

CRC WORLD DICTIONARY OF GRASSES

Common Names,
Scientific Names,
Eponyms, Synonyms,
and Etymology

VOLUME I
A - D

UMBERTO QUATTROCCHI



Taylor & Francis
Taylor & Francis Group

CRC WORLD DICTIONARY OF GRASSES

Common Names,
Scientific Names,
Eponyms, Synonyms,
and Etymology

**VOLUME I
A-D**

CRC WORLD DICTIONARY OF GRASSES

Common Names,
Scientific Names,
Eponyms, Synonyms,
and Etymology

**VOLUME I
A-D**

UMBERTO QUATTROCCHI



Taylor & Francis

Taylor & Francis Group
Boca Raton London New York

CRC is an imprint of the Taylor & Francis Group,
an informa business

Published in 2006 by
CRC Press
Taylor & Francis Group
6000 Broken Sound Parkway NW, Suite 300
Boca Raton, FL 33487-2742

© 2006 by Taylor & Francis Group, LLC
CRC Press is an imprint of Taylor & Francis Group

No claim to original U.S. Government works
Printed in the United States of America on acid-free paper
10 9 8 7 6 5 4 3 2 1

International Standard Book Number-10: 0-8493-1303-1 (Hardcover)
International Standard Book Number-13: 978-0-8493-1303-5 (Hardcover)
Library of Congress Card Number 2005046739

This book contains information obtained from authentic and highly regarded sources. Reprinted material is quoted with permission, and sources are indicated. A wide variety of references are listed. Reasonable efforts have been made to publish reliable data and information, but the author and the publisher cannot assume responsibility for the validity of all materials or for the consequences of their use.

No part of this book may be reprinted, reproduced, transmitted, or utilized in any form by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying, microfilming, and recording, or in any information storage or retrieval system, without written permission from the publishers.

For permission to photocopy or use material electronically from this work, please access www.copyright.com (<http://www.copyright.com/>) or contact the Copyright Clearance Center, Inc. (CCC) 222 Rosewood Drive, Danvers, MA 01923, 978-750-8400. CCC is a not-for-profit organization that provides licenses and registration for a variety of users. For organizations that have been granted a photocopy license by the CCC, a separate system of payment has been arranged.

Trademark Notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

Library of Congress Cataloging-in-Publication Data

Quattrocchi, Umberto.
CRC world dictionary of grasses : common names, scientific names, eponyms, synonyms, and etymology / by Umberto Quattrocchi.
p. cm.
Includes bibliographical references.
ISBN 0-8493-1303-1 (alk. paper)
1. Grasses--Dictionaries. I. Title: World dictionary of grasses. II. Title.

QK495.G74.Q38 2006
584'.9--dc22

2005046739

informa
Taylor & Francis Group is the Academic Division of Informa plc.

Visit the Taylor & Francis Web site at
<http://www.taylorandfrancis.com>
and the CRC Press Web site at
<http://www.crcpress.com>

Dedication

To Paola, Daria, and Salvatore

*If circumstances lead me, I will find
Where truth is hid, though it were hid indeed
Within the centre.
(W. Shakespeare, Hamlet)*

FOREWORD

Communication is both a complex matter and a universal phenomenon. A sender, a receiver, and the information to be transferred form the essential elements. Communication takes place between humans, between animals, and between plants, but also between humans and animals, as well as between animals and plants. The information to be transferred takes many forms — visual, acoustic, olfactory, and tactile. In science, communication takes place as a rule in rather condensed forms, often visual as a written text; information may even be still more condensed as in a mathematical formula, in bar codes, or in digitized images. In theory, communication in the sciences should be precise and unequivocal, but in real life many ambiguities exist, some of them by coincidence and some deliberately introduced and the source of much confusion. A large number of dictionaries have been published to try to clarify scientific terminology and to ease communication.

Within the natural sciences, the large field of biodiversity uses scientific names for communication, not bar codes or digitized images. The International Codes of Botanical and Zoological Nomenclature set the rules for the use of scientific plant and animal names, resulting in their universal and unequivocal application. Since scientific names cannot by their nature be abbreviated, every specialist has to be aware of an extremely large number of them, many difficult to memorize. Therefore, it is most helpful to know and understand the background of the respective scientific name — its etymology, its history, the name of the person who first coined it, the circumstances of its origin. There is always a time axis in this: scientific names have been formed over centuries; some are ancient, some recent, and this is often not evident to the uninitiated.

There is a high degree of standardization in scientific names, which largely has helped their universal use in communication. By contrast, common names are neither standardized nor universally in use. For species, they may consist of one or more words. In addition, they are only applicable locally, i.e., within the region where a given language is spoken. As a consequence, common names are totally unsuitable for international communication. However, it should be noted that common names also have their background, etymology, and history, often undergoing more changes over time and often more diversified locally than the standardized scientific names.

Umberto Quattrocchi has dealt with this subject in a general way in his *CRC World Dictionary of Plant Names* in four volumes, obligatory reading for all those interested in — as the subtitle puts it — *Common Names, Scientific Names, Eponyms, Synonyms, and Etymology*. Although dealing with names of vascular plants only, this mine of information has found its place on the shelves of reference libraries all over the world and is constantly used by a wide spectrum of users. However, any work of this kind cannot be comprehensive, in particular when considering plant diversity on a global scale and the multitude of languages spoken today, all of them possessing names for plants. Therefore, an in-depth study of a single plant family is most welcome.

For good reasons, Quattrocchi has chosen the grasses, a very large plant group, worldwide in distribution and of prime importance for the world economy, including such major crops as wheat, rice, maize, sugar, and barley, to mention just a few important ones. And he is most suited to do this job: he is well-read, multilingual, possessing a general level of culture equalled by few, and therefore able to go back into etymology and history, often right to the original mention of a particular grass name in the scientific literature long before Linnaeus.

Quattrocchi has had to deal with tens of thousands of grass names and a considerable number of languages, several of them used only outside Europe for an obvious reason. This plant group dominates many extensive areas of the globe: the prairies in temperate North America, the forests of bamboo in Southeast Asia, the dry savannahs in subtropical Africa, as well as the spinifex grassland of central Australia or, in Europe, the wetlands in the Danube delta densely covered by reeds. In short, this new dictionary helps us to understand the complex background of grass names and forms an invaluable addition to our knowledge of this plant family. It is of particular relevance to all of us since the grasses provide the most important source of protein for human nutrition on a global scale, for, as Isaiah V put it “All flesh is grass.”

H.-Walter Lack

*Botanischer Garten und Botanisches Museum,
Berlin-Dahlem,
Freie Universität Berlin*

ACKNOWLEDGMENTS

Thanks to:

Juventus Football Club, Jerry Garcia and the Grateful Dead, Thelonious Monk, Miles Davis, J.S. Bach, John Cage, Glenn Gould, Marx Brothers, Rahsaan Roland Kirk, Albert Ayler, Bud Powell, Lester Young, Lennie Tristano, Bill Evans and Scott La Faro, Charlie Parker, Dean Benedetti, Dodo Marmarosa, Serge Chaloff, John Coltrane, Charles Mingus, Carla Bley and Paul Haines, W.A. Mozart, Gabriel Faurè, Giacinto Scelsi, Frances-Marie Uitti, Francis Poulenc, Richard Wagner, Kathleen Ferrier, Elmore James, Muddy Waters, Robert Nighthawk and James “Peck” Curtis, Houston Stackhouse, Johnny Young, Howling Wolf, Willie Mae “Big Mama” Thornton, Son House, Charley Patton, Skip James, J.B. Lenoir, Otis Spann, Henry Thomas, Blind Willie Johnson, Joanie and David Lindley, Linton Kwesi Johnson, Robert Wyatt, Hatfield and the North, Raymond Queneau, Georges Perec, Edmond Jabès, Elias

Canetti, John Berger, Geoff Dyer, Robert Walser, Max Frisch, Karl Kraus, W.H. Auden, Wallace Stevens, Frank O’Hara, Anne Sexton, Jorie Graham, Philip Larkin, Alan Sillitoe, John Betjeman, Douglas Adams, Dick Brummitt, Rodolfo E.G. Pichi Sermolli, Tom Cope, W.D. Clayton, S.A. Renvoize, Gerrit Davidse, Chuck Miller, Jeremy Bruhl, Truong-Dau (Jardin botanique et zoologique de la ville Ho Chi Minh, Vietnam), Robert Laughlin, Siegmund Seybold, Dan H. Nicolson, Lázaro Novara, Michael Charters, Bernard M. Rosenthal, Ippolito Pizzetti, Ferdinando Albeggi-ani, Cäsar Scaffidi, Pietro Puccio, Annarosa Macri, Payne Stewart, Ernie Els, Harvey Penick, Joseph Beuys, Hugo Pratt and Corto Maltese, Peter Pan, Cesare Pavese and Beppe Fenoglio, Roger Gaskell, Richard Feynman, Mosaic Records, many friendly/unfriendly reviewers for many useful suggestions that contributed to this manuscript, the authorities of the Royal Botanic Gardens, Kew.

ABOUT THE AUTHOR

Umberto Quattrocchi was born December 21, 1947, in Bergamo, Italy. He received his degree in political science, his M.D., and his specialization in obstetrics and gynecology all from the University of Palermo.

The author of numerous political and botanical books and articles, his articles on plants and gardening recently have been published in *Hortus* and *The Garden*. A member of the Royal Horticultural Society and Botanical Society of America, a Fellow of the Linnean Society, his studies in

plants and ethnomedicine have taken him to remote areas of the globe.

In 1992 he retired from the practice of medicine to pursue studies in botany and to continue teaching as a professor of political science at the University of Palermo.

His interests include jazz, classical music, book collecting, and the cultivation of tropical, subtropical, and desert species of plants. He lives in Palermo with his wife Paola (also a physician) and their two children Daria and Salvatore.

INTRODUCTION TO THE GRASS FAMILY (POACEAE – GRAMINEAE)

To err is human! ...and any errors are mine alone.

These pages bring together a great deal of otherwise-dispersed data — information and morphological description regarding the genera and the species, their geographical distribution, distinctive characters, common and vernacular names, etc.

This account is certainly not complete in itself, also because of the numerous nomenclatural and taxonomic problems encountered and the conflicting taxonomic treatments (see C.W. Hamilton and S.H. Reichard, Current practice in the use of subspecies, variety, and forma in the classification of wild plants. *Taxon* 41: 485-498. 1992), this will always be a work in progress and neverending.

The study is based on secondary and primary data, and the information derives from several sources. It is gathered from a wide variety of electronic, print, and other sources, such as papers of general interest, reports and records, taxonomic revisions, field studies, herbaria and herbarium collections, notes, monographs, pamphlets, botanical literature and literature *tout court*, sources available at various natural history libraries, floras and standard flora works, local floras and local histories, nomenclatural histories, ICBN (W. Greuter et al. 2000: International Code of Botanical Nomenclature [Saint Louis Code] adopted by the Sixteenth International Botanical Congress St. Louis, Missouri, July/August 1999), ICNCP (International Code of Nomenclature for Cultivated Plants), International Union for Conservation of Nature and Natural Resources, IPNI. Also useful have been reference collections, botanical gardens and nurseries, dictionaries, drawings, poetry, journal articles, personal communications, biographies and scientific biographies, and the British Museum General Catalogue of Printed Books, the Royal Botanic Gardens Kew Library Catalogue on the World Wide Web, Manuel du Libraire et de l'Amateur de Livres (by Jacques-Charles Brunet), the Catalogue of Books, Manuscripts, Maps, and Drawings in the British Museum (Natural History), and the Catalogue of Botanical Books in the Collection of Rachel McMasters Miller Hunt, etc.

Classification follows the treatments proposed by W.D. Clayton and S.A. Renvoize (*Genera Graminum*, 1986), Watson and Dallwitz (*The Grass Genera of the World*, Wallingford: CAB International 1992 and 1994), S.W.L. Jacobs and J.E. Everett, Editors, (*Grasses: Systematics and Evolution*, 2000), *Grass Phylogeny Working Group* (GPWG) (Phylogeny and subfamilial classification of the grasses (Poaceae), *Annals of the Missouri Botanical Garden* 88(3): 373-457, 2001), Gerrit Davidse et al. (Missouri Botanical Garden – w3 TROPICOS, Missouri Botanical Garden's

VAST (VAScular Tropicos) nomenclatural database), and *Catalogue of New World Grasses* (R.J. Soreng, G. Davidse, P.M. Peterson, F.O. Zuloaga, E.J. Judziewicz, T.S. Filgueiras, and O. Morrone, Smithsonian Institution, *Contributions from the United States National Herbarium*, 2000-2003).

The classification of Australian grasses follows *Flora of Australia*, Volume 43, Poaceae 1, Introduction and Atlas, Melbourne 2002; and *Flora of Australia*, Volume 44B, Melbourne 2005. The arrangement of subfamilies and tribes follows *Flora of Australia*, 43: 245-277, 2002.

The nomenclature of South African grasses closely follows T.H. Arnold and B.C. de Wet, Editors, *Plants of Southern Africa: Names and Distribution*. Memoirs of the Botanical Survey of South Africa No. 62, Pretoria 1993.

Descriptions compiled follow the patterns and the paths and the outlines and the schemes of the great authors and their works (not necessarily about grasses!): Engler and Sir J.D. Hooker, Michel Adanson, Humboldt, Charles Russell Metcalfe, Frans A. Stafleu and friends, McClure, M.E. Barkworth, Agnes Chase, H.J. Conert, T.A. Cope, Hackel, Grisebach, Henrard, C.E. Hubbard, Hitchcock, R. Pilger, O. Stapf, Steudel, Trinius, L. Watson and M.J. Dallwitz, Constantine S. Rafinesque, William T. Stearn, R.K. Brummitt, H. Walter Lack, W.D. Clayton, S.A. Renvoize, Sylvia Phillips, D.J. Mabberley, Dan H. Nicolson, and others. Their knowledge is the main source of whatever new light this work has been able to shed on the history of grasses. Their work is my cornerstone.

We have obviously included reference information to denote the original sources and all available descriptions. Every effort has been made to ensure the accuracy of the references and other data, but this has not been possible in every case. In the meanwhile, every effort has been made to trace the original source of copyright material contained in this dictionary.

The genera and species dealt with in this work are arranged in alphabetical order. The correct identities and names of all the taxa listed were checked and, where names have changed, the currently accepted name has been applied and the previous name (or names) used have been placed into synonymy.

Obviously, this listing is not meant to be exhaustive, and I do not know most of the species. I also recognize that it is impossible that everyone will agree with the generic and specific treatment I decided to follow, and many decisions may prove to be incorrect, but this work is so full of important and useful information that perhaps it may be considered worthy to serve as a starting point for something better.

After the generic names, after the equal sign (=), could be listed: accepted name, earlier name, blocking name, correct name, homonyms, replaced name, synonyms, or similar names, etc. For names that are not grasses, e.g., *Abola* Lindl. (Orchidaceae), the given data are the testimony of the history and “movement” of the name.

Bibliographic references are listed by year, usually with the exact titles or sometimes using the abbreviation recommended by *Botanico-Periodicum-Huntianum* and G.D.R. Bridson (compiler), S.T. Townsend (Ed.), E.A. Polen (Ed.), and E.R. Smith (editorial assistant), *BPH-2: Periodicals with Botanical Content; Constituting a Second Edition of Botanico-Periodicum-Huntianum*, Hunt Institute for Botanical Documentation, Carnegie Mellon University, Pittsburgh 2004. The names of the authors of all plant names listed follow the abbreviations published by Brummitt and Powell, but usually full names and initials have been used.

This is my choice, probably not the standard way or the correct one, but I clearly don't like the reference given simply by author and date. I prefer to have all the data and full details in front of me quickly and unequivocally intelligible! This work has been arranged in a manner considered most convenient for the user, the references are probably tens of thousands. I understand that such an arrangement makes necessary the duplication of many details, but I believe this is advantageous in that each subject and each entry is a “self-contained unit” which can be utilized without reference elsewhere.

Repetita iuvant... Each entry must be considered nothing less than a monograph, more or less complete, more or less exhaustive, more or less boring.

The responsibility of all judgments and errors is my own, and if anything is omitted, misstated, misjudged, or misquoted in the text, I hope the reader will excuse my human limitations.

This dictionary is not meant to be “only” and “strictly” a nomenclatural work. Many and different are the subjects involved: history of botany and botanists, travels and botanical discoveries, history of medicine, explorations, history of genera and species and their names, biography, bibliography, linguistics, history of mankind, history of ideas, history of science, geography, ethnography, etc.

I understand that the choice to include such material could be in some way misleading, but all this too belongs to the history of botany.

Warning:

Many of the plants here described have reputed medicinal properties according to some sources; the traditional medicinal remedies have been taken from the literature and from interviews with healers, traditional or not. They have not been tested. We have reproduced only information we believe to be correct, but we make no claims as to the validity of this information, and anyone testing it does so at his own risk. Self-treatment is dangerous. It is not our intention to prescribe or make specific health claims for any of the described species. Any attempt to diagnose and treat illness should come under the direction of a health-care practitioner.

A

Abola Adans. = *Abola* Lindl. (Orchidaceae),
Cinna L.

Pooideae, Poeae, Aveninae, see *Species Plantarum* 1: 5. 1753, *Familles des Plantes* 2: 31, 511. 1763, John Lindley (1799-1865), *Folia Orchidacea. Abola* 4. London 1852-1855 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 35: 343. 1934, *Transactions of the Kentucky Academy of Science* 52: 94-96, 1991, *Sida* 14(4): 581-596. 1991, *Flora Mesoamericana* 6: 242-243. 1994, *Contributions from the United States National Herbarium* 48: 15, 234-236. 2003.

Acamptocladus Nash = *Eragrostis* Wolf

From the Greek *akamptos* “unbent, stiff” and *klados* “a branch.”

One species, North America, Mexico. Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eragrostidinae, perennial, unbranched, caespitose, tuberous, herbaceous, unarmed, culm internodes short, culm nodes hidden by leaf sheaths, ligule a fringe of hairs, leaves mostly basal, plants bisexual, deciduous inflorescence paniculate, bisexual spikelets, 2 glumes subequal, palea 2-nerved 2-keeled, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, open habitats, sandy areas, prairies, plains, often in *Eragrostis*, type *Acamptocladus sessilispicus* (Buckley) Nash, see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97. 1862 and *Flora of the Southeastern United States* ... 139-140, 1327. 1903, *Man. Grass. U.S.* 852. 1935, *Acta Bot. Neerl.* 15: 157. 1966, *Contributions from the United States National Herbarium* 41: 9, 81-115. 2001.

Species

A. sessilispicus (Buckley) Nash (*Eragrostis sessilispica* Buckley)

North America. Glumes 1-nerved.

Achaeta E. Fourn. = *Calamagrostis* Adans.

From the Greek *a* “without, lacking” and *chaite* “a bristle.”

Pooideae, Poeae, Agrostidinae, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Mexicanas Plantas* 2: 109. 1886 and *Contributions from the United States National Herbarium* 48: 15, 191-227. 2003.

Achlaena Griseb. = *Arthropogon* Nees

From the Greek *a* “without, lacking” and *chlaena*, *chlaenion* “cloak, blanket.”

One species, Cuba and Jamaica. Panicoideae, Panicodae, Paniceae (Arthropogoneae), or Panicodae, Paniceae, Arthropogoninae, perennial, caespitose, herbaceous, foliage mainly basal, auricles absent, ligule a fringed membrane, plants bisexual, open inflorescence paniculate, spikelets laterally compressed and stipitate, 2 narrow glumes unequal, lemmas pointed, palea present, 2 free lodicules, 2 stamens, woods, open areas, savannah, slopes, dry places, close to *Arthropogon* Nees, type *Achlaena piptostachya* Griseb., see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 319-320. 1829, *Catalogus plantarum cubensium* ... 228-229. 1866, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftliche Classe* 89: 125. 1884 and *Revista do Museu Paulista. Universidade de São Paulo* 13: 1250. 1922, *Botanical Magazine* (Tokyo) 76(902): 290. 1963, *Bradea, Boletim do Herbarium Bradeanum* 3: 303-322. 1982, *Annals of the Missouri Botanical Garden* 88(2): 351-372. 2001, *Contributions from the United States National Herbarium* 46: 13, 110-111. 2003.

Species

A. piptostachya Griseb. (*Arthropogon piptostachyus* (Griseb.) Pilg.; *Arthropogon piptostachyus* (Griseb.) Tateoka, nom. illeg., non *Arthropogon piptostachyus* (Griseb.) Pilg.; *Arthropogon stipitatus* Hack.)

The Caribbean, Cuba.

Achnatherum P. Beauv. = *Aristella* (Trin.) Bertol., *Eriocoma* Nutt., *Fendleria* Steud., *Jarava* Ruiz & Pav., *Lasiagrostis* Link, *Macrochloa* Kunth, *Orthoraphium* Nees, *Patis* Ohwi, *Stipa* L., *Timouria* Roshev., *Trichosantha* Steud.

Awne d scale, Greek *achne* "chaff, glume" and *ather* "stalk, barb," referring to the lemma.

About 100-300 species, Eurasia, Africa, America, New Zealand. Stipoideae, Stipeae, or Pooideae, Stipeae, Stipinae, annual or perennial, herbaceous, simple, erect, unbranched, caespitose or shortly rhizomatous, ligule an unfringed membrane or a fringed membrane, auricles present or absent, plants bisexual, with or without cleistogones, inflorescence paniculate few spikeleted to many spikeleted, open or narrow panicle, 1 floret, 2 glumes very unequal, lower glume 1-3-5-nerved, upper glume 3-5-7-nerved awns hairless to hairy to long-plumose, awn persistent, lemma cylindrical and membranous, palea with long hairs, 3 lodicules present, 3 stamens, ovary glabrous, 2 stigmas, open habitats, on dry hillsides, in shallow rocky soil, sometimes included in *Stipa* L., type *Achnatherum calamagrostis* (L.) P. Beauv., see *Species Plantarum* 1: 61, 78-79. 1753, *Flora Peruviana, et Chilensis Prodrumus* 2. 1794, *Flora Peruviana* 1: 5, t. 6, f. b. 1798, *Essai d'une Nouvelle Agrostographie* 19-20, 146, t. 6, f. 7. 1812, *The Genera of North American Plants* 1: 40. 1818, *Fundamenta Agrostographiae* 110. 1820, *Hortus Regius Botanicus Berlinensis* 1: 99. 1827, *Révision des Graminées* 1: 58. 1829, Antonio Bertoloni (1775-1869), *Flora Italica ...* 1: 690. Bologna 1833 [1835], *Nomenclator Botanicus. Editio secunda* 2: 702. 1841, *Synopsis Plantarum Glumacearum* 1: 419-420. 1854 and *Bulletin of the Torrey Botanical Club* 39(3): 102. 1912, *Contr. U.S. Natl. Herb.* 24(6): 181. 1925, *Acta Phytotaxonomica et Geobotanica* 11: 181. 1942, O.R. Matthei, "Estudio crítico de las gramíneas del género *Stipa* en Chile." *Gayana, Botánica* 13: 1-137. 1965, J.A. Caro and E. Sanchez, "Las especies de *Stipa* (Gramineae) del subgenero *Jarava*." *Kurtziana* 7: 61-116. 1973, *Bulletin of the National Science Museum, Series B, Botany* 12: 151-154. 1986, *Journal of Cytology and Genetics* 21: 155. 1986, *Annali di Botanica* 45: 75-102. 1987, *Grass Systematics and Evolution* 251-264. Washington 1987, *New Zealand Journal Bot.* 27: 569-582. 1989, *Phytologia* 74(1): 1-25. 1993, K.A. Robson & J. Maze, "A comparison of rare and common grasses of the Stipeae. I. Greenhouse studies of growth and variation in four species from parapatric populations." *International Journal of Plant Sciences* 156(4): 530-541. 1995, *Gayana, Botánica* 53(2): 277-284. 1996, *Telopea* 6: 579-595. 1996, P.F. Rojas, "New species and new combinations for the tribe Stipeae (Poaceae) in Bolivia." *Gayana, Botánica* 54(2): 163-182. 1997[1998]

Kevin P. Fort & James H. Richards, "Does seed dispersal limit initiation of primary succession in desert playas?" *Am. J. Bot.* 85: 1722-1731. 1998, Khidir W. Hilu & Lawrence A. Alice, "Evolutionary implications of *matK* indels in Poaceae." *Am. J. Bot.* 86: 1735-1741. 1999, *Global Change Biology* 5(6): 659-668. Aug 1999, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, "Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B." *Am. J. Bot.* 87: 96-107. 2000, Matthew A. Gitzendanner and Pamela S. Soltis, "Patterns of genetic variation in rare and widespread plant congeners." *Am. J. Bot.* 87: 783-792. 2000, *Oryx* 34(2): 129-135. Apr 2000, *Plant, Cell and Environment* 23(6): 649-656. June 2000, *New Phytologist* 150(2): 449-458. May 2001, P. Peñailillo, "El género *Jarava* Ruiz et Pav. (Stipeae-Poaceae): delimitación y nuevas combinaciones." *Gayana, Botánica* 59(1): 27-34. 2002, J. Valdés-Reyna & M.E. Barkworth, "Poaceae II. Pooideae: Tribu Stipeae." *Flora de Veracruz* 127: 1-28. 2002, *Restoration Ecology* 10(1): 16-26. Mar 2002, *Restoration Ecology* 10(2): 195-203. June 2002, *Journal of Ecology* 90(3): 480-494. June 2002, *Contributions from the United States National Herbarium* 48: 15-18, 402-409, 617-650. 2003, *Global Change Biology* 9(2): 276-285. Feb 2003, *Conservation Biology* 17(2): 420-432. Apr 2003, *Global Change Biology* 9(5): 729-735. May 2003, *Global Change Biology* 9(8): 1223-1233. Aug 2003, *Restoration Ecology* 11(3): 370-377. Sep 2003, *Global Ecology and Biogeography* 12(6): 449-460. Nov 2003, *Journal of Biogeography* 30(11): 1751-1761. Nov 2003, *Conservation Biology* 17(6): 1681-1693. Dec 2003, Tara A. Forbis & Daniel F. Doak, "Seedling establishment and life history trade-offs in alpine plants." *Am. J. Bot.* 91: 1147-1153. 2004, *Annals of the Association of American Geographers* 94(1): 117-139. Mar 2004, *Botanical Journal of the Linnean Society* 144(4): 483-495. Apr 2004, *Restoration Ecology* 12(2): 248-257. June 2004, *Molecular Ecology* 13(6): 1455-1467. June 2004, *Restoration Ecology* 12(4): 546-551. Dec 2004, Satya Maliakal-Witt, Eric S. Menges and J.S. Denslow, "Microhabitat distribution of two Florida scrub endemic plants in comparison to their habitat-generalist congeners." *Am. J. Bot.* 92: 411-421. 2005, *Global Change Biology* 11(5): 749-756. May 2005.

Species

A. acutum (Swallen) Valdés-Reyna & Barkworth (*Stipa acuta* Swallen)

America, Mexico. See *Journal of the Washington Academy of Sciences* 30(5): 212. 1940.

A. altum (Swallen) Hoge & Barkworth (*Stipa alta* Swallen)

America, Mexico. See *Proceedings of the Biological Society of Washington* 56: 79. 1943.

A. aridum (M.E. Jones) Barkworth (*Stipa arida* M.E. Jones; *Stipa mormonum* Mez)

U.S., California. Inflorescence often partly enclosed by uppermost leaf sheath, see *Proceedings of the California Academy of Sciences, Series 2*, 5: 725. 1895 and *Repertorium Specierum Novarum Regni Vegetabilis* 17: 209. 1921. in English: Mormon needlegrass, desert needlegrass

A. brachychaetum (Godr.) Barkworth (*Jarava brachychaeta* (Godr.) Peñailillo; *Nassella brachychaeta* (Godr.) Barkworth; *Stipa brachychaeta* Godr.; *Stipa brachychaeta* f. *brachychaeta*; *Stipa brachychaeta* var. *minor* Speg.; *Stipa eminens* f. *viridis* Kuntze; *Stipa lorentziana* Griseb.) (for the German botanist Paul Günther Lorentz, 1835-1881, bryologist, professor of botany in Argentina and Uruguay, explorer, plant collector, owner of a moss herbarium. See P.G. Lorentz and Gustavo Niederlein, *Enumeración sistemática de las plantas colectadas durante la expedición. Informe oficial de la Comisión Científica agregada al Estado Mayor General de la expedición al Rio Negro (Patagonia)*, realizada en los meses de abril, mayo y junio de 1879, bajo las órdenes del Gral. Julio A. Roca. Buenos Aires. Entrega segunda. *Botánica*. 173-294. 1881; Stafleu and Cowan, *Taxonomic literature*. 3: 157-160. 1981; August Heinrich Rudolph Grisebach (1814-1879), *Plantae lorentzianae*. Göttingen 1874; J.H. Barnhart, *Biographical notes upon botanists*. 2: 402. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 243. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 203. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; F.A. Maximilian Kuhn (1842-1894), *Filices africanae ... Accedunt filices Deckenianae et Petersianae*. Lipsiae [Leipzig] 1868; Otto Kersten (1839-1900), *Geographische Nachrichten für Welthandel und Volkswirtschaft ... unter der ... Redaktion von Dr. O.K. [Berlin - Central-Verein für Handelsgeographie, etc. Geographische Nachrichten, etc.] Berlin 1879; Carl Claus von der Decken (1833-1865), Baron C.C. von der Decken's Reisen in Ost Afrika in 1859-61*. Leipzig & Heidelberg 1869-1879).

South America, Argentina, Peru, Uruguay. Perennial bunchgrass, densely tufted, roots fibrous and shallow, erect stems, sheaths open and glabrous, ligule truncate and membranous, auricles absent, foliage tough, blade expanded and linear, panicle exserted and contracted, 1 floret, spikelets gaping, glumes subequal and glabrous, lemmas stiff to hard, callus straight and densely silky, awn once or twice bent, paleas thick and stiff, small cleistogamous seeds develop within the basal leaf sheaths, cleistogamous seed hard-coated, unpalatable to livestock, reproduces by seed, an invasive and noxious weed of pasture, disturbed sites, nearby or along drainage and irrigation ditches, see *Mémoires de la Section des Sciences; Académie des Sciences et Lettres de*

Montpellier 1: 450. 1853, *Flora Chilena* 6: 263. 1854 and *Contr. U.S. Natl. Herb.* 24(6): 181. 1925, J.A. Caro, "Las especies de *Stipa* (Gramineae) de la region central Argentina." *Kurtziana* 3: 7-119. 1966, J.A. Caro & E. Sanchez, "La identidad de *Stipa brachychaeta* Godron, *S. caudata* Trinius y *S. bertrandii* Philippi." *Darwinia* 16(3-4): 637-653. 1971, *Taxon* 39(4): 609. 1990, *Gayana, Botánica* 59(1): 30. 2002.

in English: puna grass

in Spanish: espartillo

A. bracteatum (Swallen) Valdés-Reyna & Barkworth (*Stipa bracteata* Swallen)

America, Mexico. See *Journal of the Washington Academy of Sciences* 30(5): 213. 1940.

A. bromoides (L.) P. Beauv. (*Agrostis bromoides* L.; *Aristella bromoides* (L.) Bertol.; *Lasiagrostis bromoides* (L.) Nevski & Roshev.; *Stipa aristella* L.; *Stipa bromoides* (L.) Dörfli.; *Stipa bromoides* (L.) Beck, nom. illeg., non *Stipa bromoides* (L.) Dörfli.; *Stipa bromoides* (L.) Pilg., nom. illeg., non *Stipa bromoides* (L.) Dörfli.)

Algeria, Armenia, Turkey, Iran, Europe. Perennial, coarse, robust, erect to semierect, leaves mostly basal, open panicles, useful for erosion control, on dark soil, see *Mantissa Plantarum* 30. 1767, *Flora Italica ...* 1: 690. 1834 and *Essai d'une Nouvelle Agrostographie* 20, 146, 147. 1812, *Herbarium normale Cent.* xxxiv, no. 3386. 1897 and *Flora URSS* 2: 72, t. 6, f. 7-9. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 235, f. 5. 1948, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Acta Botanica Malacitana* 21: 125-189. 1996.

A. calamagrostis (L.) P. Beauv. (*Achnatherum hallerii* (Willd.) P. Beauv.; *Agrostis calamagrostis* L.; *Arundo halleri* Willd.; *Calamagrostis argentea* DC.; *Lasiagrostis calamagrostis* (L.) Link; *Stipa calamagrostis* (L.) Wahlenb.; *Stipa longifolia* Phil., nom. illeg., non *Stipa longifolia* Borbás; *Streptachne calamagrostis* (L.) Dumort.)

South and central Europe. Perennial, stems clumped and robust, leaves attenuate, inflorescence loose, useful for erosion control, see *Systema Naturae, Editio Decima* 2: 872. 1759, *Flora Berolinensis Prodrumus* 60. 1787, *Prodrumus Florae Novae Hollandiae* 174. 1810, *Essai d'une Nouvelle Agrostographie* 20, 146, 152, t. 6, f. 7. 1812, Georgii Wahlenberg ... *De vegetatione et climate in Helvetia septentrionali ...* 23. Turici Helvetorum [Zürich] 1813, *Observations sur les Graminées de la Flore Belgique* 135. 1823 [1824], *Hortus Regius Botanicus Berolinensis* 1: 99. 1827, *Anales de la Universidad de Chile* 93: 725. 1896 and *Contr. U.S. Natl. Herb.* 24(6): 181. 1925, *Berichte der Bayerischen Botanischen Gesellschaft zur Erforschung der Heimischen Flora* 56: 95-102. 1985, *Fitologija* 39: 72-77. 1991, Roser Guàrdia, José Raventós & Hal Caswell, "Spatial growth and population dynamics of a perennial tussock grass (*Ach-*

natherum calamagrostis) in a badland area." *Journal of Ecology* 88(6): 950-963. Dec 2000.

A. capense (L.) P. Beauv. (*Agrostis capensis* (L.) Lam.; *Danthonia capensis* (L.) Druce; *Milium capense* L.)

South Africa. See *Mantissa Plantarum* 185. 1771, *Encyclopédie Méthodique, Botanique* 1: 58. 1783, *Flore Française. Troisième Édition* 3: 32. 1805, *Essai d'une Nouvelle Agrostographie* 146, 167. 1812 and *Botanical Exchange Club and Society of the British Isles* 1916: 619. Manchester 1917.

A. caragana (Trin. & Rupr.) Nevski (*Achnatherum caragana* (Trin.) Nevski; *Achnatherum caragana* (Trin. & Rupr.) Prokh., nom. illeg., non *Achnatherum caragana* (Trin. & Rupr.) Nevski; *Lasiagrostis caragana* (Trin.) Trin. & Rupr.; *Lasiagrostis caragana* (Trin. & Rupr.) Trin. & Rupr.; *Stipa caragana* Trin.; *Stipa caragana* Trin. & Rupr.)

Asia, China, Russia, Armenia. Perennial bunchgrass, open panicles, straight short deciduous awn, useful for erosion control, common in meadows, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 74. 1830, *Species Graminum Stipaceorum* 90. 1842.

A. caudatum (Trin.) S.W.L. Jacobs & J. Everett (*Jarava bertrandii* (Phil.) Peñailillo; *Jarava caudata* (Trin.) Peñailillo; *Stipa amphicarpa* Phil.; *Stipa bertrandii* Phil.; *Stipa caudata* Trin.)

South America, Chile, Argentina. Perennial, caespitose, stout, erect, tall, nodes swollen, intravaginal branching, often cleistogamous, cleistogenes in leaf sheaths, lemma hairy, awned, lodicules nerved, noxious weed species naturalized elsewhere, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 75. 1830, *Linnaea* 33(3-4): 283. 1864, *Anales de la Universidad de Chile* 93: 717, 726. 1896 [also *Anales del Museo Nacional de Chile. Primera Sección — Zoología* 1892: 11, Lam. 3 f. 2. Santiago de Chile 1892] and *Telopea* 6(4): 582. 1996, *Gayana, Botánica* 59(1): 30-31. 2002.

in Spanish: espartillo

A. clandestinum (Hack.) Barkworth (*Stipa clandestina* Hack.)

Northern America, U.S., Mexico. See *Repertorium Specierum Novarum Regni Vegetabilis* 8: 516. 1910, *Contr. U.S. Natl. Herb.* 24(7): 238. 1925, *Phytologia* 74(1): 6. 1993.

A. constrictum (Hitchc.) Valdés-Reyna & Barkworth (*Stipa constricta* Hitchc.)

America, Mexico. See *Contributions from the United States National Herbarium* 24(7): 244, t. 51, f. 28-29. 1925.

A. contractum (B.L. Johnson) Barkworth (*Oryzopsis contracta* (B.L. Johnson) Schlechter; *Oryzopsis hymenoides* var. *contracta* B.L. Johnson; *Stipa contracta* (B.L. Johnson) W.A. Weber, nom. illeg., non *Stipa contracta* Phil.)

U.S. Rare grass, see *Flora Boreali-Americana* 1: 51. 1803 and *Contributions from the United States National Herbarium* 11: 109. 1906, *Botanical Gazette* 107: 24. 1945, *Brittonia* 18(4): 342. 1967 [1966], *Phytologia* 67(6): 428. 1989, *Phytologia* 74(1): 6. 1993.

A. coronatum (Thurb.) Barkworth (*Stipa coronata* Thurb.; *Stipa coronata* var. *coronata*)

U.S., California. Glabrous to hairy, leaf sheaths ciliate, inflorescence branches widely spreading to ascending, glumes unequal, chaparral, slopes, gravelly soil, rocky places, see *Geological Survey of California, Botany* 2: 287-288. 1880 and *Taxon* 33: 126-134. 1984, *Phytologia* 74(1): 6. 1993.

A. curvifolium (Swallen) Barkworth (*Stipa curvifolia* Swallen)

Northern America, U.S. See *Journal of the Washington Academy of Sciences* 23(10): 456. 1933, *Phytologia* 74(1): 7. 1993.

in English: Guadalupe grass

A. diegoense (Swallen) Barkworth (*Stipa diegoensis* Swallen)

North America, Mexico, U.S., California, San Diego Co. Perennial, basal leaf sheaths hairy, lowest internode hairy throughout, glumes subequal, rare or uncommon species, chaparral, rocky soil, see *J. Wash. Acad. Sci.* 30(5): 212, f. 2. 1940, *Phytologia* 74(1): 7. 1993.

in English: San Diego County needlegrass, San Diego needlegrass

A. duthiei (Hook.f.) P.C. Kuo & S.L. Lu (*Achnatherum duthiei* (Hook.f.) P.C. Kuo & S.L. Lu ex J.L. Yang; *Stipa duthiei* Hook.f.) (for the British botanist John Firminger Duthie, 1845-1922 (Sussex), 1875 Fellow of the Linnean Society, professor of natural history, plant collector in India, wrote *The Orchids of the North-Western Himalaya*. Calcutta 1906; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 486. 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 223. 1994; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 110. 1972; Isaac Henry Burkill (1870-1965), *Chapters on the History of Botany in India*. 150-151. Delhi 1965; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992)

China, India, Nepal, Western Himalaya. On rocky clay soil, alpine and subalpine shrub, gravelly sand, see *Fl. Brit. India* 7(22): 232. 1896 and *Kew Bull.* 125-128. 1922, *Flora Republicae Popularis Sinicae* 9(3): 322, pl. 80, f. 9-14. 1987, *Flora Sichuanica* 5(2): 190. 1988.

A. editorum (E. Fourn.) Valdés-Reyna & Barkworth (*Stipa editorum* E. Fourn.)

America, Mexico. See *Mexicanas Plantas* 2: 75. 1886.

A. eminens (Cav.) Barkworth (*Stipa eminens* Cav.; *Stipa erecta* E. Fourn., nom. illeg., non *Stipa erecta* Trin.; *Stipa flexuosa* Vasey)

South America, U.S., North America, Texas, Mexico. Perennial, forage, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 42, t. 467, f. 1. 1799, *Mexicanas Plantas* 2: 75. 1886, *Bulletin of the Torrey Botanical Club* 15(2): 49. 1888 and *Taxon* 33: 126-134. 1984, *Phytologia* 74(1): 7. 1993.

in Mexico: agujilla grande, flechilla, flechilla grande

A. hendersonii (Vasey) Barkworth (*Oryzopsis exigua* Thurb.; *Oryzopsis exigua* var. *hendersonii* (Vasey) M.E. Jones; *Oryzopsis hendersonii* Vasey; *Stipa hendersonii* (Vasey) Muhl.) (named for professor Louis Forniquet Henderson, 1853-1942, botanist, University of Idaho, plant collector, author of *The Early Flowering of Plants in Lane County, Oregon, in 1934*. Eugene, Oregon, 1936 [Univ. Oregon Monogr., Stud. Bot. No. 1]; see Joseph Ewan, *Rocky Mountain Naturalists*. 227. The University of Denver Press 1950)

Northern America, U.S. See Charles Wilkes (1798-1877), *Narrative of the United States Exploring Expedition*. During the years ... Philadelphia 1845, *United States Exploring Expedition* 17: 481. 1874, *Contributions from the United States National Herbarium* 1(8): 267. Washington, D.C. 1893 and *Contributions to Western Botany* 14: 11. San Francisco 1912, D.C. Haskell, *The United States Exploring Expedition 1838-1842 and Its Publications 1844-1874*. New York 1942, D.B. Tyler, *The Wilkes Expedition: The First United States Exploring Expedition (1838-1842)*. Philadelphia 1968, G.A. Doumani, editor, *Antarctic Bibliography*. Washington, Library of Congress 1965-1979, *Canadian Journal of Botany* 49(9): 1568. 1971, *Phytologia* 74(1): 7. 1993, G.L. Rapson and J. Maze, "Variation and integration in the rare grass *Achnatherum (Oryzopsis) hendersonii*: phenotypic comparison with parapatric common congeners." *Canadian Journal of Botany* 72: 693-700. 1994, Elizabeth P. Binney & Gary E. Bradfield, "An initial comparison of growth rates in the rare grass *Achnatherum hendersonii* and its common associate *Poa secunda*." *Ecological Research* 15(2): 181-185. June 2000, *Vascular Plants of Wyoming* (edition 3) 377. 2001.

A. hirticulme (S.L. Hatch, Valdés-Reyna & Morden) Valdés-Reyna & Barkworth (*Stipa hirticulmis* S.L. Hatch, Valdés-Reyna & Morden)

America, Mexico. See *Systematic Botany* 11(1): 186-188, f. 1. 1986.

A. hymenoides (Roemer & Schultes) Barkworth (*Eriocoma cuspidata* Nutt.; *Eriocoma hymenoides* (Roem. & Schult.) Rydb.; *Eriocoma membranacea* (Pursh) Beal; *Eriocoma membranacea* Steud.; *Fendleria rhynchelytroides* Steud.; *Milium cuspidatum* (Nutt.) Spreng.; *Oryzopsis cuspidata* (Nutt.) Benth. ex Vasey; *Oryzopsis hymenoides* (Roem. &

Schult.) Ricker ex Piper; *Oryzopsis hymenoides* (Roem. & Schult.) Ricker; *Oryzopsis hymenoides* var. *hymenoides*; *Oryzopsis membranacea* (Pursh) Vasey; *Stipa hymenoides* Roem. & Schult.; *Stipa membranacea* Pursh, nom. illeg., non *Stipa membranacea* L.; *Urachne lanata* Trin. & Rupr.)

California, Mexico, Canada, U.S. Perennial, leafy, densely tufted, stiff stems, sheaths open, ligule smooth-edged, no auricles, leaves generally smooth and strongly inrolled, open and branched flower head, each spikelet has a single flower with rounded and pointed glumes, dense long white hairs cover the dark reddish oval lemma, stout awn, drought-tolerant, used by Native Americans for food, forage, highly palatable to livestock, good for restoring disturbed or degraded areas, used for revegetation of mined land and for dryland soil stabilization, growing on rocky or sandy soils, desert scrub, at low elevations in dry open grasslands and slopes, see *Flora Americae Septentrionalis; or, ...* 2: 728. 1814, *Systema Vegetabilium* 2: 339. 1817, *The Genera of North American Plants* 1: 40. 1818, *Systema Vegetabilium, editio decima sexta* 1: 251. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 126. 1834, *Species Graminum Stipaceorum* 19. 1842, *Synopsis Plantarum Glumacearum* 1: 420. 1854, *The Grasses of the United States* 23. 1883, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): 10, t. 10. 1891, *Grasses of North America for Farmers and Students* 2: 232. 1896 and *Contributions from the United States National Herbarium* 11: 109. 1906, *Bulletin of the Torrey Botanical Club* 39(3): 102. 1912, *Phytologia* 74(1): 7-8. New York, New York 1993.

in English: Indian ricegrass, mountain-rice

A. inebrians (Hance) Keng (*Stipa inebrians* Hance)

China. Reported to cause staggers when grazed, found in lowland seepage, clay loam, silty clay soil, lowland bench above river, see *Journal of Botany, British and Foreign* 14(163): 212. 1876 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 107, 213. 1957.

A. jacquemontii (Jaub. & Spach) P.C. Kuo & S.L. Lu (*Lasiagrostis jacquemontii* (Jaub. & Spach) Munro ex Aitch.; *Lasiagrostis jacquemontii* (Jaub. & Spach) Munro ex Boiss.; *Stipa jacquemontii* Jaub. & Spach) (after the French naturalist Victor V. Jacquemont, 1801-1832 (Bombay, India), explorer, plant collector, botanist, traveler in the West Indies and India, made collections for the Royal Museum of Paris, friend of Stendhal, author of *Voyage dans l'Inde* par V.J., pendant les années 1828 à 1832. [Botanical authors: Joseph Decaisne (1807-1882) and Jacques Cambessèdes, 1799-1863] Paris [1835-] 1841-1844, a member of the Légion-d'Honneur. See *Correspondance de Victor Jacquemont avec sa famille et plusieurs de ses amis*, pendant

son voyage dans l'Inde (1828-1832). Deuxième édition. Paris 1835; David Stacton, *A Ride on a Tiger. The Curious Travels of Victor Jacquemont*. London 1954; Pierre Maes, *Un ami de Stendhal, Victor Jacquemont*. Paris 1934; J.H. Barnhart, *Biographical notes upon botanists*. 2: 241. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 193. 1972; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898.] Leipzig 1981; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 730. Stuttgart 1993; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ignatz Urban (1848-1931), *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 359. Dresden 1916; Ignatz Urban, editor, *Symbolae Antillanae*. 3: 65. 1902; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Jacques Denis Choisy (1799-1859), *Convolvulaceae orientales*. [= *Mém. Soc. Phys. Hist. nat. Genève*. 6(2): [383]-502. 1834] 94. Genève 1834; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 469. Ansbach 1852)

Asia, China, India. Subalpine meadow, silt loam, gravelly loam, see *Illustrationes Plantarum Orientalium* 4: 60, t. 339. Parisii 1851, *Journal of the Linnean Society, Botany* 18: 107. 1880, *Flora Orientalis* 5: 506. 1884 and *Flora Reipublicae Popularis Sinicae* 9(3): 323, pl. 80, f. 15-19. 1987.

A. latiglume (Swallen) Barkworth (*Stipa latiglumis* Swallen)

U.S., California, Sierra Nevada. Hairy, basal leaf sheaths hairy, glumes subequal and acuminate, lemma awn bent twice, found in dry slopes, forest, see *Journal of the Washington Academy of Sciences* 23(4): 198, f. 1. 1933, *Phytologia* 74(1): 8. 1993.

A. lemmonii (Vasey) Barkworth (*Achnatherum lemmonii* (Swallen) Barkworth; *Stipa columbiana* Macoun; *Stipa columbiana* var. *columbiana*; *Stipa lemmonii* (Vasey) Scribn.; *Stipa lemmonii* var. *pubescens* Crampton; *Stipa minor* (Vasey) Scribn.; *Stipa pringlei* var. *lemmonii* Vasey; *Stipa viridula* var. *minor* Vasey) (for the American botanist John Gill Lemmon, 1832-1908, plant collector in Southern Arizona and Huachuca Mountains near Sierra Vista, correspondent of Asa Gray, he married Sara Allen Plummer (1836-1923), wrote *Conifers of the Pacific Slope*. [Oakland, California 1902], see J.H. Barnhart, *Biographical notes upon botanists*. 2: 367 and 3: 93. 1965)

Northern America, Canada, U.S. Perennial, good for restoring disturbed or degraded areas, used for revegetation of mined land and for dryland soil stabilization, serpentine slopes in chaparral, rich soils, dry rocky ground, dry grav-

elly soil, see *Catalogue of Canadian Plants* 2(4): 191. 1888, *Contributions from the United States National Herbarium* 3(1): 50, 54-55. 1892, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 46-47. 1898 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 3. 1901, *Contributions from the United States National Herbarium* 24(7): 253. 1925, *Leaflets of Western Botany* 7(9): 220. San Francisco 1955, *Taxon* 28: 623. 1979, *Phytologia* 74(1): 8. 1993.

in English: Lemmon's needlegrass, pubescent needlegrass

A. lemmonii (Vasey) Barkworth subsp. *lemmonii* (*Achnatherum lemmonii* (Swallen) Barkworth var. *lemmonii*; *Stipa lemmonii* (Vasey) Scribn.; *Stipa lemmonii* var. *jonesii* Scribn.; *Stipa lemmonii* var. *lemmonii*)

Northern America, U.S. Perennial, spikelets laterally compressed, glumes more or less equal, coniferous forest, sagebrush scrub, see *Phytologia* 74(1): 8. 1993.

in English: Lemmon's needlegrass

A. lemmonii (Vasey) Barkworth subsp. *pubescens* (Crampton) Barkworth (*Achnatherum lemmonii* (Swallen) Barkworth var. *pubescens* (Crampton) Barkworth; *Stipa lemmonii* var. *pubescens* Crampton)

Northern America, U.S. Perennial, see *Leaflets of Western Botany* 7(9): 220. 1955, *Phytologia* 74(1): 8. 1993.

in English: pubescent Lemmon's needlegrass, Lemmon's needlegrass

A. lettermanii (Vasey) Barkworth (*Stipa lettermanii* Vasey; *Stipa minor* (Vasey) Scribn.; *Stipa occidentalis* var. *minor* (Vasey) C.L. Hitchc.; *Stipa viridula* Trin. var. *lettermanii* (Vasey) Vasey; *Stipa viridula* var. *minor* Vasey) (named for George Washington Letterman, 1841 (or 1840)-1913, teacher, plant collector, explorer and traveler, see Joseph Ewan, *Rocky Mountain Naturalists*. 249-250. The University of Denver Press 1950)

California, Sierra Nevada, U.S. Perennial, rare, leaf blades usually curled, awn bent twice, forage, dry slopes, sagebrush scrub, meadows, coniferous forest, see *Bulletin of the Torrey Botanical Club* 13: 53. 1886, *Contributions from the United States National Herbarium* 3(1): 50. 1892, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 46-47. 1898 and *Contributions from the United States National Herbarium* 24(7): 253. 1925, *Vascular Plants of the Pacific Northwest* 1: 714. 1969, *Taxon* 28: 623-624. 1979, *Taxon* 31(2): 294, f. 6. 1982, *Phytologia* 74(1): 9. 1993.

in English: Letterman's needlegrass

A. multinode (Scribner ex Beal) Valdés-Reyna & Barkworth (*Stipa multinodis* Scribn. ex Beal)

America, Mexico. See *Grasses of North America for Farmers and Students* 2: 222. 1896.

A. nelsonii (Scribn.) Barkworth (*Stipa columbiana* var. *nelsonii* (Scribn.) Hitchc.; *Stipa columbiana* var. *nelsonii* (Scribn.) H. St. John, nom. illeg., non *Stipa columbiana* var. *nelsonii* (Scribn.) Hitchc.; *Stipa nelsonii* Scribn.; *Stipa williamsii* Scribn.) (named for Aven Nelson, 1859-1952, Rocky Mountains botanist, plant collector, professor of biology at the University of Wyoming, his works include *The Cryptogams of Wyoming*, Laramie, Wyoming 1900, with James Francis Macbride (1892-1976) wrote "Western plant studies. II." *Bot. Gaz.* 56: 469-479. Crawfordsville 1913. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 544. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 284. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 307. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Joseph William Blankinship (1862-1938), "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904 (*Stipa williamsii* Scribn. dedicated to the American botanist Thomas Albert Williams, 1865-1900, professor of botany, plant collector, see Joseph Ewan, *Rocky Mountain Naturalists*. 338. The University of Denver Press 1950 and Joseph William Blankinship (1862-1938), "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904 [1905])

Northern America, Canada, U.S. Perennial, dry soils, see *Catalogue of Canadian Plants* 2(4): 191. 1888, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 45-46, t. 4. 1898 and *Contributions from the United States National Herbarium* 24(7): 254. 1925, *Phytologia* 74: 9. 1993.

in English: Columbia needlegrass

A. nelsonii (Scribn.) Barkworth subsp. **dorei** (Barkworth & J.R. Maze) Barkworth (*Stipa columbiana* auct.; *Stipa minor* (Vasey) Scribn.; *Stipa nelsonii* subsp. *dorei* Barkworth & J. Maze; *Stipa nelsonii* Scribn. var. *dorei* (Barkworth & Maze) Dorn; *Stipa occidentalis* Thurb. var. *minor* sensu C.L. Hitchc., non (Vasey) C.L. Hitchc.) (for William George Dore, 1912-1996, author of *Wild-rice*. Dept. of Agriculture, Research Branch, Ottawa 1969 [Canada. Dept. of Agriculture. Publication 1393, *Zizania*], *Grasses of Ontario* / William G. Dore and J. McNeill. Ottawa: Research Branch, Agriculture Canada, no. 26. Hull, Que. 1980)

Northern America, U.S., British Columbia. Perennial, tufted, open sheaths smooth to densely hairy, no auricles, inrolled to flattened leaf blades, narrow spikelike and bristly flower head, glumes subequal, lemma covered in white hairs, awns twice bent, the lowest segment of the awn is

rough, found in dry plains, open woods, clearings, meadows, see *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 46. 1898 and *Taxon* 28(5/6): 623. 1979, *Vascular Plants of Wyoming* 298. 1988, *Phytologia* 74(1): 9. 1993.

in English: Columbia needlegrass, Columbian needle grass, Dore's needlegrass

A. nelsonii (Scribn.) Barkworth subsp. **nelsonii** (*Stipa columbiana* Macoun var. *nelsonii* (Scribn.) St. John; *Stipa nelsonii* Scribn.; *Stipa nelsonii* subsp. *nelsonii*; *Stipa occidentalis* Thurb. var. *nelsonii* (Scribn.) C.L. Hitchc.; *Stipa williamsii* Scribn.)

Northern America, U.S. Perennial, forage, revegetation, see *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 46. 1898 and *Vascular Plants of the Pacific Northwest* 1: 715. 1969, *Phytologia* 74(1): 9. 1993.

in English: Columbia needlegrass, Nelson's needlegrass

A. nevadense (B.L. Johnson) Barkworth (*Stipa nevadensis* B.L. Johnson)

U.S., Sierra Nevada. Perennial, delicate, leaf blades usually inrolled, awn bent twice, in open woodlands, sagebrush scrub, see *American Journal of Botany* 49: 257. 1962, *Phytologia* 74(1): 9. 1993.

in English: Nevada needlegrass

A. occidentale (Thurb.) Barkworth (*Achnatherum occidentale* (Thurb. ex S. Watson) Barkworth; *Achnatherum occidentale* subsp. *occidentale*; *Stipa occidentalis* Thurb.; *Stipa occidentalis* Thurb. ex S. Watson; *Stipa occidentalis* Bol. ex Hitchc., nom. illeg., non *Stipa occidentalis* Thurb. ex S. Watson; *Stipa occidentalis* var. *montana* Merr. & Davy; *Stipa oregonensis* Scribn.; *Stipa stricta* Vasey, nom. illeg., non *Stipa stricta* Lam.; *Stipa stricta* var. *sparsiflora* Vasey)

Northern America, U.S. Perennial, sheath ciliate at top, leaf blades rolled, leaf glabrous to hairy, glumes more or less equal, awn bent twice, found in dry rocky soil, open places, coniferous forest, see *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 380. 1871, *Proc. Calif. Acad. Sci.* 4: 169. 1872, *Bulletin of the Torrey Botanical Club* 10: 42. 1883, *Contributions from the United States National Herbarium* 3(1): 51. 1892, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 130, f. 426. 1899 and *University of California Publications in Botany* 1: 62. 1902, *Contr. U.S. Natl. Herb.* 24(7): 242. 1925, *Manual of the Grasses of the United States* 963. 1935, *Phytologia* 74(1): 10. 1993.

in English: Western needlegrass

A. occidentale (Thurb.) Barkworth subsp. **californicum** (Merr. & Burt Davy) Barkworth (*Achnatherum nelsonii* (Scribn.) Barkworth subsp. *longiaristatum* (Barkworth & Maze) Barkworth; *Achnatherum occidentale* subsp. *californicum* (H.M. Hall) Barkworth; *Stipa californica* Merr. & Burt Davy; *Stipa nelsonii* Scribn. var. *longiaristata*

Barkworth & Maze; *Stipa occidentalis* var. *californica* (Merr. & Burt Davy) C.L. Hitchc.)

Northern America, U.S. Perennial, small, upper awn segment rough to smooth, used for revegetation of mined land and for dryland soil stabilization, found in damp soil, disturbed or degraded areas, coniferous forest, see *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 46. 1898 and *University of California Publications in Botany* 1: 61. 1902, *Vascular Plants of the Pacific Northwest* 1: 715. 1969, *Taxon* 28(5/6): 623. 1979, *Phytologia* 74(1): 9-10. 1993.

in English: California needlegrass

A. occidentale (Thurb.) Barkworth subsp. **occidentale** (*Stipa occidentalis* Thurb. ex S. Wats.; *Stipa occidentalis* var. *montana* Merr. & Davy; *Stipa occidentalis* var. *occidentalis*)

Northern America, U.S., California. Perennial, hairy awn, found in dry rocky soil, coniferous forest, disturbed or degraded areas, see *University of California Publications in Botany* 1: 62. 1902, *Contr. U.S. Natl. Herb.* 24(7): 242. 1925, *Phytologia* 74(1): 10. 1993.

in English: Western needlegrass

A. occidentale (Thurb.) Barkworth subsp. **pubescens** (Vasey) Barkworth (*Stipa elmeri* Piper & Brodie ex Scribner; *Stipa occidentalis* var. *pubescens* (Vasey) Maze, Taylor & MacBryde; *Stipa viridula* var. *pubescens* Vasey) (for the American botanist Adolph Daniel Edward Elmer, 1870-1942, plant collector in Borneo, California, Washington and in the Philippines, author of "A new Grewia." *Leaflet. Philip. Bot.* 2, 1909. See Elmer Drew Merrill, *Plantae Elmerianae Borneenses*. Berkeley 1929; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. Regnum Vegetabile vol. 9. 1957; Joseph Ewan, *Rocky Mountain Naturalists*. 203. The University of Denver Press 1950)

Northern America, U.S. Perennial, strongly tufted, sheaths open and smooth or hairy, no auricles, leaves stiff and usually inrolled, spiky and bristly flower head medium to long, protruding and bristly twice-bent awns, on dry ground, coniferous forest, disturbed or degraded areas, see *Contributions from the United States National Herbarium* 3(1): 50. 1892, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 46. 1898 and *Contr. U.S. Natl. Herb.* 24(7): 241. 1925, *Canadian Journal of Botany* 56(2): 193. 1978, *Phytologia* 74(1): 10. 1993.

in English: stiff needle grass, pubescent Western needlegrass

A. parishii (Vasey) Barkworth (*Stipa coronata* subsp. *parishii* (Vasey) Hitchc.; *Stipa coronata* var. *depauperata* (M.E. Jones) Hitchc.; *Stipa coronata* var. *parishii* (Vasey) S.L. Welsh; *Stipa parishii* Vasey)

Sierra Nevada, U.S., California. Basal leaf sheaths ciliate, glumes unequal, awn bent, dry rocky slopes, see *Species*

Graminum Stipaceorum 75. 1842, *Geological Survey of California, Botany* 2: 287-288. 1880, *Botanical Gazette* 7(3): 33. 1882 and *Contributions from the United States National Herbarium* 24(7): 227. 1925, *Journal of the Washington Academy of Sciences* 24(7): 292. 1934, *Phytologia* 74(1): 11. 1993, *A Utah Flora: Third Edition, revised* 800. 2003.

A. parishii (Vasey) Barkworth subsp. **depauperatum** (M.E. Jones) Barkworth (*Stipa coronata* var. *depauperata* (M.E. Jones) Hitchc.; *Stipa parishii* var. *depauperata* M.E. Jones)

America, U.S., Utah. See *Contributions to Western Botany* 14: 11. 1912, *Journal of the Washington Academy of Sciences* 24(7): 292. 1934, *Phytologia* 74(1): 11. 1993.

A. parishii (Vasey) Barkworth subsp. **parishii** (*Stipa parishii* var. *parishii*)

America. See *Botanical Gazette* 7(3): 33. 1882.

A. pekinense (Hance) Ohwi (*Achnatherum extremorientale* (Hara) Keng; *Achnatherum extremorientale* (Hara) Hara, nom. illeg., non *Achnatherum extremorientale* (Hara) Keng; *Achnatherum extremorientale* (Hara) Keng ex P.C. Kuo, nom. illeg., non *Achnatherum extremorientale* (Hara) Keng; *Stipa extremorientalis* Hara; *Stipa japonica* Hack ex Honda; *Stipa pekinense* Hance; *Stipa sibirica* (L.) Lam.)

China, Japan. Useful for erosion control, see *Species Plantarum* 1: 79. 1753, *Primitiae Florae Amurensis* 326. 1859, *Journal of Botany, British and Foreign* 15(177): 268. 1877 and *Journal of Japanese Botany* 15(7): 459. 1939, *Journal of Japanese Botany* 17(7): 401. 1941, *Bulletin of the National Science Museum* 33: 66. 1953, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 107, 212. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 590, f. 524. 1959, *Flora Tsinlingensis*. Tomus 1, Spermatophyta 1(1): 153. Peking 1976 [China. Academia Sinicae. Institutum Botanicum], *Grasses of Japan and its Neighboring Regions* 483. 1987.

A. perplexum Hoge & Barkworth (*Stipa perplexa* (Hoge & Barkworth) Wipff & S.D. Jones)

America, U.S., New Mexico. See *Phytologia* 74(1): 11. 1993, *Phytologia* 77(6): 461. 1994[1995].

A. petriei (Buchanan) S.W.L. Jacobs & J. Everett (*Stipa petriei* Buchanan) (for the Scottish (b. Morayshire) botanist Donald Petrie, 1846-1925, went to Australia in 1868, in New Zealand 1874-1925, in 1894 chief inspector of schools, Auckland, New Zealand, wrote "List of the flowering plants indigenous to Otago." *Trans. Proc. New Zealand Inst.* 1896, "The Gramina of the Subantarctic Islands of New Zealand." *Subantarct. Is N.Z.* 2: 472-481. 1909 and "Some additions to the Flora of the Subantarctic Islands of New Zealand." *T.N.Z.I.* 47: 59-60. 1915. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 76. 1965; Thomas Frederick Cheeseman, *Manual of the New Zealand Flora*. xxvii.

Wellington 1906; I.H. Vegter, *Index Herbariorum*. Part II (5), *Collectors N-R*. Regnum Vegetabile vol. 109. 1983; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

New Zealand. Perennial, erect, wiry, branching extravaginal, short cataphylls, narrow panicle, lemma hairy, awned, chasmogamous, see *Indigenous Grasses of New Zealand* t. 17, 2, addenda. 1880 and *Telopea* 6(4): 582. 1996.

A. pinetorum (M.E. Jones) Barkworth (*Stipa pinetorum* M.E. Jones)

Sierra Nevada, Utah. Inflorescence branches appressed, glumes subequal, awn bent twice, on rocky soil, coniferous forest, see *Proceedings of the California Academy of Sciences*, Series 2, 5: 724. 1895 and *Phytologia* 74(1): 12. 1993.

A. richardsonii (Link) Barkworth (*Oryzopsis richardsonii* (Link) Beal; *Stipa richardsonii* Link; *Stipa richardsonii* var. *major* Macoun)

Northern America, U.S., Canada. Perennial, tufted, often purplish, several stemmed, sheaths open and smooth or slightly hairy, no auricles, basal leaves, rough blades usually folded to slightly inrolled, sparse open and drooping flower head with spreading and flexuous branches, single-flowered spikelets, 2 narrow glumes, awn twice bent, grows in low-elevation grasslands and montane openings in forests, see *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 2: 245. 1833, *Catalogue of Canadian Plants* 2(4): 191. 1888, *Botanical Gazette* 15(5)12: 111. 1890 and *Phytologia* 74(1): 12. 1993.

in English: Richardson's needlegrass, spreading needle grass

A. robustum (Vasey) Barkworth (*Achnatherum lobatum* (Swallen) Barkworth; *Stipa lobata* Swallen; *Stipa robusta* (Vasey) Scribn.; *Stipa vaseyi* Scribn.; *Stipa viridula* var. *robusta* Vasey)

Northern America, U.S., Mexico. Perennial, a stock-poisoning grass, on rocky areas, hillsides, rocky hill, see *Contributions from the United States National Herbarium* 1(2): 56. 1890, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 23. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 46. 1898 and *Journal of the Washington Academy of Sciences* 23(10): 199, f. 2. 1933, *Taxon* 42: 711. 1993, *Phytologia* 74(1): 9, 12. 1993, *Taxon* 44: 610. 1995.

in English: sleepygrass

A. scribneri (Vasey) Barkworth (*Stipa scribneri* Vasey)

U.S., New Mexico. Perennial, see *Bulletin of the Torrey Botanical Club* 11: 125. 1884 and *Phytologia* 74(1): 13. 1993.

in English: Scribner needlegrass

A. speciosum (Trin. & Rupr.) Barkworth (*Jarava patagonica* (Speg.) Peñailillo; *Jarava speciosa* (Trin. & Rupr.) Peñailillo; *Stipa californica* Vasey ex S. Watson; *Stipa humilis* Cav.; *Stipa humilis* var. *jonesiana* Kuntze; *Stipa humilis* var. *speciosa* (Trin. & Rupr.) Kuntze; *Stipa patagonica* Speg.; *Stipa speciosa* Trin. & Rupr.; *Stipa speciosa* f. *minor* Speg.; *Stipa speciosa* f. *speciosa*; *Stipa speciosa* var. *minor* Vasey; *Stipa speciosa* var. *speciosa*; *Stipa tehuelches* Speg.) (named for the American plant collector Marcus Eugene Jones, 1852-1934, botanist, explorer, mining engineer, Latinist, botanized in Texas and Colorado, collected widely in the Intermountain West, among his writings are *Ferns of the West*. Salt Lake City, Utah 1882 and *Revision of North-American Species of Astragalus*. Salt Lake City, Utah 1923. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 262. Boston 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 246. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 277, 361. 1916; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950)

Argentina, Chile, Baja California, U.S., Arizona, Mexico. Perennial, caespitose, forming small clumps, basal leaf sheath hairy, inflorescence partly enclosed by uppermost leaf sheath, glumes subequal, awn bent, on rocky slopes, canyons, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 41, t. 466, f. 1. 1799, *Species Graminum Stipaceorum* 45. 1842, *Proceedings of the American Academy of Arts and Sciences* 24: 80. 1889, *Contributions from the United States National Herbarium* 3(1): 52. 1892, *Revista de la Facultad de Agronomía y Veterinaria* 3: 581. 1897, *Revisio Generum Plantarum* 3(2): 371. 1898 and *Anales del Museo Nacional de Montevideo* 4: 58, f. c-d. 1901, *University of California Publications in Botany* 1: 61. 1902, *Contr. U.S. Natl. Herb.* 24(7): 222. 1925, *Revista Argentina de Botánica* 1: 24. 1925, *Phytologia* 74(1): 13. 1993, *Gayana, Botánica* 59(1): 32. 2002.

in English: desert needlegrass

A. splendens (Trin.) Nevski (*Lasiagrostis splendens* Kunth; *Lasiagrostis splendens* (Trin.) Kunth; *Stipa altaica* Trin. ex Ledeb.; *Stipa schlagintweitii* Mez; *Stipa splendens* Trin.) (for the German traveler, explorer and plant collector Hermann Alfred Rudolph von Schlagintweit-Sakünlinski (1826-1882), author of *Reisen in Indien und Hochasien*. ... Basirt auf die resultate der wissenschaftlichen mission von Hermann, Adolph und Robert von Schlagintweit, ausgeführt in den jahren 1854-1858. Jena 1869-1880, *Unter-*

suchungen über die physikalische Geographie der Alpen in ihren Beziehungen zu den Phänomenen der Gletscher, zur Geologie, Meteorologie und Pflanzengeographie, von Hermann Schlagintweit und Adolph Schlagintweit. Leipzig 1850, *Ueber die Ernährung der Pflanzen mit besonderer Rücksicht auf die Bedingungen ihres Gedeihens in verschiedenen Höhen der Alpen*. [Leipzig, 1850]; he was brother of Adolf von Schlagintweit (1829-1857). See J.H. Barnhart, *Biographical notes upon botanists*. 3: 228. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 353. 1972; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898.] Leipzig 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Stafleu & Cowan, *Taxonomic literature*. 5: 187-189. 1985)

China, Tibet, Mongolia, Russia, Siberia. Perennial bunchgrass, clumped, robust and stout stems, leaves scabrous, eaten by sheep, useful for erosion control, occurs in meadows, forest and open grassland areas, lowlands, gravelly sand, deep gravelly loam, brown gravelly soil, swamps, marshy ground along river, stream bottoms, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 54. 1821 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 208. 1921, *J. Jap. Bot.* 17: 404. 1941.

in English: chee grass

A. stillmanii (Bol.) Barkworth (*Lasiagrostis tenacissima* (L.) Trin. & Rupr.; *Macrochloa tenacissima* (L.) Kunth; *Stipa stillmanii* Bol.; *Stipa tenacissima* L.)

California, Sierra Nevada, U.S. Leaf blade folded or rolled, basal leaf sheath smooth and hairy, glumes subequal, awn bent, found on dry red soil, rocky slopes, coniferous forest, see *Centuria I. Plantarum* ... 6. 1755, *Amoen. Acad.* 4: 266. 1759, *Révision des Graminées* 1: 58. 1829, *Species Graminum Stipaceorum* 94. 1842, *Proceedings of the California Academy of Sciences* 4: 169. 1872 and *Phytologia* 74(1): 14. 1993, *Anal. Jard. Bot. Madrid* 52(2): 179-186. 1995.

A. swallenii (C.L. Hitchc. & Spellenb.) Barkworth (*Oryzopsis swallenii* C.L. Hitchc. & Spellenb.)

America. See *Brittonia* 20: 164. 1968, *Phytologia* 74(1): 14. 1993.

A. thurberianum (Piper) Barkworth (*Stipa occidentalis* Thurb. ex Torr., nom. illeg., non *Stipa occidentalis* Thurb. ex S. Watson; *Stipa occidentalis* Thurb., nom. illeg., non *Stipa occidentalis* Thurb. ex S. Watson; *Stipa thurberiana* Piper) (after George Thurber, 1821-1890, American botanist, naturalist, 1850-1853 Mexican-U.S. Boundary Survey, chemist, professor of botany and horticulture at Michigan Agricultural College 1859-1863 and editor of the *American Agriculturalist* 1863-1890; see J. Ewan, *Rocky Mountain Naturalists*. 64, 321. 1950; J.H. Barnhart, *Biographical notes upon botanists*. 3: 382. 1965)

Sierra Nevada, U.S. Perennial, hairy, awn bent twice, useful for erosion control, found on foothills, canyons, juniper woodland, disturbed areas, sagebrush scrub, see *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 380. 1871, *United States Exploring Expedition* 17: 483. 1874 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 10. 1900, *Phytologia* 74(1): 14. 1993.

in English: Thurber needlegrass, Thurber's needlegrass

A. wallowaense J. Maze & K. Robson

U.S., Oregon, Wallowa Co. See *Madroño* 43(3): 401, f. 1-2. 1996.

A. webberi (Thurb.) Barkworth (*Eriocoma webberi* Thurb.; *Oryzopsis webberi* (Thurb.) Benth. ex Vasey; *Stipa webberi* (Thurb.) B.L. Johnson)

U.S., California. Stiff, leaf blades rolled, dense inflorescence often enclosed by upper leaf sheath, glumes subequal, lemma hairy, straight awn, open places, slopes, dry flats, disturbed areas, see *Geological Survey of California, Botany* 2: 283-284. 1880, *The Grasses of the United States* 23. 1883 and *Botanical Gazette* 107: 25. 1945, *Phytologia* 74(1): 14. 1993.

A. x bloomeri (Boland.) Barkworth (*Oryzopsis bloomeri* (Boland.) Ricker ex Piper; *Oryzopsis bloomeri* (Bol.) Ricker; *Stipa bloomeri* Boland.; x *Stiporyzopsis bloomeri* (Boland.) B.L. Johnson) (for the American (San Francisco) botanist H.G. Bloomer, 1821-1874, see James C. Hickman, editor, *The Jepson Manual: Higher Plants of California*. 1180. University of California Press, Berkeley 1993; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 67. Berlin & Hamburg 1989)

North America, U.S., Oregon. Found in dry sandy soils, desert, see *Proceedings of the California Academy of Sciences* 4: 168. 1872 and *Contributions from the United States National Herbarium* 11: 109. 1906, *American Journal of Botany* 30: 55. 1943, *American Journal of Botany* 32: 602, f. 14-18. 1945, *Phytologia* 74(1): 14. 1993.

Achneria Munro ex Benth. = *Achneria* Benth., *Afrachneria* Sprague, *Pentaschistis* (Nees) Spach

Greek *achne* "chaff, glume."

Arundinoideae, Arundineae, see *Flore Française. Troisième Édition* 3: 32. 1805, *Essai d'une Nouvelle Agrostographie* 72, 146. 1812, *Histoire naturelle des Végétaux* 13: 164. Paris 1841, C.G.D. Nees von Esenbeck (1776-1858), *Florae Africae Australioris Illustrationes Monographicae* ... I. Gramineae. Glogaviae 1841, *Genera Plantarum* 3(2): 1158, 1163. 1883 and *Journal of Botany, British and Foreign* 60: 138. 1922, *Blumea* 26(1): 130. 1980, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992, M. Lazarides,

“The genus *Eriachne* (Eriachneae, Poaceae).” *Australian Systematic Botany* 8(3): 355-452. 1995, K.C. Klopfer, J.J. Spies & B. Visser, “Cytogenetic studies in the genus *Pentaschistis* (Poaceae: Arundinoideae).” *Bothalia* 28(2): 231-238. 1998.

Achneria P. Beauv. = *Eriachne* R. Br.

See *Eriachne* R. Br.

Eriachneae, type *Achneria obtusa* (R. Br.) P. Beauv., see *Prodromus Florae Novae Hollandiae* 183. 1810, Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 72, 73, 146. Paris 1812 and *Blumea* 26(1): 127, 130. 1980.

Achnodon Link = *Achnodonton* P. Beauv.,
Phleum L.

From the Greek *achne* “chaff, glume” and *odous, odontos* “tooth.”

Pooideae, Poeae, Alopecurinae, see *Species Plantarum* 1: 59-60. 1753, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 415. 1801, *Hortus Regius Botanicus Berolinensis* 1: 65. 1827, C.F. Ledebour, *Flora Rossica sive enumeratio plantarum in totius imperii Rossici provinciis Europaeis, Asiaticis et Americanis hucusque observatarum*. 4: 455. Stuttgartiae, E. Schweizerbart, 1842-1853, *Synopsis der mitteleuropäischen Flora* 2: 154. 1899 and *Contributions from the United States National Herbarium* 48: 19, 491-494. 2003.

Achnodondon Kunth = *Achnodon* Link,
Achnodonton P. Beauv.

See *Mém. Mus. Hist. Nat.* [Paris] 2: 72. 1815.

Achnodonton P. Beauv. = *Phleum* L.

From the Greek *achne* “chaff, glume” and *odous, odontos* “tooth.”

Pooideae, Poeae, Alopecurinae, type *Achnodonton tenuis* (Host) P. Beauv., see *Species Plantarum* 1: 59-60. 1753, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 415. 1801, *Icones et Descriptiones Graminum Austriacorum* 2: 27, t. 36. 1802, *Essai d'une Nouvelle Agrostographie* 24-25, 146, 173, t. 7, f. 5. 1812, *De Graminibus unifloris et sesquifloris* 164. Petropoli 1824, *Hortus Regius Botanicus Berolinensis* 1: 65. 1827, *Tourist's Fl.* 398. 1850 and *Contr. U.S. Nat. Herb.* 24: 161. 1925, *Contributions from the United States National Herbarium* 48: 19, 491-494. 2003.

Achrochloa B.D. Jacks. = *Koeleria* Pers.

From the Greek *a* “absence, lacking,” *chroa* “color, to color” and *chloe, chloa* “grass.”

Pooideae, Poeae, Aveninae, see Christiaan Hendrik Persoon (1761/1762-1836), *Synopsis Plantarum, seu enchiridium botanicum complectens enumerationem systematicam specierum hucusque cognitorum ...* 1: 97. Parisiis lutetiorum [Paris] 1805-1807.

Achroostachys Benth. = *Athroostachys*
Benth.

Greek *a* “absence, lacking,” *chroa* “color, to color” and *stachys* “a spike,” or simply referring to *Athroostachys*.

Bambusoideae, Bambuseae, Arthrostylidiinae, see *Genera Plantarum* 3: 1208-1209. 1883 and *Contributions from the United States National Herbarium* 39: 25. 2000.

Achyrodes Boehm. = *Lamarckia* Moench

From the Greek *achyron* “chaff, husk.”

Pooideae, Poeae, Dactylidinae, type *Achyrodes aureum* (L.) Kuntze, see *Species Plantarum* 1: 73. 1753, *Definitiones Generum Plantarum* 420. 1760, *Methodus Plantas Horti Botanici ...* 201. 1794, *Descr. Gram.* 376. 1812, *Revisio Generum Plantarum* 2: 758. 1891 and *Contributions from the United States National Herbarium* 48: 420-421. 2003.

Aciachne Benth.

From the Greek *ake, akis, akidos* “a point” and *achne* “chaff, glume.”

About 1-3 species, Venezuela to Peru, high Andes, northern Argentina, Costa Rica. Stipoideae, Stipeae, or Pooideae, Stipeae, Stipinae, perennial, xerophytic, low, tufted, dense mat-forming or cushions, herbaceous, unbranched, wiry, auricles absent, sheaths overlapping, ligule an unfringed membrane, stiff narrow leaves with spiny tips, fibrous roots, plants bisexual, panicle reduced, spikelets pedicellate, 2 glumes more or less equal, lower glume 3- to 5-nerved, upper glume 5-nerved, lemma coriaceous, palea coriaceous, 3 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, cleistogamous or chasmogamous, ground cover, rocky slopes, open habitats, disturbed sites, montane grassland, marshy ground, páramos, puna vegetation, type *Aciachne pulvinata* Benth., see *Hooker's Icones Plantarum* 14: 44-45, pl. 1362. 1881 and *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Boletín de la Sociedad Argentina de Botánica*

12: 268-283. 1968, *Taxon* 29: 645-666. 1980, *Nordic Journal of Botany* 7(6): 662-672. 1987, *Flora Mesoamericana* 6: 245. 1994, *Contributions from the United States National Herbarium* 48: 19. 2003.

Species

A. acicularis Laegaard (*Acicarpa uniflora* Baill.)

Bolivia, Peru. Prickly, leaves narrow and sharp, see *Bulletin Mensuel de la Société Linnéenne de Paris* 12: 1073. 1893 and *Nordic Journal of Botany* 7(6): 669. 1987.

in Peru: paku

A. flagellifera Laegaard

Ecuador. Tufted, leaves sharp pointed, see *Nordic Journal of Botany* 7(6): 669. 1987.

A. pulvinata Benth. (*Agrostis delicatula* Steud. ex Lechler)

Bolivia, Ecuador, Colombia. See *Berberides Americae Australis* 56. 1857, *Hooker's Icones Plantarum* 14: 44-45, t. 1362. 1881 and *Nord. J. Bot.* 7(6): 667. 1987.

Acicarpa Raddi = *Acicarpa* (Calyceraceae), *Digitaria* Haller, *Trichachne* Nees

From the Greek *ake*, *akis*, *akidos* "a point" and *karpos* "fruit."

Panicoideae, Paniceae, Digitariinae, type *Acicarpa sacchariflora* Raddi, see *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Annales du muséum national d'histoire naturelle* 2: 347, t. 58. 1803, *Agrostografia Brasiliensis sive enumeratio plantarum ad familias naturales graminum et ciperoidarum spectantium, quas in Brasilia ... Lucca* [1823], *Agrostologia Brasiliensis* 2: 85, 87. 1829 [or *Flora Brasiliensis seu Enumeratio Plantarum in Brasilia ... Stuttgartiae et Tubingae 1829-1833*] and *Monograph of the Genus Digitaria* 573, 851, 866. 1950, *Contributions from the United States National Herbarium* 46: 13, 193-213, 622-623. 2003.

Acidosasa C.D. Chu & C.S. Chao = *Acidosasa* C.D. Chu & C.S. Chao ex Keng f., *Metasasa* W.T. Lin

From the Greek *akidos*, *akis* "a point" plus *Sasa*, or from the Latin *acidum* (sour) and *Sasa* (another bamboo genus), referring to the sour edible shoots.

A genus of about one/(six-)eight/22 species, southern China, Guangdong, Hunan, Yunnan, Jiangxi, Fujian, Vietnam. Bambusoideae, Bambusodae, Bambuseae, perennial, monopodial, unarmed, diffuse, shrubby, erect, hollow and cylindrical, woody, 3-5 branches at each node, rhizomes leptomorph, running underground stems, culm sheaths

deciduous, leaves variable in size, plants bisexual, inflorescence a panicle or a raceme, spikelets several-many-flowered and pedicellate, the flowering culms leafy, glumes 2-4 or several, lemmas acuminate or shortly awned, paleas 2-keeled, 3 lodicules, 6 stamens, 3 feathery stigmas, edible young shoots, the young shoots are preserved by local people as a vegetable, in evergreen broad-leaved forest, type *Acidosasa chinensis* C.D. Chu & C.S. Chao (*Acidosasa chinensis* C.D. Chu & C.S. Chao ex Keng f.), see *Journal of Nanjing Technological College of Forest Products* 1979: 142. 1979, *Journal of Bamboo Research* 1(2): 31-33. 1981[1982], *Acta Phytotaxonomica Sinica* 26(2): 145-146, f. 1. 1988, Chao Chi-Son & S.A. Renvoize, "A revision of the species described under *Arundinaria* (Gramineae) in southeast Asia and Africa." *Kew Bulletin* 44(2): 349-367. 1989, *Acta Phytotaxonomica Sinica* 29(6): 517-524. 1991, *A Compendium of Chinese Bamboo* 197-198. 1994, *Taxon* 46(1): 105-107. 1997, *The Flora of China* 5: 61-81. 1997.

Species

A. sp.

in China: suanzhu shu

A. bilamina W.T. Lin & Z.M. Wu

China. See *J. South China Agr. Univ.* 14(3): 113, f. 5. 1993.

A. breviclavata W.T. Lin

China. See *Journal of Bamboo Research* 5(2): 22-27, f. 1-3. 1986.

A. brilletii (A. Camus) C.S. Chao & Renvoize (*Arundinaria brilletii* A. Camus)

Vietnam. See *Bulletin de la Société Botanique de France* 74: 620. 1927 [1928], *Kew Bulletin* 44(2): 351. 1989.

in Vietnam: tre trung, tre tien

A. chienouensis (T.H. Wen) C.S. Chao & T.H. Wen (*Acidosasa glauca* B.M. Yang; *Indosasa chienouensis* T.H. Wen)

China. Hunan. Young culms glaucous or green, glabrous, nodes prominent, pruinose below nodes, sheath caducous, sheath blade narrow-triangular to lanceolate, leaves lanceolate, auricles falciform, sheath ligule ciliate, inflorescence racemose and terminal, 2-5 spikelets, glabrous glumes, lemma acuminate, palea rounded, see *Journal of Bamboo Research* 2(1): 67, f. 19. 1983, *Acta Phytotaxonomica Sinica* 22(1): 85-86, f. 1. 1984, *Journal of Bamboo Research* 7(1): 31. 1988, *Acta Phytotaxonomica Sinica* 29(6): 522. 1991.

in China: jan-ou suanzhu, jan'ou suanzhu, chien-ou suanzhu

A. chinensis C.D. Chu & C.S. Chao (*Acidosasa chinensis* C.D. Chu & C.S. Chao ex Keng f.)

China, Guangdong. Young culms pubescent, culms green and narrow-striate, nodes prominent, 3 branches on each node, culm sheaths crisp and acuminate, sheaths auricles

absent, sheath ligule short and ciliate, 2-5 leaves on each twig, simple raceme or panicle, flowering branchlets terminal, usually 4 glumes, shoots edible, used for papermaking and weaving, in open areas, mountains, see *Journal of Nanjing Technological College of Forest Products* 1979: 142, t. 1. 1979, *Journal of Bamboo Research* 1: 31. 1982, *Acta Phytotaxonomica Sinica* 29(6): 520, f. 1. 1991, *Taxon* 46(1): 105-107. 1997.

in China: suanzhu

A. dayongensis T.P. Yi

China, Jiangxi. Culm green, glabrous, 3 branches on each node, sheath auricles narrow and sickle-shaped, sheath ligule ciliate, sheath blade purplish lanceolate, leaves broad-lanceolate to lanceolate, cultivated, shoot edible, see *Journal Nanjing University, Natural Sciences Edition* 1981: 98. 1981, *Acta Phytotaxonomica Sinica* 21(1): 94-96, pl. 1. 1983, *Bulletin of Botanical Research* 6(4): 25-26, f. 1. 1986, *Journal of Wuhan Botanical Research* 4(4): 335. 1986, *Acta Phytotaxonomica Sinica* 29(6): 524, f. 4. 1991.

in China: Dayong suanzhu

A. edulis (T.H. Wen) T.H. Wen (*Sinobambusa edulis* Wen)

China. Young culms not glaucous or only below nodes, shoots eaten as a vegetable, see *Journal of Bamboo Research* 3(2): 30, f. 6. 1984, *Journal of Bamboo Research* 7(1): 31. 1988.

in China: Huang tian zhu

A. fujianensis C.S. Chao & H.Y. Zou

China. See *J. Nanjing Inst. Forestry* 88, f. 1. 1984.

in China: Fujian suanzhu

A. gigantea (Wen) Q.Z. Xie & W.Y. Zhang (*Indosasa gigantea* (Wen) Wen; *Sinobambusa gigantea* Wen)

China, Fujian. Erect, straight, young culm pinkish green, pruinose, 3 branches on each node, sheath coriaceous, golden yellow to reddish brown, sheath auricles ovate or falciform, leaves long lanceolate, cultivated, ornamental, used as timber, see *Journal of Bamboo Research* 2(1): 57, f. 10. 1983, *Journal of Bamboo Research* 10(1): 22. 1991, *Bulletin of Botanical Research* 13(1): 74. 1993.

A. glauca B.M. Yang

China. See *Acta Phytotaxonomica Sinica* 22(1): 85, pl. 1. 1984.

in China: Fen suanzhu

A. gracilis W.T. Lin & X.B. Ye

China. Young culms pubescent, see *Acta Phytotaxonomica Sinica* 26(2): 149, f. 4. 1988.

in China: Xiao suanzhu

A. guangxiensis Q.H. Dai & C.F. Huang ex Ohrnb.

China. See *Journal of Bamboo Research* 5(3): 64-66, f. 1. 1986.

in China: Guangxi suanzhu

A. heterolodicula (W.T. Lin & Z.J. Feng) W.T. Lin (*Oligostachyum heterolodiculum* W.T. Lin & Z.J. Feng)

China. See *Bulletin of Botanical Research* 12(4): 352. 1992, *Guihaia* 10(1): 16, f. 2. 1996.

A. hirtiflora Wang & G.H. Ye (*Acidosasa dayongensis* T.P. Yi; *Acidosasa hirtiflora* Z.P. Wang & G.H. Ye ex C.S. Chao & C.D. Chu; *Acidosasa purpurea* (J.R. Xue & T.P. Yi) Keng f.; *Indosasa purpurea* J.R. Xue & T.P. Yi)

China, Guangxi. Young culms glabrous or sparsely pubescent, culm sheaths densely setose, no sheath auricles and cilia, sheath ligule arcuate, glume and lemma densely hairy, shoot edible, see *Journal Nanjing University, Natural Sciences Edition* 1981: 98. 1981, *Acta Phytotaxonomica Sinica* 21(1): 94-96, pl. 1. 1983, *Bulletin of Botanical Research* 6(4): 25-26, f. 1. 1986, *Journal of Wuhan Botanical Research* 4(4): 335. 1986, *Acta Phytotaxonomica Sinica* 29(6): 524, f. 4. 1991.

A. lentiginosa W.T. Lin & Z.J. Feng

China. See *Journal of Bamboo Research* 12(2): 37, t. 3. 1993.

A. lingchuanensis (C.D. Chu & C.S. Chao) Q.Z. Xie & X.Y. Chen (*Indosasa lingchuanensis* (C.D. Chu & C.S. Chao) Q.Z. Xie & X.Y. Chen; *Indosasa lingchuanensis* (C.D. Chu & C.S. Chao)

China, Lingchuan, Guangxi. Young culm sparsely silky, shoot reddish or greenish, auricles falciform, ligule truncate or convex, sheath blade light green broadly lanceolate, used for fencing, edible shoots, growing along riverbanks, moist ground, along streams, see *Acta Phytotaxonomica Sinica* 21(1): 69-71, pl. 4. 1983, *Bulletin of Botanical Research* 13(1): 74, f. 1-2. 1993, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

A. longiligula (T.H. Wen) C.S. Chao & C.D. Chu (*Acidosasa fujianensis* C.S. Chao & H.Y. Zou; *Indosasa longiligula* T.H. Wen)

Asia, China. Young culms glaucous, see *Journal of Bamboo Research* 2(1): 68, t. 20. 1983, *J. Nanjing Inst. Forest.* 1984(3): 88, f. 1. 1984, *Acta Phytotaxonomica Sinica* 29(6): 524, f. 5. 1991, *Fl. Reipubl. Pop. Sin.* 9(1): 568, pl. 172, f. 6-7. 1996.

A. longiligula (T.H. Wen) C.S. Chao & C.D. Chu var. **amara** (Wen) Ohrnb. (*Indosasa longiligula* var. *amara* Wen)

China. Bitter shoots, see *Journal of Bamboo Research* 2(1): 70. 1983.

A. macula W.T. Lin & Z.M. Wu

China. See *Journal of Bamboo Research* 11(1): 36, t. 6. 1992.

A. notata (Wang & X.B. Ye) S.S. You (*Acidosasa fujianensis* C.S. Chao & H.Y. Zou; *Acidosasa longiligula*

(T.H. Wen) C.S. Chao & C.D. Chu; *Arundinaria concava* C.D. Chu & H.Y. Zou; *Arundinaria notata* (Z.P. Wang & G.H. Ye) Q.H. Dai; *Arundinaria notata* (Z.P. Wang & G.H. Ye) H.Y. Zou; *Arundinaria notata* (Z.P. Wang & G.H. Ye) H.Y. Zuo ex C.S. Chao & G.Y. Yang; *Indosasa longiligulata* T.H. Wen; *Indosasa pusilloaurita* W.T. Lin; *Pleioblastus intermedius* S.Y. Chen; *Pleioblastus maculosoides* T.H. Wen; *Pseudosasa longiligulata* T.H. Wen; *Pseudosasa notata* Z.P. Wang & G.H. Ye; *Pseudosasa wuyiensis* S.L. Chen & G.Y. Sheng).

China, Fujian. Young culm pruinose, nodes weakly prominent, 3 branches at each node, small sheath auricles densely pubescent, sometimes sheath auricles absent, sheath ligule arcuate, raceme terminal or lateral, glabrous glumes, lemmas and palea pubescent, shoots edible, culms used to make containers or instruments, see *Journal Nanjing University, Natural Sciences* 1981(1): 97, f. 4. 1981, *J. Bamboo Res.* 1(1): 27. 1982, *Journal of Bamboo Research* 2(1): 68, t. 20. 1983, *Acta Phytotax. Sin.* 21(4): 408. 1983, *J. Nanjing Inst. Forest.* 1984(3): 88, f. 1. 1984, *Journal of Bamboo Research* 3(2): 33. 1984, *Acta Phytotaxonomica Sinica* 29(6): 524, f. 5. 1991, *Bull. Bot. Res., Harbin.* 11(4): 6. 1991, *Bull. Bot. Res., Harbin.* 12(4): 351, f. 2. 1992, *Journal of Bamboo Research* 12(3): 11. 1993, *Journal of Bamboo Research* 13(1): 11. 1994, *Fl. Reipubl. Pop. Sin.* 9(1): 568, pl. 172, f. 6-7. 1996.

A. paucifolia W.T. Lin (*Acidosasa nanunica* (McClure) C.S. Chao & G.Y. Yang; *Indocalamus nanunicus* McClure) China. See *Lingnan University Science Bulletin* 9: 25. 1940, *Bulletin of Botanical Research* (Harbin) 12(4): 352, f. 3. 1992, *Acta Phytotaxonomica Sinica* 39(1): 39. 2001.

A. purpurea (Hsueh & Yi) P.C. Keng (*Acidosasa dayongensis* T.P. Yi, also *dayoungensis*; *Acidosasa hirtiflora* Z.P. Wang & G.H. Ye; *Acidosasa hirtiflora* Z.P. Wang & G.H. Ye ex C.S. Chao & C.D. Chu; *Indosasa purpurea* J.R. Xue/Hsueh & T.P. Yi)

China, Hunan, Yunnan, Guangxi. Glabrous and glaucous, nodes prominent, culm sheaths leathery, raceme terminal or lateral, spikelets compressed, hairy glumes, lemmas setose, palea ciliolate, lodicules lanceolate, stigmas plumose, bitter shoots edible, culms used for weaving or fence, see *Journal Nanjing University, Natural Sciences Edition* 1981: 98. 1981, *Acta Phytotaxonomica Sinica* 21(1): 94-96, pl. 1. 1983, *Bulletin of Botanical Research* 6(4): 25-26, f. 1. 1986, *Journal of Wuhan Botanical Research* 4(4): 335. 1986, *Acta Phytotaxonomica Sinica* 29(6): 524, f. 4. 1991. in China: Maguan suanzhu

A. venusta (McClure) Z.P. Wang & G.H. Ye ex C.S. Chao & C.D. Chu (*Acidosasa venusta* (McClure) Z.P. Wang & G.H. Ye; *Semiarundinaria venusta* McClure)

China, Guangdong. Young internodes long pubescent to sparsely hairy, nodes prominent, 3 branches at each node,

sheath with deciduous pubescence, no sheath auricles, sheath ligule with a truncate tip, leaves oblong-lanceolate, raceme terminal or lateral, spikelets linear-lanceolate, 2 glumes acute, lemma acute or acuminate, 3 lodicules, ovary glabrous, stigma feathery, see *Lingnan Univ. Sci. Bull.* 9: 55. 1940, *Journal Nanjing University, Natural Sciences Edition* 1981(1): 99. 1981, *Acta Phytotaxonomica Sinica* 29(6): 524, f. 6. 1991.

in China: nizhu

A. xiushanensis Yi

China. See *Journal of Bamboo Research* 11(3): 49-51, f. 1. 1992.

in China: Ganzi zhu

Acophorum Steud.

See *Nomenclator Botanicus. Editio secunda* 1: 20. 1840.

Acostia Swallen

Dedicated to the Ecuadorian botanist Misael Acosta Solis, 1910-1994, professor of botany, plant collector, author of *Glumifloras del Ecuador*: Catálogo fitogeográfico de las Gramíneas, Ciperáceas y Juncáceas. Quito 1969 [Flora (Ecuador), nos. 13(47-50): 1-216], *Las Fibras y lanas vegetales en el Ecuador*. (Inst. Ecuat. Cienc. Nat., Contrib., no. 21) Bol. Inform. Cient. Nac., no. 48, 1952, "Los pastizales naturales del Ecuador: Conservación y aprovechamiento de los páramos y sabanas." *Revista Geogr.* (Rio de Janeiro) 53: 87-99. 1960, "Plantas indígenas para forrajicultura tropandina." *Revista Acad. Colomb. Ci. Exact.* 15(56): 57-97. 1980. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 10. 1965; R.B. Miller, *Taxon* 34: 178. 1985.

One species, Ecuador. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, herbaceous, slender, densely tufted, leaf sheaths keeled, ligule a fringed membrane, inflorescence spicate, spikelets solitary and paired, glumes one per spikelet, lower glume absent or vestigial, upper glume densely hairy, palea present, growing along rivers and stream banks, sometimes referred to *Digitaria* or *Panicum*, type *Acostia gracilis* Swallen, see *Prodromus Florae Novae Hollandiae* 190. 1810 and *Boletín de la Sociedad Argentina de Botánica* 12: 109. 1968, *Sida* 13(4): 396. 1989, *Contributions from the United States National Herbarium* 46: 13. 2003.

Species

A. gracilis Swallen (*Panicum acostia* R.D. Webster; *Panicum gracile* R. Br.)

Ecuador.

Acrachne Wight & Arn. ex Chiov. =
Acrachne Chiov., *Arthrochloa* J.W. Lorch,
Arthrochloa R. Br., *Camusia* Lorch,
Normanboria Butzin

Greek *akros* “the summit, terminal, highest, at the top” and *achne* “chaff, glume, scale,” referring to the terminal glume and lemmas.

Three species, Old World tropics, Africa, Southeast Asia, Australia, China. Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eleusininae, annual, mesophytic, herbaceous, tufted, auricles absent, ligule membranous with a ciliate fringe, flat leaf blades, plants bisexual, cleistogamous or chasmogamous, inflorescence spicate digitate or subdigitate or whorled, bisexual solitary spikelets, 6-20 florets, terminal spikelet suppressed or abortive, upper florets reduced, 2 glumes unequal or subequal, upper glume awned and acuminate, lemmas strongly keeled and membranous, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, shade and open habitats, sandy areas, among rocks, seacoast, savannah, closely related to *Eleusine* and *Dactyloctenium*, type *Acrachne verticillata* (Roxb.) Wight & Arn. ex Chiov., see *Chloris Melvilliana* 35. 1823, *Nomenclator Botanicus* edition 2 1: 21. 1840 and *Annuario Reale Ist. Bot. Roma* 8(3): 361-362. 1908, *Bulletin de la Société Botanique de France* 75: 913. 1928, *Blumea* 3: 164-167. 1938, *Atti della reale accademia d'Italia. Memorie della classe di scienze fisiche, matematiche e naturali* 11(2): 65. 1940, *Blumea, Supplement* 3: 44. 1946, *Journal of the Indian Botanical Society* 39: 490. 1960, *Grasses of Burma ...* 487. 1960, *Bulletin of the Research Council of Israel, Section D, Botany* 9: 155. 1961, *Taxon* 27(2-3): 301. 1978, *Kew Bulletin* 37(1): 158-159. 1982, *Grasses S. Queensland* 78-79. 1983, *Journal of Cytology and Genetics* 25: 322-323. 1990, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, “Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications.” *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

A. henrardiana (Bor) S.M. Phillips (*Arthrochloa henrardiana* (Bor) J.W. Lorch; *Dactyloctenium henrardianum* Bor)

India, Tamil Nadu. See *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 2: 1029. 1809 and *Blumea, Supplement* 3: 44. 1946, *Journal of the Indian Botanical Society* 39(3): 490, f. 1-5. 1960, *Kew Bulletin* 37(1): 158. 1982.

A. racemosa (B. Heyne ex Roem. & Schult.) Ohwi (*Acrachne racemosa* (Roem. & Schult.) Ohwi; *Acrachne racemosa* (B. Heyne) Ohwi; *Acrachne verticillata* (Roxb.) Lindl. ex Chiov.; *Acrachne verticillata* Roxb.; *Acrachne verticillata* (Roxb.) Chiov.; *Acrachne verticillata* (Roxb.) B.D. Jacks.;

Acrachne verticillata (Roxb.) Wight & Arn. ex Chiov.; *Eleusine racemosa* Heyne ex Roem. & Schult.; *Eleusine verticillata* Roxb.; *Leptochloa racemosa* (B. Heyne ex Roem. & Schult.) Kunth; *Leptochloa schimperiana* Hochst.; *Leptochloa verticillata* (Roxb.) Kunth; *Sclerodactylon micrandrum* P. C. Keng & L. Liou) (for G.W.H. Schimper)

Africa, Arabia, China, Hainan, Yunnan. Annual, tufted, herbaceous, smooth, erect or geniculately ascending, sparsely branched or simple, ligule a fringed membrane, leaf blades tapering to a tip, slender ascending inflorescence, spike-like racemes whorled, glumes unequal, lanceolate upper glume shortly awned and acuminate, narrowly oblong lower glume acute and mucronate, lemmas tipped with a stout short awn-point, a good fodder grass for cattle, low grazing value, a weed of cultivation, shade-loving, occurs in moist places, field margins, waste ground, ruderal, sandy soils, disturbed places, in gravelly wadi beds, riverbanks, see *Hortus Bengalensis, or a catalogue ...* 8. 1814, *Systema Vegetabilium* 2: 583. 1817, *Flora Indica; or Descriptions ...* 1: 346. 1820, *Nov. Pl. Sp.* 80. 1821, *Révision des Graminées* 1: 91. 1829, *Flora* 38: 203. 1855, *Index Kewensis* 1: 32. 1895 and *Handbook Fl. Ceylon* 5: 277. 1900, *Annuario del Reale Istituto Botanico di Roma* 8(3): 361-362. 1908, *Bulletin of the Tokyo Science Museum* 18: 1. 1947, *Grasses of Ceylon* 81. 1956, *Ceylon Journal of Science, Biological Sciences* 2(2): 125. Colombo 1959.

in Niger: najim, sabagha

in Somalia: dhamba, dhalad

in India: chhinke, jharna, kaadu kapai, kangsi, kuri chinke
 in Thailand: ya tin ka, ya tin mue kak, ya tin mue tuttu, ya yon hu, yaa teenkaa, yaa teenmue tuttuu, yaa yonhuu

A. sundararajii Umamaheswari, Muthukumar & P. Daniel
 India, Tamil Nadu. See *Kew Bulletin* 52(4): 1007, f. 1. 1997.

Acratherum Link = *Arundinella* Raddi

From the Greek *akros* “the summit, highest, at the top” and *ather* “stalk, barb.”

Panicoideae, Arundinelleae, type *Acratherum miliaceum* Link, see *Agrostografia Brasiliensis* 36-37, t. 1, f. 3. 1823, *Hortus Regius Botanicus Berolinensis* 1: 230. 1827, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 102. 1850, *Tentamen Florae Abyssinicae ...* 2: 414. 1850, *Synopsis Plantarum Glumacearum* 1: 114. 1854, *Index Kewensis* 1: 32. 1895 and *Botanical Exchange Club of the British Isles. Report* 1916: 605. 1917, *Graminées du Cameroun* 2: 361. Wageningen: Wageningen Agricultural University Papers, 1992, *Contributions from the United States National Herbarium* 46: 111-113. 2003.

Acritochaete Pilger

Greek *akritos* “unarranged, confused, doubtful, undistinguishable” and *chaite* “a bristle.”

One species, tropical Africa, from Nigeria to East Africa, Ethiopia. Panicoideae, Panicodae, Paniceae, annual or short-lived perennial, decumbent, trailing, straggling, montane, herbaceous, branched, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence spicate, erect and spaced racemes, spikelets pedicellate and solitary, 2 glumes very unequal, long awns filiform and flexuous, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade species, upland forest, see *Flore d'Oware* 2: 14. 1807 [1810] and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 32: 53-54. 1902, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1,A): 222. 1931, *American Journal of Botany* 52(8): 864-869. 1965, *Flora of Tropical East Africa Gramineae* (part 3). 451-898. Rotterdam 1982.

Species

A. volkensis Pilger (*Oplismenus volkensis* (Pilg.) Mez ex Peter) (for Georg Ludwig August Volkens, 1855-1917)

Africa. Annual, weak, trailing, stoloniferous, rooting at the nodes, lower glume very small, upper lemma acuminate, low grazing value, grazed by stock.

Acroceras Stapf = *Commelinidium* Stapf, *Neohusnotia* A. Camus

From the Greek *akros* “the summit, terminal, extremity” and *keras* “horn,” referring to the terminal glume or to the thickened crested lemmas.

Some 15/19 species, Old World tropics, Africa, Madagascar, Indomalayan region. Panicoideae, Panicodae, Paniceae, Setariinae, or Panicoideae, Paniceae, Panicinae, perennial or annual, herbaceous, slender, nonwoody, semiaquatic, branched, coarse, tufted, rhizomatous or stoloniferous, usually with long prostrate base, trailing, sprawling, creeping or decumbent-based culms, leaning, often rooting at the lower nodes, culms leafy, auricles absent, narrow membranous ligule, leaves lanceolate to linear-lanceolate to ovate-lanceolate, plants bisexual, inflorescence paniculate, loose racemes, bisexual paired spikelets, 2 florets, lower floret sterile or male, upper floret bisexual or perfect, 2 very unequal glumes keeled with keel apex crested, upper glume and lower lemma thickened and flattened, green crest at the tip of the upper lemma, 2 fleshy and free lodicules, 3 stamens, ovary glabrous, 2 stigmas, sometimes forming floating mats, shade and open habitats, near running fresh water, understory, damp places, shallow water, marshy ground, forests, stream and lake margins, resembling *Lasiacis*, type *Acroceras oryzoides* Stapf, see *North American Flora* 3(2):

200, 210. 1915, *Flora of Tropical Africa* 9: 621-622, 627. 1920, *Bulletin du Muséum National d'Histoire Naturelle (Paris)* 26(7): 664. 1921 [1920], *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 240. 1931, *Heredity; An International Journal of Genetics* 3: 369-374. 1949, *Bull. Soc. Bot. France* 97: 84-85. 1950, *Cytologia* 19: 97-103. 1954, *Grasses of Burma ...* 275-276. 1960, *Prodromus einer Flora von Südwestafrika* 160: 1-228. 1970, *Brittonia* 23(3): 293-324. 1971, *Canadian Journal of Botany* 52(5): 1075-1090. 1974, *Las Gramíneas de México* 1: 1-260. 1983, A.C. Allem & J.F.M. Valls, *Recursos Forrageiros Nativos do Pantanal Mato-grossense*. Departamento de Difusão de Tecnologia. Brasília, DF. EMBRAPA-CENARGEN. Documento, 8. 1987, *Darwiniana* 28(1-4): 191-217. 1987 [Estudio exomorfológico e histofoliar de las especies americanas del género *Acroceras* (Poaceae: Paniceae).], *Ann. Missouri Bot. Gard.* 77: 125-201. 1990, *Darwiniana* 30(1-4): 87-94. 1990, *Flora of the Guianas. Series A, Phanerogams* 8: 42-45. 1990, *Flora Mesoamericana* 6: 329. 1994, *Flora of Ethiopia and Eritrea* 7: 209-210. 1995, *American Journal of Botany* 88: 1993-2012. 2001, Sandra S. Aliscioni, Liliana M. Giussani, Fernando O. Zuloaga and Elizabeth A. Kellogg, “A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae.” *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 13-14. 2003.

Species

A. amplexans Stapf (*Acroceras basicladum* Stapf; *Neohusnotia amplexans* (Stapf) C.C. Hsu; *Panicum amplexans* (Stapf) Pilg., nom. illeg., non *Panicum amplexans* Chapm.)

Senegal, Ghana, Nigeria, Sudan, Upper Nile, Tanzania, Uganda. Annual, decumbent, scrambling, straggling, weak, linear-lanceolate leaf blades, economic plant, useful grass, sometimes floating, forage, hay, good fodder, high grazing value weakly stemmed, a serious pest of cultivation, a weed of rice paddies and hill rice, marshes, shallow water, wet areas, similar to *Acroceras zizanioides* (Kunth) Dandy, see *Botanical Gazette* 3(3): 20. 1878 and *Flora of Tropical Africa* 9: 625-626. 1920, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 241. 1931, *Journ. Fac. Sci. Univ. Tokyo, Sect. 3* 9: 94. 1965.

in Gambia: jajeo, njaro, nyaro

in Ghana: bamodo, bamodò, komudo

in Guinea Bissau: labar, lábar

in Mali: diivoonu, haratébé, kitibué, mbu niari, mbuniari, soko, sogo, soko

in Nigeria: geeron tsuntssayee

in Sierra Leone: babarawo, karinkasui, kobolo, mbowi, pisui, sunyugi, yuwi

in Upper Volta: bugau, komudo

A. attenuatum Renvoize

Tanzania. Annual, slender, decumbent, branched, mat-forming, rooting at the lower nodes, inflorescence paniculate, poorly branched oblong panicle, spikelets ovate-oblong, in forest shade, see *Kew Bulletin* 34(3): 556. 1979 [1980].

A. chaseae Zuloaga & Morrone (*Panicum planopteris* Trin. ex Döll) (for Mary Agnes Chase, 1869-1963)

South America, Brazil. See *Flora Brasiliensis* 2(2): 222. 1877 and *Darwiniana* 28(1-4): 198, f. 2. 1987[1988].

A. excavatum (Henrard) Zuloaga & Morrone (*Lasiacis excavata* (Henrard) Parodi; *Panicum excavatum* Henrard)

South America, Paraguay. Perennial, rigid, stoloniferous, open panicle, spreading pedicels, palatable, in forest openings, in semideciduous forest, see *Contributions from the United States National Herbarium* 15: 16. 1910, *Repertorium Specierum Novarum Regni Vegetabilis* 23: 179. 1926, *Notas del Museo de la Plata, Botánica* 8: 92. 1943, *Darwiniana* 28(1-4): 195. 1987 [1988].

in Bolivia: taquarilla

A. fluminense (Hack.) Zuloaga & Morrone (*Agenium villosum* (Nees) Pilg.; *Panicum fluminense* Hack.)

South America, Brazil. Ascending, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 362-363. 1829, *A Natural System of Botany* 447. 1836 and *Österreichische Botanische Zeitschrift* 51: 457. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 43: 82. 1938, *Darwiniana* 28(1-4): 197. 1987[1988].

A. gabunense (Hack.) Clayton (*Commelinidium gabunense* (Hack.) Stapf; *Commelinidium mayumbense* (Franchet) Stapf; *Commelinidium nervosum* Stapf; *Echinochloa nervosa* (Stapf) Roberty; *Panicum gabunense* Hack.; *Panicum hensii* K. Schum.; *Panicum mayumbense* Franch.)

Africa, Gabon, Tanzania. Perennial, scrambling, prostrate at the base, rooting at the lower nodes, leaf blades ovate, fodder, found in forest shade, see *Essai d'une Nouvelle Agrostographie* 52, 53, t. 11, f. 1. 1812, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 70. 1889, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 343. 1895, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 332. 1897 and *Flora of Tropical Africa* 9: 627-629. 1920, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afrique Noire Sér. A*, 17: 64. 1955, *Kew Bulletin* 34(3): 557. 1979 [1980].

in Sierra Leone: ngale

A. macrum Stapf (*Neohusnotia macra* (Stapf) C.C. Hsu; *Panicum gimmae* Fiori)

Northeastern and southern tropical Africa, Transvaal, Tanzania, Namibia, Mozambique. Perennial, tufted and simple, slender, geniculate and sometimes prostrate, rooting at the lower nodes, with creeping rhizomes, leaf sheath papery

when dry, ligule a ring of short hairs, leaf blades linear and acuminate, racemes erect and arranged singly on the primary axis, spikelets awnless and glabrous, spikelets single or in pairs, lower lemma male, little drought tolerance, useful grass, used for silage, makes good hay, very palatable, high grazing value, native pasture grass, forage, cultivated fodder, tolerates seasonal flooding, occurs in riversides, lake margins, shallow water, sand to black clay soils, seasonally flooded damp grassland, marshy grassland, damp places, vleis, swamps, see *Flora of Tropical Africa* 9: 624. 1920, *Agricoltura Coloniale* 35: 56, 62. 1941, *Journal of the Faculty of Science: University of Tokyo, Botany* 9: 94. 1965.

in English: Nile grass

in Southern Africa: Nylgras

A. munroanum (Balansa) Henrard (*Acroceras crassiapiculatum* (Merr.) Alston; *Acroceras ridleyi* (Hack. ex Ridl.) Stapf; *Brachiaria crassiapiculatum* (Merr.) Hitchc. ex Groff, Ding & Groff; *Panicum crassiapiculatum* Merr.; *Panicum latifolium* L.f., nom. illeg., non *Panicum latifolium* L.; *Panicum munroanum* Bal.; *Panicum ridleyi* Hack. ex Ridl.)

Eastern India, Sri Lanka, Malaya, Malaysia, Myanmar (Burma). Perennial, slender and creeping culms with erect tips, rooting at the nodes, ligule membranous, spikelets short-pedicelled, moist habitats, marshes, rice fields, see *Journal de Botanique (Morot)* 4(7): 140. 1890, *Trans. Linn. Soc. London, Bot.* 3: 400. 1893, *The Flora of British India* 7(21): 39. 1896[1897] and *Botanisk Tidsskrift* 24: 98. 1901, *Philippine Journal of Science* 1(Suppl. 5): 356. 1906, George Weidman Groff (1884-1954), *Lingnaam Agricultural Review* 1: 48. 1923 [An Enumeration of the McClure collection of Hainan plants. 1923-1924], *The Flora of the Malay Peninsula* 5: 229. 1925, *A Handbook to the Flora of Ceylon*, Suppl. 6: 324. 1931, *Blumea* 3(3): 444-445. 1940, *Grasses of Ceylon* 125. 1956.

in Thailand: ya bai phai, yaa bai phai

A. ridleyi (Hack. ex Ridl.) Stapf (*Panicum ridleyi* Hack. ex Ridl.)

Malay Penins. See *Trans. Linn. Soc. London, Bot.* 3: 400. 1893 and *Botanisk Tidsskrift* 24: 98. 1901, *The Flora of the Malay Peninsula* 5: 229. 1925.

A. tonkinense (Balansa) C.E. Hubb. ex Bor (*Acroceras tonkinense* (Balansa) Henrard, nom. illeg., non *Acroceras tonkinense* (Balansa) C.E. Hubb. ex Bor; *Neohusnotia tonkinensis* (Balansa) A. Camus; *Panicum latifolium* var. *majus* Hook.f.; *Panicum tonkinense* Balansa)

Vietnam. See *Species Plantarum* 1: 58-59. 1753, *Journal de Botanique (Morot)* 4(7): 140. 1890, *The Flora of British India* 7(21): 39. 1897 [1896] and *Bulletin du Muséum National d'Histoire Naturelle* 26(7): 664. 1921, *Indian Forest Records: Botany* 1: 3, 78. 1939, *Blumea* 3(3): 451. 1940.

A. zizanioides (Kunth) Dandy (*Acroceras oryzoides* Stapf; *Astragalus schimperi* Boiss.; *Astragalus schimperi* var. *aradensis* Zohary; *Echinochloa zizanioides* (Kunth) Roberty; *Panicum balbisanum* Schult.; *Panicum grandiflorum* Trin. ex Nees; *Panicum latifolium* L.f., nom. illeg., non *Panicum latifolium* L.; *Panicum lutetens* K. Schum.; *Panicum melicoides* Poir.; *Panicum ogowense* Franch.; *Panicum oryzoides* Sw., nom. illeg., non *Panicum oryzoides* Ard.; *Panicum pseudoryzoides* Steud.; *Panicum zizanioides* Kunth; *Panicum zizanioides* var. *microphyllum* Döll) (Zaire, Lutete)

Tropical Africa, southern Mexico to northern Argentina, India. Perennial, rhizomatous, weed species, prostrate, scrambling, decumbent and rooting at the lower nodes, leaves lanceolate and acuminate, racemes divergent and spaced, spikelets narrow-oblong, lower lemma sterile, useful grass, good forage and hay, occurs in damp places in shade, roadside ditches, swampy places, seasonally inundated savannahs, in shallow water, see *Animadversionum Botanicarum Specimen Alterum* 2: 16, t. 5. 1764, *Nova Genera et Species Plantarum seu Prodrum* 23. 1788, *Nova Genera et Species Plantarum* 1: 82. 1815 [1816], *Encyclopédie Méthodique, Botanique* Suppl. 4: 283. 1816, *Mantissa* 2: 254. 1824, *Agrostologia Brasiliensis* 2(1): 143. 1829 [or *Flora Brasiliensis seu Enumeratio Plantarum in Brasilia ... Stuttgartiae et Tubingae 1829-1833*], *Diagnoses plantarum orientalium novarum, ser. I*, 1(2): 53. 1843, *Synopsis Plantarum Glumacearum* 1: 75. 1853, *Flora Brasiliensis* 2(2): 229. 1877, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 344. 1895, *The Flora of British India* 7(21): 39. 1896, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 332. 1897 and *Flora of Tropical Africa* 9: 622. 1920, *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Petite Fl. Ouest-Afr.* 398. 1954, *Bulletin de l'Institut Française d'Afrique Noire, Sér. A*, 17: 67. 1955, *Flora Palaestina* 2: 455. 1972.

in English: grama grass

in Spanish: arrocillo

in Bolivia: cañuela

in Guinea-Bissau: quebè faro

in Mali: ngon

in Nigeria: geeron tsuntssayee, iyè etu

in Sierra Leone: bakabine, barekore, ekbil, gbati, karinkasui, kbaraga, kobolo, koboro, kotopoi, kpage, mbowi, melkore, pisui, sunyugi, tamidiserana, yuwi

in West Africa: kbaraga, kotopoi, ngon, pisui, quebè-fârô, sunyugi, yuwi

in Yoruba: iye etu, jaba

Acrochaete Peter = *Acrochaete* N. Pringsheim (Algae), *Setaria* P. Beauv.

From the Greek *akros* “the summit, terminal, highest, top-most” and *chaite* “bristle, mane.”

Panicoideae, Paniceae, Setariinae, type *Acrochaete pseudaristata* Peter, see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, Nathanael Pringsheim (1823-1894), *Beiträge zur Morphologie des Meeres-Algen ...* Berlin 1862 and *Contr. U.S. Natl. Herb.* 22(3): 156. 1920, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 203, Anh. 54, t. 28, f. 2. 1930, *Die Natürlichen Pflanzenfamilien* edition 2 14e: 72. 1940, *Taxon* 31(3): 561. 1982, *Contributions from the United States National Herbarium* 46: 569-593. 2003.

Acroelytrum Steud. = *Lophatherum* Brongn.

From the Greek *akros* “the summit, terminal, highest” and *elytron* “a sheath, a cover,” *elyo* “to wind.”

Centothecoideae, Centothecae, see *Voyage autour du Monde* 2(2): 49-50, t. 8. 1831 [1829-30], *Flora* 29: 20-21. 1846 and *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1988-1989: 14-20. 1988-1989, *Investigatio et Studium Naturae* 12: 48-65. 1992.

Acrospelion Besser ex Schult. & Schult.f. = *Acrospelion* Steud, *Trisetum* Pers., *Trisetum* (Besser ex Schult. & Schult.f.) Trin.

Greek *akros* “the summit, terminal, highest” and *spelion*, *pselion*, *psellion* “armlet, bracelet,” *pselioo* “to twine, wreath, crown.”

Pooideae, Poeae, Aveninae, see *Prospectus de l'Histoire des Plantes de Dauphiné* 2: 144. 1787, *Syn. Pl.* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 88, 153, t. 18, f. 1. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 59. 1830 and *U.S.D.A. Bull.* 772: 107-109. 1920, *Taxon* 36: 75. 1987, *Contributions from the United States National Herbarium* 48: 19, 659-676. 2003.

Acroxis Steud. = *Muhlenbergia* Schreb.

Chloridoideae, Cynodonteae, Muhlenbergiinae, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Nomenclator Botanicus. Editio secunda* 1: 22. 1840 and *Contributions from the United States National Herbarium* 41: 9, 143-173. 2001.

Actinochloa Willd. ex Roemer & Schultes
= *Actinochloa* Roem. & Schult., *Bouteloua*
Hornem. ex P. Beauv., *Bouteloua* Lag.,
Chondrosum Desv.

Greek *aktis*, *aktin* “a ray” and *chloe*, *chloa* “grass.”

Chloridoideae, Cynodonteae, Boutelouinae, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 40. 1812, *Gen. Sp. Nov.* 5. 1816, *Systema Vegetabilium* 2: 22, 417. 1817, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Genera Plantarum* 3(2): 1168. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 59. 1887 and *Annals of the Missouri Botanical Garden* 66(3): 358. 1979 [1980], *Contributions from the United States National Herbarium* 41: 9, 20-33, 52-55. 2001.

Actinochloris Steud. = *Chloris* Sw.

From the Greek *aktis*, *aktin* “a ray” plus *Chloris* Sw.

Chloridoideae, Cynodonteae, see *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Nomenclator Botanicus. Editio secunda* 1: 352. 1840 and *Contributions from the United States National Herbarium* 41: 39-52. 2001.

Actinocladum McClure ex Soderstr. =
Actinocladum Soderstr.

From the Greek *aktis*, *aktin* “a ray” and *klados* “a branch,” referring to the branching.

One species, Bolivia, central Brazil. Bambusoideae, Bambusoideae, Bambuseae, or Bambusoideae, Bambuseae, Arthrostylidiinae, perennial, tufted, forming extensive colonies, erect, unarmed, branched, sympodial, hollow, woody and persistent, flowering culms leafy, rhizomes pachymorph, ligule a ciliate rim, leaf blades pseudopetiolate, plants bisexual, inflorescence a sparse panicle or raceme, spikelets pedicellate, 2 glumes unequal and acuminate, lemma acuminate or short-beaked, palea acute and 2-keeled, 3 free lodicules, 3 stamens, ovary hairy, 2 stigmas, achene-like caryopsis, savannah, *cerrado*, open savannah, dense scrub, *campo rupestre*, similar to *Rhipidocladum* McClure, *Aulonemia* and *Merostachys*, type *Actinocladum verticillatum* (Nees) McClure ex Soderstr., see *American Journal of Botany* 68(9): 1200-1211. 1981, *Edinburgh Journal of Botany* 48: 73-80. 1991, *Taxon* 42: 879. 1993, Emmet J. Judziewicz et al., *American Bamboos*. 148-150. Smithsonian Institution Press, Washington and London 1999, *Contributions from the United States National Herbarium*

39: 11. 2000, *Flora Fanerogamica do Estado de São Paulo* 1: i-xxv, 1-292. 2001.

Species

A. verticillatum (Nees) McClure ex Soderstr. (*Actinocladum verticillatum* (Nees) Soderstr.; *Arundinaria verticillata* Nees; *Ludolfia verticillata* (Nees) A. Dietr.; *Rhipidocladum verticillatum* (Nees) McClure)

Central Brazil. Forming dense clumps, caespitose, rhizomatous, leaves monomorphic, synflorescences paniculate, drought-tolerant and fire resistant, forage, arrows made from culm, see *Familles des Plantes* 2: 244. 1763, *Flora Boreali-Americana* 1: 73. 1803, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 523-525. 1829 [or *Agrostologia Brasiliensis* 1829], *Species Plantarum. Editio sexta* 25. 1833 and *Smithsonian Contributions to Botany* 9: 101, 106, f. 42. 1973, *American Journal of Botany* 68(9): 1201, 1204, f. 1-39. 1981.

in Brazil: taquari, taquari mirim

Aechmophora Steud. = *Bromus* L.,
Michelaria Dumort.

From the Greek *aichme* “a point” and *phoros* “bearing, carrying.”

Pooideae, Bromaceae, see *Species Plantarum* 1: 76-78. 1753, *Observations sur les Graminées de la Flore Belgique* 77. 1823 [1824], *Nomenclator Botanicus. Editio secunda* 1: 29. 1840 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Bot. Jahrb. Syst.* 102: 447. 1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 20, 154-191. 2003.

Aegialina Schult. & Schult.f. = *Aegialina*
Schult., *Aegialitis* Trin., *Rostraria* Trin.

Greek *aigialos* “seashore,” *aiges* “waves.”

Pooideae, Poaceae, Aveninae, type *Aegialina tenuis* (Trin.) Schult., see *Syn. Pl.* 1: 97. 1805, *Fundamenta Agrostographiae* 127, 149, t. 9, 13. 1820, *Mantissa* 2: 13, 222. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 65. 1830 and *Zlaki SSSR* 267. 1976, *Contributions from the United States National Herbarium* 48: 20, 604. 2003.

Aegialitis Trin. = *Aegialitis* R. Br.
(Plumbaginaceae), *Rostraria* Trin.

Greek *aigialos* “seashore,” *aiges* “waves.”

Pooideae, Poeae, Aveninae, type *Aegialitis tenuis* Trin., see *Prodrum Florae Novae Hollandiae* 426. 1810, *Fundamenta Agrostographiae* 127, t. 9. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 65. 1830 and *Contributions from the United States National Herbarium* 48: 20, 604. 2003.

Aegicon Adans. = *Aegilops* L.

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 1: 85-87. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Familles des Plantes* 2: 36, 513. 1763, *Enumeratio Methodica Plantarum* 371. 1763, *Illustrationes Plantarum Orientalium* 4: 12, 23. 1851, *Flore de France* 3: 601. 1856 and *Blumea, Supplement* 3: 15, 17. 1946, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 653-655. 1960, *Feddes Repert.* 91: 225-228. 1980, *Biologisches Zentralblatt* 101(2): 206-208. 1982, *Taxon* 41: 552-583. 1992, *Agric. Univ. Wageningen Papers* 94-7: 1-512. 1994, *Taxon* 44: 611-612. 1995, *Flora de Veracruz* 114: 1-16. 2000, *Contributions from the United States National Herbarium* 48: 20-23. 2003.

Aegilemma Á. Löve = *Aegilops* L.

Greek *aix*, *aigos* "a goat" and *lemma*, *lemmatos* "skin, bark, scale."

Pooideae, Triticeae, Triticinae, type *Aegilemma kotschyi* (Boiss.) Á. Löve, see *Species Plantarum* 1: 85-87. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Familles des Plantes* 2: 36, 513. 1763, *Enumeratio Methodica Plantarum* 371. 1763, *Illustrationes Plantarum Orientalium* 4: 12, 23. 1851, *Flore de France* 3: 601. 1856 and *Blumea, Supplement* 3: 15, 17. 1946, *Grasses of Burma ...* 653-655. 1960, *Feddes Repert.* 91: 225-228. 1980, *Biologisches Zentralblatt* 101(2): 206-208. 1982, *Taxon* 41: 552-583. 1992, *Agric. Univ. Wageningen Pap.* 94-7: 1-512. 1994, *Taxon* 44: 611-612. 1995, *Flora de Veracruz* 114: 1-16. 2000, *Contributions from the United States National Herbarium* 48: 20-23. 2003.

Aegilonearum Á. Löve = *Aegilops* L.

Pooideae, Triticeae, Triticinae, type *Aegilonearum juvenale* (Thell.) Á. Löve., see *Species Plantarum* 1: 85. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Familles des Plantes* 2: 36, 513. 1763, *Enumeratio Methodica Plantarum* 371. 1763, *Illustrationes Plantarum Orientalium* 4: 12, 23. 1851, *Flore de France* 3: 601. 1856 and *Blumea, Supplement* 3: 15, 17. 1946, *Grasses of Burma ...* 653-655. 1960, *Feddes Repert.* 91: 225-228. 1980, *Biologisches Zentralblatt* 101(2): 206-208. 1982, *Taxon* 41: 552-583. 1992, *Agric.*

Univ. Wageningen Pap. 94-7: 1-512. 1994, *Taxon* 44: 611-612. 1995, *Flora de Veracruz* 114: 1-16. 2000, *Contributions from the United States National Herbarium* 48: 20-23. 2003.

Aegilopodes Á. Löve = *Aegilops* L.

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 1: 85. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Familles des Plantes* 2: 36, 513. 1763, *Enumeratio Methodica Plantarum* 371. 1763, *Illustrationes Plantarum Orientalium* 4: 12, 23. 1851, *Flore de France* 3: 601. 1856 and *Blumea, Supplement* 3: 15, 17. 1946, *Grasses of Burma ...* 653-655. 1960, *Feddes Repert.* 91: 225-228. 1980, *Biologisches Zentralblatt* 101(2): 206-208. 1982, *Taxon* 41: 552-583. 1992, *Agric. Univ. Wageningen Pap.* 94-7: 1-512. 1994, *Taxon* 44: 611-612. 1995, *Flora de Veracruz* 114: 1-16. 2000, *Contributions from the United States National Herbarium* 48: 20-23. 2003.

Aegilops L. = *Aegicon* Adans., *Aegilemma* Á. Löve, *Aegilonearum* Á. Löve, *Aegilopodes* Á. Löve, *Amblyopyrum* Eig, *Amblyopyrum* (Jaub.) Eig, *Chennapyrum* Á. Löve, *Comopyrum* (Jaub. & Spach) Á. Löve, *Comopyrum* (Jaub.) Löve, *Cylindropyrum* (Jaub. & Spach) Á. Löve, *Cylindropyrum* (Jaub.) Löve, *Gastropyrum* (Jaub. & Spach) Á. Löve, *Gastropyrum* (Jaub.) Á. Löve, *Henrardia* C.E. Hubb., *Kiharapyrum* Á. Löve, *Orrhopygium* Á. Löve, *Patropyrum* Á. Löve, *Perlaria* Heist. ex Fabr., *Sitopsis* (Jaub. & Spach) Á. Löve, *Triticum* L.

From an ancient Greek name for a long awned or bearded grass, *aigilops*, applied by Theophrastus to a kind of oak with sweet fruit, and by Dioscorides (4.70) to describe the lachrymal fistula, an ulcer in the eye; *aigilos* is an herb of which goats are fond; Latin *aegilops*, *opis* and *aegilopa*, *ae* for a disease of the eyes, for a kind of oak with edible acorns, for a kind of bulbous plant or for a weed among barley.

About 21-27 species, Mediterranean, Asia, North Africa. Pooideae, Triticeae, Triticinae, annual, herbaceous, rhizomatous, tufted, usually erect, internodes hollow, auricles present or absent, ligule an unfringed membrane, plants bisexual, open to dense inflorescence spicate, spikelets solitary and distichous, 2 glumes subequal and thick, lemmas apex usually toothed or awned, awned or awnless, palea 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, weed species, useful native pasture species, open habitats, sometimes included in *Triticum*, type *Aegilops triuncialis* L., see J.C. Buxbaum,

- Plantarum minus cognitarum centuriae, complectens plantas circa Byzantium et in Oriente observatas* Centuria I. Petropoli 1728-1740, *Species Plantarum* 1: 85-87. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Familles des Plantes* 2: 36, 513. 1763, *Enumeratio Methodica Plantarum* 371. 1763, *Systema Vegetabilium* 2: 769. 1817, *Notes sur Quelques Plantes Critiques, Rares, ou Nouvelles, ...* 2: 69. 1849, *Illustrationes Plantarum Orientalium* 4: 12, 21, 23. 1851, *Flora Dalmatica* 3: 345. 1852, *Synopsis Plantarum Glumacearum* 1: 354. 1854, *Flore de France* 3: 601. 1856, *Plantae Europaeae* 1: 128. 1890 and *Repertorium Specierum Novarum Regni Vegetabilis* Beih. 55: 84, 90, 117. 1929 [Feddes Repertorium], *Blumea, Supplement* 3: 15, 17. 1946, *Grasses of Burma ...* 653-655. 1960, *Feddes Repert.* 91: 225-228, 233-234, 236. 1980, *Godishen Zbornik ... Fakultet Na Univerzitetot Kiril I Metodij* Skopje 35: 145-161. 1982, *Biologisches Zentralblatt* 101(2): 206-208. 1982, *Feddes Repert.* 95: 493, 495. 1984, *Journal of Wuhan Botanical Research* 3(4): 313-318. 1985, *Genera Graminum* 157-158. 1986, *Genome* 30: 36-43, 361-365. 1988, *Godishen Zbornik Prirodno-Matematichki Fakultet na Univerzitetot "Sv. Kiril i Metodij"* 39-40: 353-365. 1989, *Genome* 33: 283-293. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Memoirs of the College of Agriculture; Kyoto University* 137: 1-116. 1990, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991, *Taxon* 41: 552-583. 1992, *Plant Systematics and Evolution* 184: 1-10 and 187: 127-134. 1993, *Acta Botanica Sinica* 36(9): 714-719. 1994, *Agric. Univ. Wageningen Pap.* 94-7: 1-512. 1994 [Wild wheats: a monograph of *Aegilops* L. and *Amblyopyrum* (Jaub. & Spach) Eig.], *Plant Systematics and Evolution* 196: 227-241. 1995, *Taxon* 44: 611-612. 1995, *Flora Mediterranea* 7: 204-213. 1997, *Am. J. Bot.* 85: 1581-1585. 1998, *Edinburgh Journal of Botany* 56: 405-419. 1999, *Flora de Veracruz* 114: 1-16. 2000, *Am. J. Bot.* 89: 1042-1056. 2002, *Am. J. Bot.* 90: 1567-1584. 2003, *Contributions from the United States National Herbarium* 48: 20-23, 234, 238, 241, 370, 409, 468, 478, 614, 676-684. 2003, C. Husband, "Chromosomal variation in plant evolution." *Am. J. Bot.* 91: 621-625. 2004, *Am. J. Bot.* 91: 707-723, 1022-1035, 1364-1370, 1709-1725. 2004, *Plant Breeding* 123(1): 93-95. Feb 2004, *The Plant Journal* 37(4): 528-538. Feb 2004, *Plant Breeding* 123(2): 117-121. Apr 2004, *Journal of Ecology* 92(2): 297-309. Apr 2004, *Plant Breeding* 123(3): 209-212, 294-296. June 2004, *Weed Research* 44(3): 187-194. June 2004, *Weed Biology and Management* 4(2): 103-113. June 2004, *Hereditas* 141(1): 46-54, 68-73, 81-88. July 2004, J. Freeman and E. Ward, "*Gaeumannomyces graminis*, the take-all fungus and its relatives." *Molecular Plant Pathology* 5(4): 235-252. July 2004, *Biological Journal of the Linnean Society* 82(4): 475-484, 599-606, 607-613, 651-663, 665-674. Aug 2004, *Plant Breeding* 123(4): 361-365. Aug 2004, *Physiologia Plantarum* 122(1): 143-151. Sep 2004, *Hereditas* 141(3): 193-198. Dec 2004, *Plant Breeding* 123(6): 595-599. Dec 2004, *Am. J. Bot.* 92: 432-437. 2005, Roberta J. Mason-Gamer, "The β -amylase genes of grasses and a phylogenetic analysis of the Triticeae (Poaceae)." *Am. J. Bot.* 92: 1045-1058. 2005, *Oikos* 108(2): 241-252. Feb 2005, *New Phytologist* 165(2): 391-410. Feb 2005, *Cladistics* 21(1): 5-30. Feb 2005, *Plant, Cell and Environment* 28(2): 176-191. Feb 2005, *Oikos* 109(1): 154-166. Apr 2005, *New Phytologist* 166(1): 5-8, 291-303. Apr 2005.
- Species**
- A. *bicornis*** (Forssk.) Jaub. & Spach (*Aegilops bicornis* (Forssk.) Jaub.; *Agropyron bicorne* (Forssk.) Roem. & Schult.; *Sitopsis bicornis* (Forssk.) Á. Löve; *Triticum bicorne* Forssk.)
- Egypt, Israel. Related to wheat, see *Flora Aegyptiaco-Arabica* 26. 1775, *Systema Vegetabilium* 2: 760. 1817, *Illustrationes Plantarum Orientalium* 4: 11, t. 309. 1850-1853, *Flora of Syria, Palestine, and Sinai* 901. 1896 and *Bulletin de la Société Botanique de Genève* sér. 2 19: 325-326. 1928, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 73. 1929, *Feddes Repert.* 91: 231. 1980, *Biologisches Zentralblatt* 101(2): 206. 1982, *Agric. Univ. Wageningen Pap.* 94-7: 139. 1994.
- A. *biuncialis*** Vis. (*Aegilops biuncialis* var. *archipelagica* Eig; *Aegilops lorentii* Hochst.; *Aegilops lorentii* subsp. *archipelagica* (Eig) Á. Löve; *Aegilops lorentii* var. *velutina* (Zhuk.) K. Hammer; *Aegilops macrochaeta* Shuttlew. & É. Huet ex Duval-Jouve; *Aegilops ovata* subsp. *biuncialis* (Vis.) Anghel & Beldie; *Aegilops ovata* var. *biuncialis* (Vis.) Halácsy; *Aegilops ovata* var. *lorentii* (Hochst.) Boiss.; *Triticum biunciale* (Vis.) K. Richt.; *Triticum lorentii* (Hochst.) Zeven; *Triticum macrochaetum* (Shuttlew. & É. Huet ex Duval-Jouve) K. Richt.; *Triticum macrochaetum* (Shuttl. & Huet) K. Richt.)
- Morocco, Iran, Europe. Related to wheat, see *Species Plantarum* 2: 1050-1051. 1753, *Flora Dalmatica* 1: 90, t. 1, f. 2. 1842, *Flora* 28: 25. 1845, *Bulletin de la Société Botanique de France* 16: 384. 1869, *Flora Orientalis* 5: 674. 1884 and *Conspectus Florae Graecae* 3: 431. 1904, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 137, t. 14g. 1929, *Flora Republicii Socialiste Romania* 12: 563. 1972, *Taxon* 22(2-3): 321. 1973, *Feddes Repert.* 91: 239. 1980, *Feddes Repertorium* 95(7-8): 503-504. 1984, *Israel J. Bot.* 35: 53-54. 1986, *Agric. Univ. Wageningen Pap.* 94-7: 146, 150. 1994.
- A. *columnaris*** Zhuk. (*Triticum columnare* (Zhuk.) Ros. Morris & Sears)
- Syria, Turkey. Drought-resistant, see *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 214. 1929, *Feddes Repert.* 95: 503. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 169. 1994.

A. comosa Sibth. & Sm. (*Aegilops comosa* Sm.; *Comopyrum comosum* (Sibth. & Sm.) Á. Löve; *Triticum comosum* (Sibth. & Sm.) K. Richt.)

Cyprus, Greece, Turkey. Yellow rust-resistant, see *Florae Graeca* 1: 75, t. 94. 1806, *Plantae Europaeae* 1: 128. 1890, *Fl. Syria, Palestine, & Sinai* 900. 1896, *Mittheilungen der Thüringischen Botanischen Vereins* n.f. 13-14: 62. 1899 and *Conspectus Florae Graecae* 3: 434. 1904, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 109-110, 214, t. 7e-k, 8a, d-e. 1929, *Feddes Repert.* 91: 235. 1980, *Biologisches Zentralblatt* 101(2): 207. 1982, *Agric. Univ. Wageningen Pap.* 94-7: 175. 1994.

A. comosa Sibth. & Sm. subsp. **comosa** (*Aegilops comosa* subsp. *comosa*)

Greece, Turkey. See *Florae Graeca* 1: 75, t. 94. 1806.

A. comosa Sibth. & Sm. subsp. **heldreichii** (Boiss.) Eig. (*Aegilops caudata* var. *heldreichii* Boiss.; *Aegilops comosa* Sibth. & Sm. subsp. *heldreichii* (Boiss.) Eig.; *Aegilops heldreichii* (Boiss.) Halácsy; *Triticum heldreichii* (Boiss.) K. Richt.)

Greece, Turkey. See *Florae Graeca* 1: 75, t. 94. 1806, *Flora Orientalis* 5: 675. 1884 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62: 578. 1929.

A. comosa Sibth. & Sm. var. **comosa** (*Aegilops comosa* subsp. *comosa*; *Comopyrum comosum* (Sm.) Á. Löve; *Triticum comosum* (Sm.) K. Richt.)

Europe, Turkey. Related to wheat, see *Florae Graeca* 1: 75, t. 94. 1806 and *Agric. Univ. Wageningen Pap.* 94-7: 3, 175-176. 1994.

A. comosa Sibth. & Sm. var. **subventricosa** Boiss. (*Aegilops caudata* var. *heldreichii* Boiss.; *Aegilops comosa* subsp. *heldreichii* (Boiss.) Eig; *Aegilops heldreichii* (Boiss.) Holzm. ex Nyman; *Comopyrum comosum* subsp. *heldreichii* (Boiss.) Á. Löve; *Triticum heldreichii* (Boiss.) K. Richt.)

Greece, Turkey. Related to wheat, see *Florae Graeca* 1: 75, t. 94. 1806, *Flora Orientalis* 5: 676. 1884 and *Feddes Repert.* 91: 235. 1980, *Feddes Repert.* 95: 494. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 3, 181-188. 1994.

A. crassa Boiss. (*Aegilops crassa* f. *macranthera* Boiss.; *Aegilops crassa* subsp. *macranthera* (Boiss.) Zhuk.; *Aegilops crassa* subsp. *trivialis* Zhuk.; *Aegilops crassa* var. *flavescens* Popova; *Aegilops crassa* var. *glumiaristata* Eig; *Aegilops crassa* var. *macranthera* Boiss.; *Aegilops crassa* var. *rubiginosa* Popova; *Aegilops platyathera* Jaub.; *Gastropyrum crassum* (Boiss.) Á. Löve; *Gastropyrum glumiaristatum* (Eig) Á. Löve & P.E. McGuire; *Triticum crassum* (Boiss.) Aitch. & Hemsl.)

Asia temperate, Turkey, Iraq. Related to wheat, see *Diagnoses plantarum orientalium novarum* 1(7): 129. 1846, *Illustrationes Plantarum Orientalium* 4: 17, t. 313. 1850-

1853, *Flora Orientalis* 5: 677. 1884, *Transactions of the Linnean Society of London, Botany* 3: 127. 1888 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 13: 477. 1923, *Bulletin de la Société Botanique de Genève*, sér. 2, 19: 326, 328. 1928, *Feddes Repert.* 91: 234. 1980, *Feddes Repertorium* 95(7-8): 501-502. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 188-189. 1994.

A. cylindrica Host (*Aegilops caudata* subsp. *cylindrica* (Host) Hegi; *Aegilops caudata* subsp. *cylindrica* (Host) Fiori, nom. illeg., non *Aegilops caudata* subsp. *cylindrica* (Host) Hegi; *Aegilops cylindrica* Schur, nom. illeg., non *Aegilops cylindrica* Host; *Aegilops cylindrica* Sibth. & Sm., nom. illeg., non *Aegilops cylindrica* Host; *Aegilops cylindrica* f. *brunnea* (Popova) K. Hammer; *Aegilops cylindrica* f. *ferruginea* (Popova) K. Hammer; *Aegilops cylindrica* f. *fuliginosa* (Popova) K. Hammer; *Aegilops cylindrica* f. *prokhanovii* (Tzvelev) K. Hammer; *Aegilops cylindrica* subsp. *aristulata* Zhuk.; *Aegilops cylindrica* subsp. *pauciaristata* Eig; *Aegilops cylindrica* subsp. *pauciaristata* (Eig) Chennav.; *Aegilops cylindrica* var. *albescens* Popova; *Aegilops cylindrica* var. *aristulata* (Zhuk.) Tzvelev; *Aegilops cylindrica* var. *brunnea* Popova; *Aegilops cylindrica* var. *ferruginea* Popova; *Aegilops cylindrica* var. *flavescens* Popova; *Aegilops cylindrica* var. *fuliginosa* Popova; *Aegilops cylindrica* var. *kastorianum* S.S. Karataglis; *Aegilops cylindrica* var. *multiaristata* Jansen & Wacht.; *Aegilops cylindrica* var. *pauciaristata* Eig; *Aegilops cylindrica* var. *prokhanovii* Tzvelev; *Aegilops cylindrica* var. *pubescens* Kloos; *Aegilops cylindrica* var. *rumelica* Velen.; *Aegilops tauschii* auct. taur., non Coss.; *Cylindropyrum cylindricum* (Host) Á. Löve; *Cylindropyrum cylindricum* subsp. *cylindricum*; *Cylindropyrum cylindricum* subsp. *pauciaristatum* (Eig) Á. Löve; *Triticum cylindricum* (Host) Ces.; *Triticum cylindricum* (Host) Cesati, Passerini & Gibelli; *Triticum cylindricum* Cesati, Pass. & Gib.)

Asia, Europe, Turkey, Greece. Noxious weed, invasive, spikelets partly sunken in axis, glumes awned or short-awned, lemmas pointed or awned, in cultivated fields, dry sites, disturbed areas, see *Species Plantarum* 1051. 1753, *Icones et Descriptiones Graminum Austriacorum* 2: 6, t. 7. 1802, *Florae Graeca* 1: 75, t. 95. 1806, *Notes sur Quelques Plantes Critiques, Rares, ou Nouvelles, ...* 2: 69. 1849, *Enumeratio Plantarum Transsilvaniae* 813. 1866, Vincenzo de Cesati (1806-1883), Giovanni Passerini (1816-1893) e Giuseppe Gibelli (1831-1898), *Compendio della Flora Italiana* 1: 86. Milano 1869, *Flora Bulgarica* 627. 1891 and *Illustrierte Flora von Mittel-Europa* 1: 390. 1906, *Nuova Flora Analitica d'Italia* 1: 160. 1923, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 103, t. 6b. 1929, *Nederlandsch Kruidkundig Archief. Verslangenen Mededelingen der Nederlandsche Botanische Vereeniging* 138, f. 5c. 1931, *Novosti Sist. Vyss. Rast.* 10: 37. 1973, *Feddes Repert.* 91: 232-233. 1980, *Biologisches Zentralblatt* 101(2): 207. 1982, *Feddes Repertorium* 95(7-8): 500.

1984, *Plant Systematics and Evolution* 163(1-2): 19. 1989, *Wagen. Agric. Univ. Pap.* 94-7: 199-200, 202-203. 1994, *Genes & Genetic Systems* 71: 243-246. 1996.

in English: jointed goatgrass

A. dichasians (Zhuk.) Humphries (*Aegilops caudata* L. pro parte; *Aegilops caudata* pro parte subsp. *caudata*; *Aegilops caudata* pro parte subsp. *dichasians* Zhuk.; *Triticum dichasians* (Zhuk.) Bowden)

Europe, Greece. See *Species Plantarum* 2: 1051. 1753 and *Canadian Journal of Botany* 37: 667. 1959.

A. geniculata Roth (*Aegilops brachyathera* Pomel; *Aegilops divaricata* Jord. & Fourr.; *Aegilops echinus* Godr.; *Aegilops erigens* Jord. & Fourr.; *Aegilops erratica* Jord. & Fourr.; *Aegilops fonsii* Sennen; *Aegilops geniculata* Fig. & De Not.; *Aegilops geniculata* subsp. *geniculata*; *Aegilops geniculata* subsp. *gibberosa* (Zhuk.) K. Hammer; *Aegilops geniculata* var. *brachyathera* (Pomel) K. Hammer; *Aegilops geniculata* var. *echinus* (Godr.) K. Hammer; *Aegilops ovata* auct.; *Aegilops ovata* L. pro parte; *Aegilops ovata* subsp. *gibberosa* Zhuk.; *Aegilops ovata* var. *brachyathera* (Pomel) Eig; *Aegilops ovata* var. *echinus* (Godr.) Eig ex Miczyn.; *Aegilops parvula* Jord. & Fourr.; *Aegilops procera* Jord. & Fourr.; *Aegilops pubiglumis* Jord. & Fourr.; *Aegilops sicula* Jord. & Fourr.; *Aegilops vagans* Jord. & Fourr.; *Triticum ovatum* auct.; *Triticum ovatum* (L.) Raspail; *Triticum ovatum* (L.) Gren. & Godr.; *Triticum ovatum* subsp. *ovatum*; *Triticum vagans* (Jord. & Fourr.) Greuter)

Algeria, Spain, Syria, Europe. Noxious weed, invasive, see *Species Plantarum* 2: 1050-1051. 1753, A.W. Roth (1757-1834), *Botanische Abhandlungen und Beobachtungen* 45. Nürnberg 1787, *Annales des Sciences Naturelles; Botanique, sér. 5*, 435. 1825, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 262. 1852, *Florula Juvenalis* 48. Montpellier 1853, *Flore de France* 3(2): 601. 1856, *Breviarum Plantarum Novarum ... fasc. 2*: 129-131. Parisii 1868, *Nouveaux matériaux pour la flore atlantique* 389. Paris, Alger 1874 and *Bulletin de la Société Botanique de France* 69: 91. 1922, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 144-145, t. 15b. 1929, *Bulletin de la Société Botanique de France* 76: 716. 1929, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 13: 170. 1967, *Willdenowia* 7(2): 420. 1974, *Feddes Repertorium* 91: 240-241, 248. 1980, *Biol. Zentralbl.* 101: 207. 1982, *Feddes Repert.* 95: 503. 1984, *Taxon* 35: 557. 1986, *Agric. Univ. Wageningen Pap.* 94-7: 220, 225. 1994.

in English: ovate goatgrass

in French: aegilops

in Morocco: senboul-el-far

A. juvenalis (Thell.) Eig (*Aegilonearum juvenale* (Thell.) Á. Löve; *Aegilops turcomanica* Roshev.; *Triticum juvenale*

Thell.; *Triticum turcomanocum* (Roshev.) Bowden, also *turcomanicum*)

Iraq, Syria. Related to wheat, see *Repertorium Specierum Novarum Regni Vegetabilis* 3: 281. 1907, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 63, 93. 1929, *Canadian Journal of Botany* 37: 676. 1959, *Feddes Repert.* 91: 235. 1980, *Biologisches Zentralblatt* 101(2): 207-208. 1982, *Pl. Genet. Resources Newslett.* 96: 11-16. 1993, *Agric. Univ. Wageningen Pap.* 94-7: 244, 246. 1994.

A. kotschy Boiss. (*Aegilemma kotschy* (Boiss.) Á. Löve; *Aegilops geniculata* Fig. & De Not.; *Aegilops glabriglumis* Gand.; *Aegilops kotschy* var. *leptostachya* (Bornm.) Eig; *Aegilops triuncialis* subsp. *kotschy* (Boiss.) Zhuk.; *Aegilops triuncialis* var. *kotschy* (Boiss.) Boiss.; *Aegilops triuncialis* var. *leptostachya* Bornm.; *Triticum kotschy* (Boiss.) Bowden) (named for the Austrian botanist Carl (Karl) Georg Theodor Kotschy, 1813-1866, plant collector, traveler, from 1835 to 1843 botanical explorer of the Orient, from 1852 Curator of the Herbarium of the Vienna Natural History Museum, his writings include *Die Insel Cypren.* [with Franz Joseph Andreas Nicolaus Unger, 1800-1870] Wien 1865 and *Die Sommerflora des Antilibanon und hohen Hermon.* Wien 1864. See Eduard Fenzl (1808-1879), *Abbildungen und Beschreibungen neuer und selthener Thiere und Pflanzen in Syrien und im westlichen Taurus gesammelt von T. Kotschy.* Stuttgart 1843; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. Stuttgart 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* Philadelphia 1964; J.H. Barnhart, *Biographical notes upon botanists.* 2: 315. 1965; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France.* 29: 182-183. Paris 1882; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen.* Dresden 1916; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 218. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 195. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert.* Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933)

Libya, Cyprus, Turkey. See *Diagnoses plantarum orientaliarum novarum* 1(7): 129. 1846, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 262. 1852, *Österreichische Botanische Zeitschrift* 31: 82. 1881, *Flora Orientalis* 5: 674. 1884, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 48: 651. 1898 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 128-129, t. 12a, d-e. 1929, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 2877. 1939, *Canadian Journal of Botany* 37: 675. 1959, *Feddes Repert.* 91: 237.

1980, *Biologisches Zentralblatt* 101(2): 207. 1982, *Agric. Univ. Wageningen Pap.* 94-7: 252, 254. 1994.

A. longissima Schweinf. & Muschler (*Sitopsis longissima* (Schweinf. & Muschl.) Á. Löve; *Triticum longissimum* (Schweinf. & Muschl.) Bowden)

Israel. See *Flora of Syria, Palestine, and Sinai* 901. 1896 and *A Manual Flora of Egypt* by Dr. Reno Muschler ... 1: 156. Berlin 1912, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10: 489. 1928, *Bulletin de la Société Botanique de Genève* sér. 2 19: 326. 1928, *Canadian Journal of Botany* 37: 666. 1959, *Feddes Repert.* 91: 231-232. 1980, *Feddes Repertorium* 95(7-8): 492. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 261. 1994.

A. markgrafii (Greuter) K. Hammer (*Aegilops caudata* auct.; *Aegilops caudata* L.; *Aegilops caudata* subsp. *dichasians* Zhuk., nom. illeg.; *Aegilops caudata* var. *polyathera* Boiss.; *Aegilops dichasians* (Bowden) Humphries; *Aegilops dichasians* (Zhuk.) Humphries; *Aegilops markgrafii* var. *markgrafii*; *Aegilops markgrafii* var. *polyathera* (Boiss.) K. Hammer; *Aegilops ventricosa* L.; *Orrhopygium caudatum* auct.; *Triticum dichasians* Bowden; *Triticum markgrafii* Greuter)

Syria, Turkey, Greece. See *Flora Orientalis* 5: 675. 1884 and *Canadian Journal of Botany* 37: 667. 1957, *Boissiera* 13: 172. 1967, *Bot. J. Linn. Soc.* 78: 236. 1979, *Feddes Repertorium* 91(4): 232. 1980, *Biol. Zentralbl.* 101: 206. 1982, *Taxon* 43: 293-296. 1994, *Agric. Univ. Wageningen Pap.* 94-7: 160, 162. 1994, *Taxon* 45: 675. 1996.

A. neglecta Req. ex Bertol. (*Aegilops algeriensis* Gand.; *Aegilops calida* Gand.; *Aegilops campicola* Gand.; *Aegilops mesantha* Gand.; *Aegilops neglecta* subsp. *neglecta*; *Aegilops neglecta* subsp. *recta* (Zhuk.) K. Hammer; *Aegilops neglecta* var. *contorta* (Zhuk.) K. Hammer; *Aegilops ovata* L.; *Aegilops ovata* L. pro parte; *Aegilops ovata* subsp. *triaristata* (Willd.) Rouy; *Aegilops ovata* var. *triaristata* (Willd.) Bluff ex Nees; *Aegilops ovata* var. *triaristata* (Willd.) Lindb.; *Aegilops ovata* var. *triaristata* (Willd.) W. Koch; *Aegilops recta* (Zhuk.) Chennav.; *Aegilops triaristata* Willd.; *Aegilops triaristata* subsp. *contorta* Zhuk.; *Aegilops triaristata* subsp. *intermixta* Zhuk.; *Aegilops triaristata* subsp. *recta* Zhuk.; *Aegilops virescens* Jord. & Fourr.; *Aegilops viridescens* Gand.; *Triticum neglectum* (Req. ex Bertol.) Greuter; *Triticum ovatum* (L.) Gren. & Godr.; *Triticum ovatum* (L.) Raspail; *Triticum ovatum* var. *triaristatum* Asch. & Graebn.; *Triticum ovatum* var. *triaristatum* Schmalh.; *Triticum rectum* (Zhuk.) Bowden; *Triticum triaristatum* (Willd.) Gren. & Godr.)

Israel, Turkey, Europe. See *Species Plantarum* 2: 1050-1051. 1753, *Species Plantarum* 4: 943. 1806, *Annales des Sciences Naturelles; Botanique, sér. 5*, 435. 1825, *Flora Italica* ... 1: 787. 1834, *Compendium Florae Germaniae. Editio altera* 1: 209. 1836, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 425. 1844, *Flore de France* 3(2): 601. 1856,

Breviarum Plantarum Novarum ... Fasc. 2: 130. 1868, *Österreichische Botanische Zeitschrift* 31: 81-82. 1881, *Flora* 2: 662. 1897 and *Flore de France* 14: 333. 1913, *Acta societatis scientiarum fennica. Series B. Opera biologica* 12: 11. 1932, *Canad. J. Genet. Cytol.* 8: 135. 1966, *Boissiera* 13: 171. 1967, *Feddes Repert.* 91: 232, 239-240. 1980, *Feddes Repertorium* 95: 503-504. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 266-267, 269, 271. 1994.

A. ovata L. (*Aegilops geniculata* Roth; *Aegilops neglecta* Req. ex Bertol.; *Aegilops neglecta* var. *contorta* (Zhuk.) K. Hammer; *Aegilops triaristata* subsp. *contorta* Zhuk.; *Aegilops triaristata* subsp. *intermixta* Zhuk.; *Triticum neglectum* (Req. ex Bertol.) Greuter; *Triticum ovatum* (L.) Raspail; *Triticum ovatum* (L.) Gren. & Godr.; *Triticum ovatum* subsp. *ovatum*)

Europe, Mediterranean, Asia. Spikelets not sunken in axis, upper 3 florets generally sterile, lemma of upper spikelets 3-awned, lemma of lower spikelets generally 2-awned, in disturbed areas, along roadsides, fields, see *Species Plantarum* 2: 1050-1051. 1753, *Botanische Abhandlungen* 45. 1787, *Species Plantarum. Editio quarta* 4: 943. 1806, *Annales des Sciences Naturelles; Botanique, sér. 5*, 435. 1825, *Flora Italica* ... 1: 787. 1834, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 262. 1852, *Florula Juvenalis* 48. Montpellier 1853, *Flore de France* 3(2): 601. 1856 and *Boissiera* 13: 171. 1967, *Feddes Repertorium* 91(4): 240. 1980, *Biological Journal of the Linnean Society* 82(4): 503-510. Aug 2004 [Are neopolyploids a likely route for a transgene walk to the wild? The *Aegilops ovata* - *Triticum turgidum durum* case].

A. peregrina (Hack.) Maire & Weiller (*Aegilemma peregrina* (Hack.) Á. Löve; *Aegilops peregrina* (Hack.) Eig; *Aegilops peregrina* (Hack.) Melderis; *Triticum peregrinum* Hack.)

Egypt, Syria, Greece. Related to wheat, naturalized elsewhere, see *Annals of Scottish Natural History* 62: 101-102. 1907, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 121. 1929, *Flore de l'Afrique du Nord*: 3: (Encycl. Biol. 48) 358. 1955, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* ser. 2 5(1): 71. 1960, *Feddes Repert.* 91: 236. 1980, *Feddes Repert.* 95: 499. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 287. 1994.

A. peregrina (Hack.) Maire & Weiller var. **brachyathera** (Boiss.) Maire & Weiller (*Aegilemma peregrina* subsp. *cylindrostachys* (Eig & Feinbrun) Á. Löve; *Aegilops peregrina* subsp. *cylindrostachys* (Eig & Feinbrun ex Eig) K. Hammer; *Aegilops peregrina* subsp. *cylindrostachys* (Eig & Feinbrun) K. Hammer; *Aegilops peregrina* var. *brachyathera* (Boiss.) K. Hammer; *Aegilops triuncialis* var. *brachyathera* Boiss.; *Aegilops variabilis* subsp. *cylindrostachys* Eig & Feinbrun; *Aegilops variabilis* subsp. *cylindrostachys* Eig & Feinbrun ex Eig; *Triticum peregrinum*

subsp. *cylindrostachys* (Eig & Feinbrun) Kimber & Feldman)

Egypt, Cyprus, Syria, Turkey. Naturalized elsewhere, see *Flora Orientalis* 5: 674. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 125, t. 9b, 11. 1929, *Flore de l'Afrique du Nord*: 3: 360. 1955, *Feddes Repert.* 91: 237. 1980, *Feddes Repert.* 95: 499. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 294. 1994.

A. peregrina (Hack.) Maire & Weiller var. *peregrina* (*Aegilemma peregrina* (Hack.) Á. Löve; *Aegilops peregrina* subsp. *peregrina* var. *variabilis* (Eig) K. Hammer; *Aegilops peregrina* var. *variabilis* (Eig) K. Hammer; *Aegilops variabilis* Eig; *Aegilops variabilis* subsp. *euvariabilis* Eig & Feinbrun; *Triticum peregrinum* Hack.)

Egypt, Greece, Turkey. Naturalized elsewhere, see *Ann. Scott. Nat. Hist.* 16(62): 101. 1907, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 121, t. 9-11. 1929, *Feddes Repert.* 91: 236-237, 254. 1980, *Feddes Repert.* 95: 499. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 284, 287. 1994.

A. searsii Feldman & Kislev ex K. Hammer (*Aegilops searsii* Feldman & Kislev; *Sitopsis searsii* (Feldman & Kislev ex K. Hammer) Á. Löve; *Sitopsis searsii* (Feldman & Kislev) Á. Löve; *Triticum searsii* (Feldman & Kislev ex K. Hammer) Feldman)

Israel. Related to wheat, found in red soil, see *Israel Journal of Botany* 26(4): 191. 1978, *Feddes Repert.* 91: 231. 1980, *Feddes Repert.* 95(7-8): 492. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 298. 1994.

A. sharonensis Eig (*Aegilops longissima* subsp. *sharonensis* (Eig) K. Hammer; *Sitopsis sharonensis* (Eig) Á. Löve)

Israel. See *Flora of Syria, Palestine, and Sinai* 901. 1896 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10: 489. 1928, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 75. 1929, *Feddes Repert.* 91: 231, 303. 1980, *Feddes Repert.* 95: 492. 1984, *Pl. Genet. Resources Newslett.* 96: 11-16. 1993, *Agric. Univ. Wageningen Pap.* 94-7: 298, 303. 1994.

A. speltoides Tausch (*Sitopsis speltoides* (Tausch) Á. Löve; *Triticum speltoides* (Tausch) Gren. ex K. Richt.; *Triticum speltoides* (Tausch) Gren.)

Israel, Greece, Bulgaria, Turkey. Forage, naturalized elsewhere, see *Flora* 20: 108-109. 1837 and *Feddes Repert.* 91: 247. 1980, *Feddes Repert.* 95: 491. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 309. 1994, I.G. Adonina, E.A. Salina, T.T. Efremova and T.A. Pshenichnikova, "The study of introgressive lines of *Triticum aestivum* x *Aegilops speltoides* by *in situ* and SSR analyses." *Plant Breeding* 123(3): 220-224 June 2004.

in English: goatgrass

A. speltoides Tausch var. *ligustica* (Savign.) Fiori (*Aegilops ligustica* (Savign.) Coss.; *Aegilops speltoides* subsp. *ligustica*

(Savign.) Zhuk.; *Aegilops speltoides* var. *ligustica* (Savign.) Bornm.; *Agropyron ligusticum* Savign.; *Sitopsis speltoides* (Tausch) Á. Löve; *Triticum ligusticum* (Savign.) Bertol.; *Triticum speltoides* subsp. *ligustica* (Savign.) Chennav.)

Israel, Greece, Bulgaria, Turkey. Related to wheat, see *Bull. Soc. Bot. France* 11: 164. 1864 and *Flora Analytica d'Italia* 4 (Append.): 32. 1907, *Feddes Repert.* 91: 231, 247. 1980, *Feddes Repert.* 95: 491. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 319-320. 1994.

A. speltoides Tausch var. *speltoides* (*Aegilops aucheri* Boiss.; *Aegilops macrura* Jaub. & Spach; *Aegilops speltoides* var. *aucheri* (Boiss.) Fiori; *Aegilops speltoides* var. *aucheri* (Boiss.) Bornm.; *Aegilops speltoides* var. *aucheri* Meyer; *Sitopsis speltoides* (Tausch) Á. Löve; *Triticum speltoides* (Tausch) Gren. ex K. Richt.; *Triticum speltoides* var. *aucheri* (Boiss.) Asch.)

Israel, Greece, Bulgaria, Turkey. Related to wheat, see *Diagnoses plantarum orientalium novarum* 1(5): 74. 1844 and *Beihefte zum Botanischen Centralblatt* abt. 2 26: 438. 1910, *Feddes Repert.* 91: 230. 1980, *Feddes Repert.* 95: 491. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 309-310, 312, 328. 1994.

in English: goatgrass

A. tauschii Coss. (*Aegilops squarrosa* auct.; *Aegilops squarrosa* f. *meyeri* Griseb.; *Aegilops squarrosa* subsp. *meyeri* (Griseb.) Zhuk.; *Aegilops squarrosa* subsp. *salina* Zhuk.; *Aegilops squarrosa* subsp. *salinum* Zhuk.; *Aegilops squarrosa* subsp. *strangulata* Eig; *Aegilops squarrosa* var. *anathera* Eig; *Aegilops squarrosa* var. *meyeri* Griseb.; *Aegilops strangulata* (Eig) N.N. Tzvelev; *Aegilops tauschii* subsp. *strangulata* (Eig) Tzvelev; *Aegilops tauschii* subsp. *tauschii*; *Aegilops tauschii* var. *anathera* (Eig) K. Hammer; *Aegilops tauschii* var. *meyeri* (Griseb.) Tzvelev; *Patropyrum tauschii* (Coss.) Á. Löve; *Patropyrum tauschii* subsp. *salinum* (Zhuk.) Á. Löve; *Patropyrum tauschii* subsp. *strangulata* (Eig) Á. Löve; *Triticum aegilops* P. Beauv. ex Roem. & Schult.; *Triticum tauschii* (Coss.) Schmalh.) (named for the Czech botanist Ignaz Friedrich Tausch, 1793-1848, naturalist, botanical collector; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 362. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 6: 182-184. Utrecht 1986; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980)

Asia, Eurasia. Naturalized elsewhere, leaf sheaths glabrous and ciliate, ligules membranous, spikes and spikelets cylindrical, glumes coriaceous, lemma lanceolate, palea keels

ciliate, in stony sites, slopes, weedy places, see J.C. Buxbaum, *Plantarum minus cognitarum centuriae, complectens plantas circa Byzantium et in Oriente observatas* Centuria I. Petropoli 1728-1740, *Species Plantarum* 1051. 1753, *Systema Vegetabilium* 2: 769. 1817, *Notes sur Quelques Plantes Critiques, Rares, ou Nouvelles, ...* 2: 69. 1849 and *Repertorium Specierum Novarum Regni Vegetabilis* Beih. 55: 90. 1929, *Feddes Repert.* 91: 233-234. 1980, *Biologisches Zentralblatt* 101(2): 206. 1982, *Feddes Repert.* 95: 493. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 326, 328-329. 1994, Wanlong Li, Peng Zhang, John P. Fellers, Bernd Friebe and Bikram S. Gill, "Sequence composition, organization, and evolution of the core Triticeae genome." *The Plant Journal* 40(4): 500-511. Nov 2004.

A. triuncialis L. (*Aegilopodes triuncialis* (L.) Á. Löve; *Aegilopodes triuncialis* subsp. *triuncialis*; *Aegilops croatica* Gand.; *Aegilops echinata* C. Presl; *Aegilops elongata* Lam.; *Aegilops nigricans* Jord. & Fourr.; *Aegilops ovata* subsp. *triaristata* (Willd.) Rouy; *Aegilops ovata* var. *triaristata* (Willd.) Bluff ex Nees; *Aegilops ovata* var. *triaristata* (Willd.) W. Koch; *Aegilops ovata* var. *triaristata* (Willd.) Lindb.; *Aegilops persica* Boiss.; *Aegilops squarrosa* L.; *Aegilops squarrosa* subsp. *squarrosa* (L.) Kihara & Tanaka; *Aegilops triaristata* Willd.; *Aegilops triaristata* Req. ex Bertol., nom. illeg., non *Aegilops triaristata* Willd.; *Aegilops triuncialis* subsp. *orientalis* Eig; *Triticum persicum* (Boiss.) Aitch. & Hemsl.; *Triticum triunciale* (L.) Raspail; *Triticum trunciale* (L.) Raspail) (Latin *triuncis* "of three")

Africa, Asia, Europe. Noxious weed, invasive, naturalized elsewhere, spikelets generally not sunken in axis, upper 2 florets generally sterile, glumes 2-3-awned, lemmas shortly-awned or awn absent, disturbed areas, cultivated fields, along roadsides, see *Species plantarum* 2: 1050-1051. 1753, *Flore de France* 3: 632. 1778, *Species Plantarum* 4: 943. 1806, *Cyperaceae et Gramineae Siculae* 47. Pragae 1820, *Annales des Sciences Naturelles (Paris)* 1(5): 435. 1825, *Flora Italica ...* 1: 789. 1834, *Compendium Florae Germaniae. Editio altera* 1: 209. 1836, *Spicilegium florum rumelicarum et bithynicarum ...* 2: 425. 1844, *Diagnoses plantarum orientalium novarum* 1(7): 129. 1846, *Breviarum Plantarum Novarum ...* 2: 128. 1868, *Österreichische Botanische Zeitschrift* 31: 81. 1881, *Transactions of the Linnean Society of London, Botany* 31: 127. 1888 and *Flore de France* 14: 333. 1913, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 134. 1929, *Acta societatis scientiarum fennica. Series B. Opera biologica* 12: 11. 1932, *Preslia* 30: 248. 1958, *Canadian Journal of Botany* 1959, *Biologisches Zentralblatt* 101(2): 207. 1982, *Taxon* 41: 555. 1992, *Agric. Univ. Wageningen Pap.* 94-7: 344-374. 1994.

in English: barbed goatgrass, barb goat grass, jointed goat grass

in Turkey: çayır otu

A. triuncialis L. var. **persica** (Boiss.) Eig (*Aegilopodes triuncialis* subsp. *persica* (Boiss.) Á. Löve; *Aegilops persica* Boiss.; *Aegilops triuncialis* subsp. *persica* (Boiss.) Zhuk.; *Triticum persicum* (Boiss.) Aitch. & Hemsl.)

Iran, Iraq, Turkey. Related to wheat, see *Diagnoses plantarum orientalium novarum* Nov 1(7): 129. 1846, *Trans. Linn. Soc. London, Bot. ser.* 2, 3: 127. 1888 and *Bulletin de la Société Botanique de Genève sér.* 2, 19: 323. 1928, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 134, t. 13c. 1929, *Feddes Repert.* 91: 238. 1980, *Feddes Repert.* 95: 501. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 370-374. 1994.

A. triuncialis L. var. **triuncialis** (*Aegilopodes triuncialis* (L.) Á. Löve; *Aegilops elongata* Lam.; *Aegilops squarrosa* L.; *Aegilops triuncialis* var. *assyriaca* Eig; *Aegilops triuncialis* subsp. *triuncialis*; *Triticum triunciale* (L.) Raspail; *Triticum trunciale* (L.) Raspail)

Africa, Asia, Europe. Noxious weed, invasive, related to wheat, see *Species plantarum* 2: 1051. 1753, *Annales des Sciences Naturelles (Paris)* 1(5): 435. 1825 and *Bulletin de la Société Botanique de Genève sér.* 2, 19: 323. 1928, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 134, t. 13b. 1929, *Feddes Repert.* 91: 238-239. 1980, *Biol. Zentralbl.* 101: 207. 1982, *Agric. Univ. Wageningen Pap.* 94-7: 347, 349-360. 1994.

in English: barbed goatgrass, barb goat grass, jointed goat grass

A. umbellulata Zhuk. (*Kiharapyrum umbellulata* (Zhuk.) Á. Löve; *Kiharapyrum umbellulatum* (Zhuk.) Á. Löve; *Triticum umbellulatum* (Zhuk.) Bowden)

Greece, Turkey. Related to wheat, see *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 216, t. 15. 1929, *Canadian Journal of Botany* 37: 666. 1959, *Feddes Repert.* 91: 236. 1980, *Biologisches Zentralblatt* 101(2): 207. 1982, *Feddes Repertorium* 95(7-8): 495. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 374-380. 1994.

A. uniaristata Vis. (*Aegilops peregrina* (Hack.) Maire & Weiller; *Aegilops uniaristata* Steud.; *Aegilops variabilis* Eig; *Chennapyrum uniaristatum* (Vis.) Á. Löve; *Triticum uniaristatum* (Vis.) K. Richt.)

Europe, Greece, Turkey. Related to wheat, see *Flora Dalmatica* 3: 345. 1852, *Synopsis Plantarum Glumacearum* 1: 354. 1854, *Plantae Europaeae* 1: 128. 1890 and *Feddes Repert.* 91: 236. 1980, *Biologisches Zentralblatt* 101(2): 207. 1982, *Feddes Repertorium* 95(7-8): 495. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 380, 382. 1994.

A. vavilovii (Zhuk.) Chennav. (*Aegilops crassa* subsp. *vavilovii* Zhuk.; *Gastropyrum vavilovii* (Zhuk.) Á. Löve; *Triticum syriacum* Bowden)

Israel, Syria. Related to wheat, see *Acta Horti Gothoburgensis* 23: 167. 1960, *Canadian Journal of Genetics and Cytology* 8: 135. 1966, *Feddes Repert.* 91: 234. 1980,

Feddes Repertorium 95(7-8): 502. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 385. 1994.

A. ventricosa Tausch (*Aegilops fragilis* Parl.; *Aegilops subulata* Pomel; *Gastropyrum ventricosum* (Tausch) Á. Löve; *Triticum subulatum* (Pomel) Durand & Schinz; *Triticum ventricosum* Ces.; *Triticum ventricosum* (Tausch) Ces. & al.)

Morocco, Europe. Noxious weed, invasive, related to wheat, naturalized elsewhere, see *Flora* 20: 108. 1837, *Compendio della flora italiana* 1(4): 86. Milano 1869, *Nouveaux matériaux pour la flore atlantique* 388-389. Paris, Alger 1874, *Conspectus Florae Africae* 5: 939. 1894 and *Feddes Repert.* 91: 234. 1980, *Biologisches Zentralblatt* 101(2): 208. 1982, *Pl. Genet. Resources Newsl.* 96: 11-16. 1993, *Agric. Univ. Wageningen Pap.* 94-7: 392. 1994.

x Aegilosecale Ciferri & Giacomini

Aegilops x *Secale*, see *Nomenclator Florae Italicae* 180. 1950, *Genera Graminum* 374. 1986.

x Aegilotrichum Camus

Aegilotriticum, see *Bulletin du Muséum d'Histoire Naturelle* 33: 538. 1927, *Genera Graminum* 374. 1986.

x Aegilotriticum Camus

Aegilotriticum, see *Berichte der Deutschen Botanischen Gesellschaft* 44: 113. 1926, *Fl. Afr. Nord* 3: 370. 1955, *Genera Graminum* 374. 1986.

x Aegilotriticum P. Fourn.

Aegilops x *Triticum*, see *Les Quatre Flores de la France* 89. 1935, *Genera Graminum* 374. 1986.

Aegopogon Humb. & Bonpl. ex Willd. = *Atherophora* Steud., *Hymenothecium* Lag., *Schellingia* Steud.

From the Greek *aix*, *aigos* “a goat” and *pogon* “a beard,” referring to the spikes, to the awns.

About 3-4 species, southern America, U.S., Mexico, Guatemala, Argentina. Chloridoideae, Cynodonteae, Muhlenbergiinae, annual or perennial, rather small, herbaceous, straggling, sprawling, stoloniferous, weak, auricles absent, ligule a fringed membrane, narrow linear leaf blades persistent, plants bisexual, inflorescence a false spike, a terminal raceme, central spikelet 1-flowered sessile or pedicelled, deciduous branchlets with clusters of 1-flowered spikelets, spikelets in triplets, longer spikelets male or sterile, shorter

spikelets bisexual, 2 glumes more or less equal and apically 2-lobed, lemma 3-nerved, glumes and lemma awned, palea present, 2 lodicules fleshy and glabrous, 3 stamens, ovary glabrous, 2 stigmas, lateral spikelets pedicelled 1-flowered, forest margins, type *Aegopogon cenchroides* Humb. & Bonpl. ex Willd., see *Species Plantarum. Editio quarta* 4(2): 899. 1805 [1806], *Genera et species plantarum* 4. 1816, *Nomenclator Botanicus. Editio secunda* 1: 167. 1840, *Flora* 33: 231-232. 1850, *Flora Brasiliensis* 2(3B): 161-242, t. 44-58. 1880 and *University of Wyoming Publications* 13(2): 17-23. 1948, *Fieldiana, Botany* 24(2): i-ix, 1-390. 1955 [Flora of Guatemala], R.W. Pohl and G. Davidse, “Chromosome numbers of Costa Rican grasses.” in *Brittonia* 23(3): 293-324. 1971, *Las Gramíneas de México* 1: 1-260. 1983, *Ruizia; Monografías del Real Jardín Botánico* 13: 1-480. 1993 [*Las Gramíneas (Poaceae) del Perú*], *Flora Mesoamericana* 6: 296-297. 1994, *Flora de Veracruz* 114: 1-16. 2000, *Flora of Ecuador* 68: 120-123. 2001, *Contributions from the United States National Herbarium* 41: 9-11, 17, 129, 193. 2001.

Species

A. bryophilus Döll (*Aegopogon argentinus* Mez; *Aegopogon fiebrigii* Mez; *Aegopogon geminiflorus* Kunth; *Aegopogon geminiflorus* var. *muticus* Pilg.; *Aegopogon tenellus* (DC.) Trin.) (dedicated to the German-born scientist Karl [also Carlos] August Gustav Fiebrig [-Gertz], 1879[or 1869]-1951 [Tucumán, Argentina], zoologist, botanist and collector in Paraguay and Bolivia from 1902 onward, 1910-1936 professor of botany and zoology at the University of Asunción and director of a Botanical and Zoological garden, 1934-1936 director of Dept. de Agricultura, 1936-1945 lecturer at the Latin-American institute in Berlin. See *Physis*, Buenos Aires 20: 526. 1954; *Ber. Deutsch. Bot. Ges.* 68a: 151-152. 1955; *Revist. Sudamer. Bót.* 10: 248. 1956)

Brazil, Ecuador to northern Argentina, Bolivia. Annual, weak, very slender, branched from base, leaf sheaths slightly inflated, ligule membranous, leaf blades flat and thin, inflorescence with 15-25 branchlets, clusters with 1 hermaphroditic and 1-2 rudimental spikelets, fertile spikelet slender, sterile spikelets with glumes bilobed and shortly awned, glumes unequal both membranous and bilobed, lemma bilobed and 3-nerved, glume and lemma awned, 3 stamens, see *Nova Genera et Species Plantarum* 1: 133, t. 43. 1815 [1816], *Flora Brasiliensis* 2(3): 239. 1880, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 25. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 145. 1921, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Identificación de Especies Vegetales en Chuquisaca – Teoría, Práctica y Resultados* 1-129. 2000, *Hickenia* 3(28): 99-103. 2001.

A. cenchroides Humb. & Bonpl. ex Willd. (*Aegopogon breviglumis* (Scribn.) Nash; *Aegopogon cenchroides* var. *abortivus* E. Fourn.; *Aegopogon cenchroides* var. *breviglumis* (Scribn.) Beetle; *Aegopogon cenchroides* var. *cenchroides*; *Aegopogon cenchroides* var. *geminiflorus* (Kunth) Griseb.; *Aegopogon cenchroides* var. *multisetus* E. Fourn.; *Aegopogon cenchroides* var. *trisetus* (Lag.) E. Fourn.; *Aegopogon geminiflorus* Kunth; *Aegopogon geminiflorus* var. *breviglumis* Scribn.; *Aegopogon guatemalensis* Gand.; *Aegopogon multisetus* Steud.; *Aegopogon pusillus* P. Beauv.; *Aegopogon quinquesetus* (Lag.) Roem. & Schult.; *Aegopogon setifer* Nees; *Aegopogon submuticus* Rupr.; *Hymenothecium quinquesetum* Lag.; *Hymenothecium trisetum* Lag.)

North America, Mexico. Annual or perennial bunchgrass, very variable species, wiry, weak, glabrous, tufted, mat-forming, small, erect, scrambling, procumbent, branched, ligule acute, leaf blades linear, leaf sheaths with membranous margins, inflorescence raceme-like with 10-20 branchlets, spikelets purplish to reddish, clusters with 1 hermaphrodite and 2 male or sterile spikelets, glumes subequal and awned, lemma awned, lodicules very small, 3 stamens, forage, weed, found along roadsides, in open weedy areas, slopes, rocky places along streams, in cracks on rocks, arid sites, compacted soil, see *Species Plantarum. Editio quarta* 4(2): 899. 1806, *Essai d'une Nouvelle Agrostographie* 122, t. 22, f. 4. 1812, *Genera et species plantarum* 4. 1816, *Nova Genera et Species Plantarum* 1: 133, t. 43. 1815 [1816], *Systema Vegetabilium* 1: 805. 1817, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1): 25. 1840, *Linnaea* 19(6): 691. 1847, *Synopsis Plantarum Glumacearum* 1: 146. 1854, *Abhandlungen der Königlich Gesellschaft der Wissenschaften zu Göttingen* 24: 301. 1879, *Mexicanas Plantas* 2: 72. 1886, *Zoë* 4(4): 386. 1894 and *North American Flora* 17(2): 139. 1912, *Bulletin de la Société Botanique de France* 66(7): 298. 1919 [1920], *University of Wyoming Publications* 8(2): 23. 1948, *Nómina de las plantas recolectadas en el Valle de Cochabamba* 2: 17-86. 1966, *Cuscatlania* 1(6): 1-29. 1991.

in Mexico: pasto

A. solisii G.A. Levin

Mexico. See *Memoir San Diego Society of Natural History* 16: 1-66. 1989 [The vascular flora of Isla Socorro, Mexico].

A. tenellus (DC.) Trin. (*Aegopogon cenchroides* var. *abortivus* E. Fourn.; *Aegopogon geminiflorus* Kunth; *Aegopogon geminiflorus* subvar. *purpureus* Griseb. ex E. Fourn.; *Aegopogon geminiflorus* var. *abortivus* E. Fourn.; *Aegopogon geminiflorus* var. *unisetus* (Lag.) E. Fourn.; *Aegopogon gracilis* Vasey; *Aegopogon imperfectus* Nash; *Aegopogon tenellus* var. *abortivus* (Fourn.) Beetle; *Aegopogon tenellus* var. *tenellus*; *Aegopogon unisetus* (Lag.) Roem. & Schult.;

Chloris pedicellata Steud. ex E. Fourn.; *Chloris pedicellata* Steud.; *Cynosurus tenellus* Cav. ex DC.; *Hymenothecium tenellum* (Cav. ex DC.) Lag.; *Hymenothecium unisetum* Lag.; *Lamarckia tenella* DC.; *Schellingia tenera* Steud.)

South America, Mexico, U.S. Annual, forage, grassland, see *Species Plantarum. Editio quarta* 4(2): 899. 1806, *Catalogus plantarum horti botanici monspeliensis* 120. 1813, *Genera et species plantarum* 4. 1816, *Nova Genera et Species Plantarum* 1: 133, t. 43. 1815 [1816], *Systema Vegetabilium* 2: 805. 1817, *De Graminibus unifloris et sesquifloris* 164. Petropoli 1824, *Flora* 33: 232. 1850, *Mexicanas Plantas* 2: 71-72. 1886, *Bulletin of the Torrey Botanical Club* 13(12): 230. 1886 and *North American Flora* 17(2): 138. 1912, *University of Wyoming Publications* 8(2): 19. 1948.

in English: fragile grass

in Mexico: pasto

Aelbroeckia De Moor = *Aeluropus* Trin., *Chamaedactylis* T.F.L. Nees

Chloridoideae, Eragrostideae, see *Fundamenta Agrostographiae* 143, t. 12. 1820, *Flora italiana, ossia descrizione delle piante ...* 1: 461. 1848, *Traité des Graminées* 134. 1854 and *Novosti Sist. Vyss. Rast.* 1966: 25. 1966.

Aeluropus Trin. = *Aelbroeckia* De Moor, *Calotheca* Desv. ex Spreng., *Calotheca* Desv., *Chamaedactylis* T.F.L. Nees

Greek *ailouros* "a cat, a weasel" and *pous* "foot," Latin *aelurus* "a cat," referring to the nature of the spikes.

Some 3-5/10 species, Mediterranean, northern China, India, Ethiopia, Sri Lanka. Chloridoideae, Eragrostideae, perennial, low, tough, rigid, herbaceous, decumbent, halophytes, much-branched, toughly rhizomatous or stoloniferous, caespitose, leaf blades often distichous, auricles absent, ligule a very short membrane fringed with hairs, leaves linear often pungent, plants bisexual, inflorescence spicate to capitate, a densely flowered head, florets bisexual, spikelets sessile and solitary, 2 glumes unequal and mucronate, lower glume 1-3-nerved, upper glume 5-7 nerved, lemmas mucronate and chartaceous, palea 3-lobed, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, valuable fodder, open habitats, dry saline areas, sand of seashores, salt flats and deserts, type *Aeluropus laevis* Trin., see *Species Plantarum* 1: 66-71, 73-76. 1753, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Anleitung zur Kenntniss der Gewächse* 2(1): 167. 1817, Carl Bernhard von Trinius (1778-1844), *Fundamenta Agrostographiae*. 143, t. 12. Viennae (Jan) 1820, Theodor F.L. Nees von Esenbeck (1787-1837) et al.,

Genera Plantarum Florae Germanicae iconibus et descriptionibus illustrata ... Bonnae [1833-] 1835-1860, *Traité des Graminées* 134. 1854 and *Grasses of Burma, Ceylon, India and Pakistan* 379-381. 1960, *Novosti Sist. Vyss. Rast.* 1966: 25. 1966, *Fitologija* 39: 72-77. 1991, S. Khattoon & S.I. Ali, *Chromosome Atlas of the Angiosperms of Pakistan*. Karachi 1993 [University of Karachi, Department of Botany], *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

Species

A. brevifolius (J. König ex Willd.) Nees ex Asch. (*Aeluropus brevifolius* Nees ex Steud.; *Aeluropus brevifolius* Trin. ex Wall.; *Aeluropus brevifolius* (J. König ex Willd.) Nees ex Asch. & Schweinf.; *Aeluropus lagopoides* (L.) Trin. ex Thwaites; *Dactylis brevifolia* J. König ex Willd.; *Eleusine brevifolia* (J. König ex Willd.) R. Br. ex Hook.f., nom. illeg., non *Eleusine brevifolia* (Hochst. & Nees) Steud.; *Koeleria brevifolia* Spreng.; *Poa brevifolia* (J. König ex Willd.) Kunth, nom. illeg., non *Poa brevifolia* DC.)

Egypt. See *Systema Naturae, edition 12* 2: 95. 1767, *De Fructibus et Seminibus Plantarum ...* 1: 7. 1788, *Species Plantarum. Editio quarta* 1: 410. 1797, *Syn. Pl.* 1: 97. 1805, *Plantarum Minus Cognitarum Pugillus* 2: 21. 1815, *Révision des Graminées* 1: 111. 1829, *Nomenclator Botanicus. Editio secunda* 1: 30. 1840, *A Numerical List of Dried Specimens* no. 8897. 1849, *Enumeratio Plantarum Zeylanicae* 374. 1864, *Mémoires de l'Institut Égyptien* 2: 173. 1889 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 70. 1903.

A. lagopoides (L.) Thw. (*Aeluropus brevifolius* Nees ex Steud.; *Aeluropus brevifolius* Trin. ex Wall.; *Aeluropus brevifolius* (J. König ex Willd.) Nees ex Asch. & Schweinf.; *Aeluropus brevifolius* var. *longifolius* Chiov.; *Aeluropus brevifolius* var. *pygmaeus* A. Terracc. ex Chiov.; *Aeluropus concinnus* Fig. & De Not.; *Aeluropus erythraeus* (A. Terracc.) Mattei; *Aeluropus erythraeus* var. *scandens* Terracc.; *Aeluropus laevis* Trin.; *Aeluropus lagopodioides* (L.) Trin. ex Thwaites; *Aeluropus lagopoides* (L.) Trin. ex Thw.; *Aeluropus lagopoides* (L.) Chiov.; *Aeluropus lagopoides* var. *lagopoides*; *Aeluropus littoralis* var. *repens* (Desf.) Cosson & Durand; *Aeluropus massauensis* (Fresen.) Mattei; *Aeluropus mucronatus* var. *erythraeus* A. Terracc.; *Aeluropus niliacus* (Spreng.) Steud.; *Aeluropus repens* (Desf.) Parl.; *Aeluropus villosus* Trin.; *Aeluropus villosus* Trin. ex C.A. Meyer; *Calotheca niliaca* Spreng.; *Calotheca repens* (Desf.) Spreng.; *Coelachyropsis lagopoides* Bor; *Dactylis brevifolia* J. König ex Willd.; *Dactylis lagopodioides* Dalzell & A. Gibson; *Dactylis lagopoides* L.; *Dactylis repens* Desf.; *Koeleria lagopoides* (L.) Panz. ex Spreng.; *Poa lagopodioides* (L.) Kunth; *Poa massauensis* Fresen.; *Poa repens* (Desf.) M. Bieb.; *Poa tunetana* Spreng.; *Sesleria lagopoides* (L.) Spreng.) (Greek *lagos* “a hare”)

Southern India, Northeast Africa, Mediterranean. Perennial, variable, erect, harsh or pruinose, much-branched, shrubby, sometimes densely tufted, mat-forming, with woody rootstock, with scaly rhizomes and strongly stoloniferous, creeping, sometimes with long prostrate stems rooting at the nodes, leaf blades tough, ligule a ring of hairs, pungent leaves narrow and rigid, inflorescence capitate, 1 ovoid raceme, spikelets elliptic-oblong and curling, florets closely imbricate, glumes hirsute or villous, lower glume ovate-oblong and subacute, lemmas villous on the margins, of some fodder value, good grazing for all stocks, extremely salt-tolerant, useful for erosion control, abundant along the seashores, salt pans, sea littoral, sandy seashores, foreshore sand dunes, seasonally flooded salt plains, salt marshes and saline areas, subkhal, dry saline places, in low moist areas, dry hillsides, saline plains, sandy soils, heavily grazed sites, inhospitable saline soils, see *Flora Carniolica* 189. 1760, *Mantissa* 1: 33. 1767, *Systema Naturae, edition 12* 2: 95. 1767, *Species Plantarum. Editio quarta* 1: 410. 1797, *Flora Atlantica* 1: 79, t. 15. 1798, *Plantarum Minus Cognitarum Pugillus* 2: 20, 22. 1815, *Fundamenta Agrostographiae* 143, t. 12. 1820, *Systema Vegetabilium, editio decima sexta* 1: 332, 347-348. 1825, *Révision des Graminées* 1: 111. 1829, *Verzeichniss der Pflanzen, ... des Caspischen Meeres ...* 18. St. Petersburg 1831, *Museum Senckenbergianum* 2: 143. 1837, *Nomenclator Botanicus. Editio secunda* 1: 30. 1840, *Flora italiana, ossia descrizione delle piante ...* 1: 461-462. 1848, *A Numerical List of Dried Specimens* no. 8897. 1849 [Wallich's Catalogue], *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 257. 1852, *Exploration Scientifique de l'Algérie* 2: 155. 1855, *The Bombay Flora ...* 298. 1861, George Henry Kendrick Thwaites (1812-1882) and Joseph Dalton Hooker (1817-1911), *Enumeratio plantarum zeylanicae: an enumeration of Ceylon plants* 5: 374. London [1858-] 1864, *Beitrag zur Flora Aethiopiens* 297, 310. Berlin 1867, *Mémoires de l'Institut Égyptien* 2: 173. 1889, *Annuario del Reale Istituto Botanico di Roma* 5: 96. 1893, *The Flora of British India* 7(22): 294, 334. 1897 [1896] and Henry Trimen (1843-1896), *A Handbook to the Flora of Ceylon* 5: 304. 1900, *Annuario del Reale Istituto Botanico di Roma* 8(1): 70. 1903, *Annuario del Reale Istituto Botanico di Roma* 8: 375. 1908, *Boll. Orto Botanico di Palermo* 9: 63. 1910, *Flora Taurico-Caucasica* 3: 69. 1918, *Hand. Fl. Ceylon* 6: 340. London 1931, *Grasses of Ceylon* 45. 1956, *Ceylon Journal of Science, Biological Sciences* 2(2): 122. 1959, *Annalen des Naturhistorischen Museums in Wien* 75: 23, 25. 1971[1972], *Taxon* 49(2): 250. 2000, M. Ajmal Khan & Salman Gulzar, “Light, salinity, and temperature effects on the seed germination of perennial grasses.” *American Journal of Botany* 90: 131-134. 2003.

in Spanish: mamoncillo

in Somalia: garo

in Yemen: kirshah

in India: kadal arugam pul, puvvu gaddi

in Thailand: luk yon phra in, luuk yon phra in, ya luk lom, yaa luuk lom

A. littoralis (Gouan) Parl. (*Aeluropus littoralis* subsp. *kuschkenensis* Tzvelev; *Aeluropus pungens* (M. Bieb.) C. Koch; *Calotheca littoralis* (Gouan) Spreng.; *Chamaedactylis maritima* (Schrader) T. Nees; *Dactylis littoralis* (Gouan) Willd.; *Dactylis maritima* Schrad., nom. illeg., non *Dactylis maritima* Curtis; *Festuca littoralis* (Gouan) Sibth. & Sm., nom. illeg., non *Festuca littoralis* Labill.; *Melica littoralis* (Gouan) Raspail; *Poa littoralis* Gouan; *Poa pungens* M. Bieb., nom. illeg., non *Poa pungens* Georgi)

Asia, Iran, Russia, Europe. Perennial, brittle, sod-forming, useful for erosion control, good grazing value, golf course rough, found in moist places, in saline areas, in very dry situations, in low places in salty areas, drainage areas, shallow soil, heavy clay soil, see Antoine Gouan (1733-1821), *Flora Monspeliaca* 470. Lyon 1765, *Species Plantarum. Editio quarta* 1: 408. 1797, *Florae Graecae Prodromus* 1: 61. 1806, *Flora Germanica* 1: 313. 1806, *Flora Taurico-Caucasica* 1: 65. 1808, *Annales des Sciences Naturelles (Paris)* 5: 443. 1825, *Systema Vegetabilium, editio decima sexta* 1: 347. 1825, *Linnaea* 21(4): 408. 1848, *Flora italiana, ossia descrizione delle piante ...* 1: 461. 1848.

in French: pied de chat

in Morocco: senboul-ef-far

A. macrostachyus Hack. (*Aeluropus grandiflorus* Munro; *Aeluropus monostachyus* Hack. ex Bor; *Catapodium pungens* Boiss.)

Asia, Afghanistan, India. See *Hortus Regius Botanicus Berolinensis* 1: 44, 280. 1827, *Catalogue of the plants distributed at the Royal Gardens, Kew ...* from the herbaria of Griffith, Falconer, and Helfer. Royal Botanic Gardens, Kew [London] 1865, *Flora Orientalis* 5: 635. 1884 and *Österreichische Botanische Zeitschrift* 52(10): 374. 1902.

A. micrantherus Tzvelev (*Aeluropus littoralis* subsp. *micrantherus* (Tzvelev) Tzvelev; *Aeluropus littoralis* var. *micrantherus* (Tzvelev) K.L. Chang)

China, Russia, Mongolia. Procumbent or ascending, branched, leaf blades flat or involute, leaf sheaths glabrous and pilose, ligule usually pilose, inflorescence spike-like, compact congested racemes, spikelets ovate, glumes scabrous, lemmas ovate or broadly ovate, along water courses, on hill slopes, desert, in sandy places, see *Zlaki SSSR* 621. 1976, *Flora in Desertis Reipublicae Populorum Sinarum* 1: 42. 1985.

in China: wei yao zhang mao

A. pilosus (X.L. Yang) S.L. Chen & H.L. Yang (*Aeluropus littoralis* var. *pilosus* H.L. Yang; *Aeluropus pilosus* (H.L. Yang) S.L. Chen)

China. Erect or decumbent, densely pubescent, leaf sheaths densely pubescent, leaf blades flat or involute, leaves hispid to densely pubescent, ligule margin ciliate, rhizomes and stolons present, inflorescence spike-like, racemes solitary, spikelets distichous, glumes pubescent and hispid, lemmas apex cuspidate, palea keels hispid, desert sand, see *Acta Botanica Yunnanica* 5(1): 74, pl. 1, f. 9-16. 1983, *Flora Reipublicae Popularis Sinicae* 10(1): 8. 1990.

in China: mao ye zhang mao

A. pungens (M. Bieb.) K. Koch (*Aeluropus littoralis* (Gouan) Parl.; *Aeluropus littoralis* subsp. *pungens* (M. Bieb.) Tzvelev; *Aeluropus pungens* (Vahl) Boiss., nom. illeg., non *Aeluropus pungens* (M. Bieb.) Koch; *Festuca pungens* Vahl; *Poa pungens* M. Bieb., nom. illeg., non *Poa pungens* Georgi)

Europe, Russia, Caucasus. Perennial, erect or decumbent, usually branched at base, leaf sheaths glabrous, leaf blades flat or involute, ligule very short with margin ciliate, rhizomatous, inflorescence spike-like, racemes solitary and rather spaced, lemmas with membranous ciliate margins, good forage species, drought resistant, turf, heavy clay loam soil, bank of irrigation canal, alkaline soil, highly salty soils, sandy places, see *Symbolae Botanicae, ...* 1: 10, t. 2. 1790, *Flora Taurico-Caucasica* 1: 65. 1808, *Linnaea* 21(4): 408. 1848, *Flora italiana, ossia descrizione delle piante ...* 1: 461. 1848, *Flora Orientalis* 5: 595. 1884 and *Novosti Sist. Vyss. Rast.* 8: 73. 1971.

in China: xiao zhang mao

A. pungens (M. Bieb.) K. Koch var. *hirtulus* S.L. Chen & X.L. Yang

China. Leaf blades densely hirsute, glumes sparsely glabrous, desert sand, see *Bulletin of Botanical Research (Harbin)* 4(2): 123-124. 1984.

in China: ci ye zhang mao

A. pungens (M. Bieb.) K. Koch var. *pungens* (*Aeluropus littoralis* subsp. *pungens* (M. Bieb.) Tzvelev; *Poa pungens* M. Bieb.)

China, Eurasia. Leaf blades glabrous, glumes margins ciliate, bank of irrigation canal, alkaline soil, highly salty soils, sandy places.

in China: xiao zhang mao

A. sinensis (Debeaux) Tzvelev (*Aeluropus littoralis* subsp. *sinensis* (Debeaux) Tzvelev; *Aeluropus littoralis* var. *sinensis* Debeaux)

China. Nodes more or less pubescent, leaf blades flat, leaf sheaths glabrous and pilose, inflorescence spike-like, compact congested racemes, glumes and lemmas glabrous or scabrous, see *Actes de la Société Linnéenne de Bordeaux* 33: 73. 1879 and *Zlaki SSSR* 621. 1976.

in China: zhang mao

Aera Asch. = *Aira* L.

Orthographic variant, from the Greek *aer* “air.”

Pooideae, Poaeae, Airinae, see Paul Friedrich August Ascherson (1834-1913), *Flora der Provinz Brandenburg* 1: 830. Berlin 1864 and *Contributions from the United States National Herbarium* 48: 89-96. 2003.

Aeropsis Asch. & Graebn. = *Airopsis* Desv.

Aveneae, see *Species Plantarum* 1: 79-81. 1753, *Icones et Descriptiones Plantarum, quae aut sponte ...* 3: 37, t. 274, f. 1. 1794, *Journal de Botanique (Desvaux)* 1: 200. 1809, *A Manual of the Botany of the Northern United States. Second Edition* 573. 1856, Paul Friedrich August Ascherson, *Synopsis der mitteleuropäischen Flora* 2(1): 298. Leipzig 1899.

Aethonopogon Kuntze = *Pollinia* Trin.
Polytrias Hack.

Possibly from the Greek *aethes* “irregular, unusual” or Greek *aitho*, *aithen* “to light up, to burn, blaze, to scorch.”

Panicoideae, Andropogoneae, Saccharinae, see *Révision des Graminées* 1: 160. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(4): 304. 1832, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 98. 1850, *Genera Plantarum* 3(2): 1127. 1883 [*Pollinia* sect. *Eulalia* (Kunth) Benth. & Hook.f.], *Die Natürlichen Pflanzenfamilien* 2(2): 24. 1887, *Monographiae Phanerogamarum* 6: 189, t. 1, f. 13. 1889, *Revisio Generum Plantarum* 2: 788. 1891 [*Aethonopogon praemorsus* (Nees) Hack. ex Kuntze] and *Flora Mesoamericana* 6: 380. 1994, *Contributions from the United States National Herbarium* 46: 14, 541-542. 2003.

Afrachneria Sprague = *Achneria* Munro ex Benth., *Pentaschistis* (Nees) Spach

From Africa and the genus *Achneria*.

Arundinoideae, Arundineae, see *Flore Française. Troisième Édition* 3: 32. 1805, *Essai d'une Nouvelle Agrostographie* 72, 146. 1812, *Histoire naturelle des Végétaux* 13: 164. Paris 1841, C.G.D. Nees von Esenbeck (1776-1858), *Flora Africae Australioris Illustrationes Monographicae ...* I. Gramineae. Glogaviae 1841, *Genera Plantarum* 3(2): 1158, 1163. 1883 and *Journal of Botany, British and Foreign* 60: 138. 1922, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992, M. Lazarides, “The genus *Eriachne* (*Eriachne*, Poaceae).” *Australian Systematic Botany* 8(3):

355-452. 1995, K.C. Klopffer, J.J. Spies & B. Visser, “Cytogenetic studies in the genus *Pentaschistis* (Poaceae: Arundinoideae).” *Bothalia* 28(2): 231-238. 1998.

Afrotrichloris Chiov.

From Africa and *Trichloris* Fourn. ex Benth.

Two species, Somalia, northeast tropical Africa. Chloridoideae, Cynodonteae, perennial, herbaceous, unbranched, unarmed, tufted, ligule pilose or a narrow ciliate membrane, narrow leaf blades, plants bisexual, inflorescence a single spike or racemes solitary, 1-sided spike with closely imbricate sessile spikelets several-flowered, lowest floret fertile, 2 glumes acuminate and more or less unequal, lemmas cleft or deeply bifid, sterile lemmas clustered and long-awned, fertile lemma 1-awned and rounded on the back, palea present, 2 free and glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas, resistant to grazing, sandy soils, woodland, type *Afrotrichloris martinii* Chiov., see *Annali di Botanica* 13(3): 371-372. 1915, *Flora of Ethiopia and Eritrea* 7: 165. 1995.

Species***A. hyaloptera*** Clayton

Somalia. Perennial bunchgrass, erect, robust, wiry, densely tufted, leaf blades tough, inflorescence linear, fertile lemma ciliate and villous, sterile lemmas clustered, bushland, orange sand, open areas, dry sandy soil, mixed bushland, see *Kew Bulletin* 21: 105. 1967.

A. martinii Chiov.

Somalia. Perennial bunchgrass, wiry, tufted, spike oblong-ovate, fertile lemma pubescent, disturbed sandy areas, stabilized or fixed dunes, coastal, see *Annali di Botanica* 13(3): 372. 1915.

in Somalia: use mullè, ouse mulleh

Agenium Nees

From the Greek *a* “absence, negative” and *geneion* “beard.”

About 4 species, Brazil, Argentina, Paraguay. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Anthistiriinae, perennial, tufted, herbaceous, branched, leaf blades acuminate, ligule an unfringed membrane, plants bisexual, inflorescence spicate digitate or subdigitate, bisexual spikelets, the upper pedicelled spikelets male, male and female spikelets mixed in the inflorescence, 2 glumes more or less equal, palea absent, 2 free and fleshy lodicules, ovary glabrous, 2 reddish stigmas, savannah, dry areas, open areas, type *Agenium nutans* Nees, see John Lindley (1799-1865), [*An Introduction to the*] *Natural System of Botany* 447. 1836 [*An Introduction to the Natural System of Botany* London 1830] and

Flora Illustrada de Entre Ríos (Argentina) 6(2): 447-508. 1969, *Contributions from the United States National Herbarium* 46: 14. 2003.

Species

A. leptocladum (Hack.) Clayton (*Agenium goyazense* (Hack.) Clayton; *Andropogon goyazensis* Hack.; *Andropogon leptocladus* Hack.; *Heteropogon leptocladus* (Hack.) Roberty)

Brazil, Paraguay, northern Argentina. Racemes solitary more or less glabrous, see *Österreichische Botanische Zeitschrift* 51(5): 152. 1901, *Kew Bulletin* 27(3): 447. 1972.

A. majus Pilg.

Paraguay. Perennial, tufted, see *Repertorium Specierum Novarum Regni Vegetabilis* 43: 82. 1938.

A. nutans Nees (*Agenium villosum* (Nees) Pilg.; *Andropogon agenium* Steud.; *Andropogon neesii* var. *apogynus* (Nees) Hack.; *Andropogon nutans* L.; *Andropogon villosus* f. *apogyna* (Nees) Henrard; *Heteropogon villosus* var. *apogynus* Hack.)

Brazil. See *Species Plantarum* 2: 1045. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 263. 1832, *An Introduction to the Natural System of Botany* 447. 1836, *Synopsis Plantarum Glumacearum* 1: 395. 1854, *Flora Brasiliensis* 2(4): 270. 1883, *Monographiae Phanerogamarum* 6: 582. 1889 and *Contr. U.S. Natl. Herb.* 12: 125. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 9. 1912, *Mededeelingen van's Rijks-Herbarium* 40: 44. 1921, *Taxon* 33: 95-97. 1984.

A. villosum (Nees) Pilg. (*Agenium nutans* Nees; *Andropogon agenium* Steud.; *Andropogon neesii* Kunth, nom. illeg., non *Andropogon neesii* Trin.; *Andropogon neesii* subvar. *glabrescens* Pilg.; *Andropogon neesii* subvar. *paraguayensis* Hack.; *Andropogon neesii* var. *apogynus* (Nees) Hack.; *Andropogon neesii* var. *dactyloides* (Hack.) Hack.; *Andropogon nutans* subvar. *elongatus* Hack.; *Andropogon nutans* subvar. *fuliginosus* Hack.; *Andropogon nutans* subvar. *neesii* Hack.; *Andropogon villosus* Lam.; *Andropogon villosus* (Nees) Ekm., nom. illeg., non *Andropogon villosus* Lam.; *Andropogon villosus* f. *apogyna* (Nees) Henrard; *Andropogon villosus* subvar. *gardneri* (Hack.) Henrard; *Andropogon villosus* subvar. *leianthus* (Hack.) Ekman; *Andropogon villosus* subvar. *leiophyllus* (Hack.) Henrard; *Andropogon villosus* subvar. *paraguayensis* (Hack.) Henrard; *Andropogon villosus* subvar. *riedelianus* (Hack.) Henrard; *Andropogon villosus* subvar. *selloanus* (Hack.) Henrard; *Andropogon villosus* subvar. *typicus* Henrard; *Andropogon villosus* var. *dactyloides* (Hack.) Hack. ex Henrard; *Andropogon villosus* var. *genuinus* (Hack.) Ekman; *Heteropogon villosus* Nees; *Heteropogon villosus* subvar. *gardneri* Hack.; *Heteropogon villosus* subvar. *leianthus*

Hack.; *Heteropogon villosus* subvar. *leiophyllus* Hack.; *Heteropogon villosus* subvar. *riedelianus* Hack.; *Heteropogon villosus* subvar. *selloanus* Hack.; *Heteropogon villosus* subvar. *typicus* Hack.; *Heteropogon villosus* var. *apogynus* Hack.; *Heteropogon villosus* var. *dactyloides* Hack.; *Heteropogon villosus* var. *genuinus* Hack.)

Brazil, Paraguay, Argentina, Bolivia. Perennial bunchgrass, tufted, erect, forming clumps, villous racemes in clusters, sandy soils, *cerrado*, see *Flore de France* 3: 634. 1778, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 362-363. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 491. 1833, *Synopsis Plantarum Glumacearum* 1: 395. 1854, *Flora Brasiliensis* 2(4): 269-270, pl. 62, f. 2. 1883, *Monographiae Phanerogamarum* 6: 582. 1889 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 137. 1901, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 9-10. 1912, *Mededeelingen van's Rijks-Herbarium* 40: 44. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 43: 82. 1938.

Aglycia Willd. ex Steud. = *Aglycia* Steud., *Eriochloa* Kunth

Perhaps from the Greek *agleykes* "not sweet, sour, harsh."

Panicoideae, Paniceae, Melinidinae, see *Nova Genera et Species Plantarum* 1: 94-95, t. 30. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 1: 37, 66. 1840 and *N. Amer. Fl.* 17: 157. 1912, *Flora Mesoamericana* 6: 333-335. 1994, *Contributions from the United States National Herbarium* 46: 233-239. 2003.

Agnesia Zuloaga & Judziewicz

Dedicated to the American botanist Mary Agnes Chase (*née* Merrill), 1869-1963, agrostologist, plant collector, traveler, among his writings are *First Book of Grasses*. New York 1922 and "Poaceae (pars)." *North Amer. Fl.* 17(8): 568-579. 1939, with the American botanist Albert Spear Hitchcock (*née* Jennings) (1865-1935) wrote *Grasses of the West Indies*. Washington [D.C.] 1917, *Tropical North American Species of Panicum*. Washington [D.C.] 1915 and *The North American Species of Panicum*. Washington [D.C.] 1910, in 1950 revised the *Manual of the Grasses of the United States* (by A.S. Hitchcock), with Cornelia D. Niles edited *Index to Grass Species*. Boston 1962. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 335. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 71. 1972; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Frans A. Stafleu & Erik A. Menega, *Taxonomic literature. Suppl. IV*. 57-60. 1997.

One species, Amazonia, South America. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, delicate, dwarf, herbaceous, unarmed, caespitose, flowering culms leafy, plants monoecious, at the upper nodes raceme-like panicles, all the fertile spikelets unisexual, several male spikelets subterminal, 1 single terminal female spikelet, 2 glumes more or less equal, female floret shortly awned, male spikelets without glumes, palea present, shade lover, clumps forming, wet forests, lowland, forest understories, type *Agnesia lancifolia* (Mez) Zuloaga & Judziewicz, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Fam. Pl.* 2: 39, 574. 1763 and *Blumea, Supplement* 3: 62. 1946, *Brittonia* 37: 22-35. 1985, *Systematic Botany* 17(1): 25-28. 1992, *Novon* 3(3): 306-309. 1993, *American Bamboos* 262-264. 1999, *Contributions from the United States National Herbarium* 39: 11. 2000.

Species

A. lancifolia (Mez) Zuloaga & Judziewicz (*Olyra lancifolia* Mez)

Amazonia, Brazil, Colombia, Peru. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7(63): 45. 1917, *Novon* 3(3): 307. 1993.

Agraulus P. Beauv. = *Agrostis* L.

From the Greek *agraulos*, *agraulon* “dwelling in the field, a boor,” *agros* “field” and *aule* “the court-yard, court, hall.”

Pooideae, Poeae, Agrostidinae, type *Agraulus caninus* (L.) P. Beauv., see *Species Plantarum* 1: 61-63. 1753, *Essai d'une Nouvelle Agrostographie* 5, 146-147, t. 3, f. 2, t. 4, f. 7. 1812 and *U.S. Dept. Agric. Bull.* 772: 127. 1920, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 99. 1957, *Novosti Sist. Vyss. Rast.* 6: 2. 1970, *Fl. Fenn.* 5: 29. 1971, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89. 2003.

Agrestis Bubani = *Agrostis* L.

Latin *agrestis* “pertaining to fields.”

Pooideae, Poeae, Agrostidinae, see *Species Plantarum* 1: 61-63. 1753, *Essai d'une Nouvelle Agrostographie* 5, 146-147, t. 3, f. 2, t. 4, f. 7. 1812 and Pietro Bubani (1806-1888), *Flora Pyrenaea* ... 4: 281. 1901, *U.S. Dept. Agric. Bull.* 772: 127. 1920, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 99. 1957, *Novosti Sist. Vyss. Rast.* 6: 2. 1970, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89. 2003.

Agriopyrum Maly

See *Species Plantarum* 1: 86-87. 1753 and *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 54: 180. 1904, *Illustrierte Flora von Mitteleuropa* 1: 488. 1908.

x Agrocalamagrostis Aschers. & Graebn.

Agrostis x *Calamagrostis*.

See *Syn. Mitteleur. Fl.* 2: 223. 1899 and *Genera Graminum* 374. 1986.

x Agroelymus E.G. Camus ex A. Camus

Agropyron x *Elymus*.

See *Bulletin du Muséum d'Histoire Naturelle* 33: 538. 1927, *Genera Graminum* 374. 1986.

x Agrohordeum E.G. Camus ex A. Camus

Agropyron x *Hordeum*.

See *Bulletin du Muséum d'Histoire Naturelle* 33: 537. 1927, *Genera Graminum* 374. 1986.

x Agropogon P. Fourn. = *Agropogon* P. Fourn.

Agrostis L. x *Polypogon* Desf.

Pooideae, Aveneae, perennial, tufted, erect, ascending, creeping, geniculate, rooting at the lower nodes, dense inflorescence paniculate, spikelets persistent, glumes mucronate, alkaline flats, saline soils, type *Agropogon lutosus* (Poir.) P. Fourn., see *Species Plantarum* 1: 61-63. 1753, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 249. 1810, *Compendium Florae Britannicae* (edition 2) 13. 1816 and *United States Department of Agriculture: Bulletin* 772: 138. 1920, Paul Victor Fournier (1877-1964), *Les Quatre Flores de la France* 50. Poinson-les-Grancey 1934, *Monde des Plantes; Revue mensuelle de botanique* 36(213): 20. 1935, *Botanical Magazine* 55(656): 357. 1941, *Journal of Ecology* 33: 333. 1946, *Journal of Japanese Botany* 33: 11. 1958, *Current Science* 49(11): 444. 1980, *Genera Graminum* 374. 1986, *Blumea* 35: 446. 1991, *Flora of Ethiopia and Eritrea* 7: 46. 1995, *Contributions from the United States National Herbarium* 48: 25. 2003.

Species

x **A. lutosus** (Poir.) P. Fourn. (*Agropogon lutosus* (Poir.) P. Fourn.; *Agrostis stolonifera* L. x *Polypogon monspeliensis* (L.) Desf.) (*Agrostis littoralis* Lam.; *Agrostis littoralis* With., nom. illeg., non *Agrostis littoralis* Lam.; *Agrostis*

lutosa Poir.; *Agrostis subaristata* Aitch. & Hemsl.; *Polypogon littoralis* Sm.; *Polypogon lutosus* (Poir.) Hitchc.; *Polypogon subaristatus* (Aitch. & Hemsl.) Bhattacharya & S.K. Jain; x *Agropyron littoralis* (Sm.) C.E. Hubb.)

Europe, Asia. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 161. 1791, *An Arrangement of British Plants, Third Edition* 1796, *Flora Atlantica* 1: 66. 1798 [1800], *Compendium Florae Britannicae* (edition 2) 13. 1816, *Journal of the Linnean Society, Botany* 19(117-118-119): 192-193, t. 29, f. 1-3. 1882.

x Agropyrohordeum E.G. Camus ex A. Camus

Agropyron x *Hordeum*.

See *Riviera Scientifique* 21: 44-45. 1934, *Genera Graminum* 374. 1986.

Agropyron Gaertn. = Australopyrum (Tzvelev) Á. Löve, Costia Willk., Kratzmannia Opiz

From the Greek *agros* "a field, country" and *pyros* "grain, wheat."

About 12-25 species, temperate Old World, Mediterranean to China and Russia. Pooideae, Triticeae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, erect or geniculate at base, generally tufted or with creeping rhizomes, herbaceous, mesophytic or xerophytic, unbranched, more or less tuberous or not, leaf blades flat or involute, auricles present or absent, ligule an unfringed membrane, plants bisexual, inflorescence a single spike linear-oblong or ovoid, 3-10 florets, spikelets solitary pedicellate, 2 glumes more or less equal, lemmas lanceolate-oblong and coriaceous, lemmas acute or with a straight apical awn, palea present, 2-3 free and ciliate lodicules, 3 stamens, ovary hairy, 2 stigmas, Ayurvedic use, dry places, dry stony soil, dry sandy soils, open habitats, open steppes, sandy and rocky slopes, waste places, type *Agropyron cristatum* (L.) Gaertn., see *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539-540. 1770, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812, *Observations sur les Graminées de la Flore Belgique* 95. 1823 [1824], *Flora Altaica* 1: 112. 1829, *Flore de Lorraine* 3: 191. 1844, *Linnaea* 21(4): 425. 1848, *Botanische Zeitung. Berlin* 16: 377. 1858, *Botanische Zeitung. Berlin* 18: 131. 1860, *Genera Plantarum* 3(2): 1203. 1883 and *Synopsis der mitteleuropäischen Flora* 2: 667. 1901, *Flore de France* 14: 315, 317. 1913, *Handbok i Skandinavien Flora* 2: 273. 1926, *Annales des Sciences Naturelles Botanique*, sér. 10, 14: 234. 1932, *Flora URSS* 2: 648. 1934, *Journal of Nanjing Agricultural University* 1:

19. 1963, *Willdenowia* 5(3): 471. 1969, *Novosti Sist. Vyss. Rast.* 10: 35. 1973, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *J. Linn. Soc. Bot.* 76: 369-384. 1978, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984, *Feddes Repertorium* 95(7-8): 442. 1984, *Acta Botanica Academiae Scientiarum Hungaricae* 31: 181-188. 1985, *American Journal Botany* 72: 767-776. 1985, *Genome* 29: 537-553. 1987, *Annali di Botanica* 45: 75-102. 1987, *Genome* 30: 361-365. 1988, *Grassland of China* 4: 53-60. 1989, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Genome* 33: 563-570. 1990, *Flora Mediterranea* 1: 229-236. 1991, *Acta Botanica Sinica* 33(11): 833-839. 1991, *Acta Phytotaxonomica Sinica* 30(4): 342-345. 1992, *Genome* 35: 676-680. 1992, *Caryologia* 46: 245-260. 1993, *Hereditas; genetiskt arkiv.* 119: 53-58. 1993, *Nordic Journal of Botany* 13: 481-493. 1993, *Plant Systematics and Evolution* 185: 35-53. 1993, *Plant Systematics and Evolution* 186: 193-212. 1993, *Pakistan Journal of Botany* 26: 353-366. 1994, *Plant Systematics and Evolution* 191: 199-201. 1994, *Plant Systematics and Evolution* 194: 189-205. 1995, *Acta Genetica Sinica* 22(2): 109-114. 1995, *Plant Systematics and Evolution* 197: 1-17. 1995, *Phytologia* 83(5): 345-365. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Am. J. Bot.* 85: 1266-1272, 1680-1687. 1998, Gail W.T. Wilson & David C. Hartnett, "Interspecific variation in plant responses to mycorrhizal colonization in tallgrass prairie." *Am. J. Bot.* 85: 1732-1738. 1998, *Opera Botanica* 137: 1-42. 1999, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, *Am. J. Bot.* 86: 703-710. 1999, *Am. J. Bot.* 87: 230-236, 402-411. 2000, Jean-Michel Gagné & Gilles Houle, "Factors responsible for *Honckenya peploides* (Caryophyllaceae) and *Leymus mollis* (Poaceae) spatial segregation on subarctic coastal dunes." *Am. J. Bot.* 89: 479-485. 2002, *Am. J. Bot.* 89: 494-499, 592-601, 1431-1438. 2002, Said A. Damhoureyeh and David C. Hartnett, "Variation in grazing tolerance among three tallgrass prairie plant species." *Am. J. Bot.* 89: 1634-1643. 2002, *Contributions from the United States National Herbarium* 48: 25-42. 2003, *Am. J. Bot.* 90: 278-283, 924-930, 1045-1053, 1313-1320. 2003, *Am. J. Bot.* 91: 1789-1801. 2004, *Am. J. Bot.* 92: 1045-1058. 2005, *Journal of Applied Ecology* 42(1): 60-69. Feb 2005, *Ecological Entomology* 30(1): 105-115. Feb 2005, *New Phytologist* 165(3): 959-962. Mar 2005, *Botanical Journal of the Linnean Society* 147(4): 501-508. Apr 2005, *Weed Research* 45(2): 114-120. Apr 2005, *Plant Breeding* 124(2): 147-153. Apr 2005, *Global Change Biology* 11(4): 575-587. Apr 2005, *Journal of Ecology* 93(2): 244-255. Apr 2005, *Restoration Ecology* 13(2): 292-301. June 2005, *Journal of Agronomy and Crop Science* 191(3): 172-184. June 2005, *Insect Molecular Biology* 14(3): 309-318. June 2005.

Species

A. brandzae Pantu & Solacolou

Romania. Rare species, see *Bulletin de la Section Scientifique de l'Académie Roumaine* 9(1-2): 28. Bucharest 1924, *Revue Roumaine de Biologie, Série Botanique* 18(2): 66. 1973, *Botanical Journal of the Linnean Society* 76(4): 384. 1978, *Feddes Repertorium* 95(7-8): 430. 1984.

A. caninum (L.) P. Beauv. (*Agropyrum caninum* (L.) Pall. ex Hegi; *Agropyron abchazicum* Waron.; *Brachypodium caninum* (L.) F. Herm. ex Lindm.; *Elymus caninus* (L.) L.; *Elytrigia canina* (L.) Drob.; *Gouardia canina* (L.) Husn.; *Roegneria canina* (L.) Nevski; *Triticum caninum* L.; *Zeia canina* (L.) Lunell)

Europe. See *Species Plantarum* 1: 86-87. 1753, *Flora suecica* (2): 39. 1755, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Essai d'une Nouvelle Agrostographie* 100, 102, 146, pl. 19, f. 35. 1812, *Linnaea* 21(4): 413. 1848, Pierre Tranquille Husnot (1840-1929), *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 83. Cahan [Caen] 1899 and *Illustrierte Flora von Mittel-Europa* 1: 488. 1908, *Moniteur du Jardin Botanique de Tiflis* 22: 2. 1912, *American Midland Naturalist* 226. 1915, *Svensk Fanerogamflora* 104. 1918, *Flora Uzbekistanica* 1: 285, 539. 1941, *Taxon* 49(2): 258. 2000.

A. cristatum (L.) Gaertn. (*Agropyrum cristatum* (L.) Gaertn.; *Avena cristata* Roem. & Schult.; *Bromus cristatus* L.; *Costia cristata* (L.) Willk.; *Eremopyrum cristatum* (L.) Willk. & Lange; *Triticum cristatum* (L.) Schreb.; *Zeia cristata* (L.) Lunell)

Eurasia, China. Perennial, spikelets spreading, hay and pasture plant, cultivated fodder, suitable for arid situations, waste places, dry mountain slopes, dry meadows, see *Species Plantarum* 1: 78-81, 85-87. 1753, *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14: 540. 1770, *Beschreibung der Gräser* 2: 12, t. 23, f. 2. 1770, *Systema Vegetabilium* 2: 758. 1817, *Annales des Sciences Naturelles; Botanique, sér. 3* 14: 360. 1851, *Botanische Zeitung. Berlin* (16): 377. 1858, *Prodromus Florae Hispanicae* 1: 108. 1870 and *American Midland Naturalist* (4): 226. 1915, *Botanical Journal of the Linnean Society* 76(4): 384. 1978, R.Z. Wang, "Demographic variation and biomass allocation of *Agropyron cristatum* grown on steppe and dune sites in the Hunshandake Desert, North China." *Grass and Forage Science* 60(1): 99-102. Mar 2005, S.K. Dong et al. "Productivity and persistence of perennial grass mixtures under competition from annual weeds in the alpine region of the Qinghai-Tibetan Plateau." *Weed Research* 45(2): 114-120. Apr 2005.

in English: crested wheatgrass, fairway crested wheatgrass

A. cristatum (L.) Gaertn. subsp. **cristatum**

Eurasia, southwest Asia, China.

A. cristatum (L.) Gaertn. subsp. **pectinatum** (M. Bieb.) Tzvelev (*Agropyron cristatiforme* Sarkar; *Agropyron cristatum* f. *pectiniforme* (Roem. & Schult.) A.V. Bukhteeva;

Agropyron cristatum var. *pectinatum* (M. Bieb.) Roshevitz ex Fedtsch.; *Agropyron cristatum* var. *pectiniforme* (Steud.) A.V. Bukhteeva; *Agropyron cristatum* var. *pectiniforme* (Roem. & Schult.) H.L. Yang; *Agropyron cristatum* var. *pectiniforme* (Roem. & Schult.) Matveev; *Agropyron lavrenkoanum* var. *pectinatum* (M. Bieb.) M. Bieb.; *Agropyron pectinatum* (M. Bieb.) P. Beauv.; *Agropyron pectiniforme* Roemer & J.A. Schultes; *Elymus pectinatus* (M. Bieb.) Lainz; *Eremopyrum cristatum* var. *pectinatum* (M. Bieb.) P. Candargy; *Triticum pectinatum* M. Bieb.; *Triticum pectiniforme* Steud.)

North America. See *Species Plantarum* 1: 83-84. 1753, *Flora Taurico-Caucasica* 1: 87. 1808, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812, *Systema Vegetabilium* 2: 758. 1817, *Nomenclator Botanicus* 855. 1821 and *Archives de Biologie Végétale Pure et Appliquée* 1: 61. 1901, *Canadian Journal of Botany* 34: 333. 1956, *Boletín del Instituto de Estudios Asturianos. Suplemento de ciencias. Oviedo*. 44. 1970, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984, *Flora Reipublicae Popularis Sinicae* 9(3): 113, pl. 27, f. 9. 1987, *Caryologia* 46: 245-260. 1993, *Plant Systematics and Evolution* 194: 189-205. 1995, *Botanical Journal of the Linnean Society* 117: 159-168. 1995.

in English: crested wheatgrass

A. cristatum (L.) Gaertn. var. **cristatum**

Eurasia, southwest Asia, China.

A. cristatum (L.) Gaertn. var. **pectiniforme** (Roemer & Schultes) H.Y. Yang (*Agropyron cristatum* f. *pectiniforme* (Roem. & Schult.) A.V. Bukhteeva; *Agropyron cristatum* var. *pectiniforme* (Roem. & Schult.) Matveev; *Agropyron cristatum* var. *pectiniforme* (Steud.) A.V. Bukhteeva; *Agropyron pectiniforme* Roemer & J.A. Schultes; *Triticum pectiniforme* Steud.)

Eurasia, southwest Asia, China. Glumes and lemmas glabrous or smooth, see *Systema Vegetabilium* 2: 758. 1817 and *Flora Reipublicae Popularis Sinicae* 9(3): 113, pl. 27, f. 9. 1987.

A. cristatum (L.) Gaertn. var. **pluriflorum** H.Y. Yang

Eurasia, southwest Asia, China. Spike ovoid-lanceolate, see *Bull. Bot. Res. Harbin* 4(4): 88. 1984.

A. dasyanthum Ledeb. (*Agropyron cristatum* subsp. *dasyanthum* (Ledeb.) Á. Löve; *Agropyron dasyanthum* (Ledeb. ex Spreng.) Ledeb.; *Eremopyrum dasyanthum* (Ledeb. ex Spreng.) P. Candargy; *Triticum dasyanthum* Ledeb. ex Spreng.)

Eurasia, Russia. Rare species, see *Systema Vegetabilium, editio decima sexta* 1: 325. 1825 and *Archives de Biologie Végétale Pure et Appliquée* 1: 34, 62. 1901, *Feddes Repertorium* 95(7-8): 431. 1984.

A. desertorum (Fischer ex Link) Schultes (*Agropyron cristatum* subsp. *desertorum* (Fisch. ex Link) Á. Löve; *Agropyron cristatum* var. *desertorum* (Fisch. ex Link) Dorn;

Agropyron desertorum (Fisch.) J.A. Schultes; *Agropyron desertorum* (Link) J.A. Schultes; *Agropyron sibiricum* var. *desertorum* (Fisch. ex Link) Trautv. ex Boiss.; *Eremopyrum sibiricum* var. *desertorum* (Fisch. ex Link) P. Candargy; *Triticum desertorum* Fisch. ex Link)

Eurasia. Spikelets spreading to ascending, florets 3-8, useful for erosion control, waste places, roadsides, disturbed areas, see *Essai d'une Nouvelle Agrostographie* 102, 146, 181. 1812, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 97. 1821, *Mantissa* 2: 412. 1824, *Flora Orientalis* 5: 667. 1884 and *Archives de Biologie Végétale Pure et Appliquée* 1: 33-34, 60. 1901, *Feddes Repertorium* 95(7-8): 431. 1984, *Vascular Plants of Wyoming* 298. 1988.

in English: desert crested wheatgrass

A. desertorum (Fischer ex Link) Schultes var. *desertorum* China.

A. desertorum (Fischer ex Link) Schultes var. *pilosiusculum* Meld. (*Agropyron sinkiangense* D.F. Cui)

China. Lemmas densely pilose, see *Fl. Mong.* 1: 121. 1949.

A. deweyi Á. Löve

Turkey. Rare species, see *Feddes Repertorium* 95(7-8): 432. 1984.

A. embergeri Maire

Morocco. Rare species, see Louis Emberger (1897-1969) and René Maire, *Catalogue des plantes du Maroc, spermatophytes et ptéridophytes*. 1941, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 100. 1942.

A. fragile (Roth) P. Candargy (*Agropyron angustifolium* (Link) Schult.; *Agropyron cristatum* subsp. *fragile* (Roth) A. Löve; *Agropyron cristatum* subsp. *sibiricum* (Willd.) Á. Löve; *Agropyron cristatum* var. *fragile* (Roth) Dorn; *Agropyron fragile* Roth; *Agropyron fragile* (Roth) Nevski; *Agropyron fragile* subsp. *sibiricum* (Willd.) Melderis; *Agropyron fragile* var. *sibiricum* (Willd.) Tzvelev; *Agropyron sibiricum* (Willd.) P. Beauv.; *Agropyrum fragile* (Roth) Nevski; *Brachypodium fragile* (Roth) P. Beauv.; *Eremopyrum sibiricum* (Willd.) P. Candargy; *Triticum angustifolium* Link; *Triticum fragile* Roth; *Triticum sibiricum* Willd.)

Europe, Eurasia. Spikelets appressed, see *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 135. 1809, *Essai d'une Nouvelle Agrostographie* 100, 102, 146, 155, 180-181. 1812, H.F. Link (1767-1851), *Enumeratio Plantarum Horti Regii Botanici Berolinensis Altera*. Berolini 1821-1822, *Mantissa* 2: 412. 1824 and *Archives de Biologie Végétale Pure et Appliquée* 1: 33-34, 60. 1901, *Fl. URSS* 2: 656, 1934, *Botanical Journal of the Linnean Society* 76(4): 384. 1978, *Feddes Repertorium* 95(7-8): 432. 1984, *Vascular Plants of Wyoming* 298. 1988.

in English: Siberian wheatgrass

A. junceiforme (Á. Löve & D. Löve) Á. Löve & D. Löve (*Agropyron jacutorum* Nevski; *Agropyron junceum* subsp.

boreali-atlanticum Simonet ex Guin.; *Elymus farctus* (Viv.) Runemark ex Melderis subsp. *boreali-atlanticus* (Simonet & Guin.) Melderis; *Elytrigia jacutorum* (Nevski) Nevski; *Elytrigia juncea* (L.) Nevski; *Elytrigia junceiformis* Á. Löve & D. Löve, *Thinopyrum junceiforme* (Á. Löve & D. Löve) Á. Löve)

Europe. See *Acta Inst. Bot. Acad. Sci. URSS* 1 2: 78. 1936, *Fl. British Isles* 1462. 1952, *Taxon* 29(2-3): 351. 1980, *South African Journal of Botany* 54: 541-550. 1988, *Acta Botanica Neerlandica* 41: 407-415. 1992, *Genome* 35: 758-764. 1992.

A. junceum (L.) P. Beauv. (*Agropyron junceum* (L.) Roem. & Schult. ex Opiz, nom. illeg., non *Agropyron junceum* (L.) P. Beauv.; *Braconotia juncea* (L.) Godr.; *Elymus junceus* Fisch.; *Elymus multinodus* Gould; *Elytrigia juncea* (L.) Nevski; *Festuca juncea* (L.) Moench; *Festuca juncea* Phil., nom. illeg., non *Festuca juncea* (L.) Moench; *Thinopyrum junceum* (L.) Á. Löve; *Triticum junceum* L.)

Europe. See *Centuria I. Plantarum* ... 1: 6. 1755, *Mantissa Plantarum* 2: 327. 1771, *Methodus Plantas Horti Botanici* ... 190. 1794, *Mémoires de la Société Impériale des Naturalistes de Moscou* 1: 25, t. 4. 1811, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812, *Flore de Lorraine* 3: 192. 1844, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 88, 89. 1891 and *Madroño* 9(4): 126. 1947, *Taxon* 29(2-3): 351. 1980, *Acta Botanica Neerlandica* 41: 407-415. 1992, *Genome* 36: 641-651. 1993.

A. michnoi Roshev. (*Agropyron cristatum* subsp. *michnoi* (Roshev.) Á. Löve)

Mongolia, Russia. Erect, leaf sheaths glabrous, long creeping branching rhizomes, spike dense and elliptic or elliptic lanceolate, 5-7(-10) florets, lemmas lanceolate and more or less woolly and bristly, palea acuminate, forage, on sandy areas, banks, see *Bulletin du Jardin Botanique Principal de l'URSS* 28: 384. 1929 [also *Izv. Glavn. Bot. Sada SSSR*], *Feddes Repertorium* 95(7-8): 432. 1984.

A. mongolicum Keng (*Agropyron cristatum* subsp. *mongolicum* (Keng) Á. Löve)

China. See *Journal of the Washington Academy of Sciences* 28: 305, f. 4. 1938, *Feddes Repertorium* 95(7-8): 432. 1984.

A. mongolicum Keng var. *mongolicum*

China.

A. mongolicum Keng var. *villosum* H.L. Yang

China. Glumes and lemmas densely villous, in sandy places, see *Bull. Bot. Res.* Harbin 4(4): 89. 1984.

A. nathaliae Sipliv. (*Agropyron michnoi* subsp. *nathaliae* (Sipliv.) Tzvelev)

Russia. See *Novosti Sist. Vyss. Rast.* 1968: 13. 1968, *Novosti Sist. Vyss. Rast.* 10: 34. 1973, *Feddes Repertorium* 95(7-8): 432. 1984.

A. pectinatum (Labill.) P. Beauv. (*Agropyron pectinatum* (M. Bieb.) P. Beauv.; *Australopyrum pectinatum* (Labill.) Á. Löve; *Triticum pectinatum* M. Bieb.)

Hungary. See *Novae Hollandiae Plantarum Specimen* 1: 21, t. 25. 1805, *Flora Taurico-Caucasica* 1: 87. 1808, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812 and *Feddes Repertorium* 95(7-8): 443. 1984, *New Zealand Journal of Botany* 31: 1-10. 1993.

in English: comb wheatgrass, spiked bluegrass

A. pungens (Pers.) Roem. & Schult. (*Agropyron pseudorepens* Scribn. & J.G. Sm.; *Agropyron pungens* Reichb. ex Nyman; *Agropyron repens* subsp. *pungens* (Pers.) Hook.f.; *Agropyron repens* var. *pungens* (Pers.) Duby; *Agropyron tetrastachys* Scribn. & J.G. Sm.; *Braconotia pungens* (Pers.) Godr.; *Elymus pauciflorus* subsp. *pseudorepens* (Scribn. & J.G. Sm.) Gould; *Elymus pungens* (Pers.) Melderis; *Elytrigia atherica* (Link) Kerguélen; *Elytrigia juncea* subsp. *x pungens* (Pers.) Tutin; *Elytrigia pungens* (Pers.) Tutin; *Psammopyrum pungens* (Pers.) Á. Löve; *Thinopyrum pungens* (Pers.) Barkworth; *Triticum pungens* Pers.; *Triticum repens* var. *pungens* (Pers.) Duby)

Europe. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 207. 1791, *Syn. Pl.* 1: 109. 1805, *Systema Vegetabilium* 2: 753. 1817, *Botanicon Gallicum* 1: 529. 1828 [also *Aug. Pyrami de Candolle Botanicon Gallicum ... Editio secunda. Ex herbariis et schedis Candollianis propriisque digestum a J.É. Duby.* 1: 529. Paris 1828], *Flore de Lorraine* 3: 192. 1844, Carl Fredrik Nyman (1820-1893), *Conspectus florae europaeae: seu Enumeratio methodica plantarum phanerogamarum Europae indigenarum, indicatio distributionis geographicae singularum etc.* 840. 1882, Sir Joseph Dalton Hooker (1817-1911), *The Student's Flora of the British Islands*, 3rd edition 504. London 1884, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 32, 34. 1897 and *Madroño* 10(3): 94. 1949, *Watsonia* 2: 186. 1952, *Botanisk Tidsskrift* 55: 300. 1960, *Botanical Journal of the Linnean Society* 76(4): 380. 1978, *Veröffentlichungen des Geobot. Inst. Rübel in Zürich* 87: 50. 1986, *Phytologia* 83(4): 304. 1997 [1998].

A. repens (L.) P. Beauv. (*Agropyron leersianum* (Wulfen ex Schweigger) Rydb.; *Agropyron repens* f. *geniculatum* Farw.; *Agropyron repens* f. *heberhachis* Fernald; *Agropyron repens* f. *pilosum* (Scribn.) Fernald; *Agropyron repens* f. *setiferum* Fernald; *Agropyron repens* f. *stoloniferum* Farw.; *Agropyron repens* f. *vaillantianum* (Wulfen & Schreb.) Fernald; *Agropyron repens* var. *pilosum* Scribn.; *Agropyron repens* var. *subulatum* Roem. & Schult.; *Braconotia officinarum* Godr.; *Elymus repens* (L.) Gould; *Elytrigia repens* (L.) Desv. ex B.D. Jacks.; *Elytrigia repens* (L.) Desv. ex Nevski, nom. illeg., non *Elytrigia repens* (L.) Desv. ex B.D. Jacks.; *Elytrigia repens* (L.) Desv.; *Trisetum repens* subsp. *magellanicum* (E. Desv.) Macloskie; *Triticum infestum* Salisb.; *Triticum leersianum* Wulfen ex Schweigg.; *Triticum*

repens L.; *Triticum repens* var. *magellanicum* E. Desv.; *Triticum vaillantianum* Wulfen & Schreb.; *Zeia repens* (L.) Lunell)

Kashmir, West Tibet. A troublesome weed, a source of essential oil, the plant used for straining milk, used as a tisane or demulcent, tea for continence, rhizomes diuretic and demulcent, boil to wash swollen legs, in India the juice of the root used for cirrhus liver, the roots utilized as a paper material, forage, see *Species Plantarum* 1: 86. 1753, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 27. Londini [London] (Nov-Dec) 1796, *Specimen Florae Erlangensis* 1: 143. 1804, *Syn. Pl.* 1: 97. 1805, August F. Schweigger (1783-1821), *Flora Erlangensis*, edition 2, 1: 144. 1811, *Essai d'une Nouvelle Agrostographie* 102, 146, 180, t. 20, f. 2. 1812, *Journal de Botanique, rédigé par une société de botanistes* 1: 73. 1813, *Systema Vegetabilium* 2: 754. 1817, *Flore de Lorraine* 3: 192. 1844, *Flora Chilena* 6: 452. 1854, *Index Kewensis* 1: 836. 1893, *Flora of Mount Desert Island, Maine* 183. 1894 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1* [2], *Botany* 8(1,5,1): 205. 1904, *American Midland Naturalist* 4: 227. 1915, *Brittonia* 1(2): 85. 1931, *Rhodora* 35(413): 184. 1933, *Madroño* 9(4): 127. 1947, *Svensk Bot. Tidskr.* 44: 132. 1950, *Pl. Syst. Evol.* 166: 99. 1989, *Willdenowia* 26: 267. 1996.

in English: English couch, English twitch, couch grass, quack grass, dog grass, twitch

in French: chiendent

in Brazil: grama

in Mexico: k'an-suuk, pasto

in Morocco: nnjem, njem, en-najam, en njil, âfar, âgesmir, taggamaît, tîl

A. scabrum (R. Br.) P. Beauv. (*Anthosachne scabra* (R. Br.) Nevski; *Elymus rectisetus* (Nees) Á. Löve & Connor; *Elymus scabrus* (R. Br.) Á. Löve; *Festuca scabra* Vahl; *Festuca scabra* Labill., nom. illeg., non *Festuca scabra* Vahl; *Roegneria scabra* (R. Br.) J.L. Yang & C. Yen; *Triticum scabrum* R. Br.; *Vulpia rectiseta* Nees)

Europe. See *Symbolae Botanicae, ...* 2: 21. 1791, *Novae Hollandiae Plantarum Specimen* 1: 22, t. 26. 1804, *Flora Badensis Alsatica* 1: 8. 1805, *Prodromus Florae Novae Hollandiae* 178. 1810, *Essai d'une Nouvelle Agrostographie* 102, 146, 181. 1812, *Synopsis Plantarum Glumacearum* 1: 237. 1855 [1854] and *New Zealand Journal of Botany* 20(2): 183. 1982, *Feddes Repertorium* 95(7-8): 468. 1984, *Bothalia* 18: 114-119. 1988, *Canadian Journal of Botany* 69(2): 291. 1990, *Bothalia* 27: 75-82. 1997.

in English: common wheatgrass

A. sibiricum (Willd.) P. Beauv. (*Agropyron cristatum* subsp. *sibiricum* (Willd.) Á. Löve; *Agropyron fragile* (Roth) P. Candargy; *Agropyron fragile* subsp. *sibiricum* (Willd.)

Melderis; *Eremopyrum sibiricum* (Willd.) P. Candargy; *Triticum sibiricum* Willdenow)

Mongolia, China, Russia. Erect or geniculate at base, tufted, leaf blades flat or involute, spikes slightly curved, 9-11 florets, glumes ovate-lanceolate and oblique, lemmas glabrous or scabrid, palea equal to or slightly shorter than lemma, sandy areas, steppes, semideserts, see *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 135. 1809, *Essai d'une Nouvelle Agrostographie* 102, 146, 181. 1812 and *Archives de Biologie Végétale Pure et Appliquée* 1: 33, 58, 60. 1901, *Botanical Journal of the Linnean Society* 76(4): 384. 1978, *Feddes Repertorium* 95(7-8): 432. 1984.

A. tanaiticum Nevski

Eurasia, Russia. Rare species.

A. velutinum Nees (*Australopyrum retrofractum* subsp. *velutinum* (Nees) Á. Löve; *Australopyrum velutinum* (Nees) B.K. Simon)

Australia. See *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 417. 1843 and *Feddes Repertorium* 95(7-8): 443. 1984, *Austrobaileya* 2(3): 241. 1986.

in English: mountain wheatgrass, velvet wheatgrass

A. violaceum (Hornem.) Lange (*Agropyron violaceum* (Hornem.) Vasey; *Elymus hyperarcticus* (Polunin) Tzvelev; *Elymus trachycaulus* subsp. *violaceus* (Hornem.) Á. Löve & D. Löve; *Elymus violaceus* (Hornem.) Feilberg; *Roegneria violacea* (Hornem.) Melderis; *Triticum caninum* var. *violaceum* (Hornem.) Laest.; *Triticum violaceum* Hornem.)

Europe. See *Species Plantarum* 1: 86-87. 1753, *Flora Danica* 12(35): t. 2044. 1832, *Botaniska Notiser* 1856: 77. 1856, J.M.C. Lange (1818-1898), *Conspectus Florae Groenlandicae* 1880 [Meddel. om Grønland ... Tredie Hefte.] and *Bulletin of the National Museum of Canada* 92: 95, pl. 4. 1940, *Svensk Botanisk Tidskrift* 44: 159. 1950, *Rhodora* 56(662): 28. 1954, *Arkticheskaia Flora SSSR* 2: 44. 1964, *Botaniska Notiser* 128(4): 502. 1975 [1976], *Meddelelser om Grønland, Bioscience* 15: 12. 1984.

Agropyropsis (Batt. & Trabut) A. Camus
= *Agropyropsis* A. Camus, *Agropyropsis* (Trab.)
A. Camus, *Catapodium* Link

Resembling the genus *Agropyron* Gaertn.

Two species, North Africa. Pooideae, Poodae, Poeae, perennial, herbaceous, halophytic, tufted, stoloniferous, unbranched, leaves mainly basal, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence a single spike, spikelets solitary, 2 glumes more or less equal, palea present, 2 free membranous lodicules, 3 stamens, ovary glabrous with the apical appendage, 2 stigmas, in saline soils, damp places, see *Hortus Regius Botanicus Berolinensis*

1: 44, 280. 1827 and *Flore d'Alger* 233. 1904, *Bulletin de la Société Botanique de France* 82: 11. 1935.

Species

A. gracilis (Balansa ex Coss. & Durieu) A. Camus (*Festuca lolium* Balansa ex Coss. & Durieu)

North Africa, Algeria. See *Société Botanique de France* 2: 311. 1855 and *Revue de Botanique Appliquée et d'Agriculture Tropicale* 15: 1050. 1935.

A. lolium (Balansa ex Coss. & Durieu) A. Camus (*Catapodium lolium* (Balansa ex Coss. & Durieu) Hack.; *Festuca lolium* Balansa ex Coss. & Durieu)

North Africa, Algeria. See *Société Botanique de France* 2: 311. 1855 and *Revue de Botanique Appliquée et d'Agriculture Tropicale* 15: 1050. 1935, *Bulletin de la Société Botanique de France* 82: 11. 1935.

Agropyrum Roemer & Schultes

Orthographic variant of *Agropyron* Gaertn., see *Systema Vegetabilium* 2: 750. 1817.

x Agrositanion Bowden

Agropyron x *Sitanion*.

See *Canadian Journal of Botany* 45: 720. 1967, *Genera Graminum* 374. 1986.

Agrosticula Raddi = Sporobolus R. Br.

Greek *agrostis*, *agrostidos* "grass, weed, couch grass," Latin *agrostis*, *is*.

Chloridoideae, Cynodonteae, Sporobolinae, type *Agrosticula muralis* Raddi, see *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Agrostografia Brasiliensis* 33, 36, t. 1, f. 2. 1823, *Nom. Bot.* 2: 1274. 1874 and *Contributions from the United States National Herbarium* 18(7): 368. 1917, *Revista Sudamericana de Botánica* 6(5-6): 145. 1940, *Flora Mesoamericana* 6: 273-276. 1994, *Contributions from the United States National Herbarium* 41: 200-219. 2001.

Agrostis L. = *Agraulus* P. Beauv., *Agrestis* Bubani, *Anomalotis* Steud., *Bromidium* Nees, *Bromidium* Nees & Meyen, *Candollea* Steud., *Chaetotropis* Kunth, *Decandolea* Bastard, *Decandolia* Batard, *Didymochaeta* Steud., *Heptaseta* Koidz., *Lachnagrostis* Trin., *Linkagrostis* Romero García et al.,

Neoschischkinia Tzvelev, *Notonema* Raf.,
Pentatherum Nabelek, *Podagrostis* (Griseb.)
 Scribn. & Merr., *Senisetum* Koidz., *Senisetum*
 Honda, *Trichodium* Michaux, *Vilfa* Adans.

From the Latin *agrostis*, *is* and Greek *agrostis*, *agrostidos* “grass, weed, couch grass,” *agron*, *agros* “field,” probably referring to the habitat; Latin *ager*, the ancient Indian *ajrah*, the Gothic *akrs*.

About 200-220 species, temperate regions and tropical mountains. Pooideae, Poodae, Aveneae, or Pooideae, Poaceae, Agrostidinae, annual or perennial bunchgrass, variable, tufted, erect, decumbent and geniculately ascending, sometimes rhizomatous or stoloniferous, herbaceous and leafy, glabrous nodes, hollow internodes, auricles absent, leaf sheath rounded, ligule membranous, bristled leaves linear and narrow, leaf blades flat or involute, plants bisexual, culm with panicle rachis persistent, inflorescence paniculate more or less deciduous, loose or contracted panicles of very small spikelets whorled and slightly laterally flattened, 1-flowered spikelets borne on thread-like branches, 1 floret bisexual, 2 glumes coarse and keeled exceeding the single floret, lemmas 3- to 5-nerved and membranous, unawned or awned, awn sharply bent, short and small callus glabrous or bearded, palea present or absent, 2 free and glabrous lodicules, 3 stamens, ovary glabrous and without the apical appendage, 2 stigmas plumose, small fruit longitudinally grooved, endosperm sometimes liquid, weed species, ornamental, shade species, for pastures and lawns, bowling greens, putting greens and playing fields, cultivated fodder, forage, native pasture species, found in grasslands, páramos, rainforest, pampas, sometimes sand dunes, woodland, dry and rocky habitats, open habitats, there is considerable taxonomic confusion concerning this genus, this group is (or should be) currently under revision and review, intergeneric hybrids with *Polypogon* Desf., *Calamagrostis* Adans. and *Lachnagrostis* Trin., type *Agrostis canina* L., see *Species Plantarum* 1: 61-63. 1753, *Genera Plantarum*. edition 5. 30. 1754, *Familles des Plantes* 2: 495. 1763, *Flora Boreali-Americana* 1: 41-42, t. 8. 1803, *Essai sur la Flore du Département de Maine et Loire* 15, 28-29. 1809, *Essai d'une Nouvelle Agrostographie* 5, 146-148, 182, t. 3, 4, f. 2, 7. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1: 134. 1816, *Syst. Veg.* 2(2): 343. 1817, *Fundamenta Agrostographiae* 128, t. 10. 1820, *Observations sur les Graminées de la Flore Belgique* 127-129. 1823 [1824], *Systema Vegetabilium, editio decima sexta* 1: 259. 1825, *Bulletin Botanique* [Genève] 1: 220. 1830, *Nomenclator Botanicus. Editio secunda* 1: 273. 1840, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 362. 1841, *A Manual of the Botany of the Northern United States* 577. 1848, C.F. von Ledebour (1785-1851), *Flora*

Rossica 4(13): 436. 1852 [Grisebach is the author of the Gramineae], *Synopsis Plantarum Glumacearum* 1: 185, 198. 1854 [1855], *Fl. Chil.* 6: 317, 320. 1854 and *Syn. Mitteleur. Fl.* 2: 194. 1900, *Contributions from the United States National Herbarium* 13(3): 58. 1910, *Fl. France* 14: 59. 1913, *U.S. Dept. Agric. Bull.* 772: 127. 1920, *J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot.* 3(1): 187. 1930, *Botanical Magazine (Tokyo)* 46: 371. 1932 and 47: 146. 1933, *Fl. N. Amer.* 17: 515. 1937, *Bull. Torrey Bot. Club* 72(6): 543. 1945, *Bol. Soc. Argent. Bot.* 1: 121. 1946, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 99. 1957, *Symbolae Botanicae Upsaliensis* 17, 1: 1-112. 1960, *Records Dom. Mus.* 5(15): 142-143. 1965, *Bot. Zhurn.* 53: 309. 1968, *Novosti Sist. Vyss. Rast.* 6: 2. 1970, *Fl. Fenn.* 5: 29. 1971, *Novosti Sist. Vyss. Rast.* 8: 59. 1971, *The Flora of Canada* 2: 93-545. 1978 [1979], *Bothalia* 12: 637. 1979, *Darwiniana* 24: 187-210. 1982, *Blumea* 28: 199-228. 1982, *Fontqueria* 3: 11-12. 1983, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Journal of Cytology and Genetics* 21: 155. 1986, *Boletim da Sociedade Broteriana, ser. 2* 61: 81-104. 1988, *Ruizia* 7: 135. 1988, *Bulletin de la Société Botanique de Belgique* 122: 161-169. 1989, *A Key to Australian Grasses* 1-150. 1990, *Gayana, Botánica* 47: 3-7. 1990, *Fitologija* 39: 72-77. 1991, *New Zealand J. Bot.* 29: 139-161. 1991, *Cytologia* 56: 437-452. 1991, *Flora Mediterranea* 1: 229-236. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Taxon* 41: 556. 1992, *Parodiana* 7(1-2): 179-255. 1992, *Acta Botanica Neerlandica* 42: 73-80. 1993, *Parodiana* 8(2): 129-151. 1993, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Flora Mesoamericana* 6: 237-240. 1994, *Flora of Ethiopia and Eritrea* 7: 46-51. 1995, *Taxon* 44: 611-612. 1995, *Gayana, Botánica* 54(2): 91-156. 1997, *Opera Botanica* 137: 1-42. 1999, *Botanical Journal of the Linnean Society* 134: 495-512. 2000 [The *Deschampsia cespitosa* complex in central and northern Europe: a morphological analysis.], *Telopea* 9(3): 439-448. 2001, *Journal of the Royal Society of New Zealand* 32(1): 89-112. 2002, *Am. J. Bot.* 89: 1303-1310, 1410-1421, 1431-1438. 2002, *Contributions from the United States National Herbarium* 48: 42-89. 2003, *Am. J. Bot.* 90: 796-821, 1416-1424. 2003, Michael T. Tercek, Donald P. Hauber and Steven P. Darwin, “Genetic and historical relationships among geothermally adapted *Agrostis* (bentgrass) of North America and Kamchatka: evidence for a previously unrecognized, thermally adapted taxon.” *Am. J. Bot.* 90: 1306-1312. 2003, Jorge Chiapella & Nina S. Probatova, “The *Deschampsia cespitosa* complex (Poaceae: Aveneae) with special reference to Russia.” *Botanical Journal of the Linnean Society* 142(2): 213-228. June 2003, *Am. J. Bot.* 91: 523-530, 1312-1318. 2004, *Diversity & Distributions* 10(5-6): 505-506 Sep 2004, *Environmental Microbiology* 6(10): 1070-1080. Oct 2004, Roger del Moral and Andrew J. Eckert, “Colonization of volcanic deserts from productive

patches." *Am. J. Bot.* 92: 27-36. 2005, *Ecology Letters* 8(6): 652-661. June 2005, *Conservation Biology* 19(3): 955-962. June 2005. *Environmental Microbiology* 7(6): 780-788. June 2005, *Global Change Biology* 11(6): 894-908. June 2005, *New Phytologist* 166(3): 737-751. June 2005, *Journal of Applied Ecology* 42(3): 567-576. June 2005.

Species

A. adamsonii Vickery (*Lachnagrostis adamsonii* (Vickery) S.W.L. Jacobs)

Australia, Victoria. Endangered species, annual, erect or geniculate, leaf blades linear, auricles absent, basal leaf sheaths scabrous, ligule membranous, leaf blades linear, inflorescence a large panicle, spikelets one-flowered, 2 glumes, see *Contributions from the New South Wales National Herbarium* 1: 107. 1941, *Telopea* 9(3): 445. 2001.

in English: Adamson's bent

A. aemula R. Br. (*Agrostis semibarbata* Trin.; *Agrostis solandri* F. Muell.; *Calamagrostis aemula* (R. Br.) Steud.; *Deyeuxia aemula* (R. Br.) Kunth; *Deyeuxia forsteri* sensu Rodway, non Kunth; *Lachnagrostis aemula* (R. Br.) Nees ex Hook.f.; *Lachnagrostis aemula* (R. Br.) Trin.; *Vilfa aemula* (R. Br.) P. Beauv.)

Australia, South Australia. Annual or perennial, erect, tufted, glabrous, coastal, ligule membranous, leaves linear to shortly acuminate and flat, inflorescence of chasmogamous spikelets, panicle spreading and not drooping, spikelets usually purple, glumes acuminate, lemma truncate and hairy on the back, callus shortly bearded, palea thin and bifid, weedy grass, grows in grassland, in open habitats, grassland, see *Prodromus Florae Novae Hollandiae* 172. 1810, *Essai d'une Nouvelle Agrostographie* 16, 146, 181. 1812, *Fundamenta Agrostographiae* 128. 1820, *Révision des Graminées* 1: 77. 1829, *Nomenclator Botanicus. Editio secunda* 1: 249. 1840, *Handbook of the New Zealand Flora* 329. 1867, *Lund Fysiogr. Sällsk. Minneskr. med ...* 8: 32, t. 7, f. 41-47. 1878 and *Contr. New South Wales Herb.* 1: 101-119. 1941, *New Zealand J. Bot.* 29: 147. 1991.

in English: blown grass

A. aemula R. Br. var. **aemula**

Australia. Leaf blades flat and linear, see *A Key to Australian Grasses* 1-150. 1990.

A. aemula R. Br. var. **setifolia** (Hook.f.) Vickery (*Agrostis billardieri* var. *setifolia* Hook.f.; *Lachnagrostis punicea* (A.J. Brown & N.G. Walsh) S.W.L. Jacobs)

Australia, Tasmania, Victoria. Found in dry areas, leaf blades filiform, lower glume acuminate, see *Prodromus Florae Novae Hollandiae* 171-172. 1810, *Flora Tasmaniae* 2: 115. 1858 and *Contributions from the New South Wales National Herbarium* 1: 116. 1941, *Telopea* 9(3): 446. 2001.

A. aequata Nees (*Calamagrostis aequata* (Nees) J.M. Black; *Deyeuxia aequata* (Nees) Benth.; *Lachnagrostis aequata* (Nees) S.W.L. Jacobs)

New South Wales, Victoria, South Australia, Tasmania. Annual, more or less tufted, geniculate and ascending, auricles absent, basal leaf sheaths not keeled, ligule membranous, leaves narrow and flat, inflorescence of chasmogamous spikelets, panicle loose with numerous spreading branches, glumes scabrous on the keels, lemma truncate and glabrous, awnless, palea present, hairy callus, grows in coastal habitats, in beach sands, sometimes considered a synonym for *Agrostis rudis* Roemer & Schultes, see *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 412. 1843, *Flora Australiensis: A Description ...* 7: 578. 1878 and *Flora of South Australia* 1: 70. 1922, *Telopea* 9(3): 445. 2001.

in English: blown grass

A. aequivalvis (Trin.) Trin. (*Agrostis canina* var. *aequalis* Trin.; *Calamagrostis aequivalvis* (Trin.) Steffen; *Deyeuxia aequivalvis* Benth. ex Vasey; *Podagrostis aequivalvis* (Trin.) Scribn. & Merr.)

U.S., Pacific Northwest, northern America, Canada. Perennial, see *Species Plantarum* 1: 62. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(2): 171. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 362. 1841, *Flora Rossica* 4(13): 436. 1852, *Contributions from the United States National Herbarium* 3(1): 77. 1892 and *Contributions from the United States National Herbarium* 13(3): 58. 1910, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Beihefte zum Botanischen Centralblatt* 58b: 162. 1938.

in English: Arctic bent, arctic bentgrass, northern bent grass

A. agrostiflora (Beck) Rauschert (*Agrostis agrostiflora* (Beck) Janchen & Neumayer; *Agrostis schradlerana* Bech.; *Calamagrostis agrostiflora* Beck; *Calamagrostis agrostiflora* (Schr.) Beck; *Calamagrostis humilis* (Roem. & Schult.) O. Schwarz; *Calamagrostis tenella* (Schr.) Link, non Host)

Europe. See *Flora Germanica* 220. 1806, *Flora von Nieder-Österreich* 61. 1891 and *Wiener Botanische Zeitschrift* 93: 79. 1944, *Feddes Repertorium* 73: 49. 1966.

A. alpina Scop. (*Agraulus alpinus* (Scop.) P. Beauv.; *Agrostis alpina* (Scop.) Bubani; *Agrostis alpina* Leyss.; *Agrostis alpina* Lam.; *Agrostis alpina* Stokes; *Agrostis canina* var. *alpina* (Leyss.) Ducommun; *Agrostis canina* var. *alpina* (Scop.) Kuntze, nom. illeg., non *Agrostis canina* var. *alpina* (Leyss.) Ducommun; *Agrostis canina* var. *alpina* Alph. Wood, nom. illeg., non *Agrostis canina* var. *alpina* (Leyss.) Ducommun)

Europe. See *Species Plantarum* 1: 62. 1753, *Flora Halensis* 16. 1761, *Flora Carniolica, Editio Secunda* 1: 60. 1772, *Encyclopédie Méthodique, Botanique* 1: 58. 1783, *A Botanical Arrangement of British Plants* (2nd edition) 1: 71. 1787, *Essai d'une Nouvelle Agrostographie* 5, 146. 1812, *Voyage botanique dans le midi de l'Espagne* 2: 646. 1844, *The American Botanist and Florist* 384. 1871, *Revisio Generum Plantarum* 3: 338. 1898, *Synopsis der mitteleuropäischen Flora* 2: 187. 1899 and *Flora Pyrenaea ...* 4: 287. 1901.

A. ambatoensis Asteg.

Argentina. See *Boletín de la Sociedad Argentina de Botánica* 20(3-4): 271. 1892.

A. anadyrensis Soczava

Eurasia, U.S., Alaska. See *Flora URSS* 2: 176, t. 13, f. 8 ad, 746. 1934.

A. arisan-montana Ohwi (*Agrostis arisan-montana* var. *meglandra* Y.C. Yang; *Agrostis infirma* var. *arisan-montana* (Ohwi) Veldkamp; *Agrostis rigidula* subsp. *arisan-montana* (Ohwi) T. Koyama, nom. illeg., non *Agrostis rigidula* var. *arisan-montana* (Ohwi) Veldkamp; *Agrostis rigidula* var. *arisan-montana* (Ohwi) Veldkamp)

Asia, Taiwan, Mt Arisan. See *Synopsis Plantarum Glumacearum* 1: 171. 1854, *Pl. Jungh.* 3: 342. 1854 and *Acta Phytotaxonomica et Geobotanica* 2(3): 161. 1933, *Blumea* 28(1): 217. 1982, *Bulletin of Botanical Research* 4(4): 98-99. 1984, *Grasses of Japan and Its Neighboring Regions* 485. 1987, *Blumea* 41(2): 408. 1996.

A. aristiglumis Swallen (*Agrostis microphylla* Steud.)

U.S., California. Endangered species, growing on slopes, see *Synopsis Plantarum Glumacearum* 1: 164. 1854 and *Leaflets of Western Botany* 5(3): 56. 1947.

in English: awned bent grass

A. arvensis Phil.

Chile. See *Linnaea* 29(1): 87. 1858.

A. australiensis Mez

Australia, Victoria, Tasmania, New South Wales. Annual, densely tufted, erect, slender, leafy, auricles absent, basal leaf sheaths not keeled, leaves rigid, ligule membranous, inflorescence of chasmogamous spikelets, panicle lax, purplish spikelets, glumes acute, lemma thin and truncate, palea minute or absent, grows in damp areas, in open habitats, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 302. 1921.

in English: Australian bent

A. avenacea J.F. Gmelin (*Agrostis debilis* Poir.; *Agrostis debilis* (Kunth) Spreng., nom. illeg., non *Agrostis debilis* Poir.; *Agrostis filiformis* (Forst.f.) Sprengel, nom. illeg., non *Agrostis filiformis* Vill.; *Agrostis forsteri* Roemer & Schultes; *Agrostis leonii* Parodi; *Agrostis ligulata* Steud.; *Agrostis retrofracta* Willd.; *Agrostis solandri* F. Muell.; *Avena filiformis* Forst.f.; *Avena retrofracta* Willd.; *Calamagrostis*

avenacea (J.F. Gmelin) Bech., nom. illeg., non *Calamagrostis avenacea* (J.F. Gmel.) W.R.B. Oliv.; *Calamagrostis avenacea* (J.F. Gmelin) W.R.B. Oliv.; *Calamagrostis filiformis* (Forst.f.) Cockayne, nom. illeg., non *Calamagrostis filiformis* Griseb.; *Calamagrostis retrofracta* (Willd.) Link; *Calamagrostis willdenowii* (Trin.) Steud.; *Deyeuxia filiformis* (Forst.f.) Petrie, nom. illeg., non *Deyeuxia filiformis* (Griseb.) Hook.f.; *Deyeuxia forsteri* Kunth, nom. illeg.; *Deyeuxia retrofracta* (Willd.) Kunth; *Lachnagrostis avenacea* (J.F. Gmelin) Veldkamp; *Lachnagrostis filiformis* (Forst.f.) Trinius; *Lachnagrostis retrofracta* (Willd.) Trin.; *Lachnagrostis willdenowii* Trin.; *Vilfa debilis* (Poir.) P. Beauv.; *Vilfa retrofracta* (Poir.) P. Beauv.)

Australia, New Zealand. Annual or perennial, tufted, clump-forming, erect or geniculate in lower part, slender to robust, glabrous, herbaceous, culms scabrous below panicle, auricles absent, basal leaf sheaths not keeled, fine green leaves linear and flat, ligule membranous, rhizomatous, chasmogamous spikelets, inflorescence a large open panicle sometimes drooping when young, panicle branches in distant whorls on the central axis, usually greenish to purple spikelets, glumes narrow and scabrous, lemma truncate and villos or hairy on the back, geniculate awn, callus shortly bearded, palea thin and membranous, very variable species naturalized elsewhere, weed, fodder, grazed when young, in New South Wales livestock poisonings associated with this grass, grows on moist soils, on damp disturbed soils, grassland, in vernal pools, on dry bare soil, along a stream, riverbanks, riparian woodland, clearings, clayey soil, roadsides, gardens, landslips, drains, channels, see *Florulae Insularum Australium Prodromus* 9. 1786, *Histoire des Plantes de Dauphiné* 2: 78. 1787, *Systema Naturae ... editio decima tertia, aucta, reformata* 2(1): 171. 1791, *Mantissa Prima Florae Halensis* 32. 1807, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 94. 1809, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 249. 1810, *Essai d'une Nouvelle Agrostographie* 16, 147-148, 181-182. 1812, *Nova Genera et Species Plantarum* 1: 128. 1815 [1816], *Systema Vegetabilium* 2: 359. 1817, *Fundamenta Agrostographiae* 128, t. 10. 1820, *De Graminibus unifloris et sesquifloris* 217. 1824, *Systema Vegetabilium, editio decima sexta* 1: 262. 1825, *Révision des Graminées* 1: 77. 1829, *Hortus Regius Botanicus Berolinensis* 2: 247. 1833, *Synopsis Plantarum Glumacearum* 1: 173, 192. 1854 and *New Zealand Department Lands Report Botanical Survey Tongariro National Park* 35. 1908, *The Subantarctic Islands of New Zealand* 2: 474. 1909, *Transactions and Proceedings of the New Zealand Institute* 99: 127. 1917, *Candollea* 7: 519. 1938, *Revista Argentina de Agronomía* 29(1-2): 19, f. 3. 1962 [1963], *Palm. Hort. Franc.* 3: 71. 1991, *Blumea* 37(1): 230. 1992, *New Zealand J. Bot.* 33: 19-20. 1995, *Bothalia* 26(1): 63-67. 1996, Paul H. Zedler and Charles Black, "Exotic plant invasions in an endemic-rich habitat: The spread of an introduced Australian grass, *Agrostis*

avenacea J. F. Gmel., in California vernal pools." *Austral. Ecology* 29(5): 537-546. Oct 2004.

in English: bent grass, avens bent grass, blown grass, common blown grass, New Zealand wind grass, bents, fairy grass, Pacific bent, Pacific bentgrass

in Hawaii: he'upuea, he'upueo

A. *avenacea* J.F. Gmelin var. ***perennis*** Vickery

Australia. See *Systema Naturae ... editio decima tertia, aucta, reformata* 2(1): 171. 1791 and *Contributions from the New South Wales National Herbarium* 1: 114. 1941.

A. *bacillata* Hack.

Costa Rica. Perennial, caespitose, montane, erect, leaves mostly basal, open panicle with yellowish cream flowers, often placed in *Podagrostis* (Griseb.) Scribner & Merr., found in open areas, páramos, see *Österreichische Botanische Zeitschrift* 52(2): 59. 1902, *Brittonia* 23(3): 293-324. 1971.

A. *barbuligera* Stapf (*Lachnagrostis barbuligera* (Stapf) Rúgolo & A.M. Molina)

South Africa. Perennial, tufted, flat leaf blade, ligule membrane-like, usually in marshy areas, see *Flora Capensis* 7(3): 548. 1899.

A. *barbuligera* Stapf var. ***barbuligera***

South Africa. Perennial, tufted, forming small clumps, basal sheaths splitting into fibers, panicle flexuous, lemmas awned, found in mountain grassland, in mountain grassveld, see *Flora Capensis* 7(3): 548. 1899.

A. *barbuligera* Stapf var. ***longipilosa*** Goossens & Papendorf

South Africa. Perennial, tufted, basal sheaths splitting, panicle flexuous, hairy lemmas, found in mountain grassland, see *Flora Capensis* 7(3): 548. 1899 and *South African Journal of Science* 41: 179. 1945.

A. *basalis* Luces

Venezuela. See *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 10-11, f. 6. 1953.

A. *bergiana* Trin.

North America, Africa. See *De Graminibus unifloris et sesquifloris* 203. 1824.

A. *bergiana* Trin. var. ***bergiana***

South Africa. Perennial or annual, short-lived, weak, delicate, open panicle, palea present, growing in mountain grassland, wet or moist places.

A. *bergiana* Trin. var. ***laeviuscula*** Stapf

South Africa. Perennial or annual, weak, delicate, open panicle, palea present, growing in mountain grassland, wet or moist places, see *Flora Capensis* 7: 547. 1899.

A. *bergiana* Trin. var. ***submutica*** Nees

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 150. 1841.

A. *billardieri* R. Br. (*Agrostis diffusa* Banks & Sol. ex Hook.f.; *Agrostis labillardieri* Roem. & Schult.; *Agrostis solandri* F. Muell., p.p.; *Avena filiformis* Labill.; *Deyeuxia billardieri* (R. Br.) Kunth; *Calamagrostis aemula* var. *billardieri* (R. Br.) Maiden & Betche; *Calamagrostis billardieri* (R.Br.) Steud.; *Deyeuxia billardieri* (R. Br.) Kunth; *Lachnagrostis billardieri* (R. Br.) Trinius; *Vilfa billardieri* (R. Br.) P. Beauv.) (named for the French explorer Jacques Julien Houtton de Labillardière, 1755-1834, botanist, traveler, from 1791-1795 on expedition to find the French navigator Jean François de Galaup de la Pérouse (1741-1788), among his works *Icones plantarum Syriae rariorum. Lutetiae Parisiorum* [Paris] 1791 [1791-1812], *Relation du voyage à la recherche de la Pérouse*. Paris [1800] and *Novae Hollandiae plantarum specimen*. Paris 1804-1806 [1807]. See Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. 573. Paris, Leipzig 1845; J.H. Barnhart, *Biographical notes upon botanists*. 2: 331. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; M.N. Chaudhri, I.H. Vegter and C.M. De Wal, *Index Herbariorum, Part II* (3), *Collectors I-L. Regnum Vegetabile* vol. 86. 1972; H.M. Cooper, *French Exploration in South Australia*. Adelaide 1952; John Dunmore, *French Explorers in the Pacific*. Oxford 1965-1969; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; N.J.B. Plomley, *The Baudin Expedition and the Tasmanian Aborigines*. Hobart 1982; Numa Broc, *Dictionnaire illustré des explorateurs français du XIXe siècle*. Afrique. Paris 1988; Sir James Edward Smith, *A Specimen of the Botany of New Holland*. 1, t. 1. London 1793; Warren R. Dawson, *The Banks Letters*. London 1958; J.C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Ida Lee, *Early Explorers in Australia: From the Log-books and Journals, including the Diary of Allan Cunningham*. London 1925; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987)

Australia, Victoria, South Australia, Tasmania. Annual or perennial, glabrous, erect, caespitose, leaves nonauriculate, basal leaf sheaths not keeled, leaf blade flat and linear to filiform or shortly acuminate, ligule membranous and hairy, inflorescence of chasmogamous spikelets, panicle branched, spikelets straw-colored or purplish, glumes scabrous on the keel, lemmas glabrous and awned, awn geniculate and exserted, callus shortly bearded, palea lanceolate and bifid, found on sandy soils, coastal areas, open habitats,

see *Prodromus Florae Novae Hollandiae* 171. 1810, *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *Fundamenta Agrostographiae* 128, t. 10. 1820, *Révision des Graminées* 1: 77. 1829, *Nomenclator Botanicus. Editio secunda* 1: 249. 1840, *Flora Tasmaniae* 2: 115. 1858 and *A Census of New South Wales Plants* 21. 1916, *Contr. New South Wales Herb.* 1: 101-119. 1941, *New Zealand Journal of Botany* 33: 1-33. 1995.

in English: coastal blown grass, blown grass, coast blown grass

A. billardieri R. Br. var. **billardieri**

Australia. Leaf blades flat and linear, see *Prodromus Florae Novae Hollandiae* 171. 1810.

A. billardieri R. Br. var. **collicola** D.I. Morris (*Agrostis collicula* (D.I. Morris) A.J. Brown & N.G. Walsh, also spelled *collicola*; *Lachnagrostis collicola* (D.I. Morris) S.W.L. Jacobs)

Tasmania. Leaf blades flat, inflorescence a panicle, lemma awned and aristate, see *Prodromus Florae Novae Hollandiae* 171. 1810 and *Muelleria* 7(2): 147. 1990, *Muelleria* 14: 80. 2000, *Telopea* 9(3): 445. 2001.

A. billardieri R. Br. var. **filifolia** Vickery (*Lachnagrostis punicea* subsp. *filifolia* (Vickery) S.W.L. Jacobs)

Tasmania. Leaf blades filiform, lemma awned, a coastal grass, see *Prodromus Florae Novae Hollandiae* 171. 1810 and *Contributions from the New South Wales National Herbarium* 1: 110. 1941, *Telopea* 9(3): 446-447. 2001.

A. billardieri R. Br. var. **robusta** Vickery (*Agrostis robusta* (Vickery) A.J. Brown & N.G. Walsh; *Lachnagrostis robusta* (Vickery) S.W.L. Jacobs)

Tasmania. Leaf blades involute, lemma awned, a coastal grass, see *Prodromus Florae Novae Hollandiae* 171. 1810 and *Contributions from the New South Wales National Herbarium* 1: 110. 1941, *Telopea* 9(3): 447. 2001.

A. billardieri R. Br. var. **tenuiseta** D.I. Morris (*Lachnagrostis billardieri* subsp. *tenuiseta* (D.I. Morris) S.W.L. Jacobs)

Tasmania. Rare species, leaf blades flat, a coastal grass, see *Prodromus Florae Novae Hollandiae* 171. 1810, *Fundamenta Agrostographiae* 128, t. 10. 1820 and *Muelleria* 7(2): 147. 1990, *Telopea* 9(3): 445. 2001.

A. blasdalei A.S. Hitchc. (*Agrostis blasdalei* var. *blasdalei*; *Agrostis blasdalei* var. *marinensis* Crampton; *Agrostis breviculmis* auct. non A.S. Hitchc.) (named for Walter Charles Blasdale, b. 1871, plant collector)

U.S., California. Vulnerable and rare species, perennial, rhizomatous, decumbent to erect, dense cylindrical inflorescence, base often partly enclosed by upper leaf, lemma sometimes awned above middle, awn straight, gravelly soils, dunes, coastal bluffs, see *Proceedings of the Biological Society of Washington* 41: 160-161. 1928.

in English: Blasdale's bent grass, Blasdale's bentgrass, cliff bent, cliff bent grass

A. blasdalei A.S. Hitchc. var. **blasdalei**

U.S., California. Vulnerable species.

in English: Blasdale's bent grass

A. blasdalei A.S. Hitchc. var. **marinensis** Crampton (California, Marin County)

U.S., California. Endangered or possibly extinct species, erect, slender, found in coastal prairie, coastal dunes, see *Proceedings of the Biological Society of Washington* 41: 160-161. 1928.

in English: Marin bent grass

A. boormanii Vickery (John Luke Boorman, fl. 1899-1919, botanist, plant collector in Australia)

Australia, New South Wales. Annual, slender, erect to geniculate, tufted, nonauriculate, basal leaf sheaths not keeled, ligule membranous and glabrous, leaves acuminate, inflorescence of chasmogamous spikelets, green and purple panicle contracted, greenish and purple spikelets, glumes acute, lemma awned and glabrous, palea absent, see *Contributions from the New South Wales National Herbarium* 1: 105. 1941, *Telopea* 9(3). 2001.

A. borealis Hartm. (*Agrostis bakeri* Rydb.; *Agrostis borealis* f. *macrantha* (Eames) Fernald; *Agrostis borealis* var. *americana* (Scribner ex Macoun) Fernald; *Agrostis borealis* var. *macrantha* Eames; *Agrostis borealis* var. *typica* Fernald; *Agrostis canina* var. *alpina* Oakes; *Agrostis canina* var. *tenella* Torr.; *Agrostis concinna* Tuck.; *Agrostis mertensii* Trin. subsp. *borealis* (Hartm.) Tzvelev; *Agrostis novae-angliae* Vasey, nom. illeg., non *Agrostis novae-angliae* Tuck.; *Agrostis pickeringii* Tuck.; *Agrostis pickeringii* var. *rupicola* Tuck.; *Agrostis rubra* L.; *Agrostis rubra* var. *alpina* (Oakes) MacMill.; *Agrostis rubra* var. *americana* Scribner ex Macoun; *Trichodium concinnum* (Tuck.) Alph. Wood) (for the American naturalist Charles Pickering, 1805-1878, botanist, zoologist, anthropologist, traveler, physician, M.D. Harvard 1826, explorer, plant geographer, historian, ethnologist, 1838-1842 with Charles Wilkes (1798-1877) and William Dunlop Brackenridge (1810-1893) on the U.S. expedition to Antarctic islands and northwest coast of North America, wrote *Chronological History of Plants*. Boston 1879. See D.C. Haskell, *The United States Exploring Expedition 1838-1842 and Its Publications 1844-1874*. New York 1942; D.B. Tyler, *The Wilkes Expedition: The First United States Exploring Expedition (1838-1842)*. Philadelphia 1968; Sydney A. Spence, *Antarctic Miscellany. Books, Periodicals and Maps Relating to the Discovery and Exploration of Antarctica*. London 1980; Howard Atwood Kelly & Walter Lincoln Burrage, *Dictionary of American Medical Biography*. New York 1928; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. 190-193. 1899; Joseph Ewan, *Rocky Mountain Naturalists*. [b. 1806] The University

of Denver Press 1950; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 224. Oxford 1964; J.H. Barnhart, *Biographical notes upon botanists*. 3: 84. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 310. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 466. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. 1969; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808 - 1841*. 475. Cambridge, Harvard University Press 1967; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 242. 1947; John Dunmore, *Who's Who in Pacific Navigation*. 265-267. Honolulu 1991; G.A. Doumani, editor, *Antarctic Bibliography*. Washington, Library of Congress 1965-1979; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Europe, Asia, northern America, Canada. Alpine, crevices, mountains, cliffs, see *Species Plantarum* 1: 62. 1753, *Linnaea* 10(3): 302. 1836, Carl Johan Hartman (1790-1849), *Handbok i Skandnaviens Flora*, edition 3, 17. 1838, *Catalogue of Vermont Plants* 32. 1842, *American Journal of Science* 45(1): 42. 1843, *Fl. New York* 2: 443. 1843, *Mag. Hort. Bot.* 9(4): 143. 1843, *A Class-book of Botany* (2) 600. 1847, *Catalogue of Canadian Plants, Part VI, Musci* 25: 391. 1890, *Contributions from the United States National Herbarium* 3(1): 76. 1892, *The Metaspermae of the Minnesota Valley* 65. 1892 and *Rhodora* 11(125): 88. 1909, *Bulletin of the Torrey Botanical Club* 36: 532. 1909, *Rhodora* 35: 204-205. 1933, *Novosti Sist. Vyss. Rast.* 10: 90. 1973.

in English: northern bentgrass

in Japan: miyamanukabo

A. bourgeaei E. Fourn. (*Agrostis alba* (L.) Lunell; *Agrostis alba* L.; *Agrostis bourgeaei* E. Fourn. ex Hemsl.; *Agrostis thyrsgera* Mez)

North America, Mexico. Aquatic, see *Species Plantarum* 1: 63. 1753, *Biologia Centrali-Americana; ... Botany ...* 3: 550. 1885, *Mexicanas Plantas* 2: 95. 1886 and *American Midland Naturalist* 4: 216. 1915, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 301. 1921.

A. boyacensis Swallen & García-Barriga

Colombia, Boyaca. See *Caldasia* 2(8): 303, f. A. 1943.

A. brachiata Munro ex Hook.f.

India, Bihar, West Bengal. Lemma awnless and glabrous, palea minute, see *The Flora of British India* 7: 256. 1897 and *Edinburgh J. Bot.* 56: 388. 1999.

A. brachyathera Steud. (*Agrostis flavidula* Steud.)

Argentina, Chile, Sandy Point-Punta Arenas, Magellan Strait, Tierra del Fuego. See *Synopsis Plantarum Glumacearum* 1: 421-422. 1854.

A. breviculmis A.S. Hitchc. (*Agrostis nana* (J. Presl) Kunth, nom. illeg., non *Agrostis nana* Delile; *Trichodium nanum* J. Presl)

Southern America, Peru, Argentina, Chile. Perennial bunchgrass, herbaceous, montane, densely tufted, prostrate, forming small clumps, ligule erose, inflorescence erect, spikelets green with purple to violet tips, growing in gravelly soil, grassland, moist places, muddy bogs, flood deposit, disturbed areas, bottomland, sandy soil, see *Révision des Graminées* 3: 596. 1829, *Reliquiae Haenkeanae* 1(4-5): 243. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1(1): 226. 1833 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 68: 36, t. 18. 1905, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958.

A. calderoniae Acosta Cast.

North America, Mexico. See *Phytologia* 62(6): 449, f. 1. 1987.

A. canina L. (*Agraulis caninus* (L.) P. Beauv.; *Agrostis canina* (L.) Bubani; *Agrostis alba* f. *aristata* Millsp.; *Agrostis canina* Ucria; *Agrostis canina* f. *fasciculata* J. Rousseau; *Agrostis canina* f. *varians* (Thuill.) Beldie; *Agrostis canina* subsp. *fascicularis* (Curtis ex Sinclair) Hyl.; *Agrostis canina* var. *alba* Desv.; *Agrostis canina* var. *alpina* Alph. Wood, nom. illeg., non *Agrostis canina* var. *alpina* (Leys.) Ducommun; *Agrostis canina* var. *fascicularis* (Curtis ex Sinclair) Martin; *Agrostis canina* var. *stolonifera* Blytt; *Agrostis canina* var. *stolonifera* Meinsh., nom. illeg., non *Agrostis canina* var. *stolonifera* Blytt; *Agrostis canina* var. *stolonifera* Vasey, nom. illeg., non *Agrostis canina* var. *stolonifera* Blytt; *Agrostis canina* var. *stolonifera* Walp., nom. illeg., non *Agrostis canina* var. *stolonifera* Blytt; *Agrostis canina* var. *varians* (Thuill.) Ducomm.; *Agrostis falklandica* Hook.f.; *Agrostis fascicularis* Sincl.; *Agrostis fascicularis* Curtis ex Sinclair; *Agrostis stricta* Parl.; *Agrostis sudavica* Natk.-Ivanauk.; *Agrostis tenuifolia* Curtis; *Agrostis tenuis* Batard. ex Roemer & Schultes, nom. illeg., non *Agrostis tenuis* Sibth.; *Agrostis wightii* Nees ex Steud.; *Milium caninum* (L.) Lag.; *Trichodium caninum* (L.) Schrad.)

Europe. Perennial, small, tufted to loosely tufted, often stoloniferous, without rhizomes, erect or ascending, slender, ligules acute, pale-green to grayish green leaves, inflorescence loosely panicle-like, spikelets 1-flowered, dark purple glumes elliptic-lanceolate and acute, lemma shorter than glumes, on the lemma awn geniculate and bent, palea minute, small seeds, weed species naturalized elsewhere,

soil binder and cover species, useful for erosion control, suitable for lawns and golf courses, putting greens, permanent wet pastures, very resistant to cold, sensitive to drought, optimum on very acid soils, found in fields and meadows, hillsides, open sandy field, shady slopes, in wet and very wet soils, in marshy places, sandy or peaty soil, rocks near the sea, see *Species Plantarum* 1: 62. 1753, *Enum. Brit. Grasses* 42. 1787, *Hortus regius Panhormitanus* ... 57. Panormi 1789, *Flore Descriptive et Analytique des Environs de Paris* éd. 2 1: 35. 1799, *Flora Germanica* 1: 198. 1806, *Essai d'une Nouvelle Agrostographie* 5, 146, 147, t. 3, 4, f. 2, t. 4, 7. 1812, George Sinclair (1786-1834), *Hortus gramineus Woburnensis* 154. 1816, *Elenchus Plantarum Novarum* 10. 1816, *Systema Vegetabilium* 2: 277. 1817, *Observations sur les Plantes des Environs d'Angers* 50. 1818, *Flora Antarctica* 2: 373. 1846, *Norsk Flora* 151. 1847, *Fl. New Zealand* 1: 296. 1853, *Synopsis Plantarum Glumacearum* 1: 168. 1854, *Taschenb. Schweiz. Bot.* 852. 1869, *The American Botanist and Florist* 384. 1871, *T.N.Z.I.* 3: 160. 1871, *Bulletin, West Virginia Agricultural Experiment Station* 24(2): 469. 1892, *Contributions from the United States National Herbarium* 3(1): 75. 1892 and *Flora Pyrenaea* ... 4: 286. 1901, *Reports of the Princeton University Expeditions to Patagonia* ... *Botany* 8(5): 186. 1904, *Kongliga Svenska Vetenskapsakademiens Handlingar* 50(3): 12. 1913, *New Zealand DSIR Bull.* 49: 108. 1936, *Contributions de l'Institut Botanique de l'Université de Montréal* 32: 56, f. 5. 1938, *Nordisk Kärnväxtflora* 1: 323. 1953, *Fl. Fenn.* 5: 29. 1971, *Flora Republicii Socialiste Romania* 12: 158. 1972, *Taxon* 31(1): 71. 1982, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 51-55. 1986, *Taxon* 41: 556. 1992, *Opera Botanica* 137: 1-42. 1999.

in English: velvet bent grass, velvet bent, brown bent, Rhode Island bent

in French: agrostis des chiens

in Italian: cappellini delle torbiere

in Spanish: agróstide canina, agróstide de perro, agróstide perruna

in German: Hundstraubgras

A. canina L. subsp. *canina*

Europe. See *Species Plantarum* 1: 62. 1753 and *The Flora of Canada* 2: 93-545. 1978 [1979].

A. capensis (L.) Lam. (*Achnatherum capense* (L.) P. Beauv.; *Agrostis capensis* Steud.; *Agrostis capensis* Willd., nom. illeg., non *Agrostis capensis* (L.) Lam.; *Milium capense* L.)

South Africa. See *Mantissa Plantarum* 185. 1771, *Encyclopédie Méthodique, Botanique* 1: 58. 1783, *Species Plantarum* 1: 372. 1797, *Essai d'une Nouvelle Agrostographie* 146, 167. 1812, *Flora* 12: 467. 1829.

A. capillaris L. (*Agrostis alba* subsp. *vulgaris* (With.) Douin; *Agrostis alba* subvar. *pumila* (L.) Cosson & Durand;

Agrostis alba subvar. *pumila* (L.) Cosson & Germ.; *Agrostis alba* var. *aristata* A. Gray, nom. illeg., non *Agrostis alba* var. *aristata* Spenn.; *Agrostis alba* var. *minor* Vasey; *Agrostis alba* var. *silvatica* (Huds.) K. Richt.; *Agrostis alba* var. *stricta* Alph. Wood; *Agrostis alba* var. *silvatica* (Huds.) Sm.; *Agrostis alba* var. *tenuis* (Sibth.) Fiori; *Agrostis alba* var. *vulgaris* (With.) Coss. & Dur., nom. illeg., non *Agrostis alba* var. *vulgaris* G. Mey.; *Agrostis alba* var. *vulgaris* (With.) Fiori, nom. illeg., non *Agrostis alba* var. *vulgaris* G. Mey.; *Agrostis capillaris* Huds., nom. illeg., non *Agrostis capillaris* L.; *Agrostis capillaris* Boiss. & Lange ex Andersson, nom. illeg., non *Agrostis capillaris* L.; *Agrostis capillaris* Pourret ex Nyman; *Agrostis capillaris* Schischk.; *Agrostis capillaris* Thore; *Agrostis capillaris* var. *aristata* (Parnell) Druce; *Agrostis diffusa* Muhl. ex Spreng., nom. illeg., non *Agrostis diffusa* Host; *Agrostis hispida* Willd.; *Agrostis laxa* Gray; *Agrostis lithuanica* Besser ex Roem. & Schult.; *Agrostis palustris* var. *stricta* (Willd.) House; *Agrostis polymorpha* Huds.; *Agrostis polymorpha* var. *capillaris* (L.) Huds.; *Agrostis polymorpha* var. *pumila* (L.) Huds.; *Agrostis pumila* L.; *Agrostis rubra* var. *pumila* (L.) Wimm. & Grab.; *Agrostis stolonifera* var. *minor* (Vasey) Farw., nom. illeg., non *Agrostis stolonifera* var. *minor* Meinsh.; *Agrostis stolonifera* var. *vulgaris* (With.) Celak., nom. illeg., non *Agrostis stolonifera* var. *vulgaris* Heuff.; *Agrostis stricta* (Roem. & Schult.) Büse, nom. illeg., non *Agrostis stricta* J.F. Gmel.; *Agrostis stricta* Muhl., nom. illeg., non *Agrostis stricta* J.F. Gmel.; *Agrostis stricta* Willd., nom. illeg., non *Agrostis stricta* J.F. Gmel.; *Agrostis silvatica* Hudson; *Agrostis tarda* Bartl.; *Agrostis tenuis* Sibth.; *Agrostis tenuis* f. *aristata* (Parnell) Wiegand; *Agrostis tenuis* var. *aristata* (Parnell) Druce; *Agrostis tenuis* var. *hispida* (Willd.) Philipson; *Agrostis tenuis* var. *pumila* (L.) Druce; *Agrostis tenuis* var. *tenuis*; *Agrostis vulgaris* With.; *Agrostis vulgaris* var. *aristata* A. Gray; *Agrostis vulgaris* var. *aristata* Parnell; *Agrostis vulgaris* var. *pumila* (L.) Pers.; *Decandolia vulgaris* (With.) Bastard; *Trichodium capillaris* (L.) Roth; *Trichodium strictum* Roem. & Schult.; *Vilfa divaricata* var. *pumila* (L.) Gray; *Vilfa vulgaris* (With.) P. Beauv.)

Europe, western Asia. Perennial, variable, slender, small size, forming large clumps, erect or spreading, loosely to densely tufted or rhizomatous, with short rhizomes, often stoloniferous with trailing stolons, stems horizontal then ascendent, leaves flat and narrow, ligule obtuse or truncate, leaf sheath glabrous, inflorescence of chasmogamous spikelets, panicle ovoid and loose, 1 floret, glumes subequal acute and lanceolate, lemma truncate and usually awnless, no awn in the spikelets except the aristate form, callus usually glabrous, palea present, small seeds, pastures, ornamental cultivated grass widely naturalized elsewhere, lawns and bowling greens, sometimes cut for hay, occasional weed in higher rainfall areas, pasture weed, turf species, tolerates shade and drought, extremely resistant to summer heat and

winter cold, producing stolons and rhizomes simultaneously, useful for erosion control and soil conservation, found on sandy soils and dunes, open meadows, along roadsides, waste places, thickets, riverbanks, rocky soils, lawns, open habitats, fields, disturbed ground, hillsides, pastures, modified grassland, peaty soil, dry fields, often associated with *Festuca rubra* L., hybridizes with *Agrostis stolonifera* L., see *Species Plantarum* 1: 62-63. 1753, *Flora Anglica* 27-28. 1762, *Mantissa Plantarum* 1: 31. 1767, *Flora Anglica, Editio Altera* 1: 31. 1778, *Flora Oxoniensis* 36. 1794, *An Arrangement of British Plants, Third Edition* 1796, *Species Plantarum* 1: 366, 370. 1797, *Essai d'une Chloris du Département des Landes, à Dax ...* 26. 1803, *Synopsis Plantarum* 1: 75. 1805, *Essai sur la Flore du Département de Maine et Loire* 28. 1809, *Descriptio uberior Graminum* 65. 1817, *Systema Vegetabilium* 2: 281. 1817, *A Natural Arrangement of British Plants* 2: 147. London 1821, *Novae Plantarum Species* 41. 1821, *English Flora* 1: 93. 1824, *Systema Vegetabilium, editio decima sexta* 1: 260. 1825, *Flora Silesiae* 1: 52. 1827, *Mantissa* 3(Add. 1): 586. 1827, *The Grasses of Scotland* 1: 34, t. 13. 1842, *A Manual of the Botany of the Northern United States* 578. 1848, *Exploration Scientifique de l'Algérie* 2: 63. 1854, *Plantae Junghuhnianae* 3: 341. 1854, *Flora Descriptive et Analytique des Environs de Paris (edition 2)* 797. 1861, *Annals of Botany. Oxford* 6: 981. 1861, *A Class-book of Botany* 774. 1861, *Prodromus der Flora von Böhmen* 710. 1881, *Conspectus florum europaeae* 801. Örebro Sueciae 1878-1890, *Plantae Europaeae* 1: 43. 1890, *Contributions from the United States National Herbarium* 3(1): 78. 1892, *Flora Analytica d'Italia* 1: 63. 1896 and *Report of the Michigan Academy of Science, Arts and Letters* 6: 202. 1904, *List of British Plants* 79. Oxford 1908, *Nuova Flora Analytica d'Italia* 1: 97. 1923, *New York State Museum Bulletin* 254: 98. 1924, *Rhodora* 26(301): 2. 1924, *The Flora of Oxfordshire (edition 2)* 474. 1927, *Flore Complète Illustrée en Couleurs de France, Suisse et Belgique* 11: 142. 1931, *Journal of the Linnean Society, Botany* 51: 86, t. 7. 1937, *New Zealand J. Agric. Res.* 1: 265-266. 1958, *New Zealand J. Bot.* 21: 141-156. 1983, Rapson G.L. & J.B. Wilson, "Non-adaptation in *Agrostis capillaris* L. (Poaceae)." *Functional Ecology* 2: 479-490. 1988, *Boletim da Sociedade Broteriana, ser. 2* 61: 81-104. 1988, *Bulletin de la Société Botanique de Belgique* 122: 161-169. 1989, *Fitologija* 39: 72-77. 1991, *New Zealand J. Bot.* 29: 139-161. 1991, *Flora Mediterranea* 8: 251-262. 1998, *Opera Botanica* 137: 1-42. 1999.

in English: colonial bent, colonial bent grass, New Zealand bent grass, Prince Edward Island bent grass, brown top, brown top bent, common bent grass, common bent, Rhode Island bent, Rhode Island bent grass

in French: agrostis commun, agrostide commun, agrostide ténue

in Spanish: agróstide común, hierba fina

in German: gemeines Straußgras, Rotstraußgras

A. castellana Boiss. & Reut. (*Agrostis alba* subsp. *castellana* (Boiss. & Reut.) P. Fourn.; *Agrostis alba* var. *olivetorum* (Gren. & Godr.) Asch. & Graebn.; *Agrostis alba* var. *olivetorum* (Gren. & Godr.) Fiori; *Agrostis azorica* (Hochst.) Tutin & E.F. Warb.; *Agrostis byzantina* Boiss.; *Agrostis capillaris* subsp. *castellana* (Boiss. & Reut.) O. Bolòs, Masalles & Vigo; *Agrostis capillaris* subsp. *olivetorum* (Gren. & Godr.) O. Bolòs, Masalles & Vigo; *Agrostis capillaris* var. *olivetorum* (Gren. & Godr.) Kerguélen; *Agrostis castellana* var. *hispanica* (Boiss. & Reut.) Ball; *Agrostis castellana* var. *olivetorum* (Gren. & Godr.) Kerguélen; *Agrostis hispanica* Boiss. & Reut.; *Agrostis olivetorum* Gren. & Godr.; *Agrostis stolonifera* subsp. *castellana* (Boiss. & Reut.) Maire & Weiller; *Agrostis stolonifera* var. *hispanica* (Boiss. & Reut.) Maire & Weiller)

Mediterranean, Portugal, Spain. Perennial, gray-green, erect, tufted, long slender rhizomes, leaf sheath glabrous, ligule ciliate, panicle usually linear-lanceolate and contracted after flowering, awn present or absent, spikelets awned from near the base of the lemma, glumes subequal acute or acuminate, palea apex bifid, ornamental, garden weed, lawn grass, found in pastures, stony waste ground, light soils, along roadsides, riverbanks, see *Species Plantarum* 1: 62. 1753, *Diagnoses Plantarum Novarum Hispanicarum* 26. 1842, *Pugillus Plantarum Novarum Africae Borealis Hispaniaeque Australis* 120. 1852, *Flore de France* 3: 483. 1855, *Journal of the Linnean Society, Botany* 16: 714. 1878, *Flora Analytica d'Italia* 1: 63. 1896, *Synopsis der mitteleuropäischen Flora* 2: 175. 1899 and *Les Quatre Flores de la France* 49. 1946, *Flore de l'Afrique du Nord*: 2(45): 121. 1953, *Bulletin de la Société Botanique de France* 123(5-6): 318. 1976, *Ruizia; Monografías del Real Jardín Botánico* 7: 111. 1988, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 17(1): 96. 1987[1988], *New Zealand Journal of Botany* 29: 101-116, 139-161. 1991.

in English: highland bent, dryland browntop

in Italian: cappellini di Castiglia

A. clavata Trin. (*Agrostis abakanensis* Less. ex Trin.; *Agrostis clavata* subsp. *clavata*; *Agrostis exarata* Trin. subsp. *clavata* (Trin.) T. Koyama; *Agrostis macrothyrsa* Hack.; *Agrostis teberdensis* Litv.; *Trichodium clavatum* (Trin.) Schult. & Schult.f.)

Eurasia, Mongolia, Russia. Forage, desert steppe, open wet meadows, wet areas, stream bank, marsh, sandy soils, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 55. Leipzig 1821, *De Graminibus unifloris et sesquifloris* 207. Petropoli 1824, *Mantissa* 3: 556. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 325. 1841 and *Schedae ad herbarium Florae Rossicae*, a

Museo botanico Academiae imperialis scientiarum Petropolitanae editum Sanktpeterburg 1898-1911, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 318. 1909, *Bulletin of Botanical Research* 4(4): 99. 1984, *Grasses of Japan and its Neighboring Regions* 484. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991.

in English: clubed bent

in Japan: yamanukabo

A. clavata Trin. subsp. *matsumurae* (Hack. ex Honda) Tateoka (*Agrostis macrothyrsa* Hack.; *Agrostis matsumurae* Hack. ex Honda)

Japan. See *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 55. 1821 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 318. 1909, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 188, 191. 1930, *Bull. Nat. Sci. Mus. Tokyo* 2: 161. 1968.

A. clavata Trin. subsp. *micrantha* (Steud.) Y.C. Tong

China. See *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 55. 1821, *Synopsis Plantarum Glumacearum* 1: 170. 1854 and *Flora Xizangica* 5: 233-234. 1987.

A. clavata Trin. var. *nukabo* Ohwi

Asia, Japan. See *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 55. 1821 and *Botanical Magazine (Tokyo)* 55: 356. 1941.

A. clavata Trin. var. *szechuanica* Y.C. Tong ex Y.C. Yang (*Agrostis szechuanica* (Y.C. Tong ex Y.C. Yang) L. Liou)

China. See *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 55. 1821 and *Bulletin of Botanical Research* 4(4): 99. 1984, *Vascular Plants of the Hengduan Mountains* 2: 2247. 1994 [Heng Duan shan qu wei guan zhi wu = Vascular plants of the Heng Duan mountains: vol 2 / editor-in-chief: Wang Wen Tsai, / vice editor-in-chief: Wu Su Gong / editors: Lang Kai Yong, Li Pei Qiong, Pu Fa Ting, Chen Shu Kun. Beijing: Science Press, 1994].

A. clivicola Crampton (*Agrostis densiflora* Vasey)

U.S., California. See *Contributions from the United States National Herbarium* 3(1): 72. 1892 and *Brittonia* 19: 174. 1967.

in English: coastal bluff bentgrass

A. clivicola Crampton var. *clivicola*

U.S. See *Brittonia* 19: 174. 1967.

in English: coastal bluff bentgrass

A. clivicola Crampton var. *punta-reyesensis* Crampton

U.S., California. Vulnerable species, see *Brittonia* 19: 174. 1967.

in English: Point Reyes bentgrass

A. continuata Stapf (*Agrostis natalensis* Stapf)

South Africa. Perennial, tufted, coarse, inflorescence spicate dense and narrow, overlapping spikelets, found in moist places, wet sites, sandy areas, see *Kew Bulletin* 1897: 290. 1897 [*Bulletin of Miscellaneous Information Kew* 1897: 290. 1897].

A. curtisii Kerguelen (*Agrostis setacea* Curtis)

Europe. Perennial, densely tufted, panicle purple and oblong, useful for erosion control, see William Curtis (1746-1799), *Flora Londinensis* London [1775-] 1777-1798 and *Lejeunia* 75(Err. & Corr.): 1. 1975, *Bulletin de la Société Botanique de France* 123(5-6): 318. 1976, *Boletim da Sociedade Broteriana, ser. 2* 61: 81-104. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990.

in English: bristle-leaved bent grass

A. cypricola Lindb.f.

Cyprus. Indeterminate species, see Harald Lindberg, 1871-1963, *Itinera mediterranea*. Helsingfors 1932, *Årsbok-vousikirja. Societas Scientiarum Fennica ...* 20(7): 5. Helsinki 1942.

A. densiflora Vasey (*Agrostis arenaria* (Vasey) Scribn., nom. illeg., non *Agrostis arenaria* Gouan; *Agrostis californica* Trin.; *Agrostis clivicola* Crampton; *Agrostis clivicola* var. *clivicola*; *Agrostis clivicola* Crampton var. *punta-reyesensis* Crampton; *Agrostis densiflora* var. *arenaria* Vasey; *Agrostis densiflora* var. *densiflora*; *Agrostis glomerata* auct. non (J. Presl) Kunth)

U.S., California. Perennial, dense inflorescence cylindrical, glumes back scabrous, lemma sometimes awned above middle, awn straight, seashore, sandy soils, coastal bluffs, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 328, 359. 1841, *Bulletin of the Torrey Botanical Club* 13: 54. 1886, *Contributions from the United States National Herbarium* 3(1): 72. 1892 and *Brittonia* 19: 174. 1967.

in English: bent grass, California bent grass, California bentgrass, Point Reyes bent grass, coastal bluff bent grass

A. diffusa S.M. Phillips (*Agrostis kilimandscharica* Mez; *Agrostis kilimandscharica* var. *sororia* (C.E. Hubb.) Hedberg; *Agrostis sororia* C.E. Hubb.)

Ethiopia. Perennial, slender, loosely tufted, ascending, straggling, linear leaves, large inflorescence paniculate, open panicle ovate, glumes unequal and keeled, lemma awned, awn geniculate, see *Repertorium Specierum Novarum Regni Vegetabilis* 18(1-3): 2. 1922, *Bulletin of Miscellaneous Information Kew* 1936(5): 303. 1936, *Symbolae Botanicae Upsaliensis* 15: 51. 1957, *Kew Bulletin* 41(1): 137, f. 4A-D. 1986.

A. dimorpholemma Ohwi

Japan, Asia. Indeterminate species, see *Botanical Magazine (Tokyo)* 55(656): 351. 1941.

A. drummondiana (Steud.) Vickery (*Deyeuxia drummondiana* (Steud.) Benth.; *Deyeuxia drummondii* (Steud.) Benth.; *Dichelachne drummondiana* Steud.; *Lachnagrostis drummondiana* (Steud.) Rúgolo & A.M. Molina; *Lachnagrostis drummondiana* (Steud.) S.W.L. Jacobs)

Western Australia. Annual, caespitose, noded, auricles absent, basal leaf sheaths not keeled, ligule membranous, inflorescence of chasmogamous spikelets, a panicle yellowish green and loosely contracted, see *Synopsis Plantarum Glumacearum* 1: 120. 1854, *Flora Australiensis: A Description ...* 7: 580. 1878 and *Contributions from the New South Wales National Herbarium* 1(3): 111. 1941, *Blumea* 22(1): 5-12. 1974, *Telopea* 9(3): 445. 2001.

A. dyeri Petrie (*Agrostis dyeri* var. *aristata* Hack.) (named for the British (b. Westminster, London) botanist Sir William Turner Thiselton-Dyer, 1843-1928 (d. Witcombe, Gloucestershire), married the eldest daughter of Sir J.D. Hooker Lady Harriet Ann Hooker (1854-1945, d. Weir Quay, Devon), student of Thomas Henry Huxley (1825-1895), naturalist, professor of Natural History and Botany, 1872 private secretary and editorial assistant to J.D. Hooker, 1872 Fellow of the Linnean Society, from 1872 to 1876 taught botany at the Royal Horticultural Society at South Kensington and Chiswick, 1880 Fellow of the Royal Society, succeeded his father-in-law (Sir J.D. Hooker) as Director of the Royal Botanic Gardens at Kew 1885-1905, 1899 knighted, his works include *Cycadaceae of Mexico and Central America*. London 1883, with Henry Trimen (1843-1896) published *Flora of Middlesex*. 1869, with Arthur H. Church *How Plants Grow*. 1869, 1902-1913 editor of *Flora of Tropical Africa*, in 1905-1906 editor of the *Curtis's Botanical Magazine*. See Gerald L. Geison, in *D.S.B.* 13: 341-344. 1981; Gilbert Westacott Reynolds (1895-1967), *The Aloes of South Africa*. 95, 249, 499. Balkema, Rotterdam 1982; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Stafleu & Cowan, *Taxonomic literature*. 6: 264-267. 1986; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 677-678. 1994; Mea Allan, *The Hookers of Kew, 1785-1911*. London 1967; J.H. Barnhart, *Biographical notes upon botanists*. 1: 489. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 398. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 160. Oxford 1964; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 734. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 409. 1973; H.R. Fletcher, *Story of the Royal Horticultural Society, 1804-1968*. Oxford 1969; Andrew Thomas Gage (1871-1945), *A History of the Lin-*

nean Society of London. London 1938; H.R. Fletcher & W.H. Brown, *Royal Botanic Garden Edinburgh, 1670-1970*. Edinburgh 1970; A. White & B.L. Sloane, *The Stapelieae*. Pasadena 1937; Ernest Nelmes & William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. [1931]; Francis Wall Oliver (1864-1951), editor, *Makers of British Botany*. Cambridge 1913).

New Zealand. Subalpine to alpine, tufted, stiff, erect or geniculate at base, leaf blade usually flat, leaf sheaths membranous and ribbed, ligule truncate, panicle lanceolate and narrowly branched, panicle open or contracted after flowering, glumes equal to subequal smooth and acute, awn absent or present, found in grassland, herbfield, tussock grassland, see *Transactions and Proceedings of the New Zealand Institute* 22: 441. 1889 and *Manual of the New Zealand Flora* 865. 1906, *New Zealand J. Bot.* 25: 41-78. 1987, *New Zealand J. Bot.* 29: 148-149. 1991.

A. elliotii Hack. (for the English (b. India, Calcutta) botanist George Francis Scott-Elliot, 1862-1934 (d. Dumfries, Scotland), 1890 Fellow of the Linnean Society, botanist on the Sierra Leone Boundary Commission, plant collector in Sierra Leone (1891-1892) and in East Africa (with the British East Africa Expedition, 1893-1894), President of the Antiquarian Society, among his writings are *Report on the District Traversed by the Anglo-French Boundary Commission*. Sierra Leone. Botany. 1893, *The Flora of Dumfriesshire*. Dumfries 1896 and *A Naturalist in Mid-Africa: Being an Account of a Journey to the Mountains of the Moon and Tanganyika*. London 1896; see Samuel P. Oliver, *The Life of Philibert Commerson*. Edited by G.F. Scott-Elliot. London 1909; J.H. Barnhart, *Biographical notes upon botanists*. 1: 504. 1965; Benjamin Daydon Jackson (1846-1927), "A list of the contributors to the herbarium of the Royal Botanic Gardens, Kew, brought down to 31st December 1899." *Bull. Misc. Inf. Kew*. 1901 and "A list of the collectors whose plants are in the herbarium of the Royal Botanic Gardens, Kew, to 31st December 1899." in *Kew Bulletin*. 1-80. 1901; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 320. Cape Town 1981; [Sotheby's - Marquess of Bute], *Catalogue of a portion of the valuable library from Dumfries House, Ayrshire*. The Property of the Most Hon. The Marquess of Bute. The First Portion: the important collection of mathematical and scientific books. Sale of 3-4 July 1961. The Second Portion: Americana, early printed books, travel, early Italian literature, bibliography, books on the arts and architecture. Sale of 16-18 Oct. 1961. London; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 73-74. 1971; G. Murray, *History of the Collections Contained in the Natural History Departments of the British Museum*. London 1904; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Auguste Jean Baptiste Chevalier (1873-1956), *Flore vivante*

de l'Afrique Occidentale Française. 1: xxvii-xxx. Paris 1938)

Madagascar. See *Journal of the Linnean Society, Botany* 29: 65. 1891.

A. *elliottiana* J.A. Schultes (*Agrostis arachnoides* Elliott, nom. illeg., non *Agrostis arachnoides* Poir.; *Agrostis elliottiana* Schult.f. *elliottiana*; *Agrostis elliottiana* f. *molesta* Shinnery; *Agrostis exigua* Thurb.; *Notonema agrostoides* Raf. ex Merr.; *Notonema arachnoides* Raf. ex B.D. Jacks.) (named for the American botanist Stephen Elliott, 1771-1830, author of *A Sketch of the Botany of South-Carolina and Georgia*. Charleston 1821-1824; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 504. Boston 1965; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. Philadelphia 1899; Jeannette E. Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Harvard University Press 1967; Ernest Earnest, *John and William Bartram, Botanists and Explorers 1699-1777, 1739-1823*. Philadelphia 1940; Josephine Herbst, *New Green World*. [An account of the botanical discoveries of John and William Bartram.] London 1954; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 115. 1972; William Darlington (1782-1863), *Reliquiae Baldwinianae*. Philadelphia 1843; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 454. 1973)

Northern America, U.S., Indiana, Missouri. Annual, delicate, caespitose, lower blades flat to inrolled, rhizomatous, open inflorescence paniculate with lower branches spreading and upper ascending, lemma generally awned from near tip, awn wavy to bent, found in fields, foothills, roadsides, rocky riverbeds, vernal pool margins, open sandy soils, dry soils, see *Encyclopédie Méthodique, Botanique* Suppl. 1: 249. 1810, *A Sketch of the Botany of South-Carolina and Georgia* 1: 134. 1816, *Mantissa* 2: 202. 1824, *Geological Survey of California, Botany* 2: 275. 1880, *Index Kewensis* 2: 319. 1894 and *Index Rafinesquianus* 74, 76. 1949, *Rhodora* 56(662): 28. 1954, *Phytologia* 37(4): 317-407. 1977, *Taxon* 34: 547-551. 1985.

in English: Elliott's bent, Elliott's bent grass, annual tick-legrass

A. *eriantha* Hack.

South Africa. Perennial, tufted, rhizomatous, inflorescence a large open panicle with spreading and straight branches, lemmas with delicate awns, relatively palatable, little grazing value, grows in wet and damp areas, open sour grassland, cultivated lands, in mountain grassveld, see *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 49: 172. 1904.

in English: large panicle agrostis

in South Africa: grootpluim-agrostis

A. *eriantha* Hack. var. ***eriantha***

South Africa. Perennial, tufted, rhizomatous, folded leaf blade, panicle with rigid and straight branches, lemmas awned, grows in wet areas, disturbed areas, cultivated lands.

A. *eriantha* Hack. var. ***planifolia*** Gooss. & Papendorf

South Africa. Rare species, flat leaf blade, see *South Africa J. Sci.* 41: 181. 1945.

A. *exarata* Trinius (*Agrostis aenea* Trinius; *Agrostis aenea* (Trin.) Trin.; *Agrostis alashana* Hultén; *Agrostis alaskana* Hultén; *Agrostis alascana* Hultén; *Agrostis alaskana* var. *breviflora* Hultén; *Agrostis albicans* Buckley; *Agrostis ampla* A.S. Hitchcock; *Agrostis asperifolia* Trin.; *Agrostis canina* var. *aenea* Trin.; *Agrostis densiflora* auct.; *Agrostis drummondii* Torr. ex Hook.f.; *Agrostis exarata* f. *asperifolia* (Trin.) Vasey; *Agrostis exarata* Trin. subsp. *minor* (Hook.) C.L. Hitchc.; *Agrostis exarata* var. *aenea* (Trin.) Griseb.; *Agrostis exarata* var. *exarata*; *Agrostis exarata* var. *minor* Hook.; *Agrostis exarata* var. *monolepis* (Torrey) A.S. Hitchc.; *Agrostis exarata* Trin. var. *pacifica* Vasey; *Agrostis exarata* Trin. var. *purpurascens* Hultén; *Agrostis grandis* Trin.; *Agrostis longiligula* A.S. Hitchc.; *Agrostis longiligula* A.S. Hitchc. var. *australis* J.T. Howell; *Agrostis longiligula* var. *longiligula*; *Agrostis melaleuca* (Trin.) A.S. Hitchc.; *Agrostis microphylla* Steud. var. *major* Vasey; *Agrostis oregonensis* Nutt. ex A. Gray; *Agrostis scouleri* Trin.; *Chaetotropis asperigluma* (Steud.) Nicora (from the Latin *exaratus* "furrowed, ploughed") (for the botanist and plant collector John Scouler, 1804-1871, a Scottish naturalist who explored the northwest U.S., Brazil and Canada)

Northern America, U.S., Canada. Perennial bunchgrass, slender, erect, occasionally rhizomatous, no auricles, open sheaths glabrous to scaberulous, ligule hyaline and lacerate, leaf blades flat and rough, narrow panicle open to spike-like, tiny spikelets green or sometimes purplish, palea absent or rudimentary, grain brownish, forage, a pioneer species, found in wet meadows, stream and lake margins, clearings, in recently disturbed sites, on bare mineral soil, in dry habitats, swamps, in moist open places, riparian communities, damp dark soil, forest openings, grasslands, boggy spots, marshes, woodlands, ditches and along roadsides, in water, meadow, see *Species Plantarum* 1: 62. 1753, *De Graminibus unifloris et sesquifloris* 164. Petropoli 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(2): 170. 1832, *Flora Boreali-Americana* 2: 293. 1839, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 316-317, 329, 332. 1841, *Flora Antarctica* 372. 1846, *Flora Rossica* 4(13): 441. 1852, *Synopsis Plantarum Glumacearum* 1: 164, 422. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 91, 334. 1862, *U.S.D.A. Div. Bot. Spec. Bull.*

(new edition) 1889: 107, t. 106. 1889, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(1): 31. 1892, *Contributions from the United States National Herbarium* 3(1): 58, 72. 1892 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 68: 38, 51, 54, t. 20, 36, f. 2, 3. 1905, *American Journal of Botany* 2: 303. 1915, *American Journal of Botany* 21(3): 136. 1934, *Flora of the Aleutian Islands* 71, 73. 1937, *Leaflets of Western Botany* 4: 246. 1946, *Vascular Plants of the Pacific Northwest* 1: 467. 1969, *Flora Patagónica* 8(3): 402. 1978.

in English: bentgrass, spike bentgrass, spike bent grass, spike bent, spiked bent grass, spike redtop, western redtop, western bentgrass, Pacific bentgrass, long-tongue bent

in Japan: onukabo

A. exarata Trin. var. **monolepis** (Torrey) Hitchc. (*Agrostis ampla* f. *monolepis* (Torr.) Beetle; *Polypogon monspeliensis* var. *monolepis* Torr.)

Northern America, U.S., California. Perennial, small, rare, see *Flora Atlantica* 1: 67. 1798, *De Graminibus unifloris et sesquifloris* 164. 1824, *Pacif. Railr. Rep.* 5(2): 366. 1858 and *American Journal of Botany* 21(3): 136. 1934, *Bulletin of the Torrey Botanical Club* 72: 544. 1945.

in English: bentgrass, spike bentgrass

A. exserta Swallen

Guatemala. Alpine, see *Contributions from the United States National Herbarium* 29(9): 404. 1950.

A. filipes Hook.f. (*Agrostis nervosa* Nees ex Trin. var. *aristata* Munro ex Hook.f.)

India, Sikkim, Himachal Pradesh, West Bengal, Himalayas. Perennial, lemma awned, on open hilly slopes, sandy soils, near water streams, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 328. 1841, *The Flora of British India* 7(22): 256. 1897 [1896] and *Journal of Cytology and Genetics* 21: 155. 1986, *Cytologia* 53: 287-290. 1988.

A. flaccida Hack. (*Agrostis borealis* var. *flaccida* (Hack.) T. Koyama & T. Shimizu)

Asia, Japan. See *Handbok i Skandinavien Flora*, 3rd ed., 17. 1838, *Flora Baicalensi-Dahurica* 18. 1856 (original publication took place in parts in the *Bulletin de la Société Impériale des Naturalistes de Moscou*, *Bulletin de la Société Impériale des Naturalistes de Moscou* 29(1): 18. 1856, *Bulletin de l'Herbier Boissier* 7(9): 649. 1899 and *Botanical Magazine* (Tokyo) 40(474): 324. 1926, *Botanical Magazine* (Tokyo) 51: 58. 1936, *Botanical Magazine* (Tokyo) 55(656): 353, 439. 1941, *Botanical Magazine* 88: 65-87. 1975, *New Alpine Flora of Japan* 2: 359. 1983 [1982], *Botanical Magazine* 100: 273-293. 1987, *Grasses of Japan and its Neighboring Regions* 484. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1675-1678. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990.

A. flaccida Hack. var. **festucoides** Honda

Japan. See *Bulletin de l'Herbier Boissier* 7(9): 649. 1899 and *Botanical Magazine* (Tokyo) 55: 439. 1941.

A. flaccida Hack. var. **morrisonensis** (Hayata) Honda (*Agrostis morrisonensis* Hayata)

Japan, Taiwan, Mt. Morrison. See *Bulletin de l'Herbier Boissier* 7(9): 649. 1899 and *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 7: 86, f. 53. 1918, *Botanical Magazine* (Tokyo) 40(474): 324. 1926, *Blumea* 28: 214. 1982.

A. foliata Hook.f. (*Agrostis nigrifolia* Pilg.; *Agrostis stuebelii* Pilg.; *Agrostis toluensis* Kunth)

Colombia, Ecuador. Tufted, páramos, see *Nova Genera et Species Plantarum* 1: 135. 1815 [1816], *Flora Antarctica* 1: 95. 1844[1845], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 713-714. 1898 and *Brittonia* 23(3): 293-324. 1971.

A. fukuyamae Ohwi (*Agrostis infirma* var. *fukuyamae* (Ohwi) Veldkamp; *Agrostis rigidula* subsp. *fukuyamae* (Ohwi) T. Koyama; *Agrostis rigidula* var. *fukuyamae* (Ohwi) Veldkamp)

China. See *Synopsis Plantarum Glumacearum* 1: 171. 1854 and *Repertorium Specierum Novarum Regni Vegetabilis* 36(936-941): 39. 1934, *Blumea* 28(1): 219-220. 1982, *Grasses of Japan and its Neighboring Regions* 485. 1987, *Blumea* 41(2): 408. 1996.

A. ghiesbreghtii E. Fourn. (*Agrostis ghiesbreghtii* E. Fourn. ex Hemsl.; *Agrostis setifolia* E. Fourn. ex Hemsl.; *Agrostis setifolia* E. Fourn., nom. illeg., non *Agrostis setifolia* Brot.)

North America, Mexico. See *Biologia Centrali-Americana; ... Botany ...* 3: 551. 1885, *Mexicanas Plantas* 2: 97. 1886.

A. gigantea Roth (*Agrostis alba* auct.; *Agrostis alba* sensu J.M. Black, non L.; *Agrostis alba* Kunze; *Agrostis alba* L.; *Agrostis alba* f. *aristata* (Fernald) Fernald, nom. illeg., non *Agrostis alba* f. *aristata* Millsp.; *Agrostis alba* f. *aristigera* (Fernald) Fernald; *Agrostis alba* subsp. *gigantea* (Roth) V. Jirásek; *Agrostis alba* subsp. *gigantea* (Roth) Arcang.; *Agrostis alba* auct., non L. subsp. *gigantea* (Roth) V. Jirásek; *Agrostis alba* var. *diffusa* (Host) Asch. & Graebn.; *Agrostis alba* var. *dispar* (Michx.) Alph. Wood; *Agrostis alba* var. *gigantea* (Roth) G. Mey.; *Agrostis alba* var. *major* Gaudin; *Agrostis alba* var. *vulgaris* G. Mey.; *Agrostis campestris* Phil.; *Agrostis diffusa* Host; *Agrostis dispar* Michx.; *Agrostis exarata* var. *mutica* Hicken; *Agrostis gigantea* var. *dispar* (Michx.) Philipson; *Agrostis graniticola* Klokov; *Agrostis korczagii* Senjan.-Korcz.; *Agrostis nigra* With.; *Agrostis praticola* Klokov; *Agrostis sabulicola* Klokov; *Agrostis semi-nuda* Knapp; *Agrostis stolonifera* f. *aristigera* Fernald; *Agrostis stolonifera* f. *diffusa* (Host) Maire & Weiller; *Agrostis stolonifera* subsp. *gigantea* Gaudin ex Sch. & Martens; *Agrostis stolonifera* subsp. *gigantea* (Roth) Schübl. & G. Martens; *Agrostis stolonifera* subsp.

gigantea (Roth) Maire & Weiller; *Agrostis stolonifera* subsp. *gigantea* (Roth) Beldie, nom. illeg., non *Agrostis stolonifera* subsp. *gigantea* (Roth) Maire & Weiller; *Agrostis stolonifera* var. *diffusa* (Host) Neillr.; *Agrostis stolonifera* var. *gigantea* (Roth) Bréb.; *Agrostis stolonifera* var. *gigantea* (Roth) Klett & Richter ex Peterm., nom. illeg., non *Agrostis stolonifera* var. *gigantea* (Roth) Bréb.; *Agrostis stolonifera* var. *major* (Gaudin) Farwell; *Agrostis virletii* E. Fourn. ex Hemsl.; *Agrostis virletii* E. Fourn.; *Cinna karataviensis* N. Pavlov; *Vilfa alba* Gray, nom. illeg., non *Vilfa alba* (L.) P. Beauv.; *Vilfa dispar* (Michx.) P. Beauv.; *Vilfa divaricata* (Hoffm.) Gray; *Vilfa gigantea* (Roth) P. Beauv.; *Vilfa nigra* (With.) Gray)

Eurasia. Perennial, coarse, erect or geniculate at base, tufted, robust, glabrous, usually unbranched, strongly rhizomatous with more or less elongated and long-creeping rhizomes, sometimes or usually stoloniferous, sometimes trailing and rooting at nodes, no auricles, sheaths open and smooth or minutely scabrid, ligule obtuse or truncate or denticulate, leaves flat and scabrous, open-branched flower heads, very loose panicle oblong pyramidal and lobed, spikelets 1-flowered with pedicels always closely scabrid, glumes subequal lanceolate and acute, glabrous lemmas truncate and usually awnless, palea bifid or truncate, callus shortly bearded or glabrous, small reddish grains, chasmogamous spikelets, noxious weed species naturalized elsewhere, cultivated, ornamental, invasive, palatable, grazed, fodder and forage, permanent wet pastures and lawns, turf, good resistance to cold, good drought-resistance, useful for erosion control, soil binder and cover plant, cut for hay, grows near water or in dry and disturbed sites, moist to saturated soil, open sandy wet alluvium, wet meadows and moist areas, damp waste ground, in riparian areas, along streams, opening in wooded slopes, roadsides, alluvial floodplains, drainage area, riverbanks, along ditches, grasslands, open grassy field, wet prairies and fields, sandy soils, clay loam soil, sandy loam, shores, boggy soil, there is considerable taxonomic confusion concerning this species, see *Species Plantarum* 1: 63. 1753, *Tentamen Florae Germanicae* 1: 31. 1788, *Flora Germanica*, edition 2, 1: 37. 1800, *Flora Boreali-Americana* 1: 52. 1803, *Gramina Britannica* pl. 115. London 1804, *Icones et Descriptiones Graminum Austriacorum* 4: 32, t. 55. 1809, *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *A Natural Arrangement of British Plants* 2: 145-146. 1821, *Gram. Unifl. Sesquifl.* 207. 1824, *Neues Hamburgisches Magazin* 1823: 134. 1824, *Flora Helvetica* 1: 189. 1828, *Flora von Württemberg* 64. 1834, *Flore de la Normandie* 390. 1835, Georg F.W. Meyer (1782-1856), *Chloris Hanoverana* 655. Göttingen 1836, W.L. Petermann (1806-1855), *Flora Lipsiensis Excursoria* 83. Lipsiae 1838, *Flora* 29: 678. 1846, *Linnaea* 29(1): 87. 1858, *Flora von Nieder-Oesterreich* 2: 43. 1859, *A Class-book of Botany* 774. 1861, *Compendio della Flora Italiana* 768. 1883, *Biologia Centrali-*

Americana; ... *Botany* ... 3: 552. 1885, *Mexicanas Plantas* 2: 96. 1886, *Index Kew.* 1: 61. 1895, *Synopsis der mitteleuropäischen Flora* 1: 174. 1899 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 2: 6. 1915, *Report of the Michigan Academy of Science, Arts and Letters* 21: 351. 1920, *New Zealand J. Agric.* 28: 73-91. 1924, *Rhodora* 35: 317. 1933, *Journal of the Linnean Society, Botany* 51: 93. 1937, *Rhodora* 49: 112. 1947, *Rhodora* 51(609): 192. 1949, *Flore de l'Afrique du Nord*: 2: 120, 123. 1953, *Flora Republicii Socialiste Romania* 12: 152. 1972, *Fl. Fennica* 5: 1-209. 1975, *Flora Patagónica* 8(3): 369-394. 1978, *Flora Mediterranea* 1: 229-236. 1991, *New Zealand Journal of Botany* 29: 139-161. 1991, *Cytologia* 56: 437-452. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 76: 476-479. 1991, *Parodiana* 7(1-2): 179-255. 1992, *Parodiana* 8(2): 129-151. 1993, *Gayana, Botánica* 54(2): 91-156. 1997, *Opera Botanica* 137: 1-42. 1999.

in English: black bent grass, giant bentgrass, bonnet grass, red top, red top bent, black bent, creeping bent grass, fine bentgrass, florin

in French: agrostis géant, agrostide géante, agrostide blanche

in Spanish: agróstide blanca, agróstide mayor, pasto quila

in German: Fioringras, Riesenstraußgras, weiße Straußgras

A. gigantea Roth subsp. *gautieri* (Sennen) Romo (*Agrostis gautieri* Sennen)

Europe. See *Bulletin de la Société Botanique de France* 74: 406. 1927, Angel M. Romo, *Flora i vegetació del Montsec* (pre-Pirineus catalans). Barcelona 1989.

A. gigantea Roth subsp. *gigantea*

Europe.

A. gigantea Roth subsp. *maeotica* (Klokov) Tzvelev (*Agrostis maeotica* Klokov)

Europe, Ukraine. See *Novosti Sist. Vyss. Rast.* 8: 57. 1971.

A. glabra (J. Presl) Kunth (*Agrostis andina* Phil.; *Agrostis gayana* E. Desv.; *Agrostis glabra* Hochst. ex E. Desv.; *Agrostis glabra* J. Presl ex Trin., nom. illeg., non *Agrostis glabra* (J. Presl) Kunth; *Agrostis pyrogea* Speg.; *Agrostis pyrogea* var. *mutica* Hack.; *Trichodium glabrum* J. Presl)

South America. See *Reliquiae Haenkeanae* 1(4-5): 244. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 226. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 342. 1841, *Flora Chilena* 6: 313-314. 1854, *Anales de la Universidad de Chile* 43: 561. 1873, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 83. 1896 and *Reports of the Princeton University Expeditions to Patagonia 1896-1899, Botany, Volume viii, Supplement* 8(3): 41. 1914 [1915].

A. glabra (J. Presl) Kunth var. *glabra*

South America.

A. glabra (J. Presl) Kunth var. *melanthes* (Phil.) Rúgolo et De Paula (*Agrostis melanthes* Phil.; *Calamagrostis laxiflora* Phil.; *Deyeuxia laxiflora* Phil.; *Deyeuxia vidalii* Phil.; *Stylagrostis laxiflora* (Phil.) Mez)

South America, Chile. See *Anales de la Universidad de Chile* 43: 563. 1873, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 84. Leipzig 1891 [also: *Catalogus praevious plantarum in itinere ad Tarapaca a Friderico Philippi lectarum.*], *Anales de la Universidad de Chile* 94: 17-18. 1896 and *Botanisches Archiv* 1(1): 20. 1922, *Flora Patagónica* 8(3): 386. 1978.

A. goughensis C.E. Hubb. (Gough Island is situated at 40°20'S, 10°0'W, 230 miles (350 km) South East of Tristan da Cunha, South Atlantic Ocean)

Tristan da Cunha. Indeterminate species, see J.B. Heaney & M.W. Holdgate, "The Gough Island Scientific Survey." *Geographical Journal* 123: 20-31. 1957, *Bulletin of the British Museum (Natural History), Botany* 8: 379. 1981, Y.M. Chamberlain, M.W. Holdgate and N.M. Wace, "The littoral ecology of Gough Island, South Atlantic Ocean." *Tethys* 11: 302-319. 1985.

A. gracilifolia C.E. Hubb. (*Agrostis bryophila* var. *elgonensis* C.E. Hubb.; *Agrostis dissitiflora* C.E. Hubb.; *Agrostis leptophylla* C.E. Hubb.)

Uganda. Perennial bunchgrass, variable, alpine, slender, erect, loosely to densely tufted, leaf blades filiform, open inflorescence paniculate lanceolate, panicle branches spreading, spikelets lanceolate, glumes subequal, lemma mucronate and awned, awn geniculate, damp grassland, mountains, moist or boggy places, meadows, see *Kew Bulletin* 1936(5): 307-309. 1936, *Bulletin of Miscellaneous Information Kew* 1937: 63. 1937.

A. gracilifolia C.E. Hubb. subsp. *bryophila* (C.E. Hubb.) S.M. Phillips (*Agrostis bryophila* C.E. Hubb.; *Agrostis bryophila* var. *bryophila*)

Uganda, Zaire. Perennial, loosely tufted, glabrous lemma, awn geniculate, see *Bulletin of Miscellaneous Information Kew* 1936(5): 307, 309. 1936 [*Kew Bulletin* 1936(5): 307, 309. 1936], *Opera Botanica* 121: 54, f. 3,3. 1993.

A. gracilifolia C.E. Hubb. subsp. *gracilifolia* (*Agrostis bryophila* var. *elgonensis* C.E. Hubb.; *Agrostis dissitiflora* C.E. Hubb.; *Agrostis leptophylla* C.E. Hubb.; *Agrostis volkensii* var. *deminuta* Pilg.)

Uganda, Kenya. Perennial, densely tufted, lemma glabrous or pilose, awn geniculate, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 512. 1926.

A. gracilifolia C.E. Hubb. subsp. *parviflora* S.M. Phillips
Ethiopia. Perennial, loosely tufted, ligule pointed to acute, narrow leaves, awn geniculate, see *Opera Botanica* 121: 55, f. 3,1. 1993.

A. griffithiana (Hook.f.) Bor (*Calamagrostis griffithiana* Hook.f.)

India, Himachal Pradesh, Uttar Pradesh, Meghalaya, Nagaland. Lemma hairy, awn of lemma always exerted, found growing on moist places, on hilly slopes, see *The Flora of British India* 7(22): 263. 1897 [1896] and *Grasses of Burma, Ceylon, India and Pakistan* 387. 1960.

A. hallii Vasey (*Agrostis davyi* Scribn.; *Agrostis hallii* var. *hallii*; *Agrostis hallii* var. *pringlei* (Scribn.) A.S. Hitchc.; *Agrostis occidentalis* Scribn. & Merr.; *Agrostis pringlei* Scribn.) (named for Elihu Hall, 1822-1882, plant collector in U.S., with J.P. Harbour in plant collecting expedition to the mountains of central Colorado; see Joseph Ewan, *Rocky Mountain Naturalists*. 36, 221, 223-224, 278, 285, 340. The University of Denver Press 1950; Edith M. Allison, "Bibliography and History of Colorado Botany." *Univ. Colorado Studies*. 6: 51-76. 1908; *Mem. New York Bot. Gard.* 19(3): 331. 1975; Stafleu & Cowan, *Taxonomic literature*. 2: 17-18. Utrecht 1979; J.H. Barnhart, *Biographical notes upon botanists*. 2: 113. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 159. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 192. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

U.S., California, Oregon. Perennial, rhizomatous, lower leaf blades flat, open to compact inflorescence lanceolate to ovate with branches ascending to appressed, awnless, hillsides, moist areas, open oak woodland, coniferous forest, see *Contributions from the United States National Herbarium* 3(1): 74. 1892, *Bulletin, Division of Agrostology United States Department of Agriculture* 7: 156, f. 138. 1897 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 3. 1901, *Bulletin of the Torrey Botanical Club* 29(7): 466. 1902, *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 68: 33, t. 12. 1905.

in English: Hall's bent grass, Hall's bent, Hall's bentgrass, Hall redtop

A. hendersonii A.S. Hitchc. (*Agrostis aristiglumis* Swallen; *Agrostis microphylla* Steud. var. *hendersonii* (A.S. Hitchc.) Beetle) (named for professor Louis Forniquet Henderson, 1853-1942, botanist, University of Idaho, plant collector, friend of Charles Vancouver Piper, 1867-1926; see Joseph Ewan, *Rocky Mountain Naturalists*. 36, 227. 1950)

U.S., California, Oregon. Endangered and rare species, uncommon, annual, lower leaf blades flat to inrolled, inflorescence cylindrical with branches ascending to appressed, glumes tip acuminate, lemma awned at the middle, awn more or less bent, palea absent, found in wet areas, vernal pools, see *Synopsis Plantarum Glumacearum* 1: 164. 1854 and *Journal of the Washington Academy of Sciences* 20(15):

381. 1930, *Bulletin of the Torrey Botanical Club* 72(6): 547, f. 8. 1945.

in English: Henderson's bent grass, Henderson's bent, Henderson's bentgrass

A. hideoi Ohwi (*Senisetum hideoi* (Ohwi) Honda)

Asia, Japan. Indeterminate species, see *Botanical Magazine* (Tokyo) 44: 568. 1930 and 46: 371. 1932.

A. hissarica Roshev. (*Polypogon hissaricus* (Roshev.) Bor)

Iran. Open panicle, see *Flora Iranica* ... 70: 307. 1970, *Cytologia* 56: 437-452. 1991.

A. holdgateana C.E. Hubb.

Tristan da Cunha. Indeterminate species, see J.B. Heaney & M.W. Holdgate, "The Gough Island scientific survey." *Geographical Journal* 123: 20-31. 1957, M.W. Holdgate, "The biological report of the Royal Society Expedition to Tristan da Cunha, 1962, part III—the fauna of the Tristan da Cunha islands." *Philosophical Transactions, Royal Society of London Series B, Biological Sciences* 249: 361-402. 1965, N.M. Wace & M.W. Holdgate, *Man and Nature in the Tristan da Cunha Islands*. Gland and Cambridge, IUCN. (IUCN Monograph No. 6) 1976, Y.M. Chamberlain, M.W. Holdgate and N.M. Wace, "The littoral ecology of Gough Island, South Atlantic Ocean." *Tethys* 11: 302-319. 1985.

A. hookeriana C.B. Clarke ex Hook.f. (*Agrostis hookeriana* C.B. Clarke; *Agrostis hookeriana* Munro ex Duthie; *Agrostis poluninii* Bor)

India, Nepal, Jammu-Kashmir, Himachal Pradesh, Sikkim, Tamil Nadu. Lemma glabrous and awned, grows at higher altitudes, see *Grasses of North-Western India* 30. 1883, *The Flora of British India* 7(22): 256. 1897 [1896] and *Kew Bulletin* 1953: 269. 1953, *Bulletin of Botanical Research* 4(4): 100-101, f. 6. 1984.

A. hooveri Swallen (dedicated to Robert Francis Hoover, 1913-1970)

U.S., California. Vulnerable and rare species, uncommon, perennial, lower leaf sheaths finely tomentose, leaf blades flat and inrolled, inflorescence lanceolate with ascending branches, lemma awned below middle, awn bent, palea absent, in dry sandy soils, open woodland, oak woodland, open chaparral, see *Leaflets of Western Botany* 5(12): 198. 1949.

in English: Hoover's bent grass, Hoover's bent, Hoover's bentgrass

A. howellii Scribn. (after the American botanist Thomas Jefferson Howell, 1842-1912, see J.H. Barnhart, *Biographical notes upon botanists*. 2: 211. 1965; Joseph Ewan, *Rocky Mountain Naturalists*. 73, 227. 1950; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 184. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; R. Zander, F. Encke, G. Buch-

heim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J. Ewan, edition, *A Short History of Botany in the United States*. New York and London 1969)

U.S., Oregon. Vulnerable species, see *Contributions from the United States National Herbarium* 3(1): 76. 1892.

in English: Howell's bent grass, Howell's bent

A. hugoniana Rendle

China. Found in subalpine meadows, abandoned fields, see *Journal of the Linnean Society, Botany* 36(254): 389-390. 1904, *Bulletin of Botanical Research* 4(4): 99-100, f. 4. 1984.

A. hugoniana Rendle var. *aristata* Keng ex Y.C. Yang

China. See *Journal of the Linnean Society, Botany* 36(254): 389-390. 1904, *Bulletin of Botanical Research Harbin* 4(4): 99-100, f. 4. 1984.

A. humilis Vasey (*Agrostis thurberiana* A.S. Hitchc.; *Podagrostis humilis* (Vasey) Björkman; *Podagrostis thurberiana* (A.S. Hitchc.) Hultén)

British Columbia, California, Oregon, Sierra Nevada. Perennial, tufted, no auricles, open sheaths, ligule somewhat toothed, leaves mostly basal, very narrow leaves, inflorescence narrowly oblong and open, small and narrow flower head, awnless, palea present, rare species, grows in subalpine to alpine meadows, slopes and stream banks, intergrades with *Agrostis thurberiana* Hitchc., see *Bulletin of the Torrey Botanical Club* 10: 21. 1883 and *Symbolae Botanicae Upsaliensis* 17: 15. 1960.

in English: mountain bent grass, alpine bentgrass

A. hyemalis (Walter) Britton, Sterns & Poggenburg (*Agrostis hyemalis* (Walter) Lunell; *Agrostis antecedens* E.P. Bicknell; *Agrostis canina* var. *hiemalis* (Walter) Kuntze; *Agrostis canina* var. *hyemalis* (Walter) Kuntze; *Agrostis hiemalis* (Walter) Britton, Sterns & Poggenb.; *Agrostis hyemalis* (Walter) Lunell; *Agrostis hyemalis* var. *hyemalis*; *Agrostis hyemalis* var. *laxiflora* (Michx.) Beetle; *Agrostis laxiflora* Poir.; *Agrostis leptos* Steud.; *Agrostis scabra* Willd.; *Cornucopiae hyemalis* Walt.; *Trichodium laxiflorum* Muhl., nom. illeg., non *Trichodium laxiflorum* Michx.; *Trichodium laxum* Schult.)

Asia, Japan, Korea, U.S., Mexico, northern America. Perennial, tufted, slender, erect to decumbent, no auricles, sheaths glabrous, ligule hyaline and often erose, leaves mostly basal and very narrow, panicle open and diffuse, spikelets purplish or reddish, panicles break off and blow around in the wind, palea absent, found in dry fields, in dry to moist open soils, dry sandy places, sandy soil, seepage areas, sterile soil, ditches, stream banks, shores and rocky shores, wet meadows, open woods, open fallow field, abandoned fields, see *Flora Caroliniana, secundum* ... 73. 1788, *Species Plantarum. Editio quarta* 1: 370. 1797, *Flora Boreali-Americana* 1: 42, t. 8. 1803, *Encyclopédie Méthodique. Botanique* ... *Supplément* 1: 255. 1810, *Descriptio uberior*

Graminum 60. 1817, *Mantissa* 2: 157. 1824, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 222. 1833, *Synopsis Plantarum Glumacearum* 1: 169. 1854, *Pittonia* 1: 184-189. Berkeley, California, U.S. 1888, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York City* 68. New York, Torrey Botanical Club 1888, *Revisio Generum Plantarum* 3(3): 338. 1898 and *Report of the Michigan Academy of Science, Arts and Letters* 6: 203. 1904, *Bulletin of the Torrey Botanical Club* 35(10): 473-475. 1908, *Contributions from the United States National Herbarium* 13(3): 56. 1910, *American Midland Naturalist* 4: 216. 1915, *Phytologia* 52(1): 11. 1982.

in English: winter bent, winter bentgrass, ticklegrass, slender bent grass, fly-away grass, hairgrass

in French: agrostis d'hiver

A. *hyemalis* (Walter) Britton & al. var. ***hyemalis***

Northern America, U.S. Annual, small, caespitose, clumps forming, disturbed soil, moist areas, dry places, ravines, see *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York City* 68. New York 1888.

in English: winter bentgrass, ticklegrass, hairgrass

in French: agrostis d'hiver

A. *hyemalis* (Walter) Britton & al. var. ***scabra*** (Willd.) H.L. Blomq. (*Agrostis hyemalis* var. *tenuis* (Tuck.) Gleason; *Agrostis scabra* Willd.; *Agrostis scabra* var. *tenuis* Tuck.)

Asia, Japan, Korea, U.S., Mexico, Canada, Northern America. Annual, useful for erosion control, see *Species Plantarum. Editio quarta* 1: 370. 1797, *American Journal of Science and Arts* 45: 45. 1843, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York City* 68. New York 1888 and *Phytologia* 4(1): 21. 1952, *Diversity* 16: 43-45. 2000.

in English: rough hair grass, winter bentgrass, ticklegrass, hairgrass

A. *hygrometrica* Nees (*Agrostis juergensii* Hack.; *Bromidium hygrometricum* (Nees) Nees & Meyen; *Bromidium ramboi* (Parodi) Rúgolo; *Bromidium ramboi* (Parodi) Rúgolo var. *ramboi*; *Deyeuxia hygrometrica* (Nees) Speg.) (for Balduino Rambo, S.J., 1905-1961, plant collector in Brazil)

Southern America, southern Brazil to Argentina, Uruguay. Contracted panicle, lemma 5-awned and one awn conspicuous, found near rivers, small streams, low fields, marshy ground, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 404. 1829, *Gramineae* 23. 1841, *Revisio Generum Plantarum* 3(3): 343. 1898 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 318. 1909, *Bradea*, *Boletim do Herbarium Bradeanum* 2(35): 244. 1978, *Flora Illustrada Catarinense* 1(Gram.): 443-906. 1982.

A. *hygrometrica* Nees var. ***hygrometrica*** (*Agrostis juergensii* Hack.; *Agrostis ramboi* Parodi; *Bromidium hygrometricum* (Nees) Nees & Meyen)

South America. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 404. 1829, *Gramineae* 23. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 155. 1843 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 318. 1909, *Boletín de la Sociedad Argentina de Botánica* 1: 119, f. 1. 1946.

A. *idahoensis* Nash (*Agrostis bakeri* Rydb.; *Agrostis borealis* Hartman var. *recta* (Hartman) Boivin; *Agrostis borealis* var. *recta* (Nash) B. Boivin; *Agrostis clavata* auct. non Trin.; *Agrostis filicumis* M.E. Jones; *Agrostis idahoensis* var. *bakeri* (Rydb.) W.A. Weber; *Agrostis tenuiculmis* Nash; *Agrostis tenuiculmis* var. *recta* Nash; *Agrostis tenuis* Vasey, nom. illeg., non *Agrostis tenuis* Sibth.; *Agrostis tenuis* var. *erecta* Vasey ex Nash)

U.S., Alaska, California, New Mexico, Montana. Perennial, rare, reddish, leaf blades flat and inrolled with age, inflorescence lanceolate to ovate with ascending branches, lemma awnless, useful for erosion control, ornamental, turf, on damp soil, open areas, wet meadows, coniferous forest, see *Flora Oxoniensis* 36. 1794, *Bulletin of the Torrey Botanical Club* 10: 21. 1883, *Bulletin of the Torrey Botanical Club* 24(1): 42-43. 1897 and *Memoirs of the New York Botanical Garden* 1: 32. 1900, *Bulletin of the Torrey Botanical Club* 36: 532. 1909, *Contributions to Western Botany* 14: 13. 1912, *Man. Grass. U.S.* 782. 1935, *Phytologia* 43(1): 105. 1979, *Phycologia* 58(6): 382. 1985.

in English: Idaho bent grass, Idaho bent, colonial bentgrass

A. *imbecilla* Zotov (*Agrostis tenella* Petrie, nom. illeg., non *Agrostis tenella* Hoffm.)

New Zealand. Perennial, slender, filiform, erect or geniculate at base, loosely tufted, leaf blade filiform and involute, leaf sheath narrow and membranous, ligule obtuse, long spike-like panicles contracted, glumes subequal or equal lanceolate, lemma apex denticulate, awnless or rarely awned, palea ovate, in damp places, tussock grassland, montane to subalpine, see *Fl. Germ. edition 2* 1: 36. 1800, *Transactions and Proceedings of the New Zealand Institute* 22: 442. 1890 and *Transactions and Proceedings of the New Zealand Institute* 73: 233. 1943, *New Zealand Journal of Botany* 29: 101-116, 139-161. 1991, *Flora of New Zealand* 5: 232. 2000.

A. *imberbis* Phil. (*Agrostis moyanoi* var. *plicatifolia* Speg.; *Agrostis pulchella* f. *purpurascens* Stuck.; *Agrostis pulchella* f. *virescens* Stuck.; *Agrostis scabra* W. Gray f. *purpurascens* Kurtz; *Agrostis scabra* f. *virescens* Kurtz; *Agrostis scabra* var. *purpurascens* Kurtz; *Agrostis scabra* var. *virescens* Kurtz; *Agrostis scotantha* Phil.; *Agrostis stenophylla* Phil.)

Chile, Argentina. See *Species Plantarum. Editio quarta* 1(1): 370. 1797, *Systema Vegetabilium* 2: 367. 1817, *Revista*

del Museo de La Plata 5: 300-301. 1893, *Anales de la Universidad de Chile* 94: 10-11, 16. 1896, *Revista de la Facultad de Agronomía; Universidad Nacional de La Plata* 3: 627. 1897, *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 189. 1902, *Anales Museo Nacional de Historia Natural de Buenos Aires* 13: 475. 1906.

A. inaequiglumis Griseb.

China, Nepal, West Bengal, Sikkim, Arunachal Pradesh. Annual, dwarf, lemma awnless, found in subalpine meadows, moist soils, disturbed soil, waste areas, along roadsides, gravelly clay loam, clay loam soil, marsh meadows, alpine pastures, see *Abhandlungen der Kön. Gesellschaft der Wissenschaften zu Göttingen* 80. 1868 and *Grasses of Burma, Ceylon, India and Pakistan* 387. 1960.

A. inaequiglumis Griseb. var. **nana** Y.C. Yang

China. See *Bulletin of Botanical Research* 4(4): 99, f. 3. 1984.

A. inconspicua Kunze ex E. Desv. (*Agrostis airaeformis* Steud.; *Agrostis airiformis* Steud.; *Agrostis airoides* Franch., nom. illeg., non *Agrostis airoides* Torr.; *Agrostis airoides* var. *flaccidifolia* Speg.; *Agrostis inconspicua* Kunze; *Agrostis mertensii* Trin.; *Agrostis umbellata* var. *mutica* Hack. ex Macloskie & Dusén)

South America, Chile, Argentina. See *Annals of the Lyceum of Natural History of New York* 1(1): 151-152. 1824, *Herbarium Pedemontanum* 6: 18. 1836, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg* sér. 6 4(1): 331. 1845, *Flora Chilena* 6: 315. 1854, *Synopsis Plantarum Glumacearum* 1: 172. 1854, Paul Hariot (1854-1917) et al., *Mission Scientifique du Cap Horn. 1882-1883. Botanique* 5: 382, t. 11. 1889 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 190. 1902, *Reports of the Princeton University Expeditions to Patagonia 1896-1899, Botany, Volume viii, Supplement* 8(3): 42. 1914 [1915], *Gayana, Bot.* 54(2): 110. 1997.

A. infirma Büse

Asia. Perennial, see F.A.W. Miquel (1811-1871), *Plantae Junghuhnianae*. Enumeratio plantarum, quas in insulis Java et Sumatra, detexit Fr. Junghuhn ... Lugduni-Batavorum [Leiden] and Parisiis [1851-1857] and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 303. 1921, *Reinwardtia* 2(2): 225. 1953, *Blumea* 41(2): 408-409. 1996.

A. infirma Büse var. **borneensis** (Stapf) Veldkamp (*Agrostis canina* L. var. *borneensis* Stapf; *Agrostis rigidula* Steud. var. *borneensis* (Stapf) J.M. Linden & Voskuil)

Malaysia, Sabah, Mount Kinabalu. Perennial, tufted, erect, see *Transactions of the Linnean Society of London* 4: 246. 1894 and *Blumea* 28: 199-228. 1982.

A. infirma Büse var. **diffusissima** (Ohwi) Veldkamp (*Agrostis reinwardtii* Büse var. *diffusissima* Ohwi; *Agrostis rigidula* var. *diffusissima* (Ohwi) Veldkamp)

Malaysia, Sabah, Mount Kinabalu. See *Bull. of the Tokyo Science Mus.* 18: 8. 1947, *Blumea* 28: 218. 1982, *Blumea* 41(2): 408. 1996.

A. infirma Büse var. **kinabaluensis** (Ohwi) Veldkamp (*Agrostis kinabaluensis* Ohwi; *Agrostis rigidula* var. *kinabaluensis* (Ohwi) Veldkamp)

Malaysia, Sabah, Mount Kinabalu. Perennial, densely tufted, erect, see *Bull. Tokyo Science Mus.* 18: 8. 1947, *Blumea* 28: 220. 1982, *Blumea* 41(2): 409. 1996.

A. inflata Scribn. (*Agrostis microphylla* Steud.)

Northern America, U.S., Canada. Rocky places, see *Synopsis Plantarum Glumacearum* 1: 164. 1854, *Canadian Record of Science* 6: 152. 1894.

in English: spider bent grass

A. insularis Rúgolo & A.M. Molina

Chile. See *Gayana, Botánica* 54(2): 111, f. 10, 11. 1997.

A. jahnii Lucas (for the Venezuelan naturalist Alfredo Jahn, 1867-1940, botanical collector in high Orinoco, see J.H. Barnhart, *Biographical notes upon botanists*. 2: 243. 1965)

Venezuela. See *Bol. Soc. Venez. Cienc. Naturales* 4, 110 p. 1937, *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 12-14, f. 8. 1953.

A. keniensis Pilg.

Uganda, Kenya, Tanzania, Ethiopia. Perennial, tufted, erect, linear leaf blades, narrow inflorescence, panicle branches ascending, glumes lanceolate-oblong and acute, lemma lanceolate, awn weakly geniculate, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 513. 1926.

A. koelerioides E. Desv. (*Agrostis anomala* (Trin.) Herter, nom. illeg., non *Agrostis anomala* Willd.; *Agrostis koelerioides* Romo, nom. illeg., non *Agrostis koelerioides* E. Desv.; *Aira anomala* Trin.; *Bromidium anomalum* (Trin.) Döll; *Bromidium hygrometricum* var. *anomalum* (Trin.) Kuntze; *Cornucopiae perennans* Walter; *Deyeuxia anomala* (Trin.) Benth. & Hook.f.)

South America, Chile, Argentina. See *Flora Caroliniana, secundum ...* 74. 1788, *Species Plantarum. Editio quarta* 1: 370. 1797, *Linnaea* 10(3): 301. 1836, *Gramineae* 22-23. 1841, *Flora Chilena* 6: 317. 1854, *Flora Brasiliensis* 2(3): 103, pl. 30, f. 2. 1878, *Genera Plantarum* 3: 1153. 1883, *Revisio Generum Plantarum* 3(3): 342. 1898 and *Revista de la Facultad de Agronomía y Veterinaria* 7: 161, f. 10D. 1930, *Estudios Botánicos en la Región Uruguaya* 32. 1931, *Treballs de l'Institut Botànic de Barcelona* 11: 37. 1987.

A. kuntzei Mez (*Agrostis exasperata* var. *viridis* Kuntze; *Polypogon exasperatus* (Trin.) Renvoize)

Chile, Bolivia. Perennial, tufted, erect or ascending, leaf blades linear, loose panicles oblong, glumes lanceolate, in moist places, see *Reliquiae Haenkeanae* 1(4-5): 238. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint*

Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 6,4(3-4): 352. 1841, *Synopsis Plantarum Glumacearum* 1: 422. 1854, *Berberides Americae Australis* 56. 1857, *Linnaea* 29(1): 88. 1858, *Anales de la Universidad de Chile* 94: 17. 1896, *Revisio Generum Plantarum* 3: 339. 1898 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 187, 190. 1902, *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 4, 1: 175, t. 9, f. 9-11. 1905, *Anales del Museo Nacional de Buenos Aires* 13: 474. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 300. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 18(1-3): 3. 1922, *Contributions from the United States National Herbarium* 24(8) 381. 1927, *Symbolae Botanicae Upsaliensis* 17(1): 14. 1960, *Flora Patagónica* 8(3): 402. 1978, *Gramíneas de Bolivia* 235-236. 1998.

A. lachnantha Nees (*Agrostis vestita* Hochst. ex A. Rich.; *Lachnagrostis lachnantha* (Nees) Rúgolo & A.M. Molina)

Tropical Africa, Namibia, Sudan, South Africa, Yemen, Ethiopia. Annual or short-lived perennial bunchgrass, slender, erect or ascending, sometimes rooting at the nodes, loosely tufted, forming small clumps, sometimes stoloniferous or rhizomatous, ligule a membrane-like, narrow spike-like panicle with ascending branches, glumes persistent after the flower has fallen, lemma 3-nerved and pilose, useful to stabilizing waterlogged soils, found in open habitats, rocky soil, pastures, swamps and marshes, pond margins, low lying areas, wet areas, mountain springs, see *Linnaea* 10(Litt.): 115-116. 1836, *Tentamen Florae Abyssinicae ...* 2: 401. 1850 and *Prodromus einer Flora von Südwestafrika* 160: 1-228. 1970, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Bothalia* 26(1): 63-67. 1996, Alina Freire Fierro y David A. Neill, eds, *La Botánica en el Nuevo Milenio: Memorias del Tercer Congreso Ecuatoriano de Botánica* 29. Quito 2002 [Publicaciones de la Fundación Ecuatoriana para la Investigación y el Desarrollo de la Botánica].

in English: South African bent grass, bent grass

in Southern Africa: sesweu, vinkagrostis, vinkgras, vleigras, mohlwa wa mafika (= grass of the boulders), chabola, tjhabola, tihaloa, tjhaola

A. lachnantha Nees var. **glabra** Gooss. & Papendorff

South Africa. See *Linnaea* 10: 115-116. 1836 and *South African Journal of Science* 41: 184. 1945.

A. lachnantha Nees var. **lachnantha** (*Agrostis huttoniae* (Hack.) C.E. Hubb.; *Agrostis huttoniae* (Hack.) C.E. Hubb. ex Gooss. & Papendorff; *Agrostis lachnantha* var. **glabra** Goossens & Papendorff; *Calamagrostis huttoniae* Hack.)

Tropical Africa, Sudan, South Africa. Perennial bunchgrass or annual, short-lived, loosely tufted, robust, forming small clumps, found in open habitats, riverbanks, seepage, wet places, marshy areas, see *Linnaea* 10: 115-116. 1836 and *Rec. Albany Museum* 1: 340. Grahamstown 1905, *Flora of*

Tropical Africa 10: 172. 1937, *South African Journal of Science* 41: 179. 1945.

in English: South African bent grass

in Southern Africa: bandgras, kruipgras, polgras, roggras, vinkagrostis, vinkgras, vleigras; chabola (Sotho)

A. lacunis D.I. Morris (*Lachnagrostis lacunis* (D.I. Morris) S.W.L. Jacobs)

Tasmania. Perennial, hydrophytic, aquatic, erect or geniculate to ascending, branched above and rooting at the nodes, leaves nonauriculate, basal leaf sheaths not keeled, ligule membranous, chasmogamous spikelets, panicle open and pyramidal, growing in shallow water, see *Muelleria* 7(2): 149-153. 1990, *Telopea* 9(3): 446. 2001.

A. laxissima Swallen (*Agrostis abietorum* Swallen)

Guatemala. See *Contributions from the United States National Herbarium* 29(9): 402-403. 1950.

A. lehmannii Swallen

Colombia. Páramo, see *Contributions from the United States National Herbarium* 29(6): 263-264. 1948 [1949].

A. lenis Roseng., Arrill. & Izag.

Southern Brazil and Uruguay. Perennial, erect, ascending, stoloniferous, panicle effuse, lemma awnless, callus glabrous, common in swampy places, sandy soils, see *Gramíneas Uruguayas* 19, 21, 23-24, f. 1. 1970.

A. lepida A.S. Hitchc. (*Agrostis pallens* Trin.)

U.S., California, Oregon. Rare species, found in open areas, gravelly soil, woods, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 328. 1841 and *A Flora of California* 1: 121. 1912.

in English: sequoia bent grass

A. leptotricha E. Desv. (*Agrostis lechleri* Steud.; *Agrostis moyanoi* Speg.; *Agrostis moyanoi* var. **major** Speg.; *Agrostis moyanoi* var. **puberigluma** Speg.) (dedicated to the German botanist Wilibald (Willibaldus) Lechler, 1814-1856, naturalist, pharmacist, explorer, 1850-1855 Chile) (for Carlos Moyano, Argentina)

Southern America, Chile, Argentina. See *Flora Chilena* 6: 316, t. 76, f. 1. 1854, *Synopsis Plantarum Glumacearum* 1: 422. 1854, *Revista de la Facultad de Agronomía; Universidad Nacional de La Plata* 3: 627. 1897 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 189. 1902, *Gayana, Botánica* 42: 1-157. 1985, *Gayana, Botánica* 54(2): 113. 1997.

A. liebmanni (E. Fourn.) Hitchc. (*Apera liebmanni* E. Fourn.)

America. See *Mexicanas Plantas* 2: 97. 1886 and *North American Flora* 17(7): 519. 1937.

A. limitanea J. Black (*Lachnagrostis limitanea* (J.M. Black) S.W.L. Jacobs)

South Australia. Endangered species, perennial, noded, tufted, glabrous, erect, stiff, leaves nonauriculate, basal leaf sheaths densely scabrous, ligule acute and membranous, loose panicle partially exerted, glumes scabrous on the keel, lemmas glabrous and awnless, callus glabrous, see *Transactions and Proceedings of the Royal Society of South Australia* 55: 137, f. 5. 1931, *Telopea* 9(3): 446. 2001.

A. limprichtii Pilger (for the German botanist Hans Wolfgang Limpricht, b. 1877, traveler, botanical explorer in China and Tibet, wrote *Botanische Reisen in den Hochgebirgen Chinas und Ost-Tibets*. Dahlem bei Berlin 1922, he was son of the German bryologist Karl Gustav Limpricht (1834-1902); see E.D. Merrill & Egbert H. Walker, *A Bibliography of Eastern Asiatic Botany*. 273. The Arnold Arboretum of Harvard University, Jamaica Plain, Massachusetts 1938; J.H. Barnhart, *Biographical notes upon botanists*. 2: 382. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 238. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 267 and 268. 1973)

Asia, China. Alpine shrub, subalpine meadows, pastures, rocky clay loam, marsh meadow, granitic gravelly loam, see *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 12: 307. 1922.

A. longiberbis Hack. (*Agrostis capillaris* L.; *Agrostis longiberbis* Hack. ex L.B. Sm.; *Agrostis longiberbis* Hack. ex Usteri; *Calamagrostis capillaris* Nees ex Steud.)

Southern Brazil. Panicle effuse, lemma awnless, callus ciliate, found in fields, see *Species Plantarum* 1: 62. 1753, *Synopsis Plantarum Glumacearum* 1: 188. 1854 and Alfred Usteri, *Flora der Umgebung der Stadt São Paulo in Brasilien* 152. Jena 1911, *Phytologia* 22(2): 88, f. 1-3. 1971.

A. longiligula Hitchc. (*Agrostis exarata* Trin.)

Northern America, U.S., California. Found in shallow water, swamps, wet meadow, see *De Graminibus unifloris et sesquifloris* 207. Petropoli 1824 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 68: 54, t. 36, f. 3. 1905, *Leaflets of Western Botany* 4: 246. 1946.

in English: Pacific bentgrass, long-tongue bent

A. lyallii Hook.f. (*Deyeuxia filiformis* var. *lyallii* (Hook.f.) Petrie; *Deyeuxia filiformis* var. *lyallii* (Hook.f.) Zotov; *Deyeuxia forsteri* var. *lyallii* (Hook.f.) Hack.; *Lachnagrostis lyallii* (Hook.f.) Zotov) (named for the British (b. Kincardineshire) naturalist David Lyall, 1817-1895 (Cheltenham, Glos), British Columbia Boundary Commission, surgeon, explorer, plant collector, botanist, 1839-1842 on Ross's Antarctic Voyage, 1847 New Zealand, 1852 with Edward Belcher (1799-1877) in the Arctic (a search for the lost

Franklin expedition), in 1862 a Fellow of the Linnean Society. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 415. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 204. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; Thomas Frederick Cheeseman, *Manual of the New Zealand Flora*. xxvii. Wellington 1906; R. Glenn, *The Botanical Explorers of New Zealand*. Wellington 1950; Captain Sir Edward Belcher, *The Last of the Arctic Voyages, being a narrative of the expedition in HMS Assistance ... in search of Sir John Franklin*. London 1855; G.A. Doumani, editor, *Antarctic Bibliography*. Washington, Library of Congress 1965-1979; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. London 1918; John T. Walbran, *British Columbia Coast Names, 1592-1906. To Which are Added a Few Names in Adjacent United States Territory, Their Origin and History*. First Edition. Ottawa: Government Printing Bureau, 1909; John Norris, *Strangers Entertained: A History of the Ethnic Groups of British Columbia*. Vancouver: British Columbia Centennial '71 Committee, 1971; G.P.V. Akrigg & Helen B. Akrigg, *British Columbia Place Names*. Victoria: Sono Nis Press, 1986)

New Zealand. Perennial, see *Révision des Graminées* 1: 77. 1829, *Flora Novae-Zelandiae* 1: 297. 1853 and *Manual of the New Zealand Flora* 869. 1906, *The Subantarctic Islands of New Zealand* 2: 474. 1909, *Transactions of the Royal Society of New Zealand* 73: 235. 1943, *Records of the Dominion Museum (N.Z.)* 5: 142. 1965.

A. magellanica Lam. (*Agrostis antarctica* Hook.f.; *Agrostis araucana* Phil.; *Agrostis chonotica* Phil.; *Agrostis cognata* Steud.; *Agrostis macrathera* Phil.; *Agrostis magellanica* var. *antarctica* (Hook.f.) Franch.; *Agrostis magellanica* var. *antarctica* (Hook.f.) Pilg., nom. illeg., non *Agrostis magellanica* var. *antarctica* (Hook.f.) Franch.; *Agrostis magellanica* var. *cognata* (Steud.) Macloskie & Dusén; *Agrostis multiculmis* Hook.f.; *Agrostis rinihuensis* Phil.; *Vilfa magellanica* (Lam.) P. Beauv.)

New Zealand. Perennial, very variable, subalpine to alpine, tufted, leafy, erect to prostrate or slightly geniculate at base, leaf blade folded and inrolled, leaf sheath membranous, ligule truncate and denticulate, panicle contracted, glumes subequal, lemma glabrous, awn flexuous and twisted, slopes, stony ground, damp soil, see *Encyclopédie Méthodique, Botanique* 1: 160. 1791, *Essai d'une Nouvelle Agrostographie* 16, 148, 181. 1812, *Fl. Antarct.* 1: 95. 1845[ante], *Flora Antarctica* 2: 374. 1846, *Synopsis Plantarum Glumacearum* 1: 421. 1854, *Linnaea* 29(1): 87. 1858, *Mission Scientifique du Cap Horn, Botanique* 5: 381. 1889, *Anales de la Universidad de Chile* 94: 10, 14. 1896 and

Repertorium Specierum Novarum Regni Vegetabilis 12: 304. 1913, *Reports of the Princeton University Expeditions to Patagonia, Botany, Supplement* 40. 1914, *New Zealand Journal of Botany* 29: 139-161. 1991.

A. mannii (Hook.f.) Stapf (*Calamagrostis mannii* (Hook.f.) Engl.; *Deyeuxia mannii* Hook.f.)

West tropical Africa. Perennial, slender, erect, ascending, loosely tufted, glumes subequal, hairy awned lemma, related to *Agrostis producta* Pilg., see *Journal of the Linnean Society, Botany* 7: 228. 1864, *Abhandlungen der Königlich Preussischen Akademie der Wissenschaften. Physikalisch-mathematische Classe* 1891: 2. 1892, *Flora Capensis* 7: 549. 1899 and *Opera Botanica* 121: 159-172. 1993.

A. mannii (Hook.f.) Stapf subsp. **aethiopica** S.M. Phillips Ethiopia. Perennial, slender, erect, ascending, loosely tufted, linear leaf blades, loose and open inflorescence paniculate, spikelets clustered, glumes subequal and acute, lemma awned, awn geniculate, moist soils, grassland, see *Kew Bulletin* 41(1): 134, f. 4E-F. 1986.

A. mannii (Hook.f.) Stapf subsp. **mannii**

West Africa.

A. maritima Lam. (*Agrostis alba* f. *maritima* (Lam.) Parl.; *Agrostis alba* subsp. *maritima* (Lam.) Arcang.; *Agrostis alba* subsp. *maritima* (Lam.) P. Fourn.; *Agrostis alba* var. *maritima* (Lam.) G. Mey.; *Agrostis maritima* L.; *Agrostis maritima* With.; *Agrostis palustris* Huds.; *Agrostis stolonifera* L.; *Agrostis stolonifera* subsp. *maritima* (Lam.) Vasc.; *Agrostis stolonifera* var. *maritima* (Lam.) W.D.J. Koch; *Agrostis stolonifera* var. *maritima* (Lam.) L. Vilyasoo; *Agrostis stolonifera* var. *stolonifera*; *Agrostis straminea* Hartm.; *Vilfa maritima* (Lam.) P. Beauv.)

Northern America. See *Species Plantarum* 1: 62. 1753, *Flora Anglica* 27. 1762, *Encyclopédie Méthodique, Botanique* 1: 61. 1783, *Essai d'une Nouvelle Agrostographie* 16, 148, 181. 1812, *Flore de France* Suppl. 5. 253. 1815, C.P. Thunberg (1743-1828), *Genera graminum in Scandinavia indigenorum recognita ... Upsaliae* 1819, *Neues Hamburgisches Magazin* 1823: 138. Hamburg, Leipzig 1824, *Synopsis der Deutschen und Schweizer Flora, ...* 781. 1837, *Flora italiana, ossia descrizione delle piante ...* 1: 181. 1848, *Prodromus Florae Hispanicae* 1: 52. 1861, *Compendio della Flora Italiana* 768. 1883, *Bulletin Société Botanique de Rochelaise. La Rochelle* 18: 45. 1896 and B.D. Jackson (1846-1927), *Index to the Linnean herbarium ...* London 1912 [also *Proc. Linn. Soc.* 124 Suppl.: 1-152. Oct 1912], *Les Quatre Flores de la France*, éd. 2, 49. 1946, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991.

in English: seaside bent

in French: agrostis maritime, agrostide maritime

A. masafuerana Pilger (Robinson Crusoe (= Juan Fernández) Islands are a Chilean National Park and a World Bio-

sphere Reserve. Located 667 kms W of continental Chile at 33°S latitude, the archipelago consist of three principal islands: Masatierra (= Isla Robinson Crusoe), Masafuera (= Isla Alejandro Selkirk) and Santa Clara)

Chile, Juan Fernandez Islands. Indeterminate species, see *Repertorium Specierum Novarum Regni Vegetabilis* 16: 388. 1920, *The Natural History of Juan Fernandez and Easter Island* Uppsala 1920-1956, *Brittonia* 54(3): 154-163. 2002.

A. meionectes Vickery (*Lachnagrostis meionectes* (Vickery) S.W.L. Jacobs) (perhaps from Greek *meionekteo* "to be poor, come short, fall short, to be short," *meionektikos* "disposed to take too little," *meion* "smaller, less" and *echo* "to hold, to sustain")

Australia, Victoria, New South Wales. Rare species, annual, noded, densely tufted, slender, small, nonauriculate, basal leaf sheaths not keeled, ligule membranous, leaves flat or folded, inflorescence of chasmogamous spikelets, open panicle with slender and purplish spikelets, glumes more or less equal and divergent, lemma awned and pubescent, alpine grass, in alpine and subalpine moist sites, see *Contributions from the New South Wales National Herbarium* 4(1): 12. 1966, *Telopea* 9(3): 446. 2001.

A. meridensis Luces

Venezuela. Páramos, moist to marshy places, see *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 11-12, f. 7. 1953.

A. mertensii Trinius (*Agrostis bakeri* Rydb.; *Agrostis boliviana* Mez; *Agrostis borealis* Hartman; *Agrostis borealis* f. *borealis*; *Agrostis borealis* f. *macrantha* (Eames) Fern.; *Agrostis borealis* subsp. *viridissima* (Kom.) Tzvelev; *Agrostis borealis* var. *americana* (Scribn. ex Macoun) Fernald; *Agrostis borealis* var. *bakeri* (Rydb.) Koji Ito; *Agrostis borealis* var. *borealis*; *Agrostis borealis* var. *macrantha* Eames; *Agrostis borealis* var. *paludosa* (Scribn.) Fern.; *Agrostis canina* var. *alpina* Oakes; *Agrostis canina* var. *mertensii* (Trin.) Kuntze; *Agrostis canina* var. *tenella* Torr.; *Agrostis compressa* Döll, nom. illeg., non *Agrostis compressa* Willd.; *Agrostis concinna* Tuck.; *Agrostis gelida* Trin.; *Agrostis idahoensis* Nash var. *bakeri* (Rydb.) W.A. Weber; *Agrostis laxiflora* Poir. var. *mertensii* (Trin.) Griseb.; *Agrostis mertensii* Trin. subsp. *borealis* (Hartman) Tzvelev; *Agrostis novae-angliae* Vasey, nom. illeg., non *Agrostis novae-angliae* Tuck.; *Agrostis paludosa* Scribn.; *Agrostis pickeringii* Tuck.; *Agrostis pickeringii* var. *pickeringii*; *Agrostis pickeringii* var. *rupicola* Tuck.; *Agrostis poeppigiana* Phil.; *Agrostis rubra* L. pro parte; *Agrostis rubra* var. *alpina* (Oakes) MacMill.; *Agrostis rubra* var. *americana* Scribner ex Macoun; *Agrostis rupestris* auct. non All.; *Agrostis scabra* var. *montana* Tuck. ex Vasey; *Agrostis viridissima* Kom.; *Agrostis williamsii* Phil.; *Trichodium concinnum* (Tuck.) Alph. Wood) (named for the American botanist Charles Fuller Baker, 1872-1927, professor of tropical agri-

culture, see J.H. Barnhart, *Biographical notes upon botanists*. 1: 107. 1965, T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 21. Boston, Mass. 1972, Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964, S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 17. 1973)

Circumpolar, northern and southern America, Canada, U.S., Argentina, Chile, Japan, Europe. Perennial, caespitose, erect, ligule membranous, leaf sheaths glabrous, leaves mostly in a basal tuft, inflorescence paniculate and diffuse, panicle dark, spikelets 1-flowered, palea vestigial, anthers yellow, found in mountain ledges, turfy places, slopes, hummocks, hummock grasslands, see *Species Plantarum* 1: 62. 1753, *Linnaea* 10(3): 302. 1836, *Handbok i Skandinavien Flora*, edition 3, 17. 1838, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 343. 1841, *Catalogue of Vermont Plants* 32. 1842, *Mag. Hort. Bot.* 9(4): 143. 1843, *Fl. New York* 2: 443. 1843, *American Journal of Science* 45(1): 42. 1843, *A Class-book of Botany* (2) 600. 1847, *Flora Rossica* 4(13): 442. 1852, *Catalogue of Canadian Plants, Part VI, Musci* 25: 391. 1890, *Contributions from the United States National Herbarium* 3(1): 76. 1892, *The Metaspermae of the Minnesota Valley* 65. 1892, *Anales de la Universidad de Chile* 94: 12, 13. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 49, f. 7. 1898, *Revisio Generum Plantarum* 3: 338. 1898 and *Bulletin of the Torrey Botanical Club* 36: 532. 1909, *Rhodora* 11(125): 88. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 13: 85. 1914, *Repertorium Specierum Novarum Regni Vegetabilis* 18(1-3): 1. 1922, *Rhodora* 35: 205, 207. 1933, *Journal of Geobotany; or the Hokuriku Journal of Botany* 9: 68. 1961, *Novosti Sist. Vyss. Rast.* 8: 62. 1971, *Novosti Sist. Vyss. Rast.* 10: 90. 1973, *Botanical Magazine* 88: 65-87. 1975, *New Alpine Flora of Japan* 2: 359. 1983, *Le Naturaliste Canadien* 113(4): 331. 1986, *Botanical Magazine* 100: 273-293. 1987, *Grasses of Japan and its Neighboring Regions* 484. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1675-1678. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990.

in English: northern bentgrass

A. meyenii Trin. (*Agrostis canina* f. *inclusa* Hack.; *Agrostis canina* f. *mutica* Hack., nom. illeg., non *Agrostis canina* var. *mutica* Sincl.; *Agrostis canina* subsp. *grandiflora* Hack., nom. illeg., non *Agrostis canina* var. *grandiflora* Hack. ex Druce; *Agrostis canina* var. *falklandica* (Hook.f.) Macloskie; *Agrostis canina* var. *falklandica* (Hook.f.) Hack. ex Skotts., nom. illeg., non *Agrostis canina* var. *falklandica* (Hook.f.) Macloskie; *Agrostis canina* var. *falklandica* (Hook.f.) Hack.; *Agrostis conferta* Nees & Meyen; *Agrostis*

conferta var. *austro-patagonica* Pilg.; *Agrostis conferta* var. *austropatagonica* Pilg.; *Agrostis falklandica* Hook.f.; *Tri-chodium pusillum* Nees ex Meyen)

Chile, Argentina. Alpine grass, growing in marshy places, rocky sites, see *Species Plantarum* 1: 62. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 312. 1841, *Gramineae* 11-12. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 143-144. 1843, *Flora Antarctica* 2: 373. 1846 and *Reports of the Princeton University Expeditions to Patagonia ... Botany* 8(5): 186. 1904, *Wissenschaftliche Ergebnisse der Schwedischen Südpolar-Expedition 1901-1903* 4(4): 5. 1906, *Kongliga Svenska Vetenskapsakademiens Handlingar* 50(3): 12. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 12: 304. 1913.

A. micrantha Steud. (*Agrostis clavata* subsp. *micrantha* (Steud.) Y.C. Tong)

Nepal, Myanmar, India. Stout, spikelets green, glumes unequal, lower glume acute, palea present, a good fodder grass, usually growing in pine forests, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 55. 1821, *Synopsis Plantarum Glumacearum* 1: 170, 174. 1854 and *Flora Xizangica* 5: 233-234. 1987.

A. microphylla Steud. (*Agraulis brevifolius* Nees ex Torr.; *Agrostis alopecuroides* (Buckley) A. Gray, nom. illeg., non *Agrostis alopecuroides* Lam.; *Agrostis aristiglumis* Swallen; *Agrostis exarata* var. *microphylla* (Steud.) Hitchc.; *Agrostis exarata* var. *microphylla* S. Watson ex Vasey; *Agrostis inflata* Scribn.; *Agrostis microphylla* var. *intermedia* Beetle; *Agrostis microphylla* var. *microphylla*; *Agrostis virescens* var. *microphylla* (Steud.) Scribn.; *Deyeuxia alopecuroides* Nutt. ex A. Gray; *Polypogon alopecuroides* Buckley)

British Columbia, Mexico, California. Annual, leaf blades scabrous, inflorescence dense and cylindrical, glumes acuminate, lemma awned from middle, awn slightly bent, palea absent, on wet soil, slopes, vernal pools, on rocks, cliffs, see *Nova Genera et Species Plantarum* 1: 135-136. 1815 [1816], *Gram. Unifl. Sesquifl.* 207. 1824, *Synopsis Plantarum Glumacearum* 1: 164. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 88, 333. 1862, *Contributions from the United States National Herbarium* 3(1): 58, 72. 1892, *Canadian Record of Science* 6: 152. 1894 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 2-3. 1901, *American Journal of Botany* 2: 303. 1915, *Journal of the Washington Academy of Sciences* 20(15): 381. 1930, *Bulletin of the Torrey Botanical Club* 72(6): 547, f. 7, 8. 1945, *Leaflets of Western Botany* 5(3): 56. 1947.

in English: small-leaf bentgrass, small-leaf bent, small-leaved bentgrass, little-leaf bentgrass, awned bent grass

A. moldavica Dobrescu & Beldie (*Agrostis gigantea* subsp. *moldavica* (Dobrescu & Beldie) Dihoru)

Romania. Rare species.

A. mongolica Roshev.

Mongolia. Found on marshy areas along the rivers and small streams, moist meadows, dry stream beds, mountain steppe, dark soils.

A. montevidensis Spreng. ex Nees (*Agrostis canina* L. var. *montevidensis* (Spreng. ex Nees) Kuntze; *Agrostis laxiflora* var. *aristata* Griseb.; *Agrostis montevidensis* var. *aristata* Döll; *Agrostis montevidensis* var. *montevidensis*; *Agrostis montevidensis* var. *submutica* Döll)

Uruguay, southern Brazil to Argentina, Bolivia, Paraguay. Annual, rare, tufted, inflorescence a strongly spreading panicle with ascending branches, spikelets distant, straight pedicels, paleas usually absent, little grazing value, common in moist and disturbed areas, mountain grasslands, along roadsides, see *Encyclopédie Méthodique. Botanique ... Supplément* 1: 255. 1810, *Botanical Appendix to Captain Franklin's Narrative* 731. 1823, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 403. 1829, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 254. 1874, *Plantae lorentzianae*. [Plants collected by the German botanist Paul Günther Lorentz, 1835-1881.] 206. Göttingen 1874, *Flora Brasiliensis* 2(3): 29. 1878, *Revisio Generum Plantarum* 3(2): 338. 1898.

in English: fog grass

in Spanish: pasto ilusión

in South Africa: misbeltgras

A. montevidensis Spreng. ex Nees f. *montevidensis* (*Agrostis montevidensis* var. *aristata* Döll)

South America, Uruguay. See *Flora Brasiliensis* 2(3): 29. 1878.

A. montevidensis Spreng. ex Nees f. *submutica* (Döll) Kämpf (*Agrostis montevidensis* var. *submutica* Döll)

South America. See *Flora Brasiliensis* 2(3): 29. 1878 and *Anuário Técnico do Instituto de Pesquisas Zootécnicas "Francisco Osorio"* 2: 577. Porto Alegre 1974[1975].

A. muelleriana Vickery (*Agrostis canina* var. *gelida* (F. Muell.) Buchanan; *Agrostis canina* var. B. Hook.f.; *Agrostis gelida* F. Muell., nom. illeg., non *Agrostis gelida* Trin.; *Agrostis muelleri* Benth., nom. illeg., non *Agrostis muelleri* J. Presl)

New Zealand, Australia, Victoria, Tasmania, New South Wales. Annual, small, tufted to densely tufted, slender, erect, noded, nonauriculate, leaf blade with rough margins, leaf sheath more or less membranous, basal leaf sheaths not keeled, ligule membranous acute to truncate, leaf blades flat or folded or involute, inflorescence of chasmogamous spikelets, short panicles narrow and contracted, spikelets purplish, glumes acute to lanceolate more or less unequal,

lemma awned and glabrous, slender awn, palea minute and ovate, found in alpine and subalpine grasslands, wet situations, fens and bogs, seepages, rocky ground, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 343. 1841, *Abhandlungen der Böhmisches Gesellschaft der Wissenschaften, nebst der Geschichte derselben* 3: 550. Prague 1845, *Transactions of Proceedings of the Royal Society of Victoria* 43. 1854-1855, *Handbk. N.Z. Fl.* 328. 1864, *Flora Australiensis: A Description ...* 7: 576. 1878, *Indigenous Grasses of New Zealand* pl. 20A. Wellington 1878-1880 [illustrated by John Buchanan, 1819-1898] and *Contributions from the New South Wales National Herbarium* 1: 103. 1941, *New Zealand Journal of Botany* 29: 101-116, 139-161. 1991.

in English: Mueller's bent

A. munroana Aitchison & Hemsley (*Calamagrostis munroana* (Aitch. & Hemsley) Boiss.; *Calamagrostis munroana* var. *stricta* Hook.f.)

Pakistan. Lemma hairy, awn of lemma very short and shortly exerted beyond the glumes, fodder, pasture grass, see *Journal of the Linnean Society, Botany* 19: 192. 1882, *Flora Orientalis* 5: 523. 1884 and *Grasses of Burma, Ceylon, India and Pakistan ...* 388. 1960, *Journal of Cytology and Genetics* 21: 155. 1986, *Cytologia* 56: 437-452. 1991, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

A. munroana Aitch. & Hemsley subsp. *indica* Sunanda Bhattacharya & S.K. Jain

India, Himachal Pradesh, Uttar Pradesh, Jammu-Kashmir. Stout, tall, leaf blades linear-lanceolate, panicle open, common in moist open fields, hilly slopes, see *Bulletin of the Botanical Survey of India* 25(1-4): 205. 1983[1985].

A. munroana Aitch. & Hemsley subsp. *munroana*

India, Pakistan. Dwarf, slender, leaf blades linear to filiform, inflorescence spicate, panicle linear, eaten by sheep, cattle and goats, common on alpine slopes, near snow, see *Journal of the Linnean Society, Botany* 19: 192. 1882.

A. muscosa Kirk (*Agrostis aemula* subsp. *spathacea* Berggr.; *Agrostis parviflora* var. *perpusilla* Hook.f.)

New Zealand. Perennial, small, low, montane to subalpine, glaucous or greenish, much branched at base, forming round cushions, leaf sheaths hyaline, ligule truncate to acute and fimbriate, leaves usually reflexed, inflorescence often recurved contracted, panicle sometimes hidden among leaf sheaths, glumes more or less unequal, lemma awnless, in tussock grassland, lowland, stony ground, bare soil, see *Prodromus Florae Novae Hollandiae* 170, 172. 1810, *Flora Novae-Zelandiae* 1: 296. 1853, *Handbook N.Z. Fl.* 328. 1864, Sven Berggren (1837-1917), *Lund Fysiogr. Sällsk. Minneskr. med ...* 8: 32, t. 7, f. 41-47. 1878 [Regia Societas

Physiographorum Lundensis], *Transactions and Proceedings of the New Zealand Institute* 13: 385. 1881 and *New Zealand J. Bot.* 29: 139-161. 1991.

in English: pincushion grass

A. myriantha Hook.f. (*Agrostis himalayana* Bor; *Agrostis platyphylla* Mez)

India, China, Tibet, Nepal. Glumes equal to subequal, a good fodder grass, grows on sandy soil, on hills under coniferous forest, see *The Flora of British India* 7(22): 257. 1897 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(492-503): 302. 1921, *Kew Bulletin* 8: 269. 1953, *Edinb. J. Bot.* 56(3): 390. 1999.

A. myriantha Hook.f. var. **myriantha** (*Agrostis myriantha* var. *khasiana* Hook.f.)

India, China, Tibet, Nepal. See *The Flora of British India* 7(22): 257. 1897 and *Edinb. J. Bot.* 56(3): 390. 1999.

A. myriantha Hook.f. var. **yangbiensis** B.S. Sun & Y. Cai Wang

Yunnan, China. See *Acta Phytotaxonomica Sinica* 30(4): 366. 1992.

A. nebulosa Boiss. & Reut. (*Agrostis capillaris* hort. non L.; *Agrostis elegans* Thore; *Agrostis nebulosa* Bourg. ex Reuter & Lange; *Neoschischkinia nebulosa* (Boiss. & Reut.) Tzvelev)

Morocco, Europe, Spain, Portugal. Annual, ornamental, tufted, linear and flat leaves, panicle loose and oblong, awns lacking, see *Diagnoses Plantarum Novarum Hispanicarum* 27. 1842, *Bibliothèque Universelle de Genève* 38: 218. 1842, *Bulletin de la Société Botanique de France* 11: 47. 1864 and *Bot. Zhurn. (Moscow & Leningrad)* 53: 309. 1968, *Lagascalia* 12: 124-128. 1983, *Boletim da Sociedade Brotteriana, ser. 2* 61: 81-104. 1988, *Gayana, Botánica* 54: 118. 1997.

in English: cloud grass

A. nervosa Nees ex Trin. (*Agrostis clarkei* Hook.f.; *Agrostis nervosa* Nees)

India, Pakistan, Nepal. Leaf blades narrow and filiform, glumes unequal, lower glume longer, palea absent, an excellent fodder grass, grows at higher altitudes, on hilly slopes, on alpine pastures, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 328. 1841.

A. nipponensis Honda

Asia, Japan. See *Botanical Magazine (Tokyo)* 41: 380. 1927.

A. novogaliciana McVaugh

Mexico. Rare species, see *Flora Novo-Galiciana* 14: 41-42, f. 10. 1983, *Monocotiledóneas Mexicanas: una Sinopsis Florística* 10: 7-236. 2000.

A. oregonensis Vasey (*Agrostis attenuata* Vasey; *Agrostis borealis* var. *californica* (Vasey) T. Koyama ex B. Boivin; *Agrostis diegoensis* Vasey; *Agrostis hallii* var. *californica* Vasey; *Agrostis lepida* A.S. Hitchc.; *Agrostis oregonensis* Nutt. ex A. Gray; *Agrostis pallens* var. *vaseyi* St. John; *Agrostis schiedeana* var. *armata* Suksd.)

U.S., California, Alaska, Wyoming. Perennial, leaf blades flat, inflorescence ovate to lanceolate, lemma sometimes awned above middle, awn straight, forage, moist areas, swamps, stream banks, meadows, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 327. 1841, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 334. 1862, *Bulletin of the Torrey Botanical Club* 13: 55. 1886, *Botanical Gazette* 11(12): 337. 1886, *Contributions from the United States National Herbarium* 3(1): 74. 1892 and *Werdenda* 1(2): 1. 1923, *Phytologia* 43(1): 105. 1975.

in English: Oregon bent, Oregon bentgrass, Oregon redtop

A. oresbia Edgar (Greek *oresbios*, living on mountains, *oros* "mountain")

New Zealand. Perennial, subalpine to alpine, tufted, erect, sometimes stoloniferous, leaf blade flat or folded, leaf sheath hyaline and ribbed, ligule smooth truncate, open panicle oblong to pyramidal with spreading branches, glumes more or less unequal, lemmas awned, palea ovate, water courses, cliffs, tussock grassland, rocky places, seepages, also in shade, see *New Zealand Journal of Botany* 29(2): 143, f. 2. 1991.

A. pallens Trin. (*Agrostis canina* var. *stolonifera* Vasey, nom. illeg., non *Agrostis canina* var. *stolonifera* Blytt; *Agrostis densiflora* var. *littoralis* (Vasey) Vasey; *Agrostis diegoensis* Vasey; *Agrostis diegoensis* var. *foliosa* Vasey; *Agrostis exarata* var. *littoralis* Vasey; *Agrostis foliosa* Vasey, nom. illeg., non *Agrostis foliosa* hort. ex Roem. & Schult.; *Agrostis lepida* A.S. Hitchc.; *Agrostis multiculmis* Vasey ex Beal; *Agrostis pallens* var. *foliosa* Hitchc.; *Agrostis pallens* var. *vaseyi* St. John)

U.S., California, British Columbia. Perennial, small, creeping rhizomes, leaves mostly basal, leaf blades flat to inrolled, inflorescence lanceolate to narrowly ovate, spike-like panicle, lemma sometimes awned near tip, awn straight, palea absent or vestigial, forage, found in open meadows and woodland, forest, subalpine zones, gravelly woods, dry places, see *Species Plantarum* 1: 62. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 328. 1841, *Bulletin of the Torrey Botanical Club* 13: 54-55. 1886, *Contributions from the United States National Herbarium* 3(1): 72, 74-75. 1892, *Grasses of North America for Farmers and Students* 328. 1896 and *U.S. Department*

of Agriculture Bureau of Plant Industry Bulletin 68: 34, t. 14, f. 1. 1905, *A Flora of California* 1: 121. 1912, *Flora of Southeastern Washington and adjacent Idaho* 30. 1937.

in English: seashore bent, bent grass, leafy bent grass, sea-shore bentgrass, thingrass

A. pallescens Cheeseman (*Agrostis muelleri* var. *paludosa* Hack.)

New Zealand. Montane to alpine grass, rhizomatous, small, tufted, slender, erect, leaf blade involute and filiform, leaf sheath more or less hyaline, ligule truncate and ciliate, narrowly branched inflorescence, open panicle delicate ovate to pyramidal to oblong, glumes more or less equal and subobtusate, lemma glabrous and awnless, palea ovate, swamps and seepages, mountains, boggy spots, tussock grassland, see *Flora Australiensis: A Description ...* 7: 567. 1878 and *Manual of the New Zealand Flora* 864. 1906, *Transactions and Proceedings of the New Zealand Institute* 53: 423. 1921, *New Zealand Journal of Botany* 29: 152. 1991.

A. pallida With. (*Agraulus pallidus* (With.) Gray; *Agrostis pallida* DC., nom. illeg., non *Agrostis pallida* With.; *Agrostis pallida* Nees ex Steud.; *Agrostis pallida* Schkuhr)

Europe. See Christian Schkuhr (1740-1811), *Botanisches Handbuch* 1791-1803, *Flore de France* Suppl. 5: 251. 1815, *A Natural Arrangement of British Plants* 2: 149. 1821, *Flora Lipsiensis Excursoria* 83. 1838, *Nomenclator Botanicus* edition 2 1: 45. 1840 and *Flore de France* 14. 1913, *Berichte der Bayerischen Botanischen Gesellschaft zur Erforschung der Heimischen Flora* 14: 72. 1914.

A. pallida With. subvar. **violacea** Rouy

France.

A. pallida With. var. **virescens** Zimm.

Europe.

A. parviflora R. Br. (*Agrostis intricata* Nees; *Agrostis parviflora* Chev., nom. illeg., non *Agrostis parviflora* R. Br.; *Agrostis scabra* sensu Rodway, p.p., non Willd.; *Vilfa parviflora* (R. Br.) P. Beauv.)

Australia, Victoria, Tasmania, New South Wales. Annual, delicate, noded, loosely tufted, slender, erect or ascending, nonauriculate, basal leaf sheaths not keeled, ligule membranous obtuse or truncate, panicles spreading and few-flowered, spikelets purplish or greenish, glumes acute, lemma unawned and truncate, palea minute, found in alpine and subalpine grasslands, wet situations, open habitats, fens, bogs, see *Prodromus Florae Novae Hollandiae* 170. 1810, *Flore Descriptive et Analytique des Environs de Paris* 2: 141. 1827, *Flora Novae-Zelandiae* 1: 296. 1853.

in English: hair bent

A. peninsularis Hook.f.

India, Tamil Nadu, Kerala. Lemma glabrous, awn basal, grows on exposed hill slopes, see *The Flora of British India* 7(22): 255. 1897 [1896].

A. perennans (Walter) Tuck. (*Agrostis abakanensis* Less. ex Trin.; *Agrostis aberrans* Steud.; *Agrostis altissima* (Walt.) Tuckerman; *Agrostis anomala* Willd.; *Agrostis campyla* Tuck.; *Agrostis canina* subsp. *grandiflora* Hack.; *Agrostis canina* var. *grandiflora* Hack.; *Agrostis chinantlae* E. Fourn.; *Agrostis chinantlae* E. Fourn. ex Hemsl.; *Agrostis cornucopiae* Sm.; *Agrostis decumbens* (Michx.) Link, nom. illeg., non *Agrostis decumbens* Host; *Agrostis elata* (Pursh) Trin.; *Agrostis elegans* (Kunth) Roem. & Schult., nom. illeg., non *Agrostis elegans* (Walter) Salisb.; *Agrostis elegans* (Walter) Salisb.; *Agrostis elegans* Thore ex R.J. Loisel, nom. illeg., non *Agrostis elegans* (Walter) Salisb.; *Agrostis exarata* var. *angustifolia* Hack.; *Agrostis fasciculata* (Kunth) Roem. & Schult.; *Agrostis flavidula* Steud.; *Agrostis humboldtiana* Steud.; *Agrostis hyemalis* var. *elata* (Pursh) Fernald; *Agrostis hyemalis* var. *oreophila* (Trin.) Farw.; *Agrostis intermedia* Scribner ex Kearney, nom. illeg., non *Agrostis intermedia* Balb.; *Agrostis kufium* Speg.; *Agrostis michauxii* Trin., nom. illeg., non *Agrostis michauxii* Zuccagni; *Agrostis novae-angliae* Tuck.; *Agrostis noveboracensis* Spreng.; *Agrostis oreophila* Trin.; *Agrostis perennans* f. *atherophora* Fernald; *Agrostis perennans* f. *chaetophora* Fernald; *Agrostis perennans* f. *perennans*; *Agrostis perennans* var. *aestivalis* Vasey; *Agrostis perennans* var. *elata* (Pursh) A.S. Hitchc.; *Agrostis perennans* var. *humilis* Farw.; *Agrostis perennans* var. *perennans*; *Agrostis pseudointermedia* Farw.; *Agrostis pulchella* Kunth, nom. illeg., non *Agrostis pulchella* (R. Br.) Roth ex Roemer & Schultes; *Agrostis scabra* var. *perennans* (Walter) Alph. Wood; *Agrostis schiedeana* Trin.; *Agrostis schiedeana* var. *schiedeana*; *Agrostis schweinitzii* Trin.; *Agrostis scribneriana* Nash ex Small; *Agrostis tenuifolia* var. *fretensis* Hook.f.; *Agrostis violacea* Phil., nom. illeg., non *Agrostis violacea* Thuill.; *Agrostis weberbaueri* Mez; *Alopecurus carolinianus* Spreng., nom. illeg., non *Alopecurus carolinianus* Walter; *Cornucopiae altissima* Walter; *Cornucopiae perennans* Walt.; *Leersia angustifolia* Munro ex Prod.; *Leersia capensis* Müll. Hal.; *Oryza hexandra* (Sw.) Döll; *Trichodium altissimum* (Walter) Michx. ex A. Wood; *Trichodium decumbens* Michx.; *Trichodium elatum* Pursh; *Trichodium muhlenbergianum* Schult.; *Trichodium noveboracense* (Spreng.) Schult.; *Trichodium perennans* (Walt.) Elliott; *Trichodium scabrum* Darl.; *Vilfa elegans* Kunth; *Vilfa fasciculata* Kunth) (Mexico, Chinantla) (U.S., New York, as Nov. Eborae) (for the American botanist Lewis David von Schweinitz, 1780-1835, mycologist, plant collector; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 250. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 357. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge,

Mass. 1917-1933; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 241. Oxford 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Stafleu and Cowan, *Taxonomic literature*. 5: 437-442. 1985; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. 127-132. 1899; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; William Darlington, *Reliquiae Baldwinianae*. Philadelphia 1843; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Cambridge, Harvard University Press 1967; William Jay Youmans, editor, *Pioneers of Science in America*. New York 1896

Northern and southern America, U.S., Mexico, Canada, Honduras, Chile, Argentina. Perennial, erect, sprawling, herbaceous, very variable, solitary or tufted, bases decumbent, pinkish inflorescence, forage, found in open woods, open grassy areas, wet places, in páramos, dry open ground, rocky or gravelly banks, thickets, sphagnum bog, swale or swamp, light shade, roadside ditch, disturbed areas and opening, slopes, see *Species Plantarum* 1: 62. 1753, *Enum. Brit. Grasses* 42. 1787, *Flora Caroliniana, secundum* ... 74. 1788, *Nova Genera et Species Plantarum seu Prodrromus* 21. 1788, *Gentleman's Magazine* 59: 873, t. 1789. 1789, *Prodrromus stirpium in horto ad Chapel Allerton vigentium*. 25. Londini [London] (Nov-Dec) 1796, *Species Plantarum* 1: 370. 1797, *Nachtr. Bot. Gart. Halle* 10. 1801, *Flora Boreali-Americana* 1: 42. 1803, *Journal de Botanique, rédigé par une société de botanistes* 2: 207, t. 8. 1809, *Flora Americae Septentrionalis; or, ...* 1: 61. 1814, *Nova Genera et Species Plantarum* 1: 139. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1: 99. 1816, *Systema Vegetabilium* 2: 362. 1817, *Mantissa* 2: 159. 1824, *De Graminibus unifloris et sesquifloris* 206, 207. Petropoli 1824, *Systema Vegetabilium, editio decima sexta* 1: 260. 1825, *Hortus Regius Botanicus Berolinensis* 1: 80. 1827, *Mantissa* 3(Add. 1): 555. 1827, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 223. 1833, *Florula Cestrica* 1: 54. 1837, *Nomenclator Botanicus editor* 2 1: 40. 1840, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 311, 317, 323, 325, 327. 1841, *American Journal of Science and Arts* 45: 44. 1843, *Magazine of horticulture, botany and all useful discoveries and improvements in rural affairs* 9(4): 143. Boston and New York 1843, *Flora Antarctica* 372. 1846, *A Class-book of Botany* 599. 1847, *American Journal of Science and Arts, ser. 2*, 6: 231. 1848, *Synopsis Plantarum Glumacearum* 1: 421-422. 1854, *Botanische Zeitung, Berlin* 14(20): 345.

1856, *A Class-book of Botany* 774. 1861, *Flora Brasiliensis* 2(2): 10. 1871, *Anales de la Universidad de Chile* 43: 560. 1873, *Biologia Centrali-Americana; ... Botany ...* 3: 550. 1885, *Mexicanas Plantas* 2: 96. 1886, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York City* 68. 1888, *Contributions from the United States National Herbarium* 3(1): 76. 1892, *Bulletin of the Torrey Botanical Club* 20: 476. 1893, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 282. 1896 and *Svenska Expeditionen till Magellansländer* 3(5): 219. 1900, *Ann. Rep. Comm. Parks and Boul. Detroit* 11: 46. 1900, *Flora of the Southeastern United States ...* 126. 1903, *Report of the Michigan Academy of Science, Arts and Letters* 6: 202. 1904, *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 68: 50, t. 33. 1905, *Wissenschaftliche Ergebnisse der Schwedischen Südpolar-Expedition 1901-1903* 4(4): 5. 1906, *Rhodora* 23(274): 229. 1921 [1922], *Repertorium Specierum Novarum Regni Vegetabilis* 18(1-3): 1. 1922, *Botanisches Archiv* 1: 217. 1922, *Papers of the Michigan Academy of Science, Arts and Letters* 1: 87. 1923, *Rhodora* 35: 317. 1933, *Bull. Cranbrook Inst. Sci.* 34: 16. Bloomfield Hills, MI. 1953, *Taxon* 45: 100. 1996.

in English: autumn bent, upland bent, autumn bentgrass, tall bentgrass

in Colombia: pasto gallina

A. personata Edgar (*Agrostis canina* L.; *Agrostis dyeri* var. *delicatior* Hack.; *Agrostis parviflora* R. Br.; *Agrostis perennans* (Walter) Tuck.; *Agrostis scabra* Willd.)

New Zealand. Tufted, slender, loose, geniculate at base or erect, soft flaccid leaves smooth or scabrid, leaf sheath membranous, ligule obtuse to truncate, delicate panicle ovate to pyramidal with filiform branches spreading when old, glumes acute and subequal, lemma glabrous awnless or awned, palea round, open areas, grassland, lowland to alpine, forest margins, see *Manual of the New Zealand Flora* 865. 1906, *New Zealand Journal of Botany* 29(2): 149, 151-152. 1991.

A. petelotii (Hitchc.) Noltie (*Aniselytron petelotii* (Hitchc.) Soják; *Aniselytron petelotii* (Hitchc.) Bennet & Raizada, nom. illeg., non *Aniselytron petelotii* (Hitchc.) Soják; *Aulacolepis petelotii* Hitchc.; *Calamagrostis petelotii* (Hitchc.) Govaerts; *Deyeuxia abnormis* Hook.f.; *Deyeuxia petelotii* (Hitchc.) S.M. Phillips & W.L. Chen; *Neoaulacolepis petelotii* (Hitchc.) Rauschert) (after the French botanist Paul Alfred Pételot, 1885-(after) 1940, bryologist, in Vietnam, lauréat de l'Académie des Sciences, chargé de cours à la Faculté Mixte de Médecine et de Pharmacie de Saigon, Chef de la Division de Botanique du Centre de Recherches Scientifiques et Techniques, his works include "La botanique en Indochine. Bibliographie." *Bull. Econ. Indochine*. 32: 587-632. 1929, *Les plantes médicinales du Cambodge, du Laos et du Viêt Nam*. Saigon 1952-1954 and "Bibliographie

botanique de l'Indochine." *Arch. Rech. Agron. Past. Viêt-nam*. 24: 1-102. 1955, with Charles Cresson wrote *Catalogue des produits de l'Indochine, Produits médicaux*. 1928-1935; see E. Perrot & P. Hurrier, *Matière médicale et pharmacopée sino-annamite*. Paris 1907; Stafleu & Cowan, *Taxonomic literature*. 4: 189. 1983; L. Menaut, "La matière médicale cambodgienne." *Bull. Econ. Indochine*. 1929; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Asia. Densely tufted, erect and slender, lemma unawned, see *The Flora of British India* 7: 268. 1897 and *Journal of the Washington Academy of Sciences* 24(7): 291. 1934, *Indian Forester* 107(7): 434. 1981, *Taxon* 31(3): 561. 1982, *Gard. Bull. Singapore* 37(2): 213-223. 1984, *Edinburgh Journal of Botany* 56(3): 384, 386-387. 1999, *World Checklist of Seed Plants* 3(1): 11. 1999, *Novon* 13(3): 319. 2003.

A. petriei Hack. (*Agrostis petriei* var. *mutica* Hack.) (for the Scottish (b. Morayshire) botanist Donald Petrie, 1846-1925, went to Australia in 1868, in New Zealand 1874-1925, in 1894 chief inspector of schools, Auckland, New Zealand, wrote "List of the flowering plants indigenous to Otago." *Trans. Proc. New Zealand Inst.* 1896, "The Gramina of the Subantarctic Islands of New Zealand." *Subantarct. Is N.Z.* 2: 472-481. 1909 and "Some additions to the Flora of the Subantarctic Islands of New Zealand." *T.N.Z.I.* 47: 59-60. 1915. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 76. 1965; Thomas Frederick Cheeseman, *Manual of the New Zealand Flora*. xxvii. Wellington 1906; I.H. Vegeter, *Index Herbariorum*. Part II (5), *Collectors N-R*. Regnum Vegetabile vol. 109. 1983; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 549. London 1994)

New Zealand. Perennial, montane to subalpine, lax, tussocky, erect or geniculate at base, clumped, leaf blades stiff and obtusely tipped, ligule obtuse, lower sheaths scabrous to scabrid, upper sheaths smooth and ribbed, wiry leaves scabrid and involute, panicle oblong, glumes more or less equal to subequal, lemma ovate and denticulate, awned, round palea, grassland, on dry rocky places, stony ground, see *Transactions and Proceedings of the New Zealand Institute* 35: 379. 1903.

A. philippiana Rúgolo & De Paula (*Agrostis clausa* Steud.; *Agrostis clausa* Phil., nom. illeg., non *Agrostis clausa* Steud.)

South America, Chile. See *Synopsis Plantarum Glumacearum* 1: 169. 1854, *Anales de la Universidad de Chile* 43: 562. 1873 and *Flora Patagónica* 8(3): 379. 1978, *Parodiána* 7: 208. 1992.

A. pilosula Trinius (*Agrostis ciliata* Trin., nom. illeg., non *Agrostis ciliata* Thunb.; *Agrostis royleana* Trin.; *Agrostis wallichiana* Steud.; *Calamagrostis ciliata* Nees ex Steud.; *Calamagrostis griffithiana* Hook.f.; *Calamagrostis hooke-*

riana Nees ex Steud.; *Calamagrostis jacquemontii* Hook.f.; *Calamagrostis neesii* Steud.; *Calamagrostis pilosula* (Trinius) Hook.f.; *Calamagrostis roylei* Nees ex Steud.; *Deyouxia royleana* (Trin.) Trimen; *Lachnagrostis ciliata* Nees ex Trin.; *Lachnagrostis royleana* Nees ex Trin.; *Lachnagrostis scabra* Nees ex Trin.; *Pentatherum pilosulum* (Trin.) Tzvelev)

Sri Lanka, India, Sikkim, Nepal, Pakistan, Himalaya. A very variable species, slender, tufted, caespitose, perennial, erect, leaf sheaths glabrous, glumes subequal, lemmas awned and pubescent, in moist places, montane grasslands, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 371-373. 1841, *Synopsis Plantarum Glumacearum* 1: 174. 1854, *The Flora of British India* 7: 263, 265. 1896 and *Kew Bulletin* 1954: 459. 1954, *Grasses of Ceylon* 61. 1956, *Grasses of Burma ...* 388. 1960, *Bulletin of the Botanical Survey of India* 25(1-4): 210. 1983[1985], *Journal of Cytology and Genetics* 22: 161-162. 1987, *Cytologia* 56: 437-452. 1991.

A. pilosula Trin. f. *ciliata* (Trin.) Bhattacharya & S.K. Jain (*Agrostis ciliata* Trin.; *Agrostis pilosula* var. *ciliata* (Trin.) Bor)

India. Spikelets purple, grows on exposed hilly slopes, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 373. 1841 and *Kew Bulletin* 1954: 459. 1954, *Bulletin of the Botanical Survey of India* 25(1-4): 210. 1983[1985].

A. pilosula Trin. f. *filifolia* (Bor) Bhattacharya & S.K. Jain (*Agrostis pilosula* var. *filifolia* Bor)

India, Tamil Nadu. Leaves filiform, see *Kew Bulletin* 1954: 459. 1954, *Bulletin of the Botanical Survey of India* 25(1-4): 210. 1983[1985].

A. pilosula Trin. f. *pilosula*

India, Sri Lanka, Pakistan. Inflorescence paniculate effuse, grows on open hilly slopes, near water.

A. pilosula Trin. f. *wallichiana* (Steud.) Bhattacharya & S.K. Jain (*Agrostis wallichiana* Steud.)

India, Tamil Nadu, Sikkim. Leaves linear-lanceolate, on wet sandy soils, see *Synopsis Plantarum Glumacearum* 1: 174. 1854 and *Bulletin of the Botanical Survey of India* 25(1-4): 210. 1983[1985].

A. pilosula Trin. var. *alpestris* (Hook.f.) Veldkamp

India. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 372. 1841, *The Flora of British India* 7: 264. 1896 and *Blumea* 28(1): 203. 1982.

A. pilosula Trin. var. **ciliata** (Trin.) Bor (*Agrostis ciliata* Trin., nom. illeg., non *Agrostis ciliata* Thunb.; *Calamagrostis ciliata* Nees ex Steud.; *Calamagrostis jacquemontii* Hook.f.; *Lachnagrostis ciliata* Nees ex Trin.)

India. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 373. 1841, *Synopsis Plantarum Glumacearum* 1: 193. 1855 [1854], *The Flora of British India* 7: 265. 1896 and *Kew Bulletin* 1954: 459. 1954.

A. pilosula Trin. var. **filifolia** Bor (*Agrostis pilosula* f. *filifolia* (Bor) Bhattacharya & S.K. Jain)

India. See *Kew Bulletin* 1954: 459. 1954, *Bulletin of the Botanical Survey of India* 25(1-4): 210. 1983[1985].

A. pilosula Trin. var. **royleana** (Trin.) Bor (*Agrostis royleana* Trin.; *Calamagrostis hookeriana* Nees ex Steud.; *Calamagrostis pilosula* var. *alpestris* Hook.f.; *Calamagrostis roylei* Nees ex Steud.)

India. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 371. 1841, *Synopsis Plantarum Glumacearum* 1: 192-193. 1854, *The Flora of British India* 7: 264. 1896 and *Kew Bulletin* 1954: 459. 1954, *Bulletin of the Botanical Survey of India* 25(1-4): 210. 1983[1985].

A. pilosula Trin. var. **wallichiana** (Steud.) Bor (*Agrostis muliensis* J.L. Yang; *Agrostis wallichiana* Steud.; *Calamagrostis pilosula* var. *wallichiana* (Steud.) Hook.f.)

India, China. Wet soils, see *Synopsis Plantarum Glumacearum* 1: 174. 1854 and *Kew Bulletin* 1954: 459. 1954, *Acta Botanica Yunnanica* 5(1): 50-51, f. 4. 1983.

A. pittieri Hackel (after the Swiss-born American botanist Henri (Henry) François Pittier (Pitter de Fábrega), 1857-1950, bryologist, plant collector, traveler, botanical explorer, an authority on the flora of Tropical America, 1882-1887 Switzerland (Lausanne), Costa Rica 1887, sent plants to Th. Durand, from 1905 with USDA (Colombia, Venezuela and Central America), 1913 Venezuela (first botanical exploration), his writings include *Manual de las Plantas Usuales de Venezuela* y su Suplemento. Caracas 1971, "Flora venezolana: plantas medicinales." *Memor. 4° Congreso Ven. de Med.* 2: 167-172. 1925, *Leguminosas de Venezuela. I. Papilionáceas.* Venezuela 1944, *Clave analítica de las familias de plantas superiores de la América Tropical.* Caracas 1937, "Existe la tagua o marfil vegetal en Venezuela?" *Bol. Com. e Industr.* Año I, no. 4, 103-104. 1920, "La caoba venezolana." *Bol. Com. e Industr.* 18: 582-593. 1921 and "Exploraciones, botánicas y otras, en la cuenca de Maracaibo." *Bol. Com. e Industr.* Año IV, no. 39-40. Caracas 1923, with Tobías Lasser, Ludwig Schnee et al. wrote *Catálogo de la flora venezolana.* Caracas 1945-1947; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 90. 1965; T.W. Bossert, *Biographical dictio-*

nary of botanists represented in the Hunt Institute portrait collection. 312. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 328. 1973; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum.* 1: 175. London 1904; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* 585-586. Philadelphia 1964; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs.* VI. 1983)

Costa Rica. Vulnerable species, perennial, herbaceous, caespitose, erect, leaves mostly basal and glabrous, lax panicles, see *Österreichische Botanische Zeitschrift* 52(2): 60. 1902.

A. planifolia K. Koch (*Agrostis vinealis* subsp. *planifolia* (K. Koch) Tzvelev)

Europe, northern America. Erect, herbaceous, subalpine, clumping, purplish, meadows and wet meadows, slopes, steep slopes, see *Linnaea* 21(3): 380. 1848 and *Novosti Sist. Vyss. Rast.* 8: 61. 1971.

A. planifolia K. Koch var. **mutica** Grossh.

Russia. See *Not. Syst. Herb. Hort. Bot. Petrop.* 4: 17. 1923.

A. planifolia K. Koch var. **pallida** Grossh.

Russia. See *Not. Syst. Herb. Hort. Bot. Petrop.* 4: 17. 1923.

A. planifolia K. Koch var. **pudica** Grossh.

Russia. See *Not. Syst. Herb. Hort. Bot. Petrop.* 4: 17. 1923.

A. planifolia K. Koch var. **variiflora** Grossh.

Russia. See *Not. Syst. Herb. Hort. Bot. Petrop.* 4: 17. 1923.

A. platensis Parodi

Argentina. See *Revista Argentina de Agronomía* 18: 143, f. 1. 1951.

A. plebeia R. Br. (*Calamagrostis aemula* var. *plebeia* Maiden & Betche; *Calamagrostis aemula* var. *plebeia* (R. Br.) Maiden & Betche; *Calamagrostis plebeia* (R. Br.) Kuntze; *Deyeuxia australis* (Steud.) Benth. & Hook.f.; *Deyeuxia plebeia* (R. Br.) Benth.; *Deyeuxia plebeia* (R. Br.) Kuntze; *Didymochaeta australis* Steud.; *Lachnagrostis plebeia* (R. Br.) Trin.; *Vilfa plebeia* (R. Br.) P. Beauv.)

Western Australia. Annual, caespitose, noded, auricles absent, basal leaf sheaths not keeled, ligule membranous, inflorescence of chasmogamous spikelets, a panicle loosely contracted, see *Prodromus Florae Novae Hollandiae* 1: 172. 1810, *Fundamenta Agrostographiae* 128. 1820, *Nomenclator Botanicus. Editio secunda* 1: 249. 1840, *Flora Australiensis: A Description ...* 7: 580-581. 1878 and J.H. Maiden (1859-1925) & Ernst Betche (1851-1913), *A Census of New South Wales Plants.* Sydney 1916.

A. polypogonoides Stapf

South Africa. Perennial, tufted, glumes awned, occurs in wet places, see *Flora Capensis* 7: 549. 1899.

A. preissii (Nees) Vickery (*Agrostis preissii* Vickery; *Agrostis solandri* F. Muell.; *Calamagrostis filiformis* var. *preissii* (Nees) Pilg.; *Deyeuxia filiformis* var. *preissii* (Nees) Domin; *Deyeuxia forsteri* var. *preissii* (Nees) Benth.; *Deyeuxia preissii* Nees; *Deyeuxia preissii* (Nees) B.D. Jacks.; *Lachnagrostis preissii* Nees)

Western Australia. Annual, caespitose, noded, erect or geniculate, auricles absent, basal leaf sheaths not keeled, ligule membranous and acute, leaf blades folded, inflorescence of chasmogamous spikelets, a green panicle loosely contracted, see *Plantae Preissianae* 2: 97. 1846-1847, *Flora Australiensis: A Description ...* 75: 579. 1878, *Index Kewensis* 1: 740. 1895 and *Bibliotheca Botanica* 85: 352. 1915, *Contributions from the New South Wales National Herbarium* 1: 111. 1941.

A. producta Pilg. (*Calamagrostis producta* (Pilg.) Mez ex Peter)

East Africa. Perennial, tufted, erect or decumbent, fibrous basal sheaths, leaf blades usually linear, glumes subequal, hairy awned lemma, in upland grassland, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 39: 600. 1907, *Feddes Repertorium, Beiheft* 40(1): 294. 1931.

A. quinqueseta (Hochst. ex Steud.) Hochst. (*Agrostis alpicola* Hochst.; *Agrostis congesta* C.E. Hubb.; *Agrostis mildbraedii* Pilg.; *Agrostis quinqueseta* (Steud.) C.E. Hubb.; *Agrostis quinqueseta* (Steud.) Hochst.; *Anomalotis quinqueseta* Steud.; *Trisetaria quinqueseta* Hochst.)

Ethiopia, Uganda. Perennial, variable, slender, wiry, stout, erect to ascending, loosely tufted, leaf blades linear, shortly rhizomatous, linear inflorescence spicate, erect panicle, narrow spikelets linear-oblong, glumes lanceolate-oblong enclosing the floret, lemma 5-nerved, awn weakly geniculate, see *Synopsis Plantarum Glumacearum* 1: 198. 1854, *Flora* 38: 284-285. 1855 and *Wissenschaftliche Ergebnisse der Deutschen Zentral-Afrika-Expedition 1907-1908, Botanik* 2: 47. 1910, *Bulletin of Miscellaneous Information Kew* 1936(5): 301. 1936, *Flora of Tropical Africa* 10: 182. 1937, *Opera Botanica* 121: 159-172. 1993.

A. reuteri Boiss.

Spain. See P.E. Boissier (1810-1885), *Voyage botanique dans le midi de l'Espagne* 2: 645. Paris Mai 1844 and *Flore de l'Afrique du Nord*: 2: 128. 1953, *Boletim da Sociedade Broteriana, ser. 2* 61: 81-104. 1988 and 63: 29-66. 1990.

A. rossiae Vasey (*Agrostis exarata* var. *rossiae* (Vasey) G. Jones; *Agrostis variabilis* auct. non Rydb.) (named for the botanical collector Edith A. Ross, see Joseph Ewan, *Rocky Mountain Naturalists*. 293. The University of Denver Press 1950)

U.S., Wyoming, Yellowstone National Park. Endangered species, small, see *De Graminibus unifloris et sesquifloris* 207. 1824, *Contributions from the United States National Herbarium* 3(1): 76. 1892 and *University of Washington Publications in Biology* 5: 113. 1936.

in English: Ross' bentgrass, Ross bentgrass, Ross' bent

A. royleana Trin. (*Agrostis pilosula* Trin.; *Agrostis pilosula* var. *royleana* (Trin.) Bor)

India, Jammu-Kashmir, Himachal Pradesh; Sri Lanka, Pakistan. Alpine grass, awn exserted, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 371-372. 1841 and *Kew Bulletin* 1954: 459. 1954.

A. rudis Roemer & Schultes (*Agrostis scabra* R. Br., nom. illeg., non *Agrostis scabra* Willd.; *Calamagrostis rudis* (Roem. & Schult.) Steud.; *Deyeuxia scabra* (R. Br.) Kunth; *Deyeuxia scabra* (P. Beauv.) Kunth; *Lachnagrostis rudis* (Roem. & Schult.) Trin.; *Vilfa scabra* (R. Br.) P. Beauv.; *Vilfa scabra* P. Beauv.)

Australia. Annual, scabrous, noded, loosely caespitose, erect or geniculate and ascending, auricles absent, basal leaf sheaths glabrous, ligule obtuse, leaves flat and linear, inflorescence of chasmogamous spikelets, panicle spreading, glumes scabrous on the keels and sides, lemmas glabrous and shortly 4-toothed, awn absent, found in damp areas, sometimes considered a synonym for *Agrostis aequata* Nees, see *Prodromus Florae Novae Hollandiae* 172. 1810, *Essai d'une Nouvelle Agrostographie* 16, 182. 1812, *Systema Vegetabilium* 2: 360. 1817, *Fundamenta Agrostographiae* 128. 1820, *Révision des Graminées* 1: 77. 1829.

in English: bent grass, bent

A. rupestris All. (*Agrostis rupestris* (All.) Bubani; *Agrostis rupestris* Willd. ex Kunth, nom. illeg., non *Agrostis rupestris* All.)

Europe. See *Flora Pedemontana sive enumeratio methodica stirpium indigenarum Pedemontii* 2: 237. Torino 1785, *Histoire des Plantes de Dauphiné* 2: 78. 1787, *Hortus Regius Botanicus Berolinensis* 1: 81. 1827, *Révision des Graminées* 1: 70. 1829, *Österreichische Botanische Zeitschrift* 9: 50. 1859, *Flora von Nieder-Österreich* 1: 60. 1890 and *Flora Pyrenaea per ordine naturales gradatim digesta* 4: 288. Milano 1901, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 221. 1941, *Flora Republicii Socialiste Romania* 12: 162. 1972, *Candollea* 29(1): 45. 1974, *Fitologija* 41: 70-75. 1991.

in English: rock bent

in French: agrostide des rochers

in Italian: cappellini della silice

A. rupestris All. subsp. *pyrenaica* (Pourret) Dostál (*Agrostis pyrenaica* Pourret)

Europe. See J. Dostál (1903-1999), *Folia Musei Rerum Naturalium Bohemiae Occidentalis* 21: 17. 1984 [Notes to the nomenclature of the taxa of the Czechoslovak flora.].

A. rupestris All. var. *atlantis* Maire

Europe. See *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 221. 1941.

A. rupestris All. var. *aurata* (All.) Gaudin (*Avena aurata* All.)

Europe. See *Flora Pedemontana* 2: 237, 255. 1785, *Flora Helvetica* 1: 179. 1828.

A. rupestris x *agrostiflora* (*Agrostis rubra* Dujard., nom. illeg., non *Agrostis rubra* L.)

Europe. See *Species Plantarum* 62. 1753, *Flore Complète d'Indre et Loire* 278. 1833.

A. sandwicensis Hillebrand (*Agrostis fallax* Hillebrand; *Agrostis rockii* Hack.)

U.S., Hawaii. Perennial, erect, caespitose, more or less solitary, leaf sheaths with margins overlapping, ligule membranous, inflorescence paniculate, 2 glumes unequal, palea vestigial, rare species, in open bogs, well-drained areas, see *Flora of the Hawaiian Islands* 515. 1888.

in English: Hawaii bentgrass, Hawaii bent

A. scabra Willd. (*Agrostis geminata* Trin.; *Agrostis geminata* f. *exaristata* Fernald; *Agrostis geminata* f. *geminata*; *Agrostis hiemalis* auct.; *Agrostis hiemalis* (Walter) Britton, Sterns & Poggenb.; *Agrostis hiemalis* var. *laxiflora* (Michx.) Beetle; *Agrostis hyemalis* (Walter) Britton, Sterns & Poggenb.; *Agrostis hyemalis* f. *exaristata* (Fernald) Scoggan; *Agrostis hyemalis* f. *tuckermanii* (Fernald) Scoggan; *Agrostis hyemalis* var. *geminata* (Trin.) A.S. Hitchc.; *Agrostis hyemalis* var. *keweenawensis* Farw.; *Agrostis hyemalis* var. *laxiflora* (Michx.) Beetle; *Agrostis hyemalis* var. *nutkaensis* (Kunth) Scribn. & Merr.; *Agrostis hyemalis* var. *scabra* (Willdenow) H.L. Blomquist; *Agrostis hyemalis* var. *tenuis* (Tuckerman) Gleason; *Agrostis laxa* Muhl.; *Agrostis laxa* Schreb. ex Pursh; *Agrostis laxiflora* (Michx.) Richardson, nom. illeg., non *Agrostis laxiflora* Poir.; *Agrostis laxiflora* var. *caespitosa* Torr.; *Agrostis laxiflora* var. *montana* (Torr.) Tuck.; *Agrostis laxiflora* var. *scabra* (Willd.) Torr.; *Agrostis laxiflora* var. *tenuis* (Tuck.) Torr.; *Agrostis michauxii* var. *laxiflora* (Michaux) A. Gray; *Agrostis nootkaensis* Trin., nom. illeg., non *Agrostis nutkaensis* Kunth; *Agrostis nutkaensis* Kunth; *Agrostis peckii* House; *Agrostis scabra* R. Br., nom. illeg., non *Agrostis scabra* Willd.; *Agrostis scabra* f. *exaristata* (Fernald) Hultén; *Agrostis scabra* f. *setigera* Fernald; *Agrostis scabra* f. *tuckermanii* Fernald; *Agrostis scabra* subsp. *septentrionalis* (Fern.) A. & D. Löve; *Agrostis scabra* var. *aristata* Hultén; *Agrostis scabra* var. *geminata* (Trin.) Swallen; *Agrostis scabra* var. *keweenawensis* (Farw.) Farw.; *Agrostis scabra* var. *montana* (Torr.) Fernald; *Agrostis scabra* var. *oreophila* Alph. Wood; *Agrostis scabra* var. *scabra*; *Agrostis scabra* var.

septentrionalis Fern.; *Agrostis scabra* var. *tenuis* Tuck.; *Agrostis scabrata* Nutt. ex A. Gray; *Agrostis scabriuscula* Buckley; *Agrostis torreyi* Tuck., nom. illeg., non *Agrostis torreyi* Kunth; *Trichodium album* J. Presl; *Trichodium laxiflorum* Michx.; *Trichodium montanum* Torr.; *Trichodium scabrum* (Willd.) Muhl.; *Vilfa scabra* P. Beauv.)

U.S., northern America. Perennial or short-lived perennial, clump-forming, slender, ascending to erect, leafy, no auricles, open sheaths, basal leaves often scabrous, fibrous root system, very open-branched drooping flower heads, inflorescences break away at maturity, palea absent, relatively unpalatable, a pioneer species, suitable for rehabilitation of disturbed sites, useful for erosion control, invasive, found in dry or wet open soil, coniferous forest, in moist meadows, on sandy loam, sandy-peaty ground, rocky slopes, rocky shores, dry habitats, on stream banks, swamps, wet moss, marshes, bogs, woodlands, forest openings, stream and lake margins, on recently disturbed sites, in ditches, semiarid grasslands, in pastures or abandoned fields, along roadsides, muddy sites, see *Species Plantarum. Editio quarta* 1: 370. 1797, *Transactions of the American Philosophical Society* 4: 236. 1799, *Flora Boreali-Americana* 1: 42, t. 8. 1803, *Prodromus Florae Novae Hollandiae* 172. 1810, *Essai d'une Nouvelle Agrostographie* 16, 182. 1812, *Catalogus Plantarum Americae Septentrionalis* 10. 1813, *Flora Americae Septentrionalis; or, ...* 1: 61. 1814, *Botanical Appendix to Captain Franklin's Narrative* 731. 1823, *A Flora of the Northern and Middle Sections of the United States* 84. 1823, *De Graminibus unifloris et sesquifloris* 207. 1824, *Reliquiae Haenkeanae* 1(4-5): 244. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 222. 1833, *North American Gramineae and Cyperaceae* 1: 17. 1834, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 326. 1841, *American Journal of Science and Arts* 45: 43, 45. 1843, *Fl. New York* 2: 442. 1843, *Magazine of horticulture, botany and all useful discoveries and improvements in rural affairs* 9(4): 143. 1843, *A Class-book of Botany* 774. 1861, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 90, 334. 1862, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York City* 68. 1888, *Proceedings of the Portland Society of Natural History* 2: 91. 1895 and *Report of the Michigan Academy of Science, Arts and Letters* 6: 203. 1904, *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 68: 44, t. 28, f. 1. 1905, *Contributions from the United States National Herbarium* 13(3): 56. 1910, *American Midland Naturalist* 7(4-5): 126. 1921, *Rhodora* 35: 207, 209-211, pl. 246, f. 1-2. 1933, *Papers of the Michigan Academy of Science, Arts and Letters* 23: 125. 1938, *Proceedings of the Biological Society of Washington* 54: 45. 1941, *Acta Universitatis Lundensis* n.s 38: 156, map 111 b. 1942, *The*

Grasses of North Carolina 82. 1948, *Phytologia* 4(1): 21. 1952, *The Flora of Canada* 1: 51. 1978, *Phytologia* 52(1): 11. 1982.

in English: rough bentgrass, rough bent, fly-away grass, ticklegrass, hairgrass, winter bentgrass

in Japan: ezonukabo

A. scabrifolia Swallen

Colombia. Páramos, see *Contributions from the United States National Herbarium* 29(6): 264. 1948 [1949].

A. scabriglumis Boiss. & Reut. (*Agrostis alba* subsp. *scabriglumis* (Boiss. & Reut.) Asch. & Graebn. ex Maire; *Agrostis alba* var. *scabriglumis* (Boiss. & Reut.) Boiss.; *Agrostis stolonifera* subsp. *scabriglumis* (Boiss. & Reut.) Maire)

Europe, Algeria. See *Pugillus Plantarum Novarum Africae Borealis Hispaniaeque Australis* 125. 1852, *Flora Orientalis* 5: 514. 1884, *Bulletin de la Société Botanique de France* 32(sér. 2) 7: 395. 1885 and *Mémoires de la Société d'Histoire Naturelle de l'Afrique du Nord* 3: 64. 1933, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 34: 140. 1943.

A. schaffneri E. Fourn. (*Agrostis schaffneri* E. Fourn. ex Hemsl.; *Agrostis tacubayensis* E. Fourn. ex Hemsl.; *Agrostis tacubayensis* E. Fourn.)

North America, Mexico. See *Biologia Centrali-Americana; ... Botany ...* 3: 551. 1885, *Mexicanas Plantas* 2: 94-95. 1886.

A. schimperiana Steud. (*Agrostis hirtella* Steud.; *Agrostis schimperiana* Hochst. ex Steud.; *Agrostis schimperiana* Hochst. ex A. Rich.; *Polypogon schimperianus* (Hochst. ex Steud.) Cope)

Yemen. Perennial, loosely tufted, sometimes stoloniferous or rhizomatous, open panicle, lemmas 5-nerved glabrous, similar or virtually identical to *Agrostis lachnantha* Nees, found in marsh and wet places, mountain springs, often in *Polypogon*, see *Tentamen Florae Abyssinicae ...* 2: 400. 1850, *Synopsis Plantarum Glumacearum* 1: 170, 173. 1854, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 58. 1894 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 52. 1903, *Grass. Saudi Arabia* 132. 1989, *Kew Bulletin* 50(1): 116. 1995.

A. schlechteri Rendle (*Lachnagrostis schlechteri* (Rendle) Rúgolo & A.M. Molina) (dedicated to the German botanist Friedrich Richard Rudolf Schlechter, 1872-1925, traveler, plant collector and orchidologist, student of Engler, assistant to Harry Bolus (1834-1911), in 1899-1900 leader of the German West Africa Rubber Expedition, from 1921 to 1925 Curator at Berlin-Dahlem, his writings include *Die Orchideen; ihre Beschreibung, Kultur und Züchtung*. Berlin 1914-1915, *West Afrikanische Kautschuk-Expedition*. Berlin 1910 and *Die Guttapercha-und Kautschuk-Expedition*. Berlin 1911. See J.H. Barnhart, *Biographical notes upon*

botanists. 3: 228. 1965; Ludwig E. Theodor Loesener, *Notizbl. Bot. Gart. Berl.* 9: 912-948. 1926; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19: 861-863. 1965; René Letouzey (1918-1989), "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 1-110. Paris 1968)

South Africa. Annual, panicle open, lemmas glabrous, grows in mountain, wet places, see *Journal of Botany, British and Foreign* 37(441): 380. 1899 and *La Botánica en el Nuevo Milenio: Memorias del Tercer Congreso Ecuatoriano de Botánica* 29. 2002.

A. schmidianus A. Camus

Europe. See *Bulletin du Muséum d'Histoire Naturelle sér.* 2 29: 187. 1957.

A. schmidii (Hook.f.) C.E.C. Fisch. (*Agrostis schmidii* (Hook.f.) Bor, nom. illeg., non *Agrostis schmidii* (Hook.f.) C.E.C. Fisch.; *Calamagrostis schmidii* Hook.f.)

India, Tamil Nadu. Indeterminate species, woody rootstock, leaf blades contracted at the base into a rigid petiole, see *Fl. Brit. India* 7: 264. 1897 and *Flora of the Presidency of Madras Part 10*: 1810. 1934, *Grasses of Burma, Ceylon, India and Pakistan* 389. 1960.

A. sclerophylla C.E. Hubb. (*Agrostis alpicola* Hochst.; *Sporobolus alpicola* Hochst. ex A. Rich.; *Vilfa alpicola* Steud.)

Ethiopia, Kenya. Perennial, compact, low and cushion-forming, leaf blades stiff and tough, leaf sheaths closely imbricate, erect panicle, glumes lanceolate-oblong, lemma 5-nerved, among rocks, mountains, see *Tentamen Florae Abyssinicae ...* 2: 395. 1850, *Synopsis Plantarum Glumacearum* 1: 154. 1854, *Flora* 38: 284. 1855 and *Bulletin of Miscellaneous Information Kew* 1936(5): 310. 1936.

A. serranoi Phil. (*Agrostis delfini* Phil.; *Agrostis fuegiana* Hack.; *Agrostis oligoclada* Phil.; *Agrostis vaginata* Phil., nom. illeg., non *Agrostis vaginata* Steud.) (for F. Torres Delfin, 1852-1904, Chilean botanist)

Chile. See *Anales de la Universidad de Chile* 94: 15. 1896 and *Svenska Expeditionen till Magellansländer* 3(5): 220. 1900.

A. sikkimensis Bor (*Agrostis divaricata* Hoffm.; *Agrostis divaricata* Griseb., nom. illeg., non *Agrostis divaricata* Hoffm.; *Vilfa divaricata* (Hoffm.) Gray)

India, West Bengal, Sikkim. Alpine grass, dwarf, slender, glumes unequal, lower glume acute to acuminate, palea minute, grows on hilly slopes, moist places, along riverbanks, see *Flora Germanica*, edition 2, 1: 37. 1800, *A Natural Arrangement of British Plants* 2: 146. 1821, *Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen. Mathematisch-physikalische Klasse* 1868: 81. 1868 and *Kew Bulletin* 502. 1954.

A. stolonifera L. (*Agrostis adscendens* Lange; *Agrostis alba* sensu Alston, non L.; *Agrostis alba* auct., non L.; *Agrostis*

alba L.; *Agrostis alba* f. *maritima* (Lam.) Parl.; *Agrostis alba* auct., non L. subsp. *alba* var. *alba*; *Agrostis alba* subsp. *filifolia* (Link) Henriq.; *Agrostis alba* subsp. *patula* (Gaudin) Arcang.; *Agrostis alba* auct., non L. subsp. *stolonifera* (L.) V. Jirásek; *Agrostis alba* subsp. *stolonifera* (L.) V. Jirásek; *Agrostis alba* subsp. *stolonizans* (Besser ex Schult. & Schult.f.) Lavrenko; *Agrostis alba* subvar. *coarctata* (Ehrh. ex Hoffm.) Blytt; *Agrostis alba* var. *albida* (Trin.) Griseb.; *Agrostis alba* var. *coarctata* (Ehrh. ex Hoffm.) Cosson & Germ.; *Agrostis alba* var. *compacta* Hartm.; *Agrostis alba* var. *palustris* (Huds.) Persoon; *Agrostis alba* var. *patula* (Gaudin) Gaudin; *Agrostis alba* var. *stolonifera* (L.) Sm.; *Agrostis alba* var. *straminea* (Hartm.) Richter; *Agrostis albida* Trin.; *Agrostis ambigua* Roem. & Schult.; *Agrostis aspera* Weber; *Agrostis brevis* Knapp; *Agrostis bryoides* Dumort.; *Agrostis caespitosa* Gaudich. ex Mirb., nom. illeg., non *Agrostis caespitosa* (L.) Salisb.; *Agrostis caespitosa* Gaudich., nom. illeg., non *Agrostis caespitosa* (L.) Salisb.; *Agrostis capillaris* Pollich, non L.; *Agrostis capillaris* var. *stolonifera* (L.) Druce; *Agrostis coarctata* Ehrh. ex Hoffm.; *Agrostis decumbens* Hall. f. ex Gaudin, nom. illeg., non *Agrostis decumbens* Host; *Agrostis densissima* Druce; *Agrostis depressa* Vasey; *Agrostis dulcis* (Pers.) Sibth. ex Kunth; *Agrostis eliasii* Sennen; *Agrostis filifolia* Link; *Agrostis flava* O.F. Müll.; *Agrostis gaditana* (Boiss. & Reut.) Nyman; *Agrostis glaucescens* (C. Presl) Spreng.; *Agrostis jacutica* Schischkin; *Agrostis karsensis* Litv.; *Agrostis macrantha* Schischkin; *Agrostis maritima* Lam.; *Agrostis maritima* With.; *Agrostis mutabilis* Knapp, nom. illeg., non *Agrostis mutabilis* Sibth.; *Agrostis nemoralis* Phil.; *Agrostis palustris* Hudson; *Agrostis patula* Gaudin; *Agrostis polymorpha* Huds.; *Agrostis polymorpha* var. *palustris* (Huds.) Huds.; *Agrostis polymorpha* var. *stolonifera* (L.) Huds.; *Agrostis prorepens* (W.D.J. Koch) G. Mey. ex Asch.; *Agrostis prorepens* (W.D.J. Koch) Rouy; *Agrostis prostrata* Hook.f.; *Agrostis pseudoalba* Klokov; *Agrostis reptans* Rydb.; *Agrostis scabriglumis* Boiss. & Reut.; *Agrostis sibirica* Petrov; *Agrostis sicula* Kunth; *Agrostis sinaica* Boiss.; *Agrostis stolonifera* Leers, nom. illeg., non *Agrostis stolonifera* L.; *Agrostis stolonifera* subsp. *albida* (Trin.) Tzvelev; *Agrostis stolonifera* subsp. *palustris* (Huds.) Tzvelev; *Agrostis stolonifera* subsp. *straminea* (Hartm.) Tzvelev; *Agrostis stolonifera* var. *compacta* Hartman; *Agrostis stolonifera* var. *maritima* (Lam.) W.D.J. Koch; *Agrostis stolonifera* var. *palustris* (Hudson) Farwell; *Agrostis stolonifera* var. *prorepens* W.D.J. Koch; *Agrostis stolonizans* Besser; *Agrostis stolonizans* Besser ex Schult. & Schult.f.; *Agrostis straminea* Hartm.; *Agrostis tenuis* var. *stolonifera* (L.) Podp.; *Agrostis vulgaris* var. *stolonifera* (L.) G. Mey.; *Agrostis vulgaris* var. *stolonifera* (L.) W.D.J. Koch; *Agrostis wightii* Nees ex Steud.; *Agrostis zerovii* Klokov; *Apera palustris* (Huds.) Gray; *Decandolia stolonifera* (L.) Bastard; *Milium maritimum* (Lam.) Clem. & Rubic; *Milium stoloniferum* (L.) Lag.; *Sporobolus gaudichaudii* (Steudel) Albov; *Vilfa coarctata* (Ehrh. ex Hoffm.) P. Beauv.; *Vilfa*

glaucescens C. Presl; *Vilfa maritima* (Lam.) P. Beauv.; *Vilfa stolonifera* (L.) P. Beauv.)

Europe, exact native range obscure. Perennial, variable, sometimes loosely or densely tufted, leafy stolons, mat-forming, small size, low-growing and trailing, slender, culms ascendant and decumbent, base prostrate, sometimes rooting from the lower nodes, auricles absent, leaf sheath smooth or scabrid, basal leaf sheaths not keeled, ligule rounded obtuse and membranous, leaves rolled and then flat, inflorescence of chasmogamous spikelets, loose panicle contracted after flowering, spikelets clustered and lanceolate, glumes acute more or less equal or unequal, glabrous lemmas unawned and oblong, palea present, small seeds, fodder grass, forage, palatable, cultivated, ornamental, weed species widely naturalized elsewhere, pioneer species, tolerates cold and shade, resistant to salt-spray, turf grass mixtures, suitable for lawns and golf courses, pasture grass, useful for erosion control, recommended for marshlands and moist pastures, found in wet meadows and wasteland, disturbed sites, in boggy places, on sand, along roadsides and in ditches, grassy roadsides, open habitats, prairies, forest openings, lawns, on riverbanks, margins of marsh, seepage areas, stream and lake margins, fresh to wet soils, shores, in salt marshes, shallow water, closely related to and difficult to separate from *Agrostis gigantea* Roth and *Agrostis capillaris* L., hybridizes with *Agrostis capillaris* L., see *Species Plantarum* 1: 62-63. 1753, *Flora Anglica* 27. 1762, *Flora Anglica, Editio Altera* 1: 31-32. 1778, *Encyclopédie Méthodique, Botanique* 1: 61. 1783, *Supplemento Florae Holsaticae* 6: 4. 1787, *Journal für die Botanik* 2: 313. 1789, *Deutschland Flora* 1: 37. 1800, *Gramina Britannica*; or representations of the British grasses pl. 28, 116. London 1804, *Synopsis Plantarum* 1: 75-76. 1805, *Alpina* 3: 14. 1808, *Essai sur la Flore du Département de Maine et Loire* 29. 1809, *Agrostologia Helvetica, definitionem ...* 1: 78. 1811, *Essai d'une Nouvelle Agrostographie* 16, 147-148, 181-182. 1812, *Elenchus Plantarum Novarum* 10. 1816, *Systema Vegetabilium* 2: 352. 1817, *Genera Graminum in Scandinavia indigenorum recognita* 4. Upsaliae 1819, *Cyperaceae et Gramineae Siculae* 23. Pragae 1820, *A Natural Arrangement of British Plants* 2: 148. 1821, *English Flora* 1: 93. 1824, *Systema Vegetabilium, editio decima sexta* 1: 258. 1825, *Fl. Belg.* 152. 1827, *Mantissa* 3 (add .1): 562. 1827, *Flora Helvetica* 1: 188. 1828, *Révision des Graminées* 1: 71. 1829, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 407. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 218. 1833, *Chloris Hanoverana* 657. 1836, *Synopsis der Deutschen und Schweizer Flora, ...* 781-782. 1837, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 344. 1841, *Handbok i Skandinaviens Flora* 24. 1843,

Synopsis Florae Germanicae et Helveticae (edition 2) 902. 1843, *Flora Antarctica* 2: 373. 1846, *Norsk Flora* 149. 1847, *Flora italiana, ossia descrizione delle piante ...* 1: 181. 1848, *Flora Rossica* 4(13): 437. 1852, *Diagnoses plantarum orientalium novarum* 2(13): 46. 1854, *Synopsis Plantarum Glumacearum* 1: 168. 1854, *Linnaea* 30(2): 205. 1859, *Flore Descriptive et Analytique des Environs de Paris* éd. 2 797. 1861, *Flora der Provinz Brandenburg* 1: 819. 1864, *Compendio della Flora Italiana* 768. 1883, *Bulletin of the Torrey Botanical Club* 13: 54. 1886, *Plantae Europaeae* 1: 43. 1890 and *Boletim da Sociedade Broteriana* 20: 43. 1905, *Flore de France* 14: 61. 1913, *Report. Botanical Exchange Club. London.* 1913: 343. 1914, *Sched. Herb. Fl. Ross.* 8: 147. 1917, *Flora of the Rocky Mountains* 54. 1917, *Annual Report of the Michigan Academy of Science, Arts and Letters* 21: 351. 1919 [1920], *List of British Plants* edition 2 126. 1928, *Flora Iakutiae* 1: 175, f. 57. 1930, *Handb. Fl. Ceylon* 6: 337. 1931, *Flora URSS* 2: 177, 179, 746-747. 1934, *Grasses of Ceylon* 61. 1956, *Grasses of Burma ...* 390. 1960, *Willdenowia* 5: 480-481. 1969, *Fl. Fenn.* 5: 1. 1971, *Novosti Sist. Vyss. Rast.* 8: 58. 1971, *Taxon* 31(1): 71. 1982, S.Y. Park et al., "Heat-shock response in heat-tolerant and nontolerant variants of *Agrostis palustris* Huds." *Plant Physiology* 111: 515-524. 1996, S.A. Heckathorn et al., "In vivo evidence from an *Agrostis stolonifera* selection genotype that chloroplast small heat-shock proteins can protect photosystem II during heat stress." *Functional Plant Biology* 29(8): 933-944. 2002, A. MacLeod, S.D. Wratten, N.W. Sotherton and M.B. Thomas, "Beetle banks as refuges for beneficial arthropods in farmland: long-term changes in predator communities and habitat." *Agricultural and Forest Entomology* 6(2): 147-154. May 2004.

in English: redtop bent grass, creeping bent grass, creeping bent, spreading bent, marsh bent, fiorin, redtop, carpet bent-grass, bentgrass

in French: agrostis stolonifère, agrostide stolonifère, agrostis à stolons

in Spanish: agróstide estolonífera

in Mexico: castillitos, nombre de Dios, zacate de piedras castillitos, zacate de piedras quilla

in German: Flechtstraubgras

A. stolonifera L. var. *palustris* (Huds.) Farw. (*Agrostis alba* var. *decumbens* Eaton & Wright, nom. illeg., non *Agrostis alba* var. *decumbens* Gaudin; *Agrostis alba* var. *palustris* (Huds.) Pers.; *Agrostis densissima* Druce; *Agrostis exarata* var. *stolonifera* Vasey; *Agrostis mutabilis* Knapp, nom. illeg., non *Agrostis mutabilis* Sibth.; *Agrostis palustris* Huds.; *Agrostis palustris* var. *palustris*; *Agrostis polymorpha* var. *palustris* (Huds.) Huds.; *Agrostis stolonifera* subsp. *palustris* (Huds.) Tzvelev; *Agrostis stolonifera* var. *latifolia* G. Sinclair; *Apera palustris* (Huds.) Gray)

Russia, Europe. Perennial, decumbent, low-growing, stoloniferous, leafy, dark green, fine-textured, panicle contracted, useful for erosion control, resistant to cold and heat and shade and saline soil, exact native range obscure, ornamental widely cultivated and naturalized, recommended for putting greens, common on golf courses, lawns, grows in bottomlands, in marshy places, see *Species Plantarum* 1: 63. 1753, *Flora Anglica* 27. 1762, *Flora Anglica, Editio Altera* 1: 31-32. 1778, *Gramina Britannica*; or representations of the British grasses pl. 28. 1804, *Synopsis Plantarum* 1: 76. 1805, *Hortus gramineus Woburnensis* 112. London 1816, *A Natural Arrangement of British Plants* 2: 148. 1821, *De Graminibus unifloris et sesquifloris* 207. 1824, *A Manual of Botany* 117. 1840, *Bulletin of the Torrey Botanical Club* 13: 54. 1886 and *Report. Botanical Exchange Club. London.* 1913: 343. 1914, *Annual Report of the Michigan Academy of Science, Arts and Letters* 21: 351. 1919 [1920], *Novosti Sist. Vyss. Rast.* 8: 58. 1971, *Flora Patagónica* 8(3): 369-394. 1978.

in English: creeping bent grass, creeping bent, marsh bent

A. stolonifera L. var. *ramosa* (Gray) Veldkamp

Malaysia. Perennial, branched, stoloniferous, in disturbed areas, grassy places, see *Blumea* 28: 223. 1982.

A. stolonifera L. var. *stolonifera* (*Agrostis alba* L.; *Agrostis alba* f. *maritima* (Lam.) Parl.; *Agrostis alba* f. *natans* Glück; *Agrostis alba* subsp. *decumbens* (Gaudin) Arcang.; *Agrostis alba* subsp. *filifolia* (Link) Henriq.; *Agrostis alba* subsp. *maritima* (Lam.) P. Fourn.; *Agrostis alba* subsp. *stolonifera* (L.) V. Jirásek; *Agrostis alba* subvar. *decumbens* (Gaudin) Meyer; *Agrostis alba* var. *albida* (Trin.) Griseb.; *Agrostis alba* var. *condensata* Hack. ex Druce; *Agrostis alba* var. *conferta* Pauquy; *Agrostis alba* var. *decumbens* Gaudin; *Agrostis alba* var. *densiflora* Guss.; *Agrostis alba* var. *foucaudi* Husn.; *Agrostis alba* var. *glaucescens* Woods; *Agrostis alba* var. *maritima* (Lam.) G. Mey.; *Agrostis alba* var. *pallida* Spenner; *Agrostis alba* var. *patula* (Gaudin) Gaudin; *Agrostis alba* var. *pontica* Grecescu; *Agrostis alba* var. *stolonifera* (L.) Sm.; *Agrostis alba* var. *straminea* Woods; *Agrostis alba* var. *sylvatica* (Huds.) Sm.; *Agrostis decumbens* Gaudin ex Muhl., nom. illeg., non *Agrostis decumbens* Host; *Agrostis decumbens* Hall. f. ex Gaudin, nom. illeg., non *Agrostis decumbens* Host; *Agrostis dulcis* (Pers.) Sibth. ex Kunth; *Agrostis maritima* Lam.; *Agrostis maritima* var. *clementei* Willk. & Lange; *Agrostis nemoralis* Phil.; *Agrostis palustris* var. *stolonifera* (L.) Druce; *Agrostis patula* Gaudin; *Agrostis polymorpha* Huds.; *Agrostis polymorpha* var. *stolonifera* (L.) Huds.; *Agrostis polymorpha* var. *sylvatica* (Huds.) Huds.; *Agrostis prorepens* (W.D.J. Koch) G. Mey. ex Asch.; *Agrostis prorepens* (W.D.J. Koch) Rouy; *Agrostis prostrata* Hook.f.; *Agrostis stolonifera* L.; *Agrostis stolonifera* subsp. *maritima* (Lam.) Vasc.; *Agrostis stolonifera* var. *alba* Lilj.; *Agrostis stolonifera* var. *angustifolia* Sincl.; *Agrostis stolonifera* var. *bottnica* Hyl.; *Agrostis stolonifera* var.

decumbens Retz.; *Agrostis stolonifera* var. *decumbens* Lilj., nom. illeg., non *Agrostis stolonifera* var. *decumbens* Retz.; *Agrostis stolonifera* var. *dulcis* Pers.; *Agrostis stolonifera* var. *effusa* Meinsh.; *Agrostis stolonifera* var. *maritima* (Lam.) W.D.J. Koch; *Agrostis stolonifera* var. *maritima* Hartm.; *Agrostis stolonifera* var. *patula* (Gaudin) Rchb.; *Agrostis stolonifera* var. *prorepens* W.D.J. Koch; *Agrostis stolonifera* var. *pumila* Peterm.; *Agrostis stolonifera* var. *straminea* (Hartm.) Hartm.; *Agrostis stolonifera* var. *tenuis* Heuff.; *Agrostis stolonifera* var. *viridula* Andersson; *Agrostis stolonifera* var. *vulgaris* Heuff.; *Agrostis straminea* Hartm.; *Agrostis sylvatica* Huds.; *Vilfa maritima* (Lam.) P. Beauv.)

Eurasia. Perennial, stoloniferous, open panicle pyramidal, important fodder grass, boggy spots, open dry fields, along roadsides, on limestone, alkaline soils, see *Species Plantarum* 1: 62-63. 1753, *Flora Anglica* 28. 1762, *Flora Anglica, Editio Altera* 1: 31-32. 1778, *Florae Scandinaviae prodromus: enumerans plantas Sveciae, Lapponiae, Finlandiae et Pomeraniae ac Daniae, Norvegiae, Holsatiae, Islandiae Groenlandiaeque* (edition 1) 14. Holmiae [Stockholm] 1779, *Encyclopédie Méthodique, Botanique* 1: 61. 1783, *Journal für die Botanik* 2: 313. 1789, *Synopsis Plantarum* 1: 75. 1805, *Alpina* 3: 14. 1808, *Agrostologia Helvetica*, definitionem descriptionemque graminum et plantarum eis affinium in Helvetia sponte nascentium complectens 1: 78. Paris, Genève 1811, *Essai d'une Nouvelle Agrostographie* 16, 148, 181. 1812, *Hortus gramineus Woburnensis* 112, 234. London 1816, *Descriptio uberior Graminum* 68. 1817, *Genera graminum in Scandinavia indigenorum recognita* 4. Upsaliae 1819, *Hannoversches Magazin* 1823: 134, 138. 1824, *English Flora* 1: 93. 1824, *Flora Friburgensis et regionum proxime adjacentum ...* 1: 94. Friburgi Brisgoviae 1825, *Flora Helvetica* 1: 187-188. 1828, *Flora Germanica Excursoria* 26. 1830, *Suppl. Florae siculae prodromus* 1: 15. Napoli 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 218. 1833, *Synopsis der Deutschen und Schweizer Flora, ...* 781. 1837, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 344. 1841, *Synopsis Florae Germanicae et Helveticae* (edition 2) 902. 1843, *Flora Antarctica* 2: 373. 1846, *Flora italiana, ossia descrizione delle piante ...* 1: 181. 1848, *The Tourist's Flora* 40, 400. London 1850, *Flora Rossica* 4(13): 437. 1852, *Plantae Scandinaviae Descriptionibus et Figuris analyticis Adumbratae. Fasciculus Secundus Gramineae Scandinaviae ...* [other title page: *Gramineae Scandinaviae* in Dania, Suecia, Norvegia et Fennia sponte crescentes, descriptae et delineatae] 93. Stockholm 1852, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 8: 225-226. 1858, *Linnaea* 30(2): 205. 1859, *Prodromus Florae Hispanicae* 1: 52. 1861, *Flora ingrifica* 460. St. Petersburg 1878 [the *Flora ingrifica* deals

with the flora of Ingermanland, the former province of St. Petersburg], *Compendio della Flora Italiana* 768. 1883, *Synopsis der mitteleuropäischen Flora* 2(1): 174. 1899 and *Boletim da Sociedade Broteriana* 20: 43. 1905, *Report. Botanical Exchange Club. London*. 1913: 343. 1914, *The Flora of Oxfordshire (edition 2)* 473. 1927, *Taxon* 22: 388-389. 1973.

in English: fiorin, white bent

A. subpatens Hitchc. (*Agrostis vinosa* Swallen)

Costa Rica, Guatemala. Perennial, caespitose, erect, leaves mostly basal, forage, found in dry rocky soil, in disturbed sites, alpine meadows, see *North American Flora* 17(7): 527. 1937, *Contributions from the United States National Herbarium* 29(9): 402. 1950.

A. subrepens (Hitchc.) Hitchc. (*Agrostis hiemalis* var. *subrepens* Hitchc.; *Agrostis hyemalis* var. *subrepens* Hitchc.)

North America, Mexico. See *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 68: 44. 1905, *North American Flora* 17(7): 525. 1937.

A. subulata Hook.f

New Zealand. Perennial, alpine, tufted, prostrate to erect, leaf blade ribbed and inrolled, leaf sheath ribbed, ligule denticulate, spike-like contracted oblong panicles, glumes subequal, usually awnless, see *Flora Antarctica* 1: 95, t. 53. 1845[ante] and *Bot. Not.* 113: 185-191. 1960, *New Zealand J. Bot.* 21: 13-20. 1983, *New Zealand Journal of Botany* 29: 101-116, 139-161. 1991.

A. subulifolia Stapf

South Africa. Annual or perennial, delicate, tufted, leaf blade folded, ligule a membrane unfringed, panicle open to contracted, lemmas glabrous, grows in mountain, wet places, bogs, marshy places, see *Bulletin of Miscellaneous Information Kew* 1910: 130. 1910.

in South Africa: jwang ba phororo (= grass of the waterfall), mathubisa a dibata

A. tandilensis (Kuntze) Parodi (*Agrostis hygrometrica* Nees var. *tandilensis* (Kuntze) L.B. Sm. & Wassh.; *Agrostis kennedyana* Beetle; *Agrostis koelerioides* var. *pampeana* Parodi; *Bromidium hygrometricum* (Nees) Nees & Meyen; *Bromidium hygrometricum* var. *tandilense* Kuntze; *Bromidium tandilense* (Kuntze) Rúgolo; *Deyeuxia hygrometrica* var. *tandilense* (Kuntze) Speg.)

Argentina. Annual, leaf blades flat and inrolled, dense inflorescence cylindrical, lemma awned below middle, lemma tip 4-toothed, awns bent, palea absent, vernal pools, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 404. 1829, *Gramineae* 23. 1841, *Flora Chilena* 6: 317. 1854, *Revisio Generum Plantarum* 3(3): 343. 1898 and *Contribución al Estudio de la Flora del Tandil* 54. La Plata & Buenos Aires 1901, *Revista de la Facultad de Agronomía y Veterinaria* 7: 161, f. 10D. 1930, *Darwiniana* 6: 158. 1943, *Bulletin of the Torrey Botanical Club* 72(6): 547, f. 6. 1945, *Manual*

of the Grasses of the United States (edition 2, revised by A. Chase) 1951, *Bradea*, *Boletim do Herbarium Bradeanum* 2(35): 244. 1978, *Darwiniana* 24(1-4): 202. 1982.

in English: Kennedy's bent, Kennedy's bentgrass

A. tateyamensis Tateoka

Asia, Japan. See *Botanical Magazine* (Tokyo) 88(1010): 65-87. 1975.

in Japan: tateyamanukabo

A. tenerrima Trin. (*Agrostis elegans* Thore ex R.J. Loisel, nom. illeg., non *Agrostis elegans* (Walter) Salisb.; *Neoschischkinia elegans* Tzvelev)

West Mediterranean. Annual, tufted, flimsy, leaves linear, branched panicles, awns absent, see *Prodr. Stirp. Chap. Allerton* 25. 1796, *Journal de Botanique, rédigé par une société de botanistes* 2: 207, t. 8. 1809 [Desvaux], *De Graminibus unifloris et sesquifloris* 205. 1824 and *Bot. Zhurn. (Moscow & Leningrad)* 53: 309. 1968, *Anales del Jardín Botánico de Madrid* 45: 273. 1988, *Boletim da Sociedade Broteriana, ser. 2* 61: 81-104. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Taxon* 45: 100. 1996.

A. tenuifolia Curtis (*Agrostis canina* L.; *Agrostis canina* var. *tenuifolia* (M. Bieb.) Boiss.; *Agrostis tenuifolia* M. Bieb., nom. illeg., non *Agrostis tenuifolia* Curtis; *Agrostis vinealis* Schreb.)

Eurasia, Asia. See *Species Plantarum* 1: 61-63. 1753, *Spicilegium Florae Lipsicae* 47. Lipsiae 1771, *Enumeration British Grasses* 42. London 1787, *Flora Taurico-Caucasica* 1: 56. 1808, *Flora Antarctica* 2: 372. 1846, *Flora Rossica* 4(13): 441. 1852, *Flora Orientalis* 5: 516. 1884 and *Taxon* 41: 556. 1992.

A. tenuis Sibth. (*Agrostis alba* var. *minor* Vasey; *Agrostis alba* var. *sylvatica* (Huds.) Sm.; *Agrostis alba* var. *tenuis* (Sibth.) Fiori; *Agrostis alba* var. *vulgaris* (With.) Coss. & Durieu, nom. illeg., non *Agrostis alba* var. *vulgaris* G. Mey.; *Agrostis alba* var. *vulgaris* (With.) Plues, nom. illeg., non *Agrostis alba* var. *vulgaris* G. Mey.; *Agrostis capillaris* L.; *Agrostis capillaris* Huds., nom. illeg., non *Agrostis capillaris* L.; *Agrostis hispida* Willd.; *Agrostis lithuanica* Besser ex Roem. & Schult.; *Agrostis stolonifera* var. *hispida* (Willd.) Farw.; *Agrostis stolonifera* var. *minor* (Vasey) Farw., nom. illeg., non *Agrostis stolonifera* var. *minor* Meinsh.; *Agrostis stolonifera* var. *vulgaris* (With.) Celak.; *Agrostis sylvatica* Huds.; *Agrostis vulgaris* With.; *Agrostis vulgaris* var. *hispida* (Willd.) G. Mey.; *Agrostis vulgaris* var. *plena* G. Mey.; *Decandolia vulgaris* (With.) Bastard; *Vilfa vulgaris* (With.) P. Beauv.; *Vilfa vulgaris* (With.) Gray, nom. illeg., non *Vilfa vulgaris* (With.) P. Beauv.)

North America, Europe, northern Asia. Stout, rhizomatous, lemma equal the glumes, used for lawns and cricket pitches, grows on dry soils, fields, waste places, see *Species Plantarum* 1: 61-63. 1753, *Flora Anglica* edition 2: 27-28. 1762,

Flora Oxoniensis 36. 1794, *Species Plantarum. Editio quarta* 1: 370. 1797, Toussaint Bastard [Batard] (1784-1846), *Essai sur la Flore du Département de Maine et Loire* 28. Angers 1809, *Essai d'une Nouvelle Agrostographie* 16, t. 5, f. 8. 1812, Samuel Frederick Gray (1766-1828), *A natural arrangement of British plants*, according to their relations to each other as pointed out by Jussieu, De Candolle, Brown, & c. ... With an introduction to botany ... London 1821, *English Flora* 1: 93. 1824, *Hannoversches Magazin* (ser. II) 1823: 140. 1824, *Mantissa* 3(Add. 1): 586. 1827, Georg Friedrich Wilhelm Meyer (1782-1856), *Flora des Königreichs Hannover*, etc. Göttingen, 1842-1854, *Exploration Scientifique de l'Algérie* 2: 63. 1855, *Brit. Grasses* 151. 1867, *Prodromus der Flora von Böhmen* 710. 1881, *Contributions from the United States National Herbarium* 3(1): 78. 1892 and *Report of the Michigan Academy of Science, Arts and Letters* 6: 202. 1904, *Rep. Michigan Acad. Sci.* 1919: 351. 1920, *Nuova Flora Analitica d'Italia* 1: 97. 1923, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Bot. Zhurn.* 72: 1069-1074. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1185. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993.

in English: New Zealand bent, colonial bent, common bent, fine bent, brown top

A. thurberiana A.S. Hitchc. (*Agrostis atrata* Rydb.; *Agrostis hillebrandii* Thurb. ex Bol.; *Podagrostis thurberiana* (Hitchc.) Hultén) (after George Thurber, 1821-1890, American botanist, naturalist and botanical collector, author and editor; see Joseph Ewan, *Rocky Mountain Naturalists*. 64, 321. The University of Denver Press 1950; J.H. Barnhart, *Biographical notes upon botanists*. 3: 382. 1965; J. Ewan, editor, *A Short History of Botany in the United States*. 45. New York and London 1969; Stafleu and Cowan, *Taxonomic literature*. 6: 334-335. 1986; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983) (Latin *atratus, a, um* "blackened")

California, Montana, Alaska, Sierra Nevada. Perennial, sometimes rhizomatous, leaf blades flat, oblong inflorescence more or less open, lemma awnless, found in wet places, heavy soils, coniferous forest, intergrades with *Agrostis humilis* Vasey, see *Transactions of the California State Agricultural Society* 1864-5: 136. 1866 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 68: 23, t. 1, f. 1. 1905, *Bulletin of the Torrey Botanical Club* 36: 531. 1909, *Flora of the Aleutian Islands* 75. 1937.

in English: Thurber bent grass, Thurber redtop, Thurber bent, Thurber's bentgrass

A. toluensis Kunth (*Agrostis araucana* Phil.; *Agrostis glomerata* (J. Presl) Kunth; *Agrostis hoffmannii* Mez; *Agrostis nana* var. *aristata* Griseb.; *Agrostis nigritella* Pilg.;

Agrostis toluensis Willd. ex Steud.; *Agrostis virescens* Kunth; *Agrostis virescens* var. *pumila* Rupr.; *Vilfa glomerata* J. Presl (Mexico, Toluca)

Southern America, Mexico, Peru, Guatemala, Argentina, Bolivia. Perennial bunchgrass, alpine, herbaceous, open, tufted, bluish green stiff foliage, acute to truncate ligule hyaline or opaque, leaves erect to spreading, green to purplish erect inflorescence, forage, growing in or near rocky places, moist areas, grassland, cliffs, hollows and depressions, marshy sites, see *Nova Genera et Species Plantarum* 1: 135-136. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 239. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 219, 226. 1833, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 52: 229. 1842, *Synopsis Plantarum Glumacearum* 1: 164. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 294. 1879 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 292. 1914, *Repertorium Specierum Novarum Regni Vegetabilis* 18: 3. 1922, *Brittonia* 23(3): 293-324. 1971.

A. toluensis Kunth var. *andicola* (Pilg.) Rúgolo & A.M. Molina (*Agrostis nana* var. *andicola* Pilg.)

South America. Alpine, hummocks forming, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1(1): 226. 1833 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 505. 1906, *Parodiiana* 8(2): 142. 1993.

A. toluensis Kunth var. *toluensis*

South America.

A. trachychlaena C.E. Hubb.

Tristan da Cunha. Rare species, see *Bulletin of the British Museum (Natural History)*, *Botany* 8: 383. 1981.

A. transcaspica Litv. (*Agrostis stolonifera* subsp. *transcaspica* (Litv.) Tzvelev)

Temperate Asia. Useful for erosion control, see *Schedae ad herbarium Florae Rossicae*, a Museo botanico Academiae imperialis scientiarum Petropolitanae editum Sanktpeterburg 1898-1911, *Journ. Bot. U.R.S.S.* 28: 245. 1943, *Novosti Sist. Vyss. Rast.* 8: 58. 1971.

A. triaristata (Hook.f.) Bor (*Agrostis triaristata* Knapp; *Calamagrostis triplifera* Hook.f.; *Deyeuxia triaristata* Hook.f.; *Deyeuxia tripilifera* (Hook.f.) Keng)

India, West Bengal, Sikkim. Lemma glabrous, growing in open fields, woods, rocky places, see *The Flora of British India* 7(22): 266. 1897 [1896] and *Sunyatsenia* 6(1): 68. 1941, *Grasses of Burma, Ceylon, India and Pakistan* 391. 1960.

A. trichodes (Kunth) Roem. & Schult. (*Agrostis bogotensis* Hack.; *Aira trichodes* (Kunth) Spreng.; *Vilfa trichodes* Kunth)

South America. See *Nova Genera et Species Plantarum* 1: 139. 1815 [1816], *Systema Vegetabilium* 2: 361. 1817, *Systema Vegetabilium, editio decima sexta* 1: 276. 1825 and *Repertorium Specierum Novarum Regni Vegetabilis* 8: 518. 1910.

A. trinii Turcz. ex M.A. Litv. (*Agrostis canina* subsp. *trinii* (Turcz.) Hultén; *Agrostis coarctata* subsp. *trinii* (Turcz.) H. Scholz; *Agrostis flaccida* subsp. *trinii* (Turcz. ex M.A. Litv.) T. Koyama; *Agrostis flaccida* subsp. *trinii* (Turcz.) T. Koyama; *Agrostis flaccida* var. *trinii* (Turcz.) Ohwi; *Agrostis trinii* Turcz.; *Agrostis vinealis* Schreb.; *Agrostis vinealis* subsp. *trinii* (Turcz. ex M.A. Litv.) Tzvelev; *Agrostis vinealis* subsp. *trinii* (Turcz.) Tzvelev)

Eurasia, Russia, Mongolia. Wet and poorly drained soils, wet meadow area, dark brown soil, alluvial soil, see *Spicilegium Florae Lipsicae* 47. 1771, *Deutschland Flora* 1: 37. 1800, *Flora Baicalensi-Dahurica* seu descriptio plantarum in regionibus cis- et transbaicalensibus atque in Dahuria sponte nascentium Mosquae 1842-1856[-1857], *Bulletin de la Société Impériale des Naturalistes de Moscou* 29(1): 18. 1856, *Bulletin de l'Herbier Boissier* 7(9): 649. 1899 and *J. Fac. Agr. Hokkaido Univ.* 26: 135. 1931, *Botanical Magazine (Tokyo)* 55(656): 353. 1941, *Kongliga Svenska Vetenskapsakademiens Handlingar* 5(Circumpolar): 114. 1962 [also E. Hultén, *The Circumpolar Plants*. I. Vascular cryptogams, conifers and monocotyledons. 1: 114. Stockholm 1962 [Kungl. Svenska Vetenskapsakademiens handlingar. Fjärde Serien. Band 8. Nr 5.]], *Willdenowia* 5(3): 484. 1969, *Novosti Sist. Vyss. Rast.* 8: 60. 1971, *Grasses of Japan and its Neighboring Regions* 484. 1987.

in Japan: kuronukabo

A. tungnathii Bhattacharya & S.K. Jain

India, Uttar Pradesh. Lemma hairy and awned, alpine grass, grows in open dry places, see *Bulletin of the Botanical Survey of India* 25(1-4): 204. 1983[1985].

A. turrialbae Mez (*Agrostis arcta* Swallen; *Agrostis vesca* Swallen) (Volcan Turrialba was named by early Spanish settlers who called it Torre Alba, or "white tower," for the plumes of smoke that poured from its summit, the volcano is 3,329 meters high and is about 15 minutes from the Atlantic slope town of Turrialba)

Costa Rica, Guatemala. See *Repertorium Specierum Novarum Regni Vegetabilis* 18(1-3): 4. 1922, *Contributions from the United States National Herbarium* 29(9): 405. 1950.

A. uliginosa Phil. (*Agrostis paucinodis* Hack.)

Chile. See *Anales de la Universidad de Chile* 27: 323. 1865, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 242. 1885.

A. umbellata Colla (*Agrostis canina* var. *umbellata* (Colla) Kuntze; *Agrostis chilensis* Trin.; *Agrostis glabra* Hochst. ex E. Desv.; *Agrostis paradisiaca* Steud.; *Agrostis patens* Trin.;

Agrostis pusilla Dumort.; *Agrostis stricta* Trin., nom. illeg., non *Agrostis stricta* J.F. Gmel.; *Agrostis umbellata* Trin., nom. illeg., non *Agrostis umbellata* Colla; *Colpodium pusillum* Nees)

Chile. See *Observations sur les Graminées de la Flore Belgique* 129, t. 10, f. 37. 1823 [1824], *Herbarium Pedemontanum* 6: 18. 1836, *Linnaea* 10(3): 302. 1836, *Flora Africae Australioris Illustrationes Monographicae* 149. 1841, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 322, 342, 370. 1841, *Flora Chilena* 6: 314. 1854, *Synopsis Plantarum Glumacearum* 1: 163. 1854, *Revisio Generum Plantarum* 33: 338. 1898 and *Reports of the Princeton University Expeditions to Patagonia 1896-1899, Botany, Volume viii, Supplement* 8(3): 42. 1914 [1915].

A. variabilis Rydb. (*Agrostis michauxii* var. *alpina* Rupr.; *Agrostis varians* Trin., nom. illeg., non *Agrostis varians* Thuill.)

U.S., Alaska, California, Colorado, Canada. Perennial, erect, tuft-forming, sheaths smooth and open, no auricles, flat to folded leaves, leaves mostly basal, ligule with slightly hairy margin, sometimes rhizomatous, inflorescence cylindrical and dense, small spike-like flower head, usually unawned lemma, palea reduced or absent, grows generally in alpine and subalpine environments, meadows, on open ridges, forest, see *Flore Descriptive et Analytique des Environs de Paris* éd. 2 1: 35. 1799, Attilio Zuccagni (1754-1807), *Centuria I: observationum botanicarum ...* [Turici, Zürich 1806], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 314. 1841, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 52: 228. 1842 and *Memoirs of the New York Botanical Garden* 1: 32. 1900. in English: alpine bent, variable bentgrass, mountain bent, mountain bentgrass, mountain redtop

A. venezuelana Mez

Venezuela. See *Repertorium Specierum Novarum Regni Vegetabilis* 18(1-3): 4. 1922.

A. venusta Trin. (*Agrostis aemula* var. *pumila* F. Muell. ex Hook.f.; *Lachnagrostis willdenowii* Nees non Trin.)

New South Wales, Victoria, Tasmania, New Zealand. Annual, tufted, slender, erect, small, auricles absent, basal leaf sheaths not keeled, ligule obtuse and membranous, leaves narrow and filiform, inflorescence of chasmogamous spikelets, panicle open, lemma awned and glabrous, palea often absent, found in open habitats, damp areas, see *Prodromus Florae Novae Hollandiae* 172. 1810, *Gram. Unifl. Sesquifl.* 217. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie:*

Sciences Naturelles 6,4(3-4): 340. 1841 and *Contr. New South Wales Herb.* 1: 101-119. 1941.

in English: graceful bent

A. vidalii Phil. (*Agrostis buchtienii* Hack.) (dedicated to F. Vidal Gormaz)

Southern America, Chile, Argentina. See *Anales de la Universidad de Chile* 48: 561. 1873 and *Repertorium Specierum Novarum Regni Vegetabilis* 2: 69. 1906, *Bulletin de la Société Botanique de France* 73: 677. 1927.

A. vinealis Schreb. (*Agrostis alba* var. *vinealis* (Schreb.) Richter; *Agrostis canina* f. *montana* C. Hartm.; *Agrostis canina* L. subsp. *montana* (Hartm.) Hartm.; *Agrostis canina* subsp. *pusilla* (Dumort.) Malagarriga; *Agrostis canina* var. *montana* Hartman; *Agrostis coarctata* Ehrh.; *Agrostis coarctata* Ehrh. ex Hoffm.; *Agrostis coarctata* subsp. *hyperborea* (Laestadius) H. Scholz; *Agrostis coarctata* subsp. *syreistschikowii* (P.A. Smirn.) H. Scholz; *Agrostis ericetorum* Préaub. & Bouvet; *Agrostis hyperborea* Laest.; *Agrostis marschalliana* Seregin; *Agrostis pusilla* Dumort.; *Agrostis rubra* L. pro parte; *Agrostis stricta* J.F. Gmel.; *Agrostis stricta* subsp. *syreistchikowii* (P.A. Smirn.) Soó; *Agrostis syreistschikowii* P.A. Smirn.; *Agrostis tenuifolia* M. Bieb., nom. illeg., non *Agrostis tenuifolia* Curtis; *Agrostis trinii* Turcz.; *Agrostis trinii* Turcz. ex M.A. Litv.; *Agrostis vinealis* Brot.; *Agrostis vinealis* Salisb.; *Agrostis vinealis* With.; *Agrostis vinealis* subsp. *trinii* (Turcz.) Tzvelev; *Agrostis vinealis* subsp. *trinii* (Turcz. ex M.A. Litv.) Tzvelev; *Agrostis vulgaris* var. *vinealis* (Schreb.) Schur)

Europe, Russia. See *Species Plantarum* 1: 62. 1753, *Spicilegium Florae Lipsicae* 47. Lipsiae 1771, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 170. Leipzig 1791[-1792], *Deutschland Flora* 1: 37. 1800, *Flora Lusitanica* 1: 74. 1804, *Flora Taurico-Caucasica* 1: 56. 1808, *Observations sur les Graminées de la Flore Belgique* 129, t. 10, f. 37. 1823, *Handbok i Skandinavien flora* (edition 2) 19. Stockholm 1832, *Flora Baicalensi-Dahurica* 18. 1856, *Enumeratio Plantarum Transsilvaniae* 734. 1866, *Plantae Europaeae* [vol. 2: *Europaeae*] 1: 43. 1890 and *Novosti Sist. Vyss. Rast.* 1966, *Willdenowia* 5: 480-482, 484. 1969, *Novosti Sist. Vyss. Rast.* 8: 60. 1971, *Feddes Repertorium* 85(7-8): 434. 1974, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Cell and Chromosome Research* 12: 60-61. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Opera Botanica* 137: 1-42. 1999, *Willdenowia* 19: 199-213. 1999.

in English: brown bent grass, brown bent

A. vinealis Schreb. subsp. *vinealis* (*Agrostis canina* f. *arida* (Schltdl.) Junge; *Agrostis canina* var. *arida* Schltdl.)

Europe, Russia. See *Flora Berlinensis* 1: 45. 1823 and *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten* 22(Beih. 3): 62. 1905.

in English: bent grass

A. virescens Kunth (*Agrostis tolucensis* Kunth)

North America, Mexico. See *Nova Genera et Species Plantarum* 1: 135-136. 1815 [1816], *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 52: 229. 1842, *Synopsis Plantarum Glumacearum* 1: 164. 1854 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 2-3. 1901.

A. viridis Gouan (*Agrostis semiverticillata* (Forssk.) C. Chr.; *Agrostis semiverticillatus* (Forssk.) C. Chr.; *Agrostis verticillata* Vill.; *Agrostis viridis* Raf. ex B.D. Jacks.; *Agrostis viridissima* Kom.; *Phalaris semiverticillata* Forssk.; *Polypogon semiverticillatus* (Forssk.) Hyl.; *Polypogon viridis* (Gouan) Breistr.)

Mediterranean. Perennial, loosely tufted, strongly decumbent at the base to long-trailing, stoloniferous with creeping stolons, erect, glabrous, smooth, often rooting at nodes, ligule scarious, sheath smooth, dense inflorescence narrowly lanceolate to elliptic, panicle contracted with whorled branches usually densely covered in spikelets, small spikelets 1-flowered, panicle more or less interrupted, spikelets falling entire, glumes falling with the spikelet, lemma 5-nerved more or less pubescent, awn absent, growing on open ground by streams, disturbed areas, moist places, irrigation ditches, canal banks, ponds and ditches, seepage areas, around springs, see *Hortus Regius Monspeliensis* 546. 1762, *Flora Aegyptiaco-Arabica* 17. 1775, *Index Kewensis* 1: 65. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 13: 85. 1914, *Dansk Botanisk Arkiv* 4(3): 12. 1922, *Bulletin de la Société Botanique de France* 110(89 Sess. Extraord.): 56. 1966, *Journal of Cytology and Genetics* 21: 155. 1986, *Annali di Botanica* 45: 75-102. 1987, *Lagascalia* 15: 119-124. 1988, *Phytologia* 64: 390-398. 1988, *Journal of the Indian Botanical Society* 69: 447-451. 1990, *Cytologia* 56: 437-452. 1991, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Bothalia* 26(1): 63-67. 1996.

in English: water bent grass, water bent

in Arabic: deil el-far

A. volkensii Stapf

Tanzania, Uganda. Perennial, erect, slender, densely tufted, leaf blades narrow and filiform, old basal leaf sheaths papery, open panicle lanceolate, glumes equal and acute, lemma lanceolate more or less hairy to pilose, awn geniculate, mountains, sometimes confused with *Agrostis producta* Pilger, see *Bulletin of Miscellaneous Information Kew* 1897: 289. 1897 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 512. 1926.

A. wacei C.E. Hubb.

Tristan da Cunha. Indeterminate species, see N.M. Wace & M.W. Holdgate, *Man and Nature in the Tristan da Cunha Islands*. Gland and Cambridge, IUCN. (IUCN Monograph

No. 6) 1976, *Bulletin of the British Museum (Natural History)*, *Botany* 8: 383. 1981, Y.M. Chamberlain, M.W. Holdgate and N.M. Wace, "The littoral ecology of Gough Island, South Atlantic Ocean." *Tethys*. 11: 302-319. 1985.

A. wardii Bor

India, Manipur. Lemma awned, growing on open grassy slopes, see *Kew Bulletin* 1949: 444. 1949.

A. zenkeri Trin. (*Agrostis abnormis* Munro ex Hook.f.; *Agrostis pleiophylla* Mez; *Calamagrostis zenkeri* (Trin.) Davidse; *Deyeuxia abnormis* Munro ex Hook.f.; *Deyeuxia abnormis* Hook.f.; *Deyeuxia zenkeri* (Trin.) Veldkamp)

India, Sikkim, West Bengal, Tamil Nadu, Meghalaya. Glumes mostly equal or subequal, growing in open dry places, wastelands, coniferous forests, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 363. 1841, *The Flora of British India* 7(22): 268. 1897 [1896] and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 301. 1921, *Kew Bull.* 9: 441-442. 1954, *The Gardens' Bulletin Singapore* 37(2): 218-219. 1984 [1985], *Edinb. J. Bot.* 56(3): 384, 386, 399. 1999.

Agrostomia Cerv. = Chloris Sw.

Chloridoideae, Cynodonteae, type *Agrostomia mutica* Cerv., see *Nova Genera et Species Plantarum seu Prodrum* 25. 1788, *Flora Indiae Occidentalis* 1: 203. 179, *Nova Genera et Species Plantarum* 1: 167-168, pl. 50. 1815 [1816], *La Naturaleza [periódico científico de la Sociedad Mexicana de Historia Natural]* 1: 345-346. Mexico City 1870 and *North American Flora* 17(8): 596. 1939, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Flora Mesoamericana* 6: 287-288. 1994, *Contributions from the United States National Herbarium* 41: 14, 39-52. 2001.

x Agrotrigia Tzvelev

Agropyron x *Elytrigia*.

See *Novosti Sist. Vyssh. Rast.* 9: 63. 1972, *Genera Graminum* 374. 1986.

x Agrotrisecale Ciferri & Giacom.

Agropyron x *Secale* x *Triticum*.

See *Nomencl. Fl. Ital., Pt. 1* 48. 1950, *Genera Graminum* 374. 1986.

x Agrotriticum Ciferri & Giacomini

Agropyron x *Triticum*.

See *Nomencl. Fl. Ital., Pt. 1* 48. 1950, *Genera Graminum* 374. 1986.

Aikinia Wallich = *Aikinia* R. Br.
(Gesneriaceae), *Ratzeburgia* Kunth

For the British (b. Lancs) chemist Arthur Aikin, 1773-1854 (London), 1818 Fellow of the Linnean Society, son of the British naturalist and physician John Aikin (1747-1822); see Dawson Turner & Lewis Weston Dillwyn (1778-1855), *The Botanist's Guide through England and Wales*. London 1805, *Révision des Graminées* 2: 487, t. 158. 1831, *Plantae Asiaticae Rariores* 3: 46, 65, t. 273. 1832 and *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 85. 1960.

Aimeea Rifat = *Vietnamosasa* T.Q. Nguyen

Named for the French botanist Aimée Antoinette Camus, 1879-1965.

Southeast Asia, Vietnam, Thailand, Cambodia, Laos. Bambusoideae, Bambusodae, Bambuseae, Racemobambosinae, see *Bull. Mus. Nat. Hist. Paris* 25: 672. 1919, *Bull. Mus. Nat. Hist. Paris* 27: 450. 1921, *Journal Arnold Arboretum* 6: 151-152. 1925, *Kew Bulletin* 44(2): 365. 1989, *Bot. Zhurn.* 75: 221-225. 1990.

Aira L. = *Airella* (Dumort.) Dumort., *Aspris* Adans., *Caryophyllea* Opiz, *Fiorinia* Parl., *Fussia* Schur, *Salmasia* Bubani

From the Greek ancient name applied to another plant, possibly *Lolium temulentum* L.; Latin *aera* for a weed among grain, darnel, tare or cockle (Plinius). See Hippocrates, *De Morbis Mulierum*. II. 193, *De Natura Muliebri*. 105; Aristoteles, *De Somno et Vigilia*. 456b 30 (editor D. Ross, Oxford 1955).

About 8-12 species, Mediterranean, temperate Europe, North Africa, western Asia. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Airinae, annual or biennial, small and flimsy, herbaceous, delicate, slender, caespitose or tufted, glabrous to scabrous, erect or ascending, unbranched, glabrous nodes, hollow internodes, auricles absent, sheaths terete, ligule membranous and unfringed, leaves setaceous and short, leaf blade filiform or narrow-linear to linear, plants bisexual, inflorescence an open or contracted panicle, delicate panicles lax and branched, small and solitary spikelets laterally compressed and pedicellate, pedicels more or less thickened at the apex, short rachilla not prolonged beyond the florets, 2 bisexual florets, 2 papery and keeled glumes equal or subequal, reduced floret absent, lemmas

acuminate to lanceolate and bifid, awned or unawned, awn geniculate with a twisted column, palea tightly clasped by the lemma and apically notched, 2 acute to lanceolate lodicules free and membranous, 3 stamens, ovary glabrous, 2 stigmas, some species ornamental and cultivated, fodder grasses, little forage value, of limited importance as stock feed, weeds, not considered troublesome, found in dry and open habitats, sandy soils, disturbed areas, grasslands, sometimes confused with *Deschampsia* P. Beauv., type *Aira praecox* L., see *Species Plantarum* 1: 63-66. 1753, *Genera Plantarum* edition 5. 31. 1754, *Familles des Plantes* 2: 496. 1763, *Observations sur les Graminées de la Flore Belgique* 120, 121. 1824, *Compendium Florae Germaniae. Editio altera* 1(1): 139. 1836, Salomon Thomas Nicolai Drejer (1813-1842), *Flora excursoria hafniensis Hafniae* 1838, *A Manual of the Botany of the Northern United States* 605. 1848, *Flora italiana, ossia descrizione delle piante ...* 1: 232. Firenze 1848 [1850], *A Manual of the Botany of the Northern United States. Second Edition* 572. 1856, Ferdinand Schur (1799-1878), *Enumeratio Plantarum Transsilvaniae* 754. Vindobonae [Wien] 1866, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868 and *U.S. Dept. Agr. Bull.* 772: 116. 1920, *Amer. J. Bot.* 21: 135. 1934, *N. Amer. Fl.* 17: 567. 1939, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 13: 179-180. 1967, *Brittonia* 23(3): 293-324. 1971, *Acta Biologica Cracoviensia, Series Botanica* 27: 57-74. 1985, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 34: 27-32. 1987, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66, 153-205. 1990, *New Zealand Journal of Botany* 29: 101-116. 1991, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Taxon* 41: 556. 1992, *Opera Botanica* 121: 159-172. 1993, *Flora Mesoamericana* 6: 235. 1994, *Taxon* 44: 611-612. 1995, *Bothalia* 26(1): 53-61. 1996, *Thaiszia* 9(1): 31-40. 1999, *Contributions from the United States National Herbarium* 48: 89-96. 2003.

Species

A. alpina L. (*Aira alpina* Lilj., nom. illeg., non *Aira alpina* L.; *Aira alpina* Roth ex Schur, nom. illeg., non *Aira alpina* L.; *Aira alpina* Savi; *Aira caespitosa* subsp. *alpina* (L.) Hook.f.; *Aira major* subsp. *alpina* (L.) Syme ex J.E. Sowerby; *Avena alpina* (L.) Trin., nom. illeg., non *Avena alpina* Sm.; *Deschampsia alpina* (L.) Roem. & Schult.; *Deschampsia caespitosa* subsp. *alpina* (L.) Tzvelev; *Deschampsia cespitosa* subsp. *alpina* (L.) Tzvelev, nom. illeg., non *Deschampsia cespitosa* var. *alpina* Schur; *Deschampsia cespitosa* var. *alpina* Schur)

North Europe. See *Species Plantarum* 65. 1753, *Botanicon etruscum* sistens plantas in Etruria sponte crescentes ... Pisis 1: 52. 1808-1825, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Systema Vegetabilium* 2: 686. 1817, *Fundamenta Agrostographiae* 157. 1820, *Österreichische*

Botanische Zeitschrift 9: 326. 1859, *The Student's Flora of the British Islands* 3: 437. 1870, *English Botany, ... third edition* 11: 65. 1877 and *Taxon* 49(2): 243. 2000.

A. caryophyllea L. (*Agrostis caryophyllea* (L.) Salisb.; *Aira latigluma* Steud.; *Airella caryophyllea* (L.) Dumort.; *Airop-sis caryophyllea* (L.) Fr.; *Aspris caryophyllea* (L.) Nash; *Avena caryophyllea* (L.) Weber; *Caryophyllea airoides* Opiz; *Fussia caryophyllea* (L.) Schur; *Salmasia vulgaris* Bubani)

Europe, Eurasia, Africa, Morocco, Algeria. Annual, low, delicate, variable, herbaceous, solitary or tufted, erect, slender, glabrous, auricles absent, sheaths open and rough or scabrid, ligule slightly hairy and more or less toothed at the apex or shortly denticulate, leaf blades extremely narrow, leaves grooved and scabrous, open and widely branched flower head, loose and spreading panicles broadly ovoid, silvery-gray to purplish spikelets, glumes are equal and enclose two flowers, shining entire glumes acute to acuminate, lemmas awned and scabrid, bent and twisted awns, palea slightly shorter than the lemmas, anthers yellow, glabrous fruit laterally and ventrally compressed, forage, weed naturalized elsewhere, ornamental, grows in dry and open rocky sites, sandy soils, rock gardens, grasslands, pastures, disturbed areas, ballast, subalpine shrubland, near moist areas, upland, see *Species Plantarum* 1: 66. 1753, *Prodrum stirpium in horto ad Chapel Allerton vigentium*. 25. Londini [London] 1796, Elias Magnus Fries (1794-1878), *Novitium florum suecicae mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845, *Synopsis Plantarum Glumacearum* 1: 22. 1853, *Enumeratio Plantarum Transsilvaniae* 754. 1866, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868 and *Flora Pyrenaea ...* 4: 316. 1901, *An Illustrated Flora of the Northern United States* 1: 214. 1913.

in English: silver hairgrass, silvery hairgrass, silvery hair grass, common silver hairgrass, silver European hairgrass

in French: canche caryophyllée

in Italian: nebbia maggiore

A. caryophyllea L. subsp. *caryophyllea*

Eurasia. Sea level to subalpine, see *Species Plantarum* 1: 66. 1753 and *New Zealand Journal of Botany* 29: 101-116. 1991.

A. caryophyllea L. subsp. *multiculmis* (Dumort.) Bonnier & Layens (*Aira caryophyllea* subsp. *multiculmis* (Dumort.) P. Fourn., nom. illeg., non *Aira caryophyllea* subsp. *multiculmis* (Dumort.) Bonnier & Layens; *Aira multiculmis* Dumort.)

Southwestern Europe. Sandy wasteland, along roadsides, see *Observations sur les Graminées de la Flore Belgique* 121, t. 7, f. 28. 1823 [1824], *Flore de France* 358. 1894 and *New Zealand Journal of Botany* 29: 101-116. 1991.

A. caryophyllea L. var. *caryophyllea*

Europe. Found in dry sand, waste places, see *Species Plantarum* 1: 66. 1753.

in English: silver hairgrass

A. cupaniana Guss. (*Aira capillaris* var. *cupaniana* (Guss.) Fiori; *Aira caryophyllea* var. *cupaniana* (Guss.) Cosson & Durand; *Airella cupaniana* (Guss.) Dumort.; *Avena cupaniana* (Guss.) Nyman) (after the Italian monk Francesco Cupani, 1657-1710/1711, botanist, a pupil of Silvio Boccone, in Misilmeri (near Palermo) founded the Botanic Garden of Giuseppe del Bosco principe della Cattolica, his works include *Hortus Catholicus*, seu Ill. et Excell. Principis Catholicae ducis Misilmeris, comitis Vicaris, baronis Prizi, nec non magni baronis Siculianae. Neapoli 1696, *Supplementum alterum ad Hortum Catholicum*. Panormi 1697, *Catalogus plantarum sicularum* noviter adinventarum. Panormi [Palermo] 1692, *Syllabus plantarum Siciliae nuper detectarum*. Panormi 1694 and *Pamphyton siculum*, sive historia naturalis de animalibus, stirpibus, fossilibus, etc. Panormi 1713; see Carl Linnaeus, *Species Plantarum*. 200. 1753 and *Genera Plantarum*. edition 5. 93. 1754; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 80-81. Palermo 1988; Giuseppe M. Mira, *Bibliografia Siciliana*. 1: 285-286. Palermo 1881; *Ann. Naturhist. Mus. Wien* 103B: 461-472. 2001)

Europe, Mediterranean. Annual, variable, delicate, open, solitary or tufted or caespitose, slender, usually erect or geniculate at the base, sheaths scabrid, ligule acute and hyaline, leaf blades folded or involute, inflorescence open and spreading, loose and broadly ovoid silvery panicles, cleistogamous spikelets, glumes subobtusate to acuminate and often mucronate, glumes mostly denticulate, lower lemma often awnless, palea hyaline to membranous, anthers yellow or purple, fruit ventrally compressed and shallowly longitudinally grooved, forage, weed species naturalized elsewhere, found in disturbed areas, shallow soil, slopes, grasslands, disturbed woodland, in pastures, see *Flora Siculae Synopsis* 1: 148. 1843, *Exploration Scientifique de l'Algérie* 2: 95. 1854-1855, *Sylloge Florae Europaeae* 414. 1854-1855, *Compendio della Flora Italiana* 1: 59. 1869, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868, *Synopsis der mitteleuropäischen Flora* 2: 284. 1899 and Michele Lojacono-Pojero (1853-1919), *Flora Sicula* 3: 297. Palermo 1908-1909, *Nuova Flora Analitica d'Italia* 1: 103. 1923, *Flore de l'Afrique du Nord*: 2: 352. 1953.

in English: English hairgrass, silver hairgrass, silvery hairgrass

in Italian: nebbia cupaniana, nebbia di Cupani

in Morocco: sibouss, ivraie aristée

in South Africa: haasgras

A. elegans Willd. ex Kunth (*Aira capillaris* Host, non Savi; *Aira caryophyllea* var. *capillaris* (Host) Mutel; *Aira elegans* Vill., *Aira elegans* Willd. ex Gaudin; *Aira elegans* subsp.

ambigua (Arcang.) Holub; *Aira elegantissima* Schur; *Aspris capillaris* (Host) A.S. Hitchc.)

Europe, Mediterranean. Erect, tufted, slender, leaf sheath membranous to submembranous, ligule smooth and denticulate, loose inflorescence ovate paniculate very delicate, scabrid glumes ovate-lanceolate, lemmas membranous and usually awned, lower lemma sometimes awnless, lowland, swamp margins, grassland, some authors used the name *Aira elegantissima* Schur, see *Agrostologia Helvetica, definitionem ...* 1: 130, 355. 1811, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 289. 1833, *Nomenclator Botanicus. Editio secunda* 1: 44. 1840, *Verhandlungen und Mittheilungen des Siebenbürgischen Vereins für Naturwissenschaften zu Hermannstadt* 4: 85. 1853, *Synopsis Plantarum Glumacearum* 1: 221. 1854, *Flore de France* 3: 505. 1855, *Verhandlungen des Botanischen Vereins von Berlin und Brandenburg* 3-4: 79. 1861-62, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868 and *Phytologia* 69: 301-302. 1990, *New Zealand Journal of Botany* 29: 101-116. 1991, *Phytologia* 74: 49. 1993.

in English: annual hairgrass, elegant hairgrass

in Italian: nebbia minore

A. elegantissima Schur (*Aira ambigua* De Not., nom. illeg., non *Aira ambigua* Michx.; *Aira capillaris* Host, nom. illeg., non *Aira capillaris* Savi; *Aira capillaris* subsp. *ambigua* Arcang.; *Aira capillaris* var. *ambigua* (Arcang.) Asch. & Graebn.; *Aira caryophyllea* var. *capillaris* (Host) Vis.; *Aira corsica* Jord., nom. illeg., non *Aira corsica* Tausch; *Aira elegans* Willd. ex Gaudin; *Aira elegans* Willd. ex Kunth; *Aira elegans* subsp. *ambigua* (Arcang.) Holub; *Aira elegans* subsp. *notarisiana* (Steud.) Soják; *Aira elegantissima* subsp. *hosteana* Holub; *Aira notarisiana* Steud.; *Airella capillaris* (Host) Dumort.; *Aiopsis capillaris* (Host) Schur; *Aspris capillaris* (Host) Hitchc.; *Avena capillaris* (Host) Mert. & W.D.J. Koch; *Fussia capillaris* (Host) Schur)

Mediterranean, Europe, Eurasia. Annual, herbaceous, loosely tufted or solitary, slender, erect or decumbent, flimsy and narrow, sheath and ligule glabrous to slightly scabrous, ligule hyaline and acute, leaf blade flat or convolute, open inflorescence, panicles loose and ovoid with spreading branches, fine and delicate inflorescences, glumes acute, lemmas scabrid and acuminate, more or less exserted awns, lower lemma often awnless, palea gaping and narrowly ovate, anthers yellow or purple, glabrous fruit ventrally compressed and not grooved, forage, ornamental, in disturbed areas, sandy to clay soils, grasslands, open woodland, damp ground, open sites, in pastures, see *Species Plantarum* 1: 66. 1753, *Icones et Descriptiones Graminum Austriacorum* 4: 20, t. 35. 1809, *Agrostologia Helvetica, definitionem ...* 1: 130, 355. 1811, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 289. 1833, *Nomenclator Botanicus. Editio secunda* 1: 44. 1840, *Flora Dalmatica* 1: 68. 1842, *Annales des Sciences Naturelles; Botanique, sér.*

3 5: 365. 1846, *Verhandlungen und Mittheilungen des Siebenbürgischen Vereins für Naturwissenschaften zu Hermannstadt* 4: 85. 1853, *Synopsis Plantarum Glumacearum* 1: 221. 1854, *Flore de France* 3: 505. 1855, *Österreichische Botanische Zeitschrift* 9: 328. 1859, *Verhandlungen des Botanischen Vereins von Berlin und Brandenburg* 3-4: 79. 1861-62, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868 and *United States Department of Agriculture: Bulletin* 772: 116. 1920, *Folia Geobotanica et Phytotaxonomica* 8(2): 176. 1973, *Notes from the Royal Botanic Garden, Edinburgh* 40(3): 509. 1983, *Phytologia* 69: 301-302. 1990, *New Zealand Journal of Botany* 29: 101-116. 1991, *Phytologia* 74: 49. 1993.

in English: elegant European hairgrass, delicate hairgrass, lace hairgrass

A. praecox L. (*Agrostis praecox* (L.) Salisb.; *Airella praecox* (L.) Dumort.; *Aiopsis praecox* (L.) Fr.; *Aspris praecox* (L.) Nash; *Avena praecox* (L.) P. Beauv.; *Caryophyllea praecox* (L.) Opiz; *Fussia praecox* (L.) Schur; *Salmasia praecox* (L.) Bubani; *Trisetum praecox* (L.) Dumort.)

Europe. Annual, herbaceous, montane to subalpine, small, erect, slender, solitary or tufted, sheaths inflated and smooth to scaberulous, ligule acute and hairy to scabrid, leaf blade convolute and grooved, panicle linear with erect branches, dense spike-like and narrow-obovate panicles, spikelets crowded, tightly closed flower head, hermaphrodite florets 2 per spikelet, glumes acute and shining, lemmas awned, shortly exserted awns, palea ciliate rounded to narrowly ovate or oblanceolate, yellow anthers, glabrous fruit ventrally compressed and deeply furrowed, forage, weed species, growing in disturbed areas, open sites, rocky slopes, in wetter sclerophyll forest, sandy and acidic soils, stony disturbed surfaces, ballast and waste ground, very similar to *Aira caryophyllea* L., see *Species Plantarum* 1: 63, 65-66. 1753, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 24. 1796, *Essai d'une Nouvelle Agrostographie* 89, 149, 154. 1812, *Observations sur les Graminées de la Flore Belgique* 122, t. 8, f. 30. 1823, Elias Magnus Fries, *Novitiarum florum suecicae mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845, *Enumeratio Plantarum Transsilvaniae* 754. 1866, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868, *Synopsis der mitteleuropäischen Flora* 2: 285. 1899 and *Flora Pyrenaea ...* 4: 316. 1901, *An Illustrated Flora of the Northern United States* 1: 215. 1913, *List of British Plants* edition 2 127. 1928, *Amer. J. Bot.* 21: 135. 1934, *New Zealand Journal of Botany* 29: 101-116. 1991, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Brittonia* 54(3): 154-163. 2002.

in English: early hairgrass, early hair grass, early silver hairgrass, yellow hairgrass, spike hairgrass

A. provincialis Jordan (*Aira caryophyllea* var. *provincialis* (Jordan) Fiori; *Aira provincialis* Gennar ex Nyman; *Airella*

provincialis (Jordan) Dumort.; *Avena provincialis* (Jordan) Nyman)

Europe. Annual, small, glaucous, slender, erect or geniculate at the base, solitary or clumped or tufted or caespitose, auricles absent, sheaths scabrous, ligule acute and membranous, scabrous leaves grooved or convolute, panicle very open and loose, hermaphrodite florets 2 per spikelet, glumes acute and scabrous, lemma acute and awned, palea 2-dentate, occurs in disturbed areas and woodland, sandy soils, similar to *Aira caryophyllea* L., see *Pugillus Plantarum Novarum* 142. 1852, *Sylloge Florae Europaeae*, Suppl., 71. 1865, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868, *Flora Analytica d'Italia* 1: 67. 1886.

in English: hairgrass

in French: canche de Provence

in Italian: nebbia della Provenza

A. tenorei Guss. (*Aira capillaris* subvar. *tenorii* (Guss.) Cosson & Durand, also spelled *tenorei*; *Aira capillaris* var. *tenorii* (Guss.) Walp.; *Aira caryophyllea* var. *tenorii* (Guss.) T. Durand & Schinz; *Aira pulchella* Link; *Aira pulchella* subsp. *tenorei* (Guss.) Asch. & Graebn. ex Bonte; *Aira pulchella* var. *tenorei* (Guss.) Fiori; *Aira tenorei* Focke ex Willk. & Lange; *Airella tenorii* (Guss.) Dumort.; *Airopsis pulchella* Ten.) (for the Italian botanist Michele Tenore, 1780-1861, his writings include *Catalogo delle piante che si coltivano nel Regio Orto Botanico di Napoli*. Napoli 1845 and *Index Seminum in Horto Botanico Neapolitano Collectorum*. 1839, uncle of the Italian botanist Vincenzo Tenore (1825-1886); see Stafleu and Cowan, *Taxonomic literature*. 6: 212-219. 1986; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 265-268. Palermo 1988; J.H. Barnhart, *Biographical notes upon botanists*. 3: 367. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 789. 1993; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 396. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 252. Oxford 1964)

South Europe. Solitary or tufted, slender, panicles diffuse, spikelets unawned, glumes obtuse, see *Flora Napolitana* 3: 56, 102. 1824-1829, *Fl. Sic. Prodr.* 1: 62. 1827, *Exploration Scientifique de l'Algérie* 2: 96. 1854-1855, *Annals of Botany*. Oxford 6: 993. 1861, *Prodromus Florae Hispanicae* 1: 55. 1861, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868 and *Flora Sicula* (Lojacono) 3: 300. 1909, *Nuova*

Flora Analytica d'Italia 1: 103. 1923, *Decheniana* 94: 118. 1937.

A. uniaristata Lag. & Rodr. (*Aira caryophyllea* subsp. *uniaristata* (Lag. & Rodr.) Maire; *Aira cupaniana* auct., non Guss.)

North Africa, Europe. See *Anales de Ciencias Naturales* 6(16): 148. 1803, *Compendio della Flora Italiana* 1: 59. 1869 and *Bulletin de l'Académie Internationale de Géographie, Botanique* 18: 469. 1908, *Catalogue des Plantes du Maroc* 1: 45. 1931, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 307. 1939, *Flore de l'Afrique du Nord*: 2: 350. 1953.

Airella (Dumort.) Dumort. = *Aira* L.

The diminutive of *Aira*.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Airinae, type *Airella caryophyllea* (L.) Dumort., see *Observations sur les Graminées de la Flore Belgique* 120, 121. 1824, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868 and *N. Amer. Fl.* 17: 567. 1939, *Contributions from the United States National Herbarium* 48: 89-96. 2003.

Airidium Steud. = *Deschampsia* P. Beauv.

Resembling *Aira* L.

Pooideae, Poeae, Airinae, type *Airidium elegantulum* Steud., see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *A Manual of the Botany of the Northern United States* 605. 1848, *Synopsis Plantarum Glumacearum* 1: 423. 1854 and *Contributions from the United States National Herbarium* 48: 245-256. 2003.

Airochloa Link = *Koeleria* Pers.

Probably from the Greek *aira* "hair-grass" and *chloe*, *chloa* "grass."

Pooideae, Poodae, Aveninae, type *Airochloa cristata* (L.) Link, see *Syn. Pl.* 1: 97. 1805, *Hortus Regius Botanicus Berolinensis* 1: 126-127. 1827, *Genera Plantarum* 3(2): 1184. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 70. 1887 and *U.S. Dept. Agric. Bull.* 772: 107. 1920, *Contributions from the United States National Herbarium* 48: 97, 409-419. 2003.

Airopsis Desv. = *Aeropsis* Asch. & Graebn., *Sphaerella* Bubani

Resembling *Aira* L.

One species, Africa, northwest Africa, Sicily, southwest Europe. Pooideae, Poodae, Aveneae, Airopsidaeae, annual,

slender to very slender, herbaceous, auricles absent, uppermost sheath inflated, ligule an unfringed membrane, plants bisexual, inflorescence paniculate open or contracted, spikelets 2-flowered, 2 glumes equal or subequal, lemmas awnless orbicular 3-nerved, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, sandy areas, see *Species Plantarum* 1: 79-81. 1753, *Icones et Descriptiones Plantarum, quae aut sponte ...* 3: 37, t. 274, f. 1. 1794, *Journal de Botanique (Desvaux)* 1: 200. 1809, *Fl. France* 3: 435. 499. 1855, *A Manual of the Botany of the Northern United States. Second Edition* 573. 1856, Paul Friedrich August Ascherson, *Synopsis der mitteleuropäischen Flora* 2(1): 298. Leipzig 1899 and *Boletim da Sociedade Broteriana, ser. 2* 43: 1-140. 1969, *Grana; an international journal of palynology ...* 15: 7-17. 1975, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990.

Species

A. tenella (Cav.) Cosson & Durand (*Airopsis tenella* (Cav.) Asch. & Graebn.)

Europe. Annual, lemma gibbous, open sandy places, see *Exploration Scientifique de l'Algérie* 2: 97. 1867.

in Italian: nebbia, nebbia globosa

in French: airopsis délicat

Alectoridia A. Rich. = *Arthraxon* P. Beauv.

Greek *alektor* “a cock.”

Panicoideae, Andropogoneae, Andropogoninae, type *Alectoridia quartiniana* A. Rich., see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie* 111, t. 11, f. 6. (Dec.) 1812, *Tentamen Florae Abyssinicae ...* 2: 447-448, t. 102. 1850 and *Contributions from the United States National Herbarium* 46: 104-110. 2003.

Alexfloydia B.K. Simon

For the Australian botanist Alexander Geoffrey Floyd, forster, ecologist, botanical collector in Papua New Guinea and Australia, author of *Rainforest Trees of Mainland South-eastern Australia*. Melbourne 1989, *Australian Rainforests in New South Wales*. 2 vols. 1990; see Lawrence Alexander Sidney Johnson (1925-1997) and Barbara Gillian Briggs (1934-), in *Botanical Journal of the Linnean Society*. 70: 176. London (Sep.) 1975.

1 species, Australia, New South Wales. Panicoideae, Panicoideae, Paniceae, perennial, stoloniferous, unarmed, herbaceous, soft, branched, nodes hidden by leaf sheaths, internodes shorter than the leaf sheaths ligule a fringe of hairs, blades flat and smooth, leaves linear and glabrous, plants bisexual, inflorescence a reduced panicle, elliptic

spikelets pedicellate and compressed, 2 florets, lower floret male, upper floret bisexual, 2 glumes very unequal and papery, lower lemma elliptic and papery, upper lemma oblong and glabrous, palea present, 2 free and membranous lodicules, 3 stamens, sometimes referred to *Panicum* L., type *Alexfloydia repens* B.K. Simon, the caterpillar *Ocybadistes knightorum* Lambkin & Donaldson feeds at night on *Alexfloydia*, see B.K. Simon, “*Alexfloydia*, *Cliffordiochloa* and *Dallwatsonia*, three new panicoid grass genera from eastern Australia.” in *Austrobaileya* 3(4): 669-691. 1992.

Species

A. repens B.K. Simon

New South Wales. Perennial, threatened species, weak, stoloniferous, trailing, mat-forming, sheath loose and hairy, ligule a fringe of hairs, lower glume ovate and acute, upper glume elliptic, upper lemma apiculate, a food source of a butterfly living on the midnorth coast of New South Wales, ground cover, grows in moist places, mangrove forest, see *Austrobaileya* 3(4): 670, f. 1. 1992.

Allagostachyum Steud. = *Tribolium* Desv.

Greek *allage* “change” and *stachys* “spike,” see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168, t. 7, f. 2. 1831, *Nomenclator Botanicus. Editio secunda* 1: 50. 1840.

Allelothea Steud. = *Lophatherum* Brongn.

Greek *allelon* “reciprocally, mutually” and *theke* “box, capsule.”

Centothecoideae, Centotheceae, see *Voyage Autour du Monde* 2(2): 49-50, t. 8. 1829 [1831], Ernst Gottlieb von Steudel (1783-1856), *Synopsis plantarum glumacearum*. 1: 117. Stuttgartiae [1853-] 1855 and *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 14-20. 1988-1989 [Sun Yat-Sen Tomb and Memorial] [*Nanjing Zhongshan Zhiwuyuan yanjiu lunwenji*], *Investigatio et Studium Naturae* 12: 48-65. 1992 [*Kao cha yu yen chiu*. Shanghai].

Alloochaete (Rendle) C.E. Hubb. =

Alloochaete C.E. Hubb.

Probably from the Greek *allos* “different, other, diverse” and *chaite* “a bristle.”

About 6 species, Africa, south tropical Africa, Tanzania, Angola, Malawi. Arundinoideae, Danthonieae, perennial, herbaceous, unbranched, tufted, leaves mainly basal, auricles absent, sheath bases densely hairy to tomentose, ligule a fringe of hairs, plants bisexual, narrow inflorescence paniculate, spikelets compressed, 2 glumes more or less equal,

proximal lemmas awned, palea present, 3 stamens, 2 stigmas, open habitats, montane grassland, rocky places, moist peaty soils, shrubby hillsides, type *Alloeochoete andongensis* (Rendle) C.E. Hubb., see *Hooker's Icones Plantarum* 35: t. 3418. 1940, J.M.J. de Wet, "Leaf Anatomy and Phylogeny in the Tribe Danthoneieae." *American Journal of Botany* 43, 3: 175-182. Mar 1956, C.H.S. Kabuye and S.A. Renvoize, "The genus *Alloeochoete*, tribe Danthoneieae (Gramineae)." *Kew Bulletin* 30(3): 569-577. 1975.

Species

A. andongensis (Rendle) C.E. Hubb. (*Danthonia andongensis* Rendle)

Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 212. 1899.

A. geniculata Kabuye

Africa. Perennial, tufted, procumbent, inflorescence lax.

A. gracillima Kabuye

Africa. Perennial, tufted, slender, bulbous, inflorescence contracted.

A. namuliensis Chippindall

Africa. See *Journal of South African Botany* 11: 101, f. 2. 1945.

A. oreogena Launert

Africa, Malawi. Tussock, large, tree trunk-like structure, leaves drooping, see *Garcia de Orta, Série de Botânica* 1(1-2): 91-92. Lisbon 1973.

A. ulugurensis Kabuye

Africa.

Alloiatheros Raf. = *Alloiatheros* Elliott ex Raf., *Gymnopogon* P. Beauv.

Chloridoideae, Cynodonteae, see *Essai d'une Nouvelle Agrostographie* 41, 164. 1812, *Bulletin Botanique [Genève]* 1: 221. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 284. 1833, *Nomenclator Botanicus* edition 2 2: 55. 1840, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888, *Index Kewensis* 1: 83. 1893 and E.D. Merrill (1876-1956), *Index rafinesquianus*. The plant names published by C.S. Rafinesque, etc. 74. Jamaica Plain, Massachusetts, U.S. 1949, *Contributions from the United States National Herbarium* 41: 124-127. 2001.

Allolepis Soderstr. & H.F. Decker

From the Greek *allos* "different, other, diverse" and *lepis* "a scale," referring to the unequal male and female lemmas.

One species, North America, Texas and Mexico, southern U.S. Chloridoideae, Cynodonteae, Monanthochloinae, perennial, herbaceous, erect, caespitose, unarmed, stoloniferous and rhizomatous, long robust stolons, auricles absent, leaf blades flat and not pungent, leaves with a non-distichous arrangement, ligule membranous with ciliate fringe, plants dioecious, inflorescence paniculate, short racemes appressed to an axis, male florets 3-staminate, subcoriaceous glumes 3- to 7-nerved, lemma acute and 3- to 5-nerved, palea margins overlapping the caryopsis, lodicules cuneate, ovary glabrous, 2 stigmas, found in open sandy places, open habitats, genus linked to *Monanthochloe* Engelm., similar to and segregate of *Distichlis* Raf., type *Allolepis texana* (Vasey) Soderstr. & H.F. Decker, see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *Contributions to the United States National Herbarium* 1: 29-65. 1890, *United States Department of Agriculture, Division of Agrostology* 16: 1-6. 1899 and *Gram. Afr. Trop.* 1: 94. 1962, *Madroño* 18(2): 33-64. 1965, *Willdenowia* 5: 472. 1969, *Sida* 16: 529-544. 1995, *Contributions from the United States National Herbarium* 41: 15. 2001.

Species

A. texana (Vasey) Soderstr. & Decker (*Distichlis texana* (Vasey) Scribn.; *Poa texana* Vasey; *Sieglingia wrightii* Vasey)

Northern America. See *Contributions from the United States National Herbarium* 1(2): 60. 1890, *Contributions from the United States National Herbarium* 1(8): 269. 1893, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 2. 1899 and *Madroño* 18(2): 36. 1965.

Alloteropsis J. Presl = *Alloteropsis* J.S. Presl ex C. Presl, *Axonopus* Hook.f., *Bluffia* Nees, *Coridochloa* Nees, *Holosectum* Steud., *Mezochloa* Butzin, *Pterochlaena* Chiov.

From the Greek *allotrios* "foreign, strange, stranger, alien," *allotereon* "foreign" and *opsis* "resemblance."

About 5-8/10-15 species, Old World tropics, Australia, Asia, India, tropical and South Africa. Panicoideae, Panicodae, Paniceae, Setariinae, or Panicoideae, Paniceae, Paspalinae, perennial or annual, herbaceous, unbranched, erect or ascending, caespitose or decumbent, tuberous or not, forming tussocks, tufted and hairy at the nodes, shoots more or less aromatic, ligule a fringed membrane, leaves mostly basal, auricles absent, hollow internodes, leaf blade rolled in bud, plants bisexual, slender racemes digitate or subdigitate, spikelets short-awned and paired or clustered, florets 2 and dissimilar, lower floret usually male, upper floret bisexual, 2 glumes very unequal, lower glume shorter than

the spikelet, upper glume ciliate on the margins, upper lemma shortly awned, palea present and hairy to papillate, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, native pasture species, forage, drought resistant, marshes, weedy places, open or shaded habitats, rainforest, type *Alloteropsis distachya* J. Presl, see *Prodromus Florae Novae Hollandiae* 192. 1810, *Reliquiae Haenkeanae* 1(4-5): 343-344, t. 47. 1830, *Edinburgh New Philosophical Journal* 15: 381. 1833, *Delectus Seminum quae in Horto Hamburgensium Botanico* 1834: 8. 1834, *Fl. Afr. Austr. Ill. 1. Gramineae*, 61. 1841, *Synopsis Plantarum Glumacearum* 1: 118. 1854, *Index Kewensis* 1: 618. 1893, *The Flora of British India* 7(21): 63. 1897 [1896] and *Contributions from the United States National Herbarium* 12(6): 210. 1909, F.M. Bailey, in *Queensland Agricultural Journal*. 27: 69, t. XIX. 1911, *Annali di Botanica* 13: 47. 1914, *Willdenowia* 4: 209, 21. 1966, *Flora of Tropical East Africa* 451-898. 1982, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Botanical Journal of the Linnean Society* 97: 255-259. 1988, *ASBS Symposium 1990: Indo-Pacific Biogeography*, 14. 1990, *Contributions from the United States National Herbarium* 46: 16. 2003.

Species

A. angusta Stapf

Africa, Angola. See *Flora of Tropical Africa* 9: 485. 1919.

A. cimicina (L.) Stapf (*Agrostis cimicina* (L.) Poir.; *Agrostis digitata* Lam.; *Agrostis digitata* (Sw.) Poir., nom. illeg., non *Agrostis digitata* Lam.; *Alloteropsis latifolia* (Peter) Pilg.; *Alloteropsis quintasii* (Mez) Pilg.; *Axonopus cimicinus* (L.) P. Beauv.; *Axonopus latifolius* Peter; *Coridochloa cimicina* (L.) Nees ex Chase; *Coridochloa cimicina* (L.) Nees; *Coridochloa cimicina* (L.) Nees ex B.D. Jacks.; *Eriachne melicacea* f. *fragrans* F.M. Bailey, nom. inval.; *Eriachne melicacea* var. *fragrans* F.M. Bailey; *Milium cimicinum* L.; *Milium digitatum* Sw.; *Panicum cimicinum* (L.) Retz.; *Urochloa cimicina* (L.) Kunth; *Urochloa quintasii* Mez)

Old World tropics, Southeast Asia, tropical Africa, Australia. Short-lived perennial or annual, erect or decumbent or ascending, tufted, low spreading habit, terete, often rooting from the lower nodes, fibrous roots, leaves lanceolate to ovate, inflorescence 1-whorled, spike-like racemes on the top of the peduncle, spikelets ovate-elliptic solitary or clustered, upper glume cartilaginous, upper lemma awned, palea hairy or papillate, weed species, hay, economic and useful plant, roots used in toothache by Lodhas (India), forage, moderate fodder value, useful for erosion control, found in moist areas, along roadsides, lowland, open habitats, weedy places, dry open forest, open dry soils, along water courses, sandy clay soil, sandy soils among rocks, waste places, see *Mantissa Plantarum Altera* 184. 1771, *Obs. Bot.* 3: 9. 1783, *Encyclopédie Méthodique, Botanique* 1: 59. 1783, *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Encyclopédie Méthodique, Botanique*

Suppl. 1: 258. 1810, *Essai d'une Nouvelle Agrostographie* 12, 154. 1812, *Révision des Graminées* 1: 31. 1829, *Edinburgh New Philosophical Journal* 15: 381. 1833, *Enum. Pl. Zeyl.* 5: 358. 1864, *Index Kewensis* 1: 618. 1893 and *Handb. Fl. Ceylon* 5: 166. 1900, *Proceedings of the Biological Society of Washington* 24: 129. 1911, *Flora of Tropical Africa* 9: 487. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 195. 1921, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 164, 165, Anhang 21. 1930, *Handb. Fl. Ceylon* vol. 6: 327. 1931, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 12: 382. 1935, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 13: 263. 1936, *Grasses of Ceylon* 149, pl. 35. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 128. 1959, *Grasses of Burma ...* 276. 1960, *Bull. Bot. Soc. Beng.* 32: 48-53. 1978.

in English: Cockatoo grass, bug seed grass, summer grass, carpet grass

in Sri Lanka: unni pul, budeni tana

in India: suni, siuri, neeru sajjae hullu

in China: chou chong cao

A. distachya J. Presl

Philippines. See *Reliquiae Haenkeanae* 1(4-5): 344, t. 47. 1830.

A. paniculata (Benth.) Stapf (*Axonopus paniculatus* Stapf; *Echinochloa paniculata* (Benth.) Roberty; *Mezochloa aubertii* (Mez) Butzin; *Oplismenus benthamii* (Steud.) Corderm.; *Panicum aubertii* Mez; *Panicum benthamii* (Benth.) Steud.; *Urochloa paniculata* Benth.)

Africa, Benin, Zambia. Annual, often decumbent, forming large tufts, digitate racemes, purple spikelets, scented roots, good fodder, a weed of rice, moist soils, dry sites, damp places, see *Niger Flora* 558. 1849, *Synopsis Plantarum Glumacearum* 1: 43. 1854[1853], *Flore de l'Île de la Réunion* 118. 1895 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 134. 1904, *Flora of Tropical Africa* 9: 486-487. 1919, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franc. Afr. Noire, Sér. A.*, 17: 67. 1955, *Willdenowia* 4: 209, 211. 1966.

in Mali: hori, subu

in Sierra Leone: kasota, kesinkr, ndiwi, yane, yani, yobovatu

in West Africa: hori, ndiwi, subu, yani

A. papillosa Clayton

South Africa, Kenya. Perennial, tufted, knotted at the base, leaf sheaths hairy, on sandy soils, open or shaded habitats, see *Kew Bulletin* 33(1): 21. 1978.

A. semialata (R. Br.) Hitchc. (*Alloteropsis eckloniana* (Nees) Hitchc.; *Alloteropsis gwebiensis* Stent & Rattray; *Alloteropsis homblei* Robyns; *Alloteropsis semialata* var. *eckloniana* (Nees) C.E. Hubb. ex Bor, nom. illeg., non

Alloteropsis semialata var. *eckloniana* (Nees) Pilg.; *Alloteropsis semialata* var. *ecklonii* (Stapf) Stapf; *Axonopus ecklonianus* Stapf ex Chiov.; *Axonopus semialatus* (R. Br.) Hook.f.; *Axonopus semialatus* var. *ecklonianus* (Nees) Peter; *Axonopus semialatus* var. *ecklonii* (Nees) Stapf; *Bluffia eckloniana* Nees; *Coridochloa semialata* (R. Br.) Nees ex Lindl.; *Coridochloa semialata* (R. Br.) Nees; *Oplismenus semialatus* (R. Br.) Desv.; *Panicum semialatum* R. Br.; *Panicum semialatum* var. *ecklonianum* (Nees) Hack. ex T. Durand & Schinz; *Paspalum semialatum* (R. Br.) Eyles; *Paspalum semialatum* var. *ecklonii* Eyles; *Pterochaena catangensis* Chiov.; *Urochloa semialata* (R. Br.) Kunth

Tropical Africa, Asia, Australia. Perennial, polymorphic, shortly rhizomatous, densely tufted, erect, herbaceous, tussock-forming, smooth basal stems, vigorous rootstock, the base thickened and coated with densely hairy scales, leaf blades linear, sheath silky tomentose, erect leaves silky to hairy, ligule a short silky rim, racemes digitate, spikelets shortly acuminate and awned, lower glume ovate, upper glume acuminate and more or less winged, upper lemma lanceolate, golden anthers, large seeds purple black, seeds heavily, attractive and ornamental, a decreaser species, economic plant, good grazing, good fodder value, pasture species, forage, grazed by cattle, palatable and nutritious when young, uprooted and eaten by pigs, can withstand burning and heavy grazing, very drought resistant, can withstand some waterlogging, in Australia stems used to dip honey out native bee hives, seed of this grass is a favourite food of hooded parrots and golden-shouldered parrots as well, occurs in open grassland or woodland, clay soil, savannah, see *Mant. Pl. Altera* 184. 1771, *Obs. Bot.* 3: 9. 1783, *Prodromus Florae Novae Hollandiae* 192. 1810, *Révision des Graminées* 1: 31. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 185. 1831, *Edinburgh New Philosophical Journal* 15: 381. 1833, *Delectus Seminum quae in Horto Hamburgensium Botanico* 1834: 8. 1834, *Journal of Botany* 2: 97. London 1850 [*The Journal of Botany*, Hooker, being a second series of the *Botanical Miscellany*], *Enum. Pl. Zeyl.* 5: 358. 1864, *Conspectus Florae Africae* 5: 764. 1894, *Fl. Br. Ind.* 7(21): 64. 1896, *Flora Capensis* 7: 418. 1899 and *Handb. Fl. Ceylon* vol. 5: 167. 1900, *Contributions from the United States National Herbarium* 12(6): 210. 1909, *Annali di Botanica* 13: 47. Roma 1914, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Transactions of the Royal Society of South Africa* 5: 299. 1916, *Fl. Trop. Afr.* 9: 485, 487. 1919, *Nuovo Giornale Botanico Italiano* 26: 79. 1919, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 1: 165. 1929, *Handb. Fl. Ceylon* 6: 237. 1931, *Bulletin du Jardin Botanique de l'État* 9(3): 172. 1932, *Proceedings of the Rhodesia Scientific Association* 32: 21. 1933, *Grasses of Ceylon* 149. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 128. 1959, *Grasses of Burma ...* 276-277. 1960, *S. Afr. J. Sci.* 70: 169-173. 1974, *Bothalia* 14: 205-213. 1983, *Annals of the*

Missouri Botanical Garden 75: 866-873. 1988, *Botanical Journal of the Linnean Society* 97: 255-259. 1988.

in English: Cockatoo grass, sugar bag grass, blackseed grass in the Philippines Islands: timi

in China: mao ying cao

A. semialata (R. Br.) Hitchc. subsp. *eckloniana* (Nees) Gibbs-Russ. (*Alloteropsis eckloniana* (Nees) Hitchc.; *Alloteropsis semialata* auctt.; *Alloteropsis semialata* (R. Br.) Hitchc.; *Alloteropsis semialata* (R. Br.) Hitchc. var. *ecklonii* (Stapf) Stapf; *Bluffia eckloniana* Nees; *Panicum semialatum* var. *ecklonianum* (Nees) Hack. ex T. Durand & Schinz)

Africa, Swaziland, Tanzania, South Africa. Perennial, tufted, short rhizomatous, unbranched culms, leaf blades flattened and densely hairy, basal sheath ribbed, ligule membranous, racemes digitate, spikelets with a short awn, unpalatable grass, low grazing value, growing in open sour grassland, moist places, in sour bushveld, hill slopes, on stony soils, see *Delectus Seminum quae in Horto Hamburgensium Botanico* 1834: 8. 1834, *Conspectus Florae Africae* 5: 764. 1894 and *Bothalia* 14(2): 211. 1983.

in English: black-seed grass

in South Africa: donkersaadgras

in China: zi wen mao ying cao

A. semialata (R. Br.) Hitchc. subsp. *semialata* (*Alloteropsis semialata* (R. Br.) Hitchc.; *Arundinella schultzei* Benth.; *Holisetum philippicum* Steud.; *Oplismenus semialatus* (R. Br.) Desv.; *Panicum philippicum* (Steud.) Villalobos; *Panicum semialatum* R. Br.; *Urochloa semialata* (R. Br.) Kunth)

Africa, Kenya, Nigeria, Senegal, Swaziland, Tanzania, South Africa, Asia temperate and tropical, India, China, Thailand, Sri Lanka, Australia, Northern Territory, Queensland, Western Australia, New South Wales. In small dense tufts, woody rootstock, leaf blades convolute, leaves narrow and sparsely hairy, spikelets loosely arranged, growing in hard dry sandy soils, hill slopes, along forest margins, woodland, see *Prodromus Florae Novae Hollandiae* 192. 1810, *Révision des Graminées* 1: 31. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 185. 1831, *Synopsis Plantarum Glumacearum* 1: 118. 1854, *Flora Australiensis: A Description ...* 7: 545. 1878.

in China: yuan bian zhong, mao ying cao

A. semialata (R. Br.) Hitchc. var. *viatica* (Griffith) Ellis & S. Karthikeyan ex S. Karthikeyan (*Aira viatica* Griffith; *Alloteropsis semialata* var. *viatica* (Griffith) J.L. Ellis & Karth.)

India, Assam, Kerala, Sri Lanka. Upper glumes winged, see *Notulae ad Plantas Asiaticas* 3: 54. 1851 and *Bulletin of the Botanical Survey of India* 13(3-4): 175. 1971[1974], *Journal of the Bombay Natural History Society* 70(3): 594. 1973[1974].

Alopecuropsis Opiz

Resembling the genus *Alopecurus* L.

Pooideae, Poaceae, Alopecurinae, type *Alopecuropsis textilis* (Boiss.) Opiz, see *Species Plantarum* 1: 60-61. 1753, *Lotos* 7: 84. 1857 and *Regnum Veg.* 127: 17. 1993, *Contributions from the United States National Herbarium* 48: 97-106. 2003.

Alopecurus L. = *Alopecuropsis* Opiz, *Colobachne* P. Beauv., *Tozzettia* Savi

From the Greek *alopekourous*, grass like a fox's tail, *alopex* "a fox" and *oura* "a tail," referring to the shape of the panicle, from the form of the spike-like panicle; Latin *alopecurus*, a kind of plant, according to Sprengel a species of *Saccharum*; see Carl Linnaeus, *Species Plantarum*. 60. 1753 and *Genera Plantarum*. edition 5. 30. 1754.

About 25-36(-50) species, northern temperate areas, Eurasia, temperate South America. Pooideae, Poodae, Aveneae, or Pooideae, Poaceae, Alopecurinae, annual or perennial, tufted, leafy, few- to many-noded, herbaceous, rhizomatous or stoloniferous, sometimes decumbent or geniculate at base, sometimes rooting at lower nodes, unbranched, glabrous nodes, hollow internodes, narrow leaf blades linear to linear-lanceolate, leaf sheath open, ligule an unfringed membrane, leaves flat, plants bisexual, inflorescence dense and cylindrical, a soft and narrow spike-like panicle, spikelets densely crowded and arranged in a dense spiral, spikelets with female-fertile florets only, 1 bisexual floret, reduced floret absent, 2 glumes more or less equal and strongly keeled and not awned, lemma 3- to 5-nerved enclosed within the glumes, obtuse lemma membranous and awned on dorsal surface, awn bent and twisted or straight, palea usually absent or very reduced, lodicules absent, 3 stamens, ovary glabrous, stigmas exerted, agricultural weed species, palatable forage for livestock, useful cultivated fodder grasses, native pasture species, ornamental, found in grasslands, swampy ground, irrigation channels, damp meadows, pampas, stony slopes, open habitats, similar to *Phleum* L., type *Alopecurus pratensis* L., see *Species Plantarum* 1: 60-61. 1753, *Species Plantarum, Editio Secunda* 89. 1762, *Memorie di Matematica e di Fisica della Società Italiana delle Scienze* 8(2): 477. 1799, *Annalen der Botanik ... Herausgegeben von Dr. Paulus Usteri ... Zürich 1791-1800, English Botany* 21: t. 1467. 1805, *Essai d'une Nouvelle Agrostographie* 22, 158. 1812, *Observations sur les Graminées de la Flore Belgique* 132. 1823 [1824], *Flora Rossica* 4(14): 640. 1853, *Nuovi Generi e Nuove Specie di Piante Monocotiledoni* 11. 1854, *Lotos* 7: 84. 1857 and *Flora Pyrenaea ...* 4: 274-275. 1901, *American Midland Naturalist* 4: 216. 1915, *Revista de la Facultad de Agronomía y Veterinaria* 7(2): 345-369. 1931, *Novosti Sist. Vyss. Rast.* 6: 18. 1970, *Flora Iranica: Gramineae* 70: 277. Graz

1970, *Novosti Sist. Vyss. Rast.* 8: 12-22. 1971, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Bot. Zhurn. SSSR* 69(12): 1703-1704. 1984, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 32: 57-70. 1985, *Bot. Zhurn. SSSR* 70(12): 1698-1699. 1985, *Taxon* 34: 346-351. 1985, *Acta Biologica Cracoviensia, Series Botanica* 28: 65-85. 1986, *Journal of Cytology and Genetics* 21: 155. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Annali di Botanica* 45: 75-102. 1987, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988 [by N. Galland], *Willdenowia* 19: 199-213. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1675-1678. 1989, *Cytologia* 55: 169-173, 217-223. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1185. 1990, *Flora Mediterranea* 1: 229-236. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 76: 476-479. 1991, *Cytologia* 56: 437-452. 1991, *Fitologija* 39: 72-77. 1991, *Bocconea, Monographiae Herbarii Mediterranei Panormitani* 3: 229-250. 1992, *Regnum Veg.* 127: 17. 1993, *Flora Mesoamericana* 6: 242. 1994, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996, *Flora Mediterranea* 7: 204-213. 1997, *Watsonia* 21: 365-368. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Turkish Journal of Botany* 23(4): 245-262. 1999, *Opera Botanica* 137: 1-42. 1999, *Contributions from the United States National Herbarium* 48: 97-106, 237, 656. 2003, *Am. J. Bot.* 91: 889-898. 2004, *Functional Ecology* 18(1): 77-86. Feb 2004, *Ecography* 27(2): 242-252. Apr 2004, *Weed Research* 44(3): 178-186, June 2004, *Weed Research* 44(5): 375-387. Oct 2004, *Weed Research* 44(6): 414-432, 460-468. Dec 2004, *Weed Research* 45(1): 2-17. Feb 2005, *Journal of Applied Ecology* 42(1): 13-24. Feb 2005, *Journal of Ecology* 93(1): 138-147. Feb 2005, *Ecology Letters* 8(4): 419-429. Apr 2005, *Global Change Biology* 11(4): 525-536. Apr 2005, *Journal of Applied Ecology* 42(2): 239-250. Apr 2005 [Predicting plant species' responses to river regulation: the role of water level fluctuations.], *Plant Breeding* 124(2): 147-153. Apr 2005, *Journal of Agronomy and Crop Science* 191(2): 152-160. Apr 2005, *Weed Research* 45(2): 140-148. Apr 2005, *New Phytologist* 166(2): 537-550. May 2005, *Oikos* 109(3): 521-534. June 2005, *Weed Research* 45(3): 165-174, 202-211, 220-227. June 2005.

Species

A. aequalis Sobol. (*Alopecurus aequalis* f. *fluitans* Parodi; *Alopecurus aequalis* f. *foliosus* Parodi; *Alopecurus aequalis* f. *notacens* (Hack.) Parodi; *Alopecurus aequalis* f. *violaceus* (Hack.) Parodi; *Alopecurus aequalis* subsp. *aequalis*; *Alopecurus aequalis* subsp. *amurensis* (Kom.) Hultén; *Alopecurus aequalis* subsp. *amurensis* (Kom.) T. Koyama, nom. illeg., non *Alopecurus aequalis* subsp. *amurensis*

(Kom.) Hultén; *Alopecurus aequalis* subsp. *aristulatus* (Michx.) Tzvelev; *Alopecurus aequalis* subsp. *natans* (Wahlenb.) Á. Löve & D. Löve; *Alopecurus aequalis* var. *aequalis*; *Alopecurus aequalis* var. *amurensis* (Kom.) Ohwi; *Alopecurus aequalis* var. *aristulatus* (Michx.) Tzvelev; *Alopecurus aequalis* var. *fluitans* (Parodi) Mariano; *Alopecurus aequalis* var. *natans* (Wahlenb.) Fernald; *Alopecurus aequalis* var. *sonomensis* P. Rubtzov; *Alopecurus aequalis* var. *violaceus* (Hack.) Mariano; *Alopecurus amurensis* Kom.; *Alopecurus aristulatus* Michx.; *Alopecurus aristulatus* var. *merriami* (Beal ex J.M. Macoun) H. St. John; *Alopecurus aristulatus* var. *natans* (Wahlenb.) Simmons; *Alopecurus baptarrhenius* S.M. Phillips; *Alopecurus brachytrichus* Ohwi; *Alopecurus caespitosus* Trin.; *Alopecurus diandrus* Griff.; *Alopecurus fulvus* Smith; *Alopecurus fulvus* f. *violacea* Hack.; *Alopecurus fulvus* var. *amurensis* (Kom.) Roshev.; *Alopecurus geniculatus* f. *robustior* Hack. ex Kneuck.; *Alopecurus geniculatus* subsp. *fulvus* (Sm.) C. Hartm.; *Alopecurus geniculatus* var. *aequalis* (Sobol.) Fiori; *Alopecurus geniculatus* var. *aequalis* (Sobol.) Paunero; *Alopecurus geniculatus* var. *amurensis* (Kom.) Roshev.; *Alopecurus geniculatus* var. *aristulatus* (Michx.) Torr.; *Alopecurus geniculatus* var. *armurensis* (Kom.) Fedtsch.; *Alopecurus geniculatus* var. *caesius* Neilr.; *Alopecurus geniculatus* var. *fulvus* (L.) Weinm.; *Alopecurus geniculatus* var. *fulvus* (Sm.) Schrad.; *Alopecurus geniculatus* var. *natans* Wahlenb.; *Alopecurus geniculatus* var. *robustus* Vasey; *Alopecurus grandiflorus* (Roshevitz) Petrov; *Alopecurus hitchcockii* Parodi; *Alopecurus howellii* var. *merriamii* Beal ex J.M. Macoun; *Alopecurus howellii* var. *merriamii* Beal; *Alopecurus paludosus* P. Beauv. ex Mert & Koch; *Alopecurus palustris* subsp. *fulvus* (Sm.) Syme ex Sowerby; *Alopecurus subaristatus* Pers.; *Tozzettia fulva* (Sm.) Lunell (after Clinton Hart Merriam, 1855-1942; after Mr. Thomas Jefferson Howell, 1842-1912; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 211. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 184. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J. Ewan, edition, *A Short History of Botany in the United States*. New York and London 1969)

Circumboreal. Annual or perennial bunchgrass, tufted, open, aquatic or semiaquatic, emergent, culms ascending and often bent at the nodes, mostly decumbent and sometimes rooting at the lower nodes, leaves erect to floating, auricles absent, culm leaf blades linear-lanceolate, leaf sheath smooth and loosely wrapped around the stem, ligule membranous, inflorescence of chasmogamous spikelets, compressed and narrow spike-like panicle, glumes membranous and keeled with silky hairs, palea absent, lemma awn weak and straight, straight awn included within or

arising from near middle of the lemma, seeds ground into a flour and used with other cereals in making bread, weed species of rice and other cereals, a good fodder plant, a famine food, ornamental, common in pastures, rice fields, wet places, edges of ponds and ditches, wet meadows, dry to damp bare soil, damp hilly slopes shores and stream banks, border of lake, bog edges, shallow water, water-filled ditches, open marshy ground, see *Flora Petropolitana* 16. 1799, *Flora Boreali-Americana* 1: 43. 1803, *Synopsis Plantarum* 1: 80. 1805, *English Botany* 21, t. 1467. 1805, *Flora Lapponica* 22. 1812, *A Flora of the Northern and Middle Sections of the United States* 1: 97. 1823, *Species Graminum* 3: t. 241. 1829-1830, *Linnaea* 12(4): 424. 1838, *Notulae ad Plantas Asiaticas* 3: 11. 1851, *Anales del Jardín Botánico de Madrid* 10: 312. 1852, *Flora von Nieder-Oesterreich* 35. 1859, *English Botany, ... third edition* 11: 23. 1873, *Bulletin of the Torrey Botanical Club* 15: 13. 1888, *Grasses of North America for Farmers and Students* 2: 278. 1896, *The Fur Seals and Fur Seal Islands of the North Pacific Ocean* 4 parts. 3: 573. [also issued as Treasury Department Doc. No. 2017] Washington, D.C.: Government Printing Office, 1899 and *Svenska Expeditionen till Magelansländer* 3(5): 218. 1900, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 11: 54. 1905, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 6(17): 4. 1907, *American Midland Naturalist* 4: 216. 1915, *Nuova Flora Analitica d'Italia* 1: 92. 1923, *Rhodora* 27(323): 198. 1925, *Revista de la Facultad de Agronomía y Veterinaria* 7(2): 365-366, f. 7ii, 8. 1931, *Acta Phytotaxonomica et Geobotanica* 5: 51. 1936, *Botanical Magazine* (Tokyo) 55(656): 360. 1941, *Acta Horti Gothoburgensis* 204: 94. 1956, *Leaflets of Western Botany* 9(11): 170-172. 1961, E. Hultén, *The Circumpolar Plants*. I. Vascular cryptogams, conifers and monocotyledons. 1: 108. Stockholm 1962 [Kungl. Svenska Vetenskapsakademien handlingar. Fjärde Serien. Band 8. Nr 5.], *Flora URSS* 2: 36. 1964, *Novosti Sist. Vyss. Rast.* 8: 20. 1971, *Flora Patagónica* 8(3): 348. 1978, *Kew Bulletin* 41(4): 1027. 1986, *Grasses of Japan and its Neighboring Regions* 485. 1987.

in English: short-awn foxtail, short-awn foxtail grass, shortawn foxtail, short-awn meadow-foxtail, short-awned foxtail, orange foxtail, foxtail, water foxtail, Sonoma alopecurus

in Italian: coda di topo arrossata

in German: Roter Fuchsschwanz, Rotgelbes Fuchsschwanzgras

A. *aequalis* Sobol. var. ***aequalis*** (*Alopecurus aequalis* Sobol. var. *natans* (Wahlenb.) Fern.; *Alopecurus aristulatus* Michx.; *Alopecurus geniculatus* L. var. *aristulatus* (Michx.) Torr.)

U.S. Perennial, see *Flora Petropolitana* 16. 1799, *Flora Lapponica* 22. 1812 and *Rhodora* 27(323): 198. 1925.

in English: short-awn foxtail

A. aequalis Sobol. var. *sonomensis* N.I. Rubtzov

U.S., California. Perennial, endangered species, open marshy areas, see *Flora Petropolitana* 16. 1799 and *Leaflets of Western Botany* 9(11): 170-172. 1961.

in English: Sonoma alopecurus, Sonoma shortawn foxtail

A. alpinus Vill. (*Alopecurus alpinus* Sm., nom. illeg., non *Alopecurus alpinus* Vill.; *Alopecurus alpinus* f. *altaicus* Griseb.; *Alopecurus alpinus* subsp. *borealis* (Trin.) Jurtzev; *Alopecurus alpinus* subsp. *glaucus* (Less.) Hultén; *Alopecurus alpinus* subsp. *stejnegeri* (Vasey) Hultén; *Alopecurus alpinus* var. *borealis* (Trin.) Griseb.; *Alopecurus alpinus* var. *glaucus* (Less.) Krylov; *Alopecurus alpinus* var. *occidentalis* (Scribn. & Tweedy) Boivin; *Alopecurus alpinus* var. *stejnegeri* (Vasey) Hultén; *Alopecurus altaicus* (Griseb.) Petrov; *Alopecurus behringianus* Gand.; *Alopecurus borealis* Trin.; *Alopecurus glaucus* Less.; *Alopecurus glaucus* var. *altaicus* Griseb.; *Alopecurus magellanicus* Lam.; *Alopecurus occidentalis* Scribn. & Tweedy)

Northern America, U.K. Perennial bunchgrass, caespitose, occurs in alpine moist meadows and streamsides, roadside ditch, moist montane valleys, subalpine and alpine meadows, see also *Alopecurus borealis* Trin., see *Histoire des Plantes de Dauphiné* éd. 2 1: 306, 427. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 168. 1791, *English Botany* pl. 1126. 1803, *Fundamenta Agrostographiae* 58. 1820, *Linnaea* 9(2): 206. 1834, *Flora Rossica* 4(13): 461-462. 1852, *Botanical Gazette* 11: 170. 1886, *Proceedings of the United States National Museum* 10: 153. 1887 and *Bulletin de la Société Botanique de France* 66(7): 298. 1919 [1920], *Kongl. Svenska Vetenskapsakad. Handl.* 5: 90. 1927, *Flora Iakutiae* 1: 146. 1930, *Arkiv för Botanik, Andra Serien* 7(1): 9-10. 1968, *Provancheria* 12: 32. 1981.

A. anatolicus M. Dogan

Eurasia, Turkey. See *Notes from the Royal Botanic Garden, Edinburgh* 45(1): 114, f. 2. 1988, *Turkish Journal of Botany* 23(4): 245-262. 1999.

A. antarcticus Vahl (*Alopecurus alpinus* f. *antarctica* (Vahl) Hack.; *Alopecurus alpinus* var. *antarcticus* (Vahl) Macloskie & Dusén; *Alopecurus alpinus* var. *aristatus* Hook.f.; *Alopecurus antarcticus* Lechler ex Steud.; *Alopecurus magellanicus* Lam.; *Alopecurus magellanicus* var. *magellanicus*; *Alopecurus pratensis* L.)

South America. See *Species Plantarum* 1: 60. 1753, *Symbolae Botanicae, ...* 2: 18. 1791, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 168. 1791, *Flora Antarctica* 370. 1846, *Synopsis Plantarum Glumacearum* 1: 148. 1854 and *Svenska Expeditionen till Magellansländer* 3(5): 260. 1900, *Reports of the Princeton University Expeditions to Patagonia ... Botany* 8(Suppl.): 33. 1915[1914], *British Antarctic Survey Scientific Reports* 60: 1-202, 1-6 pls. 1968, *Regnum Veg.* 127: 17. 1993.

A. anthoxanthoides Boiss. (*Alopecurus utriculatus* subsp. *anthoxanthoides* (Boiss.) Dogan)

Northern America. See Alexander Russell (1715-1786), *The Natural History of Aleppo (edition 2)* 2: 243. London 1794, *Diagnoses plantarum orientalium novarum* 1(13): 42. 1854 and *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 86. 1982.

A. arundinaceus Poir. (*Alopecurus armenus* (K. Koch) Grossh.; *Alopecurus arundinaceus* subsp. *armenus* (K. Koch) Tzvelev; *Alopecurus brachystachyus* M. Bieb.; *Alopecurus candicans* Salzm. ex Steud.; *Alopecurus castellanus* Boiss. & Reut.; *Alopecurus elatior* Jacq. ex Hook.f.; *Alopecurus exaltatus* Less.; *Alopecurus lasiostachyus* Link; *Alopecurus muticus* Karav. & Kir.; *Alopecurus nigrescens* Jacq.; *Alopecurus nigricans* Hornem.; *Alopecurus nigricans* var. *humilis* Fries; *Alopecurus nigricans* var. *ventricosus* (Pers.) Rchb.; *Alopecurus pratensis* subsp. *arundinaceus* (Poir.) Douin ex Bonn.; *Alopecurus pratensis* subsp. *ventricosus* (Pers.) Thell.; *Alopecurus pratensis* subsp. *ventricosus* (Rchb.) Paunero; *Alopecurus pratensis* subsp. *ventricosus* (Rchb.) Thell.; *Alopecurus pratensis* var. *armenus* K. Koch; *Alopecurus pratensis* var. *arundinaceus* (Poir.) Kuntze; *Alopecurus pratensis* var. *exaltatus* (Less.) Griseb.; *Alopecurus pratensis* var. *nigricans* (Hornem.) Wahlenb.; *Alopecurus pratensis* var. *ruthenicus* Trin.; *Alopecurus pratensis* var. *ventricosus* (Pers.) Cosson & Durand; *Alopecurus pratensis* var. *ventricosus* (Rchb.) Cosson & Durand; *Alopecurus repens* M. Bieb.; *Alopecurus ruthenicus* Weinm.; *Alopecurus ruthenicus* var. *exserens* Griseb.; *Alopecurus ruthenicus* var. *nigricans* (Hornem.) Regel; *Alopecurus salvatoris* Loscos ex Willk.; *Alopecurus sibiricus* hort. ex Roem. & Schult.; *Alopecurus ventricosus* Pers., nom. illeg., non *Alopecurus ventricosus* (Gouan) Huds.; *Alopecurus ventricosus* var. *exserens* (Griseb.) Asch. & Graebn.; *Alopecurus ventricosus* var. *exserens* (Griseb.) Serb. & Nyár.; *Alopecurus ventricosus* var. *lobatus* Grossh.)

Temperate Eurasia. Perennial, strongly rhizomatous and creeping, sod-forming, erect, often purplish at the base, leaf sheaths inflated and glabrous, ligule membranous, leaves linear and scabrid, panicle broad-cylindric and green to green-purple, spikelets urceolate, glumes lanceolate and acute and ciliate on the keels, lemmas ovate and oblique-truncate, awn curved, fodder, forage, palatable and nutritious, useful for erosion control in moist areas, found in wetland pastures and mountain meadows, shores, stream banks, ditches, wet meadows, see *Species Plantarum* 1: 60. 1753, *Flora Anglica, Editio Altera* 1: 28. 1778, *Synopsis Plantarum* 1: 80. 1805, *Encyclopédie Méthodique, Botanique* 8: 766. 1808, *Hortus Regius Botanicus Hafniensis* 1: 68. 1813, *Eclogae Graminum* 2: 17, t. 13. 1814, *Systema Vegetabilium* 2: 271. 1817, *Flora Taurico-Caucasica* Suppl. 3: 54, 56. 1819, *Flora Suecica, Editio Secunda Aucta et Emendata* 1: 37. 1824, *De Graminibus unifloris et sesquifloris* 145. Petropoli 1824, *Hortus Regius Botanicus*

Berolinensis 1: 71. 1827, *Novitiae florae svecicae. Editio altera* 8. Lundae 1828, *Flora Germanica Excursoria* 1: 31. 1830, *Linnaea* 9(2): 207. 1834, *Nomenclator Botanicus* edition 2 1: 61. 1840, *Diagnoses Plantarum Novarum Hispanicarum* 26. 1842, *Bulletin de la Société Impériale des Naturalistes de Moscou* 15: 527. 1842, *Linnaea* 21(3): 381. 1848, *Flora Rossica* 4(13): 463-464. 1852, *Exploration Scientifique de l'Algérie* 2: 56. 1854-1855, *Österreichische Botanische Zeitschrift* 40: 144. 1890, *The Flora of British India* 7: 238. 1896, *Synopsis der mitteleuropäischen Flora* 2: 134. 1899 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 52: 436. 1908, *Anales del Jardín Botánico de Madrid* 10(2): 316. 1951, *Novosti Sist. Vyss. Rast.* 8: 18. 1971, *Flora Republicii Socialiste Romania* 12: 114. 1972, *Transactions of the Nebraska Academy of Sciences* 18: 141-150. 1991.

in English: creeping foxtail, creeping meadow foxtail

in German: Rohr-Fuchsschwanz, Rohr-Fuchsschwanzgras

in Turkey: çayir otu

A. australis Nees (*Alopecurus geniculatus* L.)

Australia. See *Species Plantarum* 1: 60. 1753, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 412. 1843 and *Taxon* 49(2): 245. 2000.

in English: marsh foxtail grass

A. baptarrhenius S.M. Phillips (*Alopecurus aequalis* Sobol.)

Ethiopia. Annual or short-lived perennial, erect or ascending, tufted, leaf blades narrowly linear, upper leaf sheaths inflated, ligule acute, panicle cylindrical, glumes ciliate and hispid, awn exerted, growing in shallow water, muddy riverbanks, along streams, wet places, closely related to *Alopecurus aequalis* Sobol., see *Flora Petropolitana* 16. 1799 and *Kew Bulletin* 41(4): 1027. 1986.

A. bonariensis Parodi & Thell. (*Alopecurus antarcticus* var. *brachyatherus* Parodi; *Alopecurus aristulatus* Michx.; *Alopecurus geniculatus* L.; *Alopecurus magellanicus* var. *brachyatherus* (Parodi) Mariano)

South America, Argentina. See *Species Plantarum* 1: 60. 1753, *Flora Boreali-Americana* 1: 43. 1803 and *Repertorium Specierum Novarum Regni Vegetabilis* 23(18-25): 302. 1927, *Revista de la Facultad de Agronomía y Veterinaria* 7(2): 358, f. 4. 1931 [*Univ. Nac. Buenos Aires Rev. Agron.* 7: 358, f. 4. 1931], *Flora Patagónica* 3: 345. 1978, *Turk. J. Bot.* 23(4): 254. 1999, *Taxon* 49(2): 245. 2000.

A. borealis Trin. (*Alopecurus alpinus* Vill.; *Alopecurus alpinus* Sm., nom. illeg., non *Alopecurus alpinus* Vill.; *Alopecurus alpinus* f. *altaicus* Griseb.; *Alopecurus alpinus* subsp. *borealis* (Trin.) Jurtzev; *Alopecurus alpinus* subsp. *glaucus* (Less.) Hultén; *Alopecurus alpinus* subsp. *stejnegeri* (Vasey) Hultén; *Alopecurus alpinus* var. *borealis* (Trin.) Griseb.; *Alopecurus alpinus* var. *glaucus* (Less.) Krylov; *Alopecurus alpinus* var. *occidentalis* (Scribn. & Tweedy)

Boivin; *Alopecurus alpinus* var. *stejnegeri* (Vasey) Hultén; *Alopecurus glaucus* Less.; *Alopecurus magellanicus* Lam.; *Alopecurus magellanicus* var. *brachyatherus* (Parodi) Mariano; *Alopecurus magellanicus* var. *bracteatus* (Phil.) Mariano; *Alopecurus occidentalis* Scribn. & Tweedy; *Alopecurus pseudobrachystachyus* Ovcz.; *Alopecurus stejnegeri* Vasey) (for Leonard Hess Stejneger (1851-1943), botanical collector in Alaska, see Frank Alfred Golder (1877-1929), *Bering's voyages*; an account of the efforts of the Russians to determine the relation of Asia and America ... American Geographical Society, New York 1922-1925)

Europe, Siberia, Asia temperate, Canada, U.S. Perennial, caespitose, low, gray flowers, pubescent inflorescence spicate and ovoid, overlapping spikelets ovoid and dark purple, glumes pubescent, lemma acute and glabrous, awn straight, growing in alpine meadow, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 168. 1791, *English Botany* pl. 1126. 1803, *Fundamenta Agrostographiae* 58. 1820, *Flora Rossica* 4(13): 461. 1852, *Botanical Gazette* 11: 170. 1886, *Proceedings of the United States National Museum* 10: 153. 1887 and *Svenska Expeditionen till Magellansländer* 3(5): 260. 1900, *Revista de la Facultad de Agronomía y Veterinaria* 7(2): 358, f. 4. 1931, *Flora URSS* 2: 153, t. 10, f. 7, 745. 1934, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 7(1): 9. 1968, *Flora Patagónica* 3: 344-345. 1978, *Provancheria* 12: 32. 1981, *Turkish Journal of Botany* 23(4): 245-262. 1999.

in English: alpine foxtail, polar foxtail, boreal alopecurus

in French: vulpin de Gérard, vulpin des Alpes, vulpin alpin

in Italian: coda di topo alpina, coda di topo di Gérard

A. borii Tzvelev (*Alopecurus nepalensis* Trin. ex Steud.)

India, Russia, Pakistan, Afghanistan. Narrow panicle linear, lemma unawned, grows on black soil, plains, dry places, see *Synopsis Plantarum Glumacearum* 1: 148. 1854 and *Novosti Sist. Vyss. Rast.* 8: 19-21. 1971.

A. brachystachyus M. Bieb. (*Alopecurus arundinaceus* Poir.; *Alopecurus pratensis* subsp. *brachystachyus* (M. Bieb.) Trab.; *Alopecurus ventricosus* var. *brachystachyus* (M. Bieb.) Hackel in O. Fedtsch. & B. Fedtsch.)

China, Eurasia. Sandy loam, rocky soil, mountain meadow steppe, see *Flora Anglica, Editio Altera* 1: 28. 1778, *Encyclopédie Méthodique, Botanique* 8: 766. 1808, *Flora Taurico-Caucasica* Suppl. 3: 56. 1819, *Flore d'Alger* 145. 1895.

A. bulbosus Gouan (*Alopecurus bulbosus* Huds., nom. illeg., non *Alopecurus bulbosus* Gouan; *Alopecurus bulbosus* Poir., nom. illeg., non *Alopecurus bulbosus* Gouan)

Europe. Riverside species, useful for erosion control, growing in brackish grassland, in water meadow, see *Hortus Regius Monspelienensis* 37. 1762, *Flora Anglica* 24. 1762, *Voyage en Barbarie* 2: 94. 1789, *Hortus gramineus Woburnensis* 184. London 1816, *Exploration Scientifique de l'Algérie* 2:

57. 1854 and V.K. Sieber and B.G. Murray, "Spontaneous polyploids in marginal populations of *Alopecurus bulbosus* Gouan (Poaceae)." *Botanical Journal of the Linnean Society* 81(4): 293-300. 1980.

in English: bulbous foxtail, foxtail

in French: vulpin bulbeux

in German: Zwiebel-Fuchsschwanz, Knolliges Fuchsschwanzgras, Knollen-Fuchsschwanzgras

A. carolinianus Walter (*Alopecurus carolinianus* Spreng., nom. illeg., non *Alopecurus carolinianus* Walter; *Alopecurus geniculatus* var. *caespitosus* Scribner; *Alopecurus geniculatus* var. *ramosus* (Poiret) H. St. John; *Alopecurus gracilis* Willd. ex Trin.; *Alopecurus macounii* Vasey; *Alopecurus pedalis* Bosc ex P. Beauv.; *Alopecurus ramosus* Poir.) (dedicated to the Irish-born Canadian botanist and ornithologist John Macoun, 1831-1920, father of James Melville Macoun, 1862-1920; see R. Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 460. 1994; Joseph Ewan, *Rocky Mountain Naturalists*. 257-258. [John Macoun, b. 1832] The University of Denver Press 1950; Stafleu & Cowan, *Taxonomic literature*. 3: 232-234. 1981; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 248. 1972; J.H. Barnhart, *Biographical notes upon botanists*. 2: 432. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 277-278. 1973; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. Oxford 1964; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970) North America, U.S., Canada, British Columbia. Annual or perennial, erect to decumbent, small, tufted, clumped, fibrous roots, long membranous ligule, soft and erect spike-like panicles, 1-flowered spikelets, long awns of the glumes, very tiny grains, occurs in cultivated land and fallow fields, sunny habitats, waste areas, ephemeral wetlands, shallow water, old fields, on dry rocks, wet to swampy meadows, moist areas, riverbeds, damp soil, in sloughs, roadside ditches, around ponds and margin of alkaline ponds, low prairies, see *Species Plantarum* 1: 60. 1753, *Flora Caroliniana, secundum systema vegetabilium perillustris Linnaei digesta* ... 74. Londini [London] 1788, *Erster Nachtrag zu der Beschreibung des botanischen Gartens der Universität zu Halle* 10. Halle 1801, *Encyclopédie Méthodique, Botanique* 8: 776. 1808, *Essai d'une Nouvelle Agrostographie* 4. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 38. 1840, *Bulletin of the*

Torrey Botanical Club 15: 12. 1888, *Catalogue of Canadian Plants* 25: 389. 1890 and *Rhodora* 19(224): 167. 1917.

in English: tufted meadow-foxtail, meadow-foxtail, Carolina foxtail, annual foxtail, common foxtail

A. creticus Trin. (*Alopecurus agrestis* var. *creticus* (Trin.) Marchesetti; *Alopecurus creticus* Wilk. & Lange; *Alopecurus thracicus* Penev & Kozuharov)

Europe, Bulgaria. See *Species Plantarum, Editio Secunda* 89. 1762, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 45. 1821, *Prodromus Florae Hispanicae* 1: 41. Stuttgartiae 1861, *Flora di Trieste* 607. Trieste 1897 and *Conspectus Florae Graecae* 3: 343. 1904, *Notes from the Royal Botanic Garden, Edinburgh* 28: 187. 1968.

in English: Cretan meadow-foxtail

A. dasyanthus Trautv. (*Alopecurus vaginatus* (Willd.) Boiss., nom. illeg., non *Alopecurus vaginatus* (Willd.) Pall. ex Kunth; *Polypogon vaginatus* Willd.) (from the Greek *dasy* "thick, shaggy, hairy" and *anthos* "flower")

Asia temperate, Eurasia. Useful for erosion control, see *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 44. 1801, *Flora Orientalis* 5: 488. 1884.

A. geniculatus L. (*Alopecurus aequalis* Sobol.; *Alopecurus australis* Nees; *Alopecurus geniculatus* Lindh. ex Scheele, nom. illeg., non *Alopecurus geniculatus* L.; *Alopecurus geniculatus* Sibth. ex Steudel, nom. illeg., non *Alopecurus geniculatus* L.; *Alopecurus geniculatus* var. *aquaticus* Schltld.; *Alopecurus geniculatus* var. *viridis* Neillr.; *Alopecurus pallenscens* Piper; *Alopecurus paludosus* Crantz; *Alopecurus palustris* subsp. *geniculatus* (L.) Syme ex Sowerby; *Tozzetia geniculata* (L.) Bubani)

Eurasia. Perennial or annual, tufted, stoloniferous, rhizomatous, small, glabrous, spreading from geniculate base, creeping and ascending, rooted on the nodes, glaucous, stems often floating in water, auricles absent, membranous ligules pointed or blunt, leaf blades linear acute or acuminate, green to grayish green to bluish leaves, spike-like panicle linear or narrow-oblong with densely crowded spikelets, chasmogamous, silky dark green to black inflorescence cylindrical and slender, spikelets 1-flowered, glumes obtuse to mucronate and ciliate along the keel, glumes free or united, lemma truncate and awned, bent awn inserted below the middle of the lemma, palea absent, weed species, a good forage, cold resistant, drought sensitive, coastal and inland, grows in moist or dry places, damp areas, roadsides, shallow water, river flats, wet margins of rivers, ditches, meadows and seeps, swamp edges, in wheat field, see *Species Plantarum* 1: 60. 1753, *Flora Berolinensis* 1: 39. 1823, *Nomenclator Botanicus* edition 2 1: 61. 1840, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 412. 1843, *Linnaea* 22(3): 340. 1849, *Flora von Nieder-Oesterreich* 35. 1859, *English Botany, ... third edition* 11: 25. 1873 and *The Flora of the Palouse Region* ... 18. Pullman, Wash. 1901, *Flora Pyrenaea* ... 4: 275. 1901, *Fl.*

Iranica 70: 285. 1970, *Phytologia* 37(4): 317-407. 1977, *Flora Patagónica* 3: 134-136, 340-348. 1978, *Turkish Journal of Botany* 23(4): 254. 1999, *Taxon* 49(2): 245. 2000.

in English: marsh foxtail, marsh foxtail grass, marsh meadow-foxtail, water foxtail, water foxtail grass, floating foxtail, floating foxtail grass, kneed foxtail

in French: vulpin genouillé

in Italian: coda di topo ginocchiata

in German: Knich-Fuchsschwanz

in Mexico: cola de zorra

A. geniculatus L. var. *geniculatus*

America.

A. geniculatus L. var. *patagonicus* Parodi

South America. See *Revista de la Facultad de Agronomía y Veterinaria* (Buenos Aires) 7: 363, f. 71. 1931.

A. heleochloides Hack.

South America, Chile. See *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 166. 1911.

A. himalaicus Hook.f.

Russia, Iran, Afghanistan, Pakistan, Jammu-Kashmir. Panicle oblong and silky, glumes lanceolate densely hairy, alpine grass eaten by sheep and cattle, goats and yak, found near glaciers, on exposed hill slopes, see *The Flora of British India* 7(22): 238. 1897 [1896] and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 303: 339. 1932.

A. hitchcockii Parodi (*Alopecurus aequalis* Sobol.)

South America, Bolivia, Peru. Aquatic, floating, see *Flora Petropolitana* 16. 1799 and *Revista de la Facultad de Agronomía y Veterinaria* (Buenos Aires) 7(2): 366, f. 8. 1931.

A. laguroides Bal. (*Alopecurus vaginatus* var. *unipaleaceus* Boiss.)

Turkey. Rare species, alpine, see *Bulletin de la Société Botanique de France* 21: 11. 1874, *Flora Orientalis* 5: 488-489. 1884 and *Turkish Journal of Botany* 23(4): 245-262. 1999.

A. lanatus Sm. (*Alopecurus lanatus* Sibth. & Sm.; *Alopecurus phaleioides* K. Koch)

East Mediterranean, Turkey. Perennial, alpine, tiny, densely white tomentose to silver, caespitose, erect or curved, dwarf, slender, thick rootstock black and cylindrical, stems geniculate at node, sheaths tomentose and inflated, leaves linear and basal, brown blooms, panicles ovoid-globose, glumes lanceolate and hispid-pubescent, lemma oblique-truncate and ciliate, awn geniculate, attractive and ornamental, see *Florae Graecae Prodromus* 1: 43. 1806 and *Flora Mediterranea* 1: 238-240. 1991, *Turkish Journal of Botany* 23(4): 245-262. 1999.

in German: zottiger Fuchsschwanz

A. lechleri Steud. (*Alopecurus alpinus* f. *lechleri* (Steud.) Dusén; *Alopecurus antarcticus* Lechler ex Steud.; *Alopecurus antarcticus* var. *lechleri* (Steud.) Parodi)

Chile. See *Synopsis Plantarum Glumacearum* 1: 148. 1854 and *Reports of the Princeton University Expeditions to Patagonia 1896-1899, Botany, Volume viii, Supplement* 8(3): 34. 1914 [1915], *Revista de la Facultad de Agronomía y Veterinaria* 7(2): 356, f. 3. 1931.

A. longearistatus Maxim.

Asia temperate, Siberia, Eurasia. See *Primitiae Florae Amurensis* 327. St. Petersburg 1859.

A. magellanicus Lam. (*Alopecurus alpinus* Sm., nom. illeg., non *Alopecurus alpinus* Vill.; *Alopecurus alpinus* f. *antarctica* (Vahl) Hack.; *Alopecurus alpinus* f. *stejnegeri* (Vasey) A.E. Porsild; *Alopecurus alpinus* subsp. *alpinus*; *Alopecurus alpinus* subsp. *borealis* (Trin.) Jurtzev; *Alopecurus alpinus* subsp. *glaucus* (Less.) Hultén; *Alopecurus alpinus* subsp. *stejnegeri* (Vasey) Hultén; *Alopecurus alpinus* var. *altaicus* (Griseb.) Kryl.; *Alopecurus alpinus* var. *antarcticus* (Vahl) Macloskie & Dusén; *Alopecurus alpinus* var. *aristatus* Hook.f.; *Alopecurus alpinus* var. *borealis* (Trin.) Griseb.; *Alopecurus alpinus* var. *gracilior* Hook.f.; *Alopecurus alpinus* var. *occidentalis* (Scribn. & Tweedy) B. Boivin; *Alopecurus alpinus* var. *stejnegeri* (Vasey) Hultén; *Alopecurus altaicus* (Griseb.) Petrov; *Alopecurus antarcticus* Vahl; *Alopecurus antarcticus* var. *brevispiculatus* Hack. ex Buchtien; *Alopecurus behringianus* Gand.; *Alopecurus borealis* Trin.; *Alopecurus borealis* subsp. *borealis*; *Alopecurus borealis* subsp. *glaucus* (Less.) Dogan; *Alopecurus bracteatus* Phil.; *Alopecurus glaucus* Less.; *Alopecurus glaucus* var. *altaicus* Griseb.; *Alopecurus occidentalis* Scribn. & Tweedy; *Alopecurus pseudobrachystachyus* Ovcz.; *Alopecurus roshevitzianus* Ovcz.; *Alopecurus stejnegeri* Vasey; *Alopecurus tenuis* Kom.; *Alopecurus triceps* Krause; *Alopecurus variegatus* Steud.)

South America, Argentina, Chile. Growing on wetter areas with poor drainage, in moist depressions, wet meadows, sandy banks, in very moist sites with poor drainage, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 168. 1791, *Symbolae Botanicae, ...* 2: 18. 1791, *English Botany* pl. 1126. 1803, *Fundamenta Agrostographiae* 58. 1820, *Linnaea* 9(2): 206. 1834, *Flora Antarctica* 2: 370. 1846, *Synopsis Plantarum Glumacearum* 1: 148. 1854, *Botanical Gazette* 11: 170. 1886, *Proceedings of the United States National Museum* 10: 153. 1887, *Anales de la Universidad de Chile* 94: 6. 1896 and *Svenska Expeditionen till Magellansländer* 3(5): 260. 1900, *Contribuciones a la Flora de Bolivia* 1: 72. 1910, *Repertorium Specierum Novarum Regni Vegetabilis* 13: 85. 1914, *Beihefte zum Botanischen Centralblatt* 32: 346. 1914, *Reports of the Princeton University Expeditions to Patagonia ... Botany* 8(Suppl.): 33. 1915, *Bulletin de la Société Botanique de France* 66(7): 298. 1919 [1920], *Flora Iakutiae* 1: 146.

1930, *Revista de la Facultad de Agronomía y Veterinaria* 7(2): 358, f. 4. 1931, *Rhodora* 41(485): 177. 1939, *Flora Patagónica* 3: 344-345. 1978, *Provancheria* 12: 32. 1981, *Turkish Journal of Botany* 23(4): 259. 1999.

A. magellanicus Lam. var. **bracteatus** (Phil.) Mariano (*Alopecurus antarcticus* f. *bracteatus* (Phil.) L. Parodi ex Probst.; *Alopecurus antarcticus* var. *bracteatus* (Phil.) Parodi; *Alopecurus bracteatus* Phil.)

America. See *Anales de la Universidad de Chile* 94: 6. 1896 and *Revista de la Facultad de Agronomía y Veterinaria* 7(2): 354, f. 2f. 1931, *Mitteilungen der Naturforschenden Gesellschaft in Solothurn* 9: 10. 1932, *Flora Patagónica* 3(7): 344. 1978.

A. magellanicus Lam. var. **magellanicus** (*Alopecurus alpinus* f. *antarctica* (Vahl) Hack.; *Alopecurus alpinus* var. *antarcticus* (Vahl) Macloskie & Dusén; *Alopecurus alpinus* var. *aristatus* Hook.f.; *Alopecurus alpinus* var. *gracilius* Hook.f.; *Alopecurus antarcticus* Vahl; *Alopecurus variegatus* Steud.)

America. See *Symbolae Botanicae, ...* 2: 18. 1791, *Flora Antarctica* 2: 370. 1846, *Synopsis Plantarum Glumacearum* 1: 148. 1854 and *Svenska Exped. Magell.* 3(5): 260. 1900, *Reports of the Princeton University Expeditions to Patagonia 1896-1899, Botany, Volume viii, Supplement* 8(3): 33. 1914 [1915].

A. myosuroides Hudson (*Alopecurus agrestis* L.; *Alopecurus coerulescens* Steud. & Hochst. ex Steud.; *Alopecurus myosuroides* var. *versicolor* (Biasol.) Roshev.; *Alopecurus purpurascens* Link; *Tozzettia agrestis* (L.) Bubani) (Greek *mus*, *mys*, *mys* “mouse” and *oura* “a tail”)

Eurasia, North Africa. Annual, tufted, erect, slender, glabrous, auricles absent, ligule truncate, leaf blade flat, inflorescence of chasmogamous spikelets, panicle cylindrical and slender, glumes ciliate on the keels and united to the middle, lemma acute and ovate, lemma keel smooth, awn inserted near the base of the lemma, palea absent, lodicules absent, anthers yellow, crop pest, agricultural weed species, noxious weed of disturbed and cultivated ground, a good forage grass, growing near shore, waste places, fields, saline marshes, coastal marshes, open habitats, arable land, in heavy clay loam or light soils, see *Flora Anglica* 1: 23. 1762, *Species Plantarum, Editio Secunda* 89. 1762, *Flora* 12: 514. 1829, *Nomenclator Botanicus, Editio Secunda* 1: 60. 1840, *Linnaea* 17(4): 400. 1844, *Flora Orientalis* 5: 485. 1844, *Flora Antarctica* 2: 370. 1846, *Synopsis der mitteleuropäischen Flora* 2: 130. 1899 and *Flora Pyrenaea ...* 4: 274. 1901, *Flora de la Provincia de Buenos Aires* 4(2): 35. 1970, *Notes from the Royal Botanic Garden, Edinburgh* 40(3): 509. 1983, *Flora of Turkey and the East Aegean Islands* 9: 384. 1985, *Notes from the Royal Botanic Garden, Edinburgh* 45(1): 111, f. 1. 1988, *Turkish Journal of Botany* 23(4): 250. 1999, *Taxon* 49(2): 245. 2000, Ian Cummins and Robert Edwards, “Purification and cloning

of an esterase from the weed black-grass (*Alopecurus myosuroides*), which bioactivates aryloxyphenoxypropionate herbicides.” *The Plant Journal* vol. 39, issue 6: 894-904. Sep 2004.

in English: slender foxtail, slender meadow foxtail, mouse foxtail, black twitch, black grass, large foxtail, slimspike foxtail

in French: vulpin des prés, vulpin des champs, vulpin fausse queue de souris

in Italian: coda di topo dei campi, erba codina, erba topina

in German: Acker-Fuchsschwanz, Acker-Fuchsschwanzgras

A. myosuroides Hudson var. **breviaristatus** Marches. ex Asch. & Graebn.

Europe. See *Synopsis der mitteleuropäischen Flora* 2: 130. 1899.

A. myosuroides Hudson var. **compositus** Asch. & Graebn.

Europe. See *Synopsis der mitteleuropäischen Flora* 2: 130. 1899.

A. myosuroides Hudson var. **latialatus** Dogan (*Alopecurus adanensis* Dogan)

Europe, Turkey. See *Notes from the Royal Botanic Garden, Edinburgh* 40(3): 509. 1983, *Notes from the Royal Botanic Garden, Edinburgh* 45(1): 111, f. 1. 1988, *Turkish Journal of Botany* 23(4): 245-262. 1999.

A. nepalensis Trin. ex Steud.

Nepal, Russia, Iran, Afghanistan, Pakistan, India, Punjab, Uttar Pradesh. Erect or geniculate, a fodder grass, a weed in cultivated fields, on forest edges, plains, clearings, see *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 22: 12-22. 1987.

A. ponticus K. Koch (*Alopecurus caucasicus* Seregin; *Alopecurus glacialis* K. Koch; *Alopecurus sericeus* Albov; *Colobachne pontica* (K. Koch) Nyman)

Asia temperate, Eurasia. See *Linnaea* 21(3): 382. 1848, *Botaniska Notiser* 1851: 69. 1851 and *Novosti Sist. Vyss. Rast.* 8: 15. 1971.

A. pratensis L. (*Alopecurus alpinus* f. *songaricus* Schrenk; *Alopecurus alpinus* var. *songaricus* Schrenk ex Fisch. & Meyen; *Alopecurus alpinus* var. *ventricosus* Karav. & Kir.; *Alopecurus altissimus* Schur; *Alopecurus antarcticus* Vahl; *Alopecurus aquaticus* (Dumort.) Tinant; *Alopecurus brachyglossus* Peterm.; *Alopecurus ciliatus* All.; *Alopecurus elongatus* Peterm.; *Alopecurus laguriformis* Schur; *Alopecurus laxiflorus* Ovcz.; *Alopecurus obscurus* (Ledeb.) Schur; *Alopecurus pallidus* Dumort.; *Alopecurus pratensis* Lange; *Alopecurus pratensis* f. *alpestris* Wahlenb.; *Alopecurus pratensis* f. *breviaristatus* Beck; *Alopecurus pratensis* subsp. *alpestris* (Wahlenb.) Selander; *Alopecurus scaber* Opiz; *Alopecurus seravschanicus* Ovcz.; *Alopecurus sericeus* Gaertn.; *Alopecurus songaricus* (Schrenk) Petrov, also

spelled *soongaricus*; *Alopecurus trivialis* Seidl ex Opiz; *Phalaris aristata* Schousboe ex Willd.; *Tozzettia pratensis* (L.) Savi)

Eurasia. Perennial, stout, long-lived, robust, upright or geniculate at base, sometimes rooting at the lower nodes, often shortly rhizomatous, clump-forming, tufts loose or compact, smooth, glabrous, dark green, with short rhizomes and short ascending stolons, auricles absent, ligule membranous and blunt, sheath inflated and smooth, dark green leaves scabrid and flat, chasmogamous spikelets, silky purplish to black spike-like panicle cylindrical and dense, spikelets 1-flowered and densely packed, glumes acute and fringed or ciliate on the keel, lemma acute and awned, lemma keel ciliate, awn strong or slender and curved or protruding, palea absent, anthers deep yellow to purple, achenes fluffy and light colored, extremely resistant to cold, tolerates shade, drought sensitive, useful for erosion control, a good forage grass, quite palatable as pasture or hay, used as a hay grass for wetlands in Europe, cultivated fodder, groundcover, thrives on cool and wet soils, in wet areas of pastures, low-lying areas, grassy wasteland, wet subalpine meadows, in moist meadows, moist or swampy areas of hills, in fields and waste places, wet floodplains, roadsides, on slightly acid to alkaline soils, along ditches and streams, along railroads, marshy places, see *Species Plantarum* 1: 60. 1753, *Flora Pedemontana* 2: 235. 1785, *De Fructibus et Seminibus Plantarum* ... 1: 2, t. 1, f. 2. 1788, *Symbolae Botanicae*, ... 2: 18. 1791, *Memorie di Matematica e di Fisica della Società Italiana delle Scienze* 8(2): 477. 1799, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 413. 1801, *English Botany* pl. 1126. 1803, *Flora Lapponica* 21. 1812, *Observations sur les Graminées de la Flore Belgique* 133. 1823, *Bulletin de la Société Impériale des Naturalistes de Moscou* 14: 361. 1841, *Enumeratio Plantarum Novarum* 1841-1842, *Linnaea* 16 (Litt.): 148-152. 1843, *Flora* 27: 231-232. 1844, *Archiv für Naturgeschichte* 18: 362. 1852, *Österreichische Botanische Zeitschrift* 9: 13. 1859, *Bulletin de la Société Botanique de France* 11: 47. 1864, *Flora von Nieder-Österreich* 56. 1890 and *Flora Iakutiae* 1: 147. 1930, *Flora URSS* 2: 151, 744-745, t. 1, 11, f. 4, 5. 1934, *Acta Phytogeographica Suecica* 28: 33. 1950, M.C.J. Van Adrichem, "Performance of meadow foxtail (*Alopecurus pratensis*).” in *J. Forage Notes*. 19(2): 50-52. 1974, *Regnum Veg.* 127: 17. 1993.

in English: meadow foxtail, field meadow foxtail, blackgrass, golden foxtail grass, yellow foxtail grass

in French: vulpin des prés, vulpin des champs

in Italian: coda di topo comune

in German: Wiesen-Fuchsschwanz, Gold-Fuchsschwanz

in Spanish: cola de zorra, rabo de zorra, vulpino

A. pratensis L. subsp. **laguriformis** (Schur) Tzvelev (*Alopecurus alpinus* f. *songaricus* Schrenk; *Alopecurus alpinus* var. *songaricus* Schrenk ex Fisch. & Meyen; *Alopecurus*

alpinus var. *ventricosus* Karav. & Kir.; *Alopecurus antarcticus* Vahl; *Alopecurus brachystachyus* auct., non M. Bieb.; *Alopecurus laguriformis* Schur; *Alopecurus laxiflorus* Ovcz.; *Alopecurus pratensis* subsp. *alpestris* (Wahlenb.) Selander; *Alopecurus seravschanicus* Ovcz.; *Phalaris aristata* Schousboe ex Willd.)

Europe. See *Verh. und Mitth. Siebenbürgischen Vereins für Naturw. zu Hermannstadt* 1: 182. 1850, *Archiv für Naturgeschichte* 18: 362. 1852 and *Novosti Sist. Vyss. Rast.* 8: 19. 1971.

A. pratensis L. subsp. **pratensis** (*Alopecurus pratensis* subsp. *alpestris* (Wahlenb.) Selander)

Europe. See *Species Plantarum* 1: 60. 1753, *Flora Lapponica* 21. 1812 and *Acta Phytogeographica Suecica* 28: 33. 1950, *Opera Botanica* 137: 1-42. 1999.

A. rendlei Eig (*Alopecurus utriculatus* auct., non Banks & Sol.; *Alopecurus utriculatus* (L.) Pers., nom. illeg., non *Alopecurus utriculatus* Banks & Sol.; *Panicum flexuosum* Raf., nom. illeg., non *Panicum flexuosum* Retz.; *Panicum rafinesquianum* Schult.; *Phalaris utricularis* Salisb.; *Phalaris utriculata* L.; *Tozzettia pratensis* (L.) Savi; *Tozzettia pratensis* Savi; *Tozzettia utriculata* [as "utriculata"] Savi) (in honor of the great botanist Constantine (Constantin) Samuel Rafinesque (-Schmaltz), 1783-1840 (b. near Constantinople, d. Philadelphia, Pennsylvania), economist, plant collector, naturalist, traveler, botanical explorer, conchologist, archaeologist, spent many years of his life in Sicily (1804-1815) and in U.S., a prolific writer, among his works are *Caratteri di alcuni nuovi generi e nuove specie di animali e piante della Sicilia*, con varie osservazioni sopra i medesimi. Palermo 1810, *Florula ludoviciana*; or, a flora of the state of Louisiana. New York 1817, *Neogenyton*. [Lexington, Ky.] 1825 and *Specchio delle scienze o giornale enciclopedico della Sicilia*, deposito letterario delle moderne cognizioni, etc. Palermo 1814; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 123. 1965; Joseph Ewan, in *D.S.B.* 11: 262-264. 1981; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; Stafleu and Cowan, *Taxonomic literature*. 4: 549-563. 1983; Alexander B. Adams, *Eternal Quest. The Story of the Great Naturalists*. New York 1969; William Darlington, *Reliquiae Baldwinianae*. Philadelphia 1843 and *Memorials of John Bartram and Humphry Marshall*. 1849; Edward Lee Greene, *Landmarks of Botanical History*. Edited by Frank N. Egerton. 74-75. Stanford University Press, Stanford, California 1983; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 322. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 229. Oxford 1964; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Cambridge, Harvard University Press 1967; William Jay Youmans, editor, *Pioneers of Science in America*. 182-195. New York 1896; E.M. Tucker,

Catalogue of the library of the Arnold Arboretum of Harvard University. 1917-1933; Alex Berman, "C.S. Rafinesque (1783-1840): a challenge to the historian of pharmacy." *American Journal of Pharmaceutical Education*. 16: 409-418. 1952; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Michael A. Flannery, "The Medicine and Medicinal Plants of C.S. Rafinesque." *Economic Botany*. 52(1): 27-43. 1998; H.B. Haag, "Rafinesque's interests - a century later: medicinal plants." *Science*. 94: 403-406. 1941; E.D. Merrill (1876-1956), *Index rafinesquianus*. The plant names published by C.S. Rafinesque, etc. Jamaica Plain, Massachusetts, U.S. 1949; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 224. Palermo 1988; Garrison and Morton, *Medical Bibliography*. 1849. 1961; Giuseppe M. Mira, *Bibliografia Siciliana*. 2: 260. ["Carlo Rafanesque Schmaltz," sic!] Palermo 1881; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 606. University of Pennsylvania Press, Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 467. 1973)

Eurasia, Europe. Weed, see *Species Plantarum* 1: 60. 1753, *Systema Naturae, Editio Decima* 869. 1759, *The Natural History of Aleppo* edition 2. 2: 243. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 17. Londini [London] (Nov-Dec) 1796, *Memorie di Matematica e di Fisica della Società Italiana delle Scienze* 8(2): 477. 1799, *Synopsis Plantarum* 1: 80. 1805, *Précis des Découvertes et Travaux Somnologiques* 45. 1814, *Mantissa* 2: 257. 1824 and *Journal of Botany, British and Foreign* 75: 187. 1937, *Fitologija* 39: 72-77. 1991, *Webbia* 49(2): 265-329. 1995, *Turk. J. Bot.* 23(4): 248. 1999, *Taxon* 49(2): 253. 2000.

in English: Rendle's meadow foxtail, Rendle's foxtail

in French: vulpin de Rendle, vulpin en outre, vulpin à utriculé, vulpin utriculé

in Italian: coda di topo ovata

in German: Weitscheidiger Fuchsschwanz, Aufgeblasener Fuchsschwanz

A. saccatus Vasey (*Alopecurus californicus* Vasey; *Alopecurus howellii* Vasey) (for Thomas Jefferson Howell, 1842-1912)

North America, U.S., Oregon. Annual, wet places, poor soil, vernal pools, wetlands, damp gravelly soil, see *Botanical Gazette* 6(11): 290. 1881, *Bulletin of the Torrey Botanical Club* 15: 12-13. 1888.

in English: Pacific meadow foxtail, Pacific foxtail, foxtail

A. seravschanicus Ovcz. (*Alopecurus pratensis* L.) (Russia, Tadzikskaja, Seravschan [Zeravsan])

Eurasia. See *Species Plantarum* 1: 60. 1753 and *Regnum Veg.* 127: 17. 1993.

A. textilis Boiss. (*Alopecuropsis textilis* (Boiss.) Opiz; *Alopecurus vaginatus* var. *textilis* (Boiss.) G. Westb.)

Eurasia, Iran. See *Diagnoses plantarum orientalium novarum* 13: 40. 1854, *Lotos* 7: 84. 1857, *Flora Orientalis* 5: 488. 1884 and *Novosti Sist. Vyss. Rast.* 8: 15. 1971.

A. thracicus Penev & Kozuharov (*Alopecurus creticus* Trin.)

Bulgaria. Vulnerable species, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 45. 1821 and *Notes from the Royal Botanic Garden, Edinburgh* 28: 187. 1968.

A. utriculatus Banks & Sol. (*Alopecurus anthoxanthoides* Boiss.; *Alopecurus utriculatus* (L.) Pers., nom. illeg., non *Alopecurus utriculatus* Banks & Sol.)

Asia temperate, Syria, Greece. Useful for erosion control, see *Systema Naturae, Editio Decima* 869. 1759, *The Natural History of Aleppo* edition 2. Revised, enlarged, and illustrated with notes by Pat. Russell [Patrick Russell, 1727-1805] 2: 243. London 1794, *Synopsis Plantarum* 1: 80. 1805, *Diagnoses plantarum orientalium novarum* 13: 42. 1854 and *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 86. 1982, *Turkish Journal of Botany* 23(4): 245-262. 1999.

in Italian: coda di topo ovata

in German: Aufgeblasener Fuchsschwanz, Aufgeblasenes Fuchsschwanzgras

A. utriculatus Banks & Sol. subsp. **anthoxanthoides** (Boiss.) Dogan (*Alopecurus anthoxanthoides* Boiss.)

Turkey. See *Diagnoses plantarum orientalium novarum* 1(13): 42. 1854 and *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 86. 1982.

A. utriculatus Banks & Sol. subsp. **gaziantepicus** Dogan

Turkey. See *Notes from the Royal Botanic Garden, Edinburgh* 45(1): 114. 1988.

A. utriculatus Banks & Sol. subsp. **malatyaensis** Dogan

Turkey. See *Notes from the Royal Botanic Garden, Edinburgh* 45(1): 114. 1988.

A. utriculatus Banks & Sol. var. **brachyathera** Bornm.

Greece. See *Repertorium Specierum Novarum Regni Vegetabilis* 25: 326. 1928.

A. vaginatus (Willd.) Pall. ex Kunth (*Alopecurus brevifolius* Grossh.; *Alopecurus longifolius* Kolak.; *Alopecurus vaginatus* Pall.; *Alopecurus vaginatus* (Willd.) Boiss., nom. illeg., non *Alopecurus vaginatus* (Willd.) Pall. ex Kunth; *Alopecurus vaginatus* (Willd.) Trin., nom. illeg., non *Alopecurus vaginatus* (Willd.) Pall. ex Kunth; *Colobachne vaginata* (Willd.) P. Beauv.; *Polypogon vaginatus* Willd.)

Asia temperate, Syria, Iran, Iraq. Sheaths much dilated, useful for erosion control, see *Nova Acta Academiae*

Scientiarum Imperialis Petropolitanae. Praecedit Historia ejusdem Academiae 1797, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 44. 1801, *Essai d'une Nouvelle Agrostographie* 22, 158. 1812, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 25. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 26. 1840, *Flora Orientalis* 5: 488. 1884 and *Flora Kavkaza* 1: 75. Baku 1928.

Altoparadisium Filg. et al.

Two species, Brazil, Goiás, Alto Paraíso. Panicoideae, Paniceae, Arthropogoninae, perennial, caespitose, herbaceous, erect, hollow, contracted terminal panicle with verticillate branches, soft spikelets dorsiventrally compressed, only 2 spikelet bracts, lower floret absent, lower glume absent or awned, upper glume awned, 2 lodicules, 3 stamens, 2 stigmas, related to *Arthropogon*, *Canastra*, *Homolepis* and *Achlaena*, type *Altoparadisium chapadense* Filg. et al., see *Flora Brasiliensis seu Enumeratio Plantarum* 319. 1829 and T.S. Filgueiras, G. Davidse, F.O. Zuloaga & O. Morrone, "The establishment of the new genus *Altoparadisium* and a reevaluation of *Arthropogon* (Poaceae, Paniceae)," *Annals of the Missouri Botanical Garden* 88(2): 351-372. 2001 ["*Arthropogon bolivianus* and *Arthropogon rupestris* are reduced to varieties of *Altoparadisium chapadense*"], *Contributions from the United States National Herbarium* 46: 16-17. 2003.

Species

A. chapadense Filg. & al.

Chapada dos Veadeiros, Brazil. Erect, herbaceous, related to *Arthropogon scaber*, see *Annals of the Missouri Botanical Garden* 88(2): 363-366, f. 1-3. 2001.

A. scabrum (Pilg. & Kuhl.) Pilg. & al. (*Arthropogon scaber* Kuhl. & Pilg., nom. illeg., non *Arthropogon scaber* Pilg. & Kuhl.; *Arthropogon scaber* Pilg. & Kuhl.)

South America, Brazil. Erect, herbaceous, see *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67 (Bot. 11): 37-38, t. 2. 1922, *Revista do Museu Paulista. Universidade de São Paulo* 13: 1249. 1922, *Annals of the Missouri Botanical Garden* 88(2): 366, f. 7. 2001.

A. scabrum (Pilg. & Kuhl.) Pilg. & al. var. ***bolivianum*** (Filg.) Filg. & al. (*Arthropogon bolivianus* Filg.)

South America. See *Brittonia* 38(1): 71, f. 1g. 1986, *Annals of the Missouri Botanical Garden* 88(2): 366. 2001.

A. scabrum (Pilg. & Kuhl.) Pilg. & al. var. ***rupestre*** (Filg.) Filg. & al. (*Arthropogon rupestris* Filg.)

South America. Rhizomatous, slopes, rocky places, see *Nordic Journal of Botany* 16(1): 69, f. 1. 1996, *Annals of the Missouri Botanical Garden* 88(2): 366. 2001.

A. scabrum (Pilg. & Kuhl.) Pilg. & al. var. ***scabrum***

South America. See *Annals of the Missouri Botanical Garden* 88(2): 366, f. 7. 2001.

Alvimia C.E. Calderón ex Soderstr. & Londoño = *Alvimia* Soderstrom & Londoño

Dedicated to the Brazilian botanist Paulo de T. Alvim, naturalist, Itabuna, Brazil.

About 3 species, Brazil. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Arthrotyliidiinae, perennial, woody, strong, unarmed, leafy, solid, ascending, slender, scandent, climbing and hanging, smooth, persistent, branched, cylindrical culms, rhizomes pachymorph, auricles present, ligule ciliate, outer ligule sometimes lacking, sheath silky or pubescent, leaves disarticulating from the sheaths, plants bisexual, synflorescences spicate and paniculate, pseudospikelets slender and lax, glumes 0-3 awnless, palea present notched and awnless, 3 lodicules free and membranous, 2 or rarely 3 stamens, ovary glabrous without the apical appendage, stigmas plumose, fleshy fruits olives-like, forest, coastal forest, similar to *Atractantha*, type *Alvimia auriculata* Soderstr. & Londoño, see T.R. Soderstrom & X. Londoño, "A morphological study of *Alvimia* (Poaceae: Bambuseae), a new Brazilian bamboo genus with fleshy fruits," *American Journal of Botany* 75(6): 819-839. 1988, *Bonplandia* (Corrientes) 8(1-4): 81. 1994, *American Bamboos* 151-154. 1999, *Contributions from the United States National Herbarium* 39: 11. 2000.

Species

A. auriculata Soderstr. & Londoño

Brazil, Bahia. Smooth culms, climbing, forming dense clumps, shortly rhizomatous, coastal, sandy white soil, see *American Journal of Botany* 75(6): 833, f. 3-7, 12. 1988.

A. gracilis Soderstr. & Londoño

Brazil. Decumbent or curved, delicate, climbing, strong, solid, slender, smooth, small leaves, forming dense clumps, coastal, damp habitat, see *American Journal of Botany* 75(6): 835, f. 8, 11, 13-16. 1988.

A. lancifolia Soderstr. & Londoño

Brazil. Woody, slender, climbing, see *American Journal of Botany* 75(6): 837, f. 1-2, 9, 17. 1988.

***Alycia Willd. ex Steud.* = *Eriochloa* Kunth**

See *Nova Genera et Species Plantarum* 1: 94-95, t. 30. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 1: 37, 66,

747. 1840 and *N. Amer. Fl.* 17: 157. 1912, *Flora Mesoamericana* 6: 333-335. 1994, *Contributions from the United States National Herbarium* 46: 233-239. 2003

Amagris Raf. = *Calamagrostis* Adans.

Derived from *Calamagrostis*.

Pooideae, Poaeae, Agrostidinae, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, Constantine Samuel Rafinesque, *Principes Fondamentaux de Somiologie* 27. Palerme 1814, *Flora Telluriana*. 1: 17, 84. 1836 [1837] and *Contributions from the United States National Herbarium* 48: 191-227. 2003.

Amaxitis Adans. = *Dactylis* L.

Pooideae, Poodae, Poaeae, or Pooideae, Poaeae, Dactylidinae, see *Species Plantarum* 1: 71. 1753, *Familles des Plantes* 2: 34, 515. 1763 and *Flora Pyrenaea ...* 4: 359. 1901, *University of California Publications in Botany* 31(1): 1-40. 1959 [Cytogenetic and evolutionary studies in the genus *Dactylis*. I: Morphology, distribution, and interrelationships of the diploid subspecies.], *Contributions from the United States National Herbarium* 48: 242-244. 2003.

Amblyachyrum Hochst. & Steud. = *Amblyachyrum* Steud., *Apocopsis* Nees, *Apocopsis* Nees

From the Greek *amblys* “blunt, obtuse” and *achyron* “chaff, husk.”

Type *Amblyachyrum mangalorensis* Hochst. ex Steud., see *Synopsis Plantarum Glumacearum* 1: 413. 1854 [1855] and *Proceedings of the Linnean Society of London* 1: 93-94. 1841, *Monographiae Phanerogamarum* 6: 259. 1889 and *Blumea* 4(3): 523. 1941, *Taxon* 34: 159-164. 1985.

Amblychloa Link = *Sclerochloa* P. Beauv.

From the Greek *amblys* “blunt, obtuse” and *chloe, chloa* “grass.”

Pooideae, Poaeae, Puccinelliinae, type *Sclerochloa dura* (L.) P. Beauv., see *Species Plantarum* 1: 72. 1753, *Essai d'une nouvelle Agrostographie* 97, 98, 174, 177, t. 19, f. 4. 1812, *Commentationes Botanicae* 26-27. 1822, *Botanicon Gallicum* 1: 522. Paris 1828-1830, *Linnaea* 17(4): 399. 1844, *Spicilegium florum rumelicarum et bithynicarum ...* 2: 431. 1846, Carl Frederik Nyman (1820-1893), *Sylloge florum europaeae, seu Plantarum vascularium Europae indigenarum, enumeratio, adjectis synonymis gravioribus et indicata singularum distributione geographica*. 423. 1855, *Index Kewensis* 1: 104. 1895 and *Contr. U.S. Natl. Herb.* 10: 2.

1906, *American Journal of Botany* 18(8): 684-685, f. 1-4. 1931, *Journal of Cytology and Genetics* 21: 155. 1986, D.M. Brandenburg, J.R. Estes & J.W. Thieret, “Hard Grass (*Sclerochloa dura*, Poaceae) in the United States.” *Sida*. 14(3): 369-376. 1991, *Cytologia* 56: 437-452. 1991, *Flora Mediterranea* 8: 307-313. 1998, *Contributions from the United States National Herbarium* 48: 608-609. 2003.

Amblyopyrum (Jaub.) Eig = *Aegilops* L., *Amblyopyrum* Eig

From the Greek *amblys* “blunt, obtuse” and *pyros* “grain, wheat.”

One species, western Asia. Pooideae, Triticeae, or Pooideae, Triticeae, Triticinae, annual, herbaceous, ligule an unfringed membrane, plants bisexual, inflorescence a single spike, spikelets embedded in the rachis, 2 glumes more or less equal, palea present, 2 lodicules free and membranous, 3 stamens, ovary hairy, 2 stigmas, sometimes included in *Aegilops* L., see *Species Plantarum* 2: 1050-1051. 1753, *Illustrationes Plantarum Orientalium* 4: 23. 1851 and Alexander Eig (1894-1938), “*Amblyopyrum* Eig.: a new genus separated from the genus *Aegilops*.” Tel-Aviv 1929, *Feddes Repert.* 91: 225-228. 1980, *Feddes Repert.* 95: 425-521. 1984, *Taxon* 41: 555-556. 1992, *Nordic Journal of Botany* 13: 481-493. 1993, *Agric. Univ. Wageningen Pap.* 94-7: 1-512. 1994 [Wild wheats: a monograph of *Aegilops* L. and *Amblyopyrum* (Jaub. & Spach) Eig.], *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 20-23. 2003.

Species

A. muticum (Boiss.) Eig (*Aegilops loliacea* Jaub.; *Aegilops mutica* Boiss.; *Aegilops mutica* f. *gandiljanii* K. Hammer; *Aegilops mutica* f. *liolacea* (Jaub.) K. Hammer; *Aegilops mutica* f. *mutica*; *Aegilops mutica* f. *nuluci* (Gandilyan) K. Hammer; *Aegilops mutica* f. *nurub* (Gandilyan) K. Hammer; *Aegilops mutica* f. *nuruni* (Gandilyan) K. Hammer; *Aegilops mutica* f. *puluci* (Gandilyan) K. Hammer; *Aegilops mutica* f. *puruni* (Gandilyan) K. Hammer; *Aegilops mutica* subsp. *liolacea* (Jaub.) Zhuk.; *Aegilops mutica* subsp. *tripsacoides* (Jaub.) Zhuk.; *Aegilops mutica* var. *liolacea* (Jaub.) Eig; *Aegilops mutica* var. *nual* Gandilyan; *Aegilops mutica* var. *nuluci* Gandilyan; *Aegilops mutica* var. *nurub* Gandilyan; *Aegilops mutica* var. *nuruni* Gandilyan; *Aegilops mutica* var. *pual* Gandilyan; *Aegilops mutica* var. *puluci* Gandilyan; *Aegilops mutica* var. *puruni* Gandilyan; *Aegilops mutica* var. *typica* Eig; *Aegilops tripsacoides* Jaub. & Spach; *Aegilops tripsacoides* Jaub.; *Amblyopyrum muticum* subsp. *liolaceum* (Jaub.) Á. Löve; *Amblyopyrum muticum* var. *liolaceum* (Jaub.) Eig; *Amblyopyrum muticum* var. *typicum* Eig; *Triticum muticum* (Boiss.) Hack.; *Triticum muticum* var. *tripsacoides* (Jaub.) Thell.; *Triticum tripsacoides* (Jaub. & Spach) Bowden; *Triticum tripsacoides*

(Jaub.) Bowden; *Triticum tripsacoides* f. *lohiaceum* (Jaub.) Bowden; *Triticum tripsacoides* f. *tripsacoides*)

Turkey. Related to wheat, see *Diagnoses plantarum orientarium novarum* 1(5): 73. 1844, *Illustrationes Plantarum Orientalium* 2: 121, t. 200. 1847, *Illustrationes Plantarum Orientalium* 4: 23, t. 317. 1851 and *Annals of Scottish Natural History* 103. 1907, *Bulletin de la Société Botanique de Genève* 19: 329. 1928, *Canad. J. Bot.* 37: 666. 1957, *Canadian Journal of Botany* 37: 666. 1959, *Feddes Repert.* 91: 119, 229-230. 1980, *Feddes Repert.* 95: 494. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 405-406. 1994.

A. muticum (Boiss.) Eig var. **lohiaceum** (Jaub. & Spach) Eig (*Aegilops loliacea* Jaub. & Spach; *Aegilops loliacea* Jaub.; *Amblyopyrum muticum* var. *lohiaceum* (Jaub.) Eig)

Armenia, Turkey. See *Illustrationes Plantarum Orientalium* 4: 23, t. 317. 1851 and *Bulletin de la Société Botanique de Genève* 19: 329. 1928, *Agric. Univ. Wageningen Pap.* 94-7: 417. 1994.

A. muticum (Boiss.) Eig var. **muticum**

Turkey, Armenia. See *Agric. Univ. Wageningen Pap.* 94-7: 408. 1994.

Amblytes Dulac = *Molinia* Schrank

Greek *amblytes* “bluntness, dullness.”

Arundinoideae, Arundineae, see *Species Plantarum* 63. 1753, *Baiersche Flora* 1: 100, 334. 1789, *Methodus Plantas Horti Botanici* ... 183. 1794, *Flore du Département des Hautes-Pyrénées* 80. 1867 and *U.S. Dept. Agric. Bull.* 772: 50. 1920, *Fragmenta Floristica et Geobotanica* 21: 21-50. 1975, *Zlaki SSSR* 557. 1976, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 51-55. 1986, *Symbolae Botanicae Upsaliensis* 27(2): 139-145. 1986[1987], *Bot. Zhurn.* 74: 1675-1678. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66, 153-205. 1990, *Contributions from the United States National Herbarium* 46: 296. 2003.

Ammochloa Boiss. = *Cephalochloa* Coss. & Durieu, *Dictyochloa* (Murb.) E.G. Camus

From the Greek *ammos* “sand” and *chloe, chloa* “grass,” referring to the habitat.

About 3-4 species, Mediterranean. Pooideae, Poodae, Aveneae, annual, herbaceous, caespitose, unbranched, leaves mostly basal, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate contracted and ovoid, at the base of the inflorescence sterile spikelets reduced to small bracts, 2 glumes more or less equal, lemmas mucronate, palea present, lodicules absent, 2-3 stamens, ovary glabrous, 2 stigmas, open areas, sandy

places, dry areas, dry sandy places, see *Diagnoses plantarum orientarium novarum* ser. 1. 2(13): 51-52. 1854, *Annales des Sciences Naturelles, Botanique, sér. 4* 1: 229. 1854 and *Acta Universitatis Lundensis* 36(4): 12. 1900, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 63: 1. 45. 1931, *Kew Bulletin, Additional Series* 13: 109. 1986 [*Genera Graminum*].

Species

A. involucrata Murb.

Morocco. See *Acta Universitatis Lundensis* 36: 11-12, f. 3; t. 13, f. 3-7. 1900.

A. palaestina Boiss.

Palestine. See *Diagnoses plantarum orientarium novarum* 2(13): 52. 1854, *Bulletin de la Société Botanique de France* 1: 317. 1854 and Renato Pampanini (1875-1949), *Plantae tripolitanae ... florum vascularis Tripolitaniae*. Firenze 1914, *Flore de l'Afrique du Nord* 3: 10-11. 1955.

A. subacaulis Balansa ex Coss. & Durieu (*Ammochloa palaestina* f. *subacaulis* (Balansa ex Coss. & Durieu) Maire & Weiller; *Ammochloa palaestina* var. *subacaulis* (Balansa ex Coss. & Durieu) Pamp.)

Algeria. See *Bulletin de la Société Botanique de France* 1: 317. 1854 and *Bollettino della Società Botanica Italiana* 1914: 11. 1914, *Flore de l'Afrique du Nord* 3: 10-11. 1955.

A. unispiculata Eig

Palestine. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 63: 1. 45. 1931.

Ammophila Host = *Psamma* P. Beauv.

From the Greek *ammos* “sand” and *philos* “loving,” referring to its habitat.

About 2-4 species, North temperate, Europe, North Africa, North America. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Agrostidinae, perennial, coarse, tough, stiff, erect, herbaceous, unbranched, rhizomatous with hard and long rhizomes scaly and spreading, clumped, forming compact tussock, production of great numbers of vertical tillers and culms, glabrous nodes, hollow internodes, heavy foliage cover, leaves mostly basal, ligule acute and membranous, auricles absent, linear leaves pungent and gray-green to glaucous, leaves adapted to avoid excessive water loss, plants bisexual, a dense spike-like panicle more or less cylindrical, spikelets flattened laterally and bisexual, 1 floret bisexual, 2 glumes equal or subequal, coriaceous lemmas awnless and carinate or sharply keeled, palea present, 2 lodicules membranous and not toothed, 3 stamens, ovary glabrous, 2 stigmas, fruit ellipsoid and longitudinally grooved, sand-binder, ornamental, plays an important role in the process of dune formation and stabilization of coastal dunes, highly adapted to colonize shifting sand, widely

planted to repair or stabilize dune areas, useful for erosion control, hybrids with *Calamagrostis* Adans., type *Ammophila arundinacea* Host, see *Icones et Descriptiones Graminum Austriacorum* 4: 24, t. 41. 1809, *Essai d'une Nouvelle Agrostographie* 143, 176. 1812, *A Manual of the Botany of the Northern United States* 583. 1848 and A.H.L. Huiskes, "Biological flora of the British Isles: *Ammophila arenaria* (L.) Link." in *Journal of Ecology* 67: 363-382. 1979, *Watsonia* 18: 415-417. 1991, *New York Flora Association Newsletter* 3(1): 4. 1992, *New York Flora Association Newsletter* 5(2): 5-7. 1994, Alfred M. Wiedemann and Andrea Pickart, "The *Ammophila* problem on the Northwest Coast of North America." *Landscape and Urban Planning* 34: 287-299. 1996, *Am. J. Bot.* 84: 118. 1997, *Am. J. Bot.* 85: 1638-1645. 1998, *Am. J. Bot.* 86: 703-710. 1999, *Opera Botanica* 137: 1-42. 1999, *Am. J. Bot.* 87: 1578-1583. 2000, *Journal of Ecology* 88(5): 825-839. Oct 2000, *Am. J. Bot.* 89: 479-485, 623-631, 1431-1438. 2002, *Journal of Ecology* 90(2): 394-403. Apr 2002, *Contributions from the United States National Herbarium* 48: 107. 2003, *Restoration Ecology* vol. 12, issue 1: 29-35. Mar 2004, *New Phytologist* vol. 162, issue 3: 697-704. June 2004, *Environmental Microbiology* 6(8): 769-779. Aug 2004, *Ecology Letters* 7(8): 721-733. Aug 2004, *Ecology Letters* 7(10): 975-989. Oct 2004, *Plant Species Biology* 19(3): 175-184. Dec 2004, *Functional Ecology* 18(6): 914-924. Dec 2004, *Biological Journal of the Linnean Society* 83(4): 509-525. Dec 2004, *Journal of Ecology* 93(1): 5-15. Feb 2005, *Restoration Ecology* 13(1): 215-222. Mar 2005, *Journal of Ecology* 93(2): 441-470. Apr 2005, *Botanical Journal of the Linnean Society* 147(4): 501-508. Apr 2005.

Species

A. arenaria (L.) Link (*Ammophila arundinacea* Host; *Ammophila littoralis* (P. Beauv.) Rothm.; *Arundo arenaria* L.; *Arundo littoralis* P. Beauv. ex Steud.; *Calamagrostis arenaria* (L.) Roth; *Phalaris ammophila* (Host) Link; *Phalaris maritima* Nutt.; *Psamma arenaria* (L.) Roem. & Schult.; *Psamma littoralis* P. Beauv.)

Europe. Perennial, robust, coarse, erect, herbaceous, rigid and smooth, growing in small dense compact tufts, spreading rapidly by underground tough rhizomes that send vertical shoots upward, roots rather thin and fibrous, leaf sheath glabrous, thin and long ligules, leaves erect, inflorescence cylindrical, dense spike-like panicles, spikelets ascending, glumes narrow and subequal, lanceolate lemmas stiff and glabrous, thatching, baskets and brooms, rhizomes used for making rope and mats, coastal species, sand and dunes binder or stabilizer, drought-tolerant, useful for erosion control, not suitable for permanent erosion control, this grass is the prime colonist of unstable and mobile sand hills in dune systems, highly and perfectly adapted to colonize shifting sands of the foredune, used to control shifting dunes in coastal regions, sometimes an invasive and aggressive

weed, introduced to the west coast of North America in 1868 to stabilize sand dunes in the San Francisco area, threatens coastal sand dunes in the eastern and western United States, dies out when sand ceases to move, grows naturally in sand dunes along the coast, see *Species Plantarum* 1: 82. 1753, *Tentamen Florae Germanicae* 1: 34. 1788, *Icones et Descriptiones Graminum Austriacorum* 4: 24, t. 41. 1809, *Essai d'une Nouvelle Agrostographie* 144, t. 6, f. 1,176. 1812, *Systema Vegetabilium* 2: 845. 1817, *The Genera of North American Plants* 1: 48. 1818, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 66. 1821, *Hortus Regius Botanicus Berolinensis* 1: 105. 1827, *Nomenclator Botanicus* edition 2. 1: 144. 1840 and *Feddes Repertorium* 52: 269. 1943, *The American Grass Book* 186. 1953, *Webbia* 49(2): 265-329. 1995, *Taxon* 49(2): 247. 2000, *Molecular Ecology* 9(9): 1223-1232. Sep 2000, Cameron E. Webb, Ian Oliver and Anthony J. Pik, "Does coastal foredune stabilization with *Ammophila arenaria* restore plant and arthropod communities in Southeastern Australia?" *Restoration Ecology* 8(3): 283-288. Sep 2000, *New Phytologist* 150(3): 697-706. June 2001, *Journal of Ecology* 90(6): 978-988. Dec 2002, *New Phytologist* 162(3): 697-704. June 2004, *Environmental Microbiology* 6(8): 769-779. Aug 2004, *Ecology Letters* 7(8): 721-733. Aug 2004, *Journal of Ecology* 92(5): 906-927. Oct 2004, *Plant Species Biology* 19(3): 175-184. Dec 2004, *Biological Journal of the Linnean Society* 83(4): 509-525. Dec 2004, *Journal of Ecology* 93(2): 441-470. Apr 2005, *Botanical Journal of the Linnean Society* 147(4): 501-508. Apr 2005.

in English: marram grass, marram, beach grass, mel grass, Holland dune grass, European beach grass, European beachgrass

in French: élyme des sables, roseau des sables, ammophile des sables

in Spanish: grama de las dunas

A. arenaria (L.) Link subsp. **arenaria**

North and west Europe, southward to northwest Spain. Perennial, rhizomatous, branched, auricles absent, ligule long acuminate and hairy to scabrous, basal leaf sheaths not keeled, leaf blades linear and strongly involute, a panicle oblong and strongly contracted, inflorescence of chasmogamous spikelets, palea narrowly ovate to narrowly elliptic, sand and dunes binder or stabilizer, see *Hortus Regius Botanicus Berolinensis* 1: 105. 1827.

in English: marram grass

A. arenaria (L.) Link subsp. **arundinacea** (Husn.) H. Lindb. (*Ammophila arenaria* subsp. *arenaria* var. *australis* (Mabille) Hayek; *Ammophila australis* (Mabille) Porta & Rigo; *Ammophila littoralis* (P. Beauv.) Rothm.; *Ammophila pallida* (C. Presl) Fritsch; *Psamma australis* Mabille)

Europe, Morocco, Turkey. Useful for erosion control, see *Acta societatis scientiarum fennica. Series B. Opera biologica* 1(2): 10. Helsinki 1932.

A. arenaria (L.) Link subsp. *australis* (Mabille) M. Laínz (*Psamma australis* Mabille)

Europe. See *Recherches sur les plantes de la Corse* 1: 33. Paris 1867.

A. arenaria (L.) Link var. *arundinacea* (Host) Husn. (*Ammophila arundinacea* Host)

Europe. See *Icones et Descriptiones Graminum Austriae* 4: 24, t. 41. 1809, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 19. 1896.

A. arenaria (L.) Link var. *australis* (Mabille) Durand & Barratte (*Psamma australis* Mabille)

Europe. See *Recherches sur les plantes de la Corse* 1: 33. 1867 and *Florae libycae prodromus* ou catalogue raisonné des plantes de Tripolitaine 255. Genève 1910, *Bull. Soc. Bot. France* 57: 629-630. 1910.

A. breviligulata Fernald (*Ammophila arenaria* var. *breviligulata* (Fernald) S.G. Archer & C.E. Bunch)

Northeast northern America, U.S., Canada. Perennial, herbaceous, erect, low-growing, dark green to bluish green, coarse, tough, stiff, with strong and deep creeping rhizomes, vigorous, stems surrounded by old leaf sheaths, ligules firm and short, leaves linear rolled inward, lanceolate spikelets in dense spike-like panicles, glumes slightly scabrous, lemma rough, grain brown, low palatability, a pioneer colonist, can become invasive, can tolerate severe maritime exposure, useful for erosion control, used for initial sand dune stabilization, primary stabilization and revegetation of coastal sand dunes, growing on sandy sea-beach, sand dunes dune bluff edges, see *Rhodora* 22(256): 71. 1920, *The American Grass Book* 186. 1953, Denise M. Seliskar, "The response of *Ammophila breviligulata* and *Spartina patens* (Poaceae) to grazing by feral horses on a dynamic mid-Atlantic barrier island." *Am. J. Bot.* 90: 1038-1044. 2003.

in English: American beach grass, American beachgrass, American marram, beachgrass

A. champlainensis F. Seymour (on Lake Champlain)

Northern America. Found in shores, margins of fresh water, lakes and riverbanks, see *Sida* 2: 349. 1966.

in English: Champlain beachgrass

x *Ammocalamagrostis* P. Fourn.

Ammophila x *Calamagrostis*.

See *Monde des Plantes; revue mensuelle de botanique* 35: 28. 1934, *Genera Graminum* 374. 1986.

Ampelocalamus S.L. Chen, T.H. Wen & G.Y. Sheng = *Patellocalamus* W.T. Lin, *Sinarundinaria* Nakai

Greek *ampelos* "a vine" and *kalamos* "a reed, cane."

About 11 species, China, Hainan. Bambusoideae, Bambuseae, Arundinariinae, unicaspitose, small, sympodial, shrubby, lianoid, clumping, scandent, scrambling, climbing, culms erect below and pendulous or drooping upward, rhizomes short-necked pachymorph, manifold-branching, branches slender and short, internodes cylindrical and glabrous, culm sheath shedding late and far shorter than internode, sheath auricles distinct with long radial cilia, sheath blade developed, leaf blades lacking cross-veins, flowering semelauctant, diffuse panicle, large spikelets, 1-2 thin glumes, 3 stamens, 2 plumose stigmas, subtropical bamboos, culms for weaving, leaves as animal fodder, type *Ampelocalamus actinotrichus* (Merr. & Chun) S.L. Chen, T.H. Wen & G.Y. Sheng, see *Linnaea* 9(4): 476. 1835 and *Journal of Japanese Botany* 11(1): 1. 1935, *Acta Phytotaxonomica Sinica* 19: 332-334, f. 1. 1981, *Journal of Bamboo Research* 2(1): 15. 1983, *Journal of South China Agricultural University* 10(2): 45-46. 1989, *Kew Bulletin* 51(4): 809-813. 1996.

Species

A. actinotrichus (Merrill & Chun) S.L. Chen, T.H. Wen & G.Y. Sheng (*Arundinaria actinotricha* Merr. & Chun; *Indocalamus actinotrichus* (Merr. & Chun) McClure; *Pleioblastus actinotrichus* (Merr. & Chun) Keng f.)

China, Hainan Island, Guangdong. Thin, upper portion drooping, clumping, young culms with deciduous tomentum, culms and culm sheaths setose, sheath shorter than internode and shedding late sheath blade long lanceolate, sheath auricles caducous with stellate cilia, sheath ligule very short and ciliate, leaf lanceolate, lateral veins distinct, rhizomes will not run sideways, ornamental, growing in forests, see *Sunyatsenia* 2(3-4): 206-207, pl. 36. 1935, *Sunyatsenia* 6(1): 32. 1941, *Flora Illustralis Plantarum Primarium Sinicarum: Gramineae* 34, f. 23. 1959, *Acta Phytotaxonomica Sinica* 19(3): 334, f. 1. 1981.

in English: radiant hairy bamboo

in Chinese: She mao xuan zhu

A. anhispidis Wen

China. See *Journal of Bamboo Research* 4(2): 11, f. 2. 1985.

A. calcareus C.D. Chu & C.S. Chao

China, Guizhou, Libo. Soft and slender, manifold branching, 5-7 branches at each node, culms top drooping to scandent, leaning, clumping, culms and culm sheaths pubescent, culm sheaths persistent shorter than the internode, sheath blade ovate lanceolate or lanceolate, lateral veins not distinct, sheath auricles ciliate, sheath ligule densely hairy to fimbriate, rhizomes will not run sideways, 2-3 leaves on each branch, leaves oblong-lanceolate, see *Acta Phytotaxonomica Sinica* 21(2): 204-206, pl. 1. 1983.

A. ludianensis Yi & R.S. Wang (*Drepanostachyum ludianense* (T.P. Yi & R.S. Wang) Keng f.)

China. See *Journal of Bamboo Research* 4(2): 3-5, f. 1. 1985, *Journal of Bamboo Research* 5(2): 35. 1986.

A. mianningensis (Q. Li & X. Jiang) D.Z. Li & Stapleton (*Dendrocalamus mianningensis* Q. Li & X. Jiang; *Patellocalamus mianningensis* (Q. Li & X. Jiang) T.P. Yi)

China. See *Journal of Southwestern Forestry College* 1984(1): 134, f. 1. 1984, *Journal of Bamboo Research* 12(2): 54. 1993, *Kew Bulletin* 51(4): 811. 1996.

A. microphyllus (Hsueh/Xue & Yi) Hsueh & Yi (*Drepanostachyum microphyllum* (J.R. Xue & T.P. Yi) Keng f. ex Yi; *Sinocalamus microphyllus* J.R. Xue & T.P. Yi)

China. See *Journal of the Yunnan Forestry College* 1: 71-73, f. 2. 1982, *Journal of Bamboo Research* 4(2): 7-8. 1985, *Journal of Bamboo Research* 12(4): 46. 1993.

A. naibunensis (Hayata) T.H. Wen (*Arundinaria naibunensis* Hayata; *Drepanostachyum naibunense* (Hayata) Keng f.)

Asia. See *Journal of the College of Science, Imperial University of Tokyo* 30(1): 408-409. 1911, *Journal of Bamboo Research* 5(2): 32, f. 4. 1986, *Journal of Bamboo Research* 6(3): 34. 1987.

in English: Naibun bamboo

in China: Nei men zhu

in Japan: Naibun medake

A. patellaris (Gamble) Stapleton (*Chimonobambusa jainiana* C.R. Das & D.C. Pal; *Dendrocalamus patellaris* Gamble; *Drepanostachyum jainianum* (C.R. Das & D.C. Pal) R.B. Majumdar; *Drepanostachyum patellaris* (Gamble) J.R. Xue & D.Z. Li; *Patellocalamus patellaris* (Gamble) W.T. Lin; *Sinarundinaria jainiana* (C.R. Das & D.C. Pal) H.B. Naithani; *Sinocalamus patellaris* (Gamble) T.Q. Nguyen)

India, Sikkim, Darjeeling. Pendulous, semiscandent above, internodes striate, leaf sheaths glabrous, culms for weaving, leaves as animal fodder, see *Annals of the Royal Botanic Garden, Calcutta* 7: 86-87, t. 75. 1896 and *Journal of Economic and Taxonomic Botany, Additional Series* 4(3): 1023. 1983, *Bulletin of the Botanical Survey of India* 25(1-4): 235. 1983 [1985], *Journal of South China Agricultural University* 10(2): 46. 1989, *Bot. Zhurn.* (Moscow & Leningrad) 74(11): 1662. 1989, *Edinburgh Journal of Botany* 51(3): 321-323, f. 7. 1994, *Kew Bulletin* 51(4): 811. 1996.

Local names: nibha, ghopi bans, pajiok

A. saxatilis (Hsueh & Yi) Hsueh & Yi (*Drepanostachyum saxatile* (J.R. Xue & T.P. Yi) Keng f. ex Yi; *Sinocalamus saxatilis* J.R. Xue & T.P. Yi)

China. See *Journal of the Yunnan Forestry College* 1: 69, f. 1. 1982, *Journal of Bamboo Research* 4(2): 5. 1985, *Journal of Bamboo Research* 12(4): 46. 1993.

A. scandens J.R. Xue & W.D. Li (*Drepanostachyum scandens* (J.R. Xue & W.D. Li) Keng f. & T.P. Yi)

China. See *Journal of Bamboo Research* 4(2): 5-7, f. 2. 1985 and 12(4): 46. 1993.

Ampelodesma T. Durand & Schinz =
Ampelodesma P. Beauv. ex Benth.,
Ampelodesma P. Beauv., *Ampelodesmos* Link

Pooideae, Stipeae, Ampelodesmeae, see *Essai d'une Nouvelle Agrostographie* 78, pl. 15, f. 11. 1812, *Conspectus Florae Africae* 5: 874. 1894 and *Contributions from the United States National Herbarium* 48: 108. 2003.

Ampelodesmos Link = *Ampelodesma* T. Durand & Schinz, *Ampelodesma* P. Beauv., *Ampelodonax* Lojacono

Latin and Greek *ampelodesmos*, ancient name for *Lygeum spartum*, used in Sicily for tying up vines (Plinius).

One species, Mediterranean, North Africa. Stipoideae, Ampelodesmeae, or Pooideae, Poeae, or Pooideae, Stipeae, Ampelodesmeae, perennial, coastal, herbaceous, robust, solid, coarse, leaf blades harsh, rhizomatous, internodes solid, auricles absent, ligule a fringed membrane, plants bisexual, dense inflorescence paniculate with slender branches, spikelets 2-6-flowered, 2 membranous glumes more or less equal, lemmas incised mucronate or awned, palea present 2-dentate, 3 lodicules free and membranously hairy, 3 stamens, ovary with hairy apical appendage, 2 white stigmas, in dry places, oak woodland, coastal, resembles *Festuca*, type *Ampelodesmos tenax* (Vahl) Link, see *Essai d'une Nouvelle Agrostographie* 78, pl. 15, f. 11. 1812, *Hortus Regius Botanicus Berolinensis* 1: 136. 1827, *Conspectus Florae Africae* 5: 874. 1894 and *Flora Sicula* 3: 282. 1909, *Brittonia* 16: 76-79. 1964, *Taxon* 29: 645-666. 1980, *Kew Bulletin, Additional Series* 13: 93. 1986 [W.D. Clayton and S.A. Renvoize, *Genera Graminum*], *Contributions from the United States National Herbarium* 48: 108. 2003.

Species

A. mauritanicus (Poir.) T. Durand & Schinz (*Ampelodesmos bicolor* (Poir.) Kunth; *Ampelodesmos effusus* Steud.; *Ampelodesmos effusum* Steud.; *Ampelodesmos mauritanica* (Poir.) T. Durand & Schinz; *Ampelodesmos tenax* (Vahl) Link; *Ampelodonax bicolor* (Poir.) Lojac.; *Arundo bicolor* Poir.; *Arundo mauritanica* Poir.; *Arundo tenax* Vahl)

Tunisia, Europe, Turkey. Perennial, clumped, ligule membranous and ciliate, terminal inflorescence panicle-like with drooping branches, bisexual spikelets, glumes acuminate, cultivated, naturalized, used for rope making, see J.L.M. Poir. (1755-1834), *Voyage en Barbarie*, ou lettres écrites de l'ancienne Numidie pendant les années 1785 & 1786, sur la religion, les coutumes & les mœurs des Maures & des arabes-bédouins; avec un essai sur l'histoire naturelle

de ce pays. 2: 104. Paris 1789, *Symbolae Botanicae*, ... 2: 25. 1791, *Hortus Regius Botanicus Berolinensis* 1: 136. 1827, *Révision des Graminées* 1: 79. 1829, *Synopsis Plantarum Glumacearum* 1(3): 195. 1855 [1854], *Exploration Scientifique de l'Algérie* 2: 127. 1855, *Conspectus Florae Africae* 5: 874. 1894.

in English: dis grass, diss grass, Mauritania vine reed

in Morocco: dîs, diss, âdles

Ampelodonax Lojacono = *Ampelodesmos* Link

From the Greek *ampelos* “a vine” and *donax*, *donakos* for “a kind of reed.”

Pooideae, Stipeae, Ampelodesmeae, type *Ampelodonax bicolor* (Poir.) Lojac., see *Hortus Regius Botanicus Berolinensis* 1: 136. 1827 and *Flora Sicula* 3: 282. 1908-1909, *Contributions from the United States National Herbarium* 48: 108. 2003.

Amphibromus Nees = *Helictotrichon* Besser, *Helictotrichon* Besser ex Schult. & Schult.f., *Helictotrichon* Schult.

From the Greek *amphi* “both, of two kinds, on both sides, around, double” and the grass genus *Bromus* L. or *bromos* “food, the oat,” possibly alluding to similarity with the genus *Avena* L.

About 6-12 species, Australia, New Zealand, South America. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, perennial, aquatic or semi aquatic, slender, herbaceous, erect or geniculate at base, tufted or spreading, sometimes decumbent, stems with swollen nodes, rhizomatous, auricles absent, sheath margins free, ligule membranous and entire becoming lacerated with age, leaves often rough to scabrous, linear leaf blade flat or inrolled, glabrous nodes, hollow internodes, plants bisexual, hidden cleistogenes when present in the leaf sheaths, inflorescence a narrow loose elongated panicle with slender branches, solitary spikelets compressed laterally and pedicellate, flowering may be cleistogamous or chasmogamous, florets bisexual 3-10 or uppermost male, 2 subequal glumes acute or obtuse, firm lemmas longer than the glumes, lemmas toothed or bifid, awns more or less twisted geniculate or straight, callus hairy to silky, palea with 2 ciliate keels and apically notched, 2 lodicules free and membranous, 3 stamens, ovary glabrous or slightly hairy at apex, 2 stigmas white, common in damp areas, wet or inundated habitats, waterholes and swamps, lagoons, sometimes referred to *Helictotrichon* Besser, type *Amphibromus neesii* Steud., see *London Journal of Botany* 2: 420. 1843, *Synopsis Plantarum*

Glumacearum 1: 328. 1854 and Jason Richard Swallen (1903-1991), “The grass genus *Amphibromus*.” *Amer. J. Bot.* 18: 411-415. 1931, *Feddes Repertorium* 45: 7. 1938, S.W.L. Jacobs and L. Lapinuro, “The Australian species of *Amphibromus* (Poaceae).” in *Telopea* 2: 715-729. 1986, *A Key to Australian Grasses* 1-150. 1990, *Contributions from the United States National Herbarium* 48: 108-109. 2003.

Species

A. archeri (Hook.f.) P. Morris (*Amphibromus archeri* (Hook.f.) P. Morris var. *papillosus* P. Morris; *Amphibromus neesii* sensu Rodway, p.p., non Steudel; *Danthonia archeri* Hook.f.) (the species is dedicated to the Australian (born in Tasmania) botanist William Archer, 1820-1874 (d. Longford, Tasmania), architect, Fellow of the Linnean Society, correspondent of Sir Joseph D. Hooker (1817-1911), sent algae to William Henry Harvey; see G. Whiting, *The Products and Resources of Tasmania*. With an Appendix containing papers on the Vegetable Products ... By the Hon. W. Archer. [London. International Exhibition, 1862.] Hobart Town 1862; Joseph Dalton Hooker, *Flora Tasmaniae*. 1: 262, t. 80, 81. London 1857; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; R. Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 20. London 1994; Stafleu & Cowan, *Taxonomic literature*. 1: 58. Utrecht 1976)

South Australia, Victoria, Tasmania. Perennial, caespitose, erect, basal culm internodes often swollen, basal leaf sheaths not keeled, auricles absent, ligule acute and membranous, leaf blades ribbed or channelled, leaves often rough to scabrous, panicle erect, cleistogamous or chasmogamous spikelets, glumes unequal and glabrous, lemma bristled, scabrous awn bent and twisted, palea 2-keeled, lodicules hyaline, yellow-brown glabrous and oblong fruit, in damp areas, wet or inundated habitats, waterholes and swamps, lagoons, see *Flora Tasmaniae* 2: 122, t. 163B. 1858 and *Victorian Naturalist; Journal and Magazine of the Field Naturalists' Club of Victoria* 51: 146-147, t. 26, 2-3. Melbourne 1934, *Telopea* 2: 726. 1986.

in English: swamp wallaby-grass, pointed swamp wallaby-grass (wallaby = small kangaroo)

A. fluitans Kirk (*Amphibromus gracilis* P. Morris)

Victoria, Tasmania, New South Wales, New Zealand. Perennial, lowland to montane, rare or threatened or endangered, erect or floating above, decumbent culms rooting at lower nodes, rhizomatous or stoloniferous, glabrous to scabrous, weakly tufted, auricles absent, papery leaf sheaths not keeled, ligule entire, leaf blade flat or linear, panicle more or less erect enclosed below by uppermost leaf sheath, spikelets spreading and erect, cleistogamous or chasmogamous, glumes unequal, lemmas hispid and 2-toothed, awn straight and stout, palea smooth and 2-keeled, ovary

glabrous, fruit yellow-brown to dark, occurs in shallow waters, wetlands, open habitats, in permanent swamps, see *Transactions and Proceedings of the New Zealand Institute* 16: 374, t. 28. 1884 and *American Journal of Botany* 18: 411-415. 1931, *Victoria Naturalist* 51: 145, t. 26, f. 5. 1934, *Telopea* 2: 728-729. 1986, *Wellington Bot. Soc. Bull.* 43: 29-32. 1987, *Fl. New Zealand* 5: 298-299. 2000.

in English: graceful swamp wallaby-grass, water brome, river swamp wallaby-grass

A. macrorhinus S.W.L. Jacobs & Lapinpuro (*Amphibromus neesii* sensu Jessop)

South Australia, Western Australia, New South Wales, Victoria, Tasmania. Perennial, endangered grass, tufted, small tussocks, erect, coarse, auricles absent, ligule acute and membrane-like, basal leaf sheaths not keeled, leaves glabrous to scabrous, panicles erect and open with spreading spikelets, spikelets cleistogamous or chasmogamous, glumes more or less unequal, lemma papillose and rough, awn bent and slightly twisted, fruit yellow-brown to dark, similar to *Amphibromus nervosus* (Hook.f.) Druce, occurs on floodplains, riverbanks, inland and coastal rivers, grassland, riparian habitats, in damp soaks, in waterholes and low-lying wet places, see *Telopea* 2(6): 723. 1986.

in English: long-nosed swamp wallaby-grass

A. neesii Steudel (*Amphibromus nervosus* (Hook.f.) Druce; *Amphibromus nervosus* (Hook.f.) Baill.; *Avena nervosa* R. Br., nom. illeg., non *Avena nervosa* Lam.; *Avenastrum nervosum* (R. Br.) Vierh.; *Danthonia archeri* Hook.f.; *Danthonia nervosa* Colenso, nom. illeg., non *Danthonia nervosa* Hook.f.; *Danthonia nervosa* Hook.f., nom. illeg., non *Avena nervosa* R. Br.; *Helictotrichon neesi* (Steud.) Stace) (for the German (b. near Erbach, Hesse) botanist Christian Gottfried (Daniel) Nees von Esenbeck, 1776-1858 (d. Breslau, Wroclaw), physician, 1800 Dr. Med., editor of Robert Brown, professor of botany, botanical collector; see J.H. Barnhart, *Biographical notes upon botanists.* 2: 542. 1965)

New South Wales, Victoria, Tasmania. Perennial, rare, light green, graceful, tall and weeping, tufted, sometimes rhizomatous, forming erect tussocks and colonies, basal culm internodes not swollen, auricles absent, ligule acute, leaf sheaths glabrous or scabrous, leaves very rough to scabrous, panicle open and very loose, spreading spikelets cleistogamous or chasmogamous, glumes green and purplish, awn flexuous, palea acute and 2-keeled, fruit yellow-brown to dark, flowers in response to rain or flooding, growing in marshes and lagoons, open habitats, wetlands, wet ground, bog gardens, floodplains, river flats, often confused with *Amphibromus nervosus* (Hook.f.) Druce, see *Prodromus Florae Novae Hollandiae* 1: 178. 1810, *Synopsis Plantarum Glumacearum* 1: 328. 1854, *Flora Tasmaniae* 2: 121-122, t. 163A, B. 1858, *Histoire des Plantes* 12: 203. 1893, *Transactions and Proceedings of the New Zealand Institute* 28: 612. 1896 and *Verhandlungen der Gesellschaft Deutscher*

Naturforscher und Ärzte 85(2): 672. 1914, *Botanical Society and Exchange Club of the British Isles* 1916: 604. 1917, *Telopea* 2: 718, 721, 726. 1986, *Watsonia* 18: 413. 1991.

in English: swamp wallaby-grass, Southern swamp wallaby-grass

A. nervosus (Hook.f.) Druce (*Amphibromus neesii* sensu Jessop; *Amphibromus neesii* Steud.; *Amphibromus nervosus* (Hook.f.) Baill.; *Avena nervosa* R. Br., nom. illeg., non *Avena nervosa* Lam.; *Avenastrum nervosum* Vierh.; *Avenastrum nervosum* (R. Br.) Vierh.; *Danthonia nervosa* Colenso, nom. illeg., non *Danthonia nervosa* Hook.f.; *Danthonia nervosa* Hook.f., nom. illeg., non *Avena nervosa* R. Br.; *Helictotrichon neesii* (Steud.) Stace)

South Australia, Western Australia, New South Wales, Victoria. Perennial, tufted, erect, semiaquatic, sometimes rooting at the nodes, auricles absent, ligule acute, sheaths glabrous, leaves glabrous to scabrous, leaf blade linear, panicle erect, spreading spikelets cleistogamous or chasmogamous, glumes more or less unequal and acute, lemma scabrous, awn bent and twisted, palea acute and 2-keeled, fruit compressed and glabrous, flowers in response to rain or flooding, withstands summer drought, similar to *Amphibromus neesii* Steudel, found in open habitats, swamps, moist areas, on the floodplains and banks of rivers, see *Prodromus Florae Novae Hollandiae* 1: 178. 1810, *Synopsis Plantarum Glumacearum* 1: 328. 1854, *Flora Tasmaniae* 2: 121-122, t. 163A, B. 1858, *Histoire des Plantes* 12: 203. 1893, *Transactions and Proceedings of the New Zealand Institute* 28: 612. 1896 and *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1914, *Botanical Society and Exchange Club of the British Isles* 1916: 604. 1917, *Telopea* 2: 718, 720-721, 726. 1986, *Watsonia* 18: 413. 1991.

in English: common swamp wallaby-grass, veined swamp wallaby-grass, swamp wallaby-grass

A. pithogastrus S.W.L. Jacobs & Lapinpuro (Greek *pithos* "a large jar" and *gaster* "belly, paunch")

New South Wales, Victoria. Perennial, rare, tufted, not stoloniferous, swellings on the lower nodes, auricles absent, short ligule acute and entire, leaf sheaths glabrous, leaves glabrous to scabrous, leaf blades linear, panicle erect and slender, green to cream to straw-colored flowers, cleistogamous spikelets, spikelets on hispid pedicels, flowers in response to rain or flooding, glumes green, lemmas swollen, awn bent and twisted, short palea glabrous and acute, fruit yellow-brown, rare or threatened or endangered, presumed extinct in the south eastern part of New South Wales, similar to *Amphibromus neesii* Steudel, found in seasonally wet places, marshes and intermittent wetlands, moist habitats, near swamps, riparian forests, in swampy areas, see *Telopea* 2(6): 724. 1986.

in English: plump swamp wallaby-grass

A. quadridentulus (Döll) Swallen (*Avena montevidensis* Hack.; *Avena quadridentula* Döll; *Helictotrichon quadridentulum* (Döll) Renvoize; *Uralepis quadridentata* Döll)

South America, Brazil, Argentina, Uruguay. Swamps and moist areas, see *Flora Brasiliensis* 2(3): 100, pl. 29, f. 2. 1878, *Flora Brasiliensis* 2(3): 240. 1880 and *Österreichische Botanische Zeitschrift* 52(5): 188. 1902, *American Journal of Botany* 18: 414. 1931, *Kew Bulletin* 42: 921-925. 1987.

A. recurvatus Swallen

Victoria, Tasmania, Western Australia, South Australia. Perennial, tufted, purplish, erect, auricles absent, ligule entire and acute, leaf sheaths glabrous or pubescent, leaves glabrous to scabrous, green and purple erect panicle, chasmogamous spikelets, glumes more or less unequal, lemma hispid, awn bent and slightly twisted, palea obtuse, purple anthers, fruit compressed and glabrous, found in swamps and lagoons, open habitats, marshes and margins, see *American Journal of Botany* 18: 415. 1931, *Telopea* 2(6): 719. 1986.

in Australia: dark swamp wallaby-grass

A. scabrivalvis (Trin.) Swallen (*Avena scabrivalvis* Trin.; *Bromus gilliesii* Nees ex Steud.; *Bromus holciformis* Steud. & Hochst.; *Helictotrichon scabrivalvis* (Trin.) Govaerts, also *scabrivalve*; *Helictotrichon scabrivalvis* (Trin.) Renvoize, nom. illeg., non *Helictotrichon scabrivalvis* (Trin.) Govaerts) (for the Scottish physician John Gillies, 1792-1834 (d. Edinburgh), botanist, naval surgeon, M.D. 1817, 1820-1828 in Argentina, plant collector in South America, correspondent of John Miers (1789-1879) and William Jameson (1796-1873); see J.H. Barnhart, *Biographical notes upon botanists*. 2: 50. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. 486. Paris 1845; John Miers, *Travels in Chile and La Plata*. 1: 226. London 1826; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 171. Oxford 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Southern America, Chile, Argentina. Perennial, erect, rhizomatous, aquatic, basal corms, cleistogamous reproduction, cleistogamous spikelets enclosed within the leaf sheaths, ovary hairy, growing in shallow water, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 28. 1836, *Synopsis Plantarum Glumacearum* 1: 324, 328. 1854 and *American Journal of Botany* 18: 413. 1931, *World Checklist of Seed Plants* 2(1): 14. 1996, S.A. Renvoize, *Gramíneas de Bolivia* 155, f. 37. 1998.

in English: swamp wallaby grass

A. scabrivalvis (Trin.) Swallen var. **indigestus** Nicora

South America, Argentina, Chile. See *Darwiniana* 18: 101, f. 6. 1973, *Flora Patagónica* 3: 1-583. 1978 [Gramineae], *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994 [*Catálogo de la familia Poaceae en la República Argentina*].

A. scabrivalvis (Trin.) Swallen var. **scabrivalvis**

Chile, Argentina. See *American Journal of Botany* 18: 413. 1931.

A. sinuatus S.W.L. Jacobs & Lapinpuro

New South Wales, Victoria, Tasmania. Perennial, rare, threatened or endangered plants, stoloniferous and rooting at the lower nodes, decumbent and ascending, lower nodes occasionally swollen, auricles absent, basal leaf sheaths not keeled, ligule acuminate and entire, panicle erect and flexuous, spikelets cleistogamous or chasmogamous, lemmas with straight awns, palea acute and 2-keeled, fruit compressed and yellow-brown to dark, found in swamps and lagoons, areas with permanent swamps, open habitats, wet mud, wetlands, see *Telopea* 2(6): 727. 1986.

in English: wavy swamp wallaby-grass

A. vickeryae S.W.L. Jacobs & Lapinpuro

Western Australia, Darling region, coastal districts, wet areas. Perennial, tufted or caespitose, robust, basal internodes swollen, auricles absent, ligule acute, leaf sheaths not keeled, leaves more or less scabrous or glabrous, leaf blade flat and linear, panicle erect and contracted, chasmogamous spikelets, lemma 4-lobed, short bristle produced at the end of each lemma lobe, finely hispid lemma back, palea acute, red brown fruit, species close to and confused with *Amphibromus nervosus* (Hook.f.) Druce, found in wet areas, coastal districts, see *Telopea* 2(6): 725. 1986.

A. whitei C.E. Hubb.

Queensland. Perennial, tufted, ligule hyaline and long acute, auricles absent, basal leaf sheaths not keeled, leaves glabrous and scabrous, panicle green and erect, cleistogamous spikelets, palea hyaline and 2-keeled, anthers yellow, ovary glabrous, fruit dark yellow and compressed, extinct species, in freshwater swamp, see *Bulletin of Miscellaneous Information Kew* 1941: 30. 1941.

Amphicarpon Kunth

Greek *amphi* “both, on both sides” and *karpos* “fruit”; see *Manual of the Southeastern Flora* 88. 1933, E.D. Merrill, *Index rafinesquianus*. 74. 1949.

Amphicarpon Raf.

Greek *amphi* “both, on both sides” and *karpos* “fruit”; see C.S. Rafinesque, in *Am. Monthly Mag. Crit. Rev.* 2: 175. 1818 and *Manual of the Southeastern Flora* 88. 1933, E.D. Merrill, *Index rafinesquianus*. 74. 1949.

Amphicarpum Kunth

From the Greek *amphi* “both, on both sides” and *karpos* “fruit,” see *Révision des Graminées* 1(2): 28. 1829.

Two species, southeastern U.S. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Paspalinae, annual or perennial, herbaceous, unarmed, decumbent, auricles absent, ligule a fringe of hairs, plants bisexual, cleistogamous and chasmogamous, inflorescence paniculate, hidden cleistogenes subterranean, spikelets pedicellate, 1 or 2 very unequal glumes per spikelet, lower glume reduced or absent, lemmas acuminate, palea present, 3 stamens, open habitats, sandy fields, riverbanks, pinewoods, type *Amphicarpum purshii* Kunth, see *Révision des Graminées* 1(2): 28. 1829 and *American Journal of Botany* 35: 382-396. 1948, *Taxon* 20(2-3): 351. 1971, *Contributions from the United States National Herbarium* 46: 17. 2003.

Species

A. amphicarpon (Pursh) Nash (*Amphicarpon amphicarpon* (Pursh) Nash; *Amphicarpon purshii* Kunth; *Amphicarpum purshii* Kunth; *Milium amphicarpon* Pursh)

U.S. See *Flora Americae Septentrionalis; or, ...* 1: 62-63, t. 2. 1814, *Révision des Graminées* 1: 28. 1829, *Memoirs of the Torrey Botanical Club* 5(23): 352. 1894.

A. muhlenbergianum (Schult.) Hitchc. (*Amphicarpon floridanum* Chapm.; *Amphicarpum floridanum* Chapm.; *Milium muhlenbergianum* Schult.)

U.S. See *Mantissa* 2: 178. 1824, *Flora of the Southern United States* 572. 1860 and *Bartonia* 14: 34. 1932.

A. purshii Kunth (*Amphicarpon amphicarpon* (Pursh) Nash; *Amphicarpon purshii* Kunth; *Milium amphicarpon* Pursh)

North America. Leaves mostly basal, ponds, roadsides, see *Flora Americae Septentrionalis; or, ...* 1: 62-63, t. 2. 1814, *Révision des Graminées* 1: 28. 1829, *Memoirs of the Torrey Botanical Club* 5: 352. 1894.

Amphidonax Nees ex Lindl. = *Amphidonax* Nees, *Arundo* L.

From the Greek *amphi* “both, on both sides” and *donax*, *donakos* for “a kind of reed.”

Arundinoideae, Arundineae, type *Amphidonax bengalensis* Roxb. ex Nees, see *Species Plantarum* 1: 81. 1753, *An Introduction to the Natural System of Botany* 449. 1836, *Synopsis Plantarum Glumacearum* 1: 197. 1855 [1854] and N.L. Britton (1859-1934), *Flora of Bermuda* 29. New York 1918, *Contributions from the United States National Herbarium* 46: 113-115. 2003.

Amphigenes Janka = *Festuca* L.

From the Greek *amphigenes* “of doubtful gender.”

Pooideae, Poaceae, type *Amphigenes nutans* Hack. ex B.D. Jacks., see *Species Plantarum* 1: 73-76, 81-82. 1753, F.G. Dietrich (1768-1850), *Nachtrag zum vollständigen Lexicon der Gärtnererei und Botanik ...* 3: 333. Berlin 1817, *Linnaea* 30(5): 619. 1860, *Index Kewensis* 1: 111. 1895 and *Watsonia* 16: 300. 1987, *Contributions from the United States National Herbarium* 48: 312-368. 2003.

Amphilophis Nash = *Amphilophis* (Trin.) Nash, *Bothriochloa* Kuntze

Greek *amphilophos* “encompassing the neck,” *amphi* “on both sides” and *lophos* “a crest.”

Panicoideae, Andropogoneae, Sorghinae, type *Amphilophis torreyanus* (Steud.) Nash, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 285. 1832, *Revisio Generum Plantarum* 2: 762. 1891 and Nathaniel Lord Britton (1859-1934), *Manual of the Flora of the Northern States and Canada* 71. New York 1901, *Darwiniana* 38(1-2): 127-186. 2000, *Contributions from the United States National Herbarium* 46: 135-141. 2003.

Amphipogon R. Br. = *Gamelythrum* Nees, *Pentacraspedon* Steud.

From the Greek *amphi* “both, around, all round” and *pogon* “a beard,” referring to the hairy rachis of the spikelet, or to lemma and palea with ciliate awns, or to the bearded spikelets.

About 5-9 species, Australia. Arundinoideae, Amphipogoneae, perennial, more or less shortly rhizomatous, tufted or spreading or tussocky, herbaceous, more or less glandular, erect or geniculate at the base, unbranched, leaf blades convolute and pungent, auricles absent, ligule a fringe of hairs, narrow leaves stiff and hairy, glabrous and dark nodes, plants bisexual, inflorescence spiciform or capitate, terminal and dense spikes or panicles, bisexual spikelets awned and sessile, lower spikelets sometimes sterile, 2 glumes persistent and more or less equal, deeply cleft lemmas with ciliate awns, short hairy callus, palea deeply 2-lobed, 2 glabrous and fleshy lodicules, 3 stamens, 2 stigmas, fruit compressed, occur in dry sandy grassland, open habitats, rocky hillsides or ridges, genus of controversial placement, sometimes referred to and confused with *Enneapogon* Desv. ex P. Beauv., type *Amphipogon laguroides* R. Br., see *Species Plantarum. Editio quarta* 4(2): 899. 1805 [1806], *Prodromus Florae Novae Hollandiae* 175. 1810, *London J. Bot.* 2: 415. 1843, Ernst Gottlieb von Steudel (1783-1856), *Synopsis plantarum glumacearum* 1: 151. 1854 [1855] and

J.W. Vickery, "The species of *Amphipogon* R.Br." in *Contributions from the New South Wales National Herbarium* 1(5): 281-295. 1950, Nigel P. Barker, "The relationships of *Amphipogon*, *Elytrophorus* and *Cyperochloa* (Poaceae) as suggested by rbcL sequence data." *Telopea* 7(3): 205-213. 1997, Shauna Roche, John M. Koch and Kingsley W. Dixon, "Smoke enhanced seed germination for mine rehabilitation in the southwest of Western Australia." *Restoration Ecology* 5(3): 191-203. Sep 1997, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, "Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B." *Am. J. Bot.* 87: 96-107. 2000, T.R. Read, S.M. Bellairs, D.R. Mulligan and D. Lamb, "Smoke and heat effects on soil seed bank germination for the re-establishment of a native forest community in New South Wales." *Austral. Ecology* 25(1): 48-57. Feb 2000, *Flora of Australia* vol. 44B, Poaceae 3: 9-18. 2005.

Species

A. amphipogonoides (Steud.) Vickery (*Amphipogon pentacraspedon* Wawra; *Pentacraspedon amphipogonoides* (Steudel) Vickery)

Western Australia. Lemma 3-dentate and awnless, palea 2-dentate, see *Synopsis Plantarum Glumacearum* 1: 151. 1854 and *Contributions from the New South Wales National Herbarium* 1(5): 286. 1950.

A. avenaceus R. Br. (*Aegopogon avenaceus* (R. Br.) P. Beauv.; *Amphipogon brownii* F. Muell.; *Amphipogon strictus* var. *avenaceus* (R. Br.) Benth.)

Western Australia. See *Prodromus Florae Novae Hollandiae* 175. 1810, *Essai d'une Nouvelle Agrostographie* 122, 146, 150. 1812, *Fragmenta Phytographiae Australiae* 8: 201. 1874, *Flora Australiensis: A Description ...* 7: 598. 1878 and *Contributions from the New South Wales National Herbarium* 1(5): 284-285. 1950.

A. caricinus F. Muell. (*Amphipogon brownii* F. Muell.; *Amphipogon strictus* R. Br.; *Amphipogon strictus* sensu J.M. Black, non R. Br.; *Amphipogon strictus* var. *desertorum* Domin; *Amphipogon strictus* var. *occidentalis* Pilg.) (like the genus *Carex* L., Latin classical name *carex*, *icis* (Vergilius) for a sedge, reed-grass or rush; see Carl Linnaeus, *Species Plantarum*. 972. 1753 and *Genera Plantarum*. edition 5. 420. 1754)

Western Australia, New South Wales, Northern Territory, Queensland, South Australia, Victoria. Perennial, harsh, shortly rhizomatous or forming erect tufts, rhizomes more or less oblique, stems erect and wiry, leafy, narrow and pointed leaves, dense purplish panicles oblong to narrow-cylindrical, shallow soils, dry areas, drought resistant, hot and dry positions, unpalatable, see *Prodromus Florae Novae Hollandiae* 175. 1810, *Linnaea* 25(4): 445. 1853, *Fragmenta Phytographiae Australiae* 8: 201. 1874 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und*

Pflanzengeographie 35: 71. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 10: 119. 1911, *Contr. New South Wales Herb.* 1(5): 289. 1950.

in English: long-gray-beard grass, long-beard grass, bearded heads

A. caricinus F. Muell. var. *caricinus*

Western Australia, New South Wales, Northern Territory, Queensland, South Australia, Victoria. Perennial, erect, rigid, sometimes rhizomatous, panicle spike-like, pale spikelets, palea smooth, sandy soils, see *Contributions from the New South Wales National Herbarium* 1(5): 291. 1950.

in English: long-gray-beard grass

A. caricinus F. Muell. var. *scaber* Vickery (also *scabra*)

Queensland. See *Contributions from the New South Wales National Herbarium* 1(5): 292. 1950.

A. debilis R. Br. (*Aegopogon debilis* (R. Br.) P. Beauv.; *Amphipogon brownii* F. Muell.; *Amphipogon debilis* var. *typica* Domin)

Western Australia. Glumes tridentate, see *Prodromus Florae Novae Hollandiae* 175. 1810, *Essai d'une Nouvelle Agrostographie* 122, 146, 150. 1812, *Fragmenta Phytographiae Australiae* 8: 201. 1874 and *Journal of the Linnean Society, Botany* 41: 275. 1912, *Contributions from the New South Wales National Herbarium* 1(5): 283-284. 1950.

A. debilis R. Br. var. *fallax* Domin

Western Australia. Some doubt about this var., see *Journal of the Linnean Society, Botany* 41: 275. 1912, *Contributions from the New South Wales National Herbarium* 1(5): 284. 1950.

A. imbricatus Gand. (*Amphipogon strictus* R. Br.)

New South Wales. See *Prodromus Florae Novae Hollandiae* 175. 1810 and *Bulletin de la Société Botanique de France* 66(7): 298. 1919 [1920], *Contributions from the New South Wales National Herbarium* 1(5): 292. 1950.

A. laguroides R. Br. (*Aegopogon laguroides* (R. Br.) P. Beauv.; *Amphipogon cygnorum* Nees; *Amphipogon cygnorum* Nees ex Lehmann)

Western Australia. See *Prodromus Florae Novae Hollandiae* 175. 1810, *Essai d'une Nouvelle Agrostographie* 122, 146, 150. 1812, *Plantae Preissianae* 2: 100. 1846-1847 and *Contributions from the New South Wales National Herbarium* 1(5): 287-288. 1950.

A. laguroides R. Br. subsp. *havelii* T. MacFarlane

Western Australia.

A. laguroides R. Br. subsp. *laguroides*

Western Australia.

A. sericeus (Vickery) T. MacFarlane (*Amphipogon caricinus* var. *sericeus* Vickery)

Western Australia, Northern Territory. Leaves flat, feathery lemma lobes hairy, see *Contributions from the New South Wales National Herbarium* 1(5): 290. 1950.

A. strictus R. Br. (*Aegopogon strictus* (R. Br.) P. Beauv.; *Amphipogon brownii* F. Muell.; *Amphipogon elatior* Gand.; *Amphipogon pinifolius* Mez)

Western Australia, New South Wales, Northern Territory, South Australia. Perennial, slender, forming dense tussocks, short and creeping rhizomes, stems erect and wiry, stiff leaves erect and narrow, dense purplish or dark gray panicles capitate, feathery awns, coastal regions, on damp and moist soils, see *Prodromus Florae Novae Hollandiae* 175. 1810, *Essai d'une Nouvelle Agrostographie* 122, 146, 150. 1812, *Plantae Preissianae* 2: 101. 1846-1847, *Linnaea* 25(4): 445. 1853, *Fragmenta Phytographiae Australiae* 8: 201. 1874, *Flora Australiensis: A Description ...* 7: 598. 1878 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 35: 71. 1904, *Bulletin de la Société Botanique de France* 66(7): 298. 1919 [1920], *Repertorium Specierum Novarum Regni Vegetabilis* 17: 212. 1921, *Contributions from the New South Wales National Herbarium* 1(5): 289, 292-295. 1950.

in English: gray-beard grass

A. turbinatus R. Br. (*Aegopogon turbinatus* (R. Br.) P. Beauv.; *Aegopogon turbinatus* (R. Br.) Nees ex Vickery; *Amphipogon restionaceus* Pilger; *Gamelythrum turbinatum* (R. Br.) Nees)

Western Australia. See *Prodromus Florae Novae Hollandiae* 175. 1810, *Essai d'une Nouvelle Agrostographie* 122, 146. 1812, *London Journal of Botany* 2: 415. 1843 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 35: 72, f. 3D-J. 1904, *Contributions from the New South Wales National Herbarium* 1(5): 285-286. 1950.

Amphochaeta N.J. Andersson = *Pennisetum* Rich.

From the Greek *amphi* “both, around” and *chaite* “a bristle.”

Panicoideae, Paniceae, Cenchrinae, type *Amphochaeta exaltata* Andersson, see *Syn. Pl.* 1: 72. 1805, *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 136-137. 1855, *Index Kewensis* 1: 112. 1893 and *Contr. U.S. Natl. Herb.* 22: 210. 1921, *Flora Mesoamericana* 6: 371-374. 1994, *Sida* 19(3): 523-530. 2001, *Contributions from the United States National Herbarium* 46: 527-536. 2003.

Anachortus Jirásek & Chrtek = *Corynephorus* P. Beauv.

From the Greek *ana* “without” and *chortos* “green herbage, grass.”

Pooideae, Poeae, Airinae, type *Anachortus macrantherus* (Boiss. & Reut.) V. Jirásek & Chrtek, see *Essai d'une Nouvelle Agrostographie* 90, 149, 159. 1812 and *Preslia* 34: 383. 1962, *Contributions from the United States National Herbarium* 48: 109, 239. 2003.

Anachyris Nees = *Paspalum* L.

From the Greek *ana* “without” and *achyron* “chaff, husk.”

Panicoideae, Paniceae, Paspalinae, type *Anachyris paspaloides* Nees, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Species Graminum* 3: t. 271. 1829-1830, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 103. 1850, *Genera Plantarum* 3(2): 1097-1098. 1883 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 24(8): 435. 1927, *Repertorium Specierum Novarum Regni Vegetabilis* 26(7-15): 229. 1929, *Contributions from the United States National Herbarium* 46: 443-527. 2003.

Anachyrium Steud. = *Anachyris* Nees, *Paspalum* L.

From the Greek *ana* “without” and *achyron* “chaff, husk.”

Panicoideae, Paniceae, Paspalinae, see *Synopsis Plantarum Glumacearum* 1: 33. 1855 [1853].

Anadelphia Hackel = *Diectomis* P. Beauv., *Monium* Stapf, *Pobeguinea* (Stapf) Jacq.-Fél.

From Greek *anadelphos* “without brother or sister.”

About 13-14 species, tropical Africa, Senegal to Zambia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, caespitose, herbaceous, branched or unbranched, auricles present or absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate open or contracted, single loose racemes exerted or enclosed, spatheoles linear to narrowly lanceolate, few spikelets, male and female fertile spikelets in the same inflorescence, 2 glumes more or less equal, palea absent, 2 small free lodicules, 3 stamens, ovary glabrous, 2 stigmas, savannah, rainforest, on shallow soils, related to *Elymandra*, sometimes or often included in *Pobeguinea* (Stapf) Jacq.-Fél., type *Anadelphia virgata* Hack., see *Species Plantarum* 2: 1045. 1753, *Essai d'une Nouvelle Agrostographie* 132-133, 160, t. 23. 1812, *Mémoires du Muséum d'Histoire Naturelle* 2: 69. 1815, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 240-241. 1885, *Die Natürlichen Pflanzenfamilien* 2(2): 27. 1887 and *Journal de Botanique (Morot)* 19: 100. 1905, *Flora of Tropical Africa* 9: 399-400. 1919, *Revue internationale de*

botanique appliquée et d'agriculture tropicale 30: 172. 1950, *Kew Bulletin* 20: 275-285. 1966.

Species

A. afzeliana (Rendle) Stapf (*Anadelphia arrecta* Stapf; *Andropogon afzelianus* Rendle)

West tropical Africa, Gabon. Perennial, tufted, slender, basally branched, wiry, geniculate, weakly stemmed, good thatching, grazed when young, savannah damp places, marshy areas, see *Journal of Botany, British and Foreign* 31: 357. 1893 and *Flora of Tropical Africa* 9: 397. 1919.

in English: thatchgrass

in Nigeria: bayan maraya, beere, bere

in Senegal: bati, fati, mu git, nantag

in Sierra Leone: anepel, enepel, enepel ebana, enepel ebira, enepel erekrek, foni, foni mayambe, fovo, gbolesehrena, gbongbonelo, kulusa-binyi, puile, tikolo mese

in Yoruba: beere, bere

A. bigeniculata W.D. Clayton

West tropical Africa, Sierra Leone, Guinea. Annual, see *Kew Bulletin* 20: 283, f. 3. 1966.

in Guinea: fugolo

A. chevalieri Reznik (*Pobeguinea chevalieri* (Reznik) Jacq.-Fél.)

Guinea. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 14: 199. 1934, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 173. 1950.

A. funerea (Jacq.-Fél.) Clayton (*Monium funereum* Jacq.-Fél.)

Tropical Africa. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 186. 1950, *Kew Bulletin* 20: 281. 1966.

A. leptocoma (Rendle) Stapf (*Andropogon leptocomus* Trin.)

West tropical Africa. Perennial, good thatching, low grazing value, low-lying savannah, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 264. 1832 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 54: 284. 1917.

in English: thatch grass, thatchgrass, thatching grass

in Nigeria: beere, bere

in Sierra Leone: anbunthi, foni, foni mayambe, kilaichieyo

in Yoruba: beere, bere

A. macrochaeta (Stapf) Clayton (*Monium macrochaetum* Stapf)

Tropical Africa. See *Flora of Tropical Africa* 9: 400. 1919, *Kew Bulletin* 20: 281. 1966.

A. polychaeta Clayton

Tropical Africa, Senegal. See *Kew Bulletin* 20: 281, f. 2. 1966.

A. pumila Jacq.-Fél. (*Hypogynium pumilum* (Jacq.-Fél.) Roberty)

Tropical Africa. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 178, t. 6. 1950, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 187. 1960.

A. scyphofera W.D. Clayton

Zambia. Annual, herbaceous, leaf blades linear and very narrow, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, 2 glumes subequal, lower glume grooved, palea present, 2 fleshy lodicules, ovary glabrous, open habitats, see *Kew Bulletin* 20: 278, f. 1. 1966.

A. tenuifolia Stapf

West tropical Africa, Guinea. In damp places, see *Flora of Tropical Africa* 9: 392. 1919.

A. trepidaria (Stapf) Stapf (*Andropogon trepidarius* Stapf)

West tropical Africa, Guinea. Annual, grazed, thatching grass, see *Journal de Botanique (Morot)* 19: 100. 1905, *Flora of Tropical Africa* 9: 390. 1919.

in Guinea: tchelbi

A. trichaeta (Reznick) Clayton

Africa. A single fertile spikelet with 2 vestigial pedicels, see *Kew Bulletin* 20: 281. 1966.

A. virgata Hack.

Liberia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 241. 1885.

Anastrophus Schldl. = Axonopus P. Beauv.

From the Greek *ana* "up, back again" and *strophos* "twisted, twisted cord or band," *stropho* "to twist, to twine."

Panicoideae, Paniceae, Paspalinae, type *Paspalum platyculmum* Thouars ex Nees, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Essai d'une Nouvelle Agrostographie* 12, 154. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 24. 1829, *Botanische Zeitung. Berlin* 8: 681. 1850, *Genera Plantarum* 3(2): 1098. 1883 and *Contr. U.S. Natl. Herb.* 12: 142. 1908, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 53. 1940, *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 26(98): 13-23. 2002, *Contributions from the United States National Herbarium* 46: 116-134. 2003.

Anatherostipa (Hack. ex Kuntze) Peñailillo= *Nicoraella* Torres

From the Greek *a* “without, negative” and *ather* “stalk, barb.”

About 11 species, Argentina, Bolivia, Chile, Ecuador, Peru. Pooideae, Stipeae, Stipinae, perennial, caespitose, erect, ligule membranous, auricles absent, plants bisexual, narrow inflorescence, 2 glumes papery equal or subequal, palea present, 2-3 lodicules, 3 stamens, some species known for their toxicity, arid regions, desert, mountains, type *Anatherostipa saltensis* (Kuntze) Peñailillo, see *Species Plantarum* 1: 78-79. 1753, Ernst Gottlieb von Steudel (1783-1856), *Synopsis plantarum glumacearum*. 1: 121. Stuttgartiae 1854, *Revisio Generum Plantarum* 3(2): 372. 1898 and *Anales del Museo Nacional de Montevideo* 4: III, 36. 1901, *Bulletin of Miscellaneous Information Kew* 1923(8): 301-303. 1923, *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Blumea, Supplement* 3: 63. 1946, *Revista Argentina de Agronomía* 17(3): 201. 1950, *Gayana, Botánica* 13: 1-137. 1965, *Boletín de la Sociedad Argentina de Botánica* 12: 268-283. 1968, *Boletín de la Sociedad Argentina de Botánica* 11(4): 239. 1969, *Kew Bulletin* 40(4): 727-729. 1984[1985], Patricio Peñailillo B., “*Anatherostipa*, un nuevo género de Poaceae (Stipeae) / *Anatherostipa*, a new genus of Poaceae (Stipeae).” *Gayana, Botánica* 53(2): 277-284. 1996, A.M. Torres, “*Nicoraella* (Gramineae) un nuevo genero para America del Sur.” *Comisión de Investigaciones Científicas* 13: 69-77. 1997, *Gayana, Botánica* 54(2): 163-182. 1997, Khidir W. Hilu & Lawrence A. Alice, “Evolutionary implications of *matK* indels in Poaceae.” *Am. J. Bot.* 86: 1735-1741. 1999, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, “Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B.” *Am. J. Bot.* 87: 96-107. 2000, J. Valdés-Reyna & M.E. Barkworth, “Poaceae II. Pooideae: Tribu Stipeae.” *Flora de Veracruz* 127: 1-28. 2002, *Contributions from the United States National Herbarium* 48: 109-110, 467. 2003.

Species

A. bomanii (Hauman) Peñailillo (*Nicoraella bomanii* (Hauman) Torres; *Stipa bomanii* Hauman) (named for E. Boman, botanical collector in Argentina and Andes)

Argentina, Bolivia. Perennial, leaf blades filiform acicular, linear panicle, lanceolate glumes acute, toxic, sandy soils, rocky places, see *Anales del Museo Nacional de Buenos Aires* 29: 397, f. 1. 1917, *Gayana, Botánica* 53(2): 279. 1996, *Comisión de Investigaciones Científicas* 13: 73. 1997.

A. brevis (Torres) Peñailillo (*Nicoraella brevis* Torres)

Argentina. See *Comisión de Investigaciones Científicas* 13: 73, f. 1H-I. 1997, *Contributions from the United States National Herbarium* 48: 109. 2003.

A. coroi F. Rojas (*Achnatherum coroi* F. Rojas ex Renvoize)

Bolivia. Perennial, leaf blades filiform, panicles linear, glumes subequal lanceolate and acuminate, see *Gayana, Botánica* 54(2): 170-171, f. 2. 1997, *Gramíneas de Bolivia* 84. 1998.

A. hans-meyeri (Pilg.) Peñailillo (*Anatherostipa hans-meyeri* (Pilg.) F. Rojas, nom. illeg., non *Anatherostipa hans-meyeri* (Pilg.) Peñailillo; *Stipa hans-meyeri* Pilg.; *Stipa nivalis* Steud. ex Lechler) (for Hans (Johannes August Theodor) Meyer, 1885-1935, botanical collector in Brazil and Ecuador)

Ecuador, Peru, Bolivia. Perennial, caespitose, leaves mainly basal, leaf blades involute rigid pungent, dense panicle narrowly oblong, glumes lanceolate acuminate, callus obtuse bearded, páramos, puna, montane, forming dense clumps and small tufts, sandy places, grasslands, see *Berberides Americae Australis* 56. 1857 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl 123): 24. 1920, *Contr. U.S. Natl. Herb.* 24(7): 216, 272. 1925, *Gayana, Botánica* 53(2): 279. 1996, *Gayana, Botánica* 54(2): 170. 1997.

A. henrardiana (Parodi) Peñailillo (*Nicoraella henrardiana* (Parodi) Torres; *Stipa henrardiana* Parodi)

Argentina. See *Blumea, Supplement* 3: 68 1946, *Gayana, Botánica* 53(2): 279. 1996, *Comisión de Investigaciones Científicas* 13: 74. 1997.

A. mucronata (Griseb.) F. Rojas (*Anatherostipa saltensis* (Kuntze) Peñailillo; *Nicoraella mucronata* (Griseb.) Torres; *Oryzopsis mucronata* (Griseb.) Parodi; *Piptochaetium mucronatum* Griseb.; *Stipa saltensis* Kuntze)

Argentina. See *Symbolae ad Floram Argentinam. Zweite ...* 296-297. 1879, *Revisio Generum Plantarum* 3(2): 372. 1898 and *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 230, 306, f. 3D-E. 1944, *Gayana, Botánica* 53(2): 279. 1996, *Comisión de Investigaciones Científicas* 13: 72. 1997, *Gayana, Botánica* 54(2): 170. 1997.

A. obtusa (Nees & Meyen) Peñailillo (*Helopus obtusus* (Meyen) Steud.; *Nicoraella obtusa* (Nees & Meyen) Torres; *Oryzopsis neesii* Pilg.; *Piptatherum obtusum* Nees & Meyen; *Piptatherum obtusum* Meyen; *Stipa boliviensis* Hack.; *Stipa jujuyensis* Speg.; *Stipa obtusa* (Nees & Meyen) Hitchc.; *Urachne obtusa* (Nees & Meyen) Trin. & Rupr.)

Bolivia, Peru, Argentina. Perennial, caespitose, leaves mainly basal, leaf blades filiform rigid acuminate, panicle oblong, glumes ovate-oblong obtuse-acute, forming large clumps, puna, see *Reise um die Erde* 2: 32. 1835, *Nomenclator Botanicus. Editio secunda* 1: 747. 1840, *Gramineae* 18-19. 1841, *Species Graminum Stipaceorum* 22. 1842, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 150-151. 1843 and *Repertorium Specierum Novarum Regni Vegetabilis* 11: 21. 1912, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 26. 1920, *Contributions from*

the *United States National Herbarium* 24(7): 284. 1925, *Revista Argentina de Botánica* 1(1): 39. 1925, *Gayana, Botánica* 53(2): 279. 1996, *Comisión de Investigaciones Científicas* 13: 74. 1997.

A. orurenensis F. Rojas (*Achnatherum orurense* F. Rojas ex Renvoize)

Bolivia. Perennial, leaf blades convolute and pungent, loose panicles, subequal glumes ovate-lanceolate and acuminate, see *Gayana, Botánica* 54(2): 171-172, f. 3. 1997, *Gramíneas de Bolivia* 81. 1998.

A. rigidiseta (Pilg.) Peñailillo (*Nicoraella rigidiseta* (Pilg.) Torres; *Oryzopsis rigidiseta* Pilg.; *Stipa lechleriana* Steud. ex Lechler; *Stipa peruviana* Hitchc.; *Stipa rigidiseta* (Pilg.) Hitchc.)

Bolivia, Peru. Forming large clumps, see *Gramineae* 18-19. 1841, *Berberides Americae Australis* 56. 1857 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 26. 1920, *Contributions from the United States National Herbarium* 24(7): 285. 1925, *Gayana, Botánica* 53(2): 279. 1996, *Comisión de Investigaciones Científicas* 13: 75. 1997.

A. rosea (Hitchc.) Peñailillo (*Stipa rosea* Hitchc.)

Ecuador. Open ground, see *Contributions from the United States National Herbarium* 24(7): 272. 1925, *Contributions from the United States National Herbarium* 48: 110. 2003.

A. venusta (Phil.) Peñailillo (*Nicoraella venusta* (Phil.) Torres; *Stipa venusta* Phil.)

Chile. See *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 81. 1891 and *Gayana, Botánica* 53(2): 279. 1996, *Comisión de Investigaciones Científicas* 13: 75. 1997.

Anatherum Nabelek = *Festuca* L.

Greek *a* “without, negative” and *ather* “stalk, barb,” see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 128. (Dec.) 1812.

Anatherum P. Beauv. = *Andropogon* L., *Vetiveria* Bory

Greek *a* “without, negative” and *ather* “stalk, barb.”

Panicoideae, Andropogoneae, Andropogoninae, type *Anatherum bicorne* (L.) P. Beauv., see *Species Plantarum* 2: 1045-1046. 1753, A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie* 128, 150, atlas t. 22, f. 11. 1812, *Bull. Sci. Soc. Philom. Paris* 1822: 43. 1822 and *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64. 2003.

Ancistrachne S.T. Blake

Greek *ankistron* “fish-hook” and *achne* “chaff, glume,” referring to the hooked or curved hairs on the spikelets.

About 3-4 species, Philippines, Australia. Panicoideae, Panicoideae, Paniceae, perennial, wiry, branched above, erect or spreading or decumbent, shrubby and persistent to herbaceous, caespitose, sometimes scrambling or tufted, glabrous nodes, solid internodes, leaves narrow, auricles absent, ligule fringed and hairy, plants bisexual, inflorescence paniculate and open, spikelets sessile, 2 florets, lower floret sterile, upper floret bisexual, 2 glumes very unequal, upper glume with hooked or curved hairs or spines, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, fruit small and compressed, shade species, type *Ancistrachne uncinulata* (R. Br.) S.T. Blake, see *Nova Genera et Species Plantarum* 1: 94-95. 1815 [1816] and *Philippine Journal of Science* 37: 135. 1928, *University of Queensland Papers, Department of Biology* 1(19): 1-12. 1941 [Papers, Department of Biology, University of Queensland].

Species

A. maidenii (A.A. Ham.) Vickery (*Eriochloa maidenii* A.A. Ham.) (after the British-born (Londoner by birth) Australian botanist Joseph Henry Maiden, 1859-1925 (Sydney), studied botany under Prof. R. Bentley and Prof. D. Oliver, 1880 migrated to Australia, member of the Council of the Royal Society and Linnean Society of New South Wales and President of both Societies, Honorary Secretary of the Australasian Association for the Advancement of Science, Curator and Secretary of the Technological Museum, investigator of the economic botanical resources of Australia, 1896 succeeded the late Mr. Charles Moore as Government Botanist of New South Wales and Director of the Botanic Gardens of Sydney, 1889 Fellow of the Linnean Society (in 1915 was awarded its Gold Medal), from 1896 to 1924 New South Wales Government Botanist, 1916 admitted into the Royal Society of London, 1916 was appointed to the Imperial Service, among his writings are *The Useful Native Plants of Australia*. (Including Tasmania). London and Sydney 1889, *The Olive and Olive Oil*; being notes on the culture of the tree and extraction of the oil as carried out in South Australia and the Continent of Europe. Sydney 1887, *The Forest Flora of New South Wales*. Sydney [1903-] 1904-1925, *Mount Seaview and the Way Thither*. Sydney 1898 and *Sir Joseph Banks: the “Father of Australia.”* Sydney, London 1909, with Ernst Betche (1851-1913) wrote *A Census of New South Wales Plants*. Sydney 1916. See R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Stafleu & Cowan, *Taxonomic Literature*. 3: 249-255. 1981; J.H. Barnhart, *Biographical Notes upon Botanists*. 2: 437. 1965; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Ida Kaplan

Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.D. Merrill, *Bernice P. Bishop Mus. Bull.* 144: 129-130. 1937 and *Contr. U.S. Natl. Herb.* 30(1): 202-203. 1947; A.B. Rendle, *The Journal of Botany*. 54: 316, t. 545. 1916; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 249. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 206. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Frans A. Stafleu, *Linnaeus and the Linnaeans. The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971)

Australia, New South Wales. Perennial, vulnerable species, scrambling, decumbent and ascending, slender and rigid, sheath hairy, ligule ciliate, racemes terminaly or axillary, fertile floret elliptic to lanceolate, upper glume and lower lemma with curved hairs, upper lemma mucronate, see *Proceedings of the Linnean Society of New South Wales* 37(4): 709-711. 1912[1913], *Contributions from the New South Wales National Herbarium* 3(2): 83. 1961.

A. numaeensis (Balansa) S.T. Blake (*Panicum numaeense* Balansa)

New Caledonia. Endangered species, see *Bulletin de la Société Botanique de France* 19: 325. 1872 and *Proceedings of the Royal Society of Queensland* 81: 1. 1969.

A. uncinulata (R. Br.) S.T. Blake (*Panicum uncinulatum* R. Br.)

Australia, Queensland, New South Wales. Perennial, shrubby, sheath pilose, upper glume and lower lemma with hooked spines, upper lemma acute, grows in woodland, useful for erosion control, forage, economic plant, see *Prodromus Florae Novae Hollandiae* 191. 1810 and *University of Queensland Papers: Department of Biology* 1(19): 5, t. 2. 1941.

in English: hooky grass, hooked-hairy panic grass

Ancistragrostis S.T. Blake = *Echinopogon* P. Beauv., *Hystericina* Steud.

From the Greek *ankistron* “fish-hook.”

Two species, Papua New Guinea. Pooideae, Poodae, Aveneae, perennial, caespitose, herbaceous, unbranched, leaves mostly basal, ligule an unfringed membrane, auricles absent, leaf blades convolute or rolled, plants bisexual, contracted inflorescence paniculate, spikelets with rachilla extension, 1-flowered, 2 glumes more or less equal and persistent, lemmas convolute and strongly hooked, short subulate subapical awn hooked or not, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, damp places, montane, grassland, related to *Calamagrostis*, type *Ancistragrostis uncinoides* S.T. Blake,

see *Essai d'une Nouvelle Agrostographie* 42-43, 148, 161. 1812, *Synopsis Plantarum Glumacearum* 1: 35, 37. 1855 [1853] and *Blumea, Supplement* 3: 56-62. 1946.

Species

A. uncinoides S.T. Blake (*Calamagrostis uncinoides* (S.T. Blake) Reeder; *Deyeuxia uncinoides* (S.T. Blake) P. Royen & Veldkamp)

New Guinea. Perennial, small, caespitose, inflorescence a narrow panicle, see *Journal of the Arnold Arboretum* 31: 324. 1950, *The Alpine Flora of New Guinea* 2: 1140. 1979.

Ancistrochloa Honda = *Calamagrostis* Adans.

From the Greek *ankistron* “fish-hook” and *chloe*, *chloa* “grass.”

Type *Ancistrochloa fauriei* (Hack.) Honda, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Bulletin de l'Herbier Boissier* 7(9): 653. 1899 and *Journal of Japanese Botany* 12: 18. 1936, *Botanical Magazine* 89: 99-104. 1976, *Botanical Magazine* 91: 141-171. 1978.

Andropogon L. = *Anatherum* P. Beauv., *Arthrostachys* Desv., *Arthrolophis* (Trin.) Chiov., *Athrolophis* (Trin.) Chiov., *Diectomis* Kunth, *Dimeiostemon* Raf., *Eriopodium* Hochst., *Euklastaxon* Steud., *Eupogon* Desv., *Heterochloa* Desv., *Homoeatherum* Nees ex Lindl., *Hypogynium* Nees, *Leptopogon* Roberty

From the Greek *aner*, *andros* “a man, male” and *pogon* “a beard,” the hairy spikelets resemble a man’s beard, the pedicels of sterile spikelets are villous.

About 100-113 species, tropics and subtropics. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial bunchgrass, herbaceous, caespitose or decumbent, rhizomatous with rhizomes creeping, mostly robust and solid culms, never aromatic, base may be purplish or reddish, sometimes branched, auricles absent, sheaths and culms smooth or hairy, ligules often conspicuous with or without hairs, long arching basal leaves, plants bisexual, when present hidden cleistogenes in the leaf sheaths, inflorescence terminal to compound, racemes paired and digitate or subdigitate, racemes non deflexed at maturity, racemes digitate or rarely single, spikelets paired, sessile spikelet bisexual and often awned, shape of the sessile spikelet lower glume variable, stalked spikelet sterile or male and unawned, 2 florets, upper floret bisexual in the

sessile spikelets, upper floret male or sterile or suppressed in the pedicellate spikelets, lower floret reduced to an empty lemma, glumes more or less equal, lower glume usually membranous to coriaceous and 2-keeled, upper glume occasionally awned, upper lemma bilobed and awned or sometimes entire and awnless, palea present or absent, 2 tiny lodicules glabrous, stamens 1-3, anthers brown, ovary glabrous, 2 stigmas, extrafloral nectaries, the dispersal unit winged and plumose, handsome foliage, thatching grass, good fodder, feed green or dried, eaten by cattle, used in erosion control, pasture weeds, savannah, ruderal habitats, tropical highlands, in neglected places, marginal lands, currently there is disagreement over the taxonomic treatment of the genus, see *Species Plantarum* 2: 1045-1046. 1753, *Genera Plantarum*. edition 5. 468. 1754, *Essai d'une Nouvelle Agrostographie* 128, 132, 150, 160. 1812, *Mémoires du Muséum d'Histoire Naturelle* 2: 69. 1815, *Observ. Gramin. Belg.* 84, 90, 141. 1824, *Neogenyton* 4. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 364, 366. 1829, *Rel. Haenk.* 1(4-5): 331. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 170-171, 178, t. 8, 9, f. 2, 3. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 268. 1832, *A Natural System of Botany* ed 2 448. 1836, *Fl. Afr. Austral. Ill.* 103, 109. 1841, *Flora* 29: 115. 1846, *Synopsis Plantarum Glumacearum* 1: 412. 1854 [1855], *Fl. France Prosp.* 3: 469. 1855, *Fl. Austral.* 7: 535. 1878, *J. Linn. Soc., Bot.* 19: 72. 1881, *Flora Brasiliensis* 2(4): 283, 294-296, 303. 1883, *Gen. Pl.* 3(2): 1134. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 26-29. 1887, *Monogr. Phan.* 6: 397, 400, 402, 471, 594, 617, 647. 1889, *Index Kewensis* 1: 760. 1893 and *J. Bot. (Morot)* 19: 100. 1905, *Bollettino della Società Botanica Italiana* 1917: 57. 1917, *Madroño* 14: 18-29. 1957, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 193. 1960, *Brittonia* 19: 70-76. 1967, *Hook. Ic. Pl.* 37: t. 3644. 1967, *Primates* 10: 103-148. 1969, *Kew Bulletin* 27: 457-474. 1972, *Folia Primatologica* 21: 36-60. 1974, *Anuário Técnico do Instituto de Pesquisas Zootécnicas "Francisco Osorio"* 7: 317-410. 1980, *Trop. E. Afr. Gramineae* 770. 1982, *J. Arnold Arbor.* 64(2): 171-254. 1982, *Boletín de la Sociedad Argentina de Botánica* 24: 137-149. 1985, *Brittonia* 38(4): 411-414. 1986, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Taxon* 41: 556. 1992, *Bothalia* 24: 241-246. 1994, *Flora Mesoamericana* 6: 387-390. 1994, *Taxon* 44: 611-612. 1995, Lucia G. Le Roux and Elizabeth A. Kellogg, "Floral development and the formation of unisexual spikelets in the Andropogoneae (Poaceae)." *Am. J. Bot.* 86: 354-366. 1999, *Journal of the Torrey Botanical Society* 127(2): 101-106. 2000, Ana Zanin and Hilda Maria Longhi-Wagner, "Taxonomic Novelties in *Andropogon* (Poaceae-Andropogoneae) for Brazil." *Novon* 13(3): 368-375. 2003, *Contributions*

from the United States National Herbarium 46: 20-64. 2003.

Species

A. sp.

in Nigeria: raneraneho, yakawre

in Upper Volta: coobol, soobol, yantaare

in Yoruba: eruwa pupa, kokofa, kokofia, koriko ifa, poponloro

A. abyssinicus R. Br. ex Fresen. (*Andropogon amethystinus* Steud.; *Andropogon glabrescens* Hochst. ex Steud.; *Andropogon multinervius* Hochst. ex Steud.; *Andropogon plagiopus* Hochst. ex Steud.; *Andropogon polyatherus* Hochst. ex A. Rich.; *Andropogon polyatherus* subvar. *glabrescens* (Hochst. ex Steud.) Hack.; *Andropogon polyatherus* subvar. *intermedius* Chiov.; *Andropogon polyatherus* subvar. *multinervis* (Hochst. ex Steud.) Hack.; *Andropogon polyatherus* subvar. *scabriglumis* Hack.; *Andropogon polyatherus* var. *plagiopus* (Hochst. ex Steud.) Hack.; *Exothea abyssinica* (Hochst. ex A. Rich.) Andersson; *Sorghum abyssinicum* (R. Br. ex Fresen.) Kuntze; *Sorghum abyssinicum* (Fresen.) Kuntze)

Ethiopia. Annual, loosely tufted, ascending, leaf blades flat, racemes paired and villous to almost glabrous, geniculate awn, pedicelled spikelet usually 2-awned and male, a weed of pasture, in open grassland, disturbed areas, arable land, sometimes confused with *Andropogon distachyos* L. and *Andropogon amethystinus* Steud., see *Methodus Plantas Horti Botanici ...* 207. 1794, *Museum Senckenbergianum* 2: 146. 1837, *Tentamen Florae Abyssinicae ...* 2: 455. 1850, *Synopsis Plantarum Glumacearum* 1: 371, 374. 1854, *Nova Acta Regiae Societas Scientiarum Upsaliensis, ser. 3, 2*: 253, t. 3. 1857, *Monographiae Phanerogamarum* 6: 467. 1889, *Revisio Generum Plantarum* 2: 791. 1891 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 282. 1908, *American Journal of Botany* 43: 395-404. 1956.

A. aequatoriensis Hitchc.

Ecuador. See *Contributions from the United States National Herbarium* 24(8): 499. 1927.

A. africanus Franch. (*Anatherum africanum* (Franch.) Roberty; *Andropogon nardus* var. *prolixus* Stapf; *Andropogon prolixus* (Stapf) Stapf)

Tropical Africa. Perennial, caespitose, good cattle-grazing pasture, swampy sites, seasonally flooded plains, moist meadow, rocky places, wet sandy areas, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 325. 1895, *Flora Capensis* 7: 352. 1898 and *Bulletin de la Société Botanique de France* 55: 102. 1908, *Boissiera.* 9: 207. 1960.

in Nigeria: ranerane-ho, raneraneho, yakawre

A. amboinicus (L.) Merr. (*Eragrostis amboinica* (L.) Druce; *Poa amboinica* L.)

Philippines, Asia, India. See *Mantissa Plantarum* 557. 1771, *Symbolae Botanicae*, ... 2: 102. 1791 and *Report. Botanical Exchange Club. London*. 1916: 621. 1917, Elmer Drew Merrill (1876-1956), *An Interpretation of Rumphius's Herbarium Amboinense* Publication No. 9: 88. Manila 1917, Cornelis Andries B. Backer (1874-1963), *Handboek voor de Flora van Java* 2: 99. Batavia 1928, *Blumea* 37(1): 227-237. 1992.

A. amethystinus Steud. (*Andropogon abyssinicus* sensu Chippind., non R. Br. ex Fresen.; *Andropogon abyssinicus* R. Br. ex Fresen.; *Andropogon homogamus* Stapf; *Andropogon humilis* Hochst. ex A. Rich.; *Andropogon pilosellus* Stapf; *Andropogon polyatherus* A. Rich. var. *plagiopus* (Steud.) Hack.; *Andropogon pratensis* Hack.; *Andropogon pratensis* Hochst.; *Andropogon pratensis* Hochst. ex Hack.; *Andropogon pratensis* subvar. *pilosus* Hack.; *Andropogon pratensis* var. *pseudoabyssinicus* Chiov.; *Sorghum abyssinicum* (R. Br. ex Fresen.) Kuntze)

Tropical and southern Africa, Tanzania, Cameroon, Equatorial Guinea. Perennial, variable, straggling, loosely or densely tufted, erect to ascending, sometimes shortly rhizomatous with wiry rhizomes, basal leaf sheaths glabrous, ligule a ciliate membrane, leaves flat or inrolled, inflorescence not plumose, racemes paired and terminal, lower glume of sessile spikelet smooth and winged or wingless, fertile lemma awned, pedicelled spikelet 1- to 2-awned, sessile spikelet lanceolate to elliptic, geniculate awn, grazed by sheep and goats, whole plant eaten by baboons, common in mountain grassland, on steep slope, cliffs, hard soil, along roadsides, rocky mountain slopes, rock crevices, upland evergreen forest, open places, see *Museum Senckenbergianum* 2: 146. 1837, *Tentamen Florae Abyssinicae* ... 2: 455. 1850, *Synopsis Plantarum Glumacearum* 1: 371, 374. 1854, *Monographiae Phanerogamarum* 6: 463-464, 467. 1889, *Revisio Generum Plantarum* 2: 791. 1891 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 282. 1908, *Flora of Tropical Africa* 9: 217, 221, 228. 1919, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Bothalia* 24: 241-246. 1994.

A. amethystinus Steud. var. *breviaristatus* Hack.

Abyssinia. See *Synopsis Plantarum Glumacearum* 1: 371. 1854, *Monographiae Phanerogamarum* 6: 464. 1889.

A. angustatus (J. Presl) Steud. (*Andropogon apricus* Trin.; *Andropogon aturensis* Maury; *Andropogon mocquersyisii* Benoist; *Cymbachne angustata* (J. Presl) Roberty; *Diectomis angustata* J. Presl; *Diectomis laxa* Nees; *Sorghum laxum* (Nees) Kuntze)

Mexico and West Indies, Venezuela, Brazil. Annual, erect, caespitose, slender, callus of sessile spikelet pungent, forming colonies, páramos, roadsides, savannah, white sandy soils, riverbanks, ponds, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 340-341. 1829, *Reliquiae Haenkeanae* 1(4-5): 333. 1830, *Mémoires de l'Académie Impériale des*

Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 4,2(1): 83. 1836, *Journal de Botanique (Morot)* 3: 158, f. 4. 1889, *Synopsis Plantarum Glumacearum* 1: 370. 1854, *Revisio Generum Plantarum* 2: 790. 1891 and *Bulletin de la Société Botanique de France* 87: 340. 1940, *Boissiera*. 9: 254. 1960.

A. appendiculatus Nees (*Andropogon brazzae* Franch.; *Andropogon pseudapricus* Stapf; *Leptopogon appendiculatus* (Nees) Roberty)

Africa, Swaziland, Lesotho, South Africa. Perennial, erect, variable, stems strongly flattened, densely tufted, forming dense stands, sheaths keeled and compressed, broad leaves folded at the base, 1-2 flowering branches per culm, racemes arranged semidigitately, spikelets dark purple and paired, lower glume of the sessile spikelets grooved, useful palatable grass, high grazing value, can withstand heavy grazing, occurs in the seasonally wet areas, vleis, shady places, low-lying ground, stream banks, sandy soils, moist ground, loamy sand, see *Florae Africae Australioris Illustrationes Monographicae* 105. 1841, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 326. 1895 and *Flora of Tropical Africa* 9: 242. 1919, *Boissiera*. 9: 197. 1960, *Bothalia* 24: 241-246. 1994.

in English: bluestem

in South Africa: tajwe, vlei bluestem, blougras, vleiblougras, marotlo a mafubedu

A. appendiculatus Nees var. *ischaemum* Nees

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 105. 1841.

A. appendiculatus Nees var. *polycladus* Hack.

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 105. 1841, *Bulletin de l'Herbier Boissier* 4: Append. 3. 11. 1896 and *Kew Bulletin* 32(1): 1. 1977.

A. appendiculatus Nees var. *serrulatus* (Link) Nees (*Andropogon serrulatus* Link)

South Africa. See *Hortus Regius Botanicus Berolinensis* 1: 241. 1827, *Florae Africae Australioris Illustrationes Monographicae* 105. 1841, *Bulletin de l'Herbier Boissier* 4: Append. 3. 11. 1896.

A. arctatus Chapman (*Andropogon distachyos* L.; *Andropogon tetrastachyus* Elliott var. *distachyus* Chapm.; *Leptopogon carinatus* (Nees) Roberty; *Leptopogon carinatus* subvar. *arctatus* (Chapman) Roberty; *Sorghum arctatum* (Chapm.) Kuntze)

U.S., Florida. Perennial, tufted culms, green, nodes smooth, sheaths smooth or pubescent, mostly smooth leaves, papery ligule thin and smooth, racemes paired and silky, pedicellate spikelet a sterile scale, fruit a minute grain, threatened plant, occurs in wetlands or nonwetlands, in pine flatwoods, bogs and disturbed areas, see *Species Plantarum* 2: 1046. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1:

150, t. 8, f. 4. 1816, *Flora of the Southern United States* 581. 1860, *Botanical Gazette* 3(3): 20. 1878, *Revisio Generum Plantarum* 2: 791. 1891 and *Boissiera*. 9: 197-198. 1960, *J. Arnold Arbor.* 64: 207. 1983.

in English: pinewoods bluestem

A. arenarius Hack. (*Anatherum virginicum* subvar. *arenarium* (Hack.) Roberty; *Andropogon arenarius* f. *arenarius*; *Andropogon arenarius* f. *subcompletus* Hack. ex Lindm.)

Brazil, Uruguay. See *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *Flora* 68(8): 134. 1885 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 6. 1900, *Boissiera*. 9: 212. 1960, *Brittonia* 38(4): 411-414. 1986.

A. ariani Edgew.

India. See *Journal of the Proceedings of the Linnean Society* 6: 208. 1862.

A. aridus Clayton

Somalia. Perennial, branched, dense cushions forming, densely tufted, leaves folded or inrolled, terminal racemes paired or solitary, lower glume convex on the back, upper glume acute, upper lemma awned, stony hills, see *Kew Bulletin* 32(1): 1. 1977.

A. ascinodis C.B. Clarke (*Andropogon apricus* Hook.f., non Trinius; *Andropogon apricus* var. *indicus* Hack.)

India, Myanmar. Perennial, tufted, lower glume of sessile spikelet deeply grooved, a fodder grass, on exposed areas, slopes, hillsides, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 83. 1836, *Journal of the Linnean Society, Botany* 25: 87, t. 36. 1889, *Monographiae Phanerogamarum* 6: 457. 1889, *Fl. Brit. Ind.* 7: 169. 1897.

A. auriculatus Stapf

Tropical Africa, Senegal. Perennial, caespitose, forage, on sandy beaches, see *Flora of Tropical Africa* 9: 258. 1919.

in Sierra Leone: puile

A. barretio G.A. Norrmann & Quarin (for Ismar L. Barreto, botanist in Brazil)

Brazil. See *Bonplandia* 5: 291-293. 1983, *Darwiniana* 39(1-2): 171, f. 1. 2001.

A. bentii Stapf (named for James Theodore Bent, 1852-1897, traveler, botanical collector in Arabia, Socotra and Sudan; see Theodore Bent and Mrs. Theodore Bent [Mabel Virginia Anna Bent, née Hall-Dare], *Southern Arabia*. London 1900)

Socotra. Similar to *Andropogon kelleri* Hack., see *Kew Bulletin* 6: 224. 1907.

A. bicornis L. (*Anatherum bicorne* (L.) P. Beauv.; *Andropogon bicornis* Forssk., nom. illeg., non *Andropogon bicornis* L.; *Andropogon bicornis* var. *absconditus* Hack.; *Andropogon bicornis* var. *angustifolius* Pilg.; *Andropogon*

bicornis var. *burchellii* Hack.; *Andropogon bicornis* var. *gracillimus* Hack.; *Andropogon bicornis* var. *hybridus* Hack.; *Andropogon bicornis* var. *paranensis* Bertoni; *Andropogon bicornis* var. *virginicoides* Hack.; *Andropogon brevicornis* L.; *Melochia graminifolia* A. St.-Hil.; *Saccharum bicorne* (L.) Griseb.; *Sorghum bicorne* (L.) Kuntze)

Brazil, Mexico to Argentina, Venezuela, Costa Rica. Perennial bunchgrass, herbaceous, erect, glabrous, branching from the base, robust, semiaquatic, emergent, rhizomatous, internodes reddish, leaves long and narrow with rough margins, straight racemes aggregated into large and profusely branched inflorescences, cottony white awns or awnless, sessile spikelets awnless, a prolific seeder forming dense stands, noxious weed, invasive, potential seed contaminant, propagation by seed dispersed by wind and water, naturalized, unpalatable, forage and paper production, roots diuretic and sudorific, decoction of roots is diuretic and emollient, occurs on pasture and road bank, old abandoned fields, canal banks, marshy areas, damp places, clearings, sandy soils, forest margins, savannah, riverbanks, along roadsides, pine savannah, disturbed areas, in seasonally inundated savannahs, ditches, see *Species Plantarum* 2: 1046. 1753, *Flora Aegyptiaco-Arabica* 173. 1775, *Essai d'une Nouvelle Agrostographie* 128, 150 atlas t. 22, f. 11. 1812, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 266. 1857, *Flora Brasiliensis* 2(4): 284-285. 1883, *Monographiae Phanerogamarum* 6: 418. 1889, *Revisio Generum Plantarum* 2: 791. 1891, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 23. 1899 and *Anales Científicos Paraguayos* 2(5): 144. 1918, *Biota* 2: 82. 1958, *Anuário Técnico do Instituto de Pesquisas Zootécnicas "Francisco Osorio"* 7: 317-410. 1980, *Bol. Soc. Argent. Bot.* 24: 137-149. 1985, *Brittonia* 38(4): 411-414. 1986, *Taxon* 48: 573. 1999.

in English: horse's tail, Indian beardgrass, West Indian fox-tail grass, West Indian foxtail, foxtail, seed grass, deer grass

in Spanish: paja, cola de caballo, rabo de zorro, matojo de techar, barba de indio

in Colombia: cola de venado, cola de zorro, rabo de gato

in Ecuador: puntero, rabo de zorro

in Brazil: capim rabo de raposa, capim-andaime, capim-rabo-de-burro, capim sapê, sapê, capim amargoso, capim d'agua, capim de bezerro, capim mole, capim peba, capim vassoura, capupuba, sapê

in Mexico: cola de zorra, cola de venado, rabo de mula, zacate agrio, zacate amarillo

Common names: Bartgras, z'herbe panache, cola de venado, pajón conojera

A. bogotensis (Hack.) A. Zanin & Longhi-Wagner (*Andropogon incanus* var. *bogotensis* Hack.; *Andropogon lateralis*

var. *bogotensis* (Hack.) Henrard; *Andropogon multiflorus* Renvoize)

South America, Colombia. Perennial, erect, caespitose, leaf blades linear, branched inflorescence, racemes delicate and exserted, wet savannahs, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 329-330. 1829, *Monographiae Phanerogamarum* 6: 433. 1889 and *Mededeelingen van's Rijks-Herbarium* 40: 43. 1921, *Gramíneas de Bolivia* 596, f. 138. 1998.

A. bourgeaei Hack. (*Anatherum bourgeaei* (Hack.) Roberty; *Sorghum bourgeaui* (Hack.) Kuntze) (named for the French traveler Eugène Bourgeau, 1813-1877, botanical collector in Europe and Mexico, North America and Algeria)

America, Mexico. Perennial, erect, see *Flora* 68(8): 134. 1885, *Revisio Generum Plantarum* 2: 791. 1891 and *Boissiera*. 9: 211. 1960.

A. brachyatherus Hochst. (*Andropogon brachyatherus* Hochst. ex A. Rich., nom. illeg., non *Andropogon brachyatherus* Hochst.; *Ischaemum brachyatherum* (Hochst.) Fenzl ex Hack.)

Africa. See *Flora* 27: 241. 1844, *Tentamen Florae Abyssinicae* ... 2: 457. 1850, *Monographiae Phanerogamarum* 6: 239. 1889.

A. brachystachyus Chapman (*Anatherum brachystachyum* (Chapm.) Roberty; *Sorghum brachystachyum* (Chapm.) Kuntze)

U.S., Florida. Perennial, caespitose, tufted culms, nodes and sheaths smooth, papery ligule thin and with a fringe of hairs, leaf blades scabrous, 2-branched racemes, pedicellate spikelet reduced to a single scale, fruit a minute grain, found in pine flatwoods, sand hill, wet roadsides and ecotones of depression marsh, abundant in seasonal ponds and swales, see *Flora of the Southern United States* Suppl. 668. 1883, *Revisio Generum Plantarum* 2: 791. 1891 and *Boissiera*. 9: 211. 1960, *Journal of the Arnold Arboretum* 64: 171-254. 1983.

in English: short-spike bluestem

A. brazzae Franch. (*Andropogon appendiculatus* Nees; *Andropogon appendiculatus* var. *genuinus* Durand & Schinz; *Leptopogon appendiculatus* (Nees) Roberty) (for the Italian-born (Castel Gandolfo, Rome) French explorer Count Pierre (Pietro) Paul François Camille Savorgnan de Brazza, 1852-1905 (Dakar, Senegal), colonial administrator who founded the French (Middle) Congo, 1874 became a French citizen, explored Equatorial Africa, between 1875 and 1878 this first mission covered 900 miles of inland territory (discovering many plant and animal species unknown in Europe), 1880 he reached the Congo River, founded Brazzaville, in 1886 he was named governor general of the French Congo, wrote *Conférences et lettres de P. Savorgnan de Brazza sur ses trois explorations dans*

l'Ouest africain, de 1875 à 1886. Paris 1887. See C. de Chavannes, *Avec Brazza*. Souvenir de la mission de l'Ouest-Africain. 1935; Francesco Savorgnan di Brazza, *L'Uomo che donò un Impero*. Vita e opera di Pietro Savorgnan di Brazza. Firenze 1945; Robert de Saint Jean, "Deux témoignages sur les colonies: Las Casas et André Gide." *La Revue hebdomadaire*. 36e année, n 47: 358-364. 19 novembre 1927)

Tropical Africa, Zambia. Perennial, robust, rare, tufted, rhizomatous, leaning, glaucous, basal sheaths keeled and flattened, 4-15 racemes per spathe, lower glume of sessile spikelets concave, found near water, dry sandy soils, see *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 105. 1841, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 326. 1895 and *Boissiera*. 9: 197. 1960.

A. brevifolius Sw. (*Andropogon obtusifolius* Poir.; *Pollinia brevifolia* (Sw.) Spreng.; *Schizachyrium brevifolium* (Sw.) Nees ex Büse; *Schizachyrium platyphyllum* (Franch.) Stapf; *Sorghum brevifolium* (Sw.) Kuntze)

Asia, Japan. Slender, decumbent, much-branched, leaves narrow and short, spikes solitary and very slender, limestone, see *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Encyclopédie Méthodique, Botanique* Suppl. 1: 583. 1810, *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 13. 1815, *Tentamen Florae Abyssinicae* ... 2: 452. 1850, *Plantae Junghuhnianae* 3: 359. 1854, *Enumeratio Plantarum in Japonia Sponte Crescentium* ... 2: 610. 1879, *Monographiae Phanerogamarum* 6: 363-365. 1889, *Revisio Generum Plantarum* 2: 791. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 324. 1895 and *Contr. U.S. Natl. Herb.* 12: 143. 1908, *Flora of Tropical Africa* 9: 188. 1917, *Botanical Magazine* 56: 10. 1942, *Journal of the Arnold Arboretum* 29: 363. 1948, *Taxon* 34: 159-164. 1985.

in India: wanji-jari, ware-gare

in Japan: ushi-kusa (= ox grass)

A. brevifolius Sw. var. **cryptopodus** (Ohwi) Reeder (*Andropogon cryptopodus* Ohwi)

New Guinea. See *Nova Genera et Species Plantarum seu Prodromus* 26. 1788 and *Botanical Magazine* 56: 10. 1942, *Journal of the Arnold Arboretum* 29: 363. 1948.

A. brevifolius Sw. var. **flaccidus** (A. Rich.) Hack. (*Andropogon flaccidus* A. Rich.)

Africa. See *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Tentamen Florae Abyssinicae* ... 2: 452. 1850, *Plantae Junghuhnianae* 3: 359. 1854, *Monographiae Phanerogamarum* 6: 364. 1889.

A. brevifolius Sw. var. **fragilis** (R. Br.) Hack. (*Andropogon fragilis* R. Br.)

Australia. See *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Monographiae Phanerogamarum* 6: 364. 1889.

A. brevifolius Sw. var. *leptatherus* Hack. (*Andropogon sulcatus* Ekman; *Schizachyrium sulcatum* (Ekman) S.T. Blake)

Colombia. See *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Monographiae Phanerogamarum* 6: 364. 1889 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 4, t. 1, f. 3, t. 6, f. 3. 1911, *Proceedings of the Royal Society of Queensland* 80(6): 78. 1969.

A. brevifolius Sw. var. *minor* Vanderyst

Africa. See *Bulletin agricole du Congo Belge* 9: 238. 1918.

A. brevifolius Sw. var. *paradoxus* (Büse) Ohwi (*Schizachyrium paradoxum* Büse)

Asia. See *Plantae Junguhnianae* 3: 359. 1854 and *Acta Phytotaxonomica et Geobotanica* 11: 169. 1942.

A. brevifolius Sw. var. *sinensis* Rendle

Asia. See *Journal of the Linnean Society, Botany* 36: 372. 1889.

A. cabanisii Hack. (*Andropogon ternarius* Michx. var. *cabanisii* (Hack.) Fernald & Griscom; *Sorghum cabanisii* (Hack.) Kuntze)

U.S., Florida. See *Flora Boreali-Americana* 1: 57. 1803, *Flora* 68(8): 133. 1885, *Revisio Generum Plantarum* 2: 791. 1891 and *Rhodora* 37(436): 138. 1935.

in English: firegrass

A. campestris Trin. (*Andropogon camporum* Trin. ex Steud.; *Andropogon campestris* Kunth, nom. illeg., non *Andropogon campestris* Trin.)

America, Brazil. See *Synopsis Plantarum* 1: 103. 1805, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 338-339. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 277. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 489. 1833, *Synopsis Plantarum Glumacearum* 1: 378. 1854.

A. canaliculatus Schumach.

Benin, Ghana, Kenya. Perennial, tufted, erect, little bulk-forming, leaf blades narrowly linear, paired racemes, loose false panicle, lower glume of sessile spikelet linear and deeply grooved, grazed, highly palatable to cattle, unpalatable when old, used for thatching and matting, grows in seasonal swamps, short savannah, damp sites, lakeshore, swampy grassland, see *Beskrivelse af Guineeske planter* 52-53. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 72-73. 1828 and *Flora of Tropical Africa* 9: 252. 1919.

in Zaire: mwehwe (Shi)

A. capillaris (Thunb.) Kunth (*Achneria capillaris* (Thunb.) Stapf, nom. illeg., non *Achneria capillaris* (R. Br.) P. Beauv.; *Andropogon capillaris* Heyne ex Steud.; *Arundinella mutica* Nees; *Holcus capillaris* Thunb.; *Pentastichis*

capillaris (Thunb.) McClean; *Sorghum capillaris* (Thunb.) Roem. & Schult.)

South Africa. See *Prodromus Plantarum Capensium, ...* 20. 1794, *Systema Vegetabilium* 2: 840. 1817, *De Graminibus Paniceis* 63. 1826, *Révision des Graminées* 1: 166. 1829, *Synopsis Plantarum Glumacearum* 1: 116. 1854, *Hooker's Icones Plantarum* 27(1): t. 2604, 1-2. 1899 and *South African Journal of Science* 23: 281. 1926, *Bothalia* 18: 119-122. 1988, *Taxon* 41: 709-720. 1992.

A. capillipes Nash (*Andropogon glaucus* Muhl., nom. illeg., non *Andropogon glaucus* Retz.; *Andropogon virginicus* var. *glaucus* (Muhl.) Hack.; *Cymbopogon glaucus* (Muhl.) Schult.)

Northern America, southeast U.S., Florida. Tufted, ornamental, glaucous, erect, rhizomatous, branching from upper nodes, leaf sheaths distichous and yellowish, racemes subtended by reddish and inflated spathes, capillary peduncles, sessile spikelet villous, sterile floret absent, native to lowland areas and marshes in the southeastern U.S., see *Species Plantarum* 2: 1046. 1753, *Descriptio uberior Graminum* 278. 1817, *Mantissa* 2: 459. 1824, *Monographiae Phanerogamarum* 6: 411. 1889 and *Bulletin of the New York Botanical Garden* 1(5): 431-432. 1900, *Journal of the Arnold Arboretum* 64: 171-254. 1983.

A. carinatus Nees (*Andropogon carinatus* var. *exserens* Hack.; *Andropogon carinatus* var. *genuinus* Hack.; *Andropogon carinatus* var. *leiophyllus* Hack.; *Andropogon lateralis* Nees; *Andropogon sanlorenzanus* Killeen)

South America, Bolivia, Brazil. Perennial bunchgrass, caespitose, unbranched, single terminal inflorescence, sessile spikelet awned, pedicellate spikelet neuter or staminate, sandy places, savannah, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 329-331. 1829, *Flora Brasiliensis* 2(4): 288. 1883, *Monographiae Phanerogamarum* 6: 434. 1889 and *Boletín de la Sociedad Argentina de Botánica* 24: 137-149. 1985, *Brittonia* 38(4): 411-414. 1986, *Annals of the Missouri Botanical Garden* 77(1): 136-137, f. 2. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

A. chinensis (Nees) Merr. (*Andropogon apricus* var. *chinensis* Nees (Hack.); *Andropogon ascinodis* C.B. Clarke; *Andropogon chinense* (Nees) Merr.; *Andropogon patris* Robyns; *Andropogon schinzii* Hack. ex Schinz; *Andropogon schinzii* Hack.; *Homoeatherum chinense* Nees) (for the Swiss botanist Hans Schinz, 1858-1941, traveler, professor of botany, among his writings are *Plantae menyharthianae ein Beitrag zur Kenntniss der Flora des Unteren Sambesi ...* Wien, 1905 [Collector: Ladislav Menyharth, 1849-1897], "Durch Südwestafrika." *Verh. Ges. Erdk. Berl.* 14: 322-324. 1887, *Mein Lebenslauf*. Zürich 1940, *Observations sur une collection de plantes du Transvaal*. Genève 1891. See Albert Thellung (1881-1928), "Verzeichnis der Veröffentlichungen von Prof. Dr. Hans Schinz." *Beibl. Viertelj.-Schr.*

naturf. Ges. Zürich 15 (Jahrg. 73): 773-783. 1928, the bibliography of works and papers by Schinz; Théophile Alexis Durand (1855-1912), *Conspectus florae Africae*, ou, Enumération des plantes d'Afrique, par T.D. et Hans Schinz. Bruxelles 1895-1898; J.H. Barnhart, *Biographical notes upon botanists*. 3: 227. 1965; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 311-313. Cape Town 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 353. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Elmer Drew Merrill, *Bernice P. Bishop Mus. Bull.* 144: 163. 1937; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; A. White & B.L. Sloane, *The Stapelieae*. Pasadena 1937; Stafleu & Cowan, *Taxonomic literature*. 5: 175-181. 1985)

Tropical Africa, South Africa, Namibia, Benin, Swaziland, China, Thailand, India. Perennial, robust, coarse, stiff, erect, densely tufted, slightly bulbous at the base, branched culms, leaf sheath round, ligule membranous, leaf blades linear with acute to acuminate apex, knotty rootstock, loose false panicle of paired racemes exerted from linear bract, 2-3 racemes per spatheole, spikelets paired, pedicelled spikelet lanceolate to oblong-elliptic and 2-awned, lower glume of sessile spikelets deeply grooved, pasture grass utilized when young, used in rehabilitation projects, haulm used as thatch, common on hill slope, poor shallow stony soils, sandy soils, poor sandy soils, rocky hillsides, stony slopes, bushveld, wasteland and old clearing, open grassveld, loamy soils, wooded savannah, old fallows, see *A Natural System of Botany* edition 2 448. 1836, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 83. 1836, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 139. 1888, *Monographiae Phanerogamarum* 6: 457. 1889 and *Philippine Journal of Science* 12(2): 101. 1917, *Bothalia* 24: 241-246. 1994.

in English: hairy blue grass, hairy blue andropogon

in Guinea: oniri

in Nigeria: bere, dargaza, gamari boderi, senteni

in Senegal: nyisyil

in South Africa: harige-blougras, tweevingergras, zweifingerbartgras

in Upper Volta: jantaaje, pita, yantaare

in Yoruba: bere

A. chrysargyreus (Stapf) Stapf ex A. Chev. (*Andropogon nyassae* Rendle; *Cymbopogon chrysargyreus* Stapf; *Hyparrhenia chrysargyrea* (Stapf) Stapf; *Hyparrhenia nyassae* (Rendle) Stapf)

Africa. See *Journal of Botany, British and Foreign* 31: 358. 1893 and *Journal de Botanique (Morot)* 2: 213. 1909, *Sudania* 1: 77. 1911, *Flora of Tropical Africa* 9(2): 312-314. 1919, W.D. Clayton, "A revision of the genus *Hyparrhenia*." *Kew Bulletin, Additional Series* 2: 1-196. 1969.

A. chrysostachyus Steud. (*Leptopogon chrysostachyus* (Steud.) Roberty)

Ethiopia, Tanzania. Perennial, caespitose, leaf blades flat, inflorescence terminal, racemes subdigitate, spikelets villos, pedicelled spikelet male, in open grassland, pastures, see *Synopsis Plantarum Glumacearum* 1: 377. 1854 and *Boissiera*. 9: 201. 1960.

A. coloratus Hack. (*Andropogon coloratus* Nees ex Wight; *Andropogon nardus* var. *coloratus* Hook.f.; *Cymbopogon coloratus* (Hook.f.) Stapf)

Argentina. See N. Wallich (1786-1854), *A Numerical List of Dried Specimens of plants ...* no. 1703. London 1829, *The Flora of British India* 7(21): 206. 1897 [1896] and *Bulletin of Miscellaneous Information Kew* 1906: 321. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 13. 1911.

A. cordatus Swallen

Bolivia. Erect, branched, clumped, many-stemmed, see *Contributions from the United States National Herbarium* 29(6): 274-275. 1948 [1949].

A. cordofanus Hochst. (*Andropogon gayanus* Kunth var. *cordofanus* (Hochst.) Hack.; *Andropogon sorghum* subsp. *cordofanus* (Hochst.) Piper)

Africa, Ethiopia. See *Flora Lusitanica* 1: 88. 1804, *Flora* 27: 245. 1844, *Monographiae Phanerogamarum* 6: 448. 1889 and *Proceedings of the Biological Society of Washington* 28: 39. 1915.

A. crassus Sohns

Venezuela. See *Memoirs of the New York Botanical Garden* 9: 405, f. 76. 1957.

A. crispifolius Guala & Filg.

Brazil. Erect, more or less scandent, leaves rolled, see *Nordic Journal of Botany* 15(1): 59, f. 1. 1995.

A. crossotus Cope

Arabia, Yemen. Perennial, densely tufted, erect, ligule a truncate membrane, leaves flat, terminal and lateral racemes pairs, lower glume of sessile spikelets acute but not mucronate, pedicelled spikelet awnless, found in open rocky hills, see *Kew Bulletin* 39(4): 833. 1984.

A. crucianus Renvoize (*Andropogon insolitus* sensu Killeen, non Sohns)

Bolivia, Santa Cruz. Perennial, caespitose, erect, leaf blades linear, densely branched inflorescence narrow-oblong, racemes solitary, moist places, see *Memoirs of the New York Botanical Garden* 9(3): 271, f. 9. 1957, *Ann. Missouri Bot.*

Gard. 77: 137. 1990, *Gramíneas de Bolivia* 596, f. 142. 1998.

A. distachyos L. (*Apluda distachyos* (L.) P. Beauv.; *Chrysopogon distachyos* (L.) Rossi; *Pollinia distachya* (L.) Sprengel)

Tropical Africa, Asia. Perennial, tufted to densely to loosely tufted, erect, sometimes straggling, rarely rhizomatous, base with silky hairs, ligule a ciliate rim, basal leaf sheaths usually pilose to silky-pubescent, flat-leaved, 2 terminal racemes per spathe, lower glume of sessile spikelets deeply grooved, lower glume of sessile spikelets flat and winged, endangered, palatable, readily grazed by sheep and goats, a roadside weed, desert grass, grows on dry slopes in mountain grassland, field borders, around streams, open areas, dry slopes, bushland, disturbed places, rocky hillsides, sometimes confused with *Andropogon amethystinus* Steud., see *Species Plantarum* 1046. 1753, *Plantarum Minus Cognitarum Pugillus* 2: 12. 1815, *Monographiae Phanerogamarum* 6: 462. 1889 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 281. 1908, *Nuov. Giorn. Bot. Ital.* n.s. 19: 416-417. 1912, *Bulletin agricole du Congo Belge* 9: 238. 1918, *Fl. Trop. E. Afr. Gramineae* (3): 770. 1982, *Annali di Botanica* 45: 75-102. 1987, *Taxon* 41: 556. 1992.

in English: mountain andropogon

in French: andropogon à deux épis

in South Africa: tweevingergras

A. distachyos L. subvar. *alpina* Chiov.

Africa, Eritrea. See *Annuario del Reale Istituto Botanico di Roma* 8(3): 281. 1908.

A. distachyos L. subvar. *luxurians* Chiov.

Africa, Eritrea. See *Annuario del Reale Istituto Botanico di Roma* 8(3): 281. 1908.

A. distachyos L. var. *hirtus* Chiov.

Africa. See *Nuov. Giorn. Bot. Ital.* n.s. 19: 416-417. 1912.

A. diuturnus Sohns (*Andropogon crassus* Sohns)

Venezuela. See *Memoirs of the New York Botanical Garden* 9(3): 405-406, f. 76, 77. 1957.

A. durifolius Renvoize (*Andropogon angustatus* (J. Presl) Steud.; *Andropogon durifolium* Renvoize)

Brazil, Bahia. Perennial, rhizomatous, erect, sparsely branching, wiry, largely tufted, acuminate leaf blades folded or inrolled, racemes paired, spikelets paired, awn weakly geniculate, found on open areas, slopes, hillsides, see *Reliquiae Haenkeanae* 1(4-5): 333. 1830, *Synopsis Plantarum Glumacearum* 1: 370. 1854 and *Kew Bulletin* 39(1): 181. 1984.

A. elliotii Chapm. (*Anatherum virginicum* subvar. *elliottii* (Chapm.) Roberty; *Andropogon clandestinus* Alph. Wood, nom. illeg., non *Andropogon clandestinus* Nees ex Steud.; *Andropogon elliotii* f. *gracilior* (Hack.) Blomq.; *Andropogon elliotii* var. *gracilior* Hack.; *Andropogon elliotii* var.

projectus Fernald & Griscom; *Andropogon gracilior* (Hack.) Nash ex Small; *Andropogon gyrans* Ashe; *Andropogon gyrans* var. *gyrans*; *Sorghum elliotii* (Chapm.) Kuntze)

Northern America. Tufted, compact, bearded node, inflated and coppery-colored upper sheaths, linear leaves, racemes paired and sericeous, awn geniculate, pedicellate spikelets vestigial and white-pubescent, forage, found in sterile soils along roads, in abandoned fields, dry or moist fields or open woods, sandstone, see *Flora of the Southern United States* 581. 1860, *A Class-book of Botany* 809. 1861, *Monographiae Phanerogamarum* 6: 415. 1889, *Revisio Generum Plantarum* 2: 791. 1891, *Bulletin of the Torrey Botanical Club* 23: 145-146. 1896, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1898 and *Flora of the Southeastern United States* ... 63. 1903, *Rhodora* 37(436): 139. 1935, *The Grasses of North Carolina* 203. 1948, *Boissiera*. 9: 212. 1960, *Journal Arnold Arboretum* 64: 210. 1983, *Memoirs of the New York Botanical Garden* 85: i-xi, 1-246. 2000.

in English: Elliott's broomsedge, Elliott's bluestem, Elliott bluestem, Elliott beardgrass, beardgrass, plumegrass

A. eucomus Nees (also spelled *eucomis*)

Africa, Malawi, Zambia, South Africa. Perennial, densely tufted, upright, leaf sheath flattened and glabrous, ligule membranous with scattered hairs, leaf blade keeled, inflorescence plumose, digitate racemes borne terminally on the branches, spikelets hairy and with a single awn, lower glume of sessile spikelets deeply grooved, pedicelled spikelets suppressed, ornamental, palatable, very low grazing value, indicator of poorly drained soils, occurs in the seasonally wet areas, waste ground, moist places, poorly drained soils, uncultivated lands, on disturbed soils, undisturbed sandveld vleis, wetland areas, along roadsides, seepage areas, see *Florae Africae Australioris Illustrationes Monographicae* 104. 1841 and *Cytologia* 19: 97-103. 1954, *Bothalia* 21(2): 163-170. 1991, *Bothalia* 24: 241-246. 1994.

in English: oldman's beard, silver thread grass, small silver andropogon, snowflake grass

in Southern Africa: fynblaar andropogon, kapokgras, kleinwitbaardandropogn, kleinwitbaardgras, veergras; mohlaala, mohlala (Sotho)

A. exaratus Hack.

Paraguay, Argentina. See *Flora* 68(8): 135. 1885 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 7. 1912, *Boletín de la Sociedad Argentina de Botánica* 24: 137-149. 1985.

A. fastigiatus Swartz (*Andropogon diatherus* Steud.; *Andropogon hochstetteri* Steud.; *Cymbachne fastigiata* (Sw.) Roberty; *Diectomis fastigiata* Kunth; *Diectomis fastigiata* (Sw.) P. Beauv.; *Diectomis fastigiata* (Swartz) Kunth, nom. illeg., non *Diectomis fastigiata* (Sw.) P. Beauv.; *Heteropogon hochstetteri* (Steud.) Schweinf.; *Heteropogon*

hochstetteri (Steud.) Andersson ex Schweinf.; *Pollinia fastigiata* (Sw.) Spreng.; *Sorghum fastigiatum* (Sw.) Kuntze)

Tropics. Annual, caespitose, rare, erect, herbaceous, coarse, leaf blades flat and linear, ligule a glabrous membrane, solitary racemes terminal and lateral, inflorescence often partially enclosed by the upper leaf sheaths, racemes single and axillary, lower glume of sessile spikelet deeply grooved, upper glume of the pedicellate spikelet enlarged and wing-like, lower glume of pedicellate spikelet papery, upper glume of the sessile and pedicellate spikelets aristate, weed, grazed when young, used for thatching, found in dry sandy soil, shallow soil, loamy sand, bare gravelly soil, on lava flow, riverbank, edge of forest, rocky hillsides, along roadsides, dry bushland, open areas, open pine forest, dry savannah, dry fallows, open savannah, sandstone, see *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Essai d'une Nouvelle Agrostographie* 132, 160. 1812, *Plantarum Minus Cognitarum Pugillus* 2: 13. 1815, *Nova Genera et Species Plantarum* 1: 193. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 378, 384. 1854, *Revisio Generum Plantarum* 2: 791. 1891 and *Boissiera*. 9: 255. 1960, *Flowering Plants of Jamaica* 1972, *Phytologia* 37(4): 317-407. 1977, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Cuscatlania* 1(6): 1-29. 1991.

in India: liyur

in Guinea: fugolo

in Nigeria: bayan maraya, garbazam, jam bauje, yama

A. festuciformis Rendle (*Andropogon festucaeformis* Rendle; *Hypogynium schlechteri* (Hack.) Pilg.; *Hypogynium spathiflorum* Nees)

Tropical Africa. Perennial, densely tufted, basal sheaths keeled and compressed, inflorescence glabrous, 1-2 racemes per spathe, lower glume of sessile spikelet flat, usually in moist places, bogs, wet savannah, near streams, in seasonally wet areas, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 366. 1829, *Catalogue of the African plants collected by Dr. Friedrich Welwitsch in 1853-1861* 2(1): 145. London 1896-1901 and *Bulletin de l'Herbier Boissier, sér. 2*, 6(9): 703. 1906, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 156. 1940.

A. flavescens J. Presl (*Rottboellia sanguinea* Retz.; *Schizachyrium sanguineum* (Retz.) Alston)

Peru. See *Observationes Botanicae* 3: 25. 1783, *Reliquiae Haenkeanae* 1(4-5): 339. 1830 and *A Handbook to the Flora of Ceylon* 6: 334. 1931, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

A. floridanus Scribn. (*Anatherum virginicum* (L.) Spreng. subvar. *floridanum* (Scribn.) Roberty; *Andropogon bakeri* Scribn. & C.R. Ball) (for C.H. Baker, botanical collector in Florida)

U.S., Florida. Perennial, caespitose, found in sand hill, swamp margin, pine flatwoods and scrub, coastal pinelands,

pinelands, occasional in oak scrub and scrubby flatwoods, see *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *Bulletin of the Torrey Botanical Club* 23: 145. Apr 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 39, f. 14. 1901, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 212. 1960, *Journal of the Arnold Arboretum* 64: 171-254. 1983.

in English: Florida bluestem, Florida broomsedge

A. gabonensis Stapf (*Andropogon gayanus* Kunth)

Africa. Perennial, robust, herbaceous, grazed when young by buffaloes, found near water, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 491. 1833, *Synopsis Plantarum Glumacearum* 1: 371, 386. 1854 and *Journal de Botanique, rédigé par une société de botanistes sér. 2* 2(2): 207. 1909, *Bulletin de l'Institut Française d'Afrique Noire* 22: 108. 1960.

in Angola: titutu

A. gayanus Kunth (*Andropogon gabonensis* Stapf; *Andropogon gayanus* var. *squamulatus* (Hochst.) Stapf; *Andropogon guineensis* Schumach.; *Andropogon guineensis* Steud., nom. illeg., non *Andropogon guineensis* Schumach.; *Andropogon patris* Robyns; *Andropogon reconditus* Steud.; *Andropogon squamulatus* Hochst.; *Andropogon tomentellus* Steud.; *Cymbachne guineensis* (Schumach.) Roberty)

Tropical and South Africa. Perennial bunchgrass or rarely annual, polymorphic, tufted, waxy bloom, erect, caespitose, tussocky, herbaceous, robust, coarse, dense stands forming, reedlike flattened stems, roots more or less fibrous, blades linear and finely pointed, racemes axillary and paired in false loose panicles, pedicellate spikelets male and glabrous, sessile spikelets with a geniculate awn, weed, cultivated fodder, forage, grazed by ruminants, palatable and nutritious when young, hard and tall flowering stems, once flowering stems harsh and of little nutritional value, grains eaten, fiber from the stems for thatching and coarse matting, excellent drought tolerance, used for reclaiming badly overgrazed and eroded land, grows on sandy soils, grassland, high rainfall areas, edge of floodplains, moist bottomland, along roadsides, sandy clays, on sandy loams to loamy sands, sands to black cracking clays, wooded savannah, in open woodland and savannah, transitional woodland, deciduous bushland, see *Beskrivelse af Guineiske planter* 51-52. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Aft.* 3: 71-72. 1828, *Révision des Graminées* 1: 163. 1829, *Bull. Jard. Bot. Brux.* 8: 227. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 491. 1833, *Flora* 27: 244-245. 1844, *Synopsis Plantarum Glumacearum* 1: 371, 386. 1854, *Monographiae Phanerogamarum* 6: 448-449. 1889 and *Mémoires de la Société Botanique de France* 2(8): 102. 1907, *Bulletin de la Société Botanique de France* 55: 102. 1908, *Flora of Tropical Africa* 9: 263. 1919, *Flore Agrostologique du Congo Belge* 137. 1929, *Bulletin de*

l'Institut Française d'Afrique Noire 22: 108. 1960, G.E. Roberty (1907-1971), *Monographie systématique des Andropogoneés du globe* 244. Paris 1960, *Fl. W. Trop. Africa* edition 2, 3: 488. 1972, S.A. Setterfield, M.M. Douglas, L.B. Hutley and M.A. Welch, "Effects of canopy cover and ground disturbance on establishment of an invasive grass in an Australia savannah." *Biotropica* 37(1): 25-31. Mar 2005.

in English: Rhodesian blue grass, Rhodesian andropogon, tambuki grass, gamba grass, onaga grass

in Nicaragua: gamba

in Arabic: sméné

in Benin: koumbossou, irouwa

in Gambia: wa

in Ghana: purim pieklega, purim pielega

in Mali: dagué, guelori, kiené, mussa waga, nguon, uaga, waba, waga, wako, zara

in Niger: ahamdoroem, ajeghar, dakhié, djabar, gamba, lali, radyaré, ranièré, soobre, subna, subu nya, teebeened, yay-yere, yawiri, yawur

in Nigeria: dadeppure, ekpo, erè, eré, eruwà, gábàà, gámbà, gambà, gámba, gámbàà, girman darr daya, igomough, iikube, ikpo, ikpò, ikpo agu, jimfi, kalawal, madlbak, palawal, sefunkwe, sugu, sugu kal, suwu, suwu bul, suwu kal, suwukal, waawan ruwa, welho

in Senegal: badoba, cicca, dagué, ebuk, etiub, gandany, ginyidi, guelori, hat, khat, kiene, kiené, makas, mediidi, mussa waga, o nduy, okas, soya, uaga, vaba, waga, waga gué, yev, yew, zara

in Sierra Leone: kabusa, puile

in Tropical Africa: Gamba grass

in Upper Volta: danye, dayye, kagarire, kessé, lanyere, mofogo, mokiri, mopaka, mopoko, pita, ranyere, soporé

in Yoruba: aruwa ako funfun, eruwa, eruwà, èrùwà, eruwa ako, eruwa funfun, èrùwà funfun

in India: sadabahar

in the Philippines: batad, bayag, bukakau

in Thailand: ya kumba

in Vietnam: hung th'ao

A. gayanus Kunth var. **bisquamulatus** (Hochst.) Hack. (*Andropogon aethiopicus* Rupr. ex Steud.; *Andropogon bisquamulatus* Hochst.; *Andropogon gayanus* Kunth; *Andropogon gayanus* var. *argyrophaeus* Stapf; *Andropogon gayanus* var. *argyrophoeus* Stapf)

Africa, Guinea, Ghana, Nigeria, Sudan. Pedicelled spikelets more or less hairy, forage, very palatable to livestock, savannah, colonizer of denuded and wasteland, best on well-drained sandy clays of medium to high fertility, see *Flora* 27: 245. 1844, *Synopsis Plantarum Glumacearum* 1: 372. 1854, *Monographiae Phanerogamarum* 6: 448. 1889 and

Mémoires de la Société Botanique de France 2(8): 102. 1907, *Bulletin de la Société Botanique de France* 55: 102. 1908.

in English: gamba grass

in Spanish: rabo de zorro

A. gayanus Kunth var. **cordofanus** (Hochst.) Hack. (*Andropogon cordofanus* Hochst.; *Andropogon sorghum* subsp. *cordofanus* (Hochst.) Piper)

Africa, Ethiopia. See *Flora Lusitanica* 1: 88. 1804, *Flora* 27: 245. 1844, *Monographiae Phanerogamarum* 6: 448. 1889 and *Proceedings of the Biological Society of Washington* 28: 39. 1915.

A. gayanus Kunth var. **gayanus**

Africa, Nigeria, Ghana, Mali, Sudan. Perennial, tufted, glaucous, pedicelled spikelets glabrous, useful for erosion control in damp areas, occurs in periodic swamps and damp places, in seasonally flooded places.

A. gayanus Kunth var. **glaucus** Vanderyst

Africa. See *Bulletin agricole du Congo Belge* 9: 240. 1918.

A. gayanus Kunth var. **monostachyus** Vanderyst

Africa. See *Bulletin agricole du Congo Belge* 9: 240. 1918.

A. gayanus Kunth var. **polycladus** (Hack.) Clayton (*Andropogon appendiculatus* var. *polycladus* Hack.; *Andropogon gayanus* var. *squamulatus* (Hochst.) Stapf; *Andropogon squamulatus* Hochst.)

Africa, Guinea, Ghana, South Africa, Angola, Tanzania. Perennial, tufted, erect, glaucous, robust, branched, thick and woody when old, leaf sheath rounded hairy or glabrous, ligule membranous with a fringe of hairs, leaf blade narrow at the base, inflorescences from the uppermost nodes, false panicle with paired racemes, pedicellate spikelets scaberulous and awned, lower glume of sessile spikelet broad and flat, thatching grass, palatable, forage, good grazing grass in the young stages, grazed by hippos, best on well-drained sandy clays of medium to high fertility, black volcanic soil, bushveld, stony places, coarse soil, see *Florae Africae Australioris Illustrationes Monographicae* 105. 1841, *Flora* 27: 244. 1844, *Bulletin de l'Herbier Boissier* 4: Append. 3. 11. 1896 and *Flora of Tropical Africa* 9: 263. 1919, *Kew Bulletin* 32(1): 1. 1977.

in English: Rhodesian bluegrass, blue grass

in South Africa: blougras, Rhodesieseandropogon, grootbaardgras, hohes bartgras

A. gayanus Kunth var. **squamulatus** (Hochst.) Stapf (*Andropogon gayanus* Kunth; *Andropogon gayanus* var. *polycladus* (Hack.) Clayton; *Andropogon helophilus* K. Schum. ex Engl.; *Andropogon squamulatus* Hochst.)

Tropical Africa. Caespitose, see *Schimperi iter Abyssinicum. Sectio secunda* no. 715. 1842, *Flora* 27: 244. 1844, *Die Pflanzenwelt Ost-Afrikas* 50(c): 98. 1895, *Bulletin de l'Herbier Boissier* 4: Append. 3. 11. 1896 and *Flora of*

Tropical Africa 9: 263. 1919, J.B. Gillett, "W.G. Schimper's botanical collecting localities in Ethiopia." *Kew Bulletin* 27(1): 115-128. 1972, *Kew Bulletin* 32(1): 1. 1977.

in Angola: kota-kota, sola, tete-ialikota

A. gerardii Vitman (*Andropogon chrysocomus* Nash; *Andropogon furcatus* Muhl. ex Willd.; *Andropogon furcatus* var. *villosa* Loew; *Andropogon gerardi* Vitman; *Andropogon gerardii* var. *chrysocomus* (Nash) Fern.; *Andropogon glomeratus* (Walter) Britton, Sterns & Poggenb.; *Andropogon hallii* var. *grandiflorus* Scribn.; *Andropogon provincialis* Lam., nom. illeg., non *Andropogon provinciale* Retz.; *Andropogon provincialis* subvar. *furcatus* (Muhl. ex Willd.) Hack.; *Andropogon provincialis* subvar. *lindheimeri* Hack.; *Andropogon provincialis* subvar. *pynanthus* Hack.; *Andropogon provincialis* var. *paucipilus* (Nash) Fernald & Griscom; *Andropogon provincialis* var. *tennesseensis* Scribn.; *Andropogon tennesseensis* (Scribn.) Scribn.; *Andropogon virginicus* var. *abbreviatus* (Hack.) Fernald & Griscom; *Cinna glomerata* Walter; *Leptopogon furcatus* (Muhl. ex Willd.) Roberty) (after Ferdinand Jacob Lindheimer, 1801-1879 (Texas, U.S.), German botanist, in 1834 United States, plant collector, he sent plants to Asa Gray. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 386. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 239. 1972; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 219. Oxford 1964; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, California 1997; George Engelmann (1809-1884), Asa Gray & Joseph William Blankinship (1862-1938), *Plantae lindheimerianae*. Boston 1845-1850)

Northern America, Canada to Mexico, U.S. Long-lived perennial with tufted and solid culms, shortly stoloniferous, rhizomes short or absent, extensive root system, forming large glaucous upright clumps, vegetation gray to blue green to reddish bronze with lavender tones, bluish to red-purple nodes on the stems, ligule a fringed membrane, sheath compressed and purplish at the base, leaves glaucous and flattened, auricles absent, purplish red and terminal racemes, inflorescence in threes or multiples of three, flowering stalk grows in three finger-like branches, spikelets in pairs, stalked spikelet male and not reduced, pedicels and internodes stiffly hirsute, fruit a minute grain, ornamental and weed species, analgesic, carminative and diuretic, naturalized, cultivated, excellent and highly palatable livestock forage when actively growing, fodder, good prairie hay, used by wildlife for food and cover, provides nesting and concealment cover for birds, excellent drought tolerance,

good grass for erosion control and revegetation, tolerant of various soil types from wet clay to dry sand, occurs along riverbanks, on sandy soils, roadsides and moist meadows, open roadside, at edge of roadside ditch, coastal marshes, prairies and open fields, degraded prairie, foothills, sand hills, pine flatwoods, dry rocky soil, see Fulgenzio Vitman (1728-1806), *Species Plantarum* 2: 1046. Mediolani [Milano] 1753, *Encyclopédie Méthodique, Botanique* 1: 376. 1785, *Flora Caroliniana, secundum ...* 59. 1788, *Summa Plantarum, ...* 6: 16. 1792, *Species Plantarum* 4: 919. 1806, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftliche Classe* 89(1): 127-128. 1884, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Monographiae Phanerogamarum* 6: 408, 442-443. 1889, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7(2): 23. 1894, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 21. 1897, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 1. 1899 and *Rhodora* 37(436): 142, 147, t. 338, f. 3. 1935, *11th Ann. Report Huntington College Bot. Gard. & Arboretum* 10. 1947, *Boissiera*. 9: 196. 1960, *Le Naturaliste Canadien* 94: 521. 1967, *Genome* 29: 374-379. 1987, *Novon* 2(2): 108. 1992, *Phytologia* 80(5): 346. 1996, *American Journal of Botany* 84(2): 201. 1997 [Evolutionary implications of meiotic chromosome behavior, reproductive biology, and hybridization in 6x and 9x cytotypes of *Andropogon gerardii* (Poaceae).], Anderson R.C., B.A.D. Hetrick and G.W.T. Wilson, "Mycorrhizal dependence of *Andropogon gerardii* and *Schizachyrium scoparium* in two prairie soils." *American Midland Naturalist* 132(2): 366-376. 1994, *Am. J. Bot.* 85: 776. 1998, *American Journal of Botany* 86(7): 974-979. 1999 [Comparison of common cytotypes of *Andropogon gerardii* (Andropogoneae, Poaceae).], Peggy A. Schultz, R. Michael Miller, Julie D. Jastrow, Claudia V. Rivetta and James D. Bever, "Evidence of a mycorrhizal mechanism for the adaptation of *Andropogon gerardii* (Poaceae) to high- and low-nutrient prairies." *Am. J. Bot.* 88: 1650-1656. 2001.

in English: big bluestem, Monarch prairie grass, turkey-foot, turkey claw grass, beard grass

in Spanish: popotillo gigante

A. gerardii Vitman subsp. x *chrysocomus* (Nash) Wipff [*Andropogon gerardii* subsp. *gerardii* x *Andropogon gerardii* subsp. *hallii*] (*Andropogon chrysocomus* Nash; *Andropogon gerardii* var. *chrysocomus* (Nash) Fernald; *Andropogon provincialis* var. *chrysocomus* (Nash) Fernald & Griscom)

North America, U.S., Kansas. See *Encyclopédie Méthodique, Botanique* 1: 376. 1785 and *Manual of the Flora of the Northern States and Canada* 70. 1901, *N. Amer. Fl.*

17(2): 120. 1912, *Rhodora* 37(436): 147. 1935, *Rhodora* 45(534): 258. 1943, *Phytologia* 80(5): 344. 1996.

A. gerardii Vitman subsp. *gerardii*

America.

A. gerardii Vitman subsp. *hallii* (Hack.) Wipff (*Andropogon geminatus* Hack. ex Beal; *Andropogon gerardii* var. *incanescens* (Hack.) B. Boivin; *Andropogon gerardii* var. *paucipilus* (Nash) Fernald; *Andropogon hallii* Hack.; *Andropogon hallii* var. *bispicatus* Vasey ex Beal; *Andropogon hallii* var. *flaveolus* Hack.; *Andropogon hallii* var. *incanescens* Hack.; *Andropogon hallii* var. *muticus* Hack.; *Andropogon paucipilus* Nash; *Andropogon provincialis* var. *paucipilus* (Nash) Fernald & Griscom; *Leptopogon flaveolus* (Hack.) Roberty; *Sorghum hallii* (Hack.) Kuntze)

America. See *Encyclopédie Méthodique, Botanique* 1: 376. 1785, *Summa Plantarum, ...* 6: 16. 1792, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftliche Classe* 89(1): 127-128. 1884, *Monographiae Phanerogamarum* 6: 444. 1889, *Revisio Generum Plantarum* 2: 791. 1891, *Grasses of North America for Farmers and Students* 2: 55. 1896 and *Manual of the Flora of the Northern States and Canada* 70. 1901, *North Amer. Fl.* 17(2): 121. 1912, *Rhodora* 37(436): 147. 1935, *Rhodora* 45(534): 258. 1943, *Boissiera*. 9: 196. 1960, *Le Naturaliste Canadien* 94: 521. 1967, *Phytologia* 80(5): 329, 343-344. 1996.

A. gerardii Vitman var. *gerardii*

North America.

A. gerardii Vitman var. *hondurensis* R.W. Pohl (*Andropogon hondurensis* (R.W. Pohl) Wipff)

Honduras. See *Novon* 2(2): 108. 1992, *Phytologia* 80(5): 346. 1996, *Ceiba* 42(1): 1-71. 2001[2002].

A. glaucescens Kunth (*Andropogon amplius* J. Presl; *Andropogon glaucescens* Schltld. ex Hack.; *Andropogon glaucescens* subvar. *glaucescens*; *Andropogon glaucescens* subvar. *typicus* Hack.; *Andropogon glaucescens* var. *genuinus* Hack.; *Leptopogon glaucescens* (Kunth) Roberty)

South America, Ecuador. Annual, erect, see *Nova Genera et Species Plantarum* 1: 186-187. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 339. 1830, *Flora Brasiliensis* 2(4): 289. 1883, *Monographiae Phanerogamarum* 6: 411. 1889 and *Boissiera*. 9: 201. 1960.

A. glaucophyllus Roseng., B.R. Arrill. & Izag.

South America, Uruguay. Perennial, caespitose, 3 stamens, see *Gramíneas Uruguayas* 161, 163, 165-169. 1970.

A. glaziovii Hack. (*Anatherum virginicum* subvar. *glauopsis* (Elliott) Roberty; *Anatherum virginicum* subvar. *glaziovii* (Hack.) Roberty)

Brazil. Perennial bunchgrass, caespitose, robust, clumped, foliage mainly basal, rhizomatous, leaf blades folded or flat, inflorescence branches spreading, racemes flexuous, elon-

gate panicles, sessile spikelets awned, common in seasonally inundated areas, marshy places, savannah, see *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 150. 1816, *Flora Brasiliensis* 2(4): 286. 1883 and *Boissiera*. 9: 212-213. 1960, *Brittonia* 38(4): 411-414. 1986.

A. glomeratus (Walter) Britton, Sterns & Poggenb. (*Anatherum macrourum* Griseb.; *Anatherum macrourum* (Michx.) Griseb.; *Anatherum virginicum* subvar. *glomeratus* (Walter) Roberty; *Anatherum virginicum* subvar. *reinoldii* (León) Roberty; *Andropogon cabanisii* Hack.; *Andropogon corymbosus* (Chapm. ex Hack.) Nash; *Andropogon corymbosus* var. *abbreviatus* (Hack.) Nash; *Andropogon densus* Desv.; *Andropogon densus* Desv. ex Ham.; *Andropogon gerardii* Vitman; *Andropogon glomeratus* subsp. *reinoldii* (León) Cat. Guerra; *Andropogon glomeratus* var. *abbreviatus* (Hack.) Scribn.; *Andropogon glomeratus* var. *corymbosus* (Chapm. ex Hack.) Scribn.; *Andropogon glomeratus* var. *tenuispatheus* Nas; *Andropogon macrourum* Michx.; *Andropogon macrourum* var. *abbreviatus* Hack.; *Andropogon macrourum* var. *corymbosus* Chapm. ex Hack.; *Andropogon macrourum* var. *genuinus* Hack.; *Andropogon macrourus* Michx.; *Andropogon macrourus* var. *abbreviatus* Hack.; *Andropogon macrourus* var. *corymbosus* Chapm. ex Hack.; *Andropogon macrourus* var. *genuinus* Hack.; *Andropogon reinoldii* León; *Andropogon spathaceus* Trin.; *Andropogon tenuispatheus* (Nash) Nash; *Andropogon virginicus* f. *tenuispatheus* (Nash) Fernald & Griscom; *Andropogon virginicus* var. *abbreviatus* (Hack.) Fernald & Griscom; *Andropogon virginicus* var. *corymbosus* (Chapm. ex Hack.) Fernald & Griscom; *Andropogon virginicus* var. *tenuispatheus* (Nash) Fernald & Griscom; *Cinna glomerata* Walter; *Cinna glomerata* (Willd.) Link, nom. illeg., non *Cinna glomerata* Walter; *Dimeistemon macrurus* Raf. ex B.D. Jacks.; *Polypogon glomeratus* Willd.; *Sorghum glomeratum* (Walter) Kuntze)

Central and southern America, West Indies, Greater Antilles, Mexico, eastern and southern U.S., Florida, Costa Rica. Perennial, herbaceous, caespitose, erect and robust, tussock or clump forming, stems flattened, sheaths smooth, ligule papery and pubescent, flattened blue-green leaf blades, bushy and broom-like inflorescences, feathery and club-shaped panicles, pedicellate spikelet absent, fruit a minute grain, ornamental, naturalized, weed species, medicinal, forage, potential seed contaminant, grown for its attractive foliage, generally intolerant of dry soils, typically occurs in moist soils in swamp peripheries and margins, lake and pond margins, marshes, pastures, depression wetlands and disturbed upland sites, low spots and coastal areas, wet ditches, disturbed wet areas, road bank, bogs, abundant in seasonal ponds and swales of pine flatwoods isolated clusters, see *Species Plantarum* 1: 5. 1753, *Species Plantarum* 2: 1046. 1753, *Flora Caroliniana, secundum ...* 59. 1788, *Summa Plantarum, ...* 6: 16. 1792, *Flora Boreali-Ameri-*

cana 1: 56-57. 1803, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 87. 1809, *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *Fundamenta Agrostographiae* 186. 1820, *Prodromus Plantarum Indiae Occidentalis* 8. 1825, *Hortus Regius Botanicus Berolinensis* 2: 237. 1833, *Memoirs of the American Academy of Arts and Science, new series* 8: 534. 1863, *Flora* 68(8): 133. 1885, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Monographiae Phanerogamarum* 6: 408-409. 1889, *Revisio Generum Plantarum* 2: 790. 1891, *Index Kewensis* 1: 760. 1895 [1893] and *Bulletin, Division of Agrostology United States Department of Agriculture* 7 (edition 3): 15. 1900, *Manual of the Flora of the Northern States and Canada* 69-70. 1901, *Flora of the Southeastern United States ...* 61. 1903, *North American Flora* 17(2): 113. 1912, *Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey"* 5. 1922, *Rhodora* 37(436): 142, t. 338, f. 1, 2, 3. 1935, *Rhodora* 42(502): 416. 1940, *Boissiera* 9: 212-213. 1960, *J. Arnold Arbor.* 64: 244. 1983, *Fontqueria* 44: 144. 1996.

in English: bushy beardgrass, bushy bluestem, bushy broom grass, bush beardgrass, chalky bluestem

in Mexico: ch'it suuk, cola de zorra, pasto, popotillo matorralero, tallo azul matorralero

A. glomeratus (Walter) Britton, Sterns & Poggenb. var. **glaucopsis** (Elliott) C. Mohr (*Anatherum virginicum* subvar. *glaucopsis* (Elliott) Roberty; *Andropogon glaucopsis* (Elliott) Nash, nom. illeg., non *Andropogon glaucopsis* (Elliott) Steud.; *Andropogon glaucopsis* Ell.; *Andropogon glaucopsis* (Elliott) Steud.; *Andropogon glaucus* Muhl., nom. illeg., non *Andropogon glaucus* Retz.; *Andropogon macrourum* var. *glaucopsis* Elliott; *Andropogon macrourus* var. *glaucopsis* Elliott; *Andropogon virginicus* var. *glaucopsis* (Elliott) A.S. Hitchc.; *Cymbopogon glaucus* (Muhl.) Schult.)

Northern America, U.S. Perennial, caespitose, green spikelets, useful for erosion control, revegetation, forage, fodder, abundant in seasonal ponds and swales of pine flatwoods, wetlands, wet savannahs, ditches, flatwoods, sand hills, scrub and coastal strands, see *Species Plantarum* 2: 1046. 1753, *Flora Boreali-Americana* 1: 56. 1803, *A Sketch of the Botany of South-Carolina and Georgia* 1: 150. 1816, *Descriptio uberior Graminum* 278. 1817, *Mantissa* 2: 459. 1824, *Nomenclator Botanicus* edition 2 1: 91. 1840, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Bulletin of the Torrey Botanical Club* 24(1): 21. 1897 and *Flora of the Southeastern United States ...* 63. 1903, *American Journal of Botany* 21(3): 139. 1934, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 212. 1960.

in English: chalky bluestem, purple bluestem

A. glomeratus (Walter) Britton, Sterns & Poggenb. var. **glomeratus** (*Andropogon corymbosus* (Chapm. ex Hack.) Nash; *Andropogon corymbosus* var. *abbreviatus* (Hack.) Nash; *Andropogon glomeratus* var. *abbreviatus* (Hack.) Scribn.; *Andropogon glomeratus* var. *corymbosus* (Chapm. ex Hack.) Scribn.; *Andropogon macrourum* var. *viridis* Chapm. ex Vasey; *Andropogon macrourum* var. *viridis* Curtiss ex Hack.; *Andropogon macrourus* var. *abbreviatus* Hack.; *Andropogon macrourus* var. *corymbosus* Chapm. ex Hack.; *Andropogon macrourus* var. *genuinus* Hack.; *Andropogon macrourus* var. *macrourus*; *Andropogon macrourus* var. *viridis* Chapm. ex Vasey; *Andropogon macrourus* var. *viridis* Curtiss ex Hack.; *Andropogon virginicus* var. *abbreviatus* (Hack.) Fern. & Grisc.; *Andropogon virginicus* var. *corymbosus* (Chapman ex Hack.) Fernald & Griscom; *Cinna glomerata* Walter)

U.S. Perennial, green spikelets, occurs in bogs, disturbed roadsides, interdunal swales, swamps, flatwoods and ditches, see *Species Plantarum* 2: 1046. 1753, *Flora Boreali-Americana* 1: 56. 1803, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Monographiae Phanerogamarum* 6: 408-409, 411. 1889, *Contributions from the United States National Herbarium* 3(1): 11. 1892 and *Bulletin, Division of Agrostology United States Department of Agriculture* 7 (edition 3): 15. 1900, *Manual of the Flora of the Northern States and Canada* 69-70. 1901, *Rhodora* 37(436): 142, t. 338, f. 2. 1935.

in English: Virginia broom beard grass

A. glomeratus (Walter) Britton, Sterns & Poggenb. var. **hirsutior** (Hack.) C. Mohr (*Andropogon macrourus* var. *hirsutior* Hack.; *Andropogon virginicus* f. *hirsutior* (Hack.) Fernald & Griscom; *Andropogon virginicus* var. *hirsutior* (Hack.) A.S. Hitchc.; *Andropogon virginicus* var. *tenuispatheus* (Nash) Fernald & Griscom)

U.S. Perennial, see *Species Plantarum* 2: 1046. 1753, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Monographiae Phanerogamarum* 6: 409. 1889, *Bulletin of the Torrey Botanical Club* 24(1): 21. 1897 and *Flora of the Southeastern United States ...* 61. 1903, *Journal of the Washington Academy of Sciences* 23(10): 456. 1933, *Rhodora* 37(436): 142, t. 338, f. 1. 1935.

in English: hairy beardgrass

A. glomeratus (Walter) Britton, Sterns & Poggenb. var. **pumilus** Vasey ex L.H. Dewey (*Anatherum virginicum* subvar. *tenuispatheum* (Nash) Roberty; *Andropogon glomeratus* var. *pumilus* Vasey; *Andropogon glomeratus* var. *pumilus* (Vasey) Vasey ex L.H. Dewey; *Andropogon glomeratus* var. *tenuispatheus* Nash; *Andropogon macrourum* var. *pumilus* Vasey; *Andropogon macrourus* var. *pumilus*

Vasey; *Andropogon tenuispatheus* (Nash) Nash; *Andropogon virginicus* f. *tenuispatheus* (Nash) Fernald & Griscom; *Andropogon virginicus* var. *tenuispatheus* (Nash) Fernald & Griscom)

U.S., Utah, Nevada. Perennial, ligule papery and sometimes with dense pubescence, green spikelets, occurs in flatwoods, scrub and disturbed dry areas, meadows, pastures and ditches, see *Species Plantarum* 2: 1046. 1753, *Flora Boreali-Americana* 1: 56. 1803, *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Botanical Gazette* 16: 27. 1891, *Contributions from the United States National Herbarium* 2(3): 496. 1894 and *Flora of the Southeastern United States ...* 61. 1903, *North American Flora* 17(2): 113. 1912, *Rhodora* 37(436): 142, t. 338, f. 1, 2, 3. 1935, *Rhodora* 42(502): 416. 1940, *Boissiera*. 9: 213. 1960, *J. Arnold Arbor.* 64: 244. 1983.

in English: bushy beardgrass

A. glomeratus (Walter) Britton, Sterns & Poggenb. var. **scabrillumis** C.S. Campbell

U.S., California, New Mexico. Perennial, usually occurs in wetlands, see *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888 and *Systematic Botany* 11(2): 291. 1986.

in English: southwestern bushy bluestem, bushy beardgrass

A. gracilis Spreng. (*Andropogon gracilis* J. Presl, nom. illeg., non *Andropogon gracilis* Spreng.; *Andropogon juncifolius* Desv.; *Andropogon juncifolius* Desv. ex Ham.; *Andropogon sericatus* Swallen; *Schizachyrium gracile* (Spreng.) Nash; *Schizachyrium scoparium* subvar. *gracile* (Spreng.) Roberty; *Schizachyrium sericatum* (Swallen) Gould; *Sorghum gracile* (Spreng.) Kuntze)

U.S., northern America. Perennial, slender, densely tufted, erect, wiry, leaf blades filiform, feathery inflorescence racemose, pedicellate spikelets reduced to an awned or awnless glume, open savannah, heavy clay, rocky hills, see *Prodromus Plantarum Indiae Occidentalis* 9. 1825, *Systema Vegetabilium, editio decima sexta* 1: 284. 1825, *Reliquiae Haenkeanae* 1(4-5): 336. 1830, *Revisio Generum Plantarum* 2: 791. 1891 and *Flora of the Southeastern United States ...* 60. 1903, *Manual of the Grasses of the West Indies* 389. 1936, *Journal of the Washington Academy of Sciences* 31(8): 355, f. 8. 1941, *Boissiera*. 9: 229. 1960, *Brittonia* 19(1): 73. 1967.

A. gracilis Spreng. var. **firmior** Hitchc. (*Schizachyrium gracile* var. *firmior* J. Jiménez Alm.)

Haiti. Erect or spreading, leaning, see *Manual of the Grasses of the West Indies* 389-390. 1936, *Anales Acad. Republ. Dominicana, Bot.* 1(1): 111. 1975.

A. gracilis Spreng. var. **gracilis**

America.

A. greenwayi Napper (for the South African (b. Transvaal) botanist Percy (Peter) James Greenway, 1897-1980, from 1927 to 1950 East African Agricultural Research Station (Amani), in 1928 a Fellow of the Linnean Society, 1950-1958 botanist of the East African Herbarium in Nairobi, systematic botanist, plant collector with Colin Graham Trapnell and John P. Micklethwait Brennan (1917-1985) in Northern and Southern Rhodesia and Nyasaland, 1970-1971 President of the Kew Guild, author of *A Swahili-Botanical-English Dictionary of Plant Names*. Dar es Salaam 1940 and "The Pawpaw or Papaya." *E. A. Agri. Journ.* 13: 228-233. Nairobi 1948, coauthor (with Ivan Robert Dale, 1904-1963) of *Kenya Trees & Shrubs*. Nairobi 1961, editor of Jessie Williamson's *Useful Plants of Nyasaland*. Zomba, Nyasaland 1955 and of the *East African Agricultural Journal*; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 295. 1994; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; *Kew Bull.* 55(3): 695. 2000; F. Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*, (A.E.T.F.A.T.). 69-75. Lisbon 1962; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 103. Cape Town 1981; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 13. Utrecht 1971)

Tanzania, Ethiopia, Kenya, Arabia. Perennial, weak, wiry, slender, erect, loosely tufted, glaucous, mat-forming, shortly rhizomatous or stoloniferous, spreading, basal leaf sheaths glabrous, ligule a ciliate membrane, leaves flat, racemes paired and terminal, sessile spikelet linear to lanceolate with a membranous tip, lower glume of sessile spikelet linear-lanceolate and not mucronate, pedicelled spikelet awnless, cultivate fields, open grassland, field borders, volcanic soils, open mountain slopes, grassy places, see *Kirkia* 3: 121. 1963.

in Somalia: domar, agar

A. gyrans Ashe (*Anatherum virginicum* subvar. *elliottii* (Chapm.) Roberty; *Anatherum virginicum* subvar. *laxiflorum* (Scribn.) Roberty; *Andropogon campyloracheus* Nash; *Andropogon clandestinus* Alph. Wood, nom. illeg., non *Andropogon clandestinus* Nees ex Steud.; *Andropogon elliottii* Chapm.; *Andropogon elliottii* f. *gracilior* (Hack.) Blomq.; *Andropogon elliottii* var. *elliottii*; *Andropogon elliottii* var. *gracilior* Hack.; *Andropogon elliottii* var. *laxiflorus* Scribn.; *Andropogon elliottii* var. *projectus* Fernald & Griscom; *Andropogon gracilior* (Hack.) Nash ex Small; *Andropogon subtenuis* Nash ex Small; *Andropogon ternarius* Michx.; *Andropogon virginicus* var. *graciliformis* León; *Chrysopogon elliottii* C. Mohr; *Sorghastrum elliottii* (C. Mohr) Nash; *Sorghum elliottii* (Chapm.) Kuntze)

U.S., Florida. Perennial, caespitose, silvery and green to vivid orange, showy flowers, deer resistant, occurs almost always under natural conditions in wetlands, gravelly soils, sandstone, abandoned fields, dry to moist soil, in sand pine scrub, open woods, see *Species Plantarum* 2: 1046. 1753, *Flora Boreali-Americana* 1: 57. 1803, *Flora of the Southern United States* 581. 1860, *A Class-book of Botany* 809. 1861, *Monographiae Phanerogamarum* 6: 415. 1889, *Revisio Generum Plantarum* 2: 791. 1891, *Bulletin of the Torrey Botanical Club* 23: 146. 1896, *Bulletin of the Torrey Botanical Club* 24: 21. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1898 and *Bulletin of the New York Botanical Garden* 1(5): 431. 1900, *Flora of the Southeastern United States* ... 63, 64. 1903, *North American Flora* 17(2): 130. 1912, *Bulletin of the Torrey Botanical Club* 53: 457. 1926, *Rhodora* 37(436): 139. 1935, *The Grasses of North Carolina* 203. 1948, *Boissiera*. 9: 212. 1960, *Journal Arnold Arboretum* 64: 210, 213. 1983, Patricia Dolores Davila Aranda, "Systematic revision of the genus *Sorghastrum* (Poaceae: Andropogoneae)." 175, 185. [Thesis - Ph.D.] Ames, Iowa: Iowa State University 1988.

in English: Elliott's bluestem, Elliott bluestem, Elliott beardgrass, bottlebrush bluestem, broomsedge

A. gyrans Ashe var. **gyrans** (*Anatherum virginicum* subvar. *laxiflorum* (Scribn.) Roberty; *Andropogon campyloracheus* Nash; *Andropogon clandestinus* Alph. Wood, nom. illeg., non *Andropogon clandestinus* Nees ex Steud.; *Andropogon elliottii* Chapman; *Andropogon elliottii* f. *gracilior* (Hack.) Blomq.; *Andropogon elliottii* var. *gracilior* Hack.; *Andropogon elliottii* var. *laxiflorus* Scribn.; *Andropogon elliottii* var. *projectus* Fernald & Griscom; *Andropogon gracilior* (Hack.) Nash ex Small; *Andropogon subtenuis* Nash; *Andropogon subtenuis* Nash ex Small; *Andropogon virginicus* var. *graciliformis* León)

U.S., northern America. Perennial, green spikelets, occurs in sand hills, in well-drained sandy soils, flatwoods and scrub, disturbed dry areas, seepage slopes, wet pine flatwoods and disturbed roadsides, open woods and abandoned fields, see *Species Plantarum* 2: 1046. 1753, *Flora of the Southern United States* 581. 1860, *A Class-book of Botany* 809. 1861, *Monographiae Phanerogamarum* 6: 415. 1889, *Bulletin of the Torrey Botanical Club* 23: 146. 1896, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1898 and *Bulletin of the New York Botanical Garden* 1: 431. 1900, *Flora of the Southeastern United States* ... 63, 64. 1903, *Bulletin of the Torrey Botanical Club* 53: 457. 1926, *Rhodora* 37(436): 139. 1935, *The Grasses of North Carolina* 203. 1948, *Boissiera*. 9: 213. 1960.

in English: beardgrass, broom-straw, Elliott's bluestem

A. gyrans Ashe var. **stenophyllus** (Hack.) C.S. Campbell (*Andropogon perangustatus* Nash; *Andropogon virginicus* subvar. *stenophyllus* Hack.; *Andropogon virginicus* var. *stenophyllus* (Hack.) Fernald & Griscom)

U.S., Florida. Perennial with tufted culms, green, nodes smooth, sheaths pubescent, fringed ligule, leaf blades long and filiform, inflorescence with few branches, pinkish tan spathes, 2 racemes with silky hairs and long awns, pedicellate spikelet absent, found in wet pine flatwoods and wet roadside swales, wet ditches, edges of disturbed wetlands, bogs, savannahs, lake and pond margins, see *Species Plantarum* 2: 1046. 1753, *Monographiae Phanerogamarum* 6: 411. 1889, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1898 and *Flora of the Southeastern United States* ... 62. 1903, *Rhodora* 37(436): 142, t. 337, f. 2. 1935, *Journal of the Arnold Arboretum* 64(2): 217, f. 11C-D, 32-33. 1983.

in English: slim bluestem

A. hallii Hackel (*Andropogon chrysocomus* Nash; *Andropogon geminatus* Hack. ex Beal; *Andropogon gerardii* subsp. *hallii* (Hack.) Wipff; *Andropogon gerardii* var. *chrysocomus* (Nash) Fernald; *Andropogon gerardii* var. *incanescens* (Hack.) Boivin; *Andropogon gerardii* var. *paucipilus* (Nash) Fernald; *Andropogon hallii* var. *bispicatus* Vasey ex Beal; *Andropogon hallii* var. *flaveolus* Hack.; *Andropogon hallii* var. *incanescens* Hack.; *Andropogon hallii* var. *muticus* Hack.; *Andropogon paucipilus* Nash; *Andropogon provincialis* var. *chrysocomus* (Nash) Fernald & Griscom; *Andropogon provincialis* var. *paucipilus* (Nash) Fernald & Griscom; *Leptopogon flaveolus* (Hack.) Roberty; *Sorghum hallii* (Hack.) Kuntze)

Canada, Mexico, Arizona, New Mexico, South Dakota, Montana, Nebraska, North Dakota, northern America, U.S. Perennial, covered with a white waxy bloom, solid culms, strongly rhizomatous with rhizome spreading, extensive system of roots and rhizomes, rapid and extensive lateral spread, leaf sheaths keeled, leaf blades with prominent midribs, linear leaves glaucous or greenish, ligule a fringed membrane, hairy racemes, bisexual spikelets awned or unawned, seeds very pubescent, naturalized, cultivated, highly palatable and nutritious, forage for livestock, provides good to excellent forage for grazing and browsing wildlife species, fodder, seeds are consumed by game birds, prairie chickens and songbirds, useful for erosion control, revegetation of disturbed sites with sandy soil, found almost exclusively on sandy soils, sand hills and sand hill prairie, windblown sand dunes, high and low sandy plains, see *Encyclopédie Méthodique, Botanique* 1: 376. 1785, *Summa Plantarum*, ... 6: 16. 1792, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftliche Classe* 89(1): 127-128. 1884, *Monographiae Phanerogamarum* 6: 444. 1889, *Revisio Generum Plantarum* 2: 791. 1891, *Grasses of North America for Farmers and Students* 2: 55. 1896 and *Manual of the Flora of the Northern States and Canada* 70. 1901, *North Amer. Fl.* 17(2): 120-121. 1912, *Rhodora* 37(436): 147. 1935, *Rhodora* 45(534): 258. 1943, *Boissiera*. 9: 196.

1960, *Le Naturaliste Canadien* 94: 521. 1967, *Phytologia* 80(5): 343-344. 1996.

in English: sand bluestem, Hall's bluestem, Woodward sand bluestem, sand hill bluestem, turkeyfoot

in Mexico: popotillo arenoso

A. huillensis Rendle (Huilla is a place in Angola)

Tropical Africa. Perennial, tufted, sometimes shortly rhizomatous, basal sheaths folded, ligule membranous, 5-7 flowering branches per culm, feathery racemes arranged digitately or semidigitately at the tip of the branches, 4-10 racemes per spathe, spikelets sessile and glabrous with a thin awn, lower glume of sessile spikelets deeply grooved, low grazing value, occurs in wet areas, damp pastures, sandy soil, wet sandy soils, bushveld, open habitats, meadows, wooded meadow, edge of vleis, riverbanks, open grassland, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 146-147. 1899 and *Bothalia* 24: 241-246. 1994.

in English: large silver andropogon, oldman's beard

in South Africa: grootwitbaardandropogon, rietgras, grootwitbaardgras

A. hypogynus Hack. (*Andropogon hypogynus* var. *anatherus* Hack.; *Andropogon hypogynus* var. *conjungens* Hack.; *Andropogon hypogynus* var. *genuinus* Hack.; *Andropogon hypogynus* var. *hypogynus*; *Andropogon insolitus* Sohns; *Andropogon lateralis* Nees; *Hypogynium campestre* Nees)

Brazil. Perennial, tufted, erect, forming large clumps, pedicelled spikelet well-developed, common in damp places, floodplains, savannah, seasonally marshy grassland, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 329, 365. 1829, *Flora Brasiliensis* 2(4): 289-290, pl. 66. 1883 and *Memoirs of the New York Botanical Garden* 9(3): 271, f. 9. 1957, *Boissiera*. 9: 198. 1960, *Bol. Soc. Argent. Bot.* 24: 137-149. 1985, *Brittonia* 38(4): 411-414. 1986.

A. indetonsus Sohns (*Andropogon crassifolius* Sohns)

Brazil. Tufted, forming colonies, moist places, see *Memoirs of the New York Botanical Garden* 9(3): 269. 1957.

A. ingratus Hack. (*Andropogon sincoranus* Renvoize)

Brazil. See *Österreichische Botanische Zeitschrift* 51(5): 151. 1901, *Kew Bulletin* 39(1): 181. 1984, *Novon* 13(3): 372, f. 3. 2003.

A. insolitus Sohns (*Andropogon crucianus* Renvoize)

Venezuela, Brazil. Perennial, caespitose, elongate racemes, sessile spikelet bisexual, rachis internodes and pedicels ciliate, closely related to *Andropogon virgatus*, savannah marsh, see *Memoirs of the New York Botanical Garden* 9(3): 271, f. 9. 1957, *Gramineas de Bolivia* 596, f. 142. 1998.

A. kelleri Hack. (*Anatherum cyrtocladum* (Stapf) Roberty; *Andropogon bentii* auct. non Stapf; *Andropogon cyrtocladus* Stapf; *Schizachyrium kelleri* (Hackel) Stapf)

East Africa, Ethiopia. Perennial, bushy, densely clumped, suffrutescent, woody, branched, rhizomatous, racemes solitary and terminal, lower glume of the sessile spikelet linear-lanceolate and concave, weed, arid habitats, dry stony soils, silty areas, sandy soils, depressions, see *Mémoires de l'Herbier Boissier* 20: 6. 1900, *Bulletin of Miscellaneous Information Kew* 6: 209. 1907, *Kew Bulletin* 6: 224. 1907, *Boissiera*. 9: 210. 1960.

in Somalia: durr, tun

A. lacunosus J.G. Anderson

Tropical Africa. Perennial, straggling, trailing, lower glume of sessile spikelets rounded and pitted, growing in moist places, swamps, see *Bothalia* 8: 113. 1962.

A. lateralis Nees (*Andropogon brevis* Trin.; *Andropogon cryptopus* Trin. ex Hack.; *Andropogon glaucescens* subvar. *cryptopus* Hack.; *Andropogon glaucescens* subvar. *typicus* Hack.; *Andropogon glaucescens* var. *brevis* (Trin.) Hack.; *Andropogon glaucescens* var. *lateralis* (Nees) Hack.; *Andropogon hypogynus* Hack.; *Andropogon incanus* Hack.; *Andropogon incanus* subvar. *cryptopus* Hack.; *Andropogon incanus* subvar. *typicus* Hack.; *Andropogon incanus* var. *brevis* (Trin.) Hack.; *Andropogon incanus* var. *lateralis* (Nees) Hack.; *Andropogon incanus* var. *ramosissimus* Hack.; *Andropogon incanus* var. *subtilior* Hack.; *Andropogon incanus* var. *trichocoleus* Hack.; *Andropogon lateralis* subsp. *cryptopus* (Hack.) A. Zanin; *Andropogon lateralis* var. *brevis* (Trin.) Hack. ex Henrard; *Andropogon lateralis* var. *incanus* (Hack.) Henrard; *Andropogon lateralis* var. *ramosissimus* (Hack.) Henrard; *Andropogon lateralis* var. *subtilior* (Hack.) Henrard; *Andropogon lateralis* var. *trichocoleus* (Hack.) Henrard; *Andropogon lindmanii* Hack.; *Andropogon virginicus* L.; *Andropogon virginicus* subsp. *genuinus* Hack.; *Leptopogon carinatus* subvar. *incanus* (Hack.) Roberty; *Leptopogon carinatus* subvar. *lateralis* (Nees) Roberty; *Leptopogon carinatus* subvar. *ramosissimus* (Hack.) Roberty; *Leptopogon carinatus* subvar. *subtilior* (Hack.) Roberty; *Leptopogon carinatus* subvar. *trichocoleus* (Hack.) Roberty) (dedicated to the Swedish botanist Carl Axel Magnus Lindman, 1856-1928, traveler, 1892-1894 in Brazil; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 386. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 239. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 200. 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 268. 1973; Frederico Carlos Hoehne, M. Kuhlmann and Oswaldo Handro, *O jardim botânico de São Paulo*. 1941; Thorgny Ossian Bolivar Napoleon Krok, 1834-1921, *Bibliotheca botanica suecana*. [Posthum. edited by the Swedish botanists Carl Axel Magnus Lindman

(1856-1928) and Fredrik Rutger Aulin, 1841-1923.] Uppsala & Stockholm [1925]; Johannes Eugenius Bülow Warming (1841-1924), *Symbolae ad floram Brasiliae centralis cognoscendam quas edidit Eug. Warming*. Havniae 1867-1894)

Argentina, central Brazil, Bolivia, Uruguay. Perennial, variable, caespitose, subwoody, branched at the middle and upper nodes, pedicels and internodes villous, fodder, forage, usually on sandy soils, savannah, open fields, wet places, seasonally humid savannahs, see *Species Plantarum* 2: 1045-1046. 1753, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 329, 365. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 268. 1832, *Flora Brasiliensis* 2(4): 285, 289-290, pl. 66. 1883, *Monographiae Phanerogamarum* 6: 431-433. 1889 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 6, t. 2. 1900, *Mededeelingen van's Rijks-Herbarium* 40: 42-43. 1921, *Boissiera*. 9: 198. 1960, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 447-508. 1969, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *J. Arnold Arbor.* 64: 224. 1983, *Bol. Soc. Argent. Bot.* 24: 137-149. 1985, *Brittonia* 38(4): 411-414. 1986, *Taxon* 41: 556. 1992, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Taxon* 44: 611-612. 1995.

in English: caninha grass

in Argentina: paja colorada, capú-puitá, capú-putá

in Brazil: capim-caninha

A. *lateralis* Nees subsp. ***cryptopus*** (Hack.) A. Zanin (*Andropogon incanus* subvar. *cryptopus* Hack.)

South America, Brazil. See *Monographiae Phanerogamarum* 6: 432. 1889.

A. *lateralis* Nees subsp. ***lateralis*** (*Andropogon herzogii* Hack.; *Andropogon hirsutus* Kunth; *Andropogon lateralis* var. *lateralis*)

Paraguay. See *Nova Genera et Species Plantarum* 1: 186. 1815 [1816] and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 49. 1909.

A. *lateralis* Nees var. ***bogotensis*** (Hack.) Henrard (*Andropogon bogotensis* (Hack.) A. Zanin & Longhi-Wagner; *Andropogon incanus* var. *bogotensis* Hack.)

America. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 329. 1829, *Monographiae Phanerogamarum* 6: 433. 1889, *Mededeelingen van's Rijks-Herbarium* 40: 43. 1921.

A. *lateralis* Nees var. ***incanus*** (Hack.) Henrard (*Andropogon incanus* Hack.)

America. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 329. 1829, *Monographiae Phanerogamarum* 6: 431-433. 1889, *Mededeelingen van's Rijks-Herbarium* 40: 42. 1921, *Boissiera*. 9: 198. 1960.

A. *lawsonii* Hook.f (*Chrysopogon lawsonii* (Hook.f.) Roberty; *Chrysopogon lawsonii* (Hook.f.) Veldkamp; *Vetiveria lawsonii* (Hook.f.) Blatt. & McCann)

Asia, India. Reduced fodder value, growing in moist ground, wet places, moist lawn, see *The Flora of British India* 7(21): 187. 1896 and *Journal of the Bombay Natural History Society* 32: 409. 1928, *Boissiera*. 9: 260. 1960, J.F. Veldkamp, "A revision of *Chrysopogon* Trin. including *Vetiveria* Bory (Poaceae) in Thailand and Malesia with notes on some other species from Africa and Australia." in *Austrobaileya*. 5: 503-533. 1999.

in India: kaare hullu, mani hullu, thoddu kaare hullu

A. *laxatus* Stapf (*Andropogon ternatus* (Spreng.) Nees; *Andropogon ternatus* var. *africanus* Rendle; *Saccharum ternatum* Spreng.)

Tropical Africa. Perennial, rare, tufted, herbaceous, slender, forming large clumps, leaf blades folded, leaf sheaths keeled, plumose inflorescence, paired racemes, pedicellate spikelets absent or reduced, 2-3 racemes per spathe, lower glume of sessile spikelets deeply grooved, on wet to marshy places, roadsides, moist meadows, dry areas, wooded pastures, sometimes confused with *Andropogon eucomus* Nees, see *Systema Vegetabilium, editio decima sexta* 1: 283. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 326. 1829 and *Flora of Tropical Africa* 9: 237-238. 1919, *Bol. Soc. Argent. Bot.* 24: 137-149. 1985, *Genome* 29: 340-344. 1987, *Wageningen Agricultural University Papers* 92-1: 430. 1992.

in Tanzania: mahua kinyaturu, mahwa kinyaturu

A. *lehmannii* Pilg.

Colombia. Perennial, slender, forming colonies, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 24. 1899.

A. *leprodes* Cope

Somalia. Perennial, unbranched, greenish to glaucous, densely tufted, old leaf sheaths persistent at the base, racemes subdigitate and terminal, lower glume of sessile spikelet scabrid or scabrous and nerved in the depression, glumes of the pedicelled spikelet awnless, see *Kew Bulletin* 50(1): 111, f. 1C-D. 1995.

A. *leucostachyus* Kunth (*Anatherum domingense* Roem. & Schult.; *Anatherum virginicum* (L.) Spreng.; *Anatherum virginicum* (L.) Desv., nom. illeg., non *Anatherum virginicum* (L.) Spreng.; *Anatherum virginicum* subvar. *leucostachyum* (Kunth) Roberty; *Andropogon domingensis* (Roem. & Schult.) Steud.; *Andropogon lanuginosus* Kunth; *Andropogon leucostachyus* subsp. *genuinus* Hack.; *Andropogon leucostachyus* subvar. *mas* Hack.; *Andropogon leucostachyus* subvar. *typicus* Hack.; *Andropogon leucostachyus* var. *subvillosus* Hack.; *Andropogon virginicus* L.; *Andropogon virginicus* subsp. *leucostachyus* (Kunth) Hack.; *Sorghum leucostachyus* (Kunth) Kuntze)

Central America, Mexico, West Indies to Argentina, Brazil. Perennial, erect, herbaceous, densely caespitose, clumped, glabrous, branched, ligule delicate and truncate, flat or folded leaf blades acute to acuminate, inflorescence with silky-white hairs or densely pilose, racemes subdigitate and clustered, spikelets paired, sessile spikelet awnless or weakly awned, pedicelled spikelet rudimentary, in small clumps or tufts, a pest, a weed of pastures, naturalized, forage, sometimes used as abortifacient, found along disturbed roadsides, sandy soil, burned savannah, disturbed savannahs, mountain savannah, sandy savannah, wooded savannah, restinga forest, open rocky pasture, open areas both dry and moist, stream banks, depressions, disturbed places, pine forest, rocky roadside, open grassland, see *Species Plantarum* 2: 1046. 1753, *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *Nova Genera et Species Plantarum* 1: 187-188. 1815 [1816], *Systema Vegetabilium* 2: 809. 1817, *Nomenclator Botanicus* 45. 1821, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 175. 1831, *Flora Brasiliensis* 2(3): 286. 1877, *Flora Brasiliensis* 2(4): 286. 1883, *Monographiae Phanerogamarum* 6: 419-420. 1889, *Revisio Generum Plantarum* 2: 792. 1891 and *Boissiera*. 9: 213. 1960, *Journal of the Arnold Arboretum* 64(2): 224. 1983, *Bol. Soc. Argent. Bot.* 24: 137-149. 1985.

in Spanish: grama

in Brazil: capim membeca

in Nicaragua: walang

A. liebmannii Hack. (*Anatherum virginicum* (L.) Spreng. subvar. *liebmannii* (Hack.) Roberty; *Anatherum virginicum* subvar. *mohrii* (Hack.) Roberty; *Andropogon liebmannii* subvar. *genuinus* Hack.; *Andropogon liebmannii* subvar. *mohrii* Hack.; *Andropogon liebmannii* subvar. *rariopilis* Hack.; *Andropogon mohrii* (Hack.) Hack. ex Vasey; *Andropogon mohrii* Hack. ex B.D. Jacks.; *Andropogon mohrii* (Hack.) Vasey; *Andropogon mohrii* var. *pungensis* Ashe; *Sorghum liebmannii* (Hack.) Kuntze)

Mexico. Perennial, good forage, found in grassy swamps, riverbanks, see *Flora* 68: 132. 1885, *Bot. Gaz.* 13: 295. 1888, *Monographiae Phanerogamarum* 6: 413. 1889, *Revisio Generum Plantarum* 2: 792. 1891, *Contributions from the United States National Herbarium* 3(1): 11. 1892, *Journal of the Elisha Mitchell Scientific Society* 15: 114. Raleigh, North Carolina 1899 and *Boissiera*. 9: 213. 1960, *Journal of the Arnold Arboretum* 64(2): 171-254. 1983.

A. liebmannii Hack. var. *liebmannii* (*Andropogon liebmannii* subvar. *rariopilis* Hack.)

Mexico. See *Monographiae Phanerogamarum* 6: 413. 1889.

A. liebmannii Hack. var. *pungensis* (Hack.) C.S. Campb. (*Anatherum virginicum* subvar. *mohrii* (Hack.) Roberty; *Andropogon liebmannii* subvar. *mohrii* Hack.; *Andropogon liebmannii* var. *pungensis* (Ashe) C.S. Campb.; *Andropogon*

mohrii (Hack.) Vasey; *Andropogon mohrii* (Hack.) Hack. ex Vasey; *Andropogon mohrii* Hack. ex B.D. Jacks.; *Andropogon mohrii* var. *pungensis* Ashe)

Northern America, Mexico, U.S., Florida. Perennial with tufted culms, nodes smooth, pubescent leaves, sheaths pubescent, ligule fringed and papery, racemes with silky hairs, pedicellate spikelet reduced to a single scale, minute grain, found in bogs, savannahs and wet pine flatwoods, see *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *Bot. Gaz.* 13: 295. 1888, *Monographiae Phanerogamarum* 6: 413. 1889, *Contributions from the United States National Herbarium* 3(1): 11. 1892, *Journal of the Elisha Mitchell Scientific Society* 15: 113-114. 1899 and *Boissiera*. 9: 213. 1960.

in English: Mohr's bluestem, broomsedge

in Mexico: tallo azul mexicano

A. ligulatus (Stapf) Clayton (*Andropogon laxatus* var. *ligulatus* Stapf)

Tropical Africa. See *Flora of Tropical Africa* 9: 238. 1919, *Kew Bulletin* 32(1): 2. 1977.

A. lima (Hack.) Stapf (*Andropogon amethystinus* var. *breviaristatus* Hack.; *Andropogon amethystinus* var. *lima* Hack.; *Eulalia hydrophila* Chiov.; *Eulalia hydrophila* var. *filiformis* Chiov.)

Tropical Africa, East Africa. Perennial, densely tufted, coarse, erect, tussocky, leaf blades erect and scabrid, racemes terminal and paired, lower glume of the sessile spikelet flat or slightly concave, grazed when young, found in montane grasslands, see *Monographiae Phanerogamarum* 6: 464. 1889 and *Flora of Tropical Africa* 9: 217. 1919, *Atti della reale accademia d'Italia. Mem. Cl. Sci. Fis. Math. Nat.* 11(2): 62-63. 1940.

A. lindmannii Hack. (*Andropogon lateralis* Nees)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 329-330. 1829 and *Kongliga Svenska Vetenskapsakademien Handlingar* 34(6): 6, t. 2. 1900.

A. lividus Thwaites (*Cymbopogon lividus* (Thw.) Willis)

Sri Lanka, India, Tamil Nadu. Perennial, densely tufted, tussocky, ligule membranous, leaves erect and glabrous, paired racemes, upper glume winged, a fodder grass, grows on wet places, see *Enumeratio Plantarum Zeylaniae* 367. 1864 and *Handb. Fl. Ceylon* 5: 244. 1900, *A Revised Catalogue of the Indigenous Flowering Plants & Ferns of Ceylon* 110. Colombo 1911, *Handb. Fl. Ceylon* 6: 335. 1931, *Grasses of Ceylon* 195. 1956, *Grasses of Burma ...* 91. 1960, *Taxon* 34: 159-164. 1985.

in English: spear grass, purple grass

in Tamil: pandripul

A. longiberbis Hackel (*Anatherum virginicum* subvar. *longiberbe* (Hack.) Roberty; *Sorghum longiberbis* (Hack.) Kuntze)

Southeast U.S., Florida, Georgia. Wiry, branched above, leaves elongate and arching, panicle elongate with paired and flexuous racemes, sessile spikelet awned, pilose pedicels, found in sand dunes, dry sand hills, old fields and dry rocky soils, see *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *Flora* 68(8): 131. 1885, *Revisio Generum Plantarum* 2: 792. 1891 and *Boissiera*. 9: 213. 1960, *Journal of the Arnold Arboretum* 64(2): 223. 1983.

in English: long-beard bluestem

A. longipes Hack.

Sri Lanka, India, Tamil Nadu. Lower glume of sessile spikelet flat or concave, see *Flora* 68(8): 138. 1885 and *Taxon* 34: 159-164. 1985.

A. macrophyllus Stapf

Tropical Africa. Perennial, robust, tough, fodder grass, palatable to cattle, see *Flora of Tropical Africa* 9: 264. 1919.

in Ghana: esire

in Sierra Leone: kofu-na, tofo, tofo-ke

A. macrophyllus Stapf var. **pilosus** Reznik

Tropical Africa. See *Flora of Tropical Africa* 9: 264. 1919, *Bulletin du Muséum d'Histoire Naturelle sér. 2* 5: 500. 1933.

A. macrothrix Trin. (*Anatherum virginicum* subvar. *nashianum* (Hitchc.) Roberty; *Andropogon nashianus* Hitchc.; *Andropogon ternatus* subsp. *macrothrix* (Trin.) Hack.)

South America, Brazil, Paraguay. Perennial, pedicellate spikelets vestigial, sessile spikelets awned, single terminal inflorescence, densely villous rachis internodes and pedicels, moist areas, similar to *Andropogon ternatus* (Sprengel) Nees, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 326-327. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 270. 1832, *Flora Brasiliensis* 2(4): 287. 1883 and *Contributions from the United States National Herbarium* 12(6): 193-194. 1909, *Boissiera*. 9: 213. 1960.

A. mannii Hook.f. (*Andropogon platybasis* J.G. Anders.) (for the German botanist Gustav Mann, 1836-1916, Kew gardener 1859, plant collector, botanical explorer, traveler, 1859-1862 on William Balfour Baikie's Niger Expedition, 1863 India and Assam, 1863-1891 Indian Forest Service, sent plants and seeds to Kew, with the German botanist Hermann Wendland (1825-1903) wrote "On the palms of Western Tropical Africa." *Trans. Linn. Soc.* 24: 421-439. 1864; see J.H. Barnhart, *Biographical notes upon botanists.* 2: 443. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 206. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1917-1933; F.N. Hepper & F. Neate, *Plant Collectors in West Africa.* 53. 1971; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun.* 7: 48. Paris 1968; Ernest Nelmes & William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927.* 274-276. [1931]; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France.* 29: 184. Paris 1882; Ronald William John Keay, "Botanical Collectors in West Africa prior to 1860." in *Comptes Rendus A.E.T.F.A.T.* 55-68. Lisbon 1962; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium.* Edinburgh 1970; F. Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique, (A.E.T.F.A.T.).* 69-75. Lisbon 1962; Sir Clements Robert Markham (1830-1916), *Peruvian Bark.* A popular account of the introduction of *Cinchona* cultivation into British India ... London 1880; Claude Spencer et alii, "Survey of plants for antimalarial activity." *Lloydia.* 10(3): 145-174. [referring to *Mannia africana* Hook.] 1947)

Tropical Africa. Perennial, rare, variable, erect, densely and largely tufted, basal sheaths keeled and compressed, leaf blades erect and folded, inflorescence terminal, spikelets shortly hairy to glabrous, 2-3 racemes per spathe, lower glume of sessile spikelets concave or flat, growing in mountain grassland, moist places, riverbanks, see *Journal of the Proceedings of the Linnean Society* 7: 232. 1864 and *Kirkia* 1: 102. 1961.

A. multiflorus Renvoize (*Andropogon bogotensis* (Hack.) A. Zanin & Longhi-Wagner)

Bolivia. Perennial, caespitose, erect, leaf blades linear and acute, inflorescence much branched, racemes exserted and digitate, moist savannah, see *Gramineas de Bolivia* 596, f. 138. 1998.

A. munroi C.B. Clarke (*Andropogon gyirongensis* L. Liou; *Andropogon hookeri* Munro ex Hack.; *Andropogon tristis* Nees ex Hack.; *Cymbopogon hookeri* (Munro ex Hack.) Stapf ex Bor; *Cymbopogon munroi* (C.B. Clarke) Noltie; *Cymbopogon tibeticus* Bor)

India. Inflorescence of 4-8 racemes, see *Journal of the Linnean Society, Botany* 25: 87-88, t. 37. 1889, *Monographiae Phanerogamarum* 6: 439, 614. 1889 and *Indian Forest Records: Botany* 1: 92. 1939, *Kew Bulletin* 8(2): 275-276. 1953, *Kew Bulletin* 27(3): 447-450. 1972, *Flora Xizangica* 5: 329-331. 1987, *Edinburgh Journal of Botany* 56(3): 400. 2000.

A. perdignus Sohns

Venezuela. Bunchgrass, see *Memoirs of the New York Botanical Garden* 9(3): 274, f. 11. 1957.

A. perligulatus Stapf (*Andropogon canaliculatus* Schumacher.; *Andropogon patris* Robyns)

West tropical Africa, Togo. Perennial, robust, tufted, erect, leaf blades linear, paired racemes, loose false panicle, lower glume of sessile spikelet linear and deeply grooved, swampy places, moist meadow, see *Bull. Jard. Bot. Brux.* 8: 227. 1830 and *Bulletin of Miscellaneous Information Kew*

1908: 410. 1908, *Flore Agrostologique du Congo Belge* 137. 1929.

A. pinguipes Stapf

Tropical Africa. Annual, browsed, good forage when young, used for thatching and for making mats and screens, see *Bulletin of Miscellaneous Information Kew* 1908: 411. 1908.

in Senegal: banôbo, bohdo, goloba, gomgom, gongon, ngétiétiadi, ngolumban, taf

A. pohlianus Hack. (*Cymbachne amplexens* subvar. *pohliana* (Hack.) Roberty) (named for the Bohemian-born Austrian botanist Johann Baptist Emanuel Pohl, 1782-1834, traveler, physician, author of *Plantarum Brasiliae icones et descriptiones ... Vindobonae* [Wien]. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 94. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 226-227. 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. 332, 477, 505, 526. Paris 1845; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; *Fl. Bras.* 1(1): 78-82. 1906).

Brazil. See *Flora Brasiliensis* 2(4): 304, pl. 69. 1883 and *Boissiera*. 9: 244. 1960, *Bulletin de l'Institut Française d'Afrique Noire* 22: 105. 1960.

A. polytychos Steud. (*Andropogon polytychus* Steud.; *Andropogon polypticus* Steud.; *Dichanthium polytychos* (Steud.) A. Camus) (also spelled *polytychon* or *polytychum*)

Sri Lanka, Myanmar (Burma). Perennial, densely tufted, tussocks, leaves erect and pilose, ligule membranous, auricles absent, subdigitate racemes terminal, upper glume not winged, see *Synopsis Plantarum Glumacearum* 1: 380. 1854 and *Handb. Fl. Ceylon* 5: 237. 1900, *Bulletin du Muséum d'Histoire Naturelle* 27: 549. 1921, *Handb. Fl. Ceylon* 6: 333, 335. 1931, *Grasses of Ceylon* 191, 195. 1956, *Grasses of Burma ...* 91, 135. 1960, *Phanerogamarum Monographiae* 12: 1-225. 1980, *Taxon* 34: 159-164. 1985.

A. polytychos Steud. var. *deccanensis* Bor ex Clayton (*Andropogon polytychos* var. *deccanensis* Bor)

India, Tamil Nadu. Leaf blades filiform, 1-2 racemes, peduncle below inflorescence hairy, see *Grasses of Burma, Ceylon, India and Pakistan* 91, 135. 1960, *Kew Bulletin* 27(3): 448. 1972.

A. polytychos Steud. var. *polytychos*

Myanmar, India, Kerala, Tamil Nadu. Leaf blades flat, peduncle below inflorescence glabrous, in swampy or dry areas.

A. pringlei Scribner & Merr. (*Anatherum argyraeum* var. *pringlei* (Scribn. & Merr.) Roberty)

North America, Mexico. Perennial, tufted, see *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 7. 1901, *Boissiera*. 9: 207. 1960.

A. pseudapricus Stapf (*Anatherum africanum* (Franch.) Roberty; *Andropogon africanus* Franch.; *Andropogon appendiculatus* Nees; *Andropogon appendiculatus* var. *genuinus* Durand & Schinz; *Andropogon apricus* Trin.; *Andropogon apricus* var. *africanus* Hack.; *Andropogon brazzae* Franch.; *Leptopogon appendiculatus* (Nees) Roberty)

West tropical Africa, Chad, Benin, Burkina Faso, Togo. Annual bunchgrass with long cycle, tufted, grazed by stock, used for thatching and as a building material, used to make mats and screens, common on shallow or sandy soils, riverbanks, sandstone, irrigation ditches, loamy sand, on dry fallow land, see *Florae Africae Australioris Illustrationes Monographicae* 105. 1841, *Monographiae Phanerogamarum* 6: 457. 1889, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 326. 1895 [or 1893] and *Flora of Tropical Africa* 9: 242. 1919, *Boissiera*. 9: 197, 207. 1960, *Bothalia* 24: 241-246. 1994.

in Arabic: geishsh an naar

in Gambia: fula nyantango, nianga, njanga, seioko, sheioko

in Ghana: daziman

in Niger: jan bako, séhuko, selsené

in Nigeria: acho, dogo, funu kiango, gamari boderi, geishsh an naar, jan bako, jan baujee, jan daatsii, jan ramnoa, jan raunao, katjin, labanda, mai gindin biri, ngir masan, tidingho

in Senegal: mafar mbil, ndiangua, ndianyuè

in tropical Africa: fula nyantango, gamari boderi, mafar mbil, ndiangua, njanga, sheioko, tangolo, yantaré

in Upper Volta: kaloiega, kjiempuh, monkatjin, njianparagha, si'uko, siikuwo, tangolo, yandeparaga, yantarè

A. pumilus Roxb. (*Andropogon demissus* Steud.; *Andropogon pachyarthrus* Hack.; *Arthrolophis pumilus* (Roxb.) Chiov.)

India, Maharashtra, Madhya Pradesh. Annual, tufted, quite glabrous, smooth, erect or geniculate, low, decumbent below, rather slender, leaf blades rather narrow and linear, numerous radiating branches growing all directions, glabrous racemes, good hay and very good silage, suitable for horses and cattle both green and dry, good fodder grass, palatable to livestock, common on dry or semidry places, heavy soil, black soils, shallow soil, waste ground, see *Hortus Bengalensis, or a catalogue ...* 7. 1814, *Flora Indica; or Descriptions ...* 1: 277. 1820, *Synopsis Plantarum Glumacearum* 1: 388. 1854, *Fodder Grasses N. India* 37. 1888, *Monographiae Phanerogamarum* 6: 449. 1889 and *Bollettino della Società Botanica Italiana* 1917(6/7): 57, 59. 1917.

in India: baerki, bairki, bhurbusi, chikkanuga hullu, chimanchara, gangerua, garren, ghondhani, gondad, gondavaala, gondwal, kaavattam pullu, lahan masrut, lal gondali, lalgavat, malakava, malakaya, malka-phalka, mushel, tagargoti, tambrut, zinzvo

A. pungens T.A. Cope (*Andropogon chinensis* auct. non (Nees) Merr.)

Somalia. Perennial, tufted, green, leaves flat, racemes paired, a false panicle, very pungent callus, lower glume of sessile spikelet deeply depressed and upper glume awned, upper lemma 2-toothed, often coastal, plains, see *Kew Bulletin* 50(1): 109-117. 1995.

A. ravus J.G. Anderson

Southern Africa. Perennial, glaucous, rhizomatous with knotted and branched rhizomes, ligule a fringed membrane, inflorescence spatheate, glumes awned, lower glume of sessile spikelets deeply grooved, palatable, low grazing value, grows in mountain sourveld, see *Bothalia* 7: 417. 1960.

A. saccharoides Sw. (*Amphilophis saccharoides* (Sw.) Nash; *Amphilophis torreyanus* (Steud.) Nash; *Andropogon argenteus* DC.; *Andropogon argenteus* Elliott, nom. illeg., non *Andropogon argenteus* DC.; *Andropogon argenteus* Vanderyst, nom. illeg., non *Andropogon argenteus* DC.; *Andropogon glaucus* Torr., nom. illeg., non *Andropogon glaucus* Retz.; *Andropogon jamesii* Torr.; *Andropogon kunthii* E. Fourn.; *Andropogon laguroides* DC.; *Andropogon preamaturus* Fernald, also spelled *prematuros*; *Andropogon saccharoides* subsp. *laguroides* (DC.) Hack.; *Andropogon saccharoides* subvar. *argenteus* (DC.) Hack.; *Andropogon saccharoides* subvar. *paucirameus* Hack.; *Andropogon saccharoides* var. *glaucus* Scribn.; *Andropogon saccharoides* var. *laguroides* (DC.) Hack.; *Andropogon saccharoides* var. *surius* Krause; *Andropogon saccharoides* var. *torreyanus* (Steud.) Hack.; *Andropogon scoparius* subsp. *genuinus* Hack.; *Andropogon tenuirachis* E. Fourn.; *Andropogon torreyanus* Steud.; *Bothriochloa laguroides* (DC.) Herter; *Bothriochloa laguroides* (DC.) Pilg., nom. illeg., non *Bothriochloa laguroides* (DC.) Herter; *Bothriochloa saccharoides* (Sw.) Rydb.; *Bothriochloa saccharoides* subsp. *saccharoides*; *Bothriochloa saccharoides* var. *laguroides* (DC.) Beetle; *Bothriochloa saccharoides* var. *torreyana* (Steud.) Gould; *Dichanthium saccharoides* subvar. *laguroides* (DC.) Roberty; *Dichanthium saccharoides* subvar. *paucirameus* (Hack.) Roberty; *Dichanthium saccharoides* subvar. *torreyanum* (Steud.) Roberty; *Holcus saccharoides* (Sw.) Kuntze ex Stuck.; *Holcus saccharoides* var. *laguroides* (DC.) Hack.; *Sorghum argenteum* (Elliott) Kuntze; *Sorghum saccharoides* (Sw.) Kuntze; *Sorghum saccharoides* var. *laguroides* (DC.) Kuntze; *Trachypogon argenteus* (DC.) Nees; *Trachypogon laguroides* (DC.) Nees)

Southern America. In clearings, oak wood, dry soils, irrigation ditch, see *Nova Genera et Species Plantarum seu*

Prodromus 26. 1788, *Catalogus plantarum horti botanici monspeliensis* 77-78. 1813, *Genera et species plantarum* 3. 1816, *A Sketch of the Botany of South-Carolina and Georgia* 1: 148. 1816, *Annals of the Lyceum of Natural History of New York* 1(1): 153-154. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 348-349. 1829, *Nomenclator Botanicus. Editio secunda* 1: 93. 1840, *Linnaea* 19(6): 694. 1847, *Exploration of the Red River of Louisiana* 302. 1853, *Synopsis Plantarum Glumacearum* 1: 380. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 309. 1879, *Flora Brasiliensis* 2(4): 292-293. 1883, *Mexicanas Plantas* 2: 58-59. 1886, *Monographiae Phanerogamarum* 6: 384, 493-497. 1889, *Revisio Generum Plantarum* 2: 790, 792. 1891, *Contributions from the United States National Herbarium* 2(3): 497. 1894, *Memoirs of the Torrey Botanical Club* 5: 28. 1894, *Grasses of North America for Farmers and Students* 2: 57. 1896, *Revisio Generum Plantarum* 3(2): 368. 1898 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 266. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 16. 1911, *North American Flora* 17(2): 125. 1912, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 8. 1912, *Beihefte zum Botanischen Centralblatt* 32: 334. 1914, *Bulletin agricole du Congo Belge* 9: 237. 1918, *Contributions from the United States National Herbarium* 24(8): 497. 1927, *Brittonia* 1(2): 81. 1931, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14c: 160. 1940, *Rhodora* 42(502): 413-415, pl. 626, f. 1-3. 1940, *Field & Laboratory* 23(1): 18-19. 1955, *Madroño* 14(1): 25. 1957, *The Southwestern Naturalist* 3: 212. 1959, *Boissiera* 9: 168. 1960, *Phytologia* 30(5): 344, 346. 1975, *Systematic Botany* 8(2): 168-184. 1983, *Phytologia* 61: 119-125. 1986, *Cuscatlania* 1(6): 1-29. 1991, *Fontqueria* 46: [i-ii], 1-259. 1997, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 57: 52, f. 6, 19. 1998.

in Mexico: pasto blanco, popotillo plateado, zacate aceite

A. saccharoides Sw. var. **erianthoides** Hack. (*Bothriochloa brasiliensis* (Hack.) Henrard)

Southern America, Brazil. See *Flora Brasiliensis* 2(4): 293. 1883, *Monographiae Phanerogamarum* 6: 496. 1889 and Jan Valckenier Suringar, *Nederlandsche Dendrologische Vereeniging. Gedenkboek J. Valckenier Suringar*, 24 December, 1864 - 17 October, 1932. Wageningen 1942.

A. scabriglumis Swallen

Ecuador. See *Memoirs of the New York Botanical Garden* 9(2): 144-145. 1955.

A. schirensis Hochst. ex A. Rich. (*Andropogon congoensis* Franch.; *Andropogon dummeri* Stapf; *Andropogon schirensis* Hochst.; *Andropogon schirensis* var. *angustifolius* Stapf, also spelled *angustifolia*) (for the South African botanist

Richard Arnold Dummer [formerly Dümmer], 1887-1922, botanical collector in South Africa, Kenya and Uganda; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 477. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 109. 1972; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 140-141. 1981; Hugh Neville Dixon (1861-1944), *Uganda mosses* collected by R. Dummer and others. [*Smithsonian Misc. Coll.* lxxix. no. 8] Washington 1918)

Malawi, tropical Africa, Tanzania, South Africa, Benin, Namibia, Swaziland, Kalahari. Perennial, variable, slender, densely tufted, unbranched, erect, swollen nodes, ligule an unfringed membrane, leaf blades flat, basal leaf sheaths fibrous, roots aromatic, inflorescence one pair of terminal racemes per culm, spikelets paired, ligule membranous, expanded leaf blades, glumes awnless, lower glume of the sessile spikelets deeply grooved, growing in large tufts, thatching grass, low to medium palatability, good grazing when young and tender, occurs in derived savannah, swamp margins, shallow soil over rocks, open forest, well-drained areas, savannah woodland, sandy soil, in dry areas of meadow, grassland, wet grassland, wooded grassland, montane grassland, sandy grassland, deep sand, rocky hillsides, on stony slopes, moist meadow, open bushveld, open woodland, deciduous bushland, see *Tentamen Florae Abyssinicae* ... 2: 456. 1850, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 325. 1895 [or 1893], *Flora Capensis* 7: 340. 1898 and *Flora of Tropical Africa* 9: 248. 1919, *Bulletin de la Société Botanique de Belgique* 55: 40. 1922, *Cytologia* 19: 97-103. 1954, *Bothalia* 24: 241-246. 1994.

in English: hairy bluegrass, stab grass

in Angola: iole-iole

in Chad: cewte' (Zimé)

in Nigeria: hahaendenoh, lawrehe, rumiya, yambiu

in South Africa: tweevingergras, gesteekgras

in Tanzania: Ng'onga (= spiny spikes) kinyaturu

A. schottii Rupr. ex Hack. (*Schizachyrium sanguineum* (Retz.) Alston; *Schizachyrium sanguineum* subvar. *schottii* (Rupr. ex Hack.) Roberty; *Schizachyrium schottii* (Rupr. ex Hack.) Nash; *Sorghum schottii* (Rupr. ex Hack.) Kuntze) (named for Heinrich W. Schott, 1794-1865)

Southern America, Brazil. See *Observationes Botanicae* 3: 25. 1783, *Flora Brasiliensis* 2(3): 299. 1883, *Monographiae Phanerogamarum* 6: 383. 1889, *Revisio Generum Plantarum* 2: 792. 1891 and *North American Flora* 17(2): 105. 1912, *A Handbook to the Flora of Ceylon* 6: 334. 1931, *Boissiera*. 9: 222. 1960, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

A. selloanus (Hack.) Hack. (*Anatherum virginicum* subvar. *selloanus* (Hack.) Roberty; *Andropogon leucostachyus*

subsp. *selloanus* Hack.; *Andropogon leucostachyus* var. *selloanus* Hack.; *Euklastaxon tenuifolius* Steud.)

Mexico, West Indies, Brazil, Argentina, Bolivia, Venezuela. Perennial, herbaceous, loosely to densely tufted, slender, erect to suberect, somewhat geniculate, simple or branching, forming small clumps, leaf blades obtuse and conspicuously keeled, densely pilose racemes subdigitate and clustered, spikelets paired, sessile spikelet awnless or weakly awned, pedicelled spikelet rudimentary, palatable, forage, growing in pine forest, pastures, roadsides, open pinewoods, steep slope, wetlands, savannah, open habitats, sandy soils, wet savannah, disturbed places, see *Synopsis Plantarum Glumacearum* 1: 412. 1854, *Monographiae Phanerogamarum* 6: 420. 1889 and *Bulletin de l'Herbier Boissier, sér. 2*, 4: 266. 1904, *Boissiera*. 9: 213. 1960, *Anuário Técnico do Instituto de Pesquisas Zootécnicas "Francisco Osorio"* 7: 317-410. Porto Alegre 1980, *Bol. Soc. Argent. Bot.* 24: 137-149. 1985, *Genome* 29: 340-344. 1987, *Darwiniana* 30(1-4): 87-94. 1990.

A. shimadae Ohwi (*Schizachyrium shimadae* (Ohwi) Ohwi) (named for T. Shimada)

Asia, Taiwan. See *Acta Phytotaxonomica et Geobotanica* 4(2): 58. 1935 and 6: 151. 1937.

A. tectorum Schumach. (*Andropogon gayanus* Kunth; *Andropogon tectorum* Schumach. & Thonn.)

Tropical Africa, Benin, Nigeria. Perennial, tufted, sturdy, robust, straight, pithy, branching upward, often stilt-rooted, leaves softly pubescent, inflorescence a spreading panicle, spikelets 1-flowered arranged in pairs, lower spikelet bisexual and sessile, upper male spikelet, 3 stamens, stigmas yellow, pasture grass, readily grazed before anthesis, forage, good fodder for horses, used in fencing and for matting and for roofing, wetland, under trees, shady sites, see Heinrich Christian Friedrich Schumacher (1757-1830), *Beskrivelse af Guineiske Planter som ere fundne af Danske Botanikere isaer af Etatsraad Thonning*. 49-50. [Copenhagen 1828-29], *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 69-70. 1828, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 491. 1833 and *Bulletin du Muséum d'Histoire Naturelle* 5: 496. 1933.

in English: horse grass

in Guinea: anawen, esampan, luri, wara

in Guinea-Bissau: djagalhe quentche, uaba

in Mali: wara

in Niger: kelkeldé

in Nigeria: eruwà dudu, gábàà, gám-bàà, ikpò, ikpuru oto

in Senegal: badoni, diamel, humir

in Sierra Leone: ambobo, bendan, bende, bobo, bobogia, etanke, fovo, hos gras, ngongoi, nomina, tonfo, yobainyi

in Upper Volta: dayye koobi

in Yoruba: eruwà dudu, abo eruwà, eruwà aranwu

A. tenuiberbis Munro ex Hack. (*Andropogon tenuiberbis* Hack.; *Leptopogon tenuiberbis* (Hack.) Roberty; *Schizachyrium tenuiberbe* Munro ex Hack.)

Tropical Africa, Benin, Tanzania, Central African Republic. Perennial, coarse, herbaceous, robust, tufted, tussocky, flattened stem bases, hairy spikelets, used for thatching, found in moist meadows, stream side, see *Monographiae Phanerogamarum* 6: 434-435. 1889 and *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 203. 1960.

A. ternarius Michx. (*Amphilophis argentea* (DC.) Roshev.; *Anatherum argyraeum* (Schult.) Roberty; *Andropogon argenteus* DC.; *Andropogon argenteus* Elliott, nom. illeg., non *Andropogon argenteus* DC.; *Andropogon argenteus* Vanderyst, nom. illeg., non *Andropogon argenteus* DC.; *Andropogon argyraeus* Schult.; *Andropogon argyraeus* var. *tenuis* Vasey; *Andropogon belvisii* Desv.; *Andropogon elliottii* Chapm.; *Andropogon elliottii* var. *glaucescens* Scribn.; *Andropogon gyrans* Ashe; *Andropogon mississippiensis* Scribn. & C.R. Ball; *Andropogon muhlenbergianus* Schult.; *Andropogon saccharoides* subvar. *argenteus* (DC.) Hack.; *Andropogon scribnerianus* Nash; *Andropogon ternarius* Desv., nom. illeg., non *Andropogon ternarius* Michx.; *Andropogon ternarius* var. *glaucescens* (Scribn.) Fernald & Griscom; *Andropogon ternarius* var. *ternarius*; *Sorghum argenteum* (Elliott) Kuntze; *Trachypogon argenteus* (DC.) Nees)

Southeast U.S., Florida, northern America. Perennial bunchgrass, caespitose, tufted, basal culm buds, erect, branching above, purple-glaucous and glabrous leaves, lax inflorescence racemose, cream to gray-plumose racemes straight and rigid, fluffy silver seed heads, spikelets paired, sessile fertile spikelet glabrous, sprouts from perennating buds at the base of the culms, weed species, ornamental, forage, occurs in open woods, woodland borders, in dry soils, dry sand, margin of sandy firelanes, prairies, pastures, ditches and waste ground, coastal plain, in wet pine flatwoods, old fields, dry woods, sand hills and scrub, see *Flora Boreali-Americana* 1: 57. 1803, *Catalogus plantarum horti botanici monspeliensis* 77. 1813, *A Sketch of the Botany of South-Carolina and Georgia* 1: 148. 1816, *Mantissa* 2: 450, 455. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 348. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 171-172. 1831, *Flora of the Southern United States* 581. 1860, *Flora Brasiliensis* 2(4): 292. 1883, *Revisio Generum Plantarum* 2: 790. 1891, *Contributions from the United States National Herbarium* 3(1): 12. 1892, *Bulletin, Division of Agrostology United States Department of Agriculture* 1: 20. 1895, *Bulletin of the Torrey Botanical Club* 23: 145. 1896, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1898 [1899] and *Bulletin of the New York Botanical Garden* 1: 432-433. 1900, *Bulletin, Division of Agrostology United States Department of*

Agriculture 24: 39, 40, f. 15. 1901, *Bulletin agricole du Congo Belge* 9: 237. 1918, *Rhodora* 37(436): 137. 1935, *Boissiera*. 9: 207. 1960, *J. Arnold Arbor.* 64: 210. 1983.

in English: splitbeard bluestem, paintbrush bluestem, splitbeard beardgrass, silvery beardgrass, feather bluestem

A. ternarius Michx. var. *cabanisii* (Hack.) Fern. & Grisc. (*Andropogon cabanisii* Hack.; *Sorghum cabanisii* (Hack.) Kuntze)

U.S., Florida. Perennial, caespitose, erect, sprouts from perennating buds at the base of the culms, occurs in dry pinewoods of Florida, on fine sand, occasionally on sand hills and in sand pine scrub of central Florida, sometimes occurs in moist sites as well, see *Flora* 68(8): 133. 1885, *Revisio Generum Plantarum* 2: 791. 1891 and *Rhodora* 37(436): 138. 1935.

in English: firegrass

A. ternarius Michx. var. *ternarius* (*Andropogon ternarius* var. *glaucescens* (Scribn.) Fern. & Grisc.)

U.S. Caespitose, open areas, dry sandy soil, see *Rhodora* 37(436): 137. 1935.

in English: silvery beardgrass

A. ternatus (Spreng.) Nees (*Andropogon laxatus* Stapf; *Andropogon macrothrix* Trin.; *Andropogon ternatus* subsp. *genuinus* Hack.; *Andropogon ternatus* subsp. *macrothrix* (Trin.) Hack.; *Saccharum ternatum* Spreng.)

Brazil, Argentina. Perennial bunchgrass, erect, forming small clumps, filiform leaves, plumose inflorescence, pedicelled spikelet rudimentary, sessile spikelet strongly awned, dry wooded pastures, wet sites, marshy areas, savannah, rocky places, grassland, páramos, see *Systema Vegetabilium, editio decima sexta* 1: 283. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 326. 1829, *Reliquiae Haenkeanae* 1(4-5): 339. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 270. 1832, *Flora Brasiliensis* 2(4): 287. 1883, *Monographiae Phanerogamarum* 6: 425. 1889, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 147. 1899 and *Flora of Tropical Africa* 9: 237. 1919, *Bol. Soc. Argent. Bot.* 24: 137-149. 1985, *Genome* 29: 340-344. 1987.

A. tracyi Nash (named for the American botanist Samuel Mills Tracy, 1847-1920, plant collector, see Joseph Ewan, *Rocky Mountain Naturalists*. 200, 323-324. The University of Denver Press 1950)

U.S., Florida. Perennial, caespitose, found in dry pine flatwoods and sand hills, occasional in turkey oak sand hills, see *Bulletin of the New York Botanical Garden* 1: 433-434. 1900.

in English: Tracy's bluestem

A. urbanianus Hitchc. (*Anatherum virginicum* subvar. *urbanianum* (Hitchc.) Roberty)

The Caribbean, Santo Domingo. Erect or ascending, leaf blades stiff and appressed, racemes paired or solitary, on dry slopes, see *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815 and *Botanical Gazette* 54(5): 424. 1912, *Boissiera* 9: 214. 1960.

A. vetus Sohns (*Andropogon crassus* Sohns)

Venezuela. See *Memoirs of the New York Botanical Garden* 9: 277, 405, f. 12. 1957.

A. virgatus Desv. ex Ham. (*Anatherum inerme* (Steud.) Griseb.; *Anatherum spathiflorum* (Nees) Griseb.; *Anatherum virgatum* (Desv. ex Ham.) Desv.; *Andropogon inermis* Steud.; *Andropogon spathiflorus* (Nees) Kunth; *Andropogon spathiflorus* var. *inermis* (Steud.) Hack.; *Andropogon virgatus* Desv.; *Hypogynium spathiflorum* Nees; *Hypogynium virgatum* (Desv.) Dandy; *Hypogynium virgatum* (Desv. ex Ham.) Dandy)

Central America, West Indies to Uruguay. Perennial, caespitose, glabrous, erect, branched, leaf sheaths glabrous and finely ciliate, ligule membranous, leaf blades flat to inrolled, inflorescence contracted, solitary racemes scarcely exerted, rachis internodes and pedicels glabrous, sessile spikelet pistillate, somewhat palatable, in damp places, sandy savannahs, clay soils, canal banks, inundated sites, savannah marsh, seasonal ponds, see *Prodromus Plantarum Indiae Occidentalis* 9. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 366. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 175. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 496. 1833, *Synopsis Plantarum Glumacearum* 1: 390. 1854, *Catalogus plantarum cubensium* ... 236. 1866, *Flora Brasiliensis* 2(4): 296. 1883 and *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Hickenia* 1: 73-78. 1977, *Brittonia* 38(4): 411-414. 1986.

A. virginicus L. (*Anatherum virgatum* (Desv.) Desv.; *Anatherum virgatum* (Desv. ex Ham.) Desv.; *Anatherum virginicum* (L.) Spreng.; *Anatherum virginicum* (L.) Desv., nom. illeg., non *Anatherum virginicum* (L.) Spreng.; *Anatherum virginicum* subvar. *tetrastachyum* (Elliott) Roberty; *Andropogon curtisianus* Steud.; *Andropogon dissitiflorum* Michx.; *Andropogon dissitiflorus* Michx.; *Andropogon eriophorus* Scheele, nom. illeg., non *Andropogon eriophorus* Willd.; *Andropogon glaucescens* Schldl. ex Hack.; *Andropogon leucostachyus* Kunth; *Andropogon louisianae* Steud.; *Andropogon tetrastachyus* Elliott; *Andropogon vaginatus* Elliott; *Andropogon vaginatus* J. Presl, nom. illeg., non *Andropogon vaginatus* Elliott; *Andropogon virgatus* Desv., nom. illeg., non *Andropogon vaginatus* Elliott; *Andropogon virginicus* f. *virginicus*; *Andropogon virginicus* subsp. *genuinus* Hack.; *Andropogon virginicus* subvar. *ditior* Hack.; *Andropogon virginicus* var. *genuinus* Fernald & Griscom; *Andropogon virginicus* var. *tetrastachyus* (Elliott) Hack.; *Andropogon virginicus* var. *vaginatus* (Elliott) Alph. Wood; *Andropogon virginicus*

var. *viridis* Hack.; *Cinna lateralis* Walter; *Dimeiostemon tetrastachys* Raf. ex B.D. Jacks.; *Dimeiostemon vaginatus* Raf. ex B.D. Jacks.; *Holcus virginicus* Muhl. ex Steud.; *Sorghum virginicum* (L.) Kuntze) (named for Moses Ashley Curtis, 1808-1872)

America. Perennial bunchgrass, erect, tufted, coarse, usually slender, compressed, branching above, solid culms, basal leaves curled when old and dry, nodes smooth, leaf blade flat or folded, membranous ligule a ciliate or ciliate rim, leaf sheaths more or less tuberculate-hirsute on the margins, upper sheaths somewhat inflated, leaves pubescent, inflorescence paniculate or corymbiform, racemes inserted singly and appearing alternate, rachis slender and sericeous to long-villous, 1 fertile floret above a sterile floret, sessile spikelet bisexual, pedicellate spikelet absent or reduced to a hairy pedicel or a minute scale, pedicellate spikelet undeveloped with only the villous pedicels present, awn straight, palea minute or absent, small seeds dispersed by wind, pioneer species, noxious weed, potential seed contaminant, invasive, naturalized, extremely durable to almost any adverse conditions such as drought or salt spray, medicinal value, astringent, a tea made from the leaves used in the treatment of diarrhoea, boil plant with sugar for a tea for fever, a yellow dye obtained from the stems, used for food by songbirds (seeds) and deer (plants) and for cover by quail, sometimes grazed, low palatability and nutritive value, commonly seen in abandoned old fields, poorly drained soils, savannah, seasonally inundated fields, open areas, clay soil, subhumid to humid subtropical areas on a wide range of soils, roadsides and road banks, riverbanks, disturbed and waste ground, in dry sterile soil, sandy fields, dry sandy soils, coastal sand dunes, along railroad tracks, on wet open and swampy places, open pastures, bogs, lake and pond margins, along dry lakeshores, wet ditches, grassy spots, hilltop and moist hillsides, see *Species Plantarum* 2: 1046. 1753, *Flora Caroliniana, secundum* ... 59. 1788, *Flora Boreali-Americana* 1: 57. 1803, *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *A Sketch of the Botany of South-Carolina and Georgia* 1: 148, 150, t. 8, f. 4. 1816, *Nova Genera et Species Plantarum* 1: 187. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 336. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 175. 1831, *Nomenclator Botanicus. Editio secunda* 1: 773. 1840, *Flora* 27: 51. 1844, *Synopsis Plantarum Glumacearum* 1: 383, 390. 1854, *A Class-book of Botany* 808. 1861, *Flora Brasiliensis* 2(4): 285-286. 1883, *Monographiae Phanerogamarum* 6: 408-411. 1889, *Revisio Generum Plantarum* 2: 792. 1891, *Index Kewensis* 1: 760. 1893 and *Flora of the Southeastern United States* ... 61. 1903, *Contr. U.S. Natl. Herb.* 12: 125. 1908, *Bulletin of the Torrey Botanical Club* 53: 457. 1926, *Journal of the Washington Academy of Sciences* 23(10): 456. 1933, *American Journal of Botany* 21(3): 139. 1934, *Rhodora* 37(436): 142, t. 337, 338, f. 1, 2, 3. 1935, *Rhodora* 42(502): 416. 1940, *Boissiera. Mémoires du*

Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève 9: 213. 1960, *Journal of the Arnold Arboretum* 64(2): 171-254. 1983.

in English: yellow bluestem, yellow sedge bluestem, Virginia bluestem, broom sedge, broom sedge bluestem, whisky grass, whiskey grass, fevergrass

in Mexico: popotillo pajon

A. virginicus L. var. **decipiens** C.S. Campbell

U.S., Florida. Found in pine flatwoods, open areas, disturbed areas in both wet and dry situations, see *Systematic Botany* 11(2): 290. 1986.

A. virginicus L. var. **glaucus** Hack. (*Andropogon capillipes* Nash; *Andropogon glaucus* Muhl., nom. illeg., non *Andropogon glaucus* Retz.; *Andropogon virginicus* var. *dealbatus* C. Mohr ex Hack.; *Andropogon virginicus* var. *glaucus* (Muhl.) Hack.; *Cymbopogon glaucus* (Muhl.) Schult.)

Northern America, U.S., Florida. Perennial, caespitose, green spikelets, found in wetlands and uplands, frequent in seasonal ponds and swales, scrub and dry woodlands, one form of this grass grows in wet roadsides, wet pine flatwoods and disturbed wetlands, the other form grows in a variety of disturbed upland sites, see *Descriptio uberior Graminum* 278. 1817, *Mantissa* 2: 459. 1824 *Monographiae Phanerogamarum* 6: 411. 1889 and *Bulletin of the New York Botanical Garden* 1(5): 431-432. 1900.

in English: chalky bluestem

A. virginicus L. var. **virginicus** (*Anatherum virginicum* subvar. *tetrastachyum* (Ell.) Roberty; *Andropogon curtisianus* Steud.; *Andropogon dissitiflorus* Michx.; *Andropogon eriophorus* Scheele, nom. illeg., non *Andropogon eriophorus* Willd.; *Andropogon tetrastachyus* Elliott; *Andropogon vaginatus* Elliott; *Andropogon vaginatus* J. Presl, nom. illeg., non *Andropogon vaginatus* Elliott; *Andropogon virginicus* subvar. *genuinus* Hack.; *Andropogon virginicus* var. *genuinus* Fernald & Griscom; *Andropogon virginicus* var. *tetrastachyus* (Ell.) Hackel; *Andropogon virginicus* var. *vaginatus* (Elliott) Alph. Wood; *Cinna lateralis* Walter; *Dimeiosstemon vaginatus* Elliott ex B.D. Jacks.) (dedicated to the American botanist Moses Ashley Curtis, 1808-1872, specialist in fungi and lichens, plant collector in Northern America; see J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 1: 406. Boston 1965; Stafleu and Cowan, *Taxonomic literature*. 1: 573-574. Utrecht 1976; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement IV*. 515-517. 1997; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 451. 1973; Jeannette E. Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Harvard University Press 1967)

North America, U.S., Florida. Perennial, caespitose, green spikelets, weed species, occurs in wetlands and nonwet-

lands, characteristic of disturbed places and disturbed wet areas, found in bogs, flatwoods and sand hills, old fields, wet pine flatwoods, wet ditches, fresh and brackish marshes, lake and pond margins and depression wetlands, see *Flora Caroliniana, secundum ...* 59. 1788, *Flora Boreali-Americana* 1: 57. 1803, *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *Reliquiae Haenkeanae* 1(4-5): 336. 1830, *A Sketch of the Botany of South-Carolina and Georgia* 1: 148, 150, t. 8, f. 4. 1816, *Flora* 27: 51. 1844, *Synopsis Plantarum Glumacearum* 1: 390. 1854, *A Class-book of Botany* 808. 1861, *Monographiae Phanerogamarum* 6: 410-411. 1889, *Index Kewensis* 1: 760. 1893 and *Rhodora* 37(436): 142. 1935, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 213. 1960.

in English: broomsedge, broomsedge bluestem, Virginia broom beard grass

Andropterum Stapf

From the Greek *aner*, *andros* “a man, male” and *pteron* “wing.”

One species, tropical Africa, Mozambique. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial, decumbent, herbaceous, auricles absent, ligule a fringe of hairs, plants bisexual, inflorescence a single raceme, spikelets compressed, 2 glumes awnless, lower glume 2-keeled, type *Andropterum variegatum* Stapf, see *Flora of Tropical Africa* 9: 38. 1917, *Memoirs of the New York Botanical Garden* 9: 112. 1954.

Species

A. variegatum Stapf

Mozambique.

Androscepia Brongn. = Themeda Forssk.

From the Greek *aner*, *andros* “man” and *skepe* “a covering, shelter, protection.”

Panicoideae, Andropogoneae, Anthistiriinae, type *Androscepia gigantea* (Cav.) Brongn., see *Flora Aegyptiaco-Arabica* 178. 1775, *Icon. Pl. Rar.* 5: 36, t. 458. 1799, *Voyage Autour du Monde* 77-78. 1829 [1831], *Fodder Grasses North. India* 43. 1888 and *Grasses of Burma ...* 248-255. 1960, *Contributions from the United States National Herbarium* 46: 613. 2003.

Anelytrum Hackel = Avena L.

From the Greek *a* “without, not” and *elytron* “a sheath, a cover,” *elyo* “to wind.”

Pooideae, Poaeae, Aveninae, type *Anelytrum avenaceum* Hack., see *Species Plantarum* 1: 79-81. 1753 and *Repertorium Specierum Novarum Regni Vegetabilis* 8: 519. 1910, *Taxon* 40: 132. 1991, *Contributions from the United States National Herbarium* 48: 126-138. 2003.

Anemagrostis Trin. = *Apera* Adans.

From the Greek *anemos* “wind” and *agrostis*, *agrostidos* “grass, weed, couch grass,” referring to the spikes.

Pooideae, Poaeae, Agrostidinae, type *Anemagrostis spicaventi* (L.) Trin., see *Systema Naturae, Editio Decima* 2: 872. 1759, *Familles des Plantes* 2: 495. 1763, *Essai d'une Nouvelle Agrostographie* 31, 151. 1812, *Fundamenta Agrostographiae* 128-129, t. 11. 1820, *Observations sur les Graminées de la Flore Belgique* 127, 128. 1823 [1824], *Synopsis Plantarum Glumacearum* 1: 115. 1854 and *U.S. Dept. Agric. Bull.* 772: 127. 1920, *Grasses of Burma ...* 394. 1960, *Contributions from the United States National Herbarium* 48: 115. 2003.

Anemanthele Veldkamp = *Stipa* L.

Probably from the Greek *anemos* “wind” and *anthele* “a type of inflorescence, a little flower” or *thele* “nipple.”

Monotypic, New Zealand. Stipoideae, Stipeae, perennial, herbaceous, simple, densely caespitose, wiry, with short creeping rhizomes, leaves mostly basal, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate with capillary branchlets or branches, flowers bisexual, spikelets disarticulating above the glumes, 2 glumes subequal, lower glume 1-nerved, palea present, 2 free lodicules, 1 stamen, ovary glabrous, 2 stigmas, wild and cultivated, ornamental, type *Anemanthele lessoniana* (Steud.) Veldkamp, see *Species Plantarum* 1: 61-63, 78-79. 1753 and *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, J. Veldkamp, “*Anemanthele* Veldk. (Gramineae: Stipeae) a new genus from New Zealand.” *Acta Botanica Neerlandica* 34: 105-109. 1985.

Species

A. lessoniana (Steud.) Veldkamp (*Agrostis lessoniana* Steud.; *Agrostis procera* A. Rich., nom. illeg., non *Agrostis procera* Retz.; *Agrostis rigida* A. Rich., nom. illeg., non *Agrostis rigida* (Kunth) Spreng.; *Agrostis rigida* Less. & A. Rich., nom. illeg., non *Agrostis rigida* (Kunth) Spreng.; *Apera arundinacea* Hook.f.; *Apera purpurascens* Colenso; *Dichelachne procera* Steud.; *Dichelachne rigida* Steud.; *Oryzopsis lessoniana* (Steud.) Veldkamp; *Oryzopsis rigida* (Steud.) Zotov; *Stipa arundinacea* (Hook.f.) Benth.) (after the French botanist René Primevère Lesson, 1794-1849, physician, pharmacist, ornithologist, professor of botany, explorer, from 1822 to 1825 took part in the voyage of the

Coquille commanded by Louis-Isidor Duperrey (1786-1865), from 1826 to 1829 with Dumont d'Urville on *Astrolabe* expedition, among his writings are *Flore rochefortine*. Rochefort 1835, *Voyage Médical autour du monde*. Paris 1829, *Notice historique sur l'Admiral Dumont d'Urville*. Rochefort 1846, *Journal d'un Voyage Pittoresque autour du Monde exécuté sur la Corvette La Coquille commandée par M. L.I. Duperrey*. Paris 1830 and *Voyage autour du Monde entrepris par ordre du Gouvernement sur la Corvette La Coquille*. Paris 1838-1839; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 372. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 235. 1972; Günther Schmid, *Chamisso als Naturforscher. Eine Bibliographie*. Leipzig 1942; Stafleu and Cowan, *Taxonomic literature*. 2: 853. 1979; John Dunmore, *Who's Who in Pacific Navigation*. Honolulu 1991)

New Zealand. Perennial, densely tufted, unbranched, erect, bambusiform habit, rhizomatous, leaves drooping, nodding panicles, glumes acute to acuminate, found along streams, forest and forest margins, along roadsides, shady sites, sometimes confused with *Microlaena polynoda* (Hook.f.) Hook.f., see *Systema Vegetabilium, editio decima sexta* 1: 262. 1825., *Voyage de Découvertes autour du Monde ... sur la corvette L'Astrolabe pendant les Années 1826-1829 ... Botanique* 1: 124-125. 1832, *Nomenclator Botanicus. Editio secunda* 1: 41. 1840, *Flora Novae-Zelandiae* 295, t. 67. 1853, *Synopsis Plantarum Glumacearum* 1: 120-121. 1854, *Journal of the Linnean Society, Botany* 19: 81. 1881, *Transactions and Proceedings of the New Zealand Institute* 21: 106. 1889 and *Transactions of the Royal Society of New Zealand, Botany* 73: 235. 1943, *Blumea* 22(1): 11. 1974, *Acta Botanica Neerlandica* 34: 107-108. 1985, *New Zealand J. Bot.* 27: 580. 1989.

in English: New Zealand wind grass

Aneurolepidium Nevski = *Leymus* Hochst.

Greek *aneuros* “without nerve” and *lepidion* “a little scale.”

Pooideae, Triticeae, Hordeinae, type *Aneurolepidium multicaule* (Kar. & Kir.) Nevski, see *Flora* 31: 118. 1848 and *Flora URSS* 2: 229, 708. 1934, *Novosti Sist. Vyss. Rast.* 9: 62. 1972, *American Journal of Botany* 71: 609-625. 1984, *Contributions from the United States National Herbarium* 48: 422-425. 2003.

Anisachne Keng = *Calamagrostis* Adans.

From the Greek *anisos* “unequal” and *achne* “chaff, glume.”

Monotypic, China, Yunnan, Guizhou. Pooideae, Poaeae, Agrostidinae, perennial, glabrous, herbaceous, panicles terminal, spikelets 1-flowered, on grassland, type *Anisachne*

gracilis Keng, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 208. 1957, *Journal of the Washington Academy of Sciences* 48(4): 117-118, f. 2. 1958, *Bulletin of Botanical Research* 18(4): 398, f. 1. 1998, *Contributions from the United States National Herbarium* 48: 191-227. 2003.

Species

A. gracilis Keng

China.

Anisantha K. Koch = *Bromus* L.

From the Greek *anisos* “unequal” and *anthos* “flower.”

Pooideae, Bromeae, type *Anisantha pontica* Koch, see *Species Plantarum* 1: 76-78. 1753, *Observations sur les Graminées de la Flore Belgique* 116. 1823 [1824], *Linnaea* 21: 394. 1848 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Bot. Jahrb. Syst.* 102: 447. 1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191. 2003.

Aniselytron Merr. = *Aulacolepis* Ettingsh. (Pinaceae), *Aulacolepis* Hack., *Calamagrostis* Adans., *Neoaulacolepis* Rauschert

From the Greek *anisos* “unequal” and *elytron* “a sheath, a cover.”

About 2-3 species. Asia, China, India, Malaysia, Indonesia. Pooideae, Poodae, Aveneae, perennial, herbaceous, tufted, decumbent, auricles absent, ligule a fringed membrane-like, plants bisexual, cleistogamous or chasmogamous, open inflorescence paniculate, spikelets pedicellate, 2 glumes unequal, lemma coriaceous and keeled, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, forest, montane, shade, sandy soil, type *Aniselytron agrostoides* Merrill, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung I* 102: 135, 147. 1893, *Transactions of the Linnean Society of London, Botany* 4: 247, t. 20c, 10-16. 1894, *Hooker's Icones Plantarum* 27: sub t. 2607. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 3(42-43): 241-244. 1906 [1907], *Philippine Journal of Science* 5(4): 328-330. 1910, *Journal of the Washington Academy of Sciences* 24(7): 291. 1934, *Brittonia* 2(2): 117. 1936, *Indian Forester* 107(7): 434. 1981, *Taxon* 31(3): 561. 1982, H.M. Korthof et J.F. Veldkamp, “A revision of *Aniselytron* with

some new combinations in *Deyeuxia* in SE. Asia (Gramineae).” *The Gardens' Bulletin Singapore* 37(2): 213-223. 1984, *Contributions from the United States National Herbarium* 48: 191-227. 2003.

Species

A. agrostoides Merr. (*Aulacolepis agrostoides* (Merr.) Ohwi; *Aulacolepis agrostoides* var. *formosana* Ohwi; *Calamagrostis aniselyton* Govaerts)

Philippines. See *Philippine Journal of Science* 5(4): 329-330. 1910, *Acta Phytotaxonomica et Geobotanica* 4(1): 30. 1935, *World Checklist of Seed Plants* 3(1): 9. 1999.

A. agrostoides Merr. var. *formosana* (Ohwi) N. Zhao (*Aulacolepis agrostoides* var. *formosana* Ohwi; *Aulacolepis formosana* (Ohwi) L. Liou)

Philippines, Taiwan. See *Acta Phytotaxonomica et Geobotanica* 4(1): 30. 1935, *Vascular Plants of the Hengduan Mountains* 2: 2254. 1994, *Journal of Tropical and Subtropical Botany* 3(2): 49. 1995.

A. gracilis (Keng) N. Zhao (*Anisachne gracilis* Keng)

China. See *Journal of the Washington Academy of Sciences* 48(4): 117-118, f. 2. 1958, *Journal of Tropical and Subtropical Botany* 3(2): 50. 1995.

A. treutleri (Kuntze) Soják (*Aniselytron clemensae* (Hitchc.) Soják; *Aniselytron clemensae* (Hitchc.) Bennet & Raizada; nom. illeg., non *Aniselytron clemensae* (Hitchc.) Soják; *Aniselytron japonicum* (Hack.) Bennet & Raizada; *Aniselytron milioides* (Honda) Bennet & Raizada; *Aniselytron pseudopoda* (Jansen) Soják; *Aniselytron pseudopoda* (Jansen) Bennet & Raizada, nom. illeg., non *Aniselytron pseudopoda* (Jansen) Soják; *Aniselytron treutleri* (Kuntze) Bennet & Raizada, nom. illeg., non *Aniselytron treutleri* (Kuntze) Soják; *Aulacolepis clemensae* Hitchc.; *Aulacolepis clemensiae* Hitchc.; *Aulacolepis japonica* Hack.; *Aulacolepis milioides* (Honda) Ohwi; *Aulacolepis pseudopoda* (Jansen) Ohwi; *Aulacolepis treutleri* (Kuntze) Hack.; *Aulacolepis treutleri* var. *japonica* (Hack.) Ohwi; *Aulacolepis treutleri* var. *milioides* (Honda) Ohwi; *Calamagrostis treutleri* (Kuntze) Govaerts; *Deyeuxia pseudopoda* Jansen; *Deyeuxia treutleri* (Kuntze) Stapf; *Deyeuxia treutleri* (Kuntze) Rauschert; *Milium treutleri* Kuntze; *Neoaulacolepis clemensae* (Hitchc.) Rauschert; *Poa milioides* Honda) (for the British (b. India) physician William John Treutler, 1841-1915 (d. Sussex), plant collector in Sikkim, 1868 Fellow of the Linnean Society)

Southeast Asia, Borneo, Sumatra. See *Revisio Generum Plantarum* 2: 780. 1891, *Hooker's Icones Plantarum* 24(4): t. 2396. 1895 and *Repertorium Specierum Novarum Regni Vegetabilis* 3(42-43): 241-244. 1906 [or 1907], *Botanical Magazine* 41(491): 641. 1927, *Acta Phytotaxonomica et Geobotanica* 2(3): 161-162. 1933, *Journal of the Washington Academy of Sciences* 24(7): 290. 1934, *Acta Phytotaxonomica et Geobotanica* 6(3): 151. 1937, *Botanical*

Magazine (Tokyo) 55(656): 361. 1941, *Acta Botanica Neerlandica* 2: 363, f. 1. 1953, *Journal of Japanese Botany* 31: 137. 1956, *Indian Forester* 107(7): 434. 1981, *Taxon* 31(3): 561. 1982, *Gard. Bull. Singapore* 37(2): 216-217. 1985, *World Checklist of Seed Plants* 3(1): 11. 1999.

Anisopogon R. Br.

From the Greek *anisos* “unequal” and *pogon* “a beard,” referring to the hairy back of the lemmas.

One species, Australia. Stipoideae, Anisopogoneae, perennial, caespitose or shortly rhizomatous, erect, herbaceous, canelike stems, ligule a ciliate rim or a fringed membrane, leaf blade narrow and convolute, glabrous nodes, hollow internodes, plants bisexual, inflorescence paniculate, few spikelets, spikelets large and pendulous, 1 bisexual floret, 2 glumes linear, lemma densely hairy and awned, glumes more or less equal, 3 lodicules free and membranous, 3 stamens, ovary hairy, 2 or 3 stigmas, an attractive species, in open forest, open habitats, emerges through thick heath, see R. Brown, *Prodromus florae Novae Hollandiae*. 176. 1810, *Florae Africae Australioris Illustrationes Monographicae* 265. 1841, *Synopsis Plantarum Glumacearum* 1: 237. 1854, *Mémoires, Société d'Émulation du Doubs* 4: 391. 1860.

Species

A. avenaceus R. Br. (*Avena anisopogon* Raspail; *Danthonia anisopogon* Trin.; *Danthonia anisopogon* (R. Br.) Trin.; *Deyeuxia avenacea* (R.Br.) Sprengel)

Victoria, New South Wales, Queensland. Perennial, forming erect and tall tussocks, glabrous, leaves inrolled, auricles absent, panicle loose and slender, pedicellate spikelets, glumes subequal, lemma stalked and hairy, palea stiffly pointed, growing on heathy sandstones, in dry sclerophyll forest, open habitats, see *Annales des Sciences Naturelles (Paris)* 5: 439. 1825.

in English: oat spear-grass

Anisopyrum (Griseb.) Gren. & Duval = *Leymus* Hochst.

From the Greek *anisos* “unequal” and *pyros* “grain, wheat.”

Pooideae, Triticeae, Hordeinae, see *Flora* 31: 118. 1848, *Flora Rossica* 4(13): 343. 1852, Jean Charles M. Grenier (1808-1875), *Florula massiliensis advena*. Florule exotique des environs de Marseille ... Supplément 24. Besançon [1859 or 1860] [also in *Mémoires, Société d'Émulation du Doubs* 3(4): 369-392. 1860, and *Bull. Soc. Bot. Fr.* 7: 124-126. 1860] and *Novosti Sist. Vyss. Rast.* 9: 62. 1972, *American Journal of Botany* 71: 609-625. 1984, *Contributions*

from the United States National Herbarium 48: 422-425. 2003.

Anomalotis Steud. = *Agrostis* L.

From the Greek *anomalos* “abnormal, anomalous.”

Pooideae, Poeae, Agrostidinae, type *Anomalotis quinqueseta* Steud., see *Species Plantarum* 1: 61-63. 1753, *Synopsis Plantarum Glumacearum* 1: 198. 1854 [1855], *Flora* 38: 285. 1855 and *Flora of Tropical Africa* 10: 182. 1937, *Taxon* 41: 556. 1992, *Opera Botanica* 121: 159-172. 1993, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89. 2003.

Anomochloa Brongn.

From the Greek *anomalos* “abnormal, irregular, uneven,” *anomia*, *anomios* “lawless, irregular” and *chloe*, *chloa* “grass.”

One species, Brazil, tropics. Anomochloideae, Anomochloaeae, or Bambusoideae, Oryzodae, Anomochloaeae, perennial, herbaceous, tufted, unbranched, solid, forming large clumps, ligule a band of hairs, rhizomatous, leaf blades cordate and pseudopetiolate, rhizomes pachymorph, plants bisexual, compound inflorescence leafy and spiciform, 3-6 spathes, 2 bracts derived from spathiform leaf-sheaths, anomalous spikelets 1-flowered, glumes absent, lodicules absent or present, 4 stamens, ovary glabrous, 1 stigma, forest shade, forest undergrowth, edge of forest, disturbed areas, type *Anomochloa marantoidea* Brongn., see *Ann. Sci. Nat. Bot.*, sér. 3, 16: 368, pl. 23. 1851, *Flora Brasiliensis* 2(2A): 1-32, t. 1-11. 1871 and *Fam. Pl., Monocot.* 2: 219. 1934, *Bot. Jahrb.* 76: 366-379. 1954, *Willdenowia* 1: 772. 1957, *Darwiniana* 29: 41-45. 1989, *Smithsonian Contributions to Botany* 68: 1-52. 1989, L.G. Clark, W. Zhang and J.F. Wendel, “A phylogeny of the grass family based on *ndhF* sequence data.” *Systematic Botany* 20: 436-460. 1995, L.G. Clark & E.J. Judziewicz, “The grass subfamilies Anomochloideae and Pharoideae.” *Taxon* 45: 641-645. 1996, M.R. Duvall & B.R. Morton, “Molecular phylogenetics of Poaceae: an expanded analysis of *rbcL* sequence data.” *Molecular Phylogenetics and Evolution* 5: 352-358. 1996, Khidir W. Hilu and Lawrence A. Alice, “Evolutionary implications of *matK* indels in Poaceae.” *Am. J. Bot.* 86: 1735-1741. 1999, *American Bamboos* 322-325. 1999, *Contributions from the United States National Herbarium* 39: 11. 2000, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, “Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B.” *Am. J. Bot.* 87: 96-107. 2000, Brandon S. Gaut, “Evolutionary dynamics of grass genomes.” *New Phytologist* 154(1): 15-28. Apr 2002, Paula J. Rudall & Richard M. Bateman, “Evolution of zygomorphy in monocot flowers: iterative

patterns and developmental constraints." *New Phytologist* 162(1): 25-44. Apr 2004.

Species

A. marantoidea Brongn. (*Anomochloa macrantoidea* A. Braun ex Pritz.)

Brazil. Perennial, bambusoid leaf anatomy, see G.A. Pritzel (1815-1874), *Iconum Botanicarum Index locupletissimus* 74. Berlin 1866.

Anoplia Steud. = *Leptochloa* P. Beauv.

From the Greek *anoplos* "without the *hoplon* or large shield, unarmed."

Chloridoideae, Cynodonteae, see *Essai d'une Nouvelle Agrostographie* 71, 161. 1812, *Linnaea* 19(6): 691. 1847, *Synopsis Plantarum Glumacearum* 1: 210. 1854, *Biologia Centrali-Americana; ... Botany ...* 3(19): 558. 1885 and *Contr. U.S. Natl.* 24(6): 180. 1925, *Contributions from the United States National Herbarium* 41: 130-137. 2001.

Anthaenantia P. Beauv. = *Anthenantia* P. Beauv., *Aulaxanthus* Elliott, *Aulaxia* Nutt., *Leptocoryphium* Nees

Greek *anthos* "flower" and *enantion* "opposite, against."

About 2-4 species, North America, southeast U.S. Panicoideae, Paniceae, Paspalinae, perennial, erect, stiff, glabrous, solid, leaf sheaths terete, ligule a ciliate membrane, leaf blades flat, panicles narrow or loosely contracted, primary branches ascending and secondary spreading, spikelet terminal and solitary, florets 2, lower floret sterile and staminate, upper floret fertile, first glume absent, second glume present, upper lemma boat-shaped, lemmas of upper florets indurate or cartilaginous and awnless, palea of upper florets present, stamens 3, in wet or boggy habitat, similar to *Digitaria* and *Leptocoryphium* Nees, type *Anthaenantia villosa* (Michx.) P. Beauv., see *Essai d'une Nouvelle Agrostographie* 48, 151, t. 10, f. 7. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1: 102. 1816, *The Genera of North American Plants* 1: 47. 1818, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 83-84. 1829 and *International Organization of Plant Biosystematists Newsletter* 13: 20-21. 1989, *Contributions from the United States National Herbarium* 46: 65-66. 2003.

Species

A. lanata (Kunth) Benth. (*Anthaenantia lanata* var. *genuina* Arechav.; *Anthaenantia lanata* var. *lanata*; *Anthaenantia lanata* var. *mollis* (Nees) Arechav.; *Anthaenantia lanatum* (Kunth) Benth.; *Anthenantia lanata* (Kunth) Benth.; *Leptocoryphium lanatum* (Kunth) Nees; *Leptocoryphium lanatum* var. *genuinum* Döll; *Leptocoryphium lanatum* var.

lanatum; *Leptocoryphium lanatum* var. *molle* (Nees) Döll; *Leptocoryphium molle* Nees; *Milium juncooides* Speng.; *Milium lanatum* (Kunth) Roem. & Schult.; *Milium molle* (Nees) Kunth; *Panicum fusciflorum* Steud.; *Panicum hirticaulum* Desv., nom. illeg., non *Panicum hirticaule* J. Presl; *Paspalum dentatosulcatum* Arechav.; *Paspalum lanatum* Kunth)

America. See *Nova Genera et Species Plantarum* 1: 94, t. 29. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 322. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 83-85. 1829, *Révision des Graminées* 1: 28. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 194. 1831, *Synopsis Plantarum Glumacearum* 1: 93. 1854, *Flora Brasiliensis* 2(2): 121. 1877, *Journal of the Linnean Society, Botany* 19: 39. 1881, *Anales de Sociedad Científica Argentina* 16: 105 [126]. 1883, *Anales del Museo Nacional de Montevideo* 1: 76, 96. 1894.

A. rufa (Elliott) Schult. (*Anthaenantia rufa* (Nutt.) J.A. Schultes; *Anthaenantia rufa* var. *scabra* Nash; *Aulaxanthus rufus* Elliott; *Aulaxia rufa* (Elliott) Nutt.; *Leptocoryphium drummondii* Müll. Hal.; *Monachne rufa* (Elliott) Bertol.; *Panicum aulaxanthus* (Elliott) Kuntze; *Panicum ciliatiflorum* var. *rufum* Alph. Wood; *Panicum rufum* (Elliott) Kunth)

America, U.S. Perennial, see *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 103. 1816, *Genera Plantarum* 1: 48. 1818, *Mantissa* 2: 258. 1824, *Révision des Graminées* 1: 35. 1829, *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna* 2: 596, t. 41, f. 1. 1850, *Botanische Zeitung. Berlin* 19(43): 314. 1861, *The American Botanist and Florist* pt. 2: 392. 1871, *Revisio Generum Plantarum* 3(2): 361. 1898 and *Flora of the South-eastern United States ...* 79. 1903.

in English: purple silkscale

A. villaregalis (McVaugh & R. Guzmán) Espejo & López-Ferrari (*Leptocoryphium villaregalis* McVaugh & R. Guzmán)

America. See *Flora Novo-Galiciana* 14: 218-220, f. 15. 1983, *Acta Botánica Mexicana* 51: 62. 2000.

A. villosa (Michx.) P. Beauv. (*Anthenantia villosa* (Michx.) P. Beauv.; *Aulaxanthus ciliatus* Elliott; *Aulaxia ciliata* (Elliott) Nutt.; *Leptocoryphium obtusum* Steud.; *Oplismenus erianthos* (Poir.) Kunth; *Panicum anthaenantia* Kuntze; *Panicum ciliatiflorum* Alph. Wood, nom. illeg., non *Panicum ciliatiflorum* Kunth; *Panicum ciliatiflorum* var. *ciliatiflorum*; *Panicum erianthum* Poir.; *Panicum hirticalycinum* Bosc ex Roem. & Schult.; *Panicum hirticalycinum* Bosc ex Steud.; *Panicum hirticalycinum* Bosc ex Spreng.; *Panicum ignoratum* Kunth; *Panicum villosum* Lam.; *Phalaris villosa* Michx.)

America, U.S. Perennial, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Flora Boreali-Americana* 1: 43. 1803, *Essai d'une Nouvelle Agro-*

stographie 48, 151, t. 10, f. 7. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1: 102. 1816, *Encyclopédie Méthodique, Botanique* 4: 284. 1816, *Systema Vegetabilium* 2: 468. 1817, *Genera Plantarum* 1: 47. 1818, *Systema Vegetabilium, editio decima sexta* 1: 315. 1825, *Révision des Graminées* 1: 45. 1829, *Revisio Generum Plantarum* 2: 217, t. 20. 1830, *Nomenclator Botanicus. Editio secunda* 2: 257. 1841, *Synopsis Plantarum Glumacearum* 1: 34. 1855 [1853], *A Class-book of Botany* pt. 2: 768. 1861, *Revisio Generum Plantarum* 33: 361. 1898.

in English: green silkscale

Anthaenantiopsis Mez ex Pilger = Anthaenantiopsis Pilger

Resembling *Anthaenantia*.

About 4 species, South America, Brazil, Argentina. Panicoideae, Panicodae, Paniceae or Panicoideae, Paniceae, Paspalinae, perennial, tufted, herbaceous, hollow, auricles absent, narrow leaf blades linear, ligule a membrane unfringed or fringed, leaves pseudopetiolate, plants bisexual, inflorescence spicate, racemes divergent, spikelets shortly pedicellate, 1 or 2 glumes unequal per spikelet, lemmas smooth, indurated lower lemma, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, savannah, type *Anthaenantiopsis trachystachya* (Nees) Mez ex Pilg., see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 125-127. 1829 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 237-238. 1931, *Notas del Museo de la Plata, Botánica* 8(40): 75-100. 1943, *Kew Bulletin* 42(4): 924. 1987, O. Morrone et al., "Revision of *Anthaenantiopsis* (Poaceae: Panicoideae: Paniceae)." *Systematic Botany* 18(3): 434-453. 1993, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, A.M. Cialdella et Andrea S. Vega, "Estudios sobre la variación estructural de las espiguillas en géneros de la tribu Paniceae (Poaceae)." *Darwiniana* 34: 173. 1996, *American Journal of Botany* 88: 1670-1674. 2001 ["In *Anthaenantiopsis*, the lower lemma is usually membranous and similar to the upper lemma, or the lower lemma is crustaceous and similar to the upper glumes."], *Contributions from the United States National Herbarium* 46: 66-67. 2003.

Species

A. fiebrigii Parodi (*Anthaenantiopsis fiebrigii* Mez; *Anthaenantiopsis fiebrigii* Mez)

Bolivia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56 (Beibl. 125): 11. 1921.

A. perforata (Nees) Parodi (*Anthaenantiopsis trachystachya* (Nees) Mez ex Pilg.; *Panicum perforatum* Nees; *Panicum trachystachyum* var. *lineare* Döll)

Brazil, Matto Grosso. See *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 125-127. 1829, *Flora Brasiliensis* 2(2): 192. 1877 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 237. 1931.

A. perforata (Nees) Parodi var. *camporum* Morrone, Filg. & Zuloaga

Brazil. See *Systematic Botany* 18(3): 445. 1993.

A. perforata (Nees) Parodi var. *perforata*

Brazil.

A. rojasiana Parodi (*Panicum trachystachyum* Nees) (for T. Rojas, 1877-1954)

Brazil, Paraguay. Perennial, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 125-126. 1829 and *Notas del Museo de la Plata, Botánica* 8: 87, f. 3. 1943.

A. trachystachya (Nees) Mez ex Pilger (*Anthaenantiopsis perforata* (Nees) Parodi; *Anthaenantiopsis trachystachya* (Nees) Mez; *Anthaenantiopsis trachystachya* (Nees) Mez; *Panicum trachystachyum* Nees; *Panicum trachystachyum* var. *angustifolium* Döll; *Panicum trachystachyum* var. *trachystachyum*)

Southern Brazil, Matto Grosso, Bolivia, Paraguay. Perennial, acute leaf blades, spike-like inflorescence with spikelets in short racemes, in wet areas, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 125-127. 1829, *Flora Brasiliensis* 2(2): 192. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 237. 1931, *Notas del Museo de la Plata, Botánica* 8(40): 91. 1943.

Anthenantia P. Beauv. = Anthaenantia P. Beauv., Aulaxanthus Elliott, Aulaxia Nutt.

Orth. var. *Anthaenantia*.

Panicoideae, Paniceae, Paspalinae, type *Anthenantia villosa* (Michx.) P. Beauv., see *Essai d'une Nouvelle Agrostographie* 48, 151, t. 10, f. 7. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1: 102. 1816, *The Genera of North American Plants* 1: 47. 1818 and *Contributions from the United States National Herbarium* 46: 65-66. 2003, *Sida* 21: 303-308. 2004.

Anthephora Schreber = Hypudaerus A. Braun

From the Greek *anthos* "flower" and *phoros* "bearing, carrying," *phero, phoreo* "to bear."

About 12 species, Africa, Arabia, tropical America. Panicoideae, Panicodae, Paniceae, Cenchrinae, annual or perennial, erect, decumbent, geniculate, herbaceous, caespitose, long rhizomatous, auricles absent, ligule an unfringed or

fringed membrane, leaves flat, plants bisexual, inflorescence a cylindrical false spike with wavy rachis, clusters of spikelets surrounded by an involucre of coriaceous bristles or scales, lower floret reduced to a lemma, upper floret bisexual, spikelets flattened and lanceolate, 1 glume per spikelet, lower glume absent, upper lemma cartilaginous, palea present, lodicules absent or present, 3 stamens, ovary glabrous, 2 stigmas, open habitats, savannah, dry areas, sandy savannah, rainforest, type *Antheophora elegans* Schreb., see *Beschreibung der Gräser* 2: 105, t. 44. Leipzig 1769-1810, *Flora* 24: 275. 1841 and A.P. Goossens, "The genus *Antheophora* Schreb." *Transactions of the Royal Society of South Africa* 20: 189-200. 1932, *Trans. Amer. Microscop. Soc.* 79: 211-218. 1960, *Brittonia* 23(3): 293-324. 1971, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Flora Mesoamericana* 6: 376. 1994, *Flora of Ethiopia and Eritrea* 7: 279-283. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Contributions from the United States National Herbarium* 46: 67-68. 2003.

Species

A. ampullacea Stapf & C.E. Hubb.

Tropical Africa, Angola, Nigeria. Perennial, tussocky, hardy, persistent, robust, useful for erosion control, on sandy places, wasteland, see *Flora of Tropical Africa* 9: 939. 1930.

A. argentea Goossens (*Antheophora angustifolia* Goossens)

South Africa, central and southern Kalahari. Perennial, tufted, slender, wiry, upright, unbranched or occasionally branched, broad-leaved, shortly rhizomatous, leaf sheath glabrous and rounded, ligule membranous, rigid leaves, older leaves curled, silver woolly spike, acute lower glume, very high grazing value, valuable and palatable grass, high nutritive value, grows on loose sandy soils, on sand dunes, undisturbed veld, see *Transactions of the Royal Society of South Africa* 20: 194, 198, f. 2, 4. 1932.

in English: silver wool grass

in South Africa: silverborseltjiegras, silber kruggras

A. cristata (Döll) Hack. ex De Wildeman & T. Durand (*Antheophora appendiculata* A. Braun; *Antheophora cristata* (Döll) Hack.; *Antheophora elegans* Schreb.; *Antheophora elegans* var. *cristata* Döll)

Nigeria, Ghana, Guinea. See *Flora Brasiliensis* 2(2): 314. 1877 and É.A.J. De Wildeman (1866-1947), "Études de systématique et de géographie botaniques sur la flore du Bas- et du Moyen-Congo." in *Annales du Musée du Congo (Belge)*. Botanique. Sér. 5 Congo-Kasai. 255. 1910.

in English: oldfield grass

A. hermaphrodita (L.) Kuntze (*Antheophora cuspidata* Andersson; *Antheophora elegans* Schreb.; *Antheophora elegans* var. *armata* Döll; *Antheophora villosa* Spreng.; *Cen-*

chrus laevigatus Trin.; *Cenchrus pilosus* Kunth; *Cenchrus tripsacoides* Cav.; *Cenchrus villosus* (Spreng.) Spreng.; *Cenchrus villosus* (R. Br. ex Fresen.) Kuntze, nom. illeg., non *Cenchrus villosus* (Spreng.) Spreng.; *Tripsacum hermaphroditum* L.; *Tripsacum hermaphroditum* Panz., nom. illeg., non *Tripsacum hermaphroditum* L.)

South America, West Indies, Mexico. Annual or perennial bunchgrass, herbaceous, tufted, glabrous, low, inflorescence rachis zigzag and angled, ovate bracts, spikelets lanceolate and dorsally compressed, ornamental weed, forage, growing in hard dry soils, beaches, open areas, weedy places, among other shrubs and grasses, open grassland, abandoned fields, old lawns, along roadsides, dark brown soil, see *Systema Naturae, Editio Decima* 2: 1253, 1261, 1379. 1759, *Vollständiges Pflanzensystem* 12: 655. 1785, *Elenchus Plantarum Horti Regni Botanici Matritensis* 9. 1803, *Nova Genera et Species Plantarum* 1: 116, t. 36. 1815 [1816], *Fundamenta Agrostographiae* 172. 1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 3: 14. 1822, *Systema Vegetabilium, editio decima sexta* 1: 301. 1825, Nils Johann Andersson (Anderson) (1821-1880), *Om Galapagos-öarnes Vegetation*. Lund 1854, *Flora Brasiliensis* 2(2): 314. 1877, *Revisio Generum Plantarum* 3(3): 347. 1898 and *Feddes Repert.* 49: 52. 1940, *Taxon* 49(2): 257. 2000.

in English: oldfield grass

in Mexico: ne och, ne och suuk, pasto

A. laevis Stapf & C.E. Hubb. (*Antheophora elegans* Rupr. ex Steudel, nom. illeg., non *Antheophora elegans* Schreb.; *Antheophora elegans* var. *laevis* Schweinf.; *Antheophora hochstetteri* var. *tellinii* Chiov.) (named for the Italian naturalist Achille Tellini, botanical collector in Eritrea, see *Catalogo Ragionato delle Specie degli Uccelli*. Venezia 1904 [Estratto originale del: Reale Istituto Veneto di Scienze, Lettere ed Arti, *Catalogo ragionato delle specie di uccelli* raccolti dal prof. Achille Tellini nella colonia Eritrea dall'ottobre 1902 al marzo 1903.]; H. Schouteden, "Excursion del Dott. Achille Tellini nell'Eritrea. Hemiptera." *Annales de la Société Entomologique de Belgique* 49: 6-10. 1905; I.A.D. Robertson, "The Pyrrhocoroidea (Hemiptera - Heteroptera) of the Ethiopian region." *Journal of Insect Science* 4.14. (43pp.) 2004)

Red Sea, Sudan. Perennial, tufted, slender, ascending, leaf blades glabrous or pubescent, stiff inflorescence narrowly cylindrical, spikelets clusters erect, involucre scales glabrous and smooth, found in dry stony soils, see *Bull. Herb. Boiss.* 2, App. 2: 17. 1894, Georg August Schweinfurth (1836-1925), *Sammlung Arabisch-aethiopischer Pflanzen*. Ergebnisse von Reisen in den Jahren 1881 ... und 1894. Genève [1894-] 1896 [-1899] and *Annuario del Reale Istituto Botanico di Roma* 8(3): 291. 1908, *Flora of Tropical Africa* 9: 937. 1930.

A. nigrimana Stapf & C.E. Hubb. (*Antheophora lynesii* Stapf & C.E. Hubb.) (possibly dedicated to Hubert Lynes, 1874-1942, Rear-Admiral, retired 1922, botanical collector in Sudan and Morocco. See *Sudan Notes and Rec.* 119-137. 1921; H. Lynes, "On the birds of north and central Darfur, with notes on the west-central Kordofan and north Nuba provinces of British Sudan." *Ibis*, ser 11, 6: 399-446. 1924; Hubert Lynes, "Contribution to the ornithology of the southern Congo-basin. Lynes-Vincent tour of 1933-1934." *Rev. Zool. Bot. Afr.* 31: 1-129. 1938)

Nigeria, Kenya, Yemen, Sudan, Ethiopia. Perennial, tufted, leafy, erect or geniculately ascending, leaf blades flat and acute, narrow cylindrical inflorescence glabrous to hairy or sparsely pilose, spikelet clusters erect, clusters with pubescent peduncle, involucre bracts elliptic and pilose, lower lemma glabrous or ciliate, low seed production, grain used as a famine-food, low grazing value, a weed of arable land, found on rocky hillsides, dry rocky sites, dry sandy and gravelly soils, sandstone, fallows, open hills, sometimes confused with *Antheophora pubescens* Nees, see *Flora of Tropical Africa* 9: 937-938. 1930.

in Niger: dîrî, dyri, diriol, sangitia, zangitiya

in Nigeria: kashin bera

A. pubescens Nees (*Antheophora abyssinica* A. Rich.; *Antheophora cenchroides* (Hochst.) K. Schum. ex Engl.; *Antheophora hochstetteri* Nees ex Hochst.; *Antheophora hochstetteri* Nees; *Antheophora kotschy* Hochst.; *Hypudaerus cenchroides* Hochst.)

Tropical and South Africa. Perennial, erect, tufted to densely tufted, simple, unbranched, leafy, tussock grass, leaf blades usually shortly pubescent, leaf sheath usually round, ligule a papery membrane, shortly rhizomatous with strong creeping rhizome, leaves often curling when old, inflorescence a silky-hairy spike, spikelets clusters densely packed, clusters with bearded peduncle, involucre bracts lanceolate and densely villous, lower glumes shortly awned or acuminate, lower lemma ciliate, grain used as a famine-food, pasture grass, forage, usually very palatable, excellent drought resistance, useful to reduce soil erosion, occurs in undisturbed dry veld areas, hillsides, slopes, well-drained ground, rocky sites, deciduous bushland, low rainfall sandy areas, savannah, grassland, in dry areas, sandy soils, see *Flora Africae Australioris Illustrationes Monographicae* 1: 74. 1841, *Flora* 27: 249-250. 1844, *Tentamen Florae Abyssinicae* ... 2: 389. 1850, *Die Pflanzenwelt Ost-Afrikas* 50: 99. 1895 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 70. 1911.

in English: bottle brush grass, cat's tail grass, wool grass

in South Africa: bloubuffelsgras, borsel, borseltjiegras, krulblaargras, wolgras, kruggras

A. ramosa Goossens

South Africa. Perennial, tufted, shrub-like, branching from the base, leaf blade with thickened margins, ligule membranous, spikelets hairy, lower glume acute, good pasture, common in rocky places, stony sites, hillsides, see *Transactions of the Royal Society of South Africa* 20: 192, f. 1. 1932.

in South Africa: vertakte borseltjiegras, verzweigtes kruggras

A. schinzii Hack. (*Antheophora undulatifolia* Hack.)

South Africa. Annual, tufted, each culm with an inflorescence, leaf blade soft with wavy margins, ligule membranous, inflorescence a spike with long hairs, spikelets in group of five, lower glumes convex and curved, pioneer grass, pasture, tender and palatable, found on sandy soils, disturbed soil, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 139. 1888, *Bulletin de l'Herbier Boissier* 4(App. 3): 12. 1896.

in English: annual wool grass

in South Africa: eenjarige borseltjiegras, einjähriges kruggras

A. truncata Robyns (*Antheophora gracilis* Stapf & C.E. Hubb.)

Zimbabwe. Savannah, old fields, see *Bulletin du Jardin Botanique de l'État* 9(3): 198. 1932, *Bulletin of Miscellaneous Information Kew* 1933: 271. 1933.

Anthipsimus Raf. = *Muhlenbergia* Schreb.

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Anthipsimus gonopodus* Raf., see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, C.S. Rafinesque, in *Jour. Phys. Chim. Hist. Nat. et des Arts* 89: 105. 1819 and *Contributions from the United States National Herbarium* 41: 143-173. 2001.

Anthistiria L.f. = *Themeda* Forssk.

From the Greek *anthistemi* "to stand against, to resist, compare" (*anti* "against" and *istemi* "to stand"), or from *anthes-terion*, the eighth month of the Attic year, when *anthes-teria*, the Feast of Flowers, was held.

Panicoideae, Andropogoneae, Anthistiriinae, type *Anthistiria ciliata* L.f. (for *Andropogon quadrivalvis* L.), see *Flora Aegyptiaco-Arabica* 178. 1775, *Nova Graminum Genera* 35. 1779, *Supplementum Plantarum* 113. 1781 [1782] and *Contributions from the United States National Herbarium* 46: 613. 2003.

Anthochloa Nees & Meyen

From the Greek *anthos* "a flower" and *chloe, chloa* "grass."

About 1 species, South America, high Andes. Meliceae, or Pooideae, Poodae, Poeae, Poinae, perennial, low to dwarf, caespitose, forming small tufts, herbaceous, auricles absent, leaf blades narrow and linear, ligule an unfringed membrane, plants bisexual, contracted inflorescence paniculate, panicles partially included in the sheaths, spikelets several-flowered and shortly pedicellate, female and sterile florets distally in the spikelet, lower florets hemaphrodite and the uppermost sterile, 2 glumes subequal, lemmas toothed, palea 3-lobed and 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, growing in high-Andean punas, grasslands, moist soil, gravel, open habitats, high mountains, rocky slopes, type *Anthochloa lepidula* Nees & Meyen, unstable classification, see Franz Julius Ferdinand Meyen (1804-1840), *Reise um die Erde 2*: 14. 1834 and *Gayana, Botánica* 8: 11-15. 1963, *Contributions from the United States National Herbarium* 48: 111. 2003.

Species

A. lepidula Nees & Meyen (*Anthochloa lepidula* Nees & Meyen; *Anthochloa rupestris* J. Rémy)

Bolivia, Chile, Peru. See *Gramineae* 122. 1841, *Annales des Sciences Naturelles; Botanique, sér. 3* 6: 347. 1846.

Anthopogon Nutt. = *Gymnopogon* P. Beauv.

From the Greek *anthos* “flower” and *pogon* “beard,” referring to the hairy tube of the corolla.

Chloridoideae, Cynodonteae, see *Essai d'une Nouvelle Agrostographie* 41, 164. 1812, *The Genera of North American Plants* 1: 81. 1818, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888 and *Iowa State College Journal of Science* 45(3): 319-385. 1971, *Flora Mesoamericana* 6: 290. 1994, *Contributions from the United States National Herbarium* 41: 124-127. 2001.

Anthosachne Steud. = *Elymus* L.

From the Greek *anthos* “flower” and *achne* “chaff, glume.”

Pooideae, Triticeae, Hordeinae, type *Anthosachne australasica* Steud., see *Species Plantarum* 1: 83-84. 1753, Ernst Gottlieb von Steudel (1783-1856), *Synopsis plantarum glumacearum*. 1: 237. Stuttgartiae 1854 and *Canad. J. Bot.* 42: 554. 1964, *Novosti Sist. Vyss. Rast.* 10: 25. 1973, *Blumea* 34: 61-76. 1989, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Anthoxanthum L. = *Ataxia* R. Br., *Dimesia* Raf., *Disarrenum* Labill., *Flavia* Fabr., *Flavia* Heister ex Fabricius, *Foenodorum* Krause, *Hierochloe* R. Br., *Savastana* Schrank, *Savastana* Raf. (Melastomataceae), *Torresia* Ruiz & Pav., *Xanthonanthos* St.-Lag., *Xanthonanthus* St.-Lager

From the Greek *anthos* “flower” and *xanthos* “yellow,” the mature spikelets are yellowish.

About 15-25 species, temperate Asia and Africa, tropical mountains. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Phalaridinae, annual or perennial, slender, cylindrical, herbaceous, unbranched, ascending to erect, caespitose or decumbent, internodes hollow, leaf blades linear to lanceolate, no auricles, leaf sheath rounded, ligule membranous, leaves flat and more or less basal, rhizomes short or absent, plants bisexual, panicle contracted to spiciform, dense spike-like panicle erect, spikelets lanceolate and sessile, 3 florets per spikelet, the lower 2 florets sterile or male and reduced to empty lemmas, uppermost floret bisexual, 2 glumes unequal and papery, lower glume 1-veined, upper glume 3-veined, sterile floret lemmas papery and awned, fertile floret lemmas stiff and unawned, sterile lemmas longer than fertile, palea present, lodicules absent, stamens 2 or 3 in bisexual florets, ovary glabrous, stigmas pubescent, strongly sweetly coumarin scented, weed species, occurs in sunlight or shade, meadows, grasslands, hill pasture and heath, open habitats, very unstable classification, the genus is in great need of revision, sometimes including *Hierochloe* R. Br., type *Anthoxanthum odoratum* L., see *Species Plantarum* 1: 28. 1753, *Genera Plantarum*. edition 5. 17. 1754, *Enumeratio Methodica Plantarum* 206. 1759, *Baiersche Flora* 1: 100, 337. 1789, *Flora Peruviana, et Chilensis Prodromus* 125. 1794, *Systema Vegetabilium Florae Peruviana, et Chilensis* 1: 251. 1798 [authors: José Antonio Pavón (1754-1840) and Hipolito Ruiz Lopez (1754-1815)], *Novae Hollandiae Plantarum Specimen* 2: 82-83, f. 232. 1807, *Prodromus Florae Novae Hollandiae* 208. 1810, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812, *American monthly magazine and critical review* 1: 442. 1817, *Chloris Melvilliana* 35. 1823, *Révision des Graminées* 1: 22. 1829, *Sylva Telluriana* 100. 1838, *Annales de la Société Botanique de Lyon* 7: 119. 1880, *Annales de la Société Botanique de Lyon* 8: 189. 1881, *Botanical Magazine* 11: 443. 1897, *Flora Capensis* 7: 466. 1899 and *Die Naturwissenschaften; Wochenschrift für die Fortschritte der Reinen ...* 10: 220. Berlin 1911, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 225, 227. 1930, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3(14): 183-212. 1941, *Botaniska Notiser* 123: 201-202. 1970, *Brittonia* 23(3): 293-324. 1971, *Lagascalia* 3: 99-141. 1973, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984, Y. Schouten & J.F. Veldkamp, “A revision

of *Anthoxanthum* including *Hierochloe* (Gramineae) in Malasia and Thailand.," *Blumea* 30(2): 319-351. 1985, *Bot. Zhurn. SSSR* 70(5): 698-700. 1985, *Bot. Zhurn. SSSR* 71: 1426-1427. 1986, *Symbolae Botanicae Upsaliensis* 27: 147-154. 1986, *Botanica Helvetica* 96: 145-158. 1986, *Bot. Zhurn. SSSR* 72: 1069-1074. 1987, H.E. Connor and E. Edgar, "Name changes in the indigenous New Zealand Flora, 1960-1986 and Nomina Nova IV, 1983-1986." *New Zealand Journal of Botany*. vol. 25: 115-170. ["*Anthoxanthum* is the older name and species of *Hierochloe* are transferred to it; exceptions are the indigenous New Zealand taxa described by Zotov, etc."] 1987, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, *Acta Biologica Cracoviensia, Series Botanica* 30: 119-136. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Anales del Jardín Botánico de Madrid* 47: 411-417. 1990, *Folia Geobotanica et Phytotaxonomica* 25: 381-388. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Fitologija* 39: 72-77. 1991, *Flora Mediterranea* 1: 157-173, 229-237. 1991, *Candollea* 48(2): 582-591. 1993, *Regnum Veg.* 127: 19. 1993, *Flora Mesoamericana* 6: 236. 1994, *International Organization of Plant Biosystematists Newsletter* 24: 15-19. 1995, *Harvard Papers in Botany* 1(9): 11-90. 1996, *Bot. Zhurn. (Moscow & Leningrad)* 81(4): 119-121. 1996, *Linzer Biologische Beiträge* 29(1): 5-43. 1997, *Phyton. Annales Rei Botanicae* 38(2): 307-321. 1998, *Opera Botanica* 137: 1-42. 1999, *Grass and Forage Science* 54(1): 1-18. Mar 1999 [The extent of semi-natural grassland communities in lowland England and Wales: a review of conservation surveys 1978-1996], *Ecology Letters* 2(3): 140-148. May 1999, *Contributions from the United States National Herbarium* 48: 111-115. 2003, *New Phytologist* 161(1): 303-312. Jan 2004 [Horizontal and vertical distribution of root absorption zones of four common grass species in a mountain grassland.], *Functional Ecology* 18(6): 851-860. Dec 2004 [Inflorescence architecture and wind pollination in six grass species.], *Ecology Letters* 8(1): 30-37. Jan 2005, *Journal of Ecology* 93(1): 214-226. Feb 2005, *Functional Ecology* 19(1): 196-199. Feb 2005, *Functional Ecology* 19(2): 344-354. Apr 2005, *Ecological Management and Restoration* 6(1): 51-60. Apr 2005, *Clinical & Experimental Allergy* 35(4): 441-447. Apr 2005, *Allergy* 60(5): 619-625. May 2005, *Ecology Letters* 8(6): 652-661. June 2005, *Restoration Ecology* 13(2): 257-264. June 2005, *Oikos* 110(2): 360-368. Aug 2005.

Species

A. alpinum Á. Löve & D. Löve (*Anthoxanthum alpinum* Schur; *Anthoxanthum odoratum* subsp. *alpinum* (Á. Löve & D. Löve) Hultén; *Anthoxanthum odoratum* subsp. *nipponicum* (Honda) Tzvelev)

Europe, Scandinavia. See *Enumeratio Plantarum Transsilvaniae* 725. 1866 and *Botanical Magazine* 40: 317. 1926,

Kongliga Svenska Vetenskaps Akademiens Handlingar 7: 9. 1958.

in English: sweet vernal grass

A. altissimum (Steud.) Veldkamp (*Hierochloe altissima* Steud.)

America, Chile. See *Synopsis Plantarum Glumacearum* 1: 13. 1854 and *Blumea* 30(2): 347. 1985.

A. amarum Brot. (*Anthoxanthum odoratum* var. *amarum* (Brot.) Trin.)

Portugal, Europe. Perennial, damp places, see *Flora Lusitana* 1: 32. 1804, *Species Graminum* 1: t. 15. 1824.

A. arcticum Veldkamp (*Hierochloe pauciflora* R. Br.; *Hierochloe pauciflora* f. *pauciflora*; *Hierochloe pauciflora* f. *setigera* Lepage)

America. See *Chloris Melvilliana* 35. 1823 and *Nature Canada* 81: 255. 1952, *Blumea* 30(2): 349. 1985.

A. aristatum Boiss. (*Anthoxanthum angustifolium* Planellas Giralt; *Anthoxanthum aristatum* Boiss. subsp. *puelii* (Lecoq & Lamotte) Pinto da Silva; *Anthoxanthum carrenianum* Parl.; *Anthoxanthum lloydii* Jord. ex Boreau; *Anthoxanthum odoratum* subsp. *aristatum* (Boiss.) Trab.; *Anthoxanthum odoratum* var. *aristatum* (Boiss.) Coss. & Durieu; *Anthoxanthum odoratum* var. *puelii* (Lecoq & Lamotte) Coss. & Durieu; *Anthoxanthum ovatum* subsp. *aristatum* (Boiss.) Litard.; *Anthoxanthum ovatum* var. *aristatum* (Boiss.) Pérez Lara; *Anthoxanthum puelii* Lecoq & Lamotte; *Anthoxanthum puelii* var. *lloydii* (Jord. ex Boreau) Marais & Menier) (after the French botanist Timothée Puel, 1812-1890, physician, wrote *Catalogue des plantes vasculaires qui croissent dans le département Lot*. Cahors 1845-1853; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 114. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J.T. Timothée Puel, *Essai sur les causes locales de la différence de taille qu'on observe chez les habitants des deux cantons de Latronquièrre et de Livernon*. in Collection des thèses soutenues à la Faculté de Médecine de Paris. an 1839-1878. Paris 1839-1878)

Europe, Mediterranean. Annual, herbaceous, aromatic, caespitose, slender or filiform, glabrous or slightly hairy, erect or spreading, often much branched above and rooting at the lower nodes, upper blades softly hairy, leaf sheaths not keeled and submembranous, leaves nonauriculate, ligule membranous, a short panicle erect and spike-like, hermaphrodite florets 1 per spikelet, proximal incomplete florets 2 per spikelet, awn of lower floret more or less straight, awn of second floret geniculate, glumes unequal and glabrous, lodicules absent, ovary glabrous, fruit compressed, meadow grass, cultivated and occasionally escaped, weed species of cultivated and wasteland, disturbed sites, in open habitats, see *Species Plantarum* 1: 28. 1753, *Voyage botanique dans le midi de l'Espagne* 2: 638. 1842, *Catalogue Raisonné des*

Plantes Vasculaires du Plateau Central de la France 385. 1847, *Flore du Centre de la France* éd. 2 2: 576. 1849, *Ensayo de una Flora fanerogámica Gallega* 398. Santiago 1852, *Exploration Scientifique de l'Algérie* 2: 21-22. 1854, *Flore du Centre de la France* 2: 697. 1857, *Bulletin de la Société Botanique de France* 24: 381. 1877, *Anales de la Sociedad Española de Historia Natural* 15: 382. 1886 and *Candollea* 7: 231. 1937, *Agronomia Lusitana* 333(18): 1. 1971.

in English: small sweet vernal grass, sweet vernal grass, annual vernal grass

in Danish: enårig gulaks

in Finnish: Vihnesimake

in Spanish: antoxanto aristado

in French: flouve annuelle, flouve de Puel

A. aristatum Boiss. subsp. **aristatum**

Europe. See *Voyage botanique dans le midi de l'Espagne* 2: 638. 1839-1845.

A. aristatum Boiss. subsp. **macranthum** Valdez (*Anthoxanthum odoratum* f. *macranthum* (B. Valdez) G. López)

Europe, Spain, Italy. See *Lagascalia* 3(1): 130. 1973, *Anales del Jardín Botánico de Madrid* 51(2): 312. 1993[1994].

A. brevifolium Stapf

South Africa. Perennial, tufted, rhizomatous, very similar and confused with *Anthoxanthum ecklonii* (Nees ex Trin.) Stapf, see *Bulletin of Miscellaneous Information Kew* 1910: 59. 1910.

A. davidsei (R.W. Pohl) Veldkamp (*Hierochloe davidsei* R.W. Pohl)

America, Costa Rica. Páramos, see *Iowa State Journal of Research* 47: 71, f. 1. 1972, *Blumea* 30(2): 347. 1985.

A. dregeanum (Nees ex Trin.) Stapf (*Anthoxanthum dregeanum* (Nees) Stapf; *Hierochloe dregeana* Nees ex Trin.)

South Africa. Perennial, tufted, rhizomatous, rigid leaves, lower glume 3-nerved, common in mountain, mountain slopes, very similar to *Anthoxanthum tongo* (Nees ex Trin.) Stapf, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 83. 1839, *Flora Capensis* 7: 466-467. 1899.

A. ecklonii (Nees) Stapf (*Anthoxanthum ecklonii* (Nees ex Trin.) Stapf; *Hierochloe ecklonii* Nees)

South Africa. Perennial, loosely or densely tufted, strongly aromatic, forming loose clumps, rhizomatous, stoloniferous, bulbous base, ligule an unfringed membrane, leaves soft and scabrid, inflorescence spicate contracted, lower glume 1-nerved, lower lemma brown, common in moist

places, streamsides, mountain slopes, shade, similar to *Anthoxanthum odoratum* L., see *Flora Capensis* 7: 466. 1899.

in South Africa: leshomo, lethu

A. gracile Bivona

Mediterranean. Annual, silvery-gray, loose tussocks, leaf blades downy and arching, ovate panicle of flowers, see *Stirpium Rariorum Minusque Cognitarum in Sicilia* ... 1: 13, t. 1, f. 2. Palermo 1813[1816].

A. gunckelii (Parodi) Veldkamp (*Hierochloe gunckelii* Parodi) (for Luer Hugo Gunckel (1901-1997), author of "Nombres indígenas de plantas chilenas." *Bol. Filol.* 11: 191-327. 1960, *Contribución al conocimiento de la flora valdiviana: botánica miscelánea: sexta contribución.* Santiago 1933, "Breve historia del antiguo jardín botánico de la Quinta Normal de Santiago de Chile." *Farm. Chilena* 24(12): 537-542. 1950 and "Fitonimia Atacameña, especialmente cunza." *Revista Universitaria*, Santiago 30, 1967. See Carlos Munizaga et Hugo Gunckel, "Notas etnobotánicas del pueblo atacameño de Socaire, o etnobotánica de Socaire." *Publicaciones del Centro de Estudios Antropológicos* 5, Universidad de Chile, Santiago 1958; *Anales de la Universidad de Chile* Sexta Serie, N°13, agosto de 2001)

America, Chile. See *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3(14): 197, f. 5-6. 1941, *Blumea* 30(2): 348. 1985, *Aliso* 15: 3. 1996 [24 June 1997].

A. hirtum (Schrank) Y. Schouten et Veldkamp (*Hierochloe arctica* J. Presl; *Hierochloe hirta* (Schrank) Borbás; *Hierochloe odorata* subsp. *hirta* (Schrank) Tzvelev; *Savastana hirta* Schrank)

America. See *Baiersche Flora* 1: 337. 1789, *Reliquiae Haenkeanae* 1(4-5): 252. 1830 and V. von Borbás (1844-1905), *A Balaton flórája*: ii. Szakasz: a Balaton tavának és partmellékénck növényfölfrajza es edényes növényzete. Balaton Tud. Tanulm. Eredményei 315. 1900. 1900, *Bot. Not.* 124(1): 146. 1971, *Novosti Sist. Vyss. Rast.* 10: 81. 1973, *Blumea* 30(2): 348. 1985, *Berichte der Bayerischen Botanischen Gesellschaft zur Erforschung der Heimischen Flora* 60: 73-83. 1989.

A. hirtum (Schrank) Y. Schouten & Veldkamp subsp. **arcticum** (J. Presl) G.C. Tucker (*Hierochloe arctica* J. Presl; *Hierochloe hirta* subsp. *arctica* (J. Presl) G. Weim.; *Hierochloe hirta* var. *annulata* (Petrov) L. Vil'yasoo; *Hierochloe odorata* subsp. *arctica* (J. Presl) Tzvelev; *Hierochloe odorata* var. *annulata* Petrov)

America. See *Reliquiae Haenkeanae* 1(4-5): 252. 1830 and *Botaniska Notiser* 124(1): 150. 1971, *Zlaki SSSR* 349. 1976, *Harvard Papers in Botany* 1(9): 66. 1996.

A. horsfieldii (Kunth ex Bennett) Mez ex Reeder (*Anthoxanthum horsfieldii* Mez)

Indonesia. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 291. 1921.

A. horsfieldii (Kunth ex Bennett) Mez ex Reeder var. *borneense* (Jansen) Y. Schouten (*Anthoxanthum angustum* (Hitchc.) Ohwi var. *borneense* Ohwi ex Jansen)

Borneo, Mount Kinabalu. Perennial, tufted, erect, see *Bulletin of the Tokyo Science Museum* 18: 8. 1947, *Reinwardtia* 2(2): 227. 1953, *Blumea* 30(2): 335. 1985.

A. horsfieldii (Kunth ex Bennett) Mez ex Reeder var. *horsfieldii* (*Anthoxanthum clarkei* (Hook.f.) Ohwi; *Anthoxanthum horsfieldii* (Kunth ex Bennett) Mez ex Reeder; *Anthoxanthum neesii* Mez; *Ataxia horsfieldii* Kunth ex Bennett; *Ataxia horsfieldii* Kunth; *Ataxia javanica* R. Br. ex Hass.; *Hierochloe clarkei* Hook.f.; *Hierochloe horsfieldii* (Kunth ex Bennett) Maxim.) (named for Dr. Thomas Horsfield, 1773-1859 (London), American physician, botanist and zoologist, 1800-1818 plant collector in Malesian islands, 1820 Fellow of the Linnean Society, 1828 Fellow of the Royal Society of London, from 1820 Keeper of the East India Company Museum at London. See D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. 2: 170-171. London 1914; Lady Sophia Raffles, *Memoir of the Life and Public Services of Sir Thomas Stamford Raffles*. London 1830; Colin Clair, *Sir Stamford Raffles*. Founder of Singapore. Herts. 1936; Emily Hahn, *Raffles of Singapore: A Biography*. New York 1946 (1st American edition); J.H. Barnhart, *Biographical notes upon botanists*. 2: 205. 1965; John Joseph Bennett (1801-1876) and Robert Brown, *Plantae Javanicae rariores*, descriptae iconibus illustratae, quas in insula Java, annis 1802-1818, legit et investigavit Thomas Horsfield, M.D. London 1838-1852; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Mea Allan, *The Hookers of Kew 1785-1911*. London 1967; J. Ewan, editor, *A Short History of Botany in the United States*. 38. 1969; M. Archer, *Natural History Drawings in the India Office Library*. 46-48, 80-82. London 1962; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Java, Indonesia. See *Révision des Graminées* 1: 22. 1829, *Plantae Javanicae Rariores* 8, t. 3. 1838, *Cat. Pl. Hort. Bot. Bogor*. 16. 1844, *Diagnoses plantarum novarum asiaticarum* 7: 930. 1888, *The Flora of British India* 7(21): 223. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 291. 1921, *Bulletin of the Tokyo Science Museum* 18: 8. 1947, *Journal of the Arnold Arboretum* 24: 325, 327. 1950.

A. horsfieldii (Kunth ex Bennett) Mez ex Reeder var. *siamense* (Bor) Y. Schouten (*Anthoxanthum siamense* Bor)

Thailand. See *Journal of Indian Botany* 42A: 10, f. 1. 1963, *Blumea* 30(2): 338. 1985.

in Thailand: ya lin bang

A. juncifolium (Hack.) Veldkamp (*Hierochloe juncifolia* (Hack.) Parodi; *Hierochloe utriculata* var. *juncifolia* Hack.)

America, Argentina. See *Révision des Graminées* 1: 139, t. 8. 1829 and *Anales del Museo Nacional de Buenos Aires*

21: 64. 1911, *Notas del Museo de la Plata, Botánica* 3: 27. 1938, *Blumea* 30(2): 348. 1985.

A. mexicanum (Rupr. ex E. Fourn.) Mez (*Ataxia mexicana* Rupr. ex E. Fourn.; *Hierochloe mexicana* (Rupr. ex E. Fourn.) Benth. ex Hitchc.; *Savastana mexicana* (Rupr. ex E. Fourn.) Beal; *Torresia mexicana* Hitchc.)

America. See *Mexicanas Plantas* 2: 71. 1886, *Grasses of North America for Farmers and Students* 2: 187. 1896 and *American Journal of Botany* 2: 301. 1915, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 291. 1921, *Contributions from the United States National Herbarium* 24(9): 614. 1930.

A. monticola (Bigelow) Veldkamp (*Dimesia monticola* (Bigelow) Raf.; *Dimesia monticola* Raf. ex B.D. Jacks.; *Hierochloe alpina* (Sw. ex Willd.) Roem. & Schult.; *Hierochloe alpina* var. *monstruosus* Koidz.; *Hierochloe monstruosa* (Koidz.) Honda; *Hierochloe monticola* (Bigelow) Á. Löve & D. Löve, nom. illeg., non *Hierochloe monticola* Mez; *Hierochloe orthantha* T.J. Sørensen; *Holcus alpinus* Sw. ex Willd.; *Holcus monticola* Bigelow; *Savastana alpina* (Sw. ex Willd.) Scribn.; *Torresia alpina* (Sw. ex Willd.) Hitchc.)

America. See *Species Plantarum. Editio quarta* 4(2): 937. 1806, *New England Journal of Medicine and Surgery, and the Collateral Branches of Science* 5: 334. 1816, *American Monthly Magazine and Critical Review* 1: 442. 1817, *Systema Vegetabilium* 2: 515. 1817, *Index Kewensis* 1: 760. 1893, *Memoirs of the Torrey Botanical Club* 5(3): 34. 1894 and *American Journal of Botany* 2: 300. 1915, *Botanical Magazine* (Tokyo) 32: 63. 1918, *Botanical Magazine* (Tokyo) 40: 319. 1926, *Meddelelser om Grønland* 136(8): 1. 1954, *Taxon* 13(6): 201. 1964, *Blumea* 30(2): 347. 1985.

A. monticola (Bigelow) Veldkamp subsp. *alpinum* (Sw. ex Willd.) Soreng (*Hierochloe alpina* (Sw. ex Willd.) Roem. & Schult.; *Hierochloe alpina* f. *alpina*; *Hierochloe alpina* f. *soperi* Polunin; *Hierochloe alpina* subsp. *alpina*; *Hierochloe alpina* var. *alpina*; *Hierochloe alpina* var. *aristata* Raspail; *Holcus alpinus* Sw. ex Willd.)

America. See *Species Plantarum. Editio quarta* 4(2): 937. 1806, *Systema Vegetabilium* 2: 515. 1817, *Annales des Sciences d'Observation* 2: 85. 1829 and *Bulletin of the National Museum of Canada* 92: 43-44, pl. 1. 1940, *Fl. Canada* 2: 282. 1978, *Contributions from the United States National Herbarium* 48: 112. 2003.

A. monticola (Bigelow) Veldkamp subsp. *monticola* (*Anthoxanthum monticola* subsp. *orthanthum* (T.J. Sørensen) G.C. Tucker; *Hierochloe alpina* subsp. *orthantha* (T.J. Sørensen) G. Weim.; *Hierochloe alpina* var. *orthantha* (T.J. Sørensen) Hultén)

America. See *Botaniska Notiser* 124(1): 161. 1971, *Harvard Papers in Botany* 9: 66. 1996.

A. nitens (Weber) Y. Schouten & Veldkamp (*Avena odorata* (L.) Koeler; *Dimesia fragrans* Raf.; *Hierochloe borealis* (Schrad.) Roem. & Schult.; *Hierochloe fragrans* (Willd.) Roem. & Schult.; *Hierochloe nashii* (E.P. Bicknell) Kaczmarek; *Hierochloe odorata* (L.) P. Beauv.; *Hierochloe odorata* (L.) Wahlenb.; *Hierochloe odorata* f. *eamesii* Fernald; *Hierochloe odorata* var. *fragrans* (Willd.) K. Richt.; *Holcus borealis* Schrad.; *Holcus fragrans* Willd.; *Holcus odoratus* L.; *Poa nitens* Weber; *Savastana nashii* E.P. Bicknell; *Savastana odorata* (L.) Scribn.; *Savastana odorata* var. *fragrans* (Willd.) Farw.; *Torresia nashii* (E.P. Bicknell) House; *Torresia odorata* (L.) Hitchc.)

America, Europe. See *Species Plantarum* 2: 1048. 1753, *Primitiae Florae Holsaticae*, Suppl., 2, no. 6. 1787, *Descriptio Graminum in Gallia et Germania* 299. 1802, *Flora Germanica* 1: 252. 1806, *Species Plantarum. Editio quarta* 4(2): 936. 1806, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812, *American monthly magazine and critical review* 1: 442. 1817, *Systema Vegetabilium* 2: 514. 1817, *Flora Upsaliensis* 8: 32. 1820, *Plantae Europaeae* 1: 31. 1890, *Memoirs of the Torrey Botanical Club* 5(3): 34. 1894, *Bulletin of the Torrey Botanical Club* 25(2): 104, pl. 328. 1898 and *American Midland Naturalist* 3: 198. 1914, *American Journal of Botany* 2: 301. 1915, *Rhodora* 19(224): 152. 1917, *Report of the Michigan Academy of Science, Arts and Letters* 21: 350. 1920, *New York State Museum Bulletin* 243-244: 58. 1923, *Blumea* 30(2): 348. 1985.

A. nitens (Weber) Y. Schouten & Veldkamp subsp. **nitens** (*Hierochloe odorata* f. *odorata*; *Hierochloe odorata* subsp. *odorata*)

America.

A. occidentale (Buckley) Veldkamp (*Anthoxanthum occidentale* (Buckley) G.C. Tucker, nom. illeg., non *Anthoxanthum occidentale* (Buckley) Veldkamp; *Hierochloe macrophylla* Thurb. ex Bol.; *Hierochloe occidentalis* Buckley; *Savastana macrophylla* (Thurb. ex Bol.) Beal; *Torresia macrophylla* (Thurb. ex Bol.) Hitchc.)

America. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862, *Calif. Agric. Soc. Trans.* 1864-1865: 132. 1866, *Grasses of North America for Farmers and Students* 2: 187. 1896 and *American Journal of Botany* 2: 300. 1915, *Blumea* 30(2): 348. 1985, *Harvard Papers in Botany* 1(9): 66. 1996.

A. odoratum L. (*Anthoxanthum odoratum* subsp. *odoratum*; *Anthoxanthum odoratum* var. *altissimum* Eaton; *Anthoxanthum pilosum* Döll; *Anthoxanthum villosum* Dumort.; *Hierochloe odorata* (L.) P. Beauv.; *Xanthanthos odoratum* (L.) St.-Lag.)

Europe, temperate Asia, northwest Africa. Perennial bunchgrass, herbaceous, fragrant, bitter-tasting, simple, erect or ascending or spreading, glabrous, slender or robust, small, loosely or densely tufted, roots quite shallow, leaf sheaths

firmly encircling the culm, auricles absent or reduced, ligule membranous and truncate, upper blades slightly ciliate, dense panicle spike-like green or purple and erect, chasmogamous, glumes unequal and rough or villous or glabrous, lower glume 1-nerved, lowest 2 florets sterile and with lemma pubescent and dark, uppermost floret bisexual and with smooth lemma, awns geniculate or straight, ovary glabrous, stigmas white, sweetly or strongly scented when the green blades are dried, yields essential aromatic oil, reproduces by seeds dispersed by wind, fodder grass, forage, cultivated in hay fields and widely naturalized in temperate regions, not palatable, little food value, weed and aggressive species but is not considered a major weed pest, very resistant to cold and heat, good resistance to drought, provocative of hay asthma, it produces a lot of pollen and is a major irritant to people who suffer from hay fever, in Europe inhalation of grass pollen is the predominant cause of hay fever and related hypersensitivity reactions, a useful expectorant when made up into gargles and sprays, used also as hair tonic and scalp cleanser, forms extensive ground cover in open mesic and dry habitats at high elevations, in a great variety of habitats and on a wide range of soils, invades disturbed areas, found in mixed pastures and meadows, open fields, along roadsides, waste places, woods, in damp sites, herbaceous swamp, hill pasture and heath, fields, moors, boggy sites, clay soils, similar to *Anthoxanthum ecklonii* (Nees) Stapf, see *Species Plantarum* 1: 28. 1753, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812, *Manual of the Flora of the Northern States and Canada* 10. 1817, *Observations sur les Graminées de la Flore Belgique* 129, t. 10, f. 38. 1823, *Rheinische Flora* 122. 1843, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* edition 3 11: 17. 1873, *Annales de la Société Botanique de Lyon* 7: 119. 1880 and *Handb. Fl. Ceylon* 6: 336. 1931, *Grasses of Ceylon* 54. 1956, *Grasses of Burma ...* 431. 1960, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Botanica Helvetica* 96: 145-158. 1986, *Regnum Veg.* 127: 19. 1993.

in English: sweet vernal grass, sweet vernal, large sweet vernal grass, scented vernal grass, sweet scented vernal grass, spring grass, vanilla grass

in French: flouve odorante

in Spanish: grama de olor

in Colombia: pasto de olor

in Mexico: zacate primavera

in Morocco: dîl el-fâr

in Finnish: Tuoksusimake

in Swedish: Vårbrodd

in South Africa: heuninggras

A. odoratum L. subsp. **nipponicum** (Honda) Tzvelev (*Anthoxanthum alpinum* Á. Löve & D. Löve; *Anthoxanthum nipponicum* Honda; *Anthoxanthum nipponicum* var. *furumii* Honda; *Anthoxanthum odoratum* subsp. *alpinum* (Á. Löve & D. Löve) Hultén; *Anthoxanthum odoratum* subsp. *furumii* (Honda) T. Koyama; *Anthoxanthum odoratum* var. *nipponicum* (Honda) Tzvelev)

Asia, Japan, Europe. See *Botanical Magazine* (Tokyo) 40: 317-318. 1926, *Kongl. Svenska Vetensk. Akad. Handl.* 7: 9. 1958, *Bulletin of the National Science Museum, Series B, Botany* 13: 123-127. 1987, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 34: 27-32. 1987, *Grasses of Japan and its Neighboring Regions* 486. 1987.

A. odoratum L. subsp. **odoratum** (*Anthoxanthum odoratum* var. *villosum* (Dumort.) Syme)

Europe. See *Observations sur les Graminées de la Flore Belgique* 129, t. 10, f. 38. 1823 [1824], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* edition 3 11: 17. 1873.

A. pusillum (Hack. ex Dusén) Veldkamp (*Hierochloe pusilla* Hack. ex Dusén)

America, Argentina. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 7(2): 4, t. 1, f. 7. 1907, *Blumea* 30(2): 349. 1985.

A. redolens (Vahl) P. Royen (*Avena antarctica* (Labill.) Roem. & Schult., nom. illeg., non *Avena antarctica* Thunb.; *Avena redolens* (Vahl) Pers.; *Disarrenum antarcticum* Labill.; *Hierochloe antarctica* (Labill.) R. Br.; *Hierochloe antarctica* var. *redolens* (Vahl) Brongn.; *Hierochloe arenaria* Steud.; *Hierochloe banksiana* Endl.; *Hierochloe magellanica* (Desr.) Hook.f.; *Hierochloe magellanica* Hook.f. ex Steud.; *Hierochloe magellanica* Hook.f.; *Hierochloe moorei* De Paula; *Hierochloe redolens* (Vahl) Roem. & Schult.; *Hierochloe redolens* R. Br. ex Hook.f., nom. illeg., non *Hierochloe redolens* (Vahl) Roem. & Schult.; *Hierochloe redolens* var. *magellanica* (Hook.f.) Macloskie; *Hierochloe redolens* var. *major* Speg.; *Hierochloe redolens* var. *typica* Parodi; *Hierochloe sorianoii* De Paula; *Holcus redolens* Vahl; *Holcus redolens* Sol. ex G. Forst.; *Melica magellanica* Desr.; *Savastana antarctica* (Labill.) Speg.; *Torresia antarctica* (Labill.) P. Beauv.; *Torresia magellanica* (Desr.) P. Beauv.; *Torresia redolens* (Vahl) Roem. & Schult.)

America, Chile, Argentina. See *Florulae Insularum Australium Prodrum* 92. 1786, *Symbolae Botanicae, ...* 2: 102. 1791, *Encyclopédie Méthodique, Botanique* 4: 72. 1797, *Syn. Pl.* 1: 100. 1805, *Novae Hollandiae Plantarum Specimen* 2: 83, f. 232. 1807, *Prodromus Florae Novae Hollandiae* 1: 209. 1810, *Essai d'une Nouvelle Agrostographie* 63, 160, 164, 179. 1812, *Systema Vegetabilium, editio decima sexta* 2: 676. 1817, *Voyage Autour du Monde* 2: 144, t. 23. 1833, *Annalen des Wiener Museums der Naturgeschichte* 1: 156. 1836, *Flora Antarctica* 1: 91-92. 1844, *Flora Antarctica*

2: 375. 1846, *Synopsis Plantarum Glumacearum* 1: 14, 416. 1854[1853], *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 81. 1896 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 184. 1902, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1* [2], *Botany* 8(1,5,1): 167. 1904, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3: 189, f. 1. 1941, *New Zealand J. Bot.* 11: 574. 1973, *Boletín de la Sociedad Argentina de Botánica* 15(4): 393, 396. 1974, *The Alpine Flora of New Guinea* 2: 1185, f. 382. 1979, *Allertonia* 7: 345. Lawai, Kauai, Hawaii: National Tropical Botanical Garden and Allerton Gardens. 1998.

A. redolens (Vahl) P. Royen var. **redolens** (*Avena redolens* (Vahl) Pers.; *Disarrenum antarcticum* Labill.; *Hierochloe antarctica* (Labill.) R. Br.; *Hierochloe antarctica* var. *redolens* (Vahl) Brongn.; *Hierochloe arenaria* Steud.; *Hierochloe banksiana* Endl.; *Hierochloe magellanica* (Desr.) Hook.f.; *Hierochloe magellanica* Hook.f. ex Steud.; *Hierochloe magellanica* Hook.f.; *Hierochloe moorei* De Paula; *Hierochloe redolens* (Vahl) Roem. & Schult.; *Hierochloe redolens* R. Br. ex Hook.f., nom. illeg., non *Hierochloe redolens* (Vahl) Roem. & Schult.; *Hierochloe redolens* var. *magellanica* (Hook.f.) Macloskie; *Hierochloe redolens* var. *micrantha* Parodi; *Hierochloe redolens* var. *redolens*; *Hierochloe sorianoii* De Paula; *Holcus redolens* Vahl; *Melica magellanica* Desr.; *Savastana antarctica* (Labill.) Speg.; *Torresia antarctica* (Labill.) P. Beauv.; *Torresia magellanica* (Desr.) P. Beauv.; *Torresia redolens* (Vahl) Roem. & Schult.)

America. See *Symbolae Botanicae, ...* 2: 102. 1791, *Syn. Pl.* 1: 100. 1805, *Novae Hollandiae Plantarum Specimen* 2: 83, f. 232. 1807, *Prodromus Florae Novae Hollandiae* 1: 209. 1810, *Voyage Autour du Monde* 2: 144, t. 23. 1833, *Annalen des Wiener Museums der Naturgeschichte* 1: 156. 1836, *Synopsis Plantarum Glumacearum* 1: 416. 1854 and *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3(14): 189, 195, f. 1-3. 1941.

A. spicatum (Parodi) Veldkamp (*Hierochloe spicata* Parodi)

America, Chile. See *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3(14): 196, f. 4. 1941, *Blumea* 30(2): 349. 1985.

A. tongo (Nees ex Trin.) Stapf (*Anthoxanthum tongo* (Trin.) Stapf; *Ataxia tongo* Nees ex Trin.)

South Africa. Perennial, tufted, straggling, leaves filiform, contracted panicle, lower glume 3- to 5-nerved, in damp sites, moist shady places, very similar to and not clearly distinguished from *Anthoxanthum dregeanum* (Nees ex Trin.) Stapf, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 78. 1839, *Flora Capensis* 7: 467-468. 1889 and *Bothalia* 18: 114-119. 1988.

A. utriculatum (Ruiz & Pav.) Y. Schouten & Veldkamp
America.

Antichloa Steud. = *Bouteloua* Lag.,
Chondrosium Desv.

From the Greek *anti* “for, in place of, against” and *chloe*, *chloa* “grass.”

Chloridoideae, Cynodonteae, Boutelouinae, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Nomenclator Botanicus. Editio secunda* 1: 108. 1840 and *Contributions from the United States National Herbarium* 41: 20-33. 2001.

Antinoria Parl.

Two species, Mediterranean. Pooideae, Poodae, Aveneae, annual or perennial, herbaceous, tufted, erect, decumbent, auricles absent, narrow linear leaf blades, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate with divaricate branchlets, spikelets pedicellate, upper floret stipitate, 2 glumes subequal, lemmas membranous, palea 2-keeled, 3 stamens, ovary glabrous, 2 stigmas, found in damp places, see *Species Plantarum* 1: 63-66. 1753, *Flora Palermitana* 1: 92, 94-95. 1845 and *Flora Sicula* 3: 294. 1909.

Species

A. agrostidea (DC.) Parl. (*Airopsis agrostidea* var. *annua* Lange; *Airopsis agrostidea* var. *natans* Hack.; *Antinoria agrostidea* f. *annua* (Lange) P. Silva; *Antinoria agrostidea* f. *genuina* P. Silva; *Antinoria agrostidea* subsp. *annua* (Lange) P. Silva; *Antinoria agrostidea* var. *algeriensis* Maire; *Antinoria agrostidea* var. *annua* Lange ex Maire; *Antinoria agrostidea* var. *insularis* (Parl.) Maire; *Antinoria agrostidea* var. *natans* (Hack.) Richter; *Antinoria agrostidea* var. *perennis* Maire; *Poa agrostidea* DC.)

Sicily. Annual, floating, see *Syn. Gall.* 132. 1806, *Flore Française. Troisième Édition* 5: 262. 1815, *Catalogue Raisonné des Graminées de Portugal* 17. 1880, *Plantae Europaeae* 1: 54. 1890 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 20: 41. 1929, *Agronomia Lusitana* 8: 8-9. 1946 [Estação Agronómica Nacional, Portugal], *Agronomia Lusitana* 40(1): 5. 1980, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990.

in Italian: nebbia di Antinori

in French: antinorie fausse-agrostide, la canche faux agrostis

A. insularis Parl. (*Aira insularis* (Parl.) Woods; *Aira insularis* (Parl.) Boiss., nom. illeg., non *Aira insularis* (Parl.)

Woods; *Airopsis insularis* (Parl.) Nyman; *Antinoria agrostidea* var. *insularis* (Parl.) Maire)

Mediterranean, Sicily. Erect, glabrous, geniculate, fibrous roots, ligule lancolate, branched panicle, glume scabrous, see *Flora Palermitana* 1: 94. 1845, Joseph Woods (1776-1864), *The Tourist's Flora* 403. London 1850, *Médecine Traditionnelle et Pharmacopée* 411. 1854-1855, *Flora Orientalis* 5: 528. 1884 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 20: 41. 1929.

in French: antinorie insulaire, antinorie des îles

Antitragus Gaertn. = *Crypsis* Aiton

Greek *anti* “against” and *tragos* “a billy-goat, he-goat,” genus *Tragus*.

Chloridoideae, Cynodonteae, Sporobolinae, or Chloridoideae, Zoysieae, Sporobolinae, type *Crypsis aculeata* (L.) Aiton, see *Hortus Kewensis; or, a catalogue ...* 1: 48. 1789, *De Fructibus et Seminibus Plantarum ...* 2: 7, t. 80. 1790 and *Contributions from the United States National Herbarium* 41: 56-57. 2001.

Antonella J.A. Caro = *Tridens* Roem. & Schult.

Chloridoideae, Cynodonteae, type *Antonella nicorae* (Anton) Caro, see *Syn. Pl.* 2: 9. Nov 1806 [1807], *Essai d'une Nouvelle Agrostographie* 77, f. 15. 1812, *Systema Vegetabilium* 2: 34, 599. 1817 and *Kurtziana* 10: 51, f. 1. 1977, *Dominguezia* 2: 18-20. 1981, *Contributions from the United States National Herbarium* 41: 16, 121-122, 224-230, 239. 2001.

Antoschmidtia Boissier = *Schmidtia* Steud.
ex J.A. Schmidt

In honor of the German botanist Johann Anton Schmidt, 1823-1905, professor of botany, traveler, plant collector, 1851 Capo Verde Islands, author of *Beiträge zur Flora der Cap Verdischen Inseln*. Heidelberg 1852 and *Flora von Heidelberg*. Heidelberg 1857, and contributor to C.F.P. von Martius, *Flora Brasiliensis* (Labiatae, Scrophulariaceae, Phytolaccaceae, Nyctaginaceae, Plumbaginaceae, Plantaginaceae); see David Porter (1780-1843), *Journal of a Cruise Made to the Pacific Ocean ... in the United States Frigate Essex, in the Years 1812, 1813, and 1814*. Containing descriptions of the Cape Verd [*sic*] Islands, etc. Philadelphia 1815; J.H. Barnhart, *Biographical notes upon botanists*. 3: 232. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*.

353. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933.

See *Beiträge zur Flora der Cap Verdischen Inseln* 144-145. 1852, *Transactions of the Linnean Society of London, Botany* 2: 31. 1881, *Flora Orientalis* 5: 559. 1884 and *Flora Capensis* 7: 658. 1900, *Bothalia* 2: 421, 423. 1928, *Reperitorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 307. 1931, *Annals of the Transvaal Museum* 16: 405. 1935.

Apera Adans. = *Anemagrostis* Trin.

Greek *aperos* “unmaimed,” referring to the vestigial florets.

About 3 species, Eurasia, Europe, Afghanistan. Pooideae, Poodae, Aveneae or Pooideae, Poeae, Agrostidinae, annual, herbaceous, tufted, hollow, auricles absent, narrow leaf blades, ligule an unfringed membrane, plants bisexual, panicle open or contracted, spikelets with rachilla extension, 2 glumes unequal, lemma membranous long-awned, palea present, 2 free membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, agricultural weed species, waste ground, open habitats, old fields, arable land, dry sandy soils, type *Apera spica-venti* (L.) P. Beauv., see *Species Plantarum* 1: 61-63, 73-76. 1753, *Familles des plantes* 2: 495. 1763, *Genera Plantarum* 44. 1789, *Essai d'une Nouvelle Agrostographie* 31, 151. 1812, *Fundamenta Agrostographiae* 128-129, t. 11. 1820, *Observations sur les Graminées de la Flore Belgique* 127, 128. 1823 [1824] and *U.S. Dept. Agric. Bull.* 772: 127. 1920, Oscar R. Matthei, “La presencia del genero *Apera* (Gramineae) en Chile.” *Bol. Soc. Biol. Concepción* 48: 161-163. 1974, *Preslia* 51(3): 213-237. 1979, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 25-26. 1997, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 243. 2000, *Contributions from the United States National Herbarium* 48: 115. 2003.

Species

***A. intermedia* Hack.**

Asia, Eurasia. Found in gray sandy loam, shallow soil, around saline seep, see *Annalen des K. K. Naturhistorischen Hofmuseums* 20: 430. 1905, Albert Bruce Jackson (1876-1947), “*Apera intermedia* as an alien in Britain.” *Ann. Scot. Nat. Hist.* 1907.

***A. interrupta* (L.) P. Beauv.** (*Agrostis interrupta* (L.) Bubani; *Agrostis anemagrostis* subsp. *interrupta* (L.) Syme; *Agrostis interrupta* L.; *Agrostis spica-venti* subsp. *interrupta* (L.) Hook.f.; *Agrostis spica-venti* var. *interrupta* (Gaertner, Meyer & Scherbius) G. Mey.; *Anemagrostis interrupta* (L.) Trin.; *Apera spica-venti* var. *interrupta* (L.) Beal; *Muhlenbergia interrupta* (L.) Steud.)

Asia, Europe. Annual, see *Systema Naturae, Editio Decima* 2: 872. 1759, *Oekonomisch-Technische Flora der Wetterau* 1: 88. Frankfurt am Main 1799, *Essai d'une Nouvelle Agrostographie* 31, 151. 1812, *Fundamenta Agrostographiae* 129. 1820, *Chloris Hanoverana* 655. 1836, *Synopsis Plantarum Glumacearum* 1: 177. 1854, *The Student's Flora of the British Islands* 432. 1870, *English Botany* edition 3 11: 43-44. 1873, *Grasses of North America for Farmers and Students* 2: 357. 1896 and *Flora Pyrenaea* ... 4: 289. 1901, *Bulletin de la Société Botanique de France* 74: 406. 1927. in English: dense silky-bent, interrupted wind grass

***A. spica-venti* (L.) P. Beauv.** (*Agrostis anemagrostis* Syme; *Agrostis anemagrostis* subsp. *spica-venti* (L.) Syme; *Agrostis gracilis* Salisb.; *Agrostis spica-venti* L.; *Agrostis ventosa* Dulac; *Anemagrostis spica-venti* (L.) Trin.; *Apera longiseta* Klokov; *Festuca spica-venti* (L.) Raspail; *Muhlenbergia spica-venti* (L.) Trin.)

Eurasia, Asia, Europe. Annual, herbaceous, weed, found in ballast and waste ground, meadows, see *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 25. [London] 1796, *Essai d'une Nouvelle Agrostographie* 31, 151. 1812, *Fundamenta Agrostographiae* 129, t. 11. 1820, *Annales des Sciences Naturelles; Botanique, sér. 5*: 445. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 285. 1841, *Flore de Département des Hautes-Pyrénées* 74. 1867, *English Botany* edition 3 11: 43. 1873. in English: loose silky-bent, silky bent grass, common wind grass, wind grass

in French: agrostide jouet-du-vent

Aphanelytrum Hackel

Greek *aphanes* “obscure, inconspicuous, invisible” and *elytron* (*elyo* “to wind”) “a sheath, a cover.”

One species, Ecuador, Colombia, Bolivia. Pooideae, Poeae, Poinae, or Pooideae, Poodae, Poeae, perennial, herbaceous, scrambling, decumbent, leaning, stoloniferous, auricles absent, leaf blades flat and glabrous, ligule an unfringed membrane, plants bisexual, lax inflorescence paniculate, rachilla internodes filiform, spikelets 2-3-flowered and pedicellate, 2 glumes vestigial, lemmas herbaceous and keeled, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, montane forests, moist places, shade, type *Aphanelytrum procumbens* Hack., see *Essai d'une Nouvelle Agrostographie* 39, 155. 1812, *Anales de la Universidad Central del Ecuador* 3(25): 480. 1889 and *Österreichische Botanische Zeitschrift* 52: 12-13. 1902, A. Chase, “The structure of spikelets of *Aphanelytrum*.” *Botanical Gazette* 61: 340-343. 1916, *Arnaldoa* 8(2): 53-56. 2002, *Contributions from the United States National Herbarium* 48: 115. 2003.

Species

A. procumbens Hack. (*Aphanelytrum decumbens* Hack. ex Sodiro; *Brachyelytrum procumbens* (Hack.) Hack.)

South America. Perennial, delicate, branched, smooth or scabrous, leaf blades linear, panicle oblong, spikelets erect or pendulous, lemmas lanceolate and acuminate.

Aplexia Raf. = *Leersia* Sw., *Leersia* Sol. ex Sw.

Greek *aplektos* “unplaited,” *a* “negative” and *plektos* “twisted, plaited,” *pleko* “to twist, enfold.”

Ehrhartoideae, Oryzeae, Oryzinae, type *Leersia virginica* Willd., see *Nova Genera et Species Plantarum seu Prodromus* 1, 21. 1788, *Species Plantarum. Editio quarta* 1(1): 325. 1797, C.S. Rafinesque, *Neogenyton* 4. 1825, *Index Kewensis* 1: 162. 1893 and E.D. Merrill, *Index rafinesquianus* 74, 75. 1949, *Annals of the Missouri Botanical Garden* 74: 432-433. 1987, *Contributions from the United States National Herbarium* 39: 64-67. 2000.

Aplocera Raf. = *Ctenium* Panzer

Greek *haplos* “simple, single” and *keras* “horn,” possibly referring to the genus *Monocera* Elliott.

Chloridoideae, Cynodonteae, see *Flora Caroliniana, secundum ...* 249. 1788, *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 38, 61. 1813, *Denkschriften der Bayer[ischen]. Botanischen Gesellschaft in Regensburg* 4: 311, t. 13, f. 1-2. 1813 [1814], *Sketch Bot. S. Carolina* 1(2): 176. 1816, *Medical Flora* 2: 193. 1830, *A Class-book of Botany* 806. 1861 and E.D. Merrill, *Index rafinesquianus* 74. 1949, *Contributions from the United States National Herbarium* 41: 57-58. 2001.

Apluda L. = *Calamina* P. Beauv.

From the Latin name *apluda* (*appl-*) *ae* for chaff or bran, alluding to the involucre, or to the spikelets.

One species, tropical Asia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Ischaeminae, perennial, rambling, woody, leafy, more or less glaucous, often scrambling or decumbent and rooting at the nodes, auricles absent, leaf sheath short, ligule an unfringed membrane, leaf blades linear-lanceolate and often falsely petiolate, plants bisexual, inflorescence racemose, large terminal open compound panicle, naviculate to boat-shaped spathe, raceme comprising 1 sessile and 2 pedicelled spikelets, central sessile branch composed of a fertile floret with a male floret below it, sessile spikelets awned or not, pedicellate spikelets unawned, lower floret staminate,

upper floret hermaphrodite, 2 glumes more or less equal and more or less leathery or thin, lemmas membranous, palea reduced to a membranous scale, 2 lodicules free and fleshy, stamens 2-3, ovary glabrous, 2 stigmas, a good fodder when young suitable for all classes of animals, good hay and silage, stalks used for making hats, growing at the edge of woodlands and in hedges, thickets, on moist or dry stony soils, forest margins, type *Apluda mutica* L., see *Species Plantarum* 1: 82. 1753, *Genera Plantarum* edition 5. 35. 1754, *Essai d'une Nouvelle Agrostographie* 128, 157. 1812 and *Flora of Tropical Africa* 9: 5. 1917, *Phytologia* 10(5): 321-406. 1964, *Journal of Cytology and Genetics* 15: 51-57. 1980, M. Lazarides, “The tropical grasses of Southeast Asia (excluding bamboos).” *Phanerogamarum Monographiae* 12: 1-225. Vaduz 1980, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Cytology and Genetics* 25: 140-143, 322-323. 1990, *Regnum Veg.* 127: 20. 1993, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Contributions from the United States National Herbarium* 46: 68-69. 2003.

Species

A. mutica L. (*Andropogon aristatus* (L.) Raspail, nom. illeg., non *Andropogon aristatus* Poir.; *Andropogon glaucus* Retz.; *Andropogon glaucus* Torr., nom. illeg., non *Andropogon glaucus* Retz.; *Andropogon glaucus* Muhl., nom. illeg., non *Andropogon glaucus* Retz.; *Apluda aristata* L.; *Apluda cumingii* Büse ex de Vriese; *Apluda geniculata* Roxb.; *Apluda gigantea* (P. Beauv.) Spreng.; *Apluda glauca* (Retz.) Schreb.; *Apluda humilis* (J. Presl) Kunth; *Apluda inermis* Regel; *Apluda mutica* subsp. *aristata* (L.) Babu; *Apluda mutica* subsp. *aristata* (L.) R.D. Gaur, nom. illeg., non *Apluda mutica* subsp. *aristata* (L.) Babu; *Apluda mutica* var. *aristata* (L.) Hack. ex Backer; *Apluda mutica* var. *aristata* (L.) Pilger, nom. illeg., non *Apluda mutica* var. *aristata* (L.) Hack. ex Backer; *Apluda varia* Hackel; *Apluda varia* subsp. *aristata* (L.) Hack.; *Apluda varia* subsp. *mutica* (L.) Hack.; *Apluda varia* var. *humilis* (J. Presl) Hack.; *Apluda varia* var. *intermedia* Hack.; *Calamina gigantea* P. Beauv.; *Calamina humilis* J. Presl; *Calamina mutica* (L.) P. Beauv.)

Southeast Asia, India. Annual or perennial, leafy, tufted, slender, straggling, creeping or scandent, base decumbent, rooting from lower nodes, often rambling among bushes, leaves oblong, flowering branches erect, inflorescence a panicle, small clusters of spikelets, each cluster contains a triple branch of spikelets enclosed in a sheathing bract, lateral branches sterile florets supported by flattened pedicels, good fodder value, palatable to stock when young, young grass eaten by buffaloes, a forest grass, garden edges, plains, along bushes, ditch and river banks, wet places, along roadsides, on poor soil, in waste grounds, see *Amoen. Acad.* 4: 303. 1756, *Centuria II. Plantarum ...* 2: 7. 1756, *Observationes Botanicae* 5: 20. 1789, *Beschreibung der*

Gräser 2: 99. 1810, *Essai d'une Nouvelle Agrostographie* 128-129, 151, t. 23, f. 1. 1812, *Hortus Bengalensis, or a catalogue ...* 8. 1814, *Annals of the Lyceum of Natural History of New York* 1(1): 153-154. 1824, *Annales des Sciences Naturelles (Paris)* 5: 307. 1825, *Systema Vegetabilium, editio decima sexta* 1: 290. 1825, *Reliquiae Haenkeanae* 1(4-5): 344. 1830, *Plantae Indiae Batavae Orientalis* 105. 1857, *Die Natürlichen Pflanzenfamilien* 22: 26. 1887, J.F. Duthie, *The Fodder Grasses of Northern India*. 44-45. Roorkee 1888, *Monographiae Phanerogamarum* 6: 196-199. 1889 and *Handb. Fl. Ceylon* 5: 226. 1900, *Mémoires de la Société Royale des Sciences, Lettres et Arts de Nancy* 2: 54. 1928, *Handb. Flora van Java* 2: 54. Batavia 1928, *Handb. Fl. Ceylon* 6: 331. 1931, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 130. 1945, *Grasses of Ceylon* 177. 1956, *Grasses of Burma ...* 93. 1960, *Herbaceous Flora of Dehra Dun* 582. 1977, *Journal of Economic and Taxonomic Botany* 9(1): 59. 1987, *Taxon* 49(2): 246. 2000.

in English: snubgrass

in Japan: Okinawa-karu-kaya (= Okinawa cut-grass)

in Bhutan: karuki

in China: shui zhe cao

in India: akku hullu, baru, bhajura, bhangri, bhanjra, bhanjura, bhanjuri, bhankta, bhas, bhickma, bhumbhuru, bhus jari, bonta, chhari, chickwar, dhanghi khad, dhuri ghas, gandhani, gandhi, ganni, gawan, ghaghara, ghandani, goroma, gugar gadi, gugargadi, kaadu hanchi hullu, kadmor, kari hanchi hullu, kari kaachi hullu, karmoria, kattingiya sufed, kharvel, khavas, kurdia, makkha, manda pillu, manda pul, moongil pul, moshi, mungil pillu, munmona, murmuru, palakhari, paodi, patpatawan, phota, phula jara, phulaer, phules, phuli, phulor, phulria, phulse, poklia, poladi gavat, polki, ponai, pootstrangali, putstryagali, sanna kari hullu, santhran, send, tach, tachla, tachula, tambat, tambati, tulse paodi

in Sri Lanka: kuru kudu tana, kuru kuda tana, moongil pul, mungil pul, munjil pul

in Thailand: ya kom bang, ya phai, ya phrik phran, yaa phai, yaa phrik phraan

Apochaete (C.E. Hubb.) J.B. Phipps = *Tristachya* Nees

From the Greek *apo* "away, being away from, lack of" and *chaite* "bristle."

Panicoideae, Arundinelleae, type *Apochaete hispida* (L.f.) J.B. Phipps, see *Supplementum Plantarum* 111. 1781 [1782], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829, *Die Pflanzenwelt Ost-Afrikas* 109. 1895, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 374. 1895 and *Bulletin of Miscellaneous Information Kew* 1936(5): 322.

1936, *N. Amer. Flora* 17(8): 578. 1939, *Bulletin de la Société Botanique de Belgique* 90: 187. 1958, *Kirkia* 4: 105. 1964, *Kirkia* 5: 235-258. 1966, *Boletim da Sociedade Broteriana, ser. 2* 41: 198. 1967, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Flora Mesoamericana* 6: 378. 1994, *Contributions from the United States National Herbarium* 46: 627-628. 2003.

Apochiton C.E. Hubb.

From the Greek *apo* "away, being away from, lack of" and *chiton* "a tunic, cover."

One species, tropical East Africa. Chloridoideae, Eragrostideae, annual, herbaceous, unarmed, loosely tufted, erect, decumbent, auricles absent, ligule membranous and fringed, narrow linear leaf blades, plants bisexual, inflorescence paniculate, spikelets pedicellate, 2 glumes 3-nerved, lemmas silky and awned, palea 2-awned, fleshy lodicules present, 3 stamens, ovary glabrous, 2 stigmas, savannah, open habitats, seasonally wet soils, related to *Triraphis*, type *Apochiton burttii* C.E. Hubb., see *Hooker's Icones Plantarum* 34: t. 3319. 1936.

Species

A. burttii C.E. Hubb. (after the British (b. York) botanist Bernard Dearman Burt, 1902-1938 (d. Tanganyika, Tanzania, killed in air crash), 1933 Fellow of the Linnean Society, cousin of Joseph Burt Davy (1870-1940); see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 122. London 1994; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 15. 1971)

Tanzania.

Apoclada McClure

From the Greek *apo* "away, being away from, lack of" and *klados* "a branch," referring to the separate branching.

About 1-2 species, Brazil. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambusodae, Guaduiniae, perennial, tufted, tall, sympodial, unarmed, shrub or small tree, solid or hollow, leafy, branch complement 5 subequal, ligule fringed, rhizomes pachymorph, plants bisexual, synflorescences terminal with a single spikelet, spikelets several- to many-flowered, glumes absent or present, palea present, free lodicules, 3-6 stamens, ovary glabrous, 2 plumose stigmas, growing in colonies, open woodland, damp and sunny places, mesic forests, sandy soil, type *Apoclada simplex* McClure et L.B. Smith, see *Flora Illustrata Catarinense Gramíneas* — Suplemento. Bambúseas 1(Gram.-Supl.): 1-78. 1967, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Systematic Botany* 20(3): 207-223. 1995 [A cladistic analysis and revision of the genus *Apoclada* (Poaceae: Bambusoideae: Bambusodae), by G.F. Guala,

American Bamboos 231-234. 1999, *Bamboo Science and Culture* 14(1): 15-20. 2000, G.F. Guala, "A brief note on the forage value of *Apoclada* species." *Bamboo Science and Culture* 15: 48. 2001, *Bamboo Science and Culture: The Journal of the American Bamboo Society* 17(1): 1-3. 2003.

Species

A. simplex McClure & L.B. Smith (*Apoclada diversa* McClure & L.B. Smith)

Southeastern Brazil. Erect, reedlike, see *Fl. Il. Catarin.* 1(GRAM-Suppl.): 59-62, t. 10, f. s-y. 1967.

Apocopsis Nees = *Amblyachyrum* Steud., *Amblyachyrum* Hochst. & Steud.

Possibly from the Greek *apokope* "cutting off, amputation," *apokopos* "castrated, abrupt."

About 15 species, China, Indomalaysian region, tropical Asia, Myanmar (Burma), India. Panicoideae, Andropogonaceae, Andropogoneae, Andropogoninae, annual or perennial, herbaceous, leaf blades flat and narrow, ligule an unfringed membrane, plants bisexual, inflorescence of 1-3 digitate racemes, imbricate spikelets, racemes paired and solitary, sessile and pedicellate spikelets, sessile spikelet bisexual and deciduous, lowermost spikelets barren and awnless, 2 florets, lower floret male and the upper bisexual, 2 glumes unequal, lower glume chartaceous to coriaceous, upper glume truncate, lemmas awned or not, upper lemma linear and awned, lodicules absent, stamens 2 or absent, ovary glabrous, 2 stigmas, pedicellate spikelets reduced to a little barren pedicel, found in open places, hillsides, damp ground, dry shallow soils, pans, slopes, type *Apocopsis royleanus* Nees, see *Proceedings of the Linnean Society of London* 1: 93-94. 1841, *Synopsis Plantarum Glumacearum* 1: 413. 1854, *Journal of the Linnean Society, Botany* 19: 67. 1881, *Monographiae Phanerogamarum* 6: 259. 1889, *J. Bot. (Morot)* 4: 84. 1890 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 44: 519. 1910, *Bulletin du Muséum d'Histoire Naturelle* 25: 285. 1919, *Blumea* 4(3): 523. 1941, *Kew Bull.* 7: 101-116. 1952, *Thai Forest Bulletin. Botany* 6: 46. 1972, *Taxon* 34: 159-164. 1985.

Species

A. anomalus Bor

Myanmar. See *Kew Bulletin* 12(3): 415. 1958.

A. breviglumis Keng & S.L. Chen

China. See *Acta Phytotaxonomica Sinica* 13(1): 59-60, pl. 3. 1975.

A. burmanicus Narayanaswami ex Bor

Myanmar. See *Kew Bulletin* 1951: 169. 1951.

A. cochinchinensis A. Camus

Vietnam. See *Bulletin du Muséum d'Histoire Naturelle* 25: 286. 1919.

A. collina Balansa (*Apocopsis borneensis* Ridl.; *Apocopsis collinus* Balansa)

Vietnam, Indonesia. Perennial, tufted, see *Journal de Botanique (Morot)* 4: 84. 1890 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 44: 519. 1910.

A. courtallumensis (Steud.) Henrard (*Andropogon courtallumensis* Steud.; *Apocopsis courtallumensis* Henrard; *Apocopsis wightii* Steud.; *Apocopsis wightii* Nees ex Thwaites; *Apocopsis wightii* Nees ex Steud.; *Apocopsis wightii* Nees ex Hack.)

India, Tamil Nadu, Sri Lanka. Perennial, in waste places, often confused with *Apocopsis mangalorensis* (Hochst.) Henrard, see *Synopsis Plantarum Glumacearum* 1: 377. 1854, *Enumeratio Plantarum Zeylanicae* 365. 1864, *Monographiae Phanerogamarum* 6: 258. 1889 and *Blumea* 4(3): 524. 1941, *Grasses of Ceylon* 171. 1956.

in Thailand: ya khon bung

A. floccosus Bor

Myanmar. See *Kew Bulletin* 12(3): 414. 1958.

A. mangalorensis (Hochst.) Henrard (*Amblyachyrum mangalorensis* Hochst.; *Amblyachyrum mangalorensis* Hochst. ex Steud.; *Apocopsis beckettii* Thwaites ex Hack.; *Apocopsis courtallumensis* sensu Senaratna, non (Steud.) Henrard; *Apocopsis mangalorensis* (Hochst. ex Steud.) Henrard; *Apocopsis wightii* subsp. *mangalorensis* (Hochst.) Hack.; *Apocopsis wightii* subsp. *mangalorensis* (Hochst. ex Steud.) Hack.; *Apocopsis wightii* subvar. *beckettii* Hack.; *Apocopsis wightii* var. *beckettii* Trimen; *Apocopsis wightii* var. *beckettii* Thwaites ex Trimen; *Apocopsis wightii* var. *zeylanica* Hack.)

Southern India, Tamil Nadu, Sri Lanka. Annual, geniculate ascending, well-exserted inflorescence racemose with 2 or 3 barren spikelets at the base, in waste places, see *Synopsis Plantarum Glumacearum* 1: 413. 1854, *Flora* 39: 26. 1856, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6: 259, 269. 1889 and *Blumea* 4(3): 523. 1941, *Grasses of Ceylon* 171. 1956, *Grasses of Burma ...* 96. 1960.

A. paleacea (Trinius) Hochr. (*Andropogon himalayensis* Steud.; *Andropogon paleaceus* (Trin.) Steud.; *Apocopsis himalayensis* (Steud.) W. Wats. & E.T. Atkinson; *Apocopsis paleaceus* (Trin.) Hochr.; *Apocopsis royleana* Nees; *Ischaemum paleaceum* Trin.)

Asia, Nepal. Perennial, creeping, rhizomatous, culms leafy near base, leaves acute and hairy, fodder grass, open places, rocky sites, near drains, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 293. 1832, *Illustrations of the Botany ... of the Himalayan Moun-*

tains ... 1: 417. 1839, *Synopsis Plantarum Glumacearum* 1: 376-377. 1854, *Himalayan Districts of the North-western Provinces of India* 10: 392. 1882 and *Bulletin of the New York Botanical Garden* 6: 262. 1910.

A. peguensis Bor

Myanmar. See *Kew Bulletin* 1949: 28. 1949.

A. pulcherrimus Bor

Myanmar. See *Kew Bulletin* 1951: 168. 1951.

A. schmidianus A. Camus

Asia. See *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 29: 187. 1957.

A. siamensis A. Camus

Thailand. See *Notulae Systematicae. Herbarium de Paris* 3(3): 83. 1914.

A. vaginata Hack. (*Apocopsis wightii* var. *vaginata* (Hack.) Hook.f.)

India, Tamil Nadu, Uttar Pradesh. Annual, inflorescence within the uppermost leaf-sheath, common in open pastures and forest clearings, see *Österreichische Botanische Zeitschrift* 41: 8. 1891, *The Flora of British India* 7(21): 143. 1897 [1896].

A. wrightii Munro (*Apocopsis wightii* var. *wrightii* (Munro) Hack.) (for Charles Wright, collector of the species)

Asia. See *Proceedings of the American Academy of Arts and Sciences* 4: 363. 1860, *Monographiae Phanerogamarum* 6: 259. 1889.

in Thailand: yaa khon bung

A. wrightii Munro var. *macrantha* S.L. Chen (*Apocopsis heterogama* Keng & S.L. Chen)

China. See *Acta Phytotaxonomica Sinica* 13(1): 60-61, pl. 4. 1975, *Bulletin of Botanical Research* 12(4): 317. 1992.

Apogon Steud. = *Apogon* S. Elliott
(Asteraceae, Compositae), *Chloris* Sw.

From the Greek *a* "negative, without" and *pogon* "beard."

See *Nova Genera et Species Plantarum seu Prodrumus* 1, 25. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 2: 267. 1822 [1824], *Nomenclator Botanicus. Editio secunda* 1: 352. 1840 and *Contributions from the United States National Herbarium* 41: 39-52. 2001.

Apogonia (Nutt.) E. Fourn. = *Coelorachis*
Brongn., *Mnesithea* Kunth

From the Greek *a* "negative, without" and *pogon* "beard."

Panicoideae, Andropogoneae, Rottboelliinae, see *The Genera of North American Plants* 1: 83. 1818, *Révision des Graminées* 1: 153. 1829, *Voyage Autour du Monde* 2: 64,

f. 14. 1829 [1831], *Mexicanas Plantas* 2: 63. 1886 and *North American Flora* 17(1): 86. 1909, *Blumea* 31(2): 291, 293. 1986, *Flora Mesoamericana* 6: 396-397. 1994.

Arberella Soderstr. & C.E. Calderón

Dedicated to the British botanist Agnes Arber, 1879-1960, philosopher, plant morphologist, F.L.S. 1908, married Edward Alexander Newell Arber 1909, F.R.S. 1946, author of *Herbals*, their origin and evolution, a chapter in the history of botany 1470-1670. Cambridge (1938) 1953, "On grasses in herbal literature." *Darwiniana* 5: 20-30. 1941 and *Goethe's Botany. The Metamorphosis of Plants* (1790) and Tobler's *Ode to Nature* (1782). Waltham 1946, *The Gramineae: A Study of Cereal, Bamboo, and Grass*. Cambridge Univ. Press 1934. See Rudolf Schmid, "Agnes Arber, née Robertson (1879-1960): fragments of her life, including her place in biology and women's studies." *Annals of Botany*, 88, 2001; J.H. Barnhart, *Biographical notes upon botanists*. 1: 70. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 30. 1972; *Taxon* 9(9): 261-263. 1960; Harry Godwin, *Dict. Sci. Biogr.* 1: 205-206. 1970.

About 3-7 species, tropical America, Costa Rica to Brazil. Bambusoideae, Olyreae, Olyrinae, or Bambusoideae, Oryzodae, Olyreae, perennial, clump-forming, herbaceous, unarmed, caespitose, leafy, solid, leaf blades lanceolate, ligule membranous, plants monoecious, inflorescence a panicle bearing 1 female spikelet with male spikelets below, spikelets 1-flowered, 2 glumes 5- to 11-nerved, male spikelets 3-staminate, lemma pubescent, short callus, palea present, 3 free and fleshy lodicules, no stamens, ovary glabrous, 2 plumose stigmas, swollen internode between glumes and floret of female spikelet, forest, wet forests, slopes, forest floor, undergrowth, related to *Cryptochloa* and *Lithachne*, type *Arberella dressleri* Soderstr. & C.E. Calderón, see *Annals of the Missouri Botanical Garden* 29: 317. 1942, *Brittonia* 31(4): 433-445. 1979, *Brittonia* 34: 199-209. 1982, *Brittonia* 37(1): 22-35. 1985, *Flora of the Guianas. Series A, Phanerogams* 59-62, 1990, *Novon* 1(2): 76-87. 1991, *Novon* 2(2): 81-110. 1992, *Flora Mesoamericana* 6: 214-215. 1994, *American Bamboos* 264-266. 1999, *Contributions from the United States National Herbarium* 39: 12-13. 2000, *Taxon* 50: 559-568. 2001.

Species

A. bahiensis Soderstr. & Zuloaga

Brazil, Venezuela. See *Brittonia* 37(1): 23, f. 1, 2. 1985.

A. costaricensis (Hitchc.) Soderstr. & C.E. Calderón (*Radia costaricensis* Hitchc.)

Costa Rica, Panama. See *Proceedings of the Biological Society of Washington* 40: 87. 1927, *Brittonia* 31(4): 439. 1979.

A. dressleri Soderstr. & C.E. Calderón

Central America, Panama. See *Brittonia* 31(4): 433. 1979.

A. flaccida (Döll) Soderstr. & C.E. Calderón (*Olyra flaccida* Döll)

Central and South America, Brazil, Colombia. Perennial, variable, caespitose, glabrous, geniculate-ascending, erect, lowland forests, see *Flora Brasiliensis* 2(2): 326. 1877 and *Brittonia* 31(4): 443. 1979.

A. grayunii Davidse (for the agrostologist Michael Howard Grayum, b. 1949, Missouri Botanical Garden)

Costa Rica. See *Novon* 2(2): 94, f. 6. 1992.

A. lancifolia Soderstr. & Zuloaga

Panama. Without callus, see *Brittonia* 37(1): 25, f. 3, 4. 1985.

A. venezuelae Judz. & Davidse

Venezuela, Amazonas. See *Novon* 1(2): 76, f. 1. 1991.

Arcangelina Kuntze = *Kralikia* Coss. & Durieu, *Tripogon* Roem. & Schult.

For the Italian botanist Giovanni Arcangeli, 1840-1921, Director of the Botanical Gardens of Torino (1879-1883) and Pisa (1881-1915); see J.H. Barnhart, *Biographical notes upon botanists*. 1: 71. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 13. 1972; I.K. Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Oreste Mattiolo (1856-1947), *Cronistoria dell'Orto Botanico della Regia Università di Torino*. in *Studi sulla vegetazione nel Piemonte* pubblicati a ricordo del II Centenario della fondazione dell'Orto Botanico della R. Università di Torino. Checchini, Torino 1929; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement I: A-Ba*. 143-145. ["Director botanical garden of Firenze 1877-1878."] Königstein 1992; O. Mattiolo, *Cenni cronologici sugli Orti Botanici di Firenze*. in Pubblicazioni R. Ist. Studi Superiori Pratici e di Perfezionamento, Sez. Scienze Fis. Natur. Firenze 1899; G. Martinoli, "L'Orto Botanico di Pisa." *Agricoltura*. 7: 59-66. Roma 1963.

Chloridoideae, see *Systema Vegetabilium* 2: 34, 600. 1817, *Bull. Soc. Bot. France* 14: 89. 1867, *Revisio Generum Plantarum* 2: 759. 1891 and *Contributions from the United States National Herbarium* 41: 231. 2001.

Arctagrostis Griseb.

Greek *arktos* "the north" (Akkadian *arqu*, *urqu* "yellow") plus *agrostis*, *agrostidos* "grass, weed," referring to the habitat, arctic.

About 1-6 species, Arctic, Europe, North America and Greenland. Pooideae, Poodae, Aveneae or Pooideae, Poae, Poinae, perennial, robust, rhizomatous, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, open or contracted panicle, spikelets pedicellate and 1-flowered, 2 glumes nerved and acute, lemmas keeled and 3-nerved, palea present, 2 free and membranous lodicules, 2-3 stamens, ovary glabrous, 2 stigmas, open habitats, tundra, lakeshore, sandy soils, coastal tundra regions, marshy tundra, related to *Colpodium* Trin., type *Arctagrostis latifolia* (R. Br.) Griseb., see *Flora Rossica* 4: 434. 1852 and *Canadian Journal of Botany* 68: 2422-2432. 1990, *Canadian Journal of Botany* 70: 80-83. 1991, *Canadian Journal of Botany* 72: 1039-1050. 1994, Hong Qian, "Floristic analysis of vascular plant genera of North America north of Mexico: characteristics of phytogeography." *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, *Am. J. Bot.* 89: 1410-1421. 2002, *Contributions from the United States National Herbarium* 48: 115-117. 2003, W. Wyatt Oswald, Linda B. Brubaker, Feng Sheng Hu and Daniel G. Gavin, "Pollen-vegetation calibration for tundra communities in the Arctic Foothills, northern Alaska." *Journal of Ecology* 91(6): 1022-1033. Dec 2003, Jeffrey M. Welker, Jace T. Fahnestock, Greg H.R. Henry, Kevin W. O'Dea and Rodney A. Chimner, "CO₂ exchange in three Canadian High Arctic ecosystems: response to long-term experimental warming." *Global Change Biology* 10(1)2: 1981-1995. Dec 2004, Robert D. Hollister, Patrick J. Webber and Craig E. Tweedie, "The response of Alaskan arctic tundra to experimental warming: differences between short- and long-term responses." *Global Change Biology* 11(4): 525-536. Apr 2005.

Species

A. arundinacea (Trin.) Beal (*Arctagrostis caespitans* V. Vassil.; *Arctagrostis calamagrostidiformis* V. Vassil.; *Arctagrostis festucacea* Petrov; *Arctagrostis latifolia* subsp. *arundinacea* (Trin.) Tzvelev; *Arctagrostis latifolia* var. *arundinacea* (Trin.) Griseb.; *Arctagrostis tenuis* V. Vassil.; *Arctagrostis ursorum* (Kom.) Kom. ex Roshev.; *Arctagrostis viridula* V. Vassil.; *Catabrosa arundinacea* (Trin.) Fries; *Colpodium arundinaceum* (Trin.) Hook.; *Poa ursorum* Kom.; *Sporobolus arundinaceus* (Trin.) Kunth; *Vilfa arundinacea* Trin.)

Northern America, Russia. See *Gram. Unifl. Sesquifl.* 157. 1824, *Grass. N. Amer.* 2: 317. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 13: 161. 1914, *Flora Iakutiae* 1: 155. 1930, *Flora URSS* 2: 168. 1934, *Bot. Zhurn. (Moscow & Leningrad)* 51: 1105. 1966, *Botanicheskii Zhurnal* 68: 1325-1325. 1983.

A. latifolia (R. Br.) Griseb. (*Arctagrostis anadyrensis* V. Vassil.; *Arctagrostis arundinacea* var. *festucacea* (Petrov) Tzvelev; *Arctagrostis calamagrostidiformis* V. Vassil.; *Arctagrostis festucacea* Petrov; *Arctagrostis latifolia* subsp.

gigantea Tzvelev; *Arctagrostis tenuis* V. Vassil.; *Arctagrostis ursorum* (Kom.) Kom. ex Roshev.; *Arctagrostis viridula* V. Vassil.; *Catabrosa latifolia* (R. Br.) Fries; *Colpodium latifolium* R. Br.; *Poa ursorum* Kom.)

Asia temperate, Siberia, Norway, Europe, northern America. Perennial, stout, leafy, densely clumped, shortly rhizomatous, inflorescences narrow and erect to open and lax, useful for erosion control, revegetation, forage, drought sensitive, see *Chloris Melvilliana* 28. 1823, *Novitarum Florae Suecicae Mantissa*, Tert. 173. Lund 1842 and *Repertorium Specierum Novarum Regni Vegetabilis* 13: 161. 1914, *Flora Iakutiae* 1: 155. 1930, *Flora URSS* 2: 168. 1934, *Arkticheskaia Flora SSSR* 2: 38. 1964.

in English: Arctic grass, polar grass, Russian grass

A. latifolia (R. Br.) Griseb. subsp. *arundinacea* (Trin.) Tzvelev (*Arctagrostis angustifolia* Nash; *Arctagrostis angustifolia* Nash var. *crassispica* Bowden; *Arctagrostis arundinacea* (Trin.) Beal; *Arctagrostis arundinacea* var. *arundinacea*; *Arctagrostis arundinacea* var. *crassispica* Bowden; *Arctagrostis calamagrostidiformis* V.N. Vassil.; *Arctagrostis festucea* Petrov; *Arctagrostis latifolia* f. *parviflora* Reverd.; *Arctagrostis latifolia* var. *alaskensis* Vasey; *Arctagrostis latifolia* var. *angustifolia* (Nash) Hultén; *Arctagrostis latifolia* var. *arundinacea* (Trin.) Griseb.; *Arctagrostis macrophylla* Nash; *Arctagrostis parviflora* (Reverd.) V.V. Petrovsky; *Arctagrostis poaeoides* Nash; *Arctagrostis poaeoides* Nash ex Britton & Rydb.; *Arctagrostis tenuis* V.N. Vassil.; *Arctagrostis tilesii* (Griseb.) Petrov; *Arctagrostis ursorum* (Kom.) Kom. ex Roshev.; *Catabrosa arundinacea* (Trin.) Fries; *Colpodium arundinaceum* (Trin.) Hook.; *Colpodium tilesii* Griseb.; *Poa ursorum* Kom.; *Sporobolus arundinaceus* (Trin.) Kunth; *Vilfa arundinacea* Trin.)

U.S., Russia, Siberia. Perennial, wet meadows, see *Gram. Unifl. Sesquifl.* 157. 1824, *Flora Boreali-Americana* 2: 238. 1840, *Novitarum Florae Suecicae Mantissa*, Tert. 173. 1842, *Flora Rossica* 4(13): 385, 435. 1852, *A Descriptive Catalogue of the Grasses of the United States* 48. 1885, *Grasses of North America for Farmers and Students* 2: 317. 1896 and *Bulletin of the New York Botanical Garden* 2(6): 151-153. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 13: 161. 1914, *Flora Iakutiae* 1: 155, 163, f. 54. 1930, *Flora URSS* 2: 168. 1934, *Acta Universitatis Lundensis, n.s.* 38: 146. 1942, *Canadian Journal of Botany* 38: 118. 1960, *Bot. Zhurn. (Moscow & Leningrad)* 51: 1105. 1966.

in English: wideleaf polargrass

A. latifolia (R. Br.) Griseb. subsp. *latifolia* (*Arctagrostis anadyrensis* V. Vassil.; *Arctagrostis aristulata* Petrov; *Arctagrostis glauca* Petrov; *Arctagrostis latifolia* f. *aristata* Holmb.; *Arctagrostis latifolia* f. *latifolia*; *Arctagrostis latifolia* subsp. *gigantea* Tzvelev; *Arctagrostis latifolia* subsp. *nahanniensis* Porsild; *Arctagrostis latifolia* var. *aristulata*

(Petrov) Tzvelev; *Arctagrostis latifolia* var. *gigantea* (Tzvelev) Tzvelev; *Arctagrostis latifolia* var. *latifolia*; *Arctagrostis latifolia* var. *longiglumis* Polunin; *Arctagrostis stricta* Petrov; *Cinna brownii* Rupr.; *Colpodium latifolium* R. Br.; *Vilfa gigantea* Turcz. ex Griseb.)

Canada, U.S. Erect, rhizomatous, see *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 66. 1845, *Flora Rossica* 4(13): 435. 1852 and Otto Rudolf Holmberg (1874-1930), [C.J. Hartman] *Handbok i Skandinaviens Flora* 1: 141. Stockholm 1922, *Flora Iakutiae* 1: 156, 159, 161, t. 50, 51. 1930, *Bull. Natl. Mus. Canada* 92 (Biol. Ser. 24): 48, t. 1. 1940, *Bull. Natl. Mus. Canada* 171 (Biol. Ser. 64): 120. 1961, *Arkticheskaia Flora SSSR* 2: 38. 1964, *Zlaki SSSR* 526. 1976.

in English: wideleaf polargrass, polar grass

A. poaeoides Nash ex Britton & Rydb.

Canada. See *Bulletin of the New York Botanical Garden* 2(6): 151-153. 1901.

x Arctodupontia Tzvelev

Arctophila x Dupontia.

See *Novosti Sist. Vyssh. Rast.* 10: 91. 1973, *Genera Graminum* 374. 1986.

Arctophila (Rupr.) N.J. Andersson = *Arctophila* (Rupr.) Rupr. ex Andersson

From the Greek *arktos* “a bear, the north” and *philos* “lover, loving.”

One species, Arctic. Pooideae, Poeae, Poinae, or Pooideae, Poodae, Poeae, perennial, height variable, herbaceous, robust, hollow, rooting at the lower nodes, auricles absent, narrow linear leaf blades, ligule an unfringed membrane, leaves distichous, rhizomatous, stoloniferous, plants bisexual, inflorescence paniculate, spikelets pedicellate and 2- to 6-flowered, floret callus bearded, 2 glumes subequal and shorter than adjacent lemmas, lemmas keeled and 3-nerved, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, fodder with high nutritive value, open habitats, wet ground, margins of ponds, swamps, marshy places, bogs, crevices, seashore, along streams, similar to *Colpodium* Trin., type *Arctophila fulva* (Trin.) Andersson, see *Species Plantarum* 1: 67-70. 1753, *Baierische Flora* 1: 100, 334. 1789, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Fundamenta Agrostographiae* 119, t. 7. 1820, *Handbok i Skandinaviens Flora, Tredje Upplagen* 24. 1838, *Flora Danica* 14: pl. 2343. 1843, *Beitr. Pfl. Russ. Reich.* 2: 62-64, t. 4-6. 1846[1845], *Flora Rossica* 4(13): 385-386. 1852, *Plantae Scandinaviae Descriptionibus et Figuris analyticis Adumbratae. Fasciculus Secundus Gramineae Scandinaviae*

... 48-49. 1852 and *Ottawa Naturalist* 16: 77-85. 1902, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 28: 14. 1997, *Phytologia* 82(2): 73-78. 1997, Hong Qian, "Floristic analysis of vascular plant genera of North America north of Mexico: characteristics of phytogeography." *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, *Global Change Biology* 6(4): 459-473. Apr 2000, D.A. Walker, "Hierarchical subdivision of Arctic tundra based on vegetation response to climate, parent material and topography." *Global Change Biology* 6(s1): 19-34. Dec 2000, *Global Change Biology* 7(5): 511-530. May 2001, *Contributions from the United States National Herbarium* 48: 118-119. 2003, *Tellus B* 55(2): 215-231. Apr 2003, W. Wyatt Oswald, Patricia M. Anderson, Linda B. Brubaker, Feng Sheng Hu and Daniel R. Engstrom, "Representation of tundra vegetation by pollen in lake sediments of northern Alaska." *Journal of Biogeography* 30(4): 521-535. Apr 2003, W. Wyatt Oswald, Linda B. Brubaker, Feng Sheng Hu and Daniel G. Gavin, "Pollen-vegetation calibration for tundra communities in the Arctic Foothills, northern Alaska." *Journal of Ecology* 91(6): 1022-1033. Dec 2003, C. Brochmann et al., "Polyploidy in arctic plants." *Biological Journal of the Linnean Society* 82(4): 521-536. Aug 2004, J.T. Ngai and R.L. Jefferies, "Nutrient limitation of plant growth and forage quality in Arctic coastal marshes." *Journal of Ecology* 92(6): 1001-1010. Dec 2004.

Species

A. fulva (Trin.) Andersson (*Arctophila brizoides* Holm; *Arctophila chrysantha* Holm; *Arctophila effusa* Lange; *Arctophila fulva* (Trin.) Rupr. ex Anders.; *Arctophila fulva* f. *aristata* (Polunin) Scoggan; *Arctophila effusa* f. *depauperata* Nath.; *Arctophila fulva* subsp. *fulva*; *Arctophila fulva* subsp. *pendulina* (Laest.) Á. Löve & D. Löve; *Arctophila fulva* subsp. *similis* (Rupr.) Tzvelev; *Arctophila fulva* var. *fulva*; *Arctophila fulva* var. *pendulina* (Laest.) Holmb.; *Arctophila fulva* var. *similis* (Rupr.) Tzvelev; *Arctophila gracilis* Holm; *Arctophila laestadii* Rupr.; *Arctophila mucronata* Hack. ex Vasey; *Arctophila pendulina* (Laest.) Andersson; *Arctophila trichopoda* Holm; *Colpodium fulvum* (Trin.) Griseb.; *Colpodium fulvum* f. *aristatum* Polunin; *Colpodium fulvum* f. *depauperatum* (Nath.) Polunin; *Colpodium fulvum* var. *effusum* (Lange) Polunin; *Colpodium malmgrenii* Andersson; *Colpodium mucronatum* Beal; *Colpodium pendulinum* (Laest.) Griseb.; *Colpodium pendulinum* var. *simile* (Rupr.) Griseb.; *Glyceria fulva* (Trin.) Fries; *Glyceria pendulina* Laest.; *Graphephorum fulvum* (Trin.) A. Gray; *Graphephorum pendulina* (Laest.) A. Gray; *Molinia pendulina* (Laest.) Hartm.; *Poa deflexa* Rupr.; *Poa fulva* Trin.; *Poa laestadii* Rupr.; *Poa latiflora* Rupr.; *Poa pendulina* (Laest.) J. Vahl; *Poa poecilantha* Rupr.; *Poa remotiflora* Rupr.; *Poa similis* Rupr.; *Poa trichoclada* Rupr.)

Canada, Greenland, U.S., Russia. Perennial, somewhat succulent stems, low to dwarf, excellent fodder grass, pasture

for deer, eaten by waterbirds, growing in wet meadows, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 378. 1830, *Flora Suecica (edition 2)* 2: 1088. 1833, E.M. Fries (1794-1878), *Summa Vegetabilium Scandinaviae* 244. Uppsala 1845, *Annals of the Botanical Society of Canada* 1: 57. 1861, *Conspectus Florae Groenlandicae* 1: 167. 1880, *Kongl. Svenska Vetenskapsakad. Handl.* 20: 32. 1883, *A Descriptive Catalogue of the Grasses of the United States* 88. 1885, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 23: 121, pl 2, f 1. 1886, *Grasses of North America for Farmers and Students* 2: 558. 1896 and *Ottawa Naturalist* 16(3): 82-84, f. 3-4, 6-8. 1902, *Repert. Spec. Nov. Regni. Veg.* 3: 337. 1907, *Handbok i Skandinaviens Flora* 2: 224. 1925, *Journal of Botany, British and Foreign* 76: 96. 1938, *Bulletin of the National Museum of Canada* 92: 78. 1940, *Botaniska Notiser* 114: 49. 1961, *Zlaki SSSR* 486. 1976, *The Flora of Canada* 1: 51. 1978.

in English: pendantgrass, Arctic march grass

Arctopoa (Griseb.) Probatova = *Poa* L.

Greek *arktos* "a bear, the north" and *poa* "grass, pasture grass."

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Poinae, see *Species Plantarum* 1: 67-70. 1753, *Flora Altaica* 1: 96-97. 1829, *Reliquiae Haenkeanae* 1(4-5): 273. 1830, *Flora Rossica* 4(13): 392. 1852, *The Flora of British India* 7(22): 339. 1897 [1896] and *Arctic. Fl. SSSR* 2: 121-122. 1964 [*Flora Arctica URSS*], *Novosti Sist. Vyss. Rast.* 8: 34. 1971, *Novosti Sist. Vyss. Rast.* 11: 32, 49-52. 1974, *Novosti Sist. Vyss. Rast.* 13: 41. 1976, *Bot. Zhurn. SSSR* 69(12): 1699-1700. 1984, *Contributions from the United States National Herbarium* 48: 505-580. 2003.

Argillochloa W.A. Weber = *Festuca* L.

Greek *argillos* "white clay, argil" and *chloe, chloa* "grass."

Pooideae, Poeae, Loliinae, type *Argillochloa dasyclada* (Hack. ex Beal) W.A. Weber, see *Species Plantarum* 1: 73-76. 1753, *Grasses of North America (edition 2)* 2: 602. 1896 and *Phytologia* 55(1): 1. 1984, *Watsonia* 16: 300. 1987, *Contributions from the United States National Herbarium* 48: 312-368. 2003.

Argopogon Mimeur = *Ischaemum* L.

From the Greek *argos* "white" and *pogon* "beard."

Panicoideae, Andropogoneae, Ischaeminae, type *Argopogon vuilletii* Mimeur, see *Species Plantarum* 2: 1049. 1753 and *Revue internationale de botanique appliquée et*

d'agriculture tropicale 31: 211, 213. 1951, *Flora Mesoamericana* 6: 386-387. 1994, *Contributions from the United States National Herbarium* 46: 275-276. 2003.

Aristaria Jungh. = *Themeda* Forssk.

Latin *arista* for “the awn” or “beard” of grain.

Panicoideae, Andropogoneae, Anthistiriinae, type *Aristaria barbata* Jungh., see *Flora Aegyptiaco-Arabica* 178. 1775, *Tijdschrift voor Natuurlijke Geschiedenis en Physiologie* 7: 296-297. 1840, *Tijdschrift voor Natuurlijke Geschiedenis en Physiologie* 10: 117. 1843, *The Fodder Grasses of Northern India* 43. 1888, *Monographiae Phanerogamarum* 6: 676. 1889 and *Contributions from the United States National Herbarium* 46: 613. 2003.

Aristavena F. Albers & Butzin = *Deschampsia* P. Beauv.

Latin *arista* and *avena*.

Pooideae, Poeae, Airinae, type *Aristavena setacea* (Huds.) F. Albers & Butzin, see *Flora Anglica* 30. 1762, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Catalogue Raisonné des Graminées de Portugal* 33. 1880 and *Willdenowia* 8(1): 83. 1977, *Watsonia* 19: 134-137. 1992, *Plant Systematics and Evolution* 205: 99-110. 1997, *Opera Botanica* 137: 1-42. 1999, *Contributions from the United States National Herbarium* 48: 245-246. 2003.

Aristella Bertol. = *Achnatherum* P. Beauv., *Aristella* (Trin.) Bertol., *Aristella* Kütz. (Algae), *Stipa* L.

From the Latin *arista* “the awn.”

Pooideae, Stipeae, Stipinae, type *Aristella bromoides* (L.) Bertol., see *Species Plantarum* 1: 78-79. 1753, *Mantissa Plantarum* 30. 1767, *Essai d'une Nouvelle Agrostographie* 19-20, 146, pl. 6, f. 7. 1812, *Fundamenta Agrostographiae* 110. 1820, *Flora Italica* 1: 690. 1833, *Linnaea* 8: 563. 1833 [1834] and *Contributions from the United States National Herbarium* 48: 15-18, 617-650. 2003.

Aristida L. = *Aristopsis* Catusus Guerra, *Arthratherum* P. Beauv., *Chaetaria* P. Beauv., *Curtopogon* P. Beauv., *Kielboul* Adans., *Moulinisia* Raf., *Schistachne* Fig. & De Not., *Stipagrostis* Nees, *Streptachne* Kunth, *Streptachne* R. Br., *Trixostis* Raf.

From the Latin *arista*, *ae* “the awn, the beard of an ear of grain,” because many of the species have extremely long awns.

About 250-350 species, cosmopolitan, warm-temperate, tropical and subtropical. Arundinoideae, Aristideae, or Aristidoideae, Aristideae, annual or perennial bunchgrass, herbaceous, caespitose, forming tussocks, slender wiry culms, solid or hollow internodes, no auricles, ligule shortly hairy, leaves flat or often inrolled and mostly basal, leaf blades acute linear to linear-lanceolate to filiform, plants bisexual, if present the hidden cleistogenes in the leaf sheaths, inflorescence a narrow panicle open or spicate, spikelets not secund and pedicellate, 1 bisexual floret, equal or unequal glumes membranous and keeled, lower glume 1-nerved, lemma convolute or involute, lemmas narrow and cylindrical with a 3-branched awn or 3 awns, all 3 awns quite glabrous or upwardly scabrous, callus long and pointed and shortly bearded, small and hyaline palea, lodicules absent or present, 2 or 3 lodicules membranous when present, 1-3 stamens, ovary glabrous, 2 stigmas reddish or dark brown, sharply pointed seeds spear-like, weed species, ornamental, native pasture species, usually not valuable as fodder, the awns of many species can injure livestock, drought-tolerant, growing in semiarid woodlands, bare land, savannah, degraded pastures, rainforest, grassland, pampas, in low rainfall areas, on poor dry soils, in stony arid soils, under certain conditions several species could develop toxic properties, genus divided according to the awn characters, a difficult genus taxonomically, type *Aristida adscensionis* L., see *Species Plantarum* 1: 82. 1753, *Genera Plantarum*. edition 5. 35. 1754, *Familles des Plantes* 2: 31, 539. 1763, *Neues Journal für die Botanik* 3: 255. 1809, *Prodromus Florae Novae Hollandiae* 174. 1810, *Essai d'une Nouvelle Agrostographie* 32, 152, 158-159, t. 8, f. 7. 1812, *Nova Genera et Species Plantarum* 1: 124, t. 40. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1: 142-143, t. 8, f. 3. 1816, *Conspectus Regni Vegetabilis* 50. 1828, *Bulletin Botanique [Genève]* 1: 221. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 83. 1830, *Linnaea* 7(3): 290-291. 1832, *Species Graminum Stipaceorum* 155, 163. 1842, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 252. 1852 and *Bibliotheca Botanica* 85(1): 341. 1915, *Contr. U.S. Natl. Herb.* 22(7): 519, 529. 1924, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Mededeelingen van's Rijks-Herbarium* 58: 34-36, 45-46. 1929, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Kurtziana* 1: 123-206. 1961, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 208-224. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 352-369. 1970, *Brittonia* 23(3): 293-324. 1971, *Folia Primatologica* 21: 36-60. 1974, *Phytologia* 37(4): 317-407. 1977, *Folia Geobotanica et Phytotaxonomica* 16(4): 439. 1981,

Flora Illustrada Catarinense 1(Gram.): 443-906. 1982, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Rhodora* 88(855): 367-387. 1986, *Annals of the Missouri Botanical Garden* 77(1): 139-141. 1990, *Acta Botanica Brasiliica* 4(1): 105-124. 1990, *Taxon* 40: 5-17. 1991, *Boletín de la Sociedad Argentina de Botánica* 29(1-2): 85-92. 1993, *Flora Mesoamericana* 6: 253-257. 1994, *Flora del Valle de Tehuacán-Cuicatlán* 3: 1-35. 1994, *Flora of Ethiopia and Eritrea* 7: 76-85. 1995, *Grassland of China* 1995(1): 16-20. 1995, *Annals of the Missouri Botanical Garden* 82: 593-595. 1995, *Candollea* 53(2): 466-470. 1998, *Bot. Rev.* 64: 1-85. 1998, *Boletim do Instituto de Botânica (São Paulo)* 12: 113-179. 1999, *Acta Botánica Mexicana* 63: 1-45. 2003, *Contributions from the United States National Herbarium* 46: 69-104. 2003, *Flora of Australia* vol. 44B, Poaceae 3: 71-118. 2005.

Species

A. sp.

in Nigeria: ulumboju

in Mexico: pasto

A. abnormis Chiov. (*Aristida redacta* auct. non Stapf)

Ethiopia, Somalia, Arabia. Annual, slender, tufted, wiry, erect, spreading, branched, loose and open inflorescence paniculate, glumes subequal narrowly lanceolate, lower glume usually deciduous, lemma scabrous to scabrid, column without an articulation, lateral awns absent or reduced, hillsides, limestone, dry sandy areas, stony soils, related to *Aristida refracta* Griseb., see *Annuario del Reale Istituto Botanico di Roma* 8(1): 48, t. 6. 1903.

in Somalia: tiif

A. achalensis Mez (*Aristida achalensis* var. *elongata* Henrard; *Aristida achalensis* var. *tucumana* (Henrard) Henrard; *Aristida decipiens* Henrard; *Aristida elongata* Henrard; *Aristida mandoniana* Henrard; *Aristida tucumana* Henrard)

Argentina, Sierra Achala. Perennial, erect, see *Mededeelingen van's Rijks-Herbarium* 40: 55. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 149. 1921, *Mededeelingen van's Rijks-Herbarium* 54: 4. 1926, *Mededeelingen van's Rijks-Herbarium* 54(B): 641-642. 1928, *Mededeelingen van's Rijks-Herbarium* 58(A): 221, t. 102. 1932, *Meded. Rijks-Herb.* 54(C): 712. 1933.

A. achalensis Mez var. *achalensis*

America.

A. achalensis Mez var. *tucumana* (Henrard) Henrard (*Aristida tucumana* Henrard)

America. See *Mededeelingen van's Rijks-Herbarium* 54(B): 641-642. 1928, *Mededeelingen van's Rijks-Herbarium* 58: 234, t. 110. 1932.

A. acuta S.T. Blake

Australia, New South Wales, Queensland. Tufted, perennial, culms thin and few-noded, leaves scabrous, sheath smooth, panicle loose to open and sparse, unequal glumes linear to ovate, lower glume long-acuminate, upper glume abruptly acuminate and entire, lemma with purplish spots, awns flattened to concave to filiform, mostly in open forest, see *Proceedings of the Royal Society of Queensland* 51: 169, t. 4, f. 1-3. 1940.

in English: slender wiregrass

A. acutiflora Trin. & Rupr. (*Aristida brachyptera* var. *acutiflora* (Cosson & Bal.) T. Durand & Schinz; *Aristida zittelii* Asch.; *Arthratherum brachyatherum* var. *acutiflorum* (Trin. & Rupr.) Cosson & Durand; *Stipagrostis acutiflora* (Trin. & Rupr.) De Winter)

Central Africa. See *Species Graminum Stipaceorum* 167. 1842, *Exploration Scientifique de l'Algérie* 2: 291. 1867, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 21: 70. 1880, *Conspectus Florae Africae* 5: 801. 1894 and *Meded. Rijks-Herb.* 54(B): 690. 1928, *Flore de l'Afrique du Nord*: 2: 41. 1953, *Kirkia* 3: 133. 1963.

in Niger: ematale, assoerdin, taerhemut, idébon

A. adoensis Hochst. (*Aristida adoensis* Hochst. ex A. Rich., nom. illeg., non *Aristida adoensis* Hochst.)

Africa, Ethiopia. Perennial, small, erect, tussocky, smooth, leaf blades filiform, basal leaves, inflorescence spiciform, panicle linear, densely crowded spikelets, glumes subequal, lemma keeled, awns subequal, seeds typically 3-awned, grains eaten by baboons, found along roadsides, clearings, well-drained grassland, scrubland, shrubland, wooded grassland, see *Schimperi iter Abyssinicum. Sectio III* 1806. 1844, *Tentamen Florae Abyssinicae ...* 2: 390. 1850.

A. adscensionis L. (*Aristida adscensionis* f. *modestina* Hack.; *Aristida adscensionis* f. *viridis* Kuntze; *Aristida adscensionis* L. subsp. *guineensis* (Trin. & Rupr.) Henr.; *Aristida adscensionis* subvar. *condensata* Hack.; *Aristida adscensionis* var. *abortiva* Beetle; *Aristida adscensionis* var. *abyssinica* (Trin. & Rupr.) Engl.; *Aristida adscensionis* var. *adscensionis*; *Aristida adscensionis* var. *aethiopica* (Trin. & Rupr.) T. Durand & Schinz; *Aristida adscensionis* var. *bromoides* (Kunth) Henrard; *Aristida adscensionis* var. *canariensis* (Willd.) T. Durand & Schinz; *Aristida adscensionis* var. *coarctata* (Kunth) Kuntze; *Aristida adscensionis* var. *condensata* (Hack.) Henrard; *Aristida adscensionis* var. *decolorata* (E. Fourn.) Beetle; *Aristida adscensionis* var. *ehrenbergii* (Trin. & Rupr.) Henrard; *Aristida adscensionis* var. *festucoides* (Poir.) Henrard; *Aristida adscensionis* var. *humilis* (Kunth) Kuntze; *Aristida adscensionis* var. *interrupta* (Cav.) Beetle; *Aristida adscensionis* var. *mexicana* Hack. ex Henrard; *Aristida adscensionis* var. *modesta* Hack.; *Aristida adscensionis* var. *nigrescens* (J. Presl) Beetle; *Aristida adscensionis* var. *normalis* Kuntze; *Aristida*

adscensionis var. *pygmaea* (Trin. & Rupr.) T. Durand & Schinz; *Aristida adscensionis* var. *scabriflora* Hack.; *Aristida adscensionis* var. *strictiflora* (Trin. & Rupr.) T. Durand & Schinz; *Aristida adscensionis* var. *typica* Stapf; *Aristida aethiopica* Trin. & Rupr.; *Aristida aethiopica* (Trin. & Rupr.) Trin. & Rupr. ex Henrard; *Aristida americana* var. *bromoides* (Kunth) Scribn. & Merr.; *Aristida bromoides* Kunth; *Aristida caerulescens* Desf.; *Aristida caerulescens* Desf.; *Aristida canariensis* Willd.; *Aristida coarctata* Kunth; *Aristida confusa* Trin. & Rupr.; *Aristida confusa* (Trin. & Rupr.) Trin. & Rupr. ex Henrard; *Aristida curvata* (Nees) Trin. & Rupr.; *Aristida curvata* (Nees) Trin. & Rupr. ex Henrard; *Aristida curvata* (Nees) Dur. & Schinz; *Aristida curvata* var. *abyssinica* A. Rich.; *Aristida debilis* Mez; *Aristida depressa* auct., non Retz.; *Aristida dispersa* Trin. & Rupr.; *Aristida dispersa* var. *bromoides* (Kunth) Trin. & Rupr.; *Aristida dispersa* var. *coarctata* (Kunth) Trin. & Rupr.; *Aristida dispersa* var. *humilis* (Kunth) Trin. & Rupr.; *Aristida dispersa* var. *nana* Trin. & Rupr.; *Aristida dispersa* var. *nigrescens* (J. Presl) Trin. & Rupr.; *Aristida divaricata* Humb. & Bonpl. ex Willd.; *Aristida ehrenbergii* Trin. & Rupr.; *Aristida ehrenbergii* (Trin. & Rupr.) Trin. & Rupr. ex Henrard; *Aristida fasciculata* Torr.; *Aristida festucoides* Poir.; *Aristida festucoides* Steud. & Hochst.; *Aristida grisebachiana* E. Fourn.; *Aristida grisebachiana* var. *decolorata* E. Fourn.; *Aristida grisebachiana* var. *grisebachiana*; *Aristida guineensis* Trin. & Rupr.; *Aristida humilis* Kunth; *Aristida interrupta* Cav.; *Aristida laxa* Willd. ex Trin. & Rupr.; *Aristida macrochloa* Hochst.; *Aristida mandoniana* Henr.; *Aristida maritima* Steud.; *Aristida mauritiana* Hochst. ex A. Rich., nom. illeg., non *Aristida mauritiana* Kunth; *Aristida modatica* Steud.; *Aristida nana* (Trin. & Rupr.) Steud.; *Aristida nana* Steud.; *Aristida nigrescens* J. Presl; *Aristida peruviana* Beetle; *Aristida pusilla* Trin. & Rupr.; *Aristida schaffneri* E. Fourn.; *Aristida schaffneri* E. Fourn. ex Hemsl.; *Aristida stricta* Michx.; *Aristida stricta* var. *decolorata* E. Fourn. ex Dávila & Sánchez-Ken; *Aristida stricta* var. *grisebachiana* E. Fourn. ex Dávila & Sánchez-Ken; *Aristida submucronata* Schumach.; *Aristida vulgaris* var. *abyssinica* Trin. & Rupr.; *Aristida vulgaris* var. *aethiopica* Trin. & Rupr.; *Aristida vulgaris* var. *canariensis* (Willd.) Trin. & Rupr.; *Aristida vulgaris* var. *curvata* (Nees) Trin. & Rupr.; *Aristida vulgaris* var. *strictiflora* Trin. & Rupr.; *Chaetaria adscensionis* (L.) P. Beauv.; *Chaetaria bromoides* (Kunth) Roem. & Schultes; *Chaetaria canariensis* (Willd.) Nees; *Chaetaria coarctata* (Kunth) Roem. & Schult.; *Chaetaria curvata* Nees; *Chaetaria fasciculata* (Torr.) Schultes; *Chaetaria humilis* (Kunth) Roem. & Schultes; *Chaetaria interrupta* (Cav.) P. Beauv.; *Chaetaria nana* Nees ex Steud.) Tropics, subtropics and warm temperate regions. Annual or short-lived perennial, extremely variable, tufted, yellow to bright green, simple or often branched, culms erect or ascending and many-noded, ligule a ring of hairs, leaf sheath tight and glabrous, narrow and long pointed leaves, flexuous and narrow inflorescence,

panicle usually contracted, young panicles feathery, seed head purplish, spikelets densely clustered on the branches, scabrous and stiff awns terete, glumes usually unequal, upper glume emarginate or bifid, lemma laterally compressed, awns very variable, sharp seeds may penetrate the skin of the sheep, a pioneer grass, useful for erosion control, unpalatable, poor forage, of little or no value for grazing, grazed when young and tender, weed species, in India used for making broomsticks, flowers used topically for itch and ringworm, found in sandy soils, semiarid situations, poor sandy and stony soils, plains and low hills, poor dry soil, cultivated areas, shallow soils on stony hills, open bush, open shrubland, disturbed poor soil, grassland, moist areas, on disturbed and bare soils, wasteland, roadsides, floodplains, along washes and canyons in desert scrub and desert grassland, rocky places, fallows, on rocky slopes, coarse sand, lawn, see *Species Plantarum* 1: 82. 1753, *Flora Atlantica* 1: 109, t. 21, f. 2. 1798, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 45, t. 471, f. 2. 1799, *Flora Boreali-Americana* 1: 41. 1803, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 99. 1809, *Essai d'une Nouvelle Agrostographie* 30, 151, 158. 1812, *Nova Genera et Species Plantarum* 1: 121-122. 1815 [1816], *Systema Vegetabilium* 2: 396. 1817, *Annals of the Lyceum of Natural History of New York* 1(1): 154-155. 1824, *Mantissa* 3(Add.1): 578. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 387. 1829, *Reliquiae Haenkeanae* 1(4-5): 223. 1830, *Nomenclator Botanicus* edition 2 1: 131, 340. 1840, *Florae Africae Australioris Illustrationes Monographicae* 186. 1841, *Species Graminum Stipaceorum* 129-134, 137, 140. 1842, *Abhandlungen der Böhmisches Gesellschaft der Wissenschaften, nebst der Geschichte derselben* 3: 550. 1845, *Tentamen Florae Abyssinicae ...* 2: 392. 1850, *Synopsis Plantarum Glumacearum* 1: 137-139. 1855 [1854], *Flora* 38: 200. 1855, *Biologia Centrali-Americana; ... Botany ...* 3: 542. 1885, *Mexicanas Plantas* 2: 78. 1886, *Conspectus Florae Africae* 5: 799-800. 1894, *The Flora of British India* 7: 224. 1897, *Revisio Generum Plantarum* 3: 340. 1898 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 5. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 89, 91. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 450. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 151. 1921, *Mededeelingen van's Rijks-Herbarium* 40: 55. 1921, *Contr. U.S. Natl. Herb.* 22(7): 542-543. 1924, *Mededeelingen van's Rijks-Herbarium* 54: 2, 9, 13, 15, 21, 54, 62, 112, 124-126, 132-133, 158, 216, 265. 1926-1927, *Mededeelingen van's Rijks-Herbarium* 54(B): 537. 1928, *Kurtziana* 1: 141-142. 1961, *Phytologia* 28(4): 315, 317-318. 1974, *Phytologia* 30(5): 348. 1975, *Fl. Novo-Galic.* 14: 53. 1983, *Madroño* 40: 266. 1993, *Flora del Valle de Tehuacán-Cuicatlán* 3: 9-10. 1994.

in English: annual bristle grass, broomstick grass, annual three-awn, common needle grass, annual three-awned grass,

three-awn, three-awn grass, six-weeks three-awn, sixweeks threeawn, six-weeks three-awn grass, annual stick grass

in French: aristida bleuté

in India: barlia, bhusaria, bundi oobina hullu, cheevam pul, dhonsa, kaadu nose hullu, kaadu sanna hanchi hullu, kodai bala pullu, lappa, mahtari mulmul, mhutari mulmul, nalla putiki, oosi pullu, poraka gaddi, shigan pullu

in Spanish: flechilla, agujilla, plumilla, zacate, zacate de agua, zacate de semilla, zacate tres barbas, tres barbas anual, tres barbas, Aristida común, cola de zorra

in Mexico: pasto, tres barbas, tres barbas anual, zacate de agua, zacate de agua tres barbas, zacate cola de zorra

in Arabic: lhayet lehmar, thunayb

in Ghana: motodo

in Mali: dugun bee, allomoze, tezenat

in Mauritania: lhayet lehmar

in Morocco: chich-ed-dib, tizzit

in Niger: agaemmud, alaemos, budu, kalabon, kalau, seko, subu galigali, wutsiya'r kurege

in Nigeria: ba-zayyana, bazayyanao, datsi, gatsaura, iru ofe, katsaura, lale shamuwa, oka olongo, selbi, tsintsinyar dutse, tsintsinyar dutsee, wicco tenemeje, wutsiyar kurege baki

in Senegal: hetieb, mbol tieb

in Somalia: birre', birreh, bille, harfo, tinleh, madweed, ebateete

in Southern Africa: besemgras, eenjarige steekgras, einjäh-rige stechgras, lossteekgras, steekgras; lefielo (Sotho)

in Sudan: homra, gaaw

in Upper Volta: celbi, selbo

in Yoruba: oka olongo, iru ofe

A. adscensionis L. subsp. *guineensis* (Trin. & Rupr.) Henrard

Tropic, subtropic and warm temperate regions. See *Mededeelingen van's Rijks-Herbarium* 54: 216. 1926.

A. aequiglumis Hack.

South Africa. Tufted, stout, unbranched, short and stout rhizome, leaves mostly basal, dense and contracted inflorescence, glumes subequal to equal, lower glume mucronate, 3 awns, found in seasonally flooded areas, rocky slopes, highveld, bushveld, hillsides, sandy soils, eroded soils, see *Bulletin de l'Herbier Boissier* 3(8): 381. 1895.

in English: curly-leaved three-awned grass

A. altissima Arechav. (*Aristida laevis* (Nees) Kunth; *Chetaria laevis* Nees)

Uruguay. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 384-385. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 192. 1833 and *Anales del Museo Nacional de Montevideo* 4(1): 80-81, 73, t. 5. 1902.

A. amazonensis Longhi-Wagner

Brazil. See *Kew Bulletin* 49(4): 817, f. 1. 1994.

A. amplexifolia Caro & E.A. Sánchez (*Aristida antoniana* Steud. ex Döll)

Argentina. See *Flora Brasiliensis* 2(3): 19. 1878 and *Mededeelingen van's Rijks-Herbarium* 54: 31. 1926, *Darwiniana* 19(2-4): 413-417, f. 1. 1975.

A. anisochaeta Clayton

Ethiopia, Somalia. Perennial or annual, short lived, wiry, much-branched, tufted, delicate open and loose panicle, slender capillary branches, glumes very unequal, lemma fusiform, central awn stout and long, lateral awns very fine and short, found on red sandy soils, plains, limestone, see *Kew Bulletin* 23: 211. 1969, *Kew Bulletin*: 47(2): 277-282. 1992.

in Somalia: xalfo

A. annua B.K. Simon

Australia, Queensland. Vulnerable species, see *Austrobaileya* 2(1): 87, f. 1A. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

A. anthoxanthoides (Domin) Henrard (*Aristida adscensionis* L. var. *anthoxanthoides* Domin; *Aristida adscensionis* var. *subaequiglumis* Domin; *Aristida depressa* sensu Benth., non Retz.; *Aristida peregrina* Henrard) (from the genus *Anthoxanthum* L. and *eidos*, *oides* "resemblance," Greek *anthos* "flower" and *xanthos* "yellow")

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Annual or rarely short-lived perennial, sparsely tufted, small, slender, erect, stems usually bent at the lower nodes, simple or sparsely branched, sheath usually scabrous, bluish green leaves minutely scabrous and rigid, dense oblong spike-like panicle pale yellow, glumes unequal, lower glume acute, upper glume obtuse, glumes mucronate and with scabrid keels, lemma strongly nerved and without an articulation, awns equal and flattened, on clay or heavy soils, palatable and grazed, attractive, see *Species Plantarum* 1: 82. 1753 and *Bibliotheca Botanica* 85(2): 343, t. 15, f. 9-12. 1915, *Mededeelingen van's Rijks-Herbarium* 54: 16, 29-30. 1926.

in English: yellow three-awned grass, yellow three-awn, pale wire grass

A. antoniana Steud. ex Döll (*Aristida amplexifolia* Caro & E.A. Sánchez; *Aristida antoniana* Steud. ex Lechler; *Aristida enodis* Hack.; *Aristida pflanzii* Mez)

South America, Bolivia. Perennial, caespitose, erect, ligule hairy, leaf blades pungent, panicles oblong, glumes lanceolate and subequal, lemma cylindrical, awns persistent and unequal, on rocky places, see *Berberides Americana Australis* 56. 1857, *Flora Brasiliensis* 2(3): 19. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 11: 21.

1912, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 151. 1921, *Darwiniana* 19(2-4): 413-417, f. 1. 1975.

A. appressa Vasey (*Aristida appressa* var. *brevior* Vasey; *Aristida orizabensis* var. *pseudospadicea* (F.T. Hubb.) Henrard; *Aristida pseudospadicea* F.T. Hubb.)

Mexico. Savannah, along roadsides, see *Mexicanas Plantas* 2: 78. 1886, *Contributions from the United States National Herbarium* 1(8): 282. 1893 and *Proceedings of the American Academy of Arts and Sciences* 49(8): 500. 1913, *Mededeelingen van's Rijks-Herbarium* 54(B): 473. 1928.

A. arida B.K. Simon

South Australia. Tufted, perennial, inflorescence narrow and spike-like, glumes smooth and keeled and unequal in length, lemma convolute and densely spiny-tuberculate, awns scaberulous and flattened, not palatable, see *Austrobaileya* 2(1): 87, f. 1B. 1984, *Acta Botanica Yunnanica* 10: 49-54. 1988, *Australian Systematic Botany* 5: 129-226. 1992.

A. arizonica Vasey

U.S. Erect, forage, growing on dry soils, see *Bulletin of the Torrey Botanical Club* 13(2): 27. 1886 and *Contr. U.S. Natl. Herb.* 22(7): 568. 1924, *Phytologia* 37(4): 317-407. 1977, *Memoirs San Diego Society of Natural History* 12: 1-140. 1981.

in English: Arizona three-awn, Arizona threeawn, needle grass

in Spanish: tres aristas

in Mexico: tres aristas arizónico

A. arubensis Henrard

Aruba, the Caribbean, Venezuela. Perennial, caespitose, see *Mededeelingen van's Rijks-Herbarium* 54: 41-42. 1926.

A. asplundii Henrard (for the Swedish botanist Eric (Erik) Asplund, 1888-1974, plant collector in Cuba and South America)

Bolivia, Argentina. Perennial, densely caespitose, coarse, stiff, leaves mostly basal, leaf blades stiff and more or less pungent, inflorescence pyramidal with single branches or rarely 2 together, the whole inflorescence often breaking off at maturity, glumes subequal linear-lanceolate, on grazed land, eroded places, open slopes, see *Mededeelingen van's Rijks-Herbarium* 54: 42-43. 1926, *Sida* 17: 709. 1997.

A. asplundii Henrard var. *asplundii*

America.

A. asplundii Henrard var. *pauciflora* Sulekic

Argentina. See *Darwiniana* 41(1-4): 167-168, f. 4. 2003.

A. australis B.K. Simon

South Australia. Tufted, perennial, leaf blades flat and flexuous, inflorescences loosely contracted, glumes smooth, lemma smooth, awns slender, see *Austrobaileya* 2(1): 88, f. 1C. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

A. balansae Henr.

Asia, Indochina, Vietnam. See *Repertorium Specierum Novarum Regni Vegetabilis* 17: 397. 1921.

in Thailand: ya faek mai, ya phraek mai, ya hang suea, ya hang ma chingchok, yaa faek mai, yaa haang suea, yaa haangmaa ching chok, yaa phraek mai

A. barbicollis Trin. & Rupr. (*Aristida congesta* subsp. *barbicollis* (Trin. & Rupr.) De Winter)

Kenya, South Africa, Mozambique. Perennial, densely tufted, erect, leaf blades linear, leaf sheaths silky, panicle ovate, spikelets clustered, glumes unequal, lower glume lanceolate and acute, upper glume linear and bifid, on disturbed areas, closely related to *Aristida mutabilis* Trin. & Rupr., see *Species Graminum Stipaceorum* 152. 1842 and *Mededeelingen van's Rijks-Herbarium* 58: 132. 1929, *Mededeelingen van's Rijks-Herbarium* 54(C): 705. 1933.

in English: spreading prickle grass, spreading three-awn, spreading bristlegrass

in South Africa: witsteekgras, lossteekgras

A. basiramea Engelman ex Vasey (*Aristida basiramea* var. *basiramea*; *Aristida basiramea* var. *curtissii* (A. Gray) Shinners)

U.S. Annual, short, 3-awned, stems and leaves sparsely hairy, ligule a short ring of hairs, growing on dry sandy soil and open ground, in sand prairie and sand savannah, on sand barrens, abandoned sandy fields, see *Botanical Gazette* 9: 76. 1884, *A Manual of the Botany of the Northern United States (edition 6)* 640. 1890 and *Contr. U.S. Natl. Herb.* 22(7): 533. 1924, *American Midland Naturalist* 23: 633. 1940, *Rhodora* 88(855): 367-387. 1986.

in English: forked-tip three-awn grass, forked threeawn, forking three-awn, forktip three-awn, fork-tip three-awn grass, branching needle-grass

A. behriana F. Muell. (after the German botanist Hans Hermann Behr, 1818-1904, physician, traveler in Australia and California, wrote *Flora of the Vicinity of San Francisco*. San Francisco. 1888; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 154. 1965)

South Australia, Victoria, New South Wales, Queensland, Northern Territory. Perennial, forming low open tussocks, small, short, erect, rigid, culms simple and compressed, sheath scaberulous, leaf blade convolute and scabrous, inflorescence dense and contracted, panicle brush-like and purplish, glumes unequal, lemma convolute and more or less smooth, awns often purple filiform and stiff, ornamental and showy, drought-resistant, growing in dry areas, open woodlands and grasslands, on loamy soils, see *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1: 44. 1855 and *Mededeelingen van's Rijks-Herbarium* 54: 52. 1926, *Brunonia* 3(2): 271-333. 1980, *Australian Systematic Botany* 5: 129-226. 1992.

in English: brush wire grass, bunch wire grass, three-awned grass

A. benthamii Henrard (after the English (b. Devon) botanist George Bentham, 1800-1884 (London), son of Samuel Bentham and nephew of Jeremy Bentham, taxonomist, from 1829 to 1840 Secretary of the Horticultural Society, 1862 Fellow of the Royal Society of London and in 1826 of the Linnean Society, from 1861 to 1874 President of the Linnean Society, among his most valuable writings are *Handbook of the British Flora*. London 1858, *Flora hongkongensis*. London 1861, *Labiatarum genera et species*. London 1832-1836, *The Botany of the Voyage of H.M.S. Sulphur*, under the command of captain Sir Edward Belcher ... during the years 1836-1842. London 1844[-1846] and *Catalogue des plantes indigènes des Pyrénées et du bas Languedoc*. Paris 1826 author of most of the *Genera Plantarum* (London 1862-1883) of Bentham and Joseph Dalton Hooker (1817-1911) and in collaboration with Ferdinand Mueller of *Flora Australiensis*. London 1863-1878, his herbarium amounted to over 100,000 specimens. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 165. 1965; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 34. 1972; George Taylor, in *D.S.B.* 2: 614-615. 1981; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; B. Daydon Jackson, *George Bentham*. London 1906; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Francis Wall Oliver (1864-1951), editor, *Makers of British Botany*. Cambridge 1913; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 130. Oxford 1964; Mea Allan, *The Hookers of Kew*. London 1967; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 447. 1973; Merle A. Reinikka, *A History of the Orchid*. Timber Press 1996; Emil Bretschneider, *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898.] Leipzig 1981; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980)

Australia, Queensland, New South Wales, Tasmania. Perennial, densely and compactly tufted, slender, simple or branched, culms terete or compressed, sheath scabrous, leaves flexuous to curly, panicle contracted and narrow or loose and open, subequal or unequal glumes linear to ovate, lower glume long-acuminate, upper glume with a bifid apex and a mucro between the lobes, lemma linear to elliptic dark or purple, awns filiform, tolerates stock grazing, grows in sandy soils, in poor gravelly soils, in Tasmania endangered, see *Mededeelingen van's Rijks-Herbarium* 58(A):

246, t. 117. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 705. 1933, *Brunonia* 3(2): 271-333. 1980, *Austrobaileya* 2(1): 87-102. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

in English: three-awned spear-grass, wire grass

A. benthamii Henrard var. **benthamii**

Queensland, New South Wales. Lemma without tubercles, see *Australian Systematic Botany* 5: 129-226. 1992.

A. benthamii Henrard var. **spinulifera** B.K. Simon

Queensland, New South Wales. Lemma with tubercles, see *Austrobaileya* 2(1): 94. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

A. beyrichiana Trin. & Rupr. (*Aristida stricta* auct. nonn.; *Aristida stricta* Michx.; *Aristida stricta* Michx. var. *beyrichiana* (Trin. & Rupr.) D.B. Ward)

U.S., Florida, South Carolina. Perennial, tufted, ground cover, bunchgrass, green, fire-stimulated flowering, cover for bird nesting, growing in scrubby flatwoods, fields, grasslands, bogs, roadsides, mesic flatwoods, open woods, savannahs, see *Flora Boreali-Americana* 1: 41. 1803, *Species Graminum Stipaceorum* 104. 1842 and *Rhodora* 95(881): 25-37. 1993, *Novon* 11(3): 362. 2001.

in English: wire grass, wiregrass, three-awn wiregrass, southern wiregrass, Beyrich's three-awn

A. biglandulosa J.M. Black (*Aristida biglandulosa* var. *laevis* B.K. Simon)

Australia, Northern Territory. See *Transactions and Proceedings of the Royal Society of South Australia* 57: 146, t. 8, f. 9. 1933, *Austrobaileya* 2(1): 95, f. 5C. 1984, *Australian Systematic Botany* 5: 177. 1992.

A. biglandulosa J.M. Black var. **biglandulosa**

South Australia, Queensland. Perennial, tufted, robust, branched, glaucous, leaf blades scabrous above, inflorescence narrow-cylindrical, glumes cuspidate and with scarbid keels, awns subequal, grazed when young.

in English: two-gland three-awn, two gland threeawn

A. bipartita (Nees) Trin. & Rupr. (*Chaetaria bipartita* Nees)

South Africa, Mozambique. Perennial, tufted, weak, erect or geniculate, hard leaves, open panicle with stiff branches, spikelets purplish 3-awned, lower glume awned, the whole inflorescence breaks off at maturity, unpalatable, very low grazing value, common in moist areas, on soils very clayey, overgrazed veld, in disturbed areas, near vleis, along roadsides, see *Florae Africae Australioris Illustrationes Monographicae* 187. 1841, *Species Graminum Stipaceorum* 144. 1842.

in English: rolling grass, rolling three-awned grass, three-awn rolling grass

in Southern Africa: krulgras, rolgras, rolsteekgras, steekgras; bohlayana-ba-pere (Sotho)

A. bissei Catusas

Cuba. See *Novosti Sist. Vyss. Rast.* 20: 7. 1983, *Acta Botanica Cubana* 24: 4. 1985.

A. blakei B.K. Simon (for Stanley Thatcher Blake, 1910-1973)

Queensland, New South Wales. Annual or very short-lived perennial, tufted, smooth, glaucous, many branched at the lower nodes, sheath smooth, narrow panicle loosely contracted and with branches erect, subequal or unequal glumes lanceolate and notched, mauve lemma linear-elliptic and tuberculate, awns filiform and divergent, grows on clay and sandy soils, see *Austrobaileya* 2(1): 88, f. 1D. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

A. brachyathera Coss. & Balansa (*Aristida brachyathera* (Coss. & Durieu) Diels; *Arthratherum brachyatherum* (Coss. & Balansa) Coss. & Durieu; *Stipagrostis brachyathera* (Coss. & Balansa) De Winter)

Algeria. Rare species, see *Bulletin de la Société Botanique de France* 5: 169, 786. 1858, *Exploration Scientifique de l'Algérie* 2: 290. 1867 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 54. 1917, *Kirkia* 3: 133. 1963.

A. brainii Melderis

Zimbabwe. Rare species, see *Boletim da Sociedade Brotteriana, ser. 2* 44: 279. 1970.

A. brasiliensis Longhi-Wagner (*Aristida implexa* Trin.; *Aristida megapotamica* Spreng.)

Brazil. Solitary, on moist ground, see *Systema Vegetabilium, editio decima sexta* 4: 31. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4: 48. 1836 and *Novon* 2(1): 36-37, 39, f. 1. 1992.

A. brittonorum Hitchc. (Nathaniel Lord Britton 1859-1934, Elizabeth Gertrude Britton 1858-1934)

Cuba. Endangered species, perennial, stout, erect, leaf blades involute, narrow panicle, glumes acuminate, awns subequal, found in white sand, see *Contributions from the United States National Herbarium* 22(7): 584. 1924, *Fontqueria* 46: [i-ii], 1-259. 1997.

A. burbridgeae B.K. Simon (*Aristida pruinosa* var. *tenuis* C. Gardner)

Western Australia. Perennial, loosely tufted, branched, inflorescence spicate, similar to *Aristida latzii*, see *Bibliotheca Botanica* 85(2): 345-346. 1915, *Flora of Western Australia* 1(1): 168. 1952, *Austrobaileya* 2(1): 89, f. 1G. 1984.

A. burraensis B.K. Simon

Queensland, North Kennedy District, Burra Range. Perennial, compactly tufted, branched or unbranched, congested inflorescence spicate, lemma with terete awns, similar to *Aristida nitidula* and *Aristida latzii*, see *Austral. Syst. Bot.* 5: 211, f. 15E, *Austrobaileya* 2(1): 89, f. 1G. 1984.

A. calcicola Hitchc. & Ekman

Cuba. See *North American Flora* 17(5): 405. 1935.

A. californica Thurber (*Aristida californica* var. *fugitiva* Vasey; *Aristida californica* var. *major* Vasey; *Aristida fugitiva* Vasey ex S. Watson; *Aristida jonesii* Vasey; *Aristida peninsularis* Hitchc.)

U.S., Sonora, California, Arizona, Baja California. Annual or perennial, erect or ascending, densely pubescent, densely tufted, leaf blades flat or involute, panicles few-flowered, florets reddish, good forage, sandy beaches, sandy deserts, see *Trans. Calif. State Agric. State Soc.* 134. 1864, *Geological Survey of California, Botany* 2: 289. 1880, *Proceedings of the California Academy of Sciences, Series 2, 2*: 212. 1889, *Proceedings of the American Academy of Arts and Sciences* 24: 80. 1889, *Contributions from the United States National Herbarium* 3(1): 48-49. 1892 and *Contributions from the United States National Herbarium* 22(7): 521. 1924, F. Shreve and I.L. Wiggins, *Vegetation and Flora of the Sonoran Desert* 1: 262-266. 1964, *Phytologia* 37(4): 317-407. 1977, *Memoirs of the San Diego Society of Natural History* 12: 1-140. 1981.

A. californica Thurb. var. **californica**

U.S., California. See *Great Basin Naturalist* 52(1): 41-52. 1992.

in English: California three-awn

in Spanish: tres barbas de California

A. californica Thurb. var. **glabrata** Vasey (*Aristida californica* Thurb. var. *major* Vasey; *Aristida glabrata* (Vasey) A.S. Hitchc.)

U.S., Baja California, Mexico. Perennial bunchgrass, small, green to gray-green, not very leafy, stems wiry and hard with sharp ends, short leaves glabrous, slender inflorescence, each spikelet bears at its tip three slender spreading awns, grazed, good forage, withstands rather heavy grazing, growing on dry sandy soils, see *Proceedings of the California Academy of Sciences, Series 2, 3*: 178. 1891 and *Contributions from the United States National Herbarium* 22(7): 522. 1924.

in English: Santa Rita threeawn, threeawn

A. calycina R. Br. (*Aristida glumaris* Henrard)

Western Australia, Queensland, New South Wales, Victoria, Northern Territory. Perennial, tufted, erect, wiry and branched, sheath smooth, leaves scabrous, panicle contracted and usually loose, equal or unequal glumes lanceolate, lower glume acute to acuminate, upper glume obtuse, lemma purple or brown, margins of involute lemma

with rows of tubercles, awns divergent and flattened, on poor and sandy soils, semiarid tropics, see *Prodromus Florae Novae Hollandiae* 1: 173. 1810 and *Bibliotheca Botanica* 85: 345. 1915, *Mededeelingen van's Rijks-Herbarium* 54: 71. 1926, *Mededeelingen van's Rijks-Herbarium* 58(A): 247, 297, t. 117. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 708, 718-719. 1933, *Brunonia* 3(2): 271-333. 1980, *Austrobaileya* 2(1): 95. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

in English: three-awned spear-grass, white spear grass

A. calycina R. Br. var. *calycina* (*Aristida glumaris* Henrard) Western Australia, Queensland, New South Wales, Victoria, Northern Territory. Lemma without tubercles, lower glume shorter than upper, grows on poor and sandy soils, see *Mededeelingen van's Rijks-Herbarium* 54: 71. 1926, *Mededeelingen van's Rijks-Herbarium* 58(A): 247, t. 117. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 718-719. 1933, *Brunonia* 3(2): 271-333. 1980, *Australian Systematic Botany* 5: 129-226. 1992.

in English: dark wire grass, number nine wire-grass

A. calycina R. Br. var. *filifolia* B.K. Simon

Queensland. Loosely tufted, branched, leaf blades filiform, see *Austrobaileya* 2(1): 95. 1984.

A. calycina R. Br. var. *praealta* Domin (*Aristida armata* Henrard; *Aristida praealta* (Domin) Henrard)

Queensland, New South Wales, Northern Territory. Lemma furrow with tubercles, lower glume longer than upper, grows on poor and sandy soils, see *Bibliotheca Botanica* 85(2): 345. 1915, *Mededeelingen van's Rijks-Herbarium* 54: 72. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 463-464. 1927, *Mededeelingen van's Rijks-Herbarium* 58(A): 197, t. 87. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 703-704. 1933, *Austrobaileya* 2(1): 87-102. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

in English: wiregrass

A. canescens Henr.

South Africa. See *Mededeelingen van's Rijks-Herbarium* 58(A): 210, 309, t. 95. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 709. 1933.

A. canescens Henr. subsp. *canescens*

South Africa. Perennial, tufted, slender, erect, more or less unbranched, 3 awns, lower glume unawned, grows on poor and sandy soils, stony soils, eroded ground, disturbed areas.

in South Africa: vaalsteekgras

A. canescens Henr. subsp. *ramosa* De Winter

South Africa. Perennial, tufted, slender, erect, sometimes geniculate, more or less unbranched or culms branched from the upper nodes, contracted inflorescence, 3 awns, lower glume awned, see *Kirkia* 3: 132. 1963.

A. capillacea Lam. (*Aristida capillacea* Cav., nom. illeg., non *Aristida capillacea* Lam.; *Aristida elegans* Rudge; *Aristida sanctae-luciae* Trin.; *Chaetaria capillacea* (Lam.) P. Beauv.; *Chaetaria capillaris* Nees)

Mexico, Bolivia, Brazil. Annual, delicate, very slender, densely tufted, glabrous, erect, often profusely branching from the base, leaf blades linear, sheaths slightly inflated, ligule an irregular rim of hairs, inflorescence a diffuse panicle ovate to oblanceolate, small open spikelets, awns spreading to ascending, glumes unequal lanceolate, very short membranous palea, 2 narrow lodicules, dry savannah, along roads, road banks, open habitats, slopes, mountains, riverbanks, white sandy soil, seasonally humid habitats, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 156. 1791, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 43, t. 468, f. 1. 1799, *Histoire des plantes de la Guiane Française* 22, pl. 30. 1805, *Essai d'une Nouvelle Agrostographie* 30, 158, t. 8, f. 5. 1812, *De Graminibus Paniceis* 25. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 388. 1829 and *Mededeelingen van's Rijks-Herbarium* 54: 80. 1926, *Meded. Rijks-Herb.* 58(C): 531. 1928, *Bol. Inst. Bot.* (São Paulo) 12: 145. 1999.

A. capillifolia Henrard

South Australia. Perennial, tufted, slender, leaf blades filiform and scabrous, inflorescence spike-like and loose, glumes nerved, lemma scabrous, awns subequal and flattened, low palatability, see *Mededeelingen van's Rijks-Herbarium* 58(A): 298, t. 154. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 711. 1933, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Brunonia* 3(2): 271-333. 1980, *Australian Systematic Botany* 5: 220. 1992.

in English: needle-leaved three-awn

A. caput-medusae Domin (*Aristida ramosa* var. *compacta* Benth.; *Aristida vagans* var. *compacta* Benth.)

Queensland, New South Wales. Perennial, erect, tufted, knotty rootstock, culms wiry and strongly branched, sheath smooth, leaves scabrous, dense spike-like panicle oblong-ovate, glumes acute to obtuse, upper glume acuminate and sometimes notched, lemma purple, awns divergent, on rocky hillsides, on loamy red earth soils, see *Icones Plantarum* 5: 45, t. 471, f. 1. 1799, *Prodromus Florae Novae Hollandiae* 1: 173. 1810, *Flora Australiensis: A Description ...* 7: 563. 1878 and *Bibliotheca Botanica* 85(2): 344, t. 14, f. 3-5. 1915, *Mededeelingen van's Rijks-Herbarium* 54(B): 654. 1928, *Brunonia* 3(2): 271-333. 1980, *Australian Systematic Botany* 5: 129-226. 1992.

in English: many-headed wiregrass

A. chapadensis Trin.

South America. Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série.*

Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 4,2(1): 48. 1836.

A. chaseae A.S. Hitchc. (dedicated to the American botanist Mary Agnes Chase (née Merrill), 1869-1963, agrostologist, plant collector, traveler)

Puerto Rico. Perennial, decumbent, endangered species, found on stony places, open habitats, see *Contributions from the United States National Herbarium* 22(7): 575. 1924, *Sida* 13(4): 423-447. 1989.

in English: Chase's three-awn grass, Chase's three-awn

A. chichlayense Tovar (also *chichlayensis*) (Peru, Lambayeque, Chiclayo)

Peru. Rare species, small, annual, caespitose, see *Publicaciones del Museo de Historia Natural "Javier Prado." Serie B. Botánica* 32: 11. 1984, *Madroño* 40(4): 266-267. 1993.

A. circinalis Lindm. (*Aristida acuminata* Hack.; *Aristida aristiglumis* Caro; *Aristida leptochaeta* Hack.; *Aristida misionum* Mez; *Aristida rosacea* Mez; *Aristida succedanea* Henrard)

South America, Brazil. Perennial, caespitose, erect, leaf blades involute, panicle narrowly oblong, glumes lanceolate, awns ascending, low forage value, stony places, similar to *Aristida succedanea* Henrard and *Aristida aristiglumis* Caro, see *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 13, t. 7A. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 344. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 313. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 151. 1921, *Mededeelingen van's Rijks-Herbarium* 58(A): 294, t. 144. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 740-741. 1933, *Kurtziana* 1: 198-201, f. 18D-F. 1961.

A. cognata Trin. & Rupr. (*Aristida cognata* var. *media* Trin. & Rupr.)

West Indies. Forming clumps, see *Species Graminum Stipaceorum* 127-128. 1842 and *Manual of the Grasses of the West Indies* 1936, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979, *Sida* 13(4): 423-447. 1989, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996.

in English: spreading three-awn

A. condensata Chapman (*Aristida combsii* Scribn. & C.R. Ball; *Aristida condensata* var. *combsii* (Scribn. & Ball) Henr.; *Aristida stricta* var. *condensata* (Chapm.) Vasey) (for Robert Combs, 1872-1899)

Warm regions, U.S., Florida. In dry soil, sandy soils, see *Flora Boreali-Americana* 1: 41. 1803, *Botanical Gazette* 3(3): 19. 1878, *Contributions from the United States National Herbarium* 3(1): 45. 1892 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24:

43, f. 17. 1901, *Mededeelingen van's Rijks-Herbarium* 54: 108. 1926.

in English: Piedmont three-awn grass

A. condylifolia Caro

Argentina. See *Darwiniana* 14(2-3): 391. 1967.

A. congesta Roemer & Schultes (*Aristida alopecuroides* Hack.; *Aristida congesta* var. *megalostachya* Henrard; *Aristida congesta* var. *pilifera* Chiov.; *Aristida elyptrophoroides* Chiov.; *Chaetaria congesta* (Roem. & Schult.) Nees)

Southern Africa, Kenya, Namibia, Mozambique, Yemen. Perennial or annual, small, slender, erect, tufted or densely tufted, ligule a fringe of hairs, leaves rolled and glabrous, spike-like panicle dense and contracted with the primary branches erect, white flower heads, glumes unequal terminating in a short awn point, lemma scabrid, awns more or less equal, pioneer grass grazed by the sheep, stems eaten by baboons, found in waste ground, open sandy plains, deserts and xeric shrublands, semiarid woodlands, degraded sites, sandy soil, clayey soils, rocky sandy soils, similar to *Aristida barbicollis* Trin. & Rupr., see *Systema Vegetabilium* 2: 401. 1817, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 189. 1841, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 144. 1888 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 333-334. 1908, *Agricoltura Coloniale* 18: 351. 1924, *Mededeelingen van's Rijks-Herbarium* 58: 126. 1929, *Mededeelingen van's Rijks-Herbarium* 54(C): 711. 1933, *Prodromus einer Flora von Südwestafrika* 160: 1-228. 1970.

in English: tassel bristlegrass, white stickgrass, tassel three-awn

in South Africa: katstertsteekgras, witsteekgras, steekgras, aapstertsteekgras, bolepo, lefielo

A. congesta Roemer & Schultes subsp. *barbicollis* (Trin. & Rupr.) De Winter (*Aristida barbicollis* Trin. & Rupr.)

Africa. Annual to perennial, tufted, slender, leaf sheath keeled, ligule a ring of hairs, open panicle, clusters of spikelets, a single floret with a tripartite awn, lower glume awned, very low grazing value, a pioneer grass, seeds penetrate the fleece, found in grassland areas, overgrazed veld, on disturbed areas, rocky hillsides, uncultivated lands, along roadsides, shallow sandy soils, dry areas, bushveld, see *Species Graminum Stipaceorum* 152. 1842.

in English: buffalo grass, piercing grass, spreading three-awn, spreading prickle grass, stick grass, tassel bristle grass, tassel three-awn, white stick grass, perennial stick grass, perennial bristle grass

in South Africa: aapstertsteekgras, besempol, duin(e)steekgras, katstertsteekgras, klossaadsteekgras, klitsgras, kortbeensteekgras, kortsteekgras, langsteekgras, lossteekgras, rotstertsteekgras, steekgras, witsteekgras; lefielo (Sotho)

A. congesta Roem. & Schult. subsp. **congesta** (*Aristida alopecuroides* Hack.; *Aristida longicauda* Hack. & Henriques; *Aristida longicauda* Hack.)

South Africa. Perennial or annual, densely tufted, slender, erect or geniculate, sometimes branched from the lower nodes, leaf sheath keeled, ligule a fringe of short hairs, leaf blades glabrous, spike-like panicle very dense and contracted, single floret with a 3-partite awn, lower glume awned, a pioneer grass, little value as grazing, grazed only when young, seeds penetrate the fleece, common in bushveld, grassland, hard or stony sites, semiarid regions, on loamy soil, denuded soil, savannah, along roadsides, uncultivated lands, overgrazed veld, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 144. 1888, *Boletim da Sociedade Broteriana* 6: 143. 1888.

in English: buffalo grass, cat's-tail three-awned grass, piercing grass, stickgrass, tassel three-awned grass, tassel three-awn

in Southern Africa: katstertsteekgras, klossiesteekgras, kortbeen, meerjarige steekgras, steekgras, ausdauerndes stechgras; lefielo (Sotho)

A. constricta Longhi-Wagner

Brazil. See *Novon* 2(1): 39, f. 2. 1992.

A. contorta F. Muell. (*Aristida arenaria* Gaudich., nom. illeg., non *Aristida arenaria* Trin.; *Aristida arenaria* var. *brevistipitata* Henrard; *Aristida arenaria* var. *hirsuta* Henrard; *Aristida contorta* F. Muell. var. *hirsuta* (Henrard) H. Eichler; *Arthratherum arenarium* (Gaudich.) Nees ex Lehm.)

Australia. Ephemeral or annual or short-lived perennial, more or less drooping, densely tufted, small and weak, culms thin and wiry, sheath scabrous, leaves filiform and wavy, panicle contracted and often nodding, glumes nerved and mucronate to aristulate, lemma convolute and smooth, lemma brownish when mature and with an articulation below a twisted column, awns subequal or equal, the ripe florets can be harmful to animals, fruits round legs can immobilize sheep, grazing grass, moderate feed value when dry, readily eaten by stock especially when green, an increaser species, pioneer grass useful for erosion control and soil binding, coloniser on coastal plains and hind dunes, growing in dry areas, shallow soils, floodplains, mulga areas, on alluvial soils, alluvial plains, open woodlands, on loamy open woodland, on rocky slopes, fore dunes, on sandy soils, on sand clay and sandy loams, parklands, red-earth, sand plains, grasslands, see *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 407. 1830, *Plantae Preissianae* 2: 98. 1846-1847, *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1: 44. 1855 and *Mededeelingen van's Rijks-Herbarium* 54: 36. 1926, *Mededeelingen van's*

Rijks-Herbarium 54(C): 703. 1933, *Supplement to Black's Flora of South Australia* 48. 1965, *Brunonia* 3(2): 271-333. 1980, *Australian Systematic Botany* 5: 129-226. 1992.

in English: mulga grass, sand wire grass, wind grass, silver grass, curly wire grass, sand spear-grass, kerosene grass (= refers to its flammability as it dries), bunch kerosene grass, bunched kerosene grass

A. correlliae P.M. McKenzie, Urbatsch & Proctor (for the American botanist Donovan Stewart Correll, 1908-1983, orchidologist, USDA 1944-1956, Texas Research Foundation 1956-1972, Fairchild Tropical Garden 1973-1983, with Oakes Ames (1874-1950) wrote *Orchids of Guatemala*. Chicago 1952-1953, with Marshall Conring Johnston wrote *Manual of the Vascular Plants of Texas*. Texas Research Foundation, Renner, Texas 1970, he was married to Helen Elizabeth Butts on June 26, 1937. See J.H. Barnhart, *Biographical notes upon botanists* 1: 383. 1965; *Taxon* 32(3): 530. 1983; Donovan S. Correll, *Supplement to Orchids of Guatemala and British Honduras*. Chicago 1965; Helga Dietrich, *Bibliographia Orchidacearum*. Jena 1981)

West Indies. See *Systematic Botany* 15(3): 421-424. 1990.

A. cumingiana Trin. & Rupr. (*Aristida capillacea* Cav., nom. illeg., non *Aristida capillacea* Lam.; *Aristida cumingiana* var. *diminuta* (Mez) Jacq.-Fél.; *Aristida cumingiana* var. *reducta* Pilg.; *Aristida cumingiana* var. *uniseta* Stent & J.M. Rattray; *Aristida delicatula* Hochst. ex A. Rich.; *Aristida diminuta* (Mez) C.E. Hubb.; *Aristida trichodes* (Nees) Walp.; *Aristida tuberculosa* Nutt.; *Chaetaria trichodes* Nees; *Chaetaria tuberculosa* (Nutt.) Schult.; *Stipa diminuta* Mez)

Asia, Philippines. Annual, delicate, solitary or tufted, open inflorescence paniculate, very small spikelets, glumes unequal, lemma lanceolate, awns unequal, in moist areas, damp situations, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 43, t. 468, f. 1. 1799, *The Genera of North American Plants* 1: 57. 1818, *Mantissa* 2: 211. 1824, *Proceedings of the Rhodesia Scientific Association* 32: 48. 1833, *Species Graminum Stipaceorum* 141. 1842, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 101. 1850, *Tentamen Florae Abyssinicae ...* 2: 393. 1850, *Annals of Botany. Oxford* 3: 753. 1853 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 208. 1921, *Meded. Rijks-Herb.* 54: 80. 1926, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 805. 1933, *Kew Bulletin* 4: 480. 1949, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 13: 51. 1966, *Blumea* 37(1): 227. 1992.

in Thailand: ya khon kratai, ya lueat, yaa khon krataai, yaa lueat

A. curtifolia Hitchc.

Cuba. See *Contributions from the United States National Herbarium* 12(6): 235-236. 1909.

A. curvata Nees (*Aristida adscensionis* L.; *Aristida curvata* (Nees) Trin. & Rupr. ex Henrard; *Chaetaria curvata* Nees) Africa. See *Species Plantarum* 1: 82. 1753, *Florae Africae Australioris Illustrationes Monographicae* 186. 1841, *Tentamen Florae Abyssinicae ...* 2: 392. 1850 and *Mededeelingen van's Rijks-Herbarium* 54: 9, 124-126. 1926, *Mededeelingen van's Rijks-Herbarium* 54(B): 487. 1928.

A. cyanantha Steud. (*Chaetaria cyanantha* Nees)

Asia, India, Western Himalaya. Perennial, tufted, bushy, erect, solid, slender, purplish inflorescence, large spreading terminal panicle, a tripartite awn, grazed by cattle when tender, grows in dry places, on dry rocky soil, arid zones, stony soils, see *Synopsis Plantarum Glumacearum* 1: 141. 1855 [1854].

in India: matri jara, suhni, suhi

A. dasydesmis (Pilg.) Mez

South Africa. Perennial, densely tufted, erect, slender, much-branched, leaves folded and rigid, lower glume awnless, 3 awns, common in arid areas, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 148. 1921, *Mededeelingen van's Rijks-Herbarium* 54: 131. 1926.

A. depressa Retz.

Southern India, Sri Lanka. Annual, slender, hard, wiry, erect or ascending, more or less branched, narrow subulate leaves, panicle spike-like interrupted, spikelets sessile narrow and crowded, glumes muticous, thatching and matting grass, used to fill saddles of camels, probably not palatable, low nutritive value, flowers used for itch and ringworm, culms used for making brooms, dry and arid zones, saline habitats, sandy places, sometimes included in *Aristida adscensionis* L., see *Obs. Bot.* 4: 22. 1786 and *Grasses of Ceylon* 63. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 409. 1960.

in India: choti parba, ghyan, ghyani, lam, lam'e, lamb, lamba, lamp, nalli pootiki, rampla, sinka

in Sri Lanka: teli tana

A. desmantha Trin. & Rupr.

U.S., Texas. Annual, found in open sandy soil or sandy woods, see *Species Graminum Stipaceorum* 109. 1842.

in English: curly three-awn, three awn, curly threeawn, western tripleawn grass, western threeawn

A. dewinteri Giess (after the South African botanist Bernard De Winter (b. 1924), plant collector in the regions of Namibia, first collected this tree in the Kaokoveld, from 1973 to 1989 Director of the Botanical Research Institute, served as President of the South African Association for the Advancement of Science, as well as the South African Association of Botanists and as Chairman of the Advisory Committee for Botanical Research in Agriculture, his writings include "A morphological, anatomical and cytological study of *Potamophila prehensilis* (Nees) Benth." *Bothalia*. 6.

1951, "Plant life of the Namib Desert." *S. Afr. Biol. Soc.* 3: 19-20. 1962 and "South African trees." *S. Afr. For. J.* 88: 6-8. 1974, with M. De Winter and Donald Joseph Boomer Killick wrote *Sixty-Six Transvaal Trees*. Pretoria 1966 and *Know Your Trees. A Selection of Indigenous South African Trees*. Cape Town 1973, with J. Vahrmeijer wrote *The National List of Trees*. Pretoria 1972)

South Africa. Annual, rare, tufted, bright yellow spikelets, glumes with a dark spot, lower glume without a mucro or awn, 3 awns, see *Bothalia* 10(2): 365. 1971.

A. dichotoma Michaux (*Aristida dichotoma* f. *major* Shinnery; *Aristida dichotoma* var. *curtissii* Gray ex S. Watson & Coulter; *Aristida basiramea* Engelmann ex Vasey var. *curtissii* (A. Gray) Shinnery; *Avena paradoxa* Willd. ex Kunth; *Avena setacea* Muhl. ex Trin., nom. illeg., non *Avena setacea* Vill.; *Cyrtopogon dichotomus* (Michx.) P. Beauv.; *Cyrtopogon dichotomus* (Michx.) Spreng.)

U.S., Florida, Texas, Illinois, North Carolina, Canada, Ontario. Annual, central awn bent and basally coiled, side awns straight, growing in dry soil, open upland woods, sterile soils, along highways, rocky prairies, eroded slopes, often in hard white clay soil, see *Flora Boreali-Americana* 1: 41. 1803, *Essai d'une Nouvelle Agrostographie* 32, 159, t. 8, f. 7. 1812, *Systema Vegetabilium, editio decima sexta* 1: 266. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 87. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 188. 1833, *Botanical Gazette* 9: 76. 1884, *A Manual of the Botany of the Northern United States (edition 6)* 640. 1890 and *Contr. U.S. Natl. Herb.* 22(7): 535. 1924, *American Midland Naturalist* 23: 633-634. 1940.

in English: Shinnery's three-awn, Shinnery's three-awned grass, churchmouse three-awn, church mouse three-awn, churchmouse threeawn, povertygrass, poverty-grass, three-awn grass

A. dichotoma Michx. var. *curtissii* Gray ex S. Watson & Coulter (*Aristida basiramea* var. *curtissii* (Gray ex S. Wats. & Coult.) Shinnery; *Aristida basiramea* var. *curtissii* (A. Gray) Shinnery; *Aristida curtissii* (Gray ex S. Wats. & Coult.) Nash; *Aristida curtissii* (A. Gray) Nash; *Aristida dichotoma* var. *curtissii* A. Gray)

U.S. Annual, caespitose, open sandy soils, eroded soils, dry open sites, see *Flora Boreali-Americana* 1: 41. 1803, *Botanical Gazette* 9: 76. 1884, *A Manual of the Botany of the Northern United States (edition 6)* 640. 1890 and *Manual of the Flora of the Northern States and Canada* 94. 1901, *Contr. U.S. Natl. Herb.* 22(7): 535. 1924, *American Midland Naturalist* 23: 633. 1940.

A. dichotoma Michx. var. *dichotoma*

U.S. See *Flora Boreali-Americana* 1: 41. 1803.

A. diffusa Trin. (*Aristida vestita* var. *diffusa* (Trin.) Trin. & Rupr.)

South Africa, Lesotho, Zimbabwe, Botswana. Perennial, caespitose, wiry, flexible leaves, unpalatable, very low grazing value, useful for erosion control, used for making soft brooms, found in shallow and stony soils, dry ground, on sandy soils, open places, poor overgrazed veld, roadsides, see *Prodromus Plantarum Capensium*, ... 19. 1794, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 86. 1830, *Species Graminum Stipaceorum* 157-158. 1842 and *Mededeelingen van's Rijks-Herbarium* 54(B): 665-668. 1928.

in English: copper wiregrass, iron grass

in South Africa: koperdraadgras, ystergras, lefielo, monya

A. diffusa Trin. subsp. *burkei* (Stapf) Melderis (*Aristida burkei* Stapf; *Aristida diffusa* var. *burkei* (Stapf) Schweick.)

Transvaal, South Africa, Lesotho, Zimbabwe, Botswana. Perennial, densely tufted, unbranched or nearly so, slender, dark nodes, auricles glabrous, leaf sheath glabrous, hard leaves, inflorescence an open panicle, spikelets 3-awned, lower glume obtuse and unawned, unpalatable, of little value for grazing, growing on shallow stony soils, in open grassland, on slopes, in overgrazed veld, see *Flora Capensis* 7: 557. 1899 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(122): 195-196. 1938.

in English: iron grass

in South Africa: koperdraadgras, ystergras

A. diffusa Trin. subsp. *diffusa* (*Aristida diffusa* var. *genuina* Henr.; *Aristida diffusa* var. *pseudo-hystrix* (Trin. & Rupr.) Henr.; *Aristida diffusa* var. *pseudohystrix* (Trin. & Rupr.) Henrard)

South Africa. Perennial, erect, slender, densely tufted, unbranched or branched, leaves flexible, 3 awns, common in sandy soils, rocks, disturbed places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 86. 1830, *Species Graminum Stipaceorum* 158. 1842 and *Mededeelingen van's Rijks-Herbarium* 54(B): 471. 1928.

A. divaricata Humb. & Bonpl. ex Willd. (*Aristida barbata* E. Fourn.; *Aristida barbata* E. Fourn. ex Hemsl.; *Aristida divaricata* J. Jacq., nom. illeg., non *Aristida divaricata* Humb. & Bonpl. ex Willd.; *Aristida divaricata* Lag., nom. illeg., non *Aristida divaricata* Humb. & Bonpl. ex Willd.; *Aristida divaricata* Lag. ex Henrard, nom. illeg., non *Aristida divaricata* Humb. & Bonpl. ex Willd.; *Aristida havardii* Vasey; *Aristida humboldtiana* Trin. & Rupr.; *Aristida jacquiniana* var. *subaequilonga* Henrard; *Aristida lemmonii* Scribn.; *Aristida mexicana* Scribn. ex Henrard; *Aristida oligantha* Michx.; *Aristida palmeri* Vasey; *Aristida scova* Vasey ex Beal; *Chaetaria divaricata* (Humb. & Bonpl. ex

Willd.) P. Beauv.) (after the French-born American botanist Valéry Havard, 1846-1927, physician, botanical collector in Texas and the Southwest; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 140. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Joseph Ewan, *Rocky Mountain Naturalists*. 224-225. The University of Denver Press 1950; Joseph William Blankinship (1862-1938), "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904 [1905]; F.A. Stafleu and R.S. Cowan, *Taxonomic literature*. 2: 105. Utrecht 1979)

U.S., Texas, California, Mexico. Perennial bunchgrass, erect, simple, glabrous, dark green, leaves mostly basal, very open inflorescence, each spikelet with 3 spreading awns at its tip, twisted awn column, glumes subequal, poor forage, grows on dry rocky hills, sandy fields, desert grassland, see *Flora Boreali-Americana* 1: 41. 1803, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 99. 1809, *Essai d'une Nouvelle Agrostographie* 30, 158. 1812, *Eclogae Graminum Rariorum* 7, t. 6. 1813, *Nov. Gen. Sp.* 1: 123. 1816, *Genera et species plantarum* 3. 1816, *Flora* 19(2): 508. 1836, *Species Graminum Stipaceorum* 118. 1842, *Bulletin of the Torrey Botanical Club* 10: 42. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 532. 1885, *Mexicanas Plantas* 2: 78. 1886, *Bulletin of the Torrey Botanical Club* 13(2): 27. 1886, *Transactions of the New York Academy of Sciences* 14(2): 23. 1894, *Grasses of North America for Farmers and Students* 2: 199. 1896 and *Contr. U.S. Natl. Herb.* 22(7): 548. 1924, *Mededeelingen van's Rijks-Herbarium* 54: 150. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 270, 345-347. 1927, *Phytologia* 37(4): 317-407. 1977.

in English: poverty three-awn, poverty threeawn, spreading threeawn, spreading three-awn grass

in Mexico: tres aristas barbado, tres barbas abierto, zacate

A. divulsa N.J. Andersson (*Chloris anisopoda* Rob.; *Chloris anisopoda* Scribn. ex B.L. Rob.)

Galápagos Islands, Ecuador. Rare species, perennial, erect, densely caespitose, open inflorescence, panicle branches naked at the base, glabrous glumes, awns minutely scabrous, see *Om Galapagos-öarnes Vegetation* 143. Lund 1854, *Kongl. Svensk. Vet.-Akad. Handl.* 1853: 143. 1855 and *Proceedings of the American Academy of Arts and Sciences* 38: 118. 1902, Ira L. Wiggins & Duncan M. Porter, *Flora of the Galápagos Islands* 827-828. Stanford, California 1971, *Patterns of Evolution in Galapagos Organisms* 33-54. 1983, *Reports from the Botanical Institute, University of Aarhus* 16: 1-74. 1987, *Libro Rojo de las Plantas Endémicas del Ecuador* 2000.

A. dominii B.K. Simon

Tropical Australia, Queensland. Annual, compact, tufted, confused with *Aristida hirta* and *Aristida superpendens* see *Austrobaileya* 2(3): 281, f. 1. 1986.

A. echinata Henrard (*Aristida ramosa* var. *scaberula* Henrard)

Queensland. Perennial, coarse, compact, tufted, strongly branched, lemmas tuberculate, see *Prodromus Florae Novae Hollandiae* 1: 173. 1810 and *Mededeelingen van's Rijks-Herbarium* 58(A): 285, t. 139. 1929, *Mededeelingen van's Rijks-Herbarium* 58(A): 260. 1932, *Meded. Rijks-Herb.* 54(C): 713-714, 736. 1933.

A. echinulata Roseng. & Izag.

Uruguay. Perennial, low forage value, see *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 94: 3, f. 1. 1967.

A. ecuadoriensis Henrard

Ecuador. Perennial, caespitose, erect, scabrid, ligule a rim of short hairs, blades of culm leaves folded or involute, narrow inflorescence paniculate, spikelets linear, panicle branches soft, glumes slightly unequal, lemma shortly bearded, palea membranous, lodicules narrowly obovate, 3 stamens, along roadsides, slopes, see *Mededeelingen van's Rijks-Herbarium* 58(A): 307, t. 149. 1932.

A. effusa Henr. (*Aristida caerulescens* var. *brevisetata* Hack.; *Aristida waibeliana* Henrard)

South Africa, Namibia. Annual, erect, tufted, branched, leaf blade glabrous, ligule a fringe of hairs, leaf sheath keeled, open ovate inflorescence, spikelets clustered at the end of the branches, lower glume acute and unawned, 3 awns, pioneer, found in dense stands, unsuitable for grazing, little forage value, common on stony soils, along roadsides, see *Flora Atlantica* 1: 109, t. 21, f. 2. 1798, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 400. 1889 and *Mededeelingen van's Rijks-Herbarium* 54: 155-156. 1926, *Mededeelingen van's Rijks-Herbarium* 54(B): 679-681. 1928.

in English: spreading steekgras, spreading stick grass

in South Africa: pluimsteekgras, rispen-stechgras

A. ekmaniana Henr. (*Aristida ekmaniana* Henrard; *Aristida riparia* sensu Eckm., non Trin.; *Aristida trinii* Henrard) (for the Swedish botanist Erik Leonard Ekman, 1883-1931, explorer, plant collector in Argentina, Brazil, Cuba and Hispaniola. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 502. 1965; Carl Frederik Albert Christensen (1872-1942), *The Collection of Pteridophyta Made in Hispaniola by E.L. Ekman 1917 and 1924-1930*. Stockholm 1936 in *Kongl. Vetenskaps Akademiens Handlingar*. Ser. 3. bd. 16. no. 2; [Por el Dr. Erik L. Ekman.], *Excursión Botánica al Nord-Oeste de la República Dominicana*. Santo Domingo 1930; Ida Kaplan Langman, *A Selected Guide to*

the Literature on the Flowering Plants of Mexico. Philadelphia 1964)

Brazil. Perennial, forming small tufts, see *Mededeelingen van's Rijks-Herbarium* 54: 160-161. 1926, *Mededeelingen van's Rijks-Herbarium* 54(B): 638-640. 1928, *Acta Botanica Brasilica* 4(1): 105-124. 1990, *Boletim do Instituto de Botânica* (São Paulo) 12: 113-179. 1999.

A. elliptica (Nees) Kunth (*Chaetaria elliptica* Nees)

America. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 389-390. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 93. 1833 and *Meded. Rijks-Herb.* 54: 166. 1926, *Bol. Inst. Bot.* (São Paulo) 12: 130. 1999.

A. eludens Allred & Valdés-Reyna

Mexico. See *Novon* 5(3): 212-214, f. 3. 1995.

A. engleri Mez

Africa, Namibia. Perennial, tufted, inflorescence a contracted panicle, pioneer grass, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 147. 1921.

in English: Engler's bristle grass

A. engleri Mez var. *engleri*

South Africa. Perennial, densely tufted, unbranched or sparsely branched, erect to geniculate, leaf blade glabrous, ligule a fringe of short hairs, leaf sheaths of lower leaves keeled, leaves flexible, inflorescence a contracted panicle, lower glume acute, column extending to form three awns, found in rocky places.

in English: Engler's bristle grass, bristle three-awn

in South Africa: Engler-se-steekgras, gelbes stechgras

A. engleri Mez var. *ramosissima* De Winter

South Africa. Perennial, much-branched, tufted, leaf blade more or less expanded, ligule a fringe of short hairs, leaf sheaths keeled, leaves flexible, inflorescence an open panicle, column extending to form three awns, little forage value, on red sandy soils, rocky places, stony soil, see *Kirkia* 3: 132. 1963.

in South Africa: Engler-se-steekgras, gelbes stechgras

A. erecta Hitchc.

Cuba. See *Contributions from the United States National Herbarium* 12(6): 236. 1909.

A. exserta S.T. Blake

Australia, western Australia, Northern Territory, Queensland. Perennial, tufted, compact, thin, fastigiate, inflorescences loosely contracted, small spiciform panicles, lower glumes 3-nerved, lemmas involute, close to *Aristida capillifolia*, see *Proceedings of the Royal Society of Queensland* 51(10): 172, t. 5, f. 6-9. 1940.

A. fendleriana Steud. (*Aristida fasciculata* var. *fendleriana* (Steud.) Vasey ex L.H. Dewey; *Aristida longiseta* var. *fendleriana* (Steud.) Merr.; *Aristida purpurea* Nutt. var. *fend-*

deri Vasey; *Aristida purpurea* Nutt. var. *fendleriana* (Steud.) Vasey; *Aristida subuniflora* Nash)

U.S., New Mexico. Perennial bunchgrass, often weedy, ligules hairy, short curly mostly basal leaves, inflorescence paniculate, tripartite awn, colonizer grass, forage, found on sandy or gravelly soils, dry sandy soils, disturbed sites, sandy loams soils, see *Annals of the Lyceum of Natural History of New York* 1(1): 154-155. 1824, *Transactions of the American Philosophical Society, new series*, 5: 145. 1837, *Synopsis Plantarum Glumacearum* 1: 420. 1855 [1854], *Catalogue of Plants* 55. 1874, *Contributions from the United States National Herbarium* 3(1): 46. 1892, *Contributions from the United States National Herbarium* 2(3): 515. 1894 and *Circular, Division of Agrostology, United States Department of Agriculture* 34: 5-6. 1901, *Flora of the Southeastern United States ...* 116. 1903, *Great Basin Naturalist* 50: 74. 1990.

in English: Fendler threeawn, threeawn

in Mexico: tres aristas largo

A. ferrilateris S.M. Phillips (*Aristida adoensis* auct.)

Arabia, Yemen. Perennial, erect, densely tufted, smooth, leaves flat or involute, panicle contracted with branches erect or spreading or deflexed, glumes more or less equal terminating in a short awn point, smooth lemma, awns unequal, grows on open grassy cliff edges, rocky slopes, in shallow grassland among rocks, related to *Aristida adoensis* Hochst., see *Kew Bulletin* 41(4): 1029. 1986.

A. filifolia (Arechav.) Herter (*Aristida pallens* f. *filifolia* Arechav.; *Aristida pallens* f. *rubelliana* Arechav.; *Aristida pallens* var. *patula* Trin. & Rupr.; *Aristida pallens* var. *tragopogon* Trin. & Rupr.; *Aristida rubelliana* (Arechav.) Herter)

Uruguay. Perennial, low forage value, stony places, hills, slopes, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 43, t. 468, f. 2. 1799, *Species Graminum Stipaceorum* 116-117. 1842 and *Anales del Museo Nacional de Montevideo* 4(1): 72, 75, pl. 2. 1902, *Revista Sudamericana de Botánica* 6(5-6): 141. 1940, *Revista Sudamericana de Botánica* 9: 99. 1953.

in Spanish: espartillo

A. flabellata Caro

Argentina. See *Kurtziana* 1: 148-150, f. 4D-F. 1961.

A. flabellata Caro var. *flabellata*

Argentina.

A. flabellata Caro var. *glabriflora* Caro

America. See *Kurtziana* 1: 150-151. 1961.

A. flaccida Trin. & Rupr. (*Aristida flaccida* var. *uniglumis* Döll; *Aristida laxa* Trin. ex Henrard, nom. illeg., non *Aristida laxa* Cav.)

Brazil. In dry areas, see *Species Graminum Stipaceorum* 117-118. 1842, *Flora Brasiliensis* 2(3): 13. 1878 and *Mededeelingen van's Rijks-Herbarium* 54: 178-179, 202. 1926.

A. flexuosa E. Fourn. (*Aristida flexuosa* E. Fourn. ex Hemsl.; *Aristida schiedeana* Trin. & Rupr.; *Aristida schiedeana* var. *schiedeana*)

Mexico. See *Species Graminum Stipaceorum* 120-121. 1842, *Biologia Centrali-Americana; ... Botany ...* 3: 533. 1885, *Mexicanas Plantas* 2: 77. 1886.

A. floridana (Chapman) Vasey (*Ortachne floridana* (Chapm.) Nash; *Streptachne floridana* Chapm.)

U.S., Florida. Endangered species, see *Flora of the Southern United States* 554. 1860, *A Descriptive Catalogue of the Grasses of the United States* 35. 1885 and *Flora of the Southeastern United States ... edition 2* 119. 1903, Robert W. Long and Olga Lakela, *A Flora of Tropical Florida* Coral Gables, Fla. 1971.

in English: Key West three-awn, Key West threeawn, Key West three-awned grass, Florida three-awned grass

A. forsteri B.K. Simon

Australia, southern Queensland. Perennial, compact, tufted, branched, inflorescences loosely contracted, lower glume 1-nerved, similar to *Aristida muricata*, see *Austrobaileya* 4(2): 147. 1994.

A. fragilis Hitchc. & Ekman

Cuba. Perennial, erect, caespitose, wiry, slender, glabrous, leaf sheaths glabrous, ligule a ciliate membrane, awn bent at the base, see *North American Flora* 17(5): 393. 1935.

A. friesii Hack. ex Henrard

Bolivia. See *Mededeelingen van's Rijks-Herbarium* 54: 186-187. 1926.

A. funiculata Trin. & Rupr. (*Aristida macrathera* A. Rich.)

North Africa to Pakistan, Somalia, Sudan, White Nile region, boundary between the Saharan and Sahelian zones. Annual, erect, wiry, very slender, densely tufted, short, many stemmed, leaves flat or folded, contracted panicle linear, unequal glumes linear-lanceolate, lower glume longer than the upper, awns more or less equal, long filiform awns with three capillary branches, used for fodder, eaten by cattle in the young stage and when tender, desert grass, on very poor dry rocky soil, dry sandy soils, stony plain, see *Nomenclator Botanicus. Editio secunda* 1: 131. 1840, *Species Graminum Stipaceorum* 159. 1842, *Tentamen Florae Abyssinicae ...* 2: 393. 1850, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 21: 160, 183. 1852, *Beiträge zur Flora der Cap Verdischen Inseln* 140. Heidelberg 1852, *Journal of the Proceedings of the Linnean Society* 6: 209. 1862, *The Flora of British India* 7: 227. 1896 and *Bibliotheca Botanica* 85(2): 338. 1915, *Mededeelingen van's Rijks-Herbarium* 54: 328, 425. 1927, *Bul-*

letin de la Société d'Histoire Naturelle de l'Afrique du Nord 32: 218. 1941.

in India: bhurbhur, charbi jara, choti bhurri, mohwa bhuski, mowha bhuski, rusli, sarfi

in Mali: holu, kasso, kelbi, ngasan, nkassa, selbére

in Niger: alaemos, bu kraiba, buta'n kurege, chinini, fari n'tchawa, fari'n tchawa, kalawu, korom, lakelwado, so ka tumbi, sowulgumm, taelummus, tazima, tazmei, wudhuwo, zangua

in Nigeria: datsi

in Senegal: dohandok, galé kiam

in Somalia: birreh, bille

in Upper Volta: bissi, celbi, fitaako, hudo ranecho, selbo, sudumore

A. funiculata Trin. & Rupr. var. **funiculata** (*Aristida funicularis* Trin. ex Steud.; *Aristida funicularis* Edgew.)

North Africa. See *Nomenclator Botanicus. Editio secunda* 1: 131. 1840, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 21: 160, 183. 1852.

A. funiculata Trin. & Rupr. var. **mallica** (Edgew.) Henrard (*Aristida mallica* Edgew.)

Asia, India. Dwarf, leaves scabrous, pilose, glumes nearly equal, see *Journal of the Proceedings of the Linnean Society* 6: 209. 1862 and *Mededeelingen van's Rijks-Herbarium* 54: 328. 1927.

A. geminiflora E. Fourn. (*Aristida fournieriana* Hitchc.; *Aristida geminiflora* Steud.)

Mexico. See *Synopsis Plantarum Glumacearum* 1: 144. 1854, *Mexicanas Plantas* 2: 77. 1886 and *North American Flora* 17: 384. 1935.

A. gibbosa (Nees) Kunth (*Aristida marginalis* Ekman; *Aristida orizabensis* E. Fourn. ex Hemsl.; *Aristida orizabensis* E. Fourn., in Mexico, Veracruz, Valle de Orizaba; *Aristida sorzogonensis* J. Presl; *Chaetaria gibbosa* Nees)

Mexico, Honduras, Brazil. Perennial, erect, simple, glabrous, basal leaves, leaf blades not spirally coiled, lateral awns ascending, forage, in savannah, moist savannah, rocky places, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 383-384. 1829, *Reliquiae Haenkeanae* 1(4-5): 224. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 189. 1833, *Biologia Centrali-Americana; ... Botany ...* 3: 534. 1885, *Mexicanas Plantas* 2: 78. 1886 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 23, t. 3, f. 2, t. 6, f. 12. 1911, *Proceedings of the American Academy of Arts and Sciences* 49(8): 500. 1913, *Mededeelingen van's Rijks-Herbarium* 54(B): 473. 1928.

A. glaziovii Hack. ex Henrard

Brazil. See *Mededeelingen van's Rijks-Herbarium* 54: 204. 1926.

A. gracilipes Henrard (*Aristida vagans* var. *gracilipes* Domin; *Aristida vagans* var. *gracillima* Benth.)

Queensland, New South Wales. Perennial, bushy, slender, loosely tufted, culms terete and branched, leaves finely pointed and long scabrous, panicle loose to open, glumes lanceolate and acuminate, upper glume obtuse and notched, beaked lemma linear to elliptic, awns erect or divergent, rainforest, in woodland, similar to *Aristida caput-medusae* and *Aristida vagans*, see *Icones Plantarum* 5: 45, t. 471, f. 1. 1799, *Flora Australiensis: A Description ...* 7: 563. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 9: 551. 1911, *Mededeelingen van's Rijks-Herbarium* 54: 209. 1926.

in English: wire grass

A. gracillima Oliv.

Africa. See *Transactions of the Linnean Society of London* 29: 173, t. 114. 1875.

A. granitica B.K. Simon

Queensland. Perennial, compact, tufted, endangered species, lower glume shorter than the upper, similar to *Aristida dominii* and *Aristida superpendens*, see *Austrobaileya* 2(1): 91, f. 2A. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

A. guayllabambensis Laegaard (Ecuador, Pichincha, near Guayllabamba, north of Quito)

Ecuador. Perennial, densely caespitose, erect, glabrous, leaf blades narrowly linear, ligule a dense rim of hairs, inflorescence a narrow panicle with branches erect, narrow spikelets, glumes subequal or unequal, lemma fusiform and slightly rough, palea membranous and 2-nerved, narrow membranous lodicules, 3 stamens, along roadsides, arid zones, dry slopes, open sandy slopes, related to *Aristida venezuelae* Henrard, see *Flora of Ecuador* 57: 49, f. 9A-C. 1997 [also *Flora of Ecuador*, no. 57. 214(1) *Gramineae* (part 1): 49-52. 1997], R. Valencia, N. Pitman, S. León-Yáñez & P.M. Jørgensen, *Libro Rojo de las Plantas Endémicas del Ecuador* 2000.

A. gypsophila Beetle (*Aristida gypsophila* f. *diffusa* Allred & Valdés-Reyna; *Aristida gypsophila* f. *gypsophiloides* Allred & Valdés-Reyna)

Warm regions, Mexico. Tufted, good forage, rocky soils, see *Phytologia* 49(1): 36-37. 1981, *Brittonia* 49(1): 65. 1997.

in English: gypsum threeawn

A. gypsophila Beetle f. *diffusa* Allred & Valdés-Reyna

Mexico. See *Brittonia* 49(1): 65. 1997.

A. gypsophila Beetle f. *gypsophila*

America.

A. gypsophila Beetle f. *gypsophiloides* Allred & Valdés-Reyna

Mexico. See *Brittonia* 49(1): 65. 1997.

A. gyrans Chapman (*Aristida refracta* Griseb.)

U.S., Florida. Perennial, green spikelets, growing in flatwoods, scrub, dry sandy pinelands, disturbed sites and dry sandy soils, see *Catalogus plantarum cubensium* ... 228. 1866, *Botanical Gazette* 3(3): 18-19. 1878.

in English: corkscrew three-awn, corkscrew three-awn grass

A. hackelii Arechav.

Uruguay. Perennial, stony ground, low forage value, see *Anales del Museo Nacional de Montevideo* 4(1): 73, 79. 1902.

A. hamulosa Henrard (*Aristida gentilis* var. *breviaristata* Henrard; *Aristida humboldtiana* var. *minor* Vasey; *Aristida imbricata* Henrard; *Aristida ternipes* var. *gentilis* (Henrard) Allred; *Aristida ternipes* var. *hamulosa* (Henrard) Trent)

U.S., Arizona. Perennial, simple, glabrous, basal leaves, open panicle, glumes subequal, forage, open soil, bare soil, dry open soils, rocky places, gravel, related to *Aristida ternipes* Cav., see *Icones et Descriptiones Plantarum, quae aut sponte* ... 5: 46. 1799, *Species Graminum Stipaceorum* 118. 1842, *Contributions from the United States National Herbarium* 3(1): 47. 1892 and *Contr. U.S. Natl. Herb.* 22(7): 548. 1924, *Mededeelingen van's Rijks-Herbarium* 54: 196-197, 219-221. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 253-255. 1927, *Sida* 10(2): 260. 1990, *Phytologia* 77(5): 412. 1994 [1995].

A. hassleri Hack. (*Aristida hassleri* var. *aculeolata* Hack.; *Aristida longiramea* var. *boliviana* Henrard)

Paraguay. Perennial, caespitose, leaf blades spirally coiled when old, awns recurved, unpalatable, see *Reliquiae Haenkeanae* 1(4-5): 224. 1830, *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 277. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 373. 1909, *Mededeelingen van's Rijks-Herbarium* 40: 56. 1921, *Mededeelingen van's Rijks-Herbarium* 54(A): 222. 1927.

A. havardii Vasey (*Aristida barbata* E. Fourn.; *Aristida barbata* E. Fourn. ex Hemsl.; *Aristida divaricata* Humb. & Bonpl. ex Willd.; *Aristida scova* Vasey ex Beal) (dedicated to the French-born American botanist Valery Havard, 1846-1927)

U.S., New Mexico, Texas. Perennial, decumbent, branched, leaves linear or curved, open panicles, straight column, prairies, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 99. 1809, *Essai d'une Nouvelle Agrostographie* 30, 158. 1812, *Biologia Centrali-Americana*; ... *Botany* ... 3: 532. 1885, *Mexicanas Plantas* 2: 78. 1886, *Bulletin of the Torrey Botanical Club* 13(2): 27. 1886, *Grasses of North America for Farmers and Students* 2: 199. 1896.

in English: Havard's three-awn, Havard threeawn

A. helicophylla S.T. Blake (Greek *helix*, *helikos* "whirl, convolution" and *phyllon* "a leaf")

Queensland, New South Wales, Northern Territory. Perennial, erect, glaucous or pruinose, simple or sparsely branched, sheath smooth, leaves curly or flexuous, panicle spike-like, glumes unequal, lower glume acute to acuminate, lemma brown or purple and narrow-elliptic, lemma much shorter than the glumes and with a pseudo-articulation, awns flattened and recurved to flexuous, grows on sandy soils, see *Proceedings of the Royal Society of Queensland* 51: 171, t. 4, f. 8-12. 1940, *Brunonia* 3(2): 271-333. 1980.

A. hintonii Hitchc.

Mexico. See *North American Flora* 17(5): 382. 1935.

A. hitchcockiana Henrard

Mexico. See *Mededeelingen van's Rijks-Herbarium* 54(A): 233-234. 1927.

A. holathera Domin (*Aristida browniana* Henrard; *Aristida muelleri* Henrard; *Aristida stipoides* R. Br., nom. illeg., non *Aristida stipoides* Lam.; *Aristida stipoides* var. *brachyathera* Domin; *Aristida stipoides* var. *normalis* Domin; *Aristida stipoides* var. *tenuisetulosa* Pilg.; *Aristida tenuisetulosa* (Pilg.) Mez)

Australia. Sand dune stabilizer, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 157. 1791, *Prodromus Florae Novae Hollandiae* 1: 174. 1810, *Essai d'une Nouvelle Agrostographie* 33, 152. 1812 and *Fragmenta Florae Philippinae* 2: 146. 1904, *Bibliotheca Botanica* 85(2): 337, 340, t. 13-14, f. 9, 12, 18-19. 1915, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 147. 1921, *Mededeelingen van's Rijks-Herbarium* 54: 63-64. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 358-359. 1927, *Mededeelingen van's Rijks-Herbarium* 54(B): 593, 627. 1928, *Austrobaileya* 2(1): 95, f. 3A. 1984, *Austrobaileya* 2: 283. 1986, *Blumea* 37(1): 228. 1992.

A. holathera Domin var. **holathera** (*Aristida browniana* Henrard; *Aristida browniana* var. *browniana*; *Aristida muelleri* Henrard; *Aristida stipoides* R. Br., nom. illeg., non *Aristida stipoides* Lam.) (Greek *holos* "entire" and *ather* "stalk, barb, spine, beard, awn")

Australia. Short-lived perennial or annual, tufted, stiffly erect, simple or branched, sheath striate, leaves rigid and scabrous, panicle sparse, glumes very unequal and nerved, lemma with an articulation or swollen joint below a twisted column, lemma purplish when mature, awns subequal and filiform, normally neglected by stock, low palatability and nutritional value when dry, grazed when young, found on sandy soils and sand dunes, alluvial plains, coarse sandy soils on riverbanks, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 157. 1791, *Prodromus Florae Novae Hollandiae* 1: 174. 1810, *Essai d'une Nouvelle*

Agrostographie 33, 152. 1812 and *Fragmenta Florae Philippinae* 2: 146. 1904, *Bibliotheca Botanica* 85(2): 337, 340, t. 13-14, f. 9, 12, 18-19. 1915, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 147. 1921, *Mededeelingen van's Rijks-Herbarium* 54: 63-64. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 358-359. 1927, *Mededeelingen van's Rijks-Herbarium* 54(B): 593, 627. 1928, *Austrobaileya* 2(1): 95, f. 3A. 1984, *Austrobaileya* 2: 283. 1986, *Blumea* 37(1): 228. 1992.

in English: kerosene grass, erect kerosene grass, tall kerosene grass, white grass

A. holathera Domin var. *latifolia* (B.K. Simon) B.K. Simon (*Aristida browniana* var. *latifolia* B.K. Simon)

Australia. Perennial, loosely tufted, unbranched, leaf blades flattened, see *Austrobaileya* 2(1): 95, f. 3A. 1984, *Austrobaileya* 2: 283. 1986.

A. hordeacea Kunth (*Aristida hordeacea* Hochst. ex Steud., nom. illeg., non *Aristida hordeacea* Kunth; *Aristida hordeacea* var. *longiaristata* Henrard; *Aristida steudeliana* Trin. & Rupr.)

Tropical Africa, Benin, Namibia. Annual, erect or geniculate, ascending, tufted, delicate to robust, coarse, much branched from the base, culm internodes pubescent, leaf blade expanded and linear, ligule a whorl of short hairs, leaves and sheaths scabrid, leaf sheath keeled and hairy, very dense inflorescence spicate, a dense compact panicle oblong, spikelets clustered in fascicles, glumes subequal, lower glume long-awned, column absent, three awns, a wet season grass, low grazing value, no forage value, pioneer, grows in dry situations, small pans, heavy soils, vleis, banks of vleis, open areas, open grassland, dry grassland, shallow depressions, swampy areas, mopane woodlands, waste places, deciduous bush savannah, see *Révision des Graminées* 2: 517, t. 173. 1831, *Species Graminum Stipaceorum* 155. 1842, *Synopsis Plantarum Glumacearum* 1: 142. 1854 and *Mededeelingen van's Rijks-Herbarium* 54(A): 244. 1927.

in English: fox brush

in Niger: alaemos, fari'n hatji, kalafhu, lillimo, milmilo, ngibi bulduy , sewuko, subu kur g , tazmei

in Nigeria: wutsiyar bera, wutsiyar 'bera

in South Africa: jakkalsstert, garssteekgras, gersten-stechgras

in Upper Volta: bonguburu, butakureje

A. hubbardiana Schweick.

Africa. Annual, branched, erect to geniculate, densely tufted, inflorescence dense and spicate, no articulation on the lemma, column absent, three awns, on damp soil, seasonally flood depressions, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(122): 196-197. 1938.

A. hygrometrica R. Br.

Australia tropical and semiarid. An increaser species, annual, loosely tufted, with spear-like callus, a severe hazard to sheep, in sandy and alluvial soils, similar to *Aristida holathera* and *Aristida contorta*, see *Prodromus Florae Novae Hollandiae* 174. 1810 and *Mededeelingen van's Rijks-Herbarium* 54(A): 248. 1927.

in English: northern kerosene grass

A. hystrix L.f.

Northern India. Branched, rigid, rather straggling, large oval panicle with spreading branches, probably not palatable or grazed by cattle only when tender, common on dry sandy or stony soils, see *Suppl. Pl.* 113. 1781 [1782] and *Handb. Fl. Ceylon* 6: 336. 1931, *Grasses of Ceylon* 64. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 410. 1960.

in India: bili unugada hullu, dolluba gaddi, kale kussal, lal rampla, lappa, lapri dhauli, mathari kussal, pavenburri, pavnburri, shilpuroo-kalli

A. inaequiglumis Domin

South Australia, Queensland, Western Australia, Northern Territory. Perennial, loosely tufted, robust, culms branched and leafy, leaves scabrous, inflorescence narrow-cylindrical, acuminate glumes inverse and nerved, lemma smooth with a pseudo-articulation at the apex, awns equal, unpalatable and normally neglected by stock, growing on alluvial soils, on floodplains, mulga shrublands, on red earths, on river frontages, on sandy soils, very similar to *Aristida pruinosa*, *Aristida ingrata* and *Aristida helicophylla*, see *Bibliotheca Botanica* 85(2): 347. 1915.

in English: wiregrass, speargrass, unequal threeawn, feathertop threeawn

A. ingrata Domin

Tropical Australia, Queensland. Perennial, loosely tufted, branched, leaf blades coiled at maturity, smooth lemma grooves, lemma with a pseudoarticulation, in alluvial soils and sand, similar to *Aristida sciuroides*, *Aristida inaequiglumis* and *Aristida helicophylla*, see *Bibliotheca Botanica* 85(2): 346. 1915.

A. jaliscana R. Guzm n & Jaramillo

Mexico. See *Phytologia* 51(7): 470. 1982.

A. jaucensis Catusus

Cuba. See *Novosti Sist. Vyss. Rast.* 21: 22. 1984, *Acta Botanica Cubana* 24: 2. 1985.

A. jerichoensis (Domin) Henrard (*Aristida ingrata* var. *jerichoensis* Domin)

Queensland, New South Wales, Northern Territory. Perennial, compactly tufted, culms simple or branched from the lower nodes, sheath smooth, flexuous leaves, panicle contracted and dense, glumes narrowly oblong-ovate and subequal, dark purplish lemma linear-oblong, awns flattened

and filiform, growing on sandy and clay loams, arid areas, similar to *Aristida benthamii*, see *Bibliotheca Botanica* 85(2): 346. 1915, *Mededeelingen van's Rijks-Herbarium* 54(A): 261, 270. 1927, *Mededeelingen van's Rijks-Herbarium* 58(A): 300. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 722-723. 1933, *Austr. Syst. Bot.* 5: 175. 1992.

in English: Jericho wiregrass, number nine wiregrass, wiregrass

A. jerichoensis (Domin) Henrard var. *jerichoensis*

Queensland, New South Wales. Margins of the lemma furrow without tubercles, grows on poor soils.

A. jerichoensis (Domin) Henrard var. *subspinulifera* Henrard

Queensland, New South Wales, Northern Territory. Margins of the lemma with tubercles or spines, lemma without a pseudo-articulation, grows on rocky hillsides, see *Mededeelingen van's Rijks-Herbarium* 58(A): 300. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 722-723. 1933, *Austr. Syst. Bot.* 5: 175. 1992.

in English: Jericho wire grass

A. jorullensis Kunth (*Aristida manzanilloana* Vasey; *Aristida pilosa* Labill.; *Ortachne pilosa* (Kunth) Nees; *Strep-tachne pilosa* Kunth)

Mexico. See *Nova Genera et Species Plantarum* 1: 124. 1815 [1816], *Sertum Austro-Caledonicum* 12, t. 17. 1824, *Révision des Graminées* 1: 62. 1829, *The Botany of the Voyage of H.M.S. Herald* 225. 1854, *Synopsis Plantarum Glumacearum* 1: 121. 1854, *Contributions from the United States National Herbarium* 1(8): 282. 1893.

A. jubata (Arechav.) Herter (*Aristida pallens* f. *jubata* Arechav.; *Aristida pallens* var. *macrochaeta* Hack.; *Aristida pallens* var. *major* Döll; *Aristida pallens* var. *tragopogon* Trin. & Rupr.; *Aristida tragopogon* (Trin. & Rupr.) Herter)

South America. Perennial, stony ground, low forage value, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 43, t. 468, f. 2. 1799, *Species Graminum Stipaceorum* 116-117. 1842, *Flora Brasiliensis* 2(3): 14. 1878 and *Anales del Museo Nacional de Montevideo* 4(1): 72, 74-75, t. 1. 1902, *Anales del Museo Nacional de Buenos Aires* 13: 452. 1906, *Revista Sudamericana de Botánica* 6(5-6): 141. 1940, *Revista Sudamericana de Botánica* 9(4): 98. 1953.

in Spanish: espartillo

A. junciformis Trin. & Rupr.

Africa, South Africa. Leaves wiry and rolled, dark green, a good ground cover, a very persistent pioneer virtually impossible to eradicate, useless as animal feed, unpalatable and not grazed, only the very young leaves are grazed, found in sour grassland, on poor soils of sandstone origin, see *Species Graminum Stipaceorum* 143-144. 1842 and *Cytologia* 19: 97-103. 1954.

in English: wire grass, Ngongoni bristlegrass, Ngongoni three-awn, Gongoni three-awn grass, Gongoni grass, Gongoni three-awn

in Southern Africa: ngongoni

A. junciformis Trin. & Rupr. subsp. *galpinii* (Stapf) De Winter (*Aristida galpinii* Stapf) (after Ernest Edward Galpin, 1858-1941, banker and plant collector, naturalist and botanist, author of "A contribution to the knowledge of the flora of Drakensberg." *S. Afr. J. Sci.* 6: 209-229. 1909, "The native timbers of the Springbok Flats." *Mem. Bot. Surv. S. Afr.* 7: 25. 1924 and *Botanical Survey of the Springbok Flats, Transvaal*. Cape Town [1927] [Botanical Survey of South Africa. Memoir. no. 12]; see J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. Regnum Vegetabile vol. 9. 1957; Gilbert Westacott Reynolds, *The Aloes of South Africa*. Balkema, Rotterdam 1982; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 160-164. 1981)

Africa. Perennial, erect, densely tufted, rhizomatous, long rhizome, leaves mostly basal, inflorescence contracted, lower glume mucronate to shortly awned, three awns, on shallow soils, rocky slopes, overgrazed areas, high mountainous sourveld, see *Species Graminum Stipaceorum* 143-144. 1842 and *Bulletin of Miscellaneous Information Kew* 1910: 130. 1910, *Kirkia* 3: 132. 1963.

A. junciformis Trin. & Rupr. subsp. *junciformis*

Namibia, South Africa. Perennial, erect, densely tufted, stout rhizome, usually unbranched, tough and fibrous when mature, leaf sheath round, narrow contracted panicle, tripartite awn, lower glume awned or mucronate, pioneer grass, invasive, very unpalatable, grazed only when young, used for brooms, found in open mountain grassveld, savannah, poor stony soils, stony hillsides, damp places, in bushveld, grassland, disturbed areas, overgrazed veld, fynbos [The word *fynbos* comes from the Dutch for fine-leaved plants; *fynbos* is the major vegetation type of the small botanical region known as the Cape Floral Kingdom; *fynbos* plants are readily recognised by the sclerophyllous (hard, tough and leathery leaved) and microphyllous (small leaved) nature of almost all woody plants and is characterised by having more than 5% cover of Cape reeds], along roadsides and depressions where water collects.

in English: bristle grass, Gongoni grass, Gongoni three-awn, Ngongoni three-awn (= Ngongoni veld, Natal), Ngongoni bristle grass, wire grass

in Southern Africa: assegaasteekgras, besemgras, Gongonisteekgras, heigras, koperdraadgras, Ngongonisteekgras, steekgras; lefielo (Sotho); nGongoni, umGongoni (Zulu)

A. kelleri Hack. (after A. Keller, plant collector in Somalia in 1891)

Somalia, Ethiopia, Kenya. Perennial, wiry, densely tufted, inflated uppermost leaf-sheath, branched rootstock,

compact inflorescence, spike-like panicle not fully exerted from the uppermost sheath, spikelets densely crowded, glumes linear and unequal, lower glume mucronate, upper glume awned, lemma smooth and glabrous, weakly twisted column, central awn curved outward, lateral awns straight, on sandy soil, light-orange sand, limestone, see *Mémoires de l'Herbier Boissier* 20: 8. 1900, *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: bajeh, machew, maar

A. kenyensis Henrard

Kenya. Annual, loosely tufted, slender, smooth, leaf blades linear, leaf sheaths glabrous, leaf blades linear, panicle open, glumes subequal and pointed, lemma linear and scarbrid, in dry areas, open habitats, clearings, overgrazed sites, grassland, see *Mededeelingen van's Rijks-Herbarium* 54(C): 722-724. 1933.

A. kerstingii Pilger

Tropical Africa. Annual or short-lived perennial, solitary or tufted, slender, inflorescence almost spike-like, spikelets very short, outer scales awned, good fodder, disturbed land, see *Meded. Rijks-Herb.* 54(A): 277. 1927, *Taxon* 36: 283. 1987, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 10: 421-433. 1988.

in Nigeria: alkaman daji, datsi

in Upper Volta: celbi, selbo

A. kimberleyensis B.K. Simon

Australia, Western Australia. Perennial, decumbent, sprawling, loosely tufted, branched, lower glume 3-nerved, convolute lemmas, similar to *Aristida schultzei* and *Aristida sciuroides*, see *Austrobaileya* 2(1): 91. 1984.

A. kunthiana Trin. & Rupr.

Mali, Senegal. Rare species, see *Species Graminum Stipaceorum* 151-152. 1842.

A. laevigata Hitchc. & Ekman

Cuba. Perennial, erect, caespitose, glabrous, ligule a ciliate membrane, leaf blades involute, open panicle long-exserted, glumes subequal, see *North American Flora* 17(5): 390. 1935.

A. laevis (Nees) Kunth (*Aristida adscensionis* subvar. *densiflora* Hack.; *Aristida adscensionis* var. *argentina* Hack.; *Aristida altissima* Arechav.; *Aristida complanata* Trin.; *Aristida laevis* var. *argentina* (Hack.) Henrard; *Aristida subinterrupta* Arechav.; *Aristida subinterrupta* var. *argentina* (Hack.) Henrard; *Aristida subinterrupta* var. *subinterrupta*; *Chaetaria laevis* Nees)

Southern Brazil to Argentina. Perennial, low forage value, see *Species Plantarum* 1: 82. 1753, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 384-385. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et*

Naturelles 1(1): 85-86. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 192. 1833 and *Anales del Museo Nacional de Montevideo* 4(1): 77-78, 80-81, t. 3, 5. 1902, *Anales del Museo Nacional de Buenos Aires* 11: 88. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 65. 1911, *Mededeelingen van's Rijks-Herbarium* 54: 11. 1926, *Mededeelingen van's Rijks-Herbarium* 54(B): 609. 1928, *Kurtziana* 1: 123-206. 1961.

A. lanigera Longhi-Wagner

Brazil. See *Kew Bulletin* 49(4): 819, f. 2. 1994.

A. lanosa Muhl. ex Ell. (*Aristida gossypina* Bosc ex P. Beauv.; *Aristida lanata* Poir., nom. illeg., non *Aristida lanata* Forssk.; *Aristida lanosa* Muhl.; *Aristida lanosa* var. *lanosa*; *Aristida lanosa* var. *macera* Fernald & Griscom; *Aristida lanuginosa* Bosc ex Trin., nom. illeg., non *Aristida lanuginosa* Burch.; *Aristida lanuginosa* Clarion ex Steud.; *Chaetaria gossypina* P. Beauv. ex Roem. & Schult.; *Chaetaria gossypina* Bosc ex P. Beauv.; *Moulinsia lanosa* Raf. ex B.D. Jacks.)

U.S., Florida. Perennial, endangered species, leaf sheaths densely hairy to woolly, occurs in open woodlands, see *Encyclopédie Méthodique. Botanique ... Supplément* 1: 453. 1810, *Essai d'une Nouvelle Agrostographie* 30, 152, 158. 1812, *Catalogus Plantarum Americae Septentrionalis* 14. 1813, *A Sketch of the Botany of South-Carolina and Georgia* 1: 143. 1816, *Systema Vegetabilium* 2: 391. 1817, *Bulletin Botanique [Genève]* 1: 221. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 46. 1836, *Synopsis Plantarum Glumacearum* 1: 565. 1854 and *Rhodora* 37(436): 135-136, pl. 335. 1935, *Rhodora* 87(850): 147-155. 1985, *Rhodora* 88(855): 367-387. 1986.

in English: woolly-sheath three-awn, woollysheat three-awn, woolly tripleawn grass, woolly three-awned grass, woolly tripleawn grass, woolly threeawn, woolly threeawn grass, woollyleaf threeawn, longleaf threeawn

A. latifolia Domin (*Aristida latifolia* var. *minor* J.M. Black) (with broad leaves)

South Australia, Queensland, Western Australia, Northern Territory, New South Wales. Perennial or short-lived perennial with a shallow root system, erect and slender, glabrous, densely caespitose, robust, forming slender tussocks, culms rigid and usually simple or sparsely branched, leaf-sheaths ciliate at the orifice, greenish to glaucous leaves twisted or curly at maturity, narrow and feathery purplish panicle spike-like with spreading or drooping branches, glumes subequal or unequal, lower glume 1-nerved, lemma brownish and purple with a twisted column, numerous awns subequal and filiform, dartlike seeds with a sharply pointed tip, three-awned seeds easily penetrate the staples of wool, hardy species, low nutritive value, it will not stand heavy grazing, relatively unpalatable and normally neglected by

stock, grows on clay soils, semiarid open grassland, heavy soils, marine soils, cracking clay soils, inland regions, alluvial silts, similar to *Aristida macroclada*, *Aristida psammophila*, *Aristida warburgii* and *Aristida schultzii*, see *Bibliotheca Botanica* 85(2): 339-340, t. 13, f. 13-14. 1915, *Transactions and Proceedings of the Royal Society of South Australia* 57: 147. 1933.

in English: feathertop wire grass, feathertop wiregrass, feathertop, feather-top wire grass, curly spear grass

A. latzii B.K. Simon

Australia, Northern Territory. Perennial, rigid culms, compact, tufted, rigid filiform leaves, smooth lemmas, flattened awns, similar to *Aristida nitidula*, *Aristida burraensis* and *Aristida burbidgeae*, see *Austrobaileya* 2(1): 91, f. 2B. 1984.

A. laxa Cav. (*Aristida divaricata* Lag. ex Henrard, nom. illeg., non *Aristida divaricata* Humb. & Bonpl. ex Willd.; *Aristida divaricata* Lag., nom. illeg., non *Aristida divaricata* Humb. & Bonpl. ex Willd.; *Aristida jacquiniana* Tausch; *Aristida jacquiniana* var. *jacquiniana*; *Aristida jacquiniana* var. *subaequilonga* Henrard; *Aristida karwinskiana* Trin. & Rupr.; *Aristida lagascae* Henrard; *Aristida laxa* Trin. ex Henrard, nom. illeg., non *Aristida laxa* Cav.; *Aristida laxa* Willd. ex Trin. & Rupr.; *Aristida laxa* var. *karwinskiana* (Trin. & Rupr.) Henrard; *Aristida laxa* var. *laxa*; *Aristida laxa* var. *longiramea* (J. Presl) Henrard; *Aristida longiramea* J. Presl; *Aristida oligophylla* Pilg.; *Aristida spadicea* Kunth; *Chaetaria spadicea* (Kunth) Roem. & Schult.; *Chaetaria spadicea* (Kunth) Nees, nom. illeg., non *Chaetaria spadicea* (Kunth) Roem. & Schult.)

South America. Perennial, caespitose, stiff, erect or divergent, more or less prostrate, foliage mainly basal, ligule a dense rim of hairs, leaves spirally curling when old, inflorescence a pyramidal panicle, spikelets more or less distally clustered, panicle branches erect to divergent, glumes subequal, on dry open slopes, grassland, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 44-45, t. 470, f. 1. 1799, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 99. 1809, *Nova Genera et Species Plantarum* 1: 123. 1815 [1816], *Genera et species plantarum* 3. 1816, *Systema Vegetabilium* 2: 397. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 385. 1829, *Reliquiae Haenkeanae* 1(4-5): 224. 1830, *Flora* 19(2): 508. 1836, *Species Graminum Stipaceorum* 130. 1842, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzegeographie* 25(5): 711. 1898 and *Meded. Rijks-Herb.* 54: 150, 178-179, 202, 291. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 270, 281-282, 311. 1927, *Mededeelingen van's Rijks-Herbarium* 54(B): 576. 1928, *Annals of the Missouri Botanical Garden* 82: 593-595. 1995.

A. laxa Cav. var. **karwinskiana** (Trin. & Rupr.) Henrard (*Aristida karwinskiana* Trin. & Rupr.)

Mexico. See *Species Graminum Stipaceorum* 121-122. 1842 and *Mededeelingen van's Rijks-Herbarium* 54(A): 274, 275. 1927.

A. laxa Cav. var. **laxa**

America.

A. laxa Cav. var. **longiramea** (J. Presl) Henrard (*Aristida longiramea* J. Presl; *Aristida longiramea* var. *longiramea*) America. See *Reliquiae Haenkeanae* 1(4-5): 224. 1830 and *Mededeelingen van's Rijks-Herbarium* 54(A): 311. 1927.

A. lazaridis B.K. Simon (also spelled **lazarides**)

Australia, Queensland. Perennial, tufted, compact, branched, open panicle, tropical and subtropical, similar to *Aristida leptopoda*, see *Austrobaileya* 2(1): 92, f. 2C. 1984.

A. leichhardtiana Domin (*Aristida ramosa* var. *leptathera* Benth.) (after the German scientist Friedrich Wilhelm Ludwig Leichhardt, 1813-1848 (lost on a wild journey across Australia, a mission in the interior of Queensland, and nothing certain is known of his fate), explorer, naturalist and botanist, 1842 in Australia, plant collector, lectured on botany in Sydney, remembered for his long journey in 1844-1845 from Darling Downs to Port Essington (an early settlement in the far north of the Northern Territory), author of *Journal of an Overland Expedition in Australia, from Moreton Bay to Port Essington ... during ... 1844-45*. London 1847, also published papers in *Tasmanian Journal of Natural Science*. See Keith Willey, *Strange Seeker: The Story of Ludwig Leichhardt*. London and New York 1966; M. Arousseau, *The Letters of F.W. Ludwig Leichhardt*. London and New York 1968; James A. Baines, *Australian Plant Genera. An Etymological Dictionary of Australian Plant Genera*. 210-211. Chipping Norton, N.S.W. 1981; Ferdinand von Mueller, *The Fate of Dr. Leichhardt, and A Proposed New Search for His Party*. [Melbourne 1865]; F. von Mueller, *Fragmenta Phytographiae Australiae*. 10: 67-68. 1876; J.F. Mann, *Eight Months with Dr. Leichhardt in the Years 1846-1847*. 1888; [Ludwig Leichhardt], *An Explorer at Rest. Ludwig Leichhardt at Port Essington and on the Homeward Voyage 1845-1846*. Introduction and annotations by E. M. Webster. Melbourne 1986; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 233. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Charles Sturt (1795-1869), *Narrative of an expedition into Central Australia, Performed ... during the Years 1844, 1845 and 1846*. 2: App. 81. London 1849; Douglas Pike, editor, *Australian Dictionary of Biography*. 2: 102-104. 1967)

Queensland, New South Wales. Perennial, slender to robust, tussocky, erect, thin and simply branched, loosely tufted, sheath smooth, leaves scabrous, panicle much branched loose to open, unequal glumes lanceolate and long-acuminate, lemma purple or brown and linear to elliptic, awns

filiform and divaricate, grows on sandy soils, in sclerophyll forest, similar to *Aristida personata*, see *Prodromus Florae Novae Hollandiae* 1: 173. 1810, *Flora Australiensis: A Description ...* 7: 563. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 9: 551. 1911.

A. leptopoda Benth.

Queensland, New South Wales. Perennial, densely tussocky, compactly tufted, erect or ascending, strongly branched, sheath papery, leaves ending in a very long point, open-headed, panicle open at maturity with branches divaricate to drooping, spikelets terminal, glumes lanceolate and very long-acuminate, convolute lemma purplish linear to elliptic, awns filiform and stiff, young plants grazed, mature plants hard and prickly, grows on heavy soils, in arid and semiarid areas, similar to *Aristida behriana*, *Aristida lazardis*, *Aristida vickeryae* and *Aristida obscura*, see *Flora Australiensis: A Description ...* 7: 562. 1878 and *Austr. Syst. Bot.* 5: 206. 1992.

in English: white speargrass

A. leptura Cope

Somalia. Annual, panicle exerted from the uppermost sheath, glumes subequal finely awned, found in disturbed soil, marshes, edge of marshes, see *Kew Bulletin* 47(2): 277. 1992.

A. liebmanni E. Fourn. (*Aristida liebmanni* E. Fourn. ex Hemsl.)

Mexico. See *Biologia Centrali-Americana; ... Botany ...* 3: 534. 1855, *Mexicanas Plantas* 2: 78. 1886.

A. lignosa B.K. Simon

Queensland, New South Wales. Perennial, caespitose, compact, very robust and woody, branched and terete, strongly fasciculated branches, glabrous and smooth, sheath smooth, leaves scabrous and stiff to flexuous, panicle narrow with branches filiform, glumes lanceolate, lemma linear-elliptic and scabrous, awns subequal and slender, on stony or rocky soils, grows in dry sclerophyll forest, see *Austrobaileya* 2(1): 92, f. 2D. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

A. longespica Poir. (specific epithet sometimes spelled **longispica**) (*Aristida geniculata* Raf.; *Aristida gracilis* Elliott; *Aristida gracilis* Elliott var. *depauperata* A. Gray; *Aristida longespica* var. *geniculata* Fernald; *Aristida longespica* var. *geniculata* (Raf.) Fernald; *Aristida simpliciflora* var. *texana* Vasey; *Curtopogon gracilis* Nees ex Trin. & Rupr.; *Trixostis gracilis* Raf.; *Trixostis gracilis* Raf. ex B.D. Jacks.)

U.S., North America. Annual, caespitose, good forage, on coastal meadow marshes, thin dry soils, seashores, open glade, see *Encyclopédie Méthodique. Botanique ... Supplément* 1: 452. 1810, *A Sketch of the Botany of South-Carolina and Georgia* 1: 142, t. 8, f. 3. 1816, *American Monthly Magazine and Critical Review* 2(2): 119. 1817, *Bulletin Botanique [Genève]* 1: 221. 1830, *Species Graminum*

Stipaceorum 101. 1842, *A Manual of Botany of the Northern United States (edition 5)* 618. 1867, *Botanical Gazette* 3(3): 18. 1878, *Contributions from the United States National Herbarium* 3(1): 44. 1892 and *Rhodora* 35: 318. 1933.

in English: slimspike threeawn, three-awn, three-awned grass

A. longespica Poir. var. **geniculata** (Raf.) Fernald (*Aristida geniculata* Raf.; *Aristida gracilis* Elliott; *Aristida gracilis* var. *gracilis*; *Aristida intermedia* Scribn. & Ball; *Aristida necopina* Shinnery)

U.S. Annual, awns can cause damage, growing on sandy soils, sandy ridges, open sandy prairies, sandy open ground, along railroads and roadsides, rocky prairies, on moist calcareous sand of interdunal flats, rocky dry open woods, see *Encyclopédie Méthodique. Botanique ... Supplément* 1: 452. 1810, *A Sketch of the Botany of South-Carolina and Georgia* 1: 142, t. 8, f. 3. 1816, *American Monthly Magazine and Critical Review* 2(2): 119. 1817 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 44, f. 18. 1901, *Rhodora* 35: 318. 1933, *Rhodora* 56(662): 30. 1954.

in English: Kearney threeawn, red threeawn, plains three-awn, three-awn grass, false arrow feather, long-spike three-awned grass, spiked needlegrass

A. longespica Poir. var. **longespica**

U.S., North America. Annual, growing on sandy soil and especially in hard clayey soil, in fields, dry sandy soils, open and waste ground, along railroads and highways, rocky prairies, bluff edges, open woods and eroded slopes, see *Encyclopédie Méthodique. Botanique ... Supplément* 1: 452. 1810.

in English: three-awn, red threeawn, three-awn grass, slimspike threeawn

A. longicollis (Domin) Henrard (*Aristida adscensionis* var. *longicollis* Domin)

Australia, Queensland, Northern Territory, New South Wales. Perennial, compact, tufted, branched, erect, rigid, smooth, sheath scabrous to pubescent, panicle spike-like and dense, unequal glumes thinly membranous and entire or notched, lemma not tuberculate, awns capillary and divaricate, grows in open woodland and mallee communities, rocky and sandy soils, similar to *Aristida psammophila*, see *Species Plantarum* 1: 82. 1753 and *Bibliotheca Botanica* 85(2): 343, t. 15, f. 5-8. 1915, *Mededeelingen van's Rijks-Herbarium* 54: 14. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 306-307. 1927.

A. longiflora Schum. (*Aristida longiflora* Schumach. & Thonn.)

Central Africa. See *Beskrivelse af Guineiske planter* 48. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 68. 1828.

in Niger: aggoer, alaenta, anasuwa, assoré, azoer, bata, bataré, buwird'y, siri nyéré, surungéji, yanta

A. longifolia Trin. (*Aristida bromoides* Salzm. ex Trin. & Rupr.; *Aristida temulenta* Luces)

Brazil, Venezuela. Perennial, densely tufted, herbaceous, forming large clumps, erect, deciduous leaf blades, ligule membranous, leaves linear tapering to a filiform tip, inflorescence very open, lax panicles sparsely branched, spikelets 1-flowered with narrowly lanceolate glumes, awned, central awn ascending, in forest, sandy soils, *cerrado*, shade of trees, savannah, river beds, forest edge, among trees, rocky places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 84. 1830, *Species Graminum Stipaceorum* 118. 1842 and *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 16-19, f. 11. 1953.

in Bolivia: aguaraguai

A. macrantha Hack.

Paraguay. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 372. 1909, *Meded. Rijks-Herb.* 54(A): 321. 1927.

A. macroclada Henrard (*Aristida novae-guineae* Ohwi)

Australia, Northern Territory, New Guinea. Perennial, compact, tufted, sparsely branched, similar to *Aristida psammophila* and *Aristida longicollis*, see *Mededeelingen van's Rijks-Herbarium* 54(A): 325-326, f. 1927, *Botanical Magazine* (Tokyo) 56: 2. 1942.

A. macroclada Henrard var. **macroclada**

Australia, Northern Territory, New Guinea. Perennial, see *Mededeelingen van's Rijks-Herbarium* 54(A): 325-326, f. 1927, *Botanical Magazine* (Tokyo) 56: 2. 1942.

A. macroclada Henrard var. **queenslandica** (B.K. Simon) Veldkamp (*Aristida macroclada* subsp. *queenslandica* B.K. Simon)

Queensland, New Guinea. Perennial, see *Austrobaileya* 2(1): 95, f. 3B. 1984, *Reinwardtia* 12: 137. 2004.

A. macrophylla Hack. (*Aristida endomelas* Mez; *Aristida hassleri* var. *aculeolata* Hack.; *Aristida kleinii* L.B. Sm.; *Aristida subarticulata* Mez) (in honor of the Brazilian botanist Roberto Miquel (Miguel) Klein, born 1926, or 1923-1992, ecologist, his writings include "Árvores nativas da floresta subtropical do Alto Uruguai." *Sellowia*. 24(24): 9-62. Itajaí 1972, "Árvores nativas da Ilha de Santa Catarina." *Insula*, Boletim do Centro de Pesquisas e Estudos Botânicos. 3: 3-93, out. Florianópolis 1969, "Árvores nativas indicadas para o reflorestamento no sul do Brasil." *Sellowia*. 18: 29-40. Itajaí 1966, "Contribuição à identificação de árvores nativas nas florestas no sul do Brasil." *Silvicultura em São Paulo*. 16A pt. 1: 421-440. São Paulo 1982, "Ecologia da flora e vegetação do Vale do Itajaí." *Sellowia*. 31(31): 1-164, dez. Itajaí 1979 and "Observações e considerações sobre a vegetação do Planalto Nordeste

Catarinense." *Sellowia*. 15(15): 39-56, dez. Itajaí 1963; see *Sellowia* 15: 196. 1963; *Bradea* 1: 179. 1972; *Fl. Ilustr. Catarin.* (Loganiaceas) 34. 1976; *Ann. Missouri Bot. Gard.* 64: 318. 1977 [1978])

South America, Brazil. Perennial bunchgrass, caespitose, foliage coarse, awns spirally coiled, unpalatable, see *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 277. 1904, *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 16. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 77. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 373. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 150. 1921, *Phytologia* 22(2): 88, f. 4-8. 1971.

A. mandoniana Henrard (*Aristida achalensis* Mez; *Aristida adscensionis* L.) (for the French traveler Gilbert Mandon, 1799-1866)

Bolivia, Argentina. See *Species Plantarum* 1: 82. 1753 and *Mededeelingen van's Rijks-Herbarium* 40: 55. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 149. 1921, *Meded. Rijks-Herb.* 54: 9. 1926.

A. marginalis Ekman

South America, Brazil. Blades of culm leaves flat, glumes subequal and distinctly awned.

A. megapotamica Spreng. (*Aristida implexa* Trin.; *Aristida paraguayensis* Lindm.; *Aristida sellowii* Mez; *Jarava megapotamica* (Spreng.) Peñailillo; *Stipa filifolia* Nees)

Bolivia, central Brazil to Argentina. Perennial, callus not 2-dentate, low forage value, in dry stony areas, see *Systema Vegetabilium, editio decima sexta* 4: 31. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 379. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 48. 1836 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 14, t. 7, f. B. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 148. 1921, *Mededeelingen van's Rijks-Herbarium* 58(A): 216-217. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 724-725. 1933, *Gayana, Botánica* 59(1): 31-32. 2002.

A. megapotamica Spreng. var. **brevipes** Henrard

Brazil. See *Mededeelingen van's Rijks-Herbarium* 58(A): 217. 1932, *Meded. Rijks-Herb.* 54(C): 724. 1933.

A. megapotamica Spreng. var. **longipes** Henrard

Paraguay. See *Meded. Rijks-Herb.* 58(A): 725. 1927, *Mededeelingen van's Rijks-Herbarium* 58(A): 216. 1932.

A. megapotamica Spreng. var. **megapotamica**

Bolivia.

A. mendocina Phil. (*Aristida cordobensis* Hack.; *Aristida inversa* Hack.; *Aristida inversa* f. *macrantha* Parodi; *Aristida mendocina* var. *macrantha* (Parodi) Henrard)

Argentina, Bolivia. Perennial, caespitose, foliage cauline, glumes unequal, unpalatable, colonizer on sand dunes, open habitats, sandy soil, stony ground, see *Anales de la Universidad de Chile* 36: 205. 1870 and *Anales del Museo Nacional de Buenos Aires* 11: 91. 1904, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 8: 37. 1908, *Revista de la Sociedad Argentina de Ciencias Naturales* 8: 76. 1925, *Meded. Rijks-Herb.* 54: 118. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 267. 1927.

A. meridionalis Henrard

Tanzania, Botswana, Mozambique, South Africa. Perennial, hard, robust, fibrous, densely tufted, unbranched, erect and sometimes geniculate, hard and shiny leaf sheath, ligule a ring of woolly hairs, leaf blade inrolled, leaves flexible ending with a narrow point, inflorescence an open panicle, pendulous spikelets with a tripartite awn, moisture-loving grass, low grazing value, utilized in the young stage, thatching grass, used for broom-making, ornamental, growing in a low rainfall zone on sand dunes, open habitats, damp depressions, along roads, sandy and stony soils, moist places, deep sand, moist areas around vleis, see *Mededeelingen van's Rijks-Herbarium* 54(A): 344-345. 1927.

in English: giant three-awn, giant stick grass

in South Africa: langbeensteekgras, leeusteekgras, löwenstechgras

A. mexicana Scribner ex Henrard

Mexico. Sandy areas, see *Mededeelingen van's Rijks-Herbarium* 54(A): 344-345. 1927.

A. migiurtina Chiov.

Somalia, Arabia, Yemen. Perennial, tufted, dwarf, decumbent to erect, branched at the base, stiff leaf blades, leaves short and curved to involute, loosely contracted and obconical panicle, long-awned spikelets, glumes very unequal and awn-tipped, lower glume entire, upper glume bifid, awns subequal, growing in open areas, on barren stony slopes, sandy or stony soils, beaches and sand dunes, seasonally flooded places, see *Plantae Novae vel Minus Notae e regione Aethiopia* 29. 1928 [1911-1951, series published in different journals, also *Plantae Novae vel Minus Notae ex Aethiopia*], *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: gud lebah

A. minutiflora Caro

Argentina. Stony soils, see *Kurtziana* 1: 151-154, f. 2B, 4-5. 1961.

A. minutiflora Caro var. **glabriflora** Caro

Argentina. See *Kurtziana* 1: 154. 1961.

A. minutiflora Caro var. **minutiflora**

Argentina.

A. mohrii Nash (for the American botanist Charles T. Mohr, 1824-1901, born in Esslingen am Neckar, pharmacist, explorer, pioneer, botanical collector in Alabama and

Suriname, author of *The Forests [and Grasses] of Alabama*. 1878, *The Timber Pines of the Southern United States ...* New York 1884 [*Bull. U.S. Div. For.*, no. 13, 1897. 176 pp.], *Plant Life of Alabama*. 1901, *The Medicinal Plants of Alabama*. Mobile, Ala. 1893. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 502. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 270. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 295-296. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; J. Ewan, editor, *A Short History of Botany in the United States*. 14, 92. 1969; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 111. 1970; *Man. Grass. U.S.* 987. 1951)

North America, U.S., Alabama. Perennial, green spikelets, found in sand hills, scrub and dry flatwoods, on sandy slopes, see *Bulletin of the New York Botanical Garden* 1(5): 436. 1900, K.W. Allred, "Studies in the *Aristida* (Gramineae) of the southeastern United States. IV. Key and conspectus.," *Rhodora* 88(855): 367-387. 1986.

in English: Mohr's three-awn, Mohr's threeawn grass

A. mollissima Pilg.

Africa, Botswana. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 80. 1908.

A. mollissima Pilg. subsp. **argentea** (Schweick.) Melderis (*Aristida argentea* Schweick.)

Africa, Zimbabwe. Perennial, erect to geniculate, densely tufted, lower culm internodes woolly to densely tomentose, narrow lax inflorescence, lower glume awned, three awns, species of open habitats, mountain slopes, sandveld, sandy to stony sandy soils, disturbed areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 76(2): 218-220. 1954.

A. mollissima Pilg. subsp. **mollissima**

Africa, Kenya, Zimbabwe. Perennial, erect, densely tufted, lower culm internodes woolly to tomentose, contracted inflorescence spicate, lower glume awned, three awns, species of open habitats, sandy to stony sandy soils, red sands.

A. monticola Henrard

South Africa. Perennial, long rhizomatous, much-branched, densely tufted, hairy ligule, a contracted to lax panicle, lower glume sometimes mucronate but unawned, three awns, young leaves and inflorescences grazed, used to promote the birth of a calf, common in moist and shady areas, stream banks, mountain slopes, see *Mededeelingen van's Rijks-Herbarium* 54(A): 355-356. 1927.

in South Africa: seotla

A. moritzii Henrard

Venezuela. See *Mededeelingen van's Rijks-Herbarium* 54: 133. 1926, *Meded. Rijks-Herb.* 54(A): 356-357. 1927, *Flora of Ecuador*, no. 57. 214(1) *Gramineae* (part 1): 53. 1997.

A. multiramea Hack. (*Aristida adscensionis* var. *laevis* Hack.)

Argentina. Stony places, sandy soils, see *Anales del Museo Nacional de Buenos Aires* 11: 89. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 67, t. 1, f. a-c. 1911, *Meded. Rijks-Herb.* 54(A): 364. 1927.

A. muricata Henrard (Latin *muricatus*, *a*, *um* "roughened, with hard points, full of prickles, pointed, shaped like a purple-fish")

Queensland, New South Wales. Perennial, tufted, compact, simple or branched from the lower nodes, panicle more or less dense with wavy branches, equal or unequal glumes cuspidate, lower glume acuminate 1-nerved, upper glume obtuse, lemma linear and densely spiny, awns filiform and flattened, grows on clay loam or sandy soils, similar to *Aristida forsteri* and *Aristida exserta*, see *Mededeelingen van's Rijks-Herbarium* 58(A): 286, t. 154. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 727-729. 1933.

A. murina Cav. (*Aristida crinita* J. Presl; *Aristida pallens* var. *murina* (Cav.) Trin. & Rupr.)

South America. Perennial, leaves flat, low forage value, fields, moist ground, sandy meadow, hillsides, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 43-44, t. 468-469, f. 1-2. 1799, *Reliquiae Haenkeanae* 1(4-5): 223. 1830, *Species Graminum Stipaceorum* 117. 1842 and *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 208-224. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 352-369. 1970, *Flora Patagónica* 3: 1-583. 1978, *Acta Botanica Brasilica* 4(1): 105-124. 1990, *Boletim do Instituto de Botânica* (São Paulo) 12: 113-179. 1999.

A. mutabilis Trin. & Rupr. (*Aristida articulata* Edgew.; *Aristida astroclada* Chiov.; *Aristida cassanellii* A. Terracc.; *Aristida longeradiata* Steud.; *Aristida meccana* Hochst. ex Trin. & Rupr.; *Aristida meccana* Trin. & Rupr.; *Aristida mutabilis* var. *laeviglumis* Henrard; *Aristida tenuis* Hochst., nom. illeg., non *Aristida tenuis* (Kunth) Kunth)

Yemen, Sudan, Somalia, Saudi Arabia. Annual, rather variable, loosely tufted, sprawling, erect or ascending, wiry, slender, much-branched, short leaf blades, leaves usually convolute, open or contracted inflorescence, contracted or spreading panicle, spikelets clustered and terminal, more or less equal glumes acute mucronate or awned, lemma scabrid narrowed above the middle, awns more or less equal, fodder grass, low nutritional value, browsed by all stock when young and tender, sharp and pungent awns can cause injury to horses' mouths, used to make mats and basket sieves, used for stuffing saddles, abundant on sand dunes, open

waste places, desert, sandy soils, subdesert, grassland, stony plains, Sahara-Indian distribution, related to *Aristida barbicollis* Trin. & Rupr., see *Species Graminum Stipaceorum* 150-152. 1842, *Synopsis Plantarum Glumacearum* 1: 140. 1855 [1854], *Flora* 38: 200. 1855, *Journal of the Proceedings of the Linnean Society* 6: 209. 1862, *Annali di Botanica* 5: 94. 1894 and *Bulletin de la Société Botanique de France* 53: 32. 1906, *Annali di Botanica* 10(3): 409. 1912, *Mededeelingen van's Rijks-Herbarium* 54: 84. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 239, 339, 367-369. 1927, *Mededeelingen van's Rijks-Herbarium* 58: 136. 1929, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 368. 1939, *Grass. Saudi Arabia* 216. 1989, *Kew Bulletin* 47(2): 277-282. 1992, *Gram. Cameroun* 2: 101. 1992.

in English: white grass

in Arabic: gau

in Mali: allomoze, amadzarne, kelbi, ibirsiagué, okras, pupo supho

in Niger: alamuza, anadzarné, fari'n tchawa, gèch abiat, kalafhu, kalawa, kalawu, karagého, kasura, kotokolé, rané-raného, séko, sub kaarey, subu kuwaré, tazmei, telawlawt

in Nigeria: baya, gau, datsi, gatsuaa, gatsaua, kas makaru, katsaura

in Somalia: maruet, dub derigan, half, xalfo

in Upper Volta: celbi, selbo

A. neglecta León ex Hitchc. (*Aristida neglecta* subsp. *decumbens* Catusus; *Aristopsis bissei* Catusus)

Cuba, the Caribbean. See *Contributions from the United States National Herbarium* 22(7): 567. 1924, *Folia Geobotanica et Phytotaxonomica* 16(4): 439. 1981, *Bot. Zurn. (Kiev)* 69(6): 874. 1984.

A. nicorae Sulekic

Argentina. See *Darwiniana* 41(1-4): 175-177, f. 8. 2003.

A. niederleinii Mez (*Aristida pallens* var. *macrochaeta* Hack.)

Argentina. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 43, t. 468, f. 2. 1799 and *Anales del Museo Nacional de Buenos Aires* 13: 452. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 150. 1921, *Kurtziana* 1: 178. 1961.

A. nitidula (Henrard) S.T. Blake ex J.M. Black (*Aristida echinata* Henrard var. *nitidula* Henrard)

Australia. Perennial, compactly tufted, culms usually simple, sheath tuberculate scabrous, leaves stiff and setaceous or bristly, spike-like and narrow inflorescence, glumes subequal and nerved, upper glume mucronate, lemma convolute and densely spiny-tuberculate toward the apex, awns subequal and flattened, moderately palatable to rabbits, grows on hills and stony sites, similar to *Aristida capillifolia*, *Aristida arida*, *Aristida blakei*, *Aristida australis*,

Aristida strigosa, *Aristida latzii* and *Aristida burraensis*, see *Mededeelingen van's Rijks-Herbarium* 58(A): 285, t. 139. 1929, *Transactions and Proceedings of the Royal Society of South Australia* 67: 46. 1943.

in English: flat-awned three-awn

A. obscura Henrard (*Aristida obscura* var. *luxurians* Henrard)

Queensland, South Australia, Western Australia, Northern Territory, New South Wales. Perennial, tussocky, rare, loosely tufted, semierect or sprawling, terete culms strongly branched and fastigiate, sheath scabrous to pubescent, leaves flat to convolute, inflorescence loose to open, glumes unequal and acuminate, lemma purple and densely tuberculate-spiny or scabrous, awns subequal and divergent, palatable, grows on loamy soils, similar to *Aristida behriana*, *Aristida vickeryae* and *Aristida leptopoda*, see *Mededeelingen van's Rijks-Herbarium* 54(A): 385-387. 1927, *Mededeelingen van's Rijks-Herbarium* 58(A): 262, t. 126. 1932.

in English: brush three-awn, brush threeawn, smallbrush wire grass, rough-seed wire-grass

A. obtusa Delile (*Arthratherum obtusum* (Delile) Nees; *Stipagrostis obtusa* (Delile) Nees)

North Africa, Sahara, Morocco, Saudi Arabia. See *Description de l'Égypte, ... Histoire Naturelle, Tom. Second* 175, t. 13, f. 2. 1812, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 198. 1833, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 179. 1841 and Roberto Corti (1909-1986), *Flora e vegetazione del Fezzán e della regione di Gat*. Firenze 1942 [Reale società geografica italiana. Il Sáhara italiano, pte. 1. Fezzán e oasi di Gat.], *Mémoires, Institut de Recherches Sahariennes. Algiers* 6: 16. 1959, *Bothalia* 21(2): 163-170. 1991, *Lagascalia* 20(2): 265-275. 1998.

in Morocco: sham, selyan

A. oligantha Michaux (*Aristida divaricata* Humb. & Bonpl. ex Willd.; *Aristida macrochaeta* Steud.; *Aristida micropoda* Trin. & Rupr.; *Aristida oligantha* var. *nervata* Beal; *Aristida pallens* Nutt.; *Aristida pauciflora* Buckley; *Aristida ramosissima* Engelm. ex Gray var. *chaseana* Henr.; *Chaetaria oligantha* (Michx.) P. Beauv., also spelled *olygantha*)

U.S., Florida, California, Texas, Illinois. Annual, tufted, culms glabrous to scabrous, branched at the woolly base and nodes, clumped, smooth sheath, ligules short-fringed, leaf blades flat to involute and pubescent, open inflorescence narrowly paniculate, glumes subequal and short-awned, lemmas tipped by three diverging awns, lemma awns free at the base, invasive weed, poor forage, mature awns may injure animals, grows on dry sterile soils, dry sandy areas, dry rocky soil, abandoned fields, overgrazed and disturbed sites, depressed situations, waste ground, eroded slopes, sandy alluvium, open grassy areas, hard clay soil, open habitats, along railroads, clayey roadsides, see

Flora Boreali-Americana 1: 41. 1803, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 99. 1809, *Essai d'une Nouvelle Agrostographie* 30, 158. 1812, *The Genera of North American Plants* 1: 57. 1818, *Species Graminum Stipaceorum* 107-108. 1842, *Synopsis Plantarum Glumacearum* 1: 134. 1855 [1854], *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 92-93. 1862, *Grasses of North America for Farmers and Students* 2: 202. 1896.

in English: Oldfield three-awn, Oldfield threeawn, plains three-awn grass, prairie three-awn, prairie three-awn grass, few-flowered aristida

A. oligospira (Hack.) Henrard

South America, Paraguay. Perennial, caespitose, densely clumped, savannah, see *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 277. 1904, *Mededeelingen van's Rijks-Herbarium* 54: 160. 1926, *Meded. Rijks-Herb.* 54(A): 391-392. 1927, *Bol. Inst. Bot.* (São Paulo) 12: 141. 1999.

A. orcuttiana Vasey (*Aristida hypomegas* Mez; *Aristida schiedeana* Trin. & Rupr.; *Aristida schiedeana* var. *orcuttiana* (Vasey) Allred & Valdés-Reyna) (dedicated to the American (California) botanist Charles Russell Orcutt, 1864-1929, plant collector and naturalist, 1882-1886 Baja California, editor of *The West American Scientist*. vol. 1-21. 1881-1919)

U.S., New Mexico, California, Mexico. Forage, see *Species Graminum Stipaceorum* 120-121. 1842, *Bulletin of the Torrey Botanical Club* 13(2): 27. 1886 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 146. 1921, *Contr. U.S. Natl. Herb.* 22(7): 526. 1924, *Mededeelingen van's Rijks-Herbarium* 54(A): 250. 1927, *Novon* 5: 217. 1995.

in English: Orcutt's threeawn

in Mexico: tres barbas volador

A. pallens Cav. (*Aristida glaberrima* Steud.; *Aristida niederleinii* Mez; *Aristida pallens* Nutt.; *Aristida pallens* Pursh, nom. illeg., non *Aristida pallens* Cav.; *Aristida pallens* var. *genuina* Trin. & Rupr.; *Aristida pallens* var. *intermedia* Trin. & Rupr.; *Chaetaria pallens* (Cav.) P. Beauv.)

Central Brazil, Argentina, Chile. Perennial, erect, clumped, leaves and roots laxative, low forage value, growing in dry places, dry hillsides, rocky areas, depressed situations, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 43-44, t. 468-469, f. 1-2. 1799, *Essai d'une Nouvelle Agrostographie* 30, 152, 158. 1812, *Flora Americae Septentrionalis; or, ...* 2: 728. 1814, *The Genera of North American Plants* 1: 57. 1818, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 381. 1829, *Species Graminum Stipaceorum* 116-117. 1842, *Synopsis Plantarum Glumacearum* 1: 135. 1855 [1854], *Flora Brasiliensis* 2(3): 14. 1878 and *Anales del Museo Nacional de Montevideo* 4(1): 72, 74-75, t. 1-2. 1902, *Anales del Museo Nacional de Buenos Aires* 13: 452.

1906, *Anales del Museo Nacional de Buenos Aires* 21: 69. 1911, *Mededeelingen van's Rijks-Herbarium* 54: 201. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 408, 410. 1927, *Revista Sudamericana de Botánica* 6(5-6): 141. 1940, *Revista Sudamericana de Botánica* 9: 98-99. 1953, *Kurtziana* 1: 171-175, f. 1, 9B, 10D-F. 1961.

in English: goat's beard

in Brazil: capim barba de bode, capim de bode, barba de bode, barba da bode

A. pallens Cav. var. *geminata* Caro

Argentina. See *Kurtziana* 1: 171-175, f. 1, 9B, 10D-F. 1961.

A. pallens Cav. var. *pallens* (*Aristida pallens* var. *genuina* Trin. & Rupr.; *Chaetaria pallens* (Cav.) P. Beauv.)

South America. See *Essai d'une Nouvelle Agrostographie* 30, 152, 158. 1812, *Species Graminum Stipaceorum* 116. 1842.

A. pallida Steud.

Central Africa, Sudan, Niger. See *Synopsis Plantarum Glumacearum* 1: 143. 1855 [1854].

in Niger: aggur, awukaraz, azwoezag, enegarwagh, furué, kasawura, manrgo, surungeewol, surungéji, taezeyzey, tchibby, waajag, yanta

A. pallida Steud. var. *chudaei* (Batt. & Trab.) Maire & Weiller (*Aristida aristidis* Coss. var. *chudaei* Batt. & Trab.)

Central Africa. See *Synopsis Plantarum Glumacearum* 1: 143. 1855 [1854], *Flore d'Alger* 2: (Monocot.) 158. 1895 and *Bulletin de la Société Botanique de France*, sér. 4, 6: 32. 1906, *Flore de l'Afrique du Nord*: 2: 51. 1953.

A. palustris (Chapman) Vasey (*Aristida affinis* auct. non (J.A. Schultes) Kunth; *Aristida purpurascens* Poir. var. *alabamensis* Trin. & Rupr.; *Aristida virgata* Trin. var. *palustris* Chapm.)

U.S., Florida. Seasonally flooded areas, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 60. 1821, *Mantissa* 210. 1824, *Révision des Graminées* 1: 61. 1829, *Flora of the Southern United States* 555. 1860, *A Descriptive Catalogue of the Grasses of the United States* 35. 1885 and *Rhodora* 87(850): 147-155. 1985, *Rhodora* 88(855): 367-387. 1986.

in English: long-leaf three-awn, longleaf threeawn

A. pansa Wooton & Standl. (*Aristida dissita* I.M. Johnston; *Aristida pansa* f. *contracta* Allred & Valdés-Reyna; *Aristida pansa* var. *dissita* (I.M. Johnston) Beetle; *Aristida tehucanensis* Sánchez-Ken & Dávila)

U.S., New Mexico. Erect, sheath pubescent, forage, growing in arid and semiarid areas, grassland, mountain scrub, see *Contributions from the United States National Herbarium* 16: 112. 1913, *Journal of the Arnold Arboretum* 24(4): 401-402. 1943, *Phytologia* 27(6): 441. 1974, *Flora del Valle de Tehuacán-Cuicatlán* 3: 18, f. 1. 1994, *Brittonia* 49(1): 62-63. 1997.

in English: Wooton's three-awn, Wooton threeawn

in Mexico: tres aristas perenne

A. pansa Wooton & Standl. f. *contracta* Allred & Valdés-Reyna (*Aristida pansa* var. *pansa*)

Mexico. See *Brittonia* 49(1): 63. 1997.

A. pansa Wooton & Standl. f. *dissita* (I.M. Johnst.) Allred & Valdés-Reyna (*Aristida dissita* I.M. Johnston; *Aristida pansa* var. *dissita* (I.M. Johnston) Beetle; *Aristida tehucanensis* Sánchez-Ken & Dávila)

Mexico. See *Journal of the Arnold Arboretum* 24(4): 401-402. 1943, *Phytologia* 27(6): 441. 1974, *Flora del Valle de Tehuacán-Cuicatlán* 3: 18, f. 1. 1994, *Brittonia* 49(1): 62. 1997.

A. pansa Wooton & Standl. f. *pansa*

America.

A. paoliana (Chiov.) Henrard (*Aristida hemmingii* Clayton; *Aristida stipiformis* Lam. ex Poir. var. *paoliana* Chiov.)

Kenya, Somalia, Ethiopia. Perennial, woody, slender, freely branched from all nodes, loosely tufted, leaf blades narrowly linear, knotted base, nodding open and loose panicle, glumes unequal, lower glume emarginate to 2-lobed, upper glume 2-toothed and shortly awned, upper portion of the lemma narrowed and scabris, awns subequal, small grain, on orange sand, red sandy soil, related to *Aristida stenophylla* Henr., see *Encyclopédie Méthodique. Botanique ... Supplément* 1: 452. 1810 and *Annali di Botanica* 13(3): 371. 1915, *Mededeelingen van's Rijks-Herbarium* 54(A): 420-421. 1927, *Kew Bulletin* 23: 211. 1969, *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: ula dheere

A. parishii A.S. Hitchc. (*Aristida purpurea* Nutt. var. *parishii* (A.S. Hitchc.) Allred; *Aristida wrightii* var. *parishii* (A.S. Hitchc.) Gould) (collected by S.B. Parish and W.F. Parish, Colorado Desert, 1882) (dedicated to the brothers Samuel Bonsall Parish (1838-1928) and William F. Parish, American botanists and botanical collectors; Samuel Bonsall Parish wrote *A Catalogue of Plants Collected in the Salton Sink*. Washington, D.C. 1913. See George Neville Jones (1903-1970), *An Annotated Bibliography of Mexican Ferns*. Univ. Illinois Press 1966; J.H. Barnhart, *Biographical notes upon botanists*. 3: 48. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 566. University of Pennsylvania Press, Philadelphia 1964; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 301. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 321. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; G. Murray, *History of the Collections Contained in the Natural History Departments of the British Museum*. 1: 172. London

1904; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; George Edmund Lindsay (b. 1916), *Notes Concerning The Botanical Explorers and Exploration of Lower California, Mexico*. San Francisco 1955)

U.S., California, North America. Perennial, scattered, good forage, common on rocky slopes and along washes, see *Transactions of the American Philosophical Society, new series*, 5: 145. 1837 and *Flora of the Southeastern United States ...* 116, 1327. 1903, *A Flora of California* 1: 101. 1912, *Phytologia* 37(4): 317-407. 1977, *Journal of the Arnold Arboretum* 60(2): 320. 1979, *Brittonia* 36(4): 392. 1984.

in English: Parish's threeawn, threeawn, Parish three-awn

A. parodii Henrard

Argentina. See *Mededeelingen van's Rijks-Herbarium* 54(A): 428-429. 1927.

A. parvula (Nees) De Winter (*Stipa parvula* Nees)

South Africa. Annual, erect to geniculate, tufted, sometimes prostrate, lower glume awned, solitary awn, lateral awns missing, on stony soils, along water courses, rocky hillsides, disturbed areas, see *Florae Africae Australioris Illustrationes Monographicae* 169. 1841 and *Kirkia* 3: 132. 1963.

A. patula Chapman ex Nash (*Aristida scabra* sensu Chapm.)

U.S., Florida. Perennial, shortly rhizomatous, green spikelets, rare species growing in moist sandy barrens, sandy coast, open forest, savannah, flatwoods, grassland, ponds and disturbed sites, see *Bulletin of the Torrey Botanical Club* 23: 98. 1896 and *Rhodora* 88(855): 367-387. 1986.

in English: tall three-awn, threeawn

A. pedroensis Henrard

Argentina. See *Mededeelingen van's Rijks-Herbarium* 58(A): 232, t. 130. 1932, *Meded. Rijks-Herb.* 54(C): 731. 1933.

A. pendula Longhi-Wagner

Brazil. Perennial, erect, see *Bradea, Boletim do Herbarium Bradeanum* 5(5): 59-62, f. 1. 1988.

A. pennei Chiov. (*Aristida jemensis* Henrard ex Schwartz; *Aristida jemensis* Henrard)

Yemen, Arabia. Perennial, erect, short, smooth, tufted to densely tufted, foliage basal, leaves involute, panicle contracted, glumes unequal terminating in a short awn point, lemma scabrid, awns more or less equal stiff and spreading, widespread on stony and sandy plain, dry soil, on mountain slopes, see *Annali di Botanica* 2: 366. 1905, *Mitteilungen aus dem Institut für allgemeine Botanik in Hamburg* 10: 321. 1939.

A. pernicioso Domin

Western Australia, Northern Territory, tropical and subtropical Queensland. Perennial, compact, tufted, lemma awn column present, see *Bibliotheca Botanica* 85(2): 340-341, t. 13, f. 15-17. 1915.

A. personata Domin (*Aristida ramosa* var. *speciosa* Henrard)

Australia. Perennial, compact, tufted, slender to robust, branched, loose to open panicle, similar to *Aristida ramosa*, see *Mededeelingen van's Rijks-Herbarium* 58(A): 260, 290, t. 141. 1932, *Meded. Rijks-Herb.* 54(C): 731-732, 737. 1933, *Austr. Syst. Bot.* 5: 200. 1992.

A. peruviana Beetle (*Aristida adscensionis* L.)

Peru. Rare species growing on sand dunes near the ocean, see *Species Plantarum* 1: 82. 1753 and *Mededeelingen van's Rijks-Herbarium* 54: 9. 1926, *Phytologia* 30(5): 348. 1975, *Madroño* 40: 266. 1993.

A. petersonii Allred & Valdés-Reyna (for the American botanist Paul M. Peterson, born 1954, curator of grasses, National Museum of Natural History, Smithsonian Institution, interested in the subfamily Chloridoideae. See *Syst. Bot.* 14: 316. 1989; *Brittonia* 42(1): 47. 1990; P.M. Peterson & C.R. Annable, "Systematics of the annual species of *Muhlenbergia* (Poaceae: Eragrostideae)." *Syst. Bot. Monographs* 31: 1-109. 1991; *Madroño* 40: 71. 1993; *Amer. J. Bot.* 81: 622-629. 1994; *Novon* 5(3): 209. 1995; *Ann. Miss. Bot. Gard.* 82: 108. 1995; P.M. Peterson, R.D. Webster and J. Valdés-Reyna, "Genera of New World Eragrostideae (Poaceae: Chloridoideae)." *Gayana, Bot.* 54(2): 172. 1997; P.M. Peterson and J.J. Ortíz-Díaz, "Allelic variation in the amphitropical disjunct *Muhlenbergia torreyi* (Poaceae: Muhlenbergiinae)." *Brittonia* 50: 381-391. 1998; *Sida* 19(1): 66. 2000; S. Laegaard and P.M. Peterson, *Gramineae* (part 2) Subfam. Chloridoideae. Pp. 1-131. In: Harling, G. & L. Andersson (eds.). *Flora of Ecuador*. 2001; P.M. Peterson and Y. Herrera-Arrieta, "A leaf blade anatomical survey of *Muhlenbergia* (Poaceae: Muhlenbergiinae)." *Sida* 19: 469-506. 2001; *Contr. U.S. Natl. Herb.* 41: 1-255. 2001 [P.M. Peterson & al., Catalogue of New World grasses (Poaceae): II. subfamily Chloridoideae.]

Mexico. See *Novon* 5(3): 209-212, f. 1. 1995.

A. pilgeri Henr. (dedicated to the German botanist Robert Knuds Friedrich Pilger, 1876-1953, traveler, botanical explorer, plant collector in Brazil (Matto Grosso), Director at Botanical Garden Berlin-Dahlem, his works include "Gramineae novae, a cl. K. Skottsberg in Patagonia australi et in Fuegia collectae." *Repert. Spec. Nov. Regni Veg.* 12: 304-308. 1913 and "Sobra algunas gramíneas de América del Sur." *Revista Argent. Agron.* 11(4): 257-264. 1944. See L.R. Parodi, "Robert Pilger." *Revista Argent. Agron.* 20(2): 107-114. 1953; H. Melchior, "Zum Gedächtnis von Robert Pilger." *Bot. Jahrb. Syst.* 76(3): 385-409. 1954; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press,

Philadelphia 1964; E.D. Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 151. 1937; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 310. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 327. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; August Weberbauer, *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 39. Leipzig 1911)

South Africa. Perennial, densely tufted, coarse, robust, unbranched, leaf blade expanded at the base, lower internodes glabrous, ligule a fringe of short hairs, basal leaves leaf sheaths slightly keeled, inflorescence a compact panicle contracted and branched, spikelets with short pedicels, lower glume long awned, lemma articulation, three awns unequal, column twisted, very little forage value, tough and unpalatable, on sandy soils, veld, moist depressions, stony places, floodplains, riverbanks, see *Mededeelingen van's Rijks-Herbarium* 54(A): 443-445. 1927.

in English: Pilger's stick grass

in South Africa: Pilger-se-steekgras, Pilgers stechgras

A. pinifolia Catusas

The Caribbean, Cuba. Savannah, sandy soil, see *Novosti Sist. Vyss. Rast.* 20: 7. 1983, *Acta Botanica Cubana* 24: 3. 1985.

A. pittieri Henrard

Venezuela. Savannah, see *Mededeelingen van's Rijks-Herbarium* 54(A): 447-448. 1927.

A. platychaeta S.T. Blake

Queensland, New South Wales. Perennial, loosely tufted, slender, thin and smooth, unbranched, leaf blades flexuous to curly, sheath almost smooth, leaves scabrous, contracted inflorescences, usually loose panicle spike-like, equal or subequal glumes ovate to lanceolate, lemma linear-cylindrical white-tuberculate, awns filiform and divergent, grows in grassland, similar to *Aristida nitidula*, *Aristida blakei*, *Aristida strigosa*, *Aristida capillifolia* and *Aristida arida*, see *Proceedings of the Royal Society of Queensland* 51: 174, t. 5, f. 10-13. 1940.

A. polyclados Domin

Australia, Queensland. Annual, compact, tufted, branched, compressed, inverse glumes, twisted column, lemma articulation, see *Bibliotheca Botanica* 85(2): 338, t. 13, f. 10-12. 1915.

A. portoricensis Pilger

Puerto Rico. Largely tufted, culms spreading at base, endangered or threatened species, growing on red clay, rocky soils, sandy areas and dry fields, stony places, savannahs

and open fields, see *Symbolae Antillarum* 4: 100. 1903, *Flora of Puerto Rico and Adjacent Islands: A Systematic Synopsis* 1-342. 1982, *Sida* 13(4): 423-447. 1989.

in Spanish: pelos del diablo

A. pradana León

Cuba. Perennial, tufted, erect, wiry, rocky and stony soils, see *Bulletin of the Torrey Botanical Club* 53: 458. 1926.

A. protensa Henrard

Somalia. Perennial, densely tufted, short dense panicle spike-like cuneate below, glumes very unequal, lower glume linear-lanceolate, upper glume 2-toothed at the tip, linear upper glume with expanded base, slightly dilated distal end of the column, awns subequal, see *Mededeelingen van's Rijks-Herbarium* 54(B): 467-468. 1928, *Kew Bulletin* 47(2): 277-282. 1992.

A. pruinosa Domin

Western Australia, Queensland, Northern Territory. Perennial, loosely tufted, robust, branched, pruinose culms, subequal glumes, tuberculate lemma grooves, tropical and subarid, sands and alluvial soils, similar to *Aristida calycina* var. *praealta* and *Aristida biglandulosa*, see *Bibliotheca Botanica* 85(2): 345-346. 1915.

A. psammophila Henrard (Greek *psammos* "sand" and *philos* "lover, loving")

Queensland, New South Wales. Perennial, compact, tufted, culms sparsely branched and more or less terete, sheath scabrous, leaves scabrous, panicle more or less spike-like, glumes lanceolate and unequal, lemma pale brown, awns stiff and filiform, poor soils, sandy soils, similar to *Aristida longicollis*, *Aristida latifolia* and *Aristida macroclada*, see *Mededeelingen van's Rijks-Herbarium* 58(A): 229, t. 142. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 734-735. 1932.

A. pubescens Caro & E.A. Sánchez

Argentina. See *Darwiniana* 19(2-4): 417-421, f. 2. 1975.

A. purpurascens Poiret (*Aristida affinis* (Schult.) Kunth; *Aristida elliotiana* Steud.; *Aristida geyeriana* Steud.; *Aristida neesiana* Trin. & Rupr.; *Aristida purpurascens* var. *alabamensis* Trin. & Rupr.; *Aristida purpurascens* var. *glauco-cissima* Kearney ex Scribn. & Ball; *Aristida purpurascens* var. *minor* Vasey; *Aristida racemosa* Muhl., nom. illeg., non *Aristida racemosa* Spreng.; *Aristida recurvata* Kunth; *Aristida riedeliana* Trin. & Rupr.; *Aristida stricta* Steud., nom. illeg., non *Aristida stricta* Michx.; *Aristida tenuispica* Hitchc.; *Chaetaria affinis* Schult.; *Chaetaria purpurascens* (Poir.) P. Beauv.; *Chaetaria recurvata* (Kunth) Roem. & Schult.)

U.S., Louisiana, Florida, Texas, North America, Mexico, Canada, Honduras. Perennial, growing on dry sandy soils, in open sterile ground, wetlands, gravelly soils, in sand barrens, see *Encyclopédie Méthodique. Botanique ...*

Supplément 1: 452. 1810, *Essai d'une Nouvelle Agrostographie* 30, 152, 158. 1812, *Nova Genera et Species Plantarum* 1: 123. 1815 [1816], *Descriptio uberior Graminum* 172. 1817, *Systema Vegetabilium, editio decima sexta* 2: 397. 1817, *Mantissa* 210. 1824, *Révision des Graminées* 1: 61. 1829, *Species Graminum Stipaceorum* 102, 113. 1842, *Nomenclator Botanicus. Editio secunda* 1: 132. 1854, *Synopsis Plantarum Glumacearum* 1: 133. 1855 [1854], *Contributions from the United States National Herbarium* 3(1): 46. 1892, *Grasses of North America for Farmers and Students* 2: 201. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 45. 1901, *Contributions from the United States National Herbarium* 22(7): 572, 578, 581. 1924, *Rhodora* 88(855): 383. 1986.

in English: arrowfeather, broomsedge, arrowgrass, arrowfeather three-awn, arrowfeather threeawn

A. purpurascens Poir. var. **purpurascens** (*Aristida affinis* (J.A. Schultes) Kunth; *Aristida purpurascens* var. *minor* Vasey; *Chaetaria affinis* Schult.)

North America, U.S., Texas, Florida. Perennial, green spikelets, growing in dry flatwoods, sand hills and disturbed sites, wetland, see *Mantissa* 210. 1824, *Révision des Graminées* 1: 61. 1829, *Contributions from the United States National Herbarium* 3(1): 46. 1892.

in English: arrowfeather

A. purpurascens Poir. var. **tenuispica** (A.S. Hitchc.) Allred (*Aristida tenuispica* A.S. Hitchc.)

U.S., North America. Open areas, savannah, see *Contributions from the United States National Herbarium* 22(7): 581. 1924, *Rhodora* 88(855): 383. 1986.

A. purpurascens Poir. var. **virgata** (Trin.) Allred (*Aristida chapmaniana* Nash; *Aristida gracilis* var. *virgata* (Trin.) Alph. Wood; *Aristida perennis* Panz. ex Trin. & Rupr.; *Aristida purpurascens* var. *depauperata* Vasey ex Beal; *Aristida stricta* Steud., nom. illeg., non *Aristida stricta* Michx.; *Aristida virgata* Trin.)

U.S., North America. In dry sandy soil, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 60. 1821, *Species Graminum Stipaceorum* 104. 1842, *Nomenclator Botanicus. Editio secunda* 1: 132. 1854, *The American Botanist and Florist* 389. 1871, *Grasses of North America for Farmers and Students* 2: 201. 1896 and *Flora of the South-eastern United States ...* 118, 1327. 1903, *Contr. U.S. Natl. Herb.* 22(7): 578. 1924, *Rhodora* 88(855): 383. 1986.

in English: Trinius threeawn, wandlike three-awn grass

A. purpurea Nuttall (*Aristida aequiramea* Scheele; *Aristida berlandieri* (Trin. & Rupr.) Hitchc.; *Aristida fasciculata* var. *californica* (Vasey) Vasey ex L.H. Dewey; *Aristida fasciculata* var. *hookeri* (Trin. & Rupr.) L.H. Dewey; *Aristida filipendula* Buckley; *Aristida longiseta* var. *hookeri* (Trin. & Rupr.) Merr.; *Aristida purpurea* var. *aequiramea* (Scheele) Merr.; *Aristida purpurea* var. *berlandieri* Trin. &

Rupr.; *Aristida purpurea* var. *californica* Vasey; *Aristida purpurea* var. *capillarifolia* Merr.; *Aristida purpurea* var. *hookeri* Trin. & Rupr.)

U.S., California, Mexico. Perennial bunchgrass, densely tufted, inrolled leaves, seed head nodding and purplish, 3-awned spikelets, spreading awns, grazed only when young and green, poor forage, grows on rocky hills, grassy plains, sandy plains and arid situations, dry upland, see *Annals of the Lyceum of Natural History of New York* 1(1): 154-155. 1824, *Transactions of the American Philosophical Society, new series*, 5: 145. 1837, *Species Graminum Stipaceorum* 107. 1842, *Linnaea* 19(6): 688. 1847, *Linnaea* 22(3): 343. 1849, *Synopsis Plantarum Glumacearum* 1: 420. 1855 [1854], *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 93. 1862, *Mexicanas Plantas* 2: 78. 1886, *Contributions from the United States National Herbarium* 3(1): 46-47. 1892, *Contributions from the United States National Herbarium* 2(3): 515. 1894 and *Circular, Division of Agrostology, United States Department of Agriculture* 34: 5, 7-8. 1901, *Contributions from the United States National Herbarium* 11: 107. 1906, *A Flora of California* 1: 101. 1912, *Contributions from the United States National Herbarium* 17(3): 280. 1913, *Contr. U.S. Natl. Herb.* 22(7): 556. 1924, *Intermountain Flora* 6: 455-456. 1977, *Sida* 9(4): 358, f. 1. 1982, *Brittonia* 36(4): 391-392. 1984, *Novon* 5(3): 221. 1995.

in English: purple three-awn, purple threeawn, red three-awn, wiregrass, democrat grass

in Mexico: tres aristas morado

A. purpurea Nutt. f. **brownii** (Warnock) Allred & Valdés-Reyna (*Aristida brownii* Warnock)

South America, U.S., Texas. Perennial, see *Sida* 9(4): 358, f. 1. 1982, *Novon* 5(3): 221. 1995.

A. purpurea Nutt. var. **curvifolia** (E. Fourn.) Allred (*Aristida curvifolia* E. Fourn. ex Hemsl.; *Aristida curvifolia* E. Fourn.)

America. See *Biologia Centrali-Americana; ... Botany ...* 3: 533. 1885, *Mexicanas Plantas* 2: 78. 1886 and *Brittonia* 36(4): 392. 1984, *Fl. Valle Tehuacán-Cuicatlán* 3: 12. 1994.

A. purpurea Nutt. var. **fendleriana** (Steud.) Vasey (*Aristida fasciculata* var. *fendleriana* (Steud.) Vasey ex L.H. Dewey; *Aristida longiseta* var. *fendleriana* (Steud.) Merr.; *Aristida purpurea* var. *fendleri* Vasey)

U.S. Perennial, found in dry sandy soil, see *Annals of the Lyceum of Natural History of New York* 1(1): 154-155. 1824, *Synopsis Plantarum Glumacearum* 1: 420. 1855 [1854], Sereno Watson (1826-1892), *Catalogue of Plants Collected in ... 1871-73*, etc. 55. Washington 1874 [Geogr. and Geol. Expl., Wheeler's Exped.], *Contributions from the United States National Herbarium* 3(1): 46. 1892, *Contributions from the United States National Herbarium* 2(3): 515. 1894 and *Circular, Division of Agrostology, United States*

Department of Agriculture 34: 5-6. 1901, *Flora of the Southeastern United States* ... 116. 1903.

A. *purpurea* Nutt. var. ***longiseta*** (Steud.) Vasey (*Aristida curtiseta* Buckley; *Aristida fasciculata* var. *nuttallii* Thurb. ex Beal; *Aristida glauca* (Nees) Steud., nom. illeg., non *Aristida glauca* (Nees) Walp.; *Aristida longiseta* Steud.; *Aristida longiseta* subsp. *rariflora* Hitchc.; *Aristida longiseta* var. *longiseta*; *Aristida longiseta* var. *rariflora* A.S. Hitchc.; *Aristida longiseta* var. *rariflora* (Hitchc.) Hitchc.; *Aristida longiseta* var. *robusta* Merr.; *Aristida pallens* Pursh, nom. illeg., non *Aristida pallens* Cav.; *Aristida purpurea* subsp. *robusta* (Merr.) Piper; *Aristida purpurea* var. *longiseta* (Steud.) Vasey ex Rothr.; *Aristida purpurea* var. *robusta* (Merr.) Piper; *Aristida rariflora* (Hitchc.) Henrard; *Aristida reverchonii* Vasey; *Aristida reverchonii* var. *angusta* Vasey; *Aristida vaseyi* Wooton & Standl.) (after the French botanist Julien Reverchon, 1834-1905, plant collector (Dallas, Texas), traveler, brother of the French plant collector Elisée Reverchon (1835-1914); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 147. Boston 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 330. Boston, Mass. 1972; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Canada, British Columbia, U.S., California, Texas, New Mexico, Mexico. Perennial bunchgrass, tufted, three-awned, green, sheaths open, ligule a short fringe of hairs, short leaves stiff and rolled, narrow pyramid-shaped flower head, glumes awn-tipped, scales surrounding each seed, forage, low palatable weed, grazed before the seed heads form, growing in thick clumps, on roadsides, arid lands, in dry plains, on rocky slopes in desert scrub and desert grassland, on dry grassland sites and bare rocky soils, on sandy or gravelly plains and hills, well-drained soils, in the steppe and montane zones, see *Flora Americae Septentrionalis*; or, ... 2: 728. 1814, *Annals of the Lyceum of Natural History of New York* 1(1): 154-155. 1824, *Transactions of the American Philosophical Society, new series*, 5: 145. 1837, *Linnaea* 19(6): 688. 1847, *Synopsis Plantarum Glumacearum* 1: 135, 420. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 92. 1862, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler* ... vol. vi—*Botany* 6: 286. 1878, *Bulletin of the Torrey Botanical Club* 13: 52. 1886, *Contributions from the United States National Herbarium* 3(1): 46. 1892, *Grasses of North America for Farmers and Students* 2: 208. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 34: 5, 8. 1901, *Contributions from the United States National Herbarium* 11: 107. 1906, *New Mexico Agricultural Experiment Station: Bulletin* 81: 55. 1912, *Contributions from the United States National Herbarium* 22(7): 554, 565. 1924, *Mededeelingen van's Rijks-Herbarium*

54(A): 314. 1927, *Intermountain Flora* 6: 456. 1977, *Great Basin Naturalist* 50: 74. 1990.

in English: red three-awn, red threeawn, longawned aristida, longawned threeawn, dogtown grass, dogtown-grass, Fendler threeawn, wire grass

in Mexico: tres aristas rojo

A. *purpurea* Nutt. var. ***nealleyi*** (Vasey) Allred (*Aristida glauca* (Nees) Steud., nom. illeg., non *Aristida glauca* (Nees) Walp.; *Aristida glauca* (Nees) Walpers; *Aristida nealleyi* (Vasey) Vasey; *Aristida purpurea* var. *glauca* (Nees) A.H. Holmgren & N.H. Holmgren; *Aristida reverchonii* Vasey; *Aristida reverchonii* var. *angusta* Vasey; *Aristida stricta* var. *nealleyi* Vasey; *Aristida vaseyi* Wooton & Standl.; *Chaetaria glauca* (Nees) (for the American (b. England, Scarborough, Yorks) botanist George Vasey, 1822-1893 (d. Washington, U.S.), agrostologist, physician, in 1868 and 1869 explorer with J.W. Powell in Colorado, Curator of the United States National Herbarium, with J.W. Chickering, E. Foreman, Wm.H. Seaman and L.F. Ward wrote *Flora Columbiana*. Washington 1876, his works include *The Grasses of the United States*. Washington 1883, *Grasses of the South*. Washington 1887, *Grasses of the Southwest*. Washington 1890-1891 and *Grasses of the Pacific Slope*. Washington 1892-1893; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 427. 1965; Howard Atwood Kelly & Walter Lincoln Burrage, *Dictionary of American Medical Biography*. New York 1928; J. Ewan, editor, *A Short History of Botany in the United States*. 45. New York and London 1969; Joseph Ewan, *Rocky Mountain Naturalists*. 327. The University of Denver Press 1950; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 703. 1994; William Marriott Canby (1831-1904) & Joseph Nelson Rose (1862-1928), "George Vasey: a biographical sketch." *Bot. Gaz.* 18: 170-183. 1893; Frederick Vernon Coville (1867-1937), "Death of Dr. George Vasey." *Bull. Torr. Bot. Club.* 20: 218-220. 1893; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. Philadelphia 1899; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983)

U.S., North America. Perennial, forage, found on dry soils, deserts, on sand ridge, along roadsides, see *Flora Boreali-Americana* 1: 41. 1803, *Transactions of the American Philosophical Society, new series*, 5: 145. 1837, *Linnaea* 19(6): 688. 1847, *Annals of Botany. Oxford* 1: 925. 1849, *Synopsis Plantarum Glumacearum* 1: 135. 1854, *Bulletin of the Torrey Botanical Club* 13: 52. 1886, *Contributions from the United States National Herbarium* 1(2): 55. 1890, *Contributions from the United States National Herbarium* 3(1): 45-46. 1892 and *Circ. Div. Agrostol. U.S.D.A.* 34: 8. 1901, *New Mexico Agricultural Experiment Station: Bulletin* 81: 55. 1912, *Contr. U.S. Natl. Herb.* 22(7): 554. 1924, *Intermountain Flora* 6: 455. 1977, *Brittonia* 36(4): 391. 1984.

in English: three-awn, blue threeawn, Reverchon threeawn
in Spanish: tres barbas

in Mexico: tres barbas liso

A. purpurea Nutt. var. **parishii** (Hitchc.) Allred (*Aristida parishii* Hitchc.; *Aristida wrightii* var. *parishii* (Hitchc.) Gould)

U.S. See *Flora of the Southeastern United States* ... 116, 1327. 1903, *A Flora of California* 1: 101. 1912, *Journal of the Arnold Arboretum* 60(2): 320. 1979, *Brittonia* 36(4): 392. 1984.

A. purpurea Nutt. var. **perplexa** Allred & Valdés-Reyna

U.S., New Mexico. Sandy soil, pasture, see *Novon* 5(3): 217-221, f. 6. 1995.

A. purpurea Nutt. var. **purpurea** (*Aristida aequiramea* Scheele; *Aristida berlandieri* (Trin. & Rupr.) Hitchc.; *Aristida eggertii* Hitchc.; *Aristida fasciculata* var. *californica* (Vasey) Vasey ex L.H. Dewey; *Aristida fasciculata* var. *hookeri* (Trin. & Rupr.) L.H. Dewey; *Aristida fasciculata* var. *micrantha* (Vasey) Vasey ex L.H. Dewey; *Aristida filipendula* Buckley; *Aristida longiseta* var. *hookeri* (Trin. & Rupr.) Merr.; *Aristida micrantha* (Vasey) Nash; *Aristida muhlenbergioides* E. Fourn.; *Aristida purpurea* var. *aequiramea* (Scheele) Merr.; *Aristida purpurea* var. *berlandieri* Trin. & Rupr.; *Aristida purpurea* var. *californica* Vasey; *Aristida purpurea* var. *capillarifolia* Merr.; *Aristida purpurea* var. *hookeri* Trin. & Rupr.; *Aristida purpurea* var. *laxiflora* Merr.; *Aristida purpurea* var. *micrantha* Vasey; *Aristida roemeriana* Scheele)

U.S., California, North America. Perennial bunchgrass, dark green, single-stemmed, branched, small leaves, open and drooping inflorescence, spikelets three-awned, poor forage, low palatability, growing in small dense clumps, on rocky or sandy plains and slopes, on clayey soils, along roadsides, dry upland, see *Annals of the Lyceum of Natural History of New York* 1(1): 154-155. 1824, *Transactions of the American Philosophical Society, new series*, 5: 145. 1837, *Species Graminum Stipaceorum* 107. 1842, *Linnaea* 22(3): 343. 1849, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 93. 1862, *Mexicanas Plantas* 2: 79. 1886, *Contributions from the United States National Herbarium* 3(1): 47. 1892, *Contributions from the United States National Herbarium* 2(3): 515. 1894 and *Circular, Division of Agrostology, United States Department of Agriculture* 34: 5, 7-8. 1901, *Flora of the Southeastern United States* ... 117. 1903, *Contributions from the United States National Herbarium* 17(3): 280. 1913, *Contributions from the United States National Herbarium* 22(7): 556, 560. 1924.

in English: purple three-awn, purple threeawn, perennial threeawn, purple needle-grass

in Mexico: tres aristas morado

A. purpurea Nutt. var. **wrightii** (Nash) Allred (*Aristida brownii* Warnock; *Aristida wrightii* Nash)

Mexico, U.S., Texas. Clumping, spikelets reddish, found in gypsum soil, see also *Aristida wrightii* Nash, see *Transactions of the American Philosophical Society, new series*, 5: 145. 1837 and *Flora of the Southeastern United States* ... 116, 1327. 1903, *Brittonia* 36(4): 393. 1984.

in English: Wright's threeawn

A. purpusiana Hitchc.

North America, Mexico, Baja California. See *Contributions from the United States National Herbarium* 17(3): 276. 1913.

A. pycnostachya Cope

Somalia. Perennial, densely tufted, tussocky, woody base, elongate panicle fully exerted and without the cuneate base, glumes unequal, upper glume entire, column not dilated at the distal end, awns subequal, weed, found on sandy soil, see *Kew Bulletin* 47(2): 277. 1992.

in Somalia: meyro

A. queenslandica Henrard

Australia, Queensland. Perennial, loosely tufted, see *Mededeelingen van's Rijks-Herbarium* 54(B): 488-489. 1928, *Brunonia* 3(2): 271-333. 1980.

A. queenslandica Henrard var. **dissimilis** (S.T. Blake) B.K. Simon (*Aristida dissimilis* S.T. Blake)

Australia. Densely tufted, green to dark green, erect, culm internodes glabrous, on sandy soil, rocky slopes, see *Proceedings of the Royal Society of Queensland* 51: 170, t. 4, f. 4-7. 1940, *Austrobaileya* 2(1): 96. 1984, *Australian Systematic Botany* 5: 129-226. 1992.

A. queenslandica Henrard var. **queenslandica**

Australia, Queensland, New South Wales, Northern Territory. Perennial, wiry and more or less simple to branched, slender tussocks-forming, culm internodes hirsute or villous, sheath smooth, loose panicle contracted and often nodding, glumes lanceolate, lower glume acuminate, upper glume abruptly acuminate, lemma purplish and involute, awns dissimilar and more or less stiff, grain with a ventral furrow, on shallow soils, open forest.

in English: wire grass

A. ramosa R. Br. (*Aristida ramosa* var. *scaberula* Henrard; *Aristida ramosa* var. *speciosa* Henrard)

Western Australia, Queensland, New South Wales, Victoria, South Australia. Perennial, loosely tufted, erect, tough and rigid, usually much branched and fastigiate, canelike, forming slender tussocks, sheath often tuberculate, ligule membranous, leaves green and rolled, inflorescence branches more or less contracted, panicle loose and very narrow, glumes unequal and lanceolate, lower glume acute, upper glume obtuse, lemma smooth and not tuberculate apically, purplish lemma linear to elliptic, awns filiform spreading

or divergent, 3 stamens, ornamental, found on rocky areas, on poor soils, similar to *Aristida personata* and *Aristida echinata*, see *Prodromus Florae Novae Hollandiae* 1: 173. 1810, *Flora Australiensis: A Description ...* 7: 563. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 9: 551. 1911, *Mededeelingen van's Rijks-Herbarium* 58(A): 260, 290, t. 141. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 731-732, 736. 1933, *Brunonia* 3(2): 271-333. 1989, *New Zealand Journal of Botany* 29: 117-129. 1991, *Australian Systematic Botany* 5: 129-226. 1992.

in English: cane wire grass, purple wire grass

A. ramosissima Engelm. ex A. Gray (*Aristida ramosissima* f. *uniaristata* (A. Gray) Mohlenbr.; *Aristida ramosissima* var. *chaseana* Henrard; *Aristida ramosissima* var. *uniaristata* A. Gray) (named for the American botanist Mrs. Agnes Chase (née Merrill), 1869-1963)

U.S., Texas, Florida. Annual, growing on sterile or open clayey soils, roadsides and dry openings, see *A Manual of the Botany of the Northern United States. Second Edition* 550. 1856, *A Manual of Botany of the Northern United States (edition 5)* 618. 1867 and *Contr. U.S. Natl. Herb.* 22(7): 538. 1924, *Mededeelingen van's Rijks-Herbarium* 54(B): 498. 1928, *Illustrated Flora of Illinois* 329. 1973.

in English: slender three-awn, branched three-awn grass, s-curve three-awn, s-curve threeawn, Chase threeawn

A. recta Franch. (*Aristida atroviolacea* Hack.; *Aristida gossweileri* Pilg.; *Aristida hooki* De Wild.) (for the botanist John Gossweiler, 1873-1952, plant collector; see Alberto Judice Leote Cavaco (b.1916), *Contribution à l'étude de la flore de la Luanda d'après les récoltes de Gossweiler, 1946-1948*. Lisboa 1959 [Publicações culturais da Companhia de Diamantes de Angola, vol. 42], J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954)

Tropical Africa. Perennial, erect, tufted, rhizomatous, slender, basal leaf sheaths persistent, narrow leaves, contracted inflorescence, spikelets deep purple, lower glume awned, three awns, common around vleis, damp places, seepage areas, sour mountain grassland, slopes, in seepage meadow, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 365. 1895 and *Bulletin de l'Herbier Boissier, sér. 2*, 6(9): 707. 1906, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 39: 598. 1907.

A. recurvata Kunth (*Aristida neesiana* Trin. & Rupr.; *Aristida purpurascens* Poir.; *Aristida riedeliana* Trin. & Rupr.; *Chaetaria recurvata* (Kunth) Roem. & Schult.) (for the German traveler Ludwig Riedel, 1790-1861, plant collector in Brazil; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 156. Boston 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 233. Oxford 1964; Stafleu and Cowan, *Taxonomic literature*. 4: 789-790. 1983)

Central America to Brazil. Perennial, erect, caespitose, sparsely branched, basal leaf sheaths persistent and curling, with awn branches twisted and reflexed, awns spirally coiled, unpalatable, forming dense clumps, found in rocky places, open areas, open grassy area, shallow soil, savannah, along forest edge, slopes, see *Encyclopédie Méthodique. Botanique ... Supplément* 1: 452. 1810, *Nova Genera et Species Plantarum* 1: 123. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 397. 1817, *Species Graminum Stipaceorum* 113. 1842.

A. refracta Griseb. (*Aristida gyrans* Chapm.)

India, U.S., North America, Cuba. Growing in clumps, lemma enclosing the grain, related to *Aristida abnormis* Chiov., see *Catalogus plantarum cubensium ...* 228. 1866, *Botanical Gazette* 3(3): 18-19. 1878 and *Sida* 13(4): 423-447. 1989, *Fontqueria* 46: [i-ii], 1-259. 1997.

in English: island-thicket three-awn

A. repens Trin. (*Aristida subspicata* Trin. & Rupr.; *Chloris anisopoda* Scribn. ex B.L. Rob.)

Ecuador, Galápagos. Annual, delicate, terete, weak, much-branched, erect ore ascending, decumbent at base, leaf sheaths more or less flattened, ligule a row of hairs, leaf blades flat and involute, panicle contracted, glumes awned, weedy species, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 87. 1830 and *Flora of the Galápagos Islands* 828-829. 1971.

A. rhiniochloa Hochst. (*Aristida andoniensis* Henrard; *Aristida serrulata* Chiov.)

Tropical Africa, Niger, Namibia, Mali, Mauritania, South Africa. Annual, tufted, erect, branched, prickly, scabrid, coarse, spiny, leaf sheaths keeled and rough with long white hairs, ligule a ring of short hairs, leaf blades keeled and scabrous, leaves hard and prickly, panicle open to slightly contracted, coarse spikelets, awns at near right angles to the spikelet, glumes oblong and papery, lower glume awned, lemma linear-lanceolate and scabrid, three sharp awns ascending, column absent and no articulation, pioneer grass, low grazing value, growing on red clay soils, on stony slopes, sand to sandy loam, deciduous bushland, heavy soil, gravel plains, open grassveld, disturbed areas, rocky slopes, overgrazed veld, eroded soils, uncultivated lands, see *Flora* 38: 200. 1855 and *Agricultura Coloniale* 18: 351. 1924, *Mededeelingen van's Rijks-Herbarium* 54(B): 691-692. 1928.

in English: large-seeded three-awn

in South Africa: skurwe steekgras, skurwesteekgras, rauhspelzen stechgras

A. rhizomophora Swallen

U.S., Florida. Coarse and vulnerable species with well-developed rhizomes, very palatable, found in wet prairie,

mesic flatwoods, pine flatwood, see *Journal of the Washington Academy of Sciences* 19(10): 196, f. 1. 1929.

in English: Florida three-awn grass, Florida three-awn, Florida three-awned grass, Florida threeawn

A. riograndensis Severo & Boldrini

Warm regions, South America, North America. See *Bradea*, *Boletim do Herbarium Bradeanum* 3(30): 239-242, f. 1. 1982, *Acta Botanica Brasilica* 4(1): 105-124. 1990, *Boletim do Instituto de Botânica* (São Paulo) 12: 113-179. 1999.

A. riparia Trin. (*Aristida implexa* var. *aequa* Trin. & Rupr.; *Aristida planifolia* Swallen; *Aristida riparia* var. *andina* Henrard)

South America, Brazil, Panama. Perennial or annual, erect, caespitose, forming small clumps, foliage coarse, compact inflorescence densely flowered, glumes lanceolate, callus 2-dentate, unpalatable, savannah, overgrazed fields, *campo rupestre*, *cerrado*, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4: 48. 1836, *Species Graminum Stipaceorum* 124. 1842 and *Bulletin de l'Herbier Boissier, sér. 2, 4(3)*: 277. 1904, *Meded. Rijks-Herb.* 54(A): 392. 1927, *Mededeelingen van's Rijks-Herbarium* 58(A): 185. 1932, *Meded. Rijks-Herb.* 54(C): 739. 1933, *Annals of the Missouri Botanical Garden* 30(2): 145. 1943, *Bol. Inst. Bot.* (São Paulo) 12: 141. 1999.

A. roemeriana Scheele (*Aristida fasciculata* var. *micrantha* (Vasey) Vasey ex L.H. Dewey; *Aristida micrantha* (Vasey) Nash; *Aristida muhlenbergioides* E. Fourn.; *Aristida purpurea* Nutt.; *Aristida purpurea* var. *micrantha* Vasey; *Aristida purpurea* var. *purpurea*)

U.S., Texas, Mexico. Branched, eaten by cattle, low forage value, found on reddish soils, grassy plains, see *Annals of the Lyceum of Natural History of New York* 1(1): 154-155. 1824, *Transactions of the American Philosophical Society, new series*, 5: 145. 1837, *Linnaea* 22(3): 343. 1849, *Mexicanas Plantas* 2: 79. 1886 and *Flora of the Southeastern United States* ... 117. 1903.

in English: Roemer threeawn

in Mexico: cola de zorra, tres aristas mexicano

A. rosei Hitchc.

Santo Domingo. See *Contributions from the United States National Herbarium* 22(7): 584. 1924.

A. sanctae-luciae Trin. (*Aristida capillacea* Lam.)

Warm regions, Brazil. Forming small clumps, found in moist areas, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 156. 1791, *Essai d'une Nouvelle Agrostographie* 30, 158, t. 8, f. 5. 1812, *De Graminibus Paniceis* 25. 1826 and *Mededeelingen van's Rijks-Herbarium* 58(C): 531. 1928, *Bol. Inst. Bot.* (São Paulo) 12: 145. 1999.

A. sandinensis Catusus

Cuba. Sandy soils, see *Novosti Sist. Vyss. Rast.* 21: 21. 1984, *Acta Botanica Cubana* 24: 2. 1985.

A. sayapensis Caro

Argentina. Sandy soil, see *Kurtziana* 1: 159-162, f. 6A, 7A-C. 1961.

A. scabrivalvis Hack.

South Africa. Annual, see *Bulletin de l'Herbier Boissier, sér. 2, 6(9)*: 708. 1906, *Kirkia* 3: 132. 1963.

A. scabrivalvis Hack. subsp. *contracta* (De Winter) Meld. (*Aristida scabrivalvis* subsp. *contracta* Melderis)

South Africa. Annual, tufted, erect to geniculate, spikelets in dense clusters at the ends of the branches, lower glume awned, three awns, usually in disturbed and open areas, along roadsides, hillslopes.

A. scabrivalvis Hack. subsp. *scabrivalvis*

South Africa. Annual, tufted, erect to geniculate, often branched, leaf sheath keeled, ligule membrane-like, leaf blade slightly rough, open panicle with spreading branches, three scabrid awns, lower glume strongly awned, no grazing value, usually in disturbed areas, old fields, undisturbed open bushveld, uncultivated lands, savannah, along roadsides, shallow and sandy soils, limy soil.

in English: purple three-awn

in South Africa: pers steekgras

A. schebehliensis Henrard (Uebi Scebeli, or Shebeli, Shebelli)

Somalia. Perennial, branched, wiry, tussocky, panicle contracted, glumes acuminate, lemma not narrowed above the middle, awns unequal to subequal, see *Mededeelingen van's Rijks-Herbarium* 54(B): 537-539. 1928, *Kew Bulletin* 47(2): 277-282. 1992.

A. schiedeana Trin. & Rupr. (*Aristida flexuosa* E. Fourn.; *Aristida orcuttiana* Vasey; *Aristida virletii* E. Fourn.; *Aristida virletii* E. Fourn. ex Hemsl.) (for the German botanist Christian Julius Wilhelm Schiede, 1798-1836, physician, traveler, gardener, traveling companion of Ferdinand Deppe (1794-1861), from 1828 to 1836 plant collector and botanical explorer in Mexico, his writings include *De plantis hybridis sponte natis*. Cassellis Catorum [Kassel] 1825, with A. de Chamisso wrote "Plantarum mexicanarum a cl. viris Schiede et Deppe collectarum recensio brevis." *Linnaea*. 1830-1831; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 224. 1965; Ludolf Karl Adelbert von Chamisso and D.F.L. von Schlechtendal, "De plantis in expeditione speculatoria Romanzoffiana observatis." *Linnaea*. 1: 1-73. 1826; Stephan F. Ladislaus Endlicher, *Atakta botanika*. Nova genera et species plantarum descripta et iconibus illustrata. Vienna 1833; I.H. Vegter, *Index Herbariorum*. Part II (6), *Collectors S. Regnum Vegetabile* vol. 114. 1986; H.N. Clokie, *Account of the Herbaria of the*

Department of Botany in the University of Oxford. 239. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 678. 1964; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

Central America, Mexico. Perennial, densely caespitose, erect, simple, more or less scabrous, basal leaves, panicle ovate with diverging branches, lateral awns very short erect or divergent, good forage value, similar to *Aristida laxa*, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 46. 1799, *Species Graminum Stipaceorum* 120-121. 1842, *Biologia Centrali-Americana; ... Botany ...* 3: 535. 1885, *Mexicanas Plantas* 2: 76-77. 1886, *Bulletin of the Torrey Botanical Club* 13(2): 27-28. 1886 and *Contr. U.S. Natl. Herb.* 22(7): 525-526. 1924, *Journal of the Washington Academy of Sciences* 23(10): 453. 1933, *Taxon* 33: 126-134. 1984, *Novon* 5: 217. 1995.

in Mexico: tres barbas abierto, amarredera, raicilla, jokut-araku siruku (purépecha)

A. schiedeana Trin. & Rupr. var. *orcuttiana* (Vasey) Allred & Valdés-Reyna (*Aristida hypomegas* Mez; *Aristida orcuttiana* Vasey)

North America. See *Species Graminum Stipaceorum* 120-121. 1842, *Bulletin of the Torrey Botanical Club* 13(2): 27. 1886 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 146. 1921, *Contr. U.S. Natl. Herb.* 22(7): 526. 1924, *Mededeelingen van's Rijks-Herbarium* 54(A): 250. 1927, *Novon* 5(3): 217. 1995.

in English: singleawn aristida, beggarstick threeawn, Orcutt's threeawn

A. schiedeana Trin. & Rupr. var. *schiedeana*

America.

A. schultzii Mez

Tropical Australia, Northern Territory and Queensland. Perennial, compact, tufted, branched, fastigiate, inflorescence loosely contracted, lower glume 3- to 7-nerved, similar to *Aristida warburgii* and *Aristida kimberleyensis*, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 149. 1921.

A. sciuroides Domin (*Aristida borealis* B.K. Simon)

Tropical and subtropical Queensland. Perennial, robust, tufted, compact, branched, lemma pseudoarticulation absent, lemma involute, similar to *Aristida ingrata* and *Aristida kimberleyensis*, see *Bibliotheca Botanica* 85(2): 347.

1915, *Austrobaileya* 2(1): 89, f. 1E. 1984, *Austr. Syst. Bot.* 5: 178. 1992.

A. sciurus Stapf

South Africa. Perennial, tufted, erect, unbranched, robust, hard, fibrous, shortly rhizomatous, basal sheaths with woolly hairs, leaf blade narrower than the leaf sheaths, hanging panicle, spikelets with three awns, lower glume shorter than the upper, lemma not articulated, common on moist sandy soils, along roadsides, in mountainous sour grassland, mountain sourveld, see *Flora Capensis* 7: 557. 1899 and *Mededeelingen van's Rijks-Herbarium* 54(B): 549. 1928.

in English: bristle grass, tall three-awned grass, tall three-awn

in South Africa: steekgras, groot steekgras, langsteekgras

A. scribneriana Hitchc. (*Aristida lanuginosa* Burch.; *Aristida lanuginosa* Scribn. ex Hitchc., nom. illeg., non *Aristida lanuginosa* Burch.)

North America, Mexico. See *Travels in the Interior of South Africa* 2: 226. 1824 and *Contributions from the United States National Herbarium* 17(3): 278. 1913, *Contributions from the United States National Herbarium* 22(7): 566. 1924.

A. setacea Retz. (*Aristida caerulescens* sensu Thw., non Desf.; *Aristida quinqueseta* Steud.; *Aristida setacea* hort. ex Steud.; *Chaetaria setacea* (Retz.) P. Beauv.)

Southern India, Sri Lanka. Perennial, caespitose, slender, erect or ascending, more or less branched, nodes thickened and prominent, wiry, ligule a ciliate membrane, leaves wavy, panicle contracted or loose, spear-like florets, glumes awned, probably not palatable, culms used for making brooms and brushes, for paper manufacture and screens, dry and arid zones, roadsides, plantations, saline habitats, disturbed sites, sandy places, wet zones, coastal saline situations, grassland, savannah, scrubby forests, see *Observationes Botanicae* 4: 22. 1786, *Essai d'une Nouvelle Agrostographie* 30, 158. 1812, *Nomenclator Botanicus. Editio secunda* 1: 132. 1840, *Synopsis Plantarum Glumacearum* 1: 420. 1855 [1854] and *Handb. Fl. Ceylon* 5: 253. 1900, *Grasses of Ceylon* 64. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 412. 1960.

in India: cheepuru gaddi, dodda hanchi hullu, gaddi parakalu, hallu chuch-ho hullu, hayapuchhika, kamboji, maashaparni, moti kussal, naayi hanchi hullu, poochika gaddi, thoda pampillu

in Sri Lanka: et tuttili, et tuttiri

A. setifolia Kunth (*Aristida arenaria* Trin.; *Aristida doelliana* Henrard; *Aristida elatior* Döll ex Henrard; *Aristida elatior* Cav.; *Aristida gardneriana* Steud.; *Aristida sabulosa* Kunth; *Aristida setifolia* var. *arenaria* (Trin.) Trin. & Rupr.; *Aristida setifolia* var. *grandiflora* Döll; *Aristida setifolia* var. *grandiflora* Trin. & Rupr.; *Aristida setifolia* var. *intermedia*

Trin. & Rupr.; *Aristida setifolia* var. *parviflora* Döll; *Aristida tarapotana* Mez; *Chaetaria setifolia* (Kunth) Nees)

South America, Venezuela. Annual, densely tufted, contracted panicle, glumes narrowly lanceolate and keeled, lemma awns deciduous, savannah, open habitats, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 6: 65, t. 589, f. 1. 1801, *Nova Genera et Species Plantarum* 1: 122. 1815 [1816], *De Graminibus Paniceis* 25. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 381-383. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 196. 1833, *Species Graminum Stipaceorum* 126-127. 1842, *Synopsis Plantarum Glumacearum* 1: 137. 1855 [1854], *Flora Brasiliensis* 2(3): 22. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 151. 1921, *Mededeelingen van's Rijks-Herbarium* 54: 154, 161-163. 1926, *Bol. Inst. Bot.* (São Paulo) 12: 146. 1999.

A. sieberiana Trin. (also spelled *sieberana*) (*Aristida pallida* Steud.; *Aristida sieberiana* Trin. ex Spreng.; *Aristida sieberiana* var. *nubica* Trin. & Rupr.)

Tropical Africa, Somalia, Guinea, Mali, Chad, Mauritania, Sudan, Ghana. Perennial, branched, robust, woody, suffruticose, loosely tufted, mat-forming, strong root system, panicle contracted, lower glumes bifid and awned, cylindrical lemma not narrowed above, long sharp awns unequal, unpalatable and scarcely eaten or good for livestock and readily grazed, used for thatching, found in sandy soils, dry inland sandy areas, coastal sand, orange sand, dunes, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 61. 1821, *Species Graminum Stipaceorum* 161. 1842.

in Arabic: gau

in Mali: allomoze, amadzarne, ibirsiaguè, kelbi, okras, pufu sufo

in Niger: aggur, awukaraz, azwoezag, enegarwagh, furuè, kasawura, manrgo, surungeewol, surungéji, taezeyzey, tchibby, waajag, yanta

in Nigeria: baya, datsi, gatsaura, gatsuara, gau, kas makaru, katsaura, suwulamè

in Somalia: marchain, birreh, baradooli

in Senegal: diarhat, negeret, paldinak, paldinaq, sirin

A. simpliciflora Chapman

U.S., Florida, Alabama, Georgia. Vulnerable and endangered species, growing in longleaf pine-wiregrass savannahs, moist pinewoods, grasslands, damp pine barrens, see *Encyclopédie Méthodique. Botanique ... Supplément* 1: 452. 1810, *Botanical Gazette* 3(3): 18. 1878, *Contributions from the United States National Herbarium* 3(1): 44. 1892 and *Contr. U.S. Natl. Herb.* 22(7): 580. 1924, *Mededeelingen van's Rijks-Herbarium* 54(B): 568. 1928.

in English: Southern three-awned grass, Southern threeawn, Southern three-awn, Chapman three-awn grass, Chapman threeawn

A. somalensis Stapf

Ethiopia, Somalia, Kenya. Perennial, tufted, ovate panicle, glumes unequal and acuminate, column without an articulation, found in granitic areas, dry bushland, slopes, see *Bulletin of Miscellaneous Information Kew* 1907: 216. 1907, *Mededeelingen van's Rijks-Herbarium* 54(B): 572. 1928, *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: soda'eleh, sodaheleh

A. spanospicula Allred, Valdés-Reyna & Sánchez-Ken

Mexico. See *Novon* 5(3): 214-217, f. 4. 1995

A. spectabilis Hack.

South Africa. Perennial, densely tufted, membranous lower glume without mucro or awn, lemma articulation, three awns, on shallow soils, sandy soils, rocky mountain slopes, see *Bulletin de l'Herbier Boissier* 3(8): 380. 1895.

in South Africa: bergsteekgras

A. spegazzinii Arechav. (*Aristida pampeana* Speg.; *Aristida spegazzinii* f. *colorata* Hack.; *Aristida spegazzinii* var. *abbreviata* Hack.; *Aristida spegazzinii* var. *genuina* Hack.; *Aristida spegazzinii* var. *pallescens* Hack.; *Aristida spegazzinii* var. *spegazzinii*)

South America, Uruguay, Argentina. Annual or short-lived perennial, tufted, low forage value, forming clumps, along roadsides, see *Anales Museo Nacional de Historia Natural de Buenos Aires* 4: 177, f. 1. 1895 Carlos Luigi Spegazzini (1858-1926), *Contribucion al estudio de la flora de la Sierra de la Ventana ...* 62. La Plata 1896 and *Anales del Museo Nacional de Buenos Aires* 11: 93-94. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 70. 1911, *Meded. Rijks-Herb.* 54(B): 580, 582. 1928, *Bol. Inst. Bot.* (São Paulo) 12: 147. 1999.

A. spiciformis Elliott (*Aristida squarrosa* Trin.; *Aristida stricta* Muhl., nom. illeg., non *Aristida stricta* Michx.; *Chaetaria squarrosa* (Trin.) Schult.)

U.S., Florida, North America. Perennial, tufted, stiffly erect, inflorescence erect, dense panicle spike-like, column of awn twisted, found in moist-dry sites, droughty and poorly drained soils, flatwoods and wet flatwoods, wet prairie, dry prairie, coastal plain, coastal swales, sand hill, brackish marshes, savannahs and scrub, see *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 141. 1816, *Descriptio uberius Graminum* 174. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 52. 1821, *Mantissa* 3(Add. 1): 577. 1827.

in English: three-awn grass, bottlebrush three-awn, bottlebrush threeawn, bottlebrush three awn grass, bottlebrush grass, pine barren three-awned grass

A. spiciformis Elliott var. *antillarum* Cat. Guerra

America, the Caribbean. See *Bot. Zurn. (Kiev)* 69(6): 874. 1984.

A. spiciformis Elliott var. *spiciformis*

America.

A. spuria Domin

Australia, Queensland, New South Wales. Perennial, short-lived, erect, thin, slender, forming compact tufts, strongly branched, fastigiate, smooth glabrous culm internodes, sheath glabrous or pilose, leaf blades setaceous and involute, inflorescence loosely contracted, panicle linear, glumes linear and acuminate, lemma narrow-linear, awns dissimilar, similar to *Aristida utilis*, see *Bibliotheca Botanica* 85(2): 341-342. 1915, *Austr. Syst. Bot.* 5: 150. 1992.

A. stenophylla Henrard

Somalia. Perennial, branched, wiry, tussocky, panicle contracted, usually blunt awnless glumes, lemma not narrowed above the middle, awns unequal to subequal, grassland, limestone, dry sandy and stony soils, shrubland, open bushland, orange sand, related to *Aristida sieberiana* Trin., see *Mededeelingen van's Rijks-Herbarium* 54(B): 587-588. 1928, *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: xalfo, maad, marchain, birre', birreh

A. stenostachya W.D. Clayton

Tanzania, Somalia, Kenya, Zambia. Perennial, densely tufted, contracted or spike-like inflorescence, glumes subequal, lemma smooth, column without an articulation, growing in sandy soils, bushland, clearings, see *Boletín de la Sociedad Argentina de Botánica* 12: 111. 1968, *Kew Bulletin* 47(2): 277-282. 1992.

A. stipiformis Lam. ex Poir. (*Aristida stipiformis* Hochst. ex Steud., nom. illeg., non *Aristida stipiformis* Lam. ex Poir.)

Senegal, Africa. See *Encyclopédie Méthodique. Botanique ... Supplément* 1: 452. 1810, *Synopsis Plantarum Glumacearum* 1: 143. 1854 and *Annali di Botanica* 13(3): 371. 1915, *Mededeelingen van's Rijks-Herbarium* 54(A): 420-421. 1927.

A. stipitata Hack. ex Schinz

Africa, Zimbabwe, Namibia. Perennial, polymorphic, variable, tufted to densely tufted, coarse, smooth, glabrous, erect, unbranched or branched from the upper nodes, leaf sheath round, ligule a short ciliate membrane, leaf blades tapering to a narrow tip, inflorescence rigid and erect, compact spike-like panicle, spikelets with a twisted column, three rough awns, unpalatable, very low grazing value, found in open savannah, in open bushveld, deep sandy soils, in disturbed areas, rocky places, along vleis, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 143. 1888.

in English: long-awned three-awn, sandveld long-awned stick grass

in South Africa: langnaaldsteekgras, sandveld stechgras, steifes stechgras

A. stipitata Hack. ex Schinz subsp. *graciliflora* (Pilg.) Meld. (*Aristida graciliflora* Pilg.; *Aristida stipitata* var. *graciliflora* (Pilg.) De Winter)

Africa, Zimbabwe. Perennial, loosely tufted, slender, erect, lower internodes glabrous or pubescent, narrow inflorescence, lower glume awned, three awns, found in disturbed areas, rocky places, seepage zones, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 39: 599. 1907, *Kirkia* 3: 133. 1963, *Prodromus einer Flora von Südwestafrika* 160: 34. 1970.

A. stipitata Hack. ex Schinz subsp. *ramifera* (Pilg.) Meld. (*Aristida ramifera* Pilg.; *Aristida stipitata* subsp. *ramifera* Hack.)

Africa, Zambia. Green to yellow, inflorescence yellowish to greenish, found in open areas, sandy places, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 39: 599. 1907, *Boletim da Sociedade Broteriana* 44: 288. 1970.

A. stipitata Hack. ex Schinz subsp. *robusta* (Stent & Rattray) Melderis (*Aristida graciliflora* var. *robusta* Stent & Rattray; *Aristida stipitata* var. *robusta* (Stent & Rattray) De Winter)

Africa, Zimbabwe, Zambia. Perennial, robust, tufted, lower internodes glabrous or pubescent, narrow inflorescence, lower glume awned, three awns, found in disturbed areas, sandy soils, see *Proceedings of the Rhodesia Scientific Association* 32: 44. 1933, *Kirkia* 3: 133. 1963, *Prodromus einer Flora von Südwestafrika* 160: 34. 1970.

A. stipitata Hack. ex Schinz subsp. *spicata* (De Winter) Meld. (*Aristida stipitata* var. *spicata* De Winter)

Africa, Zimbabwe, Zambia. Perennial, slender, erect, tufted, branched at the upper nodes, lower internodes glabrous or pubescent, narrow spicate inflorescence, panicle dense, lower glume awned, three awns, on deep sandy soils, see *Kirkia* 3: 133. 1963, *Prodromus einer Flora von Südwestafrika* 160: 34. 1970.

A. stipitata Hack. ex Schinz subsp. *stipitata*

Africa, Zimbabwe, Zambia. Perennial, robust, strong, erect, tufted, branched or unbranched, lower internodes glabrous or pubescent, narrow spicate inflorescence, panicles dense and spike-like, lower glume awned, three awns, pasture, low forage value, pioneer grass, thatching grass, on deep sandy soils, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 143. 1888.

A. stipoides Lam. (*Aristida fontismagni* Schweick.; *Aristida stipoides* R. Br., nom. illeg., non *Aristida stipoides* Lam.; *Arthratherum stipoides* (R. Br.) P. Beauv.)

Tropical Africa. Annual, loosely tufted, robust, succulent and sweet nodes, galls in the basal joints, nodes and internodes glabrous, auricles woolly, leaf sheaths slightly keeled at the base, ligule a woolly fringe of hairs, leaf blades

expanded or rolled, inflorescence an open and drooping panicle, spikelets glabrous, lower glume lanceolate without mucro or awn, three awns, pioneer grass, worthless as grazing, grazed only when very young, thatching grass, ruderal, eaten by local people, on deep sandy soils, sandy depressions, uncultivated lands, seasonal floodplains, rocky hillsides, along roadsides, old cultivations, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 157. 1791, *Prodromus Florae Novae Hollandiae* 1: 174. 1810, *Essai d'une Nouvelle Agrostographie* 33, 152. 1812 and *Fragmenta Florae Philippinae* 2: 146. 1904, *Bibliotheca Botanica* 85(2): 337, 340, t. 13-14, f. 9, 12, 18-19. 1915, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 147. 1921, *Mededeelingen van's Rijks-Herbarium* 54(B): 593, 627. 1928, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 76(2): 220-221. 1954, *Austrobailyea* 2: 283. 1986, *Blumea* 37(1): 228. 1992.

in Mali: teloloud, telolud

in Niger: aggur mumu, agilé mumu, fono sunfey, foon sumfey, fulam sugu, funsumfey, gudged'y, katchiema, katchierma, katsemu, kevel, korledo, shohon waynabé, sugunaly, suwu nalli

in Nigeria: garasa, garasà, garlasa, gwiiwar tsoohuwà, gwiiwar tsohuwa, hanhande, katsemu, sodo, sodoji, tsintsiyar kogi, tsintsiyar koogii, urleho, wutsiyar jaakii, yuus soroduk

in Senegal: bebela, budel, diahal dieg, gendarat, makir, makiro, mpal diinah, paldinaq, siraba, siriba

in South Africa: grootfonteinsteekgras, grootfonteiner stechgras

A. stipoides Lam. var. *meridionalis* Stapf

Tropical Africa. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 157. 1791, *Flora Capensis* 7: 562-563. 1899.

A. stricta Michx. (*Aristida beyrichiana* Trin. & Rupr.; *Aristida stricta* Muhl., nom. illeg., non *Aristida stricta* Michx.; *Aristida stricta* Steud., nom. illeg., non *Aristida stricta* Michx.; *Aristida stricta* var. *stricta*; *Chaetaria stricta* (Michx.) P. Beauv.)

Southeast U.S., North America. Perennial bunchgrass shallow rooted, upright, densely tufted, sometimes rhizomatous, clump-forming, smooth, stiff and flexible leaves folded together lengthwise, sheaths hairy, leaves densely hairy on the upper surface, loosely arranged spikelets in a slender panicle, spikelets with three distinctive awns, retains leaves all year, cattle forage, when mature is a low quality forage, tolerates seasonal flooding, usually flowers after its habitat has been burned, found in infertile sands and sandy loams, wetlands, wet prairies, scrub and uplands, in the coastal plain, sandy and seasonally wet areas, *Pinus palustris* savannahs, well-drained hills, boggy areas, wet pine savannahs and flatwoods, see *Flora Boreali-Americana* 1: 41.

1803, *Essai d'une Nouvelle Agrostographie* 30, 152, 158. 1812, *Descriptio uberior Graminum* 174. 1817, *Species Graminum Stipaceorum* 104. 1842, *Nomenclator Botanicus. Editio secunda* 1: 132. 1854, *Synopsis Plantarum Glumacearum* 1: 133. 1855 [1854], *Contributions from the United States National Herbarium* 1(2): 55. 1890, *Contributions from the United States National Herbarium* 3(1): 45. 1892 and *Rhodora* 95(881): 25-37. 1993, *Flora del Valle de Tehuacán-Cuicatlán* 3: 9-10. 1994, *Novon* 11(3): 362. 2001, J.B. West, J.F. Espeleta and L.A. Donovan, "Root longevity and phenology differences between two co-occurring savannah bunchgrasses with different leaf habits." *Functional Ecology* 17(1): 20-28. Feb 2003.

in English: pineland three-awn, pineland three-awn grass, pineland threeawn, wiregrass, Carolina wiregrass, bottlebrush threeawn

A. strigosa (Henrard) S.T. Blake ex J.M. Black (*Aristida calycina* var. *strigosa* Henrard) (Latin *strigosus* "covered with strigae, with stiff bristles")

Australia. Perennial, tufted, compact, coarse, tussocky, culms branched and rigid, sheath scabrous, leaves scabrous flat, spike-like and dense inflorescence with branches erect, glumes unequal and nerved, lemma hairy or bristly toward the apex, awns subequal and filiform, not grazed, growing on shallow soils, on sandy soils and rocky hills, similar to *Aristida capillifolia*, *Aristida platychaeta*, *Aristida nitidula* and *Aristida arida*, see *Mededeelingen van's Rijks-Herbarium* 58(A): 297. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 708. 1933, *Transactions and Proceedings of the Royal Society of South Australia* 1 67: 45. 1943.

in English: rough three-awn, rough wire grass, wiregrass

A. subaequans Döll

Brazil. See *Flora Brasiliensis* 2(3): 19, pl. 4. 1878.

A. subspicata Trin. & Rupr. (*Aristida caudata* Andersson; *Aristida compacta* Andersson; *Stipa rostrata* Andersson)

Ecuador. Perennial, densely tufted, ligule a row of hairs, leaf sheaths scabrous or glabrous, leaf blades flat or involute, inflorescence spike-like densely contracted, spikelets congested and sessile, glumes unequal and more or less scabrous, awns scabrous, see *Species Graminum Stipaceorum* 125-126. 1842, *Om Galapagos-öarnes Vegetation* 142, 144-145. Lund 1854, *Kongl. Svensk. Vet.-Akad. Handl.* 1853: 142, 144. 1855 and *Flora of the Galápagos Islands* 829-831. 1971.

A. subulata Henrard

Argentina. See *Mededeelingen van's Rijks-Herbarium* 54(B): 612-614. 1928.

A. succedanea Henrard (*Aristida circinalis* Lindm.)

South America, Brazil. Perennial, caespitose, erect, leaves filiform, panicle oblong, glumes lanceolate and subequal, awns ascending, savannahs, see *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 13, t. 7A. 1900,

Mededeelingen van's Rijks-Herbarium 58(A): 294, t. 144. 1932, Henrard, *Meded. Rijks-Herb.* 54(C): 740-74. 1933.

A. *superpendens* Domin (*Aristida hirta* Domin)

Australia, Northern Territory, Queensland, Indonesia. Perennial, compact, tufted, branched, compressed, inflorescences contracted or more or less open, alluvial soils, similar to *Aristida dominii*, see *Bibliotheca Botanica* 85(2): 339, t. 13, 15, f. 8-9, 13-14. 1915.

A. *suringarii* Henr. (professor of botany Willem Frederik Reinier Suringar, 1832-1898)

The Caribbean. See *Mededeelingen van's Rijks-Herbarium* 54(B): 616-618. 1928, *Flora of the Netherlands Antilles* 1: 121-203. 1963, Sida 13: 293-301, 423-447. 1989.

in English: St. Eustatius three-awn

A. *swartziana* Steud. (named after the Swedish botanist Olof Peter Swartz (Svarts, Svartz, Swarts, Swarz), 1760-1818, traveler (West Indies and northeast South America), physician, he published *Nova genera et species plantarum seu Prodromus descriptionum vegetabilium maximam partem incognitorum*. Stockholm, Uppsala & Åbo 1788, *Icones plantarum incognitarum quas in Indiae occidentali ...* Erlangae 1794-1800 and *Flora Indiae occidentalis*. Erlangae 1797-1806; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 351. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 390. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 855. 1852; Frederico Carlos Hoehne, M. Kuhlmann and Oswaldo Handro, *O jardim botânico de São Paulo*. 1941; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 787. 1993; Emil Bretschneider, *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898.] Leipzig 1981; R.E.G. Pichi Sermolli, "Names and types of fern genera - 2. Angiopteridaceae, Marattiaceae, Danaeaceae, Kaulfussianaceae, Matoniaceae, Parkeriaceae." *Webbia*. 12(2): 339-373. 1957; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 262. Regione Siciliana, Palermo 1988)

Jamaica, the Caribbean. Erect, tufted, leaf blades involute, narrow panicles, awns subequal, arid and sandy sites, rocky savannahs, open ground, see *Synopsis Plantarum Glumacearum* 1: 137. 1855 [1854] and *Mededeelingen van's Rijks-Herbarium* 54: 618-619. 1928, Hitchcock, A.S., *Manual of the Grasses of the West Indies* 94-95. 1936, J.C. Lindeman & A.L. Stoffers, *Flora of the Netherlands Antilles* 1: 121-203. 1963, F.W. Gould, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979.

in English: Swartz's three-awn

A. *takeoi* Ohwi (named for Takeo Itô, plant collector on Yonagumi, Japan; see M.N. Chaudhri, I.H. Vegter and C.M. De Wal, *Index Herbariorum*, Part II (3), *Collectors I-L*. Regnum Vegetabile vol. 86. 1972)

Japan. See *Botanical Magazine* (Tokyo) 45: 183. 1931.

in English: big pine-leaved lawngrass

in Japan: ô-matsuba-shiba

A. *tarapotana* Mez (*Aristida setifolia* Kunth) (from Tarapoto, the largest city in the Department of San Martin (capital Moyobamba) in Peru)

Peru. Rare species, fields, abandoned fields, see *Nova Genera et Species Plantarum* 1: 122. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 381-383. 1829 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 151. 1921, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Revista de Ciencias (San Marcos)* 74: 48-57. 1986.

A. *tenuiflora* Steud.

Africa, Senegal. See *Synopsis Plantarum Glumacearum* 1: 138. 1855 [1854].

A. *tenuifolia* Hitchc.

Mexico. Stony places, see *Proceedings of the California Academy of Sciences, Series 4*, 21(24): 296. 1935.

A. *tenuiseta* Cope

Somalia. Perennial, wiry, densely tufted, panicle loosely contracted, glumes 2-toothed and narrowly lanceolate, lemma not narrowed above the middle, flexuous awns unequal and slender, growing in sand dunes, coastal plains, see *Kew Bulletin* 47(2): 278. 1992.

A. *teretifolia* Arechav. (*Aristida arechavaletae* Henrard; *Aristida chaseana* Herter; *Aristida complanata* Trin.; *Aristida intermedia* Scribn. & C.R. Ball; *Aristida intermedia* Arechav., nom. illeg., non *Aristida intermedia* Scribn. & C.R. Ball)

Uruguay. Perennial, low forage value, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 85-86. 1830 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 44, f. 18. 1901, *Anales del Museo Nacional de Montevideo* 4(1): 73, 78-80, t. 4. 1902, *Mededeelingen van's Rijks-Herbarium* 54: 35. 1926, *Revista Sudamericana de Botánica* 5: 23. 1937.

A. *ternipes* Cav. (*Aristida scabra* (Kunth) Kunth; *Aristida schiedeana* var. *minor* Vasey; *Aristida tenuis* (Kunth) Kunth; *Muhlenbergia scabra* (Kunth) Trin. & Rupr.; *Muhlenbergia tenuis* (Kunth) Trin. & Rupr.; *Ortachne scabra* (Kunth) E. Fourn.; *Ortachne tenuis* (Kunth) E. Fourn.; *Stipa tenuis* Willd ex Steud.; *Streptachne cubensis* A. Rich.; *Streptachne scabra* Kunth; *Streptachne tenuis* Kunth)

Venezuela, U.S., Mexico, Colombia. Perennial, caespitose, erect, hanging, slender, glabrous, ligule a rim of short hairs, narrow leaf blades, panicle very broad and open with two branches at each node, narrow spikelets, glumes unequal, first glume linear-lanceolate and long-acuminate, a single awn, lateral awns minute or obsolete, purplish glumes, forage, growing on rocky slopes, on sandy and gravelly bajadas, related to *Stipa*, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 46. 1799, *Nova Genera et Species Plantarum* 1: 124-125, t. 40. 1815 [1816], *Révision des Graminées* 1: 62. 1829, *Nomenclator Botanicus. Editio secunda* 2: 643. 1841, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 5 (1): 183. 1842, *Species Graminum Stipaceorum* 120-121, 183. 1842, *Historia Fisica Política y Natural de la Isla de Cuba, Botánica* 11: 311. 1850, *Bulletin de la Société Botanique de France* 27: 295. 1880, *Bulletin of the Torrey Botanical Club* 13(2): 28. 1886, *Mexicanas Plantas* 2: 80. 1886, *Contributions from the United States National Herbarium* 3(1): 48. 1892 and *Contributions from the United States National Herbarium* 22: 525. 1924, *Cuscatlania* 1(6): 1-29. 1991, *Flora del Valle de Tehuacán-Cuicatlán* 3: 1-35. 1994.

in English: spider grass, spidergrass

in Spanish: zacate araña, tre barbas arqueado

in Mexico: aceitilla, chak suuk, tok-su'uk, tok suuk, tres barbas arqueado, zacate araña

A. ternipes Cav. var. **gentilis** (H enr.) Allred (*Aristida gentilis* H enrard; *Aristida gentilis* var. *breviaristata* H enrard; *Aristida gentilis* var. *gentilis*; *Aristida hamulosa* H enrard; *Aristida humboldtiana* var. *minor* Vasey; *Aristida imbricata* H enrard; *Aristida ternipes* var. *hamulosa* (H enr.) Trent; *Aristida ternipes* var. *minor* (Vasey) A.S. Hitchc.)

North America, U.S. Perennial, with three awns at the end of a straight awn column, forage, common on rocky slopes in desert scrub and desert grassland, edge of fields, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 46. 1799, *Species Graminum Stipaceorum* 118. 1842, *Contributions from the United States National Herbarium* 3(1): 47. 1892 and *Contr. U.S. Natl. Herb.* 22(7): 548. 1924, *Mededeelingen van's Rijks-Herbarium* 54: 196-197, 219-221. 1926, *Mededeelingen van's Rijks-Herbarium* 54(A): 253-255. 1927, *Sida* 10(2): 260. 1990, *Phytologia* 77(5): 412. 1994 [1995].

in English: hook threeawn, threeawn spider grass, poverty three-awn

in Spanish: zacate araña de tres barbas

A. ternipes Cav. var. **minor** (Vasey) Hitchc. (*Aristida divergens* Vasey; *Aristida schiedeana* var. *minor* Vasey; *Aristida ternipes* var. *divergens* (Vasey) Hitchc.)

America, Mexico. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 46. 1799, *Species Graminum Stipace-*

orum 120-121. 1842, *Bulletin of the Torrey Botanical Club* 13(2): 28. 1886, *Contributions from the United States National Herbarium* 3(1): 48. 1892 and *Contributions from the United States National Herbarium* 22(7): 525. 1924, *Journal of the Washington Academy of Sciences* 23(10): 453. 1933.

A. ternipes Cav. var. **ternipes** (*Aristida scabra* (Kunth) Kunth; *Aristida tenuis* (Kunth) Kunth; *Muhlenbergia scabra* (Kunth) Trin. & Rupr.; *Muhlenbergia tenuis* (Kunth) Trin. & Rupr.; *Ortachne scabra* (Kunth) E. Fourn.; *Ortachne tenuis* (Kunth) E. Fourn.; *Stipa tenuis* Willd. ex Steud.; *Streptachne cubensis* A. Rich.; *Streptachne scabra* Kunth; *Streptachne tenuis* Kunth)

South and Central America. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 46. 1799, *Nova Genera et Species Plantarum* 1: 124-125, t. 40. 1815 [1816], *Révision des Graminées* 1: 62. 1829, *Nomenclator Botanicus. Editio secunda* 2: 643. 1841, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 5 (1): 183. 1842, *Species Graminum Stipaceorum* 183. 1842, *Historia Fisica Política y Natural de la Isla de Cuba, Botánica* 11: 311. 1850, *Bulletin de la Société Botanique de France* 27: 295. 1880, *Mexicanas Plantas* 2: 80. 1886.

in Spanish: zacate araña

A. thompsonii B.K. Simon

Australia, northeastern Queensland. Perennial, compact, tufted, branched, nodes glabrous, leaf blades involute setaceous, inflorescences loosely contracted, convolute lemmas, similar to *Aristida spuria* and *Aristida utilis*, see *Austrobaileya* 4(2): 105, f. 1. 1994.

A. torta (Nees) Kunth (*Aristida breviglumis* Mez; *Aristida spadicea* Trin.; *Aristida spadicea* Kunth; *Aristida tincta* Trin. & Rupr.; *Aristida tincta* var. *contractior* Döll; *Aristida tincta* var. *patula* Döll; *Chaetaria spadicea* (Kunth) Nees, nom. illeg., non *Chaetaria spadicea* (Kunth) Roem. & Schult.; *Chaetaria torta* Nees)

South America. Perennial, caespitose, leaves mainly basal, inflorescence paniculate, panicles loosely contracted, glumes lanceolate and strongly keeled, awns unequal, central awn arcuate, open savannah, shallowly inundated savannahs, see *Nova Genera et Species Plantarum* 1: 123. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 385-386. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 190. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6(2): 43. 1836, *Species Graminum Stipaceorum* 111-112. 1842, *Flora Brasiliensis* 2(3): 17. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 152. 1921, *Contr. U.S. Natl. Herb.* 22(7): 579. 1922, *Meded. Rijks-Herb.* 54(B): 534, 576. 1928.

A. trachyantha Henrard

Argentina. See *Mededeelingen van's Rijks-Herbarium* 54(B): 636-638. 1928.

A. transvaalensis Henr.

South Africa. Perennial, densely tufted, branched, lower glume awned, central awn usually solitary, on shallow soils, hillsides, see *Mededeelingen van's Rijks-Herbarium* 58(A): 235, t. 111. 1932, *Mededeelingen van's Rijks-Herbarium* 54(C): 742-744. 1933.

in English: rock threeawn, rock three-awns

A. triticoides Henrard

Somalia, Ethiopia, Yemen. Perennial, densely tufted, erect, basal leaf sheaths persistent, ligule villous, branching root-stock, dense panicle spike-like, lower glume linear-lanceolate finely acute or shortly awned, upper glume emarginate to bifid, central awn recurved at the base, lateral awns straight, on red sand, stony soils, limestone, rocky areas, related to *Aristida kelleri* Hack., see *Mededeelingen van's Rijks-Herbarium* 58: 101, t. 30. 1929, *Mededeelingen van's Rijks-Herbarium* 54(C): 744-745. 1933, *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: mahen, mahjen

A. tuberculosa Nuttall (*Chaetaria tuberculosa* (Nutt.) Schultes)

U.S., Georgia, Florida. Annual, spike loose and open, lemma awns are twisted and united into a basal column, forage, grows on dunes and dunes areas, in sand prairie and sand savannah, in sandy soil, forests, dry soil, sterile soil, see *The Genera of North American Plants* 1: 57. 1818, *Mantissa* 2: 211. 1824.

in English: three-awned grass, three awn grass, dune three-awn grass, seaside three-awn, seaside threeawn, beach needlegrass, beach three-awn grass, beach three-awned grass, seabeach needlegrass, sea-beach needlegrass, needle grass

in Mexico: zacate torcido

A. tuitensis Sánchez-Ken & Dávila

Mexico. See *Novon* 5(2): 190, f. 1. 1995.

A. uruguayensis Henrard

Uruguay. Perennial, tufted, low forage value, see *Mededeelingen van's Rijks-Herbarium* 54(B): 647-649. 1928.

A. uruguayensis Henrard var. *laevis* Caro

Argentina. Perennial, low forage value, see *Darwiniana* 14(2-3): 394. 1967.

A. uruguayensis Henrard var. *uruguayensis*

South America.

A. utilis F.M. Bailey (*Aristida streptachne* (F. Muell.) Domin; *Stipa streptachne* F. Muell.; *Streptachne stipoides* R. Br.)

New Guinea, Australia, Queensland. Perennial, compact, tufted, inflorescences more or less open with branches loosely appressed, resembling *Aristida spuria*, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Journal and Proceedings of the Royal Society of New South Wales* 15: 237. 1882 and *Queensland Agricultural Journal* 18: 340. 1907, *Bibliotheca Botanica* 85: 342. 1915.

A. utilis F.M. Bailey var. *grandiflora* B.K. Simon

Queensland, Australia. See *Austrobaileya* 2(1): 95. 1984.

A. utilis F.M. Bailey var. *utilis*

New Guinea, Australia.

A. vagans Cav. (*Aristida parviflora* Steud.)

Queensland, New South Wales. Perennial, compact, 3-awned, wiry, tufted or rhizomatous, culms strongly branched or simple, leaf blade involute, ligule ciliate, sheath glabrous, leaves scabrous or pilose, inflorescence branches not appressed, panicle loose or open, glumes lanceolate and acuminate, lower glume acute, upper glume obtuse, beaked lemma linear to elliptic, awns filiform and divergent, grows in dry sclerophyll forest, clay, on rocky and sandy soils, similar to *Aristida caput-medusae* and *Aristida gracilipes*, see *Icones Plantarum* 5: 45, t. 471, f. 1. 1799, *Synopsis Plantarum Glumacearum* 1: 140-141. 1855 [1854], *Flora Australiensis: A Description ...* 7: 563. 1878 and *Bibliotheca Botanica* 85(2): 344, t. 14, f. 3-5. 1915, *Mededeelingen van's Rijks-Herbarium* 54: 82. 1926, *Mededeelingen van's Rijks-Herbarium* 54(B): 654. 1928.

in English: wire grass, three-awned spear-grass, three-awn spear-grass, threeawn speargrass

A. vaginata Hitchc.

Mexico. See *Proceedings of the California Academy of Sciences, Series 4*, 21(24): 297. 1935.

A. valida Henrard

Argentina. See *Mededeelingen van's Rijks-Herbarium* 54(B): 655-656. 1928.

A. venezuelae Henrard (*Aristida venezuelae* Henrard)

Venezuela, Peru. Perennial, loosely caespitose, slender, glabrous, sometimes branching from lower culm nodes, leaf blades involute first and flat when old and withering, narrow panicle with short branches, narrow spikelets, glumes unequal, lemma tuberculate in upper part, awns twisted at base, palea nerveless, narrow lodicules, open slopes, rocky slopes, dry places, along roadsides, close to *Aristida guayllabambensis* Laegaard, see *Mededeelingen van's Rijks-Herbarium* 54(B): 659-660. 1928, *Flora of Ecuador*, no. 57. 214(1) *Gramineae* (part 1): 49-52. 1997.

A. venustula Arechav. (*Aristida pallens* f. *breviaristata* Hack.; *Aristida pallens* var. *tenuicula* Hack.; *Aristida pallens* var. *tenuifolia* (Nees) Trin. & Rupr.; *Chaetaria pallens* var. *tenuifolia* Nees)

Uruguay. Perennial, awns filiform, lower glume 5-nerved, low forage value, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 381. 1829, *Species Graminum Stipaceorum* 116. 1842 and *Anales del Museo Nacional de Montevideo* 4(1): 72, 77. 1902, *Anales del Museo Nacional de Buenos Aires* 13: 452. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 69. 1911, *Meded. Rijks-Herb.* 54(A): 408-409. 1927.

A. venustula Arechav. var. *scabrifolia* Hack.

Argentina. Perennial, see *Anales del Museo Nacional de Buenos Aires* 21: 71. 1911.

A. venustula Arechav. var. *venustula*

America. Perennial.

A. venustula Arechav. var. *venustuloides* (Caro) Longhi-Wagner

South America. See *Darwiniana* 14(2-3): 387. 1967, *Boletim do Instituto de Botânica* (São Paulo) 12: 152. 1999.

A. vestita Thunb.

South Africa, Namibia. Perennial, densely tufted, lower culm internodes pubescent, lower glume without mucro or awn, three awns, on stony soils, black clay, dry sandy loam, see *Prodromus Plantarum Capensium*, ... 19. 1794, *Species Graminum Stipaceorum* 158. 1842, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 400. 1889.

in English: large woolly three-awn

in South Africa: harde steekgras

A. vestita Thunb. var. *brevistipitata* Trin. & Rupr.

South Africa. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 86. 1830, *Species Graminum Stipaceorum* 158. 1842 and *Mededeelingen van's Rijks-Herbarium* 54(B): 665. 1928.

A. vestita Thunb. var. *densa* Trin. & Rupr.

South Africa. See *Species Graminum Stipaceorum* 158. 1842 and *Mededeelingen van's Rijks-Herbarium* 54: 666. 1928.

A. vestita Thunb. var. *diffusa* (Trin.) Trin. & Rupr.

South Africa. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 86. 1830, *Species Graminum Stipaceorum* 157-158. 1842.

A. vestita Thunb. var. *eckloniana* Trin. & Rupr.

South Africa. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 86. 1830, *Species Graminum Stipaceorum* 158. 1842 and *Mededeelingen van's Rijks-Herbarium* 54(B): 667. 1928.

A. vestita Thunb. var. *parviflora* Trin. & Rupr.

South Africa. See *Species Graminum Stipaceorum* 158. 1842.

A. vestita Thunb. var. *pseudohystrix* Trin. & Rupr.

South Africa. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 86. 1830, *Species Graminum Stipaceorum* 158. 1842, *Synopsis Plantarum Glumacearum* 1: 142. 1855 [1854] and *Mededeelingen van's Rijks-Herbarium* 54(B): 471. 1928.

A. vestita Thunb. var. *schraderiana* Trin. & Rupr.

South Africa. See *Species Graminum Stipaceorum* 158. 1842 and *Mededeelingen van's Rijks-Herbarium* 54(B): 668. 1928.

A. vexativa Henrard

Argentina. See *Mededeelingen van's Rijks-Herbarium* 54(B): 669-671. 1928.

A. vickeryae B.K. Simon (named for Joyce Winifred Vickery, 1908-1979)

New South Wales. Perennial, compact, tufted, glabrous, branched, culms smooth and terete, sheath smooth, panicle open, glumes purplish smooth and cuspidate, lemma convolute, awns very slender, similar to *Aristida leptopoda*, *Aristida obscura*, *Aristida behriana* and *Aristida ramosa*, see *Austrobaileya* 2(1): 94. 1984.

A. victoriana Sulekic

Argentina. See *Darwiniana* 41(1-4): 184-186, f. 11. 2003.

A. vilfifolia Henrard (*Aristopsis balatovae* Catusas)

Cuba. Savannah, see *Mededeelingen van's Rijks-Herbarium* 54(B): 671-672. 1928, *Folia Geobotanica et Phytotaxonomica* 16(4): 440. 1981.

A. villosa B.L. Robinson & Greenman

Ecuador, Galápagos Islands. Rare species, annual, erect and ascending, decumbent at the base, branched, leaf sheaths villous, leaf blades flat, panicle contracted, glumes unequal, see *American Journal of Science* 50: 144. 1895 and *Flora of the Galápagos Islands* 831-832. 1971, D.M. Porter, *Patterns of Evolution in Galapagos Organisms* 33-54. 1983, *Reports from the Botanical Institute, University of Aarhus* 16: 1-74. 1987, R. Valencia, N. Pitman, S. León-Yáñez & P.M. Jørgensen, *Libro Rojo de las Plantas Endémicas del Ecuador* i-vi, 1-489. 2000.

A. virgata Trin. (*Aristida chapmaniana* Nash; *Aristida gracilis* var. *virgata* (Trin.) Alph. Wood; *Aristida perennis* Panz ex Trin. & Rupr.; *Aristida purpurascens* var. *depauperata* Vasey ex Beal; *Aristida stricta* Steud., nom. illeg., non *Aristida stricta* Michx.)

North America, U.S. In dry sandy soil, see *Encyclopédie Méthodique. Botanique ... Supplément* 1: 452. 1810, *A Sketch of the Botany of South-Carolina and Georgia* 1: 142, t. 8, f. 3. 1816, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 60. 1821, *Species Graminum Stipaceorum* 104. 1842, *Nomenclator Botanicus. Editio secunda* 1: 132. 1854, *Flora of the Southern United States* 555. 1860, *The*

American Botanist and Florist 389. 1871, *A Descriptive Catalogue of the Grasses of the United States* 35. 1885, *Grasses of North America for Farmers and Students* 2: 201. 1896 and *Flora of the Southeastern United States ...* 118, 1327. 1903, *Contr. U.S. Natl. Herb.* 22(7): 578. 1924.

in English: threeawn, wire grass, threeawn grass, wandlike three-awn grass

A. wachterii Henrard

Africa, Zimbabwe. See *Mededeelingen van's Rijks-Herbarium* 54(C): 746-747. 1933.

A. warburgii Mez (*Aristida heterochaeta* Henrard; *Aristida intricata* S.T. Blake) (possibly dedicated to the German botanist and traveler Otto Warburg, 1859-1938, his works include *Die Pflanzenwelt*. Leipzig und Wien 1913-1922, *Die Muskatnuss*. Leipzig 1897 and *Monographie der Myrsiticaceen*. Halle 1897, editor and publisher of many composite works and besides author of *Plantae Hellwigianae*. Flora von Kaiser Wilhelms-Land ... Leipzig 1894 (collector Franz Carl Hellwig, 1861-1889) and *Die Kulturpflanzen Usambaras ...* Berlin 1894; see John Hendley Barnhart, *Biographical notes upon botanists*. 3: 458. 1965; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 426. Boston, Mass. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 797. Stuttgart 1993; the British botanist and collector Edmund Frederic Warburg, 1908-1966, was the son of Oscar Emmanuel Warburg, 1876-1937)

Queensland, New South Wales. Perennial, compact, tufted, erect or sprawling, simple and few-noded, sheath glabrous, leaves bristly and scabrous, panicle loosely contracted or more or less open, inflorescence branches loosely appressed, glumes unequal, lower glume 3- to 7-nerved, lemma brown and purplish, column twisted, lemma awns dissimilar, on sandy soils, on rocky ridges, similar to *Aristida schultzii* and *Aristida latifolia*, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 149. 1921, *Mededeelingen van's Rijks-Herbarium* 54(A): 226-228. 1927, *Proceedings of the Royal Society of Queensland* 51(10): 172, f. 1-5. 1940.

in English: three-awned spear-grass

A. welwitschii Rendle

Tropical Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 21: 202. 1899 and *Meded. Rijks-Herb.* 54(B): 683. 1928.

in Angola: kipusu

A. welwitschii Rendle var. *minor* Rendle

Tropical Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 21: 202. 1899 and *Meded. Rijks-Herb.* 54(B): 683. 1928.

A. welwitschii Rendle var. *subtomentosa* Henrard

Tropical Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 21: 202. 1899 and *Mededeelingen van's Rijks-Herbarium* 54(B): 683-685. 1928.

A. wrightii Nash (*Aristida purpurea* Nutt. var. *wrightii* (Nash) Allred)

North America, U.S., Texas. Perennial bunchgrass, densely tufted, erect, seed head purplish and then yellow, spikelet with 3 spreading awns, poor forage value, useful for erosion control, habitat of gravelly, sandy or dry plains, rocky areas, see *Transactions of the American Philosophical Society, new series*, 5: 145. 1837 and *Flora of the Southeastern United States ...* 116, 1327. 1903, *A Flora of California* 1: 101. 1912, *Journal of the Arnold Arboretum* 60(2): 320. 1979, *Brittonia* 36(4): 393. 1984.

in English: Wright threeawn, Wright's threeawn, Wright tripleawn grass

in Mexico: tres barbas, tres barbas perenne, zacate tres barbas

Aristidium (Endl.) Lindley = *Bouteloua* Lag.

From the Latin *arista, ae* "the awn, the beard of an ear of grain."

Chloridoideae, Cynodonteae, Boutelouinae, type *Dinebra aristoides* Kunth, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Fragmenta Botanica* 77. 1809, *Nova Genera et Species Plantarum* 1: 171-172. 1815 [1816], *Fundamenta Agrostographiae* 161. 1820, *De Graminibus unifloris et sesquifloris* 242. Petropoli 1824, *Genera Plantarum* 94. 1836, *The Vegetable Kingdom* 116. 1847 and *Contributions from the United States National Herbarium* 41: 20-33. 2001.

Aristopsis Catus Guerra = *Aristida* L.

Resembling *arista, ae* "the awn, the beard of an ear of grain, beard of grain."

Arundinoideae, Aristideae, or Aristidoideae, Aristideae, type *Aristopsis bissei* Catus, see *Species Plantarum* 1: 82. 1753 and *Folia Geobotanica et Phytotaxonomica* 16(4): 439. 1981, *Contributions from the United States National Herbarium* 46: 69-104. 2003.

Arrhenatherum P. Beauv. =

Pseudarrhenatherum Rouy, *Thorea* Rouy,
Thorea Briquet (Apiaceae, alt. Umbelliferae),
Thoreochloa Holub

From the Greek *arrhen* “male, masculine” and *ather* “a bristle, awn,” referring to the awn of staminate floret, to the bristled staminate florets, alluding to the awn of the male floret; see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 55, 152, 153, t. 11, f. 5. (Dec) 1812.

About 4-10 species, Europe, Mediterranean, North Africa. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, perennial, loosely tufted, tall, herbaceous, erect or slightly spreading, slender, unbranched, glabrous nodes, hollow internodes, basal internodes occasionally swollen, auricles absent, ligule an unfringed membrane, sheaths smooth and rounded, leaves flat and linear, plants bisexual, flowers in narrow panicles, florets dimorphic, spikelets solitary and flattened or compressed laterally, 2 florets and falling together at maturity, spikelets pedicellate, upper floret hermaphrodite and shortly awned, 2 glumes very unequal acuminate and membranous to papery, lemmas acute and submembranous, lower lemma with a twisted geniculate awn, hairy callus present, callus short, palea 2-keeled, 2 lodicules free and membranous, 3 stamens, ovary apex hairy, 2 stigmas white, fruit not grooved, weed species, cultivated fodder, found in dry grassland, edges of woods, disturbed ground, open habitats, sometimes referred to *Helictotrichon* Besser, intergeneric hybrids with *Avena* L., type *Arrhenatherum avenaceum* P. Beauv. ex Boiss., see *Essai d'une Nouvelle Agrostographie* 55, 152, 153. 1812, *Voyage botanique dans le midi de l'Espagne* 2: 657. 1844 and *Archives des Sciences Physiques et Naturelles* sér. 4. 13: 614. 1902, *Flore de France* 14: 142. 1913, *Bulletin de la Société Botanique de France* 68: 401. 1921, *Bot. Jahrb. Syst.* 75: 321-332. 1951, *Kew Bulletin* 16: 247-250. 1962, *Acta Universitatis Carolinae: Biologica* 1962: 154. 1963, *Acta Botanica Malacitana* 10: 123-154. 1985, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Fitologija* 39: 72-77. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Flora Mediterranea* 5: 340-345. 1995, *Annals of Botany. Oxford* 86: 1135-1142. 2000, Gary L. Hannan & Michael W. Orick, “Isozyme diversity in *Iris Cristata* and the threatened glacial endemic *I. Lacustris* (Iridaceae).” *Am. J. Bot.* 87: 293-301. 2000, *Contributions from the United States National Herbarium* 48: 119-121. 2003, Susan J. Mazer, Horacio Paz and Michael D. Bell, “Life history, floral development, and mating system in *Clarkia xantiana* (Onagraceae): do floral and whole-plant rates of development evolve independently?” *Am. J. Bot.* 91: 2041-2050. 2004.

Species

A. album (Vahl) Clayton (*Arrhenatherum album* var. *erianthum* (Boiss. & Reut.) Romero Zarco; *Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl subsp. *erianthum* (Boiss. & Reut.) Cout.; *Arrhenatherum erianthum* Boiss. & Reut.; *Avena alba* Vahl)

Spain, Europe. Erect to prostrate, useful for erosion control, see *Symbolae Botanicae, ... 2*: 24. 1791, *Diagnoses Plantarum Novarum Hispanicarum praesertim in Castella nova lectarum* 121. Genève 1842 and *Memórias da Sociedade Broteriana* 6: 10. Coimbra 1950, *Kew Bulletin* 16: 250. 1962, *Agronomia Lusitana* 40(1): 6. 1980, *Acta Botanica Malacitana* 10: 145. 1985.

in English: tall oatgrass

A. calderae A. Hansen

Spain, Canary Islands. Rare species, see Alfred Hansen, “Contributions to the flora of the Canary Islands (especially Tenerife).” *Cuad. Bot. Canar.* 14-15: 59-70. 1972.

A. elatius (L.) P. Beauv. ex J. & C. Presl (*Arrhenatherum americanum* P. Beauv.; *Arrhenatherum avenaceum* (Scop.) P. Beauv.; *Arrhenatherum avenaceum* (Scop.) P. Beauv. subsp. *avenaceum*; *Arrhenatherum bulbosum* (Willd.) C. Presl; *Arrhenatherum elatius* (L.) Mertens & Koch, nom. illeg., non *Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl; *Arrhenatherum tuberosum* F.W. Schultz; *Avena avenaceum* (Scop.) P. Beauv.; *Avena bulbosa* Willd.; *Avena elata* Salisb., nom. illeg., non *Avena elata* Forssk.; *Avena elatior* L.; *Avena tuberosa* Gilib.; *Avenastrum elatius* (L.) Jess.; *Holcus avenaceus* Scop.; *Holcus bulbosus* (Willd.) Schrad.; *Hordeum avenaceum* Wigg. ex P. Beauv.)

Europe, western Asia, Mediterranean, North Africa. Perennial bunchgrass, short-lived, robust, slender, coarse, loosely tufted, tussocks forming or culms solitary, erect or spreading or ascending, glabrous or hairy, basal internodes more or less swollen, auricles absent, blade rolled when young, ligule hairy, leaves scabrous and coarse, sheaths smooth and keeled, green to purple tinged inflorescence, shining panicle erect or nodding, chasmogamous spikelets, the upper floret sterile, lower flower usually male with a long bent awn on the lemma, the second bisexual with usually a shorter awn on the lemma, glumes acute, lemmas hairy at the base, awn bent and twisted, palea 2-keeled and hyaline, anthers yellow, ovary pubescent, fruit elliptical and laterally compressed, seed shatters at maturity, ornamental, does not tolerate shade, resistant to summer drought, weed of crops and roadsides, potentially invasive, cultivated fodder plant, planted pasture, used for making hay and for grazing, weed species of dry grasslands, fields, waste ground, disturbed places, gardens, roadside verges, grassland and hay meadows, on well-drained and dry soils, see *Species Plantarum* 1: 79. 1753, *Flora Carniolica, Editio Secunda* 2: 276. 1772, *Exercitia Phytologica* 2: 538. 1792, *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten*

Entdeckungen in der Gesamten Naturkunde 2: 116. Berlin 1799, *Flora Germanica* 1: 248. 1806, *Essai d'une Nouvelle Agrostographie* 55-56, 152-153, 165, t. 11, f. 5. 1812, *Flora Cechica* 17. 1819, *Cyperaceae et Gramineae Siculae* 29. 1820, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 23. Londini [London] (Nov-Dec) 1796, *Jahresbericht der Pollichia* 20-21: 272. 1863 and Cugen J. M. Acheroy A. L. Loutfi, D. Petit and P. Vernet, "Breeding system differentiation in *Arrhenatherum elatius* populations: evolution toward selfing?" *Evolutionary Trends in Plants* 3: 17-24. 1989, Ducouso, A., D. Petit, M. Valero and P. Vernet. 1990 Genetic variation between and within populations of a perennial grass: *Arrhenatherum elatius*. *Heredity* 65: 179-188. 1990.

in English: tall oatgrass, tall oat grass, tall oats, false oat, French rye-grass, meadow oatgrass, evergreen grass

in Colombia: avena alta

in South Africa: Franse hawergras, langswenkgras

A. elatius (L.) P. Beauv. ex J. Presl & C. Presl f. *striatum* F.T. Hubb. (*Arrhenatherum bulbosum* var. *variegatum* Hitchc.; *Arrhenatherum elatius* f. *striatum* (F.T. Hubb.) L.B. Sm.; *Arrhenatherum elatius* var. *bulbosum* (Willd.) Spenn.; *Arrhenatherum elatius* var. *striatum* (F.T. Hubb.) L.B. Sm.)

America. See *Flora Friburgensis* 1: 113. 1825 and *The Standard Cyclopedia of Horticulture* 1(A-B): 397. 1914, *Rhodora* 18: 235. 1916, *Mémoires de la Société Royale des Sciences, Lettres et Arts de Nancy* 49: 269. 1947, *Rhodora* 49: 267. 1947.

A. elatius (L.) P. Beauv. ex J. Presl & C. Presl subsp. *bulbosum* (Willd.) Schübl. & G. Martens (*Arrhenatherum avenaceum* (Scop.) P. Beauv. subsp. *praecatorium* (Thuill.) Rouy; *Arrhenatherum avenaceum* var. *bulbosum* (Schr.) Hartm.; *Arrhenatherum bulbosum* (Willd.) C. Presl; *Arrhenatherum elatius* subsp. *bulbosum* (Willd.) Hyl., nom. illeg., non *Arrhenatherum elatius* subsp. *bulbosum* (Willd.) Schübl. & G. Martens; *Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl subsp. *nodosum* (Parl.) Arcang.; *Arrhenatherum elatius* var. *bulbosum* (Willd.) Spenner; *Arrhenatherum elatius* var. *tuberosum* (Gilib.) Thielens; *Avena bulbosa* Willd.; *Avena elatior* subsp. *bulbosa* (Willd.) Litard.; *Avena tuberosa* Gilib., nom. inval.)

South and west Europe. Ornamental, culm with basal internodes swollen and bulbous, found in fields, roadsides, waste ground, lowland to montane, see *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der Gesamten Naturkunde* 2: 116. Berlin 1799, *Cyperaceae et Gramineae Siculae* 29. 1820 and *Candollea* 15: 13. 1955, *New Zealand Journal of Botany* 29: 101-116. 1991.

in English: tuber oat grass, bulbous oat grass, onion twitch

A. elatius (L.) P. Beauv. ex J. Presl & C. Presl subsp. *elatius* (*Arrhenatherum avenaceum* (Scop.) P. Beauv.; *Avena elatior* L.)

Europe. Weed species widely naturalized in temperate regions, sea level to montane, useful for erosion control, fodder, forage weed species of dry grasslands, fields and old fields, waste ground, roadside verges, grassland and hay meadows, on well-drained and dry soils, border of woods, see *Flora Cechica* 17. 1819 and *New Zealand Journal of Botany* 29: 101-116. 1991.

in English: tall oat grass, meadow oat grass, false oat grass, French rye

A. elatius (L.) P. Beauv. ex J. Presl & C. Presl subsp. *sardoum* (Em. Schmid) Gamisans (*Arrhenatherum elatius* subsp. *braun-blauquetii* P. Monts. & L. Villar; *Arrhenatherum elatius* var. *sardoum* E. Schmid; *Arrhenatherum murcicum* Sennen)

Europe. See *Candollea* 29(1): 46. 1974.

A. elatius (L.) P. Beauv. ex J. Presl & C. Presl var. *bulbosum* (Willd.) Spenner (*Arrhenatherum avenaceum* var. *bulbosum* (Schr.) Hart.; *Arrhenatherum avenaceum* var. *bulbosum* (Willd.) Hartm.; *Arrhenatherum avenaceum* var. *nodosum* Reichb.; *Arrhenatherum bulbosum* (Willd.) C. Presl; *Arrhenatherum bulbosum* var. *variegatum* Hitchc.; *Arrhenatherum elatius* f. *bulbosum* (Willd.) T. Koyama; *Arrhenatherum elatius* f. *striatum* (F.T. Hubb.) L.B. Sm.; *Arrhenatherum elatius* f. *striatum* F.T. Hubb.; *Arrhenatherum elatius* subsp. *bulbosum* (Willd.) Schübler & Martens; *Arrhenatherum elatius* var. *nodosum* (Reichb.) F.T. Hubb.; *Arrhenatherum elatius* var. *tuberosum* Thiel.; *Arrhenatherum elatius* var. *tuberosum* (F.W. Schultz) Thielens; *Arrhenatherum tuberosum* (Gilib.) F.W. Schultz; *Arrhenatherum tuberosum* F.W. Schultz; *Avena bulbosa* Willd.; *Avena elatior* L.; *Avena elatior* var. *bulbosa* (Willd.) St.-Amans; *Avena elatior* var. *tuberosa* (F.W. Schultz) Asch.; *Avena tuberosa* Gilib.; *Holcus avenaceus* Scop.; *Holcus avenaceus* var. *bulbosus* (Willd.) Gaudin; *Holcus bulbosus* (Willd.) Schr.)

Europe, Asia. Perennial, erect, stout, basal internodes occasionally swollen into bulbous structures or a chain of bulbous corms, propagules, nodes hairy, leaf blade channelled or grooved, panicle narrow, male lemmas awned, often a troublesome weed in arable land, pasture grass, ornamental, higher rainfall areas, wet ground, ornamental, rare in grassland, corms eaten by pigs, see *Flora Carniolica, Editio Secunda* 2: 276. 1772, *Exercitia Phytologica* 2: 538. 1792, *Flora Germanica* 1: 248. 1806, *Agrostologia Helvetica, definitionem ...* 1: 136. 1811, *Flora Cechica* 17. 1819, *Handbok i Skandinaviens Flora, edn. 8* 51. 1820, *Flora Agenaise* 47. 1821, *Flora Friburgensis* 1: 113. 1825, *Flora Germanica Excursoria* 1: 53. 1830, *Jahresbericht der Pollichia* 20-21: 272. 1863, *Flora der Provinz Brandenburg* 1: 826. 1864, *Bulletin de la Société Botanique de Belgique* 12:

184. 1873 and *The Standard Cyclopedia of Horticulture* 1(A-B): 397. 1914, *Rhodora* 18: 234-235. 1916, *Rhodora* 49: 267. 1947, *Grasses of Japan and its Neighboring Regions* 486. 1987, *A Key to Australian Grasses* 1-150. 1990, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994.

in English: false oat, onion couch, onion twitch, bulbous false oat, bulbous oatgrass

in Mexico: avena falsa alta

A. elatius (L.) P. Beauv. ex J. & C. Presl var. **elatius** (*Arrhenatherum elatius* var. *biaristatum* (Peterm.) Peterm.; *Avena elatior* L.; *Avena elatior* var. *elatior*)

Europe, Asia. Leaf blade not grooved, glabrous nodes, basal internodes not swollen, palea acute or obtuse, found in grassland, semishade, wooded slopes, roadsides and waste ground, see *Flora Cechica* 17. 1819.

in English: false oats, false oatgrass, tall oatgrass

A. kotschyii Boiss. (*Avena kotschyii* (Boiss.) Steud.) (named for the Austrian botanist Carl (Karl) Georg Theodor Kotschy, 1813-1866, plant collector, traveler, from 1835 to 1843 botanical explorer of the Orient, from 1852 Curator of the Herbarium of the Vienna Natural History Museum, his writings include *Die Insel Cypern*. [with Franz Joseph Andreas Nicolaus Unger, 1800-1870.] Wien 1865 and *Die Sommerflora des Antilibanon und hohen Hermon*. Wien 1864. See Eduard Fenzl (1808-1879), *Abbildungen und Beschreibungen neuer und selthener Thiere und Pflanzen in Syrien und im westlichen Taurus gesammelt von T. Kotschy*. Stuttgart 1843; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; J.H. Barnhart, *Biographical notes upon botanists*. 2: 315. 1965; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 182-183. Paris 1882; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 218. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 195. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Turkey, Iran, Syria. Perennial, useful for erosion control, steep rocky slope, *Diagnoses plantarum orientalium novarum* 1(7): 122. 1846, *Synopsis Plantarum Glumacearum* 1: 235. 1854.

A. longifolium (Thore) Dulac (*Arrhenatherum longifolium* (Nees) Potzta, nom. illeg., non *Arrhenatherum longifolium* (Thore) Dulac; *Arrhenatherum thorei* Durieu; *Avena*

longifolia Thore; *Pseudarrhenatherum longifolium* (Thore) Rouy; *Trisetum longifolium* Nees)

Europe. Useful for erosion control, see *Florae Africae Australioris Illustrationes Monographicae* 348. 1841, *Flore du Département des Hautes-Pyrénées* 78. 1867 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 327. 1951.

A. palaestinum Boiss. (*Arrhenatherum avenaceum* var. *palaestinum* (Boiss.) Hack.; *Arrhenatherum elatius* var. *palaestinum* (Boiss.) Boiss.; *Arrhenatherum erianthum* auct. balcan., non Boiss. & Reut.; *Avena palaestina* (Boiss.) Steud.)

Europe, Greece, Israel. Perennial, useful for erosion control, see *Diagnoses Plantarum Novarum Hispanicarum* 1852: 121. 1852, *Synopsis Plantarum Glumacearum* 1: 425. 1855, *Flora Orientalis* 5: 550. 1884, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 127. 1890 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 61(Beibl. 140): 163. 1928.

Arrozia Schrad. ex Kunth = *Caryochloa* Trin., *Luziola* Juss.

The Spanish name for rice.

Ehrhartoideae, Oryzeae, Luziolinae, type *Arrozia micrantha* Schrad. ex Kunth, see *Genera Plantarum* 33. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 637. 1791, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 11. 1833, *Journal of the Linnean Society, Botany* 19(115, 116): 55. 1881 and *Flora Mesoamericana* 6: 222-223. 1994, *Contributions from the United States National Herbarium* 39: 69-71. 2000.

Arthragrostis Lazarides

Greek *arthron* "a joint" and *agrostis*, *agrostidos* "grass, weed, couch grass," referring to the spikelets.

About three species, Australia. Panicoideae, Panicoideae, Paniceae, or Paniceae, Panicinae, annual, herbaceous, simple or branched, internodes hollow, auricles absent, narrow leaf blades linear, ligule a ciliate membrane, leaves hirsute to hispid, plants bisexual, open inflorescence paniculate, a contracted loose panicle with deciduous branches, spikelets solitary and long-pedicelled, spikelet 2-flowered, upper floret hermaphrodite borne on a filiform internode, 2 glumes unequal and membranous, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, open habitats, open scrub, type *Arthragrostis deschampsoides* (Domin) Lazarides, see M. Lazarides, "New taxa of tropical Australian grasses (Poaceae)." *Nuytsia*. 5(2): 285-287. 1984.

Species

A. aristispicula B.K. Simon

Australia. See *Austrobaileya* 2(3): 238. 1986.

A. clarksoniana B.K. Simon

Australia. See *Austrobaileya* 3(4): 585, f. 1. 1992.

A. deschampsoides (Domin) Lazarides (*Panicum deschampsoides* Domin)

Australia. Annual, slender, flaccid, stipitate fertile floret, see *Bibliotheca Botanica* 85: 320. 1915.

Arthratherum P. Beauv. = *Aristida* L.,
Streptachne R. Br.

From the Greek *arthron* “a joint” and *ather*, *atheros* “chaff, spine, prickle, barb, awn.”

Arundinoideae, Aristideae, or Aristidoideae, Aristideae, type *Arthratherum hygrometricum* (R. Br.) P. Beauv., see *Species Plantarum* 1: 82. 1753, *Essai d'une nouvelle Agrostographie* 32, 152, t. 8, f. 8. 1812, *Conspectus Regni Vegetabilis* 50. 1828, *Species Graminum Stipaceorum* 155. 1842 and *Contr. U.S. Natl. Herb.* 22(7): 519. 1924, *Contributions from the United States National Herbarium* 46: 69-104. 2003.

Arthraxon P. Beauv. = *Alectoridia* A. Rich.,
Arthraxon (Eichler) Tiegh. (Loranthaceae),
Batratherum Nees, *Lasiolytrum* Steud., *Lucaea*
Kunth, *Pleuroplitis* Trin., *Psilopogon* Hochst.
ex A. Rich.

From the Greek *arthron* “a joint” and *axon* “axis,” referring to the rachis, to the jointed rachides; see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 111, t. 11, f. 6. (Dec) 1812.

About 7(-10)/20-25 species, Old World tropics, mainly in India. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, herbaceous, slender, often trailing, decumbent and rooting from lower nodes, auricles absent, ligule a ciliate membrane, leaf blades linear-lanceolate to ovate-lanceolate, plants bisexual, terminal and axillary slender subdigitate racemes, spikelets solitary and sessile or pairs of sessile and pedicellate spikelets, sessile spikelets awned and with 2 florets, lower floret reduced to a lemma, upper floret bisexual, glumes equal or subequal, lower glume convex or laterally 2-keeled, lemmas membranous, upper lemma entire and awned, awn sometimes basal, pedicellate spikelet much reduced or absent or vestigial, palea present or absent, 2 lodicules free and fleshy, 2-3 stamens, ovary glabrous, shade or open habitats, rainforest, wet places, moist pastures, rocky slopes, old cultivated fields, similar to *Schizachyrium*, type *Arthraxon ciliaris* P.

Beauv., see *Essai d'une Nouvelle Agrostographie* 111, t. 11, f. 6. 1812, *Fundamenta Agrostographiae* 174-175, t. 16. 1820, *Révision des Graminées* 2: 489, t. 159. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 271, 275. 1832, *Edinburgh New Philosophical Journal* 18: 180-182. 1835, *Flora* 29: 18. 1846, *Tentamen Florae Abyssinicae ...* 2: 447-448, t. 102. 1850, *Beiträge zur Flora der Cap Verdischen Inseln* 152. 1852, *Flora Rossica* 4(14): 477, 478. 1853, *Synopsis Plantarum Glumacearum* 1: 414. 1854, *Flora van Nederlandsch Indië* 3: 481. 1857, *Bulletin de l'Académie Impériale des Sciences de Saint Pétersbourg*, sér. 3, 10: 369-370, 373-377, t. 10, f. 5, 6-10. 1866, *Bulletin de la Société Botanique de France* 42: 352. 1895 and *Journal of Cytology and Genetics* 15: 51-57. 1980, *Blumea* 27(1): 255-300. 1981, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Opera Botanica* 121: 159-172. 1993, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Flora Mesoamericana* 6: 393. 1994, *Contributions from the United States National Herbarium* 46: 104-110. 2003.

Species

A. breviaristatus Hack. (*Arthraxon hispidus* var. *hispidus*;
Arthraxon nitidulus Stapf ex Bor)

Eastern India, Southeast Asia, China. Found in moist and swampy places, used as cattle fodder, see *Monographiae Phanerogamarum* 6: 350. 1889 and *Botanical Magazine* 26(307): 214. 1912, *Grasses of Burma ...* 101, 688. 1960.

A. castratus (Griff.) Naray. ex Bor (*Andropogon castratus* Griff.; *Andropogon rudis* Nees ex Steud.; *Arthraxon dalatensis* A. Camus ex M. Schmid; *Arthraxon hainanensis* Keng & S.L. Chen; *Arthraxon pilipes* Backer; *Arthraxon rudis* (Nees ex Steud.) Hochst.)

India, Sri Lanka. Perennial, creeping, straggling, ascending, leaf sheaths villous to hirsute, racemes ascending, spikelets solitary, pedicellate spikelets reduced to a pedicel, lemma margin ciliate, for cattle fodder, hillsides, swampy places, forest openings, see *Notulae ad Plantas Asiaticas* 3: 89. 1851, *Synopsis Plantarum Glumacearum* 1: 383. 1854, *Flora* 39: 188. 1856, *Enum. Pl. Zeyl.* 368. 1864, Henry Trimen (1843-1896), *A Systematic Catalogue of the Flowering Plants and ferns indigenous to or growing wild in Ceylon* 107. Colombo 1885 and *Handb. Fl. Ceylon* 5: 224. 1900, *De Nuttige Planten van Nederlandsch-Indië* 1: 124. 1922, *Handb. Fl. Ceylon* 6: 331. 1931, *Flora of Assam* 5: 376. 1940, *Grasses of Ceylon* 187. 1956, *Grasses of Burma ...* 99. 1960, *Flora Hainanica* 4: 538, f. 1260. 1977, *Blumea* 27: 263. 1981.

in English: castrate carp grass

A. cuspidatus (Hochst. ex A. Rich.) Hochst. ex Hack. (*Andropogon cuspidatus* Hochst. ex A. Rich.; *Arthraxon cuspidatus* Hochst.; *Arthraxon cuspidatus* (Hochst. ex

A. Rich.) Hochst.; *Arthraxon hispidus* var. *hispidus*; *Batratherum cuspidatum* (Hochst. ex A. Rich.) Hochst.)

Ethiopia. Annual, slender, erect, ascending, leaf blades lanceolate, inflorescence of flexuous racemes silky-villous, sessile spikelet linear-lanceolate, pedicelled spikelet sterile, 2 stamens, wet ground, see *Tentamen Florae Abyssinicae* ... 2: 456. 1850, *Flora* 39(no.12): 178, 188. 1856.

A. deccanensis Jain

India, Maharashtra. Lower glume linear-lanceolate, see *Journal of the Bombay Natural History Society* 68(1): 297-299, t. 297. 1971.

A. depressus Stapf ex C.E.C. Fischer

India, Karnataka. Indeterminate species, lower glume of sessile spikelet linear-lanceolate, see *Bulletin of Miscellaneous Information Kew* 349. 1933.

A. echinatus (Nees) Hochst. (*Andropogon echinatus* (Nees) Heyne; *Andropogon echinatus* Heyne ex Steud., nom. illeg., non *Andropogon echinatus* (Nees) Heyne; *Arthraxon echinatus* (Nees) Heyne ex Kuntze, nom. illeg., non *Arthraxon echinatus* (Nees) Hochst.; *Arthraxon lanceolatus* var. *echinatus* (Nees) Hack.; *Arthraxon spathaceus* Hook.f.; *Batratherum echinatum* Nees)

India. Lower glume of sessile spikelet rarely smooth on the back, found in moist situations, see *Edinburgh New Philosophical Journal* 18: 181. 1835, *Nomenclator Botanicus* edition 2 1: 91. 1840, *Synopsis Plantarum Glumacearum* 1: 383. 1854, *Flora* 39: 188. 1856, *Monographiae Phanerogamarum* 6: 348. 1889, *Revisio Generum Plantarum* 2: 759. 1891, *The Flora of British India* 7(21): 145. 1897 [1896].

A. hispidus (Thunb.) Makino (*Alectoria quartiniana* A. Rich.; *Arthraxon antsirabensis* A. Camus; *Arthraxon ciliaris* P. Beauv.; *Arthraxon ciliaris* var. *cryptatherus* Hack.; *Arthraxon hispidus* (Thunb.) Merr.; *Arthraxon hispidus* var. *ciliaris* (P. Beauv.) Honda ex Nakai; *Arthraxon hispidus* var. *cryptatherus* (Hack.) Honda; *Arthraxon hispidus* var. *hispidus*; *Arthraxon hookeri* (Hackel) Henrard; *Arthraxon mauritianus* Stapf ex C.E. Hubb.; *Arthraxon micans* (Nees) Hochst.; *Arthraxon quartinianus* (A. Rich.) Nash; *Batratherum micans* Nees; *Clidemia gracilis* Pittier; *Phalaris hispida* Thunb.) (Madagascar, Antsirabe) (for the French botanist Léon Richard Quartin-Dillon, d. 1841, physician, explorer, plant collector, died during the Lefebvre expedition in Ethiopia, wrote *Des différences appréciables entre le sang de la veine porte et celui des autres veins*. in *Collection des thèses soutenues à la Faculté de Médecine de Paris*. an 1839-1878, tom. 14. Paris 1839-1878. See T. Lefebvre, *Voyage en Abyssinie exécuté ... par une Commission scientifique, composée de MM. T. Lefebvre, A. Petit et Quartin-Dillon, etc.* [1845]; I.H. Vegter, *Index Herbariorum*. Part II (5), *Collectors N-R*. Regnum Vegetabile vol. 109. 1983; Stafleu and Cowan, *Taxonomic literature*. 4: 452 and 763-764. Utrecht 1983; Achille Richard (1794-1852), *Tentamen florae abyssinicae*. [Collectors: R.

Quartin-Dillon and A. Petit] Parisiis [1847-1851]; J.H. Barnhart, *Biographical notes upon botanists*. 3: 118. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 187. Paris 1882; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937)

Southeast Asia, China, Japan, India, Sikkim, Asia temperate and tropical, Philippines, Australia, New South Wales, Queensland. Perennial or annual, subshrub, wiry, arching, low-growing, creeping habit, very slender, hispid, ascending, much-branched, decumbent and rooting from the lower nodes, sometimes reddish purple, fibrous roots, leaf bases encircle the sheath, leaves lanceolate to ovate, ligule short and membranous, inflorescences deflexed, racemes greenish to purple, spikelets solitary, lower glume purplish and scabrous, greenish upper glume compressed and keeled, lemma margin glabrous, yellowish grains, invasive weed rapidly spreading and naturalized elsewhere, used as cattle fodder, weed in tea plantations, yellow dye, medicine in China, considered a vulnerable species in Australia, usually found in moist pastures, cultivated areas, hay fields and wet ditches, around margins of pools and lagoons, on muddy banks, floodplain forests, along shores, open disturbed sites, gravel, open areas, depressional wet areas, in scattered clumps on roadside, on road bank, edge of roadside, along trails, sometimes confused with *Commelina communis* L. and *Panicum clandestinum* Hochst. ex Chiov., *Arthraxon mauritianus* Stapf ex C.E. Hubb. considered a vulnerable species in Mauritius, see *Flora Japonica*, ... 44. 1784, *Essai d'une Nouvelle Agrostographie* 111, t. 11, f. 6. 1812, *Edinburgh New Philos. J.* 18: 182. 1835, *Tentamen Florae Abyssinicae* ... 2: 448, t. 102. 1850, *Flora* 39: 189. 1856 and *Botanical Magazine* (Tokyo) 26(307): 214. 1912, *Philippine Journal of Science* 7(4): 229. 1912, *North American Flora* 17(2): 99. 1912, *Bulletin of Miscellaneous Information Kew* 1939: 653. 1939, *Bulletin de la Société Botanique de France* 95: 149. 1948, *Grasses of Ceylon* 187. 1956, *Grasses of Burma* ... 101-102. 1960, *Webbia* 49(2): 265-329. 1995.

in English: small carp grass, jointhead arthraxon

in Spanish: zacate común, zacate

in Japan: ko-buna-gusa, kobunagusa

in China: jin cao

in India: nela bidira hullu, thurade, thurde, turade, undar gin, undri

A. hispidus (Thunb.) Makino var. *hispidus* (*Alectoria quartiniana* A. Rich.; *Andropogon alectoridia* A. Rich. ex Steud.; *Andropogon amplexifolius* Trin.; *Andropogon ciliaris* (P. Beauv.) Raspail; *Andropogon cuspidatus* Hochst. ex A. Rich.; *Andropogon lasiocoleus* Steud.; *Andropogon micans* (Nees) Steud.; *Andropogon nudus* Nees ex Steud.; *Andropogon quartinianus* A. Rich.; *Andropogon submuticus* Nees ex Steud.; *Arthraxon antsirabensis* A. Camus;

Arthraxon brevistaratus Hack.; *Arthraxon caucasicus* (Rupr. ex Regel) Tzvelev; *Arthraxon centrasiaticus* (Griseb.) Gamajun.; *Arthraxon ciliare* subsp. *langsdorffii* (Trin.) Hack.; *Arthraxon ciliare* subsp. *nudus* (Nees ex Steud.) Hack.; *Arthraxon ciliare* subsp. *quartinianus* (A. Rich.) Hack.; *Arthraxon ciliare* subsp. *submuticus* (Nees ex Steud.) Hack.; *Arthraxon ciliare* subsp. *vriesii* (Büse) Hack.; *Arthraxon ciliare* var. *coloratus* (Hochst.) Hack.; *Arthraxon ciliare* var. *cryptatherus* Hack.; *Arthraxon ciliare* var. *gracilis* (Kunth) Hack.; *Arthraxon ciliare* var. *quartinianus* (A. Rich.) Hack.; *Arthraxon ciliare* var. *quartinianus* (A. Rich.) E.G. Camus & A. Camus, nom. illeg., non *Arthraxon ciliaris* var. *quartinianus* (A. Rich.) Hack.; *Arthraxon ciliaris* P. Beauv.; *Arthraxon ciliaris* subsp. *langsdorffii* (Trin.) Hack.; *Arthraxon ciliaris* subsp. *nudus* (Nees ex Steud.) Hack.; *Arthraxon ciliaris* subsp. *quartinianus* (A. Rich.) Hack.; *Arthraxon ciliaris* subsp. *submuticus* (Nees ex Steud.) Hack.; *Arthraxon ciliaris* subsp. *vriesii* (Büse) Hack.; *Arthraxon ciliaris* var. *australis* Benth.; *Arthraxon ciliaris* var. *centrasiaticus* (Griseb.) Hack.; *Arthraxon ciliaris* var. *coloratus* (Hochst.) Hack.; *Arthraxon ciliaris* var. *cryptatherus* Hack.; *Arthraxon ciliaris* var. *genuinus* Hack.; *Arthraxon ciliaris* var. *glabrescens* Hack.; *Arthraxon ciliaris* var. *gracilis* (Kunth) Hack.; *Arthraxon ciliaris* var. *hookeri* Hack.; *Arthraxon ciliaris* var. *quartinianus* (A. Rich.) Hack.; *Arthraxon ciliaris* var. *tenellus* Benth.; *Arthraxon coloratus* Hochst.; *Arthraxon cryptatherus* (Hack.) Koidz.; *Arthraxon cryptatherus* subsp. *nudus* (Nees ex Steud.) Koidz.; *Arthraxon cryptatherus* subsp. *submuticus* (Nees ex Steud.) Koidz.; *Arthraxon cryptatherus* var. *centrasiaticus* (Griseb.) Koidz.; *Arthraxon cryptatherus* var. *ciliaris* (P. Beauv.) Koidz.; *Arthraxon cuspidatus* (Hochst. ex A. Rich.) Hochst.; *Arthraxon cuspidatus* (Hochst. ex A. Rich.) Hochst. ex Hack.; *Arthraxon cuspidatus* var. *micans* (Nees) Hack.; *Arthraxon gracilis* (Kunth) Hochst.; *Arthraxon hispidus* (Thunb.) Makino; *Arthraxon hispidus* f. *brevisetus* (Regel) Ohwi; *Arthraxon hispidus* f. *centrasiaticus* (Griseb.) Ohwi; *Arthraxon hispidus* f. *formosanus* Ohwi; *Arthraxon hispidus* f. *hispidissimus* (Honda) Ohwi; *Arthraxon hispidus* f. *hispidus*; *Arthraxon hispidus* f. *japonicus* (Regel) Ohwi; *Arthraxon hispidus* f. *kobuna* (Honda) Ohwi; *Arthraxon hispidus* f. *monticola* (Hiyama) Hiyama; *Arthraxon hispidus* f. *quartinianus* (A. Rich.) Backh.; *Arthraxon hispidus* f. *riukiensis* Ohwi; *Arthraxon hispidus* f. *vriesii* (Büse) Backh.; *Arthraxon hispidus* subsp. *caucasicus* (Rupr. ex Regel) Tzvelev; *Arthraxon hispidus* subsp. *centrasiaticus* (Griseb.) Tzvelev; *Arthraxon hispidus* subsp. *ciliaris* (P. Beauv.) Masam. & Yanag.; *Arthraxon hispidus* subsp. *langsdorffii* (Trin.) Tzvelev; *Arthraxon hispidus* var. *brevisetus* (Regel) Hara; *Arthraxon hispidus* var. *centrasiaticus* (Griseb.) Honda; *Arthraxon hispidus* var. *ciliaris* (P. Beauv.) Koidz.; *Arthraxon hispidus* var. *cryptatherus* (Hack.) Honda; *Arthraxon hispidus* var. *hispidissimus* Honda; *Arthraxon hispidus* var. *hookeri* (Hack.) Honda; *Arthraxon hispidus* var. *japonicus* (Regel) Hack. ex Mori; *Arthraxon hispidus* var. *langsdorffii* (Trin.) Backh.; *Arthraxon hispidus* var. *macranthus* Ohwi; *Arthraxon hispidus* var. *microphyllus* Honda; *Arthraxon hispidus* var. *monticola* Hiyama; *Arthraxon hispidus* var. *muticus* (Honda) Ohwi; *Arthraxon hispidus* var. *nudus* (Nees ex Steud.) Ohwi; *Arthraxon hispidus* var. *vriesii* (Büse) Backh.; *Arthraxon hispidus* var. *vriesii* (Büse) Ohwi; *Arthraxon hookeri* (Hack.) Henrard; *Arthraxon inermis* Hook.f.; *Arthraxon japonicus* Miq.; *Arthraxon kobuna* Honda; *Arthraxon langsdorffii* (Trin.) Hochst.; *Arthraxon langsdorffii* var. *centrasiaticus* (Griseb.) Kom.; *Arthraxon langsdorffii* var. *cryptatherus* (Hack.) Kom.; *Arthraxon langsdorffii* var. *submuticus* (Regel) Grossh.; *Arthraxon langsdorffianus* (Trin.) Hochst.; *Arthraxon lasiocoleos* (Steud.) Hochst.; *Arthraxon major* (Hochst. ex Steud.) Hochst.; *Arthraxon mauritanus* Stapf ex C.E. Hubb.; *Arthraxon nitidulus* Stapf ex Bor; *Arthraxon nudus* (Nees ex Steud.) Hochst.; *Arthraxon okamotoi* Ohwi; *Arthraxon pallidus* Henrard; *Arthraxon pauciflorus* Honda; *Arthraxon pauciflorus* var. *muticus* Honda; *Arthraxon plumbeus* (Nees ex Arn.) Hochst.; *Arthraxon quartinianus* (A. Rich.) Nash; *Arthraxon quartinianus* subsp. *quartinianus*; *Arthraxon quartinianus* subsp. *vriesii* (Büse) Henrard; *Arthraxon quartinianus* var. *glabrescens* (Hack.) Jain; *Arthraxon quartinianus* var. *monostachyus* Jansen; *Arthraxon quartinianus* var. *montanus* Jacq.-Fél.; *Arthraxon quartinianus* var. *quartinianus*; *Arthraxon satarensis* M.R. Almeida; *Arthraxon schimperi* (Hochst.) Hochst.; *Arthraxon submuticus* (Nees ex Steud.) Hochst.; *Arthraxon violaceus* (Steud.) Hochst.; *Batratherum cuspidatum* (Hochst. ex A. Rich.) Hochst.; *Batratherum micans* Nees; *Batratherum plumbeum* Duthie; *Batratherum submuticum* (Nees ex Steud.) Nees ex W. Watson; *Chilochloa hispida* P. Beauv.; *Deyeuxia japonica* Spreng.; *Digitaria hispida* (Thunb.) Spreng.; *Lasiolytrum hispidum* (Thunb.) Steud.; *Lasiolytrum hispidum* Steud.; *Lucaea gracilis* Kunth; *Lucaea langsdorffii* (Trin.) Steud.; *Lucaea major* Hochst. ex Steud.; *Lucaea plumbea* (Nees ex Arn.) Steud.; *Lucaea violacea* Steud.; *Lucaea vriesii* Büse; *Phalaris hispida* Thunb.; *Pleuroplitis caucasica* (Rupr. ex Regel) Trautv.; *Pleuroplitis centrasiatica* Griseb.; *Pleuroplitis langsdorffii* Trin.; *Pleuroplitis langsdorffii* var. *brevisetata* Regel; *Pleuroplitis langsdorffii* var. *caucasica* Rupr. ex Regel; *Pleuroplitis langsdorffii* var. *centrasiatica* (Griseb.) Regel; *Pleuroplitis langsdorffii* var. *chinensis* Regel; *Pleuroplitis langsdorffii* var. *gracilis* (Kunth) Regel; *Pleuroplitis langsdorffii* var. *japonica* Regel; *Pleuroplitis langsdorffii* var. *submutica* Regel; *Pleuroplitis major* (Hochst. ex Steud.) Regel; *Pleuroplitis plumbea* Nees ex Arn.; *Pleuroplitis quartiniana* (A. Rich.) Regel; *Pleuroplitis quartiniana* var. *caespitosa* Regel; *Pleuroplitis quartiniana* var. *plumbea* (Nees ex Arn.) Regel; *Pleuroplitis quartiniana* var. *tenella* Regel; *Pollinia ciliaris* (P. Beauv.) Spreng.; *Psilopogon schimperi* Hochst.)

Africa, Asia. See *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Japonica*, ... 44. 1784, *Essai d'une Nouvelle Agrostographie* 37, 43, 111, 158, t. 11, f. 6. 1812, *Fundamenta Agrostographiae* 175, t. 16. 1820, *Annales des Sciences Naturelles (Paris)* 5: 307. 1825, *Systema Vegetabilium, editio decima sexta* 1: 245, 271, 289. 1825, *Révision des Graminées* 2: 489, t. 159. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 274. 1832, *Edinburgh New Philosophical Journal* 18: 181-183. 1835, *Flora* 29: 117-118. 1846, *Tentamen Florae Abyssinicae* ... 2: 448, 456, 469, t. 102. 1850, *Flora Rossica* 4(14): 477. 1853, *Plantae Junghuhnianae* 366. 1854, *Synopsis Plantarum Glumacearum* 1: 382-383, 413-414. 1854, *Flora* 39: 178, 188-189. 1856, *Annales Museum Botanicum Lugduno-Batavi* 2: 288. 1866, *Bulletin de l'Académie Impériale des Sciences de St-Pétersbourg* 10: 370, 373-375, 377, t. 10, f. 5-10. 1866, *Flora Australiensis: A Description* ... 7: 524. 1878, *Himalayan Districts of the North-western Provinces of India* 10: 392. 1882, *Genera Plantarum* 3(2): 1127. 1883, *Monographiae Phanerogamarum* 6: 350, 353-358. 1889, *The Flora of British India* 7(21): 145. 1897 [1896] and *Botanical Magazine (Tokyo)* 26(307): 214. 1912, *North American Flora* 17(2): 99. 1912, Tamezō Mori (1884-1962), *An Enumeration of Plants Hitherto Known From Corea*. July 1921. 38. Seoul 1922, *Observationes Botanicae* 7: 300. 1922, *Botanical Magazine (Tokyo)* 39(467): 276-278, 301. 1925, *Handboek voor de Flora van Java* 2: 75. 1928, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 329. 1930, *Flora Symbolae Orientali-Asiaticae* 71. 1930, *Botanical Magazine (Tokyo)* 45: 43. 1931, *Flora URSS* 2: 13. 1934, *Botanical Magazine* 49: 697-698. 1935, *Botanical Magazine (Tokyo)* 52: 186. 1938, *Bulletin of Miscellaneous Information Kew* 1939: 653. 1939, *Transactions of the Natural History Society of Taiwan* 31: 326. 1941, *Blumea* 4(3): 525-526. 1941, *Acta Phytotaxonomica et Geobotanica* 11(3): 164-165. 1942, *Bulletin of the Tokyo Science Museum* 18: 1. 1947, *Bulletin de la Société Botanique de France* 95: 149. 1948, *Journal of Japanese Botany* 23: 56. 1948, *Reinwardtia* 2(2): 231. 1953, *Journal of Japanese Botany* 33: 192. 1958, *Grasses of Burma* ... 101, 688-689. 1960, *Les Graminées d'Afrique Tropicale* 1: 292, t. 229. 1962, *Journal of the Bombay Natural History Society* 66: 515, f. A-H. 1969 [1970], *Journal of the Indian Botanical Society* 51: 180, t. 14. 1972, *Zlaki SSSR* 705-706. 1976, *Novosti Sist. Vyss. Rast.* 14: 233. 1977, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Taxon* 34: 159-164. 1985, *Opera Botanica* 121: 159-172. 1993.

A. hookeri (Hack.) Henrard (*Arthraxon ciliaris* P. Beauv. var. *hookeri* Hack.; *Arthraxon hispidus* var. *hispidus*)

India, West Bengal, Manipur, Sikkim. In waste places, see *Monographiae Phanerogamarum* 6: 357. 1889 and *Blumea* 4(3): 526. 1941.

A. inermis Hook.f. (*Arthraxon hispidus* var. *hispidus*)

India. Pedicel absent or rudimentary, common in forests, see *The Flora of British India* 7(21): 145. 1897 [1896] and *Taxon* 34: 159-164. 1985.

A. inermis Hook.f. var. *tzvelevii* Jain

India, Maharashtra. See *Science and Culture* 37(1): 55. 1971.

A. jubatus Hack.

Maharashtra, India. Spikelets long-awned, on moist ground, rocky places, see *Monographiae Phanerogamarum* 6: 358. 1889.

A. junnarensis Jain & Hemadri (*Arthraxon hispidus* var. *junnarensis* (Jain & Hemadri) Welzen)

Maharashtra, India. See *Journal of the Bombay Natural History Society* 68(1): 300-301. 1971, *Blumea* 27(1): 277. 1981.

A. lanceolatus (Roxb.) Hochstetter (*Andropogon lanceolatus* Roxb.; *Arthraxon lanceolatus* Miq., nom. illeg., non *Arthraxon lanceolatus* (Roxb.) Hochst.; *Batratherum lanceolatum* (Roxb.) Nees)

India, Southeast Asia. Much-branched, very variable, used for grazing and for hay, found on moist ground, see *Flora Indica; or Descriptions* ... 1: 262. 1820, *Edinburgh New Philosophical Journal* 18: 181. 1835, *Flora* 39: 188. 1856. in India: doongad, nagri

A. lanceolatus (Roxb.) Hochst. var. *echinatus* (Nees) Hack. (*Andropogon echinatus* (Nees) Heyne; *Andropogon echinatus* Heyne ex Steud., nom. illeg., non *Andropogon echinatus* (Nees) Heyne; *Arthraxon echinatus* (Nees) Heyne ex Kuntze, nom. illeg., non *Arthraxon echinatus* (Nees) Hochst.; *Arthraxon echinatus* (Nees) Hochst.; *Arthraxon spataceus* Hook.f.; *Batratherum echinatum* Nees)

Asia, China, India. See *Edinburgh New Philosophical Journal* 18: 181. 1835, *Synopsis Plantarum Glumacearum* 1: 383. 1854, *Flora* 39: 188. 1856, *Monographiae Phanerogamarum* 6: 348. 1889, *The Flora of British India* 7: 145. 1896 and *Blumea* 27: 285. 1981.

A. lanceolatus (Roxb.) Hochst. var. *lanceolatus* (*Andropogon lanceolatus* Roxb.; *Andropogon prionodes* Steud.; *Andropogon serrulatus* A. Rich., nom. illeg., non *Andropogon serrulatus* Link; *Arthraxon lanceolatus* (Roxb.) Hochst.; *Arthraxon lanceolatus* (Roxb.) Hochst. f. *glaberrimus* Chiov.; *Arthraxon lanceolatus* (Roxb.) Hochst. f. *puberulus* Chiov.; *Arthraxon lanceolatus* (Roxb.) Hochst. subvar. *serrulatus* Hack.; *Arthraxon lanceolatus* (Roxb.) Hochst. subvar. *typicus* Hack.; *Arthraxon lanceolatus* (Roxb.) Hochst. subvar. *wallichii* Hack.; *Arthraxon lanceolatus* (Roxb.) Hochst. var. *genuinus* Hack.; *Arthraxon lanceolatus* (Roxb.) Hochst. var. *puberulus* (Chiov.) Mattei; *Arthraxon lanceolatus* (Roxb.) Hochst. var. *serrulatus* (Hack.) Fiori, nom. illeg.,

non *Arthraxon lanceolatus* var. *serrulatus* (Hack.) T. Durand & Schinz; *Arthraxon lanceolatus* (Roxb.) Hochst. var. *serrulatus* (Hack.) T. Durand & Schinz; *Arthraxon prionodes* (Steud.) Dandy; *Arthraxon serrulatus* (A. Rich.) Mattei; *Arthraxon serrulatus* Hochst.; *Batratherum lanceolatum* (Roxb.) Nees)

Asia, China, India. Perennial, rare, trailing, lower glume spiny, female fertile lemma awned, see *Edinburgh New Philosophical Journal* 18: 181. 1835, *Synopsis Plantarum Glumacearum* 1: 383. 1854, *Flora* 39: 188. 1856, *Monographiae Phanerogamarum* 6: 348. 1889 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 278. 1908, *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 40. 1910, *Nuovo Giornale Botanico Italiano* 47: 26. 1940.

A. lanceolatus (Roxb.) Hochst. var. **meeboldii** (Stapf) Welzen (*Arthraxon meeboldii* Stapf; *Arthraxon purandharensis* Bharucha & Y. Satyan.) (after the German botanist Alfred Karl Meebold, 1863-1952, traveler and botanical collector, from 1928 to 1938 traveled widely in Australia, South Africa and southwest. U.S., novelist and essayist, poet, his works include *Indien*. München 1908 [1907]; see I.H. Vegter, *Index Herbariorum*. Part II (4), *Collectors M. Regnum Vegetabile* vol. 93. 1976; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 249. Cape Town 1981)

India. Used as fodder, found in open grassland on a hillside, *Arthraxon meeboldii* Stapf considered an indeterminate species in India, see *Bulletin of Miscellaneous Information Kew* 1908: 449. 1908, *Journal of the Bombay Natural History Society* 52: 481. 1954, *Blumea* 27(1): 285. 1981.

A. lancifolius (Trinius) Hochstetter (*Andropogon lancifolius* Trin.; *Andropogon microphyllus* Trin.; *Andropogon multicaulis* Steud.; *Arthraxon comorensis* A. Camus; *Arthraxon figarii* (De Not.) Asch. & Schweinf.; *Arthraxon lancifolius* var. *birmanicus* Kuntze; *Arthraxon lancifolius* var. *eremophilus* Bor; *Arthraxon lancifolius* var. *hindustanicus* Jain & Deshpande; *Arthraxon linifolius* Henrard; *Arthraxon microphyllus* (Trin.) Hochst.; *Arthraxon microphyllus* f. *intermedius* Backh.; *Arthraxon microphyllus* f. *lancifolius* (Trin.) Hack.; *Arthraxon microphyllus* var. *lancifolius* (Trin.) Hack.; *Arthraxon minor* Hochst.; *Arthraxon molle* (Nees) Balf., nom. illeg., non *Arthraxon molle* (Nees) Duthie; *Arthraxon molle* (Nees) Duthie; *Arthraxon schimperii* (Hochst.) Hochst.; *Arthraxon schmidtii* Hochst.; *Batratherum lancifolium* (Trin.) W. Watson ex Atkins; *Batratherum molle* Nees; *Batratherum molle* var. *tenuis* Nees; *Batratherum schimperii* Hochst.; *Batratherum schimperii* Nees ex Hochst.; *Lucaea ciliata* (J.A. Schmidt) Steud.; *Lucaea schimperii* (Hochst. ex A. Rich.) Steud.; *Pleuroplitis ciliata* J.A. Schmidt; *Pleuroplitis lancifolia* (Trin.) Regel; *Pleuroplitis microphylla* (Trin.) Regel; *Pleuroplitis schimperii* (Hochst. ex A. Rich.) Regel; *Pogonatherum tenue*

Edgew.; *Psilopogon figarii* De Not.; *Psilopogon schimperii* Hochst. ex A. Rich.; *Psilopogon schimperii* Hochst.)

India, Capo Verde Islands. Annual, very slender, delicate, trailing, creeping, loosely tufted, at first decumbent and rooting at the nodes, finally ascending, leaf sheaths glabrous or pubescent somewhat inflated, leaves acuminate and pointed, slender racemes ciliate, spikelets paired and solitary, filiform peduncles, pedicelled spikelet absent or present, pedicellate spikelets staminate or sterile, lower glume of sessile spikelets smooth, 2 stamens, fodder, growing among rocks, damp situations, exposed hill slopes, road banks, steep stony slopes, rocky sites, steep banks, open places, plains, riverbanks, cliffs, wadi, gullies, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2: 271, 275. 1832, *Edinburgh New Philosophical Journal* 18: 181, 182. 1835, *Flora* 29: 117. 1846, *Synopsis Plantarum Glumacearum* 1: 383, 414. 1854, *Flora* 39: 179, 188, 189. 1856, *Enum. Pl. Zeyl.* 368. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns Indigenous to or Growing Wild in Ceylon* 108. 1885, *Transactions of the Royal Society of Edinburgh* 31: 315. 1888, *Monographiae Phanerogamarum* 6: 352. 1889 and *Handb. Fl. Ceylon* 5: 22. 1900, *Handb. Fl. Ceylon* 6: 331. 1931, *Blumea* 4(3): 525. 1941, *Bulletin de la Société Botanique de France* 98: 36. 1951, *Grasses of Ceylon* 187. 1956, *Grasses of Burma ...* 100. 1960, *Journal of the Indian Botanical Society* 50a: 95. 1971, *Journal of the Indian Botanical Society* 51: 176, t. 8. 1972, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in Thailand: yaa doi, yaa yung daeng, ya doi, ya yung daeng

A. lancifolius (Trinius) Hochstetter var. **hindustanicus** Jain & Deshpande (*Arthraxon microphyllus* var. *hindustanicus* (Jain & Deshpande) S.M. Almeida & M.R. Almeida)

India. See *Flora* 39: 189. 1856 and *Journal of the Indian Botanical Society* 51: 176, t. 8. 1972, *Journal of the Bombay Natural History Society* 82(2): 445. 1985.

A. micans (Nees) Hochstetter (*Alectoridia quartiniana* A. Rich.; *Andropogon alectoridia* A. Rich. ex Steud.; *Andropogon micans* (Nees) Steud.; *Andropogon quartinianus* A. Rich.; *Arthraxon ciliare* subsp. *quartinianus* (A. Rich.) Hack.; *Arthraxon ciliare* var. *coloratus* (Hochst.) Hack.; *Arthraxon ciliare* var. *quartinianus* (A. Rich.) Hack.; *Arthraxon coloratus* Hochst.; *Arthraxon cuspidatus* var. *micans* (Nees) Hack.; *Arthraxon hispidus* f. *quartinianus* (A. Rich.) Backh.; *Arthraxon hispidus* var. *hispidus*; *Arthraxon major* (Hochst. ex Steud.) Hochst.; *Arthraxon micans* (Nees) Franch.; *Arthraxon quartinianus* (A. Rich.) Nash; *Batratherum micans* Nees; *Lucaea major* Hochst. ex Steud.; *Pleuroplitis major* (Hochst. ex Steud.) Regel; *Pleuroplitis quartiniana* (A. Rich.) Regel; *Pleuroplitis*

quartiniana var. *caespitosa* Regel; *Pleuroplitis quartiniana* var. *tenella* Regel)

Africa, India. Annual, decumbent, wiry, slender, trailing, shortly stoloniferous, flexuous racemes, pedice reduced, sessile spikelet narrowly lanceolate, 2 stamens, pedicelled spikelet absent, thicket forming, cattle fodder, a weed of cultivation, rocky outcrops, woodland, grassland, along water courses, upland evergreen forests, along roadsides, see *Edinburgh New Philosophical Journal* 18: 182-183. 1835, *Tentamen Florae Abyssinicae ...* 2: 448, 469, t. 102. 1850, *Synopsis Plantarum Glumacearum* 1: 382-383, 414. 1854, *Flora* 39: 188. 1856, *Bulletin de l'Académie Impériale des Sciences de St-Pétersbourg* 10: 370, 377. 1866, *Nouvelles archives du muséum d'histoire naturelle, sér. 2*, 10: 109. 1887, *Monographiae Phanerogamarum* 6: 353, 356-357. 1889 and *Botanical Magazine* 26(307): 214. 1912, *North American Flora* 17(2): 99. 1912, *Handboek voor de Flora van Java* 2: 75. 1928, *Blumea* 27(1): 255-300. 1981.

in Sierra Leone: tamedí sakena

A. microphyllus (Trinius) Hochstetter (*Andropogon lancifolius* Trin.; *Andropogon microphyllus* Trin.; *Arthraxon lancifolius* (Trin.) Hochst.; *Arthraxon lancifolius* f. *genuinus* Backh.; *Arthraxon lancifolius* var. *microphyllus* (Trin.) Kuntze; *Arthraxon microphyllus* var. *genuinus* Hack.; *Arthraxon sikkimensis* Bor; *Batratherum molle* var. *parvulum* Nees; *Pleuroplitis microphylla* (Trin.) Regel)

India. Slender, tufted, annual, lower glume of sessile spikelets grooved, used as cattle fodder, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 271, 275. 1832, *Edinburgh New Philosophical Journal* 18: 182. 1835, *Flora* 39: 188-189. 1856, *Monographiae Phanerogamarum* 6: 351. 1889 and *Kew Bulletin* 1951: 447. 1952, *Blumea* 27: 292. 1981.

A. prionodes (Steud.) Dandy (*Andropogon prionodes* Steud.; *Andropogon serrulatus* A. Rich., nom. illeg., non *Andropogon serrulatus* Link; *Arthraxon lanceolatus* f. *glaberrimus* Chiov.; *Arthraxon lanceolatus* f. *puberulus* Chiov.; *Arthraxon lanceolatus* subvar. *serrulatus* Hack.; *Arthraxon lanceolatus* var. *lanceolatus*; *Arthraxon lanceolatus* var. *serrulatus* (Hack.) T. Durand & Schinz; *Arthraxon lanceolatus* var. *serrulatus* (Hack.) Fiori, nom. illeg., non *Arthraxon lanceolatus* var. *serrulatus* (Hack.) T. Durand & Schinz; *Arthraxon serrulatus* Hochst.; *Batratherum serrulatum* Hochst. ex A. Rich.) (Greek *prion* "a saw")

Tropical East Africa, Ethiopia, Yemen, India, China, Thailand. Perennial, wiry, straggling, tufted to loosely tufted, ascending, knotty base, shortly rhizomatous, leaves acuminate with a fine point, racemes with villous internodes, spikelets always paired, sessile spikelet linear to lanceolate, lower glume papery and convex, pedicelled spikelet lanceolate to narrowly lanceolate, 3 stamens, found among

rocks, cliffs, damp places, scrubby hillsides, eroded hillsides, steep rocky slopes, often in partial shade, see *Hortus Regius Botanicus Berolinensis* 1: 241. 1827, *Tentamen Florae Abyssinicae ...* 2: 458. 1850, *Synopsis Plantarum Glumacearum* 1: 383. 1854, *Flora* 39: 188. 1856, *Monographiae Phanerogamarum* 6: 348. 1889, *Conspectus florum Africae*, ou, Enumération des plantes d'Afrique. 5: 704. Bruxelles (Jardin botanique de l'État), Berlin (R. Friedlaender & Sohn), Paris (Paul Klincksieck) 1895-1898 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 278. 1908, *Blumea* 27: 292. 1981.

A. raizadae Jain, Hemadri & Deshpande (*Arthraxon lanceolatus* var. *raizadae* (Jain, Hemadri & Deshpande) Welzen)

India, Maharashtra. See *Journal of the Indian Botanical Society* 51: 103, 180, t. 21. 1972, *Blumea* 27(1): 287, f. 11A, Map 3. 1981.

A. submuticus (Nees ex Steud.) Hochst. (*Andropogon submuticus* Nees ex Steud.; *Arthraxon ciliare* subsp. *submuticus* (Nees ex Steud.) Hack.; *Arthraxon ciliaris* subsp. *submuticus* (Nees ex Steud.) Hack.; *Arthraxon cryptatherus* subsp. *submuticus* (Nees ex Steud.) Koidz.; *Batratherum submuticum* (Nees ex Steud.) Nees ex Steud.; *Batratherum submuticum* (Nees ex Steud.) Nees ex W. Watson)

India, Nepal. Spikelets awnless, see *Synopsis Plantarum Glumacearum* 1: 382. 1854, *Flora* 39: 188. 1856, *Monographiae Phanerogamarum* 6: 356. 1889 and *Botanical Magazine* (Tokyo) 39: 301. 1925.

A. villosus C.E.C. Fisch. (*Arthraxon lanceolatus* var. *villosus* (C.E.C. Fisch.) Welzen)

India. See *Bulletin of Miscellaneous Information Kew* 1933: 350. 1933, *Blumea* 27(1): 288. 1981.

Arthrochlaena Benth. = *Arthrochlaena* Boiv. ex Benth., *Sclerodactylon* Stapf

From the Greek *arthron* "a joint" and *chlaena*, *chlaenion* "cloak, blanket."

Eragrostideae, see *Journal of the Linnean Society, Botany* 19: 107. 1881 and *Bulletin of Miscellaneous Information Kew* 1911: 318. 1911.

Arthrochloa J.W. Lorch = *Acrachne* Wight and Arn. ex Chiov., *Normanboria* Butzin

Greek *arthron* "a joint" and *chloe*, *chloa* "grass."

Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eleusininae, type *Arthrochloa henrardiana* (Bor) Lorch, see *Annuario del Reale Istituto Botanico di Roma* 8(3): 361-362. 1908, *Blumea, Supplement* 3: 44. 1946, *Journal of the Indian Botanical Society* 39(3): 490, f. 1-5. 1960,

Taxon 27(2-3): 301. 1978, *Kew Bulletin* 37(1): 158-159. 1982, *Journal of Cytology and Genetics* 25: 322-323. 1990.

Arthrochloa R. Br. = *Arthrochloa* Schult.,
Holcus L.

Greek *arthron* “a joint” and *chloe*, *chloa* “grass.”

Pooideae, Poaceae, Holcinae, see *Species Plantarum* 2: 1047-1048. 1753, *Chloris Melvilliana* 35. 1823, *Mantissa* 2: 524. 1827 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 361-362. 1908, *Blumea, Supplement* 3: 44. 1946, *J. Indian Bot. Soc.* 39: 490. 1960, *Taxon* 27(2-3): 301. 1978, *Contributions from the United States National Herbarium* 48: 387-388. 2003.

Arthrochortus Lowe = *Lolium* L.

From the Greek *arthron* “a joint” and *chortos* “green herbage, grass.”

Pooideae, Poaceae, Loliinae, type *Arthrochortus loliaceus* Lowe, see *Species Plantarum* 1: 83. 1753, *Hooker's Journal of Botany and Kew Garden Miscellany* 8: 301. 1856 and *Techn. Bull. U.S.D.A.* 1392: 7. 1968, *Contributions from the United States National Herbarium* 48: 426-431. 2003.

Arthrolophis (Trin.) Chiov. = *Andropogon* L., *Arthrolophis* Chiov.

From the Greek *arthron* “a joint” and *lophos* “a crest, back of the neck, ridge, tuft.”

Panicoideae, Andropogoneae, Andropogoninae, see *Flora Indica; or Descriptions ...* 1: 277. 1820 and *Bollettino Società Botanica Italiana* 1917(6-7): 57, 59. 1917, *Contributions from the United States National Herbarium* 46: 20-64. 2003.

Arthropogon Nees = *Achlaena* Griseb.

From the Greek *arthron* “a joint” and *pogon* “beard.”

About 5-7 species, West Indies, Brazil, Bolivia. Panicoideae, Paniceae, Arthropogoninae, or Panicoideae, Panicoideae, Paniceae (Arthropogoneae), perennial, herbaceous, tufted, narrow leaf blades, ligule fringed, plants bisexual, inflorescence a panicle with ascending branches or spicate and not branching, 2- to 3-awned, spikelets with bearded callus, 2 glumes unequal, lower glume linear to awnlike, upper glume coriaceous, lower lemma awned or not, palea present or absent, 2 lodicules, 3 stamens, ovary glabrous, 2 stigmas, savannahs, type *Arthropogon villosus* Nees, see *Flora Brasiliensis seu Enumeratio Plantarum* 319. 1829, *Catalogus plantarum cubensium ...* 228-229. 1866 and

Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 69: 418. 1939, *Willdenowia* 6(3): 515-516. 1972, *Bradea (Bol. do Herbarium Bradeanum)* 3(36): 303-322. 1982, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Ann. Missouri Bot. Gard.* 88: 351-372. 2001, *Contributions from the United States National Herbarium* 46: 13, 110-111. 2003, *Am. J. Bot.* 90: 796-821. 2003.

Species

A. fitifolius Filg.

Brazil. Leaf blades cylindrical, upper glume apex entire.

A. lanceolatus Filg. (*Canastra lanceolata* (Filg.) Morrone & al.)

Brazil. Erroneously placed within this genus, now reclassified in the genus *Canastra*, see *Novon* 11(4): 429. 2001.

A. scaber Pilg. & Kuhl. (*Altoparadisium scabrum* (Pilg. & Kuhl.) Pilg. & al.; *Arthropogon bolivianus* Filg.; *Arthropogon scaber* Kuhl. & Pilg., nom. illeg., non *Arthropogon scaber* Pilg. & Kuhl.)

Brazil, Bolivia. Panicle narrowly elliptic, species transferred to the new genus *Altoparadisium*, see *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 37-38, t. 2. 1922, *Revista do Museu Paulista. Universidade de São Paulo* 13: 1249. 1922, *Brittonia* 38(1): 71, f. 1G. 1986, *Annals of the Missouri Botanical Garden* 88(2): 366, f. 7. 2001.

A. villosus Nees (*Arthropogon villosus* var. *glabrescens* S. Moore; *Deyeuxia brasiliensis* Spreng. ex Steud.; *Eutriana villosa* Steud.)

Central and southern Brazil. Erect, inflorescence a pyramidal panicle with ascending branches, spikelets 2-awned, lower lemma mucous, palatable, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 320. 1829, *Nomenclator Botanicus. Editio secunda* 1: 497, 620. 1840, *Transactions of the Linnean Society of London, Botany* 4: 508. 1895.

A. xerachne Ekman

Brazil. Inflorescence spicate, spikelets 3-awned, upper glume deeply bifid, lower lemma awned, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 9, t. 1, f. 4, t. 6, f. 4. 1911.

Arthrostachya Link = *Gaudinia* P. Beauv.

From the Greek *arthron* “a joint” and *stachys* “a spike.”

Pooideae, Poodae, Aveneae, or Pooideae, Poaceae, Aveninae, type *Arthrostachya coarctata* Link, see *Essai d'une Nouvelle Agrostographie* 95, 153, 164. 1812, *Hortus Regius Botanicus Berolinensis* 1: 151. 1827 and *Contr. U.S. Natl. Herb.* 24: 192. 1925, *Contributions from the United States National Herbarium* 48: 370. 2003.

Arthrostachys Desv. = *Andropogon* L.

From the Greek *arthron* “a joint” and *stachys* “a spike.”

Panicoideae, Andropogoneae, Andropogoninae, type *Arthrostachys gracilis* Desv., see *Species Plantarum* 2: 1045. 1753, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 178, t. 9, f. 2. 1831 and *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64. 2003.

Arthrostylidium Rupr.

From the Greek *arthron* “joint” and *stylidium* “a small pillar.”

About 20-32 species, tropical America, West Indies to Brazil, Caribbean Islands, Central and South America. Bambusoideae, Bambuseae, Arthrostylidiinae, or Bambusoideae, Bambusodae, Bambuseae, perennial, tufted, sympodial, woody, unarmed, scrambler or climber, viny or subviny, scandent or clambering, persistent, thick-walled, leaf blades pseudopetiolate, internodes cylindrical, 3-many branches per node, short auricular bristles around sheath margin, triangular meristem above node wanting, rhizomes pachymorph, plants bisexual, inflorescence a slender raceme, rachis zig-zag, spikelets solitary, lowermost floret usually sterile, glumes 1-3 unequal, palea present, 3 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, forest, cloud-forest, wet places, along streams, primary forest, slopes, undergrowth, seasonally flooded areas, in moist forest, related to *Rhipidocladum* and *Merostachys*, type *Arthrostylidium cubense* Rupr., see *Bambuseae* 27-28, t. 4, f. 13. 1839, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3: 117. 1840 and *Contr. U.S. Natl. Herb.* 24: 307. 1927, *Man. Grass. West Indies* 15-21. 1936, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Annals of the Missouri Botanical Garden* 72(4): 864-873. 1985, *Acta Botanica Cubana* 37: 1-7. 1987, *Novon* 2(2): 81-110. 1992, *Systematic Botany* 18(1): 80-99. 1993, *Flora Mesoamericana* 6: 197-198. 1994, *American Bamboos* 154-159. 1999, *Contributions from the United States National Herbarium* 39: 13-17. 2000.

Species***A. angustifolium* Nash**

Cuba. Climbing, short racemes on a central axis, see *Torreya* 3(11): 172. 1903, *Acta Botanica Cubana* 37: 1-7. 1987.

***A. auriculatum* Londoño & L.G. Clark**

Colombia. See *Novon* 8(4): 410, f. 1. 1998.

***A. banoense* Cat. Guerra**

The Caribbean. See *Acta Botanica Cubana* 37: 6. 1987.

***A. canaliculatum* Renvoize**

Bolivia. See *Gram. Bolivia* 33, f. 3. 1998.

***A. chiribiquetensis* Londoño & L.G. Clark**

Colombia. See *Novon* 8(4): 412, f. 2. 1998.

***A. cubense* Rupr. (*Arundinaria cubense* (Rupr.) Hack., also *cubensis*)**

Cuba. On cliffs, see *Bambuseae* 28, t. 4, f. 13. 1839 and *Oesterr. Bot. Z.* 53: 69. 1903, *Acta Botanica Cubana* 37: 1-7. 1987.

***A. distichum* Pilger**

The Caribbean. Montane, see *Symb. Antill.* 2: 342. 1901, *Acta Botanica Cubana* 37: 1-7. 1987.

***A. ecuadorensis* Judz. & L.G. Clark**

Ecuador, Colombia. Scandent, see *Syst. Bot.* 18(1): 82, f. 1. 1993.

***A. ekmanii* Hitchc.**

The Caribbean. See *Man. Grasses W. Indies* 16. 1936.

***A. excelsum* Griseb. (*Arundinaria excelsa* (Griseb.) Hack.)**

The Caribbean, Guatemala, Mexico, Honduras, Panama, Nicaragua. Wet forests, shade, see *Fl. Brit. West Indies* 529. 1864 and *Oesterr. Bot. Z.* 53: 69. 1903.

***A. farctum* (Aubl.) Soderstr. & Lourteig (*Arthrostylidium capillifolium* Griseb.; *Arthrostylidium pinifolium* Cat. Guerra; *Arundinaria capillifolia* (Griseb.) Hack.; *Arundo farcta* Aubl.; *Calamagrostis farcta* J.F. Gmel.)**

The Caribbean, West Indies. Filiform leaf-blades, sometimes only 1-3 spikelets, slopes, thickets, dry places, see *Familles des Plantes* 2: 31, 530. 1763, *Histoire des plantes de la Guiane Française* 1: 52. 1775, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 172. 1791, *Bambuseae* 27. 1839, *Mem. Amer. Acad. Arts, n.s.*, 8: 531. 1862 and *Oesterr. Bot. Z.* 53: 69. 1903, *Phytologia* 64(2): 163. 1987.

in Bolivia: siqinqa, siwinqa

***A. fimbriatum* Griseb. (*Arundinaria fimbriata* (Griseb.) Hack.)**

The Caribbean. Rocky places, mountains, see *Mem. Amer. Acad. Arts, n.s.*, 8: 531. 1862 and *Acta Botanica Cubana* 37: 1-7. 1987.

***A. fimbriodum* Judz. & L.G. Clark (*Arthrostylidium fimbriodum* Judz. & L.G. Clark ex Judz.)**

Brazil, Amazonian regions. Arching and hanging, erect, scandent, trailing, climbing, see *Ann. Missouri Bot. Gard.* 79(1): 170. 1992, *Syst. Bot.* 18(1): 84, f. 2. 1993.

***A. grandifolium* Judz. & L.G. Clark**

Brazil. More or less scandent, see *Syst. Bot.* 18(1): 88, f. 3. 1993.

in Brazil: taboquinha folha larga

A. haitiense (Pilg.) Hitchc. & Chase (*Arundinaria haitiensis* Pilg., also *haitiense*)

The Caribbean. Climbing, montane, see *Contr. U.S. Natl. Herb.* 18(7): 399. 1917.

A. judziewiczii Davidse

Costa Rica, Panama. Slender, scandent, primary forest, see *Novon* 2(2): 81-110. 1992.

A. longiflorum Munro (*Arundinaria longiflora* (Munro) Hack.; *Guadua exaltata* Döll)

Venezuela. Coastal, see *Trans. Linn. Soc. London* 26(1): 41, t. 1. 1868, *Fl. Bras.* 2(3): 181. 1880 and *Oesterr. Bot. Z.* 53: 69. 1903, *Systematic Botany* 18(1): 80-99. 1993.

A. merostachyoides R.W. Pohl (*Merostachys glabra* Pohl)

Costa Rica. Arching, see *Novon* 2(2): 83, f. 1. 1992.

A. multispicatum Pilger (*Arundinaria multispicata* (Pilg.) Hack.)

The Caribbean, Uruguay. Mountain forests, see *Symb. Antill.* 2: 340. 1901, *Oesterr. Bot. Z.* 53: 69. 1903, *Acta Botanica Cubana* 37: 1-7. 1987.

A. obtusatum Pilger (*Arundinaria obtusata* (Pilg.) Hack.)

The Caribbean. See *Symb. Antill.* 2: 340. 1901, *Oesterr. Bot. Z.* 53: 69. 1903, *Flora of the Lesser Antilles. Leeward and Windward Islands* 3: 25-220. 1979.

A. pinifolium Cat. Guerra

The Caribbean. Mountainous pine forests, see *Acta Botanica Cubana* 4: 4. 1980, *Acta Botanica Cubana* 37: 1-7. 1987.

A. pubescens Rupr. (*Arundinaria pubescens* (Rupr.) Hack.)

Colombia, Venezuela, the Caribbean. Erect, scandent, scrambling, montane, forests, see *Bambuseae* 29, t. 4. 1839, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3: 119. 1840 and *Oesterr. Bot. Z.* 53: 69. 1903, *Acta Botanica Cubana* 37: 1-7. 1987, *Systematic Botany* 18(1): 80-99. 1993.

A. punctulatum Londoño & L.G. Clark

Colombia. See *Novon* 8(4): 415, f. 3. 1998.

A. reflexum Hitchc. & Ekman

The Caribbean. Climbing, forming dense thickets, on cliffs, see *Man. Grasses W. Indies* 19. 1936.

A. sarmentosum Pilger

The Caribbean, Venezuela. Climbing, found along streams, wet forests, see *Symb. Antill.* 4: 108. 1903, *Flora of Puerto Rico and Adjacent Islands: A Systematic Synopsis.* 1982, *J. Amer. Bamb. Soc.* 5(3-4): 69, f. 1a. 1984[1986], *Systematic Botany* 18(1): 90. 1993.

A. scandens McClure (*Arthrostylidium cacuminis* McClure)

Venezuela, Amazonas, Guyana. Erect, scandent, arching, climbing, decumbent, rooting at the lower nodes, woody, internodes hollow, loosely clumped, rhizomes sympodial, erect spicate racemes, 3-5-flowered, the lowest and uppermost florets sterile, forming extensive and dense thickets, in moist areas, forests, along streams and rivers, see *New York Bot. Gard.* 10(5): 3-4. 1964, *Systematic Botany* 18(1): 80-99. 1993.

in Venezuela: debeuni

A. schomburgkii (Benn.) Munro (*Arundinaria schomburgkii* Benn.)

(for the German (b. Freiburg) botanist Sir Robert Hermann Schomburgk, 1804-1865 (d. Berlin), traveler, explorer, in British Guiana (with his brother Richard), plant collector in Siam and Venezuela, 1844 knighted, 1859 Fellow of the Royal Society, British Consul in Santo Domingo and Bangkok, sent plants to Reichenbach, his writings include *A Description of British Guiana.* London 1840, *Reisen in Guayana u. am Orinoko.* Leipzig 1845, *The Natural History of the Fishes of Guiana.* 1841-1843 and *The History of Barbados.* London 1848, brother of the German botanist and explorer Moritz Richard Schomburgk (1811-1891); see A. Lasègue, *Musée botanique de Benjamin Delessert.* 216-219. 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. 776. 1993; J.H. Barnhart, *Biographical notes upon botanists.* 3: 238. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 354. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 361. 1973; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; J.W. Harshberger, *The Botanists of Philadelphia and Their Work.* 190. 1899; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists.* 612. 1994; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch.* 796. 1852; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum.* 1: 181. 1904; Henri Pittier, *Manual de las Plantas Usuales de Venezuela y su Suplemento.* Caracas 1978; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens.* Royal Botanic Gardens, Kew, London 1906; D.J. Carr and S.G.M. Carr, eds., *People and Plants in Australia.* 1981; Stafleu & Cowan, *Taxonomic literature.* 5: 295-301. 1985)

South America, Venezuela, Amazonas. Long culm internodes, cloud forest, see *Proceedings of the Linnean Society of London* 1: 51. 1840, *Transactions of the Linnean Society of London* 18(4): 562. 1841, *Transactions of the Linnean Society of London* 26(1): 41. 1868 and *Mem. New York Bot.*

Gard. 10(5): 2-3. 1964, *Annals and Mag. of Natural History* 30(1): 15. London 1981, *Systematic Botany* 18(1): 93. 1993.

in Venezuela; curatas, curas

A. simpliciusculum (Pilger) McClure (*Arundinaria simpliciuscula* Pilger)

Brazil, Colombia, Ecuador, Peru. Erect, scandent, along streams, forest margins, see *Bot. Jahrb. Syst.* 56(Beib. 123): 29. 1920, *Ruizia* 13: 1-480. 1993, *Systematic Botany* 18(1): 95. 1993.

A. urbanii Pilger (*Arundinaria urbanii* Pilger) (after the German botanist Ignatz Urban, 1848-1931, specialized on the flora of the West Indies, from 1889 professor Botanical Garden and Museum at Berlin-Dahlem, wrote on botanical biography, among his most valuable writings are *Morphologie der Gattung Bauhinia*. 1885, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916, *Plantae novae Antillanae*. Berlin 1895 and *Zur Flora Südamerikas*. Halle a.S. 1882, edited *Symbolae Antillanae seu fundamenta florum Indiae occidentalis*. Berolini etc. 1898-1928; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 417. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 411. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 418. 1973; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Stafleu and Cowan, *Taxonomic literature*. 6: 606-619. 1986)

The Caribbean, Cuba. Montane, savannah, riverbanks, see *Symb. Antill.* 2: 339. 1901, *Oesterr. Bot. Z.* 53: 69. 1903, *Systematic Botany* 18(1): 80-99. 1993.

A. venezuelae (Steud.) McClure (*Arundinaria standleyi* Hitchc.; *Chusquea venezuelae* Steud.)

South and Central America. Erect, scandent, caespitose, woody, solid, aromatic, fodder, used for making baskets, found in wet forests, closely related to *Arthrostylidium excelsum* Griseb. and *Arthrostylidium pubescens* Rupr., see *Syn. Pl. Glumac.* 1: 337. 1854, *Trans. Linn. Soc. London* 26: 55. 1868 and *Proc. Biol. Soc. Wash.* 40: 79. 1927, *Journal Washington Academy of Sciences* 32(6): 172. 1942, *Smithsonian Contr. Bot.* 9: 21. 1973, *Annals of the Missouri Botanical Garden* 74(2): 424-428. 1987, *Systematic Botany* 18(1): 96. 1993.

in Venezuela: lata

A. virolinensis Londoño & L.G. Clark

Colombia. See *Novon* 8(4): 417, f. 4. 1998.

A. youngianum L.G. Clark & Judz. (for Stephen M. Young) Ecuador, Colombia. Erect, scandent, see *Syst. Bot.* 18(1): 98, f. 7. 1993.

in Colombia: tundillas

Arundarbor Kuntze = *Bambusa* Schreb.

Latin *arundo*, *dinis* (*harundo*) “a reed, cane” and *arbor* “a tree.”

Bambusoideae, Bambuseae, Bambusinae, type *Arundarbor arundinacea* (Retz.) Kuntze, see *Genera Plantarum* 1: 236. 1789, *Species Plantarum. Editio quarta* 2: 245. 1799, *Revisio Generum Plantarum* 2: 760-761. 1891 and *Contributions from the United States National Herbarium* 39: 29-35. 2000.

Arundinaria Michaux = *Bashania* Keng f. & T.P. Yi, *Butania* Keng f., *Clavinodum* T.H. Wen, *Ludolfia* Willd., *Ludolphia* Willd., *Macronax* Raf., *Miegia* Pers., *Nipponocalamus* Nakai, *Oligostachyum* Wang & Ye, *Omeiocalamus* Keng f., *Pleioblastus* Nakai, *Polyanthus* Y.C. Hu, *Triglossum* Roem. & Schult., *Triglossum* F.E.L. Fisch. ex Roem. & Schult., *Tschompskia* Aschers. & Graebn.

From the Latin *arundo*, *dinis* (*harundo*) “a reed, cane”; see André Michaux (1746-1803), *Flora Boreali-Americana* 1: 73. Paris 1803.

Monotypic or about 50/150 species, warm and temperate regions, China, northern India to Japan, North America. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Arundinariinae, perennial, erect or climbing, unarmed, woody and persistent, slender, reedlike, shrub or small tree, cylindrical, usually not scandent, unicaespitose or pluricaespitose, forming thickets, the main branches dominant, internodes cylindrical, long or short leptomorph rhizomes, rhizomes monopodial or sympodial, flowering culms leafless or leafy, culm internodes hollow, ligule a fringed membrane, plants bisexual, flowering semeluctant, inflorescence a panicle or a raceme, bisexual spikelets, hermaphrodite florets, 1 or 3 very unequal glumes per spikelet, 3-6 stamens, ovary glabrous without the apical appendage, 2 or 3 stigmas, fruit grooved, often cultivated as ornamentals or used in bonsai, widespread in forest, grassland, mountains and high altitudes, *Bashania* Keng f. & Yi, *Fargesia* Franch. and *Pleioblastus* Nakai formerly included in and probable synonyms of *Arundinaria* Michx., type *Arundinaria macrosperma* Michx., see *Gen. Pl.* 786. 1791, *Flora Boreali-Americana*. 1: 73-74. Paris 1803, *Synopsis Plantarum* 1: 101, 102. Paris et Tubingae 1805, *Medical Repository* ser. 2, 5: 353. 1808, *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der gesammten Naturkunde*. 2: 230, 320. Berlin 1808, *Catalogue du Jardin ... Razoumoffsky ...*

à Gorenki ... 6. 1812, *Systema Vegetabilium* 2: 55, 846. 1817, *The Genera of North American Plants, and Catalogue of the Species, to the Year 1817*. 1: 39. Philadelphia 1818, *Western Review and Miscellaneous Magazine* 1: 93. Lexington, Kentucky 1819, *Transactions of the American Philosophical Society, new series*, 5: 149. 1837, *Transactions of the Linnean Society of London* 26(1): 15. 1868, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, f. 43-50. 1878, J. Mooney, *Myths of the Cherokee and Sacred Formulas of the Cherokee*. 1889 [Reprint, Nashville, Tenn., Charles Elder, 1972] and *Synopsis der mitteleuropäischen Flora* 2, 1: 772. 1902, *Journal of the Arnold Arboretum* 6(3): 145-153. 1925, *Acta Phytotax. Geobot.* 10(4): 264. 1941, *Journal of Japanese Botany* 18(7): 350, 364. 1942, *Taxon* 6(7): 207. 1957, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Acta Phytotaxonomica et Geobotanica* 30(4-6): 145. 1979, *Ann. Bot.* 48: 407-410. 1981, *Journal of Bamboo Research* 1(2): 38, 42, 171, 175. 1982, *Journal Nanjing University. Natural Sciences Edition* 1982: 95. 1982, *Journal of Bamboo Research* 2: 20. 1983, *Journal of Bamboo Research* 3(2): 23, 25, t. 1. 1984, W.D. Clayton & S.A. Renvoize "Genera graminum." *Kew Bulletin, Additional Series* 13: 45-46. 1986, *Smithsonian Contr. Botany* 72: 1-75. 1988, *Kew Bulletin* 44(2): 349-367. 1989, *Journal of Bamboo Research* 10(3): 28-30. 1991, *J. Bamb. Res.* 12(4): 1-6. 1993, *J. Bamb. Res.* 13(1): 1-23. 1994, *Castanea* 62: 8-21. 1997, *American Bamboos* 195-198. 1999, *Oryx* 33(4): 301-322. Oct 1999, *Restoration Ecology* 7(4): 348-359. Dec 1999, *Contributions from the United States National Herbarium* 39: 18-24, 68-69, 71, 75-76, 81, 106, 116. 2000, *African Journal of Ecology* 38(2): 123-129. June 2000, *African Journal of Ecology* 38(4): 369-371. Dec 2000, Gregory A. Carter and Alan K. Knapp, "Leaf optical properties in higher plants: linking spectral characteristics to stress and chlorophyll concentration." *Am. J. Bot.* 88: 677-684. 2001, *Oryx* 35(3): 250-259. July 2001, *African Journal of Ecology* 39(4): 366-373. Dec 2001, Sandra S. Aliscioni, Liliana M. Giussani, Fernando O. Zuloaga and Elizabeth A. Kellogg, "A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae." *Am. J. Bot.* 90: 796-821. 2003, *Journal of Biogeography* 31(2): 225-239. Feb 2004, Chris Carpenter, "The environmental control of plant species density on a Himalayan elevation gradient." *Journal of Biogeography* 32(6): 999-1018. June 2005.

Species

A. alpina K. Schum. (*Sinarundinaria alpina* (K. Schum.) C.S. Chao & Renvoize; *Yushania alpina* (K. Schum.) W.C. Lin)

Kenya, Tanzania. Robust, hollow-stemmed, thick-walled, erect, rhizomes woody, leaf blades linear-lanceolate, culm sheaths densely pubescent, inflorescence paniculate,

spikelets 4- to 11-flowered, glumes ovate, lemmas pubescent and acuminate, forming extensive clumps, cultivated, growing gregariously, used for water piping, for hut building, found in montane forest, see *Bulletin of the Taiwan Forest Research Institute* 248: 14. 1974, *Kew Bulletin* 44(2): 361. 1989, Ib Friis, *Forests and Forest Trees of Northeast Tropical Africa: Their Natural Habitats and Distribution Patterns in Ethiopia, Djibouti and Somalia*. London: HMSO 1992.

in English: Green Mountain bamboo, mountain bamboo

in Burundi: umugano

in Kenya: murangi, ol-diani, terga, tegundet, tegat, mwanzi

in Malawi: mlasi, lulasi, musyombe, nsungwi

A. amabilis McClure (*Pseudosasa amabilis* (McClure) Keng f. 1957; *Pseudosasa amabilis* (McClure) Keng f. 1959, nom. illeg., non *Pseudosasa amabilis* (McClure) Keng f. 1957; *Pseudosasa amabilis* var. *amabilis*)

Asia, China. See *Lingnan Science Journal* 10(1): 6, t. 1-8. 1931, *Lingnan Sci. J.* 13: 503. 1934.

A. anceps Mitford (*Sinarundinaria anceps* (Mitford) C.S. Chao & Renvoize; *Yushania anceps* (Mitford) W.C. Lin)

Southeast U.S. A running bamboo, see *The Bamboo Garden* 181. 1896 and *Bulletin of the Taiwan Forest Research Institute* 248: 9. 1974, *Kew Bulletin* 44(2): 359. 1989.

in English: Mitford bamboo

A. basigibbosa McClure

China. Often cultivated, see *Lingnan University Science Bulletin* 9: 1. 1940.

A. chino (Franch. & Sav.) Makino (*Arundinaria laydekeri* Bean ex Vilm.; *Arundinaria simonii* var. *chino* (Franch. & Sav.) Makino; *Bambusa chino* Franch. & Sav.; *Pleioblastus chino* (Franch. & Sav.) Makino; *Pleioblastus maximowiczii* var. *chino* (Franch. & Sav.) Nakai)

Japan, Asia temperate. Perennial, ornamental, see *Botanical Magazine (Tokyo)* 14(161): 98. 1900, *Bulletin de la Société Dendrologique de France* 12: 80. 1909, *Botanical Magazine (Tokyo)* 26(300): 14. 1912, *Journal of Japanese Botany* 3(6): 23. 1926.

A. chino (Franch. & Sav.) Makino f. **angustifolia** (Mitford) C.S. Chao & Renvoize (*Arundinaria angustifolia* (Mitford) J. Houz.; *Bambusa angustifolia* Mitford; *Pleioblastus angustifolius* (Mitford) Nakai; *Pleioblastus chino* f. *angustifolia* (Mitford) Muroi; *Pleioblastus chino* f. *angustifolius* (Mitford) Muroi & H. Okamura)

Japan, Asia temperate. Cultivated, see *The Bamboo Garden* 46: 547. 1894 and *Journal of Japanese Botany* 10(5): 294. 1934, *Kew Bulletin* 44(2): 368. 1989.

A. chrysantha Mitford (*Arundinaria chrysantha* Mitford ex Bean; *Pleioblastus chrysanthus* (Mitford) D.C. McClint.; *Pleioblastus chrysanthus* (Mitford ex Bean) D.C. McClint.;

Sasa chrysantha (Mitford) E.G. Camus; *Sasa chrysantha* (Mitford ex Bean) E.G. Camus)

Presumably from Japan. See *Gardener's Chronicle & Agricultural Gazette* 15: 238. 1894 and *Les Bambusées* 23. 1913, *Plantsman* 4(3): 191. 1982.

A. debilis Thwaites (*Indocalamus debilis* (Thw.) Alston; *Sinarundinaria debilis* (Thwaites) C.S. Chao & Renvoize)

Sri Lanka. Scandent, vinelike, delicate, thin-walled, spreading, leaves linear to linear-lanceolate, 2 glumes early deciduous and papery, the branches hang from small trees, sympodial pachymorph rhizome, culm leaves tardily deciduous, 3 stamens, 2 plumose stigmas, cattle fodder, sometimes excluded from *Indocalamus* and *Arundinaria*, see *Enum. Pl. Zeyl.* 375. 1864, *Trans. Linn. Soc. London* 26: 24-25. 1868, *For. Man.* 230-233. 1873, *Ann. Roy. Bot. Gard. (Calcutta)* 7(1): 8, pl. 6. 1896 and *Handb. Fl. Ceylon* 5: 311-312. 1900, *Bambus.* 30, pl. 12. 1913, *Handb. Fl. Ceylon* 6: 341-342. 1931, *Grasses of Ceylon* 30-31. 1956, *Smithsonian Contr. Bot.* 72: 3. 1988, *Kew Bulletin* 44(2): 355. 1989.

A. decalvata Döll

Brazil. See *Fl. Brasil.* 2, 3: 170. 1880.

A. densifolia Munro (*Chimonobambusa densifolia* (Munro) Nakai; *Sinarundinaria densifolia* (Munro) C.S. Chao & Renvoize; *Yushania densifolia* (Munro) R.B. Majumdar)

Sri Lanka. Closely packed culms, thin-walled, dense thickets, erect, sympodial pachymorph rhizomes, culm leaves persistent, spikelets with 1 fertile floret, rhizomes with air cavities, 2 glumes, 3 stamens, 2 plumose stigmas, this bamboo grows in standing water, bogs, wet patanas, see *Transactions of the Linnean Society of London* 26(1): 32. 1868, *Fl. Brit. Ind.* 7: 379. 1896, *Ann. Roy. Bot. Gard. (Calcutta)* 7(1): 8-9, pl. 7. 1896 and *Handb. Fl. Ceylon* 5: 312. 1900, *Indian Trees* 664. 1906, *Bambus.* 31, pl. 21c. 1913, *Journal of the Arnold Arboretum* 6: 151. 1925, *Handb. Fl. Ceylon* 6: 342. 1931, *Grasses of Ceylon* 31. 1956, *Smithsonian Contr. Bot.* 72: 12. 1988, *Kew Bulletin* 44(2): 354. 1989.

A. flabellata (Fournier ex Hemsley) McClure (*Guadua flabellata* Fournier ex Hemsley)

Mexico. Sometimes excluded from *Arundinaria*, see *Biol. Centr.-Amer.* 3: 588. 1885, *Mexic. Pl.* 2: 131. 1886 and *Bamb.* 114. 1913, *Phytologia* 10(2): 162. 1964.

A. floribunda Thw. (*Indocalamus floribundus* (Thw.) Nakai; *Sinarundinaria floribunda* (Thwaites) C.S. Chao & Renvoize)

Sri Lanka. Shrubby, montane, forming small clumps, erect, sympodial pachymorph rhizomes, roots without air cavities, hollow culms, internodes green, nodes thick, culm leaves deciduous, spikelets with 2-3 fertile florets, 2 glumes, 3 stamens, orange anthers basifixed, see *Enum. Pl. Zeyl.* 375. 1864, *Trans. Linn. Soc. London* 26: 20. 1868, *For. Man.* 230. 1873, *Ann. Roy. Bot. Gard. (Calcutta)* 7(1): 5-6, pl. 3. 1896, *Fl. Brit. Ind.* 7: 377-378. 1896 and *Handb. Fl. Ceylon*

5: 310-311. 1900, *Bambus.* 28-29, pl. 16b. 1913, *Journal of the Arnold Arboretum* 6: 148. 1925, *Handb. Fl. Ceylon* 6: 342. 1931, *Grasses of Ceylon* 30. 1956, *Kew Bulletin* 44(2): 356. 1989.

A. funghomii McClure

Eastern Asia. Cultivated, see *Lingnan University Science Bulletin* 9: 3. 1940.

A. gigantea (Walter) Muhlenb. (*Arundinaria bambusina* (Fisch.) Trin.; *Arundinaria gigantea* Chapm., nom. illeg., non *Arundinaria gigantea* (Walter) Muhl.; *Arundinaria gigantea* Nutt.; *Arundinaria gigantea* (Walter) Muhlenb. subsp. *tecta* (Walter) McClure; *Arundinaria gigantea* var. *gigantea*; *Arundinaria gigantea* var. *tecta* (Walter) Scribn.; *Arundinaria macrosperma* Michx.; *Arundinaria macrosperma* var. *arborescens* Munro; *Arundinaria macrosperma* var. *suffruticosus* Munro; *Arundinaria macrosperma* var. *tecta* (Walter) Alph. Wood; *Arundinaria tecta* (Walter) Muhlenb.; *Arundinaria tecta* var. *colorata* Rupr.; *Arundinaria tecta* (Walter) Muhlenb. var. *decidua* Beadle; *Arundinaria tecta* var. *distachya* Rupr.; *Arundinaria tecta* var. *pumila* (Nutt.) Rupr.; *Arundo gigantea* Walter; *Arundo tecta* Walter; *Bambusa hermannii* E.G. Camus; *Festuca grandiflora* Lam.; *Ludolfia macrosperma* (Michx.) Willd.; *Miegia arundinacea* Torr. ex Munro; *Miegia arundinaria* Raf.; *Miegia gigantea* (Walter) Nutt.; *Miegia macrosperma* (Michx.) Pers.; *Miegia pumila* Nutt.; *Nastus macrospermus* (Michx.) Raspail; *Triglossum bambusinum* Fisch.)

Northern America, southeast U.S. Perennial, subshrub, shrub, woody, cane, forming large extensive colonies, flowering culms slender, forage, ornamental, used for arrow shafts and baskets, grazed, joints used for making flutes, along the edge of floodplain forest, low alluvial soils, along streams and rivers, along roadside ditch, moist woodlands, along creek, see *Synopsis Plantarum* 1: 101, 102. Paris et Tubingae 1805, *Cat. Pl. Amer. Sept.* 14. 1813, *The Genera of North American Plants, and Catalogue of the Species, to the Year 1817.* 1: 39. Philadelphia 1818, *Western Review and Miscellaneous Magazine* 1: 93. Lexington, Kentucky 1819, *Annales des Sciences Naturelles (Paris)* 5: 442, 458, t. 8, f. 1. 1825, *Transactions of the American Philosophical Society, new series*, 5: 149. 1837, *Transactions of the Linnean Society of London* 26(1): 15. 1868, *Bulletin of the Torrey Botanical Club* 20: 478. 1893 and *Smithsonian Contr. Bot.* 9: 21-40. 1973, Gregory A. Carter and Alan K. Knapp, "Leaf optical properties in higher plants: linking spectral characteristics to stress and chlorophyll concentration." *Am. J. Bot.* 88: 677-684. 2001.

in English: giant cane, switch cane, cane reed, southern cane, canebreak

A. gigantea (Walt.) Muhl. subsp. *gigantea* (*Arundinaria gigantea* (Walt.) Muhl. subsp. *macrosperma* (Michx.) McClure; *Arundinaria gigantea* var. *gigantea*; *Arundinaria*

macrosperma Michx.; *Bambusa hermannii* E.G. Camus; *Ludolfia macrosperma* (Michx.) Willd.; *Miegia macrosperma* (Michx.) Pers.; *Nastus macrospermus* (Michx.) Raspail)

Northern America, U.S. Perennial, subshrub or shrub, forage, see *Western Review and Miscellaneous Magazine* 1: 93. Lexington, Kentucky 1819, *Annales des Sciences Naturelles (Paris)* 5: 442, 458, t. 8, f. 1. 1825, *Transactions of the American Philosophical Society, new series*, 5: 149. 1837, *Transactions of the Linnean Society of London* 26(1): 15. 1868, *Bulletin of the Torrey Botanical Club* 20: 478. 1893 and *Smithsonian Contr. Bot.* 9: 28. 1973.

in English: giant cane

A. gigantea (Walt.) Muhl. subsp. **macrosperma** (Michx.) McClure (*Arundinaria macrosperma* Michx.; *Bambusa hermannii* E.G. Camus; *Ludolfia macrosperma* (Michx.) Willd.; *Miegia macrosperma* (Michx.) Pers.; *Nastus macrospermus* (Michx.) Raspail)

North America. See *Fl. Bor.-Amer.* 1: 74. 1803, *Synopsis Plantarum* 1: 101, 102. Paris et Tubingae 1805, *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der gesammten Naturkunde.* 2: 320. Berlin 1808 and *Smithsonian Contributions to Botany* 9: 28. 1973.

A. gigantea (Walt.) Muhl. subsp. **tecta** (Walt.) McClure (*Arundinaria gigantea* var. **tecta** (Walter) Scribn.; *Arundinaria macrosperma* var. **tecta** (Walter) Alph. Wood; *Arundinaria tecta* (Walt.) Muhl.; *Arundo gigantea* Walt.; *Arundo tecta* Walter; *Ludolfia tecta* (Walter) A. Dietr.)

Northern America, U.S. Perennial, subshrub, shrub, see *Sp. Pl.* 2: 24. 1833, *Bulletin of the Torrey Botanical Club* 20: 478. 1893 and *Smithsonian Contributions to Botany* 9: 26. 1973.

in English: switch cane, small cane

A. gracilis Camus

India. Caespitose, green at first turning yellow with age, numerous fasciculate branchlets, inflorescence a divaricate panicle, 2 empty glumes, 3 small lodicules, 3 stamens, 2 stigmas plumose.

A. graminea (Bean) Makino (*Arundinaria hindsii* McClure var. **graminea** Bean; *Pleiolblastus gramineus* (Bean) Nakai; *Thamnocalamus hindsii* var. **graminea** (Bean) E.G. Camus)

Japan, Asia temperate. Perennial, erect, slender stems, very narrow leaves, sheath blades triangular, forming thickets, rhizomes running, cultivated, hardy, see *Botanical Magazine (Tokyo)* 26(300): 18. 1912, *Journal of the Arnold Arboretum* 6(3): 146. 1925.

A. hindsii Munro (*Pleiolblastus hindsii* (Munro) Nakai; *Pseudosasa hindsii* (Munro) C.D. Chu & C.S. Chao; *Pseudosasa hindsii* (Munro) S.L. Chen & G.Y. Sheng ex T.G. Liang; *Pseudosasa hindsii* (Munro) C.D. Chu & C.S. Chao) (named for the British naval surgeon Richard Brinsley

Hinds, circa 1812-1847 (d. Perth, Western Australia), plant collector, 1836-1842 attached as surgeon and naturalist to HMS *Sulphur*. See George Bentham, *The Botany of the Voyage of H.M.S. Sulphur, under the Command of Captain Sir Edward Belcher ... during the Years 1836-1842*. [Edited by R.B. Hinds] London 1844[-1846]; *The Zoology of the Voyage of H.M.S. Sulphur, under the Command of Captain Sir Edward Belcher ... during the years 1836-1842*. (Shells, by R.B. Hinds.) [edited by R.B. Hinds] London 1843[-1845]; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 38. 1971; A. Lasègue, *Musée botanique de Benjamin Delessert*. 329, 386. Paris 1845; J.H. Barnhart, *Biographical notes upon botanists*. 2: 178. 1965; J. Ewan, editor, *A Short History of Botany in the United States*. 116. New York and London 1969; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. 1: 438. London 1918; G.A.C. Herklots, *The Hong Kong Countryside*. 163. Hong Kong 1965)

East Asia, Hong Kong, Japan. Erect, cultivated, dark green at first and later yellow, forming dense thickets, rhizomes running extensively, culm sheath greenish to brownish, sheath auricles tiny, sheath ligule arcuate, sheath blade green, branches more or less erect forming dense clusters, leaves linear-lanceolate, see *Transactions of the Linnean Society of London* 26(1): 31. 1868 and *Journal of the Arnold Arboretum* 6(3): 146. 1925, *Journal of Japanese Botany* 9(4): 236. 1933.

in Japan: kanzan-chiku

A. humilis Mitford (*Nipponocalamus humilis* (Mitford) Nakai; *Pleiolblastus humilis* (Mitford) Nakai; *Pseudosasa humilis* (Mitford) T.Q. Nguyen; *Sasa humilis* (Mitford) E.G. Camus; *Yushania humilis* (Mitford) W.C. Lin)

Eastern Asia, Japan. See *The Bamboo Garden* 103. 1896 and *Journal of Japanese Botany* 11(1): 2. 1935, *Journal of Japanese Botany* 18: 356. 1942, *Bulletin of the Taiwan Forest Research Institute* 248: 13. 1974.

A. kokantsik Kurz

Asia, Indonesia, Java. See *Catalogus Horti Bogoriensis* 1866: 19. 1865.

A. kumasasa Kurz

Asia, Indonesia, Java. See *Catalogus Horti Bogoriensis* 1866: 19. 1865.

A. laydekeri (Mitford) Hook.f. (*Bambusa laydekeri* Mitford)

Asia. See *Bulletin de la Société Dendrologique de France* 12: 80. 1909.

A. lima (McClure) C.D. Chu & C.S. Chao (*Arundinaria nuspacula* (McClure) C.D. Chu & C.S. Chao; *Oligostachyum nuspiculum* (McClure) Z.P. Wang & G.H. Ye; *Semiarundinaria lima* McClure; *Semiarundinaria nuspacula* McClure)

China. See *Lingnan University Science Bulletin* 9: 50. 1940, *Acta Phytotaxonomica Sinica* 18(1): 29. 1980, *Journal Nanjing University. Natural Sciences Edition* 1: 98. 1982.

in English: Hainan bamboo cane

in Chinese: Hai nan qing li zhu

A. linearis Hack. (*Arundinaria gozadakensis* (Nakai) Masam.; *Nipponocalamus gozadakensis* (Nakai) Honda; *Pleioblastus gozadakensis* Nakai; *Pleioblastus linearis* (Hack.) Nakai)

Japan. See *Bulletin de l'Herbier Boissier* 7(9): 721. 1899 and *Journal of the Arnold Arboretum* 6(3): 146. 1925, *Journal of Japanese Botany* 11: 4. 1935, *Science Reports of Kanazawa University* 2: 255. 1956.

in Japan: Ryūkyū-chiku

in Okinawa: yanbaru-chiku

A. maling Gamble (*Fargesia maling* (Gamble) H. Simon ex D. McClintock; *Sinarundinaria maling* (Gamble) C.S. Chao & Renvoize; *Yushania maling* (Gamble) R.B. Majumdar; *Yushania maling* (Gamble) D.C. McClint. & Stapleton, nom. illeg., non *Yushania maling* (Gamble) R.B. Majumdar; *Yushania maling* (Gamble) Demoly, nom. illeg., non *Yushania maling* (Gamble) R.B. Majumdar)

Asia, India. See *Bulletin of Miscellaneous Information Kew* 1912: 139. 1912, *Kew Bull.* 44: 356. 1989, *Bamboo Soc. Newsl.* 12: 10. 1991.

A. nagashima (Lat.-Marl. ex Mitford) Asch. & Graebn. (*Arundinaria nagashima* Mitf.; *Bambusa nagashima* Lat.-Marl. ex Mitford; *Nipponocalamus nagashima* (Marliac ex Mitford) Nakai; *Pleioblastus nagashima* (Lat.-Marl. ex Mitford) Nakai)

Asia temperate, Japan. See *The Bamboo Garden* 46: 547. 1894 and *Journal of Japanese Botany* 9: 215. 1933, *Journal of Japanese Botany* 18: 360. 1942.

A. oleosa (T.H. Wen) Demoly (*Pleioblastus oleosus* T.H. Wen)

Asia temperate, China. Perennial, see *Journal of Bamboo Research* 1(1): 24-25, f. 3. 1982.

A. pumila Mitford (*Chimonobambusa pumila* (Mitford) Nakai; *Nipponocalamus pumilis* (Mitford) Nakai; *Pleioblastus chino* f. *pumilis* (Mitford) S. Suzuki; *Pleioblastus humilis* var. *pumilus* (Mitford) D.C. McClint., also spelled *humilus*; *Pleioblastus pumilus* (Mitford) Nakai; *Sasa pumila* (Mitford) E.G. Camus)

Asia temperate, Japan. See *The Bamboo Garden* 98. 1896 and *Journal of the Arnold Arboretum* 6: 151. 1925, *Journal of Japanese Botany* 9: 223. 1933, *Journal of Japanese Botany* 18: 361. 1942, *Hikobia* 8(1-2): 66. Hiroshima 1977, *Kew Bulletin* 38(3): 485. 1983.

in English: dwarf bamboo

A. pygmaea (Miq.) Asch. & Graebn. (*Arundinaria pygmaea* (Miq.) Mitford; *Arundinaria pygmaea* (Mitford) J. Houz.,

nom. illeg., non *Arundinaria pygmaea* (Miq.) Asch. & Graebn.; *Arundinaria pygmaea* Kurz ex Teijsm. & Binn., nom. illeg., non *Arundinaria pygmaea* (Miq.) Asch. & Graebn.; *Arundinaria pygmaeus* (Miq.) Mitf.; *Bambusa pygmaea* Miq.; *Pleioblastus pygmaeus* (Miq.) Nakai; *Sasa pygmaea* (Miq.) E.G. Camus ex Rehder; *Sasa pygmaea* (Miq.) E.G. Camus; *Sasa pygmaea* (Miq.) Rehder; *Sasa pygmaea* var. *pygmaea*)

Asia temperate, Japan. Perennial, solid, branching culms, dense foliage bright green and whitish pubescent, leaves rounded at the base, ornamental, useful for erosion control, see *The Bamboo Garden* 49. 1896.

in English: pygmy bamboo

A. pygmaea (Miq.) Asch. & Graebn. var. **disticha** (Mitford) C.S. Chao & Renvoize (*Arundinaria argenteostriata* var. *disticha* (Mitford) Honda; *Arundinaria argenteostriata* var. *distichus* (Mitford) Ohwi, nom. illeg., non *Arundinaria argenteostriata* var. *disticha* (Mitford) Honda; *Arundinaria disticha* (Mitford) Bean; *Arundinaria variabilis* var. *disticha* (Mitford) Houz.; *Bambusa disticha* Mitford; *Bambusa nana* hort.; *Pleioblastus distichus* (Mitford) Nakai; *Pleioblastus distichus* (Mitford) Muroi & H. Okamura; *Pleioblastus pygmaeus* var. *distichus* (Mitford) Nakai; *Pseudosasa disticha* (Mitford) Nakai; *Sasa disticha* (Mitford) E.G. Camus; *Sasa pygmaea* var. *disticha* (Mitford) C.S. Chao & G.G. Tang)

Asia temperate. Perennial, cultivated, ornamental, see *The Bamboo Garden* 46: 547. 1894 and *Journal of the Arnold Arboretum* 6: 150. 1925, *Science Education* 15(6): 69. Tokyo 1932, *Journal of Japanese Botany* 9: 236. 1933 Aug, *Journal of Japanese Botany* 10(4): 207, f. 37. 1934, *Journal of Nanjing Institute of Forestry* 1985(4): 15. 1985, *Kew Bulletin* 44(2): 368. 1989.

A. racemosa Munro (*Arundinaria fangiana* Hand.-Mazz.; *Arundinaria fangiana* A. Camus; *Arundinaria racemosa* subsp. *fangiana* A. Camus; *Bashania faberi* (Rendle) T.P. Yi; *Bashania fangiana* (A. Camus) Keng f. & T.H. Wen; *Fargesia racemosa* (Munro) T.P. Yi; *Yushania racemosa* (Munro) R.B. Majumdar (for W.P. Fang)

Asia tropical, India, Sikkim, Himalaya, Bhutan, Nepal. Erect, shrubby, nodding, gregarious, stems slender and clustered, culm sheaths glabrous, internodes smooth to scabrous, branches at the nodes, long rhizomes, leaf blades linear-lanceolate, raceme or simple panicle, long sheathing bracts, spikelets distichous, uppermost floret sometimes empty, 2 small empty glumes, 3 lodicules ciliate, 3 stamens, ovary glabrous, 3 stigmas plumose, flowering sporadically, used for matting and basketry, roofing and fencing, leaves good fodder for animals, young shoots edible, may form dense thickets or dense undergrowth, in mountain forests, see *Transactions of the Linnean Society of London* 26(1): 17. 1868 and *Journal of the Linnean Society, Botany* 36(254): 435. 1904, *Journal of the Arnold Arboretum* 11:

192-193. 1930, *Symbolae Sinicae* 7(5): 1273. 1936, *Journal of Bamboo Research* 2(1): 39. 1983, *Journal of Bamboo Research* 4(2): 17-18. 1985, *Kew Bull.* 44: 352. 1989, *Journal of Bamboo Research* 12(2): 52-53. 1993.

Common names: miknu, maxilla

in India: mheem, mheen, mikner, miknu, pat-hioo, pum-moon, sanu maling, sanu

A. scandens Söderstrom & Ellis (*Sinarundinaria scandens* (Soderstr. & R.P. Ellis) H.B. Naithani)

Sri Lanka. Scandent, vinelike, clambering, robust, dense clumps, erect, sympodial pachymorph rhizomes, culm leaves persistent, culms hollow, leaves narrowly oblong, 2 glumes persistent, 3 stamens, ovary with 2 stigmas, see *Smithsonian Contributions to Botany* 72: 20. 1988, *Indian Forester* 116(12): 990. Allahbad 1990.

A. schomburgkii Benn. (*Arthrostylidium schomburgkii* (Benn.) Munro; *Arundinaria schomburgkii* Jardine et al.)

South America, Venezuela, Amazonas. See *Proceedings of the Linnean Society of London* 1: 51. 1840, *Transactions of the Linnean Society of London* 18(4): 562. 1841, *Transactions of the Linnean Society of London* 26(1): 41. 1868 and *Annals and Magazine of Natural History* 30(1): 15. London 1981.

A. simonii (Carrière) Rivière & C. Rivière (*Arundinaria simonii* var. *heterophylla* Makino; *Arundinaria simonii* var. *variegata* Hook.f.; *Arundinaria vaginata* Hack.; *Bambusa simonii* Carr.; *Nipponocalamus simonii* (Carrière) Nakai; *Pleioblastus simonii* (Carr.) Nakai; *Pleioblastus simonii* f. *variegatus* (Hook.f.) Muroi; *Pleioblastus simonii* var. *heterophyllus* (Makino) Nakai) (named for Gabriel E. Simon, b. 1829, Consul in Shanghai, botanical collector, see Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. 827-833. Leipzig 1981)

Asia temperate, Japan, China. Perennial, stems hollow, arching outward, stem sheaths rather persistent and purplish, leaves narrow-oblong with long tapered points, ornamental, cultivated, see *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, f. 43-50. 1878, *Bulletin de l'Herbier Boissier* 7(10): 717. 1899 and *Journal of the Arnold Arboretum* 6(3): 147. 1925, *Journal of Japanese Botany* 18(7): 364. 1942.

in English: Simon bamboo

in Japan: me-dake, kawa-take, medake

A. variabilis Makino ex M. Vilm.

Asia. See *Bulletin de la Société Dendrologique de France* 12: 81. 1909.

A. variegata (Siebold ex Miq.) Makino (*Arundarbor fortunei* (Van Houtte) Kuntze; *Arundinaria fortunei* (Van Houtte) Rivière & C. Rivière; *Arundinaria variabilis* var. *fortunei* (Van Houtte) Houz.; *Bambusa fortunei* Van Houtte; *Bambusa picta* Siebold & Zucc. ex Munro; *Bambusa variegata*

Siebold ex Miq.; *Nipponocalamus fortunei* (Van Houtte) Nakai; *Pleioblastus fortunei* (Van Houtte) Nakai; *Pleioblastus variegatus* (Siebold ex Miq.) Makino; *Sasa fortunei* (Van Houtte) Fiori; *Sasa variegata* (Siebold ex Miq.) E.G. Camus) (named for the Scottish botanist and gardener Robert Fortune, 1812-1880 (d. Brompton, London), botanical explorer, traveler, on different journeys between 1843 to 1861 plant collector in China (for the Royal Horticultural Society) and Japan, horticulturist, 1846-1848 Curator of the Chelsea Physic Garden, collected for East India Company, introduced the tea plant from China into India, his writings include *Three Years Wanderings in the Northern Provinces of China*. London 1847, *Report upon the Tea Plantation in the North Western Provinces*. [London 1851], *A Journey to the Tea Countries of China*. London 1852, *Two Visits to the Tea Countries of China and the British Tea Plantation in the Himalaya*. London 1853, *A Residence among the Chinese*. London 1857 and *Yedo and Peking*. London 1863. See [Robert Fortune], *Catalogue of a Very Choice and Important Collection of Ancient Chinese Porcelain*, formed by R.F., Esquire, which will be sold by auction, by Messrs Christie and Manson, on Thursday, June 23, 1859. London [1859]; Alice Margaret Coats, *The Quest for Plants. A History of the Horticultural Explorers*. 71-75, 101-110. London 1969; E.H.M. Cox, *Plant-hunting in China. A History of Botanical Exploration in China and the Tibetan Marches*. 76-92. London 1945; J.H. Barnhart, *Biographical notes upon botanists*. 1: 561. Boston 1965; J. Lanjou & F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. *Regnum Vegetabile* vol. 9. 1957; Harry A. Franck, *Wandering in Northern China*. New York [c. 1923]; F.D. Drewitt, *The Romance of the Apothecaries' Garden at Chelsea*. London 1924; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 711. Stuttgart 1993; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980; Charles Lyte, *The Plant Hunters*. London 1983)

Asia, Japan. Green, very slender, internode cylindrical, slender running rhizomes, culm sheaths green, branched or unbranched, leaf sheath glabrous, ligule small or tiny, 4-7 leaves on each twig, leaf blade acuminate to small lanceolate, cultivated, ornamental, see *Transactions of the Linnean Society of London* 26: 111. 1868, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 797. 1878 and *Botanical Magazine* (Tokyo) 26(300): 15. 1912, *Bollettino della Reale Società Toscana d'Orticoltura*, ser. 4, 2: 42. 1917, *Journal of Japanese Botany* 3(6): 23. 1926, *Journal of Japanese Botany* 9(4): 232, 234, f. 30. 1933, *Journal of Japanese Botany* 18: 355. 1942.

in English: dwarf white-stripe bamboo

A. viridistriata (Siebold ex André) Makino ex Nakai (*Arundinaria auricoma* Mitford; *Arundinaria variegata* var. *viridistriata* (Siebold ex André) Makino; *Arundinaria viridistriata* (André) Makino; *Arundinaria viridistriata* (Regel) Makino ex Nakai; *Arundinaria viridistriata* (Siebold ex André) Nakai; *Bambusa viridistriata* Regel; *Bambusa viridistriata* Siebold ex André; *Pleioblastus auricomus* (Mitford) D.C. McClint., also spelled *auricoma*; *Pleioblastus viridi-striata* (André) Makino; *Pleioblastus viridi-striatus* (André) Makino; *Pleioblastus viridistriatus* (André) Makino; *Pleioblastus viridistriatus* (Regel) Makino; *Pleioblastus viridistriatus* (Siebold ex André) Makino; *Pseudosasa auricoma* (Mitford) Bergmans; *Sasa auricoma* (Mitford) E.G. Camus; *Sasa auricoma* E.G. Camus; *Sasaella viridistriata* (Siebold ex André) Nakai)

Asia, Japan. Perennial, slender to very slender, dark purplish green tufted stems, green and golden yellow striped leaves, forming dense stands, rhizomes running, internodes pubescent, cultivated and naturalized, ornamental, useful for erosion control, see *The Bamboo Garden* 101. 1896 and *Botanical Magazine* (Tokyo) 26: 15. 1912, *Journal of Japanese Botany* 3(3): 11. 1926, *Science Education [Rika Kyōiku]* 15: 76. Tokyo 1932, *Journal of Japanese Botany* 10(9): 568. 1934, *Bamboo Society Newsletter* 12: 11. 1991, *Taxon* 50: 911-912. 2001.

A. walkeriana Munro (*Arundinaria wightiana* Thw.; *Indocalamus walkerianus* (Munro) Nakai; *Sinarundinaria walkeriana* (Munro) C.S. Chao & Renvoize; *Yushania walkeriana* (Munro) R.B. Majumdar) (presumably named for Mrs. A.W. Walker (née Paton), wife of General George Warren Walker (d. 1844), plant collectors in Ceylon, she illustrated the *Flora of Ceylon*. See *Companion to the Botanical Magazine*. 2: 194-200. 1837; Robert Wight, *Icones plantarum Indiae orientalis*, or figures of Indian plants. Madras [1838-] 1840-1853; Isaac Henry Burkill, *Chapters on the History of Botany in India*. 50. Delhi 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 710. London 1994)

Sri Lanka. Shrubby, montane, densely placed clumps, sympodial pachymorph rhizomes, hollow culms, internodes smooth, nodes thick, culm leaves deciduous, 2 glumes, 3 stamens, ovary with 2-3 plumose stigmas, see *Enum. Pl. Zeyl.* 444. 1864, *Transactions of the Linnean Society of London* 26(1): 21. 1868, *For. Man.* 230. 1873, *Ann. Roy. Bot. Gard. (Calcutta)* 7(1): 34, pl. 1. 1896 and *Handb. Fl. Ceylon* 5: 309. 1900, *Journal of the Arnold Arboretum* 6: 148. 1925, *Handb. Fl. Ceylon* 6: 342. 1931, *Bull. Misc. Inform.* 1938: 126. 1938, *Grasses of Ceylon* 29-30, pl. 1. 1956, *Smithsonian Contr. Bot.* 72: 27. 1988, *Kew Bulletin* 44(2): 354. 1989.

A. wightiana Nees (*Indocalamus wightianus* (Nees) Nakai; *Sinarundinaria wightiana* (Nees) C.S. Chao & Renvoize; *Yushania wightiana* (Nees) R.B. Majumdar)

India. Culms used for mats and baskets, see *Linnaea* 9(4): 482. 1834 and *Journal of the Arnold Arboretum* 6: 149. 1925, *Kew Bulletin* 44(2): 356. 1989.

Arundinella Raddi = *Acratherum* Link, *Brandtia* Kunth, *Calamochloe* Rchb., *Goldbachia* Trin., *Riedelia* Kunth, *Thysanachne* Presl

Diminutive from the Latin *arundo*, *dinis* (*harundo*) “a reed, cane.”

About 47-55 species, pantropical and warm regions, tropics and subtropics, mainly in Asia. Panicoideae, Panicoideae, Arundinelleae, annual or perennial, erect and tough, simple or branched, tufted, spreading, herbaceous, rhizomatous or stoloniferous, short and branched rhizomes, glabrous nodes, solid or hollow internodes, leaves nonauriculate, ligule a very short fringed membrane, leaf blades linear and narrow, plants bisexual, inflorescence variable, an oblong panicle open or contracted, spikelets mostly in pairs or in triads, 2 florets, upper floret bisexual and early deciduous, lower floret sterile or male and more or less persistent, 2 glumes very unequal and membranous, lower lemma ovate-elliptic, upper lemma coriaceous and awned, 2 fleshy and glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas, native pasture species, weed species of open habitats, common on riverbanks, marshes and marshy places, rainforest, pampas, rocky slopes, related to *Melinis*, type *Arundinella brasiliensis* Raddi, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 81. 1820, *Agrostografia Brasiliensis* 36-37, t. 1, f. 3. 1823, *Hortus Regius Botanicus Berolinensis* 1: 230. 1827, *Thysanachne, Novum Plantarum Genus* 12, t. 6. 1829, *Linnaea* 7: 240 (or 224). 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 515. 1833, *Flora Brasiliensis* 7: 171-172. 1863, *Hooker's Icones Plantarum* 15: 15. 1883 and *Kew Bull. Misc. Inform.* 317-322. 1936, *Kirkia* 5: 235-258. 1966, *Canad. J. Bot.* 45: 1047-1057. 1967, *Kew Bulletin* 21(1): 119-124. 1967, *Brittonia* 23(3): 293-324. 1971, *Kew Bulletin* 26(1): 111-113. 1971, *Taxon* 34: 159-164. 1985, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Flora Mesoamericana* 6: 377-378. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, J.F. Veldkamp, “Name changes in *Agrostis*, *Arundinella*, *Deyeuxia*, *Helictotrichon*, *Tripogon* (Gramineae).” *Blumea* 41: 407-411. 1996, *The Plant Journal* 14(5): 565-572. June 1998, *Journal of Biogeography* 25(5): 901-912. Sep 1998 [The savannization of moist forests in the Sierra Nevada de Santa Marta, Colombia.], *Plant, Cell and Environment* 22(12): 1569-1577. Dec 1999 [Assessing photosystem I and II distribution in leaves from C4 plants using confocal laser scanning microscopy.], *Am. J. Bot.* 87: 96-

107. 2000, *Ecological Research* 15(1): 13-20. Mar 2000, S. McIntyre & Sandra Lavorel, "Livestock grazing in subtropical pastures: steps in the analysis of attribute response and plant functional types." *Journal of Ecology* 89(2): 209-226. Apr 2001, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Journal of Applied Ecology* 39(4): 584-594. Aug 2002, *Ecological Research* 17: 6: 705-716. Nov 2002, *Contributions from the United States National Herbarium* 46: 111-113, 242, 545-546, 616-617. 2003, *Am. J. Bot.* 90: 796-821. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, Jennifer J. Beard, David Evans Walter and Peter G. Allsopp, "Spider mites of sugarcane in Australia: a review of grass-feeding *Oligonychus* Berlese (Acari: Prostigmata: Tetranychidae)." *Australian Journal of Entomology* 42(1): 51-78. Mar 2003, *Austral. Ecology* 28(5): 471-479. Oct 2003, *Restoration Ecology* 11(4): 483-488. Dec 2003 [Factors affecting the early survival and growth of native tree seedlings planted on a degraded hillside grassland in Hong Kong, China.].

Species

A. agrostoides Trin. (*Arundinella agrostoides* Hook.f., nom. illeg., non *Arundinella agrostoides* Trin.; *Arundinella holcoides* (Kunth) Trin.)

Warm regions. See *Species Graminum* 3: t. 265. 1829-1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 107. 1836, *The Flora of British India* 7(21): 71. 1897 [1896].

A. bengalensis (Spreng.) Druce (*Arundinella stricta* (Roxb.) Janowski, nom. illeg., non *Arundinella stricta* Nees; *Arundinella wallichii* Nees ex Steudel; *Panicum bengalense* Spreng.; *Panicum strictum* Roxb., nom. illeg., non *Panicum strictum* R. Br.) (dedicated to the Danish (b. Copenhagen) physician Nathaniel Wallich (originally Nathan Wulff or Wolff), 1786-1854 (d. London), botanist and botanical collector (India, Malaya, Cape, Nepal), pupil of Vahl at Copenhagen, in 1807 went out to India as surgeon, 1809 with William Roxburgh (1751-1815) at Calcutta, 1813 with the Hon. East India Company, 1815-1846 Superintendent of the Calcutta Botanic Garden (like his predecessor W. Roxburgh), 1818 Fellow of the Linnean Society, 1820-1822 plant collector in Nepal, 1829 Fellow of the Royal Society, 1833 visited Assam, correspondent of the naturalist and plant collector John Reeves (1774-1856), among his most valuable writings are *Tentamen Florae Nepalensis*. Calcutta and Serampore 1824-1826, *Descriptions of Some Rare Indian Plants*. [Asiatic Researches 1820] 1820 and *Plantae Asiaticae rariores*. London [1829-] 1830-1832, father of George Charles Wallich (b. Calcutta 1815-d. Marylebone, London 1899); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 454. 1965; I.H. Vegter, *Index Herbariorum*. Part II (7), *Collectors T-Z*. Regnum Vegetabile vol. 117.

1988; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 796. 1993; C.F.A. Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; I.H. Vegter, *Index Herbariorum*. Part II (5), *Collectors N-R*. Regnum Vegetabile vol. 109. 1983; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 369-370. 1981; K. Biswas, editor, *The Original Correspondence of Sir Joseph Banks Relating to the Foundation of the Royal Botanic Garden, Calcutta and The Summary of the 150th Anniversary Volume of the Royal Botanic Garden, Calcutta*. Calcutta 1950; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Andrew Thomas Gage, *A History of the Linnean Society of London*. London 1938; K. Lemmon, *Golden Age of Plant Hunters*. London 1968; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. London 1914; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; E. Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 425. Boston, Mass. 1972; Daniel Merriman, in *D.S.B.* 14: 145-146. 1981; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; [Sir J.E. Smith], *Memoir and Correspondence of ... Sir J.E. Smith ...* Edited by Lady Pleasance Smith. London 1832; M. Archer, *Natural History Drawings in the India Office Library*. London 1962; James Britten and George E. Simonds Boulger, *A Biographical Index of Deceased British and Irish Botanists*. London 1931)

Subtropics, Southeast Asia, India. Perennial, creeping, leaves lanceolate, panicle cylindrical, weed species of tea, along roadsides, open places, sandy soil, under pine forests, see *Systema Vegetabilium, editio decima sexta* 1: 311. 1825, *Flora Indica; or, Descriptions of Indian Plants* 1: 306. 1832, *Synopsis Plantarum Glumacearum* 1: 114. 1854 and *Botanical Society and Exchange Club of the British Isles* 4: 605. 1916 [1917], *Repertorium Specierum Novarum Regni Vegetabilis* 17: 84. 1921.

in Bhutan: phurki, darkharey

in Ladakhi: berka (for cane)

A. berteroniana (Schult.) Hitchc. & Chase (*Arundinella berteroniana* (Schult.) Mez, nom. illeg., non *Arundinella berteroniana* (Schult.) Hitchc. & Chase; *Arundinella convoluta* Pilg.; *Arundinella crinita* Trin.; *Arundinella cubensis* Griseb.; *Arundinella peruviana* (J. Presl) Steud.; *Ischaemum peruvianum* (J. Presl) Kunth; *Muhlenbergia berteroniana*

(Schult.) Kunth; *Thysanachne peruviana* J. Presl; *Trichochloa berteroniana* Schult.)

Central America to northern Argentina, Brazil, Mexico. Herbaceous, caespitose, erect to arching, internodes glabrous, nodes hairy, panicle branches loose, forage, medicinal, terrestrial, riparian habitat, growing in small clumps, withstands seasonal flooding, found on rocks at river edge, riverbanks, slopes, silty beaches, see *Mantissa* 2: 209. 1824, *Révision des Graminées* 1: 64. 1829, *Reliquiae Haenkeanae* 1(4-5): 253. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 515. 1833, *Linnaea* 10(3): 299. 1836, *Synopsis Plantarum Glumacearum* 1: 115. 1854, *Memoirs of the American Academy of Arts and Science, new series* 8: 533. 1862, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 25. 1899 and *Contributions from the United States National Herbarium* 18(7): 290. 1917, *Repertorium Specierum Novarum Regni Vegetabilis* 17(4-7): 85. 1921.

in Mexico: carricillo papachote, itsé toom ethem, privilegio

A. birmanica Hook.f. (*Arundinella setosa* Trin.)

Asia, Myanmar. See *De Graminibus Paniceis* 63. 1826, *The Flora of British India* 7(21): 73. 1897 [1896].

A. blephariphylla (Trimen) Hook.f. (*Arundinella blephariphylla* (Trimen) Trimen ex Hook.f.; *Panicum blephariphyllum* Trimen)

Asia, Sri Lanka. Perennial, leaf sheaths ciliate, ligule absent or membranous, inflorescence an open panicle, lower floret staminate, upper glume acuminate, upper lemma awnless, along marshy places, see *Journ. Bot. Brit. & For.* 23: 272. 1885, *Fl. Br. India* 7(21): 77. 1896 and *Handb. Fl. Ceylon* 5: 180. 1900, *Grasses of Ceylon* 100. 1956, *Grasses of Burma* ... 421. 1960.

A. kannanorica V.J. Nair, Sreek. & N.C. Nair

India, Kerala. See *Journal of the Bombay Natural History Society* 80(2): 396. 1984.

A. ciliata Nees ex Miq. (*Arundinella agrostoides* Hook.f., nom. illeg., non *Arundinella agrostoides* Trin.; *Arundinella ciliata* Nees; *Arundinella ciliata* (Roxb.) Miq.; *Arundinella ciliata* Thunb., nom. illeg., non *Arundinella ciliata* Nees ex Miq.; *Arundinella hirsuta* Nees ex Steud.; *Arundinella pilosa* Hochst.; *Holcus ciliatus* Roxb.)

India. Panicle congested, glumes subequal, along roadsides, evergreen forests, see *Flora Japonica*, ... 49. 1784, *Flora Indica; or Descriptions* ... 1: 321. 1820, *Cat. Indian Plants* no. 1666. 1833, *Synopsis Plantarum Glumacearum* 1: 115. 1854, *The Flora of British India* 7(21): 71. 1897 [1896].

in the Philippine Islands: salai-salai

A. decempedalis (Kuntze) Janowski (*Arundinella clarkei* Hook.f.; *Panicum decempedale* Kuntze)

India, Sikkim, Assam, Arunachal Pradesh. Perennial or annual, stout, large panicle, see *Revisio Generum Plan-*

tarum 2: 783. 1891, *The Flora of British India* 7(21): 75-76. 1897 [1896] and *Repertorium Specierum Novarum Regni Vegetabilis* 17(477-480): 84. 1921.

A. deppeana Nees ex Steud. (*Arundinella auletica* Rupr. ex E. Fourn.; *Arundinella auletica* Rupr.; *Arundinella latifolia* E. Fourn.; *Arundinella phragmitoides* Griseb.; *Arundinella robusta* E. Fourn.; *Arundinella scoparia* (J. Presl) E. Fourn.) (for Ferdinand Deppe, 1794-1861, gardener, traveler and botanical collector in Mexico and Guatemala, together with Schiede. See *Flora Telluriana* 2: 51. 1836 [1837], *Bonplandia* 9: 157. 1861, *Bot. Zeitung* 19: 104. 1861, *Zandera* 3: 39-42. 1984)

South America, Mexico. Coarse, more or less erect, simple or branched, tall, forage, found in disturbed sites at roadside, on open and disturbed slopes above river, white to green with purple shading flowers, yellowish to red anthers, see *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 242. 1842, *Synopsis Plantarum Glumacearum* 1: 115. 1854, *Catalogus plantarum cubensium* ... 234. 1866, *Mexicanas Plantas* 2: 54-55. 1886.

in Spanish: cola de venado

A. fuscata Steud. (*Arundinella fuscata* Hook.f., nom. illeg., non *Arundinella fuscata* Steud.; *Arundinella fuscata* Nees ex Büse; *Arundinella fuscata* Nees ex Koord., nom. illeg., non *Arundinella fuscata* Steud.)

Asia, India. See *Synopsis Plantarum Glumacearum* 1: 114. 1854, *Plantae Junghuhnianae, Gramineae* 19. 1854, *The Flora of British India* 7(21): 74. 1897 [1896] and *Exkursionsflora von Java* ... 1: 119. 1911, *Reinwardtia* 2(2): 233. 1953.

A. grevillensis B.K. Simon (Mt. Greville, located southwest of Lake Moogerah, Queensland)

Australia, Queensland. Reed grass, rare species, see *Austrobaileya* 1(5): 463. 1982.

A. hirta (Thunb.) Tanaka (*Agrostis ciliata* Thunb.; *Agrostis thunbergii* (Kunth) Steud.; *Arundinella anomala* Steud.; *Arundinella hirta* (Thunb.) Koidz.; *Arundinella hirta* var. *ciliata* (Thunb.) Koidz.; *Panicum williamsii* Hance; *Poa hirta* Thunb.)

India, China, Japan, Taiwan, Korea. Herbaceous, rhizomatous, found in alpine grassland, useful for erosion control, see *Flora Japonica*, ... 49. 1784, *Synopsis Plantarum Glumacearum* 1: 116, 163. 1854, *Annales des Sciences Naturelles; Botanique, sér. 5*, 5: 250. 1866 and *Botanical Magazine* (Tokyo) 39: 302. 1925, *Bull. Sci. Hort. Inst. Kyushu Imp. Univ.* 1: 196, 208. 1925.

in Japan: todashiba

A. hispidia (Humb. & Bonpl. ex Willd.) Kuntze (*Acratherum miliaceum* Link; *Agrostis beteteriana* Spreng. ex Steud.; *Aira brasiliensis* Spreng., nom. illeg., non *Aira brasiliensis* Raddi; *Andropogon hispidus* Humb. & Bonpl. ex Willd.; *Andropogon virens* Spreng.; *Arundinaria hispidia* var.

glabrivaginata Kuntze; *Arundinella brasiliensis* Raddi; *Arundinella confinis* (J.A. Schultes) A.S. Hitchc. & Chase; *Arundinella elata* Pilg.; *Arundinella hispida* (Humb. & Bonpl. ex Willd.) Hack., nom. illeg., non *Arundinella hispida* (Humb. & Bonpl. ex Willd.) Kuntze; *Arundinella hispida* Hack.; *Arundinella hispida* (Willd.) Kuntze; *Arundinella hispida* var. *glabrivaginata* Kuntze; *Arundinella martinicensis* Trin.; *Arundinella mikanii* (Trin. ex Spreng.) Nees; *Arundinella pallida* Nees; *Arundinella palmeri* Vasey ex Beal; *Arundinella scoparia* (J. Presl) E. Fourn.; *Goldbachia mikanii* Trin. ex Spreng.; *Holcus nervosus* Roxb.; *Ischaemum hispidum* (Humb. & Bonpl. ex Willd.) Kunth; *Piptatherum confine* J.A. Schultes; *Riedelia mikanii* Trin. ex Kunth; *Thysanachne scoparia* J. Presl)

Mexico, Argentina, Brazil, Bolivia, Venezuela, Paraguay. Perennial, stout, simple, erect to semidecumbent, internodes glabrous, nodes hairy, stiff panicle stiffly branched, forage, commonly growing in wet ground, savannah marsh, in seasonally inundated savannah, see *Species Plantarum. Editio quarta* 4: 908. 1806, *Nova Genera et Species Plantarum* 1: 194-195. 1815 [1816], *Flora Indica; or Descriptions ...* 1: 320. 1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 42. 1820, *Agrostografia Brasiliensis* 37, t. 1, f. 3. 1823, *Mantissa* 2: 184. 1824, *De Graminibus Paniceis* 62. 1826, *Hortus Regius Botanicus Berolinensis* 1: 230. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 465. 1829, *Thysanachne, Novum Plantarum Genus* 12, t. 6. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 515. 1830, *Nomenclator Botanicus edition 2* 1: 39, 143. 1840, *Mexicanas Plantas* 2: 55. 1886, *Revisio Generum Plantarum* 2: 761. 1891, *Grasses of North America for Farmers and Students* 2: 67, f. 20A, a. 1896, *Revisio Generum Plantarum* 3(3): 341. 1898, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 710. 1898 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(6): 527. 1904, *Contributions from the United States National Herbarium* 18(7): 290. 1917, *J. Bot. British & Foreign* 62: 166. 1924.

in English: arundinella

in Spanish: rabo de gato

in Mexico: papachota, popote, tlacopopôtl, tepopôtl, (*tlacopopotl ahnôzo tepopotl* = medicinal plant)

in Thailand: yaa khaai luang, yaa khaai yai, ya khai luang, ya khai yai

A. holcoides (Kunth) Trin. (*Arundinella agrostoides* Trin.; *Brandtia holcoides* Kunth)

Southeast Asia, India, Thailand, Philippines. Panicle congested, near riverbanks, on rocky slopes, see *Révision des Graminées* 2: 511, t. 170. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 107. 1836 and *Reinwardtia* 2(2): 231. 1953.

A. hookeri Munro ex Keng (*Arundinella hookeri* Munro ex Hook.f.; *Arundinella villosa* Arnott ex Steudel var. *himalayica* Hook.f.)

India, Himalaya. Tufted, shortly rhizomatous, leaves triangular, inflorescences purple, peduncle glabrous below the inflorescence, low forage value, fodder, grows on rocky slopes, see *The Flora of British India* 7(21): 73. 1897 [1896] and *Journ. Ind. Bot. Soc.* 27: 66. 1948.

A. khaseana Nees ex Steud. (*Arundinella khaseana* Nees)

India. Perennial, stout, densely hairy at nodes, grows in rice fields, see *Synopsis Plantarum Glumacearum* 1: 115. 1854.

A. lasiostoma K. Schum. (*Arundinella setosa* var. *lasiostoma* (K. Schum.) Jansen)

Asia, Pacific. See *Die Flora der deutschen Schutzgebiete in der Südsee* 174. 1901, *Reinwardtia* 2(2): 235. 1953.

A. laxiflora Hook.f. (*Arundinella nervosa* Thw.)

Asia, Sri Lanka. Perennial or annual, leaf sheaths glabrous, ligule a short ciliate membrane, inflorescence an open panicle, lower floret staminate, upper lemma awnless or awned, grassland, open areas, open dry soils, along roadsides, see *Enum. Pl. Zeyl.* 362. 1864, *Fl. Br. Ind.* 7(21): 75. 1896 and *Handb. Fl. Ceylon* 5: 180. 1900, *Grasses of Ceylon* 99. 1956, *Grasses of Burma ...* 422. 1960.

A. leptochloa (Steud.) Hook.f. (*Arundinella gigantea* Dalz.; *Arundinella lawsonii* Hook.f.; *Arundinella leptochloa* (Nees ex Steud.) Hook.f.; *Arundinella laxiflora* Hook.f.; *Panicum leptochloa* Nees ex Steud.; *Panicum zeylanicum* Arn. ex Hook.f.)

Southern India, Sri Lanka, Tamil Nadu. Perennial, unbranched, leaf sheaths glabrous or villous, ligule a short membrane, inflorescence a narrow panicle, glumes acute, open areas, forests, shade places, wastelands, open woodlands, along fields margins, often confused with *Arundinella metzii* Hochst. ex Miq., see *Synopsis Plantarum Glumacearum* 1: 62. 1854, *The Bombay Flora ...* 293. 1861, *The Flora of British India* 7(21): 75-76. 1897 [1896] and *Handb. Fl. Ceylon* 5: 178. 1900, *Grasses of Ceylon* 100. 1956, *Grasses of Burma ...* 423. 1960.

A. mesophylla Nees ex Steud. (*Arundinella khaseana* Nees)

India. Perennial, slender, in wet river beds, along rock crevices, grasslands, see *Synopsis Plantarum Glumacearum* 1: 115. 1854.

A. metzii Hochst. ex Miq. (*Arundinella decomposita* Janowski; *Arundinella lawii* Hook.f.; *Arundinella pygmaea* Hook.f.)

Southern India, Sri Lanka. Perennial, slender, leaf blades sparsely hispid, leaf sheaths hispid or villous, ligule membranous, loosely contracted panicle, lower floret staminate, glumes unequal, forage, common in moist shady places, in open grasslands, see *Nieuwe Verh. Eerste Kl. Kon. Ned. Inst. Wetensch. Amsterdam* ser. 3, 4: 31. 1851 [Verh. Konink.

Nederl. Inst.], *Analecta botanica indica* ... 2: 19. 1851, *Fl. Br. Ind.* 7(21): 72. 1896 and *Handb. Fl. Ceylon* 5: 180. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 84. 1921, *Grasses of Burma* ... 423. 1960.

A. montana S.T. Blake

Australia, Queensland, Mt. Ngungun. Rare species, found in rock crevices, see *University of Queensland Papers: Department of Biology* 1(18): 16. 1941.

in English: mountain reed

A. nepalensis Trinius (*Acratherum miliaceum* Link; *Arundinella acratherum* Nees ex Steudel; *Arundinella ecklonii* Nees; *Arundinella glabra* Nees; *Arundinella miliacea* (Link) Nees; *Arundinella miliacea* (Link) Druce, nom. illeg., non *Arundinella miliacea* (Link) Nees; *Arundinella ritchei* Munro ex Lisboa; *Arundinella virgata* Janowski) (after the Danish botanist Christian Friedrich (Frederik) Ecklon, 1795-1868, apothecary and botanical collector, traveler, sent plants to Bentham (1835), author of *Topographisches Verzeichniss der Pflanzensammlung von C.F. Ecklon*. Esslingen 1827 and "A list of plants found in the district of Uitenhage between the months of July 1829 and February 1830." *S. Afr. Quart. J.* 1: 358-380. 1830, with Karl Ludwig Philipp Zeyher wrote *Enumeratio plantarum africae australis extratropicae*. Hamburg [1834-] 1835-1836[-1837]; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 494. 1965; Karl Boriwog Presl, *Botanische Bemerkungen*. Prague 1844; Peter MacOwan, "Personalalia of botanical collectors at the Cape." *Trans. S. Afr. Philos. Soc.* 4(1): xliiii-xlvi. 1884-1886; John Hutchinson, *A Botanist in Southern Africa*. 641-642. London 1946; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. Oxford 1964; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942)

Tropical Africa, China, India, South Africa. Perennial, very variable, woody, tough, coarse, tufted, unbranched or branched, erect, shortly rhizomatous with scaly rhizomes, hard rootstock, forming spreading patches, reedlike, ligule short and densely ciliate, leaves usually linear to oblong and glabrous to hirsute, inflorescence a contracted oblong purple panicle with straight ascending racemes, spikelets lanceolate, 2 florets, lower floret male or sterile, female-fertile floret with awned lemma, lower glume ovate and acuminate, lower lemma obtuse, upper lemma hardened and brownish, no bristles at the base of the awn, palea with doorlike germination flaps, eaten by cattle in time of scarcity, little forage value, browsed before anthesis, unpalatable when in seed or dry, ornamental ground cover, useful for erosion control, windbreak and shelter for the wildlife, may become a nuisance, used to make a lotion for washing wounds, sometimes used as thatching grass, grows in dry

woodland and grassland, wet grassland, marshes and margins of marshes, damp places, in vleis, moist areas and along stream banks, ponds and dams, on riverbanks and moist grasslands, savannah, see *De Graminibus Panicis* 62. 1826, *Hortus Regius Botanicus Berolinensis* 1: 230. 1827, *The Botany of Captain Beechey's Voyage* 237. 1837, *Nomenclator Botanicus* edition 2 1: 143. 1840, *Florae Africae Australioris Illustrationes Monographicae* 80. 1841, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 102. 1850, *Journal of the Bombay Natural History Society* 5: 343. 1890 and *Botanical Exchange Club of the British Isles. Report* 1916: 605. 1917, *Repertorium Specierum Novarum Regni Vegetabilis* 17(477-480): 84-85. 1921, *Botanical Magazine* (Tokyo) 56: 4. 1942.

in English: reed grass, river grass

in India: dundi, namza, namsa, tutnalia

in South Africa: riviergras, beesgras, rietgras

in Lesotho: molula, modula, mohlakamane

A. nervosa (Roxb.) Nees ex Hook. & Arn. (*Arundinella nervosa* (Roxb.) Nees ex Steud., nom. illeg., non *Arundinella nervosa* (Roxb.) Nees ex Hook. & Arn.; *Holcus nervosus* Roxb.)

India, Tamil Nadu, Kerala. Found in open places, see *Flora Indica; or Descriptions* ... 1: 320. 1820, *The Botany of Captain Beechey's Voyage* 237. 1836, *Synopsis Plantarum Glumacearum* 1: 115. 1854.

A. pumila (Hochst. ex A. Rich.) Steud. (*Acratherum pumilum* Hochst. ex A. Rich.; *Anemagrostis tenella* Steud.; *Anemagrostis tenella* Wight ex Steud.; *Arundinella tenella* Nees ex Steud.)

India, Ethiopia, Sri Lanka. Annual, slender, weak, nodes hirsute, open panicle, ornamental grass, used as forage, forest shade, ditches, along roadsides, in rock crevices, hill slopes, near riverbanks, see *Tent. Fl. Abyss.* 2: 414. 1850, *Syn. Pl. Glumac.* 1: 114-115. 1854 and *Grasses of Ceylon* 99. 1956, *Grasses of Burma* ... 423. 1960.

A. purpurea Hochst. ex Steud. (*Arundinella fuscata* Hook.f., nom. illeg., non *Arundinella fuscata* Steud.)

India. See *Synopsis Plantarum Glumacearum* 1: 115. 1854, *The Flora of British India* 7(21): 74. 1897 [1896].

A. purpurea Hochst. ex Steud. var. **laxa** Bor

India, Tamil Nadu. Lax panicle, pedicel very long, see *Kew Bulletin* 1955: 407. 1955.

A. purpurea Hochst. ex Steud. var. **purpurea**

India, Karnataka, Kerala, Tamil Nadu. Panicle congested, pedicel of spikelet short, on hill slopes.

A. setosa Trinius (*Arundinella bidentata* Keng; *Arundinella birmanica* Hook.f.; *Arundinella capillaris* Hook.f.; *Arundinella hirsuta* Nees ex Steud.; *Arundinella mutica* Nees ex Steud.; *Arundinella setifera* Steud.; *Arundinella sinensis* Rendle; *Arundinella stricta* Nees; *Arundinella zollingeri*

Steud.; *Berghausia barbulata* (Nees) Endl. ex Miq.; *Danthonia luzoniensis* Steud.; *Danthonia neuroelytrum* Steud.; *Garnotia barbulata* (Nees) Merr.; *Garnotia barbulata* (Nees) Janowski; *Milium cimicipoides* Roxb. ex Hook.f.; *Miquelia barbulata* Nees; *Miquelia barbulata* Nees; *Miquelia setosa* Nees)

Southeast Asia, Vietnam, Indonesia. Perennial, tall, tufted, woody, rather rigid, ascending from a hard rootstock, shortly rhizomatous, rather slender, leaf sheath at first tight and later loosening, leaf blade smooth, ligule membrane-like, leaves acute and oblong, terminal panicle with a smooth axis, spikelets occur in pairs, 1 spikelet short and the other long-stalked, lower glume acuminate and clasping, lemma lanceolate, slender bristles at the base of the terminal awn, native pasture species, grass eaten in time of scarcity, ground cover, used for making brooms, often growing at the edge of woodlands, moist hillsides, steep, savannah, deforested hillsides, rocky ground, Himalayan subtropical pine forests, see *De Graminibus Paniceis* 63. 1826, *Gramineae* 46. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 178. 1843, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19(Suppl. 1): 46. 1846, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 102. 1850, F.A.W. Miquel (1811-1871), *Analecta botanica indica* ... 2: 20. Amsterdam 1851, *Synopsis Plantarum Glumacearum* 1: 115-116, 245. 1854, *The Flora of British India* 7(21): 70, 73-74. 1897 [1896] and *Handb. Fl. Ceylon* 5: 177. 1900, *Journal of the Linnean Society, Botany* 36(253): 342-343. 1904, *Philippine Journal of Science* 13(3): 130. 1918, *Bulletin du Muséum d'Histoire Naturelle* 25: 368. 1919, *Repertorium Specierum Novarum Regni Vegetabilis* 17(477-480): 86. 1921, *Journal of the Washington Academy of Sciences* 21(8): 159-160, f. 3. 1931, *Fl. Pres. Madras* 10: 1801. 1934, *Reinwardtia* 2(2): 235. 1953, *Grasses of Ceylon* 98. 1956, *Grasses of Burma* ... 424-425. 1960, *Journal of the Bombay Natural History Society* 72(3): 827. 1975[1976], *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1988-1989: 2. 1988-1989.

in Cambodia: Ploong grass

in India: hakki vaarji hullu, hakkivarji hullu, kotir thurdia, maraga thattu hullu, marga thattu, murkia puleri, pathi oopagaddi

in the Philippines: salai-salai

A. sinensis Rendle (*Arundinella setosa* Trin.)

Southeast Asia, China. Slender, tufted, leaf sheath tightly wrapped and smooth, ligule a shallow rim, linear and arching leaf blade, open panicle, spikelets elongate, see *De Graminibus Paniceis* 63. 1826 and *Journal of the Linnean Society, Botany* 36(253): 342-343. 1904.

A. spicata Dalziel

Maharashtra, India. Grassy plains, open places, see *The Bombay Flora* ... 293. 1861.

A. tuberculata Munro ex Lisboa

Asia, India. Montane rain forests, on hill slopes, see *Journal of the Bombay Natural History Society* 5: 344. 1890.

A. thwaitesii Hook.f.

Asia, Sri Lanka. Perennial or annual, nodes glabrous or villous, similar to *Arundinella laxiflora* Hook.f., see *Fl. Br. Ind.* 7(21): 77. 1896 and *Handb. Fl. Ceylon* 5: 181. 1900, *Grasses of Ceylon* 100. 1956, *Grasses of Burma* ... 425. 1960.

A. vaginata Bor (*Arundinella villosa* var. *heyne* Hook.f.)

India, Kerala, Tamil Nadu. See *The Flora of British India* 7(21): 73. 1897 [1896] and *Journal of the Indian Botanical Society* 27: 66. 1948.

A. villosa Nees (*Arundinella villosa* var. *wightii* Hook.f.)

Asia, India, Sri Lanka. Perennial, stiff, erect, base bulbous and woolly, narrow panicle, glumes acuminate, along roadsides, see *Syn. Pl. Glumac.* 1: 115. 1854, *The Flora of British India* 7(21): 73. 1897 [1896] and *Handb. Fl. Ceylon* 5: 178. 1900, *Grasses of Ceylon* 98. 1956, *Grasses of Burma* ... 426. 1960.

Arundo L. = *Amphidonax* Nees, *Amphidonax* Nees ex Lindl., *Donacium* Fries, *Donax* P. Beauv., *Eudonax* Fries, *Scolochloa* Mert. & Koch

From the Latin *arundo*, *dinis* (*harundo*) "a reed, cane."

About 3-12 species, from Mediterranean region to China. Arundinoideae, Arundineae, perennial, robust, erect, in large tall clumps, sometimes almost woody, persistent, robust, thick and stout, creeping thick and knotty rhizomes, flowering culms leafy, glabrous nodes, hollow internodes, branched, ligule a fringed membrane, sheath ribbed or smooth, leaves alternate and glaucous, leaves linear-lanceolate to lanceolate to oblong-lanceolate, plants bisexual, large inflorescence paniculate and open, feathery plume-like terminal panicle, fascicled lower branches, spikelets pedicellate and solitary, uppermost flower reduced or usually empty or all flowers perfect, 2 large glumes keeled and more or less equal, lemma hairy to villous and awned, female-fertile lemmas densely hairy, callus shortly hairy, 2 free fleshy glabrous lodicules irregularly toothed, 3 stamens, ovary glabrous, 2 stigmas, weed species, native pasture species, invasive, several cultivars cultivated as ornamentals, can be grown as a windbreak screen, highly flammable, leaves made into matting and baskets, occurring in riversides and in ditches, riparian habitats, in poor sandy soil, along riverbanks and wet places, pampas, on sand dunes near seashores, type *Arundo donax* L., see *Species Plantarum* 1: 81-82. 1753, *Genera Plantarum*. edition 5. 35. 1754, *Familles des Plantes* 2: 34, 559. 1763, *Essai d'une Nouvelle Agrostographie* 77-78, 152, 161. 1812, *J. C.*

Rohlings Deutschlands Flora 1: 374, 528, 530. 1823, *An Introduction to the Natural System of Botany* 449. 1836, *Botaniska Notiser* 1843: 132. 1843, *Flora Rossica* 4(13): 393-394. 1852, Pietro Bubani, *Flora Virgiliana*, ovvero sulle piante menzionate da Virgilio. 22-24. Bologna 1870 and *Contr. U.S. Natl. Herb.* 24: 184. 1925, H.J. Conert, "Die Systematik und Anatomie der Arundineae." Weinheim 1961, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Kew Bulletin* 41: 323-342. 1986, *Grass Systematics and Evolution* 239-250. 1987, *Pl. Syst. Evol.* 173: 57-70. 1990, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Flora Mesoamericana* 6: 252. 1994, *Syst. Bot.* 20: 423-435. 1995, *Restoration Ecology* 5(4s): 43-55, 56-68, 75-84. Dec 1997, *Australian Syst. Bot.* 11: 41-52. 1998, *Syst. Bot.* 23: 327-350. 1998, *Plant, Cell and Environment* 22(11): 1319-1335. Nov 1999, *Global Ecology and Biogeography* 9(1): 93-94. Jan 2000, *Restoration Ecology* 8(3): 268-275. Sep 2000, *Heredity* 86(6): 738-742. June 2001, *Plant, Cell and Environment* 25(3): 441-451. Mar 2002, *Oikos*. vol. 98, issue 2: 284-298. Aug 2002, *New Phytologist* 155(2): 197-199, 284-298. Aug 2002, *Diversity & Distributions* 8(5): 285-295. Sep 2002, *Restoration Ecology* 10(4): 695-702. Dec 2002, *Contributions from the United States National Herbarium* 46: 17, 113-115, 214, 241, 569. 2003, *Diversity & Distributions* 10(5-6): 367-369, 485-492. Sep 2004, *Diversity & Distributions* 10(5-6): 475-484. Sep 2004 [Mapping the potential ranges of major plant invaders in South Africa, Lesotho and Swaziland using climatic suitability.], *Global Change Biology* 11(1): 60-69. Jan 2005.

Species

A. donax L. (*Amphidonax bengalensis* Roxb. ex Nees; *Amphidonax bifaria* (Retz.) Nees ex Steud.; *Arundo aegyptiaca* hort. ex Vilm.; *Arundo bambusifolia* Hook.f.; *Arundo bengalensis* Retz.; *Arundo bifaria* Retz.; *Arundo donax* var. *angustifolia* Döll; *Arundo donax* var. *lanceolata* Döll; *Arundo donax* var. *procerior* Kunth; *Arundo glauca* Bubani, nom. illeg., non *Arundo glauca* M. Bieb.; *Arundo latifolia* Salisb.; *Arundo longifolia* Salisb. ex Hook.f.; *Arundo maxima* Forssk.; *Arundo sativa* Lam.; *Arundo scriptoria* L.; *Arundo versicolor* P. Mill.; *Cynodon donax* (L.) Raspail; *Donax arundinaceus* P. Beauv.; *Donax bifarius* (Retz.) Trin. ex Spreng.; *Donax donax* (L.) Asch. & Graebn.; *Scolochloa arundinacea* (P. Beauv.) Mert. & Koch; *Scolochloa donax* (L.) Gaudin) (Greek *donax*, *donakos* for a kind of reed)

Mediterranean. Perennial, semiaquatic, large, erect, tall, woody, vigorous, thick, quick growing, rhizomatous, stems forming clumps and dense monotypic stands, roots extensive, large root systems, creeping horizontal rhizomes, ligule papery and truncate, leaf sheaths hairy at base, leaves stiff with an auriculate base, glaucous and arching distichous leaves, very large compact inflorescence, feathery plume-like inflorescences, florets in large branched panicles, dense and silky-hairy panicle, spikelets pedicellate and

solitary, glumes subequal and glabrous, long pilose to pubescent lemmas, palea 2-nerved, cultivated, medicinal value, native pasture species, browsed only the young leaves, unpalatable when old, can form dense floating mats in streams and rivers, forming large colonies, strong winds tolerant, invasive and quite aggressive, useful for erosion control, ornamental, stems used for light construction work and for making woodwind reeds, windbreaks, pipe instruments, reed for clarinets, walking sticks and fishing rods, a source of paper pulp, a decoction of rhizomes said to stimulate menstrual discharge, growing in damp places and along riverbanks, riparian habitats, floodplains, hillsides, moist disturbed places, in coastal areas, along roadsides, marshes, on sand dunes near seashores, along irrigation ditches and waste places, open forest, on edge of streams and ponds, along lakeshore, streams, see *Species Plantarum* 1: 81. 1753, *Amoenitates Academicae* ... 4: 450. 1759, *The Gardeners Dictionary: ... eighth edition* 3. 1768, *Flore de France* 3: 616. 1778, *Observationes Botanicae* 4: 21. 1786, *Observationes Botanicae* 5: 20. 1789, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 24. Londini [London] (Nov-Dec) 1796, *Essai d'une Nouvelle Agrostographie* 78, 152, 161. 1812, *A Botanical Materia Medica* 1: 160. 1812, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 73. 1821, *J. C. Rohlings Deutschlands Flora* 1(2): 530. 1823, *Annales des Sciences Naturelles, Botanique* 5: 302. 1825, *Flora Helvetica* 1: 202. 1828, *Révision des Graminées* 1: 78. 1829, *A Natural System of Botany* 449. 1836, *Synopsis Plantarum Glumacearum* 1: 197. 1855 [1854], *Flora Brasiliensis* 2(3): 48. 1878, *The Flora of British India* 7: 303. 1896, *Flora des Nordostdeutschen Flachlandes* 101. Berlin 1898, *Bulletin de l'Herbier Boissier* 7(9): 724. 1899 and *Flora Pyrenaea per ordine naturales gradatim digesta* 4: 303. Milano 1901, *Bulletin Agricole du Congo Belge* 11: 114. 1920, *Botanical Magazine* 41: 15. 1927, *Acta Phytotaxonomica et Geobotanica* 10: 265. 1941, *Grasses of Burma* ... 413. 1960, *Phytologia* 38(3): 174. 1978, *Bot. Gaz.* 145: 78-82. 1984, *Flora Analítica de la Provincia de Valencia* 368. 1987, *Regnum Veg.* 127: 21. 1993, Olga Speck and Hanns-Christof Spatz, "Damped oscillations of the giant reed *Arundo donax* (Poaceae)." *Am. J. Bot.* 91: 789-796. 2004.

in English: bamboo reed, giant reed, great reed, giantreed, ribbon grass, reed, reed grass, giant reed grass, Spanish reed, Danubian reed, Spanish cane, variegated giant reed grass, arundo grass, river cane, nal grass, wild cane

in France: canne de Provence, roseau géant, grand roseau

in Spain: caña común, caña de Castilla, caña Castilla, canya, garritz

in Bolivia: caña hueca, tacuara

in Brazil: canna do reino

in Colombia: cañabrava de Castilla, lata

in Cuba: caña-guana

in Ecuador: juco, junco, carrizo, carriso

in Mexico: aca-te, acatl, baacam, baca, bacaca, caña, caña de Castilla, caña hueca, cañaveral, canuto, carricillo, carrizo, carrizo de la selva, daxó, falso bambú, gubaguih, gubaguihoguere, haca, halal, ja-sá, jará, junco gigante, ka'tit, katut, ocatl, pacab, pakaab, patamu, shiti, tarro, tek'halal, tekhalal, xitji

in Peru: carrizo

in West Indies: bambou indien, bambou mare, giant reed, panache, roseau, roseau des mares

in Portuguese: cana vieira, cana de roca, cana

in South Africa: riet, Spaans(e)riet, Spaanseriet

in Japan: yoshi-take, danchiku

in Okinawa: deiku

in India: adavikkasagaddi, ama, bansi, bara nal, dhama, gaha nal, hulugilu hullu, kaki veduru, korukkachi, korukkai, laalada kaddi, mudam pul, nal, nala, naldhura, naldura, narkat nal, narsal, paatuveduru, potagal, sarah, shoonya madhya, sukna, vaelam

in Laos: khem

in Thailand: o luang, o yai

in Vietnam: say, lau

in Tunisia: ksab

in Morocco: l-gesba, l-gseb, l-qseb, âganim

in Arabic: qasab, 'alal, kasab

A. donax L. var. **versicolor** (Mill.) Stokes (*Arundo donax* f. *versicolor* (Mill.) Beetle; *Arundo donax* var. *variegata* Vilm.; *Arundo donax* var. *versicolor* (Mill.) Kunth, nom. illeg., non *Arundo donax* var. *versicolor* (Mill.) Stokes; *Arundo versicolor* Mill.)

Cosmopolitan. Ornamental variety with white-striped leaves, see *The Gardeners Dictionary: ... eighth edition* 3. 1768, J.S. Stokes, *A Botanical Materia Medica* 1: 160. 1812, *Révision des Graminées* 1: 78. 1829 and *Phytologia* 38(3): 174. 1978.

in English: giant reed

in Thailand: o laai, o lai

A. pliniana Turra (*Arundo mauritanica* Desf., nom. illeg.; *Arundo plinii* Turra)

Europe. Wetland, pioneer grass, see *Farsetia* 11. 1765.

in Italian: piccola canna del Reno, canna, cannuccia di Plinio, canna del Reno, cannuccia del Reno

A. poiformis Labill. (*Poa poiformis* (Labill.) Druce)

Australia. See *Novae Hollandiae Plantarum Specimen* 1: 27. 1804 and *Report. Botanical Exchange Club. London. Suppl. 2: 640. 1917*, J.W. Vickery, "A taxonomic study of the genus *Poa* L. in Australia." in *Contributions from the New South Wales National Herbarium* 4(4): 145-243 (208). 1972.

Arundoclaytonia Davidse & R.P. Ellis

Named for W.D. Clayton, British agrostologist.

One species, Brazil. Arundinoideae, Steyermarkochloaeae, or Panicoideae, Steyermarkochloaeae, perennial, tufted, plants monoecious, ligule a fringed membrane, 2 glumes very unequal, male florets 2-staminate, palea present, lodicules absent, no stamens, ovary glabrous, 2 stigmas, open habitats, type *Arundoclaytonia dissimilis* Davidse & R.P. Ellis, see *Annals of the Missouri Botanical Garden* 74(3): 479-490. 1987, *Contributions from the United States National Herbarium* 46: 115. 2003.

Species

A. dissimilis

Brazil.

Asperella Humb. = *Asperella* Juss., *Elymus* L., *Hystrix* Moench

Diminutive of the Latin *asper, era, erum* "rough," referring to the leaves.

Pooideae, Triticeae, Hordeinae, type *Asperella hystrix* (L.) Humb., see *Species Plantarum* 1: 83-84. 1753, *Botanisches Magazin (Römer & Usteri)* 7: 5. 1790, *Methodus Plantas Horti Botanici ...* 294-295. 1794, *Dictionnaire des Sciences Naturelles* 3: 214. 1804 [1805] and *Amer. J. Bot.* 21: 133-134. 1934, *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Asperella Juss. = *Leersia* Sw., *Leersia* Sol. ex Sw.

Ehrhartoideae, Oryzeae, Oryzinae, see *Nova Genera et Species Plantarum seu Prodrum* 1, 21. 1788, *Dictionnaire des Sciences Naturelles* 3: 214. 1804 [1805] and *Contributions from the United States National Herbarium* 39: 64-67. 2000.

Asprella Host = *Psilurus* Trin.

Latin *asper, era, erum* "rough."

Type *Asprella nardiformis* Host, see *Icones et Descriptiones Graminum Austriacorum* 4: 17. 1809, *Fundamenta Agrostographiae* 93. 1820.

Asprella Schreber = *Leersia* Sw., *Leersia* Sol. ex Sw.

From the Latin *asper, era, erum* "rough."

Ehrhartoideae, Oryzeae, Oryzinae, see *Nova Genera et Species Plantarum seu Prodromus* 1, 21. 1788, Johann Christian Daniel von Schreber (1739-1810), *Genera Plantarum*. 45. 1789 and *Contributions from the United States National Herbarium* 39: 64-67. 2000.

Asprella Willd. = *Elymus* L.

Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 83-84. 1753, *Enumeratio Plantarum Horti Botanici Bero-linensis*, ... 1: 132. 1809 and *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Aspris Adans. = *Aira* L.

Latin *asper, era, erum* "rough, bitter, harsh."

Pooideae, Poeae, Airinae, see *Species Plantarum* 1: 63-66. 1753, *Familles des Plantes* 2: 496. 1763, *Icones et Descriptiones Graminum Austriacorum* 4: 20, t. 35. 1809 and *An Illustrated Flora of the Northern United States* 1: 214-215. 1913, *United States Department of Agriculture: Bulletin* 772: 116. 1920, *Amer. J. Bot.* 21: 135. 1934, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 89-96. 2003.

Asthenatherum Nevski = *Centropodia* Rchb., *Centropodia* (R. Br.) Reichenbach

Greek *asthenes* "weak, feeble" and *ather, atheros* "barb, spine," see *Narrative of Travels and Discoveries in Northern and Central Africa* 244. 1826, *Conspectus Regni Vegetabilis* 212a. 1828 and *Senck. Biol.* 43(4): 239-266. 1962, *Kew Bulletin* 37(4): 657-659. 1982, T.A. Cope, "Centropodia: an earlier name for *Asthenatherum* (Gramineae)." *Kew Bulletin* 37(4): 657-659. 1983, *Bothalia* 15(1/2): 153-159. 1984, *Flora of Ethiopia and Eritrea* 7: 73. 1995.

Asthenochloa Büse = *Garnotiella* Stapf

From the Greek *asthenes* "weak, feeble" and *chloe, chloa* "grass."

One species, Indonesia, Southeast Asia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, decumbent, herbaceous, slender, branched, plants bisexual, open inflorescence paniculate, spikelets paired, lower floret suppressed, pedicellate spikelets reduced to barren pedicels, 2 glumes subequal, keeled upper glume, lower glume convex, upper lemma bilobed and awned, palea and lodicules absent, 2 stamens, ovary glabrous, 2 stigmas, in damp ground, type *Asthenochloa*

tenera Büse, see *Voyage Autour du Monde* 2(2): 132-133, pl. 21. 1830, *Plantae Junghuhnianae* 3: 367, 368. 1854, *Hooker's Icones Plantarum* 25: t. 2494. 1896 and *Kew Bulletin* 27: 515-562. 1972.

Species

A. tenera Büse (*Garnotia leptos* (Steudel) Stapf; *Garnotia philippinensis* Stapf)

Indonesia. See *Bulletin of Miscellaneous Information Kew* 1910: 302. 1910.

Astrebla F. Muell. = *Astrebla* F. Muell. ex Benth., *Astrebla* Benth.

Straight awned, from the Greek *a* "without, not" and *streblos* "twisted," referring to the straight awns; *Astrebla* spp. were first discovered near Bourke in New South Wales by the explorer, Sir Thomas Livingstone Mitchell, in 1835.

4 species, subtropical areas of Australia. Chloridoideae, perennial or annual, coarse, caespitose and forming a tussock grassland, xerophytic, adapted to a harsh environment, leafy, deep rooted and long-lived grassland, tough rootstock, short stout thick branched and scaly rhizomes, stems jointed and erect, herbaceous and branched above, glabrous nodes, solid internodes, ligule a fringe of hairs or a ciliate rim, leaves narrow, no auricles, plants bisexual, inflorescence a single spike or a spike-like raceme, spikelets sessile or nearly so, bisexual and solitary spikelets, 2-9 florets and the uppermost often reduced, 2 glumes subequal acute and persistent, lemmas silky-hairy and 3-lobed, untwisted awn, palea 2-keeled with keels ciliate, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, produce abundant nutritious seeds, cultivated fodder, forage grasses, native pasture species, all species palatable and acceptable to stock, low in nutritive value, loses much of its nutritive value with age, normally continuously grazed, growth responses are determined by rainfall, extraordinary resistance to drought and continuous grazing, tolerant of mild salinity, plants do not break up when dry, no toxicity has been reported, useful for erosion control, common in dry areas, floodplains, alluvial plains, on relatively fertile cracking clay soils, on shallow clays on limestones, subtropical areas of Australia, arid and semiarid inland plains, on the heavy gray clays, on heavy soils, heavy clay soils, downs and coolibah clay soils in drier areas, open habitats, common on the black and red soils in the interior of New South Wales, Queensland and the Northern Territory, nomenclature very confused, see George Benthams (1800-1884), *Flora Australiensis*. 7: 602. 1878, F.M. Bailey (1827-1915), *A Few Queensland Grasses*, with short notes, range of each species, etc., etc. Brisbane 1888 and *Bull. Misc. Inform. Kew* 1928: 257-266. 1928, *Austral. J. Bot.* 17: 359-374. 1969, *Austral. Ecology* 26(4): 338-348. Aug 2001, *Journal*

of *Applied Ecology* 38(5): 897-909. Oct 2001, Ian J. Radford, Mike Nicholas, Fleur Tiver, Joel Brown and Darren Kriticos, "Seedling establishment, mortality, tree growth rates and vigour of *Acacia nilotica* in different *Astrebla* grassland habitats: Implications for invasion." *Austral. Ecology* vol. 27, issue 3: 258-268. June 2002, *Austral. Ecology* vol. 27, issue 6: 706-713. Dec 2002, *Austral. Ecology* 28(3): 227-236. June 2003, *Austral. Ecology* 28(4): 423-443. Aug 2003, *Austral. Ecology* 29(1): 51-58. Feb 2004, *Australian Journal of Entomology* 43(3): 216-234, 293-303. July 2004, *Physiologia Plantarum* 121(3): 409-420. July 2004, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005, *Flora of Australia* vol. 44B, Poaceae 3: 452-457. 2005.

Species

A. elymoides F. Muell. ex F.M. Bailey

Northern Territory, Queensland, New South Wales. Perennial, tufted, erect, tussock grass with a thickened hairless butt, stems branched and bluish green, leaves flat and narrow, leafy tussocks, narrow inflorescences, recurved mature flowering culms, spikelets or racemes slender and curved or drooping to the ground, weeping seed-heads long and narrow, spikelets solitary distant or loosely imbricate, glumes often deciduous, lemmas shortly villous at the base, palea lanceolate, cleistogamy, a decreaser species, moderately palatable and nutritious when young, grazed, growing in alluvial areas, heavy cracking gray clay soils, in wetter or heavily grazed areas, on heavy self-mulching clays, see *A Few Queensland Grasses*, with short notes, range of each species, etc., etc. Brisbane 1888.

in English: hoop Mitchell grass, weeping Mitchell grass, weeping Mitchell, slender Mitchell

A. lappacea (Lindley) Domin (*Astrebla pectinata* var. *curvifolia* F.M. Bailey; *Astrebla triticoides* (Lindley) F. Muell.; *Astrebla triticoides* (Lindl.) F. Muell. ex Benth.; *Danthonia lappacea* Lindley; *Danthonia triticoides* Lindley)

Western Australia, Queensland, Northern Territory, New South Wales. Perennial, densely tufted, with stout rhizomes and a thickened butt, numerous wiry roots, stems jointed, bluish green or glaucous leaves, inflorescence a long narrow spike-like raceme, wavy backed seed heads, spikelets loosely imbricate and alternate, each floret ends in three long and bristle-like lobes, glumes acuminate and unequal, lemma villous on the back, broad lateral lemma lobes, short awn, bristly seeds, cleistogamy, cultivated fodder, very nutritious, drought resistant and very tolerant of grazing, recommended for sowing, growing on heavy clay and clay loam soils of river floodplains, on deep cracking clays in arid zones, arid open areas, degraded pastures, sometimes grows on sandy alluvium, see *Three Expeditions into the*

Interior of Eastern Australia 1: 309. 1838, *Journal of an Expedition into the Interior of Tropical Australia* 365. 1848 and *Bibliotheca Botanica* 85: 372, f. 86. 1915, Oula Ghanoum et al., "Nonstomatal limitations are responsible for drought-induced photosynthetic inhibition in four C4 grasses." *New Phytologist* 159(3): 599-608. Sep 2003, K. Siebke et al. "Photosynthetic oxygen exchange in C4 grasses: the role of oxygen as electron acceptor." *Plant, Cell and Environment* vol. 26, issue 12: 1963-1972. Dec 2003. in English: curly Mitchell grass, wheat Mitchell, wheat Mitchell grass

A. pectinata (Lindley) F. Muell. ex Benth. (*Astrebla pectinata* (Lindl.) F. Muell.; *Astrebla pectinata* (Lindl.) Benth.; *Danthonia pectinata* Lindley)

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Short-lived perennial or annual, vigorous tussock grass, tufted, leafy, bluish green, compact, erect and smooth, short rhizome, butt and rhizome hairless often knotty and covered with reduced and sparsely hairy leaves, stems many branched or unbranched, leaves flat and basal with long tapering points, cleistogamy common, a barley-like seed head short and straight, spikelets closely packed together or densely imbricate along the entire raceme, flower heads compact, glumes acute, lemma villous on the back, straight and conspicuous awn, the relatively large seeds are easily separated from the chaff, ornamental, decreaser species, drought-resistant or tolerant, heavy stocking resistant, useful for erosion control, very palatable when green, pasture grass, good fodder, food for wild budgerigars, dominant in arid and drier areas, on slight cracking clays, red clays, very similar to curly Mitchell *Astrebla lappacea* (Lindley) Domin, see *Three Expeditions into the Interior of Eastern Australia* 2: 26. 1838, *Dept. Agr. Brisbane Bot. Bull.* 13: 15. 1896 [also *Bot. Bull. Dept. Agric., Queensland*] and *The Queensland Flora* 6: 1897, t. 82. 1902 [Printed by H.J. Diddams & co., 1899-1902. Published under the authority of the Queensland government.]. in English: barley Mitchell grass, barley Mitchell, Mitchell grass, common Mitchell

A. squarrosa C.E. Hubbard

Western Australia, Northern Territory, Queensland, New South Wales. Perennial, large, compact, leafy, tufted, butt densely coated with persistent leaf sheaths, culms erect from a short rhizome, stems strong and prominent, spikelet or raceme quite dense to loose, spikelets closely imbricate and 3- to 9-flowered, glumes acuminate, lemma 3-lobed and densely silky-villous, lobes of the lemma with hooked awns, palea elliptic, seed heads dense and large, usually dominant in the wetter northern Mitchell grasslands and is least palatable and nutritious, on water run-on areas, see *Bulletin of Miscellaneous Information Kew* 1928(7): 259-261. 1928.

in English: bull Mitchell grass, wheateared Mitchell grass, tall Mitchell grass

Ataxia R. Br. = *Anthoxanthum* L., *Hierochloa* R. Br.

Greek *ataxia* “disorder, confusion, irregularity, indiscipline,” *a* “negative, absence” and *taxis* “a series, order, arrangement.”

Pooideae, Poaceae, Phalaridinae, type *Ataxia horsfieldii* Kunth, see *Species Plantarum* 1: 28. 1753, *Prodromus Florae Novae Hollandiae* 208. 1810, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812, *Chloris Melvilliana* 35. 1823, *Révision des Graminées* 1: 22. 1829 and *Regnum Veg.* 127: 19. 1993, *Contributions from the United States National Herbarium* 48: 111-115, 123, 384-387. 2003.

Athernotus Dulac = *Calamagrostis* Adans.

From the Greek *ather*, *atheros* “barb, spine, chaff, prickle” and *notos* “back.”

Pooideae, Poaceae, Agrostidinae, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Flore de Département des Hautes-Pyrénées* 74. 1867 and *Contributions from the United States National Herbarium* 48: 123, 191-227. 2003.

Atherophora Steud. = *Aegopogon* Humb. & Bonpl. ex Willd.

From the Greek *ather*, *atheros* “barb, spine, chaff, prickle” and *phoros* “bearing, carrying,” *phero*, *phoreo* “to bear.”

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Hymenothecium tenellum* (Cav. ex DC.) Lag., see *Species Plantarum. Editio quarta* 4(2): 899. 1805 [1806], *Genera et species plantarum* 4. 1816, *Nomenclator Botanicus. Editio secunda* 1: 167. 1840 and *Contributions from the United States National Herbarium* 41: 9-11. 2001.

Atheropogon Willd. = *Atheropogon* Muhl. ex Willd., *Bouteloua* Hornem. ex P. Beauv., *Bouteloua* Lag.

From the Greek *ather*, *atheros* “barb, spine, chaff, prickle” and *pogon* “beard.”

Chloridoideae, Cynodonteae, Boutelouinae, type *Atheropogon apludioides* Muhl. ex Willd., see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Species Plantarum. Editio quarta* 4(2): 937. 1805 [1806], *Essai d'une Nouvelle Agrostographie* 40. 1812, *Gen. Sp. Nov.* 5. 1816, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Genera Plantarum* 3(2):

1168-1169. 1883 and *Contributions from the United States National Herbarium* 41: 20-33. 2001.

Athrolophis (Trin.) Chiov. = *Andropogon* L.

From the Greek *athroos* “crowded, crowded together” and *lophos* “a crest, back of the neck, ridge, tuft.”

Panicoideae, Andropogoneae, Andropogoninae, see *Species Plantarum* 2: 1045-1046. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 268. 1832 and *Bolletino della Società Botanica Italiana* 1917: 57. 1917, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64. 2003.

Athroostachys Benth. = *Achroostachys* Benth.

Crowded spike, from the Greek *athroos* “crowded, crowded together” and *stachys* “a spike.”

One species, South America, Brazil. Bambusoideae, Bambusoideae, Bambuseae, or Bambusoideae, Bambuseae, Arthrostylidiinae, perennial, sympodial, arching, scrambler, vining, scandent, climbing, woody, nearly solid, unarmed, branched, clumped, hollow, leaf blades pseudopetiolate, rhizomes pachymorph, plants bisexual, inflorescence compound and short-stalked, spikelets with 1 fertile floret and 1 sterile or rudimentary, racemes in globose head with branchlets subtended by small bracts, 2 glumes unequal, palea present, 3 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, lowland forests, type *Athroostachys capitata* (Hook.) Benth., see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Transactions of the Linnean Society of London* 26(1): 50. 1868, *J. Linn. Soc. Bot.* 19: 134. 1881, *Genera Plantarum* 3: 1208-1209. 1883 and F.A. McClure, “Genera of bamboos native to the New World (Gramineae: Bambusoideae).” *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Annals of the Missouri Botanical Garden* 74(2): 424-428. 1987, *Thaiszia* 3: 53-88. 1993, *American Bamboos* 160-162. 1999, *Bamboo Science & Culture: The Journal of the American Bamboo Society* 14(1): 1-3. 2000, *Contributions from the United States National Herbarium* 39: 25. 2000.

Species

A. capitata (Hooker) Benth. (*Chusquea fimbriata* Steud.; *Chusquea glomerata* Munro; *Merostachys capitata* Hook.; *Merostachys capitata* var. *angustifolia* Döll; *Merostachys capitata* var. *capitata*)

Eastern Brazil. Shortly rhizomatous, condensed inflorescence capitate, see *Icones Plantarum* 3: t. 273, 274. 1840,

Synopsis Plantarum Glumacearum 1: 338. 1854, *Flora Brasiliensis* 2(3): 217. 1880, *Genera Plantarum* 3: 1209. 1883.

Atractantha McClure

From the Greek *atraktos* “a spindle” and *anthos* “flower,” referring to the inflorescence, to the slender pseudospikelets.

About 2-5/10 species, South America, eastern Brazil. Bambusoideae, Bambuseae, Arthrotyliidiinae, or Bambusoideae, Bambusodae, Bambuseae, perennial, woody, unarmed, sympodial, erect, decumbent, arching, scandent, vining, climber, pendulous, hanging down, solid, branched, narrow sheaths or bracts together in a globose head, ligule an unfringed membrane, leaf blades deciduous or persistent, short rhizomes pachymorph, plants bisexual, inflorescence capitate or racemose, usually pseudospikelets, spikelets solitary, 1-flowered, pungent and needle-like florets, rachilla extension, glumes absent, lemma thorn-like and convolute, palea present, 3 free and fleshy lodicules, 3 stamens, ovary hairy, 2 or rarely 3 stigmas, forming clumps, forest, riverine, coastal, rain forest, sandy soils, edge of rivers, low forest, humid forest, similar to *Alvimia*, type *Atractantha radiata* McClure, see *Smithsonian Contributions to Botany* 9: 42, 50, f. 21-23. 1973, *Novon* 1(2): 76-87. 1991, *Annals of the Missouri Botanical Garden* 79(1): 160-183. 1992 [A revision of *Atractantha* (Poaceae: Bambusoideae: Bambuseae).], *American Bamboos* 162-165. 1999, *Contributions from the United States National Herbarium* 39: 25. 2000.

Species

A. amazonica Judz. & L.G. Clark

Venezuela, Brazil. Leaf blades erect and persistent, true spikelets, see *Novon* 1(2): 78, f. 2. 1991.

A. aureolanata Judz.

Brazil, Bahia.

A. cardinalis Judz.

Brazil, Bahia.

A. falcata McClure

Brazil, Bahia. See *Smithsonian Contributions to Botany* 9: 48, f. 21. 1973.

A. radiata McClure

Brazil, Bahia. Very small leaf blades, condensed inflorescence capitate, see *Smithsonian Contributions to Botany* 9: 50, f. 22-23. 1973.

Atractocarpa Franchet = *Puelia* Franch.

From the Greek *atraktos* “a spindle” and *karpos* “fruit.”

Bambuseae, type *Atractocarpa olyrififormis* Franch., see *Bulletin Mensuel de la Société Linnéenne de Paris* 1:

674-675, 676. 1887, *Conspectus Florae Africae* 5: 945. 1894 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 124-125. 1901, *Kew Bulletin* 20: 273. 1966, *Hooker's Icones Plantarum* 37: t. 3642. 1967, *Fl. Trop. E. Afr. Gramin.* 1: 15. 1970.

Atropis (Trinius) Grisebach = *Atropis* (Trin.) Rupr. ex Griseb., *Atropis* Rupr., *Puccinellia* Parl.

From the Greek *a* “lacking” and *tropis* “ship, keel.”

Poaceae, see *Prodromus Florae Novae Hollandiae* 179. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 68. 1836, *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 64. 1845, *Flora italiana, ossia descrizione delle piante ...* 1: 366-367, 370. 1848, *Flora Rossica* 4(13): 388. 1852, *Genera Plantarum* 3(2): 1198. 1883 and *Flora URSS* 2: 470. 1934, N.L. Bor (1893-1972), *Flora Iranica: Gramineae* 70: 62. Graz 1970, *Zlakii SSSR* 500. 1976, *Contributions from the United States National Herbarium* 48: 591-601. 2003.

Aulacolepis Hackel = *Aniselytron* Merr., *Aulacolepis* Ettingsh. (Pinaceae), *Calamagrostis* Adans.

Greek *aulax*, *aulakos* “a furrow” and *lepis* “a scale.”

Aveneae, type *Aulacolepis treutleri* (Kuntze) Hack., see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung I* 102: 135, 147. 1893, *Transactions of the Linnean Society of London, Botany* 4: 247, t. 20c, 10-16. 1894, *Hooker's Icones Plantarum* 27: sub t. 2607. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 3(42-43): 241-244. 1906 [1907], *Philippine Journal of Science* 5: 328-330. 1910, *Brittonia* 2(2): 117. 1936, *Indian Forester* 107(7): 434. 1981, H.M. Korthof and J.F. Veldkamp, “A revision of *Aniselytron* with some new combinations in *Deyeuxia* in SE. Asia (Gramineae).” *The Gardens' Bulletin Singapore* 37(2): 213-223. 1984.

Aulaxanthus Elliott = *Anthaenantia* P. Beauv., *Anthenantia* P. Beauv.

Greek *aulax*, *aulakos*, *alox*, *alokos* “a furrow” and *anthos* “flower.”

Panicoideae, Paniceae, Paspalinae, type *Aulaxanthus ciliatus* Elliott, see *Essai d'une Nouvelle Agrostographie* 48,

151, t. 10, f. 7. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 102-103. 1816, *Mantissa* 2: 258. 1824, *Révision des Graminées* 1: 35. 1829, *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna* 2: 596, t. 41, f. 1. 1850 and *Contributions from the United States National Herbarium* 46: 65-66. 2003.

Aulaxia Nutt. = *Anthaenantia* P. Beauv.,
Anthenantia P. Beauv., *Aulaxanthus* Elliott

Greek *aulax*, *aulakos*, *alox*, *alokos* “a furrow.”

Panicoideae, Paniceae, Paspalinae, see *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 102-103. 1816, *Genera Plantarum* 1: 47-48. 1818 and *Contributions from the United States National Herbarium* 46: 65-66. 2003.

Aulonemia Goudot = *Matudacalamus*
Maekawa

Greek *aulos* “a tube, flute” and *nemos* “wooded pasture, glade, a grove,” some suggest from *nema* “thread, filament.”

About 24-34 species, Mexico to Bolivia, Brazil. Bambusoideae, Bambuseae, Arthrostylidiinae, or Bambusoideae, Bambusodae, Bambuseae, perennial, sympodial, unarmed, erect, hollow or solid, bushy or scrambling, scandent, climbing over the low vegetation, woody, rather succulent, caespitose, viscid band at nodes, slender internodes, clump-forming, leaf blades pseudopetiolate and not coriaceous, rhizomes pachymorph, plants bisexual, inflorescence an open panicle, glumes 2-3, lemmas often or sometimes awned, palea present, 3 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, savannah, in grassy páramo, boggy areas of páramo, tropical forests, on cliffs, open forest, margins of swampy places, type *Aulonemia queko* Goudot, see *Annales des Sciences Naturelles; Botanique*, sér. 3 5: 75-76. 1846 and *Journal of Japanese Botany* 36(10): 343-345. 1961, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Annals of the Missouri Botanical Garden* 72(4): 864-873. 1985, *Brittonia* 40: 22-31. 1988, *Annals of the Missouri Botanical Garden* 77(2): 353-358. 1990, *Novon* 1(2): 76-87. 1991, *Novon* 2(2): 81-110. 1992, *American Journal of Botany* 79(4): 478-480. 1992, *Flora Mesoamericana* 6: 198-199. 1994, *Brittonia* 49(4): 503-507. 1997, *American Bamboos* 165-172. 1999, *Contributions from the United States National Herbarium* 39: 25-29. 2000, *Botanical Journal of the Linnean Society* 138(1): 45-55. Jan 2002 [Cauline anatomy of native woody bamboos in Argentina and neighbouring areas: epidermis].

Species

A. amplissima (Nees) McClure (*Arthrostylidium amplissimum* (Nees) McClure; *Arundinaria amplissima* Nees)

Brazil. See *Linnaea* 9(4): 479. 1834 and *Fieldiana Bot.* 28(1): 33. 1951.

A. aristulata (Döll) McClure (*Arundinaria aristulata* (Döll) McClure; *Arundinaria aristulata* Döll; *Arundinaria mucronata* Munro ex E.G. Camus; *Sieglingia aristulata* (Döll) Kuntze)

Brazil. See *Flora Brasiliensis* 2(3): 165, pl. 44. 1880 and *Smithsonian Contributions to Botany* 9: 56. 1973.

A. bogotensis L.G. Clark

Colombia. See *Brittonia* 49(4): 504, f. 1. 1997.

A. boliviana Renvoize

Bolivia. Bushy or scrambling, scandent, climbing over the low vegetation, open inflorescence, spikelets linear, glumes oblong to ovate, lemmas lanceolate, moist woods, forest, see *Gramíneas de Bolivia* 39, f. 3A. 1998.

A. chimantaensis Judz. & Davidse

Venezuela. See *Novon* 1(2): 80, f. 3G-J. 1991.

A. clarkiae Davidse & R.W. Pohl (for the agrostologist Lynn G. Clark, b. 1956)

Mexico. See *Novon* 2(2): 84, f. 2. 1992.

A. deflexa (N.E. Br.) McClure (*Arthrostylidium steyermarkii* McClure; *Arundinaria deflexa* N.E. Br.; *Aulonemia steyermarkii* (McClure) McClure) (for to the American botanist Julian Alfred Steyermark, 1909-1988, botanical explorer, specialist on Rubiaceae, traveler, with Paul C. Standley curator of the *Flora of Guatemala*. [Fieldiana, Botany, vol. 24, etc.] Published by Chicago Natural History Museum; see J.A. Steyermark & collaborators, “Botanical Exploration in Venezuela.” in *Fieldiana, Bot.* 1951-1952; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 383. 1972; J.H. Barnhart, *Biographical notes upon botanists*. 3: 330. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 388. 1973; Stafleu & Cowan, *Taxonomic literature*. 5: 925-926. 1985)

Venezuela, Guyana. See *Trans. Linn. Soc. London, Bot.* 6(1): 75. 1901, *Fieldiana, Botany* 28(1): 31, f. 3. 1951, *Smithsonian Contributions to Botany* 9: 56, 61. 1973.

A. effusa (Hack.) McClure (*Arthrostylidium effusum* (Hack.) McClure; *Arundinaria effusa* Hack.; *Arundinaria glaziovii* Hack.; *Aulonemia aristulata* (Döll) McClure; *Aulonemia glaziovii* (Hack.) McClure)

Brazil. See *Flora Brasiliensis* 2(3): 165, pl. 44. 1880 and *Österreichische Botanische Zeitschrift* 53(2): 71-72. 1903, *Fieldiana, Botany* 28(1): 31. 1951, *Smithsonian Contributions to Botany* 9: 56. 1973.

A. fulgor Soderstr.

Mexico. See *Brittonia* 40(1): 22, f. 1b, 2. 1988.

- A. glaziovii** (Hack.) McClure (*Arundinaria glaziovii* Hack.; *Arundinaria glaziovii* var. *glaziovii*) (for the French botanist Auguste François Marie Glaziou, 1828-1906, traveler, plant collector in Brazil, author of "Plantae Brasiliae centralis a Glaziou lecta. Liste des plantes du Brésil Central recueillies en 1861-1895." in *Mém. Soc. Bot. France*. 1(3): 1-661. 1905-1913, collaborator of Antoine L.A. Fée (1789-1874) for *Cryptogames vasculaires du Brésil* ... avec le concours ... de ... F.M.G. Strasbourg 1869. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 54. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 145. 1972; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 715. Stuttgart 1993; D. de Andrade Lima, "Plantas das Caatingas." *Academia Brasileira de Ciências*, Rio de Janeiro. 218-219. 1989; Raymond M. Harley, "Plant Diversity: Kew's Role in North-east Brazil." *The Kew Magazine*. vol. 9. 3: 103-116. Aug 1992; Simon Mayo, "Neoglaziovia variegata (Bromeliaceae)." *The Kew Magazine*. vol. 9. 3: 124-127. Aug 1992)
- Brazil. See *Österreichische Botanische Zeitschrift* 53(2): 72. 1903, *Smithsonian Contributions to Botany* 9: 56. 1973.
- A. goyazensis** (Hack.) McClure (*Arundinaria goyazensis* Hack.)
- Brazil. See *Österreichische Botanische Zeitschrift* 53(2): 71. 1903, *Smithsonian Contributions to Botany* 9: 56. 1973.
- A. haenkei** (Rupr.) McClure (*Arthrostylidium haenkei* Rupr.; *Arundinaria haenkei* (Rupr.) Hack.; *Arundinaria setifera* Pilg.; *Arundinaria sodiroana* Hack.; *Aulonemia sodiroana* (Hack.) McClure) (for the botanical collector Thaddäus Peregrinus Xaverius Haenke, 1761-1816 or 1817)
- Peru, Ecuador. See *Bambuseae* 27, t. 3, f. 12. 1839 and *Österreichische Botanische Zeitschrift* 53(2): 69-70. 1903, *Repert. Spec. Nov. Regni Veg.* 1(10): 145. 1905, *Smithsonian Contributions to Botany* 9: 56, 61. 1973.
- A. herzogiana** (Henrard) McClure (*Arundinaria herzogiana* Henrard)
- Bolivia. Dense inflorescence, panicle exserted, see *Mededeelingen van's Rijks-Herbarium* 40: 75. 1921, *Smithsonian Contributions to Botany* 9: 56. 1973.
- A. hirtula** (Pilg.) McClure (*Arundinaria hirtula* Pilg.)
- Peru, Ecuador. See *Repert. Spec. Nov. Regni Veg.* 17(19-30): 445. 1921.
- A. humillima** (Pilg.) McClure (*Arundinaria humillima* Pilg.)
- Peru. See *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 47: 100. 1905, *Smithsonian Contributions to Botany* 9: 58. 1973.
- A. jauaensis** Judz. & Davidse
- Venezuela, Cerro Jaua. See *Novon* 1(2): 83, f. 3A-F. 1991.
- A. laxa** (F. Maekawa) McClure (*Matudacalamus laxus* F. Maek.)
- Mexico. See *J. Jap. Bot.* 36(10): 345. 1961.
- A. longiaristata** L.G. Clark & Londoño
- Ecuador. See *Annals of the Missouri Botanical Garden* 77(2): 353-358. 1990.
- A. longipedicellata** Renvoize
- Bolivia. Panicle ovate, see *Gram. Bolivia* 41, f. 3B. 1998.
- A. parviflora** (J. Presl) McClure (*Arthrostylidium maculatum* Rupr.; *Arundinaria maculata* Hack.; *Bambusa parviflora* (J. Presl) Schult. & Schult.f.; *Guadua parviflora* J. Presl)
- Peru. See *Syst. Veg.* 7(2): 1350. 1830, *Reliq. Haenk.* 1(4-5): 257. 1830, *Bambuseae* 28, t. 5. 1839 and *Oesterr. Bot. Z.* 53(2): 69, 516. 1903.
- A. patriae** R.W. Pohl (*Lingnania atra* McClure)
- Panama, Costa Rica. See *Journal of the Arnold Arboretum* 23(1): 98-99. 1942, *Fieldiana, Bot.*, n.s. 4: 68. 1980, *Annals of the Missouri Botanical Garden* 68(1): 225-226. 1981.
- A. patula** (Pilg.) McClure (*Arundinaria patula* Pilg.; *Arundinaria sodiroana* Hack.; *Aulonemia sodiroana* (Hack.) McClure)
- Peru, Ecuador. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 719. 1898 and *Oesterr. Bot. Z.* 53(2): 70. 1903.
- A. pumila** L.G. Clark & Londoño
- Colombia. See *Annals of the Missouri Botanical Garden* 77(2): 353-358. 1990.
- A. purpurata** (McClure) McClure (*Arthrostylidium purpuratum* McClure)
- Venezuela. See *J. Wash. Acad. Sci.* 32(6): 170, f. 3. 1942.
- A. queko** Goudot (*Arthrostylidium queko* (Goudot) Hack.; *Arundinaria queko* (Goudot) Hack.)
- Peru, Colombia, Ecuador. See *Annales des Sciences Naturelles; Botanique, sér. 3* 5: 76, t. 4. 1846, *Nat. Pflanzenz.* 2(2): 93. 1887 and *Oesterr. Bot. Z.* 53(2): 74. 1903.
- A. radiata** (Rupr.) McClure & L.B. Sm. (*Arundinaria radiata* Rupr.)
- Brazil. See *Bambuseae* 25, t. 15, f. 9. 1839 and *Flora Illustrada Catarinense* 1(GRAM-Supl.): 56, t. 9. f. a-i. 1967.
- A. ramosissima** (Hack.) McClure (*Arundinaria glaziovii* var. *macroblephara* E.G. Camus; *Arundinaria ramosissima* Hack.)
- Brazil. See *Österreichische Botanische Zeitschrift* 53(2): 72, 74. 1903, *Les Bambusées* 41, Atlas t. 34, f. 8. 1913.
- A. robusta** L.G. Clark & Londoño

Colombia, Venezuela. See *Annals of the Missouri Botanical Garden* 77(2): 356, f. 2D-E, 3. 1990.

A. setigera (Hack.) McClure (*Arthrostylidium aristatum* Glaz. ex Camus; *Arundinaria setigera* Hack.)

Brazil. See *Oesterr. Bot. Z.* 53(2): 73. 1903, *Les Bambusées* 67, Atlas t. 40, f. A. 1913.

A. sodiroana (Hackel) McClure (*Arundinaria sodiroana* Hackel ex Sodiro; *Arundinaria sodiroana* Hackel; *Aulonemia haenkei* (Rupr.) McClure; *Aulonemia patula* (Pilg.) McClure)

Ecuador. See *Bambuseae* 27, t. 3, f. 12. 1839, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 719. 1898 and *Österreichische Botanische Zeitschrift* 53(2): 70. 1903, *Smithsonian Contributions to Botany* 9: 56, 58, 61. 1973.

A. steyermarkii (McClure) McClure (*Arthrostylidium steyermarkii* McClure; *Aulonemia deflexa* (N.E. Br.) McClure)

Venezuela. See *Fieldiana, Botany* 28(1): 31, f. 3. 1951, *Smithsonian Contributions to Botany* 9: 56, 61. 1973.

A. subpectinata (Kuntze) McClure (*Arthrostylidium subpectinatum* Kuntze)

Venezuela. See *Revis. Gen. Pl.* 2: 760. 1891 and *Smithsonian Contributions to Botany* 9: 61. 1973.

A. tremula Renvoize

Bolivia. Panicle ovate, see *Gram. Bolivia* 39, f. 3C. 1998.

A. trianae (Munro) McClure (*Arundinaria multiflora* Döll; *Arundinaria trianae* Munro) (for the Colombian botanist José Jerónimo (or Gerónimo) Triana, 1834-1890 (d. Paris), traveler, plant collector, botanical explorer, journalist, his writings include *Nuevos jeneros i especies de plantas para la flora Neo-Granadina*. Bogotá 1854 and *Prodromus florae Novogranatensis*. Paris 1862-1867; see Enrique Pérez Arbeláez, in *D.S.B.* 13: 463-464. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 400. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 406. Boston, Mass. 1972; M. Colmeiro y Penido, *La Botánica y los Botánicos de la Peninsula Hispano-Lusitana*. Madrid 1858; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Colombia. See *Fl. Bras.* 2(3): 166. 1880, *Trans. Linn. Soc. London* 26(1): 25. 1868 and *Smithsonian Contributions to Botany* 9: 61. 1973.

A. ulei (Hack.) McClure & L.B. Sm. (*Arundinaria ulei* Hack.) (for the German botanist Ernst Heinrich Georg Ule, 1854-1915, plant collector, botanical explorer in Brazilian highlands and in Venezuela (Alta Guayana venezolana,

Mniang, Caroní, Cuquenán), from 1913 to 1914 assistant at the Botanical Museum Berlin, among his many works are *Die Vegetation des Roraima*. Leipzig und Berlin 1914, "Bericht über den Verlauf der zweiten Expedition in das Gebiet des Amazonasstromes in den Jahren 1908 bis 1912." *Notizbl. d. königl. bot. Gart. u. Mus.-Berlin*. 6: 78. 1914, "Die Pflanzenformationen des Amazonas-gebietes. II." *Bot. Jahrb. Syst.* 40(3): 398-432. 1908, "II. Beiträge zur Flora der Hylaea nach den Sammlungen von Ule's Amazonas-Expedition." *Verh. Bot. Vereins Prov. Brandenburg*. 48(2): 116-222. 1907 and "Über eine neue Gattung der Cappariaceen." *Ber. deut. bot. Ges.* 26a(3): [220]-224. pl. 2. 1908; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 414. 1965; Stafleu & Cowan, *Taxonomic literature*. 6: 578-583. 1986; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 792. 1993; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 410. Boston, Mass. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 258. Oxford 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Henri François Pittier, *Manual de las Plantas Usuales de Venezuela y su Suplemento*. Caracas 1971; H. Genast, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 667. 1996; August Weberbauer (1871-1948), *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. Leipzig 1911; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Brazil. See *Österreichische Botanische Zeitschrift* 53(2): 75. 1903, *Flora Illustrada Catarinense* 1(GRAM-Supl.): 57, t. 10, f. j-r. 1967.

A. viscosa (Hitche.) McClure (*Arundinaria viscosa* Hitche.)

Venezuela, Costa Rica. See *Proc. Biol. Soc. Wash.* 40: 79. 1927, *Smithsonian Contributions to Botany* 9: 61. 1973.

Australopyrum (Tzvelev) Á. Löve = Agropyron Gaertn.

From the Latin *australis* "southern" and Greek *pyros* "grain, wheat," a small genus from Eastern Australia; in *Feddes Rept.* 95: 442. 1984.

About 5 species, Australia, New Zealand, New Guinea. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, caespitose, herbaceous, unbranched, erect, stiff, leaf sheath hairy, ligule membranous and lacerate, auricles clasping, leaf blade softly pubescent and erect, plants bisexual, chasmogamous or cleistogamous, inflorescence a single spike-like raceme or a dense spike, spikelets solitary and spreading, spikelet shortly pedicelled, 2 unequal glumes persistent and rigid, hairy or glabrous

glumes more or less sharply reflexed outward and downward, lemmas pointed and awned, palea apically notched and awnless, 2 lodicules ciliate or glabrous, 3 stamens, ovary hairy with hairy apical corona, 2 stigmas, formerly included in and sometimes referred to *Agropyron* Gaertner, sometimes included in *Agropyron* Gaertn., see *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539-540. 1770 and *Willdenowia* 5: 473. 1969, *Novosti Sist. Vyss. Rast.* 10: 35. 1973, *Feddes Repertorium* 95(7-8): 442-443. 1984, *Pl. Syst. Evol.* 166: 159-171. 1989, J.F. Veldkamp & H.J. van Scheindelen, "Australopyrum, Brachypodium, and Elymus (Gramineae) in Malesia." *Blumea* 34: 61-76. 1989, H.E. Connor, B.P. Molloy, M.I. Dawson, "Australopyrum (Triticeae: Gramineae) in New Zealand." in *New Zealand Journal of Botany* 31: 1-10. 1993, *Bot. Rev.* 59: 273-343. 1993, *Genome* 36: 147-151. 1993, H.E. Connor, "Indigenous New Zealand Triticeae: Gramineae." in *New Zealand Journal of Botany* 32: 125-154. 1994, *Syst. Bot.* 21: 321-347. 1996, *Phytologia* 83(5): 345-365. 1997, *Bot. Rev.* 64: 372-417. 1998, *Flora of New Zealand* 5: 378-383. 2000, *Contributions from the United States National Herbarium* 48: 25-42. 2003.

Species

A. calcis Connor & Molloy

New Zealand. Perennial, tufted, slender, geniculate and decumbent, stoloniferous, ligule lacerate, leaf sheath more or less glabrous or hairy, auricles clasping, short spike-like raceme, see *New Zealand Journal of Botany* 31(1): 2, f. 1-2. 1993 and 32: 37-51. 1994.

in English: limestone wheatgrass

A. calcis Connor & Molloy subsp. *calcis*

New Zealand. Stout, rachis glabrous, limestone wheat grass, confined to limestone ecosystems, rare and endangered grass, grows in partial shade, unpalatable to grazing animals, see B.P. Molloy, "Observations on the ecology and conservation of *Australopyrum calcis* (Triticeae: Gramineae) in New Zealand." in *N.Z. J. Bot.* 32(1): 37-51. 1994.

in English: limestone wheat grass

A. calcis Connor & Molloy subsp. *optatum* Connor & Molloy

New Zealand. Rachis hairy, vulnerable grass, unpalatable to grazing animals, see *New Zealand Journal of Botany* 31(1): 4, f. 2, 4. 1993.

in English: limestone wheat grass

A. pectinatum (Labill.) Á. Löve (*Agropyron brownei* (Kunth) Tzvelev; *Agropyron pectinatum* (Labill.) P. Beauv.; *Agropyron retrofractum* Vickery; *Australopyrum retrofractum* (Vickery) Á. Löve; *Eremopyrum brownei* (Kunth) Candargy; *Festuca pectinata* Labill.; *Triticum brownei* Kunth;

Triticum pectinatum (Labill.) R. Br.; *Vulpia pectinata* (Labill.) Nees)

Australia, Victoria, New South Wales, Tasmania. Perennial, erect or geniculate at the base, tufted, slender, smooth and glabrous to coarse and hairy, compact, culm internodes hairy, leaf sheath villous, auricles present, ligule hyaline to membranous, leaf blade involute or flat, inflorescence a single spike to a raceme to a spike-like raceme, cleistogamous and distichous spikelets divaricate or spreading, lower spikelets pointed downward, glumes more or less equal and coriaceous, florets and sharp glumes reflexed and pungent-pointed, lemma keeled, palea narrowly ovate to narrowly elliptic, 2 lodicules free and hyaline, fruit obovoid and slightly dorsiventrally compressed, alpine and subalpine, growing in alpine heaths, high elevations, subalpine subhumid grasslands, on swampy lands, temperate wet sclerophyll forests, see *Novae Hollandiae Plantarum Specimen* 1: 21, t. 25. 1805, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812 and *Contributions from the New South Wales National Herbarium* 1(6): 340. 1951, *Taxon* 34(2): 86. 1983, *Feddes Repertorium* 95(7-8): 443. 1984.

in English: comb wheatgrass, wheatgrass

A. retrofractum (Vickery) Á. Löve (*Agropyron retrofractum* Vickery; *Australopyrum pectinatum* (Labill.) Á. Löve subsp. *retrofractum* (Vickery) Á. Löve)

Victoria, New South Wales, Tasmania. Perennial, spiny, coarse, erect or ascending and geniculate at the base, loosely tufted, culm internodes glabrous, leaf sheath pilose, auricles present and clasping, ligule truncate to erose, leaves stiff, erect and dense single spike with cleistogamous spikelets stiff and distichous, florets appressed to rachis, rachis with retrorse hairs, glumes subequal and reflexed with short pungent awns, lemmas lanceolate, ciliate palea narrowly ovate to narrowly elliptic and membranous to chartaceous, fruit compressed, unpalatable, alpine grass, found in rocky slopes, alpine herbfields, black cracking clay, grasslands, lowland, temperate subhumid grassland, see *Novae Hollandiae Plantarum Specimen* 1: 21, t. 25. 1805, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 417. 1843 and *N.Z. J. Agric.* 3: 1-8. 1911, *New Zealand DSIR Bull.* 49. 1936, *New Zealand DSIR Bull.* 83. 1940, *Contributions from the New South Wales National Herbarium* 1(6): 340. 1951, *Taxon* 34(2): 86. 1983, *Feddes Repertorium* 95(7-8): 443. 1984, *Telopea* 3: 601-603. 1990.

A. uncinatum Veldkamp

Papua New Guinea, Asia tropical. See *Blumea* 34(1): 67, f. 1a. 1989.

A. velutinum (Nees) B.K. Simon (*Agropyron velutinum* Nees; *Australopyrum retrofractum* (Vickery) Á. Löve subsp. *velutinum* (Nees) Á. Löve)

Australia, Victoria, Victorian Alps, New South Wales, Kosciuszko National Park, Tasmania. Perennial, erect, tufted, smooth and glabrous, auricles present and short,

ligule membranous and truncate, leaf blade scabrous or densely hirsute, a single spike to a raceme, greenish chasmogamous spikelets, glumes acuminate and reflexed, lemmas with awnlike points, palea 2-keeled, fruit obovoid to oblong and ventrally compressed, rare species, alpine and subalpine, humid grassland, high plains, alpine herbfields, high altitudes, snowy flats, see *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 417. 1843 and *Feddes Repertorium* 95(7-8): 443. 1984, *Austrobaileya* 2(3): 238-242. 1986.

in English: mountain wheatgrass, velvet wheatgrass

Austrochloris Lazarides

A genus from Australia, Queensland, Latin *australis* "southern" plus *Chloris* Swartz.

One species, Australia. Chloridoideae, perennial, herbaceous, tufted, leaf blades linear, auricles absent, ligule a ciliate membrane, plants bisexual, racemes digitate, spikelets dorsally compressed and solitary, 1 bisexual floret, 2 glumes narrow and divergent, upper glume deciduous and acuminate, 1 fertile floret, lemma sterile cuneate, fertile lemma awned and acute, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, savannah, type *Austrochloris dichanthioides* (Everist) Lazarides, see *Nova Genera et Species Plantarum seu Prodromus* 1, 25. 1788 and *Australian Journal of Botany. Supplementary Series*. 5: 1-51. (Nov) 1972, D.E. Anderson, "Taxonomy of the genus *Chloris* (Gramineae)." *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Contributions from the United States National Herbarium* 41: 39-52. 2001.

Species

A. dichanthioides (Everist) Lazarides (*Chloris dichanthioides* Everist)

Queensland. See *Queensland Agricultural Journal* 49(5): 432, t. 155. 1938, *Australian Journal of Botany, Supplementary Series* 5: 35. 1972.

Austrodanthonia H.P. Linder

From the Latin *australis* (*auster* "the south wind, the south") "southern" and the genus *Danthonia* DC., referring to the southern species; sometimes referred to *Danthonia* s.l., *Rytidosperma* s.l., *Notodanthonia* s.l., *Thonandia* superfluous, *Austrodanthonia* proposed.

A genus of 28 species, New Zealand, Australia and New Guinea. Arundinoideae, or Danthonioideae, Danthonieae, perennial, caespitose, herbaceous, erect, rarely decumbent, ligule a fringe of hairs, culm leaves absent, solid internodes, leaf blades linear-lanceolate, auricles absent, plants bisexual, inflorescence spicate or paniculate, large callus, 2

glumes more or less equal, lemmas smooth, lemma indumentum more or less tufted, palea present, 2 fleshy and free lodicules, 3 stamens, ovary glabrous, 2 stigmas, valuable native pasture species, tolerant of heavy grazing and drought, open habitats, some species adapted to acid soils, very similar to *Notodanthonia*, *Joycea*, *Rytidosperma* and *Karroochloa*, type *Austrodanthonia caespitosa* (Gaudich.) H.P. Linder, see *Flore Française. Troisième Édition* 3: 32. 1805, *Synopsis Plantarum Glumacearum* 1: 425. 1854 and *New Zealand Journal of Botany* 1: 104, 122. 1963, S.T. Blake, "*Plinthanthesis* and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae)." *Contributions from the Queensland Herbarium* 14: 3. 1972, H.P. Linder & G.A. Verboom, "Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex." *Telopea* 6(4): 597-627. 1996, H.P. Linder, "Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae)." *Telopea* 7(3): 269-274. 1997, *Biological Journal of the Linnean Society* 81(2): 275-299. Feb 2004, *Ecological Management and Restoration* 6(1): 73-75. Apr 2005, *Austral. Ecology* 29(3): 320-331. June 2004, *Australian Journal of Entomology* 43(3): 216-234. July 2004, *Ecological Management and Restoration* 5(2): 131-134. Aug 2004, *Ecography* 27(6): 798-810. Dec 2004, *Flora of Australia* vol. 44B, Poaceae 3: 45-63. 2005, *Ecological Management and Restoration* 6(1): 16-27, 28-33, 34-42, 51-60. Apr 2005, *Austral. Ecology* 30(3): 336-347. May 2005.

Species

A. acerosa (Vickery) H.P. Linder (*Danthonia acerosa* Vickery; *Notodanthonia acerosa* (Vickery) Veldkamp; *Rytidosperma acerosa* (Vickery) Connor & Edgar; *Rytidosperma acerosum* (Vickery) Connor & Edgar)

Australia. Perennial, tufted, see *Contributions from the New South Wales National Herbarium* 1: 296. 1950, *New Zealand Journal of Botany* 17(3): 331. 1979, *Taxon* 29: 296. 1980.

A. alpicola (Vickery) H.P. Linder (*Danthonia alpicola* Vickery; *Danthonia semiannularis* var. *alpina* Benth.; *Notodanthonia alpicola* (Vickery) Veldkamp; *Rytidosperma alpicola* (Vickery) Connor & Edgar; *Rytidosperma alpicolum* (Vickery) Connor & Edgar)

New South Wales, Victoria, Tasmania. Perennial, tufted, erect, small or dwarf, somewhat prickly, leaves stiff and rigid and almost pungent-pointed, culms geniculate at the nodes, dense panicle, spikelets crowded and hairy, 4-6 florets, glumes subequal, long exerted awns, grows at high altitude, rocky areas, pot specimen, see *Flora Australiensis: A Description ...* 7: 595. 1878 and *Contributions from the New South Wales National Herbarium* 1: 297. 1950, *Contr. New South Wales Natl. Herbarium* 2: 300. 1956, *New Zealand Journal of Botany* 17(3): 331. 1979, *Taxon* 29: 296. 1980.

in English: crab wallaby-grass, crag wallaby-grass, alpine grass

A. auriculata (J.M. Black) H.P. Linder (*Danthonia auriculata* J.M. Black; *Notodanthonia auriculata* (J.M. Black) Zotov; *Rytidosperma auriculatum* (J.M. Black) Connor & Edgar)

South Australia, Victoria, New South Wales. Perennial, erect and slender, tufted or caespitose, sometimes geniculate at the base, leaves flat or inrolled, leaf blades fine and pilose, compact inflorescence ovate to oblong, dense panicle much exserted sometimes reduced to a raceme, spikelets circa 6-flowered, glumes much longer than the florets, natural pastures, usually on loamy or clay soils, see *Transactions and Proceedings of the Royal Society of South Australia* 53: 261. 1929, *Contr. New South Wales Natl. Herbarium* 2: 309. 1956, *New Zealand Journal of Botany* 1: 113. 1963, *New Zealand Journal of Botany* 17(3): 322. 1979.

in English: lobed wallaby-grass

A. biannularis (Zotov) H.P. Linder (*Notodanthonia biannularis* Zotov; *Rytidosperma biannulare* (Zotov) Connor & Edgar)

New Zealand. See *New Zealand Journal of Botany* 1: 116. 1963, *New Zealand Journal of Botany* 17(3): 324. 1979.

A. bipartita (Link) H.P. Linder (*Avena bipartita* Link; *Danthonia linkii* Kunth; *Notodanthonia bipartita* (Link) Veldkamp; *Notodanthonia linkii* (Kunth) H.P. Linder; *Rytidosperma linkii* Connor & Edgar; *Rytidosperma linkii* (Kunth) Connor & Edgar)

Victoria, South Australia, Queensland, New South Wales. Perennial, densely caespitose, erect, variable, leaf blade flat to loosely or closely involute, panicle spreading or contracted, spikelets 6-flowered, glumes subequal with membranous margins, lemma body hairy, grows on heavy clay or loamy soils, see *Hortus Regius Botanicus Berolinensis* 1: 113. 1827, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 315. 1833 and *Taxon* 29: 296. 1980, *Telopea* 6(4): 616. 1996, *New Zealand Journal of Botany* 17(3): 332. 1979.

A. bonthainica (Jansen) H.P. Linder (*Danthonia bonthainica* (Jansen) Veldkamp; *Danthonia pilosa* var. *bonthainica* Jansen; *Notodanthonia bonthainica* (Jansen) H.P. Linder; *Notodanthonia penicillata* subsp. *bonthainica* (Jansen) Veldkamp; *Rytidosperma bonthainicum* (Jansen) Veldkamp) (Bonthain Bay, southeast of Makassar, Sulawesi (formerly Celebes). The *Swallow*, of Captain Carteret, reached the Strait of Macassar (14/11/1767), and then sailed to Macassar on Sulawesi (15/12/1767), and then on to Bonthain (21/12/1767), where they spent some five months recuperating and trying to make the *Swallow* seaworthy. Philip Carteret, (circumnavigator, born in Jersey (Channel Islands) on 22 January 1733, died at Southampton on 21 July 1796, voyager, sailed as First Lieutenant of the *Tamar*

(later transferred to the *Dolphin*) in John Byron's voyage of discovery round the world 1764-1766, commanded the sloop *Swallow* in Samuel Wallis's expedition round the world 1766, in 1777 commanded the *Druid* for an expedition to the West Indies, he discovered and named Pitcairn, Queen Charlotte's Islands, Vanikoro, Ndai, Kilinailau Islands (Carteret Islands), Buka, Admiralty Islands, etc. See John Byron (1723-1786), *A Journal of a Voyage round the World in ... Dolphin*. London 1767; H. Carrington, editor, *The Discovery of Tahiti: A Journal of the Second Voyage of HMS Dolphin under the command of Captain Wallis RN*. London 1948, R.E. Gallagher, editor, *Byron's Journal of His Circumnavigation 1764-1766*. Cambridge 1964; John Dunmore, *Who's Who in Pacific Navigation*. 48-50. Honolulu 1991; John Hawkesworth (c. 1715-1773), *An Account of the Voyages ... by Commander Byron, Captain Wallis, Captain Carteret and Captain Cook*. London 1773; H. Wallis, editor, *Carteret's Voyage Round the World 1766-1769*. Cambridge 1965; [John Barrow], *A Description of Pitcairn's Island and its Inhabitants, with an Authentic Account of the Mutiny of the Ship Bounty and of the Subsequent Fortunes of the Mutineers*. J. & J. Harper, New York 1833)

Asia, Indonesia. See *Prodromus Florae Novae Hollandiae* 177. 1810 and *Reinwardtia* 2(2): 258. 1953, *Taxon* 29(2-3): 298. 1980, *Blumea* 38(1): 217. 1993, *Telopea* 6(4): 615. 1996, *Telopea* 7(3): 270. 1997, *Reinwardtia* 12(2): 139. 2004.

A. caespitosa (Gaudich.) H.P. Linder (*Danthonia caespitosa* Gaudich.; *Notodanthonia caespitosa* (Gaudich.) Zotov; *Danthonia semiannularis* sensu J. Black, non (Labill.) R. Br.; *Rytidosperma caespitosum* (Gaudich.) Connor & Edgar)

Australia. Perennial, slender to robust, decorative, tufted, forming dense tussocks, erect, leaf sheaths densely hairy, hirsute to glabrous flat or involute leaves, inflorescences compact and bristled, soft panicles exserted and linear-lanceolate to lanceolate, spikelets pale and light green, 4-9 florets, glumes subequal with membranous margins, lemma with hairy callus, native pasture grass, very variable and highly palatable, useful in the drier regions, can withstand heavy grazing, see *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 4: 408. 1826 and *New Zealand Journal of Botany* 1: 117. 1963, *New Zealand Journal of Botany* 17(3): 325. 1979.

in English: common wallaby-grass, white top, ringed wallaby-grass

A. carphoides (Benth.) H.P. Linder (*Austrodanthonia carphoides* (F. Muell. ex Benth.) H.P. Linder; *Danthonia carphoides* F. Muell. ex Benth.; *Notodanthonia carphoides* (Benth.) Zotov; *Notodanthonia carphoides* (F. Muell. ex Benth.) Zotov; *Rytidosperma carphoides* (Benth.) Connor

& Edgar; *Rytidosperma carphoides* (F. Muell. ex Benth.) Connor & Edgar)

New South Wales, Victoria, Tasmania, South Australia. Perennial, very hardy, shortly tufted, small, erect or geniculate at the nodes, leaves filiform and usually inrolled, scabrous and hairy, panicle or raceme dense and ovoid, greenish to purple spikelets on very short pedicels, 3-5 florets, lemma pilose on the back, grows in grassland or woodland, on heavy soils, see *Flora Australiensis: A Description ...* 7: 592. 1878 and *Contr. N.S.W. Herb.* 2: 277. 1956, *New Zealand Journal of Botany* 1: 113. 1963, *New Zealand Journal of Botany* 17(3): 331. 1979.

in English: short wallaby-grass

A. clavata (Zotov) H.P. Linder (*Notodanthonia clavata* Zotov; *Rytidosperma clavatum* (Zotov) Connor & Edgar)

New Zealand. See *New Zealand Journal of Botany* 1: 119. 1963, *New Zealand Journal of Botany* 17(3): 326. 1979.

A. diemenica (D.I. Morris) H.P. Linder (*Danthonia diemenica* D.I. Morris; *Notodanthonia diemenica* (D.I. Morris) H.P. Linder)

Australia, Tasmania. See *Muelleria* 7(2): 153-155, f. 5b, 6. 1989, *Telopea* 6(4): 616. 1996.

A. duttoniana (Cashmore) H.P. Linder (*Danthonia duttoniana* Cashmore; *Notodanthonia duttoniana* (Cashmore) Veldkamp; *Rytidosperma duttonianum* (Cashmore) Connor & Edgar) (species dedicated to the German-born Hon. Francis Staker Dutton, 1816-1877, in 1840s to Australia, Commissioner for Crown Lands in South Australia and Premier, algae collector, wrote *Constitution fuer Suedaustralien*. Im 13 und 14 Regierungsjahre Ihrer Majestaet der Koenigin Victoria. Gesetz zur bessern Regierung der australischen Colonien Ihrer Majestaet. Adelaide 1900 and *South Australia and its Mines*; with an historical sketch of the colony, under its several administrations, to the period of Captain Grey's departure. London 1846; see F. von Mueller, in *Linnaea*. 25: 409. 1853 and *Transactions and Proceedings of the Victorian Institute for the Advancement of Science*. 40. 1855)

South Australia, Victoria, New South Wales. Perennial, robust, stout, densely tufted, forming tussocks, erect, erect, very leafy, culms smooth and shining, sheaths smooth, leaves firm and green to glaucous with blunt apices, panicle finally exserted and oblong to ovate with numerous and clustered spikelets, 5-8 florets, body of the lemma golden brown, central awn strong, anthers orange, pasture species, ornamental, palatable and nutritious feed, clay soils, on poorly drained soils, see *Contr. New South Wales Herb.* 2(3): 304. 1956, *New Zealand Journal of Botany* 17: 332. 1979, *Taxon* 29: 296. 1980.

in English: brown-back wallaby-grass

A. eriantha (Lindl.) H.P. Linder (*Danthonia eriantha* Lindl.; *Notodanthonia eriantha* (Lindl.) Veldkamp; *Rytidosperma erianthum* (Lindley) Connor & Edgar)

Australia. Perennial, erect, densely tufted, sheaths slender and glabrous or hairy, leaves fine and strongly inrolled, culms slender and smooth, inflorescences hairy and loosely compact or contracted, panicle finally much exserted and lanceolate to ovate, panicle branches pilose or pubescent, greenish 4- to 8-flowered spikelets, glumes subequal and longer than the florets, lemma lanceolate, central awn twisted, anthers yellow, ornamental, very hardy, dry conditions, grows in open woodland and plains, native pasture species, grazing species, see *Three Expeditions into the Interior of Eastern Australia* 2: 304. 1838 and *New Zealand Journal of Botany* 17(3): 323. 1979, *Taxon* 29: 296. 1980.

in English: wallaby-grass, woolly wallaby-grass

A. fulva (Vickery) H.P. Linder (*Danthonia linkii* Kunth var. *fulva* Vickery; *Danthonia semiannularis* (Labill.) R. Br. var. *browniana* Domin; *Notodanthonia bipartita* var. *fulva* (Vickery) Veldkamp; *Notodanthonia fulva* (Vickery) H.P. Linder; *Rytidosperma linkii* (Kunth) Connor & Edgar var. *fulvum* (Vickery) Connor & Edgar) (named after the German botanist Johann Heinrich Friedrich Link, 1767-1851, philosopher, medical doctor, traveler, from 1815 to 1851 professor of botany at Berlin, plant collector, his works include *Enumeratio plantarum horti regii berlinensis altera*. Berolini [Berlin] 1821-1822 and *Elementa philosophiae botanicae*. Berolini 1824; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 388. 1965; M. Colmeiro y Penido, *La Botánica y los Botánicos de la Peninsula Hispano-Lusitana*. Madrid 1858)

South Australia, Victoria, New South Wales. Perennial, densely tufted, erect, very leafy, leaves flat or involute, culms smooth and slender, spikelets pale and crowded, glumes with an acuminate tip, lemma lanceolate, hairy callus, central awn brown and twisted, anthers pale, pasture grass, ornamental, see *Contributions from the New South Wales National Herbarium* 1: 299. 1950, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 296. 1980, *Telopea* 6(4): 616. 1996, Ian Cole, Jean Metcalfe and Terry Koen, "The effect of removing seed from florets on germination and field establishment in a Wallaby Grass (*Austroanthonia fulva*) accession." *Ecological Management and Restoration* vol. 5, issue 2: 134-136. Aug 2004.

in English: wallaby-grass, Link's wallaby-grass

A. geniculata (J.M. Black) H.P. Linder (*Danthonia geniculata* J.M. Black; *Notodanthonia geniculata* (J.M. Black) Zotov; *Rytidosperma geniculatum* (J.M. Black) Connor & Edgar)

South Australia, Victoria, Tasmania. Perennial, very slender, erect, tufted, often geniculate near the base, leaves filiform and inrolled, panicle dense and ovoid to oblong, spikelets pale and crowded, the central awn geniculate from the base

and loosely twisted, coastal and near-coastal regions, a graceful species, see *Transactions and Proceedings of the Royal Society of South Australia* 53: 261. 1929, *Contr. New South Wales Natl. Herb.* 2: 279. 1956, *New Zealand Journal of Botany* 1: 114. 1963, *New Zealand Journal of Botany* 17(3): 323. 1979.

in English: kneed wallaby-grass

A. *induta* (Vickery) H.P. Linder (*Danthonia induta* Vickery; *Notodanthonia induta* (Vickery) Veldkamp; *Rytidosperma indutum* (Vickery) Connor & Edgar) (Latin *induo, ui, utum, ere* “to put on an article of dress or ornament,” *indutus* “apparel”)

Victoria, New South Wales, Queensland. Perennial, caespitose, ornamental, robust, vigorous, forming erect tussocks, leaf blade flat to loosely inrolled, culms thick and smooth, panicle loose and spreading with numerous spikelets mostly 3-flowered, glumes subequal and longer than the florets, palea membranous, anthers orange-yellowish, moist soils, rocky hillsides, in eucalypt forest, see *Contributions from the New South Wales National Herbarium* 1(5): 298. 1950, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 296. 1980.

in English: wallaby-grass

A. *laevis* (Vickery) H.P. Linder (*Danthonia laevis* Vickery; *Notodanthonia laevis* (Vick.) Zotov; *Rytidosperma laevis* (Vick.) Connor & Edgar)

South Australia, Victoria, New South Wales, Tasmania. Perennial, densely caespitose, decorative, erect, forming small tussocks, leaves fine and inrolled rigid and pointed, short panicle much exserted, inflorescence loosely racemose or paniculate, spikelets 4- to 6-flowered greenish and white, florets rather divergent, glumes subequal and longer than the florets, lemma lanceolate to fusiform, grows in open woodland and grassland, in dry areas, see *Contributions from the New South Wales National Herbarium* 1(5): 299. 1950, *New Zealand Journal of Botany* 1: 117. 1963, *New Zealand Journal of Botany* 17(3): 325. 1979.

in English: wallaby-grass, smooth wallaby-grass

A. *mera* (Connor & Edgar) H.P. Linder (*Notodanthonia mera* (Connor & Edgar) H.P. Linder; *Rytidosperma merum* Connor & Edgar)

New Zealand. See *New Zealand Journal of Botany* 17(3): 328, f. 3. 1979, *Telopea* 6(4): 616. 1996.

A. *monticola* (Vickery) H.P. Linder (*Danthonia monticola* Vickery; *Notodanthonia monticola* (Vickery) Veldkamp; *Rytidosperma monticola* (Vickery) Connor & Edgar; *Rytidosperma monticulum* (Vickery) Connor & Edgar)

Victoria, Tasmania, New South Wales. Perennial, densely caespitose, erect, leaf blade inrolled-setaceous and hirsute, spikelets 4- to 6-flowered often purplish, florets much shorter than the glumes, glumes subequal with purplish margins, lemma with 2 rows of hairs, sometimes a weed,

grows on sandy soils, in exposed or disturbed sites, granitic soils, see *Contributions from the New South Wales National Herbarium* 1(5): 299. 1950, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 296. 1980, *Telopea* 7(3): 272. 1997.

A. *occidentalis* (Vickery) H.P. Linder (*Danthonia occidentalis* Vickery; *Notodanthonia occidentalis* (Vickery) Veldkamp; *Rytidosperma occidentale* (Vickery) Connor & Edgar)

Australia. See *Contributions from the New South Wales National Herbarium* 1(5): 300. 1950, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 297. 1980.

A. *oreophila* (H.P. Linder & N.G. Walsh) H.P. Linder (*Notodanthonia oreophila* (H.P. Linder & N.G. Walsh) H.P. Linder; *Rytidosperma oreophilum* H.P. Linder & N.G. Walsh) (from the Greek *oros* “mountain” and *philos* “lover, loving”)

Australia. Caespitose, see *Muelleria* 8(3): 283. 1995, *Telopea* 6(4): 616. 1996.

A. *penicillata* (Labill.) H.P. Linder (*Arundo penicillata* Labill.; *Danthonia penicillata* (Labill.) Muell., nom. illeg., non *Danthonia penicillata* (Labill.) R. Br. ex P. Beauv.; *Danthonia penicillata* (Labill.) P. Beauv.; *Danthonia racemosa* var. *penicillata* (Labill.) Benth.; *Notodanthonia penicillata* (Labill.) Zotov; *Rytidosperma penicillatum* (Labill.) Connor & Edgar) (from the Latin *penicillum, i* “a pencil, a painter’s brush”)

Tasmania, Victoria, New South Wales. Perennial, erect, slender, loosely tufted, forming open and straggly tussocks, leaf blade hairy or glabrous, leaves flat and narrow, culms very slender and shortly pubescent, inflorescence subracemose and not crowded, panicle sparse and hairy, spikelets purplish 4- to 7-flowered, palea lanceolate, glumes subequal with narrow membranous margins, lemma slender, central awn twisted and brown, palea lanceolate, shade species, grows in grassland and open woodland, moist soils, often on slopes, forest, see *Novae Hollandiae Plantarum Specimen* 1: 26, t. 34. 1804, *Essai d’une Nouvelle Agrostographie* 92, 153, 160. 1812, *Fragmenta Phytographiae Australiae* 8: 135. 1873, *Flora Australiensis: A Description ...* 7: 594. 1878 and *New Zealand Journal of Botany* 1: 122. 1963, *New Zealand Journal of Botany* 17(3): 327. 1979.

in Australia: slender wallaby-grass

A. *pilosa* (R. Br.) H.P. Linder (*Danthonia penicillata* var. *pilosa* (R. Br.) Rodway; *Danthonia penicillata* var. *pilosa* (R. Br.) F. Muell. ex Maiden & Betche; *Danthonia pilosa* R. Br.; *Notodanthonia pilosa* (R. Br.) Zotov; *Rytidosperma pilosum* (R. Br.) Connor & Edgar)

South Australia, Victoria, New South Wales, Tasmania, Western Australia, Queensland, New Zealand. Perennial, tufted, erect or geniculate, slender tussocks forming, hairy leaves flat or inrolled, panicle exserted, spikelets crowded

and often overlapping in a short panicle, 6-9 florets, glumes subequal, purple awns, central awn twisted in the lower part, palea oblanceolate, hairy callus, ornamental, useful pasture grass, quite palatable, widespread, various habitats, see *Prodromus Florae Novae Hollandiae* 177. 1810 and *A Census of New South Wales Plants* 22. 1916, *New Zealand Journal of Botany* 1: 118. 1963, *New Zealand Journal of Botany* 17(3): 326. 1979.

in English: hairy oat grass, velvet wallaby-grass, purple-awned wallaby-grass, smooth-flowered wallaby-grass

A. popinensis (D.I. Morris) H.P. Linder (*Danthonia popinensis* D.I. Morris; *Notodanthonia popinensis* (D.I. Morris) H.P. Linder)

Tasmania. Endangered species, see *Muelleria* 7(2): 157-159, f. 8b, 9. 1989, *Telopea* 6(4): 616. 1996.

A. racemosa (R. Br.) H.P. Linder (*Danthonia penicillata* var. *racemosa* (R. Br.) Rodway; *Danthonia penicillata* var. *racemosa* (R. Br.) F. Muell. ex Maiden & Betche; *Danthonia racemosa* R. Br.; *Notodanthonia racemosa* (R. Br.) Zotov; *Rytidosperma racemosum* (R. Br.) Connor & Edgar)

New South Wales, South Australia, Queensland, Victoria, Tasmania, New Zealand. Perennial, tufted, forming slender tussocks, erect or straggling, slender, variable, narrow leaves flat or inrolled, panicles much exerted and racemose, clusters of spikelets, 6-10 florets, glumes subequal with membranous margins, lemma linear to lanceolate, hairy callus, central awn basally twisted, useful pasture grass, extremely variable, ornamental, grows in grassland or woodland, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Australiensis: A Description ...* 7: 594. 1878 and *A Census of New South Wales Plants* 22. 1916, *New Zealand Journal of Botany* 1: 121. 1963, *New Zealand Journal of Botany* 17(3): 327. 1979.

in Australia: wallaby-grass

A. racemosa (R. Br.) H.P. Linder var. **obtusata** (Benth.) H.P. Linder (*Austrodanthonia racemosa* (R. Br.) H.P. Linder var. *obtusata* (F. Muell. ex Benth.) H.P. Linder; *Danthonia racemosa* var. *obtusata* Benth.; *Danthonia racemosa* var. *obtusata* F. Muell. ex Benth.; *Notodanthonia racemosa* var. *obtusata* (Benth.) Veldkamp; *Notodanthonia racemosa* var. *obtusata* (F. Muell. ex Benth.) Veldkamp; *Rytidosperma racemosum* var. *obtusatum* (Benth.) Connor & Edgar; *Rytidosperma racemosum* var. *obtusatum* (F. Muell. ex Benth.) Connor & Edgar)

Queensland, New South Wales. Lateral lobes of the lemma obtuse or truncate, see *Flora Australiensis: A Description ...* 7: 594. 1878 and *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 297. 1980.

A. racemosa (R. Br.) H.P. Linder var. **racemosa**

Queensland.

A. remota (D.I. Morris) H.P. Linder (*Danthonia remota* D.I. Morris; *Notodanthonia remota* (D.I. Morris) H.P. Linder)

Tasmania. Rare species, see *Muelleria* 7(2): 160-162, f. 10, 11a. 1989, *Telopea* 6(4): 617. 1996.

A. richardsonii (Cashmore) H.P. Linder (*Danthonia richardsonii* Cashmore; *Notodanthonia richardsonii* (Cashmore) Veldkamp; *Rytidosperma richardsonii* (Cashmore) Connor & Edgar) (after M. Richardson)

South Australia, New South Wales, Queensland, Victoria, Tasmania. Perennial, leafy, robust, erect, densely tufted or caespitose, forming large tussocks, leaves acuminate and smooth, culms stout and erect, inflorescence lanceolate to ovate, dense and exerted panicle much branched, spikelets pale green, florets closely packed, glumes subequal, densely hairy callus, central awn fine and twisted, common in natural pastures, fodder grass, palatable and nutritious feed, eaten by stock, ornamental, in dry areas, useful plant for revegetation of roadsides, see *Trans. & Proc. Roy. Soc. S. Austral.* 57: 72. 1933, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 297. 1980.

in English: wallaby-grass

A. setacea (R. Br.) H.P. Linder (*Danthonia penicillata* var. *setacea* (R. Br.) J.M. Black; *Danthonia penicillata* var. *setacea* (R. Br.) Rodway; *Danthonia setacea* R. Br.; *Notodanthonia setacea* (R. Br.) Veldkamp; *Rytidosperma setaceum* (R. Br.) Connor & Edgar) (from the Latin *saeta* (*seta*), *ae* "a bristle, hair")

South Australia, Tasmania, Victoria, New South Wales, Queensland, Western Australia. Perennial, erect and slender, densely tufted, leaves setaceous and filiform, culms geniculate at the base, slender panicles crowded and narrow-oblong or linear-to lanceolate, hairy panicle usually contracted, silvery 4- to 10-flowered spikelets, florets closely packed, glumes subequal, awns slender and shortly exerted, central awn twisted at the base, lemmas long-mucronate and with narrow lobes, hairy callus, extremely hardy and drought resistant, pasture grass, ornamental, this widespread and common species often confused with *Austrodanthonia caespitosa* (Gaudich.) H.P. Linder (*Danthonia caespitosa* Gaudich.), often growing with *Austrodanthonia caespitosa* (Gaudich.) H.P. Linder and *Austrodanthonia eriantha* (Lindl.) H.P. Linder (*Danthonia eriantha* Lindl.), see *Prodromus Florae Novae Hollandiae* 177. 1810 and *Tasmanian Fl.* 267. 1903, *Flora South Australia (edition 2)* 73. 1922, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 297. 1980.

in English: small-flowered wallaby-grass

A. tenuior (Steud.) H.P. Linder (*Danthonia purpurascens* Vickery; *Danthonia tenuior* (Steud.) Conert; *Notodanthonia purpurascens* (Vickery) Zotov; *Notodanthonia tenuior* (Steudel) S.T. Blake; *Plinthanthesis tenuior* Steudel; *Rytidosperma tenuius* (Steud.) O.E. Erikss., Alfred Hansen & P. Sunding; *Rytidosperma tenuius* (Steudel) Connor & Edgar, nom. illeg., non *Rytidosperma tenuius* (Steud.) O.E. Erikss., A. Hansen & Sunding)

New South Wales, South Australia, Queensland, Victoria, Tasmania. Perennial, erect, tufted, leaves glabrous to hirsute, panicle much exerted lanceolate to ovate usually with numerous spikelets, 4-6 florets, glumes subequal with purplish margins and much longer than the florets, lemma lanceolate, palea oblong-elliptic, hairy callus, central awn twisted in the lower part, grows in dry sclerophyll forest on sandy soils, see *Synopsis Plantarum Glumacearum* 1: 14. 1855 [1853] and *Contributions from the Queensland Herbarium* 14: 3. 1972, *Senckenbergiana Biologica* 56: 163. 1975, *Flora of Macaronesia: Checklist of Vascular Plants (2nd revised edition)* 1: 93. Botanical Garden and Museum, University of Oslo, Oslo 1979, *New Zealand Journal of Botany* 17(3): 324. 1979.

in English: wallaby-grass

Austrofestuca (Tzvel.) E.B. Alexeev = *Festucella* E.B. Alexeev, *Hookerchloa* E.B. Alexeev, *Schedonorus* P. Beauv.

Latin *australis* "southern" plus *Festuca* L., a genus from Australia and New Zealand segregated from *Festuca* L.

About 2-4 species, Australia and New Zealand. Pooideae, Poodae, Poeae, perennial, tufted, tussock forming, rhizomatous and caespitose, herbaceous, unbranched, unarmed, halophytic, leaves mostly basal, culm nodes glabrous exposed or hidden by the leaf sheaths, internodes hollow, auricles present or absent, leaf sheaths terete and open, ligule membranous and unfringed, leaves linear and flat, plants bisexual, panicle open or contracted almost spike-like, rachilla hairy, inflorescence of chasmogamous spikelets, spikelets solitary, bisexual florets several, uppermost floret reduced, vestigial foliar structure subtending the inflorescence present or absent, glumes nerved, lemma leathery and keeled, palea awnless and 2-keeled with wingless keels, 2 hairy lodicules free and toothed, 3 stamens, ovary glabrous, stigmas plumose white, small fruit grooved and compressed, open habitats, inland woodland, littoral sand, dunes, coastal sand dunes, a difficult genus commonly included in *Festuca*, type *Austrofestuca littoralis* (Labill.) E.B. Alexeev, see *Species Plantarum* 1: 73-76. 1753, *Novae Hollandiae Plantarum Specimen* 1: 22, t. 27. 1804[1805] and *Bot. Zhurn. (Moscow & Leningrad)* 56(9): 1257. 1971, *New Zealand Journal of Botany* 24: 425-503. 1986, *New Zealand Journal of Botany* 36: 329-367. 1998, *Flora of New Zealand* 5: 85-87. 2000, Cameron E. Webb, Ian Oliver and Anthony J. Pik, "Does coastal foredune stabilization with *Ammophila arenaria* restore plant and arthropod communities in Southeastern Australia?" *Restoration Ecology* 8(3): 283-288. Sep 2000.

Species

A. eriopoda (Vickery) S.W.L. Jacobs (*Festuca eriopoda* Vickery; *Festucella eriopoda* (Vickery) E.B. Alexeev)

Victoria, New South Wales. Perennial, erect, densely caespitose, almost glabrous, leaves mostly basal, auricles absent, sheaths striate or ribbed, ligule pubescent, leaves very scabrous and channelled, green to purple panicle open with slender branches, chasmogamous spikelets, hermaphrodite florets 3-5 per spikelet, vestigial foliar structure subtending the inflorescence present or absent, glumes acute, lemmas awned, ovary glabrous, anthers yellow or purple, small fruit grooved and ventrally compressed, in damp sites, open habitats, grassland, near water, in eucalypt forests, see *Contributions from the New South Wales National Herbarium* 1: 10. 1939, *Telopea* 3(4): 602. 1990.

in English: snow fescue

A. hookeriana (F. Muell. ex Hook.f.) S.W.L. Jacobs (*Festuca hookeriana* F. Muell. ex Hook.f.; *Hookerchloa hookeriana* (F. Muell. ex Hook.f.) E.B. Alexeev; *Poa hookeriana* (F. Muell.) F. Muell.; *Poa hookeriana* (F. Muell. ex Hook.f.) F. Muell.; *Schedonorus hookerianus* (F. Muell. ex Hook.f.) Benth.) (after the British botanist W.J. Hooker, 1785-1865, from 1841 to 1865 director Royal Botanic Gardens, Kew, see Stafleu and Cowan, *Taxonomic literature*. 2: 283-301. 1979)

Victoria, New South Wales, Tasmania. Perennial, erect, caespitose, culms stout and robust, bright green, forming coarse and leafy tussocks, glabrous, auricles present or absent, sheath striate, ligule obtuse, leaves scabrous, very loose panicle spreading to nodding, green or purplish spikelets 3- to 5-flowered, chasmogamous spikelets, vestigial foliar structure subtending the inflorescence present or absent, glumes lanceolate or narrowly elliptic, lemma bidentate, palea lanceolate, ovary glabrous, fruit compressed and grooved, will not tolerate heavy grazing, found in swampy places, boggy or waterlogged sites, near streams, open moist sites, in subalpine swamp, open habitats, in open forest or grassland, in eucalypt woodland, dry sclerophyll forest, in Tasmania grows on dry hillsides under light eucalypt forest in the Central Highlands and East Coast, rough pasture, see *Flora Tasmaniae* 2: 127, t. 165. 1858, *Fragmenta Phytographiae Australiae* 8: 131. 1873 and *Telopea* 3(4): 602. 1990.

in English: Hooker's fescue, Hooker fescue

A. littoralis (Labill.) E.B. Alexeev (*Arundo triodioides* Trin.; *Festuca littoralis* Labill.; *Festuca littoralis* (Roem. & Schult.) Steud., nom. illeg., non *Festuca littoralis* Labill.; *Poa billardierei* (Spreng.) St.-Yves; *Schedonorus billardiereanus* Nees; *Schedonorus billardierianus* Nees; *Schedonorus littoralis* (Labill.) P. Beauv.; *Schedonorus littoralis* var. *minor* Hook.f.; *Schenodorus littoralis* (Labill.) P. Beauv.; *Triodia billardierei* Spreng.)

Victoria, New South Wales, Tasmania, South Australia, New Zealand. Perennial, caespitose, dense, tussock forming, erect and slender, very stiff to pungent, leaves mostly basal, rhizomatous with vertical rhizomes, leaf sheath striate and coriaceous, ligule obtuse and thick to stiffly membranous, narrow leaves rigid and scabrous, almost spike-like panicle erect and contracted, vestigial foliar structure subtending the inflorescence present or absent, chasmogamous and overlapping spikelets, glumes acute and keeled, lemmas obtuse shortly mucronate, palea lanceolate, lodicules bilobed and ciliate, ovary glabrous, fodder plant, provide refuge for wildlife, pioneer and dominant sand-binding grass, sand dunes restoration, high salt wind tolerance, high wind tolerance, high drought tolerance, species variable, can colonize and stabilize coastal dunes, occurs on coastal sand dunes, open habitats, on sand near the sea, sand plains behind dunes, flat rocky shores and cliffs in coastal regions, see *Novae Hollandiae Plantarum Specimen* 1: 22, t. 27. 1804 [1805], *Essai d'une Nouvelle Agrostographie* 177. 1812, *Systema Vegetabilium* 2: 740. 1817, *Systema Vegetabilium, editio decima sexta* 1: 330. 1824, *Species Graminum* 3: t. 351. 1836, *London Journal of Botany* 2: 419. 1843, *Flora Novae-Zelandiae* 2(1): 310. 1853, *Synopsis Plantarum Glumacearum* 1: 317. 1854, *Indig. Grasses N.Z.* t. 54. 1880 and *Candollea* 3: 284. 1927, *New Zealand J. Bot.* 6: 268. 1968.

in English: beach fescue, sand tussock, coast fescue, coastal fescue

in New Zealand: hinarepe (Maori name)

A. pubinervis (Vickery) S.W.L. Jacobs (*Austrofestuca triticoides* (Steud.) E.B. Alexeev; *Festuca pubinervis* Vickery; *Festuca triticoides* Steud., nom. illeg., non *Festuca triticoides* Lam.; *Schedonorus littoralis* var. *triticoides* Benth.)

Western Australia. Perennial, erect, caespitose, rhizomatous with vertical rhizome, leaves mostly basal, sheath striate, ligule thick, narrow leaves rigid, yellowish panicle erect and contracted, spikelets 3-4-flowered, chasmogamous spikelets, lemma coriaceous, ovary glabrous, fruit compressed and grooved, maritime-arenicolous, open habitats, coastal grasslands, dunes, similar to and confused with *Austrofestuca littoralis* (Labill.) E.B. Alexeev, see *Essai d'une Nouvelle Agrostographie* 177. 1812, *Synopsis Plantarum Glumacearum* 1: 315. 1854, *Indig. Grasses N.Z.* t. 54. 1880 and *Contributions from the New South Wales National Herbarium* 1: 7. 1939, *N.Z. J. Bot.* 6: 268. 1968, *Austrobaileya* 2(3): 241. 1986.

Austrostipa S.W.L. Jacobs & J. Everett

Latin *australis* "southern" plus *Stipa* L., a genus from Australia.

About 60-65 species, Australia. Stipoideae, Stipeae, or Pooideae, Stipeae, Stipinae, perennial, simple or bambusiform, caespitose or rhizomatous, branching intravaginal or extravaginal, inflorescence paniculate and much branched, spikelets 1-flowered, flowers bisexual, mature florets dark and tough, awn often very long, glumes 2 enclosing the floret, lemma margins overlapping, lemma coriaceous and cylindrical, callus pungent to sharply pointed, palea enclosed by lemma, 2 or 3 lodicules, 3 stamens, ovary glabrous, plumose or feathery stigmas, segregated from *Stipa* L., type *Austrostipa mollis* (R. Br.) S.W.L. Jacobs & J. Everett, see *Species Plantarum* 1: 78-79. 1753, *Species Graminum Stipaceorum* 47. 1842 and *Telopea* 3: 1-132. 1986, *N.Z. J. Agric. Res.* 36: 301-307. 1993, K.A. Robson and J. Maze, "A comparison of rare and common grasses of the Stipeae. I. Greenhouse studies of growth and variation in four species from parapatric populations." *International Journal of Plant Sciences* 156(4): 530-541. 1995, S.W.L. Jacobs and J. Everett, "Austrostipa, a new genus, and new names for Australasian species formerly included in *Stipa* (Gramineae)." *Telopea* 6(4): 579-595. 1996, Khidir W. Hilu & Lawrence A. Alice, "Evolutionary implications of *matK* indels in Poaceae." *Am. J. Bot.* 86: 1735-1741. 1999, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, "Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B." *Am. J. Bot.* 87: 96-107. 2000, *Flora of New Zealand* 5: 68-79. 2000, S.W.L. Jacobs, J. Everett, M.E. Barkworth, and C. Hsiao, "Relationships with the Stipoid grasses (Gramineae)." 75-82. 2000 in S.W.L. Jacobs & J. Everett (Editors), *Proceedings of the Third International Symposium on Grass Systematics and Evolution*. CSIRO, Canberra, Australia, *Contributions from the United States National Herbarium* 48: 126. 2003.

Species

A. acrociliata (Reader) S.W.L. Jacobs & J. Everett (*Stipa acrociliata* Reader; *Stipa readeri* F. Muell. ex Reader)

Australia. Sandy desert, see *Victoria Naturalist* 13: 167-168. Melbourne 1897 and *Telopea* 6(4): 584. 1996.

A. aphylla (Rodway) S.W.L. Jacobs & J. Everett (*Stipa aphylla* Rodway; *Stipa aphylla* (Rodway) Townrow; *Stipa pubescens* var. *aphylla* Rodway)

Australia, Tasmania. Dry hills, see *Tasmanian Fl.* 262. 1903, *Papers and Proceedings of the Royal Society of Tasmania* 104: 85, 96. 1970, *Telopea* 3: 27. 1986.

A. aquarii (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa aphylla* (Rodway) Townrow; *Stipa aquarii* J. Vickery, S.W.L. Jacobs & J. Everett)

Australia, Northern Territory. Perennial, erect, sandy soils, see *Telopea* 3(1): 27. 1986, *Telopea* 6(4): 584. 1996.

A. aristiglumis (F. Mueller) S.W.L. Jacobs & J. Everett (*Stipa aristiglumis* F. Mueller)

Australia. Desert, see *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 43. 1855 and *Telopea* 6(4): 584. 1996.

A. bigeniculata (Hughes) S.W.L. Jacobs & J. Everett (*Stipa bigeniculata* Hughes)

Australia, New South Wales. Perennial, erect, tussocky, tall, cataphylls hairy, ligule ciliate, stiff leaves, inflorescence paniculate and hairy, glumes unequal, lemma with white hairs, awn geniculate, column twisted, 3 lodicules, in grassland and disturbed areas, see *Bulletin of Miscellaneous Information Kew* 1922: 20. 1922, *Telopea* 6(4): 584. 1996.

A. blackii (C.E. Hubbard) S.W.L. Jacobs & J. Everett (*Stipa aristiglumis* var. *cana* Reader; *Stipa blackii* C.E. Hubbard; *Stipa clelandii* Summerh. & C.E. Hubb.; *Stipa pubescens* var. *comosa* J.M. Black) (named for the Scottish-born Australian botanist John McConnell Black, 1855-1951, author of *Flora of South Australia*. 1922-1929; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 194. 1965; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement II: Be-Bo*. 186-188. 1993; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 65. London 1994) (*Stipa clelandii* Summerh. & C.E. Hubb. dedicated to the Australian naturalist Sir John Burton Cleland, 1878-1971, botanist, ethnologist, explorer and plant collector, 1920-1948 professor of pathology at the University of Adelaide, between Aug 1929 and Aug 1936 made numerous excursions into Central Australia (in connection with the Board for Anthropological Research, University of Adelaide, and the South Australian Museum), knighted in 1964, his works include *The Ancient Family of Cleland*. London 1905, *Royal Society of New South Wales, Sydney*. Presidential Address. Sydney 1918, *Toadstools and Mushrooms and Other Larger Fungi of South Australia*. Adelaide 1934, with Edwin Cheel (1872-1951) wrote Notes on Australian Fungi. no. IV. *Polyporus, Fomes and Hexagona*. 1918 and *Notes on the Early Stages of Development of *Lysurus gardneri*-L. australiensis*, etc. 1918, with Thomas Harvey Johnston (1881-1951) wrote *Notes on Worm Nests in Australian Cattle due to *Filaria, Onchocerca gibsoni*, and on Similar Structures in Camels*. 1911, with Dr. C. Fenner wrote *The Geography and Botany of the Adelaide coast*. Adelaide 1935. See E.C. Black, editor, *Memoirs of John McConnell Black*. Adelaide 1971; Constance Margaret Eardley (1910-1978), "John McConnell Black, A.L.S., M.B.E. (1855-1951)." *Trans. R. Soc. S. Aust.* 76: i-vi. 1953, and "John Burton Cleland - a tribute on his eightieth birthday." *Trans. R. Soc. S. Aust.* 82: 339-341. 1959; John Anderson Gilruth (1871-1937) and Georgina Sweet, *Onchocerca gibsoni: The Cause of Worm Nodules in Australian Cattle*. 1911; J.H. Barnhart, *Biographical notes upon botanists*. 1: 356. 1965; J. Lanjouw and F.A. Stafleu, *Index Herbariorum. Collectors A-D*. Utrecht 1954; John McConnell Black (1855-1951), in *Transactions and Proceedings of the Royal*

Society of South Australia. 56: 46, t. II, f. 3. 1932; Dennis John Carr and S.G.M. Carr (1912-1988), eds., *People and plants in Australia*. London 1981; Garrison and Morton, *Medical Bibliography*. 4648, 5474. 1961)

South Australia. Perennial, tall, coarse, tough, stout, smooth, erect, strong rootstock, culms compressed, nodes pubescent, scabrid to scabrous leaves, open panicle, chasmogamous and cleistogamous, lemma hairy to densely villous, awn stiffly hairy, column strongly twisted, 3 lodicules, sandy soil, desert, see *Victoria Naturalist* 17: 156. 1901, *Bulletin of Miscellaneous Information Kew* 1925: 431. 1925, *Bulletin of Miscellaneous Information Kew* 1927: 362. 1927, *Telopea* 6(4): 584. 1996.

A. blakei (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa blakei* Vickery, S.W.L. Jacobs & J. Everett) (for the Australian botanist Stanley Thatcher Blake, 1910-1973, traveler, plant collector, 1946-1973 Brisbane Queensland Herbarium; see Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement II: Be-Bo*. 195-196. [b. on 3 September 1911] 1993; Selwyn Lawrence Everist (1913-1981), *Queensl. Nat.* 21(1-2): 31-32. 1974; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980)

Australia, Queensland. Erect, tufted, dark green, open places, sandy areas, see *Telopea* 3(1): 34. 1986, *Telopea* 6(4): 584. 1996.

A. breviglumis (J.M. Black) S.W.L. Jacobs & J. Everett (*Stipa breviglumis* J.M. Black)

South Australia. See *Transactions and Proceedings of the Royal Society of South Australia* 65: 333. 1941, *Telopea* 3: 35. 1986, *Telopea* 6(4): 584. 1996.

A. campylachne (Nees) S.W.L. Jacobs & J. Everett (*Stipa campylachne* Nees; *Stipa semibarbata* R. Br. var. *campylachne* (Nees) Benth.) (from the Greek *kampylos* "curved" and *achne* "chaff, glume")

Australia. See *Plantae Preissianae* 2: 99. 1846 and *Telopea* 3: 37. 1986, *Telopea* 6(4): 584. 1996.

A. centralis (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa centralis* Vickery, S.W.L. Jacobs & J. Everett)

Australia, Northern Territory. Perennial, erect, see *Telopea* 3(1): 39. 1986, *Telopea* 6(4): 584. 1996.

A. compressa (R. Brown) S.W.L. Jacobs & J. Everett (*Stipa compressa* R. Brown; *Stipa longearistata* Steud.)

Western Australia. See *Prodromus Florae Novae Hollandiae* 175. 1810, *Synopsis Plantarum Glumacearum* 1: 127. 1854 and *Telopea* 6(4): 584. 1996.

A. crinita (Gaudichaud) S.W.L. Jacobs & J. Everett (*Stipa crinita* Gaudichaud)

Western Australia. See Charles Gaudichaud-Beaupré (1789-1854), [Botany of the Voyage.] *Voyage autour du*

Monde ... sur ... l'Uranie et la Physicienne, pendant ... 1817-1820. 407. Paris 1826 [-1830] and *Telopea* 6(4): 585. 1996.

A. curticoma (Vickery) S.W.L. Jacobs & J. Everett (*Stipa curticoma* Vickery)

South Australia. See *Telopea* 2(1): 11. 1980 and *Telopea* 6(4): 585. 1996.

A. densiflora (Hughes) S.W.L. Jacobs & J. Everett (*Stipa congesta* Summerh. & C.E. Hubb.; *Stipa densiflora* Hughes; *Stipa krylovii* Roshev.)

South Australia, New South Wales, Victoria, Queensland. Perennial, caespitose, ligule truncate and ciliate, auricles present or absent, blade rolled and ribbed, panicle dense or moderately dense, floret elliptic, spikelets gaping, hairy glumes unequal and acuminate, lemma scabrous and silky, densely silky callus straight and sharp or weakly bent at the tip, pubescent awn strongly twice bent, forage, decorative grass, suitable for revegetating eroded hilly areas, for dry sites in sun or semishade, usually grows in woodland, see *Bulletin of Miscellaneous Information Kew* 1921: 18, f. 20. 1921, *Bulletin of Miscellaneous Information Kew* 1925: 362. 1927, *Telopea* 6(4): 585. 1996.

in English: foxtail speargrass

A. dongicola (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa dongicola* Vickery, S.W.L. Jacobs & J. Everett) (Blackoak Donga, Kanandah Station, Naretha Donga)

Western Australia. See *Telopea* 3(1): 46. 1986, *Telopea* 6(4): 585. 1996.

A. drummondii (Steudel) S.W.L. Jacobs & J. Everett (*Stipa drummondii* Steudel; *Stipa horrifolia* J.M. Black; *Stipa luehmannii* Reader; *Stipa scabra* Lindl. var. *auriculata* J.M. Black; *Stipa scabra* var. *subtricha* Reader)

Australia. Perennial, rigid blades subulate-involute, ligule membranous-ciliate, glumes hyaline to membranous and acuminate, lemma white-pubescent, awn geniculate, bristle curved, sandy areas, desert, see *J. Trop. Australia* 31. 1848, *Synopsis Plantarum Glumacearum* 1: 128. 1854 and *Victoria Naturalist* 16: 158. 1900, *Victoria Naturalist* 17: 156. 1901, *Transactions and Proceedings of the Royal Society of South Australia* 44: 191. 1920, *Telopea* 3: 47. 1986, *Telopea* 6(4): 585. 1996.

in English: cottony speargrass

A. echinata (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa echinata* Vickery, S.W.L. Jacobs & J. Everett)

South Australia. See *Telopea* 3(1): 50. 1986, *Telopea* 6(4): 585. 1996.

A. elegantissima (Labill.) S.W.L. Jacobs & J. Everett (*Stipa elegantissima* Labillardière)

Western Australia, South Australia, New South Wales, Victoria. Perennial, caespitose, tussock-forming, shortly rhizomatous, stems glabrous wiry and decumbent, nodes glabrous, ligule obtuse and membranous, leaves acuminate and yellow-green, auricles glabrous, feathery inflorescence, panicle pyramidal with few-flowered branches, spikelets gaping at maturity, callus straight and silky, glumes hirsute and acute, lemma tuberculate, awn with one bend, highly palatable to stock, found growing on dune and coast above salt marsh, swampy near-coastal areas, suitable for revegetation in salt marshes, chenier ridges, coastal berms and tidal/freshwater wetlands, full sun, see *Novae Hollandiae Plantarum Specimen* 1: 23, t. 29. 1805 and *Telopea* 3(1): 51. 1986, *Telopea* 6(4): 585. 1996.

in English: elegant speargrass, feather speargrass

A. eremophila (Reader) S.W.L. Jacobs & J. Everett (*Stipa dura* J.M. Black; *Stipa eremophila* Reader; *Stipa fusca* C.E. Hubb.; *Stipa pubescens* var. *auricoma* Reader; *Stipa variegata* Summerh. & C.E. Hubb.)

South Australia. Sandy areas, desert, see *Victoria Naturalist* 17: 154, 156. 1901, *Bulletin of Miscellaneous Information Kew* 1925: 432. 1925, *Bulletin of Miscellaneous Information Kew* 1927: 363. 1927, *Transactions and Proceedings of the Royal Society of South Australia* 65: 333. 1941, *Telopea* 6(4): 585. 1996.

A. exilis (Vickery) S.W.L. Jacobs & J. Everett (*Stipa exilis* Vickery)

South Australia. See *Telopea* 2(1): 13. 1980, *Telopea* 6(4): 585. 1996.

A. feresetacea (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa feresetacea* Vickery, S.W.L. Jacobs & J. Everett)

Australia, Northern Territory. Perennial, spreading, see *Telopea* 3(1): 58. 1986, *Telopea* 6(4): 585. 1996.

A. flavescens (Labillardière) S.W.L. Jacobs & J. Everett (*Stipa aphanoneura* Hughes; *Stipa compacta* Hughes; *Stipa flavescens* Labillardière; *Stipa flavescens* Hook.f. non Labill.; *Stipa hirsuta* Hughes; *Stipa laeviculmis* Nees; *Stipa laevis* Mez; *Stipa pubescens* var. *maritima* J.M. Black; *Stipa scabra* var. *elatio* Benth.; *Stipa scabra* var. *striata* Benth.; *Stipa tenuiglumis* Hughes)

Australia. Perennial, coarse, tussocky, dense, tall, erect or decumbent, shortly rhizomatous, cataphylls, leaf sheath scabrid, leaf blade rigid, ligule ciliate, contracted panicle, lemma cylindrical, awn geniculate, column tightly and loosely twisted, palea internerve glabrous, 3 lodicules, in grassland, see *Novae Hollandiae Plantarum Specimen* 1: 24, t. 30. 1804 [1805], *Plantae Preissianae* 2: 99. 1846, *J. Trop. Australia* 31. 1848, *Flora of Australia* 7: 571. 1878 and *Bulletin of Miscellaneous Information Kew* 1921: 22, 24-25, f. 29 & 29A, 31 & 31A. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 210. 1921,

Transactions and Proceedings of the Royal Society of South Australia 67: 36. 1943, *Telopea* 3(1): 59. 1986, *Telopea* 6(4): 585. 1996.

A. geoffreyi S.W.L. Jacobs & J. Everett

Western Australia. See *Telopea* 6(4): 585. 1996.

A. gibbosa (Vickery) S.W.L. Jacobs & J. Everett (*Stipa gibbosa* Vickery)

South Australia. See *Telopea* 2: 14. 1980, *Telopea* 6(4): 586. 1996.

A. hemipogon (Bentham) S.W.L. Jacobs & J. Everett (*Stipa hemipogon* Bentham; *Stipa indepressa* J.M. Black; *Stipa nobilis* Pilg.; *Stipa semibarbata* R. Br.; *Stipa semibarbata* var. *gracilis* J.M. Black)

Western Australia, South Australia. See *Prodromus Florae Novae Hollandiae* 174. 1810, *Flora Australiensis: A Description ...* 7: 569. 1878 and *Transactions and Proceedings of the Royal Society of South Australia* 65: 334. 1941, *Transactions and Proceedings of the Royal Society of South Australia* 67: 36. 1943, *Telopea* 3: 63-64. 1986, *Telopea* 6(4): 586. 1996.

A. juncifolia (Hughes) S.W.L. Jacobs & J. Everett (*Stipa juncifolia* Hughes)

Australia. See *Bulletin of Miscellaneous Information Kew* 1921: 11. 1921, *Telopea* 6(4): 586. 1996.

A. lanata (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa lanata* Vickery, S.W.L. Jacobs & J. Everett)

Australia. See *Telopea* 3(1): 68. 1986, *Telopea* 6(4): 586. 1996.

A. macalpinei (Reader) S.W.L. Jacobs & J. Everett (*Stipa compressa* var. *lachnocolea* Benth.; *Stipa lachnocolea* (Benth.) Hughes; *Stipa macalpinei* Reader; *Stipa scelerata* Behr ex Benth.; *Stipa setacea* var. *latifolia* Benth.) (named for the English-born Australian botanist Daniel McAlpine, 1849-1932, a student of fungi, Victoria Dept. of Agriculture 1890-1915 plant pathologist; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 447. London 1994)

Australia. Annual, stems stout, nodes glabrous, sheaths with flattened transparent flexuous hairs, panicle contracted, floret elliptic, lemma white, callus straight and sharp, awn twice bent, sandy areas, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Flora of Australia* 7: 567-568. 1878, *Victoria Naturalist* 15: 143. 1899 and *Bulletin of Miscellaneous Information Kew* 1921: 26. 1921, *Telopea* 3: 70. 1986, *Telopea* 6(4): 587. 1996.

in English: annual spear-grass, one year grass

A. metatoris (J. Everett & S.W.L. Jacobs) S.W.L. Jacobs & J. Everett (*Stipa metatoris* J. Everett & S.W.L. Jacobs)

Australia. See *Telopea* 2(4): 399. 1983, *Telopea* 6(4): 587. 1996.

A. mollis (R. Brown) S.W.L. Jacobs & J. Everett (*Stipa mollis* R. Br.; *Stipa plagiopogon* J.M. Black; *Stipa semibarbata* var. *mollis* (R. Br.) Benth.)

Australia. See *Prodromus Florae Novae Hollandiae* 174. 1810, *Flora of Australia* 7: 569. 1878 and *Transactions and Proceedings of the Royal Society of South Australia* 65: 334. 1941, *Telopea* 3: 74. 1986, *Telopea* 6(4): 587. 1996.

A. muelleri (Tate) S.W.L. Jacobs & J. Everett (*Stipa muelleri* Tate)

South Australia. Forests, scrublands, see *Transactions and Proceedings of the Royal Society of South Australia* 7: 70. 1885 and *Telopea* 6(4): 587. 1996.

A. multispiculis (J.M. Black) S.W.L. Jacobs & J. Everett (*Stipa multispiculis* J.M. Black)

South Australia. See *Transactions and Proceedings of the Royal Society of South Australia* 65: 333. 1941, *Telopea* 3: 78. 1986, *Telopea* 6(4): 587. 1996.

A. mundula (J.M. Black) S.W.L. Jacobs & J. Everett (*Stipa mundula* J.M. Black)

South Australia. See *Transactions and Proceedings of the Royal Society of South Australia* 65: 333. 1941, *Telopea* 6(4): 587. 1996.

A. nitida (Summerhayes & C.E. Hubbard) S.W.L. Jacobs & J. Everett (*Stipa nitida* Summerhayes & C.E. Hubb.; *Stipa scabra* Lindley var. *pallida* Reader)

Australia. Perennial, caespitose, tussocky, erect, tall, simple, nodes glabrous, ligule truncate and membranous, leaf blades filiform and long-acuminate, ligule fimbriate, auricle glabrous or hirsute, leaf sheath glabrous or woolly-pubescent, panicle dense and exserted, floret elliptic, spikelets linear-lanceolate, glumes subequal and thinly membranous, lower glume linear-lanceolate, upper glume lanceolate and acuminate, lemma brown and silky, densely silky callus straight and sharp or weakly bent at the tip, awn falcate, on sandy soils, along roadsides, grasslands, see *J. Trop. Australia* 31. 1848 and *Victoria Naturalist* 17: 156. 1901, *Bulletin of Miscellaneous Information Kew* 1927: 60, 80. 1927, T.G.B. Osborn, J.G. Wood and T.B. Paltridge, "On the autecology of *Stipa nitida*, a study of a fodder grass in arid Australia." in *Proc. Linn. Soc. NSW*. 56: 299-324. 1931, *Telopea* 6(4): 587. 1996.

in English: Balcarra grass, Balcarra speargrass, speargrass

A. nivicola (J.H. Willis) S.W.L. Jacobs & J. Everett (*Stipa nivicola* J.H. Willis)

Australia. Grassy slopes, see *Victoria Naturalist* 73: 149. 1957.

A. nodosa (S.T. Blake) S.W.L. Jacobs & J. Everett (*Stipa effusa* Hughes, nom. illeg., non *Stipa effusa* Mez; *Stipa falcata* var. *minor* J.M. Black; *Stipa nodosa* S.T. Blake)

South Australia. Perennial, caespitose, open at the base, tussocky, erect to nodding, hairy cataphylls, ligule usually

ciliate, pinkish inflorescence, panicle subtended by hairy bracts, callus long sharp, awn falcate, 3 lodicules, flowers chasmogamous and cleistogamous, often confused with *Stipa variabilis* Hughes, found in waste places, dry areas, pastures, along roadsides, riverbeds and along streams, see *Bulletin of Miscellaneous Information Kew* 1922: 20. 1922, *Transactions and Proceedings of the Royal Society of South Australia* 65: 334. 1941, *Proceedings of the Royal Society of Queensland* 62: 89. 1952, *Telopea* 3: 86. 1986, *Telopea* 6(4): 587. 1996.

A. nullarborensis (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa nullarborensis* Vickery, S.W.L. Jacobs & J. Everett)

Australia. See *Telopea* 3(1): 88. 1986, *Telopea* 6(4): 587. 1996.

A. nullanulla (J. Everett & S.W.L. Jacobs) S.W.L. Jacobs & J. Everett (*Stipa nullanulla* J. Everett & S.W.L. Jacobs)

Australia, New South Wales, Nulla Nulla. See *Telopea* 2(4): 398. 1983, *Telopea* 6(4): 587. 1996.

A. oligostachya (Hughes) S.W.L. Jacobs & J. Everett (*Stipa oligostachya* Hughes)

Australia. Tussocky, see *Bulletin of Miscellaneous Information Kew* 1921: 12. 1921, *Telopea* 6(4): 587. 1996.

A. petraea (Vickery) S.W.L. Jacobs & J. Everett (*Stipa petraea* Vickery)

Australia. See *Telopea* 2: 15. 1980, *Telopea* 6(4): 587. 1996.

A. pilata (S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa pilata* S.W.L. Jacobs & J. Everett)

South Australia. Growing under mallee, see *Telopea* 3(1): 92. 1986, *Telopea* 6(4): 587. 1996.

A. platychaeta (Hughes) S.W.L. Jacobs & J. Everett (*Stipa acrociliata* var. *minor* Reader; *Stipa platychaeta* Hughes)

Australia. Perennial, glabrous, smooth, ligule membranous, leaf blades flat and long-acuminate, loose panicle, glumes with acuminate apex, lemma entire and shortly pilose, awn flattened and recurved, mallee, see *Victoria Naturalist* 23: 25. 1906, *Bulletin of Miscellaneous Information Kew* 1921: 16, f. 17 & 17A. 1921, *Telopea* 6(4): 587. 1996.

in English: flat-awned speargrass

A. plumigera (Hughes) S.W.L. Jacobs & J. Everett (*Stipa eremophila* var. *dodrantaria* J.M. Black; *Stipa gracilis* (Speg.) Speg., nom. illeg., non *Stipa gracilis* Roshev.; *Stipa plumigera* Hughes; *Stipa plumosa* Trin. var. *gracilis* Speg.) (Latin *dodrants*, *antis* “nine twelfths or three fourths of any thing, nine inches,” Latin *dodrantarius*, *a*, *um* “belonging to a *dodrants*: *tabulae*, the debt-books introduced in consequence of the *lex Valeria feneratoria*”)

Australia. Perennial, pubescent, few-noded, ligule densely ciliate, leaf sheath pubescent, leaf blades linear more or less convolute, panicle dense, glumes acuminate and entire, lemma cylindrical, awn slender, bristle and column feathery,

see *Anales del Museo Nacional de Montevideo* 4(2): 41. 1901, *Bulletin of Miscellaneous Information Kew* 1921: 20, f. 25 & 25A. 1921, *Transactions and Proceedings of the Royal Society of South Australia* 46: 565. 1922, *Revista Argentina de Botánica* 1: 16. 1925, *Telopea* 6(4): 588. 1996.

A. puberula (Steudel) S.W.L. Jacobs & J. Everett (*Stipa arachnopus* Pilg.; *Stipa puberula* Steudel)

Australia. See *Synopsis Plantarum Glumacearum* 1: 128. 1854 and *Telopea* 3: 96. 1986, *Telopea* 6(4): 588. 1996.

A. pubescens (R. Brown) S.W.L. Jacobs & J. Everett (*Stipa commutata* Trin. & Rupr.; *Stipa pubescens* R. Brown)

New South Wales, Queensland. Perennial, caespitose, short rhizome, extravaginal shoots, ligule leathery, auricles present, blade rolled and ribbed, panicle exerted and sparse, spikelets gaping, glumes unequal, lemma finely tuberculate and reddish brown, callus bent and reddish brown, awn twice bent, in woodland, sandstone areas, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Species Graminum Stipaceorum* 49. 1842 and *Telopea* 3: 97. 1986, *Telopea* 6(4): 588. 1996.

in English: tall speargrass

A. pubinodis (Trinius & Ruprecht) S.W.L. Jacobs & J. Everett (*Stipa pubescens* var. *semiglabra* Reader; *Stipa pubinodis* Trinius & Ruprecht)

Australia. See *Species Graminum Stipaceorum* 50. 1842 and *Victoria Naturalist* 17: 155. 1901, *Telopea* 6(4): 588. 1996.

A. pycnostachya (Bentham) S.W.L. Jacobs & J. Everett (*Stipa pycnostachya* Bentham)

Australia. See *Flora Australiensis: A Description ...* 7: 568. 1878 and *Telopea* 6(4): 588. 1996.

A. ramosissima (Trinius) S.W.L. Jacobs & J. Everett (*Stipa ramosissima* Trinius; *Stipa ramosissima* (Trin.) Nees; *Stipa ramosissima* (Trin.) Trin.; *Streptachne ramosissima* (Trin.) Trin. & Rupr.; *Urachne ramosissima* Trin.)

Australia. Branched, large feathery flower heads, growing in wet conditions, full sun, see *Flora* 11(1: 19): 301. 1828, *Species Graminum Stipaceorum* 7. 1842 and *Bulletin of Miscellaneous Information Kew* 1921: 28. 1921, *Telopea* 3: 101. 1986, *Telopea* 6(4): 588. 1996.

in English: bamboo grass

A. rudis (Sprengel) S.W.L. Jacobs & J. Everett (*Stipa rudis* Sprengel)

Australia. Perennial, see *Telopea* 6(4): 588. 1996.

A. rudis subsp. **australis** (S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa rudis* subsp. *australis* S.W.L. Jacobs & J. Everett)

Australia. Robust, stout, coarse, spreading panicle, see *Telopea* 2(4): 396. 1983, *Telopea* 6(4): 588. 1996.

A. rudis subsp. *nervosa* (Vickery) S.W.L. Jacobs & J. Everett (*Stipa nervosa* Vickery; *Stipa nervosa* subsp. *nervosa* Vickery; *Stipa rudis* subsp. *nervosa* (Vickery) S.W.L. Jacobs & J. Everett; *Stipa rudis* subsp. *nervosa* (Vickery) J. Everett and S.W.L. Jacobs)

Australia. See *Contributions from the New South Wales National Herbarium* 1: 335. 1951, *Telopea* 6(4): 588. 1996.

A. rudis (Sprengel) S.W.L. Jacobs & J. Everett subsp. *rudis* Eastern Australia. Perennial, tall, stout, wiry, erect, open, tussocky, cataphylls glabrous, ligule apex shortly ciliate, panicle loosely contracted and subtended by hairy bracts, glumes subequal, lemma tuberculate, awn geniculate, column tightly twisted, 2 lodicules, along roadsides, see *Telopea* 6(4): 588. 1996.

A. scabra (Lindley) S.W.L. Jacobs & J. Everett (*Stipa scabra* Lindley)

Australia. Perennial or annual or short-lived perennial, few-noded, caespitose to densely tufted, tussocky, simple, nodes glabrous, hairy leaf sheaths loose and ribbed, ligule shortly ciliate and membranous, auricles present or absent, blade folded or inrolled or tightly convolute, leaves hispid, dense panicle exerted, spikelets linear usually gaping at maturity, glumes unequal and acute to long-acuminate, lemma convolute and notched, lemma brown and densely silky, callus straight and densely silky, awn falcate and twice bent, palea apex glabrous, 3 lodicules, cleistogamous and chasmogamous florets, seed harmful to the skin of sheep, found in loam with mulga, readily eaten when young and green, see *J. Exped. Trop. Australia* 31. 1848 and *Telopea* 6(4): 588. 1996.

in English: speargrass, rough speargrass, delicate speargrass, slender speargrass, rough needle-grass

A. scabra (Lindley) S.W.L. Jacobs & J. Everett subsp. *falcata* (Hughes) S.W.L. Jacobs & J. Everett (*Stipa falcata* Hughes; *Stipa scabra* Lindl. subsp. *falcata* (Hughes) S.W.L. Jacobs & J. Everett; *Stipa scabra* Lindl. subsp. *falcata* (Hughes) Vickery, S.W.L. Jacobs & J. Everett)

Australia. Spreading spikelets, open panicle, useful for erosion control, grows in woodland, grassland, see *Bulletin of Miscellaneous Information Kew* 1921: 14. 1921, *Telopea* 3: 110. 1986, *Telopea* 6(4): 588. 1996.

in English: slender speargrass

A. scabra (Lindley) S.W.L. Jacobs & J. Everett subsp. *scabra* (*Stipa scabra* Lindley subsp. *scabra*)

Australia. Narrow dense inflorescence paniculate, grows in dry areas, grassland, see *Telopea* 6(4): 588. 1996.

in English: rough speargrass

A. semibarbata (R. Brown) S.W.L. Jacobs & J. Everett (*Stipa semibarbata* R. Brown)

South Australia, Victoria, Tasmania, New South Wales. Perennial, caespitose, nodes pubescent, leaf blades subulate

to filiform, ligule ciliate and truncate, auricles hirsute and thickened, blade rolled and ribbed, leaves pubescent, oblong panicle dense and contracted, spikelets gaping, floret elliptic, narrow glumes unequal and acuminate, lemma black or white silky-pubescent, densely silky callus straight and sharp or weakly bent at the tip, awn twice bent, stout column pubescent to villous, usually on sandy soils, in sclerophyll forest, see *Prodromus Florae Novae Hollandiae* 174. 1810 and *Telopea* 6(4): 588. 1996.

in English: fibrous speargrass, barbed speargrass

A. setacea (R. Brown) S.W.L. Jacobs & J. Everett (*Dichelachne setacea* (R. Br.) Nees; *Stipa brachystephana* S.T. Blake; *Stipa setacea* R. Brown; *Stipa setacea* var. *latiglumis* J.M. Black)

Australia. Perennial, slender, leaf blades filiform-involute, ligule membranous, leaves glabrous mostly basal, panicle loosely contracted, glumes acuminate, lemma more or less fusiform, awn twice-geniculate, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Plantae Preissianae* 2: 98. 1846 and *Transactions and Proceedings of the Royal Society of South Australia* 46: 565. 1922, *Proceedings of the Royal Society of Queensland* 62: 90, t. 6. 1952, *Telopea* 3: 113. 1986, *Telopea* 6(4): 589. 1996.

in English: corkscrew grass

A. stipoides (Hooker f.) S.W.L. Jacobs & J. Everett (*Dichelachne stipoides* Hooker f.; *Stipa stipoides* (Hooker f.) Veldkamp; *Stipa teretifolia* Steud.)

Southeast Australia, Tasmania. Perennial, tall, caespitose, clumped, erect, stiff, swollen base, small cataphylls, leaf sheath smooth, rigid leaves more or less sharply pointed, ligule acute to subacute, narrow panicle with ascending branches, 3 lodicules, found in muddy places, mudflats, see *Flora Novae-Zelandiae* 1: 294, t. 66. 1853, *Synopsis Plantarum Glumacearum* 1: 128. 1854 and *Blumea* 22(1): 11. 1974, *Pap. Proc. Roy. Soc. Tasmania* 112: 277-287. 1978, *Telopea* 6(4): 589. 1996.

A. stuposa (Hughes) S.W.L. Jacobs & J. Everett (*Stipa eriopus* Benth.; *Stipa incurva* Hughes; *Stipa leptophylla* Hughes; *Stipa scabra* Lindl. var. *occidentalis* Benth.; *Stipa scabra* var. *pubescens* Benth.; *Stipa stuposa* Hughes)

Southeast Australia, Tasmania. Perennial, tall, coarse, densely tufted, erect, stiff, stout, tussocky, swollen bases, hairy cataphylls, ligule fringed, harsh leaves, narrow panicle, glumes unequal, lemma hairy, awn geniculate, column twisted and hairy, 2 lodicules, cleistogamous and chasmogamous flowers, in grassland, among shrubs, see *J. Trop. Australia* 31. 1848 and *Bulletin of Miscellaneous Information Kew* 1921: 14, f. 10 & 10A, 16, f. 16 & 16A, 20f, 24 & 24A. 1921, *Telopea* 3: 119. 1986, *Telopea* 6(4): 589. 1996.

A. tenuifolia (Steudel) S.W.L. Jacobs & J. Everett (*Stipa tenuifolia* Steudel) Australia.

See *Synopsis Plantarum Glumacearum* 1: 128. 1854 and *Telopea* 6(4): 589. 1996.

A. trichophylla (Bentham) S.W.L. Jacobs & J. Everett (*Stipa trichophylla* Bentham)

Australia. See *Flora Australiensis: A Description ...* 7: 570. 1878 and *Telopea* 6(4): 589. 1996.

A. tuckeri (F. Mueller) S.W.L. Jacobs & J. Everett (*Stipa tuckeri* F. Mueller)

Australia. Rhizomatous, highly palatable, see *Fragmenta Phytographiae Australiae* 9: 129. 1881 and *Telopea* 6(4): 589. 1996.

A. variabilis (Hughes) S.W.L. Jacobs & J. Everett (*Stipa pubescens* var. *effusa* Benth.; *Stipa variabilis* Hughes)

Australia. Perennial, few-noded, blades linear and long acuminate, ligule ciliate, glumes membranous with acuminate apex, lemma cylindrical white-pilose, awn with recurved bristle, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Flora of Australia* 7: 570. 1878 and *Bulletin of Miscellaneous Information Kew* 1921: 15. 1921, *Telopea* 6(4): 589. 1996.

in English: variable spear-grass

A. velutina (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa velutina* Vickery, S.W.L. Jacobs & J. Everett)

Australia. See *Telopea* 3(1): 126. 1986, *Telopea* 6(4): 589. 1996.

A. verticillata (Nees ex Sprengel) S.W.L. Jacobs & J. Everett (*Stipa micrantha* R. Br. ex Hughes, nom. illeg., non *Stipa micrantha* Cav.; *Stipa verticillata* Nees ex Sprengel; *Streptachne ramosissima* (Trin.) Trin. & Rupr.; *Streptachne verticillata* (Nees ex Spreng.) Trin. & Rupr.)

Eastern Australia. Perennial, bambusiform, erect, stout, vigorous, caespitose, shortly rhizomatous, erect, cataphylls, leaf sheaths glabrous and hairy, branched inflorescence, panicle verticillate to subverticillate, lemma hairy, awn geniculate or straight, column straight, 2 lodicules, cultivated, see *Prodromus Florae Novae Hollandiae* 175. 1810, *Species Graminum Stipaceorum* 7-9. 1842 and *Telopea* 3: 127. 1986, *Telopea* 6(4): 589. 1996.

in English: slender bamboo grass

A. vickeryana (S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Austrostipa vickeryana* (J. Everett & S.W.L. Jacobs) S.W.L. Jacobs & J. Everett; *Stipa vickeryana* S.W.L. Jacobs & J. Everett; *Stipa vickeryana* J. Everett & S.W.L. Jacobs)

Australia. Forming dense clumps, inflorescence spreading, see *Telopea* 2(4): 397. 1983, *Telopea* 6(4): 589. 1996.

A. wakoolica (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett (*Stipa wakoolica* Vickery, S.W.L. Jacobs & J. Everett) (Shire of Wakool, Murray River, Moulamein, New South Wales)

New South Wales. Perennial, endangered species, densely caespitose, ligule firm and ciliate, auricles present, pubescent blades expanded and ribbed, panicle spreading, spikelets gaping, glumes unequal and acuminate, lemma silky and dark at maturity, callus hairy and straight, awn twice bent, open woodland floodplains, see *Telopea* 3(1): 129. 1986, *Telopea* 6(4): 589. 1996.

Avellinia Parl. = *Trisetaria* Forssk.

After the Italian botanist Giulio Avellino, he seems to have flourished from 1840-1843, wrote *Su di una nuova specie di Clematide*. Napoli 1842, coauthor with Giuseppe Antonio Pasquale (1820-1893) of *Flora Medica della provincia di Napoli*. Napoli 1841; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 93. 1965.

About 1-2 species, Mediterranean. Pooideae, Poodae, Aveneae, annual, caespitose, small, herbaceous, auricles absent, ligule membranous, internodes hollow, plants bisexual, inflorescence loosely paniculate or a contracted narrow panicle, spikelets solitary, bisexual and pedicellate spikelets compressed laterally, hermaphrodite florets, 2 glumes very unequal and awnless, lower glume bristle-like, upper glume acuminate, lemmas awned, awn straight and short, palea bifid, 2 free lodicules membranous, 3 stamens, ovary glabrous, 2 stigmas, sometimes referred to *Trisetum* Pers. and *Trisetaria* Forssk., see *Flora Aegyptiaco-Arabica* 60. 1775, Gaetano Savi (1769-1844), *Botanicon Etruscum: sistens plantas in Etruria sponte crescentes*. Pisis 1808-1825, Filippo Parlatore, *Plantae Novae*. 59. Parisiis 1842, *Conspicuum Florae Europaeae: seu Enumeratio methodica plantarum phanerogamarum Europae indigenarum, indicatio distributionis geographicae singularum etc.* 815. 1882, *Plantae Europaeae* 1: 74. 1890 and F. Sennen (1861-1937), *Diagnoses des nouveautés parues dans les exsiccata: plantes d'Espagne et du Maroc, de 1928 à 1935*. 248. 1936, *Annali di Botanica* 45: 75-102. 1987, *Contributions from the United States National Herbarium* 48: 659-676. 2003.

Species

A. michelii (Savi) Parlatore (*Avena michelii* (Savi) Guss.; *Bromus michelii* Savi; *Festuca michelii* (Savi) Kunth; *Koeleria michelii* (Savi) Cosson; *Koeleria michelii* (Savi) Coss. & Durand.; *Trisetaria michelii* (Savi) D. Heller; *Vulpia michelii* (Savi) Reichb.) (the species after the Italian botanist Pier (Pietro) Antonio Micheli, 1679-1737, botanical collector throughout southern and central Europe, founder of the Società Botanica Fiorentina, from 1718 to 1737 Curator of the Botanical Garden of Florence, his works include *Relazione dell'erba detta da' botanici Orobanche* e volgarmente succiamele, fiamma, e mal d'occhio. Firenze 1723, *Catalogus plantarum Horti caesarei florentini*. Florentiae [Florence] 1748 and *Icones plantarum submarinarum*. [Florence?] 1748; see Francesco Rodolico, in *D.S.B.* 9: 368-

369. New York 1981; Giovanni Targioni-Tozzetti (1712-1783), *Notizie della vita e delle opere di Pier Antonio Micheli*, pubblicate per cura di Adolfo Targioni-Tozzetti. Firenze 1858; J.H. Barnhart, *Biographical notes upon botanists*. 2: 486. 1965; James Britten, *The Sloane Herbarium ...* revised and edited by J.E. Dandy. London 1958; Antonio Targioni-Tozzetti (1785-1856), *Catalogo delle piante coltivate nell'Orto Botanico-Agrario detto dei Semplici*. Firenze 1841; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 266. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Frans A. Stafleu, *Linnaeus and the Linnaeans. The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 189. Regione Siciliana, Palermo 1988)

Mediterranean. Annual, small, slender, delicate, leaves pubescent, narrow panicle loose, awned, weed, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 397. 1833, *Florae Siculae Synopsis* 151. 1843, *Exploration Scientifique de l'Algérie* 2: 120. 1855 and *Catalogue des Plantes du Maroc* 4: 935. 1941, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 48: 481. 1957, *Conspectus Florae Orientalis* 6: 92. 1991.

in English: avellinia

Avena L. = *Anelytrum* Hack., *Avena* Scop., *Preissia* Opiz

From the Latin *avena*, *ae*, classical name for oats used by Plinius, Horatius and Vergilius ("avenae steriles vanae").

About 25-30 species, Old World, Europe, Mediterranean, north and northeastern Africa, western and central Asia. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, annual or biennial or perennial, erect or geniculate, rarely prostrate, upright stems solitary or tufted, herbaceous, hollow internodes, auricles absent, leaf sheath chartaceous, ligule a scarious membrane, leaves linear and narrow or broad, plants bisexual, inflorescence a very loose open panicle more or less cylindrical with awned pendulous or nodding large spikelets, uppermost floret sometimes male, 2 smooth rounded glumes more or less equal, spikelets surrounded by glumes, lemmas hairy at base and stiff, awn twisted and bent, tough palea entire to apically notched, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, differences between the species often obscure, grain crop, pasture and hay grasses, a weed species of other

cereals, cultivated ground and in meadows, bushland, pampas, pasture, open habitats, weedy places, roadsides, grasslands, dry wasteland and heavy places, some species a serious annual grass weed in winter cereals in North Africa and Mediterranean regions, southern Spain, Italy, Turkey and in Greece, potentially nitrate-poisonous, hybrids with *Arrhenatherum* P. Beauv., type *Avena fatua* L., see *Species Plantarum* 1: 79-81. 1753, *Genera Plantarum*. edition 5. 34. 1754, *Introductio ad Historiam Naturalem* 74. 1777, Pietro Bubani, *Flora Virgiliana*. 24-25. Bologna 1870, *Flora Brasiliensis* 2(3A): 1-160, t. 1-43. 1878 and *Reperitorium Specierum Novarum Regni Vegetabilis* 8: 519. 1910, *Manual of the Grasses of the United States (edition 2, revised by A. Chase)*. 1951 [1950], *Bot. Mus. Leaflet Harvard* 16: 265-303. 1954, *Fieldiana, Botany* 24(2): 38-331. 1955, *Taxon* 23(4): 579-583. 1974, *Canada Dept. Agric. Monogr.* 14: 1-463. 1977 [*Canada Department of Agriculture, Research Branch, Monograph*], *Acta Societatis Botanicorum Poloniae* 52: 205-214. 1983, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Journal of Cytology and Genetics* 25: 147-148. 1990, *Taxon* 40: 132. 1991, *Fitologija* 39: 72-77. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Flora Mesoamericana* 6: 232. 1994, *Watsonia* 20: 63-66. 1994, *Flora of Ethiopia and Eritrea* 7: 33-37. 1995, *Flora Mediterranea* 5: 340-345. 1995, *Journal of Wuhan Botanical Research* 13(2): 177-179. 1995, *Bothalia* 26(1): 53-61. 1996, *Southwest China Journal of Agricultural Sciences* 9(1): 33-38. 1996, *Lagascalia* 20(2): 265-275. 1998, *Journal of Jiangsu Agricultural College* 19(2): 35-38. 1998, *Am. J. Bot.* 85: 1353-1363, 1626-1630. 1998, *Opera Botanica* 137: 1-42. 1999, *Am. J. Bot.* 86: 1776-1785. 1999, Javier Francisco-Ortega, Arnoldo Santos-Guerra, Seung-Chul Kim and Daniel J. Crawford, "Plant genetic diversity in the Canary Islands: a conservation perspective." *Am. J. Bot.* 87: 909-919. 2000, Judith L. Croxdale, "Stomatal patterning in angiosperms." *Am. J. Bot.* 87: 1069-1080. 2000, Kevin J. Rice and Eric S. Nagy, "Oak canopy effects on the distribution patterns of two annual grasses: the role of competition and soil nutrients." *Am. J. Bot.* 87: 1699-1706. 2000, *Am. J. Bot.* 89: 279-286, 602-612. 2002, *Contributions from the United States National Herbarium* 48: 110, 126-138, 589. 2003, *Am. J. Bot.* 91: 1070-1085. 2004, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, "The evolution of nuclear genome structure in seed plants." *Am. J. Bot.* 91: 1709-1725. 2004, *Weed Research* 45(3): 165-174. June 2005, *Journal of Agronomy and Crop Science* 191(3): 172-184. June 2005, *New Phytologist* 166(3): 917-932. June 2005, M.C. Caldeira, A. Hector, M. Loreau and J.S. Pereira, "Species richness, temporal variability and resistance of biomass production in a Mediterranean grassland." *Oikos* 110(1): 115-123. July 2005.

Species

A. abyssinica Hochst. (*Avena abyssinica* A. Rich.; *Avena abyssinica* Hochst. ex A. Rich., nom. illeg., non *Avena*

abyssinica Hochst.; *Avena alba* subsp. *abyssinica* (Hochst.) Á. Löve & D. Löve; *Avena sativa* var. *abyssinica* (Hochst. ex A. Rich.) Engl.; *Avena sativa* var. *abyssinica* (A. Rich.) Engl.; *Avena strigosa* subsp. *abyssinica* (Hochst. ex A. Rich.) Thell.)

Africa, Yemen, Ethiopia. Annual, erect, panicle with spreading or pendulous branches, tough rachilla breaking up irregularly, glumes and lemmas glabrous, lemmas bifid with 2 short fine bristles, awn bent, probably a cultivated derivative of *Avena vaviloviana* (Malzev) Mordv., closely related to *Avena barbata* Pott ex Link, a common weed of disturbed places, roadsides, wheat and barley fields, subtropical areas, see *Tentamen Florae Abyssinicae* ... 2: 415. 1850, *Akademie der Wissenschaften und der Literatur: Abhandlungen der Mathematisch-Naturwissenschaftlichen Klasse* 2: 129. 1891 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 343. 1908, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 335. 1911, *Atti dell'Istituto Botanico dell'Università di Pavia* 2: 152. 1944.

in English: Abyssinian oat

A. agadiriana B.R. Baum & Fedak

Morocco. See *Canadian Journal of Botany* 63(8): 1379. 1985.

A. atlantica B.R. Baum & Fedak

Morocco. See *Canadian Journal of Botany* 63(6): 1057. 1985.

A. barbata Pott ex Link (*Avena alba* sensu J.H. Willis, non Vahl; *Avena alba* Vahl; *Avena alba* var. *barbata* (Pott ex Link) Maire & Weiller; *Avena almeriensis* Gand.; *Avena barbata* Brot., nom. illeg., non *Avena barbata* Pott ex Lin.; *Avena deusta* Ball; *Avena hirsuta* Mathieu, nom. illeg., non *Avena hirsuta* Moench; *Avena hirsuta* Moench; *Avena hirtula* auct.; *Avena hoppeana* Scheele; *Avena sallentiana* Pau; *Avena sativa* var. *barbata* (Pott ex Link) Fiori; *Avena sesquiteria* hort. ex Steud.; *Avena strigosa* subsp. *barbata* (Pott ex Link) Thell.)

Mediterranean. Annual, variable and often very slender, solitary or tufted, clumped, erect or geniculate, rarely prostrate, often drooping, unbranched, nonauriculate, leaf blades hairy or ciliate, leaf sheaths not keeled and pilose or slightly scabrid above, ligule scabrid to hairy, leaves flat and linear, loose and 1-sided panicle green to purple, weeping branches, flowers greenish brown, cleistogamous and chasmogamous, glumes subequal and lanceolate, lemmas bristled or silky, awns on lemma apices, awns geniculate with twisted column, palea narrowly oblong or narrowly elliptic, anthers yellow, ovary antrorsely silky, silky fruit laterally and ventrally compressed, useful fodder, forage, ornamental, invasive, common noxious weed species of disturbed land, edges of fields, waste places, dry banks, near the sea, common in low shrubland, along roads, deep white sand over limestone, sandy soil, on cliffs, see *Species*

Plantarum 1: 79. 1753, *Symbolae Botanicae*, ... 2: 24. 1791, *Journal für die Botanik* 2: 314-315. 1799 [1800], *Methodus Plantas Horti Botanici* ... 64. 1802, *Flora Lusitana* 1: 108. 1804, *Genera et species plantarum* 4. 1816, *Nomenclator Botanicus* 95. 1821, *Flora* 27: 57. 1844, *Flore Generale de Belgique* 1: 606. 1853, *Prodromus Florae Hispanicae* 1: 68. 1861, *Flore d'Alger* 62. 1884, *Anales de la Sociedad Española de Historia Natural* 15: 398. 1886, *Plantae Europaeae* 1: 62. 1890 and *Bulletin de la Société Botanique de France* 52: 443. 1905, *Flora Sicula* 3: 302. 1909, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 330, 336. 1911, *Boletín de la Sociedad Aragonesa de Ciencias Naturales* 1918: 133. 1918, *Nuova Flora Analitica d'Italia* 1: 109. 1923, *Boletim da Sociedade Broteriana*, ser. 2 13: 617, 621, 627, t. 7, f. 1-2. 1938-1939, *Grasses of Ceylon* 50. 1956, *Grasses of Burma* ... 433. 1960, *Botanical Journal of the Linnean Society* 76(4): 359. 1978, *Grass. Saudi Arabia* 118. 1989.

in English: barbed oats, barbed oat, bearded oats, slender oats, slender oat, slender wild oats, slim oat

in Spanish: avena barbada, ballueca

in South Africa: baardhaver, wildebaardhaver

A. barbata Pott ex Link subsp. ***atherantha*** (C. Presl) Rocha Afonso (*Avena atherantha* C. Presl; *Avena barbata* Pott ex Link subsp. *hirtula* auct., non (Lag.) Tab. Morais; *Avena clauda* auct. lusit., non Durieu; *Avena strigosa* Schreb. subsp. *hirtula* auct., non (Lag.) Malzev; *Avena wiestii* sensu Pignatti, non Steud.)

Europe, south part of Mediterranean region. See *Cyperaceae et Gramineae Siciliae* 30. 1820 and *Botanical Journal of the Linnean Society* 76(4): 358. 1978.

A. barbata Pott ex Link subsp. ***barbata*** (*Avena barbata* Pott ex Link subsp. *hirtula* (Lag.) Tab. Morais; *Avena hirsuta* Moench; *Avena hirtula* Lag.; *Avena strigosa* Schreb. subsp. *hirtula* (Lag.) Malzev)

Europe, North Africa. See *Journal für die Botanik* 2: 315. 1799.

in English: barbed oats, barbed oat

A. breviaristata G. Barratte

Algeria. Indeterminate species, see *Flore d'Alger* 2: 184. 1895 and *Blumea* 3(3): 430. 1940, *Acta Horti Botanici Pragensis* 1962: 82. 1962, *Folia Geobotanica et Phytotaxonomica* 11(3): 294. 1976.

A. brevis Roth (*Avena brevis* Breb.)

Europe. Annual, cereal, cultivated and naturalized in Europe, see *Species Plantarum* 1: 79. 1753, *Botanische Abhandlungen* 42. 1787, *Flore de la Normandie. Troisième édition* 349. 1859 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 332. 1911, *Nuova Flora Analitica d'Italia* 1: 109. 1923, *Repertorium Specierum Novarum Regni Vegetabilis* 30(3): 321. 1932.

in English: short oat

A. brevis Roth var. *uniflora* (Parl.) Drouet

Tropical Africa. Annual, erect or ascending, simple.

in Angola: aveinha

A. byzantina K. Koch (*Avena algeriensis* Trab.; *Avena ponderosa* L. ex B.D. Jacks.; *Avena praecocioides* Litv.; *Avena praecoqua* Litv.; *Avena praecoqua* Moench; *Avena prae-gravis* (Krause) Roshev.; *Avena sativa* L.; *Avena sativa* subsp. *prae-gravis* (Krause) Mordv.; *Avena sativa* var. *prae-gravis* Krause; *Avena shatilowiana* Litv.; *Avena sterilis* L.; *Avena sterilis* subsp. *byzantina* (Koch) Thell.; *Avena sterilis* var. *algeriensis* (Trab.) Trab.; *Avena trabutiana* Thell.)

Europe. Annual, loosely tufted, rather slender, erect, unbranched, glabrous, rather stiff, leaves mostly basal, auricles absent, ligule truncate and membranous, basal leaf sheaths upper part keeled, leaves more or less scabrous, inflorescence a fully exerted green and nodding panicle, cleistogamous, glumes subequal, lemma obtuse and coriaceous, awn more or less straight or geniculate at base, upper lemma usually awnless or with a weak one, palea narrowly elliptic, anthers yellow, ovary silky and obovoid, silky fruit ventrally compressed and longitudinally grooved, weed species, in India seeds and husk (*bhusa*) good cattle food, an escape from cultivation, ornamental, palatable, cultivated for grain and fodder for horses and cattle, adapted to warmer climates, growing in sandy loam, waste and disturbed areas, along roadsides, see *Species Plantarum* 1: 79. 1753, *Species Plantarum, Editio Secunda* 1: 118. 1762, *Linnaea* 21(4): 392. 1848 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 2: 151, 153-5. 1910, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 316. 1911, *Index to the Linnean herbarium, with Indication of ...* 42. 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 13: 53. 1913, *Journal of Heredity* 5: 77. 1914, *Flora URSS* 2: 268. 1934, *Taxon* 23: 579-583. 1974, *Grass. Saudi Arabia* 123. 1989.

in English: red oats, red oat, Algerian oat, Indian oat, cultivated red oat, common red oat

in South Africa: rooihawer

in India: javi, jav, yavalu

A. byzantina K. Koch var. *biaristata* (Hack. ex Trab.) Parodi (*Avena byzantina* subvar. *biaristata* (Hack. ex Trab.) Maire & Weiller; *Avena sativa* var. *biaristata* Hack. ex Trab., *Avena sterilis* subvar. *biaristata* (Hack. ex Trab.) Malzev; *Avena sterilis* var. *biaristata* (Hack. ex Trab.) Thell.)

America. See *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 149: 228. 1909, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 316. 1911, *Flore de l'Afrique du Nord*: 2: 289. 1953, *Encyclopedia Argentina de Agricultura y Jardineria* 1: 127. 1959.

A. byzantina K. Koch var. *hipomelanathera* (Thell.) Parodi (*Avena sterilis* f. *hipomelanathera* Thell.; *Avena sterilis* subvar. *hipomelanathera* (Thell.) Malzev)

America. See *Recueil des Travaux Botaniques Néerlandais* 25a: 431-432. 1928, *Encyclopedia Argentina de Agricultura y Jardineria* 1: 127. 1959.

A. canariensis B.R. Baum, Rajhathy & D.R. Sampson (*Avena canariensis* Nees ex Steud.)

Morocco, Spain, Canary Islands. Rare species, see *Nomenclator Botanicus. Editio secunda* 2: 171. 1840 and *Canadian Journal of Botany* 51(4): 759. 1973, *Genes & Genetic Systems* 71: 1-8. 1996.

A. clauda Durieu (*Avena pilosa* sensu Hayek, non M. Bieb.)

Algeria, Morocco, Israel. See *Revue Botanique; Recueil Mensuel* 1: 360. 1845-1846, *Bulletin de la Société Botanique de France* 1: 15. 1854, *Annales Botanicae Systematicae* 6: 1000. 1861, *Mittheilungen der Thüringischen Botanischen Vereins* 6: 43. 1894 and *Thaiszia* 9(1): 19-26. 1999.

A. cultiformis (Malzev) Malzev (*Avena cultiformis* (Malz.) Malzev & al.; *Avena fatua* L. subsp. *cultiformis* Malzev)

Europe, Russia. See *Species Plantarum* 1: 79-81. 1753.

A. damascena Rajh. & B.R. Baum

Asia temperate, Syria. See *Canadian Journal of Genetics and Cytology* 14(3): 646. 1972.

A. eriantha Durieu (*Avena eriantha* (Boiss. & Reut.) Hack., nom. illeg., non *Avena eriantha* Durieu; *Avena pilosa* (Roem. & Schult.) M. Bieb., nom. illeg., non *Avena pilosa* Scop.; *Trisetum pilosum* Roem. & Schult.)

Bulgaria, Algeria, Syria, Israel. Annual, prostrate to erect, see *Systema Vegetabilium* 2: 662. 1817, *Flora Taurico-Caucasica* 3: 84. 1819, *Revue Botanique; Recueil Mensuel* 1: 360. 1845-1846, *Diagnoses Plantarum Novarum Hispanicarum* 1852: 121. 1852, *Bulletin de la Société Botanique de France* 1: 14. 1854, *Österreichische Botanische Zeitschrift* 27(4): 122. 1877 and *Thaiszia* 9(1): 19-26. 1999.

A. fatua L. (*Avena fatua* subsp. *meridionalis* Malzev; *Avena fatua* var. *glabrata* Peterm.; *Avena fatua* var. *glabrescens* Coss.; *Avena fatua* var. *intermedia* (T. Lestib.) Lej. ex Courtois; *Avena fatua* var. *intermedia* Hartm., nom. illeg., non *Avena fatua* var. *intermedia* (T. Lestib.) Lej. ex Courtois; *Avena fatua* var. *intermedia* Husn., nom. illeg., non *Avena fatua* var. *intermedia* (T. Lestib.) Lej. ex Courtois; *Avena fatua* var. *intermedia* Vasc., nom. illeg., non *Avena fatua* var. *intermedia* (T. Lestib.) Lej. ex Courtois; *Avena fatua* var. *vilis* (Wallr.) Hausskn.; *Avena hybrida* Peterm. ex Rchb. p.p.; *Avena intermedia* Lindgr., nom. illeg., non *Avena intermedia* Guss.; *Avena intermedia* T. Lestib.; *Avena lanuginosa* Gilib.; *Avena meridionalis* (Malzev) Roshev.; *Avena nigra* Wallr.; *Avena patens* St.-Lag.; *Avena pilosa* Scop.; *Avena sativa* var. *fatua* (L.) Fiori; *Avena sativa* var. *sericea* Hook.f.; *Avena septentrionalis* Malzev)

North Africa, central Asia, Europe. Annual or perennial, herbaceous, tufted or solitary, clumped, robust or slender, stout, vigorous and competitive, bluish, prostrate to erect or occasionally geniculate at base, unbranched, fibrous root, leaves mostly basal, auricles absent, sheaths open, ligule obtuse and membrane-like or acute, basal leaf sheaths upper part keeled, flat and rough leaves, open flower head, loose green and brown panicle with weeping heads, drooping and chasmogamous spikelets, filiform pedicels, rachilla breaking up above the glumes, glumes subequal or equal, lower glume dorsally rounded, hairy or densely bearded lemmas entire or shortly bifid, one dark brown bent awn per floret, palea membranous and coriaceous, anthers yellow, ovary antrorsely silky, silky fruit ventrally compressed and longitudinally grooved, planted as erosion control, drought-resistant, invasive, the most widely distributed of the wild oat species, one of the world's worst weeds difficult to eradicate because of shattering and dormancy, forage, a useful fodder, palatable when young, naturalized throughout temperate regions, noxious weed species of disturbed lands, sandy soils, disturbed waste areas, open pasture, open habitats, in coarse desert loam, along roadsides, gardens, brackish soil, cultivated lands, on slopes, a weed of other cereals and fields, worst weed problem in barley, wheat and oat fields, see *Species Plantarum* 1: 79-80. 1753, *Flora Carniolica, Editio Secunda* 1: 86. 1772, *Exercitia Phytologica* 2: 539. 1792, *Botanographie Belgique* 2: 36. 1827, *Compendium Florae Belgicae* 1: 71. 1828, *Botaniska Notiser* 151. 1841, *Linnaea* 14(6): 544. 1841, *Handbok i Skandnaviens Flora, 4 edn.* 30. 1843, *The Flora of British India* 7: 275. 1896 and *Nuova Flora Analitica d'Italia* 1: 109. 1923, *Revista Agronómica* (Lisbon) 19(4): 19. 1931, *Flora Turkmenii* 1: 105. 1932, *Grasses of Ceylon* 50. 1956, *Grasses of Burma* ... 434. 1960, *Taxon* 40: 132. 1991.

in English: common wild oat, spring wild oat, wild oats, wild oat, black oat, poor oats

in Spanish: avena loca, avena silvestre

in Ecuador: avena

in Mexico: avena cimarrona, avena guacha, avena loca, avena silvestre

in Italian: avena

in Arabic: zommeir

in East Africa: ribanchore

in Morocco: rhortal, hortat, wazkun, azqun, iterter, bu zrur, tamenshit, inesli

in South Africa: gewone wildehaver, wildehaver

in Japan: karasu-mugi

in China: ch'iao mai, yen mai

in Bhutan: bocchar, jangali jar

in India: gandal, ganer, ganerjei, ganhel, gozang, jandel, jei, kaadu thoke godhi, kujud, kuljud, upwa

A. *fatua* L. subsp. *fatua*

Africa.

A. *glabra* K. Koch

Europe. See *Linnaea* 19(1): 5. 1846, *Flora Rossica* 4(13): 414. 1852.

A. *hirtula* Lag. (*Avena alba* subvar. *minor* (Lag.) Emb. & Maire; *Avena alba* var. *hirtula* (Lag.) Emb. & Maire; *Avena barbata* subsp. *hirtula* (Lag.) Mor.; *Avena barbata* var. *hirtula* (Lag.) Pérez Lara; *Avena prostrata* Ladiz.; *Avena strigosa* subsp. *hirtula* (Lag.) Malzev)

Spain, Morocco, Algeria. See *Genera et species plantarum* 4. 1816, *Anales de la Sociedad Española de Historia Natural* 15: 398. 1886 and *Boletim da Sociedade Broteriana, ser. 2* 13: 622. 1938-1939, *Bull. Soc. Nat. Phys. Maroc.* 37: 145. 1957, *Israel Journal of Botany* 20(4): 297. 1971.

A. *hispanica* Ard. (*Avena agraria* Brot.; *Avena hispanica* Hort. ex Roem. & Schult.; *Avena hispanica* Lange; *Avena strigosa* Schreb.; *Avena strigosa* subsp. *agraria* (Brot.) Tab. Morais)

Europe. Cultivated and naturalized, see *Spicilegium Florae Lipsicae* 52. 1771, *Saggi scientifici e letterarj dell' Accademia di Padova* 2: 112. 1789, *Flora Lusitanica* 1: 105. 1804, *Systema Vegetabilium* 2: 691. 1817, *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 1: 41. 1860 and *Boletim da Sociedade Broteriana, ser. 2* 7: 116. 1931, *Boletim da Sociedade Broteriana, ser. 2* 12: 236. 1937.

A. *hybrida* Peterm. (*Avena fatua* subsp. *meridionalis* Malzev; *Avena hybrida* Peterm. ex Rchb.; *Avena japonica* Steud.; *Avena meridionalis* (Malzev) Roshev.)

Asia, Europe. Annual, see *Flora Saxonica* 17. 1842, *Synopsis Plantarum Glumacearum* 1: 231. 1854.

A. *insularis* Ladiz.

Europe, Italy, Sicily. See *Genetic Resources and Crop Evolution* 45: 263-264, f. 1-3. 1998.

A. *longiglumis* Durieu (*Avena barbata* subsp. *longiglumis* (Durieu) Lindb.)

Europe, Italy, Algeria, Egypt, Israel. Annual, sandy soil, see *Revue de Botanique, Bulletin Mensuel* 1: 359. 1845-1846 and *Acta Societatis Scientiarum Fennicae ser. B.* 12: 12. 1932, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 93. 1942, *Flore de l'Afrique du Nord:* 2: 272. 1953.

A. *lusitanica* (Tab. Morais) B.R. Baum (*Avena barbata* subvar. *lusitanica* Tab. Morais)

Spain, Canary Islands, Morocco, Algeria, Europe. See *Boletim da Sociedade Broteriana, ser. 2* 13: 624. 1938-1939, *Oats: Wild and Cultivated* 227. 1977.

A. *macrostachya* Balansa ex Coss. & Durieu (*Arrhenatherum macrostachyum* (Balansa ex Coss. & Durieu)

Potztal; *Helictotrichon macrostachyum* (Balansa ex Coss. & Durieu) Henrard)

Algeria. See *Bulletin de la Société Botanique de France* 1: 318. 1854 and *Blumea* 3(3): 430. 1940, *Willdenowia* 4: 400. 1968.

A. maroccana Gand. (*Avena magna* H.C. Murphy & Terrell)

Morocco. See *Bulletin de la Société Botanique de France* 55: 658. 1908.

in English: Moroccan oat

A. matritensis B.R. Baum

Spain, Morocco, Algeria, Europe. See *Oats: Wild and Cultivated* 233. 1977.

A. murphyi Ladiz.

Europe, Spain, Israel. Annual, roadside and undisturbed patches, heavy soils, see *Israel Journal of Botany* 20(1): 24. 1971.

A. nuda L. (*Avena nudibrevis* Vavilov)

Europe. Annual, erect, lemmas coriaceous, cultivated, cereal, fodder, see *Demonstrationes Plantarum* 3. 1753, *Spicilegium Florae Lipsicae* 52. 1771, *Hortus Regius Botanicus Berolinensis* 1: 109. 1827, *Synopsis der mitteleuropäischen Flora* 2: 238. 1899 and *Taxon* 49(2): 247. 2000.

in English: hull-less oat, sand oat, naked oat

in French: avoine nue

in Spanish: avena desnuda

A. occidentalis Durieu

Portugal, Ethiopia, Egypt, Spain. See *Cat. Graines Jard. Bordeaux* 25. 1865.

in English: western oat, western wild oat

A. quadridentula Döll (*Amphibromus quadridentulus* (Döll) Swallen; *Helictotrichon quadridentulum* (Döll) Renvoize)

Brazil. Caryopsis used to stop hemoptysis, see *Flora Brasiliensis* 2(3): 100, pl. 29, f. 2. 1878 and *American Journal of Botany* 18: 414. 1931, *Kew Bulletin* 42: 921. 1987.

in Brazil: aveia do campo, aveia da terra, aveia do mato

A. sativa L. (*Avena algeriensis* Trab.; *Avena anglica* Hort. ex Roemer & Schultes; *Avena byzantina* K. Koch; *Avena byzantina* var. *anopla* Mordv.; *Avena byzantina* var. *thellungiana* (Malzev) Mor.; *Avena chinensis* Fisch. ex Roem. & Schult.; *Avena cinerea* hort. ex Roem. & Schult.; *Avena diffusa* var. *segetalis* Vavilov; *Avena diffusa* var. *volgensis* Vavilov; *Avena distans* Schur; *Avena fatua* subsp. *macrantha* (Hack.) Malzev; *Avena fatua* subsp. *nodipilosa* Malzev; *Avena fatua* subsp. *praegravis* (Krause) Malzev; *Avena fatua* subsp. *sativa* (L.) Thell.; *Avena fatua* subsp. *sativa* Thell.; *Avena fatua* var. *sativa* (L.) Hausskn.; *Avena flava* Hort. ex Roem. & Schult.; *Avena fusca* Schur, nom. illeg., non *Avena fusca* Ard.; *Avena fuscoflora* Schur; *Avena geor-*

giana Roem. & Schult.; *Avena georgica* Zuccagni; *Avena grandis* Nevski; *Avena heteromalla* Haller; *Avena hungarica* Lucé; *Avena hybrida* Peterm. ex Rchb. p.p.; *Avena macrantha* (Hack.) Malzev; *Avena macrantha* (Hack.) Nevski; *Avena nigra* Wallr.; *Avena nodipilosa* (Malzev) Malzev, nom. illeg., non *Avena nodipilosa* (Malzev) Malzev; *Avena orientalis* Schreb.; *Avena pendula* Gilib.; *Avena persarum* Nevski; *Avena podolica* Pascal. ex Zuccagni; *Avena ponderosa* L. ex B.D. Jacks.; *Avena praecocoides* Litv.; *Avena praecoqua* Litv.; *Avena praegravis* (Krause) Roshev.; *Avena pseudosativa* (Thell.) Herter; *Avena pseudosativa* Thell. ex Malzev; *Avena racemosa* Thuill.; *Avena rubra* Zuccagni; *Avena sativa* Willd.; *Avena sativa* convar. *nodipilosa* (Malzev) Tzvelev; *Avena sativa* cv. *montana* Alef.; *Avena sativa* cv. *obtusata* Alef.; *Avena sativa* cv. *pugnax* Alef.; *Avena sativa* var. *segetalis* (Vavilov) Nevski; *Avena sativa* cv. *tristis* Alef.; *Avena sativa* subsp. *macrantha* (Hack.) Rocha Afonso; *Avena sativa* subsp. *nodipilosa* (Malzev) Vasc.; *Avena sativa* var. *aristata* Schltldl.; *Avena sativa* var. *brunnea* Körn.; *Avena sativa* var. *cinerea* Körn.; *Avena sativa* var. *contracta* Neilr.; *Avena sativa* var. *diffusa* Neilr.; *Avena sativa* var. *eligulata* Vavilov ex Mordv.; *Avena sativa* var. *flava* Körn.; *Avena sativa* var. *grisea* Körn.; *Avena sativa* var. *inermis* Körn.; *Avena sativa* var. *ligulata* Vavilov ex Mordv.; *Avena sativa* var. *macrantha* Hack.; *Avena sativa* var. *mutica* Schltldl., nom. illeg.; *Avena sativa* var. *nigra* Haller; *Avena sativa* var. *nigra* Alph. Wood, nom. illeg., non *Avena sativa* var. *nigra* Schrank; *Avena sativa* var. *orientalis* (Schreber) Alefeld; *Avena sativa* var. *praegravis* Krause; *Avena sativa* var. *secunda* Alph. Wood; *Avena shatilowiana* Litv.; *Avena sterilis* L.; *Avena sterilis* f. *pseudosativa* Thell.; *Avena sterilis* var. *algeriensis* (Trab.) Trab.; *Avena sterilis* var. *thellungiana* Malzev; *Avena tartarica* Ard.; *Avena thellungii* Nevski; *Avena trabutiana* Thell.; *Avena trisetata* Thunb.; *Avena unilateralis* Brouss. ex Roem. & Schult.; *Avena verna* Heuze; *Avena volgensis* (Vavilov) Nevski)

Europe, Egypt to Morocco. Annual, solitary or tufted, clumping, robust, erect or decumbent and rooting at base, herbaceous, flat and not grooved leaves, auricles absent, basal leaf sheaths not keeled, sheaths loose, finely denticulate ligule membranous to chartaceous, inflorescence very variable in shape, pyramidal green nodding terminal panicle 1-sided, cleistogamous and drooping spikelets, glumes subequal or equal, lower glume dorsally rounded and narrowly ovate, lemmas glabrous and shortly 2-toothed at the top, awn with a distinct column, palea cartilaginous and 2-keeled, anthers yellow, pilose to spiny golden fruit ventrally compressed and longitudinally grooved, cultivated in many varieties, frequently escaped and naturalized, Ayurvedic use, tonic and diuretic, laxative and calmativ, vulnerary, soil improver, fodder, forage, grain crop, a very nutritious source of food, crushed grain and straw for feeding horses, under some circumstances capable of poisoning livestock,

open grass plain, common in waste places, fallow fields, along roadsides, disturbed areas, dry soil, occasionally in damp ground, see *Species Plantarum* 1: 79. 1753, *Species Plantarum, Editio Secunda* 1: 118. 1762, *Spicilegium Florae Lipsicae* 52. 1771, *Novi Commentarii Societatis Regiae Scientiarum Göttingensis* 6: f. 32, f. 33. 1775, *Saggi scientifici e letterarj dell' accademia di Padova* 2: 101. 1789, *Exercitia Phytologica* 2: 539. 1792, *Prodromus Plantarum Capensium, ...* 22. 1794, *Flore des Environs de Paris* 59. 1799, *Collectanea* 126. 1809, *Systema Vegetabilium, editio decima sexta* 2: 669. 1817, *Topographische Nachrichten von der Insel Oesel* 20. 1823, *Linnaea* 14(6): 544. 1841, *A Class-book of Botany* edition 2. 610. 1847, *Linnaea* 21(4): 392. 1848, *Flora von Nieder-Österreich* 58. 1859, *Enumeratio Plantarum Transsilvaniae* 756. 1866, *Landwirthschaftliche Flora* 321. 1866, *Österreichische Botanische Zeitschrift* 20: 22. 1870, *Mitteilungen der Geographischen Gesellschaft zu Jena* 3: 238. 1885, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 244. 1885 and *Bulletin Agricole de l'Algérie et de la Tunisie* 16: 354-356, f. i-f, f. 4. 1910, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 325. 1911, *Index to the Linnean Herbarium, with Indication of ...* 42. 1912, *La flore adventice de Montpellier* 110. 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 13: 53. 1913, *Journal of Heredity* 5: 77. 1914, *Revista Agronómica* (Lisbon) 19(4): 19. 1931, *Flora URSS* 2: 268. 1934, *Boletim da Sociedade Broteriana, ser. 2* 13: 611. 1938-1939, *Revista Sudamericana de Botánica* 6: 141. 1940, *Grasses of Ceylon* 50. 1956, *Grasses of Burma ...* 434. 1960, *Taxon* 23: 579-583. 1974, *N.Z. J. Agric.* 128. 45. 1974, *Botanical Journal of the Linnean Society* 76(4): 359. 1978, *Grass. Saudi Arabia* 123. 1989.

in English: common oat, common oats, cultivated oat, cultivated oats, oat hay, red oat, side oat, wild oat, sativa oats, oats, oat, tree oat, black tartarian oats (a variety of *Avena sativa* L.)

in Arabic: azekkoun, hartaman, khortan, shufan, tamenzirt, taskrunt, ziwan, zummeir

in Italian: avena

in French: avoine cultivée, avoine byzantine, avoine

in Spanish: avena roja, avena común, avena

in Morocco: hortâl, âzqûn, wazqûn, wasqûn

in Bolivia: avena, awina

in Colombia: avena

in Ecuador: avena silvestre, avena

in Mexico: avena

in Southern Africa: gewone hawer, sativa hawer; habore (Sotho)

in Japan: ma-karasu-mugi

in Bhutan: bachu

in India: ganer, jai, javi, jawi, kuljud, otdhanya, pai, seeme thoke godhi, vilayathi jaw, wilayati jau

in Thailand: khaao ot, khao ot

in Hawaii: 'oka

in Turkey: yulaf

A. sativa L. subsp. *macrantha* (Hack.) Rocha Afonso (*Avena fatua* L. subsp. *macrantha* (Hack.) Malzev; *Avena sativa* var. *macrantha* Hack.)

Europe. Lemma sparsely hairy, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 244. 1885 and *Botanical Journal of the Linnean Society* 76(4): 359. 1978.

A. saxatilis (Lojac.) Rocha Afonso (*Avena barbata* var. *saxatilis* Lojac.)

Europe, Italy, Sicily. Rare species, see *Flora Sicula* 3: 302. 1909, *Botanical Journal of the Linnean Society* 76(4): 359. 1978.

A. sterilis L. (*Avena affinis* Bernh. ex Steud.; *Avena algeriensis* Trab.; *Avena byzantina* K. Koch; *Avena byzantina* var. *solida* (Hauskn.) Maire & Weiller; *Avena fatua* var. *ludoviciana* (Durieu) Fiori; *Avena ludoviciana* Durieu; *Avena x ludoviciana* Durieu; *Avena ludoviciana* var. *psilathera* (Thell.) Parodi; *Avena macrocalyx* Sennen; *Avena macrocarpa* Moench; *Avena melillensis* Sennen & Mauricio; *Avena nutans* St.-Lag.; *Avena persica* Steud.; *Avena sativa* L.; *Avena sativa* subsp. *sterilis* (L.) de Wet; *Avena sativa* var. *ludoviciana* (Durieu) Fiori; *Avena sativa* var. *sterilis* (L.) Fiori; *Avena sensitiva* hort. ex Vilm.; *Avena solida* (Hauskn.) Herter; *Avena sterilis* Bianca, nom. illeg., non *Avena sterilis* L.; *Avena sterilis* Delile ex Boiss., nom. illeg., non *Avena sterilis* L.; *Avena sterilis* L. subsp. *ludoviciana* (Durieu) M. Gillet & Magne; *Avena sterilis* subsp. *ludoviciana* (Durieu) Nyman; *Avena sterilis* subsp. *macrocarpa* (Moench) Briq.; *Avena sterilis* var. *algeriensis* (Trab.) Trab.; *Avena sterilis* var. *ludoviciana* (Durieu) Husn.; *Avena sterilis* var. *psilathera* Thell.; *Avena sterilis* var. *solida* Hauskn.; *Avena trichophylla* K. Koch; *Avena turonensis* Tourlet)

Mediterranean region. Annual, solitary or tufted, strong, robust, rather stiff, leaves mostly basal, stems upright or spreading or geniculate, ligule membranous or chartaceous and acute to truncate, auricles absent, leaves stiff, basal leaf sheaths distally keeled or not keeled, heavy inflorescences, green and nodding panicle, flowers connate and falling as one unit at maturity, cleistogamous spikelets dark brown at maturity or golden-brown at maturity, uppermost florets sterile and awnless, 2 lower florets fertile and awned, lower glume dorsally rounded, lemma narrow-lanceolate, lower 1-2 lemmas awned, geniculate awns twist and untwist under humid conditions and in moist surroundings, palea firmly membranous to coriaceous, anthers yellow, ovary silky and golden, silky fruit ventrally compressed and longitudinally

grooved, ornamental, invasive, widely naturalized elsewhere, a noxious weed of fields and roadsides, waste places, disturbed soils, see *Species Plantarum* 1: 79. 1753, *Species Plantarum, Editio Secunda* 1: 118. 1762, *Methodus Plantas Horti Botanici ...* 196. 1794, *Linnaea* 21(4): 392-393. 1848, *Synopsis Plantarum Glumacearum* 1: 230. 1854, *Actes de la Société Linnéenne de Bordeaux* 20: 37, 41. 1855, *Nomenclator Botanicus. Editio secunda* 1: 171. 1873, *Nouvelle Flore Française* 532. 1873, *Flora Orientalis* 5: 543. 1884, *Mittheilungen der Thüringischen Botanischen Vereins* 6: 40, 44. 1894 and *Flora Analitica d'Italia* 1: 72. 1908, *Catalogue Raisonné des Plantes Vasculaires du Department d'Indre-et-Loire* 568. 1908, *Bulletin Agricole de l'Algérie et de la Tunisie* 16: 354-356, f. i-f, f. 4. 1910, *Prodrome de la Flore Corse* 1: 105. 1910, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 314. 1911, *Journal of Heredity* 5: 77. 1914, *Bull. Soc. Bot. France* 68: 407. 1922, *Nuova Flora Analitica d'Italia* 1: 109. 1923, *Catálogo de la flora del Rif oriental ...* 129. 1933, *Revista Sudamericana de Botánica* 6: 144. 1940, *Flore de l'Afrique du Nord*: 2: 288. 1953, *Annuario del Reale Istituto Botanico di Roma* 15: 393. 1957, *Enciclopedia Argentina de Agricultura y Jardinería* 1: 126. 1959, *Grasses of Burma ...* 434. 1960, *Grass. Saudi Arabia* 123. 1989, J. Barroso et al., "Comparison of sampling methodologies for site-specific management of *Avena sterilis*." *Weed Research* 45(3): 165-174. June 2005.

in English: animated oat, weather spider, red wild oats, wild red oat, tall wild oats, wild oats, wild oat, fly oats, sterile oat, sterile oats, winter wild oat

in French: avoine animée, avoine stérile

in Spanish: avena loca, avena

in Morocco: rhortal, hortal, wazkun, azqun, iterter, bu zrur, tamenshit, inesli

in South Africa: groot wildehawer, rooiwildehawer, wildehawer

in Turkey: yabani yulaf

A. sterilis L. subsp. *ludoviciana* (Durieu) M. Gillet & Magne (*Avena ludoviciana* Durieu; *Avena persica* Steud.; *Avena sterilis* L. subsp. *ludoviciana* (Durieu) Nyman)

Eurasia. Annual, robust, basal leaf sheaths glabrous or scabrous, flat and scabrous leaves, ligule membranous, erect flowering culms, loose pyramidal panicle, drooping spreading spikelets, filiform pedicels, lower florets awned, glumes subequal and acute, lemmas ovate, slender awn geniculate and twisted, cultivated, naturalized, a weed of cereal crops, disturbed waste areas, in gravelly clay loam, on roadsides, see *Synopsis Plantarum Glumacearum* 1: 230. 1854, *Actes de la Société Linnéenne de Bordeaux* 20: 37, 41. 1855, *Nouvelle Flore Française* 532. 1873 and J. Barroso, C. Fernández-Quintanilla, D. Ruiz, P. Hernaiz and L.J. Rew, "Spatial stability of *Avena sterilis* ssp. *ludoviciana* popula-

tions under annual applications of low rates of imazamethabenz." *Weed Research* 44(3): 178-186. June 2004.

in English: ludo wild oats

A. sterilis L. subsp. *sterilis* (*Avena macrocarpa* Moench; *Avena trichophylla* K. Koch)

Mediterranean. Annual, ligule more or less chartaceous, lemma margins smooth, awn stout, lodicules ovate, see *Species Plantarum, Editio Secunda* 1: 118. 1762.

in English: sterile oats, sterile oat

A. strigosa Schreb. (*Avena agraria* Brot.; *Avena alta* Cav. ex Roemer & Schultes; *Avena ambigua* Schoemb. ex Nyman; *Avena arduensis* Lej. ex Steud.; *Avena glabrescens* (Malzev) Herter; *Avena hispanica* Ard.; *Avena nervosa* Lam.; *Avena nuda* subsp. *strigosa* (Schreb.) Mansf.; *Avena sativa* var. *strigosa* (Schreb.) Fiori; *Avena strigosa* Vogler, nom. illeg., non *Avena strigosa* Schreb.; *Avena strigosa* subsp. *agraria* (Brot.) Mor.; *Avena strigosa* var. *agraria* (Brot.) Samp.; *Avena strigosa* var. *glabrescens* (Marq.) Malzev; *Danthonia strigosa* (Schreb.) P. Beauv.)

Europe. Annual, glaucous, tufted, slender, erect, leaf sheath glabrous or finely hairy, ligule denticulate and obtuse, rather dense panicle erect or drooping, both lemmas awned, cultivated and naturalized, a weed in crops, along roadsides, light soil, ballast, see *Species Plantarum* 1: 79. 1753, *Spicilegium Florae Lipsicae* 52. 1771, *Schediasma botanicum de duabus Graminum speciebus nondum satis extricatis ...* 22. Giessae [Giessen] 1776, *Saggi scientifici e letterarj dell'accademia di Padova* 2: 112. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 201. 1791, *Flora Lusitanica* 1: 105. 1804, *Essai d'une Nouvelle Agrostographie* 154, 160. 1812, *Systema Vegetabilium, editio decima sexta* 2: 691. 1817, *Nomenclator Botanicus. Editio secunda* 1: 171. 1840, *Tentamen Florae Abyssinicae ...* 2: 415. 1850, *Österreichische Botanische Zeitschrift* 27(4): 125. 1877 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 331-332, 334-335. 1911, *Botanical Exchange Club of the British Isles. Report* 6: 324-325. 1922, *Nuova Flora Analitica d'Italia* 1: 109. 1923, *Botaniska Notiser* 1926: 182. 1926, *Boletim da Sociedade Broteriana, ser. 2* 7: 116. 1931, *Boletim da Sociedade Broteriana, ser. 2* 12: 236, 240-242, 245. 1937, *Boletim da Sociedade Broteriana, ser. 2* 13: 637, 640-641, 643. 1938-1939, *Revista Sudamericana de Botánica* 6: 141. 1940.

in English: black oat, bristle oat, sand oat, small oat, lopsided oat, lopsided oats

in French: avoine rude

A. trichophylla K. Koch (*Avena fatua* var. *trichophylla* (K. Koch) Griseb.; *Avena ludoviciana* Durieu; *Avena sterilis* L.; *Avena sterilis* subsp. *trichophylla* (K. Koch) Malzev)

Asia temperate and tropical, Europe, Algeria, India, Israel. See *Species Plantarum, Editio Secunda* 1: 118. 1762, *Linnaea* 21(4): 393. 1848, *Actes de la Société Linnéenne de*

Bordeaux 20: 37, 41. 1855 and *Grass. Saudi Arabia* 123. 1989.

A. vaviloviana (Malzev) Mordv. (*Avena barbata* subsp. *vaviloviana* (Malz.) Mor.; *Avena barbata* var. *pilosiuscula* (Thell.) Mor.; *Avena strigosa* subsp. *vaviloviana* Malzev; *Avena strigosa* var. *pilosiuscula* Thell.; *Avena strigosa* var. *pilosiuscula* (Thell.) Malzev; *Avena vaviloviana* (Malzev) C.E. Hubb.; *Avena vaviloviana* (Malzev) Malzev; *Avena vaviloviana* var. *pilosiuscula* (Thell.) C.E. Hubb.)

Ethiopia. Annual, erect, simple, panicle loose, spikelets 2-3-flowered, the third floret reduced or vestigial, fragile rachilla breaks up readily, lemmas often hairy, weed species, arable land, closely related to *Avena barbata* Pott ex Link, see *Mittheilungen der Thüringischen Botanischen Vereins* 13-14: 49. 1899 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 334, 336. 1911, *Flora of Cultivated Plants of the USSR* 2: 422. 1936, *Flora of Tropical Africa* 10: 118-120. 1937, *Boletim da Sociedade Broteriana, ser. 2* 13: 626-627. 1938-1939.

A. ventricosa Balansa ex Coss. (*Avena bruhsiana* Gruner; *Avena ventricosa* subsp. *bruhsiana* (Gruner) Malzev)

Algeria, Iraq. See *Bulletin de la Société Botanique de France* 1: 14. 1854 and *Grass. Saudi Arabia* 120. 1989.

A. wiestii Steud. (*Avena alba* var. *wiestii* (Steud.) Maire & Weiller; *Avena barbata* subsp. *wiestii* (Steud.) Mansf.; *Avena barbata* subsp. *wiestii* (Steud.) Tzvelev; *Avena barbata* var. *wiestii* (Steud.) Hausskn.; *Avena nuda* subsp. *wiestii* (Steudel) Á. Löve & D. Löve; *Avena strigosa* subsp. *wiestii* (Steud.) Thell.)

Algeria, Egypt, Asia, Israel, Europe. See *Synopsis Plantarum Glumacearum* 1: 231. 1854, *Mittheilungen der Thüringischen Botanischen Vereins* 6: 42, 45. 1894, *Mittheilungen der Thüringischen Botanischen Vereins* 13-14: 49. 1899 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 307, 333. 1911, *Flore de l'Afrique du Nord*: 2: 277. 1953, *Novosti Sist. Vyss. Rast.* 11: 70. 1974, *Thaiszia* 9(1): 19-26. 1999.

A. x glabrata Hausskn. (*Avena sativa* x *Avena fatua*)

Japan, Asia, Europe. See *Nomenclator Botanicus. Editio secunda* 1: 172. 1840.

A. x haussknechtii Nevski (*Avena haussknechtii* Nevski; *Avena sativa* x *Avena sterilis*)

Europe, Asia.

Avena Scop. = *Avena* L., *Lagurus* L.

Nom. illeg., non *Avena* L.

Pooideae, Poeae, Agrostidinae, see *Species Plantarum* 1: 81. 1753, *Introductio ad Historiam Naturalem* 74. 1777 and *Contributions from the United States National Herbarium* 48: 126-138, 420. 2003.

Avenaria Fabr. = *Avenaria* Heist. ex Fabricius, *Bromus* L.

Referring to the genus *Avena* L.

Pooideae, Bromae, see *Species Plantarum* 1: 76-78. 1753, *Enumeratio Methodica Plantarum* 206. 1759 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191. 2003.

Avenastrum Opiz = *Avenastrum* Jess., *Helictotrichon* Besser, *Helictotrichon* Besser ex Schult. & Schult.f., *Helictotrichon* Schult.

Resembling the genus *Avena* L., *astrum* is a Latin substantial suffix indicating inferiority or incomplete resemblance.

Pooideae, Poeae, Aveninae, type *Avenastrum sempervirens* (Vill.) Vierh., see *Deutschlands Gräser und Getreidearten* 53, 214, f. 95. Leipzig 1863 and *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 671-672. 1914, *Introd. S. African Grasses* 32. 1931, *Feddes Repertorium* 45: 7. 1938, *Folia Geobot. Phytotax.* 2: 402. 1967, *Contributions from the United States National Herbarium* 48: 382-383. 2003.

Avenella (Bluff & Fingerh.) Drejer = *Avenella* Parl., *Deschampsia* P. Beauv.

The genus *Avena* L. plus the diminutive.

Pooideae, Poeae, Airinae, type *Avenella flexuosa* (L.) Drejer, see *Species Plantarum* 1: 63-66. 1753, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Compendium Florae Germaniae. Editio altera* 1(1): 139. 1836, *Flora Excursoria Hafniensis* 32. 1838, *Flora italiana, ossia descrizione delle piante ...* 1: 246. 1848, *Die Natürlichen Pflanzenfamilien* 2(2): 54. 1887 and *Bot. Not.* 1953(3): 356. 1953, *Folia Geobotanica et Phytotaxonomica* 1(3): 294. 1976, *Contributions from the United States National Herbarium* 48: 245-256. 2003.

Avenochloa Holub = *Avenula* (Dumort.) Dumort., *Helictotrichon* Besser, *Helictotrichon* Besser ex Schult. & Schult.f., *Helictotrichon* Schult.

The genus *Avena* L. and *chloe*, *chloa* "grass."

Pooideae, Poeae, see *Bulletin de la Société Botanique de Belgique* 7: 68. 1868 and *Feddes Repertorium* 45: 7. 1938, *Acta Horti Botanici Pragensis* 1962: 82. 1962, *Contributions*

from the United States National Herbarium 48: 139-140, 382-383. 2003.

Avenula (Dumort.) Dumort. = *Avenastrum* Jess., *Avenochloa* Holub, *Danthorhiza* Tenore, *Helictotrichon* Besser, *Helictotrichon* Besser ex Schult. & Schult.f., *Helictotrichon* Schult.

Referring to the genus *Avena* L., a diminutive.

About 30 species, most of which are European. Pooideae, Poaceae, perennial, caespitose or stoloniferous, unribbed leaves, sheaths usually open, ligules membranous and acute, leaf blades flat or folded, inflorescence a reduced panicle, flattened awns, unlobed lodicules, liquid to semiliquid endosperm, related to and frequently included in *Helictotrichon*, type *Avenula pubescens* (Huds.) Dumort., see *Flora Napolitana* 1: x. 1811, *Observations sur les Graminées de la Flore Belgique* 122. 1824, *Deutschlands Gräser und Getreidearten* 53, 214, f. 95. 1863, *Bulletin de la Société Botanique de Belgique* 7(1): 68. 1868 and *Feddes Repertorium* 45: 7. 1938, *N. Amer. Fl.* 17: 568. 1939, *Acta Horti Botanici Pragensis* 1962: 82. 1962, *Folia Geobot. Phytotax.* 11(3): 294. 1976, *Preslia* 49: 203-221. 1977, *Phyton. Annales Rei Botanicae* 24: 193-223. 1984, *Acta Botanica Croatica* 43: 315-328. 1984, *Annali di Botanica* 45: 75-102. 1987, *International Organization of Plant Biosystematists Newsletter* 17: 7-8. 1991, *Restoration Ecology* 5(1): 66-76. Mar 1997, C. Philip Wheeler & W. Rod Cullen, "The Flora and invertebrate fauna of abandoned limestone quarries in Derbyshire, United Kingdom." *Restoration Ecology* 5(1): 77-84. Mar 1997, *Bot. Zhurn. (Moscow & Leningrad)* 84(7): 109-118. 1999, *Grass and Forage Science* 54(1): 1-18, Mar 1999, *Diversity & Distributions* 5(6): 275-293. Nov 1999, *Grasses: Systematics and Evolution* 61-74. 2000, *Environmental Microbiology* 2(1): 99-110. Feb 2000, *Journal of Ecology* 88(2): 331-347. Apr 2000, *Molecular Phylogenetics and Evolution* 21(2): 198-217. 2001, *Journal of Applied Ecology* 39(2): 294-309. Apr 2002, *Contributions from the United States National Herbarium* 48: 108-109, 139-140, 382-383. 2003, William A. Weber, "The Middle Asian element in the Southern Rocky Mountain flora of the western United States: a critical biogeographical review." *Journal of Biogeography* 30(5): 649-685. May 2003, *New Phytologist* 159(1): 213-228. July 2003, *Global Change Biology* 9(9): 1309-1321. Sep 2003, *New Phytologist* 161(1): 279-290. Jan 2004.

Species

A. albinervis (Boiss.) M. Láziz (*Avena albinervis* Boiss.; *Avena sulcata* J. Gay ex Delastre var. *albinervis* (Boiss.) DC.)

Europe. See *Voyage botanique dans le midi de l'Espagne* 2: 656, t. 176. 1839-1845 and M. Láziz, "Aportaciones al conocimiento de la flora gallega, viii." *Comun. I.N.I.A.*, no. 2, 26 p. 1974.

A. bromoides (Gouan) H. Scholz (*Avena bromoides* Gouan; *Avenula bromoides* (Gouan) M. Láziz, nom. illeg., non *Avenula bromoides* (Gouan) H. Scholz)

Europe. See *Hortus Regius Monspelienis* 52. 1762 and *Willdenowia* 7(2): 420. 1974, *Comunicaciones I.N.I.A. Serie: Recursos Naturales* 2: 23. 1974.

A. crassifolia (Font Quer) Holub (*Avena crassifolia* Font Quer)

Spain. See *Folia Geobotanica et Phytotaxonomica* 2 11(3): 295. 1976.

A. dahurica (Kom.) W. Sauer & H. Chmelitschek (*Avena planiculmis* subsp. *dahurica* Kom., *Avenastrum dahuricum* (Kom.) Roshev., *Avenochloa dahurica* (Kom.) Holub; *Avenula dahurica* (Kom.) Holub, nom. illeg., non *Avenula dahurica* (Kom.) W. Sauer & H. Chmelitschek)

Eurasia. See *Flora Germanica* 1: 381, t. 6, f. 2. 1806 and *Flora Peninsulae Kamtschatka* 1: 159. 1927, *Flora URSS* 2: 275. 1934, *Report of the Institute of Scientific Research, Manchoukuo* 3(1): 77. 1939, *Acta Horti Botanici Pragensis* 1962: 84. 1962, *Mitteilungen der Botanischen Staatssammlung München* 12: 582. 1976, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976.

A. delicatula Franco

Spain, Portugal. See *Botanical Journal of the Linnean Society* 76(4): 359. 1978.

A. hackelii (Henriq.) Holub (*Avena hackelii* Henriq.)

Spain, Portugal. See *Boletim da Sociedade Broteriana* 20: 87. 1905, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976.

A. hookeri (Scribner) Holub (*Arrhenatherum hookeri* (Scribn.) Potzta; *Avena americana* (Scribn.) Scribn.; *Avena hookeri* Scribn.; *Avena pratensis* var. *americana* Scribn.; *Avenastrum asiaticum* Roshev.; *Avenochloa asiatica* (Roshev.) Holub; *Avenochloa hookeri* (Scribn.) Holub; *Helictotrichon asiaticum* (Roshev.) Grossh.; *Helictotrichon hookeri* (Scribn.) Henrard)

Europe. See *Essai d'une Nouvelle Agrostographie* 55, 152, 153. 1812, *Botanical Gazette* 11: 177. 1886, E. Hackel (1850-1926), *The True Grasses* 123. New York 1890 [translated by F. Lamson-Scribner (1851-1938) and Effie A. Southworth], *Bulletin, Division of Agrostology United States Department of Agriculture* 7; 183, f. 165. 1897 and *Blumea* 3(3): 429. 1940, *Acta Horti Botanici Pragensis* 1962: 82, 84. 1962, *Willdenowia* 4: 400. 1968, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976.

A. hookeri (Scribner) Holub subsp. **hookeri**

Europe.

Caespitose, erect, leaf blades blades glabrous to scabrid, sheath glabrous to scabrid, ligule usually lacerate, glumes acute, grows on open prairie slopes

in English: spike oat

A. marginata (Lowe) Holub (*Avena marginata* Lowe)

Europe. See *Transactions of the Cambridge Philosophical Society* 6: 529. 1838 and *Preslia* 49(3): 219. 1977.

A. marginata (Lowe) Holub subsp. **sulcata** (J. Gay ex Delastre) Franco (*Avena sulcata* J. Gay ex Delastre; *Avena sulcata* Gay ex Boissier; *Avena sulcata* J. Gay ex Delastre var. *sulcata*; *Avenula sulcata* (J. Gay ex Delastre) Dumort.; *Avenula sulcata* (Gay ex Boissier) Dumort.; *Helictotrichon sulcatum* (Delastre) Henrard)

Europe.

A. pubescens (Hudson) Dumort.

Eurasia. Shortly stoloniferous, leaf blades blades pubescent, sheath pubescent, grows in meadows, pastures, and woodland clearings.

in English: oat

A. pubescens (Hudson) Dumort. subsp. **laevigata** (Schur) Holub

Eurasia.

Smooth leaves.

A. pubescens (Hudson) Dumort. subsp. **pubescens**

Eurasia.

Pilose to pubescent leaves.

A. sulcata (Gay ex Boissier) Dumort. (*Avena sulcata* J. Gay ex Delastre; *Avena sulcata* Gay ex Boissier; *Avenastrum sulcatum* (Gay ex Boissier) Vierh.; *Avenochloa sulcata* (Gay ex Boissier) Holub; *Avenula sulcata* (J. Gay ex Delastre) Dumort.

Europe. See *Elenchus Plantarum Novarum* 88. 1838, *Bulletin de la Société Botanique de Belgique* 7(1): 68. 1868 and *Acta Horti Botanici Pragensis* 1962: 85. 1962.

Axonopus P. Beauv. = *Anastrophus* Schldl., *Axonopus* Hook.f., *Cabrera* Lag., *Lappagopsis* Steud.

From the Greek *axon*, *axonos* “axis, stem, axle” and *pous*, *podos* “a foot,” referring to the stolons or to the digitate inflorescences; Latin *axon*, *onis* (*axis*, *is* “axle, pivot,” from *ago*, *egi*, *actum*, *ere* “to move”); from the ancient Indian *aksa*; from the ancient German *ahsa* and the Avestic *asa*; see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 12, 154. (Dec.) 1812.

About 35/(110-)114 species, tropical and subtropical America, Africa. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Paspalinae, annual or perennial, erect,

stoloniferous or rhizomatous, caespitose, sometimes mat-forming, herbaceous, ligule an unfringed membrane, leaves oblong and blunt, plants bisexual, inflorescence of spicate main branches digitate or nondigitate, 2 to many racemes linear, spikelets solitary and dorsally compressed, 2 florets, lower floret sterile, upper floret bisexual, glumes 1 per spikelet, lower glume absent or suppressed, upper lemma hardened and obtuse, upper glume and lower lemma as long as spikelet, palea present, 2 minute lodicules free and fleshy, usually 3 stamens, ovary glabrous, 2 stigmas, lawn grass, weed species, cultivated fodder, native pasture species, playing fields, usually in grassland, on dry pampas near woods, disturbed soil, open grassy plain, sandy open hillsides, open meadow, pampas, evergreen forest, rocky dry ground, low moist ground, degraded pastures, wet sandy soil, open habitats, moist and weedy places, marshy areas, savannah, forest clearings, along a drainage ditch, type *Axonopus aureus* P. Beauv., see *Species Plantarum* 1: 55. 1753, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Prodr.* 24. 1788, *Essai d'une Nouvelle Agrostographie* 12, 154. 1812, *Genera et species plantarum* 5. 1816, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 24. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 193, 195. 1834, *Botanische Zeitung. Berlin* 8: 681. 1850, *Synopsis Plantarum Glumacearum* 1: 112. 1855 [1854], *Flora Brasiliensis* 2(2): 113, 173. 1877, *Genera Plantarum* 3: 1098. 1883, *The Flora of British India* 7(21): 63. 1896 and *Contr. U.S. Natl. Herb.* 12: 142. 1908, *Proceedings of the Biological Society of Washington* 24: 132, 134-135. 1911, *N. Amer. Fl.* 17: 161. 1912, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 53. 1940, G.A. Black, “Grasses of the genus *Axonopus* (A taxonomic treatment).” *Advancing Frontiers of Plant Sciences* 5: 1-186. 1963, *Brittonia* 23(3): 293-324. 1971, *Cytologia* 40: 185-204. 1975, *Flora Illustrata Catarinense* 1(Gram.): 909-1407. 1982, *Flora of Tropical East Africa* 451-898. 1982, *Annals of the Missouri Botanical Garden* 74(2): 416-423. 1987, *Proc. N.Z. Grasslands Assoc.* 51: 47-50. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Flora Mesoamericana* 6: 356-359. 1994, *Darwiniana* 3(1-4): 53-60. 1995, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Caldasia* 22(2): 237-243. 2000, *Am. J. Bot.* 88: 1993-2012. 2001, Nelson Ramírez, “Reproductive phenology, life-forms, and habitats of the Venezuelan Central Plain.” *Am. J. Bot.* 89: 836-842. 2002, *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 26(98): 13-23. 2002 [Las especies de la sect. *Lappagopsis* del género neotropical *Axonopus* (Poaceae, Panicoideae, Paniceae), by D. Giraldo-Cañas], *Contributions from the United States National Herbarium* 46: 18-19, 116-134, 143-144, 278. 2003, *Am. J. Bot.* 90: 796-821. 2003.

Species

A. affinis Chase (*Axonopus compressus* (Sw.) P. Beauv.; *Axonopus compressus* sensu Chippind., non (Swartz) P. Beauv.; *Axonopus compressus* var. *affinis* (Chase) Henderson; *Axonopus fissifolius* (Raddi) Kuhl.; *Axonopus fissifolius* var. *fissifolius*)

Tropical America, West Indies, southern U.S. Perennial creeping grass, leafy, shallow-rooted, glabrous, caespitose, compact, forming dense mats, shortly rhizomatous and with slender stolons, poor root development and poor drought resistance, flat stems, culms erect or ascending, glabrous nodes, leaves with a rounded apex, sheath compressed and keeled, ligule a ciliolate rim, racemes on a long slender stem, erect or spreading straight spikes, spikelets arranged in two neat rows, spikelets usually obtuse and fuzzy, upper glume and sterile lemma membranous on the back, fertile floret white to pale yellow in color and subequal to the spikelet, light seeds, often a weed species and a prolific seeder, adapted to light-textured soils, fair grazing for wildlife and livestock, a good horse feed, fairly palatable till flowering, very low nutritive value, cultivated fodder, lawn grass, ground cover, baseball fields, sown in tropical pastures, widely naturalized in the wild, stands heavy defoliation and tolerates overgrazing, does not withstand prolonged flooding or permanently swampy conditions, rapidly spreading by stolons and rhizomes, useful to prevent erosion, often confused with and usually referred to *Axonopus fissifolius* (Raddi) Kuhl., occurs in disturbed habitats and places, improved pastures, grows on poor soil, sandy moist to alluvial soils, subhumid and humid woodland and savannah, sandy or sandy-loam soils with readily available moisture, often in waterlogged sites, cultivated fields, see *Essai d'une Nouvelle Agrostographie* 12, 154, 167. 1812, *Agrostografia Brasiliensis* 26. 1823 and *Comissão de Linhas Telegraphicas Estratégicas de Matto-Grosso ao Amazonas*, *Botanica* 67(Bot. 11): 87. 1922, *Journal of the Washington Academy of Sciences* 28: 180, f. 2. 1938, *Malayan Wild Flowers, Monocotyledons*. Mal. Nat. Soc. Kuala Lumpur 339. 1954, *Grasses of Ceylon* 147, pl. 34. 1956, *Ceylon J. Sci.*, *Biol. Sci.* 2(2): 128. 1959, *Grasses of Burma ...* 277. 1960.

in English: common carpet grass, carpet grass, compressum, narrow-leaved carpet grass, Swazi grass, Durrington grass, mat grass, lawn-grass

in Mexico: pasto chato común

in South Africa: gewone matgras

in Sri Lanka: sinna sappu pul, hin potu tana

A. amapaensis G.A. Black

Brazil. See *Advancing Frontiers of Plant Sciences* 5: 104, f. 3 e-f. 1963.

A. anceps (Mez) Hitchc. (*Axonopus aturensis* Lucas; *Axonopus caracarhyensis* G.A. Black & Fróes; *Axonopus*

erectus Swallen; *Axonopus pruinosis* Henrard; *Paspalum anceps* Mez; *Paspalum scoparium* var. *parviflorum* Döll)

West Indies, Venezuela. Perennial, not stoloniferous, leaf sheaths keeled and overlapping, leaf blades elongate, loosely spreading racemes, spikelets silky pubescent, savannah, open grassland, see *Graminum Monographiae ... Pars. I. Paspalum. Reimaria* 124. 1810, *Flora Brasiliensis* 2(2): 107. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 61. 1917, *Manual of the Grasses of the West Indies* 190. 1936, *Blumea* 5(3): 527-529. 1945, *Boletim Técnico do Instituto Agrônômico do Norte* 20: 34, t. 3. 1950, *Fieldiana, Botany* 28(1): 19. 1951, *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 23-24, f. 16. 1953.

A. andinus G.A. Black

Bolivia. Perennial, caespitose, geniculate, glabrous nodes, leaf blades linear or lanceolate and acuminate, inflorescences terminal, racemes solitary or paired, spikelets lanceolate or oblong, see *Advancing Frontiers of Plant Sciences* 5: 111. 1963.

A. apricus G.A. Black

Brazil. Erect, tufted, open habitats, slopes, rocky places, see *Advancing Frontiers of Plant Sciences* 5: 43. 1963.

A. arcuatus (Mez) G.A. Black (*Axonopus arcuatus* (Mez) Dedecca; *Paspalum arcuatum* Mez)

Brazil. See *Repertorium Specierum Novarum Regni Vegetabilis* 15: 60. 1917, *Bragantia* 15: 288, 289. 1956, *Advancing Frontiers of Plant Sciences* 5: 137. 1963.

A. argentinus Parodi (*Axonopus argentinus* f. *hirsutus* Parodi; *Axonopus argentinus* subsp. *argentinus*; *Axonopus argentinus* subsp. *glabripes* (Parodi) Roseng., B.R. Arrill. & Izag.; *Axonopus argentinus* subsp. *pubiflorus* (Parodi) Roseng., B.R. Arrill. & Izag.; *Axonopus argentinus* var. *argentinus*; *Axonopus argentinus* var. *genuinus* Parodi; *Axonopus argentinus* var. *glabriflorus* Parodi; *Axonopus argentinus* var. *glabripes* Parodi; *Axonopus hagenbeckianus* (Kuntze) Parodi; *Axonopus hagenbeckianus* var. *pratensis* G.A. Black; *Axonopus paraguayensis* G.A. Black; *Axonopus suffultus* var. *pubiflorus* Parodi; *Panicum hagenbeckianum* Kuntze)

Argentina, Uruguay. Grazed, forage, see *Revisio Generum Plantarum* 3(3): 361. 1898 and *Notas del Museo de la Plata, Botánica* 3(17): 15, 18-19, 21, 23, f. 1. 1938, *Advancing Frontiers of Plant Sciences* 5: 135, 141. 1963, *Gramíneas Uruguayas* 293, f. 21. 1970.

in English: carpet grass

A. arsenei Swallen (*Axonopus elongatus* Swallen)

Mexico, Guatemala. See *Journal of the Washington Academy of Sciences* 23(10): 459. 1933, *Contributions from the United States National Herbarium* 29(9): 414. 1950.

A. ater Chase (*Axonopus fissifolius* (Raddi) Kuhl.)

Panama. See *Agrostografia Brasiliensis* 26. 1823 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 1922, *Journal of the Washington Academy of Sciences* 17: 143. 1927.

A. attenuatus (J. Presl) Hitchc. (*Axonopus elegantulus* (J. Presl) Hitchc.; *Paspalum attenuatum* J. Presl)

Northern America. See *Reliquiae Haenkeanae* 1(4-5): 211-212. 1830 and *Contributions from the United States National Herbarium* 22(6): 471. 1922, *Contributions from the United States National Herbarium* 24(8): 433. 1927.

A. aureus P. Beauv. (*Aulonemia ulei* (Hack.) McClure & L.B. Sm.; *Axonopus aureus* var. *aureus*; *Axonopus burchellii* G.A. Black; *Axonopus canescens* (Nees ex Trin.) Pilg.; *Axonopus carinato-vaginatus* (Mez) H. Scholz; *Axonopus carinato-vaginatus* var. *sprucei* (G.A. Black) H. Scholz; *Axonopus chrysites* (Steud.) Kuhlm.; *Axonopus chrysodactylus* (Trin.) Kuhlm.; *Axonopus chrysostachyus* (Schrad.) Pilg.; *Axonopus exasperatus* (Nees ex Steud.) G.A. Black; *Axonopus holochrysum* (Trin.) Henrard; *Axonopus minutus* Lucas; *Axonopus paucisetosus* G.A. Black; *Axonopus pulcher* (Nees) Kuhlm.; *Axonopus radiatus* (Trin.) Kuhlm.; *Axonopus ramosissimus* (Nees) Pilg.; *Axonopus sprucei* G.A. Black; *Axonopus tenuis* Renvoize; *Digitaria aurea* (P. Beauv.) Spreng.; *Panicum aureum* (P. Beauv.) Trin.; *Panicum aureum* (Hochst. ex A. Braun) Nees, nom. illeg., non *Panicum aureum* (P. Beauv.) Trin.; *Panicum canescens* Roth ex Roem. & Schult.; *Panicum chrysites* Steud.; *Panicum chrysodactylon* Trin.; *Panicum chrysostachyum* (Schrad.) Trin.; *Panicum exasperatum* Nees ex Steud.; *Panicum holochrysum* Trin.; *Panicum pulchrum* Willd. ex Spreng.; *Panicum pulchrum* Willd. ex Trin.; *Paspalum aureum* (P. Beauv.) Kunth; *Paspalum canescens* Nees ex Trin.; *Paspalum carinato-vaginatum* Mez; *Paspalum chrysites* (Steud.) Döll; *Paspalum chrysodactylon* (Trin.) Döll; *Paspalum chrysostachyum* Schrad.; *Paspalum exasperatum* Nees; *Paspalum holochrysum* Henrard; *Paspalum pulchrum* Nees; *Paspalum pulchrum* var. *angustifolium* Döll; *Paspalum pulchrum* var. *planifolium* Döll; *Paspalum radiatum* Trin.; *Paspalum ramosissimum* Nees; *Setaria aurea* Hochst. ex A. Braun)

Costa Rica. Perennial, decumbent and erect, slender, wiry, compressed, branching, leaf blades spreading, slender racemes subdigitate, bristles golden mainly on rachis, on shallow arid sites, among rocks, wet sandy soils, marsh, savannah, disturbed areas, see *Essai d'une Nouvelle Agrostographie* 12. 1812, *Nova Genera et Species Plantarum* 1: 93, t. 27. 1815 [1816], *Systema Vegetabilium* 2: 457. 1817, *Mantissa* 2: 176. 1824, *Systema Vegetabilium, editio decima sexta* 1: 272. 1825, *De Graminibus Paniceis* 88-89. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 79-81. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 195-197. 1834, *Flora* 24: 276. 1841, *Linnaea*

16(2): 218. 1842, *Synopsis Plantarum Glumacearum* 1: 38, 62. 1855 [1853], *Flora Brasiliensis* 2(2): 114, 116-118. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 31. 1917, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 48-49, 87-88. 1922, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14E: 54-55. 1940, *Blumea* 4(3): 509-510. 1941, *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 22-23, f. 15. 1953, *Advancing Frontiers of Plant Sciences* 5: 165, 168, 170, 172, f. 8c. 1963, *Willdenowia* 8(1): 95. 1977, *Kew Bulletin* 39(1): 182. 1984, *Fl. Guianas, Ser. A: Phan., Fascicle* 8: 88-89. 1990.

in English: golden carpet grass

A. barbigerus (Kunth) Hitchc. (*Axonopus barbatus* (Nees) Kuhlm.; *Axonopus barbatus* Chase ex Parodi, nom. illeg., non *Axonopus barbatus* (Nees) Kuhlm.; *Axonopus eminens* var. *bolivianus* G.A. Black; *Axonopus perlongus* G.A. Black; *Axonopus pilosus* G.A. Black; *Axonopus siccus* (Nees) Kuhlm.; *Axonopus ulei* (Hack.) Dedecca; *Paspalum barbatum* Nees ex Trin., nom. illeg., non *Paspalum barbatum* (Trin.) Schult.; *Paspalum barbatum* Nees; *Paspalum barbigerum* Kunth; *Paspalum siccum* Nees; *Paspalum ulei* Hack.; *Sacciolepis angustissima* (Hochst. ex Steud.) Kuhlm.)

Brazil, Paraguay and Argentina, Bolivia. Perennial bunchgrass, erect, robust, coarse, rhizomatous, caespitose, herbaceous, bearded nodes, forming dense clumps, glaucous, involute leaf blades glabrous or scabrous, open inflorescence, low palatability or unpalatable, dry areas, savannahs, wetlands, pampas, sandy clay, seasonally inundated savannah, see *Species Graminum* 1: t. 98. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 27-28. 1829, *Révision des Graminées* 1: 24. 1829 and *Österreichische Botanische Zeitschrift* 51: 240. 1901, *Revista Argentina de Agronomía* 4: 49. 1922, *C Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 45, 87. 1922, *Contributions from the United States National Herbarium* 24(8) 433. 1927, *Bragantia* 15: 276. 1956, *Advancing Frontiers of Plant Sciences* 5: 89, 92-93, 97, 100, f. 3k, l. 1963.

A. boliviensis Renvoize

Bolivia. Annual, caespitose, erect or geniculate, glabrous nodes, ligule ciliate, leaf blades linear-lanceolate and hairy to pilose, racemes digitate or subdigitate, spikelets elliptic-oblong, dry or wet savannah, see *Gramineas de Bolivia* 496, f. 109. 1998.

A. brasiliensis (Spreng.) Kuhlman (*Anastrophus dissitiflorus* Schldl. ex Jackson; *Axonopus bijugus* (Steud.) Chase; *Axonopus dissitiflorus* (Trin.) Chase; *Axonopus dissitiflorus* (Trin.) Kuhlm., nom. illeg., non *Axonopus dissitiflorus* (Trin.) Chase; *Axonopus pulcher* (Nees) Kuhlm.; *Eriochloa brasiliensis* Spreng.; *Lappagopsis bijuga* Steud.; *Paspalum*

brasiliense (Spreng.) Hack.; *Paspalum dissitiflorum* Trin.; *Paspalum tenue* Nees ex Trin.)

Brazil, Paraguay. Perennial, tufted, leaf blades linear or filiform, racemes digitate or subdigitate, spikelets divergent from the rachis, spikelets and rachis papillose hispid, bristles white mainly on spikelets, plumose inflorescence, open areas, see *Systema Vegetabilium, editio decima sexta* 1: 249. 1825, *De Graminibus Paniceis* 92. 1826, *Synopsis Plantarum Glumacearum* 1: 112. 1854, *Index Kewensis* 1: 118. 1893 and *Proceedings of the Biological Society of Washington* 24: 135-136. 1911, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 47-48, 87. 1922.

A. caespitosus Swallen (*Anastrophus poiophyllus* (Chase) Nash; *Axonopus poiophyllus* Chase)

Panama. Erect bunchgrass, sometimes used as abortifacient, see *Proceedings of the Biological Society of Washington* 24: 133. 1911, *North American Flora* 17(2): 163. 1912, *Annals of the Missouri Botanical Garden* 30(2): 185. 1943.

in Nicaragua: walang

A. canescens (Nees ex Trin.) Pilg. (*Axonopus aureus* P. Beauv.; *Axonopus canescens* var. *canescens*; *Axonopus canescens* var. *psilachne* (Döll) G.A. Black; *Axonopus carinato-vaginat* var. *sprucei* (G.A. Black) H. Scholz; *Axonopus chrysites* (Steud.) Kuhlm.; *Axonopus chrysodactylus* (Trin.) Kuhlm.; *Axonopus exasperatus* (Nees ex Steud.) G.A. Black; *Axonopus pulcher* (Nees) Kuhlm.; *Axonopus sprucei* G.A. Black; *Axonopus sprucei* var. *glabratus* (Döll) G.A. Black; *Axonopus sprucei* var. *sprucei*; *Axonopus villosus* Swallen; *Panicum canescens* Nees; *Panicum chrysites* Steud.; *Panicum chrysodactylon* Trin.; *Panicum pulchrum* Willd. ex Spreng.; *Paspalum canescens* Nees ex Trin.; *Paspalum canescens* Nees, nom. illeg., non *Paspalum canescens* Nees ex Trin.; *Paspalum chrysodactylon* (Trin.) Döll; *Paspalum chrysodactylon* var. *glabratum* Döll; *Paspalum chrysodactylon* var. *psilachne* Döll; *Paspalum chrysodactylon* var. *villosum* Döll; *Paspalum exasperatum* Nees; *Paspalum pulcher* Nees; *Paspalum pulchrum* Nees; *Paspalum exasperatum* Nees ex Steud.)

Central America, Bolivia to Brazil. Perennial, erect or ascending, leaf blades linear and acuminate, rhizomatous, spikelets not sunken in cavities, racemes digitate or subdigitate, spikelets pubescent oblong-elliptic, see *Essai d'une Nouvelle Agrostographie* 12. 1812, *Systema Vegetabilium, editio decima sexta* 1: 272. 1824, *De Graminibus Paniceis* 89. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 79, 81. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 197. 1834, *Synopsis Plantarum Glumacearum* 1: 38, 62. 1855 [1853], *Flora Brasiliensis* 2(2): 118. 1877 and *Enum. Pl. Suriname* 49. 1906, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao*

Amazonas, Botanica 67(Bot. 11): 48-49, 87-88. 1922, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14E: 55. 1940, *Fl. Suriname* 1(1): 341. 1943, *Fieldiana, Botany* 28(1): 21. 1951, *Advancing Frontiers of Plant Sciences* 5: 167-168, 172-173, f. 8d. 1963, *Willdenowia* 8(1): 95. 1977.

A. capillaris (Lam.) Chase (*Anastrophus capillaris* (Lam.) Nash; *Axonopus extenuatus* (Nees) Kuhlm.; *Paspalum capillare* Lam.; *Paspalum extenuatum* Nees; *Paspalum minutum* Trin.)

South America, Bolivia to Paraguay, Honduras. Annual, geniculate, ascending, delicate, slender, glabrous, branching, leaf blades lanceolate or linear-lanceolate, racemes digitate to subdigitate, spikelets elliptic-oblong and glabrous, on moist open ground, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 25. 1829, *Linnaea* 10(3): 293. 1836 and *Proceedings of the Biological Society of Washington* 24: 133. 1911, *North American Flora* 17(2): 161. 1912, *Comissão de Linhas Telegraficas, Botanica* 67(Bot. 11): 87. 1922.

A. carajasensis Bastos

Brazil. See *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 6(1): 137. 1990[1991].

A. casiquiarensis Davidse (Venezuela, Territorio Federal Amazonas. The Casiquiare is a river which sends some of the water of the Orinoco down to the Rio Negro)

Venezuela. Rare species, herbaceous, creeping, stoloniferous, densely tufted, savannah, white sandy places, along riverbanks, sandy ground, see *Annals of the Missouri Botanical Garden* 74(2): 419, f. 4. 1987.

A. caulescens (Mez) Henrard (*Paspalum caulescens* Mez)

America, British Guiana. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 10. 1921, *Blumea* 4(3): 510. 1941.

A. centralis Chase (*Axonopus columbiensis* Henrard; *Axonopus rivularis* G.A. Black)

America, Panama, Colombia. Along riverbanks, see *Journal of the Washington Academy of Sciences* 17: 143. 1927, *Blumea* 5(1): 278-279. 1942, *Memoirs of the New York Botanical Garden* 9(3): 250. 1957.

A. chaseae G.A. Black (*Paspalum marginatum* f. *glabrescens* Döll)

Brazil. Erect, tufted, see *De Graminibus Paniceis* 90. 1826, *Flora Brasiliensis* 2(2): 110. 1877 and *Advancing Frontiers of Plant Sciences* 5: 157, f. 7b. 1963.

A. chimantensis Davidse

Venezuela, Guayana region. Vulnerable species, open rocky places, savannah, inundated ground, low depressions, see *Annals of the Missouri Botanical Garden* 74(2): 418, f. 3. 1987.

A. chrysoblepharis (Lag.) Chase (*Axonopus appendiculatus* (J. Presl) Hitchc. & Chase; *Axonopus aureus* P. Beauv.; *Axonopus aureus* var. *pilosus* (Döll) Henrard; *Axonopus chrysoblepharis* (Lag.) Kuhl., nom. illeg., non *Axonopus chrysoblepharis* (Lag.) Chase; *Axonopus excavatus* (Nees ex Trin.) Henrard; *Axonopus immersus* (Nees) Kuhl.; *Axonopus savannarum* Schlecht. ex Jacks.; *Cabrera chrysoblepharis* Lag.; *Digitaria aurea* (P. Beauv.) Spreng.; *Panicum chrysoblephare* (Lag.) Steud.; *Panicum chryso-dactylon* Nees; *Panicum immersum* (Nees) Trin.; *Panicum savannarum* Schldtl. ex G.A. Black; *Paspalum appendiculatum* J. Presl; *Paspalum aureum* (P. Beauv.) Kunth; *Paspalum chrysoblephare* (Lag.) Döll; *Paspalum chryso-dactylon* (Trin.) Döll; *Paspalum excavatum* Nees ex Trin.; *Paspalum gnaphalioideum* Müll. Hal.; *Paspalum immersum* Nees; *Paspalum immersum* var. *pilosum* Döll; *Paspalum savannarum* Schltr.)

Costa Rica to Bolivia, Venezuela, Brazil, Paraguay. Perennial or annual, robust, erect, smooth, tufted, stoloniferous, nodes pubescent or glabrous, blades more or less glabrous to rough, ligule very short and ciliate, leaves linear, racemes subdigitate or digitate, rachis hispid to papillose, spikelets elliptic-oblong sunken into cavities of a thickened rachis, glumes and lemmas hispid, unpalatable, open savannah, similar to *Axonopus excavatus* (Trin.) Henrard, see *Essai d'une Nouvelle Agrostographie* 12. 1812, *Genera et species plantarum* 5. 1816, *Nova Genera et Species Plantarum* 1: 93, t. 27. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 272. 1825, *De Graminibus Paniceis* 88. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 82. 1829, *Reliquiae Haenkeanae* 1(4-5): 211. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 197. 1834, *Linnaea* 26(2): 132. 1854, *Botanische Zeitung. Berlin* 19(45): 332. 1861, *Flora Brasiliensis* 2(2): 114, 119. 1877, *Index Kewensis* 1: 255. 1893 and *Proceedings of the Biological Society of Washington* 24: 134. 1911, *Contributions from the United States National Herbarium* 18(7): 300. 1917, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87-88. 1922, *Blumea* 4(3): 509-510. 1941, *Advancing Frontiers of Plant Sciences* 5: 161. 1963.

A. chrysostachyus (Schr.) Pilg. (*Axonopus ramosissimus* (Nees) Pilg.; *Panicum chrysostachyum* (Schr.) Trin.; *Paspalum chrysocomum* Trin. ex Nees; *Paspalum chrysostachyum* Schrad.; *Paspalum chrysotrichum* Schrad. ex B.D. Jacks.; *Paspalum gnaphalioideum* Müll. Hal.; *Paspalum pulchrum* var. *rigidiusculum* Döll; *Paspalum ramosissimum* Nees)

South America, Brazil. See *Mantissa* 2: 176. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 79-81. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Phy-*

siques et Naturelles. Seconde Partie: Sciences Naturelles 3,1(2-3): 196. 1834, *Botanische Zeitung. Berlin* 19(45): 332. 1861, *Flora Brasiliensis* 2(2): 116. 1877, *Index Kewensis* 3: 430. 1894 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14E: 54-55. 1940.

A. ciliatifolius Swallen

America, Belize. See *Journal of the Washington Academy of Sciences* 23(10): 458. 1933.

A. comans (Trin. ex Döll) Kuhl. (*Axonopus camargoanus* G.A. Black; *Axonopus comans* (Trin.) Kuhl.; *Axonopus comans* (Trin. ex Döll) Henrard, nom. illeg., non *Axonopus comans* (Trin. ex Döll) Kuhl.; *Mesosetum loliiforme* (Hochst. ex Steud.) Chase; *Paspalum comans* Trin.; *Paspalum comans* Trin. ex Döll)

Brazil, Paraguay. Damp sandy soil, see *Flora Brasiliensis* 2(2): 109. 1877 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 3 Mar 1922, *Mededeelingen van's Rijks-Herbarium* 47: 2. 1922, *Advancing Frontiers of Plant Sciences* 5: 102. 1963.

A. comatus (Mez) Swallen (*Paspalum comatum* Mez)

Brazil. See *Repertorium Specierum Novarum Regni Vegetabilis* 15: 67. 1917, *Fieldiana, Botany* 28(1): 21. 1951.

A. complanatus (Nees) Dedecca (*Paspalum complanatum* Nees)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 22. 1829 and *Bragantia* 15: 265, f. 7. 1956.

A. compressus (Sw.) P. Beauv. (*Agrostis compressa* (Sw.) Poir., nom. illeg., non *Agrostis compressa* Willd.; *Agrostis compressa* Poir., nom. illeg., non *Agrostis compressa* Willd.; *Anastrophus compressus* (Sw.) Schldtl. ex Döll; *Anastrophus compressus* Schldtl. ex Döll; *Anastrophus platycaulis* (Poir.) Nash ex Small; *Anastrophus platycaulis* Schldtl. ex B.D. Jacks., also spelled *platycaulmis*; *Axonopus affinis* Chase; *Axonopus amplifolius* Chase ex C.E. Hubb.; *Axonopus barbatus* (Nees) Kuhl.; *Axonopus barbatus* (Nees) Parodi; *Axonopus barbatus* Chase ex Parodi, nom. illeg., non *Axonopus barbatus* (Nees) Kuhl.; *Axonopus brevipedunculatus* Gledhill; *Axonopus compressus* subsp. *brevipedunculatus* Gledhill; *Axonopus compressus* var. *affinis* (Chase) Henderson; *Axonopus compressus* var. *australis* G.A. Black; *Axonopus compressus* var. *compressus*; *Axonopus compressus* var. *macropodius* (Steud.) G.A. Black; *Axonopus flexuosus* (Peter) C.E. Hubb.; *Axonopus kisantuensis* (Vanderyst) Vanderyst; *Axonopus multipes* Swallen; *Axonopus poiretii* Roem. & Schult.; *Digitaria domingensis* Desv. ex Kunth; *Digitaria flexuosa* Peter; *Digitaria platycaulis* (Poir.) Desv.; *Digitaria uniflora* Salzm. ex Steud.; *Echinochloa compressa* Roberty; *Helopus barbatus* Trin.; *Milium compressum* Swartz; *Panicum filiforme* L.; *Panicum platycaulon* (Poir.) Kuntze; *Paspalum barbatum* Nees, nom. illeg., non *Paspalum barbatum* (Trin.) Schult.; *Paspalum*

barbatum (Trin.) Schult.; *Paspalum barbatum* Nees ex Trin., nom. illeg., non *Paspalum barbatum* (Trin.) Schult.; *Paspalum compressum* (Sw.) Nees, nom. illeg., non *Paspalum compressum* Raf.; *Paspalum compressum* (Sw.) Raspail, nom. illeg., non *Paspalum compressum* Raf.; *Paspalum compressum* P. Beauv. ex C.P. Cowan, nom. illeg., non *Paspalum compressum* Raf.; *Paspalum conjugatum* var. *subcordatum* Griseb.; *Paspalum depressum* Steud.; *Paspalum filostachyum* A. Rich. ex Steud.; *Paspalum furcatum* Fluegge; *Paspalum furcatum* var. *filiforme* (L.) Döll; *Paspalum furcatum* var. *fissum* Döll; *Paspalum furcatum* var. *parviflorum* Döll; *Paspalum guadaloupense* Steud.; *Paspalum kisantuense* Vanderyst; *Paspalum laticulmum* Spreng.; *Paspalum longissimum* var. *guadalupense* Steud. ex Griseb.; *Paspalum macropodium* Steud.; *Paspalum platycaule* Willd. ex Steud.; *Paspalum platycaulon* Poir.; *Paspalum platycaulon* var. *parviflorum* Döll; *Paspalum raunkiaerii* Mez; *Paspalum tenue* Willd. ex Steud., nom. illeg., non *Paspalum tenue* Gaertn.; *Paspalum tristachyon* Lam.; *Paspalum uniflorum* Salzm. ex Steud.; *Sporobolus poiretii* (Roem. & Schult.) Hitchc.) (named for Christen Christiansen Raunkiaer, 1860-1938)

Northern and southern America, tropical America. Perennial or annual, vigorous and rather coarse, creeping, sward-forming, shallow-rooted, rhizomatous and distinctly stoloniferous, stolons compressed, erect culms arising from the older nodes, nodes usually hairy to densely villous, flattened internodes, leaf blades linear-lanceolate and not folded, sheath compressed and keeled, ligule membranous, blunt-ended leaves, inflorescence with 2-3 racemes, erect or spreading spikes, spikelets acute and 1-sided in 2 rows, rachis and spikelets glabrous to pubescent, lower glume absent, upper glume and sterile lemma membranous on the back, fertile floret shorter than the spikelet, small lodicules, 3 stamens, white stigmas, weed species, potential seed contaminant, spreads quickly by stolons and rhizomes forming dense mats in grazed pasture, a good pasture grass in wet areas, forage, cultivated fodder, fairly palatable to stock, utilized for whooping cough, sometimes used as abortifacient, ornamental, used in soil conservation schemes, useful for erosion control, stabilizes erosive soils in the higher rainfall tropics, used in the establishment of a hard-wearing turf, used widely as a lawn and sward grass, playing fields, withstands poor conditions and heavily grazing, survives seasonal flooding but it is not tolerant of swampy conditions, grows well in the shade, economic plant, introduced and widely naturalized into most tropical and subtropical countries, allergic contact dermatitis, common in open second growth and old horse pastures, marshy places, sandy prairies, low moist ground, subhumid and humid woodland and savannah, in shaded moist grassland, roadsides and disturbed moist places, pathsides, moist sandy soils, forest margins, savannah margins, see *Species Plantarum* 57. 1753, *Nova Genera et Species Plantarum seu Prodrum*

24. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Encyclopédie Méthodique, Botanique* 5: 34. 1804, *Encyclopédie Méthodique, Botanique Suppl.* 1: 258-259. 1810, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 114. Hamburg 1810, *Essai d'une Nouvelle Agrostographie* 12, 154, 167. 1812, *Systema Vegetabilium* 2: 318. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 49. 1821, *Annales des Sciences Naturelles (Paris)* 5: 301. 1825, *Systema Vegetabilium, editio decima sexta* 1: 245. 1825, *Mantissa* 3(Add. 1): 558. 1827, *Species Graminum* 1: t. 98. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 23, 27. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 166. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 49. 1833, *Nomenclator Botanicus. Editio secunda* 1: 508. 1840, *Nomenclator Botanicus. Editio secunda* 2: 272-273. 1841, *Synopsis Plantarum Glumacearum* 1: 18-20. 1855 [1853], *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 262. 1857, *Flora Brasiliensis* 2(2): 102, 104. 1877, *Index Kewensis* 1: 118. 1893, *Revisio Generum Plantarum* 3(2): 363. 1898 and *Flora of the Southeastern United States ...* 79. 1903, *Repertorium Specierum Novarum Regni Vegetabilis* 15(418-421): 60. 1917, *Bulletin agricole du Congo Belge* 9: 246. 1918, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 45. 1922, *Bulletin agricole du Congo Belge* 16: 654, 667. 1925, *Repertorium Specierum Novarum Regni Vegetabilis* 40(1): 60, t. 3, f. 1. 1931, *Bartonia* 14: 32. 1932, *Journal of the Washington Academy of Sciences* 23(10): 459. 1933, *Bulletin of Miscellaneous Information Kew* 1938: 382. 1938, *Journal of the Washington Academy of Sciences* 28: 180, f. 2. 1938, *Bol. Secr. Est. Negoc. Agr. Ind. e Com. Porto Alegre, Brazil* 100: 36. 1943, *Blumea* 5(3): 529. 1945, *Malayan Wild. Fl. Monoc. Mal. Nat. Soc. Kuala Lumpur* 339. 1954, *Petite Flore de l'Ouest-Africain* 17: 66. 1955, *Grasses of Ceylon* 146, pl. 33. 1956, *Exploration du Parc National de la Garamba* 4: 18. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 128. 1959, *Grasses of Burma ...* 278. 1960, *Phytomorphology* 12(4): 412. 1962, *Advancing Frontiers of Plant Sciences* 5: 81-82. 1963, *Boletim da Sociedade Broteriana, ser. 2* 40: 127, 132. 1966, *Listados Florísticos de México* 1: 117. 1983, D. Koh, Goh C.L., Tan H.T., Ng S.K. and W.K. Wong, "Allergic contact dermatitis from grasses." *Contact Dermatitis* 37(1): 32-34. 1997, *Flora Fanerogamica do Estado de São Paulo* 1: 136, pl. 18. 2001.

in English: lawn grass, carpet grass, broad-leaved carpet grass, broadleaf carpet grass, tropical carpet grass, savannah grass, flat joint grass, blanket grass, Louisiana grass

in Spanish: nudillo, cañamazo, cola de caballo, grama, grama trenza, zacate amargo, alfombra

in Colombia: cañamazo

in Mexico: alfombra, pasto alfombra, pasto chato de alfombra, pasto chato veracruzano, pasto de alfombra, zacate amargo

in Nicaragua: walang

in Portuguese: capim-grama, capim-erva-tapete

in Indonesia: jukut pahit, papahitan, rumput pahit

in Japan: tsuru-me-hi-shiba (= vine *Digitaria adscendens*)

in Malaysia: rumput parit

in the Philippines Islands: carabao grass, carpet grass, kulape

in Sri Lanka: sappu pul, potu tana

in Thailand: ya baimaln, ya malaysia, ya malesia, yaa paak khwaai, ya pak khwai

in Angola: erva tapete, capim grama

in Guinea: tenkétètèn

in Ivory Coast: tunétunènègo

in Sierra Leone: boni, fonie brure, jani, ka yan, kharutu-na, kotokpo, kpangba, kpangba tava, nika-yani, serkha-na, tandamanyo, yani

A. compressus (Sw.) P. Beauv. var. **jesuiticus** Araujo (*Axonopus compressus* var. *jesuitica* Araujo; *Axonopus jesuiticus* (Araujo) Valls)

Brazil. See *Essai d'une Nouvelle Agrostographie* 12, 154, 167. 1812 and *Bol. Secr. Est. Negoc. Agr. Ind. e Com. Porto Alegre, Brazil* 100: 36. 1943, *Flora Fanerogamica do Estado de São Paulo* 1: 136, pl. 18, f. M. 2001.

A. cuatrecasasii G.A. Black

Colombia, Venezuela. Perennial, caespitose, hairy nodes, leaf blades linear, racemes digitate or subdigitate, spikelets oblong, glume and lower lemma equalling the upper floret, often colonizing the sand dunes, on sandy soils, sandy well-drained savannah, scrub, woods, savannahs, see *Advancing Frontiers of Plant Sciences* 5: 147. 1963.

A. debilis G.A. Black

Cuba. See *Advancing Frontiers of Plant Sciences* 5: 86. 1963.

A. deludens Chase (*Anastrophus deludens* (Chase) Nash; *Atropis osteniana* Pilg.; *Axonopus mexicanus* G.A. Black; *Paspalum fournierianum* Ricker ex Schell.)

Mexico. See *Proceedings of the Biological Society of Washington* 24: 134. 1911, *North American Flora* 17(2): 163. 1912, *Mémoires de la Société des Sciences Naturelles de Neuchâtel* 5: 344. 1913, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9: 290. 1925, *Flora URSS* 2: 470. 1934, *Advancing Frontiers of Plant Sciences* 5: 144, t. 10. 1963.

A. elegantulus (J. Presl) Hitchc. (*Axonopus attenuatus* (J. Presl) Hitchc.; *Paspalum attenuatum* J. Presl; *Paspalum elegantulum* J. Presl; *Paspalum gregoriense* Mez)

South America, Ecuador, Peru to Bolivia. Perennial, stoloniferous, erect or ascending, leaves hairy, leaf blades linear, erect racemes, spikelets oblong, see *Reliquiae Haenkeanae* 1(4-5): 211-212. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 10. 1921, *Contributions from the United States National Herbarium* 22(6): 471. 1922, *Contributions from the United States National Herbarium* 24(8): 433. 1927.

A. eminens (Nees) G.A. Black (*Axonopus eminens* var. *bolivianus* G.A. Black; *Axonopus eminens* var. *eminens*; *Axonopus gentilis* Henrard; *Paspalum eminens* Nees)

South America, Venezuela, Bolivia, Brazil. Perennial, robust, caespitose, clumped, erect, leaves pseudopetiolate, several racemes erect, spikelets oblong, forage, low palatability, along roadsides, savannah, similar to *Axonopus barbigerus* (Kunth) Hitchc. and *Axonopus pellitus* (Nees ex Trin.) Hitchc. & Chase, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 30-31. 1829 and *Contributions from the United States National Herbarium* 18(7): 301. 1917, *Blumea* 5(1): 276. 1942, *Fl. Suriname* 1(1): 346. 1943, *Advancing Frontiers of Plant Sciences* 5: 92, 93, f. 31. 1963.

A. equitans Hitchc. & Chase (*Axonopus oteroi* G.A. Black)

West Indies, Trinidad, Brazil, Venezuela. Perennial, erect, caespitose, nodes bearded, foliage basal, leaf blades ascending and ciliate, leaf sheaths compressed, ligule membranous, racemes erect or ascending, spikelets oblong and acute to acuminate, grassland, stream banks, related to *Axonopus pubivaginatus* Henr., see *Contributions from the United States National Herbarium* 18(7): 301. 1917, *Fl. Suriname* 1(1): 345. 1943, *Fl. Guy. Franç.* 1: 122. 1955, *Advancing Frontiers of Plant Sciences* 5: 126. 1963.

A. excavatus (Trin.) Henrard (*Axonopus excavatus* (Nees ex Trin.) Henrard; *Paspalum excavatum* Nees ex Trin.)

South America, Brazil. Annual, similar to *Axonopus chrysoblepharis* (Lag.) Chase, see *De Graminibus Paniceis* 88. 1826 and *Blumea* 4(3): 509. 1941.

A. fastigiatus (Nees ex Trin.) Kuhl. (*Axonopus aureus* P. Beauv.; *Axonopus canaliculatus* (Nees) Kuhl.; *Paspalum canaliculatum* Nees; *Paspalum fastigiatum* Nees ex Trin.; *Paspalum fastigiatum* Nees, nom. illeg., non *Paspalum fastigiatum* Nees ex Trin.)

Brazil. Erect, caespitose, sandy soil, see *De Graminibus Paniceis* 100. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 33. 1829 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 1922.

A. fissifolius (Raddi) Kuhl. (*Axonopus affinis* Chase; *Axonopus ater* Chase; *Axonopus compressus* (Sw.) P. Beauv.; *Axonopus compressus* var. *affinis* (Chase) Henderson; *Axonopus fissifolius* (Raddi) Chase, nom. illeg., non *Axonopus fissifolius* (Raddi) Kuhl.; *Axonopus fissifolius*)

var. *coronatus* G.A. Black; *Axonopus fissifolius* var. *fissifolius*; *Axonopus hirsutus* G.A. Black; *Axonopus purpusii* (Mez) Chase; *Axonopus stragulus* Chase; *Paspalum compressum* var. *arenarium* Bertoni; *Paspalum fissifolium* Raddi; *Paspalum purpusii* Mez)

U.S. to Argentina, Mexico, Venezuela, Brazil, Bolivia, Costa Rica. Annual or short-lived perennial, caespitose, unbranched, more or less stoloniferous, shortly rhizomatous, forming low mats and dense colonies, nodes glabrous or slightly bearded, glabrous internodes, sheaths compressed and glabrous, ligule membranous minutely ciliate, leaf blades linear obtuse or bluntly acute, racemes digitate or subdigitate, spikelets hairy and solitary, fertile floret yellowish, glume and lower lemma glabrous or sparsely pilose, upper lemma and palea as long as the spikelet, fruit brown, ornamental, scattered stands, economic plant now widely naturalized in paleotropics, useful for erosion control, forage, very palatable, weed species, invasive lawn weed, occurs in wetlands and wet pastures, savannah, low moist ground, moist clay, damp sandy soil, even in standing water, humid or inundated savannahs, in cattle pastures, disturbed wet forest and bogs, open forest, roadside weeds in areas most exposed to tradewinds and mist, often occurs in flatwoods, lawns, open riverside, margins of scrub, wasteland, see *Essai d'une Nouvelle Agrostographie* 12, 154. 1812, *Agrostografia Brasiliensis* 26. 1823 and *Anales Científicos Paraguayos*, ser. 2, 2: 153. 1918, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzegeographie* 56(Beibl. 125): 10. 1921, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas*, *Botanica* 67(Bot. 11): 87. 1922, *Contributions from the United States National Herbarium* 22(6): 472, f. 80. 1922, *Journal of the Washington Academy of Sciences* 13(9): 172. 1923, *Journal of the Washington Academy of Sciences* 28: 180, f. 2. 1938, *Malayan Wild. Fl. Monoc. Mal. Nat. Soc. Kuala Lumpur* 339. 1954, *Advancing Frontiers of Plant Sciences* 5: 55, 58, 62, f. 2, q-r. 1963, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 411-418. 1969, *Flora Ilustrada Catarinense* 1(Gramin.): 1125. 1982.

in English: narrow-leaved carpet grass, narrow-leaf carpet grass, common carpet grass

in Spanish: guaratara

A. flabelliformis Swallen (*Axonopus flabelliformis* var. *camporum* G.A. Black; *Axonopus flabelliformis* var. *decipiens* G.A. Black; *Axonopus flabelliformis* var. *flabelliformis*; *Axonopus kaletukensis* Swallen; *Axonopus purpurellus* Swallen; *Axonopus tamayonis* Luces)

Central America, Venezuela. Perennial, variable, caespitose, delicate, glabrous, fragile, leaves basal, leaf sheaths keeled, ligule fringed, spikelets ovate-lanceolate and acuminate, in sandy soils, sandy savannahs, along roadsides, see *Fl. Suriname* 1(1): 342. 1943, *Bulletin of the Torrey Botanical Club*

75: 82-83. 1948, *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 21-22, f. 14. 1953, *Advancing Frontiers of Plant Sciences* 5, t. 11: 145-146. 1963, *Fl. Suriname*, Add. & Corr. 1(2): 359. 1968.

A. flexuosus (Peter) C.E. Hubb. (*Axonopus arenosus* Gledhill; *Axonopus compressus* (Sw.) P. Beauv.; *Axonopus compressus* subsp. *congoensis* Henrard; *Axonopus compressus* var. *congoensis* (Henrard) G.A. Black; *Digitaria flexuosa* Peter)

Tropical Africa. Perennial, herbaceous, robust, stoloniferous, sward-forming, low grazing value, growing in wet areas, moist pastures, in a swamp, damp or swampy sites, shade species, see *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Essai d'une Nouvelle Agrostographie* 12, 154. 1812 and *Repertorium Specierum Novarum Regni Vegetabilis* 40(1): 60, 206, t. 31, f. 1. 1930 [1931], *Blumea* 5(3): 529. 1945, *Exploration du Parc National de la Garamba* 4: 18. 1956, *Advancing Frontiers of Plant Sciences* 5: 81. 1963, *Boletim da Sociedade Broteriana*, ser. 2 40: 130. 1966.

in Sierra Leone: boni, fonye brure, jani, kayan, kharatu na, kharutu-na, kotokpo, kpangba, kpangba tava, nika-yani, serkha-na, tandamaneyo, yani

A. furcatus (Fluegge) A.S. Hitchc. (*Anastrophus furcatus* (Fluegge) Nash; *Panicum furcatum* Fluegge; *Paspalum digitaria* Müll. Hal., also Müll. Stuttg., nom. illeg., non *Paspalum digitaria* Poir.; *Paspalum furcatum* Fluegge; *Paspalum furcatum* var. *villosum* (Vasey) Vasey; *Paspalum michauxianum* Kunth var. *villosum* Vasey; *Paspalum obtusatus* Nees ex Döll; *Paspalum paspalodes* (Michx.) Scribn. var. *villosum* (Vasey) Scribner & C.R. Ball)

Northern America, U.S., Florida, Louisiana. Perennial, invasive, stoloniferous to rhizomatous, clump forming, spreads by rhizomes or stolons, found in the wild in dense mats, spikelets smooth, often occurs in flatwoods and wetlands, in small seasonal wetlands, coastal plain, on roadsides, even in standing water, poorly to very poorly drained hydric depressions with mineral soils, salt-tolerant, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 114. 1810, *Révision des Graminées* 1: 25. 1829, *Botanische Zeitung. Berlin* 19(44): 324. 1861, *Flora Brasiliensis* 2(2): 103. 1877, *Bulletin of the Torrey Botanical Club* 13: 163. 1886, *Contributions from the United States National Herbarium* 3(1): 16. 1892, *Memoirs of the Torrey Botanical Club* 5(3): 29. 1894 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 42. 1901, *Rhodora* 8(95): 205. 1906, *North American Flora* 17(2): 162. 1912.

in English: big carpet grass, carpet grass, flat crab grass

A. gentilis Henrard (*Axonopus eminens* (Nees) G.A. Black; *Axonopus eminens* var. *eminens*; *Paspalum eminens* Nees) Suriname. Perennial, caespitose, stout, reedlike, leaf blades rigid and pseudopetiolate, savannah, see *Flora Brasiliensis*

seu Enumeratio Plantarum 2: 30. 1829 and *Blumea* 5(1): 276. 1942, *Advancing Frontiers of Plant Sciences* 5: 92. 1963.

A. gracilis G.A. Black (*Axonopus polydactylus* (Steud.) Dedecca; *Paspalum polydactylon* Steud.)

Venezuela. Savannah, see *Synopsis Plantarum Glumacearum* 1: 19. 1855 [1853] and *Bragantia* 15: 273, f. 16. 1956, *Memiors of the New York Botanical Garden* 9(3): 254. 1957.

A. grandifolius Renvoize (*Axonopus fissifolius* (Raddi) Kuhl.)

Brazil. Annual or short-lived perennial, tufted, pubescent culm base, leaf blades linear and obtuse, spikelets solitary and alternate, found among rocks, see *Kew Bulletin* 39(1): 183. 1984.

A. herzogii (Hack.) Hitchc. (*Axonopus brasiliensis* (Spreng.) Kuhl.; *Axonopus hagenbeckianus* (Kuntze) Parodi; *Axonopus pulcher* (Nees) Kuhl.; *Panicum herzogii* Hack.; *Paspalum herzogii* Hack.)

Bolivia to Brazil. Perennial, caespitose, leaf blades linear and ciliate, racemes subdigitate, spikelets lanceolate, stony places, savannahs, see *Systema Vegetabilium, editio decima sexta* 1: 249. 1825, *Revisio Generum Plantarum* 3(3): 361. 1898 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 50. 1909, *Comissão de Linhas Telegraficas, Botanica* 67(Bot. 11): 47-48. 1922, *Contributions from the United States National Herbarium* 24(8): 431. 1927, *Notas del Museo de la Plata, Botánica* 3(17): 21. 1938.

A. hirsutus G.A. Black (*Axonopus fissifolius* (Raddi) Kuhl.)

Bolivia to Brazil. Perennial, stoloniferous, hairy nodes, leaf blades linear, solitary terminal peduncle, spikelets ovate to oblong-elliptic, moist savannah, see *Advancing Frontiers of Plant Sciences* 5: 55. 1963.

A. iridaceus (Mez) Hitchc. & Chase ex Rojas (*Axonopus hagenbeckianus* var. *iridaceus* (Mez) G.A. Black; *Axonopus iridaceus* (Mez) Parodi; *Axonopus iridaceus* (Mez) Henrard, nom. illeg., non *Axonopus iridaceus* (Mez) Hitchc. & Chase ex Rojas; *Axonopus suffultus* (Mikan ex Trin.) Parodi; *Paspalum iridaceum* Mez; *Paspalum suffultum* Mikan ex Trin.)

Argentina, Southern America. See *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 46. 1821 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 10. 1921, *Revista del Jardín Botánico y Museo de Historia Natural del Paraguay* 2: 159-160. 1930, *Notas del Museo de la Plata, Botánica* 3(17): 23. 1938, *Blumea* 4: 510. 1941, *Advancing Frontiers of Plant Sciences* 5: 140. 1963.

A. iridifolius (Poepp.) G.A. Black (*Axonopus anceps* (Mez) Hitchc.; *Axonopus maguirei* G.A. Black; *Axonopus scoparius* (Flüggé) Kuhl.; *Paspalum iridifolium* Poepp.; *Paspalum saccharoides* Nees ex Trin.)

Colombia, Peru, Venezuela, Bolivia. Perennial, erect, scandent, caespitose, compressed, robust, hairy nodes, foliage basal, leaf blades linear to linear-lanceolate, spikelets oblong to elliptic-oblong, forage, along riverbanks and streams, sandy soil, along roadsides, see *Species Graminum* 1: t. 107. 1827, *Reise in Chile, Peru* 2: 324. 1836 and *Comissão de Linhas Telegraficas, Botanica* 67(Bot. 11): 45-46. 1922, *Contr. U.S. Natl. Herb.* 28: 236. 1929, *Memiors of the New York Botanical Garden* 9: 252, f. 5a. 1957, *Advancing Frontiers of Plant Sciences* 5: 125. 1963.

A. jeanyae Davidse

Panama. Endangered species, see *Annals of the Missouri Botanical Garden* 74(2): 421, f. 5. 1987.

A. jesuiticus (Araujo) Valls (*Axonopus compressus* var. *jesuiticus* Araujo)

Brazil. See *Bol. Secr. Est. Negoc. Agr. Ind. e Com. Porto Alegre, Brazil* 100: 36. 1943, *Flora Fanerogamica do Estado de São Paulo* 1: 136, pl.18 f.M. 2001.

A. junciformis G.A. Black

Brazil. See *Advancing Frontiers of Plant Sciences* 5: 48. 1963.

A. laxiflorus (Trin.) Chase (*Anastrophus laxiflorus* (Trin.) Nash; *Axonopus conduplicatus* G.A. Black; *Axonopus schultesii* G.A. Black; *Paspalum laxiflorum* Trin.)

America. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 148. 1834 and *Proceedings of the Biological Society of Washington* 24: 133. 1911, *North American Flora* 17(2): 163. 1912, *Advancing Frontiers of Plant Sciences* 5: 115, 123. 1963.

A. laxus Luces

Venezuela. See *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 20-21, f. 13. 1953.

A. leptostachyus (Fluegge) Hitchc. (*Axonopus macrostachyus* Hitchc. & Chase; *Axonopus paranaensis* Parodi; *Axonopus paranaensis* Parodi ex G.A. Black, nom. illeg., non *Axonopus paranaensis* Parodi; *Paspalum leptostachyum* Fluegge)

Venezuela, Brazil to Argentina, Colombia, Bolivia. Perennial bunchgrass, erect, caespitose, glabrous, ligule fringed, leaf blades linear, racemes loosely ascending, spikelets acuminate and dorsally flattened, upper florets dark and glabrous, upper glume and lower lemma acuminate, upper lemma glabrous at apex, low forage value, in grassland, seasonally humid savannah, along streams, see *Graminum Monographiae ... Pars. I. Paspalum. Reimaria* 122. 1810 and *Contributions from the United States National Herbarium* 18(7): 301. 1917, *Contributions from the United States National Herbarium* 22(6): 471. 1922, *Revista Argentina de Agronomía* 28: 111, f. 3. 1961 [1962], *Advancing Frontiers of Plant Sciences* 5: 87. 1963.

A. longispicus (Döll) Kuhl. (*Axonopus hitchcockii* G.A. Black; *Axonopus longispicus* (Döll) Kuhl.; *Axonopus longispica* (Döll) Henrard, nom. illeg., non *Axonopus longispicus* (Döll) Kuhl.; *Axonopus rivularis* G.A. Black; *Paspalum longispicum* Döll)

Brazil, Venezuela. Perennial bunchgrass, caespitose, leaf blades acute, leaf sheaths glabrous to pubescent, ligule ciliate, nodes glabrous to bearded, divergent racemes, spikelets lanceolate, along stream and river banks, moist riverbanks, moist ground, rocky places, open areas, related to *Axonopus surinamensis* (Steud.) Henr., see *Flora Brasiliensis* 2(2): 105. 1877 and *Comissão de Linhas Telegraficas, Botanica* 67(Bot. 11): 87. 1922, *Blumea* 5(1): 276. 1942, *Memoirs of the New York Botanical Garden* 9(3): 250. 1957, *Advancing Frontiers of Plant Sciences* 5: 106. 1963.

A. marginatus (Trin.) Chase (*Axonopus kleinii* L.B. Sm. & Wassh.; *Axonopus longecilius* (Hack.) Parodi; *Axonopus marginatus* (Trin.) Kuhl., nom. illeg., non *Axonopus marginatus* (Trin.) Chase; *Paspalum marginatum* Trin.; *Paspalum marginatum* Remy, nom. illeg., non *Paspalum marginatum* Trin.; *Paspalum marginatum* var. *longecilius* Hack.) (in honor of the Brazilian botanist Roberto Miquel (Miguel) Klein, born 1926, ecologist, his writings include "Árvores nativas da floresta subtropical do Alto Uruguai." *Sellowia*. 24(24): 9-62. Itajaí 1972, "Árvores nativas da Ilha de Santa Catarina." *Insula*, Boletim do Centro de Pesquisas e Estudos Botânicos. 3: 3-93, out. Florianópolis 1969, "Árvores nativas indicadas para o reflorestamento no sul do Brasil." *Sellowia*. 18: 29-40. Itajaí 1966, "Contribuição à identificação de árvores nativas nas florestas no sul do Brasil." *Silvicultura em São Paulo*. 16A pt. 1: 421-440. São Paulo 1982, "Ecologia da flora e vegetação do Vale do Itajaí." *Sellowia*. 31(31): 1-164, dez. Itajaí 1979 and "Observações e considerações sobre a vegetação do Planalto Nordeste Catarinense." *Sellowia*. 15(15): 39-56, dez. Itajaí 1963)

Bolivia, Paraguay, Brazil. Perennial, caespitose, coarse, erect, subbulbous, foliage mostly basal, leaf blades linear, racemes erect and more or less subdigitate, spikelets solitary with long hairs spreading, upper glume and lower lemma stiffly pubescent on the nerves, savannah, fields, damp sandy soil, see *De Graminibus Paniceis* 90. 1826, *Annales des Sciences Naturelles; Botanique, sér. 3* 6: 348. 1846 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 370. 1909, *Contributions from the United States National Herbarium* 17(3): 226. 1913, *Indian Journal of Plant Sciences* 67(Bot. 11): 87. 1922, *Notas del Museo de la Plata, Botánica* 3(17): 22. 1938, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 244. 1978.

A. mathewsii (Mez) Hitchc. (*Paspalum mathewsii* Mez)

South America, Peru, Ecuador. Annual, erect, along roadsides, see *Repertorium Specierum Novarum Regni*

Vegetabilis 15: 62. 1917, *Contributions from the United States National Herbarium* 24(8): 432. 1927.

A. mexicanus G.A. Black (*Anastrophus deludens* (Chase) Nash; *Axonopus deludens* Chase)

Mexico. See *Proceedings of the Biological Society of Washington* 24: 134. 1911, *North American Flora* 17(2): 163. 1912, *Advancing Frontiers of Plant Sciences* 5: 144, t. 10. 1963.

A. micay García-Barr. (*Axonopus micay* Fluegge ex Hitchc. ex Perez Arbelaez; *Axonopus scoparius* (Fluegge) Kuhl.)

Southern America, Venezuela, Colombia, Costa Rica. Perennial, decumbent or loosely prostrate, rooting from the nodes, leaf sheaths compressed and keeled, weed species, also cultivated, humid tropics, economic plant, forage, pasture grass, useful for erosion control, used for establishing vegetative hedges, used for soil and water conservation in the humid tropics, the sugar cane and forage grass pest *Prosapia simulans* (Homoptera: Cercopidae) found on *Axonopus micay*, see *Plantas Utiles de Colombia* 113. 1947, *Caldasia* 8(39): 432. 1960.

in Spanish: pasto micael, pasto micay, micay, yerba micay in Colombia: micay, pasto micael

A. monticola G.A. Black (*Axonopus monticola* var. *barbinodis* G.A. Black; *Axonopus monticola* var. *monticola*)

Brazil. Moist sites, see *Advancing Frontiers of Plant Sciences* 5: 107-108. 1963.

A. moronei Giraldo-Cañas

Colombia. Savannah, see *Caldasia* 20(2): 88, f. 1-2. 1998.

A. nagensis Bor

Asia.

A. obtusifolius (Raddi) Chase (*Anastrophus obtusifolius* (Raddi) Nash; *Axonopus chaseanus* (Raddi) Herter; *Axonopus obtusifolius* (Raddi) Kuhl.; *Paspalum furcatum* var. *grandiflorum* Döll; *Paspalum obtusifolium* Raddi)

Brazil. Stoloniferous, inflorescence of 1-2 racemes, found in disturbed places, moist ground, arid places, shady woodland margins, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 114. 1810, *Agrostografia Brasiliensis* 23. 1823, *Flora Brasiliensis* 2(2): 104. 1877 and *North American Flora* 17(2): 162. 1912, *Journal of the Washington Academy of Sciences* 13(9): 171. 1923, *Revista Sudamericana de Botánica* 9: 111. 1953, *Advancing Frontiers of Plant Sciences* 5: 71. 1963.

A. obtusifolius (Raddi) Chase var. *obtusifolius* (*Anastrophus obtusifolius* (Raddi) Nash; *Axonopus chaseanus* (Raddi) Herter; *Paspalum furcatum* var. *grandiflorum* Döll; *Paspalum obtusifolium* Raddi)

South America.

A. obtusifolius (Raddi) Chase var. *rolfsii* G.A. Black

Brazil. Stoloniferous, found in disturbed places, moist ground, see *Advancing Frontiers of Plant Sciences* 5: 71. 1963.

A. oiapocensis G.A. Black (after Rio Oiapoque or Oyapock River)

Brazil. Annual, rare, tufted, unbranched, foliage mostly basal, ligule a ciliate membrane, peduncles filiform, divergent racemes, spikelets acute to acuminate, rocky places, related to *Axonopus capillaris* (Lam.) Chase, see *Advancing Frontiers of Plant Sciences* 5: 154, t. 13. 1963.

A. paniceus (Sw.) P. Beauv. (*Digitaria panicea* (Sw.) Urb.; *Milium paniceum* Sw.)

South America. See *Nova Genera et Species Plantarum seu Prodomus* 24. 1788, *Essai d'une Nouvelle Agrostographie* 12, 154, 168. 1812 and *Symbolae Antillarum* 8: 23. 1920.

A. paschalis (Stapf) Pilg. (*Paspalum paschale* Stapf; *Paspalum scoparium* var. *oligostachyum* Hack. ex Fuentes)

America, Easter Islands. See *Bulletin of Miscellaneous Information Kew* 1913: 117. 1913, C. Skottsberg (1880-1963), editor, *The Natural History of Juan Fernandez and Easter Island* 2(5): 63, t. 6, f. 2. Uppsala 1922.

A. passourae G.A. Black

America. Perennial, caespitose, robust, leaves basal, leaf sheaths keeled, ligules fringed, racemes loosely ascending, spikelets acute, savannah, related to *Axonopus equitans* Hitchc. & Chase, see *Advancing Frontiers of Plant Sciences* 5: 117, t. 8. 1963.

A. pellitus (Nees ex Trin.) Hitchc. & Chase (*Anastrophus pellitus* Schlecht. ex Jackson; *Axonopus swallenii* G.A. Black; *Paspalum barbatum* var. *pellitum* (Nees ex Trin.) Döll; *Paspalum dolichostachyus* Trin. ex Nees; *Paspalum pellitum* Nees ex Trin.; *Paspalum pellitum* Nees, nom. illeg., non *Paspalum pellitum* Nees ex Trin.)

Brazil. Erect or spreading, large, villous or pilose leaf blades, open sandy ground, see *De Graminibus Paniceis* 89. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 30. 1829, *Flora Brasiliensis* 2(2): 108. 1877, *Index Kewensis* 1: 118. 1893 and *Contributions from the United States National Herbarium* 18(7): 301. 1917, *Advancing Frontiers of Plant Sciences* 5: 92, f. 3 m-n. 1963.

A. pennellii G.A. Black (for the American botanist Francis Whittier Pennell, 1886-1952, bibliographer, traveler, plant collector, specialist on Scrophulariaceae, collected with E.P. Killip and T.E. Hazen in Colombia, 1924-1952 edited *Bartonia*, his works include "What is *Commelina communis*?" *Proc. Acad. Nat. Sci. Philadelphia*. 90: 31-39. 1939 and "Veronica in North and South America." *Rhodora*. 23(265): 1-22, 23(266): 29-41. 1921. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 66. Boston 1965; Walter Mackinnett Benner (1888-1970), "Francis Whittier Pennell." *Bartonia*. 26: 16-17. 1952; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; J. Ewan,

editor, *A Short History of Botany in the United States*. 1969; J. Ewan and Nesta Dunn Ewan, "Biographical dictionary of Rocky Mountain naturalists." *Reg. Veget.* 107: 1-253. 1981; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; George Neville Jones, *An Annotated Bibliography of Mexican Ferns*. University of Illinois Press 1966; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 305. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 324. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; *Proc. Biol. Soc. Wash.* 50: 208. 1937; *Bull. Torr. Bot. Club* 65: 251. 1938; *Notul. Nat. Acad. Nat. Sci. Philadelphia* 95: 4, 10. 1942; *Proc. Acad. Nat. Sci. Philad.* 99: 161. 1947; *Fieldiana* 31: 228. 1967; *Phytologia* 19: 370. 1970; *Castanea* 65(2): 112. 2000)

Colombia. See *Advancing Frontiers of Plant Sciences* 5: 142-143, f. 4g. 1963.

A. piccae Giraldo-Cañas

Colombia. See *North American Flora* 17(2): 163. 1912, *Caldasia* 21(2): 133, f. 1-3. 1999.

A. poiophyllus Chase (*Anastrophus poiophyllus* (Chase) Nash; *Axonopus blakei* Hitchc.; *Axonopus caespitosus* Swallen; *Axonopus fissifolius* (Raddi) Kuhlm.; *Axonopus lineatus* G.A. Black; *Axonopus reederii* G.A. Black; *Axonopus rhizomatosus* Swallen)

Guatemala, Panama, Colombia, Belize. Erect, bunchgrass, savannah, see *Proceedings of the Biological Society of Washington* 24: 133. 1911, *North American Flora* 17(2): 163. 1912, *Proceedings of the Biological Society of Washington* 40: 85. 1927, *Journal of the Washington Academy of Sciences* 23(10): 458. 1933, *Annals of the Missouri Botanical Garden* 30(2): 185. 1943, *Advancing Frontiers of Plant Sciences* 5: 45, 67, f. 2k. 1963.

A. poiretii Roem. & Schult. (*Sporobolus poiretii* (Roem. & Schult.) Hitchc.)

Neotropics, warm and hot regions, Pacific Islands. Perennial, invasive grass, widely naturalized in disturbed areas of tropical regions, often confused with *Sporobolus indicus* (L.) R. Br., see *Systema Vegetabilium* 2: 318. 1817 and *Bartonia* 14: 32. 1932.

in English: smut grass, smutgrass, wiregrass, Indian dropseed

A. polydactylus (Steud.) Dedecca (*Agrostis polydactyla* Salzm. ex Steud.; *Axonopus gracilis* G.A. Black; *Axonopus*

polydactylos (Steud.) Dedecca; *Paspalum polydactylon* Steud.)

Brazil. Perennial, caespitose, erect, sheaths strongly compressed and keeled, leaf blades linear, leaves glabrous to pilose, glabrous spikelets solitary and alternate, on rocky or sandy soils, savannah, open areas, deep sandy soil, see *Bragantia* 15: 273, f. 16. 1956, *Memoirs of the New York Botanical Garden* 9(3): 254. 1957.

A. polystachyus Black (*Axonopus compressus* var. *itirapinensis* G.A. Black; *Axonopus fissifolius* var. *polystachyus* (G.A. Black) L.B. Sm. & Wassh.; *Axonopus polydactylus* (Steud.) Dedecca)

Eastern and southern Brazil. Perennial, tufted, erect, common in damp places, forest margins and along roadsides, edge of marsh, see *Essai d'une Nouvelle Agrostographie* 12, 154. 1812 and *Advancing Frontiers of Plant Sciences* 5: 62, 82, f. 2, q-r. 1963, *Flora Ilustrada Catarinense* 1(Gramin.): 1125. 1982.

A. pressus (Nees ex Steud.) Parodi (*Axonopus derbyanus* G.A. Black; *Axonopus derbyanus* var. *derbyanus*; *Axonopus derbyanus* var. *parvispicula* G.A. Black; *Axonopus pressus* (Steud.) Parodi; *Axonopus pressus* Nees ex Torrend; *Paspalum pressum* Nees ex Steud.; *Paspalum pressum* Nees)

Argentina, Brazil. Perennial, stoloniferous, rhizomatous, robust, caespitose, erect, ascending, vigorous, largely clumped, leaf blades usually folded or strongly keeled, ligules ciliate, nodes glabrous, panicle nodding, gravelly sites, savannah, sandy soils, see *Synopsis Plantarum Glumacearum* 1: 23. 1855 [1853] and *Broteria* 3(2): 119. 1933, *Notas del Museo de la Plata, Botánica* 3(17): 23. 1938, *Advancing Frontiers of Plant Sciences* 5: 127, 130. 1963.

A. pubivaginitus Henrard (*Axonopus maguirei* G.A. Black; *Axonopus pressus* (Nees ex Steud.) Parodi; *Axonopus pubivaginitus* var. *limae* G.A. Black; *Axonopus pubivaginitus* var. *pubivaginitus*; *Axonopus pubivaginitus* var. *tomentosus* G.A. Black) (after the American botanist Bassett Maguire, 1904-1991, explorer, plant collector, from 1943 New York Botanical Garden, among his writings are "Guttiferae." in R.E. Schultes, "Plantae Austro-Americanae VII." *Bot. Mus. Leaflet* 15(2): 55-69. 1951, "Guttiferae." in B. Maguire, J.J. Wurdack and collaborators, "The Botany of the Guayana Highland-part IV(2)." *Mem. New York Bot. Gard.* 10(4): 21-32. 1961, "Rapateaceae." in B. Maguire, J.J. Wurdack and collaborators, "The Botany of the Guayana Highland-part VI." *Mem. New York Bot. Gard.* 12(3): 69-102. 1965 and "Notes on the Clusiaceae - chiefly of Panama. III." *Phytologia* 39(2): 65-77. 1978, with Y.-C. Hung wrote "Styracaceae." in B. Maguire, J.J. Wurdack and collaborators, "The Botany of the Guayana Highland-part X." *Mem. New York Bot. Gard.* 29: 204-223. 1978, with R.E. Weaver, Jr., wrote "The neotropical genus *Tachia* (Gentianaceae)." *J. Arnold Arbor.* 56(1): 103-125. 1975,

with J.A. Steyermark and D.G. Frodin wrote "Araliaceae." in B. Maguire, J.J. Wurdack and collaborators, "The Botany of the Guayana Highland-part XII." *Mem. New York Bot. Gard.* 38: 46-84. 1984; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 436. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 249. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 279. 1973; J. Ewan, editor, *A Short History of Botany in the United States*. 22. 1969; Laurence J. Dorr, "In Memoriam. John J. Wurdack, 1921-1998." in *Plant Science Bulletin*. 44(2): 41. Summer 1998)

Suriname, Brazil, Colombia. Perennial bunchgrass, coarse, nodes densely hairy, forming clumps, leaf blades narrowly acute, ligules ciliate, racemes loosely ascending, spikelets acute, in disturbed areas, dry lowland, open areas, savannah, cerrado, related to *Axonopus equitans* Hitchc. & Chase, see *Blumea* 5(1): 276-278. 1942, *Memoirs of the New York Botanical Garden* 9: 252, f. 5a. 1957, *Advancing Frontiers of Plant Sciences* 5: 110-111. 1963.

A. pulcher (Nees) Kuhl. (*Axonopus sprucei* G.A. Black; *Axonopus villosus* Swallen; *Panicum pulchrum* Willd. ex Spreng.; *Paspalum chrysodactylon* var. *villosum* Döll; *Paspalum pulchrum* Nees)

Colombia, Venezuela, Brazil. Spikelets pubescent, often treated as a variety of *Axonopus canescens*, see *Systema Vegetabilium, editio decima sexta* 1: 272. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 79. 1829, *Flora Brasiliensis* 2(2): 118. 1877 and *Comissão de Linhas Telegraphicas, Botanica* 67(Bot. 11): 88. 1922, *Fieldiana, Botany* 28(1): 21. 1951, *Advancing Frontiers of Plant Sciences* 5: 172. 1963.

A. purpurellus Swallen (*Axonopus flabelliformis* Swallen)

Suriname. On wet sandy soil, see *Bulletin of the Torrey Botanical Club* 75: 82-83. 1948.

A. purpusii (Mez) Chase (*Axonopus anomalus* Swallen; *Axonopus fissifolius* (Raddi) Kuhl.; *Axonopus fissifolius* (Raddi) Chase, nom. illeg., non *Axonopus fissifolius* (Raddi) Kuhl.; *Axonopus fissifolius* var. *fissifolius*; *Axonopus flexilis* (Mez) Henrard; *Axonopus purpusii* var. *glabrescens* Valls ex Longhi-Wagner; *Axonopus purpusii* var. *purpusii*; *Paspalum fissifolium* Raddi; *Paspalum flexile* Mez; *Paspalum platycaulon* Poir.; *Paspalum platycaulon* var. *gracilius* Döll; *Paspalum platycaulon* var. *parviflorum* Döll; *Paspalum purpusii* Mez) (dedicated to the German botanical explorer Carl (Karl) Albert (Alberto) Purpus, 1851-1941, botanist, botanical and plant collector in Mexico and southwest United States, physician, wrote *Die Kakteen der Grand Mesa in West-Colorado*. 1893, he was the brother of the gardener Joseph Anton Purpus (1860-1932); see J.H.

Barnhart, *Biographical notes upon botanists*. 3: 116. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 337. 1973; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 598-601. Philadelphia 1964; Stafleu and Cowan, *Taxonomic literature*. 4: 445-446. Utrecht 1983; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Mario S. Sousa, "Las colecciones botánicas de C.A. Purpus en México, periodo 1898-1925." *Univ. Calif. Publ. Bot.* 51: i-ix, 1-36. 1969; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 766. Stuttgart 1993; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Mexico to Argentina, Brazil, Bolivia, Venezuela, Colombia. Perennial, erect, prostrate to decumbent, caespitose, rarely stoloniferous, leaves mostly basal, mat-forming, glabrous nodes, ligule membranous, leaf blades acute, inflorescence erect to loosely ascending, spikelets with short hairs appressed, upper glume and lower lemma hairy, forage, good grazing, often form a sod under misuse, can tolerate extremes of flood and fire, common on arid sites and wetlands, lowland tropical rainforest, often on inundated soils, lowland savannahs, seasonally flooded grasslands and savannahs, burned savannah, sandy areas, see *Encyclopédie Méthodique, Botanique* 5: 34. 1804, *Agrostografia Brasiliensis* 26. 1823, *Flora Brasiliensis* 2(2): 102. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 9-10. 1921, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 1922, *Journal of the Washington Academy of Sciences* 13(9): 172. 1923, *Journal of the Washington Academy of Sciences* 17: 144. 1927, *Blumea* 4(3): 510. 1941, *Fl. Suriname* 1(1): 343. 1943, *Contributions from the United States National Herbarium* 29(6): 268. 1948 [1949], *Fl. Guy. Franç.* 1: 121. 1955, *Fl. Suriname, Add. & Corr.* 1(2): 360. 1968, *Memoirs of the New York Botanical Garden* 18(2): 11-22. 1969, *Iheringia, Série Botânica* 38: 28. 1988.

in Spanish: guaratara, pasto guaratara

A. radiatus (Trin.) Kuhl. (*Axonopus aureus* P. Beauv.; *Axonopus holochrysus* (Trin.) Henrard; *Panicum holochrysum* Trin.; *Paspalum radiatum* Trin.)

Brazil. See *Essai d'une Nouvelle Agrostographie* 12. 1812, *Nova Genera et Species Plantarum* 1: 93, t. 27. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 272. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles*

3,1(2-3): 195. 1834 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 48, 87. 1922, *Blumea* 4(3): 509. 1941.

A. ramboi G.A. Black (*Axonopus argentinus* subsp. *glabripes* (Parodi) Roseng., B.R. Arrill. & Izag.; *Axonopus argentinus* var. *glabripes* Parodi) (B. Rambo)

Southern America, Brazil. See *Notas del Museo de la Plata, Botánica* 3(17): 19. 1938, *Advancing Frontiers of Plant Sciences* 5: 134. 1963, *Gramíneas Uruguayas* 293, f. 21. 1970.

A. ramosus Swallen

Suriname. Perennial, fastigate, tufted, nodes glabrous or villous, deciduous leaf blades, leaf sheaths overlapping, ligules ciliate, inflorescence axillary and terminal, peduncles filiform, racemes spreading, spikelets glabrous, upper glume and lower lemma papery, 3 stamens, see *Fl. Suriname* 1(1): 342. 1943, *Bull. Torrey Bot. Club* 75: 82. 1948, *Contributions from the United States National Herbarium* 29(9): 413. 1950.

A. rosei (Scribn. & Merr.) Chase (*Anastrophus rosei* (Scribn. & Merr.) Nash; *Paspalum rosei* Scribn. & Merr.)

Mexico. Forage, see *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 9, f. 2. 1901, *Proceedings of the Biological Society of Washington* 24: 132. 1911, *North American Flora* 17(2): 163. 1912, *Wyoming Range Management* issue no. 291. 1988.

in Mexico: pasto chato de Nayarit

A. rosengurtii G.A. Black

Uruguay. See *Advancing Frontiers of Plant Sciences* 5: 64. 1963.

A. rupestris Davidse (*Axonopus purpusii* (Mez) Chase)

Brazil. Endangered species, distichous sheaths, see *Annals of the Missouri Botanical Garden* 74(2): 416, f. 1-2. 1987.

A. savannarum Schlecht. ex Jacks. (*Axonopus chrysoblepharis* (Lag.) Chase; *Cabrera chrysoblepharis* Lag.)

South America. See *Genera et species plantarum* 5. 1816, *Index Kewensis* 1: 255. 1893 and *Proceedings of the Biological Society of Washington* 24: 134. 1911.

A. schultesii G.A. Black (*Axonopus laxiflorus* (Trin.) Chase; *Axonopus longispicus* (Döll) Kuhl.; *Paspalum laxiflorum* Trin.) (named for the American botanist Richard Evans Schultes, 1915-2001, botanical explorer, ethnobotanist, plant collector, Jeffrey Professor of Biology and Director of the Botanical Museum of Harvard University, member of the Linnean Society of London, author of *Where the Gods Reign: Plants and People of the Colombian Amazon*. London 1988, with Robert F. Raffauf wrote *Vine of the Soul: Medicine Men, Their Plants and Rituals in the Colombian Amazonia*. Synergetic Press, Oracle, Arizona 1992 and *The Healing Forest: Medicinal and Toxic Plants of the Northwest Amazonia*. Dioscorides Press, Portland, Oregon

1992, with Arthur Stanley Pease wrote *Generic Names of Orchids: Their Origin and Meaning*. 38. Academic Press, New York and London 1963)

Colombia. Caespitose, glaucous, clumped, forming patches, in open grassland, savannah, white sand, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 148. 1834 and *Proceedings of the Biological Society of Washington* 24: 133. 1911, *Advancing Frontiers of Plant Sciences* 5: 123. 1963.

A. scoparius (Fluegge) Kuhl. (*Anthaenantia columbiensis* (Kuntze) Schum.; *Anthaenantia gigantea* (Kuntze) K. Schum.; *Axonopus iridifolius* (Poepp.) G.A. Black; *Axonopus scoparius* (Fluegge) Hitchc., nom. illeg., non *Axonopus scoparius* (Fluegge) Kuhl.; *Axonopus scoparius* f. *matogrossense* Kuhl.; *Axonopus scoparius* f. *scoparius*; *Axonopus scoparius* f. *typica* Kuhl.; *Axonopus scoparius* var. *glabriusculus* Kuhl.; *Axonopus scoparius* var. *scoparius*; *Panicum columbiense* Kuntze; *Paspalum columbiense* Kuntze; *Paspalum fournierianum* Ricker ex Schell.; *Paspalum fournierianum* var. *maximum* Thell.; *Paspalum giganteum* Kuntze; *Paspalum iridifolium* Poepp.; *Paspalum oryziformis* Steud. ex Döll; *Paspalum scoparium* Fluegge; *Paspalum tripinnatum* Mez)

Tropical America, Mexico, Southern America, Peru, Brazil, Colombia, Bolivia, Venezuela, Costa Rica. Perennial, upright, densely tufted, stoloniferous, coarse, robust, compressed, solid and succulent stems, leaf blades linear, leaves blunt-ended and hairy, leaf sheaths laterally compressed and dorsally keeled, inflorescence axillary or terminal, numerous slender erect or ascending racemes, spikelets villous oblong-elliptic, growing in small patches or forming large tussocks, forage, quite palatable, eaten by cattle, ornamental, silage grass, wild and cultivated, propagated by division of clumps, tolerates drought, useful for erosion control, grows best in areas of high rainfall, roadsides and well-drained soils, moist ground, sandy and alluvial soils, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 124. 1810, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 46. 1821, *Reise in Chile, Peru* 2: 324. 1836, *Flora Brasiliensis* 2(2): 106. 1877, *Revisio Generum Plantarum* 3: 360. 1898 and *Mémoires de la Société des Sciences Naturelles de Neuchâtel* 5: 344. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 64. 1917, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 45-47. 1922, *Contributions from the United States National Herbarium* 22(6): 471. 1922, *Anales del Museo de Historia Natural de Montevideo*, ser. 2, 3(1): 49. 1929, *Advancing Frontiers of Plant Sciences* 5: 125. 1963.

in English: imperial grass, imperial

in Colombia: imperial

in Mexico: imperial, pasto chato imperial, zacate imperial
in South America: cachi, maicillo

A. senescens (Döll) Henrard (*Axonopus canescens* Döll ex Henrard; *Paspalum senescens* Döll)

Brazil. Perennial, caespitose, glabrous, leaf sheaths compressed, ligule membranous, racemes ascending to spreading, coastal savannahs, see *Flora Brasiliensis* 2(2): 119. 1877 and *Taxon* 4: 509. 1941, *Taxon* 5(3): 529. 1945.

A. siccus (Nees) Kuhl. (*Anastrophus barbatus* Schldl. ex Jackson; *Axonopus barbatus* (Nees) Kuhl.; *Axonopus barbatus* (Nees) Parodi; *Axonopus barbatus* Chase ex Parodi, nom. illeg., non *Axonopus barbatus* (Nees) Kuhl.; *Axonopus barbiger* (Kunth) Hitchc.; *Axonopus barbigerus* (Kunth) Hitchc.; *Axonopus barbigerus* var. *barbigerus*; *Axonopus barbigerus* var. *venturii* G.A. Black; *Axonopus malmei* G.A. Black; *Axonopus perlongus* G.A. Black; *Axonopus pilosus* G.A. Black; *Axonopus rojasii* G.A. Black; *Axonopus siccus* var. *laxior* (Döll) G.A. Black; *Axonopus siccus* var. *scaber* (Pilg.) G.A. Black; *Axonopus siccus* var. *siccus*; *Axonopus ulei* (Hack.) Dedecca; *Panicum excelsum* Spreng. ex Steud., nom. illeg., non *Panicum excelsum* Nees; *Paspalum barbatum* sensu Ekm., non Nees; *Paspalum barbatum* Nees ex Trin., nom. illeg., non *Paspalum barbatum* (Trin.) Schult.; *Paspalum barbatum* Nees, nom. illeg., non *Paspalum barbatum* (Trin.) Schult.; *Paspalum barbatum* (Trin.) Schult.; *Paspalum barbatum* var. *glabrum* Döll; *Paspalum barbatum* var. *laxius* Döll; *Paspalum barbatum* var. *scabrum* Pilg.; *Paspalum barbigerum* Kunth; *Paspalum polyneuron* Mez; *Paspalum siccum* Nees; *Paspalum ulei* Hack.) (*Axonopus malmei* G.A. Black for the Swedish botanist Gustaf Oskar Andersson Malme (né Andersson), 1864-1937, lichenologist, at the Stockholm Riksmuseum, traveled in South America (1901-1903, Argentina, Paraguay), his writings include *Ex herbario Regnelliano*. Stockholm 1898-1901, "Über die Asclepiadaceen-Gattung *Tweedia* Hooker & Arnott." *Ark. Bot.* 2(7): 1-20. 1904, *Die Bauhinien von Matto Grosso*. [Stockholm 1905], "Asclepiadaceae Duseninanae in Paraná collectae." *Ark. Bot.* 21A(3): 1-48. 1927, "Die Compositen der zweiten Regnellschen Reise. III. Puente del Inca und Las Cuevas (Mendoza)." *Ark. Bot.* 24A(8): 58-66. 1932, "Asclepiadaceae austroamericanae praecipue andinae." *Ark. Bot.* 25A(7): 1-26. 1932, "Asclepiadaceae Brasilienses, novae vel minus bene cognitae." *Ark. Bot.* 28A(5): 1-28. 1936, "Über die Gattung *Grisebachiella* Lorentz." *Ark. Bot.* 28B(2): 1-4. 1936, "Beiträge zur Kenntniss der chilenischen Asclepiadaceen." *Ark. Bot.* 28B(6): 1-6. 1936 and "Die in Rio Grande do Sul vorkommenden Spezies der Gattung *Lathyrus*." *Revista Sudamer. Bot.* 3(1-2): 8-13. 1936, with A.F.M. Glaziou (1828-1906) wrote *Xyridaceae brasilienses*. Stockholm 1898. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 440. 1965; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; T.W. Bossert, *Biographical dictionary of*

botanists represented in the Hunt Institute portrait collection. 250. 1972; Frederico Carlos Hoehne, M. Kuhlmann and Oswaldo Handro, *O jardim botânico de São Paulo*. 128. 1941; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Argentina, Paraguay, Brazil, Bolivia. Perennial, slender, solitary, caespitose, erect, robust, forming clumps, leaf blades linear to filiform, spikelets subsessile, useful for erosion control, sandy clay, rocky places, see *Species Graminum* 1: t. 98. 1827, *Mantissa* 3(Add. 1): 558. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 27-28. 1829, *Révision des Graminées* 1: 24. 1829, *Nomenclator Botanicus. Editio secunda* 2: 256. 1841, *Flora Brasiliensis* 2(2): 108. 1877, *Index Kewensis* 1: 118. 1893 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 130. 1901, *Österreichische Botanische Zeitschrift* 51: 240. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 63. 1917, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas*, *Botanica* 67(Bot. 11): 45, 87. 1922, *Revista de la Facultad de Agronomía y Veterinaria* 4: 49. 1922, *Contributions from the United States National Herbarium* 24(8): 433. 1927, *Bragantia* 15: 276. 1956, *Advancing Frontiers of Plant Sciences* 5: 89, 97, 99-101, f. 3 k. 1963.

A. steyermarkii Swallen

Venezuela. See *Fieldiana, Botany* 28(1): 20. 1951.

A. succulentus G.A. Black

Paraguay. Perennial, see *Advancing Frontiers of Plant Sciences* 5: 134. 1963.

A. suffultiformis G.A. Black (*Axonopus pubivaginatus* Henrard)

Venezuela. Open areas, rocky places, see *Blumea* 5(1): 276-278. 1942, *Memoirs of the New York Botanical Garden* 9(3): 253, f. 5b. 1957.

A. suffultus (J.G. Mikan ex Trin.) Parodi (*Anthaenania hagenbeckiana* (Kuntze) Schum.; *Axonopus argentinus* Parodi; *Axonopus argentinus* var. *glabriflorus* Parodi; *Axonopus chloridiformis* Herter; *Axonopus hagenbeckianus* (Kuntze) Parodi; *Axonopus hagenbeckianus* var. *hagenbeckianus*; *Axonopus hagenbeckianus* var. *iridaceus* (Mez) G.A. Black; *Axonopus hagenbeckianus* var. *pratensis* G.A. Black; *Axonopus iridaceus* (Mez) Hitchc. & Chase ex Rojas; *Axonopus iridaceus* (Mez) Henrard, nom. illeg., non *Axonopus iridaceus* (Mez) Hitchc. & Chase ex Rojas; *Axonopus pseudochloris* Herter; *Axonopus scoparius* var. *suffultus* (Mikan ex Trin.) Herter; *Axonopus suffultus* (Mikan ex Trin.) Henrard, nom. illeg., non *Axonopus suffultus* (Mikan ex Trin.) Parodi; *Axonopus suffultus* var. *suffultus*; *Panicum hagenbeckianum* Kuntze; *Panicum suffultum* (Mikan ex Trin.) Kuntze; *Paspalum iridaceum*

Mez; *Paspalum scoparium* Stuck.; *Paspalum scoparium* var. *angustifolium* Döll; *Paspalum scoparium* var. *glabriusculum* Döll; *Paspalum scoparium* var. *vestitum* Döll; *Paspalum suffultum* J.G. Mikan ex Trin.)

Northern Argentina, southern Brazil, Uruguay, Paraguay. Caespitose, glaucous, stoloniferous, florets lustrous, useful for erosion control, often in damp places, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 124. 1810, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 46. 1821, *Flora Brasiliensis* 2(2): 107. 1877, *Revisio Generum Plantarum* 3(3): 361, 364. 1898 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 13: 427. 1906, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 10. 1921, *Anales del Museo de Historia Natural de Montevideo* ser. 2, 3(1): 49. 1929, *Revista del Jardín Botánico y Museo de Historia Natural del Paraguay* 2: 159-160. 1930, *Notas del Museo de la Plata, Botánica* 3(17): 15, 19, 21, 23, f. 1. 1938, *Revista Sudamericana de Botánica* 6: 136, f. 5. 1940, *Blumea* 4: 510. 1941, *Revista Sudamericana de Botánica* 10: 130, 131. 1953, *Advancing Frontiers of Plant Sciences* 5: 140-141. 1963.

in English: carpet grass

A. sulcatus G.A. Black

Brazil. See *Advancing Frontiers of Plant Sciences* 5: 94. 1963.

A. surinamensis (Hochst. ex Steud.) Henrard (*Axonopus fockei* (Mez) Henrard; *Axonopus fockei* (Mez) Swallen, nom. illeg., non *Axonopus fockei* (Mez) Henrard; *Axonopus surinamensis* var. *imberbis* G.A. Black; *Axonopus surinamensis* var. *surinamensis*; *Panicum surinamense* Hochst. ex Steud.; *Paspalum fockei* Mez)

Venezuela to Brazil. Perennial bunchgrass, robust, caespitose, nodes villous or bearded, foliage basal, base of leaf sheaths hispid on the back, ligule ciliate, inflorescence cylindrical, racemes loosely ascending, dry areas, savannahs, see *Synopsis Plantarum Glumacearum* 1: 42. 1853 and *Enum. Pl. Suriname* 48. 1906, *Repert. Spec. Nov. Regni Veg.* 15: 62. 1917, *Blumea* 4(3): 510. 1941, *Blumea* 5(1): 275. 1942, *Fieldiana, Botany* 28(1): 21. 1951, *Advancing Frontiers of Plant Sciences* 5: 125. 1963.

A. tamayonis Luces (*Axonopus flabelliformis* Swallen; *Axonopus kaietukensis* Swallen)

Venezuela. Bunchgrass, caespitose, sandy soil, rocky ground, see *Bulletin of the Torrey Botanical Club* 75: 82-83. 1948, *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 21-22, f. 14. 1953, *Advancing Frontiers of Plant Sciences* 5: 1-186. 1963.

A. tenuis Renv. (*Axonopus aureus* P. Beauv.)

Brazil. Perennial, tufted, slender, filiform leaf blades acute or acuminate, spikelets solitary and dorsally compressed, growing on marshy ground, see *Essai d'une Nouvelle Agrostographie* 12. 1812, *Nova Genera et Species Plantarum* 1: 93, t. 27. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 272. 1825 and *Kew Bulletin* 39(1): 182. 1984.

A. triglochinosides (Mez) Dedecca (*Paspalum triglochinosides* Mez)

Brazil. See *Repertorium Specierum Novarum Regni Vegetabilis* 15: 61. 1917, *Bragantia* 15: 280, f. 22. 1956.

A. ulei (Hack.) Dedecca (*Axonopus barbigerus* (Kunth) Hitchc.; *Axonopus barbigerus* var. *barbigerus*; *Axonopus siccus* (Nees) Kuhl.; *Paspalum barbigerum* Kunth; *Paspalum siccum* Nees; *Paspalum ulei* Hack.)

Warm regions. See *Révision des Graminées* 1: 24. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 28. 1829 and *Österreichische Botanische Zeitschrift* 51: 240. 1901, *Comissão de Linhas Telegraphicas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 1922, *Contributions from the United States National Herbarium* 24(8) 433. 1927, *Bragantia* 15: 276. 1956.

A. uninodis (Hack.) G.A. Black (*Axonopus plumosus* (Henrard) Henrard; *Paspalum plumosum* Henrard; *Paspalum uninode* Hack.)

South America, Brazil. See *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 6. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 67. 1908, *Mededeelingen van's Rijks-Herbarium* 47: 1-2. 1922, *Advancing Frontiers of Plant Sciences* 5: 102. 1963.

A. villosus Swallen

Venezuela. See *Fieldiana, Botany* 28(1): 21. 1951.

A. volcanicus R.W. Pohl

Costa Rica. Vulnerable species, compact, terrestrial, leaves green-whitish, green inflorescences, stigmas dark purplish, see *Fieldiana: Botany, New Series* 4: 84. 1980.

A. yutajensis G.A. Black (*Axonopus arundinaceus* G.A. Black)

Venezuela. See *Memoirs of the New York Botanical Garden* 9(3): 251. 1957.

A. zuloagae Giraldo-Cañas

Colombia. See *Caldasia* 20(2): 89, f. 3-4. 1998.

B

Balansochloa Kuntze = *Germainia* Balansa & Poitrasson

For the French botanist Benedict Balansa, 1825-1891, explorer and botanical collector in Asia Minor, North Africa, Indo-China and Paraguay. See J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 1: 110. 1965; Gaston Astre, *La vie de Benjamin Balansa, botaniste explorateur*. Toulouse 1947; Ernest Saint-Charles Cosson (1819-1889), *Compendium florae atlanticae*. Paris 1881-1887; Carlo Luigi Spegazzini (1858-1926), *Fungi guaranitici pugillus i-ii*. Buenos Aires 1883-1888 and *Fungi guaranitici nonnulli novi v. critici*. Buenos Aires 1891; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 22. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 124-125. Oxford 1964; Clyde F. Reed, *Bibliography to Floras of Southeast Asia*. 1969.

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, see *Bulletin de la Société d'Histoire Naturelle de Toulouse* 7: 344, f. 1-9. 1873, *Flora Australiensis: A Description ...* 7: 518-519. 1878, *Monogr. Phan.* 6: 255. 1889, *Journal de Botanique (Morot)* 4: 83. 1890 and *Lexikon Generum Phanerogamarum* 247. 1903 [1904], *Bulletin du Muséum d'Histoire Naturelle* 25: 285. 1919, *Hooker's Icones Plantarum*. Ser. 5. 3, t. 3262. 1935, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 124. 1940, *Australian Journal of Botany* 2: 108. 1954, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Dansk Botanisk Arkiv* 23(4): 467-471. 1968, *Thai Forest Bulletin. Botany* 6: 29-59. 1972, *Blumea* 45: 443-475. 2000.

Baldingera P. Gaertner, B. Meyer & Scherbius = *Phalaris* L., *Phalaroides* Wolf

After the German botanist Ernst Gottfried Baldinger, 1738-1804, physician, author of *Ueber das Studium der Botanik und die Erlernung derselben*. Jena 1770, *Ueber Litterar-Geschichte der theoretischen und praktischen Botanik ...* Marburg 1794 and *Index plantarum horti et agri jenensis ...* Gottingae et Gothae 1773. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 111. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800.

Pooideae, Poaeae, Phalaridinae, see *Genera Plantarum* 11. 1776, *Flora der Wetterau* 1: 43, 96. 1799 and *Iowa State College Journal of Science* 36(1): 1-96. 1961, *Webbia* 49(29): 265-329. 1995, *Contributions from the United States National Herbarium* 48: 140, 479-488. 2003.

Baldomiria Herter = *Leptochloa* P. Beauv.

Chloridoideae, Cynodonteae, type *Baldomiria chloridiformis* (Hack.) Herter, see *Essai d'une Nouvelle Agrostographie* 71, 161. 1812 and *Anales del Museo Nacional de Buenos Aires* 13: 498. 1906, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 4: 184, f. 5-6. 1918, *Contr. U.S. Natl.* 24(6): 180. 1925, *Revista Sudamericana de Botánica* 6(5-6): 145, f. 10. 1940, *Contributions from the United States National Herbarium* 41: 18, 130-137. 2001.

Bambos Retz. = *Bambusa* Schreb.

The Indian name.

Bambusoideae, Bambuseae, Bambusinae, type *Bambos arundinacea* Retz., see *Contributions from the United States National Herbarium* 39: 29-35. 2000.

Bambusa Mutis ex Caldas = *Bambusa* Caldas

See *Bambusa* Schreber.

Bambusoideae, Bambuseae, Bambusinae, type *Bambusa aculeata* Caldas, see *Semanario del Nuevo Reino de Granada* 17: 131-132. 1809 and *Contributions from the United States National Herbarium* 39: 29-35. 2000.

Bambusa Schreber = *Arundarbor* Kuntze, *Bambos* Retz., *Bambus* J.F. Gmel., *Bambusa* Mutis ex Caldas, *Bonia* Balansa, *Criciuma* Söderstrom & Londoño, *Dendrocalamopsis* (L.C. Chia & H.L. Fung) Keng f., *Eremocaulon* Söderstrom & Londoño, *Guadua* Kunth, *Holttumochloa* K.M. Wong, *Ischurochloa*

Büse, *Kinabaluchloa* K.M. Wong, *Leleba* Nakai, *Lingnania* McClure, *Ludolfia* Adans., *Neosinocalamus* Keng f., *Maclurochloa* K.M. Wong, *Soejatmia* K.M. Wong, *Tetragonocalamus* Nakai

From the Malayan native name; see Johann Christian Daniel von Schreber (1739-1810), *Genera Plantarum*. 236, 828. 1789.

About 100/120-140 species, tropics and subtropics, Asia. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, perennial, woody, thick-walled, tree or shrub-like, fast-growing, sympodial, closely tufted, forming dense clumps, armed or unarmed, twigs of most species hardened into spines, erect or drooping, scandent or not scandent, erect and leaning to arching, rarely climbing, rhizomes thick and shortened, rhizomes pachymorph, multibranch pattern, main branch often developed, culms hollow and cylindrical, usually glabrous and terete, flowering culms leafless or leafy, culm sheaths with erect triangular blades and large auricles, leaf sheaths usually deciduous, ligule membranous, leaves small, plants bisexual, flowering iterant, inflorescence a spike, pseudospikelets fascicled, at the inflorescence base bracts with two ciliate keels, 1-3 glumes present, subequal lemmas awnless or mucronate, palea keels winged or wingless, 2-3 or 0 lodicules free and membranous, 6 stamens, ovary hairy, 1-3 plumose stigmas, fruit grooved, rectangular caryopsis, they flower but rarely, new culms with pale waxy deposit, some species with thorny branches, ornamental, fodder or food, the young bamboo shoots of probably all species are eaten for food (the Chinese name: *chuk sun*), the stems are used for constructional works, bows for archery, split bamboo used for making ropes, the stems a source of material for paper-making, culms closely clumped, many species resistant to honey fungus, siliceous concretion inside the stems (*tabasheer* or *tabashir*), the genus planted or naturalized in wastelands or along riverbanks, species usually found growing in open areas, lowlands, hill sides, in moist places, in monsoon and wet tropics, species often escape from cultivation and become naturalized, type *Bambusa arundinacea* (Retz.) Willd., see *Familles des Plantes* 2: 244. 1763, *Observationes Botanicae* 5: 24. 1788, *Genera Plantarum*. 236, 828. 1789, *Obs. Bot.* 5: 24. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 579. 1791, *Species Plantarum. Editio quarta* 2: 245. 1799, *Semanario del Nuevo Reino de Granada* 17: 131-132. 1809, *Synopsis Plantarum* 1: 253. 1822, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 150. 1822, *Rel. Haenk.* 1: 256. 1830, *Syst. Veg.* 7: 1340-1342. 1830, *The Penny Cyclopaedia of the Society for the Diffusion of Useful Knowledge*. London 1833-1843, *Plantae Junghuhnianae* 389-390. 1854, *Catal. Plantarum in Horto Botanico Bogoriensi* 20. 1866, *Transactions of the Linnean Society of London* 26(1): 98, 109. 1868, *J. Linn.*

Soc. Bot. 19: 31. 1881, *Journal de Botanique (Morot)* 4: 29. 1890, *Revisio Generum Plantarum* 2: 760-761. 1891 and *Journal of Japanese Botany* 9(1-2): 9-12, 86, 88-89, pl. 1, 10. 1933, *Lingnan University Science Bulletin* 9: 34-35. 1940, *Blumea*, Suppl. 3: 106. 1946, *Taxon* 6(7): 203-204. 1957, *Flora of Java* 3: 632. 1968, *Acta Phytotaxonomica Sinica* 18(2): 214. 1980, *Journal of Bamboo Research* 2: 11-12. 1983, *Smithsonian Contrib. Botany* 72: 1-75. 1988 [*The woody bamboos of Sri Lanka.*], *Flora Mesoamericana* 6: 193-194. 1994, *Plant Resources of South-East Asia* 7: 1-191. Leiden 1995 [*Bamboos*, S. Dransfield & E.A. Widjaja, editors], *Am. J. Bot.* 86: 780-784. 1999, *Contributions from the United States National Herbarium* 39: 29-35. 2000, Fabian A. Michelangeli, Jerrold I Davis and Dennis Wm. Stevenson, "Phylogenetic relationships among Poaceae and related families as inferred from morphology, inversions in the plastid genome, and sequence data from the mitochondrial and plastid genomes." *Am. J. Bot.* 90: 93-106. 2003.

Species

B. sp.

In Hong Kong, *Bambusa* sp. is the host plant of the pathogen *Phyllachora shiraiana* Syd., the disease is called "tar spot," both surfaces of the leaf are affected.

in Micronesia: bamboo, pehri

B. spp.

in Arabic: crasen el-kharazan

in China: wu jiao lu zhu

in India: bans

in Japan: diasan-chiku, ryoku-chiku

in Malay: rebung

in Tagalog: labong, tambo

B. affinis Munro (*Arundarbor affinis* (Munro) Kuntze)

India. Shrubby, tufted, low, nodes with black hairs, used for fishing rods and javelins, see *Transactions of the Linnean Society of London* 26(1): 93. 1868, *Revisio Generum Plantarum* 2: 761. 1891.

Local names: lai lo paa, wa buk, waa buai, wabuk

in Thailand: lai lo pa, wa buk, wa buai

B. alamii Stapleton

Bhutan, Nepal, India. Erect, drooping, many branches, culm sheaths persistent, inflorescence spicate, fodder, used for weaving, see *Edinburgh Journal of Botany* 51(1): 10, f. 3. 1994.

Common name: mugl bans

B. albofolia Wen & X.J. Hua

China, Guangxi. See *Journal of Bamboo Research* 8(1): 20-22, f. 4. 1989.

B. albolineata Chia (*Bambusa albo-lineata* Chia; *Bambusa albolineata* (McClure) L.C. Chia; *Bambusa dolichomerit-*

halla Hayata; *Bambusa textilis* var. *albo-lineata* McClure; *Bambusa textilis* var. *albo-striata* McClure; *Leleba dolichomerithalla* (Hayata) Nakai

China, Guangdong, Taiwan. Branches usually arising from basal fourth to sixth node upward, culm sheaths caducous leathery rigid, nodes and sheaths at the culm base with white stripes, sheath scar at nodes of lower culm with a ring of white silky hairs, sheath coriaceous, sheath auricles unequal, sheath blade triangular, linear-lanceolate pseudospikelets usually 3-5 fasciculate on each node of flowering branches, spikelets bearing 5-7 florets apical one sterile, glume ovate glabrous 15- to 17-nerved, lemma elliptic glabrous 17- to 19-nerved, 3 stigmas plumose, ornamental, used as living hedge, cultivated on lower hills, riversides, plains, see *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 6: 146-148, f. 55. 1916, *Journal of Japanese Botany* 9(1): 16. 1933, *Lingnan University Science Bulletin* 9: 15. 1940, *Guihaia* 8(2): 121-122. 1988.

B. albostriata (McClure) Ohrnb.

China.

B. amahussana Lindley (*Arundarbor amahussana* (Lindl.) Kuntze; *Bambusa atra* var. *amahussana* (Lindl.) Merr.; *Bambusa rumphiana* Kurz; *Leleba amahussana* Roem. & Schult.; *Leleba rumphiana* var. *amhussana* Kurz; *Neoleleba amahussana* (Lindl.) Widjaja)

Indonesia. Erect, slanting, reclining, scandent, leaning, thin-walled, culm sheath hairy on the back, sheath blade narrowly triangular, small auricles long bristly, short ligule, 3-6 pseudospikelets at each node, used for weaving, string, rope, growing on lowlands, near the sea, see *Journal of the Asiatic Society of Bengal* 39(2): 86. 1870, *Revisio Generum Plantarum* 2: 761. 1891 and E.D. Merrill (1876-1956), *An Interpretation of Rumphius's Herbarium amboinense*. Manila 1917 [Work begun by Charles Budd Robinson, 1871-1913], *Reinwardtia* 11(2): 112-113. 1997.

in Indonesia: bambu nitu

B. amplexicaulis W.T. Lin & Z.M. Wu

China, Guangdong. Culms internodes glabrous, nodes slightly prominent ± geniculate branches usually arising from basal third node upward, culm sheaths deciduous, leaf blades linear-lanceolate glabrous adaxially pubescent abaxially, on open fields, low hills, see *Bulletin of Botanical Research* 12(4): 349-350, f. 1. 1992.

B. andamanica Kurz (*Gigantochloa andamanica* (Kurz) Kurz)

Burma, India. See *Journal of the Asiatic Society of Bengal* 39(2): 88. 1870, *Preliminary Report on the Forest and other Vegetation of Pegu* App. A. 137; App. B. 93. 1875, *Forest Flora of British Burma* 2: 556. 1877.

B. angulata Munro (*Arundarbor angulata* (Munro) Kuntze; *Arundinaria angulata* (Munro) Porterf.; *Chimonobambusa*

angulata (Munro) T.Q. Nguyen; *Tetragonocalamus angulatus* (Munro) Nakai)

Asia, China, Taiwan. See *Transactions of the Linnean Society of London* 26(1): 94. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *United States Department of Agriculture. Inventory* 105: 48. 1932, *Journal of Japanese Botany* 9(2): 86, 88-89, 90, pl. 10. 1933, *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 880. 1991.

B. angustiaurita W.T. Lin

China, Guangdong. Erect and slightly curved, scattered branches usually emerged from second to fifth node upward, culm sheath deciduous and thickly leathery, sheath blade erect and ovate-triangular, sheath ligule irregularly linear, leaf blades linear-lanceolate, leaves glabrous upper and pubescent beneath, on lower hills, near or around villages, see *Bamboo Res.* 1983(2): 52, f. 2-1. 1983.

B. angustissima Chia & H.L. Fung

China, Guangdong. Culm wall thick, culm lower portions slightly zigzag, branches usually emerged from basal first node, culm sheaths slightly caducous, sheath auricle narrow and linear to drooping, leaves glabrous beneath, leaf blades lanceolate to narrowly lanceolate, cultivated as windbreaks and frames, growing on riverbanks, see *Acta Phytotaxonomica Sinica* 19(3): 367-368, pl. 13, f. 1. 1981.

B. annulata W.T. Lin & Z.J. Feng (*Bambusa annulata* (J.R. Xue & W.P. Zhang, nom. illeg., non *Bambusa annulata* W.T. Lin & Z.J. Feng) D.Z. Li; *Bambusa glaucescens* var. *annulata* (W.T. Lin & Z.J. Feng) N.H. Xia; *Glaucescens annulata* (W.T. Lin & Z.J. Feng) N.H. Xia; *Schizostachyum annulatum* J.R. Xue & W.P. Zhang)

China, Guangdong. See *Philippine Journal of Science* 7(4): 230. 1912, *Journal of Bamboo Research* 5(1): 77. 1986, *Journal of Bamboo Research* 12(2): 33. 1993, *Journal of Tropical and Subtropical Botany* 9(1): 8. 1993, *Acta Botanica Yunnanica* 16(1): 41. 1994.

B. arnhemica F. Muell.

Australia. See *Australasian Journal of Pharmacy* 1: 447. 1886.

in Australia: Arnhem Land bamboo

B. atra Lindley (*Arundarbor atra* (Lindl.) Kuntze; *Arundinaria papuana* Lauterb. & K. Schum.; *Bambusa lineata* Munro; *Bambusa papuana* (Lauterb. & K. Schum.) K. Schum.; *Bambusa picta* Lindl.; *Bambusa prava* Lindl.; *Bambusa rumphiana* Kurz; *Bambusa tenuis* Munro; *Bambusa verticillata* Willd.; *Bambusa verticillata* Lindl., nom. illeg., non *Bambusa verticillata* Willd.; *Dendrocalamus latifolius* Laut. & K. Schum.; *Dendrocalamus latifolius* Lauterb. & K. Schum.; *Dendrocalamus multispiculatus* Lauterb. & K. Schum.; *Dendrocalamus papuanus* (Lauterb. & K. Schum.) Pilg.; *Leleba alba* Roem. & Schult.; *Leleba lineata* Roem. & Schult.; *Leleba picta* Roem. & Schult.;

Leleba prava Roem. & Schult.; *Neoleleba atra* (Lindl.) Widjaja

New Guinea, Moluccas, Andaman Islands. Densely or loosely tufted, variable, reedlike, nodes prominent, sympodial, thin-walled, culm sheath thin, leaf blades oblong-lanceolate, inflorescence terminal, clusters of spikelets laterally compressed, 1-3 glumes ovate, lemma pointed, lodicules absent, stamens exerted, ovary pubescent, 3 purple stigmas plumose, used for building materials, basketry, binding material, screens, sometimes cultivated, propagation by rhizome cuttings, found on wet soils, on limestone, lowlands, poor or dry soils, hill slopes, along riverbanks, see *Species Plantarum. Editio quarta* 2: 245. 1799, *Systema Vegetabilium* 7(2): 1345-1346. 1830, *Transactions of the Linnean Society of London* 26(1): 118-119. 1868, *Journal of the Asiatic Society of Bengal* 39(2): 86. 1870, *Revisio Generum Plantarum* 2: 761. 1891 and *Die Flora der deutschen Schutzgebiete in der Südsee* 186-188. 1900, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 175. 1914, *Kew Bulletin* 21: 268-271. 1967, *Reinwardtia* 11(2): 114. 1997.

in Indonesia: loleba, nena, loleba putih (with green culms), loleba hitam (purplish green culms)

B. atrovirens Wen (*Dendrocalamopsis atrovirens* (T.H. Wen) Keng f. ex W.T. Lin; *Dendrocalamopsis oldhamii* f. *oldhami*)

China. See *Journal of Bamboo Research* 2(1): 12. 1983, *Journal of Bamboo Research* 5(2): 15. 1986, *Guihaia* 10(1): 15. 1990.

B. auriculata Kurz (*Gigantochloa auriculata* Kurz; *Gigantochloa auriculata* (Kurz) Kurz; *Oxytenanthera auriculata* (Kurz) Prain)

India, Bangladesh. Tufted, evergreen, branches curved downward, nodes brown, thick wall, leaves a good fodder, culms locally used, see *Journal of the Asiatic Society of Bengal* 39(2): 86. 1870, *Preliminary Report on the Forest and other Vegetation of Pegu* App. A. 137; App. B. 94. 1875, *Forest Flora of British Burma* 2: 557. 1877 and *Bengal Plants* 2: 1234. 1903.

B. aurinuda McClure

Vietnam, China, Hainan. Sheath deciduous and coriaceous, sheath auricle well-developed, sheath blade erect triangular or ovate-lanceolate, leaves ovate or linear-lanceolate, pseudospikelets linear, spikelets with 5-12 perfect florets, uppermost 2 or 3 or sometimes lowermost one sterile, 3 stigmas plumose, in forest edge or along riverside, see *Lingnan University Science Bulletin* 9: 3. 1940.

B. australis Chia & H.L. Fung (*Bambusa atra* Lindl.; *Lingnaniana atra* McClure)

Vietnam. See *Journal of the Arnold Arboretum* 23(1): 98-99. 1942, *Acta Phytotaxonomica Sinica* 18(2): 214. 1980.

B. balcooa Roxburgh (*Arundarbor balcooa* (Roxb.) Kuntze; *Bambusa balcooa* Roxb.; *Dendrocalamus balcooa* (Roxb.) Voigt)

Northeastern India, Bangladesh. Sympodial, large, tall, caespitose or densely tufted, stout, coarse, thick-walled, branched from the base, densely clumped, thick furry culm wax, erect or drooping with pointed recurved branchlets toward the base, nodes swollen, young shoots with acute tip, thorny branchlets, rhizomatous, lower nodes with aerial roots, culm sheath auricles always absent, densely hairy culm sheaths, leaf sheaths with dark or brown hairs, branches from the lower nodes leafless, compound inflorescence paniculate, spicate branches, pseudospikelet groups, ovoid-lanceolate spikelets, 0-2 glumes, lemmas mucronate, palea 2-keeled, 3 lodicules fimbriate, ovary hairy, 3 stigmas plumose, known from cultivation and wild, flowering cycle at 35-45 years, useful for soil stabilisation, young shoots used as a vegetable, a source of fiber, foliage as animal fodder, the strongest bamboo used for building purposes, very durable and insect resistant, making pillars, raw material for paper, common on stream banks and forest margins, heavy soil with good drainage, tropical monsoon climate, could be confused with *Dendrocalamus Calostachyus* (Kurz) Kurz, see *Hortus Bengalensis, or a Catalogue ...* 25. Serampore 1814, *Flora Indica; or, Descriptions of Indian Plants* 2: 196. 1832, *Hortus Suburbanus Calcuttensis* 718. 1845, *Revisio Generum Plantarum* 2: 761. 1891 and *The Indian Forester* 114: 576-583, 726-736. 1988, *Bangladesh Journal of Forest Science* 20: 31-36. 1991, *The Indian Forester* 119: 205-211. 1993, *Edinb. J. Bot.* 51: 12. 1994.

Local names: bamboo, Cape bamboo, boro bans, jhushing in India: balko bans, balku bans, baluka, barak, beru, bhalu bans, bhaluka, borak bans, boro bans, dhanu bans, wamnah in Nepali: dhanu bans, ban bans

in South Africa: bamboesriet

B. bambos (L.) Voss (*Arundarbor arundinacea* (Retz.) Kuntze; *Arundarbor orientalis* (Nees) Kuntze; *Arundo bambos* L.; *Bambos arundinacea* Retz.; *Bambos bambos* (L.) Wight; *Bambus arundo* C.C. Gmel.; *Bambusa arundinacea* (Retz.) Willd.; *Bambusa arundinacea* Retz.; *Bambusa bambos* (L.) Druce, nom. illeg., non *Bambusa bambos* (L.) Voss; *Bambusa bambos* Becker, nom. illeg., non *Bambusa bambos* (L.) Voss; *Bambusa orientalis* Nees; *Bambusa spinosa* Roxb.; *Bambusa vulgaris* Schrad. ex J.C. Wendl.; *Ischurochloa arundinacea* var. *orientalis* (Nees) Büse)

Southern China, India, Thailand. Tall, armed, giant, woody, erect and leaning to arching, flowering sporadically, very densely tufted, wall very thick, large and very dense clumps of closely placed culms, clumps almost impenetrable, spiny lower branches, when young the culms covered with wax, sympodial and pachymorph rhizomes, cylindrical and hollow culms, spiny branches arising from all nodes, spines usually in groups of 3, interlacing thorny branches,

internodes green, nodes rooting at the lower ones with small roots in rings, culm sheath coriaceous, flowers and fruits gregariously at long intervals, large panicles, 3-7 fertile florets, 1-3 imperfect florets, at the nodes of leafless branches small clusters of pseudospikelets, slender lanceolate spikelets, 0-2 empty glumes, 6 stamens, ovary glabrous and hairy, 2-3 stigmas plumose, readily establishes from seed, propagated also by rhizome cuttings and by tissue culture, a multipurpose bamboo cultivated elsewhere in tropical Asia, valuable for building purposes, useful for erosion control, young shoots or newly sprouted buds eaten, young shoots cooked into curries, in India leaves used in the Ayurvedic system of medicine, a decoction of the roots used in case of anuria, leaves anthelmintic, a source of fiber, animal food, forage, raw material for paper and pulp, highly palatable seeds eaten as rice substitute (India), growing buds used for vegetable and pickled, siliceous concretion inside the stems (*tabasheer* or *tabashir*), the split stems used for making sieves, trays, fishtraps, leaves given to horses for coughs and colds, very variable species related to and resembling *Bambusa blumeana* J.A. & J.H. Schultes, humid tropical climate, along riverbanks, moist conditions, rich moist soils, moist deciduous forest, ravines, along river valleys, riverbanks, alluvial soil, mixed dry deciduous forest, hills, semievergreen forest, see *Species Plantarum* 1: 81. 1753, *Systema Naturae, Editio Decima* 2: 878. 1759, *Observationes Botanicae* 5: 24. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2(1): 579. 1791, *Species Plantarum, Editio quarta* 2: 245. 1799, J.C. Wendland (1755-1828), *Collectio Plantarum: tam exoticarum, quam indigenarum ...* 2: 26, t. 47. Hannover 1808, *Hortus Bengalensis, or a catalogue ...* 25. 1814, *Syst. Veg.* 7: 1340-1342. 1830, *Linnaea* 9(4): 472. 1835, *Plantae Indiae Batavae orientalis*. 115. Lugduni Batavorum 1856-1857, *Trans. Linn. Soc. London* 26: 104-106. 1868, *Fl. Sylv.* 231-232. 1872, *Revisio Generum Plantarum* 2: 761. 1891, *Ann. Roy. Bot. Gard. (Calcutta)* 7: 51-55, pl. 48. 1896, *Fl. Brit. India* 7: 395-396. 1896 and *Handb. Fl. Ceylon* 5: 313-314. 1900, *Contributions from the United States National Herbarium* 9: 195. 1905, *Phil. J. Sci.* 7: 413-415. 1912, *Bambusées* 128-129, pl. 74, f. A and pl. 75, f. A. 1913, *Botanical Exchange Club Report London*. 4: 608. 1917, *De nuttige planten van Nederlandsch- Indië*. Batavia 1913-1922, *Report. Botanical Exchange Club. London*. 4: 608. 1917, *Grasses of Ceylon* 27. 1956, *The Gardens' Bulletin, Singapore* 16: 59-62. 1958, *Current Science* 47(16): 584-586. 1978, *Kerala Journal of Veterinary Science* 15(1): 38-44. 1984, *Journal of the American Bamboo Society* 6(1-4): 4-16. 1985[1987] *Smithsonian Contributions to Botany* 72: 30-36. 1988, *Sandakania* 3: 17-41. 1993, *Kew Bulletin* 52(3): 693-698. 1997.

in English: thorny bamboo, bamboo, male bamboo, spiny bamboo, Indian bamboo, giant thorny bamboo

in French: bambou roseau

in Spanish: bambú

in Mexico: bambú japonés

in Burma: kya-kat-wa

in Cambodia: khléi, russèi, russèi préi, russey, rosey, asey

in China: t'ien chu yuen, t'ien chu huang

in India: aambal, ambal, ambu, ande bidiru, aril, bahupal-lava, bamboo, bambu, bams, bamsh, bans, baroowa, bedru, behor, behor bans, beudo baunso, bidirina mele, bidirna gala, bidiru, bidungalu, bidunguloo, biduru, bir, bnah, bonga, bongu, bongu-veduru, bonguveduru, brihatrina, cadam, canagi, cey, conoqui, daba, dhanurdruma, dhatushya, dirdhakanda, dongi, dougi, dowya, dridhagranthi, dridhapathra, duraruha, gala, gale, galu, hebbiduru, hennu bidiru, hennubiduru, illi, iravarai, kaambul, kalai, kalak, kalale, kalele, kalla bans (young shoots), kallak, kamatha, kambu, kampu, kananki, kaneera, kaniyaaram, kanta baunso, kantaki, kantalu, kapura, karira, karmmaaram, karmmara, katabams, katang, katang bans, katoba, kattang, kattang bans, keechaka, ketua, ketwa, kicagam, kicakamu, kichakamu, kilai, kilati, kirubiduru, kisagam, kishkuparva, kotoba, kotoha, kotoha-bans, kulaaimgil, kulay, kushirandhra, kutuasi, kyakatwa, macuk-karam, madusuveduru, magar, magar bans, magarbams, mahaabala, malbams, mandgai, mandgay, mangal, maskara, maskara-mu, maskaramu, masukkaram, mat, mirittucam, miruttusam, moolkasha, moongil, moongilarisi, moongiluppu, mri-tyubeeja, mudangal, mudusu-veduru, mula, mulai, mulkas, mulla, mulla veduru, mullumoongil, mulmulam, mundlaveduru, mundlaveduru, mundul, mungil, naadimoongil, nagotbelu, nai, nal bans, narbaams, navaagragandha, nedil, nettil, paandil, paasu, palandam, panai, pattil, pente-veduru, penti-veduru, pentivedaru, periya mingil, perumungil, peruvurai, phalantaka, pottuvaeduru, purvayoni, pushpaghataka, qasab, saanagi, sabam, saneibi, saneibo, satari, sey, shathaparva, shatpadalaya, suparva, suparvan, tajan, tandu, tattai, tejana, tejanam, trinad waja, trinadhvaja, trinadhvajamu, trinadhvajam, trinakaethuka, trynad havjamu, tulai, tumbu, tvachisara, tvakasara, una, vadaniya, vaenu, vaishnavi, valai, valiyamula, vamnsa lavanum, vamsa, vamsha, vamsha rochana, vannigaruppam, vans, vansa, vansh, vansha, vanya, varaimungil, vaso, vederuppu, vedir, vedroo, veduru, vedurubeeam, velam, vellu, venu, veral, vey, veyal, vindil, wa-kanteh, wans, yavaphala

in India: for *tabashir*: banasa lochana, banasa mitha, bangsolochan, bans kapur, bans lochan, bidaruppu, kabudi (blue, bluish white or pale blue variety), mole uppa, munga luppu, sufed (white variety), tabasheer, tabashir, tabashira, tavakshirá, tavakshiri, tugakshiri, una kapuru, una lunu, va-cchá, vadega-sa, vans kapur, vas nu mitha, vasan, vathega kiyu, vathegasa, veduruppu, venu lavanam

in Indonesia: bambu duri, pring ori

in Laos: phaix pax

Malayan names: bambu duri, buloh duri

in the Philippine Islands: kawayan, kauayang-tinik, kauayan-tinik, kauayang totoo, kauayan-totoo, kauayan, kauayan gid, kauayan na bayog, kauayang bayog, kauayang-potog, kauayang-siitan, kauayan-siitan, kabugauan, kaano, aonoo, kaanono, botong, butung, batakan, baugin, dugian, Indian bamboo, caña espina, lamnuan, marurugi, pagsingan, paua, rugian, marubal, labong (bamboo shoots) in Sri Lanka: moongil, mungil, munjil, katu una, mungal (for *Bambusa* sp.)

in Tamil: mungil arisee

in Telugu: Veduru

in Thailand: cha kat waa, cha-kat-wa, cha riang, chaa riang, chaa riong, chaa rong, cha rong, phai, phai naam, phai-nam, phai-pa, phai paa, phai ruak, ra sai, sang nam, saang naam, tha ngan, thangaan, thun, thuun, wa chu, waa chu, waa chuu, waa kha yuu, waa sue, waa tha, wae su, wae suu

in Vietnam: tre l[af] ng[af], tre gai r[uw]ng, tre, tre cai, tre gai, tre viron

B. basihirsuta McClure (*Bambusa prasina* T.H. Wen; *Dendrocalamopsis basihirsuta* (McClure) Keng f. & W.T. Lin; *Dendrocalamopsis prasina* (T.H. Wen) P.C. Keng; *Sinocalamus basihirsutus* (McClure) W.T. Lin)

Southeast Asia, Hong Kong, China, Guangdong. Young culms pruinose, slightly hispid and with white powder when young, branches many from middle portion of culms, culm sheath caducous and coriaceous, sheath auricles tiny with hirsute margin, sheath ligule denticulate, erect sheath blade broadly lanceolate, leaves lanceolate to long elliptic densely pubescent beneath, pseudospikelets 5- to 7-flowered subtended by a prophyll, 1-2 glumes, 3 lodicules ciliate, 3 stigmas, cultivated, shoots bitter and not used for eating, see *Lingnan University Science Bulletin* 9: 6. Canton 1940, *Bamboo Research in Asia* 1990(1): 4. 1990, *Flora Reipublicae Popularis Sinicae* 9(1): 143. 1996.

B. beecheyana Munro (*Arundarbor beecheyana* (Munro) Kuntze; *Dendrocalamopsis beecheyana* (Munro) Keng f.; *Dendrocalamopsis beecheyana* var. *beecheyana*; *Neosinocalamus beecheyanus* (Munro) Keng f. & T.H. Wen; *Sinocalamus beecheyanus* (Munro) McClure)

China, Guangdong, Guangxi, Hainan, Taiwan. Culms slightly pubescent and with white powder when young, recurved or long pendulous apically, nodes flat, branches several 1-3 dominant, culm sheaths deciduous leathery, leaves sheaths hirtellous when young, pseudospikelets 6- to 8-flowered, glumes 2 cordate ciliate, lodicules 3 ciliate, 2-4 stigmas rarely 1, edible shoots a bit bitter, commonly cultivated, see *Transactions of the Linnean Society of London* 26(1): 108. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Lingnan University Science Bulletin* 9: 67. 1940, *Journal of Bamboo Research* 2(1): 12. 1983, *Journal of Bamboo Research* 4(2): 18. 1985.

B. beecheyana Munro var. *beecheyana* (*Dendrocalamopsis beecheyana* (Munro) Keng f.; *Neosinocalamus beecheyanus* (Munro) Keng f. & T.H. Wen; *Sinocalamus beecheyanus* (Munro) McClure)

Guangdong, Guangxi, Hainan. Culms long pendulous apically, without a ring of brown pubescence below nodes, branches arising from middle portion of culms, stigmas 2-4.

B. beecheyana Munro var. *pubescens* (P.F. Lin) Lin (*Dendrocalamopsis beecheyana* var. *pubescens* (P.F. Li) Keng f.; *Neosinocalamus beecheyanus* (Munro) P.C. Keng var. *pubescens* (P.F. Li) P.C. Keng & T.H. Wen; *Sinocalamus beecheyanus* var. *pubescens* P.F. Li; *Sinocalamus pubescens* (P.F. Li) P.C. Keng)

China, Guangdong, Taiwan. Culms recurved apically, with a ring of brown pubescence below nodes, branches arising from basal portion of culms, stigmas 2, see *Sunyatsenia* 6(3-4): 205-212, pl. 36-38. 1946, *Bulletin of the Taiwan Forest Research Institute* 6: 1, f. 1. 1964, *Journal of Bamboo Research* 2(1): 12. 1983.

B. bicatricata (W.T. Lin) Chia & H.L. Fung (*Dendrocalamopsis bicatricata* (W.T. Lin) Keng f.; *Neosinocalamus bicatricata* (W.T. Lin) W.T. Lin; *Sinocalamus bicatricata* W.T. Lin; *Sinocalamus bicatricatus* W.T. Lin)

China, Hainan. Culm recurved apically, wall thick, branches clustered, branches arising from basal 1-2 nodes, internodes contracted, culm sheath deciduous leathery, no sheath auricles and cilia, leaves long lanceolate to elliptic, pseudospikelets 6- to 8-flowered with 2 sterile terminal ones, glumes 2-3 glabrous subcordate, lemmas ciliate, 3 lodicules, 1 stigma, cultivated, edible shoots, culms used for furniture and construction materials, see *Acta Phytotaxonomica Sinica* 16(1): 68-70, pl. 2. 1978, *Acta Phytotaxonomica Sinica* 18(2): 214. 1980, *Journal of Bamboo Research* 2(1): 12. 1983.

B. binghamii Gamble

Burma. See *Annals of the Royal Botanic Garden. Calcutta*. 7: 45. 1896, *Flora British India* 7: 392. 1896.

B. blumeana Schult. & Schult.f. (*Arundarbor blumeana* (Schult. & Schult.f.) Kuntze; *Arundarbor pungens* (Blanco) Kuntze; *Bambus arundo* Blanco; *Bambusa bambos* (L.) Voss; *Bambusa blumeana* Schult.; *Bambusa pungens* Blanco; *Bambusa spinosa* Roxb.; *Bambusa spinosa* Blume ex Nees, nom. illeg., non *Bambusa spinosa* Roxb.; *Bambusa stenostachya* Hack.; *Bambusa teba* Miq.; *Ischurochloa stenostachya* (Hack.) Nakai) (after the Dutch (German born) botanist Karl Ludwig (Carl, Carolus Ludovicus) von Blume, 1796-1862, physician, traveler, plant collector, Director of the Botanic Gardens of Buitenzorg, Superintendent of the Leyden Rijksherbarium, with Philipp Franz (Balthasar) von Siebold (1796-1866) founded the *Koninklijke Nederlandsche Maatschappij tot aanmoediging van den Tuinbouw*, with Johannes Baptistus Fischer (d. 1832) wrote *Flora Javae*. Bruxelles 1828 [-1851], his works

include *Enumeratio plantarum Javae*. Leyden 1827-1828, *Bijdragen tot de flora van Nederlandsch Indië*. Batavia 1825-1826 and *Rumphia*. Lugduni Batavorum [Leyden] 1836. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 204. 1965; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 448. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Frederick Muller, *Four Catalogues*. [*Les Indes Orientales: Catalogue de Livres sur les Possessions Néerlandaises aux Indes*; etc.] Amsterdam 1882; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 42. 1972; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 133-134. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845)

Borneo, Indonesia, Java, Sumatra, Lesser Sunda Islands. Erect, tall, densely tufted, sympodial, young culms pruinose green, spiny basal branches, stout curved spines, lower nodes with aerial roots, culm sheaths with dark brown hairs and narrowly triangular blades, auricles of the culm sheath prominent with curly hairs and bristles, ligule irregularly toothed, leaf blades linear-lanceolate with rounded base, clusters of pseudospikelets on branches of a leafless culm, spikelet laterally compressed, 5-12 florets, 2-3 empty glumes, propagation by culm cuttings, tolerates flooding, flowers very rarely, plants die after flowering, raw material for paper, cane for construction and basketry, binding, living fences, windbreaks, used for water pipe in pond fields, wild and naturalized, forming densely interlaced thicket, cultivated elsewhere in tropical Asia, used to prevent soil erosion, may be grown for soil reclamation in highly eroded areas, young shoots eaten as a vegetable, growing on irrigation ditch, tropical lowlands, along water courses, canal bank, riverbanks, often on heavy soils, hill slopes, at low and medium altitudes, freshwater creeks, resembles *Bambusa bambos* (L.) Voss, see *Hortus Bengalensis, or a catalogue ...* 25. 1814, *Flora* 8: 580. 1825, *Systema Vegetabilium* 7(2): 1343. 1830, *The Botany of Capt. Beechey's Voyage*; comprising an account of the Plants collected by Messrs. Lay and Collie ... during the voyage to the Pacific and Bering's Strait, performed in H.M.S. *Blossom ...* 1825-1828. 254. London [1830-] 1841, *Flora van Nederlandsch Indië* 3: 418. 1859, *Revisio Generum Plantarum* 2: 761. 1891 and *Phil. J. Sci.* 7: 413-415. 1912, *The Gardens' Bulletin, Singapore* 16: 59-62. 1958, *Bulletin of the Forestry and Forest Products Research Institute* 301: 79-118. 1978,

Journal of Tropical Forest Science 2(3): 227-234. 1990, *Sandakanian* 3: 22. 1993, *Journal of Tropical Forest Science* 6(2): 159-170. 1993.

in English: spiny bamboo, thorny bamboo

in Cambodia: russèi roliek

in Indonesia: bambu duri, haur cucuk, pring gesing

in Laos: phaix ban:nz

in Malaysia: buloh duri, buloh sikai, buluh duri, buluh sikai

Local names: bambu, buluh duri, buluh sikai, kawayen, tongkungon

in the Philippines: aonoo, batakan, baugin, /bengwil/, caña espina, dugian, kaaono, kabugauan, kauayan, kauayan gid, kauayan ng bayog, kauayan potog, kauayan siitan, kauayan-tinik, kauayan totoo, kawayan-siitan, lamnuan, marurugi, pasingan, paua, rugian

in Thailand: phai see suk, phai si suk, phai-sisuk, seesuk, si suk, waa mee bo, wa mi bo

in Vietnam: tre gai

B. blumeana Schult. & Schult.f. cv. **wei-fang Lin** (W.C. Lin) Chia (*Bambusa stenostachya* cv. *wei-fan Lin* W.C. Lin)

Asia, Taiwan. See *Bulletin de l'Herbier Boissier* 7(9): 725. 1899 and *Bulletin of the Taiwan Forest Research Institute* 98: 12, f. 13. 1964, *Guihaia* 8(2): 122. 1988.

B. boniopsis McClure (*Bambusa fecunda* McClure)

Southeast Asia, Hong Kong, China, Hainan. Young culms pruinose, several to numerous fasciculate branches usually arising from basal third to fifth node, culm sheaths caducous, sheath almost pruinose and glabrous, unequal sheath auricles elliptic to broadly elliptic, sheath ligule tip ciliate, sheath blade narrowly lanceolate and erect, leaves narrow-lanceolate, linear or linear-lanceolate pseudospikelets solitary or 2 to 3 fasciculate on each node of flowering branches, spikelets with 3-7 florets, middle 2 or 3 florets fertile, one glume ovate-oblong glabrous 11- to 13-nerved acute, lemma oblong-lanceolate glabrous 17- to 19-nerved acute and mucronate, 3 stigmas plumose, cultivated, around villages, forest, ravines, see *Lingnan University Science Bulletin* 9: 7, 9. 1940, *Journal of Zhejiang Forestry College* 8(1): 127-130. Hangzhou 1991. [*Zhejiang linxueyuan xuebao*].

B. breviflora Munro (*Arundarbor breviflora* (Munro) Kuntze, also spelled *brevifolia*; *Bambusa longiflora* W.T. Lin; *Bambusa pallescens* (Döll) Hack.; *Bambusa tuldooides* Munro; *Bambusa tuldooides* cv. *tuldooides*; *Bambusa ventricosa* McClure; *Guadua pallescens* Döll; *Leleba breviflora* (Munro) Nakai; *Leleba tuldooides* (Munro) Nakai; *Leleba ventricosa* (McClure) W.C. Lin)

Asia, China, Taiwan, Hong Kong. Clumping grass, see *Transactions of the Linnean Society of London* 26(1): 93, 96. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Journal of Japanese Botany* 9(1): 16-17. 1933, *Lingnan*

Science Journal 17(1): 5, f. 17-62, t. 5. 1938, *Bulletin of the Taiwan Forest Research Institute* 150: 1305, f. 1. 1963, *Bulletin of Botanical Laboratory of North-Eastern Forestry Institute* 1980(6): 85, f. 1. 1980.

B. breviflora Munro var. *hainanensis* G.A. Fu

China. See *Acta Phytotaxonomica Sinica* 20(4): 491, pl. 2. 1982.

B. brevispicula Holttum

Indonesia, New Guinea. See *Kew Bulletin* 21: 277. 1967.

B. brunneoaciculia G.A. Fu

China. See *Guihaia* 13(2): 108-109. 1993.

B. burmanica Gamble

India, Myanmar, Thailand. Erect, drooping to slightly drooping, thick-walled, caespitose, solid, branching at the lower part of the culm, 3 prominent main branches, young culms pruinose, nodes with white ring of hairs and waxy powder, culm sheath coriaceous and caducous, sheath blade erect and ovate or broadly triangular, sheath auricles rather large and distinct with ciliate margins, sheath ligule with an irregular margin minutely dentate, leaves lanceolate and shortly tomentose beneath, inflorescence on leafless branch, pseudospikelets in groups of 2-5 at the nodes 2 glumes mucronate, 3 stigmas, used for fence and hedge, in weaving, roofing and thatching, basket making, as construction materials, related to *Bambusa tulda* Roxb. and *Bambusa polymorpha* Munro, found on dry hill slopes, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 35-36, t. 33. 1896, *Fl. Brit. Ind.* 7: 388. 1896.

in India: thaikawa

in Myanmar: thaikwa, thaikawa

in Thailand: bong naam, bong nam, phai-bongnam, tai waa, tai waa yee, wa ther, wa thoe

B. cacharensis Majumdar (Cachar Hills of Assam)

India. Arborescent, erect, young shoots without the white powdery excretions below the culm sheaths, sheath blades orange-yellow and spreading at right angle to the axis, inflorescence paniculate, 2 glumes unequal, paleas 2-keeled, 3 lodicules ciliate, 6 stamens, used locally for various purposes, see *Bulletin of the Botanical Survey of India* 25(1-4): 237. 1983[1985].

B. cerosissima McClure (*Lingnania cerosissima* (McClure) McClure)

Indonesia, South China, Guangdong. Long top drooping, manifold branching, branches many from apical portion of culms, young culms heavily and strongly pruinose, culm sheaths late deciduous thick-papery much shorter than internodes, sheath auricles long and narrow, sheath blade dark and ovate-triangular to broadly lanceolate, 4-8 leaves on each twig, leaves linear-lanceolate, glumes 1-2, used in weaving, along roadside, near villages, see *Lingnan Science*

Journal 15(4): 637-639, f. 1. 1936, *Lingnan University Science Bulletin* 9: 35. 1940.

B. chacoensis Rojas (*Guadua angustifolia* subsp. *chacoensis* (Rojas) S.M. Young & Judd, *Guadua chacoensis* (Rojas) Londoño & P.M. Peterson)

Northern Argentina, southern Brazil. See *Synopsis Plantarum* 1: 253. 1822 and *Bulletin de l'Académie Internationale de Géographie, Botanique* 26(4): 157, f. 1. 1918, *Hickenia* 1: 73-78. 1977, *Novon* 2(1): 41-46, f. 1-2. 1992, *Ann. Missouri Bot. Gard.* 79(4): 763. 1992.

B. chungii McClure (*Lingnania chungii* (McClure) McClure; *Lingnania chungii* var. *petilla* T.H. Wen)

China, Guangdong, Guangxi, Hong Kong. Culm wall thin, culms heavily and strongly pruinose, branches many from apical portion of culms, most of branches fascicled, culm sheaths deciduous, sheath pruinose, sheath auricles narrow oblong with ciliate margin, sheath ligule margin dentate or ciliate, leaves linear-lanceolate to oblong-lanceolate, 1-2 glumes, 2 or 3 stigmas, ornamental, medicinal, used for weaving, in papermaking, see *Lingnan Science Journal* 15(4): 639-643, f. 1, pl. 28, 29. 1936, *Lingnan University Science Bulletin* 9: 35. 1940, *Journal of Bamboo Research* 1(1): 34. 1982.

B. chungii McClure var. *barbellata* (Q.H. Dai) Ohrnb.

China.

B. chungii McClure var. *petilla* (Wen) Ohrnb.

China.

B. chunii Chia & H.L. Fung

China, Hong Kong. Culm wall thick, culm lower portions zigzag, swollen base, nodes slightly convex, three or more branches at each node, branches at lower portion of the culm sharply thorny, coriaceous sheath shedding late, sheath blade erect and broad-lanceolate, sheath auricles linear-lanceolate rugose to hirsute, leaves lanceolate shortly pubescent beneath, cultivated around villages, see *Kew Bulletin* 37(4): 593. 1983.

B. clavata Stapleton

Bhutan. Erect, drooping, a ring of white pubescence below each node, used for construction, leaves as animal fodder, see *Edinburgh Journal of Botany* 51(1): 12, f. 4. 1994.

Local names: chile bans, pagshing

B. contracta L.C. Chia & H.L. Fung

China, Guangxi. Glabrous, branches usually arising from basal fourth to six node upward, most of the branches fascicled, culm sheaths caducous, sheath base almost cordate, sheath auricles unequal, sheath ligule serrate, leaves shortly pubescent beneath, used in weaving, growing around villages, similar to *Bambusa textilis* McClure, see *Acta Phytotaxonomica Sinica* 19(3): 376-377, pl. 14, f. 6. 1981.

B. copelandi Gamble (also spelled *copelandii*) (*Bambusa copelandii* Gamble ex Brandis; *Dendrocalamopsis copelan-*

dii (Gamble ex Brandis) Keng f.; *Dendrocalamus copelandii* (Gamble ex Brandis) N.H. Xia & Stapleton; *Sinocalamus copelandi* (Gamble) Raizada; *Sinocalamus copelandi* (Gamble ex Brandis) Raizada)

Myanmar. Tufted, large, thick-walled, nodes prominent, culm sheaths covered with golden hairs, large compound panicle, uppermost floret sterile, spikelets clustered in a head with 2 small bracts at the base, 3 lodicules hairy on the margins, 6 stamens exerted, ovary hairy, 1 stigma plumose, cultivated, see *Indian Trees* 671. 1906, *Indian Forester* 74(1): 10. 1948, *Journal of Bamboo Research* 2(1): 12. 1983, *Kew Bulletin* 52(2): 484. 1997.

B. corniculata Chia & H.L. Fung

China, Dongxing, Guangxi, Guangzhou, Guangdong. Internodes short, a ring of white pubescence below each node, branches usually arising from basal second or third node, twigs of the lower branches shortened into spines, culm sheaths caducous, sheath blade triangular and erect, sheath auricles unequal, sheath ligule back hirsute to densely hairy, leaves pubescent beneath, cultivated, near or around villages, low hills, see *Acta Phytotaxonomica Sinica* 19(3): 368-369, pl. 13, f. 2. 1981.

B. cornigera McClure

China. Young culms pruinose, manifold branching, branches usually arising from second node upward with primary ones being thicker and longer, branchlets of lower branches sometimes specialized into fine weak thorn, sheath irregularly spotted, small sheath auricles oblong and ciliate, sheath ligule margin entire or finely ciliate, sheath blade triangular and erect, culm sheaths caducous, leaves ovate-lanceolate, used for construction, along riversides, see *Lingnan University Science Bulletin* 9: 7. 1940.

B. cornuta Munro (*Arundarbor cornuta* (Munro) Kuntze) Southeast Asia, Indonesia, Philippines. See *Transactions of the Linnean Society of London* 26(1): 113. 1868, *Revisio Generum Plantarum* 2: 761. 1891.

B. crispiaurita W.T. Lin & Z.M. Wu

China, Guangdong. Culms internodes upper parts ± covered with brown stiff hairs, wall thick, nodes slightly prominent, branches usually arising from basal first or second nodes upward, culm sheaths deciduous with apex truncate, blades erect ovate-lanceolate, leaf blades linear-lanceolate glabrous adaxially pubescent abaxially, usually on lower hill slopes, see *J. S. China Agric. Univ.* 13(2): 81. 1992.

B. daii (P.C. Keng) D.Z. Li (*Dendrocalamopsis daii* P.C. Keng; *Dendrocalamopsis grandis* Q.H. Dai & X.L. Tao; *Neosinocalamus grandis* (Q.H. Dai & X.L. Tao) T.H. Wen, nom. illeg.)

China, Guangxi. Culms sparsely hispid when young, nodes flat, slightly swollen basally and recurved apically, branches several, culm sheaths deciduous leathery, pseudospikelets 4- to 8-flowered with a sterile terminal one, 1 glume ciliate,

lemmas ciliate, 3 lodicules, 1 stigma, cultivated for shoots and culms, see *Acta Phytotax. Sin.* 20: 201. 1982, *J. Bamboo Res.* 2(1): 13. 1983, *J. Bamboo Res.* 4(2): 18. 1985, *Fl. Reipubl. Popularis Sin.* 9(1): 149. 1996.

B. diaoluoshanensis Chia & H.L. Fung

China. Young culms covered with dark minute hairs, branches usually arising from basal first node, solitary branches on basal three nodes, twigs of the lower branches shortened into spines, culm sheath covered with blackish brown appressed stiff hairs, sheath blade triangular and erect, sheath auricles unequal, leaves pubescent beneath, cultivated, similar to *Bambusa ramispinosa* L.C. Chia & H.L. Fung, see *Acta Phytotaxonomica Sinica* 19(3): 369, pl. 13, f. 3. 1981.

B. disseimulator (also *dissimulator*) McClure

China, Guangxi, Guangdong. Clumps unicaespitose, erect or semierect, arching at the top, branches solitary and armed, setulose, sheath caducous and tough, internodes green and thick-walled, sheath auricles subequal or unequal, erect sheath blade ovate to ovate-lanceolate with cordate base, culm leaves tardily deciduous, 5-14 leaves on each twig, leaf blades long slender lanceolate, cultivated, pseudospikelets solitary or fasciculate on each node of flowering branches, spikelets with 4 or 5 perfect florets and 2 to several sterile florets at apex, 3 stigmas, used a green living fence, windbreak, see *Lingnan Science Journal* 19(3): 413-415, t. 20. 1940.

in English: muddy bamboo

B. disseimulator McClure var. *albinodia* McClure

China, Guangdong. Internodes near the base with white streaks, culm internodes hairy, cultivated around villages, see *Lingnan Science Journal* 19(3): 415. 1940.

B. disseimulator McClure var. *dissimulator*

China. Culm internodes glabrous.

B. disseimulator McClure var. *hispidia* McClure

China, Guangdong. Nodes and internodes hispid, cultivated around villages, used as a fence, see *Lingnan Science Journal* 19(3): 415. 1940.

B. dissimilis W.T. Lin

China, Guangdong. Internodes more or less glabrous, twigs of the lower branches shortened into spines, sheath green deciduous, sheath auricles more or less different, sheath blade erect and narrow triangular, leaves pubescent beneath, leaf blades linear-lanceolate, cultivated, see *Bamboo Res.* 1983(2): 50, f. 1. 1983.

B. distegia (Keng & Keng f.) Chia & H.L. Fung (*Bambusa funghomii* McClure; *Bambusa guangxiensis* L.C. Chia & H.L. Fung; *Lingnan distegia* (Keng & Keng f.) Keng f.; *Lingnan funghomii* McClure; *Sinocalamus distegia* Keng & Keng f.; *Sinocalamus distegius* Keng & Keng f.)

China, Sichuan. Culm top slightly bending, rarely drooping, hairy and covered by white powder when young, branches many from apical portion of culms, sheath ligule low and short with denticulate margin, leathery culm sheaths deciduous, sheath blade triangular to lanceolate, more than 10 leaves on each twig, leaves long lanceolate pubescent beneath, 1-2 glumes, 1-3 stigmas, used in weaving and handicrafts, raw material for papermaking, along streams, see *Lingnan University Science Bulletin* 9: 36. 1940, *Lingnan Science Journal* 19(4): 535-536, t. 37. 1940, *Journal of the Washington Academy of Sciences* 36: 76, f. 1. 1946, *Acta Phytotaxonomica Sinica* 18(2): 213-214. 1980, *Acta Phytotaxonomica Sinica* 19(1): 142. 1981.

B. dolichoclada Hayata (*Leleba dolichoclada* (Hayata) Odash.).

Southern China, Hainan Island, Taiwan. Caespitose, young culms pruinose, branching from the basal nodes, 3 to numerous branches on each node, culm sheaths pilose and coriaceous, sheath auricles unequal and ciliate at the margin, sheath blade erect and triangular to narrow lanceolate, 8-14 leaves on each twig, leaves chartaceous, leaf blades linear-lanceolate, inflorescence a lateral panicle of spicate branchlets, pseudospikelets 3- to 9-fasciculate on each node of flowering branches, spikelets linear to narrowly lanceolate with 5-7-12 florets 2 glumes ovate 14-nerved, lemmas ovate acute 18- to 20-nerved, palea present, 3 obovoid lodicules, 3 stamens, ovary narrowly ovoid and hairy above, 3 feathery stigmas, cultivated, used in weaving and as shelter-belts, on riverbanks, around villages, forest edges, hills, see *Icones plantarum formosandarum nec non et contributiones ad floram formosanam* 6: 144-146, f. 54. Taihoku [= Taipei, Taiwan] 1916, *Journal of the Society of Tropical Agriculture* 8: 58. 1936, *Bulletin of the Taiwan Forest Research Institute* 98: 15, f. 9, 10. 1964.

in Japan: choshi-chiku

B. dolichomerithalla Hayata (*Bambusa albolineata* (McClure) L.C. Chia; *Bambusa multiplex* var. *multiplex*; *Leleba dolichomerithalla* (Hayata) Nakai)

China, Japan. See *Systema Vegetabilium* 7(2): 1350. 1830 and *Icones plantarum formosandarum nec non et contributiones ad floram formosanam* 6: 146-148, f. 55. 1916, *Journal of Japanese Botany* 9(1): 16. 1933, *Guihaia* 8(2): 121-122. 1988.

B. duriuscula W.T. Lin (*Bambusa breviligulata* L.C. Chia & H.L. Fung; *Bambusa insularis* L.C. Chia & H.L. Fung) Hainan, China. Lower portion of the culm white striped, branches usually arising from basal fifth or sixth node upward, branches clustering, often aerial roots on nodes, culm sheath deciduous, sheath auricles flat and different, sheath ligule serrate with hairy margin, sheath blade cordate, leaves pubescent beneath, pseudospikelets 2- to 3-fasciculate on each node of flowering branches, spikelets bearing 6-7 florets apical 1 sterile, glume absent, lemma

oblong acute, 3 stigmas plumose, used for general constructional work, for weaving, frame and fences, usually cultivated, on slopes, near villages, similar to *Bambusa pachinensis* Hayata, see *Bulletin of Botanical Laboratory of North-Eastern Forestry Institute* 1980(6): 87-88, f. 2. Harbin 1980 [*Chih wu yen chiu shih hui kan.*], *Acta Phytotaxonomica Sinica* 19(3): 370-371, 375-376, pl. 13, f. 5 and pl. 14, f. 5. 1981.

B. emeiensis L.C. Chia & H.L. Fung (*Bambusa affinis* Munro; *Dendrocalamus affinis* Rendle; *Lingnan affinis* (Rendle) P.C. Keng; *Neosinocalamus affinis* (Rendle) P.C. Keng; *Neosinocalamus affinis* cv. *affinis*; *Sinocalamus affinis* (Rendle) McClure)

China, Guizhou, western Hunan, Sichuan, Yunnan. Culms covered by appressed stiff pale brown hairs when young, nodes flat, long pendulous apically, branches many from middle portion of culms, culm sheaths deciduous leathery, pseudospikelets 3- to 5-flowered plus a terminal sterile floret, 0-1 glumes, 3 lodicules rarely 4, 2-4 stigmas, cultivated, used for various purposes, agricultural tools, weaving, materials, ornamental, soil protection, the spikelet structure linking to subg. *Dendrocalamopsis*, vegetative parts of subgen. *Lingnania*, see *Transactions of the Linnean Society of London* 26(1): 93. 1868 and *Journal of the Linnean Society, Botany* 36(254): 447-448. 1904, *Acta Phytotaxonomica Sinica* 18(2): 214. 1980.

B. emeiensis Chia & H.L. Fung f. *chrysotricha* (Hsueh & Yi) Ohrnb.

China.

B. emeiensis Chia & H.L. Fung f. *flavidorivens* (Yi) Ohrnb. China.

B. emeiensis Chia & H.L. Fung f. *viridiflava* (Yi) Ohrnb. China.

B. eutuldoides McClure

Southern China. Young culms pruinose, some culms with longitudinal yellow and green stripes, branches usually arising from basal second or third node upward, several or numerous branches fasciculate with central 3 thicker and longer, culm sheaths caducous leathery with arched apex extremely asymmetrical, sheath auricles unequal and different in size, sheath ligule serrate and ciliate, sheath blade erect more or less triangular to broadly lanceolate, 4-8 leaves on each twig, leaves linear-lanceolate, linear pseudospikelets stalkless fasciculate at each node of flowering branches and branchlets, spikelets 5- to 6-flowered subtended by several bud-bearing bracts at base, 3 stigmas plumose, used for handicrafts, furniture, construction material, usually cultivated along riverbanks or around villages, related to *Bambusa tuldooides* Munro, see *Lingnan University Science Bulletin* 9: 8, f. 4. 1940.

B. eutuldoides McClure var. *basistriata* McClure

Guangdong, Guangxi, China. Basal internodes green with longitudinal yellow and green stripes, culm sheath auricles strongly wrinkled, see *Lingnan University Science Bulletin* 9: 9. 1940.

B. eutuldoides McClure var. *eutuldoides*

Guangdong, Guangxi, China. Culms internodes green, usually cultivated along riverbanks or around villages.

B. eutuldoides McClure var. *viridivittata* (W.T. Lin) Chia (*Bambusa eutuldoides* McClure var. *viridi-vittata* (W.T. Lin) Chia; *Bambusa viridi-vittata* W.T. Lin; *Bambusa viridivittata* W.T. Lin)

China, Guangdong. Culms internodes yellow with green stripes, culm sheaths green with yellow stripes when young, culm sheath auricles strongly wrinkled, ornamental, see *Journal of Bamboo Research* 1983(2): 54, f. 2-2. 1983, *Guihaia* 8(2): 123-124. 1988.

B. farinacea K.M. Wong

Peninsular Malaysia. See *Sandakania* 3: 23. 1993.

Malayan name: buluh aur bukit

B. fecunda McClure (*Bambusa boniopsis* McClure)

Asia, China. See *Lingnan University Science Bulletin* 9: 9. 1940.

B. fimbriiligulata McClure

China. See *Lingnan University Science Bulletin* 9: 10. 1940.

B. flavonoda W.T. Lin

China. See *Bamboo Res.* 1986(2): 23. 1986.

B. flexuosa Munro (*Arundarbor flexuosa* (Munro) Kuntze; *Bambusa bambos* auct.; *Bambusa flexuosa* Carrière, nom. illeg., non *Bambusa flexuosa* Munro; *Bambusa flexuosa* hort. ex Rivière & C. Rivière; *Bambusa scabriculum* W.T. Lin; *Bambusa stenostachya* auct.; *Phyllostachys flexuosa* A. Rivière & C. Rivière)

Guangdong, China. Erect, scandent or drooping, lower portions zigzag, branching from the lower part of the culm, internodes thick-walled, twigs of the lower branches shortened into spines, sheath shedding late, sheath auricles minute or narrowly linear, sheath blade erect or extending outward, leaves narrow and glabrous, pseudospikelets solitary or fasciculate slightly compressed with 8-12 florets, middle florets perfect, glumes usually absent, 3 stigmas plumose, cultivated, used as bushy fences, found along riversides, hills, see *Transactions of the Linnean Society of London* 26(1): 101. 1868, *Revue Horticole* 1870: 320. 1870, *Bulletin de la Société Nationale d'Acclimatation de France* 3: 5: 758. 1878, *Revisio Generum Plantarum* 2: 760. 1891 and *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in Thailand: phai see suk, phai si suk

B. forbesii (Ridley) Holttum (*Arundinaria coboni* F.M. Bailey; *Dendrocalamus forbesii* Ridley; *Gigantochloa novoguineensis* Rendle)

Papua New Guinea, Indonesia. Erect, drooping, leaning, spreading, thin-walled, densely tufted, culm sheath hairy, sheath blade broadly ovate with cordate base, large sheath auricles with long bristles, leaf sheaths completely surround the culm, leaf blade base cordate, pseudospikelets several to many in a cluster at each node of a leafy branch, shoots said to be eaten, culm used for making arrow head, vessels, water pipes, handicrafts, found in lowland and hills, on riverbanks, disturbed lower montane forest, highlands, undergrowth and regrowth vegetation, see *J. Bot. Brit. Foreign* 24: 360. 1886 and *Queensland Agricultural Journal* 20: 71. 1908, L.S. Gibbs (1870-1925), *A Contribution to the Phytogeography and Flora of the Arfak Mountains* 199. London 1917 [Dutch N.W. New Guinea.], *Kew Bulletin* 21: 271. 1967.

in Indonesia: akoya, sasa, warire

in Papua New Guinea: aku, hodzjima, k'link

B. fruticosa Holttum

Papua New Guinea. See *Kew Bulletin* 21: 275. 1967.

B. funghomii McClure

China, Guangdong, Guanxi. Erect, culms thorny and drooping, branching from lower part, all branches have spines, internodes pubescent, nodes at lower portion crooked, culm sheath shedding late, sheath auricles unequal and ciliate, sheath blades erect, 3-6 leaves on each twig, leaves long lanceolate, raw material for paper, cane for construction and basketry, scaffolding and poles, binding, living fences, windbreaks, used for water pipe in pond fields, forming densely interlaced thickets, used to prevent soil erosion, young shoots eaten as a vegetable, open places, hills, near villages, see *Lingnan Science J.* 19(4): 535-536, pl. 37. 1940.

B. gibba McClure (*Bambusa tulda* sensu Merrill & Chun, not Roxburgh)

China, Guangdong, Guanxi. Erect, clumps unicaespitose, young culms pruinose, branches thorny, internodes pruinose and slightly swollen at base, branches emerged from basal or second node upward, culm leaves tardily deciduous, sheath auricles unequal, sheath blade erect and long triangular, culm sheaths caducous, leaf blades lanceolate, leaves both surfaces glabrous or minutely pubescent to tomentose, pseudospikelets linear, spikelets 4- to 8-flowered, one glume ovate-elliptic 15-nerved apex acute and mucronate, lemma ovate-oblong 17-nerved apex acute and mucronate, 3 stigmas plumose, strips pulverized for oil extraction, used as a natural green fence, culms used in scaffolding and in making farm and fishing appliances, on lower hills, around villages, see *Sunyatsenia* 2: 207. 1935, *Lingnan University Science Bulletin* 9: 10. 1940.

Common name: nai bamboo

B. gibboides W.T. Lin

China, Guangdong, Hong Kong. Erect, more or less swollen in the lower portion, young culms pruinose, branches usually arising from basal first or second node upward, culm sheath deciduous, small sheath auricles subequal and oblong, sheath blade erect ovate lanceolate or narrowly triangular, leaves linear-lanceolate densely minutely shortly pubescent beneath, pseudospikelets several fasciculate on each node of flowering branches, spikelets bearing 5-7 florets, 1 or 2 apical florets usually sterile, cultivated, used for bamboo wares, shoots edible and eaten, see *Acta Phytotaxonomica Sinica* 16(1): 70-71, f. 3. 1978.

in English: tender shoot bamboo

B. glabrovagina G.A. Fu (*Bambusa glabro-vagina* G.A. Fu)

China. Erect, internodes cylindrical and glabrous, culm sheath deciduous, sheath blade erect and narrow triangular, sheath auricle ovate, leaves linear lanceolate shortly pubescent beneath, pseudospikelets several fasciculate on each node, spikelets 6- to 7-flowered middle 3 or 4 perfect, glumes absent, lemma ovate-oblong, 9- to 11-nerved, 3 stigmas plumose, used for framing and construction, on low hills, around villages, see *Acta Phytotaxonomica Sinica* 20(4): 489-491, pl. 1. 1982.

B. glaucophylla Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

B. grandis (Q.H. Dai & X.L. Tao ex Keng f.) Ohrnb.

China.

B. griffithiana Munro (*Arundarbor griffithiana* (Munro) Kuntze; *Dendrocalamus griffithianus* (Munro) Kurz)

India. Scandent or subscandent, slender, soft, hollow culms fistular, leaves lanceolate and acuminate, terminal panicle with spicate branches, heads of spikelets, 2 glumes ovate-acute, lemmas mucronate, 3 lodicules fimbriate, ovary smooth, 3 plumose stigmas, used locally for various purposes, see *Transactions of the Linnean Society of London* 26(1): 99. 1868, *Preliminary Report on the Forest and other Vegetation of Pegu* App. B: 94. 1875, *Revisio Generum Plantarum* 2: 761. 1891.

B. guadua Bonpl. (*Arundarbor guadua* (Bonpl.) Kuntze; *Guadua aculeata* Rupr. ex E. Fourn.; *Guadua angustifolia* Kunth; *Guadua angustifolia* subsp. *angustifolia*; *Nastus guadua* (Bonpl.) Spreng.)

South America. Large, woody, erect, caespitose, thorny with thorns from the nodes, armed with straight and hooked spines, clumped, rhizome pachymorph, arching descending branches, lower branches strongly thorny, sheaths deciduous, culm sheaths covered with brown hairs, inflorescence variable, spikelets 1-3 at nodes, glumes keeled, paleas acute, 3 slender lodicules, ovary stipitate, 2-3 stigmas, forming extensive impenetrable thickets and groves, pulp for paper, found along riverbanks, forest edge on riverbank, along streams, see *Plantae Aequinoctiales* 1: 68, t. 20. 1808, *Synopsis Plantarum* 1: 253. 1822, *Systema Vegetabilium*, editio

decima sexta 2: 113. 1825, *Revisio Generum Plantarum* 2: 761. 1891 and *Flora of the Guianas* 235. 1990, *Ann. Missouri Bot. Gard.* 79(4): 737-769. 1992.

in English: bamboo

in Bolivia: tacuara, tacuar-guasú

in Colombia: guadua

in Ecuador: guadúa, caña de Guayaquil, caña guadúa, caña mansa, caña brava, gadúa, amisa

in Paraguay: tacuara

in Venezuela: guafa, guajua, juajua

B. guangdongensis N.H. Xia & R.S. Lin (*Bambusa breviflora* Munro var. *hainanensis* G.A. Fu; *Bambusa longispiculata* not Gamble ex Brandis; *Bambusa tuldooides* auct., not Munro)

China, Guangdong, Hainan. Culms lower part slightly zigzag, tips erect or slightly drooping, internodes glabrous, lower internodes with yellowish green or pale green stripes, wall thick, basal one or two nodes bearing short aerial roots, branches usually arising from basal third or fourth node upward, culm sheaths deciduous leathery, leaf blades linear or linear-lanceolate glabrous adaxially and densely pubescent abaxially, spikelets 46 florets, glume absent, cultivated, culms used for scaffolding.

B. guangxiensis Chia & H.L. Fung (*Bambusa distegia* (Keng & Keng f.) L.C. Chia & H.L. Fung; *Bambusa fung-homii* McClure; *Lingnania fung-homii* McClure)

China, Guangxi. Tuberculately hairy when young, internodes with deciduous pubescence, node rings densely hairy, many branches, culm sheaths deciduous leathery densely covered by brownish tuberculate hairs, sheath auricles scabrous, sheath ligule very short to extremely short, sheath blade lanceolate, used in weaving, building material, lowland areas, see *Lingnan University Science Bulletin* 9: 36. 1940, *Lingnan Science Journal* 19(4): 535-536, t. 37. 1940, *Acta Phytotaxonomica Sinica* 18(2): 213-214. 1980.

B. hainanensis Chia & H.L. Fung (*Bambusa scandens* Blume ex Nees; *Lingnania scandens* McClure)

China, Hainan. Climber, scrambling, wall very thin, culms covered with appressed stiff hairs, internodes glabrous, thin and slender branches, sheath thick, leaves oblong-lanceolate to linear-lanceolate and pubescent beneath, 3 lodicules, 3 stigmas, tropical forest, see *Flora* 7: 291. 1824, *Lingnan University Science Bulletin* 9: 38. 1940, *Acta Phytotaxonomica Sinica* 18(2): 213. 1980.

B. heterostachya (Munro) Holttum (*Bambusa heterostachya* (Gamble) Holttum; *Bambusa latispiculata* (Gamble) Holttum; *Gigantochloa heterostachya* Munro; *Gigantochloa latispiculata* Gamble)

Origin unknown, Malaysia, Singapore. Stiffly erect, open or loosely tufted, straight, strong, sympodial, culm sheaths covered with dark hairs, blades erect narrowly to broadly

triangular, auricles with curly bristles, leaf blades glabrous, inflorescence interauctant, up to 10 florets, groups of 2-3 pseudospikelets at each inflorescence node, spikelets flattened, 2 glumes glabrous, 3 lodicules, 6 stamens with filaments connate, 1-3 plumose stigmas, flowers regularly, only found in cultivation, propagated by rhizome cuttings, ornamental, culms suitable for poles, basketry, adapted to a humid tropical lowland climate, see *Transactions of the Linnean Society of London* 26(1): 125. 1868, *Annals of the Royal Botanic Garden. Calcutta*. 7: 67, t. 59. 1896, *The Flora of British India* 7(22): 400. 1897 [1896] and *Journal Arnold Arboretum* 27: 341. 1946, *Gard. Bull. Sing.* 16: 65-67. 1958, *Nature Malaysiana* 7: 34-39. 1982, *Bamboo Journal* 11: 20-28. 1993, *Sandakania* 3: 27-28. 1993.

Malayan vernacular names: buloh galah, buloh pengait, buloh telang, buluh galah, buluh minyak, buluh pengahit, buluh pering, buluh telang, buluh telang minyak, buluh tilah, buluh tilan

B. hirsuta Holttum (*Neoleleba hirsuta* (Holttum) Widjaja) Indonesia, New Guinea. Inflorescences terminating leafy branches, see *Kew Bulletin* 21: 271. 1967, *Reinwardtia* 11(2): 118. 1997.

B. horsfieldii Munro (*Bambusa cornuta* Munro; *Fimbriambusa horsfieldii* (Munro) Widjaja) (named for Dr. Thomas Horsfield, 1773-1859 (London), American physician, botanist and zoologist, M.D. Philadelphia 1798, from 1800 to 1818 naturalist and plant collector in Malesian islands, in 1820 a Fellow of the Linnean Society and in 1828 of the Royal Society of London, from 1820 Keeper of the East India Company Museum at London, among his most valuable writings are Part I (-II) of a descriptive *Catalogue of the Lepidopterous Insects Contained in the Museum of the Honorable East-India Company*. London 1828-1829, with Frederic Moore (1830-1907) wrote *A Catalogue of the Birds in the Museum of the Honorable East-India Company*. London 1854-1858, with Nicholas Aylward Vigors (1785-1840) wrote *A Description of the Australian Birds in the Collection of the Linnean Society*. London 1827. See D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. 2: 170-171. London 1914; Lady Sophia Raffles, *Memoir of the Life and Public Services of Sir Thomas Stamford Raffles*. London 1830; Colin Clair, *Sir Stamford Raffles*. Founder of Singapore. Herts. 1936; Emily Hahn, *Raffles of Singapore: A Biography*. New York 1946 (1st American edition); J.H. Barnhart, *Biographical notes upon botanists*. 1: 163, 2: 205. 1965; John Joseph Bennett (1801-1876) & Robert Brown (1773-1858), *Plantae Javanicae rariores*, descriptae iconibus illustratae, quas in insula Java, annis 1802-1818, legit et investigavit Thomas Horsfield, M.D. London 1838-1852; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Mea Allan, *The Hookers of Kew 1785-1911*. London 1967; J. Ewan, editor, *A Short History of Botany in the United States*. 38. New York and London 1969; M. Archer, *Natural History Drawings in the India Office Library*. 46-

48, 80-82. London 1962; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Southeast Asia. Culms scandent, young shoots edible, see *Transactions of the Linnean Society of London* 26(1): 115. 1868 and *Reinwardtia* 11(2): 81. 1997.

in the Philippine Islands: lopa

B. indigena Chia & H.L. Fung (*Bambusa dissimilis* W.T. Lin)

China, Guangdong, Hainan. Young culms pruinose, twigs of the lower branches shortened into soft spines, culm sheaths glabrous or only stiff hairy near base abaxially, sheath deciduous, sheath blade erect and triangular, sheath auricles unequal, leaves beneath densely covered with short pubescence, pseudospikelets linear, spikelets with 5-12 florets, apical 1 floret sterile, 1 glume ovate elliptic 11-nerved apex acute and mucronate, lemma lanceolate glabrous 13- to 15-nerved apex acuminate, 3 stigmas plumose, cultivated as green fence and for building purposes, on low hills, similar to *Bambusa diaoluoshanensis* L. C. Chia & H. L. Fung, see *Acta Phytotaxonomica Sinica* 19(3): 370, pl. 13, f. 4. 1981, *Bamboo Res.* 1983(2): 50, f. 1. 1983.

B. insularis Chia & H.L. Fung (*Bambusa duriuscula* W.T. Lin)

China, Hainan. Basal internodes glabrous with purple spots, a ring of brown silky hair below each node, branches usually arising from basal first or second node, solitary branches on basal nodes and 3 to numerous on other nodes, twigs of the lower branches shortened into soft spines, culm sheaths caducous, sheath blade erect with margins long ciliate, sheath auricles unequal and wrinkled, sheath ligule serrate and pubescent, leaves narrow lanceolate and shortly pubescent beneath, cultivated, near or around villages, lower hills, see *Bulletin of Botanical Laboratory of North-Eastern Forestry Institute* 1980(6): 87-88, f. 2. 1980, *Acta Phytotaxonomica Sinica* 19(3): 370-371, pl. 13, f. 5. 1981.

B. intermedia Hsueh & Yi

China, Guangzhou, Yunnan. Young culms pruinose, branches many from basal portion of culms, culm sheaths caducous and coriaceous, sheath auricles inconspicuous often ciliate, sheath ligule hirsute, sheath blade ovate lanceolate, leaves long lanceolate, 1-2 glumes, 3 stigmas, widely cultivated, used for weaving, an intermediate form of subg. *Leleba* and sub. *Lingnania*, see *Journal of Bamboo Research* 3(1): 43, f. 1. 1984.

B. jacobsii Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

B. jaintiana Majumdar (of Jaintia Hills of Meghalaya)

India. Shrubby habit, culm sheaths glabrous, similar to *Bambusa tulda* Roxb., see *Fl. Ind. Enumerat.-Monocot.* 274. 1989.

B. khasiana Munro (for Khasi Hills) (*Arundarbor khasiana* (Munro) Kuntze)

India. Culms solitary, fistular, singly growing, thin-walled, soft, nodes not prominent, creeping rhizomes, culm sheath densely hairy, leaf sheaths glabrous, elongate panicle, spikelets in subverticillate groups, lower glumes mucronate, paleas ciliate on the keels, lodicules shortly fimbriate, 3 stigmas plumose, see *Transactions of the Linnean Society of London* 26(1): 97. 1868, *Revisio Generum Plantarum* 2: 761. 1891.

in India: bewar, chatur, serim, tirriah, tumoh, tyrah, wachiusa

B. kingiana Gamble

India. Leaves linear-lanceolate with a rather thick petiole, see *Annals of the Royal Botanic Garden. Calcutta.* 7: 46. 1896, *Flora British India* 7: 393. 1896.

B. kyathaungtu Brandis ex Camus

Myanmar. See *Les Bambusées* 116. 1913.

B. lako Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

B. lapidea McClure (*Bambusa miyiensis* T.P. Yi)

China, Guangdong, Guangxi, Yunnan, Sichuan. Culms strong and pliant, erect, clumps unicaespitose, nodes swollen, aerial roots from the nodes, internodes glabrous and thick-walled to solid, primary branches strong, twigs of the lower nodes often shortened into soft or hard spines, secondary branches often thorny, branches emerged from the basal third or fourth node upward, culm leaves promptly deciduous, culm sheaths thick-leathery and glabrous and shiny and olive-green with purple streaks when fresh, sheath auricles with wavy corrugation and margins shortly hirsute, sheath blade erect ovate to broadly ovate, slender leaves lanceolate, pseudospikelets linear compressed, spikelets containing 5 or 6 perfect florets, apex usually with 2 sterile florets, glumes absent, lemma glabrous many-nerved, 3 stigmas, tough culms borer resistant, used for scaffolding, bamboo pegs, carrying poles, along riversides and villages, hills, plains, see *Lingnan Science Journal* 19(4): 531-533, t. 35. 1940, *Bulletin of Botanical Research* 2(4): 99-100. 1982.

in English: horse-hoof bamboo

B. latideltata W.T. Lin (also *latideltada*)

China. Culms internodes glabrescent, nodes covered with a ring of pale hispid below and above sheath scars, branches fasciculate usually arising from basal first node upward, lower branches sometimes shortened into weak or tough thorns, culm sheaths deciduous densely covered with brown stiff hairs, leaf blades linear glabrous adaxially and pubescent abaxially, similar to *Bambusa lapidea* McClure, see *Journal of Bamboo Research* 13(2): 15-16, f. 1. 1994.

B. laxa K.M. Wong

Peninsular Malaysia. See *Sandakanian* 3: 29. 1993.

Malayan name: buluh tilan payong

B. lenta L.C. Chia

China, Fujian. Thin, pruinose, zigzag, asymmetrical, branches usually arising from basal eighth to tenth node upward, culm sheath deciduous and coriaceous, sheath auricles different in size, sheath ligule serrate, sheath blade erect and rough, leaves linear densely pubescent beneath, easy to split, material for weaving, cultivated at lower altitude, along riversides and around villages, see *Guihaia* 8(2): 125-126. 1988.

B. liangchiana N.H. Xia (*Bambusa burmanica* not Gamble)

China, Yunnan, Malaysia, Myanmar, Thailand. Culms internodes subsolid brown hairy when young, nodes slightly prominent with a ring of grayish white or yellowish white silky hairs below and above sheath scars, basal nodes bearing short aerial roots, culm sheaths caducous, leaf blades linear-lanceolate glabrous adaxially glaucous and densely pubescent abaxially.

B. lingnanioides W.T. Lin (*Bambusa parviflora* (J. Presl) Schult. & Schult. f.; *Lingnania parviflora* McClure)

China. See *Systema Vegetabilium* 7(2): 1350. 1830 and *Lingnan University Science Bulletin* 9: 37. 1940, *Acta Phytotaxonomica Sinica* 26(2): 146. 1988.

B. lixin Hsueh & T.P. Yi (*Bambusa nutans* Munro subsp. *cupulata* Stapleton; *Bambusa tulda* not Roxb.)

China, Bangladesh, Bhutan, India, Myanmar, Nepal. Culms lower parts straight, tips slightly drooping, internodes white powdery when young, thick-walled, nodes flat, several to many fasciculate branches usually arising from basal first node upward, lower branches bent downward, culm sheaths caducous thick leathery, leaf blades broad-linear to linear-lanceolate glabrous or sometimes hispidulous near base adaxially, pseudospikelets solitary or 2-5 fasciculate on each node of flowering branches, spikelets linear to linear lanceolate, 4-6 florets, glumes 1 or 2 many-nerved apex acute, lemma ovate to oblong glabrous many-nerved apex acute or acuminate and fine tipped, palea 2-keeled, 3 stigmas plumose, along riversides, around villages, in open fields, see *Flora Indica; or, Descriptions of Indian Plants* 2: 193. 1832 and *Bamboo Research in Asia* 2(1): 30, f. 2. 1983, *Edin. J. Bot.* 51: 19. 1994.

B. longipalea W.T. Lin

China. Culms lower parts ± zigzag, culm internodes deep green and with purple stripes when young, nodes glabrous, branches usually arising from basal first or second node upward, branchlets of lower ones sometimes shortened into weak thorns, culm sheaths deciduous, leaf blades linear-lanceolate glabrous adaxially and pubescent abaxially, 7-8 florets, 0-1 glumes, lemma subglabrous, ovary obovoid sim-

ilar to *Bambusa indigena* L.C. Chia & H.L. Fung, see *Acta Phytotaxonomica Sinica* 26(3): 224, pl. 1. 1988.

B. longispiculata Gamble ex Brandis (*Bambusa tulda* var. *longispiculata* (Gamble) Bois & Grignan)

Asia tropical, India, Thailand. Arborescent, culms cylindrical, densely clumped, evergreen or deciduous, large dense clumps, straight, appressed black spicules, a ring above and below each joint, culm sheaths densely appressed, blades glaucous beneath, sheath auricles unequal, sheath ligule serrate and densely pubescent, leaves linear-lanceolate pubescent beneath, few branches flowering, clump blooming and often dying, inflorescence erect often branching, large compound panicle with branching spikes, 2 empty glumes, lemmas acuminate, paleas 2-keeled, 2-3 lodicules, 6 stamens or rarely 3, ovary stipitate, 3 stigmas plumose, cultivated, naturalized elsewhere, used for frame and fencing, natural resistance to insects, found in rainforest, moist areas, see *Indian Trees* 668. 1906, *Ceiba* 19(1): 1-118. 1975, *Cuscatlania* 1(6): 1-29. 1991.

in India: metenga, thaikwa

in Thailand: phai lam malok, phai yai ko, phar malok

B. macrolemma Holttum

Papua New Guinea. Ornamental, see *Kew Bulletin* 21: 274. 1967.

B. macrotis Chia & H.L. Fung

China, Guangdong. Basal nodes with white silky hairs, branches usually emerged from basal nodes, branches of the lower basal part spinescent, glabrous culm internodes, culm sheaths slightly tardily deciduous with apex slightly asymmetrical broad arched, sheath auricles unequal, leaves linear lanceolate shortly pubescent beneath, cultivated, used for living fences and as fishing tools, along riversides, similar to *Bambusa rutila* McClure, see *Acta Phytotaxonomica Sinica* 19(3): 371-372, pl. 13, f. 6. 1981.

B. maculata Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

B. magica Ridl. (*Bambusa elegans* Ridl.; *Holttumochloa magica* (Ridl.) K.M. Wong)

Malay Peninsula. See *Journal of the Straits Branch of the Royal Asiatic Society* 44: 208-209. 1905, *Kew Bulletin* 48(3): 520, f. 1-2. 1993.

B. malingensis McClure

China, Hainan. Culms strong, stout, erect or semierect, clump forming, thick-walled, clumps unicaespitose, black when mature, branches of the lower basal part often spinescent with soft to hard spines, often branching from the culm base, branches several from the nodes, branches emerged from basal nodes upward, sheath auricles bristly and irregular, sheath scars slightly swollen, sheaths glabrous and ribbed-striate when dry, sheath blade erect triangular to narrowly triangular, leaf blades lanceolate to narrow

lanceolate, cultivated, culms can be used for frames and making farm appliances, windbreak, hedge, shelter for stock, in open places, hills, see *Lingnan University Science Bulletin* 9: 11. 1940.

in English: maling bamboo

B. marginata Munro (*Arundarbor marginata* (Munro) Kuntze; *Dinochloa marginata* (Munro) Brandis)

Myanmar. See *Transactions of the Linnean Society of London* 26(1): 114. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Indian Trees* 681. 1906.

in Thailand: waa me, wa me

B. mastersii Munro (*Arundarbor mastersii* (Munro) Kuntze; *Melocalamus mastersii* (Munro) R.B. Majumdar)

India, Assam. Climbing, very small, reedlike, ligule very short, leaves attenuate at the base into a short petiole, see *Transactions of the Linnean Society of London* 26(1): 113. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Fl. Ind. Enumerat.-Monocot.* 278. 1989.

in India: benti bans, bentibans, beti bans

B. membranacea (Munro) Stapleton & N.H. Xia (*Dendrocalamus membranaceus* Munro)

Asia, China, Laos, Vietnam, Thailand. Vegetable, human food, see *Transactions of the Linnean Society of London* 26(1): 149. 1868 and *Kew Bulletin* 52(1): 238. 1997.

Local name: waya

in Thailand: lai lo, sang doi, wa mi, wa mu, wae mi, wa tong tiang

B. merrillii Gamble

Philippines. See *Philippine Journal of Science* 5: 269. 1910.

B. microcephala (Pilger) Holttum

Papua New Guinea.

B. minutiligulata W.T. Lin & Z.M. Wu

China. See *Journal of Bamboo Research* 11(1): 27. 1992.

B. mitis (Lour.) Steud. (*Arundinaria japonica* Sieb. & Zucc.; *Arundo mitis* Lour.; *Bambos mitis* Poir.; *Bambusa mitis* Blanco; *Bambusa mitis* Poir.; *Bambusa mitis* (Lour.) Poir.; *Bambusa mitis* Hort. ex Carr.; *Bambusa mitis* Hort. ex Munro)

Asia. See *Flora Cochinchinensis, denuo in Germania edita* 1: 57. 1790, *Encyclopédie Méthodique. Botanique ... Supplément* 8: 704. 1808, *Flora de Filipinas* 271. 1837, *Revue Horticole* 380. 1866, *Transactions of the Linnean Society of London* 26: 18. 1868.

B. mollis Chia & H.L. Fung

China, Guangxi. Branches arising from basal third to fifth node upward, culm base nodes densely covered with white silky pubescence, culm sheath caducous, sheath auricles unequal, sheath ligule glabrous, sheath blade ovate-lanceolate, leaf blades linear-lanceolate shortly pubescent

beneath, used in weaving, growing around villages, see *Acta Phytotaxonomica Sinica* 19(3): 377-378, pl. 14, f. 7. 1981.

B. montana (Ridl.) Holttum (*Bambusa pauciflora* Ridl.; *Dinochloa montana* Ridl.; *Maclurochloa montana* (Ridl.) K.M. Wong)

Malay Peninsula. See *Journal of the Straits Branch of the Royal Asiatic Society* 44: 210. 1905, *Kew Bulletin* 11: 206. 1956, *Kew Bulletin* 48(3): 528, f. 6. 1993.

B. moreheadiana F.M. Bailey

Australia, Queensland. See *Report of the Government Scientific Expedition to the Bellenden-Ker Range upon the Flora and Fauna of that Part of the Colony* 71. Brisbane 1889 [botany by F.M. Bailey; zoology by Charles Hedley & Henry Tryon].

in Australia: Queensland climbing bamboo

B. multiplex (Lour.) Räsch. ex Schultes & Schultes f. (*Arundarbor multiplex* (Lour.) Kuntze; *Arundarbor nana* (Roxb.) Kuntze; *Arundinaria glaucescens* (Willd.) P. Beauv.; *Arundo multiplex* Lour.; *Bambos nana* var. *alphonso-karri* (Mitford) Makino; *Bambusa alphonse-karri* Mitford; *Bambusa argentea* hort.; *Bambusa floribunda* (Büse) Zoll. & Moritz; *Bambusa glaucescens* Munro; *Bambusa glaucescens* (Willd.) Merr.; *Bambusa glaucescens* (Willd.) Holttum, nom. illeg., non *Bambusa glaucescens* (Willd.) Merr.; *Bambusa glaucescens* (Willd.) Sieb. ex Holttum; *Bambusa glaucescens* (Willd.) Siebold ex Munro; *Bambusa glaucescens* var. *riviereorum* (Maire) L.C. Chia & H.L. Fung; *Bambusa multiplex* (Lour.) Räsch.; *Bambusa multiplex* var. *nana* (Roxb.) Keng f.; *Bambusa multiplex* var. *riviereorum* Maire; *Bambusa nana* Roxb.; *Bambusa nana* var. *alphonso-karri* Lat.-Marl. ex E.G. Camus; *Leleba multiplex* (Lour.) Nakai; *Leleba shimadai* (Hayata) Nakai; *Ludolfia glaucescens* Willd.; *Ludolphia glaucescens* Willd.)

Indochina, southern China. Perennial, shrubby, slender and weak, erect or arching above, top slightly bending, spineless, young culms pruinose, thickly growing, variable and polymorphic, spreading, densely tufted, forming dense clumps of closely placed culms, sympodial and pachymorph rhizomes, clumps unicaspitose, culms very numerous, internodes green throughout and waxy, branches small and usually emerged from the seventh node upward, auricles of culm sheath absent, culms leaves deciduous, ligule short, culm sheath with caducous black hairs, leaf sheath with white apical bristles, leaves usually at the end of a branch, 5-10 leaves on each twig, leaves lanceolate densely pubescent beneath, at the nodes of a leafless branch several slender pseudospikelets sessile in small clusters, up to ten fertile florets, uppermost floret rudimentary, spikelet linear-lanceolate, 2 glumes or none or rarely one, lemmas ovate-lanceolate, palea keels slightly fringed, 3 unequal ovate lodicules membranous, 6 stamens long-exserted and pendulous, ovary cylindrical narrow at the base and pubescent above, 3 plumose stigmas, sometimes die after flowering,

usually propagated by rhizome cuttings, garden plant, ornamental, widely cultivated for hedging and for construction purposes, windbreak, green fences, in weaving or a binding material, dwarf cultivars suitable as indoor pot plant (*pen-jing*), paper is made from the culms, canes split easily, culms are used for making umbrellas, mats and handicrafts, a tea prepared from a handful of the shoots is used as an abortient, young shoots bitter tasting, culms often used as fishing rods, only known from cultivation, well on sandy loams, see *Fl. Cochinch.* edition 1. 1: 58. 1790, *Nomenclator Botanicus* edition 3 103. 1797, *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der gesammten Naturkunde.* 2: 320. Berlin 1808, *Ess. Agrostogr.* 144, 152. 1812, *Systema Vegetabilium* 7(2): 1350-1351. 1830, *Fl. Ind.* edition 1832, 2: 199. 1832, *Transactions of the Linnean Society of London* 26(1): 22-23, 89. 1868, *Revisio Generum Plantarum* 2: 760-761. 1891, *Ann. Roy. Bot. Gard. (Calcutta)* 7(1): 40-41, pl. 38. 1896 and *Handb. Fl. Ceylon* 5: 315. 1900, *Philippine Journal of Science* 7(4): 230. 1912, *Bambusées* 121, 132. 1913, *Handb. Fl. Ceylon* 6: 342. 1931, *Journal of Japanese Botany* 9(1): 14, f. 2. 1933, *Technical Bulletin of the National Forestry Research Bureau* 8: 17. Nanking 1948, *Kew Bulletin* 11(2): 207-211. 1956, *Grasses of Ceylon* 28. 1956, *Tappi* 40(8): 671-678. 1957, *Gard. Bull. Straits Settlm.* 16: 67-70. 1958, S. Suzuki, *Index to Japanese Bambusaceae.* 102-105. Gakken Company, Tokyo, Japan 1978, *Smithsonian Contributions to Botany* 72: 36-39. 1988, *Journal of Bamboo Research* 8(1): 20-22, f. 4. 1989, *Environmental and Experimental Botany* 29: 307-315. 1989, *Journal of Zhejiang Forestry College* 8(1): 127-130. 1991, *Cuscatlania* 1(6): 1-29. 1991, *Sabah Forest Record* 14: i-xi, 1-94. 1992.

in English: hedge bamboo, Chinese goddess bamboo, Chinese dwarf bamboo, Oriental hedge bamboo, Chinese bamboo, bambu China

Local names: marona, China una

in Indonesia: bambu china, buluh pagar, aor selat

in Japan: horai-chiku, hourai-chiku, houshou-chiku (white stripes), suou-chiku (green stripes on yellow background), hou-ou-chiku (*Hou-ou*, is a legendary bird), beni-hou-ou (green stripes on the culms and the branches), fu-iri-hou-ou (white stripes on the leaves), mikisuji-hou-ou (green stripes on a yellowish culm), komachi-dake, houbi-chiku

in Okinawa: ubidai, njadaki

in the Philippine Islands: kauayang tsina, kawayan sa song, kawayan tsina

in Malaysia: buloh china, buloh pagar, buluh Cina, buluh pagar

in Myanmar: pa-lau-pinan-wa

in Sri Lanka: China una

in Thailand: phai Chiang Phrai, phai-liang, phai sang phrai, phak

in Vietnam: cay hop

B. multiplex (Lour.) Räsch. ex Schultes & Schultes f. var. **elegans** (Koidzumi) Muroi (*Bambusa multiplex* var. *elegans* (Koidzumi) Muroi; *Leleba elegans* Koidz.)

South China. Caespitose, culm-sheaths glabrous, leaves distichous and minutely pubescent, cultivated, see *Acta Phytotaxonomica et Geobotanica* 3(1): 27. 1934, *New Keys of Japanese Trees*, Revised Edn. 457. Osaka 1961.

in Japan: hoo-chiku, hobi-chiku

B. multiplex (Lour.) Räsch. ex Schultes & Schultes f. var. **incana** B.M. Yang (*Bambusa glaucescens* var. *strigosa* (T.H. Wen) L.C. Chia; *Bambusa glaucescens* var. *pubivagina* (W.T. Lin & Z.M. Wu) Xia; *Bambusa multiplex* var. *pubivagina* W.T. Lin & Z.J. Feng; *Bambusa pubivaginata* W.T. Lin & Z.J. Feng; *Bambusa strigosa* T.H. Wen)

China, Hunan. Back of the culm sheath densely shortly whitish tomentose, on open fields, along riversides, see *Journal of Bamboo Research* 1(1): 31, f. 8. 1982, *Journal of Hunan Normal Univ.* 1983(1): 77, f. 1. 1983.

B. multiplex (Lour.) Räsch. ex Schultes & Schultes f. var. **multiplex** (*Arundinaria glaucescens* P. Beauv.; *Arundo multiplex* Loureiro; *Bambusa albofolia* T.H. Wen & Hua; *Bambusa alphonse-karri* Mitford; *Bambusa caesia* Siebold & Zuccarini ex Munro; *Bambusa dolichomerithalla* Hayata; *Bambusa glauca* Lodd. ex Lindl.; *Bambusa glaucescens* (Willdenow) E.D. Merrill; *Bambusa glaucescens* (Willdenow) E.D. Merrill f. *solida* K.J. Mao & C. H. Zhao; *Bambusa multiplex* cv. "Alphonse Karr" Young; *Bambusa multiplex* cv. "Fernleaf" Young; *Bambusa multiplex* var. *nana* (Roxburgh) P.C. Keng; *Bambusa multiplex* cv. "Silverstripe" Young; *Bambusa multiplex* var. *isolida* B.M. Yang; *Bambusa multiplex* cv. "Stripe stem fernleaf" Young; *Bambusa nana* Roxburgh; *Bambusa nana* var. *alphonso-karri* Lat.-Marl. ex E.G. Camus; *Bambusa nana* Roxburgh var. *variegata* Camus; *Bambusa sterilis* Kurz ex Miq.; *Bambusa viridiglaucescens* Carr.; *Ischurochloa floribunda* Büse ex Miquel; *Leleba dolichomerithalla* (Hayata) Nakai; *Leleba elegans* Koidz.; *Ludolfia glaucescens* Willdenow; *Ludolphia glaucescens* Willdenow)

South and southeastern China. Culms ultimate branches 5- to 12-foliate, see *Journal of Bamboo Research* 8(1): 20-22, f. 4. 1989.

B. multiplex (Lour.) Räsch. ex Schultes & Schultes f. var. **pubivagina** W.T. Lin & Z.J. Feng (*Bambusa glaucescens* var. *pubivagina* (W.T. Lin & Z.J. Feng) N.H. Xia)

Guangdong, China. See *Philippine Journal of Science* 7(4): 230. 1912, *Journal of Bamboo Research* 12(2): 35. 1993, *Journal of Tropical and Subtropical Botany* 1(1): 9. 1993.

B. multiplex (Lour.) Räsch. ex Schultes & Schultes f. var. **riviereorum** R. Maire (*Bambusa glaucescens* var. *riviereorum* (Maire) L.C. Chia & H.L. Fung)

China. Clumped, solid, soft, drooping, 13-25 leaves on each twig, leaves lanceolate, ornamental, potted plants, used as a green living fence or shelter, on low hills, riversides, see *Flore de l'Afrique du Nord* 1: 355. 1952, *Phytologia* 52(4): 257. 1982.

B. multiplex (Lour.) Räsch. ex Schultes & Schultes f. var. **shimadae** (Hayata) Sasaki (also spelled **shimadai**) (*Bambusa glaucescens* var. *shimadai* (Hayata) L.C. Chia & But; *Bambusa multiplex* var. *shimadae* Sasaki; *Bambusa shimadai* Hayata; *Leleba shimadai* (Hayata) Nakai)

Japan, China, Taiwan. Culm sheaths nearly symmetrically broadly arched, used for hedge or windbreak, usually cultivated in fields or mountains, see *Transactions of the Linnean Society of London* 26(1): 89. 1868 and *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 6: 151-152, f. 59. 1916, *Journal of Japanese Botany* 9(1): 17. 1933, *Phytologia* 52(4): 258. 1982.

B. mutabilis McClure

China, eastern Asia, Hainan. Clumps unicaespitose, culm wall thin, young culms slightly pruinose, internodes thin-walled and more or less glabrous, branches slender, branches usually emerged from around the fifth to seventh nodes upward, culm sheaths promptly deciduous, sheaths smooth and glabrous, sheath auricles subequal and oblong, sheath ligule short, leaf blades narrowly lanceolate, leaves densely hairy on the underside, used for weaving, along riversides or forest edge, see *Lingnan University Science Bulletin* 9: 12. 1940.

in English: lesser yellow bamboo

B. nepalensis Stapleton

Nepal. See *Edinburgh Journal of Botany* 51(1): 15, f. 5. 1994.

B. nguyenii Ohrenb.

Vietnam.

B. nutans Wallich ex Munro (*Arundarbor nutans* (G.C. Wall. ex Munro) Kuntze; *Bambusa nutans* Wall.)

China, Yunnan, Thailand, Myanmar. Elegant, straight, graceful, strong, creeping, culm top drooping, young culm pruinose, loosely clumped and much-branched, branches usually arising from basal fourth node upward, numerous fasciculate branches with central 3 conspicuously longer and thicker, sheaths coriaceous and caducous, sheath auricles prominent and unequal or subequal, sheath ligule with a ciliate margin, leaves narrow-lanceolate its underside sparsely tomentose, inflorescence variable, leafless panicle, 2-3 glumes mucronate, paleas 2-keeled, 3 lodicules fimbriate, 6-7 stamens, ovary pubescent, 2-3 stigmas plumose or glabrous, ornamental, raw material for making paper, culms used as poles, as building construction, fences, on slopes, see *Transactions of the Linnean Society of London* 26(1): 92. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Edin. J. Bot.* 51(1): 17. 1994.

in India: badia bansa, beng, bidhuli, deobans, jotia-makal, kali, mahi bans, mahlu mallo, makla, malabans, mallo, mukial, seringjai, wakla, wa malang

in Thailand: phai bong

B. nutans Wall. ex Munro subsp. *cupulata* Stapleton

Nepal, India, Bangladesh, Bhutan. Erect, culm top drooping, inflorescence spicate, spikelets cylindrical, cultivated, used for construction, foliage as animal fodder, see *Edinburgh Journal of Botany* 51(1): 17, f. 6. 1994.

Vernacular names: mal bans, wahlo, jhushing

B. nutans Wall. ex Munro subsp. *nutans*

Nepal, India.

B. odashimae Hatusima

China.

B. oldhamii Munro (*Arundarbor oldhamii* (Munro) Kuntze; *Bambusa atrovirens* T.H. Wen; *Dendrocalamopsis atrovirens* (T.H. Wen) P.C. Keng ex W.T. Lin; *Dendrocalamopsis oldhamii* (Munro) Keng f.; *Dendrocalamopsis oldhamii* f. *oldhamii*; *Leleba oldhamii* (Munro) Nakai; *Sinocalamus oldhamii* (Munro) McClure)

China, Fujian, Guangdong, Guangxi, Hainan, Taiwan. Culms slightly zigzag, glabrous and with white powder when young, nodes flat, branches many from middle portion of culms, culm sheaths deciduous leathery, leaves sheaths hispid when young, pseudospikelets 5- to 9-flowered, 1 glume, ovate lemmas similar to glumes, 3 lodicules, 3 stigmas, commonly cultivated, shoots of very good quality, see *Transactions of the Linnean Society of London* 26(1): 109. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Journal of Japanese Botany* 9(1): 16. 1933, *Lingnan University Science Bulletin* 9: 67. 1940, *Journal of Bamboo Research* 2(1): 12. 1983.

B. oldhamii Munro f. *revoluta* W.T. Lin & J.Y. Lin (*Dendrocalamopsis oldhamii* f. *revoluta* (W.T. Lin & J.Y. Lin) W.T. Lin; *Neosinocalamus revolutus* (W.T. Lin & J.Y. Lin) T.H. Wen; *Sinocalamus oldhamii* f. *revolutus* (W.T. Lin & J.Y. Lin) W.T. Lin)

China. See *Acta Phytotaxonomica Sinica* 26(3): 225, pl. 2. 1988, *Guihaia* 10(1): 15. 1990, *Journal of Bamboo Research* 10(1): 23. 1991, *Journal South China Agricultural University* 14(3): 111. 1993.

B. oliveriana Gamble

India, Myanmar. Tufted, thick-walled, much branched from the base upward, much-branched panicle of 1-sided spikes, bracteate clusters of spikelets, spikelets flattened, 1-2 glumes ovate-lanceolate, terminal floret imperfect, lemmas tip bristly, paleas 2-keeled, 3 lodicules long-fimbriate, stamens long-exserted, 2 stigmas plumose, used locally for various purposes, found in moist deciduous forests, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 130. 1896, *Fl. Brit. India* 7: 392. 1896.

in English: bush bamboo

B. pachinensis Hayata (*Leleba pachinensis* (Hayata) Nakai)

Taiwan, China, Fujian. Dark green, branches arising from basal eighth to tenth nodes upward, culm sheaths caducous leathery rigid, sheath coriaceous and densely pubescent, sheath ligule slightly circular, sheath blade lanceolate to triangular, oblong sheath auricles distinct and ciliate, leaf blade linear lanceolate, pseudospikelets lanceolate to linear-lanceolate, lemma ovate-elliptic acute and mucronate, 3 lodicules, 3 stigmas plumose, usually cultivated along riverbanks, in lower hills and around villages, see *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 6: 150-151, f. 58. 1916, *Journal of Japanese Botany* 9(1): 17. 1933.

B. pachinensis Hayata var. *hirsutissima* (Odashima) Lin (*Bambusa textilis* McClure var. *fusca* McClure; *Leleba beisitiku* var. *hirsutissima* Odashima; *Leleba pachinensis* var. *hirsutissima* (Odashima) Lin)

Taiwan, China, Guangdong, Guangxi. Branch sheath with short silver white pubescence, culm sheaths ligules long fimbriate, cultivated in lower hills and around villages, used as windbreak, see *Journal of the Society of Tropical Agriculture* 8(1): 58, f. 3. 1936, *Lingnan University Science Bulletin* 9: 14, 16. 1940, *Bulletin of the Taiwan Forest Research Institute* 98: 21. 1964.

B. pachinensis Hayata var. *pachinensis* (*Bambusa beisitiku* (Odashima) P.C. Keng; *Leleba beisitiku* Odashima; *Leleba pachinensis* (Hayata) Nakai)

Taiwan, China. Culm sheaths ligules irregularly dentate, usually cultivated along riverbanks, in lower hills and around villages.

B. pallida Munro (*Arundarbor pallida* (Munro) Kuntze; *Bambusa critica* Kurz)

Northeastern India, Bhutan, China, Myanmar, Thailand. Caespitose, culm wall thin, growing in thick clumps, branching at the upper part of the culm, branches usually arising from basal sixth or seventh node upward, many slender and short branches, basal internodes with aerial roots, young culms pruinose, culm sheaths caducous, sheath pruinose and glabrous, sheath auricles small almost round to semicircular, sheath blade erect, 7-9 leaves at each twig, leaves narrowly lanceolate densely shortly tomentose beneath, large branching panicle, heads of many sterile and few fertile spikelets, 1-2 glumes ovate acute, lemmas ciliate on the keels, 3 lodicules fimbriate, stamens exserted, 3 plumose stigmas, used for house building and screens, cultivated, hills and plains, open areas, see *Transactions of the Linnean Society of London* 26(1): 97. 1868, *Revisio Generum Plantarum* 2: 761. 1891.

in India: bakhhal, bijli, bongshing, burwal, jowa, ka-sken, kalinga, loto, makal, pashipo, pshi, pushee, seskien, shen,

skhen, tesero, teusng, tneng, tounng, usken, walkthai, watai, wathai, watoi

in Thailand: phai phio, phai phiu

B. papillata (Q.H. Dai) K.M. Lan (*Bambusa papillata* (Q.H. Dai) Q.H. Dai, nom. illeg., non *Bambusa papillata* (Q.H. Dai) K.M. Lan; *Lingnania papillata* Dai)

Guangxi, China. Bending and drooping at the top, covered by tuberculately spinous hairs when young, young culm with a pruinose ring on each joint, internodes densely hairy, most of branches fascicled, deciduous culm sheaths rectangular leathery, sheath auricles narrow oblong, sheath ligule low and short with dentate margin, sheath blade ovate-lanceolate and erect, leaves lanceolate to linear-lanceolate, used in papermaking and weaving, see *Acta Phytotaxonomica Sinica* 20(2): 213-215, pl. 4. 1982, *Flora Guizhouensis* 5: 281. 1988, *Flora Reipublicae Popularis Sinicae* 9(1): 129, pl. 31, f. 6-7. 1996.

B. parvifolia W.T. Lin

Guangdong, China. See *Bamboo Res.* 1986(2): 22. 1986.

B. pauciflora Ridl. (*Dinochloa montana* Ridl.; *Maclurochloa montana* (Ridl.) K.M. Wong)

Malay Peninsula. See *The Journal of the Straits Branch of the Royal Asiatic Society* 44: 210. 1905, *Flora of the Malay Peninsula* 5: 259. 1925, *Kew Bulletin* 48(3): 528, f. 6. 1993.

B. pervariabilis McClure

Southern China, Guangxi, Guangdong. Strong and straight culms, culms top not drooping, erect or nearly erect, young culms pruinose with white deciduous pubescence, clumps unicaespitose, internodes thick-walled covered with a white bloom, branches stiff and straight, branching low, branches usually emerged from the basal first node upward, culm leaves promptly deciduous, basal internodes with yellow vertical stripes, culm sheaths caducous, sheath auricles prominent, sheath ligule margin dentate, sheath blade erect, leaves long lanceolate densely pubescent beneath, pseudospikelets linear, spikelets 5- to 10-flowered subtended by 2 or 3 bud-bearing bracts, one glume oblong glabrous 9-nerved acute, lemma oblong-lanceolate glabrous 13- to 15-nerved acute, 3 hairy stigmas, shavings of culm-cortex used in China for treating febrile diseases and hematuria, used for house building and screens, construction materials, furniture, in weaving, on riverbanks, low hills, loose wet soils, around villages, related to *Bambusa tuldoidea* Munro, see *Lingnan University Science Bulletin* 9: 13. 1940, *Journal of Bamboo Research* 4(2): 9-10, f. 1. 1985.

in English: punting pole bamboo

B. pervariabilis McClure *pervariabilis*

Southern China. Basal several culm internodes green with yellowish white stripes, on riverbanks, low hills, loose wet soils, around villages.

B. pervariabilis McClure var. *viridistriata* Q.H. Dai & X.C. Liu

China, Guangxi. Internodes of culms and branches yellow with green stripes, cultivated, ornamental, see *Acta Phytotaxonomica Sinica* 24(5): 395. 1986.

B. pierreana Camus

Laos, Thailand. See *Notulae Systematicae. Herbarium de Paris* 2(8): 245. 1912.

Local names: lammalo mai, mammalo mai

in Thailand: lam malo

B. piscatorum McClure

Hainan, China. Branches usually arising from basal fourth to sixth node upward, culm sheath caducous, small sheath auricles ciliate and subequal, sheath ligule margin entire or denticulate, caducous sheath blade lanceolate-triangular and erect, leaves linear-lanceolate shortly pubescent beneath, used as fishing rod, cultivated around villages, very similar to *Bambusa mutabilis* McClure, see *Lingnan University Science Bulletin* 9: 14. 1940.

B. polymorpha Munro (*Arundarbor polymorpha* (Munro) Kuntze; *Bambusa cyanostachya* Kurz ex Gamble, also spelled *cyanestachya*)

Thailand, Bangladesh, India, Burma, China. Large, tree-like, densely clumped, very densely tufted, evergreen or sometimes deciduous, sympodial, erect, drooping or curving outward at the top, densely covered with persistent grayish white silky hairs, hollow culms, numerous fasciculate slender and arched branches usually arising from midculm upward, auricles of culm sheath present and equal, culm sheath thick, leaf blades lanceolate or linear-lanceolate or narrow-lanceolate, scabrous both surfaces of leaves, much-branched panicle, groups of pseudospikelet on long branches, spikelets cylindrical, long curved bract enclosing pseudospikelet, 2-3 florets, 1-3 empty glumes, lemmas many-nerved, paleas lanceolate and keeled, 3 lodicules fimbriate, ovary hirsute, 3 hairy stigmas, natural propagation by seed, normally flowers gregariously, suitable for landscaping, ornamental, young shoots edible with sweet taste or reputed to taste very bitter, canes used for construction and for the production of pulp and paper, matting, handicrafts, in weaving, roofing and flooring, found in humid mixed deciduous forest, rich and well-drained soils, deep fertile loams, in mountain forest, see *Transactions of the Linnean Society of London* 26(1): 98. 1868, *Revisio Generum Plantarum* 2: 761. 1891, *The Flora of British India* 7(22): 389. 1897 [1896] and *Unasylva* 13: 36-43. 1959, *Bano Biggyan Patrika* 13(1-2): 67-73. 1984 [by R.L. Banik].

in India: bari, bethua, betua, betwa, jaibarooa, jama, jama betua, jama betwa, narangi bhas, narangibans, paura

in Myanmar: kyathaungwa

in Thailand: hop, phai-hom, sa lom, salon, waa kheh, wa khe

B. procera A. Chevalier & Camus

Vietnam. See *Bulletin du Muséum d'Histoire Naturelle* 28: 379. 1922.

B. prominens H.L. Fung & C.Y. Sia

China. Culm thick, fast growing, tough, branching at the lower part, aerial roots in some internodes near the culm base, numerous fasciculate branches usually arising from basal first node, twigs on lower branches often or sometimes shortened into soft spines or weak thorns, culm sheath tardily deciduous with a triangular protuberance at one side of apex, sheath blade triangular and erect, sheath auricles unequal, leaves densely shortly pubescent beneath, cultivated, used as construction material and fishing devices, along riversides, on hills, near and around villages, similar to *Bambusa tuldoidea* Munro, see *Acta Phytotaxonomica Sinica* 18(3): 372-373, pl. 14, f. 1. 1981.

B. pseudopallida Majumdar

India, Assam, Meghalaya. Shrubby habit, auricles pointed, see *Fl. Ind. Enumerat.-Monocot.* 275. 1989.

B. pubivaginata W.T. Lin & Z.M. Wu

China. See *Journal of Bamboo Research* 11(1): 29. 1992.

B. ramispinosa Chia & H.L. Fung

China, Guangxi. Smooth, glabrous, some basal internodes pruinose, branches usually arising from basal third node, twigs on lower branches often or sometimes shortened into soft spines, culm sheaths caducous, sheath auricles unequal, sheath ligule ciliate with a denticulate margin, sheath blade narrowly lanceolate and erect, leaves lanceolate, plains and slopes, see *Acta Phytotaxonomica Sinica* 19(3): 373, pl. 14, f. 2. 1981.

B. remotiflora (Kuntze) Chia & H.L. Fung (*Arundarbor remotiflora* Kuntze; *Bambusa remotiflora* Kuntze; *Lingnania fimbriiligulata* McClure; *Lingnania remotiflora* McClure; *Lingnania remotiflora* (Kuntze) McClure)

China, Guangdong, Guangxi, Vietnam. Top slightly bending, young culms pubescent, branches many from basal portion of culms, culm sheaths deciduous tough to coriaceous, sheath auricles narrow oblong with ciliate margin, 8-16 leaves on each twig, leaves glabrous, leaf blades lanceolate to oblong-lanceolate, 1-2 glumes, 3 stigmas, woven into stripes, used in weaving, lowland riverbank, see *Revisio Generum Plantarum* 2: 760. 1891 and *Lingnan Univ. Sci. Bull.* no. 9: 35. 1940, *Journal of the Arnold Arboretum* 23(1): 101. 1942, *Acta Phytotaxonomica Sinica* 18(2): 214. 1980.

B. riauensis Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

B. ridleyi Gamble (*Soejatmia ridleyi* (Gamble) K.M. Wong) (for the British botanist Henry Nicholas Ridley, 1855-1956 (Kew, Surrey), plant collector, botanical explorer, traveler, Botany Dept. British Museum 1880-1888, in 1888 was

appointed Singapore's first Scientific Director of the Botanic Gardens, he was largely responsible for establishing the rubber industry in the Malay Peninsula, he fathered the region's rubber industry by convincing Malaya's planters of the superior worth of *Hevea brasiliensis* (eleven seedlings arrived at the Singapore Botanical Garden where H.N. Ridley developed a method to propagate them rapidly and tap them for their lucrative white sap; today the method of collecting the latex from the trees is basically the same as when devised by H.N. Ridley over a century ago), his writings include *The Flora of the Malay Peninsula*. London 1922-1925, *The Dispersal of Plants Throughout the World*. Ashford, Kent 1930 and "A monograph of the genus *Liparis*." *J. Linn. Soc., Bot.* 22: 244-297. 1886; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 155. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 332. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.D. Merrill, *An Enumeration of Philippine Flowering Plants*. 4: 221-222. Manila 1925-1926; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; G. Murray, *History of the Collections Contained in the Natural History Departments of the British Museum*. 177. London 1904; Ernest Nelses & William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 314-316. [1931]; Merle A. Reinikka, *A History of the Orchid*. Timber Press 1996; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14 Aufl. Stuttgart 1993)

Asia, India, Singapore. See *Annals of the Royal Botanic Garden, Calcutta*. 7: 34, t. 32. 1896, *Flora British India* 7: 388. 1896 and *Kew Bulletin* 48(3): 532, f. 7. 1993.

B. rigida Keng & Keng f. (*Bambusa stipitata* W.T. Lin)

China, Guangdong, Guangxi. Young culm covered with white waxy powder, several to numerous fasciculate branches usually arising from basal first or second node, culm sheaths caducous, sheath ligule dwarf and dentate, sheath blade erect and broadly lanceolate, 5-12 leaves on each twig, leaf blades narrowly lanceolate to linear-lanceolate to rectangular, pseudospikelets solitary or several to numerous fasciculate on each node of flowering branches, fasciculate pseudospikelets usually sterile, solitary pseudospikelets usually fertile 3- to 7-flowered subtended by several gemmiferous bracts, 3 stigmas, culm used as punt poles and in papermaking, bitter shoots not edible, cultivated along riversides, around villages, plains, see *Journal of the Washington Academy of Sciences* 36(3): 81, f. 2. 1946.

B. riparia Holttum (*Bambusa brassii* A. Camus; *Schizostachyum brassii* A. Camus) (for Leonard John Brass,

1900-1971, the leader and official botanist of the Archbold Collecting Expeditions to tropical areas, Papua New Guinea, British Solomon Islands, etc.)

Papua New Guinea. See *Journal of the Arnold Arboretum* 9(4): 144-146. 1928, *Kew Bulletin* 21: 275. 1967.

B. rugata (W.T. Lin) Ohrenb.

China.

B. rutila McClure (*Bambusa shuangliuensis* T.P. Yi)

China, Guangdong, Guangxi. Culms thick-walled and strong, lower part of culm somewhat sigmoid, culms erect or nearly erect, clumps unicaespitose, nodes swollen, internodes thick-walled and densely covered with appressed brown bristled hairs on the lower nodes, branches always emerged from the basal third or fourth node upward, main branches thick and drooping, culm leaves tardily deciduous, sheath auricles unequal, sheath ligule with dentate margin, sheath blade erect and triangular, 10 leaves on each twig, leaves underside shortly pubescent or glabrous, leaf blades narrowly lanceolate to linear lanceolate, pseudospikelets linear-lanceolate compressed, spikelets with 9 florets, apical 1 or 2 florets sterile, glumes absent, lemma ovate-lanceolate many-nerved, young shoots edible, culms used for poles and scaffolding, open areas, fields, around villages, see *Lingnan Science Journal* 19(4): 533-535, t. 36. 1940, *Bulletin of Botanical Research* 2(4): 100-102, f. 2. 1982.

in English: muk bamboo

B. sanzaoensis W.T. Lin

China. See *Journal of Bamboo Research* 12(3): 1-2, f. 1. 1993.

B. semitecta W.T. Lin & Z.M. Wu

China, Guangdong. Culms internodes glabrous, nodes slightly prominent, branches usually arising from basal seventh to eighth node upward, culm sheaths deciduous, leaf blades linear-lanceolate glabrous adaxially pubescent abaxially, on lower hills, see *Journal South China Agricultural University* 14(3): 111. 1993.

B. serracta (Q.H. Dai) Q.H. Dai (*Lingnaniania serracta* Q.H. Dai)

China, Guangxi. Culms sparsely covered by glaucous hairs, nodes flat, sheath scars densely covered by a ring of strigose hairs, branches many from basal portion of culms, culm sheaths deciduous thick-leathery densely hispid abaxially, leaf sheaths glabrous, culms used for weaving, growing on riverbanks and near villages, see *Acta Phytotax. Sin.* 20: 213. 1982, *Fl. Reipubl. Popularis Sin.* 9(1): 119. 1996.

B. sesquiflora (McClure) Chia & H.L. Fung (*Lingnaniania sesquiflora* McClure)

Vietnam. See *Journal of the Arnold Arboretum* 23(1): 99-100. 1942, *Acta Phytotaxonomica Sinica* 18(2): 214. 1980.

B. sinospinosa McClure (*Bambusa spinosissima* Hack.; *Guadua spinosissima* (Hack.) E.G. Camus)

China, Guangdong, Guangxi, Guizhou. Culms thick and tough and straight, bushy, clumps unicaespitose, internodes thick-walled and smooth and glabrous, internodes green, branches usually emerged from the basal first or second node upward, twigs on lower branches often or sometimes shortened into soft spines, secondary branches from nodes at culm base often hardened into sharp spines, sheath coriaceous and tardily deciduous, long ovate sheath auricles ciliate and almost equal, sheath ligule margin dentate, sheath blade ovate more or less erect, leaves linear-lanceolate, pseudospikelets linear to linear-lanceolate slightly compressed solitary or several fasciculate in each node of flowering branches, spikelets with 6-12 perfect florets, glumes usually absent, 3 stigmas plumose, giant bamboo, shoots edible, cultivated as a natural green fence and as a windbreak, shelter belt, water pipes, carrying poles, construction material, culms are often used for scaffolding, found along riversides, near villages, see *Österreichische Botanische Zeitschrift* 53(5): 197. 1903, *Les Bambusées* 1: 112. 1913, *Lingnan Science Journal* 19(3): 411, t. 19. 1940, *Journal of the Washington Academy of Sciences* 36(3): 80. 1946.

in English: Chinese thorny bamboo, spiny bamboo, Chinese spiny bamboo

B. sinthana Brandis ex Camus (*Bambusa sinthana* Brandis)

Myanmar. Erect, silky, along banks of streams, low moist ground, see *Indian Trees* 685. 1971.

B. solomonensis Holttum

Indonesia, New Guinea. Inflorescences terminating leafy branches, spikelets flattened, see *Kew Bulletin* 21: 274. 1967.

B. stenoaurita (W.T. Lin) Wen (*Bambusa stenoaurita* (W.T. Lin) D.Z. Li; *Dendrocalamopsis stenoaurita* (W.T. Lin) Keng f. ex W.T. Lin; *Neosinocalamus stenoauritus* (W.T. Lin) W.T. Lin; *Sinocalamus stenoauritus* W.T. Lin)

China, Guangdong, Guangxi. Glabrous, green, recurved apically, a waxy or pruinose ring below joint, clustered branching, branches several from middle portion of culms, culm sheaths deciduous leathery, sheath auricles narrow and linear, sheath ligule with denticulate margin, sheath blade ovate-lanceolate, leaves linear-lanceolate, pseudospikelets 6-flowered bracts 1-2, glumes ciliate 1-2, ciliate lodicules 3, stigmas 2-4 rarely 1, edible shoots, culms used for construction, see *Bulletin of Botanical Laboratory of North-Eastern Forestry Institute* 1980(6): 89, f. 3. 1980, *Guihaia* 10(1): 15-16. 1990, *Journal of Bamboo Research* 10(1): 22. 1991.

B. stenostachya Hack. (*Bambusa blumeana* cv. *blumeana*; *Ischurochloa stenostachya* (Hack.) Nakai)

Indochina, Taiwan. Clustered culms, caespitose, thorny, more or less flexuous, each node with many branches at a right angle to culms, twigs usually spiny, leaves oblong-

lanceolate, culm sheaths densely hairy, inflorescence a panicle of spicate branchlets, spikelets linear-lanceolate with 4-6 florets, 1-3 glumes broadly ovate and acute, lemmas acute, palea present, 3 ovate lodicules, stamens exserted, ovary narrowly ovoid, 3 plumose stigmas, shoots bitter and eaten, cultivated, used as living fences, windbreaking, building, furniture, see *Systema Vegetabilium* 7(2): 1343. 1830, *Bulletin de l'Herbier Boissier* 7(9): 725. 1899 and *Science Education [Rika Kyô-iku]* 15: 68. Tokyo 1932, *Bulletin of the Taiwan Forest Research Institute* 98: 12, f. 13. 1964.

in Japan: shi-chiku, rinshi-chiku (green stripes on the culm and branches and white stripes on the leaves)

B. striata Lodd. ex Lindl. (*Arundarbor striata* (Lodd. ex Lindl.) Kuntze; *Bambusa vulgaris* cv. *vittata* McClure; *Bambusa vulgaris* hort. f. *vittata* McClure; *Bambusa vulgaris* var. *striata* (Lodd. ex Lindl.) Gamble; *Bambusa vulgaris* var. *vittata* Rivière & C. Rivière; *Phyllostachys striata* (Lodd. ex Lindl.) Nakai)

China, Japan. Tufted, glabrous, ornamental, graceful, commonly cultivated, culms used as poles and in building construction, see *Collectio Plantarum* 2: 26, t. 47. 1808, *Revisio Generum Plantarum* 2: 761. 1891, *Annals of the Royal Botanic Garden. Calcutta.* 7: 44. 1896 and *Science Education [Rika Kyô-iku]* 15: 69. 1932, *Fieldiana: Botany, New Series* 24(2): 60. 1955, *Agriculture Handbook* 193: 46. 1961.

in India: bansini bans, basini bans, sundrogai

B. subaequalis H.L. Fung & C.Y. Sia

China. Smooth, straight, hard, nodes glabrous, branching at the lower part of the culm, twigs on lower branches usually spiny, culm sheaths caducous, sheath glossy and not pruinose, sheath blade erect and triangular with ciliate margin, leaves linear pubescent beneath and shortly petiolate, cultivated, used for farm tools, similar to *Bambusa indigena*, see *Acta Phytotaxonomica Sinica* 19(3): 374, pl. 14, f. 3. 1981.

B. subtruncata Chia & H.L. Fung

China, Guangdong. Lower internodes with yellowish green stripes, numerous fasciculate branches usually arising from basal third or fourth node, young sheath with yellowish green stripes, sheath auricles long elliptic to elliptic and unequal, leaves densely pubescent beneath, culm sheaths caducous and truncate at apex, leaf blades linear-lanceolate, on slopes or around villages, similar to *Bambusa guangdongensis*, see *Acta Phytotaxonomica Sinica* 19(3): 378, pl. 14, f. 8. 1981.

B. superba (Huber) McClure (*Bambusa tessmannii* (Pilg.) McClure; *Guadua superba* Huber; *Guadua tessmannii* Pilg.) (for the German ethnographer Günther (Guenther) Tessmann, explorer and plant collector in Africa and Peru, western tropical Africa, missionary, among his writings are

Die Bubi von Fernando Poo. Herausgegeben von Prof. Dr. O. Reche. Hagen & Darmstadt 1923, *Menschen Ohne Gott*. Stuttgart 1928 and *Die Pangwe. ... Ergebnisse der Lübecker Pangwe-Expedition 1907-1909 und früherer Forschungen 1904-1907*. Berlin 1913; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 369. 1965; Stafleu & Cowan, *Taxonomic literature*. 6: 228-229. 1986; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 58. Paris 1968; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 78-79. 1971; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19(2): 861-863. 1965; J. Vivien & J.J. Faure, *Arbres des Forêts denses d'Afrique Centrale*. Agence de Coopération Culturelle et Technique. Paris 1985; Gottfried Wilhelm Johannes Mildbraed (1879-1954), "Plantae Tessmannianae Peruvianae I." *Notizbl. Bot. Gart. Berlin-Dahlem*. 9: 136-144. 1924, "Plantae Tessmannianae Peruvianae II." *Notizbl. Bot. Gart. Berlin-Dahlem*. 9(84): 260-268. 1925 and "Plantae Tessmannianae Peruvianae III." *Notizbl. Bot. Gart. Berlin-Dahlem*. 9(89): 964-997. 1926, etc.)

South America. Spiny, upright, canes used to build fences, see *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 479. 1904, "Plantae Tessmannianae Peruvianae II." *Notizbl. Bot. Gart. Berlin-Dahlem*. 9(84): 260-268. 1925, "Plantae Tessmannianae Peruvianae III." *Notizbl. Bot. Gart. Berlin-Dahlem*. 9(89): 964-997. 1926, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(100): 124. 1927, *Smithsonian Contributions to Botany* 9: 68. 1973.

Local names: chingana, marona

B. surrecta (Q.H. Dai) Q.H. Dai (*Lingnania surrecta* Dai)

China, South Guangxi. Top bending, young culm dark and minutely hairy, basal internodes with green stripes, sheath coriaceous, sheath auricles long ovate with ciliate margin, sheath blade erect and long ovate, 10-12 leaves on each twig, leaf blades lanceolate and glabrous on both surfaces, cultivated, used for weaving and as construction material, see *Acta Phytotaxonomica Sinica* 20(2): 213, pl. 3. 1982, *Flora Reipublicae Popularis Sinicae* 9(1): 119-120, pl. 27, f. 6-8. 1996.

B. taiwanensis L.C. Chia & H.L. Fung (*Leleba edulis* Odashima; *Bambusa edulis* (Odashima) P.C. Keng, not Carrière; *Dendrocalamopsis edulis* (Odashima) P.C. Keng; *Sinocalamus edulis* (Odashima) P.C. Keng)

Taiwan. Nodes flat, branches many from basal portion of culms, culm sheaths deciduous leathery hispid, pseudospikelets slender 8- to 13-flowered with 2-3 terminal sterile ones, glumes 1, lodicules 2-3, stigmas 3, lowland and hilly areas, used for delicious shoots and widely cultivated, see *J. Trop. Agric.* 8: 59. 1936, *Acta Phytotax. Sin.* 18: 215. 1980.

B. teres Buch.-Ham ex Munro (*Arundarbor teres* (Buch.-Ham. ex Munro) Kuntze)

India, Bangladesh. Tufted, large, smooth, leaves oblong-lanceolate with an oblique base, culm sheaths deciduous, large compound panicle, fertile and sterile spikelets grouped and bracteate, glumes mucronate, lodicules fimbriate, 6 stamens, ovary hairy and beaked, 3 hairy stigmas, used locally for making mats and baskets, agarbati sticks and food grain containers, see *Transactions of the Linnean Society of London* 26(1): 95. 1868, *Revisio Generum Plantarum* 2: 761. 1891.

in India: bhaluki makel, paora

B. textilis McClure

China, Guangdong, Guangxi. Straight, clumps uniceapitose, culms with nodding or slightly pendulous tips, culm top bending, young culm pruinose, internodes green densely bristled, long cylindrical internodes, branching high, primary branches small and short, branches usually oriented from around the seventh to eleventh nodes upward, culm sheaths promptly deciduous, small sheath auricles narrow oblong with ciliate margin, sheath ligule with dentate margin, sheath blade erect ovate-triangular to broadly lanceolate, 8-12 leaves on each twig, leaves lanceolate, pseudospikelets solitary or several to numerous fasciculate on each node of flowering branches, spikelets bearing 5-8 florets apical one sterile, glume ovate apex acute and mucronate, lemma elliptic glabrous apex acute and mucronate, lodicules unequal, 3 stigmas plumose, extremely ornamental, tough and pliant fibers, good material for handicrafts and utensils, used in weaving; from the culm-internodes collected tabasheer (*Concretio Silicea Bambusae Textilis*, note that the fully natural product is rare), siliceous secretions used for the treatment of childhood convulsions, especially useful in treating children, cultivated, lower altitude, along riversides, around villages, see *Lingnan University Science Bulletin* 9: 14. 1940.

in English: weaver's bamboo

in Chinese: zhu huang, zhu huang jing, tian zhu huang (all names for tabasheer)

in Japanese: tenjikuo

in Korean: ch'onhwabun

B. textilis McClure var. **albo-striata** McClure (*Bambusa albolineata* (McClure) L.C. Chia; *Bambusa textilis* var. *albo-lineata* McClure)

Southeast Asia, China. See *Lingnan University Science Bulletin* 9: 14-15. 1940, *Guihaia* 8(2): 121-122. 1988.

B. textilis McClure var. **fusca** McClure (*Bambusa pachinensis* var. *hirsutissima* (Odashima) W.C. Lin; *Leleba beisitiku* var. *hirsutissima* Odashima)

Southeast Asia, China. Culm sheath covered with brown setae on its back, used in weaving, see *Journal of the Society of Tropical Agriculture* 8(1): 58, f. 3. 1936, *Lingnan*

University Science Bulletin 9: 14, 16. 1940, *Bulletin of the Taiwan Forest Research Institute* 98: 21. 1964.

B. textilis McClure var. **glabra** McClure

China, Guangxi, Guangdong. Culm and sheath glabrous or almost glabrous, culms internodes glabrous when young, used for weaving, for making utensils, usually cultivated in gardens, see *Lingnan University Science Bulletin* 9: 14, 16. 1940.

in English: smooth weaver's bamboo

B. textilis McClure var. **gracilis** McClure

Southeast Asia, China, Guangxi, Guangdong. Slender culms, internodes more or less glabrous, culm sheath sparsely covered with dull brown stiff hairs, cultivated, extremely ornamental, tough and pliant fibers, good material for handicrafts and utensils, used in weaving, usually cultivated in gardens, see *Lingnan University Science Bulletin* 9: 14, 16. 1940.

in English: slender weaver's bamboo

B. textilis McClure var. **maculata** McClure (*Bambusa textilis* cv. *maculata* L.C. Chia & al.)

Southeast Asia, China. See *Lingnan University Science Bulletin* 9: 14, 16. 1940, *Guihaia* 8(2): 127. 1988.

B. textilis McClure var. **textilis** (*Bambusa annulata* W.T. Lin & Z.J. Feng; *Bambusa glaucescens* (Willdenow) E.D. Merrill var. *annulata* (W.T. Lin & Z.J. Feng) N.H. Xia; *Bambusa minutiligulata* W.T. Lin; *Bambusa varioaurita* W.T. Lin & Z.J. Feng)

Southeast Asia, China.

B. thalaw-wa Brandis ex Camus (*Bambusa thalaw-wa* Brandis)

Myanmar. Erect, tufted, silky, culm sheaths thick, see *Indian Trees* 685. 1971.

B. thorelii Camus (*Bambusa thorelii* E.G. Camus)

Laos. See *Noticiero Botánico* 2(8): 245. 1912.

B. truncata B.M. Yang

China, Hunnan. Culms internodes glabrous covered with white powder when young, branches usually arising from midculm, culm sheaths caducous, leaf blades oblong-lanceolate glabrous on both surfaces, cultivated on riverbanks and around villages, see *J. Hunnan Norm. Univ., Nat. Sci. Ed.* 12: 337. 1989.

B. tsangü McClure

Vietnam. See *Journal of the Arnold Arboretum* 23(1): 97-98. 1942.

B. tulda Roxb. (*Bambusa lixin* Hsueh & T.P. Yi; *Dendrocalamus tulda* (Roxb.) Voigt)

Asia tropical, northern India and Bangladesh to Burma and Thailand, Nepal, Bhutan, China, Guangdong, Guangxi. Sympodial, evergreen or deciduous, pruinose, caespitose, usually erect to ascending, spineless, walls very thick,

culms sometimes striped, numerous branches developing from all nodes, branching strong and heavy, almost unbranched below, swollen nodes, internodes green and hollow, leaf sheath auricles with bristles, culm sheath auricles large and broad, culm sheath with brown hairs, leaves linear-lanceolate densely pubescent beneath, inflorescence variable, 4-6 fertile florets, 1-2 imperfect or male terminal florets, pseudospikelets in clusters of 2-5, spikelet linear-lanceolate, 2-4 glumes, 6 stamens rarely 3, ovary stipitate hairy on the tip, 3 stigmas plumose, normally flowers gregariously, under dry conditions may shed its leaves, propagated by rhizome cuttings and seeds, more or less edible succulent shoots taste slightly bitter, the stems are very strong and are used for scaffolding and roofing, windbreak, raw material for paperpulp, culms for building construction and handicraft, when split the stems are used for making hats, used in the manufacture of fly rods or split-bamboo fishing-rods, the leaves used as animal fodder, growing in moist alluvial soils, flats, in moist mixed deciduous forest, along water courses, in relatively low rainfall areas, valleys, see *Hortus Bengalensis, or a Catalogue ...* 25. 1814, *Fl. Ind.* (Carey edn.) 2: 193. 1832 [*Flora Indica; or, Descriptions of Indian Plants* 2: 193. 1832], *Hortus Suburbanus Calcuttensis* 718. 1845 and *Bamboo Research in Asia* 2(1): 30, f. 2. 1983, *The Indian Forester* 114: 539-548, 549-559, 576-583, 613-621, 637-649, 701-710. 1988, D.N. Tewari, *A Monograph on Bamboo*. Dehra Dun, India 1992, *Edin. J. Bot.* 51: 19. 1994.

in English: Calcutta bamboo, spineless Indian bamboo, Bengal bamboo, tulda, common bamboo of Bengal

in Bangladesh: basini bans, jowa bans, metinga, tulda bans

in Bhutan: singhane bans, jhushing

in Burma: deo-bans, thaik-wa

in India: bijuli, bleeng, deo bans, deobans, ghora, jao, jati, jowa, kiranti, kranti bans, mak, matela, mirtinga, mitenga, nal-bans, peka, pepe siman, pheka, talda, torolabanso, tulda, wagi, wamunna, wati

in Laos: bong

in Philippines: spineless Indian bamboo

in Thailand: bong, bong-dam, phai bong, phai-bongdam, phai haang chaang, phai hang chang, phai-hangchang, wa khue, waa khue, waa see, wa si, wa sue, waa sue, wae cho wa, wae sho wa

in Vietnam: tre xi[ee]m

B. tuldooides Munro (*Arundarbor breviflora* (Munro) Kuntze; *Bambusa angulata* Munro; *Bambusa blumeana* Hook. & Am.; *Bambusa breviflora* Munro; *Bambusa fauriei* Hack.; *Bambusa flavonoda* W.T. Lin, syn. nov.; *Bambusa longiflora* W.T. Lin; *Bambusa pallescens* (Döll) Hack.; *Bambusa parvifolia* W.T. Lin, syn. nov.; *Bambusa tulda* sensu Benth., not Roxburgh; *Bambusa ventricosa* McClure; *Guadua pallescens* Döll; *Leleba breviflora* (Munro) Nakai;

Leleba tuldooides (Munro) Nakai; *Tetragonocalamus angulatus* (Munro) Nakai, syn. nov.)

Southern China, Vietnam, Asia temperate and tropical. Open or densely tufted, sympodial, culms erect or nearly erect or slightly nodding, culms top slightly drooping or arching horizontal when old, dark green, pruinose, glabrous, nodes slightly prominent, internodes thick-walled and covered with a white bloom when young, branches stiff and straight, branching low, branches usually emerged from the basal first node upward, culm leaves promptly deciduous, culm sheath caducous, the culm sheath and the culm sheath blade both are completely hairless and smooth, leaf blades linear-lanceolate to narrowly lanceolate, inflorescence on long leafless branches, pseudospikelets several on each node of flowering branches subtended by sheath-like bracts, 2-5 perfect florets and above 1-2 reduced florets, one glume ovate-oblong glabrous acute, lemma ovate-oblong 19-nerved glabrous obtuse and mucronate, 3 stigmas plumose, large and dense clumps unicaespitose, usually cultivated near or around villages, occurs in two forms depending on where it grows, flowers occur very rarely, ornamental species, propagated by rhizome and culm cuttings, young shoots bitter and edible, the canes used as punting poles and as scaffolding, for farm equipment, the splits employed in weaving handicrafts and utensils, shavings of culm-cortex used in China for treating febrile diseases and hematuria, cultivated as a tall hedge and pot plants, growing at low altitudes, on lower hills, along riverbanks, closely related to *Bambusa pervariabilis* McClure and *Bambusa eutuldooides* McClure, see *Transactions of the Linnean Society of London* 26(1): 93, 96. 1868 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(113-118): 69. 1908, *Journal of Japanese Botany* 9(1): 16-17. 1933, *Lingnan Science Journal* 17(1): 5, f. 17-62, t. 5. 1938, *Economic Botany* 11: 235-243. 1957, *Bragantia* 29: 11-22. 1970, *Bulletin of Botanical Laboratory of North-Eastern Forestry Institute* 1980(6): 85, f. 1. 1980, *Journal of the American Bamboo Society* 2: 2-20. 1981, *Journal of the American Bamboo Society* 6: 43-57. 1985, *Bragantia* 47: 239-246. 1988, *Sandakania* 3: 33-34. 1993.

in English: verdant bamboo, punting pole bamboo, Buddha bamboo, Buddha's belly bamboo

in Indonesia: bambu blenduk

in Malaysia: buloh balai

in Vietnam: h[os]p

B. utilis Lin

Taiwan. Several to many fasciculate ranches arising from lower nodes, tough culm sheath caducous and densely shortly pubescent, sheath auricles irregular, sheath ligule prominent and serrate, 5-11 leaves on each twig, leaves linear-lanceolate, 4- to 6-flowered pseudospikelets solitary or numerous fasciculate on each node of flowering branches, two glumes subovate 9- to 11-nerved acute and

mucronate, lemma ovate-lanceolate 17- to 20-nerved acute and mucronate, 3 plumose stigmas, on lower hills, around villages, see *Bulletin of the Taiwan Forest Research Institute* 98: 2, f. 1, 2. 1964.

B. valida (Q.H. Dai) W.T. Lin (*Dendrocalamopsis validus* Q.H. Dai)

China, Guangxi. Drooping, young culm internodes densely pubescent, culm sheath orange-purple to purplish and deciduous, sheath auricles linear, sheath ligule truncate with dark ciliate margin, sheath blade erect ovate-lanceolate, cultivated, edible shoots, culm used as construction materials, see *Acta Phytotaxonomica Sinica* 24(5): 393-394, pl. 1. 1986, *Guihaia* 10(1): 15. 1990.

B. variostrata (W.T. Lin) Chia & H.L. Fung (*Bambusa vario-striata* (W.T. Lin) L.C. Chia & H.L. Fung; *Dendrocalamopsis vario-striata* (W.T. Lin) Keng f.; *Dendrocalamopsis variostrata* (W.T. Lin) Keng f.; *Sinocalamus variostratus* W.T. Lin)

Guangdong, Guangxi, China. Culm top bending and drooping, internodes swollen, branches many from basal portion of culms, branches clustered, culm base with longitudinal streaks, lower joints with a ring of short pubescence, culm sheath deciduous, sheath auricles with a ciliate margin, sheath blade erect, leaves linear-lanceolate, pseudospikelets 5- to 6-flowered plus a terminal sterile floret, 1 glume, 3 lodicules, 3 stigmas, cultivated, edible shoots, culm used as construction materials, lowland, hills, see *Acta Phytotaxonomica Sinica* 16(1): 66-68, pl. 1. 1978, *Acta Phytotaxonomica Sinica* 18(2): 215. 1980, *Journal of Bamboo Research* 2(1): 13. 1983.

B. ventricosa McClure (*Bambusa tuldoidea* Munro; *Bambusa ventricosa* cv. *nana* Wen; *Leleba ventricosa* (McClure) L.; *Leleba ventricosa* Lin; *Leleba ventricosa* (McClure) W.C. Lin; *Leleba ventricosa* Borss. Waalk.)

South China, Vietnam, Taiwan. A valuable ornamental garden plant, interesting and decorative, erect, spineless or lower part of the culm somewhat sigmoid with soft spines, glabrous, shrub-like, flowers unknown, clumps unicaespitose, length of culms very variable, internodes cylindrical and dark green, branches frequently arise from the basal third or fourth node upward, culm sheath purple when young and hairless, culm blade erect and smooth, culm leaves promptly to tardily deciduous, ligule short, linear-lanceolate slightly compressed pseudospikelets solitary or many fasciculate on each node of flowering branches, spikelets with 6-8 florets, basal one or 2 and apical 2 or 3 usually sterile, 3 stigmas plumose, widely cultivated, excellent tall hedge, often grown as a potted plant, this bamboo exists in several forms: normal, dwarf and intermediate, the dwarf form is much treasured in bonsai, see *Transactions of the Linnean Society of London* 26(1): 93, 96. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Journal of Japanese Botany* 9(1): 16-17. 1933, *Lingnan Science Journal* 17(1):

5, f. 17-62, t. 5. 1938, *Bulletin of the Taiwan Forest Research Institute* 150: 1305, f. 1. 1963, *Bulletin of Botanical Laboratory of North-Eastern Forestry Institute* 1980(6): 85, f. 1. 1980, *Journal of Bamboo Research* 4(2): 18. 1985.

in English: Buddha's belly bamboo, Buddha bamboo

in Japan: Buppuku-chiku, daifuku-chiku, butto-chiku, kimmei-daifuku-chiku (green stripes on the yellow background)

in Thailand: phai nam tao, phai namtao

B. villosula Kurz

Myanmar. See *Forest Flora of British Burma* 2: 553. 1877.

in Thailand: waa mi, wa mi

B. vinhphuensis Nguyen

Vietnam. See *Bot. Zhurn.* 72(6): 828. 1987.

B. viridis Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

B. vulgaris Schrader ex J.C. Wendl. (*Arundarbor arundinacea* (Retz.) Kuntze; *Arundarbor blancoi* (Steud.) Kuntze; *Arundarbor fera* (Miq.) Kuntze; *Arundarbor monogyna* (Blanco) Kuntze; *Arundo bambos* L.; *Arundo fera* Oken; *Bambos arundinacea* Retz.; *Bambusa auriculata* Kurz; *Bambusa bambos* (L.) Voss; *Bambusa blancoi* Steud.; *Bambusa fera* Miq.; *Bambusa humilis* Rchb. ex Rupr.; *Bambusa madagascariensis* Hort. ex A. & C. Rivière; *Bambusa mitis* Blanco; *Bambusa monogyna* Blanco; *Bambusa sieberi* Griseb.; *Bambusa striata* Lodd.; *Bambusa surinamensis* Ruprecht; *Bambusa thouarsii* Kunth; *Bambusa tuldoidea* Munro; *Bambusa vulgaris* Schrad.; *Bambusa vulgaris* Wendl. ex Nees, nom. illeg., non *Bambusa vulgaris* Schrad. ex J.C. Wendl.; *Bambusa vulgaris* cv. *vulgaris*; *Bambusa vulgaris* f. *vulgaris*; *Bambusa vulgaris* var. *aureovariegata* Beadle; *Bambusa vulgaris* var. *striata* (Lodd.) Gamble; *Bambusa vulgaris* var. *vittata* Rivière; *Bambusa vulgaris* var. *vittata* Rivière & C. Rivière; *Bambusa vulgaris* var. *vulgaris*; *Leleba vulgaris* (Schrader) Nakai; *Leleba vulgaris* var. *striata* (Gamble) Nakai; *Leleba vulgaris* (Schrad. ex J.C. Wendl.) Nakai; *Nastus thouarsii* Raspail; *Nastus viviparus* Raspail)

Tropical Asia, unknown origin. Woody, greatly variable, tall, strong thick walls, culms strong and cylindrical but not straight, not flexible, clumps unicaespitose, loosely tufted to open tufted, not densely tufted, culms yellow with narrow longitudinal green stripes, erect and slightly arched above, rooting at lower nodes, more or less glabrous, internodes cylindrical dark green, sympodial and pachymorph rhizomes, branches usually emerged only from the higher nodes, culm sheath auricles slightly pointed and curved backwards, culm leaves promptly deciduous, sheaths hairy, leaves lanceolate, leaves borne on lateral branches, small groups of pseudospikelets fasciculate at each node, spikelets laterally flattened, 5-10 perfect florets and a terminal vestigial floret, glumes 1 or 2 ciliate toward the apex, lemmas

fimbriate, palea 2-keeled, 3 lodicules unequal, stamens exerted, ovary hairy, 1-3 stigmas plumose, flowering is extremely rare, cultivated extensively, propagated by culm or branch cuttings, ornamental and vigorous clump-forming of closely placed culms, a source of fiber, landscape, light timber, planted as source for banana support, stems used for houses and for light construction, canes used in building huts, used as stake and for pig fences, a source of paper pulp, split stems used for brooms and baskets, young shoots edible, young culms used for the making of boards, sometimes used as abortifacient, a cold decoction of the roots used for kidney troubles, leaves used as sudorific and febrifuge agents, sap from the young shoot recommended to treat fever and hematuria, tabasheer from culm-internodes used to treat infantile epilepsy, in China roots, shoots, bark and leaves are used, bark astringent and emmenagogue, can be planted on slopes to control erosion, usually found commonly along creek, along rivers and lakes, low altitudes, humid conditions, wastelands, open ground, see *Observationes Botanicae* 5: 24. 1789, *Sp. Pl.* 2: 245. 1799, *Coll. Pl.* 2: 26-30, pl. 47. 1808, Alexander Moon (d. 1825), *A Catalogue of the Indigenous and Exotic Plants Growing in Ceylon* 26. Colombo 1824, *Revis. Gramin.* 1: 323, pl. 73, 74. 1830, *Bambuseae* 49, t. 11, f. 49. 1839, *Synopsis Plantarum Glumacearum* 1: 331. 1854, *Trans. Linn. Soc. London* 26: 106-108. 1868, *Fl. Sylv.* 232. 1872, *Bulletin de la Société Nationale d'Acclimatation de France* sér. 3, 5: 631, 640. 1878, *Revisio Generum Plantarum* 2: 761. 1891, *Ann. Roy. Bot. Gard. (Calcutta)* 7(1): 43-45, pl. 40. 1896 and *Handb. Fl. Ceylon* 5: 314. 1900, *Bambusées* 122-123, pl. 76, f. A. 1913, *Journal of Japanese Botany* 9(1): 17. 1933, *Fieldiana, Botany* 24(2): 60. 1955, *Grasses of Ceylon* 27-28. 1956, *Flora of Java* 3: 632-633. 1968, *The Indian Forester* 98: 359-362. 1972, *Bulletin of the Forestry and Forest Products Research Institute* 301: 79-118. 1978, *The Indian Forester* 114: 576-583. 1988, *Journal of Tropical Forest Science* 2(3): 227-234. 1990, *Sandakania* 3: 34-36. 1993, *Kew Bulletin* 52(3): 697. 1997.

in English: common bamboo, striped bamboo, golden bamboo, yellow bamboo, soft bamboo, feathery bamboo

in French: bambou, grand bambou

in Spanish: bambú, bambúa, bambu, caña india

in Portuguese: bambu-vulgar

in Cuba: caña brava, cañambú, pito

in Mexico: bacáu, bambú, bambú patamba, cupamu, otate, sacaú

in Nicaragua: itikna

in Panama: cañaza

in West Indies: bamboo, bambu

in Cameroon: mfele, mfelè, lefyog

in Congo: linetso

in Guinea: ko-tatami, tatami

in Ivory-Coast: balé

in Malawi: mlasi, lulasi, musyombe, nsungwi

in Nigeria: agarabà, igbon ikirai, vyo

in Senegal: i n'gol, i ngol

in Sierra Leone: baran, boo, kanale, kasul, ken, kenye, kewe, pilanda, semi, sen, seni, senye, sii, simine, tatami, tatamina, wusle

in Upper Volta: ngmalu

in Burma: wanet

in Cambodia: russèi kaèw

in India: bakal, bannada bidiru, basini bans, basinibans, davike, haladi bidiru, kalaka, ponmungil, seemamula, sunderkania bansa

in Indonesia: bambu ampel (green culms), bambu blenduk, bambu kuning (yellow culms), domar, haur

in Japan: dai-san-chiku, daisan-chiku, kinshi-chiku (green stripes on the yellowish culm)

in Laos: s'a:ng kh'am'

in Sri Lanka: ponmungil

Malayan names: aur beting, aur gading, bambu kuning, buloh aur, buloh gading, buloh kuning, buloh minyak, buloh minyak has, buloh pau, buluh aur, buluh minyak, buluh pau, tamalang, tamalang silau, tambalang, tamelang

in the Philippines Islands: bolinao, bolinau, burirau, butong, kabaloan, kauayan, kauayan-china, kauayan-kiling, kauayan-kiting, kawayan, kawayang-china, kawayang-kiling, kawayang-kiting, kawayang-tsina, kiling, labong (bamboo shoots), limas, lunas, maribal, marobal, patong, patung, sinambang, sinamgang, taiu-anak, taring, teuanak, tewanak, tiling, yellow bamboo

in Thailand: chan kham, mai-luang, phai cheen, phai chin, phai-luang, phai lueang, phai-ngachang, rai yai, ree sai, ri sai

in Vietnam: phai-bongkham, tre m[owx], tre tr[owf]

in Pacific: kaho palangi, kaho papalangi

in New Guinea: mambu kakar

B. vulgaris Schrader ex J.C. Wendl. var. *constrictinoda* Proudloch (*Bambusa vulgaris* var. *constrictinoda* Proudlock ex Houz. de Lehaie)

Asia. See *Le Bambou, son étude, sa culture, son emploi* 1: 115. 1906.

B. vulgaris Schrader ex J.C. Wendl. var. *striata* (Lodd. ex Lindl.) Gamble (*Arundarbor striata* (Lodd. ex Lindl.) Kuntze; *Bambusa striata* Lodd. ex Lindl.; *Bambusa vulgaris* cv. *vittata* McClure; *Bambusa vulgaris* f. *vittata* McClure; *Bambusa vulgaris* Schrader ex J.C. Wendl. var. *striata* (Lodd.) Gamble; *Bambusa vulgaris* var. *vittata* Rivière & C. Rivière; *Phyllostachys striata* (Lodd. ex Lindl.) Nakai)

Asia. Large and tall, clump forming, ornamental, culms normally yellow with green streaks, adventitious roots often develop from the lowermost nodes, culm-blade yellow when young, edible bamboo shoots, water from boiled shoots used as a medicine, culms used for structural material, used for light construction, roots very easily, commonly cultivated, see *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 640. 1878, *Revisio Generum Plantarum* 2: 761. 1891, *Annals of the Royal Botanic Garden, Calcutta*. 7: 44. 1896 and *Fieldiana, Botany, New Series* 24(2): 60. 1955.

in English: golden bamboo, golden common bamboo, yellow bamboo, striped bamboo

in Colombia: bambú

in Malay: aur gading, buloh gading, buloh kuning, buluh gading, buluh kuning

in the Philippine Islands: kauayan China, kawayang-tsina

in Indonesia: bambu kuning

in Japan: kinshi-chiku

in New Guinea: wok, mambu yang

in Thailand: saang kham, sang kham

B. wamin Camus (*Bambusa vulgaris* f. *waminii* T.H. Wen; *Bambusa vulgaris* cv. *wamin* McClure; *Bambusa wamin* Brandis ex Camus)

Asia. Erect, loosely tufted, bending, usually arching at the top, leaf sheaths keeled, internodes swollen in the lower half, commonly cultivated, culms used for handicrafts, see *Indian Trees* 685. 1911.

in English: Buddha's belly bamboo

in Indonesia: bambu blenduk

in Myanmar/Burma: wamin

B. wenchouensis (Wen) Q.H. Dai (*Bambusa wenchouensis* (Wen) Ohrnberger; *Lingnania wenchouensis* Wen)

China. Pubescent when young, nodes tomentose, branches many from basal portion of culms, culm sheaths deciduous coriaceous, sheath auricles lacking or weak, sheath blade retroflexed and lanceolate, leaves broadly lanceolate, 2-4 glumes, lodicules ovate, 3 stigmas, shoots bitter but edible after treatment, used for making fishing cord and farm tools, along riverbanks, around villages, see *J. Bamb. Res.* 1(1): 32-33, f. 9. 1982, *Fl. Reipubl. Pop. Sin.* 9(1): 117, pl. 27, f. 5. 1996.

B. wrayi Stapf (*Kinabaluchloa wrayi* (Stapf) K.M. Wong) (named for the English botanical collector Leonard Wray, 1853-1942, traveler and explorer, collected plants in Malaya with Herbert Christopher Robinson (1874-1929), author of "Journal of a collection expedition to the mountain of Batang Padang, Perak." *Jour. Straits Branch Roy. Asiatic Soc.* 21: 123-165. 1890; see Spenser Buckingham St. John

(1825-1910), *Life in the Forests of the Far East*. London 1862; [Sir Hugh Low], *The Journal of Sir Hugh Low, Perak, 1877*. Edited by Emily Sadka. [Journal of the Malayan Branch, Royal Asiatic Society. vol. 27. pt. 4.] Singapore 1955; Alice Margaret Coats, *The Quest for Plants. A History of the Horticultural Explorers*. London 1969; Shirley Heriz-Smith, "Western collectors on eastern islands." *Hortus*. 7: 83-92. 1988; Merle A. Reinikka, *A History of the Orchid*. Timber Press 1996; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 758. London 1994; Charles Brooke (1829-1907), *Ten Years in Sarawak*. London 1866; Captain Henry Keppel, *Expedition to Borneo of H.M.S. Dido for the Suppression of Piracy with Extracts from the Journal of James Brooke, Esq., of Sarawak*. New York 1846 (1st American edition); S. Baring-Gould & C.A. Bampfylde, *A History of Sarawak under its Two White Rajahs 1839-1908*. 1909; Henry Nicholas Ridley (1855-1956), *The Flora of the Malay Peninsula*. London 1922-1925; Benedetto Scortechini, 1845-1886, *Nuovo Giorn. Bot. Ital.* 18: 308. 25 Oct 1886)

Malaysia, Malay Peninsula. See *Bulletin of Miscellaneous Information Kew* 1893: 14. 1893 and *Kew Bulletin* 48(3): 524, f. 4. 1993.

B. xiashanensis Chia & H.L. Fung (*Bambusa sanzaoensis* W.T. Lin)

China, Guangdong. Tough, firm, young culms purplish green, above and below each node a ring of whitish silky hairs, branches usually arising from basal first or second nodes, solitary branches on basal two nodes and 3 to numerous on other nodes with primary one dominant, twigs on lower branches often shortened and hardened into spines, culm sheath caducous, sheath auricles unequal, leaves underside densely covered with short pubescence, cultivated, fast growing bamboo, used to construct sheds, on lower hills, plains, near villages, similar to *Bambusa rutila* McClure, see *Acta Phytotax. Sin.* 19(3): 374-375, pl. 14, f. 4. 1981.

B. xueana Ohrnb. (*Bambusa yunnanensis* (Hsueh & J.R. Hsueh) D.Z. Li, nom. illeg., non *Bambusa yunnanensis* N.H. Xia; *Neosinocalamus yunnanensis* Hsueh & J.R. Hsueh)

China. See *Acta Phytotax. Sin.* 29(3): 274, f. 1. 1991, *Acta Bot. Yunn.* 16(1): 41. 1994.

B. yunnanensis N.H. Xia (*Bambusa annulata* (Hsueh & W.P. Zhang) D.Z. Li, nom. illeg., non *Bambusa annulata* W.T. Lin & Z.J. Feng; *Schizostachyum annulatum* Hsueh & W.P. Zhang)

China. Used in weaving, ornamental, edible shoots, see *J. Bamb. Res.* 5(1): 77. 1986, *J. Trop. Subtrop. Bot.* 1(1): 8. 1993, *Acta Bot. Yunn.* 16(1): 41. 1994.

Baptorhachis Clayton & Renvoize

Greek *bapto* "to dip, to dip in dye, color," *baptos* "dipped, dyed, bright-colored" and *rhachis* "rachis, axis, midrib of a leaf."

One species, Mozambique. Panicoideae, Panicodae, Paniceae, annual, herbaceous, hollow, auricles present, ligule a fringed membrane, leaf blades linear-lanceolate, plants bisexual, inflorescence a solitary raceme, broad colorful rhachis, spikelets paired sessile and pedicellate, or subsessile and pedicellate, lower glume suppressed, upper floret acute, lower lemma bilobed and awned, palea present, lodicules absent, 3 stamens, ovary glabrous, 2 stigmas, on stony places, open habitats, slopes, type *Baptorhachis foliacea* (Clayton) Clayton (*Stereochlaena foliacea* Clayton), see *Proceedings of the Rhodesia Scientific Association* 7(2): 65. 1908, *Kew Bulletin* 33(2): 175-179, 295-297. 1978, *Kew Bulletin* 42(2): 401. 1987.

Species

B. foliacea (Clayton) Clayton (*Stereochlaena foliacea* Clayton)

Africa.

Bashania P.C. Keng & T.P. Yi = *Arundinaria* Michx.

Four to six species, China, Guizhou, Sichuan, Yunnan, Hunan. Bambusoideae, Bambuseae, Arundinariinae, solid, rhizomes sympodial, culms cylindrical, internodes hollow, three or manifold branches, leaves lanceolate and hard, sheath shedding late or persistent, sheath blade erect, sheath auricles absent or present and indistinct, panicles or racemes terminal, spikelets 3- to 5-flowered, 3 stamens, 2 stigmas, often in *Arundinaria*, type *Bashania qingchengshanensis* Keng f. & T.P. Yi, see *Flora Boreali-Americana* 1: 73-74. 1803 and *Journal of Bamboo Research* 1(2): 38, 171. 1982, *Contributions from the United States National Herbarium* 39: 18-24. 2000.

Species

B. auctiaurita T.P. Yi

China. Auricles present, purple, see *Bulletin of Botanical Research* 6(4): 27, f. 2. 1986.

B. faberi (Rendle) Yi (*Arundinaria faberi* Rendle; *Arundinaria fangiana* A. Camus; *Arundinaria racemosa* subsp. *fangiana* A. Camus; *Bashania fangiana* (A. Camus) P.C. Keng & T.H. Wen; *Gelidocalamus fangianus* (A. Camus) Keng & Wen; *Gelidocalamus fangianus* (A. Camus) T.H. Wen & Keng f.; *Sarocalamus faberi* (Rendle) Stapleton; *Sinarundinaria faberi* (Rendle) Keng f.; *Sinarundinaria fangiana* (A. Camus) Keng & Keng f.; *Sinarundinaria*

fangiana (A. Camus) Keng ex Keng f.; *Sinarundinaria fangiana* Keng)

China. Food for giant panda, see *Journal of the Linnean Society, Botany* 36(254): 435. 1904, *Journal of the Arnold Arboretum* 11(4): 192-193. 1930, *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal of Bamboo Research* 12(2): 52-53. 1993, *Novon* 14(3): 348. 2004.

in Chinese: Leng qing li zhu, Leng jian zhu

in English: Fang's cane-bamboo

B. fangiana (A. Camus) P.C. Keng & T.H. Wen (*Arundinaria fangiana* A. Camus; *Gelidocalamus fangianus* (A. Camus) Keng & Wen; *Gelidocalamus fangianus* (A. Camus) T.H. Wen & Keng f.; *Sinarundinaria fangiana* (A. Camus) Keng & Keng f.; *Sinarundinaria fangiana* (A. Camus) Keng ex Keng f.; *Sinarundinaria fangiana* Keng)

China, Sichuan. Cylindrical, glabrous, many branches clustered, sheath glabrous and ciliate often shorter than the internode, no sheath auricles and cilia, 2-4 leaves on each twig, see *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal of Bamboo Research* 2(1): 20. 1983, *Journal of Bamboo Research* 4(2): 17-18. 1985.

B. fansipanensis Nguyen

Vietnam. See *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 876. 1991.

B. fargesii (Camus) P.C. Keng & T.P. Yi (*Arundinaria dumetosa* Rendle; *Arundinaria fargesii* E.G. Camus; *Arundinaria fargesii* var. *grandifolia* Camus; *Indocalamus dumetosus* (Rendle) Nakai; *Indocalamus dumetosus* (Rendle) Keng f.; *Indocalamus fargesii* (E.G. Camus) Nakai; *Indocalamus scariosus* McClure)

China, Sichuan, Hubei, Shaanxi. Forming thickets, thick-walled, rhizome amphipodial, 3 or more branches on each node, sheath shedding late or persistent and coriaceous, no sheath auricles and cilia, sheath ligule convex, sheath blade lanceolate and deciduous, leaves hard and tough, codl resistant, used for papermaking, construction, framework, see *Notulae Systematicae. Herbarium du Museum de Paris* 2(8): 244. 1912, *Les Bambusées* 198. 1913, *Plantae Wilsonianae* 2(1): 63. 1914, *Journal of the Arnold Arboretum* 6(3): 148. 1925, *Lingnan University Science Bulletin* 9: 23, 27. 1940, *Journal of Bamboo Research* 1(2): 37. 1982.

in Chinese: Fa shi ruo zhu

in English: Farges indocalamus

B. qingchengshanensis P.C. Keng & T.P. Yi

China, Sichuan. Solid or nearly solid, grayish yellowish, sheath persistent coriaceous, sheath auricles absent, sheath ligule arcuate or truncate, sheath blade lanceolate or broadly lanceolate, 1-3 leaves on each twig, leaf long-lanceolate, leaves hard and papery, cultivated, ornamental, see *Journal*

Nanjing University. *Natural Sciences Edition* 3: 728. f. 2. 1982.

B. spanostachya Yi (*Sarocalamus spanostachyus* (T.P. Yi) Stapleton)

China, Sichuan. Erect, cylindrical, pruinose, light yellow sheath coriaceous persistent, sheath auricle absent, no cilia, sheath ligule purple, sheath blade erect more or less flat or wrinkled, leaves linear-lanceolate, see *Acta Botanica Yunnanica* 11(1): 35-37, f. 1. 1989, *Novon* 14(3): 348. 2004.

Bathratherum Hochst. = *Batratherum* Nees

See *Tentamen Florae Abyssinicae* ... 2: 458. 1850, *Flora* 39: 177. 1856.

Batratherum Nees = *Arthraxon* P. Beauv.,
Bathratherum Nees

Panicoideae, Andropogoneae, Andropogoninae, type *Batratherum micans* Nees, see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 111, t. 11, f. 6. (Dec) 1812, *Edinburgh New Philosophical Journal* 18: 180-181, 182-183. 1835 and *Contributions from the United States National Herbarium* 46: 104-110, 134. 2003.

Bauchea E. Fourn. = *Sporobolus* R. Br.

Chloridoideae, Cynodonteae, Sporobolinae, type *Bauchea karwinskyi* E. Fourn., see *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Nom. Bot.* 2: 1274. 1874, *Bulletin of the Torrey Botanical Club* 9: 103. 1882, *Biologia Centrali-Americana*; ... *Botany* ... 3: 550. 1885, *Mexicanas Plantas* 2: 87. 1886 and *Contributions from the United States National Herbarium* 41: 18, 200-219. 2001.

Bealia Scribner = *Muhlenbergia* Schreb.

For the American botanist William James Beal, 1833-1924, agrostologist, student of Asa Gray and Louis Agassiz; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 145. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. 11, 47, 63. New York and London 1969; Charles J. Édouard Morren, *Correspondance botanique*. Liège 1874 and 1884.

One species, North America, Mexico. Chloridoideae, Cynodonteae, Muhlenbergiinae, or Chloridoideae, Eragrostideae, annual, erect, caespitose, herbaceous, much branched at lower nodes, lacking stolons and rhizomes, leaf sheaths not ciliate, ligule a membrane, leaves with sheath auricles, leaf blades linear not pungent, plants bisexual,

inflorescence a panicle exerted, disarticulation above glumes, spikelets solitary and compressed, 1 floret per spikelet, 2 glumes more or less equal, first glume 1-nerved, second glume 1-nerved and awnless, lemma lobed and awned, palea hairy and membranous, 2 free and fleshy lodicules truncate, 3 stamens, ovary glabrous, 2 stigmas, type *Bealia mexicana* Scribn., see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Reliquiae Haenkeanae* 1(4-5): 235. 1830, *Bulletin of the Torrey Botanical Club* 13(12): 231. 1886, *True Grasses* 104, f. 45a. 1890, W.J. Beal, *Grasses of North America for Farmers and Students* 2: 268. Lansing 1896, *Proceedings of the California Academy of Science* 2: 210-214. 1899 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 71. 1956, *Madroño* 35(4): 320-324. 1988 [*Chromosome numbers in the annual Muhlenbergia (Poaceae)*, by P.M. Peterson], *Nordic Journal of Botany* 8: 575-583. 1989, *Madroño* 36(4): 260-265. 1989 [by P.M. Peterson], *Madroño* 40(3): 148-160. 1993 [by P.M. Peterson, M.R. Duvall & A.H. Christensen], *American Journal of Botany* 81: 622-629. 1994, *Taxon* 43: 383-422. 1994, *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 18-19. 2001.

Species

B. mexicana Scribn. (*Bealia mexicana* Scribn. ex Beal, nom. illeg., non *Bealia mexicana* Scribn.; *Epicampes mexicana* (Scribn.) M.E. Jones; *Muhlenbergia biloba* Hitchc.; *Muhlenbergia mexicana* (L.) Trin.)

Mexico. Sandy soil, see *De Graminibus unifloris et sesquifloris* 189, 190, 297, t. 5, f. 8. Petropoli 1824, *The True Grasses* 103, f. 45a. 1890, *Grasses of North America for Farmers and Students* 2: 267. 1896 and *Contributions to Western Botany* 14: 7. 1912, *Contr. U.S. Natl. Herb.* 17(3): 294. 1913, *Madroño* 36(4): 262. 1989.

Beckera Fresen. = *Paratheria* Griseb.,
Snowdenia C.E. Hubb.

For the German botanist Johannes Becker, 1769-1833, author of *Flora der Gegend um Frankfurt am Main*. Frankfurt a.M. 1828; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 150. 1965.

Panicoideae, Paniceae, Cenchrinae, type *Beckera polystachya* Fresen., see *Species Plantarum* 1: 55. 1753, *Museum Senckenbergianum* 2: 132. 1837, *Catalogus plantarum cubensium* ... 236. 1866, *Flora Brasiliensis* 2(2): 150, t. 25. 1877 and *Bulletin of Miscellaneous Information Kew* 1929(1): 30-31. 1929, *Flora Mesoamericana* 6: 376. 1994, *Contributions from the United States National Herbarium* 46: 134, 441. 2003.

Beckeria Bernh. = *Melica* L.

Pooideae, Meliceae, type *Beckeria montana* Bernh., see *Species Plantarum* 1: 66-67. 1753, *Systematisches Verzeichnis* 20, 40. 1800, *Flora der Provinz Brandenburg* 1: 838. 1864, *Index Kewensis* 1: 282. 1893 and *Bull. U.S.D.A.* 772: 69. 1920, *Taxon* 41: 566. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 432-450. 2003.

Beckeria Heynh.

See *Nomenclator Botanicus* 2: 63. 1846.

Beckeropsis Figari & De Notaris = *Pennisetum* Rich.

For the German botanist Johannes Becker, 1769-1833; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 150. 1965.

About 6 species, tropical and southern Africa. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Cenchrinae, annual or perennial, herbaceous, unarmed, tufted, hollow, auricles absent, ligule fringed, rhizomatous, plants bisexual, inflorescence paniculate, spikelets solitary and pedicellate subtended by bristles, two glumes unequal to very unequal, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, native pasture species, shade, woodland, wooded grassland, along riverbanks, often in *Pennisetum*, type *Beckeropsis nubica* (Hochst.) Fig. & De Not., see *Syn. Pl.* 1: 72. 1805, Antonio Bey Figari (1804-1870), *Agrostographiae Aegyptiacae Fragmenta* 2: 49. [Augustae Taurinorum] 1853 [*Mem. Acc. Tor.*, II. xii., xiv.], *Memorie della Reale Accademia delle Scienze di Torino*, ser. 2 2: 49, t. 28. 1853, *Die Natürlichen Pflanzenfamilien* 2(2): 38. 1887 and *Contr. U.S. Natl. Herb.* 22: 210-211. 1921, *Flora Mesoamericana* 6: 371-374. 1994, *Sida* 19(3): 523-530. 2001, *Contributions from the United States National Herbarium* 46: 134-135, 527-536. 2003.

Species

B. laxior Clayton (*Pennisetum laxior* (Clayton) Clayton; *Pennisetum laxior* (Clayton) Zon, nom. illeg., non *Pennisetum laxior* (Clayton) Clayton)

Africa, Nigeria, Benin. See *Bulletin of the British Museum (Natural History)*, *Botany* 3: 118. 1963, *Hooker's Icones Plantarum* 7: t. 3643. 1967, *Kew Bulletin* 32(3): 580. 1978, *Wageningen Agricultural University Papers* 92-1(2): 338, 557. 1992, *Willdenowia* 32(2): 237-238. 2002 [J. Müller, R. Sieglstetter, Y. Boni & H. Scholz: *Notulae Florae Beninensis - Beckeropsis laxior and Heteranthoecia guineensis (Poaceae)* new for Benin (W Africa)].

B. nubica (Hochst.) Fig. & De Not. (*Gymnotrix nubica* Hochst.; *Pennisetum nubicum* (Hochst.) K. Schum. ex Engl.)

Africa, Sudan, northern Yemen. Annual, tufted, much-branched, leaf blades linear and false-petiolate, inflorescence axillary from the upper leaf sheaths, false panicle, spikelets narrowly elliptic each subtended by a single fine bristle, lower lemma sterile, along roadsides, waste places, closely related to *Beckeropsis petiolaris*, see *Flora* 27: 251. 1844, *Memorie della Reale Accademia delle Scienze di Torino*, ser. 2 2: 49, t. 28. 1853, *Memorie della Reale Accademia delle Scienze di Torino* ser. 2 14: 366. 1854, *Abhandlungen der Preussischen Akademie der Wissenschaften. Physikalisch-mathematische Klasse* 1894: 58. 1894.

B. petiolaris (Hochst.) Fig. & De Not. (*Beckera petiolaris* (Hochst.) Hochst.; *Gymnotrix petiolaris* Hochst.; *Pennisetum dioicum* Hochst. ex A. Rich.; *Pennisetum petiolaris* (Hochst.) Chiov.; *Setaria dioica* Hochst.)

Africa. Annual, tufted, slender, branched, leaf blades flaccid, lower leaf blades cordate, inflorescence axillary on long peduncles, spikelets narrowly elliptic each subtended by a single bristle, lower lemma sterile, field margins, along roadsides, disturbed places, see *Flora* 24: 1, *Intell.* 19. 1841, *Flora* 27: 250, 512. 1844, *Tentamen Florae Abyssinicae ...* 2: 380. 1850, *Memorie della Reale Accademia delle Scienze di Torino*, ser. 2 2: 52. 1853, *Memorie della Reale Accademia delle Scienze di Torino* ser. 2 14: 368. 1854 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 324. 1908.

B. pirottae (Chiov.) Stapf & C.E. Hubb. (*Pennisetum pirottae* Chiov.) (named for the Italian botanist Pietro Romualdo Pirota, 1853-1936, professor of botany, 1880-1883 Praefectus of the Botanical Garden of Modena, 1883-1925 Praefectus of the 4th Orto Botanico of Roma (Giardini di Villa Corsini, Gianicolo), 1886-1902 editor of vols. 1-16 of *Malpighia*, editor of *Annuario del Regio Istituto Botanico di Roma*, edited Federico Cesi (1585-1630) *Phytosopharum tabularum pars prima ... Ad fidem exemplaris castigatioris iterum edita per R. Pirota*. 1904, wrote "Sul genere Keteheria di Carrière (*Abies Fortunei* Murr.)." *Bull. Soc. Tosc. Ort.* 12: 269-274. 1887. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 89. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 311. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 585. Philadelphia 1964; L. Pirota, "Il Regio Orto Botanico di Roma." *Annali di Botanica*. no. 23. 1941)

Africa, Sudan. Perennial, robust, smooth, densely tussocky, hard, inflorescences crowded in fascicles, spikelets subtended by a single basal bristle, lower lemma sterile, sandy soil, on riverbanks, low-lying areas, see *Annuario del Reale Istituto Botanico di Roma* 8: 37, t. 2. 1903, *Bulletin of Miscellaneous Information Kew* 1933: 269. 1933.

B. procera Stapf (*Beckeropsis procera* Stapf ex Stent; *Pennisetum purpureum* subsp. *flexispica* (K. Schum.) Maire & Weiler; *Pennisetum procerum* (Stapf) Clayton)

Africa. See *Die Pflanzenwelt Ost-Afrikas* 5(C): 105. 1895 and *Bulletin of Miscellaneous Information Kew* 1933: 272. 1933, *Proceedings of the Rhodesia Scientific Association* 32: 38. 1933, *Flore de l'Afrique du Nord* 1: 340. 1952, *Kew Bulletin* 32(3): 580. 1978.

B. uniseta (Nees) K. Schum. (*Beckera uniseta* (Nees) Nees ex Hochst.; *Beckera uniseta* (Nees) Steud., nom. illeg., non *Beckera uniseta* (Nees) Nees ex Hochst.; *Beckeropsis uniseta* (Nees) Stapf ex Robyns; *Gymnotrix uniseta* Nees; *Pennisetum dioicum* Hochst. ex A. Rich.; *Pennisetum unisetum* (Nees) Benth.; *Setaria dioica* (Hochst. ex A. Rich.) Hochst. ex Walp.)

Central Africa. Perennial, tufted, robust, leaf blades coarse, lower lemma male or sterile, inflorescence on long slender peduncles, large nodding false panicles, medicinal value, for the cough a decoction roots of a partial mixing of *Andropogon gayanus*, *Beckeropsis uniseta*, *Aframomum latifolium*, *Landolphia owariensis*, see *Florae Africae Australioris Illustrationes Monographicae* 66. 1841, *Flora* 27: 512. 1844, *Tentamen Florae Abyssinicae ...* 2: 380. 1850, *Annales Botanicae Systematicae* 3: 721. 1852-53, *Synopsis Plantarum Glumacearum* 1: 118. 1854, *Journal of the Linnean Society, Botany* 19: 47, 49. 1881, *Die Pflanzenwelt Ost-Afrikas* 5(8): 52. 1895 and *Bull. Jard. Bot. Bruxelles* 9: 199. 1932 [*Bulletin du Jardin Botanique de l'État* 9(3): 199. 1932], S. Mbarubukeye, *La médecine vétérinaire traditionnelle: rapport du 1er atelier des guérisseurs traditionnels du bétail au Rwanda*. Éditions ISAR/LVNR - IRST/CURPHAMETRA – MINAGRI 1992.

in English: beckeropsis, Duncan grass, Natal grass, silky grass

in Central Africa, Rwanda: umuhihi

Local name: kantentwa

Beckmannia Host = *Bruchmannia* Nutt., *Ioackima* Ten., *Joachima* Ten., *Joachimia* Ten. ex Roem. & Schult.

For the German botanist Johann Beckmann, 1739-1811, traveler, naturalist, author of *Lexicon botanicorum*. Gottingae 1801. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 151. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London

1796-1800; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Friedrich Klemm, in *D.S.B.* 1: 554-555. 1981.

Two species, north temperate zones, Eurasia, America. Pooideae, Poodae, Aveneae, or Pooideae, Poodae, Alopecurinae, perennial or annual, herbaceous, tufted, hollow, forming large bunches, auricles absent, ligule membrane-like, leaf blades soft, leaf sheaths overlapping, rhizomatous, plants bisexual, inflorescence spicate or paniculate, unilateral racemes on a central axis, panicle branches strongly ascending to appressed, orbicular spikelets imbricate and compressed, 1- to 2-flowered, 2 glumes herbaceous and inflated, lemmas cartilaginous acute or tapering to an awn-point, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, when perennial lowest culm internode tuberous, native pasture species, tolerant of high soil salinity, found in sloughs, meadows, along the edge of ponds and ditches, shores, open habitats, moist places, usually in the presence of water, similar to *Phleum* L., type *Beckmannia eruciformis* (L.) Host, see *Icones et Descriptiones Graminum Austriacorum* 3: 5. 1805, *Flora Napolitana* 1: ix, 16. 1811, *Catalogus Plantarum Hortii Regii Neapolitani* 53. 1813, *Systema Vegetabilium* 2: 695. 1817, *The Genera of North American Plants* 1: 48. 1818 and *Bulletin of the Torrey Botanical Club* 80(3): 187-196. 1953, *Index Kewensis* Suppl. 12: 74. 1959, *Webbia* 49(2): 265-329. 1995, *Contributions from the United States National Herbarium* 48: 140-141, 191, 402, 409. 2003.

Species

B. eruciformis (L.) Host (*Paspalum aristatum* Moench; *Paspalum eruciforme* (L.) Spreng.; *Phalaris erucaeformis* L.)

America. Strongly flattened spikelets, see *Species Plantarum* 1: 55. 1753, *Methodus Plantas Horti Botanici ...* 178. 1794, *Der Botanische Garten der Universität zu Halle, Erster Nachtrag* 31. 1801, *Icones et Descriptiones Graminum Austriacorum* 3: 5. 1805 and *Taxon* 49(2): 253. 2000.

in English: American sloughgrass

B. syzigachne (Steud.) Fernald (*Beckmannia baicalensis* (I.V. Kusn.) Hultén; *Beckmannia eruciformis* auct. non (L.) Host; *Beckmannia eruciformis* (L.) Host subsp. *baicalensis* (Kusnez.) Hultén; *Beckmannia eruciformis* subsp. *syzigachne* (Steud.) Breitung; *Beckmannia eruciformis* var. *baicalensis* I.V. Kusn.; *Beckmannia eruciformis* var. *uniflora* Scribn. ex Gray; *Beckmannia syzigachne* subsp. *baicalensis* (Kusnez.) Koyama & Kawano; *Beckmannia syzigachne* subsp. *baicalensis* (Kusnez.) Hultén; *Beckmannia syzigachne* var. *syzigachne*; *Beckmannia syzigachne* var. *uniflora* (Scribn. ex Gray) B. Boivin; *Panicum syzigachne* Steud.)

U.S., New Mexico. Stout, annual or short-lived perennial, solitary or clumped, often with stolons, ligule membranous, leaf sheath open, narrow and congested flower head, many 1-sided spikes arranged in a narrow panicle, glumes equal and strongly keeled, lemma acute or awned, glumes joined when the whole spikelet falls from the flowering head, weed, infests cereals and wheat, palatable to livestock, important hay crop, found in damp habitats, wet meadows, marshes, stream banks, see *Flora* 29: 19. 1846, *A Manual of the Botany of the Northern United States* (edition 6) 628. 1890 and *Rhodora* 30: 27. 1928, *American Midland Naturalist* 58: 10. 1957, *Canad. Journ. Bot.* 42: 879. 1964, *Le Naturaliste Canadien* 94: 521. 1967, Li Yi Wei, Chen Yi Feng, Li Yong Feng, Tang Ri Sheng, Mei Chuan Sheng, "Inductive resistance to chlorsulfuron in *Beckmannia syzigachne* and *Alopecurus japonicum* in vitro." *Jiangsu Journal of Agricultural Sciences*. 13: 85-89. 1997.

in English: western sloughgrass, sloughgrass, American sloughgrass

Beesha Kunth = *Melocanna* Trin.

Bambusoideae, Bambuseae, Melocanninae, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 43. 1820 [1821], *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822 and *Contributions from the United States National Herbarium* 39: 71. 2000.

Beesha Munro = *Ochlandra* Thwaites

Bambusoideae, Bambuseae, Melocanninae, see George Henry Kendrick Thwaites (1812-1882) & Joseph Dalton Hooker (1817-1911), *Enumeratio plantarum zeylaniae: an enumeration of Ceylon plants*. 376. London [1858-] 1864, *Transactions of the Linnean Society of London* 26: 144. 1868, *The Flora Sylvatica for Southern India* 239, t. 234. 1873, *Annals of the Royal Botanic Garden, Calcutta*. 7: 125. 1896 and *Bull. de la Société Linnéenne de Lyon* 9: 185-188. 1945, *Rheedea* 5(1): 63-89. 1995, *Contributions from the United States National Herbarium* 39: 81-82. 2000.

Bellardiochloa Chiov. = *Poa* L.

After the Italian botanist Carlo Antonio Lodovico Bellardi, 1741-1826, physician, pupil of the Italian physician and botanist Carlo Allioni (1728-1804), author of *Osservazioni botaniche*. Torino 1788, *Appendix Ludovici Bellardi ad Floram pedemontanam*. Torino 1792 and *Mezzo facile ed economico per nodrire i bachi da seta ...* Torino 1787. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 158. 1965; Carlo Allioni, *Flora pedemontana*. 1: 61. Torino 1785; Jonas C. Dryander, *Catalogus bibliothecae historico-*

naturalis Josephi Banks. London 1796-1800; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. 344. Paris, Leipzig 1845; O. Mattiolo, *Cronistoria dell'Orto Botanico della Regia Università di Torino*. in *Studi sulla vegetazione nel Piemonte* pubblicati a ricordo del II Centenario della fondazione dell'Orto Botanico della R. Università di Torino. Torino 1929.

One species, Europe, Asia. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Poinae, perennial, herbaceous, densely tufted, auricles absent, narrow linear leaf blades, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets pedicellate and flattened, two glumes unequal or subequal, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, often referred to *Poa*, type *Bellardiochloa violacea* (Bellardi) Chiov., see *Species Plantarum* 1: 67-70. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1(1): 182. 1791, *Mémoires de l'Académie Royale des Sciences* 5: 214, t. 3. 1792, *Essai d'une Nouvelle Agrostographie* 99, 162, 177. 1812, *Hortus Regius Botanicus Berolinensis* 1: 171. 1827, *Hortus Regius Botanicus Berolinensis* 1: 171. 1829 and *Studi Vegetazione nel Piemonte* 13, 60. 1929, *Fragmenta Floristica et Geobotanica* 19: 265-270. 1973, *Lejeunia* 110: 56. 1983, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *American Journal of Botany* 77(11): 1383-1400. Nov 1990, *Fitologija* 39: 72-77. 1991, *Flora Reipublicae Popularis Sinicae* 9(2): 178-179, 198, 210. 2003, *Contributions from the United States National Herbarium* 48: 505-580. 2003.

Species

B. variegata (Lam.) Kerguelen (*Bellardiochloa violacea* (Bellardi) Chiov.; *Bellardiochloa violacea* var. *aetnensis* (C. Presl) Chiov.; *Bellardiochloa violacea* var. *anthoxanthoides* Chiov.; *Bellardiochloa violacea* var. *breunia* (Facchini) Chiov.; *Poa variegata* Lam.; *Poa violacea* Bellardi; *Schedonorus violaceus* (Bellardi) Link; *Schoenodorus violaceus* (Bellardi) Link)

Europe.

in French: paturin violet

Bennetia Raf. = *Sporobolus* R. Br.

Chloridoideae, Cynodonteae, Sporobolinae, type *Agrostis juncea* Michx. (*Bennetia juncea* Raf. ex Jacks.; *Bennetia juncea* (Kunth) Jacks.; *Heleochoa juncea* P. Beauv.; *Sporobolus junceus* (Michx.) Kunth), see *Flora Boreali-Americana* 1: 52. 1803, *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Essai d'une Nouvelle Agrostographie* 24, 147, 164, t. 7, f. 2. 1812, *Révision des Graminées* 1: 68. 1829, *Bulletin Botanique [Genève]* 1: 220. 1830,

Linnaea 8: Lit.-Ber. 85. 1838, *Nom. Botanicus* 2: 1274. 1874, *Index Kewensis* 1: 291. 1893 and *Contributions from the United States National Herbarium* 41: 200-219. 2001.

Berchtoldia J. Presl = *Chaetium* Nees

Dedicated to the Czech botanist Friedrich Berchtold, 1781-1876, traveler and plant collector in Brazil; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 166. 1965.

Panicoideae, Paniceae, Melinidinae, type *Berchtoldia bromoides* J. Presl, see *Species Plantarum* 1: 55. 1753, *Nova Genera et Species Plantarum* 1: 107. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 269-271. 1829, *Reliquiae Haenkeanae* 1(4-5): 323-324, t. 43. 1830, *Flora Brasiliensis* 2(2): 149. 1877, *Biologia Centrali-Americana*; ... *Botany* ... 3: 503. 1885 [Biologia Centrali-Americana; or, Contributions to the knowledge of the fauna and flora of Mexico and Central America. Edited by F. Du Cane Godman & Osbert Salvin. Botany ... By W. Botting Hemsley.], *Mexicanas Plantas* 2: 41. 1886 and *Contributions from the United States National Herbarium* 22(3): 136, f. 27. 1920, *Brittonia* 23(3): 293-324. 1971, *Annals of the Missouri Botanical Garden* 85(3): 404-424. 1998 [Revisión sistemática y análisis cladístico del género *Chaetium* (Poaceae: Panicoideae: Paniceae), by O. Morrone et al.], *Contributions from the United States National Herbarium* 46: 152-153. 2003.

Berghausia Endl. = *Garnotia* Brongn., *Miquelia* Arn. & Nees, *Miquelia* Meisn. (Icacinaceae), *Miquelia* Blume (Gesneriaceae)

For the German cartographer Heinrich Karl Wilhelm Berghaus, 1797-1884, professor of mathematics, see J.H. Barnhart, *Biographical notes upon botanists*. 1: 169. 1965.

Arundinelleae, see *Voyage Autour du Monde* 2(2): 132-133, pl. 21. 1830, *Plantarum vascularium genera secundum ordines* ... 1: 152. 1838, *Bulletin des Sciences Physiques et Naturelles en Neerlande* 1: 94. 1838, *Gramineae* 45-46, 47-48. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 177-178. 1843, *Genera Plantarum* Suppl. 3: 57. 1843.

Bewsia Goossens

After the Scottish ecologist John William Bews, 1884-1938 (Pietermaritzburg, Natal), philosopher, traveler, from 1910-1938 professor of botany at Natal University College, Pietermaritzburg, South Africa, in 1926 a Fellow of the Linnean Society, author of *The World's Grasses*. London 1929, *The Grasses and Grasslands of South Africa* ... Pietermaritzburg 1918, *Human Ecology*. London 1935, *Life*

as a Whole. London 1937, *Plant Forms and their Evolution in South Africa*. London 1925, *An Introduction to the Flora of Natal and Zululand*. Pietermaritzburg 1921 and *Studies in the Ecological Evolution of the Angiosperms*. London 1927, co-author with Robert Douglas Aitken of *Researches on the Vegetation of Natal*. Pretoria 1923, 1925 [Botanical Survey of South Africa. Memoir no. 5, 8]. See G.W. Gale, *John William Bews*. Pietermaritzburg 1954; J.H. Barnhart, *Biographical notes upon botanists*. 1: 180. 1965; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 93-94. Cape Town 1981.

One species, tropical Africa. Chloridoideae, Eragrostideae, Eleusininae, perennial, unarmed, herbaceous, tufted, solid, with short and creeping rhizomes, leaves basal, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence spicate, spikelets solitary 2- to 4-flowered, 2 glumes subequal, lemmas rounded and shortly awned, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, grazed by stock when young, savannah woodland, open flats, grassveld, sandy soils, rocky hillsides, a segregate from *Leptochloa*, type *Bewsia biflora* (Hack.) Goossens, see *South African Journal of Science* 37: 183. 1941.

Species

B. biflora (Hack.) Goossens (*Diplachne biflora* Hack.)

Central and southern Africa. Perennial, tufted, erect, tough, sometimes shortly rhizomatous, leaf sheath round, ligule membranous, racemes arranged irregularly on the primary axis, spikelets shortly pedicellate, lemmas dorsally awned, low grazing value, ornamental, common in open habitats, grassveld, plains, on damp soils, sandy soils, on riverbanks, open grassland, along vleis, sour bushveld, drainage canals, stony slopes, see *Essai d'une Nouvelle Agrostographie* 80. 1812, *Bulletin de l'Herbier Boissier* 3(8): 387. 1895 and *South African Journal of Science* 37: 184. 1941.

in English: false love grass

in South Africa: blousaadgras, vals-eragrostis

Bhidea Stapf ex Bor = *Bhidea* Stapf

Named for R.K. Bhide, collector of *Bhidea borii*.

About two to three species, India. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual, herbaceous, auricles absent, leaf blades narrow linear, ligule an unfringed membrane, plants bisexual, inflorescence terminal and axillary, racemes paired or solitary, spikelets in pairs of sessile and pedicelled ones, sessile spikelet dorsally compressed, 2 glumes very unequal, lower glumes asymmetrical winged, male spikelets with glumes, upper lemma bilobed and awned, palea present, 2 lodicules cuneate, open

habitats, dry soils, type *Bhidea burnisiana* Bor, segregate from *Andropogon* sect. *Andropogon*.

Species

B. borii U.R. Deshpande, Ved Prakash & N.P. Singh

India. Annual, slender, upper nodes hairy, leaf blade linear acuminate, leaf sheath glabrous, racemes solitary and non-digitate, spikelets in pairs, glumes of all spikelets with awns, in open grassland, on rocky soils, see *Kew Bulletin* 42(3): 683. f. 1. 1987, *Current Science* 58(19): 1094. 1989.

B. burnisiana Bor

India. Rare, annual, erect, leaves basal, leaf blades linear, ligule an unfringed membrane, inflorescence of two racemes, two glumes unequal to very unequal, lower glume of sessile spikelets oblong and 2-nerved, upper glume awned, pedicelled and basal spikelets awnless, upper lemma 2-lobed and awned, a pioneer, in dry places, abandoned fields, on rocky plains, see *Kew Bulletin* 3: 445-447, figs. 1-3. 1949, *Grasses of Burma* ... 103, fig. 2. 1960.

B. fischeri Sreekumar & Shetty

India. Annual, in open grasslands, dry rocky plains, see *Kew Bulletin* 42: 3 683. 1987.

Biatherium Desv. = *Gymnopogon* P. Beauv.

From the Latin *bis* “twice” and Greek *ather* “barb, spine, chaff, prickle, awn.”

Chloridoideae, Cynodonteae, type *Biatherium foliosum* (Willd.) Desv., see *Species Plantarum. Editio quarta* 4: 924. 1806, *Essai d'une Nouvelle Agrostographie* 41, 164. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 426. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 172, 176, t. 8, f. 2. 1831, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888 and *Contributions from the United States National Herbarium* 41: 124-127. 2001

Bifaria (Hack.) Kuntze = *Bifaria* Tiegh.

(Loranthaceae), *Mesosetum* Steud.

Latin *bifarius*, *a*, *um* “twofold, double,” lower glume awned.

Panicoideae, Paniceae, Paspalinae, see *Synopsis Plantarum Glumacearum* 1: 118. 1855 [1854], *Bulletin de la Société Botanique de France* 43: 164. post 24 Apr 1896, *Österreichische Botanische Zeitschrift* 47(3): 75-77. 1897, *Revisio Generum Plantarum* 3[3]: 359. 1898 and *Proceedings of the Biological Society of Washington* 24: 121, 123. 1911, *Contributions from the United States National Herbarium* 46: 288-292. 2003

Blakeochloa Veldkamp = *Plinthanthesis* Steud.

Arundineae, type *Blakeochloa urvillei* (Steud.) Veldkamp, see *Synopsis Plantarum Glumacearum* 1: 14. 1855 [1853] and *Taxon* 29: 296. 1980, *Taxon* 30(2): 478. 1981

Blepharidachne Hackel = *Eremochloa* Büse, *Eremochloe* S. Watson

Greek *blepharon* “an eyelid,” *blepharis* “eyelash” and *achne* “chaff, glume,” referring to the ciliate lemmas.

About 4 species, western U.S., Argentina, Mexico. Chloridoideae, Cynodonteae, Munroinae, annual or perennial, decumbent, knotty base, lacking stolons, rhizomatous, auricles absent, ligule absent or a line of hairs, sheaths ciliate, short leaves, hermaphrodite or monoecious, inflorescence a panicle exerted or partially included in upper sheath, disarticulation above glumes, few spikelets 4-flowered and shortly peduncled, spikelets solitary and laterally compressed, single fertile floret embraced by two sterile florets, the 2 lowest florets male or barren, the third female or bisexual, the fourth reduced, 2 glumes more or less equal, second glume awnless, rounded lemmas deeply bilobed and ciliate on the margins, ciliate awn, palea keels ciliate or smooth, lodicules absent, 1-3 stamens, ovary glabrous, 2 stigmas, found in rocky slopes, open habitats, desert, related to *Munroa* Torrey, type *Blepharidachne kingii* (S. Watson) Hack., see *Plantae Junghuhnianae* 357. 1854, *U.S. Geol. Explor. 40th Par.* 5: 382, t. 40, f. 1-16. 1871 [also *United States Geological Exploration [sic] of the Fortieth Parallel. Botany*], *Nat. Pfl.-Fam.* 2, 2: 68, 126. 1887, *Monographiae Phanerogamarum* 6: 261. 1889 and *U.S.D.A Bull.* 772: 78. 1920 [also *Bulletin, Division of Agrostology United States Department of Agriculture*, or *Bull. Div. Agrostol., U.S.D.A.*], *Journal of the Colorado-Wyoming Academy of Science* 7(4): 29. 1973 [*Blepharidachne*, an anomalous eragrostoid grass.], *Brittonia* 31: 446-453. 1979, *Lilloa* 36: 131-138. 1983, *Revista del Museo Argentino de Ciencias Naturales* 4(3): 73-87. 1983, Hong Qian, “Floristic analysis of vascular plant genera of North America north of Mexico: characteristics of phytogeography.” *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, *Contributions from the United States National Herbarium* 41: 19, 115. 2001, *Flora Fanerogámica Argentina* 86: 1-68. 2003.

Species

B. benthamiana (Hack. ex Kuntze) Hitchc. (*Munroa benthamiana* Hack. ex Kuntze)

South America, Argentina. See *Rev. Mus. La Plata* 5: 303. 1893, *Revisio Generum Plantarum* 3(3): 357. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 772: 78. 1920.

B. bigelovii (S. Watson) Hackel (*Eremochloe bigelovii* S. Watson; *Eremochloe thurberi* S. Watson)

U.S., Texas, Mexico. See *Blumea* 46: 416. 2001.

B. hitchcockii Lahitte

South America, Argentina. See *Physis* (Buenos Aires) 15: 305. 1939.

B. kingii (S. Watson) Hackel (*Eremochloe kingii* S. Watson)

U.S., Nevada. See *Monogr. Phan.* 6: 261. 1889.

in English: king's eyelash grass

Blepharochloa Endl. = *Leersia* Sol. ex Sw.,
Leersia Sw.

From the Greek *blepharon* "an eyelid" and *chloe*, *chloa* "grass."

Ehrhartoideae, Oryzeae, Oryzinae, type *Blepharochloa ciliata* Endl. ex B.D. Jacks., see *Nova Genera et Species Plantarum seu Prodromus* 1, 21. 1788, *Genera Plantarum* 1352. 1840, *Index Kewensis* 1: 312. 1895 and *Contributions from the United States National Herbarium* 39: 35, 64-67. 2000

Blepharoneuron Nash

From the Greek *blepharon* "an eyelid" and *neuron* "nerve," referring to the lemmas.

About 1-2 species, North America, southwestern U.S., Texas, Mexico. Chloridoideae, Cynodonteae, Muhlenbergiinae, annual or perennial, erect or decumbent, herbaceous, unarmed, caespitose or not, auricles absent, sheaths not ciliate, ligule membranous, leaf blades ribbed and involute, inflorescence a panicle exserted, pedicels glandular, disarticulation above glumes, spikelets 1-flowered without rachilla extension, 2 glumes subequal or unequal, second glume awnless, lemma entire and awnless, palea densely villous or hairy, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, found in dry open places, woodland, close to *Erioneuron* Nash, type *Blepharoneuron tricholepis* (Torr.) Nash, see *Bulletin of the Torrey Botanical Club* 14: 133-134. 1887, *Bulletin of the Torrey Botanical Club* 25(2): 83-89. 1898 and *Contributions from the United States National Herbarium* 29: 203-208. 1947, *Brittonia* 23: 105-117. 1971, *Kew Bull.* 37: 133-162. 1982, *Phytologia* 64: 390-398. 1988, *Madroño* 35(4): 320-324. 1988, *Systematic Botany* 15(4): 515-525. 1990, *Sida* 14: 531-549. 1991, *American Journal of Botany* 81: 622-629. 1994, *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 19-20. 2001.

Species

B. shepherdii (Vasey) P.M. Peterson & Annable (*Muehlenbergia shepherdii* (Vasey) Swallen; *Muhlenbergia shepherdii* (Vasey) Swallen; *Sporobolus shepherdii* Vasey)

Southern U.S., Colorado to central Mexico. Annual, branched, see *Genera Plantarum* 44. 1789, *Bulletin of the Torrey Botanical Club* 14: 8. 1887 and *Contributions from the United States National Herbarium* 29(4): 204. 1947, *Systematic Botany* 15(4): 519. 1990.

B. tricholepis (Torr.) Nash (*Sporobolus tricholepis* (Torr.) J.M. Coult.; *Vilfa tricholepis* Torr.)

Southern U.S., Colorado to central Mexico. Perennial, caespitose, herbaceous, forage, grows in dry areas, see *Pacific Railr. Reports* 4(5): 155. 1857, *Manual of the Botany ... of the Rocky Mountain Region* . . 411. 1885, *Bulletin of the Torrey Botanical Club* 25(2): 88. 1898.

in Mexico: popotillo del pinar

Bluffia Nees = *Alloteropsis* Presl

After the German botanist Mathias Joseph Bluff, 1805-1837, physician; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 204. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 42. Palermo 1988.

Panicoideae, Paniceae, Paspalinae, type *Bluffia eckloniana* Nees, see *Göttingische gelehrte Anzeigen (unter der Aufsicht der Königl. Gesellschaft der Wissenschaften)* 1825: 1705. 1825 [also *Gött. gel. Anz.*], *Reliquiae Haenkeanae* 1(4-5): 343-344, t. 47. 1830, *Delectus Seminum quae in Horto Hamburgensium Botanico* 1834: 8. 1834 and *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Contributions from the United States National Herbarium* 46: 16. 2003

Blumenbachia Koeler = *Blumenbachia*
Schrad. (Loasaceae), *Sorghum* Moench

For the German botanist Johann Friedrich Blumenbach, 1752-1840, biologist, physician, anthropologist, 1775 medical doctor, Göttingen; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 204. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Walter Baron, in *D.S.B.* 2: 203-205. 1981; Bentley Glass et al., eds., *Forerunners of Darwin: 1745-1859*. Edited by ... O. Temkin, William Strauss, Jr. First Edition. John Hopkins Press, Baltimore 1959; Jeanette E. Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808 - 1841*. Harvard University Press 1967; Giulio Giorello & Agnese Grieco, a cura di, *Goethe*

scenziato. Einaudi Editore, Torino 1998; G. Schmid, *Goethe und die Naturwissenschaften*. Halle 1940.

Panicoideae, Andropogoneae, Sorghinae, type *Blumenbachia halepensis* (L.) Koeler, see *Species Plantarum* 2: 1047-1048. 1753, *Methodus Plantas Horti Botanici ...* 207. 1794, *Descriptio Graminum in Gallia et Germania* 28-29. 1802, *Flora Brasiliensis* 2(4): 271. 1883 and *Novosti Sist. Vyss. Rast.* 10: 79. 1973, *Contributions from the United States National Herbarium* 46: 135, 598-606. 2003

Blyttia Fr. = *Blyttia* Arn. (Asclepiadaceae),
Cinna L.

Named for the Norwegian botanist Matthias [Matias, Mathias] Numsen Blytt (1789-1862), naturalist, traveler, professor of botany, 1843-1862 Director University Botanical Garden of Christiania, father of Axel Gudbrand Blytt (1843-1898), author of *Norges flora, eller Beskrivelser over de i Norge vildtvoxende Karplanter tilligemed Angivelser af de geografiske Forholde, under hvilke de forekomme*. Oslo 1861-1877 and *Enumeratio plantarum vascularum, quæ circa Christianiam sponte nascuntur ... Christianiae* 1844. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 205. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; *Blyttia* 1: 2-15, 16-18, 19-20. 1943; *Blyttia* 45: 102. 1987.

Pooideae, Poeae, Aveninae, see *Species Plantarum* 1: 5. 1753, *Magazine of Zoology and Botany* 2: 420. 1838, *Kongliga Svenska Vetenskapsakademiens Handlingar* 1837: 256. 1838, *Novit. Fl. Suec. Mant.* 2: 2. 1839 [also E.M. Fries (1794-1878), *Novitarum Florae Suecicae Mantissa* Lund 1832-1845], *Flora Rossica* 4(13): 435. 1852 and *Bot. Zhurn.* 70(1): 126-128. 1985, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1185. 1990, *Contributions from the United States National Herbarium* 48: 142, 234-236. 2003

Boissiera Hochst. ex Steud. = *Boissiera*
Hochst. ex Griseb., *Boissiera* Steud., *Euraphis*
(Trin.) Lindley, *Schnizleinia* Steud., *Wiesta*
Boiss.

After the Swiss botanist and traveler Pierre-Edmond Boissier, 1810-1885, botanical collector. See Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement II: Be-Bo.* 279-282. 1993; Pierre Edmond Boissier, *Pugillus plantarum novarum Africae borealis Hispaniaeque australis*, auctoribus E. Boissier et G.F. Reuter. Geneva, Ex Typographia

F. Ramboz et Socii, 1852; Pierre Edmond Boissier, *Diagnoses plantarum novarum hispanicarum praesertim in Castella nova lectarum / auctoribus E. Boissier et G.F. Reuter*. Geneva: Typis Ferdinandi Ramboz, 1842; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 61. 1970; J.H. Barnhart, *Biographical notes upon botanists*. 1: 211. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 43. 1972; Eugène John Benjamin Autran (1855-1912), *Hortus boissierianus*. Genève 1896.

One species, western Asia, Turkey to Pakistan. Pooideae, Triticodae, Bromeae, annual, herbaceous, tufted or solitary, hollow, auricles present, leaf sheaths margins connate, narrow linear leaf blades, ligule an unfringed membrane, plants bisexual, capitate inflorescence, panicle densely contracted and more or less ovoid, spikelets narrowly lanceolate and pedicellate, florets with 5-9 awns, upper florets reduced to a cluster of awns, 2 glumes membranous and subequal, lemmas papery to coriaceous, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, open places, dry stony sites, native pasture species, sometimes referred to *Bromus* and to *Enneapogon*, type *Boissiera bromoides* Hochst. & Steud., see *Species Plantarum* 1: 76-78. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 92. 1830, *Flora* 21: 25. 1838, *Nomenclator Botanicus. Editio secunda* 1: 213. 1840, *The Vegetable Kingdom* 115. 1846, *Flora Rossica* 4(13): 404. 1852, *Syn. Pl. Glum.* 1: 200. 1854, *Flora Orientalis* 5: 559. 1884, *Revisio Generum Plantarum* 1: 776. 1891 and *Feddes Rep.* 79: 337-345. 1969, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 491-501. 1985, *Flora Mediterranea* 5: 340-345. 1995, *Annales Botanici Fennici* 35: 123-130. 1998.

Species

B. squarrosa (Banks & Sol.) Nevski (*Boissiera bromoides* Hochst. & Steud.; *Boissiera pumilio* (Trin.) Hack.; *Boissiera squarrosa* (Banks & Sol.) Eig, nom. illeg., non *Boissiera squarrosa* (Banks & Sol.) Nevski; *Bromus pumilto* (Trin.) P.M. Sm.; *Bromus pumilto* (Trin.) P.M. Sm.; *Euraphis pumilio* (Trin.) Kuntze; *Euraphis squarrosa* (Banks & Sol.) Soják; *Pappophorum pumilio* Trin.; *Pappophorum sinaicum* Trin.; *Pappophorum squarrosum* Banks & Sol.)

Eurasia. See *The Natural History of Aleppo* 2: 224. 1794, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 54. 1836, *Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse, Denkschriften* 50(2): 9. 1885 and *Journal of Botany, British and Foreign* 75: 189. 1937, *Feddes Repertorium* 79: 338. 1969.

Boivinella A. Camus = *Boivinella* (Pierre ex Baillon) Aubrév. & Pellegr. (Sapotaceae), *Cyphochlaena* Hack.

For the French botanist Louis Hyacinthe Boivin, 1808-1852 (Brest), traveler and plant collector (Corsica, islands of the Indian Ocean and coasts of Africa, Canary Islands, Madagascar), explorer, 1846-1852 served as botanist on the *Oise* expedition. See F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 11. 1971; J.H. Barnhart, *Biographical notes upon botanists*. 1: 212. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Mary Gunn & Leslie Edward W. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Laurence J. Dorr, *Plant Collectors in Madagascar and the Comoro Islands*. 1997.

About two species, Madagascar. Panicoideae, Panicodae, Paniceae, Boivinelleanae, annual or perennial, herbaceous, unarmed, leaf sheaths inflated at the base, ligule membranous, plants bisexual, inflorescence nondigitate, unilateral racemes, paired dimorphic spikelets, sterile spikelets sessile, female spikelets pedicelled and laterally compressed, two glumes subequal, upper glume coriaceous, lower lemma gibbous, male spikelet upper glume and lower lemma membranous, palea present, 6 stamens, ovary glabrous, 2 stigmas, in damp places, often in *Cyphochlaena* Hackel, type *Boivinella sclerioides* (Boivin ex A. Camus) A. Camus, see *Linnaea* 23: 72. 1850 and *Österreichische Botanische Zeitschrift* 51: 465. 1901, *Bulletin de la Société Botanique de France* 72: 175-176. 1925, *Flora of West Tropical Africa* edition 1 2: 9. 1931, *Bulletin de la Société Botanique de France* 105: 37. 1958, *Adansonia* n.s., 5: 411-413. 1965.

Bonia Balansa = *Bambusa* Schreb.

Dedicated to the French botanist Père Henry François Bon, Missionary of the Missions Étrangères, botanical collector, traveler, see Emil Bretschneider, *History of European Botanical Discoveries in China*. 911-912. Leipzig 1981.

About five species, China, Vietnam. Bambusoideae, Bambuseae, Bambusinae, often in *Bambusa*, type *Bonia tonkinensis* Balansa, see *Genera Plantarum* 1: 236. 1789, *Species Plantarum*. Editio quarta 2: 245. 1799, *Journal de Botanique (Morot)* 4: 29. 1890 and *Les Bambusées* 136. 1913, *Acta Phytotaxonomica Sinica* 26(3): 212-215, pl. 1. 1988, N.H. Xia, "A study of *Bonia* (Gramineae: Bambusoideae)." *Kew Bulletin* 51(3): 565-569. 1996, *Contributions from the United States National Herbarium* 39: 29-35. 2000.

Species

B. amplexicaulis (Chia, H.L. Fung & Y.L. Yang) N.H. Xia (*Monocladus amplexicaulis* Chia & al.)

China. Stony hills, mountains, calcareous, see *Acta Phytotax. Sin.* 26(3): 215-216, f. 2: 1-3. 1988, *Kew Bulletin* 51(3): 568. 1996.

in China: yuang xiang zhu, mei-gom

B. levigata (Chia, H.L. Fung & Y.L. Yang) N.H. Xia (*Monocladus levigatus* Chia & al.)

China. Montane forests, mountains, see *Acta Phytotax. Sin.* 26(3): 216, f. 2: 4-5. 1988, *Kew Bulletin* 51(3): 568. 1996.

in China: xiang zhi zhu

B. saxatilis (Chia, H.L. Fung & Y.L. Yang) N.H. Xia (*Monocladus saxatilis* Chia & al.; *Monocladus saxatilis* Y.L. Yang)

China. Stony hills, mountains, calcareous, see *Acta Phytotax. Sin.* 26(3): 213, f. 1. 1988, *Kew Bulletin* 51(3): 567. 1996.

in China: dan zhi zhu

B. solida (C.D. Chu & C.S. Chao) N.H. Xia (*Indocalamus solidus* C.D. Chu & C.S. Chao; *Monocladus saxatilis* var. *solidus* (C.D. Chu & C.S. Chao) Chia; *Monocladus solidus* (C.D. Chu & C.S. Chao) Chia)

China. Stony hills, mountains, calcareous, cultivated, see *Acta Phytotax. Sin.* 18(1): 26, f. 2. 1980, *Acta Phytotax. Sin.* 26(3): 215. 1988, *Fl. Reipubl. Pop. Sin.* 9(1): 40. 1996, *Kew Bulletin* 51(3): 568. 1996.

in China: jang gang zhu

B. tonkinensis Balansa (*Bambusa tonkinensis* (Balansa) Baillon)

Vietnam. Mountains, see *J. Bot. Paris* 4: 29. 1890, *Hist. Pl.* 12: 147. 1894 [1893].

in Vietnam: câi le

Borinda Stapleton = *Sinarundinaria* Nakai

For the Irish (b. at Tramore, County Waterford) botanist Norman Loftus Bor, 1893-1972 (London), agrostologist, plant collector in India and Tibet, 1921-1948 Indian Forest Service, 1936 Botanical Officer Assam, Forest Botanist of the Forest Research Institute (Dehra Dun), 1945 President of the Indian Botanical Society, 1948-1959 Assistant Director Kew, 1931 Fellow of the Linnean Society, author of *Manual of Indian Forest Botany*. Oxford University Press, London 1953, *The Grasses of Burma, Ceylon, India and Pakistan*. London 1960, with Mukat Behari Raizada wrote *Some Beautiful Indian Climbers and Shrubs*. Bombay Natural History Society - Oxford University Press, Bombay 1982, contrib. to *Indian Forester*. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 220. 1965; C.E. Hubbard,

“Norman Loftus Bor (1893-1972).” in *Kew Bulletin*. 30(1): 1-4. 1975; Carolyn M.K. Pope, “A bibliography of the work of Dr. N.L. Bor.” in *Kew Bulletin*. 30(1): 4-10. 1975; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 86. 1994.

About 8 species or more, subtropical to temperate, southern Vietnam, Tibet, Nepal, Sikkim, Bhutan. Bambusoideae, Bambusodae, Bambuseae, Thamnocalaminae, perennial, clump-forming, woody and persistent, branched, culms flexible, finely grooved culm internodes, rhizomes pachymorph, uniaespitose, erect or curving below, nodding to drooping above, internodes lightly waxy, culm sheaths deciduous, flowering culms leafy, leaf blades persistent or deciduous, plants unarmed and bisexual, flowering semelactant, without pseudospikelets, spikelets solitary and pedicellate, 2 glumes unequal to subequal and shortly awned, palea present, 3 free and membranous lodicules, 3 stamens, 2-3 stigmas, used for weaving, for making fences, see *Journal of Japanese Botany* 11(1): 1. 1935, *Edinburgh Journal of Botany* 51(2): 275-295. 1994, C.M.A. Stapleton, *Bamboos of Nepal*. Kew: Royal Botanic Gardens 1994, C.M.A. Stapleton, *Bamboos of Bhutan*. Kew: Royal Botanic Gardens 1994, *Flora of Bhutan* [The Grasses of Bhutan] 3(2): 501-502. 2000.

Species

B. albocerea (J.R. Xue & T.P. Yi) Stapleton (*Fargesia albocerea* J.R. Xue [also Hsueh] & T.P. Yi)

China. See *Journal of Bamboo Research* 7(2): 45-47, f. 11. 1988, *Kew Bulletin* 53(2): 455. 1998.

B. chigar Stapleton

China, Nepal. See *Edinburgh Journal of Botany* 51(2): 286, f. 2. 1994.

Local name: chigar

B. edulis (J.R. Xue & T.P. Yi) Stapleton (*Fargesia edulis* J.R. Xue & T.P. Yi)

China. See *Journal of Bamboo Research* 7(2): 53-57, f. 14. 1988, *Kew Bulletin* 53(2): 455. 1998.

B. emeryi Stapleton (*Yushania emeryi* (Stapleton) Demoly)

China, Nepal. See *Edinburgh Journal of Botany* 51(2): 286. 1994, *Bambou*, Association Européenne du Bambou, EBS Section France 29: 13. 1998.

Local name: kalo nigalo

B. extensa (T.P. Yi) Stapleton (*Fargesia extensa* T.P. Yi; *Sinarundinaria extensa* Yi)

China. See *Journal of Bamboo Research* 2(2): 163. 1983, *Edinburgh Journal of Botany* 51(2): 288. 1994.

B. fansipanensis (T.Q. Nguyen) Stapleton (*Fargesia fansipanensis* T.Q. Nguyen)

Vietnam. See *Kew Bulletin* 53(2): 455. 1998.

B. farcta (Yi) Stapleton (*Fargesia farcta* Yi)

China. See *J. Bamb. Res.* 2(2): 165, f. 5. 1983.

B. frigidorum (T.P. Yi) Stapleton (*Fargesia frigidorum* T.P. Yi)

China. See *Journal of Bamboo Research* 7(2): 17-20, f. 1. 1988, *Fl. Reip. Pop. Sin.* 9(1): 406. 1996, *Kew Bulletin* 53(1): 456. 1998.

B. fungosa (T.P. Yi) Stapleton (*Fargesia fungosa* T.P. Yi; *Yushania fungosa* (Yi) Demoly)

China. See *Bulletin of Botanical Research* 5(4): 121-123, f. 1. 1985, *Kew Bulletin* 53(2): 456. 1998.

B. glabrifolia (Yi) Stapleton (*Fargesia glabrifolia* Yi; *Sinarundinaria glabrifolia* Yi)

China. See *Journal of Bamboo Research* 2(2): 32, 168, f. 6. 1983, *Edinburgh Journal of Botany* 51(2): 288. 1994.

B. grossa (T.P. Yi) Stapleton (*Fargesia bhutanensis* Stapleton; *Fargesia grossa* Yi; *Sinarundinaria grossa* Yi; *Thamnocalamus bhotanica* Munro)

Bhutan, China. Densely clumped, thin-walled, erect and drooping, internodes waxy, nodes densely waxy and pubescent, culm sheaths triangular and deciduous, leaf sheaths glabrous, auricles absent, also cultivated, used for house roofing and for making fence sections, see *J. Bamb. Res.* 2(2): 171, f. 7. 1983, *Edinburgh Journal of Botany* 51(2): 288. 1994.

in Bhutan: baa, rhui

B. hsuehana (T.P. Yi) Stapleton (also spelled *hsuehiana*) (*Fargesia hsuehana* T.P. Yi)

China. See *Journal of Bamboo Research* 7(2): 104-108, f. 32. 1988, *Kew Bulletin* 53(2): 456. 1998.

B. lushuiensis (J.R. Xue & T.P. Yi) Stapleton (*Fargesia lushuiensis* J.R. Xue & T.P. Yi)

China. See *Journal of Bamboo Research* 7(2): 111-113, f. 34. 1988, *Kew Bulletin* 53(2): 457. 1998.

B. macclureana (Bor) Stapleton (*Arundinaria macclureana* Bor; *Fargesia macclureana* (Bor) Stapleton; *Sinarundinaria macclureana* (Bor) C.S. Chao & G.Y. Yang)

China. See *Kew Bulletin* 12(3): 420. 1957[1958], *Journal of Bamboo Research* 13(1): 20. 1994, *Edinburgh Journal of Botany* 51(2): 290. 1994, *Bamboo Soc. (G.B.) Newsl.* 17: 17 (1993).

B. papyrifera (T.P. Yi) Stapleton (*Fargesia papyrifera* T.P. Yi)

China. See *Journal of Bamboo Research* 7(2): 42-45, f. 10. 1988, *Kew Bulletin* 53(2): 457. 1998.

B. perlonga (J.R. Xue & T.P. Yi) Stapleton (*Fargesia perlonga* J.R. Xue & T.P. Yi)

China. See *Journal of Bamboo Research* 7(2): 79-81, f. 23. 1988, *Kew Bulletin* 53(2): 457. 1998.

B. setosa (Yi) Stapleton (*Fargesia setosa* Yi; *Sinarundinaria setosa* Yi; *Sinarundinaria setosa* J.J.N. Campbell)

China. See *Journal of Bamboo Research* 2(2): 179, f. 10. 1983.

in English: Tibetan arrow bamboo

in China: xizang jian zhu

Boriskellera Terekhov = *Eragrostis* Wolf

Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostidae, Eragrostidinae, type *Boriskellera arundinacea* (L.) Terekhov, see *Species Plantarum* 1: 64. 1753, *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809 and *Delectus Seminum Hortus Botanicus Reg. Kujbyshev* 13. 1938, *Acta Bot. Neerl.* 15: 157. 1966, *Contributions from the United States National Herbarium* 41: 81-115. 2001.

Botelua Lagasca

Orthographic variant, see *Bouteloua* Lag.

Chloridoideae, Cynodonteae, Boutelouinae, see *Varietades de Ciencias, Literatura y Artes* 2(4): 134. 1805 and *Contributions from the United States National Herbarium* 41: 20-33. 2001.

Bothriochloa Kuntze = *Amphilophis* Nash, *Amphilophis* (Trin.) Nash, *Amphilopsis* Nash, *Dichanthium* Willemet, *Gymnandropogon* (Nees) Duthie

From the Greek *bothros* "a pit, hole," *bothrion* "a little pit" and *chloe*, *chloa* "grass," in allusion to the glumes, joints and pedicels, or to the pitted lower glumes of sessile spikelets.

About (20-)28/35 species, cosmopolitan, warm temperate to tropical regions. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Sorghinae, perennial, tough, stiff, herbaceous, stout and erect, tufted, rhizomatous or stoloniferous, sometimes decumbent, often branched, solid internodes, shoots more or less aromatic, auricles absent, ligule membranous and short, sheaths terete with margins open, plants bisexual, spike-like racemes in a panicle or digitately, racemes ascending to erect, rachis joints with a translucent groove, spikelets paired, sessile spikelets awned and fertile with one fertile floret above a sterile floret, sessile spikelet callus obtuse, pedicellate spikelets unawned and sterile or male, 1 pair of spikelets may be unisexual, 2 glumes more or less equal and sometimes with small indentations or with a pit on the back, lower glumes nonpitted or pitted, upper lemma of fertile spikelet entire and awned, palea absent or present, 2 lodicules free and fleshy, 1-3 stamens, ovary glabrous without the apical appendage, 2 stigmas red, caryopses

dorsiventrally compressed and lanceolate, weed species, native pasture species, important livestock forage in grasslands or savannahs, cultivated for fodder, palatability to stock varies with its stage of growth, most species are hardy, attractive and ornamental, drought-resistant, found in grassy places, open habitats, roadsides, poor soils, heavy soils, rainforest, grassland, pampas, dry areas, similar to *Andropogon* L., hybrids with *Capillipedium* Stapf and *Dichanthium* Willemet, sometimes included in and referred to *Dichanthium* Willemet, type *Bothriochloa anamitica* Kuntze, see *Species Plantarum* 2: 1045. 1753, *Annalen der Botanik.* editor Usteri 18: 11. 1796, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 285. 1832, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 103. 1841, *Synopsis Plantarum Glumacearum* 1: 371. 1854, *Gaz. NW Prov. & Oude* 10: 638. 1882, *Flora Brasiliensis* 2(4): 291. 1883, C.E.O. Kuntze, *Revisio Generum Plantarum* 2: 762. 1891 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Nederlandsche Dendrologische Vereeniging.* Gedenkboek J. Valckenier Suringar, 24 December, 1864 - 17 October, 1932. Wageningen 1942, *J. Linn. Soc.* 55: 755-760. 1957, *Madroño* 14: 18-29. 1957, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 159, 167-170. 1960, *Phytomorph.* 11: 378-383. 1961, *Bot. Gaz.* 126: 209-214. 1965, *Amer. J. Bot.* 53: 94-98. 1966, *Amer. J. Bot.* 55(10): 1246-1250. 1968, *Evolution* 24: 270-277. 1970, *Taxon* 19: 339-340. 1970, *Folia Primatologica* 21: 36-60. 1974, *Syst. Bot.* 8(2): 168-184. 1983, *Austrobaileya* 3(1): 79-99. 1989, *Flora Mesoamericana* 6: 384-386. 1994, Lucia G. Le Roux & Elizabeth A. Kellogg, "Floral development and the formation of unisexual spikelets in the Andropogoneae (Poaceae)." *Am. J. Bot.* 86: 354-366. 1999, *Darwiniana* 38(1-2): 127-186. 2000, *Austral. Ecology* 25(3): 213-222. June 2000, Graciela García-Guzmán & Rodolfo Dirzo, "Patterns of leaf-pathogen infection in the understory of a Mexican rain forest: incidence, spatiotemporal variation, and mechanisms of infection." *Am. J. Bot.* 88: 634-645. 2001, Liliana M. Giussani, J. Hugo Cota-Sánchez, Fernando O. Zuloaga and Elizabeth A. Kellogg, "A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis." *Am. J. Bot.* 88: 1993-2012. 2001, *Austral. Ecology* 26(2): 150-155. Apr 2001, *Restoration Ecology* 10(2): 401-407. June 2002, *Ecology Letters* 5(5): 676-684. Sep 2002, *Global Change Biology* 8(11): 1118-1129. Nov 2002, *Austral. Ecology* 27(6): 638-646. Dec 2002, *Contributions from the United States National Herbarium* 46: 17-18, 135-141, 192-193. 2003, *New Phytologist* 159(3): 599-608. Sep 2003, *New Phytologist* 160(2): 319-327. Nov 2003, *Plant, Cell and Environment* 26(12): 1963-1972. Dec 2003, *Am. J. Bot.* 91: 707-723. 2004, Suzanne M. Prober, K.R. Thiele and T.B. Koen, "Spring burns control exotic annual grasses in

a temperate grassy woodland." *Ecological Management and Restoration* 5(2): 131-134. Aug 2004, Ian Cole, Jean Metcalfe and Terry Koen, "The effect of removing seed from florets on germination and field establishment in a Wallaby Grass (*Austrodanthonia fulva*) accession." *Ecological Management and Restoration* 5(2): 134-136. Aug 2004, *Ecological Management and Restoration* 6(1): 43-50. Apr 2005, *Austral. Ecology* 30(4): 445-464. June 2005, *Weed Biology and Management* 5(2): 77-79. June 2005.

Species

B. sp.

in Mexico: tallo peludo azul

B. alta (Hitchc.) Henrard (*Andropogon altus* A.S. Hitchc.; *Bothriochloa alta* (Hitchc.) Cabrera, nom. illeg., non *Bothriochloa alta* (Hitchc.) Henrard)

Northern America, Southern America, U.S., New Mexico, Argentina. Perennial, caespitose, forage, along irrigation ditch, see *Contributions from the United States National Herbarium* 17(3): 208. 1913, *Blumea* 4(3): 520. 1941, *Manual de la Flora de los Alrededores de Buenos Aires* 107. 1953.

in English: tall bluestem, tall beard grass

B. ambigua S.T. Blake (*Andropogon ambiguus* Michx.; *Andropogon blakei* H. St. John; *Bothriochloa macra* (Stuedel) S.T. Blake)

Australia. See *Flora Boreali-Americana* 1: 58. 1803 and *Trans. Royal Soc. S. Australia* 67: 43. 1943, *University of Queensland Papers: Department of Botany* 2(3): 29. 1944.

B. barbinodis (Lagasca) Herter (*Amphilophis barbinodis* (Lag.) Nash; *Amphilophis emersus* (E. Fourn.) Nash; *Amphilophis leucopogon* (Nees) Nash; *Amphilophis palmeri* (Hack.) Nash; *Amphilophis perforatus* (Trin. ex E. Fourn.) Nash; *Amphilophis schlumbergeri* (E. Fourn.) Nash; *Andropogon barbinodis* Lag.; *Andropogon barbinodis* var. *perforatus* (Trin. ex E. Fourn.) Gould; *Andropogon emersus* E. Fourn.; *Andropogon ischaemum* var. *barbinodis* (Lag.) Desv.; *Andropogon leucopogon* Nees; *Andropogon palmeri* (Hack.) Gould; *Andropogon perforatus* Trin. ex E. Fourn.; *Andropogon saccharoides* Sw.; *Andropogon saccharoides* subsp. *leucopogon* (Nees) Hack.; *Andropogon saccharoides* subvar. *perforatus* (Trin. ex E. Fourn.) Hack.; *Andropogon saccharoides* var. *barbinodis* (Lag.) Hack.; *Andropogon saccharoides* var. *palmeri* Hack.; *Andropogon saccharoides* var. *perforatus* (Trin. ex E. Fourn.) Hack. ex L.H. Dewey; *Andropogon schlumbergeri* E. Fourn.; *Bothriochloa barbinodis* (Lag.) Henrard, nom. illeg., non *Bothriochloa barbinodis* (Lag.) Herter; *Bothriochloa barbinodis* var. *palmeri* (Hack.) de Wet; *Bothriochloa barbinodis* var. *perforata* (Trin. ex E. Fourn.) Gould; *Bothriochloa barbinodis* var. *schlumbergeri* (E. Fourn.) de Wet; *Bothriochloa emersa* (E. Fourn.) Henrard; *Bothriochloa leucopogon* (Nees) Pilg.; *Bothriochloa palmeri* (Hack.) Gould, nom. illeg., non

Bothriochloa palmeri (Hack.) Pilg.; *Bothriochloa perforata* (Trin. ex E. Fourn.) Herter; *Bothriochloa schlumbergeri* (E. Fourn.) Henrard; *Holcus saccharoides* (Sw.) Kuntze ex Stuck.; *Holcus saccharoides* var. *barbinodis* (Lag.) Hack.; *Holcus saccharoides* var. *perforatus* (Trin. ex E. Fourn.) Hack.; *Schizachyrium hirtiflorum* Nees; *Sorghum saccharoides* (Sw.) Kuntze; *Sorghum saccharoides* var. *leucopogon* (Nees) Nash ex Kuntze; *Sorghum schlumbergeri* (E. Fourn.) Kuntze)

North America, South America, U.S. Perennial bunchgrass, densely tufted, erect to spreading, sometimes rhizomatous, coarse leaves blue-green, internodes pubescent, inflorescence paniculate, pairs of spikelets occur at each joint, one is sessile and seed producing, glandular pit on the first outer glume of the sessile spikelet present or absent, seeds dispersed by wind, animal food, forage, palatable before the stems become fully mature and fibrous, recommended for reseeding arid rangelands, leaves diuretic, extremely drought-resistant, full sun, commonly found in semidesert grasslands and chaparral, disturbed habitats, among rocks, along roadsides, open arroyo, see *Species Plantarum* 2: 1047. 1753, *Nova Genera et Species Plantarum seu Prodrromus* 26. 1788, *Genera et species plantarum* 3. 1816, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 334. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 172. 1831, *Linnaea* 19(6): 694. 1847, *Mexicanas Plantas* 2: 58-59. 1886, *Monographiae Phanerogamarum* 6: 494, 496. 1889, *Revisio Generum Plantarum* 2: 792. 1891, *Contributions from the United States National Herbarium* 2(3): 497. 1894, *Revisio Generum Plantarum* 2: 368. 1898 and *Flora of the Southeastern United States* ... 65-66. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *North American Flora* 17(2): 126. 1912, *Manual Grasses U.S.* 792. 1935, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 160. 1940, *Blumea* 4(3): 520. 1941, *Madroño* 14(1): 23. 1957, *The Southwestern Naturalist* 3: 212. 1959, *American Journal of Botany* 55(10): 1246-1250. 1968, *Bol. Inst. Bioci. Univ. Fed. Rio Grande do Sul* 57: 20. 1998.

in English: fuzzy top, cane bluestem, cane beard grass, pinhole bluestem, pinhole beardgrass, perforated bluestem, feather bluestem, plains beardgrass

in Mexico: cola de coyote, popotillo pasto azul, popotillo algodonoso, popotillo cola de coyote, popotillo perforado, popotillo plateado, zacatón

B. barbinodis (Lagasca) Herter var. **barbinodis**

South America.

B. barbinodis (Lagasca) Herter var. **palmeri** (Hack.) de Wet (*Amphilophis palmeri* (Hack.) Nash; *Andropogon palmeri* (Hack.) Gould; *Andropogon saccharoides* subsp. *leucopogon* (Nees) Hack.; *Andropogon saccharoides* var. *palmeri* Hack.; *Bothriochloa palmeri* (Hack.) Pilg.; *Bothriochloa*

palmeri (Hack.) Gould, nom. illeg., non *Bothriochloa palmeri* (Hack.) Pilg.)

Northern America, U.S., Mexico. Perennial, see *Nova Genera et Species Plantarum seu Prodrum* 26. 1788, *Linnaea* 19(6): 694. 1847, *Monographiae Phanerogamarum* 6: 496. 1889 and *North American Flora* 17(2): 126. 1912, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 160. 1940, *Madroño* 14(1): 23. 1957, *The Southwestern Naturalist* 3: 212. 1959, *American Journal of Botany* 55(10): 1248. 1968.

B. biloba S.T. Blake

Australia, Queensland, New South Wales. Perennial, caespitose, erect or decumbent, often branching from the nodes, sheath keeled and glabrous, ligule ciliolate, racemes subdigitate white or purple and sparsely hairy, sessile spikelets acute and with densely bearded callus, pedicellate spikelets acute and linear-lanceolate, awn bent or twisted, a vulnerable and endangered species, occurs in dry sclerophyll woodland, grassy sclerophyll woodland, grasslands and pastures, poor soils, see *University of Queensland Papers: Department of Botany* 2(3): 27. 1944.

B. bladhii (Retz.) S.T. Blake (*Amphilophis glabra* (Roxb.) Stapf; *Amphilophis intermedia* (R. Br.) Stapf; *Amphilophis intermedia* var. *acidula* (Stapf) Stapf; *Andropogon annulatus* var. *bladhii* (Retz.) Hack.; *Andropogon bladhii* Retz.; *Andropogon caucasicus* Trin.; *Andropogon glaber* Roxb.; *Andropogon haenkei* Presl; *Andropogon intermedius* R. Br.; *Andropogon intermedius* subvar. *perfossus* Hack.; *Andropogon intermedius* var. *caucasicus* (Trin.) Hack.; *Andropogon intermedius* var. *genuinus* Hack.; *Andropogon intermedius* var. *punctatus* (Roxb.) Hack.; *Andropogon inundatus* F. Muell.; *Andropogon perfossus* Nees, nom. illeg.; *Andropogon perfossus* Nees & Meyen ex Steud.; *Andropogon pertusus* var. *vegetior* Hack.; *Andropogon punctatus* Roxb.; *Bothriochloa caucasica* (Trin.) C.E. Hubb.; *Bothriochloa glabra* (Roxb.) A. Camus; *Bothriochloa intermedia* (R. Br.) A. Camus; *Bothriochloa intermedia* var. *punctata* (Roxb.) Keng; *Bothriochloa insculpta* (A. Rich.) A. Camus var. *vegetior* (Hack.) C.E. Hubb.; *Bothriochloa inundata* (F. Muell.) J. Black; *Dichanthium bladhii* (Retz.) Clayton; *Dichanthium intermedium* (R. Br.) de Wet & J.R. Harlan; *Dichanthium ischaemum* (L.) Roberty; *Dichanthium ischaemum* subvar. *intermedium* (R. Br.) Roberty) (species dedicated to the Finnish botanist Peter Johan Bladh, 1746-1816, plant collector, with the Swedish East India Company, correspondent of Thunberg, Anders Jahan Retzius (1742-1821), Bäck, Bergius & Sir Joseph Banks; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 195. 1965; Carl Edvard Bladh, *Minnen från finska kriget, åren 1808-1809*. Stockholm 1809; Carl Peter Thunberg (1743-1828), *Nova Genera Plantarum*. 6. 1781; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981)

Tropical Africa, China, Japan, India, Indonesia, Nepal, Malaysia, Australia. Perennial or annual, very variable decreaser species, very vigorous, shortly rhizomatous, tufted or loosely tufted, bluish green, aromatic, tall, erect and stout, often robust, stems stiff and yellowish, unbranched or branched, ligule a short membrane, sheaths hairless and round, blades flat or folded, foliage scented, ascending racemes whorled and flexuous, rachis with simple branches, spikelets hairy and dark, callus shortly bearded, pedicellate spikelets male or sterile and unawned, sessile spikelet awned, lower glumes pitted, upper glume boat-shaped with a slender tip, lemmas membranous, palea absent, stamens 3, yellow anthers, weed species, sometimes invasive, native pasture species, cultivated, suitable for hay and silage, grazed while still young, low grazing value, palatable or not, excellent fodder, forage, revegetator, useful for erosion control, drought- and short-term flooding-resistant, hybridize freely with other species and genera, naturalized in dry zones on open hillsides, common along roadsides, swamp margins, streamsides, damp places, rough grassland, on riverbanks, moist sites, low lying areas, woodlands, borders of woods, margins of fields, vleis, disturbed habitats, see *Observationes Botanicae* 2: 27. 1781, *Prodrum Florae Novae Hollandiae* 1: 202. 1810, *Flora Indica; or Descriptions ...* 1: 268. 1820, *Reliq. Haenk.* 1: 340. 1830, *Nomenclator Botanicus* edition 2 1: 92. 1840, *Monographiae Phanerogamarum* 6: 481, 486-487, 572. 1889 and *Flora of Tropical Africa* 9: 174. 1917, *Annales de la Société Linéenne de Lyon, sér. 2*, 76(1930): 164-165. 1931, *Bulletin of Miscellaneous Information Kew* 1934: 109. 1934, *Grasses of Burma ...* 108. 1960, *Boissiera*. 9: 160. 1960, *American Journal of Botany* 53(1): 97. 1966, *Proceedings of the Royal Society of Queensland* 80(6): 62-63. 1969, *Kew Bulletin* 32(1): 3. 1977, *Berichte des Geobotanischen Institutes der Eidgenössischen Technischen Hochschule Stiftung Rübel* 51: 35. 1984, *Acta Botanica Indica* 18: 240-246. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: purple plume grass, purple tassel grass, forest bluegrass, bluegrass, latoka grass, thamboni grass, mountain bluegrass, plains bluestem, Australian bluestem, Australian beard grass, Caucasian bluestem

in India: donda, dhunda, gundha goorana, jhara, kachi gadi, kasi gadi, khar, khar jhara, koda johor, loari, matring, mular, nilon, sandhor, sudugan, sundhaur, tambat

in Thailand: yaa khaem khok, ya khi ma

in East Africa: apuoyo

in Nigeria: cawkitiningel

in Senegal: gèrgètièm, gèrkèndièl, kumba ndiargandal

in South Africa: blouklosgras, blouklossiesgras, persklossiegras, kahlblättriges stinkgras

in Japan: mon-tsuki-gaya

B. bladhii (Retz.) S.T. Blake subsp. **glabra** (Roxb.) B.K. Simon (*Amphilophis glabra* (Roxb.) Stapf; *Andropogon glaber* Roxb.; *Andropogon haenkei* J. Presl; *Andropogon intermedius* subvar. *glaber* (Roxb.) Hack.; *Andropogon leptanthus* Steud.; *Andropogon punctatus* Trin., nom. illeg., non *Andropogon punctatus* Roxb.; *Andropogon vachellii* Nees; *Bothriochloa glabra* (Roxb.) A. Camus)

Australia, Africa. Perennial, leafy, robust, persistent under heavy grazing, well eaten by cattle, on coastal grasslands, see *Flora Indica; or Descriptions ...* 1: 271. 1820, *Synopsis Plantarum Glumacearum* 1: 391. 1854 and *Flora of Tropical Africa* 9: 174. 1917, *Annales de la Société Linnéenne de Lyon, sér. 2*, 76(1930): 164. 1931, *Austrobaileya* 3(1): 79. 1989, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: forest grass

in Thailand: ya khaem khok

B. bladhii (Retz.) S.T. Blake var. **bladhii** (*Andropogon bladhii* Retzius; *Andropogon intermedius* R. Br.; *Andropogon intermedius* var. *genuinus* Hack.; *Bothriochloa anamitica* Kuntze; *Bothriochloa intermedia* (R. Br.) A. Camus)

Asia. See *Observationes Botanicae* 2: 27. 1781, *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Monographiae Phanerogamarum* 6: 486. 1889, *Revisio Generum Plantarum* 2: 762. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 76(1930): 164. 1931, *Proceedings of the Royal Society of Queensland* 80(6): 62. 1969, *Berichte des Geobotanischen Institutes der Eidgenössischen Technischen Hochschule Stiftung Rübel* 51: 35. 1984, *Acta Botanica Indica* 18: 240-246. 1990.

B. bladhii (Retz.) S.T. Blake var. **punctata** (Roxb.) R.R. Stewart (*Andropogon punctatus* Roxb; *Andropogon punctatus* Trin., nom. illeg., non *Andropogon punctatus* Roxb.; *Bothriochloa intermedia* var. *punctata* (Roxb.) Keng; *Bothriochloa punctata* (Roxb.) L. Liou)

Asia. See *Flora Indica; or Descriptions ...* 1: 268. 1820 and *Claves Generum et Specierum Graminearum Primarium Sinicarum Appendice Nomenclatione Systematica* 244. 1957, *Annotated Cat. Vasc. Pl. W. Pakistan & Kashmir* 106. 1972, *Kew Bulletin* 29(2): 444. 1974, *Flora Xizangica* 5: 326. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990.

B. brasiliensis (Hack.) Henrard (*Andropogon saccharoides* subsp. *brasiliensis* Hack.; *Andropogon saccharoides* var. *erianthoides* Hack.)

Southern America. See *Flora Brasiliensis* 2(4): 293. 1883, *Monographiae Phanerogamarum* 6: 496. 1889 and *Nederl. Dendrologische Ver. Gedenkboek J.V. Suringar* 187. 1942.

B. bunyensis B. Simon (Queensland, Bunya Mountains)

Australia, Queensland. A vulnerable species, see *Austrobaileya* 1(5): 455. 1982.

B. campii (Swallen) de Wet (*Andropogon campii* Swallen)

Ecuador. See *Memoirs of the New York Botanical Garden* 9(2): 143-144. 1955, *American Journal of Botany* 55(10): 1249. 1968.

B. caucasica (Trin.) C.E. Hubb. (*Andropogon caucasicus* Trin.; *Andropogon intermedius* var. *caucasicus* (Trin.) Hack.; *Dichanthium caucasicum* (Trin.) S.K. Jain & Deshp.; *Sorghum caucasicum* (Trin.) Griseb.)

Southern Russia. Perennial bunchgrass, leafy, tufted, stiff, deep rooted and fine stemmed, erect, ornamental purple inflorescences, panicles or racemes loose and open, fluffy seeds, drought-tolerant or resistant, used for pasture and hay, palatable while succulent, sprawling habit, can become a weed in crop fields, aggressive invader, rapid growth, a prolific seed producer, grows well on poor shallow soils, especially useful for erosion control, used for stabilizing waterways, tolerant of heavy grazing pressure, similar to and sometimes considered as a synonym of *Bothriochloa bladhii* (Retz.) S.T. Blake, see *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 286. 1832, *Flora Rossica* 4(14): 476. 1853, *Monographiae Phanerogamarum* 6: 486. 1889 and *Bulletin of Miscellaneous Information Kew* 1939: 101. 1939, *Bulletin of the Botanical Survey of India* 20(1-2): 133. 1978 [1979], *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: purple beard grass, Caucasian bluestem

B. compressa (Hook.f.) Henrard (*Amphilophis compressa* (Hook.f.) Blatt. & McCann; *Andropogon compressus* Hook.f.; *Dichanthium compressum* (Hook.f.) S.K. Jain & Deshp.)

Asia, India. See *The Flora of British India* 7: 172. 1896 and *Journal of the Bombay Natural History Society* 32: 421. 1928, *Blumea* 3(3): 456. 1940, *Bulletin of the Botanical Survey of India* 20(1-4): 133. 1978 [1979].

B. concanensis (Hook.f.) Henrard (*Amphilophis concanensis* (Hook.f.) Blatt. & McCann; *Andropogon concanensis* Hook.f.; *Dichanthium concanensis* (Hook.f.) S.K. Jain & Deshp.)

Hassan, Karnataka, India. See *The Flora of British India* 7: 174. 1896 and *Journal of the Bombay Natural History Society* 32: 422. 1928, *Blumea* 3(3): 457. 1940, *Bulletin of the Botanical Survey of India* 20(1-4): 134. 1978 [1979].

B. decipiens (Hackel) C.E. Hubb. (*Amphilophis decipiens* (Hack.) Moodie; *Andropogon decipiens* (Hack.) Domin; *Andropogon pertusus* var. *decipiens* Hack.) (from the Latin *decipio, cepi, ceptum, ere (de e capio)* "to deceive, to trick")

Australia, Queensland, New South Wales, Victoria. Perennial, caespitose, basal tussock, more or less glabrous sheath keeled and loose, ligule ciliolate, bluish green leaves narrow and glabrous, purplish stems erect and slender, spreading or subdigitate inflorescence, purplish and long-awned

spikelets paired and hairy, sessile spikelets lanceolate and with hairy callus, pedicellate spikelets subulate and reduced to one glume, attractive and ornamental, pastures, colonisers of disturbed and degraded areas, see *Monographiae Phanerogamarum* 6: 483. 1889 and *Bibliotheca Botanica* 85(2): 266. 1915, *Bulletin of Miscellaneous Information Kew* 1934: 444. 1934, *Agricultural Gazette of New South Wales* 45: 603. 1934.

in English: red-leg grass, red grass, pitted bluegrass

B. edwardsiana (Gould) Parodi (*Andropogon edwardsianus* Gould) (Edwards Co., Texas)

Southern America, U.S., Argentina. Erect, stiff, densely clumped, see *Field & Laboratory* 19(4): 184-185. 1951, *Gramineas Bonaerenses* (edition 5) 116, 120. 1958.

in English: Merrill bluestem, Edwards plateau beard grass

B. erianthoides (F. Muell.) C.E. Hubb. (*Amphilophis erianthoides* (F. Muell.) Roshev.; *Andropogon erianthoides* F. Muell.) (like the genus *Erianthus* Michaux, from the Greek *erion* "wool" and *anthos* "flower")

Australia, Queensland, New South Wales. Perennial, caespitose, densely tufted, dense tussock forming, expanded sheath, bright green and rigid leaves, ligule obtuse and ciliate, stout and channelled stems, inflorescence with long and dense hairs, white to golden silky and spreading spike-like racemes, sessile spikelets acute and with densely bearded callus, pedicellate spikelets linear or linear-oblong, awn straight, grassland, heavy soils, ornamental when in flower, very adaptable species and very hardy, see *Fragmenta Phytographiae Australiae* 10: 75. 1876 and *Bulletin of Miscellaneous Information Kew* 1934: 444. 1934, *Zlaci SSSR* 570. 1937.

in English: satin-top grass

B. eurylemma M Marchi & Longhi-Wagner

Brazil, Argentina. See *Candollea* 50(2): 432, f. 1-2, 7. 1995.

B. ewartiana (Domin) C.E. Hubb. (*Andropogon ewartianus* Domin; *Andropogon ischaemum* sensu Benth., non L.; *Dichanthium ewartianum* (Domin) C. Gardner) (after the British born botanist Alfred James Ewart, 1872-1937 (Melbourne), plant collector, 1898 Fellow of the Linnean Society, from 1906 to 1937 professor of botany at the Melbourne University, from 1906 to 1937 Victoria Government botanist, 1922 Fellow of the Royal Society of London, his works include *Flora of Victoria*. [Melbourne] 1930, *The New Matriculation Botany*. Specially prepared to meet the requirements of the Matriculation syllabus of London University. 1902, *The Poisonous Action of Ingested Saponins*. [Commonwealth of Australia. Council for Scientific and Industrial Research. Bulletin no. 50.] Melbourne 1931 and the *Rural Calendar*. Birmingham [1904, etc.], co-author with Olive Blanche Davies (fl. 1917) of *The Flora of the Northern Territory*. Melbourne 1917, with Daniel Murnane

wrote *Kimberley Horse Disease*. [Commonwealth of Australia. Council for Scientific and Industrial Research. Bulletin no. 36.] Melbourne 1928; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 521. 1965; Gustave Beauverd (1867-1942), in *Bull. Soc. Bot. Genève* 2: 236. 1910; A.J. Ewart & James Richard Tovey (1873-1922), *The Weeds, Poison Plants and Naturalized Aliens of Victoria*. Melbourne 1909)

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Perennial, stout, erect, caespitose, forming tall and thick leafy tussocks, ligule membranous, glaucous or bluish green and slightly reddish leaves, shiny stems stiff and hairy at the base, reddish and silvery inflorescence, sessile spikelet with a short bearded callus, first glume more or less glabrous and rarely pitted, second glume membranous and hairy, pedicellate spikelet sterile or rarely male and unawned, anthers yellow and linear, native pasture species, grazed, hot areas, wet areas, see *Bibliotheca Botanica* 85: 269. 1915, *Kew Bulletin* 1934: 444. 1934 [*Bulletin of Miscellaneous Information Kew* 1934: 444. 1934], *Flora of Western Australia* pt. 1: 328. pl. 96. 1952.

in English: desert bluegrass

B. exaristata (Nash) Henr. (*Amphilophis exaristatus* Nash; *Andropogon exaristatus* (Nash) Hitchc.; *Andropogon hassleri* Hack.; *Andropogon saccharoides* Sw.; *Andropogon saccharoides* subvar. *muticus* Hack.; *Andropogon saccharoides* var. *hassleri* (Hack.) Ekman; *Andropogon saccharoides* var. *inermis* Vasey ex Beal; *Andropogon saccharoides* var. *submuticus* Vasey ex Hack.; *Bothriochloa hassleri* (Hack.) Henrard; *Bothriochloa hassleri* (Hack.) Cabrera, nom. illeg., non *Bothriochloa hassleri* (Hack.) Henrard; *Bothriochloa hassleri* (Hack.) Herter, nom. illeg., non *Bothriochloa hassleri* (Hack.) Henrard)

U.S., Texas, South America. Inflorescence plumose, upper lemma awnless, see *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Monographiae Phanerogamarum* 6: 495. 1889, *Grasses of North America for Farmers and Students* 2: 57. 1896 and *Flora of the Southeastern United States ...* 65. 1903, *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 266. 1904, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 8. 1912, *Proceedings of the Biological Society of Washington* 41: 163. 1928, *Blumea* 4(3): 520. 1941, *Nederlandsche Dendrologische Vereeniging. Gedenkboek J. Valckenier Suringar*, 24 December, 1864 - 17 October, 1932. Wageningen 1942, *Manual de la Flora de los Alrededores de Buenos Aires* 107. 1953, *Darwiniana* 21(2-4): 579-581. 1978, *Systematic Botany* 8(2): 168-184. 1983, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 57: 1-99. 1998, *Darwiniana* 38(1-2): 127-186. 2000.

in English: awnless bluestem, awnless beard grass

B. foulkesii (Hook.f.) Henrard (*Amphilophis foulkesii* (Hook.f.) C.E.C. Fisch.; *Andropogon foulkesii* Hook.f.; *Dichanthium foulkesii* (Hook.f.) S.K. Jain & Deshp.)

Asia, India. See *The Flora of British India* 7: 174. 1896 and *Flora of the Presidency of Madras* 10: 1731, 1732. London Nov-Dec 1934, *Blumea* 3(3): 547. 1940, *Bulletin of the Botanical Survey of India* 20(1-4): 134. 1978[1979].

B. gracilis W.Z. Fang

China. Sandy soil, see *Bulletin of Botanical Research* 6(1): 100-101, f. 3. 1986.

B. grahamii (Haines) Bor (*Andropogon grahamii* Haines; *Dichanthium grahamii* (Haines) Deshp.)

Asia, India, Africa, Australia. An intergeneric hybrid, *Dichanthium annulatum* (Forssk.) Stapf x *Bothriochloa bladhii* (Retz.) S.T. Blake, see *Bulletin of Miscellaneous Information Kew* 1914: 189. 1914, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 107. 1960, *Fascicles of Flora of India* 15: 14. 1984, *Acta Botanica Indica* 18: 240-246. 1990.

B. hassleri (Hack.) Henrard (*Amphilophis exaristatus* Nash; *Andropogon exaristatus* (Nash) Hitchc.; *Andropogon hassleri* Hack.; *Andropogon saccharoides* subvar. *muticus* Hack.; *Andropogon saccharoides* var. *hassleri* (Hack.) Ekman; *Bothriochloa hassleri* (Hack.) Cabrera, nom. illeg., non *Bothriochloa hassleri* (Hack.) Henrard; *Bothriochloa hassleri* (Hack.) Herter, nom. illeg., non *Bothriochloa hassleri* (Hack.) Henrard) (named for the Swiss botanist Émile (Emilio) Hassler, 1861-1937, physician, botanical collector, traveler (Paraguay), plant collector with the Paraguayan botanist Teodor (Teodoro) Rojas, 1877-1954; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 137. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 167. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; F.A. Stafleu & R.S. Cowan, *Taxonomic literature*. 2: 98. 1979 and 4: 868. Utrecht 1983)

Southern America, Argentina. Wet areas, *Nova Genera et Species Plantarum seu Prodrum* 26. 1788, *Monographiae Phanerogamarum* 6: 495. 1889, *Grasses of North America for Farmers and Students* 2: 57. 1896 and *Flora of the Southeastern United States ...* 65. 1903, *Bulletin de l'Herbier Boissier*, sér. 2, 4(3): 266. 1904, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 8. 1912, *Proceedings of the Biological Society of Washington* 41: 163. 1928, *Blumea* 4(3): 520. 1941, *Nederlandsche Dendrol. Ver. Gedenkboek J. Valckenier Suringar*. 184. 1942, *Manual de la Flora de los Alrededores de Buenos Aires* 107. 1953, *Darwiniana* 21(2-4): 579-581. 1978, *Systematic Botany* 8(2): 168-184. 1983, *Boletim do Instituto de*

Biociências, Universidade Federal do Rio Grande do Sul 57: 1-99. 1998, *Darwiniana* 38(1-2): 127-186. 2000.

B. hirtifolia (J. Presl) Henrad (*Amphilophis hirtifolius* (J. Presl) Nash; *Amphilophis hirtifolius* var. *hirtifolius*; *Andropogon hirtifolius* var. *pubiflorus* (E. Fourn.) Hack.; *Andropogon hirtifolius* J. Presl; *Andropogon pubiflorus* E. Fourn.; *Andropogon pubiflorus* E. Fourn. ex Hemsl.; *Andropogon schaffneri* Griseb. ex E. Fourn.; *Bothriochloa hirtifolia* var. *glabrifolia* Henrard; *Bothriochloa hirtifolia* var. *hirtifolia*; *Dichanthium ischaemum* subvar. *hirtifolium* (J. Presl) Roberty; *Sorghum hirtifolium* (J. Presl) Kuntze)

Mexico. Good forage, see *Reliquiae Haenkeanae* 1: 338. 1830, *Biologia Centrali-Americana; ... Botany ...* 3: 529. 1885, *Mexicanas Plantas* 2: 57. 1886, *Monographiae Phanerogamarum* 6: 484. 1889, *Revisio Generum Plantarum* 2: 792. 1891 and *North American Flora* 17(2): 125. 1912, *Nederlandsche Dendrol. Ver. Gedenkboek J. Valckenier Suringar*. 183-184. 1942, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 159-160. 1960. in Mexico: tallo peludo azul

B. hybrida (Gould) Gould (*Andropogon hybridus* Gould)

U.S., Northern America. See *Madroño* 14(1): 21-23. 1957, *The Southwestern Naturalist* 3: 212. 1959, *Brittonia* 19(1): 68-73. 1967.

in English: hybrid beard grass, hybrid bluestem

B. imperatoides (Hack.) Herter (*Andropogon imperatoides* (Hack.) Lillo; *Andropogon laguroides* DC.; *Andropogon saccharoides* subsp. *laguroides* (DC.) Hack.; *Andropogon saccharoides* var. *imperatoides* Hack.; *Bothriochloa springfieldii* (Gould) Parodi; *Bothriochloa springfieldii* var. *australis* de Wet)

Southern America. See *Nova Genera et Species Plantarum seu Prodrum* 26. 1788, *Catalogus plantarum horti botanici monspeliensis* 78. 1813, *Flora Brasiliensis* 2(4): 293. 1883, *Monographiae Phanerogamarum* 6: 495. 1889 and *Flora de la Provincia de Tucumán, Gramíneas* 20. 1916, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Madroño* 14(1): 19-20. 1957, *Gramineas Bonaerenses* (edition 5) 120. 1958, *American Journal of Botany* 55(10): 1249. 1968.

B. insculpta (Hochst. ex A. Rich.) A. Camus (*Amphilophis insculpta* (Hochst. ex A. Rich.) Stapf; *Andropogon insculptus* Hochst. ex A. Rich.; *Andropogon pertusus* (L.) Willd.; *Andropogon pertusus* subvar. *trifoveolatus* Hack.; *Andropogon pertusus* var. *capensis* Hack.; *Andropogon pertusus* var. *insculptus* (Hochst. ex A. Rich.) Hack.; *Andropogon subunifoveolatus* Steud.; *Bothriochloa insculpta* (A. Rich.) A. Camus; *Bothriochloa pertusa* auct. non (L.) A. Camus; *Bothriochloa pertusa* (L.) A. Camus; *Dichanthium insculptum* (Hochst. ex A. Rich.) Clayton; *Holcus pertusus* L.) (Latin *insculptus*, a, um "engraved, embedded in, cut into")

Africa, Arabia. Perennial or annual, branching, hard and fibrous, reddish purple, tufted, upright, often decumbent and rambling, often stoloniferous with woody stolons, shortly rhizomatous, white hairs around the nodes, leaf blade usually flattened, leaf sheath round, ligule a papery membrane, the leaves and stems have a strong characteristic scent when crushed, spike-like racemes arranged semidigitately, sessile spikelets shiny, 0-4 pitted pedicelled spikelets, lower glume of both spikelets pitted, a pit on one side of the seed hull, grains eaten by baboons, cultivated fodder, low grazing value, unpalatable or moderately to reasonably palatable, forage, native pasture species, hay aromatic, slow to establish, useful for erosion control and for thatching, spreads by horizontal runners, drought-tolerant, colonizes disturbed sites, generally occurs on all well-drained soils, vleis, low-lying areas, in open grassland, stony hillsides, open woodland, grassy plains, grassy banks around fields, borders of irrigated fields, bushveld, along roadsides, in heavily grazed areas, turf, on clay, cultivated ground, similar to *Bothriochloa bladhii* (Retz.) S.T. Blake and *Bothriochloa ewartiana* (Domin) C.E. Hubb., very similar to *Bothriochloa pertusa* (L.) A. Camus, see *Mantissa Plantarum* 2: 301-302. 1771, *Species Plantarum. Editio quarta* 4(2): 922. 1806, *Tentamen Florae Abyssinicae ...* 2: 458. 1850, *Synopsis Plantarum Glumacearum* 1: 380. 1854, *Monographiae Phanerogamarum* 6: 481-483. 1889 and *Flora of Tropical Africa* 9: 176. 1917, *Annales de la Société Linnéenne de Lyon, sér. 2*, 76(1930): 164-165. 1931, *Bulletin of Miscellaneous Information Kew* 1934: 109. 1934, *Kew Bulletin* 32(1): 3. 1977, *Journal of Cytology & Genetics* 15: 51-57. 1980, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Bol. Inst. Bioci.* 57: 38. 1998.

in English: pinhole grass, tassel grass, turf grass, creeping bluegrass, sweet pitted grass, sweet pit grass, stippel grass

in India: hennu ganjalub garikai hullu

in southern Rhodesia: umKunena

in southern Africa: klosgras, lidjiesgras, stinkgras, stippelgras, terpentyn gras, turfgras, turfklosgras, turfklossiegras; imbutane (Zulu); motsamabudi (Sotho); uhatshi (Ndebele)

B. ischaemum (L.) Keng (*Amphilophis ischaemum* (L.) Nash; *Andropogon digitatus* St.-Lag.; *Andropogon ischaemum* L.; *Andropogon ischaemum* var. *americanus* Hack.; *Andropogon ischaemum* var. *genuinus* Hack.; *Andropogon ischaemum* var. *ischaemum*; *Andropogon ischaemum* var. *radicans* (Lehm.) Hack.; *Andropogon ischaemum* var. *songaricus* Rupr. ex Fisch. & Meyen; *Andropogon radicans* Lehm.; *Andropogon taiwanensis* Ohwi; *Bothriochloa ischaemum* (L.) Mansf., nom. illeg., non *Bothriochloa ischaemum* (L.) Keng; *Bothriochloa ischaemum* (L.) Henrard, nom. illeg., non *Bothriochloa ischaemum* (L.) Keng; *Bothriochloa ischaemum* f. *ischaemum*; *Bothriochloa*

ischaemum f. *songarica* (Rupr. ex Fisch. & Meyen) Kitag.; *Bothriochloa ischaemum* var. *songarica* (Rupr. ex Fisch. & Meyen) Celarier & J.R. Harlan; *Bothriochloa taiwanensis* (Ohwi) Ohwi; *Dichanthium ischaemum* (L.) Roberly; *Sorghum ischaemum* (L.) Kuntze) (Latin *ischaemon* for a kind of styptic herb, Plinius)

South Europe, Algeria, Asia temperate and tropical, India, China, Nepal, Central or Southern Asia. Perennial, upright to semiprostrate bunchgrass, tussocks-forming, sheaths shorter than the internodes, ligule hairy, inflorescences digitate, terminal and palmate clusters of panicles, papery paired spikelets, lower glumes nonpitted, lemmas awned, long twisted awns, weed species, cultivated and naturalized, used for pasture and hay, good pasturage, native pasture species, drought-resistant, potential seed contaminant, no tolerance to flooding, found in dry stony places, slopes, field, see *Species Plantarum* 2: 1047. 1753, *Semina in Horto Botanico Hamburgensi* 4: 16. 1827, *Enumeratio Plantarum Novarum* 2. 1841, *Monographiae Phanerogamarum* 6: 475-476. 1889, *Revisio Generum Plantarum* 2: 792. 1891 and *North American Flora* 17(2): 124. 1912, *Contributions from the Biological Laboratory of the Chinese Association for the Advancement of Science. Section Botany.* 10: 201. Nanking 1936, *Journal of Japanese Botany* 12(9): 652-653. 1936, *Blumea* 3(3): 457. 1940, *Flore Analytique et Synoptique de la Tunisie* 56. 1954, *Journal of the Linnean Society, Botany* 55(363): 758. 1958, *Boissiera.* 9: 160. 1960, *Neolineamenta Florae Manshuricae* 70. 1979, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Taxon* 49(2): 245. 2000.

in English: yellow blue stem, Turkestan beard grass, Turkestan blue-stem, plains blue-stem, King Ranch blue-stem

in Mexico: tallo peludo azul

B. ischaemum (L.) Keng var. *ischaemum* (*Amphilophis ischaemum* (L.) Nash; *Andropogon ischaemum* L.; *Dichanthium ischaemum* (L.) Roberly)

Europe, Algeria, Asia temperate and tropical, India, Nepal, China, Japan. Perennial, semiprostrate bunchgrass, naturalized, fodder, forage, erosion control, stabilization of earth structures, revegetation of disturbed areas, see *Species Plantarum* 2: 1047. 1753.

in English: Turkestan blue stem, yellow blue stem

B. ischaemum (L.) Keng var. *songarica* (Rupr. ex Fisch. & C.A. Mey.) Celarier & J.R. Harlan (*Andropogon ischaemum* L. forma *songaricus* (Rupr. ex Fisch. & C.A. Mey.) Kitag., also spelled *songarica*; *Andropogon ischaemum* var. *songaricus* Rupr. ex Fisch. & C.A. Mey.)

Asia temperate and tropical. Perennial, naturalized in the wild, withstands heavy grazing, aggressive, erosion control, revegetation, fodder, forage, see *Species Plantarum* 2: 1047. 1753, *Enumeratio Plantarum Novarum* 2. 1841 and *Contributions from the Biological Laboratory of the Chinese*

Association for the Advancement of Science. Section Botany. 10: 201. 1936, *Journal of the Linnean Society, Botany* 55(363): 758. 1958, *Japanese Journal of Botany* 36: 20. 1961, *Brittonia* 19(1): 68-73. 1967, *Neo-Lineamenta Florae Manshuricae: Or Enumeration of the Spontaneous Vascular Plants of Manchuria* 70. 1979, *Darwiniana* 38(1-2): 127-186. 2000.

in English: King Ranch bluestem, bluestem, Texas yellow beardgrass, Eurasian bluestem, yellow bluestem

in Mexico: tallo azul de King-ranch

B. kuntzeana (Hack.) Henrard (*Amphilophis kuntzeana* (Hack.) Haines; *Andropogon kuntzeanus* Hack.; *Dichanthium kuntzeana* (Hack.) S.K. Jain & Deshp., also spelled *kuntseana*; *Eulalia clarkei* Haines) (in honor of the German botanist Otto Kuntze, 1843-1907, author of *Lexicon generum Phanerogamarum*. Stuttgart 1903, "Plantae pechuelianae hereroenses." *Jb. K. Bot. Gart. Mus. Berl.* 4: 260-275. 1886 and *Revisio generum Plantarum Vascularium*. Leipzig 1891, see Thomas A. Zanoni, "Otto Kuntze, botanist. I. Biography, bibliography and travels." *Brittonia* 32(4): 551-571. 1980)

Asia, India. See *Monographiae Phanerogamarum* 6: 478. 1889 and *The Botany of Bihar and Orissa* 5: 1017, 1031. 1924, *Blumea* 3(3): 546. 1940, *Bulletin of the Botanical Survey of India* 20(1-4): 134. 1978[1979], *Journal of Cytology and Genetics* 15: 51-57. 1980.

B. laguroides (DC.) Herter (*Andropogon laguriformis* Griseb.; *Andropogon laguroides* DC.; *Andropogon laguroides* Lag., nom. illeg., non *Andropogon laguroides* DC.; *Andropogon saccharoides* Sw.; *Andropogon saccharoides* subsp. *laguroides* (DC.) Hack.; *Andropogon saccharoides* var. *laguroides* (DC.) Hack.; *Andropogon saccharoides* var. *laguroides* Hack.; *Andropogon tenuirachis* E. Fourn.; *Bothriochloa exaristata* (Nash) Henrard; *Bothriochloa laguroides* (DC.) Pilg., nom. illeg., non *Bothriochloa laguroides* (DC.) Herter; *Bothriochloa saccharoides* var. *laguroides* (DC.) Beetle; *Deyeuxia megapotamica* Spreng.; *Dichanthium saccharoides* subvar. *laguroides* (DC.) Roberty; *Holcus saccharoides* var. *laguroides* (DC.) Hack.; *Sorghum saccharoides* var. *laguroides* (DC.) Kuntze; *Trachypogon laguroides* (DC.) Nees)

Southern America, Argentina. Forage, see *Nova Genera et Species Plantarum seu Prodrum* 26. 1788, *Catalogus plantarum horti botanici monspeliensis* 78. 1813, *Genera et species plantarum* 3. 1816, *Systema Vegetabilium, editio decima sexta* 4(cur. post.): 30. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 349. 1829, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 309. 1879, *Flora Brasiliensis* 2(4): 293. 1883, *Mexicanas Plantas* 2: 58. 1886, *Monographiae Phanerogamarum* 6: 495. 1889, *Revisio Generum Plantarum* 3(2): 368. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *North American Flora* 17(2): 125. 1912, *Brit-*

tonia 1(2): 81. 1931, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 160. 1940, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 168. 1960, *Phytologia* 30(5): 344, 346. 1975.

in English: silver beard grass

in Mexico: pasto

B. laguroides (DC.) Herter subsp. *laguroides* (*Andropogon laguroides* DC.; *Andropogon saccharoides* Sw.; *Andropogon saccharoides* subsp. *laguroides* (DC.) Hack.; *Andropogon saccharoides* var. *laguroides* (DC.) Hack.; *Andropogon saccharoides* var. *pulvinatus* Gould; *Andropogon tenuirachis* E. Fourn.; *Bothriochloa laguroides* (DC.) Herter; *Bothriochloa laguroides* (DC.) Pilg., nom. illeg., non *Bothriochloa laguroides* (DC.) Herter; *Bothriochloa laguroides* var. *laguroides*; *Bothriochloa saccharoides* subsp. *saccharoides*; *Bothriochloa saccharoides* var. *laguroides* (DC.) Beetle; *Bothriochloa saccharoides* var. *pulvinata* (Gould) Gould; *Dichanthium saccharoides* subvar. *laguroides* (DC.) Roberty; *Holcus saccharoides* var. *laguroides* (DC.) Hack.; *Sorghum saccharoides* var. *laguroides* (DC.) Kuntze; *Trachypogon laguroides* (DC.) Nees)

Southern America, Argentina, Mexico, U.S., northern America. Erect stems, creamy white fluffy spikelets, weed, forage, drought-tolerant, found near the coasts, along roadsides, pine forest, see *Nova Genera et Species Plantarum seu Prodrum* 26. 1788, *Catalogus plantarum horti botanici monspeliensis* 78. 1813, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 349. 1829, *Flora Brasiliensis* 2(4): 293. 1883, *Mexicanas Plantas* 2: 58. 1886, *Monographiae Phanerogamarum* 6: 495. 1889, *Revisio Generum Plantarum* 3(2): 368. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *Brittonia* 1(2): 81. 1931, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 160. 1940, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Madroño* 14(1): 25. 1957, *The Southwestern Naturalist* 3: 212. 1959, *Boissiera*. 9: 168. 1960, *Phytologia* 30(5): 344, 346. 1975.

B. laguroides (DC.) Herter subsp. *torreyana* (Steud.) Allred & Gould (*Amphilophis torreyanus* (Steud.) Nash; *Andropogon glaucus* Torr., nom. illeg., non *Andropogon glaucus* Retz.; *Andropogon hassleri* var. *aristatus* Hack.; *Andropogon jamesii* Torr.; *Andropogon saccharoides* auct.; *Andropogon saccharoides* var. *glaucus* Scribn.; *Andropogon saccharoides* var. *pulvinatus* Gould; *Andropogon saccharoides* var. *torreyanus* (Steud.) Hack.; *Andropogon torreyanus* Steud.; *Bothriochloa laguroides* (DC.) Herter; *Bothriochloa laguroides* var. *torreyana* (Steud.) M. Marchi & Longhi-Wagner; *Bothriochloa saccharoides* (Sw.) Rydb.; *Bothriochloa saccharoides* var. *pulvinata* (Gould) Gould; *Bothriochloa saccharoides* var. *torreyana* (Steud.) Gould;

Dichanthium saccharoides subvar. *torreyanum* (Steud.) Roberty)

South America, Argentina, Mexico, North America, U.S. Perennial, densely tufted, forage, cultivated, naturalized in the wild, see *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Annals of the Lyceum of Natural History of New York* 1(1): 153-154. 1824, *Nomenclator Botanicus. Editio secunda* 1: 93. 1840, *Exploration of the Red River of Louisiana* 302. 1853, *Monographiae Phanerogamarum* 6: 495. 1889, *Memoirs of the Torrey Botanical Club* 5: 28. 1894 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Bulletin de l'Herbier Boissier, sér. 2, 4(3)*: 266. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 341. 1909, *Brittonia* 1(2): 81. 1931, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Madroño* 14(1): 25. 1957, *The Southwestern Naturalist* 3: 212. 1959, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 168. 1960, *Systematic Botany* 8(2): 168-184. 1983, *Phytologia* 61: 119-125. 1986, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 57: 52, f. 6, 19. 1998.

in English: silver beard grass, silver blue stem

B. laguroides (DC.) Herter var. *laguroides*

South America.

B. laguroides (DC.) Herter var. *torreyana* (Steud.) M. Marchi & Longhi-Wagner (*Amphilophis torreyanus* (Steud.) Nash; *Andropogon glaucus* Torr., nom. illeg., non *Andropogon glaucus* Retz.; *Andropogon hassleri* var. *aristatus* Hack.; *Andropogon jamesii* Torr.; *Andropogon saccharoides* var. *glaucus* Scribn.; *Andropogon saccharoides* var. *pulvinatus* Gould; *Andropogon saccharoides* var. *torreyanus* (Steud.) Hack.; *Andropogon torreyanus* Steud.; *Bothriochloa saccharoides* var. *pulvinata* (Gould) Gould; *Bothriochloa saccharoides* var. *torreyana* (Steud.) Gould; *Dichanthium saccharoides* subvar. *torreyanum* (Steud.) Roberty)

South America. Perennial, more or less densely tufted, see *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Annals of the Lyceum of Natural History of New York* 1(1): 153-154. 1824, *Nomenclator Botanicus. Editio secunda* 1: 93. 1840, *Exploration of the Red River of Louisiana* 302. 1853, *Monographiae Phanerogamarum* 6: 495. 1889, *Memoirs of the Torrey Botanical Club* 5: 28. 1894 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Bulletin de l'Herbier Boissier, sér. 2, 4(3)*: 266. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 341. 1909, *Brittonia* 1(2): 81. 1931, *Madroño* 14(1): 25. 1957, *The Southwestern Naturalist* 3: 212. 1959, *Boissiera*. 9: 168. 1960, *Phytologia* 61: 119-125. 1986, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 57: 52, f. 6, 19. 1998.

B. longipaniculata (Gould) Allred & Gould (*Andropogon saccharoides* var. *longipaniculatus* Gould; *Bothriochloa saccharoides* (Sw.) Rydb.; *Bothriochloa saccharoides* var. *longipaniculata* (Gould) Gould)

North America, U.S., Texas. See *Brittonia* 1(2): 81. 1931, *Field & Laboratory* 23(1): 18-19. 1955, *The Southwestern Naturalist* 3: 212. 1959, *Systematic Botany* 8(2): 168-184. 1983.

in English: long-spike beard grass, longspike silver bluestem

B. macera (Steud.) S.T. Blake (*Andropogon macer* Steud.)

Australia. See *Synopsis Plantarum Glumacearum* 1: 371. 1854 and *Proceedings of the Royal Society of Queensland* 53: 64. 1969, B.K. Simon, *A Key to Australian Grasses* 1990.

B. macra (Steudel) S.T. Blake (*Andropogon blakei* H. St. John; *Andropogon macer* Steud.; *Bothriochloa ambigua* S.T. Blake; *Dichanthium annulatum* (Forssk.) Stapf)

South Australia, Victoria, Queensland, New South Wales. Perennial, slender, loosely or densely tufted, erect to decumbent, forming a neat tussock, reddish purple and tough stems, straggling, green and hairy leaves, leaf sheaths keeled, ligule finely ciliate, panicle erect and simple, white-silky racemes shortly pedunculated, greenish and hairy spikelets, pedicelled spikelet sterile, sessile spikelet lanceolate and with a short bearded callus, first glume flattish and more or less pitted on the back, second glume white and smooth, first lemma hyaline, fertile lemma with a brown awn, palea absent, stamens 3, anthers purple, pedicellate spikelets sterile and reduced to glumes, dry areas, more or less unpalatable, revegetator and coloniser of disturbed and degraded areas, ornamental, turf, lawns, forage, in dry areas, see *Flora Aegyptiaco-Arabica* 173. 1775 and *Flora of Tropical Africa* 9: 178. 1917, *Trans. Royal Soc. S. Australia* 67: 43. 1943, *University of Queensland Papers: Department of Botany* 2(3): 29. 1944, H. St. John, "List and summary of the flowering plants in the Hawaiian Islands." *Pacific Trop. Bot. Gard., Mem.* 1: 18. 1973, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Bulletin of Botanical Research* 6(1): 97-98, f. 1. 1986, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Acta Botanica Indica* 18: 240-246. 1990, *Journal of Cytology and Genetics* 25: 140-143, 147-148, 322-323. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: red grass, red-leg grass, pitted beard-grass, red grass

B. meridionalis M. Marchi & Longhi-Wagner

Brazil. See *Candollea* 50(2): 433, f. 3-4, 7. 1995.

B. odorata (Lisboa) A. Camus (*Amphilophis odorata* (Lisboa) A. Camus; *Andropogon odoratus* Lisboa; *Cymbopogon odoratus* (Lisboa) G. Watt; *Dichanthium odoratum* (Lisboa) S.K. Jain & Deshp.)

India, Deccan. Smells like ginger, carminative, essential volatile oil, see *Journal of the Bombay Natural History Society* 4: 123. 1889 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 76: 165. 1931, *Bulletin of the Botanical Survey of India* 20(1-4): 134. 1978[1979].

in India: ushadhana

B. palmeri (Hack.) Pilg. (*Amphilophis palmeri* (Hack.) Nash; *Andropogon palmeri* (Hack.) Gould; *Andropogon saccharoides* subvar. *palmeri* (Hack.) Hack.; *Andropogon saccharoides* var. *palmeri* Hack.; *Bothriochloa barbinodis* var. *palmeri* (Hack.) de Wet; *Bothriochloa palmeri* (Hack.) Gould, nom. illeg., non *Bothriochloa palmeri* (Hack.) Pilg.)

South America. See *Nova Genera et Species Plantarum seu Prodrumus* 26. 1788, *Monographiae Phanerogamarum* 6: 496. 1889 and *North American Flora* 17(2): 126. 1912, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 160. 1940, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Madroño* 14(1): 23. 1957, *The Southwestern Naturalist* 3: 212. 1959, *American Journal of Botany* 55(10): 1248. 1968.

B. perforata (Trin. ex E. Fourn.) Herter (*Amphilophis barbinodis* (Lag.) Nash; *Amphilophis emersus* (E. Fourn.) Nash; *Amphilophis perforatus* (Trin. ex E. Fourn.) Nash; *Amphilophis schlumbergeri* (E. Fourn.) Nash; *Andropogon barbinodis* Lag.; *Andropogon barbinodis* var. *perforatus* (Trin. ex E. Fourn.) Gould; *Andropogon emersus* E. Fourn.; *Andropogon ischaemum* var. *barbinodis* (Lag.) Desv.; *Andropogon perforatus* Trin. ex E. Fourn.; *Andropogon saccharoides* subvar. *perforatus* (Trin. ex E. Fourn.) Hack.; *Andropogon saccharoides* var. *barbinodis* (Lag.) Hack.; *Andropogon saccharoides* var. *perforatus* (Trin. ex E. Fourn.) Hack. ex L.H. Dewey; *Andropogon schlumbergeri* E. Fourn.; *Bothriochloa barbinodis* (Lagasca) Herter; *Bothriochloa barbinodis* (Lag.) Henrard, nom. illeg., non *Bothriochloa barbinodis* (Lag.) Herter; *Bothriochloa barbinodis* var. *palmeri* (Hack.) de Wet; *Bothriochloa barbinodis* var. *perforata* (Trin. ex E. Fourn.) Gould; *Bothriochloa barbinodis* var. *schlumbergeri* (E. Fourn.) de Wet; *Bothriochloa emersa* (E. Fourn.) Henrard; *Bothriochloa schlumbergeri* (E. Fourn.) Henrard; *Holcus saccharoides* var. *barbinodis* (Lag.) Hack.; *Holcus saccharoides* var. *perforatus* (Trin. ex E. Fourn.) Hack.; *Sorghum schlumbergeri* (E. Fourn.) Kuntze)

America. Perennial bunchgrass, densely tufted, erect to spreading, see *Species Plantarum* 2: 1047. 1753, *Nova Genera et Species Plantarum seu Prodrumus* 26. 1788, *Genera et species plantarum* 3. 1816, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 334. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 172. 1831, *Linnaea* 19(6): 694. 1847, *Mexicanas Plantas* 2: 58-59. 1886, *Monographiae Phanerogamarum* 6: 494, 496. 1889, *Revisio Generum Plantarum* 2: 792. 1891, *Contributions from the United States National Herbarium* 2(3): 497. 1894, *Revisio Generum Plantarum* 2: 368. 1898 and *Flora of the*

Southeastern United States ... 65-66. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *North American Flora* 17(2): 126. 1912, *Manual Grasses U.S.* 792. 1935, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 160. 1940, *Blumea* 4(3): 520. 1941, *Madroño* 14(1): 23. 1957, *The Southwestern Naturalist* 3: 212. 1959, *American Journal of Botany* 55(10): 1246-1250. 1968, *Bol. Inst. Bioci. Univ. Fed. Rio Grande do Sul* 57: 20. 1998.

B. pertusa (L.) A. Camus (*Amphilophis pertusa* (L.) Nash ex Stapf; *Amphilophis pertusa* (L.) Stapf, nom. illeg., non *Amphilophis pertusa* (L.) Nash ex Stapf; *Andropogon angustifolius* Parl., nom. illeg., non *Andropogon angustifolius* Sibth. & Sm.; *Andropogon panormitanus* Parl.; *Andropogon pertusus* (L.) Willd.; *Andropogon pertusus* var. *panormitanus* (Parl.) Hack.; *Bothriochloa insculpta* (Hochst. ex A. Rich.) A. Camus; *Bothriochloa panormitana* (Parl.) Pilg.; *Bothriochloa pertusa* (L.) Maire, nom. illeg., non *Bothriochloa pertusa* (L.) A. Camus; *Bothriochloa pertusa* (L.) Willd.; *Dichanthium ischaemum* subvar. *pertusum* (L.) Roberty; *Dichanthium pertusum* (L.) Clayton; *Elionurus pertusus* (L.) Nees ex Steud.; *Holcus pertusus* L.; *Lepocercis pertusa* (L.) Hassk.)

Asia tropical, India, Indonesia. Perennial, herbaceous, prostrate, matted, culms erect or geniculately ascending and branching, spreading, stoloniferous or tufted, numerous creeping shoots which root at the nodes, shortly rhizomatous, leaf blades flat, ligule ciliate, sheaths rounded, inflorescence purplish and scented when crushed, panicles well-exserted, racemes villous, pedicelled spikelets usually with one pit but occasionally with three or none, awn of sessile spikelet geniculate, awns dark purple, first glume glabrous, stamens 3, stigmas reddish purple, native pasture species, quite palatable, best fed green, eaten when mixed with other grasses, good fodder grass, forage, used for grazing and for stacking, suitable for silage and hay, erosion control, revegetator, turf, lawns, recommended for reseeding eroded land in India, ornamental, cultivated, naturalized, moderate periods of drought-tolerant, withstands heavy grazing and trampling, survives fire, vigorous weed species, sometimes difficult to eradicate, rather common in disturbed as well as undisturbed areas, in moderately damp areas, along roadsides and in rather dry areas, grassland on clay soils and open woodland, limestone, loamy soils, open disturbed roadsides, dry pastures, very close to *Bothriochloa insculpta* (Hochst. ex A. Rich.) A. Camus, closely related to *Bothriochloa panormitana* (Parl.) Pilg., *Bothriochloa decipiens* (Hack.) C.E. Hubbard, *Bothriochloa longifolia* (Hack.) Bor and *Bothriochloa radicans* (Lehm.) A. Camus, see *Mantissa Plantarum* 2: 301-302. 1771, *Species Plantarum. Editio quarta* 4(2): 922. 1806, *Flora Palermitana* 1: 269. 1845, *Plantae Javanicae Rariores* 52. 1848, *Tentamen Florae Abyssinicae* ... 2: 458. 1850, *Synopsis Plantarum Glumacearum* 1: 364. 1854 and *Agric. News W. Indies* 15:

179. 1916, *Flora of Tropical Africa* 9: 175. 1917, *Annales de la Société Linnéenne de Lyon, sér. 2*, 76: 164-165. 1931, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 31: 45. 1940, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 216. 1941, *Grasses of Ceylon* 180-181. 1956, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 48: 478. 1957, *Grasses of Burma ...* 109. 1960, *Phyton* 20: 205-211. 1963, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: pitted beardgrass, pitted bluestem, pitted blue grass, sweet pitted grass, hurricane grass, sour grass, Barbados sour grass, Seymour grass, Indian blue grass, Indian couch, Indian couch grass

in Spanish: yerba huracán, camagueyana

in India: anekattu hullu, basana, chapruro, chikka kaare hullu, chinna karai pullu, chinna karai pully, chinna korai pul, chirrya, chota piya, choti jergi, ghanya marvel, girji, gohhaya, hennu ganjala garike hullu, janewa, janewah, janu gaddi, janugaddi, jarewa, karadaa kaasi hullu, killa, makhel, malhar, malher, miniyar, nukah, paluah, palva, palvan, palwa, palwal, palwan, parwal, payen, phularia, phulra, rukah, rukar, sandhur, tikria, tikriya, turri gadai, vida-gucha gadi

in Indonesia: rebha las-alasan, sukut putihan

in Malaysia: rumput embun

in the Philippines: salay, salay parang

in Thailand: yaa haang maa, ya hang ma, ya hangma, yaa hom, ya hom, yaa tot lueat, ya tot lueat

in Vietnam: hoa co, huyêt tha'ô lô

B. pseudischaemum (Nees ex Steud.) Henrard (*Andropogon oryzetorum* Hack.; *Andropogon pseudischaemum* Nees ex Steud.; *Bothriochloa oryzetorum* (Hack.) Bor)

India, Sri Lanka. Perennial, tufted, terete sheaths, lower glume not pitted, closely related to *Bothriochloa ischaemum* (L.) Keng, see *Synopsis Plantarum Glumacearum* 1: 380. 1854, *Mon. Phan.* 6: 477. 1889 and *Blumea* 3: 457. 1940, *Grasses of Ceylon* 189. 1956, *Grasses of Burma ...* 109. 1960.

B. radicans (Lehm.) A. Camus (*Amphilophis radicans* (Lehm.) Stapf; *Andropogon ischaemum* var. *radicans* (Lehm.) Hack.; *Andropogon ischaemum* var. *somalensis* Stapf; *Andropogon radicans* Lehm.; *Dichanthium radicans* (Lehm.) Clayton)

Ethiopia, Sudan, Arabia, South Africa. Perennial, shrub-like, geniculate, usually ascending, tufted, branched, nodes hairy, often stoloniferous, sometimes rooted at the lower nodes, leaf blade flattened, leaf sheath of basal leaves loose and open, ligule a ring of white hairs, inflorescence subdigitate with sessile or shortly pedunculated racemes, spikelets paired, pedicelled spikelet awnless, sessile spikelet

lanceolate, glumes unpitted, lower glume of sessile spikelets hairy, very low grazing value, unpalatable grass, cultivated, naturalized, useful for erosion control, indicator of disturbed veld, common in dry warm regions, on stony slopes, rocky hillsides, heavy clay soils, limestone, vleis, low-lying areas, see *Semina in Horto Botanico Hamburgensi* 4: 16. 1827 [1828], *Monographiae Phanerogamarum* 6: 476. 1889 and *Bulletin of Miscellaneous Information Kew* 6: 210. 1907, *Flora of Tropical Africa* 9: 173. 1917, *Annales de la Société Linnéenne de Lyon, sér. 2*, 76: 164. 1931, *Kew Bulletin* 32(1): 4. 1977.

in English: stinking grass

in South Africa: stinkgras, vleistinkgras, vleystinkgras

B. reevesii (Gould) Gould (*Andropogon reevesii* Gould; *Bothriochloa saccharoides* subsp. *reevesii* (Gould) Allred & Gould)

America, U.S., Texas. See *Brittonia* 1(2): 81. 1931, *Madroño* 14(1): 20-21. 1957, *The Southwestern Naturalist* 3: 212. 1959, *Systematic Botany* 8(2): 177. 1983.

B. saccharoides (Sw.) Rydb. (*Amphilophis argentea* (DC.) Roshev.; *Amphilophis saccharoides* (Sw.) Nash; *Andropogon argenteum* DC.; *Andropogon argenteus* DC.; *Andropogon argenteus* Elliott, nom. illeg., non *Andropogon argenteus* DC.; *Andropogon argenteus* Vanderyst, nom. illeg., non *Andropogon argenteus* DC.; *Andropogon berteronianus* Steud.; *Andropogon kunthii* E. Fourn.; *Andropogon laguriformis* Griseb.; *Andropogon laguroides* DC.; *Andropogon saccharoides* Sw.; *Andropogon saccharoides* subsp. *genuinus* Hack.; *Andropogon saccharoides* subsp. *laguroides* (DC.) Hack.; *Andropogon saccharoides* subsp. *parvispiculus* Hitchc.; *Andropogon saccharoides* subvar. *argenteus* (DC.) Hack.; *Andropogon saccharoides* subvar. *paucirameus* Hack.; *Andropogon saccharoides* subvar. *saccharoides*; *Andropogon saccharoides* subvar. *typicus* Hack.; *Andropogon saccharoides* var. *berteronianus* (Steud.) Hack.; *Andropogon saccharoides* var. *genuinus* Hack.; *Andropogon saccharoides* var. *laguroides* (DC.) Hack.; *Andropogon saccharoides* var. *saccharoides*; *Andropogon saccharoides* var. *surius* Krause; *Bothriochloa laguroides* (DC.) Pilg., nom. illeg., non *Bothriochloa laguroides* (DC.) Herter; *Bothriochloa saccharoides* var. *laguroides* (DC.) Beetle; *Dichanthium saccharoides* (Sw.) Roberty; *Dichanthium saccharoides* subvar. *laguroides* (DC.) Roberty; *Dichanthium saccharoides* subvar. *paucirameus* (Hack.) Roberty; *Dichanthium saccharoides* subvar. *saccharoides*; *Holcus saccharoides* (Sw.) Kuntze ex Stuck.; *Holcus saccharoides* var. *laguroides* (DC.) Hack.; *Sorghum argenteum* (Elliott) Kuntze; *Sorghum saccharoides* (Sw.) Kuntze; *Sorghum saccharoides* var. *laguroides* (DC.) Kuntze; *Sorghum saccharoides* var. *saccharoides*; *Trachypogon argenteus* (DC.) Nees; *Trachypogon laguroides* (DC.) Nees)

Colombia, Venezuela, Mexico, U.S. to Argentina. Weed species, tussocky, clump forming, blue-green and glabrous

leaves, much-branched and oblong gray-downy panicles, bisexual spikelets with awned lemmas, awns sharply bent, grows in dry soils, sandy places, along irrigation ditches, moist areas, see *Nova Genera et Species Plantarum seu Prodrumus* 26. 1788, *Catalogus plantarum horti botanici monspeliensis* 77-78. 1813, *Genera et species plantarum* 3. 1816, *A Sketch of the Botany of South-Carolina and Georgia* 1: 148. 1816, *Annals of the Lyceum of Natural History of New York* 1(1): 153-154. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 348-349. 1829, *Nomenclator Botanicus. Editio secunda* 1: 93. 1840, *Linnaea* 19(6): 694. 1847, *Exploration of the Red River of Louisiana* 302. 1853, *Synopsis Plantarum Glumacearum* 1: 380. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 309. 1879, *Flora Brasiliensis* 2(4): 292-293. 1883, *Mexicanas Plantas* 2: 58-59. 1886, *Monographiae Phanerogamarum* 6: 384, 493-497. 1889, *Revisio Generum Plantarum* 2: 790, 792. 1891, *Contributions from the United States National Herbarium* 2(3): 497. 1894, *Memoirs of the Torrey Botanical Club* 5: 28. 1894, *Grasses of North America for Farmers and Students* 2: 57. 1896, *Revisio Generum Plantarum* 3(2): 368. 1898 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 266. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 16. 1911, *North American Flora* 17(2): 125. 1912, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 8. 1912, *Beihefte zum Botanischen Centralblatt* 32: 334. 1914, *Bulletin agricole du Congo Belge* 9: 237. 1918, *Contributions from the United States National Herbarium* 24(8): 497. 1927, *Brittonia* 1(2): 81. 1931, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 160. 1940, *Rhodora* 42(502): 413-415, pl. 626, f. 1-3. 1940, *Field & Laboratory* 23(1): 18-19. 1955, *Madroño* 14(1): 25. 1957, *The Southwestern Naturalist* 3: 212. 1959, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 168. 1960, *Phytologia* 30(5): 344, 346. 1975, *Systematic Botany* 8(2): 168-184. 1983, *Phytologia* 61: 119-125. 1986, *Cuscatlania* 1(6): 1-29. 1991, *Fontqueria* 46: [i-ii], 1-259. 1997, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 57: 52, f. 6, 19. 1998.

in English: silver beard grass, plumed beard grass

in Mexico: pasto

B. saccharoides (Sw.) Rydb. subsp. *reevesii* (Gould) Allred & Gould (*Andropogon reevesii* Gould; *Bothriochloa reevesii* (Gould) Gould)

Mexico, Northern America. Forage, see *Brittonia* 1(2): 81. 1931, *Madroño* 14(1): 20-21. 1957, *The Southwestern Naturalist* 3: 212. 1959, *Systematic Botany* 8(2): 177. 1983.

in Spanish: popotillo

in Mexico: popotillo

B. saccharoides (Sw.) Rydb. subsp. *saccharoides* (*Amphilophis argentea* (DC.) Roshev.; *Amphilophis saccharoides* (Sw.) Nash; *Andropogon argenteum* DC.; *Andropogon argenteus* DC.; *Andropogon saccharoides* Sw.; *Andropogon saccharoides* subsp. *genuinus* Hack.; *Andropogon saccharoides* subvar. *argenteus* (DC.) Hack.; *Andropogon saccharoides* subvar. *paucirameus* Hack.; *Andropogon saccharoides* subvar. *typicus* Hack.; *Andropogon saccharoides* var. *genuinus* Hack.; *Andropogon saccharoides* var. *surius* Krause; *Bothriochloa saccharoides* (Sw.) Rydb.; *Dichanthium saccharoides* (Sw.) Roberty; *Dichanthium saccharoides* subvar. *paucirameus* (Hack.) Roberty; *Holcus saccharoides* (Sw.) Kuntze ex Stuck.; *Sorghum saccharoides* (Sw.) Kuntze; *Trachypogon argenteus* (DC.) Nees)

Mexico, Southern America, Colombia, Venezuela. Perennial, herbaceous, weed, forage, medicinal, drought-resistant, found along roadsides, in open areas, open forests, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 148. 1816, *Synopsis Plantarum Glumacearum* 1: 380. 1854 and *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *Bulletin agricole du Congo Belge* 9: 237. 1918, *Contributions from the United States National Herbarium* 24(8): 497. 1927, *Brittonia* 1(2): 81. 1931, *Phytologia* 30(5): 344, 346. 1975.

in Mexico: pasto blanco, popotillo cola de zorra, popotillo plateado, zacate aceite

B. saccharoides (Sw.) Rydb. var. *parvispicula* (Hitche.) Tovar (*Andropogon saccharoides* subsp. *parvispiculus* Hitche.; *Andropogon saccharoides* var. *parvispiculus* (Hitche.) Standl.; *Bothriochloa saccharoides* subsp. *parvispicula* (Hitche.) Davidse)

South America. See *Nova Genera et Species Plantarum seu Prodrumus* 26. 1788 and *Contributions from the United States National Herbarium* 24(8): 497. 1927, *Publications of the Field Columbian Museum, Botanical Series* 8(5): 297. 1931, *Ruizia*; *Monografías del Jardín Botánico* 13: 436. 1993, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1257. 1993.

B. saccharoides (Sw.) Rydb. var. *saccharoides* (*Amphilophis argentea* (DC.) Roshev.; *Andropogon argenteus* DC.; *Andropogon saccharoides* subvar. *argenteus* (DC.) Hack.; *Andropogon saccharoides* subvar. *paucirameus* Hack.; *Bothriochloa saccharoides* subsp. *saccharoides*; *Dichanthium saccharoides* subvar. *paucirameus* (Hack.) Roberty; *Trachypogon argenteus* (DC.) Nees)

South America. See *Nova Genera et Species Plantarum seu Prodrumus* 26. 1788, *Catalogus plantarum horti botanici monspeliensis* 77. 1813, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 348. 1829, *Flora Brasiliensis* 2(4): 292. 1883, *Monographiae Phanerogamarum* 6: 497. 1889 and *Zlazi SSSR* 5709. 1937, *Boissiera*. 9: 168. 1960.

B. schlumbergeri (E. Fourn.) Henrard (*Amphilophis schlumbergeri* (E. Fourn.) Nash; *Andropogon schlumbergeri* E. Fourn.; *Andropogon schlumbergeri* E. Fourn. ex Hemsl.; *Bothriochloa barbinodis* var. *schlumbergeri* (E. Fourn.) de Wet; *Bothriochloa perforata* (Trin. ex E. Fourn.) Herter; *Sorghum schlumbergeri* (E. Fourn.) Kuntze)

Arid regions, Mexico, North America. See *Mexicanas Plantas* 2: 59. 1886, *Revisio Generum Plantarum* 2: 792. 1891 and *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Blumea* 4(3): 520. 1941, *American Journal of Botany* 55(10): 1248. 1968.

B. springfieldii (Gould) Parodi (*Andropogon springfieldii* Gould; *Bothriochloa springfieldii* var. *springfieldii*)

Southern America, Argentina, U.S., northern America. Forage, see *Madroño* 14(1): 19-20. 1957, *Gramineas Bonaerenses* (edition 5) 120. 1958, *American Journal of Botany* 55(10): 1249. 1968.

in English: Springfield bluestem, Springfield's beard grass
in Mexico: pasto

B. velutina M. Marchi & Longhi-Wagner

South America, Brazil. See *Candollea* 50(2): 435, f. 5-7. 1995.

B. woodrovii (or **woodrowii**) (Hook.f.) A. Camus (*Amphilophis woodrovii* (Hook.f.) A. Camus; *Andropogon woodrovii* Hook.f.; *Dichanthium woodrowii* (Hook.f.) S.K. Jain & Deshp.) (to commemorate the Kew gardener George Marshall Woodrow, 1846-1911, Director of Botanical Survey of Western India 1893-1899; see Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 755. 1994; M.P. Nayar, *Meaning of Indian Flowering Plant Names*. 365. Dehra Dun 1985)

Asia, India. See *The Flora of British India* 7: 173. 1896 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 76: 165. 1931, *Bulletin of the Botanical Survey of India* 20(1-4): 134. 1978[1979].

B. wrightii (Hack.) Henr. (*Amphilophis wrightii* (Hack.) Nash; *Andropogon wrightii* Hack.; *Andropogon wrightii* Munro ex C. Wright; *Sorghum wrightii* (Hack.) Kuntze) (for the American botanist Charles (Carlos) Wright, 1811-1885, botanical explorer, botanical collector for Asa Gray in the Mexican Boundary Region, explorer and traveler, from 1853 to 1855 under Capt. Cadwalader Ringgold (1802-1867) and Comm. John Rodgers (1812-1882) on the five-ship North Pacific Exploring Expedition, plant collector in Cuba 1856-1857. See Asa Gray (1810-1888), *Plantae Wrightianae Texano-Neo-Mexicanae*. 1852-1853; A.H. Dupree, *Asa Gray - American Botanist, Friend of Darwin*. J. Hopkins 1988; August Heinrich Rudolf Grisebach (1814-1879), *Plantae wrightianae, e Cuba orientali*. Cantabrigiae, Nov. Angl. 1860-1862 and *Catalogus Plantarum Cuben-*

sium. Lipsiae 1866; Daniel Cady Eaton (1834-1895), *Filices wrightianae et fendlerianae*. 1860; Francisco Adolfo Sauvalle (1807-1879), *Flora Cubana*. Enumeratio nova plantarum cubensium vel revisio catalogi grisebachiani, exhibens descriptiones generum specierumque novarum Caroli Wright et Francisci Sauvalle, etc. Havanae [Habana] [1868-] 1873; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; J.H. Barnhart, *Biographical notes upon botanists*. 3: 523. 1965; W.P. Cummings, S.E. Hillier, D.B. Quinn and G. Williams, *The Exploration of North America 1630-1776*. London 1974; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 443. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Elmer Drew Merrill, in *Contr. U.S. Natl. Herb.* 30(1): 318. 1947 and in *Bernice P. Bishop Mus. Bull.* 144: 192. 1937; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 381. Cape Town 1981; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Stafleu & Cowan, *Taxonomic literature*. 7: 464-466. 1988)

Northern America, U.S., Arizona, Texas, New Mexico. Forage, rare species, see *Flora* 68(8): 139. 1885, *Revisio Generum Plantarum* 2: 792. 1891 and *North American Flora* 17(2): 124. 1912, *Blumea* 4(3): 520. 1941.

in English: Wright's beard grass

in Mexico: popotillo cola de coyote, popotillo hoyuelo

Bouteloua Lag. = *Actinochloa* Willd. ex Roem. & Schult., *Antichloa* Steud., *Aristidium* (Endl.) Lindl., *Atheropogon* Muhl. ex Willd., *Botelua* Lag., *Bouteloua* Hornem. ex P. Beauv., *Buchloe* Engelm., *Buchlomimus* Reeder, C. Reeder & Rzed., *Bulbilis* Raf. ex Kuntze, *Calanthera* Hook., *Cathestecum* J. Presl, *Chondrosium* Desv., *Chondrosium* Desv., *Cyclostachya* Reeder & C. Reeder, *Erucaria* Cerv., *Eutriana* Trin., *Fourniera* Scribn., *Griffithsochloa* G. J. Pierce, *Heterosteca* Desv., *Lasiostega* Benth., *Nestlera* Steud., *Opizia* J. Presl, *Pentarrhaphis* Kunth, *Pleiodon* Rchb.,

Polyschistis J. Presl, *Pringleochloa* Scribn.,
Soderstromia C.V. Morton, *Strombodurus*
Steud., *Triaena* Kunth, *Triathera* Desv.,
Triplathera (Endl.) Lindl.

After the Spanish botanist Estéban Boutelou y Soldevilla, 1776-1813 (Madrid), professor in Madrid. See Yahya Ibn Muhammad called Ibn Al-'Auwan, *Libro de Agricultura ... Arreglo hecho ... por D. C. Boutelou*, precedido de una introducción de D. E. Boutelou, etc. 1878; Miguel Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. Madrid 1858; *Genera et Species Plantarum*. 1816.

About 24/40-60 species, North and South America, southwest U.S., Mexico. Chloridoideae, Cynodonteae, Boutelouinae, annual or perennial, herbaceous, caespitose or stoloniferous, erect or decumbent, glandular, auricles absent, ligule a fringe of hairs, plants bisexual or dioecious, sometimes gynodioecious, spicate-branched inflorescence with laterally compressed spikelets, short spikes racemously arranged, racemes solitary along an axis, several to many rather crowded spikelets per spike, spikelets subtended by solitary bristles, cleistogamous or chasmogamous, one fertile basal floret and 1-2 modified sterile florets above, sterile floret variable, 2 glumes very unequal to subequal, lemmas 3-nerved and nerves terminating in mucros or short awns, awned or awnless, 1-3 awns when present, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, weed species, native pasture species, cultivated, fodder, open habitats, dry areas, hill slopes, plains, hillsides, type *Bouteloua racemosa* Lag., see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Species Plantarum. Editio quarta* 4(2): 937. 1806 [1805], *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 40. 1812, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 68. 1813, *Nova Genera et Species Plantarum* 1: 171-172, 174-175, 177-179, t. 55, 61. 1815 [1816], *Systema Vegetabilium* 2: 22, 417. 1817, *Fundamenta Agrostographiae* 161. 1820, *De Graminibus unifloris et sesquifloris* 242. Petropoli 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 413. 1829, *Reliquiae Haenkeanae* 1(4-5): 293-295, t. 41, 42, f. 1-12. 1830, *Genera Plantarum* 94. 1836, *Nomenclator Botanicus. Editio secunda* 1: 108. 1840, *Nomenclator Botanicus. Editio secunda* 2: 192, 299. 1841, *Nom. Gen. Pl.* 38. 1841, *The Vegetable Kingdom* 116. 1847, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Hooker's Journal of Botany and Kew Garden Miscellany* 8: 18. 1856, *Plantas Hartwegianas imprimis Mexicanas* 347. 1857, *Transactions of the Academy of Science of St. Louis* 1: 432. 1859, *Naturaleza [Sociedad mexicana de historia natural]* 1: 347. 1870, *Bull. Torrey Bot. Club* 11: 37, t. 45. 1884, *Die Natürlichen Pflanzenfamilien* 2(2): 59-

60. 1887, *Revisio Generum Plantarum* 2: 763. 1891, *Botanical Gazette* 21: 137-138. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 7-9. 1897, *Circular, Division of Agrostology, United States Department of Agriculture* 15: 7. 1899 and *Contr. U.S. Nat. Herb.* 14(3): 343-428. 1912, *Fieldiana, Botany* 24(2): 38-331. 1955, *Bulletin of the Torrey Botanical Club* 90: 195-196. 1963, *Brittonia* 16: 182-207. 1964, *Brittonia* 17(1): 29-30. 1965, *Leaflets of Western Botany* 10: 327. 1966, *Brittonia* 21: 261-274. 1969, *Brittonia* 23(3): 293-324. 1971, *Bulletin of the Torrey Botanical Club* 105(2): 134. 1978, *Annals of the Missouri Botanical Garden* 66(3): 348-416. 1979 [1980], *Syst. Bot.* 5(3): 312-321. 1980, *Kew Bulletin* 37(3): 417-420. 1982, *Flora Mesoamericana* 6: 296. 1994, *Sida* 17: 111-114. 1996, *Aliso* 17(2): 99-130. 1998, *Aliso* 18: 61-65. 1999, *Flora of Ecuador* 68: 113-119. 2001, *Contributions from the United States National Herbarium* 41: 20-33. 2001, *Restoration Ecology* 12(1): 80-84. Mar 2004, *Conservation Biology* 18(2): 444-454. Apr 2004, *New Phytologist* 162(2): 447-458. May 2004, *Molecular Ecology Notes* 4(2): 262-264. June 2004, *Plant, Cell Environment* 27(7): 907-916. July 2004, *Oikos* 106(1): 151-157. July 2004, *Conservation Biology* 18(4): 947-956. Aug 2004, *Journal of Applied Ecology* 41(4): 604-614. Aug 2004, *Global Change Biology* 10(9): 565-1575. Sep 2004, *Journal of Applied Ecology* 41(6): 1058-1064. Dec 2004, *Oikos* 107(3): 576-582. Dec 2004, *Restoration Ecology* 12(4): 546-551. Dec 2004, *Diversity & Distributions* 11(1): 45-55. Jan 2005, *Global Change Biology* 11(4): 666-684. Apr 2005, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

B. alamosana Vasey (*Bouteloua longiseta* Gould)

Mexico. See *Contributions from the United States National Herbarium* 1(4): 115. 1891 and *Brittonia* 21: 271. 1969.

B. americana (L.) Scribn. (*Aristida adscensionis* var. *americana* (L.) Kuntze; *Aristida americana* L.; *Aristida antillarum* Poir.; *Aristida furcata* P. Beauv.; *Aristida subbiflora* Steud.; *Atheropogon americanus* (L.) E. Fourn.; *Atheropogon antillarum* (Poir.) Spreng.; *Bouteloua americana* (L.) Scribn.; *Bouteloua americana* (L.) Hitchc., nom. illeg., non *Bouteloua americana* (L.) Scribn.; *Bouteloua americana* (L.) Pilg., nom. illeg., non *Bouteloua americana* (L.) Scribn.; *Bouteloua elatior* Griseb.; *Bouteloua humboldtiana* Griseb.; *Bouteloua juncifolia* Lag.; *Bouteloua litigiosa* Lag.; *Bouteloua porphyrantha* C. Wright; *Chaetaria antillarum* (Poir.) P. Beauv. ex Roem. & Schult.; *Dinebra americana* (L.) P. Beauv.; *Eutriana antillarum* (Poir.) Steud.; *Heterosteca americana* (L.) Desv.; *Heterosteca juncifolia* Desv.; *Triathera americana* (L.) Desv.)

South America, the Caribbean. Perennial or annual, short-lived, rather variable, caespitose, weak, erect, slender, prostrate, often branching from the aerial nodes, spreading, often procumbent or scrambling, leaf blades flat or loosely involute, ligule a line of hairs, 5-8 distant branchlets with 4-8 spikelets with 1 hermaphroditic floret and 1 rudiment, glumes subequal, lemma lanceolate 3-awned, 2 ovate lodicules, 3 stamens, open dry areas, see *Species Plantarum* 1: 82. 1753, *Systema Naturae, Editio Decima* 879. 1759, *Fragmenta Botanica* 77. 1809, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Encyclopédie Méthodique, Botanique Suppl.* 1: 451. 1810, *Essai d'une Nouvelle Agrostographie* 98, 160, t. 16, f. 1-3. 1812, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 68. 1813, *Genera et species plantarum* 5. 1816, *Systema Vegetabilium, editio decima sexta* 2: 395. 1817, *Systema Vegetabilium, editio decima sexta* 1: 294. 1825, *Synopsis Plantarum Glumacearum* 1: 138, 217. 1854, *Memoirs of the American Academy of Arts and Science, new series* 8: 532. 1862, *Flora of the British West Indian Islands* 537. 1864, *Anales de la Academia de Ciencias Medicas ...* 8: 201. 1871, *Mexicanas Plantas* 2: 139. 1886, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 306-307. 1891, *Annual Report of the Missouri Botanical Garden* 1893: 148. 1893, *Revisio Generum Plantarum* 33: 340. 1898 and *Symbolae Antillarum* 5: 288. 1907, *Contr. U.S. Natl. Herb.* 12: 123. 1908, *Taxon* 49(2): 247. 2000.

B. annua Swallen

Mexico. See *Journal of the Washington Academy of Sciences* 25(9): 414. 1935.

B. aristidoides (Kunth) Griseb. (*Aristida unilateralis* Willd. ex Steud.; *Atheropogon aristidoides* (Kunth) Roem. & Schult., also spelled *aristidoides*; *Bouteloua aristidoides* var. *aristidoides*; *Bouteloua aristidoides* var. *arizonica* M.E. Jones; *Bouteloua ciliata* Griseb.; *Bouteloua gracilis* Vasey; *Dinebra hirsuta* J. Presl; *Dinebra aristidoides* Kunth; *Dinebra hirsuta* J. Presl; *Eutriana aristidoides* (Kunth) Trin.; *Eutriana hirsuta* (J. Presl) Kunth; *Triathera aristidoides* (Kunth) Nash)

America, Mexico, U.S. Annual, tufted, decumbent to erect, sometimes geniculate, branched at the lower nodes, ligule membranous, inflorescence branches appressed to reflexed, 2-10 spikelets per branch, proximal spikelet on each branch with 1 floret, distal spikelets with 1 bisexual and 1 rudimentary floret, upper glumes pubescent, upper floret base hairy-tufted, forage, along roadsides, gravelly soil, sandy to rocky slopes, flats, washes, disturbed sites, see *Nova Genera et Species Plantarum* 1: 171-172. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 415. 1817, *De Graminibus unifloris et sesquifloris* 242. 1824, *Reliquiae Haenkeanae* 1(4-5): 292. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 280. 1833, *Nomenclator Botanicus. Editio secunda* 1: 132. 1840, *Flora of the British*

West Indian Islands 537. 1864, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 287. 1878, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 302. 1879 and *Flora of the Southeastern United States ...* 137. 1903, *Contributions to Western Botany* 14: 13. 1912, *Ann. Missouri Bot. Gard.* 66: 386. 1979, *Ruizia* 13: 292. 1993.

in English: needle grama

in Mexico: navajita anual, pasto de cabra, tochite

B. aristidoides (Kunth) Griseb. var. *aristidoides* (*Aristida unilateralis* Willd. ex Steud.; *Atheropogon aristidoides* (Kunth) Roem. & Schult., also spelled *aristidoides*; *Bouteloua ciliata* Griseb.; *Bouteloua gracilis* Vasey; *Dinebra hirsuta* J. Presl; *Dinebra aristidoides* Kunth; *Dinebra hirsuta* J. Presl; *Eutriana aristidoides* Trin.; *Eutriana hirsuta* (J. Presl) Kunth; *Triathera aristidoides* (Kunth) Nash)

America, Mexico, U.S. Annual, delicate, branched from base, glabrous, leaf sheaths slightly inflated, ligule a line of short hairs, leaf blades linear and long-attenuate, inflorescence a raceme of 6-10 branchlets divergent to reflexed, 2-5 very slender spikelets per branchlet, first spikelet 1-flowered without rudiment, second spikelet 1-flowered with well-developed awned rudiment, glumes unequal, first glume acicular, second glume lanceolate, 3 stamens, grows in dry mesas, washes, plains, see *Nova Genera et Species Plantarum* 1: 171-172. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 415. 1817, *De Graminibus unifloris et sesquifloris* 242. 1824, *Reliquiae Haenkeanae* 1(4-5): 292. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 280. 1833, *Nomenclator Botanicus. Editio secunda* 1: 132. 1840, *Flora of the British West Indian Islands* 537. 1864, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 287. 1878, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 302. 1879 and *Flora of the Southeastern United States ...* 137. 1903, *Ann. Missouri Bot. Gard.* 66: 386. 1979, *Ruizia* 13: 292. 1993.

in English: needle grama

B. aristidoides (Kunth) Griseb. var. *arizonica* M.E. Jones (*Bouteloua aristidoides* (Kunth) Griseb.; *Dinebra aristidoides* Kunth)

U.S. Annual, 6-10 spikelets per branch, grows in dry mesas, washes, plains, see *Flora of the British West Indian Islands* 537. 1864 and *Contributions to Western Botany* 14: 13. 1912, *Ann. Missouri Bot. Gard.* 66: 386. 1979, *Ruizia* 13: 292. 1993.

in English: Arizona needle grama

B. barbata Lag. (*Actinochloa barbata* (Lag.) Roem. & Schult.; *Bouteloua arenosa* Vasey; *Bouteloua barbata* var. *barbata*; *Bouteloua micrantha* Scribn. & Merr.; *Bouteloua*

microstachya (E. Fourn.) L.H. Dewey; *Bouteloua polystachya* (Benth.) Torr.; *Bouteloua polystachya* var. *major* Vasey; *Bouteloua polystachya* var. *polystachya*; *Bouteloua pumila* Buckley; *Chondrosium subscorpioides* Müll. Hal.; *Chondrosium barbatum* (Lag.) Clayton; *Chondrosium exile* E. Fourn.; *Chondrosium microstachyum* Fourn.; *Chondrosium polystachyum* Benth.; *Chondrosium subscorpioides* Müll. Hal.; *Erucaria tetrastachya* Cerv.; *Eutriana barbata* (Lag.) Kunth)

America, Mexico, U.S. Annual or short-lived perennial, tufted, decumbent at base, erect, prostrate, rooting at the lower nodes, ligule a ciliate membrane, 1 bisexual and 2 rudimentary florets, glumes unequal, lowest lemmas densely pilose, central awn with two membranous lobes, on loose sandy soil, see *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *Systema Vegetabilium* 2: 420. 1817, *Révision des Graminées* 1: 96. 1829, *The Botany of the Voyage of H.M.S. Sulphur* 56. 1844, *Botanische Zeitung. Berlin* 14: 347. 1856, *Pacif. Railr. Rep.* 5(2): 366, t. 10. 1857, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 93. 1862, *Naturaleza [Sociedad mexicana de historia natural]* 1: 349. 1870, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 287. 1878, *Mexicanas Plantas* 2: 137-138. 1886, *Proc. Amer. Acad.* 24: 81. 1889, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(1): t. 34. 1890, *Contributions from the United States National Herbarium* 2(3): 531. 1894 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 8. 1901, *Contr. U.S. Natl. Herb.* 14(3): 383. 1912, *Annals of the Missouri Botanical Garden* 66: 400-403. 1979, *Kew Bulletin* 37: 417. 1982, *Taxon* 33: 126-134. 1984, *Phytologia* 80: 73-91. 1996.

in English: six-weeks grama

in Mexico: navajita anual, navajita de agua, pata de cuervo

B. barbata Lag. var. **barbata** (*Actinochloa barbata* (Lag.) Roem. & Schult.; *Bouteloua arenosa* Vasey; *Bouteloua barbata* var. *arenosa* (Vasey) Beetle; *Bouteloua micrantha* Scribn. & Merr.; *Bouteloua microstachya* (E. Fourn.) L.H. Dewey; *Bouteloua polystachya* (Benth.) Torr.; *Bouteloua pumila* Buckley; *Chondrosium polystachyum* Benth.; *Chondrosium subscorpioides* Müll. Hal.; *Chondrosium barbatum* (Lag.) Clayton; *Chondrosium exile* E. Fourn.; *Chondrosium microstachyum* E. Fourn.; *Chondrosium polystachyum* Benth.; *Chondrosium subscorpioides* Müll. Hal.; *Erucaria tetrastachya* Cerv.; *Eutriana barbata* (Lag.) Kunth)

Northern America, U.S., Mexico. Annual, decumbent and geniculate, prostrate to erect, rooting at the lower nodes, inflorescence branches spreading to appressed, florets 2–3, upper floret hairy-tufted, upper glume tip generally notched, in rocky places, flats, washes, along roadsides, in disturbed soils, see *Varietades de Ciencias, Literatura y Artes* 2(4):

141. 1805, *Systema Vegetabilium* 2: 420. 1817, *Révision des Graminées* 1: 96. 1829, *The Botany of the Voyage of H.M.S. Sulphur* 56. 1844, *Botanische Zeitung. Berlin* 14: 347. 1856, *Pacif. Railr. Rep.* 5(2): 366, t. 10. 1857, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 93. 1862, *Naturaleza [Sociedad mexicana de historia natural]* 1: 349. 1870, *Mexicanas Plantas* 2: 137-138. 1886, *Proc. Amer. Acad.* 24: 81. 1889, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(1): t. 34. 1890, *Contributions from the United States National Herbarium* 2(3): 531. 1894 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 8. 1901, *Contributions from the United States National Herbarium* 14(3): 383, 389, f. 43. 1912, *Ann. Missouri Bot. Gard.* 66: 400-403. 1979, *Kew Bulletin* 37: 417. 1982, *Phytologia* 54(1): 1. 1983.

in English: six-weeks grama

B. barbata Lag. var. **rothrockii** (Vasey) Gould (*Bouteloua barbata* var. *major* Beetle; *Bouteloua barbata* var. *major* (Vasey) Govaerts; *Bouteloua hirticulmis* Scribn.; *Bouteloua polystachya* var. *major* Vasey; *Bouteloua rothrockii* Vasey)

Northern America, U.S., Mexico. Short-lived perennial, erect, forage, see *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 287. 1878, *Department of Agriculture. Special Report* 63: 33. 1883, *Contributions from the United States National Herbarium* 1(8): 268. 1893 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 4-5. 1901, *Annals of the Missouri Botanical Garden* 66: 400-404. 1979, *Las Gramíneas de México* 2: 63. 1987, *World Checklist of Seed Plants* 2(1): 13. 1996.

in English: Rothrock's grama

in Mexico: navajita, navajita de agua, navajita liebrera, navajita racimosa, pata de cuervo, zacate liebre

B. barbata Lag. var. **sonorae** (Griffiths) Gould (*Bouteloua sonorae* Griffiths)

Northern America, Mexico. See *Contributions from the United States National Herbarium* 14(3): 389, f. 43. 1912, *Annals of the Missouri Botanical Garden* 66: 403. 1979[1980].

B. bracteata (McVaugh) Columbus (*Opizia bracteata* McVaugh)

South America, Mexico. See *Flora Novo-Galiciana* 14: 269-270, f. 16a-e. 1983, *Aliso* 18(1): 63. 1999.

B. breviseta Vasey (*Bouteloua oligostachya* (Nutt.) Torr. ex A. Gray; *Bouteloua oligostachya* var. *ramosa* (Scribn. ex Vasey) Scribn. ex Beal; *Bouteloua ramosa* Scribn. ex Vasey; *Chondrosium brevisetum* (Vasey) Clayton)

Northern America, U.S., Mexico. Perennial, rhizomatous, caespitose, erect, woody, panicle branches erect to arching, spikelets pectinate, 1 bisexual floret and 1-2 rudimentary

florets, glumes acute to acuminate, forage, gypsophile, see *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Contributions from the United States National Herbarium* 1(2): 58. 1890, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(1): t. 44. 1890, *Grasses of North America for Farmers and Students* 2: 418. 1896 and *Phytologia* 37(4): 317-407. 1977, *Annals of the Missouri Botanical Garden* 66: 411. 1979, *Systematic Botany* 5: 312-321. 1980, *Kew Bulletin* 37: 418. 1982, *Taxon* 35: 153. 1986.

in English: grama grass, gypsum grama grass, gypsum grama

in Mexico: chino grama, grama azul, navajita china

B. chasei Swallen (*Chondrosum chasei* (Swallen) Clayton)

Mexico. Forage, see *Proceedings of the Biological Society of Washington* 56: 81. 1943, *Boletín de la Sociedad Botánica de México* 30: 113-120. 1969, *Kew Bulletin* 37: 418. 1982.

in Mexico: navajita salina

B. chihuahuana (M.C. Johnst.) Columbus (*Bouteloua rigidiseta* var. *chihuahuana* M.C. Johnst.)

Mexico. See *The Southwestern Naturalist* 27(1): 29. 1982, *Aliso* 14(3): 227. 1996.

B. chondrosioides (Kunth) Benth. ex S. Watson (*Actinochloa ovata* (Lag.) Roem. & Schult.; *Atheropogon chondrosioides* (Kunth) Roem. & Schult.; *Bouteloua havardii* Vasey ex S. Watson; *Bouteloua ovata* Lag.; *Chondrosum humboldtianum* Kunth; *Dinebra chondrosioides* Kunth)

Northern and southern America. Perennial, caespitose, erect, leaves basal, densely pubescent panicle branches, usually 8-12 appressed spikelets per branch, 1 bisexual and 1 rudimentary floret, glumes hairy, forage, open areas, on dry rocky slopes, see *Genera et species plantarum* 5. 1816, *Nova Genera et Species Plantarum* 1: 173, t. 53. 1815 [1816], *Systema Vegetabilium* 2: 416, 420. 1817, *Révision des Graminées* 1: 93. 1829, *Proceedings of the American Academy of Arts and Sciences* 18: 179. 1883 and *Annals of the Missouri Botanical Garden* 66: 389. 1979.

in English: sprucetop grama

in Mexico: navajita morada, navajita peinada

B. curtipendula (Michaux) Torrey (*Andropogon curtipendulum* (Michx.) Spreng. ex Steud.; *Aristida secunda* Rud. ex Roemer & Schultes; *Atheropogon acuminatus* E. Fourn.; *Atheropogon affinis* (Hook.f.) E. Fourn.; *Atheropogon apludioides* Muhl. ex Willd.; *Atheropogon apludioides* Muhl.; *Atheropogon curtipendulus* (Michx.) E. Fourn.; *Atheropogon medius* E. Fourn.; *Atheropogon racemosus* (Lag.) Roem. & Schult.; *Bouteloua media* Gould & Kapadia; *Bouteloua acuminata* (E. Fourn.) Griffiths; *Bouteloua brasiliensis* Ekman; *Bouteloua curtipendula* var. *aristosa* A. Gray; *Bouteloua curtipendula* var. *curtipendula*; *Bouteloua media* (E. Fourn.) Gould & Kapadia; *Bouteloua meliciformis*

Hornem.; *Bouteloua meliciformis* Hornem. ex Roem. & Schult.; *Bouteloua melicoides* P. Beauv.; *Bouteloua pendula* hort. ex Lag.; *Bouteloua racemosa* Lag.; *Bouteloua racemosa* var. *aristosa* (A. Gray) S. Watson & J.M. Coult.; *Chloris curtipendula* Michx.; *Chloris secundus* (Pursh) Eaton; *Chloris virgata* Sw.; *Cynodon curtipendula* (Michx.) Raspail; *Cynodon melicoides* (P. Beauv.) Raspail; *Cynosurus secundus* Pursh; *Dinebra curtipendula* (Michx.) P. Beauv.; *Dinebra melicoides* P. Beauv.; *Dinebra secunda* (Pursh) Roemer & Schultes; *Eutriana affinis* Hook.f.; *Eutriana curtipendula* Trin.; *Eutriana curtipendula* (Michx.) Trin.; *Heterostega curtipendula* Schwein. ex Hook.f.; *Heterostegon curtipendula* Schweinf. ex Hook.f.; *Melica curtipendula* Michx. ex Steud.)

Northern and southern America, from Canada to Argentina. Perennial bunchgrass, caespitose, erect or decumbent, forming clumps, sometimes rhizomatous, ligule a ciliate membrane, inflorescence branches generally pendent, spikelets 1-13 per branch, florets nodding, 1 bisexual and 1-2 sterile rudimentary florets, glumes unequal, upper glume acute or awned, good forage, ornamental, growing on dry slopes, open fields, sandy to rocky drainages, open grasslands and wetlands, woodland, see *Flora Indiae Occidentalis* 1: 203. 1797, *Flora Boreali-Americana* 1: 59. 1803, *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *Species Plantarum* 4: 937. 1806, *Enumeratio Plantarum Horti Botanici Hafniensis* 7. 1807, *Essai d'une Nouvelle Agrostographie* 40, 155, 158, 160, t. 9, f. 6. 1812, *Flora Americae Septentrionalis; or, ...* 728. 1814, *Systema Vegetabilium* 2: 414, 711. 1817, *Fundamenta Agrostographiae* 161. 1820, *Nomenclator Botanicus. Editio secunda* 1: 91, 519. 1821, *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *Manual of Botany for North America. Fifth edition* 173. 1829, *Nomenclator Botanicus edition 2* 1: 90. 1840, *Transactions of the Linnean Society of London* 20: 174-175. 1847, W.H. Emory (1811-1887), *Notes of a Military Reconnaissance from Fort Leavenworth in Missouri to San Diego in California*, etc. 153. Washington 1848, *Exploration of the Red River of Louisiana* 300. 1853, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Gen. Pl.* 3: 1169. 1883, *Mexicanas Plantas* 2: 138-139. 1886, *A Manual of the Botany of the Northern United States* (edition 6) 656. 1890 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 29, t. 4, f. 4, t. 6, f. 15. 1911, *Contributions from the United States National Herbarium* 14(3): 406, f. 55. 1912, *N. Amer. Fl.* 17: 633. 1939, *Brittonia* 16(2): 196, f. 35. 1964, *Annals of the Missouri Botanical Garden* 66: 374. 1979, *Diversity* 16: 40-41. 2000.

in English: side-oats grama, sideoats grama, tall grama grass

in Mexico: banderilla, banderita, gramilla, navajita banderilla

B. curtipendula (Michaux) Torrey var. ***caespitosa*** Gould & Kapadia (*Atheropogon acuminatus* E. Fourn.; *Atheropogon racemosus* (Lag.) Roem. & Schult.; *Bouteloua acuminata* (E. Fourn.) Griffiths; *Bouteloua curtipendula* (Michx.) Torr.; *Bouteloua curtipendula* var. ***aristosa*** A. Gray; *Bouteloua pendula* hort. ex Lag.; *Bouteloua racemosa* Lag.; *Bouteloua racemosa* var. ***aristosa*** (A. Gray) S. Watson & J.M. Coult.; *Bouteloua ramosa* Scribn. ex Vasey; *Chloris curtipendula* Michx.)

Southwest U.S., Mexico, from Colombia and Venezuela to Argentina. Perennial, caespitose, erect, forming small clumps, short knotted base, only branched at base, shortly rhizomatous or rhizomes absent, inflorescence spike-like, spikelets fusiform, lower floret usually hermaphroditic, upper floret sterile, glumes unequal, 2 lodicules, 3 stamens, lemma of fertile floret mucronate or very shortly awned, sterile floret with much reduced membranous lemma and deeply bifid with a tough awn, grows on loose sandy soil, dry regions, grassy slopes, see *Flora Boreali-Americana* 1: 59. 1803, *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *Systema Vegetabilium, editio decima sexta* 2: 414. 1817, *Not. Mil. Recon.* 154. 1848, *Exploration of the Red River of Louisiana* 300. 1853, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Mexicanas Plantas* 2: 139. 1886, *A Manual of the Botany of the Northern United States* (edition 6) 656. 1890, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(1): t. 44. 1890, *Grass. N. Amer.* 2: 418. 1896 and *Contributions from the United States National Herbarium* 14(3): 406, f. 55. 1912, *Brittonia* 16: 203, f. 43. 1964, *Annals of the Missouri Botanical Garden* 66: 374, 377, 379. 1979, *Taxon* 35: 153. 1986, Steven E. Smith, "Variation in response to defoliation between populations of *Bouteloua curtipendula* var. *caespitosa* (Poaceae) with different live-stock grazing histories." *American Journal of Botany* 85: 1266-1272. 1998.

in English: side-oats grama, sideoats grama

B. curtipendula (Michaux) Torrey var. ***curtipendula*** (*Andropogon curtipendulum* (Michx.) Spreng. ex Steud.; *Aristida secunda* Rud. ex Roemer & Schultes; *Atheropogon affinis* (Hook.f.) E. Fourn.; *Atheropogon apludioides* Muhl. ex Willd.; *Atheropogon apludioides* Muhl.; *Atheropogon curtipendulus* (Michx.) Fourn.; *Bouteloua curtipendula* var. ***aristosa*** A. Gray; *Bouteloua meliciformis* Brouss. ex Hornem.; *Bouteloua meliciformis* Hornem. ex Roem. & Schult.; *Bouteloua racemosa* var. ***aristosa*** (A. Gray) S. Watson & J.M. Coult.; *Chloris curtipendula* Michx.; *Cynodon curtipendula* (Michx.) Raspail; *Cynosurus secundus* Pursh; *Dinebra curtipendula* (Michx.) P. Beauv.; *Dinebra secunda* (Pursh) Roemer & Schultes; *Eutriana affinis* Hook.f.; *Eutriana curtipendula* Trin.; *Eutriana curtipendula* (Michx.) Trin.; *Heterostega curtipendula* Schwein. ex Hook.f.; *Heterostega curtipendula* Schweinf. ex Hook.f.; *Melica curtipendula* Michx. ex Steud.)

Northern America, U.S. Perennial, solitary or clumped, long rhizomatous, forage, grows on rich well-drained soil, see *Flora Boreali-Americana* 1: 59. 1803, *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *Species Plantarum* 4: 937. 1806, *Enumeratio Plantarum Horti Botanici Hafniensis* 7. 1807, *Essai d'une Nouvelle Agrostographie* 98, 158, 160. 1812, *Flora Americae Septentrionalis; or, ...* 728. 1814, *Systema Vegetabilium* 2: 711. 1817, *Fundamenta Agrostographiae* 161. 1820, *Nomenclator Botanicus. Editio secunda* 1: 91, 519. 1821, *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *Nomenclator Botanicus* edition 2 1: 90. 1840, *Transactions of the Linnean Society of London* 20: 174-175. 1847, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Gen. Pl.* 3: 1169. 1883, *Mexicanas Plantas* 2: 138-139. 1886, *A Manual of the Botany of the Northern United States* (edition 6) 656. 1890 and *Annals of the Missouri Botanical Garden* 66: 374-377. 1979.

in English: side-oats grama, sideoats grama

in Mexico: banderilla, gramilla, navajita banderilla

B. curtipendula (Michaux) Torrey var. ***tenuis*** Gould & Kapadia (*Bouteloua curtipendula* f. *vivipara* Beetle)

North America, Mexico. See *Phytologia* 48(2): 190. 1981 and *Brittonia* 16(2): 201, f. 42. 1964.

B. dactyloides (Nutt.) Columbus (*Antheophora axilliflora* Steud.; *Bouteloua mutica* Griseb. ex E. Fourn.; *Buchloe dactyloides* (Nutt.) Engelm.; *Bulbilis dactyloides* (Nutt.) Raf. ex Kuntze; *Calanthera dactyloides* (Nutt.) Kunth ex Hook.; *Casiostega dactyloides* (Nutt.) E. Fourn.; *Casiostega hookeri* Rupr. ex E. Fourn.; *Lasiostega humilis* Rupr. ex Munro; *Melica mexicana* Link ex E. Fourn.; *Sesleria dactyloides* Nutt.)

Northern America, U.S. Ornamental, forage, useful for erosion control, see *The Genera of North American Plants* 1: 65. 1818, *Synopsis Plantarum Glumacearum* 1: 111. 1854, *Hooker's Journal of Botany and Kew Garden Miscellany* 8: 18. 1856, *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas adjectis nonnullis Grahamianis enumerat novisque describit). 347. London 1839-1857, *Transactions of the Academy of Science of St. Louis* 1: 432, t. 12, 14, f. 1-17. 1859, *Bulletin de la Société Botanique de Belgique* 15: 470-471. 1876, *Revisio Generum Plantarum* 2: 763. 1891 and *Aliso* 18: 63. 1999, *Diversity* 16: 40-43. 2000.

in English: buffalo grass

in Spanish: hierba búfalo, zacate búfalo

B. dimorpha Columbus (*Opizia stolonifera* J. Presl)

South America, Mexico, Cuba. See *Reliquiae Haenkeanae* 1(4-5): 293, t. 41, f. 1-11. 1830 and *Aliso* 18: 61-65. 1999.

B. distans Swallen

Mexico. Good forage, see *Contributions from the United States National Herbarium* 29(9): 401. 1950.

in Mexico: pasto

B. disticha (Kunth) Benth. (*Atheropogon distichus* (Kunth) Spreng.; *Bouteloua pilosa* (Hook.f.) Benth. ex S. Watson; *Bouteloua piurensis* Pilg.; *Eutriana gracilis* Hook.f., nom. illeg., non *Eutriana gracilis* (Kunth) Trin.; *Eutriana mucronata* F. Aresch.; *Eutriana pilosa* Hook.f.; *Eutriana polyodon* Trin.; *Leptochloa hirta* Nees ex Steud.; *Polydon distichum* Kunth; *Polyodon distichum* Kunth)

South America, Ecuador. Annual or short-lived perennial, very variable, weak, spreading, straggling, geniculate, often procumbent or scrambling, usually densely branched from base, leaf blades flat, ligule a very short fringed membrane, leaf blades linear and long-attenuate, inflorescence spike-like, 1-8 densely clustered spikelets fusiform with 1 fertile and 1 sterile floret, awned, glumes delicate, first glume acicular, second glume lanceolate, lemma of first floret oblong-lanceolate and shortly awned, 3 stamens, sterile floret reduced to an awned lemma, weed, along roadsides, dry hills, open disturbed ground, dry coastal lowland, see *Nova Genera et Species Plantarum* 1: 175, t. 55. 1815 [1816], *Gram. Unifl. Sesquifl.* 242. 1824, *Systema Vegetabilium, editio decima sexta* 1: 294. 1825, *Transactions of the Linnean Society of London* 20: 173, 175. 1847, *Synopsis Plantarum Glumacearum* 1: 209. 1854, *Journal of the Linnean Society, Botany* 19: 105. 1881, *Proceedings of the American Academy of Arts and Sciences* 18: 179. 1883 and F.W.C. Areschoug (1830-1908), *Plantae sub itinere navis bellicae Eugeniae anno 1852 a N. J. Andersson circa Guayaquil collectae* 3: 118. 1910, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 447. 1921.

B. diversispicula Columbus (*Bouteloua brevifolia* Buckley; *Cathestecum brevifolium* Swallen; *Cathestecum brevifolium* var. *brevifolium*)

South America, U.S., Mexico. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 93. 1862 and *Journal of the Washington Academy of Sciences* 27(12): 500. 1937, *Ann. Missouri Bot. Gard.* 66: 397. 1979, *Aliso* 18(1): 63. 1999.

B. elata Reeder & C. Reeder (*Chondrosium elatum* (Reeder & C. Reeder) Clayton)

Mexico. See *Brittonia* 15(3): 215, f. 1-2. 1963, *Kew Bulletin* 37: 418. 1982.

B. eludens Griffiths

North America, U.S., Arizona. Perennial, unbranched, leaf sheaths glabrous or sparsely ciliate near the throat, without rhizomes or stolons, pubescent panicle branches, spikelets appressed with 1-2 bisexual florets and 1 rudimentary floret, glumes acuminate or shortly awned, third florets if present pubescent and variable, forage, grows on dry rocky slopes and rolling desert flats, resembles *Bouteloua chondrosoides*, see *Contributions from the United States National Herbarium* 14(3): 401, pl. 78-80A. 1912, *Desert Plants* 10(1): 19-22, 31-32. 1990.

in English: Santa Rita Mountain grama, elusive grama

in Mexico: navajita Santa Rita

B. erecta (Vasey & Hack.) Columbus (*Cathestecum erectum* Vasey & Hack.)

America, Mexico, U.S., Guatemala. See *Bulletin of the Torrey Botanical Club* 11: 37, pl. 45. 1884 and *Aliso* 18: 61-65. 1999.

in English: grama, grama grass, false grama

in Spanish: grama, grama china

B. eriopoda (Torrey) Torrey (*Bouteloua brevifolia* Buckley; *Chondrosium eriopodum* Torr.; *Chondrosium eriopodum* Torr.)

North America, Mexico, U.S. Perennial, decumbent, wiry, caespitose, rooting at the lower nodes, shortly rhizomatous, sometimes stoloniferous, panicle branches pubescent to woolly, spikelets appressed with 1 bisexual floret and 1 rudimentary floret, glumes unequal, upper glume sharply acute, upper floret base hairy-tufted, good forage, highly palatable, rocky places, dry plains, open areas, slopes, waste ground, woodland, see *Notes of a Military Reconnaissance* 154. 1848, *Pacif. Railr. Rep.* 4(5): 155. 1857, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 93. 1862 and *Proceedings of the Biological Society of Washington* 56: 81. 1943, *Annals of the Missouri Botanical Garden* 66: 397-398. 1979, Debra P. C. Peters, "Recruitment potential of two perennial grasses with different growth forms at a semiarid-arid transition zone." *Am. J. Bot.* 89: 1616-1623. 2002.

in English: black grama, woolly foot grama

in Mexico: navajita negra

B. eriostachya (Swallen) Reeder (*Botelua eriostachya* Reeder; *Bouteloua eriopoda* var. *eriostachya* Swallen; *Chondrosium eriostachyum* (Swallen) Clayton)

South America, Mexico. See *Proceedings of the Biological Society of Washington* 56: 81. 1943, *Bulletin of the Torrey Botanical Club* 94: 7. 1967, *Kew Bulletin* 37: 418. 1982.

B. gracilis (Kunth) Lag. ex Griffiths (*Actinochloa gracilis* (Kunth) Willd. ex Roem. & Schult.; *Atheropogon gracilis* (Kunth) Spreng.; *Atheropogon oligostachyus* Nutt.; *Bouteloua gracilis* (Kunth) Griffiths; *Bouteloua gracilis* (Kunth) Lag.; *Bouteloua gracilis* (Willd. ex Kunth) Lag. ex Griffiths; *Bouteloua gracilis* Vasey; *Bouteloua gracilis* (Kunth) Lag. ex Steud.; *Bouteloua gracilis* f. *pallida* (Scribn. ex Beal) B. Boivin; *Bouteloua gracilis* var. *gracilis*; *Bouteloua gracilis* var. *major* (Vasey ex L.H. Dewey) Beetle; *Bouteloua gracilis* var. *stricta* (Vasey) Hitchc.; *Bouteloua major* Vasey; *Bouteloua oligostachya* (Nutt.) Torr. ex A. Gray; *Bouteloua oligostachya* var. *major* Vasey ex L.H. Dewey; *Bouteloua oligostachya* var. *pallida* Scribn. ex Beal; *Bouteloua stricta* Vasey; *Chondrosium gracile* Kunth; *Chondrosium gracile* Kunth; *Chondrosium gracile* var. *gracile*; *Chondrosium gracile* var. *polystachyum* Nees; *Chondrosium oligostachyum*

(Nutt.) Torr.; *Eutriana gracilis* (Kunth) Trin.; *Eutriana oligostachya* (Nutt.) Kunth)

North America, U.S. Perennial, variable, usually densely caespitose, erect, geniculate or decumbent and rooting at the lower nodes, leaves basal, often with short stout rhizomes, inflorescence racemose or digitate, spikelets with 1 bisexual and 1 rudimentary floret, upper florets sterile, glumes mostly glabrous or scabrous, good forage, ornamental, golf courses, turf, naturalized elsewhere, grows in disturbed habitats, grasslands, on rocky or clay soils, pine forest, slopes, scrub, flats, drainages, shrubland, see *Nova Genera et Species Plantarum* 1: 176, t. 58. 1815 [1816], *Systema Vegetabilium* 2: 418. 1817, *The Genera of North American Plants* 1: 78. 1818, *De Graminibus unifloris et sesquifloris* 240. 1824, *Systema Vegetabilium, editio decima sexta* (edition 16) 1: 293. 1825 [1824], *Révision des Graminées* 1: 96. 1829, *Nomenclator Botanicus. Editio secunda* 1: 219. 1840, *Linnaea* 19(6): 692. 1847, *Exploration of the Red River of Louisiana* 300. 1853, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Bulletin of the Torrey Botanical Club* 14: 9. 1887, *Bulletin of the Torrey Botanical Club* 15: 49. 1888, *Contributions from the United States National Herbarium* 2(3): 531. 1894, *Grasses of North America for Farmers and Students* 2: 418. 1896 and *Contributions from the United States National Herbarium* 14: 375. 1912, *Journal of the Washington Academy of Sciences* 23(10): 454. 1933, *Le Naturaliste Canadien* 94(4): 521. 1967, *Proc. N.Z. Ecol. Soc.* 17: 18-24. 1970, *Annals of the Missouri Botanical Garden* 66: 392. 1979, *Phytologia* 52(1): 11. 1982, *Phytologia* 69: 302. 1990, Julie Fair, W.K. Lauenroth and D.P. Coffin, "Demography of *Bouteloua gracilis* in a mixed prairie: analysis of genets and individuals." *Journal of Ecology* 87(2): 233-243. Mar 1999, *Diversity* 16: 11-14, 40-41. 2000, *Taxon* 50: 573-575. 2001, Debra P. C. Peters, "Recruitment potential of two perennial grasses with different growth forms at a semiarid-arid transition zone." *Am. J. Bot.* 89: 1616-1623. 2002, Laura G. Ambrose, Scott D. Wilson, "Emergence of the Introduced Grass *Agropyron cristatum* and the Native Grass *Bouteloua gracilis* in a Mixed-grass Prairie Restoration." *Restoration Ecology* 11(1): 110-115. Mar 2003, Norma Elena Leyva-López, Karla Iveth Pérez-Márquez, Edmundo García-Moya, José Tulio Arredondo-Moreno & Juan Pablo Martínez-Soriano, "Genetic variability of *Bouteloua gracilis* populations differing in forage production at the southernmost part of the North American Graminetum." *Plant Ecology* 170(2): 287-299. 2004.

in English: blue grama, blue grama grass, eyelash grass

in Spanish: navajita, navajita azul

in Mexico: grama, grama azul, navajita, navajita azul, zacate cepillo

B. griffithsii Columbus (*Actinochloa prostrata* (hort. ex Lag.) Roem. & Schult.; *Bouteloua prostrata* hort. ex Lag.; *Cathestecum annuum* Swallen; *Cathestecum prostratum* J. Presl; *Chondrosium prostratum* (hort. ex Lag.) Sweet; *Chondrosium prostratum* (hort. ex Lag.) Kunth, nom. illeg., non *Chondrosium prostratum* (hort. ex Lag.) Sweet)

South America, Mexico. See *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *Systema Vegetabilium* 2: 419. 1817, *Hortus Britannicus* 1: 455. 1826, *Révision des Graminées* 1: 94. 1829, *Reliquiae Haenkeanae* 1(4-5): 295, t. 42. 1830 and *Journal of the Washington Academy of Sciences* 27(12): 497. 1937, *Aliso* 18(1): 63. 1999.

B. hirsuta Lag. (*Actinochloa hirsuta* (Lag.) Roem. & Schult.; *Atheropogon hirtus* (Kunth) Spreng.; *Atheropogon papillosus* Engelm.; *Bouteloua aschenborniana* Griseb. ex E. Fourn.; *Bouteloua bolanderi* Vasey ex Beal; *Bouteloua foenea* (Torr.) Torr. ex S. Watson; *Bouteloua glandulosa* (Cerv.) Swallen; *Bouteloua hirsuta* f. *vivipara* Beetle; *Bouteloua hirsuta* var. *glandulosa* (Cerv.) Gould; *Bouteloua hirsuta* var. *major* Vasey; *Bouteloua hirsuta* var. *minor* Vasey; *Bouteloua hirsuta* var. *palmeri* Vasey ex Beal; *Bouteloua hirsuta* var. *pectinata* (Feath.) Cory; *Bouteloua hirta* (Kunth) Scribn.; *Bouteloua hirta* hort. ex Lag.; *Bouteloua hirta* Scribn. ex Vasey; *Bouteloua hirta* var. *major* (Vasey) Vasey ex L.H. Dewey; *Bouteloua hirta* var. *minor* Vasey ex L.H. Dewey; *Bouteloua hirticulmis* Scribn.; *Bouteloua palmeri* Vasey; *Bouteloua papillosa* (Engelm.) Torr.; *Bouteloua pectinata* Feath.; *Chloris hispida* P. Durand; *Chondrosium hirsutum* (Lag.) Sweet; *Chondrosium aschenbornianum* Nees; *Chondrosium drummondii* E. Fourn.; *Chondrosium foeneum* Torr.; *Chondrosium hirsutum* (Lag.) Sweet; *Chondrosium hirsutum* Sweet; *Chondrosium hirsutum* var. *glandulosum* (Cerv.) R.W. Pohl; *Chondrosium hirtum* Kunth; *Chondrosium papillosum* (Engelm.) Torr.; *Erucaria glandulosa* Cerv.; *Erucaria hirsuta* Cerv.; *Erucaria longifolia* Cerv.; *Eutriana hirta* (Kunth) Trin.) (named for the American (California) (b. in Germany) botanist Henry Nicholas Bolander, 1831 (or 1832)-1897, plant collector (California), ca. 1867-1872 with Albert Kellogg (1813-1887), 1873-1874 with Albert Kellogg et al. (California), Bolander was a friend and correspondent of Charles Léo Lesquereux (1806-1889), author of *A Catalogue of the Plants Growing in the Vicinity of San Francisco*. San Francisco 1870. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 212. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 448. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; W.L. Jepson, in *Erythea, a Journal of Botany, West American and General*. 76: 100-107. Berkeley, California

1898; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954)

North America, U.S., Guatemala. Perennial, densely or loosely caespitose, dense, erect or decumbent, forming clumps, occasionally stoloniferous, panicle branches extending beyond the base of the terminal spikelets, spikelets with 1 bisexual floret and 1-2 rudimentary florets, glumes acuminate or awn-tipped, forage, open areas, along roadsides, dry rocky soil, dry sandy soil, see *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *De Quibusdam Chloridis Speciebus* 17, 22. Monspeli 1808, *Nova Genera et Species Plantarum* 1: 176-177, t. 59. 1815 [1816], *Systema Vegetabilium* 2: 419. 1817, *De Graminibus unifloris et sesquifloris* 240. 1824, *Systema Vegetabilium, editio decima sexta* 1: 293. 1825, Sweet's *Hortus Britannicus* 455. London 1826, *American Journal of Science* 46: 104. 1843, *Linnaea* 19(6): 692. 1847, *Notes of a Military Reconnaissance* 153, t. 12. 1848, *Exploration of the Red River of Louisiana* 300. 1853, *Naturaleza [Sociedad mexicana de historia natural]* 1: 347-348, 350. 1870, *Catalogue of Plants* 18. 1874, *Mexicanas Plantas* 2: 137. 1886, *Bulletin of the Torrey Botanical Club* 14: 9. 1887, *Proceedings of the American Academy of Arts and Sciences* xxii: 531. 1887, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(1): t. 39, f. 2-3. 1890, *Contributions from the United States National Herbarium* 2(3): 531. 1894, *Grasses of North America for Farmers and Students* 2: 417. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 4-5. 1901, *Contr. U.S. Natl. Herb.* 14: 372. 1912, *Botanical Gazette* 91: 103, f. 1-4. 1931, *Rhodora* 38(455): 405. 1936, *North American Flora* 17(8): 621. 1939, *Annals of the Missouri Botanical Garden* 66: 394. 1979, *Journal of the Arnold Arboretum* 60(2): 320. 1979, *Phytologia* 54(1): 1. 1983, *Novon* 2(2): 102. 1992, *Taxon* 50: 850. 2001.

in English: hairy grama

in Mexico: navajita velluda, navajitas

B. hirsuta Lag. subsp. *hirsuta*

U.S. Perennial, variable, densely or loosely caespitose, usually decumbent and branched basally, erect, sometimes stoloniferous, leaf sheaths glabrous or pubescent to scabrous, rachilla internodes subtending second florets with a distal tuft of hairs, on well-drained soils.

in English: hairy grama

B. hirsuta Lag. subsp. *pectinata* (Feath.) Wipff & S.D. Jones (*Bouteloua hirsuta* var. *major* Vasey; *Bouteloua hirsuta* var. *pectinata* (Feath.) Cory; *Bouteloua hirta* var. *major* (Vasey) Vasey ex L.H. Dewey; *Bouteloua pectinata* Feath.; *Chondrosium pectinatum* (Feath.) Clayton)

U.S. Erect, densely tufted, without rhizomes or stolons, leaf sheaths mostly pubescent, panicles racemose, rachilla internodes subtending second florets with a distal tuft of hairs, on well-drained soils, see *U.S. Department of Agriculture.*

Division of Botany. Bulletin 12(1): t. 39, f. 3. 1890, *Contributions from the United States National Herbarium* 2(3): 531. 1894 and *Botanical Gazette* 91: 103, f. 1-4. 1931, *Rhodora* 38(455): 405. 1936, *Kew Bulletin* 37: 418. 1982, *Sida* 17(1): 109. 1996.

in English: tall grama

B. hirsuta Lag. var. *glandulosa* (Cerv.) Gould (*Bouteloua glandulosa* (Cerv.) Swallen; *Bouteloua hirsuta* var. *palmeri* Vasey ex Beal; *Bouteloua hirticulmis* Scribn.; *Chondrosium hirsutum* var. *glandulosum* (Cerv.) R.W. Pohl; *Erucaria glandulosa* Cerv.; *Erucaria hirsuta* Cerv.)

North America, Mexico. See *Naturaleza [Sociedad mexicana de historia natural]* 1: 347-348. 1870, *Grasses of North America for Farmers and Students* 2: 417. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 4-5. 1901, *North American Flora* 17(8): 621. 1939, *Journal of the Arnold Arboretum* 60(2): 320. 1979, *Novon* 2(2): 102. 1992.

B. hirsuta Lag. var. *hirsuta* (*Actinochloa hirsuta* (Lag.) Roem. & Schult.; *Atheropogon hirtus* (Kunth) Spreng.; *Atheropogon papillosus* Engelm.; *Bouteloua aschenborniana* Griseb. ex E. Fourn.; *Bouteloua bolanderi* Vasey ex Beal; *Bouteloua foenea* (Torr.) Torr. ex S. Watson; *Bouteloua glandulosa* (Cerv.) Swallen; *Bouteloua hirsuta* subsp. *hirsuta*; *Bouteloua hirsuta* Lag. var. *glandulosa* (Cerv.) Gould; *Bouteloua hirsuta* var. *minor* Vasey; *Bouteloua hirsuta* var. *palmeri* Vasey ex Beal; *Bouteloua hirta* (Kunth) Scribn.; *Bouteloua hirta* hort. ex Lag.; *Bouteloua hirta* var. *minor* Vasey ex L.H. Dewey; *Bouteloua papillosa* (Engelm.) Torr.; *Chondrosium aschenbornianum* Nees; *Chondrosium hirsutum* (Lag.) Sweet; *Chondrosium aschenbornianum* Nees; *Chondrosium drummondii* E. Fourn.; *Chondrosium foeneum* Torr.; *Chondrosium hirsutum* (Lag.) Sweet; *Chondrosium hirsutum* Sweet; *Chondrosium hirsutum* (Lag.) Kunth; *Chondrosium hirsutum* var. *hirsutum*; *Chondrosium hirtum* Kunth; *Chondrosium papillosum* (Engelm.) Torr.; *Eutriana hirta* (Kunth) Trin.)

North America, U.S., Guatemala. Perennial, forage, see *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *Nova Genera et Species Plantarum* 1: 176-177, t. 59. 1815 [1816], *Systema Vegetabilium* 2: 419. 1817, *De Graminibus unifloris et sesquifloris* 240. 1824, *Systema Vegetabilium, editio decima sexta* 1: 293. 1825, Sweet's *Hortus Britannicus* 455. London 1826, *American Journal of Science* 46: 104. 1843, *Linnaea* 19(6): 692. 1847, *Notes of a Military Reconnaissance* 153, t. 12. Washington 1848, *Exploration of the Red River of Louisiana* 300. 1853, *Catalogue of Plants* 18. 1874, *Mexicanas Plantas* 2: 137. 1886, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(1): t. 39, f. 2. 1890, *Contributions from the United States National Herbarium* 2(3): 531. 1894, *Grasses of North America for Farmers and Students* 2: 417. 1896 and *Contr.*

U.S. Natl. Herb. 14: 372. 1912, *Annals of the Missouri Botanical Garden* 66: 394. 1979.

in English: hairy grama

in Mexico: grama, navajita, navajita velluda

B. hirsuta Lag. var. ***pectinata*** (Featherly) Cory (*Bouteloua hirsuta* Lag. subsp. *pectinata* (Featherly) J. Wipff & S.D. Jones; *Bouteloua pectinata* Featherly; *Chondrosium pectinatum* (Feath.) Clayton)

North America, U.S. Perennial, see *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805 and *Botanical Gazette* 91: 103, f. 1-4. 1931, *Rhodo* 38(455): 405. 1936, *Kew Bulletin* 37: 418. 1982, *Sida* 17(1): 109. 1996.

in English: tall grama, hairy grama

B. johnstonii Swallen

Mexico. Good forage, see *Proceedings of the Biological Society of Washington* 56: 79. 1943.

B. juncea (Desv. ex P. Beauv.) A.S. Hitchc. (*Atheropogon domingensis* Spreng.; *Eutriana juncea* (Desv. ex P. Beauv.) Trin.; *Eutriana ledebourii* Trin.; *Triaena juncea* (Desv. ex P. Beauv.) Griffiths; *Triathera juncea* Desv. ex P. Beauv.)

North America, U.S. Perennial, prostrate, delicate, low, prostrate, geniculate, leaf blades flat or folded, minute spikes, spikelet solitary, glumes lanceolate and acuminate, sterile floret of 3 slender scabrous awns, found along roadsides, arid ground, disturbed areas, see *Essai d'une Nouvelle Agrostographie* 40, t. 8, f. 4. 1812, *De Graminibus unifloris et sesquifloris* 238. 1824, *Systema Vegetabilium, editio decima sexta* 1: 293. 1825 and *Contributions from the United States National Herbarium* 14(3): 354. 1912, *Contributions from the United States National Herbarium* 17(3): 343. 1913.

in Spanish: lamilla

B. karwinskii (E. Fourn.) Griffiths (*Chondrosium karwinskii* E. Fourn.; *Chondrosium karwinskii* E. Fourn.)

Mexico. See *Mexicanas Plantas* 2: 137. 1886 and *Contributions from the United States National Herbarium* 14(3): 394, f. 47, t. 76. 1912, *Boletín de la Sociedad Botánica de México* 30: 113-120. 1969.

B. kayi Warnock (*Chondrosium kayi* (Warnock) Clayton)

North America, U.S. Perennial, herbaceous, caespitose, erect, ligule a ciliate membrane, panicle branches with 6-20 spikelets pedicellate, spikelets reddish to purplish with 1 bisexual and 1 rudimentary floret, glumes subequal, lowest lemmas glabrous, see *Field & Laboratory* 23(1): 15-16, f. s.n. 1955, *Kew Bulletin* 37: 418. 1982.

in English: Kay's grama

B. media (E. Fourn.) Gould & Kapadia (*Atheropogon medius* E. Fourn.; *Bouteloua media* Gould & Kapadia; *Bouteloua brasiliensis* Ekman; *Bouteloua latifolia* Swallen; *Bouteloua pringlei* Scribn.; *Opizia pringlei* (Scribn.) Hack.)

South Mexico, Brazil, Paraguay. Perennial, caespitose, slender, branched from upper nodes, leaf sheaths glabrous or hirsute, ligule a line of very short hairs, old leaf sheaths fibrous, leaf blades long-tapering, inflorescence branchlets with 1-3 spikelets, lowermost spikelets reduced, glumes unequal, first glume narrowly acuminate, second glume lanceolate, fertile floret without awns, 2 lodicules, 3 stamens, second floret sterile and awned, slopes, see *Mexicanas Plantas* 2: 139. 1886 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 4. 1901, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 29, t. 4, f. 4, t. 6, f. 15. 1911, *North American Flora* 17(8): 631, 633. 1939, *Brittonia* 16(2): 196, f. 35. 1964.

in Mexico: pasto

B. megapotamica (Spreng.) Kuntze (*Bouteloua multisetata* (Nees) Griseb.; *Bouteloua multisetata* var. *pallida* Hack.; *Eutriana multisetata* Nees; *Pappophorum eutrianoides* Trin. ex Nees; *Pappophorum megapotamicum* Spreng.)

Southern America, Bolivia, Uruguay, Argentina. Found in dry sandy soil, see *Systema Vegetabilium, editio decima sexta* 4(2): 34. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 413-414. 1829, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 303. 1879, *Revisio Generum Plantarum* 3(2): 341. 1898 and *Anales del Museo Nacional de Buenos Aires* 13: 491. 1906, *Annals of the Missouri Botanical Garden* 66: 385. 1979.

in English: grama grass

B. mexicana (Scribn.) Columbus (*Fourniera mexicana* Scribn.; *Soderstromia mexicana* (Scribn.) C.V. Morton)

Mexico. See *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 8-9. 1897 and *Leaflets of Western Botany* 10(16): 327. 1966, *Aliso* 18(1): 63. 1999.

B. multifida (Griffiths) Columbus (*Cathestecum multifidum* Griffiths; *Griffithssochloa multifida* (Griffiths) G.J. Pierce)

Mexico. See *Contributions from the United States National Herbarium* 14(3): 360, f. 24. 1912, *Bulletin of the Torrey Botanical Club* 105(2): 134. 1978, *Aliso* 18(1): 63. 1999.

B. nervata Swallen (*Buchlomimus nervatus* (Swallen) Reeder, C. Reeder & Rzed.)

Mexico. See *North American Flora* 17(8): 626. 1939, *Brittonia* 17(1): 29-30. 1965.

B. parryi (Fourn.) Griffiths (*Bouteloua polystachya* var. *vestita* S. Watson; *Bouteloua vestita* (S. Watson) Scribn. ex L.H. Dewey; *Chondrosium parryi* E. Fourn.; *Chondrosium parryi* Fourn.)

North America, U.S. Annual or short-lived perennial, tufted, erect or geniculate, 1 bisexual floret and 2 rudimentary florets, glumes unequal, lower glumes mucronate, stoloniferous, good forage, grows on sandy slopes, flats, see *Proc. Amer. Acad. Sci.* 17: 202, 367. 1882, *Proceedings of the American Academy of Arts and Sciences* 18: 177. 1883, *Mexicanas Plantas* 2: 150. 1886, *Contributions from the*

United States National Herbarium 2(3): 531. 1894 and *Contributions from the United States National Herbarium* 14(3): 381. 1912, *Leaflets of Western Botany* 5(12): 199. 1949, *Cactus Succ. J.* (Los Angeles) 33: 51. 1961, *Annals of the Missouri Botanical Garden* 66: 408. 1979[1980].

in English: Parry's grama

B. parryi (Fourn.) Griffiths var. **gentryi** (Gould) Gould (*Bouteloua gentryi* Gould)

North America. Perennial, stoloniferous, see *Leaflets of Western Botany* 5(12): 199. 1949, *Annals of the Missouri Botanical Garden* 66: 408. 1979[1980].

B. parryi (Fourn.) Griffiths var. **parryi** (*Bouteloua polystachya* S. Watson; *Bouteloua polystachya* var. *vestita* S. Watson; *Bouteloua vestita* (S. Watson) Scribn. ex L.H. Dewey; *Chondrosum parryi* E. Fourn.)

North America. Annual, tufted, see *Proceedings of the American Academy of Arts and Sciences* 18: 177. 1883, *Mexicanas Plantas* 2: 150. 1886, *Contributions from the United States National Herbarium* 2(3): 531. 1894.

B. pedicellata Swallen

Mexico. Good forage, see *North American Flora* 17(8): 627. 1939.

in Mexico: pasto

B. polymorpha (E. Fourn.) Columbus (*Atheropogon polymorphus* E. Fourn.; *Pentarrhaphis founeriana* Hack. & Scribn.; *Pentarrhaphis geminata* Hack. & Scribn.; *Pentarrhaphis polymorpha* (E. Fourn.) Griffiths)

Mexico. See *Mexicanas Plantas* 2: 141. 1886, *Bulletin of the Torrey Botanical Club* 17: 229-230, t. 107-108. 1890 and *Contributions from the United States National Herbarium* 14(3): 357, f. 21. 1912, *Aliso* 18(1): 63. 1999.

B. purpurea Gould & Kapadia

Mexico. Good forage, see *Brittonia* 16(2): 197, f. 40. 1964.

B. quiriegoensis Beetle

Mexico. See *Phytologia* 59(4): 287. 1986.

B. radicata (E. Fourn.) Griffiths (*Actinochloa bromoides* (Lag.) Roem. & Schult.; *Atheropogon bromoides* (Kunth) Roem. & Schult.; *Atheropogon radicosus* E. Fourn.; *Bouteloua bromoides* Lag.; *Bouteloua bromoides* var. *radicata* (E. Fourn.) Vasey ex L.H. Dewey; *Dinebra bromoides* Kunth; *Dinebra bromoides* Kunth; *Eutriana bromoides* (Kunth) Trin.; *Eutriana bromoides* (Lag.) Trin., nom. illeg., non *Eutriana bromoides* (Kunth) Trin.; *Eutriana bromoides* (Kunth) Kunth, nom. illeg., non *Eutriana bromoides* (Kunth) Trin.; *Nestlera festuciformis* Willd. ex Steud.)

North America, U.S., Mexico. Perennial, dense, caespitose, erect, straight, knotty, unbranched, leaf sheaths striate, rhizomatous, inflorescence variable, spikelets appressed, 2 florets, lowest floret bisexual, glumes acuminate, lowest lemmas 3-awned, good forage, on dry rocky places, slopes, in disturbed habitats, see *Nova Genera et Species*

Plantarum 1: 172, t. 51. 1815 [1816], *Genera et species plantarum* 5. 1816, *Systema Vegetabilium, editio decima sexta* 2: 415, 420. 1817, *Fundamenta Agrostographiae* 161, 162. 1820, *Gram. Unifl. Sesquifl.* 241. 1824, *Révision des Graminées* 1: 95. 1829, *Nomenclator Botanicus. Editio secunda* 2: 192. 1841, *Mexic. Plantas* 2: 140. 1886, *Contributions from the United States National Herbarium* 2(3): 533. 1894 and *Contr. U.S. Natl. Herb.* 14: 411, t. 81. 1912, *Annals of the Missouri Botanical Garden* 66: 381. 1979, *Fl. Novo-Galic.* 14: 92. 1983.

in English: purple grama

in Mexico: navajita morada

B. ramosa Scribner ex Vasey (*Bouteloua breviseta* Vasey; *Bouteloua curtispindula* var. *caespitosa* Gould & Kapadia; *Bouteloua oligostachya* var. *ramosa* (Scribn. ex Vasey) Scribn. ex Beal)

North America, U.S. Perennial, not rhizomatous, geniculate, densely caespitose, hard, knotty, panicles ascending to divergent to arching, reduced spikelet terminal, 1 bisexual floret and 1-2 rudimentary florets, glumes acute to acuminate, lowest lemmas 3-awned, forage, on rocky slopes, see *Exploration of the Red River of Louisiana* 300. 1853, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(1): t. 44. 1890, *Contributions from the United States National Herbarium* 1(2): 58. 1890, *Grasses of North America for Farmers and Students* 2: 418. 1896 and *Brittonia* 16(2): 203, f. 43. 1964, *Syst. Bot.* 5: 318. 1980, *Taxon* 35: 153. 1986.

in Spanish: chino grama

in Mexico: chino, zacate chino

B. reederorum Columbus (*Atheropogon stolonifer* E. Fourn.; *Bouteloua stolonifera* Scribn.; *Cathestecum stoloniferum* (E. Fourn.) Griffiths; *Cyclostachya stolonifera* (Scribn.) Reeder & C. Reeder; *Pringleochloa stolonifera* (E. Fourn.) Scribn.)

Mexico. See *Mexicanas Plantas* 2: 140. 1886, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 302. 1891, *Botanical Gazette* 21: 137-138. 1896 and *Contributions from the United States National Herbarium* 14(3): 362, f. 26. 1912, *Bulletin of the Torrey Botanical Club* 90: 196. 1963, *Aliso* 18(1): 63. 1999.

B. reflexa Swallen

Mexico. Lowermost spikelets reduced, see *North American Flora* 17: 632. 1939.

B. repens (Kunth) Scribn. (*Actinochloa bromoides* (Lag.) Roem. & Schult.; *Atheropogon americanus* (L.) E. Fourn.; *Atheropogon americanus* var. *depauperata* E. Fourn.; *Atheropogon filiformis* E. Fourn.; *Atheropogon juncifolius* (Desv.) Spreng.; *Atheropogon repens* (Kunth) Roem. & Schult.; *Bouteloua bromoides* Lag.; *Bouteloua bromoides* var. *bromoides*; *Bouteloua filiformis* (E. Fourn.) Griffiths;

Bouteloua heterostega (Trin.) Griffiths; *Bouteloua humboldtiana* Griseb.; *Bouteloua porphyrantha* C. Wright; *Bouteloua pubescens* Pilg.; *Bouteloua repens* (Kunth) Scribn. & Merr.; *Dinebra juncifolia* (Desv.) Steud.; *Dinebra repens* Kunth; *Eutriana bromoides* (Kunth) Trin.; *Eutriana bromoides* (Lag.) Trin., nom. illeg., non *Eutriana bromoides* (Kunth) Trin.; *Eutriana heterostega* Trin.; *Eutriana juncifolia* (Desv.) Kunth; *Eutriana repens* (Kunth) Trin.; *Heterosteca juncifolia* Desv.; *Heterosteca rhadina* Nash)

North and South America, U.S., Mexico. Perennial, herbaceous, leaning, not rhizomatous, widely spreading, more or less prostrate, decumbent, erect or geniculate, sometimes rooting at the lower nodes, usually branching from the aerial nodes, ligule a ciliate membrane, reddish to purplish inflorescence, spikelets appressed or closely imbricate, 1 bisexual and 1 staminate or rarely rudimentary floret, glumes glabrous, lowest lemmas 3-awned, good forage, growing in small clumps, dry places, montane slopes, dunes and low dunes, sandy ocean shores, see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Nova Genera et Species Plantarum* 1: 172, t. 51-52. 1815 [1816], *Genera et species plantarum* 5. 1816, *Systema Vegetabilium* 2: 416, 420. 1817, *Fundamenta Agrostographiae* 161, 162. 1820, *De Graminibus unifloris et sesquifloris* 241-242. 1824, *Systema Vegetabilium, editio decima sexta* 1: 294. 1825, *Révision des Graminées* 1: 95. 1829, *Nomenclator Botanicus. Editio secunda* 1: 510. 1840, *Memoirs of the American Academy of Arts and Science, new series* 8: 532. 1863, *Anales de la Academia de Ciencias Medicas ...* 8: 201. 1871, *Mexicanas Plantas* 2: 139-140. 1886, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 9. 1897 and *U.S.D.A. Div. Agrostol. Bull.* 24: 26. 1901, *Bulletin of the Torrey Botanical Club* 30(7): 386. 1903, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 51: 193. 1909, *Contributions from the United States National Herbarium* 14: 413-414, t. 82A, 83, f. 59. 1912, *Annals of the Missouri Botanical Garden* 66: 379-380. 1979, *Inform. Bot. Italia* 13: 168-171. 1981, *Fl. Novo-Galic.* 14: 91. 1983, *Cuscatlania* 1(6): 1-29. 1991, *Listados Florísticos de México* 17: 1-41. 1997.

in English: slender grama

in Mexico: k'u-suuk, navajita rastrera, pelillo

B. rigidiseta (Steud.) Hitchc. (*Aegopogon rigidiseta* Steud.; *Bouteloua texana* S. Watson; *Polyodon texanus* (S. Watson) Nash)

Northern America, Mexico. Perennial, caespitose, erect, leaf sheaths smooth, ligule a ciliate membrane, without rhizomes or stolons, spikelets appressed, 1 bisexual and 1-2 rudimentary florets, second florets sterile, glumes lanceolate and pubescent, upper glume bilobed and awned, lower glume bidentate and shortly awned, forming clumps, low forage value, spikelets purplish green, in grassy

pastures, openings, in clay or sandy clay soils, see *Synopsis Plantarum Glumacearum* 1: 146. 1854, *Proceedings of the American Academy of Arts and Sciences* 18: 196. 1883 and *Journal of the Washington Academy of Sciences* 23(10): 453. 1933, *Annals of the Missouri Botanical Garden* 66: 379-380. 1979, *The Southwestern Naturalist* 27(1): 29. 1982, *Aliso* 14(3): 227. 1996.

in English: Texas grama

B. rothrockii Vasey (*Bouteloua barbata* Lag. var. *rothrockii* (Vasey) Gould; *Bouteloua hirticulmis* Scribn.) (for the American botanist Joseph Trimble Rothrock, 1839-1922, surgeon, explorer, plant collector, professor of botany, forester, one time student of Asa Gray, with Robert Kennicott & Major Frank Pope exploring expedition to British Columbia and Alaska; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 183. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 340. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 651-652. 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 355. 1973; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. 305-313. 1899; Howard Atwood Kelly & Walter Lincoln Burrage, *Dictionary of American medical biography*. New York 1928; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; John T. Walbran, *British Columbia Coast Names, 1592-1906: To Which are Added a Few Names in Adjacent United States Territory, Their Origin and History*. First Edition. Ottawa: Government Printing Bureau, 1909; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; G.P.V. Akrigg & Helen B. Akrigg, *British Columbia Place Names*. Sono Nis Press, Victoria 1986.)

Northern America, U.S., Mexico. Short-lived perennial, erect or geniculate, not stoloniferous, panicle branches scabrous, important forage, grows on dry slopes and sandy flats, see *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 287. 1878, *Department of Agriculture. Special Report* 63: 33. 1883, *Contributions from the United States National Herbarium* 1(8): 268. 1893 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 4-5. 1901, *Annals of the Missouri Botanical Garden* 66: 400-404. 1979, *Las Gramíneas de México* 2: 63. 1987, *World Checklist of Seed Plants* 2(1): 13. 1996.

in English: Rothrock's grama

B. scabra (Kunth) Columbus (*Atheropogon pentarrhaphis* (Trin.) Spreng.; *Eutriana pentarrhaphis* Trin.; *Pentarrhaphis paupercula* (Presl) Hack. & Scribn.; *Pentarrhaphis scabra* Kunth; *Polyschistis paupercula* J. Presl)

Mexico. See *Nova Genera et Species Plantarum* 1: 178, t. 60. 1815 [1816], *Gram. Unifl. Sesquifl.* 239. 1824, *Systema Vegetabilium, editio decima sexta* 1: 294. 1825, *Reliquiae Haenkeanae* 1(4-5): 294, t. 41, f. 12. 1830, *Bulletin of the Torrey Botanical Club* 17 17: 233. 1890 and *Aliso* 18(1): 64. 1999.

B. scorpioides Lag. (*Actinochloa humilis* (P. Beauv. ex Kunth) Willd. ex Roem. & Schult.; *Actinochloa procumbens* (P. Durand) Roem. & Schult.; *Actinochloa prostrata* (hort. ex Lag.) Roem. & Schult.; *Actinochloa scorpioides* (Lag.) Roem. & Schult.; *Actinochloa tenuis* (P. Beauv. ex Kunth) Willd. ex Roem. & Schult.; *Atheropogon humilis* (P. Beauv. ex Kunth) Spreng.; *Atheropogon procumbens* (P. Durand) J. Jacq.; *Atheropogon scorpioides* (Lag.) Spreng.; *Bouteloua humilis* (P. Beauv. ex Kunth) Hieron.; *Bouteloua procumbens* (P. Durand) Griffiths; *Bouteloua prostrata* hort. ex Lag.; *Bouteloua rahmeri* Phil.; *Bouteloua simplex* var. *rahmeri* (Phil.) Henrard; *Bouteloua tenuis* (P. Beauv. ex Kunth) Griseb.; *Chloris procumbens* P. Durand; *Chondrosium scorpioides* (Lag.) Kunth; *Chondrosium humile* P. Beauv. ex Kunth; *Chondrosium procumbens* (P. Durand) Desv. ex P. Beauv., nom. illeg., non *Chondrosium procumbens* (P. Durand) Desv.; *Chondrosium prostratum* (hort. ex Lag.) Sweet; *Chondrosium scorpioides* (Lag.) Kunth; *Chondrosium tenue* P. Beauv. ex Kunth; *Cynodon procumbens* (P. Durand) Raspail; *Erucaria lutescens* Cerv.; *Eutriana humilis* (P. Beauv. ex Kunth) Trin.; *Eutriana tenuis* (P. Beauv. ex Kunth) Trin.)

Mexico. Caespitose, erect, dense, glabrous, ligule ciliate, leaf blades involute and filiform, spikelets pectinate, glumes subacute and glabrous, fertile lemma bearded and densely pilose, forage, on rocky hills, see *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, Philippe Durand [l'abbé] (*fl.* 1795-1815), *De Quibusdam Chloridis Speciebus* 16, 22. Monspeii 1808, *Essai d'une Nouvelle Agrostographie* 1: 41, 158, t. 9, f. 7. 1812, *Eclogae Graminum Rariorum* 2: 16, t. 12. 1813, *Nova Genera et Species Plantarum* 1: 175-176, t. 56, 57. 1815 [1816], *Genera et species plantarum* 5. 1816, *Systema Vegetabilium* 2: 417-420. 1817, *Gram. Unifl. Sesquifl.* 239-240. 1824, *Annales des Sciences Naturelles (Paris)* 5: 303. 1825, *Systema Vegetabilium, editio decima sexta* 1: 293. 1825, *Hortus Britannicus* 1: 455. 1826, *Révision des Graminées* 1: 94. 1829, *Naturaliza [Sociedad mexicana de historia natural]* 1: 349. 1870, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 259. 1874, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 4: 495. 1882, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 85. 1891 and *Contributions from the*

United States National Herbarium 14(3): 364, f. 27. 1912, *Mededeelingen van 's Rijks-Herbarium* 40: 66. 1921, J.B.M. Alcocer-Ruthling, R. Robberecht & D.C. Thill, "The response of *Bouteloua scorpioides* to water stress at two phenological stages." *Botanical Gazette* 150: 454-461. 1989, *Plant Ecology* 170(2): 287-299. 2004.

in Mexico: pasto

B. simplex Lag. (*Actinochloa humilis* (P. Beauv. ex Kunth) Willd. ex Roem. & Schult.; *Actinochloa procumbens* (P. Durand) Roem. & Schult.; *Actinochloa prostrata* (hort. ex Lag.) Roem. & Schult.; *Actinochloa simplex* (Lag.) Roem. & Schult.; *Actinochloa tenuis* (P. Beauv. ex Kunth) Willd. ex Roem. & Schult.; *Atheropogon humilis* (P. Beauv. ex Kunth) Spreng.; *Atheropogon procumbens* (P. Durand) J. Jacq.; *Bouteloua brachyathera* Phil.; *Bouteloua humilis* (P. Beauv. ex Kunth) Hieron.; *Bouteloua humilis* (P. Beauv. ex Kunth) Hack. ex Sodiro; *Bouteloua procumbens* (P. Durand) Griffiths; *Bouteloua prostrata* hort. ex Lag.; *Bouteloua pusilla* Vasey; *Bouteloua rahmeri* Phil.; *Bouteloua simplex* var. *actinochloides* Henrard; *Bouteloua simplex* var. *rahmeri* (Phil.) Henrard; *Bouteloua tenuis* (P. Beauv. ex Kunth) Griseb.; *Bouteloua tenuis* var. *humilis* (P. Beauv. ex Kunth) Griseb.; *Chloris filiformis* Poir.; *Chloris procumbens* P. Durand; *Chloris tenuis* Poir.; *Chondrosium humile* Kunth; *Chondrosium simplex* (Lag.) Kunth; *Chondrosium tenue* P. Beauv. ex Kunth; *Chondrosium humile* P. Beauv. ex Kunth; *Chondrosium procumbens* (P. Durand) Desv.; *Chondrosium procumbens* Desv. ex Beauv.; *Chondrosium procumbens* (P. Durand) Desv. ex P. Beauv., nom. illeg., non *Chondrosium procumbens* (P. Durand) Desv.; *Chondrosium prostratum* (Lag.) Sweet; *Chondrosium prostratum* (hort. ex Lag.) Sweet; *Chondrosium prostratum* (hort. ex Lag.) Kunth, nom. illeg., non *Chondrosium prostratum* (hort. ex Lag.) Sweet; *Chondrosium simplex* (Lag.) Kunth; *Chondrosium tenue* P. Beauv. ex Kunth; *Chondrosium tenue* P. Beauv.; *Cynodon procumbens* (P. Durand) Raspail; *Erucaria lutescens* Cerv.; *Eutriana humilis* (P. Beauv. ex Kunth) Trin.; *Eutriana tenuis* (P. Beauv. ex Kunth) Trin.)

North and South America, U.S., Bolivia, Colombia, Peru. Annual, erect, decumbent, leaf sheaths smooth, panicle branches straight and arching, 1 bisexual floret and 1-2 rudimentary florets, glumes acute or acuminate, lowest lemmas 3-awned, stout compressed awns, forage, weed species, grows on rocky open slopes, disturbed places, see *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *De Quibusdam Chloridis Speciebus* 16, 22. 1808, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Encyclopédie Méthodique. Botanique ... Supplément* 2: 237. 1811, *Essai d'une Nouvelle Agrostographie* 1: 41, 158, t. 9, f. 7. 1812, *Eclogae Graminum Rariorum* 2: 16, t. 12. 1813, *Nova Genera et Species Plantarum* 1: 175-176, t. 56-57. 1815 [1816], *Systema Vegetabilium* 2: 417-419. 1817, *Encyclopédie Méthodique.*

Botanique ... Supplément 5: 614. 1817, *De Graminibus unifloris et sesquifloris* 239-240. 1824, *Systema Vegetabilium, editio decima sexta* 1: 293. 1825, *Annales des Sciences Naturelles (Paris)* 5: 303. 1825, *Hortus Britannicus* 1: 455. 1826, *Révision des Graminées* 1: 94. 1829, *Naturaliza [Sociedad mexicana de historia natural]* 1: 349. 1870, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 259. 1874, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 303. 1879, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 4: 495. 1882, *Bulletin of the Torrey Botanical Club* 11: 6. 1884, *Anales de la Universidad Central del Ecuador* 3(25): 481. 1889, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 85. Leipzig 1891 and *Contributions from the United States National Herbarium* 14(3): 364, f. 27. 1912, *Mededeelingen van's Rijks-Herbarium* 40: 65-66. 1921, *Annals of the Missouri Botanical Garden* 66: 404. 1979, *Great Basin Naturalist* 50: 74. 1990.

in English: mat grama, matted grama

in Mexico: navajita simple, navajita anual

B. stolonifera Scribn. (*Cyclostachya stolonifera* (Scribn.) Reeder & C. Reeder)

Mexico. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 302. 1891 and *Bulletin of the Torrey Botanical Club* 90: 196. 1963.

B. swallenii Columbus (*Bouteloua annua* Swallen; *Pentarrhaphis annua* Swallen)

Costa Rica. Rare, see *Journal of the Washington Academy of Sciences* 25(9): 414. 1935, *Ceiba* 4(5): 286. 1955, *Aliso* 18: 61-65. 1999.

B. triaena (Trin. ex Spreng.) Scribn. (*Atheropogon triaena* Trin. ex Spreng.; *Dinebra cristata* J. Presl; *Eutriana cristata* (J. Presl) Kunth; *Eutriana racemosa* Trin. ex E. Fourn.; *Eutriana triaena* Trin.; *Triaena racemosa* Kunth; *Triathera gracilis* E. Fourn.; *Triathera racemosa* (Kunth) Desv.)

Mexico. Erect, delicate, prostrate, caespitose, leaf blades glabrous, ligule shortly pubescent, good forage, ornamental, moist places, shade, see *Nova Genera et Species Plantarum* 1: 179, t. 61. 1815 [1816], *Gram. Unifl. Sesquifl.* 239. 1824, *Systema Vegetabilium, editio decima sexta* 1: 293. 1825, *Reliquiae Haenkeanae* 1(4-5): 293. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 176. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 281. 1833, *Las Gramíneas de México* 141. 1881, *Mexicanas Plantas* 2: 141. 1886, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 307-308, f. 2. 1891.

in Mexico: pasto, navajita

B. trifida Thurber (*Bouteloua burkii* Scribn. ex S. Watson, also spelled *burkei*; *Bouteloua burkii* Scribn.; *Bouteloua*

trinii (E. Fourn.) Griffiths; *Chondrosium trinii* Fourn.; *Chondrosium polystachyum* Trin. ex E. Fourn.; *Chondrosium trifidum* (Thurb.) Clayton; *Chondrosium trinii* E. Fourn.; *Chondrosium virletii* E. Fourn. ex Hemsl.; *Chondrosium virletii* E. Fourn.)

U.S., Mexico. Perennial, erect, geniculate, caespitose, delicate, slender, wiry, sometimes shortly rhizomatous, leaf sheaths glabrous, panicle branches ascending and slightly arching, spikelets 3-awned and purplish, 1 bisexual floret and 1 rudimentary floret, glumes 2-lobed and unequal, upper glume acute or notched, central awns of lemmas without membranous lobes, good forage, a drought-resistant species, found in sandy areas, dry open plains, rocky places, sandy plains, shrubby hills, slopes, see *Proceedings of the American Academy of Arts and Sciences* 18: 177, 179. 1883, *Bulletin of the Torrey Botanical Club* 11: 5. 1884, *Biologia Centrali-Americana; ... Botany ...* 3: 564. 1885, *Mexicanas Plantas* 2: 136. 1886, *Contributions from the United States National Herbarium* 2(3): 532. 1894 and *Contributions from the United States National Herbarium* 14(3): 387, 423, f. 41, 42, t. 74. 1912, *Kew Bulletin* 37: 418. 1982.

in English: red grama

in Mexico: navajita roja

B. trifida Thurber var. **burkii** (Scribn. ex S. Wats.) Vasey ex L.H. Dewey (*Bouteloua burkii* Scribn. ex S. Watson; *Bouteloua burkii* Scribn.; *Bouteloua trifida* Thurb.; *Chondrosium trinii* Fourn.)

U.S., New Mexico, Texas, Mexico. Perennial, lower lemmas densely appressed pubescent, see *Proceedings of the American Academy of Arts and Sciences* 18: 177, 179. 1883, *Bulletin of the Torrey Botanical Club* 11: 5. 1884, *Mexicanas Plantas* 2: 136. 1886, *Contributions from the United States National Herbarium* 2(3): 532. 1894 and *Contributions from the United States National Herbarium* 14(3): 387, f. 41, 42, t. 74. 1912.

in English: red grama

B. trifida Thurber var. **trifida**

U.S. Perennial, lower lemmas glabrous or sparsely appressed pubescent, grows in dry plains and rocky slopes, see *Proceedings of the American Academy of Arts and Sciences* 18: 177, 179. 1883.

in English: red grama

B. uniflora Vasey (*Bouteloua uniflora* var. *uniflora*)

North America, Texas, Mexico, U.S. Perennial, caespitose, erect, glabrous, without rhizomes or stolons, leaf blades involute, panicle branches with 1 spikelet, spikelets appressed with 1 bisexual and 0-1 rudimentary florets, glumes acute, second florets absent or reduced to short awns, good forage, in limestone soils, see *Botanical Gazette* 16(1): 26-27. 1891 and *Annals of the Missouri Botanical Garden* 66: 368. 1979.

in English: oneflower grama, Nealley's grama, oneflowered grama

in Mexico: banderilla simple, pasto

B. uniflora Vasey var. *coahuilensis* Gould & Kapadia

North America, Mexico, U.S. Good forage, see *Brittonia* 16(2): 191, f. 27, 41. 1964.

B. uniflora Vasey var. *uniflora*

North America, Mexico, U.S.

in Mexico: pasto

B. vaneedenii Pilg.

West Indies. Perennial, caespitose, erect, slender, leaf blades involute and filiform, leaves glabrous, spikes finally reflexed, awns very short, see *Symbolae Antillarum* 6: 2. 1909.

B. varia (Swallen) Columbus (*Cathestecum varium* Swallen)

South America. See *Journal of the Washington Academy of Sciences* 27(12): 498. 1937, *Aliso* 18(1): 63. 1999.

B. warnockii Gould & Kapadia (named for B. Warnock, botanical collector)

U.S., Texas, Mexico. Perennial, erect, glaucous, caespitose, stiff, leaf sheaths glabrous, forming clumps, leaf blades erect or curving, rhizomes or stolons absent, spikelets appressed with 1 bisexual and 1 sterile floret, glumes subequal, lowest lemmas 3-awned, on dry slopes, see *The Southwestern Naturalist* 7(3-4): 176-181, f. 1-10. 1962

in English: Warnock's grama

B. williamsii Swallen (dedicated to the American botanist Louis Otho (Otto) Williams, 1908-1991, traveler, orchidologist, botanical collector in Brazil, Honduras, Costa Rica, Guatemala and United States of America, his works include *Orchid studies*. Harvard University [1937-1947], with P.H. Allen wrote "Orchids of Panama." *Monogr. Syst. Bot. Missouri Botanical Garden*. vol. 4. 1980. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 499. 1965; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 437. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 805-806. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 436. 1973; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; *Leaflet. W. Bot.* 1: 131. 1934; *Phytologia* 2: 234. 1947; *Phytologia* 24: 85-86, 90. 1972; *Fieldiana, Bot.* 34: 101. 1972; *Wrightia* 5: 70. 1974; *Phytologia* 31: 443. 1975; *Wrightia* 7: 23. 1981; *Mem. New York Bot. Gard.* 35: 713.

1982; *Wrightia* 7: 272. 1984; *Brittonia* 37: 290. 1985; *Ann. Missouri Bot. Gard.* 74: 919. 1987; *Taxon* 42: 930. 1993)

Mexico, Honduras. Erect, delicate, leaves mostly basal, leaf blades glabrous to hirsute, lower spikelets perfect, glumes acuminate, good to excellent forage, grows in dry rocky sites, hillsides, see *Ceiba* 4(5): 285. 1955.

in Mexico: navajita

Brachatera Desv. = *Danthonia* DC.,
Sieglingia Bernh.

From the Greek *brachys* "short" and *ather* "barb, spine, chaff, prickle, awn."

Danthonioideae, Danthonieae, see *Syst. Verz.* 20, 44. 1800, *Flore Française. Troisième Édition* 3: 32. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Systema Vegetabilium* 2: 690. 1817 and *Contributions from the United States National Herbarium* 46: 170-177. 2003.

Brachiaria (Trin.) Griseb. = *Leucophrys*
Rendle, Pseudobrachiaria Launert

Latin *brachium*, *ii* (*bracchium*) "the arm, the forearm," referring to the shape of the grass or to the racemes, armlike; Greek *brachion*; see Carl Friedrich (Carolus Fridericus) von Ledebour (1785-1851), *Flora rossica*. 4: 469. Stuttgartiae 1853.

About (1-3-)(50-)90/100 species warm areas and tropics, mainly Old World. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Melinidinae, or Panicoideae, Paniceae, Setariinae, mostly annual or sometimes perennial, variable, herbaceous, caespitose, creeping, sprawling, sometimes stoloniferous or rhizomatous, hollow internodes, auricles absent, ligule fringed to ciliate, sheaths open, leaves linear to lanceolate, plants bisexual, inflorescence of compound spike-like racemes along a central axis with filiform rachis, ovate or oblong spikelets, spikelets pedicellate and solitary or in pairs, florets 2, upper floret bisexual, lower floret sterile or male, 2 glumes very unequal, lower glume a small scale and much smaller than the second, lower lemma and upper glume equal and similar, upper lemma acute and coriaceous or hardened when ripe, palea present, 2 cuneate lodicules free and fleshy, 3 stamens, ovary glabrous without the apical appendage, anthers brown or yellowish brown, 2 plumose stigmas, fruit small and compressed, weed species, lawn grass, cultivated fodder, native pasture species, grain crop species, in shade or open habitats, rainforest, swamps, semidesertic habitats and disturbed ground, serious taxonomic problems and relationships between *Brachiaria*, *Panicum* and *Urochloa*, particularly difficult to separate from *Panicum* L. and from

a number of other genera, *Brachiaria* has been nearly completely reduced to *Urochloa* P. Beauv., see also *Panicum* L. and *Urochloa* P. Beauv., type *Brachiaria holosericea* (R. Br.) Hughes, see *Species Plantarum* 1: 55. 1753, *Flora Graeca* 1(2): 44, t. 59. 1808, *De Graminibus Paniceis* 51, 125, 266. 1826, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 3: 233. 1834, C.F. von Ledebour, *Flora Rossica sive enumeratio plantarum in totius imperii Rossici provinciis Europaeis, Asiaticis et Americanis hucusque observatarum*. 4: 469. Stuttgartiae, E. Schweizerbart, 1842-1853, *Flora Brasiliensis* 2(2): 184. 1877, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2: 193-194. 1899 and *Bulletin of Miscellaneous Information Kew* 1923(9): 315. 1923, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 253. 1930, *Agron. Trop.* 6: 38-42. 1951, *Cytologia* 19: 97-103. 1954 [Chromosome numbers of a few South African grasses.], *Kariba Studies*, vol. II. Manchester University Press, Manchester 1962, *Primates* 10: 103-148. 1969, *Zambian Papers* 5. Manchester University Press, Manchester 1971, *Folia Primatologica* 15: 1-35. 1971, *Ciencia e Cultura (São Paulo)* 29: 1032-1034. 1977, *Journal of Cytology and Genetics* 18: 58-59, 60-61. 1983, *African Studies Monographs* 3: 109-130. 1983, *Taxon* 34: 159-164, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Canad. J. Bot.* 65: 2297-2309. 1987, *Folia Primatologica* 48: 78-120. 1987, *Bothalia* 18: 119-122. 1988, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988 [by T. Hoshino & G. Davidse], *Journal of Cytology and Genetics* 25: 140-143, 147-148. 1990, *Darwiniana* 30(1-4): 87-94. 1990 [by A.I. Honfi, C.L. Quarin & J.F.M. Valls], *Cytologia* 56: 437-452. 1991 [about some Kashmir grasses ..., by K.K. Koul & R.N. Gohil], O. Morrone & F.O. Zuloaga, "Sinopsis del género *Urochloa* (Poaceae: Panicoideae: Paniceae) para México y America Central." *Darwiniana* 32(1-4): 59-75. 1993, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Proceedings of the Indian Science Congress Association* 82(3-viii): 73. 1995, *Taxon* 45: 319-320. 1996, J.F. Veldkamp, "Brachiaria, *Urochloa* (Gramineae - Paniceae) in Malesia." *Blumea* 41: 413-437. 1996, *Taxon* 47: 869. 1998, *Taxon* 48: 376. 1999, *Fontqueria* 55(4): 15-17. 2001, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001 [Phylogenetics of Paniceae (Poaceae); A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis.], *Am. J. Bot.* 90: 796-821. 2003 [A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae.], *Austrobaileya* 6(3): 572. 2003, *Contributions from the United States National Herbarium* 46: 141-143, 629-634. 2003, Alexandre J.B. Santos et al., "High rates of net ecosystem carbon assimilation by *Brachiaria* pasture in the Brazilian Cerrado." *Global Change Biology* 10(5): 877-885. May 2004.

Species

B. spp.

in Niger: akasufe, garabo, garaji, garza, garzahi, gmero sunsaye, ishibaen, ishiban, ngarwo, ngono, sabéri, sung suns

B. ambigens Chiov.

Ethiopia. Perennial, densely tufted, leaf blades linear and pubescent, racemes ascending, spikelets borne singly in 2 rows, upper glume pubescent, upper lemma rugose, lower lemma fringed, see *Webbia* 8: 62. 1951.

B. annulatum (Forssk.) Stapf

U.S.

in English: ringed signal grass

B. argentea (R. Br.) Hughes (*Panicum argenteum* R. Br.; *Urochloa argentea* (R. Br.) Hughes)

Australia, Northern Territory. See *Prodromus Florae Novae Hollandiae* 190. 1810 and *Bulletin of Miscellaneous Information Kew* 1923: 315. 1923.

in English: silver panic

B. arida (Mez) Stapf (*Panicum aridum* Mez)

Somalia, Socotra. Perennial, erect or sprawling, shortly rhizomatous, tufted, leaves linear, paired spikelets elliptic and acute, stipe present, glumes separated by a short internode, lower glume clasping, upper lemma rugose, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 139. 1904, *Flora of Tropical Africa* 9: 540. 1919.

B. arrecta (Hack. ex T. Durand & Schinz) Stent (*Brachiaria arrecta* (T. Durand & Schinz) Stent; *Brachiaria latifolia* Stapf; *Brachiaria radicans* Napper; *Panicum arrectum* Hack. ex T. Durand & Schinz; *Panicum multifolium* Peter; *Urochloa arrecta* (Hack. ex T. Durand & Schinz) Morrone & Zuloaga)

Tropical Africa, Mozambique. Perennial, wiry, sprawling, straggling, rambling, prostrate, decumbent, geniculate, ascending, slender, stoloniferous, rooting at the lower nodes, succulent, leaf blades narrowly lanceolate, racemes unbranched, spikelets solitary in 2 rows, wavy rachis, readily grazed by cattle, pasture grass naturalized elsewhere in tropics, it does not tolerate drought, found in marshy areas, along lake and stream margins, humid tropics, swampy and seasonally flooded grassland, see *Conspectus Florae Africae* 5: 741. 1894 and *Flora of Tropical Africa* 9: 526. 1919, *Bothalia* 1: 263. 1924, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* N.F. 13(2): 44. 1928, *Bulletin de la Société Botanique de France* 101: 395. 1954, *Kirkia* 3: 125. 1963, *Darwiniana* 31(1-4): 69. 1992.

in English: Tanner grass, Joe Tanner's grass

in Mali: kussein

in Nigeria: ladikoro

in Yoruba: ladikoro

B. bovonei (Chiov.) Robyns (*Brachiaria hians* Stapf; *Brachiaria viridula* Stapf; *Panicum bovonei* Chiov.)

Tropical Africa, South Africa, Zaire. Perennial, densely tufted, spikelets in two rows, usually in damp areas, marshy places, deciduous bushland, sandy soils, dams, streams, mountain slopes, see *Annali di Botanica* 13: 43. 1914, *Flora of Tropical Africa* 9: 514-515. 1919, *Bulletin du Jardin Botanique de l'État* 9(3): 174. 1932.

in English: wiry signal grass

B. breviglumis Clayton

Africa, Kenya, Ethiopia. Annual, ascending, slender, loosely tufted, leaf blades narrowly lanceolate, silvery inflorescence, erect racemes appressed, spikelets elliptic and silky-villous, upper floret rugulose, lower glume round, upper lemma granulose, on silty soils, shrubland, see *Kew Bulletin* 34(3): 557-558. 1979.

B. brizantha (A. Rich.) Stapf (*Brachiaria brizantha* (Hochst. ex A. Rich.) Stapf; *Brachiaria brizantha* (Hochst.) Stapf; *Brachiaria brizantha* var. *angustifolia* Stent & Rat-tray; *Panicum brizanthum* Hochst. ex A. Rich.; *Panicum brizanthum* var. *lasiochloa* Chiov.; *Panicum brizanthum* var. *latifolium* Oliv.; *Panicum brizanthum* var. *pandanifolium* Peter; *Panicum brizanthum* var. *polystachyum* De Wild. & T. Durand; *Urochloa brizantha* (Hochst. ex A. Rich.) R.D. Webster)

Tropical and South Africa. Perennial, stout, robust, tufted, shortly rhizomatous, prostrate to rather erect, usually unbranched, leaf blades boat-shaped at the base, ligule a fringe of short white hairs, basal leaf sheaths open and keel-shaped, leaf margins thickened and wavy, spike-like racemes arranged along an axis, spikelets in a single row on the rachis and the rachis never branching, upper floret not beaked, upper glume acute, grains eaten by people, palatable with high nutritive value, good hay, cultivated, fodder, high grazing value, grains and young leaves eaten by baboons and chimpanzees, weed of crops, sandy and acid soils, grassy fields borders, montane grassland, high rainfall areas, humid and subhumid tropics, it does not tolerate poorly drained soils, intergrades with *Brachiaria decumbens* Stapf, cultivar *Marandú* is spittlebug-resistant, see *Tentamen Florae Abyssinicae* ... 2: 363. 1850, *Transactions of the Linnean Society of London* 29: 170. 1875 and *Plantae Thonnerianae congolenses*; ou, *Énumération des plantes récoltées en 1896 par M. Fr. Thonner dans le district des Bangalas, par É. De Wildeman ... et Th. Durand ... Avec une introduction de M. Fr. Thonner. Bruxelles 1900* [Franz Thonner, 1863-1928], *Flora of Tropical Africa* 9: 531. 1919, *Nuovo Giornale Botanico Italiano, n.s.* 26: 65. 1919, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 171, 178 & Anhang, 31, t. 19, f. 4. 1930, *Proceedings of the Rhodesia Scientific Association* 32: 23. 1933, *Ciencia*

e Cultura (São Paulo) 29: 1032-1034. 1977, *The Australian Paniceae (Poaceae)* 233. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Bothalia* 21(2): 163-170. 1991.

in English: bread grass, large-seeded millet grass, big ashama, upright brachiaria, palisade grass, palisade signal grass

in Angola: kamuxi, ocinde linene

in Nigeria: gawrare, ashama uku

in South Africa: broodsijnjaalgras, aufrechtes armgras

in Colombia: bracherón

in Mexico: señal

in Thailand: ya siknaentontang

B. chusqueoides (Hack.) Clayton (*Panicum chusqueoides* Hack.)

Tropical Africa, Yemen, South Africa, Natal. Annual or perennial, scandent or creeping, branched, trailing, slender, wiry, delicate, brittle, tufted, knotty base, rhizomatous, leaf blades pseudopetiolate at the base, leaves narrowly lanceolate, racemes lax and spaced, solitary or paired spikelets elliptic with a short basal stipe, pedicels unequal, glumes separated by a short internode, lower glume clasping, upper lemma rugose and coriaceous, found in open habitats, coastal bushland, dense scrub, bushland, deep sand, coastal dune forest, wet ground, see *Bulletin de l'Herbier Boissier* 3(8): 377. 1895 and *Kew Bulletin* 34(3): 558. 1979 [1980], *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

B. comata (Hochst.) Stapf (*Brachiaria comata* (Hochst. ex A. Rich.) Stapf; *Brachiaria comata* (A. Rich.) Stapf; *Brachiaria epaleata* Stapf; *Brachiaria kotschyana* (Hochst.) Stapf; *Brachiaria kotschyana* (Hochst. ex Steud.) Stapf; *Brachiaria secernenda* (Hochst. ex Mez) Henrard; *Panicum comatum* Hochst. ex A. Rich.; *Panicum indutum* Steud.; *Panicum kotschyanum* Hochst. ex Steud.; *Panicum kotschy-anum* Steud.; *Panicum secernendum* Hochst. ex Mez; *Panicum stuhlmannii* Schum.; *Panicum villosum* var. *erythraeum* Chiov.)

Arabia, Yemen. Annual, tufted to loosely tufted, straggling, weak, ascending or decumbent and rooting at the nodes, leaf blades narrowly lanceolate, inflorescence paniculate, compound racemes, spikelet indumentum variable, spikelets solitary paired or in small clusters densely arranged along the primary branches, short secondary branchlets, upper lemma acute and striate, good fodder, grain eaten in time of scarcity, a field weed, open places, along roadsides, disturbed ground, deciduous bushland, around field edges, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Tentamen Florae Abyssinicae* ... 2: 376. 1850, *Synopsis Plantarum Glumacearum* 1: 68. 1853 [1854], *Die Pflanzenwelt Ost-Afrikas* 5(C): 102. 1895 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 302. 1908, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem*

7: 68. 1917, *Flora of Tropical Africa* 9: 555, 559, 561. 1919, *Blumea* 3(3): 432. 1940.

in Arabic: saba kunku

in Niger: saba kunku

in Nigeria: omafé

in West Africa: saba kunku, omafé

B. decumbens Stapf (*Brachiaria bequaertii* Robyns; *Brachiaria brizantha* sensu Senaradna; *Brachiaria eminii* (Mez) Robyns; *Panicum eminii* Mez; *Urochloa decumbens* (Stapf) R.D. Webster; *Urochloa eminii* (Mez) Davidse)

Tropical Africa. Perennial, decumbent, low-growing, prostrate to ascending, rhizomatous and stoloniferous, forming a dense cover, spikelets hairy membranous on a flattened rachis, lower floret staminate, glumes and lower lemma sparsely pubescent, upper glume membranous, lower glume clasping, widely cultivated, suitable for erosion control, forage, palatable to ruminants, ground cover, grazed, withstands dry seasons and heavy grazing, does not tolerate flooding, moderately shade tolerant, adapted to humid and subhumid tropics, tolerant of low soil-fertility, intergrades with *Brachiaria brizantha* (A. Rich.) Stapf, causes photosensitisation in sheep, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 135. 1904, *Fl. Trop. Afr.* 9: 528, 531. 1919, *Bulletin du Jardin Botanique de l'État* 9(3): 176-177. 1932, *Bulletin du Jardin Botanique de l'État* 23: 373, f. 36, 37. 1953, *Grasses of Ceylon* 145. 1956, *Grasses of Burma* ... 281. 1960, *Australian Paniceae* 234. 1987, *Lejeunia* 132: 16. 1989, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993 [Catalogue of the Flowering Plants and Gymnosperms of Peru].

in English: signal grass

in Malaysia: rumput signal

in Thailand: ya siknaentonnon, ya surinam

B. deflexa (Schumach.) C.E. Hubb. ex Robyns (*Brachiaria clavulisetata* Chiov.; *Brachiaria deflexa* (Schumach.) C.E. Hubb. ex Hutch. & Dalziel; *Brachiaria deflexa* (Schumach.) C.E. Hubb.; *Brachiaria regularis* (Nees) Stapf; *Panicum deflexum* Schumach.; *Panicum nudiglume* Hochst.; *Panicum petiveri* var. *nudiglume* (Hochst.) Chiov.; *Panicum petiveri* var. *robustissimum* Chiov.; *Panicum ramosum* var. *deflexum* Mez ex Peter; *Panicum regulare* Nees; *Pseudobrachiaria deflexa* (Schumach.) Launert; *Urochloa deflexa* (Schumach.) H. Scholz)

Arabia to Pakistan, Senegal to Yemen. Annual, slender, solitary or tufted to loosely tufted, erect or weakly ascending, sheaths rounded, ligule a ring of short hairs, open inflorescence paniculate with distant spikelets, spikelets solitary or paired or in small clusters arranged along the primary branches, 2-flowered, secondary branchlets present, upper floret bisexual, lower floret reduced to lemma and palea, 2 glumes, upper glume and lower lemma cartilaginous, upper

lemma rugose, 3 stamens, stigmas red, cultivated as a cereal, edible grains, forage, grains and young leaves eaten by baboons and chimpanzees, drought-resistant, found in alluvial plains, weedy areas, disturbed land, often in shade, dampish places, arable land, margins of riverine forests, along roadsides, cultivated fields, dry regions, stony hillsides, woodland, open bushland, deciduous bush, closely related to *Brachiaria ramosa* (L.) Stapf, see *Species Plantarum* 1: 55. 1753, *Mantissa Plantarum* 1: 29-30. 1767, *Essai d'une Nouvelle Agrostographie* 52, 53, t. 11, f. 1. 1812, *De Graminibus Paniceis* 51, 125, 144, 266. 1826, *Beskrivelse af Guineiske planter* 63-64. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 83-84. 1828, *Florae Africae Australioris Illustrationes Monographicae* 41. 1841, *Flora* 27: 253. 1844, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853] and *Annuario del Reale Istituto Botanico di Roma* 8(1): 32-33. 1903, *Annuario del Reale Istituto Botanico di Roma* 8(3): 303. 1908, *Flora of Tropical Africa* 9: 544. 1919, *Bulletin of Miscellaneous Information Kew* 1923(9): 315. 1923, *Agricoltura Coloniale* 20: 106. 1926, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 170, 177. 1930, *Bulletin du Jardin Botanique de l'État* 9(3): 181. 1932, *Flora of West Tropical Africa* 2: 563, 564. 1936, *Mitteilungen der Botanischen Staatssammlung München* 8: 158. 1970, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 11(4): 443. 1989 [1990].

in English: Guinea millet, animal fonio

in Gambia: jajawo

in Guinea-Bissau: jegè

in Mali: paguiri, yagué yagué ba

in Upper Volta: kolo rassé

in West Africa: jajawo, jégé, paguiri

B. dictyoneura (Fig. & De Not.) Stapf (*Brachiaria humidicola* (Rendle) Schweick.; *Brachiaria keniensis* Henrard; *Brachiaria obvoluta* Stapf; *Panicum albovellereum* K. Schum. ex Engl.; *Panicum dictyoneurum* Fig. & De Not.; *Panicum humidicola* Rendle; *Urochloa dictyoneura* (Fig. & De Not.) Veldkamp; *Urochloa humidicola* (Rendle) Morrone & Zuloaga)

East Africa, Sudan. Perennial, tufted, ascending, coarse, leaf blades linear, silky spikelets borne singly in 2 rows, in bushland, open woodland, see *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 329, t. 8. 1854, *Die Pflanzenwelt Ost-Afrikas* 5(C): 101. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 169. 1899 and *Flora of Tropical Africa* 9: 511-512. 1919, *Bulletin of Miscellaneous Information Kew* 1936(5): 297. 1936, *Blumea* 3(3): 432. 1940, *Darwiniana* 31(1-4): 80. 1992, *Blumea* 41(2): 418. 1996, *Fontqueria* 55(4): 16. 2001.

B. distachya (L.) Stapf (*Brachiaria subquadrifera* (Trin.) Hitchc.; *Digitaria distachya* (L.) Pers.; *Panicum distachyon* L.; *Panicum subquadrifera* Trin.; *Urochloa distachya* (L.) T.Q. Nguyen)

East Africa, tropical Asia, Sri Lanka. Perennial or annual, erect, creeping, ascending from a prostrate base, rooting at the nodes, stoloniferous, sheaths rounded, spikelets solitary 2-rowed, lower floret sterile, lower glume clasping, upper lemma rugulose, fodder grass good for cattle, high palatability, freely grazed, does not tolerate waterlogging, tolerant of light shade and poor soils, useful as a soil-binder, found along roadsides and forest edges, lowlands, waste places, old plantations, secondary vegetation, beaches, sand dunes and coastal sand dunes, orchards, tidal flats, resembling *Brachiaria subquadrifera* (Trin.) Hitchc., see *Mant. Pl. Altera* 183-184. 1771, *Syn. Pl.* 1: 85. 1805, *De Graminibus Paniceis* 145. 1826 and *Flora Trop. Africa* 9: 565. 1919, *Flore Générale de l'Indo-Chine* 7: 437. 1922, *Handb. Fl. Ceylon* 6: 318. 1931, *Lingnan Science Journal* 7: 214. 1929 [1931], *Grasses of Ceylon* 141. 1956, *Grasses of Burma* ... 281. 1960, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Proceedings of the Indian Science Congress Association* 70(3-vi): 94. 1983, *Proceedings of the Indian Science Congress Association* 5: 609-626. 1985, *Blumea* 41: 426. 1996.

in English: green summer grass

in India: hanchi haaraka hullu, koranna gaddi, motia, pore hullu

in Indonesia: blabakan, blembem, kadalán

in Malaysia: rumput melera minyak, rumput minyak

in the Philippines: gome-gone, tanageb

in Thailand: yaa teenkaa, yateenka, yaa tinkaa, ya tin ka

in Vietnam: co'mât

B. dura Stapf

Tropical Africa, Central Eastern Africa, Zambia. Perennial, simple, caespitose to compactly caespitose, smooth, wiry, slender, erect, more or less geniculate and branched, shortly rhizomatous with rhizomes oblique, masses of root hairs, intravaginal innovations, leaf sheaths hard and hairy, ligule a ciliolate rim, leaf sheath terete, blades narrowly linear, spikelets glabrous and in one or two rows, grains eaten by local people, drought-resistant, very high palatability, forage, heavily grazed, on sandy soils of low fertility, coarse sandy soils, floodplains, dunes, along dry rivers, in shade, see *Flora of Tropical Africa* 9: 531. 1919.

in English: signal grass

B. dura Stapf var. *pilosa* J.G. Anderson

South Africa, Cape Province. Perennial, rare, rhizomatous, leaves wiry, spikelets pilose and in one or two rows, common on sand dunes.

B. echinulata (Mez) Parodi (*Panicum adpersum* Trin.; *Panicum adpersum* var. *exile* Lindm.; *Panicum adpersum*

var. *neesi* Lindm.; *Panicum echinulatum* Mez; *Panicum echinulatum* var. *boliviense* Henrard; *Panicum keyense* Mez; *Panicum thomasianum* Steud. ex Döll)

Southern America, Argentina, Bolivia, Brazil. Annual, herbaceous, erect, decumbent and rooting, leaning, upper floret ovate, glumes and lower lemma hirsute, weed in cultivated fields, growing on sandy soils, deciduous and semideciduous forests, near water, see *De Graminibus Paniceis* 146. 1826, *Flora Brasiliensis* 2(2): 188. 1877 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 8, t. 3. 1900, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 61-62. 1917, *Mededeelingen van's Rijks-Herbarium* 40: 50. 1921, *Darwiniana* 15: 94, 96. 1969, *Proceedings of the Royal Society of Queensland* 81: 4. 1969, *Systematic Botany* 13(4): 607. 1988.

B. eruciformis (J.E. Sm.) Griseb. (*Brachiaria eruciformis* (Sm.) Griseb.; *Brachiaria eruciformis* (Sibth. & Sm.) Griseb.; *Brachiaria isachne* (Roth ex Roem. & Schult.) Stapf; *Brachiaria isachne* (Roth) Stapf; *Brachiaria poaeoides* sensu Cufodontis, non Stapf; *Echinochloa eruciformis* (Sm.) Koch; *Echinochloa eruciformis* (Sm.) Rchb.; *Milium alternans* Bubani; *Moorochloa eruciformis* (Sm.) Veldkamp; *Panicum anisostachium* Bojer; *Panicum caucasicum* Trin.; *Panicum cruciforme* Sibth. ex Roem. ex Schult.; *Panicum eruciforme* Sm.; *Panicum isachne* Roth ex Roem. & Schult.; *Panicum isachne* var. *mexicana* Vasey ex Beal; *Panicum pubinode* Hochst. ex A. Rich.; *Panicum wightii* Nees; *Urochloa eruciformis* (Sm.) C. Nelson & Fern. Casas) (Latin *eruca*, *ae*, ancient name for a caterpillar and for *Brassica eruca* L., see Plinius, L. Junius Moderatus Columella, Q. Horatius Flaccus, M. Valerius Martialis)

India, Sri Lanka, Mediterranean region, Pakistan, Kenya, Namibia, Swaziland, Sudan, Egypt, Tanzania, Uganda, South Africa. Annual, stoloniferous, loosely tufted, slender, fine, delicate, soft, spreading, creeping, geniculately ascending, prostrate or decumbent at the base and often rooting at the lower nodes, rounded sheaths glabrous to pubescent with short hairs, minute ligule membranous, leaves linear to narrowly lanceolate, several racemes on a common axis, spikelets solitary and pedicellate arranged in two rows on the rachis, lower floret sterile, upper floret shiny and smooth, lower glume encircling the base of the spikelet, upper glume and lower lemma pubescent, lower lemma 2-keeled, valuable pioneer grass, naturalized, found to increase the milk yield, animal food, forage, palatable or relatively palatable, low grazing value, best time to feed in the flowering stage, invasive weed species, one of the worst weeds of cropping, weed in cotton fields, an indicator of poorly drained soil, a common weed in irrigation fields and gardens, grows on disturbed ground and moist sites, black clays, black turf, weedy embankments, cultivated fields and wasteland, alluvial plains, damp disturbed places, gardens, on heavy clay or loam soils, along roadsides, trampled clay soil, overgrazed vleis, in wet sandy soil and on termite

mounds, see *Fl. Graeca* 1(2): 44, t. 59. 1806, *Syst. Veg.* 2: 426, 458. 1817, *Systema Vegetabilium* 2: 458. 1819, *Species Graminum* 3: t. 262. 1829-1830, *Flora Germanica Excursionaria* 3: 45. 1833, *Hortus Mauritianus* 364. 1837, *Flora Africæ Australioris Illustrationes Monographicae* 29. 1841, *Linnaea* 21(4): 437. 1848, *Tentamen Floræ Abyssinicae ...* 2: 363. 1850, *Enum. Pl. Zeyl.* 359. 1864, *Nuovo Giornale Botanico Italiano* 5: 317. 1873, Henry Trimen (1843-1896), *A Systematic Catalogue of the Flowering Plants and Ferns Indigenous to or Growing Wild in Ceylon* 104. Colombo 1885, *Grasses of North America for Farmers and Students* 2: 114. 1896 and *Handb. Fl. Ceylon* 5: 133. 1900, *Flora of Tropical Africa* 9: 552. 1917, *Contr. U.S. Natl. Herb.* 22: 36-37. 1920, *Handb. Fl. Ceylon* 6: 318. 1931, *Grasses of Ceylon* 142. 1956, *Grasses of Burma ...* 283. 1960, *Fontqueria* 51: 4. 1998, *Reinwardtia* 12(2): 139. 2004.

in English: sweet signal grass, signal grass, sweet summer grass, summer grass

in Mauritius: mehenki

in India: antu garike hullu, chimpigyan hullu, chinari, chinwari, domakalu gaddi, guhria, khariu, loidan siput, sarput, sarput, seprut, sheput, shimpi, shimpigyan hullu, sipi, tiliya

in Somalia: kulekule, kule-kule

in Southern Africa: litjiesinjaalgras, litjiesrysgras, soetgras, soetlitjiesrysgras, umkraut armgras; khalane, kgalane, kgo-lane (Sotho); umfisane (Zulu)

in Sudan: um sileika

B. glomerata (Hack.) A. Camus (*Leucophrys glomerata* Stapf; *Panicum glomeratum* Hack. ex Schinz)

South Africa. Annual, tufted, velvety and soft, erect or geniculate, decumbent, branched from nodes, sometimes rooting at the lower nodes, ligule a fringe of short hairs, leaf sheaths hairy and rounded, leaf blade expanded, leaf margins sometimes wavy, inflorescence a panicle, spikelets densely clustered, rachilla extension short, palatable, usually on red sand dunes, sandy patches, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 141. 1888 and *Flora of Tropical Africa* 9: 504. 1919, *Bulletin de la Société Botanique de France* 77: 640. 1930.

in English: annual sweet grass

in Southern Africa: eenjarige soetgras, knäuelarmgras

B. grossa Stapf (*Brachiaria grossaria* Griseb. ex E. Fourn.; *Panicum nudiglume* var. *major* Rendle)

Tropical Africa. Annual, tufted, leaf blades rounded at the base, inflorescence ovate, spikelets spaced, upper lemma rugose, pasture species, weed, found on rocky mountain slopes, see *Flora* 27: 253. 1844, *Mexicanas Plantas* 2: 15. 1886, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2: 170. 1899 and *Flora of Tropical Africa* 9: 547. 1919.

B. humidicola (Rendle) Schweick. (*Brachiaria dictyoneura* (Fig. & De Not.) Stapf; *Brachiaria dictyoneura* subsp. *humidicola* (Rendle) Catasús; *Brachiaria rautanenii* (Hack.) Stapf; *Panicum dictyoneurum* Fig. & De Not.; *Panicum golae* Chiov.; *Panicum humidicola* Rendle; *Panicum rautanenii* Hack.; *Panicum vexillare* Peter; *Urochloa dictyoneura* (Fig. & De Not.) Veldkamp; *Urochloa humidicola* (Rendle) Morrone & Zuloaga)

Sudan, Kenya, Tanzania. Perennial, strongly stoloniferous, procumbent, slender, geniculate and rooting at the nodes, leaf blades broadly linear, leaf sheaths villous, silky inflorescence, spikelets in two rows, upper lemma shiny, ground cover, pasture grass, forage, palatable, grazed, high-yielding grass, useful for erosion control, can withstand very heavy grazing, tolerates shade and poor drainage, found in swampy sites, damp grassland, can be confused with *Brachiaria dictyoneura* (Fig. & De Not.) Stapf, see *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 329, t. 8. 1854, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 169. 1899 and *Bulletin de l'Herbier Boissier, sér. 2*, 2: 935. 1902, *Annali di Botanica* 13: 43. 1914, *Flora of Tropical Africa* 9(2): 512-513. 1919, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 167, 173 & Anhang, 22, t. 10, f. 2. 1930, *Kew Bulletin* 1936: 297. 1936 [or *Bulletin of Miscellaneous Information Kew* 1936(5): 297. 1936], *Darwiniana* 31(1-4): 80. 1992, *Blumea* 41(2): 418. 1996, *Fontqueria* 55(4): 16. 2001.

in English: koronivia grass

in West Africa: inte-rere, interere

in Thailand: ya humidicola

B. jubata (Fig. & De Not.) Stapf (*Brachiaria bomaensis* Vanderyst; *Brachiaria brevis* Stapf; *Brachiaria fulva* Stapf; *Brachiaria soluta* Stapf; *Panicum jubatum* Fig. & De Not.; *Urochloa jubata* (Fig. & De Not.) Sosef)

Tropical Africa. Perennial, tufted, slender, decumbent, fibrous roots, leaf blades linear, racemes rachis winged and ribbon-like, spikelets singly in two rows, good pasture, edible grain, useful for erosion control, growing in alluvium, in seasonally waterlogged places, shallow soils, grassland, bottomland, swamp margins, scrubland, damp places, see *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 331, f. 9. 1854 and *Flora of Tropical Africa* 9: 518-519, 563. 1919, *Bulletin agricole du Congo Belge* 16: 654, 665. 1925, *Flore du Gabon* 5 bis (Gramineae, Supplément): 64. Paris 1999.

in Ghana: burugu, tumbin jaki

in Guinea-Bissau: bondim-ô, bondimo, labar, quel el

in Mali: ban ngassan, handu nkasan, sakateré

in Nigeria: ata gbuin gbuin, garaji, garji, huturho, labunehe, makarin faku, nyeelo, okakakplu, sabe, sabu

in Upper Volta: bugmoinu, dodumuanga, kolonkoghse, kufi moni, naganionurè, narukkere, tugau

in West Africa: ata gbuin gbuin, ban ngassan, bondimo, bondim-ô, bugmoinu, burugu, dodumuanga, garaji, gariji, handu nkasan, huturho, kolonkoghse, kufi moni, lábar, labunehe, makarin faku, naganionurè, narukkere, nyeelo, okakakplu, què-el, sabe, sakatere, tugau, tumbin jaki

in Yoruba: ata gbuin gbuin

B. kurzii (Hook.f.) A. Camus (*Panicum lachnanthum* Hochst.; *Panicum kurzii* Hook.f.; *Urochloa kurzii* (Hook.f.) T.Q. Nguyen; *Urochloa kurzii* (Hook.f.) R.D. Webster, nom. illeg., non *Urochloa kurzii* (Hook.f.) T.Q. Nguyen)

India. Slender, leaf blades lanceolate, see *The Flora of British India* 7(21): 38. 1897 [1896] and *Flore Générale de l'Indo-Chine* 7: 438. 1922, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *The Australian Paniceae (Poaceae)* 241. 1987.

B. lachnantha (Hochst.) Stapf (*Panicum lachnanthum* Hochst.)

Tropical Africa, Uganda, Tanzania, Ethiopia, Kenya. Perennial, densely tufted, erect, tussocky, basal sheath hairy to silky-tomentose, leaves linear to lanceolate, knotty rootstock, inflorescence pubescent to villous, silky hairy racemes, spikelets solitary or paired with a short stipe, lower glume clasping, upper glume and lower lemma membranous, upper lemma shiny, open grassland, clearings, black clay soils, see *Flora* 38: 195. 1855 and *Flora of Tropical Africa* 9(3): 536-537. 1919.

B. lata (Schumach.) C.E. Hubb. (*Brachiaria lata* var. *lata* (Schumach.) C.E. Hubb.; *Panicum amplexifolium* Hochst.; *Panicum amplexifolium* Griseb. ex Mez, nom. illeg., non *Panicum amplexifolium* Hochst.; *Panicum hamadense* Mez; *Panicum insculptum* Steud.; *Panicum latum* Schumach.; *Urochloa insculpta* (Steud.) Stapf; *Urochloa lata* (Schumach.) C.E. Hubb.)

Arabian Peninsula, Yemen. Annual, tufted to loosely tufted or solitary, vigorous, coarse, upright, spreading, creeping, ascending or decumbent, sheaths hairy to ciliate, ligule fringed, leaf blades lanceolate, leaves glabrous or hispid, inflorescence of ascending spike-like racemes arranged spirally, spikelets shortly pedicellate arranged irregularly along one side of the raceme, spikelets 2-flowered, lower floret reduced, upper floret bisexual, 2 glumes, upper glume and lower lemma membranous, upper lemma rugose and mucronate, 2 lodicules, 3 stamens, edible grain, excellent fodder, hay, palatable, a weed of cultivated crops, rocky slopes, fields, gardens, on stony areas, cultivated land, open bushland, field borders, waste grassland, roadside margins, disturbed soil, see *Beskrivelse af Guineiske planter* 61-62. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Aft.* 3: 81-82. 1828, *Synopsis Plantarum Glumacearum* 1: 49. 1853, *Flora* 38: 194. 1855 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 66. 1917, *Flora of Tropical Africa* 9(4): 599. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 3. 1921, *Bulletin of*

Miscellaneous Information Kew 1934: 112. 1934, *Kew Bulletin* 1949: 125. 1949.

in Arabic: difera, umm jigeri

in Ghana: garaji, lambusan

in Mali: akaru, akasof, ányu sámú buguru, ichiban

in Niger: dhihò, duld'ha, garza, ishibaen, tagabart, tagaboert

in Nigeria: baadeho, difera, garaji, umm jigeri

in Senegal: kombar-diagandal

in Upper Volta: bafura, farduko, koala, pagga pucci

B. lata (Schumach.) C.E. Hubb. subsp. *caboverdiana* Conert & C. Kohler

Capo Verde Islands. See *Senckenbergiana Biologica* 64(4-6): 432. 1987.

B. latifolia Stapf (*Brachiaria arrecta* (Hack. ex T. Durand & Schinz) Stent; *Panicum arrectum* Hack. ex T. Durand & Schinz)

Tropical Africa, Mozambique. Perennial, wiry, decumbent, slender, succulent, rambling, rooting at the lower nodes, pasture grass, in marshy areas, see *Conspectus Florae Africae* 5: 741. 1894 and *Flora of Tropical Africa* 9: 526. 1919, *Bothalia* 1: 263. 1924.

B. leersioides (Hochst.) Stapf (*Brachiaria distichophylla* sensu Cufodontis, non (Trin.) Stapf; *Brachiaria villosa* (Lam.) A. Camus; *Panicum leersioides* Hochst.)

East Africa, Mozambique. Annual, ascending, tufted, glaucous, slender, branched, leaf blades linear, slender racemes spreading or deflexing, spikelets paired and elliptic without a stipe, glumes separated by an internode, lower glume clasping, upper glume and lower lemma membranous, upper lemma rugose and acute, found in sandy areas, semi-arid regions, in light shade, dry bushland, woodland, shallow stony soils, red sand, open scrub, in coarse sand, often waxy deposits in the inflorescence, see *Flora* 38: 196. 1855 and *Flora of Tropical Africa* 9: 551. 1919, *F.T.E.A., Gramineae*: 591. 1982.

in English: blue signal grass

B. leucacrantha (Schum.) Stapf (*Panicum leucacranthum* Schum.)

Tanzania, Zaire, Mozambique, Uganda. Annual, loosely tufted, prostrate, decumbent, rooting from the nodes, leaves velvety, leaf blades linear to narrowly lanceolate, single spikelets pubescent and pilose with a stipe, upper lemma papillose and acute, on deciduous bushland, sandy soil, disturbed places, see *Die Pflanzenwelt Ost-Afrikas* C: 102. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2: 170. 1899 and *Flora of Tropical Africa* 9: 540. 1919.

B. longiflora W.D. Clayton

Africa, Kenya, Ethiopia. Perennial, stiff, wiry, slender, straggling, tufted, woody to knotty rootstock, leaves

narrowly lanceolate, paired spikelets narrowly elliptic and pubescent, stipe present, glumes separated by a short internode, lower glume clasping, upper glume and lower lemma papery, upper lemma smooth, on stabilized dunes, open areas, open bushland, see *Kew Bulletin* 34(3): 558. 1980 [1979].

B. lorentziana (Mez) Parodi (*Brachiaria platyphylla* (Munro ex C. Wright) Nash; *Panicum lorentzianum* Mez; *Panicum velutinsum* f. *violascens* Stuck.; *Panicum velutinsum* f. *viride* Stuck.; *Urochloa lorentziana* (Mez) Morrone & Zuloaga)

Northern Argentina. Glumes and lower lemma glabrous, upper floret subglobose, herbaceous, weed, in seasonal forest, see *Anales de la Academia de Ciencias Medicas* ... 8: 206. 1871 and *Flora of the Southeastern United States* ... 81: 1327. 1903, *Anales Museo Nacional de Historia Natural de Buenos Aires* 11: 75. 1904, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Darwiniana* 15(1-2): 99. 1969, *Darwiniana* 31(1-4): 82. 1992.

B. malacodes (Mez & K. Schum.) H. Scholz (*Brachiaria poaeoides* Stapf; *Moorochloa malacodes* (Mez & K. Schum.) Veldkamp; *Panicum malacodes* Mez & K. Schum.)

South Africa. Annual, soft, loosely to very loosely tufted, straggling, branched, erect or geniculate, often decumbent and rooting at the lower nodes, leaf sheath hairy and rounded, ligule a fringe of hairs, leaf margins sometimes wavy and spinous, panicle compound with filiform branches, 1-sided spike-like racemes, spikelets pilose arranged in two rows, pioneer grass, relatively palatable, pasture, often in seasonally moist depressions, partial shade, under bushes and trees, disturbed land, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 70. 1917, *Flora of Tropical Africa* 9: 554. 1919, *Willdenowia* 8(2): 384. 1978, *Reinwardtia* 12(2): 139. 2004.

in Southern Africa: pluimarmgras, rispen armgras

B. marlothii (Hack.) Stent (*Panicum marlothii* Hack.) (after the South African botanist Hermann Wilhelm Rudolf Marloth, 1855-1931, pharmacist, chemist, botanical explorer, plant collector, from 1833 in South Africa, he is best known for "The historical development of the geographical botany of South Africa." *S. Afr. J. Sci.* 1: 251-257. 1903, "Notes on the vegetation of Southern Rhodesia." *S. Afr. J. Sci.* 2: 300-307. 1904, *The Chemistry of South African Plants and Plant Products*. Cape Town 1913, *The Flora of South Africa*. Capetown and London 1913-1932, *Dictionary of the Common Names of Plants with a List of Foreign Plants Cultivated in the Open*. Cape Town 1917, *Cape Flowers at Home*. Cape Town [1922]. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 449. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute*

portrait collection. 254. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 206. 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Hans Herre (1895-1979), *The Genera of the Mesembryanthemaceae*. 49-50. Cape Town 1971; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; A. White & B.L. Sloane, *The Stapeliaceae*. Pasadena 1937; A. Engler et al., "Plantae Marlothianae." in *Bot. Jahrb.* 10: 1-50, 242-285. 1889; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997)

Southern Africa, Namibia. Annual or weak perennial, variable, creeping growth form, profusely branched, erect or geniculate, with stolons, decumbent and rooting from the lower nodes, leaf sheaths hairy or glabrous, ligule a ring of short hairs, leaf blades expanded, inflorescences of racemes arranged irregularly on the primary axis, spikelets 2-flowered, spikelets unilateral and arranged in four rows, hardy pioneer grass, palatable, suitable pasture for sheep, weed, useful grass for disturbed soils, occurs in overgrazed veld or disturbed places such as roadsides, gardens, lawns and cultivated lands, in shallow sandy to loamy soils, heavily grazed areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 398. 1889 and *Bothalia* 1: 263. 1924.

in English: small signal grass, creeping grass

in Southern Africa: kleinsinjaalgras, kruipgras, wortelklitsgras; phetola (Sotho)

B. meziana Hitchc. (*Urochloa meziana* (Hitchc.) Morrone & Zuloaga)

North America, Mexico. See *Contributions from the United States National Herbarium* 12(3): 140. 1908, *Darwiniana* 32(1-4): 68. 1993.

in Mexico: almejita lisa

B. miliiformis (Presl & C. Presl) A. Chase (*Brachiaria miliiformis* (J. Presl) Chase; *Brachiaria subquadripara* var. *miliiformis* (J. Presl) S.L. Chen & Y.X. Jin; *Panicum miliiforme* J. Presl; *Urochloa distachya* (L.) T.Q. Nguyen; *Urochloa subquadripara* (Trin.) R.D. Webster)

Malaysia, Sri Lanka, Australia, Kimberley Region, India. Annual, fodder grass, grain, human food, water treatment, shade tolerant plant, closely related to *Brachiaria subquadripara* (Trin.) Hitchc., see *Reliquiae Haenkeanae* 1(4-5): 300. 1830 and *Contributions from the United States National Herbarium* 22(1): 35. 1920, *Lingnan Science Journal* 7: 214. 1929 [1931], *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Acta Phytotaxonomica Sinica* 22(6): 472. 1984, *The Australian Paniceae (Poaceae)* 252. 1987.

in English: green summer grass, two-spiked panic, arm grass millet

B. mutica (Forssk.) Stapf (*Brachiaria numidiana* (Lam.) Henrard; *Brachiaria purpurascens* (Raddi) Henrard; *Panicum amphibium* Steud.; *Panicum barbinode* Trin.; *Panicum equinum* Salzm. ex Steud.; *Panicum molle* Sw.; *Panicum molle* sensu Trimen, non Swartz; *Panicum molle* Griseb., nom. illeg., non *Panicum molle* Sw.; *Panicum muticum* Forssk.; *Panicum numidianum* Lam.; *Panicum numidianum* J. Presl, nom. illeg., non *Panicum numidianum* Lam.; *Panicum numidianum* Sieber ex Schult., nom. illeg., non *Panicum numidianum* Lam.; *Panicum pictigluma* Steud.; *Panicum punctatum* Burm.f.; *Panicum punctulatum* Arn. ex Steud.; *Panicum purpurascens* Raddi; *Panicum sarmentosum* Benth.; *Paspalidium punctatum* (Burm.f.) A. Camus; *Paspalum punctatum* (Burm.f.) Stapf ex Ridl., nom. illeg., non *Paspalum punctatum* (L.) Fluegge; *Setaria punctata* (Burm.f.) Veldkamp; *Urochloa mutica* (Forssk.) Nguyen; *Urochloa mutica* (Forssk.) R.D. Webster ex Zon)

Tropics and subtropics. Perennial, long-lived, robust, coarse, densely hairy, long-decumbent, prostrate and ascending, shortly rhizomatous, stoloniferous, creeping, spreading, sprawling, trailing and intertwining, rooting at the lower joints, spikelets mostly paired in several rows and the rachis usually simple, lower floret staminate, good quality hay, forage grass of lowland pastures, grazed on pasture or cut, very competitive and vigorous, very troublesome weed in cultivated areas and in irrigation ditches, tolerates salinity, can survive severe drought, suitable for erosion control, sometimes attacked by a leafhopper, common in swampy places, poorly drained or periodically waterlogged areas, riverbanks, damp and wet regions, wastelands, along roadsides, wet pastures, margins of streams, marshes, close to *Brachiaria arrecta* (Th. Dur. & Schinz) Stent, see *Flora Indica ... nec non Prodrum Florae Capensis* 26. 1768, *Flora Aegyptiaco-Arabica* 20. 1775, *Nova Genera et Species Plantarum seu Prodrum* 22. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Cyperaceae et Gramineae Siculae* 19. 1820, *Agrostogr. Bras.* 47. 1823, *Mantissa* 2: 267. 1824, *Sp. Gram.* 3: 596, pl. 318. 1832, *Syn. Pl. Glumac.* 1: 61-62, 67, 73. 1854, *Enum. Pl. Zeyl.* 361. 1864, *Flora of the British West Indian Islands* 547. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns Indigenous to or Growing Wild in Ceylon* 105. 1885 and *Handb. Fl. Ceylon* 5: 140. 1900, *Fl. Trop. Africa* 9: 526. 1919, *Flore Générale de l'Indo-Chine* 7: 419. 1922, *The Flora of the Malay Peninsula* 5: 218. 1925, *Handb. Fl. Ceylon* 6: 318. 1931, *Blumea* 3(3): 434. 1940, *Bulletin de la Société Botanique de Genève* 31: 154. 1940, *Grasses of Ceylon* 142. 1956, *Grasses of Burma ...* 284. 1960, *Ciencia e Cultura (São Paulo)* 29: 1032-1034. 1977, *Fl. Trop. E. Afr., Gram.* 3: 551. 1982, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Canad. J. Bot.* 65: 2297-2309. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Wageningen Agricultural University Papers* 92-1(2): 264-266. 1992, *Blumea* 39(1-2): 381. 1994.

in English: Para grass, tall panicum, California grass, buffalo grass, water grass, Mauritius grass, mountain grass

in French: herbe de Para, herbe de Guinée

in Arabic: feflik, aelaek, faelek, faeq, feleq

in Mexico: camalote, camelote, egipto, leh-toom, pará, paraná, pasto pará, piojillo para, quixi-coba, zacate camalote, zacate colorado, zacate egipto, zacate pará

in Nicaragua: sagádi pará

in Cambodia: smau kôô

in India: nardul

in Indonesia: jukut inggris, rumput malela, sukut kolonjono

in Malaysia: rumput melela, rumput para

in the Philippines: babaka-nalabaga, mara-kawayan

in Sri Lanka: tannipul, diya tana

in Thailand: yaa khon, ya khon

in Vietnam: co' lông tây

in Mali: konya, kussein

in Niger: burgu, shémé, talud, talul

in Nigeria: bauna, birbet, ladikoro, zarin bauna, zaza

B. nigropedata (Munro ex Ficalho & Hiern) Stapf (*Brachiaria melanotyla* (Hack.) Henrard; *Panicum melanotylum* Hack.; *Panicum nigropedatum* Munro ex Ficalho & Hiern)

Tropical Africa, South Africa, Swaziland, KwaZulu-Natal, Namibia. Perennial, loosely or densely tufted, leafy, unbranched culms, woolly nodes, creeping rhizomes, basal sheaths with velvety hairs, ligules a fringe of short hairs, long wiry leaves, racemes arranged singly on the primary axis, spikelets arranged in two rows, mature spikelets with dark stalks or a typical short black pedicel, tightly clasping lower glume acuminate to long-acuminate, upper glume and lower lemma acuminate, forage, palatable, animal food, very high grazing value, native pasture species, economic plant, useful for erosion control, indicator of veld in good condition, occurs in undisturbed veld, on red soil in relatively dry areas, on stony and rocky slopes and in sandveld, well-drained sandy and stony soils, sandy soils, lowveld, arid mountain bushveld, loamy to gravelly soil, disturbed vlei areas, see *Transactions of the Linnean Society of London, Botany* 2: 29. 1881, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 398. 1889 and *Flora of Tropical Africa* 9: 535. 1919, *Blumea* 3(3): 436. 1940.

in English: spotted false paspalum, spotted signal grass, black-footed brachiaria, blackfoot signal grass, black-footed signal grass, sweet grass

in Southern Africa: haasgras, krulgras, soetgras, swartvoetjie, swartvoetjiegras, schwarzfüsschen, wurmpiesgras, wurmsinjaalgras; mlabie (Tswana); phetola (Sotho)

B. notochthona (Domin) Stapf (*Panicum helopus* sensu Benth., non Trin.; *Panicum notochthonum* Domin;

Urochloa gilesii subsp. *gilesii*; *Urochloa notochthona* (Domin) Hughes) (from the Greek *heleos*, *helos* “a marsh, wet, low ground, meadow” and *pous* “a foot;” Greek *notos* “back” and *chthon*, *chthonos* “the earth, ground”)

South Australia, Northern Territory, New South Wales, Queensland. Annual or perennial, erect, leaves lanceolate, racemes spreading-erect, spikelets in two rows along the rachis, grazed, see *Repertorium Specierum Novarum Regni Vegetabilis* 10: 60. 1911, *Flora of Tropical Africa* 9: 597. 1920, *Bulletin of Miscellaneous Information Kew* 1923(9): 319. 1923.

in English: naked arm grass

B. obtusiflora (Hochst.) Stapf (*Brachiaria obtusiflora* (Hochst. ex A. Rich.) Stapf; *Echinochloa obtusiflora* Stapf; *Echinochloa rotundiflora* Clayton; *Panicum obtusiflorum* Hochst. ex A. Rich.)

Tropical Africa, Sudan. Annual, culms erect or bent, racemes irregularly many-rowed, spikelets densely crowded and very swollen, fodder plant, ripe seeds edible, low rainfall savannah, semidesert, moist and cultivated habitats, see *Tentamen Florae Abyssinicae ...* 2: 367. 1850 and *Flora of Tropical Africa* 9: 533. 1919, *Flora of Tropical Africa* 9: 606. 1920, *Kew Bulletin* 34(3): 560. 1979 [1980].

in Sudan: um khirr

B. orthostachys (Mez) W.D. Clayton (*Brachiaria xantholeuca* (Hack.) Stapf, in part; *Brachiaria xantholeuca* (Hack. ex Schinz) Stapf; *Brachiaria xantholeuca* (Schinz) Stapf; *Panicum orthostachys* Mez)

Tropical Africa. Annual, glabrous spikelets, upper glume 7-nerved, grazed, found on sandy soils, poor areas, resembles *Brachiaria xantholeuca*, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 66. 1917, *Kew Bulletin* 20: 265. 1966.

B. ovalis Stapf (*Brachiaria glauca* Stapf; *Brachiaria somalensis* C.E. Hubb.; *Panicum nudiglume* var. *major* Balf.f.; *Panicum ovale* R. Br.)

Sudan, Kenya, Pakistan, Arabia. Annual, tufted, densely pubescent, leaves linear to lanceolate, racemes appressed or spreading or widely diverging, spikelets loosely arranged, smooth and shiny spikelets single or in pairs, secondary branchlets absent, pedicels shorter than the spikelets, lower glume ovate, upper glume and lower lemma cartilaginous and glossy, upper lemma granulose, palatable, weedy, found in open woodland, dry stony hills, open *Acacia* scrub, open sandy areas, slopes and dry rocky slopes, plains grassland, semidesert scrubland, cultivated lands, alluvial soils, limestone hills, light shade, fixed or stabilized dunes, loose sandy soil, see Henry Salt (1780-1827), *A Voyage to Abyssinia, and Travels into the Interior of that Country ... in the years 1809 and 1810 ...* London 1814, *Flora* 27: 253. 1844, I.B. Balfour (1853-1922), *Botany of Socotra* 311. Edinburgh 1888 [*Trans. Roy. Soc. Edinb.* xxxi]

and *Flora of Tropical Africa* 9: 546, 550. 1919, *Kew Bulletin* 1941: 189. 1941.

B. paspaloides (Presl) C.E. Hubb. (*Panicum ambiguum* Trin.; *Panicum glumare* Trin.; *Panicum paspaloides* Pers.; *Urochloa ambigua* (Trin.) Pilg.; *Urochloa glumaris* (Trin.) Veldkamp; *Urochloa paspaloides* J. Presl)

Tropical Asia. Short-lived perennial, decumbent, slender, suberect, rooting at the lower nodes, leaves pubescent, sheath apex hairy, inflorescence rachis pubescent, spikelets apiculate and ovate, increases flow of milk, good fodder grass relished by cattle, hay, suitable for turfs, a weed of open places, growing in waste ground, low coastal forest, disturbed places, see *Syn. Pl.* 1: 81. 1805, *De Graminibus Paniceis* 143. 1826, *Reliquiae Haenkeanae* 1(4-5): 318. 1830, *Voyage Autour du Monde* 121. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 243. 1834, *Nomenclator Botanicus. Editio secunda* 2: 264. 1841 and *Flore Générale de l'Indo-Chine* 7: 433. 1922, *Hooker's Icones Plantarum* 4: t. 3363. 1938, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 35. 1940, *Blumea* 4(3): 503. 1941, *Blumea* 41(2): 420. 1996.

in English: crab grass

in India: chikhari, karkoljodi, takri, takria

B. paucispicata (Morong) Clayton (*Acroceras paucispicatum* (Morong) Henrard; *Panicum paucispicatum* Morong; *Urochloa paucispicata* (Morong) Morrone & Zuloaga)

Paraguay, Argentina, Gran Chaco. Perennial or annual, herbaceous, erect, decumbent, rooting at the lower nodes, upper floret beaked, in seasonally inundated swamps, seasonally humid savannahs, see *Annals of the New York Academy of Sciences* 7: 262. 1893 and *Blumea* 3(3): 449. 1940, *Kew Bulletin* 42(4): 401. 1987, *Darwiniana* 31(1-4): 95. 1992.

B. piligera (F. Muell. ex Benth.) Hughes (*Brachiaria piligera* var. *intercedens* (Domin) Hughes; *Panicum intercedens* Domin; *Panicum piligerum* F. Muell. ex Benth.; *Urochloa piligera* (F. Muell. ex Benth.) R.D. Webster)

South Australia, Northern Territory, New South Wales, Queensland, Western Australia. Annual or perennial, erect or ascending, glabrous, leafy, leaves linear-lanceolate, racemes spreading or reflexed, more or less hairy spikelets in two rows along the rachis, fodder, highly palatable especially when young, erosion control, natural host of sugarcane mosaic virus in Australia, see *Flora Australiensis: A Description ...* 7: 477. 1878 and *Journal of the Linnean Society, Botany* 41: 271. 1912, *Bulletin of Miscellaneous Information Kew* 1923(9): 315. 1923, *The Australian Paniceae (Poaceae)* 246. 1987.

in English: hairy arm grass, hairy signal grass, narrow leaf signal grass, signal grass

B. plantaginea (Link) Hitchc. (*Brachiaria extensa* Chase; *Brachiaria platyphylla* (Munro ex C. Wright) Nash; *Panicum disciferum* E. Fourn.; *Panicum distans* Salzm. ex Steud.; *Panicum plantagineum* Link; *Panicum platyphyllum* Munro ex C. Wright; *Paspalum platyphyllum* Schult.; *Paspalum platyphyllum* Griseb., nom. illeg., non *Paspalum platyphyllum* Schult.; *Urochloa discifera* (E. Fourn.) Morrone & Zuloaga; *Urochloa extensa* (Chase) C. Nelson & Fern. Casas; *Urochloa plantaginea* (Link) R.D. Webster; *Urochloa platyphylla* (Munro ex C. Wright) R.D. Webster; *Urochloa platyphylla* (Griseb.) R.D. Webster)

Mexico to Paraguay, west tropical Africa. Annual, decumbent, rooting at the nodes, spikelets in 1-2 rows on the rachis, glumes and lower lemma glabrous, weed, forage, cut as fodder for horses, found in disturbed places, gardens, see *Hortus Regius Botanicus Berolinensis* 1: 206. 1827, *Mantissa* 2: 557. 1827, *Synopsis Plantarum Glumacearum* 1: 61. 1853, *Catalogus plantarum cubensium* ... 230. 1866, *Anales de la Academia de Ciencias Medicas* ... 8: 206. 1871, *Mexicanas Plantas* 2: 19. 1886 and *Flora of the Southeastern United States* ... 81: 1327. 1903, *Contributions from the United States National Herbarium* 12(6): 212. 1909, *Contributions from the United States National Herbarium* 28: 240. 1929, *Systematic Botany* 13(4): 606-607. 1988, *Darwiniana* 32(1-4): 65. 1993, *Fontqueria* 51: 4. 1998.

in Ghana: gyemsa

B. psammophila (Welw. ex Rendle) Launert (*Leucophrys psammophila* (Welw. ex Rendle) Dandy; *Panicum psammophilum* Welw. ex Rendle; *Panicum psammophilum* Nash, nom. illeg., non *Panicum psammophilum* Welw. ex Rendle)

Africa, Angola. Annual, rare, tufted, erect or decumbent, densely yellow hairy, spikelets clustered and without the rachilla extension, found on sand dunes, dry river beds, see *Bulletin of the Torrey Botanical Club* 26(11): 576. 1899, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 171. 1899 and *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Mitteilungen der Botanischen Staatssammlung München* 8: 149. 1970.

B. pubescens (Chiov.) S.M. Phillips (*Brachiaria serrifolia* var. *pubescens* Chiov.)

Ethiopia. Short-lived perennial, stiff, slender, ascending, branched, villous nodes, loosely tufted, sometimes rooting at the lower nodes, leaf blades narrowly lanceolate and velvety, divergent racemes, spikelets narrowly ovate and shortly acuminate, upper lemma subacute and mucronate, in bushland, see *Flora of Tropical Africa* 9: 548. 1919, *Webbia* 8: 65. 1951, *Kew Bulletin* 46(3): 536. 1991.

B. ramosa (L.) Stapf (*Brachiaria regularis* (Nees) Stapf; *Brachiaria regularis* var. *nidulans* (Mez) Täckh. & G. Täckh.; *Echinochloa ramosa* (L.) Roberty; *Panicum arvense* Kunth; *Panicum brachylachnum* Steud.; *Panicum*

breviradiatum Hochst.; *Panicum canescens* Roth ex Roem. & Schult.; *Panicum cognatissimum* Steud.; *Panicum nidulans* Mez; *Panicum pallidum* Peter; *Panicum patens* Bojer, nom. illeg., non *Panicum patens* L.; *Panicum petiveri* var. *puberulum* Chiov.; *Panicum ramosum* L.; *Panicum sorghum* Delile ex Steud.; *Panicum supervacuum* C.B. Clarke; *Urochloa ramosa* (L.) R.D. Webster; *Urochloa ramosa* (L.) T.Q. Nguyen; *Urochloa supervacua* (C.B. Clarke) Noltie)

Tropics of Old World. Annual, variable, loosely tufted, branching, spreading, erect or geniculate, ascending, sometimes rooting at the lower nodes, sheaths keeled and ciliate, ligule more or less membranous, leaf blades velvety-pubescent, leaves linear, loose inflorescence paniculate with spike-like racemes erect to ascending, spikelets apiculate usually paired and pubescent, lower floret staminate or sterile, upper floret bisexual and rugose, upper lemma rugose and acute, grown as a cereal, edible grains used in preparing traditional foods, palatable, grazed, straw and grains readily eaten by baboons and cattle, bird feed, a weed of cultivation, growing on sand dunes, coastal dunes, sandy plains, rocky slopes, forest undergrowth, waste places, irrigated land, stony ground, field borders, along roadsides, open *Acacia* scrub, cottonfields, shallow soil, plantations, closely related to *Brachiaria deflexa* (Schumach.) C.E. Hubb. ex Robyns, can be confused with *Brachiaria villosa*, see *Mantissa* 29-30. 1767, *Systema Vegetabilium* 2: 457. 1817, *De Graminibus Paniceis* 144. 1826, *Révision des Graminées* 2: 391, t. 109. 1831, *Hortus Mauritianus* 365. 1837, *Synopsis Plantarum Glumacearum* 1: 58, 62, 69. 1854, *Flora* 38: 195. 1855, *Journal of the Linnean Society, Botany* 24(164): 407-408, f. A-E. 1888 and *Handb. Fl. Ceylon* 5: 140. 1900, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 136. 1904, *Annuario del Reale Istituto Botanico di Roma* 8(3): 302-303. 1908, *Fl. Trop. Africa* 9(3): 542-544. 1919, *Bulletin of Miscellaneous Information Kew* 1923(2): 315. 1923, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* N, f. 13(2): 45. 1928, *Handb. Fl. Ceylon* 6: 319. 1931, *Bulletin of the Faculty of Science Egyptian University* 17: 432. 1941, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franc. Afr. Noire, Sér. A*, 17: 64, 1955, *Grasses of Ceylon* 144. 1956, *Grasses of Burma* ... 284. 1960, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Proceedings of the Indian Academy of Sciences* 49(4): 380. 1983, *The Australian Paniceae (Poaceae)* 251. 1987, *Blumea* 41: 427. 1996, *Edinburgh Journal of Botany* 56(3): 394-395. 1999.

in English: browntop millet

in Portuguese: pé-de-galinha

in Niger: garaji, garza, garzahy, ishibaen, ishiban, kreb, pagguré

in Nigeria: baadeho, kanarin doki

in Senegal: gae rid, ndugup i mpiti

in India: anda korra, bennaki hullu, benne akki hullu, chama pothaval, eduru gaddi, kaadu baragu hullu, pala pul, sanam pul

in Indonesia: au kawunga, rebha pereng-perengan

B. remota (Retz.) Haines (*Panicum crusgalli* var. *petiveri* (Trin.) Hack. ex De Wild. & T. Durand; *Panicum foliosum* var. *petiveri* (Trin.) Benth.; *Panicum petiveri* Trin.; *Panicum remotum* Retz.; *Urochloa remota* (Retz.) Ashalatha & V.J. Nair)

India and Sri Lanka. Perennial, decumbent, loose, lax, rhizomatous base, often stoloniferous, in small clumps, spikelets usually solitary, lower floret sterile, upper lemma sessile, on the beaches, dunes and beaches, rocky soils, in shade, see *Species Plantarum* 1: 56. 1753, *Observationes Botanicae* 4: 17. 1786, *Prodromus Florae Novae Hollandiae* 191. 1810, *De Graminibus Paniceis* 144. 1826, *Flora Australiensis: A Description ...* 7: 481. 1878 and *Handb. Fl. Ceylon* 5: 144. 1900, *Annales du Musée du Congo. Série 1, Botanique* 1: 72. 1900, *The Botany of Bihar and Orissa* 5: 1005. 1924, *Handb. Fl. Ceylon* 6: 318. 1931, *Grasses of Ceylon* 145. 1956, *Grasses of Burma ...* 285. 1960, *Bulletin of the Botanical Survey of India* 35(1-4): 29. 1993.

in India: chapar, chaprur, chaprura

B. remota (Retz.) Haines var. *lanceolata* Davidse

Sri Lanka. Perennial, decumbent, erect, coastal, branched, rooting at the lower nodes, ligule ciliate, leaf blades lanceolate, spikelets often paired and densely arranged, lower floret staminate, on the beaches, dunes and beaches, rocky soils, see *Revised Handbook to the Flora of Ceylon* 8: 93. 1994.

B. remota (Retz.) Haines var. *remota*

Sri Lanka, India. Perennial, sprawling, rooting at the nodes, branched, ligule ciliate, leaf blades linear, spikelets usually solitary, lower floret sterile, on dunes, beaches, along roadsides.

B. reptans (L.) C.A. Gardner & C.E. Hubb. (*Brachiaria prostrata* (Lam.) Griseb.; *Echinochloa reptans* (L.) Roberty; *Panicum brachythyrsum* Peter; *Panicum procumbens* Lam. ex Nees; *Panicum prostratum* Lam.; *Panicum prostratum* var. *pilosum* Eggers; *Panicum reptans* L.; *Panicum reptans* (Lam.) Kunth, nom. illeg., non *Panicum reptans* L.; *Panicum umbrosum* Retz.; *Saccharum reptans* Lam.; *Urochloa ramosa* (L.) T.Q. Nguyen; *Urochloa reptans* (L.) Stapf)

Tropics. Annual or subperennial, tufted, running, usually prostrate or creeping, mat-forming, stoloniferous, at first decumbent and rooting at the nodes and finally ascending, nodes ciliate, sheath embracing the culm, ligule a minute fringed membrane, leaves cordate or ovate-lanceolate, 1-sided spike-like racemes ascending, racemes solitary, glabrous spikelets mostly paired and broadly elliptic, lower floret sterile or staminate, first glume very short, upper

lemma mucronate and rugose, grains eaten in times of scarcity, fodder, highly palatable especially when young, eaten by cattle and goats, common weed on the alluvial plains, waste places, irrigation ditches, sand bars, weedy areas, irrigated land, cultivated fields, clearings, sand dunes, along roadsides, see *Systema Naturae, Editio Decima* 2: 870. 1759, *Observationes Botanicae* 4: 16. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 155, 171. 1791, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 109. 1829, *Révision des Graminées* 2: 219, t. 21. 1830, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 263. 1857, *Enum. Pl. Zeyl.* 359. 1864, *The Flora of St. Croix and the Virgin Islands* 104. 1879, *A Systematic Catalogue of the Flowering Plants ... in Ceylon* 105. 1885, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 263. 1857 and *Handb. Fl. Ceylon* 5: 139. 1900, *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Fl. Trop. Africa* 9: 601. 1920, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 13(2): 45. 1928, *Handb. Fl. Ceylon* 6: 323. 1931, *Hooker's Icones Plantarum* 34(3): t. 3363, p. 3. 1938, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franc. Afr. Noire, Sér. A*, 17: 66. 1955, *Grasses of Ceylon* 143. 1956, *Grasses of Burma ...* 285. 1960, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Proceedings of the Indian Academy of Sciences* 49(4): 380. 1983, *Blumea* 41: 417. 1996.

in India: emme thappare hullu, sanna kaadu bili saame hullu, shani pullu

in Thailand: yaa phak kai, ya phak kai, yaa ton tit, ya ton tit

B. ruziziensis R. Germ. & C.M. Evrard (*Brachiaria decumbens* var. *ruziziensis* (R. Germ. & Evrard) Ndab.; *Urochloa ruziziensis* (R. Germ. & C.M. Evrard) Crins; *Urochloa ruziziensis* (R. Germ. & Evrard) Morrone & Zuloaga, nom. illeg., non *Urochloa ruziziensis* (R. Germ. & Evrard) Crins) (Ruzizi plains in Zaire)

Tropical Africa. Perennial, tufted, creeping, leafy and hairy, stoloniferous, shortly rhizomatous, spikelets in one or two rows, flattened and winged rachis, sexual reproduction, ground cover, aromatic, high nutritive value, palatable, forage grass, readily grazed, best on well-drained sites, closely related to *Brachiaria decumbens* Stapf, see *Flora of Tropical Africa* 9: 528. 1919, *Bulletin du Jardin Botanique de l'État* 23: 373, f. 36, 37. 1953, *Lejeunia* 132: 16. 1989, *Journal of the Arnold Arboretum, Supplementary Series* 1: 269. 1991, *Darwiniana* 31(1-4): 101. 1992.

in English: Congo grass, Congo signal grass, prostrate signal grass, ruzi grass, Kennedy ruzi grass, bongo grass

in Spanish: yerba congo

in Thailand: ya ruzi, ya susi

B. scalaris (Mez) Pilger (*Brachiaria heterocraspeda* (Peter) Pilg.; *Brachiaria pilgerana* H. Scholz; *Brachiaria scalaris* Pilg.; *Panicum heterocraspedum* Peter; *Panicum scalarum*

Schweinf.; *Panicum scalare* Mez, nom. illeg., non *Panicum scalarum* Schweinf.)

East Africa, Tanzania, Zimbabwe. Annual, straggling, erect, decumbent or ascending, leaf blades lanceolate, inflorescence pyramidal with divergent racemes, spikelets acute, secondary branchlets absent, upper lemma acute, closely related to *Brachiaria villosa* (Lam.) A. Camus, found in weedy places, along roadsides, see *Bulletin de l'Herbier Boissier* 2, App. 2: 20. 1894 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34: 138. 1904, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 13(2): 45. 1928, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(93): 269. 1928, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 13: 263. 1936, *Willdenowia* 8(2): 385. 1978.

B. schoenfelderi C.E. Hubb. & Schweick. (*Moorochloa schoenfelderi* (C.E. Hubb. & Schweick.) Veldkamp) (named for E.B.W. Schoenfelder, in 1913 emigrated to Southwest Africa from Germany)

Namibia. Annual or perennial, straggling, open, erect or geniculate, branched or unbranched, tufted or stoloniferous, often decumbent and rooting at the nodes, leaf sheaths rounded, leaf blade expanded, ligule a fringe of short hairs, spike-like racemes, spikelets densely pilose arranged in two rows, pioneer grass, forming dense stands, soft and palatable, growing in damp places, vleis, closely related to *Brachiaria poaeoides* Stapf, see *Bulletin of Miscellaneous Information Kew* 1936(5): 323. 1936, *Reinwardtia* 12(2): 139. 2004.

in South Africa: Schoenfelder-se-armgras, Schoenfelders armgras

B. semiundulata (Hochst. ex A. Rich.) Stapf (*Brachiaria villosa* sensu Senaratna; *Panicum coccospermum* sensu Thw.; *Panicum nilagiricum* Steud.; *Panicum semiundulatum* Hochst. ex A. Rich.; *Panicum villosum* sensu Hook.f., nom. illeg., non *Panicum villosum* Lam.; *Panicum villosum* var. *erythraeum* Chiov.; *Urochloa semiundulata* (Hochst. ex A. Rich.) Ashalatha & V.J. Nair)

India, Sri Lanka, East Africa. Annual, slender, decumbent, straggling, loosely tufted, delicate, ascending, leaf blades lanceolate to ovate, sheaths villous, ligule with minute membrane, ascending racemes, overlapping spikelets solitary and strongly gibbous, upper lemma swollen and longer than the upper glume, lower floret sterile, weed species, growing in disturbed situations, grassland, arable fields, open areas, rocky slopes, bushland, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Tent. Fl. Abyss.* 2: 364. 1850, *Syn. Pl. Glumac.* 1: 62-63. 1854, *Enum. Pl. Zeyl.* 359. 1864, *A Systematic Catalogue of the Flowering Plants ... in Ceylon* 105. 1885, *The Flora of British India* 7(21): 34. 1897 [1896] and *Handb. Fl. Ceylon* 5: 139. 1900, *Annuario del Reale Istituto Botanico di Roma* 8(3):

302. 1908, *Fl. Trop. Africa* 9: 556. 1919, *Fl. Indo-Chine* 7(4): 433. 1922, *Handb. Fl. Ceylon* 6: 319. 1931, *Grasses of Ceylon* 143. 1956, *Grasses of Burma ...* 285. 1960, *Proceedings of the Indian Academy of Sciences* 49(4): 380. 1983, *Bulletin of the Botanical Survey of India* 35(1-4): 30. 1993.

B. semiverticillata (Rottler ex Steud.) Alston (*Panicum firmiculme* Mez; *Panicum petiveri* sensu Thw.; *Panicum semiverticillatum* Rottler ex Steud.; *Panicum semiverticillatum* Rottler; *Urochloa semiverticillata* (Rottler ex Steud.) Ashalatha & V.J. Nair)

Southern India, Sri Lanka. Perennial, caespitose, erect, branched, forming large clumps, sheaths densely pubescent, spikelets solitary or paired, lower floret sterile, upper lemma stipitate, forest shade, rocky hills, see Sir Whitelaw Ainslie (1767-1837), *Materia medica of Hindoostan*, and artisan's and agriculturist's nomenclature. Madras: Govt. Press, 1813, *Gram. Panic.* 144. 1826, *Syn. Pl. Glumac.* 1: 62. 1854, *Enum. Pl. Zeyl.* 359. 1864, *A Systematic Catalogue of the Flowering Plants ... in Ceylon* 104. 1885 and *Handb. Fl. Ceylon* 5: 143. 1900, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 65. 1917, *Fl. Trop. Africa* 9: 556. 1919, *Fl. Indo-Chine* 7(4): 433. 1922, *Handb. Fl. Ceylon* 6: 318. 1931, *Grasses of Ceylon* 145. 1956, *Grasses of Burma ...* 286. 1960, *Bulletin of the Botanical Survey of India* 35(1-4): 30. 1993.

B. serrata (Thunb.) Stapf (*Brachiaria brachylopha* Stapf; *Brachiaria serrata* var. *gossypina* (A. Rich.) Stapf; *Brachiaria serrata* var. *serrata*; *Holcus serratus* Thunb.; *Panicum gossypinum* A. Rich., nom. illeg., non *Panicum gossypinum* Hook.f. & Arn.; *Panicum nigropedatum* Munro ex Ficalho & Hiern; *Panicum nigropedatum* var. *basipiliferum* Chiov.; *Panicum scopuliferum* Trin.; *Panicum serratum* (Thunb.) Spreng.; *Panicum serratum* var. *brachylophum* (Stapf) A. Chev.; *Panicum serratum* var. *gossypinum* Hack. ex T. Durand & Schinz; *Panicum serratum* var. *gossypium* (A. Rich.) T. Durand & Schinz; *Panicum serratum* var. *hirtum* Kuntze; *Panicum serratum* var. *holosericeum* Hack. ex T. Durand & Schinz; *Sorghum serratum* (Thunb.) Roem. & Schult.; *Tricholaena abbreviata* K. Schum. ex Engl.)

Tropical Africa, Benin, Namibia, Swaziland, South Africa, Malawi. Perennial, variable, slender, erect to decumbent, tufted to densely tufted, sometimes rhizomatous, culms grow upright with leaves alternate and horizontal, ligule a fringe of hairs, leaf sheath hairy to silky-tomentose and round, basal leaf sheaths clustered, pungent blades, leaf short with crinkled to serrate margins, tough rootstock, narrow inflorescence, unilateral velvety racemes arranged on a hairy primary axis, racemes erect and compact, spikelets densely hairy and thickened, lower glume subacute and villous, upper glume and lower lemma usually fringed and cartilaginous, mucronate lower lemma and palea, upper lemma coriaceous and acute with a cuspidate tip, native

pasture species, high grazing value, heavily grazed by stock, reasonably palatable, useful for erosion control, indicator of veld in a good condition, occurs in stony places in undisturbed veld, in heavily grazed veld, deciduous bushland, red soils, shallow sandy soils, woodland clearings, sandy and loam soil, sandveld and vlei areas, wooded grassland, vlei edges, highveld grassland, clay highveld grassland, upland grass savannah, open bushland on stony hillsides, open bushveld, see *Prodromus Plantarum Capensium*, ... 20. 1794, *Systema Vegetabilium* 2: 839. 1817, *Systema Vegetabilium, editio decima sexta* 1: 309. 1824, *Species Graminum* 2: t. 165. 1829, *The Botany of Captain Beechey's Voyage* 100. 1841, *Tentamen Florae Abyssinicae ... 2*: 366. 1850, *Transactions of the Linnean Society of London, Botany* 2: 29. 1881, *Conspectus Florae Africae* 5: 765. 1894, *Abhandlungen der Preussischen Akademie der Wissenschaften. Physikalisch-mathematische Klasse* 1894: 58. 1894, *Revisio Generum Plantarum* 3(3) 364. 1898 and *Annali di Botanica* 13: 42. 1914, *Flora of Tropical Africa* 9: 537-539. 1919, *Exploration Botanique de l'Afrique Occidentale Française ... 1*: 730. 1920.

in English: velvet grass, velvet signal grass, red top grass

in South Africa: fluweelsinjalgras, fluweelgras, rooisinjalgras, leholane

in Upper Volta: naruce

B. serrifolia (Hochst.) Stapf (*Panicum serrifolium* Hochst.) East Africa, Ethiopia, Niger, Zimbabwe. Annual, erect, robust, leaf blades cordate with crinkled to serrate margins, racemes ascending or divergent, spikelets glabrous and paired, upper glume papery, upper lemma subacute and rugose, edible grain, grazed, occurring under light shade in forest, deciduous bushland, see *Flora* 38: 196. 1855 and *Flora of Tropical Africa* 9: 548. 1919, *Webbia* 8: 65. 1951, *Kew Bulletin* 46(3): 536. 1991.

B. setigera (Retz.) C.E. Hubb. (*Brachiaria setigera* (Retz.) C.E. Hubb.; *Cyrtococcum setigerum* (P. Beauv.) Stapf; *Digitaria setigera* Roth; *Echinochloa setigera* (Retz.) P. Beauv.; *Panicum euryphyllum* Peter; *Panicum procumbens* var. *setigerum* (Retz.) Nees; *Panicum prostratum* var. *setigerum* (Retz.) Büse; *Panicum setigerum* Retz.; *Panicum setigerum* (Roth) Boerl.; *Panicum setigerum* P. Beauv., nom. illeg., non *Panicum setigerum* Retz.; *Panicum trichopodioides* Mez & Schum.; *Urochloa setigera* (Retz.) Stapf; *Urochloa trichopodioides* (Mez & Schum.) S.M. Phillips & S.L. Chen)

Tropical East Africa, India, Thailand. Perennial, trailing, leaf blades lanceolate, single or paired spikelets narrowly ovate, in forest, under tree shade, see *Observationes Botanicae* 4: 15. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Essai d'une Nouvelle Agrostographie* 53, 161, 171. 1812, *Systema Vegetabilium* 2: 474. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 109. 1829, *Plantae Junghuhnianae* 3: 372. 1854, *Annales*

du Jardin Botanique de Buitenzorg 8: 52. 1890, *Fl. Br. India* 7: 36. 1897 and *Handb. Fl. Ceylon* 5: 141. 1900, *Flora of Tropical Africa* 9(1): 15. 1917, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 60. 1917, *Flora of Tropical Africa* 9(4): 598, 746. 1920, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* N.F. 13(2): 45. 1928, *Hooker's Icones Plantarum* 34(3): t. 3363. 1938, *Grasses of Ceylon* 144. 1956, *Fl. Ind. Enumerat.-Monocot.* 273. 1989, *Novon* 13(4): 470. 2003.

B. soluta Stapf (*Brachiaria jubata* (Fig. & De Not.) Stapf; *Panicum jubatum* Fig. & De Not.)

Tropical Africa, Tanzania, Kenya. Perennial, loosely tufted, inflorescence of dense spike-like racemes, spikelets in two rows, very important for grazing, grassland, in seasonally waterlogged places, see *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 331, f. 9. 1854 and *Flora of Tropical Africa* 9: 519, 563. 1919.

in East Africa: arombo, atoch-toch

B. stefaninii Chiov. (*Panicum stefaninii* Chiov.) (named for the Italian naturalist Giuseppe Stefanini, 1882-1938, traveler and collector in eastern Africa, Ethiopia and Somalia, author of *In Somalia. Note e impressioni di viaggio*. Firenze 1922; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 342. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 73. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; F.A. Stafleu & E.A. Mennega, *Taxonomic literature. Supplement IV*. 104-110. 1997; Gordon Douglas Rowley, *A History of Succulent Plants*. Mill Valley, California 1997)

Ethiopia. Perennial, glaucous, branched, erect, woody base, densely tufted, basal sheaths pubescent to velvety pubescent, rigid leaves linear to lanceolate and distichous, spikelets villous and acuminate with a short stipe, lower glume clasping, upper glume and lower lemma membranous, upper lemma acute, on sandy soils, plains, see *Plantae Novae vel Minus Notae ex Aethiopia* 23. 1928.

B. stigmatisata (Mez) Stapf (*Panicum stigmatisatum* Mez)

Tropical Africa. Annual, small, prostrate to semiprostrate, grain edible, turf forming, good fodder, in disturbed areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 140. 1904, *Flora of Tropical Africa* 9: 520. 1919.

in Mali: dionguenianin tioke, donguenianin tioke, kamimbi, kononimbi, larba, lahrba, niarukeho

in Nigeria: aparum odan, takoure, takure

in Senegal: kamimbi

in Upper Volta: bassangui, kamimbi, kononimbi, kouloumogo, kulumogo, naganouoyo, naganuoyo, naumé

B. subquadripara (Trin.) A. Hitchc. (*Brachiaria distachya* (L.) Stapf; *Brachiaria miliiformis* (Presl & C. Presl) A.

Chase; *Panicum distachyum* sensu Thw.; *Panicum miliiforme* Presl; *Panicum miliiforme* Presl & C. Presl; *Panicum subquadruparum* Trin.; *Urochloa distachya* (L.) T.Q. Nguyen; *Urochloa subquadrupara* (Trin.) Webster)

Tropical and subtropical Asia, Sri Lanka, Pacific Islands. Perennial or annual, ascending, prostrate, decumbent, erect, creeping, slender, stoloniferous, rooting at the lower nodes, mat-forming, sheaths pubescent or glabrous, spaced racemes, spikelets solitary in two rows, peduncle glabrous or hairy, lower floret sterile, upper lemma rugulose, very palatable, grazed, forage for ruminants, shade tolerant, once established can withstand heavy grazing, moderately drought-tolerant, ground cover, grassy roadsides, open habitats, waste places, along stream banks, taxonomic situation not clear, closely related to *Brachiaria distachya* (L.) Stapf, confused with *Brachiaria miliiformis* (Presl & C. Presl) A. Chase, see *Mantissa Plantarum* 2: 183-184. 1771, *De Graminibus Paniceis* 145. 1826, *Reliquiae Haenkeanae* 1(4-5): 300. 1830 and *Flora of Tropical Africa* 9: 565. 1919, *Contributions from the United States National Herbarium* 22(1): 35. 1920, *Lingnan Sci. J.* 7: 214. 1931, *Grasses of Ceylon* 140. 1956, *Grasses of Burma ...* 286. 1960, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Proceedings of the Indian Science Congress Association* 70(3-vi): 94. 1983, *Acta Phytotaxonomica Sinica* 22(6): 472. 1984, *The Australian Paniceae (Poaceae)* 252. 1987.

in English: cori grass

B. subulifolia (Mez) Clayton (*Brachiaria filifolia* Stapf; *Panicum subulifolium* Mez)

South Africa. Perennial, rare, tufted, rhizomatous with oblique rhizomes, filiform leaves, spikelets arranged in two rows, lower glume 7-nerved, usually in damp areas, seepage, sandy soils, see *Flora of Tropical Africa* 9: 516. 1919, *Kew Bulletin* 34(3): 559. 1979 [1980], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 135. 1979 [1980].

B. villosa (Lam.) A. Camus (*Brachiaria coccosperma* (Steud.) Stapf ex Reeder; *Brachiaria distichophylla* (Trin.) Stapf; *Panicum coccospermum* Steud.; *Panicum despreauxii* Steud.; *Panicum distichophyllum* Trin.; *Panicum grossarium* Roxb.; *Panicum nanum* Nees ex Steud.; *Panicum pauperulum* Steud.; *Panicum serrulatum* Schumacher, nom. illeg., non *Panicum serrulatum* Roxb.; *Panicum villosum* Lam.; *Panicum viviparum* Schumacher.; *Urochloa villosa* (Lam.) T.Q. Nguyen)

Southeast Asia, Sudan. Sharply acute spikelets, lower glume acute, upper glume as long as the spikelet, on sandy soils, exposed areas, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Flora Indica; or Descriptions ...* 1: 300. 1820, *De Graminibus Paniceis* 147. 1826, *Beskrivelse af Guineiske planter* 62-63. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 82-83. 1828, *Synopsis Plantarum Glumacearum* 1: 58, 62. 1854 and

Flora of Tropical Africa 9: 557. 1919, *Flore Générale de l'Indo-Chine* 7: 433. 1922, *Journal of the Arnold Arboretum* 29: 273. 1948, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966.

B. xantholeuca (Schinz) Stapf (*Brachiaria pubifolia* Stapf; *Brachiaria ukambensis* (Mez) Henrard; *Brachiaria xantholeuca* (Hack. ex Schinz) Stapf; *Panicum anisotrichum* Mez; *Panicum distichophylloides* Mez; *Panicum pubifolium* Nash; *Panicum pubifolium* Mez, nom. illeg., non *Panicum pubifolium* Nash; *Panicum xantholeucum* Hack. ex Schinz; *Urochloa xantholeuca* (Hack. ex Schinz) H. Scholz)

Namibia. Annual, tufted, leaf blades broadly linear and velvety-pubescent, leaves acute, ascending racemes, spikelets acute to cuspidate and overlapping, upper glume and lower lemma membranous, upper lemma acute and rugose, in weedy places, deciduous bushland, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 141. 1888, *Bulletin of the Torrey Botanical Club* 26: 577. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 137. 1904, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 70. 1917, *Flora of Tropical Africa* 9: 541, 549. 1919, *Blumea* 3(3): 436. 1940, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 11(4): 443. 1989 [1990].

Brachyachne (Benth. & Hook.f.) Stapf = Brachyachne (Benth.) Stapf

From the Greek *brachys* "short" and *achne* "chaff, glume," referring to the lemmas, shorter than the glumes.

About 8/10 species, tropical Africa, Australasia, Java to Australia. Chloridoideae, Cynodonteae, Chloridinae, perennial or annual, herbaceous, slender, stoloniferous or caespitose, rarely erect, usually decumbent, sometimes or usually creeping or not creeping, culms branching, solid internodes, auricles absent, leaf sheath smooth and loose, ligule membranous and ciliate, leaf blade with scabrous margins, narrow leaves flat and linear or folded, plants bisexual, racemes single or digitate, solitary and sessile spikelets strongly compressed laterally and imbricate, one bisexual floret, two glumes subequal and narrow, awnless and keeled lemmas shorter than the glumes, palea present, 2 fleshy lodicules joined or free, 3 stamens, ovary glabrous, 2 stigmas, small ellipsoid fruit, weed species, fodder grasses, growing in seasonal swamps and wet places, open habitats, rockpools, open grasslands, rainforest, depressions, in tropical and subtropical arid and semiarid regions, moist rock crevices, plants contain cyanogenetic glycosides, hydrocyanic or prussic acid (HCN), lectotype *Brachyachne convergens* (F. Muell.) Stapf, see *Syn. Pl.* 1: 85. 1805, *Prodromus Florae Novae Hollandiae* 208. 1810, *Essai d'une Nouvelle Agrostographie* 122, 146, 150. 1812, *Gen-*

era Plantarum 3(2): 1164. 1883 and Sir David Prain (1857-1944), editor, *Flora of Tropical Africa*. 9: 20. 1917, *Icones Plantarum [Hooker's]* Edn. Ser. 5, 1(4): sub. t. 3099. 1922, *Kew Bulletin* 1933: 502-503. 1933, *Kew Bulletin* 1934: 436. 1934, *Icones Plantarum [Hooker's]* Edn. Ser. 5, 4(1): sub. t. 3362, p. 2. 1936, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 82, 84. 1956, M. Lazarides, "A revision of Australian Chloridoideae (Gramineae)." *Australian Journal of Botany Supplementary Series* 5: 1-52. 1972, G. Morgan, *Desert Uplands*. In P.S. Sattler & R.D. Williams, (editors), *The Conservation Status of Queensland's Biogeographical Ecosystems*. Environmental Protection Agency, Brisbane. 1999, R.J.F. Henderson, (editor), *Names and Distribution of Queensland Plants, Algae and Lichens*. Environmental Protection Agency, Toowong. 2002, *New Phytologist* vol. 156, issue 3: 327-349. Dec 2002, *Austral. Ecology* 28(2): 182-195. Apr 2003, *Flora of Australia* vol. 44B, Poaceae 3: 294-300. 2005, Qing Liu et al. "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* vol. 148, issue 1: 57-72. May 2005.

Species

B. ambigua Ohwi

Australia, Indonesia. Annual, decumbent or geniculate, without stolons, glume keels wingless, see *Bulletin of the National Science Museum, Tokyo*: 11. 1947.

B. ciliaris (Kuntze) C.E. Hubb. (*Brachyachne ciliaris* (Benth.) C.E. Hubb.; *Capriola ciliaris* Kuntze; *Cynodon ciliaris* (L.) Raspail; *Cynodon ciliaris* Benth., nom. illeg., non *Cynodon ciliaris* (L.) Raspail; *Microchloa ciliaris* (Kuntze) Domin; *Poa ciliaris* L.)

Australia, Queensland, Northern Territory, South Australia, New South Wales. Annual or short-lived perennial, small, erect or geniculate, spreading, creeping or not creeping, basal leaf sheaths villous, leaf blades villous, spikes paired and digitate, spikelets 1-flowered, subapically bearded floret, glumes obtuse or bifid, upper glume rounded on back, lemma villous and concave, grows on red sandy soils, grassland, young growth contains hydrocyanic or prussic acid (HCN), species similar to *Cynodon dactylon* (L.) Pers., see *Systema Naturae, Editio Decima* 875. 1759, *Annales des Sciences Naturelles, Botanique* 5: 302. 1825, *Flora Australiensis: A Description ...* 7: 610. 1878, *Revisio Generum Plantarum* 2: 764. 1891 and *Bibliotheca Botanica* 85: 364. 1915, *Bulletin of Miscellaneous Information Kew* 1934: 448. 1934.

in English: hairy native couch

B. convergens (F. Muell.) Stapf (*Capriola convergens* (F. Muell.) Kuntze; *Cynodon convergens* F. Muell.; *Microchloa convergens* (F. Muell.) Domin)

Western Australia, Queensland, Northern Territory, New South Wales. Annual or biennial, ascending or erect,

branched, geniculate at the base, usually stoloniferous, sheath overlapping, leaves glabrous, erect or spreading spikes, spikelets 1-flowered, glumes acute or mucronate and laterally compressed, upper glume with a winged keel, lemma acute with densely ciliate margins, palea keels contiguous, strongly flattened grain, weed, an increaser species, a valued fodder grass, useful for erosion control, grows in floodplains, young shoots contain cyanogenetic glycosides, hydrocyanic or prussic acid (HCN), see *Fragmenta Phytographiae Australiae* 8: 113. 1873, *Revisio Generum Plantarum* 2: 764. 1891 and *Repertorium Specierum Novarum Regni Vegetabilis* 10: 119. 1911.

in English: common native couch, common couch, water couch, Kimberley couch, spider grass, gulf star grass, gulf spider grass

B. kundelungensis Van der Veken

Zaire. Erect, see *Bulletin du Jardin Botanique de l'État* 28(1): 86. 1958.

B. patentiflora (Stent & Rattray) C.E. Hubb. (*Microchloa patentiflora* Stent & Rattray)

Tropical Africa. Perennial, tufted, basal sheaths break up into fine fibers when old, spikes slender and usually solitary, leaves revive after desiccation, common in seasonal swamps, waterlogged soils, see *Bulletin of Miscellaneous Information Kew* 1933: 503. 1933, *Proceedings of the Rhodesia Scientific Association* 32: 59. 1933.

B. pilosa Van der Veken

Zaire. Erect, see *Bulletin du Jardin Botanique de l'État* 28(1): 84. 1958.

B. prostrata C.A. Gardner & C.E. Hubb.

Western Australia, central Queensland Annual or biennial, prostrate, without stolons, arid areas, see *Icones Plantarum [Hooker's]* Edn. Ser. 5, 4(1): t. 3362. 1936.

B. simonii Kupicha & Cope

Zambia. See *Kew Bulletin* 40(1): 89. 1985.

B. tenella (R. Br.) C.E. Hubbard (*Capriola tenella* (R. Br.) Kuntze; *Cynodon altior* F. Muell.; *Cynodon tenellus* R. Br.; *Microchloa tenella* (R. Br.) Domin)

Western Australia. Annual or perennial, erect, decumbent or geniculate, slender inflorescence branches, spikelets elliptic or obovate, glumes with acute wingless keels, grain not compressed, in swampy areas, floodplains, sometimes in water, contains cyanogenetic glycosides, hydrocyanic or prussic acid (HCN), see *Prodromus Florae Novae Hollandiae* 187. 1810, *Fragmenta Phytographiae Australiae* 8: 113. 1873, *Revisio Generum Plantarum* 2: 764. 1891 and *Repertorium Specierum Novarum Regni Vegetabilis* 10: 119. 1911, C.E. Hubbard, Gramineae Australienses: II. *Bulletin of Miscellaneous Information* 10: 448. 1934 [also *Bulletin of Miscellaneous Information Kew* 1934: 448. 1934].

in English: slender native couch

B. upembaensis Van der Veken

Zaire. Erect, see *Bulletin du Jardin Botanique de l'État* 28(1): 85. 1958.

**Brachyathera Kuntze = *Danthonia* DC.,
Sieglingia Bernh.**

From the Greek *brachys* "short" and *ather* "barb, spine, chaff, prickle, awn."

Danthonioideae, Danthonieae, see *Flore Française. Troisième Édition* 3: 32. 1805, *Systema Vegetabilium* 2: 690. 1817 and *Lexicon Generum Phanerogamarum* 77. 1903, *Contributions from the United States National Herbarium* 46: 170-177. 2003.

Brachychloa S.M. Phillips

From the Greek *brachys* "short" and *chloe, chloa* "grass, young grass."

About two species, Mozambique and southern Africa, Kwa-Zulu-Natal. Chloridoideae, Eragrostideae, Eleusininae, annual or perennial, tufted, decumbent, herbaceous, stoloniferous, unbranched, leaf blades rigid, auricles absent, ligule a short fringed membrane, plants bisexual, racemes on a central axis, spikelets compressed and solitary, florets 3-7 bisexual or uppermost floret reduced and sterile, 2 glumes subequal and coriaceous, lower glume acute and awnless, upper glume acuminate to shortly mucronate, lemmas bidentate and mucronate, palea gibbous, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, shade species and species of open habitats, sandy sites, dunes, in coastal forests on sandy soil, clearings, type *Brachychloa schiemaniana* (Schweick.) S.M. Phillips, see *Kew Bulletin* 37(1): 145,158-159. 1982.

Species

B. fragilis S.M. Phillips

South Africa, Mozambique. Annual, rare, tufted, decumbent, long and deciduous racemes, lemmas 3-nerved, common on sandy soils, coastal dunes, see *Kew Bulletin* 37(1): 159. 1982.

B. schiemaniana (Schweick.) S.M. Phillips (*Heterocarpha schiemaniana* Schweick.) (for the German botanist Elisabeth Schieman, 1881-1972, *Berliner Botanikerin*, 1908-1912 among the first girl-students officially admitted to study natural science at the Friedrich-Wilhelms-Universität at Berlin, one of the first women scientists to penetrate the German academic establishment, professor of genetics, authority on the history of cultivated plants, she was greatly influenced by Erwin Bauer. See Elvira Scheich, "Science, Politics, and Morality: The Relationship of Lise Meitner

and Elisabeth Schieman." *Osiris* 12: 143-168. 1997; Mathilde Schmitt, Elisabeth Schieman, Genetikerin und Kulturpflanzenhistorikerin. In: Inhetveen, Heide/Schmitt, Mathilde (Hg.) *Pionierinnen des Landbaus*. Uetersen: Heydorn, S. 81-86. 2000; J.H. Barnhart, *Biographical notes upon botanists*. 3: 224. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 352. 1972; *Der Züchter*. 21(7-8): 193-195. 1951; *Der Züchter*. 31(4): 117-118. 1961)

South Africa. Perennial, rare, stoloniferous, short and persistent racemes, lemmas 5- to 7-nerved, common on sandy soil, sand dunes, see *Bulletin of Miscellaneous Information Kew* 1929: 263. 1929, *Der Züchter. Zeitschrift für theoretische und angewandte Genetik* 31(4): 192-193, f. 1. 1961.

Brachyelytrum P. Beauv.

From the Greek *brachys* "short" and *elytron (elyo* "to wind") "a sheath, a cover."

One species, eastern North America, China to Japan, eastern Asia. Bambusoideae, Oryzodae, Brachyelytreae, or Stipoideae, or Pooideae, Brachypodieae, perennial, herbaceous, slender, auricles absent, leaf blades narrowly lanceolate, ligule membranous, shortly rhizomatous, plants bisexual, inflorescence a panicle, spikelets all alike, 1-flowered, bristle-like rachilla extension, 2 unequal tiny glumes or one per spikelet, upper glume subulate, lower glume often absent or reduced to vestigial, lemma herbaceous with straight awn, palea and lodicules present, stamens 2-3, ovary hairy, 2 stigmas, in woodland, forest shade, open woods, type *Brachyelytrum erectum* (Schreb.) P. Beauv., see *Essai d'une Nouvelle Agrostographie* 39, 155. 1812 and *Botanical Magazine* (Tokyo) 55: 361. 1941, *Acta Phytotaxonomica et Geobotanica* 11: 183. 1942, *Journal of Japanese Botany* 32: 111-114. 1957, *Canad. J. Bot.* 42: 863-867. 1964, *The Michigan Botanist* 10: 19-33. 1971 [The biosystematics and ecology of the genus *Brachyelytrum* (Gramineae) in Michigan.], *Taxon* 29: 645-666. 1980, *J. Arnold Arboretum* 66: 123-199. 1985, *Journal of the Arnold Arboretum* 69(3): 239-273. 1988, *International Organization of Plant Biosystematists Newsletter* 25: 9-10. 1995, *Systematic Botany* 28(4): 674-692. 2003 [A taxonomic revision of the eastern North American and eastern Asian disjunct genus *Brachyelytrum* (Poaceae) ...], *Contributions from the United States National Herbarium* 48: 142-143. 2003.

Species

B. erectum (Schreb.) P. Beauv. (*Agrostis erecta* (Schreb.) Spreng.; *Brachyelytrum aristatum* P. Beauv. ex Roem. & Schult.; *Brachyelytrum aristatum* P. Beauv. ex Trel.; *Brachyelytrum aristatum* var. *engelmannii* A. Gray; *Brachyelytrum aristosum* (Michx.) P. Beauv. ex Trel.; *Brachyelytrum aristosum* var. *glabratum* Vasey; *Brachye-*

lytrum erectum subsp. *erectum*; *Brachyelytrum erectum* var. *erectum*; *Brachyelytrum erectum* var. *glabratum* (Vasey) T. Koyama & Kawano; *Brachyelytrum erectum* var. *septentrionale* Babel; *Brachyelytrum septentrionale* (Babel) G.C. Tucker; *Dilepyrum aristosum* Michx.; *Dilepyrum erectum* (Schreb.) Farw.; *Muhlenbergia aristata* Pers.; *Muhlenbergia brachyelytrum* Trin.; *Muhlenbergia erecta* Schreber; *Muhlenbergia erecta* Muhl.)

Asia, North America. See *Transactions of the American Philosophical Society* 3: 160. 1793, A.W. Roth (1757-1834), *Neue Beiträge zur Botanik* 1: 97. Frankfurt a.M. 1802, *Flora Boreali-Americana* 1: 40. 1803, *Syn. Pl.* 1: 73. 1805, *Systema Vegetabilium* 2: 413. 1817, *Gram. Unifl. Sesquifl.* 188, 296, t. 5, f. 1. 1824, *Systema Vegetabilium, editio decima sexta* 1: 264. 1825, *A Manual of Botany of the Northern United States* (edition 5) 614. 1867, *Annual Report of the Geological Survey of Arkansas* 1888(4): 235. 1888 [1891], *Bulletin, West Virginia Agricultural Experiment Station* 24: 469. 1892, *Publ. Field Columbian Mus., Bot. Ser.* 1: 194. 1896 and *American Midland Naturalist* 8: 33. 1922, *Rhodora* 45(534): 260. 1943, *Canadian Journal of Botany* 42: 866. 1964, *Journal of the Arnold Arboretum* 69(3): 253. 1988.

in China: duan ying cao

B. erectum (Schreb.) P. Beauv. subsp. ***erectum***

Eastern North America.

B. erectum (Schreb.) P. Beauv. subsp. ***japonicum*** (Hack.) Koyama & Kawano (*Brachyelytrum erectum* var. *japonicum* Hackel; *Brachyelytrum japonicum* (Hackel) Matsumura ex Honda)

China. Perennial, slender, erect, solitary or loosely tufted, soft leaf blades linear-lanceolate and acuminate at apex, unbranched, short knotty rhizome, narrow panicle, lemma narrowly lanceolate, in woodland shade, see *Bulletin de l'Herbier Boissier* 7(9): 647. 1899 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 210. 1930, *Canadian Journal of Botany* 42: 866, f. 5. 1964.

in China: ri ben duan ying cao

Brachypodium P. Beauv. = *Brevipodium* Á. & D. Löve, *Hemibromus* Steud., *Trachynia* Link, *Tragus* Panzer

From the Greek *brachys* "short" and *podion* "a little foot," referring to the short pedicels of the spikelets, to subsessile spikelets; see Ambroise Marie François Joseph Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 100, 101, 155, 156, t. 19, f. 35. Paris 1812.

About 10/17 species, temperate Eurasia, Africa, tropical America, Mexico to Bolivia, tropical mountains. Pooideae, Triticoideae, Brachypodioideae, or Pooideae, Triticeae, annual or perennial, herbaceous, stems upright and flimsy, wiry,

erect or decumbent, often rooting at nodes, rhizomatous or tufted, forming tussocks, internodes hollow, leaf blades linear, auricles absent, ligule a short unfringed or fringed membrane, leaves often hairy, rhizomes branching when present, plants bisexual, inflorescence linear or arched or nodding, short spike-like loose racemes, spikelets elongated usually solitary pedicellate or subsessile, 5-22 florets bisexual or uppermost floret sometimes reduced and sterile, 2 unequal glumes persistent and stiff, lemma herbaceous to membranous, lemmas 7- to 9-nerved and with a straight terminal awn, hairy callus absent, palea oblong and ciliate, 2 ciliolate lodicules free and membranous, 3 stamens, ovary with apex hairy or villous, 2 stigmas white plumose, weed species, adapted to disturbed habitats, shade species, foodplant, ornamental, woodland, shady hedgebanks, rainforest, open habitats, intergrades with *Elymus* L., a difficult genus, type *Brachypodium pinnatum* (L.) P. Beauv., see *Prodromus Florae Novae Hollandiae* 179. 1810, *Essai d'une Nouvelle Agrostographie* 100-101, 155-156, 180. 1812, G.W.F. Panzer (1755-1829), "Ideen zu einer künftigen Revision der Gattungen der Gräser." *Denkschr. Akad. Wiss., Wien* 4: 253-312. 1813, *Observations sur les Graminées de la Flore Belgique* 99, 100. 1824, Johann Heinrich Friedrich Link (1767-1851), *Enumeratio plantarum horti regii berlinensis altera*. 1: 39, 42-43. Berolini [Berlin] 1827, *Synopsis Plantarum Glumacearum* 1: 317. 1854, *Exploration Scientifique de l'Algérie* 2: 192. 1855, *Conspectus florae europaeae: seu Enumeratio methodica plantarum phanerogamarum Europae indigenarum, indicatio distributionis geographicae singularum etc.* 843. 1882 and *Flore de France* 14: 294-295. 1913, *Contr. U.S. Natl. Herb.* 24: 196. 1925, *Candollea* 5: 427-493. 1934, *Hooker's Icones Plantarum* 33: t. 3280. 1935, *Journal of Japanese Botany* 12: 155. 1936, *Flore de l'Afrique du Nord* 3: 267, 269. 1955, *Botaniska Notiser* 114: 36. 1961, *Bol. Soc. Argent. Bot.* 12: 44-56. 1962, *Feddes Repertorium* 81: 119-130. 1970, *Brittonia* 23(3): 293-324. 1971, *Novosti Sist. Vyss. Rast.* 12: 81. 1975, *Phytologia* 37(4): 317-407. 1977, *Fl. Europaea* 5: 189-190. 1980, *Taxon* 31: 9-36. 1982, *Lagascalia* 12: 124-128. 1983, *Lagascalia* 12: 286-290. 1984, *New Phytol.* 107: 633-644. 1987, *Las Gramíneas de México* 2: 1-344. 1987, *Biologie-Ecologie Méditerranéenne* 10: 291-313. 1987, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, *Lagascalia* 15: 179-188. 1990, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 45: 1-250. 1991 [Revision der europäischen Arten der Gattung *Brachypodium* Palisot de Beauvois (Poaceae)], *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Berichte des Geobotanischen Institutes der Eidgenössische Technische Hochschule Stiftung Rübel* 57: 182-192. 1991, *Plant Systematics and Evolution* 188: 125-138. 1993 [Ribosomal DNA variation and its phylogenetic implication in the genus *Brachypodium* (Poaceae)], *Flora Mesoamericana* 6: 246. 1994, *Anales del*

Jardín Botánico de Madrid 51(2): 280. 1994, *Botanical Journal of the Linnean Society* 117: 263-280. 1995, *Linzer Biologische Beiträge* 29(1): 5-43. 1997, *Lagascalia* 20(2): 223-230, 265-275. 1998, *Willdenowia* 28: 173. 1998, *Opera Botanica* 137: 1-42. 1999, *Botanical Journal of the Linnean Society* vol. 140, issue 2: 95-114. Oct 2002, *Contributions from the United States National Herbarium* 48: 143-145. 2003, *Botanical Journal of the Linnean Society* vol. 142, Issue 3: 273-280. July 2003.

Species

B. arbuscula Gay ex Knoche (*Brachypodium arbuscula* Gay; *Brachypodium arbuscula* Knoche)

Europe, Spain, Canary Islands. Rare species, see *Bulletin de la Société Botanique de France* 3: 56-59. 1856 and *Vagandi mos* 272. Strasbourg, Paris 1923, *Candollea* 5: 460, 468, t. 17. 1934.

B. bolusii Stapf

South Africa. Perennial, densely tufted, erect, ligule a fringe of hairs, leaves mostly basal and rigid, spike-like racemes straight on a central axis, 1-4 spikelets crowded, unknown grazing value, mountain grassland, shallow soil, slopes, rocky places, see *Flora Capensis* 7: 737-738. 1900.

B. distachyon (L.) P. Beauv. (*Agropyron distachyos* (L.) Chevall.; *Brachypodium distachyum* (L.) P. Beauv.; *Brachypodium geniculatum* K. Koch; *Brachypodium schimperi* (Hochst. ex A. Rich.) Chiov.; *Bromus distachyos* L.; *Bromus geniculatus* (K. Koch) Steud., nom. illeg., non *Bromus geniculatus* L.; *Festuca distachyos* (L.) Roth.; *Festuca schimperi* (Hochst. ex A. Rich.) Steud.; *Trachynia distachya* (L.) Link; *Triticum schimperi* Hochst. ex A. Rich.; *Zerna distachyos* (L.) Panz. ex B.D. Jacks.) (for the German botanist and plant collector Georg Heinrich Wilhelm Schimper, 1804-1878, traveler, botanical explorer, author of *Reise nach Algier ...* Stuttgart 1834, he was the brother of Karl Friedrich Schimper (1803-1867) and cousin of the Alsatian bryologist and palaeontologist Wilhelm Philipp (Guillaume Philippe) Schimper (1808-1880); see H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 239. Oxford 1964; John Hendley Barnhart (1871-1949), *Biographical notes upon botanists*. 3: 226. Boston 1965; [British Museum], *Catalogue of the Books, manuscripts, maps and drawings in the British Museum (Natural History)*. 2: 1833. Weinheim 1964; J.B. Gillett, "W.G. Schimper's botanical collecting localities in Ethiopia." *Kew Bulletin*. 27(1): 115-128. 1972; A.P.M. Sanders, in *D.S.B.* 12: 165-167. 1981; Heinz Tobien, in *D.S.B.* 12: 167-168. 1981; P.W. Richards, in *D.S.B.* 12: 168-169. 1981; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845)

Mediterranean. Annual or perennial, herbaceous, loosely tufted or tufted, small size, erect or geniculate, often branching near the base, slender or robust, auricles absent, ligule

membranous, short leaves flat and sparsely pilose, hairy to densely pubescent nodes, chasmogamous and cleistogamous, spikelets in short erect spike-like racemes, spikelets crowded at the top of the stem, glumes unequal, lemmas stiff and nerved, straight terminal awn, palea stiffly keeled, anthers very small, ovary pubescent to hispid, fruit laterally compressed and deeply furrowed, undemanding growth requirements, more or less 15 weeks seed-to-seed lifecycle, invasive, naturalized elsewhere, a weedy species in dry disturbed areas, upland, dry wasteland, cliff slopes, dry rocky soil, scrubland, dry red soil, open habitats, along roadsides, gardens, see *Centuria II. Plantarum ...* 8. 1756, *Amoen. Acad.* 4: 304. 1759, *Voyage en Barbarie* 2: 98. 1789, *Catalecta Botanica* 1: 11. 1797, *Flore Générale des Environs de Paris* 2: 196. 1827, *Hortus Regius Botanicus Bero-linensis* 1: 43. 1827, *Fl. Paris* éd 2, 2: 196, 1836, *Florae Siculae Synopsis* 1: 73. 1843, *Linnaea* 21(4): 422. 1848, *Tentamen Florae Abyssinicae ...* 2: 441. 1850, *Synopsis Plantarum Glumacearum* 1: 316, 318. 1854, *Index Kewensis* 2: 1249. 1895 and *Flora Analitica d'Italia* 1: 101. 1908, *Flora Sicula* 3: 376. 1909, *Bulletin de l'Académie Internationale de Géographie, Botanique* 21: 133. 1911, *Bollettino della Società Botanica Italiana* 1914: 11. 1914, *Plantae Tripolitanae* 13. Firenze 1914, *Nuovo Giornale Botanico Italiano, n.s.* 26: 83. 1919, *Candollea* 5: 474, 478, 481-482. 1934, *Catalogue des Plantes du Maroc* 4: 945. 1941, *Acta Phytotaxonomica Barcinon.* 18: 10. 1976[1977], *Fl. Libya* 145: 87. 1988, P. Bablak, J. Draper, M.R. Davey and P.T. Lynch, "Plant regeneration and micropropagation of *Brachypodium distachyon*." in *Plant Cell Tissue and Organ Culture* 42: 97-107. 1995, Andrew P.M. Routledge et al., "*Magnaporthe grisea* interactions with the model grass *Brachypodium distachyon* closely resemble those with rice (*Oryza sativa*)." *Molecular Plant Pathology* 5(4): 253-265. July 2004, Luis A.J. Mur et al., "Characterization of a proteinase inhibitor from *Brachypodium distachyon* suggests the conservation of defence signalling pathways between dicotyledonous plants and grasses." *Molecular Plant Pathology* 5(4): 267-280. July 2004.

in English: false brome, stiff brome, purple false brome
in Morocco: bu sibus

B. distachyon (L.) P. Beauv. var. ***platystachyon*** Coss. & Dur. (*Trachynia platystachya* (Coss. & Dur.) H. Scholz)

Mediterranean. See *Exploration Scientifique de l'Algérie* 2: 192. 1855 and *Willdenowia* 28: 173. 1998.

B. flexum Nees (*Brachypodium diaphanum* Cufod.; *Brachypodium diaphanum* (Steud.) Cufod.; *Brachypodium flexum* var. *abyssinicum* Hochst.; *Brachypodium sylvaticum* (Huds.) P. Beauv.; *Brachypodium sylvaticum* var. *abyssinicum* (Hochst.) Chiov.; *Brachypodium sylvaticum* var. *pseudopinnatum* Chiov.; *Brevipodium flexum* (Nees) K. Larsen; *Festuca diaphana* Steud.; *Festuca flexa* (Nees) Steud.; *Festuca quartiniiana* A. Rich.; *Triticum flexum* (Nees)

Hochst. ex A. Rich.) (for the French botanist Léon Richard Quartin-Dillon, d. 1841, physician, explorer, plant collector, wrote *Des différences appréciables entre le sang de la veine porte et celui des autres veins*. in Collection des thèses soutenues à la Faculté de Médecine de Paris. an 1839-1878, tom. 14. Paris 1839-1878. See T. Lefebvre, *Voyage en Abyssinie exécuté ... par une Commission scientifique*, composée de MM. T. Lefebvre, A. Petit et Quartin-Dillon, etc. [1845]; J.H. Barnhart, *Biographical notes upon botanists*. 3: 118. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 187. Paris 1882; A. White & B.L. Sloane, *The Stapelieae*. Pasadena 1937)

Tropical Africa. Perennial, diffuse, rough, sometimes decumbent and rooting at the lower nodes, straggling, tufted, wiry, weak-stemmed, mat-forming, often climbing on and scrambling through shrubs, slender, leaf sheaths scabrid, flexuous racemes with 3-9 spikelets, 6-12 florets, glumes acute and lanceolate, lemmas narrowly oblong and pubescent, possibly an useful grazing grass, usually in moist shady places, clearings, near streams, upland forest, riverbanks, bushland, bamboo thickets, see *Essai d'une Nouvelle Agrostographie* 101, 155, 156, t. 3, f. 115. 1812, *Florae Africae Australioris Illustrationes Monographicae* 456. 1841, *Tentamen Florae Abyssinicae ...* 2: 435, 441. [Collectors: R. Quartin-Dillon and A. Petit] Parisiis 1850, *Synopsis Plantarum Glumacearum* 1: 316. 1854 and *Flora Capensis* 7: 737. 1900, *Annuario del Reale Istituto Botanico di Roma* 8(3): 379-380. 1908, *Botaniska Notiser* 116: 420. 1963, *Bulletin du Jardin Botanique National de Belgique* 38: 1215. 1968.

B. japonicum Miq. (*Agropyron japonicum* (Miq.) P. Candargy; *Agropyrum japonicum* (Miq.) P. Candargy)

Asia. See *Annales Museum Botanicum Lugduno-Batavi* 2: 286-287. 1866 and *Flora of Japan* 153. 1965, *Grasses of Japan and its Neighboring Regions* 483. 1987.

B. kotschy Boiss. (for the Austrian botanist Carl (Karl) Georg Theodor Kotschy, 1813-1866, plant collector, traveler, from 1835 to 1843 botanical explorer of the Orient, from 1852 Curator of the Herbarium of the Vienna Natural History Museum, his writings include *Die Insel Cypern*. [with Franz Joseph Andreas Nicolaus Unger, 1800-1870] Wien 1865 and *Die Sommerflora des Antilibanon und hohen Hermon*. Wien 1864. See Eduard Fenzl (1808-1879), *Abbildungen und Beschreibungen neuer und selthener Thiere und Pflanzen in Syrien und im westlichen Taurus gesammelt von T. Kotschy*. Stuttgart 1843; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; J.H. Barnhart, *Biographical notes upon botanists*. 2: 315. 1965; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 182-183. Paris 1882; Ignatz Urban, *Geschichte des Königlichen Botani-*

schens Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen. Dresden 1916; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 218. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 195. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Turkey. Rare species, see *Flora Orientalis* 5: 659. 1884.

B. mexicanum (Roem. & Schult.) Link (*Brachypodium latifolium* E. Fourn.; *Brachypodium latifolium* E. Fourn. ex Hemsl.; *Brachypodium mexicanum* var. *mexicanum*; *Brachypodium subulatum* E. Fourn.; *Brachypodium subulatum* E. Fourn. ex Hemsl.; *Brachypodium sylvaticum* var. *scabrum* (Lag.) Kuntze; *Bromus mexicanus* hort. ex Steud.; *Festuca mexicana* Roem. & Schult.; *Festuca mexicana* Lag. ex Link; *Festuca scabra* Lag., nom. illeg., non *Festuca scabra* Vahl; *Triticum mexicanum* (Roem. & Schult.) Schrad. ex Steud.)

Northern America, Mexico. Tufted, weak, herbaceous, branching, decumbent, internodes glabrous, ligule ciliate, linear racemes, spreading spikelets, greenish flowers, pedicels densely pubescent, lemmas coriaceous, good forage, clambering through shrubs, grassland, along roadsides, tussock grassland, see *Genera et species plantarum* 4. 1816, *Systema Vegetabilium* 2: 732. 1817, *Hortus Regius Botanicus Berolinensis* 1: 41. 1827, *Nomenclator Botanicus. Editio secunda* 1: 228. 1840, *Nomenclator Botanicus. Editio secunda* 2: 716. 1841, *Biologia Centrali-Americana; ... Botany ...* 3: 584. 1885, *Mexicanas Plantas* 2: 125. 1886, *Colo. Agr. Exp. Sta. Bull.* 12: 52. 1890, *Revisio Generum Plantarum* 2: 763. 1891 and *Phytologia* 49(1): 38. 1981.

in Mexico: sacapipilo, zacapipilo

B. mexicanum (Roem. & Schult.) Link var. *inermis* Beetle Northern America, Mexico. Perennial, tufted, see *Phytologia* 49(1): 38. 1981.

B. mexicanum (Roem. & Schult.) Link var. *mexicanum* Northern America, Mexico.

B. phoenicoides (L.) Roemer & Schultes (*Brachypodium macropodium* Hack.; *Brachypodium mucronatum* Willk.; *Brachypodium phoenicoides* (L.) P. Beauv.; *Brachypodium phoenicoides* (L.) P. Beauv. ex Roem. & Schult.; *Festuca phoenicoides* L.)

Europe, Spain. Perennial, erect, simple, stiff, shortly rhizomatous, branched stock, pubescent at nodes, auricles absent, leaf sheath cylindrical, leaves glaucous or silvery green, ligule membranous and dentate, elongate spike distichous, narrow curved yellowish flower plumes with spikelets on long stems, ornamental, propagates vegetatively, establishment from seedling is rare, useful for ero-

sion control, found in dry fields, moist places, see *Mantissa Plantarum* 33. 1767, *Descriptio Graminum in Gallia et Germania* 201. 1802, *Flora Lusitana* 1: 121. 1804, *Essai d'une Nouvelle Agrostographie* 101. 1812, *Systema Vegetabilium* 2: 737, 740. 1817, *Nomenclator Botanicus* 120. 1821, *Catalogue des Plantes Indigènes des Pyrénées et du Bas-Languedoc* 64. 1826, *Hortus Regius Botanicus Bero-linensis* 2: 191. 1833, *Synopsis Florae Germanicae et Hel-veticae* (edition 2) 944. 1843, *Österreichische Botanische Zeitschrift* 27: 48. 1877, *Flora Analitica d'Italia* 1: 102. 1896 and *Synopsis der mitteleuropäischen Flora* 2(1): 637. 1901, *Boletim da Sociedade Broteriana* 20: 154. 1903[1905], *Cavanillesia* 4: 129. 1931, *Candollea* 5: 448-449, 451-453. 1934, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 28: 387. 1937, *Boletim da Sociedade Broteriana* 60: 157. 1987, *Taxon* 37: 158-164. 1988.

in English: false brome, perennial falsebrome, fallow-land falsebrome

in Spanish: botea, braquipodio, fenàs, fenàs de marge, fenassos

B. pinnatum (L.) P. Beauv. (*Agropyron pinnatum* (L.) Chevall.; *Bromus corniculatus* (L.) Lam.; *Bromus pinnatus* L.)

Europe, northwestern Africa, southwestern Asia. Perennial, herbaceous, slender, tufted, forming tussocks, spreading, smooth, upright, strongly rhizomatous, wiry rhizomes narrow and scaly, leaf sheaths rounded glabrous, ligule truncate and ciliate, green to yellowish green, leaves linear to linear-lanceolate, spike-like racemes more or less erect, erect spikelets on long stems and smooth, slender spikelets green to yellow 7- to 20-flowered, glumes acute to linear-lanceolate and convex, lemmas awned, ornamental grass naturalized elsewhere, found in waste areas, grassy hillsides, along roadsides, wet meadows, see *Species Plantarum* 78. 1753, *Mantissa Plantarum* 33-34. 1767, *Flora Halensis* edition 2, 26: 116. 1783, *Icones et Descriptiones Graminum Austriacorum* 4: 10-11, t. 17, 18. 1809, *Systema Vegetabilium* 2(15): 737. 1817, *Observations sur les Graminées de la Flore Belgique* 99-100, t. 3, f. 9. 1823, *Flore Générale des Environs de Paris* 2: 195. 1827, *Flora Germanica Excursoria* 19. 1830, *Synopsis Florae Germanicae et Hel-veticae* 2: 818. 1837, *Prodromus Florae Hispanicae* 1: 111. 1861, *Anales de la Sociedad Española de Historia Natural* 15: 420-421. 1886, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 305-306, t. 13, f. 5, 5a-5e. 1891, *Flora Analitica d'Italia* 1: 102. 1896, *Bollettino della Società Botanica Italiana* 1899: 289. 1899 and *Synopsis der mitteleuropäischen Flora* 2(1): 633-634. 1901, *Flora Analitica d'Italia* 102. 1908, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972], *Flora Republicii Socialiste Romania* 12: 343-344. 1972.

in English: false brome, chalk false brome, pinnate false brome, slender false brome, wood false brome, heath false brome, Japanese false bromegrass, tor grass

B. pinnatum (L.) P. Beauv. subsp. **pinnatum**

Europe.

B. pringlei Scribn. ex Beal (after the American botanist Cyrus Guernsey Pringle, 1838-1911, Quaker, plant collector (Pacific States and Mexico), wrote *The Record of a Quaker Conscience: C. Pringle's Diary*. New York 1918. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 111. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 318. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ezra Brainerd (1844-1924), "Cyrus Guernsey Pringle." *Rhodora*. 13: 225-232. 1911; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Helen Burns Davis, *Life and Work of Cyrus Guernsey Pringle*. Burlington, Vt. 1936; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 335-336. 1973; Ira L. Wiggins, *Flora of Baja California*. 42. Stanford, California 1980; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 596. University of Pennsylvania Press, Philadelphia 1964; Gordon Douglas Rowley, *A History of Succulent Plants*. California 1997; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Northern America, Mexico. Growing in moist places, moist banks, see *Grasses of North America for Farmers and Students* 2: 627. 1896.

in Mexico: falso bromo regiomontano

B. retusum (Pers.) P. Beauv. (*Brachypodium boissieri* Nyman; *Brachypodium flexum* sensu Schwartz; *Brachypodium ramosum* (L.) Roem. & Schult.; *Brachypodium ramosum* Schult.; *Bromus ramosus* L.; *Bromus retusus* Pers.)

Temperate Asia, Turkey, Algeria, North Africa, Europe. Perennial, variable, pale green or glaucous, slender, smooth, densely tufted, erect or geniculately ascending, glabrous, rooting at the lower nodes, leaf sheaths smooth and glabrous, leaf blades distichous, rhizome much branched, leaves scabrid or glabrous, spikelets linear or linear-oblong loosely arranged at the top of the stem, short-awned, 8- to 15-flowered, glumes acute, lemma awned and narrowly oblong, widespread in dry pastures, exposed mountain ridges, dry rocky places, limestone, rocky grassland, protected cliffs, see *Syn. Pl.* 1: 96. 1805.

in French: brachypode rameux

in Italian: paleo ramoso

in Spain: cervero, cerverol, fenal, fenàs reüll, fenazo, lastón, llistó

B. rupestre (Host) Roem. & Schult. (*Brachypodium caespitosum* (Host) Roem. & Schult., also spelled *cespitosum*; *Brachypodium caespitosum* (Desf.) C. Presl, nom. illeg., non *Brachypodium caespitosum* (Host) Roem. & Schult.; *Brachypodium gracile* (Leyss.) P. Beauv.; *Brachypodium pinnatum* subsp. *caespitosum* (Host) Hack.; *Brachypodium pinnatum* subsp. *rupestre* (Host) Tzvelev, nom. illeg., non *Brachypodium pinnatum* subsp. *rupestre* (Host) Schübl. & G. Martens; *Brachypodium pinnatum* var. *rupestre* (Host) Reichb.; *Bromus caespitosus* Desf. ex Steud.; *Bromus gracilis* Leyss., nom. illeg., non *Bromus gracilis* Weigel; *Bromus rupestris* Host)

Europe, Italy, Russia. Useful for erosion control, see *Flora Halensis*, edition 2, 26: 116. 1783, *Flora Atlantica* 1: 91, t. 24, f. 1. 1798, *Icones et Descriptiones Graminum Austriacorum* 4: 10-11, t. 17, 18. 1809, *Essai d'une Nouvelle Agrostographie* 101, 155, 156. 1812, *Systema Vegetabilium* 2: 736-737. 1817, *Cyperaceae et Gramineae Siciliae* 40. 1820, *Nomenclator Botanicus* 119. 1821, *Observations sur les Graminées de la Flore Belgique* 99. 1823, *Enumeratio Plantarum Transsilvaniae* 800. 1866 and *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972], R. D'Ovidio & F. Lucchese, "Chromosomal races in the *Brachypodium rupestre* complex in Italy." *Ann. Bot. (Roma)* 44: 175-180. 1986.

in Italian: paleo rupestre

B. rupestre (Host) Roem. & Schult. subsp. *cespitosum* (Host) H. Scholz (*Brachypodium cespitosum* (Host) Roem. & Schult.; *Bromus caespitosus* Host)

Eurasia, Europe.

B. rupestre (Host) Roem. & Schult. subsp. *rupestre* (*Brachypodium pinnatum* subsp. *rupestre* (Host) Schübl. & G. Martens)

Eurasia, Europe. Caespitose, slender, drooping spikes, open habitats, moist places, calcareous soil, grasslands, moist ravines.

B. sanctum (Janka) Janka (*Agropyron sanctum* (Janka) Hack.; *Festuca sancta* Janka; *Festucopsis sancta* (Janka) Melderis; *Peridictyon sanctum* (Janka) Seberg, Fred. & Baden)

Bulgaria. Rare species, see *Österreichische Botanische Zeitschrift* 21: 250. 1871, *Österreichische Botanische Zeitschrift* 22: 181. 1872 and *Journal of the Linnean Society, Botany* 76: 319. 1978, *Willdenowia* 21(1-2): 96. 1991.

B. sylvaticum (Huds.) P. Beauv. (*Agropyron sylvaticum* (Huds.) Chevall.; *Agropyron sylvaticum* (Moench) Chevall., nom. illeg., non *Agropyron sylvaticum* (Huds.) Chevall.; *Brachypodium gracile* f. *pubescens* Peterm.; *Brachypodium miserum* (C.P. Thunb. ex A. Murray) Koidz.; *Brachypodium sylvaticum* subsp. *dumosum* (Vill.) Tzvelev; *Brachypodium*

wattii C.B. Clarke; *Brevipodium sylvaticum* (Huds.) Á. Löve & D. Löve; *Brevipodium sylvaticum* var. *dumosum* (Vill.) Pinto da Silva & Teles; *Bromus dumosus* Vill.; *Bromus sylvaticus* (Huds.) Lyons; *Bromus sylvaticus* (Huds.) Pollich; *Festuca misera* C.P. Thunb. ex A. Murray; *Festuca sylvatica* Huds.; *Triticum sylvaticum* (Huds.) Parnell, nom. illeg., non *Triticum sylvaticum* Moench; *Triticum sylvaticum* Moench)

North Africa, Europe, temperate Asia. Perennial bunchgrass, densely and compactly tufted, lax, smooth, pale yellow-green, unbranched, slender, weak, geniculate at the base, upright or spreading, apparently not rhizomatous or sometimes very shortly rhizomatous, forming tussocks or large clumps, hollow culms pilose or hairy, auricles absent, open leaf sheaths hairy, ligule membrane-like, broad flat leaves linear-lanceolate, erect to arching spike-like racemes, spikelets either sessile or short-pedicellate, produces slender stalkless pale green flower spikelets alternating along the usually arching tops of stems, unequal glumes acute and ribbed, lemmas strongly ciliate, awns straight, invasive grass, often misidentified or mistaken for a brome, occasionally cultivated for ornamental purposes, growing in subalpine meadows, in rock crevices, lowland to montane grasslands, woodlands, open habitats, shade of trees or shrubs, forested habitats, open grassland, riparian forests, gravelly silt loam, forest edges, closely related to *Brachypodium pinnatum* (L.) P. Beauv., see *Flora Anglica* 1: 38. 1762, *Fasciculus Plantarum Circa Cantabrigiam nascentium, quae post Rajum observatum fuere*. 15. Londini 1763, *Systema Vegetabilium. Editio decima quarta* 119. 1784, *Histoire des Plantes de Dauphiné* 2: 119. 1787, *Essai d'une Nouvelle Agrostographie* 101, 115, 155, 156, pl. 3, f. 11. 1812, *Genera et species plantarum* 4. 1816, *Flore Générale des Environs de Paris* 2: 196. 1827, *Compendium Florae Belgicae* 1: 100. 1828, *The Grasses of Scotland* 1(1): 132, t. 61. 1842, *Enum. Pl. Zeyl.* 374. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns Indigenous to or Growing Wild in Ceylon* 110. Colombo 1885, *Journal of the Linnean Society, Botany* 25: 90, t. 40. 1889, *Revisio Generum Plantarum* 2: 763. 1891, *The Flora of British India* 7: 363. 1896 and *Handb. Fl. Ceylon* 5: 306. 1900, *Annuario del Reale Istituto Botanico di Roma* 8(3): 380. 1908, *Nuova Flora Analitica d'Italia* 1: 151. 1923, *Botanical Magazine* 39: 303. 1925, *Florae Symbolae Orientali-Asiaticae* 80. 1930, *Brittonia* 2(2): 108. 1936, *Reinwardtia* 2(2): 242. 1953, *Grasses of Ceylon* 41. 1956, *Grasses of Burma ...* 450. 1960, *Botaniska Notiser* 114: 36. 1961, *Agronomia Lusitana* 34(3): 180. 1972[1973], *Novosti Sist. Vyss. Rast.* 10: 89. 1973, *Willdenowia* 15(1): 30. 1985, *Blumea* 34: 71. 1989, Gert Meijer & Adrian Leuchtman, "Multistrain infections of the grass *Brachypodium sylvaticum* by its fungal endophyte *Epichloë sylvatica*." *New Phytologist* 141(2): 355-368. Feb 1999, Gert Meijer & Adrian Leuchtman, "The effects of genetic and environmental

factors on disease expression (stroma formation) and plant growth in *Brachypodium sylvaticum* infected by *Epichloë sylvatica*." *Oikos* 91(3): 446-458. Dec 2000.

in English: slender false brome, slender false brome grass, wood false brome, false brome

B. sylvaticum (Huds.) P. Beauv. subsp. ***creticum*** H. Scholz & Greuter

Greece, Crete. Rare grass, see *Willdenowia* 15(1): 30. 1985.

Brachystachyum Keng = *Semiarundinaria*
Nakai, *Semiarundinaria* Makino ex Nakai

From the Greek *brachys* "short" and *stachys* "spike," referring to the short spike-like racemes.

Monotypic, China, Jiangsu, Zhejiang, Guangdong. Bambusoideae, Bambuseae, Shibataeinae, shrubby or arborescent, rhizomes monopodial, three branches at each node, several branchlets, sheath caducous, sheath auricles developed and ciliate, sheath ligule short, racemes spiciform, 3 stamens, 3 stigmas, open slopes, low hills, mountains, type *Brachystachyum densiflorum* (Rendle) Keng, see *Journal of the Arnold Arboretum* 6(3): 150-151. 1925, *Sunyatsenia* 4(3-4): 151, 153. 1940, *Taxon* 6(7): 208. 1957, *Agriculture Handbook* 193: i-iii, 1-74. 1961, *Compendium Chinese Bamboo* 105. 1994, *Flora Reipublicae Popularis Sinicae* 9(1): i-xxvi, 1-761. 1996, *Contributions from the United States National Herbarium* 39: 112. 2000.

Species

B. densiflorum (Rendle) Keng (*Arundinaria densiflora* (Rendle) Nakai; *Fargesia densiflora* (Rendle) Nakai; *Semiarundinaria densiflora* (Rendle) Wen)

China, Hubei, Anhui. Pruinose below the joint, glabrous, cylindrical or grooved, sheath whitish purplish, sheath blade long lanceolate, sheath auricles purplish red and sickle-shaped, sheath ligule truncate, used for making fishing poles, frames, see *J. Linn. Soc. Bot.* 36: 434. 1904, *Journal of the Arnold Arboretum* 6(3): 152. 1925, *Sunyatsenia* 4(3-4): 153. 1940, *J. Bamb. Res.* 8(1): 24. 1989.

in English: short spiked bamboo, short spike bamboo

in China: duan sui zhu shu

B. densiflorum (Rendle) Keng var. ***villosum*** S.L. Chen & C.Y. Yao (*Semiarundinaria densiflora* f. *villosa* (S.L. Chen & C.Y. Yao) Wen)

China. Culm sheaths pilose or villous, sheath ligule conspicuous, used for making fishing poles, living frames, see *Acta Phytotax. Sin.* 21(4): 404. 1983, *J. Bamb. Res.* 8(1): 24. 1989.

in China: maohuan duan sui zhu

Brachystylus Dulac = *Airochloa* Link,
***Koeleria* Pers.**

From the Greek *brachys* "short" and *stylos* "style, column."

Pooideae, Poaceae, Aveninae, see *Species Plantarum* 1: 63. 1753, *Syn. Pl.* 1: 97. 1805, *Flore de Département des Hautes-Pyrénées* 84-85. 1867 and *Contributions from the United States National Herbarium* 48: 97, 145, 409-419. 2003.

Braconotia Godr. = *Elymus* L., *Elytrigia*
Desv.

Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 83-84. 1753, *Flore de Lorraine* 3: 191. 1844 and *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Bracteola Swallen = *Chrysochloa* Swallen

The diminutive of Latin *bractea*, *brattea* "bract, a thin leaf."

Chloridoideae, Cynodonteae, type *Bracteola lucida* Swallen, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 222. 1899 and *American Journal of Botany* 20: 118, f. 1. 1933, *Bulletin of Miscellaneous Information Kew* 1934: 117. 1934, *Proceedings of the Biological Society of Washington* 54: 44. 1941.

Brandtia Kunth = *Arundinella* Raddi

For the German botanist Johann Friedrich von Brandt, 1802-1879, zoologist, surgeon, paleontologist, 1826 obtained the M.D., 1826-1831 worked with Julius T.C. Ratzeburg, from 1831 at St. Petersburg Director of the Zoological Museum, among his writings are *Flora berlinensis* ... Berlin 1825 and *Untersuchungen über die fossilen und subfossilen Cetaceen Europa's*, [*Mém. Acad. Imp. Sci. St. Pétersbourg*, 7. Sér., 20/1: 1-372.] 1873. See Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J.H. Barnhart, *Biographical notes upon botanists*. 1: 24. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 50. Boston, Mass. 1972; Albert V. Carozzi, in *D.S.B. (or Dictionary of Scientific Biography*. Editor in Chief Charles Coulston Gillispie) 2: 422-423. New York 1981.

Panicoideae, Arundinelleae, type *Brandtia holcoides* Kunth, see *Agrostografia Brasiliensis* 36, 37, t. 1, f. 3. 1823, *Révision des Graminées* 2: 511, t. 170. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 107.

1836 and *Reinwardtia* 2(2): 231. 1953, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Flora Mesoamericana* 6: 377-378. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, J.F. Veldkamp, "Name changes in *Agrostis*, *Arundinella*, *Deyeuxia*, *Helictotrichon*, *Tripogon* (Gramineae)." *Blumea* 41: 407-411. 1996, *Contributions from the United States National Herbarium* 46: 111-113. 2003.

Brasilocalamus Nakai = *Merostachys* Spreng.

From Brazil and the Greek *kalamos* "a reed, cane."

Bambusoideae, Bambuseae, Arthrostylidiinae, type *Brasilocalamus pubescens* Nakai, see *Systema Vegetabilium* 1: 132, 249, f. 37b-n. 1824, *Revue Horticole* 48: 22. 1876, *Flora Brasiliensis* 2(3): 189, pl. 51. 1880 and *Journal of Japanese Botany* 9(1): 10. 1933, *Botanical Magazine* (Tokyo) 49: 74. 1935, *Fieldiana, Botany* 24(2): 38-331. 1955, *Flora Illustrata Catarinense* 1(Gram.-Supl.): 1-78. 1967, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Novon* 8(4): 408-428. 1988, *Novon* 2(2): 81-110, 111-113. 1992, *Flora Mesoamericana* 6: 201-202. 1994, *Novon* 5(1): 76-96. 1995, *Novon* 7(3): 285-307. 1997, *Contributions from the United States National Herbarium* 39: 71-75. 2000, *Kew Bulletin* 56(3): 627-638. 2001.

Brevipodium Á. Löve & D. Löve = *Brachypodium* P. Beauv.

Latin *brevis* "short," Greek *brachys* "short" and *podion* "a little foot."

Pooideae, Brachypodieae, type *Brevipodium sylvaticum* (Huds.) Á. Löve & D. Löve, see *Essai d'une Nouvelle Agrostographie* 100, 155, pl. 19, f. 35. 1812 and *Botaniska Notiser* 114: 36. 1961, *Flora Mesoamericana* 6: 246. 1994, *Anales del Jardín Botánico de Madrid* 51(2): 280. 1994, *Botanical Journal of the Linnean Society* 117: 263-280. 1995, *Linzer Biologische Beiträge* 29(1): 5-43. 1997, *Lagscalia* 20(2): 223-230, 265-275. 1998, *Willdenowia* 28: 173. 1998, *Opera Botanica* 137: 1-42. 1999, *Contributions from the United States National Herbarium* 48: 143-145. 2003.

Briza L. = *Brizochloa* V. Jirásek & Chrtek; *Calosteca* Desv., *Calotheca* P. Beauv., *Calotheca* Desv., *Chascolytrum* Desv., *Chondrachyrum* Nees, *Lombardochloa* Roseng. & B.R. Arrill., *Macrobriza* (Tzvelev) Tzvelev, *Tremularia* Fabr., *Tremularia* Heist. ex Fabr.

Greek *briza* "rye" (Galenus), "a root" (Apollonius Dyscolus, *De Adverbiis*. 157.20), *brizo* "to be sleepy, nod;" see

Carl Linnaeus, *Species Plantarum*. 70. 1753 and *Genera Plantarum*. edition 5. 32. 1754.

About (12-)16/20 species, cosmopolitan. Pooideae, Pooideae, Poeae, or Pooideae, Poeae, Brizinae, perennial or sometimes annual, loosely tufted, herbaceous, shortly rhizomatous, erect or ascending or decumbent, unbranched above, glabrous, culm nodes glabrous, hollow internodes, auricles absent, ligule membranous and obtuse, leaf sheath open at maturity, leaves flat and linear to linear-lanceolate, plants bisexual, inflorescence open or loosely contracted, flowers in dense or loose panicle with drooping or erect spikelets, florets bisexual, reduced floret at apex, spikelets broadly ovate or ovoid and solitary on filiform pedicels, 2 glumes more or less equal, ribbed glumes ovate or boat-shaped, lustrous and smooth lemmas alternate and ovate, closely overlapping lemmas membranous and deeply concave, lemmas as broad as long and cordate at base, palea 2-keeled with keels often winged, 2 membranous lodicules joined or free, 1 or 3 stamens, ovary glabrous, anthers light brown, stigmas white, small fruit dorsiventrally compressed, ornamental, grown for drying and dyeing, panicles persist for several weeks after flowering, weed species, chalk hills, pampas, on dry to moist soils, natural grasslands, open habitats, type *Briza minor* L., see *Species Plantarum* 70-71, 73-76. 1753, *Enumeratio Methodica Plantarum* 207. 1759, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Essai d'une Nouvelle Agrostographie* 85. 1812, *A Natural System of Botany* edition 2: 449-450. 1836, *Synopsis Plantarum Glumacearum* 1: 288. 1854, *Genera Plantarum* 3(2): 1195. 1883 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 70. 1913, *Revista de la Facultad de Agronomía y Veterinaria* 3: 120, 130, 133. 1920, *Novitates Botanicae et Delectus Seminum Horti Botanici Universitatis Carolinae Pragensis* 1966: 40. 1966 [1967], *Brittonia* 23(3): 293-324. 1971, *Heredity* 33: 285-292. 1974, *Willdenowia*, Beih. 8: 1-168. 1975 [O. Matthei, *Der Briza-Komplex in Südamerika: Briza, Calotheca, Chascolytrum, Poidium* (Gramineae)], *Hickenia* 1: 73-78. 1977 [Recuentos cromosómicos en gramíneas de Argentina subtropical.], *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Anales de la Facultad de Química de Montevideo* 9: 260. 1979, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Darwiniana* 23(1): 279-309. 1981, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Chromosoma* 94: 293-296. 1986, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 81-84. 1986, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 22. 1987, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Bothalia* 18: 114-119. 1988, *Anales del Jardín Botánico de Madrid* 47: 411-417. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Bot. Zhurn.*

(Moscow & Leningrad) 76: 1331-1332. 1991, *Flora Mesoamericana* 6: 229. 1994, *Flora Mediterranea* 5: 340-345. 1995, *Bothalia* 27: 75-82. 1997, *Cladistics* 14: 287-296. 1998 [N.D. Bayón, Cladistic analysis of the *Briza* Complex (Poaceae, Poeae)], *Opera Botanica* 137: 1-42. 1999, *Lagascalia* 21(1): 235-240. 1999, M. Ajmal Khan & Salman Gulzar, "Light, salinity, and temperature effects on the seed germination of perennial grasses." *Am. J. Bot.* 90: 131-134. 2003, *Contributions from the United States National Herbarium* 48: 146-151. 2003.

Species

B. bipinnata L. (*Desmostachya bipinnata* (L.) Stapf; *Desmostachys bipinnata* (L.) Stapf; *Eragrostis cynosuroides* (Retzius) P. Beauvois; *Eragrostis bipinnata* (L.) Schum.; *Eragrostis bipinnata* (L.) Muschl., nom. illeg., non *Eragrostis bipinnata* (L.) Schum.; *Leptochloa bipinnata* (L.) Hochst.; *Poa cynosuroides* Retzius; *Pogonarthria bipinnata* (L.) Chiov.; *Stapfiola bipinnata* (L.) Kuntze; *Uniola bipinnata* (L.) L.)

Europe, Asia, China. Perennial, coarse, tough, rigid, creeping, vigorous, branched at base, forming large leafy tussocks, spreading scaly rhizomes, leathery yellowish sheaths, racemes ascending or spreading, spikelets elliptic or elliptic-oblong in two rows from the under side of each branch, glumes ovate-lanceolate, useful as a soil-binder, found in arid regions, see *Flora Palaestina* 12. 1756, *Species Plantarum, Editio Secunda* 1: 204. 1762, *Flora* 38: 422. 1855, *Die Pflanzenwelt Ost-Afrikas* 50: 113. 1895 and *Flora Capensis* 7: 632. 1900, *Lexicon Generum Phanerogamarum* 532. 1903, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 49: 74. 1907, *Annuario del Reale Istituto Botanico di Roma* 8(3): 362. 1908, *Taxon* 49(2): 248. 2000.

in India: aswalayana darbha gaddi, barhi, chir, daab, daabh, dab, dabhat, dabvi, dabwi, darbh, darbha, darbha pull, darbhapullu, davoli, davolia, dhab, dharbe, dib, drab, drabh, dubha, durbha, durbka, durpa, durva, garbha, hrasva, khusa, koosha, kurava, kus, kusa, kush, kusha, kushadarbh, kushadarbha, kutha, kutupa, pavithra, sadanapu veduru, soochyagra, yainabhooshana

B. brachychaete Ekm. (*Microbriza brachychaete* (Ekman) Parodi ex Nicora & Rúgolo; *Poidium brachychaetum* (Ekman) Matthei)

Brazil. Lemmas scaberulous, spikelets 2-flowered, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 60, t. 4, f. 3. 1913, *Darwiniana* 23(1): 296. 1981.

B. brizoides (Lam.) Kuntze (*Briza brizoides* Lam.; *Briza elegans* (P. Beauv.) Döll; *Briza patula* Phil.; *Briza tandilensis* Parodi; *Bromus brizoides* Lam.; *Calotheca brizoidea* (Lam.) Desv.; *Calotheca brizoides* (Lam.) Desv.; *Calotheca elegans* (P. Beauv.)

Southern America, Argentina. Erect, leaves erect, lemmas shortly awned, found in wet places, often considered to be a synonym of *Calotheca brizoides* (Lam.) Desv., see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 193, no. 1060. 1791, *Essai d'une Nouvelle Agrostographie* 157, t. 17, f. 7. 1812, *Anales de la Universidad de Chile* 94: 163. 1896, *Revisio Generum Plantarum* 3(3): 341. 1898 and *Revista de la Facultad de Agronomía y Veterinaria* 3: 132, f. 4(1b). 5. Buenos Aires 1920.

B. calotheca (Trin.) Hack. (*Briza neesii* Döll; *Briza poa* Nees ex Steud.; *Briza scabra* Nees ex Steud.; *Eragrostis calotheca* Trin.; *Eragrostis crassa* Jedwabn.; *Poa calotheca* (Trin.) Kunth; *Poidium calotheca* (Trin.) Matthei)

Central Brazil to Argentina. Spikelets 3- to 6-flowered, smooth lemmas, common in swampy places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 414. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 340. 1833, *Synopsis Plantarum Glumacearum* 1: 276, 283. 1854, *Flora Brasiliensis* 2(3): 132. 1878 and *Bulletin de l'Herbier Boissier, sér. 2, 4*(3): 282. 1904, *Botanisches Archiv* 5(3-4): 187. 1924.

B. erecta Lam. (*Briza macrostachya* (J. Presl) Steud.; *Briza montevidensis* Trin. ex Steud.; *Calotheca brizoidea* P. Beauv.; *Calotheca brizoides* (Lam.) Desv.; *Calotheca macrostachya* J. Presl; *Calotheca montevidensis* Spreng. ex Steud.; *Chascolytrum erectum* (Lam.) Desv.; *Festuca brizoides* Spreng.; *Festuca erecta* (Lam.) Spreng. ex Kunth, nom. illeg., non *Festuca erecta* (Huds.) Wallr.)

Southern America, Uruguay. Often considered to be a synonym of *Chascolytrum erectum* (Lam.) Desv., see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 187. 1791, *Essai d'une Nouvelle Agrostographie* 86, 155, t. 17, f. 6. 1812, *Reliquiae Haenkeanae* 1(4-5): 268, 351. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 373. 1833, *Nomenclator Botanicus. Editio secunda* 1: 225, 261. 1840, *Flora Brasiliensis* 2(3): 132. 1878 and *Contr. U.S. Natl. Herb.* 24(8): 334. 1927.

B. humilis M. Bieb. (*Briza spicata* Sm., nom. illeg.; *Briza spicata* Sibth. & Sm., non Burm.f.; *Brizochloa humilis* (M. Bieb.) Chrték & Hadac; *Brizochloa humilis* (M. Bieb.) V. Jirásek & Chrték)

Europe, Asia, Syria, Turkey. Annual, low- and many-stemmed, branched from the base, leaves short, inflorescence paniculate, forage, found in rocky dry mixed forest and grassland, see *Flora Taurico-Caucasica* 1: 66. 1808 and *Candollea* 24: 170. 1969, *Journal of Cell Science* 97: 565-570. 1990.

in English: spiked quaking grass

B. lamarckiana Nees (*Briza fusca* (Parodi) Parodi; *Briza lindmanii* Ekman; *Briza subaristata* var. *fusca* Parodi; *Chascolytrum lamarckianum* (Nees) Matthei)

Southern America, southern Brazil to Argentina, Uruguay. Panicle spreading with long and flexuous branches, occurs in sandy fields near small streams, often considered to be a synonym of *Chascolytrum lamarckianum* (Nees) Matthei, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 481. 1829 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 54, t. 4, f. 2. 1913, *Revista de la Facultad de Agronomía y Veterinaria* 3: 127, f. 2(1). 1920, *Revista de la Facultad de Agronomía y Veterinaria* 4: 93. 1922, *Willdenowia*, Beih. 8: 74. 1975.

B. lindmanii Ekman (*Briza fusca* (Parodi) Parodi; *Briza lamarckiana* Nees; *Briza subaristata* var. *fusca* Parodi; *Chascolytrum lamarckianum* (Nees) Matthei)

Brazil, Uruguay. Often considered to be a synonym of *Chascolytrum lamarckianum* (Nees) Matthei, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 481. 1829 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 54, t. 4, f. 2. 1913, *Revista de la Facultad de Agronomía y Veterinaria* 3: 127, f. 2(1). 1920, *Revista de la Facultad de Agronomía y Veterinaria* 4: 93. 1922, *Willdenowia*, Beih. 8: 74. 1975.

B. marcowiczii Woronow ex B. Fedtsch.

Northern America, Russia.

B. maxima L. (*Briza grandis* Salisb.; *Briza major* C. Presl; *Macrobriza maxima* (L.) Tzvelev; *Poa maxima* (L.) Cav.)

Mediterranean, Europe, Asia temperate. Annual, small, erect or geniculate at base, slender, glabrous, solitary or tufted, simple or branched, auricles absent, leaf sheath smooth and papery, ligule oblong and hyaline, flat linear leaves glabrous and tapering to an acute apex, panicles of translucent dangling seed heads on wiry stems, flowers in nodding and loose panicles simple or slightly branched, drooping spikelets cordate or ovate to oblong, filiform pedicels, glumes dark-brown or purplish or red and brown, lemmas glabrous and closely imbricate, paleas winged, ovary glabrous and without a conspicuous apical appendage, fruit ventrally compressed, palatable, low grazing value, widespread weed species, attractive, ornamental grass cultivated and naturalized elsewhere, common in disturbed areas, open sandy soil, along irrigated fields, wetlands and woodlands, well-drained soil, gardens, wasteland, granite rocks, shallow granitic soils, pastures, along roadsides, orchards, see *Species Plantarum* 1: 70. 1753, *Prodromus stirpium in horto ad Chapel Allerton vigentium* 21. 1796, A.J. Cavanilles (1745-1804), *Descripción de las Plantas ...* 314. 1802 and *Grasses of Ceylon* 43. 1956, *Grasses of Burma* 527. 1960, *Fl. Libya* 145: 82. 1988, *Bot. Zhurn. (Moscow & Leningrad)* 78(10): 91. 1993.

in English: quaking grass, great quaking grass, greater quaking grass, big quaking grass, large quaking grass, quake grass, shaky grass, shaking grass, blow fly grass, bronco grass, lady's heart grass, large fairy bells

in South Africa: bewertjiesgras, grootbewertjiesgras, grootbewertjie, grootklokkiesgras, Janbewertjies, klokkies, trilgras

in Japan: koban-sô (koban = a gold coin)

in Colombia: corazoncitos

B. media L. (*Briza australis* Prokudin; *Briza intermedia* Samp.; *Poa media* (L.) Cav.)

Eurasia. Perennial, herbaceous, slender, small, hairless, few-stemmed, forming tussocks, shortly rhizomatous, rhizomes spreading, stems upright, no auricles, ligule short and rounded to truncate on the top, leaf sheath submembranous, finely bristled blue-green leaves, blade rolled when young, flowers in an erect and spreading pyramidal panicle, purple-green to purplish hanging spikelets ovate to deltoid or heart shaped, glumes ribbed, lemmas nerved, seed pods round, weed species, forage, ornamental, cut for hay, good resistance to cold and to drought, groundcover, on dry and poor soils, mountain meadow, black soil, roadsides, moist soils, fallow fields and wet meadows, see *Species Plantarum* 1: 70. 1753, *Elenchus Plantarum Horti Regni Botanici Matritensis* 28. 1803 and *Feddes Repertorium* 49: 52. 1940, K.J. Milnes, W.J. Davies, J.S. Rodwell and B.J. Francis, "The responses of *Briza media* and *Koeleria macrantha* to drought and re-watering." *Functional Ecology* 12(4): 665-672. Aug 1998, J.M. Dixon, "*Briza media* L." *Journal of Ecology* 90(4): 737-752. Aug 2002.

in English: quaking grass, common quaking grass, perennial quaking grass, rattlesnake grass, rattle grass, didder, totter, totter grass, doddering-dillies, dillies, doddering dickies, jiggle-joggles, shivering grass, trembling grass, cow quakes, lady's hair grass, maidenhair grass, pearl grass

in French: amourette commune

in India: jai

B. media L. subsp. *elatior* (Sm.) Rohlena (*Briza australis* Prokudin; *Briza elatior* Sibth. & Sm.; *Briza elatior* Sm.; *Briza media* subsp. *elatior* (Sibth. & Smith) Tutin)

Europe, Iran, Russia, Turkey. Perennial bunchgrass, vigorous.

B. media L. subsp. *media*

Europe.

B. minor L. (*Bouteloua media* (E. Fourn.) Gould & Kapadia; *Briza gracilis* hort.; *Briza gracilis* G. Nicholson; *Briza minima* hort. ex Nichols.; *Briza virens* L.)

Eurasia, Mediterranean. Annual, slender, short, loosely tufted, forming loose tussocks, glabrous, herbaceous, often-branched, stems flimsy and erect or slightly geniculate at base, dark nodes, leaves nonauriculate, sheath loose and smooth, ligule hyaline and oblong to lanceolate, linear leaves glabrous and scabrous, flowers in a loose and compound panicle very open, panicle branches ascending to erect, cleistogamous spikelets, pale green and purple

spikelets erect to drooping on slender but straight pedicels, spikelets numerous rounded to deltoid-ovate to triangular, glumes ribbed and greenish to purplish, lemmas imbricate, palea elliptic and finely winged, anthers and stigmata enclosed within the lemma, ovary glabrous and without a conspicuous apical appendage, fruit ventrally compressed, palatable grass, good forage, tillering grass, ornamental, naturalized elsewhere, widespread weed of gardens and disturbed areas, moist soils, swamp margins, moist open sandy sites, drainage ditches, orchards, open habitats, shady areas, fields under irrigation, near rivers or vleis, ballast, wetlands, wastelands, granite rocks, along roadsides, loam or clay, see *Species Plantarum* 1: 70. 1753, *Species Plantarum, Editio Secunda* 103. 1762, *The Illustrated Dictionary of Gardening, ...* 1: 212. 1884 and *Handb. Fl. Ceylon* 6: 341. 1931, *Grasses of Ceylon* 43. 1956, *Grasses of Burma ...* 528. 1960, *Fl. Trop. E. Afr. Gram.* 53. 1970, *Darwiniana* 23: 288. 1981, *Taxon* 41: 558. 1992.

in English: little fairy bells, little quaking grass, quaking grass, small quaking grass, lesser quaking grass, shivery grass, little rattlesnake grass

in French: petite amourette, petite brize

in Danish: dværg-hjertegræs

in South Africa: bewertjiesgras, kleinbewertjies, kleinklokkiesgras, kleinklokkiegras, trilgras

in Japan: hime-koban-sô (hime = small)

in Colombia: corazoncitos

in Mexico: briza corta

B. monandra (Hack.) Pilg. (*Briza lilloi* Parodi; *Briza mandoniana* (Griseb.) Henr.; *Briza stricta* var. *mandoniana* (Griseb.) Hauman; *Calotheca stricta* var. *mandoniana* Griseb.; *Poa monandra* Hack.; *Poidium monandrum* (Hack.) Matthei)

Colombia to Argentina, Bolivia. Lemmas puberulous, see *Nomenclator Botanicus. Editio secunda* 1: 225. 1840, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 289. 1879 and *Österreichische Botanische Zeitschrift* 52(10): 376. 1902, *Revista de la Facultad de Agronomía y Veterinaria* 3: 133, f. 6(1), f. 7(1). 1920, *Mededeelingen van 's Rijks-Herbarium* 40: 70. 1921, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 725. 1929, *Publications of the Field Columbian Museum, Botanical Series* 8(5): 298. 1931.

B. rufa (J. Presl) Steud. (*Briza glomerata* Arechav.; *Briza glomerata* Kuntze & Hack. ex Kuntze, nom. illeg., non *Briza glomerata* Arechav.; *Briza scabra* Ekman; *Briza scabra* (Nees ex Steud.) Ekman; *Chascolytrum rufum* J. Presl; *Chondrachyrum scabrum* Nees ex Steud.; *Lombardochloa rufa* (J. Presl) Roseng. & B.R. Arrill.; *Poidium rufum* (J. Presl) Matthei)

South America, southern Brazil to northern Argentina. Perennial, tufted, erect, short ascending rhizomes, leaf

sheath submembranous ribbed and keeled, ligule rounded, contracted to condensed panicle with very short branches, glumes more or less equal, lemmas rufous and coriaceous, palea keels ciliate, often considered to be a synonym of *Poidium rufum* (J. Presl) Matthei, see *Reliquiae Haenkeanae* 1(4-5): 282. 1830, *Nomenclator Botanicus. Editio secunda* 1: 225. 1840, *Synopsis Plantarum Glumacearum* 1: 288. 1854, *Anales del Museo Nacional de Montevideo* 1: 469, t. 59. 1897, *Rev. Gen. Pl.* 3(3): 342. 1898 and *Willdenowia* 8: 98. 1975, *Anales de la Facultad de Química de Montevideo* 9: 260. 1979[1982], *Darwiniana* 23: 279-309. 1981.

B. subaristata Lam. (*Briza microstachya* (J. Presl) Steud.; *Briza poiformis* (Spreng.) Kuntze; *Briza reniformis* (J. Presl) Steud.; *Briza rotundata* (Kunth) Steud.; *Briza stricta* (Hook. & Arn.) Steud.; *Briza subaristata* var. *interrupta* (Hack. ex Stuck.) Roseng. B.R. Arrill. & Izag.; *Briza triloba* Nees; *Briza triloba* f. *pumila* Hack. ex Kneuck.; *Briza triloba* f. *violascens* Hack.; *Briza triloba* var. *alpha* Nees; *Briza triloba* var. *beta* Nees; *Briza triloba* var. *grandiflora* Döll; *Briza triloba* var. *interrupta* Hack.; *Briza triloba* var. *typica* Parodi; *Briza violascens* Steud.; *Bromus rotundatus* Kunth; *Calotheca microstachya* J. Presl; *Calotheca poiformis* Spreng.; *Calotheca reniformis* J. Presl; *Calotheca rotundata* (Kunth) Roem. & Schult.; *Calotheca rotundata* (Kunth) Steud.; *Calotheca stricta* Hook. & Arn.; *Calotheca triloba* (Nees) Kunth; *Chascolytrum rotundatum* (Kunth) Kunth; *Chascolytrum subaristatum* (Lam.) Desv.; *Chascolytrum trilobum* (Nees) Desv.; *Festuca commersonii* Spreng.)

Mexico, Chile, southern Brazil to Argentina, Uruguay, Paraguay. Perennial or annual, caespitose or clump forming, glabrous, leaves nonauriculate, basal sheaths persistent, ligule hyaline and smooth, sheath loose and smooth, rough and green leaves, cleistogamous spikelets, purplish or green compact inflorescence linear to ovate, small curled spikelets in small airy heads on stems, glumes green or purplish, lower glume narrowly obovate, upper glume elliptic, lemmas imbricate and mucronate or shortly awned, upper lemmas with a mid-nerve shortly aristate, palea winged with glabrous wings, ovary glabrous and without a conspicuous apical appendage, fruit ventrally compressed, good forage, useful for erosion control, usually in moist cultivated areas, along roadsides, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 187. 1791, *Nova Genera et Species Plantarum* 1: 152-153. 1815 [1816], *Systema Vegetabilium* 2: 632. 1817, *Systema Vegetabilium, editio decima sexta* 1: 348, 353. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 482. 1829, *Révision des Graminées* 1: 121. 1829, *Reliquiae Haenkeanae* 1(4-5): 268. 1830, *The Botany of Captain Beechey's Voyage* 50. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 374. 1833, *Nomenclator Botanicus. Editio secunda* 1: 225. 1840, *Synopsis Plantarum Glumacearum* 1: 283-284. 1854, *Flora Chilena* 6:

383. 1854, *Flora Brasiliensis* 2(3): 134. 1878, *Revisio Generum Plantarum* 3(3): 342. 1898 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 8: 97. 1902, *Anales del Museo Nacional de Buenos Aires* 21: 146. 1911, *Revista de la Facultad de Agronomía y Veterinaria* 3: 127, 128, f. 2(1). 1920, *Bol. Fac. Agron. Univ. Montevideo* 105: 22. 1968, *Willdenowia* Beih. 8: 79. 1975.

in Mexico: lanternita, linternita

B. uniolae (Nees) Steud. (*Briza spicigera* (J. Presl) Steud.; *Briza uniolae* (Nees) Nees ex Steud.; *Briza uniolae* var. *modestior* Döll; *Briza uniolae* var. *robustior* Döll; *Chascolytrum spicigerum* J. Presl; *Eragrostis uniolae* Nees; *Poa anomala* Kunth; *Poa uniolae* (L.f.) Schrad.; *Poidium uniolae* (Nees) Matthei)

South America, Bolivia, southern Brazil to Argentina, Uruguay, Paraguay. Panicle branches stiff and erect, shiny spikelets, lemmas acute, useful for erosion control, see *Supplementum Plantarum* 110. 1781 [1782], *Göttingische gelehrte Anzeigen (unter der Aufsicht der Königl. Gesellschaft der Wissenschaften)* 3: 2074. 1821, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 494-495. 1829, *Reliquiae Haenkeanae* 1(4-5): 282. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 365. 1833, *Nomenclator Botanicus. Editio secunda* 1: 225. 1840, *Synopsis Plantarum Glumacearum* 1: 283. 1854, *Flora Brasiliensis* 2(3): 131. 1878.

Brizochloa Jirásek & Chrtek = *Briza* L.

From the Greek *briza* “rye” and *chloe*, *chloa* “grass, young grass.”

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Brizinae, type *Brizochloa spicata* (Sibth. & Sm.) V. Jirásek & Chrtek, see *Species Plantarum* 1: 70-71. 1753 and *Novitates Botanicae et Delectus Seminum Horti Botanici Universitatis Carolinae Pragensis* 1966: 40. 1966 [1967], *Flora Mediterranea* 5: 340-345. 1995, *Cladistics* 14: 287-296. 1998 [N.D. Bayón, Cladistic analysis of the *Briza* Complex (Poaceae, Poeae)], *Opera Botanica* 137: 1-42. 1999, *Contributions from the United States National Herbarium* 48: 146-151. 2003.

Brizopyrum Link = *Desmazeria* Dumort.

Greek *briza* “rye” and *pyros* “grain, wheat.”

Pooideae, Poeae, Ammochloinae, type *Brizopyrum siculum* (Jacq.) Link, see *Commentationes Botanicae* 26-27. 1822, Johann Heinrich Friedrich Link (1767-1851), *Hortus regius botanicus berolinensis*. 1: 159. Berolini [Berlin] 1827 and *Nord. J. Bot.* 1: 20. 1981, *Contributions from the United States National Herbarium* 48: 256. 2003.

Brizopyrum Stapf = *Plagiochloa* Adamson & Sprague, *Tribolium* Desv.

Greek *briza* “rye” and *pyros* “grain, wheat.”

Danthonioideae, Danthonieae, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168, t. 7, f. 2. 1831, *Flora Capensis* 7: 318. 1898 and *Journal of South African Botany* 7(2): 89-90. 1941, H.P. Linder & G. Davidse, “The systematics of *Tribolium* Desv. (Danthonieae: Poaceae).” *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 119(4): 445-507. 1997, *Contributions from the United States National Herbarium* 46: 622. 2003.

Bromelica (Thurb.) Farw. = *Melica* L.

Bromus and *Melica*.

Pooideae, Meliceae, see *Species Plantarum* 1: 66-67. 1753, *Proceedings of the American Academy of Arts and Sciences* 8: 409. 1872, *Geological Survey of California, Botany* 2: 304. 1880 and *Gray's Manual of Botany* (edition 7) 152. 1908, *Rhodora* 21: 77. 1919, *U.S.D.A. Bull.* 772: 69, 71. 1920, *Madroño* 8: 8. 1945, *Taxon* 41: 566. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 432-450. 2003.

Bromidium Nees & Meyen = *Agrostis* L., *Didymochaeta* Steud.

Referring to *Bromus*.

Pooideae, Poeae, Agrostidinae, type *Bromidium hygrometricum* (Nees) Nees & Meyen, often placed in *Agrostis*, see *Species Plantarum* 1: 61-63. 1753, *Gramineae* 22-23. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 154. 1843, *Flora Chilena* 6: 317. 1854, *Synopsis Plantarum Glumacearum* 1: 185. 1854 [1855] and *Boletín de la Sociedad Argentina de Botánica* 1: 119, 121, f. 1. 1946, *Fl. Fenn.* 5: 29. 1971, *Darwiniana* 24(1-4): 187-216. 1982 [Revalidación del género *Bromidium* Nees et Meyen emend. Pilger (Gramineae)], *Taxon* 41: 566. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 152-153. 2003.

Species

B. anomalum (Trin.) Döll (*Agrostis anomala* Willd.; *Agrostis koelerioides* E. Desv.; *Aira anomala* Trin.)

South America. See *Species Plantarum. Editio quarta* 1: 370. 1797, *Linnaea* 10(3): 301. 1836, *Flora Chilena* 6: 317. 1854, *Flora Brasiliensis* 2(3): 103, pl. 30, f. 2. 1878.

B. hygrometricum (Nees) Nees & Meyen (*Agrostis hygrometrica* Nees; *Agrostis hygrometrica* var. *hygrometrica*)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 404. 1829.

B. ramboi (Parodi) Rúgolo (*Agrostis ramboi* Parodi)

Argentina. See *Boletín de la Sociedad Argentina de Botánica* 1: 119, f. 1. 1946, *Darwiniana* 24(1-4): 207. 1982.

B. ramboi (Parodi) Rúgolo var. **pubescens** (Kämpf) Rúgolo (*Agrostis ramboi* var. *pubescens* Kämpf)

South America. See *Anuário Técnico do Instituto de Pesquisas Zootécnicas "Francisco Osorio"* 2: 588, f. 9b [10]. Porto Alegre 1974[1975], *Darwiniana* 24(1-4): 210. 1982.

B. ramboi (Parodi) Rúgolo var. **ramboi**

South America.

B. tandilense (Kuntze) Rúgolo (*Agrostis hygrometrica* var. *tandilensis* (Kuntze) L.B. Sm. & Wassh.; *Agrostis kennedyana* Beetle; *Agrostis koelerioides* var. *pampeana* Parodi; *Agrostis tandilensis* (Kuntze) Parodi; *Bromidium hygrometricum* var. *tandilense* Kuntze; *Deyeuxia hygrometrica* var. *tandilense* (Kuntze) Speg.)

South America. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 404. 1829, *Flora Chilena* 6: 317. 1854, *Revisio Generum Plantarum* 3(3): 343. 1898 and *Contribucion al Estudio de la Flora del Tandil* 54. 1901, *Revista de la Facultad de Agronomía y Veterinaria* 7: 161, f. 10D. 1930, *Darwiniana* 6: 158. 1943, *Bulletin of the Torrey Botanical Club* 72(6): 547, f. 6. 1945, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 244. 1978, *Darwiniana* 24(1-4): 202, 204. 1982.

B. trisetoides (Steud.) Rúgolo (*Agrostis trisetoides* Steud.)

South America. See *Synopsis Plantarum Glumacearum* 1: 172. 1854 and *Darwiniana* 24(1-4): 200. 1982.

x Bromofestuca Prodán

Bromus x *Festuca*.

See *Bul. Grad. Bot. Univ. Cluj* 16: 93. 1936, *Genera Graminum* 374. 1986.

Bromopsis (Dumort.) Fourr. = *Bromus* L., *Zerna* Panz.

Resembling *Bromus*.

Pooideae, Bromeae, see *Species Plantarum* 1: 76-78. 1753, *Flora Badensis Alsatica* 1: 8. 1805, *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 46, 59. 1813, *Observations sur les Graminées de la Flore Belgique* 116, 117. 1823 [1824], *Annales de la Société Linnéenne de Lyon, sér.* 2, 17: 187. 1869 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Svensk Fanerogamflora* 101. 1918, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard.* 30: 366, 372. 1970, *Folia Geobot. Phytotax.* 8: 159. 1973, *Bot. Jahrb. Syst.* 102: 447.

1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191. 2003.

Bromuniola Stapf & C.E. Hubb.

Bromus and *Uniola* L.

One species, Africa, Angola. Bambusoideae, Oryzodae, Centothecae, or Centothecoideae, Centothecae, perennial, herbaceous, loosely tufted, solid, auricles absent, narrowly lanceolate leaf blades, ligule a fringed membrane, plants bisexual, loose panicle, 4- to 9-flowered, the lowest floret usually reduced to an empty lemma, 2 glumes subequal or very unequal, lemma awned, palea gibbous on the back, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, forest shade, type *Bromuniola gossweileri* Stapf & Hubbard, see *Kew Bulletin* 1926: 366. 1926.

Species

B. gossweileri Stapf et Hubbard

Angola.

Bromus L. = *Aechmophora* Steudel, *Anisantha* K. Koch, *Avenaria* Fabr., *Avenaria* Heister ex Fabricius, *Boissiera* Hochst. ex Steud., *Bromopsis* (Dumort.) Fourr., *Bromus* Scop., *Ceratochloa* DC. & P. Beauv., *Ceratochloa* P. Beauv., *Forasaccus* Bubani, *Genea* (Dumort.) Dumort., *Libertia* Lejeune, *Michelaria* Dumort., *Nevskiella* Krecz. & Vved., *Serrafalcus* Parlato, *Stenofestuca* (Honda) Nakai, *Triniusa* Steud., *Triniusia* Steud., *Trisetobromus* Nevski, *Zerna* Panz.

From the Latin and Greek *bromos* "oats" (Hippocrates, *De victus ratione*. 2.43, Plinius, etc.); see Carl Linnaeus, *Species Plantarum*. 76. 1753 and *Genera Plantarum*. Edition 5. 33. 1754.

About 100/150 species, temperate and tropical climates, north temperate regions, tropical mountains. Pooideae, Triticoideae, Bromeae, or Pooideae, Bromeae, annual, biennial or perennial, herbaceous and leafy, tufted or solitary, shortly rhizomatous or stoloniferous, erect or decumbent, unbranched above, stems flimsy to rigid, auricles present or absent, ligule a membrane, hairy tubular leaf sheaths, leaf blades linear, plants bisexual, inflorescence an open or contracted panicle, panicles erect or nodding, spikelets all alike, chasmogamous or facultatively cleistogamous, hermaphrodite florets, incomplete florets present and distal to the hermaphrodite florets, apical florets usually sterile or imperfect, 2 glumes subequal or very unequal and acute or

- shortly awned, lemma rounded or keeled herbaceous or coriaceous, subapical or apical lemma awns, 2 glabrous lodicules entire and connate below, 1-3 stamens, anthers exerted and florets chasmogamous, hairy ovary apical appendage, 2 stigmas white, fruit laterally compressed, mesophytic or xerophytic, intergeneric hybrid with *Festuca* L., shade species, cultivated fodder, native pasture species, grain crop species, ornamental, important livestock forage, several species with callus or awns or spear-like bristles which can contaminate wool or cause injury to stock, growing in woodland and meadow, grassland, in damp areas, pampas, open habitats, disturbed ground, ruderal habitats, this genus is taxonomically difficult and has been divided into sections and subgenera, *Bromus* is confused with *Festuca* and *Helictotrichon*, very similar to *Poa*, type *Bromus secalinus* L., see *Species Plantarum* 1: 76. 1753, *Genera Plantarum*. Edition 5. 33. 1754, *Enumeratio Methodica Plantarum* 206. 1759, *Introductio ad Historiam Naturalem sistens genera lapidum, plantarum et animalium hactenus detecta ...* 74. Pragae 1777, *Systema Vegetabilium. Editio decima quarta* 119. 1784, *Essai d'une Nouvelle Agrostographie* 75, 158. 1812, *Observations sur les Graminées de la Flore Belgique* 77, 116, 117. 1823 [1824], *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 12: 755, 757. 1825, *Nomenclator Botanicus. Editio secunda* 1: 29. 1840, *Rariorum plantarum et haud cognitarum in Sicilia sponte provenientium ...* 2: 14. Panormi 1838-1840, *Linnaea* 21(4): 394. 1848, *Flora Rossica* 4(13): 360. 1852, *Synopsis Plantarum Glumacearum* 1: 328. 1854, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *Annales de la Société Linnéenne de Lyon, sér. 2*, 17: 187. 1869 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Flora Pyrenaea ...* 4: 379. 1901, *Svensk Fanerogamflora* 101. 1918, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 44, 54. 1930, *Man. Grasses U.S.* 55. 1935, *Revista Sudamericana de Botánica* 6: 144. 1940, *Blumea* 4(3): 498. 1941, *Amer. J. Bot.* 32: 66-72. 1945, *Journal of Japanese Botany* 25: 6. 1950, *Brittonia* 7(5): 415-480. 1952 [A revision of the genus *Bromus* sect. *Bromopsis* of North America], *Bull. Jard. Bot. Brux.* 31: 289-299. 1961, *New Phytol.* 64: 80-85. 1965, *Pub. Mus. Michigan State Univ. Biol. Ser.* 3(5): 465-520. 1968 [T.R. Soderstrom & J.H. Beaman, The genus *Bromus* (Gramineae) in Mexico and Central America.], *Willdenowia* 6: 139-160. 1970, *Notes Roy. Bot. Gard. Edinburgh* 30: 361-375. 1970, *Brittonia* 23(3): 293-324. 1971, *Grasses of the Soviet Union* 1: 298-343. 1976, *Hickenia* 1: 73-78. 1977, *The Flora of Canada* 2: 93-545. 1978 [1979], *Bot. Jahrb. Syst.* 102(1-4): 359-379, 445-457. 1981, *Canadian Journal of Botany* 62: 581-585. 1984, *Folia Geobotanica et Phytotaxonomica* 19: 28-39. 1984, *Amer. J. Bot.* 72: 1334-1338. 1985, *Bot. Zhurn. SSSR* 70(1): 126-128. 1985, *Gayana, Botánica* 43(1-4): 47-110. 1986 [O. Matthei, El género *Bromus* L. (Poaceae) en Chile], *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 49-50. 1986, *Caldasia* 15(71-75): 15-34. 1986 [P. Pinto-Escobar, El género *Bromus* en los Andes centrales de Suramérica], *Canadian Journal of Plant Sciences* 67: 267-269. 1987, *Iheringia, Série Botânica* 38: 21-42. 1988, *Orsis* 3: 41-54. Barcelona 1988, *Acta Botanica Barcinonensia* 37: 335-344. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Blumea* 35: 483-497. 1991, *Taxon* 41: 559. 1992, *Anales del Jardín Botánico de Madrid* 51(2): 280. 1994, *Flora Mesoamericana* 6: 245-246. 1994, *New Zealand Journal of Botany* 33: 35-42. 1995, L.E. Pavlick, *Bromus L. of North America* 1-160. 1995, *Taxon* 44: 611-612. 1995, *Flora Mediterranea* 8: 307-313. 1998, *Lagascalia* 20(2): 223-230. 1998, *Thaiszia* 9(1): 31-40. 1999, *Opera Botanica* 137: 1-42. 1999, *Lagascalia* 21(1): 235-240. 1999, *Phanerogamarum Monographiae* 22: 1-293. 1999, *Grasses: Systematics and Evolution* 89-101. 2000 [A.M. Planchuelo & P.M. Peterson, The species of *Bromus* (Poaceae: Bromeae) in South America], *Contributions from the United States National Herbarium* 48: 20, 110, 138, 153-191, 230-232, 368-369, 370, 425, 451, 467, 610-611, 617, 658-659, 695. 2003, *Botanical Journal of the Linnean Society* 141(2): 177-181. Feb 2003, *Botanical Journal of the Linnean Society* 143(4): 443-447. Dec 2003, *Botanical Journal of the Linnean Society* 144(4): 497-505. Apr 2004, *Botanical Journal of the Linnean Society* 145(3): 257-294. July 2004, Stacey L. Halpern, "Sources and consequences of seed size variation in *Lupinus perennis* (Fabaceae): adaptive and nonadaptive hypotheses." *Am. J. Bot.* 92: 205-213. 2005, Xianzhong Wang, "Reproduction and progeny of *Silene latifolia* (Caryophyllaceae) as affected by atmospheric CO₂ concentration." *Am. J. Bot.* 92: 826-832. 2005, Roberta J. Mason-Gamer, "The β -amylase genes of grasses and a phylogenetic analysis of the Triticeae (Poaceae)." *Am. J. Bot.* 92: 1045-1058. 2005, *New Phytologist* 165(2): 338-341. Feb 2005, *Oikos* 109(1): 154-166. Apr 2005, *Ecology Letters* 8(4): 419-429. Apr 2005, *Diversity & Distributions* 11(3): 183-191. May 2005, *Weed Biology and Management* 5(2): 62-68. June 2005, *Journal of Applied Ecology* 42(3): 498-506. June 2005, *Restoration Ecology* 13(2): 380-389. June 2005, *Journal of Ecology* 93(3): 576-583, 632-648. June 2005, *Oikos* 109(3): 521-534. June 2005, *Molecular Ecology* 14(7): 2065-2073. June 2005, *Conservation Biology* 19(3): 917-928. June 2005, *Journal of Biogeography* 32(6): 1085-1106. June 2005.

Species

B. aleutensis Trin. ex Griseb. (*Bromus sitchensis* var. *aleutensis* (Trin. ex Griseb.) Hultén)

North America. Perennial, nonrhizomatous, auricles absent or present, leaf sheaths hairless to moderately hairy, panicle erect and slightly lax, flattened spikelets, four to eight flowers per spikelet, lemma keeled and nerved, lemma softly hairy with a wide and almost hyaline margin, awn straight, occurs on sandy and disturbed soil, very similar to *Bromus sitchensis* Trin., see *Flora Rossica* 4(13): 361. 1852 and

Flora of Alaska and Neighboring Territories: A Manual of the Vascular Plants 254. 1942.

in English: Aleut brome

B. alopecuroides Poir. (*Bromus alopecuroides* Poir.; *Bromus alopecurus* Pers.; *Bromus alopecurus* Poir. ex Pers.; *Bromus contortus* Desf.; *Serrafalcus alopecuroides* (Poir.) Parl.; *Serrafalcus alopecuroides* (Poir.) C.A. Gardner)

Europe, Mediterranean. Annual, slender, tufted, ascending and geniculate at the base, leaf sheath villous, dense panicle erect and compact, spikelets hairy, flattened and twisted awns, common along roadsides, on dry soil, waste grounds, cultivated fields, see *Voyage en Barbarie* 2: 100. 1789, *Flora Atlantica* 1: 95, t. 25. 1798, *Syn. Pl.* 1: 95. 1805, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 703. 1810 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 98. 1942, *Flora of Western Australia* 1: 95. 1952, *Flore de l'Afrique du Nord*: 25: 261. 1955, *Annalen des Naturhistorischen Museums in Wien* 75: 83. 1971[1972], *Botanical Journal of the Linnean Society* 76(4): 360. 1978, *Flora Mediterranea* 4: 207. 1994.

in English: weedy brome

B. angrenicus Drobow (*Bromopsis angrenica* (Drobow) Holub; *Bromopsis paulsenii* subsp. *angrenica* (Drobow) Tzvelev; *Zerna angrenica* (Drobow) Nevski; *Zerna paulsenii* subsp. *angrenica* (Drobow) Tzvelev)

Europe, Eurasia, Russia. See *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 38. 1925, *Novosti Sist. Vyss. Rast.* 7: 57. 1970 [1971], *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973.

B. angustifolius Schrank (*Bromus angustifolius* Hornem., nom. illeg., non *Bromus angustifolius* Schrank; *Bromus erectus* var. *angustifolius* (Schrank) Beck)

Europe. See *Baiersche Flora* 1: 366. 1789, *Hortus Regius Botanicus Hafniensis* 13. 1819, *Flora von Nieder-Österreich* 1: 106. 1890 and *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972].

B. anomalus Rupr. ex E. Fourn. (*Bromopsis anomala* (Rupr. ex Fourn.) Holub; *Bromus anomalus* Rupr., also spelled *anomala*; *Bromus ciliatus* var. *minor* Munro ex L.H. Dewey; *Bromus ciliatus* var. *montanus* Vasey ex Beal; *Bromus ciliatus* var. *porteri* (J.M. Coult.) Rydb.; *Bromus exaltatus* Bernh.; *Bromus kalmii* var. *major* Vasey ex Shear; *Bromus kalmii* var. *occidentalis* Vasey ex Beal; *Bromus kalmii* var. *porteri* J.M. Coult.; *Bromus porteri* (J.M. Coult.) Nash; *Bromus porteri* var. *havardii* Shear; *Bromus scabratus* Scribn., nom. illeg., non *Bromus scabratus* Link; *Zerna anomala* (Rupr. ex E. Fourn.) Henrard)

Mexico, North America, California. Perennial, leaf sheaths hairless to hairy with long soft hairs, auricles present or absent, ligules blunt, open and spreading flower head, spikelets more or less laterally compressed, glumes hairy, lemma with a central awn, good forage, can be confused with

Bromus ciliatus L., occurs under dry conditions, rocky slopes, shade, see *Species Plantarum* 1: 76-77. 1753, *Bull. Académie Royale Sciences Bruxelles* 9(2): 236. 1842, *A Manual of the Botany of the Northern United States* 600. 1848, *Bot. Wheeler Exped.* 6: 292. 1878, *Manual of the Botany ... of the Rocky Mountain Region ...* 425. 1885, *Mexicanas Plantas* 2: 126. 1886, *Contributions from the United States National Herbarium* 2(3): 548. 1894, *Bulletin of the Torrey Botanical Club* 22(12): 512. 1895, *Contributions from the United States National Herbarium* 3(3): 192. 1895, *Grasses of North America for Farmers and Students* 2: 619, 624. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 13: 46. 1898 and *Bull. Div. Agrostol., U.S.D.A.* 23: 35, 37. 1900, *Journal of the Washington Academy of Sciences* 23: 449. 1933, *Blumea* 4(3): 499. 1941, *Brittonia* 7: 415-480. 1952, *Publications of the Museum. Michigan State University. Biological Series* 3(5): 465-519. 1968, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973, *Phytologia* 37(4): 317-407. 1977.

in English: nodding brome, anomalous brome

in Mexico: bromo dormilón

B. araucanus Phil. (*Bromus alpestris* Steud.; *Bromus araucanus* var. *araucanus*; *Bromus araucanus* var. *obtusiflorus* (Hack.) J.A. Cámara; *Bromus araucanus* var. *obtusiflorus* (Hack.) J. Hern.; *Bromus obtusiflorus* Hack.)

Southern America, Argentina, Chile. See *Berberides Americae Australis* 52. 1857, *Anales de la Universidad de Chile* 94: 343. 1896 and *Anales del Museo Nacional de Buenos Aires* 21: 171. 1911, *Flora Patagónica* 3: 86. 1978.

B. arenarius Labill. (*Bromus arenarius* Desm., nom. illeg., non *Bromus arenarius* Labill.; *Serrafalcus arenarius* (Labill.) C.A. Gardner)

Australia. Annual, loosely tufted or solitary, erect or ascending, procumbent or geniculate, glabrous stems, internodes hollow, auricles absent, leaf sheaths more or less villous and not keeled, ligule truncate and hyaline, leaves pubescent to villous to densely villous, a raceme or a panicle loose and drooping, cleistogamous spikelets oblong-lanceolate, spikelets loosely hairy, glumes subequal, lower glume elliptic to obovate, lemmas awned and lanceolate, callus glabrous, palea membranous to chartaceous and 2-keeled with keels wingless, palea interkeels glabrous, ovary with the hairs only at the apex, fruit oblong and compressed, grows on sandy soils in dry areas, rocky places near the coast, sandy dunes, ballast, very similar to *Bromus japonicus* var. *vestitus* (Schrad.) Halácsy, see *Novae Hollandiae Plantarum Specimen* 1: 23, t. 28. Parisii 1805, *Mémoires de la Société Linnéenne du Calvados* 1824: 40. 1824, *Flora Australiensis: A Description ...* 7: 661. 1878 and *Flora of Western Australia* 1: 96. 1952.

in English: sand brome, Australian brome, Australian chess

B. arizonicus (Shear) Stebbins (*Bromus carinatus* var. *arizonicus* Shear; *Ceratochloa arizonica* (Shear) Holub)

North America, U.S. Annual, occurs under dry conditions, chaparral, see *The Botany of Captain Beechey's Voyage* 403. 1840 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 62. 1900, *Proceedings of the California Academy of Sciences, Series 4*, 25: 309. 1944, *Folia Geobotanica et Phytotaxonomica* 8(2): 170. 1973, *Phytologia* 37(4): 317-407. 1977.

in English: Arizona brome

B. armenus Boiss. (*Bromopsis armena* (Boiss.) Holub)

Turkey. Rare species, see *Flora Orientalis* 5: 642. 1884 and *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973.

B. arvensis L. (*Bromus arvensis* Lam., nom. illeg., non *Bromus arvensis* L.; *Bromus arvensis* Weigel, nom. illeg., non *Bromus arvensis* L.; *Bromus arvensis* L. subsp. *billotii* (F.W. Schultz) Hegi; *Bromus arvensis* subsp. *segetalis* H. Scholz; *Bromus billotii* F.W. Schultz; *Bromus erectus* var. *arvensis* (L.) Huds.; *Bromus japonicus* Thunb.; *Bromus multiflorus* Weigel; *Bromus patulus* Mert. & W.D.J. Koch; *Bromus versicolor* Pollich; *Bromus verticillatus* Cav.; *Forasaccus arvensis* (L.) Bubani; *Serrafalcus arvensis* (L.) Godr.; *Serrafalcus scoparius* (L.) Parl.)

Temperate Asia, Europe. Annual and biennial bunchgrass, extensive fibrous root system, leaves pubescent, spikelets lanceolate to oblong, flimsy branchlets, lemmas spreading at maturity, weed species widely naturalized in temperate regions, palatable, soil improver, cover crop, useful for erosion control, common along roadsides, fields, disturbed soils, see *Species Plantarum* 1: 77. 1753, *Observationes Botanicae* 2-4, 6-7, t. 1, f. 1. 1772, *Historia Plantarum in Palatinatu Electorali sponte nascentium incepta, secundum systema sexuale digesta* ... Mannheim 1: 190. 1776-1777, *Flora Anglica*, edition 2 50. 1778, *Systema Vegetabilium. Editio decima quarta* 119. 1784, *Icones et Descriptiones Plantarum, quae aut sponte* ... 6: 66, f. 590. 1801, *Flore de Lorraine* 3: 185. 1844 and *Flora Pyrenaea* ... 4: 385. 1901, *Bull. Nat. Sci. Mus.* 31: 136. 1952, *Willdenowia* 6: 145. 1970, *Notes Royal Bot. Gard. Edinburgh* 42: 499. 1985.

in English: field brome, field chess, field bromegrass

in French: brome des champs

B. arvensis L. subsp. *segetalis* H. Scholz (*Bromus secalinus* L. subsp. *billotii* (F.W. Schultz) Asch. & Graebn.)

Central Europe. See *Species Plantarum* 1: 77. 1753 and *Willdenowia* 6: 145. 1970.

B. attenuatus Swallen (*Bromopsis attenuata* (Swallen) Holub)

Mexico. See *Contr. U.S. Natl. Herb.* 29(9): 397. 1950, *Folia Geobot. Phytotax.* 8(2): 167. 1973.

B. auleticus Trin. ex Nees (*Bromopsis auletica* (Trin. ex Nees) Herter; *Bromus erectus* var. *auleticus* (Trin. ex Nees) Döll)

South America, Brazil, Uruguay, Argentina. Perennial bunchgrass, rhizomatous, very leafy, erect, leaves mostly basal, narrow or broad leaves, useful for erosion control and for stabilizing sand dunes, growing on sandy soils, sandy soil near small stream, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 468. 1829, *Flora Brasiliensis* 2(3): 109. 1878 and *Revista Sudamericana de Botánica* 6(5-6): 144. 1940, *Flora de la Provincia de Buenos Aires* 4(2): 85-101. 1970.

B. barcensis Simonk. (*Bromopsis riparia* subsp. *barcensis* (Simonk.) Holub; *Bromus fibrosus* Hack. subsp. *barcensis* (Simonk.) Hayek; *Bromus fibrosus* var. *barcensis* (Simonk.) Jav.; *Bromus riparius* subsp. *barcensis* (Simonk.) Soó)

Europe, Bulgaria. Useful for erosion control, see *Enumeratio Plantarum Transsilvaniae* 584. 1886 and *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972], *Flora Republicii Socialiste Romania* 12: 311. 1972, *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

B. benekenii (Lange) Trimen (*Bromopsis benekenii* (Lange) Holub; *Bromopsis ramosa* (Huds.) Holub subsp. *benekenii* (Lange) Tzvelev; *Bromus asper* var. *benekenii* Syme; *Bromus benekenii* (Syme) Beck.; *Bromus benekenii* (Syme) Trimen; *Bromus ramosus* Huds.; *Schedonorus benekenii* Lange; *Zerna benekenii* (Lange) Lindm.)

Asia, Europe. Perennial, robust, panicle nodding, useful for erosion control, adapted to shady areas, see *Flora Anglica* 40. 1762, *Flora Danica* 48: 5. 1871, *English Botany, ... third edition* 11: 157. 1873, *Flora von Nieder-Österreich* 1: 107. 1890 and *Svensk Fanerogamflora* 101. 1918, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 1506. 1933, *Arkiv för Botanik* 5: 1. 1959, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

B. berterioanus Colla (also spelled *berterianus* or *berteriana*) (*Avena paupercula* Phil.; *Avena symphicarpa* Trin. ex Steud.; *Avena villosula* Kunze ex E. Desv.; *Bromus barbatooides* Beal; *Bromus barbatooides* var. *sulcatus* Beal; *Bromus berterioanus* var. *excelsus* (Shear) Pavlick; *Bromus bicuspis* Nees ex Steud.; *Bromus leyboldtii* Phil.; *Bromus rudis* Sodiro; *Bromus trinii* E. Desv.; *Bromus trinii* var. *effusa* E. Desv.; *Bromus trinii* var. *excelsus* Shear; *Bromus trinii* var. *manicata* E. Desv.; *Bromus trinii* var. *micranthera* E. Desv.; *Bromus trinii* var. *pallidiflorus* E. Desv.; *Bromus trinii* var. *stricta* E. Desv.; *Danthonia pseudo-spicata* Müll. Hal.; *Trisetobromus hirtus* (Trin.) Nevski; *Trisetum barbatooides* Beal; *Trisetum barbatooides* var. *sulcatus* Beal; *Trisetum barbatum* Steud., nom. illeg., non *Trisetum barbatum* Nees; *Trisetum barbatum* var. *major* Vasey; *Trisetum hirtum* Trin.; *Trisetum litorale* Phil.; *Trisetum trinii* (Trin.) Louis-Marie; *Trisetum trinii* var. *effusum* (E. Desv.) Louis-Marie;

Trisetum trinii var. *litorale* (Phil.) Louis-Marie; *Trisetum trinii* var. *majus* (Vasey) Louis-Marie; *Trisetum trinii* var. *manicatum* (E. Desv.) Louis-Marie; *Trisetum trinii* var. *micrantherum* (E. Desv.) Louis-Marie; *Trisetum trinii* var. *pallidiflorus* (E. Desv.) Louis-Marie; *Trisetum trinii* var. *strictum* (E. Desv.) Louis-Marie (after the Italian botanist Carlo Giuseppe Bertero, 1789-1831, physician, traveler, botanical collector, plant collector in Chile. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 175. 1965; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement II*. 118-119. 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 36. 1972; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 131. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

U.S., South America, Argentina, Chile. Annual, tufted, herbaceous, open, loose inflorescence, green spikelets, weed species, found in grassland, see *Memorie della Reale Accademia delle Scienze di Torino* 39: 25, t. 58. 1836, *Linnaea* 10(3): 300. 1836, *Nomenclator Botanicus. Editio secunda* 1: 173. 1840, *Florae Africae Australioris Illustrationes Monographicae* 345. 1841, *Flora Chilena* 6: 441-442. 1854, *Synopsis Plantarum Glumacearum* 1: 229, 322. 1854, *Botanische Zeitung. Berlin* 14(20): 348. 1856, *Linnaea* 29(1): 92, 94. 1858, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): 60. 1893, *Grasses of North America for Farmers and Students* 2: 614-615. 1896, *Anales de la Universidad de Chile* 94: 344. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 25. 1900, *Rhodora* 30: 243. 1928 [1929], *Bromus L. of North America* 128, 144. 1995.

in English: Chilean brome

B. berterioanus Colla var. *berterioanus* (*Bromus trinii* var. *trinii*)

U.S., South America, Argentina, Chile. See *Fl. Chile* 6: 441. 1854.

B. berterioanus Colla var. *excelsus* (Shear) Pavlick (*Bromus berterioanus* Colla; *Bromus trinii* var. *excelsus* Shear)

U.S., South America, Argentina, Chile. See *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 25. 1900, *Bromus L. of North America* 128, 144. 1995.

B. biebersteinii Roem. & Schult. (*Bromopsis biebersteinii* (Roem. & Schult.) Holub; *Bromus albidus* M. Bieb.; *Zerna*

biebersteinii (Roem. & Schult.) Nevski) (for the German explorer Friedrich August Marschall von Bieberstein, 1768-1826, author of *Flora taurico-caucasica*. Charkouiae [Charkow] 1808-1819, *Beschreibung der Länder zwischen den Flüssen Terek und Kur am Caspischen Meere*. Frankfurt am Main 1800 and *Centuria plantarum rariorum Rossiae meridionalis praesertim Tauriae et Caucasi iconibus descriptionibusque illustrata*. Charkoviae 1810. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 450. 1965; Stafleu and Cowan, *Taxonomic literature*. 3: 305-306. 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 207. Oxford 1964; Warren R. Dawson, *The Banks Letters*. London 1958; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Asia, Iran. Perennial bunchgrass, tall, leafy, leaves mostly basal, see *Systema Vegetabilium* 2: 638. 1817, *Flora Taurico-Caucasica* 3: 79. 1819, *Flora Analitica d'Italia* 1: 98. 1896 and *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973.

in English: Bieberstein brome, meadow brome

B. bonariensis Parodi & Cámara

Argentina. See *Revista Argent. Agron.* 29(1-2): 12-15, f. 1. 1962 [1963].

B. brachyanthera Döll (*Bromus uruguayensis* Arechav. var. *glabrescens* Arechav.; *Bromus uruguayensis* var. *robustior* Arechav.)

Southern America, Uruguay, southern Brazil to Argentina. Lemmas with a stiff awn, common on low shaded forest, disturbed places, often confused with *Festuca ulochaeta* Nees ex Steud., see *Flora Brasiliensis* 2(3): 110. 1878, *Anales del Museo Nacional de Montevideo* 1: 493, 496, t. 54. 1897 and *Revista Sudamericana de Botánica* 6(5-6): 144. 1940, *Gramíneas Uruguayas* 113, f. 39. 1970, *Flora de la Provincia de Buenos Aires* 4(2): 93. 1970.

B. brachyanthera Döll subsp. *brachyanthera*

Southern America, Uruguay, Brazil, Argentina. See *Flora Brasiliensis* 2(3): 110. 1878.

B. brachyanthera Döll subsp. *uruguayensis* (Arechav.) Roseng. & al. (*Bromopsis uruguayensis* (Arechav.) Herter; *Bromus uruguayensis* Arechav.)

Southern America, Uruguay, Argentina. Useful for erosion control, see *Flora Brasiliensis* 2(3): 110. 1878, *Anales del Museo Nacional de Montevideo* 1: 493, t. 54. 1897 and *Revista Sudamericana de Botánica* 6(5-6): 144. 1940, *Gramíneas Uruguayas* 113, f. 39. 1970, *Flora de la Provincia de Buenos Aires* 4(2): 93. 1970.

B. brachyanthera Döll var. **uruguayensis** (Arechav.) J.A. Cámara (*Bromopsis uruguayensis* (Arechav.) Herter; *Bromus brachyanthera* subsp. *uruguayensis* (Arechav.) Roseng., B.R. Arrill. & Izag.; *Bromus uruguayensis* Arechav.; *Bromus uruguayensis* var. *genuinus* Arechav.)

Southern America. See *Anales del Museo Nacional de Montevideo* 1(6): 493, 496, t. 54. 1897 and *Revista Sudamericana de Botánica* 6(5-6): 144. 1940, *Flora de la Provincia de Buenos Aires* 4(2): 93. 1970, *Gramíneas Uruguayas* 113, f. 39. 1970.

B. brachystachys Hornung

Europe, Germany, Asia, Iran, Israel. Useful for erosion control, possibly extinct in Germany, see *Flora* 16(2): 417. 1833, *Flora of Syria, Palestine, and Sinai* 894. 1896 and *Bulletin de la Société Botanique de Genève* 31: 166. 1940, *Edinburgh Journal of Botany* 50(2): 149-171. 1993.

B. brevis Steud. (*Bromus brevis* Nees; *Bromus brevis* Nees ex Steud.; *Bromus brevisetus* Dumort.; *Bromus catharticus* var. *rupestris* (Speg.) Planchuelo & P.M. Peterson; *Bromus uniolooides* f. *brevis* (Nees ex Steud.) Kloos; *Bromus uniolooides* var. *brevis* (Nees ex Steud.) Hack.; *Bromus uniolooides* var. *rupestris* Speg.; *Ceratochloa brevis* Nees ex B.D. Jacks.)

South America. Perennial, tufted, erect, stiff, leaves narrow, leaf sheath keeled and hairy, ligule toothed to denticulate, panicle branches erect and compressed, spikelets strongly compressed, chasmogamous and cleistogamous, glumes more or less unequal to subequal, lemma hairy and keeled, lemma acute or shortly mucronate or shortly awned, seeds cooked as flour, found in waste ground, steppe, dwelling surroundings, along roadsides, see *Symbolae Botanicae, ...* 2: 22. 1791, *Nova Genera et Species Plantarum* 1: 151. 1815 [1816], *Florula belgica, operis majoris prodromus, auctore ...* 155. Tournay 1827, *Synopsis Plantarum Glumacearum* 1: 326. 1854, *Index Kewensis* 1: 487. 1895, *Contribucion al estudio de la flora de la Sierra ...* 76-77. 1896 and *Anales del Museo Nacional de Buenos Aires* 11: 144. 1904, *Nederlandsch Kruidkundig Archief. Verslangen en Mededelingen der Nederlandsche Botanische Vereeniging* 1917: 175. 1918, *Flora de la Provincia de Buenos Aires* 4(2): 85-101. 1970, *Flora Patagónica* 3: 77-93. 1978, *Kurtziana* 21: 243-257. 1991, *Darwiniana* 31: 173-183. 1992, *Novon* 8: 53-60. 1998, *Flora of New Zealand* 5: 360. 2000.

in English: pampas brome

in Argentina: trigo, loica loi, cebadilla

B. briziformis Fischer & C.A. Meyer (*Bromus briziformis* Willk. ex Willk. & Lange, nom. illeg., non *Bromus briziformis* Fisch. & C.A. Mey.)

Europe. Annual, herbaceous, leaves downy, leaf sheaths softly hairy, ligules with a rough edge or hairs along the edge, no auricles, open and often-nodding flower head, pyramidal and branched loose panicles, wedge-shaped

spikelets, glumes obtuse, lemma obtuse and usually without awns, ornamental grass, grows in open and disturbed grasslands, roadsides, waste places, dry disturbed soil, see *Index Seminum [St. Petersburg]* 3: 30. 1837, *Linnaea* 25(1): 26. 1852, *Prodromus Florae Hispanicae* 1: 101. 1861 and *Flora Kavkaza* 1: 125. 1928.

in English: rattlesnake brome, rattlesnake chess, quake-grass

B. bromoideus (Lej.) Crép. (*Bromus arduennensis* Dumort.; *Bromus arduennensis* var. *villosus* (Crép.) Cugnac & A. Camus; *Bromus arduennensis* var. *villosus* (Crepin ex Husnot) Cugnac & A. Camus; *Bromus bromoides* (Lej.) Druce; *Calotheca bromoidea* Lej.; *Michelaria bromoidea* (Lej.) Dumort.)

Europe. Useful for erosion control, see *Observations sur les Graminées de la Flore Belgique* 77. 1823 [1824], *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 416. 1833 and *List of British Plants*, edition 2 133. 1928, *Bulletin de la Société Botanique de France* 83: 66-67, t. 4. no. 21. 1936.

B. canadensis Michx. (*Bromopsis canadensis* (Michx.) Holub; *Bromus ciliatus* L.; *Bromus hookeri* var. *canadensis* (Michx.) E. Fourn.; *Zerna canadensis* (Michx.) Tzvelev)

North America, U.S., Mexico. Perennial, nonrhizomatous, leaves lax, panicle with pendulous branches, dark spikelets, first glume 1-nerved, second glume trinerved, lemma pubescent, see *Species Plantarum* 1: 76-77. 1753, *Flora Boreali-Americana* 1: 65. 1803, *Mexicanas Plantas* 2: 127-128. 1886 and *Acta Phytotaxonomica et Geobotanica* 2: 30. 1933, *Novosti Sist. Vyss. Rast.* 7: 54. 1970 [1971], *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973, *Taxon* 25: 613. 1976.

in English: fringed brome

B. cappadocicus Boiss. & Balansa (*Bromopsis cappadocica* (Boiss. & Balansa) Holub; *Bromopsis tomentella* subsp. *cappadocica* (Boiss. & Balansa) Tzvelev; *Zerna cappadocica* (Boiss. & Balansa) Nevski; *Zerna tomentella* subsp. *cappadocica* (Boiss. & Bal.) Tzvelev)

Iran, Turkey, Europe. Small, short, leaves mostly basal and short, useful for erosion control, occurs in mountain meadows, rocky and dry sites, see *Diagnoses plantarum orientium novarum, ser. I*, 13: 65. 1854, *Bulletin de la Société Botanique de France* 4: 306. 1857 and *Annalen des K. K. Naturhistorischen Hofmuseums* 20: 433. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 61(Beibl. 140): 172. 1928, *Novosti Sist. Vyss. Rast.* 7: 56. 1970 [1971], *Folia Geobotanica et Phytotaxonomica* 8(2): 167, 169. 1973, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 496. 1985.

B. cappadocicus Boiss. & Balansa subsp. *cappadocicus*
Europe.

B. cappadocicus Boiss. & Balansa subsp. **lacmonicus** (Hausskn.) P.M. Sm. (*Bromus lacmonicus* Hausskn.) (Mount Lacmon, Greece)

Europe, Greece, Bulgaria, Central and South Pirin Mountains. Subalpine and alpine, limestone rocks, see *Mittheilungen der Thüringischen Botanischen Vereins* 13-14: 53. 1899 and *Botanical Journal of the Linnean Society* 76: 360. 1978.

B. carinatus Hook. & Arn. (*Bromus californicus* Nutt. ex Buckley; *Bromus carinatus* var. *californicus* (Nutt. ex Buckl.) Shear; *Bromus carinatus* var. *californicus* Shear; *Bromus carinatus* var. *densus* Shear; *Bromus carinatus* var. *hookerianus* (Thurb.) Shear; *Bromus carinatus* var. *linearis* Shear; *Bromus catharticus* Vahl; *Bromus compressus* Lag.; *Bromus hookeri* var. *pendulinus* (Spreng.) E. Fourn.; *Bromus hookeri* var. *schaffneri* E. Fourn.; *Bromus hookeri* var. *schlechtendalii* E. Fourn.; *Bromus hookerianus* Thurb.; *Bromus hookerianus* var. *minor* Scribn. ex Vasey; *Bromus japonicus* subsp. *anatolicus* (Boiss. & Heldr.) Pénzes; *Bromus japonicus* var. *anatolicus* (Boiss. & Heldr.) Asch. & Graebn.; *Bromus laciniatus* Beal; *Bromus nitens* Nutt. ex A. Gray; *Bromus oregonus* Nutt. ex Hook.f.; *Bromus oregonus* Nutt. ex Shear; *Bromus pendulinus* Sessé ex Lag., nom. illeg., non *Bromus pendulinus* Schrad.; *Bromus proximus* var. *schlechtendalii* (E. Fourn.) Shear, also spelled *schlechtendalii*; *Bromus schaffneri* (E. Fourn.) Scribn. & Merr.; *Bromus virens* Buckley; *Bromus virens* var. *minor* Scribn. ex Beal; *Ceratochloa carinata* (Hook. & Arn.) Tutin; *Ceratochloa carinata* var. *hookerianus* (Thurb.) Tzvelev; *Ceratochloa grandiflora* Hook.; *Ceratochloa laciniata* (Beal) Holub; *Festuca pendulina* Spreng.)

Canada, Mexico, Northern America, U.S. Annual, biennial or relatively short-lived perennial, bunchgrass, leafy, polymorphic species, extremely variable in height, tufted, robust, vigorous, erect and decumbent, pale green, roots fibrous, sheaths often hairy and soft, ligule with a tattered edge, small to minute auricles may be present, loose and open flower head with ascending to drooping branches, open and stiff panicle drooping at maturity, spikelets strongly flattened, keeled and flattened lemmas, an awn between the two teeth of the lemma, an insectary plant, weed, native pasture species, forage, palatable most of the year, seed heads palatable and nutritious, establishes rapidly, useful for reclaiming disturbed sites, suitable for erosion control, conservation crop for burned-over areas and road banks, commonly used for highway restoration, can withstand periodic drought in areas that receive low precipitation, thrives in high moisture regions, grows in open woods and meadows, fields, chaparral, alpine and subalpine, loamy soil, plains, on grassy openings, dry slopes, edge of road, on moist mountain meadows, closely resembles *Bromus sitchensis* Trin., intergrades with *Bromus marginatus* Nees ex Steud., see *Symbolae Botanicae* ... 2: 22. 1791, *Genera et species plantarum* 4. 1816, *Systema Vegetabilium, editio decima sexta* 1: 356. 1825, *Linnaea* 6: 38.

1831, *The Botany of Captain Beechey's Voyage* 403. 1840, *Flora Boreali-Americana* 2: 253. 1840, *Diagnoses plantarum orientalium novarum, ser. 1*, 2(13): 63. 1853, *Hooker's Journal of Botany and Kew Garden Miscellany* 8: 18. 1856, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 98, 336. 1862, *United States Exploring Expedition* 17: 493. 1874, *A Descriptive Catalogue of the Grasses of the United States* 92. 1885, *Mexicanas Plantas* 2: 127-128. 1886, *Grasses of North America for Farmers and Students* 2: 614-615. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 59-61, f. 38-39. 1900, *Bulletin of the Torrey Botanical Club* 28: 245. 1901, *Synopsis der mitteleuropäischen Flora* 2: 619. 1901, *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 30. 1901, *Amer. J. Bot.* 21: 127. 1934, *Flora of the British Isles* 1458. 1952, *Folia Geobotanica et Phytotaxonomica* 8(2): 170. 1973, *Caldasia* 11(54): 9-16. 1976, *Bot. Jahrb. Syst.* 102: 447. 1981, *Fragmenta Floristica et Geobotanica* 28: 97-105. 1982, R. Freeman Long, A. Corbett, C. Lamb, C. Reberg-Horton, J. Chandler and M. Stimmann, "Beneficial insects move from flowering plants to nearby crops." *Calif. Agric.* 52: 23-26. 1998.

in English: California brome, keeled brome, bromegrass, sweet brome, sweet bromegrass, mountain brome, big brome

in Mexico: basiawari, basicuáare, camaloti, masiyague, pipilo, tupikua

in Spanish: bromo de California, grama, pipillo, pipilo, tigrillo, zacate, zacate bromo

B. carinatus Hook. & Arn. var. **californicus** Shear (*Bromus californicus* Nutt. ex Buckley)

North America, California. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 336. 1862 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 60. 1900.

B. carinatus Hook. & Arn. var. **carinatus** (*Bromus brevibristatus* Buckley; *Bromus marginatus* Nees ex Steud.; *Bromus polyanthus* Scribn. ex Shear)

North America, California. Perennial, alpine and subalpine, see *The Botany of Captain Beechey's Voyage* 403. 1840, *Synopsis Plantarum Glumacearum* 1: 322. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 98. 1862 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 56, f. 34. 1900, *Novosti Sist. Vyss. Rast.* 7: 51. 1970 [1971], *Brittonia* 33(3): 325. 1981.

in English: California brome

B. carinatus Hook. & Arn. var. **hookerianus** (Thurb.) Shear (*Bromus grandiflorus* Weigel; *Bromus hookerianus* Thurb.; *Ceratochloa carinata* var. *hookerianus* (Thurb.) Tzvelev; *Ceratochloa grandiflora* Hook.)

North America, California. See *Observationes Botanicae* 9-10, t. 1, f. 6. 1772, *Flora Boreali-Americana* 2: 253. 1840, *United States Exploring Expedition* 17: 493. 1874 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 60, f. 38. 1900, *Flora of the British Isles* 1458. 1952, *Novosti Sist. Vyss. Rast.* 18: 248. 1981.

B. carinatus Hook. & Arn. var. **maritimus** (Piper) C.L. Hitchc. (*Bromus marginatus* subsp. *maritimus* Piper; *Bromus maritimus* (Piper) Hitchc.)

North America, California. Perennial, in coastal habitats, see *The Botany of Captain Beechey's Voyage* 403. 1840 and *Proceedings of the Biological Society of Washington* 18: 148. 1905, *A Flora of California* 1: 177. 1912, *Vascular Plants of the Pacific Northwest* 1: 504. 1969.

in English: seaside brome

B. catharticus Vahl (*Bromus angustatus* Pilg.; *Bromus bolivianus* Hack. ex Buchtien; *Bromus breviaristatus* (Hook.) Thurb.; *Bromus brevis* Nees ex Steud.; *Bromus brongniartii* Kunth; *Bromus carinatus* Hook. & Arn.; *Bromus catharticus* var. *catharticus*; *Bromus haenkeanus* (J. Presl) Kunth; *Bromus mathewsii* Steud., also spelled *mathewsii*; *Bromus mucronatus* Willd. ex Steud.; *Bromus preslii* Kunth; *Bromus schraderi* Kunth; *Bromus strictus* Brongn., nom. illeg.; *Bromus tacna* Steud. ex Lechler; *Bromus unioloides* Kunth; *Bromus unioloides* (Willd.) Raspail, nom. illeg.; *Bromus unioloides* f. *chasmogama* Hack.; *Bromus unioloides* f. *cleistogama* Hack.; *Bromus unioloides* f. *pseudoparviflorus* Koos; *Bromus unioloides* f. *pubiculmis* (Domin) Kloos; *Bromus unioloides* subfo. *achalensis* Hack.; *Bromus unioloides* var. *haenkeanus* (J. Presl) Shear; *Bromus unioloides* var. *humilis* Speg., nom. illeg., non *Bromus unioloides* var. *humilis* E. Desv.; *Bromus unioloides* var. *montanus* Hack.; *Bromus unioloides* var. *sanjuaninus* Hieron.; *Bromus willdenowii* Kunth; *Bromus willdenowii* var. *haenkeanus* (J. Presl) Shear; *Bromus willdenowii* var. *willdenowii*; *Ceratochloa breviaristata* Hook.; *Ceratochloa cathartica* (Vahl) Henrard, nom. illeg., non *Ceratochloa cathartica* (Vahl) Herter; *Ceratochloa cathartica* (M. Vahl) Herter; *Ceratochloa festucoides* P. Beauv.; *Ceratochloa haenkeana* J. Presl; *Ceratochloa haenkeana* J. Presl. var. *patens* Nees; *Ceratochloa haenkeana* J. Presl. var. *subspicata* Nees; *Ceratochloa pendula* Schrad.; *Ceratochloa secunda* J. Presl; *Ceratochloa simplex* Nees ex Steud.; *Ceratochloa submutica* Steud.; *Ceratochloa unioloides* (Willd.) P. Beauv.; *Ceratochloa willdenowii* (Kunth) W.A. Weber; *Festuca unioloides* Willd.; *Forasaccus breviaristatus* (Hook.) Lunell; *Schedonorus unioloides* (Kunth) Roem. & Schult.; *Serrafalcus unioloides* Samp.; *Tragus unioloides* (Willd.) Panz. ex B.D. Jacks.; *Zerna unioloides* (Kunth) Lindm.) (*Bromus willdenowii* Kunth dedicated to the German (b. Berlin) botanist Karl (Carl) Ludwig Willdenow, 1765-1812 (d. Berlin), physician, naturalist, professor of botany, Director of the Berlin Botanical Garden, friend of D.F.L. von Schlechtendal; see J.H. Barnhart, *Biographical*

notes upon botanists. 3: 497. 1965; Jerome J. Bylebyl, in *D.S.B.* 14: 386-388. New York 1981; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. 1993; Stafleu & Cowan, *Taxonomic literature.* 7: 298-305. 1988; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China.* [Reprint of the original edition, St. Petersburg 1898] Leipzig 1981; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks.* London 1796-1800; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* Philadelphia 1964; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 437. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 435. 1973; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 265. Oxford 1964; A. Lasègue, *Musée botanique de M. Benjamin Delessert.* 1845; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo.* 293-294. Soprintendenza per i Beni Culturali e Ambientali. Sezione per i Beni Bibliografici. Regione Siciliana, Palermo 1988; William Darlington (1782-1863), *Reliquiae Baldwinianae.* Philadelphia 1843; G. Schmid, *Goethe und die Naturwissenschaften.* Halle 1940; Günther Schmid, *Chamisso als Naturforscher.* Eine Bibliographie. Leipzig 1942)

Southern America. Annual growth habit or short-lived perennial or biennial, variable, bunchgrass, herbaceous, unbranched, densely tufted, robust, open, stout, erect or spreading, erect or decumbent, culms glabrous, fibrous roots, internodes hollow, foliage soft and spreading, auricles absent, ligule hyaline and obtuse to acute, sheaths keeled and hairy to villous, leaves flat, large panicles drooping and loose, spikelets compressed and lanceolate or ovate-lanceolate, cleistogamous or chasmogamous, glumes acuminate and keeled, lemmas awned or not, lemmas acute or acuminate, palea membranous to chartaceous and 2-keeled with keels wingless, ovary apex hairy, fruit ovoid and compressed, weed species widely naturalized elsewhere, contains toxic levels of nitrates, palatable or relatively palatable, medicinal value, used by dogs and horses, native pasture species, cultivated as a pasture species, good forage, fodder, useful for erosion control, very resistant to warm, resistant to drought, sensitive to a high soil humidity, common in waste and disturbed places, lawns, gardens, riverbanks, areas under irrigation, dry to moderately moist waste places, near water, along roadsides, bottomlands and moist bottom, agricultural fields, cultivated lands, bare soil, vacant lots, slopes, orchards, see *Symbolae Botanicae, ...* 2: 22. 1791, *Hort. Berol.* 1: 3, t. 3. 1803, *Nova Genera et Species Plantarum* 1: 151. 1815 [1816], *Florula belgica, operis*

majoris prodromus, auctore ... 155. Tournay 1827, *Revis. Gramin.* 1: 434. 1829, *Synopsis Plantarum Glumacearum* 1: 326. 1854, *Index Kewensis* 1: 487. 1895, *Contribucion al estudio de la flora de la Sierra ...* 76-77. 1896, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 719. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 144. 1904, *Nederlandsch Kruidkundig Archief. Verslangen en Mededelingen der Nederlandsche Botanische Vereeniging* 1917: 175. 1918, *Handb. Fl. Ceylon* 6: 341. 1931, *Amer. J. Bot.* 21: 127. 1934, *Revista Sudamericana de Botánica* 6: 144. 1940, *Agron. Lusit.* 18(9): 7. 1956, *Grasses of Ceylon* 41. 1956, *Grasses of Burma ...* 456. 1960, *Brittonia* 12: 219. 1960, *Kew Bulletin* 29: 431. 1974, *Caldasia* 11(54): 9-16. 1976, *Bot. Jahrb. Syst.* 102: 447. 1981.

in English: broncho grass, orchard grass, prairie grass, flat brome grass, rescue grass, rescue grass, rescue brome, prairie brome, brome grass, Schrader grass, Schrader's grass, Schrader's brome grass

in Spanish: cebadilla, cebadilla criolla, triguillo, pasto

in Danish: amerikansk hejre

in French: brome purgatif, brome cathartique, brome de Schrader

in Argentina: cebadilla, lancú

in Colombia: triguillo

in Ecuador: ashco micuna, ashcu micuna, ashcu uicuna
cehada de perro, cebadilla, hierba de perro, milan, milin, milín, millín, uchcu micuna

in Mexico: bromo cebadilla, bromo cebadillo, cebadilla, zacate de rescate

in Peru: pasto, shulla, sonsa

in Santo Domingo: cebadilla

in Uruguay: cebadilla

in Southern Africa: Australiese gras, beesgras, hang hawergras, maandgras, osgras, perdegras, Pienaarsgras, red-dingsgras, rysgras, soetgras, tuingras, Vandermerwesgras, wintergras; Lehola-la-lipere, lehola-la-dipere, lehola-la-dintja, lehola (Sotho)

in Japan: inumugi

B. catharticus Vahl var. *catharticus* (*Bromus angustatus* Pilg.; *Bromus breviaristatus* (Hook.) Thurb., nom. illeg., non *Bromus breviaristatus* Buckley; *Bromus catharticus* Vahl; *Bromus haenkeanus* (J. Presl) Kunth; *Bromus mathewsii* Steud., also spelled *matthewsii*; *Bromus preslii* Kunth; *Bromus schraderi* Kunth; *Bromus strictus* Brongn., nom. illeg., non *Bromus strictus* Scop.; *Bromus tacna* Steud. ex Lechl.; *Bromus uniolooides* Kunth; *Bromus uniolooides* (Willd.) Raspail, nom. illeg., non *Bromus uniolooides* Kunth; *Bromus uniolooides* f. *chasmogama* Hack.; *Bromus uniolooides* subfo. *achalensis* Hack.; *Bromus uniolooides* var. *haenkeanus* (J. Presl) Shear; *Bromus uniolooides* var. *major*

A. Zobel; *Bromus uniolooides* var. *micrantha* Speg.; *Bromus uniolooides* var. *montanus* Hack.; *Bromus uniolooides* var. *sanjuaninus* Hieron.; *Bromus willdenowii* Kunth; *Ceratochloa breviaristata* Hook.; *Ceratochloa cathartica* (Vahl) Herter; *Ceratochloa haenkeana* J. Presl; *Ceratochloa secunda* J. Presl; *Ceratochloa simplex* Nees ex Steud.; *Ceratochloa uniolooides* (Willd.) P. Beauv.; *Festuca uniolooides* Willd.; *Forasaccus breviaristatus* (Hook.) Lunell; *Schedonorus uniolooides* (Kunth) Roem. & Schult.; *Tragus uniolooides* (Willd.) Panz. ex B.D. Jacks.; *Zerna uniolooides* (Kunth) Lindm.)

Southern America, Argentina, Chile, Paraguay. Annual or short-lived perennial, bunchgrass, vigorous, culms slender, open and slender panicles, useful for erosion control, forage, palatable, weed species widely naturalized elsewhere, common on sandy loam soils, along roadsides, see *Symbolae Botanicae, ...* 2: 22. 1791, *Hortus Regius Botanicus Berolinensis* 1: 3, t. 3. 1803, *Essai d'une Nouvelle Agrostographie* 75, t. 15, f. 7. 1812, *Nova Genera et Species Plantarum* 1: 151. 1815 [1816], *Systema Vegetabilium* 2: 708. 1817, *Annales des Sciences Naturelles, Botanique* 5: 439. 1825, *Voyage autour du Monde* 45. 1829, *Révision des Graminées* 1: 134. 1829, *Reliquiae Haenkeanae* 1(4-5): 285. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 416, 545. 1833, *Flora Boreali-Americana* 2: 253. 1840, *Synopsis Plantarum Glumacearum* 1: 323. 1854, *Berberides Americae Australis* 56. 1857, *United States Exploring Expedition* 17(2): 493. 1874, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 4(1): 69. 1881, *Index Kewensis* 2: 199. 1895, *Revista de la Facultad de Agronomía; Universidad Nacional de La Plata* 3: 630. 1897, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 719. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 52. 1900, *Anales del Museo Nacional de Buenos Aires* 11: 144. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 527. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 172. 1911, *American Midland Naturalist* 4: 225. 1915, *Svensk Fanerogamflora* 101. 1918, *Amer. J. Bot.* 21: 127. 1934, *Revista Sudamericana de Botánica* 6: 144. 1940, *Caldasia* 11(54): 9-16. 1976, *Bot. Jahrb. Syst.* 102: 447. 1981, *Phytologia* 51(6): 371. 1982.

in English: prairie grass, rescue grass, rescue grass, brome grass

in Spanish: cebadilla, cebadilla criolla, triguillo

B. catharticus Vahl var. *rupestris* (Speg.) Planchuelo & P.M. Peterson (*Bromus brevis* Steud.; *Bromus brevis* subsp. *festucarioides* Covas & Millot; *Bromus uniolooides* f. *brevis* (Nees ex Steud.) Kloos; *Bromus uniolooides* var. *brevis* (Nees ex Steud.) Hack.; *Bromus uniolooides* var. *rupestris* Speg.; *Ceratochloa brevis* Nees ex B.D. Jacks.)

Southern America, Argentina. Annual, biennial, see *Symbolae Botanicae, ...* 2: 22. 1791, *Nova Genera et Species*

Plantarum 1: 151. 1815 [1816], *Florula belgica, operis majoris prodromus, auctore* ... 155. Tournay 1827, *Synopsis Plantarum Glumacearum* 1: 326. 1854, *Index Kewensis* 1: 487. 1895, *Contribucion al estudio de la flora de la Sierra* ... 76-77. 1896 and *Anales del Museo Nacional de Buenos Aires* 11: 144. 1904, *Nederlandsch Kruidkundig Archief. Verslangen en Mededelingen der Nederlandsche Botanische Vereeniging* 1917: 175. 1918, *Flora de la Provincia de Buenos Aires* 4(2): 85-101. 1970, *Flora Patagónica* 3: 77-93. 1978, *Kurtziana* 21: 243-257. 1991, *Darwiniana* 31: 173-183. 1992, *Novon* 8: 53-60. 1998, *Flora of New Zealand* 5: 360. 2000.

B. catharticus Vahl var. ***striatus*** (A. Hitchc.) Pinto (*Bromus striatus* A. Hitchc.)

Southern America, Peru. Endangered grass, see *Contributions from the United States National Herbarium* 24(8) 316. 1927, *Caldasia* 15: (71-75): 15-34. 1986.

B. cebadilla Steud. (*Bromus stamineus* E. Desv.)

Chile, Juan Fernandez Islands. See *Synopsis Plantarum Glumacearum* 1: 321. 1854.

B. ciliaris Panz. (*Bromus ciliatus* L.)

North America. Used for making an alcoholic drink called *tiswin* or *teshuino*, see *Species Plantarum* 1: 76-77. 1753, *Vollständiges Pflanzensystem* 12: 429. 1785, E. Palmer, *Indian Naturalist* 7: 755. 1873 and *Rhodora* 24(281): 91. 1922, *American Midland Naturalist* 10: 203. 1927, *J. Arnold Arb.* 19: 317. 1938, *Taxon* 25: 613. 1976.

in Mexico: bas-iz-agua, triguillo

B. ciliatus L. (*Bromopsis canadensis* (Michx.) Holub; *Bromopsis ciliata* (L.) Holub; *Bromopsis richardsonii* (Link) Holub; *Bromus canadensis* Michx.; *Bromus ciliaris* Panz.; *Bromus ciliaris* subv. *denudatus* (Wiegand) Farw.; *Bromus ciliatus* Lam., nom. illeg., non *Bromus ciliatus* L.; *Bromus ciliatus* f. *ciliatus*; *Bromus ciliatus* f. *denudatus* Wiegand; *Bromus ciliatus* f. *intonsus* (Fernald) F. Seym.; *Bromus ciliatus* subvar. *denudatus* (Wiegand) Farw.; *Bromus ciliatus* var. *ciliatus*; *Bromus ciliatus* var. *denudatus* (Wiegand) Fernald; *Bromus ciliatus* var. *genuinus* Fernald; *Bromus ciliatus* var. *intonsus* Fernald; *Bromus ciliatus* var. *richardsonii* (Link) Y.C. Jiang; *Bromus ciliatus* var. *scariosus* Scribn.; *Bromus dudleyi* Fernald; *Bromus hookeri* var. *canadensis* (Michx.) E. Fourn.; *Bromus hookeri* var. *ciliatus* (L.) E. Fourn.; *Bromus inermis* var. *ciliata* (L.) Trautv.; *Bromus pubescens* var. *canadensis* Eaton & J. Wright; *Bromus pubescens* var. *ciliatus* Eaton & J. Wright; *Bromus purgans* var. *ciliatus* (L.) Kuntze; *Bromus purgans* var. *longispicatus* Hook.; *Bromus purgans* var. *pallidus* Hook.; *Bromus richardsonii* Link; *Bromus richardsonii* var. *pallidus* (Hook.) Shear; *Forasaccus ciliatus* (L.) Lunell; *Zerna canadensis* (Michx.) Tzvelev; *Zerna ciliata* (L.) Henrard; *Zerna richardsonii* (Link) Nevski)

Northern America, U.S. Perennial bunchgrass, herbaceous, erect, slender, nonrhizomatous, bright green to light green, well-developed root system, sheaths hairless, no auricles, leaves somewhat rough and hairy on the upper surface, open flower head with long ascending-to-drooping open branches, very palatable, forage species, heavily grazed, shade tolerant, found in damp meadows, woodlands, moist woods and along stream banks, moist conditions, thickets, forest openings, rich moist thickets, grasslands, shrublands, forested areas, in open timber stands or in clearings, in wet ground, subalpine forest, fens, wet to moist places where surface water is fresh, stream and lake margins, marshes, bogs, benches, prairies, open or densely shaded habitats, see *Species Plantarum* 1: 76-77. 1753, *Vollständiges Pflanzensystem* 12: 429. Nürnberg 1785, *Flora Boreali-Americana* 1: 65. 1803, *Essai d'une Nouvelle Agrostographie* 101, 155. 1812, *Hortus Regius Botanicus Berolinensis* 2: 281. 1833, *Flora Boreali-Americana* 2: 252. 1840, *A Manual of Botany* 161. 1848, *Acta Horti Petrop.* 5: 135. 1877, *Mexicanas Plantas* 2: 127-128. 1886, *Revisio Generum Plantarum* 2: 763. 1891, *Bulletin, Division of Agrostology United States Department of Agriculture* 13: 46. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 34. 1900, *American Midland Naturalist* 4: 225. 1915, *Rhodora* 24(281): 91. 1922, *Rhodora* 28(325): 20. 1926, *American Midland Naturalist* 10: 203. 1927, *Rhodora* 32: 63, 70, t. 196. 1930, *Acta Phytotaxonomica et Geobotanica* 2: 30. 1933, *J. Arn. Arb.* 19: 317. 1938, *Blumea* 4(3): 498. 1941, *Fl. N. England* 60. 1969, *Novosti Sist. Vyss. Rast.* 7: 54. 1970 [1971], *Folia Geobotanica et Phytotaxonomica* 8(2): 167-168. 1973, *Taxon* 25: 613. 1976, *Flora Intramongolica* 7: 104. 1983.

in English: fringed brome, fringe brome, fringed brome-grass

B. ciliatus L. var. ***ciliatus*** (*Bromopsis canadensis* (Michx.) Holub; *Bromopsis ciliata* (L.) Holub; *Bromus canadensis* Michx.; *Bromus ciliatus* var. *genuinus* Fern.; *Bromus ciliatus* var. *intonsus* Fern.; *Bromus dudleyi* Fern.; *Bromus richardsonii* var. *pallidus* (Hook.) Shear)

North America. Perennial, see *Species Plantarum* 1: 76-77. 1753.

B. ciliatus L. var. ***richardsonii*** (Link) Boivin (*Bromopsis canadensis* (Michx.) Holub subsp. *richardsonii* (Link) Tzvelev; *Bromopsis richardsonii* (Link) Holub; *Bromus ciliatus* var. *richardsonii* (Link) Y.C. Jiang; *Bromus richardsonii* Link)

North America. Perennial, see *Hortus Regius Botanicus Berolinensis* 2: 281. 1833 and *Le Naturaliste Canadien* 94: 521. 1967, *Flora Intramongolica* 7: 104. 1983.

in English: Richardson brome, fringed brome

B. coloratus Steud. (*Bromus coloratus* Baumg. ex Nyman, nom. illeg., non *Bromus coloratus* Steud.; *Bromus coloratus* Lojac., nom. illeg., non *Bromus coloratus* Steud.; *Bromus*

coloratus var. *vivipara* Speg.; *Bromus hackelii* Macloskie ex Scott; *Bromus patagonicus* Hack., nom. illeg., non *Bromus patagonicus* Phil.; *Bromus patagonicus* F. Philippi; *Bromus unioides* var. *coloratus* (Steud.) Pilg.; *Ceratochloa colorata* (Steud.) Holub

South America, Chile, Argentina. Compact to lax panicle, wet and shady habitats, disturbed sites, see *Nova Genera et Species Plantarum* 1: 151. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 429. 1854, *Anales de la Universidad de Chile* 43: 577. 1873, *Consp. Fl. Eur.* 824. 1882, *Anales del Museo Nacional de Buenos Aires* 5: 98. 1896 and *Svenska Expeditionen till Magellansländer* 3(5): 230. 1900, *Reports of the Princeton University Expeditions to Patagonia ... Botany* 8: 241. 1904, *Flora Sicula* 3: 354, t. 14, f. 2. 1909, *Kongliga Svenska Vetenskapsakademiens Handlingar* 56(5): 179. 1916, *Folia Geobotanica et Phytotaxonomica* 8(2): 170. 1973.

B. commutatus Schrad. (*Brachypodium commutatum* (Schrad.) P. Beauv.; *Bromus commutatus* Guss. ex Steud., nom. illeg., non *Bromus commutatus* Schrad.; *Bromus commutatus* subsp. *neglectus* (Parl.) P.M. Sm.; *Bromus commutatus* var. *apricorum* Simonkai; *Bromus commutatus* var. *neglectus* (Parl.) Hausskn.; *Bromus erectus* var. *hackelii* Borb.; *Bromus hordeaceus* var. *commutatus* (Schrad.) Fiori; *Bromus hordeaceus* var. *pratensis* (Schultz) Fiori; *Bromus japonicus* Thunb.; *Bromus mollis* var. *commutatus* (Schrad.) Sanio; *Bromus mutabilis* var. *commutatus* (Schrad.) Schultz; *Bromus mutabilis* var. *pratensis* Schultz; *Bromus pannonicus* Hack., nom. illeg., non *Bromus pannonicus* Kummer & Sendtn.; *Bromus pratensis* Ehrh., nom. illeg., non *Bromus pratensis* Lam.; *Bromus pratensis* Ehrh. ex Hoffm., nom. illeg., non *Bromus pratensis* Lam.; *Bromus pratensis* Hoffm.; *Bromus pratensis* var. *apricorum* (Simonk.) Druce; *Bromus racemosus* L.; *Bromus racemosus* L. subsp. *commutatus* (Schrad.) Maire & Weiller; *Bromus racemosus* subsp. *commutatus* (Schrad.) Tourlet; *Bromus racemosus* var. *commutatus* (Schrad.) Cosson & Durand; *Bromus secalinus* subsp. *commutatus* (Schrad.) Lloret; *Bromus secalinus* var. *gladewitzii* Farw.; *Serrafalcus commutatus* (Schrad.) Bubani; *Serrafalcus commutatus* (Schrad.) Bab.; *Serrafalcus neglectus* Parl.; *Serrafalcus racemosus* var. *commutatus* (Schrad.) Husn.)

North Africa, western temperate Asia, Europe. Annual to biennial, herbaceous, tufted to loosely tufted or solitary, erect, ligule denticulate to lacerate, leaf sheaths densely hairy or densely villous, no auricles, panicle spreading and somewhat loose with branches erect or ascending and not spreading or drooping, spikelets flattened, unequal glumes papery to subcoriaceous, hardened or leathery lemmas, straight awn hairlike, noxious weed species, invasive, may be troublesome weed in grain fields, grows in disturbed sites, fields and sown pasture, wet places, sandy soil, waste places and roadsides, grassy roadsides, resembles *Bromus racemosus* L., see *Species Plantarum* 1: 76. 1753, *Species*

Plantarum, Editio Secunda 1: 114. 1762, *Flora Japonica*, ... 52, pl. 11. 1784, *Beiträge zur Naturkunde* 6: 84. 1791, *Deutschland Flora* 2: 52. 1800, *Flora Germanica* 353. 1806, *Essai d'une Nouvelle Agrostographie* 101, 155. 1812, *Rariorum plantarum et haud cognitarum in Sicilia sponte provenientium ...* 2: 14. Panormi 1838-1840, *Manual of British Botany* 1: 374. 1843, *Flora italiana, ossia descrizione delle piante ...* 1: 391. 1848, *Flora* 32: 234. 1849, *Synopsis Plantarum Glumacearum* 1: 325. 1854, *Exploration Scientifique de l'Algérie* 2: 165. 1855, *Österreichische Botanische Zeitschrift* 32: 135. 1882, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 23: Abh. (3) 31. 1882, *Flora Transsylvanicae Excursoria* 583. 1886, *Mittheilungen der Thüringischen Botanischen Vereins* 13, 14: 54. 1899 and *Flora Pyrenaea ...* 4: 387. 1901, *Nuova Flora Analitica d'Italia* 1: 149. 1923, *American Midland Naturalist* 10: 24. 1926, *The Flora of Oxfordshire* 496. 1927, *Flore de l'Afrique du Nord*: 3: 246. 1955, *Botanical Journal of the Linnean Society* 76: 360. 1978, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 499. 1985, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 22: 151. 1993.

in English: meadow brome, hairy chess

in Danish: mangleblomstret hejre

B. commutatus Schrad. subsp. *commutatus*

Europe.

B. commutatus Schrad. subsp. *neglectus* (Parl.) P.M. Sm. (*Bromus neglectus* (Parl.) Nyman; *Serrafalcus neglectus* Parl.)

Europe, Italy. See *Species Plantarum, Editio Secunda* 1: 114. 1762, *Flora Germanica* 353. 1806, *Flora italiana, ossia descrizione delle piante ...* 1: 391. 1848 and *Botanical Journal of the Linnean Society* 76: 360. 1978, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 499. 1985.

B. commutatus Schrad. var. *apricorum* Simonk. (*Bromus pratensis* var. *apricorum* (Simonk.) Druce)

Europe, Canada, United States. See *Encyclopédie Méthodique, Botanique* 1: 468. 1785, *Flora Transsylvanicae Excursoria* 583. 1886 and *The Flora of Oxfordshire* 496. 1927.

B. commutatus Schrad. var. *commutatus*

Europe, Canada, United States.

B. condensatus Hack. (*Bromopsis condensata* (Hack.) Holub; *Bromus erectus* var. *condensatus* (Hack.) Fiori; *Bromus erectus* var. *condensatus* Hack., nom. illeg., non *Bromus erectus* var. *condensatus* (Hack.) Fiori; *Zerna condensata* (Hack.) Holub)

Europe. See *Österreichische Botanische Zeitschrift* 29: 209. 1879, *Flora Analitica d'Italia* 1: 98. 1896 and *Mittheilungen der Thüringischen Botanischen Vereins* 29: 64. 1912, *Österreichische Botanische Zeitschrift* 70: 247. 1923, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 206. 1932, *Folia Geobotanica et Phytotaxonomica*

5: 439. 1970, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973.

B. confertus M. Bieb. (*Bromus confertus* Boreau, nom. illeg., non *Bromus confertus* M. Bieb.; *Bromus scoparius* L.)

Eurasia, Europe. See *Flora Taurico-Caucasica* 1: 71. 1808, *Rariorum plantarum et haud cognitarum in Sicilia sponte provenientium ...* 2: 19. 1840, *Flora Palermitana* 1: 174. 1845, *Linnaea* 21(4): 418. 1848, *Flore du Centre de la France* 2: 586. 1849 and *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 499. 1985.

B. danthoniae (Desf.) Trin. (*Boissiera danthoniae* (Trin.) A. Braun; *Bromus danthoniae* Trin.; *Bromus lanceolatus* var. *danthoniae* (Trin.) Dinsm.; *Bromus macrostachys* var. *triaristatus* Hack.; *Triniusa danthoniae* (Trin.) Steud.)

Southwest and central Asia. Annual, leaves downy, inflorescence purple, panicle narrow and erect, shiny spikelets lanceolate to oblong, lemmas awned, common at edges of field, fallow fields, bare soil of roadsides, see *Flora Atlantica* 1: 96, t. 19, f. 2. 1798, *Synopsis Plantarum Glumacearum* 1: 328. 1854, *Flora* 62: 155. 1879 and *Synopsis der mitteleuropäischen Flora* 2: 627. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 39. 1925, *Flora Turkmenii* 1: 166. 1932, *Flora of Syria, Palestine, and Sinai* edition 2. 2: 775. 1933, *Arkiv för Botanik* 5(1): 63. 1959, *Nouvelle Flore du Liban et de la Syrie* 1: 127. 1966, *Willdenowia* 28: 144, 146-147, f. 2-3. 1998.

in Turkey: ibubuk ekini

B. densus Swallen (*Bromopsis densa* (Swallen) Holub)

Mexico. Perennial, densely tufted, see *Contr. U.S. Natl. Herb.* 29(9): 396. 1950, *Folia Geobot. Phytotax.* 8(2): 167. 1973.

in Mexico: bromo del infernillo

B. diandrus Roth (*Anisantha diandra* (Roth) Tutin ex Tzvelev; *Anisantha diandra* (Roth) Tutin; *Anisantha diandra* subsp. *rigida* (Roth) Tzvelev; *Anisantha gussonii* (Parl.) Nevski; *Anisantha macranthera* (Hack. ex Henriq.) Pinto da Silva; *Anisantha rigida* (Roth) Hyl.; *Bromus diandrus* Curtis, nom. illeg., non *Bromus diandrus* Roth; *Bromus diandrus* subsp. *rigidus* (Roth) O. Bolòs; *Bromus diandrus* subsp. *rigidus* (Roth) O. Bolòs, Masalles & Vigo; *Bromus gussonii* Parl., also spelled *gussonei*; *Bromus gussonii* var. *rigidus* (Roth) Lindb.; *Bromus macrantherus* Hack. ex Henriq.; *Bromus macrantherus* Hack.; *Bromus madritensis* var. *maximus* St.-Amans; *Bromus madritensis* var. *maximus* (Desf.) St.-Amans; *Bromus madritensis* var. *rigidus* (Roth) Bab. ex Syme; *Bromus maximus* Desf.; *Bromus maximus* var. *gussonei* (Parl.) Parl.; *Bromus rigidus* sensu J. Black, non Roth; *Bromus rigidus* Roth; *Bromus rigidus* subsp. *gussonei* (Parl.) Maire; *Bromus rigidus* subsp. *maximus* (St.-Amans) De Bolos & al.; *Bromus rigidus* var. *gussonei* (Parl.) Coss. & Durieu; *Bromus rubens* var. *rigidus* (Roth)

Mutel; *Bromus villosus* Forssk., nom. illeg., non *Bromus villosus* Scop.; *Bromus villosus* var. *gussonei* (Parl.) Asch. & Graebn.; *Bromus villosus* var. *maximus* (St.-Amans) Asch. & Graebn.; *Bromus villosus* var. *rigidus* (Roth) Asch. & Graebn.; *Forasaccus maximus* (St.-Amans) Bubani; *Genea rigida* (Roth) Dumort.; *Zerna gussonei* (Parl.) Grossh.) (dedicated to the Italian botanist Giovanni Gussone, 1787-1866, his writings include *Catalogus plantarum quae osservantur in regio horto serenissimis Francisci Borboni principis juventutis in Boccadifalco prope Panormum*. Neapoli 1821, *Plantae rariores quas in itinere per oras Jonii ac Adriatici maris et per regionis Samnii ac Aprutii collegit Joanne Gussone*. Neapoli 1826, *Florae siculae prodromus sive plantarum in Sicilia ulteriori nascentium enumeratio secundum systema Linneanum disposita*. Neapoli 1827-1828 and *Florae siculae synopsis* exhibens plantas vasculares in Sicilia insulisque adjacentibus huc usque detectas, secundum systema Linneanum dispositas. Neapoli 1842-1844[-1845]; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 101. 1965; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 119-120. Palermo 1988; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Mediterranean region, southwest Europe. Annual, tufted to loosely tufted or solitary, stout, robust, erect to ascending and geniculate, roots fibrous, auricles absent, leaf sheath loose and not keeled, ligule obtuse and denticulate to lacerate, leaves rough to pilose, internodes hollow, a raceme or a panicle very lax and nodding with spreading branches, spikelets attached to long slender branches, cleistogamous, glumes acute and unequal, lower glume oblong, callus pointed, lemmas lanceolate with a toothed apex, awn straight and scabrid, palea 2-keeled with keels wingless, 2-3 stamens, ovary apex hairy, stigmas white, forage, low grazing value, noxious and invasive weed, the mature fruits may cause irritation and infection to the sheep, very similar to *Bromus rigidus* Roth, grows in grassland or woodland, waste ground, weedy places, in damp areas, moist sites, roadsides, sandy places, disturbed places and habitats, gardens, cultivated lands, riverbanks, closely related to *Bromus rigidus* Roth, see *Flora Aegyptiaco-Arabica* 23. 1775, *Botanische Abhandlungen und Beobachtungen* 44. 1787, *Bot. Mag. (Zurich)* 4(10): 21. 1790, *Flora Atlantica* 1: 95. 1798, *Flora Londinensis [second edition]* 6: t. 5. 1828, *Rariorum plantarum et haud cognitarum in Sicilia sponte provenientium ...* 2: 8. 1840, *Flora italiana, ossia descrizione delle piante ...* 1: 407. 1848, *Exploration Scientifique de l'Algérie* 2: 159. 1855, *Étude agrostographique sur le genre Michelaria et la classification des graminées* 30. Gent 1868, *English Botany, ... third edition* 11: 161. 1873, *Bulletin de la Société Botanique de France* 34: 394. 1887 and *Synopsis der mitteleuropäischen Flora* 2: 595-596. 1901, *Flora Pyrenaea ...* 4: 382. 1901, *Acta societatis scientiarum fennica*.

Series B. Opera biologica 1(2): 15. 1932, *Catalogue des Plantes du Maroc* 865. 1934, *Uppsala Universitets Årsskrift* 7: 32. 1945, *Grasses of Burma ...* 454. 1960, *Flora of the British Isles* (edition 2) 1149. 1962, *Agronomia Lusitana* 29: 7. 1968, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 17(1): 96. 1987 [1988], *Edinb. J. Bot.* 50(1): 8-11. 1993, Kevin J. Rice & Eric S. Nagy, "Oak canopy effects on the distribution patterns of two annual grasses: the role of competition and soil nutrients." *Am. J. Bot.* 87: 1699-1706. 2000.

in English: broncho grass, ripgut, ripgut brome, brome grass, ripgut grass, wild oat, jabbers, great brome, Kingston grass

in South Africa: Australiese gras, bronkhorstgras, lang-naaldbromus, predikantsluis

B. dolichocarpus Wagnon (*Bromopsis dolichocarpa* (Wagnon) Holub)

Mexico. Forest, see *Leafl. W. Bot.* 6(3): 65-67. 1950, *Folia Geobot. Phytotax.* 8(2): 167. 1973.

B. erectus Hudson (*Bromopsis aspera* (Murr.) Fourr.; *Bromopsis erecta* (Hudson) Fourr.; *Bromopsis heterophylla* (Klokov) Holub; *Bromopsis riparia* (Rehmann) Holub subsp. *heterophylla* (Klokov) Tzvelev; *Bromus asper* Pall. ex M. Bieb., nom. illeg., non *Bromus asper* Murray; *Bromus borbasii* Hack.; *Bromus caprinus* A. Kern. ex Hackel; *Bromus collinus* Phil.; *Bromus dolichostachys* Phil.; *Bromus erectus* Turcz. ex Ledeb., nom. illeg., non *Bromus erectus* Huds.; *Bromus erectus* subsp. *longiflorus* (Willd.) Arcang.; *Bromus erectus* var. *hackelii* Borbás; *Bromus glabriflorus* Borbás; *Bromus hackelii* (Borbás) Borbás; *Bromus heterophyllus* (Klokov) Stankov; *Bromus heterophyllus* Klokov; *Bromus longiflorus* Willd. ex Spreng.; *Bromus macounii* Vasey; *Bromus pubiflorus* Borbás; *Bromus racemiferus* Borbás; *Bromus variegatus* auct., non M. Bieb.; *Festuca aspera* (L.f.) Mert. & Koch, nom. illeg., non *Festuca aspera* Poir. ex Lam.; *Festuca erecta* (Huds.) Hegetschw. & Heer, nom. illeg., non *Festuca erecta* (Huds.) Wallr.; *Festuca erecta* (Hudson) Wallr.; *Forasaccus erectus* (Huds.) Bubani; *Zerna erecta* (Huds.) Panz. ex B.D. Jacks.; *Zerna erecta* (Huds.) Gray)

Europe, southwest Asia, northwest Africa. Perennial, tufted, erect, robust, nonrhizomatous, hairy, ligule short and truncate, short pubescent leaves, stiff panicle erect and narrow, spikelets reddish, glumes unequal and acuminate, anthers orange, weed species naturalized elsewhere, very resistant to drought, growing in dry and very dry soils, stony calcareous soils, along roadsides, fields, see *Flora Anglica* 39. 1762, *Supplementum Plantarum* 111. 1781, *Flora Taurico-Caucasica* 1: 73. 1808, *Schedulae Criticae de plantis florae halensis selectis* 35. Halae [Halle] 1822, *Stirpium Sardoarum Elenchus* 1: 50. 1827, *Die Flora der Schweiz* 95. 1840, *Flora Rossica* 4(13): 358. 1852, *Linnaea* 29(1): 101. 1857, *Handbk N.Z. Fl.* 763. 1867, *Annales de la Société*

Linnéenne de Lyon, sér. 2, 17: 187. 1869, *T.N.Z.I* 4: 284. 1872, *Österreichische Botanische Zeitschrift* 29: 209. 1879, *Bulletin of the Torrey Botanical Club* 15: 48. 1888, *Index Kewensis* 2: 1249. 1895, *Anales de la Universidad de Chile* 94: 343. 1896 and *Flora Pyrenaea ...* 4: 384. 1901, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973.

in English: upright brome, erect brome, meadow brome

in French: brome dressé, brome érigé

B. erectus Huds. subsp. **condensatus** (Hack.) Asch. & Graebn. (*Bromus condensatus* Hack.; *Bromus microtrichus* Borbás)

Europe, South Alps, Balkan Peninsula. See *Österreichische Botanische Zeitschrift* 29: 209. 1879, *Flora Analitica d'Italia* 1: 98. 1896 and *Mitteilungen der Thüringischen Botanischen Vereins* 29: 64. 1912, *Österreichische Botanische Zeitschrift* 70: 247. 1923, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 206. 1932, *Folia Geobotanica et Phytotaxonomica* 5: 439. 1970, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973.

B. erectus Huds. subsp. **erectus**

Europe. See *Flora Anglica* 39. 1762.

B. erectus Huds. subsp. **stenophyllus** (Link) Asch. & Graebn. (*Bromus stenophyllus* Link)

Europe, Yugoslavia, Italy. See *Enumeratio Plantarum* 1: 94. 1821 and *Nuova Flora Analitica d'Italia* 1: 146. 1923.

B. erectus Huds. subsp. **transsilvanicus** (Steud.) Asch. & Graebn. (*Bromus transsilvanicus* Steud.; *Bromus transsilvanicus* Schur, nom. illeg., non *Bromus transsilvanicus* Steud.)

Europe, North Italy, Bulgaria, Romania. See *Synopsis Plantarum Glumacearum* 1: 320. 1854, *Österreichische Botanische Zeitschrift* 10: 227. 1860, *Annalen des Naturhistorischen Hofmuseums* 2: 46. 1887 and *Flora Analitica d'Italia* 1: 98. 1908, *Folia Geobotanica et Phytotaxonomica* 5: 441. 1970, *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

B. exaltatus Bernh. (*Bromopsis exaltata* (Bernh.) Holub; *Bromus subalpinus* Rupr. ex E. Fourn.)

Mexico. Fodder, see *Linnaea* 15: 90. 1841, *Mexicanas Plantas* 2: 128. 1886 and *Publications of the Museum. Michigan State University. Biological Series* 3(5): 504. 1968, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973, *Novon* 2(2): 100. 1992.

in Mexico: pasto

B. fasciculatus C. Presl (*Anisantha fasciculata* (C. Presl) Nevski; *Bromus fasciculatus* subsp. *delilei* (Boiss.) H. Scholz; *Bromus fasciculatus* var. *alexandrinus* Thell.; *Bromus fasciculatus* var. *fallax* Maire; *Bromus matritensis* subsp. *delilei* (Boiss.) Maire & Weiller; *Bromus matritensis* var. *delilei* Boiss.; *Bromus rubens* subsp. *fasciculatus* (C. Presl) Trab.; *Genea fasciculata* (C. Presl) Dumort.)

Asia, Iraq, Europe. See *Cyperaceae et Gramineae Siculae* 39. 1820, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *Flore d'Alger* 226. 1884, *Flora Orientalis* 5: 649. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis* 5: 161. 1908, *Archivio Botanico* 12: 18. 1936, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 311. 1939, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 97. 1942, *Willdenowia* 6(2): 291. 1971, *Edinb. J. Bot.* 50: 17. 1993.

B. fernandezianus (Phil.) Skottsbo. (*Bromus megalachne* Pilg.; *Megalachne berteroniana* Steud.; *Pantathera avenacea* Hemsl.; *Pantathera fernandeziana* Phil., also spelled *fernandeziana*)

Juan Fernandez, Easter Island, Chile. See *Synopsis Plantarum Glumacearum* 1: 237. 1854, *Botanische Zeitung, Berlin* 14(37): 649. 1856, *Report on the Scientific Results of the Voyage of H.M.S. Challenger* 1(3): 61. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis* 16: 386. 1920, *The Natural History of Juan Fernandez and Easter Island* 2: 102, f. 1i. 1922.

B. firmior (Nees) Stapf (*Bromus firmior* var. *leiorhachis* Stapf; *Bromus speciosus* var. *firmior* Nees)

South Africa. Perennial, tufted, ligule an unfringed membrane, leaves flat or rolled, open panicle much exerted, villous pedicels, spikelets greenish and flattened, lemmas villous, unknown grazing value, high altitudes, moist places, grassy slopes, see *Florae Africae Australioris Illustrationes Monographicae* 454. 1841 and *Flora Capensis* 7: 733-734. 1900.

in English: strong brome

in South Africa: blouaadgras

B. flexuosus Planchuelo

Argentina. See *Kurtziana* 16: 123, f. 1. 1983.

B. formosanus Honda (*Bromus insignis* Büse var. *kinabaluensis* Jansen; *Bromus kinabaluensis* (Jansen) Veldkamp)

Asia. Perennial, tufted, branched at the base, erect, often geniculate at the base, see *Bot. Mag.* (Tokyo) 42: 136. 1928, *Reinwardtia* 2: 245. 1953, *Blumea* 35: 483-497. 1991.

B. frondosus (Shear) Wooton & Standl. (*Bromopsis frondosa* (Shear) Holub; *Bromus porteri* (J.M. Coult.) Nash; *Bromus porteri* var. *frondosus* Shear)

North America. Caespitose, found in open habitats, road bank, roadsides, see *Manual of the Botany ... of the Rocky Mountain Region*, from New Mexico to the British boundary. 425. New York, Chicago 1885, *Bulletin of the Torrey Botanical Club* 22(12): 512. 1895 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 37, f. 20. 1900, *New Mexico Agricultural Experiment Station: Bulletin* 81: 144. 1912, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973.

in English: weeping brome

B. garamas Maire

Algeria. Rare species, see *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 6, 97. 1942.

B. gracillimus Bunge (*Bromus crinitus* Boiss. & Hohen.; *Deschampsia aralensis* Regel; *Nevskiella gracillima* (Bunge) Krecz. & Vved.)

Iran, Asia. See *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savants et lus dans ses Assemblées* 8: 527. 1851, *Diagnoses plantarum orientarium novarum* 2(13): 64. 1854, *Bulletin de la Société Impériale des Naturalistes de Moscou* 41(2): 300. 1868.

B. grandis (Shear) A.S. Hitchc. (*Bromopsis grandis* (Shear) Holub; *Bromus grandis* (Stapf) Melderis, nom. illeg., non *Bromus grandis* (Shear) Hitchc.; *Bromus orcuttianus* var. *grandis* Shear; *Bromus porteri* var. *assimilis* Burt Davy)

North America, California. Perennial, under dry conditions, chaparral, see *Botanical Gazette* 10: 223. 1885, *The Flora of British India* 7: 359. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 43. 1900, *University of California Publications in Botany* 1: 55. 1902, *A Flora of California* 1: 175. 1912, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973, *Enumeration of the Flowering Plants of Nepal* 1: 125. 1978.

in English: tall brome

B. grossus Desf. ex DC. (*Bromus grossus* Desf. ex Lam. & DC.; *Bromus grossus* var. *velutinus* (Schrad.) Godet; *Bromus japonicus* auct. lusit., non Thunb.; *Bromus secalinus* f. *velutinus* (Schrad.) Todor; *Bromus secalinus* L. subsp. *grossus* (Desf. ex DC.) Domin; *Bromus secalinus* subsp. *grossus* (Desf. ex Lam. & DC.) Domin; *Bromus secalinus* var. *grossus* (Desf. ex DC.) Neillr.; *Bromus secalinus* var. *velutinus* (Schrad.) Koch; *Bromus secalinus* var. *velutinus* (Schrad.) Schübel & G. Martens)

Europe, Switzerland, Belgium, Luxembourg. Endangered species, see *Flore Française ... Troisième Édition* 3: 68. 1805, *Flora Germanica* 1: 349, t. 6, f. 3. 1806, *Flora Friburgensis* 1: 147. 1825, *Flora von Württemberg* 85. 1834, *Syn. Fl. Germ. Helv.* 819. 1837, *Fl. Jura* 826. 1853 and *Preslia* 13-15: 37. 1935, *Bull. Soc. Bot. France* 83: 59, 60, 62, t. 3. 1936, *Berichte der Schweizerischen Botanischen Gesellschaft* 48: 286. 1938, *Flora Republicii Socialiste Romania* 12: 317. 1972.

in English: whiskered brome

in French: brome à fleurs nombreuses, brome épis

B. gunckelii Matthei (for Luer Hugo Gunckel)

South America, Chile. See *Gayana, Botánica* 43(1-4): 62, f. 2. 1986, *Aliso* 15: 3. 1996 [24 June 1997].

B. himalaicus Stapf (*Bromopsis himalaica* (Stapf) Holub; *Zerna himalaica* (Stapf) Henrard)

Asia, China, India, Bhutan, Nepal. Subalpine meadows, gravelly silt loam, rocky clay loam, see *The Flora of British*

India 7: 358-359. 1896 and *Blumea* 4(3): 449. 1941, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973.

B. hordeaceus L. (*Avena mollis* (L.) Salisb.; *Bromus ferrouii* Mabillet; *Bromus hordeaceus* C.C. Gmel., nom. illeg., non *Bromus hordeaceus* L.; *Bromus hordeaceus* f. *leiostachys* (Hartm.) Hyl.; *Bromus hordeaceus* f. *leptostachys* (Pers.) Wiegand; *Bromus hordeaceus* subsp. *mollis* (L.) Hyl., nom. illeg., non *Bromus hordeaceus* subsp. *mollis* (L.) Maire; *Bromus hordeaceus* subsp. *mollis* (L.) Maire & Weiller, nom. illeg., non *Bromus hordeaceus* subsp. *mollis* (L.) Maire; *Bromus hordeaceus* subsp. *mollis* (L.) Maire; *Bromus hordeaceus* var. *leptostachys* (Pers.) Beck; *Bromus hordeaceus* var. *mollis* (L.) Fiori; *Bromus leptostachys* (Pers.) Fouill. ex de Lesd., nom. illeg., non *Bromus leptostachys* Pieri; *Bromus leptostachys* (Pers.) Steud., nom. illeg., non *Bromus leptostachys* Pieri; *Bromus leptostachys* var. *pubescens* Fouill. ex de Lesd.; *Bromus megapotamicus* Spreng.; *Bromus mollis* L.; *Bromus mollis* f. *nanus* (Weigel) Todor; *Bromus mollis* subsp. *hordeaceus* (L.) Hiitonen; *Bromus mollis* var. *hordeaceus* (L.) Fries; *Bromus mollis* var. *leiostachys* Hartm.; *Bromus mollis* var. *leptostachys* Pers.; *Bromus mollis* var. *nanus* (Weigel) Lilj.; *Bromus nanus* Weigel; *Bromus racemosus* L.; *Bromus secalinus* L.; *Bromus secalinus* var. *hordeaceus* (L.) L.; *Bromus thominei* Hardouin; *Forasaccus mollis* (L.) Bubani; *Serrafalcus hordeaceus* (L.) Gren. & Godron; *Serrafalcus mollis* (L.) Parl.)

Eurasia. Annual or sometimes a biennial, tufted, erect or geniculate at the base, culms extremely hairy or glabrous, lower leaf sheaths appear densely to softly hairy to villous, upper sheath sometimes glabrous, ligule short and truncate to denticulate, no auricles, leaves very hairy or velvety, ovoid and loose or contracted panicles, short flower head branches, pedicels pressed against the main stem, spikelets lanceolate, subequal glumes keeled and short-hairy to glabrous, lemmas papery with raised ridges on the back with short hairs or without hairs, awn erect and straight, forage, nutritious and palatable, resistant to drought, soil improver, resistant to variations in temperature, weed species naturalized elsewhere, found in cutting meadows and grassland, disturbed areas and places, roadsides, on normally drained to dry soils, on clay loam and sandy soils, gardens, areas of low-fertility, fields and waste ground, see *Species Plantarum* 1: 76-77. 1753, *Species Plantarum, Editio Secunda* 1: 112, 114. 1762, *Observationes Botanicae* 8, t. 1, f. 9. 1772, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 23. Londini [London] (Nov-Dec) 1796, *Syn. Pl.* 1: 95. 1805, *Novitiae Florae Suecicae* 16. 1814-1823, *Flora Badensis Alsatica* 4: 68, t. 1. 1826, *Systema Vegetabilium, editio decima sexta* 4: 36. 1827, *Handbok i Skandinavien Flora* 33. 1832, *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 11. 1840, *Synopsis Plantarum Glumacearum* 1: 324. 1854, *Flore de France* 3: 590. 1856, *Actes de la Société Linnéenne de Bordeaux* 25: 613. 1864, *Flora von*

Nieder-Österreich 109. 1890 and *Flora Pyrenaea ...* 4: 386. 1901, *Rhodora* 24(281): 90. 1922, *Nuova Flora Analitica d'Italia* 1: 149. 1923, *Suomen Kasvio* 219. Helsinki 1933, *Catalogue des Plantes du Maroc* 4: 943. 1941, *Uppsala Universitets Årsskrift* 7: 84. 1945, *Flore de l'Afrique du Nord* 3: 254. 1955, *Watsonia* 6: 327-344. 1968, *Flora Republicii Socialiste Romania* 12: 325. 1972, *Notes from the Royal Botanic Garden, Edinburgh* 42: 496, 499. 1985, *Folia Geobotanica* 34: 405-419. 1999, *Taxon* 49(2): 247-248. 2000, Kevin J. Rice & Eric S. Nagy, "Oak canopy effects on the distribution patterns of two annual grasses: the role of competition and soil nutrients." *Am. J. Bot.* 87: 1699-1706. 2000.

in English: soft brome, soft chess, soft brome grass, lop grass

in French: brome mou

in South Africa: sagtebromus

B. hordeaceus L. subsp. *divaricatus* (Bonnier & Layens) Kerguélen (*Bromus confertus* Boreau, nom. illeg., non *Bromus confertus* M. Bieb.; *Bromus intermedius* subsp. *divaricatus* Bonnier & Layens; *Bromus hordeaceus* subsp. *molliformis* (J. Lloyd) Maire & Weiller; *Bromus hordeaceus* var. *molliformis* (J. Lloyd) Halácsy; *Bromus lloydianus* (Gren. & Godr.) Nyman; *Bromus molliformis* J. Lloyd; *Bromus mollis* var. *molliformis* (J. Lloyd) Loret. & Barr.; *Serrafalcus lloydianus* Gren. & Godr.; *Serrafalcus molliformis* (J. Lloyd) F.W. Schultz)

Europe. See *Species Plantarum, Editio Secunda* 1: 112. 1762, *Florae Siculae Prodromus* 1: 114. 1827, *Rariorum plantarum et haud cognitarum in Sicilia sponte provenientium*. 2: 14. Panormi [Palermo] 1838-1840, *Flore de la Loire-Inférieure* 315. 1844, *Flore du Centre de la France* 2: 586. 1849, *Flore de France* 3: 591. 1856, *Archives de la Flore de France et d'Allemagne* 320. 1861, *Sylloge Florae Europaeae, Suppl.* 73. 1865, *Flore de Montpellier* 2: 762. 1876, Tableaux synoptiques des plantes vasculaires de la flore de la France, etc. Paris and *Conspectus Florae Graecae* 3: 396. 1904, *Flore de l'Afrique du Nord* 3: 255. 1955, *Société pour l'Échange des Plantes Vasculaires de l'Europe et du Bassin Méditerranéen*: Bulletin 18: 27. 1981.

B. hordeaceus L. subsp. *ferronii* (Mabillet) P.M. Sm. (*Bromus ferronii* Mabillet)

Northwest Europe. Annual, rare, tufted, erect or decumbent, spikelets villous, spreading and twisted awns, useful for erosion control, on weedy places, see *Watsonia* 6: 327. 1968.

B. hordeaceus L. subsp. *hordeaceus* (*Bromus hordeaceus* subsp. *mollis* (L.) Maire; *Bromus hordeaceus* var. *mollis* (L.) Fiori; *Bromus mollis* auct. non L.; *Bromus mollis* L.; *Forasaccus mollis* (L.) Bubani; *Serrafalcus mollis* (L.) Parl.)

Europe. Annual or biennial, bunchgrass, leaves along the culms, auricles absent, ligules hyaline and smooth, cleistogamous spikelets, ovary apex hairy, forage species, common along roadsides, waste places, fields, see *Species Plantarum* 1: 76-77. 1753, *Species Plantarum, Editio Secunda* 1: 112. 1762, *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 11. 1840 and *Flora Pyrenaea ...* 4: 386. 1901, *Nuova Flora Analitica d'Italia* 1: 149. 1923, *Catalogue des Plantes du Maroc* 4: 943. 1941, *Taxon* 49(2): 247-248. 2000.

in English: soft brome, soft chess

B. hordeaceus L. subsp. **molliformis** (Lloyd ex Godron) Maire & Weiller (*Bromus hordeaceus* subsp. *divaricatus* (Bonnier & Layens) Kerguelen; *Bromus lloydianus* Nyman; *Bromus molliformis* Lloyd; *Bromus molliformis* Lloyd ex Godron; *Serrafalcus cavanillesii* Willk.; *Serrafalcus lloydianus* Gren. & Godr.; *Serrafalcus molliformis* (Lloyd ex Godron) F.W. Schultz; *Serrafalcus rigens* Samp.)

South Europe, France, Italy. Annual, tufted, contracted panicle, spikelets villous, awns scabrid and more or less erect, weed of cultivation, usually occurs in nonwetlands but sometimes found on wetlands, disturbed areas, see *Flore de Lorraine* 315. 1844, *Archives de la Flore de France et d'Allemagne* 320. 1861 and *Flore de l'Afrique du Nord*: 3: 255. 1955, *Société pour l'Echange des Plantes Vasculaires de l'Europe et du Bassin Méditerranéen: Bulletin* 18: 27. 1981.

in English: soft brome

B. hordeaceus L. subsp. **pseudothominii** (P.M. Smith) H. Scholz (also spelled **pseudothominei**) (*Bromus mollis* f. *leiostachys* (Hartman) Fernald; *Bromus mollis* var. *leiostachys* Hartman; *Bromus pseudothominii* P.M. Sm.)

Europe. Found in low meadows, grasslands, see *Watsonia* 6: 330. 1968, *Willdenowia* 6: 148. 1970.

B. hordeaceus L. subsp. **thominii** (also spelled **thominei**) (Hardouin) Braun-Blanquet (*Bromus arenarius* Desm.; *Bromus hordeaceus* L. subsp. *thominei* (Hardham ex Nyman) Braun-Blanquet, also spelled *thominii*; *Bromus hordeaceus* L. subsp. *thominei* (Hardouin) Hyl.; *Bromus hordeaceus* L. subsp. *thominei* (Hardouin) Maire & Weiller; *Bromus hordeaceus* L. subsp. *thominei* (Hardouin) Maire; *Bromus hordeaceus* var. *nanus* (Weigel) Asch. & Graebn.; *Bromus hordeaceus* var. *thominei* (Hardouin) Brand; *Bromus leptostachys* var. *thominii* (Hardouin) Fouill. ex de Lesd.; *Bromus thominei* Hardham ex Nyman; *Bromus thominei* Hardouin; *Eragrostis sessilispica* Buckley)

West Europe, North America. Common in waste places, sandy soil, sandy dunes, see *Observationes Botanicae* 8, t. 1, f. 9. 1772, *Mémoires de la Société Linnéenne du Calvados* 1824: 40. 1824, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97. 1862 and *Flora of the Southeastern United States ...* 140. 1903, *Synopsis der Deutschen und Schweizer Flora* 3: 2784. 1907, *Man. Grass.*

U.S. 852. 1935, *Catalogue des Plantes du Maroc* 4: 943. 1941, *Uppsala Universitets Årsskrift* 7: 84. 1945, *Flore de l'Afrique du Nord*: 3: 256. 1955, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 496. 1985, *Edinburgh Journal of Botany* 50(2): 149-171. 1993.

B. inermis Leysser (*Bromopsis inermis* (Leyss.) Holub; *Bromopsis inermis* var. *aristata* (Schur) Tzvelev; *Bromus confinis* Nees ex Steud.; *Bromus glabrescens* Honda; *Bromus inermis* f. *aristatus* (Schur) Fernald; *Bromus inermis* f. *aristatus* (Schur) Drobow; *Bromus inermis* f. *bulbiferus* Moore; *Bromus inermis* f. *proliferus* Louis-Marie; *Bromus inermis* f. *villosus* (Mertens & Koch) Fernald; *Bromus inermis* f. *villosus* (Mertens & Koch) Todor, nom. illeg., non *Bromus inermis* f. *villosus* (Mertens & Koch) Fernald; *Bromus inermis* subsp. *inermis*; *Bromus inermis* subsp. *reimannii* Asch. & Graebn.; *Bromus inermis* var. *aristatus* (Schur) Drobow; *Bromus inermis* var. *aristatus* (Schur) Fernald; *Bromus inermis* var. *aristatus* Schur; *Bromus inermis* var. *divaricatus* Rohlena; *Bromus inermis* var. *inermis*; *Bromus inermis* var. *villosus* (Mertens & Koch) Beck; *Bromus inopinatus* B. Brues; *Bromus latifolius* Kar. & Kir.; *Bromus munroi* Boiss.; *Bromus tatewakii* Honda; *Festuca inermis* (Leyss.) DC. & Lam.; *Festuca inermis* var. *inermis*; *Festuca inermis* var. *villosa* Mertens & Koch; *Forasaccus inermis* (Leyss.) Lunell; *Poa bromoides* (Leyss.) Mérat, nom. illeg., non *Poa bromoides* Vahl; *Schedonorus inermis* (Leyss.) P. Beauv.; *Zerna inermis* (Leyss.) Lindm.)

Eurasia. Perennial, long-lived, variable, sod-forming, herbaceous, erect, robust, glabrous, leafy, leaves along the culms, weakly or strongly rhizomatous with long creeping rhizomes, root system strong and interlaced, leaf blades glabrous, ligule very short and truncate, leaf sheath glabrous and not keeled, auricles absent or very tiny, nodes glabrous, internodes hollow, narrow but branched flower head with branches ascending to spreading, open to contracted panicle erect or nodding, pale green to slightly purple-tinged spikelets narrow-oblong to lanceolate, glumes lanceolate and unequal, lemma entire or very shortly awned, glabrous to scabrous lemmas narrow-oblong, back of the lemma rounded and not keeled, awn sometimes absent, palea membranous and 2-keeled, anthers orange-yellow, ovary apex hairy, fruit hairy to pilose, weed species, widely cultivated and naturalized, native pasture grass and hay, early growth highly palatable and nutritious, cultivated as a fodder crop, does not tolerate shade, very resistant to cold, adapted to dry climates, very resistant to drought, moisture sensitive, not recommended for saline or alkaline soils, excellent for erosion control, grows in disturbed areas, prairies, riparian zones, mountain meadows, along roadsides, in moist meadows, light brown soil, fields, light-sandy dark brown soil, waste ground, valley bottoms, weedy places, this grass may become ergotized with *Claviceps purpurea*, see *Flora Halensis* 16. 1761, *Flore Française ... Troisième Édition* 3: 49. 1805, *Essai d'une Nouvelle Agrostographie* 177. 1812,

Bulletin de la Société Impériale des Naturalistes de Moscou 865. 1841, *Synopsis Plantarum Glumacearum* 1: 320. 1854, *Enumeratio Plantarum Transsilvaniae* 805. 1866, *Flora Orientalis* 5: 643. 1884, *Flora von Nieder-Österreich* 1: 106. 1890 and *Transactions of the Wisconsin Academy of Sciences, Arts and Letters* 17: 73. 1911, *American Midland Naturalist* 4: 225. 1915, *J. Agric. N.Z. Dept. Agric.* 13: 210. 1916, *Svensk Fanerogamflora* 101. 1918, *Rhodora* 35: 316. 1933, *Revue d'Oka* 14: 144. Oka, Quebec 1940, *Rhodora* 43: 76. 1941, *Flora Republicii Socialiste Romania* 12: 307. 1972, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973, *Folia Geobotanica et Phytotaxonomica* 12(4): 425. 1977, *Journal of August 1st Agricultural College* 14(1): 43-45. 1991, S.K. Dong, R.J. Long, Z.Z. Hu and M.Y. Kang, "Productivity and persistence of perennial grass mixtures under competition from annual weeds in the alpine region of the Qinghai-Tibetan Plateau." *Weed Research* 45(2): 114-120. Apr 2005.

in English: Hungarian brome, brome grass, smooth brome, smooth brome grass, awnless brome, Austrian brome, Russian brome

in Brazil: capim-cevadilha

in Colombia: bromo

in French: brome inerme

B. inermis Leyss. subsp. *inermis* (*Bromopsis inermis* (Leyss.) Holub)

Eurasia. Perennial, weed species naturalized elsewhere in temperate regions, fodder, forage, useful for erosion control, in disturbed habitats, ravines, see *Flora Halensis* 16. 1761.

in English: smooth brome, smooth brome grass, Russian brome grass, Austrian brome grass, Hungarian brome, Hungarian brome grass, awnless brome

B. inermis Leyss. subsp. *inermis* var. *divaricatus* Rohlena Europe, North America. See *Flora Halensis* 16. 1761.

in English: smooth brome

B. inermis Leyss. subsp. *inermis* var. *inermis* (*Bromopsis inermis* (Leyss.) Holub)

Europe, North America. See *Flora Halensis* 16. 1761.

in English: smooth brome

B. inermis Leyss. subsp. *pumpellianus* (Scribner) Wagnon (*Bromopsis inermis* subsp. *pumpelliana* (Scribn.) W.A. Weber; *Bromus pumpellianus* Scribner; *Bromus sibiricus* Drobow)

Northern America, Eurasia. Perennial, long-lived, alpine, nodes more or less pubescent, lemmas slightly to extremely pubescent, useful for erosion control, forage, found on gravelly soil, open woods, wet meadows, woodland openings, mountain light brown soil, see *Bulletin of the Torrey Botanical Club* 15(1): 9-10, f. s.n.; pl. D, f. 1-9. 1888 and *Rhodora* 52(651): 211. 1950.

in English: Pumpelly's brome grass, Pumpelly's brome, Arctic brome, brome grass

B. inermis Leyss. subsp. *pumpellianus* (Scribner) Wagnon var. *arcticus* (Shear ex Scribner & Merr.) Wagnon (*Bromopsis pumpelliana* (Scribn.) Holub subsp. *arctica* (Shear ex Scribn. & Merr.) Á. & D. Löve; *Bromus inermis* Leyss. var. *aristatus* Schur ex Scribn. & Merr.; *Bromus pumpellianus* Scribn. var. *arcticus* (Shear ex Scribn. & Merr.) Porsild)

North America. Perennial.

in English: Pumpelly's brome

B. inermis Leyss. subsp. *pumpellianus* (Scribner) Wagnon var. *pumpellianus* (Scribner) C.L. Hitchc. (*Bromopsis dicksonii* (Mitchell & Wilton) Á. & D. Löve; *Bromopsis inermis* (Leyss.) Holub subsp. *pumpelliana* (Scribn.) W.A. Weber; *Bromopsis pumpelliana* (Scribn.) Holub; *Bromus ciliatus* L. var. *coloradensis* Vasey ex Beal; *Bromus inermis* var. *pumpellianus* C.L. Hitchc.; *Bromus inermis* Leyss. var. *purascens* (Hook.) Wagnon; *Bromus inermis* Leyss. var. *tweedyi* (Scribn. ex Beal) C.L. Hitchc.; *Bromus pumpellianus* Scribn.; *Bromus pumpellianus* Scribn. subsp. *dicksonii* Mitchell & Wilton; *Bromus pumpellianus* Scribn. var. *tweedyi* Scribn. ex Beal; *Bromus pumpellianus* Scribn. var. *villosissimus* Hultén)

North America. Perennial, long-lived, erect, rhizomatous, stout, leaves flat, leaf sheaths with soft long hairs, short auricles on the lower leaves, hairy or glabrous nodes, flower head narrow to open, glumes glabrous, lemmas hairy along the margins and silky-hairy across the back, forage, on sandy or gravelly stream banks, open woods, see *Bulletin of the Torrey Botanical Club* 15(1): 9-10, f. s.n.; pl. D, f. 1-9. 1888 and *Rhodora* 52(651): 211. 1950, *Vascular Plants of the Pacific Northwest* 1: 507. 1969.

in English: Pumpelly brome, Pumpelly's brome

B. intermedius Guss. (*Bromus intermedius* Zumagl., nom. illeg., non *Bromus intermedius* Guss.; *Bromus lanceolatus* subsp. *intermedius* (Guss.) Lloret; *Serrafalcus intermedius* (Guss.) Parl.)

Algeria, Iran, Europe. Useful for erosion control, see *Species Plantarum* 1: 77. 1753, *Catalecta Botanica quibus plantae novae et minus cognitae ...* 1: 18. Lipsiae 1797, *Florae Siculae Prodromus* 1: 114. 1827, *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 17. 1840, *Flora Pedemontana* 1: 166. 1849, *Flora Dalmatica* 3: 341. 1852, *Mittheilungen der Thüringischen Botanischen Vereins* 13-14. 55. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 19. 1900, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 22: 151. 1993.

B. interruptus (Hackel) Druce (*Bromus mollis* var. *interruptus* Hack.)

Europe, U.K. Cultivated, species of arable and waste ground, weed in sanfoin and ryegrass, scarce or possibly extinct in wild, useful for erosion control, see *Journal of Botany, British and Foreign* 33: 344. 1895.

in English: interrupted brome

B. irtutensis Kom. (*Bromopsis irtutensis* (Kom.) Á. Löve & D. Löve; *Bromopsis korotkiji* (Drobow) Holub; *Bromopsis pumpelliana* subsp. *korotkiji* (Drobow) Tzvelev; *Bromus irtutensis* Kom.)

Russia, Irkutsk. Woodland openings, see *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973, *Botaniska Notiser* 128(4): 501. 1975[1976].

B. japonicus Thunberg (*Bromus abolinii* Drobow; *Bromus arvensis* L.; *Bromus arvensis* var. *japonicus* (Thunb.) Fiori; *Bromus arvensis* var. *patulus* (Mert. & W.D.J. Koch) Mutel; *Bromus chiapporianus* De Not. ex Nyman; *Bromus cyri* Trin.; *Bromus gedrosianus* Pènzes; *Bromus japonicus* subsp. *anatolicus* (Boiss. & Heldr.) Pènzes; *Bromus japonicus* subsp. *phrygius* (Boiss.) Pènzes; *Bromus japonicus* subsp. *subsquarrosus* Pènzes; *Bromus japonicus* subsp. *typicus* (Hack.) Pènzes; *Bromus japonicus* var. *pendulus* (Schur) Schur ex Asch. & Graebn.; *Bromus japonicus* var. *phrygius* (Boiss.) Asch. & Graebn.; *Bromus japonicus* var. *porrectus* Hackel; *Bromus japonicus* var. *sooi* (Pènzes) Soó; *Bromus japonicus* var. *subsquarrosus* Savul.; *Bromus japonicus* var. *typicus* Hack.; *Bromus japonicus* var. *vestitus* (Schr.) Halácsy; *Bromus japonicus* var. *vestitus* (Schr.) Degen, nom. illeg., non *Bromus japonicus* var. *vestitus* (Schr.) Halácsy; *Bromus japonicus* var. *vestitus* (Schr.) Henrard, nom. illeg., non *Bromus japonicus* var. *vestitus* (Schr.) Halácsy; *Bromus kerlobagensis* Degen; *Bromus kochii* C.C. Gmel.; *Bromus patulus* Mert. & W.D.J. Koch; *Bromus patulus* subsp. *subsquarrosus* Borbás; *Bromus pendulus* Schur; *Bromus phrygius* Boiss.; *Bromus squarrosus* var. *patulus* (Mert. & W.D.J. Koch) Regel; *Bromus unilateralis* Schur; *Bromus vestitus* Schr.; *Forasaccus patulus* (Mert. & W.D.J. Koch) Bubani; *Serrafalcus patulus* (Mert. & W.D.J. Koch) Parl.) (Caucasus, Azerbaijan, Kura river)

Eurasia. Annual or biennial, herbaceous, low, caespitose, slender, erect or spreading, roots fibrous, sheaths hairy to densely villous, ligule membranous and truncate, leaves very hairy, auricles lacking, spreading and branched flower head, pyramidal nodding panicles, purplish spikelets lanceolate to oblong, glumes hairless to slightly rough, lower glume acute and 3-ribbed, upper glume obtuse and 5-ribbed, lemmas almost leathery in texture, broad lemmas lanceolate and obtuse, awn often twisted and flexuous, weed species naturalized elsewhere, may be troublesome weed in grain fields, a noxious weed on rangelands and prairies, ornamental, intolerant of alkaline soils, not recommended for restoration, reproduces only from seeds, decreases in nutritive content and digestibility as it matures, grows on soils of various textures, usually occurs along roadsides, prairies,

sand dunes, on disturbed sites and in undisturbed communities, waste grounds and fields, hybridizes with rattlesnake brome (*Bromus briziformis* Fischer & C.A. Meyer) and soft chess (*Bromus hordeaceus* L.), integrades with corn brome (*Bromus squarrosus* L.) and hairy brome (*Bromus commutatus* Schrad.), often confused with *Bromus commutatus* Schrad., see *Species Plantarum* 1: 77. 1753, *Systema Vegetabilium. Editio decima quarta* 119. 1784, *Flora Japonica*, ... 52, pl. 11. 1784, Carl [Karl] Christian Gmelin (1762-1837), *Flora Badensis Alsatica et confinium regionum cis et transrhena plantae a lacu bodamico* ... 4: 76, t. 6. Karlsruhe 1826, *Flora italiana, ossia descrizione delle piante* ... 1: 394. 1848, *Diagnoses plantarum orientalium novarum, ser. 1*, 2(13): 63. 1853, *Diagnoses plantarum orientalium novarum, ser. 2*, 3(4): 140. 1859, *Enum. Pl. Transsylv.* 802. 1866, *Acta Horti Petrop.* 7: 602. 1881 and *Synopsis der mitteleuropäischen Flora* 2: 620. 1901, *Flora Pyrenaea* ... 4: 387. 1901, *Conspectus Florae Graecae* 3: 397. 1904, *Nuova Flora Analitica d'Italia* 1: 149. 1923, *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 40. 1925, *Blumea* 4(3): 502. 1941, *Bull. Nat. Sci. Mus.* 31. 136. 1952, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972], *Notes Royal Bot. Gard. Edinburgh* 42: 499. 1985.

in English: Japanese brome, wild oats, Japanese chess, spreading brome

in South Africa: hooigras, Japanese bromus

B. japonicus Thunb. subsp. *anatolicus* (Boiss. & Heldr.) Pènzes (*Bromus anatolicus* Boiss. & Heldr.; *Bromus carinatus* Hook. & Arn.)

Eurasia, Syria, Turkey. See *Systema Vegetabilium. Editio decima quarta* 119. 1784, *The Botany of Captain Beechey's Voyage* 403. 1840, *Diagnoses plantarum orientalium novarum, ser. 1*, 2(13): 63. 1853.

B. japonicus Thunb. subsp. *japonicus*

Europe, Egypt, Iran, Siberia, Turkey. See *Systema Vegetabilium. Editio decima quarta* 119. 1784.

B. japonicus Thunb. var. *vestitus* (Schr.) Halácsy (*Bromus japonicus* var. *vestitus* (Schr.) Degen, nom. illeg., non *Bromus japonicus* var. *vestitus* (Schr.) Halácsy; *Bromus japonicus* var. *vestitus* (Schr.) Henrard; *Bromus vestitus* Schr.)

South Africa. Villous to hairy, panicle very lax and nodding, glumes unequal and pubescent, lemma densely pubescent, see *Conspectus Florae Graecae* 3: 397. 1904 and *Flora vellebitica*. 1: 567. Budapest 1936-1938, *Blumea* 4(3): 502. 1941.

B. kalmii A. Gray (*Bromopsis kalmii* (Gray) Holub; *Bromus ciliatus* var. *purgans* (L.) A. Gray; *Bromus hookeri* E. Fourn.; *Bromus hookeri* var. *hookeri*; *Bromus imperialis* Steud.; *Bromus purgans* L.; *Bromus steudelii* Frank ex Steudel; *Forasaccus purgans* (L.) Lunell; *Zerna purgans* (L.)

Henrard) (for the Swedish (b. Ångermanland, Sweden) botanist Pehr (Peter) Kalm, 1716-1779 (d. Turku, Finland), traveler, pupil of Linnaeus, 1748-1751 North America, 1749 Canada, professor of economy and natural history at Abo (Turku), his writings include *Beschreibung der Reise die er nach dem nördlichen Amerika ... unternommen hat. Eine Übersetzung*. [translated from the Swedish by Johann Philipp Murray & Johann Andrews Murray] Göttingen 1754-1764 and *De Erica vulgari et Pteride aquilina*. Aboae [1754]. See Carl Skottsberg, "Pehr Kalm." *Kungliga Svenska vetenskapsakademiens levnadsteckningar*. 139: 221-503. 1951; Ragnar Granit, in *D.S.B.* 7: 210-211. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 2: 268. Boston 1965; T.W. Bossert, comp., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 203. 1972; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. 1796-1800; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; E. Berkeley & D.S. Berkeley, *Dr. Alexander Garden of Charles Town*. University of North Carolina Press [1969] and John Clayton, *Pioneer of American Botany*. Chapel Hill 1963; Joseph Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; F.D. Drewitt, *The romance of the Apothecaries' Garden at Chelsea*. London 1924; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. Philadelphia 1899; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 732. 1993; G.C. Wittstein, *Etymologisch-botanisches Handwörterbuch*. 484. Ansbach 1852; W. Darlington, *Memorials of John Bartram and Humphry Marshall*. 1849; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971)

Northern America, U.S. Perennial, herbaceous, grows in dry rocky or sandy woods, thickets, meadows, banks, see *Species Plantarum* 1: 76. 1753, *Nomenclator Botanicus* edition 2. 1: 229. 1840, *A Manual of the Botany of the Northern United States* 600. 1848, *Pacif. Railr. Rep.* 4: 157. 1856, *Manual of the Botany ... of the Rocky Mountain Region* . . 425. 1885, *Mexicanas Plantas* 2: 127. 1886, *Grasses of North America for Farmers and Students* 2: 624. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 35. 1900, *Contr. U.S. Natl. Herb.* 12: 122. 1908, *American Midland Naturalist* 4: 225. 1915, *Blumea* 4(3): 498. 1941, *Brittonia* 7: 415-480. 1952, *Canad. J. Bot.* 45: 1849. 1967, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973, *Taxon* 25: 611-616. 1976.

in English: Kalm's brome, Kalm brome, Arctic brome, brome grass

B. kopetdaghensis Drobow (*Bromopsis kopetdagensis* (Drobow) Holub; *Bromus kopetdagensis* Drobow; *Zerna kopetdagensis* (Drobow) Nevski)

Russia. See *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 38. 1925, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

B. laciniatus Beal (*Bromus carinatus* Hook. & Arn.; *Bromus pendulinus* Sessé ex Lag., nom. illeg., non *Bromus pendulinus* Schrad.; *Bromus polyanthus* Scribn. ex Shear; *Bromus proximus* Shear; *Ceratochloa laciniata* (Beal) Holub)

North and South America. See *Genera et species plantarum* 4. 1816, *The Botany of Captain Beechey's Voyage* 403. 1840, *Grasses of North America for Farmers and Students* 2: 615. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 56, f. 34. 1900, *Bulletin of the Torrey Botanical Club* 28: 245. 1901, *Fieldiana, Botany* 24(2): 38-331. 1955, *Folia Geobotanica et Phytotaxonomica* 8(2): 170. 1973, *Ceiba* 19(1): 1-118. 1975.

B. laevipes Shear (*Bromopsis laevipes* (Shear) Holub)

North America, U.S., California. Annual or perennial, chaparral, subalpine forest, occurs under moist conditions, banks and near streams, on damp red soil, on dry red rocky soil, see *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 45, f. 25. 1900, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

in English: Chinook brome, woodland brome, woodland brome grass

B. lanatipes (Shear) Rydb. (*Bromopsis lanatipes* (Shear) Holub; *Bromopsis pinetorum* (Swallen) Holub; *Bromus anomalus* var. *lanatipes* (Shear) A.S. Hitchc.; *Bromus lanatipes* f. *glaber* Wagnon; *Bromus pinetorum* Swallen; *Bromus porteri* var. *lanatipes* Shear)

North America, U.S. Open areas, see *Bulletin of the Torrey Botanical Club* 22(12): 512. 1895 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 37, 45, f. 25. 1900, *Bulletin Colorado State University Experiment Station* 100: 52. 1906, *Journal of the Washington Academy of Sciences* 23: 449. 1933, *Proceedings of the Biological Society of Washington* 56: 77. 1943, *Leaflets of Western Botany* 6(1): 68-69. 1950, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

in English: woolly brome

B. lanatus Kunth (*Bromus buchtienii* Hack.; *Bromus lenis* J. Presl; *Bromus oliganthus* Pilg.; *Bromus pflanzii* Pilg.; *Bromus pitensis* Kunth; *Bromus tenuis* J. Presl ex Steud., nom. illeg., non *Bromus tenuis* Tineo; *Ceratochloa pitensis* (Kunth) Holub; *Festuca mollis* Kunth, nom. illeg. superfl.; *Bromus lanatus* Kunth; *Schedonorus lanatus* (Kunth) Roem & Schult.; *Schenodorus lanatus* (Kunth) Roem & Schult.)

Ecuador, Peru. See *Essai d'une Nouvelle Agrostographie* 75, 99, 158, 162, 177. 1812, *Nova Genera et Species Plantarum* 1: 150, 152. 1815 [1816], *Systema Vegetabilium* 2: 708. 1817, *Révision des Graminées* 1: 132. 1829, *Reliquiae Haenkeanae* 1(4-5): 262. 1830, *Synopsis Plantarum*

Glumacearum 1: 319. 1854, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 718. 1898 and *Repertorium Specierum Novarum Regni Vegetabilis* 11: 30. 1912, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 189. 1912, *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973.

B. lanceolatus Roth (*Bromus canariensis* Zuccagni ex Roemer; *Bromus divaricatus* Rhode ex Loisel.; *Bromus lanceolatus* subsp. *macrostachys* (Desf.) Maire; *Bromus lanceolatus* var. *lanatus* Kerguelen; *Bromus lanceolatus* var. *lanuginosus* (Poir.) Dinsm.; *Bromus lanceolatus* var. *lanuginosus* (Poir.) Maire, nom. illeg., non *Bromus lanceolatus* var. *lanuginosus* (Poir.) Dinsm.; *Bromus lanuginosus* Poir.; *Bromus macrostachys* Desf.; *Bromus macrostachys* var. *lanuginosus* (Poir.) Coss. & Durieu; *Bromus pseudodanthoniae* Drobow; *Forasaccus lanceolatus* (Roth) Bubani; *Serrafalcus lanceolatus* (Roth) Parl.; *Serrafalcus macrostachys* (Desf.) Parl.; *Zerna macrostachys* (Desf.) Panz. ex B.D. Jacks.)

Southern Europe. Annual, erect to geniculate, caespitose, leaves mostly basal, auricles absent, leaves and sheaths hairy, ligule hyaline, nodes hairy, internodes hollow and glabrous, erect and contracted panicle, spikelets lanceolate, upper glume keeled, lemma bifid at the apex, apical awn bent and twisted at the base, fruit compressed, forage, weed species naturalized elsewhere, see *Catalecta Botanica* 1: 18. 1797, *Flora Atlantica* 1: 96, t. 19, f. 2. 1798, *Journal de Botanique, rédigé par une société de botanistes* [Edited by Desvaux] 2: 214. Paris 1809, *Encyclopédie Méthodique, Botanique, Suppl.* 1: 703. 1810, *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 18. 1840, *Flora italiana, ossia descrizione delle piante ...* 1: 397. 1848, *Exploration Scientifique de l'Algérie* 2: 162. 1855, *Index Kewensis* 2: 1249. 1895 and *Flora Pyrenaea ...* 4: 384. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 39. 1925, *Flora of Syria, Palestine, and Sinai* edition 2. 2: 774. 1933, *Catalogue des Plantes du Maroc* 4: 944. 1941, *Bulletin de la Société Botanique de France* 124(56): 340. 1977, *Willdenowia* 28: 150, f. 5. 1998.

in English: Mediterranean brome

B. lanceolatus Roth subsp. *biaristulatus* Maire

Africa. See *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 98. 1942, *Willdenowia* 7(2): 420. 1974, *Flora Mediterranea* 4: 207. 1994.

B. lanceolatus Roth subsp. *lanuginosus* (Poir.) Dinsm. (*Bromus lanceolatus* var. *lanatus* Kerguelen; *Bromus lanuginosus* Poir.; *Bromus macrostachys* var. *lanuginosus* (Poir.) Coss. & Durieu)

Iran, Iraq. Spikelets hairy, cultivated, useful for erosion control, see *Encyclopédie Méthodique, Botanique, Suppl.* 1: 703. 1810 and *Flora of Syria, Palestine, and Sinai*

edition 2. 2: 774. 1933, *Catalogue des Plantes du Maroc* 4: 944. 1941.

B. lanceolatus Roth var. *lanatus* Kerguelen (*Bromus lanceolatus* var. *lanuginosus* (Poir.) Dinsm.; *Bromus lanceolatus* var. *lanuginosus* (Poir.) Maire; *Bromus lanuginosus* Poir.; *Bromus macrostachys* var. *lanuginosus* (Poir.) Coss. & Durieu)

South America, Uruguay. See *Bulletin de la Société Botanique de France* 124(56): 340. 1977.

B. latiglumis (Shear) A.S. Hitchc. (*Bromopsis latiglumis* (Scribn. ex Shear) Holub; *Bromus altissimus* Pursh, nom. illeg., non *Bromus altissimus* Weber ex Wiggers; *Bromus altissimus* f. *incanus* (Shear) Wiegand; *Bromus ciliatus* L.; *Bromus ciliatus* subvar. *latiglumis* (Scribn. ex Shear) Farw.; *Bromus ciliatus* var. *incanus* (Shear) Farw.; *Bromus ciliatus* var. *latiglumis* Scribn. ex Shear; *Bromus incanus* (Shear) Hitchc.; *Bromus latiglumis* (Scribn. ex Shear) Hitchc.; *Bromus latiglumis* f. *incanus* (Shear) Fernald; *Bromus purgans* auct. non L., misapplied; *Bromus purgans* var. *incanus* Shear; *Bromus purgans* var. *latiglumis* Scribn. ex Shear; *Forasaccus latiglumis* (Scribn. ex Shear) Lunell; *Zerna latiglumis* (Scribn. ex Shear) Henrard)

Northern America, U.S., Canada. Perennial, herbaceous, found in rich alluvial woods and riverbanks, thickets, see *Species Plantarum* 1: 76-77. 1753, *Flora Americae Septentrionalis; or, ...* 2: 728. 1814 and *Bulletin, Division of Agronomy United States Department of Agriculture* 23: 40-41. 1900, *Rhodora* 8(95): 211-212. 1906, *American Midland Naturalist* 4: 225. 1915, *Rhodora* 24(281): 91. 1922, *American Midland Naturalist* 10: 204. 1927, *Rhodora* 35: 316. 1933, *Blumea* 4(3): 498. 1941, *Folia Geobotanica et Phytotaxonomica* 9(3): 272. 1974.

in English: early-leaf brome, vibrant shade grass, brome grass

B. latiglumis (Shear) A.S. Hitchc. f. *incanus* (Shear) Wiegand

Northern America, U.S., Canada.

B. latiglumis (Shear) A.S. Hitchc. f. *latiglumis*

Northern America, U.S., Canada.

B. lepidus Holmb. (*Bromus brittanicus* I.A. Williams; *Bromus gracilis* Krösche, nom. illeg., non *Bromus gracilis* Weigel; *Bromus hordeaceus* subsp. *lepidus* (Holmb.) A. Pedersen; *Serrafalcus mollis* nra. *microstachyus* Rouy)

Europe. Annual, useful for erosion control, common in waste places, see *Flore de France* 14: 236. 1913, *Botaniska Notiser* 1924: 326. 1924, *Repertorium Specierum Novarum Regni Vegetabilis* 19: 329-330. 1924, *Journal of Botany, British and Foreign* 67: 65, f. A, D, G, p. 67. 1929, *Proceedings of the Royal Irish Academy* 52: 82. 1949, *Botanisk Tidsskrift* 68(3-4): 205. 1974, *Bot. Jahrb. Syst.* 122(2): 198. 2000.

in English: slender soft brome

B. leptoclados Nees (*Bromus cognatus* Steud.; *Bromus petitianus* A. Rich.)

Tropical Africa, Yemen, Arabia. Perennial, tufted to loosely tufted, erect or ascending, leaf sheaths hispid or glabrous, open panicle loose and nodding, spikelets narrowly oblong, glumes narrow and awned, lower glume 1-nerved, lemmas narrowly elliptic with a short straight awn, fodder, palatable pasture, grazed by all stock, common along rivers and streams, margins of ditches, in open areas, moist or shady sites, forest clearings, cliffs, open valleys, mountains, montane scrub, escarpment mountains, in forest shade, highlands, in humus, ungrazed shaded places, on riverbank, sandy loam, see *Florae Africae Australioris Illustrationes Monographicae* 453. 1841, *Synopsis Plantarum Glumacearum* 1: 321. 1854.

in English: mountain brome

B. lithobius L. (*Bromus andinus* Phil.; *Bromus andinus* var. *scabrivalva* Speg.; *Bromus chilensis* Trin.; *Bromus fonkii* F. Philippi; *Bromus scaber* F. Philippi; *Bromus unioloides* Kunth f. *humilis* (E. Desv.) Kloos; *Bromus unioloides* Kunth subvar. *pubescens* (Kunth) Kloos; *Bromus unioloides* Kunth var. *humilis* E. Desv.; *Bromus unioloides* Kunth var. *pubescens* Kunth) (from the Greek *lithos* “a stone” and *bios* “life,” referring to the rocky habitat)

South America, Argentina, Chile. Perennial, tufted, spreading, ascending, more or less erect, geniculate at base, prostrate or upright, leaf sheath rounded and softly hairy, ligule truncate and shortly denticulate, leaf blade villous, nodding panicle with slender branches, linear spikelets, acute and hairy glumes unequal to subequal, lemma keeled and densely hairy, awn present, cleistogamous and chasmogamous, common in waste ground, dry soil, roadsides, see *Nova Genera et Species Plantarum* 1: 151. 1815 [1816], *Linnaea* 10(3): 303-304. 1836, *Flora Chilena* 6: 438. 1854, *Linnaea* 29(1): 102. 1858, *Anales de la Universidad de Chile* 94: 341-342. 1896, *Revista de la Facultad de Agronomía; Universidad Nacional de La Plata* 3: 629. 1897 and *Anales del Museo Nacional de Buenos Aires* 21: 173. 1911, *Nederlandsch Kruidkundig Archief. Verslangen en Mededelingen der Nederlandsche Botanische Vereeniging* 1917: 164, 175. 1918, *Gayana, Botánica* 43: 47-110. 1986.

in English: Chilean brome

B. luzonensis J. Presl (*Bromus breviaristatus* Buckley; *Bromus carinatus* var. *linearis* Shear; *Bromus subvelutinus* Shear; *Trisetum luzonensis* (J. Presl) Steud.; *Triticum luzonense* (J. Presl) Kunth)

Northern America. See *Species Plantarum* 1: 85. 1753, *Syn. Pl.* 1: 97. 1805, *Reliquiae Haenkeanae* 1(4-5): 262. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 446. 1833, *The Botany of Captain Beechey's Voyage* 403. 1840, *Nomenclator Botanicus. Editio secunda* 1: 228. 1840, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 98. 1862 and *Bulletin, Division of Agrostology*

United States Department of Agriculture 23: 52, 61, f. 32, 39. 1900, *Taxon* 39: 660. 1990.

B. macrocladus Boiss.

Turkey. Indeterminate species, see *Diagnoses plantarum orientarium novarum* 2(13): 64. 1854.

B. madritensis L. (*Anisantha flabellata* (Hack. ex Boiss.) Holub; *Anisantha madritensis* (L.) Nevski; *Bromus flabellatus* Hack. ex Boiss.; *Bromus madritensis* Cav. ex Kunth; *Bromus matritensis* L.; *Bromus variegatus* subsp. *villosulus* (Steud.) P.M. Sm.; *Bromus villosus* Forssk., nom. illeg., non *Bromus villosus* Scop.; *Festuca madritensis* (L.) Desf.; *Festuca matritensis* (L.) Desf.; *Genea madritensis* (L.) Dumort.; *Zerna madritensis* (L.) Gray; *Zerna madritensis* (L.) Panz. ex B.D. Jacks)

Mediterranean, southern Europe. Annual or short-lived perennial, tufted or loosely tufted, noded, slender, erect or geniculate, glabrous, unbranched, auricles absent, leaves mostly basal, ligule lacinate denticulate and hyaline, leaf sheaths keeled, upper sheaths glabrous, raceme or panicle upright and conic, panicle branches erect or slightly spreading, spikelets oblong, glabrous peduncle, glumes subequal to unequal, lower glume carinose and narrow-lanceolate, upper glume lanceolate, callus pointed, lemmas toothed and keeled, lemma margins without cilia, slender and slightly curved awns, ovary apex hairy, fruit oblong and hairy, invasive weed naturalized elsewhere, of little value to livestock and big game, drought-resistant, long awns harmful to livestock, the long awned ripe seeds may be troublesome in the wool of sheep, characteristic of disturbed places, ballast, grows on sandy soils, waste ground, red rocky soil, coastal sand, shallow soils, weedy places, dry rocky soil, there is a taxonomic disagreement about *Bromus madritensis* L. in the strict sense, see *Amoen. Acad. seu dissertationes variae* ... 4: 265. 1759, *Flora Aegyptiaco-Arabica* 23. 1775, *Flora Atlantica* 1: 91. 1798, *A Natural Arrangement of British Plants* 2: 117. 1821, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 419. 1833, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *Flora Orientalis* 5: 648. 1884, *Index Kewensis* 2: 1249. 1895 and *Folia Geobotanica et Phytotaxonomica* 8(2): 176. 1973, *Notes Royal Bot. Gard. Edinburgh* 43: 500. 1985, *Edinb. J. Bot.* 50: 11. 1993.

in English: compact brome, foxtail chess, red brome, wall brome, Madrid brome, lesser brome, Spanish brome

B. madritensis L. subsp. *madritensis*

Mediterranean. Annual, occurs in wetlands and in nonwetlands, in disturbed habitats.

in English: foxtail chess

B. madritensis L. subsp. *rubens* (L.) Husnot (*Bromus madritensis* subsp. *rubens* (L.) Duvin; *Bromus rubens* L.)

Mediterranean, southern Europe. Annual, reddish, noxious and invasive weed species, occurs in wetlands and in nonwetlands, in disturbed habitats, see Lesley A. DeFalco,

David R. Bryla, Vickie Smith-Longozo and Robert S. Nowak, "Are Mojave Desert annual species equal? Resource acquisition and allocation for the invasive grass *Bromus madritensis* subsp. *rubens* (Poaceae) and two native species." *Am. J. Bot.* 90: 1045-1053. 2003.

in English: red brome

B. madritensis L. var. *delilei* Boiss. (*Bromus madritensis* var. *delilei* Boiss. ex Batt. & Trab.)

Europe, Asia. See *Flora Orientalis* 5: 649. 1884, *Flore d'Alger* 2: 226. 1895 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 311. 1939, *Willdenowia* 6(2): 291-296. 1971.

B. mango E. Desv. (*Bromus burkartii* Muñoz; *Ceratochloa mango* (E. Desv.) Holub)

South America, Chile, Argentina, Chubut, Neuquen, Rio Negro. Rare species, old cereal, cultivated by the Indians pre-conquest, see *Flora Chilena* 6: 436, t. 82. 1854 and *Agricultura Técnica (Santiago)* 8: 83, f. 16-18. 1948, *Folia Geobotanica et Phytotaxonomica* 8(2): 170. 1970, *Flora Patagónica* 3: 77-93. 1978.

B. marginatus Nees ex Steud. (*Bromus breviaristatus* Buckley; *Bromus carinatus* Hook. & Arn.; *Bromus carinatus* var. *carinatus*; *Bromus carinatus* Hook. & Arn. var. *linearis* Shear; *Bromus carinatus* var. *marginatus* (Nees ex Steud.) Hitchc.; *Bromus flodmanii* Rydb.; *Bromus hookeri* var. *marginatus* (Nees ex Steud.) E. Fourn.; *Bromus insignis* var. *scopulorum* (Chase) Jansen; *Bromus latior* (Shear) Rydb.; *Bromus marginatus* var. *breviaristatus* (Buckley) Beetle; *Bromus marginatus* var. *latior* Shear; *Bromus marginatus* var. *seminudus* Shear; *Bromus sitchensis* Trin. var. *marginatus* (Nees ex Steud.) Boivin; *Bromus parviflorus* Nutt. ex A. Gray; *Bromus pauciflorus* Nutt. ex Shear, nom. illeg., non *Bromus pauciflorus* Thunb.; *Bromus proximus* Shear; *Bromus sitchensis* var. *marginatus* (Nees ex Steud.) B. Boivin; *Ceratochloa marginata* (Nees ex Steud.) B.D. Jackson; *Ceratochloa marginata* Steud. ex B.D. Jacks.; *Ceratochloa marginata* (Nees ex Steud.) W.A. Weber; *Forasaccus marginatus* (Nees ex Steud.) Lunell (named for Julius Hjalmar Flodman, plant collector)

Pacific Northwest of the U.S., Northern America, Canada, Alberta, British Columbia. Perennial bunchgrass, short-lived, tufted, erect, tall, more or less coarse, noncreeping, leafy, deep and well-branched root system, leaf sheaths sparsely to densely hairy, ligule gnawed or sparsely hairy along the edge, leaf blades flat, no auricles, flower head mostly narrow and with erect branches, pedicles longer than the spikelets, keeled lemmas leathery and nerved, forage, recommended for short term pastures or hay crops, useful for erosion control, grows in grasslands, waste places, dry soil, damp rocky soil, open slopes, shrublands and openings in the forests, resembles *Bromus carinatus* Hook. & Arn., see *The Botany of Captain Beechey's Voyage* 403. 1840,

Synopsis Plantarum Glumacearum 1: 322. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 98, 336. 1862, *Mexicanas Plantas* 2: 127. 1886, *Index Kewensis* 1: 487. 1893 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 53, 55. 1900, *Bulletin of the Torrey Botanical Club* 28: 245. 1901, *Proceedings of the Biological Society of Washington* 18: 148. 1905, *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *American Midland Naturalist* 4: 225. 1915, *Flora of the Rocky Mountains* 89. 1917, *Le Naturaliste Canadien* 94(4): 521. 1967, *Brittonia* 33(3): 325. 1981, *Phytologia* 55(3): 209. 1984.

in English: large mountain brome, mountain brome, California brome, western brome grass

in French: brome marginé

B. maritimus (Piper) A.S. Hitchc. (*Bromus carinatus* Hook. & Arn. var. *maritimus* (Piper) C.L. Hitchc.; *Bromus marginatus* subsp. *maritimus* Piper; *Bromus marginatus* var. *maritimus* Piper; *Ceratochloa maritima* (Piper) Holub)

Northern America, U.S. Perennial, see *The Botany of Captain Beechey's Voyage* 403. 1840 and *Proceedings of the Biological Society of Washington* 18: 148. 1905, *A Flora of California* 1: 177. 1912, *Vascular Plants of the Pacific Northwest* 1: 504. 1969, *Folia Geobotanica et Phytotaxonomica* 8(2): 170. 1973.

in English: seaside brome, maritime brome

B. maroccanus Pau & Font Quer (*Bromopsis maroccana* (Pau & Font Quer) Holub; *Bromus maroccanus* Pau & Font Quer ex Sennen & Mauricio; *Zerna maroccana* (Pau & Font Quer) Holub)

Morocco. Rare species, see *Catalogo de la flora del Rif oriental ...* 134. 1934, *Folia Geobotanica et Phytotaxonomica* 5: 440. 1970, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

B. maximus Desf. (*Bromus diandrus* Roth; *Bromus diandrus* subsp. *maximus* (Desf.) Soó; *Bromus diandrus* var. *rigidus* (Roth) F. Sales; *Bromus madritensis* var. *maximus* (Desf.) St.-Amans; *Bromus maximus* Gilib.; *Bromus maximus* Roth, nom. illeg., non *Bromus maximus* Desf.; *Bromus rigidus* Roth; *Bromus rigidus* subsp. *maximus* (Desf.) De Bolos & al.; *Bromus villosus* var. *maximus* (Desf.) Asch. & Graebn.; *Forasaccus maximus* (Desf.) Bubani; *Genea maxima* (Desf.) Dumort.)

Europe. See *Botanische Abhandlungen und Beobachtungen* 44. 1787, *Exercitia Phytologica* 2: 535. 1792, *Flora Atlantica* 1: 95. 1798, *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 8. 1840, *Voyage botanique dans le midi de l'Espagne* 2: 677. 1844, *Flora italiana, ossia descrizione delle piante ...* 1: 407. 1848, *Prodromus Florae Hispanicae* 1: 98. 1861, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868 and *Flora Pyrenaea ...* 4: 382. 1901, *Synopsis der mitteleuropäischen Flora* 2: 595. 1901, *Cavanillesia* 4:

62. 1931, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972], *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 17: 96. 1987, *Edinb. J. Bot.* 50(1): 8-10. 1993.

B. meyeri Swallen (*Bromopsis anomala* (Rupr. ex E. Fourn.) Holub; *Bromus anomalus* Rupr. ex E. Fourn.)

America, Mexico. Perennial, rhizomatous, see *Annales de la Société Linnéenne de Lyon, sér. 2*, 17: 187. 1869, *Mexicanas Plantas* 2: 126. 1886 and *Contributions from the United States National Herbarium* 29(9): 395. 1950, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973.

B. modestus Renvoize (*Bromus frigidus* Ball, nom. illeg., non *Bromus frigidus* Boiss. & Hausskn.)

South America, Peru. Nodding inflorescences, see *Journal of the Linnean Society, Botany* 22: 63. 1885 and *Kew Bulletin* 49(3): 545. 1994.

B. moesiacus Vell. (*Bromopsis moesiaca* (Vell.) Holub; *Bromus erectus* Huds. subsp. *erectus* var. *moesiacus* (Vell.) Stoj. & Stef.; *Zerna moesiaca* (Vell.) Holub)

Bulgaria. Rare species, see *Flora Bulgarica* 616. 1891 and *Folia Geobotanica et Phytotaxonomica* 5: 440. 1970, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

in English: misian brome

B. mollis L. (*Bromus hordeaceus* L.; *Bromus mollis* Thunb., nom. illeg., non *Bromus mollis* L.)

Europe. Leaf blades pubescent, sheaths pubescent, dense panicles, spikelets strongly compressed, grains toxic could be fatal to poultry, see *Species Plantarum* 1: 76-77. 1753, *Species Plantarum, Editio Secunda* 1: 112, 114. 1762, *Observationes Botanicae* 8, t. 1, f. 9. 1772, *Prodromus Plantarum Capensium, ...* 22. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 23. Londini [London] (Nov-Dec) 1796, *Syn. Pl.* 1: 95. 1805, *Novitiae Florae Suecicae* 16. 1814-1823, *Systema Vegetabilium, editio decima sexta* 4: 36. 1827, *Handbok i Skandinaviens Flora* 33. 1832, *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 11. 1840, *Synopsis Plantarum Glumacearum* 1: 324. 1854, *Flore de France* 3: 590. 1856, *Actes de la Société Linnéenne de Bordeaux* 25: 613. 1864, *Flora von Nieder-Österreich* 109. 1890 and *Flora Pyrenaea ...* 4: 386. 1901, *Rhodora* 24(281): 90. 1922, *Nuova Flora Analitica d'Italia* 1: 149. 1923, *Suomen Kasvio* 219. Helsinki 1933, *J. Bombay Nat. Hist. Soc.* 551. 1936, *Catalogue des Plantes du Maroc* 4: 943. 1941, *Uppsala Universitets Årsskrift* 7: 84. 1945, *Flore de l'Afrique du Nord*: 3: 254. 1955, *Watsonia* 6: 327-344. 1968, *Flora Republicii Socialiste Romania* 12: 325. 1972, *Notes from the Royal Botanic Garden, Edinburgh* 42: 496, 499. 1985, *Taxon* 49(2): 247-248. 2000.

B. mollis L. var. **glabratus** Hartm.

Europe. See *Handbok i Skandinaviens Flora*, edition 5 289. 1849.

B. mucroglumis Wagnon (*Bromopsis mucroglumis* (Wagnon) Holub; *Bromus thysanoglottis* T.R. Soderstr. & J.H. Beaman)

North America, U.S. Slopes, clay soil, see *Leaflets of Western Botany* 6(3): 67-68. 1950, *Publications of the Museum. Michigan State University. Biological Series* 3(5): 509. 1968, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

in English: sharp-glume brome

B. natalensis Stapf (*Bromus natalensis* var. *lasiophilus* Stapf; *Bromus speciosus* sensu Compton, non Nees)

South Africa. Perennial, rhizomatous, open panicle, on rocky places, hillsides, see *Flora Capensis* 7: 732-733. 1900.

B. nepalensis Melderis

Western Nepal. Perennial, erect, caespitose, glabrous, leaf blade acuminate, inflorescence nodding, panicle spreading, spikelets persistent and slightly keeled, lower glume lanceolate and acute, upper glume broadly lanceolate, lemma awned, erect awn, see *Enum. Fl. Pl. Nepal* 1: 125. 1978.

B. nottowayanus Fern. (*Bromopsis nottowayana* (Fernald) Holub) (U.S., Virginia, Valley of Nottoway River, Sussex County)

North America, U.S. Perennial, without rhizomes, forming clumps, an open panicle often drooping at maturity, numerous spikelets, upper glume 5-nerved, grows along rivers and streams, bottomland woods, on rich loamy soils, this grass very similar to *Bromus latiglumis* (Shear) A.S. Hitchc. and *Bromus pubescens* Muhl. ex Willd., see *Rhodora* 43(514): 530-532, pl. 670, f. 1-7. 1941, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973, P.M. Mackenzie & D. Ladd, "Status of *Bromus nottowayanus* (Poaceae) in Missouri." in *Missouriensis*. 16(2): 57-68. 1995.

in English: Nottoway valley brome, satin brome

B. obtusiflorus Hack. (*Bromus araucanus* Phil.; *Bromus araucanus* var. *obtusiflorus* (Hack.) J.A. Cámara; *Bromus araucanus* var. *obtusiflorus* (Hack.) J. Hern.)

Southern America, Argentina. See *Anales de la Universidad de Chile* 94: 343. 1896 and *Anales del Museo Nacional de Buenos Aires* 21: 171. 1911, *Flora Patagónica* 3: 86. 1978.

B. orcuttianus Vasey (*Bromopsis orcuttiana* (Vasey) Holub; *Bromus brachyphyllus* Merr.; *Bromus orcuttianus* (Shear) A. Hitchc.; *Bromus orcuttianus* var. *hallii* A.S. Hitchc.)

North America, U.S. Annual, open dry pine forests, see *Botanical Gazette* 10: 223. 1885 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 43. 1900, *Rhodora* 4(43): 146-147. 1902, *A Flora of California* 1: 175. 1912, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

in English: Orcutt's brome, Chinook brome

B. orcuttianus Vasey var. *hallii* Hitchc.

North America, U.S.

B. orcuttianus Vasey var. *orcuttianus*

North America, U.S.

B. ornans Kom. (*Bromopsis ornans* (Kom.) Holub; *Bromopsis pumpelliana* subsp. *ornans* (Kom.) Tzvelev; *Bromus arcticus* subsp. *ornans* (Kom.) Karav. ex Gubanov & V.N. Tikhom.; *Bromus arcticus* var. *ornans* (Kom.) Hultén; *Zerna ornans* (Kom.) Nevski; *Zerna pumpelliana* subsp. *ornans* (Kom.) Tzvelev)

Asia, Australia. See *Contributions from the United States National Herbarium* 13: 83. 1910, *Kongliga Svenska Vetenskapsakademiens Handlingar* 5: 147, t. 6, f. d. 1927, *Novosti Sist. Vyss. Rast.* 7: 58. 1970[1971], *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

B. oxyodon Schrenk (*Bromus krausei* Regel; *Bromus lanceolatus* subsp. *oxyodon* (Schrenk) Tzvelev; *Bromus oxyodon* Schrenk)

Asia, Iran, Russia. Annual, loose and open panicles, awned, useful for erosion control, see *Enumeratio Plantarum Novarum* 2: 1. 1841.

B. pacificus Shear (*Bromopsis pacifica* (Shear) Holub; *Bromus magnificus* Elmer)

North America, U.S. Perennial, common in moist thickets near the seashore, boggy spots, see *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 38, f. 21. 1900, *Botanical Gazette* 36: 53. 1903, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

in English: Pacific brome

B. pannonicus Kumm. & Sendtn. (*Bromopsis pannonica* (Kummer & Sendtn.) Holub; *Bromus erectus* var. *pannonicus* (Kummer & Sendtn.) Asch. & Kan.; *Bromus erectus* var. *pannonicus* (Kummer & Sendtn.) Fiori, nom. illeg., non *Bromus erectus* var. *pannonicus* (Kummer & Sendtn.) Asch. & Kan.; *Bromus erectus* var. *vernalis* Pancic; *Bromus pannonicus* Hack., nom. illeg., non *Bromus pannonicus* Kummer & Sendtn.; *Bromus reptans* Borbás; *Bromus vernalis* (Panic ex Hack.; *Zerna pannonica* (Kummer & Sendtn.) Holub)

Central Europe. Useful for erosion control, see *Flora* 32: 757. 1849 and *Nuova Flora Analitica d'Italia* 1: 146. 1923, *Folia Geobotanica et Phytotaxonomica* 5: 440. 1970, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972], *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973, *Botanical Journal of the Linnean Society* 76: 360. 1978.

B. pannonicus Kumm. & Sendtn. subsp. *monocladus* (Domin) P.M. Sm. (*Bromus monocladus* Domin)

Europe, Hungary. See *Botanical Journal of the Linnean Society* 76: 360. 1978.

B. pannonicus Kumm. & Sendtn. subsp. *pannonicus*

Central Europe.

B. parodii Covas & Itria (after the Argentine botanist Lorenzo Raimundo Parodi, 1895-1966, agrostologist, professor of botany in Argentina, 1934-1962 editor and director of the *Revista Argentina de Agronomía*, his writings include "Nota sobre las especies de *Briza* de la flora argentina." *Revista Fac. Agron. Veterin.* 3: 113-138. 1920, "Albert Spear Hitchcock." *Revista Argent. Agron.* 3(2): 113-119. 1936, "El origen geográfico de algunas gramíneas coleccionadas por don Luis Née en su viaje alrededor del mundo." *Revista Argent. Agron.* 14(1): 61-69. 1947, "Robert Pilger." *Revista Argent. Agron.* 20(2): 107-114. 1953 and "Thaddaeus Peregrius Haenke a dos siglos de su nacimiento." *Anales Acad. Nac. Ci. Exact. Buenos Aires.* 17: 9-28. 1964, with J. Camara wrote "El mango, cereal extinguido en cultivo, sobrevive en estado salvaje." *Ci. & Invest.* 20(12): 543-549. 1964; see Arturo E. Burkart (1906-1975), "Bibliografía del botánico argentino Lorenzo R. Parodi (1895-1966)." *Bol. Soc. Argent. Bot.* 12: 7-16. 1968; H. Augustín Garaventa (1911-1981), "El botánico argentino Lorenzo R. Parodi." *Revista Univ. (Santiago)* 52: 167-175. 1967 [1968])

South America, Argentina. See *Boletín de la Sociedad Argentina de Botánica* 12: 113. 1968.

B. pauciflorus (Thunb.) Hack. (*Bromus pauciflorus* Thunb.; *Bromus pauciflorus* Nutt. ex Shear, nom. illeg., non *Bromus pauciflorus* Thunb.; *Festuca pauciflora* Thunb.)

Asia. See *Bulletin de l'Herbier Boissier* 7: 713. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 53. 1900.

B. pectinatus Thunb. (*Bromus adoensis* Hochst. ex Steud.; *Bromus adoensis* Steud.; *Bromus gedrosianus* Pènzès; *Bromus japonicus* var. *japonicus*; *Bromus japonicus* var. *pectinatus* (Thunb.) Asch. & Graebn.; *Bromus japonicus* var. *velutinus* Asch. & Graebn.; *Bromus patulus* var. *falconeri* Stapf; *Bromus pseudojaponicus* H. Scholz; *Bromus tectorum* sensu Hepper; *Danthonia anomala* Steud.)

Ethiopia, Asia, Iran, India. Annual, tufted, erect, culms glabrous, sheaths hairy, loose panicle oblong and open, spikelets laterally flattened, glumes lanceolate acute, lemmas with awns straight, fibrous roots, native pasture species, weed species in cereals, useful for erosion control, usually in disturbed places, dry riverbeds and water courses, escarpment mountains, eroded areas, moist places, near small streams, along moist riverbanks and ditches, see *Systema Vegetabilium. Editio decima quarta* 119. 1784, *Prodromus Plantarum Capensium*, ... 1: 22. 1794, *Synopsis Plantarum Glumacearum* 1: 245, 326. 1854, *The Flora of British India* 7: 361. 1896 and *Synopsis der mitteleuropäischen Flora* 2: 619-620. 1901, *Brittonia* 5: 413. 1945, *Bull. Nat. Sci. Mus.* 31. 136. 1952, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 102(1-4): 485. 1981. in English: brome grass

B. pellitus Hack.

Argentina. See *Svenska Expeditionen till Magellansländer* 3(5): 230. 1900.

B. pendulus Schur (*Bromus japonicus* Thunb.)

Europe. See *Systema Vegetabilium. Editio decima quarta* 119. 1784, *Enumeratio Plantarum Transsilvaniae* 802. 1866 and *Synopsis der mitteleuropäischen Flora* 2: 620. 1901, *Bull Nat. Sci. Mus.* 31. 136. 1952.

B. pitensis Kunth (*Bromus buchtienii* Hack.; *Bromus frigidus* Ball, nom. illeg., non *Bromus frigidus* Boiss. & Hausskn.; *Bromus glaber* Willd. ex Steud., nom. illeg., non *Bromus glaber* Scop.; *Bromus lanatus* Kunth; *Bromus lenis* J. Presl; *Bromus oliganthus* Pilg.; *Bromus tenuis* J. Presl ex Steud., nom. illeg., non *Bromus tenuis* Tineo; *Ceratochloa pitensis* (Kunth) Holub; *Festuca confusa* Piper; *Vulpia confusa* (Piper) Henrard) (for the German botanist Otto Buchtien, 1859-1946, botanical explorer, a collector of Bolivian plants; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 275. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 57. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 140. Oxford 1964)

Southern America, Venezuela, Bolivia, Colombia, Ecuador. Annual, tufted, erect, open, forming small clumps, herbaceous, small, ligule hyaline, softly pubescent leaves, panicle drooping, lax inflorescences greenish cream to purplish to reddish green, forage, in rocky places, open areas, along streams, limestone outcrop, moist quebrada, damp ground, see *Nova Genera et Species Plantarum* 1: 150, 152. 1815 [1816], *Systema Vegetabilium* 2: 708. 1817, *Reliquiae Haenkeanae* 1(4-5): 262. 1830, *Nomenclator Botanicus. Editio secunda* 1: 227. 1840, *Synopsis Plantarum Glumacearum* 1: 319. 1854, *Journal of the Linnean Society, Botany* 22: 63. 1885, *Anales de la Universidad Central del Ecuador* 3(25): 483. 1889, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 718. 1898 and *Contributions from the United States National Herbarium* 10(1): 13, pl. 1. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 11: 30. 1912, *Blumea* 2: 323. 1937, *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973.

in Ecuador: milín blanco

B. polyanthus Scribn. ex Shear (*Bromus carinatus* var. *carinatus*; *Bromus laciniatus* Beal; *Bromus multiflorus* Scribn., nom. illeg., non *Bromus multiflorus* Weigel; *Bromus paniculatus* (Shear) Rydb.; *Bromus polyanthus* var. *paniculatus* Shear; *Ceratochloa laciniata* (Beal) Holub; *Ceratochloa polyantha* (Scribn. ex Shear) Tzvelev; *Ceratochloa polyantha* (Scribn. ex Shear) W.A. Weber)

North America, U.S. Perennial, see *The Botany of Captain Beechey's Voyage* 403. 1840, *Grasses of North America for Farmers and Students* 2: 615. 1896, *Bulletin, Division of*

Agrostology United States Department of Agriculture 13: 46. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 56-57, f. 34, 35. 1900, *Flora of the Rocky Mountains* 90. 1917, *Novosti Sist. Vyss. Rast.* 7: 51. 1970 [1971], *Folia Geobotanica et Phytotaxonomica* 8(2): 170. 1973, *Brittonia* 33(3): 325. 1981.

in English: Great Basin brome, polyanthus brome, Colorado brome

B. polyanthus Scribn. ex Shear var. *paniculatus* Shear (*Bromus paniculatus* (Shear) Rydb.)

North America. Perennial, see *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 56-57, f. 34, 35. 1900, *Flora of the Rocky Mountains* 90. 1917.

in English: Great Basin brome

B. polyanthus Scribn. ex Shear var. *polyanthus* (*Ceratochloa polyantha* (Scribn. ex Shear) Tzvelev)

North America. Perennial, see *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 56-57, f. 34, 35. 1900.

in English: Great Basin brome

B. popovii Drobow (*Bromus racemosus* L.)

Asia, Uzbekistan. Useful for erosion control, see *Species Plantarum, Editio Secunda* 1: 114. 1762 and *Feddes Repertorium* 21: 40. 1925, *Notes from the Royal Botanic Garden, Edinburgh* 42: 499. 1985.

B. porteri (Coul.) Nash (*Bromopsis frondosa* (Shear) Holub; *Bromopsis porteri* (J.M. Coul.) Holub; *Bromus anomalus* auct. non Rupr. ex Fourn.; *Bromus ciliatus* var. *montanus* Vasey ex Beal; *Bromus ciliatus* var. *porteri* (J.M. Coul.) Rydb.; *Bromus ciliatus* var. *scariosus* Scribn.; *Bromus frondosus* (Shear) Wootton & Standl.; *Bromus kalmii* var. *major* Vasey ex Shear; *Bromus kalmii* var. *occidentalis* Vasey ex Beal; *Bromus kalmii* var. *porteri* J.M. Coul.; *Bromus porteri* Hitchc.; *Bromus porteri* var. *frondosus* Shear; *Bromus scabratus* Scribn., nom. illeg., non *Bromus scabratus* Link)

North America. Good forage, see *Species Plantarum* 1: 76-77. 1753, *Bull. Acad. Roy. Sci. Bruxelles* 9(2): 236. 1842, *A Manual of the Botany of the Northern United States* 600. 1848, *Bot. Wheeler Exped.* 6: 292. 1878, *Manual of the Botany ... of the Rocky Mountain Region ...* 425. 1885, *Mexicanas Plantas* 2: 126. 1886, *Bulletin of the Torrey Botanical Club* 22(12): 512. 1895, *Contributions from the United States National Herbarium* 3(3): 192. 1895, *Grasses of North America for Farmers and Students* 2: 619, 624. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 13: 46. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 35, 37, f. 20. 1900, *University of California Publications in Botany* 1: 55. 1902, *New Mexico Agricultural Experiment Station: Bulletin* 81: 144. 1912, *Brittonia*

7: 415-480. 1952, *Folia Geobotanica et Phytotaxonomica* 8(2): 167-168. 1973.

in Mexico: bromo frondoso

B. pratensis Lam. (*Bromus pratensis* Ehrh., nom. illeg., non *Bromus pratensis* Lam.; *Bromus pratensis* Ehrh. ex Hoffm., nom. illeg., non *Bromus pratensis* Lam.; *Bromus pratensis* (Huds.) Spreng., nom. illeg., non *Bromus pratensis* Lam.)

Europe, France. See *Flora Anglica* 37. 1762, *Encyclopédie Méthodique, Botanique* 1: 468. 1785, *Beiträge zur Naturkunde* 6: 84. 1791, *Systema Vegetabilium, editio decima sexta* 1: 359. 1825, *Flora* 32: 234. 1849, *Flora Transsilvaniae Excursoria* 583. 1886 and *Nuova Flora Analitica d'Italia* 1: 149. 1923, *The Flora of Oxfordshire* 496. 1927.

B. psammophilus P.M. Smith

Turkey. Endangered species, sandy dunes, see *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 492, f. 1. 1985.

B. pseudodanthoniae Drobow (*Bromus danthoniae* subsp. *pseudodanthoniae* (Drobow) H. Scholz; *Bromus lanceolatus* Roth; *Bromus macrostachys* Desf.)

Asia, Armenia. Useful for erosion control, see *Catalecta Botanica* 1: 18. 1797, *Flora Atlantica* 1: 96, t. 19, f. 2. 1798 and *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 39. 1925, *Feddes Repertorium* 21: 39-40. 1925, *Willdenowia* 28: 146, 150, f. 2, 5. 1998.

B. pseudolaevipes Wagon (*Bromopsis pseudolaevipes* (Wagon) Holub)

North America, U.S., California. Perennial, chaparral, coastal, see *Leaflets of Western Botany* 6(3): 64-65. 1950, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

in English: coastal range brome, southern chinook brome

B. pubescens Muhl. ex Willd. (*Bromopsis pubescens* (Muhl. ex Willd.) Holub; *Bromus ciliatus* L. f. *laeviglumis* (Scribn. ex Shear) Wiegand; *Bromus ciliatus* L. subvar. *laevivaginatulus* (Wiegand) Farw.; *Bromus ciliatus* L. var. *laeviglumis* Scribn. ex Shear; *Bromus ciliatus* L. var. *purgans* (L.) A. Gray; *Bromus hookeri* var. *pubescens* (Muhl. ex Willd.) E. Fourn.; *Bromus laeviglumis* (Scribn. ex Shear) Hitchc.; *Bromus pubescens* C. Koch, nom. illeg., non *Bromus pubescens* Muhl. ex Willd.; *Bromus pubescens* Pieri, nom. illeg., non *Bromus pubescens* Muhl. ex Willd.; *Bromus pubescens* Muhl. ex Willd. var. *laeviglumis* (Scribn. ex Shear) Swallen; *Bromus purgans* auct. non L.; *Bromus purgans* f. *glabriflorus* Wiegand; *Bromus purgans* f. *laevivaginatulus* Wiegand; *Bromus purgans* var. *laeviglumis* (Scribn. ex Shear) Swallen; *Bromus villosulus* Steud.; *Forasaccus ciliatus* var. *laeviglumis* (Scribn. ex Shear) Lunell)

North America, Missouri. Perennial, herbaceous, solitary or caespitose, single stemmed or clumped, nodding inflorescences, forage, useful for erosion control, found in dry open woods, alluvial soil, in shade, prairies, bottomland, dry to moist woods and thickets, along roadsides and drainage channels, rich moist slopes, hillsides, loamy soil, see

Species Plantarum 1: 76-77. 1753, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 120. 1809, *The Flora corciense* anonymously published in *Ionios Anthologia ...* 3: 680. 1834, *Linnaea* 21(4): 420. 1848, *A Manual of Botany* 161. 1848, *Synopsis Plantarum Glumacearum* 1: 327. 1854, *Mexicanas Plantas* 2: 127. 1886 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 32. 1900, *Contr. U.S. Natl. Herb.* 12: 122. 1908, *American Midland Naturalist* 4: 225. 1915, *Rhodora* 24(281): 91-92. 1922, *American Midland Naturalist* 10: 204. 1927, *Proceedings of the Biological Society of Washington* 41: 157. 1928, *Proceedings of the Biological Society of Washington* 54: 45. 1941, *Canad. J. Bot.* 45: 1849. 1967, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973, *Taxon* 25: 613. 1976.

in English: hairy woodland brome, hairy brome, Canada brome

B. pumpellianus Scribn. (*Bromopsis inermis* subsp. *pumpelliana* (Scribn.) W.A. Weber; *Bromopsis pumpelliana* (Scribn.) Holub; *Bromus arcticus* Shear; *Bromus ciliatus* var. *coloradensis* Vasey ex Beal; *Bromus ciliatus* var. *coloradensis* Vasey; *Bromus inermis* subsp. *pumpellianus* (Scribn.) Wagon; *Bromus inermis* var. *pumpellianus* C.L. Hitchc.; *Bromus inermis* var. *purpurascens* (Hook.) Wagon; *Bromus inermis* var. *tweedyi* (Scribn. ex Beal) C.L. Hitchc.; *Bromus occidentalis* (Nevski) Pavl.; *Bromus pumpellianus* subsp. *dicksonii* W.W. Mitch. & Wilton; *Bromus pumpellianus* var. *arcticus* (Shear) A.E. Porsild; *Bromus pumpellianus* var. *melicoides* Shear; *Bromus pumpellianus* var. *tweedyi* Scribn. ex Beal; *Bromus pumpellianus* var. *tweedyi* Scribn.; *Bromus pumpellianus* var. *villosissimus* Hultén; *Bromus purgans* var. *longispicatus* Hook.; *Bromus purgans* var. *purpurascens* Hook.; *Forasaccus pumpellianus* (Scribn.) Lunell; *Zerna occidentalis* Nevski; *Zerna pumpelliana* (Scribn.) Tzvelev)

North America, U.S. See *Flora Halensis* 16. 1761, *Ideen zu einer künftigen Revision der Gattungen der Gräser.* 46, 59. 1813, *Flora Boreali-Americana* 2: 252. 1840, *Bulletin of the Torrey Botanical Club* 15(1): 9-10, pl. d, f. 1-9. 1888, *Grasses of North America for Farmers and Students* 2: 619, 622. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 37. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 50. 1900, *Contributions from the United States National Herbarium* 13: 83. 1910, *American Midland Naturalist* 4: 225. 1915, *Trudy Sredne-Aziatskogo Gosudarstvennogo Universiteta. Seriya 8b, Botanika* 17: 18. 1934, *Rhodora* 41(485): 182. 1939, *Acta Universitatis Lundensis, n.s.* 38(1): 251. 1942, *Rhodora* 52(651): 211. 1950, *Brittonia* 7: 465. 1952, *Flora Kazakhstana* 1: 276. 1956, *Flora Arctica URSS* 2: 225. 1964, *Brittonia* 18: 163. 1966, *Vascular Plants of the Pacific Northwest* 1: 507. 1969, *Folia Geobotanica et Phytotaxonomica* 8(2): 167. 1973, *Phytologia* 33(2): 105. 1976.

B. pumpellianus Scribn. subsp. *dicksonii* W.W. Mitch. & Wilton (*Bromopsis dicksonii* (W.W. Mitch. & Wilton) Á. Löve & D. Löve)

North America, U.S. See *Brittonia* 18(2): 163. 1966, *Botaniska Notiser* 128(4): 501. 1975 [1976].

B. pumpellianus Scribn. subsp. *pumpellianus*

North America, U.S.

B. pumpellianus Scribn. var. *arcticus* (Shear) A.E. Porsild (*Bromopsis arctica* (Shear) Holub; *Bromopsis pumpelliana* subsp. *arctica* (Shear) Á. Löve & D. Löve; *Bromopsis pumpelliana* subsp. *arctica* (Shear) Tzvelev; *Bromopsis pumpelliana* var. *villosissima* (Hultén) Kosh.; *Bromus arcticus* Shear; *Bromus inermis* var. *arcticus* (Shear) Wagnon; *Bromus pumpellianus* var. *villosissimus* Hultén; *Zerna arctica* (Shear) Tzvelev; *Zerna pumpelliana* subsp. *arctica* (Shear) Tzvelev)

North America, U.S. See *Flora Halensis* 16. 1761 and *Contributions from the United States National Herbarium* 13: 83. 1910, *Rhodora* 41(485): 182. 1939, *Acta Universitatis Lundensis, n.s.* 38(1): 251. 1942, *Rhodora* 52(621): 211. 1950, *Flora Arctica URSS* 2: 225, 228. 1964, *Novosti Sist. Vyss. Rast.* 7: 56. 1971, *Folia Geobotanica et Phytotaxonomica* 8(2): 167-168. 1973, *Botaniska Notiser* 128(4): 501. 1975 [1976], *Zlaki SSSR* 221. 1976, *Novosti Sist. Vyss. Rast.* 18: 234. 1981.

B. pumpellianus Scribn. var. *pumpellianus*

North America, U.S.

B. racemosus L. (*Bromus arvensis* var. *racemosus* (L.) Neilr.; *Bromus commutatus* auct. lusit., non Schrad.; *Bromus commutatus* subsp. *neglectus* (Parl.) P.M. Sm.; *Bromus hordeaceus* L.; *Bromus hordeaceus* var. *glabrescens* (Coss.) Shear; *Bromus hordeaceus* var. *leptostachys* (Pers.) Beck; *Bromus hordeaceus* var. *racemosus* (L.) Fiori; *Bromus lusitanicus* F. Sales & P.M. Sm.; *Bromus mollis* f. *leiostachys* (Hartm.) Fernald; *Bromus mollis* var. *commutatus* (Schrad.) Sanio; *Bromus mollis* var. *leiostachys* Hartm.; *Bromus mollis* var. *leptostachys* Pers.; *Bromus mollis* var. *neglectus* (Parl.) Fiori; *Bromus mollis* var. *racemosus* (L.) Fiori; *Bromus neglectus* (Parl.) Nyman; *Bromus popovii* Drobow; *Bromus pratensis* Ehrh., nom. illeg., non *Bromus pratensis* Lam.; *Bromus racemosus* var. *commutatus* (Schrad.) Cosson & Durand; *Bromus squarrosus* var. *racemosus* (L.) Regel; *Bromus tuzsonii* Pénzes; *Forasaccus commutatus* (Schrad.) Bubani; *Forasaccus racemosus* (L.) Bubani; *Serrafalcus neglectus* (Schrad.) Bab.; *Serrafalcus neglectus* Parl.; *Serrafalcus racemosus* (L.) Parl.; *Serrafalcus racemosus* var. *commutatus* (Schrad.) Husn.)

Europe. Annual or biennial, herbaceous, erect or ascending, loosely tufted or solitary, glabrous or pubescent, ligule denticulate, leaf sheath hairy to villous, panicle erect and narrow usually more or less contracted, spikelets lanceolate, glumes unequal obtuse or mucronate, lemmas with incurved

margins, awn subapical and straight, palea keels ciliate, weed species naturalized elsewhere, grows on disturbed ground, ballast, sand dunes, waste places, see *Species Plantarum* 1: 77. 1753, *Species Plantarum, Editio Secunda* 1: 114. 1762, *Flora Germanica* 353. 1806, *Handbok i Skandinavien Flora* 33. 1832, *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 14. 1840, *Manual of British Botany* 1: 374. 1843, *Flora italiana, ossia descrizione delle piante ...* 1: 391. 1848, *Sylloge florae Europaeae* 419. Oerebroe 1854, *Exploration Scientifique de l'Algérie* 2: 165. 1855, *Flora von Nieder-Österreich* 81. 1859, *Acta Horti Petrop.* 7: 602. 1881, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 23: Abh. (3) 31. 1882, *Flora Analitica d'Italia* 1: 100. 1896 and *Flora Pyrenaea ...* 4: 387. 1901, *Nuova Flora Analitica d'Italia* 1: 149. 1923, *Feddes Repertorium* 21: 40. 1925, *Rhodora* 35: 316. 1933, *Flore de l'Afrique du Nord*: 3: 246. 1955, *Flora Republicii Socialiste Romania* 12: 322. 1972, *Botanical Journal of the Linnean Society* 76: 360. 1978, *Notes from the Royal Botanic Garden, Edinburgh* 42: 499. 1985, *Edinburgh Journal of Botany* 47: 361. 1990, *Taxon* 49(2): 247-248. 2000.

in English: bald brome, smooth brome, soft chess

B. ramosus Huds. (*Bromopsis benekenii* (Lange) Holub; *Bromopsis ramosa* (Huds.) Holub; *Bromus asper* Murray; *Bromus asper* L.f., nom. illeg., non *Bromus asper* Murray; *Bromus asper* Pall. ex M.-Bieb., nom. illeg., non *Bromus asper* Murray; *Bromus asper* Suter, nom. illeg., non *Bromus asper* Murray; *Bromus benekenii* (Lange) Trimen; *Bromus benekenii* (Syme) Beck.; *Bromus nemoralis* Huds.; *Bromus ramosus* L., nom. illeg., non *Bromus ramosus* Huds.; *Bromus ramosus* var. *benekenii* (Lange) Asch. & Graebn.; *Schedonorus benekenii* Lange; *Zerna benekenii* (Lange) Lindm.; *Zerna ramosa* (Huds.) Lindm.)

Southwest Asia, North Africa, Europe. Erect, tufted, panicle lax and pendulous, lower glume subulate, upper glume lanceolate, lemma lanceolate, awn straight, good fodder grass, see *Flora Anglica* 40. 1762, *Mantissa Plantarum* 34. 1767, *Prodromus Designationis Stirpium Gottingensium* 42. 1770, *Flora Anglica, Editio Altera* II 1: 51. 1778, *Supplementum Plantarum* 111. 1781, *Flora Helvetica* 1: 62. 1802, *Flora Taurico-Caucasica* 1: 73. 1808, *Flora Danica* 48: 5. 1871, *English Botany, ... third edition* 11: 157. 1873, *Flora von Nieder-Österreich* 1: 107. 1890 and *Synopsis der mitteleuropäischen Flora* 2(1): 576. 1901, *Svensk Fanerogamflora* 101. 1918, *Folia Geobotanica et Phytotaxonomica* 8(2): 167-168. 1973, *Taxon* 49(2): 247-248. 2000.

in English: hairy brome

B. richardsonii Link (*Bromopsis canadensis* subsp. *richardsonii* (Link) Tzvelev; *Bromopsis richardsonii* (Link) Holub; *Bromus ciliatus* L.; *Bromus ciliatus* L. var. *richardsonii* (Link) Y.C. Jiang; *Bromus ciliatus* var. *richardsonii*

(Link) B. Boivin; *Zerna canadensis* subsp. *richardsonii* (Link) Tzvelev; *Zerna richardsonii* (Link) Nevski

North America, California. Perennial, see *Species Plantarum* 1: 76-77. 1753, *Hortus Regius Botanicus Berolinensis* 2: 281. 1833, *Flora Boreali-Americana* 2: 252. 1840 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 34. 1900, *Le Naturaliste Canadien* 94: 521. 1967, *Novosti Sist. Vyss. Rast.* 7: 54. 1970 [1971], *Folia Geobotanica et Phytotaxonomica* 8(2): 167-168. 1973, *Taxon* 25: 613. 1976, *Flora Intramongolica* 7: 104. 1983, *Grasses of Japan and its Neighboring Regions* 493. 1987.

in English: fringed brome

B. rigens L. (*Anisantha rigens* (L.) Nevski; *Genea rigens* (L.) Dumort.)

Europe, North America. See *Mantissa Plantarum* 1: 33. 1767, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868.

B. rigidus Roth (*Anisantha diandra* subsp. *rigida* (Roth) Tzvelev; *Anisanta rigida* (Roth) Hyl.; *Bromus diandrus* Roth; *Bromus diandrus* subsp. *maximus* (St.-Amans) Soó; *Bromus diandrus* subsp. *rigidus* (Roth) Laínz; *Bromus diandrus* subsp. *rigidus* (Roth) O. Bolòs, Masalles & Vigo; *Bromus diandrus* var. *rigidus* (Roth) F. Sales; *Bromus gussonei* Parl., also spelled *gussonii*; *Bromus gussonii* var. *rigidus* (Roth) Lindb.; *Bromus madritensis* var. *maximus* St.-Amans; *Bromus madritensis* var. *rigidus* (Roth) Bab. ex Syme; *Bromus matritensis* var. *maximus* (Desf.) St.-Amans; *Bromus matritensis* var. *rigidus* (Roth) Bab. ex Syme; *Bromus maximus* Desf.; *Bromus maximus* Desf. subsp. *maximus*; *Bromus maximus* var. *gussonii* (Parl.) Parl.; *Bromus rigens* auct. lusit., non L.; *Bromus rigens* L. subsp. *maximus* (Desf.) Cout.; *Bromus rigidus* subsp. *maximus* (St.-Amans) De Bolos & al.; *Bromus rigidus* subsp. *maximus* (Desf.) De Bolos & al.; *Bromus rigidus* var. *rigidus*; *Bromus rubens* var. *rigidus* (Roth) Mutel; *Bromus villosus* Asch. & Graebn.; *Bromus villosus* Forssk., nom. illeg., non *Bromus villosus* Scop.; *Bromus villosus* var. *maximus* (St.-Amans) Asch. & Graebn.; *Bromus villosus* var. *maximus* (Desf.) Asch. & Graebn.; *Bromus villosus* var. *rigidus* (Roth) Asch. & Graebn.; *Catapodium tuberculatum* var. *pauciflorum* Post; *Forasaccus maximus* (St.-Amans) Bubani; *Forasaccus maximus* (Desf.) Bubani; *Genea maxima* (St.-Amans) Dumort.; *Genea maxima* (Desf.) Dumort.; *Genea rigida* (Roth) Dumort.; *Zerna gussonei* (Parl.) Grossh.)

Eurasia, southern and western Europe. Annual, erect, vigorous, tufted, inflorescence stiffly contracted, panicle erect and contracted, narrow spikelets reddish, lemma scabrous, weed species naturalized elsewhere, seeds penetrate the skin of livestock, pungent callus and rough awn penetrate mouth, eyes and intestine, common in waste places, weedy places, disturbed areas, seaports, along roadsides, closely related to *Bromus diandrus* Roth, see *Flora Aegyptiaco-Arabica*

23. 1775, *Botanische Abhandlungen und Beobachtungen* 44. 1787, *Bot. Mag. (Zurich)* 4(10): 21. 1790, *Flora Atlantica* 1: 95. 1798, *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 8. 1840, *Annotations à la Flore de France et d'Allemagne* 229. 1855, *Exploration Scientifique de l'Algérie* 2: 159. 1855, *Étude agrostographique sur le genre Michelaria* et la classification des graminées 30. Gent 1868, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *English Botany, ... third edition* 11: 161. 1873, *Flora of Syria, Palestine, and Sinai* 890. 1896 and *Synopsis der mitteleuropäischen Flora* 2: 595-596. 1901, *Flora Pyrenaea* ... 4: 382. 1901, *Acta societatis scientiarum fennica. Series B. Opera biologica* 1(2): 15. 1932, *Catalogue des Plantes du Maroc* 865. 1934, *Uppsala Universitets Årsskrift* 7: 32. 1945, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972], *Giornale Botanico Italiano* 111(1-2): 59. 1977, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 17(1): 96. 1987 [1988], *Edinburgh J. Bot.* 50(1): 8-11. 1993.

in English: rigput grass, rigid brome, rigput brome

B. rigidus Roth var. **gussonii** (Parl.) Coss. & Durieu (*Bromus gussonei* Parl.; *Bromus maximus* var. *gussonei* (Parl.) Parl.; *Bromus villosus* var. *gussonei* (Parl.) Asch. & Graebn; *Zerna gussonei* (Parl.) Grossh.)

Algeria. See *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 8. 1840, *Flora italiana, ossia descrizione delle piante ...* 1: 407. 1848, *Exploration Scientifique de l'Algérie* 2: 159. 1855 and *Synopsis der mitteleuropäischen Flora* 2: 595. 1901.

B. riparius Rehmman (*Bromopsis riparia* (Rehmman) Holub; *Bromopsis riparia* (Rehmman) Holub subsp. *fibrosa* (Hack.) Tzvelev; *Bromopsis riparia* (Rehmman) Holub subsp. *riparia*; *Bromus erectus* auct. ross., non Huds.; *Bromus fibrosus* Hack.; *Bromus fibrosus* Hack. subsp. *fibrosus*; *Bromus pseudocappadocicus* (Klokov) Stankov; *Zerna riparia* (Rehmman) Nevski)

Southeast Asia, Turkey, Eastern Europe. Perennial bunchgrass, tufted, vigorous, mildly rhizomatous, extensive fibrous root system, leaves and stems generally pubescent, basal leaf growth, leaves long and arching, fodder, forage, permanent pasture, useful for erosion control, growing in dry hillsides, meadow steppes, black soil, open meadows at mountain top, see *Verhandlungen des Naturforschenden Vereins in Brünn* 10: 8. 1871 [1872], *Enumeratio Plantarum Transsylvanicae* 584. 1886 and *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972], *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

in English: meadow brome, meadow bromegrass, bromegrass.

B. rubens L. (*Anisantha rigens* (L.) Nevski; *Anisantha rubens* (L.) Nevski; *Bromus dilatatus* Lam.; *Bromus madritensis* subsp. *rubens* (L.) Husnot; *Bromus madritensis* subsp. *rubens* (L.) Duvin; *Bromus matritensis* subsp. *rubens*

(L.) Husnot; *Bromus purpurascens* Delile; *Bromus scoparius* var. *rubens* (L.) St.-Amans; *Festuca rubens* (L.) Pers.; *Zerna rubens* (L.) Grossh.)

Southern Europe, Mediterranean. Annual bunchgrass, tufted, erect, geniculate, pubescent, dense and shallow root system, leaves nonauriculate, culms hairy below the inflorescence, leaf sheath villous and not keeled, ligule lacinate and hyaline, blade flat or involute, leaves hairy to pilose to shortly pubescent, green reddish panicle or raceme compact or contracted, dense panicles of erect branches, cleistogamous spikelets, seed heads large and nodding, glumes acute and subequal to unequal, lower glume narrowly oblong, strongly nerved lemmas keeled and curved outwards, awn slightly divaricate or twisted, palea hyaline to membranous, ovary apex hairy, fruit compressed and not grooved, weed species naturalized elsewhere, potential wildland pest, forage, low palatability, suitable for revegetation, ungrazed after the seed heads mature, generally on poor sandy soils in dry areas, desert, on arid and shallow-soil sites, open hillsides, waste ground, woodland or chaparral areas, disturbed places, see *Centuria I. Plantarum* ... 1: 5. 1755, *Amoen. Acad. seu dissertationes variae* ... 4: 265. 1759, *Mantissa Plantarum* 1: 33. 1767, *Flora Aegyptiaco-Arabica* 23. 1775, *Encyclopédie Méthodique, Botanique* 1: 468. 1785, *Flora Atlantica* 1: 91. 1798, *Syn. Pl.* 1: 94. 1805, *Cyperaceae et Gramineae Siculae* 39. 1820, *A Natural Arrangement of British Plants* 2: 117. 1821, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 419. 1833, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *Flora Orientalis* 5: 648. 1884, *Flore d'Alger* 226. 1884, *Index Kewensis* 2: 1249. 1895 and *Folia Geobotanica et Phytotaxonomica* 8(2): 176. 1973, *Notes from the Royal Botanic Garden, Edinburgh* 42: 500. 1985, *Edinb. J. Bot.* 50: 11. 1993.

in English: red brome, fox-tail brome, foxtail brome, foxtail chess

B. runssoroensis K. Schum. (*Bromus runssorensis* K. Schum.)

Africa. See *Die Pflanzenwelt Ostafrikas* C: 116. 1895.

B. scoparius L. (*Bromus confertus* M. Bieb.; *Bromus confertus* Boreau, nom. illeg., non *Bromus confertus* M. Bieb.; *Bromus humilis* Cav.; *Bromus ovatus* Gaertn.; *Bromus rigens* L.; *Bromus rigens* L. subsp. *rigens*; *Serrafalcus cavanillesii* Willk.; *Serrafalcus scoparius* (L.) Parl.) (named for the Spanish botanist Antonio José Cavanilles, 1745-1804, clergyman, at the Madrid Botanical Garden, plant collector, he is best remembered for *Icones et Descriptiones Plantarum*. Madrid 1791-1801 and *Monadelphiae classis dissertationes decem*. Madrid [1785]-1790. See E. Alvarez López, "Cavanilles. Ensayo biográfico-crítico." *Anales Jard. Bot. Madrid*. 6(1): 1-64. 1946; Juan Vernet, in *D.S.B.* 3: 154-155. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 1: 324. 1965; T.W. Bossert, *Biographical dictionary of*

botanists represented in the Hunt Institute portrait collection. 69. 1972; M. Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. 1858; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Alessandro (Alejandro) Malaspina (1754-1810, d. Pontremoli, Italy), *Viaje político-científico alrededor del mundo por las corbetas Descubierta y Atrevida al mando de los capitanes de navío D. Alejandro Malaspina y Don José de Bustamante y Guerra desde 1789 á 1794*. Publicado con una introducción por Don Pedro de Novo y Colson ... Segunda edición. Madrid 1885; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement III*. 466-468. 1995)

Europe, Algeria, Egypt, Iran, Israel, Syria, Asia. Annual, in dense clumps, naturalized elsewhere in temperate regions, see *Centuria I. Plantarum* ... 1: 6. 1759, *Icones et Descriptiones Plantarum, quae aut sponte* ... 6: 65. 1801, *Flora Taurico-Caucasica* 1: 71. 1808, *Flora Libycae Specimen sive plantarum enumeratio Cyrenaicam, Pentapolim, Magne Syrteos desertum et regionem Tripolitanam incolentium* ... 4, t. 2, f. 2. Genuae 1824, *Rariorum Plantarum in Sicilia Sponte Provenientium* 2: 19. 1840, *Flora Palermiana* 1: 174. 1845, *Flore du Centre de la France* 2: 586. Paris 1849, *Prodromus Florae Hispanicae* 1: 101. 1883 and *Bulletin of Miscellaneous Information Kew* 1907: 369. 1907, *Flore de l'Afrique du Nord* 3: 259. 1955, *Notes from the Royal Botanic Garden, Edinburgh* 42: 499. 1985, *Flora Mediterranea* 4: 17. 1994.

in English: broom brome

B. scoparius L. var. *scoparius*

Europe, Mediterranean.

B. scoparius L. var. *villiglumis* Maire & Weiller

Europe, Mediterranean. See *Flore de l'Afrique du Nord* 3: 259. 1955.

B. secalinus L. (*Avena secalina* (L.) Salisb.; *Bromus billotii* F.W. Schultz; *Bromus mollis* var. *secalinus* (L.) Huds.; *Bromus secalinus* subsp. *billotii* (F.W. Schultz) Asch. & Graebn.; *Bromus secalinus* L. var. *hirsutus* Kindb.; *Bromus secalinus* L. var. *hirtus* (F.W. Schultz) Hegi; *Bromus secalinus* var. *velutinus* (Schrad.) Schübel & G. Martens; *Bromus submuticus* Steud.; *Bromus velutinus* Schrad.; *Forasaccus secalinus* (L.) Bubani; *Serrafalcus secalinus* (L.) Bab.)

North Africa, Eurasia, Mediterranean. Annual, herbaceous, slender, tufted, pubescent, lower leaf sheaths glabrous, open and spreading inflorescences, loose panicles, glabrous spikelets, strongly compressed, lemma rounded and

nonkeeled, curved awns, noxious weed species widely naturalized elsewhere, invasive, may be troublesome weed in grain fields, found in fields and disturbed places, waste ground and grain fields, gravel mounds, see *Species Plantarum* 1: 76-77. 1753, *Fl. Angl.* (edition 1) 1: 39. 1762, *Flora Anglica, Editio Altera* 2: 49. 1778, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 22. Londini [London] (Nov-Dec) 1796, *Flora Germanica* 1: 349, 353, t. 6, f. 3. 1806, *Flora von Württemberg* 85. 1834, *Manual of British Botany* 1: 374. 1843, *Flora* 32: 233. 1849, *Synopsis Plantarum Glumacearum* 1: 321. 1854 and *Flora Pyrenaea ...* 4: 388. 1901, *Synopsis der mitteleuropäischen Flora* 2: 604-605. 1901, *American Midland Naturalist* 10: 24. 1926, *Preslia* 13-15: 37. 1935, *Feddes Repertorium* 77: 63. 1969, *Flora Republicii Socialiste Romania* 12: 317. 1972, *Notes from the Royal Botanic Garden, Edinburgh* 42: 498. 1985, *Taxon* 41: 559. 1992, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 22: 151. 1993, *Feddes Repertorium* 119(5-6): 427-433, f. 1b, 2a, 3b. 1999.

in English: cheat, cheatgrass, chess, chess brome, cheat and chess, rye brome

in French: brome faux-seigle

B. segetum Kunth (Latin *secale* (*sicale*), *secalis* “a kind of grain, rye, black spelt,” *seges*, *segetis* “a cornfield, a field, ground,” Akkadian *se’u*, *sehu* “grain, corn”)

Southern America, Peru, Venezuela, Ecuador, Bolivia. Herbaceous, reddish flowers, clumps forming, see *Nova Genera et Species Plantarum* 1: 151-152. 1815 [1816].

B. sericeus Drobow (*Anisantha sericea* (Drobow) Nevski; *Bromus sericeus* Ten.; *Bromus tectorum* subsp. *lucidus* F. Sales)

Asia, Russia, Turkestan, Afghanistan. See *Flora Napolitana* 1(1): 10. 1811-1815 and *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 39. 1925, *Grasses of the Soviet Union* 1: 326. 1984, *Willdenowia* 19(1): 134. 1989, *Flora et Vegetatio Mundi* 9: 32. 1991.

B. setifolius J. Presl (*Bromus macranthos* var. *dusenii* Hack. ex Macloskie; *Bromus macranthos* var. *setifolius* (J. Presl) E. Desv.; *Bromus pictus* Hook.f.)

Southern America, Argentina, Chile. Growing on sandy soil, see *Reliquiae Haenkeanae* 1(4-5): 261. 1830, *Flora Antarctica* 2: 387. 1847, *Flora Chilena* 6: 443. 1854 and *Reports of the Princeton University Expeditions to Patagonia ... Botany Suppl.*: 63. 1915, *Kongliga Svenska Vetenskapsakademiens Handlingar* 56(5): 179. 1916, *Flora Patagónica* 3: 87. 1978, *Canadian Journal of Botany* 68: 2493-2500. 1990, *World Checklist of Seed Plants* 2(1): 13. 1996.

B. setifolius J. Presl var. **brevifolius** Nees (*Bromus macranthos* E. Desv.; *Bromus macranthos* Meyen ex E. Desv.; *Bromus macranthos* Meyen; *Bromus macranthos* var. *macranthos*; *Bromus macranthos* var. *macranthos* E. Desv.)

Argentina, Chile. Useful for erosion control, see *Reliquiae Haenkeanae* 1(4-5): 261. 1830, *Gramineae* 36-37. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 168-169. 1843, *Flora Chilena* 6: 443. 1854.

B. setifolius J. Presl var. **pictus** (Hook.f.) Skottsbo. (*Bromus pictus* Hook.f.; *Bromus setifolius* var. *pictus* (Hook.f.) J.A. Cámara)

Argentina, Chile. See *Flora Antarctica* 2: 387. 1847 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 56(5): 179. 1916, *Flora Patagónica* 3: 87. 1978.

B. setifolius J. Presl var. **setifolius** (*Bromus macranthos* var. *setifolius* (J. Presl) E. Desv.)

Argentina, Chile. See *Reliquiae Haenkeanae* 1(4-5): 261. 1830, *Flora Chilena* 6: 443. 1854.

B. severtzovii Regel

Europe, Russia. Annual, low, grows in dry conditions, on dry slopes, see *Act. Hort. Petrop.* 7: 601. 1880.

B. sinaicus (Hackel) Täckh. (*Bromus japonicus* subsp. *sinaicus* Hack.; *Bromus patulus* subsp. *sinaicus* Hack.)

Egypt. Rare species, see *Systema Vegetabilium. Editio decima quarta* 119. 1784 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 9: 167. 1903, *Bulletin of the Faculty of Science Egyptian University* 17: 153. 1941, *Publications from the Cairo University Herbarium* 5: 50. 1972 [1974].

B. sinensis Keng f. (*Bromus sinensis* Keng)

China. Subalpine shrub, gravelly loam, see *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 175. 1957, *Acta Botanica Yunnanica* 4(4): 349. 1982.

B. sitchensis Trin. (Sitcha/Sitka Isl.)

Canada, North America, U.S. Perennial, stout, robust, erect, without rhizomes, flat leaves sparsely hairy, leaf sheaths hairless or covered by long scattered hairs, ligule denticulate with a ragged to hairy margin, no auricles, large flower head very open and branched, spreading panicle branches, strongly flattened spikelets, cleistogamous and chasmogamous, glumes subequal acute to acuminate, keeled lemmas awned and nerved, occurs on rocky soil, stream banks and exposed rocky bluffs, waste ground, gardens, closely resembles Aleutian brome *Bromus aleutensis* Trin. ex Griseb., see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(2): 173. 1832, *Flora Rossica* 4(13): 361. 1852, *Synopsis Plantarum Glumacearum* 1: 322. 1854 and *Flora of Alaska and Neighboring Territories. A Manual of the Vascular Plants* 254. 1942, *Le Naturaliste Canadien* 94(4): 521. 1967.

in English: Sitka brome, Alaska brome

B. speciosus Nees (*Bromus natalensis* Stapf)

South Africa. Perennial, tufted, panicle open with glabrous pedicels, purplish linear spikelets, found on moist mountain slopes, along streams, see *Florae Africae Australioris Illustrationes Monographicae* 454. 1841 and *Flora Capensis* 7: 732-733. 1900.

in English: purple brome

B. squarrosus L. (*Bromus japonicus* subsp. *noeanus* (Boiss.) Pènzes; *Bromus japonicus* var. *paniculatus* (Kuntze) Roshev.; *Bromus noeanus* Boiss.; *Bromus pubescens* Pieri, nom. illeg., non *Bromus pubescens* Muhl. ex Willd.; *Bromus squarrosus* subsp. *typicus* Pènzes; *Bromus squarrosus* var. *villosus* Koch, nom. illeg.; *Bromus wolgensis* Fisch. ex J. Jacq.; *Forasaccus squarrosus* (L.) Bubani; *Serrafalcus squarrosus* (L.) Bab.)

Mediterranean, Europe. Annual or biennial, herbaceous, stems solitary or tufted, stems erect or ascending, leaves hairy, panicles with open drooping branches, sparse spikelets ovate to elliptic, awn recurved and twisted, weed species, growing in rocky dry areas, waste places, alluvial soils, coarse brown sandy loams, railroad ballast, grassland, open habitats, disturbed places, see *Species Plantarum* 1: 76. 1753, *Species Plantarum, Editio Secunda* 1: 114. 1762, *Eclogae Graminum Rariorum* 20, t. 15. 1813, The *Flora corcirese* anonymously published in *Ionios Anthologia* ... 3: 680. 1834, *Manual of British Botany* 375. 1843, *Acta Horti Petrop.* 7: 602. 1881, *Flora Orientalis* 5: 651. 1884 and *Flora Pyrenaea* ... 4: 385. 1901, *Flora Republicii Socialiste Romania* 12: 327. 1972, *Notes from the Royal Botanic Garden, Edinburgh* 42: 500. 1985, *Anales de Biologia, Facultad de Biologia, Universidad de Murcia* 13: 27. 1987.

in English: rough brome, corn brome, chess

B. stamineus E. Desv. (*Bromus cebadilla* Steud.; *Bromus uniolooides* f. *elatus* (E. Desv.) Kloos; *Bromus uniolooides* var. *elata* E. Desv.; *Bromus valdivianus* F. Philippi; *Ceratochloa staminea* (E. Desv.) Stace; *Ceratochloa valdiviana* (Phil.) Holub)

South America, Argentina, Chile, Juan Fernandez Islands. Annual or perennial, robust, coarse, tufted, spreading, ascending to more or less erect, leaf sheath hairy to villous, ligule denticulate, heavy panicles erect and spreading, glumes unequal acute, awned, weed species, forage, useful for erosion control, waste ground, disturbed places, along roadsides, often coastal, see *Nova Genera et Species Plantarum* 1: 151. 1815 [1816], *Flora Chilena* 6: 438, 440. 1854, *Synopsis Plantarum Glumacearum* 1: 321. 1854, *Linnaea* 29(1): 102. 1858 and *Nederlandsch Kruidkundig Archief. Verslagen en Mededelingen der Nederlandsche Botanische Vereeniging* 1917: 164. 1918, *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973, *Watsonia* 18(4): 413. 1991.

in English: Harlan brome, roadside brome, spikey brome, grazing brome

B. stenostachyus Boiss. (*Bromopsis stenostachya* (Boiss.) Holub; *Zerna stenostachya* (Boiss.) Nevski)

Asia, Iran. Useful for erosion control, see *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

B. sterilis L. (*Anisantha sterilis* (L.) Nevski; *Bromus distichus* Moench; *Bromus grandiflorus* Weigel; *Bromus grandiflorus* K. Koch, nom. illeg., non *Bromus grandiflorus* Weigel; *Bromus jubatus* Ten., nom. illeg., non *Bromus jubatus* Vill.; *Genea sterilis* (L.) Dumort.; *Schedonorus sterilis* (L.) Fries; *Zerna sterilis* Panz. ex B.D. Jacks.; *Zerna sterilis* (L.) Panz.)

North Africa, Morocco, Europe, southwestern Asia. Annual or biennial, herbaceous, reddish, loosely tufted or solitary, more or less erect or geniculate and ascending, leaf sheath densely pubescent, ligule lacerate, open panicle with drooping spreading branches, glumes unequal and membranous, scabrous lemmas rounded and awned, weed species naturalized elsewhere, found in disturbed places, rocky sites, dry rocky soil, dry sandy soil, damp rocky soil, bottomland, waste ground, along roadsides, mowed areas, see *Species Plantarum* 1: 77. 1753, *Observationes Botanicae* 9-10, t. 1, f. 6. 1772, *Flora Napolitana* 3: 89. 1824-1829, *Botaniska Notiser* 131. 1843, *Linnaea* 21(4): 419. 1848, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *Index Kewensis* 2: 1249. 1895 and *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 115. 1971[1972], *Notes from the Royal Botanic Garden, Edinburgh* 42: 500. 1985, *Blumea* 35: 497. 1991, *Taxon* 41: 584. 1992.

in English: poverty brome, sterile brome, barren brome

in French: brome stérile

in Japan: arechi-no-cha-hiki

B. striatus Hitchc. (*Bromus catharticus* var. *striatus* (Hitchc.) Pinto)

South America, Peru. See *Symbolae Botanicae*, ... 2: 22. 1791 and *Contributions from the United States National Herbarium* 24(8) 316. 1927.

B. subvelutinus Shear (*Bromus breviaristatus* Buckley; *Bromus luzonensis* J. Presl; *Bromus marginatus* var. *breviaristatus* (Buckley) Beetle; *Trisetum luzonensis* (J. Presl) Steud.; *Triticum luzonense* (J. Presl) Kunth)

Northern America, U.S. Perennial, see *Reliquiae Haenkeanae* 1(4-5): 262. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 446. 1833, *Nomenclator Botanicus. Editio secunda* 1: 228. 1840, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 98. 1862 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 52, f. 32. 1900, *Phytologia* 55(3): 209. 1984, *Taxon* 39: 660. 1990.

in English: short brome, hoary brome

B. suksdorfii Vasey (*Bromopsis suksdorfii* (Vasey) Holub) (after the American (b. Holstein, Germany) botanist Wilhelm Nikolaus Suksdorf, 1850-1932 (killed by a train),

plant collector (Iowa, California, Montana, Oregon and Washington), worked with Asa Gray, his writings include *Flora washingtonensis*. [White Salmon, Washington 1892] and "Untersuchungen in der Gattung *Amsinckia*." *Werdenda*. 1: 47-113. 1931; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 346. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; T.W. Bossert, comp., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 388. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 360, 398. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Joseph Ewan, *Rocky Mountain Naturalists*. 1950)

North America, U.S. Perennial, subalpine forest, loose soil, see *Botanical Gazette* 10: 223. 1885 and *U.S.D.A. Div. Agrostol. Bull.* 23: 46. 1900, *Folia Geobotanica et Phytotaxonomica* 5: 440. 1970, *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

in English: Suksdorf's brome

B. syriacus Boiss. & Blanche

Jordan, Israel, Syria. Useful for erosion control, see *Diagn. pl. orient.* ser. 2, 4: 139. 1859, *Flora Orientalis* 5: 644. 1884 and *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

B. tectorum L. (*Anisantha pontica* Koch; *Anisantha tectorum* (L.) Nevski; *Bromus abortiflorus* St.-Amans; *Bromus nutans* St.-Lag.; *Bromus setaceus* Buckley; *Bromus tectorum* f. *nudus* (Klett & Richt.) H. St. John; *Bromus tectorum* L. var. *glabratus* Spenner; *Bromus tectorum* var. *hirsutus* Regel; *Bromus tectorum* var. *nudus* Klett & Richter; *Bromus tectorum* var. *tectorum*; *Genea tectorum* (L.) Dumort.; *Schedonorus tectorum* (L.) Fries; *Zerna tectorum* (L.) Panz.; *Zerna tectorum* Panz. ex B.D. Jacks.)

Mediterranean. Annual or occasionally biennial, extremely variable in height, herbaceous, erect, slender, stems single or tufted or loosely tufted, culms glabrous below the inflorescence, ligule with a lacerate margin, sheaths softly hairy to shortly pubescent, leaves hairy and purplish, no auricles, flower head more or less lax or contracted, dense and nodding panicle with flexuous branches, brush-like spikelets often purplish and moderately awned or with long and prominent awns, glumes very unequal, lemmas hairy to long-hairy over the back and often with a few longer hairs on the margins, native pasture species, grows quickly and reproduces only from seeds, invasive and noxious weed species, widespread aggressive invader, readily invades perennial forage crops, may be troublesome weed in grain fields, grows in waste ground and disturbed areas, sandy soil on roadsides, disturbed habitats, fields, dry fallow fields, along highways and railroads, overgrazed rangelands, see *Species Plantarum* 1: 77. 1753, *Flora Friburgensis* 1:

152. 1825, *Flora der phanerogamischen Gewächse der Umgegend von Leipzig* 109. Leipzig 1830, *Botaniska Notiser* 131. 1843, *Linnaea* 21(4): 394. 1848, *Flore de France ... Prospectus* 3: 583. 1853, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 98-99. 1862, *Enumeratio Plantarum Transsilvaniae* 805. 1866, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *T.N.Z.I.* 3: 148-161. 1871, *Plantae Europaeae* 1: 114. 1890, *Index Kewensis* 2: 1249. 1895 and *Synopsis der mitteleuropäischen Flora* 2: 594. 1901, *Man. Grass. U.S.* 817. 1935, *Grasses of the Soviet Union* 1: 326. 1984, *Notes from the Royal Botanic Garden, Edinburgh* 42: 500. 1985, *New Zealand J. Bot.* 25: 523-537. 1987, Melgoza G., R.S. Nowak and R.J. Tausch, "Soil water exploitation after fire: competition between *Bromus tectorum* (cheatgrass) and two native species." *Oecologia* 83: 7-13. 1990, Melgoza G. & R.S. Nowak, "Competition between cheatgrass and two native species after fire: implications from observations and measurements of root distribution." *Journal of Range Management* 44: 27-33. 1991, *Flora et Vegetatio Mundi* 9: 32. 1991, *Edinb. J. Bot.* 50: 25. 1993, *Am. J. Bot.* 86: 333-343. 1999, *Am. J. Bot.* 87: 903-907, 1240-1245, 1279-1286. 2000, *Am. J. Bot.* 88: 1409-1418. 2001, Elizabeth Bartlett, Stephen J. Novak and Richard N. Mack, "Genetic variation in *Bromus tectorum* (Poaceae): differentiation in the eastern United States." *Am. J. Bot.* 89: 602-612. 2002, *Am. J. Bot.* 89: 623-631. 2002, *Am. J. Bot.* 90: 730-735, 897-904, 1045-1053. 2003, Alisa P. Ramakrishnan et al., "Correlation between molecular markers and adaptively significant genetic variation in *Bromus tectorum* (Poaceae), an inbreeding annual grass." *Am. J. Bot.* 91: 797-803. 2004, *Am. J. Bot.* 91: 1155-1162. 2004, *Am. J. Bot.* 92: 205-213. 2005.

in English: drooping brome, June grass, downy chess, early chess, cheat grass, cheatgrass brome, downy brome, bronco grass, slender chess, downy brome grass, military grass, Mormon oats

in French: brome des toits

in Spanish: bromo veloso, espiguilla colgante

in Turkey: ibubuk ekini

B. tectorum L. var. ***glabratus*** Spenner. (*Anisantha tectorum* (L.) Nevski; *Bromus tectorum* L.; *Bromus tectorum* f. *nudus* (Klett & Richt.) H. St. John; *Bromus tectorum* var. *nudus* Klett & Richt.)

Europe. See *Species Plantarum* 1: 77. 1753, *Flora Friburgensis* 1: 152. 1825, *Flora der phanerogamischen Gewächse der Umgegend von Leipzig* 109. Leipzig 1830 and *Notes from the Royal Botanic Garden, Edinburgh* 42: 500. 1985.

B. texensis (Shear) A.S. Hitchc. (*Bromopsis texensis* (Shear) Holub; *Bromus purgans* var. *texensis* Shear)

North America, U.S. Annual, weed species, disturbed places, see *Species Plantarum* 1: 76. 1753 and *Bulletin, Division of Agrostology United States Department of*

Agriculture 23: 41. 1900, *Contributions from the United States National Herbarium* 17(3): 381. 1913, *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

in English: Texas brome

B. thysanoglottis Soderstr. & J.H. Beaman (*Bromus mucroglumis* Wagnon)

Mexico, U.S. Slopes, clay soil, see *Leaflets of Western Botany* 6(3): 67-68. 1950, *Publications of the Museum. Michigan State University. Biological Series* 3(5): 509. 1968, *Folia Geobotanica et Phytotaxonomica* 8(2): 168. 1973.

in English: sharp-glume brome

B. tomentellus Boiss. (*Bromus tomentellus* (Boiss.) Holub, also spelled *tomentella*)

Asia, Iran, Turkey, Syria. Perennial bunchgrass, tall, glaucous, slender, robust, leaves mostly basal, leaves pubescent and narrow, useful for erosion control, grows in gravelly red clay, limestone, stony soil, heavy clay soil, on rocky slope above a stream, see *Diagn. pl. orient. ser. 1*, 7: 126. 1846.

B. tomentosus Trin. (*Bromopsis triniana* (Schult.) Holub; *Bromus persicus* Boiss. ex Steud.; *Bromus trinianus* Schult., nom. illeg.; *Zerna tomentosa* (Trin.) Nevski; *Zerna triniana* (Schult.) Tzvelev)

Asia, Iran, Iraq, Turkey. Perennial, short, rhizomatous, glaucous to light green, with densely pubescent to velvety leaves, useful for erosion control, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Avec l'Histoire de l'Académie* 6: 487, t. 9. 1818 and *Novosti Sist. Vyss. Rast.* 7: 58. 1970[1971], *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

B. trinii E. Desv. (*Bromus barbatooides* Beal; *Bromus barbatooides* var. *sulcatus* Beal; *Bromus berteroanus* Colla; *Bromus rudis* Sodiro; *Bromus trinii* var. *excelsus* Shear; *Danthonia pseudo-spicata* Müll. Hal.; *Trisetobromus hirtus* (Trin.) Nevski; *Trisetum barbatum* Steud., nom. illeg., non *Trisetum barbatum* Nees; *Trisetum barbatum* var. *major* Vasey; *Trisetum trinii* (Trin.) Louis-Marie; *Trisetum trinii* var. *majus* (Vasey) Louis-Marie; *Trisetum trinii* var. *pallidiflorus* (E. Desv.) Louis-Marie)

Chile. Annual, found in dry areas, hillsides, see *Memorie della Reale Accademia delle Scienze di Torino* 39: 25, t. 58. 1836, *Herbarium Pedemontanum* 6: 68. Torino 1836, *Linnaea* 10(3): 300. 1836, *Florae Africae Australioris Illustrationes Monographicae* 345. 1841, *Flora Chilena* 6: 441-442. 1854, *Synopsis Plantarum Glumacearum* 1: 229. 1854, *Botanische Zeitung. Berlin* 14(20): 348. 1856, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): 60. 1893, *Grasses of North America for Farmers and Students* 2: 614-615. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 25. 1900, *Rhodora* 30: 243. 1928 [1929].

in English: Chilean chess

B. tunicatus Phil. (*Bromus culmineus* Phil.; *Bromus unioloides* var. *hirsuta* Speg.)

South America, Chile. See *Linnaea* 33(3-4): 298. 1864, *Anales de la Universidad de Chile* 94: 343. 1896, *Revista de la Facultad de Agronomía y Veterinaria* 30-31: 586. 1897.

B. valdivianus Phil. (*Bromus cebadilla* Steud.; *Ceratochloa valdiviana* (Phil.) Holub)

South America. Perennial, tufted, slender, geniculate to erect, leaf sheath villous, ligule denticulate, drooping panicles, glumes very unequal, weed, gardens, along roadsides, grassland, see *Synopsis Plantarum Glumacearum* 1: 321. 1854, *Flora Chilena* 6: 440. 1854, *Linnaea* 29(1): 102. 1858 and *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973.

in English: stripey brome

B. variegatus M. Bieb. (*Bromopsis variegata* (M. Bieb.) Holub; *Zerna variegata* (M. Bieb.) Nevski)

Asia, Turkey, Iran, Armenia. Herbaceous, erect, roots fibrous, useful for erosion control, grows in open meadow, steep slopes, see *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

B. variegatus M. Bieb. subsp. ***variegatus***

Asia, Russia, Armenia, Turkey.

B. variegatus M. Bieb. subsp. ***villosulus*** (Steud.) P.M. Sm. (*Bromopsis variegata* subsp. *villosula* (Steud.) Tzvelev; *Bromus adjaricus* Sommier & Levier; *Bromus pubescens* C. Koch, nom. illeg., non *Bromus pubescens* Muhl. ex Willd.; *Bromus villosulus* Steud.; *Zerna adjaricus* (Somm. & Levier) Nevski; *Zerna variegata* subsp. *villosula* (Steud.) Tzvelev)

Asia, Iraq, Iran, Armenia. See *Linnaea* 21(4): 420. 1848, *Synopsis Plantarum Glumacearum* 1: 327. 1854, *Acta Horti Petrop.* 13(1): 51. 1893 and *Novosti Sist. Vyss. Rast.* 7: 55. 1970[1971], *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 496. 1985.

B. villosissimus A.S. Hitchc.

Peru. Rare species, alpine, bunchgrass, open, tufted, spikelets green purplish to reddish, growing in loose soils, slopes, see *Proceedings of the Biological Society of Washington* 36: 195. 1923.

B. vulgaris (Hook.) Shear (*Bromopsis vulgaris* (Hook.) Holub; *Bromus ciliatus* var. *glaberrimus* Suksd.; *Bromus ciliatus* var. *ligulatus* Vasey ex Macoun; *Bromus ciliatus* var. *pauciflorus* Beal; *Bromus ciliatus* var. *pauciflorus* Vasey ex Macoun; *Bromus debilis* Nutt. ex Shear; *Bromus eximius* (Shear) Piper; *Bromus eximius* subsp. *robustus* (Shear) Piper; *Bromus eximius* subsp. *umbraticus* Piper; *Bromus eximius* var. *umbraticus* Piper; *Bromus purgans* var. *vulgaris* Hook.; *Bromus vulgaris* var. *eximius* Shear; *Bromus vulgaris* var. *robustus* Shear; *Zerna vulgaris* (Hook.) Henrard)

Northern America, U.S. Annual or perennial bunchgrass, slender, loosely tufted, hollow culms, perennating buds at the bases of culms, leaf sheaths are hairy to smooth, flat and lax leaf blades, ligules blunt and gnawed looking, no auricles, slender and narrow drooping flower head with slender branches, few-flowered and rounded spikelets, lemma awned, livestock forage, common in rocky soils, moist to dry conditions, in shaded or open woods, on open or forested sites, moist thickets, chaparral, rocky ravines, near the seashore, on moist or dry stream banks, on dry rocky slopes, see *Species Plantarum* 1: 76-77. 1753, *Flora Boreali-Americana* 2: 252. 1840, *Catalogue of Canadian Plants* 2(4): 238. 1888, *Grasses of North America for Farmers and Students* 2: 619. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 23: 43-44, f. 24. 1900, *Deutsche Botanische Monatschrift* 19: 93. 1901, *Contributions from the United States National Herbarium* 11: 143-144. 1906, *Blumea* 4(3): 498. 1941, *Folia Geobotanica et Phytotaxonomica* 8(2): 169. 1973.

in English: Columbia brome, Colombian brome, common brome

B. willdenowii Kunth (*Bromus catharticus* Vahl; *Bromus catharticus* var. *catharticus*; *Bromus unioloides* Kunth; *Bromus unioloides* (Willd.) Raspail, nom. illeg., non *Bromus unioloides* Kunth; *Ceratochloa unioloides* (Willd.) P. Beauv.; *Ceratochloa willdenowii* (Kunth) W.A. Weber; *Festuca unioloides* Willd.)

South America. Annual or short-lived perennial, tufted, coarse, stout, ascending to erect, lower sheaths silky, ligule denticulate, leaves glabrous or slightly hairy, pyramidal heavy panicles erect or drooping, spikelets compressed, sharply keeled glumes more or less unequal to subequal, awned, cleistogamous and chasmogamous, used as a good forage grass, found along roadsides, fields, gardens, waste ground, see *Symbolae Botanicae, ...* 2: 22. 1791, *Hortus Regius Botanicus Berolinensis* 1: 3, t. 3. 1803, *Essai d'une Nouvelle Agrostographie* 75, t. 15, f. 7. 1812, *Nova Genera et Species Plantarum* 1: 151. 1815 [1816], *Annales des Sciences Naturelles, Botanique* 5: 439. 1825, *Florula belgica, operis majoris prodromus, auctore ...* 155. Tournay 1827, *Révision des Graminées* 1: 134. 1829, *Reliquiae Haenkeanae* 1(4-5): 285. 1830, *Synopsis Plantarum Glumacearum* 1: 326. 1854, *Index Kewensis* 1: 487. 1895, *Contribucion al estudio de la flora de la Sierra ...* 76-77. 1896, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 719. 1898 and *Bulletin of the Torrey Botanical Club* 28(4): 244. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 144. 1904, *Bollettino della Società Botanica Italiana* 1907: 6. 1907, *Nederlandsch Kruidkundig Archief. Verslagen en Mededelingen der Nederlandsche Botanische Vereeniging* 1917: 175. 1918, *Amer. J. Bot.* 21: 127. 1934, *Revista Sudamericana de Botánica* 6: 144. 1940, *Brittonia* 12: 219-221. 1960, *Phytologia* 27(6): 442. 1974, *Caldasia* 11(54): 9-16. 1976,

Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 102: 447. 1981, *Phytologia* 51(6): 371. 1982, *Gayana, Botánica* 43: 147-110. 1986, *Blumea* 35: 483-497. 1991, *Novon* 8: 53-60. 1998, *Flora of New Zealand* 5: 370-371. 2000.

in English: prairie grass, brome grass

in Mexico: bromo cebadilla, bromo cebadillo, cebadilla

Bromus Scop. = *Triticum* L.

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 1: 85-87. 1753, *Introductio ad Historiam Naturalem* 74. 1777 and *Contributions from the United States National Herbarium* 48: 676-684. 2003.

Brousemichea Balansa = *Zoysia* Willd.

Chloridoideae, Cynodonteae, Zoysiinae, type *Brousemichea seslerioides* Bal., see *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 440-441. 1801, *Icones et Descriptiones Graminum Austriacorum* 3: 5. 1805, *Journal de Botanique (Morot)* 4(8): 161-172. 1890 [B. Balansa, *Catalogue des Graminées de l'Indo-Chine française ...*, Paris 1890] and *Kew Bulletin* 28(1): 41. 1973, *Contributions from the United States National Herbarium* 41: 240. 2001.

Bruchmannia Nutt. = *Beckmannia* Host

Probably a misspelling for *Beckmannia*.

Pooideae, Poeae, Alopecurinae, see *The Genera of North American Plants* 1: 48. 1818 and *Webbia* 49(2): 265-329. 1995, *Contributions from the United States National Herbarium* 48: 140-141. 2003.

Brylkinia F. Schmidt

One species, Japan, China. Pooideae, Poodae, Meliceae, or Brylkinieae, perennial, herbaceous, slender, rhizomatous, auricles absent, ligule membranous, sheath margins connate, leaf blades narrow linear, plants bisexual, inflorescence a raceme, spikelets pedicellate and laterally compressed, one fertile floret with 2 sterile lemmas below and a short rachilla extension above, two narrow glumes herbaceous and acuminate, sterile lemma acuminate, fertile lemma terminally awned, palea present, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade, woodland, type *Brylkinia caudata* (Munro) Schmidt, see *Species Plantarum* 1: 60-61. 1753, *Kongl. Vetenskaps Akademiens Handlingar* 40: 217, pl. 8. 1779, *Nova Acta r. Soc. Sci. Upsal.* 3: 208. 1780, *Memoirs of the American Academy of Arts and Science, new series* 6: 420. 1859, *Mémoires de l'Académie*

Impériale des Sciences de Saint Pétersbourg (Sér. 7) 12: 199, pl. 8, f. 22-27. 1868 and Acta Phytotaxonomica et Geobotanica 10: 107-108. 1941, Canad. J. Bot. 38: 962. 1960, Taxon 29: 645-666. 1980.

Species

B. caudata (Munro) Schmidt (*Alopecurus caudatus* Thunb.; *Brylkinia caudata* (Thunb.) F. Schmidt; *Brylkinia schmidtii* (Munro) Ohwi; *Ehrharta caudata* Munro)

Asia.

Bucetum Parn. = *Festuca* L., *Schedonorus* P.

Beauv.

From the Latin *bucetum* (*bucita, orum*) “a pasture for cow, cow-pasture” (M. Annaeus Lucanus).

Pooideae, Poaeae, Loliinae, see *Species Plantarum* 1: 73-77. 1753, *Flora Anglica* 37. 1762, *Essai d'une Nouvelle Agrostographie* 77, 99, 162, 177, pl. 12, f. 2. 1812, *The Grasses of Scotland* 104-105, 107-108, t. 46, 47. 1842, *Nomencl. Bot.* 2: 1071. 1874 and *Contr. U.S. Natl. Herb.* 24(6): 193. 1925, *Zlaki SSSR* 2: 393. 1976, *Watsonia* 16: 300. 1987, *Novosti Sist. Vyss. Rast.* 23: 14. 1988, *Contributions from the United States National Herbarium* 48: 312-368, 605-607. 2003.

Buchloe Engelm. = *Bouteloua* Lag., *Buchloë* Engelm., *Bulbilis* Raf. ex Kuntze, *Calanthera* Hook., *Lasiostega* Benth.

From the Greek *bous* “an ox” and *chloe, chloa* “grass, young grass.”

One species, North America. Chloridoideae, Cynodonteae, Boutelouinae, perennial, low, tufted, solid, stoloniferous, herbaceous, sward-forming, auricles absent, leaf blades narrow, ligule a fringe of hairs, plants monoecious or dioecious, female inflorescence of two racemes, female spikelet one-flowered and dorsally compressed, two glumes very unequal, upper glume forming an involucre enclosing the floret, lower glume reduced or suppressed, male inflorescence long-exserted and spicate, palea present, lodicules absent or present, ovary glabrous, stigmas 2, racemes embraced by inflated upper leaf sheaths, weed species, fodder, native pasture species, dry plains, prairies, type *Buchloe dactyloides* (Nutt.) Engelm., see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Hooker's Journal of Botany and Kew Garden Miscellany* 8: 18. 1856, *Plantas Hartwegianas imprimis Mexicanas* 347. 1857, *Transactions of the Academy of Science of St. Louis* 1: 432. 1859, *Revisio Generum Plantarum* 2: 763. 1891 and *Phytologia* 37(4): 317-407. 1977, *Flora Mesoamericana* 6:

293-295. 1994, *Las Gramíneas de México* 2: 1-344. 1987, *Contributions from the United States National Herbarium* 41: 20-33. 2001.

Species

B. dactyloides (Nutt.) Engelm. (*Antheophora axilliflora* Steud.; *Bouteloua dactyloides* (Nutt.) Columbus; *Bouteloua mutica* Griseb. ex E. Fourn.; *Bulbilis dactyloides* (Nutt.) Raf. ex Kuntze; *Calanthera dactyloides* (Nutt.) Kunth ex Hook.; *Casiostega dactyloides* (Nutt.) E. Fourn.; *Casiostega hookeri* Rupr. ex E. Fourn.; *Lasiostega humilis* Rupr. ex Munro; *Melica mexicana* Link ex E. Fourn.; *Sesleria dactyloides* Nutt.)

Northern America, U.S., Mexico. Tufted, sward-forming, unbranched above, leaf sheath glabrous, ligule ciliate, leaf blade flat, curly leaves, florets unisexual, female spikelets crowded together and burrlike, male spikelets on a raceme, short basal bracts, cultivated, ornamental, good forage, useful for erosion control, open habitats, see *The Genera of North American Plants* 1: 65. 1818, *Synopsis Plantarum Glumacearum* 1: 111. 1854, *Hooker's Journal of Botany and Kew Garden Miscellany* 8: 18. 1856, *Plantas Hartwegianas imprimis Mexicanas* 347. 1857, *Bulletin de la Société Botanique de Belgique* 15: 470-471. 1876, *Revisio Generum Plantarum* 2: 763. 1891 and *Aliso* 18: 63. 1999.

in English: buffalo grass

in Spanish: hierba búfalo, zacate búfalo

in Mexico: zacate búfalo, zacate chino

Buchlomimus J.R. Reeder & C.G. Reeder & Rzedowski = *Bouteloua* Lag.

Similar to *Buchloe*.

One species, Mexico. Chloridoideae, Cynodonteae, Boutelouinae, perennial, prostrate, herbaceous, ligule a line of hairs, auricles absent, leaf blades narrow, stoloniferous, plants dioecious, inflorescence spicate, racemes straight or curved exserted from leaf sheaths, spikelets solitary, female spikelets dorsally compressed, 1 fertile floret, hermaphrodite florets lacking, two unequal glumes narrow and membranous, lemma tapering to a shortly 3-awned tip, male inflorescence erect, male spikelets 1-flowered, palea present, 2 free lodicules, no stamens, 3 staminodes, ovary glabrous, 2 stigmas, open areas, slopes, dry places, rocky hills, closely related to *Cyclostachya* and *Pringleochloa*, type *Buchlomimus nervatus* (Swallen) J. & C. Reeder & Rzedowski, see *Linnaea* 2: 589. 1827 and *Brittonia* 17(1): 26-33. 1965, *Flora Mesoamericana* 6: 293-295. 1994, *Las Gramíneas de México* 2: 1-344. 1987, *Contributions from the United States National Herbarium* 41: 20-33. 2001.

Species

B. nervatus (Swallen) J. & C. Reeder & Rzedowski (*Bouteloua nervata* J.R. Swallen)

Mexico. See *North American Flora* 17(8): 626. 1939.

Buergersiochloa Pilger

One species, Papua New Guinea, Indonesia. Bambusoideae, Oryzodae, Olyreae, Buergersiochloae, perennial, dimorphic, erect, unarmed, loosely tufted, auricles present, ligule a fringed membrane, plants monoecious, sexes mixed, inflorescence a narrow contracted panicle, hermaphrodite florets lacking, female spikelets above and male below, all the fertile spikelets unisexual, female spikelet lanceolate, male spikelets without glumes, two coriaceous glumes, lemma awned, palea present, 3 lodicules, staminal filaments joined, no stamens, 3 staminodes, ovary glabrous, 2 stigmas, forest, type *Buergersiochloa bambusoides* Pilg., see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 167-168, f. 1. 1914, *Blumea, Suppl.* 3(56): 56-62. 1946 [S.T. Blake, Two new grasses from New Guinea.], *Blumea* 22(3): 415-418. 1975 [F. Fijten, A taxonomic revision of *Buergersiochloa* Pilg. (Gramineae)].

Species

B. bambusoides Pilg. (*Buergersiochloa macrophylla* S.T. Blake)

New Guinea.

***Bulbilis* Raf. ex Kuntze = *Bouteloua* Lag., *Buchloe* Engelm., *Bulbilis* Kuntze**

From the Greek *bolbos* "bulb," Latin *bulbus* "a bulb."

Chloridoideae, Cynodonteae, Boutelouinae, see *Revisio Generum Plantarum* 2: 763. 1891 and *Phytologia* 37(4):

317-407. 1977, *Flora Mesoamericana* 6: 293-295. 1994, *Las Gramíneas de México* 2: 1-344. 1987, *Contributions from the United States National Herbarium* 41: 20-33. 2001.

***Bulbulus* Swallen = *Rehia* Fijten**

Latin *bulbulus* "a small bulb."

Bambusoideae, Olyreae, Olyrinae, type *Bulbulus nervatus* Swallen, see *Phytologia* 11(3): 154. 1964, *Blumea* 22(3): 416. 1975, *Brittonia* 34: 25-29. 1982, *Flora of the Guianas. Series A, Phanerogams* 545-547. 1990, *Contributions from the United States National Herbarium* 39: 109. 2000.

***Burmabambus* Keng f. = *Sinarundinaria* Nakai**

From Burma (Myanmar).

Bambusoideae, Bambuseae, Arundinariinae, type *Burmabambus elegans* (Kurz) Keng f., see *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 42: 249. 1873 and *Journal of Japanese Botany* 11(1): 1. 1935, *Journal of Bamboo Research* 1(2): 40, 173. 1982, *Contributions from the United States National Herbarium* 39: 112-113. 2000.

***Butania* Keng f. = *Arundinaria* Michx.**

From Bhutan.

Bambusoideae, Bambuseae, Arundinariinae, type *Butania pantlingii* (Gamble) Keng f., see *Flora Boreali-Americana* 1: 73-74. 1803 and *Journal of Japanese Botany* 11(1): 1. 1935, *Journal of Bamboo Research* 1(2): 42. 1982, *Contributions from the United States National Herbarium* 39: 18-24, 112-113. 2000.

C

Cabrera Lag. = *Axonopus* P. Beauv.

Panicoideae, Paniceae, Paspalinae, type *Cabrera chrysoblepharis* Lag., see *Species Plantarum* 1: 55. 1753, *Systema Naturae*, *Editio Decima* 846, 855, 1359. 1759, *Essai d'une Nouvelle Agrostographie* 12, 154. 1812, *Genera et species plantarum* 5. 1816, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 193, 195. 1834, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853], *Flora Brasiliensis* 2(2): 113. 1877 and *Contr. U.S. Natl. Herb.* 12: 142. 1908, *Proceedings of the Biological Society of Washington* 24: 132, 134. 1911, *Advancing Frontiers of Plant Sciences* 5: 1-186. 1963, *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 26(98): 13-23. 2002, *Contributions from the United States National Herbarium* 46: 116-134. 2003.

Cabralea A. Juss., Meliaceae, named for the Portuguese explorer Pedro Alvares (Alvarez) Cabral (Cabrera), ca. 1467/68-ca. 1526, navigator, in 1500 sailed from Lisbon for the East Indies, landed at Mozambique, claimed Brazil for Portugal.

Calamagrostis Adanson = *Achaeta* Fourn., *Amagris* Raf., *Ancistrochloa* Honda, *Anisachne* Keng, *Aniselytron* Merr., *Athernotus* Dulac, *Aulacolepis* Ettingsh. (Pinaceae), *Aulacolepis* Hack., *Chamaecalamus* Meyen, *Cinnagrostis* Griseb., *Deyeuxia* Clarion ex P. Beauv., *Lechlera* Steud., *Neoaulacolepis* Rauschert, *Pteropodium* Steud., *Sclerodeyeuxia* (Stapf) Pilg., *Stilpnophleum* Nevski, *Stylagrostis* Mez

A reedy grass, from the Greek *kalamos* "reed" and *agrostis*, *agrostidos* "grass, weed, couch grass."

About 230-270 species, temperate regions. Pooideae, Poodae, Aveneae, or Pooideae, Poodae, Agrostidinae, perennial, bunchgrass, leafy, unbranched, herbaceous, erect or ascending, rhizomatous or stoloniferous or caespitose or decumbent, tufted, flimsy to robust and glabrous, sometimes reedlike, auricles absent, ligule an unfringed membrane, long and linear leaf blades, plants bisexual with

narrowly paniculate inflorescence, dense or lax panicle open or contracted, bisexual spikelets compressed, plumose rachilla extended beyond the single floret, spikelets 1-flowered and narrow-lanceolate, spikelets breaking up above the persistent glumes, hermaphrodite florets, awned or unawned, awns straight or sharply bent or geniculate, 2 glumes more or less equal or subequal, lemma membranous to coriaceous, palea present, 2 free and glabrous membranous lodicules, stamens 3, ovary glabrous without the apical appendage, 2 plumose stigmas, cleistogamous or chasmogamous, native pasture species, can be invasive, some species valuable sand binder, marshland fen, wet woodland, coastal sand, in shade or in open habitats, páramos, punas, hybridization, a difficult genus often included in *Deyeuxia*, species polymorphic, type *Calamagrostis lanceolata* Roth, see *Familles des plantes*. 31, 530. Paris 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Ess. Agrostogr.* 43-44, 160. 1812, *Principes Fondamentaux de Somiologie* 27. 1814, *Observations sur les Graminées de la Flore Belgique* 126. 1824, *Conspectus Regni Vegetabilis* 50. 1828, *Reise um die Erde* 1: 456. 1834, *Nomenclator Botanicus. Editio secunda* 2: 414. 1841, *Synopsis Plantarum Glumacearum* 1: 101. 1854, *Flore de Département des Hautes-Pyrénées* 74. 1867, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 256-257, t. 2, f. 7. 1874, *Mexicanas Plantas* 2: 109. 1886, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung I* 102: 135, 147. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 3(42-43): 241-244. 1906 [1907], *Philippine Journal of Science* 5(4): 328-330. 1910, *Botanisches Archiv* 1(1): 20. 1922, *Contr. U.S. Natl. Herb.* 246: 169 1925, *Journal of Japanese Botany* 12: 18. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 19. 1947, *Journal of the Washington Academy of Sciences* 48(4): 117-118, f. 2. 1958, *Grasses of Burma* ...395, 397. 1960, *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 63(3): 229-251. 1960, *Darwiniana* 19(2-4): 404-412. 1975 [Z.E. Rúgolo de Agrasar, *Novedades en el género Deyeuxia* Clarion (Gramineae)], *Botanical Magazine* 89: 99-114. 1976 [Chromosome numbers of the genus *Calamagrostis* in Japan.], *Darwiniana* 21(2-4): 417-453. 1978, *Taxon* 31(3): 561. 1982, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann.*

Univ. Fenn. Abo., A 3: 1-12. 1982], *American Journal of Botany* 71: 285-293. 1984, *Parodiana* 4(1): 73-95. 1986, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 51-55. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 73: 294-295. 1988, *Willdenowia* 18: 243-252. 1988, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1671-1673. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Cytologia* 56: 437-452. 1991 [Cytogenetic studies on some Kashmir grasses. VIII tribe Agrostideae, Festuceae and Paniceae.], *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Flora Mesoamericana* 6: 240-241. 1994, Xenia Villavicencio, *Revision der Gattung Deyeuxia in Bolivien: eine taxonomisch-anatomische studie...* 1-304. Berlin 1995, *Flora of Ethiopia and Eritrea* 7: 51-52. 1995, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996, *Flora Mediterranea* 8: 251-262. 1998, *Opera Botanica* 137: 1-42. 1999, *Am. J. Bot.* 86: 1-16, 17-31. 1999, *Am. J. Bot.* 87: 591-596. 2000, *Am. J. Bot.* 88: 1058-1064, 1065-1070, 1863-1867. 2001, *Am. J. Bot.* 89: 346-351, 642-654. 2002, *Am. J. Bot.* 90: 85-92, 270-277, 364-369. 2003, *Contributions from the United States National Herbarium* 48: 191-227. 2003, *Am. J. Bot.* 91: 1147-1153, 1333-1344, 2004-2012, 2013-2021. 2004, *Am. J. Bot.* 92: 422-431. 2005, *Ecography* 28(1): 37-48. Feb 2005, *Molecular Plant Pathology* 6(2): 99-111. Mar 2005, *Oikos* 109(1): 187-195. Apr 2005, *Oikos* 109(2): 239-254. Apr 2005, Erwin B. Adema, Johan Van de Koppel, Harro A. J. Meijer and Ab P. Grootjans, "Enhanced nitrogen loss may explain alternative stable states in dune slack succession." *Oikos* 109(2): 374-386. Apr 2005, *Global Change Biology* 11(4): 564-574. Apr 2005, *The Professional Geographer* 57(2): 185-197. May 2005, *Global Change Biology* 11(6): 869-880. June 2005, *Conservation Biology* 19(3): 955-962. June 2005.

Species

C. sp.

in English: reed grass

C. alba (J. Presl) Steud. (*Calamagrostis alba* subsp. *tricholemma* Roseng., B.R. Arrill. & Izag.; *Calamagrostis armata* (Döll) Parodi; *Calamagrostis armata* var. *subcontracta* (Döll) Parodi; *Calamagrostis montevidensis* Nees var. *armata* Döll; *Calamagrostis montevidensis* var. *subcontracta* Döll; *Deyeuxia alba* J. Presl; *Deyeuxia alba* subsp. *alba*; *Deyeuxia armata* (Döll) Parodi).

Southern America, Uruguay, Argentina, Brazil. Perennial, lemma glabrous, palatable, useful for erosion control, common on sandy fields, see *Reliquiae Haenkeanae* 1(4-5): 248. 1830, *Nomenclator Botanicus. Editio secunda* 1: 249. 1840, *Flora Brasiliensis* 2(3): 55. 1878, *Revista Argentina de Agronomía* 16(2): 68-70. 1949, *Revista Argentina de Agronomía* 20(1): 14. 1953, *Gramíneas Uruguayas* 26-27, f. 4. 1970.

C. alba (J. Presl) Steud. subsp. *tricholemma* Roseng., B.R. Arrill. & Izag.

Uruguay, Brazil. Perennial, silky lemma, see *Gramíneas Uruguayas* 26-27, f. 4. 1970.

C. amoena (Pilg.) Pilg. (*Calamagrostis filifolia* (Wedd.) Henrard, nom. illeg., non *Calamagrostis filifolia* Merr.; *Calamagrostis filifolia* (Wedd.) Pilg, nom. illeg., non *Calamagrostis filifolia* Merr.; *Calamagrostis trichophylla* Pilg.; *Deyeuxia amoena* Pilg.; *Deyeuxia filifolia* Wedd.).

South America, Philippines. See *Bulletin de la Société Botanique de France* 22: 178. 1875, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 28. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 60, 67. 1908, *Mededeelingen van's Rijks-Herbarium* 40: 61. 1921.

C. amoena (Pilg.) Pilg. var. ***amoena***

Southern America.

C. amoena (Pilg.) Pilg. var. ***festucoides*** (Wedd.) Soreng (*Deyeuxia festucoides* Wedd.; *Deyeuxia filifolia* var. *festucoides* (Wedd.) Rúgolo & X. Villavicencio)

Southern America. See *Bulletin de la Société Botanique de France* 22: 178, 179. 1875 and *Contributions from the United States National Herbarium* 48: 193. 2003.

C. ampliflora Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 11: 16. 1960.

C. angustifolia Kom. (*Calamagrostis purpurea* subsp. *angustifolia* (Kom.) Vorosch.; *Deyeuxia angustifolia* (Kom.) Y.L. Chang, nom. illeg., non *Deyeuxia angustifolia* Vickery)

Russia. See *Gram. Unifl. Sesquifl.* 219. 1824.

C. arundinacea (L.) Roth (*Agrostis arundinacea* L.; *Agrostis arundinacea* J. Presl, nom. illeg., non *Agrostis arundinacea* L.; *Arundo montana* Gaudin; *Arundo sylvatica* Schrad.; *Calamagrostis haenkeana* Hitchc.; *Calamagrostis parviflora* Rupr.; *Calamagrostis pyramidalis* Host; *Calamagrostis sylvatica* (Schrad.) DC.; *Cinna agrostioidea* P. Beauv.; *Deyeuxia arundinacea* P. Beauv.; *Deyeuxia arundinacea* (L.) Jansen, nom. illeg., non *Deyeuxia arundinacea* Phil.; *Deyeuxia montana* P. Beauv.; *Deyeuxia pyramidalis* (Host) Veldkamp; *Deyeuxia sylvatica* (Schrad.) Kunth; *Deyeuxia sylvatica* (Schrad.) Vasey, nom. illeg., non *Deyeuxia sylvatica* (Schrad.) Kunth).

Asia Minor; Europe. Perennial bunchgrass, vigorous, tufted, unbranched and glabrous, erect and slender to stout, creeping and short rhizomes, leaves linear and scabrous, inflorescence a contracted panicle, awn geniculate and stout, useful for erosion control, usually in open meadows, open habitats, rocky range, slopes, see *Species Plantarum* 1: 61. 1753, *Tentamen Florae Germanicae* 2(1): 89. 1789, *Flora Germanica* 1: 218, t. 4, f. 7. 1806, *Alpina* 3: 19. 1808, *Icones et Descriptiones Graminum Austriacorum* 4: 28, t. 49. 1809, *Essai d'une Nouvelle Agrostographie* 44, 147, 160, pl. 15, f. 11. 1812, *Flore Française. Troisième Édition*

5(6): 253. 1815, *Révision des Graminées* 1: 77. 1829, *Reliquiae Haenkeanae* 1(4-5): 238. 1830, *Beiträge zur Pflanzenkunde des Russischen Reiches* 4: 36. 1845, *The Grasses of the United States* 28. 1883 and *Contr. U.S. Natl. Herb.* 24: 185, 371. 1927, *Acta Botanica Neerlandica* 1(3): 470-471. 1952, *Blumea* 37(1): 230. 1992, *Taxon* 49(2): 243. 2000.

C. arundinacea (L.) Roth var. **sciuroides** (Franch. & Sav.) Hack. (*Calamagrostis sciuroides* Franch. & Sav.)

Asia. See *Enumeratio plantarum in Japonia sponte crescentium*. 2: 600. Paris [1873] 1875-1879, *Bulletin de l'Herbier Boissier* 7(9): 652. 1899.

C. aurea (Munro ex Wedd.) Hack. ex Sodiro (*Calamagrostis ligulata* (Kunth) Hitchc.; *Calamagrostis longigluma* Pilg.; *Deyeuxia aurea* Munro ex Wedd.; *Stylagrostis longigluma* (Pilg.) Mez)

Ecuador. Páramos, see *Nova Genera et Species Plantarum* 1: 145. 1815 [1816], *Bulletin de la Société Botanique de France* 22: 176 (perhaps 156), 179. 1875, *Anales de la Universidad Central del Ecuador* 3(25): 481. 1889 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 71. 1908, *Botanisches Archiv* 1(1): 20. 1922, *Contributions from the United States National Herbarium* 24(8) 372. 1927.

C. avenoides (Hook.f.) Cockayne (*Agrostis avenoides* Hook.f.; *Deyeuxia avenoides* (Hook.f.) J. Buch.)

New Zealand. Useful for erosion control, see *Handbook of the New Zealand Flora* 330. 1864, *Indigenous Grasses of New Zealand* 11. 1880 and L. Cockayne (1855-1934), *New Zealand Department of Lands Report Botanical Survey Tongariro National Park* 35. Wellington 1908 (Survey of the Tongariro National Park [Dept. of Lands N.Z., C.-11, 1908]. Botanical reports to the New Zealand Department of Lands. 1907-1929).

in English: mountain oat grass

C. bogotensis (Pilg.) Pilg. (*Calamagrostis nuda* (Pilg.) Pilg.; *Deyeuxia bogotensis* Pilg.; *Deyeuxia nuda* Pilg.)

Southern America. Páramos, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 712. 1898, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 29. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 60. 1908.

C. bolanderi Thurber (*Calamagrostis varia* Bol. ex Thurber; *Deyeuxia bolanderi* (Thurb.) Vasey; *Deyeuxia bolanderi* (Thurb.) Scribn.)

U.S., California. Swamps, see *Geological Survey of California, Botany* 2: 280. 1880, *Bulletin of the Torrey Botanical Club* 10: 8. 1883, *The Grasses of the United States* 28. 1883.

in English: Bolander's reed grass

C. boliviensis Hack. (*Calamagrostis heterophylla* (Wedd.) Pilg.; *Deyeuxia boliviensis* (Hack.) X. Villavicencio; *Deyeuxia heterophylla* Wedd.)

Southern America. See *Bulletin de la Société Botanique de France* 22: 177. 1875 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 156. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 64. 1908.

C. boyacensis Swallen & García-Barr. (*Calamagrostis weberbaueri* Tovar)

Colombia, Boyaca. See *Caldasia* 2(8): 302, f. D. 1943, *Publicaciones del Museo de Historia Natural "Javier Prado."* Serie B. Botánica 32: 3. 1984.

C. brachytricha Steud. (*Arundo sylvatica* Schrad.; *Calamagrostis arundinacea* subsp. *brachytricha* (Steud.) Tzvelev; *Calamagrostis arundinacea* var. *brachytricha* (Steud.) Hack.; *Calamagrostis brevipila* Steud. ex Miq.; *Deyeuxia arundinacea* var. *brachytricha* (Steud.) P.C. Kuo & S.L. Lu; *Deyeuxia brachytricha* (Steud.) Chang; *Deyeuxia brachytricha* (Steud.) Veldkamp; *Deyeuxia sylvatica* (Schrad.) Kunth; *Deyeuxia sylvatica* (Schrad.) Vasey, nom. illeg., non *Deyeuxia sylvatica* (Schrad.) Kunth; *Deyeuxia sylvatica* var. *brachytricha* (Steud.) Rendle)

China, Japan, Russia. See *Tentamen Florae Germanicae* 2(1): 89. 1789, *Synopsis Plantarum Glumacearum* 1: 189. 1854, *Bulletin de l'Herbier Boissier* 7(9): 652. 1899 and S. Liu (1897-1975), *Claves plantarum Chinae Boreali-orientalis* 492. [Beijing] 1959 [Index of Latin plant names: pp. 623-655], *The Gardens' Bulletin Singapore* 27(2): 220. 1984 [1985], *Journal of Japanese Botany* 76: 231-236, f. 1a-d, f. 2, f. 3. 2001.

C. breviaristata (Wedd.) Pilg. (*Calamagrostis variegata* (Phil.) Kuntze; *Deyeuxia breviaristata* Wedd.; *Deyeuxia mutica* Wedd.; *Deyeuxia variegata* Phil.)

Southern America. See *Bulletin de la Société Botanique de France* 22: 177, 179-180. 1875, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 83. 1891, *Revisio Generum Plantarum* 3: 345. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 66. 1908.

C. brevifolia (J. Presl) Steud. (*Deyeuxia brevifolia* J. Presl)

Southern America. See *Reliquiae Haenkeanae* 1(4-5): 248. 1830, *Nomenclator Botanicus. Editio secunda* 1: 249. 1840.

C. brevifolia (J. Presl) Steud. var. **brevifolia**

Southern America.

C. brevifolia (J. Presl) Steud. var. **expansa** (Rúgolo & X. Villavicencio) Soreng (*Deyeuxia brevifolia* var. *expansa* Rúgolo & X. Villavicencio)

Southern America, Bolivia. See *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 125. 1995, *Contributions from the United States National Herbarium* 48: 194. 2003.

C. breweri Thurb. (*Calamagrostis lemmonii* Kearney; *Deyeuxia breweri* (Thurb.) Vasey)

North America, U.S., California. See *Geological Survey of California, Botany* 2: 280-281. 1880, *The Grasses of the United States* 28. 1883, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 16-17. 1898.

C. cabreræ Parodi (*Deyeuxia cabreræ* (Parodi) Parodi) (named for the Argentine botanist Angel Lulio Cabrera, 1908-1999)

Southern America, Argentina. See *Revista Argentina de Agronomía* 15(1): 59, f. 3. 1948, *Revista Argentina de Agronomía* 20(1): 14. 1953.

C. cabreræ Parodi var. **aristulata** (Rúgolo & X. Villavicencio) Soreng (*Deyeuxia cabreræ* var. *aristulata* Rúgolo & X. Villavicencio)

Southern America. See *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 126, f. 1. 1995, *Contributions from the United States National Herbarium* 48: 195. 2003.

C. cabreræ Parodi var. **cabreræ**

Southern America.

C. cabreræ Parodi var. **maxima** (Rúgolo) Soreng (*Deyeuxia cabreræ* var. *maxima* Rúgolo)

Southern America. See *Parodiana* 4(1): 106, f. 3a-e. 1986, *Contributions from the United States National Herbarium* 48: 195. 2003.

C. cabreræ Parodi var. **trichopoda** (Parodi ex Rúgolo) Soreng (*Deyeuxia cabreræ* var. *trichopoda* Parodi ex Rúgolo)

Southern America. See *Parodiana* 4(1): 107, f. 3f-k. 1986, *Contributions from the United States National Herbarium* 48: 195. 2003.

C. cainii Hitchc. (for the American botanist Stanley Adair Cain, 1902-1995, botanical collector (1920-1937 Southern Appalachian Mts., Smokey Mts., Indiana, Tennessee), author of "Dale J. Hagenah (1908-1971): an outstanding Michigan botanist." *Michigan Bot.* 11: 60-66. 1972, *Foundations of Plant Geography*. New York 1971. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 297. 1965; J. Ewan, editor, *A Short History of Botany in the United States*. 119, 121, 122, 128, 130. 1969; Stanley A. Cain and G.M. de Oliveira Castro, *Manual of Vegetation Analysis* New York 1959.

America. See *Journal of the Washington Academy of Sciences* 24(11): 480. 1934.

C. calderillensis Pilg. (*Deyeuxia calderillensis* (Pilg.) Rúgolo)

America, Bolivia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 72.

1908, *Boletín de la Sociedad Argentina de Botánica* 30(1-2): 112. 1994.

C. canadensis (Michx.) P. Beauv. (*Arundo agrostoides* Pursh; *Arundo canadensis* Michx.; *Arundo cinnoides* Muhl.; *Arundo conoides* Eaton; *Arundo fissa* Willd. ex Steud.; *Calamagrostis agrostoides* (Pursh) Pursh ex Spreng.; *Calamagrostis alaskana* Kearney; *Calamagrostis anomala* Suksd.; *Calamagrostis atropurpurea* Nash; *Calamagrostis blanda* Beal; *Calamagrostis canadensis* var. *campestris* Kearney; *Calamagrostis canadensis* var. *pallida* Stebbins; *Calamagrostis canadensis* var. *robusta* Vasey ex Rothr.; *Calamagrostis cinnoides* (Muhl.) W.P.C. Barton; *Calamagrostis columbiensis* Nutt. ex A. Gray; *Calamagrostis hirtigluma* Steud.; *Calamagrostis langsдорфii* var. *acuminata* (Vasey ex Shear & Rydb.) Litw.; *Calamagrostis mexicana* Nutt.; *Calamagrostis michauxii* Trin. ex Steud.; *Calamagrostis oregonensis* Buckley; *Calamagrostis pallida* C. Mueller; *Calamagrostis pallida* Vasey & Scribn. ex Vasey, nom. illeg., non *Calamagrostis pallida* C. Mueller; *Calamagrostis scribneri* Beal; *Calamagrostis scribneri* Beal var. *imberbis* Stebbins; *Cinna purshii* Kunth; *Deyeuxia canadensis* (Michx.) Munro ex Hook.)

Northern America, Canada, U.S. Perennial bunchgrass, vigorous, densely clumped, leafy stems, rhizomatous, inflorescence erect, panicles of small spikelets, long hairs on florets, forage, fodder, usually on disturbed sites, harsh environments, tundra locations, open prairies, wooded hillsides, borders of marshes, see *Flora Boreali-Americana* 1: 73. 1803, *Essai d'une Nouvelle Agrostographie* 15, 152, 157. 1812, *Flora Americae Septentrionalis; or, ...* 1: 86. 1814, *Descriptio uberior Graminum* 187. 1817, *The Genera of North American Plants* 1: 46. 1818, *Manual of the Flora of the Northern States and Canada* edition 2 147. 1818, W.P.C. Barton (1786-1856), *Compendium Florae Philadelphicae* (containing a description of the indigenous and naturalized plants found within a circuit of 10 miles around Philadelphia) 1: 45. 1818, *Gram. Unifl. Sesquifl.* 225, t. 4, f. 10. 1824, *Systema Vegetabilium, editio decima sexta* 1: 252. 1825, *Révision des Graminées* 1: 67. 1829, *Nomenclator Botanicus. Editio secunda* 1: 144. 1840, *Synopsis Plantarum Glumacearum* 1: 188. 1854, *Annales Botanicae Systematicae* 6: 986. 1861, *Transactions of the Linnean Society of London* 23: 345. 1861, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 92, 334. 1862, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi — Botany* 6: 285. 1878 [1879], *Contributions from the United States National Herbarium* 3(1): 79. 1892, *Grasses of North America for Farmers and Students* 2: 343, 349. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 26. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 31-32. 1898 and *Bulletin of the New York Botanical Garden* 2(6): 153-154. 1901, *Allgemeine*

Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie 12(3): 43. 1906, *Rhodora* 32: 45-46. 1930, MacDonald S. E. V. J. Lieffers, "Population variation, outcrossing, and colonization of disturbed areas by *Calamagrostis canadensis* — evidence from allozyme analysis." *American Journal of Botany* 78: 1123. 1991, *Contr. U.S. Natl. Herb.* 48: 192. 2003.

in English: bluejoint, bluejoint reedgrass, Canada reedgrass, Canada bluejoint

C. canadensis (Michx.) P. Beauv. var. **canadensis** (*Calamagrostis anomala* Suksdorf; *Calamagrostis atropurpurea* Nash; *Calamagrostis blanda* Beal; *Calamagrostis canadensis* subsp. *canadensis*; *Calamagrostis canadensis* var. *campestris* Kearney; *Calamagrostis canadensis* var. *dubia* (Scribn. & Tweedy) Vasey; *Calamagrostis canadensis* var. *pallida* (Vasey & Scribn.) Stebbins; *Calamagrostis canadensis* var. *robusta* Vasey; *Calamagrostis canadensis* var. *typica* Stebbins; *Calamagrostis dubia* Bunge; *Calamagrostis dubia* (Scribn. & Tweedy) Scribn. ex Vasey, nom. illeg., non *Calamagrostis dubia* Bunge; *Calamagrostis expansa* (Munro ex Hillebr.) A.S. Hitchc. var. *robusta* (Vasey) Stebbins; *Calamagrostis inexpansa* var. *cuprea* Kearney; *Calamagrostis inexpansa* var. *robusta* (Vasey) Stebbins; *Calamagrostis langsdorfii* var. *acuminata* (Vasey ex Shear & Rydb.) Litw.; *Calamagrostis langsdorfii* var. *scribneri* (Beal) Jones; *Calamagrostis pallida* C. Mueller; *Calamagrostis pallida* Vasey & Scribn. ex Vasey, nom. illeg., non *Calamagrostis pallida* C. Mueller; *Calamagrostis scribneri* Beal; *Calamagrostis scribneri* var. *scribneri*; *Cinna purshii* Kunth; *Deyeuxia dubia* Scribn. & Tweedy)

Northern America. Perennial, in shallow water, marshy places, open prairies, see *Gram. Unifl. Sesquifl.* 225, t. 4, f. 10. 1824, *Révision des Graminées* 1: 67. 1829, *North American Gramineae and Cyperaceae* 1: 20. 1834, A.A. von Bunge (1803-1890), *Beitrag zur Kenntniss der Flora Russlands und der Steppen Central-Asiens ...* St. Petersburg 1852, *Annales Botanicae Systematicae* 6: 986. 1861, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi Botany* 6: 285. 1878 [1879], *Botanical Gazette* 11: 174. 1886, *Contributions from the United States National Herbarium* 3(1): 79-80. 1892, *Grasses of North America for Farmers and Students* 2: 343, 349. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 26. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 31, 37. 1898 and *Bulletin of the New York Botanical Garden* 2(6): 153-154. 1901, *Contributio Botanice Universitatis "Babes-Bolyai"* 14: 9. Cluj-Napoca 1912, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 12(3): 43. 1906, *Rhodora* 32: 45. 1930.

in English: bluejoint, bluejoint reedgrass, Canada reedgrass, Canada bluejoint

C. canadensis (Michx.) P. Beauv. var. **imberbis** (Stebbins) C.L. Hitchc. (*Calamagrostis anomala* Suksd.; *Calamagrostis scribneri* var. *imberbis* Stebbins)

Northern America. Perennial, see *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 12(3): 43. 1906, *Rhodora* 32: 46. 1930, *Vascular Plants of the Pacific Northwest* 1: 524. 1969.

in English: bluejoint, bluejoint reedgrass

C. canadensis (Michx.) P. Beauv. var. **langsdorfii** (Link) Inman (*Agrostis groenlandica* Steud.; *Arundo langsdorfii* Link; *Calamagrostis baicalensis* Litv.; *Calamagrostis canadensis* subsp. *langsdorfii* (Link) Hultén; *Calamagrostis canadensis* var. *lactea* (Beal) C.L. Hitchc.; *Calamagrostis canadensis* var. *scabra* (J. Presl) A.S. Hitchc.; *Calamagrostis columbiensis* Nutt. ex A. Gray; *Calamagrostis confusa* V.N. Vassil.; *Calamagrostis fusca* Kom.; *Calamagrostis hal-leriana* var. *langsdorfii* (Link) Hack.; *Calamagrostis hirtigluma* Steud.; *Calamagrostis x lactea* Beal (pro sp.); *Calamagrostis langsdorfii* (Link) Trin.; *Calamagrostis nubila* Louis-Marie; *Calamagrostis purpurea* subsp. *langsdorfii* (Link) Tzvelev; *Calamagrostis scabra* J. Presl; *Calamagrostis sitkensis* Trin. ex Ledeb.; *Calamagrostis unilateralis* Petrov; *Calamagrostis yendoana* Honda; *Deyeuxia groenlandica* Munro ex Hook.f.; *Deyeuxia langsdorfii* (Link) Kunth; *Deyeuxia preslii* Kunth)

Northern America. Perennial, see *Essai d'une Nouvelle Agrostographie* 15, 152, 157. 1812, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 74. 1821, *Gram. Unifl. Sesquifl.* 225, t. 4, f. 10. 1824, *Révision des Graminées* 1: 77. 1829, *Reliquiae Haenkeanae* 1(4-5): 234. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 243-244. 1833, *Flora Rossica* 4(13): 433. 1852, *Synopsis Plantarum Glumacearum* 1: 175, 188. 1854, *Transactions of the Linnean Society of London* 23: 345. 1862, *Nuovo Giornale Botanico Italiano* 25: 99. 1893 and *Rhodora* 24: 143. 1922, *Botanical Magazine* (Tokyo) 41: 635. 1927, *Flora Iakutiae* 1: 201. 1930, *American Journal of Botany* 21(3): 135. 1934, *Acta Universitatis Lundensis, n.s.* 38(1): 161-163. 1942, *Rhodora* 46: 296, pl. 836, f. 1-4. 1944, *Novosti Sist. Vyss. Rast.* 1965: 34. 1965.

in English: bluejoint, bluejoint reedgrass

C. canadensis (Michx.) P. Beauv. var. **macouniana** (Vasey) Stebbins (*Calamagrostis macouniana* (Vasey) Vasey; *Deyeuxia macouniana* Vasey)

Northern America. Perennial, see *Botanical Gazette (London)* 10: 297. 1885, *Contributions from the United States National Herbarium* 3(1): 81. 1892 and *Rhodora* 32: 41. 1930.

in English: bluejoint, Macoun's reedgrass, bluejoint reedgrass

C. canescens (Weber ex F.H. Wigg.) Roth (*Arundo calamagrostis* L.; *Arundo canescens* Weber ex F.H. Wigg.; *Arundo*

canescens F.H. Wigg.; *Calamagrostis canescens* (Wigg.) Roth; *Calamagrostis lanceolata* Roth; *Calamagrostis lanceolata* Stokes, nom. illeg., non *Calamagrostis lanceolata* Roth; *Calamagrostis lanceolata* Aitch., nom. illeg., non *Calamagrostis lanceolata* Roth; *Calamagrostis lanceolata* Trin. ex Steud., nom. illeg., non *Calamagrostis lanceolata* Roth; *Calamagrostis lanceolata* var. *somalensis* Chiov.; *Calamagrostis lithuanica* Besser)

Russia, Siberia; Europe. Perennial, loosely tufted, rhizomatous, leaves linear, loose and narrow panicle, spikelets purplish, glumes lanceolate, lemma hyaline and shortly awned at the tip, ornamental, useful for erosion control, see *Species Plantarum* 82. 1753, *Primitiae florum holsaticae*. Quas praeside D. Ioh. Christiano Kerstens ... publice defendet auctor Fridericus Henricus Wiggers. Kiliae [Kiel], litteris M.F. Bartschii Acad. Typogr. 1780 [D. Ioh. Christianus Kerstens, praeses. Fridericus Henricus Wiggers, respondent.], *Tentamen Florae Germanicae* 1: 34. 1788, *Tentamen Florae Germanicae* 2(1): 93. 1789, *An Arrangement of British Plants*, third edition 2: 122. 1796, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840, *Journal of the Linnean Society, Botany* 18: 107. 1880 and *Watsonia* 20: 51-60. 1994.

in English: purple smallreed

C. *canescens* (Weber ex F.H. Wigg.) Roth subsp. *canescens*
Russia, Siberia; Europe. Perennial.

C. *canescens* (Weber ex F.H. Wigg.) Roth subsp. *vilnensis* (Besser) H. Scholz (*Calamagrostis vilnensis* Besser ex Schult. & Schult.f.; *Calamagrostis x vilnensis* Besser)

Germany and Baltic Region, Europe. Perennial.

C. *capillaris* Nees ex Steud. (*Agrostis capillaris* L.; *Agrostis longiberbis* Hack. ex L.B. Sm.)

Brazil. Panicle with flexuous branches, common in damp places, see *Species Plantarum* 1: 62. 1753, *Nomenclator Botanicus. Editio secunda* 1: 249. 1840, *Synopsis Plantarum Glumacearum* 1: 188. 1854 and *Phytologia* 22(2): 88, f. 1-3. 1971.

C. *carchiensis* Laegaard

Ecuador. Páramos, see *Novon* 8(1): 23-25, f. 1A. 1988.

C. *cephalantha* Pilg. (*Calamagrostis lagurus* (Wedd.) Pilg., nom. illeg., non *Calamagrostis lagurus* (L.) Koeler; *Deyeuxia curta* var. *longearistata* Türpe; *Deyeuxia lagurus* Wedd.)

South America, Bolivia, Peru. Open fields, see *Bulletin de la Société Botanique de France* 22: 176 [or 156?] 179-180. 1875 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 61. 1908, *Contribuciones a la Flora de Bolivia* 1: 74. 1910, *Lilloa* 31: 115, f. 1. 1962.

C. *chaseae* Luces

Venezuela. See *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 6-8, f. 4. 1953.

C. *chrysantha* (J. Presl) Steud. (*Calamagrostis chrysostachya* (E. Desv.) Kuntze; *Calamagrostis chrysostachya* (E. Desv.) V.N. Vassil., nom. illeg., non *Calamagrostis chrysostachya* (E. Desv.) Kuntze; *Calamagrostis mutica* Steud. ex Lechler; *Calamagrostis nitida* Hack.; *Deyeuxia chrysantha* J. Presl; *Deyeuxia chrysostachya* E. Desv.; *Deyeuxia leiopoda* Wedd.; *Deyeuxia phalaroides* Wedd.; *Stylagrostis chrysantha* (J. Presl) Mez; *Stylagrostis chrysostachya* (E. Desv.) Mez; *Stylagrostis leiopoda* (Wedd.) Mez; *Stylagrostis phalaroides* (Wedd.) Mez)

America. See *Reliquiae Haenkeanae* 1(4-5): 247. 1830, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840, *Flora Chilena* 6: 323, t. 78, f. 2. 1854, *Berberides Americae Australis* 56. 1857, *Bulletin de la Société Botanique de France* 22: 177, 180. 1875, *Revisio Generum Plantarum* 3: 344. 1898 and *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 168. 1911, *Botanisches Archiv* 1(1): 20. 1922, *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 63: 243. 1961.

C. *chrysantha* (J. Presl) Steud. var. *chrysantha* (*Deyeuxia chrysantha* var. *chrysantha*)

America. See *Reliquiae Haenkeanae* 1(4-5): 247. 1830.

C. *chrysantha* (J. Presl) Steud. var. *phalaroides* (Wedd.) Soreng (*Deyeuxia chrysantha* var. *phalaroides* (Wedd.) X. Villavicencio; *Deyeuxia phalaroides* Wedd.; *Stylagrostis phalaroides* (Wedd.) Mez)

America. See *Bulletin de la Société Botanique de France* 22: 177, 180. 1875 and *Botanisches Archiv* 1(1): 20. 1922, *Contributions from the United States National Herbarium* 48: 198. 2003.

C. *chrysostachya* (E. Desv.) Kuntze (*Calamagrostis chrysantha* (J. Presl) Steud.; *Calamagrostis chrysostachya* (E. Desv.) V.N. Vassil., nom. illeg., non *Calamagrostis chrysostachya* (E. Desv.) Kuntze; *Deyeuxia chrysostachya* E. Desv.; *Stylagrostis chrysostachya* (E. Desv.) Mez)

South America. See *Nomenclator Botanicus. Editio secunda* 1: 250. 1840, *Flora Chilena* 6: 323, t. 78, f. 2. 1854, *Revisio Generum Plantarum* 3: 344. 1898 and *Botanisches Archiv* 1(1): 20. 1922, *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 63: 243. 1961.

C. *cleefii* Escalona

South America, Colombia. Páramos, see *Phytologia* 31: 324-325. 1975, *Phytologia* 32: 312-314, 417. 1975, *Phytologia* 38: 12. 1977, *Brittonia* 30: 43. 1978, *Phytologia* 47: 122-123. 1980, A.M. Cleef, *The Vegetation of the Páramos of the Colombian Cordillera Oriental*. Vaduz 1981 [Dissertationes botanicae, Band 61.], *Caldasia* 13: 691. 1983, *Phytologia* 65(5): 339, f. 1. 1988, *Anales Jard. Bot. Madrid* 51: 76. 1993, *Revista Acad. Colomb. Ci. Exact.* 19: 253. 1994, *Novon* 5: 384. 1995, *Revista Acad. Columb. Ci. Exact.* 23(88): 332. 1999.

C. coahuilensis P.M. Peterson, Soreng & Valdés-Reyna
America, Mexico. See *Sida* 21(1): 312, 314, f. 1. 2004.

C. coarctata (Torr.) Eaton (*Agrostis glauca* Muhl.; *Arundo canadensis* Nutt. ex Steud.; *Arundo cinnoides* Muhl.; *Arundo coarctata* (Kunth) Poir.; *Arundo coarctata* Torr., nom. illeg., non *Arundo coarctata* (Kunth) Poir.; *Calamagrostis cinnoides* W. Bart.; *Calamagrostis cinnoides* (Muhl.) W.P.C. Barton; *Calamagrostis coarctata* Torrey ex Eaton; *Calamagrostis coarctata* (Kunth) Steud., nom. illeg., non *Calamagrostis coarctata* Torr. ex Eaton; *Calamagrostis nuttalliana* Steud.; *Deyeuxia coarctata* Kunth; *Deyeuxia nuttalliana* (Steud.) Vasey)

Northern America, U.S., Canada. Perennial, see *Catalogus Plantarum Americae Septentrionalis* 13. 1813, *Nova Genera et Species Plantarum* 1: 143. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 704. 1816, *Descriptio uberior Graminum* 76. 1817, *Compendium Florae Philadelphiae* 1: 45. 1818, *A Flora of the Northern and Middle Sections of the United States* 1: 94. 1823, *A Manual of Botany for the Northern States* 144. 1829, *Nomenclator Botanicus* edition 2 1: 144, 250-251. 1840, *The Grasses of the United States* 28. 1883.

in English: Arctic reedgrass

C. compacta (Munro ex Hook.f.) Hack. ex Paulsen (*Calamagrostis compacta* (Munro) Hack.; *Calamagrostis holciformis* Jaub. & Spach; *Deyeuxia compacta* Munro ex Hook.f.; *Deyeuxia holciformis* (Jaub. & Spach) Bor)

Asia, Afghanistan, Iran, northwest Himalaya. Panicle compact, see *Illustrationes Plantarum Orientalium* 4: 61, t. 340. 1851, *The Flora of British India* 7(22): 267. 1897 [1896], *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 55: 167. 1903, *Grasses of Burma, Ceylon, India and Pakistan ...* 397-398. 1960.

C. cordechii Govaerts (*Calamagrostis ciliata* Nees ex Steud.; *Deyeuxia ciliata* Rúgolo & X. Villavicencio)

South America, Bolivia. See *Synopsis Plantarum Glumacearum* 1: 193. 1855 [1854] and *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 126, f. 2. 1995.

C. cordechii Govaerts var. **cordechii** (*Deyeuxia ciliata* var. *ciliata*)

South America.

C. cordechii Govaerts var. **glabrescens** (Rúgolo & X. Villavicencio) Soreng (*Deyeuxia ciliata* var. *glabrescens* Rúgolo & X. Villavicencio)

Southern America, Bolivia. See *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 128, f. 3. 1995, *Contributions from the United States National Herbarium* 48: 199. 2003.

C. crispa (Rúgolo & X. Villavicencio) Govaerts (*Deyeuxia crispa* Rúgolo & X. Villavicencio)

America, Argentina. See *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 128, f. 4. 1995, *World Checklist of Seed Plants* 3(1): 10. 1999.

C. cryptolopha (Wedd.) Hitchc. (*Deyeuxia cryptolopha* Wedd.)

America. See *Bulletin de la Société Botanique de France* 22: 176 (156?), 179. 1875 and *Contributions from the United States National Herbarium* 24(8): 374. 1927.

C. curta (Wedd.) Hitchc. (*Deyeuxia curta* Wedd.)

America. See *Bulletin de la Société Botanique de France* 22: 176 (156?), 179. 1875 and *Contributions from the United States National Herbarium* 24(8): 376. 1927.

C. curtoides (Rúgolo & X. Villavicencio) Govaerts (*Deyeuxia curtoides* Rúgolo & X. Villavicencio)

America. See *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 132, f. 5. 1995, *World Checklist of Seed Plants* 3(1): 10. 1999.

C. curvula (Wedd.) Pilg. (*Calamagrostis tenuifolia* (Phil.) R.E. Fr.; *Calamagrostis variegata* (Phil.) Kuntze; *Deyeuxia curvula* Wedd.; *Deyeuxia tenuifolia* Phil.; *Deyeuxia variegata* Phil.)

South America. See *Bulletin de la Société Botanique de France* 22: 178-179. 1875, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 83. 1891, *Revisio Generum Plantarum* 3: 345. 1898 and *Nova Acta Regiae Societatis Scientiarum Upsaliensis* IV. 1: 177. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 60. 1908.

C. cuzcoensis Tovar

South America, Peru. See *Publicaciones del Museo de Historia Natural "Javier Prado." Serie B. Botánica* 33: 11. 1985.

C. densiflora (J. Presl) Steud. (*Calamagrostis densiflora* (Blytt) Müll. Hal. ex Walp., nom. illeg., non *Calamagrostis densiflora* (J. Presl) Steud.; *Deyeuxia densiflora* J. Presl)

America. See *Reliquiae Haenkeanae* 1(4-5): 247. 1830, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840, *Norsk Flora* 140. 1847, *Annales Botanicae Systematicae* 6: 986. Leipzig 1861 [W.G. Walpers, editor].

C. deschampsoides Trin. (*Calamagrostis bracteolata* V.N. Vassil.; *Calamagrostis deschampsiiiformis* C.E. Hubb.; *Calamagrostis deschampsoides* subsp. *macrantha* Piper ex Scribn. & Merr.; *Calamagrostis deschampsoides* var. *churhilliana* Polunin ex Scoggan; *Calamagrostis deschampsoides* var. *macrantha* (Piper ex Scribn. & Merr.) Tzvelev; *Calamagrostis festuciformis* V.N. Vassil.; *Calamagrostis macrantha* (Piper ex Scribn. & Merr.) V. Vassil.; *Calamagrostis miyabei* Honda; *Deyeuxia deschampsoides* (Trin.) Scribn.)

Canada, Russia, Bering, Alaska. See *Species Graminum* 3: t. 354. 1836, *Bulletin of the Torrey Botanical Club* 10: 8. 1883 and, *Contributions from the United States National Herbarium* 13(3): 59. 1910, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 142. 1931, *Feddes Repertorium* 68: 233. 1963, *Zlaci SSSR* 306. 1976, *The Flora of Canada* 2: 256. 1978, *Bulletin of the British Museum (Natural History)*, *Botany* 8: 386. 1981.

C. deserticola (Phil.) Phil. (*Deyeuxia deserticola* Phil.)

South America, Chile. See *Florula Atacamensis seu Enumeratio ...* 55. 1860, *Anales de la Universidad de Chile* 94: 21. 1896.

C. deserticola (Phil.) Phil. var. *breviaristata* (Rúgolo & X. Villavicencio) Soreng (*Deyeuxia deserticola* var. *breviaristata* Rúgolo & X. Villavicencio)

Southern America, Bolivia. See *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 134, f. 6. 1995, *Contributions from the United States National Herbarium* 48: 200. 2003.

C. deserticola (Phil.) Phil. var. *deserticola* (*Deyeuxia deserticola* var. *deserticola*)

South America.

C. diemii (Rúgolo) Soreng (*Deyeuxia diemii* Rúgolo) (for José Diem, 1899-1986, author of "Pteridófitas nuevas del Parque Nacional de Nahuel-Huapi (Argentina)." *Darwiniana* 12: 67-74. 1960, *Flora del Parque Nacional de Nahuel-Huapi* (tomo i). Helechos y las demás criptógamas vasculares. 1943; see J. Diem and Juana S. de Lichtenstein (1909-2000), "Las Himenofiláceas del área argentino-chilena del sud." *Darwiniana* 11: 611-760. 1959; *Darwiniana* 39(3-4): 354. 2001.

Argentina. See *Darwiniana* 19(2-4): 404, f. 1. 1975, *Contributions from the United States National Herbarium* 48: 200. 2003.

C. divaricata P.M. Peterson & Soreng

Mexico. See *Sida* 21(1): 315, f. 3. 2004.

C. divergens Swallen

Colombia. See *Contributions from the United States National Herbarium* 29(6): 262-263. 1948 [1949].

C. ecuadoriensis Laegaard

Ecuador. Páramos, see *Novon* 8(1): 25-26, f. 1B. 1988.

C. effusa (Kunth) Steud. (*Arundo effusa* (Kunth) Poir., nom. illeg., non *Arundo effusa* C.C. Gmel.; *Calamagrostis areantha* (Pilg.) Pilg.; *Calamagrostis funckii* Steud.; *Deyeuxia araeantha* Pilg.; *Deyeuxia areantha* Pilg.; *Deyeuxia effusa* Kunth; *Deyeuxia funckii* Steud. ex Wedd.)

Colombia, Venezuela, Ecuador. See *Nova Genera et Species Plantarum* 1: 146, t. 46. 1815 [1816], *Encyclopédie Méthodique, Botanique* Suppl. 4: 706. 1816, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840, *Synopsis Plantarum Glumacearum* 1: 192. 1854, *Bulletin de la Société*

Botanique de France 22: 178. 1875, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 711. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 60. 1908.

C. eminens (J. Presl) Steud. (*Agrostis eminens* (J. Presl) Griseb.; *Calamagrostis elegans* (Wedd.) Henrard; *Calamagrostis eminens* var. *grisebachiana* Kuntze; *Calamagrostis eminens* var. *sordida* Kuntze; *Calamagrostis eminens* var. *tunariensis* Kuntze; *Calamagrostis robusta* (Phil.) Phil., nom. illeg., non *Calamagrostis robusta* (Blytt) Müll. Hal.; *Deyeuxia arundina* Phil. ex Durand & Hook.f.; *Deyeuxia arundinacea* Philippi; *Deyeuxia elegans* Wedd.; *Deyeuxia eminens* J. Presl; *Deyeuxia polystachya* Wedd.; *Deyeuxia robusta* Phil.; *Stylagrostis elegans* (Wedd.) Mez; *Stylagrostis eminens* (J. Presl) Mez; *Stylagrostis polystachya* (Wedd.) Mez; *Stylagrostis robusta* (Phil.) Mez)

Chile, Bolivia, Peru. See *Reliquiae Haenkeanae* 1(4-5): 250. 1830, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840, *Florula Atacamensis seu Enumeratio ...* 54. 1860, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 254. 1874, *Bulletin de la Société Botanique de France* 22: 177, 179-180. 1875, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 84. 1891, *Anales de la Universidad de Chile* 94: 19. 1896, *Revisio Generum Plantarum* 3: 344. 1898 and *Index Kewensis* suppl. 1: 132. 1906, *Mededeelingen van's Rijks-Herbarium* 40: 61. 1921, *Botanisches Archiv* 1(1): 20. 1922.

C. eminens (J. Presl) Steud. var. *discreta* (Rúgolo & X. Villavicencio) Soreng (*Deyeuxia eminens* var. *discreta* Rúgolo & X. Villavicencio; *Deyeuxia leiopoda* var. *discreta* Wedd.)

South America, Peru. See *Bulletin de la Société Botanique de France* 22: 177, 180. 1875 and *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 135. 1995, *Contributions from the United States National Herbarium* 48: 201. 2003.

C. eminens (J. Presl) Steud. var. *eminens* (*Calamagrostis eminens* f. *eminens*; *Deyeuxia eminens* f. *eminens*; *Deyeuxia eminens* var. *eminens*)

America.

C. eminens (J. Presl) Steud. var. *fulva* (Griseb.) Soreng (*Agrostis fulva* Griseb.; *Calamagrostis eminens* f. *brevipila* Hack.; *Calamagrostis fulva* (Griseb.) Kuntze; *Calamagrostis grata* Phil.; *Calamagrostis robusta* (Phil.) Phil., nom. illeg., non *Calamagrostis robusta* (Blytt) Müll. Hal.; *Deyeuxia eminens* f. *brevipila* (Hack.) Türpe; *Deyeuxia eminens* var. *fulva* (Griseb.) Rúgolo; *Deyeuxia fulva* (Griseb.) Parodi; *Deyeuxia robusta* Phil.; *Stylagrostis robusta* (Phil.) Mez)

South America, Chile, Argentina. See *Florula Atacamensis seu Enumeratio ...* 54. 1860, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 294. 1879, *Anales de la Universidad de Chile* 94: 19, 22. 1896, *Revisio Generum Plantarum* 3(3): 344. 1898 and *Anales*

del Museo Nacional de Buenos Aires 21: 99. 1911, *Botanisches Archiv* 1(1): 20. 1922, *Revista Argentina de Agronomía* 20: 14. 1953, *Lilloa* 31: 118. 1962, *Boletín de la Sociedad Argentina de Botánica* 30(1-2): 112. 1994, *Contributions from the United States National Herbarium* 48: 201. 2003.

C. emodensis Griseb.

India, Sikkim, Himalayas. Tall, sea-green foliage, leaf blades broad and flat, stiff leaves, sheaths purplish, inflorescence silky and shining, broad panicle, spikelets closely set, see *Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen. Mathematisch-physikalische Klasse* 80. 1868 and *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 55: 167. 1903.

C. epigejos (L.) Roth (*Agrostis epigeios* (L.) Raspail; *Arundo epigejos* L.; *Arundo stricta* Gilib.; *Calamagrostis arenicola* Fernald; *Calamagrostis epigeios* (L.) Roth; *Calamagrostis epigeios* var. *epigeios*; *Calamagrostis epigejos* f. *laevis* Meinsh.; *Calamagrostis epigejos* subsp. *macrolepis* (Litv.) Tzvelev; *Calamagrostis epigejos* var. *georgica* (K. Koch) Ledeb.; *Calamagrostis georgica* K. Koch; *Calamagrostis glomerata* Boiss. & Buhse; *Calamagrostis koibalensis* Reverd.; *Calamagrostis lenkoranensis* Steud.; *Calamagrostis macrolepis* Litv.)

Eurasia, Africa. Perennial bunchgrass, robust, coarse, stout, tufted, more or less strongly rhizomatous with creeping rhizomes, sod-forming, leaf blade stiffly harsh and tapering to a fine tip, inflorescence dense flowered, erect panicles lanceolate to linear-oblong, branched inflorescence, glumes subulate, lemma with a ring of white callus hairs, awn mid-dorsal, ornamental, weedy, useful for erosion control and as cover for disturbed areas, usually in wet upland grasslands, wet bottomlands, open grasslands, waste areas, disturbed areas, clearings, upland forests, along roadsides, shallow soils, grass steppe, mountain steppe, sandy places along river, see *Species Plantarum* 1: 81. 1753, *Tentamen Florae Germanicae* 1: 34. 1788, *Exercitia Phytologica* 2: 542. 1792, *Annales des Sciences Naturelles (Paris)* 5: 449. 1825, *Linnaea* 21(4): 387. 1848, *Flora Rossica* 4(13): 433. 1852, *Synopsis Plantarum Glumacearum* 1: 188. 1854, *Mémoires de la Société Impériale des Naturalistes de Moscou* 12: 229. 1860 and *Rhodora* 30: 203. 1928, *Canadian Journal of Botany* 67: 3205-3218. 1989.

in English: bush grass, wood smallreed

C. epigejos (L.) Roth subsp. *epigejos* (*Calamagrostis epigeios* var. *epigeios*)

South Africa, Temperate Europe and Asia.

C. epigejos (L.) Roth subsp. *glomerata* (Boiss. & Buhse) Tzvelev (*Calamagrostis arenicola* Fernald; *Calamagrostis epigejos* var. *georgica* (K. Koch) Ledeb.; *Calamagrostis georgica* K. Koch; *Calamagrostis glomerata* Boiss. & Buhse)

South Africa. See *Linnaea* 21(4): 387. 1848, *Flora Rossica* 4(13): 433. 1852, *Mémoires de la Société Impériale des Naturalistes de Moscou* 12: 229. 1860 and *Rhodora* 30: 203. 1928, *Novosti Sist. Vyss. Rast.* 1965: 41. 1965.

C. epigejos (L.) Roth subsp. *macrolepis* (Litv.) Tzvelev (*Calamagrostis gigantea* (Roshev.) Roshev.; *Calamagrostis karataviensis* P.A. Smirn.; *Calamagrostis macrolepis* Litv.)

Asia, China; Eurasia, Siberia. Perennial, wet areas, sandy alluvial soils, see *Bulletin de la Société Impériale des Naturalistes de Moscou* 49(1): 91. 1940.

C. epigejos (L.) Roth var. *capensis* Stapf

South Africa. Perennial, robust, erect, tufted, leaf blades tough, rhizomatous with creeping rhizomes, dense inflorescence, narrow panicle linear-oblong, spikelets linear-oblong or slightly gaping, florets hairy, glumes rounded at the base, upland grasslands and upland forest, see *Flora Capensis* 7: 551. 1899.

in English: reed grass, saltpangrass

in South Africa: soutpangras

C. erectifolia Hitchc. (*Calamagrostis orizabae* (Rupr. ex E. Fourn.) Beal; *Deyeuxia orizabae* Rupr. ex E. Fourn.)

Mexico. See *Bulletin de la Société Botanique de France* 24: 181. 1877, *Grasses of North America for Farmers and Students* 2: 340. 1896 and *North American Flora* 17(7): 507. 1937.

C. eriantha (Kunth) Steud. (*Arundo eriantha* (Kunth) Poir.; *Calamagrostis schiedeana* (Rupr. ex E. Fourn.) Hitchc.; *Calamagrostis schiedeana* Rupr. ex Steud.; *Deyeuxia eriantha* Kunth; *Deyeuxia schiedeana* Rupr. ex E. Fourn.; *Deyeuxia schiedeana* Rupr.)

America. See *Nova Genera et Species Plantarum* 1: 145. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 705. 1816, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 233. 1842, *Synopsis Plantarum Glumacearum* 1: 190, 193. 1854, *Bulletin de la Société Botanique de France* 24: 181. 1877, *Mexicanas Plantas* 2: 105. 1886 and *Contributions from the United States National Herbarium* 17(3): 321. 1913.

C. fibrovaginata Laegaard (*Arundo coarctata* (Kunth) Poir.; *Calamagrostis coarctata* Torr. ex Eaton; *Calamagrostis coarctata* (Kunth) Steud., nom. illeg., non *Calamagrostis coarctata* Torr. ex Eaton; *Deyeuxia coarctata* Kunth)

Southern America, Ecuador, Colombia. See *Nova Genera et Species Plantarum* 1: 143. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 704. 1816, *A Manual of Botany for the Northern States* 144. 1829, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840 and *Novon* 8(1): 29. 1998.

C. fiebrigii Pilg. (*Deyeuxia fiebrigii* (Pilg.) Rúgolo; *Deyeuxia nardifolia* var. *elatior* Türpe)

Bolivia, Argentina. See *Anales del Museo Nacional de Chile. Primera Sección — Zooloía* 8: 83. 1891 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 68. 1908, *Lilloa* 31: 128, f. 8. 1962, *Boletín de la Sociedad Argentina de Botánica* 30(1-2): 113. 1994.

C. foliosa Kearney (*Calamagrostis longifolia* Hook.; *Calamagrostis sylvatica* var. *longifolia* Vasey)

U.S., California. See *Icones et Descriptiones Graminum Austriacorum* 4: t. 48. 1809, *Flora Boreali-Americana* 2: 241. 1840, *Contributions from the United States National Herbarium* 3(1): 83. 1892, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 17-18. 1898.

in English: leafy reed grass

C. fulgida Laegaard

Ecuador. See *Novon* 8(1): 26, f. 1C. 1988.

C. fuscata (J. Presl) Steud. (*Deyeuxia fuscata* J. Presl)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 249. 1830, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840.

C. garhwalensis C.E. Hubb. & Bor (*Calamagrostis garhwalensis* C.E. Hubb. & Bor)

India, Uttar Pradesh. Alpine grass, on rocky places, see *Indian Forester* 68: 355. 1942.

C. gayana (Steud.) Soreng (*Aira gayana* Steud.; *Calamagrostis erythrostachya* (E. Desv.) Hack.; *Calamagrostis stipitata* Hitchc.; *Deyeuxia erythrostachya* E. Desv.; *Stylagrostis erythrostachya* (E. Desv.) Mez)

Chile. Along riverbanks, see *Synopsis Plantarum Glumacearum* 1: 220. 1854, *Flora Chilena* 6: 324, t. 78, f. 1. 1854 and *Botanisches Archiv* 1(1): 20. 1922, *Journal of the Washington Academy of Sciences* 20(15): 382. 1930, *Contributions from the United States National Herbarium* 48: 203. 2003.

C. gayana (Steud.) Soreng var. *gayana* (*Deyeuxia erythrostachya* var. *erythrostachya*)

South America.

C. gayana (Steud.) Soreng var. *neuquenensis* (Rúgolo) Soreng (*Deyeuxia erythrostachya* var. *neuquenensis* Rúgolo)

South America. See *Darwiniana* 19(2-4): 410, f. 3. 1975, *Contributions from the United States National Herbarium* 48: 203. 2003.

C. glacialis (Wedd.) Hitchc. (*Deyeuxia glacialis* Wedd.)

Bolivia. See *Bulletin de la Société Botanique de France* 22: 178, 179. 1875 and *Contributions from the United States National Herbarium* 24(8): 375. 1927.

C. guamanensis Escalona

Ecuador, Andes. Loosely tufted, páramos, see *Phytologia* 65(5): 340, f. 2. 1988.

C. guatemalensis Hitchc.

Guatemala. See *Proceedings of the Biological Society of Washington* 40: 82. 1927.

C. hackelii Lillo (*Calamagrostis capitata* Hack.; *Deyeuxia hackelii* (Lillo) Parodi)

Argentina. See *Anales del Museo Nacional de Buenos Aires* 21: 100, t. 4, f. A. 1-5. 1911, *Revista Argentina de Agronomía* 20: 14. 1953.

C. haenkeana Hitchc. (*Agrostis arundinacea* J. Presl, nom. illeg., non *Agrostis arundinacea* L.; *Arundo neglecta* Ehrh.; *Calamagrostis arundinacea* (L.) Roth; *Calamagrostis neglecta* (Ehrh.) Gaertn.; *Calamagrostis stricta* (Timm) Koeler; *Deyeuxia poaeoides* (Steud.) Rúgolo)

South America, Peru. See *Species Plantarum* 1: 61. 1753, *Tentamen Florae Germanicae* 2(1): 89. 1789, *Beiträge zur Naturkunde* 6: 137. 1791, *Oekonomisch-Technische Flora der Wetterau* 1: 94. 1799, *Saccardo: Monographiae Mycologicae* 105. 1802, *Reliquiae Haenkeanae* 1(4-5): 238. 1830, *Synopsis Plantarum Glumacearum* 1: 423. 1854 and *Contributions from the United States National Herbarium* 24(8): 371. 1927, *Flora Patagónica* 3: 361. 1978.

C. heterophylla (Wedd.) Pilg. (*Calamagrostis boliviensis* Hack.; *Calamagrostis calvescens* Pilg.; *Calamagrostis heterophylla* var. *pubescens* Pilg.; *Calamagrostis heterophylla* var. *robustior* Pilg.; *Calamagrostis swallenii* Tovar; *Chaetotropis andina* Ball; *Deyeuxia boliviensis* (Hack.) X. Villavicencio; *Deyeuxia heterophylla* Wedd.; *Deyeuxia swallenii* (Tovar) Rúgolo; *Muhlenbergia rupestris* Steud. ex Lechler)

South America, Peru. See *Berberides Americae Australis* 56. 1857, *Bulletin de la Société Botanique de France* 22: 177. 1875, *Journal of the Linnean Society, Botany* 22: 58. 1885 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 64-65. 1908, *Memorias del Museo de Historia Natural "Javier Prado"* 11: 66. 1960, *Darwiniana* 36(1-4): 168-169. 1998.

C. hieronymi Hack. (*Deyeuxia hieronymi* (Hack.) Türpe)

Argentina. See *Österreichische Botanische Zeitschrift* 52(3): 109. 1902, *Lilloa* 31: 122. 1962.

C. hirta (Sodi) Laegaard (*Calamagrostis brevipaleata* Swallen; *Deyeuxia brevipaleata* Rúgolo; *Deyeuxia hirta* Sodi)

Ecuador. See *Revista del Colegio Nacional Vicente Rocafuerte* 12: 64, 75. 1930, *Contributions from the United States National Herbarium* 29(6): 259-260. 1948 [1949], *Novon* 8(1): 29-30. 1988.

C. howellii Vasey (*Deyeuxia howellii* (Vasey) Vasey)

North America, U.S. See *Botanical Gazette* 6: 271. 1881.

C. hyperborea Lange (*Calamagrostis neglecta* (Ehrh.) Gaertn.; *Calamagrostis neglecta* subsp. *inexpansa* (A. Gray) Tzvelev; *Calamagrostis neglecta* var. *hyperborea* (Lange) M.E. Jones; *Calamagrostis stricta* subsp.

inexpansa (A. Gray) C.W. Greene; *Calamagrostis stricta* subsp. *stricta*; *Deyeuxia hyperborea* (Lange) Lunell)

Northern America, U.S., Alaska, Greenland. Perennial, rare, found in wet places, see *Oekonomisch-Technische Flora der Wetterau* 1: 94. 1799, *North American Gramineae and Cyperaceae* 1: 20. 1834, J.M.C. Lange (1818-1898), *Conspectus Florae Groenlandicae* 160. Kjøbenhavn 1880-1887, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 39-41. 1898 and *Contributions to Western Botany* 14: 9. 1912, *American Midland Naturalist* 4: 218. 1915, *Zlaki SSSR* 310. 1976, *American Journal of Botany* 71: 286. 1984.

C. insperata Swallen (*Calamagrostis porteri* Gray subsp. *insperata* (Swallen) C.W. Greene; *Deyeuxia porteri* (A. Gray) Vasey). Named for the American botanist Thomas Conrad Porter, 1822-1901, clergyman, professor of botany and zoology, his works include *Die Verfasser des Heidelberger Katechismus* (1863) and *Flora of Pennsylvania* edited with the addition of analytical keys by John Kunkel Small (1869-1938). Boston 1903 (with John Merle Coulter, 1851-1928) wrote *Synopsis of the Flora of Colorado*. Washington 1874; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 101. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 315. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 334. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. 92. 1969; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. 236-243. 1899; J.W. von Goethe, *Hermann and Dorothea*. Translated by Thomas Conrad Porter. 1854; Johann Jacob Hottinger, *The Life and Times of U. Zwingli*. Translated from the German by Thomas Conrad Porter. Harrisburg 1856; Joseph William Blankinship, "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 592. University of Pennsylvania Press, Philadelphia 1964; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950.

Northern America, U.S. Perennial, found on wooded and dry hillsides, see *Proceedings of the American Academy of Arts and Sciences* 6: 79. 1862 and *Journal of the Washington Academy of Sciences* 25(9): 413. 1935, *American Journal of Botany* 71: 285. 1984.

in English: Porter's reedgrass

C. intermedia (J. Presl) Steud. (*Arundo stricta* (Kunth) Poir., nom. illeg., non *Arundo stricta* Timm; *Calamagrostis*

agapatea Steud. ex Lechler; *Calamagrostis gracilis* (Wedd.) Henrard, nom. illeg., non *Calamagrostis gracilis* Seenus; *Calamagrostis gracilis* (Wedd.) Pilg., nom. illeg., non *Calamagrostis gracilis* Seenus; *Calamagrostis humboldtiana* Steud.; *Calamagrostis imberbis* (Wedd.) Pilg.; *Calamagrostis scaberula* Swallen; *Calamagrostis secunda* (Pilg.) Pilg.; *Calamagrostis stricta* (Timm) Koeler; *Deyeuxia gracilis* Wedd.; *Deyeuxia imberbis* Wedd.; *Deyeuxia intermedia* J. Presl; *Deyeuxia secunda* Pilg.; *Deyeuxia stricta* Kunth)

South America, Ecuador. Páramos, see *Saccardo: Monographiae Mycologicae* 105. 1802, *Nova Genera et Species Plantarum* 1: 146. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 706. 1816, *Reliquiae Haenkeanae* 1(4-5): 249. 1830, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840, *Berberides Americae Australis* 56. 1857, *Bulletin de la Société Botanique de France* 22: 179. 1875, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 712. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 60, 65, 71. 1908, *Mededeelingen van's Rijks-Herbarium* 40: 61. 1921, *Contributions from the United States National Herbarium* 29(6): 261. 1948 [1949].

C. involuta Swallen

Colombia. Páramos, see *Contributions from the United States National Herbarium* 29(6): 259. 1948 [1949].

C. jamesonii Steud. (*Calamagrostis stuebelii* (Pilg.) Pilg.; *Deyeuxia jamesonii* (Steud.) Munro ex Wedd.; *Deyeuxia stuebelii* Pilg.)

Ecuador. Páramos, see *Synopsis Plantarum Glumacearum* 1: 191. 1854, *Bulletin de la Société Botanique de France* 22: 176. 1875, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 713. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 60. 1908.

C. killipii Swallen

Colombia. Páramos, see *Contributions from the United States National Herbarium* 29(6): 257. 1948 [1949].

C. koelerioides Vasey (*Calamagrostis densa* Vasey; *Calamagrostis koelerioides* var. *densa* (Vasey) Beal; *Calamagrostis viliformis* Kearney)

America, U.S., California. See *Botanical Gazette* 16(5): 147. 1891, *Grasses of North America for Farmers and Students* 2: 345. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 20. 1898.

C. langsdorffii (Link) Trin. (also spelled **langsdorfi**) (*Arundo langsdorffii* Link; *Arundo confinis* Willd.; *Calamagrostis baicalensis* Litv.; *Calamagrostis canadensis* subsp. *langsdorffii* (Link) Hultén; *Calamagrostis canadensis* var. *langsdorffii* (Link) Inman; *Calamagrostis canadensis* var. *scabra* (J. Presl) Hitchc.; *Calamagrostis confinis* (Willd.)

P. Beauv.; *Calamagrostis confusa* V.N. Vassil.; *Calamagrostis fusca* Kom.; *Calamagrostis purpurea* (Trin.) Trin. subsp. *langsдорffii* (Link) Tzvelev; *Calamagrostis unilateralis* Petrov; *Calamagrostis yendoana* Honda; *Deyeuxia langsдорffii* (Link) Keng (named for the German surgeon Georg Heinrich von Langsdorff, 1774-1852, explorer, naturalist, 1803-1806 Krusenstern Expedition (Adam Johann von Krusenstern, 1770-1846) in Brazil, plant collector, with Friedrich Ernst Ludwig von Fischer (1782-1854) published *Plantes recueillies pendant le voyage des Russes autour du monde*. Tubingue 1810, *Bemerkungen auf einer Reise um die Welt in den Jahren 1803 bis 1807 ... Mit ... Kupfern*, etc. Frankfurt am Mayn 1812, *Bemerkungen über Brasilien*. Heidelberg 1821 and *Phantasmatum sive machinarum ad artis obstetriciae exercitia facientium vulgo Fantôme dictarum brevis historia*. Dissertatione inaugurali delineata, etc. Gottingae [1797]. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 343. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 227. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 197. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898] Leipzig 1981)

China, Siberia, Mongolia. Perennial, sandy and gravelly soils, alluvial gravel, see *Essai d'une Nouvelle Agrostographie* 15, 152, 157. 1812, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 74. 1821, *De Graminibus unifloris et sesquifloris* 219, 225, t. 4, f. 10. Petropoli 1824 and *Rhodora* 24: 143. 1922, *Botanical Magazine* (Tokyo) 41: 635. 1927, *Flora Iakutiae* 1: 201. 1930, *American Journal of Botany* 21(3): 135. 1934, *Acta Universitatis Lundensis, n.s.* 38(1): 161-163. 1942, *Novosti Sist. Vyss. Rast.* 1965: 34. 1965.

C. lapponica (Wahlenb.) Hartman (*Arundo confinis* Willd.; *Arundo lapponica* Wahlenb.; *Calamagrostis alaskana* Kearney; *Calamagrostis confinis* (Willd.) P. Beauv.; *Calamagrostis confinis* (Willd.) Nutt.; *Calamagrostis gorodkovii* V.N. Vassil.; *Calamagrostis lancea* Ohwi; *Calamagrostis lancea* Ohwi; *Calamagrostis lapponica* subsp. *sibirica* (Petrov) Tzvelev; *Calamagrostis lapponica* var. *groenlandica* Lange; *Calamagrostis lapponica* var. *nearctica* A.E. Porsild; *Calamagrostis neglecta* var. *confinis* (Willd.) Beal; *Calamagrostis pseudolapponica* V.N. Vassil.; *Calamagrostis sibirica* Petrov; *Deyeuxia confinis* (Willd.) Kunth; *Deyeuxia lapponica* (Wahlenb.) Kunth)

Alaska, Russia, Siberia, Finland. See *Oekonomisch-Technische Flora der Wetterau* 1: 94. 1799, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 127. 1809, *Essai d'une Nouvelle Agrostographie* 15, 152, 157. 1812, *Flora Lapponica* 27. pl. 1. 1812, *The Genera of North American*

Plants 1: 47. 1818, *Genera Graminum* 5. 1819, *Révision des Graminées* 1: 76. 1829, *Conspectus Florae Groenlandicae* 296. 1887, *Grasses of North America for Farmers and Students* 2: 353. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 32. 1898 and *Flora Iakutiae* 1: 203, f. 68. 1930, *Acta Phytotaxonomica et Geobotanica* 2: 162. 1933, *Sargentia: Continuation of the Contributions from the Arnold Arboretum of Harvard University* 4: 10-11. Jamaica Plain, MA 1943, *Feddes Repertorium* 68: 226-227. 1963, *Novosti Sist. Vyss. Rast.* 1965: 31. 1965, *Contr. U.S. Natl. Herb.* 48: 192. 2003.

C. leiophylla (Wedd.) Hitchc. (*Calamagrostis toluensis* var. *laxiflora* Kuntze; *Deyeuxia leiophylla* Wedd.; *Deyeuxia picta* Wedd.)

South America, Bolivia. See *Nomenclator Botanicus. Editio secunda* 1: 251. 1840, *Bulletin de la Société Botanique de France* 22: 177, 180. 1875, *Revisio Generum Plantarum* 3: 345. 1898 and *Contributions from the United States National Herbarium* 24(8): 367. 1927.

C. leonardii Chase

Southern America, West Indies. Red clay, open habitats, see *Journal of the Washington Academy of Sciences* 17: 72, f. 1. 1927.

C. ligulata (Kunth) Hitchc. (*Arundo ligulata* (Kunth) Poir.; *Calamagrostis aurea* (Munro ex Wedd.) Hack. ex Sodiro; *Calamagrostis longigluma* Pilg.; *Calamagrostis podophora* Pilg.; *Deyeuxia aurea* Munro ex Wedd.; *Deyeuxia ligulata* Kunth; *Deyeuxia podophora* (Pilg.) Sodiro; *Stylagrostis longigluma* (Pilg.) Mez)

South America, Peru, Ecuador. See *Nova Genera et Species Plantarum* 1: 145. 1815 [1816], *Encyclopédie Méthodique, Botanique* Suppl. 4: 706. 1816, *Bulletin de la Société Botanique de France* 22: 176, 179. 1875, *Anales de la Universidad Central del Ecuador* 3(25): 481. 1889 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 66, 71. 1908, *Botanisches Archiv* 1(1): 20. 1922, *Contributions from the United States National Herbarium* 24(8) 372. 1927, *Revista del Colégio Nacional Vicente Rocafuerte* 12: 79. 1930.

C. llanganatensis Laegaard

Ecuador, Cordillera de los Llanganates. See *Novon* 8(1): 26-27, f. 1D. 1988.

C. longearistata (Wedd.) Hack. ex Sodiro (*Calamagrostis beyrichiana* Nees ex Döll; *Calamagrostis longearistata* f. *pilosa* Kämpf; *Calamagrostis longearistata* var. *minor* Kämpf; *Calamagrostis longiaristata* (Wedd.) Hack.; *Calamagrostis montevidensis* Nees; *Calamagrostis montevidensis* var. *linearis* Hack.; *Calamagrostis rupestris* Trin.; *Deyeuxia beyrichiana* (Nees ex Döll) Sodiro; *Deyeuxia longearistata* Wedd.; *Deyeuxia rupestris* (Trin.) Rúgolo)

Southern America, Colombia to Uruguay. Perennial, with straight awns, found in damp places, sandy soils, see

De Graminibus Paniceis 28. 1826, *Bulletin de la Société Botanique de France* 22: 176. 1875, *Flora Brasiliensis* 2(3): 53, t. 16. 1878, *Anales de la Universidad Central del Ecuador* 3(25): 481. 1889 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 156. 1908, *Anuário Técnico do Instituto de Pesquisas Zootécnicas "Francisco Osorio"* 2: 610, 613. 1974 [1975].

C. macbridei Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 11: 62. 1960.

C. macilenta (Griseb.) Litv. (*Calamagrostis varia* var. *macilenta* Griseb.; *Deyeuxia macilenta* (Griseb.) Keng)

Europe. See *Flora Rossica* 4(13): 427. 1852 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 204. 1957.

C. macrophylla (Pilg.) Pilg. (*Deyeuxia macrophylla* Pilg.)

South America, Ecuador. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 711-712. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 60. 1908.

C. malamalensis Hack. (*Deyeuxia malamalensis* (Hack.) Parodi)

Argentina. See *Anales del Museo Nacional de Buenos Aires* 13: 478. 1906, *Revista Argentina de Agronomía* 20: 14. 1953.

C. mandoniana (Wedd.) Wedd. (*Calamagrostis mandoniana* (Wedd.) Pilg.; *Deyeuxia mandoniana* Wedd.)

South America, Bolivia. See *Bulletin de la Société Botanique de France* 22: 179, 180. 1875 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 71. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 183. 1913.

C. menhoferi Govaerts (*Calamagrostis hirsuta* V.N. Vassil.; *Calamagrostis manshurica* (V. Vassil.) Baranov & Skvortzov; *Deyeuxia hirsuta* Rúgolo & X. Villavicencio)

South America, Bolivia. See *Quarterly Journal of the Taiwan Museum* 18: 221. 1965, Masao Kitagawa (b. 1909), *Neo-Lineamenta Florae Manshuricae: or enumeration of the spontaneous vascular plants hitherto known from Manchuria (northeastern China) together with their synonymy and distribution.* 75. 1979 [Flora et vegetatio mundi herausgegeben von Reinhold Tüxen; Band IV.], *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 136, f. 7. 1995, *World Checklist of Seed Plants* 3(1): 11. 1999.

C. minima (Pilg.) Tovar (*Calamagrostis vicunarum* var. *minima* Pilg.; *Deyeuxia minima* (Pilg.) Rúgolo)

South America, Peru. Open areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie*

42: 62-63. 1908, *Memorias del Museo de Historia Natural "Javier Prado"* 11: 53. 1960.

C. mollis Pilg. (*Deyeuxia mollis* (Pilg.) Sodiro)

South America, Ecuador. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 61. 1908, *Revista del Colegio Nacional Vicente Rocafructe* 12: 80. 1930.

C. montanensis (Scribn.) Scribn. (*Calamagrostis montanensis* (Scribn.) Beal, nom. illeg., non *Calamagrostis montanensis* (Scribn.) Scribn.; *Calamagrostis montanensis* Scribn. ex Vasey; *Calamagrostis neglecta* var. *candidula* Kearney; *Deyeuxia montanensis* Scribn.)

North America, U.S., Canada. Open prairies, moist places, see *Oekonomisch-Technische Flora der Wetterau* 1: 94. 1799, *Proceedings of the Society for the Promotion of Agricultural Science* 6. 1883, *Contributions from the United States National Herbarium* 3(1): 82. 1892, *Grasses of North America*, second edition, 2: 342. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 35-36. 1898.

C. muiriana B.L. Wilson & Sami Gray

North America, U.S., California. See *Madroño* 49(3): 174-175, f. 3, f. 4. 2002.

C. mulleri Lucas

South America, Venezuela. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 252-253. 1874 and *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 9-11, f. 5. 1953.

C. nagarum (Bor) G. Singh (*Deyeuxia nagarum* Bor)

India, Naga Hills. Straggling, see *Indian Forest Records: Botany* 1: 69. 1938, *Taxon* 33(1): 94. 1984.

C. nardifolia (Griseb.) Hack. (*Agrostis canescens* Griseb., nom. illeg., non *Agrostis canescens* (L.) Salisb.; *Agrostis nardifolia* Griseb.; *Deyeuxia nardifolia* (Griseb.) Phil.; *Deyeuxia trisetoides* Phil.)

Argentina. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 252-253. 1874, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 83. Leipzig 1891 [also in *Anales del Museo Nacional de Chile. Primera Sección — Zoolojía* 8: 83. 1891, with the title *Catalogus praevious plantarum in itinere ad Tarapaca a Friderico Philippi lectarum.*] and *Anales del Museo Nacional de Buenos Aires* 13: 480. 1906.

C. neglecta (Ehrh.) Gaertn. (*Agrostis arundinacea* J. Presl, nom. illeg., non *Agrostis arundinacea* L.; *Arundo neglecta* Ehrh.; *Arundo stricta* Timm; *Calamagrostis ameghinoi* (Speg.) Macloskie; *Calamagrostis ameghinoi* (Speg.) Hauman, nom. illeg., non *Calamagrostis ameghinoi* (Speg.) Macloskie; *Calamagrostis arundinacea* (L.) Roth; *Calamagrostis freticola* (Speg.) Macloskie; *Calamagrostis fuegiana* Speg.; *Calamagrostis haenkeana* Hitchc.; *Calamagrostis*

hookeri (Syme) Druce; *Calamagrostis hyperborea* Lange; *Calamagrostis kolgujensis* Gand.; *Calamagrostis laxiflora* Kearney, nom. illeg., non *Calamagrostis laxiflora* Phil.; *Calamagrostis lucida* Scribn.; *Calamagrostis magellanica* Phil.; *Calamagrostis micrantha* Kearney; *Calamagrostis neglecta* var. *gracilis* Scribn. ex Kearney; *Calamagrostis neglecta* var. *micrantha* (Kearney) Stebbins; *Calamagrostis ochotensis* V. Vassil.; *Calamagrostis poaeoides* Steud.; *Calamagrostis robertii* A.E. Porsild; *Calamagrostis stricta* (Timm) Koeler; *Calamagrostis stricta* var. *hookeri* Syme; *Deyeuxia ameghinoi* Speg.; *Deyeuxia borealis* Macoun; *Deyeuxia freticola* Speg.; *Deyeuxia hookeri* (Syme) Druce; *Deyeuxia neglecta* (Ehrh.) Kunth; *Deyeuxia neglecta* var. *brevifolia* Vasey; *Deyeuxia neglecta* var. *gracilis* Scribn.; *Deyeuxia poaeoides* (Steud.) Rúgolo; *Deyeuxia vancouverensis* Vasey)

South America. See *Tentamen Florae Germanicae* 2(1): 89. 1789, *Beiträge zur Naturkunde* 6: 137. 1791, *Oekonomisch-Technische Flora der Wetterau* 1: 94. 1799, *Saccardo: Monographiae Mycologicae* 105. 1802, *Révision des Graminées* 1: 76. 1829, *Reliquiae Haenkeanae* 1(4-5): 238. 1830, *Synopsis Plantarum Glumacearum* 1: 423. 1854, *English Botany, the third edition* 11: 56. 1873, *Botanical Gazette* 11: 175. 1886, *Catalogue of Canadian Plants* 2(4): 206-207. 1888, *Bulletin of the Torrey Botanical Club* 15(2): 48. 1888, *Anales del Museo Nacional de Buenos Aires* 5: 85, 87. 1896, *Anales de la Universidad de Chile* 94: 18, 20. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 34-36. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 30: 8. 1901, *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 190. 1902, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2], Botany* 8(1,5,1): 193-194. 1904, *Bulletin de la Société Botanique de France* 56: 533. 1909, *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 57. 1917, *Contributions from the United States National Herbarium* 24(8): 371. 1927, *Botanical Exchange Club of the British Isles. Report* 8: 140. 1926-1927, *Rhodora* 32: 55. 1930, George Claridge Druce (1850-1932), *The Comital Flora of the British Isles* 352. Arbroath, Scot. 1932 [Flora Comitalis Britannicae], *Nature Canada* 4: 5. 1974 [1975], *Darwiniana* 21: 443. 1978, *Flora Patagónica* 3: 361. 1978.

C. neglecta (Ehrh.) Gaertn. subsp. *inexpansa* (A. Gray) Tzvelev (*Calamagrostis aculeolata* (Hack.) Ohwi; *Calamagrostis americana* (Vasey) Scribn.; *Calamagrostis breviseta* var. *lacustris* Kearney; *Calamagrostis californica* Kearney; *Calamagrostis canadensis* var. *arcta* Stebbins; *Calamagrostis chordorrhiza* A.E. Porsild; *Calamagrostis crassiglumis* Thurb.; *Calamagrostis elongata* (Kearney) Rydb.; *Calamagrostis expansa* Rickett & Gilly; *Calamagrostis fernaldii* Louis-Marie; *Calamagrostis hyperborea* Lange; *Calamagrostis hyperborea* var. *americana* (Vasey) Kearney; *Calamagrostis hyperborea* var. *elongata* Kearney; *Calamagrostis hyperborea* var. *hyperborea*; *Calamagrostis*

hyperborea var. *stenodes* Kearney; *Calamagrostis inexpansa* A. Gray; *Calamagrostis inexpansa* var. *barbulata* Kearney; *Calamagrostis inexpansa* var. *brevior* (Vasey) Stebbins; *Calamagrostis inexpansa* var. *inexpansa*; *Calamagrostis inexpansa* var. *novae-angliae* Stebbins; *Calamagrostis inexpansa* var. *robusta* (Vasey) Stebbins; *Calamagrostis labradorica* Kearney; *Calamagrostis lacustris* (Kearney) Nash; *Calamagrostis lapponica* var. *brevipilis* Stebbins; *Calamagrostis neglecta* var. *crassiglumis* (Thurb.) Beal; *Calamagrostis neglecta* var. *hyperborea* (Lange) M.E. Jones; *Calamagrostis neglecta* var. *inexpansa* (A. Gray) M.E. Jones; *Calamagrostis pickeringii* var. *debilis* (Kearney) Fernald & Wiegand; *Calamagrostis pickeringii* var. *lacustris* (Kearney) Hitchc.; *Calamagrostis robusta* (Vasey) Vasey; *Calamagrostis stricta* subsp. *inexpansa* (A. Gray) C.W. Greene; *Calamagrostis stricta* var. *aculeolata* Hack.; *Calamagrostis stricta* var. *brevior* Vasey; *Calamagrostis stricta* var. *robusta* Vasey; *Calamagrostis wyomingensis* Gand.; *Deyeuxia americana* (Vasey) Lunell; *Deyeuxia crassiglumis* (Thurb.) Vasey; *Deyeuxia elongata* (Kearney) Lunell; *Deyeuxia glomerata* Vasey ex Macoun; *Deyeuxia hyperborea* (Lange) Lunell; *Deyeuxia hyperborea* var. *elongata* (Kearney) Lunell; *Deyeuxia hyperborea* var. *stenodes* (Kearney) Lunell; *Deyeuxia neglecta* var. *americana* Vasey; *Deyeuxia neglecta* var. *robusta* Vasey)

America. Swamps, woods, meadows, boggy places, see *Genera Graminum* 5. 1819, *North American Gramineae and Cyperaceae* 1: 20. 1834, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler...* vol. vi — *Botany* 6: 285. 1878 [1879], *Geological Survey of California, Botany* 2: 281. 1880, *The Grasses of the United States* 28. 1883, *Catalogue of Canadian Plants* 2(4): 206. 1888, *Botanical Gazette* 16: 288. 1891, *Contributions from the United States National Herbarium* 3(1): 82. 1892, *Memoirs of the Torrey Botanical Club* 5: 41. 1894, *Grasses of North America for Farmers and Students* 2: 353. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 27. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 25-26, 37-41. 1898, *Bulletin de l'Herbier Boissier* 7(9): 652. 1899 and *Rhodora* 8(95): 210. 1906, *Contributions to Western Botany* 14: 9. 1912, *An Illustrated Flora of the Northern United States* 1: 208. 1913, *Rhodora* 15(175): 135. 1913, *American Midland Naturalist* 4: 218. 1915, *Flora of the Rocky Mountains* 1060. 1917, *American Midland Naturalist* 5: 233. 1918, *Bulletin de la Société Botanique de France* 66(7): 299. 1919 [1920], *Rhodora* 32: 45, 48, 50-51, 56. 1930, *Acta Phytotaxonomica et Geobotanica* 2: 278. 1933, *Bulletin of the Torrey Botanical Club* 69: 464. 1942, *Sargentia: Continuation of the Contributions from the Arnold Arboretum of Harvard University* 4: 9-10. 1943, *Rhodora* 46: 290, pl. 836, f. 4. 1944, *Zlaki SSSR* 310. 1976, *American Journal of Botany* 71: 286. 1984.

C. neglecta (Ehrh.) Gaertn. subsp. *neglecta* (*Arundo neglecta* Ehrh.; *Arundo stricta* Timm; *Calamagrostis jacutensis* Petrov; *Calamagrostis kolgijewensis* Gand.; *Calamagrostis laxiflora* Kearney, nom. illeg., non *Calamagrostis laxiflora* Phil.; *Calamagrostis lucida* Scribn.; *Calamagrostis micrantha* Kearney; *Calamagrostis micrantha* var. *micrantha*; *Calamagrostis micrantha* var. *sierrae* M.E. Jones; *Calamagrostis neglecta* subsp. *aculeolata* (Hack.) T. Koyama; *Calamagrostis neglecta* subsp. *micrantha* (Kearney) Tzvelev; *Calamagrostis neglecta* subsp. *stricta* (Timm) Tzvelev; *Calamagrostis neglecta* var. *gracilis* Scribn. ex Kearney; *Calamagrostis neglecta* var. *micrantha* (Kearney) Stebbins; *Calamagrostis neglecta* var. *neglecta*; *Calamagrostis neglecta* var. *poaeoides* (Steud.) Hack.; *Calamagrostis neglecta* var. *stricta* (Timm) Griseb.; *Calamagrostis neglecta* var. *wrightii* Kearney; *Calamagrostis ochotensis* V. Vassil.; *Calamagrostis poaeoides* Steud.; *Calamagrostis praerupta* V. Vassil.; *Calamagrostis reverdattoi* Golub; *Calamagrostis stricta* var. *aculeolata* Hack.; *Calamagrostis stricta* var. *stricta*; *Deyeuxia micrantha* (Kearney) L. Liou; *Deyeuxia neglecta* var. *brevifolia* Vasey; *Deyeuxia neglecta* var. *gracilis* Scribn.; *Deyeuxia poaeoides* (Steud.) Rúgolo)

Europe, America. Meadows, under trees, see *Beiträge zur Naturkunde* 6: 137. 1791, *Saccardo: Monographiae Mycologicae* 105. 1802, *Flora Rossica* 4(13): 429. 1852, *Synopsis Plantarum Glumacearum* 1: 423. 1854, *Botanical Gazette* 11: 175. 1886, *Catalogue of Canadian Plants* 2(4): 206. 1888, *Anales de la Universidad de Chile* 94: 18. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 34-36. 1898, *Bulletin de l'Herbier Boissier* 7(9): 652. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 30: 8. 1901, *Bulletin de la Société Botanique de France* 56: 533. 1909, *Anales del Museo Nacional de Buenos Aires* 21: 103. 1911, *Contributions to Western Botany* 14: 9. 1912, *Flora Yakutiae* 1: 214, f 23. 1930, *Rhodora* 32: 55. 1930, *Feddes Repertorium* 68: 236. 1963, *Novosti Sist. Vyss. Rast.* 1965: 29-30. 1965, *Flora Patagónica* 3: 361. 1978, *Grasses of Japan and its Neighboring Regions* 496. 1987, *Vascular Plants of the Hengduan Mountains* 2: 2239. 1994.

C. neglecta (Ehrh.) Gaertn. var. *borealis* (Laest.) Kearney (*Arundo groenlandica* Schrank; *Calamagrostis borealis* Laest.; *Calamagrostis stricta* subsp. *groenlandica* (Schrank) Á. Löve)

Europe. See *Denkschriften der Bayer[ischen]. Botanischen Gesellschaft in Regensburg* 1: 8. 1818, C.P. Laestadius (1835-1920), *Bidrag till kannedomen om växtligheten i Torneå Lappmark*. Diss. Uppsala 1860, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 35. 1898 and *Taxon* 19: 299. 1970.

C. nepalensis Nees ex Steud. (*Calamagrostis pseudophragmites* (Haller f.) Koeler)

Asia. See *Archiv für die Botanik* 1: 11. 1797, *Descriptio uberior Graminum* 106. 1803, *Synopsis Plantarum Glumacearum* 1: 193. 1854.

C. nitidula Pilg. (*Calamagrostis nitidula* var. *elata* Pilg.; *Calamagrostis nitidula* var. *macrantha* Pilg.; *Calamagrostis rigida* (Kunth) Trin. ex Steud.; *Deyeuxia nitidula* (Pilg.) Rúgolo; *Deyeuxia rigida* Kunth)

Peru, Bolivia. Stony sites, see *Nova Genera et Species Plantarum* 1: 144. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 1: 251. 1840 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 69-70. 1908.

C. nutkaensis (J. Presl & C. Presl) Steud. (*Calamagrostis albescens* Buckley ex A. Gray; *Calamagrostis albicans* Buckley; *Calamagrostis aleutica* Trin.; *Calamagrostis aleutica* var. *patens* Kearney; *Calamagrostis nutkaensis* (J. Presl) J. Presl ex Steud.; *Calamagrostis pallida* Nutt. ex A. Gray, nom. illeg., non *Calamagrostis pallida* C. Mueller; *Deyeuxia aleutica* (Trin.) Munro ex Hook.; *Deyeuxia breviaristata* Vasey, nom. illeg., non *Deyeuxia breviaristata* Wedd.; *Deyeuxia columbiana* Macoun; *Deyeuxia nutkaensis* J. Presl)

Northern America, Alaska, U.S. Perennial, see *Reliquiae Haenkeanae* 1(4-5): 250. 1830, *Synopsis Plantarum Glumacearum* 1: 190. 1854, *Transactions of the Linnean Society of London* 23: 345. 1862, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 92, 334. 1862, *Bulletin of the Torrey Botanical Club* 15(2): 48. 1888, *Catalogue of Canadian Plants* 2(4): 207. 1888, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 20. 1898.

C. ophitidis (J. Howell) Nygren (*Calamagrostis purpurascens* var. *ophitidis* J.T. Howell) (from the Latin *ophitis*, *idis* and *ophites*, *ae* "snake-stone, a kind of marble spotted like a snake, serpentine-stone"; Plinius: "...ophites serpentinum maculis similis unde et nomen accepit...")

U.S., California. See *Botanical Appendix to Captain Franklin's Narrative* 731. 1823 and *Leaflets of Western Botany* 4(10): 246-247. 1946, *Hereditas; genetiskt arkiv.* 40: 388. 1954.

in English: serpentine reed grass

C. orbignyana (Wedd.) Wedd. ex Pilg. (*Calamagrostis nematophylla* (Wedd.) Pilg.; *Calamagrostis orbignyana* (Wedd.) Hitchc., nom. illeg., non *Calamagrostis orbignyana* (Wedd.) Wedd. ex Pilg.; *Deyeuxia nematophylla* Wedd.; *Deyeuxia orbignyana* Wedd.) (named for the French (b. Loire-Atlantique) naturalist Alcide Dessalines d'Orbigny, 1802-1857 (d. near Sant-Denis), traveler, zoologist, palaeontologist, explorer, 1826-1834 in South America, palm collector, studied in Paris under Pierre-Louis-Antoine Cordier (1777-1861), professor of paleontology at the Muséum d'Histoire Naturelle de Paris, among his numerous writings are *Voyage dans l'Amerique méridionale*.

Paris, Strasbourg 1834[-1847], *Tableau méthodique de la classe des Céphalopodes*. Paris 1826 and *Paléontologie française*. Description zoologique et géologique de tous les animaux mollusques et rayonnés fossiles de France. Paris 1840-1856. See P. Fischer, "Notice sur la vie et sur les travaux d'Alcide d'Orbigny." *Bulletin de la Société géologique de France*. sér. 3. 6: 434-453. Paris 1878; A. Gaudry, "Alcide d'Orbigny, ses voyages et ses travaux." *Revue des Deux Mondes*. Paris 1859; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; B. Glass et al., editors, *Forerunners of Darwin: 1745-1859*. Baltimore 1959; August Weberbauer (1871-1948), *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 8-9. Leipzig 1911; Claudio Urbano B. Pinheiro and Michael J. Balick, *Brazilian Palms. Notes on Their Uses and Vernacular Names*, compiled and translated from Pio Corrêa's "Dicionário das Plantas Úteis do Brasil e das Exóticas Cultivadas, with updated nomenclature and added illustrations" in *Contributions from the New York Botanical Garden*. vol. 17: 39-40. 1987; Heinz Tobien, in *D.S.B.* 10: 221-222. 1981; F. Boerner and G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 143. Berlin & Hamburg 1989; H. Genast, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 440. 1996; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 407, 785f. Stuttgart 1993; G. Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 636. Ansbach 1852; Stafleu and Cowan, *Taxonomic literature*. 3: 842-844. 1981)

America. See *Bulletin de la Société Botanique de France* 22: 178-180. 1875 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 70. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 184. 1912, *Contributions from the United States National Herbarium* 24(8): 378. 1927.

C. orizabae (Rupr. ex E. Fourn.) Beal (*Achaeta plumosa* E. Fourn.; *Achaeta plumosa* E. Fourn. ex Hemsl.; *Calamagrostis erecta* Beal; *Calamagrostis erectifolia* Hitchc.; *Calamagrostis orizabae* Steud.; *Calamagrostis plumosa* Spreng.; *Calamagrostis plumosa* (E. Fourn.) Scribn. ex Beal, nom. illeg., non *Calamagrostis plumosa* Spreng.; *Deyeuxia orizabae* Rupr. ex E. Fourn.; *Deyeuxia orizabae* Rupr.)

North America, Mexico. See *Systema Vegetabilium, editio decima sexta* 1: 253. 1825 [1824], *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 233. 1842, *Synopsis Plantarum Glumacearum* 1: 193. 1854, *Bulletin de la Société Botanique de France* 24: 181. 1877, *Biologia Centrali-Americana; ... Botany ...* 3: 553. 1885, *Mexicanas Plantas* 2: 105, 109. 1886, *Grasses of North America for Farmers and Students* 2: 340. 1896 and *North American Flora* 17(7): 507. 1937.

C. ovata (J. Presl) Steud. (*Calamagrostis pflanzii* Pilg.; *Calamagrostis pflanzii* var. *major* Pilg.; *Deyeuxia*

anthoxanthum Wedd.; *Deyeuxia capitata* Wedd.; *Deyeuxia nivalis* Wedd.; *Deyeuxia ovata* J. Presl; *Stylagrostis nivalis* (Wedd.) Mez; *Stylagrostis ovata* (J. Presl) Mez)

America, Bolivia, Peru. See *Reliquiae Haenkeanae* 1(4-5): 246. 1830, *Nomenclator Botanicus. Editio secunda* 1: 251. 1840, *Bulletin de la Société Botanique de France* 22: 176, 179-180. 1875 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 184. 1912, *Botanisches Archiv* 1(1): 20. 1922.

C. ovata (J. Presl) Steud. var. **nivalis** (Wedd.) Soreng (*Calamagrostis nivalis* (Wedd.) Hack. ex Buchtien; *Deyeuxia nivalis* Wedd.; *Deyeuxia ovata* var. *nivalis* (Wedd.) X. Villavicencio; *Stylagrostis nivalis* (Wedd.) Mez)

America. See *Bulletin de la Société Botanique de France* 22: 176, 180. 1875 and *Contribuciones a la Flora de Bolivia* 1: 75. 1910, *Contributions from the United States National Herbarium* 48: 213. 2003.

C. ovata (J. Presl) Steud. var. **ovata** (*Calamagrostis pflanzii* var. *major* Pilg.; *Calamagrostis pflanzii* var. *pflanzii*; *Deyeuxia ovata* J. Presl; *Deyeuxia ovata* var. *ovata*; *Stylagrostis ovata* (J. Presl) Mez)

America. See *Reliquiae Haenkeanae* 1(4-5): 246. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 184. 1912, *Botanisches Archiv* 1(1): 20. 1922.

C. parsana (Bor) Dogan (*Agrostis parsana* (Bor) Beetle; *Deyeuxia parsana* Bor)

Iran. Rhizomatous, leaves mainly basal, usually in wet areas, see *Kew Bulletin* 1948: 42. 1948, *Bulletin of the Torrey Botanical Club* 76: 290. 1949, *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 86. 1982.

C. patagonica (Speg.) Macloskie (*Deyeuxia patagonica* Speg.)

South America, Argentina. See *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 191. 1902, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899*, Volume viii, 1 [2], *Botany* 8(1,5,1): 195-196. 1904.

C. perplexa Scribn. (*Calamagrostis nemoralis* Phil.; *Calamagrostis nemoralis* Kearney, nom. illeg., non *Calamagrostis nemoralis* Phil.; *Calamagrostis porteri* var. *perplexa* (Scribn.) R.T. Clausen)

America. See *Proceedings of the American Academy of Arts and Sciences* 6: 79. 1862, *Anales de la Universidad de Chile* 94: 18. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 26. 1898 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 7. 1901, *Cornell University Agricultural Experiment Station Memoir* 291: 11. Ithaca, New York 1949 [also Memoir, Cornell University Agricultural Experiment Station].

C. pickeringii A. Gray (*Calamagrostis breviseta* (A. Gray) Scribn.; *Calamagrostis breviseta* var. *debilis* Kearney;

Calamagrostis pickeringii f. *vivipara* Louis-Marie; *Calamagrostis pickeringii* var. *debilis* (Kearney) Fernald and Wiegand; *Calamagrostis sylvatica* var. *brevisetata* A. Gray; *Deyeuxia pickeringii* (A. Gray) Vasey

North America, Savannah, wet sites. See *A Manual of the Botany of the Northern United States* 582. 1848, *A Manual of the Botany of the Northern United States*. second edition 547. 1856, *The Grasses of the United States* 28. 1883, *Memoirs of the Torrey Botanical Club* 5: 41. 1894, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 25. 1898 and *Rhodora* 15(175): 135. 1913, *Rhodora* 46: 296. 1944.

C. pickeringii A. Gray f. **pickeringii** (*Calamagrostis pickeringii* var. *pickeringii*)

America.

C. pickeringii A. Gray f. **vivipara** Louis-Marie

Canada. See *Rhodora* 46: 296. 1944.

C. pinetorum Swallen

Guatemala. Slopes, dry areas, see *Contributions from the United States National Herbarium* 29(9): 406. 1950.

C. pisinna Swallen

Venezuela. Páramos, see *Contributions from the United States National Herbarium* 29(6): 257-258. 1948 [1949].

C. pittieri Hack.

South America. See *Österreichische Botanische Zeitschrift* 52(3): 108. 1902.

C. planifolia (Kunth) Trin. ex Steud. (*Arundo planifolia* (Kunth) Poir.; *Deyeuxia planifolia* Kunth)

America. See *Nova Genera et Species Plantarum* 1: 145. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 707. 1816, *Nomenclator Botanicus. Editio secunda* 1: 251. 1840.

C. podophora Pilg. (*Calamagrostis ligulata* (Kunth) Hitchc.; *Deyeuxia ligulata* Kunth; *Deyeuxia podophora* (Pilg.) Sodiro)

Peru. See *Nova Genera et Species Plantarum* 1: 145. 1815 [1816] and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 66. 1908, *Contributions from the United States National Herbarium* 24(8) 372. 1927, *Revista del Colegio Nacional Vicente Rocafuerte* 12: 79. 1930.

C. polygama (Griseb.) Parodi (*Calamagrostis lilloi* Hack.; *Calamagrostis lilloi* f. *grandiflora* Hack.; *Calamagrostis lilloi* f. *lilloi*; *Cinnagrostis polygama* Griseb.; *Deyeuxia polygama* (Griseb.) Parodi)

South America, Argentina. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 257, t. 2, f. 7. 1874, A.H.R. Grisebach (1814-1879), *Plantae lorentzianae*. Göttingen 1874 and *Anales del Museo Nacional de Buenos Aires* 13: 477. 1906, *Anales del Museo*

Nacional de Buenos Aires 21: 102. 1911, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 41. 1928, *Revista Argentina de Agronomía* 20: 14. 1953.

C. polygama (Griseb.) Parodi subsp. **filifolia** (Rúgolo & X. Villavicencio) Soreng (*Deyeuxia polygama* subsp. *filifolia* Rúgolo & X. Villavicencio)

South America, Bolivia. See *Boletín de la Sociedad Argentina de Botánica* 31(1-2): 139, f. 8. 1995, *Contributions from the United States National Herbarium* 48: 215. 2003.

C. polygama (Griseb.) Parodi subsp. **polygama** (*Deyeuxia polygama* subsp. *polygama*)

America.

C. porteri A. Gray (*Deyeuxia porteri* (A. Gray) Vasey)

America, U.S. See *Proceedings of the American Academy of Arts and Sciences* 6: 79. 1862, *The Grasses of the United States* 28. 1883 and *Cornell University Agricultural Experiment Station Memoir* 291: 11. 1949.

C. porteri A. Gray subsp. **insperata** (Swallen) C.W. Greene (*Calamagrostis insperata* Swallen)

U.S. See *Journal of the Washington Academy of Sciences* 25(9): 413. 1935, *American Journal of Botany* 71: 285. 1984, Esselman E.J., L. Jianqiang, D.J. Crawford, J.L. Windus, A.D. Wolfe, "Clonal diversity in the rare *Calamagrostis porteri* subsp. *insperata* (Poaceae): comparative results for allozymes and random amplified polymorphic DNA (RAPD) and intersimple sequence repeat (ISSR) markers." *Molecular Ecology* 8: 443. 1999.

C. porteri A. Gray subsp. **porteri**

U.S.

C. preslii (Kunth) Hitchc. (*Agrostis caespitosa* J. Presl, nom. illeg., non *Agrostis caespitosa* (L.) Salisb.; *Agrostis preslii* Kunth; *Bromidium caespitosum* Nees & Meyen; *Bromidium hygrometricum* var. *caespitosum* (Nees & Meyen) Kuntze; *Calamagrostis caespitosa* Scribn., nom. illeg., non *Calamagrostis caespitosa* (Hochst. ex Seub.) Steud.)

America, Peru. See *Prodr. Stirp. Chap. Allerton* 25. 1796, *Reliquiae Haenkeanae* 1(4-5): 237. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 225. 1833, *Gramineae* 23-24. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 155-156. 1843, *Revisio Generum Plantarum* 3(3): 343. 1898, *Annual Report of the Missouri Botanical Garden* 10: 37. 1899 and *Contributions from the United States National Herbarium* 24(8) 370. 1927.

C. pringlei Scribner ex Beal (*Calamagrostis guatemalensis* Hitchc.; *Deyeuxia pringlei* Soreng; *Deyeuxia pringlei* Scribn. ex Beal)

Mexico. See *Grasses of North America for Farmers and Students* 2: 345. 1896.

C. pseudophragmites (Haller f.) Koeler (*Arundo laxa* (Host) Wahlenb.; *Arundo littorea* Schrad.; *Arundo*

pseudophragmites Haller f.; *Calamagrostis glauca* (M.Bieb.) Trin.; *Calamagrostis glauca* Trin. ex Hohen.; *Calamagrostis lanceolata* Aitch., nom. illeg., non *Calamagrostis lanceolata* Roth; *Calamagrostis laxa* Host; *Calamagrostis littorea* DC.; *Calamagrostis littorea* (Schrad.) DC.; *Calamagrostis littorea* (Schrad.) P. Beauv.; *Calamagrostis nepalensis* Nees ex Steud.; *Calamagrostis onoei* Franch. & Sav.; *Calamagrostis pseudophragmites* (Haller f.) Koeler subsp. *dubia* (Bunge) Tzvelev

Asia, China, Japan. Perennial, rhizomatous, coarse foliage, useful for erosion control, common in disturbed sites, wet areas along rivers, pine woods, along roadsides, see *Archiv für die Botanik* 1: 11. 1797, *Descriptio uberior Graminum* 106. 1803, *Flora Germanica* 1: 212, pl. 4, f. 2. 1806, *Essai d'une Nouvelle Agrostographie* 15. 1812, *Bulletin de la Société Impériale des Naturalistes de Moscou* 14. 1837, *Synopsis Plantarum Glumacearum* 1: 193. 1854, *Enumeratio Plantarum in Japonia Sponte Crescentium* ... 2: 598. 1879, *Journal of the Linnean Society, Botany* 18: 107. 1880.

C. pseudophragmites (Haller f.) Koeler subsp. **pseudophragmites**

Europe, Asia. Perennial, rhizomatous, useful for erosion control.

C. pubescens (Pilg.) Pilg. (*Deyeuxia pubescens* Pilg.)

South America, Colombia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 712. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 60. 1908.

C. pungens Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 11: 61. 1960.

C. purpurascens R. Br. (*Arundo purpurascens* (R. Br.) Schult.; *Avena sesquiflora* (Trin.) Griseb.; *Calamagrostis arctica* Vasey; *Calamagrostis arundinacea* f. *purpurascens* (R. Br.) Gelert; *Calamagrostis arundinacea* var. *purpurascens* (R. Br.) Porsild; *Calamagrostis caespitosa* V. Vassil., nom. illeg., non *Calamagrostis caespitosa* (Hochst. ex Seub.) Steud.; *Calamagrostis lepageana* Louis-Marie; *Calamagrostis purpurascens* subsp. *arctica* (Vasey) Hultén; *Calamagrostis purpurascens* var. *arctica* (Vasey) Kearney; *Calamagrostis purpurascens* var. *ophitidis* J.T. Howell; *Calamagrostis purpurascens* var. *vaseyi* (Beal) M.E. Jones; *Calamagrostis sesquiflora* (Trin.) Kawano; *Calamagrostis sesquiflora* (Trin.) Tzvelev; *Calamagrostis sylvatica* var. *americana* Vasey; *Calamagrostis sylvatica* var. *purpurascens* Thurb. ex Vasey; *Calamagrostis vaseyi* Beal; *Calamagrostis wiluica* Litv. ex V. Petrov; *Calamagrostis yukonensis* Nash; *Deschampsia congestiformis* W.E. Booth; *Deyeuxia purpurascens* (R. Br.) Kunth; *Deyeuxia robusta* Phil.; *Trisetum sesquiflorum* Trin.)

North America, U.S., Canada. Open habitats, dry soils, see *Tentamen Florae Germanicae* 2(1): 89. 1789, *Icones et Descriptiones Graminum Austriacorum* 4: t. 48. 1809,

Botanical Appendix to Captain Franklin's Narrative 731. 1823, *Mantissa* 3: 603. 1827, *Révision des Graminées* 1: 77. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 14. 1836, *Flora Rossica* 4(13): 419. 1852, *Florula Atacamensis seu Enumeratio* ... 54. 1860, *Contributions from the United States National Herbarium* 3(1): 83. 1892, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 55. 1893, *Grasses of North America for Farmers and Students* 2: 344. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 19. 1898 and *Bulletin of the New York Botanical Garden* 2(6): 154-155. 1901, Carl E. Hansen Ostenfeld (1873-1931), *Flora arctica* containing descriptions of the flowering plants and ferns, found in the Arctic regions, with their distribution in these countries ... Edited by C.H. Ostenfeld ... Pt. I. Copenhagen, Det Nordiske Forlag, 1902. [Pteridophyta, Gymnospermae and Monocotyledones, by O. Gelert and C.H. Ostenfeld.], *Meddelelser om Grønland* 47: 261. 1910, *Contributions to Western Botany* 14: 9. 1912, *Flora Iakutiae* 1: 193, f. 63. 1930, *Acta Universitatis Lundensis, n.s.* 38(1): 170-171. 1942, *Rhodora* 45(538): 414. 1943, *Rhodora* 46: 303. 1944, *Leaflets of Western Botany* 4(10): 246-247. 1946, *Flora Arctica URSS* 2: 74. 1964, *Acta Phytotaxonomica et Geobotanica* 21: 80. 1965.

C. purpurascens R. Br. var. **laricina** Louis-Marie (*Calamagrostis laricina* (Louis-Marie) Louis-Marie; *Calamagrostis poluninii* T.J. Sørensen; *Calamagrostis purpurascens* f. *compacta* Louis-Marie; *Calamagrostis purpurascens* f. *laricina* Louis-Marie)

North America, Canada. See *Revue d'Oka, agronomie, médecine, vétérinaire de l'institut agricole* 20: 153. 1946, *Nature Canada* 85: 70. 1958, *Fl. Canada* 2: 258. 1978.

C. purpurascens R. Br. var. **purpurascens** (*Calamagrostis caespitosa* V. Vassil., nom. illeg., non *Calamagrostis caespitosa* (Hochst. ex Seub.) Steud.; *Calamagrostis maltei* (Polunin) Á. Löve and D. Löve; *Calamagrostis purpurascens* subsp. *maltei* (Polunin) A.E. Porsild; *Calamagrostis purpurascens* subsp. *purpurascens*; *Calamagrostis purpurascens* var. *maltei* Polunin; *Calamagrostis yukonensis* Nash)

North America, Canada. Dry soils, see *Bulletin of the New York Botanical Garden* 2(6): 154-155. 1901, *Bulletin of the National Museum of Canada* 92: 51. 1940, *Nature Canada* 4: 5. 1974 [1975], *Botaniska Notiser* 128(4): 503. 1975 [1976].

C. purpurea (Trin.) Trin. (*Arundo purpurea* Trin.; *Calamagrostis gracilis* (Litv.) V. Vassil., nom. illeg., non *Calamagrostis gracilis* Seenus; *Calamagrostis neglecta* var. *poaeoides* (Steud.) Hack.; *Calamagrostis notabilis* Litv.; *Calamagrostis poaeoides* Steud.; *Calamagrostis poaeoides*

V.N. Vassil., nom. illeg., non *Calamagrostis poaeoides* Steud.; *Calamagrostis poplowskiae* Roshev.; *Deyeuxia poaeoides* (Steud.) Rúgolo

Siberia, Russia, Finland. Perennial, on sandy soil, meadows, mountain steppe, margin of abandoned fields, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 52. 1821, *Gram. Unifl. Sesquifl.* 219. 1824 and *Feddes Repertorium* 68: 212, 219. 1963.

C. purpurea (Trin.) Trin. subsp. ***phragmitoides*** (Hartm.) Tzvelev (*Calamagrostis elata* Blytt; *Calamagrostis flexuosa* Rupr.; *Calamagrostis phragmitoides* Hartm.)

Russia, Siberia, Finland. Useful for erosion control.

C. purpurea (Trin.) Trin. subsp. ***pseudopurpurea*** (Gerstl. ex O.R. Heine) G.C.S. Clarke (*Calamagrostis pseudopurpurea* Gerstl. ex O.R. Heine; *Calamagrostis pseudopurpurea* Gerstl. ex Rauschert; *Calamagrostis purpurea* subsp. *pseudopurpurea* (Gerstl. ex Rauschert) G.C.S. Clarke; *Calamagrostis rivalis* (Torges) H. Scholz)

Europe, Germany. See *Feddes Repertorium* 83(4): 282. 1972, *Botanical Journal of the Linnean Society* 76: 361. 1978.

C. purpurea (Trin.) Trin. subsp. ***purpurea***

Siberia, Russia.

C. ramonae Escalona

Venezuela. Páramos, see *Phytologia* 65(5): 342, f. 3. 1988.

C. rauhii Tovar (for the German botanist Werner Rauh, 1913-2000 (Heidelberg), explorer, collector, botanical writer, bryologist, and specialist on succulent plants and Bromeliaceae, traveler (Africa and South America, Madagascar), professor and former director of the Institute for Systematic Botany at the University of Heidelberg (Inst. für Systematische Botanik, Ruprecht-Karls-Universität, Heidelberg, Germany) and the associated botanical garden, author of numerous books and articles pertaining to succulent plants, he is commemorated in numerous specific and generic names, contributed to *The Euphorbia Journal*, among his writings are "The Didiereaceae." *Cact. Succ. J. Amer.* 48: 75. 1976, "Über einige interessante Sukkulente aus Kenia." *Sukkulentekunde*. 7/8: 108-127. 1963, *Kakteen an ihren Standorten*. Berlin & Hamburg 1979 and *Succulent and Xerophytic Plants of Madagascar*. Two volumes. Strawberry Press 1995-1998. See T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 325. 1972; *The Euphorbia Journal*. vol. 10: 225-226. 1996; Andrew Cowin, "The Hortus Palatinus: Heidelberg's Eight Wonder of the World." in *Hortus*. 24: 44-54. 1992; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 290. Cape Town 1981;

Irving William Knobloch, compilation, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; *Trop. Subtrop. Pflanzenwelt* no. 10: 15, f. 8. 1974; *Brittonia* 34: 480. 1982; *Trop. Subtrop. Pflanzenwelt* 50: 19. 1984; *J. Bromel. Soc.* 35: 116(-117). 1985; *Trop. Subtrop. Pflanzenwelt* 60: 69. 1987; *Trop. Subtrop. Pflanzenwelt* 65: 19. 1988; *Icon. Orchid.* fasc. 3(2): t. 373. 1999; *Kakteen Sukk.* 51(Heft 11): 294. 2000; *J. Bromel. Soc.* 50(3): 122-124. 2000)

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 11: 78. 1960.

C. recta (Kunth) Trin. ex Steud. (*Arundo recta* (Kunth) Poir.; *Arundo stricta* (Kunth) Poir., nom. illeg., non *Arundo stricta* Timm; *Calamagrostis humboldtiana* Steud.; *Calamagrostis naiguatensis* Swallen; *Calamagrostis pallens* (J. Presl) Steud.; *Calamagrostis stricta* (Timm) Koeler; *Deyeuxia pallens* J. Presl; *Deyeuxia recta* Kunth; *Deyeuxia stricta* Kunth; *Deyeuxia sulcata* Wedd.)

South America, Ecuador, Venezuela. See *Saccardo: Monographiae Mycologicae* 105. 1802, *Nova Genera et Species Plantarum* 1: 144-146. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 706. 1816, *Reliquiae Haenkeanae* 1(4-5): 249. 1830, *Nomenclator Botanicus. Editio secunda* 1: 250-251. 1840, *Bulletin de la Société Botanique de France* 22: 178, 180. 1875 and *Contributions from the United States National Herbarium* 29(6): 262. 1948 [1949].

C. reitzii Swallen (named for Padre Raulino Reitz, 1919-1990, Jesuit)

Brazil. See *Sellowia* 7: 11. 1956.

C. rigescens (J. Presl) Scribn. (*Agrostis bromidioides* Griseb.; *Agrostis chamaecalamus* Trin.; *Agrostis rigescens* J. Presl; *Agrostis jamesoniana* Steud.; *Bromidium brevifolium* Nees & Meyen; *Bromidium hygrometricum* var. *rigescens* (J. Presl) Kuntze; *Bromidium hygrometricum* var. *spectabilis* (Nees & Meyen) Kuntze; *Bromidium rigescens* (J. Presl) Nees & Meyen; *Bromidium rigescens* var. *brevifolium* Nees; *Bromidium rigescens* var. *rigescens*; *Bromidium spectabile* Nees & Meyen; *Bromidium spectabile* var. *nubigenum* Nees; *Bromidium spectabile* var. *spectabile*; *Calamagrostis bromidioides* (Griseb.) Pilg.; *Calamagrostis cajatambensis* Pilg.; *Calamagrostis imberbis* (Wedd.) Pilg.; *Chamaecalamus spectabilis* Meyen ex Nees; *Chamaecalamus spectabilis* Meyen; *Deyeuxia cajatambensis* Pilg. ex Zuloaga & al.; *Deyeuxia imberbis* Wedd.; *Deyeuxia phalaroides* Wedd.; *Deyeuxia rigescens* (J. Presl) Türpe; *Stylagrostis phalaroides* (Wedd.) Mez)

Southern America, Argentina, Peru. See *Revisio Generum Plantarum* 3: 342. 1808, *Reliquiae Haenkeanae* 1(4-5): 237. 1830, *Reise um die Erde* 1: 456. 1834, *Gramineae* 23-25. 1841, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences*

Naturelles 6,4(3-4): 365. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 23, 155, 156-157. 1843, *Synopsis Plantarum Glumacearum* 1: 163. 1854, *Bulletin de la Société Botanique de France* 22: 177, 180. 1875, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 293. 1879, *Revisio Generum Plantarum* 3(3): 343. 1898, *Annual Report of the Missouri Botanical Garden* 10: 37. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42(1): 64-65. 1908, *Botanisches Archiv* 1(1): 20. 1922, *Feddes Repertorium* 45: 4. 1938, *Lilloa* 31: 134. 1962, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: 49. 1994.

C. rigida (Kunth) Trin. ex Steud. (*Agrostis antoniana* Griseb.; *Arundo rigida* (Kunth) Poir.; *Calamagrostis antoniana* (Griseb.) Steud. ex Hitchc.; *Calamagrostis antoniana* (Griseb.) D.M. Moore, nom. illeg., non *Calamagrostis antoniana* (Griseb.) Steud. ex Hitchc.; *Calamagrostis antoniana* Steud. ex Lechler; *Calamagrostis crassifolia* Hack. ex Sodiro; *Calamagrostis gracilis* (Wedd.) Henrard, nom. illeg., non *Calamagrostis gracilis* Seenus; *Calamagrostis gracilis* (Wedd.) Pilg., nom. illeg., non *Calamagrostis gracilis* Seenus; *Calamagrostis gusindei* Pilg. ex Skotts.; *Calamagrostis gusindei* Pilg.; *Calamagrostis nitidula* Pilg.; *Calamagrostis nitidula* var. *elata* Pilg.; *Calamagrostis nitidula* var. *macrantha* Pilg.; *Calamagrostis sandiensis* Pilg.; *Deyeuxia antoniana* (Griseb.) Parodi; *Deyeuxia crassifolia* Sodiro; *Deyeuxia gracilis* Wedd.; *Deyeuxia gusindei* (Pilg.) Parodi; *Deyeuxia nitidula* (Pilg.) Rúgolo; *Deyeuxia rigida* Kunth) (for Martin Gusinde, 1886-1969, botanist and botanical collector in Chile, author of *Der Peyote Kult, Entstehung und Verbreitung*, in *Festschrift zum 50 jährigen Bestandsjubiläum des Missionhauses St. Gabriel Wien-Modling*, no.8, St. Gabriel Studien, pp. 401-499. 1939, "Descripción de una nueva especie chilena del género *Myrceugenia*." *Anales Univ. Chile* 140: 307-312. 1917 and "Plantas medicinales que los indios araucanos recomiendan." *Anthropos* 31: 55-873. 1936; see *American Anthropologist*, XLII, 667-669. 1940)

Ecuador, Peru, Chile. Páramos, stony places, see *Nova Genera et Species Plantarum* 1: 144. 1815 [1816], *Encyclopédie Méthodique, Botanique* Suppl. 4: 705. 1816, *Nomenclator Botanicus. Editio secunda* 1: 251. 1840, *Berberides Americae Australis* 56. 1857, *Bulletin de la Société Botanique de France* 22: 179. 1875, *Symbolae ad Floram Argentinam* 293. 1879, *Anales de la Universidad Central del Ecuador* 3(25): 481. 1889 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 68-71. 1908, *Mededeelingen van's Rijks-Herbarium* 40: 61. 1921, *Acta Horti Gothoburgensis* 2: 29, 36. 1926, *Contributions from the United States National Herbarium* 24(8): 378. 1927, *Revista del Colegio Nacional Vicente Rocafuerte* 12: 64, 73. 1930, *Revista Argentina de Agronomía* 20: 14. 1953, *Flora of Tierra del Fuego* 310. 1983.

C. rosea (Griseb.) Hack. (*Agrostis rosea* Griseb.; *Calamagrostis rosea* f. *typica* Hack.; *Calamagrostis rosea* var. *viridula* Hack.; *Deyeuxia colorata* Beetle; *Deyeuxia rosea* Bor; *Deyeuxia rosea* (Griseb.) Türpe, nom. illeg., non *Deyeuxia rosea* Bor)

South America. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 253-254. 1874 and *Anales del Museo Nacional de Buenos Aires* 11: 109. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 480. 1906, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 8: 40. 1908, *Kew Bulletin* 9(3): 498. 1954, *Lilloa* 31: 122. 1962, *Rhodora* 66: 277. 1964.

C. rubescens Buckley (*Calamagrostis aleutica* Trin.; *Calamagrostis aleutica* var. *angusta* Vasey; *Calamagrostis angusta* (Vasey) Kearney; *Calamagrostis cusickii* (Vasey) Vasey; *Calamagrostis fasciculata* Kearney; *Calamagrostis luxurians* (Kearney) Rydb.; *Calamagrostis subflexuosa* Kearney; *Calamagrostis suksdorfii* (Scribn.) Scribn.; *Calamagrostis suksdorfii* var. *luxurians* Kearney; *Calamagrostis suksdorfii* var. *suksdorfii*; *Deyeuxia aleutica* (Trin.) Munro ex Hook.; *Deyeuxia cusickii* Vasey; *Deyeuxia rubescens* (Buckley) Vasey; *Deyeuxia suksdorfii* Scribn.) (for the American botanist William Conklin Cusick, 1842-1922, Oregon plant collector; see John Hendley Barnhart, *Biographical notes upon botanists*. 1: 407. Boston 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

Northern America, U.S., Canada (British Columbia), Pacific Northwest. Perennial, slender, tufted, usually reddish at the base, leaves erect, leaf sheaths smooth but slightly hairy, spikelets 1-floreted, flowers borne in a narrow cluster, with creeping rhizomes, native pasture species, leaves used to weave socks and mocassin insoles, in British Columbia the leaves used in the preparation of "Indian icecream," moist montane forests, plains, open areas, dry sagebrush flats, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 92. 1862, *Transactions of the Linnean Society of London* 23: 345. 1862, *The Grasses of the United States* 28. 1883, *Botanical Gazette* 10: 244. 1885, *Bulletin of the Torrey Botanical Club* 15(1): 9, pl. C, f. 1-9. 1888, *Contributions from the United States National Herbarium* 3(1): 80-82. 1892, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 21-25, f. 1. 1898 and *Flora of the Rocky Mountains* 1060. 1917.

in English: pine grass, timbergrass

C. rupestris Trin. (*Calamagrostis beyrichiana* Nees ex Döll; *Calamagrostis longearistata* (Wedd.) Hack. ex Sodiro; *Calamagrostis longearistata* f. *pilosa* Kämpf; *Calamagrostis longearistata* var. *longearistata*; *Calamagrostis longearistata* var. *minor* Kämpf; *Calamagrostis montevidensis* var. *linearis* Hack.; *Deyeuxia beyrichiana* (Nees ex Döll) Sodiro; *Deyeuxia heterophylla* var. *elatior* Wedd.;

Deyeuxia longearistata Wedd.; *Deyeuxia rupestris* (Trin.) Rúgolo)

Brazil, Bolivia. See *De Graminibus Paniceis* 28. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 401. 1829, *Bulletin de la Société Botanique de France* 22: 176, 180. 1875, *Flora Brasiliensis* 2(3): 53, t. 16. 1878, *Anales de la Universidad Central del Ecuador* 3(25): 481. 1889 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 156. 1908, *Revista del Colegio Nacional Vicente Rocafuerte* 12: 79. 1930, *Anuário Técnico do Instituto de Pesquisas Zootécnicas "Francisco Osorio"* 2: 610, 613. 1974 [1975].

C. scaberula Swallen (*Calamagrostis intermedia* (J. Presl) Steud.; *Deyeuxia intermedia* J. Presl)

Ecuador. Páramos, see *Reliquiae Haenkeanae* 1(4-5): 249. 1830, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840 and *Contributions from the United States National Herbarium* 29(6): 261. 1948 [1949].

C. scabriflora Swallen

Venezuela. Swampy places, moist meadows, see *Contributions from the United States National Herbarium* 29(6): 260-261. 1948 [1949].

C. sclerantha Hack. (*Calamagrostis spiciformis* Hack.; *Deyeuxia sclerantha* (Hack.) Rúgolo; *Deyeuxia spiciformis* (Hack.) Türpe)

Argentina. See *Österreichische Botanische Zeitschrift* 52(3): 108. 1902, *Anales del Museo Nacional de Buenos Aires* 13: 481. 1906, *Lilloa* 31: 138. 1962.

C. scopulorum M.E. Jones (*Calamagrostis scopulorum* var. *bakeri* Stebbins; *Calamagrostis scopulorum* var. *lucidula* Kearney; *Calamagrostis scopulorum* var. *scopulorum*) (Latin *scopulus*, *i*, "a rock, cliff," Greek *skopelos* "peak, promontory")

North America, U.S. See *Proceedings of the California Academy of Sciences, Series 2*, 5: 722. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 33. 1898 and *Rhodora* 32: 47. 1930.

C. secunda (Pilg.) Pilg. (*Calamagrostis humboldtiana* Steud.; *Calamagrostis stricta* (Timm) Koeler; *Deyeuxia secunda* Pilg.; *Deyeuxia stricta* Kunth)

South America, Ecuador. See *Accardo: Monographiae Mycologicae* 105. 1802, *Nova Genera et Species Plantarum* 1: 146. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 1: 250. 1840, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 712. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 60. 1908.

C. sesquiflora (Trin.) Tzvelev (*Avena sesquiflora* (Trin.) Griseb.; *Calamagrostis arctica* Vasey; *Calamagrostis purpurascens* subsp. *arctica* (Vasey) Hultén; *Calamagrostis purpurascens* subsp. *tasuensis* Calder and Roy L. Taylor; *Calamagrostis purpurascens* var. *arctica* (Vasey) Kearney; *Calamagrostis purpurascens* var. *tasuensis* (Calder & Roy

L. Taylor) B. Boivin; *Calamagrostis purpurascens* var. *vaseyi* (Beal) M.E. Jones; *Calamagrostis sesquiflora* (Trin.) Kawano; *Calamagrostis sesquiflora* subsp. *urelytra* (Hack.) Prob.; *Calamagrostis urelytra* Hack.; *Calamagrostis vaseyi* Beal; *Trisetum bongardii* Louis-Marie; *Trisetum sesquiflorum* Trin.) (after the German botanist August (Gustav) Heinrich von Bongard, 1786-1839, physician, traveler, explorer, botanical collector in Alaska, China, Russia, author of *Observations sur la végétation de l'île de Sitcha*. [Saint Pétersbourg, 1833. *Mém. Acad. Pétersb. Sér. VI.*, ii.], *Esquisse historique des travaux sur la botanique entrepris en Russie*, etc. [Saint Pétersbourg, 1834.], *Descriptiones plantarum novarum*

Publisher Petropoli, 1839 [*Mém. Acad. Pétersb. Sér. VI.*, v.]; see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série*. 4: 157-246. 1845; J.H. Barnhart, *Biographical notes upon botanists*. 1: 217. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933).

North America. See *Botanical Appendix to Captain Franklin's Narrative* 731. 1823, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 14. 1836, *Flora Rossica* 4(13): 419. 1852, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 55. 1893, *Grasses of North America for Farmers and Students* 2: 344. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 19. 1898, *Bulletin de l'Herbier Boissier* 7(9): 653. 1899 and *Contributions to Western Botany* 14: 9. 1912, *Rhodora* 30(359): 220. 1928 [1929], *Acta Universitatis Lundensis, n.s.* 38(1): 170-171. 1942, *Flora Arctica URSS* 2: 74. 1964, *Canadian Journal of Botany* 43(11): 1388-1389. 1965, *Acta Phytotaxonomica et Geobotanica* 21: 80. 1965, *Le Naturaliste Canadien* 94(4): 521. 1967, *Novosti Sist. Vyss. Rast.* 15: 68. 1979.

C. setiflora (Wedd.) Pilg. (*Calamagrostis coronalis* Tovar; *Deyeuxia setiflora* Wedd.)

Bolivia, Peru. See *Bulletin de la Société Botanique de France* 22: 176, 180. 1875 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 61. 1908, *Publicaciones del Museo de Historia Natural "Javier Prado." Serie B. Botánica* 32: 6. 1984.

C. spicigera (J. Presl) Steud. (*Deyeuxia obtusata* Wedd.; *Deyeuxia spicigera* J. Presl; *Deyeuxia subsimilis* Wedd.)

South America, Bolivia. See *Reliquiae Haenkeanae* 1(4-5): 247. 1830, *Nomenclator Botanicus. Editio secunda* 1: 251. 1840, *Bulletin de la Société Botanique de France* 22: 177-178, 180. 1875.

C. spicigera (J. Presl) Steud. var. **cephalotes** (Wedd.) Soreng (*Deyeuxia cephalotes* Wedd.; *Deyeuxia spicigera* var. *cephalotes* (Wedd.) Rúgolo)

Bolivia. See *Bulletin de la Société Botanique de France* 22: 178, 179. 1875 and *Contributions from the United States National Herbarium* 48: 220. 2003.

C. spicigera (J. Presl) Steud. var. *spicigera* (*Deyeuxia spicigera* var. *spicigera*)

Bolivia. See *Reliquiae Haenkeanae* 1(4-5): 247. 1830.

C. spruceana (Wedd.) Hack. ex Sodiro (*Deyeuxia spruceana* Wedd.; *Deyeuxia toluccensis* Munro ex Wedd.)

Ecuador. See *Bulletin de la Société Botanique de France* 22: 178, 180. 1875.

C. srilankensis Davidse (*Deyeuxia srilankensis* (Davidse) Veldkamp)

Asia, Sri Lanka. Perennial, caespitose, geniculate at the base, erect, sheaths acuminate, ligule toothed, spreading panicles, lanceolate spikelets, stamens 3, related to *Calamagrostis zenkeri* (Trin.) Davidse, growing in montane grassland, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2: 363. 1841, *Fl. Br. India* 7: 265. 1896 and *Handb. Fl. Ceylon* 5: 265. 1900, *Kew Bulletin* 9: 441, 456. 1954, *Fl. Ceylon* 8: 107-108. 1994, *Blumea* 41(2): 410. 1996.

C. staintonii (Bor) G. Singh (*Deyeuxia nepalensis* Bor) (for Adam Stainton, author of *Forests of Nepal*, London 1972, with Oleg Polunin wrote *Flowers of the Himalaya*, Delhi 1988)

India, Uttar Pradesh; Nepal. Grows on sandy soil, near water, at high altitudes, see *Kew Bulletin* 12(3): 411. 1958, *Taxon* 33(1): 94. 1984, *Acta Phytotax. Geobot.* 53(1): 4. 2002.

C. steyermarkii Swallen

Ecuador. Páramos, see *Contributions from the United States National Herbarium* 29(6): 258-259. 1948 [1949].

C. stoliczkai Hook.f. (*Calamagrostis tibetica* (Bor) G. Singh; *Calamagrostis tibetica* (Bor) Keng f., nom. illeg., non *Calamagrostis tibetica* (Bor) G. Singh; *Deyeuxia tibetica* Bor)

India, Sikkim; Tibet. Alpine grass, see *The Flora of British India* 7(22): 262. 1897 [1896] and *Kew Bulletin* 4(1): 66. 1949, *Bulletin of Botanical Research* 4(3): 196. 1984, *Taxon* 33(1): 95. 1984, *Journal of Cytology and Genetics* 21: 155. 1986, *Journal of Cytology and Genetics* 24: 164-166. 1989, *Cytologia* 56: 437-452. 1991.

C. stricta (Timm) Koeler (*Agrostis arundinacea* J. Presl, nom. illeg., non *Agrostis arundinacea* L.; *Arundo lapponica* Wahl.; *Arundo neglecta* Ehrh.; *Arundo stricta* Timm; *Calamagrostis ameghinoi* (Speg.) Macloskie; *Calamagrostis ameghinoi* (Speg.) Hauman, nom. illeg., non *Calamagrostis ameghinoi* (Speg.) Macloskie; *Calamagrostis arundinacea* (L.) Roth; *Calamagrostis freticola* (Speg.) Macloskie; *Calamagrostis fuegiana* Speg.; *Calamagrostis*

haenkeana Hitchc.; *Calamagrostis hookeri* (Syme) Druce; *Calamagrostis magellanica* Phil.; *Calamagrostis neglecta* (Ehrh.) Gaertn.; *Calamagrostis neglecta* auct.; *Calamagrostis neglecta* subsp. *neglecta*; *Calamagrostis neglecta* subsp. *stricta* (Timm) Tzvelev; *Calamagrostis neglecta* var. *poaeoides* (Steud.) Hack.; *Calamagrostis neglecta* var. *stricta* (Timm) Griseb.; *Calamagrostis poaeoides* Steud.; *Calamagrostis robertii* A.E. Porsild; *Calamagrostis stricta* var. *hookeri* Syme; *Deyeuxia ameghinoi* Speg.; *Deyeuxia freticola* Speg.; *Deyeuxia hookeri* (Syme) Druce; *Deyeuxia neglecta* (Ehrh.) Kunth; *Deyeuxia poaeoides* (Steud.) Rúgolo)

Europe; South America, Chile. Perennial, see *Tentamen Florae Germanicae* 2(1): 89. 1789, *Beiträge zur Naturkunde* 6: 137. 1791, *Oekonomisch-Technische Flora der Wetterau* 1: 94. 1799, *Saccardo: Monographiae Mycologicae* 105. 1802, *Révision des Graminées* 1: 76. 1829, *Reliquiae Haenkeanae* 1(4-5): 238. 1830, *Flora Rossica* 4(13): 429. 1852, *Synopsis Plantarum Glumacearum* 1: 423. 1854, *English Botany, the third edition* 11: 56. 1873, *Anales del Museo Nacional de Buenos Aires* 5: 85, 87. 1896, *Anales de la Universidad de Chile* 94: 20. 1896 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 190. 1902, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1* [2], *Botany* 8(1,5,1): 193-194. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 103. 1911, *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 57. 1917, *Contributions from the United States National Herbarium* 24(8): 371. 1927, *The Comital Flora of the British Isles* 352. 1932, *Novosti Sist. Vyss. Rast.* 1965: 30. 1965, *Nature Canada* 4: 5. 1974 [1975], *Darwiniana* 21(2-4): 439. 1978, *Flora Patagónica* 3: 361. 1978, *Watsonia* 20: 51-60. 1994, Ulf Molau, Urban Nordenhäll and Bente Eriksen, "Onset of flowering and climate variability in an alpine landscape: a 10-year study from Swedish Lapland." *Am. J. Bot.* 92: 422-431. 2005.

in English: slimstem reedgrass

C. stricta (Timm) Koeler subsp. *inexpansa* (A. Gray) C.W. Greene (*Calamagrostis aculeolata* (Hack.) Ohwi; *Calamagrostis americana* (Vasey) Scribn.; *Calamagrostis breviseta* var. *lacustris* Kearney; *Calamagrostis californica* Kearney; *Calamagrostis canadensis* (Michx.) Beauv. var. *arcta* Stebbins; *Calamagrostis canadensis* var. *acuminata* Vasey ex Shear & Rydb.; *Calamagrostis chordorrhiza* Porsild; *Calamagrostis crassiglumis* Thurb.; *Calamagrostis elongata* (Kearney) Rydb.; *Calamagrostis expansa* Rickett & Gilly, non (Munro ex Hillebr.) A.S. Hitchc.; *Calamagrostis fernaldii* Louis-Marie; *Calamagrostis hyperborea* Lange; *Calamagrostis hyperborea* Lange var. *americana* (Vasey) Kearney; *Calamagrostis hyperborea* var. *elongata* Kearney; *Calamagrostis hyperborea* var. *hyperborea*; *Calamagrostis hyperborea* var. *stenodes* Kearney; *Calamagrostis inexpansa* A. Gray; *Calamagrostis inexpansa* var. *barbulata*

Kearney; *Calamagrostis inexpansa* var. *brevior* (Vasey) Stebbins; *Calamagrostis inexpansa* var. *inexpansa*; *Calamagrostis inexpansa* var. *novae-angliae* Stebbins; *Calamagrostis inexpansa* var. *robusta* (Vasey) Stebbins; *Calamagrostis labradorica* Kearney; *Calamagrostis lacustris* (Kearney) Nash; *Calamagrostis lapponica* var. *brevipilis* Stebbins; *Calamagrostis neglecta* subsp. *inexpansa* (A. Gray) Tzvelev; *Calamagrostis neglecta* var. *crassiglumis* (Thurb.) Beal; *Calamagrostis neglecta* var. *hyperborea* (Lange) M.E. Jones; *Calamagrostis neglecta* var. *inexpansa* (A. Gray) M.E. Jones; *Calamagrostis pickeringii* var. *debilis* (Kearney) Fernald & Wiegand; *Calamagrostis pickeringii* var. *lacustris* (Kearney) A.S. Hitchc.; *Calamagrostis robertii* Porsild; *Calamagrostis robusta* (Vasey) Vasey; *Calamagrostis stricta* var. *aculeolata* Hack.; *Calamagrostis stricta* var. *brevior* Vasey; *Calamagrostis stricta* var. *lacustris* (Kearney) C.W. Greene; *Calamagrostis stricta* var. *robusta* Vasey; *Calamagrostis wyomingensis* Gand.; *Deyeuxia americana* (Vasey) Lunell; *Deyeuxia crassiglumis* (Thurb.) Vasey; *Deyeuxia elongata* (Kearney) Lunell; *Deyeuxia glomerata* Vasey ex Macoun; *Deyeuxia hyperborea* (Lange) Lunell; *Deyeuxia hyperborea* var. *elongata* (Kearney) Lunell; *Deyeuxia hyperborea* var. *stenodes* (Kearney) Lunell; *Deyeuxia neglecta* var. *americana* Vasey; *Deyeuxia neglecta* var. *robusta* Vasey)

Northern America, Canada, U.S. Perennial, swamps, see *Essai d'une Nouvelle Agrostographie* 15, 152, 157. 1812, *Genera Graminum* 5. 1819, *North American Gramineae and Cyperaceae* 1: 20. 1834, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 285. 1878 [1879], *Geological Survey of California, Botany* 2: 281. 1880, *The Grasses of the United States* 28. 1883, *Catalogue of Canadian Plants* 2(4): 206. 1888, *Botanical Gazette* 16: 288. 1891, *Contributions from the United States National Herbarium* 3(1): 82. 1892, *Memoirs of the Torrey Botanical Club* 5: 41. 1894, *Grasses of North America for Farmers and Students* 2: 353. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 27. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 25-26, 37-41. 1898, *Bulletin de l'Herbier Boissier* 7(9): 652. 1899 and *Rhodora* 8(95): 210. 1906, *Contributions to Western Botany* 14: 9. 1912, *An Illustrated Flora of the Northern United States* 1: 208. 1913, *Rhodora* 15(175): 135. 1913, *American Midland Naturalist* 4: 218. 1915, *Flora of the Rocky Mountains* 1060. 1917, *American Midland Naturalist* 5: 233. 1918, *Bulletin de la Société Botanique de France* 66(7): 299. 1919 [1920], *Rhodora* 32: 45, 48, 50, 56. 1930, *Acta Phytotaxonomica et Geobotanica* 2: 278. 1933, *Bulletin of the Torrey Botanical Club* 69: 464. 1942, *Sargentia: Continuation of the Contributions from the Arnold Arboretum of Harvard University* 4: 9-10. 1943, *Rhodora* 46: 290, pl. 836, f. 4. 1944,

Zlaki SSSR 310. 1976, *American Journal of Botany* 71: 286. 1984.

in English: Northern reedgrass

C. stricta (Timm) Koeler subsp. **stricta** (*Arundo neglecta* Ehrh.; *Arundo stricta* Timm; *Calamagrostis hyperborea* auct.; *Calamagrostis jacutensis* Petrov; *Calamagrostis kolgujewensis* Gand.; *Calamagrostis laxiflora* Kearney, nom. illeg., non *Calamagrostis laxiflora* Phil.; *Calamagrostis lucida* Scribn.; *Calamagrostis micrantha* Kearney; *Calamagrostis micrantha* var. *micrantha*; *Calamagrostis micrantha* var. *sierrae* M.E. Jones; *Calamagrostis neglecta* (Ehrh.) P.G. Gaertn., B. Mey. & Scherb.; *Calamagrostis neglecta* (Ehrh.) Gaertn.; *Calamagrostis neglecta* subsp. *aculeolata* (Hack.) T. Koyama; *Calamagrostis neglecta* subsp. *micrantha* (Kearney) Tzvelev; *Calamagrostis neglecta* subsp. *neglecta*; *Calamagrostis neglecta* subsp. *stricta* (Timm) Tzvelev; *Calamagrostis neglecta* var. *gracilis* (Scribn.) Scribn.; *Calamagrostis neglecta* var. *gracilis* Scribn. ex Kearney; *Calamagrostis neglecta* var. *micrantha* (Kearney) Stebbins; *Calamagrostis neglecta* var. *neglecta*; *Calamagrostis neglecta* var. *poaeoides* (Steud.) Hack.; *Calamagrostis neglecta* var. *stricta* (Timm) Griseb.; *Calamagrostis neglecta* var. *wrightii* Kearney; *Calamagrostis ochotensis* V. Vassil.; *Calamagrostis poaeoides* Steud.; *Calamagrostis praerupta* V. Vassil.; *Calamagrostis reverdattoi* Golub; *Calamagrostis stricta* var. *aculeolata* Hack.; *Calamagrostis stricta* var. *stricta*; *Deyeuxia borealis* Macoun; *Deyeuxia micrantha* (Kearney) L. Liou; *Deyeuxia neglecta* (Ehrh.) Kunth; *Deyeuxia neglecta* var. *brevifolia* Vasey; *Deyeuxia neglecta* var. *gracilis* Scribn.; *Deyeuxia poaeoides* (Steud.) Rúgolo; *Deyeuxia vancouverensis* Vasey)

Northern America, Canada, U.S., Europe. Perennial, in meadows, under pines, see *Beiträge zur Naturkunde* 6: 137. 1791, *Oekonomisch-Technische Flora der Wetterau* 1: 94. 1799, *Révision des Graminées* 1: 76. 1829, *Flora Rossica* 4(13): 429. 1852, *Synopsis Plantarum Glumacearum* 1: 423. 1854, *Botanical Gazette* 11: 175. 1886, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 34, 36. 1898, *Bulletin de l'Herbier Boissier* 7(9): 652. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 30: 8. 1901, *Bulletin de la Société Botanique de France* 56: 533. 1909, *Anales del Museo Nacional de Buenos Aires* 21: 103. 1911, *Contributions to Western Botany* 14: 9. 1912, *Flora Iakutiae* 1: 214, f. 23. 1930, *Rhodora* 32: 55. 1930, *Feddes Repertorium* 68: 236. 1963, *Novosti Sist. Vyss. Rast.* 1965: 29-30. 1965, *Flora Patagónica* 3: 361. 1978, *Grasses of Japan and its Neighboring Regions* 496. 1987, *Vascular Plants of the Hengduan Mountains* 2: 2239. 1994.

in English: slimstem reedgrass

C. suka Speg. (*Calamagrostis sukatschewii* (Popl.) Roshev.; *Deyeuxia suka* (Speg.) Parodi)

Chile. See *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 86, t. 4, f. 8. 1896 and *Revista Argentina de Agronomía* 20: 14. 1953, *Darwiniana* 21: 436. 1978.

C. tarmensis Pilg. (*Calamagrostis rosea* var. *macrochaeta* Hack.; *Calamagrostis tarijensis* Pilg.; *Deyeuxia tarmensis* (Pilg.) Sodiro; *Deyeuxia tarmensis* var. *tarijensis* (Pilg.) X. Villavicencio)

Bolivia, Peru. See *Anales del Museo Nacional de Buenos Aires* 11: 109. 1904, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 70-71. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapssakademien* 8: 40. 1908, *Revista del Colégio Nacional Vicente Rocafuerte* 12: 81. 1930.

C. tarmensis Pilg. var. **macrochaeta** (Hack.) Soreng (*Calamagrostis rosea* var. *macrochaeta* Hack.; *Calamagrostis tarijensis* Pilg.; *Deyeuxia tarmensis* var. *tarijensis* (Pilg.) X. Villavicencio)

South America. See *Anales del Museo Nacional de Buenos Aires* 11: 109. 1904, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 70-71. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapssakademien* 8: 40. 1908, *Revista del Colégio Nacional Vicente Rocafuerte* 12: 81. 1930, *Contributions from the United States National Herbarium* 48: 222. 2003.

C. tarmensis Pilg. var. **tarmensis** (*Deyeuxia tarmensis* var. *tarmensis*)

South America.

C. teretifolia Laegaard

Ecuador. See *Novon* 8(1): 27, f. 1E. 1988.

C. toluensis (Kunth) Trin. ex Steud. (*Agrostis cuspidata* Willd. ex Steud.; *Agrostis junciformis* Willd. ex Steud.; *Arundo cuspidata* (Spreng.) Schult.; *Arundo junciformis* (Kunth) Poir.; *Arundo toluensis* (Kunth) Poir.; *Avena cuspidata* Willd. ex Spreng.; *Calamagrostis cuspidata* Spreng.; *Calamagrostis junciformis* (Kunth) Steud.; *Calamagrostis mcvaughii* Sohns; *Calamagrostis sesquitriflora* Steud.; *Deyeuxia junciformis* Kunth; *Deyeuxia toluensis* Kunth) (dedicated to the American botanist Rogers McVaugh, b. 1909, traveler, plant collector, lichenologist, and professor of botany, Curator Emeritus of University of Michigan Herbarium, 1977 Merit Award Winner of the Botanical Society of America, his writings include "Botanical exploration in Nueva Galicia from 1790 to the present time." *Contr. Univ. Mich. Herb.* 9(3): 205-357. 1972, "Galeotti's Botanical Work in Mexico: The Numbering of his Collections and a Brief Itinerary." *Contr. Univ. Mich. Herb.* 11(5): 291-297. 1972, *Flora Novo-Galiciana: A Descriptive Account of the Vascular Plants of Western Mexico*. [vol. 5, 1987; vol. 12, 1984; vol. 13, 1993; vol. 14, 1983; vol. 15, 1989; vol. 17, 1992] general editor William R. Anderson, University of Michigan Herbarium), *Edward Palmer, Plant Explorer of the American West*. University of Oklahoma Press, Norman

1956 and "Compositarum Mexicanarum Pugillus." *Contr. Univ. Mich. Herb.* 9(4): 361-484. 1972, with Stanley Adair Cain (1902-1955) and Dale J. Hagenah (1908-1971) wrote *Farwelliana: an account of the life and botanical work of Oliver Atkins Farwell, 1867-1944*. Cranbrook Institute of Science Bulletin 34. 1953. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 433. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 261. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 278. 1973; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Irving William Knobloch, compilation, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; George Bentham, *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas adjectis nonnullis Grahamianis enumerat novisque describit). London 1839-1857. (Reprint, with new introduction by Rogers McVaugh.) 1970; *Phytologia* 79: 35. 1996; Rogers McVaugh, *Botanical Results of the Sesse & Mocino Expedition (1787-1803)*. VII, *A Guide to Relevant Scientific Names of Plants*. Hunt Institute for Botanical Documentation, Pittsburgh (U.S.) Spring 2000)

Bolivia, Mexico. See *Nova Genera et Species Plantarum* 1: 143-144. 1815 [1816], *Encyclopédie Méthodique, Botanique* Suppl. 4: 705. 1816, *Systema Vegetabilium, editio decima sexta* 1: 252-253. 1825, *Mantissa* 3: 604. 1827, *Nomenclator Botanicus. Editio secunda* 1: 40-41, 251. 1840, *Synopsis Plantarum Glumacearum* 1: 190. 1854, *Revisio Generum Plantarum* 3: 345. 1898 and *Journal of the Washington Academy of Sciences* 46: 382. 1956.

C. trichodonta (Wedd.) Soreng (*Deyeuxia trichodonta* Wedd.)

South America, Peru. See *Bulletin de la Société Botanique de France* 22: 176, 180. 1875 and *Contributions from the United States National Herbarium* 48: 223. 2003.

C. tweedyi (Scribn.) Scribn. (*Deyeuxia tweedyi* Scribn.) (for Frank Tweedy, 1854-1937, botanical collector in Western U.S. and Virginia, in the Yellowstone area, Montana, and in the Pacific Northwest, 1893-1896 Colorado and Wyoming, topographic engineer, 1884-1915 with the U.S. Geological Service, 1886 wrote the first flora of Yellowstone; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 411. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; N.L. Britton, "Contributions to Texas botany: Note on some plants collected by Mr. Frank Tweedy in Tom Greene Co., Texas." *Transactions of the New York Academy of Sciences* 9: 183-185. 1890; Richard Urquhart Goode (1858-1903) *The Goode Diary: A Personal Journal of the Northern Trans-Continental Survey, 1883*. C.W. Tazewell, editor. 1990)

America, U.S. See *Bulletin of the Torrey Botanical Club* 10: 64. 1883, *Contributions from the United States National Herbarium* 3(1): 83. 1892.

C. *valida* Sohns (*Calamagrostis mcvaughei* Sohns)

North America, Mexico. See *Journal of the Washington Academy of Sciences* 46(12): 382, 385, f. 39-46, 47-55. 1956.

C. *varia* (Schrad.) Host (*Arundo varia* Schrad.; *Calamagrostis montana* Host; *Calamagrostis sylvatica* Host; *Calamagrostis varia* Bol. ex Thurb.; *Calamagrostis varia* Host; *Deyeuxia varia* (Schrad.) Kunth)

Europe. Useful for erosion control, see *Flora Germanica* 2: 128. 1806, *Révision des Graminées* 1: 76. 1829, *Flora Rossica* 4(13): 427. 1852, *Geological Survey of California, Botany* 2: 280. 1880 and *International Organization of Plant Biosystematists Newsletter* 24: 15-19. 1995.

C. *varia* (Schrad.) Host subsp. ***corsica*** (Hack.) Rouy (*Calamagrostis varia* subsp. *corsica* (Hack. ex Briq.) Gams; *Calamagrostis varia* var. *corsica* Hack. ex Briq.; *Deyeuxia varia* subsp. *corsica* (Hack. ex Briq.) Kerguelén)

Europe. See *Candollea* 29(1): 45. 1974, *Lejeunia* 75: 133. 1975.

C. *varia* (Schrad.) Host subsp. ***varia***

Europe.

C. *velutina* (Nees & Meyen) Steud. (*Calamagrostis chilensis* (E. Desv.) R.E. Fr., nom. illeg., non *Calamagrostis chilensis* Phil.; *Calamagrostis velutina* (Nees & Meyen) Hauman, nom. illeg., non *Calamagrostis velutina* (Nees & Meyen) Steud.; *Calamagrostis velutina* var. *breviculmis* Hauman; *Calamagrostis velutina* var. *velutina*; *Deyeuxia chilensis* E. Desv.; *Deyeuxia velutina* Nees & Meyen)

South America. See *Nomenclator Botanicus. Editio secunda* 1: 251. 1840, *Gramineae* 15-16. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 147-148. 1843, *Flora Chilena* 6: 322. 1854 and *Nova Acta Regiae Societatis Scientiarum Upsaliensis* IV. 1(1): 176. 1905.

C. *vicunarum* (Wedd.) Pilg. (*Calamagrostis pentapogonodes* Kuntze; *Calamagrostis pulvinata* Hack.; *Calamagrostis spiciformis* var. *acutifolia* Hack. ex Buchtien; *Calamagrostis vicunarum* var. *abscondita* Pilg.; *Calamagrostis vicunarum* var. *elatior* Pilg.; *Calamagrostis vicunarum* var. *humilior* Pilg.; *Calamagrostis vicunarum* var. *major* Pilg.; *Calamagrostis vicunarum* var. *minima* Pilg.; *Calamagrostis vicunarum* var. *setulosa* Pilg.; *Calamagrostis vicunarum* var. *tenuifolia* Pilg.; *Calamagrostis vicunarum* var. *tenuior* Pilg.; *Calamagrostis vicunarum* var. *vicunarum*; *Deyeuxia minima* (Pilg.) Rúgolo; *Deyeuxia pulvinata* (Hack.) Türpe; *Deyeuxia vicunarum* Wedd.; *Deyeuxia vicunarum* var. *major* Wedd.; *Deyeuxia vicunarum* var. *tenuifolia* Wedd.)

Argentina, Bolivia, Peru. See *Bulletin de la Société Botanique de France* 22: 177, 180. 1875, *Revisio Generum Plantarum* 3(2): 344. 1898 and *Anales del Museo Nacional de Buenos Aires* 13: 481. 1906, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 62-63. 1908, *Contribuciones a la Flora de Bolivia* 1: 75. 1910, *Anales del Museo Nacional de Buenos Aires* 21: 104, t. 4, f. B. 1-4. 1911, *Bot. Centralbl.* 120: 548. 1912, *Lilloa* 31: 132. 1962.

C. *villosa* (Chaix.) Gmelin

Europe. See *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 34: 3-20. 1987, Adriana L. Carnelli, Marco Madella, Jean-Paul Theurillat and Brigitta Ammann, "Aluminum in the opal silica reticulate of phytoliths: a new tool in palaeoecological studies." *Am. J. Bot.* 89: 346-351. 2002.

C. *violacea* (Wedd.) Hack. ex Buchtien (*Calamagrostis violacea* (Wedd.) Hitchc.; *Deyeuxia violacea* Wedd.)

South America. See *Bulletin de la Société Botanique de France* 22: 179. 1875 and *Contribuciones a la Flora de Bolivia* 1: 75. 1910, *Contributions from the United States National Herbarium* 24(8): 377. 1927.

C. *violacea* (Wedd.) Hack. ex Buchtien var. ***puberula*** (Rúgolo & X. Villavicencio) Soreng

America.

C. *violacea* (Wedd.) Hack. ex Buchtien var. ***violacea***

America.

C. *viridiflavescens* (Poir.) Steud. (*Arundo viridiflavescens* Poir.; *Calamagrostis montevidensis* Nees; *Calamagrostis montevidensis* var. *ampliflora* Döll; *Calamagrostis splendens* (Brongn. ex Duperrey) Steud.; *Calamagrostis splendens* (Brongn.) Steud.; *Calamagrostis viridescens* (Poir.) Steud.; *Calamagrostis viridiflavescens* var. *montevidensis* (Nees) Kämpf; *Deyeuxia splendens* Brongn. ex Duperrey; *Deyeuxia splendens* Brongn.; *Deyeuxia viridiflavescens* (Poir.) Kunth; *Deyeuxia viridiflavescens* var. *montevidensis* (Nees) Cabrera & Rúgolo; *Donax viridiflavescens* (Poir.) Roem. & Schult.)

South America, southern Brazil to Argentina. Perennial bunchgrass, erect, awns recurved and subapical, growing in moist sandy sites, see *Encyclopédie Méthodique, Botanique* 6: 271. 1804, *Systema Vegetabilium* 2: 601. 1817, *Révision des Graminées* 1: 77. 1829, *Voyage Autour du Monde* 2: 23. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 401. 1829, *Nomenclator Botanicus. Editio secunda* 1: 251. 1840, *Flora Brasiliensis* 2(3): 54. 1878 and *Flora de la Provincia de Buenos Aires* 4(2): 219. 1970, *Anuário Técnico do Instituto de Pesquisas Zootécnicas "Francisco Oso-rio"* 2: 625. 1974[1975].

C. *viridiflavescens* (Poir.) Steud. var. ***montevidensis*** (Nees) Kämpf (*Calamagrostis montevidensis* Nees; *Calamagrostis montevidensis* var. *montevidensis*; *Calamagrostis splendens*

(Brongn.) Steud.; *Deyeuxia flavescens* Clarion ex Spreng.; *Deyeuxia splendens* Brongn. ex Duperrey; *Deyeuxia splendens* Brongn.; *Deyeuxia viridiflavescens* (Poir.) Kunth var. *montevidensis* (Nees) Cabrera & Rúgolo)

Southern America, Paraguay. Perennial, palatable, useful for erosion control, see *Systema Vegetabilium, editio decima sexta* 1: 254. 1825, *Voyage Autour du Monde* 2: 23. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 401. 1829, *Nomenclator Botanicus. Editio secunda* 1: 251. 1840 and *Flora de la Provincia de Buenos Aires* 4(2): 219. 1970, *Anuário Técnico do Instituto de Pesquisas Zootécnicas "Francisco Osorio"* 2: 625. 1974[1975].

C. viridiflavescens (Poir.) Steud. var. **viridiflavescens** (*Calamagrostis montevidensis* var. *ampliflora* Döll; *Deyeuxia viridiflavescens* (Poir.) Kunth var. *viridiflavescens*)

Southern America. See *Révision des Graminées* 1: 77. 1829, *Flora Brasiliensis* 2(3): 54. 1878.

C. viridis (Phil.) Sorong (*Calamagrostis nemoralis* Phil.; *Calamagrostis nemoralis* Kuntze, nom. illeg., non *Calamagrostis nemoralis* Phil.; *Deyeuxia nemoralis* Phil. ex Kuntze; *Deyeuxia viridis* Phil.)

South America. See *Linnaea* 33(3-4): 288. 1865, *Anales de la Universidad de Chile* 94: 18. 1896, *Revisio Generum Plantarum* 3(3): 344. 1898 and *Contributions from the United States National Herbarium* 48: 225. 2003.

C. vulcanica Swallen

Guatemala, Quezaltenango, Volcán Santa Maria. See *Phytologia* 4(7): 424. 1953.

C. youngii (Hook.f.) Petrie (*Agrostis youngii* Hook.f.; *Calamagrostis youngii* (Hook.f.) Skeels; *Calamagrostis youngii* var. *petriei* (Hack.) Petrie; *Deyeuxia youngii* (Hook.f.) J. Buchanan)

New Zealand. Found in dry hillsides, see *Handbook of the New Zealand Flora* 330. 1864, *Indigenous Grasses of New Zealand* 11. 1880 and *Transactions and Proceedings of the New Zealand Institute* 35: 380. 1903, *Transactions and Proceedings of the Royal Society of New Zealand* 47: 57. 1915.

C. zenkeri (Trin.) Davidse (*Agrostis zenkeri* Trinius; *Deyeuxia zenkeri* (Trin.) Veldkamp)

Asia, India. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2: 363. 1841, *Fl. Br. India* 7: 265. 1896 and *Handb. Fl. Ceylon* 5: 265. 1900, *Kew Bulletin* 9: 441, 456. 1954, *The Gardens' Bulletin Singapore* 37(2): 219. 1984 [1985].

C. x acutiflora (Schrad.) Rehb. (*Calamagrostis arundinacea* (L.) Roth x *Calamagrostis epigejos* (L.) Roth) (*Arundo acutiflora* Schrad.; *Calamagrostis acutiflora* (Schrad.) DC.; *Calamagrostis trinii* Rupr.; *Calamagrostis x acutiflora* (Schrad.) DC.; *Deyeuxia acutiflora* (Schrad.) P. Beauv.)

Eurasia, Siberia, Europe. Ornamental, see *Flora Germanica* 1: 217. 1806, *Essai d'une Nouvelle Agrostographie* 44, 152, 160. 1812, *Flore Française. Troisième Édition* 5: 255. 1815, *Beiträge zur Pflanzenkunde des Russischen Reiches* 4: 36. 1845.

in English: feather reed grass

C. x lactea Suskd. ex Beal (*Calamagrostis canadensis* x *Calamagrostis nutkaensis*) (*Calamagrostis canadensis* var. *lactea* (Suskd. ex Beal) C.L. Hitchc.; *Calamagrostis lactea* Suskd. ex Beal; *Calamagrostis langsdorffii* var. *lactea* (Suskd. ex Beal) Kearney; *Deyeuxia lactea* (Suskd. ex Beal) Suskd. ex Beal; *Deyeuxia lactea* (Suskd. ex Beal) Suskd.)

America, U.S. See *Essai d'une Nouvelle Agrostographie* 15, 152, 157. 1812, *Gram. Unifl. Sesquifl.* 225, t. 4, f. 10. 1824, *Grasses of North America for Farmers and Students* 2: 346. 1896 [also *Grasses of North America* second edition 2: 346. 1896], *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 28. 1898 and *Deutsche Botanische Monatschrift* 19(6): 92. 1901, *Vascular Plants of the Pacific Northwest* 1: 524. 1969.

Calamina P. Beauv. = *Apluda* L.

Panicoideae, Andropogoneae, Ischaeminae, see *Species Plantarum* 1: 82. 1753, *Essai d'une Nouvelle Agrostographie* 128, 157. 1812 and *Regnum Veg.* 127: 20. 1993, *Contributions from the United States National Herbarium* 46: 68-69, 144. 2003.

x Calammophila Brand

Ammophila x *Calamagrostis*.

See *Synopsis der Deutschen und Schweizer Flora* edition 3, 3: 2715. 1907, *Genera Graminum* 374. 1986.

Calamochloa E. Fourn. = *Calamochloe* Rehb., *Eufournia* Reeder, *Sohnsia* Airy Shaw

Greek *kalamos* "reed" and *chloe*, *chloa* "grass, young grass."

Chloridoideae, Cynodonteae, type *Calamochloa filifolia* E. Fourn., see *Conspectus Regnum Vegetabilis ... Pars I.* 1828, *Bulletin de la Société Botanique de France* 24: 177-178. 1877 and *The Families of Flowering Plants* 2: 199-229. 1934, *Journal of the Washington Academy of Sciences* 46: 109-112. 1956, *American Journal of Botany* 51: 453-463. 1964, *Kew Bulletin* 18(2): 272. 1965, *Brittonia* 19: 244. 1967, *Bulletin of the Torrey Botanical Club* 94: 1-17. 1967, *Contributions from the United States National Herbarium* 41: 35, 117, 195. 2001.

Calamochloe Reichb. = *Arundinella* Raddi, *Goldbachia* DC. (Brassicaceae, alt. Cruciferae), *Goldbachia* Trin.

Greek *kalamos* “reed” and *chloe*, *chloa* “grass, young grass.”

Panicoideae, Arundinelleae, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 42, 81. 1820, *Mémoires du Muséum d'Histoire Naturelle* 7: 242. 1821, *Regni Vegetabilis Systema Naturale* 2: 577. 1821, *Agrostografia Brasiliensis* 36-37, t. 1, f. 3. 1823, *Conspectus Regni Vegetabilis* 52. 1828 and *Flora Mesoamericana* 6: 377-378. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, J.F. Veldkamp, “Name changes in *Agrostis*, *Arundinella*, *Deyeuxia*, *Helictotrichon*, *Tripogon* (Gramineae).” *Blumea* 41: 407-411. 1996, *Contributions from the United States National Herbarium* 46: 111-113. 2003.

x **Calamophila O. Schwarz**

Ammophila x *Calamagrostis*.

See *Mitteilung der Thüringischen Botanischen Gesellschaft* 1: 88. 1949, *Genera Graminum* 374. 1986.

Calamovilfa (A. Gray) Hack. = *Calamovilfa* (A. Gray) Hack. ex Scribn. & Southw.

From the Greek *kalamos* “reed” plus the genus *Vilfa* Adans.

About 4-5 species, North America, southwestern U.S. Chloridoideae, Eragrostideae, or Chloridoideae, Zoysieae, Sporobolinae, perennial, erect or slightly ascending, thick, solitary, herbaceous, coarse, caespitose, solid internodes, shortly rhizomatous, auricles absent, ligule a line of hairs, leaf blades filiform to linear and pointed, plants bisexual, panicle open or contracted, spikelets pedicellate and lanceolate, solitary spikelets laterally compressed and keeled, 1 floret per spikelet, 2 unequal glumes membranous and awnless, lemma 1-nerved and awnless, callus bearded, palea hairy, 2 free lodicules truncate, stamens 3, ovary glabrous, stigmas 2, used for reclamation and revegetation, found in sandy areas, marshy sites, open habitats, inland dunes, sandy prairies, edge of swamps, type *Calamovilfa brevipilis* (Torr.) Hack. ex Scribn. & Southw., see *A Manual of the Botany of the Northern United States* 582. 1848, *True Grasses* 113. 1890 and *U.S.D.A. Bull.* 772: 126. 1920, *Brittonia* 12: 71-77. 1960, J.W. Thieret, “Synopsis of the genus *Calamovilfa* (Gramineae).” *Castanea* [The Journal of the Southern Appalachian Botanical Society] 31(2): 145-152. 1966, *Bulletin of the Torrey Botanical Club* 94: 199-200. 1967, *Contributions from the United States National Herbarium* 41: 35-36. 2001, *Restoration Ecology* 9(1): 60-70.

Mar 2001, Jean-Michel Gagné and Gilles Houle, “Factors responsible for *Honckenya peploides* (Caryophyllaceae) and *Leymus mollis* (Poaceae) spatial segregation on subarctic coastal dunes.” *Am. J. Bot.* 89: 479-485. 2002, Feihai Yu, Ming Dong and Bertil Krüsi, “Clonal integration helps *Psammochloa villosa* survive sand burial in an inland dune.” *New Phytologist* 162(3): 697-704. June 2004.

Species

C. arcuata K.E. Rogers

North America. Perennial, herbaceous, erect, glabrous, tufted, may root at the nodes, forming dense colonies, leaf blades broad and tapering to a very fine tip, sheath margins free, ligule a short fringe of hairs, shortly rhizomatous, persistent bases of the foliage leaves, horizontal underground stems, open panicles, inflorescence branches erect and spreading, spikelets ventrally compressed, 2 glumes firm and unequal, glumes usually arcuate and acute, 4 to 8 fertile florets, lemmas arcuate and pubescent, paleas pubescent, 2 feathery stigmas, grows along streams and rivers, open rocky seasonally flowing streams, rocky stream bed, could be confused with switchgrass (*Panicum virgatum*) or purpletop (*Tridens flavus*), see *Rhodora* 72(789): 72-79, f. 1-2. 1970.

in English: Cumberland sand reed

C. brevipilis (Torr.) Scribn. (*Ammophila brevipilis* (Torr.) Benth. ex Vasey; *Arundo brevipilis* Torr.; *Calamagrostis brevipilis* (Torr.) L.C. Beck; *Calamovilfa brevipilis* var. *brevipilis*; *Calamovilfa brevipilis* var. *calvipes* Fernald; *Calamovilfa brevipilis* var. *heterolepis* Fernald; *Calamovilfa brevipilis* var. *typica* Fernald)

North America. Perennial, shortly rhizomatous, persistent bases of the foliage leaves, open panicles with ascending to spreading branches, straight and acute glumes, lemmas acuminate and pubescent, paleas pubescent, grows in moist to dry pine barrens, savannah, sandy swamps, bogs, swamp edges, see *Icones et Descriptiones Graminum Austriacorum* 4: 24. 1809, *A Flora of the Northern and Middle Sections of the United States* 1: 95. 1823, *Botany of the Northern and Middle States* 401. 1833, *The Grasses of the United States* 29. 1883 and *Rhodora* 41: 501-502, pl. 573, f. 1-2, 4. 1939.

in English: pine barren sand reed

C. curtissii (Vasey) Scribn. (*Ammophila curtissii* Vasey; *Calamagrostis curtissii* (Vasey) Vasey) (for the American botanist Allen Hiram Curtiss, 1845-1907, traveler, botanical collector, associated with USDA, 1881-1886 Texas and Arkansas, 1884-1899 Florida, Virginia and Georgia, 1902-1905 in West Indies, author of *Catalogue of the phænogamous and vascular cryptogamous plants of Canada and the Northeastern portion of the United States*, including Virginia and Kentucky on the South, and Missouri, Iowa and Minnesota on the West. Liberty, Va., 1873. See J.H. Barn-

hart, *Biographical notes upon botanists*. 1: 406. 1965; Ignatz Urban (1848-1931), editor, *Symbolae Antillanae*. 3: 35. Berlin 1902; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 142. London 1904; *Bulletin de la Société Botanique de France* 20: 208-209. 1874)

North America. Rare, perennial, shortly rhizomatous, panicles contracted with erect branches, glumes straight, lemmas straight and pubescent, grows in moist flatwoods, in interdune swales, see *Bulletin of the Torrey Botanical Club* 11: 7. 1884, *Botanical Gazette* 15: 269. 1890, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 199. 1899.

in English: Florida sand reed

C. gigantea (Nutt.) Scribn. & Merr. (*Calamagrostis gigantea* Nutt.; *Toxemia gigantea* Nutt. ex Scribn. & Merr.)

Utah, Nebraska, Arizona, Texas. Perennial, tall, mostly solitary, ligule a ring of hairs, rhizomes elongate and scaly, panicle long exerted and open, panicle branches ascending to strongly divergent, spikelets flattened and 1-flowered, glumes unequal and straight, lemmas straight and pubescent, excellent sand binding, grows on sand dunes, sandy banks, prairies, riverbanks, flood plains, see *Transactions of the American Philosophical Society, new series*, 5: 143. 1837 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 2. 1901.

in English: giant sand reed, big sand reed

C. longifolia (Hook.) Scribn. (*Ammophila longifolia* (Hook.) Benth. ex Vasey; *Athernotus longifolius* (Hook.) Lunell; *Calamagrostis longifolia* Hook.; *Calamovilfa longifolia* (Hook.) Hack. ex Scribn. & Southw.; *Vilfa rigida* Buckley)

North America. Perennial, stout, smooth, mostly solitary, stiff leaf blades, ligule a dense ring of hairs, leaf sheaths crowded and overlapping, scaly rhizomes elongate and sharp-pointed, narrow loosely spreading panicle with branches ascending to strongly divergent, 1-flowered, crowded spikelets flattened and overlapping, glumes rigid and acuminate, lemmas and paleas glabrous, forage, food for horses, excellent sand binding, grows in sand or sandy soils, steppe, in clay soils, prairies, sand hills, see *Flora Boreali-Americana* 2: 241. 1840, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 89. 1862 and *American Midland Naturalist* 4: 218. 1915, *Manual of the Grasses of the United States* 844. 1950.

in English: prairie sand reed, sand reed grass

C. longifolia (Hook.) Scribn. var. ***longifolia***

North America. Perennial, stout, glabrous, solitary, erect, ligule a fringe of hairs, leaf blades flat and involute, leaf sheaths round and pilose, auricles absent, coarse rhizomes scaly and branched, long panicle with ascending branches, spikelets 1-flowered, lemma glabrous, more or less resistant to trampling, tolerant of moderately saline soils, low forage value, food for ungulates, provides cover for small mammals and birds, palatability decreases with plant maturity, high silica content, an early colonizer in sand dunes, used for reclamation and revegetation, grows on sandy range sites, sand flats, slopes, dry valleys, deep sandy soils, stabilized blowouts, dry prairies, disturbed sand, dune depressions, stabilized dunes, sand hills, see *Oecologia* 49: 137-142. 1981.

in English: prairie sand reed, sand grass, sand reed grass

C. longifolia (Hook.) Scribn. var. ***magna*** Scribn. & Merr. Eastern U.S., Great Lakes region. Perennial, leaf sheaths densely pubescent, panicle branches widely divergent, grows on sandy shorelines, on dunes and lakeshores, see *Circular, Division of Agrostology, United States Department of Agriculture* 35: 3. 1901.

Calanthera Hook. = *Bouteloua* Lag.,
Buchloe Engelm.

From the Greek *kalos* "beautiful" and *anthera* "anther."

Chloridoideae, Cynodonteae, Boutelouinae, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Hooker's Journal of Botany and Kew Garden Miscellany* 8: 18. 1856, *Plantas Hartwegianas Imprimis Mexicanas* 347. 1857, *Transactions of the Academy of Science of St. Louis* 1: 432. 1859, *Revisio Generum Plantarum* 2: 763. 1891 and *Phytologia* 37(4): 317-407. 1977, *Flora Mesoamericana* 6: 293-295. 1994, *Las Gramíneas de México* 2: 1-344. 1987, *Contributions from the United States National Herbarium* 41: 20-33. 2001.

Calderonella Soderstr. & H.F. Decker

Named for Cléofe E. Calderón (1940-1989), Panama botanist, botanical collector, bamboo taxonomist at the Smithsonian Institution. See C.E. Calderón & Thomas R. Soderstrom, "Las gramíneas tropicales afines a *Olyra* L." Atas do Simpósio sobre a Biota Amazônica. Conselho de Pesquisas, Rio de Janeiro. 4 (Botânica): 67-76. 1967; C.E. Calderón & Thomas R. Soderstrom, "Morphological and anatomical considerations of the grass subfamily Bambusoideae based on the new genus *Maclurolyra*." *Smithsonian Contributions to Botany* no.11. Washington 1973; *Phytologia* 46: 290-291. 1980; C.E. Calderón & Thomas R. Soderstrom, *The Genera of Bambusoideae (Poaceae) of the American Continent: Keys and Comments*. Washington, Smithsonian Institution Press 1980; *Acta Amazonica* 11:

307. 1981; *Kew Bulletin* 39: 180, 182. 1984; *J. Bromel. Soc.* 34: 213. 1984; *Brittonia* 37: 23-25. 1985; *Amer. J. Bot.* 74: 35. 1986; *Bol. Mus. Para. Emilio Goeldi, ser. Bot.* 7: 305. 1991; *Novon* 7: 302. 1997.

One species, Panama. Centothecoideae, Centotheceae, or Panicoideae, Centotheceae, perennial, very small, delicate, herbaceous, unarmed, almost stemless, caespitose, leaf blades lanceolate, ligule an unfringed membrane, leaves false petiolate, stoloniferous, plants bisexual, inflorescence a single raceme, spikelets solitary and pedicellate, 3- to 5-flowered, lowest floret female, 2 glumes acute, female lemma strongly gibbous, male florets lanceolate, palea present, 2 lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade species, forest, possible that *Calderonella* and *Zeugites* may be congeneric, type *Calderonella sylvatica* Soderstr. & H.F. Decker, see *Mat. Fl. Malay Pen.* 3: 122. 1907, *Ann. Missouri Bot. Gard.* 60(2): 427-441. 1973, *Flora Mesoamericana* 6: 249-250. 1994, G.H. Rua, "Centothecoid grasses and the evolution of panicoid spikelets." *Plant Systematics and Evolution* 240(1-4): 83-89. Sep 2003, *Contributions from the United States National Herbarium* 46: 144. 2003.

Species

C. sylvatica Soderstr. & H.F. Decker

Panama. See *Annals of the Missouri Botanical Garden* 60(2): 427-432, f. 2-3, 5. 1973

Callichloea Steud. = *Elionurus* Humb. & Bonpl. ex Willd., *Elionurus* Kunth

From the Greek *kalli* "beautiful" and *chloe*, *chloa* "grass, young grass."

Panicoideae, Andropogoneae, Rottboelliinae, see *Species Plantarum. Editio quarta* 4(2): 941-942. 1806, *Mémoires du Muséum d'Histoire Naturelle* 2: 69. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 1: 257. 1840 and *Taxon* 47: 737. 1998, *Taxon* 49: 273. 2000, *Contributions from the United States National Herbarium* 46: 225-229. 2003.

Calochloa Kunze = *Elionurus* Humb. & Bonpl. ex Willd.

From the Greek *kalos* "beautiful" and *chloe*, *chloa* "grass, young grass." Panicoideae, Andropogoneae, Rottboelliinae, see *Contributions from the United States National Herbarium* 46: 225-229. 2003.

Calosteca Desv. = *Briza* L., *Calosteca* Desv.

From the Greek *kalos* "beautiful" and *theke* "a case."

One species, South America. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Brizinae, perennial, tufted, herbaceous, auricles absent, narrow leaf blades linear, ligule an unfringed membrane, plants bisexual, cleistogamous or chasmogamous, inflorescence paniculate, spikelets pedicellate and laterally flattened, 2 glumes subequal, palea present, 2 free and membranous lodicules, ovary glabrous, 2 stigmas, often in *Briza* or in *Calosteca*, type *Calosteca brizoides* (Lam.) Desv., see *Species Plantarum* 1: 70-71. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 193. 1791, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810 and *Willdenowia* Beiheft 8, 168 pp. 1975, *Darwiniana* 23(1): 279-309. 1981, *Taxon* 37: 434. 1988, *Flora Mesoamericana* 6: 229. 1994, *Contributions from the United States National Herbarium* 48: 146-151, 227-228. 2003.

Species

C. brizoides (Lam.) Desv. (*Briza brizoides* (Lam.) Kuntze; *Briza elegans* (P. Beauv.) Döll; *Briza patula* Phil.; *Briza tandilensis* Parodi; *Bromus brizoides* Lam.; *Calosteca brizoides* (Lam.) Desv.; *Calosteca elegans* P. Beauv.; *Chascolytrum elegans* E. Desv. ex P. Beauv.)

South America. See *Essai d'une Nouvelle Agrostographie* 86, 157, t. 17, f. 7. 1812, *Flora Brasiliensis* 2(3): 135. 1878, *Anales de la Universidad de Chile* 94: 163. 1896, *Revisio Generum Plantarum* 3(3): 341. 1898 and *Revista de la Facultad de Agronomía y Veterinaria* 3: 132, f. 4(1b). 5. 1920.

Calosteca Desv. = *Briza* L., *Calosteca* Desv.

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Brizinae, often in *Briza* or in *Calosteca*, type *Calosteca brizoides* (Lam.) Desv., see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Anleitung zur Kenntniss der Gewächse* 2(1): 167. 1817 and *Darwiniana* 23(1): 279-309. 1981, *Taxon* 37: 434. 1988, *Cladistics* 14: 287-296. 1998, *Contributions from the United States National Herbarium* 48: 146-151, 227-228. 2003.

Calosteca Desv. ex Spreng. = *Aeluropus* Trin.

Chloridoideae, Eragrostideae, see *Species Plantarum* 1: 66-71, 73-76. 1753, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Anleitung zur Kenntniss der Gewächse* 2(1): 167. 1817, *Fundamenta Agrostographiae*. 143, t. 12. Viennae (Jan) 1820, *Genera Plantarum Florae Germanicae iconibus et descriptionibus illustrata ...* [1833-] 1835-1860, *Traité des Graminées* 134. 1854 and *Grasses of Burma ...* 379-381. 1960, *Novosti Sist. Vyss. Rast.* 1966: 25. 1966, *Fitologija* 39: 72-77. 1991, S.

Khaton & S.I. Ali, *Chromosome Atlas of the Angiosperms of Pakistan*. Karachi 1993 [University of Karachi, Department of Botany], *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

Calotheca P. Beauv. = *Briza* L., *Calotheca* Desv.

From the Greek *kalos* “beautiful” and *theke* “a case.”

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Brizinae, see *Essai d'une Nouvelle Agrostographie* 85. 1812 and *Contributions from the United States National Herbarium* 48: 146-151, 227-228. 2003.

Calotheria Steud. = *Enneapogon* Desv. ex P. Beauv.

From the Greek *kalos* “beautiful” and *ather* “barb, spine, chaff, prickle, awn.”

Pappophoreae, or Chloridoideae, Eragrostideae, Cotteinae, see *Genera Plantarum* 2: 787. 1791, *Symbolae Botanicae*, ... 3: 10, t. 51. 1794, *Essai d'une Nouvelle Agrostographie* 81, 161. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 91. 1830, *Émoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 202. 1831, *Synopsis Plantarum Glumacearum* 1: 199. 1854, *Die Natürlichen Pflanzenfamilien* 2(2): 64. 1887 and *U.S. Dept. Agric. Bull.* 772: 83. 1920, *Proc. Linn. Soc.* 153: 52-91. 1941, *Kew Bulletin* 22: 393-401. 1968, E.K.Z. Kakudidi, M. Lazarides and J.A. Carnahan, “A revision of *Enneapogon* (Poaceae, Pappophoreae) in Australia.” *Aust. Syst. Bot.* 1(4): 325-353. 1989, *Contributions from the United States National Herbarium* 41: 78. 2001.

Calycodon Nutt. = *Muhlenbergia* Schreb.

From the Greek *kalyx*, *kalykos* “calyx” and *odous*, *odontos* “a tooth.”

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Calycodon montanum* Nutt., see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 23. 1848, *J. Acad. Nat. Sci. Philadelphia* ser. 2, 1: 186. 1848 and *United States Department of Agriculture: Bulletin* 772: 145, 147. 1920, *Phytologia* 79(1): 25-27. 1995, Y. Herrera-Arrieta, “A revision of the *Muhlenbergia montana* (Nutt.) Hitchc. complex (Poaceae: Chloridoideae).” *Brittonia* 50(1): 23-50. 1998, P.M. Peterson, “Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostideae).” *Grasses: Systematics and Evolution*

195-212. 2000, *Contributions from the United States National Herbarium* 41: 143-173. 2001.

Calyptochloa C.E. Hubb.

From the Greek *kalypto* “to hide, cover” and *chloe*, *chloa* “grass, young grass”; see Charles Edward Hubbard (1900-1980), *Hooker's Icones Plantarum*. Ser. 5. 3: t. 3210. 1933.

One species, Australia. Panicoideae, Panicodae, Paniceae, perennial, herbaceous, creeping, decumbent, mat-forming, hollow, auricles absent, ligule a fringe of hairs, plants bisexual, cleistogamous or chasmogamous, cleistogenes in upper axils, hidden cleistogenes in the leaf sheaths, inflorescence loosely racemose, 5-8 spikelets singly on a slender rachis, spikelets adaxial, 2 glumes very unequal, lower glume vestigial, upper glume stiffly pilose, upper lemma shortly awned, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, suitable for mine site revegetation, grows in woodland shade, forest, woodland understorey, related to *Cleistochloa* and *Alloteropsis*, type *Calyptochloa gracillima* C.E. Hubbard, see *Hook. Ic. Pl.* 33: t. 3210, 1-3. 1933, C.S. Campbell, J.A. Quinn, G.P. Cheplick and T.J. Bell, “Cleistogamy in Grasses.” *Annual Review of Ecology and Systematics* 14: 411-441. 1983.

Species

C. gracillima C.E. Hubbard

Australia, Queensland.

Campeiostrachys Drobow = *Elymus* L.

Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, type *Campeiostrachys schrenkiana* (Fisch. & C.A. Mey.) Drobow, see *Species Plantarum* 1: 83-84. 1753, *Bulletin de la Classe Physico-Mathématique de l'Académie Impériale des Sciences de Saint Pétersbourg* 3: 305. 1845 and *Flora Uzbekistanica* 1: 300, 540. 1941, *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Campelia Kunth = *Campelia* Rich.

(Commelinaceae), *Deschampsia* P. Beauv.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Airinae, see *Species Plantarum* 2: 1028. 1753, *Démonstrations Botaniques* 46. 1808, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Nova Genera et Species Plantarum (quarto ed.)* 1: 264. 1815 [1816], *A Manual of the Botany of the Northern United States* 605. 1848 and *Flora Mesoamericana* 6: 235. 1994, *Plant Systematics and Evolution* 205: 99-110. 1997, *Botanical Journal of the Linnean Society* 134: 495-512. 2000 [The *Deschampsia cespitosa* complex

in central and northern Europe: a morphological analysis.], *Contributions from the United States National Herbarium* 48: 245-256. 2003.

Campella Link = *Deschampsia* P. Beauv.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Airinae, see *Species Plantarum* 1: 64-65. 1753, *Species Plantarum* 2: 1028. 1753, *Démonstrations Botaniques* 46. 1808, *Essai d'une Nouvelle Agrostographie* 91. 1812, *Nova Genera et Species Plantarum (quarto ed.)* 1: 264. 1815 [1816], *Hortus Regius Botanicus Berolinensis* 1: 122. 1827, *A Manual of the Botany of the Northern United States* 605. 1848, *Flora Rossica* 4(13): 420. 1852 and *Botaniska Notiser* 1953(3): 356. 1953, *Flora Mesoamericana* 6: 235. 1994, *Plant Systematics and Evolution* 205: 99-110. 1997, *Botanical Journal of the Linnean Society* 134: 495-512. 2000 [The *Deschampsia cespitosa* complex in central and northern Europe: a morphological analysis.], *Contributions from the United States National Herbarium* 48: 245-256. 2003.

Campuloa Desv. = *Ctenium* Panz.

Perhaps from the Greek *kampylos* "curved" and *chloa* "grass, young grass."

Chloridoideae, Cynodonteae, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 167. 1813, *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 38, 61. 1813, *Denkschriften der Bayer[ischen]. Botanischen Gesellschaft in Regensburg* 4: 311, t. 13, f. 1-2. 1813 [1814] and *North American Flora* 17(8): 579-638. 1939, *Flora Mesoamericana* 6: 290-291. 1994, *Contributions from the United States National Herbarium* 41: 57-58. 2001.

Campulosus Desv. = *Ctenium* Panz.

Perhaps from the Greek *kampylos* "curved."

Chloridoideae, Cynodonteae, type *Campulosus gracilior* Desv., see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 38, 61. 1813, *Denkschriften der Bayer[ischen]. Botanischen Gesellschaft in Regensburg* 4: 311, t. 13, f. 1-2. 1813 [1814] and *North American Flora* 17(8): 579-638. 1939, *Flora Mesoamericana* 6: 290-291. 1994, *Contributions from the United States National Herbarium* 41: 57-58. 2001.

Camusia Lorch = *Acrachne* Wight & Arn. ex Chiov.

For the French botanist Aimée Antoinette Camus, 1879-1965, among his works are *Monographie des saules*

d'Europe. Paris 1904-1905 and *Les Chataigniers*. Paris 1929, with the French pharmacist and botanist Edmond Gustave Camus (1852-1915) (her father) wrote *Classification des saules d'Europe et monographie des Saules de France*. Paris 1904-1905, with E.G. Camus and Paul Bergon (1863-1912) wrote *Monographie des orchidées de l'Europe, de l'Afrique septentrionale, de l'Asie mineure et des provinces russes transcaspiennes*. Paris [1908]; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 305. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 64. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Clyde F. Reed, *Bibliography to Floras of Southeast Asia*. 1969; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 16. 1971; Elmer Drew Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 58. 1937; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement III*. 337-350. 1995.

Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eleusininae, type *Camusia perrieri* (A. Camus) Lorch, see *Annuario del Reale Istituto Botanico di Roma* 8(3): 361-362. 1908, *Bulletin de la Société Botanique de France* 75: 913. 1928, *Bulletin of the Research Council of Israel, Section D, Botany* 9: 155. 1961.

Camusiella Bosser = *Setaria* P. Beauv.

For the French botanist Aimée Antoinette Camus, 1879-1965.

About 2 species, Madagascar. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Setariinae, annual, caespitose, unarmed, solid, auricles absent, leaf blades pseudopetiolate, ligule fringed, plants bisexual, inflorescence a false spike, spikelets with involucre of bristles, 2 glumes unequal, palea present, fleshy lodicules, 3 stamens, ovary glabrous, 2-3 stigmas, sometimes referred to *Setaria*, see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812 and *Bulletin de la Société Botanique de France* 108: 158-163. 1961, *Adansonia: recueil périodique d'observations botanique, n.s.* 6: 105-112. 1966, *Contributions from the United States National Herbarium* 46: 569-593. 2003.

Species

C. fiherenensis Bosser

Madagascar.

C. vatkeana (K. Schum.) Bosser (*Camusiella vatkeana* subvar. *violaceus* Bosser; *Camusiella vatkeana* var. *meridionalis* Bosser; *Camusiella vatkeana* var. *vatkeana*; *Setaria vatkeana* K. Schum.) (for the German botanist Georg Carl Wilhelm Vatke, 1849-1889; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 427. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 415. 1972; W. Vatke, "Plantas in itinere

africao ab J.M. Hildebrandt collectas determinare pergit." *Linnaea* 43(7): 507-541. 1882)

Madagascar. See *Abhandlungen herausgegeben vom Naturwissenschaftlichen Vereine zu Bremen* 9: 402. 1887.

Canastra Morrone, Zuloaga, Davidse & Filgueiras

Monotypic, Brazil, Minas Gerais. Panicoideae, Paniceae, Paspalinae, perennial, erect, caespitose, robust, tussocky, simple or branched, leaf sheaths overlapping, lower sheaths usually lacinate, ligules membranous ciliate, leaves rigid and involute, inflorescences terminal or axillary, spikelets dorsiventrally compressed, spikelets 2-flowered, lower and upper glume awned, upper glume as long as the spikelet, lower glume reduced and 1-nerved, lower flower present and staminate, upper flower bisexual, lodicules 2, stamens 3, stigmas plumose, found among rocks, sandy soils, type *Canastra lanceolata* (Filgueiras) Morrone, Zuloaga, Davidse & Filgueiras, related to *Arthropogon*, *Altoparadisium*, *Homolepis* and *Achlaena*, see *Proc. Linn. Soc. New South Wales*, ser. 2, 39: 385-394. 1914, *Bothalia* 12: 65-109. 1976, *Bothalia* 12: 641-672. 1979, *Bradea* 3(36): 303-322. 1982, *Ann. Missouri Bot. Gard.* 79: 770-818. 1992, *Novon* 11(4): 429-436. 2001, *Ann. Missouri Bot. Gard.* 88: 351-372. 2001, *Contributions from the United States National Herbarium* 46: 144. 2003.

Species

C. lanceolata (Filgueiras) Morrone, Zuloaga, Davidse & Filgueiras (*Arthropogon lanceolatus* Filgueiras)

Brazil, Parque Nacional da Serra da Canastra.

Candollea Steud. = *Agrostis* L., *Candollea* Baumg. (Ericaceae), *Candollea* Labill. (Stylidiaceae), *Candollea* Labill. (Dilleniaceae), *Candollea* Mirb. (Polypodiaceae), *Candollea* Raddi (Bryophyta)

Named after the Swiss botanist Augustin Pyramus de Candolle, 1778-1841, among his most valuable writings are *Plantarum historia succulentarum*. Paris 1798-1837, *Catalogus plantarum horti botanici monspeliensis*. Montpellier, Paris, Strasbourg 1813 and *Plantes rares du Jardin de Genève*. Genève, Paris 1825 [-1827]; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 306. 1965; Jacques Julien Houtton de Labillardière (1755-1834), *Novae Hollandiae plantarum specimen*. 2: 33, t. 176. 1806; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 64. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; P.E. Pilet, in *D.S.B.* 3: 43-45.

1981; Stafleu and Cowan, *Taxonomic literature*. 1: 438-452. Utrecht 1976; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997.

Pooideae, Poaceae, Agrostidinae, see *Species Plantarum* 1: 61-63. 1753, *Histoire Naturelle des Végétaux, Classés par Familles* 3: 471 and 5: 89. 1803, *Annales du muséum national d'histoire naturelle* 6: 453. 1805, *Novae Hollandiae Plantarum Specimen* 2: 33. 1806, Giuseppe Raddi (1770-1829), *Jungermannografia etrusca ...* Modena 1818 [Mem. Soc. Mod. xviii.], *Nomenclator Botanicus. Editio secunda* 1: 273. 1840 and *J. Wash. Acad. Sci.* 36: 168. 1946, *Fl. Fenn.* 5: 29. 1971, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89. 2003.

Capillipedium Stapf = Filipedium Raizada & Jain

Latin *capillus*, *i* "the hair" and *pes*, *pedis* "foot," referring to the spikelets, pedicels and base are ciliate, or alluding to the spikelets borne on capillary panicle branches.

Some 14 species, warm Old World, eastern Africa, tropical Asia, New Caledonia, Australia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, erect and slender, sometimes decumbent or caespitose, rambling, usually scented or sometimes aromatic, tufted, stout, herbaceous, nodes bearded or hairy, auricles absent, ligule membranous and more or less fringed, leaves flat, plants bisexual, elongate inflorescence, a panicle open with capillary branchlets, racemes short on slender and glandular branches, panicle branches bearing short racemes of 1-8 sessile spikelets, terminal spikelets in triplets, sessile spikelets with 1 fertile floret and 1 sterile lemma, pedicellate spikelets flattened, short racemes often reduced to triads, glumes 2 more or less equal, upper glume boat-shaped or naviculate, lower glume 2-keeled, palea absent, free and fleshy lodicules present, stamens 3, ovary glabrous, stigmas 2, ornamental, weed species, essential oil with antibacterial efficacy, related to and hybrids with *Bothriochloa* Kuntze, found in open grassy places, type *Capillipedium parviflorum* (R. Br.) Stapf, see *Flora of Tropical Africa* 9: 11, 169. 1917, *University of Queensland, Department of Biology, Papers* 2(3): 1-62 (41-46). 1944, *Journal of the Bombay Natural History Society* 49: 682-683. 1951, *Phytomorphology* 7: 93-102. 1957, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 154. 1960, *Grasses of Burma ...* 110-113. 1960, *Flora of New South Wales Gramineae* 19(1): 37-39. 1961, *American Journal of Botany* 53(1): 94-98. 1966 [Morphology of the Compilospecies *Bothriochloa intermedia*.], *Bot. Tidsskr.* 67: 324-326. 1973, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Pharmazie* 39(1): 64. 1984, *Journal of Cytology and Genetics* 25: 140-143.

1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

Species

C. sp.

in Thailand: yaa dokkhaa

C. annamense A. Camus (*Capillipedium parviflorum* var. *annamense* (A. Camus) Roberty)

Annam. See *Bulletin du Muséum d'Histoire Naturelle* 31: 206. 1925.

in Thailand: yaa dokkhaa, ya dok kha

C. arachnoideum Henrard (*Capillipedium arachnoideum* subsp. *arachnoideum*; *Capillipedium arachnoideum* subsp. *luzoniense* Henrard)

Asia, Indonesia, Java. See *Blumea* 3(3): 458-459. 1940.

C. assimile (Steudel) A. Camus (*Andropogon assimilis* Steudel; *Andropogon assimilis* Steud. ex Zoll.; *Andropogon glaucopsis* Steud., nom. illeg., non *Andropogon glaucopsis* (Elliott) Steud.; *Andropogon montanus* Hack., nom. illeg., non *Andropogon montanus* Roxb.; *Andropogon montanus* var. *glaucopsis* (W. Watson) Hack.; *Andropogon subrepens* Steud.; *Bothriochloa assimilis* (Steud. ex Zoll.) Ohwi; *Bothriochloa picta* Ohwi; *Capillipedium assimile* (Steud. ex Zoll.) A. Camus; *Capillipedium assimile* var. *assimile*; *Capillipedium assimile* var. *glaucophyllum* (Henrard) Jansen; *Capillipedium glaucopsis* (Steud.) Stapf; *Capillipedium glaucopsis* (W. Watson) Stapf; *Capillipedium subrepens* (Steud.) Henrard; *Chrysopogon glaucopsis* W. Watson; *Chrysopogon subrepens* (Steud.) W. Watson; *Dichanthium assimile* (Steud. ex Zoll.) Deshp.)

Southeast Asia, India, Taiwan. Riverbanks, scrambling, branched, woody at base, leaves acuminate, fodder grass, see *Systematisches Verzeichniss der im Indischen Archipel* 58. 1854, *Synopsis Plantarum Glumacearum* 1: 397. 1854, *Himalayan Districts of the Northwestern Provinces of India* 10: 392. 1882, *Monographiae Phanerogamarum* 6: 490-491. 1889 and *Fl. Gén. Indo-Chine* 7: 314. 1922, *Hooker's Icones Plantarum* 31(4): t. 3085. 1922, *Blumea* 3(3): 463. 1940, *Acta Phytotaxonomica et Geobotanica* 11(3): 165, 167. 1942, *Fascicles of Flora of India* 15: 6. 1984.

in English: hard-stemmed golden beard

in Thailand: yaa yung, ya yung

C. filiculme (Hook.f.) Stapf (*Andropogon filiculmis* Hook.f.; *Dichanthium filiculmi* (Hook.f.) S.K. Jain & Deshp.)

India. Decumbent, trailing, climbing over bushes, grows in shady places, slopes, rocky sites, see *Flora British India* 7(21): 181. 1897 and *Hooker's Icones Plantarum* 31(4): t. 3085. 1922, *Bulletin of the Botanical Survey of India* 20(1-4): 134. 1978[1979].

C. huegelii (Hack.) Stapf (*Andropogon foetidus* Hack. ex Lisboa; *Andropogon huegelii* Hack.; *Andropogon huegelii* var. *foetidus* Lisboa; *Andropogon schmidii* Hook.f.; *Capillipedium foetidum* (Lisboa) Raiz. & Jain; *Capillipedium huegelii* (Hack.) Blatt. & McCann; *Capillipedium hugelii* (Hack.) Stapf; *Capillipedium parviflorum* f. *huegelii* (Hack.) Roberty; *Capillipedium schmidii* (Hook.f.) Stapf; *Dichanthium huegelii* (Hack.) S.K. Jain & Deshp.) (named for the German-born Austrian plant collector and traveler Baron Karl Alexander Anselm von Hügel, 1794/1796-1870, soldier, horticulturist, 1830-1837 in Australasia, 1837-1849 in Vienna, 1849-1859 in Florence, 1860-1869 in Bruxelles, author of *Der stille Ocean und die Spanischen Besitzungen im ostindischen Archipel*. Wien 1860. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 215. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; S.L. Endlicher et al. [Eduard Fenzl, George Bentham and Heinrich Wilhelm Schott], *Enumeratio plantarum quas in Novae Hollandiae ... collegit C. de Hügel*. Wien 1837 and *Stirpium Australasicarum herbarii Hügeliani decades tres*. Vindobonae 1838; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

India. Small value for grazing, nodes densely bearded, panicle contracted, see *Fodder Grasses N. India* 88. 1888, *Monographiae Phanerogamarum* 6: 492. 1889, *Journal of the Bombay Natural History Society* 6: 71. 1891, *The Flora of British India* 7(21): 180. 1897 [1896] and *Hooker's Icones Plantarum* 31(4): t. 3085. 1922, *J. Bomb. Nat. Hist. Soc.* 32: 420. 1928, *Indian Forester* 77: 752. 1951, *Boissiera*. 9: 154. 1960, *Bulletin of the Botanical Department*. 20(1-4): 135. 1978[1979].

C. kwashotensis (Hayata) C. Hsu (*Andropogon kwashotensis* Hayata; *Bothriochloa kwashotensis* (Hayata) Ohwi)

China, Taiwan. See *Icones plantarum formosanarum nec non et contributiones ad floram formosanam*. 7: 80-81, f. 47. 1918, *Acta Phytotaxonomica et Geobotanica* 11(3): 168. 1942, *Journal of Japanese Botany* 37(9): 280. 1962.

C. longisetosum Bor

Asia, India. See *Brittonia* 16: 227. 1964.

in Thailand: yaa phom hom, ya phom hom

C. magdaleni Almeida (*Dichanthium magdaleni* (M.R. Almeida) S.K. Jain & Deshp.)

Karnataka, India. See *J. Bomb. Nat. Hist. Soc.* 72(3): 813-814. 1975, *Bulletin of the Botanical Survey of India* 20(1-4): 135. 1978[1979].

C. nagense Almeida (*Dichanthium nagense* (Bor) Deshp.)

Naga Hills, India. See *Brittonia* 16: 228. 1964, *Bulletin of the Botanical Survey of India* 21(1-4): 198. 1979[1981].

C. parviflorum (R. Br.) Stapf (*Anatherum parviflorum* (R. Br.) Spreng.; *Andropogon alternans* J. Presl; *Andropogon caerulescens* (Gaudich.) Kunth; *Andropogon capilliflorus* Steud.; *Andropogon micranthus* Kunth; *Andropogon micranthus* var. *quartinianus* (A. Rich.) Hack.; *Andropogon micranthus* var. *violascens* (Trin.) Honda; *Andropogon parviflorus* Roxb.; *Andropogon parviflorus* (R. Br.) Domin, nom. illeg., non *Andropogon parviflorus* Roxb.; *Andropogon parvispica* Steud.; *Andropogon quartinianus* A. Rich.; *Andropogon serratus* Miq.; *Andropogon violascens* (Trin.) Nees ex Steud.; *Bothriochloa parviflora* (R. Br.) Ohwi; *Bothriochloa parviflora* f. *violascens* (Trin.) Ohwi; *Bothriochloa pauciflora* (R. Br.) Quart.; *Chrysopogon alternans* (J. Presl) Trin. ex Steud.; *Chrysopogon parviflorus* (R. Br.) Benth.; *Chrysopogon parviflorus* var. *violascens* (Trin.) Kitag.; *Chrysopogon parvispicus* (Steud.) W. Watson; *Chrysopogon violascens* Trin.; *Dichanthium parviflorum* (R. Br.) de Wet & Harlan; *Dichanthium parviflorum* (R. Br.) de Wet; *Holcus caerulescens* Gaudich.; *Holcus parviflorus* R. Br.; *Rhaphis caerulescens* (Gaudich.) Desv.; *Rhaphis microstachya* Nees ex Steud.; *Rhaphis parviflora* (R. Br.) Chase; *Rhaphis villosula* Nees ex Steud.; *Sorghum parviflorum* (R. Br.) P. Beauv.; *Sorghum quartinianum* (A. Rich.) Schweinf.; *Sorghum quartinianum* (A. Rich.) Asch.)

Asia temperate and tropical to Australia, East Africa, Sudan, Tanzania, Ethiopia, India, Indonesia, China, Japan, Philippines, Queensland, New South Wales, Northern Territory. Perennial, variable, densely tufted, slender to robust, erect, hairy or glabrous, ligule short and with fringed margin, nodes bearded, sheath more or less glabrous, hairy panicles, racemes with 1 sessile and 2 pedicellate spikelets, spikelets purple and long awned, glumes more or less pubescent, pedicellate spikelets male, paleas absent, weed species, very hard and adaptable, ornamental when in flower, decorative aromatic panicles, low forage value, grows in woodland and on roadsides, wastelands, grasslands, upland grassland, slopes, see *Prodromus Florae Novae Hollandiae* 199. 1810, *Essai d'une Nouvelle Agrostographie* 132, 165. 1812, *Flora Indica; or Descriptions ...* 1: 277. 1820, *Systema Vegetabilium, editio decima sexta* 1: 290. 1825, *Révision des Graminées* 1: 165, 618. 1829-1830, *Reliquiae Haenkeanae* 1(4-5): 342. 1830, *Voyage autour de Monde exécuté pendant les Années 1836 et 1837 sur la Corvette la Bonite ... Botanique* 411, t. 27. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 173. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 319. 1832, *Nomenclator Botanicus. Editio secunda* 1: 359. 1840, *London Journal of Botany* 2: 411. 1843, *Tentamen Florae Abyssinicae ...* 2: 469. 1850, *Synopsis Plantarum Glumacearum* 1: 396-397. 1854, *Annales Museum Botanicum Lugduno-Batavi* 2: 290. 1866, *Beitrag zur Flora Aethiopiens ...* 306. Berlin 1867, *Himalayan Districts of the North-western Provinces of India* 392. 1882,

Monogr. Phan. 6: 490. 1889 and *Bibliotheca Botanica* 85(2): 263. 1915, *Flora of Tropical Africa* 9: 169. 1917, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 345. 1930, *Report of the Institute of Scientific Research, Manchoukuo* 3(App. 1): 68. 1939, *Acta Phytotaxonomica et Geobotanica* 11(3): 166. 1942, *Journal of Taiwan Museum* 10: 58. 1957, *American Journal of Botany* 53: 97. 1966.

in English: scented-top grass, scented-top, scented golden-beard

in Thailand: yaa phom hom, ya yung

C. parviflorum (R. Br.) Stapf subsp. **capilliflorum** Henrard (*Andropogon capilliflorus* Steud.)

China, Australia. See *Synopsis Plantarum Glumacearum* 1: 397. 1854 and *Blumea* 3(3): 457. 1940.

C. parviflorum (R. Br.) Stapf var. **parviflorum** (*Andropogon micranthus* Kunth; *Andropogon parviflorus* Roxb.; *Bothriochloa parviflora* (R. Br.) Ohwi; *Holcus parviflorus* R. Br.) China. See *Prodromus Florae Novae Hollandiae* 199. 1810, *Flora Indica; or Descriptions ...* 1: 277. 1820, *Révision des Graminées* 1: 165. 1829 and *Blumea* 3(3): 457. 1940, *Acta Phytotaxonomica et Geobotanica* 11(3): 166. 1942.

C. parviflorum (R. Br.) Stapf var. **spicigerum** (Benth.) Roberty (*Andropogon spicigerus* (S.T. Blake) Reeder; *Bothriochloa parviflora* var. *spicigera* (Benth.) Ohwi; *Capillipedium parviflorum* var. *spicigerum* (Benth.) C.C. Hsu, nom. illeg., non *Capillipedium parviflorum* var. *spicigerum* (Benth.) Roberty; *Capillipedium spicigerum* S.T. Blake; *Chrysopogon parviflorus* var. *spicigerus* Benth.; *Dichanthium parviflorum* var. *spicigerum* (S.T. Blake) de Wet)

Taiwan. See *Flora Australiensis: A Description ...* 7: 538. 1878 and *Acta Phytotaxonomica et Geobotanica* 11(3): 166. 1942, *University of Queensland Papers: Department of Biology* 2(3): 43. 1944, *Journal of the Arnold Arboretum* 29(4): 366. 1948, *Boissiera* 154, 155. 1960, *Index to Grass Species* 452. 1962, *Taiwania* 16(2): 309. 1971.

C. planipedicellatum Bor (*Dichanthium planipedicellatum* (Bor) S.K. Jain & Deshp.; *Filipedium planipedicellatum* (Bor) Raizada & Jain)

Asia, India. Awnless, see *Kew Bulletin* 1949: 222. 1949, *Journal of the Bombay Natural History Society* 49: 683. 1951, *Bulletin of the Botanical Survey of India* 20(1-4): 135. 1978[1979].

C. pteropechys (Clarke) Stapf (*Andropogon pteropechys* Clarke; *Dichanthium pteropechys* (C.B. Clarke) S.K. Jain & Deshp.)

Naga Hills, India. Nodes bearded, leaf sheaths stgriate, leaf blades acuminate, ligule ciliate, panicle branched, see *J. Linn. Soc. (Botany)* 25: 88, t. 38. 1899 and *Hooker's Icones Plantarum* 31(4): t. 3085. 1922, *Bulletin of the Botanical Survey of India* 20(1-4): 135. 1978[1979].

C. spicigerum S.T. Blake (*Andropogon micranthus* var. *muelleri* Hack.; *Andropogon parviflorus* var. *spicigerus* (Benth.) Domin; *Andropogon spicigerus* (S.T. Blake) Reeder; *Chrysopogon parviflorus* var. *spicigerus* Benth.; *Dichanthium parviflorum* var. *spicigerum* (S.T. Blake) de Wet) (Latin *spica*, *ae* “a point, spike, tuft” and *gero, gessi, gestum* “to bear, carry, to wear”)

Australia, Queensland, New South Wales, Northern Territory. Perennial, tufted, stout, smooth and green leaves, hairy and purple to yellowish panicle, purple spikelets long awned, pedicellate spikelets sterile or male, low forage value, ornamental when in flower, scented panicles, sometimes weedy, woodland, similar to *Capillipedium parviflorum* (R. Br.) Stapf, see *University of Queensland, Department of Biology, Papers* 2(3): 43. 1944, *Journal of the Arnold Arboretum* 29(4): 366. 1948, *Flora of New South Wales* 19(1): 37-39 (38-39). 1961.

in English: scented-top grass

C. sulcatum Bor

Asia, India. See *Botanisk Tidsskrift* 67(4): 324. 1973.

C. venustum (Thwaites) Bor (*Bothriochloa venusta* (Thwaites) A. Camus; *Hemisorghum venustum* (Thwaites) Clayton; *Vetiveria venusta* (Thwaites) Willis)

Southeast Asia, India. See *Enumeratio Plantarum Zeylaniae* 136. 1864 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 76: 165. 1931, *Grasses of Burma ...* 113. 1960, *Kew Bulletin* 27(3): 448. 1972.

Capriola Adans. = *Cynodon* Rich.

Chloridoideae, Cynodonteae, Chloridinae, type *Capriola dactylon* (L.) Kuntze, see *Flora Mesoamericana* 6: 291-292. 1994, *Contributions from the United States National Herbarium* 41: 59-63. 2001.

Caryochloa Spreng. = *Piptochaetium* Presl

From the Greek *karyon* “a nut, any kind of nut” and *chloe, chloa* “grass.”

Pooideae, Stipeae, Stipinae, type *Caryochloa montevidensis* Spreng., see *Systema Vegetabilium, editio decima sexta* 4(2): 22, 30. 1827, *Reliquiae Haenkeanae* 1(4-5): 222, t. 37, f. 2. 1830 and *Darwiniana* 36(1-4): 107-157. 1998, *Contributions from the United States National Herbarium* 48: 495-504. 2003.

Caryochloa Trin. = *Luziola* Juss.

From the Greek *karyon* “a nut, any kind of nut” and *chloe, chloa* “grass.”

Ehrhartoideae, Oryzeae, Luziolinae, type *Caryochloa brasiliensis* Trin., see *Genera Plantarum* 33. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 637. 1791, *De Graminibus Paniceis* 54, 248. 1826, *Die Natürlichen Pflanzenfamilien* 2(2): 40. 1887 and *Contributions from the United States National Herbarium* 39: 69-71. 2000.

Caryophyllea Opiz = *Aira* L.

From the Greek *karyon* “nut” and *phylon* “leaf.”

Pooideae, Poeae, Airinae, see *Species Plantarum* 1: 63-66. 1753 and *Boissiera*. 13: 179-180. 1967, *Taxon* 41: 556. 1992, *Opera Botanica* 121: 159-172. 1993, *Flora Mesoamericana* 6: 235. 1994, *Taxon* 44: 611-612. 1995, *Bothalia* 26(1): 53-61. 1996, *Thaiszia* 9(1): 31-40. 1999, *Contributions from the United States National Herbarium* 48: 89-96. 2003.

Casiostega Galeotti = *Opizia* C. Presl

Chloridoideae, Cynodonteae, Boutelouinae, see *The Genera of North American Plants* 1: 65. 1818, *Reliquiae Haenkeanae* 1(4-5): 293, t. 41, f. 1-11. 1830, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9: 232. 1842, *Bulletin de la Société Botanique de Belgique* 15: 470-471. 1876.

Castellia Tineo

Dedicated to the Italian botanist Pietro Castelli, author of *Exactissima descriptio rariorum quarundam plantarum, quae continentur Romae in horto Farnesiano*: Tobia Aldino Cesenate auctore... Romae, typis Jacobi Mascardi, 1625, and Petri Castelli ... *Hortus Messanensis*. Messanae, typis viduae Ioannis Francisci Bianco, 1640; see Luigi Belloni, in *D.S.B.* 9: 62-66. 1981; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 65-66. Palermo 1988; Giuseppe M. Mira, *Bibliografia Siciliana*. 1: 195. Palermo 1881.

One species, Mediterranean, western Asia, Canary Islands. Pooideae, Poodae, Poeae, annual, herbaceous, tufted, erect or geniculately ascending, auricles absent or present, ligule an unfringed membrane, leaf blades linear, plants bisexual, inflorescence racemose or paniculate, racemes single or scattered, spikelets compressed laterally and more or less sessile, several-flowered, 2 glumes unequal more or less keeled, thin lemmas awnless and densely tuberculate, palea present, 2 free and membranous lodicules, stamens 3, ovary glabrous, 2 stigmas, open habitats, dry places, dry open places, confused with *Lolium*, type *Castellia tuberculata* Tineo, see Vincenzo (Vincentius) Tineo, 1791-1856,

Plantarum rariorum Siciliae minus cognitarum ... 2: 17-18. Panormi 1846.

Species

C. tuberculosa (Moris) Bor (*Castellia tuberculata* Tineo; *Catapodium tuberculatum* Moris; *Desmazeria tuberculosa* (Moris) Batt. & Trab.; *Desmazeria tuberculosa* (Moris) Bonnet; *Festuca tuberculata* (Tineo) Benth.; *Festuca tuberculosa* (Moris) Coss. & Dur.; *Micropyrum tuberculatum* (Moris) Pilg.; *Nardurus tuberculatus* (Moris) Hayek)

Asia, Europe, Greece, Italy. Annual, loosely tufted, stiff racemose inflorescence sparsely branched, a single raceme, spikelets distichous and many-flowered, glumes glabrous, scabrid-tuberculate lemmas thinly membranous, useful for erosion control, grows in bushland, rocky areas, crevices, see *Exploration Scientifique de l'Algérie* 2: 189, t. 41. 1855, *Journal of the Linnean Society, Botany* 19: 128. 1881, *Flore d'Alger* 100. 1884 and *Feddes Repertorium, Beiheft* 30(3): 295. 1932, *Indian Forester* 74: 90. 1948, *Engler's Botanische Jahrbucher* 74: 576. 1949.

in French: catapodium tuberculé

in Morocco: mahadoun, ziouan

Catabrosa P. Beauv.

Greek *katabibrosko*, *katabibroskein* "eat up, devour," *kato*, *kata* "below, downward, down from" and *broskein*, *brosko*, *bibrosko* "to eat, to devour," *katabrosis* "eating up, devouring," used as fodder for cattle and goats or referring to the glumes.

About 2-3 species, north temperate, Chile. Pooideae, Poodae, Meliceae, or Pooideae, Poae, Puccinelliinae, perennial, often prostrate, with creeping stolons or decumbent, soft and fleshy, herbaceous, hollow, loosely tufted or sprawling, branching and rooting at the nodes in water, leaf sheaths glabrous, leaf blades linear and narrow, ligule an unfringed membrane, plants bisexual, inflorescence loosely paniculate, panicle open, spikelets 1- to 3-flowered, 2 glumes unequal toothed or erose, lower glume obtuse to truncate, lemmas membranous and keeled, floret callus glabrous, palea present, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, growing in aquatic habitats, in marshes, in mud, from sea level, shallow water, streams and seepage areas, streamsides, drainage ditches, open habitats, springs, related to *Colpodium* Trin., containing HCN-glucoside, type *Catabrosa aquatica* (L.) P. Beauv., see *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 97. Paris 1812, *Fundamenta Agrostographiae* 119, t. 7. 1820, *Flora Orientalis* 5: 578. 1884 and *Darwiniana* 23(1): 179-188. 1981 [*Catabrosa* P. Beauv. y *Phippsia* R. Brown (Gramineae) en America del Sur.], R.R. Mill, "Eremopoa, Nephelochloa, Catabrosella, Colpodium, Hypopoa, Catabrosa, Paracolpodium." in P.H. Davis (editor),

Flora of Turkey and the East Aegean Islands 9: 486-501. 1985, *American Journal of Botany* 81(1): 119-126. 1994, *Contributions from the United States National Herbarium* 48: 228-230. 2003.

Species

C. aquatica (L.) P. Beauv. (*Aira aquatica* L.; *Catabrosa aquatica* subsp. *pseudairoides* (Herrm.) Tzvelev; *Catabrosa aquatica* var. *uniflora* S.F. Gray; *Catapodium aquaticum* Trin. ex Willk. & Lange; *Colpodium aquaticum* (L.) Trinius; *Diarrhena aquatica* (L.) Raspail; *Festuca airoides* (Koeler) Mutel, nom. illeg., non *Festuca airoides* Lam.; *Festuca albifolia* Reverd.; *Festuca lenensis* Drob. subsp. *albifolia* (Reverd.) Tzvelev; *Glyceria airoides* (Koeler) Reichb.; *Glyceria airoides* (Nutt.) Fries, nom. illeg., non *Glyceria airoides* (Koeler) Reichb.; *Glyceria aquatica* (L.) J. Presl & C. Presl; *Glyceria catabrosa* Klett & Richt.; *Glyceria dulcis* (Salisb.) Holmb.; *Hydrochloa airoides* (Koeler) Hartm.; *Melica aquatica* (L.) Loisel.; *Molinia aquatica* (L.) Wibel; *Poa airoides* Koeler; *Poa aquatica* L.; *Poa dulcis* Salisb.; *Poa pseudairoides* Herrm.)

North temperate. Species variable, creeping, leaf sheaths open, open inflorescence very lax, panicle pyramidal or oblong, glumes unequal to nearly equal, lemmas truncate and erose at the apex, palatable, weed species, grows in moist meadows and along lakeshores or stream banks, see *Species Plantarum* 1: 64, 66-70, 73-76. 1753, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 20. 1796, *Primitiae Florae Werthemensis* 116. 1799, *Descriptio Graminum in Gallia et Germania* 194. 1802, *Prodromus Florae Novae Hollandiae* 179. 1810, *Mémoires de la Société Impériale des Naturalistes de Moscou* 3, t. 13. 1812, *Essai d'une Nouvelle Agrostographie* 97, 135, 142, 149, 157, 160, 162, 165, pl. 19. 1812, *Genera Graminum* 5. 1819, *Flora Cechica* 25. 1819, *A Natural Arrangement of British Plants* 2: 133. 1821, *Annales des Sciences Naturelles, Botanique* 5: 447. 1825, *Flora Gallica*, edition 2, 1: 59. 1828, *Flora der Phanerogamischen Gewächse der Umgegend von Leipzig* 96. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 395. 1830, *Flore Française* 4: 115. 1837, *Novitiae Florae Suecicae* 3: Add. 176. 1843, *Prodromus Florae Hispanicae* 1: 77. 1861 and *Botaniska Notiser* 97. 1919, *Arch. Soc. Zool.-Bot. Fenn. Vanamo* 2: 100-106. 1947, *Bot. Zurn. (Kiev)* 56(9): 1254. 1971, *Bot. Zhurn. SSSR* 70(5): 698-700. 1985, *Novosti Sist. Vyss. Rast.* 1986: 29. 1986, *Bot. Zhurn. SSSR* 71: 1426-1427. 1986, *Fl. Libya* 145: 84. 1988, *Acta Biologica Cracoviensia, Series Botanica* 33: 37-38. 1991, *Flora Mediterranea* 5: 340-345. 1995, *Opera Botanica* 137: 1-42. 1999.

in English: waterhair, water hairgrass, brookgrass, whorlgrass, water whorlgrass, water whorl grass

C. aquatica (L.) P. Beauv. subsp. **aquatica** (*Catabrosa aquatica* var. *aquatica*; *Catabrosa aquatica* var. *laurentiana* Fernald; *Catabrosa aquatica* var. *uniflora* S.F. Gray)

North temperate. See *A Natural Arrangement of British Plants* 2: 133. 1821 and *Rhodora* 35(412): 137-140, pl. 242, f. 3-4. 1933.

C. sikkimensis Stapf ex Hook.f.

North temperate, India, Sikkim. Alpine grass, spreading, rooting at nodes, dwarf, leafy, leaf sheaths glabrous, ligules blunt, lax panicle, see *The Flora of British India* 7(22): 311. 1897 [1896].

C. werdermannii (Pilg.) Nicora & Rúgolo (*Catabrosa latifolia* Phil.; *Panicularia latifolia* (Phil.) Kuntze; *Phippsia werdermannii* Pilg.; *Phippsia werdermannii* f. *major* Pilg.; *Phippsia werdermannii* f. *minor* Pilg.; *Phippsia werdermannii* f. *werdermannii*)

South America. See *Herbarium Pedemontanum* 6: 235. 1836, *Anales Mus. Nac. Santiago de Chile* 1891: 85. 1891, *Revisio Generum Plantarum* 2: 783. 1891 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 759-760. 1929, *Darwiniana* 23(1): 182. 1981.

Catabrosella (Tzvelev) Tzvelev = Colpodium Trin.

The diminutive of *Catabrosa*.

About 9 species, Himalaya, China. Pooideae, Poodae, Poeae, perennial, herbaceous, caespitose, auricles absent, narrow linear leaf blades, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, lax panicle, spikelets pedicellate and laterally flattened, 2 glumes unequal to very unequal, lemmas awnless, palea present, 2 membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, often in *Colpodium*, type *Catabrosella humilis* (Bieb.) Griseb., see *Fundamenta Agrostographiae* 119, t. 7. 1820 and *Novosti Sist. Vyss. Rast.* 1: 12. 1964, *Bot. Zhurn. (Moscow & Leningrad)* 50: 1320. 1965, N.L. Bor (1893-1972), *Flora Iranica: Gramineae*. Graz 1970, *Zlaki SSSR* 481. 1976, R.R. Mill, "Eremopoa, Nephelochloa, Catabrosella, Colpodium, Hyalopoa, Catabrosa, Paracolpodium." in P.H. Davis (editor), *Flora of Turkey and the East Aegean Islands* 9: 486-501. 1985, *Nordic Journal of Botany* 14(6): 601-607. 1994.

Species

C. araratica (Lipsky) Tzvelev (*Catabrosa araratica* Lipsky; *Colpodium araraticum* (Lipsky) Woronow ex Grossh.; *Colpodium araraticum* (Lipsky) Woronow; *Colpodium fibrosum* var. *araraticum* (Lipsky) Woronow ex B. Fedtsch.; *Koeleria dominii* Nábelek)

Eurasia, Turkey. See *Flora Kavkaz* 1: 112. 1928.

C. calvertii (Boiss.) Czerep. (*Catabrosella humilis* subsp. *calvertii* (Boiss.) Tzvelev; *Catabrosella parviflora* subsp. *calvertii* (Boiss.) E.B. Alexeev ex R.R. Mill; *Catabrosella parviflora* subsp. *calvertii* (Boiss.) E.B. Alexeev, nom. illeg., non *Catabrosella parviflora* subsp. *calvertii* (Boiss.) E.B. Alexeev ex R.R. Mill; *Colpodium parviflorum* subsp. *calvertii* (Boiss.) D. Heller; *Colpodium calvertii* Boiss.)

Eurasia. See *Diagnoses plantarum orientalium novarum*, ser. 2, 4: 133. 1859 and *Novosti Sist. Vyss. Rast.* 1966: 32. 1966.

C. fibrosa (Trautv.) Tzvelev (*Colpodium fibrosum* Trautv.)

Eurasia. See *Novosti Sist. Vyss. Rast.* 1966: 32. 1966.

C. gillettii (Bor) Tzvelev (*Colpodium gillettii* Bor)

Russia. See *Notes from the Royal Botanic Garden, Edinburgh* 25: 64. 1963, *Grasses of the Soviet Union* 481. 1976.

C. himalaica (Hook.f.) Tzvelev (*Catabrosa himalaica* (Hook.f.) Stapf; *Colpodium himalaicum* (Hook.f.) Bor; *Phippsia himalaica* Hook.f.)

Asia. See *The Flora of British India* 7(22): 240, 311. 1897 [1896] and *Grasses of Burma ...* 529. 1960, *Novosti Sist. Vyss. Rast.* 1966: 32. 1966.

C. humilis (M. Bieb.) Tzvelev (*Aira humilis* M. Bieb.; *Catabrosa humilis* (M. Bieb.) Trin.; *Colpodium humile* (M. Bieb.) Griseb.; *Glyceria humilis* (M. Bieb.) Heynh.)

Asia Minor. See *Flora Taurico-Caucasica* 1: 57. 1808, *Fundamenta Agrostographiae* 136. 1820, *Nomenclator Botanicus Hortensis* 1: 361. 1840, *Flora Rossica* 4(13): 384. 1852 and *Bot. Zhurn. (Moscow & Leningrad)* 50: 1320. 1965.

C. leiantha (Hack.) Czerep. (*Catabrosella variegata* subsp. *leiantha* (Hack.) Tzvelev; *Catabrosella variegata* var. *leiantha* (Hack.) E.B. Alexeev ex R.R. Mill; *Catabrosella variegata* var. *leiantha* (Hack.) E.B. Alexeev, nom. illeg., non *Catabrosella variegata* var. *leiantha* (Hack.) E.B. Alexeev ex R.R. Mill; *Colpodium leianthum* Hack.; *Colpodium variegatum* var. *leianthum* (Hack.) Grossh.)

Eurasia, Russia. See *Flora Rossica* 4(13): 384. 1852 and *Flora Kavkaz* (edition 2) 1: 270. 1939, *Novosti Sist. Vyss. Rast.* 1966: 32. 1966, *Flora of Turkey and the East Aegean Islands* 9: 496. 1985.

C. ornata (Nevski) Czoponov (*Catabrosella humilis* subsp. *ornata* (Nevski) Tzvelev; *Colpodium ornatum* Nevski)

Russia. See *Flora URSS* 2: 441, 757. 1934, *Bot. Zhurn. (Moscow & Leningrad)* 50: 1320. 1965.

C. parviflora (Boiss. & Buhse) E.B. Alexeev ex R.R. Mill (*Catabrosa parviflora* (Boiss. & Buhse) Boiss.; *Catabrosella humilis* subsp. *parviflora* (Boiss. & Buhse) Tzvelev; *Catabrosella parviflora* (Boiss. & Buhse) Czoponov ex E. Aleks., nom. illeg., non *Catabrosella parviflora* (Boiss. & Buhse) E.B. Alexeev ex R.R. Mill; *Colpodium parviflorum* Boiss. & Buhse)

Turkey, Eurasia. See *Diagnoses plantarum orientalium novarum*, ser. 2, 4: 133. 1859, *Flora Orientalis* 5: 578. 1884 and *Bot. Zhurn. (Moscow & Leningrad)* 50: 1320. 1965, *Novosti Sist. Vyss. Rast.* 1966: 32. 1966, *Flora of Turkey and the East Aegean Islands* 9: 496. 1985.

C. songorica (Tzvelev) Czer. (*Catabrosella humilis* subsp. *songorica* Tzvelev)

Eurasia.

C. variegata (Boiss.) Tzvelev (*Aira catabrosoides* (K. Koch) Steud.; *Catabrosa balansae* Boiss.; *Catabrosa variegata* Boiss.; *Catabrosella variegata* var. *chrysantha* (Woronow) Tzvelev; *Colpodium balansae* (Boiss.) Woronow; *Colpodium chrysanthum* Woronow; *Colpodium variegatum* (Boiss.) Griseb.; *Poa catabrosoides* K. Koch, also *catabrosodes*)

Caucasus, Turkey. See *Diagnoses plantarum orientalium novarum*, ser. 1, 1(5): 1. 1844, *Linnaea* 21(4): 406. 1848, *Flora Rossica* 4(13): 384. 1852, *Synopsis Plantarum Glumacearum* 1: 223. 1854, *Flora Orientalis* 5: 577. 1884 and *Flora Kavkaza* (edition 2) 1: 270. 1939, *Novosti Sist. Vyss. Rast.* 1966: 32. 1966, *Grasses of the Soviet Union* 482. 1976, *Flora of Turkey and the East Aegean Islands* 9: 496. 1985.

Catalepis Stapf & Stent

From the Greek *kato*, *kata* “below, downward, down from” and *lepis*, *lepidos* “flake, scale.”

One species, South Africa. Chloridoideae, Chlorideae, or Chloridoideae, Cynodonteae, Zoysiinae, perennial, caespitose, creeping, herbaceous, unbranched, unarmed, leaves mostly basal, auricles absent, ligule a fringe of short hairs, plants bisexual, inflorescence spicate or paniculate, head of numerous racemes, spikelets solitary and shortly pedicellate, floret 1 bisexual, 2 glumes very unequal, lower glume reduced to a small subulate scale, upper glume narrow and acuminate, lemma keeled and acute, palea present, 2 lodicules free and fleshy, stamens 3, ovary glabrous, 2 stigmas plumose, growing in mountain grassland, sandy veld near vleis, disturbed places, black clay near vleis, open habitats, shallow sandy soil, along roadsides, stony hillsides, type *Catalepis gracilis* Stapf & Stent, see *Kew Bulletin* 1929: 11-12. 1929 [*Bulletin of Miscellaneous Information Kew* 1929(1): 11-12. 1929].

Species

C. gracilis Stapf & Stent

South Africa, Transvaal. Perennial, tufted, creeping, rhizomatous, leaf blade rolled and curly with age, contracted spike-like panicle, lower glume reduced to a small scale, lodicules cuneate, highly palatable and overgrazed, weed, pioneer grass, useful for erosion control.

in English: gause grass

in South Africa: gause gras

Catapodium Link = *Cutandia* Willk.
Scleropoa Griseb., *Synaphe* Dulac

From the Greek *kata* “below, all along” and *podion* “little foot,” referring to the short branches clothed with spikelets, or from the Greek *katapoda*, *katapodas* “straightway,” allusion obscure; see the German botanist and physician Johann Heinrich Friedrich Link (1767-1851), in *Hortus regius botanicus berolinensis*. 1: 44, 145, 380. Berolini (Oct-Nov) 1827 and 2: 193. 1833.

About 2 species, Europe, Mediterranean, North Africa to Iran. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Ammochloinae, annual, often coastal, tufted or solitary, erect or spreading, sometimes geniculate, smooth, slender, herbaceous, unbranched, hollow internodes, auricles absent, leaf blade flat, linear leaves, ligule an unfringed membrane, plants bisexual, stiff and 1-sided panicle, spikelets many-flowered, florets 3-10 bisexual or uppermost floret reduced and sterile, awnless glumes unequal and pointed, lemmas obtuse and glabrous, palea nerved and keeled with keels wingless, 2 ovate lodicules free and glabrous, stamens 3, ovary glabrous, stigmas plumose, small fruit ellipsoid, weed, found in maritime sand, disturbed areas, dry places, open habitats, sometimes referred to *Desmazeria* Dumort., type *Catapodium loliaceum* (Huds.) Link, see *Species Plantarum* 1: 67-70. 1753, *Flora Anglica* 10. 1754, *Prodromus Florae Novae Hollandiae* 179. 1810, *Observations sur les Graminées de la Flore Belgique* 110, 113. 1823 [1824], *Hortus Regius Botanicus Berolinensis* 1: 44, 145, 280. 1827, *Florula belgica, opera majoris prodromus, auctore ...* 157. 1827, *Spicilegium florum rumelicarum et bithynicarum ...* 2: 431. 1846, *Flore de Département des Hautes-Pyrénées* 90. 1867, Edmond Bonnet (1848-1922) et J.F. Gustave Barratte (1857-1920), *Catalogue Raisonné des Plantes Vasculaires de la Tunisie* 483. Paris 1896 [Exploration Scientifique de la Tunisie] and *Botanical Journal of the Linnean Society* 76: 350-352. 1978 [Notes on *Cutandia* and related genera.], *Candollea* 45: 65-74. 1990, *Bothalia* 27: 75-82. 1997, *Bothalia* 29(2): 335-341. 1999, J.M. Dixon, “*Koeleria macrantha* (Ledeb.) Schultes (*K. alpigena* Domin, *K. cristata* (L.) Pers. pro parte, *K. gracilis* Pers., *K. albescens* auct. non DC.)” *Journal of Ecology* 88(4): 709-726. Aug 2000, *Contributions from the United States National Herbarium* 48: 230. 2003, *Journal of Ecology* 92(2): 297-309. Apr 2004.

Species

C. mamoraenum (Maire) Maire & M. Weiller (*Micropyrum mamoraenum* (Maire) Stace; *Nardurus mamoraenus* Maire)

Morocco. See *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 28: 386. 1937, *Bulletin de la Société*

d'Histoire Naturelle de l'Afrique du Nord 33(4): 96. 1942, *Botanical Journal of the Linnean Society* 76: 350. 1978.

C. marinum (L.) C.E. Hubb. (*Catapodium loliaceum* (Huds.) Link; *Desmazeria loliacea* Nyman; *Demazeria marina* (L.) Rothm.; *Desmazeria marina* (L.) Druce; *Desmazeria marinum* (L.) Druce; *Festuca loliacea* auct.; *Festuca marina* L.; *Festuca rottboelloides* Kunth; *Poa loliacea* Huds.; *Sclerochloa loliacea* Woods ex Bab.; *Scleropoa loliacea* (Huds.) Woods)

Europe, Turkey, Mediterranean. Annual, tufted, tiny, erect or decumbent, ligule membranous, auricles absent, short leaves, plants bisexual, inflorescence a raceme or a panicle, dense raceme-like panicles, inflorescence racemose or paniculate, spikelets distichous and erect, 2 glumes, palea narrowly elliptic and strongly 2-keeled, 2 lodicules, 3 stamens, ovary glabrous, fruit compressed and grooved, useful for erosion control, seashore, stony places, walls, bare sandy ground, open habitats, maritime habitat, coastal grassland, on sandy soils, see *Amoenitates Academici* ... 4: 96. 1759, *Hort. Berol.* 1: 45. 1827 and *Scottish Botanical Review* 1: 156. 1912, *Feddes Repertorium* 52: 177. 1943, *Kew Bull.* 1954: 375. 1954, *Willdenowia* 6(2): 291. 1971, *Bot. J. Linn. Soc.* 91: 440. 1985.

in English: stiff sand grass, sea ferngrass, darnel poa

in French: fétuque marine, catapode maritime, ivraie maritime

in Italian: logliarello marino

C. rigidum (L.) C.E. Hubb. ex Dony (*Catapodium rigidum* (L.) C.E. Hubb.; *Catapodium rigidum* (L.) Dony; *Demazeria rigida* (L.) Tutin; *Desmazeria rigida* (L.) Tutin; *Desmazeria rigidum* (L.) Tutin; *Diplachne rigida* (L.) Munro ex Chapm.; *Festuca rigida* (L.) Raspail; *Glyceria rigida* (L.) Sm.; *Poa cristata* Walter, nom. illeg., non *Poa cristata* (L.) L.; *Poa rigida* L.; *Sclerochloa rigida* (L.) Link; *Scleropoa rigida* (L.) Griseb.; *Synaphe rigida* (L.) Dulac)

Europe, Mediterranean. Annual, much branched at the base, often coastal, small to tiny, glabrous, rigid, slender, tufted, erect or spreading and geniculate at the base, ligule acute and membranous, leaf sheath glabrous ribbed, glabrous inrolled leaves, stiff inflorescence with oblong awnless spikelets, erect and 1-sided panicle linear to narrowly ovate with rigid and ascending branches, florets widely spaced, glumes pointed and subequal, lemmas obtuse, paleas with scabrid keels, low forage value, weed of disturbed areas, wasteland, dry open places, dry rocky outcrops, walls, sea dune areas, depleted pasture, gardens, on sandy disturbed areas, dry habitats and substrates, along roadsides, railway ballast, in sand or sandy soil, on sandy and gravelly beaches, in damp situations, limestone, see *Flora Anglica* 10. 1754, *Flora Caroliniana, secundum* ... 80. 1788, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 90. 1821, *English Flora* 1: 119. 1824, *Annales des Sciences Naturelles,*

Botanique 5: 445. 1825, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 431. 1844, *Flore de Département des Hautes-Pyrénées* 90. 1867, *Flora of the Southern United States* 609. 1897 and *Flora of the British Isles* 1434. 1952, Charles Abbot (1761-1817), *Flora Bedfordiensis*, comprehending such plants as grow wild in the county of Bedford, arranged according to the system of Linnæus, with occasional remarks. 437. 1953, *Bot. J. Linn. Soc.* 91: 439. 1985, *Flora of South Africa* 4: 1888. 1986, *Grasses of New South Wales* 136. 1991, *The Grasses of Tasmania* 52. 1991, *Taxon* 49(2): 256. 2000.

in English: fern grass, hard grass, rigid fescue, hard poa, hard meadow-grass

in French: catapode rigide, paturin rigide

in Morocco: mahadoun srhir

in Italian: logliarello rudérale

in South Africa: steifgras

C. rigidum (L.) C.E. Hubb. ex Dony subsp. **rigidum** (*Catapodium rigidum* var. *rigidum*)

Europe, Mediterranean.

Catatherophora Steud. = *Pennisetum* Rich.

Greek *kato*, *kata* “below, downward” plus *ather* “barb, spine, chaff, prickle, awn” and *phoros* “bearing.”

Panicoideae, Paniceae, Cenchrinae, or Panicoideae, Panicoideae, Paniceae, see *Species Plantarum* 1: 60. 1753, *Syn. Pl.* 1: 72. 1805, *Flora* 12: 465. 1829 and *Contr. U.S. Natl. Herb.* 22: 210. 1921, *Flora Mesoamericana* 6: 371-374. 1994, *Contributions from the United States National Herbarium* 46: 527-536. 2003.

Cathariostachys S. Dransf.

Possibly from the Greek *kathairo* “to purge,” *kathartes* “purifier,” *katharos* “pure,” *kathartikon* “purgatives,” referring to the cyanogenic parts of the bamboos.

Two species, Madagascar. Bambusoideae, type *Cathariostachys capitata* (Kunth) S. Dransf., lowlands, mountain forests, see S. Dransfield, “*Valiha* and *Cathariostachys*, 2 new bamboo genera (Gramineae-Bambusoideae) from Madagascar.” *Kew Bulletin* 53(2): 375-397. 1998.

Species

C. capitata (Kunth) S. Dransf. (*Beesha capitata* (Kunth) Munro; *Cephalostachyum peclardii* A. Camus; *Nastus capitatus* Kunth; *Ochlandra capitata* (Kunth) E.G. Camus)

Madagascar. See *Révision des Graminées* 1: 325, t. 75. 1830, *Transactions of the Linnean Society of London* 26(1): 145. 1868 and *Les Bambusées* 183. 1913, *Bulletin de la*

Société Botanique de France 72: 87-88. 1925, *Kew Bulletin* 53(2): 378, 391. 1998.

C. madagascariensis (A. Camus) S. Dransf. (*Cephalostachyum madagascariense* A. Camus; *Cephalostachyum peclardii* A. Camus) (named for a mister Péclard, grass collector in Madagascar, see *Bulletin de la Société Botanique de France* 72: 88. 1925)

Madagascar. Bamboo, stoloniferous, solitary stems, the favourite food of the bamboo lemurs, *Haplemur* spp. consume the cynogenic parts — young leaf bases, young pseudopetioles and young shoots, see *Bulletin de la Société Botanique de France* 72: 87-88. 1925, *Kew Bulletin* 53(2): 391, 394. 1998.

in English: giant bamboo

in French: bambou géant

in Madagascar: volosy, volohosy, volotsangana

Cathestecum J. Presl = *Bouteloua* Lag.

Possibly from the Greek *kathestekotos*, “fixedly, steadily,” *katasketos*, *katasketon*, “held back, kept back, held fast.”

About 5-6 species, Mexico, U.S., Guatemala. Chloridoideae, Cynodonteae, Boutelouinae, annual or perennial, herbaceous, unarmed, glabrous, erect or ascending or decumbent, stoloniferous, caespitose, leaves mostly basal, auricles absent, sheaths terete with open margins, ligule a dense fringe of hairs, plants bisexual, inflorescence a false spike, racemes cuneate, each raceme with dimorphous spikelets in triplets, male and female fertile spikelets mixed in the inflorescence, central spikelet fertile and 3-flowered, lateral spikelets sessile and 2-flowered, 2 lower spikelets usually male or neuter, spikelets subtended by solitary bristles deciduous with the spikelets, 2 glumes very unequal, thin lemmas, awns 3, palea present, 2 free and fleshy lodicules, stamens 0-3, ovary glabrous, 2 plumose stigmas, open habitats, dry areas, hillsides, open scrub, open gravelly ground, under trees and shrubs, type *Cathestecum prostratum* J. Presl, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Reliquiae Haenkeanae* 1(4-5): 294-295, t. 42. 1830, *Bull. Torrey Bot. Club* 11: 37, t. 45. 1884 and *Contr. U.S. Nat. Herb.* 14(3): 358-363. 1912, *Journal of the Washington Academy of Sciences* 27(12): 495-501. 1937, *Fieldiana, Botany* 24(2): 38-331. 1955, *Phytologia* 37(4): 317-407. 1977, *Bulletin of the Torrey Botanical Club* 105: 134-138. 1978, Irving William Knobloch, compiled by, “A preliminary verified list of plant collectors in Mexico.” *Phytologia Memoirs*. VI. Plainfield, N.J. 1983, *Taxon* 33: 126-134. 1984, *Las Gramíneas de México* 2: 1-344. 1987, *Flora Mesoamericana* 6: 296. 1994, *Sida* 17: 111-114. 1996, *Aliso* 17(2): 99-130. 1998, *Aliso* 18: 61-65. 1999, *Contributions from the United States National Herbarium* 41: 20-33. 2001.

Species

C. brevifolium Swallen (*Bouteloua diversispicula* Columbus; *Cathestecum brevifolium* var. *brevifolium*)

Mexico. Good forage, medicinal, mat-forming, found on gravelly soil, along roadsides, see *Journal of the Washington Academy of Sciences* 27(12): 500. 1937, *Aliso* 18(1): 63. 1999.

in Mexico: grama china, pasto

C. brevifolium Swallen var. *sonorense* Pacheco L. (*Cathestecum brevifolium* Swallen; *Cathestecum erectum* Vasey & Hack.)

Mexico. Inflorescence reddish to greenish, see *Bulletin of the Torrey Botanical Club* 11: 37, pl. 45. 1884.

C. multifidum Griffiths (*Bouteloua multifidum* (Griffiths) Columbus; *Griffithsochloa multifida* (Griffiths) G.J. Pierce)

Mexico. See *Contributions from the United States National Herbarium* 14(3): 360, f. 24. 1912, *Bulletin of the Torrey Botanical Club* 105(2): 134. 1978.

C. prostratum J. Presl (*Bouteloua griffithsii* Columbus; *Cathestecum annuum* Swallen)

Mexico. Forage, see *Reliquiae Haenkeanae* 1(4-5): 295, t. 42. 1830 and *Journal of the Washington Academy of Sciences* 27(12): 497. 1937.

in Mexico: grama china, zacate

C. tamaulipense Pierce ex Beetle

Mexico. See A.A. Beetle, *Las Gramíneas de México* 2: 177. 1987.

C. varium Swallen (*Cathestecum brevifolium* Swallen; *Bouteloua varia* (Swallen) Columbus)

Mexico. Fodder, see *Journal of the Washington Academy of Sciences* 27(12): 498. 1937, *Phytologia* 37(4): 317-407. 1977.

in Mexico: pasto

Celtica F.M. Vázquez and Barkworth

One species, western Mediterranean. Pooideae, Stipeae, Stipinae, perennial, ligules membranous scabrous, lax panicle open, spikelets lanceolate, glumes 3-nerved or veined, lemma coriaceous, awn bigeniculate, paleas membranous bifid, 3 lodicules, 3 anthers, type *Stipa gigantea* Link (*Celtica gigantea* (Link) F.M. Vázquez and Barkworth), see *Species Plantarum* 1: 78-81. 1753, *Révision des Graminées* 1: 58-59. 1829 and *Preslia* 48(2): 186. 1976, *Acta Bot. Malacitana* 21: 163-165. 1996, *Contributions from the United States National Herbarium* 48: 432. 2003, Francisco M. Vázquez and Mary E. Barkworth, “Resurrection and emendation of *Macrochloa* (Gramineae: Stipeae).” *Botanical Journal of the Linnean Society* 144(4): 483-495. Apr 2004.

Species

C. gigantea (Link) F.M. Vázquez and Barkworth (*Avena cavanillesii* Lag.; *Avena sterilis* L.; *Celtica gigantea* subsp. *donyanae* (F.M. Vázquez & Devesa) F.M. Vázquez & Barkworth; *Lasiagrostis gigantea* (Link) Trin. & Rupr.; *Macrochloa arenaria* (Brot.) Kunth; *Macrochloa gigantea* (Link) Hack.; *Stipa arenaria* Brot.; *Stipa gigantea* Link; *Stipa gigantea* subsp. *donyanae* F.M. Vázquez & Devesa; *Stipa gigantea* subsp. *maroccana* (Pau & Font Quer) F.M. Vázquez & Devesa; *Stipa gigantea* var. *maroccana* Pau & Font Quer; *Stipa gigantea* var. *mesatlantica* Andr.; *Stipa pellita* (Trin. & Rupr.) Tzvelev)

Portugal, Spain, Morocco. See *Species Plantarum, Editio Secunda* 1: 118. 1762, *Journal für die Botanik* 2: 313. 1799, *Flora Lusitanica* 1: 86. 1804, *Varietades de Ciencias, Literatura y Artes* 4(19): 39. 1805, *Species Graminum Stipaceorum* 96. 1842, *Catalogue Raisonné des Graminées de Portugal* 16. 1880 and *Iter Maroccanum* 1927: no. 23. 1928, *Index Hort. Budapest* 90. 1934, *Grass. Saudi Arabia* 123. 1989, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Anales Jard. Bot. Madrid* 52: 179-186. 1995, *Botanical Journal of the Linnean Society* 124: 202-203. 1997.

C. gigantea (Link) F.M. Vázquez and Barkworth subsp. *donyanae* (Vázquez and Barkworth) Vázquez and Barkworth

Portugal, Spain, Morocco.

C. gigantea (Link) F.M. Vázquez and Barkworth subsp. *maroccana* (Font Quer) Vázquez and Barkworth

Morocco.

C. gigantea (Link) F.M. Vázquez and Barkworth subsp. *sterilis* Vázquez and Barkworth

Southwest Portugal.

Cenchropsis Nash = Cenchrus L.

Resembling the genus *Cenchrus* L.

Panicoideae, Paniceae, Cenchrinae, type *Cenchropsis myosuroides* (Kunth) Nash, see *Species Plantarum* 2: 1049-1050. 1753 and *Flora of the Southeastern United States* ... 109, 1327. 1903, *Contributions from the United States National Herbarium* 46: 144-150. 2003.

Cenchrus L. = Cenchropsis Nash, Echinaria Fabr., Nastus Lunell, Raram Adans.

From the Greek *kenchros* "millet"; Latin *cenchros*, used by Plinius for an Arabian diamond or an unknown kind of precious stone big as a grain of millet; see Carl Linnaeus, *Species Plantarum*. 1049. 1753 and *Genera Plantarum*. edition 5. 470. 1754.

About 22-30 species, cosmopolitan, warm and dry regions, tropical and warm temperate. Panicoideae, Paniceae, Paniceae, or Panicoideae, Paniceae, Cenchrinae, annual or perennial, tufted, erect or procumbent, weak geniculate culms, herbaceous, slender, branched, stoloniferous or rhizomatous, auricles absent, ligule a short ciliate membranous rim, loose leaf sheaths keeled and compressed, narrow leaf blades linear or linear-lanceolate, sometimes leaves pungent, plants bisexual with only a single spike-like axis, inflorescence a false simple cylindrical spike, inflorescence bristles fused and often united at base, spikelets solitary or clustered, sessile involucre of sterile spikelets hardened and spiny, deciduous involucre composed of 1 or more whorls of bristles, spikelets unawned and falling with the glumes, florets 1 or 2, lower floret sterile or male, upper floret hermaphrodite deciduous with the spiny involucre, 2 glumes very unequal and shorter than the spikelet, lower glume minute or sometimes suppressed, palea present, lodicules absent, stamens 3, ovary glabrous, stigmas 2, spines and bristles on the seeds, weed, cultivated fodder, halophytic, troublesome prickly spiny burrs contaminate wool and their spines damage skin, in damp or wet soils some species are prone to root rots, native pasture species, drought resistant and tolerant of hard grazing, soil stabilizer, shade species, ornamental, grows on open grasslands, on disturbed land, woodland on poorer soils, coastal dunes, pampas, bush, rainforest, sandy and weedy places, some species overlapping and confused with *Pennisetum* Rich., see *Species Plantarum* 2: 1049-1050. 1753, *Enumeratio Methodica Plantarum* 206. 1759, *Familles des Plantes* 2: 35, 597. 1763, *Flora Atlantica* 2: 385. 1799 and *Flora of the Southeastern United States* ... 109, 1327. 1903, *American Midland Naturalist* 4: 214. 1915, *Contributions from the United States National Herbarium* 22: 45-77. 1929, *Journal of the Washington Academy of Sciences* 45(5): 135-143. 1955, *Iowa State College Journal of Science* 37(3): 259-351. 1963 [Taxonomy and distribution of the genus *Cenchrus*], *Kurtziana* 4: 95-129. 1967, *Taxon* 33: 126-134. 1984, *Acta Amazonica* 14(1-2): 95-127. 1984, J. Fournet and John L. Hammerton, *Weeds of the Lesser Antilles*. INRA, Paris 1991, *Flora Mesoamericana* 6: 374-375. 1994, *Flora of Ethiopia and Eritrea* 7: 275-279. 1995, *Sida* 19(3): 523-530. 2001 [Nomenclatural changes in *Pennisetum* (Poaceae: Paniceae)], *Contributions from the United States National Herbarium* 46: 144-150. 2003.

Species

C. sp.

in Mexico: rosapillo

C. agrimonioides Trin. (*Cenchrus agrimonioides* var. *laysanensis* F. Br.; *Cenchrus calyculatus* var. *uniflorus* Hillebr.; *Cenchrus fusiformis* Nees; *Cenchrus fusiformis* Nees & Meyen; *Cenchrus pedunculatus* Degener & Whitney)

U.S., Hawaii. Perennial, endangered species, occurs in the mountains, grows in well-drained soil, see *De Graminibus Paniceis* 72. 1826, *Gramineae* 38. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 170. 1843, *Flora of the Hawaiian Islands* 505. 1888 and *Bernice P. Bishop Museum Bulletin* 81: 20. 1931.

in English: agrimony sandbur

in Hawaii: kamanomano, kumanomano

C. agrimonioides Trin. var. *agrimonioides*

U.S., Hawaii. Perennial, endangered species

in English: agrimony sandbur

C. agrimonioides Trin. var. *laysanensis* F. Br. (*Cenchrus pedunculatus* O. Deg. & Whitney) (Laysan Island in the Northwestern Hawaiian Islands)

U.S., Hawaii. Perennial, endangered or extinct species, see *De Graminibus Paniceis* 72. 1826 and *Bernice P. Bishop Museum Bulletin* 81: 20. 1931.

in English: Laysan agrimony sandbur

in Hawaii: kamanomano, kumanomano

C. australis R. Br. (*Cenchrus calyculatus* Cav.)

Australia, Queensland. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 40, t. 463. 1799, *Prodromus Florae Novae Hollandiae* 1: 196. 1810, *Systema Vegetabilium, editio decima sexta* 1: 303. 1825.

in English: hillside burgrass

C. biflorus Roxb. (*Cenchrus annularis* Andersson ex Peters; *Cenchrus barbatus* Schumacher; *Cenchrus catharticus* Delile; *Cenchrus catharticus* Schltdl., nom. illeg., non *Cenchrus catharticus* Delile; *Cenchrus leptacanthus* A. Camus; *Cenchrus niloticus* Fig. & De Not.; *Cenchrus perinvolutus* Stapf & C.E. Hubb.; *Elymus caput-medusae* Forssk., nom. illeg., non *Elymus caput-medusae* L.)

Tropical Africa, Sahel, Sudan, Yemen, subtropical Africa. Annual, herbaceous, tufted, erect or geniculately ascending, sheaths keeled or compressed, ligule a densely ciliate rim, blades flat and rigid, lamina linear-lanceolate, inflorescence spike-like formed of clusters of spikelets, spikelets surrounded by a rigid involucre in 2 whorls, inner bristles flattened, outer bristles short and spiny, ovoid disc at the base of the burr, thorny grains may wound livestock and wildlife, exact native range obscure, paleotropical invasive weed, adapted to hot and dry tropical areas, it does not have any flood tolerance, used for hay and silage, native pasture species, grazed by most animals in its juvenile state, a source of fodder, food for the herds grazing throughout the Sahel, in northwestern Sahel a food resource for the nomadic Tuareg and settled populations, seeds eaten (Nigeria), seeds used for making bread, in India seeds eaten mixed with *bajra* (millet) for bread making, seeds also eaten raw, in Sudan seeds are pounded and eaten raw or made into porridge, a thin bread (*kisra*) is also made from the

seeds, a grass with hypotensive activity, impressions of *Cenchrus biflorus* seeds in potsherds found in the archeological site of Tichitt Chebka III (Mauritania, West Africa), grows on sand dunes and on sandy soils, clayey soils and light sandy soils, coastal sand dune scrub woodland, deciduous bushland, sand dune savannah and desert fringes, on disturbed lands, orange sand, in sandy plains, in bush, in arid and semiarid regions, hot and dry tropical areas, in low-rainfall woodland savannah on sand, abandoned cultivation, bare sandy ground, see *Flora Aegyptiaco-Arabica* 25. 1775, *Hortus Bengalensis, or a catalogue ...* 81. 1814, *Flora Indica; or Descriptions ...* 1: 238. 1820, *Beskrivelse af Guineiske planter* 43-44. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 63-64. 1828, *Linnaea* 4: 78. 1829, *Catalogus plantarum horti botanici monspeliensis* 1838: 4. 1839, *Mémoires de l'Académie des Sciences de Turin* 14: 380, t. 33. 1854, *Naturwissenschaftliche Reise nach Mossambique ...* 553. 1863 and *Boll. Reale Orto Bot. Giardino Colon. Palermo* 9: 51. 1910, *Bulletin de la Société Botanique de France* 80: 774. 1933, *Bulletin of Miscellaneous Information Kew* 1933: 299. 1933.

in English: burgrass, bur grass, India sandbur, Indian sandbur, gallons curse, 2-flowered sandspur.

in Arabic: e'neti, el gasba, gasba, heskinit, höbb el adjais, initi, koreib, niti

in Botswana: kram-kram

in Burkina Faso: cram-cram

in Gambia: casso

in Ghana: karengia

in Guinea: anyalangò, dialango, djalangò, uyalankon

in Guinea-Bissau: quebè

in Mali: cram-cram, cramcram, dané, dani, gasba, heskinit, initi, khine, kolomon, konomon, koolumo ya, koreib, norna, norolan, uéjag, uzag, uzak, wadjak

in Mauritania: e'neti, el gasba, gasba, initi, niti

in Niger: daani, dané, dani (Djerma/Zarma), dâni, éneti, gasba, gerengyari, gobi, gôbi, hansaelik, hebbere, hébbo, hobbéré, karanguia, karanguya, k'arangya, kébbé, ngibbi, nögu, wadjâk, wajjag, wuajjag

in Nigeria: apiwa, emimo, eemo, hebbere, ikon, ikpolikpo, K'arangiya, karangiyàà, karangiyàà gumba, karangiyàà kumba, karanguja, kebbe, kora-kondo, ngibbi, njimi, njiwi, nyakkabre

in Sahel: wezzeg, wezzag, cram-cram

in Sudan: haskaneet, haskanit, abu sha'ar, haskanit kishin

in Sahara: ouezzeg (Tuareg)

in Senegal: gebi, haham, hamham, hébbe, hobbéré, kebbè, kebè, khakham, khamkham, ngoj, ngojin, ngotj, norma, norna, norolan, xam xam

in Upper Volta: dani, diubiguina, hebbere, kebbe, kinangu, rani

in Yemen: kurbays

in Yoruba: emimo, eemo

in Kanuri: Ngibbi

in India: argana, baront, basla, bharbhunt, bharont, bharut, bhurat, bhurt, bhurut, dhaman, kukar, lapta

C. brevisetus E. Fourn. (*Cenchrus echinatus* L.; *Cenchrus echinatus* var. *brevisetus* (E. Fourn.) Scribn.)

Mexico. See *Species Plantarum* 2: 1050. 1753, *Bulletin de la Société Botanique de France* sér. 2, 27: 294. 1880, *Mexicanas Plantas* 2: 50. 1886 and *Publications of the Field Columbian Museum, Botanical Series* 2(1): 26. 1900, *Rheedea* 10(2): 153-155. 2000.

C. brownii Roemer & J.A. Schultes (*Cenchrus dactylolepis* Steud.; *Cenchrus echinatus* Steud. ex Döll, nom. illeg., non *Cenchrus echinatus* L.; *Cenchrus echinatus* var. *viridis* (Spreng.) Spreng. ex Griseb.; *Cenchrus inflexus* R. Br., nom. illeg., non *Cenchrus inflexus* Poir.; *Cenchrus inflexus* Poir.; *Cenchrus rigidus* Willd. ex Döll; *Cenchrus viridis* Spreng.; *Cenchrus viridis* var. *macrocephalus* Döll; *Pseudechino-laena inflexa* (Poir.) Pittier)

Mexico, Southern America. Annual, herbaceous, tufted, erect to straggling, glabrous, culm bases sometimes decumbent and rooting at the nodes, sheaths slightly compressed, leaves scattered along culms, inflorescence densely spicate, spikelet involucre in 2 whorls, burs imbricate or densely crowded, inner bristles flattened, green fruits, weed species, pioneer grass, forage, invader, grows in sandy waste places and forest borders, sandy soils, savannah, on beaches and near the ocean, in disturbed places, see *Encyclopédie Méthodique, Botanique* 6: 50. 1804, *Prodromus Florae Novae Hollandiae* 195. 1810, *Systema Vegetabilium* 2: 258. 1817, *Systema Vegetabilium, editio decima sexta* 1: 301. 1824, *Synopsis Plantarum Glumacearum* 1: 109. 1854, *Flora of the British West Indian Islands* 556. 1864, *Flora Brasiliensis* 2(2): 309-310. 1877 and *Bol. Técn. Minist. Agric.* 41. Caracas 1937.

in English: burgrass, burrgrass, fine-bristled burrgrass, slim-bristle sandbur, slim-bristle sandburr, fine-bristle sandbur, fine burgrass, fine bur grass, sandbur, green sandspur

in Costa Rica: mozote

in Ecuador: cadillo

in Honduras: mozote de caballo

in Mexico: cadillo, cadillo bobo, guachapure, huizapol, mosoto lanudo

in South Africa: fynklitsgras, knopklitsgras

in Japan: kuri-no-iga

C. caliculatus Cav. (*Cenchrus anomoplexis* Labill., nom. illeg., non *Cenchrus anomoplexis* Desf.; *Cenchrus australis* R. Br.; *Cenchrus australis* var. *latifolius* Drake; *Cenchrus*

caliculatus Cav.; *Cenchrus taitensis* Steud.; *Pennisetum caliculatum* (Cav.) Spreng.) (Latin *caliculus*, i “a small cup”)

Pacific Islands, New Zealand, Australia, New Guinea. Perennial or annual, forming clumps or dense mats, scrambling, trailing, robust, short woody rhizome, culms rooting at lower nodes, tiny ligule densely ciliate, sheath compressed and keeled, blade flat, leaf blades narrowly lanceolate, panicle spike-like, spikelets glabrous in clusters, burrs purplish to black, spines soft, lower glume obtuse, upper glume acute, lower lemma sterile or male and scabrous, upper lemma bisexual and scabrous, sharp-pointed fruits, straggling over vegetation, probably dispersed by adhering to seabird feathers, a fodder plant, weed, found on poor soils, near coast, on rocky coasts, on old lava fields, open areas, open sunny places, coastal thickets, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 40, t. 463. 1799, *Prodromus Florae Novae Hollandiae* 1: 196. 1810, *Sertum Austro-Caledonicum* 14, t. 19. 1824, *Systema Vegetabilium, editio decima sexta* 1: 303. 1825, *Synopsis Plantarum Glumacearum* 1: 419. 1854, *Flora of the Hawaiian Islands* 505. 1888, *Flore de la Polynésie française ...* 252. Paris 1892.

in English: hillside burrgrass, large burr grass, Polynesian bur-grass

in Tonga: hefa

in Society Islands: piripiri

C. ciliaris L. (*Cenchrus aequiglumis* Chiov.; *Cenchrus anjana* Ham. ex Wallich; *Cenchrus bulbosus* Fresen.; *Cenchrus ciliaris* Fig. & De Not.; *Cenchrus ciliaris* f. *intermedia* (Chiov.) Chiov.; *Cenchrus ciliaris* var. *anachoreticus* Chiov. ex Pirotta; *Cenchrus ciliaris* var. *genuina* Chiov.; *Cenchrus ciliaris* var. *genuinus* (Leeke) Maire & Weiler, nom. illeg., non *Cenchrus ciliaris* var. *genuina* Chiov.; *Cenchrus ciliaris* var. *leptostachys* (Leeke) Maire & Weiler; *Cenchrus ciliaris* var. *nubicus* Fig. & De Not.; *Cenchrus ciliaris* var. *nubicus* T. Durand & Schinz, nom. illeg., non *Cenchrus ciliaris* var. *nubicus* Fig. & De Not.; *Cenchrus ciliaris* var. *pallens* (Fenzl ex Leeke) Maire & Weiler; *Cenchrus ciliaris* var. *pennisetiformis* (Hochst. & Steud.) Chiov. ex Pirotta; *Cenchrus ciliaris* var. *rigidifolius* (Fig. & De Not.) Chiov.; *Cenchrus ciliaris* var. *villiferus* Fig. & De Not.; *Cenchrus ciliaris* var. *villiferus* T. Durand & Schinz, nom. illeg., non *Cenchrus ciliaris* var. *villiferus* Fig. & De Not.; *Cenchrus digynus* Ehrenb. ex Boiss.; *Cenchrus echinoides* Wight ex Steud.; *Cenchrus glaucus* C.R. Mudaliar & Sundararaj; *Cenchrus lappaceus* L.; *Cenchrus lappaceus* Tausch, nom. illeg., non *Cenchrus lappaceus* L.; *Cenchrus longifolius* Hochst. ex Steud.; *Cenchrus mutilatus* Kuntze; *Cenchrus mutabilis* Wight ex Hook.f.; *Cenchrus pennisetiformis* Hochst. & Steud.; *Cenchrus pennisetiformis* var. *intermedia* Chiov.; *Cenchrus pennisetiformis* var. *rigidifolia* (Fig. & De Not.) Chiov.; *Cenchrus pennisetiformis* var.

typica Chiov.; *Cenchrus pubescens* L. ex B.D. Jacks.; *Cenchrus rigidifolius* Fig. & De Not.; *Cenchrus rufescens* Desf.; *Cenchrus setigerus* Vahl; *Panicum vulpinum* L.; *Panicum vulpinum* Willd., nom. illeg., non *Panicum vulpinum* L.; *Pennisetum cenchroides* Rich., nom. illeg.; *Pennisetum cenchroides* Rich. ex Pers.; *Pennisetum cenchroides* var. *echinoides* (Hochst. & Steud.) Hook.f.; *Pennisetum cenchroides* var. *hamphilahense* Terracc.; *Pennisetum ciliare* (L.) Link; *Pennisetum ciliare* f. *brachystachys* Peter; *Pennisetum ciliare* f. *longifolium* Peter; *Pennisetum ciliare* var. *anachoreticum* Chiov.; *Pennisetum ciliare* var. *ciliare*; *Pennisetum ciliare* var. *genuina* Leeke; *Pennisetum ciliare* var. *hamphilahense* (Terracc.) T. Durand & Schinz; *Pennisetum ciliare* var. *leptostachys* Leeke; *Pennisetum ciliare* var. *palens* Fenzl ex Leeke; *Pennisetum ciliare* var. *robustior* Penz.; *Pennisetum ciliare* var. *setigerum* (Vahl) Leeke; *Pennisetum distylum* Guss.; *Pennisetum incomptum* Nees ex Steud.; *Pennisetum longifolium* Fenzl ex Steud.; *Pennisetum mutilatum* (Kuntze) Leeke; *Pennisetum petraeum* Steud.; *Pennisetum polycladum* Chiov.; *Pennisetum prieurii* Kunth; *Pennisetum prieurii* A. Chev., nom. illeg., non *Pennisetum prieurii* Kunth; *Pennisetum rangei* Mez; *Pennisetum rufescens* (Desf.) Spreng.; *Pennisetum rufescens* Hochst. ex Steud., nom. illeg., non *Pennisetum rufescens* (Desf.) Spreng.; *Pennisetum teneriffae* Steud.; *Setaria vulpina* (Willd.) P. Beauv.)

Tropical Africa, Middle East, India, Pakistan, Syria. Perennial bunchgrass, rarely spreading, profusely branched, shrub-like, wiry to woody, often forming tussocks or mat, tufted, very variable in habit, ascending, base decumbent and geniculate, tough rootstock, ligule ciliate, sheaths glabrous to sparingly pilose and compressed, leaves more or less glabrous and linear, inflorescence dense spike-like pale green or purplish, involucre elongate, spikelets seated in bristly involucre, solitary or clustered spikelets surrounded by numerous bristles not spiny, prickly burs, inner bristles united only at the base to form a disc, outer bristles filiform, lower glume usually nerveless and acute, upper glume mucronate, lemmas subequal and minutely awned, lower lemma male or sterile rarely bisexual, upper lemma bisexual, ornamental, weed species introduced into many tropical and subtropical areas and widely naturalized, invasive and adaptable, palatable when young, cultivated fodder with a moderately high oxalate content, native pasture species, forage, nutritive value of new growth very good, can be fed green or turned into silage, tolerant of heavy grazing once established, soil stabilizer, very drought resistant, sensitive to waterlogging, in India (Rajasthan) seeds eaten mixed with *bajra* (millet) for bread making, seeds also eaten raw, occurs mostly on sandy soils and alluvial flats, on shallow soils of marginal fertility, on light sandy soils, in heavy limestone, creeklines, river edges, roadside table drains, silty and alluvial soils, shifting sand dunes, sandstone rocky sites, along roadsides and water courses, dry river beds,

rocky hillsides, on sandy loam and clay loam soils, in open woodlands and calcareous areas, hot dry areas, in dry sandy regions and denuded arid lands, often treated as *Pennisetum ciliare* (L.) Link, many ecotypes and strains are known, see *Mantissa Plantarum* 302. 1771, *Flora Atlantica* 2: 388. 1799, *Syn. Pl.* 1: 72. 1805, *Enumeratio Plantarum ...* 2: 395. 1805, *Enumeratio Plantarum Horti Botanici Berolinensis*, ...1031. 1809, *Essai d'une Nouvelle Agrostographie* 51. 1812, *Systema Vegetabilium, editio decima sexta* 1: 302. 1825, *Hortus Regius Botanicus Berolinensis* 1: 213. 1827, *Ind. Sem. Hort. Bocc.* 8. 1828, *Museum Senckenbergianum* 2: 138. 1837, *Flora* 20(1): 57. 1837, *Nomenclator Botanicus. Editio secunda* 1: 317. 1840, *Flora Orientalis* 5: 449. 1844, *Memorie della Reale Accademia delle Scienze di Torino*, ser. 2, 14: 383, 386, 392. 1854, *Synopsis Plantarum Glumacearum* 1: 105-106, 109. 1854, *Atti del Congresso Botanico Internazionale de Genova 1892* 1892: 366. 1892, *Annuario del Reale Istituto Botanico di Roma* 5: 93. 1894, *Conspectus Florae Africae* 5: 776, 778. 1894, *Annuario del Reale Istituto Botanico di Roma* 6: 167. 1896, *The Flora of British India* 7: 88. 1896, *Annuario del Reale Istituto Botanico di Roma* 7: 66. 1897, *Revisio Generum Plantarum* 3: 347. 1898 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 43-44. 1903, *Zeitschrift für Naturwissenschaften* 79: 21-22, 33. 1907, *Annuario del Reale Istituto Botanico di Roma* 8(3): 325-326. 1908, *Index to the Linnean herbarium*, with indication of the type of species marked by Carl von Linné ... 53. London 1912, *Flore de l'Afrique Centrale Française, Énumération des Plantes Récoltées* 1: 368. 1913, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 190. 1921, *Agronomie Coloniale* 20: 108. 1926, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 71. 1930, *Flore de l'Afrique du Nord*: 1: 342. 1952, *Journal of the Bombay Natural History Society* 54: 926. 1957, *Grasses of Burma ...* 287. 1960, Curtis C. Daehler and Erin M. Goergen, "Experimental restoration of an indigenous Hawaiian grassland after invasion by Buffel Grass (*Cenchrus ciliaris*)."
Restoration Ecology 13(2): 380-389. June 2005.

in English: blue buffalo grass, buffalo grass, buffel grass, U.S. buffel grass, Biloela buffel grass, black buffel grass, Gayndah buffel grass, South African kyasuwa, dhaman grass, foxtail grass, Rhodesian foxtail, African foxtail grass, African foxtail, anjan grass, malopo blue, poor man's pennisetum, pearl millet

in French: cenchrus cilié, pennisetum cilié, faux napier

in Spanish: pasto buffel, yerba buffel, yerba salina, zacate buffel

in Mexico: buffel, cola de zorra africana, cola de zorra rhodesiana, zacate buffel

in Arabic: heskanit, aebaed

in India: anajan, andho, angan, anjan, anjana, baiba, bandri, bharbhunt, charwa, dhaman, dhamman, handri, jiral,

kollukattai, koluk katai, kolukkattai pul, kurkan, kusa, marwar anjan, taura, vagnoru

in the Philippines: kawit-kawitan, sagisi

in Thailand: ya bup fen

in Mali: ebanau, ebenu, habinni, heskanit, labdi, lahbdi

in Morocco: el-labd, kra'legrâb, bûrgîba, bu rgiba, bou-ergueba, tabat d-did, tâbat ed-dîb, sebet-ed-dib

in Niger: habini, massinguié, tabahot

in Nigeria: karangiyaa, karangiyar, nijibi

in Senegal: diam hamham, ngolo

in Somalia: anodug, garrow, harfo

in Southern Africa: bloubuffelsgras, blaubüffelgras, breëblaargras, buffelgras, donkiegras, droëland(s)gras, katstertbuffel, katstertgras, katstertjie, lidjiesgras, pêrelmanne, pokogras, skaapgras; modula-tjava (Sotho); se-be-kxare-yaweso (Zulu)

in Sudan: haskanit naim, heskanit

C. dactylolepis Steud. (*Cenchrus brownii* Roem. & Schult.) Suriname. See *Systema Vegetabilium* 2: 258. 1817, *Synopsis Plantarum Glumacearum* 1: 109. 1854.

C. distichophyllus Griseb.

West Indies, Cuba. See *Catalogus plantarum cubensium* ... 234. 1866.

C. echinatus L. (*Cenchrus brevisetus* E. Fourn.; *Cenchrus cavanillesii* Tausch; *Cenchrus crinitus* Mez; *Cenchrus echinatus* Cav.; *Cenchrus echinatus* Steud. ex Döll, nom. illeg., non *Cenchrus echinatus* L.; *Cenchrus echinatus* var. *brevisetus* (E. Fourn.) Scribn.; *Cenchrus echinatus* var. *glabratus* F. Br.; *Cenchrus echinatus* var. *hillebrandianus* (A.S. Hitchc.) F. Br.; *Cenchrus echinatus* var. *morisonii* Kuntze; *Cenchrus echinatus* var. *pennisetoides* F. Br.; *Cenchrus echinatus* var. *viridis* (Spreng.) Spreng. ex Griseb.; *Cenchrus hexaflorus* Blanco; *Cenchrus hillebrandianus* Hitchc.; *Cenchrus insularis* Scribn. ex Millsp.; *Cenchrus insularis* Scribn.; *Cenchrus lechleri* Steud. ex Lechler; *Cenchrus macrocarpus* hort. ex Steud.; *Cenchrus macrocarpus* Ledeb. ex Steud.; *Cenchrus pungens* Kunth; *Cenchrus quinquevalvis* Buch.-Ham. ex Wall.; *Cenchrus spinifex* Cav.; *Cenchrus viridis* Spreng.; *Panicastrella muricata* (L.) Moench)

Tropics and subtropics. Annual, herbaceous to subshrubby, stout, spiny and unpleasant, coarse, ascending from a geniculate base, spreading to erect, geniculate or trailing, growing in clumps, loosely tufted, culms slightly flattened and bent at the nodes, purple-reddish leaf sheaths keeled and overlapping at the base, ligule a densely ciliate rim, leaf blades narrow and slightly hairy on the upper surface near the base, loose inflorescence spike-like and purplish, seed heads are composed of spiny burrs, burs imbricate, inner bristles flattened, outer bristles terete, spikelets acuminate, lower glume narrow, upper glume puberulous to membra-

nous, lower lemma sterile rarely male, upper lemma bisexual, bur purple tinged, good forage grass when young and before the burs harden, medicinal, anti-malarial use (with leaves of *Persea americana* or leaves of *Lippia schomburgkiana*), tea for kidney problems, an infusion is drunk as a febrifuge in the West Indies, invasive in most tropical countries, a troublesome weed in cultivated land, spines from this plant are very irritating, common on waste ground, near running fresh water, coastal, coastal dunes, near the ocean, open areas, sandy or limestone soils, open ground and waste places, edge of cultivated fields, roadsides, ruderal areas, in turf, on disturbed ground and road verges, road ditch, river sands, poor soils, in vine thickets, on beaches and riverbanks, recently fallow land, see *Species Plantarum* 2: 1050. 1753, *Methodus Plantas Horti Botanici* ... 206. 1794, *Icones et Descriptiones Plantarum, quae aut sponte* ... 5: 38-39, t. 461-462. 1799, *Nova Genera et Species Plantarum* 1: 115. 1815 [1816], *A Flora of the Northern and Middle Sections of the United States* 1: 69. 1824, *Systema Vegetabilium, editio decima sexta* 1: 301. 1824, *Flora* 20: 97. 1837, *Flora de Filipinas* 36. 1837, *Nomenclator Botanicus. Editio secunda* 2: 317. 1840, *A Numerical List of Dried Specimens* 8854-B, C. 1849 [Wallich's Catalogue], *Berberides Americae Australis* 56. 1857, *Flora of the British West Indian Islands* 556. 1864, *Flora Brasiliensis* 2(2): 309. 1877, *Mexicanas Plantas* 2: 50. 1886, *Revisio Generum Plantarum* 2: 765. 1891 and *Publications of the Field Columbian Museum, Botanical Series* 2(1): 26-27, t. 58. 1900, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 9: 169. 1903, *Contr. U.S. Natl. Herb.* 12: 127. 1908, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 48. 1917, *Memoirs of the Bernice Pauahi Bishop Museum* ... 8(3): 211, f. 106. 1922, *Bernice P. Bishop Museum Bulletin* 84: 65-66. 1931, *Grasses of Burma* ... 289. 1960, *Iowa St. J. Sci.* 37: 298. 1963, *Regnum Veg.* 127: 31. 1993, *Economic Botany* 51(3): 212-237. 1997, *Rhedeia* 10(2): 153-155. 2000.

in English: sand-bur, sandbur, sand burr, cram cram, common sandbur, southern sandspur, southern sandbur, southern burgrass, southern sandbur grass, burr grass, bur grass, burgrass, Mossman River grass, Mossman burr grass, hedgehog grass, hedge-hog grass, hedgehog dogtail

in Spanish: cadillo, cadillo bravo, cadillo tigre, espolón, abrojo, guisaso

in Belize: muul, espina

in Brazil: carrapicho

in the Caribbean: herbe rude, herbe collante, zèb rid, zèb kolan, zèb pikan, herbe piquante

in Cuba: guizazo

in Ecuador: guagran espino, rabo de zorro, selemo, guagran casha

in Mexico: abrojo, cadillo, cardo, ch'ohool, guechi nate, guechi-na-ta, huizapol, huizapul, k'iith, k'iith toom,

mozote, muul, ojo de arriera, ojo de hormiga, pega ropa, pegarropa, perro, rosetilla, rosetilla grande, t'oyol, t'oyol toom, t'oxol, zacahuitztlil

in Peru: carricillo

in Pacific: cram-cram (New Caledonia), mosie vihilango

in Hawaii: 'ume'alu, mau'u kuku

in New Guinea: hmalbru

in India: argana, dhaman

in Thailand: yaa khee khrok, yaa kheekhrok, ya khi khrok, yaa khikhrok, ya son krachap, yaa son krachap

C. geniculatus Thunb. (*Panicum geniculatum* (Thunb.) Thunb., nom. illeg., non *Panicum geniculatum* Poir.; *Pennisetum geniculatum* (Thunb.) E. Phillips, nom. illeg., non *Pennisetum geniculatum* (Poir.) Jacq.; *Pennisetum geniculatum* (Thunb.) Leeke, nom. illeg., non *Pennisetum geniculatum* (Poir.) Jacq.; *Pennisetum thunbergii* Kunth)

Africa. See *Prodromus Plantarum Capensium*, ... 24. 1794, *Flora Capensis* 1: 388. 1813, *Flora Capensis*, Edidit et Praefatus est J. A. Schultes 1: 103. 1823, *Révision des Graminées* 1: 50. 1829 and *Zeitschrift für Naturwissenschaften* 79: 43. 1907, *An Introduction to the Study of the South African Grasses* ... 219. 1931.

C. gracillimus Nash

U.S., Florida, Cuba. Perennial, wiry, sometimes forming dense clumps, sheaths keeled, blades stiff, burs not imbricate and ovoid, bristles somewhat flattened, weed species growing in sandy soils of open pinelands, wet prairies and river flats, under the light shade of the trees, behind the sandy dunes, see *Bulletin of the Torrey Botanical Club* 22(7): 300. 1895 and *Iowa St. J. Sci.* 37: 294. 1963.

in English: slender sandburr, slender sandbur, slender sandspur

C. hillebrandianus Hitchc. (*Cenchrus echinatus* L.) (named in honor of the German physician Wilhelm B. Hillebrand, 1821-1886, botanist, traveler, from 1851 to 1871 lived in the Hawaiian islands, wrote *A Flora of the Hawaiian Islands*. Annotated and published after the author's death by William Francis Hillebrand [1853-1925]. London, New York & Heidelberg 1888, "The relation of forestry to agriculture." in *Hawaiian Pl. Rec.* 22: 174-200. 1920 and "Die Vegetationsformationen der Sandwich-Inseln." *Bot. Jahrb. Syst.* 9: 305-314. 1888. See W.T. Pope, "Dr. William Hillebrand, M.D. (1821-1886)." *Hawaiian Annual.* 1919: 53-60; J.H. Barnhart, *Biographical notes upon botanists.* 2: 177. 1965; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 175. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the*

correspondence of John Torrey. Library of the New York Botanical Garden. 223. Boston, Mass. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Hawaii. Sandy soil, see *Species Plantarum* 2: 1050. 1753 and *Contr. U.S. Natl. Herb.* 12: 127. 1908, *Memoirs of the Bernice Pauahi Bishop Museum* ... 8(3): 211, f. 106. 1922, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Regnum Veg.* 127: 31. 1993, *Ruizia; Monografías del Jardín Botánico* 13: 1-480. 1993.

C. incertus M.A. Curtis (*Cenchrus albertsonii* Runyon; *Cenchrus bambusoides* Caro & E.A. Sánchez; *Cenchrus carolinianus* Walter; *Cenchrus echinatus* f. *longispina* Hack.; *Cenchrus humilis* Hitchc.; *Cenchrus longispinus* (Hack.) Fernald; *Cenchrus microcephalus* Nash ex Hitchc. & Chase; *Cenchrus muricatus* Phil., nom. illeg., non *Cenchrus muricatus* L.; *Cenchrus parviceps* Shinners; *Cenchrus pauciflorus* Benth.; *Cenchrus pauciflorus* var. *longispinus* (Hack.) Jansen & Wacht.; *Cenchrus pauciflorus* var. *muricatus* Caro & E.A. Sánchez; *Cenchrus pauciflorus* var. *pauciflorus*; *Cenchrus roseus* E. Fourn.; *Cenchrus spinifex* Cav.; *Cenchrus strictus* Chapm.; *Cenchrus tribuloides* sensu J. Black, non L.; *Cenchrus tribuloides* L.; *Nastus carolinianus* (Walter) Lunell; *Nastus strictus* (Walter) Lunell; *Pennisetum pauciflorus* Benth.)

Northern America, U.S., Florida, Arizona, Texas, Mexico. Annual or sometimes a short-lived perennial, tufted, with a shallow root system, erect or bend at the lower nodes, branched, base decumbent and frequently reddish, prostrate stems rooting at the lower nodes, leaf sheaths either hairy or glabrous, ligule ciliate, blade flat or folded, inflorescence open or compact, flowering spikes often partially enclosed by the upper leaf sheath, seed head a spike of spiny burs, spiny inflorescence not very dense, involucre pubescent, spines flat and more or less spreading and rigid, lower lemma sterile, upper lemma bisexual, each yellowish bur usually contains 2 seeds, seeds often a nuisance in hay and wool as well as skin, noxious weed species specialized for life on sand dunes, invasive and unpalatable, often an indicator of poor fertility, found mostly in disturbed areas, dry sites, dry sand, washes, in saline meadows, beaches, dunes, sand hills, in cultivated fields, sandy soils, road verges and paddocks, lawns and pastures, see *Species Plantarum* 2: 1050. 1753, *Flora Caroliniana, secundum* ... 79. 1788, *Icones et Descriptiones Plantarum, quae aut sponte* ... 5: 38, t. 461. 1799, *A Flora of the Northern and Middle Sections of the United States* 1: 69. 1824, *Boston J. Nat. Hist.* 1: 135. 1835, *The Botany of the Voyage of H.M.S. Sulphur* 56. 1844, *Anales de la Universidad de Chile* 36: 202. 1870, *Botanical Gazette* 3(3): 20. 1878, *Mexicanas Plantas* 2: 50. 1886 and *American Midland Naturalist* 4: 214. 1915, *Contributions from the United States National Herbarium*

18(7): 356. 1917, *Contributions from the United States National Herbarium* 24(8): 488. 1927, *American Journal of Botany* 26: 485. 1939, *Field & Laboratory* 24: 73. 1956, *Kurtziana* 4: 44, 122, f. 8. 1967.

in English: burgrass, spiny burgrass, spiny bur grass, spiny bur grass, gentle Annie, grass burr, mat sandburr, field sandspur, field sandbur, sandbur grass, sand bur grass, coastal sandspur, coast sandbur grass, coast sandbur

in Argentina: roseta

in Mexico: pasto

in South Africa: dubbeltjiegras, klitsgras, sandklits, sandklitsgras

C. laniflorus Steud.

Pacific Islands. See *Synopsis Plantarum Glumacearum* 1: 110. 1854.

C. lappaceus L. (*Cenchrus lappaceus* Tausch, nom. illeg., non *Cenchrus lappaceus* L.; *Centosteca lappacea* (L.) Desv.; *Centotheca lappacea* (L.) Desv.; *Melica lappacea* (L.) Raspail; *Uniola lappacea* (L.) Trin.)

India. See *Species Plantarum, Editio Secunda* 1488. 1763, *Annales des Sciences Naturelles (Paris)* 5: 443. 1825, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 358. 1830, *Flora* 20(1): 57. 1837 and *Blumea* 19: 59. 1971, *Kew Bulletin* 27(3): 447-450. 1972.

C. leptacanthus A. Camus (*Cenchrus biflorus* Roxb.)

Africa. See *Flora Indica; or Descriptions ...* 1: 238. 1820 and *Bulletin de la Société Botanique de France* 80: 774. 1933, *Iowa State College Journal of Science* 37(3): 259-351. 1963.

C. linearis Lam.

Europe, France. See *Flore Française* 3: 631. 1778.

C. longifolius Hochst. ex Steud. (*Cenchrus ciliaris* L.)

Africa, Nubia. See *Mantissa Plantarum* 302. 1771, *Synopsis Plantarum Glumacearum* 1: 109. 1854.

C. longisetus M.C. Johnst. (*Cenchrus villosus* (R. Br. ex Fresen.) Kuntze, nom. illeg., non *Cenchrus villosus* (Spreng.) Spreng.; *Pennisetum villosum* R. Br. ex Fresen.)

Africa. See *Museum Senckenbergianum* 2: 134. 1837, *Revisio Generum Plantarum* 3(3): 347. 1898 and *Sida* 1(3): 182. 1963.

C. longispinus (Hackel) Fernald (*Cenchrus carolinianus* Walter; *Cenchrus echinatus* L. forma *longispina* Hackel; *Cenchrus echinatus* sensu C. Gardner, non L.; *Cenchrus pauciflorus* Benth.; *Cenchrus pauciflorus* var. *longispinus* (Hack.) Jansen & Wacht.; *Nastus carolinianus* (Walter) Lunell; *Nastus strictus* (Walter) Lunell)

Argentina, U.S. Annual or short-lived perennial, spiny, tufted, coarse, fibrous root system, ascending, sometimes decumbent and geniculate, often with many branches arising from the base, leaf sheaths strongly compressed and keeled, ligule a fringe of hairs, scabrous to pilose leaves flat and linear, no auricles, compact cylindrical spike-like panicles, conspicuous round and spiny burs along the seed head, burs contain 30-60 spines, slender bristle, purplish involucre sessile, lower lemma sterile, upper lemma bisexual, weed species with low forage value, invasive and naturalized, found in cultivated and disturbed soils, sandy soils and road verges, sandy alluvium, in dry roadside gravel, sandy fields and sandy woods, roadsides and railroads, coastal plains, fields and pastureland, on floodplains, in lawns and waste ground, confused with *Cenchrus echinatus* L., see *Flora Caroliniana, secundum ...* 79. 1788, *The Botany of the Voyage of H.M.S. Sulphur* 56. 1844 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 9: 169. 1903, *American Midland Naturalist* 4: 214. 1915, *Rhodora* 45: 388. 1943, *Nederlandsch Kruidkundig Archief. Verslagen en Mededelingen der Nederlandsche Botanische Vereeniging* 56: 246. 1949, *Iowa State College Journal of Science* 37(3): 298. 1963, *Taxon* 44: 607. 1995.

in English: mat sandbur, burgrass, burgrass, grassbur, sandspur, spiny burgrass, long-spine sandbur, longspine sandbur, longspine sandspur, field sandbur, gentle Annie, bear grass, hedgehog grass, innocent weed

C. macrocephalus (Döll) Scribn. (*Cenchrus echinatus* var. *tribuloides* (L.) Torr.; *Cenchrus tribuloides* L.; *Cenchrus tribuloides* var. *macrocephalus* Döll)

U.S. See *Species Plantarum* 2: 1050. 1753, *A Flora of the Northern and Middle Sections of the United States* 1: 69. 1824, *Flora Brasiliensis* 2(2): 312. 1877, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 110, f. 406. 1899 and *Contr. U.S. Natl. Herb.* 12: 127. 1908.

C. melanostachyus A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 81: 594. 1934.

C. microcephalus Nash ex Hitchc. & Chase (*Cenchrus incertus* M.A. Curtis)

Bahamas. Saline flats, saline meadows, cultivated fields, see *Boston J. Nat. Hist.* 1: 135. 1835 and *Contributions from the United States National Herbarium* 18(7): 356. 1917.

C. mitis Anderss. (*Cenchrus aequiglumis* Chiov.)

Africa, Tanzania, Mozambique, Kenya. Annual, leaves flat, involucre ovoid, body of the involucre pubescent, inner spines flattened, outer bristles numerous and filiform, growing in bushland, coastal bushland, sandy soils, heavy grazed soils, abandoned ground, abandoned cultivation, see *Naturwissenschaftliche Reise nach Mossambique ...* 2: 554. 1864 and *Agronomie Coloniale* 20: 108. 1926.

C. montanus Steud. (*Cenchrus montanus* Nees ex Royle).

India. Annual, variable, ascending from a procumbent base, leaves linear acuminate, involucre shortly stalked enclosing 1-2 spikelets, outer spines of involucre subulate, inner spines lanceolate pungent connate, glumes subequal, nutritious, good grazing grass, makes excellent hay, in sandy places, see *Illustrations of the Botany ... of the Himalayan Mountains ...* 416. 1839, *Synopsis Plantarum Glumacearum* 1: 111. 1854.

in India: anjan, dhaman, dhamman

C. multiflorus J. Presl (*Pennisetum karwinskyi* Schrad.; *Pennisetum multiflorum* E. Fourn.; *Pennisetum vulcanicum* Chase)

Mexico. Tufted, forage, along roadsides, see *Reliquiae Haenkeanae* 1(4-5): 318. 1830, *Linnaea* 12(4): 431. 1838, *Mexicanas Plantas* 2: 49. 1886 and *Journal of the Washington Academy of Sciences* 13(16): 363. 1923, *Phytologia* 37(4): 317-407. 1977, *Fl. Novo-Galic.* 14: 113. 1983, *Cuscatlania* 1(6): 1-29. 1991, *Las Gramíneas de México* 5: 1-466. 1999.

C. myosuroides Kunth (*Cenchropsis myosuroides* (Kunth) Nash; *Cenchrus alopecuroides* J. Presl, nom. illeg., non *Cenchrus alopecuroides* Thunb.; *Cenchrus ekmanianus* Hitchc.; *Cenchrus elliotii* Kunth; *Cenchrus myosuroides* var. *myosuroides*; *Cenchrus scabridus* Arechav.; *Cenchrus setoides* Buckley; *Panicum cenchroides* Elliott, nom. illeg., non *Panicum cenchroides* Lam.; *Pennisetum myosuroides* (Kunth) Spreng.; *Pennisetum pungens* Nutt.; *Setaria elliotiana* Roem. & Schult.)

Mexico, U.S., Southern America. Tall perennial bunchgrass, caespitose, tough, stout, erect with a decumbent base, branched, glaucous, burs composed of several whorls of bristles, bristle united at the base, inner bristles as long as the spikelet, weed species browsed by cattle, very palatable, grows mostly along roadsides and in other waste places, in sandy open soil, dense to open grassland, moist sandy openings near coast, old fields and denuded rangelands, from sands to clays, see *Nova Genera et Species Plantarum* 1: 115-116, t. 35. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1: 111. 1816, *The Genera of North American Plants* 54. 1818, *Mantissa* 2: 279. 1824, *Systema Vegetabilium, editio decima sexta* 1: 303. 1825, *Révision des Graminées* 1: 51. 1829, *Reliquiae Haenkeanae* 1(4-5): 317. 1830, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 2. 1866, *Anales del Museo Nacional de Montevideo* 1: 556, t. 12. 1897 and *Flora of the Southeastern United States ...* 109, 1327. 1903, *Manual of the Grasses of the West Indies* 361. 1936, *Kurtziana* 4: 112. 1967, *Fl. Novo-Galic.* 14: 113. 1983, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

in English: big sandbur, big sandburr, sandbur, big sandspur, grassbur, giant cenchrus, big cenchrus

in Mexico: pasto

C. myosuroides Kunth var. *longisetus* Caro & E.A. Sánchez Argentina. See *Kurtziana* 4: 112. 1967.

C. myosuroides Kunth var. *myosuroides* (*Cenchropsis myosuroides* (Kunth) Nash; *Cenchrus alopecuroides* J. Presl, nom. illeg., non *Cenchrus alopecuroides* Thunb.; *Cenchrus ekmanianus* Hitchc.; *Cenchrus elliotii* Kunth; *Cenchrus myosuroides* var. *myosuroides*; *Cenchrus scabridus* Arechav.; *Cenchrus setoides* Buckley; *Panicum cenchroides* Elliott, nom. illeg., non *Panicum cenchroides* Lam.; *Pennisetum myosuroides* (Kunth) Spreng.; *Pennisetum pungens* Nutt.; *Setaria elliotiana* Roem. & Schult.)

Mexico, U.S., Southern America.

C. pallidus E. Fourn. (*Cenchrus pallidus* E. Fourn. ex Hemsl.; *Cenchrus pilosus* Kunth)

Mexico. See *Nova Genera et Species Plantarum* 1: 116, t. 36. 1815 [1816], *Biologia Centrali-Americana; ... Botany ...* 3: 507. 1885, *Mexicanas Plantas* 2: 50. 1886.

C. palmeri Vasey

America, Mexico. See *Proceedings of the California Academy of Sciences, Series 2*, 2: 211. 1889.

C. parviceps Shinnars (*Cenchrus incertus* M.A. Curtis)

U.S. Cultivated fields, see *Boston J. Nat. Hist.* 1: 135. 1835 and *Field & Laboratory* 24: 73. 1956.

C. parviflorus Poir. (*Chaetochloa corrugata* var. *parviflora* (Poir.) Scribn. & Merr.; *Chaetochloa parviflora* (Poir.) Scribn.; *Pennisetum indicum* subvar. *parviflora* (Poir.) Leeke; *Pennisetum parviflorum* (Poir.) Trin.; *Setaria geniculata* P. Beauv.; *Setaria parviflora* (Poir.) Kerguelen; *Setaria parviflora* var. *parviflora*)

Mesoamerica. See *Encyclopédie Méthodique, Botanique* 6: 52. 1804, *Essai d'une Nouvelle Agrostographie* 51, 169, 178. 1812, *De Graminibus Paniceis* 65. 1826, *U.S. Department of Agriculture. Division of Botany. Bulletin* 4: 39. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 24, t. 12. 1900, *Field Columbian Museum, Publ.* 2(1): 26. 1900, *Zeitschrift für Naturwissenschaften* 79: 19. 1907, *Lejeunia*; *Revue de Botanique. Nouvelle série* 120: 161. 1987.

in English: bristly foxtail

in Argentina: paitén

C. pauciflorus Benth. (*Cenchrus albertsonii* Runyon; *Cenchrus echinatus* f. *longispina* Hack.; *Cenchrus humilis* Hitchc.; *Cenchrus longispinus* (Hack.) Fernald; *Cenchrus muricatus* Phil., nom. illeg., non *Cenchrus muricatus* L.; *Cenchrus pauciflorus* var. *longispinus* (Hack.) Jansen & Wacht.; *Cenchrus roseus* E. Fourn.; *Cenchrus tribuloides* auct.)

South America, Mexico. Annual, on dry sand, see *The Botany of the Voyage of H.M.S. Sulphur* 56. 1844, *Anales de la Universidad de Chile* 36: 202. 1870, *Mexicanas Plantas* 2: 50. 1886 and *Allgemeine Botanische Zeitschrift für*

Systematik, Floristik, Pflanzengeographie 9: 169. 1903, *Contributions from the United States National Herbarium* 24(8): 488. 1927, *American Journal of Botany* 26: 485. 1939, *Rhodora* 45: 388. 1943, *Nederlandsch Kruidkundig Archief. Verslagen en Mededelingen der Nederlandsche Botanische Vereeniging* 56: 246. 1949, *Iowa St. J. Sci.* 37: 298. 1963, *Kurtziana* 4: 122, f. 8. 1967, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-3): 123. 1971[1972], *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Cuscatlania* 1(6): 1-29. 1991.

in Mexico: abrojo roseta, cadillo, chancaquilla, huitzapol, huizapole, ladilla, rosetilla

C. pedunculatus O. Deg. & Whitney (*Cenchrus agrimonioides* Trin.)

Hawaii. See *De Graminibus Paniceis* 72. 1826 and *Flora Hawaiensis* Fam. 47. 1936.

C. pennisetiformis Hochst. & Steud. (*Cenchrus aequiglumis* Chiov.; *Cenchrus ciliaris* var. *pennisetiformis* (Hochst. & Steud.) Chiov. ex Pirota; *Cenchrus echinoides* Wight ex Steud.; *Cenchrus lappaceus* Tausch, nom. illeg., non *Cenchrus lappaceus* L.; *Pennisetum cenchroides* var. *echinoides* (Hochst. & Steud.) Hook.f.; *Pennisetum pennisetiforme* (Hochst. & Steud.) Wipff)

Mediterranean region, east and northeast tropical Africa, India, Arabia, Yemen, Pakistan. Annual or short-lived perennial, tufted, variable, usually branched, soft stems, erect or ascending, leaf sheaths keeled and compressed, ligule a ciliate rim, blade flat to convolute, panicle spike-like and cylindrical, involucre elongate, bristles numerous, inner bristles glabrous and connate from the base, outer bristles filiform, spikelets lanceolate and acute, cluster of spikelets surrounded by hairy bristles, lower glume present or suppressed, lower lemma male or sterile, upper lemma bisexual, planted, pasture, fodder grass, well-grazed, adapted to arid conditions and slightly alkaline soils, excellent drought tolerance, withstands heavy grazing, survives seasonal floodings, useful for stabilisation of the sand dunes, grows as a monospecific sward, common on deep sandy soils, dry waste places, dry semidesert habitats, on sand hills and poor soils, salt marshes, along the banks of water courses, gravel plains, hot and dry regions, loams and alluvial silts, stream beds, along roadsides, well-drained sand dunes, see *Mantissa Plantarum* 302. 1771, *Flora* 20(1): 57. 1837, *Nomenclator Botanicus. Editio secunda* 1: 317. 1840, *Synopsis Plantarum Glumacearum* 1: 109. 1854, *Memorie della Reale Accademia delle Scienze di Torino* ser. 2, 14: 386. 1854, *Annales des Sciences Naturelles; Botanique, série 4* 18: 139. 1862, *The Flora of British India* 7: 88. 1896 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 43-44. 1903, *Annuario del Reale Istituto Botanico di Roma* 8(3): 326. 1908, *Agronomie Coloniale* 20: 108. 1926, *Sida* 19: 527, f. 1. 2001.

in English: buffel grass, slender buffel grass, white buffel grass, white buffel, cloncurry buffel, cloncurry buffel grass

C. pilosus Kunth (*Antheophora hermaphrodita* (L.) Kuntze; *Cenchrus pallidus* E. Fourn.; *Tripsacum hermaphroditum* L.)

Guatemala, Venezuela. Annual, caespitose, erect or decumbent, branched, glabrous, forage, grows on beach sand, grassy roadside, open areas, disturbed grounds, tropical dry forest, bare gravelly soils, see *Systema Naturae, Editio Decima* 2: 1261. 1759, *Elenchus Plantarum Horti Regni Botanici Matritensis* 9. 1803, *Nova Genera et Species Plantarum* 1: 116, t. 36. 1815 [1816], *Mexicanas Plantas* 2: 50. 1886, *Revisio Generum Plantarum* 2: 759. 1891 and *Taxon* 49(2): 257. 2000.

in Mexico: muul-suuk, pasto

in Venezuela: cadillo bobo

C. platyacanthus Andersson (*Cenchrus granularis* Andersson, nom. illeg., non *Cenchrus granularis* L.)

America, Galápagos Islands. Annual, glabrous, erect or ascending, weak, geniculate at the base, rooting at the nodes, ligule stiffly hairy, leaf blades elongate, inflorescence very compact and spiciform, flattened spines, in sandy soil, shore, see *Kongl. Vetenskaps Academiens Handlingar* 1853: 139-140. 1854 and Ira L. Wiggins and Duncan M. Porter, *Flora of the Galápagos Islands* 835-836. 1971.

C. prieurii (Kunth) Maire (*Cenchrus hystrix* Fig. & De Not.; *Cenchrus macrostachyus* Hochst. ex Steud.; *Pennisetum breviflorum* Steud.; *Pennisetum prieurii* Kunth) (after the French botanist F.M.R. Leprieur, 1799-1869, a dispenser in the French navy, between 1824-29 in Senegambia, in 1829 returned to France and began his *Flora*, continued by [Jean Baptiste] Antoine Guillemin (1796-1842), George Samuel Perrotet (1793-1870) and Achille Richard (1794-1852) as *Florae Senegambiae tentamen*. Paris (Treuttel et Wurtz), London 1830-1833; see Joseph Vallot (1854-1925), "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 168-238. Paris 1882; R.W.J. Keay, "Botanical Collectors in West Africa prior to 1860." in *Comptes Rendus A.E.T.F.A.T.* 55-68. Lisbon 1962; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 49. 1971; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London 1904; J.H. Barnhart, *Biographical notes upon botanists*. Boston 1965)

India, Africa. Annual, sometimes perennial, decumbent or tufted, erect to ascending, famine food, grains eaten by humans, good grazing for camels, seeds eaten raw, palatable fodder before anthesis, grows on sand dunes and sandy soils, sandy waste places, desert habitats, see *Révision des Graminées* 2: 411. 1831, *Memorie della Reale Accademia delle Scienze di Torino*, ser. 2, 14: 382. 1854, *Synopsis Plantarum Glumacearum* 1: 107, 109. 1854 and *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 3: 523. 1931.

in French: cram cram

in Arabic: gasba, heskanit, initi, tilimit

in Mali: heskanit, koolumo ana, tawajjaq, uazedj, wadjak, wajjag, wesedj

in Mauritania: gasba, initi, tilimit

in Niger: dani, âni, diger, k'aranga hanfoka, k'aranga kûra, kébbé buru, mali alyia (for the seeds), ngibbi bulduyè, tawajaq, tawajjag, wadjâk, wajjag

in Nigeria: karangiyar, karangiyar hanfoka, karangiyar kura

in Senegal: kébbé buru

in India: dhamnio, lambio-bhurut

C. prieurii (Kunth) Maire var. **scabra** Bhandari

India, Rajasthan. Indeterminate species, see *Fl. Indian Desert* 395. 1978.

C. pungens Kunth (*Cenchrus echinatus* L.)

Peru. See *Species Plantarum* 2: 1050. 1753 and *Contr. U.S. Natl. Herb.* 12: 127. 1908, *Regnum Veg.* 127: 31. 1993, *Rheedeia* 10(2): 153-155. 2000.

C. purpurascens Thunb. (*Pennisetum alopecuroides* f. *purpurascens* (Thunb.) Ohwi; *Pennisetum purpurascens* (Thunb.) Kuntze, nom. illeg., non *Pennisetum purpurascens* Kunth; *Pennisetum purpurascens* (Thunb.) Makino, nom. illeg., non *Pennisetum purpurascens* Kunth)

Warm regions, Asia, Japan. See *Transactions of the Linnean Society of London* 2: 329. 1794, *Systema Vegetabilium, editio decima sexta* 1: 303. 1825, *Revisio Generum Plantarum* 2: 787. 1891 and *Botanical Magazine* (Tokyo) 26: 294. 1912, *Acta Phytotaxonomica et Geobotanica* 10(4): 274. 1941.

C. racemosus L. (*Lappago racemosa* (L.) Honck.; *Nazia racemosa* (L.) Kuntze; *Tragus echinatus* (L.) Cav.; *Tragus muricatus* Moench; *Tragus racemosus* (L.) All.)

Europe. See *Species Plantarum* 2: 1049. 1753, *Flora Pedemontana* 2: 241. 1785, *Synopsis Plantarum Germaniae* 1: 440. 1792, *Methodus Plantas Horti Botanici ...* 53. 1794, *Elenchus Plantarum Horti Botanici* 38. 1803, *Revisio Generum Plantarum* 2: 780. 1891 and *Feddes Repertorium* 49: 53. 1940, *Flora de la Provincia de Buenos Aires* 4(2): 35. 1970, *Acta Botanica Cubana* 4: 1-11. 1980, *Fl. Libya* 145: 336. 1988, *Taxon* 49(2): 149, 249. 2000.

C. rajasthanensis K.C. Kanodia & P.C. Nanda

India, Rajasthan. Indeterminate species, see *Geobios* 5(4): 157. 1978.

C. retusus Sw. (*Panicum polystachion* L.; *Pennisetum polystachion* (L.) Schult.)

Pacific. See *Systema Naturae, Editio Decima* 870. 1759, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Syn. Pl.* 1: 72. 1805, *Mantissa* 2: 146. 1824 and *Micronesica*; journal of the college of Guam. 18(2): 45-102.

Agana, Guam 1982, *Cytologia* 54: 641-652. 1989, *Journal of the Indian Botanical Society* 68: 295-299. 1989.

C. rigidifolius Fig. & De Not. (*Cenchrus ciliaris* L.; *Cenchrus ciliaris* var. *rigidifolius* (Fig. & De Not.) Chiov.; *Cenchrus pennisetiformis* var. *rigidifolia* (Fig. & De Not.) Chiov.)

Africa. See *Mantissa Plantarum* 302. 1771, *Memorie della Reale Accademia delle Scienze di Torino*, ser. 2, 14: 386. 1854 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 43-44. 1903, *Annuario del Reale Istituto Botanico di Roma* 8(3): 326. 1908.

C. robustus R.D. Webster

Australia. See *The Australian Paniceae (Poaceae)* 27. 1987.

C. rufescens Desf. (*Cenchrus ciliaris* L.; *Pennisetum rufescens* (Desf.) Spreng.)

Atlantic. See *Mantissa Plantarum* 302. 1771, *Flora Atlantica* 2: 388. 1799, *Systema Vegetabilium, editio decima sexta* 1: 302. 1825.

C. scabridus Arechav. (*Cenchrus myosuroides* Kunth; *Cenchrus myosuroides* var. *myosuroides*)

Uruguay. See *Nova Genera et Species Plantarum* 1: 115-116, t. 35. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 303. 1825, *Anales del Museo Nacional de Montevideo* 1: 556, t. 12. 1897 and *Flora of the Southeastern United States ...* 109, 1327. 1903, *Fl. Novo-Galic.* 14: 113. 1983, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

C. setiger Vahl (also spelled **setigerus**) (*Cenchrus barbatus* Schumach.; *Cenchrus bulbifer* Hochst. ex Boiss.; *Cenchrus ciliaris* var. *setigerus* (Vahl) Maire & Weiler; *Cenchrus montanus* Nees ex Steud.; *Cenchrus montanus* Nees ex Royle; *Cenchrus quinquevalvis* Buch.-Ham. ex Wall.; *Cenchrus schimperii* Hochst. & Steud. ex Steud.; *Cenchrus setigerus* Forssk. ex Steud.; *Cenchrus triflorus* Roxb. ex Aitch.; *Cenchrus tripsacoides* R. Br.; *Cenchrus uniflorus* Ehrenb. ex Boiss.; *Pennisetum ciliare* var. *setigerum* (Vahl) Leeke; *Pennisetum setigerum* (Vahl) Wipff; *Pennisetum vahlii* Kunth)

East and northeast tropical Africa, northwest India, Arabia, Yemen. Perennial bunchgrass or annual, grows rapidly and vigorously, variable, leafy, more or less erect, tussocky, stoloniferous, forming clumps, more or less spiny, low spreading, bulbous at base, stout rootstock, short rhizomes, leaf sheath scabrous upward, ligule short and ciliate, leaf blades flat or folded, dense inflorescence spike-like erect and cylindrical, spikelets surrounded by a rigid involucre cup-shaped, body of the involucre glabrous, outer bristles minute or absent, inner bristles flattened and grooved on the back, lower lemma sterile rarely male, upper lemma bisexual, seeds purple and bristly, cultivated fodder, once established withstands heavy stocking, forage, pasture species or potential pasture grass, high feed value during the

pre-flowering stage, tender leaves quite palatable, poor forage value, in India seeds eaten mixed with *bajra* (millet) for bread making, seeds also eaten raw, adapted to arid and semiarid climates with a long dry season, useful against moving sand, very tolerant of drought, naturalized elsewhere, can be a serious riverine weed, found in alluvial flats and water courses, wet to upland soil, open dry bush and grassland, arid deciduous grassland, desert areas, subdesert grassland, hot arid zones, along roadsides, on sandy soils, margins of irrigated fields, sandy and silty soils, free-draining soils, sand plains and sand dunes, alkaline soils, sandstone rocky sites, stony hills, savannah, ravine areas, degraded lands, see *Enumeratio Plantarum ... 2*: 395. 1805, Henry Salt (1780-1827), *A Voyage to Abyssinia* and travels into the interior of that country ... in the years 1809 and 1810, etc. 62. London 1814 [Botany. List of new and rare plants, etc. by Robert Brown], *Flora* 4(1), Beil. 2: 61-64. Jan-June 1821, *Révision des Graminées* 1: 49. 1829, *Illustrations of the Botany and other Branches of the Natural History of the Himalayan Mountains and the Flora of Cashmere*. 416. London 1839-1840, *Nomenclator Botanicus. Editio secunda* 1: 317. 1840, *A Numerical List of Dried Specimens* 8854-B,C. 1849, *Catalogue of the Plants of the Punjab and Sindh* 163. 1869, *Flora Orientalis* 5: 448. 1884 and *Zeitschrift für Naturwissenschaften* 79: 22. 1907, *Flore de l'Afrique du Nord*: 1: 342. 1952, *Sida* 19(3): 523-530. 2001.

in English: Birdwood grass, Birdwoodgrass, Birdwood, Birdwood buffel, anjan grass, cow sandbur, South African pennisetum

in Arabic: aebaed

in India: anjan, dhaman, motha dhaman, moda dhaman grass, kata-dhaman, marwar dhaman, kala-dhaman

C. somalensis Clayton (*Pennisetum somalense* (Clayton) Wipff)

Somalia. Perennial, densely tufted, narrow leaves folded to inrolled, involucre cup-shaped, inner bristles flexuous, outer bristles filiform, shade species, under shade of trees and among bushes, see *Kew Bulletin* 32(1): 3. 1977, *Sida* 19(3): 527. 2001.

C. spicatus (L.) Cav. (*Cenchrus spicatus* (L.) Kuntze, nom. illeg., non *Cenchrus spicatus* (L.) Cav.; *Holcus spicatus* L.; *Pennisetum glaucum* (L.) R. Br.)

South America. See *Species Plantarum* 1: 56. 1753, *Systema Naturae, Editio Decima* 2: 1305. 1759, *Descripción de las Plantas ...* 304. Madrid 1802, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Revisio Generum Plantarum* 3(3): 346. 1898.

C. spinifex Cav. (*Cenchrus echinatus* L.; *Cenchrus incertus* M.A. Curtis; *Cenchrus parviceps* Shinnery; *Cenchrus pauciflorus* Benth.)

U.S., Florida, South America. Tufted annual or short-lived perennial, culms geniculate, prostrate, decumbent, leaf sheaths compressed, leaves entire and alternate, flower spikes consist of burs with sharp spines, burs imbricate, bristles ciliate basally, outer bristles when present mostly flattened, first floret sometimes staminate, first palea sometimes reduced or absent, noxious weed, invasive, burs can inflict pain, growing on sandy areas and sandy soils in both open areas and thin woods, on sandy plains, beach sand, in sandy woods, fields and waste places, in sandy soils along rivers and streams, cultivated fields, along roadsides, see *Species Plantarum* 2: 1050. 1753, *Methodus Plantas Horti Botanici ...* 206. 1794, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 38, t. 461. 1799, *Boston Journal of Natural History* 1: 135. Boston, Mass. 1835 [1834-1837], *The Botany of the Voyage of H.M.S. Sulphur* 56. 1844, *Flora Brasiliensis* 2(2): 309. 1877 and *Contr. U.S. Natl. Herb.* 12: 127. 1908, *Regnum Veg.* 127: 31. 1993.

in English: common sandbur, common sandspur, coast sandbur, coast sandspur, southern sandbur, sandbur, coastal sandbur, field sandspur, field sandbur, spiny burgrass.

C. strictus Chapm. (*Cenchrus incertus* M.A. Curtis)

U.S., Florida. Cultivated fields, see *Boston Journal of Natural History* 1: 135. Boston, Mass. 1837 [The Boston Journal of Natural History, containing papers and communications read to the Boston Society of Natural History. Boston, MA. Vols. 1-7 (1834/37-1859/63, 1837-1863)], *Botanical Gazette* 3(3): 20. 1878.

C. taitensis Steud. (*Cenchrus calyculatus* Cav.)

French Polynesia. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 40, t. 463. 1799, *Synopsis Plantarum Glumacearum* 1: 419. 1854.

C. tomentosus Poir.

Africa. See *Encyclopédie Méthodique, Botanique* 6: 1804.

C. tribuloides L. (*Cenchrus carolinianus* Walter; *Cenchrus echinatus* var. *tribuloides* (L.) Torr.; *Cenchrus incertus* M.A. Curtis; *Cenchrus macrocephalus* Scribn.; *Cenchrus macrocephalus* (Döll) Scribn.; *Cenchrus tribuloides* var. *macrocarpus* Steud.; *Cenchrus tribuloides* var. *macrocephalus* Döll; *Cenchrus vaginatus* Steud.; *Nastus carolinianus* (Walter) Lunell; *Nastus strictus* (Walter) Lunell) (Latin *tribulus*, *tribolos*, i "a caltrop"; Greek *tribolos*, *treis*, *tria* "three" and *bolos* "a point")

Eastern U.S., West Indies, Brazil. Perennial or annual, sharp and quite painful to touch, branched, sprawling, erect or ascending, branching and rooting at the lower nodes, leaf sheaths compressed, long narrow gray-green glabrous leaves, flowers scattered and infrequent, flower clusters spiny, spikelets hard and prickly, burs densely pubescent, tiny and backward-pointing spines densely villous basally, outer bristles usually present, spines flattened and more or

less spreading, fertile lemma and palea occasionally scaberrulous, weed species, unpleasant to walk on barefooted, naturalized elsewhere, useful stabilizer of dunes, young burs used as fodder, seeds scorched to make herbal coffee or bread, grows in moist sandy dunes, on coastal sands, beaches, on sandy shores, open dunes, active dunes, sandy fields and woods, cultivated fields, primary dunes zone, land side of barrier dunes, back dunes or secondary dunes, across secondary dunes, tropical salt marshes, open grasslands to dense shrub, groves of low broadleaf evergreen trees, see *Species Plantarum* 2: 1050. 1753, *Flora Caroliniana, secundum* ... 79. 1788, *A Flora of the Northern and Middle Sections of the United States* 1: 69. 1824, *Boston Journal of Natural History* 1: 135. Boston, Mass. 1837, *Synopsis Plantarum Glumacearum* 1: 110. 1854, *Flora Brasiliensis* 2(2): 312. 1877, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 110, f. 406. 1899 and *Contr. U.S. Natl. Herb.* 12: 127. 1908, *American Midland Naturalist* 4: 214. 1915, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-3): 123. 1971[1972], *Flora of Puerto Rico and Adjacent Islands: A Systematic Synopsis* 1-342. 1982, *Taxon* 44: 607. 1995.

in English: hedgehog grass, bur, American burgrass, burgrass, sandspur, dune sandspur, beach sand-spur, sandspurs, sand-dune sandburr, sand dune sandbur, sand bur, dune sandbur, long-spine sandbur

in Mexico: cadillo, huisapole, huitzapol, huizapole, pasto, rosetilla, zacapolin

C. vaginatus Steud. (*Cenchrus tribuloides* L.)

Europe. See *Species Plantarum* 2: 1050. 1753, *Synopsis Plantarum Glumacearum* 1: 110. 1854 and *Contr. U.S. Natl. Herb.* 12: 127. 1908.

C. villosus (Spreng.) Spreng. (*Antheophora hermaphrodita* (L.) Kuntze; *Antheophora villosa* Spreng.; *Cenchrus villosus* (R. Br. ex Fresen.) Kuntze, nom. illeg., non *Cenchrus villosus* (Spreng.) Spreng.; *Pennisetum villosum* R. Br. ex Fresen.; *Tripsacum hermaphroditum* L.)

See *Systema Naturae, Editio Decima* 2: 1261. 1759, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 3: 14. 1822, *Systema Vegetabilium, editio decima sexta* 1: 301. 1825, *Museum Senckenbergianum* 2: 134. 1837, *Revisio Generum Plantarum* 2: 759. 1891, *Revisio Generum Plantarum* 3(3): 347. 1898.

Centosteca Desv. = *Centotheca* Desv.

Presumably an orthographic variant of *Centotheca* Desv., see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Journ. de Bot.* 1: 70. 1813.

Centotheca Desv. = *Centosteca* Desv.,
Centotheca P. Beauv., *Ramosia* Merr.

From the Greek *kenteo* “to prick, torture, torment, sting, spur, pierce” and *theke* “a case, sheath,” alluding to the prickly glumes, to the spines on the lemma, to prickly hairs within the spikelet on the upper lemmas.

Some 1/4-5 species, Old World tropics, tropical West Africa, tropical Asia, Pacific, India, China, Sri Lanka. Bambusoideae, Oryzodae, Centothecoideae, Centothecaceae, perennial or annual, unarmed, tufted, ascending to erect, knotty base, rhizomatous or caespitose, woody and persistent, flowering culms leafy, culm nodes glabrous, culm internodes solid, auricles present or absent, sheaths strongly nerved, ligule a short rim or an unfringed membrane, leaf blades elliptic or linear to lanceolate, plants bisexual and unarmed, inflorescence an ascending panicle, the terminal floret rudimentary, upper floret often with reflexed bristles, spikelets with pedicels hispid, 2 glumes herbaceous and oblong-lanceolate, lemmas apiculate and awnless, palea present, lodicules 2 or absent, stamens 2-3, ovary glabrous, 2 stigmas, spikelets breaking up at maturity, forest shade, type *Centotheca lappacea* (L.) Desv., see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Journ. de Bot.* 1: 70. 1813, *Flora Indica; or Descriptions of Indian Plants, by the Late William Roxburgh, ...* edited by William Carey, D.D. to which are added descriptions of plants more recently discovered by Nathaniel Wallich... 2 vols. Serampore 1820-1824, *J. Linn. Soc. Bot.* 19: 31. 1881 and *Mat. Fl. Malay Pen.* 3: 122. 1907, *Philippine Journal of Science Bot.* 11: 2. 1916, *Amer. J. Bot.* 56: 1054-1057. 1969, *Blumea* 19: 57-60. 1971, *Kew Bulletin* 27(3): 447-450. 1972, *Taxon* 30: 615. 1981, *Dominguezia* 4: 41. 1982, *Taxon* 33(4): 705. 1984, *Taxon* 37(2): 434-477. 1988.

Species

C. lappacea (L.) Desv. (*Cenchrus lappaceus* L.; *Centotheca lappacea* Desv.; *Centotheca latifolia* Trin.; *Centotheca parviflora* Andersson; *Festuca ciliaris* Heyne; *Festuca latifolia* Roth, nom. illeg., non *Festuca latifolia* DC.; *Hierochloa latifolia* (Osbeck) Kunth; *Holcus latifolius* Osbeck; *Melica diandra* Roxb.; *Melica lappacea* (L.) Raspail; *Melica refracta* Roxb.; *Panicum festuciforme* Hochst. ex Hook.f.; *Pentas schumanniana* K. Krause (Rubiaceae); *Poa latifolia* G. Forst.; *Torresia biflora* Roem. & Schult.; *Torresia latifolia* (Osbeck) P. Beauv. ex Roem. & Schult.)

Southeast Asia, India, China, Africa. Perennial or annual, tufted, rather coarse, robust, rhizomatous, culms erect or ascending and solitary, sometimes rooting at the lower nodes, woody roots, leaf sheath with hairy margins and strongly nerved, leaf blade lanceolate to nearly elliptic, ligule membranous, leaves reticulate below, panicle exerted from the uppermost sheath, inflorescence a branching terminal panicle, open panicle with the lower branches

drooping, spikelets ovate-elliptic, bristles on the upper flowering glume, 2 glumes, lower glume hairy, spines or stiff hairs on the lemma, palea narrow and slightly hairy, dispersal by reflexed spines, moderately palatable, good fodder, grazed by cattle, usually animals avoid eating the seed heads, medicinal value, weed species growing in shady damp areas, forest shade, rather shady habitats, hills, disturbed areas, swamps, open places in rain forests and thickets, along trails, forest paths, lowlands, edge of woodlands, in secondary vegetation, old taro plantations, waste places, in forest clearings, among tall shrubs, see *Dagbok ofwer en Ostindisk Resa* 247. 1757, *Species Plantarum, Editio Secunda* 1488. 1763, *Florulae Insularum Australium Prodrumus* 8. 1786, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Systema Vegetabilium* 2: 515, 728. 1817, *Fundamenta Agrostographiae* 141. 1820, *Nov. Fl. Ind. Orient.* 75. 1821, *Annales des Sciences Naturelles (Paris)* 5: 443. 1825, *Révision des Graminées* 1: 21. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 358. 1830, *Enum. Pl. Zeyl.* 374. 1864, *The Flora of British India* 332. 1896 and *Handb. Fl. Ceylon* 5: 304. 1900, *Journal of the Linnean Society, Botany* 36: 420. 1904, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 39: 521. 1907, *Bulletin of the Tokyo Science Museum* 18: 10. 1947, *Bulletin du Jardin Botanique de l'État* 23: 256, f. 31/F. 1953, *Grasses of Ceylon* 32. 1956, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 457, 459. 1960, *Smithsonian Contr. Botany* 45: 5. 1980, *Grasses of Japan and its Neighboring Regions* 497. 1987.

in English: barbed grass

in Sierra Leone: kulagbi, nana, naragbadi, nolomingkodena, suisexe

in Indonesia: jobuk, jukut kidang, karetet lempad, suket lorodan

in Malaysia: rumput darah, rumput lilit kain, rumput temaga

in Papua New Guinea: kuang

in the Philippines: andu-dukot aridekdiket, baylu patong

in Thailand: khon moi mae mai, khon moi maemaai, lek phai, niao ma, nieo maa, ya enieo, yaa ee nieo, ya i niao, yaa i nieo, ya khon moi maemai

in Vietnam: co' móc

C. philippinensis (Merr.) C. Monod (*Ramosia philippinensis* Merr.)

Philippines. See *Philippine Journal of Science* 11: 2. 1916, *Blumea* 19(1): 60. 1971.

C. uniflora Swallen

Vietnam. Open places, in shade, see *Journal of the Washington Academy of Sciences* 26(12): 535-537, f. 1. 1936.

Centochloa Swallen

Greek *kentron* "a spur, prickle" and *chloe, chloa* "grass, young grass, vegetables, greens."

One species, Brazil. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Paspalinae, annual, caespitose, herbaceous, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence of subdigitate racemes, spikelets solitary, 1 glume per spikelet, lower glume absent, upper glume extending below the callus, upper lemma tip pubescent to puberulous, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, savannah, type *Centochloa singularis* Swallen, see J.R. Swallen, "*Centochloa*, a new genus of grasses from Brazil." *Journal of the Washington Academy of Sciences* 25: 190-193. 1935, *Contributions from the United States National Herbarium* 46: 151. 2003.

Species

C. singularis Swallen

Brazil. See *Journal of the Washington Academy of Sciences* 25(4): 192, f. A. 1935.

Centrophorum Trin. = Chrysopogon Trin.

From the Greek *kentron* "a spur, prickle" and *phoros* "bearing," *kentrophoros* "with a sting."

Panicoideae, Andropogoneae, Sorghinae, type *Centrophorum chinense* Trin., see *Fundamenta Agrostographiae* 106, 187-188, t. 5. 1820, *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *Flora Mesoamericana* 6: 383. 1994, *Austrobaileya* 5(3): 503-533. 1999, *Contributions from the United States National Herbarium* 46: 159-161. 2003.

Centropodia Reichenbach = Asthenatherum Nevski, Centropodia (R. Br.) Rchb.

From the Greek *kentron* "a spur, prickle" and *pous, podos* "foot," referring to the stem.

About 4 species, North Africa, southern Africa, Middle East, northern India. Arundinoideae, Arundineae, annual or perennial, herbaceous, unbranched, unarmed, glaucous, tufted or decumbent, woody rootstock, auricles absent, ligule a fringe of hairs, leaf blades stiff and pungent, plants bisexual, inflorescence a contracted panicle, panicles enclosed by spathe-like upper leaf sheaths, 2 glumes equal or subequal, rachilla internode between the glumes, awns 1 or 3 straight or geniculate, floret callus pungent, glumes 2 more or less equal strongly 7-11 nerved, lemmas coriaceous with a terminal long tuft, awn straight or geniculate, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, open habitats, deserts, an earlier name for

Asthenatherum Nevski, see *Narrative of Travels and Discoveries in Northern and Central Africa* 244. 1826, *Conspectus Regni Vegetabilis* 212a. 1828 and *Senck. Biol.* 43(4): 239-266. 1962, *Kew Bulletin* 37(4): 657-659. 1982, T.A. Cope, "Centropodia: an earlier name for *Asthenatherum* (Gramineae)." *Kew Bulletin* 37(4): 657-659. 1983, *Bothalia* 15(1/2): 153-159. 1984, *Bothalia* 18: 119-122. 1988, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Flora of Ethiopia and Eritrea* 7: 73. 1995.

Species

C. forskalii (Vahl) Cope (*Asthenatherum forskahlei* (Vahl) Nevski; *Asthenatherum forskalii* (Vahl) Nevski; *Avena forskalei* Vahl; *Avena forskalii* Vahl; *Avena pensylvanica* Forssk., nom. illeg., non *Avena pensylvanica* L.; *Danthonia forskalei* (Vahl) Trin.; *Danthonia forskalii* (Vahl) R. Br.; *Danthonia forskalii* (Vahl) Trin.; *Trisetum forskalii* (Vahl) P. Beauv.)

Sudan, Egypt, Iran, Israel. Perennial, tufted to loosely tufted, erect, robust, linear leaves pubescent, sheaths pubescent, ligule a ring of hairs, dense panicle contracted and linear, glumes equal glabrous, lemma shorter than the glumes and pilose, lemma 2-lobed, awned, good fodder for stock and camels, on sandy plain, sand dunes, arid desert habitats, see *Flora Aegyptiaco-Arabica* 23. 1775, *Symbolae Botanicae, ...* 2: 25. 1791, *Essai d'une Nouvelle Agrostographie* 88. 1812, *Species Graminum* 1: t. 49. 1826, *Narrative of Travels and Discoveries in Northern and Central Africa* 244. 1826, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 48: 647. 1898 and *Kew Bulletin* 37(4): 658. 1982, *Willdenowia* 19: 446. 1990.

in Arabic: legsaibo

in Mauritania: burekkebah, legsaibo, zehife

in Morocco: rabya

in Niger: adawu, alamfazo, tetemt, aelambazo

in Sahara (Tassili): takamayt

C. glauca (Nees) T.A. Cope (*Asthenatherum forskahlei* auctt.; *Asthenatherum glaucum* (Nees) Nevski; *Danthonia forskalii* subsp. *glauca* (Nees) Maire & Weiller; *Danthonia glauca* Nees)

South Africa. Annual or short-lived perennial, tufted, erect, variable with habitat, brittle, fragile, weak, branched from the base, shortly rhizomatous, rhizomes covered with papery bracts, leaf blades scabrid with a fine sharp tip, basal sheaths densely hairy and loose, ligule a ring of short hairs, dense contracted panicle, lower 2 spikelets bisexual, glumes with bent awns, very palatable, very high grazing value, useful for erosion control, found in sandveld, on sand dunes, in gravel flats between dunes, in deep sandy soils, open habitats, on red sand, on gravelly soils, see *Florae Africae Australioris Illustrationes Monographicae* 327. 1841 and

Flore de l'Afrique du Nord: 2: 363. 1953, *Kew Bulletin* 37(4): 658. 1982.

in English: gha grass

in South Africa: ghagras, dünenhafer

C. glauca (Nees) T.A. Cope var. *glauca*

South Africa, Southern Kalahari. Perennial, tufted, glabrous, sandy dunes.

C. glauca (Nees) T.A. Cope var. *lasiophylla* (Pilger) Conert South Africa. Perennial, tufted, rhizomes covered with hairy papery bracts, leaf sheaths densely hairy.

C. mossamedensis (Rendle) Cope (*Asthenatherum mossamedense* (Rendle) Conert; *Danthonia mossamedensis* Rendle) (Angola, Mossamedes)

South Africa. Perennial, tufted, rhizomatous, woody bulbous rhizomes, basal sheaths present or absent, in coarse sandy places, riverbeds, desert, drainage lines, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 211. 1899 and *Senckenbergiana Biologica* 43: 254. 1962, *Kew Bulletin* 37(4): 658. 1982.

Cephalochloa Cosson & Durieu = *Ammochloa* Boiss.

From the Greek *kephale* "head" and *chloe*, *chloa* "grass, young grass."

Pooideae, Poodae, Aveneae, see *Diagnoses plantarum orientarium novarum* ser. 1. 2(13): 51-52. 1854, *Annales des Sciences Naturelles, Botanique*, sér. 4 1: 229. 1854 and *Acta Universitatis Lundensis* 36(4): 12. 1900, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 63: 1. 45. 1931, *Kew Bulletin, Additional Series* 13: 109. 1986 [*Genera Graminum*].

Cephalostachyum Munro = *Schizostachyum* Griff., *Schizostachyum* Nees

From the Greek *kephale* "head" and *stachys* "a spike."

About 1/12-16 species, tropics and subtropics, Bhutan, Indomalaya, Burma (Myanmar), Madagascar, from northeastern Himalayas to Thailand. Bambusoideae, Bambusoideae, Bambuseae, Melocanninae, sympodial, perennial, unarmed, thin-walled, dense clumps, rhizomes pachymorph, manifold branching, woody, flexible, persistent, climbing, straggling, pendulous or scandent or not scandent, flowering culms leafy, culm internodes hollow, culm nodes glabrous or hairy, internodes long, culm sheath coriaceous shedding late, auricles lacking or not, sheath blade erect or extending outward, plants bisexual, flowering iterant, spikelets with basal buds, pseudospikelet aggregating into cephalanthium, 2-several glumes, palea present, 3 free lodicules, 6 stamens, hollow ovary appendage, 2-3 stigmas,

useful for weaving into mats, found in deciduous forest, mixed forests, high rainfall forests, thickets, near streams, humid and shady conditions, broad-leaved forests, moist sites, mountain to forests at low altitudes, riverbanks, evergreen forest, type *Cephalostachyum capitatum* Munro, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829, *Deutsch. Fl.* 6: 6. 1846, *Notulae ad Plantas Asiaticas* 3: 64. 1851, *Transactions of the Linnean Society of London* 26(1): 138-139, 143, t. 3. 1868, *Forest Flora of British Burma* 2: 566. 1877, *Annals of the Royal Botanic Garden, Calcutta*. 7(26): 107, t. 94. 1896 and A. Camus, "Le genre *Cephalostachyum* a Madagascar." *Bulletin de la Société Botanique de France* 72: 84-88. 1925, *Taxon* 6(7): 201. 1957, R.A. Young & J.R. Haun, "Bamboo in the United States: Description, culture, and utilization." *Agriculture Handbook* 193: i-iii, 1-74. 1961, F.A. McClure, "Genera of bamboos native to the New World (Gramineae: Bambusoideae)." *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 281-282. Calcutta 1989, *Edin. J. Bot.* 51: 29. 1994, *Plant Resources of South-East Asia* 7: 1-191. 1995, *Flora Reipublicae Popularis Sinicae* 9(1): i-xxvi, 1-761. 1996, D.-Z. Li & J.-R. Xue, "The diversity and conservation of bamboos in Yunnan, China." *The Bamboos* 6: 83-94. 1997, C.M.A. Stapleton, D.Z. Li & N. Jia-Ron, "A new combination in *Cephalostachyum* with notes on names in *Neomicrocalamus* (Gramineae-Bambusoideae)." *Kew Bulletin* 52(3): 699-702. 1997, S. Dransfield, "Valiha and *Cathariostachys*, 2 new bamboo genera (Gramineae-Bambusoideae) from Madagascar." *Kew Bulletin* 53(2): 375-397. 1998, *Contributions from the United States National Herbarium* 39: 36. 2000.

Species

C. burmanicum R.N. Parker & C.E. Parkinson (*Schizostachyum burmanicum* (R. Parker & C.E. Parkinson) H.B. Naithani & Bennet)

Burma. See *Repertorium Specierum Novarum Regni Vegetabilis* 31: 127. 1932, *Indian Forester* 117(1): 68. 1991.

C. capitatum Munro (*Bambusa capitata* Wall. & Griff., not *Bambusa capitata* Trinius, not *Bambusa capitata* Willd. ex Ruprecht; *Schizostachyum capitatum* (Munro) R.B. Majumdar; *Schizostachyum capitatum* (Trin.) Rupr.; *Schizostachyum capitatum* Rupr.; *Schizostachyum munroi* S. Kumar & P. Singh)

Bhutan, Sikkim, India. Internodes smooth, culms nodes glabrous, culm sheaths smooth, leaves used as fodder, stems used for building purposes and arrows, used for weaving into mats, seeds used as food in time of scarcity, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3(1): 626-627. 1835, *Bambuseae* 46-47, t. 17, f. 46. 1839, A

Numerical List of Dried Specimens 8913. 1849, *Transactions of the Linnean Society of London* 26(1): 139. 1868 and *Fl. Ind. Enumerat.-Monocot.* 281. 1989, *J. Indian Bot. Soc.* 70(1-4): 423. 1991.

Local names: jhi, pishima, dulloo bans, payong

in Bhutan: payong, dullu bans, dulloo bans, pishima

in India: gobia, gopi, payang, silli

C. capitatum Munro var. ***decompositum*** Gamble (*Schizostachyum capitatum* var. *decompositum* (Gamble) R.B. Majumdar & Karth.; *Schizostachyum munroi* var. *decompositum* (Gamble) S. Kumar & P. Singh)

India, Sikkim. See *Annals of the Royal Botanic Garden, Calcutta*. 7(26): 105. 1896 and *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, 281. 1989, *J. Indian Bot. Soc.* 70(1-4): 423. 1991.

C. chapelieri Munro (for Louis Armand Chapelier, 1779-1802, see H. Poisson, *Etude des manuscrits de Louis Armand Chapelier. Voyageur-Naturaliste (1778-1806)*. Imprimerie Moderne. Tananarive 1940; "Lettres de Chapelier, copiées sur les originaux existant aux archives de Port-Louis. Annotées par G. Fontoynt." *Bulletin de l'Académie Malgache* 10: 297-371. 1912)

Madagascar. See *Transactions of the Linnean Society of London* 26(1): 140. 1868, *Journal of the Linnean Society, Botany* 21: 317-353, 407-455. 1884-1885 and *Bulletin de la Société Botanique de France* 72: 86. 1925, W.C. Lin, "The species and distribution of bamboos in the Republic of Malagasy (Madagascar), East Africa." *Special Bulletin of Taiwan Forestry Research Institute* no. 4: 33. 1967.

C. chevalieri A. Camus (after the French botanist Auguste Jean Baptiste Chevalier, 1873-1956, author of *L'Afrique Centrale Française*. Mission Chari-Lac Tchad, 1902-1904. Paris 1907; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 340. 1965)

Vietnam. See *Bulletin de la Société Botanique de France* 90: 74. 1943.

C. flavescens Kurz (*Melocanna lutescens* Kurz; *Schizostachyum flavescens* (Kurz) R.B. Majumdar)

India, Burma. Cultivated, ornamental, see *J. Asiat. Soc. Bengal* n.s. 42(2): 252. 1873, *Forest Flora of British Burma* 2: 564. 1877 and *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* 281. 1989.

C. fuchsianum Gamble (*Cephalostachyum latifolium* Munro; *Schizostachyum fuchsianum* (Gamble) R.B. Majumdar; *Schizostachyum latifolium* (Munro) R.B. Majumdar, nom. illeg., non *Schizostachyum latifolium* Gamble; *Schizostachyum latifolium* (Gamble) Majumdar; *Schizostachyum sharmae* S. Kumar & P. Sing)

China, Yunnan. Culms pruinose, culm wall thin, pruinose ring below joint, sheath shedding late, no sheath auricles,

sheath ligule very low, sheath blade narrow-lanceolate, 7-11 leaves on each twig, leaf blades ovate-lanceolate sparsely shortly tomentose beneath, strips used in weaving, see *Transactions of the Linnean Society of London* 26(1): 140. 1868, *Annals of the Royal Botanic Garden, Calcutta*. 7(26): 107, t. 94. 1896 and *Fl. Ind. Enumerat.-Monocot*. 281. 1989, *J. Indian Bot. Soc.* 70(1-4): 423. 1991, *Edin. J. Bot.* 51(1): 29. 1994.

C. langbianense A. Chevalier & A. Camus

Vietnam. See *Bull. Mus. Nation. Hist. Nat. Paris* 27: 452. 1921.

C. latifolium Munro (*Cephalostachyum fuchsianum* Gamble; *Schizostachyum fuchsianum* (Gamble) R.B. Majumdar; *Schizostachyum latifolium* (Munro) R.B. Majumdar, nom. illeg., non *Schizostachyum latifolium* Gamble; *Schizostachyum latifolium* (Gamble) Majumdar; *Schizostachyum sharmae* S. Kumar & P. Sing)

Bhutan, India, Burma. Internodes rough, culm nodes hairy, culm sheaths ridges, inflorescence compound and unilateral, used for weaving, see *Transactions of the Linnean Society of London* 26(1): 140. 1868, *Annals of the Royal Botanic Garden, Calcutta*. 7(26): 107, t. 94. 1896 and *Fl. Ind. Enumerat.-Monocot*. 281. 1989, *J. Indian Bot. Soc.* 70(1-4): 423. 1991, *Edin. J. Bot.* 51(1): 29. 1994.

in Bhutan: jhi, ghopi bans, pishima, palom

C. madagascariense A. Camus (*Cathariostachys madagascariensis* (A. Camus) S. Dransf.)

Madagascar. See *Bulletin de la Société Botanique de France* 72: 88. 1925, *Special Bulletin of Taiwan Forestry Research Institute* no. 4: 33. 1967, S. Dransfield, "Valiha and *Cathariostachys*, 2 new bamboo genera (Gramineae-Bambusoideae) from Madagascar." *Kew Bulletin* 53(2): 375-397. 1998.

C. mannii (Gamble) Stapleton & D.Z. Li (*Arundinaria mannii* Gamble; *Neomicrocalamus mannii* (Gamble) R.B. Majumdar; *Racemobambos mannii* (Gamble) Campbell)

India. See *Annals of the Royal Botanic Garden, Calcutta*. 7(26): t. 26. 1896, *Fl. Brit. Ind.* 7: 38. 1896 and *Notes Sino-Himal. Bamboo Spec.* 23. 1988, *Fl. Ind. Enumerat.-Monocot*. 279. 1989, *Kew Bulletin* 52(3): 700. 1997.

C. mindorensis Gamble (*Cephalostachyum mindorensis* Gamble)

Philippines. Scrambling, thin-walled, many slender pseudospikelets clustered at each node, used for fencing and handicrafts, household articles, some taxonomic problem for this plant, see *Plant Resources of South-East Asia* 7: 148-149. 1995.

in Philippines: bagto

C. pallidum Munro (*Schizostachyum pallidum* (Munro) R.B. Majumdar)

India, Burma, Bhutan, China. Upper part of the culm scandent, culm wall thin, branching extending upward with no main branch, sheath narrow long, no sheath auricles, sheath ligule very low, sheath blade narrow-lanceolate to long-lanceolate, leaves ovate-lanceolate its underside scabrous to tomentose, used in weaving and making flutes, see *Transactions of the Linnean Society of London* 26(1): 139. 1868 and *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 282. Calcutta 1989 [also *Fl. Ind. Enumerat.-Monocot*. 282. 1989].

C. peclardii A. Camus (*Cathariostachys capitata* (Kunth) S. Dransf.; *Nastus capitatus* Kunth)

Madagascar. See *Révision des Graminées* 1: 325, t. 75. 1830 and *Bulletin de la Société Botanique de France* 72: 87-88. 1925, *Special Bulletin of Taiwan Forestry Research Institute* no. 4: 19, 33. 1967, *Kew Bulletin* 53(2): 391. 1998.

C. pergracile Munro (*Oxytenanthera aliena* McClure; *Schizostachyum pergracile* (Munro) R.B. Majumdar)

Myanmar (Burma). Tufted, sympodial, deciduous, growing in large stands, young culms densely covered with small adnate pubescence, very thin walled, erect with nodding to pendulous tips, branches from the upper nodes, culm sheath thick and leathery, sheath blade erect or extending outward, sheath auricles long ovate, leaf blades linear-lanceolate and rough, inflorescence drooping, pseudospikelets, spikelets with 1-2 sterile florets at base, often flowers sporadically, can be propagated by seed and rhizome cuttings, widely cultivated, ornamental, stems used for fishing rods and in building, fences, wind-breaks, crate weaving, basketry, handicrafts, binding materials, raw material for paper pulp, young shoots bitter and edible, in Burma internode of a 1-year-old culm used for cooking glutinous rice, found in mixed deciduous forests, hills, see *Transactions of the Linnean Society of London* 26(1): 141. 1868 and *Lingnan University Science Bulletin* 9: 39. 1940, *Economic Botany* 11: 235-243. 1957, *The Indian Forester* 102: 579-595. 1976, *Fl. Ind. Enumerat.-Monocot*. 282. 1989.

in English: tinwa bamboo

in Burma: tinwa

in India: latang, madang

in Laos: khauz hla:m

in Thailand: khaao laam, khao lam, khui pang, khui paang, mai-pang, paang, pang, phai-khaolam, phai-khaolarm, wa blo, waa blo, wa phlong, waa phlong

C. perrieri A. Camus

Madagascar. Climbing, scandent, see *Bulletin de la Société Botanique de France* 72: 85. 1925, *Special Bulletin of Taiwan Forestry Research Institute* no. 4: 18, 33. 1967.

C. scandens Bor (*Cephalostachyum scandens* Jia Rong Xue & C.M. Hui, nom. illeg., non *Cephalostachyum scandens* Bor; *Cephalostachyum scandens* Hsueh & C.M. Hui, nom.

illeg., non *Cephalostachyum scandens* Bor; *Schizostachyum scandens* (Bor) H.B. Naithani & Bennet)

Burma, China. Scandent, straggling, see *Kew Bulletin* 12(3): 419. 1958, *Indian Forester* 117(1): 68. 1991, *Research of Bamboos from Nujiang (Salween), Yunnan, China* 22. 1996, *Kew Bulletin* 52(3): 699-702. 1997, *Acta Phytotaxonomica Sinica* 35(6): 562-565. 1997.

C. viguieri A. Camus

Madagascar. Solid, climbing, lining, erect or suberect, eaten by *Hapalemur aureus*, see *Bulletin de la Société Botanique de France* 72: 85-86. 1925, *Special Bulletin of Taiwan Forestry Research Institute* no. 4: 19, 33. 1967.

in Madagascar: tsiergolovolo

C. virgatum (Munro) Kurz (*Melocanna virgata* Munro; *Schizostachyum virgatum* (Munro) H.B. Naithani & Bennet)

Myanmar. Culm top slightly drooping, thin-walled, manifold branching at lower portion of culm, branches spreading horizontally, young culm pruinose, sheath auricles like narrow stripe, sheath blade narrow-lanceolate erect or turned outside down, leaves lanceolate, inflorescence borne on leafless branch, several to many groups of slender pseudospikelets at each node, culms used for matting, handles, household utensils, in ware weaving used as rafters or strips, found growing in evergreen forests, some taxonomic problem for this plant, see *Transactions of the Linnean Society of London* 26(1): 133. 1868, *Forest Flora of British Burma* 2: 564. 1877 and *Indian Forester* 117(1): 68. 1991.

in Myanmar: waba

in Thailand: pai hia, phai hia, phai hiae

Ceratochaete Lunell = *Zizania* L.

From the Greek *keras*, *keratos* “a horn” and *chaite* “bristle, mane, loose flowing hair, long hair.”

Ehrhartoideae, Oryzaeae, Zizaniinae, type *Ceratochaete aquatica* (L.) Lunell, see *Species Plantarum* 2: 991. 1753 and *American Midland Naturalist* 4: 214. 1915, *Phytologia* 72: 6. 1992, *Sida* 17(3): 533-549. 1997, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, *Contributions from the United States National Herbarium* 39: 116-118. 2000.

Ceratochloa DC. & P. Beauv. = *Bromus* L., *Ceratochloa* P. Beauv.

Greek *keras*, *keratos* “a horn” and *chloe*, *chloa* “grass,” referring to the seeds.

Pooideae, Bromaeae, type *Ceratochloa cathartica* (Vahl) Herter, see *Species Plantarum* 1: 76-78. 1753, A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*.

75, 158. 1812, *Flora Rossica* 4(13): 360. 1852 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Revista Sudamericana de Botánica* 6(5-6): 144. 1940, *Blumea* 4(3): 498. 1941, *Brittonia* 7: 421. 1952, *Bot. Jahrb. Syst.* 102: 447. 1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191. 2003.

Cerea Schlttdl. = *Cerea* Thou.

(Elaeocarpaceae), *Ceresia* Pers., *Paspalum* L.

Panicoideae, Paniceae, Paspalinae, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, Louis-Marie Aubert Aubert du Petit-Thouars (1758-1831), *Histoire des Végétaux Recueillis dans les Isles Australes d'Afrique* (edition 2) t. 28. Paris 1805, *Bot. Zeitung (Berlin)* 12: 820. 1854 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 46: 443-527. 2003.

Ceresia Pers. = *Paspalum* L.

Ceres, the daughter of Saturn and Ops.

Panicoideae, Paniceae, Paspalinae, type *Ceresia elegans* Pers., see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Flora Caroliniana, secundum ...* 75. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 177. 1791, *Synopsis Plantarum* 1: 85. 1805, *Essai d'une Nouvelle Agrostographie* 9: 171, t. 5, f. 4. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 109, pl. 6. f. 4. 1816, *Systema Vegetabilium, editio decima sexta* 2: 290. 1817, *Conspectus Regni Vegetabilis* 49. 1828, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 76. 1829, *Nomenclator Botanicus. Editio secunda* 1: 333. 1840, *Nomenclator Botanicus. Editio secunda* 2: 256. 1841, *Botanische Zeitung. Berlin* 19(44): 326. 1861, *Genera Plantarum* 3: 1098. 1883, *Index Kewensis* 1: 489. 1893, *Revisio Generum Plantarum* 3(2): 360. 1898 and *Contributions from the United States National Herbarium* 24: 153. 1925, *Repertorium Specierum Novarum Regni Vegetabilis* 26(15): 230. 1929, *Linnaea* 26: 133. 1953, *Flora Mesoamericana* 6: 335-352. 1994, *Las Gramíneas de México* 5: 1-446. 1999, *Annals of the Missouri Botanical Garden* 89(3): 337-399. 2002 [Systematic revision and phylogeny of *Paspalum* subgenus *Ceresia* (Poaceae: Panicoideae: Paniceae)], *Contributions from the United States National Herbarium* 46: 443-527. 2003.

Ceytosis Munro = *Crypsis* Aiton

Chloridoideae, Cynodonteae, Sporobolinae, or Chloridoideae, Zoysieae, Sporobolinae, see *Hortus Kewensis; or, a catalogue ...* 1: 48. 1789, *Collectanea ad omnem rem botanicam spectantia partim e propriis, partim ex amicorum*

schedis manuscriptis concinnavit et edidit J.J. Roemer. Turici [Zürich], apud H. Gessnerum, [1806-1809, *J. Linn. Society Botany* 6: 54. 1862 and *Mittheilungen der Thüringischen Botanischen Vereins*, ser. 2, 30: 83. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 293. 1921, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 62. 1956, *Contributions from the United States National Herbarium* 41: 38, 56-57. 2001.

Chaboissaea E. Fourn. = *Muhlenbergia*
Schreb.

About 4 species, North and South America, north-central Mexico, Argentina, Bolivia, the Caribbean. Chloridoideae, Cynodonteae, Muhlenbergiinae, annual or perennial, erect or decumbent, caespitose, often rooting at lower nodes, auricles absent, ligule a membrane, leaf blades linear, plants bisexual, inflorescence a panicle exerted or partially included in upper sheath, disarticulation above glumes, solitary spikelets laterally compressed, florets 1-3 per spikelet, lower floret perfect, upper floret staminate or sterile, sterile florets absent or present, 2 glumes more or less equal, lemma entire and awned or awnless or mucronate, palea glabrous, lodicules fleshy and glabrous, stamens 3, ovary glabrous, stigmas 2, widespread in marshy areas, open habitats, ephemeral pools, seasonally wet marshes, drainage ditches, closely related to *Muhlenbergia* Schreb., type *Chaboissaea ligulata* E. Fourn., see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Mexicanas Plantas* 2: 112. 1886 and *Contributions from the United States National Herbarium* 17: 181-189. 1913, *Flora Taxonomica Mexicana*, vol. 1. 1946, *Journal of the Washington Academy of Sciences* 43: 405-407. 1953, *Phytologia* 37(4): 317-407. 1977, *Australian Journal of Botany* 33: 433-484. 1985, *Phytologia* 65: 155-157. 1988, P.M. Peterson and C.R. Annable, "A revision of *Chaboissaea* (Poaceae: Eragrostideae).," *Madroño* 39(1): 8-30. 1992, *American Journal of Botany* 81: 622-629. 1994, *Flora Mesoamericana* 6: 276-286. 1994, *Madroño* 42(4): 427-449. 1995, *Sida* 17: 349-365. 1996, *Brittonia* 50(1): 23-50. 1998, P.M. Peterson, "Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostideae).," *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 143-173. 2001.

Species

C. atacamensis (Parodi) P.M. Peterson & Annable (*Muhlenbergia atacamensis* Parodi; *Muhlenbergia atacamensis* var. *atacamensis*; *Muhlenbergia atacamensis* var. *brachyanthera* Parodi)

South America. Annual, see *Revista Argentina de Agronomía* 15: 248, 250. 1948, *Madroño* 39(1): 19. 1992.

C. decumbens (Swallen) Reeder & C. Reeder (*Muhlenbergia decumbens* Swallen)

Mexico. Annual, see *Boletín de la Sociedad Botánica de México* 23: 30-32, f. 4. 1958 [1959], *Phytologia* 65(2): 156. 1988.

C. ligulata E. Fourn. (*Muhlenbergia ligulata* (E. Fourn.) Scribn. & Merr.)

Mexico. Good forage, see *Mexicanas Plantas* 2: 112, t. 1. 1886 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 19. 1901.

in Mexico: pelillo

C. subbiflora (Hitchc.) Reeder & C. Reeder (*Muhlenbergia subbiflora* Hitchc.)

Mexico. Annual, moist soil, see *North American Flora* 17(6): 437. 1935, *Phytologia* 65(2): 156. 1988.

Chaetaria P. Beauv. = *Aristida* L.

Greek *chaite* "bristle, loose flowing hair."

Arundinoideae, Aristideae, or Aristidoideae, Aristideae, type *Chaetaria stricta* (Michx.) P. Beauv., see *Species Plantarum* 1: 82. 1753, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 30, 152, 158. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 83. 1830 and *Contr. U.S. Natl. Herb.* 22(7): 529. 1924, *Meded. Rijks.-Herb.* 54: 9. 1926, *Kurtziana* 1: 123-206. 1961, *Flora Mesoamericana* 6: 253-257. 1994, *Flora del Valle de Tehuacán-Cuicatlán* 3: 1-35. 1994, *Flora of Ethiopia and Eritrea* 7: 76-85. 1995, *Grassland of China* 1995(1): 16-20. 1995, *Annals of the Missouri Botanical Garden* 82: 593-595. 1995, *Candollea* 53(2): 466-470. 1998, *Bot. Rev.* 64: 1-85. 1998, *Boletim do Instituto de Botânica (São Paulo)* 12: 113-179. 1999, *Acta Botánica Mexicana* 63: 1-45. 2003, *Contributions from the United States National Herbarium* 46: 69-104, 151-152. 2003.

Chaetium Nees = *Berchtoldia* J. Presl

From the Greek *chaite* "bristle, loose flowing hair, foliage."

About 3 species, tropical South America, Brazil, Mexico, West Indies. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Melinidinae, perennial, herbaceous, unbranched, caespitose, erect, solid internodes, auricles absent, plants bisexual, inflorescence racemose or paniculate, loose single raceme along a central axis, spikelets lanceolate solitary or paired, 2 glumes subequal and awned, lower glume sometimes reduced to an awn, lower lemma acuminate or awned, upper lemma shortly awned, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas, along roadsides, grasslands,

trails, moist forest, type *Chaetium festucoides* Nees, see *Species Plantarum* 1: 55. 1753, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 269-271. 1829, *Reliquiae Haenkeanae* 1(4-5): 323-324, t. 43. 1830, *Flora Brasiliensis* 2(2): 149. 1877 and *Brittonia* 23(3): 293-324. 1971, *Flora Mesoamericana* 6: 330-331. 1994, *Annals of the Missouri Botanical Garden* 85(3): 404-424. 1998 [Revisión sistemática y análisis cladístico del género *Chaetium* (Poaceae: Panicoideae: Paniceae).], *Contributions from the United States National Herbarium* 46: 152-153. 2003.

Species

C. bromoides (J. Presl) Benth. ex Hemsl. (*Berchtoldia bromoides* J. Presl; *Panicum berchtoldiae* Döll)

Mexico. Perennial, erect, forming colonies, forage, found along roadsides, see *Reliquiae Haenkeanae* 1: 324, t. 43. 1830, *Flora Brasiliensis* 2(2): 150. 1877, *Biologia Centrali-Americana*; ... *Botany* ... 3: 503. 1885.

C. cubanum (C. Wright) Hitchc. (*Bouteloua litigiosa* Lag.; *Perotis cubana* C. Wright)

West Indies, Cuba. Awnless, see *Hortus Kewensis* 1: 85. 1789, *Varietates de Ciencias, Literatura y Artes* 2(4,21): 134. 1805, *Genera et species plantarum* 5. 1816, *Anales de la Academia de Ciencias Medicas* ... 8: 288. 1871 and *Contributions from the United States National Herbarium* 12(6): 232. 1909.

C. festucoides Nees (*Oplismenus festucoides* (Nees) Kunth; *Panicum chaetium* Steud.; *Panicum festucoides* Poir.)

South America, Brazil. See *Flore d'Oware* 2: 14. 1807 [1810], *Encyclopédie Méthodique. Botanique* ... *Supplément* 4: 283. 1816, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 270-271. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 146. 1830, *Nomenclator Botanicus. Editio secunda* 2: 254. 1841.

Chaetobromus Nees = Danthonia DC.

From the Greek *chaite* "bristle" plus *Bromus* L., *bromos* "oats," referring to the shape of the spikelets.

About 1-3 species, South Africa. Arundinoideae, Danthoniae, perennial, tufted, herbaceous, erect, unarmed, branched, sometimes long-rhizomatous or stoloniferous, sometimes decumbent, rooting also occurs at the lower nodes, black nodes, network of roots and runners, auricles absent, ligule a fringe of hairs, plants bisexual, inflorescence paniculate open or contracted, spikelets solitary 2- to 4-flowered, linear pungent bearded callus, 2 glumes papery equal or subequal, lemmas membranous with long awns and bristles, female-fertile lemmas with a bent awn, palea present, lodicules glabrous, 3 stamens, ovary glabrous, 2 stigmas, coastal species, on sandy soil, dry stony soils, a difficult genus, serious taxonomic problems, type *Chaetobromus involucratus* (Schrad.) Nees, see *Flore Française*.

Troisième Édition 3: 32. 1805, *Essai d'une Nouvelle Agrostographie* 92, t. 18, f. 8. 1812, *Systema Vegetabilium* 2: 690. 1817, *A Natural System of Botany* 449. 1836, *Florae Africae Australioris Illustrationes Monographicae* 1: 344-345. 1841 and *Bothalia* 18: 111-114, 119-122. 1988, *South African Journal of Botany* 61: 60-65. 1995, *Genome* 33: 646-658. 1990, *Nordic Journal of Botany* 18: 57-77. 1998 [A re-evaluation of species limits in *Chaetobromus* (Danthonieae: Poaceae)], P.C. Beukes and R.M. Cowling, "Evaluation of restoration techniques for the Succulent Karoo, South Africa." *Restoration Ecology* 11(3): 308-316. Sep 2003.

Species

C. dregeanus Nees (*Chaetobromus involucratus* subsp. *dregeanus* (Nees) Verboom; *Danthonia dregeana* (Nees) Steud.)

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 1: 343-345. 1841, *Synopsis Plantarum Glumacearum* 1: 244. 1854 and *Nordic Journal of Botany* 18(1): 74. 1998.

C. involucratus (Schrad.) Nees (*Avena involucrata* Schrad.; *Danthonia involucrata* (Schrad.) Schrad.; *Pentameris involucrata* (Schrad.) Nees)

South Africa. Perennial, stoloniferous or tufted, rhizomatous, erect, basal leaves and sheaths hairy, basal florets with central awn usually not geniculate, rocky places, see *Göttingische gelehrte Anzeigen (unter der Aufsicht der Königl. Gesellschaft der Wissenschaften)* 3: 2075. 1821, *Mantissa* 2: 383. 1824, *Linnaea* 7(3): 310. 1832, *Florae Africae Australioris Illustrationes Monographicae* 344-345. 1841 [Agrostographia Capensis ... denuo impressa. Halae 1853], *Conspectus Florae Africae* 5: 851. 1894 and *Nordic Journal of Botany* 18(1): 70, 72. 1998.

C. schraderi Stapf

South Africa. Perennial, erect, rooting at the lower nodes, subterranean runners, leaves with sharp points, inflorescence paniculate, spikelets on the side branches, valuable grazing crop, used to protect sandy soil against wind erosion, among shrubs, rocky areas, sandy soil, see *Flora Capensis* 7: 538. 1899 and *Bothalia* 18: 119-122. 1988, *Genome* 33: 646-658. 1990.

in South Africa: wortelgras

Chaetochloa Scribner = Setaria P. Beauv.

Greek *chaite* "bristle, mane, crest, foliage" and *chloe*, *chloa* "grass."

Panicoideae, Paniceae, Setariinae, type *Chaetochloa viridis* (L.) Scribn., see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Index Seminum [Berlin]* 18. 1855, Frank Lamson Scribner (1851-1938), in *Bulletin, Division of Agrostology*

United States Department of Agriculture 4: 38-39. 1897 and *Contr. U.S. Natl. Herb.* 22(3): 156, 158. 1920, *Flora Mesoamericana* 6: 359-363. 1994, J.F. Veldkamp, "Miscellaneous notes on southeast Asian Gramineae: 9. *Setaria* and *Paspalidium*." *Blumea* 39: 373-384. 1994, R.D. Webster, "Nomenclatural changes in *Setaria* and *Paspalidium* (Poaceae: Paniceae)." *Sida* 16: 439-446. 1995, *Darwiniana* 37(1-2): 37-151. 1999, *Sida* 18(4): 1037-1047. 1999, *Contributions from the United States National Herbarium* 46: 569-593. 2003.

Chaetopoa C.E. Hubb. = *Anthephora* Schreb.

Greek *chaite* "bristle, mane, crest, foliage" and *poa* "grass, pasture grass."

About 2 species, Tanzania. Panicoideae, Panicoideae, Paniceae, annual, herbaceous, slender, loosely tufted, erect, geniculately-ascending, auricles absent, ligule membranous, leaf sheaths hairy, narrow leaf blades, plants bisexual, cylindrical spiciform inflorescence bearing deciduous clusters of shortly pedicelled sterile spikelets embracing 1 sessile bisexual spikelet, 2 glumes subequal, bisexual spikelet lower glume suppressed or subulate, upper glume more or less lanceolate, upper lemma acuminate awned, sterile spikelets glumes long and awnlike, palea present, 2 glabrous lodicules, 3 stamens, ovary hairy, 2 stigmas, rocky places, open habitats, see *Beschreibung der Gräser* 2: 105, t. 44. Leipzig 1769-1810 and *Hooker's Icones Plantarum* 37: t. 3646. 1967, *Kew Bulletin* 32(4): 579-581. 1977, *Flora of Tropical East Africa* 451-898. 1982.

Species

C. pilosa W.D. Clayton

Tanzania. See *Kew Bulletin* 32(3): 579. 1978.

C. taylori C.E. Hubbard

Tanzania.

Chaetopogon Janchen = *Chaeturus* Link

From the Greek *chaite* "bristle, mane, crest, foliage" and *pogon* "a beard."

About 1-2 species, Mediterranean. Pooideae, Poodae, Aveneae, annual, herbaceous, auricles absent, narrow linear leaf blades, ligule an unfringed membrane, plants bisexual, contracted inflorescence paniculate, spikelets without rachilla extension and shortly pedicellate, 2 membranous glumes unequal and longer than floret, lower glume awned, lemma rounded and acute, palea nerveless, 2 lodicules membranous, 3 stamens, ovary glabrous, 2 stigmas, sandy places, see *Flora Berolinensis Prodrum* 200. 1787, *Journal für die Botanik* 1799(2): 313. 1800 and Erwin Janchen (1882-

1970), *Die europäischen Gattungen der Farn- und Blütenpflanzen ...* (edition 2) 33. Leipzig und Wien 1913, M. Gandoger (1850-1926), *Flora cretica*. Paris 1916, *Lagascalia* 15: 119-124. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990.

Species

C. creticus (Coustur. & Gand.) Hayek (*Chaeturus creticus* Coustur. & Gand.)

Creta. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 335. 1932.

C. fasciculatus Link (Hayek) (*Chaeturus fasciculatus* Link; *Polypogon fasciculatus* (Link) Pers.)

Mediterranean, Spain. See *Flora Atlantica* 1: 66. 1798 [1800], *Syn. Pl.* 1: 80. 1805 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 335. 1932.

Chaetostichium C.E. Hubb. = *Oropetium* Trin.

Greek *chaite* "bristle, mane, crest, foliage" and *stichos* "rank."

One species, Africa. Chloridoideae, Eragrostideae, type *Chaetostichium minimum* (Hochst.) C.E. Hubbard, perennial, herbaceous, densely tufted, narrow and rigid leaf blades, ligules fringed, plants bisexual, slender and recurved inflorescence spicate, spikes usually flexuous or coiled, spikelets solitary, 1 or 2 glumes per spikelet, lower glume obscure or absent, upper glume acuminate to awned, palea and lodicules present, 3 stamens, ovary glabrous, 2 stigmas, depressions and bushland, shallow soil, among rocks, dry sandy soil, grassy plains, type *Chaetostichium minimum* (Hochst.) C.E. Hubb., see *Fundamenta Agrostographiae* 98, t. 3. 1820, *Flora* 38: 332. 1855 and *Bulletin de la Société Botanique de France: Mémoires* 8(d): 222. 1912, *Hooker's Icones Plantarum* 34: t. 3341. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 14. 1947, *Webbia* 8: 107-108. 1951, *Kew Bulletin* 1957: 60. 1957, *Bulletin du Jardin Botanique National de Belgique* 38: 1285. 1968, *Kew Bulletin* 30: 467-470. 1975, *Kew Bulletin* 50: 601-604. 1995.

Species

C. minimum (Hochst.) C.E. Hubbard (*Chaetostichium majusculum* C.E. Hubb.; *Chaetostichium minimum* var. *macrochaetum* Chiov.; *Chaetostichium minimum* var. *microchaetum* Chiov.; *Lepturus minimus* Hochst.; *Oropetium majusculum* (C.E. Hubb.) Cufod.; *Oropetium minimum* (Hochst.) Pilg.)

Northeast Africa. Perennial, densely tufted, small, spikes curved.

Chaetotropis Kunth = *Polypogon* Desf.

From the Greek *chaite* “bristle, crest, foliage” and *tropis*, *tropidos* “keel, the keel of a vessel.”

Pooideae, Poaceae, Agrostidinae, see *Flora Atlantica* 1: 66-67. 1798 [1800], *Révision des Graminées* 1: 72. 1829 and *Flora Mesoamericana* 6: 241-242. 1994, *Las Gramíneas de México* 5: 1-466. 1999, *Contributions from the United States National Herbarium* 48: 583-588. 2003.

Chaeturus Link = *Chaetopogon* Janchen, *Chaeturus* Host ex Saint-Lager (Lamiaceae, Labiatae), *Chaeturus* Rchb. (Lamiaceae), *Chaiturus* Willd. (Lamiaceae)

Greek *chaite* “bristle, crest, foliage” and *oura* “a tail.”

Pooideae, Poodae, Aveneae, see *Flora Berolinensis Prodrum* 200. 1787, *Journal für die Botanik* 1799(2): 313. 1800, *Conspectus Regni Vegetabilis* 116. 1828, *Étude des Fleurs*, éd. 8 2: 681. 1889 and *Die europäischen Gattungen der Farn- und Blütenpflanzen* (edition 2) 33. 1913.

Chalcoelytrum Lunell = *Chrysopogon* Trin.

Greek *chalkeios* “of copper, of bronze” and *elytron* “a sheath, a cover.”

Panicoideae, Andropogoneae, Sorghinae, see *Species Plantarum* 2: 1045. 1753, *Fundamenta Agrostographiae* 187-188. 1820, *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *American Midland Naturalist* 4: 212. 1915, *Austrobaileya* 5(3): 503-533. 1999, *Contributions from the United States National Herbarium* 46: 159-161. 2003.

Chalynochlamys Franch. = *Arundinella* Raddi

Panicoideae, Arundinelleae, see *Journal of Cytology and Genetics* 20: 205-206. 1985, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Flora Mesoamericana* 6: 377-378. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, J.F. Veldkamp, “Name changes in *Agrostis*, *Arundinella*, *Deyeuxia*, *Helictotrichon*, *Tripogon* (Gramineae).” *Blumea* 41: 407-411. 1996, *Contributions from the United States National Herbarium* 46: 111-113. 2003.

Chamaecalamus Meyen = *Calamagrostis* Adans.

Greek *chamai* “on the ground, low, dwarf” and *kalamos* “a reed, cane.”

Pooideae, Poaceae, Agrostidinae, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Reise um die Erde* 1: 456. 1834, *Gramineae* 24. 1841, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 365. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 156. 1843 and *Contributions from the United States National Herbarium* 48: 191-227. 2003.

Chamaedactylis T.F.L. Nees = *Aeluropus* Trin.

Greek *chamai* “on the ground, low, dwarf” with *daktylos* “a finger.”

Chloridoideae, see *Fundamenta Agrostographiae* 143, t. 12. 1820, *Genera Plantarum Florae Germanicae* iconibus et descriptionibus illustrata ... Bonnae [1833-] 1835-1860 and *Grasses of Burma, Ceylon, India and Pakistan* 379-381. 1960, *Novosti Sist. Vyss. Rast.* 1966: 25. 1966, *Fitologija* 39: 72-77. 1991, S. Khattoon and S.I. Ali, *Chromosome Atlas of the Angiosperms of Pakistan*. Karachi 1993 [University of Karachi, Department of Botany], *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

Chamaeraphis R. Br. = *Setosa* Ewart

Greek *chamai* “on the ground, dwarf” and *rhaphis*, *rhaphidos* “a needle.”

One species, Australia. Panicoideae, Panicoideae, Paniceae, perennial, herbaceous, tufted, solid internodes, auricles absent, narrow leaf blades, ligule an unfringed membrane, plants bisexual, inflorescence densely spicate, imbricate reduced racemes in 2 opposite rows, each raceme composed of a single spikelet with pungent callus and subtended by a stout bristle, 2 glumes unequal, open sandy places, open areas, coastal grassland, type *Chamaeraphis hordeacea* R. Br., see Robert Brown, *Prodromus florae Novae Hollandiae* 193-194. 1810, *Annales des Sciences Naturelles (Paris)* 5: 299. 1825 and *Lexicon Generum Phanerogamarum* 115. 1903, Alfred James Ewart (1872-1937) and Olive Blanche Davies (fl. 1917), *The flora of the Northern territory* 33, pl. 2. Melbourne 1917, *Icones Plantarum [Hooker's]* Edn. Ser. 5 2: t. 3140. 1930, *The Australian Paniceae (Poaceae)* 1-322 (28-29). 1987, *Vascular Plant Families and Genera* 395. 1992.

Species

C. hordeacea R. Br. (*Panicum hordeaceum* (R. Br.) Raspail; *Setosa erecta* Ewart & Cookson)

Australia.

Chamaerhaphis Sprengel

Orthographic variant *Chamaeraphis* R. Br., see *Genera plantarum* 1: 76. 1830.

Chamagrostis Borkh. = Mibora Adans.

Greek *chamai* “dwarf” plus *Agrostis*.

Pooideae, Poeae, Miliinae, or Aveneae, see *Familles des Plantes* 2: 495. 1763, Moriz Balthasar Borkhausen (1760-1806), *Tentamen dispositionis plantarum Germaniae seminiferarum* ... 43. Darmstadt 1792, August Wilhelm Eberhard Christoph Wibel (1775-1813), *Primitiae Florae Werthemensis* 126. Ienae [Jena] 1799, *English Botany* 16: 1127. 1803, *Essai d'une Nouvelle Agrostographie* 167, pl. 8, f. 4. 1812, *Observations sur les Plantes des Environs d'Angers* 45. 1818, *Fundamenta Agrostographiae* 135. 1820, *Dictionnaire des Sciences Naturelles*. second edition 31: 17. 1824 and *Boll. Soc. Bot. Ital.* 1925: 151. 1925, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 220. 1941, *Preslia* 46(2): 168. 1974, *Taxon* 49(2): 243. 2000, *Contributions from the United States National Herbarium* 48: 450. 2003.

Chandrasekharania V.J. Nair, V.S. Ramach. & Sreek.

One species, India. Panicoideae, Panicodae, or Arundinelleae, annual, ligule membranous, plants bisexual, contracted panicle capitate, papery spikelets, both florets bisexual, 2 glumes unequal and shortly awned, lemmas membranous with a short straight awn, palea wingless and bilobed, 2 lodicules fleshy and glabrous, 3 stamens, ovary glabrous, 2 stigmas, type *Chandrasekharania keralensis* V. J. Nair, Ramachandran, Sreekumar, see V.J. Nair, V.S. Ramachandran and P.V. Sreekumar, “*Chandrasekharania*. A new genus of Poaceae from Kerala, India.” *Proc. Indian Acad. Sci. (Plant Sci.)* 91: 79-82. 1982, Uniyal, B.P. & D.C. & Pal., “Additional locality for *Chandrasekharania keralensis*.” *J. Econ. Tax. Bot.* 4(3): 950. 1983.

Species

C. keralensis Nair, Ramachandran & Sreekumar

Southern India. Lemma bidentate and short awned.

Chascolytrum Desv. = *Briza* L., *Chondrachyrum* Nees

From the Greek *chasko* “to gape” and *elytron* “a sheath, a cover.”

About 6 species, South America. Pooideae, Poeae, Brizinae, perennial or annual, caespitose or clump forming, glabrous,

leaves nonauriculate, basal sheaths persistent, ligule hyaline and smooth, sheath loose and smooth, rough and green leaves, cleistogamous spikelets, purplish or green compact inflorescence linear to ovate, small curled spikelets in small airy heads on stems, glumes green or purplish, lower glume narrowly obovate, upper glume elliptic, lemmas imbricate and mucronate or shortly awned, upper lemmas with a mid-nerve shortly aristate, palea winged with glabrous wings, ovary glabrous and without a conspicuous apical appendage, fruit ventrally compressed, type *Chascolytrum subaristatum* (Lam.) Desv., often in *Briza* L., see *Species Plantarum* 1: 66-67, 70-71. 1753, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Nova Genera et Species Plantarum* 1: 164. 1815 [1816], *A Natural System of Botany* 449. 1836, *Synopsis Plantarum Glumacearum* 1: 288. 1854, *Genera Plantarum* 3(2): 1194-1195. 1883 and *Revista de la Facultad de Agronomía y Veterinaria* 3: 120. 1920, *Feddes Repertorium* 84(7-8): 541. 1973, O. Matthei, “Der *Briza*-Komplex in Südamerika: *Briza*, *Calotheca*, *Chascolytrum*, *Poidium* (Gramineae)” *Willdenowia. Beihefte* 8: 1-168. 1975, *Hickenia* 1: 73-78. 1977, *Darwiniana* 23(1): 279-309. 1981 [Los géneros sudamericanos afines a *Briza* L. (Gramineae).], *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 1-191. 1987, *Flora Mesoamericana* 6: 229. 1994, *Flora Mediterranea* 5: 340-345. 1995, *Bothalia* 27: 75-82. 1997, *Cladistics* 14: 287-296. 1998 [N.D. Bayón, Cladistic analysis of the *Briza* Complex (Poaceae, Poeae)], *Opera Botanica* 137: 1-42. 1999, *Lagascalia* 21(1): 235-240. 1999, *Contributions from the United States National Herbarium* 48: 146-151, 233-234. 2003.

Species

C. erectum (Lam.) Desv. (*Briza erecta* Lam.; *Briza macrostachya* (J. Presl) Steud.; *Briza montevidensis* Trin. ex Steud.; *Calotheca brizoidea* P. Beauv.; *Calotheca brizoides* (Lam.) Desv.; *Calotheca dilatata* Link; *Calotheca macrostachya* J. Presl; *Calotheca montevidensis* Spreng. ex Steud.; *Festuca brizoides* Spreng.; *Festuca erecta* (Lam.) Spreng. ex Kunth, nom. illeg., non *Festuca erecta* (Huds.) Wallr.)

South America. Perennial, good forage, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 187. 1791, *Essai d'une Nouvelle Agrostographie* 86, 155, t. 17, f. 6. 1812, *Hortus Regius Botanicus Berolinensis* 1: 157. 1827, *Reliquiae Haenkeanae* 1(4-5): 268, 351. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 373. 1833, *Nomenclator Botanicus. Editio secunda* 1: 225, 261. 1840, *Flora Brasiliensis* 2(3): 132. 1878 and *Contr. U.S. Natl. Herb.* 24(8): 334. 1927.

C. lamarckianum (Nees) Matthei (*Briza fusca* (Parodi) Parodi; *Briza lamarckiana* Nees; *Briza lindmanii* Ekman; *Briza subaristata* var. *fusca* Parodi)

Southern America, southern Brazil to Argentina, Uruguay. Panicle spreading with long and flexuous branches, occurs in sandy fields near small streams, often considered to be a synonym of *Chascolytrum lamarckianum* (Nees) Matthei, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 481. 1829 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 54, t. 4, f. 2. 1913, *Revista de la Facultad de Agronomía y Veterinaria* 3: 127, f. 2(1). 1920, *Revista de la Facultad de Agronomía y Veterinaria* 4: 93. 1922, *Willdenowia*, Beih. 8: 74. 1975.

C. paleapiliferum (Parodi) Matthei (*Briza paleapilifera* Parodi)

America, Argentina. See *Revista de la Facultad de Agronomía y Veterinaria* 3: 124, f. 2(5). 1920, *Willdenowia*, Beih. 8: 88. 1975.

C. parodianum (Roseng., B.R. Arrill. & Izag.) Matthei (*Briza parodiana* Roseng., B.R. Arrill. & Izag.)

America, Uruguay. See *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 105: 26. 1968, *Willdenowia*, Beih. 8: 68. 1975.

C. scabrum (Nees ex Steud.) Matthei (*Briza scabra* (Nees ex Steud.) Ekman; *Chondrachyrum scabrum* Nees ex Steud.; *Panicum scabrum* Trin. ex Steud.)

America. See *Nomenclator Botanicus. Editio secunda* 1: 254. 1841, *Synopsis Plantarum Glumacearum* 1: 276, 288. 1854 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 53. 1913, *Willdenowia*, Beih. 8: 77, 88. 1975.

C. subaristatum (Lam.) Desv. (*Briza microstachya* (J. Presl) Steud.; *Briza poiformis* (Spreng.) Kuntze; *Briza reniformis* (J. Presl) Steud.; *Briza rotundata* (Kunth) Steud.; *Briza stricta* (Hook. & Arn.) Steud.; *Briza subaristata* Lam.; *Briza subaristata* var. *interrupta* (Hack. ex Stuck.) Roseng. B.R. Arrill. & Izag.; *Briza triloba* Nees; *Briza triloba* f. *pumila* Hack. ex Kneuck.; *Briza triloba* f. *violascens* Hack.; *Briza triloba* var. *alpha* Nees; *Briza triloba* var. *beta* Nees; *Briza triloba* var. *grandiflora* Döll; *Briza triloba* var. *interrupta* Hack.; *Briza triloba* var. *typica* Parodi; *Briza violascens* Steud.; *Bromus rotundatus* Kunth; *Calotheca microstachya* J. Presl; *Calotheca poiformis* Spreng.; *Calotheca reniformis* J. Presl; *Calotheca rotundata* (Kunth) Roem. & Schult.; *Calotheca rotundata* (Kunth) Steud.; *Calotheca stricta* Hook. & Arn.; *Calotheca triloba* (Nees) Kunth; *Chascolytrum rotundatum* (Kunth) Kunth; *Chascolytrum trilobum* (Nees) Desv.; *Festuca commersonii* Spreng.)

Mexico, Chile, southern Brazil to Argentina, Uruguay, Paraguay. Perennial or annual, caespitose or clump forming, good forage, useful for erosion control, usually in moist cultivated areas, along roadsides, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 187. 1791, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Nova Genera et Species Plantarum*

1: 152-153. 1815 [1816], *Systema Vegetabilium* 2: 632. 1817, *Systema Vegetabilium, editio decima sexta* 1: 348, 353. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 482. 1829, *Révision des Graminées* 1: 121. 1829, *Reliquiae Haenkeanae* 1(4-5): 268. 1830, *The Botany of Captain Beechey's Voyage* 50. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 374. 1833, *Nomenclator Botanicus. Editio secunda* 1: 225. 1840, *Synopsis Plantarum Glumacearum* 1: 283-284. 1854, *Flora Chilena* 6: 383. 1854, *Flora Brasiliensis* 2(3): 134. 1878, *Revisio Generum Plantarum* 3(3): 342. 1898 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 8: 97. 1902, *Anales del Museo Nacional de Buenos Aires* 21: 146. 1911, *Revista de la Facultad de Agronomía y Veterinaria* 3: 127, 128, f. 2(1). 1920, *Bol. Fac. Agron. Univ. Montevideo* 105: 22. 1968, *Willdenowia* Beih. 8: 79. 1975.

in Mexico: lanternita, linternita

Chasea Nieuwl. = *Panicum* L.

Dedicated to the American botanist Mary Agnes Chase (née Merrill), 1869-1963, agrostologist, plant collector, traveler, among her writings are *First Book of Grasses*. New York 1922 and "Poaceae (pars)." *North Amer. Fl.* 17(8): 568-579. 1939, with the American botanist Albert Spear Hitchcock (né Jennings) (1865-1935) wrote *Grasses of the West Indies*. Washington [D.C.] 1917, *Tropical North American Species of Panicum*. Washington [D.C.] 1915 and *The North American Species of Panicum*. Washington [D.C.] 1910, in 1950 revised the *Manual of the Grasses of the United States* (by A.S. Hitchcock), with Cornelia D. Niles edited *Index to Grass Species*. Boston 1962. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 335. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 71. 1972; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Suppl. IV*. 57-60. 1997.

Panicoideae, Paniceae, Panicinae, see *Species Plantarum* 1: 55, 58. 1753 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *American Midland Naturalist* 2: 64. 1911, *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 17(2): 297-314. 2001, *Contributions from the United States National Herbarium* 46: 306-441. 2003.

Chasechloa A. Camus = *Echinolaena* Desv.

For the American botanist Mary Agnes Chase (née Merrill), 1869-1963.

About 3 species Madagascar. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, annual or perennial, herbaceous, auricles absent, plants bisexual, inflorescence spicate, spikelets solitary, 2 glumes subequal and winged, lower glume acute to shortly awned, lemmas keeled, palea present, 2 lodicules glabrous and fleshy, 3 stamens, ovary glabrous, 2 stigmas, savannah, often in *Echinolaena*, type *Chasechloa madagascariensis* (Baker) A. Camus, see *Species Plantarum* 1: 55. 1753, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 75. 1813, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 127. 1829 and *Bulletin de la Société Botanique de France* 95: 330-331. 1949, *Flora Mesoamericana* 6: 302. 1994, *Contributions from the United States National Herbarium* 46: 224-225. 2003.

Species

C. egregia (Mez) A. Camus (*Echinolaena boiviniana* A. Camus; *Panicum egregium* Mez)

Madagascar. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 5. 1921, *Bulletin de la Société Botanique de France* 75: 912. 1928, *Bulletin de la Société Botanique de France* 95: 331. 1948[1949].

C. humbertiana A. Camus

Madagascar. See *Mémoires de l'Institut Scientifique de Madagascar, Série B, Biologie Végétal* 5: 203-204. 1955.

C. madagascariensis (Baker) A. Camus (*Echinolaena madagascariensis* Baker)

Madagascar. See *Journal of the Linnean Society, Botany* 21: 452. 1885.

Chasmanthium Link = *Gouldochloa* Valdés-Reyna, Morden & S.L. Hatch

Greek *chasma*, *chasmatos* "open, any wide opening" and *anthos* "flower."

About 6 species, eastern U.S., Mexico. Centothecoideae, Centotheceae, or Panicoideae, Centotheceae, perennial, erect or ascending, herbaceous, hollow, rhizomatous, leaf blades linear to narrowly lanceolate, auricles absent, ligule variable, plants bisexual, inflorescence a panicle or a raceme, spikelets cuneate and pedicellate, 2- to 20-flowered, rachilla extension bearing a rudimentary floret, reduced florets both above and below fertile florets, 2 glumes equal or unequal, lemmas acute and papery, palea gibbous, 2 glabrous lodicules, stamen 1-3, ovary glabrous, 2 stigmas, exposed-cleistogamous or chasmogamous, semiarid shrubland, woodland, moist areas, traditionally referred to *Uniola*, type *Chasmanthium gracile* (Michaux) Link, see *Species Plantarum* 1: 71. 1753, *Hortus Regius Botanicus Berolinensis* 1: 159. 1827 and *Southw. Nat.* 11(2): 145-189. 1966, *Southw. Nat.* 11(4): 415-455. 1966 [Revision of grasses traditionally referred to *Uniola*, II. *Chasmanthium*],

Systematic Botany 11(1): 112-118, f. 1-5. 1986, *Contributions from the United States National Herbarium* 46: 158-159. 2003.

Species

C. curvifolium (Valdés-Reyna, Morden & S.L. Hatch) Wipff & S.D. Jones (*Gouldochloa curvifolia* Valdés-Reyna, Morden & S.L. Hatch)

America, Mexico. See *Systematic Botany* 11(1): 112-118, f. 1-5. 1986, *Phytologia* 69(6): 469. 1990 [1991].

C. latifolium (Michx.) Yates (*Uniola latifolia* Michx.)

U.S. Perennial, clump forming, arching or drooping, ligules a ciliate membrane, panicles open or contracted, spikelets ovate and laterally compressed, nodding clusters of oatlike seed heads, subequal florets, seeds a food source for wildlife, decorative foliage, ornamental and attractive, forage, sometimes used in gardens and landscapes, once established tolerant of drought and salt, found in wet woods, bottomlands, pondside, see *Flora Boreali-Americana* 1: 70-71. 1803 and *The Southwestern Naturalist* 11(4): 416. 1966.

in English: Indian woodoats, broadleaf uniola, wild oats, northern sea oats, spangle grass, sea oats, river oats

in Mexico: canastilla de hoja ancha

C. laxum (L.) Yates (*Chasmanthium gracile* (Michx.) Link; *Holcus laxus* L.; *Uniola gracilis* Michx.; *Uniola laxa* (L.) Britton, Sterns & Poggenb.; *Uniola sessiliflora* Poir.; *Uniola uniflora* Benke; *Uniola virgata* Bartram ex Pursh)

North America, U.S. Perennial, see *Species Plantarum* 2: 1047-1048. 1753, *Flora Boreali-Americana* 1: 71. 1803, *Encyclopédie Méthodique, Botanique* 8: 185. 1808, *Flora Americae Septentrionalis; or, ...* 1: 82. 1814, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888 and *Rhodora* 31(368): 148-149. 1929, *The Southwestern Naturalist* 11(4): 433, 440, f. 6. 1966, *Ann. Missouri Bot. Gard.* 77: 601. 1990.

in English: slender woodoats, spike uniola, slender spikegrass, small river oats

C. nitidum (Baldwin) Yates (*Uniola intermedia* Bosc ex P. Beauv.; *Uniola nitida* Baldw.)

U.S. Perennial, see *Essai d'une Nouvelle Agrostographie* 75, 181. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 167. 1816 and *Southw. Naturalist* 11(4): 448, 453-454. 1966.

in English: shiny woodoats, shiny spikegrass, spanglegrass.

C. ornithorhynchum (Steud.) Yates (*Chasmanthium ornithorhynchum* Nees; *Chasmanthium ornithorhynchum* Nees ex Steud.; *Chasmanthium ornithorhynchum* (Nees) H.O. Yates; *Uniola ornithorhyncha* (Nees) Steud.; *Uniola ornithorhyncha* Steud.; *Uniola ornithorhyncha* (Nees) Steud.)

U.S. Perennial, see *Annals of Natural History* 1: 284. 1838, *Synopsis Plantarum Glumacearum* 1: 280, 473. 1854 and *The Southwestern Naturalist* 11(4): 443, f. 8. 1966.

in English: birdbill woodoats

C. sessiliflorum (Poir.) Yates (*Chasmanthium laxum* subsp. *sessiliflorum* (Poir.) L.G. Clark; *Chasmanthium laxum* var. *sessiliflorum* (Poir.) J. Wipff & S.D. Jones; *Poa sessiliflora* (Poir.) Kunth; *Uniola longifolia* Scribn.; *Uniola sessiliflora* Poir.)

U.S. Perennial, see *Encyclopédie Méthodique, Botanique* 8: 185. 1808, *Révision des Graminées* 1: 111. 1829, *Bulletin of the Torrey Botanical Club* 21(5): 229-230. 1894 and *The Southwestern Naturalist* 11(4): 426, 433. 1966, *Annals of the Missouri Botanical Garden* 77(3): 601. 1990, *Phytologia* 77(6): 456. 1994[1995].

in English: longleaf woodoats, longleaf uniola, slender woodoats

Chasmopodium Stapf

From the Greek *chasme* “gaping, yawning” and *podion* “a small foot.”

About 2 species, west tropical Africa, Zaire. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial or annual, herbaceous, canelike, pithy stems, robust, coarse, branched, auricles absent, ligule a fringe of hairs, broad leaf blades, plants bisexual, inflorescence axillary, single racemes subcylindrical, spikelets paired sessile and pedicellate, lower floret male, 2 glumes more or less equal, lower glume oblong-ovate and 2-keeled, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, good fodder, used for fencing, sometimes toxic, savannah, rainforest, type *Chasmopodium caudatum* (Hack.) Stapf, see *Flora of Tropical Africa* 9: 76. 1917, *Flore Agrostologique du Congo Belge* 1: 66. 1929, *Kew Bulletin* 28(1): 51. 1973, *Bull. Jard. Bot. Nat. Belg.* 48: 373-381. 1978.

Species

C. afzelii (Hack.) Stapf (the name commemorates the Swedish doctor and botanist Adam Afzelius, 1750-1837, botanical collector, pupil of Linnaeus, correspondent of Banks, Smith, and Thunberg, in 1812 professor of *materia medica* at Uppsala, traveler, he lived in Sierra Leone in 1792-93 and 1794-96 and collected plants there, in 1792 Agric. Adviser, Freetown, Sierra Leone Company, in 1797 medical degree; among other works Afzelius was the author of *Genera plantarum Guineensium revisa et aucta*. Uppsala [1804]. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 18. 1965; Joseph Vallot, “Études sur la flore du Sénégal.” in *Bull. Soc. Bot. de France*. 29: 172. Paris 1882; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London

1904; Warren R. Dawson, *The Banks Letters*. London 1958; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 121. Oxford 1964; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; E.G. Cox, *A Reference Guide to the Literature of Travel*. Washington 1935; A.P. Kup, editor, “Adam Afzelius Sierra Leone Journal 1795-1796.” *Studia Ethnographica Upsaliensae*. 27. 1967; *Transactions of the Linnean Society of London*. 4: 221. 1798; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 2, 10. 75. 1971; Anthonius Josephus Maria Leeuwenberg, “Isotypes of which holotypes were destroyed in Berlin.” *Webbia*. 19(2): 862. 1965; R.W.J. Keay, “Botanical Collectors in West Africa prior to 1860.” in *Comptes Rendus A.E.T.F.A.T.* 55-68. Lisbon 1962; Sir James Edward Smith (1759-1828), *Tracts Relating to Natural History*. 288, t. 4, 5, 6, 7. [Octavo, first edition; a collection of 12 essays including “Description of a New Genus of Plants called *Boronia*.” (the genus *Boronia* named after the Italian naturalist Francesco Borone, 1769-1794, plant collector, companion of Afzelius in Sierra Leone)] London 1798; Carl Frederik Albert Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; Pierre Fatumbi Verger, *Ewé: The Use of Plants in Yoruba Society*. São Paulo 1995; Celia Blanco, *Santeria Yoruba*. Caracas 1995; C. Bolt, *The Anti-Slavery Movement*. Oxford 1969; Johnson U.I. Asiegbu, *Slavery and the Politics of Liberation 1787-1861*. London 1969; Reginald Coupland, *The Exploitation of East Africa, 1856-1890: The Slave Trade and the Scramble*. London 1939; Robert Clarke, *Sierra Leone*. London 1843; Nicholas Owen, *Journal of a Slave-Dealer*. Edited, with an introduction by Eveline Martin. London 1930)

Tropical Africa. See *Flora of Tropical Africa* 9: 77. 1917.

in English: cane grass, wild rice of the bush, wild rice of the bird

in Guinea: kali

in Nigeria: kamsuvan doki, marorehe, sansari, shinkaafar daajii, shinkaafar tsuntsuu

in Senegal: esisitè

in Sierra Leone: aboboruni, awop, bomie, ethanke, fa, famese, fanebaba, gala, gbande, kala, kale, kali, kalla, ken gras, kesiowuli, ngala, ngalei, ngara, waga

in Upper Volta: ngeloori

West Africa, Sierra Leone. Annual, coarse, robust, canelike

C. caudatum (Hack.) Stapf (*Rottboellia caudata* Hack.)

Central Africa, Sudan. See *Supplementum Plantarum* 13, 114. 1781 [1782], *Monographiae Phanerogamarum* 9: 298. 1889 and *Flora of Tropical Africa* 9: 76. 1917.

in English: cane grass

in Nigeria: kamsuvan doki, marorehe, sansari

Chauvinia Steudel = *Spartina* Schreb.

After the French botanist François Joseph Chauvin, 1797-1859, algologist, see J.H. Barnhart, *Biographical notes upon botanists*. 1: 337. 1965.

Chloridoideae, Zoysieae, Sporobolinae, type *Chauvinia chilensis* Steud., see *Genera Plantarum* 43. 1789, *Catalecta Botanica* 3: 10. 1806, *Voyage Autour du Monde* 2(2): 14. 1829, *Synopsis Plantarum Glumacearum* 1: 362. 1854 [1855] and *Iowa State College Journal of Science* 30(4): 471-574. 1956 [Taxonomy and distribution of the genus *Spartina*], *Flora Mesoamericana* 6: 292. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, M.J. Balick, M.H. Nee & D.E. Atha, *Memoirs of the New York Botanical Garden* 85: i-ix, 1-246. 2000, *Contributions from the United States National Herbarium* 41: 195-200. 2001.

Chennapyrum Á. Löve = *Aegilops* L.

Presumably from the Greek *chenna* "a quail" and *pyros* "grain, wheat."

Pooideae, Triticeae, Triticinae, see J.C. Buxbaum (1693-1730), *Plantarum minus cognitarum centuriae, complectens plantas circa Byzantium et in Oriente observatas* Centuria I. Petropoli 1728-1740, *Species Plantarum* 1: 85. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Familles des Plantes* 2: 36, 513. 1763, *Enumeratio Methodica Plantarum* 371. 1763, *Systema Vegetabilium* 2: 769. 1817, *Notes sur Quelques Plantes Critiques, Rares, ou Nouvelles, ...* 2: 69. 1849, *Illustrationes Plantarum Orientalium* 4: 12, 21, 23. 1851, *Flora Dalmatica* 3: 345. 1852, *Synopsis Plantarum Glumacearum* 1: 354. 1854, *Flore de France* 3: 601. 1856, *Plantae Europaeae* 1: 128. 1890 and *Repertorium Specierum Novarum Regni Vegetabilis* Beih. 55: 84, 90, 117. 1929, *Blumea, Supplement* 3: 15, 17. 1946, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 653-655. 1960, *Feddes Repert.* 91: 225-228, 233-234, 236. 1980, *Biologisches Zentralblatt* 101(2): 206-208. 1982, *Feddes Repert.* 95: 493, 495. 1984, *Taxon* 41: 552-583. 1992, *Agric. Univ. Wageningen Pap.* 94-7: 1-512. 1994, *Taxon* 44: 611-612. 1995, *Flora de Veracruz* 114: 1-16. 2000, *Contributions from the United States National Herbarium* 48: 20-23. 2003.

Chevalierella A. Camus Dedicated to the French botanist Auguste Jean Baptiste Chevalier, 1873-1956 (b. Orne, d. Paris), explorer, plant collector (in French West Africa, Belgian Congo, Cape Verde Islands., Dahomey, French Guinea, Ivory Coast), father of applied tropical botany, 1905 established Botanical Garden at Dalaba (Guinea), traveler, president of Acad. Science of France, his works include *Michel Adanson, voyageur, naturaliste et philosophe*. Paris 1934, *Travaux bryologiques dédiés à la mémoire de Pierre-Tranquille Husnot*. Paris 1942, *Nos connaissances actuelles sur la géographie botanique et la flore économique du Sénégal et du Soudan*. [Exposition Universelle Internationale de 1900. Colonies françaises.] Paris 1900, *Flore vivante de l'Afrique Occidentale Française ...* Paris 1938, *L'Afrique Centrale Française*. Mission Charilac Tchad, 1902-1904. Paris 1907 and *Monographie des Myricacées*. Cherbourg 1901, with François (or Francis) Fleury (1882-1919) in Indochina; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 340. Boston 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; François Gagnepain (1866-1952), in Paul Henri Lecomte's *Flore générale de l'Indo-Chine*. Paris 1944; Henri Jacques-Félix, in *Taxon* 5(6): 120-125. 1956; Clyde F. Reed, *Bibliography to Floras of Southeast Asia*. Baltimore, Maryland 1969; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 18. Utrecht 1971; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement IV*. 89-97. 1997; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Alain Campbell White and Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937.

About 1-2 species, Zaire. Centothecoideae, Centotheceae, perennial, small herbaceous habit, unarmed, leaf blades elliptic and pseudopetiolate, tufted, leafy, plants bisexual, inflorescence spiciform of numerous loose racemes, 1-flowered, spikelets solitary and pedicellate, rachilla extension bearing a small sterile floret, 2 glumes unequal, lemmas awned, palea present, 2 glabrous lodicules, 2 stamens, ovary glabrous, 2 stigmas, forest, shady places, type *Chevalierella congoensis* A. Camus, see *Revue internationale de botanique appliquée et d'agriculture tropicale* 13: 421-422. 1933, *Bull. Jard. Bot. Bruxelles* 29: 400. 1954, *Bull. Sci. Inst. des Recherches Agronomiques tropicales* 8. 1962.

Species

C. congoensis A. Camus

Zaire.

C. dewildemanii (Vand.) Van der Veken ex Compère (*Ichnanthus dewildemanii* Vanderyst) (for the Belgian botanist Émile Auguste Joseph De Wildeman, 1866-1947, a specialist

of the Congolese flora; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 450. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; Frans A. Stafleu and Richard S. Cowan, *Taxonomic literature*. 1: 639-643. Utrecht 1976; É.A.J. De Wildeman, "Études de systématique et de géographie botaniques sur la flore du Bas- et du Moyen-Congo." in *Annales du Musée du Congo (Belge)*. Botanique. Sér. 5 Congo-Kasai. 152, t. 40 (1). 1910; É.A.J. De Wildeman, *Reliquiae Dewevreanae* ou Énumération des Plantes récoltées par Alfr. Dewèvre en 1895-96 dans l'État Indépendant du Congo. Fasc. 1-2. Bruxelles 1901)

Zaire. See *Essai d'une Nouvelle Agrostographie* 56. 1812 and *Bulletin agricole du Congo Belge* 10: 249. 1919, *Bulletin du Jardin Botanique de l'État* 33: 393. 1963.

Chikusichloa Koidzumi

From Japanese *chiku* "bamboo" and Greek *chloe*, *chloa* "grass, young grass."

Three species, Japan, Sumatra, China. Bambusoideae, Oryzodae, Oryzaceae, perennial, aquatic or terrestrial, tufted, erect, herbaceous, ligule membranous, leaf blades linear, plants bisexual, open inflorescence paniculate, panicles terminal and lax, spikelets 1-flowered, long slender stipe derived from floret callus, glumes usually absent or vestigial, lemma membranous strongly 5- to 7-veined, awned or awnless, palea present, 2 lodicules, 1 stamen, ovary glabrous, 2 stigmas, shade species, found in moist places in forest, resembles *Leersia* Sw., type *Chikusichloa aquatica* Koidz., see *Botanical Magazine* (Tokyo) 39: 23-24. 1925, *J. Fac. Sci. Univ. Tokyo* 3: 303. 1930, Yi-Li Keng (1897-1975), "The genus *Chikusichloa* of Yapan and China." *J. Wash. Acad. Sci.* 21: 526-530. 1931.

Species

C. aquatica Koidz.

China, Japan. Type species, leaf sheaths smooth and keeled, panicle lax and purplish, spikelets awned, glumes absent, lemma lanceolate to narrowly ovate, awn scabrous, grains yellowish brown, growing in wet valleys, along streamsides, see *Botanical Magazine* 39: 23. 1925.

C. brachyathera Ohwi

Japan, Ryûkyû Islands. Awned, see *Acta Phytotaxonomica et Geobotanica* 11: 255. 1942.

in English: Iriomote grass

in Japan: Iriomote-gaya

C. mutica Keng

China. Leaf sheaths smooth, panicle lax, spikelets awnless, callus stipe slightly curved, glumes vestigial, lemma lanceolate, stipe with 2 tiny lemma vestiges, grains dark brown,

found in damp streamsides in forest, see *Journal of the Washington Academy of Sciences* 21(21): 527-530, f. 2. 1931.

Chilochloa P. Beauv. = Phleum L.

From the Greek *cheilos* "a lip" and *chloe*, *chloa* "grass."

Pooideae, Poaceae, Alopecurinae, type *Chilochloa boehmeri* (Wibel) P. Beauv., see *Species Plantarum* 1: 59-60. 1753, *Primitiae Florae Werthemensis* 125. 1799, *Essai d'une Nouvelle Agrostographie* 37, 158. 1812, *Observations sur les Graminées de la Flore Belgique* 131. 1823 [1824], Wilhelm Ludwig Petermann (1806-1855), *Deutschlands flora* 619. Leipzig 1849 and *Contr. U.S. Natl. Herb.* 24: 167. 1925, *Contributions from the United States National Herbarium* 48: 234, 491-494. 2003.

Chimonobambusa Makino = Oreocalamus

Keng, *Qiongzhuea* (T.H. Wen & D.

Ohrnberger) J.R. Xue [Pinyin spelling Hsueh]

& T.P. Yi, *Qiongzhuea* J.R. Xue & T.P. Yi,

Qiongzhuea Hsueh & Yi, *Qiongzhuea* Hsueh

& Yi

Winter bamboo, bamboo shooting out in cold winter, from the Greek *cheimon* "winter" plus *Bambusa*.

About (2-6-)10/20-38 species, south and eastern Asia, Indochina, India, southwest China, Japan. Bambusoideae, Bambusoideae, Bambuseae, Arundinariinae or Shibataeinae, monopodial or amphipodial, perennial, woody, tall or shrub-like, sometimes arborescent, erect, diffuse habit, single-stemmed or clump forming, conspicuously thorny, branched above, 3 or more branches at each node, rhizomatous or stoloniferous, rhizomes leptomorph, running rhizomes, flowering culms leafy, multiple twigs, culm sheaths somewhat leathery or chartaceous and deciduous or persistent, sheath blades very small, no sheath auricles, leaves glabrous, culm internodes hollow, internodes smooth or scabrous, the 2-ridged culm nodes usually thorny and very swollen, lower nodes often with rootlets thorns, tubercular aerial roots present, plants bisexual, inflorescence diffuse and compound, a terminal or axillary racemose leafy panicle, racemes fascicled, spikelets terminal on the branchlets and many-flowered, usually 2 glumes frequently 1 or none, lemmas membranous, palea present, 3 stamens, ovary glabrous without the apical appendage, short style, 2 plumose stigmas, forest, type *Chimonobambusa marmorea* (Mitford) Makino, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 130, t. 119. 1896 and *Botanical Magazine* (Tokyo) 28(329): 153-154. 1914, *Plantae Wilsonianae* 2(1): 64. 1914, *Journal of Japanese Botany* 11(1): 1. 1935, *Sunyatsenia* 4(3-4): 146-151, t. 37. Canton 1940, *Technical*

Bulletin of the National Forestry Research Bureau 8: 15. 1948, *Taxon* 6(7): 201-202. 1957, *Acta Botanica Yunnanica* 1(2): 75-76. 1979, *Acta Botanica Yunnanica* 2(1): 91-92, 96-99, pl. 3, 4. 1980, *Acta Phytotaxonomica Sinica* 21(1): 96-99, pl. 2. 1983, *Acta Botanica Yunnanica* 5(1): 42-44, 45-46, pl. 3, 4. 1983, *Kew Bulletin, Additional Series* 13: 48. 1986 [*Genera Graminum*], *Journal of Bamboo Research* 5(2): 22. 1986, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1986, *Bamboo Res.* 1988(3): 8. 1988, *Kew Bulletin* 44(2): 349-367. 1989 [A revision of the species described under *Arundinaria* (Gramineae) in south-east Asia and Africa.], D. Ohrnberger, *Genus Chimonobambusa*. Augsberg 1990, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Contributions from the United States National Herbarium* 39: 36. 2000, Anwaruddin Choudhury, "An overview of the status and conservation of the red panda *Ailurus fulgens* in India, with reference to its global status." *Oryx* 35(3): 250-259. July 2001, Johan Gielis, "A generic geometric transformation that unifies a wide range of natural and abstract shapes." *Am. J. Bot.* 90: 333-338. 2003, *Taxon* 53(2): 527. 2004.

Species

C. angustifolia C.D. Chu & C.S. Chao (*Chimonobambusa linearifolia* W.D. Li & Q.X. Wu)

China, Guangxi, Sichuan. Glabrous, culm and branch fragile, culm sheath papery shorter than internode, tiny tubercles caducous, shoots bitter, found near ditches, wet spots, hills, in hardwood forests, see *Journal of Nanjing Agricultural College* 1981(3): 36, t. 5. 1981, *Journal of Bamboo Research* 4(1): 47-48, f. 3. 1985.

C. armata (Gamble) Hsueh & Yi (*Arundinaria armata* Gamble; *Chimonobambusa metuoensis* Hsueh & Yi; *Chimonocalamus armatus* (Gamble) R.B. Majumdar; *Oreocalamus armatus* (Gamble) T.H. Wen)

China. Culm cylindrical, internodes of branches ridged and grooved, nodes thorny, sheath annulus convex, sheath shorter than internode and shedding late, sheath blade tiny and erect, no sheath auricles, sheath ligule truncate, leaves lanceolate, edible shoots, see *Annals of the Royal Botanic Garden. Calcutta.* 7: 130, t. 119. 1896 and *Journal of Bamboo Research* 2(1): 38. 1983, *Journal of Bamboo Research* 5(2): 22. 1986, *Journal of Bamboo Research* 6(2): 11-13, f. 2. 1987, *Fl. Ind. Enumerat.-Monocot.* 275. 1989.

in Thailand: tut

C. brevinoda Hsueh & W.P. Zhang

China, southeast Yunnan. Internodes cylindrical or square, leaves 3-5 per twig, culm annulus convex, lower nodes often with rootlets thorns, culm sheath persistent and longer than internode, sheath auricles absent, sheath ligule indistinct, leaf blades lanceolate, broad-leaved forest, see *Journal of Bamboo Research* 7(1): 14-16, f. 1. 1988.

C. callosa (Munro) Nakai (*Arundinaria callosa* Munro; *Chimonobambusa callosa* (Munro) Makino; *Chimonocalamus callosus* (Munro) Hsueh & Yi; *Sinobambusa callosa* (Munro) T.H. Wen)

Asia, Bhutan, India. Shrubby, erect, single, smooth, striate when young, nodes pubescent and thorny, internodes smooth, nodes swollen subtended by a ring, culm sheaths pubescent, leaf sheaths glabrous, auricles small, leaves oblong-lanceolate, branched panicle, nodes of the panicle subtended by sheathing bracts, 2 glumes nerved, lemmas mucronate and ciliate, paleas acute, 3 lodicules fimbriate, ovary glabrous, 2 stigmas shortly plumose, culms used for thatching and tying, young shoots edible, growing in open clumps, in forests, deep shade, see *Transactions of the Linnean Society of London* 26(1): 30. 1868 and *Journal of the Arnold Arboretum* 6(3): 151. 1925, *Acta Botanica Yunnanica* 1(2): 84. 1979, *Journal of Bamboo Research* 1(1): 35. 1982, *Kew Bulletin* 44: 366. 1989, *Edinb. J. Bot.* 51: 327. 1994.

in India: kaure maling, khare bans, spar, sypar, u-spar, uskong, uspar

Vernacular names: khare bans, rawa, u

C. communis (Keng f.) Wen & Ohrnb. (*Chimonobambusa communis* (J.R. Xue & T.P. Yi) K.M. Lan; *Chimonobambusa communis* (J.R. Xue & T.P. Yi) Wen & D. Ohrnberger; *Oreocalamus communis* (J.R. Xue & T.P. Yi) Keng f.; *Qionghuea communis* J.R. Xue & T.P. Yi)

China. See *Acta Botanica Yunnanica* 2(1): 96-98, pl. 3. 1980, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1986, *Flora Guizhouensis* 5: 308. 1988.

C. convoluta Q.H. Dai & X.L. Tao

China, Guangxi. Internodes with yellowish brown longitudinal tomentum, sheath shorter than internode and deciduous, see *Acta Phytotaxonomica Sinica* 20(2): 212-213, pl. 2. 1982.

C. damingshanensis Hsueh & W.P. Zhang

China, Guangxi, Nanning. Sheath densely tomentose, a ring of dark brown tomentose below nodes, basal nodes with root-thorns, inflorescence paniculate or racemose, lemmas papery awned, slopes, see *Bamboo Res.* 7(3): 5, t. 1. 1988.

C. densifolia (Munro) Nakai (*Arundinaria densifolia* Munro; *Sinarundinaria densifolia* (Munro) C.S. Chao & Renvoize; *Yushania densifolia* (Munro) R.B. Majumdar)

Sri Lanka; Kerala, India. Rare, small, shrubby, gregarious, thick or thin walls, nodes prominent with 2 or 3 branches, culm sheath hirsute, leaves sessile and rounded at the base, scaly thick rhizome, inflorescence on leafy branches, 2 glumes attenuate, lemmas and glumes with an awned tip, paleas 2-keeled, 3 lodicules, ovary glabrous, 2 stigmas plumose, leaves used as a fodder for cattle, see *Transactions of the Linnean Society of London* 26(1): 32. 1868 and

Journal of the Arnold Arboretum 6: 151. 1925, *Kew Bulletin* 44(2): 354. 1989.

C. fansipanensis Nguyen & Vucan

Vietnam. See *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 994. 1991

C. grandifolia Hsueh & W.P. Zhang

China. Culm wall thick, 3 branches at each node, internode cylindrical, sheath papyraceous and shedding late, sheath blade triangular, sheath annulus with a ring of dense brown hair, lower internodes often with rootlets thorns or spiny air roots, leaves oblong-lanceolate, edible shoots, ornamental, see *Journal of Bamboo Research* 7(1): 17-19, f. 2. 1988.

C. hejiangensis C.D. Chu & C.S. Chao

China, Hejiang, Sichuan. Sheath deciduous, internode tubercular, see *Journal of Nanjing Agricultural College* 1981(3): 36, t. 6. 1981.

C. hirtinoda C.S. Chao & K.M. Lan

China. Culm square, young culm densely hairy, sheath blade tiny, 3 branches at each node, nodes with tubercles, spiny aerial roots, sheath papyraceous longer than internode, leaves membranous oblong-lanceolate or lanceolate, see *Bamboo Research in Asia* 1982(1): 2, f. 2. 1982.

C. lactistriata W.D. Li & Q.X. Wu

China. Short and sparse tubercular setae, 3 branches at each node, sheath papyraceous usually longer than internode, sheath blade narrow triangular or absent, sheath auricles undeveloped, sheath ligule tiny or absent, leaves lanceolate finely pubescent beneath, see *Journal of Bamboo Research* 4(1): 46-47, f. 2. 1985.

C. leishanensis Yi

China. See *Acta Botanica Yunnanica* 13(2): 144-145, pl. 1. 1991.

C. linearifolia W.D. Li & Q.X. Wu

China. See *Journal of Bamboo Research* 4(1): 47-48, f. 3. 1985.

C. luzhiensis (Keng f.) Wen & Ohrnb. (*Chimonobambusa luzhiensis* (J.R. Xue & T.P. Yi) T. H. Wen & D. Ohrnberger; *Chimonobambusa luzhiensis* (J.R. Xue & T.P. Yi) K.M. Lan; *Oreocalamus luzhiensis* (J.R. Xue & T.P. Yi) Keng f.; *Qiongzhueta luzhiensis* J.R. Xue & T.P. Yi)

China. See *Acta Botanica Yunnanica* 5(1): 45-46, pl. 4. 1983, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1986, *Flora Guizhouensis* 5: 309. 1988.

C. macrophylla Wen & Ohrnb. (*Chimonobambusa macrophylla* (J.R. Xue & T.P. Yi) T. H. Wen & D. Ohrnberger; *Qiongzhueta macrophylla* J.R. Xue & T.P. Yi; *Qiongzhueta macrophylla* f. *macrophylla*)

China. See *Acta Phytotaxonomica Sinica* 23(5): 398-399, pl. 1. 1985, *Acta Botanica Yunnanica* 10(1): 51, 53, f. 1, 2. 1988.

C. macrophylla Wen & Ohrnb. f. *intermedia* Wen & Ohrnb. (*Chimonobambusa macrophylla* f. *intermedia* (J.R. Xue & D.Z. Li) T. H. Wen & D. Ohrnberger; *Qiongzhueta intermedia* J.R. Xue & D.Z. Li)

China.

C. macrophylla Wen & Ohrnb. f. *leiboensis* Wen & Ohrnb. (*Chimonobambusa macrophylla* f. *leiboensis* (J.R. Xue & T.P. Yi) T. H. Wen & D. Ohrnberger; *Qiongzhueta macrophylla* f. *leiboensis* J.R. Xue & T.P. Yi)

China.

C. maculata Wen (*Chimonobambusa maculata* (T.H. Wen) Wen; *Qiongzhueta maculata* T.H. Wen)

China. See *Journal of Bamboo Research* 5(2): 22, f. 5. 1986, *Journal of Bamboo Research* 7(1): 31. 1988.

C. marmorea (Mitford) Makino (*Arundinaria marmorea* (Mitford) Makino; *Arundinaria matsumurae* Hack., also spelled *matsumarae*; *Arundinaria nana* Makino; *Bambusa marmorea* Mitf.; *Chimonobambusa marmorea* Makino; *Chimonobambusa marmorea* (Mitford) Nakai; *Chimonobambusa purpurea* J.R. Xue & T.P. Yi; *Phyllostachys marmorea* (Mitford) Asch. & Graebn.)

Asia temperate, Japan. Origin unknown. Small, slender, round culm, smooth, purple-lined, 3 branches at each node, nodes prominent, internodes glabrous, nodes of lower part with spiny air roots, sheath persistent or shedding late, culm sheaths softly membranous and marbled brown and white, running rhizomes, leaf blades narrowly lanceolate or band-like lanceolate, leaves glabrous, spikelets linear with 4-7 florets, terminal floret usually male, 0-3 glumes frequently 1 or none, lemmas ovate-lanceolate, palea 2-mucronate at the tip, 3 ovate lodicules, 3 stamens exerted, ovary narrowly ovoid, 2 feathery stigmas, may be invasive, edible shoots tasty, ornamental, cultivated, used for furniture, handles, see *The Bamboo Garden* 46: 547. 1894, *Botanical Magazine* (Tokyo) 11: 160. 1897 and *Synopsis der mitteleuropäischen Flora* 2(1): 778. 1902, *Botanical Magazine* (Tokyo) 28(329): 154. 1914, *Bulletin de l'Herbier Boissier* 7(9): 716. 1929, *Report Fuji Bamboo Garden* 17: 8. 1972, *Journ. Yunnan For. Coll.* 1982(1): 36, f. 2. 1982.

in English: winter bamboo, marble bamboo

in Japan: kan-chiku

C. marmorea (Mitford) Makino var. *marmorea* (*Arundinaria marmorea* (Mitford) Makino; *Bambusa marmorea* Mitford; *Chimonobambusa setiformis* T.H. Wen; *Phyllostachys marmorea* (Mitford) Ascherson & Graebner)

Asia temperate. A ring of root-thorns on basal nodes, see *The Bamboo Garden* 46: 547. 1894 and *J. Bamboo Res.* 3(2): 29. 1984.

C. marmorea (Mitford) Makino var. *purpurea* (Hsueh & T.P. Yi) D.Z. Li (*Chimonobambusa neopurpurea* T.P. Yi; *Chimonobambusa purpurea* Hsueh & T.P. Yi)

Asia temperate. Robust, a ring of root-thorns on nonbranching nodes, see *J. Yunnan Forest. Coll.* 1982 (1): 36. 1982, *J. Bamboo Res.* 8(3): 23. 1989.

C. metuoensis Hsueh & Yi

China, Tibet. See *Journal of Bamboo Research* 2(1): 34, t. 4. 1983.

C. microfloscula McClure

China, Yunnan. Internode cylindrical, 3 branches at each node, some basal nodes with spiny aerial roots, sheath caducous and shorter than internode, sheath ligule with a ciliate tip, leaves oblong-lanceolate, edible shoots, cultivated, planted as hedge and fence, growing in hardwood forests, see *Lingnan University Science Bulletin* 9: 17. 1940.

C. montigena Ohrnb. (*Chimonobambusa montigena* (Yi) Ohrnberger; *Qiongzhueta montigena* Yi)

China, Yunnan. See *Journal of Bamboo Research* 9(3): 28-30, f. 2. 1990.

C. neopurpurea Yi (*Chimonobambusa purpurea* Hsueh & Yi)

China, Sichuan. Aerial roots under branch, sheath thinly papyraceous and longer than internode, edible shoots, culm used for papermaking, shelter, fence, screen, see *J. Bamboo Res.* 8(3): 22, pl. 2. 1989, *Acta Botanica Yunnanica* 14(2): 137-138. 1992.

C. ningnanica Hsueh & L.Z. Gao (*Chimonobambusa tuberculata* J.R. Xue & L.Z. Gao)

China, Tibet. See *Journal of Bamboo Research* 2(1): 38. 1983, *Journal of Bamboo Research* 6(2): 11-15, f. 2, 3. 1987.

C. opienensis (Keng f.) Wen & Ohrnb. (*Chimonobambusa opienensis* (J.R. Xue & T.P. Yi) T.H. Wen & D. Ohrnberger; *Oreocalamus opienensis* (J.R. Xue & T.P. Yi) Keng f.)

China. See *Acta Botanica Yunnanica* 2(1): 98-99, pl. 4. 1980, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1986.

C. pachystachys Hsueh & Yi

China, Yunnan. Square or cylindrical internodes, yellowish brown, tubercular air roots, sheath deciduous or persistent, sheath auricles absent, sheath ligule truncate, bamboo for giant panda, see *Journ. Yunnan. For. Coll.* 1982(1): 33, f. 1. 1982.

C. paucispinosa Yi

China, Yunnan. See *Journal of Bamboo Research* 9(3): 24-26, f. 1. 1990.

C. puberula (Keng f.) Wen & Ohrnb. (*Chimonobambusa puberula* (J.R. Xue & T.P. Yi) T. H. Wen & D. Ohrnberger; *Chimonobambusa puberula* (J.R. Xue & T.P. Yi) K.M. Lan; *Oreocalamus puberulus* (J.R. Xue & T.P. Yi) Keng f.; *Qiongzhueta puberula* J.R. Xue & T.P. Yi)

China. See *Acta Botanica Yunnanica* 5(1): 42-44, f. 3. 1983, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1986, *Flora Guizhouensis* 5: 308. 1988.

C. pubescens Wen

China. See *Journal of Bamboo Research* 5(2): 20. 1986.

C. quadrangularis (Franceschi) Makino (*Arundinaria angulata* (Munro) Porterf.; *Arundinaria quadrangularis* (Franceschi) Makino; *Bambusa quadrangularis* Franceschi; *Chimonobambusa angulata* K.M. Nakai; *Chimonobambusa quadrangularis* (Fenzi) Makino; *Phyllostachys quadrangularis* (Franceschi) Rendle; *Tetragonocalamus angulatus* (Munro) Nakai; *Tetragonocalamus quadrangularis* (Franceschi) Nakai)

Asia temperate, China, Sichuan, Guangxi, Taiwan. Diffuse bamboo, solitary culms, well-spaced, dark green, thick-walled but fragil, internodes quadrangular, extensively running rhizomes, branch nodes swollen, lowest nodes with spiny rootlets, culm sheath triangular, leaf sheath bristly at the apex, leaves lanceolate or narrowly lanceolate, branches spreading and drooping, culm surface rough, shoot delicious, cultivated, naturalized, ornamental, used as walking stick, see *Arboretum Amazonicum* 5: 401. 1880, *Botanical Magazine* (Tokyo) 9: 71. 1895 and *Journal of the Linnean Society, Botany* 36(254): 443. 1904, *Botanical Magazine* (Tokyo) 28(329): 153-154. 1914, *Science Education [Rika Kyô-iku]* 15(16): 67. Tokyo 1932, *Journal of Japanese Botany* 9(2): 86, 88-90. 1933, *Report Fuji Bamboo Garden* 17: 10. 1972, *Cuscatlania* 1(6): 1-29. 1991, *Journal of Bamboo Research* 10(1): 17-18. 1991.

in English: square bamboo, square-stem bamboo, square-stemmed bamboo

in Japan: shiho-chiku, shi-hou-chiku, shihou-chiku zoku, shikaku-dake, kimmei-hou-chiku (with green oblong stripes on the bud canal), tatejima-hou-chiku, suow-shikaku dake

C. quadrangularis (Franceschi) Makino f. ***purpureiculma*** Wen

China. See *Journal of Bamboo Research* 8(1): 24. 1989.

C. rigidula (Keng f.) Wen & Ohrnb. (*Chimonobambusa rigidula* (J.R. Xue & T.P. Yi) T. H. Wen & D. Ohrnberger; *Oreocalamus rigidulus* (J.R. Xue & T.P. Yi) Keng f.; *Qiongzhueta rigidula* J.R. Xue & T.P. Yi)

China. See *Acta Phytotaxonomica Sinica* 21(1): 96-99, pl. 2. 1983, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1986.

C. rivularis Yi

China. See *Journal of Bamboo Research* 8(3): 18-21, f. 1. 1989.

C. setiformis Wen

China. Greenish purplish, sheath persistent and papyraceous, no sheath auricles and cilia, sheath ligule arcuate,

leaves narrowly lanceolate glabrous, see *Journal of Bamboo Research* 3(2): 29, t. 5. 1984.

C. szechuanensis (Rendle) Keng f. (*Arundinaria szechuanensis* Rendle; *Oreocalamus szechuanensis* (Rendle) Keng f.)

China, Sichuan. Glabrous, middle and lower portion of culm square, several nodes with spiny aerial roots, culm sheath caducous and shorter than internode, forming thickets, shoot edible, culm used for papermaking, a plant for giant panda, see *Plantae Wilsonianae* 2(1): 64. 1914, *Sunyatsenia* 4(3-4): 147-148. 1940, *Technical Bulletin of the National Forestry Research Bureau* 8: 15. 1948.

C. szechuanensis (Rendle) Keng f. var. *flexuosa* Hsueh & C. Li (*Chimonobambusa szechuanensis* f. *flexuosa* (J. R. Xue & C. Li) T.H. Wen & D. Ohrnberger)

China, Sichuan. Culm zigzag and abnormally swollen, used for making smoking pipes, see *Journ. Yunn. For. Coll.* 1982(1): 40, f. 3. 1982.

C. tuberculata Hsueh & L.Z. Gao (*Chimonobambusa armata* f. *tuberculata* (J.R. Xue & L.Z. Gao) T.H. Wen; *Chimonobambusa ningnanica* J.R. Xue & L.Z. Gao)

China, Yunnan. Culm cylindrical, young culm densely pubescent, 3 or more branches at each node, at nodes 4-12 spiny tubercular aerial roots, caducous sheath long triangular and longer than internode, leaves lanceolate, see *Journal of Bamboo Research* 2(1): 38. 1983, *Journal of Bamboo Research* 6(2): 11-15, f. 2, 3. 1987.

C. tumidissinoda Hsueh & Yi ex Ohrnb. (*Chimonobambusa tumidinoda* (J.R. Xue & T.P. Yi) T.H. Wen; *Qiongzhueta tumidinoda* Hsueh & Yi)

China. See *Acta Botanica Yunnanica* 2(1): 93, pl. 1-2. 1980, *Journal of Bamboo Research* 10(1): 17. 1991, *Taxon* 53(2): 527. 2004.

C. unifolia Wen (*Chimonobambusa unifolia* (Yi) T.H. Wen; *Qiongzhueta unifolia* Yi)

China. See *Journal of Bamboo Research* 9(1): 27-29, f. 1. 1990.

C. utilis (Keng) Keng f. (*Oreocalamus utilis* Keng)

China, Sichuan, Guizhou. Internode cylindrical or square, culm smooth and glabrous, sheath papery, sheath ligule green, 3 branches on each nodes, edible shoot, timber bamboo, see *Sunyatsenia* 4(3-4): 148-151, t. 37. 1940, *Technical Bulletin of the National Forestry Research Bureau* 8: 15. 1948.

C. verruculosa Wen & Ohrnb. (*Chimonobambusa verruculosa* (T.P. Yi) T. H. Wen & D. Ohrnberger; *Qiongzhueta verruculosa* T.P. Yi)

China. See *Bulletin of Botanical Research* (Harbin) 8(4): 65-67, pl. 2. 1988.

C. yunnanensis Hsueh & W.P. Zhang

China, Yunnan. Internode square, sometimes cylindrical, culm annulus flat, sheath blade triangular, nodes below middle culm with spiny aerial roots, no sheath auricles, in evergreen hardwood forests, see *Journal of Bamboo Research* 7(1): 19-21, f. 3. 1988.

Chimonocalamus Hsueh & Yi = *Chimonocalamus* J.R. Xue & T.P. Yi, *Sinarundinaria* Nakai

From the Greek *cheimon*, *cheimonos* "winter" and *kalamos* "a reed, cane."

About 16 species, China, India, Bhutan, Myanmar. Bambuseae, Thamnocalaminae, erect, shrubby or arborescent, sympodial, rhizomes short-necked, thorny, clump-forming, 3 or more branches, joint of branches swollen, culm sheaths caducous longer than internodes, sheath ligule developed, inflorescence semelactant shortly paniculate on leafy flowering branches, 2 glumes, lemmas slightly awned, paleas 2-keeled, 3 lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, mountains, subtropical regions, used for house construction and weaving, edible shoots, cavity of culms often containing a fragrant oil, see *Journal of Japanese Botany* 11(1): 1. 1935, *Acta Botanica Yunnanica* 1(2): 74-92. 1979, *Kew Bulletin* 44(2): 349-367. 1989, *Journal of South China Agricultural University* 10(2): 45. 1989, *Edinburgh Journal of Botany* 51(2): 284, 290. 1994, *Journal of Bamboo Research* 13(4): 1-3, f. 1. 1994, *Contributions from the United States National Herbarium* 39: 112-113. 2000.

Species

C. bicorniculatus S.F. Li & Z.P. Wang (*Semiarundinaria bicorniculata* (S.F. Li & Z.P. Wang) Govaerts)

China. See *Acta Phytotax. Sin.* 33(6): 614-615, f. 1. 1995, *World Checklist of Seed Plants* 3(1): 21. 1999.

C. burmaensis (C.S. Chao & Renvoize) D.Z. Li (*Chimonocalamus burmaensis* (C.S. Chao & Renvoize) Ohrnb.; *Sinarundinaria burmaensis* C.S. Chao; *Sinarundinaria burmaensis* C.S. Chao & Renvoize)

Burma. See *Kew Bulletin* 43(3): 409, f. 1. 1988, *Acta Botanica Yunnanica* 16(1): 40. 1994.

C. callosus (Munro) Hsueh & Yi (*Arundinaria callosa* Munro; *Arundinaria far* Brandis ex Camus; *Chimonobambusa callosa* (Munro) Nakai; *Sinobambusa callosa* (Munro) Wen)

Bhutan, India. See *Transactions of the Linnean Society of London* 26(1): 30. 1868 and *Indian Trees* 721. 1906, *J. Arnold Arboretum* 6: 151. 1925, *Acta Bot. Yunnan.* 1(2): 84. 1979, *J. Bamb. Res.* 1(1): 35. 1982, *Edinb. J. Bot.* 51(3): 327. 1994.

Local names: khare bans, khare maling, u, rawa

C. delicatus Hsueh & Yi

China. Sheath coriaceous but fragile and easy to break, culm annulus convex, sheath blade lanceolate or linear-lanceolate, no sheath auricles, sheath ligule denticulate, edible shoots, see *Acta Bot. Yunnan.* 1(2): 77-78, f. 1. 1979.

in China: xiangzhu

C. dumosus Hsueh & Yi

China, Yunnan. Young culm gray pruinose, sheath annulus smooth, culm auricles convex, manifold branching, sheath papery, sheath blade erect, sheath auricles absent, sheath ligule rusty hairy, 3-7 leaves on each twig, edible shoots, bushy, see *Acta Bot. Yunnan.* 1(2): 81-82, f. 7. 1979.

in China: xiao xiangzhu

C. dumosus Hsueh & Yi var. *pygmaeus* Hsueh & Yi

China. Aerial roots densely clustered, sheath blades caducous, green branches, see *Acta Bot. Yunnan.* 1(2): 82. 1979.

C. fimbriatus Hsueh & Yi

China, Yunnan, Kengma. Young culm sparsely tomentose, aerial spiny roots densely clustered, sheath coriaceous, culm sheath ligule fimbriate, edible shoot, see *Acta Bot. Yunnan.* 1(2): 78-79, f. 3. 1979.

in China: liusu xiangzhu

C. gallatyi (Gamble) Hsueh & Yi (*Arundinaria gallatyi* Gamble; *Chimonobambusa gallatyi* (Gamble) Rhind; *Sinarundinaria gallatyi* (Gamble) C.S. Chao & Renvoize)

Burma. See *Ann. Roy. Bot. Gard. Calcutta* 7: 23, pl. 21. 1896 and *Bull. Misc. Inf., Kew* 47. 1928, *The Grasses of Burma* 2: 10. Calcutta 1945, *J. Bamb. Res.* 2(1): 38. 1983, *Kew Bulletin* 44(2): 354. 1989.

C. griffithianus (Munro) Hsueh & Yi (*Arundinaria griffithiana* Munro; *Chimonobambusa griffithiana* (Munro) Nakai; *Sinarundinaria griffithiana* (Munro) C.S. Chao & Renvoize)

Burma, India, China. See *Trans. Linn. Soc.* 26(1): 20. 1868 and *J. Arnold Arboretum* 6: 151. 1925, *Acta Botanica Yunnanica* 1(2): 83-84. 1979, *Kew Bulletin* 44(2): 353. 1989.

in China: geshi xiangzhu

C. longiligulatus Hsueh & Yi

China, Yunnan, Luchun. Culm annulus and sheath annulus convex, aerial spiny roots closely arranged, sheath coriaceous and caducous, sheath blade erect, 2-6 leaves on each twig, edible shoots, see *Acta Phytotax. Sin.* 23(3): 236, f. 1. 1985.

C. longispiculatus R.B. Majumdar (*Chimonocalamus longispiculatus* (C.S. Chao & Renvoize) D.Z. Li; *Sinarundinaria longispiculata* C.S. Chao & Renvoize)

India. See *Kew Bulletin* 43(3): 411. 1988, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 276. Calcutta 1989, *Acta Botanica Yunnanica* 16(1): 41. 1994.

C. longiusculus Hsueh & Yi

China, Yunnan. Thick-walled, internodes solid, thick and spiny air roots, 4-5 branches at each node, sheath coriaceous shedding late, sheath blade linear and erect, sheath auricles small or absent, leaves linear, shoots edible, hard and tough wood used in rural construction, bushy, see *Acta Bot. Yunnan.* 1(2): 80-81, f. 6. 1979.

in China: changje xiangzhu

C. lushaiensis Ohrnb. (*Chimonocalamus longispiculatus* (C.S. Chao & Renvoize) D.Z. Li; *Chimonocalamus longispiculatus* (C.S. Chao & Renvoize) Ohrnb.; *Sinarundinaria longispiculata* C.S. Chao & Renvoize)

India. See *Acta Bot. Yunnan.* 16(1): 41. 1994, *Kew Bulletin* 43(3): 411, f. 2. 1988.

C. makuanensis Hsueh & Yi

China, Yunnan, Maguan. Young culms densely silky pubescent, air roots at each node of branches, 3-4 branches at each node, yellow-striped culm sheath caducous, sheath blade erect, edible shoot, see *Acta Bot. Yunnan.* 1(2): 80, f. 5. 1979.

in China: maguan xiangzhu

C. montanus Hsueh & Yi

China, Yunnan, Tengchong. Smooth, glabrous, spiny air roots expanding above branches, sheath blade slender lanceolate with wavy base, 2-4 leaves on each twig, see *Acta Bot. Yunnan.* 1(2): 79, f. 4. 1979.

in China: shan xiangzhu

C. pallens Hsueh & Yi

China, Yunnan, Yuanyang. Young culm with grayish to grayish green powder, aerial roots present, sheath coriaceous, sheath blade ribbon-like lanceolate, sheath ligule denticulate, see *Acta Bot. Yunnan.* 1(2): 79, f. 2. 1979.

in China: huizhu

C. tortuosus Hsueh & Yi

China, Tibet. Aromatic bamboo, 2-9 branches on each node, young culm silky pubescent, sheath persistent, sheath blade broadly lanceolate, culm sheath blade twisted when dry, sheath auricles convex and purplish, sheath ligule purplish and triangular, 3-7 leaves on each twig, found growing in broad-leaved forests, see *Acta Botanica Yunnanica* 1(2): 82, f. 8. 1979.

in China: xizang xiangzhu

Chionachne R. Br. = Sclerachne R. Br.

Greek *chion* "snow" and *achne* "chaff, glume," alluding to the fruits or to the nature of the spikelet.

About 7 species, Southeast Asia, Polynesia, Indomalayan region, Indochina, eastern Australia. Panicoideae, Andropogonodae, Maydeae, or Andropogoneae, Chionachninae, perennial, rarely annual, woody and persistent or herbaceous,

reedlike, rhizomatous or caespitose, bulbous base, culms cylindrical, branched, culm nodes hairy or glabrous, culm internodes solid or hollow, ligule tomentose, leaf blades flat, plants monoecious, inflorescence axillary, spiciform spathe racemes bearing paired spikelets with female segments below and male segments above, all the fertile spikelets unisexual, basal female spikelet and several males, pedicelled spikelet suppressed or vestigial, male spikelets 2-flowered and solitary or 2-nate, 2 glumes dissimilar and membranous, caryopsis enveloped in the hard lower glume, palea present, lodicules absent, ovary glabrous, 2 stigmas, some species prone to grazing and trampling, on moist grassy slopes, forest margins, riverbanks, type *Chionachne barbata* (Roxb.) R. Br., see *Transactions of the American Philosophical Society, new series*, 5: 142. 1835, John Joseph Bennett (1801-1876) and Robert Brown, *Plantae Javanicae rarioris*. 15, 18, 20. London 1838, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 273. 1841, *Fragmenta Phytographiae Australiae* 8: 116. 1873, *Flora Australiensis* 7: 515. 1878, *Contributions from the United States National Herbarium* 2(3): 518. 1894 and *Meded. Rijks-Herb.* 67: 1-17. 1931, R.P. Celarier, "Cytotaxonomy of the Andropogoneae 2. Subtribes Ischaeminae, Rottboellinae, and the Maydeae." *Cytologia* 22: 160-183. 1957, *Kew Bulletin* 35: 813. 1981, *Blumea* 47(3): 545-580. 2002 [Revision of Chionachninae (Gramineae: Andropogoneae), by T.A. Jannink & J.F. Veldkamp].

Species

C. biaurita Hack.

Australia, Philippines. See *Philippine Journal of Science* 1(Suppl.): 263. 1906, *Blumea* 47(3): 556-557, f. 1. 2002.

C. cyathopoda (F. Muell.) Benth. (*Chionachne cyathopoda* (F. Muell.) F. Muell. ex Benth.; *Polytoca cyathopoda* (F. Muell.) Bailey; *Sclerachne cyathopoda* F. Muell.)

Western Australia. Perennial, tufted, reedlike, rhizomatous, produces coarse fodder, palatable when young, eaten by horses, a weed of irrigation canals, along the banks of river, clay, sand, see *Fragmenta Phytographiae Australiae* 8: 116. 1873, *Fl. Austral.* 7: 516. 1878 and *The Queensland Flora* 6: 1849. 1902, *Mededeelingen Van's Rijks-Herbarium* 67: 11. 1931, *Blumea* 47(3): 557-559, f. 2. 2002.

in English: cane grass, river grass

C. gigantea (J. König) Veldkamp (*Chionachne barbata* (Roxb.) Aitch.; *Chionachne barbata* (Roxb.) Benth., nom. illeg., non *Chionachne barbata* (Roxb.) Aitch.; *Chionachne barbata* (Roxb.) Duthie, nom. illeg., non *Chionachne barbata* (Roxb.) Aitch.; *Chionachne barbata* (Roxb.) R. Br.; *Chionachne koenigii* (Spreng.) Thwaites; *Coix arundinacea* Lam.; *Coix arundinacea* J. König ex Willd., nom. illeg., non *Coix arundinacea* Lam.; *Coix barbata* Roxb.; *Coix*

crypsoides Müll. Hal.; *Coix gigantea* J. König; *Coix koenigii* Spreng.; *Polytoca barbata* (Roxb.) Stapf)

Australia, India. Coarse, male spikes erect, pedicels jointed, used as fodder when young, growing in rice fields, moist rich soil, banks of water courses, see *Der Naturforscher* (Halle) 23: 211. 1788, *Encyclopédie Méthodique, Botanique* 3: 422. 1791, *Species Plantarum. Editio quarta* 4: 203. 1805, *Systema Vegetabilium, editio decima sexta* 1: 239. 1824, *Flora Indica; or, Descriptions of Indian Plants* 3: 569. 1832, *Plantae Javanicae Rariores* 18. 1838, *Botanische Zeitung. Berlin* 19(45): 334. 1861, *Enumeratio Plantarum Zeylanicae* 357. 1864, *Catalogue of the Plants of the Punjab and Sindh* 157. 1869, *Flora Australiensis: A Description ...* 7: 515. 1878, *A List of the Grasses of N.W. India, Indigenous and Cultivated* 11. 1883, *The Flora of British India* 7(21): 102. 1897 [1896] and *Blumea* 47(3): 559-560, f. 3. 2002.

in India: bhus, ghella gadee, gurgur, kadpi, kirma-gilaram gadi, varival

C. hubbardiana Henrard

Western Australia, Queensland. Annual or perennial, arid habitats, black sand, black clay, see *Blumea* 3(3): 162-163. 1938, *Blumea* 47(3): 560-562, f. 4. 2002.

in English: hairy ribbon grass, river grass

C. koenigii (Sprengel) Thwaites & Hook.f. (*Chionachne barbata* (Roxb.) Aitch.; *Chionachne barbata* (Roxb.) Benth., nom. illeg., non *Chionachne barbata* (Roxb.) Aitch.; *Chionachne barbata* (Roxb.) Duthie, nom. illeg., non *Chionachne barbata* (Roxb.) Aitch.; *Chionachne barbata* (Roxb.) R. Br.; *Chionachne gigantea* (J. König) Veldkamp; *Chionachne koenigii* (Spreng.) Thwaites; *Coix arundinacea* Lam.; *Coix arundinacea* J. König ex Willd., nom. illeg., non *Coix arundinacea* Lam.; *Coix barbata* Roxb.; *Coix crypsoides* Müll. Hal.; *Coix koenigii* Sprengel; *Polytoca barbata* (Roxb.) Stapf; *Polytoca barbata* Stapf)

Eastern India, Sri Lanka. Perennial, coarse, monoecious, robust, stout, erect, branched, nodes softly bearded or hairy, leaf sheaths loose, ligule tomentose, stiff hairs on sheaths and leaves, irritating hairs, bracts subtending racemes, pistillate spikelets solitary, female spikelets sessile, the lower glume of the female spikelet embraces the spikelet, upper floret male or barren, 3 stamens, fruit case solitary, poor fodder, stony fruits used as rosary beads, medicinal value, useful in treating burns, grows in damp situations, riverbanks, along roadsides, in hot and damp regions, woodland borders, see *Der Naturforscher* (Halle) 23: 211. 1788, *Encyclopédie Méthodique, Botanique* 3: 422. 1791, *Species Plantarum. Editio quarta* 4: 203. 1805, *Systema Vegetabilium, editio decima sexta* 1: 239. 1824, *Flora Indica; or, Descriptions of Indian Plants* 3: 569. 1832, *Plantae Javanicae Rariores* 18. 1838, *Botanische Zeitung. Berlin* 19(45): 334. 1861, *Enumeratio Plantarum Zeylanicae* 357. 1864, *Catalogue of the Plants of the Punjab and Sindh* 157. 1869,

Flora Australiensis: A Description ... 7: 515. 1878, *A List of the Grasses of N.W. India, Indigenous and Cultivated* 11. 1883, *The Flora of British India* 7(21): 102. 1897 [1896] and *Handb. Fl. Ceylon* 5: 194. 1900, *Grasses of Ceylon* 204. 1956, *Grasses of Burma* 262. 1960, *Blumea* 47(3): 559-560, f. 3. 2002.

in India: amarapushpaka, ashvabala, chamarapushpa, darbhapathraka, gela gaddi, ghellagadi, gurgur, ikshugandha, ikshura, ishika, kaasi gaddi, kachalu, kadpi, kalivaeru gaddi, kanda, kansa, kanta-karvel, karmamoola, kasai, kasekshu, kasha, luchra, nadeya, niraja, potagala, sharada, shiri, sukanda, sukku debbe hullu, suku dabha, tauri, thendebalada hullu, vanahasaka, varival

in Thailand: dueai na, duei naa, duei na

C. macrophylla (Benth.) Clayton (*Polytoca macrophylla* Benth.)

Australia. See *Journal of the Linnean Society, Botany* 19: 52. 1881 and *Kew Bulletin* 35(4): 814. 1981, *Blumea* 47(3): 563-564, f. 6. 2002.

C. semiteres (Benth. ex Stapf) Henr. (*Chionachne semiteres* (Benth.) Henrard; *Chionachne semiteres* (Benth. ex Stapf) C.E.C. Fisch., nom. illeg., non *Chionachne semiteres* (Benth. ex Stapf) Henrard; *Chionachne wightii* Munro ex Benth. & Hook.f.; *Polytoca semiteres* Benth.; *Polytoca semiteres* Benth. ex Stapf; *Tripsacum semiteres* Wall.)

India, Tamil Nadu, Burma. Fruit cases several and winged, grows along roadsides, on dry hill slopes, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Genera Plantarum* 3: 113. 1883, *The Flora of British India* 7(21): 101. 1897 [1896] and *Mededeelingen van's Rijks-Herbarium* 67: 16. 1931, *Flora of the Presidency of Madras* 3: 1706. 1934, *Blumea* 47(3): 567. 2002.

Chionacne Bal.

Orthographic variant of *Chionachne* R. Br., see *Journal Bot.* 4: 78. 1890.

Chionanche Endl.

Orthographic variant of *Chionachne* R. Br., see I.L. Endlicher, *Enchiridion botanicum*, exhibens classes et ordines plantarum accedit nomenclator generum et officinalium vel usualium indicatio. Lipsiae 1841.

Chionochloa Zotov

From the Greek *chion* "snow" and *chloe*, *chloa* "grass, young grass," referring to the habitat; see Victor Dmitrievich Zotov (1908-1977), *New Zealand Journal of Botany* 1: 87. 1963.

About 21-24 species, New Zealand, southeast Australia. Arundinoideae, Danthoneieae, Danthoniinae, or Danthonioideae, Danthoneieae, perennial, caespitose, solitary, forming large and dense tussocks, erect, coarse, herbaceous, harsh foliage, glabrous nodes, hollow internodes, auricles absent, old leaf sheaths persistent, leaf blades flat or folded and persistent or falling or disarticulating, ligule a fringe of hairs, leaves often pungent, plants nearly always bisexual, all species chasmogamous, inflorescence loose or contracted, erect and open or compact panicle of few to many spikelets of few to several bisexual florets, spikelets flattened, 2 unequal glumes acute or rarely awned, lemmas 2-lobed with the lobes often short-awned, lemma lobes conspicuous, long awns present with flattened and more or less twisted column, palea pubescent or glabrous, hairy callus, 2 ciliate lodicules free and toothed to lobed, stamens 3, ovary glabrous, 2 stigmas, anthers and stigmas simultaneously exerted at anthesis, reproduction by seeds, tussock grasses, alpine and subalpine grasslands, sea level, valuable summer grazing, useful for slope protection, ornamental when in flower, graceful flower heads, sometimes referred to as *Danthonia* sensu lato and *Rytidosperma* Steudel, intergrading with *Cortaderia* Stapf and *Danthonia* DC., type *Chionochloa rigida* (Raoul) Zotov, see *Transactions and Proceedings of the New Zealand Institute* 45: 274. 1913, *Journal of the Linnean Society, Botany* 51: 1-9. 1937, *New Zealand Journal Agric. Res.* 3: 728-733. 1960, *New Zealand Journal of Botany* 1: 78-136. 1963, *Heredity* 18: 538-540. 1963, *New Zealand Journal of Botany* 3: 180-193, 300-319. 1965, *New Zealand Journal of Botany* 4: 392-397. 1966, *New Zealand Journal of Botany* 5: 3-16. 1967, *Vegetatio* 18: 289-306. 1969, *New Zealand Journal of Botany* 8: 132-152. 1970, *New Zealand Journal Agric. Res.* 13: 534-554. 1970, *New Zealand Journal of Botany* 10: 205-224, 515-544. 1972, *New Zealand Journal of Botany* 14: 315-326. 1976, *Phytochem.* 15: 1933-1935. 1976, *New Zealand Journal of Botany* 15: 399-442, 761-765. 1977, *New Zealand Journal of Botany* 16: 255-260, 435-460, 479-498. 1978, *New Zealand Journal of Botany* 17: 43-54. 1979, *New Zealand Journal of Botany* 19: 161-170. 1981, Williams, G.R. & Given, D.R. *The Red Data Book of New Zealand: Rare and Endangered Species of Endemic Terrestrial Vertebrates and Vascular Plants*. Wellington, N.Z.: Nature Conservation Council 1981, *New Zealand Journal of Botany* 21: 13-20. 1983, *Phytochem.* 22: 119-124. 1983, *Biochem. Syst. Evol.* 11: 247-259. 1983, *Aust. J. Chem.* 37: 1341-1347. 1984, *New Zealand Journal of Botany* 24: 529-537. 1986, Briggs, J.D. & Leigh, J.H. *Rare or Threatened Australian Plants*. revised edition. Australian National Parks and Wildlife Service 1988, *Phytochem.* 27: 3499-3507. 1988, *New Zealand Journal of Botany* 27: 163-165. 1989, *J. Ecol.* 77: 704-716. 1989, *New Zealand Journal of Botany* 28: 59-65. 1990, *New Phytologist* 116: 555-562. 1990, H.E. Connor, "Chionochloa Zotov (Gramineae) in New Zealand." *New Zealand Journal of Botany* 29:

219-283. 1991, *Phytochem.* 31: 702-703. 1992, *New Zealand Journal of Botany* 30: 125-133. 1992, *Trends in Ecology and Evolution* 9: 465-470. 1994, *New Zealand Journal of Botany* 35: 259-262. 1997, *Global Change Biology* 4: 591-596. 1998, *Am. J. Bot.* 86: 1136-1145. 1999, *Flora of New Zealand* 5: 423-459. 2000, *Austral. Ecology* 25(4): 402-408. Aug 2000, *Freshwater Biology* 46(2): 213-226. Feb 2001, *Journal of Ecology* 89(1): 31-39. Feb 2001, *Journal of Applied Ecology* 38(2): 233-237. Apr 2001, *Global Change Biology* vol. 8, issue 4: 345-360. Apr 2002, *Austral. Ecology* 27(4): 369-384. June 2002, Kelvin M. Lloyd, William G. Lee and J. Bastow Wilson, "Competitive abilities of rare and common plants: comparisons using *Acaena* (Rosaceae) and *Chionochloa* (Poaceae) from New Zealand." *Conservation Biology* 16(4): 975-985. Aug 2002, *Freshwater Biology* 48(8): 1363-1378. Aug 2003, Kelvin M. Lloyd, J. Bastow Wilson and William G. Lee, "Correlates of geographic range size in New Zealand *Chionochloa* (Poaceae) species." *Journal of Biogeography* 30(11): 1751-1761. Nov 2003, *Oikos* 104(3): 540-550. Feb 2004, *Journal of Biogeography* 31(3): 401-413. Mar 2004, William J. Bond, Katharine J. M. Dickinson and Alan F. Mark, "What limits the spread of fire-dependent vegetation? Evidence from geographic variation of serotiny in a New Zealand shrub." *Global Ecology and Biogeography* 13(2): 115-127. Mar 2004, *Freshwater Biology* 49(4): 448-462. Apr 2004, *Oikos* 107(3): 505-518. Dec 2004, *Flora of Australia* vol. 44B, Poaceae 3: 26. 2005, *Freshwater Biology* vol. 50, issue 5: 839-853. May 2005.

Species

C. acicularis Zotov

New Zealand. Erect, slender, leaf sheath persistent, leaf blade disarticulating at ligule, pointed and deciduous leaves, see *New Zealand Journal of Botany* 1: 101. 1963.

C. antarctica (Hook.f.) Zotov (*Bromus antarcticus* Hook.f.; *Danthonia antarctica* (Hook.f.) Hook.f., nom. illeg., non *Danthonia antarctica* (G. Forst.) Spreng.; *Danthonia flavescens* var. *hookeri* Zotov)

New Zealand. Slender, leaf blade disarticulating at ligule, leaves pungent and deciduous, glumes acute or shortly awned, see *Flora Antarctica* 1: 97, t. 54. 1845[1844], *Flora Novae-Zelandiae* 1: 302. 1853 and *Transactions and Proceedings of the New Zealand Institute* 73(3): 234. 1943, *New Zealand Journal of Botany* 1: 99. 1963.

C. australis (Buchanan) Zotov (*Danthonia australis* (Buchanan) Buchanan; *Danthonia raoulii* subsp. *australis* Buchanan)

New Zealand. Low growing, mat-forming, alpine, deep green, leaf sheath glabrous and hairy, leaf blade persistent, leaves tightly rolled and pungent tipped, lemma scabrid, occurs in steep alpine slopes, see *Synopsis Plantarum Glumacearum* 1: 246. 1854, *Transactions and Proceedings of*

the New Zealand Institute 4: 224. 1872, *Manual of the Indigenous Grasses of New Zealand* 77, t. 31. 1880 and *New Zealand Journal of Botany* 1: 103. 1963.

in English: alpine carpet grass, carpet grass

C. beddiei Zotov

New Zealand. Caespitose, leaf blade persistent, glumes shortly awned and prickly, on coastal cliffs, see *New Zealand Journal of Botany* 1: 90. 1963.

C. bromoides (Hook.f.) Zotov (*Danthonia bromoides* Hook.f.)

New Zealand. Caespitose, gynodioecious, sheath hairy, leaf blade persistent, prickly glumes acute or shortly awned, on coastal cliffs, see *Flora Novae-Zelandiae* 1: 303. 1853 and *New Zealand Journal of Botany* 1: 90. 1963.

C. cheesemanii (Hack. ex Cheeseman) Zotov (*Danthonia flavescens* var. *cheesemanii* (Hack. ex Cheeseman) Zotov; *Danthonia raoulii* var. *cheesemanii* Hack. ex Cheeseman) (for the New Zealand (born at Hull, Yorks) botanist Thomas Frederic (Frederick) Cheeseman, 1846-1923, explorer, botanical collector, from 1854 to New Zealand, 1873 Fellow of the Linnean Society, he is best known for his *Manual of the New Zealand Flora*. Wellington 1906, with William Botting Hemsley (1843-1924) wrote *Illustrations of the New Zealand Flora*. [The plates drawn by Miss Matilda Smith, 1854-1926] Wellington 1914. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 338. 1965; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A.-D*. Regnum Vegetabile vol. 2. 1954; O.E. Schulz, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem*. 10: 551. 1929)

New Zealand. Tussocky, leaf blade persistent, sheath densely hairy, scabrid leaves, distant florets, glumes hyaline, lemma scabrid, in forest, grasslands, see *Synopsis Plantarum Glumacearum* 1: 246. 1854, *Handbook of the New Zealand Flora* 332. 1864 and *Manual of the New Zealand Flora* 887. 1906, *Transactions and Proceedings of the New Zealand Institute* 73(3): 234. 1943, *New Zealand Journal of Botany* 1: 95. 1963.

C. conspicua (G. Forst.) Zotov (*Agrostis conspicua* (G. Forst.) Roem. & Schult.; *Agrostis conspicua* (G. Forst.) Willd. ex A. Rich., nom. illeg., non *Agrostis conspicua* (G. Forst.) Roem. & Schult.; *Arundo conspicua* G. Forst.; *Calamagrostis conspicua* (G. Forst.) Gmelin; *Chionochloa conspicua* (G. Forst.) Zotov subsp. *cunninghamii* (Hook.f.) Zotov; *Cortaderia conspicua* (G. Forst.) Stapf; *Deyeuxia conspicua* (G. Forst.) Zotov)

New Zealand. Tall, densely tufted, robust, basal leaves dark green to olive, leaf sheath persistent and fibrous, leaf blade margin hairy below, leaves rigid and flat to concave, drooping leaves tardily deciduous, loose seed heads, erect to pendent and hairy open inflorescence, drooping panicles, spikelets 3- to 7-flowered, glumes apex acute or shortly

awned, lemma pilose at the base, awn straight, ornamental, rare species, pioneer, used by Maoris for thatching, high wind tolerance, alpine and subalpine habitats, see *Florulae Insularum Australium Prodromus* 9. 1786, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 172. 1791, *Essai d'une Nouvelle Agrostographie* 20, 142, 146, 152. 1812, *Systema Vegetabilium* 2: 364. 1817, *Voyage de découvertes de l'Astrolabe ... Part [1]: Essai d'une flore de la Nouvelle-Zélande* 127. Paris 1832 and *Hand-list Herbaceous Plants Cultivated Royal Bot. Gard. Kew, edition 2*, 137, 333. 1902, *Transactions and Proceedings of the New Zealand Institute* 73(3): 234. 1943, *New Zealand Journal of Botany* 1: 92. 1963.

in English: Hunangamoho grass, broad-leaved bush tussock, plume tussock grass, plumed tussock grass, bush tussock, brown tussock, snow grass, snow tussock

in New Zealand: toetoe, toitoi

C. conspicua (G. Forst.) Zotov subsp. ***conspicua***

New Zealand. Leaf sheath and leaf blade hairy.

C. conspicua (G. Forst.) Zotov subsp. ***cunninghamii*** (Hook.f.) Zotov (*Danthonia antarctica* var. *laxiflora* Hook.f.; *Danthonia antarctica* var. *parviflora* Hook.f.; *Danthonia cunninghamii* Hook.f.; *Danthonia pentaflora* Colenso)

New Zealand. Leaf sheath and leaf blade glabrous, see *Flora Novae-Zelandiae* 1: 302. 1853, *Handbook of the New Zealand Flora* 332. 1864, *Transactions and Proceedings of the New Zealand Institute* 16: 343. 1884 and *New Zealand Journal of Botany* 1: 92, 94. 1963.

C. crassiuscula (Kirk) Zotov (*Chionochloa pungens* (Cheeseman) Zotov; *Danthonia crassiuscula* Kirk; *Danthonia pungens* Cheeseman)

New Zealand. Small tawny green tussock, sheath stout and stiff, leaf blade hairy, leaves pungent with thick tips, leaves curl spirally when dry or dead, inflorescence hairy, occurs in the higher rainfall mountains, leached or boggy soils, deep wet hollows, see *Transactions and Proceedings of the New Zealand Institute* 17: 224. 1885 and *Manual of the New Zealand Flora* 887. 1906, *New Zealand Journal of Botany* 1: 103. 1963.

in English: curly-leaved snow tussock, curly snow tussock

C. crassiuscula (Kirk) Zotov subsp. ***crassiuscula*** (*Chionochloa pungens* (Cheeseman) Zotov; *Danthonia pungens* Cheeseman)

New Zealand. Stout, robust, tussocky, pungent leaf blades curved and coriaceous, in meadows, boggy meadows, see *Manual of the New Zealand Flora* 887. 1906, *New Zealand Journal of Botany* 1: 103. 1963.

C. crassiuscula (Kirk) Zotov subsp. ***directa*** Connor

New Zealand. Prostrate, slender, wet grassland, boggy grassland, inundated and poorly drained areas, see

New Zealand Journal of Botany 1: 103. 1963, *New Zealand Journal of Botany* 29(3): 236, f. 5. 1991.

C. crassiuscula (Kirk) Zotov subsp. ***torta*** Connor

New Zealand. Stout, robust, tussocky, alpine, leaf sheaths glabrous or hairy, leaf blades curled or twisting, see *New Zealand Journal of Botany* 1: 103. 1963, *New Zealand Journal of Botany* 29(3): 237, f. 6. 1991.

C. defracta Connor

New Zealand. Tussocky, hairy to scabrid, variable, leaf blades hairy, leaves narrow or long, inflorescence hairy, glumes acute or shortly awned, open slopes, see *New Zealand Journal of Botany* 25(1): 164. 1987.

C. flavescens Zotov (*Danthonia flavescens* Hook.f.)

New Zealand. Densely tufted, alpine plant, tough, stout shoots, leaf sheaths glabrous or hairy, leaf blades tapering, glossy leaves drooping and deciduous, dead sheaths break crosswise, glumes acute or shortly awned, growing on rocky coarse textured slopes, on shady slopes, sometimes described under *Chionochloa rigida* (Raoul) Zotov, see *Handbook of the New Zealand Flora* 332. 1864 and *Transactions and Proceedings of the Royal Society of New Zealand* 68: 295. 1938, *New Zealand Journal of Botany* 1: 97. 1963, *New Zealand J. Bot.* 29: 253. 1991.

in English: broad leaved snow tussock grass, broad leaved snow tussock

C. flavescens Zotov subsp. ***brevis*** Connor

New Zealand. Inflorescence glabrous, grassland, see *New Zealand Journal of Botany* 1: 97. 1963, *New Zealand Journal of Botany* 29(3): 240, f. 9. 1991.

C. flavescens Zotov subsp. ***flavescens***

New Zealand. Inflorescence glabrous, grassland, see *New Zealand Journal of Botany* 1: 97. 1963.

C. flavescens Zotov subsp. ***hirta*** Connor

New Zealand. Leaf sheath glabrous, inflorescence very hairy, glumes awned, see *New Zealand Journal of Botany* 1: 97. 1963, *New Zealand Journal of Botany* 29(3): 241, f. 10. 1991.

C. flavescens Zotov subsp. ***lupeola*** Connor

New Zealand. Leaf sheath glabrous, inflorescence very hairy, see *New Zealand Journal of Botany* 1: 97. 1963, *New Zealand Journal of Botany* 29(3): 242, f. 11. 1991.

C. flavicans Zotov (*Danthonia antarctica* var. *elata* Hook.f.)

New Zealand. Stout, sprawling, persistent foliage, sheath glabrous, leaf blade margin scabrid, inflorescence dense and compact, distant florets, light-green seed heads, glumes bifid, lemma scabrid, weeping flowers, slow growing, ornamental, occurs in dry areas, see *Flora Novae-Zelandiae* 1: 302. 1853 and *New Zealand Journal of Botany* 1: 91. 1963. in New Zealand: dwarf weeping toi toi, snow tussock

C. flavicans Zotov f. *flavicans*

New Zealand.

C. flavicans Zotov f. *temata* Connor

New Zealand. See *New Zealand Journal of Botany* 29(3): 245, f. 13. 1991.

C. frigida (Vickery) Conert (*Danthonia frigida* Vickery)

New Zealand, Australia, New South Wales, Kosciuszko district. Perennial, robust, densely caespitose, forming dense stout tussocks, culms smooth and shining, grayish leaves flat or folded, panicles nodding and many-flowered, spikelets 4- to 8-flowered, glumes subequal, central awn geniculate and coarse, anthers yellow-orange, rare species, alpine and subalpine meadows, rocky slopes.

in English: robust wallaby grass, ribbon grass

C. howensis S.W.L. Jacob

Australia, Lord Howe Island. Rare, see *Telopea* 3(2): 281. 1988.

C. juncea Zotov (*Danthonia raoulii* var. *teretifolia* Patrie; *Danthonia rigida* var. *teretifolia* (Petrie) Zotov)

New Zealand. Tussocky, swollen bases, leaf sheath entire, leaf blades junceous, old leaf sheaths fibrous and persistent, leaves persistent, glumes glabrous, lemma hairy and glabrous, swampy places, see *Annales des Sciences Naturelles; Botanique, sér. 3* 2: 116. 1844, *Synopsis Plantarum Glumacearum* 1: 246. 1854 and *Transactions and Proceedings of the New Zealand Institute* 54: 571. 1923, *Transactions and Proceedings of the New Zealand Institute* 73(3): 234. 1943, *New Zealand Journal of Botany* 1: 101. 1963.

C. lanea Zotov

New Zealand. Slender, tussocky, hairy persistent sheaths, leaf blade tip blunt and leaf blade margin glabrous, deciduous leaves, glumes glabrous, lemma more or less hairy to glabrous, wet ground, boggy sites, grassland, see *New Zealand Journal of Botany* 25(1): 165. 1987.

C. macra Zotov

New Zealand. Tussock, persistent sheath, leaves narrow flat or loosely rolled, basal sheaths dull purplish brown, inflorescence open and glabrous, glumes subequal, long awn column, alpine areas, harsh climates, see *New Zealand Journal of Botany* 8: 91. 1970.

in English: slim snow-tussock, slim-leaved snow tussock

C. oreophila (Petrie) Zotov (*Chionochloa oreophila* var. *elata* (Petrie) Zotov; *Danthonia flavescens* var. *elata* (Petrie) Zotov; *Danthonia oreophila* Patrie; *Danthonia oreophila* var. *elata* Patrie; *Danthonia pallida* Patrie, nom. illeg., non *Danthonia pallida* R. Br.)

New Zealand. Small, short and mat-forming, tussock, slender flowering culms, persistent sheaths, inflorescence on flexuous branches, small solitary spikelets, glumes more or less equal, common in snowbanks, grasslands.

in English: snow patch grass, see *Handbook of the New Zealand Flora* 332. 1864, *Transactions and Proceedings of the New Zealand Institute* 27: 406. 1895 and *Transactions and Proceedings of the New Zealand Institute* 45: 274. 1913, *Transactions and Proceedings of the New Zealand Institute* 73(3): 234. 1943, *New Zealand Journal of Botany* 1: 104. 1963.

C. ovata (Buchanan) Zotov (*Danthonia ovata* Buchanan; *Danthonia planifolia* Petrie)

New Zealand. Tussock, old sheaths fibrous, leaf blade tip pungent and leaf blade margin glabrous, leaf sheaths persistent, inflorescence shortly branched, lemma hairy and glabrous, wet places, grassland, see *Manual of the Indigenous Grasses of New Zealand* t. 29 (2). 1880 [1879, in *Flora of New Zealand* 5: 447. 2000] and *Transactions and Proceedings of the New Zealand Institute* 33: 328. 1901, *New Zealand Journal of Botany* 1: 104. 1963.

C. pallens Zotov

New Zealand. Green or tawny green tussock, leaf sheaths keeled and glabrous, soft leaves, basal sheaths pale brown to purple, inflorescence glabrous, glumes acute and glabrous, found in the penialpine zone, on rocky well-drained soils, see *New Zealand Journal of Botany* 1: 99. 1963, W.G Lee, M Fenner, A Loughnan and K.M Lloyd, "Long-term effects of defoliation: incomplete recovery of a New Zealand alpine tussock grass, *Chionochloa pallens*, after 20 years." *Journal of Applied Ecology* 37(2): 348-355. Apr 2000.

in English: mid-ribbed snow tussock

C. pallens Zotov subsp. *cadens* Connor

New Zealand. Stout, old sheaths hairy and persistent, leaf blade twisting and disarticulating at ligule, see *New Zealand Journal of Botany* 29(3): 251, f. 17. 1991.

C. pallens Zotov subsp. *pallens*

New Zealand. Stout, persistent leaf blades, in grassland.

C. pallens Zotov subsp. *pilosa* Connor

New Zealand. Leaf blade persistent and pilose, in grassland, see *New Zealand Journal of Botany* 29(3): 252, f. 18. 1991.

C. pallida (R. Br.) S.W.L. Jacobs (*Danthonia pallida* R. Br.; *Notodanthonia pallida* (R. Br.) Veldkamp)

New South Wales, Victoria. Perennial, densely caespitose, robust, culms stout and erect, forming erect tussocks, leaves rather rigid and greenish, panicles exerted and spreading, spikelets loosely arranged, glumes subequal and rather narrow, lemma membranous, central awn geniculate and twisted, anthers red-orange, ornamental, grows on poor and acid soils, on upland soils of low fertility.

in English: silvertop wallaby grass, red anther wallaby grass, white-topped wallaby-grass

C. rigida (Raoul) Zotov (*Danthonia flavescens* Hook.f.; *Danthonia raoulii* Steud.; *Danthonia raoulii* var. *flavescens*)

(Hook.f.) Hack. ex Cheeseman; *Danthonia rigida* Raoul; *Danthonia rigida* Steud., nom. illeg., non *Danthonia rigida* Raoul)

New Zealand. Erect and spreading, stout, shoots slender, leaf blade deciduous, leaf sheaths pale green to light brown to orange, dead sheaths break crosswise, tough and glossy leaves, inflorescence open, panicle branched and loose, glumes acute or shortly awned, lemma hairy, harsh climate, on poorly drained areas, see *Annales des Sciences Naturelles; Botanique, sér. 3* 2: 116. 1844, *Synopsis Plantarum Glumacearum* 1: 243, 246. 1854, *Handbook of the New Zealand Flora* 332. 1864 and *Manual of the New Zealand Flora* 886. 1906, *New Zealand Journal of Botany* 1: 96. 1963, *New Zealand J. Bot.* 29: 253. 1991.

in English: snow tussock, narrow-leaved snow tussock

C. rigida (Raoul) Zotov subsp. *amara* Connor

New Zealand. Scabrid or hairy inflorescence, in boggy places, see *New Zealand Journal of Botany* 29(3): 254, f. 19. 1991.

C. rigida (Raoul) Zotov subsp. *rigida*

New Zealand. Glabrous inflorescence.

C. rubra Zotov (*Danthonia antarctica* var. *minor* Hook.f.; *Danthonia raoulii* Steudel)

New Zealand. Very tough, slender, upright, dense tussock forming, leaves needle-like red to purple, inflorescence open, glumes acute rarely awned, ornamental, pioneer, high waterlogging tolerance, tolerant of dry or wet conditions, high wind tolerance, seepages and swamps, tussock grassland, bogs, stream banks, see *Flora Novae-Zelandiae* 1: 302. 1853 and *New Zealand Journal of Botany* 1: 96. 1963.

in English: red tussock grass, copper tussock, red tussock

C. rubra Zotov subsp. *cuprea* Connor

New Zealand. Leaf sheath entire, see *New Zealand Journal of Botany* 29(3): 256, f. 23. 1991.

C. rubra Zotov subsp. *occulta* Connor

New Zealand. See *New Zealand Journal of Botany* 29(3): 257, f. 24. 1991.

C. rubra Zotov subsp. *rubra*

New Zealand. See *New Zealand Journal of Botany* 1: 96. 1963.

C. rubra Zotov var. *inermis* Connor

New Zealand. See *New Zealand Journal of Botany* 29(3): 255, f. 22. 1991.

C. rubra Zotov var. *rubra*

New Zealand. See *New Zealand Journal of Botany* 1: 96. 1963.

C. spiralis Zotov

New Zealand, South Island. Vulnerable species, perennial, slender, tussock-forming, leaf sheath glabrous and coiling

up, leaves narrow and sharply pointed, narrow inflorescence, branched panicles, spikelets 4- to 6-flowered, glumes acute or shortly awned, lemma hairy and long-awned, in limestone areas, see *New Zealand Journal of Botany* 1: 100. 1963.

C. teretifolia (Petrie) Zotov (*Danthonia teretifolia* Petrie)

New Zealand. Tussock, small, leaf blade juncous and disarticulating at ligule, persistent sheaths, hairy leaves twisting and deciduous, inflorescence open, few solitary spikelets, in grasslands, see *Transactions and Proceedings of the New Zealand Institute* 46: 36. 1914 and *New Zealand Journal of Botany* 1: 100. 1963.

C. vireta Connor

New Zealand. Slender, tussock, hairy sheaths entire, leaf blade twisting and disarticulating at ligule, inflorescence glabrous, see *New Zealand Journal of Botany* 29(3): 261, f. 25. 1991.

Chloachne Stapf = *Poecilostachys* Hack.

From the Greek *chloe*, *chloa* "grass, young grass" and *achne* "chaff, glume."

Two species, tropical Africa. Panicoideae, Panicoideae, Paniceae, perennial, decumbent, branched, tufted, herbaceous, rhizomatous, rambling, stoloniferous, scrambling, running, trailing, auricles absent, leaf blades lanceolate, ligule a fringed membrane, plants bisexual, inflorescence spicate or paniculate, racemes unilateral, spikelets in pairs or in triplets, 2 glumes unequal or subequal, palea present, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, forest shade, sometimes in *Poecilostachys*, see *Flore d'Oware* 2: 14. 1807 [1810], *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung 1* 89: 131. 1884, *Journal of the Linnean Society, Botany* 21: 317-353, 407-455. 1884-1885, *Boletim da Sociedade Broteriana* 6: 141. 1888 and *Journal of the Linnean Society, Botany* 40: 231. 1911, *Bulletin du Jardin Botanique de l'État* 9(3): 173. 1932, *Mémoires de l'Institut Scientifique de Madagascar, Série B, Biologie Végétale* 6: 1-272. 1955, W.D. Clayton and S.A. Renvoize, *Flora of Tropical East Africa Gramineae* 451-898. 1982.

Species

C. oplismenoides (Hack.) Robyns (*Chloachne secunda* Stapf; *Oplismenus anomalus* Peter; *Panicum oplismenoides* Hack.; *Poecilostachys flaccidula* Stapf ex Rendle; *Poecilostachys oplismenoides* (Hack.) Clayton)

Africa. See *Boletim da Sociedade Broteriana* 6: 141. 1888 and *Journal of the Linnean Society, Botany* 40: 231. 1911, *Hooker's Icones Plantarum* 31: t. 3072. 1916, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 1: 220.

1930 [1931], *Bulletin du Jardin Botanique de l'État* 9(3): 173. 1932, *Kew Bulletin* 42: 403. 1987.

C. secunda Stapf (*Chloachne oplismenoides* (Hack.) Robyns; *Panicum oplismenoides* Hack.; *Poecilostachys oplismenoides* (Hack.) Clayton)

Africa. See *Boletim da Sociedade Broteriana* 6: 141. 1888 and *Hooker's Icones Plantarum* 31: t. 3072. 1916, *Bulletin du Jardin Botanique de l'État* 9(3): 173. 1932, *Kew Bulletin* 42: 403. 1987.

Chloammia Raf. = *Vulpia* Gmelin

Perhaps from the Greek *chloe*, *chloa* “grass, young grass” and *ammos* “sand.” Pooideae, Poeae, Loliinae, type *Festuca tenella* Willd., see *Species Plantarum* 1: 73-76. 1753, *Species Plantarum. Editio quarta* 1(1): 419. 1797, *Flora Badensis Alsatica* 1: 8. 1805, C.S. Rafinesque, *Neogenyton* 4. 1825, *Genera Plantarum* 101. 1836, *Prodromus Florae Hispanicae* 1: 91. 1861, *Die Natürlichen Pflanzenfamilien* 2(2): 75. 1887 and E.D. Merrill, *Index rafinesquianus* 75. 1949, *Botaniska Notiser* 130: 173-187. 1977 [Morphological and anatomical variation of *Vulpia* (Gramineae)], *Nordic Journal of Botany* 1(1): 17-26. 1981, *Contributions from the United States National Herbarium* 48: 234, 690-694. 2003.

Chloammia Raf. ex Schlecht.

Perhaps from the Greek *chloe*, *chloa* “grass” and *ammos* “sand,” see E.D. Merrill, *Index rafinesquianus*. 75. 1949.

Chloothamnus Büse = *Nastus* Juss.

From the Greek *chloe*, *chloa* “grass” and *thamnos* “bush, shrub.”

Bambusoideae, Bambusodae, Bambuseae, Bambusinae, Hickeliinae, type *Chloothamnus chilianthus* Büse, see *Genera Plantarum* 34. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 580. 1791, *Plantae Javanicae Rariores* 42. 1848, *Plantae Junghuhnianae* 386. 1854 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 174. 1914, *Blumea* 2: 70-71. 1936, *Mémoires de l'Institut Scientifique de Madagascar, Série B, Biologie Végétale* 6: 1-272. 1955, R.E. Holttum, “The bamboo-genera *Nastus* and *Chloothamnus*.” *Kew Bulletin* 10: 591-594. 1956 [1955], *Taxon* 6(7): 202, 205. 1957, R.E. Holttum, “The bamboos of New Guinea.” *Kew Bulletin* 21(2): 263-292. 1967, W.C. Lin, “The species and distribution of bamboos in the Republic of Malagasy (Madagascar), East Africa.” *Special Bulletin of Taiwan Forestry Research Institute* no. 4. 1967.

Chloridion Stapf = *Stereochlaena* Hack.

Referring to *Chloris*.

See *Hooker's Icones Plantarum* 28: t. 2640. 1900, *Proceedings of the Rhodesia Scientific Association* 7(2): 65-66. 1908, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 45. 1940, W.D. Clayton, “The genus *Stereochlaena* (Gramineae).” *Kew Bulletin* 33(2): 295-297. 1978, *Flora of Tropical East Africa Gramineae* 451-898. 1982, *Kew Bulletin, Additional Series* 13: 298, 377. 1986.

Chloridopsis Hack. = *Trichloris* E. Fourn. ex Benth.

Referring to *Chloris*.

Chloridoideae, Cynodonteae, Chloridinae, see *Nova Genera et Species Plantarum seu Prodromus* 1, 25. 1788, *Varietates de Ciencias, Literatura y Artes* 2(4): 143. 1805, *Journal of the Linnean Society, Botany* 19: 102. 1881, *Mexicanas Plantas* 2: 142. 1886, *Die Natürlichen Pflanzenfamilien* 2(2): 59. 1887, *Revisio Generum Plantarum* 2: 771. 1891 and *Division of Botany, Circular (United States Department of Agriculture)* 32: 7. 1901, *U.S. Dept. Agric. Bull.* 772: 190. 1920, Adolf Pascher (1881-1945), *Die Süßwasser-Flora Deutschlands, Österreichs und der Schweiz* 4: 88, 103. 1927, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Flora Mesoamericana* 6: 287-289. 1994, *Flora of Ecuador* 68: 105-106. 2001 [by Laegaard, S. & P.M. Peterson], *Contributions from the United States National Herbarium* 41: 39-52, 222-223. 2001.

Chloris O. Swartz = *Actinochloris* Steud., *Agrostomia* Cerv., *Apogon* Steud., *Chloridopsis* Hack., *Chloroides* Fisch. ex Regel, *Chloropsis* Kuntze, *Chlorostis* Raf., *Geopogon* Steud., *Heterolepis* Boiss., *Heterolepis* Cass. (Asteraceae), *Heterolepis* Ehrenb. ex Boiss., *Leptochloris* Kuntze, *Phacellaria* Steud., *Phacellaria* Willd. ex Steud., *Pterochloris* (A. Camus) A. Camus, *Schultesia* Spreng., *Trichloris* Benth., *Trichloris* E. Fourn. ex Benth.

After the Greek goddess of flowers, Chloris, daughter of Amphion; Flora was the equivalent Roman goddess; Latin *chloris*, *chloridis* “verdant,” Greek *chloros* “green”; see Olof Peter Swartz, *Nova genera et species plantarum seu Prodromus*. 25. 1788.

About 35-55 species, tropical and warm temperate regions. Chloridoideae, Cynodonteae, perennial or annual, habitat

variable, 2- or 3-awned, herbaceous, slender, erect and decumbent or prostrate, forming spreading tussocks, caespitose, rhizomatous or stoloniferous, long-rhizomatous or long-stoloniferous, auricles absent, leaf sheaths keeled and chartaceous, ligule a fringed membrane, leaves linear and scabrous, plants bisexual, inflorescence spicate and digitate or subdigitate or very rarely single, spikelets laterally flattened and arranged on a short axis, rachilla nonarticulated, hidden cleistogenes absent or present, 1 perfect basal floret, 1 to several sterile florets above, 2 glumes unequal and keeled, upper glume acute or 2-toothed, fertile lemma awned and keeled, palea present, 2 free and fleshy lodicules in bisexual florets, stamens 3, ovary glabrous, 2 stigmas, small fruit not compressed or trigonous in cross section, weed species aggressive, cultivated useful fodder, valuable for forage, tussock grasses, native pasture species, decorative flower heads, reports of high contents of cyanogenic glycosides, ruderal species on disturbed ground, growing in poor soil, dry open habitats, grassland, pampas, rainforest, related to *Eustachys* Desv. and *Cynodon* Rich., often confused with *Enteropogon* Nees, hybridization with *Cynodon* Rich., type *Chloris cruciata* (L.) Sw., see *Prod. Veg. Ind. Occ.* 25. 1788 [also *Nova Genera et Species Plantarum seu Prodromus* 25. 1788], *Principes Fondamentaux de Somiologie* 26, 29. 1814 [1813], *Plantarum Minus Cognitarum Pugillus* 2: 17. 1815, *Bull. Sci. Soc. Philom. Paris* 1820: 26. 1820, *Conspectus Regni Vegetabilis* 4. 1828, *Nomenclator Botanicus. Editio secunda* 1: 352-353. 1840, *Nomenclator Botanicus. Editio secunda* 2: 343. 1841, *Index Seminum [St. Petersburg]* 28. 1863, *Naturaleza [Sociedad mexicana de historia natural]* 1: 345. 1870, *Flora Brasiliensis* 2(3): 63. 1878, *Flora Orientalis* 5: 554. 1884 and *Bulletin de la Société Botanique de France* 91: 63. 1944, *Bulletin de la Société Botanique de France* 97: 227. 1950, *Flora of Ethiopia and Eritrea* 7: 166-171. 1995, *Bulletin du Muséum d'Histoire Naturelle sér. 2*, 29: 349. 1957, *Folia Primatologica* 15: 1-35. 1971, D.E. Anderson, "Taxonomy of the genus *Chloris* (Gramineae)." *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Taxon* 25: 176-178. 1976, *Feddes Repert.* 94: 625-630. 1983, *Taxon* 32(3): 472. 1983, *Feddes Repert.* 96: 269-277. 1985, *Flora Mesoamericana* 6: 287-289. 1994, *Contributions from the United States National Herbarium* 41: 39-52, 222-223. 2001, *Flora of Australia* vol. 44B, Poaceae 3: 269-282. 2005, *Journal of Biogeography* 32(2): 311-327. Feb 2005, *Plant Pathology* vol. 54, issue 2: 253-253. Apr 2005, *Ecological Management and Restoration* vol. 6, issue 1: 43-50, 73-75. Apr 2005, *Botanical Journal of the Linnean Society* vol. 147, issue 4: 399-416. Apr 2005, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

C. sp.

in Mexico: escobetilla

C. acicularis Lindl. (*Chloris acicularis* var. *queenslandiae* Domin; *Enteropogon acicularis* (Lindl.) Lazarides)

Australia. Erect or spreading, glaucous, tussock forming, erect flowering stems, radiating spikes, food for finches, see *Journal of an Expedition into the Interior of Tropical Australia* 33. 1848 and *Bibliotheca Botanica* 85: 368. 1915, *Australian Journal of Botany, Supplementary Series* 5: 31. 1972.

in English: curly windmill grass

C. affinis Caro & E.A. Sánchez

Argentina. See *Kurtziana* 6: 224, f. 2. 1971.

C. amethystea Hochst.

Ethiopia. Perennial, loosely tufted, stoloniferous, leaf blades acute, spikelets 2-flowered and inconspicuously awned, confused with *Chloris gayana* Kunth, see *Flora* 38: 205. 1855.

C. andropogonoides Fourn. (*Chloris andropogonoides* E. Fourn. ex Hemsl.; *Chloris tenuispica* Nash)

North America, U.S., Mexico. Good forage, see *Biologia Centrali-Americana; ... Botany ...* 3: 558. 1885, *Mexicanas Plantas* 2: 143. 1886, *Bulletin of the Torrey Botanical Club* 25: 436. 1898.

in Mexico: verdillo esbelto

in English: slim-spike windmill grass, fingergrass, slim-spike windmillgrass

C. arenaria Hitchc. & Ekman (*Chloris eleusinoides* var. *vestita* Greenm. ex Combs)

Cuba. Endangered species, found on white sand, grassy riverbanks, pinelands, see *Transactions of the Academy of Science of St. Louis* 7: 477, t. 39. 1897 and *Manual of the Grasses of the West Indies* 131. 1936.

C. barbata Swartz (*Andropogon barbatus* sensu L. 1771 (also *barbata* and *barbatum*); *Andropogon polydactylon* L.; *Chloris barbata* (L.) Nash, nom. illeg., non *Chloris barbata* Sw.; *Chloris barbata* (L.) Swartz; *Chloris barbata* var. *divaricata* Kuntze; *Chloris barbata* var. *formosana* Honda; *Chloris dandyana* C.D. Adams; *Chloris inflata* Link; *Chloris longifolia* Steud.; *Chloris paraguayensis* Steud.; *Chloris paraguayensis* Steud.; *Chloris polydactyla* (L.) Sw.; *Chloris rufescens* Steud., nom. illeg., non *Chloris rufescens* Lag.; *Miscanthus polydactylos* (L.) Voss; *Saccharum polydactylum* (L.) Thunb.)

Tropics, origin uncertain. Annual or short-lived perennial, stout, glabrous, 3-awned, loosely tufted, simple or only branched at base, stems loosely clumped and ascending, erect or sometimes decumbent, often stoloniferous, base prostrate, sometimes rooting at the lowermost nodes, leaf

sheaths compressed and keeled, leaves linear and flat, ligule a ring of hairs or shortly pilose, inflorescence spicate and digitately arranged at the end of a flowering culm, spikelets secund and 3-awned, spikelets purple-red on short stalks in 2 rows alternately on each side of the spike, lowest fertile floret with long-bearded callus, glumes unequal, lower glume lanceolate, upper glume ovate, lemma oval with a purple awn, fertile lemmas bordered with long spreading hairs, palea oblong with folded margins, 2 lodicules, 3 stamens, a common weed species widespread in tropics and subtropics, high food value, fodder and forage, best grazed in mixture with other grasses, unpalatable when old, good fodder up to the time of flowering, young plants grazed by stock, suitable as hay when mixed with legumes, it stands drought well, can thrive on alkaline soils, often growing on road verges, wasteland, levee banks, along roadsides, abandoned fields, pastures, grassy slopes in dry areas, disturbed sites and creek lines, sandy beaches, on lowlands and coastal areas, in dry regions at lower elevations, in disturbed dry and mesic areas, see *Voy. Jamaica* 111, t. 65, f. 2. 1707, *Systema Naturae, Editio Decima* 2: 1305. 1759, *Species Plantarum, Editio Secunda* 2: 1483. 1763, *Mantissa Plantarum* 302. 1771, *Flora Japonica*, ... 42. 1784, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Flora Indiae Occidentalis* 1: 200, 203. 1797, *Essai d'une Nouvelle Agrostographie* 84, 158, 176. 1812, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 105. 1821, *Synopsis Plantarum Glumacearum* 1: 204-206. 1854, *Enum. Pl. Zeyl.* 5: 371. 1864, *Flora Brasiliensis* 2(3A): 1-160, t. 1-43. 1878, *Flora Australiensis: A Description ...* 7: 613. 1878, *Revisio Generum Plantarum* 2: 771. 1891, *Vilmorin's Illustrierte Blumengartnerei* 1: 1191. 1895, *Bulletin of the Torrey Botanical Club* 25: 443. 1898 and *Handb. Fl. Ceylon* 5: 275. 1900, *Botanical Magazine (Tokyo)* 40: 437. 1926, *Claves Generum et Specierum Graminearum Primarium Sinicarum Appendice Nomenclatione Systematica* 197. 1957, *Grasses of Burma ...* 465. 1960, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Phytologia* 21: 408. 1971, *Australian Journal of Botany, Supplementary Series* 5: 1-51. 1972, *Taxon* 25(1): 176-178. 1976, *Flora Illustrada Catarinense* 1(Gram.): 1-435. 1981, *Fl. Guianas, Ser. A, Phanerogams* 8: 136. 1990, *Rhodora* 94(878): 135-140. 1992, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996.

in English: swollen fingergrass, swollen chloris, swollen windmillgrass, purpletop chloris, purple top, peacock-plume grass, airport grass

in Spanish: paraguaita morada

in French: herbe cils

in Argentina: pasto borla

in Brazil: capim branco, capim guiamum, pé de galinha

in the Caribbean: ti pyé poul, zèb a bab, petit pied de poule, herbe à barbe

in Colombia: pasto blanco, siy, siyi

in Hawaii: mau'u lei

in Japan: murasaki-hige-shiba, shima-hige-shiba

in the Philippines Islands: banoko, korokorosan, koro-korosan, banuko

in India: adavigodhumulu, aptia, bardiya, botya jhara, chanderyot, chhinkri, gandi, gandi gavung, ganni, gavung, gondvel, goshva, hennu ganjalu garike hullu, jargi, jharna, kodai pullu, konda jeri, konda pulla, konda pullu, manchada kaalu hullu, myel kondai pullu, navilu baalada hullu, paluah, palwat, phulkia, phundi, punji, sevarugu pullu, uppa gaddi, uppugaddi, zende balada hullu

in Sri Lanka: kondai pul, mayuru tana

in Thailand: yaa rang nok, ya rang nok

in Ghana: kafar faraki, káfàr fàràki

C. berazainiae Catasus

America. See *Acta Botanica Cubana* 25: 5. 1985.

C. berroi Arechav. (*Chloris accumbens* Hack. ex Arechav.) (dedicated to M.B. Berro)

South America, Uruguay, Argentina. Perennial, clumped, cylindrical inflorescence spicate and digitate, spikelets densely arranged, growing in dry arid places, see *Anales del Museo Nacional de Montevideo* 1: 388, t. 44. 1896 and 5: 391. 1896.

in English: giant fingergrass, Uruguay grass

in Spanish: pata de gallo

C. boliviensis Renvoize

Bolivia. Perennial, tufted, leaf blades acuminate, solitary racemes, spikelets 3-flowered, glumes lanceolate and acuminate, lemma acute, dry or wet savannahs, see *Gramíneas de Bolivia* 347, f. 74. 1998.

C. bournei Rangachariar & Tadulingam

India. See *Journal of the Indian Botanical Society* 2: 189. 1921, *Current Science* 57(11): 617-618. 1988.

C. breviaristata (Hack. ex Kütz.) Herter (*Chloris polydactyla* var. *breviaristata* Hack. ex Kütz.)

South America. See *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 16: 257. 1899 and *Revista Sudamericana de Botánica* 6: 146. 1940.

C. breviseta Benth. (*Chloris virgata* var. *breviseta* (Benth.) Pilger ex Peter)

Africa, Benin. See *Niger Flora* 566. 1849 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 262. 1931.

C. canterae Arechav. (also *canterai*) (*Chloris barbata* Sw.; *Chloris parodiana* Rosengurt & Izaguirre; *Chloris polydactyla* f. *pauciradiata* Kurtz; *Chloris polydactyla* f. *stolonifera* Parodi) (named for Mr. C.B. Cantera)

South America, Argentina, Uruguay, Paraguay. Perennial, tufted, erect, leafy, growing along roadsides, grasslands, see *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Anales del Museo Nacional de Montevideo* 1: 385. 1896 and *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 16: 257. 1900, *Revista Argentina de Agronomía* 20: 24. 1953, *Boletín de la Sociedad Argentina de Botánica* 12: 124, 128, f. 4. 1968.

in English: Paraguayan windmill grass, windmill grass

in Spanish: pata de gallo

C. canterae Arechav. var. **canterae** (*Chloris parodiana* Rosengurt & Izaguirre)

South America. See *Anales del Museo Nacional de Montevideo* 1: 385. 1896 and *Boletín de la Sociedad Argentina de Botánica* 12: 128, f. 4. 1968.

in English: windmill grass

C. canterae Arechav. var. **grandiflora** (Roseng. & Izag.) D.E. Anderson (*Chloris grandiflora* Roseng. & Izag.)

America. See *Anales del Museo Nacional de Montevideo* 1: 385. 1896 and *Boletín de la Sociedad Argentina de Botánica* 12: 124, f. 3. 1968, *Brigham Young University Science Bulletin: Biological Series* 19(2): 32. 1974.

C. castilloniana Lillo & Parodi (named for L. Castillon)

Bolivia, Argentina. Annual, bunchgrass, erect, caespitose, glabrous, flat leaves, forage, very palatable, useful for erosion control, see *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 4: 176, f. 1-2. 1918.

C. castilloniana Lillo & Parodi var. **castilloniana**

South America.

C. castilloniana Lillo & Parodi var. **pubescens** Caro & E.A. Sánchez

South America. See *Kurtziana* 6: 230. 1971.

C. cheesemani Hack. ex Cheesem.

Cook Island. Endangered species, see *Fragmenta Phytographiae Australiae* 7: 118. 1870 and *Transactions of the Linnean Society of London, Botany*, ser. 2, 6: 305. 1903, *Kew Bulletin* 21: 108. 1967.

C. ciliata Sw. (*Andropogon pubescens* Aiton; *Andropogon pubescens* Vis., nom. illeg., non *Andropogon pubescens* Aiton; *Andropogon pubescens* Willd. ex Kunth, nom. illeg., non *Andropogon pubescens* Aiton; *Chloris brachyathera* (Hack. ex Parodi) Herter; *Chloris ciliata* var. *texana* Vasey; *Chloris nashii* A. Heller; *Chloris propinqua* Steud.; *Chloris texana* (Vasey) Nash; *Cynodon ciliatus* (Sw.) Raspail)

North and South America, West Indies. Perennial, caespitose, erect, branched, leaf blades glabrous or scabrous, good forage, growing in disturbed areas, open habitats, see *Nova Genera et Species Plantarum seu Prodromus* 25. 1788. *Hortus Kewensis; or, a catalogue ...* 3: 423. 1789, *Annales des Sciences Naturelles (Paris)* 5: 303. 1825, *Flora*

12(Erganz. 1): 3. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 498. 1833, *Synopsis Plantarum Glumacearum* 1: 204. 1854, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(1): t. 30. 1890, *Bulletin of the Torrey Botanical Club* 25: 441. 1898 and *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 16: 257. 1900, *Muhlenbergia: A Journal of Botany* 5: 120. 1909, *Revista de la Facultad de Agronomía y Veterinaria* 2: 271. 1919, *Revista Sudamericana de Botánica* 6: 146. 1940.

in English: fringed windmill grass, fringed chloris, false Rhodes grass

in Mexico: verdillo de fleco, yok-t'ut-suuk

C. ciliata Sw. f. **breviseta** Hack.

America.

C. ciliata Sw. f. **ciliata**

America.

C. ciliata Sw. var. **ciliata** (*Chloris brachyathera* (Hack. ex Parodi) Herter; *Chloris ciliata* var. *brachyathera* Hack. ex Parodi; *Chloris ciliata* var. *brachyathera* Hack.)

America. See *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 16: 257. 1900, *Revista de la Facultad de Agronomía y Veterinaria* 2: 271. 1919, *Revista Sudamericana de Botánica* 6: 146. 1940.

C. cruciata (L.) Sw. (*Agrostis cruciata* L.; *Chloris breviglumis* C. Wright; *Chloris humboldtiana* Steud.; *Cynodon cruciatus* (L.) Raspail; *Rhabdochloa cruciata* (L.) P. Beauv.; *Vilfa cruciata* (L.) P. Beauv.)

America. See *Systema Naturae, Editio Decima* 2: 873. 1759, *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Essai d'une Nouvelle Agrostographie* 16, 84, 158, 161, 176. 1812, *Annales des Sciences Naturelles (Paris)* 5: 303. 1825, *Synopsis Plantarum Glumacearum* 1: 205. 1854, *Anales de la Academia de Ciencias Medicas ...* 8: 200. 1871 and *Contr. U.S. Natl. Herb.* 12: 120. 1908.

C. cubensis A.S. Hitchc. & Ekman (*Chloris cubensis* Hitchc. & Ekman ex A.S. Hitchc.; *Chloris sagraeana* subsp. *cubensis* (Hitchc. & Ekman) Cat. Guerra)

Cuba. See *Manual of the Grasses of the West Indies* 131. 1936, *Acta Botanica Cubana* 25: 6. 1985, *Fontqueria* 44: 145. 1996.

in English: Cuban windmill grass

C. cucullata Bisch.

North America, Mexico, U.S., Texas, New Mexico. Perennial, caespitose, tall, erect, simple, sometimes with short stolons, flat bluish green stems and sheaths, leaves scabrous and acuminate, purplish terminal spikes, ornamental, fair forage value for both livestock and wildlife, growing in waste ground, arid soils, deserts and xeric shrublands, in flat sandy soils, on upland sandy soils, see *Annales des Sciences Naturelles; Botanique, sér. 3* 19: 357. 1853.

in English: hooded windmill grass, hooded windmillgrass, windmill grass, hooded fingergrass

in Mexico: papalote, verdillo, verdillo papalote

C. dandyana C.D. Adams (*Andropogon barbatus* L.; *Andropogon polydactylon* L.; *Chloris arundinacea* Nees ex Steud.; *Chloris barbata* Sw.; *Chloris barbata* (L.) Swartz; *Chloris barbata* (L.) Nash, nom. illeg., non *Chloris barbata* Sw.; *Chloris castilloniana* Lillo & Parodi; *Chloris consanguinea* Kunth; *Chloris elata* Desv.; *Chloris polydactyla* Sw.; *Chloris polydactyla* (L.) Sw.; *Chloris polydactyla* f. *stolonifera* Parodi)

U.S., Florida, Cuba, Argentina. Annual or perennial, erect bunchgrass, stemmy, leaf blade acuminate, inflorescence brown, lower lemma ciliate on the margins and keel, good forage, drought-tolerant, rhizomes against uterine disorders, common in disturbed places, dry sites, see *Systema Naturae, Editio Decima* 2: 1305. 1759, *Species Plantarum, Editio Secunda* 2: 1483. 1763, *Mantissa Plantarum* 302. 1771, *Nova Genera et Species Plantarum seu Prodrum* 26. 1788, *Flora Indiae Occidentalis* 1: 200. 1797, *Révision des Graminées* 1: 89. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 177. 1831, *Synopsis Plantarum Glumacearum* 1: 207. 1854, *Bulletin of the Torrey Botanical Club* 25: 443. 1898 and *Revista Argentina de Agronomía* 20: 24. 1953, *Phytologia* 21: 408. 1971, *Taxon* 25(1): 176-178. 1976, *Fl. Guianas*, Ser. A, 8: 136. 1990.

in Brazil: capim branco, capim guiamum, pé de galinha

C. dichanthioides Everist (*Austrochloris dichanthioides* (Everist) Lazarides)

Australia. See *Queensland Agricultural Journal* 49(5): 432, t. 155. 1938, *Australian Journal of Botany, Supplementary Series* 5: 35. 1972.

C. diluta Renvoize

South Africa, Transvaal. Perennial, wiry, erect, ascending, branching above the base, rhizomatous and rarely stoloniferous, leaf blades acuminate, inflorescence digitate to subdigitate, slender spikes, 2 florets, spikelets spaced, glumes lanceolate and membranous, awned, lemma elliptic, common on riverbanks, scrub forest, very similar to *Chloris pycnothrix* Trin., see *Kew Bulletin* 31(4): 844. 1977.

C. divaricata R. Br. (*Chloris cynodontoides* Balansa; *Chloris divaricata* var. *cynodontoides* (Balansa) Lazarides)

Queensland, New South Wales. Perennial, erect or decumbent, slender, creeping, mostly glabrous, simple or freely branching at lower joints, tufted to shortly stoloniferous, creeping runners, upright flower stalks, spikes digitate and spreading at maturity from a common center, spikelets imbricate and crowded, 2 florets, glumes very narrow-lanceolate, fertile lemma toothed at the apex and scabrous, upper lemma glabrous and deeply 2-lobed, noxious weed, alluvial areas, floodplains and areas subject to periodic flooding, dry regions, see *Prodrum Florae Novae*

Hollandiae 186. 1810, *Bulletin de la Société Botanique de France* 19: 318. 1872, *Flora Australiensis: A Description ...* 7: 612. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 9: 553. 1911, *Transactions and Proceedings of the Royal Society of South Australia* 37: 124, t. 5. 1913, *Australian Journal of Botany, Supplementary Series* 5: 18. 1972, *Brigham Young University Science Bulletin: Biological Series* 19(2): 85. 1974.

in English: spreading windmill grass, star windmill grass, star grass, slender chloris

C. divaricata R. Br. var. *cynodontoides* (Balansa) Lazarides
Australia. Rigid inflorescence branches.

C. divaricata R. Br. var. *divaricata*

Australia. Flexible inflorescence branches.

C. ekmanii Hitchc.

West Indies, Cuba. Pastures, see *Manual of the Grasses of the West Indies* 129. 1936.

C. elata Desv. (*Andropogon barbatus* L.; *Andropogon polydactylon* L.; *Chloris arundinacea* Nees ex Steud.; *Chloris barbata* (L.) Nash, non Sw.; *Chloris dandyana* C.D. Adams; *Chloris polydactyla* (L.) Sw.)

Bolivia, Brazil. Annual, dark green, caespitose, erect, herbaceous, inflorescence flexuous, along roadsides, see *Systema Naturae, Editio Decima* 2: 1305. 1759, *Species Plantarum, Editio Secunda* 2: 1483. 1763, *Mantissa Plantarum* 302. 1771, *Nova Genera et Species Plantarum seu Prodrum* 26. 1788, *Flora Indiae Occidentalis* 1: 200. 1797, *Révision des Graminées* 1: 89. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 177. 1831, *Synopsis Plantarum Glumacearum* 1: 207. 1854, *Bulletin of the Torrey Botanical Club* 25: 443. 1898 and *Revista Argentina de Agronomía* 20: 24. 1953, *Phytologia* 21: 408. 1971, *Taxon* 25(1): 176-178. 1976, *Fl. Guianas*, Ser. A, 8: 136. 1990.

in English: tall windmill grass, manyspiked chloris, manyspike fingergrass

C. exilis Renvoize

Brazil. Annual, slender, erect, decumbent, leaf blades linear, inflorescence subdigitate, spikelets oblong, glumes ovate, in cerrado or caatinga, on sandy soils, see *Kew Bulletin* 37(2): 323, f. 2. 1982.

C. ferruginea Renvoize (*Tetrapogon ferrugineus* (Renvoize) S.M. Phillips)

Africa, Kenya. Rare species, see *Kew Bulletin* 28(2): 195, f. 1. 1973, *Kew Bulletin* 42(2): 478. 1987.

C. filiformis Poir. (*Bouteloua simplex* Lag.; *Chloris filiformis* (Vahl) Poir.; *Chloris tenuis* Poir.)

Mauritius. Vulnerable species, second floret occasionally fertile, see also *Cynosurus filiformis* Vahl, see *Symbolae Botanicae, ...* 2: 20. 1790, *Varietades de Ciencias, Literatura y Artes* 2(4): 141. 1805, *Encyclopédie Méthodique.*

Botanique ... Supplément 2: 237-238. 1811, *Systema Vegetabilium 2*: 579. 1817, *Encyclopédie Méthodique. Botanique ... Supplément 5*: 614. 1817.

C. flabellata (Hack.) Launert (*Chloris pubescens* Peyr., nom. illeg., non *Chloris pubescens* Lag.; *Tetrapogon flabellatus* Hack.)

South Africa. Perennial, stoloniferous, woody and stout stolons, sward-forming, spikes stout and curved, upper glume with silky edge, useful for erosion control, common on saline marshes, flats, coastal regions, sandy places, muddy sites, see *Akademie der Wissenschaften in Wien, Sitzungsberichte, Mathematisch-naturwissenschaftliche Klasse, Abteilung I* 38: 385. 1860, *Bulletin de l'Herbier Boissier* 4: 810. 1896 and *Mitteilungen der Botanischen Staatssammlung München* 8: 147-163. 1970.

C. gabriellae Domin (*Chloris virgata* Sw.)

Australia. See *Flora Indiae Occidentalis* 1: 203. 1797 and *Bibliotheca Botanica* 85: 368, f. 83. 1915.

C. gayana Kunth (*Chloris abyssinica* Hochst. ex A. Rich.; *Chloris gayana* f. *genuina* Maire & Weiller; *Chloris gayana* f. *oligostachys* (Barratte & Murb.) Maire & Weiller; *Chloris gayana* subsp. *oligostachys* Barratte & Murb.; *Chloris glabrata* Andersson; *Chloris multiradiata* var. *ragazzii* Pirota; *Chloris repens* Hochst.; *Eustachys gayana* Mundy)

Tropical and southern Africa. Short-lived perennial or annual, very variable, leafy, glabrous, erect or ascending, culms often decumbent at the base then erect, simple or usually branched, tall and robust, tough and wiry, vigorous root system, sometimes forming tufts, usually strongly stoloniferous, rooting stolons, ligule membranous with hairy margins, leaf sheaths compressed and keeled, blades flat or folded, leaves linear and tapering, spikes or racemes subdigitate and spreading to somewhat erect, spikelets crowded or densely imbricate, spikelets rather coarse, 2 awns, florets 3 or 4, lowest floret fertile, upper florets awnless, glumes membranous and unequal, lemma tips truncate, fertile lemma lanceolate and ciliate on the margins and keel, 2 lodicules, 3 stamens, weed species widely naturalized and grown in tropical countries, escaped from cultivation, suitable for silage and hay, thatching, pasture grass in subtropical areas, cultivated fodder, relished by livestock, high grazing value, a valuable forage species, young growth very palatable, fairly drought resistant, usually will not survive prolonged drought or flooding, it does not grow well in shade, withstands trampling and recovers quickly, salt-tolerant, ground cover for erosion control, useful as a sand binder and soil stabilizer, grows on road margins and pastures, irrigated terraces, open bushland, disturbed sites, along roadsides in dry areas, vleis, riverbanks, lake margins, waste places, seasonally waterlogged plains, fields, open woodland and grassland, sown pastures, clay and clay-loam soils, red clay soil, infertile sands, in coastal and subcoastal areas, red loams, alluvial loam, alluvial soils, allied to

Chloris inflata, see *Révision des Graminées* 1(6): 89. 1829, *Révision des Graminées* 2: 293, t. 58. 1830, *Tentamen Florae Abyssinicae ... 2*: 406. 1850, *Flora* 38: 204. 1855, *Naturwissenschaftliche Reise nach Mossambique ... 2*: 557. 1864, *Annuario del Reale Istituto Botanico di Roma* 6: 157. 1896 and *Acta Universitatis Lundensis*, Sect. 2, 36: 8, t. 13. 1900, *Rhodesian Agricultural Journal* 14: 142. 1922, *Flore de l'Afrique du Nord*: 2: 204. 1953, *Grasses of Ceylon* 89. 1956, *Ceylon J. Sci. Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 466, f. 51. 1960.

in English: Hunyani grass, Rhodes grass, Rhodesgrass, Rhodesian blue grass, Rhodes chloris

in French: chloris, herbe de Rhodes

in Portuguese: capim-de-Rhodes

in Spanish: grama de Rodas, pasto de Rodas, pasto Rhodes, grama Rhodes

in Colombia: pasto rhodes

in Costa Rica: zacate gordura

in Mexico: pasto rodes, pasto rhodes, zacate rhodes

in East Africa: apwoyo

in Nigeria: garaaji, kauarin dooki, kauarin duki, pagamri

in Southern Africa: bruinvingergras, Rhodes chloris, Rhodes-gras, Rhodesgras, rooiklossiesgras; nyankomo (Zulu)

in the Philippines Islands: banuko, koro-korosan, Rhodes grass

in Thailand: ya rot

in Vietnam: tucgiêân

C. halophila Parodi (*Gymnopogon beyrichianus* (Kunth) Parodi)

Argentina. Racemes at maturity divergent to reflexed, fertile lemma awned, see *Essai d'une Nouvelle Agrostographie* 41, 164. 1812, *Révision des Graminées* 1: 89, 289. 1829 and *Revista del Centro de Estudiantes de Agronomía y Veterinaria. Buenos Aires* 18: 148, f. 55. 1925, *Revista Argentina de Agronomía* 12(1): 45. 1945.

C. halophila Parodi var. ***halophila***

America.

C. halophila Parodi var. ***humilis*** Christa Müller

Argentina to Ecuador, Peru, high Andes. Perennial, stoloniferous or rhizomatous, rooting and branching from nodes, mat-forming, flowering culms erect, leaf sheaths keeled, leaf blades linear, inflorescence of digitate or subverticillate racemes, glumes unequal and lanceolate, fertile lemma lanceolate with a straight awn, sterile lemma with a subapical awn, palea membranous, 2 lodicules, 3 stamens, open grassland, in disturbed ground, along roads, see *Feddes Repert.* 94(9-10): 627. 1983.

C. inflata Link (*Andropogon barbatus* sensu L. 1771 (also *barbata* and *barbatum*); *Chloris barbata* Sw.; *Chloris paraguayensis* Steud.)

Pantropical. Annual, stout, glabrous, tussocks, often pro-cumbent and rooting from basal nodes, auricles hairy, ligule a ciliate membrane, leaf blades linear long-attenuate, inflorescence of 8-16 digitate racemes erect, spikelets with 2-4 rudimentary florets, 3-4 weak and flexuous awns, glumes lanceolate, lemma of fertile floret ovate, sterile lemmas inflated, 2 lodicules, 3 stamens, dry grassland, roadsides, coastal lowland, see *Systema Naturae, Editio Decima* 2: 1305. 1759, *Mantissa Plantarum* 302. 1771, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 105. 1821, *Synopsis Plantarum Glumacearum* 1: 204-206. 1854.

C. jubaensis Cope

Somalia. Perennial, erect or ascending, tufted or stoloniferous, leaves obtuse and oblong, a head of digitate or subdigitate racemes, spikelets 2-3 awned, fertile lemma glabrous, see *Kew Bulletin* 50(1): 113, f. 2A-B. 1995.

C. lamproparia Stapf

Africa. Annual, tufted, erect or spreading, ascending, sometimes rooting at the nodes, leaf blades flat and acuminate, spikes paired or closely digitate, spikelets 3- to 4-flowered and 2-awned, inflated uppermost leaf sheaths embracing the spikes, glumes acuminate, lower glume papery, upper glume membranous, fertile lemma bearded at the margins, edible grains, good grazing for stock, possibly a source of minerals, found on dry soil, savannah, open places, rocky areas, dry bare soils, shallow sandy soil, see *Mémoires de la Société Botanique de France*, sér. 4, 8: 220. 1912.

in English: donkey's grass

in Arabic: aba malih

in Mali: dugu kunsingui

in Nigeria: gegera

in Upper Volta: bunagau

C. lobata Lazarides

Australia. Annual, erect or prostrate, stolons absent, inflorescence branches erect or spreading, spikelets pedicellate 2- to 3-flowered, deeply lobed second lemma, similar to *Chloris pumilio*, see *Australian Journal of Botany, Supplementary Series* 5: 20. 1972.

C. mensensis (Schweinf.) Cufod. (*Chloris somalensis* Rendle; *Gymnopogon mensensis* Schweinf.)

Eastern Africa, Ethiopia, Somalia. Perennial, tufted, long straggling stems, leaf blades linear and tapering to an acute apex, basal leaf sheaths flattened, open inflorescence, digitate or subdigitate racemes, spikelets long-awned, 2 florets, rudimentary second floret, glumes linear-lanceolate, fertile lemma lanceolate and glabrous, rocky areas, hillsides, dry open scrubland, grassland, see *Journal of Botany, British*

and Foreign 37: 66. 1899 and *Bulletin du Jardin Botanique National de Belgique* 38. 1968.

C. montana Roxb. (*Chloris decora* Thw., non Nees; *Chloris montana* var. *glauca* Hook.f.)

India, Sri Lanka. Perennial or sometimes annual, glabrous, strongly compressed, branched or simple, compact, ascending and rooting at the lower nodes, leaf sheaths folded and keeled, leaf blades pointed and acuminate, leaves folded and imbricate, spicate inflorescence erect and appressed, 5-awned spikelets, 5 florets, lowest floret bisexual, glumes mucronate, found in overgrazed areas, coastal, savannah, grassland, woodland, sandy dunes, wasteland, see *Fl. Ind.* 1: 331. 1820, *Enum. Pl. Zeyl.* 5: 371. 1864 and *Handb. Fl. Ceylon* 5: 276. 1900, *Grasses of Ceylon* 89. 1956, *Ceylon J. Sci. Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 466. 1960.

in India: gonde javara hullu

C. mossambicensis K. Schum. (*Tetrapogon mossambicensis* (K. Schum.) Chippind. ex B.S. Fisher)

Tropical Africa, Kenya, South Africa, Tanzania, Mozambique. Perennial, erect or ascending, tufted, robust, stoloniferous and rhizomatous, shortly rhizomatous or stoloniferous, culms compressed, basal sheaths strongly compressed or keeled, leaves oblong and obtuse, coarse inflorescence, digitate spikes or racemes straw to purplish colored, spikelets 2-awned, fertile lemma ciliate on the margins, fairly palatable, little grazing value, useful for erosion control, extremely drought-tolerant, growing on sandy soil, on clay and waterlogged soil, heavy clay soils, loose sandy soils, consolidated dunes, shady places, seasonal pans, grassland and open bush, in wet areas, riverbanks, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 1: 104. 1895 and *Grasses and Pastures of South Africa* 198. 1955.

in English: perennial spiderweb grass

in South Africa: meerjarige spinnerakgras

C. orthonoton Döll (*Chloris guaranitica* Parodi)

Brazil, Argentina. See *Flora Brasiliensis* 2(3): 64. 1878 and *Revista Argentina de Agronomía* 28: 106, f. 2. 1961 [1962].

C. paniculata Scribn.

Costa Rica. Bunchgrass, see *Proceedings of the American Academy of Arts and Sciences* 38: 262. 1902.

C. parvispicula Caro & E.A. Sánchez

Argentina. See *Kurtziana* 6: 227, f. 3. 1971.

C. pectinata Benth. (*Chloris divaricata* R. Br. var. *minor* J. Black; *Chloris divaricata* R. Br. var. *muelleri* Domin; *Chloris pectinata* var. *fallax* Domin; *Chloris pectinata* var. *typica* Domin)

Queensland, Northern Territory, South Australia, Western Australia, New South Wales. Annual, glabrous, erect or ascending, geniculate at the base, usually simple, leaves

flat, purplish spike-like racemes erect to slightly reflexed, spikelets packed and diverging, 2 florets, upper floret empty, glumes narrow-lanceolate membranous or hyaline, lemmas cartilaginous, fertile lemma 2-lobed and usually smooth, moderately palatable, grows in temporarily wet places, clayey soils, floodplains, waterholes and depressions, see *Flora Australiensis: A Description ...* 7: 612. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 9: 553. 1911, *Transactions and Proceedings of the Royal Society of South Australia* 37: 124, t. 5. 1913, *Bibliotheca Botanica* 85: 366. 1915.

in English: comb windmill grass, comb chloris

C. pilosa Schumach. (*Chloris breviseta* Benth.; *Chloris nigra* Hack.)

Tropical Africa. Annual, tufted, erect, ascending or geniculately ascending, slender to robust, often rooting at the lower nodes, spreading by lateral runners, sheaths rolled, hairy auricles, leaf blades finely pointed, inflorescence more or less erect with few loosely digitate spikes, spikelets 3-flowered, 2 upper florets reduced to lemma, lowest floret bisexual, first lemma obovate and gibbous, 2nd lemma cuneate and inflated, glumes 2, awn length variable, grain translucent, good forage, pasture, good quality hay, along roadsides margins, disturbed places, related to *Chloris virgata*, see *Beskrivelse af Guineiske planter* 55-56. 1827 [also in *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Aft. 3: 75-76. 1828*], *Niger Flora* 566. 1849 and *Boletim da Sociedade Broteriana* 21: 179. 1906, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 262. 1931, *Bulletin du Jardin Botanique National de Belgique* 57(3-4): 455. 1987.

in English: goat's beard

in Gambia: kending na'kurto

in Liberia: duo su, duo suo

in Mali: babunsi, bakoron mbonsi, keenie geu, ngolo ntéguélé

in Niger: darambua, karam faryé, kata-kutey asadiora, kwai engermaka

in Nigeria: ééran, eríran, kafan gauraka, kafan pakara, kafar fakaràà, kafar gauraka, kafar tsuntsuu, kerkole, kila silum, kilasilim, kwoyde kumare, sawun gauraka, tafin gauraka, taphin gauraka, tiksha digo

in Senegal: babunsi, bakoron mbonsi, guendjar, ngolo ntéguélé, sivandan ngoromdom, tiokol, tiokol peul

in Yoruba: ééran, eríran

C. polystachya Roxb. (*Chloris polystachya* Lag.)

America, Asia. See *Hortus Bengalensis, or a catalogue ...* 82. 1814, *Genera et species plantarum* 4. 1816, *Nova Genera et Species Plantarum* 1: 167-168, pl. 50. 1815 [1816], *Flora Indica; or Descriptions ...* 1: 332. 1820.

C. pumilio R. Br. (*Chloris pallida* Hack., nom. illeg., non *Chloris pallida* Willd.; *Chloris ruderalis* Domin; *Chloris ruderalis* f. *biaristulata* Domin; *Chloris ruderalis* f. *robusta* Domin; *Chloris ruderalis* var. *ruderalis*; *Chloropsis pumilio* (R. Br.) Kuntze)

Australia. Annual, erect or decumbent, see *Prodromus Florae Novae Hollandiae* 186. 1810, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 244. 1885, *Revisio Generum Plantarum* 2: 771. 1891 and *Bibliotheca Botanica* 85: 365. 1915, *Brigham Young Univ. Sci. Bull., Biol. Ser.* 19(2): 82. 1974.

C. pycnothrix Trin. (*Chloris beyrichiana* Kunth; *Chloris beyrichiana* Steud.; *Chloris crinita* Salzm. ex Döll, nom. illeg., non *Chloris crinita* Lag.; *Chloris humilis* Kunth; *Chloris intermedia* A. Rich.; *Chloris leptostachya* Hochst. ex A. Rich.; *Chloris leptostachya* var. *intermedia* (A. Rich.) T. Durand & Schinz; *Chloris obtusifolia* Desv., nom. illeg., non *Chloris obtusifolia* Trin.; *Chloris radiata* (L.) Swartz; *Chloris radiata* Ekm. non (L.) Swartz; *Chloris radiata* var. *beyrichiana* (Kunth) Hack. ex Stuck.; *Chloris radiata* var. *beyrichiana* (Kunth) Hack.; *Chloris salzmannii* Steud.; *Gymnopogon beyrichianus* (Kunth) Parodi; *Gymnopogon haumanii* Parodi; *Gymnopogon radiatus* var. *beyrichiana* (Kunth) Parodi) (*Chloris salzmannii* Steud. Dedicated to the German botanist Philipp Salzman, 1781-1851, physician, entomologist, plant collector and traveler (Brazil and North Africa), wrote *Enumeratio plantarum rariorum, in Gallia australi sponte nascentium*. Mospelii 1818. See John Hendley Barnhart (1871-1949), *Biographical notes upon botanists*. Boston 1965; H.N. Clouke, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 237. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933) (*Gymnopogon haumanii* Parodi for the Belgian botanist Lucien Hauman, 1880-1965, studied under Leo (-Abram) Errera (1858-1905), from 1904 to 1926 Faculty of Agronomy in Buenos Aires (Argentina), 1928-1950 professor of botany at Bruxelles, author of *La végétation des hautes Cordillères de Mendoza*. Buenos Aires 1919, Buenos Aires 1917-1923 *Catalogue des phanérogames de l'Argentine* jointly written with G. Vanderveken and Luis H. Irigoyen; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 139. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Tropical Africa, South America, Venezuela to Argentina. Annual or perennial, loosely tufted, erect or bent at the nodes and ascending, sometimes stoloniferous and spreading with short stolons, often rooting at the lower nodes, flattened leafy shoots, fibrous roots, ligule membranous with hairy margin, leaf sheath strongly compressed, leaf

blades flat and blunt to bluntly acute, inflorescence a star-shaped whorl of 2-8 narrow spikes or digitate racemes, 2-flowered, purplish awn, glumes linear-lanceolate and acuminate-mucronate, lemmas glabrous, lowest lemma acuminate, 1 to 2 awns, a common weed species of annual and perennial crops, palatable, fodder, forage, good hay, very low grazing value, colonizer, useful for erosion control, found in wasteland on light and heavy soils, fields borders, high rainfall areas, weedy places, lawns, shallow stony soils, red and stony soils, gardens and roadsides, woodland margins, in disturbed places, edge of sidewalk, riverbanks, cultivated lands, limestone hillsides, grasslands, fallows, margins of irrigation ditches, irrigated grassland, see *Systema Naturae, Editio Decima* 873. 1759, *Nova Genera et Species Plantarum seu Prodrumus* 26. 1788, *De Graminibus unifloris et sesquifloris* 234. Petropoli 1824, *Révision des Graminées* 1: 89, 289. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 177. 1831, *Nomenclator Botanicus* (edition 2.) 1: 353. 1840, *Tentamen Florae Abyssinicae ...* 2: 407. 1850, *Synopsis Plantarum Glumacearum* 1: 206. 1854, *Flora Brasiliensis* 2(3): 64. 1878, *Conspectus Florae Africae* 5: 861. 1894 and *Anales del Museo Nacional de Buenos Aires* 13: 489. 1906, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 4: 173, 180, 183. 1918, *Revista del Centro de Estudiantes de Agronomía y Veterinaria. Buenos Aires* 18: 148, f. 55. 1925.

in English: orchard grass, radiate fingergrass, spiderweb chloris, spider-web grass, spiderweb grass, false stargrass

in Spanish: zacate estrella

in East Africa: apama, ekode

in Nigeria: eéran, eríran, kerkole, kilasilim, kila silum, kiri kiri, sawun gauraka, tafin gauraka, taphin gauraka, tiksha digo, tsawko, zankon gauraka, zanzon gauraka

in Somalia: harfo, domar

in South Africa: spinnerakchloris, spinnerakgras

C. radiata (L.) Swartz (*Agrostis radiata* L.; *Chloris biflora* Regel; *Chloris crinita* Salzm. ex Döll, nom. illeg., non *Chloris crinita* Lag.; *Chloris durandiana* Schult.; *Chloris glaucescens* Steud.; *Chloris gracilis* P. Durand; *Chloris pallascens* Regel; *Chloris pycnothrix* Trin.; *Chloris radiata* Heyne ex Roth, nom. illeg., non *Chloris radiata* (L.) Sw.; *Chloris radiata* var. *longiaristata* Christa Müller; *Chloris scoparius* (Lam.) Desf.; *Chloris scoparius* Regel, nom. illeg., non *Chloris scoparius* (Lam.) Desf.; *Chloris tacnensis* Steud. ex Lechler; *Cynosurus scoparius* Lam.; *Gymnopogon radiatus* (L.) Parodi) (*Chloris durandiana* Schult. possibly dedicated to Philippe Durand, fl. 1798-1807, French clergyman and botanical collector in Morocco and South Spain; the Belgian botanist Théophile Alexis Durand (1855-1912), with the Swiss botanist Hans Schinz (1859-1941) wrote *Conspectus florae Africae*, ou, Enumération des plantes d'Afrique. Bruxelles (Jardin botanique de l'État), Berlin (R. Friedlaender & Sohn), Paris (Paul

Klincksieck) 1895-1898 and *Études sur la flore de l'État indépendant du Congo*. Bruxelles (Hayez) 1896, with his daughter Héléne (1883-1934) wrote *Sylloge florae congolanae* [Phanerogamae]. Bruxelles (Albert De Boeck) 1909; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 485. 1965)

Tropical America, Mexico. Annual, very variable, loosely tufted, erect, ascending, often with procumbent base, usually spreading and much branched at the base, rooting at nodes and often purplish at the nodes, ligule a short membrane, leaves flat or folded with apex blunt, leaf sheaths flattened and glabrous or slightly inflated, inflorescence spikeate and digitate, racemes erect to divergent, flexuous lateral branches clustered near the tip of a straight central rachis, spikelets erect, slender rudimental floret linear, glumes unequal, lemma lanceolate, 2 lodicules, 3 stamens, weed, good forage, growing in disturbed sites, wetlands, dry wastelands, reservoir banks, abandoned fields and roadsides, dry or muddy soil, cultivated areas, pastures, ditches, see *Systema Naturae, Editio Decima* 873. 1759, *Encyclopédie Méthodique, Botanique* 2: 188. 1786, *Nova Genera et Species Plantarum seu Prodrumus* 26. 1788, *Tableau de l'École de Botanique* 14. 1804, *De Quibusdam Chloridis Speciebus* 10. 1808, *Novae Plantarum Species* 61. 1821, *Mantissa* 2: 341. 1824, *De Graminibus unifloris et sesquifloris* 234. Petropoli 1824, *Révision des Graminées* 1: 89, 289. 1829, *Synopsis Plantarum Glumacearum* 1: 206. 1854, *Berberides Americae Australis* 56. 1857, *Annotationes Botanic. Index Seminum* 28. 1863, *Flora Brasiliensis* 2(3): 64. 1878 and *Anales del Museo Nacional de Buenos Aires* 13: 489. 1906, *Contr. U.S. Natl. Herb.* 12: 120. 1908, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 4: 180. 1918, *Feddes Repertorium* 94(9-10): 625, f. 2. 1983.

in English: bearded lawn-grass, radiate fingergrass, plush-grass

in Spanish: grama de costa

in Japan: hige-shiba

C. robusta Stapf

Tropical Africa. Perennial, robust, woody, geniculate, rooting at the nodes, a source of minerals, growing on sandy places, sandy banks, sandy riverbeds, see *Mémoires de la Société Botanique de France*, sér. 4, 8: 221. 1912.

in Nigeria: eru luludo, kaasaraa

in Yoruba: eru luludo

C. roxburghiana Schult. (*Chloris myriostachya* Hochst.; *Chloris myriostachya* Hochst. var. *minor* Chiov.; *Chloris polystachya* Roxb., nom. illeg., non *Chloris polystachya* Lag.) (for the Scottish (b. Ayrshire) botanist William Roxburgh, 1751-1815 (d. Edinburgh), physician, M.D. Edinburgh, traveler and plant collector, 1776-1780 with the East India Company in the Madras Medical Service, from 1781 Superintendent of the Samalkot Botanic Garden, 1793-1813

Superintendent of the Calcutta Botanic Garden and Chief Botanist of East India Company, from 1798 to 1799 at Cape, 1799 Fellow of the Linnean Society, 1814 St. Helena, among his writings are *Account of the Chermes Lacca* ... from the Philosophical Transactions. [London 1791], *Flora Indica; or Descriptions of Indian Plants*, etc. [Edited by William Carey, 1761-1834] Serampore 1832, *Plants of the Coast of Coromandel*. London 1795-1820 and *Hortus bengalensis*. Serampore 1814. See Joseph François Charpentier-Cossigny de Palma, *Essai sur la fabrique de l'indigo*. Isle de France 1779 and *Memoir Containing an Abridged Treatise, on the Cultivation and Manufacture of Indigo*. [Process of Making Indigo on the Coast of Ingeram, by William Roxburgh.] Calcutta 1789; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. London 1914; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980; Stafleu and Cowan, *Taxonomic literature*. 4: 954-958. 1983; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 46, 178. 1904; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 597-598. 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; N. Hall, *Botanists of the Eucalypts*. 1978 and Supplement 1980; J.H. Barnhart, *Biographical notes upon botanists*. 3: 187. 1965; K. Biswas, editor, *The Original Correspondence of Sir Joseph Banks Relating to the Foundation of the Royal Botanic Garden, Calcutta and The Summary of the 150th Anniversary Volume of the Royal Botanic Garden, Calcutta*. Calcutta 1950; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. London 1969; Mary Gunn and L.E. Codd, *Botanical Exploration of Southern Africa*. 303. A.A. Balkema Cape Town 1981; Mariella Azzarello Di Misa, editors, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 237. Regione Siciliana, Palermo 1988; K. Lemmon, *Golden Age of Plant Hunters*. London. 1968; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. 1975; M. Archer, *Natural History Drawings in the India Office Library*. London 1962; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 341. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. Leipzig 1981)

Tropical Africa, Arabia, eastern and southern Africa, Angola, India. Perennial bunchgrass, erect or procumbent,

tufted to densely tufted, coarse, tussocky, flat shoot bases, tough spreading stolons, rhizomatous, young growth very succulent, basal sheaths strongly keeled, lowest leaf sheaths usually white or straw-colored, leaves linear tapering to an acute apex, dense feathery inflorescence, spikes or racemes numerous and arranged on a long central axis, feathery panicles straw-colored or purple, spikelets long-awned, 3 or 4 awns, fertile lemma elliptic and ciliate to sparsely ciliate, grains and leaves eaten by baboons, ornamental, excellent for dry flower arrangements, a good fodder, readily grazed, drought-tolerant, useful for erosion control, often a pioneer grass, grows in arid and semiarid areas, amongst bushes, stony slopes, in shallow clay loam, loose sandy soils, abandoned cultivation, old termite nesting grounds, red gravelly soil, savannah, open grassland, open scrub, desert woodland, shrubland, loams and alluvial silts, on sandy or alluvial soils, see *Flora Indica; or Descriptions* ... 1: 332. 1820, *Mantissa* 2: 339. 1824, *Flora* 38: 204. 1855 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 54. 1903, *Journal of Economic and Taxonomic Botany* 22(2): 491-494. 1998.

in English: horsetail grass, plumed chloris

in India: bamna, hika gadi, mathaniya, salakodam gadi

in Somalia: anekuduk, anadug

C. rufescens Lag. (*Agrostomia aristata* Cerv.; *Chloris aristata* (Cerv.) Swallen; *Chloris peregrina* P. Durand; *Chloris rufescens* Llanos, nom. illeg., non *Chloris rufescens* Lag.; *Chloris rufescens* Steud., nom. illeg., non *Chloris rufescens* Lag.)

Mexico. See *Varietades de Ciencias, Literatura y Artes* 2(4): 143. 1805, Philippe Durand [l'abbé] (*fl.* 1795-1815), *De Quibusdam Chloridis Speciebus* 11, 22. Monspeli 1808, *Fragmentos de Algunas Plantas Filipinas* 31. 1851, *Synopsis Plantarum Glumacearum* 1: 206. 1854, *Naturaleza [Sociedad mexicana de historia natural]* 1: 345. 1870 and *North American Flora* 17(8): 596. 1939, *Taxon* 50: 846. 2001.

C. sagraeana A. Rich. (*Chloris eleusinoides* Griseb.; *Chloris morales-coelloi* León ex Britton) (named for Ramon de la Sagra, 1798-1871)

North America, the Caribbean, Cuba. Growing in waste places, sandy areas, see *Historia Fisica Politica y Natural de la Isla de Cuba, Botánica* 11: 315. 1850, *Flora of the British West Indian Islands* 539. 1864 and *Bulletin of the Torrey Botanical Club* 53: 458. 1926, *Acta Botanica Cubana* 25: 1-6. 1985, *Fontqueria* 46: [i-ii], 1-259. 1997.

in English: roadside windmill grass

C. sagraeana A. Rich. subsp. **cubensis** (Hitc. & Ekman) Catus (*Chloris cubensis* Hitc. & Ekman)

America. See *Manual of the Grasses of the West Indies* 131. 1936, *Acta Botanica Cubana* 25: 6. 1985, *Fontqueria* 44: 145. 1996.

C. sagraeana A. Rich. subsp. *sagraeana*

America.

C. scariosa F. Muell. (*Chloris scariosa* P. Beauv.; *Oxychloris scariosa* (F. Muell.) Lazarides)

Australia. Annual or short-lived perennial, stiff, glabrous, erect, densely tufted, simple or branched, spikes erect, whitish spikelets, glumes hyaline, lemmas with broad scarious wings, this grass appears not to be grazed to any extent, often occurs in areas of high salinity, on red-earth soils under mulga, on low rocky hills, creek banks and on heavy soils under gidgee, water courses, see *Essai d'une Nouvelle Agrostographie* 79, 158. 1812, *Fragmenta Phytographiae Australiae* 6: 85. 1867 and *Nuytsia* 5(2): 283. 1984[1985]. in English: winged windmill grass, winged chloris, wing chloris

C. sesquiflora Burkart

Argentina. See *Boletín de la Sociedad Argentina de Botánica* 12: 287, f. 2. 1968.

C. spathacea Hochst. ex Steud. (*Chloris spathacea* Baill., nom. illeg., non *Chloris spathacea* Hochst. ex Steud.; *Cryptochloris spathacea* (Hochst. ex Steud.) Benth.; *Tetrapogon cenchriformis* (A. Rich.) Clayton; *Tetrapogon macranthus* var. *spathaceus* (Hochst. ex Steud.) Chiov.; *Tetrapogon spathaceus* (Hochst. ex Steud.) Hack. ex T. Durand & Schinz; *Tetrapogon spathaceus* (Hochst. ex Steud.) Macloskie, nom. illeg., non *Tetrapogon spathaceus* (Hochst. ex Steud.) Hack. ex T. Durand & Schinz)

Africa. See *Tentamen Florae Abyssinicae ...* 2: 422, t. 101. 1850, *Synopsis Plantarum Glumacearum* 1: 204. 1854, *Journal of the Linnean Society, Botany* 19: 106. 1881, *Hooker's Icones Plantarum* 14: t. 1376. 1882, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1070. 1893, *Conspectus Florae Africae* 5: 864. 1894 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2]*, *Botany* 8(1,5,1): 211. 1904, *Annuario del Reale Istituto Botanico di Roma* 8(3): 352. 1908, *Kew Bulletin* 16: 247-250. 1962.

C. subaequigluma Rendle (*Bracteola subaequigluma* (Rendle) C.E. Hubb.; *Chrysochloa subaequigluma* (Rendle) Swallen)

Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 222. 1899 and *Bulletin of Miscellaneous Information Kew* 1934: 117. 1934, *Proceedings of the Biological Society of Washington* 54: 44. 1941.

C. submutica Kunth (*Agrostomia mutica* Cerv.; *Chloris inermis* Trin.; *Chloris polystachya* Lag.; *Chloris pratensis* Lesible ex Steud.; *Chloris subbiflora* Steud.; *Eustachys polystachya* (Lag.) Kunth; *Eustachys submutica* (Kunth) Roem. & Schult.; *Phacellaria panicea* Willd. ex Steud.)

North America, New Mexico, Mexico. Perennial, erect, simple, tussock, caespitose or shortly stoloniferous, lower

nodes geniculate and rooting, leaves glabrous, leaf sheaths slightly inflated and keeled, ligule a short membrane, leaf blades linear, subverticillate racemes, glumes lanceolate and unequal, fertile lemma with mucro or awnlet, forage, found in cultivated areas, along roadsides, see *Nova Genera et Species Plantarum* 1: 167-168, pl. 50. 1815 [1816], *Genera et species plantarum* 4. 1816, *Systema Vegetabilium* 2: 614. 1817, *De Graminibus unifloris et sesquifloris* 232. Petropoli 1824, *Révision des Graminées* 1: 88. 1829, *Nomenclator Botanicus* 1: 353. 1840, *Nomenclator Botanicus. Editio secunda* 2: 313. 1841, *Synopsis Plantarum Glumacearum* 1: 206-207. 1854, *Naturaleza [Sociedad mexicana de historia natural]* 1: 345. 1870.

in English: Mexican windmill grass

in Mexico: pata de gallo, pato de gallo mexicano, tupikua, zacate

C. suringarii Hitchc.

West Indies. See *Symbolae Antillarum* 7: 167. 1912.

C. tenella J. König ex Roxb. (*Chloris tenella* Roxb.; *Chloris triangulata* Hochst. ex A. Rich.; *Ctenium indicum* Spreng.; *Lepidopironia triangulata* (Hochst. ex A. Rich.) Hochst. ex Schumach.; *Tetrapogon tenellus* (J. König ex Roxb.) Chiov.; *Tetrapogon triangularis* (Hochst. ex A. Rich.) Hochst.; *Tetrapogon triangulatus* (Hochst. ex A. Rich.) Schweinf.; *Tetrapogon triangulatus* var. *agowensis* Chiov.; *Tetrapogon triangulatus* var. *sericatus* Chiov.)

India. Erect, decumbent, smooth, leaves smooth and soft, spikes solitary or in pairs, 3- to 5-flowered, good fodder grass, see *Hortus Bengalensis, or a catalogue ...* 82. 1814, *Flora Indica: or Descriptions ...* 1: 330. 1820, *Systema Vegetabilium, editio decima sexta* 1: 274. 1825, *Tentamen Florae Abyssinicae ...* 2: 409. 1850, *Bulletin de l'Herbier Boissier* 2: App. 2: 97. 1894, *Annuario del Reale Istituto Botanico di Roma* 6: 171, t. 15. 1896, *Fl. Br. Ind.* 7: 291. 1896 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 352. 1908, *Grass. Saudi Arabia* 302. 1989.

in India: kagya, morbhaga ghas

C. texensis Nash (*Chloris nealleyi* Nash) (named for Greenleaf Cilley Nealley, 1846-1896)

U.S., Texas. Rare vulnerable endangered species, growing in sandy to sandy loam soils, coastal prairie grasslands, see *Bulletin of the Torrey Botanical Club* 23: 151. 1896, *Bulletin of the Torrey Botanical Club* 25: 435. 1898.

in English: Texas windmill grass, Texas windmillgrass

C. transiens Pilg. (*Schoenefeldia transiens* (Pilg.) Chiov.)

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 418. 1914, *Resultati Scientifici della Missione Stefanini-Paoli nella Somalia Italiana* 1: 186. 1916.

C. triangulata Hochst. ex A. Rich. (*Lepidopironia triangulata* (Hochst. ex A. Rich.) Hochst. ex Schumach.; *Tetra-*

pogon tenellus (J. König ex Roxb.) Chiov.; *Tetrapogon triangularis* (Hochst. ex A. Rich.) Hochst.; *Tetrapogon tri-angulatus* (Hochst. ex A. Rich.) Schweinf.)

Africa. See *Flora Indica; or Descriptions ...* 1: 330. 1820, *Tentamen Florae Abyssinicae ...* 2: 409. 1850, *Bulletin de l'Herbier Boissier* 2: App. 2: 97. 1894 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 352. 1908.

C. truncata R. Br. (*Chloris elongata* Poir.; *Chloris megastachya* Schrad. ex Schult.; *Chloris truncata* f. *abbreviata* Thell.)

Queensland, New South Wales, South Australia, Western Australia. Annual or perennial, small, usually simple or unbranched, leafy, coarse, oblique or erect, slender, glabrous, forming compact tufts, sometimes stoloniferous with short and branched stolons, leaves flat or folded with apex obtuse, dull green basal leaves, inflorescence spicate and branched, racemes widely spreading at maturity, spikes digitate and spreading horizontally when in flower, spikes arranged like the vanes of a windmill, spikelets rather distant, florets often black to bright purple when mature, upper floret empty, glumes unequal with or without a short point, lemmas cartilaginous, fertile lemma narrow-elliptic with apex truncate, long and roughened awns, moderate fodder value, readily grazable when young, unpalatable with age, decorative when in flower, cultivated as an ornamental plant, ingestion of this plant is said to produce photosensitisation in animals, a colonizer of some eroded soils and scalded areas, suitable for rehabilitation, useful for landscaping, provides excellent habitat for the Common Froglet, grows on heavy clay soils, wasteland, in pastures, stony or sandy ground, disturbed places, in open fields and river settings, on plains, gray clays, on red or black earths, see *Prodromus Florae Novae Hollandiae* 186. 1810, *Encyclopédie Méthodique. Botanique ... Supplément* 2: 236. 1811, *Mantissa* 2: 340. 1824 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 706. 1919.

in English: stargrass, umbrella grass, umberalla grass, windmill grass, creeping windmill grass, Australian fingergrass

C. ventricosa R. Br. (*Chloris sclerantha* Lindl.; *Chloris ventricosa* var. *tenuis* Benth.)

Queensland, Victoria, New South Wales, South Australia. Perennial, dull green, stoloniferous, forming spreading tufts, stems variable but usually branched, prostrate or spreading to erect, leaves close to the ground, inflorescence spicate and spreading like a windmill, spikes flexible and digitate, spikelets closely packed along the branches and shortly awned, 2 or 3 florets, glumes scarious, upper lemma blunt, awns glabrous, callus pubescent, pioneer grass, suitable for revegetation and pasture, cultivated as an ornamental, very hardy, attractive and decorative, grows in woodland on good soil, see *Prodromus Florae Novae Hollandiae* 186. 1810, *Journal of an Expedition into the Interior of Tropical*

Australia 31. London 1848, *Flora Australiensis: A Description ...* 7: 613. 1878.

in English: Australian weeping grass, windmill grass, Australian windmill grass, tall windmill grass, tall chloris

C. verticillata Nutt.

North America, U.S., New Mexico, Texas. Perennial bunchgrass, low, in small tufts, blue-green, erect, strongly flattened stems usually branched at the base and rooting at the lower nodes, small fringed ligule, auricles absent, leaf blades narrow and folded, leaf sheaths compressed and very flat, inflorescence windmill-like and terminal, spikelets alternate and awned, poor economic value, grows in heavy sand and gravelly soils, old fields, waste places, on railroad tracks, on disturbed rocky sites, dry prairies and plains, disturbed ground, on roadsides, lawns, on the sandy riverbanks, in developed land and successional field, see *Transactions of the American Philosophical Society, new series*, 5: 150. 1835, *Pacif. Railr. Rep.* 2: 176. 1855, *Botanische Zeitung. Berlin* 19(46): 341. 1861, *Contributions from the United States National Herbarium* 2(3): 528. 1894, *Bulletin of the Torrey Botanical Club* 25: 439. 1898.

in English: tumble windmill grass, tumble windmillgrass, windmill grass

C. virgata Swartz (*Agrostomia barbata* Cerv.; *Andropogon curtipendulus* (Michx.) Spreng. ex Steud.; *Atheropogon curtipendulus* (Michx.) E. Fourn.; *Bouteloua curtipendula* (Michx.) Torr.; *Chloris alba* J. Presl; *Chloris alba* var. *aristulata* Torr.; *Chloris albertii* Regel; *Chloris barbata* var. *decora* (Nees ex Steudel) Benth.; *Chloris brachystachys* Andersson; *Chloris caudata* Trin. ex Bunge; *Chloris compressa* DC.; *Chloris curtipendula* Michx.; *Chloris decora* Nees ex Steudel; *Chloris elegans* Kunth; *Chloris gabriellae* Domin; *Chloris gracilis* P. Durand; *Chloris madagascariensis* Steud.; *Chloris meccana* Hochst. ex Steud.; *Chloris multiradiata* Hochst.; *Chloris notocoma* Hochst.; *Chloris penicillata* Jan. ex Trin., nom. illeg., non *Chloris penicillata* (Vahl) Pers.; *Chloris penicillata* Willd. ex Steud., nom. illeg., non *Chloris penicillata* (Vahl) Pers.; *Chloris polydactyla* subsp. *multiradiata* (Hochst.) Chiov.; *Chloris pubescens* Lag.; *Chloris rogeoni* A. Chev.; *Chloris tetrastachys* Hack. ex Hook.f.; *Chloris tibestica* Quézel; *Chloris virgata* P. Durand, nom. illeg., non *Chloris virgata* Sw.; *Chloris virgata* var. *elegans* (Kunth) Stapf; *Cynodon curtipendula* (Michx.) Raspail; *Dinebra curtipendula* (Michx.) P. Beauv.; *Eutriana curtipendula* (Michx.) Trin.; *Lepeocercis serrata* (Retz.) Trin.; *Rabdochloa virgata* (Sw.) P. Beauv.; *Rabdochloa virgata* (Sw.) P. Beauv.) (*Chloris albertii* Regel possibly named for the Swiss-born Russian physician [Johann] Albert von Regel, 1845-1908, botanist, traveler, oldest son of Edward August von Regel (1815-1892), in 1875 appointed District Physician at Kuldja in Ili, explorer of Turkestan and Eastern Asia (1876-1888); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 138. 1965; Emil

Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Tropics. Annual or short-lived perennial, variable, weak, ascending to erect or geniculate, spreading, clumped, tufted or rarely slightly stoloniferous, open-tufted, often decumbent, often or occasionally rooting from the lower nodes, much-branched and soft-stemmed, shallow root system, ligule an inconspicuous short membrane, sheaths inflated and keeled, leaf blades very acute to acuminate and hispid, inflorescence digitate and erect, ripe spikelets black, soft spikelets pubescent to feathery, spikelets densely crowded and 2-flowered, lower floret fertile, upper floret imperfect and reduced to a lemma, 2 awns, glumes lanceolate, lemmas cartilaginous, fertile lemma entire or notched or keels slightly gibbous, second lemma truncate, tuft of hairs on the lemma tips, 2 lodicules, 3 stamens, a cover plant rapidly growing, seeds easily transported by wind and water, low palatability, native pasture species, good fodder for horses and cattle, valuable as forage, palatable grazing when young, weed species, usually will not survive prolonged flooding, a decoction of the plant or of the roots used for colds and rheumatism, leaves applied on wound to prevent bacterial infection, pioneer grass used for reseeding denuded rangeland, found in areas where water lies after rain, dry tidal mudflats, tropical lowland, tropical coasts, hind dunes, desert steppe, in gardens, grasslands, along coast, desert washes and swales, on bare compacted and disturbed soil, sandy places, very dry areas, in pure sand, in saline areas, edges of the desert, disturbed sites along roads, cultivated and disturbed areas, disturbed agricultural area, along field margins, grass steppe, waste places, open habitats, black cracking clays, heavy soils, shallow gravelly soil, in ditch along highway, along roadsides and creeks, banks of water courses, see *Observationes Botanicae* 5: 21. 1789, *Flora Indiae Occidentalis* 1: 203. 1797, *Flora Boreali-Americana* 1: 59. 1803, *Varietates de Ciencias, Literatura y Artes* 2(4): 143. 1805, *De Quibusdam Chloridis Speciebus* 10. 1808, *Essai d'une Nouvelle Agrostographie* 84, 98, 158, 160, 176. 1812, *Catalogus plantarum horti botanici monspeliensis* 94. 1813, *Nova Genera et Species Plantarum* 1: 166-167, t. 49. 1815 [1816], *Fundamenta Agrostographiae* 161, 203, t. 18. 1820, *De Graminibus unifloris et sesquifloris* 231. Petropoli 1824, *Annales des Sciences Naturelles (Paris)* 5: 303. 1825, *Reliquiae Haenkeanae* 1(4-5): 289. 1830, *Enumeratio Plantarum, quas in China Boreali* 70. 1833, *Nomenclator Botanicus. Editio secunda* 1: 90, 353. 1840, *Notes of a Military Reconnaissance* 153. 1848, *Niger Flora* 566. 1849, *Exploration of the Red River of Louisiana* 300. 1853, *Synopsis Plantarum Glumacearum* 1: 205-206. 1854, *Flora* 38: 204.

1855, *Pacif. Railr. Rep.* 4: 155. 1857, *Naturwissenschaftliche Reise nach Mossambique ...* 556. 1864, *Naturaleza [Sociedad mexicana de historia natural]* 1: 346. 1870, *Flora Australiensis: A Description ...* 7: 613. 1878, *Acta Horti Petrop.* 7: 650. 1881, *Mexicanas Plantas* 2: 138. 1886, *The Flora of British India* 7: 291. 1896 and *Flora Capensis* 7: 642. 1900, *Annuario del Reale Istituto Botanico di Roma* 8(1): 54. 1903, *Bibliotheca Botanica* 85: 368, f. 83. 1915, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 262. 1931, *Revue internationale de botanique appliquée et d'agriculture tropicale* 14(150): 127. 1934, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 48: 84. 1957.

in English: windmill grass, feather windmill grass, showy windmill grass, feathertop, feathertop chloris, feather-top chloris, showy chloris, feathered chloris, feathertop Rhodes, feathertop Rhodes grass, feathery Rhodes grass, feather fingergrass, feather finger grass, woolly-top, old land grass, old land's grass, sweet grass, sweet hay grass, haygrass, blackseed, blackseed grass, blue grass, white grass

in India: bhothia jara, chota sailria, ganjali hullu, gharani-agas, gudi hullu, pandhad, phundna

in Spanish: verdillo plumerito, zacate pluma, zacate mota, zacate

in Mexico: barba de chivo, barba de indio, barbas de indio, cebadilla, cola de zorra, huak-top'suuk, meex-mascual, motita, paraguistas, pata de gallo, verdillo plumerito, zacate cola de zorra, zacate lagunero, zacate mota, zacate motilla

in Madagascar: antocazo, antokazo

in Niger: asghal, azghal, buta'n kurégé, gabarédilabé, garago, tasbat n-ejemar, toesbat najemâr

in Somalia: ausdug, agar

in S. Rhodesia: Wuwu

in Southern Africa: blougras, hooigras, katstertgras, vley-quirfgras, klossiesgras, klossiegras, kwasgras, oulandegras, paardgras, perdegras, witgras, soetgras, spinnekopgras, witpluimchloris, wollerigegras; amafusine (Zulu); sehabane, lehola-la-dipere (Sotho); umadolwana (Xhosa)

in Upper Volta: garbere

C. x subdolichostachya Müll. Hal. [*cucullata* x *verticillata*] (*Chloris brevispica* Nash; *Chloris latisquamea* Nash; *Chloris verticillata* var. *aristulata* Torr. & A. Gray; *Chloris verticillata* var. *intermedia* Vasey)

North America, U.S., Texas. Perennial, good forage, growing on sandy sites, on disturbed sandy sites in drier soil conditions, see *Transactions of the American Philosophical Society, new series*, 5: 150. 1835, *Pacif. Railr. Rep.* 2: 176. 1855, *Botanische Zeitung, Berlin* 19(46): 341. 1861, *Contributions from the United States National Herbarium* 2(3): 528. 1894, *Bulletin of the Torrey Botanical Club* 25: 438-439. 1898 and *Phytologia* 37(4): 317-407. 1977, *Las*

Gramíneas de México 2: 1-344. 1987, *Phytologia* 74(4): 336-338. 1993.

in English: short-spike windmill grass, shortspike windmillgrass, shortspiked windmillgrass, Nash windmill grass
in Mexico: verdillo norteño

Chlorocalymma W.D. Clayton

From the Greek *chloros* “green, pale green” and *kalymma* “a covering, hood.”

One species, Tanzania. Panicoideae, Panicodae, Paniceae, annual, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence spicate, rachis tough, spikelets subtended by a spiny elongated involucre, 2 glumes unequal to very unequal, lower lemma laterally winged, palea present, 3 stamens, ovary glabrous, 2 stigmas, open habitats, dry areas, bushland, type *Chlorocalymma cryptacanthum* Clayton, see *Kew Bulletin* 24: 461. 1970.

Species

C. cryptacanthum Clayton

Africa.

Chloroides Regel = *Chloris* Sw., *Chloroides* Fisch. ex Regel, *Eustachys* Desv.

Greek *chloroeides* “of a greenish appearance,” resembling *Chloris*.

Chloridoideae, Cynodonteae, Chloridinae, see *Nova Genera et Species Plantarum seu Prodrumus* 1, 25. 1788, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188-189. 1810, *Index Seminum [St. Petersburg]* 28. 1863 and *Flora Mesoamericana* 6: 288-289. 1994, A.M. Molina, “Revisión taxonómica del género *Eustachys* Desv. (Poaceae: Chloridoideae, Cynodonteae) de Sudamérica.” *Candollea* 51(1): 225-272. 1996, *Gramíneas de Bolivia* 353-355. 1998, *Contributions from the United States National Herbarium* 41: 39-52, 117-118, 222-223. 2001.

Chloropsis Kuntze = *Chloropsis* Hack. ex Kuntze, *Trichloris* E. Fourn. ex Benth.

From the Greek *chloros* “green, pale green, yellow-green” and *opsis* “aspect, appearance, resemblance,” resembling *Chloris*.

Chloridoideae, Cynodonteae, Chloridinae, see *Nova Genera et Species Plantarum seu Prodrumus* 1, 25. 1788, *Variedades de Ciencias, Literatura y Artes* 2(4): 143. 1805, *Journal of the Linnean Society, Botany* 19: 102. 1881, *Mex-*

icanas Plantas 2: 142. 1886, *Die Natürlichen Pflanzenfamilien* 2(2): 59. 1887, *Revisio Generum Plantarum* 2: 771. 1891 and *Division of Botany, Circular (United States Department of Agriculture)* 32: 7. 1901, *U.S. Dept. Agric. Bull.* 772: 190. 1920, Adolf Pascher (1881-1945), *Die Süßwasser-Flora Deutschlands, Österreichs und der Schweiz* 4: 88, 103. 1927, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Flora Mesoamericana* 6: 287-289. 1994, *Flora of Ecuador* 68: 105-106. 2001, *Contributions from the United States National Herbarium* 41: 39-52, 222-223. 2001.

Chlorostis Raf. = *Chloris* Sw.

Referring to *Chloris* Sw.

Chloridoideae, Cynodonteae, Chloridinae, see C.S. Rafinesque (1783-1840), *Princ. Fond. Somiol.* 26, 29. 1813 [1814], *Flora Telluriana*. 1: 84. 1836 [1837] and *Contributions from the United States National Herbarium* 41: 39-52, 222-223. 2001.

Chondrachyrum Nees = *Briza* L., *Chascolytrum* Desv.

Greek *chondros* “cartilage, gristle” and *achyron* “chaff, husk.”

Pooideae, Poeae, Brizinae, type *Chondrachyrum scabrum* Nees ex Steud., see *Species Plantarum* 1: 66-67, 70-71. 1753, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Nova Genera et Species Plantarum* 1: 164. 1815 [1816], *A Natural System of Botany* 449. 1836, *Synopsis Plantarum Glumacearum* 1: 276, 288. 1854, *Genera Plantarum* 3(2): 1194-1195. 1883 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 53. 1913, *Revista de la Facultad de Agronomía y Veterinaria* 3: 120. 1920, *Feddes Repertorium* 84(7-8): 541. 1973, *Willdenowia*, Beih. 8: 77. 1975, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 1-191. 1987, *Flora Mesoamericana* 6: 229. 1994, *Flora Mediterranea* 5: 340-345. 1995, *Bothalia* 27: 75-82. 1997, *Cladistics* 14: 287-296. 1998 [N.D. Bayón, Cladistic analysis of the *Briza* Complex (Poaceae, Poeae).], *Opera Botanica* 137: 1-42. 1999, *Lagascalia* 21(1): 235-240. 1999, *Contributions from the United States National Herbarium* 48: 146-151, 233-234. 2003.

Chondrochlaena Kuntze = *Prionachne* Nees ex Lindl., *Prionanthium* Desv.

From the Greek *chondros* “cartilage, lump, groats of wheat” and *chlaena*, *chlaenion* “cloak.”

Chondrolaena Nees = *Prionachne* Nees ex Lindl., *Prionanthium* Desv.

Greek *chondros* “cartilage, lump, groats of wheat” and *chlaena*, *chlaenion*, *laina* “cloak, blanket,” Latin *laena*, *ae* “a cloak, mantle.”

Arundinoideae, Danthoniae, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168-169, t. 7, f. 3. 1831, *An Introduction to the Natural System of Botany* 447. 1836, *Florae Africae Australioris Illustrationes Monographicae* 1: 133. 1841 and G. Davidse, “A revision of the genus *Prionanthium* (Poaceae: Arundineae).” *Bothalia* 18: 143-153. 1988, *South African Journal of Botany* 60: 285-292. 1994.

Chondrosium Desv. = *Actinochloa* Willd. ex Roem. & Schult., *Antichloa* Steud., *Bouteloua* Lag., *Erucaria* Cerv.

Greek *chondros* “cartilage, wheat, grain of wheat.”

About 14 species or 0, Canada to Argentina, U.S., Mexico. Chloridoideae, Cynodonteae, Boutelouinae, annual or perennial, caespitose, leaf blades linear, spikelets laterally compressed with 1-2 sterile florets, glumes lanceolate, lemma keeled and 3-awned, lower lemma fertile, upper lemmas sterile, open habitats, plains, often included in *Bouteloua* as a subgenus, type *Chondrosium procumbens* (P. Durand) Desv., see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Systema Vegetabilium* 2: 22, 417. 1817, *Nomenclator Botanicus. Editio secunda* 1: 108. 1840, *A Manual of the Botany of the Northern United States*. second edition 553. 1856, *Naturaleza [Sociedad mexicana de historia natural]* 1: 347. 1870, *Genera Plantarum* 3(2): 1168. 1883 and *Annals of the Missouri Botanical Garden* 66(3): 348-416. 1979 [1980], *Kew Bulletin* 37(3): 417-420. 1982, *Flora Mesoamericana* 6: 292-293, 296. 1994, *Sida* 17: 111-114. 1996, *Aliso* 17(2): 99-130. 1998, *Aliso* 18: 61-65. 1999, *Contributions from the United States National Herbarium* 41: 20-33. 2001.

Chretomeris Nutt. ex J.G. Sm. = *Elymus* L., *Sitanion* Raf.

Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 83-84. 1753, C.S. Rafinesque, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, *Annals of Natural History* 1: 284. 1838, *Genera Plantarum* 3(2): 1207. 1883, *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 10, 12-13, 15, 17, 19-20, t. 3. 1899 and E.D. Merrill, *Index rafinesquianus* 76. 1949, *Canad. J. Bot.* 42: 554. 1964, M.E. Barkworth &

D.R. Dewey, “Genomically based genera in the perennial Triticeae of North America: identification and membership.” *Amer. J. Bot.* 72: 767-776. 1985, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Chrysochloa Swallen = *Bracteola* Swallen

From the Greek *chrysos* “gold” and *chloe*, *chloa* “grass.”

About 4-5 species, tropical Africa. Chloridoideae, Cynodonteae, annual or perennial, unarmed, tufted, herbaceous, caespitose, stoloniferous, leafy, leaves mainly basal, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence spicate digitate or subdigitate, racemes single or digitate, spikelets imbricate compressed, 2 florets, upper floret male or sterile, 2 glumes more or less equal, upper glume deciduous and keeled, fertile lemma mucronate or shortly awned, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, seasonally flooded places, lowlands, damp sites, seasonally waterlogged soils, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 222. 1899 and *American Journal of Botany* 20: 118, f. 1. 1933, *Bulletin of Miscellaneous Information Kew* 1934: 117. 1934, *Proceedings of the Biological Society of Washington* 54: 44. 1941.

Species

C. hindsii C.E. Hubbard (*Chrysochloa annua* C.E. Hubbard; *Chrysochloa caespitosa* Clayton)

Tropical Africa. Annual, stoloniferous, caespitose, variable, see *Kew Bulletin* 4: 349. 1949, *Kew Bulletin* 12: 59. 1957, *Kew Bulletin* 14: 239. 1960.

in Upper Volta: petrepin ragha

C. hubbardiana Germain & Risopoulos

Tropical Africa. See *Bulletin du Jardin Botanique de l'État* 22: 71. 1952.

C. lucida (Swallen) Swallen (*Bracteola lucida* Swallen)

Tropical Africa, Angola. See *American Journal of Botany* 20: 118, f. 1. 1933, *Proceedings of the Biological Society of Washington* 54: 44. 1941.

C. orientalis (C.E. Hubbard) Swallen (*Bracteola orientalis* C.E. Hubb.)

Tanzania. See *Bulletin of Miscellaneous Information Kew* 1934: 117. 1934, *Proceedings of the Biological Society of Washington* 54: 44. 1941.

C. subaequigluma (Rendle) Swallen (*Chloris subaequigluma* Rendle)

Tropical Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 222. 1899 and *Bulletin of Miscellaneous Information Kew* 1934: 117.

1934, *Proceedings of the Biological Society of Washington* 54: 44. 1941.

Chrysopogon Trin. = *Centrophorum* Trin., *Chalcoelytrum* Lunell, *Lenormandia* Steud., *Mandelorna* Steud., *Pollinia* Spreng., *Pollinia* Trin., *Rhaphis* Lour., *Trianthium* Desv.

From the Greek *chrysos* “gold” and *pogon* “a beard,” referring to the color of the awns or to the golden brown callus hairs of some species; see Carl Bernhard von Trinius (1778-1844), *Fundamenta Agrostographiae*. 187. Viennae (Jan) 1820.

About 25-45 species, tropical and subtropical, warm regions, mainly in Asia and Australia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Sorghinae, annual or perennial, herbaceous, usually unbranched, sometimes decumbent or slightly bent, mostly tufted, solid culm internodes, leaves often harsh and glaucous in a basal tussock, leaf blades narrow, auricles absent, ligule a fringed membrane or a ciliate rim, rhizomatous or stoloniferous, deep-rooting, plants bisexual, inflorescence loosely paniculate and filiform usually with terminal triads of spikelets or spikelets in pairs, spikelets at the ends of the branches of the panicle, 1 sessile bisexual spikelet and 2 pedicellate male or sterile spikelets, 1 sessile awned spikelet and 2 pedicelled unawned spikelets developed or rudimentary, fertile spikelets compressed laterally, male spikelets often purplish and compressed dorsally, tuft of long hairs on the branches below the spikelets, lower glume cartilaginous and rounded on the back, upper glume often awned, lower floret reduced, upper lemma hyaline often 2-toothed and awned, palea present or absent, 2 glabrous lodicules free and fleshy, stamens 3, anthers yellow, ovary glabrous, fruit yellow and compressed, cultivated fodder, weed species resistant to drought and heavy grazing, native pasture species, lawns, playing fields, common in disturbed ground, heavy soils, open habitats, poor soils or subdesert, rainforest, floodplains, desert, humid tropics, intergrades with *Vetiveria*, type *Chrysopogon gryllus* (L.) Trin., see *Species Plantarum* 1: 61-63, 82. 1753, *Species Plantarum* 2: 1045, 1047. 1753, *Flora Cochinchinensis* 538, 552. 1790, *Pl. Pugill.* 2: 10. 1815, *Fundamenta Agrostographiae* 187-188. 1820, *Bull. Sci. Soc. Philom. Paris* 1822: 43. 1822, *Flora* 33: 229. 1850, *Synopsis Plantarum Glumacearum* 1: 359. 1854 [1855], *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *American Midland Naturalist* 4: 212. 1915, *Bulletin de l'Institut Française d'Afrique Noire* 22: 106. 1960, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 291. 1960, *Folia Primatologica* 15: 1-35. 1971, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Cytology*

and *Genetics* 25: 140-143, 322-323. 1990, *Flora Mesoamericana* 6: 383. 1994, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, J.F. Veldkamp, “A revision of *Chrysopogon* Trin. including *Vetiveria* Bory (Poaceae) in Thailand and Malesia with notes on some other species from Africa and Australia.” *Austrobaileya* 5(3): 503-533. 1999, *Contributions from the United States National Herbarium* 46: 151, 156, 159-161, 283, 285, 541-542, 544-545. 2003, Federico Selvi and Massimo Bigazzi, “Revision of genus *Anchusa* (Boraginaceae-Boraginaceae) in Greece.” *Botanical Journal of the Linnean Society* 142(4): 431-454, Aug 2003.

Species

C. aciculatus (Retz.) Trin. (*Andropogon acicularis* Willd.; *Andropogon acicularis* Retz. ex Roem. & Schult.; *Andropogon aciculatus* Retzius; *Andropogon aciculatus* Willd.; *Andropogon gryllus* L.; *Andropogon javanicus* Steud.; *Andropogon subulatus* J. Presl; *Apluda gryllus* (L.) C. Presl; *Centrophorum chinense* Trin.; *Chloris gryllus* (L.) Honck.; *Chrysopogon acicularis* Duthie; *Chrysopogon aciculatus* var. *longifolius* Büse; *Chrysopogon gryllus* (L.) Trin.; *Chrysopogon subulatus* (J. Presl) Trin. ex Steud.; *Chrysopogon trivialis* Arn. & Nees; *Holcus aciculatus* (Retz.) R. Br.; *Holcus gryllus* (L.) R. Br.; *Pollinia gryllus* (L.) Spreng.; *Rhaphis acicularis* (Retz. ex Roem. & Schult.) Desv.; *Rhaphis aciculatus* (Retz.) Desv., also spelled *aciculata*; *Rhaphis aciculatus* (Retz.) Honda; *Rhaphis gryllus* (L.) Desv.; *Rhaphis gryllus* (L.) Trin.; *Rhaphis javanica* Nees ex Steud.; *Rhaphis javanica* Nees; *Rhaphis trivialis* Lour.; *Rhaphis zizanioides* var. *aciculatus* (Retz.) Roberty

Tropics, Southeast Asia, China, India, Japan, Indonesia, Philippines, Nepal. Perennial, terrestrial, variable, vigorous, solid, glabrous, often branching, stoloniferous, extensively creeping, prostrate and mat-forming, spreading, ascending or erect from a decumbent base, nodal rooting, forming a short turf, woody creeping rhizome, leaves mostly basal, auricles present, sheaths striate, ligule a shallow rim or shortly membranous, erect flowering culm unpalatable when in fruit, inflorescence a rigid and erect panicle, small panicles reddish purple with several slender branches, triad of spikelets, pedicellate spikelets purple, erect naked peduncle, 1 sessile awned spikelet and 2 pedicelled awnless spikelets, lower bisexual spikelet, upper male spikelets, 2 glumes, palea hyaline and oblong-acute, stamens 3, sharp-pointed seeds cause extensive ulceration, ripe fruits with sharp basal callus, diaspores adhere to clothing and hair very readily, aggressive and noxious weed species, a serious persistent pest, a weed of tea in India, straw used for making hats and mats, culms woven into cigarette-cases and used to make brushes, can stand heavy grazing, fairly drought-tolerant, useful fodder grass, cultivated, forage to worthless as forage flowering culms and spikelets have low palatability, leaves highly palatable, naturalized, ornamental, lawns and playing

fields, soil binder, erosion control, useful for stabilizing embankments, withstands trampling and poor soils, responds to burning, a vigorous coloniser of denuded ground, prefers moist soils, open areas, rocky slopes, waste areas, common on abandoned cultivations on poor sandy soils, pastures, overgrazed soil, humid tropics, sandy loams, neutral soils, heavy soil, rangelands, intergrades with *Vetiveria* Bory, taxonomy of the genus remains confused, see *Centuria II. Plantarum* ... 2: 33. 1756, *Amoen. Acad.* 4: 332. 1759, *Obs. Bot.* 5: 22. 1789, *Flora Cochinchinensis* 2: 553. 1790, *Synopsis Plantarum Germaniae* 1: 437. 1792, *Species Plantarum. Editio quarta* 4: 906. 1806, *Prodromus Florae Novae Hollandiae* 199. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 10. 1815, *Cyperaceae et Gramineae Siculae* 55. 1820, *Fund. Agrost.* 106, 188, t. 5. 1820, *Narrative of Travels and Discoveries in Northern and Central Africa* Appendix: 244. 1826, *Reliquiae Haenkeanae* 1(4-5): 341. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 172-173. 1831, *Nomenclator Botanicus. Editio secunda* 1: 360. 1840, *Gramineae* 50. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19 (Suppl. 1): 182. 1843, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 99. 1850, *Plantae Jung-huhnianae* 3: 361. 1854, *Synopsis Plantarum Glumacearum* 1: 360, 396. 1854, *Genera Plantarum* 3(2): 1127. 1883, *A List of the Grasses of N.W. India, Indigenous and Cultivated* 22. 1883 and *Handb. Fl. Ceylon* 5: 234. 1900, *Botanical Magazine* (Tokyo) 40: 103. 1926, *Handb. Fl. Ceylon* 6: 333. 1931, *Petite Flore de l'Ouest-Africain* 403-404. 1954, *Grasses of Ceylon* 186. 1956, *Grasses of Burma* ... 115. 1960, *Bot. Macaronesica* 6: 64. 1980, *Austrobaileya* 5(3): 510. 1999.

in English: golden beard grass, golden false beard grass, spear grass, love grass, love torn, grass seed, seed grass, seedy grass, Mackie's pest, small needled goldbeard, Port Harcourt grass

in Spanish: amorseco

in French: herbe plate, herbe à piquant, chiendent grenille

in Hawaii: manienie 'ula, pi'pi'i, pilipili 'ula, pilipiliula

in Micronesia: rehtakai

in Pacific: mosie fisi

in New Guinea: knalbru

in Cambodia: smao kan troeng, smao kantreill, smau kân-traëy

in China: ji gu cao

in Japan: Okinawa-michishiba

in India: chora kanta, chorakanta, chorapushpee, chora-pushpi, chorkanta, ganji garike hullu, kaeshini, katle chettu, katle gaddi, kava, kawa, keshinee, kheti, kudira pullu, lampa, puttligaddi, sans, senra, shankapushpi chettu, shunkini, shuntnee, sikola, surwala

in Indonesia: jukut domdoman, rumput kemuncup, salohot
in Malaysia: kemuchut, kemunchup, temuchut

in the Philippines Islands: amorseco, amorseko, dalekedek, dalukduk, lakut-lapas, marisekos, mariskos, pagippi, pangrot, tinloi

in Sri Lanka: ottu pul, tuttiri

in Thailand: ya chaochu, yaa chaochuu, yaa ka troei, yaa khee khrok, ya khitroei, yaa khee troei, ya khikh rok, yaa klon, yaa kon, yaa nam luek, yaa nokkhum

in Vietnam: co may, co' may, co' bông, bong co

C. argutus (Steud.) Trin. ex Jackson (*Andropogon argutus* Nees ex Steud.; *Chrysopogon argutus* (Nees ex Steud.) Trin. ex B.D. Jacks.; *Vetiveria arguta* (Nees ex Steud.) C.E. Hubb.)

Mauritius, Rodrigues. Pungent and hairy callus, 1-6 spikelet groups per branch, see *Synopsis Plantarum Glumacearum* 1: 391. 1854, *Index Kewensis* 1: 124, 530. 1893 and *Bulletin of Miscellaneous Information Kew* 1939: 654. 1940.

C. aucheri (Boiss.) Stapf (*Andropogon aucheri* Boiss.; *Chrysopogon ciliolatus* var. *aucheri* (Boiss.) Boiss.; *Chrysopogon fulvus* var. *migiurtinus* (Chiov.) Chiov.; *Chrysopogon montanus* var. *migiurtinus* Chiov.; *Chrysopogon serrulatus* var. *aucheri* (Boiss.) Boiss. ex Parsa)

Eastern Arabia, Iran, Pakistan, India. Perennial, slender, densely tufted, basal sheaths often silky-villous, leaves pubescent and glaucous, panicle ovate, a triplet spikelet, sessile spikelet elliptic to oblong, pedicelled spikelets usually 1-awned, upper glume and upper lemma shortly awned, spikelet dispersal occurs primarily by wind, awn of pedicelled spikelet glabrous, found in desert and semidesert, rocky hills, coastal, grassland, very rare in East Africa, mainly in Somalia, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 318. 1832, *Diagnoses plantarum orientalium novarum* 5: 77. 1844, *Flora Orientalis* 5: 458. 1884 and *Bulletin of Miscellaneous Information Kew* 6: 211. 1907, *Flora Somala* 328. 1929, *Flora of Iran [Parsa]* 5: 538. 1950.

in Niger: akarasha, kébulu, kéwulu, taghatemt, toeghatimt

C. borneensis Henr.

East Borneo. Perennial, very similar to *Chrysopogon tenuiculmis* Henr., see *Blumea* 4(3): 534. 1941.

C. celebicus Veldk.

Celebes. Perennial, obtuse and hairy callus, 4-7 spikelet groups, on sandy soil, similar to *Chrysopogon lawsonii* (Hook.f.) Veldk. and *Chrysopogon nemoralis* (Balansa) Holtt., see *Austrobaileya* 5(3): 511-512. 1999.

C. elongatus (R. Br.) Benth. (*Andropogon elongatus* (R. Br.) Spreng.; *Holcus elongatus* R. Br.; *Rhaphis elongatus* (R. Br.) Chase; *Sorghum elongatus* (R. Br.) P. Beauv.; *Vetiveria elongata* (R. Br.) Stapf ex C.E. Hubb.)

Australia. Pungent and hairy callus, see *Prodromus Florae Novae Hollandiae* 1: 200. 1810, *Essai d'une Nouvelle Agrostographie* 131, 164, 178. 1812, *Bull. Sci. Soc. Philom. Paris* 1822: 43. 1822, *Systema Vegetabilium, editio decima sexta* 1: 287. 1825, *Flora Australiensis: A Description ...* 7: 538-539. 1878 and *Contributions from the United States National Herbarium* 24: 205. 1925, *Bulletin of Miscellaneous Information Kew* 1934: 444. 1934, *Austrobaileya* 5(3): 513. 1999.

in English: long golden beard grass.

C. fallax S.T. Blake (*Andropogon gryllus* sensu J. Black, non L.; *Chrysopogon gryllus* sensu Benth., non (L.) Trin.)

South Australia, Western Australia, Queensland, Northern Territory, New South Wales. Perennial, tufted, stems erect, sheath not keeled, leaves smooth and hairy in a dense basal tussock, inflorescence a loose panicle with whorled simple branches, tall flower heads, narrow spikelets on long and slender stalks, pedicellate spikelets sterile or male, a more or less valuable pasture species and grass, eaten when young, an indicator of good range condition, very hardy and drought resistant, a decreaser species, can be removed by overgrazing, found on heavy soils, floodplains, in open sandy places, see *Flora South Australia (edition 2)* 1: 60. 1943, *University of Queensland Papers: Department of Biology* 2(3): 9. 1944.

in English: golden beard grass

C. festucoides (J. Presl) Veldkamp (*Andropogon anias* Llanos; *Andropogon festucoides* Presl; *Andropogon muricatus* Retz.; *Andropogon muricatus* var. *aristatus* Büse; *Andropogon squarrosus* auct. non L.f.; *Andropogon squarrosus* var. *nigritanus* auct. non Hack.; *Andropogon zizanioides* auct. non Urban; *Chrysopogon zizanioides* (L.) Roberty; *Chrysopogon zizanioides* var. *nigritanus* auct. non Roberty; *Phalaris zizanioides* L.; *Vetiveria festucoides* (Presl) Ohwi; *Vetiveria lawsonii* auct. non Blatter & McCann; *Vetiveria nigritana* auct. non (Benth.) Stapf)

Asia tropical, India, Philippines. Perennial, unpalatable, grows on rice fields, swampy soils, inundated areas, floodplains, see *Mantissa Plantarum* 2: 183. 1771, *Observationes Botanicae* 3: 43. 1783, *Reliquiae Haenkeanae* 1(4-5): 340. 1830, *Fragmentos de Algunas Plantas Filipinas* 29. 1851, *Plantae Indiae Batavae Orientalis* 104. 1857 and *Bulletin of the Tokyo Science Museum* 18: 4. 1947, *Bulletin de l'Institut Française d'Afrique Noire* 22: 106. 1960, *Austrobaileya* 5(3): 512-513. 1999.

C. fulvus (Spreng.) Chiov. (*Andropogon fulvus* Spreng.; *Andropogon montanus* Trin.; *Andropogon montanus* J. König ex Trin., nom. illeg., non *Andropogon montanus* Roxb.; *Andropogon monticola* Schult.; *Andropogon monticola* Roem. & Schult.; *Andropogon sprengelii* Kunth; *Chrysopogon montanus* Trin. ex Spreng.; *Chrysopogon montanus* Trin.; *Chrysopogon monticola* (Schult.) Haines;

Chrysopogon monticola (Roem. & Schult.) Haines; *Pollinia fulva* Spreng.)

Southeast Asia, southern India to Thailand. Perennial, tufted to densely tufted, variable, slender, cylindrical, simple or branched, forming short turf, erect or ascending from a shortly geniculate base, ligule a short ciliolate membrane, leaves mostly basal, panicle ovate, sessile spikelets oblong, lower glume compressed or keeled, shortly pungent callus, upper lemma bidentate, palatable, a useful pasture grass, used as fodder when young and tender, relished by the bullocks, on stony soils, along roadsides, dry sandy soils, open glades, similar to *Chrysopogon serrulatus* Trin., see *Plantarum Minus Cognitarum Pugillus*. 2: 8, 10. 1815, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 93. 1821, *Mantissa* 3: 665. 1827, *Revis. Gramin.* 1: 166. 1829 and *Fl. Ceylon* 5: 236. 1900, *Indian For.* 40: 495. 1914, *Flora Somala* 1: 327. 1929, *Handb. Fl. Ceylon* 6: 333. 1931, *Grasses of Ceylon* 185. 1956, *Grasses of Burma ...* 116. 1960.

in English: red false beard grass, Guria grass

in India: agiva, chalo sanna kannee hullu, chickua, dand, dhau, ganjigarika, ghatara, ghora, gogad, gogar, goria, gorka, gorkha, guria, gurla, kare hullu, karni, pandhari kusal, phulkia, sani khidi, shili ghas, sunthia khad, thigori in Sri Lanka: kuru vi

C. gryllus (L.) Trin. (*Andropogon glabratus* (Trin.) Steud., nom. illeg., non *Andropogon glabratus* (Brongn.) Steud.; *Andropogon gryllus* L.; *Andropogon gryllus* subsp. *glabratus* (Trin.) Hack.; *Andropogon royleanus* Steud.; *Apluda gryllus* (L.) C. Presl; *Chloris gryllus* (L.) Honck.; *Chrysopogon benthamianus* Henrard; *Chrysopogon glabratus* Trin.; *Chrysopogon gryllus* Benth.; *Chrysopogon gryllus* subsp. *glabratus* (Trin.) Tzvelev; *Chrysopogon royleanus* (Steud.) W. Watson; *Holcus gryllus* (L.) R. Br.; *Pollinia gryllus* (L.) Sprengel; *Pollinia pallida* (R. Br.) Roemer & Schultes; *Rhaphis gryllus* (L.) Desv.; *Rhaphis gryllus* (L.) Trin.)

Africa, Eurasia. Perennial, unbranched or simple, robust, cylindrical, forming large dense tufts, leaf sheaths keeled above, inflorescence a large panicle with spreading branches, at the tip of the branches the spikelets are in threes, sessile spikelet awned, peduncles with bearded apices, used for brushes, good fodder, thatching grass, erosion control, usually on stony soils, dry areas, see *Centuria II. Plantarum ...* 2: 33. 1756, *Amoen. Acad.* 4: 332. 1759, *Obs. Bot.* 5: 22. 1789, *Flora Cochinchinensis* 2: 553. 1790, *Synopsis Plantarum Germaniae* 1: 437. 1792, *Species Plantarum. Editio quarta* 4: 906. 1806, *Prodromus Florae Novae Hollandiae* 199. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 10. 1815, *Cyperaceae et Gramineae Siculae* 55. 1820, *Fund. Agrost.* 106, 188, t. 5. 1820, *Narrative of Travels and Discoveries in Northern and Central Africa* Appendix: 244. 1826, *Reliquiae Haenkeanae* 1(4-5): 341. 1830,

Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers 1: 172-173. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 318. 1832, *Nomenclator Botanicus. Editio secunda* 1: 360. 1840, *Gramineae* 50. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19 (Suppl. 1): 182. 1843, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 99. 1850, *Plantae Junghuhnianae* 3: 361. 1854, *Synopsis Plantarum Glumacearum* 1: 360, 395-397. 1854, *Genera Plantarum* 3(2): 1127. 1883, *A List of the Grasses of N.W. India, Indigenous and Cultivated* 22. 1883 and *Handb. Fl. Ceylon* 5: 234. 1900, *Botanical Magazine (Tokyo)* 40: 103. 1926, *Handb. Fl. Ceylon* 6: 333. 1931, *Blumea* 4(3): 532. 1941, *Petite Flore de l'Ouest-Africain* 403-404. 1954, *Grasses of Ceylon* 186. 1956, *Grasses of Burma ...* 115. 1960, *Bot. Macaronesica* 6: 64. 1980, *Austrobaileya* 5(3): 510. 1999.

in English: French whisk

in India: kus, sailma, salima, salum

C. gryllus (L.) Trin. subsp. **echinulatus** (Nees) Cope (*Andropogon echinulatus* Nees ex Steud.; *Chrysopogon echinulatus* (Boiss.) Stapf; *Chrysopogon echinulatus* var. *filipes* (Steud.) W. Watson; *Chrysopogon gryllus* subsp. *echinulatus* (Nees ex Steud.) Cope; *Rhaphis echinulata* Nees)

India, Pakistan, Nepal, Asia temperate and tropical. See *Synopsis Plantarum Glumacearum* 1: 397. 1854 and *Kew Bulletin* 35(3): 701. 1980.

C. lancearius (Hook.f.) Haines (*Andropogon lancearius* Hook.f.)

India, Sikkim. A good fodder grass, see *The Flora of British India* 7(21): 190. 1897 [1896] and *The Botany of Bihar and Orissa* Pt. 5: 1036. 1924.

in India: korpo bimbu, korpo dumbau

C. latifolius S.T. Blake

Australia, Western Australia. Useful for grazing of sheep in Australia, see *University of Queensland Papers: Department of Biology* 2(3): 7. 1944.

C. macleishii Cope

Oman. Vulnerable species, see *Kew Bulletin* 49(3): 533, f. 1. 1994.

C. nodulibarbis (Steud.) Henrard (*Andropogon nodulibarbis* Steud.; *Andropogon zeylanicus* Steud.; *Chrysopogon zeylanicus* (Steud.) Thw.)

Southern India, Sri Lanka. Perennial, tussocky, basal leaf sheaths strongly keeled, ligule a rim of hairs, leaf blades stiff and acuminate, panicle ovate, racemes with 1-3 sessile spikelets oblong with an acute callus, upper glume mucronate with a geniculate awn, pedicelled spikelets acuminate, used for thatching, see *Synopsis Plantarum Glumacearum* 1: 396-397. 1854, *Enum. Pl. Zeyl.* 366. 1864, *Mon. Phan.*

6: 553. 1889 and *Handb. Fl. Ceylon* 5: 235. 1900, *Handb. Fl. Ceylon* 6: 333. 1931, *Blumea* 4: 543. 1941, *Grasses of Ceylon* 185. 1956, *Grasses of Burma ...* 119. 1960.

in Sri Lanka: gavara

C. orientalis (Desv.) A. Camus (*Andropogon aristulatus* Hochst. ex Steud.; *Andropogon breviaristatus* Steud.; *Andropogon orientalis* (Desv.) Druce; *Andropogon wightianus* Nees ex Steud.; *Andropogon wightianus* Steud.; *Chrysopogon verticillatus* var. *orientalis* (Desv.) Roberty; *Chrysopogon wightianus* (Steud.) Thwaites; *Chrysopogon wightianus* (Nees ex Steud.) Thwaites; *Microstegium breviaristatum* (Steud.) Keng; *Rhaphis orientalis* Desv.)

Asia tropical, Southeast Asia, southern India, Thailand, Vietnam. Perennial, tufted to densely tufted, creeping, branching, shortly stoloniferous, foliage basal, ligule a short ciliolate membrane, leaves acute to linear-acuminate, loose inflorescence paniculate, terminal panicle with whorls of slender branches, triad of spikelets, sessile spikelet bisexual and with an acute pungent callus, upper glume obtuse, upper lemma entire with a geniculate awn, green forage, palatable, can be cut and fed to animals, not suitable for silage making, useful for wind erosion, tolerates heavy grazing and fire, found in open grassland, infertile soils, open fields, sandy soils, old plantations, heavy soils, sandy coastal areas, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 173. 1831, *Synopsis Plantarum Glumacearum* 1: 395-397. 1854, *Enumeratio Plantarum Zeylanicae* 366. 1864 and *Flore Générale de l'Indo-Chine* 7: 332. 1922, *Sinensia* 3: 92. 1932, *Grasses of Burma ...* 118. 1960, *Taxon* 34: 159-164. 1985, *Austrobaileya* 5(3): 518. 1999.

in India: karappa gaddi

in Indonesia: rukut dukut, salsapot, tinloy

in Laos: hnha:z khwa:k

in Thailand: yaa khao nok khao, yaa phungchuu, ya phungchu

in Vietnam: coi may dong

C. parviflorus (R. Br.) Benth. (*Anatherum parviflorum* (R. Br.) Spreng.; *Andropogon micranthus* Kunth; *Andropogon parviflorus* (R. Br.) Domin, nom. illeg., non *Andropogon parviflorus* Roxb.; *Bothriochloa parviflora* (R. Br.) Ohwi; *Bothriochloa pauciflora* (R. Br.) Quart.; *Capillipedium parviflorum* (R. Br.) Stapf; *Chrysopogon parviflorus* (R. Br.) Nees; *Holcus parviflorus* R. Br.)

Australia. See *London Journal of Botany* 2: 411. 1843 and *Bibliotheca Botanica* 85(2): 263. 1915, *Flora of Tropical Africa* 9: 169. 1917, *Journal of Taiwan Museum* 10: 58. 1957.

in English: scented golden beard

C. pauciflorus (Chapman) Benth. ex Vasey (*Andropogon pauciflorus* (Chapm.) Hack.; *Andropogon wrightii* Munro ex C. Wright; *Chrysopogon pauciflorus* (Chapm.) Roberty, nom. illeg., non *Chrysopogon pauciflorus* (Chapm.) Benth.

ex Vasey; *Chrysopogon wrightii* Munro ex Vasey; *Rhaphis pauciflora* (Chapman) Nash; *Sorghum pauciflorum* Chapm.)

U.S., Florida. Annual, see *Botanical Gazette* 3(3): 20. 1878.
in English: Florida false beard grass

C. perlaxus Bor

Thailand. Indeterminate species, see *Dansk Botanisk Arkiv* 23: 157. 1965.

C. plumulosus Hochst. (*Andropogon aristidoides* Steud.; *Andropogon aucheri* Boiss. var. *quinqueplumis* (Hochst. ex A. Rich.) Hack.; *Andropogon quinqueplumis* (A. Rich.) Steud.; *Andropogon quinqueplumis* (Hochst. ex A. Rich.) Steud.; *Andropogon quinqueplumis* Hochst. ex A. Rich.; *Aristida chrysopila* Steud.; *Chrysopogon aucheri* (Boiss.) Stapf var. *pulvinatus* Stapf; *Chrysopogon aucheri* var. *quinqueplumis* (A. Rich.) Stapf; *Chrysopogon aucheri* var. *quinqueplumis* (Hochst. ex A. Rich.) Stapf; *Chrysopogon quinqueplumis* A. Rich.)

East Africa, Somalia, western Arabia. Perennial bunchgrass, slender and wiry culms, desert grass, glaucous, tufted, leafy, erect or ascending, low cushions forming, basal sheaths flattened or compressed, panicle ovate and spreading, orange spikelets in triads on slender peduncles, pedicelled spikelets green, sessile spikelets with a geniculate awn and from the upper glume a straight plumose bristle, a poor seeder, excellent drought tolerance, grass of high nutritive value and highly palatable, grains and leaves eaten by baboons, arid and dry regions, areas of low rainfall, alkaline soils, overgrazed areas, rocky ground and rocky hillsides, sandy and alluvial plains, wooded grassland, dry open stony hills, *Acacia* bushland, see *Nomenclator Botanicus* edition 2 1: 131. 1840, *Diagnoses plantarum orientalium novarum* 5: 77. 1844, *Tentamen Florae Abyssinicae* ... 2: 450. 1850, *Synopsis Plantarum Glumacearum* 1: 397-398. 1854, *Monographiae Phanerogamarum* 6: 561. 1889 and *Bulletin of Miscellaneous Information Kew* 6: 211. 1907 [also *Kew Bulletin* 1907: 211. 1907].

in English: Aucher's grass

in Somalia: daremo, dareemo

C. serrulatus Trin. (*Andropogon caeruleus* Steud.; *Andropogon ciliolatus* Nees ex Steud.; *Andropogon monticola* Roem. & Schult.; *Andropogon monticola* var. *trinii* (Steud.) Hook.f.; *Andropogon serrulatus* Link; *Andropogon tremulus* Hack.; *Andropogon trinii* Steud.; *Andropogon trinii* var. *increscens* Hack.; *Chrysopogon caeruleus* (Steud.) W. Watson; *Chrysopogon ciliolatus* (Nees ex Steud.) Boiss.; *Chrysopogon fulvus* var. *serrulatus* (Trin.) R.R. Stewart; *Chrysopogon fulvus* var. *serrulatus* (Trin.) Roberty; *Chrysopogon montanus* Trin.; *Chrysopogon montanus* var. *serrulatus* (Trin.) Stapf; *Chrysopogon montanus* var. *tremulus* (Hack.) Stapf; *Chrysopogon trinii* (Steud.) W. Watson;

Chrysopogon wightianus var. *leucanthus* Thw.; *Rhaphis montana* var. *tremula* (Trin.) E. Phillips)

East Africa, Asia. Perennial, tufted, generally unbranched, erect, robust, sometimes shortly rhizomatous, leaf sheaths compressed and keeled, ligule membranous with a hairy margin, leaves mostly cauline, open or contracted ovate panicles, whorls of lax branches, spikelets in group of 3, 1 spikelet sessile and narrowly oblong with a shortly pungent callus, lower glume laterally compressed, upper glume glabrous, upper lemma 2-dentate, pedicelled spikelets awned, a sand binder, palatable, good fodder grass, very high grazing value, cut before flowering, used as thatching grass, medicinal value, the seeds vermifuge, found on stony slopes, shallow stony soil, on clay and loam soil, rocky hillsides, similar to *Chrysopogon fulvus* (Spreng.) Chiov., see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 93. 1821, *Hortus Regius Botanicus Berolinensis* 1: 241. 1827, *Mantissa* 2: 665. 1827, *An Introduction to the Study of the South African Grasses* ... 219, t. 14. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(3): 318. 1832, *Sp. Gram.* 621, pl. 331. 1836, *Synopsis Plantarum Glumacearum* 1: 395-396. 1854, *Enum. Pl. Zeyl.* 366. 1864, *Himalayan Districts of the North-western Provinces of India* 10: 392. 1882, *Gaz. N. W. India* 392. 1882, *Flora Orientalis* 5: 458. 1884, *Monographiae Phanerogamarum* 6: 558. 1889, *The Flora of British India* 7(21): 193. 1897 [1896] and *Bulletin de l'Herbier Boissier* II 1: 764. 1901, *Flora of Tropical Africa* 9: 159, 160. 1917, *Flora Somalia* 1: 327. 1929, *Brittonia* 5: 466. 1945, *Grasses of Burma* ... 118. 1960, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 284. 1960.

in English: golden beard grass

in India: agiva, ballak, chellosankanni, chickua, dhaula, dhaulian, dholu, ghweia, gogada gaddi, goria, gurla, gurra battokelu, jhingraka-jhara, karehullu, khar, khidi, kohi-gayab, palla paggar gadi, tigr

in South Africa: gouebaardgras, krulgras

C. sylvaticus C.E. Hubb.

Australia, Queensland, Northern Territory, New South Wales. Perennial, densely tufted, sheath glabrous and keeled, panicle loose and ovate with whorled branches, lower glume truncate, upper glume obtuse, lower lemma with a geniculate awn, pedicellate spikelets sterile or male and often rudimentary, in eucalypt woodland, see *Hooker's Icones Plantarum* 4: pl. 3365. 1938.

C. velutinus (Hook.f.) Bor (*Andropogon velutinus* Hook.f.; *Chrysopogon velutinus* Arn. ex Hook.f.)

India, Andhra Pradesh. Indeterminate species, see *The Flora of British India* 7(21): 194. 1897 [1896] and *Grasses of*

Burma, Ceylon, India and Pakistan (excluding Bambuseae) 119. 1960.

C. verticillatus (Roxb.) Trin. ex Steud. (*Andropogon verticillatus* Roxb.; *Chrysopogon verticillatus* St.-Lag.; nom. illeg., non *Chrysopogon verticillatus* (Roxb.) Trin. ex Steud.)

India, Asia. See *Flora Indica; or Descriptions ...* 1: 267. 1820, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 173. 1831, *Nomenclator Botanicus. Editio secunda* 2(1): 360. 1840 and *Boissiera*. 9: 283, 285. 1960.

C. zeylanicus (Nees ex Steud.) Thwaites (*Andropogon nodulibarbis* Hochst. ex Steud.; *Andropogon peninsulæ* Steud.; *Andropogon zeylanicus* Nees ex Steud.; *Chrysopogon nodulibarbis* (Hochst. ex Steud.) Henrard)

India, Southeast Asia, Sri Lanka. Useful for erosion control, in South India food for Nilgiri tahr (*Hemitragus hylocrius*), see *Synopsis Plantarum Glumacearum* 1: 396-397. 1854, *Enumeratio Plantarum Zeylaniae* 366. 1864 and *Blumea* 4(3): 534. 1941.

C. zizanioides (L.) Roberty (*Agrostis verticillata* Lam., nom. illeg., non *Agrostis verticillata* Vill.; *Anatherum muricatum* (Retz.) P. Beauv.; *Anatherum zizanioides* (L.) Hitchc. & Chase; *Andropogon festucoides* J. Presl; *Andropogon muricatum* Retz.; *Andropogon muricatus* Retz.; *Andropogon zizanioides* (L.) Urb.; *Chamaeraphis muricata* (Retz.) Merr.; *Chrysopogon festucoides* (J. Presl) Veldkamp; *Holcus zizanioides* (L.) Kuntze ex Stuck.; *Palaris zizanioides* L.; *Rhaphis zizanioides* (L.) Roberty; *Sorghum zizanioides* (L.) Kuntze; *Vetiveria arundinacea* Griseb.; *Vetiveria festucoides* (J. Presl) Ohwi; *Vetiveria muricata* (Retz.) Griseb.; *Vetiveria odorata* Virey; *Vetiveria odoratissima* Bory; *Vetiveria zizanioides* (L.) Nash; *Vetiveria zizanioides* var. *genuina* A. Camus)

Asia, America. See *Mantissa Plantarum* 2: 183. 1771, *Encyclopédie Méthodique, Botanique* 1: 59. 1783, *Observationes Botanicae* 3: 43 [31]. 1783, *Prodromus Florae Novae Hollandiae* 193. 1810, *Essai d'une Nouvelle Agrostographie* 128, 150, atlas 15, t. 22, f. 10. 1812, *Reliquiae Haenkeanae* 1(4-5): 340. 1830, *Flora of the British West Indian Islands* 559-560. 1864, *Revisio Generum Plantarum* 2: 791. 1891 and *Symbolae Antillarum* 4: 79. 1903, *Flora of the Southeastern United States ...* 67, 1326. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *Contributions from the United States National Herbarium* 18(7): 285. 1917, *Bulletin du Muséum National d'Histoire Naturelle* 25: 673. 1919, *An Enumeration of Philippine Flowering Plants* 1(1): 75. 1922, *Bulletin of the Tokyo Science Museum* 18: 4. 1947, *Petite Flore de l'Ouest-Africain* 404. 1954, *Bulletin de l'Institut Française d'Afrique Noire* 22: 106. 1960, *Boissiera*. 9: 291. 1960, *Molecular Ecology*

vol. 7, issue 7: 813-818. July 1998, *Austrobaileya* 5(3): 512-513. 1999.

Chrysurus Pers. = Lamarckia Moench

From the Greek *chrysos* "gold" and *oura* "a tail."

Pooideae, Poeae, Dactylidinae, see *Species Plantarum* 1: 73. 1753, *Methodus Plantas Horti Botanici ...* 201. 1794, *Syn. Pl.* 1: 80. 1805, *Descr. Gram.* 376. 1812, *Systema Vegetabilium, editio decima sexta* 1: 296. 1825, *Stirpium Sardoarum Elenchus* 1: 50. 1827 and *Flora Mesoamericana* 6: 229. 1994, *Contributions from the United States National Herbarium* 48: 420-421. 2003.

Chumsriella Bor = Germainia Balansa & Poitrasson

Named for Chai Anan [Chaianan] Chumsri, b. 1930, agrostologist, botanist in Thailand.

One species, Thailand. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual, herbaceous, ligule a fringe of hairs, plants monoecious, inflorescence loosely racemose, bractiform involucre, all the fertile spikelets unisexual, male and female fertile spikelets mixed in the inflorescence, sessile spikelets chartaceous, 2 glumes more or less equal or subequal, palea present, lodicules absent, no stamens, ovary glabrous, 2 stigmas, desert and arid places, often included in *Germainia*, type *Chumsriella thailandica* Bor, see *Bulletin de la Société d'Histoire Naturelle de Toulouse* 7: 344, f. 1-9. 1873, *Flora Australiensis: A Description ...* 7: 518. 1878, *Journal de Botanique (Morot)* 4: 83. 1890 and *Lexikon Generum Phanerogamarum* 247. 1903 [1904], *Bulletin du Muséum d'Histoire Naturelle* 25: 285. 1919, O. Stapf and Charles Edward Hubbard, *Hooker's Icones Plantarum*. Ser. 5. 3, t. 3262. 1935, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 124. 1940, *Australian Journal of Botany* 2: 108. 1954, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Dansk Botanisk Arkiv* 23(4): 467-471. 1968, *Thai Forest Bulletin. Botany* 6: 29-59. 1972, *Blumea* 45: 443-475. 2000.

Species

C. thailandica Bor (*Germainia thailandica* (Bor) Chai-Anan)

Thailand. Lower glume chartaceous, see *Dansk Botanisk Arkiv* 23: 467. 1968, *Thai Forest Bulletin. Botany* 6: 37. 1972.

Chusquea Kunth = *Coliquea* Bibra, *Coliquea* Steud. ex Bibra, *Dendragrostis* Jackson, *Dendragrostis* Nees ex B.D. Jackson, *Dendragrostis* Nees, *Mustelia* Cav. ex Steud., *Mustelia* Steud., *Rettbergia* Raddi, *Swallenochloa* McClure

From a South American (Colombia) native name, *chusque*.

About 100-135-137 species, Central and South America. Bambusoideae, Bambuseae, Chusqueinae, solid, slender, mostly sympodial, sometimes monopodial, woody and branching, shrubby or climber, mostly scandent or strongly arching, at each node 1 large branch and several small leafy branches, dimorphic bud-branches, inflorescence an open or condensed capitate panicle, 1 fertile floret, 4 glumes, the 2 lower glumes small or rudimentary, stamens 3, stigmas 2, found in rain forest, understory, páramos and subpáramos, forest, dense woods, pastures, wet montane forest, mountain slopes, edge of woods, cloud forest, montane woodlands, moist shady banks, a difficult genus, type *Chusquea scandens* Kunth, see *Species Plantarum* 1: 81-82. 1753, *Genera Plantarum* 34. 1789, *Flora Boreali-Americana* 1: 73. 1803, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Synopsis Plantarum* 1: 254. 1822, *Agrostografía Brasiliensis* 17, 18, t. 1, f. 1. 1823, *Linnaea* 9(4): 467, 487. 1835[1834], *Nomenclator Botanicus. Editio secunda* 2: 168. 1841, *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 5(2): 115. 1853, *J. Linn. Soc. Bot.* 19: 31. 1881, *Index Kewensis* 727. 1893 and *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Brittonia* 23(3): 293-324. 1971, *Smithsonian Contributions to Botany* 9: 1-48. 1973, *Ceiba* 19(1): 1-118. 1975 [Enumeración de las plantas de Honduras], *Brittonia* 30: 154-164, 297-312. 1978, *Brittonia* 31: 433-445. 1979, *J. Bamb. Res.* 1: 15-18. 1982, *Gayana, Bot.* 42: 1-157. 1985, *Annals of the Missouri Botanical Garden* 72(4): 864-873. 1985, *Iowa State Journal of Research* 61(1): 99-102. 1986, *Annals of the Missouri Botanical Garden* 74(2): 424-428. 1987, *Grass Systematics and Evolution* 225-238. 1987, *Systematic Botany Monographs* 27: 1-127. 1989, *National Geographic Research* 5: 459-476. 1989, *Systematic Botany* 15(4): 617-634. 1990, *Nordic Journal of Botany* 11: 323-331. 1991 [Miscellaneous new taxa of bamboo (Poaceae: Bambuseae) from Colombia, Ecuador, and Mexico], *Annals of the Missouri Botanical Garden* 78(1): 164-171. 1991 [New species of *Chusquea* (Poaceae: Bambusoideae) from Costa Rica], *Cuscatlania* 1(6): 1-29. 1991, R.W. Pohl and L.G. Clark, "New chromosome counts for *Chusquea* and *Aulonemia* (Poaceae: Bambusoideae)." *American Journal of Botany* 79(4): 478-480. 1992, L.G. Clark, "*Chusquea* sect. *Swallenochloa* (Poaceae: Bambusoideae) and allies in Brazil." *Brittonia* 44(4): 387-422. 1992, *Novon* 3(3): 228-238. 1993,

Ruizia 13: 1-480. 1993, *Flora Mesoamericana* 6: 202-210. 1994, *Brittonia* 48(2): 250-262. 1996 [Four new species of *Chusquea* (Poaceae: Bambusoideae) from Brazil and Ecuador.], Veblen, T.T., C. Donoso, T. Kitzberger and A.J. Rebertus, "Ecology of southern Chilean and Argentinian *Nothofagus* forests." in T.T. Veblen, R.S. Hill and J. Read [editors], *The Ecology and Biogeography of Nothofagus Forests*, 293-353. Yale University Press, New Haven, CT. 1996, S.A. Kelchner and L.G. Clark, "Molecular evolution and phylogenetic utility of the chloroplast *rpl16* intron in *Chusquea* and the Bambusoideae (Poaceae)." *Molecular Phylogenetics and Evolution* 8: 385-397. 1997, *Systematic Botany* 22(2): 219-228. 1997, *The Bamboos* 33-44. 1997 [Diversity, biogeography and evolution of *Chusquea*.], Randall L. Small, Julie A. Ryburn, Richard C. Cronn, Tosak Seelanan and Jonathan F. Wendel, "The tortoise and the hare: choosing between noncoding plastome and nuclear *Adh* sequences for phylogeny reconstruction in a recently diverged plant group." *Am. J. Bot.* 85: 1301-1315. 1998, Emmet J. Judziewicz et al., *American Bamboos* 199-223. Smithsonian Institution Press, Washington and London 1999, Susanne S. Renner, "Circumscription and phylogeny of the Laurales: evidence from molecular and morphological data." *Am. J. Bot.* 86: 1301-1315. 1999, *Am. J. Bot.* 86: 447-455, 554-562, 1597-1605. 1999, *Contributions from the United States National Herbarium* 39: 36-52. 2000, *Am. J. Bot.* 87: 259-272, 273-292. 2000, *Am. J. Bot.* 88: 1103-1117, 1675-1687. 2001, Scot A. Kelchner, "Group II introns as phylogenetic tools: structure, function, and evolutionary constraints." *Am. J. Bot.* 89: 1651-1669. 2002, *Am. J. Bot.* 89: 1342-1359, 1967-1972. 2002, *Am. J. Bot.* 90: 445-460. 2003, *Am. J. Bot.* 91: 274-284, 601-614, 1086-1098, 1709-1725. 2004, Joey Shaw et al., "The tortoise and the hare II: relative utility of 21 noncoding chloroplast DNA sequences for phylogenetic analysis." *Am. J. Bot.* 92: 142-166. 2005.

Species

C. sp.

in Central America: crimichaca, rosetilla, vara de botoncillo

in Colombia: carrizo, chusque

in Ecuador: carrizo

in Peru: caña-brava

in Venezuela: puru-puru

C. abietifolia Griseb. (*Arundinaria microclada* Pilg.)

The Caribbean. See *Fl. Brit. West Indies* 529. 1864 and *Symb. Antill.* 5: 289. 1907.

C. acuminata Döll (*Chusquea tenuis* Glaz. ex E.G. Camus)

Brazil. See *Flora Brasiliensis* 2(3): 204. 1880 and *Les Bambusées* 1: 90. 1913.

C. affinis Munro ex Camus (*Chusquea ramosissima* Lindm.)

Brazil. See *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 24, t. 14. 1900, *Les Bambusées* 1: 80, t. 60, f. B. 1913, *Revista Argent. Agron.* 8: 338. 1941.

C. albilanata L.G. Clark & Londoño

Ecuador, Colombia. See *Nordic Journal of Botany* 11(3): 323. 1991.

C. amistadensis L.G. Clark, Davidse & R.P. Ellis

Costa Rica, Panama. Páramos, see *National Geographic Research* 5(4): 462, f. 1, 2Aa, 3-4, 5, 6C, 7C, 8C. 1989.

C. andina Phil. (*Chusquea culeou* E. Desv.)

Chile. See *Flora Chilena* 6: 450, t. 83, f. 2. 1854, *Linnaea* 29(1): 103. 1858 and *Rev. Argent. Agron.* 8(4): 343. 1941, *Economic Botany* 55(2): 243-254. 2001.

C. anelythra Nees (*Dendragrostis anelythra* Nees ex Munro)

Brazil. See *Linnaea* 9(4): 491. 1835, *Trans. Linn. Soc. London* 26(1): 63. 1868, *Flora Brasiliensis* 2(3B): 161-242, t. 44-58. 1880.

C. anelytroides Rupr. ex Döll

Brazil. See *Flora Brasiliensis* 2(3): 206. 1880.

C. angustifolia (Soderstr. & C.E. Calderón) L.G. Clark (*Swallenochloa angustifolia* Soderstr. & C.E. Calderón)

Venezuela, Colombia. Páramos, see *Brittonia* 30(3): 303. 1978, *Annals of the Missouri Botanical Garden* 74(2): 428. 1987.

C. antioquiensis L.G. Clark & Londoño

Colombia. See *Novon* 8(4): 423, f. 6. 1998.

C. aperta L.G. Clark

Mexico. See *Annals of the Missouri Botanical Garden* 74(2): 426-427, f. 1E-H. 1987.

C. arachniforme L.G. Clark & Londoño (*Chusquea arachniformis* L.G. Clark & Londoño)

Colombia. See *Novon* 8(4): 425-428. 1998.

C. argentina Parodi (*Chusquea culeou* E. Desv.)

Chile, Argentina. See *Flora Chilena* 6: 450, t. 83, f. 2. 1854 and *Revista Argent. Agron.* 8(4): 339, t. 24, f. 4. 1941, *Flora Patag.* 3: 1-583. 1978, *Gayana, Bot.* 42: 1-157. 1985.

C. aspera L.G. Clark

Peru. See *Iowa State Journal of Research* 61(1): 113, f. 4f-i. 1986.

C. attenuata (Döll) L.G. Clark (*Arundinaria attenuata* Döll)

Brazil. See *Flora Brasiliensis* 2(3): 170. 1880 and *Novon* 3(3): 237. 1993.

C. baculifera Silveira

Brazil. See *Arq. Mus. Nac. Rio de Janeiro* 22: 99, t. 1. 1919.

C. bahiana L.G. Clark (*Chusquea bambusoides* (Raddi) Hack.)

Brazil. See *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 20. 1906, *Brittonia* 48(2): 250-253, f. 1. 1996.

C. bambusoides (Raddi) Hack. (*Chusquea bahiana* L.G. Clark; *Chusquea gaudichaudii* Kunth; *Nastus brunneus* Desv.; *Rettbergia bambusoides* Raddi) (named for the French naturalist Charles Gaudichaud-Beaupré, 1789-1854, plant collector, circumnavigator, accompanied Freycinet in his voyage round the world, wrote "Rapport sur la flore des îles Malouines." *Ann. Sci. Nat.* 5: 89-110. Paris 1825; see J.H. Barnhart, *Biographical notes upon botanists.* 2: 33. 1965; John Dunmore, *Who's Who in Pacific Navigation.* University of Hawaii Press, Honolulu 1991; Paul Henri Lecomte, *Flore générale de l'Indo-Chine.* Paris 1907-1950; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China.* 809-811. [Reprint of the original edition 1898] Leipzig 1981; Charles Gaudichaud-Beaupré, [Botany of the Voyage.] *Voyage autour du Monde ... sur ... l'Uranie et la Physicienne, pendant ... 1817-1820.* 48. Paris 1826 [-1830]; Günther Schmid, *Chamisso als Naturforscher.* Eine Bibliographie. Leipzig 1942)

Brazil. See *Agrostografia Brasiliensis* 18, t. 1, f. 1. 1823, *Révision des Graminées* 1: 331, t. 78. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 211. 1831, *Opusc. Sci. Phys. Nat.* 211. [reprint] 1831-1833 and *Ergebn. Bot. Exp. Südbras.* 1: 20. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 81. 1908, *Brittonia* 48(2): 250-253, f. 1. 1996.

C. bambusoides (Raddi) Hack. var. *minor* McClure & L.B. Sm.

Brazil. See *Fl. Il. Catarin. Gram. Suppl.* 25, t. 5, f. g-i. 1967.

C. barbata L.G. Clark

Peru. See *Novon* 3(3): 232-233, f. 2. 1993.

C. bilimekii E. Fourn. (*Arundinaria flabellata* (E. Fourn.) McClure; *Guadua flabellata* E. Fourn.) (for Dominik Bilimek, 1812/1813-1884/1887, scientist, priest, botanical and zoological collector, naturalist, followed Archduke Ferdinand Maximilian (1832-1867) to Mexico, 1866 made the first biospeleological visit to the Grutas de Cacahuamilpa, collected and described for the first time numerous cave animals. See Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs.* VI. Plainfield, N.J. 1983; P. Herman Josef Roth, "Dominik Bilimek: Leben und Werk eines österreichischen Naturforschers sur mexikanischen Expedition der Österreicher vor hundert Jahren." *Sudhoffs Arch.* 49: 338-354. 1965; Paul Carpenter Standley, 1884-1963, *Trees and Shrubs of Mexico.* 1920-1926)

Mexico. Used for making baskets, see *Biologia Centrali-Americana; ... Botany ...* 3(20): 588. 1885, *Mexic. Pl.* 2: 132. 1886 and *Mem. New York Bot. Gard.* 10(5): 162. 1964, *Phytologia* 37(4): 317-407. 1977.

in Mexico: otate

C. bradei L.G. Clark (for A.C. Brade, 1881-1971)

Brazil. See *Brittonia* 48(2): 254-256, f. 2. 1996.

C. breviglumis Phil.

Argentina. See *Linnaea* 29(1): 103. 1858.

C. caparaoensis L.G. Clark

Brazil, Parque Nacional do Caparao. See *Brittonia* 44(4): 408, f. 9H, I. 1992.

C. capitata Rupr. (*Rettbergia capitata* Nees ex Döll)

Brazil. See *Linnaea* 9(4): 489. 1834, *Fl. Bras.* 2(3): 196. 1880.

C. capituliflora Trin.

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(6): 613. 1835.

C. capituliflora Trin. var. *capituliflora*

Brazil.

C. capituliflora Trin. var. *pubescens* McClure & L.B. Sm.

Brazil. See *Fl. Il. Catarin. Gram. Suppl.* 28-29, t. 6, f. a-c. 1967.

C. ciliata Phil. (*Chusquea tenuiflora* Phil.)

Chile. See *Linnaea* 30(2): 206. 1859, *Linnaea* 33(3-4): 299. 1864.

C. circinata Soderstr. & C.E. Calderón

Mexico. Used for making baskets, see *Brittonia* 30(2): 156, f. 1. 1978.

in Mexico: otate, otate chino

C. coronalis Soderstr. & C.E. Calderón

Mexico, Guatemala, Costa Rica. See *Brittonia* 30(2): 158, f. 2. 1978, *Am. J. Bot.* 89: 1967-1972. 2002.

C. culeou E. Desv. (*Chusquea andina* Phil.; *Chusquea argentina* Parodi; *Chusquea breviglumis* Phil.; *Chusquea culeou* f. *culeou*; *Chusquea culeou* f. *longiramea* Parodi)

Chile, Argentina. Shoots eaten, moist woods, see *Flora Chilena* 6: 450, t. 83, f. 2. 1854, *Linnaea* 29(1): 103. 1858 and *Revista Argentina de Agronomía* 8(4): 339, 343, t. 24, f. 4. 1941, *Economic Botany* 55(2): 243-254. 2001.

in Argentina: quila, caña

C. culeou E. Desv. f. *longiramea* Parodi

Chile, Argentina. See *Revista Argentina de Agronomía* 8(4): 339, 343, t. 24, f. 4. 1941.

C. cumingii Nees (*Arundo canila* Molina ex Steud.; *Chusquea parvifolia* Phil.) (after Hugh Cuming, 1791-1865 (d. London), British traveler and plant collector in South America and in the Philippines, Fellow of the Linnean Society 1832, shell collector. See A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ray Desmond,

Dictionary of British & Irish Botanists and Horticulturists. 183-184. London 1994; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997; Sebastian Vidal y Soler (1842-1889), *Phanerogamae Cumingianae Philippinarum*; ó, Índice numérico y catálogo sistemático de las plantas fanerogamas coleccionadas en Filipinas por Hugh Cuming, con características de algunas especies no descritas y del género *Cumingia* (Malvaceas) por Sebastian Vidal y Soler. Publicada por superior decreto. Manila, Tipo-litográfico de M. Pérez Hijo, 1885)

Chile. See *Linnaea* 9(4): 487. 1834, *Synopsis Plantarum Glumacearum* 1: 336. 1854, *Linnaea* 33(3-4): 299. 1864.

C. decolorata Munro ex Parodi (*Chusquea decolorata* L. Parodi)

Peru. See *Revista Univ. Santiago* 30: 65. 1945.

C. deficiens Parodi

Argentina. See *Revista Argent. Agron.* 8(4): 335, t. 22, f. 2-3. 1941.

C. deflexa L.G. Clark

Guatemala, Honduras. See *Iowa State J. Res.* 61(1): 102, f. 1d-f. 1986.

C. delicatula Hitchc.

Peru, Bolivia. See *Contrib. U.S. National Herbarium* 24(8): 309. 1927.

C. depauperata Pilg. (*Swallenochloa depauperata* (Pilg.) McClure)

Peru. See *Repert. Spec. Nov. Regni Veg.* 1(10): 149. 1905, *Smithsonian Contrib. Bot.* 9: 106, 112, f. 43-45. 1973.

C. discolor Hack. (*Chusquea oligophylla* Rupr.; *Chusquea wettsteinii* Hack.)

Brazil. See *Bambuseae* 34, t. 7, f. 23. 1839 and *Oesterr. Bot. Z.* 53(4): 155. 1903, *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 21. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 82. 1908.

C. dombeyana Kunth (*Chusquea pubispicula* Pilg.; *Chusquea scandens* Kunth; *Nastus chusque* Kunth) (after the French botanist Joseph Dombey, 1742-1796 (he died in prison, Montserrat, West Indies) (there is still no certainty with respect to the year of death, Pritzel accepts 1793, Brummitt and Powell 1796, *D.S.B.* 1794, etc.), plant collector, physician, naturalist, explorer and traveler, between 1777-1788 in Chile and Peru with H. Ruíz López (1754-1815, Spanish scientist and traveler, author of a never published supplement to a dictionary of the Quechua language spoken by the Indians of Peru) and José Antonio Pavón (1754-1844). See *Joseph Dombey, médecin, naturaliste, archéologue, explorateur du Pérou, du Chili et du Brésil, 1778-1785* ... Paris 1905; J.H. Barnhart, *Biographical notes upon botanists*. 1: 463. 1965; Diego de Torres Rubio, *Arte de la lengua quichua*. Lima 1619; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*.

Regnum Vegetabile vol. 2. 1954; James Lockhart, *Men of Cajamarca: A Social and Biographical Study of the First Conquerors of Peru*. Austin 1972; R.B. Cunninghame Graham, *Pedro de Valdivia: Conqueror of Chile*. London 1927; E. Alvarez López, "Dombey y la expedición al Perú y Chile." *Anales Inst. Bot. Cavanilles*. 14: 31-129. 1956; Francisco Guerra, in *D.S.B.* 4: 156-157. [d. 1794] 1981; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 94. 1989; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971)

Peru. See *Nova Genera et Species Plantarum* 1: 201. 1815 [1816], *Synopsis Plantarum* 1: 254. 1822, *Révision des Graminées* 2: 553, t. 191. 1832 and *Repertorium Specierum Novarum Regni Vegetabilis* 1(10): 148. 1905.

C. effusa Renv. (*Aulonemia lanciflora* McClure & L.B. Sm.; *Colantheria lanciflora* (McClure & L.B. Sm.) McClure

Brazil. Glumes absent, see *Flora Illustrada Catarinense* 1(GRAM-Supl.): 47-50, t. 9, f. d-l. 1967, *Smithsonian Contrib. Bot.* 9: 77, 79, f. 32. 1973, *Kew Bulletin* 42(2): 924. 1987.

C. elegans Renvoize (*Chusquea mimosa* McClure & L.B. Sm.)

Brazil. Glumes absent, see *Flora Illustrada Catarinense* 1(GRAM-Supl.): 37-40, t. 8, f. a-c. 1967, *Kew Bulletin* 42(2): 924. 1987.

C. erecta L.G. Clark

Brazil. See *Brittonia* 44(4): 397, f. 1. 1992.

C. exasperata L.G. Clark

Ecuador, Peru. See *Syst. Bot.* 15(4): 627, f. 5-6, 11A-G. 1990.

C. falcata L.G. Clark

Ecuador. See *Novon* 3(3): 228, f. 1A-D. 1993.

C. fasciculata Döll

Brazil. See *Flora Brasiliensis* 2(3): 202, t. 54. 1880.

C. fendleri Munro (named for the German-born explorer August Fendler, 1813-1883, plant collector in North and South America, with Asa Gray (1810-1888) wrote *Plantae fendlerianae novi-mexicanae*. [Philadelphia 1849]; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 534. 1965)

Venezuela. See *Trans. Linn. Soc. London* 26(1): 61. 1868.

C. fernandeziana Phil. (*Chusquea ligulata* Munro)

Chile, Juan Fernandez Islands. See R.A. Philippi, "Observaciones sobre la flora de Juan Fernández." in *Anales Univ. Chile*. 13: 157-169. (May) 1856, "Bemerkungen über die Flora der Insel Juan Fernandez." in *Bot. Zeitung*. 14: 625-636, 641-650. 1856, *Transactions of the Linnean Society of London* 26(1): 62. 1868, *Anales Univ. Chile* 43: 577. 1873, Friedrich (Federico) Richard Adalbert (Adelbart) Johow, 1859-1933, "Los helechos de Juan Fernández." *Anales*

Univ. Chile. 82: 741-757. 1892 and 977-1004. 1893, "Las plantas de cultivo en Juan Fernández." *Anales Univ. Chile*. 84: 939-970. 1893 and *The Natural History of Juan Fernandez and Easter Island* 1: 95-240. 1922, *The Natural History of Juan Fernandez and Easter Island* 2(28): 763-792. 1951, *Contr. U.S. Natl. Herb.* 19: 41. 2000, *Brittonia* 54(3): 154-163. 2002 [Notes on the Poaceae of the Robinson Crusoe (Juan Fernández) Islands, Chile].

C. foliosa L.G. Clark

Mexico, Costa Rica. See *Iowa State Journal of Research* 61(1): 115, f. 4a-e. 1986.

C. galeottiana Rupr. ex Munro (*Chusquea galeottiana* Rupr. ex Galeotti) (for the French-born Belgian botanist Henri-Guillaume Galeotti, 1814-1858, explorer in Central America, director of the botanic garden of Bruxelles; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 24. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 713. Stuttgart 1993; Rogers McVaugh, "Galeotti's Botanical Work in Mexico: The Numbering of his Collections and a Brief Itinerary." *Contr. Univ. Mich. Herb.* 11(5): 291-297. 1972; Michael Joseph Scheidweiler (1799-1861), "Descriptio diagnostica nonnullarum Cactearum quae a domino Galeotti in provinciis Potosi et Guanaxato regni Mexicani inveniuntur. Genus *Ariocarpus*." in *Bull. Acad. Sci. Brux.* 5: 491-492. 1838; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964)

Mexico. See *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 246. 1842, *Trans. Linn. Soc. London* 26(1): 59. 1868.

in Mexico: carrizo

C. glauca L.G. Clark

Mexico. See *Syst. Bot. Monogr.* 27: 95. 1989.

C. gracilis McClure & L.B. Sm.

Brazil. See *Flora Illustrada Catarinense* 1(GRAM-Supl.): 43-44, t. 8, f. i-k. 1967.

C. grandiflora L.G. Clark

Panama, Colombia. See *Annals of the Missouri Botanical Garden* 74(2): 424-426, f. 1A-D. 1987.

C. heterophylla Nees (*Chusquea heterophylla* var. *elongata* Döll; *Chusquea heterophylla* var. *heterophylla*; *Chusquea heterophylla* var. *microphylla* Döll; *Chusquea heterophylla* var. *squamosa* Döll; *Chusquea pinifolia* (Nees) Nees; *Chusquea pinifolia* var. *heterophylla* (Nees) Hack.)

Brazil. See *Linnaea* 9: 488, 490. 1835, *Symbolae ad Floram Argentinam* 285. Göttingen 1879, *Flora Brasiliensis* 2(3): 207. 1880 and *Ergebn. Bot. Exp. Südbras.* 1: 21. 1906, *Brittonia* 44: 417, 420. 1992, *Willdenowia* 22: 268. 1992.

C. huantensis Pilg.

Peru, Huanta. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 29. 1920.

C. ibiramae McClure & L.B. Sm.

Brazil, Santa Catarina, Ibirama. See *Flora Illustrada Catarinense* 1(GRAM-Supl.): 40-42, t. 8, f. d-f. 1967.

C. inamoena Pilg. (*Chusquea serrulata* Pilg.)

Peru. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 719-720. 1898 and *Repert. Spec. Nov. Regni Veg.* 1(10): 150. 1905.

C. juergensii Hack. (*Chusquea swallenii* McClure & L.B. Sm.)

Uruguay, Brazil. See *Repert. Spec. Nov. Regni Veg.* 7(149-151): 325. 1909, *Flora Illustrada Catarinense* 1(GRAM-Supl.): 44-45, t. 9, f. a-c. 1967.

C. lanceolata Hitchc.

Mexico, Honduras, Guatemala. See *Phytologia* 1(4): 145-146. 1935.

C. latifolia L.G. Clark

Colombia. See *Annals of the Missouri Botanical Garden* 72(4): 868-870, f. 3. 1985.

C. lehmannii Pilg. (*Chusquea pilgeri* E.G. Camus)

Ecuador, Colombia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 35-36. 1899 and *Les Bambusées* 1: 83. 1913, Lorenzo Raimundo Parodi, "Robert Pilger." *Revista Argent. Agron.* 20(2): 107-114. 1953, *Nordic Journal of Botany* 11: 325. 1991.

C. lehmannii Pilg. subsp. *farinosa* L.G. Clark & Londoño
Ecuador, Colombia. See *Nord. J. Bot.* 11(3): 326. 1991.

C. lehmannii Pilg. subsp. *lehmannii*

Ecuador, Colombia.

C. leonardiorum L.G. Clark

Ecuador. See *Brittonia* 48(2): 256-260, f. 3. 1996.

C. leptophylla Nees (*Arthrostylidium leptophyllum* (Nees) Döll; *Arundinaria leptophylla* (Nees) Hack.)

Brazil. See *Linnaea* 9(4): 489. 1835, *Flora Brasiliensis* 2(3): 175. 1880 and *Österreichische Botanische Zeitschrift* 53: 69, 516. 1903.

C. liebmanni E. Fourn. (*Chusquea heydei* Hitchc.; *Chusquea liebmanni* Fournier ex Hemsley)

Mexico, Guatemala. See *Biologia Centrali-Americana; ... Botany ...* 3(20): 587. 1885, *Mexic. Pl.* 2: 132. 1886 and *Proceedings of the Biological Society of Washington* 40: 80. 1927.

C. ligulata Munro (*Chusquea fernandeziana* Phil.)

Colombia. See *Trans. Linn. Soc. London* 26(1): 62. 1868, *Anales de la Universidad de Chile* 43: 577. 1873 and *The Natural History of Juan Fernandez and Easter Island* 1: 95-

240. 1922, *The Natural History of Juan Fernandez and Easter Island* 2(28): 763-792. 1951, *Syst. Bot.* 15: 628. 1990, *Contr. U.S. Natl. Herb.* 19: 41. 2000, *Brittonia* 54: 156. 2002.

C. linearis N.E. Br.

Brazil, Venezuela, Guyana. See *Trans. Linn. Soc. London, Bot.* 6(1): 76. 1901.

C. londoniae L.G. Clark

Colombia. See *Syst. Bot.* 15(4): 628, f. 3-4, 12A-D. 1990.

C. longifolia Swallen

Mexico, Guatemala, Costa Rica, Panama. See *J. Wash. Acad. Sci.* 30(5): 210. 1940, *Syst. Bot. Monogr.* 27: 105. 1989.

C. longiligulata (Soderstr. & C.E. Calderón) L.G. Clark (*Swallenochloa longiligulata* Soderstr. & C.E. Calderón)

Costa Rica. See *Brittonia* 30(3): 305, f. 3, 4. 1978, *Annals of the Missouri Botanical Garden* 74(2): 428. 1987.

C. longipendula Kuntze (*Chusquea uniflora* Steud.)

Bolivia. See *Synopsis Plantarum Glumacearum* 1: 337. 1854, *Revis. Gen. Pl.* 3(2): 348. 1893.

C. longiprophylla L.G. Clark

Colombia. See *Syst. Bot.* 15(4): 626, 631, f. 1-2, 14F-I. 1990.

C. lorentziana Griseb. (for the German botanist Paul Günther Lorentz, 1835-1881, bryologist, professor of botany in Argentina and Uruguay, explorer, plant collector, owner of a moss herbarium. See P.G. Lorentz and Gustavo Niederlein, *Enumeración sistemática de las plantas colectadas durante la expedición*. Informe oficial de la Comisión Científica agregada al Estado Mayor General de la expedición al Rio Negro (Patagonia), realizada en los meses de abril, mayo y junio de 1879, bajo las órdenes del Gral. Julio A. Roca. Buenos Aires. Entrega segunda. *Botánica*. 173-294. 1881; Stafleu and Cowan, *Taxonomic literature*. 3: 157-160. 1981; August Heinrich Rudolph Grisebach (1814-1879), *Plantae lorentzianae*. Göttingen 1874; J.H. Barnhart, *Biographical notes upon botanists*. 2: 402. 1965)

Argentina. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 249-250. 1874.

C. loxensis L.G. Clark

Ecuador, Loja. See *Brittonia* 48(2): 260-262, f. 4. 1996.

C. maclurei L.G. Clark (also spelled *macclurei*)

Ecuador. See *Iowa State J. Res.* 61(1): 109, f. 3. 1986.

C. macrostachya Phil.

Chile. See *Anales Univ. Chile* 94: 350. 1896.

C. maculata L.G. Clark

Colombia, Venezuela. See *Syst. Bot.* 15: 632, f. 7, 14A-E. 1990.

- C. meyeriana** Rupr. ex Döll (*Chusquea meyeriana* Döll; *Chusquea meyeriana* var. *meyeriana*)
Brazil. Glumes absent, see *Fl. Bras.* 2(3): 203. 1880.
- C. microphylla** (Döll) L.G. Clark (*Chusquea heterophylla* var. *microphylla* Döll)
Brazil. See *Flora Brasiliensis* 2(3): 207. 1880 and *Brittonia* 44(4): 420, f. 16G-K. 1992.
- C. mimosa** McClure & L.B. Sm. (*Chusquea elegans* Ren-voize)
Brazil. See *Flora Illustrada Catarinense* 1(GRAM-Supl.): 37-40, t. 8, f. a-c. 1967, *Kew Bulletin* 42(2): 924. 1987.
- C. mimosa** McClure & L.B. Sm. subsp. *australis* L.G. Clark
Brazil. See *Brittonia* 44(4): 414, f. 14G-I. 1992.
- C. mimosa** McClure & L.B. Sm. subsp. *mimosa*
Brazil.
- C. montana** Phil. (*Chusquea nigricans* Phil.)
Argentina, Chile. See *Linnaea* 33(3-4): 298. 1864, *Anales de la Universidad de Chile* 27: 323. 1865.
- C. muelleri** Munro (*Chusquea carinata* E. Fourn.; *Chusquea mexicana* Hack.; *Chusquea mulleri* Munro)
Mexico. See *Trans. Linn. Soc. London* 26(1): 65. 1868, *Mexic. Pl.* 2: 132. 1886.
- C. nelsonii** Scribn. & J.G. Sm. (for the American naturalist Edward William Nelson, 1855-1934, explorer, in Mexico and Guatemala, plant collector, from 1890 to 1929 with the USDA, his writings include *Descriptions of New Genera, Species and Subspecies of Birds from Panama, Colombia and Ecuador*. Washington 1912, *The Eskimo about Bering Strait*. Washington 1881, "Lower California and its natural resources." *Mem. Natl. Acad. Sci.* 16: 1-194. Washington 1922, "A winter expedition in southwestern Mexico." *Natl. Geog. Mag.* 15(9): 339-356. 1904 and *Wild Animals of North America*. Washington 1930. See [edited by H.W. Henshaw] *Report upon Natural History Collections made in Alaska between the years 1877 and 1881 by E.W. Nelson*. 1887; E.A. Goldman, "Edward William Nelson, naturalist, 1855-1934." *Auk*. 52: 135-148. 1935; J.H. Barnhart, *Biographical notes upon botanists*. 2: 544. 1965; H. Robinson & R.D. Brettell, in *Phytologia*. 27(1): 54. 1973; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950)
Mexico, Guatemala. Used for making baskets, see *U.S.D.A. Div. Agrostol. Bull.* 4: 16. 1897 [also *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 16. 1897].
in Mexico: ojatate
- C. neurophylla** L.G. Clark
Peru, Ecuador. See *Iowa State J. Res.* 61(1): 105, f. 2a-f. 1986.
- C. nigricans** Phil.
Chile. See *Anales Univ. Chile* 27: 323. 1865.
- C. nudiramea** L.G. Clark
Brazil. See *Brittonia* 44(4): 415, f. 15. 1992.
- C. nutans** L.G. Clark
Brazil. See *Brittonia* 44(4): 398, f. 3A-F, 4, 5. 1992.
- C. oligophylla** Rupr. (*Chusquea discolor* Hack.; *Chusquea wettsteinii* Hack.) (for the Austrian botanist Richard Wettstein von Westersheim, 1863-1931, traveler, plant collector, phylogenist, father of the Austrian botanist and plant physiologist Fritz (Friedrich) Wettstein von Westersheim (1895-1945); see T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 433. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; Stafleu and Cowan, *Taxonomic literature*. 7: 219-235. 1988)
Brazil. See *Bambuseae* 34, t. 7, f. 23. 1839 and *Österreichische Botanische Zeitschrift* 53(4): 155. 1903, *Ergebn. Bot. Exp. Südbras.* 1: 21. 1906.
- C. oxylepis** (Hack.) Ekm. (*Chusquea bambusoides* subsp. *oxylepis* Hack.)
Brazil. See *Ergebn. Bot. Exp. Südbras.* 1: 20. 1906, *Ark. Bot.* 13(10): 65. 1913.
- C. oxyphylla** Freng. & Parodi
Argentina. Fossil, see *Notas Mus. La Plata, Paleontol.* 6 (Paleont. 32): 236. [t.] f. 1.2. 1941.
- C. palenae** Philippi (*Chusquea valdiviensis* E. Desv.)
Chile. See *Flora Chilena* 6: 446. 1854, *Anales de la Universidad de Chile* 94: 350. 1896.
- C. pallida** Munro (*Chusquea hispida* McClure)
Venezuela. See *Trans. Linn. Soc. London* 26(1): 65. 1868 and *J. Wash. Acad. Sci.* 32(6): 179, f. 7. 1942.
- C. paludicola** L.G. Clark
Costa Rica. See *Iowa State J. Res.* 61(1): 101, f. 1a-c. 1986.
- C. parviflora** Philippi
Chile. See *Anales de la Universidad de Chile* 94: 349. 1896.
- C. patens** L.G. Clark
Panama, Costa Rica. See *Iowa State J. Res.* 61(1): 119, f. 5. 1986.
- C. perligulata** (Pilg.) McClure (*Guadua perligulata* Pilg.)
Ecuador. See *Biblioth. Bot.* 29(116): 57. 1937, *Smithsonian Contr. Bot.* 9: 69. 1973.

C. perotensis L.G. Clark, G. Cortés & Chazaro

Mexico. See *Syst. Bot.* 22(2): 225, f. 1-4. 1997.

C. peruviana E.G. Camus (*Chusquea ramosissima* Pilger; *Chusquea sandiensis* Pilger) (Peru, Sandia)

Peru, Bolivia. See *Repert. Spec. Nov. Regni Veg.* 1(10): 149. 1905, *Bot. Jahrb. Syst.* 56(Beibl. 123): 29. 1920.

C. picta Pilg.

Peru. See *Repert. Spec. Nov. Regni Veg.* 1(10): 151. 1905.

C. pinifolia (Nees) Nees (*Arundinaria pinifolia* Nees; *Chusquea heterophylla* Nees; *Chusquea heterophylla* Griseb., nom. illeg., non *Chusquea heterophylla* Nees; *Chusquea heterophylla* var. *elongata* Döll; *Chusquea heterophylla* var. *microphylla* Döll; *Chusquea heterophylla* var. *squamosa* Döll; *Chusquea microphylla* (Döll) L.G. Clark; *Chusquea pinifolia* var. *heterophylla* (Nees) Hack.; *Chusquea pinifolia* var. *pinifolia*; *Ludolfia pinifolia* (Nees) A. Dietr.; *Ludolfia pinifolia* (Nees) A. Dietr.)

Brazil. See *Familles des Plantes* 2: 244. 1763, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 525. 1829, *Species Plantarum. Editio sexta* 2: 25. 1833, *Linnaea* 9(5): 488, 490. 1834[1835], *Symbolae ad Floram Argentinam* 285. 1879, *Flora Brasiliensis* 2(3): 207. 1880 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 21. 1906, *Syst. Bot. Monogr.* 27: 51. 1989, *Brittonia* 44(4): 417, 420, f. 16G-K. 1992, *Willdenowia* 22: 268. 1992.

C. pittieri Hack. (*Chusquea maurofernandeziana* Hack. ex E.G. Camus)

Mexico, Guatemala. See *Oesterr. Bot. Z.* 53(4): 153. 1903, *Syst. Bot. Monogr.* 27: 74. 1989.

C. pohlii L.G. Clark

Panama, Costa Rica. Climbing, hanging, see *Annals of the Missouri Botanical Garden* 72(4): 867-868, f. 2B-f. 1985.

C. polyclados Pilg.

Peru. See *Repert. Spec. Nov. Regni Veg.* 1(10): 147. 1905.

C. pubescens Steud.

South America. See *Syn. Pl. Glumac.* 1: 337. 1854.

C. pubispicula Pilg.

Peru. See *Repert. Spec. Nov. Regni Veg.* 1(10): 148. 1905.

C. pulchella L.G. Clark

Brazil. See *Novon* 3(3): 236, f. 3F-J. 1993.

C. purdieana Munro (for the Scottish botanist William Purdie, 1817-1857 (Trinidad), plant collector in tropical South America, gardener, 1846-1857 Botanical Garden Trinidad, wrote "Journal of Botanical Mission to West Indies in 1843-1844." in *London J. Bot.* 3: 501-533. 1844 and 4: 14-27. 1845. See J.H. Barnhart, *Biographical notes upon botanists.* 3: 115. 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists.* 567. London 1994; Mea Allan, *The Hookers of Kew.* London 1967; Henri François Pittier, *Manual de las Plantas Usuales de Venezuela y su*

Suplemento. Caracas 1971; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa.* 66. 1971; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France.* 29: 191-192. Paris 1882; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium.* Edinburgh 1970)

Colombia. See *Trans. Linn. Soc. London* 26(1): 56. 1868.

C. quila Kunth (*Arundo quila* Molina; *Chusquea intermedia* Steud.; *Chusquea parvifolia* Phil.; *Chusquea quila* var. *laxiflora* E. Desv.; *Chusquea quila* var. *longipila* E.G. Camus; *Chusquea quila* var. *quila*; *Chusquea valdiviensis* E. Desv.; *Coliquea quila* (Molina) Steud. ex Bibra; *Cortaderia quila* (Molina) Stapf; *Gynerium quila* (Molina) Nees & Meyen; *Moorea quila* (Molina) Stapf; *Nastus productus* (Pilg.) Holttum; *Nastus prolifer* Desv.; *Nastus quila* (Kunth) Schult.f.; *Oreostachys producta* Pilg.)

Chile. See Giovanni Ignazio Molina (1737-1829), *Saggio sulla storia naturale del Chili.* 154-155. Bologna 1782, *Essai d'une Nouvelle Agrostographie* 138, 153, t. 24. 1812, *Systema Vegetabilium* 7: 1361. 1830, *Révision des Graminées* 1: 329, t. 77. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 211. 1831, *Gramineae* 153-154. 1841, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* (Suppl. 1): 153. 1843, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 21-22. 1843, *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 5(2): 115. 1853, *Flora Chilena* 6: 446-447. 1854, *Berberides Americae Australis* 52. 1857, *Linnaea* 33(3-4): 299. 1864, *Gardener's Chronicle, ser. 3* 22(571): 396. 1897 and *Gardener's Chronicle, ser. 3* 34: 400. 1903, *Les Bambusées* 1: 198, f. 61a. 1913, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62: 460. 1929, *Kew Bulletin* 10: 594. 1956, *Taxon* 23: 599. 1974.

C. ramosissima Lindm. (*Chusquea affinis* Munro ex Camus; *Chusquea phacellophora* Pilg.; *Chusquea ramosissima* Pilg., nom. illeg., non *Chusquea ramosissima* Lindm.)

Brazil, Argentina. Solid, leaning, scrub forming, grazed, medicinal and magical uses, primary forest, rocky soil, forest margins, see *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 24, t. 14. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 1(10): 149. 1905, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 8(76): 456. 1923, *Revista Argentina de Agronomía* 8: 338. 1941, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, H.A. Keller, "Mythical origin of *Chusquea ramosissima* (Poaceae), the ancient knife of the Guaranis." *Economic Botany* 57(4): 461-471. 2003.

C. repens L.G. Clark & Londoño

Mexico. See *Nordic Journal of Botany* 11(3): 327. 1991.

C. repens L.G. Clark & Londoño subsp. *oaxacacensis* L.G. Clark & Londoño

Mexico. See *Nordic Journal of Botany* 11(3): 328. 1991.

C. repens L.G. Clark & Londoño subsp. ***repens***
Mexico.

C. riosaltensis L.G. Clark

Brazil. See *Brittonia* 44(4): 403, f. 6. 1992.

C. scabra Soderstr. & C.E. Calderón

Costa Rica. See *Brittonia* 30(3): 300, f. 2. 1978.

C. scandens Kunth (*Bambusa chusque* Poir.; *Chusquea jamesonii* Steud.; *Chusquea meyeriana* var. *patentissima* (Hack.) E.G. Camus; *Chusquea quitensis* Hack.; *Chusquea quitensis* var. *patentissima* Hack.; *Nastus chusque* Kunth) (after the Scottish botanist William (Guilielmo) Jameson, 1796-1873 (d. Ecuador), physician, M.D. Edinburgh 1818, traveler, 1820 South America, from 1826 at Quito, plant collector, 1827 professor of chemistry and botany, author of *Synopsis plantarum aequatoriensium*, exhibens plantas praecipue in regione temperata et frigida crescentes, etc. Quito 1865. See *Companion to Curtis's Botanical Magazine*. 111-116. 1835; J.H. Barnhart, *Biographical notes upon botanists*. 2: 244. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 194. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 189. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 303, 360. Dresden 1916)

Bolivia, Peru, Ecuador, Colombia. Erect, solid and pliable stems, trailing over trees and shrubs, used for making baskets, mountain forest, see *Nov. Gen. Sp.* 1: 201. 1816, *Syn. Pl. Glumac.* 1: 337. 1854 and *Oesterr. Bot. Z.* 53(4): 154. 1903, *Repert. Spec. Nov. Regni Veg.* 6(113-118): 161. 1908, Fortunato L. Herrera, *Estudios sobre la flora del departamento del Cuzco*. Lima 1930, E. Yacovleff and F.L. Herrera, "El mundo vegetal de los antiguos peruanos." *Revista del Museo Nacional* 3: 241-322 and 4: 20-102. Lima 1934-1935, John Howland Rowe, "Inca Culture." in *Handbook of South American Indians*. Bureau of American Ethnology, Bulletin 143, 2: 183-330. Washington 1946.

in Peru: kurcur

C. sclerophylla Döll

Brazil. See *Fl. Bras.* 2(3): 200. 1880 and *Brittonia* 44: 403. 1992.

C. sellowii Rupr.

Brazil. See *Bambuseae* 35, t. 11, f. 26. 1839.

C. serpens L.G. Clark

Venezuela, Colombia, Ecuador. See *Annals of the Missouri Botanical Garden* 72(4): 870, f. 4. 1985, *Syst. Bot. Monogr.* 27: 91. 1989.

C. serrulata Pilg.

Colombia, Ecuador. See *Bot. Jahrb. Syst.* 25: 719. 1898.

C. simpliciflora Munro (*Chusquea simplicifolia* Munro ex Hemsl.)

Venezuela, Colombia, Ecuador, Mexico, Nicaragua. See *Trans. Linn. Soc. London* 26(1): 54, t. 2. 1868, *Biol. Cent. Amer., Bot.* 3: 587. 1885 and *Syst. Bot. Monogr.* 27: 89. 1989.

C. smithii L.G. Clark (for David N. Smith)

Peru. See *Iowa State J. Res.* 61(1): 107, f. 2g-i. 1986.

C. sneidernii Aspl.

Colombia. See *Bot. Not.* 1939: 797. 1939.

C. spadicea Pilg.

Colombia. See *Bot. Jahrb. Syst.* 27: 35. 1899.

C. spathacea McClure ex L.G. Clark

Colombia. See *Novon* 3(3): 235, f. 3A-E. 1993.

C. spencei Ernst

Venezuela, Colombia. See *J. Bot.* 10: 262. 1872 and *Syst. Bot. Monogr.* 27: 54. 1989.

C. spicata Munro (*Chusquea humilis* Lechler ex Munro; *Chusquea simplicissima* Pilg.; *Chusquea weberbaueri* Pilg.; *Swallenochloa spicata* (Munro) McClure; *Swallenochloa weberbaueri* (Pilg.) McClure)

Bolivia, Peru. See *Trans. Linn. Soc. London* 26(1): 60. 1868 and *Repert. Spec. Nov. Regni Veg.* 1(10): 145-146. 1905, *Smithsonian Contributions to Botany* 9: 112-113. 1973, *Syst. Bot. Monogr.* 27: 62-63. 1989.

C. straminea Pilg.

Peru. See *Repert. Spec. Nov. Regni Veg.* 1(10): 147. 1905.

C. subtessellata Hitchc. (*Swallenochloa subtessellata* (Hitchc.) McClure)

Panama, Costa Rica. See *Proc. Biol. Soc. Wash.* 40: 81. 1927, *Smithsonian Contributions to Botany* 9: 113. 1973.

C. subtilis Y. Widm. & L.G. Clark

Costa Rica. See *Annals of the Missouri Botanical Garden* 78(1): 167, f. 1F-H. 1991.

C. subulata McClure ex L.G. Clark (*Chusquea subulata* L.G. Clark)

Colombia. See *Novon* 3(3): 229, f. 1E-H. 1993.

C. sulcata Swallen

Mexico, Guatemala, Costa Rica. See *J. Wash. Acad. Sci.* 30(5): 209. 1940.

C. talamancensis Y. Widm. & L.G. Clark

Costa Rica, Cordillera de Talamanca. See *Annals of the Missouri Botanical Garden* 78(1): 169, f. 2A-F. 1991.

C. tarmensis Pilg.

Peru. See *Repert. Spec. Nov. Regni Veg.* 1(10): 151. 1905.

C. tenella Nees (*Chusquea uruguayensis* Arechav.)

Brazil, Uruguay, Argentina. See *Linnaea* 9(4): 492. 1835, *Anales Mus. Nac. Montevideo* 1(6): 546. 1897.

C. tenella Nees var. *latifolia* Dutra

Brazil. See *Revista Sudamer. Bot.* 5(5-6): 146. 1938.

C. tenella Nees var. *tenella*

Brazil.

C. tenuiflora Philippi (*Chusquea ciliata* Phil.; *Chusquea uliginosa* Phil.)

Chile. See *Linnaea* 30(2): 206-207. 1859, *Linnaea* 33(3-4): 299. 1864.

C. tenuiglumis Döll

Brazil. See *Flora Brasiliensis* 2(3): 199. 1880.

C. tenuiglumis Döll var. *laxiuscula* Döll

Brazil. See *Fl. Bras.* 2(3): 200. 1880.

C. tenuiglumis Döll var. *subcylindrica* Döll

Brazil. See *Fl. Bras.* 2(3): 199. 1880.

C. tenuiglumis Döll var. *tenuiglumis*

Brazil.

C. tenuis Glaz. ex E.G. Camus (*Chusquea acuminata* Döll; *Chusquea tenuis* E.G. Camus)

Brazil. See *Flora Brasiliensis* 2(3): 204. 1880 and *Les Bambusées* 1: 90. 1913.

C. tessellata Munro (*Chusquea humilis* Lechler ex Munro; *Chusquea simplicissima* Pilg.; *Chusquea spicata* Munro; *Chusquea weberbaueri* Pilg.; *Swallenochloa spicata* (Munro) McClure; *Swallenochloa tessellata* (Munro) McClure; *Swallenochloa weberbaueri* (Pilg.) McClure)

Venezuela, Bolivia, Colombia, Ecuador, Peru. See *Trans. Linn. Soc. London* 26(1): 60. 1868 and *Repertorium Specierum Novarum Regni Vegetabilis* 1(10): 145-146. 1905, *Smithsonian Contributions to Botany* 9: 112-113. 1973, *Syst. Bot. Monogr.* 27: 62-63. 1989.

C. tomentosa Y. Widm. & L.G. Clark

Costa Rica, Cordillera de Talamanca. See *Annals of the Missouri Botanical Garden* 78(1): 165, f. 1A-E. 1991.

C. tonduzii Hack. (for the Swiss botanist Adolphe [Adolfo] Tonduz, 1862-1921, plant collector, traveler and botanical explorer (Costa Rica and Guatemala), author of *Flora of Costa Rica*. San José de Costa Rica 1897 [Expos. Centroam. Guatemala.], *La Fumagina del Cafeto*. San José de Costa Rica 1897 [An. Inst. Fís. Geogr. Nac. vii.]; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 390. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Costa Rica. See *Österreichische Botanische Zeitschrift* 53(4): 155. 1903.

C. tuberculosa Swallen (*Chusquea hispida* McClure)

Colombia. See *J. Wash. Acad. Sci.* 21(1): 14. 1931, *Journal of the Washington Academy of Sciences* 32(6): 179, f. 7. 1942.

C. uliginosa Phil. (*Chusquea tenuiflora* Phil.)

Chile. See *Linnaea* 30(2): 206-207. 1859.

C. uniflora Steud.

Colombia, Ecuador. See *Syn. Pl. Glumac.* 1: 337. 1854.

C. urelytra Hack.

Brazil. See *Oesterr. Bot. Z.* 53(4): 158. 1903.

C. uruguayensis Arechavaleta (*Chusquea tenella* Nees)

Uruguay, Argentina. See *Linnaea* 9(4): 492. 1835, *Anales del Museo Nacional de Montevideo* 1(6): 546. 1897.

C. valdiviensis E. Desv. (*Chusquea intermedia* Steud.; *Chusquea palenae* Pilg.)

Argentina, Chile. See *Fl. Chil.* 6: 446. 1853, *Berberides Americae Australis* 52. 1857, *Anales Univ. Chile* 94: 350. 1896.

C. virgata Hack.

Costa Rica, Panama. See *Oesterr. Bot. Z.* 53(4): 156. 1903.

C. vulcanalis (Soderstr. & C.E. Calderón) L.G. Clark (*Swallenochloa vulcanalis* Soderstr. & C.E. Calderón)

Costa Rica, Panama. See *Brittonia* 30(3): 309, f. 5. 1978, *Annals of the Missouri Botanical Garden* 74(2): 428. 1987.

C. wettsteinii Hackel (*Chusquea discolor* Hack.)

Brazil. See *Bambuseae* 34, t. 7, f. 23. 1839 and *Oesterr. Bot. Z.* 53(4): 155. 1903, *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 21. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 82. 1908.

C. wilkesii Munro (for Charles Wilkes, 1798-1877, American naval officer, traveler, in 1818 joined the U.S. Navy, studied hydrography, from 1838 to 1842 explorer in the Pacific Ocean (explored the South Pacific islands and the Antarctic continent), in 1864 was court-martialed for disobedience, author of *Narrative of the United States Exploring Expedition: During the Years ...* Philadelphia 1845; see D.M. Henderson, *The Hidden Coasts: A Biography of Admiral Charles Wilkes*. New York 1953; G.A. Doumani, editor, *Antarctic Bibliography*. Washington, Library of Congress 1965-1979; J.H. Barnhart, *Biographical notes upon botanists*. 3: 496. 1965; W. Bixby, *The Forgotten Voyage of Charles Wilkes*. New York 1966; D.C. Haskell, *The United States Exploring Expedition 1838-1842 and Its Publications 1844-1874*. New York 1942; W.J. Morgan et al., editors, *Autobiography of Rear Admiral Charles Wilkes U.S. Navy 1798-1877*. Washington, D.C. 1978; D.B. Tyler, *The Wilkes Expedition: The First United States Exploring Expedition (1838-1842)*. Philadelphia 1968; Edmund Fanning,

Voyages Round the World; with selected sketches of voyages to the South Seas, North and South Pacific Oceans, China, etc., ... 1792 and 1832, ... N.Y. 1833; John Dunmore, *Who's Who in Pacific Navigation*. 265-267. Honolulu 1991; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 436. 1972; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 472. 1973; Staffleu and Cowan, *Taxonomic literature*. 7: 295-297. 1988)

Brazil. See *Trans. Linn. Soc. London* 26(1): 63. 1868.

C. windischii L.G. Clark

Brazil. See *Brittonia* 44(4): 405, f. 9A-G. 1992.

Cinna L. = *Abola* Adans., *Blyttia* Arn. (Asclepiadaceae), *Blyttia* Fries, *Cinnastrum* E. Fourn.

Greek *kinna* for “way barley, wall barley,” applied by Dioscorides to a species of *Hordeum*; Latin *Cinna*, *ae* was the family name of the gentes Cornelia and Helvia.

About 3-6 species, Northern America, U.S., Canada, Mexico to Peru. Pooideae, Poodae, Aveneae, or Pooideae, Poaeae, Aveninae, perennial, herbaceous, solitary or tufted, more or less tuberous, internodes hollow, rhizomatous, auricles absent, leaf sheaths glabrous, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, panicle open, spikelets pedicellate and falling with the glumes, 2 glumes subequal membranous, upper glume 1- to 3-nerved and acute, lemmas membranous and keeled, palea present, 2 free and membranous lodicules, 1-2 stamens, ovary glabrous, 2 stigmas, shade species useful for erosion control, moist areas, damp woods, open and semiopen areas, alluvial soils, recent clearings, along roadsides, type *Cinna arundinacea* L., see Carl Linnaeus, *Species Plantarum* 1: 5, 61, 67, 81. 1753, *Genera Plantarum*. edition 5. 6. 1754, *Familles des Plantes* 2: 31, 511. 1763, *Genera Plantarum* 44. 1789, *Magazine of Zoology and Botany* 2: 420. 1838, *Novit. Fl. Suec. Mant.* 2: 2. 1839, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 280. 1841, *A Manual of the Botany of the Northern United States* edition 2. 545. 1856, Pierre N.E. Fournier (1834-1884), *Mexicanas Plantas* 2: 90. 1886 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 69. 1956, *Brittonia* 23(3): 293-324. 1971, *Bot. Zhurn. SSSR* 70(1): 126-128. 1985, *Gayana, Botánica* 42: 1-157. 1985, *Bot. Zhurn. SSSR* vol. 75. 1990, D.M. Brandenburg, W.H. Blackwell and J.W. Thieret, “Revision of the

genus *Cinna* (Poaceae).” *Sida* 14(4): 581-596. 1991, *Transactions of the Kentucky Academy of Science* 52: 94-96. 1991, *Flora Mesoamericana* 6: 242-243. 1994, *Sida* 19(1): 195-200. 2000 [*Cinna* and *Limnodea* (Poaceae): not congeneric], *Contributions from the United States National Herbarium* 48: 234-236. 2003.

Species

C. arundinacea L. (*Agrostis cinna* Retz.; *Agrostis cinna* Lam., nom. illeg., non *Agrostis cinna* Retz.; *Agrostis cinna* Pursh; *Agrostis mexicana* L.; *Cinna agrostoides* P. Beauv. ex Steud.; *Cinna arundinacea* Hook. ex B.D. Jacks.; *Cinna arundinacea* Retz. ex Steud., nom. illeg., non *Cinna arundinacea* L.; *Cinna arundinacea* var. *arundinacea*; *Cinna arundinacea* var. *inexpansa* Fern. & Griscom; *Cinna mexicana* (L.) P. Beauv.; *Muhlenbergia cinna* (Lam.) Trin.)

Northern America, Canada. Perennial, swamps, wet woods, see *Mantissa Plantarum* 1: 31. 1767, *Observationes Botanicae* 5: 18. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 162. 1791, *Essai d'une Nouvelle Agrostographie* 32, 148, 158. 1812, *Flora Americae Septentrionalis; or, ...* 1: 64. 1814, *Nomenclator Botanicus* 1: 20, 198. 1821, *De Graminibus unifloris et sesquifloris* 191, 296, t. 5, f. 12. Petropoli 1824, *Index Kewensis* 2: 238. 1840, *Nomenclator Botanicus. Editio secunda* 1: 365. 1840 and *Contr. U.S. Natl. Herb.* 12: 115. 1908, *Rhodora* 37(436): 135, t. 334, f. 1-2. 1935, *Sida* 14: 585. 1991.

in English: stout woodreed, sweet woodreed

C. bolanderi Scribner (*Cinna pendula* var. *bolanderi* (Scribn.) Vasey)

Northern America. Perennial, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 280. 1841, *Flora Rossica* 4(13): 435. 1852, *Proceedings of the Academy of Natural Sciences of Philadelphia* 36: 290, pl. 7, f. 4-5. 1884, *Contributions from the United States National Herbarium* 3(1): 57. 1892 and *Sida* 14: 590. 1991.

in English: Scribner woodreed, Bolander's woodreed

C. latifolia (Trev. ex Goeppert) Griseb. (*Agrostis latifolia* Trevir. ex Göpp.; *Agrostis suaveolens* Blytt ex Sommerf.; *Blyttia suaveolens* (Blytt ex Sommerf.) Fr.; *Cinna arundinacea* var. *pendula* (Trin.) A. Gray; *Cinna bolanderi* Scribn.; *Cinna expansa* Link; *Cinna latifolia* (Goepp.) Griseb.; *Cinna latifolia* var. *glomerata* Scribn. ex Beal; *Cinna pendula* Trin.; *Cinna pendula* var. *acutiflora* Vasey ex Macoun; *Cinna pendula* var. *bolanderi* (Scribn.) Vasey; *Cinna pendula* var. *glomerata* Scribn.; *Cinna pendula* var. *glomerulata* Macoun; *Cinna pendula* var. *mutica* Vasey; *Cinna suaveolens* (Blytt ex Sommerf.) Fries; *Cinna suaveolens* (Blytt ex Sommerf.) Rupr.; *Muhlenbergia pendula* Trin.)

North America. Perennial, thickets, wet woods, see *Beschreibung Botanischer Garten Breslau* 82. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(2): 172. 1832, *Hortus Regius Botanicus Berolinensis* 2: 236. 1833, *Kongliga Svenska Vetenskapssakademiens Handlingar* 1837: 256. 1838, *Novitiarum Florae Suecicae Mantissa* 2: 2. 1839, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 280. 1841, *Beiträge zur Pflanzenkunde des Russischen Reiches* 4: 228. 1846, Joakim Frederik Schouw (1789-1852), *Foreløbig Fortegnelse over den kjøbenhavnske botaniske Haves Planter. Indeholdende dem, der ere blevne undersøgte i Aarene 1842-1846 ...* Kjøbenhavn 1847, *Flora Rossica* 4(13): 435. 1852, *A Manual of the Botany of the Northern United States* edition 2. 545. 1856, *Proceedings of the Academy of Natural Sciences of Philadelphia* 36: 290, pl. 7, f. 3-5. 1884, *Catalogue of Canadian Plants* 2(4): 202-203. 1888, *Catalogue of Canadian Plants* 2(5): 393. 1890, *Contributions from the United States National Herbarium* 3(1): 57. 1892, *Grasses of North America for Farmers and Students* 2: 319. 1896 and *Taxon* 33(3): 439. 1984, *Sida* 14(4): 586, 590. 1991.

in English: drooping woodreed

in Danish: cinnagræs

C. poiformis (Kunth) Scribn. & Merr. (*Agrostis poiformis* Willd. ex Steud.; *Arundo poaeoides* Poir.; *Arundo poiformis* Labill.; *Calamagrostis neglecta* var. *poaeoides* (Steud.) Hack.; *Calamagrostis poaeiformis* (Kunth) Beal; *Calamagrostis poaeoides* Steud.; *Calamagrostis poaeoides* Trin. ex Steud.; *Calamagrostis poiformis* (Kunth) Beal; *Calamovilfa poiformis* (Kunth) M.E. Jones; *Cinna miliacea* Griseb. ex E. Fourn.; *Cinnastrum miliaceum* Griseb. ex E. Fourn.; *Cinnastrum poiforme* (Kunth) E. Fourn.; *Deyeuxia poaeoides* (Steud.) Rúgolo; *Deyeuxia poiformis* Kunth; *Poa australis* var. *billardieri* (Labill.) Hook.f.; *Poa poiformis* (Labill.) Druce; *Poa subnudiflora* Kunth; *Poa subuniflora* Kunth)

Mexico. Forage, see *Familles des Plantes* 2: 31, 530. 1763, *Oekonomisch-Technische Flora der Wetterau* 1: 94. 1799, *Novae Hollandiae Plantarum Specimen* 1: 27. 1804, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Nova Genera et Species Plantarum* 1: 146-147. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 705. 1816, *Révision des Graminées* 1: 115. 1829, *Nomenclator Botanicus* edition 2, 1: 42. 1840, *Synopsis Plantarum Glumacearum* 1: 423. 1854, *Flora Tasmaniae* 2: 125. 1858, *Mexicanas Plantas* 2: 91. 1886, *The True Grasses* (ed. Scribn.) 113. 1890, *Grasses of North America for Farmers and Students* 2: 349. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 21. 1901, *Anales del Museo Nacional de Buenos Aires* 21: 103. 1911, *Contributions to Western Botany* 14: 9. 1912, *Report. Botanical Exchange Club.*

London. Suppl. 2: 640. 1917, *Flora Patagónica* 3: 361. 1978, *Darwiniana* 21(2-4): 439. 1978.

C. valdiviana Philippi

Chile. Indeterminate, see *Anales de la Universidad de Chile* 43: 563. 1873.

Cinnagrostis Griseb. = *Calamagrostis* Adans.

Genera *Cinna* and *Agrostis*.

Pooideae, Poodae, Aveneae, or Pooideae, Poodae, Agrostidinae, type *Cinnagrostis polygama* Griseb., see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Pl. Lorentz.* 209, t. 2, f. 7. 1874, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 256-257, t. 2, f. 7. 1874 and *Revista Argentina de Agronomía* 20: 14. 1953, *Cytologia* 56: 437-452. 1991 [Cytogenetic studies on some Kashmir grasses. VIII Tribe Agrostidae, Festuceae and Paniceae], *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Flora Mesoamericana* 6: 240-241. 1994, Xenia Villavicencio, *Revision der Gattung Deyeuxia in Bolivien: eine taxonomisch-anatomische studie...* 1-304. Berlin 1995, *Flora of Ethiopia and Eritrea* 7: 51-52. 1995, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996, *Flora Mediterranea* 8: 251-262. 1998, *Opera Botanica* 137: 1-42. 1999, *Contributions from the United States National Herbarium* 48: 191-227. 2003.

Cinnastrum Fourn.

Resembling *Cinna* L.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see Carl Linnaeus, *Species Plantarum* 1: 5. 1753, *Genera Plantarum.* edition 5. 6. 1754, *Familles des Plantes* 2: 31, 511. 1763, *Genera Plantarum* 44. 1789, *Nova Genera et Species Plantarum* 1: 146-147. 1815 [1816], *Novit. Fl. Suec. Mant.* 2: 2. 1839, *Mexicanas Plantas* 2: 90-91. 1886 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 69. 1956, *Brittonia* 23(3): 293-324. 1971, D.M. Brandenburg, W.H. Blackwell and J.W. Thieret, "Revision of the genus *Cinna* (Poaceae)." *Sida* 14: 581-596. 1991, *Flora Mesoamericana* 6: 242-243. 1994, *Sida* 19(1): 195-200. 2000, *Contributions from the United States National Herbarium* 48: 234-236. 2003.

Cladoraphis Franchet

From Greek *klados* "branch, twig, young shoot" and *rhapshis, raphidos* "a needle."

About 2 species, southern Africa, Namibia. Chloridoideae, Eragrostidae, Eragrostidinae, perennial, armed, woody,

stout, branched, long-rhizomatous or rhizomatous and stoloniferous, auricles absent, ligule a fringe of hairs, leaf blades flat or rolled, hard and needle-like leaves, plants bisexual, open panicle, spikelets solitary, lemmas rounded and entire, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, suitable for stabilizing dunes, open habitats, maritime-arenicolous, on beach dunes, in sandy beds, on desert dunes, windblown dunes, in sandy beds of dry water courses, sometimes referred to *Eragrostis* N.M. Wolf, type *Cladoraphis duparquetii* Franch., see *Species Plantarum* 1: 67-70, 73-76. 1753, *Genera Plantarum* 23. 1776, *Bulletin Mensuel de la Société Linnéenne de Paris* 1: 673. 1887 and *Contributions from the United States National Herbarium* 41: 55-56. 2001.

Species

C. cyperoides (Thunb.) S.M. Phillips (*Brizopyrum cyperoides* (Thunb.) Nees; *Eragrostis cyperoides* (Thunb.) P. Beauv.; *Poa cyperoides* Thunb.)

South Africa. Perennial, tufted, bushy, spiny, primary branches not always spiny, spikelets clustered, sometimes occasionally grazed, useful for erosion control, usually on coastal dunes, deep sand, see *Prodromus Plantarum Capensium*, ... 22. 1794, *Essai d'une Nouvelle Agrostographie* 71, 162, 174. 1812, *Florae Africae Australioris Illustrationes Monographicae* 374. 1841 and *Kew Bulletin* 37(1): 159. 1982.

in English: sedge-stemmed lovegrass, bristly lovegrass

in South Africa: steekriet

C. spinosa (L.f.) S.M. Phillips (*Eragrostis spinosa* (L.f.) Trin.; *Festuca spinosa* L.f.)

South Africa. Perennial, tufted, spiny, bushy, primary branches spiny, spreading spine-tipped racemes, useful for erosion control, common on loose sand, on dunes, weel drained deep sand, overgrazed veld, see *Supplementum Plantarum* 111. 1781 [1782], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 416. 1830 and *Kew Bulletin* 37(1): 159. 1982.

in English: ostrich grass, spiny lovegrass

in South Africa: volstruisgras, volstruisdoring

Claudia Opiz = *Beckeria* Bernh., *Melica* L.

Pooideae, Meliceae, type *Claudia ciliata* (L.) Opiz, see *Species Plantarum* 1: 66-67. 1753, *Systematisches Verzeichnis* 20, 40. 1800, *Lotos* 3: 67. 1853, *Flora der Provinz Brandenburg* 1: 838. 1864, *Index Kewensis* 1: 282. 1893 and *Bull. U.S.D.A.* 772: 69. 1920, *Taxon* 41: 566. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 140, 236, 432-450. 2003.

Clausospicula Lazarides

Latin *claudo* “to close, to shut up,” *clausus* “closed” and *spicula* “spikelet,” *spiculum* “a little sharp point, sting, spicule.”

One species, Australia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual, herbaceous, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, reduced racemes, sterile spikelets awnless, 2 glumes subequal, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2-3 stigmas, type *Clausospicula extensa* Lazarides, see *Methodus Plantas Horti Botanici ...* 207. 1794 and *Cytologia* 55: 141-151. 1990, M. Lazarides, J. Lenz & L. Watson, “*Clausospicula*, a new Australian genus of grasses (Poaceae, Andropogoneae).” *Australian Systematic Botany* 4(2): 391-405. 1991, *Australian Systematic Botany* 4: 591-635. 1991 [Taxonomy, cytology and ecology of indigenous Australian sorghums (*Sorghum* Moench: Andropogoneae: Poaceae)], Russell E. Spangler, “Taxonomy of *Sarga*, *Sorghum* and *Vacoparis* (Poaceae: Andropogoneae).” *Australian Systematic Botany* vol. 16 no. 3: 279-299. 2003, *Annals of Botany* 95: 219-227. 2005.

Species

C. extensa Lazarides

Northern Territory. See *Australian Systematic Botany* 4(2): 399, f. 1-10. 1991.

Clavinodum T.H. Wen = *Arundinaria* Michx.

Latin *clava* “a club, a knotty branch” and *nodus* “node.”

Bambusoideae, Bambuseae, Arundinariinae, type *Clavinodum oedogonatum* (Z.P. Wang & G.H. Ye) T.H. Wen, see *Flora Boreali-Americana* 1: 73-74. 1803 and *Journal Nanjing University. Natural Sciences Edition* 1981(1): 96, f. 3. 1981, *Journal Nanjing University. Natural Sciences Edition* 1982(3): 734, f. 2. 1982, *Journal of Bamboo Research* 3(2): 24-26, t. 1. 1984, *Contributions from the United States National Herbarium* 39: 18-24. 2000.

Cleachne Roland ex Rottb. = *Cleachne* Adns., *Paspalum* L.

Greek *kleis* “lock, key” and *achne* “chaff, glume.”

Panicoideae, Paniceae, Paspalinae, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Acta Literaria Universitatis Hafniensis* 1: 285. 1778 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Journal of Cytology and Genetics* 18: 26-33, 60-61. 1983, *Blumea* 30: 279-318. 1985, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Ernstia* 1(4):

135. 1992, *Ernstia* 2(1-2): 22. 1992, *Novon* 4(1): 20. 1994, *Flora Mesoamericana* 6: 335-352. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Ernstia* 8(4): 100. 1999, *Contributions from the United States National Herbarium* 46: 443-527. 2003.

Cleistachne Benth.

From the Greek *kleistos*, *klistos* “closed” and *achne* “chaff, glume,” alluding to the nature of the spikelets.

One species, tropical Africa. Panicoideae, Andropogonoidae, Andropogoneae, Andropogoninae, annual, unarmed, herbaceous, coarse, unbranched, leaf blades narrow and linear, auricles absent, ligule an unfringed membrane, large terminal inflorescence paniculate, contracted panicle oblong or linear-oblong, primary branches bearing racemes, single sessile spikelet, 2 glumes subequal, lower glume coriaceous, upper lemma bidentate and awned, awn often twisted, palea minute, 2 free and fleshy lodicules ciliate, 3 stamens, ovary glabrous, 2 stigmas, open habitats, moist grassland, riverbanks, wastelands, along forest margins, old cultivations, closely related to *Sorghum*, type *Cleistachne sorghoides* Benth., see *Hooker's Icones Plantarum* 14: t. 1379. 1882, *The Flora of British India* 7(21): 162. 1897 [1896] and *Österreichische Botanische Zeitschrift* 51(5): 153. 1901, *Flora of Tropical Africa* 9: 89-91, 155. 1917.

Species

C. sorghoides Benth.

Tropical Africa, India. Annual, robust, coarse, erect, stilt roots, leaf blades hispid, leaf sheaths hispid, dark inflorescence, panicle narrowly oblong, spikelets pedicellate covered with white hairs, useful for erosion control.

in English: false sorghum

Cleistochloa C.E. Hubb. = *Dimorphochloa*
S.T. Blake

Greek *kleistos*, *klistos* “closed” and *chloe*, *chloa* “grass,” some spikelets are cleistogamous and the others chasmogamous; see Charles Edward Hubbard, in *Hooker's Icones Plantarum*. Ser. 5. 3: t. 3209. (Dec) 1933.

About 2-3 species, Australia and New Guinea, Queensland and New South Wales. Panicoideae, Panicodae, Paniceae, perennial, caespitose, wiry, branched, hollow internodes, glabrous nodes, ligule hairy, plants bisexual, terminal and axillary inflorescences few spikeleted, single loose raceme, spikelets dimorphic, hidden cleistogenes, axillary inflorescence of a single cleistogamous spikelet, terminal inflorescence spike-like and of chasmogamous spikelets, 2 florets, the lower floret sterile and reduced to the lemma, the upper floret bisexual, 1 or 2 glumes, lower glume minute or absent,

upper glume and lower lemma acute to truncate, upper lemma coriaceous, palea 2-nerved, 2 free and fleshy lodicules, open habitats, dry sandstones ridges, cleistogamous and chasmogamous, type *Cleistochloa subjuncea* C.E. Hubb., see *Species Plantarum* 1: 55. 1753, *Plantae Javanicae Rariores* 15, 18, 20. 1838 and *Flora of Tropical Africa* 9: 739. 1920, *Hooker's Icones Plantarum* 33: t. 3209. 1933, *Blumea* 3(3): 161. 1938, *University of Queensland Papers: Department of Biology* 1(19): 1. 1941, Jannink & Veldkamp, “Revision of Chionachninae (Gramineae: Andropogoneae).” *Blumea* 47(3): 545-580. 2002.

Species

C. rigida (S.T. Blake) R.D. Webster (*Cleistochloa rigida* (S.T. Blake) Clayton, nom. illeg., non *Cleistochloa rigida* (S.T. Blake) R.D. Webster; *Dimorphochloa rigida* S.T. Blake)

Australia, Queensland and New South Wales. Perennial, shrubby, fertile floret mucronate, dry scrub, sandstone, see *University of Queensland Papers: Department of Botany* 1(19): 2. 1941, *Kew Bulletin* 42(2): 401-403. 1987.

C. sclerachne (F.M. Bailey) C.E. Hubb. (*Chionachne sclerachne* F.M. Bailey; *Polytoxa sclerachne* (F.M. Bailey) F.M. Bailey)

Australia. See *Queensland Dept. Agric. Bull.* 7(Bot. Bull. 2): 21. 1891 and *The Queensland Flora* 6: 1849. 1902.

C. subjuncea C.E. Hubb. (*Cleistochloa hubbardiana* Henrard; *Entolasia subjuncea* (C.E. Hubb.) C.E. Hubb.; *Panicum subjunceum* Ekman; *Panicum subjunceum* Domin, nom. illeg., non *Panicum subjunceum* Ekman)

Australia, Queensland and New South Wales. Wiry, bases with cataphylls, terminal inflorescence erect, chasmogamous spikelets almost glabrous, cleistogamous spikelets obtuse, sandstone, scrubby areas, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 16, t. 5, f. 2, t. 6, f. 8. 1911, *Bibliotheca Botanica* 85: 314, f. 70. 1915, *Journal of Ecology* 21: 223. 1933.

Cleistogenes Keng = *Diplachne* P. Beauv.,
Jarrilla I.M. Johnst., *Kengia* Packer

From the Greek *kleistos*, *klistos* “closed” and *gennao* “to generate.”

Chloridoideae, Cynodonteae, see *Essai d'une Nouvelle Agrostographie* 80-81, 160, pl. 16, f. 9. 1812, *A Manual of the Botany of the Northern United States* 588. 1848, *Flora Europae* 25: 354. 1891 and *Torreyia* 21: 47. 1921, *Contributions from the Gray Herbarium of Harvard University* 70: 78. 1924, *Botanical Magazine* (Tokyo) 39: 258. 1925, *J. Wash. Acad. Sci.* 23: 136. 1933, *Sinensia* 5: 147. 1934, *Journal of Japanese Botany* 18(9): 540. 1942, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und*

Pflanzengeographie 78(2): 208-245. 1959 [Beiträge zur Monographie der Gattungen *Cleistogenes* und *Neyraudia*], *Botaniska Notiser* 113(3): 291. 1960, *Taxon* 43: 123. 1994, Chen Liang, D.L. Michalk & G.D. Millar, "The ecology and growth patterns of *Cleistogenes* species in degraded grasslands of eastern Inner Mongolia, China" *Journal of Applied Ecology* 39(4): 584-594. Aug 2002.

Cleomena Roem. & Schult. = *Muhlenbergia* Schreb.

Derivation obscure, possibly from the Greek *kleio*, *kleiein* "to shut, close," or from *kleio*, *kleiein* "to glorify, celebrate," *kleomai* "to become famous."

Chloridoideae, Cynodonteae, Muhlenbergiinae, see *Systema Vegetabilium* 2: 18, 383. 1817 and P.M. Peterson, "Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostideae)." *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 143-173. 2001.

Cliffordiochloa B.K. Simon = *Steinchisma* Raf.

For Harold Trevor Clifford, Australian botanist, taxonomist, ecologist, author of *Etymological Dictionary of Grasses*. Amsterdam 1996; see *Tropical Plant Communities: Their Resilience, Functioning and Management in Northern Australia* / H.T. Clifford and R.L. Specht, editors St. Lucia, Australia: Dept. of Botany, University of Queensland 1986; Rolf Martin T. Dahlgren (1932-1987), *The Families of the Monocotyledons: Structure, Evolution, and Taxonomy* / R.M.T. Dahlgren, H.T. Clifford, P.F. Yeo in cooperation with R.B. Faden ... [et al.]. Berlin: Springer-Verlag 1985.

Panicoideae, Panicoideae, Paniceae, Paspalinae, perennial, herbaceous, caespitose, ligule membranous, plants bisexual, inflorescence a panicle more or less contracted, spikelets flattened, 2 glumes unequal to very unequal, lower glume short, lower lemma 3-nerved, palea thickened, 2 fleshy and glabrous lodicules, 2 stamens, ovary glabrous, 2 stigmas, in damp grassland, sometimes referred to *Panicum*, type *Cliffordiochloa parvispicula* B.K. Simon, see *Species Plantarum* 1: 55, 58. 1753, Constantine S. Rafinesque, *Seringe Bull. Bot.* 1: 220. 1830 [also *Bulletin Botanique [Genève]* 1: 220. 1830] and *Flora of the Southeastern United States* ... 105. 1903, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, E.D. Merrill, *Index Rafinesquianus* 76. 1949, *Grass Systematics and Evolution* 300. 1987, *Syst. Bot.* 13: 598. 1988, *Austrobaileya* 3(4): 674, 676, f. 3. 1992, *Flora Mesoamericana* 6: 302-318. 1994, *Austrobaileya* 4(3): 369-379. 1995, *Annals of the Missouri Botanical Garden* 85: 631-656. 1998, *Contributions from the United States National*

Herbarium 46: 607-608. 2003, *Austrobaileya* 6(3): 561-562. 2003.

Species

C. parvispicula B.K. Simon (*Panicum laxum* Sw.; *Steinchisma laxa* (Sw.) Zuloaga)

South America, Australia. Perennial, erect, clumped, stoloniferous, rhizomatous, sprawling, tidal mudflats, wet savannah, along roadsides and streams, marshy areas, see *Nova Genera et Species Plantarum seu Prodromus* 23. 1788 and *Austrobaileya* 3(4): 676, f. 3. 1992, *American Journal of Botany* 90(5): 817. 2003.

Clinelymus (Griseb.) Nevski = *Elymus* L.

From the Greek *kline* "a bed" and *elymos* "millet."

Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 83-84. 1753, *Flora Rossica* 4(13): 330. 1852 and *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Clomena P. Beauv. = *Muhlenbergia* Schreb.

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Clomena peruviana* P. Beauv., see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Essai d'une Nouvelle Agrostographie* 28, t. 7, f. 10, t. 3, f. 20. 1812, *Systema Vegetabilium, editio decima sexta* 1: 262. 1825, *Nomenclator Botanicus. Editio secunda* 1: 41. 1840, *Gramineae* 12-13. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 144-145. 1843, *Die Natürlichen Pflanzenfamilien* 2(2): 97. 1887, *Revisio Generum Plantarum* 3(3): 357. 1898 and *Contributions to Western Botany* 14: 7. 1912, *Ill. Fl. N. U.S.* (edition 2) 1: 184. 1913, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 69-70. 1956, *Flora Mesoamericana* 6: 276-286. 1994, *American Journal of Botany* 81: 622-629. 1994, *Madroño* 42(4): 427-449. 1995, *Sida* 17: 349-365. 1996, *Brittonia* 50(1): 23-50. 1998, P.M. Peterson, "Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostideae)." *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 143-173. 2001, *Flora of Ecuador* 68: 85. 2001.

Cockaynea Zotov = *Hystrix* Moench

Dedicated to the English-born New Zealand botanist Leonard Cockayne, 1855-1934, scientist, ecologist and traveler, 1876 to Australia, ca. 1880 moved to New Zealand, botanical collector, naturalist, teacher, explorer, 1910 F.L.S., 1912 F.R.S., Cockayne moved to Wellington in 1914, he became President of the New Zealand Institute for

2 years in 1918, Honorary Botanist to the New Zealand Forest Service from 1923 and Honorary Botanist to the Wellington City Council, 1927 responsible for the establishment of the Otari Open Air Plant Museum at Wilton, Wellington, wrote *The Vegetation of New Zealand*, 1921, *New Zealand Plants and Their Story*. 4th edition edited by E.J. Godley. Wellington, Govt. Print., 1967, "Some New Zealand indigenous-induced weeds and indigenous-induced modified and mixed plant-communities." *J. Linn. Soc. (Bot.)* 49: 13-45. 1932. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 362. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 700. Stuttgart 1993; R. Glenn, *The Botanical Explorers of New Zealand*. 173. Wellington 1950; A.D. Thomson, *The Life and Correspondence of Leonard Cockayne*. Christchurch, New Zealand: [s.n.], 1983 (Christchurch: Caxton Press) [Paper presented at the History of Science in New Zealand Conference, Wellington, 12 to 14 Feb, 1983]; Sir Arthur William Hill (1875-1941), "Leonard Cockayne 1855-1934." *Obit. Not. Roy. Soc. Lond.* pp. 443-457. 1935; *Transactions and Proceedings of the Royal Society of New Zealand* 65: 457-467. 1935-1936; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 156. London 1994; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; Dennis John Carr and S.G.M. Carr, editors, *People and Plants in Australia*. 167, 168, 176. London 1981; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement IV: Ce-Cz*. 233-240. 1997; L.B. Moore, "The Cockayne memorial lecture, 1965: Leonard Cockayne, botanist." *Transactions of the Royal Society of New Zealand, General* 2, No 1: 1-18. Mar 1967.

Two species, New Zealand. Pooideae, Triticoideae, Triticeae, perennial, herbaceous, hollow, stoloniferous, ligule an unfringed membrane, plants bisexual, cleistogamous or chasmogamous, inflorescence spicate, spikelets solitary, glumes reduced to suppressed, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, sometimes referred to *Elymus*, type *Cockaynea laevis* (Petrie) Zotov, see *Species Plantarum* 1: 83-84, 560. 1753, *Botanisches Magazin (Römer & Usteri)* 7: 5. 1790, *Methodus Plantas Horti Botanici et agri marburgensis, a staminum situ describendi ...* 294-295. Marburgi Cattorum [Marburg] 1794, *Beschreibung der Gräser Leipzig* 1769-1810, *A Manual of the Botany of the Northern United States* 604. 1848, *Flora of New Zealand* 1: 312, t. 70. 1853, *Geological Survey of California, Botany* 2: 327. 1880 and *American Midland Naturalist* 4: 228. 1915, *Transactions of the Royal Society of New Zealand, Biological Sciences* 73: 233-234. 1943, *Canad. J. Bot.* 42: 554. 1964, *N.Z. J. Bot.* 20: 169-186. 1982, *Feddes Repert.* 95: 425-521. 1984 [Conceptus of the Triticeae], *Taxon* 41: 562-563. 1992, *New Zealand J. Bot.* 32: 146. 1994, *Taxon* 44: 611-612. 1995,

C. Baden, S. Frederiksen and O. Seberg, "A taxonomic revision of the genus *Hystrix* Moench (Triticeae, Poaceae)." *Nord. J. Bot.* 17: 449-467. 1997, *Nordic Journal of Botany* 18(1): 89-94. 1998, Zhou Yong-Hong, Zheng You-Liang, Yang Jun-Liang and Yen Chi, "Relationships among species of *Hystrix* Moench and *Elymus* L. assessed by RAPDs." *Genetic Resources and Crop Evolution* 47(2): 191-196. Apr 2000, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Species

C. gracilis (Hook.f.) Zotov (*Gymnostichum gracile* Hook.f.)

New Zealand.

C. laevis (Petrie) Zotov (*Asprella laevis* Petrie)

New Zealand. Auricles absent, see *Transactions and Proceedings of the New Zealand Institute* 27: 406. 1895.

Codonachne Steudel = Tetrapogon Desf.

From the Greek *kodon* "a bell" and *achne* "chaff, glume."

Chloridoideae, Cynodonteae, see *Flora Atlantica* 2: 388-389, t. 255. 1799 [1800], *Nomenclator Botanicus. Editio secunda* 1: 393. 1840.

Coelachna Post & Kuntze

Orth. var. of *Coelachne* R. Br., see Tomas Erik von Post and C.E.O. Kuntze, *Lexicon generum Phanerogamarum*. 134. 1903.

Coelachne R. Br.

Greek *koilos* "hollow" and *achne* "chaff, glume, scale," the glumes are hollow, or referring to the saccate lemma.

About 10 species, Old World tropics and subtropics, India. Panicoideae, Panicodae, Isachneae, annual or perennial, slender, filiform, caespitose, ascending or decumbent, herbaceous, weak, low growing, densely matted, culm nodes bearded, auricles absent, leaf blades flat or folded, leaf sheaths rounded, ligule absent or a minute fringe of hairs, leaves lanceolate or linear to ovate-lanceolate, creeping rhizomes, plants bisexual, inflorescence an open or contracted panicle, small narrow panicle with short spreading branches, small to very minute spikelets gaping and deciduous, 2 florets membranous and exerted, lower floret perfect and large, upper floret female, 2 persistent broad glumes more or less unequal and shorter than the spikelet, lemmas awnless and rounded on back, palea present, 2 free and fleshy lodicules, 2-3 stamens, ovary glabrous, 2 stigmas, marshes and marshy places, waterfalls, streamsides, along streams, waterlogged soils, ponds, springs, wet

places, type *Coelachne pulchella* R. Br., see *Species Plantarum* 1: 55. 1753, *Prodromus florae Novae Hollandiae* 187, 196. 1810, *Gen. Pl.* 3: 1156. 1883, *Flora of British India* 7: 270. 1897 and *Lexicon generum Phanerogamarum* 134. 1903, *Hook. Ic. Pl.* t. 3440. 1943, *Grasses of Burma* ... 576. 1960.

Species

C. africana Pilg.

Zambia. Perennial, low, mat-forming, slender, straggling, rooting at the nodes, leaf blades narrowly lanceolate, panicle lanceolate, spikelets oblong, florets obtuse, lower glume broadly oblong, upper glume broadly ovate, lower lemma ovate, upper lemma narrowly ovate, see *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 208. 1916.

C. minuta Bor (*Coelachne ghatika* Naik)

India, Western Ghats, Maharashtra. Rare, annual, erect, tufted, very slender, wiry, leaf blades lanceolate and acute, panicle effuse with spreading capillary branches, spikelets globose and minute, glumes glabrous or sparsely bristly, lower lemma folded, upper lemma lanceolate and 2-keeled, stamens usually 2, grows in open areas, rocky places, moist grassland, see *J. Bombay Nat. Hist. Soc.* 58: 317-318. 1961, *Reinwardtia* 9: 393. 1980.

C. perpusilla (Arn. ex Steudel) Thw. (*Coelachne perpusilla* var. *muscosa* Hook.f.; *Coelachne pulchella* R. Br. var. *perpusilla* (Steud.) Hook.f.; *Panicum perpusillum* Steud.; *Panicum perpusillum* Arn. ex Steud.)

Southeast Asia. Perennial, ascending, densely tufted, leaf blades pointed and mostly filiform, panicle few-flowered and very lax, panicle branches spreading, spikelets spaced, florets densely bearded at base, lower lemma coriaceous, 3 stamens, in marshy soils, along lakes, seeps, see *Prodromus Florae Novae Hollandiae* 1: 187. 1810, *Syn. Pl. Glumac.* 1: 96. 1854, *Enum. Pl. Zeyl.* 373. 1864, *The Flora of British India* 7(22): 271. 1897 [1896] and *Handb. Fl. Ceylon* 5: 270. 1900, *Grasses of Ceylon* 111. 1956, *Grasses of Burma* ... 576. 1960.

C. perpusilla (Arn. ex Steudel) Thw. var. *nilagirica* Ved Prakash & Jain

India, Tamil Nadu. Slender, leaf blades linear-lanceolate, see *Bull. Bot. Survey India* 24: 187. 1983.

C. perpusilla (Arn. ex Steudel) Thw. var. *perpusilla*

India, Tamil Nadu, Sri Lanka. Leaf blades involute and filiform, in marshy places, see *The Flora of British India* 7(22): 271. 1897 [1896] and *Handb. Fl. Ceylon* 5: 270. 1900.

C. simpliciuscula (Wight & Arn. ex Steudel) Munro ex Bentham (*Coelachne pulchella* R. Br. var. *simpliciuscula* (Steud.) Hook.f.; *Coelachne simpliciuscula* (Wight & Arn.)

Munro; *Coelachne simpliciuscula* (Steudel) Bentham; *Isachne hispidula* Steud.; *Isachne hispidula* Nees ex Steud.; *Isachne simpliciuscula* (Steud.) Thw.; *Panicum simpliciusculum* Steud.; *Panicum simpliciusculum* Wight & Arn. ex Steud.)

Southeast Asia, China; Madagascar, Sri Lanka. Perennial or annual, variable, tufted, erect or decumbent, prostrate or ascending, dense mat-forming, leaf blades lanceolate or linear, panicles spiciform or open with spreading branches, spikelets appressed, florets glabrous at base, glumes glabrous, 3 stamens, weed in paddy fields, in moist soils, in damp and marshy places, closely related to *Coelachne pulchella* R. Br., see *Syn. Pl. Glumac.* 1: 96. 1854, *Enum. Pl. Zeyl.* 373. 1864, *Journal of the Linnean Society, Botany* 19(115-116): 93. 1881, *Fl. Br. Ind.* 7: 271. 1896 and *Grasses of Ceylon* 110. 1956, *Grasses of Burma* ... 576. 1960, *Canad. J. Bot.* 52: 1075-1090. 1974, *Taxon* 24: 512. 1974, *Taxon* 25: 158. 1976.

in Thailand: yaa phai, yaa wong waen

Coelachyropsis Bor

Resembling *Coelachyrum* Hochst. & Nees.

One species, Sri Lanka, southern India. Chloridoideae, annual, herbaceous, unbranched, erect or geniculate, decumbent, stoloniferous, auricles absent, glandular, ligule a fringed membrane, plants bisexual, inflorescence digitate, 2 glumes broadly elliptic more or less equal, lemma acute to mucronate, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, type *Coelachyropsis lagopoides* Bor, see *Species Plantarum* 1: 71. 1753, *Systema Naturae, edition 12* 2: 95. 1767, *Linnaea* 16(2): 221. 1842 and *Annalen des Naturhistorischen Museums in Wien* 75: 23, 25. 1971[1972], *Taxon* 49(2): 250. 2000.

Species

C. lagopoides Bor (*Dactylis lagopoides* L.)

South India, Sri Lanka.

Coelachyrum Hochst. & Nees =
Coelachyropsis Bor, *Coeleochloa* Steud.,
Cypholepis Chiov.

From the Greek *koilos* "hollow" and *achyron* "chaff, husk."

About 6-8 species, Africa, Mauritania, Arabia, Somalia, Tanzania, Pakistan, southern India, Sri Lanka. Chloridoideae, Eragrostideae, annual or perennial, variable, herbaceous, erect or geniculate, sometimes or usually stoloniferous, auricles absent, ligule a ciliate fringed membrane, leaves flat almost subcordate at base, plants bisexual, contracted spike-like racemes open or dense, spikelets laterally compressed elliptic to ovate, 2 glumes unequal and

keeled, lemmas saccate and more or less papery to coriaceous, palea entire and sometimes villous on the keels, 2 lodicules free and fleshy, stamens 3, ovary glabrous, 2 stigmas, free pericarp, species of open habitats or light shade, open shrubland, limestone, dry grassland, sand and red sandy soil, desert to semidesert, a link between *Eragrostis* and *Eleusine*, type *Coelachyrum brevifolium* Hochst. & Nees, see *Nomenclator Botanicus. Editio secunda* 1: 394. 1840, *Linnaea* 16(2): 221. 1842 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 357-358. 1908, *Kirkia* 3: 117, 131-134. 1963, *Annalen des Naturhistorischen Museums in Wien* 75: 23. 1971[1972].

Species

C. brevifolium Hochst. & Nees (*Coelachyrum brevifolium* (Koenig ex Willd) Hochst. & Nees; *Eleusine brevifolia* (Hochst. & Nees) Steud.)

Sudan, Somalia, Arabia. Annual, loosely tufted, sprawling, stolons lacking or stoloniferous, subdigitate racemes clustered, 6-10 florets closely imbricate, spikelets sessile and broadly ovate, glumes ovate to elliptic and mucronate, lemmas hairy and membranous, grain rugose, good grazing, coastal dunes, sand, desert, type species, see *Linnaea* 16(2): 221. 1842, *Synopsis Plantarum Glumacearum* 1: 211. 1854. in Nigeria: magari kura

C. lagopoides (Burm.f.) Senaratna (*Aeluropus laevis* Trin.; *Aeluropus lagopoides* (L.) Trin. ex Thw.; *Coelachyropsis lagopoides* (Burm.f.) Bor; *Coelachyrum brevifolium* (Koenig ex Willd.) Hochst. & Nees; *Coelachyrum brevifolium* Hochst. & Nees; *Coelachyrum indicum* Hack.; *Cynosurus lagopoides* Burm.f.; *Dactylis brevifolia* Willd.; *Dactylis brevifolia* Koenig ex Willd.; *Dactylis lagopoides* (Burm.f.) L.; *Distichlis sudanensis* Beetle; *Eleusine brevifolia* (Hochst. & Nees) Steud.; *Eleusine brevifolia* (Koenig ex Willd.) R. Br. ex Hook.f., nom. illeg., non *Eleusine brevifolia* (Hochst. & Nees) Steud.; *Eleusine brevifolia* (Willd.) R. Br. ex Hook.f.; *Eleusine lagopoides* (Burm.f.) Merr.; *Eragrostis brevifolia* (Willd.) Benth.; *Eragrostis brevifolia* Benth.; *Koeleria brevifolia* (Willd.) Spreng.; *Koeleria brevifolia* Spreng.; *Poa brevifolia* (Willd) Kunth; *Poa brevifolia* (J. König ex Willd.) Kunth, nom. illeg., non *Poa brevifolia* DC.)

Southern India, Asia, Sri Lanka. Annual, slender, smooth, branched, erect or geniculate, spreading or prostrate, inflorescence compact, glumes mucronate, pericarp wavy or rugulose, see *Mant.* 33. 1767, *Flora Indica ... nec non Prodrumus Florae Capensis* 29. 1768, *Mant.* 557. 1771, *Genera Plantarum* 23. 1776, *De Fructibus et Seminibus Plantarum...* 1: 7. 1788, *Species Plantarum. Editio quarta* 1: 410. 1797, *Syn. Pl.* 1: 97. 1805, *Plantarum Minus Cognitarum Pugillus* 2: 21. 1815, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *Fundamenta Agrostographiae* 143, t. 12. 1820, *Révision des Graminées* 1: 111. 1829, *Linnaea* 16(2): 221. 1842, *Enum.*

Pl. Zeyl. 374. 1864, *Hooker's Icones Plantarum* pl. 1268 p. 51. 1881, *Die Natürlichen Pflanzenfamilien* 2(2): 61. 1887, *The Flora of British India* 7(22): 294. 1897 [1896] and *Handb. Fl. Ceylon* 5: 278-279. 1900, *Philippine Journal of Science* 19: 339. 1921, *Revista Argentina de Agronomía* 22(2): 89, f. 1. 1955, *Grasses of Ceylon* 79. 1956, *Grasses of Burma ...* 488. 1960, *Annalen des Naturhistorischen Museums in Wien* 75: 25. 1971[1972].

C. longiglume Napper (*Desmostachya bipinnata* (L.) Stapf)

Kenya. Annual, slender, geniculately ascending, soft leaf blades linear, ovate open panicle with racemose branches, 5- to 10-flowered, spikelets broadly elliptic, glumes unequal and 3-nerved, lemmas elliptic and densely hispid, rugulose grains, saline plains, dry grassland, flats, see *Flora Palaestina* 12. 1756 and *Flora Capensis* 7: 632. 1900, *Kirkia* 3: 113. 1963.

C. piercei (Benth.) Bor (*Coelachyrum stoloniferum* C.E. Hubb.; *Eragrostis piercei* Benth.; *Leptochloa appletonii* Stapf) (for E. Pierce)

Ethiopia, Asia, Pakistan, Arabia. Perennial, tufted, stoloniferous with woody stolons, knotty base, open panicle with racemose branches, spikelets on pedicels, glumes unequal, upper glume mucronate, lemma glabrous or shortly ciliate, grassland, sand, bushland, coastal dunes, limestone, desert scrub, semideserts, see *Icones Plantarum* 4: 1370. 1881 and *Bulletin of Miscellaneous Information Kew* 6: 223. 1907, *Kew Bulletin* 1941: 198. 1941, *Kew Bulletin* 7(2): 226. 1952.

in Somalia: duyu, dooyo

C. poiflorum Chiov. (*Coelachyrum induratum* Pilger; *Eleusine poiflora* (Chiov.) Chiov.)

Sudan, Somalia, Arabia. Perennial, densely tufted, erect, spreading, with woody stolons, inflorescence racemose, 4- to 18-flowered, spikes clustered toward the top of the culm, spikelets sessile and ovate, glumes 1-nerved, upper glume mucronate or shortly awned, lemmas shaggy and mucronate, grain strongly compressed, growing on rocky or sandy plain, gypsum, grassland, limestone, open shrubland, see *Annuario del Reale Istituto Botanico di Roma* 7: 75, t. 3, f. 4. 1896 and *Annali di Botanica* 10(3): 409. 1912.

C. yemenicum (Schweinf.) S.M. Phillips (*Cypholepis yemenica* (Schweinf.) Chiov.; *Eleusine yemensis* (Schweinf.) Chiov.; *Eragrostis yemenica* Schweinf.; *Leptochloa appletonii* Stapf)

Tropical East Africa, South Africa, Ethiopia, Somalia, Yemen, Arabia. Annual or perennial, slender, densely tufted, erect or geniculate, ascending, without stolons, sheaths keeled, leaf blades narrowly linear, narrow inflorescence racemose, erect racemes spaced, 7- to 12-flowered, spikelets elliptic to narrowly lanceolate-elliptic, florets closely imbricate, glumes lanceolate-oblong, lemmas coriaceous and obtuse, smooth grain, growing on red sandy soil, grassland, open areas, in *Acacia* scrub, open shrubland, rocky places,

sandstone, limestone, open stony ground, see *Bulletin de l'Herbier Boissier* 2(App. 2): 41. 1894 and *Bulletin of Miscellaneous Information Kew* 6: 223. 1907, *Annuario del Reale Istituto Botanico di Roma* 8(3): 357-358. 1908, *Annali di Botanica* 10: 410. 1912, *Kew Bulletin* 37(1): 159. 1982, *Grass. Saudi Arabia* 274. 1989.

Coelarthron Hook.f. = *Microstegium* Nees

From the Greek *koilos* "hollow" and *arthron* "a joint."

Panicoideae, Andropogoneae, Saccharinae, type *Coelarthron brandisii* Hook.f., see *Species Plantarum* 2: 1045. 1753, *A Natural System of Botany* 2nd edn. 447. 1836, *The Flora of British India* 7(21): 163-164. 1897 [1896] and *Die Natürlichen Pflanzenfamilien* 2(2): Nachtr. 2: 4. 1900, *The Grasses of Burma* 2, 62. 1945, *Contributions from the United States National Herbarium* 46: 292. 2003.

Coelochloa Steud. = *Coelachyrum* Hochst. & Nees

From the Greek *koilos* "hollow" and *chloe, chloa* "grass, young grass."

Chloridoideae, Eragrostideae, see *Nomenclator Botanicus. Editio secunda* 1: 394. 1840, *Linnaea* 16(2): 221. 1842 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 357-358. 1908, *Kirkia* 3: 117, 131-134. 1963, *Annalen des Naturhistorischen Museums in Wien* 75: 23. 1971[1972].

Coelorachis Brongn. = *Apogonia* (Nutt.) E. Fourn., *Coelorhachis* Brongn., *Cycloteria* Stapf, *Mnesithea* Kunth

Greek *koilos* "hollow" and *rhachis* "rachis, axis, midrib of a leaf," the rachis is concave, swollen and hollow; see Louis-Isidor Duperrey, *Voyage autour du Monde exécuté par ordre du Roi sur la corvette La Coquille pendant les années 1822-1825*. 64, t. 14. 1831.

About 20-21 species, tropics. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial or annual, rather variable, herbaceous, branched, robust, clump forming, culm internodes solid, auricles absent, ligule fringed, broad leaf blades linear and flat, plants bisexual, inflorescence axillary, single cylindrical or flattened raceme, peduncled racemes, partial inflorescences, racemes linear bearing pairs of sessile and pedicellate spikelets, sessile spikelet unawned, lower floret barren, 2 glumes more or less equal, lower glume smooth and 2-keeled, upper glume awnless, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas reddish to red, pedicelled spikelet sometimes vestigial, spikelets sometimes borne in triplets, damp

soils, grassland, open habitats, open woodland, savannah, closely related to *Rhytachne*, sometimes included in *Mnesithea* Kunth, type *Coelorachis muricata* (Retz.) Brongn., see *Mantissa Plantarum* 2: 164. 1767, *Supplementum Plantarum* 13, 114. 1781 [1782], *Supplementum Carpologicae* 1(1): 3, pl. 181, f. 3. 1805, *The Genera of North American Plants* 1: 83-84. 1818, *Révision des Graminées* 1: 153. 1829, *Voyage autour du Monde* 64, t. 14. 1831, *Mexicanas Plantas* 2: 63. 1886, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887 and *Ann. Soc. Linn. Lyon*, sér. 2, 68: 198. 1921 [1922], *Kew Bulletin* 24: 309-314. 1970, *Blumea* 31: 291, 293. 1986, *Flora of the Guianas. Series A, Phanerogams* 8: 143-146. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Journal of Cytology and Genetics* 29(2): 125-131. 1994, *Flora Mesoamericana* 6: 396-397. 1994, *Contributions from the United States National Herbarium* 46: 295-296. 2003.

Species

C. afraurita (Stapf) Stapf (*Mnesithea afraurita* (Stapf) de Koning & Sosef; *Rottboellia afraurita* Stapf)

Tropical Africa. Perennial, tufted, erect, good fodder when young, used for fencing and matting, marshy places, marshy grasslands, swamps, fresh water, see *Bulletin de la Société Botanique de France* 55: Mém. 8, 98. 1908, *Flora of Tropical Africa* 9: 80. 1917, *Blumea* 31(2): 290. 1986.

in Sierra Leone: fovo, tomo

C. aurita (Steud.) A. Camus (*Coelorachis aurita* (Steud.) Henrard, nom. illeg., non *Coelorachis aurita* (Steud.) A. Camus; *Coelorhachis aurita* (Steud.) A. Camus; *Manisuris aurita* (Steud.) Kuntze ex Hitchc. & Chase; *Manisuris aurita* (Steud.) Hitchc. & Chase, nom. illeg., non *Manisuris aurita* (Steud.) Kuntze; *Manisuris aurita* (Steud.) Kuhlman, nom. illeg., non *Manisuris aurita* (Steud.) Kuntze; *Manisuris aurita* (Steud.) Kuntze; *Manisuris fasciculata* (Lam.) Hitchc.; *Mnesithea aurita* (Steud.) de Koning & Sosef; *Rottboellia aurita* Steudel)

Costa Rica to Argentina. Swamps and damp places, see *Synopsis Plantarum Glumacearum* 1: 361. 1854, *Monographiae Phanerogamarum* 6: 311. 1889, *Revisio Generum Plantarum* 3(3): 356. 1898 and *Contributions from the United States National Herbarium* 18(7): 276. 1917, *Annales de la société linnéenne de Lyon*, sér. 2 68: 197. 1921, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922, *Blumea* 4(3): 515. 1941, *Blumea* 31(2): 290. 1986.

C. capensis Stapf (*Mnesithea capensis* (Stapf) de Koning & Sosef)

South Africa. Perennial, tufted, pedicellate spikelets sometimes reduced, see *Bulletin of Miscellaneous Information Kew* 1916: 234. 1916, *Blumea* 31(2): 290. 1986.

C. clarkei (Hack.) Blatt. & McCann (*Manisuris clarkei* (Hack.) Bor ex Santapau; *Mnesithea clarkei* (Hack.) de Koning & Sosef; *Rottboellia clarkei* Hack.)

Tropics, India. Annual, see *Österreichische Botanische Zeitschrift* 41: 8. 1891 and *Journal of the Bombay Natural History Society* 82: 33. 1927, *Records of the Botanical Survey of India* 16(1): 357. 1953, *Blumea* 31(2): 290. 1986.

C. cylindrica (Michx.) Nash (*Manisuris campestris* (Nutt.) A.S. Hitchc.; *Manisuris cylindrica* (Michx.) Kuntze; *Mnesithea cylindrica* (Michx.) de Koning & Sosef; *Rottboellia cylindrica* (Michx.) Torr., nom. illeg., non *Rottboellia cylindrica* Willd.; *Tripsacum cylindricum* Michx.)

Northern America, U.S. Perennial, useful for erosion control, see *Flora Boreali-Americana* 1: 60. 1803, *Revisio Generum Plantarum* 2: 779. 1891 and *North American Flora* 17(1): 85. 1909, *Blumea* 31(2): 290. 1986.

in English: Carolina joint-tail grass, cylinder joint-tail grass

C. glandulosa (Trin.) Stapf ex Ridl. (*Manisuris glandulosa* (Trin.) Kuntze; *Mnesithea glandulosa* (Trin.) de Koning & Sosef; *Ophiuros muriculatus* Steud.; *Rottboellia glandulosa* Trin.)

Asia, Southeast Asia. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 250. 1832, *Synopsis Plantarum Glumacearum* 1: 360. 1854, *Revisio Generum Plantarum* 2: 780. 1891 and *The Flora of the Malay Peninsula* 5: 204. 1925, *Blumea* 4(3): 517. 1941, *Blumea* 31(2): 290. 1986.

in the Philippines Islands: murabon

in Thailand: yaa khaao paa

C. khasiana (Hackel) Stapf ex Bor (*Coelorachis khasiana* (Hack.) Henrard, nom. illeg., non *Coelorachis khasiana* (Hack.) Stapf ex Bor; *Mnesithea khasiana* (Hack.) de Koning & Sosef; *Rottboellia striata* Nees ex Steudel subsp. *khasiana* Hackel)

India, Darjeeling, Sikkim. Leafy, leaves lanceolate and acuminate, leaves margins not ciliate, lower glume of sessile spikelet contracted into winged apiculus, pedicellate spikelet well-developed, see *Monographiae Phanerogamarum* 6: 302. 1889 and *Indian Forest Records: Botany* 1(3): 101. 1939, *Blumea* 4(3): 519. 1941, *Blumea* 31(2): 291. 1986.

C. rottboellioides (R. Br.) A. Camus (*Andropogon rottboellioides* (R. Br.) Steud.; *Coelorachis rottboellioides* (R. Br.) Henrard, nom. illeg., non *Coelorachis rottboellioides* (R. Br.) A. Camus; *Coelorachis rottboellioides* (R. Br.) Ohwi, nom. illeg., non *Coelorachis rottboellioides* (R. Br.) A. Camus; *Coelorachis rottboellioides* (R. Br.) Stapf ex C.E. Hubb., nom. illeg., non *Coelorachis rottboellioides* (R. Br.) A. Camus; *Ischaemum rottboellioides* R. Br.; *Manisuris rottboellioides* (R. Br.) Kuntze; *Rottboellia rottboellioides* (R. Br.) Druce; *Rottboellia rottboellioides* (R. Br.) Reeder, nom. illeg., non *Rottboellia rottboellioides* (R. Br.) Druce)

Southeast Asia. Useful for erosion control, see *Prodromus Florae Novae Hollandiae* 1: 205. 1810 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 197. 1921 [1922], *Blumea* 4(3): 519. 1941, *Bulletin of Miscellaneous Information Kew* 1941: 25. 1941, *Bulletin of the Tokyo Science Museum* 18: 2. 1947, *Acta Botanica Neerlandica* 2(2): 255. 1953, *Blumea* 31(2): 291. 1986.

in English: cane grass

C. striata (Nees ex Steudel) A. Camus (*Manisuris striata* (Nees ex Steud.) Kuntze; *Mnesithea striata* (Nees ex Steud.) de Koning & Sosef; *Rottboellia striata* Nees ex Steudel)

Southeast Asia, India. Leaves margins ciliate, pedicellate spikelet reduced, see *Synopsis Plantarum Glumacearum* 1: 361. 1854, *Revisio Generum Plantarum* 1(2): 780. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 197. 1922, *Blumea* 4(3): 519. 1941, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 121. 1960, *Blumea* 31(2): 292. 1986.

in Thailand: yaa khon

Coelorhachis Endl.

Orthographic variant of *Coelorachis* Brongn.

Coix L. = *Lachryma-jobi* Ortega, *Lachrymaria* Heist. ex Fabr., *Lacryma* Medikus, *Lacrymaria* Heist. ex Fabr., *Lithagrostis* Gaertn., *Sphaerium* Kuntze

From the ancient Greek name used by Theophrastus for a kind of Egyptian palm, *Hyphaene thebaica* (L.) Martius, Latin *coix*, *coicis* for a kind of Ethiopian palm (Plinius).

Some 5/6 species, Europe, tropical Asia. Panicoideae, Andropogonodae, Maydeae, or Panicoideae, Andropogoneae, Coicinae, annual or perennial, herbaceous, leafy, coarse, thick, stout, often rhizomatous, erect, branched, culm internodes solid, auricles absent, ligule membranous, leaves flat and lanceolate, plants monoecious with all the fertile spikelets unisexual, inflorescences axillary and compound, racemes separated by a prophyll, inflorescences in hard globular utricles, male and female spikelets on the same inflorescence and usually the male above, female inflorescence sessile, fertile female spikelet with 2 florets, all the fertile spikelets unisexual, without hermaphrodite florets, male raceme pedunculated, male spikelets with 2 florets both fertile, hard utricles are modified leaf base enclosing the female inflorescence, lower glume papery and laterally winged, palea present, lodicules absent, ovary glabrous, stamens absent or 3 staminodes, stigmas 2, false fruits variable, ornamental, weed, cultivated fodder crop, grain crop species, aquatic forms, swamps, shade species, wet habitats, forest margins, swamps, type *Coix lacryma-jobi*

L., see *Species Plantarum* 2: 972. 1753, *Genera Plantarum*. edition 5. 419. 1754, *Enumeratio Methodica Plantarum* 208. 1759, *Syst. Nat.* edition 10, 1261. May-June 1759, Casimiro Gomez [de] Ortega (1740-1818), *Tabulae Botanicae* 30. Matriti [Madrid] 1773, *De Fructibus et Seminibus Plantarum*... 1: 7. 1788, *Philosophische Botanik* 1: 177. 1789, *Consp. Reg. Veg.* 51. 1828, *Revisio Generum Plantarum* 2: 793. 1891 and *Bull. Agric. Congo Belge* 39: 247-304. 1948, *Rev. Bot. Appl.* 31: 197-211. 1951, *J. Agr. Trop.* 8: 44-56. 1961, *Econ. Botany* 28: 38-42. 1974, *Cytologia* 50: 655-661. 1985, *Flora Mesoamericana* 6: 401-402. 1994, *Contributions from the United States National Herbarium* 46: 162-163. 2003.

Species

C. aquatica Roxb. (*Coix gigantea* var. *aquatica* (Roxb.) Watt; *Coix lacryma-jobi* f. *aquatica* (Roxb.) Backer)

China, India, Thailand, Southeast Asia. Floating, creeping, succulent culms, sometimes decumbent and rooting from nodes, floating roots, leaves densely hairy, male spikelets mainly in triads, animal food, fodder, weed species, ponds, lakes, wet habitats, streams and marshes, see *Der Naturforscher* 23: 211. 1788, *Flora Indica*; or, *Descriptions of Indian Plants* 3: 571-572. 1832 and *Journal of Cytology and Genetics* 1: 14-20. 1966, *Current Science* 55: 1200-1201. 1986, *Genetica* 74: 61-68. 1987, *Cytologia* 54: 169-172. 1989, *Proceedings of the Indian Science Congress Association* 77(3, vi): 135. 1990, *Nucleus* 37(1,2): 10-15. 1994, *The Grasses and Bamboos of India* 1: 175. 1997.

in Thailand: chaai fuei, chaai phuei, chai fueai, dueai hin, duei hin, lam iak, o nam

C. gigantea Koenig ex Roxb. (*Chionachne gigantea* (J. König) Veldkamp; *Coix gigantea* J. König; *Coix lacryma-jobi* var. *gigantea* (J. König ex Roxb.) Stapf ex Hook.f.; *Coix lingulata* Hack.)

Papua New Guinea, Sri Lanka, Southeast Asia, India, Malaysia, Indonesia. Perennial, densely caespitose water grass, stiff, erect, leaf blades linear not cordate at base, surface of leaves glabrous to scabrid, staminate inflorescence drooping, spikelets mainly in threes, lower glume winged, used for bead-curtains and baskets, sometimes collected for food, grains separated from the shell can be fed to poultry, cereal, a salt source, often used for ornamental purposes, weed species of rice fields, growing in marshy areas, moist or dry locations, wet situations, see *Der Naturforscher* 23: 211. 1788, *Hortus Bengalensis, or a catalogue* ... 66. 1814, *Fl. Ind.* edition 2. 3: 570. 1832, *Plantae Javanicae Rariores* 15, 18. 1838, *Österreichische Botanische Zeitschrift* 41: 5. 1891, *The Flora of British India* 7(21): 100. 1897 [1896] and *Grasses of Ceylon* 203. 1956, *Grasses of Burma* ... 264. 1960, *Genetica* 74: 61-68. 1987, *The Grasses and Bamboos of India* 1: 175. 1997, *Blumea* 47(3): 559-560, f. 3. 2002.

in English: wild adlay

in India: danga gurgur, kesai

in Sri Lanka: hin kirindi

C. lacryma-jobi L. (also spelled ***lachryma-jobi***) (*Coix agrestis* Lour.; *Coix arundinacea* Lam.; *Coix exaltata* Jacq.; *Coix lacryma* L.; *Coix ovata* Stokes; *Coix pendula* Salisb.; *Lithagrostis lacryma-jobi* (L.) Gaertn.; *Sphaerium lacryma* (L.) Kuntze)

Asia. Annual or perennial, monoecious, tall, large, smooth, sometimes woody, ornamental and variable species, robust and erect, prostrate and rooting at the nodes below, branched or much-branched, leaf sheath short or long, ligule short and membranous, leaves narrow-lanceolate and acute, inflorescences arching, male and female inflorescences on 1 peduncle, male spikelets mainly in pairs, female inflorescence surrounded by utricles ovoid-globose, lower glume narrowly winged, tear-shaped seeds, hard seedcoat or large stony involucre, weed, naturalized, used as a fiber plant by Aborigines of Australia, fodder or poor fodder for cattle, the green material is very palatable, the seed is enclosed in a hard shell that has to be broken by pounding or rough grinding, utricles used as beads, grass widely cultivated and naturalized in tropics, in India seeds eaten by the Bhil people, seeds either mixed with *Panicum colonum* L. or *Zea mays* L. and made into bread or prepared like rice, beverage base, a coffee is made from the roasted seed, seeds used to make tea in Japan, roots used in the treatment of menstrual disorders, fruits are antipyretic, antiseptic and antispasmodic, usually growing along forest edge, hot and damp areas, moist conditions, lowlands, near streams, along water courses, swampy places, ditches, on drier disturbed ground, hill forest, see *Species Plantarum* 2: 972. 1753, *Systema Naturae, Editio Decima* 1261. 1759, *De Fructibus et Seminibus Plantarum*... 1: 7. 1788, *Flora Cochinchinensis* 2: 551. 1790, *Encyclopédie Méthodique, Botanique* 3: 422. 1791, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 28. Londini [London] (Nov-Dec) 1796, *A Botanical Materia Medica* 4: 343. 1812, *Eclogae Graminum Rariores* 60, t. 40. 1820, *Bull. Soc. Acclimat.* 3(8): 442. 1881, *Journal de Botanique (Morot)* 4(4): 77. 1890, *Revisio Generum Plantarum* 2: 793. 1891, *The Flora of British India* 7: 100. 1896 and *Flore Générale de l'Indo-Chine* 7(5): 220. 1922, *Grasses of Ceylon* 203. 1956, *Grasses of Burma* ... 264. 1960, *Fl. Trop. E. Afr. Gramineae* (3): 857. 1982, *J. Guangdong Bot. Soc.* 2: 72-73. 1984, *Journal of Wuhan Botanical Research* 3(4): 345-349. 1985, *Cytologia* 51: 527-547. 1986, *Grasses of Japan and its Neighboring Regions* 498. 1987, *Current Science* 58: 757-758. 1989, *Proceedings of the Indian Science Congress Association* 76(3, vi): 177-178. 1989, *Cytologia* 55: 57-60. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Cytologia* 58: 355-360. 1993, *Nucleus* 37(1,2): 10-15. 1994, *Caryologia* 50: 175-184. 1997, *Grassland of China* 2000(5): 1-5. 2000.

in English: Job's tears, gromwell-read, pearl barley, corn bead, adlay

in French: larmes de Job, larmilles, herbe à chapelets

in Brazil: capim-de-nossa Senhora, capim-rosario

in Central America: zacate de perla

in Colombia: lágrimas de Job, lágrimas de san Pedro

in Ecuador: lagrima de Job

in Mexico: acayacotl, acayocoyoth, acayocoyotl, arrocillo, ishlocashtajad, ishlocashtajat, lágrimas de Job, lágrimas de San Pedro, suuk-paen, zacate de cuentas

in Nicaragua: sagadí, agusa, am mak, am minik

in Angola: lágrimas de Nossa Senhora

in Ghana: agu, ahwinie, akrokosebia, n'ani nsuwa, owu amma manka m'asem

in Guinea: amberkesy, fondo, forono, wakometa

in Guinea-Bissau: bonco

in Ivory Coast: manquassem

in Liberia: za

in Morocco: habb al-barâka

in Nigeria: aka ila, ngkwa eto, nkwa ikot

in Senegal: balifo, boror, foror, makaramba kesè, namma-ket, porola

in Sierra Leone: ampolo, boboni volo, bohor, bongkori, epereka, folo, foro, foronde tasebia, forondo, forondo mese, gbegebena, gboe, gbolo, gbolokpo, gbolondo, gboye, jina forondo, kali bagi, kpetehu volo, kpoklole, mapolo, matom-perega, puboe, sankala, sisig, tasabiana, yiri foronde

in Southern Africa: Jobskrale, Jobskraaltjies, Jobstrane, kraalgras, tandgras, tandkraalgras, traangras; ilozisi (Zulu)

in Yoruba: tésubiyyu

in Bhutan: ghan rey mala, gar day mala

in Cambodia: neang vong, skouy, skuöy

in China: yi yi ren, i i jen, i yi jen, chieh li, chi shih, kan mi, hui hui mi, t'u i mi, chao i mi

in India: ashru beeja, baru, dahir, galao, gandula, gangee, garru, garun, gavedhu, gavedu, gavendhu, gavendhuka, gharu ghas, gojivha, gorivindlu, gorivipusa, gulbi gadi, gulu, gundragutta, gurgur, gurlu, gurmur, jargadi, jogimani, kaage mani, kaash, kaasha, kaattukumdumani, kalmathu beeja, kalmathu, kasaayi, kasad, kasaiya (Bhil group), kasei, kashige gida, kassaibija, kasee, kosar, kothi beeja, koti beeja, kshudragojihva, kunch, nellumany, nethpaavalam, netpavalam, ran jondhala, ranjondhala, ran makkai, ranmaka, ranmakkai, ranzondlo, ranzonnalo, sanklee, sanklu, sankru, sohriu, tal-ka gandula

in Indonesia: jali, jali betul, jali watu

in Japan: juzu-dama (= rosary bead)

in Laos: düay

in Malaysia: jalai batu, jelai batu, jelai pulut, jilai batu, jilai pulut, menjelai, menjilai, malai tikus

in Papua New Guinea: noi

in the Philippines Islands: abukai, adlai, adlay, agagai, agda, aglai, alimudias, apagi, atakai, balantakan, barubaioko, bintikai, bitogan, dalai, damau, glias, kalabugau, kambot, katayan, katayn, katigbi, kaudlasan, kiboung, koldasan, kudlasan, lamudias, lias, paias, paleas, palias, pintaka, talantakan, tidbi, tigbi, tigbikai, tiguas, tikaian

in Okinawa: shishi-dama

in Sri Lanka: kirindi

in Thailand: duai, duei, ma doi, maduai

in Vietnam: bo bo, c[uw] [owf]m g[aj]o, hat cuom, may pat, y di, [ys] d[ix]

in Hawaii: pu'ohe'ohe, kukaekolea, 'oheohe, pupu kolea

in Samoa: sanasana, sanasana samoa

in Pacific: tangatanga

in Arabic: damu ayub

C. lacryma-jobi L. var. **gigantea** (J. König ex Roxb.) Stapf ex Hook.f. (*Coix gigantea* J. König ex Roxb.; *Coix gigantea* J. König)

India. See *Der Naturforscher* 23: 211. 1788, *Flora Indica; or, Descriptions of Indian Plants* 3: 570. 1832, *The Flora of British India* 7: 100. 1896.

C. lacryma-jobi L. var. **lacryma-jobi** (*Coix agrestis* Lour.; *Coix arundinacea* Lam.; *Coix exaltata* Jacq.; *Coix lacryma* L.; *Coix ovata* Stokes; *Lithagrostis lacryma-jobi* (L.) Gaertn.)

Asia temperate and tropical, China, India. False fruit ovoid and not striate, ornamental, medicinal uses, cereal, sometimes cultivated and naturalized, see *Species Plantarum* 2: 972. 1753, *Systema Naturae, Editio Decima* 1261. 1759, *De Fructibus et Seminibus Plantarum...* 1: 7. 1788, *Flora Cochinchinensis* 2: 551. 1790, *Encyclopédie Méthodique, Botanique* 3: 422. 1791, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 28. Londini [London] (Nov-Dec) 1796, *A Botanical Materia Medica* 4: 343. 1812, *Eclogae Graminum Rariorum* 60, t. 40. 1820, *Bull. Soc. Acclimat.* 3(8): 442. 1881, *Journal de Botanique (Morot)* 4(4): 77. 1890, *Revisio Generum Plantarum* 2: 793. 1891, *The Flora of British India* 7: 100. 1896 and *Flore Générale de l'Indo-Chine* 7(5): 220. 1922, *Fl. Trop. E. Afr. Gramineae* (3): 857. 1982, *Grasses of Japan and its Neighboring Regions* 498. 1987.

in Thailand: ma doi, dueai

C. lacryma-jobi L. var. **ma-yuen** (Rom. Caill.) Stapf ex Hook.f. (*Coix chinensis* Tod.; *Coix chinensis* var. *chinensis*; *Coix lacryma-jobi* subsp. *ma-yuen* (Rom. Caill.) T. Koyama; *Coix lacryma-jobi* var. *ma-yuen* (Rom. Caill.) Stapf; *Coix ma-yuen* Rom. Caill.)

Southeast Asia, China, India. False fruits ovoid to pyriform, involucre soft and striate, cultivated for its edible seeds and medicinal virtues, cereal, animal food, fodder, handicrafts, used in macrobiotic diets and cuisine, the seeds are a traditional Chinese medicine possessing antitumor activity, see *Ind. Sem. Hort. Bot. Pan. Ann.* 5. 1861, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 2, 8: 442. 1881, *The Flora of British India* 7(21): 100. 1897 [1896] and *Grasses of Japan and its Neighboring Regions* 498. 1987, M. Numata, A. Yamamoto, A. Moribayashi, H. Yamada, "Antitumor components isolated from the Chinese herbal medicine *Coix lacryma-jobi*." in *Planta Med.* 60(4): 356-359. Aug 1994.

in China: yi yi

in Japan: hato-mugi

in Brazil: rosario

C. lacryma-jobi L. var. ***maxima*** Makino (*Coix agrestis* var. *maxima* (Makino) Nakai)

Asia temperate, Taiwan. See *Botanical Magazine* 20: 10. 1906.

C. lacryma-jobi L. var. ***monilifer*** G. Watt

Tropical Asia, Eastern India, Malaysia, Myanmar. Hard false fruit globose and flattened, ornamental, see *Dictionary of the Economic Products of India* 493. 1887 and *Agricultural Ledger* 214. 1904.

C. lacryma-jobi L. var. ***novoguineensis*** Pilg.

New Guinea. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 171. 1914.

C. lacryma-jobi L. var. ***stenocarpa*** (Balansa) Stapf ex Hook.f. (*Coix lacryma-jobi* var. *stenocarpa* (Oliv.) Stapf; *Coix lacryma* var. *stenocarpa* Oliv.; *Coix lacryma-jobi* var. *stenocarpa* Stapf; *Coix stenocarpa* Balansa; *Coix stenocarpa* (Oliv.) Balansa; *Coix tubulosa* Hack.)

Southeast Asia, China, India. Hard false fruit cylindrical and not striate, ornamental, used for beads, see *Hooker's Icones Plantarum* 18(3): t. 1764. 1888, *Journal de Botanique (Morot)* 4(4): 77-78. 1890, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 13(2): 260. 1890, *The Flora of British India* 7: 100. 1896.

in Thailand: boe, ma dueai khi non, ma duei kee non, phong mue thee, phong mue thi

C. puellarum Balansa (*Coix lacryma-jobi* var. *puellarum* (Balansa) A. Camus)

Southeast Asia, China, India. Perennial, ornamental purposes, see *Journal de Botanique (Morot)* 4(4): 77. 1890 and *Flore Générale de l'Indo-Chine* 7(5): 220. 1922.

in India: sachipa

in Thailand: boe mue thee, boe mue thi, ma dueai hin, ma duei hin

Colantheia McClure & E.W. Smith

From the Greek *kouleos*, *koleos*, *koleon*, *kouleon* "a sheath" and *anthele* "a type of inflorescence, a little flower," *anthe-lion* is a diminutive of *anthos* "flower, blossom," referring to the small synflorescences.

About 7 species, eastern Brazil. Bambusoideae, Bambuseae, Arthrostylydiinae, or Bambusoideae, Bambusodae, Bambuseae, perennial, very slender, sympodial, erect, weak, decumbent, scandent, woody, shrub, scrambler, hollow, climbing, leaf blades pseudopetiolate, clump forming, branch complement several, nodes with 2 ridges, 1 branch dominant, narrow sheaths, short rhizomes pachymorph, plants bisexual, inflorescence simple and exserted, a weak panicle or raceme, 1-2 spikelets slender, 1-3 glumes unequal, palea present, 3 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, forest, type *Colantheia cingulata* (McClure & L.B. Sm.) McClure, see *Flora Boreali-Americana* 1: 73. 1803 and *Smithsonian Contributions to Botany* 9: 1-148. 1973 [Genera of bamboos native to the New World (Gramineae: Bambusoideae)], *American Bamboos* 172-174. 1999, *Contributions from the United States National Herbarium* 39: 53. 2000, *Botanical Journal of the Linnean Society* 138(1): 45-55. Jan 2002 [Cauline anatomy of native woody bamboos in Argentina and neighbouring areas: epidermis].

Species

C. burchellii (Munro) McClure (*Arthrostyidium burchellii* Munro; *Arundinaria burchellii* (Munro) Hack.) (for the British naturalist William John Burchell, 1781-1863, in South Africa 1811-1815, Brazil 1825-1829, botanical collector, explorer, painter, writer, gardener, entomologist, 1808 Fellow of the Linnean Society (1803, in Staffeu and Menega, *Suppl. III*), author of *Travels in the Interior of Southern Africa*. London 1822-1824; see Helen M. McKay, editor, *The South African Drawings of William J. Burchell*. Johannesburg 1952; John Lindley, *The Genera and Species of Orchidaceous Plants*. London 1830-1840; J.H. Barnhart, *Biographical notes upon botanists*. 1: 282. 1965; John Hutchinson (1884-1972), *A Botanist in Southern Africa*. 625-641. London 1946; M. Gunn and L.E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 59. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 141-142. Oxford 1964; Mia C. Karsten, *The Old Company's Garden at the Cape and its Superintendents: Involving an Historical Account of Early Cape Botany*. Cape Town 1951; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997)

Brazil. See *Trans. Linn. Soc. London* 26(1): 43. 1868 and *Oesterr. Bot. Z.* 53: 69. 1903.

C. cingulata (McClure & L.B. Sm.) McClure (*Aulonemia cingulata* McClure & L.B. Sm.)

Brazil. Scandent, lowland, secondary forests, coastal, see *Flora Illustrada Catarinense* 1(GRAM-Supl.): 50-52, t. 9, f. m-u. 1967.

C. distans (Trin.) McClure (*Arundinaria distans* Trin.)

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3, 1(6): 621. 1835.

C. intermedia (McClure & L.B. Sm.) McClure (*Aulonemia intermedia* McClure & L.B. Sm.)

Brazil. Forming dense and impenetrable thickets, moist habitats.

C. lanciflora (McClure & L.B. Sm.) McClure (*Aulonemia lanciflora* McClure & L.B. Sm.; *Chusquea effusa* Renv.)

Brazil. Spikelets few-flowered, montane plant, moist habitats, see *Kew Bulletin* 42(2): 924. 1987.

C. macrostachya (Nees) McClure (*Arundinaria macrostachya* Nees)

Brazil. See *Linnaea* 9(4): 481. 1834.

C. rhizantha (Hack.) McClure (*Arundinaria rhizantha* Hack.)

Brazil. See *Repert. Spec. Nov. Regni Veg.* 7(149-151): 323. 1909.

Coleanthus J. Seidel = *Schmidtia* Tratt., *Schmidtia* Raf., *Smidetia* Raf., *Wilibalda* Sternb. ex Roth, *Wilibalda* Roth

From the Greek *koleos* “a sheath” and *anthos* “flower.”

One species, northern Asia, central Europe, North America. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Agrostidinae, annual, dwarf, small, decumbent, herbaceous, auricles absent, upper leaf sheaths inflated embracing the inflorescence, narrow leaf blades linear, ligule an unfringed membrane, plants bisexual, contracted inflorescence paniculate, spikelets in globular clusters, 1-flowered, glumes lacking, lemma keeled with a short subulate awn, palea present, lodicules absent, 2 stamens, ovary glabrous, 2 stigmas, pond margins, type *Coleanthus subtilis* (Tratt.) Seidel, see *Flora des Österreichischen Kaiserthumes* 1: 12. 1816, *Systema Vegetabilium* 2: 11, 276. 1817, *Enumeratio Plantarum Phaenogamarum in Germania* 1(1): 92. 1827, Constantine Samuel Rafinesque, *Autikon botanikon. Icones plantarum select. nov. vel rariorum, etc.* 187. Philadelphia 1840, *Beiträge zur Flora der Cap Verdischen Inseln* 154. Heidelberg 1852 and *Contributions from the United States National Herbarium* 48: 237, 608, 614, 694. 2003.

Species

C. subtilis (Tratt.) Seidel (*Schmidtia subtilis* Tratt.; *Schmidtia utricularia* J. Presl & C. Presl; *Smidetia humilis* Raf.; *Wilibalda subtilis* (Tratt.) Roth; *Zizania subtilis* (Tratt.) Raspail)

Canada, U.S. Clusters of umbel-like spikelets, see *Species Plantarum* 2: 991. 1753, *Flora Cechica* 12. 1819, *Annales des Sciences Naturelles, Botanique* 5: 452, 458. 1825.

Coleataenia Griseb. = *Panicum* L.

From the Greek *koleos* “a sheath” and *tainia* “fillet, a ribbon.”

Panicoideae, Paniceae, Panicinae, type *Coleataenia gynerioides* Griseb., see *Species Plantarum* 1: 55, 58. 1753, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 162-163. 1829, *Symbolae ad Floram Argentinam* 308. Göttingen 1879 [also in *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen Phys. Cl.* 24(1): 1-345. 1879] and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 243. 1931, *Gramíneas Uruguayas* 341-342, f. 143. 1970, *Contributions from the United States National Herbarium* 46: 163, 306-441. 2003.

Coliquea Steud. ex Bibrá = *Chusquea* Kunth

Bambusoideae, Bambuseae, Chusqueinae, type *Coliquea quila* (Molina) Steud. ex Bibrá, see *Saggio sulla Storia Naturale del Chili ...* 154-155. 1782, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Synopsis Plantarum* 1: 254. 1822, *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 5(2): 115. 1853 and *Flora Mesoamericana* 6: 202-210. 1994, *The Bamboos* 33-44. 1997 [Diversity, biogeography and evolution of *Chusquea*], Emmet J. Judziewicz et al., *American Bamboos*. 199-223. Smithsonian Institution Press, Washington and London 1999, *Contributions from the United States National Herbarium* 39: 36-52, 53. 2000.

Colladoa Cav. = *Ischaemum* L.

Probably after the Swiss physician Louis Théodore Frédéric Colladon, 1792-1862, botanist; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 366. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 80. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 210. University of Pennsylvania Press, Philadelphia 1964.

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Ischaeminae, type *Colladoa distachia* Cav. [also *distachya*], see *Species Plantarum* 2: 1049. 1753, *Icones Stirpium Rariorum* 1, t. 1. 1791, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 37, t. 460. 1799, *Systema Vegetabilium, editio decima sexta* 1: 298. 1825 and *Philippine Journal of Science* 1(Suppl.): 330. 1906, *North Amer. Fl.* 17: 94. 1909, *Flora Mesoamericana* 6: 386-387. 1994, *Contributions from the United States National Herbarium* 46: 275-276. 2003.

Colobachne P. Beauv. = Alopecurus L.

Greek *kolobos* “stunted, mutilated” and *achne* “chaff, glume.”

Pooideae, Poeae, Alopecurinae, type *Colobachne vaginata* (Willd.) P. Beauv., see *Species Plantarum* 1: 60-61. 1753, *Flora Pedemontana* 2: 232. 1785, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 44. 1801, *Essai d'une Nouvelle Agrostographie* 22, 158. 1812, *Fundamenta Agrostographiae* 59. 1820, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 74. 1821, *Linnaea* 21(3): 382. 1848, *Botaniska Notiser* 1851: 69. 1851, *Flora Rossica* 4(14): 640. 1853 and *Regnum Veg.* 127: 17. 1993, *Flora Mesoamericana* 6: 242. 1994, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996, *Flora Mediterranea* 7: 204-213. 1997, *Watsonia* 21: 365-368. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Turkish Journal of Botany* 23(4): 245-262. 1999, *Opera Botanica* 137: 1-42. 1999, *Contributions from the United States National Herbarium* 48: 97-106, 237. 2003.

Colobanthium (Reichb.) G. Taylor = Sphenopholis Scribn.

From the Greek *kolobanthes* “bearing stunted flowers,” *kolobos* “stunted, mutilated” and *anthos*.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see *Der Deutsche Botaniker Herbarienbuch* 1(2): 149. 1841 and *Rhodora* 8(92): 142. 1906, *Index Kewensis* 13: 33. 1966, *Flora of Alaska and Neighboring Territories; A Manual of the Vascular Plants* i-xxi, 1-1008. 1968, *Anderson's Flora of Alaska and Adjacent Parts of Canada* i-xvi, 1-724. 1974, *Flora of the Yukon Territory* i-xvii, 1-669. 1996, *Contributions from the United States National Herbarium* 48: 614-617. 2003.

Colobanthus (Trin.) Spach = Colobanthus Bartl. (Caryophyllaceae), Sphenopholis Scribn.

Greek *kolobos* “stunted, mutilated” and *anthos* “flower.”

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 66. 1830, *Ordines Naturales Plantarum* 305. 1830, *Reliquiae Haenkeanae* 2(1): 13, t. 49, f. 2. 1831, *Histoire Naturelle des Végétaux* 13: 163. 1841 and *Rhodora* 8(92): 142, 144. 1906, *Contributions from the United States National Herbarium* 48: 237, 614-617. 2003.

Colpodium Trinius = Catabrosella (Tzvelev) Tzvelev, Hyalopoa (Tzvelev) Tzvelev, Keniochloa Melderis, Paracolpodium (Tzvelev) Tzvelev

From the Greek *kolpodes*, *kolpoeides* “like a breast, winding, loose, like a bay, turgid, embosomed.”

Some 3 (*sensu stricto*)/20 species, montane, high altitude North temperate, Turkey, Nepal, eastern Siberia, Caucasus, Africa, Kenya, Lesotho. Pooideae, Poodae, Poeae, perennial, tufted, herbaceous, unbranched, shortly rhizomatous or stoloniferous, decumbent or erect, auricles absent, ligule an unfringed membrane, leaf blades flat or folded, plants bisexual, open inflorescence paniculate, panicle open or sometimes contracted, spikelets 1- to 4-flowered, 2 obtuse to acute glumes unequal to subequal, lower glume 1-nerved, upper glume 1- to 3-nerved, lemmas toothed and membranous, palea keels smooth and non scabrid, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, high mountains, a segregate from *Poa*, type *Colpodium stevenii* Trin. (*Colpodium versicolor* (Steven) Schmalh.), see *Species Plantarum* 1: 61-63. 1753, *Familles des Plantes* 2: 495. 1763, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées.* 97, 119. 1812, *Fundamenta Agrostographiae* 119, t. 7. 1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 37, 58. 1821, *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 64. 1845 [1846], *Flora Rossica* 4(13): 385. 1852, *Flora Orientalis* 5: 578. 1884 and *Svensk Botanisk Tidskrift* 50(4): 538, 540. 1956, *Grasses of Burma ...* 529-530. 1960, *Novosti Sist. Vyss. Rast.* 1: 5-19. 1964, *Arkticheskaia Flora SSSR* [Flora of the Russian Arctic] 2: 172. Akademija nauk SSSR Leningrad 1964, *Bot. Zhurn. (Moscow & Leningrad)* 50(9): 1320. 1965, *Novosti Sist. Vyss. Rast.* 17: 4-10. 1980, *Novosti Sist. Vyss. Rast.* 18: 86-95. 1981, *Flora of Turkey and the East Aegean Islands* 9: 486-501. 1985, *Bot. Zhurn. SSSR* 70(12): 1698-1699. 1985, *Nordic Journal of Botany* 14(6): 601-607. 1994 [The genus *Colpodium* (Gramineae) in Africa.], *Contributions from the United States National Herbarium* 48: 237-238. 2003, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, “The evolution of nuclear genome structure in seed plants.” *Am. J. Bot.* 91: 1709-1725. 2004.

Species

C. chionogeiton (Pilg.) Tzvelev (*Agrostis chionogeiton* Pilg.; *Agrostis oreades* Peter; *Colpodium oreades* (Peter) E.B. Alexeev; *Keniochloa chionogeiton* (Pilg.) Melderis; *Keniochloa chionogeiton* var. *oreades* (Peter) Melderis)

Africa, Kenya. Narrow and contracted panicle, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 510. 1926, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(Anhang 1): 87, f. 2. 1930, *Svensk Botanisk Tidskrift* 50(4): 540. 1956, *Novosti Sist. Vyss. Rast.* 17: 8. 1980.

C. colchicum (Albov) Woronow ex Grossh. (*Catabrosa colchica* Albov; *Paracolpodium colchicum* (Albov) Tzvelev)

Eurasia, Russia. See *Flora Kavkaza* 1: 111. 1928, *Novosti Sist. Vyss. Rast.* 1966: 33. 1966.

C. drakensbergense Hedberg & I.Hedberg

Lesotho, South Africa. See *Nordic Journal of Botany* 14(6): 606, f. 3. 1994.

C. fibrosum Trautv. (*Catabrosella fibrosa* (Trautv.) Tzvelev)

Turkey. See *Novosti Sist. Vyss. Rast.* 1966: 33. 1966.

C. hedbergii (Melderis) Tzvelev (*Catabrosa aquatica* auct.; *Keniochloa hedbergii* Melderis)

Africa, Russia, Europe. Perennial, rare, tufted to loosely tufted, prostrate or ascending, stoloniferous, basal leaf sheaths papery, leaves keeled and folded, ligule acute, panicle with spreading stiff branches, spikelets 1-flowered, glumes subequal or equal, on moist ground, wet places, temporary pools, along small streams, sedge meadows, see *Svensk Botanisk Tidskrift* 50(4): 542, f. 1,1-2, 2. 1956.

C. humile (M. Bieb.) Griseb. (*Aira humilis* M. Bieb.; *Catabrosa humilis* (M. Bieb.) Trin.; *Catabrosella humilis* (M. Bieb.) Tzvelev; *Colpodium humile* Lange, nom. illeg., non *Colpodium humile* (M. Bieb.) Griseb.; *Glyceria humilis* (M. Bieb.) Heynh.)

China, Russia, Turkey. See *Flora Taurico-Caucasica* 1: 57. 1808, *Fundamenta Agrostographiae* 136. 1820, Gustav Heynhold (1800-ca. 1860), *Nomenclator Botanicus Hortensis* 1: 361. Dresden, Leipzig 1840-1846, *Flora Rossica* 4(13): 384. 1852 and *Bot. Zhurn. (Moscow & Leningrad)* 50: 1320. 1965.

C. lanatiflorum (Roshevitz) Tzvelev (*Hyalopoa lanatiflora* (Roshev.) Tzvelev; *Poa lanatiflora* Roshev.)

Russia. See *Flora Arctica URSS* 2: 172. 1964, *Novosti Sist. Vyss. Rast.* 1966: 32. 1966.

C. oreades (Peter) E.B. Alexeev (*Agrostis oreades* Peter; *Colpodium chionogeiton* (Pilg.) Tzvelev; *Keniochloa chionogeiton* var. *oreades* (Peter) Melderis)

Russia. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(Anhang 1): 87, f. 2. 1930, *Svensk Bot-*

anisk Tidskrift 50(4): 540. 1956, *Novosti Sist. Vyss. Rast.* 17: 8. 1980.

C. tibeticum Bor (*Paracolpodium tibeticum* (Bor) E.B. Alexeev)

India, Tibet, Himalaya. Plant robust, see *Kew Bulletin* 8(2): 270. 1953, *Novosti Sist. Vyss. Rast.* 18: 95. 1981.

C. vahlianum (Liebm.) Nevski (*Atropis vahliana* (Liebm.) K. Richt.; *Glyceria vahliana* (Liebm.) Th. Fr.; *Phippsia vahliana* (Liebm.) Á. Löve and D. Löve; *Poa vahliana* Liebm.; *Puccinellia vahliana* (Liebm.) Scribn. and Merr.; *Puccinellia vahliana* (Liebm.) Tolm., nom. illeg., non *Puccinellia vahliana* (Liebm.) Scribn. & Merr.)

Canada, Russia. Caespitose, curly roots, see *Chloris Melvilliana* 27. 1823, *Fl. Danica* 2401. 1845, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 26: 139-140. 1869, *Plantae Europaeae* 1: 92. 1890 and *Contributions from the United States National Herbarium* 13: 78. 1910, *Fl. SSSR* 2: 436, 470. 1934 [*Flora URSS* 2: 436. 1934], *Botaniska Notiser* 128(4): 501. 1975 [1976], *Contributions from the United States National Herbarium* 48: 591-601. 2003.

C. variegatum (Boiss.) Griseb. (*Catabrosa variegata* Boiss.; *Catabrosella variegatum* (Boiss.) Tzvelev, also spelled *variegata*)

Russia, Turkey. In damp soil, alpine slopes, see *Diagnoses plantarum orientalium novarum, ser. 1*, 1(5): 1. 1844, *Flora Rossica* 4(13): 384. 1852 and *Novosti Sist. Vyss. Rast.* 1966: 32. 1966.

C. versicolor (Steven) Schmalh. (*Agrostis versicolor* Steven; *Catabrosa versicolor* (Steven) Boiss.; *Colpodium schelkownikowii* Grossh.; *Colpodium versicolor* (Steven) Woronow ex Grossh.; *Colpodium stevenii* Trin.)

Russia. See *Fundamenta Agrostographiae* 119, t. 7. 1820, *Flora Orientalis* 5: 579. 1884 and *Flora Kavkaza* 1: 111, 127. 1928.

C. wallichii (Hook.f. ex Stapf) Bor (*Catabrosa wallichii* Hook.f. ex Stapf; *Paracolpodium wallichii* (Hook.f. ex Stapf) E.B. Alexeev)

India, Bhutan, Sikkim. Inflorescence a raceme, glumes dark purple, see *The Flora of British India* 7(22): 312. 1897 [1896] and *Kew Bulletin* 1953: 270. 1953, *Novosti Sist. Vyss. Rast.* 18: 94. 1981.

Commelinidium Stapf = Acroceras Stapf

Resembling *Commelina*.

Three species, tropical Africa. Panicoideae, Paniceae, Setariinae, or Panicoideae, Paniceae, Panicinae, perennial, herbaceous, slender, nonwoody, branched, coarse, solid, rhizomatous or stoloniferous, usually with long prostrate

base, trailing, creeping or decumbent-based culms, leaning, often rooting at the lower nodes, auricles absent, narrow membranous ligule, leaves lanceolate to linear-lanceolate to ovate-lanceolate, plants bisexual, inflorescence paniculate or spicate, solitary or paired spikelets, florets 2, lower floret sterile or male, upper floret bisexual or perfect, 2 very unequal glumes, lower glume 3- to 5-nerved, upper glume 5-nerved, palea present, 2 fleshy and free lodicules, stamens 3, ovary glabrous, stigmas 2, shade and open habitats, near running fresh water, understory, damp places, shallow water, marshy ground, forests, stream and lake margins, often referred to *Acroceras*, type *Commelinidium gabunense* (Hack.) Stapf, see *North American Flora* 3(2): 200, 210. 1915, *Flora of Tropical Africa* 9: 621-622, 627. 1920, *Bulletin du Muséum National d'Histoire Naturelle (Paris)* 26(7): 664. 1921 [1920], *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 240. 1931, *Heredity: An International Journal of Genetics* 3: 369-374. 1949, *Bull. Soc. Bot. France* 97: 84-85. 1950, *Cytologia* 19: 97-103. 1954, *Grasses of Burma ...* 275-276. 1960, *Prodromus einer Flora von Südwestafrika* 160: 1-228. 1970, *Brittonia* 23(3): 293-324. 1971, *Canadian Journal of Botany* 52(5): 1075-1090. 1974, *Las Gramíneas de México* 1: 1-260. 1983, *Darwiniana* 28(1-4): 191-217. 1987[1988], *Darwiniana* 30(1-4): 87-94. 1990, *Flora of the Guianas. Series A, Phanerogams* 8: 42-45. 1990, *Flora Mesoamericana* 6: 329. 1994, *Flora of Ethiopia and Eritrea* 7: 209-210. 1995, *Contributions from the United States National Herbarium* 46: 13-14. 2003.

Species

C. gabunense (Hack.) Stapf (*Acroceras gabunense* (Hack.) Clayton; *Commelinidium mayumbense* (Franchet) Stapf; *Commelinidium nervosum* Stapf; *Echinochloa nervosa* (Stapf) Roberty; *Panicum gabunense* Hack.; *Panicum hensii* K. Schum.; *Panicum mayumbense* Franch.)

West tropical Africa, Gabon, Tanzania. Perennial, scrambling, prostrate at the base, rooting at the lower nodes, leaf blades ovate, fodder, found in forest shade, see *Essai d'une Nouvelle Agrostographie* 52, 53, t. 11, f. 1. 1812, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 70. 1889, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 343. 1895, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 332. 1897 and *Flora of Tropical Africa* 9: 627-629. 1920, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afrique Noire Sér. A*, 17: 64. 1955, *Kew Bulletin* 34(3): 557. 1979 [1980].

in Sierra Leone: ngale

Comopyrum (Jaub.) Á. Löve = *Aegilops* L., *Comopyrum* (Jaub. & Spach) Á. Löve, *Comopyrum* Á. Löve

From the Greek *kome* "hair of the head, tuft of hairs" and *pyros* "grain, wheat."

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 2: 1050-1051. 1753, *Flora Graeca* 1: 75, t. 94. 1806, *Flora Orientalis* 5: 675. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis* Beih. 55: 84, 90, 117. 1929, *Blumea, Supplement* 3: 15, 17. 1946, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 653-655. 1960, *Feddes Repert.* 91: 225-228, 233-234, 236. 1980, *Biologisches Zentralblatt* 101(2): 206-208. 1982, *Feddes Repert.* 95(7-8): 493, 495. 1984, *Taxon* 41: 552-583. 1992, *Agric. Univ. Wageningen Pap.* 94-7: 1-512. 1994, *Taxon* 44: 611-612. 1995, *Flora de Veracruz* 114: 1-16. 2000, *Contributions from the United States National Herbarium* 48: 20-23, 238. 2003.

Corethrum Vahl

From the Greek *korethron* "broom."

Name of uncertain application, type *Corethrum bromoides* Vahl, see *Skrifter af Naturhistorie-Selskabet* 6: 85. 1810 and *Genera Graminum* 376. 1999.

Coridochloa Nees = *Alloteropsis* Presl

Greek *koris*, *koridos* "a species of *Hypericum*, a bug" and *chloe*, *chloa* "grass, young grass"; see Robert Wight and G. Arnott Walker Arnott, *The Edinburgh New Philosophical Society*. 15: 381. 1833.

Panicoideae, Panicodae, Paniceae, Setariinae, or Panicoideae, Paniceae, Paspalinae, type *Coridochloa cimicina* (L.) Nees ex B.D. Jacks., see *Contributions from the United States National Herbarium* 12(6): 210. 1909, F.M. Bailey, in *Queensland Agricultural Journal*. 27: 69, t. XIX. 1911, *Annali di Botanica* 13: 47. 1914, *Willdenowia* 4: 209, 21. 1966, *Flora of Tropical East Africa* 451-898. 1982, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Botanical Journal of the Linnean Society* 97: 255-259. 1988, *ASBS Symposium 1990: Indo-Pacific Biogeography*, 14. 1990, *Contributions from the United States National Herbarium* 46: 16, 163. 2003.

Cornucopiae L.

Cornucopiae, the emblem of fruitfulness and abundance.

Two species, eastern Mediterranean, Iraq. Pooideae, Poodae, Aveneae, annual, branched, herbaceous, auricles absent, narrow leaf blades linear acuminate, upper sheaths

inflated subtending 1-several panicles, inflorescence capitate, panicle with dentate cupuliform involucre, 2 glumes subequal, lower glume 3-nerved, upper glume 2- to 3-nerved, palea and lodicules lacking, 3 stamens, ovary glabrous, 2 stigmas, type *Cornucopiae cucullatum* L. (*Alopecurus cornucopiae* (L.) Trin.), see *Species Plantarum* 1: 54, 60-61. 1753, *Flora Caroliniana, secundum ...* 73-74. 1788, *Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 6, Sci. Math., Seconde Pt. Sci. Nat.* 6,4(1-2): 46. 1840, *Journal of the Linnean Society, Botany* 24: 440. 1888 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 293. 1921, *Regnum Veg.* 127: 38. 1993.

Species

C. alopecuroides L.

Mediterranean. See *Systema Naturae, edition 12* 2: 85. 1767, *Mant. Pl.* 29. 1767 and *Taxon* 49(2): 249. 2000.

C. cucullatum L. (*Alopecurus cornucopiae* (L.) Trin.)

Mediterranean. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 46. 1840, *Flora* 68(7): 126. 1885 and *Kew Bulletin* 20: 446. 1966.

Cortaderia Stapf = Moorea Lemaire

From *cortadera*, the Argentine name; from the Spanish *cortar* "to cut, to harvest, pick," from the Latin *curto, avi, atum, are (curtus)* "to shorten"; the plant has sharp-edged leaves or leaf blades. "Que rodea una laguna/con su pajonal dorado/de filosa cortadera/coronada de penachos." (Hilario Ascasubi, *Santos Vega*).

About 15-27 species, mostly South America, New Zealand. Arundinoideae, Danthonieae, Cortaderiinae, or Danthonioideae, Danthonieae, perennial, large, erect, densely tussocky, caespitose, robust and coarse, hollow, unbranched, ligule present, leaves mostly basal or crowded at the base of flowering shoot, auricles absent, leaf blades linear and harsh, ligule a dense rim of hairs, plants bisexual, dioecious or gynodioecious, inflorescence a small or large silvery silky plumose branched panicle, spikelets unisexual or occasionally hermaphrodite, 2-5 developed florets and a rudiment, florets hermaphrodite or female on separate plants (gynodioecious), with hermaphrodite florets or without hermaphrodite florets, glumes transparent and persistent 1- to 3-nerved, several hairy white and papery lemmas, lemmas awned or slender-pointed, the median lemma awn not strongly flattened, laterals lemmas present or absent, callus in female long silky-hairy and pointed, palea keeled, 2 fleshy and ciliate lodicules, stamens 3, ovary glabrous, plumose stigmas, noxious weed species, in weedy places, pampas, cultivated, ornamental, lawn specimens, wetter areas, open habitats, a rather heterogeneous genus, inter-

grading with *Chionochloa* Zotov, type *Cortaderia argentea* (Nees) Stapf (*Cortaderia selloana* (Schultes & Schultes f.) Asch. & Graebner), see *L'illustration horticole* 2: Misc. 14-15. 1855, *The Gardeners' Chronicle*. Ser. 3, 22: 378, 396. 1897 and *Synopsis der mitteleuropäischen Flora* 2(1): 325. 1900, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 374. 1906, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Bol. Mus. Nac. Hist. Nat.* 27(4): 205-246. 1959, *New Zealand J. Agric. Res.* 3: 725-727. 1960, Hans J. Conert, *Die Systematik und Anatomie der Arundineae* 208 p. Weinheim 1961, *New Zealand Journal of Botany* 1: 78-136, 258-264. 1963, *Tetrahedron Letters* 34: 2323-2327. 1964, *New Zealand Journal of Botany* 3: 17-23, 233-242. 1965, *Phytochem.* 6: 559-572. 1967, *New Zealand Journal of Botany* 9: 519-525. 1971, *Phytochem.* 10: 2167-2173. 1971, *Phytochem.* 12: 1196. 1973, H.E. Connor and E. Edgar, "Names and types of *Cortaderia* Stapf (Gramineae)." *Taxon* 23(4): 595-605. 1974, *Evolution* 27: 663-678. 1974, H.E. Connor and A.W. Purdie, "Inheritance of triterpene methyl ethers in *Cortaderia* (Gramineae)." *Phytochemistry* 15: 1937-1939. 1976, *New Zealand Journal of Botany* 16: 45-59. 1978, *Proceedings, Koninklijke Nederlandse Akademie van Wetenschappen. Series C, biological and medical sciences* 82: 165-170. 1979, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *New Zealand Journal of Botany* 19: 171-172. 1981, *Taxon* 32: 633-634. 1983, *Heredity* 51: 395-403. 1983, *Botanical Gazette* 145: 78-82. 1984, *New Zealand Journal of Botany* 26: 163-167. 1988, H.E. Connor and D. Charlesworth, "Genetics of male-sterility in gynodioecious *Cortaderia* (Gramineae)." *Heredity* 63: 373-382. 1989, *Flora Mesoamericana* 6: 251-252. 1994, *Darwiniana* 33: 43-51. 1995, S.A. Renvoize, *Gramineas de Bolivia* 262-267. 1998, *Syst. Bot.* 23: 327-350. 1998, Lynda F. Delph, Maia F. Bailey and Deborah L. Marr, "Seed provisioning in gynodioecious *Silene acaulis* (Caryophyllaceae)." *Am. J. Bot.* 86: 140-144. 1999, *Journal of Biogeography* 26(4): 693-712. July 1999 [Brazilian Páramos I. An introduction to the physical environment and vegetation of the *campos de altitude*.], Hugh DeForest Safford, "Brazilian Páramos II. Macro- and mesoclimate of the *campos de altitude* and affinities with high mountain climates of the tropical Andes and Costa Rica." *Journal of Biogeography* 26(4): 713-737. July 1999, K.J.M. Dickinson and A.F. Mark, "Interpreting ecological patterns in an intact estuary, Southwest New Zealand World Heritage Area." *Journal of Biogeography* 26(4): 913-932. July 1999, Colin M. Orians, "The effects of hybridization in plants on secondary chemistry: implications for the ecology and evolution of plant-herbivore interactions." *Am. J. Bot.* 87: 1749-1756. 2000, *Restoration Ecology* 9(1): 1-12. Mar 2001, Alan F. Mark et al. "Vegetation patterns, plant distribution and life forms across the

alpine zone in southern Tierra del Fuego, Argentina." *Austral. Ecology* 26(4): 423-440. Aug 2001, *Grass and Forage Science* 56(4): 423-425. Dec 2001, *Restoration Ecology* 10(1): 96-106. Mar 2002, David R. Towns, "Korapuki Island as a case study for restoration of insular ecosystems in New Zealand." *Journal of Biogeography* 29(5-6): 593-607. May 2002, Eija Asikainen and Pia Mutikainen, "Female frequency and relative fitness of females and hermaphrodites in gynodioecious *Geranium sylvaticum* (Geraniaceae)." *Am. J. Bot.* 90: 226-234. 2003, *Contributions from the United States National Herbarium* 46: 163-166, 297. 2003, *Ann. Missouri Bot. Gard.* 90: 1-24. 2003, *Conservation Biology* 17(1): 83-92. Feb 2003, *Ethology* 110(1): 79-80. Jan 2004, *Tropical Medicine and International Health* 9(4): 508-519. Apr 2004, Peter A. Williams and Susan Wiser, "Determinants of regional and local patterns in the floras of braided riverbeds in New Zealand." *Journal of Biogeography* 31(8): 1355-1372. Aug 2004, *Diversity & Distributions* 10(5-6): 367-369. Sep 2004, *Flora of Australia* vol. 44B, Poaceae 3: 22-25. 2005, Sonia L. Fontana, "Coastal dune vegetation and pollen representation in south Buenos Aires Province, Argentina." *Journal of Biogeography* 32(4): 719-735. Apr 2005, *Biological Journal of the Linnean Society* 85(1): 65-79. May 2005.

Species

C. araucana Stapf (*Arundo dioeca* Spreng. nom. illeg., non *Arundo dioica* Lour.; *Arundo dioica* Spreng. nom. illeg., non *Arundo dioica* Lour.; *Arundo kila* Spreng. ex Steud.; *Arundo selloana* Schult. & Schult.f.; *Cortaderia araucana* var. *araucana*; *Cortaderia araucana* var. *fuenzalidae* Acevedo; *Cortaderia araucana* var. *skottsbergii* Acevedo; *Cortaderia argentea* (Nees) Stapf; *Cortaderia dioica* Speg.; *Cortaderia longicauda* Hack.; *Cortaderia quila* var. *patagonica* Speg.; *Cortaderia selloana* (Schult. & Schult.f.) Asch. & Graebn.; *Gynerium argenteum* Nees; *Gynerium dioicum* (Spreng.) Dallièrè; *Gynerium purpureum* Carrière; *Moorea araucana* (Stapf) Stapf; *Moorea argentea* (Nees) Lem.) (after the Swedish botanist Carl Johan Fredrik Skottsberg, 1880-1963, traveler and botanical explorer (South America, Chile, Patagonia), professor of botany, collected cacti, his works include "The Swedish Magellanian expedition, 1907-1909: Preliminary reports." *Geogr. Jour.* London 1908, *The wilds of Patagonia: A narrative of the Swedish expedition to Patagonia, Tierra del Fuego and the Falkland Islands in 1907-1909.* London 1911 and "Observations on the natives of the Patagonian Channel region." *Amer. anthr.* 4: 578-616. 1913; see Stafleu and Cowan, *Taxonomic literature.* 5: 627-639. Utrecht 1985; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. Stuttgart 1993; John M. Cooper, *Analytical and Critical Bibliography of the Tribes of Tierra del Fuego and Adjacent Territory.* [Smithsonian Institution Bureau of American Ethnology Bulletin 63.] Washington 1917; J.H. Barnhart, *Biographical notes upon*

botanists. 3: 285. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 370. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; Clodomiro Marticorena, *Bibliografía Botánica Taxonómica de Chile.* 518-521. Missouri Botanical Garden 1992; Gordon Douglas Rowley, *A History of Succulent Plants.* Strawberry Press, Mill Valley, California 1997; J. Ewan, editor, *A Short History of Botany in the United States.* New York and London 1969; E.D. Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 171-173. 1937 and *Contr. U.S. Natl. Herb.* 30(1): 278-282. 1947; Margaret Patricia Henwood Laver, *An Annotated Bibliography of the Falkland Islands and the Falkland Island Dependencies* (as delimited on 3rd Mar, 1962). Cape Town 1977)

Chile, Argentina. Ornamental, silvery creamy feather-like plumes, see *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 194. 1902, *Gardener's Chronicle, ser. 3* 34: 400. 1903, *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 169. 1911, *Boletin del Museo Nacional de Historia Natural* 27(4): 239-240, f. 7. 1959, *Taxon* 23: 596. 1974, Colin M. Orians, "The effects of hybridization in plants on secondary chemistry: implications for the ecology and evolution of plant-herbivore interactions." *Am. J. Bot.* 87: 1749-1756. 2000.

in English: pampas grass

in Colombia: carmín, pasto de trenza

C. archboldii (Hitchc.) Connor & Edgar (*Chionochloa archboldii* (Hitchc.) Conert; *Danthonia archboldii* Hitchc.) New Guinea, New Zealand. See *Brittonia* 2(2): 114. 1936, *Taxon* 23(4): 596. 1974, *Senckenbergiana Biologica* 56: 156. 1975.

C. atacamensis (Phil.) Pilg. (*Gynerium atacamense* Phil.) Chile, Argentina, Bolivia. See *Linnaea* 33(3-4): 289. 1864 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 374. 1906, *Syst. Anat. Arundineae* 90. 1961.

in English: pampas grass, Selloa pampas grass

C. bifida Pilger (*Cortaderia aristata* Pilg.; *Cortaderia bifida* var. *bifida*; *Cortaderia bifida* var. *grandiflora* Henrard; *Cortaderia trianae* Stapf ex Conert)

South America, Peru, Bolivia, Colombia. Perennial, caespitose, erect, large, tussocky, leaf blades flat or involute, old leaf sheaths curling at the base, ligule a rim of hairs, loose terminal panicle oblong with scabrous branches or shortly hispid, 2-4 flowered with a small rudiment, glumes subequal, lower lemma pilose, páramos, roadsides, scrub forests, subpáramos, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 374-375. 1906, *Mededeelingen van's Rijks-Herbarium* 40: 67. 1921, *Die Systematik und Anatomie der Arundineae* 100-101. 1961.

C. boliviensis M. Lyle (*Cortaderia bifida* var. *grandiflora* Henrard)

Chile, Argentina, Bolivia. Leaves basal, leaf blades flat or involute, loose terminal panicle oblong, glumes subequal, lower lemma pilose, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 374. 1906, *Mededeelingen van's Rijks-Herbarium* 40: 67. 1921, *Novon* 6(1): 72, f. 1-2. 1996.

C. columbiana (Pilg.) Pilg. (*Cortaderia parviflora* Swallen; *Gynerium columbianum* Pilg.)

Colombia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27: 31. 1900, *Contributions from the United States National Herbarium* 29(6): 253. 1949.

C. fulvida (Buchanan) Zotov (*Arundo conspicua* var. *fulvida* (Buchanan) Kirk; *Arundo fulvida* Buchanan)

New Zealand. Robust, coarse, stout, erect, tussock-forming, caespitose, green, glabrous, contra-ligule absent, leaves narrow and curved to flexible, seed heads compact, tawny and pale panicles with pendent branches, spikelets 1- to 3-flowered, glumes more or less equal, pioneer grass, ornamental, attracts birds, fast growing, riparian, useful for erosion control and slope stabilisation, provides wind shelter, high wind and salt wind tolerance, occurs in swamps, in open stream-sides, margins of forests, stream banks, damp sites, open areas, wetland margins, clearings, roadsides, see *Transactions and Proceedings of the New Zealand Institute* 6: 242. 1874, *T.N.Z.I.* 10: app. xliii. 1879 and *New Zealand Journal of Botany* 1: 84. 1963.

in New Zealand: toetoe, kakaho

C. hapalotricha (Pilg.) Conert (*Cortaderia scabriflora* Swallen; *Danthonia hapalotricha* Pilg.) (from the Greek *hapalos* "soft, tender, delicate, weak" and *thrix, trichos* "hair")

Peru, Bolivia, Colombia, Venezuela, Ecuador, Costa Rica. Perennial, erect, caespitose, leaf blades convolute or flat, foliage crowded at the base, leaves pungent and rigid, contracted terminal panicle oblong or ovate, panicle branches long-hairy, glumes equal or subequal, lower lemma pilose, central awn straight, palea loosely pilose, páramos, open habitats, often in swamps, lakeshores, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 715. 1898 and *Contributions from the United States National Herbarium* 29(6): 252. 1949, *Die Systematik und Anatomie der Arundineae* 102-103. 1961, *Taxon* 23(4): 595-605. 1974, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Taxon* 32(4): 633-634. 1983, Volkmar Vareschi (1906-1991), *Flora de Los Páramos de Venezuela*. Universidad de Los Andes. Merida - Venezuela 1970, *Publicaciones del Museo de Historia Natural: Universidad Nacional Mayor de San Marcos: Serie B: Botánica* 34: 1-37. 1990, Karl Weidmann, *Páramos venezolanos*. Caracas

1991, *Ruizia* 13: 1-480. 1993, *AAU Reports* 34: 1-443. 1994, *Flora Mesoamericana* 6: 251-252. 1994.

C. jubata (Lemoine) Stapf (*Arundo quila* Molina; *Coliquea quila* (Molina) Steud. ex Bibrá; *Cortaderia atacamensis* (Phil.) Pilger; *Cortaderia jubata* (Lemoine ex Carrière) Stapf; *Cortaderia quila* (Nees & Mey.) Stapf; *Cortaderia quila* (Molina) Stapf; *Gynerium jubatum* Lemoine ex Carrière; *Gynerium pygmaeum* Meyen; *Gynerium quila* (Molina) Nees & Meyen; *Gynerium quila* var. *pygmaeum* Nees; *Moorea quila* (Molina) Stapf)

Southern America, Peru, Ecuador, Argentina, Bolivia, Andes. Perennial, deep dark green, large and robust tussock grass, densely tufted, erect, sheaths of mature plants with long hairs, ligule a dense rim of hairs, leaves mostly basal arching and scabrous, margins rough and cutting, loose and feathery panicle, branches nodding or drooping, plants dioecious (staminate and pistillate flowers on different plants), male spikelets covered with long hairs, glumes unequal, lemma scabrid, lodicules lobed or simple, noxious weed species naturalized elsewhere, produces abundant seeds annually and establishes rapidly on bare soil, ornamental, useful for erosion control, grown to control erosion of mine dumps, growing in disturbed areas, dry slopes, moist sites, landslides, waste places, roadsides, railway lines, coastal and lowland shrub, open rocky sites, in grazed areas, sand dunes, coastal dunes, grasslands, clearings, forest margins, scrub, see *Reise um die Erde* 1: 484. 1834, *Gramineae* 21-22, 153-154. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 153-154. 1843, *Revue Horticole* 50: 449. 1878, *Gardener's Chronicle, ser. 3* 22(571): 396. 1897, *Botanical Magazine* 124: t. 7607. 1898 and *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Taxon* 23: 598-599. 1974, *Revista de Ciencias (San Marcos)* 74: 48-57. 1986, *Fieldiana: Botany, New Series* 24: 1-126. 1990, *Publicaciones del Museo de Historia Natural: Universidad Nacional Mayor de San Marcos: Serie B: Botánica* 34: 1-37. 1990, *New Zealand Journal of Botany* 29: 117-129. 1991, Timmins, Susan M. and Ian W. Mackenzie. *Weeds in New Zealand Protected Natural Areas Database*. Wellington, New Zealand. Department of Conservation, Technical Series no. 8: 67-70. 1995, *Darwiniana* 33(1-4): 43-51. 1995, John G. Lambrinos, "The impact of the invasive alien grass *Cortaderia jubata* (Lemoine) Stapf on an endangered mediterranean-type shrubland in California." *Diversity & Distributions* 6(5): 217-231. Sep 2000, *Hickenia* 3(28): 99-103. 2001, John G. Lambrinos, "The expansion history of a sexual and asexual species of *Cortaderia* in California, U.S." *Journal of Ecology* 89(1): 88-98. Feb 2001.

in English: pink pampas grass, purple pampas grass, Selloa pampas grass, Andes grass, Andean pampas grass, Jubata-grass, jubata grass, pampas grass

in Peru: sacuara

in Ecuador: sixe, zicce, sigse, sigze, sig-zal

C. modesta (Döll) Hack. ex Dusén (*Cortaderia modesta* f. *ramosa* Hack.; *Gynerium modestum* Döll; *Gynerium ramosum* Hack.)

Brazil. See *Flora Brasiliensis* 2(3): 240. 1880 and *Arquivos do Museu Nacional do Rio de Janeiro* 13: 73. 1903, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 9(5): 4. 1909, *Taxon* 23: 600. 1974

in Brazil: cabeça-de-negro, capim-de-anta

C. nitida (Kunth) Pilg. (*Arundo calycina* Willd. ex Steud.; *Arundo nitida* Kunth; *Cortaderia columbiana* (Pilg.) Pilg.; *Cortaderia sodiroana* Hack.; *Danthonia hapalotricha* Pilg.; *Gynerium columbianum* Pilg.; *Gynerium nitidum* (Kunth) Pilg.)

Peru, Colombia, Venezuela, Ecuador. Perennial bunchgrass, erect, large, tussocky, ligule a rim of hairs, leaf sheaths not densely hairy and gradually disintegrating, panicle branches more or less scabrous, palea 2-keeled, pioneer grass, natural bush vegetation, on rocks, montane forest, along roads, riversides, moist and dry páramos, highlands, see *Nova Genera et Species Plantarum* 1: 149. 1815 [1816], *Nomenclator Botanicus* edition 2 1: 144. 1840, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27: 31. 1899[1900] and *Österreichische Botanische Zeitschrift* 52: 238. 1902, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 65, 374-375. 1906, *Taxon* 23: 600. 1974, Volkmar Vareschi (1906-1991), *Flora de Los Páramos de Venezuela*. Universidad de Los Andes. Merida - Venezuela 1970, Karl Weidmann, *Páramos venezolanos*. Caracas 1991.

in Ecuador: sigse

C. pilosa (D'Urv.) Hackel (*Ampelodesmos australis* Brongn. ex Duperrey; *Arundo pilosa* D'Urv.; *Calamagrostis patula* Steud.; *Calamagrostis scirpiformis* Phil.; *Cortaderia minima* Conert; *Cortaderia pilosa* var. *minima* (Conert) Nicora; *Cortaderia pilosa* (d'Urv.) Hack. var. *pilosa*; *Gynerium nanum* Phil.; *Gynerium pilosum* (d'Urv.) Macloskie; *Phragmites pilosa* (d'Urv.) Macloskie & Dusén; *Phragmites pilosus* (d'Urv.) Macloskie & Dusén; *Poa phragmites* Phil.)

Falkland Islands/Islas Malvinas, Chile, Argentina. Tussock, low nutritive value, growing point of the leaves generally beneath a longer dead leaf mass, on poorly drained plains, see *Mémoires de la Société Linnéenne de Paris* 4: 603. 1826, *Voyage autour du Monde* 22: 31. 1829, *Synopsis Plantarum Glumacearum* 1: 422. 1854, *Anales de la Universidad de Chile* 43(46): 576. 1872 [1873], *Anales de la Universidad de Chile* 94: 20, 155. 1896 and *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 16: 253. 1900, *Wiss. Ergebn. Schwed. Exped. Magellandslandern* 3, pt. 5: 222. 1900, *Die Systematik und Anatomie der Arundineae* 119-120. 1961, *Darwiniana* 18(1-2): 80. 1973, *Taxon* 23:

600. 1974, J.H. McAdam, *Whitegrass Proceedings of 1st International Symposium*. The Queens University of Belfast 1992, F.E.A. Wilson, B.M.R. Harvey, J.H. McAdam and D.W.H. Walton, "The response of Whitegrass [*Cortaderia pilosa* (D'Urv.) Hack.] to nitrogen nutrition." *Grass and Forage Science* 56(1): 84-91. Mar 2001.

in English: whitegrass

in Spanish: hierba blanca

C. planifolia Swallen

Peru, Colombia. See *Contributions from the United States National Herbarium* 29(6): 253-254. 1949, *Taxon* 23(4): 595-605. 1974.

C. pungens Swallen (*Danthonia confusa* L.B. Sm.)

South America, Colombia. Páramos, tufted, see *Contributions from the United States National Herbarium* 29(6): 251-252. 1949, *Phytologia* 22(2): 89, f. 9-11. 1971, *Taxon* 23: 595-605. 1974.

C. quila (Molina) Stapf (*Chusquea quila* Kunth; *Cortaderia jubata* (Lemoine ex Carrière) Stapf; *Cortaderia rudiuscula* Stapf; *Cortaderia selloana* (Schult. & Schult.f.) Asch. & Graebn.)

South America. See *Mantissa* 3(Add. 1): 605. 1827, *Révision des Graminées* 1: 329, t. 77. 1830, *Systema Vegetabilium* 7: 1361. 1830, *Revue Horticole* 50: 449. 1878, *Gardener's Chronicle*, ser. 3 22(571): 396. 1897, *Botanical Magazine* 124: t. 7607. 1898 and *Synopsis der mitteleuropäischen Flora* 2(1): 325. 1900, *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 194. 1902, *Gardener's Chronicle*, ser. 3 34: 400. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 125. 1904, *Bol. Mus. Nac. Hist. Nat. Chile* 27: 220. 1959, *Taxon* 23: 599. 1974.

C. richardii (Endl.) Zotov (*Arundo australis* A. Rich., nom. illeg., non *Arundo australis* Cav.; *Arundo kakao* Steud.; *Arundo richardii* Endl.; *Gynerium zeelandicum* Steud.)

New Zealand. Tall, large tussock-like grass, stout, fast growing, leaf sheath glabrous and waxy to the touch, narrow leaves coriaceous and recurved, serrated edged leaves, plume-like flower heads, plants gynodioecious, male and female plants similar, pale golden yellow to white creamy drooping inflorescences, spikelets 1- to 3-flowered, flowers on long stalks, glumes equal, pioneer, riparian, sand dune restoration, windbreaks, high waterlogging tolerance, high wind and salt wind tolerance, found in moist soils, along sandy stream banks, scrub and on the coast, open areas, wetlands, alongside creeks and streams, lake margins, riverbeds, see *Voyage de Découvertes autour du Monde ... sur la corvette L'Astrolabe pendant les Années 1826-1829 ... Botanique* 121. Paris 1832-1848, *Annalen des Wiener Museums der Naturgeschichte* 1: 158. 1836, *Synopsis Plantarum Glumacearum* 1(3): 194, 198. 1855 [1854] and *New Zealand Journal of Botany* 1: 84. 1963, Connor H. E., "Breeding systems in New Zealand grasses. VI. Control of

gynodioecism in *Cortaderia richardii* (Endl.) Zotov." *New Zealand Journal of Botany* 3: 233. 1965, *Student's Fl. Tasmania* 4B p. 319. 1994.

in English: toe toe, toetoe grass, toitoi, plumed tussock, New Zealand pampas grass

C. roraimensis (N.E. Br.) Pilg. (*Arundo roraimensis* (N.E. Br.) (Mount Roraima)

Brazil, Colombia, Guyana, Venezuela. Along streams, see *Transactions of the Linnean Society of London, Botany* 6(1): 74. 1901, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 6: 112. 1914, *Memoirs of the New York Botanical Garden* 18(2): 11-22. 1969.

C. rudiuscula Stapf (*Cortaderia quila* (Molina) Stapf; *Cortaderia selloana* (Schult. & Schult.f.) Asch. & Graebn.; *Gynerium argenteum* var. *parviflorum* E. Desv.; *Gynerium quila* (Molina) Nees & Meyen; *Gynerium rudiusculum* (Stapf) Kuntze ex Stuck.; *Moorea rudiuscula* (Stapf) Stapf)

Chile, Argentina, Peru. Leaves basal, leaf blades linear, oblong panicles, glumes subequal, lower lemma pilose and glabrous, see *Saggio sulla Storia Naturale del Chili ...* 154-155. Bologna 1782, *Mantissa* 3(Add. 1): 605. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 462. 1829, *Gramineae* 153-154. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 21-22. 1843, *Flora Chilena* 6: 328. 1854, *Gardener's Chronicle, ser. 3* 22(571): 396. 1897 and *Synopsis der mitteleuropäischen Flora* 2(1): 325. 1900, *Gardener's Chronicle, ser. 3* 34: 400. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 125. 1904, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Manual of the Grasses of the United States* (edition 2, revised by A. Chase) 1951, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Bol. Mus. Nac. Hist. Nat. Chile* 27: 220. 1959, *Nómina de las plantas recolectadas en el Valle de Cochabamba* 2: 17-86. 1966 *Taxon* 23: 599, 601. 1974, *Flora Patagónica* 3: 1-583. 1978, *Gayana, Botánica* 42: 1-157. 1985, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: i-xl 1-1286. 1993, *Ruizia* 13: 1-480. 1993, *Darwiniana* 33(1-4): 43-51. 1995, N.B. De La Barra, *Reconstrucción y Evolución del Paisaje Vegetal Autóctono de la Zona Urbana y Peri-Urbana de la Ciudad de Cochabamba* i-v, 1-174. 1997.

C. scabriflora Swallen (*Cortaderia hapalotricha* (Pilg.) Conert)

South America, Ecuador. On páramos, along lakeshore, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 715. 1898 and *Contributions from the United States National Herbarium* 29(6): 252. 1949, *Die Systematik und Anatomie der Arundineae* 102-103. 1961, *Taxon* 32(4): 633-634. 1983.

C. selloana (Schultes & Schultes f.) Asch. & Graebner (*Arundo dioeca* Spreng., nom. illeg., non *Arundo dioica* Lour.; *Arundo dioica* Spreng., nom. illeg., non *Arundo*

dioica Lour.; *Arundo kila* Spreng. ex Steud.; *Arundo selloana* Schult. & Schult.f.; *Arundo selloana* (Schultes & Schultes f.) Asch. & Graebner; *Cortaderia araucana* Stapf; *Cortaderia argentea* (Nees) Stapf; *Cortaderia dioica* (Spreng.) Speg.; *Cortaderia dioica* Speg.; *Cortaderia quila* (Molina) Stapf; *Gynerium argenteum* Nees; *Gynerium dioicum* (Spreng.) Dallièrè; *Gynerium purpureum* Carrière; *Moorea araucana* (Stapf) Stapf; *Moorea argentea* (Nees) Lem.) (after the German gardener Friedrich Sellow (Sello), 1789-1831 (d. by drowning), botanical explorer, naturalist, plant collector in Brazil and Uruguay, in Brazil with the German botanist Maximilian Alexander Philipp zu Wied-Neuwied (1782-1867); see M.A.P. zu Wied-Neuwied, *Reise nach Brasilien in den Jahren 1815 bis 1817*. Frankfurt a.M. 1820-1821; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 779. Stuttgart 1993; J.H. Barnhart, *Biographical notes upon botanists*. 3: 259. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Günther Schmid, *Chamisso als Naturforscher. Eine Bibliographie*. Leipzig 1942; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; W.G. Herter & S.J. Rambo, "Nas pegadas dos naturalistas Sellow e Saint-Hilaire." *Revista Sudamericana de Botánica*. 10, 3: 61-98. 1953)

Temperate central South America. Perennial, dioecious or gynodioecious, densely tufted, robust, erect and stout, large and dense, leaf sheaths hairless or sparsely hairy, arching leaves narrow and glaucous to dull green, sharp leaf edges, white to pink-purplish panicle oblong to pyramidal, the female spikelets silky-hairy, the male spikelets glabrous, spikelets solitary, glumes more or less equal, lemmas soft, large amount of seeds, seeds formed on hermaphrodite plants, reproductive system mainly dioecious, noxious weed species naturalized elsewhere, ornamental, specimen lawn grass, often cultivated, many varieties of pampas grass are available for use in the landscape, tolerant of maritime exposure, growing in fertile well-drained loamy soils, depressions, damp places, wetter places, wastelands and disturbed areas, dry soils, roadsides, railway lines, sand dunes, disturbed forest, along stream banks, scrubland, on riverbanks and mountains, open rocky sites, moist sandy soils, see *Systema Vegetabilium, editio decima sexta* 1: 361. 1825, *Mantissa* 3(Add. 1): 605. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 462. 1829, *Nomenclator Botanicus* edition 2 1: 144. 1840, *L'illustration horticole* 2: Misc. 14-15. 1855, *Revue Horticole* 419. 1866, *Gardener's Chronicle, ser. 3* 22(571): 396. 1897 and *Synopsis der mitteleuropäischen Flora* 2(1): 325. 1900, *Anales del Museo Nacional de Buenos Aires* 7: 194. 1902, *Gardener's Chronicle, ser. 3* 34: 400. 1903, *Bol. Mus. Nac. Hist. Nat. Chile* 27: 220. 1959, *Taxon* 23: 596, 599, 601. 1974, *Proc. 37th N.Z. Weed and Pest Control Conf.* 187-190. 1984, *N.Z. J. Forest. Sci.* 20: 176-183. 1990, Timmins, Susan M. & Ian

W. Mackenzie. *Weeds in New Zealand Protected Natural Areas Database*. Wellington, New Zealand. Department of Conservation, Technical Series no. 8: 71-73. 1995, John G. Lambrinos, "The expansion history of a sexual and asexual species of *Cortaderia* in California, USA" *Journal of Ecology* 89(1): 88-98. Feb 2001.

in English: pampas grass, silver pampas grass, Uruguayan pampas grass

in South Africa: pampasgras, silwergras

in Mexico: plum de las pampas

C. sericantha (Steud.) Hitchc. (*Danthonia jubata* Sodiro; *Danthonia sericantha* Steud.)

Colombia, Ecuador, Peru. Perennial, tussocky, low, erect, caespitose, woody, robust, foliage spreading and stiff, leaf sheaths densely hairy, ligule a dense rim of white hairs, leaf base waxy, leaf blades tapering to a sharp point at the apex, short dense panicle contracted, panicle branches densely long hairy, 2-3 florets and a rudiment, dry areas, along roads, slopes, swampy areas, wet soils, near lakes and on lakeshores, along streams, wet páramos, boggy plains, see *Synopsis Plantarum Glumacearum* 1: 246. 1854 and *Contributions from the United States National Herbarium* 24(8): 348. 1927, *Revista del Colegio Nacional Vicente Rocafuerte* 12: 91. 1930, *Taxon* 23: 602. 1974, *Taxon* 32(4): 633-634. 1983.

C. speciosa (Nees & Meyen ex Nees) Stapf (*Cortaderia speciosa* (Nees & Meyen) Stapf; *Gynerium argenteum* var. *strictum* E. Desv.; *Gynerium speciosum* Nees & Meyen ex Nees; *Gynerium speciosum* Nees & Meyen; *Moorea speciosa* (Nees & Meyen ex Nees) Stapf; *Moorea speciosa* (Nees & Meyen) Stapf)

Chile, Argentina, Bolivia. Caespitose, leaves mainly basal, ligules ciliate, leaf blades linear, panicle oblong, lemmas densely pilose mucronate or shortly awned, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 462. 1829, *Gramineae* 21. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 153. 1843, *Flora Chilena* 6: 328. 1854, *Gardener's Chronicle, ser. 3* 22(571): 396. 1897 and *Gardener's Chronicle, ser. 3* 34: 400. 1903, *Taxon* 23: 603. 1974, *Darwiniana* 33: 51. 1995.

in Spanish: cortadera

C. splendens Connor

New Zealand. Robust tussock, green, coarse, tall, hairy, rhizomatous with long stout rhizomes, leaf sheath densely hairy, contra-ligule present, leaf blade flexible, plumose inflorescence erect or nodding, seed heads compact and pale brown, glumes equal, occurs in coastal sand dunes and cliff faces, sand hills, rocks, see *New Zealand Journal of Botany* 9(3): 519. 1971, *Taxon* 23: 595-605. 1974, *New Zealand Journal of Botany* 29: 117-129. 1991.

in New Zealand: toetoe

C. toetoe Zotov

New Zealand. Robust tussock, green, coarse, tall, erect, hairy, waxy, ivory glabrous sheath, stiff leaf blades, sharp leaves, large plumose panicle, erect seed heads creamy white, glumes equal, pioneer grass, attracts birds, weaving material, anti-inflammatory uses, occurs in dry to boggy conditions, wetlands, damp and dry soils, coastal and inland, swamps, roadsides and clearings, poor soils, see *New Zealand Journal of Botany* 1: 85. 1963.

in New Zealand: toetoe, native toetoe, kakaho

C. trianae Stapf ex Conert (*Cortaderia bifida* Pilg.) (for the Colombian (b. Zipaquirá) botanist José Jerónimo (or Gerónimo) Triana, 1834-1890 (d. Paris), traveler, plant collector, botanical explorer, his writings include *Nuevos jeneros i especies de plantas para la flora Neo-Granadina*. Bogotá 1854 and *Prodromus florum Novogranatensis*. Paris 1862-1867; see Enrique Pérez Arbeláez, in *D.S.B.* 13: 463-464. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 400. 1965)

Colombia. Pistillate, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 374-375. 1906, *Mededeelingen van's Rijks-Herbarium* 40: 67. 1921, *Die Systematik und Anatomie der Arundineae* 100-101. 1961.

C. turbaria H.E. Connor

New Zealand, Chatham Islands. Vulnerable endangered species, perennial, tall, stout, tussock-forming, leaf sheath densely hairy, leaf blade pointed, leaves narrow and scabrid, dense plumose inflorescence, branched panicles, spikelets with 2 hermaphrodite florets, all flowers hermaphrodite, glumes more or less equal, occurs in peaty swamps, stream margins, see *New Zealand Journal of Botany* 25(1): 167. 1987.

in New Zealand: Chatham Island toetoe, Chatham Island toitoi

C. vaginata Swallen

South America, Colombia, Brazil. See *Sellowia* 7: 9. 1956.

Corycarpus Spreng. = *Diarrhena* P. Beauv., *Korycarpus* Lag., *Korycarpus Zea* ex Lag.

Orth. var. *Korycarpus*, from the Greek *korys*, *korythos* "a helmet" and *karpos* "fruit."

Pooideae, Diarrheneae, see *Systema Vegetabilium, editio decima sexta* 1: 123. 1824 and *Flora of the Prairies and Plains of Central North America* 114. 1932, E.D. Merrill, *Index rafinesquianus*. The plant names published by C.S. Rafinesque, etc. 75. Jamaica Plain, Massachusetts, U.S. 1949, *Bulletin of the Torrey Botanical Club* 118: 128-136. 1991 [A revision of *Diarrhena* (Poaceae) in the U.S.], *Contributions from the United States National Herbarium* 48: 238, 269, 419. 2003.

Corynephorus P. Beauv. = *Anachortus*
Jirásek & Chrtek, *Weingaertneria* Bernh.

From the Greek *koryne* “a club” and *phoros* “bearing, carrying,” *phero*, *phoreo* “to bear,” alluding to the extraordinary awns.

About 5 species, Iran, Europe, Mediterranean. Pooideae, Poodae, Aveneae, or Pooideae, Poaceae, Airinae, annual or perennial, tufted, herbaceous, leaf blades narrow linear, auricles absent, ligule an unfringed membrane, plants bisexual, open or contracted panicle, spikelets 2-flowered, hairs at the base of the floret, 2 glumes subequal, lower glume 1-nerved, upper glume 1- to 3-nerved, lemmas membranous and rounded, basal awns with twisted column, awns with a ring of hairs, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, in sandy places, on dunes, often coastal, type *Corynephorus canescens* (L.) P. Beauv., see *Species Plantarum* 61-63, 65, 79-81. 1753, Johann Jacob Bernhardt (1774-1850), *Systematisches Verzeichnis* 23, 51. Erfurt 1800, *Essai d'une Nouvelle Agrostographie* 90, 149, 159. 1812 and *Catalogo de la flora del Rif oriental ...* 128. 1933, *Preslia* 34: 383. 1962, *Zlaci SSSR* 291. 1976, *Lagascalía* 15: 119-124. 1988, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Bothalia* 26(1): 53-61. 1996 [Cytogenetic studies in some representatives of the subfamily Pooideae (Poaceae) in South Africa. 1. The tribe Aveneae, subtribe Aveninae.], *Journal of Ecology* 87(2): 258-264. Mar 1999, *Journal of Ecology* 88(4): 709-726. Aug 2000, *Journal of Ecology* 89(2): 300-303. Apr 2001, *Plant, Cell and Environment* 25(5): 601-608. May 2002, *Contributions from the United States National Herbarium* 48: 109, 239, 694. 2003, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, “The evolution of nuclear genome structure in seed plants.” *Am. J. Bot.* 91: 1709-1725. 2004, *Weed Research* 44(2): 117-128. Apr 2004, *Botanical Journal of the Linnean Society* 147(4): 501-508. Apr 2005, *Journal of Ecology* 93(2): 441-470. Apr 2005.

Species

C. aetnensis C. Presl ex Schult. (*Aira aetnensis* (C. Presl ex Schult.) Guss.)

Europe. See *Mantissa* 3: 641. 1827, Giovanni Gussone (1787-1866), [*Floræ siculae prodromus*, etc.] *Supplementum*. Neapoli 1832.

C. canescens (L.) P. Beauv. (*Agrostis canescens* (L.) Salisb.; *Aira canescens* L.; *Aira variegata* St.-Amans; *Avena canescens* (L.) Web. ex Wigg.; *Corynephorus canescens* var. *andinus* Hack. ex Sodiro; *Corynephorus incanescens* Bubani; *Weingaertneria canescens* (L.) Bernh.)

Europe. See *Primitiae Florae Holsaticae* 9. 1780, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 25. 1796, *Systematisches Verzeichnis* 51. 1800, *Flora Agenaise* 32. 1821, *Anales de la Universidad Central del Ecuador* 3(25): 481. 1889 and *Flora Pyrenaea ...* 4: 311. 1902, *Anal.*

Bot. Cavanilles 13: 173. 1955, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 121. 1971[1972], *Rivisgodaya* 6: 166. 1991, *Taxon* 49(2): 244. 2000.

in French: corynephorus en touffe

in Morocco: bousibouss, hamra

C. divaricatus (Pourret) Breistr. (*Aira articulata* Desf.; *Aira caryophyllea* var. *divaricata* (Pourret) Asch. & Graebn., nom. illeg., non *Aira caryophyllea* var. *divaricata* Bréb.; *Aira caryophyllea* var. *divaricata* (Pourret) Druce, nom. illeg., non *Aira caryophyllea* var. *divaricata* Bréb.; *Aira divaricata* Pourret; *Anachortus articulatus* (Desf.) Jir. & Chrtek; *Anachortus divaricatus* (Pourret) M. Lainz; *Anachortus divaricatus* subsp. *articulatus* (Desf.) M. Lainz; *Corynephorus articulatus* (Desf.) P. Beauv.; *Corynephorus divaricatus* subsp. *articulatus* (Desf.) Lainz)

Europe, Algeria. See *Flora Atlantica* 1: 70, t. 13. 1798, *Essai d'une Nouvelle Agrostographie* 159. 1812, *Synopsis der mitteleuropäischen Flora* 2: 282. 1899 and *Bull. Soc. Bot. France* 119: 237. 1952, *Preslia* 34: 383. 1962, M. Lainz, “Aportaciones al conocimiento de la flora gallega, viii.” *Comun. I.N.I.A.*, no. 2, 26 p. 1974.

C. fasciculatus Boiss. & Reut. (*Aira fascicularis* (Boiss. & Reut.) Steud.; *Anachortus fasciculatus* (Boiss. & Reut.) V. Jirásek & Chrtek; *Corynephorus gracilis* (Desf.) K. Richt.; *Weingaertneria gracilis* (Desf.) Asch. & Graebn.)

Europe. Annual, solitary or tufted, useful for erosion control, see *Pugillus Plantarum Novarum Africae Borealis Hispaniaeque Australis* 123. 1852, *Synopsis Plantarum Glumacearum* 1: 219. 1854 and *Preslia* 34: 383. 1962.

Costia Willk. = *Agropyron* Gaertn.

For the Spanish (Catalan) botanist Antonio Cipriano Costa y Cuxart, 1817-1886, see M. Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. Madrid 1858 and J.H. Barnhart, *Biographical notes upon botanists*. 1: 385. 1965, T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 85. 1972.

Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 78. 1753, *Botanische Zeitung*. Berlin 16: 377. 1858, *Botanische Zeitung*. Berlin 18: 131. 1860 and *Phytologia* 83(5): 345-365. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Opera Botanica* 137: 1-42. 1999, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, *Contributions from the United States National Herbarium* 48: 25-42, 239. 2003.

Cottea Kunth

For the German patron of science Johann Georg Cotta von Cottendorf, 1796-1863.

One species, America, southern U.S., Argentina. Chloridoideae, Pappophoreae, or Chloridoideae, Eragrostideae, Cotteinae, perennial, loosely caespitose, herbaceous, erect or ascending or geniculate, unarmed, branched, internodes solid, tuberous, auricles absent, leaf sheaths villous to pilose, hidden cleistogenes in the basal leaf sheaths, glandular leaves not pungent, ligule fringed, plants bisexual, cleistogamous or chasmogamous, inflorescence paniculate, panicles open or narrow or contracted, spikelets pubescent and pedicellate, 4-8 florets and a rudiment, female-fertile lemmas irregularly lobed, 2 glumes subequal, lemmas awned, 7-13 awns antrorsely barbed, palea keels ciliate, 2 lodicules, 3 stamens, ovary glabrous, cleistogenes within the lower sheaths, rachilla disarticulating between florets, open habitats, steppes, plains, dry areas, hills, coastal lowland, type *Cottea pappophoroides* Kunth, see *Révision des Graminées* 1: 84. 1829 and *Ecología en Bolivia* 34: 45-70. 2000, *Contributions from the United States National Herbarium* 41: 56. 2001.

Species

C. pappophoroides Kunth

Mexico, Peru. Perennial, more or less pubescent, wiry, knotty base with cleistogenes, leaf sheaths furrowed, leaf blades linear, panicle ovate-lanceolate, spikelets ovate and awned, glumes lanceolate and awned, ornamental, forage.

in English: cotta grass, cottea

in Mexico: cotea, pelucilla

Craepalia Schrank = *Lolium* L.

Pooideae, Poeae, Loliinae, type *Craepalia temulenta* (L.) Schrank, see *Species Plantarum* 1: 83. 1753, *Observations sur les Graminées de la Flore Belgique* 97, 99. 1823 [1824], *Baiersche Flora* 1: 102, 382. 1789 and *Grasses of Ceylon* 45. 1956, *Techn. Bull. U.S.D.A. (or U.S. Dept. Agric. Tech. Bull., or Technical Bulletin, United States Department of Agriculture)* 1392: 1-65. 1968, *Dominguezia* 1: 1-23. 1978, *Bot. J. Linn. Soc.* 108: 408. 1992, *Novon* 3(3): 239-243. 1993, *Fragmenta Floristica et Geobotanica* 41(2): 521-536. 1996, *Contributions from the United States National Herbarium* 48: 239, 426-431. 2003.

Craspedorhachis Benth.

From the Greek *kraspedon* "a fringe, border" and *rhachis* "rachis, axis, midrib of a leaf."

About 2-5/6 species, southern tropical Africa, North and South America. Chloridoideae, Chlorideae, perennial, herbaceous, unarmed, often stoloniferous or shortly rhizomatous, auricles absent, ligule fringed, plants bisexual, inflorescence with several racemes more or less digitate, spikelets dorsally compressed, 2 glumes subequal and

membranous, lower glume keeled, upper glume deciduous and rounded, lemma obtuse, palea present, lemma and palea hairy or glabrous, 2 fleshy lodicules, ovary glabrous, open habitats, sandy savannah, on sand dunes, sandy soils, sandy loam, similar to *Willkommia* and *Microchloa*, type *Craspedorhachis africana* Benth., see *Fragmenta Botanica* 77. 1809, *Tentamen Florae Abyssinicae* ... 2: 409. 1850, *Hooker's Icones Plantarum* 14: 58, t. 1377. 1882, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 145. 1888 and *Bulletin de l'Herbier Boissier, sér. 2, 1*: 770. 1901, *Botanical Gazette* 35: 283, f. 1-2. 1903, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 78. 1925, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 27. 1947, *Grasses and Pastures of South Africa* 205, f. 182. 1955, *Notulae Systematicae. Herbarium du Museum de Paris* 15(2): 134. 1956, *Adansonia, sér. 2, 8*: 515. 1968.

Species

C. africana Benth.

Tropical Africa. Perennial, tufted, erect, rhizomatous, lemma and palea hairy, considered rare in South Africa, see *Hooker's Icones Plantarum* 14: 58, t. 1377. 1882.

C. africana Benth. var. *madecassa* A. Camus

Madagascar. See *Notulae Systematicae. Herbarium du Museum de Paris* 15: 135. 1956.

C. digitata Kupicha & Cope

Zimbabwe. See *Kew Bulletin* 40(4): 89-90. 1985.

C. rhodesiana Rendle

Africa. Perennial, tufted, erect, lemma and palea glabrous, common on sand dunes, along dry river beds, see *Journal of the Linnean Society, Botany* 40: 233, t. 5, f. 5-13. 1911.

C. rhodesiana Rendle var. *gracilior* C.E. Hubb.

Africa. See *Bulletin of Miscellaneous Information Kew* 1949: 36. 1949.

Crassipes Swallen = *Sclerochloa* P. Beauv.

From the Latin *crassus, a, um* "thick" and *pes, pedis* "foot," thick-footed or thick-stemmed.

Pooideae, Poeae, Puccinelliinae, type *Crassipes annuus* Swallen, see *Species Plantarum* 1: 72. 1753, *Essai d'une Nouvelle Agrostographie* 97-98, 174, 177. 1812, *Aug Pyrami de Candolle Botanicon Gallicum* 1: 522. 1828 and *Contr. U.S. Natl. Herb.* 10: 2. 1906, *American Journal of Botany* 18(8): 684-685, f. 1-4. 1931, *Journal of Cytology and Genetics* 21: 155. 1986, D.M. Brandenburg, J.R. Estes & J.W. Thieret, "Hard Grass (*Sclerochloa dura*, Poaceae) in the United States." *Sida*. 14(3): 369-376. 1991, *Cytologia* 56: 437-452. 1991, *Flora Mediterranea* 8: 307-313. 1998,

Contributions from the United States National Herbarium 48: 239, 608-609. 2003.

Cremopyrum Schur = *Eremopyrum* (Ledeb.)
Jaub. & Spach

Greek *kremao* “to hang” and *pyros* “grain, wheat.”

Pooideae, Triticaceae, Hordeinae, see *Enumeratio Plantarum Transsilvaniae* 807-808. 1866 and *Contributions from the United States National Herbarium* 48: 311-312. 2003.

Criciuma Soderstr. & Londoño = *Bambusa*
Schreber, *Eremocaulon* Soderstr. & Londoño

A vernacular name, or perhaps from *krikion*, the diminutive of the Greek *krikos* “ring, armband.”

One species, Brazil. Bambusoideae, Bambuseae, Guaduiniae, woody, solid, vinelike, hard, erect, pendent, loosely clumped, shortly rhizomatous, foliage leaf with asymmetrical central midnerve, inflorescence terminal, elongate pseudospikelets, florets linear-lanceolate, 3 lodicules, 6 stamens, ovary glabrous, 2 plumose stigmas, type *Criciuma asymmetrica* Soderstr. & Londoño, see *American Journal of Botany* 74(1): 27-39. 1987 [2 new genera of Brazilian bamboos related to *Guadua* (Poaceae: Bambusoideae: Bambuseae.)], Emmet J. Judziewicz et al., *American Bamboos* 234-238. 1999, *Contributions from the United States National Herbarium* 39: 29-35, 54-55. 2000, *Systematic Botany* 27(4): 703-721. 2002.

Species

C. asymmetrica Soderstr. & Londoño (*Eremocaulon asymmetricum* (Soderstr. & Londoño) Londoño)

Brazil. Climbing, ascending, culm leaves with reflexed blades, pseudospikelets linear-lanceolate, sandy places, forests, see *American Journal of Botany* 74(1): 35, f. 1, 2, 5a, 5b. 1987, *Systematic Botany* 27(4): 711-714, f. 4-5. 2002.

Crinipes Hochst.

Latin *crinis* “hair” and *pes* “foot,” referring to the awn.

Two species, Sudan, Ethiopia, Uganda. Arundineae, or Arundinoideae, Danthonieae, perennial, herbaceous, caespitose, tussocky, auricles absent, leaves basal, ligule fringed or a ciliate rim, tough leaf blades narrowly linear to linear-lanceolate, plants bisexual, inflorescence paniculate, panicle oblong to ovate to elliptic-oblong, spikelets flattened and oblong, 2- to 3-flowered, 2 unequal glumes acuminate or shortly awned, floret callus bearded, lemmas membranous entire or toothed, long awn straight or flexuous, palea glabrous, 2 free lodicules glabrous, 3 stamens, ovary glabrous, 2 stigmas, moist places, moist rock, type

Crinipes abyssinicus (Hochst. ex A. Braun) Hochst., see *Flore Française. Troisième Édition* 3: 32. 1805, *Prodromus Florae Novae Hollandiae* 185. 1810, *Flora* 24: 20. 1841, *Flora* 38: 279-280. 1855 and *Kew Bulletin* 1934: 200. 1934, *Kew Bulletin* 1935: 306. 1935, *Kew Bulletin* 12: 51-52, 54-58. 1957, *Bothalia* 9: 134. 1966.

Species

C. abyssinicus (Hochst. ex A. Braun) Hochst. (*Danthonia abyssinica* Hochst. ex A. Braun; *Danthonia tenuiglumis* Steud.; *Triraphis abyssinica* (Hochst. ex A. Braun) Nees ex Engl.)

Abyssinia. Perennial, tough, pendulous, forming large dense tussocks, panicle narrowly oblong, glumes linear-lanceolate, see *Flora* 24(45): 712. 1841, *Synopsis Plantarum Glumacearum* 1: 244. 1854, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2(1): 132. 1891 [1892].

C. longifolius C.E. Hubb.

Abyssinia. Perennial, coarse, pendulous, forming large dense tussocks, glumes lanceolate, lemmas lanceolate-oblong, see *Kew Bulletin* 1935(5): 306-307. 1935.

Critesion Raf. = *Hordeum* L.

Greek *crithe*, Akkadian *qaritum*, *qiritu* “granary, store room,” Hebrew *qorah* “beam, roof,” see *Journal de Physique, de Chimie, d’Histoire Naturelle et des Arts* 89: 103. 1819.

About 35 species, temperate regions. Pooideae, Triticodae, Triticaceae, or Pooideae, Triticaceae, Hordeinae, annual or perennial, tufted, herbaceous, leaf sheath membranous, ligule membranous, auricles present or absent, plants bisexual, flowers in dense and narrow spike-like raceme, spikelets in triads at each node, lateral spikelets usually smaller or incomplete or male, central spikelet usually hermaphrodite, rachis fragile, glumes 2, lemma of central spikelet rigid and awned or unarmed, lemmas of lateral florets usually reduced, palea nerved, 2 lodicules, stamens 3, ovary with hairy corona, tolerant of saline soils, growing in dry soils, sandy places, rather moist habitats, salty sites, there is considerable taxonomic confusion concerning this genus, formerly included in *Hordeum* L. as subgen., type *Critesion geniculatum* Raf., see *Species Plantarum* 1: 84-85. 1753, *Journal de Physique, de Chimie, d’Histoire Naturelle et des Arts* 89: 103. 1819 and *Canad. J. Bot.* 37: 679. 1959, *Nord. J. Bot.* 9: 1-10. 1989, *Plant Systematics and Evolution* 189: 217-231. 1994, *Flora Mesoamericana* 6: 247. 1994, *Nordic Journal of Botany* 14(2): 117-136. 1994 [A taxonomic revision of *Hordeum* sect. *Critesion*.], *Annals of Botany* 73: 195-203. 1994, *Nord. J. Bot.* 15: 449-458. 1995, *Systematic Botany* 21(2): 3-15. 1996, *Canadian Journal of Botany* 78(12): 1590-1602. 2000, *Plant, Cell and Environment*

24(6): 585-596. June 2001, J.W. Morgan, "Seedling recruitment patterns over 4 years in an Australian perennial grassland community with different fire histories." *Journal of Ecology* 89(6): 908-919. Dec 2001, M.P. McDonald, N.W. Galwey and T.D. Colmer, "Similarity and diversity in adventitious root anatomy as related to root aeration among a range of wetland and dryland grass species." *Plant, Cell and Environment* 25(3): 441-451. Mar 2002, *Contributions from the United States National Herbarium* 48: 239-241, 389-402. 2003, *Ecological Management and Restoration* 4(1): 5-12. Apr 2003, *Plant, Cell and Environment* 26(1): 17-36. Jan 2003, *Am. J. Bot.* 91: 1789-1801. 2004, *Botanical Journal of the Linnean Society* 147(4): 501-508. Apr 2005, *Ecological Management and Restoration* 6(1): 61-67. Apr 2005.

Species

C. glaucum (Steud.) Á. Löve (*Critesion murinum* subsp. *glaucum* (Steud.) B.K. Simon, nom. illeg., non *Critesion murinum* subsp. *glaucum* (Steud.) W.A. Weber; *Hordeum glaucum* Steud.; *Hordeum murinum* subsp. *glaucum* (Steud.) Tzvelev)

Mediterranean, southwestern Asia. Annual, loosely tufted, erect or geniculate, auricles glabrous, leaf sheath more or less inflated, ligule membranous and truncate, erect racemes, central spikelet hermaphrodite with glabrous pedicels, lateral spikelets male or sterile with shortly pubescent pedicels, erect and spreading awns, pasture species, a widespread weed of disturbed sites, waste ground, grazed woodlands and shrublands, host to several cereal diseases, its sharp seeds can enter the eyes and skin of sheep, see *Species Plantarum* 1: 85. 1753, *Linnaea* 9(1): 133. 1834, *Synopsis Plantarum Glumacearum* 1: 352. 1854 and *Novosti Sist. Vyss. Rast.* 8: 67. 1971, *Botanical Journal of the Linnean Society* 72(2): 150. 1976, *Taxon* 29(2/3): 350. 1980, *Phytologia* 51(6): 374. 1982, *Feddes Repertorium* 95: 440. 1984, *Austrobaileya* 2(3): 241. 1986.

in English: barley grass

C. hystrix (Roth) Á. Löve (*Hordeum geniculatum* All.; *Hordeum hystrix* Roth)

Mediterranean, southwestern Asia. Annual, often decumbent, closely tufted, auricles absent, ligule truncate, leaf sheath pilose, raceme erect, lateral spikelets sterile, central hermaphrodite spikelet sessile, glumes more or less equal, in saline flats, see *Flora Pedemontana* 2: 259, 3: t. 91, f. 3. 1785, *Catalecta Botanica* 1: 23. 1797 and *Feddes Repertorium* 95(7-8): 440. 1984.

in English: Mediterranean barley grass, Mediterranean barley

C. jubatum (L.) Nevski (*Hordeum jubatum* L.)

North America. Perennial, erect or geniculate below, loosely tufted, auricles absent, ligule truncate, sheath of uppermost leaf inflated, plume-like nodding racemes dense-flowered,

central hermaphrodite spikelet sessile, lateral spikelets sterile, glumes subequal, lemma of lateral spikelets much reduced, along roadsides, see *Species Plantarum* 1: 85. 1753 and *Flora URSS* 2: 721. 1934, *Canadian Journal of Botany* 40: 1690. 1962, *Botaniska Notiser* 128(4): 503. 1975[1976].

in English: squirrel tail grass

C. marinum (Huds.) Á. Löve (*Hordeum marinum* Huds.)

Eurasia. Annual, loosely tufted, stiff, auricles absent, lodicules ciliate, see *Flora Anglica, Editio Altera* 1: 57. 1778, *Flora Palermitana* 1: 246. 1845 and *Taxon* 29(2/3): 350. 1980, *American Journal of Botany* 72(5): 772. 1985, M.P. McDonald, N.W. Galwey and T.D. Colmer, "Waterlogging tolerance in the tribe Triticeae: the adventitious roots of *Critesion marinum* have a relatively high porosity and a barrier to radial oxygen loss." *Plant, Cell and Environment* 24(6): 585-596. June 2001.

C. murinum (L.) Á. Löve (*Hordeum murinum* L.)

Europe. Annual, loosely tufted, clasping auricles, ligule ciliate, oblong racemes dense-flowered. Central bisexual spikelet sessile or pedicelled, lateral spikelets male or sterile, in wasteland, along roadsides, see *Species Plantarum* 1: 85. 1753, *Linnaea* 9(1): 133. 1834, *Synopsis Plantarum Glumacearum* 1: 352. 1854 and *Taxon* 29(2/3): 350. 1980, *Phytologia* 51(6): 374. 1982, *Austrobaileya* 2(3): 241. 1986.

C. murinum (L.) Á. Löve subsp. ***leporinum*** (Link) Á. Löve Europe, Mediterranean, Asia. See *Linnaea* 9(1): 133. 1834, *Comp. Fl. Ital.* 805. 1882 and *Taxon* 29(2/3): 350. 1980.

in English: barley grass

C. murinum (L.) Á. Löve subsp. ***murinum***

Europe. See *Species Plantarum* 1: 85. 1753 and *Taxon* 29(2/3): 350. 1980.

C. secalinum (Schreb.) Á. Löve (*Hordeum secalinum* Schreb.)

Europe, Africa. Perennial, erect or geniculate, loosely tufted, sheath of uppermost leaf appressed to culm, dense-flowered raceme, glumes subequal, see *Spicilegium Florae Lipsicae* 148. 1771 and *Taxon* 29(2/3): 350. 1980.

Critho E. Meyer = *Hordeum* L.

From the Greek *krithe* "barley-corn, barley."

Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 84-85. 1753, *Illustrations of the Botany ... of the Himalayan Mountains ...* 1(11): 418. 1839 [1840], *Index Sem. Hort. Regiomont.* 5. 1848 and *Canad. J. Bot.* 37: 679. 1959, *Plant Systematics and Evolution* 189: 217-231. 1994, *Flora Mesoamericana* 6: 247. 1994, *Nordic Journal of Botany* 14(2): 117-136. 1994 [A taxonomic revision of *Hordeum* sect. *Critesion*.], *Annals of Botany* 73: 195-203. 1994, *Systematic Botany* 21(2): 3-15.

1996, *Canadian Journal of Botany* 78(12): 1590-1602. 2000, *Contributions from the United States National Herbarium* 48: 241, 389-402. 2003.

Crithodium Link = *Triticum* L.

Greek *krithe* “barley-corn, barley,” *krithidion* “decoction of barley, a little barley.”

Pooideae, Triticeae, Triticinae, type *Crithodium aegilopoides* Link, see *Species Plantarum* 1: 85-87. 1753, *Species Plantarum, Editio Secunda* 127. 1762, *Linnaea* 9(1): 132, pl. 3, f. 1-5. 1834, *Oekonomisch-technische Flora Böhmens* 1: 425. 1836, *Annales des Sciences Physiques et Naturelles, d'Agriculture et de l'Industrie, Publiées par la Société Royale d'Agriculture, etc., de Lyon.* 5: 103-196, pl. 2-10. 1842 [*Descriptions et figures des céréales européennes*], *Landwirtschaftliche Flora* 335-336. 1866, *Botanisches Centralblatt* 73: 339. 1898 and *Flora URSS* 2: 677. 1934, A. Prati, *Vocabolario etimologico italiano*. Torino 1951, *Feddes Repert.* 95(7-8): 497. 1984, *Taxon* 35: 144-149. 1986, *Wageningen Agricultural University Papers* 94-7: 1-512. 1994, *Contributions from the United States National Herbarium* 48: 241, 676-684. 2003.

Crithopsis Jaub. & Spach

Resembling *Critho*, Greek *krithe* “barley-corn, barley” and *opsis* “aspect, appearance, resemblance.”

One species, Libya, Iran, Crete. Pooideae, Triticodae, Triticeae, annual, herbaceous, caespitose, auricles present, leaf blades acuminate, ligule an unfringed membrane, plants bisexual, inflorescence spiciform, raceme narrowly oblong, raceme rachis fragile, 2-flowered, upper floret rudimentary, spikelets paired and flattened laterally, 2 linear glumes subequal, lemma rounded on back and awned, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, type *Crithopsis rhachitricha* Jaub., see *Species Plantarum* 1: 83-85. 1753, *Illustrationes Plantarum Orientalium* 4: 30, t. 321. 1851, *Die Natürlichen Pflanzenfamilien* 2(2): 88. 1887 and *Nordic Journal of Botany* 13: 481-493. 1993 [Taxonomic studies in some annual genera of the Triticeae (Poaceae)].

Species

C. delileana (Schult.) Roshev. (*Agropyron cretense* Coustur. & Gand.; *Crithopsis brachytricha* Walp.; *Crithopsis rhachitricha* Jaub.; *Elymus arenarius* subsp. *geniculatus* (Curtis) Husn.; *Elymus delileanus* Schult.; *Elymus geniculatus* Delile; *Elymus geniculatus* Curtis; *Elymus rhachitrichus* Hochst. ex Kotschy; *Eremopyrum cretense* (Coustur. & Gand.) Nevski; *Hordeum delileanum* Hack.; *Hordeum geniculatum* (Delile) Thell., nom. illeg., non *Hordeum geniculatum* All.)

North Africa. See *Description de l'Égypte, ... Histoire Naturelle, Tom. Second* 174, t. 13, f. 1. 1812, *Mantissa* 2: 424. 1824, *Annales des Sciences Naturelles; Botanique, sér.* 3 14: 360. 1851, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 76. 1899 and *Flora Cretica* 107. 1916, *Nord. J. Bot.* 13: 484. 1993.

Crithopyrum Steud. = *Elymus* L.

From the Greek *krithe* “barley-corn, barley” and *pyros* “grain, wheat.”

Pooideae, Triticodae, Triticeae, or Pooideae, Triticeae, Hordeinae, in syn. sub *Triticum trachycaulum* Link, see *Species Plantarum* 1: 83-84. 1753, *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770, *Hortus Regius Botanicus Berlinensis* 2: 189. 1833, *Synopsis Plantarum Glumacearum* 1: 344. 1854 and *The Canadian Field-Naturalist* 45: 201. 1931, *Rhodora* 56(662): 28. 1954, *Canad. J. Bot.* 42: 554. 1964, *Feddes Repert.* 95: 425-521. 1984 [Conspectus of the Triticeae.], *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 241, 279-307. 2003.

Crossotropis Stapf = *Trichoneura* Andersson

From the Greek *krossos* “a fringe” and *tropis* “keel, the keel of a vessel.”

Chloridoideae, Eragrostideae, Eleusininae, or Chloridoideae, Cynodonteae, type *Crossotropis grandiglumis* (Nees) Rendle, see *Prodromus Florae Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 80. 1812, *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 148. 1855, *Flora Capensis* 7: 317. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 226. 1899 and *Ark. Bot.* 11, 9: 1-19. 1912, *Grasses and Pastures of South Africa* 128. 1955, *Boletín de la Sociedad de Biología de Concepción* 46: 37-39. 1973, *Los Generos de Gramineas de America Austral.* 1987, *Contributions from the United States National Herbarium* 41: 56, 224. 2001.

Crypsinna Fourn. = *Muhlenbergia* Schreb.

From the Greek *krypto*, *kryptein* “to hide,” *krypsis* “hiding, suppression.”

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Crypsinna macroura* (Kunth) E. Fourn., see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Essai d'une Nouvelle Agrostographie* 29, 176, 179, t. 8, f. 2, 3. 1812, *Mémoires du Muséum d'Histoire Naturelle* 2: 72. 1815, *Mexicanas*

Plantas 2: 90. 1886 and P.M. Peterson, "Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostideae)." *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 56, 143-173. 2001.

Crypsis Aiton = *Antitragus* Gaertn., *Ceytosis* Munro, *Heleochloa* Host ex Roem., *Pachea* Steud., *Pallasia* Scop., *Pallassia* Houtt. (Rutaceae), *Pechea* Lepeyrouse, *Raddia* Mazziari, *Torgesia* Bornm.

Greek *krypsis* "hiding, suppression," Greek *kryptein* "to hide," perhaps referring to the seeds extruded from the fruits or alluding to the partially hidden inflorescence.

About 7-8 species, Mediterranean, Middle East, China, central Africa. Chloridoideae, Cynodonteae, Sporobolinae, or Chloridoideae, Zoysieae, Sporobolinae, annual, low growing, prostrate or ascending, erect, decumbent, much branched near the base, auricles absent, ligule a line of hairs, leaf blades flat or involute, panicle spiciform cylindrical and more or less exserted, ovoid to capitate inflorescence sometimes partially enclosed by bract-like leaf sheaths, spikelets solitary strongly laterally compressed and keeled sometimes falling entire, floret 1 per spikelet, 2 glumes more or less equal and strongly keeled, glumes narrow acute or shortly awned, lemma membranous acute or shortly awned, palea rarely nerved, lodicules absent, stamens 2-3, ovary glabrous, stigmas 2, often mat-forming, found on wet saline soils, salty plains, seasonally flooded areas, mud, semiarid regions, related to *Sporobolus*, type *Crypsis aculeata* (L.) Aiton, see *Species Plantarum* 1: 42, 54-55, 59-63. 1753, *Natuurlijke Historie* 2(4): 382. 1775, *Introductio ad Historiam Naturalem* 72. 1777, William Townsend Aiton (1766-1849), *Hortus Kewensis; or, a catalogue ...* 1: 48. 1789, *De Fructibus et Seminibus Plantarum...* 2: 7. 1790, *Collectanea ad omnem rem botanicam spectantia partim e propriis, partim ex amicorum schedis manuscriptis concinnavit et edidit J.J. Roemer. Turici [Zürich], apud H. Gessnerum, [1806-]1809, Supplément à l'histoire des Plantes des Pyrénées* 8. Toulouse 1818, *Opuscoli Scientifici* 3: 410. 1819, *Ionios Anthologia* 2: 448. 1834, *Nom. Bot. edition* 2, 1: 449. 1840, *J. Linn. Society Botany* 6: 54. 1862 and *Mittheilungen der Thüringischen Botanischen Vereins*, ser. 2, 30: 83. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 293. 1921, *Hooker's Icones Plantarum* 35(3): 1-11, plate 3457. 1947, *Fl. Afrique Nord* 2: 89. 1953, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 62. 1956, *Bull. Research Council of Israel* 11D: 91-126. 1962, *Systematic Botany* 4(4): 267-280. 1979, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Preslia* 64: 193-206. 1992, *Contributions from the United States National Herbarium* 41: 16, 38, 56-57, 127, 177, 181, 191,

220. 2001, *Am. J. Bot.* 91: 2022-2029. 2004, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005 [Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications].

Species

C. aculeata (L.) Aiton (*Agrostis aculeata* (L.) Scop.; *Schoenus aculeatus* L.)

Europe. See *Flora Carniolica, Editio Secunda* 1: 62. 1771.

C. alopecuroides (Phill. & Mitterp.) Schrad. (*Crypsis explicata* (Link) F. Herm.; *Crypsis phalaroides* M. Bieb.; *Heleochloa alopecuroides* (Pill. & Mitt.) Roem.; *Heleochloa alopecuroides* (Piller & Mitterp.) Host; *Phalaris explicata* Link; *Phalaris geniculata* Sibth. & Sm.; *Phleum alopecuroides* Piller & Mitterp.)

Europe. See A. Mathias Piller (1733-1788), *Iter per Poeseganam Sclavoniae [Slavoniae] provinciam ...* 147, t. 16. Budae [Budapest] 1783, *Journal für die Botanik* 1: 312. 1799, *Icones et Descriptiones Graminum Austriacorum* 1: 23, t. 29. 1801, *Flora Germanica* 1: 167. 1806, *Flora Graecae Prodrum* 1: 38. 1806, *Flora Taurico-Caucasica* 1: 45. 1808 and *Hercynia* 1: 121. 1937, *Feddes Repert.* 45: 230. 1938.

C. schoenoides (L.) Lam. (*Heleochloa schoenoides* (L.) Host; *Phleum schoenoides* L.)

Arabia, Yemen. Annual, tufted, compressed, much branched from the base, prostrate or ascending, spreading in a circle from the root, ligule a ring of hairs, leaves flat acuminate, upper sheaths swollen and open, inflorescence densely capitate, spikelets 1-flowered awnless, spikelets usually partially enclosed by the uppermost leaf sheaths, spikelets densely crowded into sessile ovoid or ellipsoid heads, glumes more or less equal shortly ciliate on the keels, found on wet saline soils, salty plains, coastal, see *Species Plantarum* 1: 60. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 166, t. 42, f. 1. 1791, *Icones et Descriptiones Graminum Austriacorum* 1: 23, t. 30. 1801.

in English: swamp grass

in India: talaphetar

in Sudan: gogheib

C. vaginiflora (Forssk.) Opiz (*Crypsis compacta* Steud.; *Crypsis niliacea* Fig. & De Not.; *Crypsis schoenoides* (L.) Lam., in part; *Heleochloa compacta* (Steud.) T. Durand & Schinz; *Phalaris vaginiflora* Forssk.)

Tropical Africa, Europe. Annual, prostrate, ascending, branched, forming mats or low cushions, leaf blades linear and tough, leaf sheaths slightly inflated and enveloping, inflorescence axillary, glumes and lemma more or less equal, lower glume linear, lemma narrowly lanceolate, palea 2-nerved, grazed, found in damp sites, flooded areas, riverbanks, lake margins, often confused with *Crypsis schoenoides* (L.) Lam., see *Flora Aegyptiaco-Arabica* 18. 1775,

Naturalientausch 8: 83. 1823, *Mémoires de l'Académie Royale des Sciences de Turin* 14: 322. 1854, *Synopsis Plantarum Glumacearum* 1: 151. 1855 [1854], *Conspectus Florae Africae* 5: 814. 1894.

Cryptochloa Swallen

From the Greek *kryptos* "hidden" and *chloe, chloa* "grass, young grass," referring to the inflorescences.

About 5-8/15 species, Central and South America, Mexico to Brazil. Bambusoideae, Oryzodae, Olyreae or Bambusoideae, Olyreae, Olyrinae, perennial, herbaceous, unarmed, robust, clumped, caespitose, decumbent floriferous culms, leaf blades pseudopetiolate, very short and narrowly oblong 2-ranked leaves, shortly rhizomatous, plants monoecious, inconspicuous inflorescence few-flowered, a terminal and axillary panicle, female spikelets above and male spikelets below, female lemma dorsally compressed, 2 glumes 3- to 5-nerved herbaceous and acute, lemma usually glabrous, palea present, 3 free and fleshy lodicules, stamens 0, ovary glabrous, 2 stigmas, forest, upland primary forest, on slope along rivers and streams, forest floor, related to *Olyra* L., type *Cryptochloa variana* Swallen, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Opuscoli Scientifici* 3: 410. 1819, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 298. 1829 and *Annals of the Missouri Botanical Garden* 29(4): 317-318, 320-321. 1942, *Ceiba* 19(1): 1-118. 1975 [Enumeración de las plantas de Honduras.], *Brittonia* 34: 25-29, 199-209. 1982, *American Journal of Botany* 70(5): 129-130. 1983, *Novon* 2(2): 81-110. 1992, *Flora Mesoamericana* 6: 213-214. 1994, Emmet J. Judziewicz et al., *American Bamboos*. 267-269. Smithsonian Institution Press, Washington and London 1999, *Contributions from the United States National Herbarium* 39: 53-54. 2000, *Ceiba* 42(1): 1-71. 2001[2002].

Species

C. capillata (Trin.) Soderstr. (*Olyra capillata* Trin.; *Olyra capillata* var. *capillata*; *Olyra capillata* var. *segregata* Döll; *Olyra podachne* Mez; *Raddia capillata* (Trin.) Hitchc.)

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 114. 1834, *Flora Brasiliensis* 2(2): 318. 1877 and *Bot. Jahrb. Syst.* 56(Beibl. 125): 6. 1921, *Contr. U.S. Natl. Herb.* 24(8): 491. 1927.

C. concinna (Hook.f.) Swallen (*Olyra concinna* Hook.f.; *Raddia concinna* (Hook.f.) Chase)

Nicaragua, Guatemala, Mexico, Honduras, Colombia. Fern-like, see *Bot. Mag.* 122: t. 7469. 1896 and *Proceedings of the Biological Society of Washington* 21: 185. 1908, *Ann. Missouri Bot. Gard.* 29(4): 320. 1942.

C. decumbens Soderstr. & Zuloaga

Panama. See *Brittonia* 37: 29, f. 5. 1985.

C. dressleri Soderstr. (named for the botanist and taxonomist Robert Louis Dressler, born 1927, an orchid specialist at the Smithsonian Tropical Research Institute, Panama, he collected plants throughout the American tropics, among his writings are "Terrestrial plants of Panama." *Bull. Biol. Soc.* Washington 2: 179-186. 1972, *Phylogeny and Classification of the Orchid Family*. Portland, Oregon 1993, *Field Guide to the Orchids of Costa Rica and Panama*. Ithaca, New York 1993 and "Checklist of the orchids of Panama." I-XXVI. in *Orchids of Panama*. Monographs in Systematic Botany from the Missouri Botanical Garden vol. 4: 1-26. See *Genera Orchidacearum*: vol.1, edited by: Alec M. Pridgeon, Phillip J. Cribb, Mark W. Chase, Finn Rasmussen. Oxford, Oxford University Press 1999)

Panama. See *Brittonia* 34(1): 25, f. 1. 1982.

C. soderstromii Davidse

Panama. Clumped, see *Novon* 2(2): 96, f. 7. 1992.

C. strictiflora (E. Fourn.) Swallen (*Cryptochloa granulifera* Swallen; *Olyra strictiflora* (E. Fourn.) Hemsl.; *Raddia strictiflora* (E. Fourn.) Chase; *Strepium strictiflorum* E. Fourn.)

Mexico, Ecuador, Costa Rica, Panama. See *Bulletin de la Société Botanique de Belgique* 15(3): 465. 1876, *Biologia Centrali-Americana; ... Botany ...* 3(19): 510. 1885 and *Proceedings of the Biological Society of Washington* 21: 185. 1908, *Annals of the Missouri Botanical Garden* 29(4): 321. 1942.

C. unispiculata Soderstr.

Peru, Ecuador, Bolivia, Brazil, Colombia. See *Brittonia* 34(2): 200-202, f. 1. 1982, *AAU Reports* 24: 1-241. 1990, *Systematic Botany* 18(1): 80-99. 1993, *Ruizia* 13: 1-480. 1993.

C. variana Swallen

Panama, Colombia, the Caribbean. See *Ann. Missouri Bot. Gard.* 29(4): 318. 1942.

Cryptochloris Benth. = Tetrapogon Desf.

From the Greek *kryptos* "hidden" plus *Chloris*.

Chloridoideae, Cynodonteae, type *Cryptochloris spathacea* (Hochst. ex Steud.) Benth., see *Nova Genera et Species Plantarum seu Prodromus* 1, 25. 1788, *Flora Atlantica* 2: 388-389, t. 255. 1799 [1800], *Synopsis Plantarum Glumacearum* 1: 204. 1854, *Journal of the Linnean Society, Botany* 19: 106. 1881, *Hooker's Icones Plantarum* 14: t. 1376. 1882, *Conspectus Florae Africae* 5: 864. 1895 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2]*, *Botany* 8(1,5,1): 211. 1904, *Annuario del Reale Istituto Botanico di Roma* 8(3): 352. 1908, *Flora of Ethiopia and Eritrea* 7: 159-163. 1995.

Cryptopyrum Heynh. = *Elymus* L.

From the Greek *kryptos* “hidden” and *pyros* “grain, wheat.”

Pooideae, Triticodae, Triticeae, or Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 83-84. 1753, *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770, *Hortus Regius Botanicus Berolinensis* 2: 190. 1833, Gustav Heynhold (1800- ca. 1860), *Nomenclator Botanicus Hortensis* oder alphabetische und synonymische ... 2: 174. 1846 and *American Journal of Botany* 21(3): 131. 1934, *Rhodora* 56(662): 28. 1954, *Canad. J. Bot.* 42: 554. 1964, *Botaniska Notiser* 128(4): 502. 1975 [1976], *Feddes Repert.* 95: 425-521. 1984 [Conspectus of the Triticeae.], *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, *Contributions from the United States National Herbarium* 48: 241, 279-307. 2003.

Cryptostachys Steud. = *Sporobolus* R. Br.

From the Greek *kryptos* “hidden” and *stachys* “a spike.”

Chloridoideae, Eragrostidae, or Chloridoideae, Cynodonteae, Sporobolinae, type *Cryptostachys vaginata* Steud., see *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Flora* 33: 229. 1850, *Fragmentos de Algunas Plantas Filipinas* 25. 1851, *Synopsis Plantarum Glumacearum* 1: 181. 1854, *Nom. Bot.* 2: 1274. 1874, *Botanical Gazette* 21: 15. 1896 and *Flora of the Guianas, Series A: Phanerogams* 606-615. 1990, *Blumea* 35(2): 393-458. 1991, *American Journal of Botany* 81: 622-629. 1994, *Flora Mesoamericana* 6: 273-276. 1994, *Sida* 16: 529-544. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Australian Systematic Botany* 12(3): 375-448. 1999, *Contributions from the United States National Herbarium* 41: 57, 200-219. 2001.

Crypturus Trin. = *Lolium* L.

From the Greek *krypto* “to hide” and *oura* “tail.”

Pooideae, Poeae, Loliinae, type *Crypturus loliaceus* Link, see *Species Plantarum* 1: 83. 1753, *Linnaea* 17(4): 386-387. 1844 and *Grasses of Ceylon* 45. 1956, *Techn. Bull. U.S.D.A. (or U.S. Dept. Agric. Tech. Bull., or Technical Bulletin, United States Department of Agriculture)* 1392: 1-65. 1968, *Dominguezia* 1: 1-23. 1978, *Novon* 3(3): 239-243. 1993, *Fragmenta Floristica et Geobotanica* 41(2): 521-536. 1996, *Contributions from the United States National Herbarium* 48: 241, 426-431. 2003.

Ctenium Panzer = *Aplocera* Raf., *Campuloa* Desv., *Campulosus* Desv., *Kampochloa* W.D. Clayton, *Monathera* Raf., *Monocera* Elliott, *Triatherus* Raf.

From *ktenion*, the diminutive of the Greek *kteis*, *ktenos* “a comb,” referring to the arrangement of the spikelets.

About 17-20 species, tropical and subtropical, America and Africa, Madagascar. Chloridoideae, Cynodonteae, perennial or annual, tufted or densely tufted, herbaceous, unarmed, aromatic or not aromatic, leaf sheath usually round, ligule a very short fringed membrane, hard leaves linear or involute, plants bisexual, inflorescence a single unilateral spike sickle-shaped when young and spirally twisted when mature, racemes single or digitate, spikelets strongly compressed laterally, 2 lowermost florets sterile, third floret fertile, fourth floret male or sterile, straight awns, male florets with 2 stamens, 2 glumes very unequal, large upper glume enclosing the florets, fertile lemma entire or bidentate, palea present, 2 lodicules free and fleshy, stamens 3, ovary glabrous, 2 stigmas, found on moist soils, open habitats, savannah, open grassland, open bushveld, poor dry sandy soils, type *Ctenium carolinianum* Panz., see *Species Plantarum* 1: 53-54. 1753, *Species Plantarum* 2: 1050. 1753, *Supplementum Plantarum* 13, 114. 1781 [1782], *Nova Genera et Species Plantarum seu Prodromus* 1, 25. 1788, *Syn. Pl.* 1: 85. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 38, 61. München 1813, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 167. 1813, *Denkschriften der Bayer[ischen]. Botanischen Gesellschaft in Regensburg* 4: 311, t. 13, f. 1-2. 1813 [1814], *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 176. 1816, *American Monthly Magazine and Critical Review* 3: 99. 1818, *American Monthly Magazine and Critical Review* 4: 190. 1819, *Medical Flora* 2: 193. 1830 and *North American Flora* 17(8): 579-638. 1939, *Kew Bulletin* 16: 471-475. 1963, *Kew Bulletin* 21: 103. 1967, *Acta Botanica Brasilica* 1: 53-62. 1988, *Flora Mesoamericana* 6: 290-291. 1994, *Journal of Biogeography* 26(6): 1307-1321. Nov 1999 [Floristic analysis of vascular plant genera of North America north of Mexico: characteristics of phytogeography.], *Journal of Ecology* 88(5): 790-800. Oct 2000, *Contributions from the United States National Herbarium* 41: 16, 37, 57-58, 142, 222. 2001, *African Journal of Ecology* 40(3): 252-259, Sep 2002, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Journal of Biogeography* 31(9): 1445-1461. Sep 2004, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, “Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications.” *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

C. aromaticum (Walter) Alph. Wood (*Aegilops aromatica* Walter; *Aplocera maritima* Raf.; *Campuloa gracilis* Desv.; *Campuloa monostachya* (Michx.) Roem. & Schult.; *Campulosus aromaticus* (Walter) Scribn.; *Campulosus aromaticus* Trin. ex Steud.; *Campulosus gangitis* (L.) Kuntze;

Campulosus gracilior Desv.; *Campulosus gracilis* Bertol.; *Campulosus monostachyus* (Michx.) P. Beauv.; *Chloris monostachya* Michx.; *Chloris piperita* Michx. ex Steud.; *Ctenium americanum* Spreng.; *Ctenium aromaticum* (Walter) Hitchc., nom. illeg., non *Ctenium aromaticum* (Walter) Alph. Wood; *Ctenium carolinianum* Panz.; *Ctenium gangitum* (L.) Druce; *Cynodon monostachyos* (P. Beauv.) Raspail; *Monerma gangitis* (L.) Roem. & Schult.; *Monocera aromatica* (Walter) Elliott; *Nardus gangitis* L.; *Nardus scorpioides* Lam.; *Rottboellia scorpioides* Poir. ex Steud.; *Triatherus aromaticus* Raf.)

Northern America, U.S., Virginia, Florida. Flowers after fire, see *Species Plantarum* 53. 1753, *Flora Caroliniana, secundum ...* 249. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 152. 1791, *Flora Boreali-Americana* 1: 59. 1803, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Essai d'une Nouvelle Agrostographie* 64, 157, 158, f. 1. 1812, *Journal de Botanique, rédigé par une société de botanistes* 69. 1813 [J. Bot. Appl. (Desvaux)], *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 176. 1816, *Systema Vegetabilium* 2: 516, 800. 1817, *American Monthly Magazine and Critical Review* 3: 99. 1818, *Systema Vegetabilium, editio decima sexta* 1: 274. 1825, *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *Medical Flora* 2: 193. 1830, *Nomenclator Botanicus. Editio secunda* 1: 272, 353. 1840, *Nomenclator Botanicus. Editio secunda* 2: 474. 1841, *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna* 2: 602, pl. 43, f. a-c. 1850, *A Class-book of Botany* 806. 1861, *Revisio Generum Plantarum* 2: 764. 1891, *Memoirs of the Torrey Botanical Club* 5(4): 45. 1894 and *Rhodora* 8(95): 210. 1906, *Botanical Exchange Club of the British Isles. Report* 3: 416. 1914.

in English: toothache grass

C. brachystachyum (Nees) Kunth (*Campulosus brachystachyus* Nees)

Brazil, Paraguay. Solitary racemes, lemmas awnless or shortly awned, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 417-418. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 275. 1833.

C. brevispicatum J.G. Smith (*Campulosus brachystachyus* Trin.; *Ctenium trinii* Ekman)

Brazil. Lemmas awned and ciliate on the margins, see *Species Graminum* 1828-1836, *Botanical Gazette* 21: 363. 1896 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 45. 1913.

C. chapadense (Trin.) Döll (*Campuloa chapadensis* Trin. ex Döll; *Campulosus chapadensis* Trin.)

Brazil, Bahia. Perennial, wiry, erect, often fibrous at base, leaf blades linear and acuminate, straight or flexuous racemes 1-sided and terminal, spikelets in 2 rows, glabrous glumes conspicuously glandular on the nerves, see Carl B.

Trinius (1778-1844), *Species Graminum iconibus et descriptionibus ... Petropoli* [St. Petersburg] 1828-1836, *Flora Brasiliensis* 2(3): 73-74. 1878.

C. cirrosus (Nees) Kunth (*Campulosus cirrosus* Nees)

America. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 416-417. 1829, *Révision des Graminées* 2: 445, t. 136. 1831.

C. concinnum Nees (*Ctenium concinnum* var. *indutum* Pilg.; *Ctenium minus* (Pilg.) Clayton)

South Africa. Perennial, densely tufted, unbranched, wiry, leaves mostly basal, leaf sheath usually round, basal sheaths nonfibrous, ligule a short membrane, hard leaves, inflorescence a single unilateral spike sickle-shaped when young and spirally twisted when mature, spikelets compressed laterally, upper glume tubercled, straight awns, low grazing value, species of open habitats, open grassland, open bushveld, poor dry sandy soils, on moist soils, similar to *Ctenium somalense* (Chiov.) Chiov., see *Florae Africae Australioris Illustrationes Monographicae* 1: 237. 1841 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(82): 118. 1924, *Kew Bulletin* 16: 473. 1963.

in English: sickle grass

in South Africa: sekelgras

C. elegans Kunth (*Chloris elegans* (Kunth) Roberty, nom. illeg., non *Chloris elegans* Kunth; *Ctenium serpentinum* Steud.)

Tropical Africa. Strongly aromatic, densely tufted, annual, wiry, low to medium grazing value, used for thatching and for making baskets, found on dry sandy soils, see *Révision des Graminées* 1: 93. 1829, *Révision des Graminées* 2: 295, t. 59. 1830, *Synopsis Plantarum Glumacearum* 1: 202. 1854 and H.J.R. Vanderyst (1860-1934), *Étude de l'agrostologie agricole tropicale. Bas et Moyen-Congo Belge ... Bruxelles* 1921, *Revue de Botanique Appliquée et d'Agriculture Tropicale* 14(150): 128. 1934, *Petite Flore de l'Ouest-Africain* 387. 1954.

in Guinea: enokolomb

in Guinea-Bissau: undáte

in Mali: samu saana, wolo kaman

in Niger: alakad, alakaka, bat kaarey, bata kwaré, bataré, buhirdi, chinaka, ikardan'allagh, kinaka, niél, niniét, shinaka

in Nigeria: abori woroko, shinaka, sinaka, sinakaho, weewe, wicco dombru, wicco pallandi, wicco wanduho, wixxo wandulho, wutsiyar beeraa, wutsiyar biri, wutsiyar kadan-gare, wutsiyar kuusuu

in Senegal: dikandapali, lab a koy, rev, rov, uluku, yagon

C. floridanum (Hitchc.) Hitchc. (*Campulosus floridanus* Hitchc.)

America. See *American Journal of Botany* 2: 306. 1915, *Proceedings of the Biological Society of Washington* 41: 162. 1928.

C. newtonii Hack. (*Ctenium camposum* A. Chev.; *Ctenium newtonii* var. *majusculum* Pilg.; *Ctenium newtonii* var. *productum* Pilg.; *Ctenium schweinfurthii* Pilg.) (in honor of Francis[co] Xavier Oakley de Aguiar Newton, 1864-1909, British-born Portuguese plant collector in West Africa)

Tropical Africa. Perennial, tufted, wiry, aromatic, colonizer, aggressive, pioneer, low grazing value, used as a thatching grass, open bushland, stony areas, overgrazed fields, poor soils, see *Boletim da Sociedade Broteriana* 5: 229. 1887 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(82): 116. 1924, *Revue de Botanique Appliquée et d'Agriculture Tropicale* 14(150): 128. 1934, *Adansonia* 15(3): 388. 1975 [1976].

in Guinea: d'yubali bowal, dyubali bowal

in Mali: wolo kaman

in Nigeria: abori woroko, shinaka, sinaka, sinakaho, weewe, wicco dombru, wicco pallandi, wicco wanduho, wixxo wandulho, wutsiyar beeraa, wutsiyar biri, wutsiyar kadan-gare, wutsiyar kuusuu

in Sierra Leone: fiwa, foni gboli, kerinkeralal, puisale, wolen

in Upper Volta: laasi dawaadi, lamzudu

C. nubicum De Not.

Nubia. See *Index Seminum [Geneva]* 25. 1852, *Annuario del Reale Istituto Botanico di Roma* 7: 72. 1897 and *Nuovo Giornale Botanico Italiano* n.s. 26: 82. 1919, *Fl. Trop. E. Africa, Gramineae* (Part 2): 324. 1974.

C. planifolium (J. Presl) Kunth (*Campulosus planifolius* J. Presl; *Ctenium glandulosum* Scribn. & J.G. Sm.)

America. See *Reliquiae Haenkeanae* 1(4-5): 287. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 275. 1833, *Botanical Gazette* 21(6): 362. 1896.

C. plumosum (Hitchc.) Swallen (*Campulosus plumosus* Hitchc.)

America, Mexico. See *Contributions from the United States National Herbarium* 17(3): 330. 1913, *North American Flora* 17(8): 602. 1939.

C. polystachyum Balansa

Brazil and Paraguay. Lemmas awned and ciliate on the margins, see *Bulletin de la Société Botanique de France* 32: 244. 1885.

C. sesquiflorum Clayton

Guinea. See *Kew Bulletin* 14: 239-240. 1960.

C. somalense (Chiov.) Chiov. (*Ctenium nubicum* var. *somalense* Chiov.)

Ethiopia. Perennial, erect, tufted, slender, old leaf sheaths fibrous, open places, bushland, deciduous bushland, see

Index Seminum [Geneva] 25. 1852, *Annuario del Reale Istituto Botanico di Roma* 7: 72. 1897 and *Nuovo Giornale Botanico Italiano* n.s. 26: 82. 1919, *Fl. Trop. E. Africa, Gramineae* (Part 2): 324. 1974.

Ctenopsis De Notaris = Ctenopsis Naudin (Cucurbitaceae), *Vulpia* Gmelin

Greek *ktenos* "a comb" and *opsis* "resemblance," a comb-like inflorescence; imitating *Ctenium*.

About 4 species, Mediterranean, Western Asia. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, annual, caespitose, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence racemose or paniculate, spikelets pectinate compressed laterally, 2 unequal glumes, lower glume 0-nerved, upper glume 3-nerved, lemmas papery, palea present, 2 lodicules free and membranous, 3 stamens, ovary glabrous, stigmas 2, species of open habitats, often referred to *Vulpia*, type *Ctenopsis pectinella* (Delile) De Not., see *Species Plantarum* 1: 73-76. 1753, *Flora Badensis Alsatica* 1: 8. 1805, *Index Sem. Hort. Genuensis* 26. 1847, *Prodromus Florae Hispanicae* 1: 90. 1861, *Annales des Sciences Naturelles; Botanique, sér. 5*, 6: 12-13. 1866 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 16: 100-102. 1925, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 29. 1936, *Anales del Instituto Botánico A. J. Cavanilles* 21: 365. 1963, *Botaniska Notiser* 130(2): 186. 1977, *Nordic Journal of Botany* 1(1): 20, 24. 1981, *Watsonia* 15: 38-39. 1984, *Taxon* 33: 351-354. 1984, *Watsonia* 16: 300. 1987, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Flora Mesoamericana* 6: 228. 1994, *Bothalia* 27: 75-82. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Bothalia* 29(2): 335-341. 1999, *Systematic Botany* 27(2): 241-251. 2002, *Contributions from the United States National Herbarium* 48: 690-694. 2003.

Species

C. cynosuroides (Desf.) Paunero ex Romero Garcia (*Festuca cynosuroides* Desf.; *Narduretia cynosuroides* (Desf.) Villar)

Mediterranean. See *Flora Atlantica* 1: 88, t. 12. 1798 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 16: 100-101. 1925, *Lagascalia* 18(2): 321. 1996.

C. gypsophila (Hack.) Paunero (*Festuca gypsophila* Hack.)

Mediterranean. See *Österreichische Botanische Zeitschrift* 27: 47. 1877 and *Anales del Instituto Botánico A. J. Cavanilles* 21: 368. 1963.

C. patens (Boiss.) Melderis (*Vulpia patens* Boiss.)

Europe. See *Arkiv för Botanik, Andra Serien* 2: 297. 1952.

C. pectinella (Delile) De Not. (*Festuca pectinella* Delile; *Vulpia pectinella* (Delile) Boiss.)

Europe. See *Flora Orientalis* 5: 631. 1884.

Curtopogon P. Beauv. = Aristida L.

From the Greek *kyrtos* “curved, swelling, bent, hunch-backed” and *pogon* “beard.”

Arundinoideae, Aristideae, or Aristidoideae, Aristideae, type *Curtopogon dichotomus* (Michx.) P. Beauv., see *Species Plantarum* 1: 82. 1753, *Flora Boreali-Americana* 1: 41. 1803, *Essai d'une Nouvelle Agrostographie* 32, 159, t. 8, f. 7. 1812, *Species Graminum Stipaceorum* 101. 1842 and *Contr. U.S. Natl. Herb.* 22(7): 529. 1924, *Meded. Rijks.-Herb.* 54: 9. 1926, *Kurtziana* 1: 123-206. 1961, *Flora Mesoamericana* 6: 253-257. 1994, *Flora del Valle de Tehuacán-Cuicatlán* 3: 1-35. 1994, *Flora of Ethiopia and Eritrea* 7: 76-85. 1995, *Grassland of China* 1995(1): 16-20. 1995, *Annals of the Missouri Botanical Garden* 82: 593-595. 1995, *Candollea* 53(2): 466-470. 1998, *Bot. Rev.* 64: 1-85. 1998, *Boletim do Instituto de Botânica (São Paulo)* 12: 113-179. 1999, *Acta Botánica Mexicana* 63: 1-45. 2003, *Contributions from the United States National Herbarium* 46: 69-104, 166. 2003.

Cutandia Willk. = Catapodium Link, Desmazeria Dumort., Scleropoa Griseb.

For the Spanish botanist Vicente Cutanda, 1804-1866, professor of botany (Madrid); see J.H. Barnhart, *Biographical notes upon botanists*. 1: 407. 1965; M. Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. Madrid 1858.

About 6 species, Middle East, Mediterranean. Pooideae, Poeae, Ammochloinae, or Pooideae, Poodae, Poeae, annual, hollow, branched, nodes glabrous, auricles absent, narrow linear leaf blades, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate with divergent branches, panicle sparse, spikelets several-flowered, 2 glumes very unequal or subequal, lower glume 1- to 3-nerved, upper glume 1-5 nerved, 3 nerved lemma, palea present, 2 free and ciliate lodicules, 3 stamens, ovary glabrous, 2 stigmas, native pasture species, open habitats, coastal, maritime, stony hillsides, sandy places, type *Cutandia scleropoides* Willk., see *Species Plantarum* 1: 73-76, 85-87. 1753, *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770, *Essai d'une Nouvelle Agrostographie* 100, 15, pl. 19, f. 35. 1812, *Commentationes Botanicae* 26-27. 1822, *Hortus Regius Botanicus Berolinensis* 1: 44, 145, 280. 1827, *Spicilegium florae rumelicae et bithynicae* ... 2: 431. 1846, *Botanische Zeitung. Berlin* 18: 130. 1860, *Flore d'Alger* 236-237. 1895, *Catalogue Raisonné des Plantes Vasculaires de la Tunisie* 482. 1896 and *Flore de France* 14: 290. 1913, *Annales du*

Service Botanique (et Agronomique) de la Direction Générale de l'Agriculture Tunisie. 4(2): 68. 1927, *Ind. Hort. Budapest* 1934: 95. 1935, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 31. 1936, C.A. Stace, “Notes on *Cutandia* and related genera.” *Botanical Journal of the Linnean Society* 76: 350-352. 1978, *Taxon* 33: 351-354. 1984, *Bot. J. Linn. Society* 91: 441. 1985, *Annali di Botanica* 45: 75-102. 1987, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, *Lagascalia* 20(2): 265-275. 1998, A.R. Dyer, D.E. Goldberg, R. Turkington and C. Sayre, *Contributions from the United States National Herbarium* 48: 230, 241, 256, 609. 2003, Magdy I. El-Bana, Ivan Nijs and Abdel-Hamid A. Khedr, “Effects of growing conditions and source habitat on plant traits and functional group definition.” *Functional Ecology* 15(1): 85-95. Feb 2001, “The importance of phytogenic mounds (Nebkhas) for restoration of arid degraded rangelands in Northern Sinai.” *Restoration Ecology* 11(3): 317-324. Sep 2003, Hagit Shilo-Volin et al., “Density regulation in annual plant communities under variable resource levels.” *Oikos* 108(2): 241-252. Feb 2005.

Species

C. maritima (L.) Barbey (*Agropyron maritimum* (L.) P. Beauv.; *Brachypodium maritimum* (L.) Roem. & Schult.; *Cutandia maritima* (L.) Richter; *Festuca maritima* (L.) Lam. ex DC., nom. illeg., non *Festuca maritima* L.; *Scleropoa maritima* (L.) Parl.; *Triticum maritimum* L.)

Europe. See *Species Plantarum, Editio Secunda* 128. 1762, *Flore Française* 3: 47. 1805, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812, *Systema Vegetabilium* 2: 743. 1817, *Flora italiana, ossia descrizione delle piante* ... 1: 468. 1848[1850], William Barbey (1842-1914), *Florae Sardoae Compendium* 190. Lausanne 1884 [1885], *Plantae Europaeae* 1: 78. 1890.

C. memphitica (Spreng.) K. Richt. (*Cutandia dichotoma* var. *memphitica* (Spreng.) Maire & Weiller; *Cutandia memphitica* (Sprengel) Benth.; *Cutandia scleropoides* Willk.; *Dactylis memphitica* Spreng.; *Festuca caspica* (K. Koch) Steud.; *Festuca divaricata* var. *memphitica* (Spreng.) Coss. & Durieu; *Festuca memphitica* (Spreng.) Boiss. ex Coss.; *Scleropoa caspica* K. Koch; *Scleropoa memphitica* (Spreng.) Parl.)

Europe. Native pasture species, see *Flora Atlantica* 1: 89, t. 22. 1798, *Der Botanische Garten der Universität zu Halle, Erster Nachtrag* 1: 20. 1801, *Linnaea* 21: 409. 1848, *Flora italiana, ossia descrizione delle piante* ... 1: 470. 1848[1850], *Notes sur Quelques Plantes Critiques, Rares, ou Nouvelles, ...* 183. 1851, *Synopsis Plantarum Glumacearum* 1: 303. 1854, *Exploration Scientifique de l'Algérie* 2: 184. 1855, *Botanische Zeitung. Berlin* 18: 130. 1860, *Plantae Europaeae* 1: 77. 1890, *Flore d'Alger* 237. 1895 and *Flore de l'Afrique du Nord*: 3: 38. 1955, *Publications from the Cairo University Herbarium* 5: 51. 1972[1974].

Cuviera Koeler = *Cuviera* DC. (Rubiaceae), *Hordelymus* (Jess.) Jess. ex Harz, *Hordelymus* (Jessen) Harz

After the French (born Württemberg, Montbéliard) naturalist Georges Léopold Chrétien Frédéric Dagobert baron Cuvier, 1769-1832 (Paris, France), zoologist, palaeontologist, comparative anatomist, studied under Karl Friedrich Kiemeyer (1765-1844) at the Caroline University, (former/once) friend of Étienne Geoffroy Saint-Hilaire (1772-1844) and Lamarck, from 1795 assistant professor of animal anatomy at the Muséum (Paris), in 1796 a member of the Institut de France, from 1800 professor at the Collège de France, in 1818 member of the Académie Française, his works include *Notice biographique sur Bruguières, etc.* [Rapport général des travaux de la Société Philomatique de Paris] [1799], *Voyages dans l'Amérique méridionale*, par F. de Azara ... enrichis de notes par G. Cuvier. Paris 1809 and *The Animal Kingdom*. London 1827-1835, with Achille Valenciennes wrote *Histoire naturelle des Poissons*. Paris 1828-1849, with A. Brongniart wrote *Description Géologique des environs de Paris*. Paris 1822, he was the brother of the French zoologist Frédéric Cuvier (1773-1838, d. Strasbourg, France). See Georges Louis Duvernoy (1777-1855), *Notice historique sur les Ouvrages et la Vie de M. le Baron Cuvier*. Paris 1833; *G. Cuvier's Briefe an C.H. Pfaff aus den Jahren 1788 bis 1792 ...* Herausgegeben von ... W.F.G. Behn. Kiel 1845; Franck Bourdier, in *D.S.B.* 3: 520-528. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 1: 408. 1965; Felix de Azara (1742-1821), *Viaje por la America meridional*. La descripción geográfica ... del Paraguay ... los pueblos salvajes ... medios de los Jesuitas para someter ... Pub. por C.A. Walckenaer. Madrid 1941.

Pooideae, Triticodae, Triticeae, type *Cuviera europaea* (L.) Koeler, see *Species Plantarum* 1: 84-85. 1753, *Annales du muséum national d'histoire naturelle* 9: 222. 1807, *Description Graminum in Gallia et Germania* 1802, *Observations sur les Graminées de la Flore Belgique* 92. 1823 [1824], *Nomenclator Botanicus. Editio secunda* 2: 233. 1841, *Deutschlands Gräser und Getreidearten ...* 202. 1863, *Bulletin de la Société Botanique de Belgique* 7: 66. 1868, *Genera Plantarum* 3(2): 1206. 1883, *Landwirtschaftliche Samenkunde* 2: 1147. 1885 and *Archives de Biologie Végétale Pure et Appliquée* 1: 18, 38. 1901, *Bot. Zhurn. (Moscow & Leningrad)* 35: 191. 1950, *New Publications of the U.S. Geological Survey* 17(1-2): 120. 1971 [1972], *Flora Republicii Socialiste Romaniaa* 12: 583. 1973, *Giornale Botanico Italiano* 111(1-2): 58. 1977, *Acta Biologica Cracoviensia, Series Botanica* 27: 57-74. 1985, *Taxon* 49(2): 250. 2000.

Cyathopus Stapf

From the Greek *kyathos* “cup, ladle” and *pous* “foot,” referring to the stoloniferous culm or to the cupular pedicel tips.

One species, Sikkim, eastern Himalayas. Aveneae, perennial, erect and leafy, ascending, tufted, herbaceous, slender, scabrid or glabrous, terete, branched, leaf blades narrow and scabrid, leaf sheaths glabrous, ligule elongate, plants bisexual, inflorescence paniculate and lax, open panicle, spikelets borne on the slender branches of decompound panicle, floret 1, 2 glumes subequal and 3-nerved, lemma membranous and awnless, palea 2-keeled, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade species, in woods, valleys, type *Cyathopus sikkimensis* Stapf, see *Hooker's Icones Plantarum* t. 2395. 1895, *Fl. British India* 7: 240. 1897 and *Grasses of Burma ...* 565. 1960.

Species

C. sikkimensis Stapf

North Sikkim. Stout culms, erect, creeping, stoloniferous, leaf blades oblong and acute to finely acuminate, panicle effuse, spikelets glabrous at base, glumes beaked.

Cyathorhachis Nees ex Steud. = *Cyathorhachis* Steud., *Polytoca* R. Br.

From the Greek *kyathos* “cup, ladle” and *rhachis* “rachis, axis, midrib of a leaf.”

Andropogoneae, type *Cyathorhachis wallichiana* Nees ex Steud., see John Joseph Bennett (1801-1876) and Robert Brown, *Plantae Javanicae rarioris*. 15, 18, 20, f. 5. London (July) 1838, *Synopsis Plantarum Glumacearum* 1: 403. 1854 [1855] and *Meded. Rijks-Herb.* 67: 9. 1931, *Blumea* 47(3): 545-580. 2002 [Revision of Chionachninae (Gramineae: Andropogoneae)].

Cyclichnium Dulac = *Gaudinia* P. Beauv.

From *kylichnion*, the diminutive of the Greek *kylichne* “a small cup.”

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see *Essai d'une Nouvelle Agrostographie* 95, 153, 164, t. 19,5. 1812, *Hortus Regius Botanicus Berolinensis* 1: 151. 1827, *Conspectus Regni Vegetabilis* 54. 1828, *Flore du Département des Hautes-Pyrénées* 68. 1867 and *Acta Universitatis Lundensis* 36(1): 27. 1900, *Contr. U.S. Natl. Herb.* 24: 192. 1925, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Contributions from the United States National Herbarium* 48: 241, 370. 2003.

Cyclostachya J.R. Reeder & C.G. Reeder = *Bouteloua* Lag.

From the Greek *kyklos* “circle, round” and *stachys* “a spike,” referring to the inflorescences, to the mature racemes.

One species, Mexico. Chloridoideae, Cynodonteae, Boutelouinae, perennial, herbaceous, stoloniferous, caespitose, solid, auricles absent, leaf blades narrow linear, ligule membranous, plants dioecious, inflorescence exerted from sheath, hermaphrodite florets lacking, single pectinate raceme, 1 fertile floret, female spikelets dorsally compressed, male inflorescence deciduous, 2 narrow glumes unequal and dissimilar, lower glume 1-nerved, upper glume 2- to 3-nerved, lemma 3-awned, palea present, 2 free and fleshy lodicules, no stamens, 3 staminodes, ovary glabrous, 2 stigmas, open habitats, dry areas, type *Cyclostachya stolonifera* (Scribn.) Reeder & C. Reeder, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Gen. Sp. Nov.* 5. 1816 and *Bulletin of the Torrey Botanical Club* 90: 195-196. 1963, *Contributions from the United States National Herbarium* 41: 20-33, 58-59. 2001.

Species

C. stolonifera (Scribn.) Reeder & Reeder (*Atheropogon stolonifer* E. Fourn.; *Bouteloua reederorum* Columbus; *Bouteloua stolonifera* Scribn.)

Mexico. Good forage, see *Mexicanas Plantas* 2: 140. 1886, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 302. 1891 and *Aliso* 18(1): 63. 1999.

in Mexico: zacate rueda

Cyclotera Stapf = *Coelorachis* Brongn.

From Greek *kyklos* “circle, round” and *teres, retis (tero)* “rounded off, smoothed, shapely,” *kykloteres* “made round by turning,” or possibly from the Greek *theros* “summer, summer-fruits,” *thero* “heat, warm,” Greek *teiro, teirein* “distress, weaken,” or Latin *tero, -is, trivi, tritum, terere* “to grind, to wear away, to waste.”

Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, see *Voyage Autour du Monde* 2: 64, f. 14. 1829 [1831] and Otto Stapf (1857-1933), *Index Londinensis* to illustrations of flowering plants, ferns and fern allies ... /prepared under the auspices of the Royal Society of London at the Royal Botanic Gardens, Kew. Oxford: Clarendon Press 1929-1931, *Kew Bulletin* 24: 309-314. 1970, *Blumea* 31: 291, 293. 1986, *Flora of the Guianas. Series A, Phanerogams* 8: 143-146. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Journal of Cytology and Genetics* 29(2): 125-131. 1994, *Flora Mesoamericana* 6: 396-397. 1994, *Contributions from the United States National Herbarium* 46: 161-162, 295-296. 2003.

Cylindropyrum (Jaub. & Spach) Á. Löve = *Aegilops* L.

From the Greek *kylindros* “a cylinder” and *pyros* “grain, wheat.”

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 2: 1050-1051. 1753, *Icones et Descriptiones Graminum Australiacorum* 2: 6, t. 7. 1802, *Illustrationes Plantarum Orientalium* 4: 12. 1851 and *Repertorium Specierum Novarum Regni Vegetabilis* Beih. 55: 84, 90, 103, 117. 1929, *Blumea, Supplement* 3: 15, 17. 1946, *Grasses of Burma ...* 653-655. 1960, *Feddes Repert.* 91: 225-228, 233-234, 236. 1980, *Biologisches Zentralblatt* 101(2): 206-208. 1982, *Feddes Repert.* 95(7-8): 493, 495, 500. 1984, *Taxon* 41: 552-583. 1992, *Agric. Univ. Wageningen Pap.* 94-7: 1-512. 1994, *Taxon* 44: 611-612. 1995, *Flora de Veracruz* 114: 1-16. 2000, *Contributions from the United States National Herbarium* 48: 20-23, 241. 2003.

Cymatochloa Schldl. = *Paspalum* L.

From the Greek *kyma, kymatos* “anything swollen” and *chloe, chloa* “grass, young grass.”

Panicoideae, Paniceae, Paspalinae, type *Cymatochloa fluitans* (Elliott) Schldl., see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Acta Helvetica, Physico-Mathematico-Anatomico-Botanico-Medica* 7: 129, t. 7. 1762 [1772], *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 109, pl. 6. f. 4. 1816, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 77. 1829, *Species Graminum* 3: t. 271. 1829-1830, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 103. 1850, *Botanische Zeitung. Berlin* 12(47): 817, 821-822. 1854, *Botanische Zeitung. Berlin* 19(44): 326. 1861, *Flora Brasiliensis* 2(2): 98. 1877, *Genera Plantarum* 3(2): 1097-1098. 1883 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 24(8): 435. 1927, *Repertorium Specierum Novarum Regni Vegetabilis* 26(7-15): 229. 1929, *Contributions from the United States National Herbarium* 46: 166-167, 443-527. 2003.

Cymbachne Retz.

From the Greek *kymbe* “boat” and *achne* “chaff, glume,” an allusion to the shape of flowers and spikes, see *Observationes Botanicae* 6: 36. Jul-Nov 1791 and *Genera Graminum* 376. 1999, *Contributions from the United States National Herbarium* 46: 167. 2003.

Cymbanthelia Andersson = *Cymbopogon* Sprengel

From the Greek *kymbe* “boat” and *anthele* “a type of inflorescence, a little flower.”

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, see *Plantarum Minus Cognitarum Pugillus* 2: 14-15. 1815, *Nova Acta Regiae Societatis Scientiarum Upsaliensis* ser. 3, 2: 254. 1856 and *Bot. Porto Rico* 1: 27.

1923, *Contributions from the United States National Herbarium* 46: 167-169. 2003.

Cymbopogon Sprengel = Cymbanthelia
Andersson, *Gymnanthelia* Schweinf.,
Gymnanthelia Andersson

From the Greek *kymbe* “a boat” and *pogon* “a beard,” referring to the many-awned spikelets and boat-shaped spathes or to the glumes; see Kurt Polycarp Joachim Sprengel, *Plantarum Minus Cognitarum Pugillus*. 2: 14. 1815.

About 40/55(-60) species, Old World tropics and subtropics. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial or rarely annual, robust, tussocky, tall, aromatic, herbaceous, densely tufted, unbranched, internodes solid, auricles absent, ligule membranous and fringed or not or scarious, leaves linear to lanceolate, plants bisexual, inflorescences spatheate and spatheolate, large panicles compound and multibranching, racemes short and long peduncled, at the tip of each branch 2 small racemes, racemes paired and enclosed in a reddish spatheole, spikelets paired and dissimilar, sessile spikelet dorsally compressed and pedicelled spikelet never concave on the back, sessile spikelets awned and with 1 fertile floret above a sterile floret, 2 glumes more or less equal, lower glume flat or concave and laterally 2-keeled, upper lemma 2-lobed or bifid pedicellate spikelets awnless and sterile, palea absent, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, usually grazed when young, several species provide seed for small birds, ornamental for foliage and for the inflorescences, under certain conditions several species could develop toxic properties, aromatic oils used in medicine and as flavouring agents, highly flammable, diverse uses in food, in perfumery and pharmaceutical industry and as a natural precursor of semisynthetic vitamin A, essential oils from different species of the genus *Cymbopogon* are known for their antimicrobial activity, may be harmful if ingested in quantity, populations occurring in the wild harbor considerable genetic variation, a difficult genus, resembles *Andropogon* L., drought-resistant, occurs from mountains and grasslands to arid zones, dry soils, savannah, rainforest, open habitats, type *Cymbopogon schoenanthus* (L.) Spreng., see *Species Plantarum* 2: 1045. 1753, *Catalogus plantarum horti botanici monspeliensis* 78. 1813, *Plantarum Minus Cognitarum Pugillus* 2: 14-15. 1815, *Allgemeine Gartenzeitung* 3: 267. Berlin 1835, *Florae Africae Australioris Illustrationes Monographicae* 109. 1841, *Synopsis Plantarum Glumacearum* 1: 383. 1855 [1854], *Nova Acta Regiae Societatis Scientiarum Upsaliensis* ser. 3, 2: 254. 1856, *Beitr. Flora Aethiopiens* 229. 1867 and *Bulletin of Miscellaneous Information Kew* 1906: 322, 350-351, 357. 1906, *J. Bombay Nat. Hist. Soc.* 51: 890-916. 1953 and 52: 149-183. 1954, *Cytologia* 19: 97-103. 1954, *Folia Primatologica* 15: 1-35. 1971, S. Soenarko, “The

genus *Cymbopogon* Sprengel (Gramineae).” *Reinwardtia* 9(3): 225-375. 1977, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Cytology and Genetics* 21: 21-34. 1986, *Cytologia* 53: 517-524. 1988, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Flora Mesoamericana* 6: 390-391. 1994, *Journal of Cytology and Genetics* 24: 241-246. 1994, *Cymbopogon: The Aromatic Grass*. Monograph/edited by Sushil Kumar, Samresh Dwivedi, A.K. Kukreja, J.R. Sharma and G.D. Bagchi. Lucknow, Central Institute of Medicinal & Aromatic Plants 2000, Liliana M. Giussani, J. Hugo Cota-Sánchez, Fernando O. Zuloaga and Elizabeth A. Kellogg, “A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis.” *Am. J. Bot.* 88: 1993-2012. 2001, *Contributions from the United States National Herbarium* 46: 167-169, 243. 2003, *Weed Biology and Management* 4(1): 19-23. Mar 2004, *Journal of Applied Ecology* 41(2): 224-237. Apr 2004, E.K. Kakudidi, “Cultural and social uses of plants from and around Kibale National Park, Western Uganda.” *African Journal of Ecology* 42(s1): 114-118. Aug 2004, *Helicobacter* 9(s1): 42-48, Aug 2004, *African Journal of Ecology* 42(3): 237-238. Sep 2004, *Letters in Applied Microbiology* 39(5): 395-400. Nov 2004, *Weed Biology and Management* 4(4): 239-248. Dec 2004, *Medical and Veterinary Entomology* 18(4): 449-452. Dec 2004, *Journal of Applied Microbiology* 97(6): 1289-1296. Dec 2004, *Ecological Management and Restoration* 6(1): 43-50. Apr 2005, *International Journal of Food Science and Technology* 40(1): 97-103. Jan 2005, *Austral. Ecology* 30(4): 445-464. June 2005.

Species

C. spp.

in English: lemon grasses

C. ambiguus A. Camus (*Andropogon ambiguus* Steudel, nom. illeg., non *Andropogon ambiguus* Michx.; *Cymbopogon ambiguus* (Steudel) A. Camus; *Cymbopogon exaltatus* sensu J. Black, non (R. Br.) Domin; *Cymbopogon exaltatus* var. *ambiguus* (A. Camus) Domin)

South Australia, Western Australia, Queensland, New South Wales, Northern Territory. Perennial, slender, tufted, lemon-scented, caespitose, forming erect and leafy tussocks, leaves bluish green or sometimes reddish, sheath glabrous, stems erect or arching, densely villous racemes paired and more or less erect, very narrow panicles, sheathing bract, spikelets blue-green and very hairy or densely silky-villous, awn slender, not usually grazed, rarely eaten by stock, moderately palatable to rabbits, handsome and very attractive, drought resistant, revegetation, used by the Australian aborigines for analgesic purposes, the fresh grass is crushed between the hands and the scent inhaled to relieve congestion, the whole plant dried used as a liniment for scabies,

sores, cramp and sore heads, growing on rocky hills, shallow rocky soils, exposed granite and on roadsides which have shallow loam or clayey soils, also along creek banks in stony uplands, often near water courses, see *Flora Boreali-Americana* 1: 58. 1803, *Synopsis Plantarum Glumacearum* 1: 385. 1854 and *Bibliotheca Botanica* 85: 273. 1915, *Revue de Botanique Appliquée & d'Agriculture Coloniale* 1: 290. 1921.

in English: scented grass, lemon scented grass, scented oilgrass, scent grass, lemon grass

C. bombycinus (R. Br.) Domin (*Andropogon bombycinus* R. Br.; *Andropogon exaltatus* var. *lanatus* (R. Br.) Hack.; *Andropogon lanatus* R. Br.; *Andropogon procerus* var. *schultzei* Hack.; *Cymbopogon bombycinus* (R. Br.) A. Camus, nom. illeg., non *Cymbopogon bombycinus* (R. Br.) Domin; *Sorghum bombycinum* (R. Br.) Kuntze) (referring to the silky hairs of the spikelets, Greek *bombyx*, *bombykos* "silk, silk-worm, silk garment," Latin *bombyx*, *bycis* "silk-worm, silk, any fine fiber")

Western Australia, Queensland, Northern Territory. Perennial, erect, tufted, tough, forming erect and rigid tussocks, stems slender and rigid, leaves narrow and rigid, woolly spikelets with long silky hairs, ornamental and attractive, an increaser species, sandy or stony soils, along stream banks, alluvial flats, see *Prodromus Florae Novae Hollandiae* 202. 1810, *Monographiae Phanerogamarum* 6: 595-596. 1889, *Revisio Generum Plantarum* 2: 791. 1891 and *Bibliotheca Botanica* 85: 274. 1915, *Revue de Botanique Appliquée & d'Agriculture Coloniale* 1: 290. 1921.

in English: citronella grass, silky oilgrass

C. caesioides (Nees) Stapf (*Andropogon caesioides* Nees ex Hook. & Arn.; *Andropogon connatus* Hochst. ex A. Rich.; *Andropogon excavatus* Hochst.; *Andropogon schoenanthus* L.; *Andropogon schoenanthus* subsp. *schoenanthus* var. *caesioides* (Nees) Hackel; *Andropogon schoenanthus* var. *caesioides* (Nees ex Hook. & Arn.) Hack.; *Andropogon schoenanthus* var. *caesioides* (Nees ex Hook. & Arn.) Rangachariar, nom. illeg., non *Andropogon schoenanthus* var. *caesioides* (Nees ex Hook. & Arn.) Hack.; *Andropogon schoenanthus* var. *gracillimus* Hook.f.; *Cymbopogon caesioides* (Nees ex Hook. & Arn.) Stapf; *Cymbopogon caesioides* (Hook. & Arn.) Stapf; *Cymbopogon connatus* (Hochst. ex A. Rich.) Chiov.; *Cymbopogon connatus* var. *muticus* Chiov.; *Cymbopogon excavatus* (Hochst.) Stapf; *Cymbopogon excavatus* (Hochst.) Stapf ex Burt Davy; *Cymbopogon schoenanthus* (L.) Spreng.; *Trachypogon schoenanthus* (L.) Nees) (Latin *caesioides* "bluish gray")

Eastern Africa, Somalia, southern India, Sri Lanka, South Africa, Namibia, Swaziland. Perennial, straggling, tufted or densely tufted or loosely tufted, tussocky, usually unbranched, wiry, erect, knotted woody rhizome, lower portions of the stem not covered with leaf sheaths, narrow leaf blade widest at the base, leaf sheath rounded and smooth,

ligule a short and rounded membrane, basal leaf sheaths glabrous, linear leaves blue-green and waxy, thick inflorescence, erect false panicle narrow to narrowly oblong, each pair of spike-like racemes partially enclosed by a spathe, spikelets paired, 1 spikelet sessile and with a twisted awn, pedicelled spikelet narrowly lanceolate, sessile raceme with lowest pedicel swollen, panicle remains yellow-green at maturity, a weed, low grazing value, poorly utilized, low palatable and hard, only eaten when very young, very unpalatable because of its bitter leaves and peppery scent, strong turpentine smell, sour by nature, eaten by goats in Tanzania, used for thatching roofs, found in most veld types, damp ground, open areas, fixed dunes, shrubby vegetation, alluvial plains, on red loamy sand, near the coast, steep rocky hillsides, stony soil, open grassy plain, upland hillsides, overgrazed veld, field borders, cliffs, closely related to *Cymbopogon martinii* (Roxb.) J.F. Watson and *Cymbopogon pospischilii* (K. Schum.) C.E. Hubbard, see *Species Plantarum* 2: 1046. 1753, *The Botany of Captain Beechey's Voyage* 244. 1838, *Tentamen Florae Abyssinicae* ... 2: 464. 1850, *Gaz. N.W. Prov. Ind.* 392. 1882, *Monographiae Phanerogamarum* 6: 610. 1889, *The Flora of British India* 7(21): 205. 1897 [1896] and *Bulletin of Miscellaneous Information Kew* 1906(8): 360-361. 1906, *Grasses of Burma* ... 125. 1960, *Journal of Cytology and Genetics* 19: 15-20. 1984, *Pakistan Journal of Botany* 17: 309-310. 1985, *Cell and Chromosome Research* 15(3): 16. 1992.

in English: broad-leaved turpentine grass, kachi grass, inchi grass, buchu grass, turpentine grass, common turpentine grass, eau-de-Cologne grass, ginger grass, lemon-scented grass, lemon grass

in Arabic: m'hâh

in India: adavi nimma gaddi, anji hullu, kaamaanchi hullu, kaasi gaddi, kaasi hullu, kharadaa kaasi hullu, mandappullu, muchival pullu, naati laamancha, kaamaakshi pullu

in Vietnam: co dit, co thui

in Namibia: Heng'ge (Vasekele)

in Somalia: sandul, sandool

in East Africa: ang'we

in Rodrigues Island: citronelle, citronelle marron

in Southern Africa: boegoegrass, buchugras, lemoengras, stinkgras, suurgras, suurpol, gewone terpenyngras, terpenyngras, breëblaarterpenyngras, breitblättriges pfeffergras, koperdraadgras; imbubu (Zulu); mkakama, umqungu (Tswana); patiane (Sotho)

in southern Rhodesia: mWaa

C. calciphilus Bor

Thailand. Indeterminate species, see *Dansk Botanisk Arkiv* 23: 157. 1965.

in Thailand: ya kho daeng

C. cambogiensis (Balansa) E.G. Camus & A. Camus (*Andropogon cambogiensis* Balansa; *Cymbopogon siamensis* Bor)

Southeast Asia, Thailand. See *Journal de Botanique, rédigé par une société de botanistes* 4: 114. 1890 [*Journal de Botanique (Morot)*] and *Flore Générale de l'Indo-Chine* 7: 351. 1922, *Dansk Botanisk Arkiv* 23: 158. 1965.

in Thailand: yaa frik fran, yaa phrik phraan, ya phrik phran

C. citratus (DC.) Stapf (*Andropogon ceriferus* Hack.; *Andropogon citratus* DC.; *Andropogon citratus* DC. ex Nees; *Andropogon citriodorum* hort. ex Desf.; *Andropogon nardus* subsp. *ceriferus* (Hack.) Hack.; *Andropogon roxburghii* Nees ex Steud.; *Andropogon schoenanthus* L.; *Cymbopogon citratus* (DC. ex Nees) Stapf; *Cymbopogon citratus* (Nees) Stapf; *Cymbopogon nardus* subvar. *citratus* (DC.) Roberty)

Southeast Asia, Sri Lanka, South India, Nepal. Perennial bunchgrass strongly lemon-scented, blue green, canelike stems slender to robust, densely clumped, bushy, tall, very leafy, short oblique rhizome, leaves sheathing, ligule a fringed membrane, sheaths slightly flattened and more or less waxy, leaves narrowed at the base or tapered to both ends, nodding inflorescence, rachis nodes and pedicels ciliate, lax false panicles, spathe bracts linear-lanceolate, sessile spikelet bearing 2 florets, paired and dissimilar spikelets, sessile spikelet linear-lanceolate and awnless or with a twisted awn, raceme with lowest pedicel not swollen, lower glume of sessile spikelet concave or flat, lower floret reduced to an empty lemma, upper floret hermaphrodite and awnless, pedicelled spikelet elliptic-oblong, palea mostly absent, 2 lodicules, 3 stamens, plumose stigmas, propagation is by root or plant division, plants rarely flower or set seed, essential oils, culinary herb, stem and leaves are used for cooking, the lemon-scented foliage used as a flavouring and a masking fragrance, used in herbal teas and in the preparation of a highly spiced sherbet, scent for soaps and creams, reported to have antimicrobial activity, considered a carminative and insect repellent, used against coughing, muscular aches and pains, insufficient milk in breast feeding mothers, headaches, oil acts as a central nervous system depressant, lemongrass oil is obtained by steam distillation of partially wilted leaves, commonly cultivated and wild, grows well in sandy soils with adequate drainage, semi-deserts, savannah, in clearings, sunny warm and humid conditions, see *Species Plantarum* 2: 1046. 1753, *Catalogus plantarum horti botanici monspeliensis* 78. Montpellier, Paris, Strasbourg 1813, *Tableau de l'École de Botanique* 15. 1815, *Allgemeine Gartenzeitung* 3: 267. 1835, *Synopsis Plantarum Glumacearum* 1: 395. 1854, *Flora Brasiliensis* 2(4): 281. 1883, *Monographiae Phanerogamarum* 6: 605. 1889, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 155. 1899 and *Handb. Fl. Ceylon* 5: 243. 1900, *Bulletin of Miscellaneous Information Kew* 1906: 322, 357. 1906 [also *Kew Bulletin*], *Handb. Fl.*

Ceylon 6: 335. 1931, *Grasses of Ceylon* 193. 1956, *Grasses of Burma ...* 126. 1960, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 174. 1960, *Taxon* 49(2): 246. 2000.

in English: camel grass, lemon grass, true lemon grass, melissa grass, rosha grass, sweet rush, ginger grass, fever grass, West Indian lemon grass, West Indian lemon, citronella, citronella grass, mulch grass

in French: citronnelle, herbe citron, verveine des Indes, fausse citronnelle

in Angola: belgata, chá de gabão, chá de princípios, matitiiti

in Benin: tiwouroussou, ousofoussouhou

in Cameroon: bealibe ti, bejaba ti, beyebe ti, hundè, ti

in Gambia: kanyang yallo

in Guinea: idel tegag, walel waregag

in Guinea-Bissau: belgata

in Morocco: sitronil

in Nigeria: achara ehi, akwukwo, eti, ikon eti, isoko, kooko oba, koriko oba, koriko oyinbo, myoyaka makara, oko oba, tsauri

in Sierra Leone: anwoapotho, bichineyo, bichinyeyo, lemon gras, pei-poto, popana, pu-lumbe, pudumbi, pulumbi, ti

in Yoruba: koriko oba, koriko oyinbo, kooko oba, oko oba, tii, eti, isoko

in Pacific: moengalo

in Burma (Myanmar): sabalin

in Cambodia: sacrey, slek krey sabou

in China: iang mao, hsiang mao ts'ao

in India: abichhathraka, agia ghas, agin ghas, aginghas, agya-ghans-tail, akyaghas-ka-air, athigandha, badhira, badhiradhvanibodhana, bhoostrhina, bhoothika, bhor, bhustrina, bhuthina, bohr, chaa hullu, chae Kashmiri, chaathappu, chaayapuu, chayapul, chhathra, chippa-gaddinune, chippagaddi, choakappullu, devajagdhaka-tailam, gandha bela, gandha-bena, gandhabena, gandhatrana, gandhathrina, gandhatrina, gavathichahaa, gavaticaha, gochhalaka, guchhala, guhyabeeja, gundardha, haree chaha, hazar-masaleh-ka-aatar, hirua cha, hirvacha, jambukapriya, karenduka, karpooora pullu, karpoorpul, karpura-pullu-yenney, khawi, kutimbaka, lili cha, lilicha, lilli-chaya-tel, majjige hullu, malathrinaka, mikkotiu, mirchia gand, nimbe hullu, nimma-gaddi-nune, nimmagaddi, olancha, olecha, patichachaha, pengrima-tel, penguin, poonsvavighraha, poothigandha, purhali hullu, purvali-hullu-yanne, roghanchae-kashmiri, rohisha, rusa, rusa ka tel (grass oil of Nimar), sabalen-si, samalambi, sambaara hullu, sambharapulla-enna, shambharapull, shringarocha, sugandha, sugandhichaha, takratani, takratrani, thakkaathana, thakrathruna, tikari, vaasana gaddi, vaasana pullu, vasanap-

pulla-enna, vasanappillu, vasanappulla, vasanapulla, vasanapull, vasane-hullu-yanne, vashanap-pullu-yenney, vashanup pulla

in Indonesia: bubu, serai dapur, sereh

in Laos: 'si khai, 'sing khai

in Malaysia: serai, serai dapur, sereh

in the Philippines: balioko, baroni, belioko, paja de meca, salai, salay, tanglad

in South Laos: (people Nya Hön) bum sray

in Sri Lanka: sera, serai

in Thailand: cha khrai, ho wo ta po, howo tapo, hua sing khai, kha hom, khaa hom, khrai, loe kroei, soet kroei, ta khrai

in Vietnam: huong mao, la sa, s[ar] chanh, sa, say ya

in Spanish: pasto limón, zacate limón

in Portuguese: citronela

in Brazil (Amazonas): makiyuma hanaki, makiyuma xik, patchuli, waihi hanaki

in Brazil: capim-catinga, capim-cheiroso, capim-cidreira, capim-cidrilho, capim-ciri, capim-de-cheiro, capim limão, capim-marinho, capim santo, erva cidreira, grama-cidreira, patchuli, patchuli-falso, vervena, yerba Luisa

in the Caribbean: citronnelle, sitwonnèl

in Central America: limonera, te de limón, zacate limón, zacate de limón

in Colombia: limoncillo

in Costa Rica: to kri, togli

in Ecuador: hierba de limón, hierba luisa, limoncillo

in Guatemala: llmon ch'iim, lmunch chim, tè de limón, zacate limón

in Mexico: Imoo toom, ocozacatl, pasto limón, tè limón, zacate limón, zacatlatlaunqui

in Nicaragua: sagádi, sagádi abirua, ti

in Puerto Rico: caña limonaria

in South America: ajéj, arak, cedrón, hierba buena, hierba lousa, hierba luisa, limoncillo, limonera, paja cedrón, pipirí, yerba juiza, yerba luisa, yerba luiza

in Venezuela: malojo

in West Indies: fever grass, lemon grass, sitwonele, citronelle, herbe lemon, herbe citronelle

C. coloratus (Hook.f) Stapf (*Andropogon coloratus* Nees ex Wight; *Andropogon nardus* subsp. *glomeratus* Hack.; *Andropogon nardus* var. *coloratus* Hook.f)

Asia, Southeast Asia, India. Perennial, aggressive, nonpalatable grass, used for perfuming soaps, see *Monographiae Phanerogamarum* 6: 604. 1889, *The Flora of British India* 7(21): 206. 1897 [1896] and *Bulletin of Miscellaneous Information Kew* 1906: 321. 1906.

in English: boda grass

in India: boda gaddi, manakru pillu, manjen pullu, senga manu mala pillu, sengana pillu

C. commutatus (Steud.) Stapf (*Andropogon commutatus* Steud.; *Cymbopogon divaricatus* Stapf; *Cymbopogon flocosus* (Schweinf.) Stapf)

Tropical Africa, Asia, India. Perennial, variable, tufted to densely tufted, erect, sweetly scented, basal leaf sheaths glabrous or hairy, leaves flat or filiform, inflorescence linear, racemes ciliate, sessile and pedicelled spikelets lanceolate to narrowly lanceolate, lowermost pedicel of the sessile raceme swollen, lower glume of sessile spikelet with rounded keels, awn of upper lemma geniculate, low to medium palatability, grazed, used for roofing, found in degraded areas, deciduous bushland, open sandstone hillsides, grassy plains, limestone, hillsides, wadi, see *Synopsis Plantarum Glumacearum* 1: 387. 1854 and *Flora of Tropical Africa* 9: 276, 278. 1919, *Bulletin of Miscellaneous Information Kew* 1907: 211. 1907.

in Somalia: hadaf

in Arabic: sakhbar, idhkhir, khasab, hamra

C. densiflorus (Steud.) Stapf (*Andropogon densiflorus* Steud.; *Andropogon schoenanthus* L.; *Andropogon schoenanthus* subsp. *densiflorus* Hack.; *Andropogon schoenanthus* var. *densiflorus* (Steud.) Hack.; *Andropogon stypticus* Welw.; *Cymbopogon schoenanthus* (L.) Spreng.; *Cymbopogon schoenanthus* var. *densiflorus* (Hack.) Rendle; *Cymbopogon schoenanthus* var. *typicus* Rendle; *Cymbopogon stypticus* (Welw.) Fritsch)

Tropical Africa. Annual or perennial, tufted, aromatic, ornamental, inflorescences used in rituals, growing in open habitats, along roadsides, grassland, see *Species Plantarum* 2: 1046. 1753, *Plantarum Minus Cognitarum Pugillus* 2: 15. 1815, *Synopsis Plantarum Glumacearum* 1: 386. 1854, *Boletim da Sociedade Broteriana* 3: 139. 1885, *Monographiae Phanerogamarum* 6: 609. 1889, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 154. 1899 and *Bulletin de l'Herbier Boissier, sér. 2, 1*(11): 1099. 1901, *Flora of Tropical Africa* 9: 289. 1919, *Taxon* 49(2): 246. 2000.

in Angola: evulu, kaxinde, kiangu, musoso, onkotankota, saku-saku, saku

C. dependens B.K. Simon

Australia, Northern Territory. Rare species, see *Austrobaileya* 3(1): 79-99. 1989 [Studies in Australian grasses: 4. Taxonomic and nomenclatural studies in Australian Andropogoneae].

C. dieterlenii Stapf ex Schweick. (*Andropogon dieterlenii* Stapf; *Cymbopogon dieterlenii* Stapf ex E. Phillips)

South Africa. Perennial, forming large clumps, tufted, ligule pointed, leaves basal, inflorescence paniculate with spatheate racemes, spikelets sessile and pedicellate, sessile spikelets

with winged lower glume, palatable only when young, in South Africa traditional healers use it to remove bad luck after the death, found in mountain slopes and veld, among boulders, open areas, see *Annals of the South African Museum* 16: 336. 1919, *Bulletin of Miscellaneous Information Kew* 1936(5): 325. 1936 [or *Kew Bulletin* 1936: 325. 1936].

in South Africa: lebate, leбата, lebatjana

C. *distans* (Nees) J.F. Watson (*Andropogon distans* Nees ex Steud.; *Andropogon nardus* var. *distans* (Nees ex Steud.) Hack.; *Cymbopogon distans* (Nees ex Steud.) J.F. Watson)

Asia, India, Jammu and Kashmir State. Perennial, simple, aromatic and sweet smelling, smooth, glabrous, fibrous roots, basal sheaths very short, ligule membranous scarious, old leaf sheaths fibrous, leaf blades rounded at the base with a long filiform tip, leaves mostly basal, panicle with paired racemes, lower floret empty, upper floret hermaphrodite, erosion control, subtropical or tropical savannah, dry habitats, see *Synopsis Plantarum Glumacearum* 1: 387. 1854, *Gaz. N.W. Prov. India* 392. 1882, *Monographiae Phanerogamarum* 6: 608. 1889 and *Proceedings of the Indian Academy of Sciences* 71: 97. 1970, *Reinwardtia* 9: 356. 1977.

in India: sunni ghas

C. *exaltatus* (R. Br.) Domin (*Andropogon exaltatus* R. Br.; *Cymbopogon procerus* (R. Br.) Domin)

Australia. See *Prodromus Florae Novae Hollandiae* 1: 202. 1810 and *Bibliotheca Botanica* 85: 273. 1915, *Revue de Botanique Appliquée & d'Agriculture Coloniale* 1: 290. 1921.

C. *flexuosus* (Nees ex Steudel) J.F. Watson (*Andropogon ampliflorus* Steud.; *Andropogon flexuosus* Nees ex Steud.; *Andropogon nardus* var. *flexuosus* (Nees ex Steud.) Hack.; *Cymbopogon flexuosus* (Steud.) J.F. Watson; *Cymbopogon flexuosus* (Nees ex Steud.) Stapf, nom. illeg., non *Cymbopogon flexuosus* (Nees ex Steud.) J.F. Watson; *Cymbopogon travancorensis* Bor)

Indomalesia, Asia tropical, India. Perennial, rather variable, vigorous, tufted, aromatic, terete, erect, solid, smooth and glabrous, nodes sometimes short-bearded, leaf blade linear-acuminate tapering at both ends, tomentose patches at the base of the leaf blade, sheath clasping the culm, ligule papery, short thick rhizome, leaves sheathing, inflorescence paniculate with crowded paired racemes, a spatheole subtending a pair of racemes, large and loose panicle with many drooping branches, spikelets paired, pedicelled spikelet male or sterile, lower floret reduced to an empty lemma, upper floret hermaphrodite, palea absent, 2 lodicules, 3 stamens, plumose stigmas, commonly cultivated and sometimes naturalized, waterlogging not tolerated, often cultivated as a garden plant, rainfed crop, propagation is by root or plant division, essential oils, flavouring, used in herbal teas, widely used as a fragrance in perfumes and cosmetics, considered a carminative and insect repellent, oil has

antifungal activity, useful for acne and excessive perspiration, muscular pain, grows well in sandy soils with adequate drainage, fertile sandy loams, fields, along roadsides, slopes, ridges, forest, see *Synopsis Plantarum Glumacearum* 1: 388. 1854, *Gaz. N.W. Prov. India* 10: 392. 1882, *Monographiae Phanerogamarum* 6: 603. 1889 and *Bulletin of Miscellaneous Information Kew* 1906(8): 319-321. 1906, *Journal of the Bombay Natural History Society* 51: 903. 1954, *Genetica* 72: 211-215. 1987, *Bangladesh Journal of Botany* 16: 109-110. 1987, *Journal of Cytology and Genetics* 34(2): 161-168. 1999.

in English: Malabar oil, Malabar grass, Malabar lemon-grass, Cochin grass, Cochin lemongrass, East Indian lemon grass, ginger grass, lemongrass

in French: herbe de Malabar, verveine des Indes

in Spanish: pasto de Malabar

in Brazil: capim-catinga, capim-cheiroso, capim-cidreira, capim-cidrilho, capim-ciri, capim-de-cheiro, capim limão, capim limão da Índia oriental, capim-marinho, capim santo, erva cidreira, grama-cidreira, patchuli, patchuli-falso, vervena

in India: anthibale hullu, kodi pullu, kodipullu, shunti hullu

in Vietnam: co sa, s[ar] d[i]j[u]

C. *flexuosus* (Nees ex Steudel) J.F. Watson var. ***microstachys*** (Hook.f.) Bor (*Andropogon nardus* var. *microstachys* Hook.f.)

India, Uttar Pradesh, Singapore. Rare species, see *The Flora of British India* 7: 207. 1896 and *Journal of the Bombay Natural History Society* 52: 162. 1954.

C. *gidarba* (Ham. ex Hook.f.) Haines (*Andropogon gidarba* Ham. ex Hook.f.; *Andropogon gidarba* Buch.-Ham. ex Steud.; *Andropogon gidarba* Buch.-Ham.; *Cymbopogon gidarba* (Buch.-Ham. ex Steud.) A. Camus; *Cymbopogon gidarba* (Buch.-Ham. ex Steud.) Haines)

India. A good fodder grass, see *Synopsis Plantarum Glumacearum* 1: 387. 1854, *The Flora of British India* 7(21): 208. 1897 [1896] and *Bulletin du Muséum d'Histoire Naturelle* 26: 562. 1920, *The Botany of Bihar and Orissa* 1: 48. 1924.

in India: benne hanchi hullu

C. *giganteus* (Hochst.) Chiov. (*Andropogon giganteus* Hochst., nom. illeg., non *Andropogon giganteus* Ten.; *Andropogon giganteus* (Chiov.) Eyles; *Cymbopogon conatus* var. *benearmatus* Chiov.; *Cymbopogon giganteus* Chiov.)

Tropical Africa. Perennial, herbaceous, pithy stems, robust, tufted to loosely tufted, rhizomatous, erect, thick, sometimes stilt-rooted, ligule scarious, aromatic to strongly smelling, pepper flavour, leaves more or less cordate, inflorescence cylindrical, false panicle linear, sessile spikelet elliptic, lower glume membranous and winged, upper

lemma awned, pedicelled spikelet lanceolate, essential oils in the inflorescences, vigorous, used for soil erosion, browsed when young, low nutritive value, unpalatable when old, thatching material, fencing, occurs in wooded grasslands, open habitats, deciduous savannah bushland, forest, silty soils, fallows, savannah, see *Flora Napolitana* 5: 285. 1835-1836[-1838], *Flora* 27: 242. 1844 and Emilio Chiovenda (1871-1941), *Intorno ad alcune graminacee da essenze ed a quelle della Colonia Eritrea*. Roma 1909, *Transactions of the Royal Society of South Africa* 5: 296. 1916, *Kew Bulletin* 19: 454. 1965.

in English: tsauri grass, scented reed, wolf's grass, scented grass

in French: citronnelle de brousse

in Arabic: nal, seko

in Benin: meunououse, yakimooribou

in Gambia: benefalu, kala kasala, wa, wa serrela

in Ghana: gbetenga, mopele mogo, ngkabe

in Guinea: ediediyita, endediyita, endiediyita, osamban

in Ivory Coast: awendè, boborasien, fime, fimu, nukian, nuyapien, surugubi, wozomo

in Mali: dagè, gagèli, kièkala, kogniorè, tièkala, tièkala bilé

in Niger: abanazar, abanozar, ahanbarom, ahanibaerum, gadjiali, gajaali, goso faryé, sabré, wadjialo

in Nigeria: gamba, kyara, mobefa, nal, nugbwanu bmagna, oka eye, riyak, seko, sukkahoreho, tsabre, tsagre, tsaure, wajaalo, wajande

in Senegal: ara, begnfala, bègnfala, bègnfalo, beignfala, beignefala, benfala, benfalo, bengfala, dagé, dagué, ebuk, èbuk, ebukay, èbukay, éputa, gadé, gadié, gagèli, gapélé, gosofaryé, holl, inak, kala, kékala, kiékala, konorè, mbal, mbol, mbonfala, mbönfala, nak, ñak, nipéré, sabré, tékala, tiékala, tiékala bilé, trékala, wa, wa kasala, wakasala

in Upper Volta: boborasien, fasaure, fbopbo rasienasuure, gajaalo, kasseburu, kuèrè, kurukuru, mofogo, natamora, nata moza, surugubi, tièkala

in Yoruba: oka eye

C. goeringii (Steud.) A. Camus (*Andropogon goeringii* Steud.; *Andropogon nardus* var. *goeringii* (Steud.) Hack.; *Cymbopogon tortilis* var. *goeringii* (Steud.) Hand.-Mazz.) (named for the German chemist Philip Friedrich Wilhelm Goering, 1809-1876, botanical collector in Japan)

Southeast Asia. See *Flora* 24: 22. 1846, *Monographiae Phanerogamarum* 6: 607. 1889 and *Revue de Botanique Appliquée & d'Agriculture Coloniale* 1: 286. 1921, *Revue de Botanique Appliquée & d'Agriculture Coloniale* 5: 206. 1925, *Symbolae Sinicae* 7(5): 1314-1315. 1936, *Reinwardtia* 9(3): 346. 1977.

C. jwarancusa (Jones) Schult. (also spelled *iwarancusa*) (*Andropogon himalayensis* Gand., nom. illeg., non *Andropogon himalayensis* Steud.; *Andropogon jwarancusa* Jones; *Cymbopogon iwarancusa* (Jones) Schult.; *Cymbopogon jwarancusa* Schultes) (the word *Cusa* is perhaps derived from the Sanskrit word *Kusha* for grass)

Africa, Asia, Uttar Pradesh, India, Pakistan. Perennial, densely tufted, very aromatic, leaf sheaths more or less inflated below, ligule membranous and ciliolate, leaf blades flat with a long filiform tip, long and narrow panicles conspicuously hairy to densely villous, racemes unequal, lowermost pedicel of the sessile spikelet not swollen, lower glume of the sessile spikelet with sharp keels, with 4 different dispersal units: a paired spikelet, a partial raceme, an entire raceme and a partial inflorescence, effective barrier against soil erosion, useful species for conserving soil and water in arid lands, medicinal grass used in Ayurvedic traditional medicine, used to purify blood and in coughs, boiled in wine as a diuretic, occurs on sand dune, arid and semiarid lands, arid stony plains, see Sir William Jones (1746-1794), "Botanical observations on select Indian plants." *Asiatic Researches* 4: 237-312. 1795, *Mantissa* 2: 458. 1824, *Bulletin de la Société Botanique de France* 46: 421. 1899.

in English: Iwarancusa grass, oilgrass

in India: amrinala, avadahaka, avadataka, bur, deerghamoola, ghatyari, ghatzari, ibharankusha, ibharankussa, ishthaka pathika, izkhir, izkir, jalashaya, jara khus, karankusa, karankusha, karankussa, karilaavancha hullu, khavi, khawi, khoi, laghu, lamajjaka, lamjak, lavaja, laya, nalada, panni, pivalavala, pilo valo, purale hullu, purvele hullu, san, sandula, sevyra, shighra, solara, sunala, sunila

C. jwarancusa (Jones) Schult. subsp. *olivieri* (Boiss.) Soenarko (*Andropogon arriani* Edgew. ex Hook.f.; *Andropogon jwarancusa* subsp. *laniger* Hook.f.; *Andropogon olivieri* Boiss.; *Cymbopogon arriani* (Edgew. ex Hook.f.) Aitch.; *Cymbopogon ladakhensis* B.K. Gupta; *Cymbopogon olivieri* (Boiss.) Bor)

Asia temperate and tropical, Nepal, India, Iraq. Perennial, densely tufted, see *Diagnoses plantarum orientalium novarum* 5: 76. 1844, *Catalogue of the Plants of the Punjab and Sindh* 174. 1869, *The Flora of British India* 7(21): 203. 1897 [1896] and *Notes from the Royal Botanic Garden, Edinburgh* 25(1): 62. 1963, *Proceedings of the Indian Academy of Sciences* 71: 10. 1970, *Reinwardtia* 9(3): 307. 1977.

C. khasianus (Munro ex Hackel) Stapf ex Bor (*Andropogon khasianus* Munro ex Duthie; *Andropogon nardus* subsp. *khasianus* Munro ex Hack.; *Andropogon nardus* var. *khasianus* Munro ex Hackel; *Andropogon nardus* var. *khasianus* Hack.) (Khasi Hills, India, Assam)

India. Aromatic, variable, dense and narrow inflorescence, see *The Fodder Grasses of Northern India* 88. 1888,

Monographiae Phanerogamarum 6: 603. 1889 and *Indian Forest Records: Botany* 1(3): 92. 1938, *Journal of the Bombay Natural History Society* 52: 169. 1954.

C. ladakhensis B.K. Gupta

India. Threatened species, see *Proceedings of the Indian Academy of Sciences* 71: 10. 1970 and S.K. Jain & R.R. Rao, *An Assessment of Threatened Plants of India*. Proceedings of the seminar held at Dehra Dun, 14-17 Sept, 1981. Howrah, Botanical Survey of India 1983.

C. marginatus (Steud.) Stapf ex Burt Davy (*Andropogon marginatus* Steud.)

South Africa. Perennial, densely tufted, racemes hairy, lower glume of sessile spikelets winged, found in rocky places, see *Flora* 12(2): 472. 1829 and *Annals of the Transvaal Museum* 3: 121. 1912.

in English: dobo grass, khuskus, lemon grass, scented turpentine grass, Cape turpentine grass, tambootie grass

in Southern Africa: akkerwani, buffelsrooigras, koperdraadgras, kuskusgras, lemoegras, motwortel, motwortelterpentyngras, terpentyngras, muskusgras, platgras, rooigras, tamboekiegras, vrouehaargras; lebatha (Sotho); umqungu (Xhosa)

C. martinii (Roxb.) J.F. Watson (*Andropogon martinii* Roxb.; *Andropogon pachnodes* Trin.; *Andropogon schoenanthus* var. *martinii* (Roxb.) Benth.; *Andropogon schoenanthus* var. *martinii* Hook.f.; *Cymbopogon martinianus* (Roxb.) Schult.; *Cymbopogon martinii* var. *martinii*; *Cymbopogon martinii* var. *sofia* Bruno; *Cymbopogon pachnodes* (Trin.) W. Watson; *Gymnanthelia martinii* (Roxb.) Anderson) (dedicated to a General Martin, collector)

India, Asia tropical. Perennial, leafy, vigorous, terete, densely tufted, tussocky or forming clumps, simple or sparingly branched, smooth, glabrous, long slender stems, lower nodes often swollen, knotty base covered with dry sheaths, ligule membranous, leaf blade oblong-lanceolate with a cordate base, stout woody rhizome, inflorescence a cylindrical contracted panicle, boat-shaped bract, lower floret reduced to an empty lemma, upper floret hermaphrodite, lower glume channelled, palea absent, 3 stamens, plumose stigmas, pedicellate spikelet male with florets reduced to a scale, usually unpalatable to livestock, sometimes eaten by cattle, used to flavour tobacco and in perfumery and as a substitute for oil of rose and oil of geranium, sweet-scented aromatic essential oil has stimulating properties and is used as a remedy for rheumatism, very popular with soap and cosmetic manufacturers, stomachic and tonic, antiseptic and bactericide, antimicrobial, antifungal, used for infections, helps in skin and lymphatic problems, a valuable aid against dermatitis and skin infections, supportive to the nerves and cardiovascular system, restores intestinal flora, stimulates and aids digestion, palmarosa oil is obtained from freshly cut whole flowering plant, possessing an odour resembling geranium and rose, both the herb and the essential oil are

used widely in traditional Indian Ayurvedic medicine, cultivated and wild, useful for erosion control, does not tolerate acid soils or waterlogging, prefers warm and sunny conditions, fertile well-drained soils, see *Hortus Bengalensis, or A Catalogue ...* 7. 1814, *Flora Indica; or Descriptions ...* 1: 280-281. 1820, *Systema Vegetabilium* 459. 1824, *Gaz. N.W. Prov. Ind.* 392. 1882 and *Boll. Stud. Inform. Reale Giardino Coloniale* 10: 66. 1929, *Grasses of Burma ...* 125, 129. 1960, *Journal of Cytology and Genetics* 25: 322-323. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: ginger-grass, geranium oil, East Indian geranium oil, geranium grass, rosha grass, rosha oil grass, roosa grass, rusa grass, rusa oil, russa grass, palmarosa, palmarosa grass, palmarosa oil, motia, sofia, grass of Nemaur

in India: anche hullu, anchit hullu, babra, bhoosthrina, bhor, bhustrina, bili dodda kaashihullu, boosthram, bujina, chipara, coorai pul, dang rhauns, dhyamakah, gandh bel, gandhabena, ghandhabenaa, gandi, gundha-bena, ibharankusha, iwarankusha, kaachihullu, kaashi hullu, kanchi gedde, kanchi kaddi, kamachi kassuvu, kamakshapullu, kannam pullu, kavatham pillu, kavathum pillu, kavattan pullu, kunthi hullu, kurankusha, maaravali hullu, makora, merchya, mircha, mirchia, mirchia gandh, mirchua, moolathrina, moongil pul, motia, motiya, mulathrina, nanj hullu, panni, raos, rauns, rausagas, rhaunsa, rhausa, rhus sugandhi, rohisa, rohish, rohisha, rohishathruna, roinsa, rosa, rosha, roshegavat, roshsagavath, rousa-ka-aatar, rousa-ka-airtr, rousa-ka-tel, rusa (= the fragrant oil obtained from the grass), rusa, sofia, sofia, tikadi-moti, thikari, tikhari, varukaraiaal pul

Local names: rosha, rusa, palma rosa, palmarosa

in Vietnam: s[ar] hoa h[oof]ng

C. microtheca (Hook.f.) A. Camus (*Andropogon microtheca* Hook.f.)

India. Dense inflorescences, leaves not aromatic, see *The Flora of British India* 7: 208. 1896.

C. munroi (C.B. Clarke) Noltie (*Andropogon gyirongensis* L. Liou; *Andropogon hookeri* (Munro ex Hackel) Stapf ex Bor; *Andropogon munroi* C.B. Clarke; *Andropogon tristis* Nees ex Hack.; *Cymbopogon hookeri* Munro ex Hackel; *Cymbopogon hookeri* (Munro ex Hack.) Stapf ex Bor; *Cymbopogon tibeticus* Bor) (named for Sir William Munro, 1818-1880 (Somerset), British botanist, plant collector, agrostologist, 1834-1838 India, 1847 Kashmir, 1870-1875 Barbados, in 1840 a Fellow of the Linnean Society; see E. Bretschneider, *History of European Botanical Discoveries in China*. 1981; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 216. Oxford 1964; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Ralph Randles Stewart, *An Annotated Catalogue of the Vascular Plants of West Pakistan and Kashmir*. Karachi 1972; I.C. Hedge and J.M. Lam-

ond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Asia, China. Nonaromatic, lax inflorescence, racemes paired, see *Monographiae Phanerogamarum* 6: 439, 614. 1889, *Journal of the Linnean Society, Botany* 25: 87-88, t. 37. 1889 and *Indian Forest Records: Botany* 1: 92. 1939, *Kew Bulletin* 8(2): 275-276. 1953, *Kew Bulletin* 27(3): 447-450. 1972, *Flora Xizangica* 5: 329-331. 1987, *Edinburgh Journal of Botany* 56(3): 400. 2000.

C. nardus (L.) Rendle (*Andropogon ampliflorus* Steud.; *Andropogon confertiflorus* Steud.; *Andropogon nardus* L.; *Andropogon nardus* subsp. *nilagiricus* Hack.; *Andropogon nardus* var. *luridus* Hook.f.; *Andropogon nilagiricus* Hochst.; *Andropogon thwaitesii* Hook.f.; *Cymbopogon afronardus* Stapf; *Cymbopogon confertiflorus* (Steud.) Stapf; *Cymbopogon nardus* var. *confertiflorus* (Steud.) Bor; *Cymbopogon thwaitesii* (Hook.f.) Bor, nom. illeg., non *Cymbopogon thwaitesii* (Hook.f.) Willis; *Cymbopogon validus* (Stapf) Burt Davy; *Sorghum nardus* (L.) Kuntze) (Greek *nardos* "spikenard")

Tropical Asia, Sri Lanka, South India. Perennial, harsh, tufted, tall, robust and erect, clump forming, persistent for a number of years, leaves glaucous and narrow, leaf sheaths smooth, inflorescence compact and narrow linear, a panicle with the spikelets arranged in 2 terminal racemes, rachis ciliate and spathes elliptic, spikelets occur in pairs, unawned or awned, racemes at first erect and then deflexed, sessile spikelet flat or concave on the back with winged keels, lower glume of sessile spikelet flat and more or less winged, ornamental, cultivated, invasive and very competitive, very resistant to fire, feeding value low, browsed the young growth, unpalatable to cattle, generally is avoided in grazing, essential oil lemon-scented, flavouring, used as tea, a source of insect repellent and disinfectants, may irritate sensitive skin, useful in perspiration and oily skin, temporary relief of symptoms of cold and flu, good thatching and mulching material, growing on roadsides and waste ground, hills, grassland, deciduous bushland, poor soils, see *Species Plantarum* 2: 1046. 1753, *Synopsis Plantarum Glumacearum* 1: 385, 388. 1854, *Flora* 39: 86. 1856, *Monographiae Phanerogamarum* 6: 604. 1889, *Fl. Br. Ind.* 7: 206. 1896, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 155. 1899 and *Handb. Fl. Ceylon* 5: 242-243. 1900, *Bulletin of Miscellaneous Information Kew* 1906: 355. 1906, *Handb. Fl. Ceylon* 6: 335. 1931, *Journal of the Bombay Natural History Society* 51: 905. 1953, *Grasses of Ceylon* 193. 1956, *Grasses of Burma* ... 130, 132. 1960, *Journal of Cytology and Genetics* 21: 21-34. 1986, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Restoration Ecology* 5(1): 36-43. Mar 1997, *Entomologia Experimentalis et Applicata* 108(1): 43-51. July 2003, *Medical and Veterinary Entomology* 18(4): 449-452. Dec 2004, *International Journal of Food Science and Technology* 40(1): 97-103, Jan 2005.

in English: Mana grass, nard grass, citronella, Ceylon citronella, citronella grass, citronella oil grass, blue citronella grass, false citronella, new citronella grass

in French: citronelle, citronnelle de Ceylan

in Spanish: zacate limón

in Mexico: tè limón, xuxutsakat, zacate citronela, zacate limón

in Cambodia: sacrey

in Japan: kôsui-gaya (= perfume grass)

in India: allapu kommu vellavanti gadda, allupu, bhatri, chora-pulla-enna, chorapulla, citronella aenne hullu, gand bel, ganda-hanchi-khaddi, ganda-hanchi-khaddi-yanne, gandha hanchi kaddi hullu, gandhabael, ganjini, ganjni, ganjni-ka-aatar, ganjini-ka-aitr, ganjni-ka-aitr, ganjni-ka-ghas, guchcha, guchha, kaamaachipillu, kaamaakshi hullu, kaamaakshikasuvu, kaamaakshipull, kaamanchi gaddi, kaavattampullu, kama-kher-tail, kamachi pillu, kamachipillu, kamakher, kamakshi-kasuvu, kamakshi-kasuvu-nune, kamakshi-pillu, kamakshi-pulla, kamakshi-pulla-enna, kamakshi-pullu-yenney, kamakshikasuvu, kamakshipillu, kamanchi-gaddi-nune, kamkshi-kasuvu, kavattam-pullu-yenney, khavai, kommu, maana, mandap-pullu-yenney, mandapullu, ooshadhana, shunnarip-pullu-yenney, sinngou-mia-si, sugandhi gavah, sunnaripullu, usadhana, ushadhan, vasanepillu

in Sri Lanka: lenabatu, mana, hin pengiri, lena batu pengiri

in Thailand: cha khai ma khut, cha khai ma khuut, ta khrai ma khut, ta khrai ma khuut, ta khrai daeng, ta khrai hom

in Vietnam: la sa

in Pacific: kamapui

in Nigeria: tsaure

in Senegal: beignefala, tiberimt, tiékala ba, tsaura

C. nardus (L.) Rendle var. *confertiflorus* (Steud.) Stapf ex Bor (*Andropogon confertiflorus* Steud.; *Andropogon nardus* subsp. *nilagiricus* Hack.; *Andropogon nardus* var. *luridus* Hook.f.; *Andropogon nilagiricus* Hochst.; *Andropogon thwaitesii* Hook.f.; *Cymbopogon confertiflorus* (Steud.) Stapf; *Cymbopogon nardus* var. *confertiflorus* (Steud.) Bor; *Cymbopogon thwaitesii* (Hook.f.) Bor, nom. illeg., non *Cymbopogon thwaitesii* (Hook.f.) Willis)

Southeast Asia, India. Jamrosa oil from the hybrid *Cymbopogon nardus* var. *confertiflorus* x *Cymbopogon jwarancusa*, see *Synopsis Plantarum Glumacearum* 1: 385. 1854, *Flora* 39: 85-86. 1856, *Monographiae Phanerogamarum* 6: 604. 1889, *The Flora of British India* 7: 206. 1896 and *Bulletin of Miscellaneous Information Kew* 1906: 318. 1906, *Journal of the Bombay Natural History Society* 52: 172. 1954.

in Vietnam: la sa

C. nervatus (Hochst.) Chiov. (*Andropogon nervatus* Hochst.; *Andropogon schoenanthus* subsp. *nervatus*)

(Hochst.) Hack.; *Cymbopogon nervatus* var. *aerythraeum* Chiov.; *Gymnanthelia nervata* (Hochst.) Asch. ex Schweinf.)

Asia, Southeast Asia, Africa, Ethiopia, Sudan. Annual or short-lived perennial, erect, fragrant, glaucous, simple, ligule membranous, leaves with rounded base, false panicle linear to oblong, racemes in pairs, sessile spikelet elliptic, lower glume membranous, upper lemma awned, fodder, used for thatching huts and houses, on sandy soils, moist and cultivated habitats, savannah, semideserts, see *Flora* 27: 243. 1844, *Beitrag zur Flora Aethiopiens* ... 306. 1867, *Monographiae Phanerogamarum* 6: 611. 1889 and *Intorno ad alcune graminacee da essenze ed a quelle della Colonia Eritrea*. Roma 1909.

in Sudan: naal

C. obtectus S.T. Blake (*Cymbopogon bombycinus* sensu J. Black, non (R. Br.) Domin) (Latin *obtectus* "hidden, concealed, protected")

Western Australia, Northern Territory, Victoria, South Australia, Queensland, New South Wales. Perennial, slender, tall and leafy, forming erect tussocks, compact base with yellow roots, smooth and aromatic blue green leaves, sheath silky and persistent, shortly branched and compact panicle, racemes paired and densely villous, sheathing bract, spikelets reddish and silky, sessile spikelets awned, very hardy, not usually grazed, may be eaten when young, the plant is generally ignored when mature due to the lemon scent, handsome, ornamental when in flower, revegetation, Aborigines used for medicinal purposes, lemon scented essential oil may be suitable for perfumes, generally found as scattered plants on sandy red earths, dry areas or near water courses, red sands, stony soils, see *University of Queensland Papers: Department of Biology* 2(3): 55. 1944.

in English: silky-heads

C. osmastonii R. Parker (named for Bertram Beresford Osmaston, 1868-1961)

India, Uttar Pradesh; Bangladesh. Perennial vulnerable species, tufted, aromatic, slender, glabrous, culms slightly compressed, ligule ciliolate, leaf blades rounded at the base and acutely pointed, inflorescence a narrow panicle with paired racemes, spikelets awnless, growing in dry habitats, see *Feddes Repertorium* 31: 126. 1932, *Journal of the Bombay Natural History Society* 60: 709-710. 1963.

C. parkeri Stapf (*Andropogon laniger* Desf.)

Qatar, Southeast Asia, India, Jammu and Kashmir, Africa. Perennial grass, erect, caespitose, slender, simple below the inflorescence, hairy sheaths, leaf blades folded and linear with a filiform tip, basal leaves not twisted, panicle spatheate and narrow, 1 sessile raceme, glumes subequal, plant possess antispasmodic properties, useful for erosion control, found in dry rocky areas, see *Bulletin of Miscellaneous*

Information Kew 1929(1): 10-11. 1929, *Proceedings of the Indiana Academy of Sciences* 71: 96. 1970.

in Arabic: askhabar, skhabar

in India: gundar, khawi, runa, san, solara

C. pendulus (Nees ex Steudel) J.F. Watson (*Andropogon nardus* L. var. *grandis* Hackel; *Andropogon pendulus* Nees ex Steud.)

India, Jammu and Kashmir. Aromatic, lemon-scented, leaves glaucous, an oil obtained from this plant was found to be rich in elemicin (53.7%, 5-allyl-1,2,3-trimethoxybenzene), a starting material for a systemic antibacterial drug, see *Synopsis Plantarum Glumacearum* 1: 388. 1854, *Gaz. N.W. Prov. India* 392. 1882.

in English: Jammu lemongrass

C. plurinodis (Stapf) Burt Davy (*Andropogon plurinodis* Stapf; *Cymbopogon pospischilii* (K. Schum.) C.E. Hubb.)

South Africa. Perennial, erect, tufted, leaves sometimes villous, lower glume of sessile spikelets concave and wingless, growing on open grassland, stony places, see *Flora Capensis* 7: 353. 1898 and *Annals of the Transvaal Museum* 3: 121. 1912.

in English: bitter turpentine grass

C. polyneuros (Steud.) Stapf (*Andropogon polyneuros* Steud.; *Andropogon schoenanthus* var. *versicolor* (Nees ex Steud.) Hack.; *Andropogon schoenanthus* L. var. *versicolor* Hook.f.; *Andropogon schoenanthus* var. *versicolor* (Steud.) Hack.; *Andropogon versicolor* Nees ex Steud.; *Cymbopogon versicolor* (Nees ex Steud.) J.F. Watson)

Asia, India. Perennial, tufted, knotted woody rootstock, leaf blades subcordate at base, erect false panicle oblong, racemes ciliate, sessile raceme with lowest pedicel not swollen, sessile spikelet oblong-elliptic, fodder for horses, grassy hills, see *Species Plantarum* 2: 1046. 1753, *Synopsis Plantarum Glumacearum* 1: 385, 388. 1854, *Himalayan Districts of the North-western Provinces of India* 392. 1882, *Monographiae Phanerogamarum* 6: 610. 1889 and *Handb. Fl. Ceylon* 5: 241. 1900, *Bulletin of Miscellaneous Information Kew* 1906: 345. 1906, *Handb. Fl. Ceylon* 6: 335. 1931, *Grasses of Ceylon* 192. 1956, *Grasses of Burma* ... 131. 1960.

C. pospischilii (K. Schum.) C.E. Hubbard (*Andropogon nardus* L. var. *stracheyi* Hook.f.; *Andropogon plurinodis* Stapf; *Andropogon pospischilii* K. Schum.; *Cymbopogon plurinodis* (Stapf) Burt Davy; *Cymbopogon plurinodis* (Stapf) Stapf ex Burt Davy)

Eastern Africa, Nepal, Pakistan, Tanzania, Kenya. Perennial, tufted, erect, usually unbranched, leaves mostly basal, dense mass of leaves on the basal portions of the plant, lower portions of the stem covered with old leaf sheaths, ligule prominent and membrane-like, leaf sheath rounded and smooth, leaf folded or thread-like, leaf blade widest in the middle, inflorescence a false panicle linear to oblong,

paired racemes each with a leaflike spathe, spikelets paired, 1 spikelet sessile and awned, lowermost pedicel not swollen, lower glume papery, male pedicelled spikelet narrowly lanceolate, strong turpentine smell, fodder grass, poorly utilized, more or less unpalatable, eaten by baboons, low grazing value, grows in dry areas, subdesert grassland, deciduous bushland, bushveld, semiarid and arid rangelands, degraded areas, hillsides, limestone, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 328. 1897 [1898?] and *Kew Bulletin* 4: 175. 1949.

in English: bitter turpentine grass, bushveld turpentine grass, narrow-leaved turpentine grass

in South Africa: terpenyngras, smalblaarterpenyngras, bosveldterpenyngras, bitterterpenyngras, schmalblättriges pfeffergras, stinkwildebeesgras, suurgras, pepergras, bittergras, bitterpol, bitterrooigras, blouaadgras, breëaarrooigras, breësaadgras, heuninggras, koperdraadgras, rooiangelgras, rooiberggras, rooigras

in Somalia: beili, baila, beli

C. procerus (R. Br.) Domin (*Andropogon exaltatus* R. Br.; *Andropogon procerus* R. Br.; *Cymbopogon exaltatus* (R. Br.) Domin; *Cymbopogon nardus* subvar. *exaltatus* (R. Br.) Roberty; *Cymbopogon procerus* (R. Br.) A. Camus, nom. illeg., non *Cymbopogon procerus* (R. Br.) Domin; *Sorghum exaltatum* (R. Br.) Kuntze; *Sorghum procerum* (R. Br.) Kuntze) (the specific name from the Latin *procerus*, *a*, *um*, "high, tall")

Western Australia, Northern Territory. Perennial, tall, tufted, robust, forming erect and slender tussocks, aromatic leaves gray-green, hairy and branched panicles, woolly and glaucous spikelets, ornamental and attractive, very hardy, an increaser species, rocky soils, see *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Revisio Generum Plantarum* 2: 791. 1891, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 155. 1899 and *Revue de Botanique Appliquée & d'Agriculture Coloniale* 1: 289. 1921, *Bibliotheca Botanica* 85: 273. 1915, *Boissiera*. 9: 174, 176. 1960.

C. prolixus (Stapf) E. Phillips (*Andropogon nardus* var. *prolixus* Stapf; *Andropogon prolixus* (Stapf) Stapf)

South Africa. Perennial, tufted, erect, ligule membranous, inflorescence paniculate, racemes more or less glabrous, lower glume of sessile spikelets winged, grass with lemon smell, unknown grazing value, found in savannah, grassland, along roadsides, rocky places, rocky hillsides, see *Flora Capensis* 7: 352. 1898.

in English: Tambuki grass (Tambuki or Amathembu, a tribe in South Africa)

in South Africa: Tamboekiegras

C. ramnagarensis B.K. Gupta

India, Jammu and Kashmir. Indeterminate species, see *The Flora of British India* 7(21): 207. 1897 [1896] and *Indian Forester* 80: 44. 1954, *J. Bombay Nat. Hist. Soc.* 52: 159. 1954, *Proceedings of the Indian Academy of Sciences* 71: 86. 1970.

C. refractus (R. Br.) A. Camus (*Anatherum refractum* (R. Br.) P. Beauv.; *Andropogon refractus* R. Br.; *Andropogon tahitensis* Hook. & Arn.; *Cymbopogon nardus* var. *refractus* (R. Br.) Roberty; *Sorghum refractum* (R. Br.) Kuntze)

Queensland, New South Wales, Northern Territory, Victoria. Perennial bunchgrass, coarse, tough, slender and stiff, caespitose, forming erect and slender tussocks, rough and aromatic leaves, very narrowly-linear panicle with reflexed branches and glabrous racemes, raceme segments with slender recurved pungently tipped pedicelled spikelets, narrow spathes often reddish, blue-green to reddish spikelets, the seeds clings to fur of animals, avoided by livestock because of its taste, waxy or soapy secretions, noxious weed, invasive, very prolific seeder, revegetation, very hardy, forage, Aborigines used for medicinal purposes, found on poor soils, dry forests, coastal dunes, see *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Essai d'une Nouvelle Agrostographie* 128, 150. 1812, *The Botany of Captain Beechey's Voyage* 72. 1832, *Revisio Generum Plantarum* 2: 792. 1891, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 155. 1899 and *Revue de Botanique Appliquée & d'Agriculture Coloniale* 1: 279. 1921, *Boissiera*. 9: 176. 1960.

in English: barbwire grass, barbed wire grass, soap grass, turpentine grass, ginger grass

C. schoenanthus (L.) Sprengel (*Andropogon circinnatus* Hochst. & Steud.; *Andropogon iwarancusa* subsp. *laniger* (Desf.) Hook.f., also spelled *jwarancusa*; *Andropogon laniger* Desf.; *Andropogon lanigerum* Desf.; *Andropogon schoenanthus* L.; *Cymbopogon circinnatus* Hochst.; *Cymbopogon densiflorus* (Steud.) Stapf; *Cymbopogon proximus* (Hochst. ex A. Rich.) Stapf; *Trachypogon schoenanthus* (L.) Nees)

Saudi Arabia, Chad, Egypt, Mali, Niger, Algeria. Perennial, compact, desert grass, erect and slender, densely tufted, aromatic to strongly smelling, leaves filiform and glaucous, narrow panicles composed of clustered racemes, lowermost pedicel of the sessile raceme hard and swollen, glumes chartaceous or papery, upper floret shortly bifid, awn slightly twisted, sessile spikelets acuminate to linear-lanceolate, pedicelled spikelet narrowly lanceolate, lower glume of sessile spikelet concave and wingless, essential oils extracted by steam distillation, significant insecticidal activity and medicinal value, antimicrobial and analgesic properties, relieving muscular aches and pains, treatment of acne and oily skin, treatment of tinea by topical application, may irritate sensitive skin, leaf tea tonic and calmative, oil applied in rheumatism and neuralgia, decoction of grass

febrifuge, an extract from the leaves it has analgesic properties and improves muscle and skin tone, forage, a common camel fodder, used for thatching, wild or cultivated, cataplasm for wounds of camels, decoction of a mixture of this grass and *Ambrosia maritima* L. (Asteraceae, alt. Compositae) used for diabetes, grows in degraded areas, arid foothills, rocky and stony places, sand dunes, hillsides, subdesert plains and bushlands, arid stony plains, limestone, south Sahara, *Acacia* and *Commiphora* bushes, see *Species Plantarum* 2: 987-988, 1046. 1753, *Asiatic Researches* 4: 237-312. 1795, *Flora Atlantica* 2: 379. 1800, *Plantarum Minus Cognitarum Pugillus* 2: 15. 1815, *Flora Brasiliensis seu Enumeratio Plantarum* 341. 1829, *Linnaea* 7: 281. 1832, *Synopsis Plantarum Glumacearum* 1: 386-387. 1854, *The Flora of British India* 7(21): 203. 1897 [1896] and *Flora of Tropical Africa* 9: 289. 1919, *Fl. Libya* 107: 120. 1983, *Taxon* 49(2): 246. 2000.

in English: camel grass, camel's hay, canal grass, lemon grass, hemplike grass, gingergrass, sweet rush, rusa grass, geranium grass

in French: herbe à chameau, chiendent pied de poule, cheveu de sable, paille de la Mecque, alfa de la Mecque, jonc aromatique, jonc odorant

in Spanish: pasto de camellos

in Arabic: adkhar, azkhar, afar, halfa bar, half barr, halfet Makkah, hashma, idkhar, lemmad, mahareib, mahareb, tibn Makkah, nal, seko, sha'ret et-trab

in Benin: moushinnourtou

in Ghana: ku ankasumpiga, sompigo, suompiga

in Mali: lemmad, taberimt, tiberimt, tiékala ni

in Mauritania: afar, iverd

in Morocco: îdhir, l-yedhêr, îdjikim, lemmad, l-med, teberemt, tiberrimt, sa'rât et-trâb, chaaret-diel-trab, â'mud es-sgîr, amoued srhir, amwad sgîr, tibn, tben Mekka, halfat Mekka, cheveu de sable, bâtonnet, tadomst

in Niger: babamba, goso, gozow, hurdu dumboore, hurdu dum boré, karsân, lubbo, muny, muymuy, nôbi, noobol, oshub, sughu, taeboaremt, têtêremt, toeboerimt, tsabre, tsaure

in Nigeria: jimwi, lubgol, lubodi, mahareib, nal, nobe, nugbwanu bmagna, seko, sukkahoreho, tsabre, tsaure, wajalo, wajande

in Sahara (Tassili): tébarémt

in Senegal: nangulé, ñangulé

in Somalia: werahr

in Upper Volta: buluuje, buulorde, sompigo, suompiga, suompigo, wuulorde, wuluunde

in Brazil: capim cidreira, capim santo, capim-limão, capim-catinga, capim-cheiroso, capim-cidreira, capim-cidrilha, capim-de-cheiro, capim-siri, erva cidreira, patchui

in China: mao hsiang, pai mao hsiang, hsiang ma, mao ju ma
in India: agya ghans tail, akya-ghas-ka-air, anche hullu, anchit hullu, azkhar, babhori, babra, bhoosthrina, bhoothi, bhoothika, bhor, bhustrina, bhutika, bili dodda kaashihullu, boosthram, bujina, bur, chipara, chippa gaddi nune, coorai pul, dabsulo, dang rhauns, devajagdha, devajagdhaka-tailam, dhoopagandhika, dhyama, dhyamaka, dhyamakah, gandel, gander, gandh bel, gandhabena, ghandhabenaa, gandhi, gandi, geranium hullu, gundha-bena, hazar masalehka-aatar, ibharankusha, iwarankusha, jaramkush, kaachihullu, kaashi hullu, kanchi gedde, kanchi kaddi, kamachi kassuvu, kamakshapullu, kannam pullu, karpura pullu yenney, kathrana, kavatham pillu, kavathum pillu, kavattan pullu, khair, khavi, khawi, khurankusha, kunthi hullu, kurankusha, lilli chaya tel, maaravali hullu, makora, merchya, mircha, mirchia, mirchia gandh, mirchiagand, mirchua, moolathrina, moongil pul, motia, motiya, mulatrina, musel, nanj hullu, nimma gaddi nune, palakhari, panni, paura, pengrima tel, poothimugdala, purvali hullu yanne, raos, rauns, rausagas, rhaunsa, rhausa, rhus sugandhi, roghane-chaekashmiri, rohisa, rohish, rohisha, rohishathrina, rohishathruna, roinsa, rosa, rosegavath, rosha, roshegavat, roshisha, roshsagavath, rousa-ka-aatar, rousa-ka-air, rousa-ka-tel, rousaghas, runa, rusa (= the fragrant oil obtained from the grass), rusaghas, rusha, rushagavath, sabalen si, sambhara pulla enna, saugandhika, saundhiya, shakanarupillu, shyamaka, sir ghurai, sofia, sofiya, solara, sugandha vaasane hullu, sugandhathrinashitha sushithala, tikadi-moti, thikari, tikhari, varukaraial pul, vasanap pulla enna, vasane hullu yanne, vashanap pullu yenney

Malayan names: rumput serai

C. schoenanthus (L.) Sprengel subsp. **proximus** (Hochst. ex A. Rich.) Maire & Weiller (*Andropogon iwarancusa* var. *proximus* (Hochst. ex A. Rich.) Hack.; *Andropogon proximus* Hochst. ex A. Rich.; *Andropogon schoenanthus* subsp. *proximus* (Hochst. ex A. Rich.) Maire; *Cymbopogon proximus* (Hochst. ex A. Rich.) Stapf; *Cymbopogon proximus* (Hochst. ex A. Rich.) Chiov.; *Cymbopogon sennarensis* var. *proximus* (Hochst. ex A. Rich.) Chiov.)

Tropical Africa. Racemes clustered, aromatic, good forage, used for thatching, see *Tentamen Florae Abyssinicae ...* 2: 464. 1850, *Monographiae Phanerogamarum* 6: 601. 1889 and *Flora of Tropical Africa* 9: 271. 1919, *Flore de l'Afrique du Nord*: 1: 287. 1952.

C. schoenanthus (L.) Sprengel subsp. **schoenanthus**

Africa, Somalia, India. Aromatic, traditional drug plant, young shoots grazed by stock, low grazing value, used for thatching.

C. siamensis Bor (*Andropogon cambogiensis* Balansa; *Cymbopogon cambogiensis* (Balansa) E.G. Camus & A. Camus)

Thailand. Indeterminate species, see *Journal de Botanique, rédigé par une société de botanistes* 4: 114. 1890 [*Journal*

de Botanique (Morot)] and Flore Générale de l'Indo-Chine 7: 351. 1922, *Dansk Botanisk Arkiv* 23: 158. 1965.

in Thailand: yaa frik fran, yaa phrik phraan, ya phrik phran
C. tortilis (J. Presl) A. Camus (*Anthistiria tortilis* J. Presl; *Cymbopogon tortilis* (J. Presl) Hitchc.)

Southeast Asia, Korea, Japan. Useful for erosion control, found in open areas, open fields, see *Reliquiae Haenkeanae* 1(4-5): 347. 1830, *Flora* 24: 22. 1846 and *Revue de Botanique Appliquée & d'Agriculture Coloniale* 5: 206. 1925, *Lingnan Science Journal* 7: 246. 1929, *Symbolae Sinicae* 7(5): 1314-1315. 1936, *Grasses of Japan and its Neighboring Regions* 498. 1987.

in Japan: o-karu-kaya, karu-kaya

C. traninhensis (A. Camus) S. Soenarko (*Cymbopogon confertiflorus* var. *traninhensis* A. Camus; *Cymbopogon khasianus* var. *nagensis* Bor)

Asia. See *Bulletin of Miscellaneous Information Kew* 1906: 318. 1906, *Bulletin du Muséum d'Histoire Naturelle* 26: 565. 1920, *Journal of the Bombay Natural History Society* 52: 169. 1954, *Reinwardtia* 9(3): 347. 1977.

C. travancorensis Bor

Asia. Whitish culms, usually a synonym of *Cymbopogon flexuosus* (Nees ex Steudel) J.F. Watson, sometimes considered as a separate species, see *Synopsis Plantarum Glumacearum* 1: 388. 1854, *Gaz. N.W. Prov. India* 392. 1882 and *Journal of the Bombay Natural History Society* 52: 174-176, f. 24. 1954, *J. Bombay Nat. Hist.* 51: 903. 1954.

C. validus (Stapf) Burtt Davy (*Andropogon nardus* var. *validus* Stapf; *Cymbopogon afronardus* Stapf; *Cymbopogon classensii* Robyns; *Cymbopogon validus* (Stapf) Stapf ex Burtt Davy)

South Africa, Swaziland. Perennial, tufted, very robust thatching grass, leaf narrow at base, membranous ligule prominent, groups of paired racemes each partially enclosed by a leaflike spathe, spikelets paired, 1 spikelet sessile and awned, strong turpentine smell when crushed, unpalatable, low grazing value, antimicrobial activity, grows in moist veld types and forest margins, loamy soil, wet sites, in mountainous grassland, along roadsides, wetlands or disturbed grasslands, vleis, stony slopes, see *Flora Capensis* 7: 352. 1898 and *Annals of the Transvaal Museum* 3: 129. 1912, *Flora of Tropical Africa* 7: 279. 1919, *Flore Agrostologique du Congo Belge* 1: 145. 1929.

in English: giant turpentine grass, turpentine grass, tambookie grass, tambuti

in Burundi: Ibikenkekenke

in Southern Africa: reuse terpentyngas, tamboekiegras; isigunga (Zulu); umqunga (Xhosa)

C. winterianus Jowitt ex Bor (*Cymbopogon nardus* var. *mahapangiri* auct.; *Cymbopogon winterianus* Jowitt) (to honor A.W. Winter)

India, Southeast Asia, Sri Lanka. Perennial, large, tall, herbaceous, terete, smooth, glabrous, tufted, forming large clumps, somewhat glaucous, flowering culms arching, leaf blades smooth and gradually narrowed at the base, shortly rhizomatous, leaves sheathing and drooping, loose inflorescence, large false panicle much branched, spatheoles linear-lanceolate subtending a pair of racemes, racemes ciliate, lowest pedicel not swollen, sessile spikelet with 2 florets, lower floret reduced to an empty lemma, upper floret hermaphrodite, lower glume concave and winged, palea absent, 2 lodicules, 3 stamens, plumose stigmas, pedicelled spikelet male or sterile with florets reduced to a scale, ornamental, aromatic foliage, widely cultivated, scented essential oils used in perfumery and for insect repellents, deodorant, medicinal, antibacterial, antidepressant, antispasmodic, rheumatism and arthritic pain, useful for erosion control, intolerant of salinity, tolerates only short periods of waterlogging, best on neutral to slightly acid well-drained loamy soils, very similar to *Cymbopogon flexuosus* (Nees ex Steud.) J.F. Watson, see *Annals of the Royal Botanic Gardens. Peradeniya* 4: 188. 1908, *Handb. Fl. Ceylon* 6: 335. 1931, *Grasses of Ceylon* 193. 1956, *Grasses of Burma ...* 132. 1960, *Österreichische Botanische Zeitschrift* 112(1-2): 185. 1965, B. R. Rajeswara Rao, "Biomass Yield and Essential Oil Yield Variations in Java Citronella (*Cymbopogon winterianus* Jowitt), Intercropped with Food Legumes and Vegetables." *Journal of Agronomy and Crop Science* 185(2): 99-103. Sep 2000.

in English: Java citronella, Java citronella grass, Java citronella oil, old citronella grass, maha pangiri grass, Winter's grass

in French: herbe citron de Java, citronnelle de Java

in Spanish: citronela

in Indonesia: serai wangi, sere wangi, sereh wangi

in Malaysia: serai wangi

in Sri Lanka: maha pangiri, maha pengiri

in Thailand: takhrai-daeng, takhrai-hom, takhrai ma-khuut

in Vietnam: s[ar] d[or], s[ar] Java

Cymbosetaria Schweick. = *Setaria* P. Beauv.

From the Greek *kymbe* "boat" plus *Setaria*.

One species, Africa. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Setariinae, annual, herbaceous, more or less branched, auricles absent, leaf blades sagittate, ligule a membrane-like more or less fringed, plants bisexual, spicate inflorescence nondigitate, each spikelet subtended by a bristle, compressed spikelets, 2 glumes very unequal, lower glume 3-nerved, upper glume 5- to 7-nerved, lemmas cymbiform, palea present, free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, often in *Setaria*, type *Cymbosetaria sagittifolia* (Hochst. ex A. Rich.) Schweick.,

see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812 and *Contr. U.S. Natl. Herb.* 22(3): 156. 1920, *Hooker's Icones Plantarum* 34: t. 3320. 1936, *J. Wash. Acad. Sci.* 44: 116-122. 1954, *Cytologia* 19: 97-103. 1954, *Illinois Biological Monographs* 29: 1-132. 1962, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Adansonia* sér. 2, 6: 105. 1966, *Austral. J. Bot.* 16: 539-544, 551-554. 1968, *Novosti Sist. Vyss. Rast.* 8: 71. 1971, *Willdenowia* 8: 67-79. 1977, *Contributions from the United States National Herbarium* 46: 569-593. 2003.

Species

C. sagittifolia (Hochst. ex A. Rich.) Schweick. (*Cymbosetaria sagittifolia* (A. Rich.) Schweick.; *Panicum barbigerrum* Bertol.; *Panicum sagittifolium* (Hochst. ex A. Rich.) Steud.; *Pennisetum sagittifolium* Hochst. ex A. Rich.; *Setaria barbiger* (Bertol.) Stapf; *Setaria sagittifolia* (Hochst. ex A. Rich.) Walp.; *Setaria sagittifolia* (A. Rich.) Walp.)

Tropical Africa, Yemen. Annual, tufted, open, slender, weak, erect or geniculate, rounded spikelets and characteristic sagittate leaves pseudopetiolate, leaf sheaths rounded at the top, basal sheaths slightly compressed, ligule membranous and thin, inflorescence of several spike-like racemes, open panicle oblong to ovate, unilateral branches arranged horizontally in whorls, spikelets with a single bristle, lower floret male or barren, lower lemma rugose, upper lemma gibbous and keeled, a palatable pioneer grass, of little agricultural value, food for seed-eating birds, forms dense stands, grows in shaded places often near rivers, riverine forest, in open to dense bushveld and in forests, mostly in sandy soil, savannah woodland, stony and gravelly banks by wadis, see *Tentamen Florae Abyssinicae* ... 2: 379-380. 1850, *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna* 3: 250, t. 19, f. 1-2. 1851, *Annales Botanicae Systematicae* 3: 721. 1852, *Synopsis Plantarum Glumacearum* 1: 54. 1853 and *Flora of Tropical Africa* 9: 862. 1930, *Hooker's Icones Plantarum* 34: t. 3320. 1936.

in English: arrow grass

in South Africa: pylblaargras, eenjarige pylblaargras, pfeilblatthirse

x *Cynochloris* Clifford & Everist

Cynodon x *Chloris*.

Two hybrids species, Australia. Cynodonteae, perennial, type x *Cynochloris macivorii* Clifford & Everist, see Harold Trevor Clifford (b. 1927) and Selwyn Lawrence Everist (1913-1981), in *Proceedings of the Royal Society of Queensland*. 75: 46. 1964, *Austrobaileya* 1(5): 460. 1982 [1983], *Flora of Australia* 44B: 300-301. 2005.

Species

x ***C. macivorii*** Clifford & Everist (a Mr. McIvor)

Queensland. Erect or decumbent.

x ***C. reynoldensis*** B.K. Simon (Reynolds Creek, Moreton District, Queensland)

Queensland. Decumbent or geniculate.

***Cynodon* L.C. Richard** = *Capriola* Adans., *Dactilon* Vill., *Fibichia* Koeler

From the Latin *cynodon* and Greek *kynodous* "teeth of a saw, canine tooth, having pairs of projecting teeth," *kynos* and *odontos* "a tooth," referring to the scaly rhizomes, to the basal buds on the rhizomes, or to the spikes; see Christiaan Hendrik Persoon, (1761/1762-1836), *Synopsis plantarum*, seu enchiridium botanicum complectens enumerationem systematicam specierum hucusque cognitorum. 1: 85. Paris 1805.

About 8-10 species, Old World tropics, subtropical, tropical, warm temperate regions. Chloridoideae, Cynodonteae, Chloridinae, perennial, terete or compressed, mostly rhizomatous and stoloniferous, creeping or spreading, herbaceous, leafy and much-branched, erect or ascending, decumbent and rooting at nodes, nodes glabrous, hollow internodes, no auricles, short leaf sheath smooth and rounded, ligule membrane-like and fringed or ciliate, short leaves linear to filiform more or less opposite on the stolons, plants bisexual, erect flowering shoots, terminal inflorescence umbellate or spicate and digitate, rachis flat or semiterete, sessile spikelets strongly laterally compressed and disarticulating above or between the glumes, spikelets solitary and secund, erect flowering shoots produced at the nodes, 1 bisexual floret, 2 narrow glumes keeled and papery, lemmas with a ciliate keel and awnless, free and fleshy minute lodicules, stamens 3, ovary glabrous, 2 red stigmas, fruit small and trigonous, ornamental, occasionally causing cyanide poisoning or often HCN poisonous, attractive inflorescence, vigorous, often sward-forming, weed species, native pasture species, fodder grass, lawns, turf, playing fields, growing in sandy places, open habitats, grazed or weedy places, arable land, seashores, disturbed land, pampas, rainforest, roadsides, interspecific hybridization, developed many improved varieties, intergeneric hybrids with *Chloris* Sw. with which it is related, type *Cynodon dactylon* (L.) Pers., see *Familles des Plantes* 2: 31, 532. 1763, *Histoire des Plantes de Dauphiné* 2: 69. 1787, *Descriptio Graminum in Gallia et Germania* 302, 308. 1802, *Syn. Pl.* 1: 85. 1805, *Essai d'une Nouvelle Agrostographie* 122, 146, 150. 1812, *Genera Plantarum* 3(2): 1164. 1883 and *Fieldiana, Botany* 24(2): 38-331. 1955, *Proceedings of the Zoological Society of London* 139: 181-220. 1962, *Amer. J. Bot.* 56: 944-950. 1969, *Kurtziana* 5: 191-252. 1969 [Las especies de *Cynodon* (Gramineae) de la República Argentina.],

Taxon 19: 565-569. 1970, *Oklahoma Agricultural Experiment Station: Bulletin* 673: 1-37. 1970, S.A. Altmann and J. Altmann, *Baboon Ecology*. University of Chicago Press, Chicago 1970, *Zoologica Africana* 13(2): 329-350. 1978, *Flora Mesoamericana* 6: 291-292. 1994, *Flora of Ethiopia and Eritrea* 7: 174-177. 1995, *Am. J. Bot.* 84: 1565. 1997, Gail W.T. Wilson and David C. Hartnett, "Interspecific variation in plant responses to mycorrhizal colonization in tallgrass prairie." *Am. J. Bot.* 85: 1732-1738. 1998, S.A. Renvoize, *Gramíneas de Bolivia* 362-363. 1998, Heike Vibrans, "Epianthropochory in Mexican weed communities." *Am. J. Bot.* 86: 476-481. 1999, *Am. J. Bot.* 87: 986-994. 2000, *Contributions from the United States National Herbarium* 41: 37-38, 59-63, 64, 121. 2001, Dushyantha K. Wijesinghe and Dennis F. Whigham, "Nutrient foraging in woodland herbs: a comparison of 3 species of *Uvularia* (Liliaceae) with contrasting belowground morphologies." *Am. J. Bot.* 88: 1071-1079. 2001, *Am. J. Bot.* 88: 1080-1087. 2001, *Am. J. Bot.* 89: 1439-1446. 2002, *Am. J. Bot.* 90: 72-77. 2003, Hester L. Bell and James W. O'Leary, "Effects of salinity on growth and cation accumulation of *Sporobolus virginicus* (Poaceae)." *Am. J. Bot.* 90: 1416-1424. 2003, *Flora of Australia* vol. 44B, Poaceae 3: 301-309. 2005, *Austral. Ecology* 30(1): 49-57. Feb 2005, *Plant, Cell and Environment* 28(2): 157-166. Feb 2005, *New Phytologist* 165(2): 591-598. Feb 2005 [Mycorrhiza and root hairs in barley enhance acquisition of phosphorus and uranium from phosphate rock but mycorrhiza decreases root to shoot uranium transfer.], *Restoration Ecology* 13(1): 49-60. Mar 2005, Y. Arocha, D. Horta, B. Piñol, I. Palenzuela, S. Picornell, R. Almeida and P. Jones, "First report of a phytoplasma associated with Bermuda-grass white leaf disease in Cuba." *Plant Pathology* 54(2): 233. Apr 2005, J. Huang, L. Zheng, T. Hsiang, "First report of leaf spot caused by *Curvularia verruculosa* on *Cynodon* sp. in Hubei, China." *Plant Pathology* 54(2): 253. Apr 2005, *Ecological Management and Restoration* 6(1): 75-76. Apr 2005, *Weed Research* 45(2): 121-129. Apr 2005, *Plant Breeding* 124(2): 147-153. Apr 2005, *New Phytologist* 166(1): 73-82. Apr 2005, *Journal of the European Academy of Dermatology and Venereology* 19(3): 390-391. May 2005, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005 [Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications.], *Journal of Agronomy and Crop Science* 191(3): 172-184. June 2005.

Species

C. aethiopicus W.D. Clayton & J.R. Harlan

Eastern coasts of Africa, Ethiopia, Zimbabwe, Uganda, Tanzania. Perennial, tall, coarse, woody, large, robust, stoloniferous, erect, not rhizomatous, stolon internodes flat, ligule a ciliate membrane, foliage stiff and harsh, inflorescence reddish or purple or dark red, stiff racemes, lemma keel usually glabrous, weed, native pasture species naturalized

elsewhere, medicinal use, palatable, good grazing, fodder, useful for erosion control, found in coastal plains, wastelands, abandoned cultivations, crops and pastures, on roadsides, see *Kew Bulletin* 24: 187. 1970.

in English: cynodon couch, budgee grass, Bermudagrass, Ethiopian dog's-tooth grass, Ethiopian dogstooth grass, giant quickgrass, Nakuru grass, giant star grass, star grass, African star grass

in Spanish: pasto estrella gigante

in South Africa: reusekweekgras, stergras

C. arcuatus J. Presl (*Cynodon dactylon* var. *intermedius* (Rang. & Tadulingham) C.E.C. Fischer; *Cynodon intermedius* Rang. & Tadul.; *Cynodon leptochloides* Steud.; *Digitaria radiata* (Roth) Spreng.)

Southeast Asia, India, Australia. Perennial, glabrous, compressed, decumbent or prostrate, branched, stoloniferous and rhizomatous, auricles glabrous, stiff leaf blades, flowering culms erect, spikes curved and spreading, glumes equal, grazed by cattle, open habitat, dry areas, disturbed places, seasonally flooded sites, along roadsides, open sandy sites, old cultivations, edge of forest, stony places, see *Systema Vegetabilium* 2: 411. 1817, *Novae Plantarum Species* 38. 1821, *Systema Vegetabilium, editio decima sexta* 1: 272. 1825, *Reliquiae Haenkeanae* 1(4-5): 290. 1830 and *Journal of the Bombay Natural History Society* 26: 304. 1918, *Flora of the Presidency of Madras* 10: 1835. 1934, *Grasses of Ceylon* 90, pl. 13. 1956, *Grasses of Burma* ... 469. 1960.

C. aristiglumis Caro & E.A. Sánchez (*Cynodon dactylon* (L.) Pers.)

South and Central America. Waste places and areas, see *Species Plantarum* 1: 58. 1753, *Syn. Pl.* 1: 85. 1805 and *Kurtziana* 5: 236, f. 11. 1969.

C. barberi Rang. & Tadul. (named for the British Charles Alfred Barber, 1860-1933, a sugarcane specialist, lecturer in tropical agriculture at Cambridge, 1860-1870 South Africa, 1898 India as Director of the Botanical Survey of Southern India, author of *Studies in Indian Sugarcanes...* Calcutta 1915-1919; see Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement I: A-Ba.* 37-314-315. Königstein 1992; J.H. Barnhart, *Biographical notes upon botanists.* 1: 119. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1917-1933)

Southern India, Sri Lanka. Perennial, stoloniferous and rhizomatous, flowering culms erect, glabrous, loosely matted, leaf sheaths keeled, leaf blades lanceolate, spicate inflorescence spreading and more or less curved, glumes unequal and scarious, lemma ciliate, grazed by cattle, found in wet places, open damp sites, sandy soils, roadsides, gravelly soils, often confused with *Cynodon arcuatus* J. Presl and *Cynodon dactylon* (L.) Pers., see *Journal of the Bombay*

Natural History Society 24: 846. 1916, *Grasses of Ceylon* 91. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 469. 1960.

C. *bradleyi* Stent

South Africa. See *Bothalia* 2: 277. 1927.

C. *dactylon* (L.) Pers. (*Agrostis bermudiana* Tussac ex Kunth; *Agrostis filiformis* J. König ex Kunth, nom. illeg., non *Agrostis filiformis* Vill.; *Capriola dactylon* (L.) Hitchc., nom. illeg., non *Capriola dactylon* (L.) Kuntze; *Capriola dactylon* (L.) Kuntze; *Capriola dactylon* var. *maritima* (Kunth) Hitchc.; *Chloris cynodon* Trin.; *Chloris paytensis* Steud.; *Cynodon aristiglumis* Caro & E.A. Sánchez; *Cynodon aristulatus* Caro & E.A. Sánchez; *Cynodon dactylon* f. *vivipara* Beetle; *Cynodon dactylon* subsp. *glabratus* (Steud.) Chev.; *Cynodon dactylon* var. *densus* Hurcombe; *Cynodon dactylon* var. *elegans* Rendle; *Cynodon dactylon* var. *glabratus* (Steud.) Chiov.; *Cynodon dactylon* var. *maritimus* (Kunth) Hack.; *Cynodon erectus* J. Presl; *Cynodon glabratus* Steud.; *Cynodon maritimus* Kunth; *Cynodon occidentalis* Willd. ex Steud.; *Cynodon pascuus* Nees; *Cynodon polevansii* Stent; *Cynodon portoricensis* Willd. ex Steud.; *Cynodon tenuis* Trin. ex Spreng.; *Cynodon umbellatus* (Lam.) Caro; *Cynosurus dactylon* (L.) Pers.; *Cynosurus uniflorus* Walter; *Dactilon officinale* Vill.; *Digitaria dactylon* (L.) Scop.; *Digitaria glumaepatula* (Steud.) Miq.; *Digitaria littoralis* Salisb.; *Digitaria maritima* (Kunth) Spreng.; *Digitaria stolonifera* Schrad., nom. illeg., non *Digitaria dactylon* (L.) Scop.; *Fibichia dactylon* (L.) Beck; *Fibichia umbellata* Koeler; *Milium dactylon* (L.) Moench; *Panicum dactylon* L.; *Panicum glumaepatulum* Steud.; *Paspalum dactylon* (L.) Lam.; *Paspalum umbellatum* Lam.; *Phleum dactylon* Pall. ex Georgi) (from the Greek *daktylos* “a finger”)

Cosmopolitan. Perennial, vigorous, highly to extremely variable, long-lived and hardy, tough, gray to gray-green or glaucous, slender, wiry, creeping or prostrate and forming a dense mat, often strongly rooting at the nodes, rhizomatous and/or strongly stoloniferous, both stolons and rhizomes, woody stolons and underground scaly rhizomes, culms erect or geniculate, internodes flattened, auricles bearded, leaf sheaths keeled and shiny, ligule short and fringed with hairs, glabrous distichous leaves, green or purplish or reddish brown erect and slender digitate spikes, broad spikelets sessile and laterally compressed, glumes acuminate and more or less persistent, lemma boat-shaped and mucronate, palea with 2 longitudinal ridges, 2 lodicules, 3 stamens, purple stigmas, grains turgid, ornamental when in flower, sacred to Hindus, in India tender leaves and shoots eaten, excellent fodder grass, forage, good pasture species, relished by all classes of livestock, roots edible, scaly rhizomes given to horses, a noxious weed of annual and perennial crops, highly invasive, difficult to eradicate without herbicides, a valuable herbal medicinal, tea from roots for kidneys, a good medicine for skin diseases, in folk medicine

used as a diuretic and emollient, the fresh juice used as a snuff in epistaxis, numerous cultivars have been developed, withstands long periods of drought, widely planted for lawns and/or playing fields, groundcover, turf, useful for erosion control, sand binder for coastal districts, useful stabiliser of disturbed beach dunes, sometimes used to bind soil embankments, usually found in wetlands and river edges, in riparian areas and in grasslands adjacent to streams and marshes, disturbed places, cultivated lands, bare damp ground, alluvium, floodplain margin, along stream banks, in the understory of open woods, along sand dunes, coarse sand, on waste grounds, trampled areas, in lawns, along roadsides and railroads, on roadside gravel, silty outwash area, on beach sand, uncultivated areas, on sandy wastes, overgrazed areas, in very poor soils, desert, see *Species Plantarum* 1: 58. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1772, *Histoire des Plantes de Dauphiné* 2: 69. 1787, *Flora Caroliniana, secundum ...* 82. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176-177. 1791, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 19. Londini [London] (Nov-Dec) 1796, Johann Gottlieb Georgi (1729-1802), *Geographisch-physikalische und Naturhistorische Beschreibung des Russischen Reichs* 4 Th. 4: 684. Königsberg 1797-1800, *Descriptio Graminum in Gallia et Germania* 302. 1802, *Methodus Plantas Horti Botanici ...* 67. 1802, *Synopsis Plantarum* 1: 85. 1805, *Flora Germanica* 1: 165, pl. 3, f. 9. 1806, *Nova Genera et Species Plantarum* 1: 170. 1815 [1816], *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 63. 1821, *De Graminibus unifloris et sesquifloris* 229. Petropoli 1824, *Systema Vegetabilium, editio decima sexta* 1: 272. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 425. 1829, *Reliquiae Haenkeanae* 1(4-5): 290. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 259, 261. 1833, *Nomenclator Botanicus. Editio secunda* 1: 463. 1840, *Synopsis Plantarum Glumacearum* 1: 41, 207, 212. 1855 [1853], *Flora van Nederlandsch Indië* 3: 439. 1857, *Revisio Generum Plantarum* 2: 764. 1891, *Annual Report of the Missouri Botanical Garden* 1893: 147. 1893, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 221. 1899 and *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegovina* 9: 436. 1904, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 8(8): 40. 1909, *Flora Descriptiva é Illustrada de Galicia* 3: 310. Santiago 1909, *Journal of the Bombay Natural History Society* 26: 304. 1918, *Nuovo Giornale Botanico Italiano*, n.s., 26: 82. 1919, *United States Department of Agriculture: Bulletin* 772: 179. 1920, *Mémoires de la Société des Sciences Naturelles du Maroc* 4(1): 25. 1924, *Bothalia* 2: 283. 1927, *Flora of the Presidency of Madras* 10: 1835. 1934, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 368. 1939, *Nomenclator Botanicus. Editio secunda* 1: 463. 1940, *Botanical Magazine* 55: 538. 1941, *Botanical Magazine (Tokyo)* 55: 538. 1941, *Revue internationale de botanique appliquée et d'agriculture tropicale*

27(297-298): 282. 1947, *Revista Argentina de Agronomía* 23: 185. 1956, *Kurtziana* 5: 210, 220, 223, 236, f. 2G, 7, 11. 1969, *Kew Bulletin* 24: 185-189. 1970, *Flora Republicii Socialiste Romania* 12: 139. 1972, *Darwiniana* 17: 514, 522, f. 2. 1972, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 123. 1971 [1972], *Phytologia* 48(2): 189-190. 1981, *Dominguezia* 6, f. 4: 16. 1983, *Micronesica* 18(2): 45. Agana, Guam 1982[1984], *Lagascalia* 14(1): 171. 1986, *Grasses of Japan and its Neighboring Regions* 498. 1987, G. Garcia-Guzman and J.J. Burdon, "Impact of the flower smut *Ustilago cynodontis* (Ustilaginaceae) on the performance of the clonal grass *Cynodon dactylon* (Gramineae)." *Am. J. Bot.* 84: 1565. 1997, *Restoration Ecology* vol. 13, issue 1: 49-60. Mar 2005, *Plant Pathology* vol. 54, issue 2: 233-233. Apr 2005 [First report of a phytoplasma associated with Bermuda-grass white leaf disease in Cuba.], *Plant Breeding* vol. 124, issue 2: 147-153. Apr 2005, *Austral. Ecology* 30(4): 445-464. June 2005.

in English: Bermuda grass, Bermudagrass, Bermuda, European Bermuda grass, common Bermuda grass, Florida grass, Scotch grass, Bahama grass, Bahamas grass, Hariyali grass, Hurialle grass, Baramagrass, balama grass, croquet grass, king's grass, African couch, Australian couch, Fiji couch, couch, common couch, green couch, couch grass, Indian couch, hare's string, running grass, star grass, common stargrass, wire grass, devil's grass, devilgrass, devil grass, dog's tooth, dog's tooth grass, creeping dog's tooth grass, creeping grass, doorwa, doab grass, dub, dhub, doob grass, dhoub grass, doub grass, dub grass, dhub grass, Indian doab, dun grass, finegrass, fingergrass, fingers, cwice, twitch grass, quitch, quickgrass, white quickgrass, kweek grass, coarse kweek, common quickgrass

in French: gros chiendent, chiendent, petit chiendent, chien-dent pied-de-poule, chiendent officinal, chiendent des Bermudes, dactyle, gazon des Bermudes, gazon bleu à Dakar

in Spanish: pasto argentina, bermuda común, pasto bermuda, grama bermuda, hierba de bermuda, zacate bermuda, Pepe Ortíz, hierba fina, gramilla blanca, grama dulce, gramón

in Portuguese: grama, grama de boticas

in Argentina: diente de perro, grama, grama de Bermuda, gramilla colorada, gramilla de tiempo, pata de perdiz

in Brazil: capim-de-burro, capim de cidade, capim seda, grama de botica, grama de Marajó

in the Caribbean: Bahama-grass, chyendan, ti chyendan, chiendent, petit chiendent

in Central America: zacate agujilla, zacate de conejo, grama de gallina

in Colombia: argentina, bermuda, pasto argentina, pasto bermuda

in Costa Rica: zacate gallina

in Cuba: grama

in Guatemala: grama de bermudas, kox, pelo de macho, rixquiaktap, rixquiatap

in Mexico: acabacahuiztle, acabacahuitzili, acacahuiztli, agrarista, bermuda, bermuda de la costa, canzuuc, elozacatl, gallito, gallitos, grama, grama de bermuda, grama de la costa, gramilla, guix-biguiñi, guixi-biguiñi, guixi-guitoo, kan-suuk, lan-suuk y canzuuc, pasto alambre, pasto de bermuda, pasto del diablo, pasto diente de perro, pasto enredadera, pasto estrella, pata de gallo, pata de perdíz, pata de pollo, quixi-piguiñe, tsakam toom, zacate agrarista, zacate bermuda, zacate borrego, zacate chino, zacate conejo, zacate del conejo, zacate inglés, zacate pilillo, zarzuue

in Puerto Rico: grama

in West Indies: petit chiendent

in Arabic: 'akresh, endjil, iverd, kar'a leghrab, kezmir, loh, moddad, nadjir, ndjil, nedjam, nedjem, nedjil, negil, nigil, nisjil, raifa, rjel leghrab, sabak, sabaq, tsil, ubal, wubal, zabak, zil

in Angola: otyiwena, usila, escalracho, capim de cavalos, grama

in Ghana: chiaavar sarki, chiaawar sarki

in Guinea: naragbada, naragbara, doubourou leïdi, kokidéggé

in Guinea-Bissau: bogobodje

in Mali: almès, kiki, nedjam, nghoghon, zozobu

in Mauritania: iverd

in Morocco: nnjem, njem, en-najam, anjil, en njîl, njil, njir, âfar, affer, almès, haffar, âgesmir, agouzinir, aoukeraz, tag-amait, tamusayt, taggamaît, tîl, toungane, tribatt, imelzi, tizimit

in Niger: aefir, aessem, aeseembé, kirkishi, lallamé kéina, tsirkya'r zomo

in Nigeria: bogol boje, buntun kудaa, buntun shaamuwaa, damoo, jaajaa mazà, jiriyel, kargashi, karjigu, karya garma, kiri kiri, kiri kirii, kooko igba, loh, nkimenang, sirkiyambo, syesyè, taagol doneyel, tsambiya, tsarkiyar zoomoo, tsirkiyar damòd, tsirkiyar zoomoo

in Rodrigues Island: chiendent

in Senegal: gereded, harap, keref, sogosoko

in Sierra Leone: ka gbatha, kroke gras

in Somalia: harfo, sadeho, serdi, domar, darris

in Southern Africa: kweek, kweekgras, queckgras, anosterkweek, Bataviesekweek, buffelgras, buffelkweek, doobgras, elandskweek, fynkweek, garies, gemsbokkweek, growweekweek, gewone kweekgras, hardekweek, Indiese kweek, kruisgras, kwaggagrass, kwaggakweek, lynkweek, oosindiesekweek, renoster, rivierkweek, vingergras, witkweekgras, ysterkweek; mohloa, mohlwa (Sotho); mothowa (Tswana); uqaqaqa (Xhosa); uqethu (Zulu)

in Sudan: nejeel

in Tunisia: njem
 in Yoruba: kooko igba
 in Bhutan: rampa, aram, dubo
 in Burma: mye sa met, mye sa myet
 in Cambodia: smao anchien, smao aucheou sor
 in China: tie xian cao
 in India: amari, ambate, amritha, anantha, anuvallika, arghum, arugam pilla, arugam pul, arugampullu, asithalatha, bahuveerya, barawa, belikaraga, bhaaergavi, bhaargavi, bhoothahanthri, chibbar, chota pine nutti, dhobi ghas, dhoboghas, dhoortha, dhoorva, dhub, dhubkhabbal, dhupsa, dhurmara, dhurva, dob, doob, doob ghas, doob grass, doobdaa, doobdra, doobra, doorba, doorvaa, dub, duba, dubh, dubra, durba, durba, durva, garika gaddi, garikaihallu, garike, garike hullu, garikoihallu, garke, gauri, gericha gaddi, ghericha, gherka, guna, haraili, harala, harasalika, hariaaly, hariali, harialil, harialy, haridoob, haryeli, haritali, haritha, harithali, harvali, haryali, jaya, kaade, kachharuha garike, kabbal, kabbar, kali ghas, kalighas, karala, karike hullu, karkeri hullu, karuka, khabbal, khabbar, kudigarikai, mahaushadhi, mahavari, mangala, nanda, neelidhoorva, neladoorva, nila durva, nili dub, ourooha, paandaridhoorva, ram ghas, romghas, ruha, safed doob, sahasraveerya, saumya, shaambhavi, shadvala, shantha, shashpa, shathaparva, shathagranthi, shathavalli, shathmoola, sheetha, sheethakumbi, sheethala, shiva, shiveshtha, shyama, talla (Punjab), thadike, thella gariki, thikthaparva, tilla, ununtha, vamini, vijia
 in Indonesia: gigirinling, jukut kakawatan, sukut grinting
 in Japan: gyôgi-shiba
 in Laos: hnha:z ph'è:d
 in Malaysia: rumput minyak
 in Okinawa: gagina
 in the Philippine Islands: bakbaka, balbalut, galud-galud, grama, kapot-kapot, kawad-kawad, kawad-kawaran, kawit-kawitan, kolatai, palot galot
 in Sri Lanka: ruha, aruham pul
 in Tamil: aroogum pillo, arugampullu
 in Telugu: garike, garikagoddi
 in Thailand: no ke de, nokede, yaa phaet, ya phraek, yaa phraek
 in Tibetan: rtsva-ram-pa, se'u, sor-ba
 in Vietnam: co chi, cò'chi', co'ông, co ong
 in Hawaii: manienie, manienie haole
 in Pacific: mosie molulu

C. dactylon (L.) Pers. subsp. *nipponicus* (Ohwi) T. Koyama (*Cynodon dactylon* var. *nipponicus* Ohwi)

Japan. See *Grasses of Japan and its Neighboring Regions* 498. 1987.

C. dactylon (L.) Pers. var. *afghanicus* J.R. Harlan & de Wet
 Afghanistan. See *Crop Science* vol. 9. Madison, Wisconsin 1969.

C. dactylon (L.) Pers. var. *aridus* J.R. Harlan & de Wet
 Israel, Tanzania, South Africa, Sri Lanka, India. Useful for erosion control, fodder, forage, noxious weed, invasive, ornamental, see *Syn. Pl.* 1: 85. 1805 and *Crop Science* vol. 9: 774. Madison, Wisconsin 1969.

in English: giant Bermuda grass

C. dactylon (L.) Pers. var. *coursii* (A. Camus) J.R. Harlan & de Wet (*Cynodon coursii* A. Camus)

Madagascar. Found in dry sites, sandy areas, open habitats, see *Notulae Systematicae. Herbarium du Muséum de Paris* 16: 323. 1961, *Crop Science* vol. 9. Madison 1969.

C. dactylon (L.) Pers. var. *dactylon* (*Capriola dactylon* (L.) Kuntze; *Cynodon pascuus* Nees; *Digitaria stolonifera* Schrad.; *Panicum dactylon* L.)

Cosmopolitan. Worldwide weed, forage, fodder, ornamental, useful for erosion control, see *Syn. Pl.* 1: 85. 1805, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 425. 1829 and *Iheringia, Série Botânica* 44: 85-102. 1994.

in English: Bermuda grass, quick grass, devil's grass, Hariali grass, Bahama grass

in French: grand chiendent

in Spanish: grama rastrera, zacate de Bermuda

in India: dhub, doob

in Southern Africa: kweekgras

C. dactylon (L.) Pers. var. *elegans* Rendle (*Cynodon dactylon* (L.) Pers.)

South Africa, Mozambique, Angola. Along roadsides, poorly drained roadside ditch, flat country, grayish black soil, see *Syn. Pl.* 1: 85. 1805, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 221. 1899.

C. dactylon (L.) Pers. var. *polevansii* (Stent) J.R. Harlan & de Wet (*Cynodon polevansii* Stent)

South Africa. Perennial, rare, compact, dense, rhizomatous, low-growing, rigid to very rigid leaves, spikes not reflexed, along roadsides, sandy soils, sandy roadsides, moist areas, see *Bothalia* 2: 283. 1927, *Crop Science* vol. 9. Madison, Wisconsin 1969.

in S. Africa: kweek

C. dactylon (L.) Pers. var. *pulchellus* F. Muell. ex Benth.

Australia. See *Fl. Austral.* 7: 609. 1878.

C. hirsutissimus (Litard. & Maire) Caro & E.A. Sánchez (*Cynodon dactylon* f. *glabrescens* (Beck.) Soó; *Cynodon dactylon* subvar. *hirsutissima* Litard. & Maire; *Cynodon dactylon* var. *hirsutissimus* (Litard. & Maire) Maire)

North Africa, Morocco. See *Mémoires de la Société des Sciences Naturelles du Maroc* 4(1): 25. 1924, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 368. 1939, *Kurtziana* 5: 191-252. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 395-404. 1970, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 123. 1971 [1972].

C. hirsutus Stent (*Cynodon incompletus* Nees var. *hirsutus* (Stent) de Wet & J.R. Harlan)

South Africa. Perennial, herbaceous, erect or decumbent or geniculate, stoloniferous, not rhizomatous, 3-nerved upper glume, in the upper half a wing on the lemma keel, very similar to *Cynodon bradleyi* Stent and *Cynodon incompletus* Nees, see *Linnaea* 7(3): 301. 1832 and *Bothalia* 2: 277, 286. 1927, *Revista Argentina de Agronomía* 17(3): 216, f. 14. 1950, *Crop Science* vol. 9: 291. Madison, Wisconsin 1969.

in English: dog grass, hairy couch, hairy quickgrass, red quickgrass, Transvaal quickgrass

in Southern Africa: fynkweekgras, harige kweekgras, kwagkakweek, mossiekweek, perdekweek, rooikweek, soetkweek, Transvaalsekweekgras, Transvaalsekweek, wildekweek; mohlwa (Sotho)

C. hirsutus Stent var. *sesquiflorus* Parodi

Argentina. See *Revista Argentina de Agronomía* 17(3): 216, f. 14. 1950, *Kurtziana* 5: 191-252. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 395-404. 1970, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994.

C. incompletus Nees (*Cynodon hirsutus* Stent)

South Africa. Perennial, erect, stoloniferous, herbaceous, usually without rhizomes, ligule membranous, leaf blades flat, spikes usually pale green, spikelets narrowly ovate, glumes acute to acuminate, lemma blunt or shortly mucronate, lemma keel winged, weed species naturalized elsewhere, good feed relished by cattle, quick growing, used for controlling erosion, poisonous, grows on roadsides and heavily grazed pastures, very close to *Cynodon hirsutus* Stent, see *Linnaea* 7(3): 301. 1832 and *Bothalia* 2: 277, 286. 1927, *Revista Argentina de Agronomía* 17(3): 216, f. 14. 1950, *Crop Science* vol. 9: 291. Madison, Wisconsin 1969, *Australian Journal of Botany, Supplementary Series* 5: 1-51. 1972.

in English: dog grass, blue couch, blue couch grass, fine couch, fine quick, hairy quickgrass, Karoo quickgrass, Karoo quick grass, red quickgrass

in South Africa: fynkweekgras, harige kweekgras, Karookweekgras, kwagkakweek, regtekweek, rooikweek, soetkweek, Transvaalsekweekgras

C. incompletus Nees var. *hirsutus* (Stent) de Wet & J.R. Harlan (*Cynodon bradleyi* Stent; *Cynodon hirsutus* Stent)

South Africa. Prostrate to low, dark green, rapid growing, stoloniferous, rhizomes absent, sod-forming, extremely vigorous, leaves densely or sparsely hairy, lemma keel not winged, ornamental, lawn grass, found on stony areas, dry sites, dry sandy clay, rocky soil, along roadsides, fertile well-drained soils, see *Linnaea* 7(3): 301. 1832 and *Bothalia* 2: 277, 286. 1927, *Revista Argentina de Agronomía* 17(3): 216, f. 14. 1950, *Crop Science* vol. 9: 291. Madison, Wisconsin 1969.

in English: Bradley Bermuda grass, Bradley grass, Bradley, red quick grass

C. incompletus Nees var. *incompletus*

South Africa. Found along roadsides, dry rocky habitat, sandy-loam soil, on sandy soil and sandy alluvial streambank, see *Linnaea* 7(3): 301. 1832.

in English: Magennis Bermuda grass, Magennis' dog's-tooth grass, Magennis

C. nlemfuensis Vanderyst (*Cynodon dactylon* (L.) Pers. var. *sarmentosus* Parodi; *Cynodon parodii* Caro & E.A. Sánchez)

Tropical Africa. Perennial, extremely variable, stout, leafy, large, robust to slender, tough, deep rooted, creeping, vigorous, sward-forming, no rhizomes, strongly stoloniferous, stout woody stolons flat on the ground, rooted runners, small inconspicuous membranous ligule, leaf sheath glabrous and keeled, leaves flat, inflorescence of 4-13 digitate 1-sided spikes whorled, spikes slender and flexuous, spikelets 1-flowered and imbricate in 2 rows, glumes shorter than the florets, lemma silky with not winged keel, 2 lodicules, 3 stamens, native pasture species, forage, grazed by ruminants, not particularly palatable, extremely palatable when young, troublesome, aggressive, good ground cover, it does not tolerate long periods of flooding, used mainly for soil conservation works, useful for erosion control and for waterways, a pioneer grass on wasteland, weed of arable land and perennial crops, found in disturbed areas, weedy grassy sandy places, along roadsides, in grassland, on moist alluvium, in moist areas near rivers and streams, in saturated soil, uncultivated lands, in open and dense bushveld, in orchards and fields, cattle kraals, sometimes confused with *Cynodon plectostachyus* (K. Schum.) Pilg., see *Bulletin agricole du Congo Belge* 11: 121. 1921 [1920], *Bulletin agricole du Congo Belge* 13: 342. 1922, *Revista Argentina de Agronomía* 23: 185. 1956, *Kurtziana* 5: 193. 1970, *Kew Bulletin* 24: 185-189. 1970, *Taxon* 19: 565-569. 1970.

in English: African Bermuda grass, East African couch, East African star grass, African star grass, Rhodesian star grass, giant quickgrass, giant star grass, robust star grass, star grass
in Spanish: yerba estrella, pasto estrella, estrella

in East Africa: chemorut, emurwa, kakodongo, lugowi, ruchwamba, rugoli

in South Africa: gifgras, Oos-Afrikaanse kweek, Oos-Afrikaanse stergras, reusekweekgras, robuustekweekgras, stergras, sterkgras, vreemdevingergras

in the Philippines: galud-galud, kolatay, rukut-dukut

in Thailand: ya sata

C. nlemfuensis Vanderyst var. **nlemfuensis** (*Cynodon dactylon* (L.) Pers. var. *sarmentosus* Parodi)

Tropical East Africa, Kenya, Uganda, Tanzania. Perennial, purplish, tufted, stoloniferous, erect, leaf sheath more or less glabrous or pubescent, ligule membranous and fringed, adapted to tropical and subtropical regions, open spaces, see *Bulletin agricole du Congo Belge* 13: 342. 1922, *Revista Argentina de Agronomía* 23: 185. 1956, *Kew Bulletin* 24(1): 185-189. 1970.

C. nlemfuensis Vanderyst var. **robustus** Clayton & J.R. Harlan

Tropical East Africa. Perennial, stout, green, open spaces, bush, forest, see *Kew Bulletin* 24: 189. 1970.

C. plectostachyus (K. Schum.) Pilg. (*Cynodon plectostachyus* var. *ruspolianus* (Chiov.) Chiov.; *Cynodon ruspolianus* Chiov.; *Leptochloa plectostachyus* K. Schum., also spelled *plectostachya*) (Greek *plektos* “twisted, plaited” and *stachys* “spike”)

Tropical Africa, Tanzania, Kenya, Ethiopia, Uganda. Perennial weed species, large, robust, stout and woody, spreading, forming dense turf, stoloniferous, rhizomes absent, soft foliage, small glumes, aggressive, naturalized elsewhere, under certain conditions could develop toxic properties, useful pasture grass and hay, not particularly palatable, good grazing for livestock, forage, fodder, whole plant eaten by baboons, used mainly for soil conservation works and for erosion control, tolerates temporary flooding, can stand heavy grazing, drought-tolerant, found in dry areas, semi-arid areas, deciduous bushland, along roadsides, disturbed sites, black cracking clay soils, weedy places, red clay soil, bare land, sandy loams, on dry lake beds, alluvial silts and clays, overgrazed land, see *Die Pflanzenwelt Ost-Afrikas* 112. 1895, *Annuario del Reale Istituto Botanico di Roma* 7: 70, t. 7. 1897 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 82. 1907, *Webbia* 8: 111. 1951, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Kew Bulletin* 24(1): 185-189. 1970, *Ceiba* 19(1): 1-118. 1975.

in English: feathery couch, giant quickgrass, Naivasha star grass (= Kenya, Rift Valley, Lake Naivasha), giant star grass, star grass

in Spanish: estrella, estrella Africana, pasto estrella

in Mexico: pasto estrella

in South Africa: gifgras, reusekweekgras, stergras, vreemdevingergras

C. radiatus Roth (*Cynodon arcuatus* J. Presl; *Cynodon dactylon* var. *intermedius* (Rang. & Tadulingham) C.E.C. Fisch.; *Cynodon intermedius* Rang. & Tadul.; *Cynodon leptochloides* Steud.; *Digitaria radiata* (Roth) Spreng.)

Southeast Asia, Madagascar, Vietnam, Thailand, India, Indonesia, Philippines. Erect, wiry, coarse, not rhizomatous, vigorous, spreading, coloniser, open habitats, disturbed sites, dry areas, along roadsides, open sandy sites, edge of forest, stony places, see *Systema Vegetabilium* 2: 411. 1817, *Novae Plantarum Species* 38. 1821, *Systema Vegetabilium, editio decima sexta* 1: 272. 1825, *Reliquiae Haenkeanae* 1(4-5): 290. 1830 and *Journal of the Bombay Natural History Society* 26: 304. 1918, *Flora of the Presidency of Madras* 10: 1835. 1934.

C. transvaalensis Burt Davy

South Africa. Perennial, creeping, decumbent, herbaceous, slender, forming fine dense uniform turf, bright green to reddish purple, densely stoloniferous and/or rhizomatous, culms prostrate, ligule a short hairy membrane, leaf blades bristle-like, very fine green leaves linear to linear-triangular, inflorescence of green or purplish digitate spikes, narrow spikelets laterally compressed, spikes reflexed at maturity, short acuminate glumes, lemma acute and keeled, ornamental, readily grazed, a lawn grass and a troublesome weed, useful for turf purposes, growing in clay soil, roadsides, weedy places, similar and close to *Cynodon dactylon* (L.) Pers., see *Bulletin of Miscellaneous Information Kew* 1921: 281. 1921, *Adansonia: recueil périodique d'observations botanique, n.s.* 6: 248. 1966.

in English: African Bermuda grass, African bermudagrass, African Bermuda, African dog's-tooth grass, African dogstooth grass, Uganda grass, Florida grass, Transvaal quick, Transvaal quick grass, Transvaal dogtooth grass

Local name: masindi

C. x magennisii Hurcombe (= *Cynodon dactylon* (L.) Pers. x *Cynodon transvaalensis* Burt Davy) (also spelled **magennisii** and **magenisii**)

South Africa. Ornamental, turf, cultivated, see *Journal of South African Botany* 13: 19. 1947.

Cynosurus L. = *Falona* Adans., *Phalona* Dumort.

Hound's tail, from the Greek *kynos*, *kyon* “a dog” and *oura* “a tail,” referring to the shape of the panicle; Latin *cynosura*, *ae* “a constellation near the north pole, Ursa Minor”; see Carl Linnaeus, *Species Plantarum*. 72. 1753 and *Genera Plantarum*. edition 5. 33. 1754.

About 5-8 species, Europe, North Africa, Middle East. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Cynosurinae, annual or perennial, tufted, sometimes rhizomatous, stems clumped, herbaceous, erect or spreading, slender, glabrous,

unbranched, culm nodes exposed and glabrous, culm internodes hollow, leaves nonauriculate, ligule obtuse and membrane-like, sheaths not keeled and rounded on the back, leaves linear and flat, plants bisexual, inflorescence 1-sided panicle spicate and contracted, panicle spiciform or capitate, spikelets paired and sessile, inner spikelet fertile, outer or lower spikelet sterile, bisexual spikelets more or less concealed by persistent sterile spikelets, 2 subequal glumes narrow, lower glume 1- to 2-nerved, upper glume 1-nerved, lemmas leathery or coriaceous with apex acute to awned, short or long awned, palea keels wingless, 2 free and toothed or bilobed apically lodicules, 3 stamens, ovary glabrous, 2 stigmas, pasture and hay grasses, weed species naturalized elsewhere, cultivated fodder, grazed pastures, open habitats, weedy places, meadows, disturbed ground, waste areas, grasslands, open and grassy habitats, lawns and playing fields, similar to *Lamarckia* Moench and *Lolium* Krecz. & Bobrov, type *Cynosurus cristatus* L., see *Species Plantarum* 1: 59-60, 72-73. 1753, *Familles des Plantes* 2: 496. 1763, *Observations sur les Graminées de la Flore Belgique* 114. 1823 [1824], *Genera Plantarum* 3(2): 1183. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 73. 1887 and *Novitates Botanicae et Delectus Seminum Horti Botanici Universitatis Carolinae Pragensis* 1964: 23-27. Prague 1964, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Flora Mesoamericana* 6: 228-229. 1994, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 13-14. 1997, *Opera Botanica* 137: 1-42. 1999, *Grass and Forage Science* 54(1): 1-18. Mar 1999, *Grass and Forage Science* 54(2): 99-115. June 1999 [Hay production from lowland seminatural grasslands: a review of implications for ruminant livestock systems.], *Functional Ecology* 13(5): 650-660. Oct 1999, *Taxon* 49(2): 249. 2000, *Journal of Ecology* 88(5): 757-764. Oct 2000, *Journal of Applied Ecology* 37(6): 1029-1043. Dec 2000, *Journal of Applied Ecology* 38(2): 253-267. Apr 2001, *Journal of Applied Ecology* 39(2): 279-293. Apr 2002, *Grass and Forage Science* 57(2): 82-92. June 2002, *Journal of Applied Ecology* 39(4): 572-583. Aug 2002, *Contributions from the United States National Herbarium* 48: 242. 2003, *Journal of Applied Ecology* 40(1): 51-64, 65-77. Feb 2003, *Global Change Biology* 9(10): 1451-1457. Oct 2003, *Global Change Biology* 10(2): 209-227. Feb 2004, *European Journal of Soil Science* 55(1): 71-77. Mar 2004, *Grass and Forage Science* 59(2): 144-156. June 2004, A.R. McCrea, I.C. Trueman and M.A. Fullen, "Factors relating to soil fertility and species diversity in both seminatural and created meadows in the West Midlands of England." *European Journal of Soil Science* 55(2): 335-348. June 2004, *Journal of Applied Ecology* 41(5): 880-887. Oct 2004, *Journal of Ecology* 92(5): 906-927. Oct 2004, *Restoration Ecology* 11(4): 424-435. Dec 2003, *Ibis* 146(s2):

108-114. Nov 2004 [Swards and structure: the interactions between farming practices and bird food resources in lowland grasslands.], *Functional Ecology* 19(1): 27-37. Feb 2005.

Species

C. coloratus Lehm. ex Nees (*Cynosurus coloratus* Lehm. ex Steudel)

Mediterranean. Annual, rare, tufted or loosely tufted, awns purple at the base, common in rocky areas, see *Nomenclator Botanicus. Editio secunda* 1: 465. 1840, *Florae Africae Australioris Illustrationes Monographicae* 439. 1841.

C. cristatus L. (*Phleum cristatum* (L.) Scop.)

Eurasia. Perennial, tufted, compact, erect or shortly geniculate, glabrous, stiff, unbranched, auricles absent, ligule not lobed and blunt, sheaths smooth and subcoriaceous, leaves flat and ribbed or grooved, a green to purple spike-like panicle narrow-oblong to linear and not secund, spikelets densely overlapping, fertile spikelets surrounded by sterile spikelets, glumes persistent and keeled, lemmas of fertile florets more or less hairy and shortly to very shortly awned, palea hyaline narrowly ovate to narrowly elliptic, anthers yellow, fruit not grooved, drought resistant, grown for hay production, fodder and pasture especially for sheep, used for weaving mats and baskets, a weedy species of waste and cultivated areas, moist and very wet places, damp or dry soils, grassy area under woods, along roadsides, grasslands, seasonally inundated fields, open habitats, swamp margins, see *Flora Carniolica, Editio Secunda* 1: 57. 1771 and *Regnum Veg.* 127: 41. 1993.

in English: crested dog's tail, crested dogtail

in Spanish: cola de perro

C. echinatus L. (*Falona echinata* (L.) Dumort.; *Phalona echinata* (L.) Dumort.)

Southern Europe, Mediterranean. Annual, tufted or solitary, erect or decumbent or geniculate at base, slender, open leaf sheaths loose and enlarged to inflated, auricles absent, ligule blunt to rounded, leaves glabrous and flat, ovoid to globose to ovate-oblong spike-like green to purple panicle, inflorescence very bristly and along top of stem, spikelets densely crowded and mostly in pairs, individual florets above long bristle, fertile spikelets surrounded by sterile spikelets, glumes persistent narrow-lanceolate, lemmas convex and conspicuously long-awned, palea 2-keeled with the keels green, yellow anthers, cultivated, invasive species growing in colonies and naturalized elsewhere, weed of waste and disturbed places, crops, hillsides, damp or dry soils, dry bare soil, open grasslands, meadows, open habitats, coniferous woodlands, well-drained soils, along roadsides and trails, pasture, often in shade, see *Observations sur les Graminées de la Flore Belgique* 114. 1823 [1824] and *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991, *Newslett. Int.*

Organ. Pl. Biosyst. (Oslo) 26/27: 13-14. 1997, *Taxon* 49(2): 249. 2000.

in English: dogtail, bristled dog's tail, bristly dog's tail, bristly dog's tail grass, crested dog's tail, rough dog's tail, rough dogstail, rough dog's tail grass, hedgehog dogtail

C. elegans Desf. (*Cynosurus junceus* Murb.; *Falona elegans* (Desf.) Jir. & Chrtek; *Falona juncea* (Murb.) Jir. & Chrtek)

Israel. Lax inflorescence, awns silky and longer than lemmas, see *Flora Atlantica* 1: 182. 1789 and *Novitates Botanicae ex Universitate Carolinae* 1964: 26. 1964.

Cyperochloa Lazarides & L. Watson

From the Greek *kypeiron*, *kyperos*, *kypeiros* "a sedge" and *chloe*, *chloa* "grass, young grass."

One species, Australia. Arundinoideae, Cyperochloaeae, or Centothecoideae, perennial, tufted, herbaceous, erect, sedge-like, solid, auricles absent, setaceous leaf blades narrow, ligule fringed, leaves mostly basal, plants bisexual, inflorescence paniculate capitate spatheate contracted, bracteate spikelets, 2 glumes unequal 3- to 5-nerved, lemma 5- to 7-nerved, palea present, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, type *Cyperochloa hirsuta* Lazarides & L. Watson, see Michael Lazarides and L. Watson, "Cyperochloa, a new genus in the Arundinoideae Dumortier (Poaceae)." *Brunonia* 9(2): 216. 1987 [1986], Nigel P. Barker, "The relationships of *Amphipogon*, *Elytrophorus* and *Cyperochloa* (Poaceae) as suggested by rbcL sequence data." *Telopea* 7(3): 205-213. 1997, C. Hsiao, S.W.L. Jacobs, N.P. Barker and N.J. Chatterton, "A Molecular Phylogeny of the Subfamily Arundinoideae (Poaceae) Based on Sequences of rDNA." *Australian Systematic Botany* 11(1): 41-52. 1998, C. Hsiao, S.W.L. Jacobs, N.J. Chatterton and K.H. Asay, "A Molecular Phylogeny of the Grass Family (Poaceae) Based on the Sequences of Nuclear Ribosomal DNA (ITS)." *Australian Systematic Botany* 11(5-6): 667-688. 1998, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, "Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B." *Am. J. Bot.* 87: 96-107. 2000, M.R. Duvall, J.D. Noll and A.H. Minn, "Phylogenetics of Paniceae (Poaceae)." *Am. J. Botany* 88(11): 1988-1992. 2001, E.A. Kellogg, "Evolutionary History of the Grasses." *Plant Physiology* 125(3): 1198-1205. 2001, *Flora of Australia* 43: 27, 28, 97, 104, 106, 265. 2002, G.H. Rua, "Centothecoid grasses and the evolution of panicoid spikelets." *Plant Systematics and Evolution* 240(1-4): 83-89. 2003.

Species

C. hirsuta Lazarides & L. Watson

Southwestern Australia. Dry sandy places.

Cyphochlaena Hackel = *Boivinella* A. Camus, *Sclerolaena* A. Camus

From the Greek *kyphos* "bent, curved, humped, tumour" and *chlaena* "cloak."

About 2 species, Madagascar. Panicoideae, Panicoideae, annual or perennial, trailing, herbaceous, auricles absent, ligule fringed, plants bisexual, inflorescence spicate, unilateral racemes, paired dimorphic spikelets, female spikelets laterally compressed, 2 glumes subequal, upper glume coriaceous, lower glume with a deciduous apical awn, lower lemma gibbous, male spikelet upper glume and lower lemma membranous, palea present, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, in damp places, related to *Pseudechinolaena*, type *Cyphochlaena madagascariensis* Hack., see *Species Plantarum* 1: 55. 1753, *Flore d'Oware* 2: 14. 1807 [1810], *Prodromus Florae Novae Hollandiae* 410. 1810 and *Österreichische Botanische Zeitschrift* 51: 465. 1901, *Bulletin de la Société Botanique de France* 72: 175-176, 622. 1925, *Bulletin du Muséum d'Histoire Naturelle* 31: 390. 1925, *Adansonia: recueil périodique d'observations botanique, n.s.* 5: 411-413. 1965, *Mem. Torrey Bot. Club* 23: 1-97, 126-130. 1977.

Species

C. madagascariensis Hack. (*Boivinella comorensis* A. Camus; *Oplismenus nossibensis* Mez; *Sclerolaena comorensis* Boivin ex A. Camus; *Sclerolaena comorensis* Boivin)

Madagascar. See *Notizblatt des Königlichen botanischen Gartens und Museums zu Berlin* 7: 53. 1917.

C. sclerioides (A. Camus) Bosser (*Boivinella sclerioides* A. Camus; *Panicum sclerioides* Boivin ex A. Camus)

Madagascar.

Cypholepis Chiov. = *Coelachyrum* Hochst. & Nees

From the Greek *kyphos* "bent, curved, tumour" and *lepis* "scale."

One species, Africa. Chloridoideae, Eragrostideae, type *Cypholepis yemenica* (Schweinf.) Chiov., perennial, herbaceous, unarmed, caespitose, densely tufted, ligule a fringed membrane, plants bisexual, spikelets flattened, 2 glumes subequal, lemma thinly coriaceous, short awnless palea, 2 fleshy lodicules, 3 stamens, 2 stigmas, smooth grains, often in *Coelachyrum*, see *Nomenclator Botanicus. Editio secunda* 1: 394. 1840, *Linnaea* 16(2): 221. 1842 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 357-358. 1908, *Kirkia* 3: 117, 131-134. 1963, *Annalen des Naturhistorischen Museums in Wien* 75: 23. 1971[1972].

Species

C. yemenica (Schweinf.) Chiov. (*Coelachyrum yemenicum* (Schweinf.) S.M. Phillips; *Eleusine yemensis* (Schweinf.) Chiov.; *Eragrostis yemenica* Schweinf.; *Leptochloa appletonii* Stapf)

Tropical East Africa, South Africa, Ethiopia, Somalia, Yemen, Arabia. Annual or perennial, slender, densely tufted, erect or geniculate, ascending, without stolons, sheaths keeled, leaf blades narrowly linear, narrow inflorescence racemose, erect racemes spaced, 7- to 12-flowered, spikelets elliptic to narrowly lanceolate-elliptic, florets closely imbricate, glumes lanceolate-oblong 1-nerved, lemmas coriaceous and obtuse, growing on red sandy soil, grassland, open areas, in *Acacia* scrub, open shrubland, rocky places, sandstone, limestone, open stony ground, see *Bulletin de l'Herbier Boissier* 2(App. 2): 41. 1894 and *Bulletin of Miscellaneous Information Kew* 6: 223. 1907, *Annuario del Reale Istituto Botanico di Roma* 8(3): 357-358. 1908, *Annali di Botanica* 10: 410. 1912, *Kew Bulletin* 37(1): 159. 1982, *Grass. Saudi Arabia* 274. 1989.

Cyrene F. Allam.

See *Nova Acta Leop.-Carol. Nat. Cur.* 4: 94. 1770 [also *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.*] and *Genera Graminum* 376. 1999.

Cyrtococcum Stapf = *Loxostachys* Peter, *Pseudechinolaena* Stapf

Greek *kyrtos* "curved, arched" and *kokkos* "a berry," alluding to the nature of the fruits, to the gibbous spikelets.

About 11-12 species, Old World tropics, Sri Lanka. Panicoideae, Panicoideae, Isachneae, or Panicoideae, Paniceae, Panicinae, annual or perennial, leafy, creeping, herbaceous, branched, stoloniferous or decumbent and rooting from the nodes, internodes hollow, auricles absent, ligule a membrane-like more or less fringed, leaves lanceolate to ovate to linear-lanceolate, plants bisexual, inflorescence a more or less loose panicle open or contracted, spikelets laterally compressed and asymmetrically obovate or gibbous, florets 2, lower floret sterile, upper floret perfect or bisexual, small crest on the upper floret, 2 glumes more or less equal and shorter than the spikelets, upper glume nerved and obtuse, lemmas boat-shaped, lower lemma obtuse, upper lemma laterally compressed, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 plumose stigmas, weed species, native pasture species, lower montane forest, shade species, lowland, open areas, related to *Panicum*, type *Cyrtococcum setigerum* (P. Beauv.) Stapf, see *Species Plantarum* 1: 55. 1753, *Syst. Veg.* 2: 884. 1817 and *Flora of Tropical Africa* 9: 15. (July) 1917 and 9: 745-746. (Aug) 1920, *J. Bot.* 69: 55. 1931, *Repert. Spec. Nov. Regni Veg.*

Beih. 40(1): 203, Anh. 55. 1930, *Flora Mesoamericana* 6: 328-329. 1994, *Am. J. Bot.* 88: 1993-2012. 2001, *Flora of Australia* 43: 113, 277. 2002, *Contributions from the United States National Herbarium* 46: 169, 285, 542-543. 2003.

Species

C. accrescens (Trin.) Stapf (*Panicum accrescens* Trin.)

Asia. Perennial, decumbent, rooting from the lower nodes, large and open inflorescence, fodder grass, see *Species Graminum* 1: t. 88. 1828[1827] and *Bulletin du Muséum National d'Histoire Naturelle* 27(1): 118. 1921, *Hooker's Icon. Pl.* 31(4): sub t. 3096. 1922, *Acta Phytotaxonomica et Geobotanica* 11(1): 47-48. 1942.

in Thailand: yaa ngaat, yaa raat

C. capitis-york B.K. Simon

Australia. Upper glume 3-nerved, spikelets compressed laterally and falling with glumes, see *Austrobaileya* 3(4): 592, f. 3. 1992.

C. chaetophoron (Roem. & Schult.) Dandy (*Cyrtococcum setigerum* (P. Beauv.) Stapf; *Isachne jardinii* (Steud.) Durand & Schinz; *Panicum chaetophorum* Roem. & Schult.; *Panicum jardinii* Steud.; *Panicum patens* L.; *Panicum setigerum* Retz.; *Panicum setigerum* P. Beauv., nom. illeg., non *Panicum setigerum* Retz.)

Tropical Africa. Perennial, loose, delicate, ascending, magical application, forest shade, see *Species Plantarum* 1: 58. 1753, *Observationes Botanicae* 4: 15. 1786, *Flore d'Oware* 1: 49, 82. 1804, *Prodromus Florae Novae Hollandiae* 196. 1810, *Systema Vegetabilium* 2: 884. 1817, *Synopsis Plantarum Glumacearum* 1: 95. 1854[1855], *Conspectus Florae Africae* 5: 739. 1896 and *Journal of Botany, British and Foreign* 69(2): 55. 1931.

in Ivory Coast: bikakosiré

C. deccanense Bor (*Cyrtococcum patens* sensu Senaratna, non (L.) A. Camus; *Panicum patens* sensu Hook.f., pro parte, non L.)

Southern India, Sri Lanka. Perennial, erect, decumbent, creeping, prostrate, rooting from the lower nodes, leaf sheaths keeled, panicles open and diffuse, upper floret pitted, forest shade, mountains, jungle, damp places, see *Handb. Fl. Ceylon* 5: 159. 1900, *Kew Bulletin* 1956: 255-256. 1956, *Grasses of Ceylon* 120. 1956, *Grasses of Burma* ... 291. 1960.

C. multinode (Lam.) Clayton (*Panicum cyrtococcoides* Napper; *Panicum multinode* Lam.; *Panicum multinode* J. Presl, nom. illeg., non *Panicum multinode* Lam.)

Tropical Africa. See *Encyclopédie Méthodique, Botanique* 4: 747. 1796, *Reliquiae Haenkeanae* 1(4-5): 303. 1830 and *Kirkia* 3: 126. 1963, *Kew Bulletin* 33(1): 22. 1978.

C. oxyphyllum (Hochstetter ex Steudel) Stapf (*Panicum oxyphyllum* Hochst. ex Steud.; *Panicum pilipes* Nees &

Arnott ex Büse, nom. illeg., non *Panicum pilipes* Nees) (Greek *oxys* “sharp” and *phyllon* “leaf”)

Southeast Asia, China, India, Indonesia, Sri Lanka, Australia. Perennial, weed species, slender, prostrate, erect, creeping, rooting at the nodes, leaf sheaths keeled at the tip, ligule minutely ciliolate, sheaths and blades often densely hairy below, leaf blades lanceolate, leaves more or less appressed and pubescent, flowering stems ascending, inflorescence very dense and narrow panicles long pilose, panicles contracted, asymmetrical spikelets dark orange and shining, sterile glumes keeled, fodder grass, in forest shade, old taro plantations, in forest clearings, easily confused with species of *Oplismenus* P. Beauv., see *Synopsis Plantarum Glumacearum* 1: 65. 1854, *Plantae Junghuhnianae* 3: 376. 1854, Henry Trimen (1843-1896), *A Systematic Catalogue of the Flowering Plants and Ferns Indigenous to or Growing Wild in Ceylon* 105. Colombo 1885 and *Handb. Fl. Ceylon* 5: 158. 1900, *Hooker's Icones Plantarum* 31(4): t. 3096. 1922, *Handb. Fl. Ceylon* 6: 322. 1931, *Grasses of Ceylon* 120. 1956, *Grasses of Burma ...* 291. 1960.

C. patens (L.) A. Camus (*Cyrtococcum accrescens* (Trinius) Stapf; *Cyrtococcum muricatum* (Retz.) Bor; *Cyrtococcum radicans* (Retz.) Stapf; *Panicum accrescens* Trin.; *Panicum carinatum* J. Presl; *Panicum carinatum* Torr., nom. illeg., non *Panicum carinatum* J. Presl; *Panicum muricatum* Retz.; *Panicum obliquum* Roth ex Roem. & Schult.; *Panicum patens* L.; *Panicum patens* forma *latifolium* Honda; *Panicum radicans* Retz.; *Paspalum carinatum* (J. Presl) K. Schum.) Southeast and tropical Asia, India. Perennial, creeping, scrambling, low, prostrate, decumbent, erect, frequently rooting at lower nodes, ligule glabrous, leaf sheath smooth with hairy margins, leaves lanceolate and acuminate, very lax and open inflorescence with spreading branches, spikelets pubescent, lower floret sterile, upper floret pitted, lower glume ovate, lemma with hairy margins, palea leathery, weed species, native pasture species, good fodder, common at the edge of woods, secondary growth, swamps, open areas, confused with *Cyrtococcum trigonum* (Retz.) A. Camus, see *Species Plantarum* 1: 1: 58. 1753, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Observationes Botanicae* 4: 18. 1786, *Systema Vegetabilium* 2: 433. 1817, Albrecht Wilhelm Roth (1757-1834), *Novae plantarum species praesertim Indiae orientalis*. Halberstadii 1821, *Reliquiae Haenkeanae* 1(4-5): 309. 1830, *Boston J. Nat. Hist.* 1: 137. 1835, Karl Moritz Schumann (1851-1904), *Die Flora von Kaiser Wilhelms Land* 21. Berlin 1889 and *Handb. Fl. Ceylon* 5: 159. 1900, *Botanisk Tidsskrift* 24: 99. 1901, *Fragmenta Florae Philippinae* 143. 1904, *Bull. Mus. Hist. Nat.* (Paris) 27(1): 118. 1921, *Flore Générale de l'Indo-Chine* 7: 465. 1922, *Hooker's Icon. Pl.* t. 3096. 1922, *Handb. Fl. Ceylon* 6: 322. 1931, *Acta Phytotaxonomica et Geobotanica* 11(1): 47-48. 1942, *Journal of the Arnold*

Arboretum 29: 286. 1948, *Grasses of Ceylon* 120-121. 1956, *Grasses of Burma ...* 291-292. 1960.

in Japan: hime-chigo-zasa (= little *Isachne*)

in India: mannakki pullu

C. pilipes (Nees & Arn. ex Büse) A. Camus (*Panicum hermaphroditum* Steud.; *Panicum oxyphyllum* Hochst. ex Steud.; *Panicum pilipes* Nees & Arn. ex Büse, nom. illeg., non *Panicum pilipes* Nees)

Southeast Asia, Thailand. See *Plantae Junghuhnianae* 3: 376. 1854, *Synopsis Plantarum Glumacearum* 1: 65, 67. 1854 and *Bulletin du Muséum National d'Histoire Naturelle* 27: 118. 1921.

in Thailand: dok haang raet, yaa ngaat, yaa raat, yaa yuung

C. trigonum (Retz.) A. Camus (*Loxostachys lachnantha* Peter; *Panicum difforme* Roth; *Panicum trigonum* Retz.)

Southeast Asia, Sri Lanka. Perennial, creeping, matted, prostrate, erect, rooting at lower nodes, ligule glabrous, leaf sheath smooth with hairy margin, leaves lanceolate and acuminate, open inflorescence, shade species, fodder grass, common at the edge of woods, along roadsides, secondary growth, swamps, along paths, open areas, similar and confused with *Cyrtococcum patens* (L.) A. Camus, see *Sp. Pl.* edition 1. 1: 58. 1753, *Obs. Bot.* 3: 9. 1783, *Systema Vegetabilium* 2: 433. 1817, *Enum. Pl. Zeyl.* 359. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns Indigenous to or Growing Wild in Ceylon* 105. 1885 and *Handb. Fl. Ceylon* 5: 157. 1900, *Bull. Mus. Hist. Nat.* (Paris) 27: 118. 1921, *Hooker's Icon. Pl.* t. 3096. 1922, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 1: 55, f.14/1. 1930 [1931], *Handb. Fl. Ceylon* 6: 322. 1931, *Grasses of Ceylon* 120. 1956, *Grasses of Burma ...* 292. 1960.

in India: abbu garike

C. trigonum (Retz.) A. Camus var. **celebicum** Jansen

Southeast Asia, Celebes. See *Reinwardtia* 2(2): 258. 1953.

Cyrtopogon Spreng. = *Aristida* L., *Curtopogon* P. Beauv.

From the Greek *kyrtos* “curved, arched” and *pogon* “a beard.”

Arundinoideae, Aristideae, or Aristidoideae, Aristideae, see *Species Plantarum* 1: 82. 1753, *Flora Boreali-Americana* 1: 41. 1803, *Ess. Agrostogr.* 32, 159, t. 8, f. 7. 1812, *Systema Vegetabilium, editio decima sexta* 1: 266. 1824[1825] and *Kurtziana* 1: 123-206. 1961, *Flora Mesoamericana* 6: 253-257. 1994, *Flora del Valle de Tehuacán-Cuicatlán* 3: 1-35. 1994, *Flora of Ethiopia and Eritrea* 7: 76-85. 1995, *Annals of the Missouri Botanical Garden* 82: 593-595. 1995, *Candollea* 53(2): 466-470. 1998, *Bot. Rev.* 64: 1-85. 1998, *Boletim do Instituto de Botânica (São Paulo)* 12: 113-179.

1999, *Acta Botánica Mexicana* 63: 1-45. 2003, *Contributions from the United States National Herbarium* 46: 69-104, 166, 169. 2003.

Czerniaevia (Ledeb.) Ledeb. = *Czerniaevia* Ledeb., *Deschampsia* P. Beauv.

Pooideae, Poodae, Aveneae, or Pooideae, Poae, Airinae, in syn. sub *Deschampsia bottnica* (Wahlenb.) Trin., see *Flora Lapponica* 1: 36, t. 4. 1812, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Fundamenta Agrostographiae* 158. 1820, *Flora Rossica* 4(13): 422. 1852 and *Contributions from the United States National Herbarium* 48: 245-256. 2003.

Czerniaevia Turcz. ex Griseb. = *Deschampsia* P. Beauv.

Pooideae, Poodae, Aveneae, or Pooideae, Poae, Airinae, in syn. sub *Deschampsia bottnica* var. *melicoides* (?), see *Flora Lapponica* 1: 36, t. 4. 1812, *Essai d'une Nouvelle*

Agrostographie 91, 149, 160. 1812, *Fundamenta Agrostographiae* 158. 1820, *Flora Rossica* 4(13): 422. 1852 and *Contributions from the United States National Herbarium* 48: 242, 245-256. 2003.

Czernya Presl = *Phragmites* Adans.

Arundinoideae, Arundineae, see *Species Plantarum* 1: 81. 1753, *Familles des Plantes* 2: 34, 559. 1763, *Archiv für die Botanik* 1(3): 37. 1798, *Systema Vegetabilium* 2: 29, 501. 1817, *Cyperaceae et Gramineae Siculae...* Pragae 1820, *Fundamenta Agrostographiae* 134. 1820 [1822], *Synopsis Plantarum Glumacearum* 1: 197. 1855 [1854], *Journal of the Linnean Society Bot.* 19: 112. 1881, Hermann Karsten (1817-1908), *Deutsche Flora. Pharmaceutisch-medizinische Botanik...* 379. Berlin 1881 and *Kew Bulletin* 21: 113-117. 1967, *Taxon* 17: 168-169. 1968, H.I. Aston, *Aquatic Plants of Australia*. 207-210. 1973, *Journal of Shenyang Agricultural University* 24(2): 89-94. 1993, *Contributions from the United States National Herbarium* 46: 169, 537-539. 2003.

D

Dactilon Vill. = *Cynodon* Rich.

Greek *daktylos* "a finger."

Chloridoideae, Cynodonteae, Chloridinae, type *Dactilon officinale* Vill., see *Species Plantarum* 1: 58. 1753, *Histoire des Plantes de Dauphiné* 2: 69. 1787, *Syn. Pl.* 1: 85. 1805 and *Contributions from the United States National Herbarium* 41: 59-63, 64. 2001.

Dactylis L. = *Amaxitis* Adans., *Trachypoa* Bub.

From the Latin *dactylis* and Greek *daktylos* for a kind of grape or a sort of grass (Plinius) or the date, perhaps referring to the stiff branches of the flower head; see Carl Linnaeus (1707-1778), *Species Plantarum*. 71. 1753 and *Genera Plantarum*. Edition 5. 32. 1754.

About 1-5 species, Europe, Mediterranean, North Africa, temperate Asia. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Dactylidinae, perennial, extremely variable, bulbous base, herbaceous, unbranched, densely tufted, young shoots strongly flattened, rhizomatous or stoloniferous, short and oblique rhizomes, hollow internodes, auricles absent, ligule membranous and unfringed, leaf sheaths keeled and compressed, leaf blades linear to linear-lanceolate and broad or narrow, old leaf sheaths persistent and fibrous, plants bisexual, panicle compound and contracted or open, spikelets densely crowded in thick clusters, 2-5 florets, vestigial foliar structure subtending the inflorescence rarely present or absent, 2 persistent and subequal glumes keeled and acute, stiff lemmas keeled and mucronate, lemma spinulose on keel, palea keels wingless, 2 lodicules free and membranous, 3 stamens, ovary glabrous, anthers yellowish cream, 2 stigmas white plumose, weed species, pasture grass, cultivated fodder, shade species, habitat variable, grows in meadows, moist and fertile soils, stony hills, open habitats, wastelands, woodlands and disturbed ground, in moist to dry places, a segregate from *Poa*, type *Dactylis glomerata* L., see *Species Plantarum* 1: 54-55, 71, 73-78. 1753, *Familles des Plantes* 2: 34, 515. 1763 and *Flora Pyrenaea* ... 4: 359. 1901, *Acta Botanica Bohemica* 14: 1-147. 1943, *University of California Publications in Botany* 31(1): 1-40. 1959 [Cytogenetic and evolutionary studies in the genus *Dactylis*. I: Morphology, distribution, and interrelationships

of the diploid subspecies.], *Journal of the Linnean Society, Botany* 56: 441-452. 1961, *Brittonia* 23(3): 293-324. 1971, *Annual Report of the Welsh Plant Breeding Station* 1977: 190-209. Aberystwyth 1978, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Botanica Helvetica* 94: 261-267. 1984, *Carinthia II* 174: 107-130. 1984, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Journal of Cytology and Genetics* 25: 74-77. 1990, *Folia Geobotanica et Phytotaxonomica* 25: 381-388. 1990, *Plant Systematics and Evolution* 169: 81-96. 1990, *Phyton. Annales Rei Botanicae* 31: 35-55. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Cytologia* 56: 437-452. 1991, *Flora Mesoamericana* 6: 231. 1994, *International Organization of Plant Biosystematists Newsletter* 22: 3. 1994, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *New Phytologist* 128: 555-561. 1994, *Grassland of China* 1994(3): 55-57. 1994, *Flora Mediterranea* 5: 340-345. 1995, *Grassland of China* 1995(1): 16-20. 1995, *Plant Systematics and Evolution* 196: 227-241. 1995, *Boletim da Sociedade Broteriana, ser. 2* 67: 223-230. 1996, *Bothalia* 27: 75-82. 1997, *Plant, Cell and Environment* vol. 21, iss. 10: 995-1005. Oct 1998, *Newslett. Int. Organ. Pl. Biosyst. (Pruhonice)* 31: 12. 1999, *Plant Biology* 1: 538-540. 1999, *Opera Botanica* 137: 1-42. 1999, *Grassland of China* 2000(5): 1-5. 2000, *Botanical Journal of the Linnean Society* vol. 140, iss. 2: 95-114. Oct 2002, *Botanical Journal of the Linnean Society* vol. 142, iss. 4: 347-372. Aug 2003, *Contributions from the United States National Herbarium* 48: 106, 242-244, 656. 2003, *Botanical Journal of the Linnean Society* 143(2): 169-175. Oct 2003.

Species

D. glomerata L. (*Bromus glomeratus* (L.) Scop.; *Dactylis glaucescens* Willd.; *Dactylis glomerata* var. *ciliata* Petermann; *Dactylis glomerata* var. *detonsa* Fries, *Dactylis glomerata* var. *vivipara* Parl.; *Dactylis hispanica* Roth; *Festuca glomerata* (L.) All.; *Festuca glomerata* (L.) Spreng., nom. illeg., non *Festuca glomerata* (L.) All.; *Limnetis glomerata* (L.) Eaton; *Phalaris glomerata* Gueldenst.; *Trachypoa vulgaris* Bubani)

North Africa, Mediterranean, Europe. Long-lived perennial bunchgrass, very variable, densely and strongly tufted, dark green to light green to grayish green, tall, robust, coarse, erect or spreading, tussocks forming, strong and extensive fibrous

root system, has no stolons and only rarely has short rhizomes, auricles absent, leaf sheaths keeled, ligule membranous and smooth, long linear and flat leaves, panicle usually contracted and well exerted from uppermost sheath, spikelets ovate and crowded in dense and compact 1-sided clusters, vestigial foliar structure subtending the inflorescence rarely present or absent, 2 glumes persistent and finely pointed, lemmas with a terminal mucro or a short awn, paleas 2-keeled with hairy keels, ovary glabrous, reproduces sexually by seed production and asexually by tiller formation, sometimes a noxious weed species, can withstand heavy grazing, moderately nutritious and highly palatable, cultivated fodder, meadow and pasture grass, forage, cause of hay fever, ornamental honey plant, drought- and shade-tolerant, frost- and heat-resistant, requires good drainage, excellent ground cover, recommended and used for a variety of rehabilitation applications, used for rehabilitation of sites disturbed by mining, may be used for soil erosion control on cut-over forest land, found in moist soils, in timbered areas after fire, in open habitats, gardens, fields, in disturbed places and along roadsides, orchards, waste places and depleted sites, meadows, dune hollows, sandy soil, clays and clay loams, in irrigated and high rainfall areas, on logging roads, on normally drained to dry soils, might be confused with *Phalaris arundinacea* L., see *Species Plantarum* 71. 1753, *Flora Carniolicæ, Editio Secunda* 1: 76-77. 1771, *Flora Pedemontana* 2: 252. 1785, *Reisen durch Russland und im Caucasischen Gebürge* 2: 214. 1791, *Plantarum Minus Cognitarum Pugillus* 2: 22. 1815, *A Manual of Botany for the Northern States* 14. 1817 and *Handb. Fl. Ceylon* 5: 305. 1900, *Flora Pyrenæa* ... 4: 359. 1901, *Grasses of Ceylon* 44. 1956, *Grasses of Burma* ... 530. 1960, *Fl. Trop. E. Africa Gramineæ* (1): 43. 1970, R. Lumaret, "Polyploidy and the critical size of natural populations: the case of cocksfoot (*Dactylis glomerata* L.), a grass used as a fodder plant." *Bocconea* 7: 133-139. 1997, *Plant, Cell and Environment* vol. 20, iss. 10: 1309-1316. Oct 1997, *Grass and Forage Science* vol. 53, iss. 3: 225-232. Sep 1998, T.D. Cirkovic et al., "Physicochemical and immunologic characterization of low molecular weight allergoids of *Dactylis glomerata* pollen proteins." *Allergy* 54(2): 128-134. Feb 1999, *Functional Ecology* 13(4): 473-482. Aug 1999, E. Sahuquillo & R. Lumaret, "Chloroplast DNA variation in *Dactylis glomerata* L. taxa endemic to the Macaronesian islands." *Molecular Ecology* 8(11): 1797-1803. Nov 1999, *Grass and Forage Science* 57(3): 247-254. Sep 2002, Florence Volaire, "Seedling survival under drought differs between an annual (*Hordeum vulgare*) and a perennial grass (*Dactylis glomerata*)." *New Phytologist* 160(3): 501-510. Dec 2003, *Physiologia Plantarum* 118(2): 270-277. June 2003.

in English: akaroa, cock's foot, cocksfoot, orchard grass, rough cock's foot, duck grass, Paiute orchard grass, Paiute, barnyard grass

in French: dactyle glomérulé, dactyle vulgaire, dactyle aggloméré, dactyle pelotonné

in Spanish: alpistillo, dácilo, dácilo aglomerado, dácilo apelonado, dácilo ramoso, dorchoro, gramilla de huertos, orcho, orchoro, pasto orchoro, oவில், pasto oவில், pasto azul, pasto azul orchoro, pasto cogon, pasto de huerto

in Argentina: pelotonero

in Brazil: capim de galhina

in Colombia: pasto azul, orchoro

in Mexico: dactilo, gallo, pata de pollo, zacate de la huerta

in Morocco: mdhoun, nahadoun, agziz, tiraw

in South Africa: Australiese gras, koksvoet gras, kropaar, kropaar gras

in Japan: kamo-gaya

D. glomerata L. subsp. ***aschersoniana*** (Graebner) Thellung (*Dactylis aschersoniana* Graebn.; *Dactylis glomerata* subsp. *lobata* (Drejer) H. Lindb.; *Dactylis polygama* Horv.) (after the German botanist Paul Friedrich August Ascherson, 1834-1913, professor of botany; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 82. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 16. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Stafleu & Cowan, *Taxonomic literature*. 1: 72-77. 1976; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement I*. 186-195. 1992)

Europe. See *Flora Excursoria Hafniensis* 45. 1838, *Notizblatt des Königlichen botanischen Gartens und Museums zu Berlin* 17(2): 274. 1899 and *Allegemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 7: 34. 1911.

in English: Ascherson's orchardgrass

in German: Aschersons Knäuelgras, Wald-Knäuelgras, Wiesen-Knäuelgras

D. glomerata L. subsp. ***glomerata*** (*Dactylis ciliata* (Peterm.) Opiz; *Dactylis glaucescens* Willd.; *Dactylis glomerata* var. *ciliata* Peterm.; *Dactylis glomerata* var. *detonsa* Fr.; *Dactylis glomerata* var. *glomerata*; *Dactylis glomerata* var. *variegata* Hitchc.; *Trachypoa vulgaris* Bubani)

Europe, Russia. Perennial, see *Species Plantarum* 1: 71. 1753, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 111. 1809 and *Manual of the Grasses of the United States* 184. 1935, *Acta Bot. Bohem.* 14: 20. 1943.

in English: orchard grass, orchardgrass

in French: dactyle aggloméré

D. glomerata L. subsp. ***himalayensis*** Domin

Temperate and tropical Asia, India, China, Japan. Perennial, useful for erosion control, see *Acta Botanica Bohemica* 14: 129. 1943.

in English: orchard grass

D. glomerata L. subsp. **hispanica** (Roth) Nyman (*Dactylis glomerata* var. *hispanica* (Roth) W.D.J. Koch; *Dactylis glomerata* subsp. *rigida* (Boiss. & Heldr.) Hayek; *Dactylis hispanica* Roth)

Europe, Asia temperate, Iraq. Perennial, erect, robust, useful for erosion control, see *Catalecta botanica*. 1: 8. Lipsiae 1797.

in English: orchard grass, Spanish cock's foot

D. glomerata L. subsp. **ibizensis** (Gand.) Stebbins & Zohary (*Dactylis glomerata* subsp. *ibizensis* Stebbins & D. Zohary)

Europe, Spain. Perennial, see *University of California Publications in Botany* 31(1): 12, f. 8. 1959.

D. glomerata L. subsp. **judaica** Stebbins & Zohary

Europe, Israel. On rocky soil, limestone, see *University of California Publications in Botany* 31(1): 11, f. 7. 1959.

D. glomerata L. subsp. **juncinella** (Bory) Boiss. (*Dactylis glomerata* subsp. *juncinella* (Bory) Stebbins & D. Zohary; *Dactylis glomerata* var. *juncinella* (Bory) Boiss.; *Dactylis glomerata* var. *juncinella* (Bory) Merino; *Dactylis juncinella* Bory)

Europe, Spain. Perennial, growing alongside railroad, rocky places, see *Annales Générales des Sciences Physiques* 3: 8. Bruxelles 1820 and *University of California Publications in Botany* 31(1): 13. 1959.

D. glomerata L. subsp. **lobata** (Drejer) H. Lindb. (*Dactylis aschersoniana* Graebn.; *Dactylis glomerata* subsp. *aschersoniana* (Graebner) Thellung; *Dactylis glomerata* subsp. *polygama* (Horv.) Domin; *Dactylis glomerata* var. *aschersoniana* (Graebn.) Domin; *Dactylis glomerata* var. *aschersoniana* (Graebn.) Thell.; *Dactylis glomerata* var. *lobata* Drejer; *Dactylis glomerata* var. *macrocephala* Domin; *Dactylis glomerata* var. *schustleri* Domin; *Dactylis glomerata* var. *subglomerata* Domin; *Dactylis glomerata* var. *trichophora* Domin; *Dactylis polygama* Horvatovszky; *Dactylis polygama* f. *subglaucescens* (Domin) Soó; *Dactylis polygama* f. *subglaucescens* Domin; *Dactylis polygama* var. *glaucoviridis* (Domin) Soó; *Dactylis glomerata* var. *glaucoviridis* Domin; *Dactylis polygama* var. *trichophora* (Domin) Soó; *Dactylis glomerata* var. *trichophora* Domin; *Dactylis polygama* var. *vuyckii* (Jansen & Wacht.) Soó; *Dactylis glomerata* var. *vuyckii* Jansen & Wacht.)

Europe, Eurasia, Russia. Perennial, see *Flora Excursoria Hafniensis* 45. 1838, *Notizblatt des Königlichen botanischen Gartens und Museums zu Berlin* 17(2): 274. 1899 and *Beihefte zum Botanischen Centralblatt* 26: 276. Kassel 1910, *Allegemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 7: 34. 1911, *Acta Botanica Bohemica* 14: 88, 111-112, 115. 1943, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 118-119. Budapest 1971 [1972]

in English: orchard grass

D. glomerata L. subsp. **lusitanica** Stebbins & Zohary

Europe, Portugal. Perennial, useful for erosion control, see *University of California Publications in Botany* 31(1): 13, f. 10. 1959.

D. glomerata L. subsp. **reichenbachii** (Hausm. ex Dalla Torre & Sarnth.) Stebbins & Zohary (*Dactylis glomerata* var. *reichenbachii* Hausm. ex Dalla Torre & Sarnth.)

Europe, Italy. See *University of California Publications in Botany* 31(1): 9, f. 6. 1959.

D. glomerata L. subsp. **santai** Stebbins & Zohary

Algeria, Morocco. Perennial, on limestone, see *University of California Publications in Botany* 31(1): 14, f. 11. 1959.

D. glomerata L. subsp. **slovenica** (Domin) Domin (*Dactylis glomerata* subsp. *slovenica* Domin; *Dactylis slovenica* Domin)

Central Europe.

D. glomerata L. subsp. **smithii** (Link) Stebbins & Zohary (*Aeluropus smithii* (Link) Steud.; *Dactylis smithii* Link; *Poa smithii* (Link) Kunth)

Europe, Portugal, Spain, Canary Islands, Madeira. Perennial, useful for erosion control, see *Révision des Graminées* 1: 111. 1829, *Nomenclator Botanicus* edition 2 1: 30. 1840 and *University of California Publications in Botany* 31(1): 18, f. 12. 1959.

D. glomerata L. subsp. **woronowii** (Ovcz.) Stebbins & Zohary (*Dactylis woronowii* Ovcz.)

Asia temperate, Eurasia, Iran, Turkey. Perennial, useful for erosion control, see *Flora URSS* 2: 262, 752. 1934, *University of California Publications in Botany* 31(1): 9, f. 5. 1959.

D. marina Borrill (*Dactylis glomerata* subsp. *marina* (Borrill) Greuter; *Dactylis glomerata* L. var. *maritima* (Hack.) K. Richt.; *Dactylis glomerata* var. *marina* (Borrill) Speranza & Christof.; *Dactylis hispanica* Roth var. *maritima* Hack.; *Dactylis maritima* (Hack.) Rivas Mart., nom. illeg.; *Dactylis smithii* subsp. *marina* (Borrill) P.F. Parker)

Europe, Mediterranean, Portugal, Canary Islands, Spain. Perennial, drought-resistant, slow growth rate, low water requirement, useful for erosion control, growing in coastal cliffs, limestone rocks, see *Journal of the Linnean Society, Botany* 56: 437. 1961, *New Phytologist* 71(2): 376. 1972, Norris IB, Thomas H., "Variation in growth of varieties and ecotypes of *Lolium*, *Dactylis* and *Festuca* subjected to contrasting soil moisture regimes." in *Journal of Applied Ecology*. 19: 881-889. 1982, *Willdenowia* 13(1): 72. 1983, *Webbia* 39(2): 394. 1986.

in English: cocks foot

D. smithii Link (*Aeluropus smithii* (Link) Steud.; *Dactylis glomerata* subsp. *smithii* (Link) Stebbins & D. Zohary; *Poa smithii* (Link) Kunth)

Europe, Portugal, Spain, Canary Islands, Madeira. Rare species, see *Révision des Graminées* 1: 111. 1829, *Nomenclator Botanicus* edition 2 1: 30. 1840 and *University of California Publications in Botany* 31(1): 18, f. 12. 1959.

Dactyloctenium Willd.

From the Greek *daktylos* “a finger” and *ktenion* “a little comb,” *kteis*, *ktenos* “a comb,” referring to the arrangement of the spikes in the inflorescence; see Carl Ludwig Willdenow (1765-1812), *Enumeratio plantarum horti regii botanici berolinensis*. 1029. 1809; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 293-294. Regione Siciliana, Palermo 1988.

A genus of 14 species, warm regions, Indian Ocean, Africa, India, Australia. Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, annual or perennial, herbaceous, branched, caespitose, mat-forming, often stoloniferous, prostrate to erect, decumbent and ascending, solid or hollow, auricles absent, ligule a ciliolate membrane or a rim of hairs, leaf sheath keeled with scabrous margins, leaves linear to linear-lanceolate and finely tapered to pungent, plants bisexual, inflorescence a panicle exerted, paired or digitate racemes each terminating in a bare point, primary branches digitate reflexed or spreading, spikelets solitary and laterally compressed, terminal floret barren, 2 glumes more or less equal and strongly keeled, lower glume persistent and ovate, upper glume more or less persistent and mucronate or short-awned below the tip, strongly keeled lemmas acute or acuminate to shortly awned, palea 2-keeled, 2 fleshy lodicules truncate, 3 stamens, ovary glabrous, 2 stigmas, small fruit sculptured or rugose, shade-tolerant, sand binder, soil stabilizer, fruits edible, rhizomes chewed like sugarcane, lawns and playing fields, weed species, cultivated fodder, native pasture species, reputed to contain cyanogenetic glucosides, a taxonomically difficult genus, common in open habitats, arid and semiarid places, saline habitats, dunes, on dry sandy soils, rainforest, taxonomically difficult genus, closely related to *Eleusine* Gaertn., type *Dactyloctenium aegyptium* (L.) Willd., see *De Fructibus et Seminibus Plantarum* . . . 1: 7. 1788, *Enumeratio plantarum horti regii botanici berolinensis*. 1029. 1809 and *U.S.D.A. Bull.* (1915-23) 772: 175. 1920, *Annals of the Natal Museum* 10(1): 47-77. 1941 [A critical account of the species of *Dactyloctenium* Willd. in Southern Africa.], *Kariba Studies*, vol. II. Manchester University Press, Manchester 1962, *Primates* 10: 103-148. 1969, J.L. Newman, *The Ecological Basis for Subsistence Change among the Sandawe of Tanzania*. National Academy of Sciences, Washington, D.C. 1970, *Zambian Papers* 5. Manchester University Press, Manchester 1971, *Folia Primatologica* 15: 1-35. 1971, *Journal of Cytology and Genetics* 7-8: 161-164. 1973, *Darwiniana* 18: 526-538. 1974, *Economic Botany* 35:

96-130. 1981, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Phytologia* 37: 317-407. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Flora Mesoamericana* 6: 272-273. 1994, *American Journal of Botany* 81: 622-629. 1994, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Flora of Ethiopia and Eritrea* 7: 134-137. 1995, *Restoration Ecology* 6(1): 102-110. Mar 1998, *Sedimentology* 46(4): 689-701. Aug 1999, *Austral. Ecology* 25(2): 140-149. Apr 2000, *Austral. Ecology* 25(3): 213-222. June 2000, *Journal of Applied Ecology* 37(3): 491-507. June 2000, *Contributions from the United States National Herbarium* 41: 64-65. 2001, *African Journal of Ecology* 39(2): 170-177. June 2001, *Insect Molecular Biology* 11(1): 97-103. Feb 2002, *Flora of Australia* vol. 44B, Poaceae 3: 315-320. 2005, *Weed Research* 45(2): 121-129. Apr 2005, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

D. aegyptium (L.) Willd. (*Aegilops saccharinum* Walter; *Chloris mucronata* Michx.; *Cynosurus aegyptius* L.; *Cynosurus carolinianus* Willd. ex Steud.; *Cynosurus cavara* Ham. ex Dillwyn; *Cynosurus distachyos* Rottler ex Steud.; *Cynosurus aegyptius* L.; *Dactyloctenium aegyptiacum* Willd.; *Dactyloctenium aegyptium* (L.) P. Beauv., nom. illeg., non *Dactyloctenium aegyptium* (L.) Willd.; *Dactyloctenium aegyptium* (L.) Richt., nom. illeg., non *Dactyloctenium aegyptium* (L.) Willd.; *Dactyloctenium aegyptium* (L.) Willd.; *Dactyloctenium aegyptium* f. *viviparum* Beetle; *Dactyloctenium aegyptium* (L.) Willd. ex Asch. & Schweinf. var. *mucronatum* (Michx.) Schweinf.; *Dactyloctenium aegyptius* var. *mucronatum* (Michx.) Lanza & Mattei; *Dactyloctenium distachyum* Trin.; *Dactyloctenium figarei* De Not.; *Dactyloctenium meridionale* Hamilt.; *Dactyloctenium mpuetensis* De Wild.; *Dactyloctenium mucronatum* (Michx.) Willd.; *Dactyloctenium mucronatum* var. *erectum* Fourn.; *Eleusine aegyptia* (L.) Desf.; *Eleusine aegyptia* (L.) Pers., nom. illeg., non *Eleusine aegyptia* (L.) Desf.; *Eleusine aegyptia* (L.) Roberty, nom. illeg., non *Eleusine aegyptia* (L.) Desf.; *Eleusine aegyptia* (L.) Roxb., nom. illeg., non *Eleusine aegyptia* (L.) Desf.; *Eleusine aegyptia* Raf., nom. illeg., non *Eleusine aegyptia* (L.) Desf.; *Eleusine aegyptiaca* (L.) Desf.; *Eleusine cruciata* Lam.; *Eleusine cruciata* Elliott, nom. illeg., non *Eleusine cruciata* Lam.; *Eleusine egyptia* Raf., nom. illeg., non *Eleusine aegyptia* (L.) Desf.; *Eleusine mucronata* (Michx.) Hornem., nom. illeg., non *Eleusine mucronata* Michx.; *Eleusine mucronata* Stokes, nom. illeg., non *Eleusine mucronata* Michx.; *Eleusine pectinata* Moench; *Rabdochloa mucronata* P. Beauv.)

Old World tropics, tropical and subtropical regions. Tufted annual or short-lived perennial, highly variable to exceedingly variable, quick growing, ruderal, glaucous, robust, richly branched, spreading, open, creeping, mat-forming, more or less stoloniferous with stolons creeping, culms

ascending and often rooting at the lower nodes, leaf sheaths glabrous and keeled, slightly succulent leaves linear-acuminate, ligule fringed and membranous, inflorescence branches spicate digitate and sided, stout spikes, spikelets broad-ovate arranged in 2 rows on one side of the secondary axes, rachis straight, glumes 2 persistent, lower glume ovate and acute, upper glume oblong-elliptic and with the keel extended into a divergent awn, lemmas ovate and mucronate, palea membranous and 2-nerved, 2 lodicules, 3 stamens, anthers pale yellow, grain wrinkled or very rugose, seed head resembles a crow's foot, lactogogue grass, a troublesome weed in crops, drought-resistant, sand-binder and stabilizer, lawns and playing fields, tolerant of alkaline soils, nitrate poisoning has been reported, native pasture species, valuable to excellent fodder grass, forage, quite palatable and nutritious, used by indigenous people to treat amenorrhea and stomach ache, edible grains, seeds dried and ground used for porridge during scarcity in Africa, a decoction from seeds used for kidney inflammations, common in arable land and waste areas, low dry stony hills, in wet places, in disturbed areas near water, ricefields, in gardens and along roadsides, disturbed ground, lowlands in secondary situations, beach sand, loose sand, white sand, reddish brown loamy soils, alluvial soils, waste and cultivated lands, in roadbed, river edges, uncultivated savannah, sandy soils along the coast, arid and semiarid places, in high rainfall areas, steep wooded hills, fields and open ground, floodplains, generally on poor soil, poor dry soils, see *Species Plantarum* 72-73, 1050. 1753, *Flora Caroliniana, secundum ...* 249. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 203, t. 48, f. 2. 1791, *Flora Atlantica* 1: 85. 1798, *Methodus Plantas Horti Botanici ...* (Suppl.) 68. 1802, *Flora Boreali-Americana* 1: 59. 1803, *Syn. Pl.* 1: 87. 1805, *Enumeratio plantarum horti regii botanici berlinensis.* 1029-1030. 1809, *A Botanical Materia Medica* 1: 150. 1812, *Essai d'une Nouvelle Agrostographie* 15, 72, 159, t. 15, f. 2. 1812, *Précis des Découvertes et Travaux Somnologiques* 45. 1814, C.S. Rafinesque, *Chloris Aetnensis* o le quattro florule dell'Etna ... 7. Palermo 1813[1815] *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 176. 1816, *Hortus Regius Botanicus Hafniensis* 116. 1819, *Fundamenta Agrostographiae* 140. 1820, *Flora Indica; or Descriptions ...* 1: 345. 1820, *Prodromus Plantarum Indiae Occidentalis* 6. 1825, *Nomenclator Botanicus. Editio secunda* 1: 465. 1840, *Plantae Europaeae* 1: 68. 1870, *Mexicanas Plantas* 2: 144. 1886 and *Handb. Fl. Ceylon* 5: 279. 1900, *Boll. Reale Orto Bot. Giardino Colon. Palermo* 9: 58. 1910, *Handb. Fl. Ceylon* 6: 338. 1931, *Petite Flore de l'Ouest-Africain* 386. 1954, *Grasses of Ceylon* 82, pl. 10. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 489. 1960, *Phytologia* 48(2): 190. 1981.

in English: buffalo grass, Egyptian grass, Egyptian finger grass, finger comb grass, comb fringe grass, starfish grass,

coast button grass, giant button grass, beach wiregrass, coast duck grass, duck grass, hare's grass, crow's foot, Durban crowfootgrass, Durban crow's-foot grass, Egyptian crow-footgrass, common crowfoot, crowfoot grass, crow's foot grass

in French: dactyloctenium d'égypte

in Spanish: tres dedos, pata de gallina, paja de palma, yerba de Egipto

in Colombia: hierba de tres dedos, tres dedos

in Mexico: chimes-suuk, es-me-cha, pata de gallo, pata de pollo, yerba egipcia

in Arabic: abou asabé, abu asabe, asaba, koreib, kra'a l'grab, kreb, naim el-salib, rigl el-herbaya

in Benin: kpi, gbadianou

in East Africa: ewudmondu, ribanchore

in Gambia: kontenterong

in Guinea: alapo xedi

in Guinea-Bissau: cunher, nasci

in Mali: burgue boguel, burguel, burugal, burugual, keenie ana, ndanguel, ndéguéré, ntéguélé

in Mauritania: kra'a l'grab, kra lekrab

in Niger: adag, addad, asha, bude budeeri, burugil, buruugel baali, dangél, fhutuku, gudagudé, gude gudeeri, gudégudé, gudégudéré, guye guyeeri, guyeeri, katikuti, korangaji, kra'a l'grab, kra'lakrab, kutakuté, kurtu, kutuku, m'bururu, oezbârenkuleen, taemakaerzist, taemakirjzist, terfilant, tiginit, tikinit

in Nigeria: abou asabé, abu asabe, asaba, burugih, ewa esin, faam, fagam, fakam, falande, fogam, fowum, guda gude, gude gude, ikangel a ika, koreib, kreb, kurtu, kutukku, pagamje, pagamri, tumbi, um asaba

in Senegal: ndanga, ndégélé, ngok, tang i mpiteurh

in Sierra Leone: kubema, mammi, petewule, taha, tanse, tugbe, tugbele

in Somalia: hurbunle, sadeho

in South Africa: gewone hoenderspoort, hoenderspoor, hoenderspoorgras, Natakweek, gewöhnliches schirmgras

in Sudan: koreeb, assabi

in Upper Volta: buruuguel, ganaga, guanaga, guanani, guguni, ndéguéré, nebiépélé, ntéguélé, uantega

in Yoruba: ewa esin

in Japan: tatsu-no-tsume-gaya

in India: anchi manchi, anchu manchu, chikara, chimbari, chota mandya, chubrei, gandhi, hakki kalin hullu, kaadu raagi hullu, kada jara, kakdel, kakria, kakuriya, karmadhana, kark-madhana, kavrapullu, kharmakri, khermakra, konana thale hullu, madana, madhana, madjiro, maka makna, makamakna, makara, makra, makri, makta, makur jali, mali, malicha, manchi, manchi anchi, mandi,

mansa, markatathrna, markatahasthrna, mathna, mattanga pillu, mhar, muttengapillu, muttengapilloo, navi ragi, nela raagi, nrttkondaka, phanghad, sodee, sodi, suntu bukru, tagar sammi, tamida, thakrahva, thamida, thimira, tipakia, ute sirkum jari, ute sirla gadi, vasira

in Indonesia: rebha kartuut, tapak jalak, suket dringoan

in Malaysia: rumput miuyak

in Myanmar: didok-chi, myet le gra, mye-sa myet

in the Philippine Islands: alam, damong-balang, damung-balang, krus-krusan, tugot-manok

in Sri Lanka: putu tana

in Thailand: ya pak kluai, ya pak khwai, yaa paak khwai, yaa paak kluai, ya-pakkhwai

in Vietnam: co'chân gà, co chi

in Micronesia: te uteute (Kiribati Islands)

D. aristatum Link (*Dactyloctenium aegyptium* var. *aristatum* (Link) A. Chev.; *Dactyloctenium radulans* auct. non (R. Br.) P. Beauv.; *Dactyloctenium seminipunctatum* Courbon)

Eastern Africa, Egypt, northwestern India. Annual, geniculate and ascending often rooting at the lower nodes, sprawling, leaves hispid, inflorescence compact clustered in a dense head, glumes subequal, lemmas mucronate, deep sand, hillsides, coastal dunes, disturbed areas, see *Hortus Regius Botanicus Berolinensis* 1: 59. 1827, *Annales des Sciences Naturelles; Botanique, série 4* 18: 135. 1862 and *Revue de Botanique Appliquée et d'Agriculture Tropicale* 14(150): 130. 1934.

D. australe Steudel

South Africa. Perennial, dark green, sod forming, stoloniferous, with wiry and flattened stolons, rhizomes absent, erect or geniculate, leaf sheath slightly compressed, ligule a short membrane, leaves shining, digitate and unilateral spikes, spikelets elliptic-oblong and flattened, lower glume ovate and truncate, upper glume with the keel extended into an awn, lemmas ovate, permanent ground cover, salt-spray-tolerant, ornamental, useful as a shade-tolerant lawn grass and sand-binder, turf, often used in conjunction with *Stenotaphrum secundatum* (Walter) Kuntze, forage, palatable pasture grass, grazed by stock, good sandbinder, useful for erosion control, recommended for heavily shaded areas, sometimes weedy, common in urban and coastal regions, along forest roads, sandy seaside area, dunes, disturbed sites, under older orchards, sometimes confused with *Dactyloctenium aegyptium*, see *Synopsis Plantarum Glumacearum* 1: 212. 1854.

in English: Durban grass, Durban, Natal crowfoot, L.M. grass, sweet smother grass, smothergrass

in South Africa: Natal hoenderspoor, Natakweek, L.M. grass

D. buchananensis B.K. Simon

Australia, Lake Buchanan. Annual or short-lived perennial, halophytic, caespitose, erect or geniculate, tufted, without stolons or rhizomes, extremely short spikes, on saline clays, see *Flora of Australia* 44B: 459. 2005.

D. geminatum Hack. (*Dactyloctenium bogdani* S.M. Phillips, named for Alexis V. Bogdan; *Dactyloctenium glaucophyllum* Courbai var. *somalicum* Chiov.)

Eastern Africa, Mozambique, South Africa. Perennial, creeping, mat-forming, stoloniferous and long rhizomatous, leaves flat and tough, inflorescence open, unilateral spikes arranged digitately, straight or slightly falcate racemes, flattened spikelets, glumes subequal, lemma acute and often mucronate, fertile stems tufted, dune pioneer, useful for erosion control on brackish and sandy soils, occurs in sandy areas, sandy and alluvial soils, open grassveld, escarpments, on sand dunes, lawn, cultivated fields, coarse sand, near rivers and along water-courses, along roadsides, on brackish soils, in coastal regions, alkaline flats, see *Bulletin de l'Herbier Boissier* 7(1): 26. 1899 and *Annali di Botanica* 13(3): 371. 1915, *Kew Bulletin* 29: 268. 1974.

in English: sign grass

in South Africa: wysergras

D. giganteum B.S. Fisher & Schweick.

Tropical Africa, southern Africa, Namibia, Swaziland. Annual, robust and erect, tufted, soft, branched culms, geniculate, prostrate, without rhizomes, sometimes rooting at the lower nodes, lower nodes decumbent, leaf sheath keeled and flattened, ligule a ciliate membrane with wavy margin, broad leaves tapering to a sharp point, unilateral spikes, spikelets strongly flattened arranged in two rows on one side of the secondary axes, upper glume with short awn, lemma keels scabrid, fruits with spiky hairs, grains eaten by local people, cultivated fodder, soft leafy hay, very palatable pasture grass, weed species, pioneer grass, does not tolerate flooding, drought-tolerant, useful for erosion control, ground cover, common in sandy soils, along riverbanks near water, alluvial savannah, along lakeshore, sandveld, red earths, trampled areas, grassland, on disturbed areas, roadsides, uncultivated lands, under trees, under forest thickets, see *Annals of the Natal Museum* 10: 53. 1941.

in English: giant crowfoot, L.M. grass, giant button grass

in Southern Africa: reusehoenderspoor, reuse hoenderspoor, sterretjiegras, großessschirmgras; nsonko (Tsonga); rathathe (Ngami)

D. henrardianum Bor (*Acrachne eleusinoides* Wight & Arn. ex Steudel; *Acrachne henrardiana* (Bor) S.M. Phillips; *Arthrochloa henrardiana* (Bor) J.W. Lorch; *Dactylis interrupta* Rottler ex Bor; *Normanboria henrardianum* (Bor) F. Butzin)

India. See *Species Plantarum* 1: 71. 1753, *Nomenclator Botanicus* edition 2 1: 21. 1840 and *Annuario del Reale*

Istituto Botanico di Roma 8(3): 361. 1908, *Blumea, Supplement* 3: 44. 1946, *Journal of the Indian Botanical Society* 39(3): 490, f. 1-5. 1960, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 489. 1960, *Taxon* 27(2-3): 301. 1978, *Kew Bulletin* 37(1): 158. 1982.

D. radulans (R. Br.) P. Beauv. (*Dactyloctenium aegyptium* sensu J. Black, non (L.) P. Beauv.; *Eleusine aegyptiaca* sensu Benth., non Pers.; *Eleusine radulans* R. Br.) (Latin *radula*, *ae* “scraper”)

Australia. Annual or short-lived perennial, ephemeral, slender, tufted, semierect or rarely erect, sometimes prostrate or decumbent and ascending, rosette of leafy stems, rapid-growing, leaves flat and sometimes ciliate to sparsely hairy, deciduous spikes digitate and finally spreading in a starlike cluster, each spike with 2 rows of crowded overlapping flat spikelets, 2-4 florets, glumes scabrous on the keel, upper glume with the keel extended into an awn, lemmas ovate and scabrous on the keel, pasture grass, fodder, highly palatable especially to sheep, nutritious, can be toxic to cattle, sometimes can cause nitrate-nitrite poisoning, sometimes a weed of cultivation and gardens, found in sandy soils, roadside gravel, on coarse sands, dry areas, in disturbed or trampled areas, saline soil or calcareous, alluvial places, cracking clays, near the coast, see *Prodromus Florae Novae Hollandiae* 186. 1810, *Essai d'une Nouvelle Agrostographie* 72, 160. 1812.

in English: button grass, finger grass, coast button grass

D. robecchii (Chiov.) Chiov. (*Eleusine robecchii* Chiov.)

Oman, Arabia, Yemen. Perennial, tough, robust, woody or shrubby, mat-forming, stoloniferous with scaly stolons, pungent leaves rigid and short, inflorescence a compact head, spikelets ovate, glumes subequal, lemmas elliptic and mucronate, grows in floodplains, alluvial soils, slopes, rocky areas, see *Annuario del Reale Istituto Botanico di Roma* 6: 171, t. 19. 1896.

D. scindicum Boiss. (also spelled *sindicum*) (*Dactyloctenium glaucophyllum* Courbai; *Dactyloctenium glaucophyllum* var. *elongatior* Courbai; *Dactyloctenium glaucophyllum* var. *robustior* Courbai; *Eleusine glaucophylla* (Courbai) Munro ex Benth.; *Eleusine scindica* (Boiss.) Duthie)

Northeastern Africa, India, Arabia, Middle East. Perennial, halophyte, erect, slender, mat-forming desert grass, stoloniferous with woody stolons, stems swollen below, leaves tough and hispid, ligule ciliate, inflorescence a compact head with racemes often falcate, rachis strongly curved upward, glumes subequal, lower glume oblong and acute, lemmas lanceolate and mucronate, a good fodder, grain eaten, growing in alluvial plains, stony plain, in open *Acacia* scrub, grassland, shrubland, sandy soils, margins of irrigation ditches, see *Diagnoses plantarum orientalium novarum*, ser. 2, 4: 131. 1859, *Annales des Sciences Naturel-*

les; Botanique, série 4 18: 133-134. 1862, *Journal of the Linnean Society, Botany* 19: 107. 1881, *The Fodder Grasses of Northern India* 58. 1888.

in India: bhobra, bobriya, ganthi, ganthya, ganti ghas, jangli malicha, kharo makro, mandjiro, tantia ghas,

in Somalia: duyo, dooyo

Dactyloides Kuntze = *Tripsacum* L.

Resembling fingers.

Panicoideae, Andropogonodae, Maydeae, or Panicoideae, Andropogoneae, Tripsacinae, see C. Linnaeus, *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Familles des Plantes* 2: 38, 550. 1763, *Revisio Generum Plantarum* 2: 772. 1891 and *Botanical Gazette* 41: 294. 1906, *Boletín de la Sociedad Botánica de México* 25: 1-21. 1941, *Rhodora* 66: 371-374. 1964, *Bot. Mus. Leaflet. Harvard* 20: 289-316. 1964, *Bot. Mus. Leaflet. Harv.* 22: 33-62. 1967, *Phytologia* 33(3): 203-227. 1976, *American Journal of Botany* 68: 269-276. 1981, *Systematic Botany* 8: 243-249. 1983, *American Journal of Botany* 70: 706-711. 1983, *Flora Mesoamericana* 6: 398-400. 1994, *American Journal of Botany* 82(1): 57-63. 1995, *American Journal of Botany* 85(9): 1237-1242. 1998, *Contributions from the United States National Herbarium* 46: 169, 623-627. 2003.

Dactylogramma Link = *Muhlenbergia* Schreb.

From the Greek *daktylos* “a finger” and *gramma* “a thread, line, letter.”

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Dactylogramma cinnoides* Link, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Gram. Unifl. Sesquifl.* 191, 193, 297, t. 5, f. 10, 22. 1824, *Flora oder allgemeine Botanische Zeitung*. 11: 301. 1828, *Hort. Berol.* 2: 248. 1833 and *Rhodora* 48: 64. 1946, *Le Naturaliste Canadien* 94: 526. 1967, *Flora Mesoamericana* 6: 276-286. 1994, *American Journal of Botany* 81: 622-629. 1994, *Madroño* 42(4): 427-449. 1995, *Sida* 17: 349-365. 1996, *Brittonia* 50(1): 23-50. 1998, P.M. Peterson, “Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostidae).” *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 65, 143-173. 2001.

Dactylus Asch. = *Cynodon* Rich., *Dactylus* Forsskal (Ebenaceae)

Latin *dactylis*, *dactylus* and Greek *daktylos* for “a kind of grape or a sort of grass” (Plinius) or “the date.”

Chloridoideae, Cynodonteae, Chloridinae, see *Species Plantarum* 1: 58. 1753, *Flora Aegyptiaco-Arabica* xxxvi. 1775, *Histoire des Plantes de Dauphiné* 2: 69. 1787, *Syn. Pl.* 1: 85. 1805, *Fl. Brandenburg* 1: 810. 1864 and *Contributions from the United States National Herbarium* 41: 59-63. 2001.

Daknopholis W.D. Clayton

From the Greek *dakno* “bite, to bite, sting” and *pholis* “a horny scale.”

One species, Indian Ocean islands, Madagascar. Chloridoideae, Cynodonteae, annual, herbaceous, unarmed, prostrate, stoloniferous, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence spicate and digitate, racemes digitate, spikelets strongly laterally flattened, 1-flowered, 2 glumes membranous more or less equal, upper glume acute to truncate, lemma keeled and bidentate, awned or rarely awnless, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, coastal, open places, sand dunes, seashore, beaches, resembling *Chloris* and *Cynodon*, type *Daknopholis boivinii* (A. Camus) Clayton, see *Nova Genera et Species Plantarum seu Prodromus* 1, 25. 1788, *Bull. Soc. Bot. France* 79: 845. 1932, *Not. Syst. Herbier Mus. Hist. Nat. Paris* 12: 155. 1946, *Bulletin de la Société Botanique de France* 96: 93. 1949, *Kew Bulletin* 21: 102. 1967, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974 [Taxonomy of the genus *Chloris* (Gramineae)].

Species

D. boivinii (A. Camus) Clayton (*Chloris boivinii* A. Camus; *Chloris perrieri* A. Camus; *Chloris ramosissima* A. Camus)

East African coasts, Madagascar. See *Bulletin de la Société Botanique de France* 79: 845. 1932.

Dallwatsonia B.K. Simon

One species, Australia, Queensland. Panicoideae, Panicodae, Paniceae, or Digitariinae, perennial, herbaceous, branched, leaves linear, ligule a fringed membrane, plants bisexual, inflorescence spicate or paniculate, spikelets laterally compressed, 2 glumes unequal, lower glume ovate, palea reduced, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, type *Dallwatsonia felliana* B.K. Simon, see B.K. Simon, “*Alexfloydia*, *Cliffordiochloa* and *Dallwatsonia*, three new panicoid grass genera from eastern Australia.” in *Austrobaileya* 3(4): 669-691. 1992, *Flora of Australia* 43: 120. 2002.

Species

D. felliana B.K. Simon

Queensland.

Dalucum Adans. = *Melica* L.

Pooideae, Meliceae, see *Species Plantarum* 1: 66-67. 1753, *Observations sur les Graminées de la Flore Belgique* 109. 1823 [1824], *Anales de la Sociedad Española de Historia Natural* 28(Mem.): 8-9. 1899 and *Bull. U.S.D.A.* 772: 69. 1920, *Lagascalia* 12: 286-290. 1984, *Candollea* 41: 431-439. 1986, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991, *Taxon* 41: 566. 1992, *Flora Mediterranea* 1: 229-236. 1991, *Flora Mediterranea* 5: 340-345. 1995, *Taxon* 44: 611-612. 1995, *Taxon* 49(2): 252. 2000, *Contributions from the United States National Herbarium* 48: 244, 432-450. 2003.

Danthonia Post & Kuntze

Orthographic variant of *Danthonia* DC., see Tomas Erik von Post & C.E.O. Kuntze, *Lexicon generum Phanerogamarum*. 163. 1903.

Danthonia DC. = *Austrodanthonia* H.P. Linder, *Brachatera* Desv., *Brachyathera* Kuntze, *Merathrepta* Raf., *Notodanthonia* Zotov, *Rytidosperma* Steudel, *Sieglingia* Bernhardt, *Wilibald-Schmidtia* Conrad

Dedicated to the French botanist D. (Étienne) Danthoine, fl. 1788, agrostologist; see Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 369. Ansbach 1852.

A genus of about 20-33 species (about 100 including *Rytidosperma* Steudel), New Zealand, America, Australia. Arundinoideae, or Danthonioideae, Danthonieae, perennial or rarely annual, tufted or caespitose, shortly rhizomatous, forming small to large clumps or tussocks, herbaceous and unbranched above, erect or ascending, hollow, ligule a ciliate rim, flat or involute leaf blades, more or less erect leaves filiform and narrow, plants bisexual, with hidden cleistogenes or without hidden cleistogenes, cleistogenes usually present in culm sheaths, inflorescence a crowded solitary panicle or raceme few spikeleted, panicle open or contracted, spikelets solitary or in clusters, spikelets dimorphic, several bisexual florets, reduced floret at apex, glumes subequal as long as spikelets, glumes papery and acute to oblong-lanceolate and rounded to keeled, lemmas pilose and boat-shaped, geniculate awn, flattened and twisted awns from between 2 teeth at the tip of the lemma, callus sharp and bearded, palea 2-keeled, 2 usually glabrous lodicules free and fleshy or lodicules absent, 3 stamens, anthers purple or yellow, 2 stigmas, small fruit longitudinally grooved, great variability, ornamental, some species highly palatable and with a high nutritive value, important component of native pastures, most species very hardy, used for regeneration,

most commonly found near scrub or forest margins on poorer soils, grasslands, infertile soils, open woodlands, dry conditions, intergeneric hybrids with *Sieglingia* Bernh., the genus *Danthonia* DC. described as among the most variable, native species formerly in *Danthonia* are now mostly included in *Austrodanthonia*, *Notodanthonia* and *Rytidosperma*, see *Species Plantarum* 1: 79-81. 1753, *Systematisches Verzeichnis* 20, 44. Erfurt 1800, *Flore Française. Troisième Édition* 3: 32. 1805, *Prodromus Florae Novae Hollandiae* 182. 1810, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Essai d'une Nouvelle Agrostographie* 72, 146. 1812, *Bulletin Botanique Genève* 1: 221. 1830, *Pflanzen und Gebirgsarten von Marienbad* 38. Prag 1837, *Histoire naturelle des Végétaux* 13: 164. Paris 1841, C.G.D. Nees von Esenbeck (1776-1858), *Florae Africae Australioris Illustrationes Monographicae ... I. Gramineae. Glogaviae* 1841, *Synopsis Plantarum Glumacearum* 1: 425. 1854, *Genera Plantarum* 3(2): 1158, 1163. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 68. 1887 and *Lexikon Generum Phanerogamarum* 77. 1903, *J. Bot.* 60: 138. 1922, J.M. de Wet, "The genus *Danthonia* in grass phylogeny." *American Journal of Botany* 41: 204-211. 1954, *New Zealand Journal of Botany* 1: 104, 122. 1963, *Brittonia* 23(3): 293-324. 1971, S.T. Blake, "Plinthanthesis and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae)." *Contributions from the Queensland Herbarium* 14: 3. 1972, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Anales del Jardín Botánico de Madrid* 41: 191-194. 1984, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1671-1673. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992, M. Lazarides, "The genus *Eriachne* (Eriachneae, Poaceae)." *Australian Systematic Botany* 8(3): 355-452. 1995, *Courier Forschungsinstitut Senckenberg* 186: 69-103. Frankfurt am Main 1995, *Gayana, Botánica* 53(2): 329-333. 1996 [C.M. Baeza P., Numero de cromosomas en algunas especies chilenas de *Danthonia* DC. y *Rytidosperma* Steud. (Poaceae).], H.P. Linder & G.A. Verboom, "Generic limits in the *Rytidosperma* (*Danthonieae*, Poaceae) complex." *Telopea* 6(4): 615-617. 1996, H.P. Linder, "Nomenclatural corrections in the *Rytidosperma* complex (*Danthonieae*, Poaceae)." *Telopea* 7(3): 269-274. 1997, K.C. Klopffer, J.J. Spies and B. Visser, "Cytogenetic studies in the genus *Pentaschistis* (Poaceae: Arundinoideae)." *Bothalia* 28(2): 231-238. 1998, *Bothalia* 29(2): 335-341. 1999, *Opera Botanica* 137: 1-42. 1999, *Restoration Ecology* 7(4): 376-381. Dec 1999, *Am. J. Bot.* 87: 96-107, 205-214, 339-347, 1769-1777. 2000, *Austral. Ecology* 25(6): 588-599. Dec 2000, *Am. J. Bot.* 88: 832-840. 2001, *Am. J. Bot.* 89: 972-980, 1439-1446. 2002, *Austral. Ecology* 27(4): 422-432, 463-473. June 2002, *Flora of Australia* vol. 43, Poaceae 1: 141, 149-150, 164, 171-173, 175-176, 198, 229, 246, 269, 308. 2002, *Contributions from the United States National Herbarium* 46: 116, 141, 143, 170-177, 288, 298, 548-550, 594, 635. 2003, *Austral.*

Ecology 28(1): 23-32. Feb 2003, *Austral. Ecology* 28(5): 491-498. Oct 2003 [Competition between Australian native and introduced grasses along a nutrient gradient.], Joyce Maschinski, Joanne E. Baggs and Christopher F. Sacchi, "Seedling recruitment and survival of an endangered limestone endemic in its natural habitat and experimental reintroduction sites." *Am. J. Bot.* 91: 689-698. 2004, *Botanical Journal of the Linnean Society* 144(4): 497-505. Apr 2004, *Restoration Ecology* 12(2): 279-289. June 2004, *Molecular Ecology Notes* 4(2): 262-264. June 2004, *Oikos* 107(1): 148-160. Sep 2004, *Journal of Ecology* 92(5): 893-905. Oct 2004, *Weed Biology and Management* 4(4): 218-221. Dec 2004, *Restoration Ecology* 12(4): 597-604. Dec 2004, *Flora of Australia* vol. 44B, Poaceae 3: 29, 45-63. 2005, *Austral. Ecology* 30(1): 74-78. Feb 2005, *Journal of Applied Ecology* 42(1): 60-69. Feb 2005, *Ecology Letters* 8(2): 209-217. Feb 2005, *Journal of Ecology* 93(1): 202-213. Feb 2005 [Long-term change in ground-layer vegetation of deciduous forests of the North Carolina Piedmont, U.S.], *Journal of Ecology* 93(2): 441-470. Apr 2005, *Ecological Management and Restoration* 6(1): 73-75. Apr 2005.

Species

D. alpina Vest (*Avena calycina* Vill.; *Avena paradensis* Kit.; *Avena spicata* var. *calycina* (Vill.) Willd.; *Avena stricta* Host; *Danthonia calycina* (Vill.) Rchb., nom. illeg., non *Danthonia calycina* Roem. & Schult.; *Danthonia provincialis* DC.; *Danthonia provincialis* var. *alpina* (Vest) Nyman; *Danthonia provincialis* var. *elata* Waisb.)

Europe, Asia temperate, Turkey. See *Flora Delphinalis* 10. 1785, *Species Plantarum. Editio quarta* 1: 453. 1797, *Flore Française. Troisième Édition* (éd. 3) 3: 33. 1809, *Flora* 4: 145. 1821, *Flora Austriaca* 1: 127. 1827, *Agrostographia Germanica* 44, t. 103, f. 1713, 1714. 1834, *Sylloge Florae Europaeae* 415. 1855, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 13: 543. 1863.

in French: danthonie des Alpes

in Italian: danthonia maggiore

in German: Traubenhafer, Kelchgras

D. andina Phil. (*Danthonia virescens* E. Desv.; *Rytidosperma virescens* (E. Desv.) Nicora)

Chile. See *Flora Chilena* 6: 363. 1854, *Anales de la Universidad de Chile* 94: 30, 33. 1896 and *Darwiniana* 18: 93, f. 4A-E. 1973.

D. annableae P.M. Peterson & Rúgolo (for C.R. Annable)

Bolivia. Erect, caespitose, leaves mostly basal, shortly rhizomatous, leaf blades filiform, spikelets solitary or paired, 4-6-flowered, glumes subequal and lanceolate, see *Madroño* 40(2): 71, f. 1. 1993, *Gramíneas de Bolivia* 260, f. 52. 1998.

D. araucana Phil.

Chile. See *Anales de la Universidad de Chile* 94: 31. 1896.

D. auriculata J.M. Black (*Austrodanthonia auriculata* (J.M. Black) H.P. Linder; *Notodanthonia auriculata* (J.M. Black) Zotov; *Rytidosperma auriculatum* (J.M. Black) Connor & Edgar)

Australia. Forage, see *Transactions and Proceedings of the Royal Society of South Australia* 53: 261. 1929, *New Zealand Journal of Botany* 1: 113. 1963, *Contr. New South Wales Herb.* 2: 309. 1956, *New Zealand Journal of Botany* 17(3): 322. 1979, *Telopea* 7(3): 270. 1997.

in English: lobed wallaby grass

D. boliviensis Renvoise

Bolivia. Erect, caespitose, leaves mostly basal, shortly rhizomatous, leaf blades filiform, 2-4-flowered, see *Gramíneas de Bolivia* 260, 262, f. 52. 1998.

D. breviseta Hack. (*Danthonia macrophylla* Hack.)

Brazil. See *Österreichische Botanische Zeitschrift* 52(5): 192-193. 1902.

D. buchananii Hook.f. (*Hierochloa equisetata* Zotov; *Rytidosperma buchananii* (Hook.f.) Connor & Edgar) (John Buchanan, 1819-1898, author and illustrator, *New Zealand Grasses*)

New Zealand. See *Indig. Grasses* t. 35. 1879, *T.N.Z.I.* 14: 385. 1882 and *New Zealand Journal of Botany* 11(3): 568. 1973.

D. cachemyriana Jaub. & Spach (*Danthonia cachemyriana* Hook.f., nom. illeg., non *Danthonia cachemyriana* Jaub. & Spach; *Danthonia exilis* Hook.f.; *Danthonia jacquemontii* Bor)

Asia tropical and temperate, India, Himachal Pradesh, Jammu and Kashmir, Nepal. Slender, high altitude grass, see *Illustrationes Plantarum Orientalium* 4: 46 t. 331. 1850-1853, *The Flora of British India* 7(22): 281. 1897 [1896] and *Kew Bulletin* 1952: 80. 1952.

D. caespitosa Gaudich. (*Austrodanthonia caespitosa* (Gaudich.) H.P. Linder; *Notodanthonia caespitosa* (Gaudich.) Zotov; *Rytidosperma caespitosum* (Gaudich.) Connor & Edgar)

Australia. Forage, see *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 4: 408. 1826, *London Journal of Botany* 2: 417. 1843, *Plantae Preissianae* 2: 104. 1846-47 and *New Zealand Journal of Botany* 1: 117. 1963, *New Zealand Journal of Botany* 17(3): 325. 1979, *Telopea* 7(3): 271. 1997.

in English: ringed wallaby grass, white top, common wallaby grass

D. californica Bolander (*Danthonia americana* Scribn.; *Danthonia californica* var. *americana* (Scribn.) A.S. Hitchc.; *Danthonia californica* var. *palousensis* St. John; *Danthonia californica* var. *piperi* St. John; *Danthonia*

macounii Hitchc.; *Merathrepta californica* (Bol.) Piper; *Pentameris californica* (Bol.) A. Nelson & J.F. Macbr.)

Chile, Canada, Columbia Basin region, U.S., California. Perennial, tufted, no auricles, ligule a fringe of hairs, leaf sheaths hairy and open, narrow leaves flat to inrolled, branched and few-flowered flower head, lemmas glabrous, glumes nearly equal, bent awn, native pasture species, forage, useful for erosion control and restoration of disturbed sites, growing on borders of cultivated fields, coastal meadows, lakeshores, on sandy and rocky ridges, see *Essai d'une Nouvelle Agrostographie* 92, t. 18, f. 8. 1812, *Proceedings of the California Academy of Sciences* 2: 182. 1863 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 5. 1901, *Contributions from the United States National Herbarium* 11: 122. 1906, *Botanical Gazette* 56(6): 469. 1913, *American Journal of Botany* 2: 305. 1915, *Manual of the Grasses of the United States* 831. 1935, *Sendtnera* 3: 26. 1996.

in English: California oat grass

D. carphoides F. Muell. ex Benth. (*Austrodanthonia carphoides* (F. Muell. ex Benth.) H.P. Linder; *Notodanthonia carphoides* (F. Muell. ex Benth.) Zotov; *Rytidosperma carphoides* (F. Muell. ex Benth.) Connor & Edgar)

Australia. Forage, see *Flora Australiensis: A Description ...* 7: 592. 1878 and *Contributions from the New South Wales National Herbarium* 2: 279. 1956, *New Zealand Journal of Botany* 1: 113. 1963, *New Zealand Journal of Botany* 17(3): 331. 1979, *Telopea* 7(3): 271. 1997.

in English: short wallaby grass

D. chaseana Conert (for A. Chase)

Brazil. Densely tufted, on stony soils and rocks, see *Senckenbergiana Biologica* 56(4-6): 308. 1975.

D. chiapasensis Davidse

Mexico, Chiapas. Montane rainforests, see *Novon* 2(2): 100. 1992.

D. chilensis E. Desv. (*Avena ariguensis* Steud.; *Danthonia aureofulva* E. Desv.; *Danthonia malacantha* (Steud.) Pilg.; *Trisetum malacanthum* Steud.)

Chile, Arigue. See *Flora Chilena* 6: 360, 362, t. 80, f. 2, 3. 1854, *Synopsis Plantarum Glumacearum* 1: 233, 424. 1854 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 759. 1929, *Darwiniana* 18: 82, f. 1L-M. 1973, *Sendtnera* 3: 32, f. 4I. 1996.

D. cirrata Hack. & Arechav. (*Danthonia cirrhata* (Kuntze) Hack. & Arechav.; *Danthonia cirrhata* Hack. & Arechav.; *Danthonia melanathera* (Hack.) Bernardello; *Danthonia tandilensis* Kuntze; *Trisetum sericeum* Desv.) (Argentina, Sierra de Tandil)

Southern America, Brazil, Uruguay, Bolivia, Argentina. Perennial, erect, leaf blades filiform, shortly rhizomatous, dense panicle oblong, 5- to 12-flowered, glumes lanceolate

and subequal, stony places, arid and desert, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 204. 1831, *Anales del Museo Nacional de Montevideo* 1: 367, t. 40. 1896, *Revisio Generum Plantarum* 3(3): 349. 1898 and *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 16: 38. 1900, *Anales del Museo Nacional de Buenos Aires* 21: 112. 1911, *Kurtziana* 10: 249. 1977, *Gramíneas de Bolivia* 262, f. 52. 1998.

D. clelandii Vickery (*Joycea clelandii* (Vickery) Linder; *Notodanthonia clelandii* (Vickery) Veldkamp; *Rytidosperma clelandii* (Vick.) Connor & Edgar) (species dedicated to the Australian naturalist Sir John Burton Cleland, 1878-1971, botanist, ethnologist, explorer and plant collector)

South Australia. Robust, perennial, ornamental, tufted, forming erect tussocks, leaves flat or inrolled, culms erect and stout, loose panicle exserted and linear-oblong, spikelets with red hanging anthers, central awn twisted, poor soils, see *Contributions from the New South Wales National Herbarium* 1: 297. 1950, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 296. 1980, *Telopea* 6(4): 612. 1996.

in Australia: wallaby-grass

D. compressa Austin (*Danthonia allenii* Austin (also *allenii*); *Danthonia faxonii* Austin; *Danthonia spicata* var. *compressa* (Austin) Alph. Wood; *Merathrepta compressa* (Austin) A. Heller; *Pentameris compressa* (Austin) A. Nelson & J.F. Macbr.) (Charles Edward Faxon, 1846-1918)

North America, U.S., Canada. Perennial bunchgrass, slender, compressed, sometimes decumbent, dense growth habit, leaves mostly basal, inflorescence a panicle, awn bent, forage, pasture grass, susceptible to drought, growing in open woodlands, well-drained sites, on dry sites, logged and burned areas, on disturbed sites, mountain meadows and clearings, in forest openings, see *Systema Vegetabilium* 2: 690. 1817, *Annual Report of the New York State Museum* 22(87): 55. 1869, *The American Botanist and Florist* 2: 396. 1871, *Bulletin of the Torrey Botanical Club* 3(4): 21. 1872, *Bulletin of the Torrey Botanical Club* 6(36): 190. 1877 and *Muhlenbergia: A Journal of Botany* 5: 120. 1909, *Botanical Gazette* 56(6): 469. 1913.

in English: flat-stem oat grass, flattened oatgrass, slender oatgrass, mountain oat grass

D. cumminsii Hook.f. (*Danthonia jacquemontii* Bor; *Danthonia jacquemontii* var. *minor* (Hook.f.) Bor; *Danthonia schneideri* Pilger)

Asia, India. A very variable species, good fodder, see *The Flora of British India* 7: 282. 1897 and *Kew Bulletin* 1952: 80-81. 1952.

in English: native oat grass

D. cunninghamii Hook.f. (*Agrostis pilosa* Retz.; *Agrostis pilosa* A. Cunn., nom. illeg., non *Agrostis pilosa* Retz.;

Chionochloa conspicua subsp. *cunninghamii* (Hook.f.) Zotov) (after the (British-born, Wimbledon, Surrey) Australian botanist Allan Cunningham, 1791-1839 (Sydney), botanist in New South Wales (Australia), plant collector, explorer, botanical collector for Kew, 1814-1816 to Brazil with James Bowie (ca. 1789-1869), in New Zealand 1826 and 1838, Superintendent of Botanic Garden at Sydney, his works include *Florae Insularum Novae Zelandiae Precursor*; or, a Specimen of the Botany in the Islands of New Zealand. London 1837-1840; see Ida Lee (afterwards Marriott), *Early Explorers in Australia*. From the log-books and journals, including the Diary of Allan Cunningham. [Selections from his journal from Mar 1817-Nov 1818.] London 1925; Barron Field (1786-1846), *Geographical Memoirs on New South Wales*. By various hands ... Edited by B.F. [Allan Cunningham, *Journal of a Route from Bathurst to Liverpool Plains*, etc. Mar-June 1823; *A Specimen of the Indigenous Botany of the Mountainous Country*, between the colony round Port Jackson and the settlement of Bathurst.] London 1825; J.H. Barnhart, *Biographical notes upon botanists*. 1: 404. 1965; R. Glenn, *The Botanical Explorers of New Zealand*. Wellington 1950; W.G. McMinn, *Allan Cunningham, Botanist and Explorer*. Melbourne 1970; Stephan F. Ladislaus Endlicher, *Genera Plantarum*. 1: 151. 1836; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. *Regnum Vegetabile* vol. 2. 1954; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 42. London 1904; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. Oxford 1964; Dennis John Carr & S.G.M. Carr, editors, *People and Plants in Australia*. London 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 184-185. London 1994; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Harold B. Carter, *Sir Joseph Banks (1743-1820). A Guide to Biographical and Bibliographical Sources*. Winchester 1987; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987)

New Zealand. Woods, see *Observationes Botanicae* 6: 22. 1791, *Handbook of the New Zealand Flora* 332. 1864 and *New Zealand Journal of Botany* 1: 92, 94. 1963.

D. decumbens (L.) DC. (*Bromus decumbens* (L.) Koeler; *Danthonia decumbens* f. *breviglumis* Hack.; *Danthonia decumbens* f. *longiglumis* Hack.; *Danthonia decumbens* var. *longiglumis* Hack.; *Festuca decumbens* L.; *Melica decumbens* (L.) Weber; *Melica rigida* Wibel, nom. illeg., non *Melica rigida* Cav.; *Poa decumbens* (L.) Scop.; *Sieglingia*

decumbens (L.) Bernh.; *Sieglingia decumbens* f. *longiglumis* (Hack.) Soó; *Sieglingia decumbens* subsp. *longiglumis* (Hack.) Maire; *Sieglingia decumbens* subsp. *mauritanica* (Maire) Maire; *Sieglingia decumbens* subvar. *breviglumis* (Hack.) Briq.; *Sieglingia decumbens* var. *breviglumis* (Hack.) Maire; *Sieglingia decumbens* var. *eudecumbens* Maire & Weiler; *Sieglingia decumbens* var. *mauritanica* Maire; *Triodia decumbens* (L.) P. Beauv.; *Triodia decumbens* var. *breviglumis* (Hack.) Rouy; *Triodia decumbens* var. *longiglumis* (Hack.) Rouy

Morocco, Algeria, Canada. Perennial, loosely caespitose, weed, inflorescence contracted, spikelets with 4-6 florets, flowers often cleistogamous, see *Species Plantarum* 1: 66-70, 75. 1753, *Flora Carniolica, Editio Secunda* 1: 69. 1771, *Spicilegium Florae Goettingensis* 3. 1778, *Primitiae Florae Werthemensis* 117. 1799, *Systematisches Verzeichnis* 20: 44. 1800, *Descriptio Graminum in Gallia et Germania* 242. 1802, *Flore Française. Troisième Édition* 3: 33. 1805, *Essai d'une Nouvelle Agrostographie* 1: 76, 160, t. 15, f. 9. 1812, *Österreichische Botanische Zeitschrift* 27(4): 123. 1877 and *Prodrome de la Flore Corse* 1: 114. 1910, *Flore de France* 14: 149. 1913, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 94. 1942, *Flore de l'Afrique du Nord*: 2: 366. 1953, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 117. 1971 [1972].

in English: heath grass, common heathgrass, heather grass

in French: danthonie

in Italian: danthonia minore

in German: Dreizahn

D. domingensis Hack. & Pilg. (*Danthonia domingensis* subsp. *shrevei* (Britton) Conert; *Danthonia shrevei* Britton) (after Forrest Shreve, 1878-1950, author of *Vegetation and Flora of the Sonoran Desert* [by] Forrest Shreve & Ira L. Wiggins. Stanford, Calif., Stanford University Press, 1964, "Plants of the sand." *News Serv. Bull. Carneg. Instn.* 4: 90-96. 1937, "The Coastal deserts of Jamaica." *Plant World* 13: 129-134. 1910, *The Plant Life of Maryland*, by Forrest Shreve, M.A. Chrysler, Frederick H. Blodgett and F.W. Besley. Lehre, Germany: J. Cramer 1969 [Originally published: Baltimore: John Hopkins Press, 1910]. See Janice Emily Bowers. *A Sense of Place: The Life and Work of Forrest Shreve*. Tucson: University of Arizona Press 1988)

Dominican Republic, Jamaica. See *Symbolae Antillarum* 6: 1. 1909, *Torreya* 9(9): 210. 1909, *Senckenbergiana Biologica* 56(4-6): 300-301, f. 1k, 2a-i, 3a-d, g. 1975.

D. dregeana (Nees) Steud. (*Chaetobromus dregeanus* Nees; *Chaetobromus involucratus* (Schrad.) Nees subsp. *dregeanus* (Nees) Verboom)

South Africa. Perennial, stoloniferous or tufted, erect, leaf hairy on the upper side, rooting from the culm nodes, basal and upper florets with central awn usually geniculate, glumes red-brown, seeds very small and fine, common on

sandy areas, rocky hillsides, see *A Natural System of Botany* 449. 1836, *Florae Africae Australioris Illustrationes Monographicae* 1: 343-345. 1841, *Synopsis Plantarum Glumacearum* 1: 244. 1854 and *South African Journal of Botany* 61: 60-65. 1995, *Nordic Journal of Botany* 18(1): 57-77. 1998, *Bothalia* 18: 111-114, 119-122. 1988, *Genome* 33: 646-658. 1990.

in South Africa: hartbeesgras

D. duttoniana Cashmore (*Austrodanthonia duttoniana* (Cashmore) H.P. Linder; *Notodanthonia duttoniana* (Cashmore) Veldkamp; *Rytidosperma duttonianum* (Cashmore) Connor & Edgar) (for the German-born Hon. Francis Staker Dutton, 1816-1877, in 1840s to Australia, Commissioner for Crown Lands in South Australia and Premier, algae collector, wrote *Constitution fuer Suedaustralien*. Im 13 und 14 Regierungsjahre Ihrer Majestaet der Koenigin Victoria. Gesetz zur bessern Regierung der australischen Colonien Ihrer Majestaet. Adelaide 1900 and *South Australia and Its Mines*; with an historical sketch of the colony, under Its several administrations, to the period of Captain Grey's departure. London 1846; see F. von Mueller, in *Linnaea*. 25: 409. 1853 and *Transactions and Proceedings of the Victorian Institute for the Advancement of Science*. 40. 1855)

Australia. Forage, see *Transactions and Proceedings of the Royal Society of South Australia* 57: 72. 1933, *Contr. New South Wales Herb.* 2(3): 304. 1956, *New Zealand Journal of Botany* 17: 332. 1979, *Taxon* 29: 296. 1980, *Telopea* 7(3): 271. 1997.

in English: brown-back wallaby grass

D. epilis Scribn. (*Danthonia glabra* Phil.; *Danthonia glabra* Nash, nom. illeg., non *Danthonia glabra* Phil.; *Danthonia sericea* Nutt.; *Danthonia sericea* var. *epilis* (Scribn.) Blomquist; *Pentameris epilis* (Scribn.) A. Nelson & J.F. Macbr.)

U.S. Perennial, see *The Genera of North American Plants* 1: 71. 1818, *Anales de la Universidad de Chile* 94: 30. 1896, *Bulletin of the Torrey Botanical Club* 24(1): 43-44. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 30: 7. 1901, *Botanical Gazette* 56(6): 469. 1913, *The Grasses of North Carolina* 77. 1948, *Sendtnera* 3: 57. 1996.

in English: Carolina oatgrass

D. eriantha Lindl. (*Austrodanthonia eriantha* (Lindl.) H.P. Linder; *Notodanthonia eriantha* (Lindl.) Veldkamp; *Rytidosperma erianthum* (Lindl.) Connor & Edgar)

Australia. Forage, see *Three Expeditions into the Interior of Eastern Australia* 2: 304. 1838 and *New Zealand Journal of Botany* 17(3): 323. 1979, *Taxon* 29: 296. 1980, *Telopea* 7(3): 271. 1997.

in English: hill wallaby grass

D. glabra Phil. (*Danthonia glabra* Nash, nom. illeg., non *Danthonia glabra* Phil.; *Notodanthonia lechleri* (Steud.)

Veldkamp; *Rytidosperma glabrum* (Phil.) Nicora; *Rytidosperma lechleri* Steud.)

Southern America, Argentina, Chile. See *Synopsis Plantarum Glumacearum* 1: 425. 1854, *Anales de la Universidad de Chile* 94: 30. 1896, *Bulletin of the Torrey Botanical Club* 24(1): 43-44. 1897 and *Darwiniana* 18: 87, f. 2A-F. 1973, *Taxon* 29: 297. 1980.

D. gracilis Hook.f. (*Danthonia semiannularis* var. *gracilis* (Hook.f.) Hook.f.; *Notodanthonia gracilis* (Hook.f.) Zotov; *Rytidosperma gracile* (Hook.f.) Connor & Edgar; *Thonandia gracilis* (Hook.f.) H.P. Linder)

Tasmania, New Zealand. Perennial, ornamental, erect, tussocks forming, softly hairy leaves flat or inrolled, panicle hairy and compact, hairy spikelets, yellow anthers, a graceful species, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Novae-Zelandiae* 1: 303, t. 69B. 1853, *Handbook of the New Zealand Flora* 333. 1864 and *Transactions of the Royal Society of New Zealand* 73(3): 234. 1943, *New Zealand J. Bot.* 1: 123. 1963, *New Zealand Journal of Botany* 17(3): 330. 1979, *Telopea* 6(4): 612. 1996.

in Australia: wallaby-grass

D. holm-nielsenii Laegaard (named for Lauritz B. Holm-Nielsen)

Ecuador. Perennial, slender, densely caespitose, leaves hispid, inflorescence a short panicle, spikelets 7- to 8-flowered, pilose florets, glumes subequal lanceolate, palea with finely ciliolate keels, 3 stamens, in dry sites, related to *Danthonia secundiflora* Presl, see *Flora of Ecuador* 214(1) *Gramineae* (part 1): 15, 17-18. 1997.

D. intermedia Vasey (*Avena riabuschinskii* Kom.; *Danthonia canadensis* Baum & Findlay; *Danthonia cusickii* (T.A. Williams) Hitchc.; *Danthonia intermedia* subsp. *riabuschinskii* (Kom.) Tzvelev; *Danthonia intermedia* var. *cusickii* Williams; *Merathrepta intermedia* (Vasey) Piper; *Merathrepta intermedia* subsp. *cusickii* (T.A. Williams) Piper; *Pentameris intermedia* (Vasey) A. Nelson & J.F. Macbr.; *Trisetum williamsii* Louis-Marie) (William Conklin Cusick, 1842-1922)

Northern America, U.S., Canada. Perennial bunchgrass, densely caespitose, erect, basal meristems, shallow and fibrous root system, auricles absent, ligules shortly hairy, smooth leaf sheaths, leaves mostly basal, old sheaths and blades often persistent, spiky flower heads, inflorescence a narrow panicle, flowers rarely visible, cleistogamous or self-fertilized spikelets, lemmas hairy, bent and twisted awn, palatable, forage for livestock and wildlife, species ecologically very versatile, grazing-tolerant, grows in small openings, shallow to deep soils, on dry to moist sites, slopes, on loam and silt-loam soils, beaches, gravelly and rocky sites, on alluvial flats of river floodplains, subalpine meadows and mountain meadows, openings in woods, dry meadows, prairies and grasslands, subalpine and alpine grasslands, see *Bulletin of the Torrey Botanical Club* 10:

52. 1883 and *Circ. Div. Agrostol. U.S.D.A.* 30: 6-7. 1901 [also *Bulletin, Division of Agrostology United States Department of Agriculture*], *Contributions from the United States National Herbarium* 11: 122. 1906, *Botanical Gazette* 56(6): 470. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 13: 86. 1914, *American Journal of Botany* 2: 305. 1915, *Rhodora* 30: 221. 1928, *Canadian Journal of Botany* 52(7): 1577. 1974, *Zlaki SSSR* 610. 1976, *Sendtnera* 3: 42. 1996.

in English: intermediate oat grass, timber oat grass, timber danthonia, wild oat grass

D. longifolia R. Br. (*Avena longifolia* (R. Br.) Spreng., nom. illeg., non *Avena longifolia* Thore; *Danthonia penicillata* var. *longifolia* (R. Br.) F. Muell. ex Maiden & Betche; *Notodanthonia longifolia* (R. Br.) Veldkamp; *Rytidosperma longifolium* (R. Br.) Connor & Edgar; *Thonandia longifolium* (R. Br.) H.P. Linder)

Tasmania, Victoria, Queensland, New South Wales. Perennial, densely caespitose, erect, wiry, slender weeping leaves become inrolled and curled with age, dense and many-flowered gray-brown panicles, spikelets crowded and white hairy, hardy grass, grows on sandy and infertile soils, commonly found on drier rocky sites, immature heads are attractive, can produce a vigorous dark green basal tussock of fine leaves with some red tinges in moist well-drained sites or a sparse tuft of finely inrolled flexuose leaves with reddish coloring on drier ground, see *Prodromus Florae Novae Hollandiae* 176. 1810, *Essai d'une Nouvelle Agrostographie* 92, 153, 160. 1812, *Systema Vegetabilium, editio decima sexta* 1: 336. 1825 and *A Census of New South Wales Plants* 22. 1916, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 296. 1980, *Telopea* 6(4): 613. 1996.

in English: long-leaf wallaby-grass, long-leaved wallaby-grass, wallaby-grass

D. montevidensis Hack. & Arechav. (*Danthonia secundiflora* J. Presl)

South America, Argentina, Uruguay. Perennial, short, see *Reliquiae Haenkeanae* 1(4-5): 255. 1830, *Anales del Museo Nacional de Montevideo* 1: 369. 1896.

D. nitens D.I. Morris (*Rytidosperma nitens* (D.I. Morris) H.P. Linder)

Tasmania. Rare species, see *Muelleria* 7(2): 155-157, f. 7, 8a. 1989, *Telopea* 6(4): 614. 1996.

D. nivicola Vickery (*Notodanthonia nivicola* (Vickery) Veldkamp; *Rytidosperma niviculum* (Vickery) Connor & Edgar)

Tasmania, Victoria, New South Wales. Perennial, tufted, small, shortly rhizomatous, slender, erect, leaves smooth and inrolled, leaf blade fine and bristle-like, culms stiff, reddish flowering stems, panicle dense and open at maturity, spikelets hairy, 4 florets, glumes longer than florets, awns exerted, grows at high altitude on slopes or amongst rocks,

moist situations, often associated with *Danthonia nudiflora* P. Morris, ornamental, container plants, see *Contributions from the New South Wales National Herbarium* 1: 300. 1950, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29(2-3): 296. 1980.

in Australia: snow wallaby-grass

D. nuda Hook.f. (*Notodanthonia nuda* (Hook.f.) Zotov; *Rytidosperma nudum* (Hook.f.) Connor & Edgar)

New Zealand. See *Flora Novae-Zelandiae* 2: 337. 1855 and *New Zealand Journal of Botany* 1: 112. 1963, *New Zealand Journal of Botany* 17(3): 322. 1979.

D. nudiflora P. Morris (*Notodanthonia nudiflora* (P. Morris) Veldkamp; *Rytidosperma nudiflorum* (P. Morris) Connor & Edgar)

Tasmania, Victoria, New South Wales. Perennial, tufted, small or short, erect, sometimes rhizomatous, leaf blade inrolled, stiff and spiny or somewhat prickly leaves, short panicle linear and dense, spikelets crowded and very hairy, 5-6 florets, glumes subequal with membranous margins, awns exserted, grows in grassland at high altitude, moist conditions, ornamental, container plants, see *Victoria Naturalist* 52: 111. 1935, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29(2-3): 296. 1980.

in English: alpine wallaby-grass

D. oreoboloides (F. Muell.) Stapf (*Festuca oreoboloides* F. Muell.; *Monostachya oreoboloides* (F. Muell.) Hitchc.; *Notodanthonia oreoboloides* (F. Muell.) Veldkamp; *Rytidosperma oreoboloides* (F. Muell.) H.P. Linder)

Asia. Tussocky, low, found in open places, wet areas, see *Hooker's Icones Plantarum* 27(1): t. 2606. 1899, *Transactions of the Royal Society of Victoria* 1(2): 38-39. 1889 and *Philippine Journal of Science* 5: 330. 1910, *Brittonia* 2(2): 107. 1936, *Taxon* 29: 298. 1980, *Telopea* 6(4): 614. 1996.

D. parryi Scribner (*Danthonia parryi* var. *longifolia* Scribn.; *Merathrepta parryi* (Scribn.) A. Heller) (for the English-born American botanist Charles Christopher Parry, 1823-1890 (Davenport, Iowa, U.S.), 1832 to America, M.D. Columbia College 1846, plant collector, explorer (Colorado, Oregon, Western Wyoming, Rocky Mountains, Utah, Nevada, California, Mexico), physician, from 1849 to 1861 with the Mexican Boundary Survey, 1861 Colorado Expedition, 1862 the Parry, Hall and Harbour Expedition, expedition of 1864 (Hot Sulphur Springs, excursion to Long's Peak), 1869-1872 USDA, his writings include *Botanical Observations in Western Wyoming*. Salem 1874 and "California manzanitas." *Bull. Calif. Acad. Sci.* 2: 483-496. 1886-1887. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 52. 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 537. London 1994; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 301. 1972; H.N. Clouke, *Account of the Herbaria of the Department of Botany in*

the University of Oxford. 221. Oxford 1964; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 566-567. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 465-466. 1973; Ira L. Wiggins, *Flora of Baja California*. 42. Stanford, California 1980; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Joseph William Blankinship, "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J. Ewan, ed, *A Short History of Botany in the United States*. 1969; Charles Francis Saunders, *Western Wild Flowers*. 73. New York 1933; Howard Atwood Kelly & Walter Lincoln Burrage, *Dictionary of American Medical Biography*. New York 1928; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 172. 1904; Margaret Miller Rocq, editor, *California Local History*. A Bibliography and Union List of Library Holdings. Second Edition. Stanford, California 1970; A.E. Weber, *King of Colorado Botany: Charles Christopher Parry, 1823-1890*. 1997; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

U.S., Colorado, Canada. Dry subalpine meadow, dominant in montane grassland, see *Botanical Gazette* 21(3): 133-134. 1896 and *Muhlenbergia: A Journal of Botany* 5: 120. 1909, *Can. J. Bot.* 52: 153. 1974.

in English: Parry's oat grass

D. paschalis Pilger (*Rytidosperma paschale* (Pilg.) C. Baeza)

Easter Island. Vulnerable species, see *The Natural History of Juan Fernandez and Easter Island* 2: 67, f. 1d-h. 1922, G. Zizka, *Flowering plants of Easter Island*. Frankfurt am Main, Germany 1991 [Palmarum Hortus Francofurtensis, 3 (Scient. Reports Res. Activ.)], *Gayana, Botánica* 47(3-4): 84. 1990 [1991], *Sendtnera* 3: 67. 1996.

D. pauciflora R. Br. (*Notodanthonia pauciflora* (R. Br.) Veldkamp; *Rytidosperma pauciflorum* (R. Br.) Connor & Edgar)

Tasmania. Perennial, wiry, forming small spreading tufts, leaves slender and stiff, culms smooth and slender, panicle

crowded, spikelets crowded and purplish, ornamental, wet and peaty soils, container, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Australiensis: A Description ...* 7: 596. 1878 and *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29(2-3): 297. 1980.

D. penicillata (Labill.) R. Br. ex P. Beauv. (*Arundo penicillata* Labill.; *Danthonia penicillata* (Labill.) F. Muell., nom. illeg., non *Danthonia penicillata* (Labill.) R. Br. ex P. Beauv.; *Notodanthonia penicillata* (Labill.) Zotov; *Rytidosperma penicillatum* (Labill.) Connor & Edgar)

Australia. See *Novae Hollandiae Plantarum Specimen* 1: 26, t. 34. 1804, *Essai d'une Nouvelle Agrostographie* 92, 153, 160. 1812, *Fragmenta Phytographiae Australiae* 8: 135. 1873 and *New Zealand Journal of Botany* 1: 122. 1963, *New Zealand Journal of Botany* 17(3): 327. 1979.

in Australia: slender wallaby-grass

D. penicillata (Labill.) R. Br. ex P. Beauv. var. *villosa* (Labill.) P. Beauv.

Australia.

D. pilosa R. Br. (*Austrodanthonia pilosa* (R. Br.) H.P. Linder; *Danthonia penicillata* var. *pilosa* (R. Br.) F. Muell. ex Maiden & Betche; *Notodanthonia pilosa* (R. Br.) Zotov; *Rytidosperma pilosum* (R. Br.) Connor & Edgar)

Tasmania, Australia. Forage, see *Prodromus Florae Novae Hollandiae* 177. 1810 and *A Census of New South Wales Plants* 22. 1916, *New Zealand Journal of Botany* 1: 118. 1963, *New Zealand Journal of Botany* 17(3): 326. 1979, *Telopea* 7(3): 272. 1997.

D. popinensis D. Morris (*Austrodanthonia popinensis* (D.I. Morris) H.P. Linder; *Notodanthonia popinensis* (D.I. Morris) H.P. Linder)

Tasmania. Endangered species, see *Muelleria* 7(2): 157-159, f. 8b, 9. 1989, *Telopea* 6(4): 616. 1996, *Telopea* 7(3): 273. 1997.

D. procera Vick. (*Austrodanthonia procera* (Vickery) S.W.L. Jacobs; *Notodanthonia procera* (Vick.) Veldkamp; *Rytidosperma procerum* (Vickery) Connor & Edgar) (from the Latin *procerus*, *a*, *um*, "high, tall")

Victoria, New South Wales, Tasmania. Perennial, tall, robust, stout, densely caespitose, forming coarse tussocks, leaves narrow and pointed, culms slender with purple dots, panicle open and loosely spreading, spikelets 4- to 5-flowered in small clusters, glumes subequal, decorative, see *Contributions from the New South Wales National Herbarium* 2: 306. 1956, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 297. 1980, *Telopea* 9(3): 741. 2001.

in Australia: tall wallaby-grass

D. purpurascens Vick. (*Danthonia tenuior* (Steud.) Conert; *Notodanthonia purpurascens* (Vickery) Zotov; *Notodanthonia tenuior* (Steud.) S.T. Blake; *Plinthanthesis tenuior* Steud.; *Rytidosperma tenuius* (Steud.) Connor & Edgar,

nom. illeg., non *Rytidosperma tenuius* (Steud.) O.E. Erikss., A. Hansen & Sunding)

Victoria, New South Wales, Tasmania, South Australia, Queensland. Perennial, ornamental, slender, forming erect tussocks, leaves glabrous or hairy, culms tall and smooth, hairy panicle narrow and loose, spikelets purplish, anthers orange, see *Synopsis Plantarum Glumacearum* 1: 14. 1855 and *Contributions from the New South Wales National Herbarium* 1(5): 301. 1950, *Contributions from the New South Wales National Herbarium* 2: 298. 1956, *New Zealand Journal of Botany* 1: 114. 1963, *Contributions from the Queensland Herbarium* 14: 3. 1972, *Senckenbergiana Biologica* 56: 163. 1975, *New Zealand Journal of Botany* 17(3): 324. 1979.

in English: wallaby-grass

D. racemosa R. Br. (*Austrodanthonia racemosa* (R. Br.) H.P. Linder; *Danthonia penicillata* var. *racemosa* (R. Br.) F. Muell. ex Maiden & Betche; *Notodanthonia racemosa* (R. Br.) Zotov; *Rytidosperma racemosum* (R. Br.) Connor & Edgar)

Tasmania, Australia. See *Prodromus Florae Novae Hollandiae* 177. 1810 and *A Census of New South Wales Plants* 22. 1916, *New Zealand Journal of Botany* 1: 121. 1963, *New Zealand Journal of Botany* 17(3): 327. 1979, *Telopea* 7(3): 273. 1997.

D. raoulii Steud. (*Chionochloa rigida* (Raoul) Zotov; *Danthonia rigida* Raoul) (named for the French naval surgeon Édouard Fiacre Louis Raoul, 1815-1852, botanist, from 1840 to 1842 on the *Allier* (with Joseph-Fidèle-Eugène du Bouzet, 1805-1867), from 1842 to 1843 on the *Aube*, from 1840 to 1846 collected and studied New Zealand plants, from 1849 professor of medicine at Brest, France, wrote *Choix de plantes de la Nouvelle-Zélande* recueillies and décrites par M.E. Raoul. Paris, Leipzig 1846 and *Des rapports des maladies aiguës et chroniques du coeur avec les affections dites rhumatismales*. Paris 1839. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 129. 1965; John Dunmore, *Who's who in Pacific navigation*. Honolulu 1991; Thomas Frederick Cheeseman (1846-1923), *Manual of the New Zealand Flora*. Wellington 1906 and 1925; A. Gazel, *French Navigators and the Early History of New Zealand*. Wellington 1946; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 767. Stuttgart 1993)

New Zealand. See *Annales des Sciences Naturelles; Botanique, sér. 3* 2: 116. 1844, *Synopsis Plantarum Glumacearum* 1: 246. 1854 and *New Zealand Journal of Botany* 1: 96. 1963.

D. raoulii Steud. var. *flavescens* (Hook.f.) Hack. (*Danthonia flavescens* Hook.f.; *Danthonia raoulii* var. *flavescens* (Hook.f.) Hack. ex Cheeseman)

New Zealand. See *Handbook of the New Zealand Flora* 332. 1864 and *Manual of the New Zealand Flora* 886. 1906.

D. remota D.I. Morris (*Austrodanthonia remota* (D.I. Morris) H.P. Linder; *Notodanthonia remota* (D.I. Morris) H.P. Linder)

Tasmania. Rare species, see *Muelleria* 7(2): 160-162, f. 10, 11a. 1989, *Telopea* 6(4): 617. 1996, *Telopea* 7(3): 273. 1997.

D. rhizomata Swallen

Brazil, Uruguay. Spreading, rhizomatous, loosely tufted, common on sandy places, see *Comunicaciones Botánicas del Museo de Historia Natural de Montevideo* 3(39): 2-3. 1961.

D. richardsonii Cashmore (*Austrodanthonia richardsonii* (Cashmore) H.P. Linder; *Notodanthonia richardsonii* (Cashmore) Veldkamp; *Rytidosperma richardsonii* (Cashmore) Connor & Edgar)

Australia. Forage, see *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 297. 1980, *Telopea* 7(3): 273. 1997, J.L. Lutze & R.M. Gifford, "Acquisition and allocation of carbon and nitrogen by *Danthonia richardsonii* in response to restricted nitrogen supply and CO₂ enrichment." *Plant, Cell and Environment* 21(11): 1133-1141. Nov 1998, J.L. Lutze & R.M. Gifford, "Carbon accumulation, distribution and water use of *Danthonia richardsonii* swards in response to CO₂ and nitrogen supply over four years of growth." *Global Change Biology* 4(8): 851-861. Dec 1998, J.L. Lutze & R.M. Gifford, "Nitrogen accumulation and distribution in *Danthonia richardsonii* swards in response to CO₂ and nitrogen supply over four years of growth." *Global Change Biology* 6(1): 1-12. Jan 2000, Jason L. Lutze, Roger M. Gifford and Helen N. Adams, "Litter quality and decomposition in *Danthonia richardsonii* swards in response to CO₂ and nitrogen supply over four years of growth." *Global Change Biology* 6(1): 13-24. Jan 2000.

D. secundiflora J. Presl (*Danthonia charruana* Swallen; *Danthonia dusenii* Ekman; *Danthonia dusenii* var. *charruana* (Swallen) Roseng. & B.R. Arrill.; *Danthonia filifolia* Hubb.; *Danthonia montana* Döll; *Danthonia montevidensis* Hack. & Arechav.; *Danthonia quinquenervata* Roseng. & B.R. Arrill.; *Danthonia tenuifolia* Döll) (Brazil, Rio Grande do Sul, Estancia Charrua, south of Santa Victoria do Palmar) (species dedicated to the Swedish botanist Per Karl Hjalmar Dusén, 1855-1926, explorer and botanical collector (West Africa), civil engineer, bryologist, author of *New and Some Little Known Mosses from the West Coast of Africa*. Stockholm 1895, 1896; see F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 27. 1971; G. Murray, *History of the collections contained in the Natural History Depart-*

ments of the British Museum. London 1904; Benjamin Daydon Jackson (1846-1927), "A list of the contributors to the herbarium of the Royal Botanic Gardens, Kew, brought down to 31st December 1899." *Bull. Misc. Inf. Kew*. 1901 and "A list of the collectors whose plants are in the herbarium of the Royal Botanic Gardens, Kew, to 31st December 1899." in *Kew Bulletin*. 1-80. 1901; J.H. Barnhart, *Biographical notes upon botanists*. 1: 486. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 110. 1972)

Uruguay, Peru, Brazil, Mexico to Argentina. Perennial, striate, hollow, loosely tufted, sheaths slightly inflated, ligule a ring of short hairs, inflorescence a slender panicle with erect branches hispid, 5-8 fertile florets and an apical rudiment, glabrous glumes narrowly lanceolate, lemma deeply bifid with an awn inserted in the apical cleft, 3 stamens, in swampy places, moist sites, sandy soils, see *Reliquiae Haenkeanae* 1(4-5): 255. 1830, *Flora Brasiliensis* 2(3): 101-102, pl. 30, f. 1. 1878, *Anales del Museo Nacional de Montevideo* 1: 369. 1896 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 24, t. 1, f. 5, t. 6, f. 13. 1911, *Contributions from the Gray Herbarium of Harvard University* 52: 60. 1917, *Comunicaciones Botánicas del Museo de Historia Natural de Montevideo* 3(29): 1-2. 1961, *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 71: 26-27. 1963, *Sendtnera* 3: 51. 1996.

D. semiannularis (Labill.) R. Br. (*Arundo semiannularis* Labill.; *Danthonia semiannularis* Buchanan; *Notodanthonia semiannularis* (Labill.) Zotov; *Rytidosperma semiannulare* (Labill.) Connor & Edgar)

South Australia, Western Australia, Tasmania, Victoria, New South Wales, New Zealand. Perennial, erect and slender, caespitose, clustered in tussocks, leaves narrow and involute, panicles much exerted and contracted, spikelets not very closely packed, florets loose, glumes subequal, outer glumes acute, lemma lanceolate and villous, hairy callus, central awn twisted at the base and then geniculate, palatable, grows on sandy soils in woodland, see *Novae Hollandiae Plantarum Specimen* 1: 26, t. 33. 1804, *Prodromus Florae Novae Hollandiae* 177. 1810, *Manual of the Indigenous Grasses of New Zealand* t. 34(2A). 1879 and *New Zealand Journal of Botany* 1: 116. 1963, *New Zealand Journal of Botany* 17(3): 332. 1979.

in English: Tasmanian wallaby-grass

D. sericea Nutt. (*Danthonia epilis* Scribn.; *Danthonia glabra* Nash, nom. illeg., non *Danthonia glabra* Phil.; *Danthonia sericea* var. *epilis* (Scribn.) Blomq.; *Danthonia sericea* var. *sericea*; *Merathrepta sericea* (Nutt.) A. Heller; *Pentameris epilis* (Scribn.) A. Nelson & J.F. Macbr.; *Pentameris sericea* (Nutt.) A. Nelson & J.F. Macbr.)

U.S., Florida. Perennial, see *The Genera of North American Plants* 1: 71. 1818, *Anales de la Universidad de Chile* 94:

30. 1896, *Bulletin of the Torrey Botanical Club* 24(1): 43-44. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 30: 7. 1901, *Muhlenbergia: A Journal of Botany* 5: 120. 1909, *Botanical Gazette* 56(6): 469-470. 1913, *The Grasses of North Carolina* 77. 1948, *Sendtnera* 3: 57. 1996.

in English: downy danthonia

D. setacea R. Br. (*Austrodanthonia setacea* (R. Br.) H.P. Linder; *Danthonia penicillata* var. *setacea* (R. Br.) J.M. Black; *Danthonia penicillata* var. *setacea* (R. Br.) Rodway; *Danthonia setacea* P. Beauv., nom. illeg., non *Danthonia setacea* R. Br.; *Notodanthonia setacea* (R. Br.) Veldkamp; *Rytidosperma setaceum* (R. Br.) Connor & Edgar)

Tasmania, Australia, New Zealand. Forage, see *Prodromus Florae Novae Hollandiae* 177. 1810 and *Tasmanian Fl.* 267. 1903, *Flora South Australia (edition 2)* 73. 1922, *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 297. 1980, *Telopea* 7(3): 273. 1997.

in English: small-flower wallaby-grass

D. setifolia (Hook.f.) Cockayne (*Danthonia semiannularis* var. *setifolia* Hook.f.; *Danthonia setifolia* (Hook.f.) Calder; *Notodanthonia setifolia* (Hook.f.) Zotov; *Rytidosperma setifolia* (Hook.f.) Connor & Edgar)

New Zealand. See *Flora Novae-Zelandiae* 1: 304. 1853 and *New Zealand Journal of Agriculture* 23: 146. 1921, *Journal of the Linnean Society, Botany* 51: 88. 1937, *New Zealand Journal of Botany* 1: 108. 1963, *New Zealand Journal of Botany* 17(3): 316. 1979.

D. spicata (L.) P. Beauv. ex Roemer & J.A. Schultes (*Avena glumosa* Michx.; *Avena spicata* L.; *Avena spicata* (L.) Fedtsch., nom. illeg., non *Avena spicata* L.; *Avena spiciformis* P. Beauv.; *Danthonia faxonii* Austin; *Danthonia glumosa* (Michx.) P. Beauv.; *Danthonia pinetorum* (Piper) Piper; *Danthonia spicata* var. *longipila* Scribner & Merrill; *Danthonia spicata* var. *pinetorum* Piper; *Danthonia spicata* var. *spicata*; *Danthonia spicata* var. *typica* Fernald; *Danthonia spicata* var. *villosa* Peck; *Danthonia thermalis* Scribn. (also *thermale*); *Merathrepta pinetorum* (Piper) Piper; *Merathrepta spicata* Raf. ex B.D. Jacks.; *Merathrepta thermale* (Scribn.) A. Heller; *Merathrepta thermale* var. *pinetorum* Piper ex Fedde & Schuster; *Pentameris spicata* (L.) A. Nelson & J.F. Macbr.; *Pentameris thermale* (Scribn.) A. Nelson & J.F. Macbr.; *Triodia glumosa* P. Beauv.)

Northern America, U.S., British Columbia. Perennial bunchgrass, densely caespitose, low growing, fibrous roots, sheaths open and smooth to slightly hairy, old basal leaves curling upon drying, no auricles, inflorescence a compressed panicle, small and narrow flower head, chasmogamous and cleistogamous florets, basal cleistogamous flowers, slender glumes, lemmas rounded on the back with two apical teeth, lemma hairy on the back and margins, twisted and pubescent awns, awn often basally coiled,

pioneer grass, useful for erosion control, colonizer, good forage, unpalatable or palatable, poor to good palatability, useful for erosion control, growing in sandy soil or rocky, stony sites, in overgrazed pastures, trampled ground, woodland margins, dry slopes, along lakeshores, disturbed and grazed areas, dry sterile soil, dry meadows, roadsides, see *Species Plantarum* 1: 64, 79-81. 1753, *Flora Boreali-Americana* 1: 72. 1803, *Prodromus Florae Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 12, 92, 153-154, 160, t. 18, f. 7. 1812, *Systema Vegetabilium* 2: 690. 1817, *Annual Report of the New York State Museum* 22(87): 55. 1869, *The American Botanist and Florist* 2: 396. 1871, *Bulletin of the Torrey Botanical Club* 6(36): 190. 1877, *Index Kewensis* 2: 211. 1894, *Annual Report of the New York State Museum* 47: 168. 1894, *Erythea* 7: 103. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 30: 5-7. 1901, *Contributions from the United States National Herbarium* 11: 122. 1906, *Contr. U.S. Natl. Herb.* 12: 123. 1908, *Muhlenbergia: A Journal of Botany* 5: 120. 1909, *Botanischer Jahresbericht* 37: 128. 1911, *Botanical Gazette* 56(6): 470. 1913, Charles Vancouver Piper (1867-1926), *Flora of the Northwest Coast*, including the area west of the summit of the Cascade Mountains, from the forty-ninth parallel south to the Calapooia Mountains on the south border of Lane County, Oregon. By Charles V. Piper ... and R. Kent Beattie. Lancaster, Pa. 1915, *Rhodora* 45(534): 242. 1943, Melissa K. McCormick, Katherine L. Gross and Robin A. Smith, "Danthonia spicata (Poaceae) and Atkinsonella hypoxylon (Balansiae): environmental dependence of a symbiosis." *Am. J. Bot.* 88: 903-909. 2001.

in English: poverty oat grass, poverty danthonia, poverty grass, curly grass

D. thomsonii Buchanan (*Notodanthonia thomsonii* (Buchanan) Zotov; *Rytidosperma thomsonii* (Buchanan) Connor & Edgar; *Triodia thomsonii* (Buchanan) Petrie)

New Zealand. See *The Indigenous Grasses of New Zealand* Wellington 1878-1880, *Manual of the Indigenous Grasses of New Zealand* Wellington 1880 and *Transactions and Proceedings of the New Zealand Institute* 44: 188. 1912, *New Zealand Journal of Botany* 1: 112. 1963, *New Zealand Journal of Botany* 17(3): 322. 1979.

D. unarede Raoul (*Danthonia semiannularis* var. *unarede* (Raoul) Hook.f.; *Notodanthonia unarede* (Raoul) Zotov; *Rytidosperma unarede* (Raoul) Connor & Edgar; *Thonandria unarede* (Raoul) H.P. Linder)

New Zealand, Lord Howe Island. Rare species, useful for erosion control, see *Annales des Sciences Naturelles; Botanique, sér. 3* 2: 116. 1844, *Flora Novae-Zelandiae* 1: 304. 1853 and *New Zealand Journal of Botany* 1: 122. 1963, *New Zealand Journal of Botany* 17(3): 328. 1979, *Telopea* 6(4): 613. 1996.

D. unispicata (Thurber) Munro ex Macoun (*Danthonia californica* var. *unispicata* Thurb.; *Danthonia unispicata* Thurb.; *Danthonia unispicata* Munro ex Thurb.; *Danthonia unispicata* Munro ex Vasey; *Merathrepta unispicata* (Thurb.) Piper; *Pentameris unispicata* (Thurb.) A. Nelson & J.F. Macbr.)

U.S., California. Perennial bunchgrass, densely tufted, root system shallow and fibrous, old sheaths persist at the base of the plants, leaf blades flat to inrolled, generally straight basal leaves, succulent basal herbage, no auricles, sheaths open and hairy, inflorescence a panicle, small and narrow flower head, first glume slightly shorter than the second, lemmas smooth on the back with hairs along the margin, flattened awn, lemmas with two prominent teeth at the tip, growing on rocky soils, on dry to moist sites, prairies, poorly drained soils, slopes and ridges, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 1863: 78. 1863, *Geological Survey of California, Botany* 2: 294. 1880, *A Descriptive Catalogue of the Grasses of the United States* 59. 1885, *Catalogue of Canadian Plants* 2(4): 215. 1888 and *Contributions from the United States National Herbarium* 11: 123. 1906, *Botanical Gazette* 56(6): 470. 1913.

in English: one-spike oat grass, onespikes danthonia, onside oatgrass

D. virescens E. Desv. (*Danthonia picta* var. *patagonica* Sp.; *Danthonia werdermannii* Pilg.; *Notodanthonia virescens* (E. Desv.) Veldkamp; *Notodanthonia virescens* var. *patagonica* (Sp.) Veldkamp; *Rytidosperma virescens* (E. Desv.) Nicora; *Rytidosperma virescens* var. *patagonicum* (Sp.) Nicora) (for the German (b. Berlin) botanist Erich Werdermann, 1892-1959 (Bremen), specialist of Cactaceae and fungi, plant geographer, traveler (Latin America, South Africa, Namibia, Chile, Bolivia, Brazil, Mexico), explorer, plant collector, anatomist, professor of botany, plant physiologist; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 477. 1965; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 374. Cape Town 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 431. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 798-799. Philadelphia 1964; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

South America, Argentina, Chile. See *Flora Chilena* 6: 363. 1854 and *Anales del Museo Nacional de Buenos Aires* 7: 193. 1902, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 758. 1929, *Darwiniana* 18: 93, f. 4A-E. 1973, *Taxon* 29: 297. 1980.

Danthoniastrum (Holub) Holub = *Metcalfia* Conert

Resembling *Danthonia*.

About two species, Balkan Peninsula, Caucasus. Stipoideae, Stipeae, or Pooideae, Poodae, Aveneae, or Pooideae, Stipeae, Duthieinae, perennial, herbaceous, tufted, slender, auricles absent, narrow leaf blades linear, ligule a membrane-like fringed or unfringed, leaves pungent, plants bisexual, inflorescence racemose or paniculate, narrow panicle, spikelets laterally flattened, 2 glumes unequal or subequal, palea present, 3 free and membranous ciliate lodicules, 3 stamens, ovary hairy, 2 or 3 plumose stigmas, taxonomic confusion, see *Willdenowia* 2(3): 417-419. 1960, *Botanical Magazine* 77(909): 69-72. 1964, *Willdenowia* 4: 399. 1968, *Folia Geobotanica et Phytotaxonomica* 5: 435. 1970, B.R. Baum, "The genus *Danthoniastrum*, about its circumscription, past and present status, and some taxonomic principles." *Österr. Bot. Z.* 122: 51-77. 1973, *Willdenowia* 12: 47-49, 287-289. 1982, *Kew Bulletin* 40(4): 727-729. 1984[1985], *Contributions from the United States National Herbarium* 48: 450. 2003.

Species

D. brevidentatum H. Scholz

Europe. See *Willdenowia* 12(1): 47. 1982.

D. compactum (Boiss. & Heldr.) Holub (*Arrhenatherum compactum* (Boiss. & Heldr.) Potztl; *Avena compacta* Boiss. & Heldr.; *Avenastrum compactum* (Boiss. & Heldr.) Halácsy; *Danthonia compacta* (Boiss. & Heldr.) Grossh.; *Danthonia compacta* Boiss. & Heldr.; *Helictotrichon compactum* (Boiss. & Heldr.) Henrard; *Metcalfia compacta* (Boiss. & Heldr.) Clayton)

Asia, Greece. See *Diagnoses plantarum orientalium novarum ser. 1*, 1(7): 122-123. 1846 and *Conspectus Florae Graecae* 3: 370. 1904, *Flora Kavkaza* (edition 2) 1: 217. 1939, *Blumea* 3(3): 430. 1940, *Willdenowia* 4: 399. 1968, *Folia Geobotanica et Phytotaxonomica* 5: 436. 1970, *Kew Bulletin* 40(4): 727-729. 1984[1985], *Fitologija* 39: 72-77. 1991.

Danthonidium C.E. Hubb.

Resembling *Danthonia*.

One species, India. Arundinoideae, Danthonieae, annual, tufted, wiry, herbaceous, unbranched, auricles absent, ligule fringed, leaves linear, plants bisexual, inflorescence shortly racemose, many-sided raceme, spikelets 1-flowered, 2 glumes unequal or subequal, lemmas convolute and cylindrical, palea small, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, open grasslands, crevices, rocky places, similar to *Rytidosperma* and *Anisopogon*, see *Hooker's Icones Plantarum* 34: t. 3331. 1937.

Species

D. gammiei (Bhide) C.E. Hubbard

Kerala, Maharashtra.

Danthoniopsis Stapf = *Gazachloa* J.B.

Phipps, *Jacquesfelixia* J.B. Phipps, *Petrina* J.B.

Phipps, *Pleioneura* (C.E. Hubb.) J.B. Phipps,

Ratraya J.B. Phipps, *Xerodanthia* J.B. Phipps

Resembling a grass genus, *Danthonia*, Greek *opsis* “resemblance, resembling.”

About 20 species, central and south Africa, Arabia, Sudan to Pakistan, Sierra Leone. Panicoideae, Panicoideae, Arundinelleae, perennial or rarely annual, variable, herbaceous, unarmed, tufted to densely tufted, long stem bases, auricles absent, ligule a fringe of hairs, leaves flat, plants bisexual, open or contracted inflorescence paniculate, spikelets paired or usually in groups of 3, proximal florets male, short blunt callus, 2 nearly glabrous unequal glumes, lemmas nerved, lower lemma 5- to 9-nerved, upper lemma with 2 shortly awned lobes, the main awn bent about the middle with a spirally twisted column, palea keels winged, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, among rocks, savannah woodland, river edges in flowing water, desert margins, linked to *Loudetia*, type *Danthoniopsis gossweileri* Stapf, see *Synopsis Plantarum Glumacearum* 1: 238. 1854 and *Hooker's Icones Plantarum* 31: t. 3075. 1916, *Bulletin of Miscellaneous Information Kew* 1936(5): 320, 321, 324. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 357. 1951, *Kirkia* 4: 100-101, 115-118, t. 10, f. 1. 1964, *Kirkia* 5(2): 230-231, 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Boletim da Sociedade Broteriana, ser. 2* 46: 418-419, 421-423. 1972 [1973], *Taxon* 27(2-3): 301. 1978, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, “Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B.” *Am. J. Bot.* 87: 96-107. 2000, Melvin R. Duvall, Jeffrey D. Noll and Alexandra H. Minn, “Phylogenetics of Paniceae (Poaceae).” *Am. J. Bot.* 88: 1988-1992. 2001, Liliana M. Giussani, J. Hugo Cota-Sánchez, Fernando O. Zuloaga and Elizabeth A. Kellogg, “A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis.” *Am. J. Bot.* 88: 1993-2012. 2001, Sandra S. Aliscioni, Liliana M. Giussani, Fernando O. Zuloaga and Elizabeth A. Kellogg, “A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae.” *Am. J. Bot.* 90: 796-821. 2003, Rowan F. Sage, “The evolution of C4 photosynthesis.” *New Phytologist* 161(2): 341-370. Feb 2004.

Species

D. barbata (Nees) C.E. Hubb. (*Loudetia barbata* (Nees) A. Br. ex Steudel; *Sorghum barbatum* Steud. & Hochst. ex Steud.; *Trichopteryx barbata* (Nees) Hackel ex Durand & Schinz; *Trichopteryx somalensis* Engl.; *Tristachya barbata* Nees; *Tristachya bricchettiana* Chiov.; *Tristachya somalensis* Franch.; *Xerodanthia barbata* (Nees) J.B. Phipps)

Sudan, southern Arabia, Ethiopia. Perennial, tufted to densely tufted, erect, tough, knotty base, nodes bearded to villous, flat leaves distichous and pungent, panicle contracted, spikelets usually in triplets, glumes glabrous, upper lemma with awned lobes, awns falcate, found in stony areas, hillsides, lava plains, rocky places, see *Florae Africae Australioris Illustrationes Monographicae* 269. 1841, *Nomenclator Botanicus. Editio secunda* 2: 612. 1841, *Synopsis Plantarum Glumacearum* 1: 238. 1854, A.R. Franchet (1834-1900), *Sertulum Somalense*. Paris 1882, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 130. 1892, *Conspectus Florae Africae* 5: 846. 1892 and *Bulletin of Miscellaneous Information Kew* 1934: 435. 1934, *Kirkia* 5(2): 231. 1966, *Flora of Ethiopia and Eritrea* 7: 285-286. 1995.

in East Africa: dramogale, dramoh ghale

D. betsileensis (A. Camus) A. Camus (*Isalus betsileensis* (A. Camus) J.B. Phipps; *Tristachya betsileensis* A. Camus)

Africa. See *Bulletin de la Société Botanique de France* 104: 160. 1957, *Bulletin de la Société Botanique de France* 105: 246. 1958, *Kirkia* 5(2): 233. 1966.

D. catangensis (Chiov.) Kiwak & Duvign. (*Danthoniopsis gossweileri* var. *catangensis* Chiov.)

Africa. See *Bulletin de la Société Botanique de Belgique* 85: 73. 1952.

D. chevalieri A. Camus & C.E. Hubbard (*Arundinella chevalieri* (A. Camus & C.E. Hubb.) Roberty)

Tropical Africa. Perennial, tufted, medicinal use, grazed, thatching grass, savannah, see *Revue de Botanique Appliquée et d'Agriculture Tropicale* 14: 780. 1934, *Petite Flore de l'Ouest-Africain* 392. 1954, *Bulletin de l'Institut Française d'Afrique Noire* 17: 55. 1955.

in Senegal: fuadobi, tesegbe na, wandeusse

D. chimanimaniensis (J.B. Phipps) Clayton (*Gazachloa chimanimaniensis* J.B. Phipps)

South Africa, southern Rhodesia, Chimanimani Mountains. Perennial, tufted, purple spikelets, lower lemma 5-nerved, lobes aristulate, growing on rocky areas, in the middle of dry stream beds, see *Kirkia* 4: 116. 1964, *Kew Bulletin* 21(1): 123. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

D. dinteri (Pilg.) C.E. Hubb. (*Jacquesfelixia dinteri* (Pilg.) J.B. Phipps; *Trichopteryx dinteri* Pilg.) (after the German Professor Moritz Kurt Dinter, 1868-1945 (Saxony), botanist and plant collector in southwest Africa, explorer in

Namibia, author of "Noterelle botaniche dell'Africa meridionale." *Malpighia*. 11: 339-343. 1897, *Deutsch-Südwest-Afrika. Flora*. Leipzig (T.O. Weigel) 1909 and *Neue und wenig bekannte Pflanzen Deutsch-Südwest-Afrikas*. 1914; see Albert F. Calvert, *South-West Africa, during the German Occupation 1894-1914*. London 1915; Alwin Berger (1871-1931), *Florula Mortolensis*. An enumeration of the Plants growing wild at La Mortola. [La Mortola 1905], *Hortus Mortolensis ... Alphabetical Catalogue of Plants growing in the Garden of the late Sir T. Hanbury ... at La Mortola ... Italy*. London 1912; Luigi Viacava, *Lodovico Winter, giardiniere in Bordighera*. Bordighera 1997; Nino Lamboglia, "La villa Hanbury nel passato e nell'avvenire." in *Rivista Ingauna e Intemelia*. Anno XV, no. 1-4. 1960; M. Muratorio and G. Kiernan, *Thomas Hanbury e il suo giardino*. Arma di Taggia 1992; F. Mazzino, *Un Paradiso Terrestre. I Giardini Hanbury alla Mortola*. Genova 1994; Paola Gastaldo & Paola Profumo, *I Giardini Botanici Hanbury*. Torino 1995; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 703. Stuttgart 1993; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 120. 1989; J.H. Barnhart, *Biographical notes upon botanists*. 1: 457. 1965; Alain Campbell White & Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937; Adolar Gottlieb Julius Hans Herre (1895-1979), *The Genera of the Mesembryanthemaceae, ... illustrations by Harry Bolus, Beatrice Carter, Mary Page and Maisie Walgate*. Cape Town 1971; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 103. 1972; Gilbert Westacott Reynolds, *The Aloes of South Africa*. 211. Rotterdam 1982; Gordon Douglas Rowley, *A History of Succulent Plants*. California 1997; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981)

South Africa. Annual, tufted, robust, thick and woody, erect, unbranched, leaf blade expanded and glabrous, ligule a fringe of hairs, leaf sheaths of basal leaves keeled, inflorescence an open panicle, purple-tinged spikelets in lax triads, awn slightly bent, upper lemma hairy, pasture, of little agricultural value, grazed by animals in the young stages, useful for erosion control, common on rocky soil, on mountains, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 414. 1914, *Bulletin of Miscellaneous Information Kew* 1934: 436. 1934, *Kirkia* 4: 115. 1964.

in South Africa: berghawer, rohrhafer

D. gossweileri Stapf (*Danthoniopsis viridis* (Rendle) C.E. Hubb.; *Trichopteryx viridis* Rendle)

Africa, Angola. See *Hooker's Icones Plantarum* 31: t. 3075. 1916.

D. lignosa C.E. Hubb. (*Petrina lignosa* (C.E. Hubb.) J.B. Phipps)

South Africa. Perennial, tufted, robust, woody, inflorescence dense, spikelets in pairs, upper lemma nerved, see *Kew Bulletin* 1949: 351. 1949, *Kirkia* 4: 118. 1964.

D. occidentalis Jacq.-Fél.

Tropics. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 424. 1950.

D. parva (J.B. Phipps) Clayton (*Petrina parva* J.B. Phipps)

South Africa, Transvaal. Perennial, tufted, delicate, spikelets paired, upper glume 5-nerved, lower lemma 3-nerved, see *Kirkia* 4: 118. 1964, *Kew Bulletin* 21(1): 123. 1967.

D. petiolata (J.B. Phipps) Clayton (*Pleioneura petiolata* (J.B. Phipps) J.B. Phipps; *Ratraya petiolata* J.B. Phipps)

Zimbabwe, southern Rhodesia. False petiole, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 357. 1951, *Kirkia* 4: 101, t. 10, f. 1. 1964, *Kew Bulletin* 21(1): 123. 1967, *Boletim da Sociedade Broteriana, ser. 2* 46: 421. 1972 [1973].

D. pruinosa C.E. Hubb. (*Petrina pruinosa* (C.E. Hubb.) J.B. Phipps)

South Africa. Perennial, tufted, brittle, waxy bloom below the nodes, woody rhizomes, upper glume 3-nerved, lower lemma 3-nerved, lower lemma hairy, useful for erosion control, see *Bulletin of Miscellaneous Information Kew* 1934: 436. 1934, *Kirkia* 4: 118. 1964.

in English: rock powder grass

D. ramosa (Stapf) Clayton (*Loudetia anomala* C.E. Hubb. & Schweick.; *Loudetia ramosa* (Stapf) C.E. Hubb.; *Pleioneura anomala* (C.E. Hubb. & Schweick.) J.B. Phipps; *Ratraya anomala* (C.E. Hubb. & Schweick.) Butzin; *Trichopteryx ramosa* Stapf)

Southwest Africa. Perennial, tufted, low, wiry, shrubby, profusely branched, obliquely growing rhizomes with swollen nodes, leaf blade expanded, ligule a fringe of short hairs, leaf sheaths surrounding the culm at the base, purplish inflorescence paniculate, spikelets solitary or paired, two flowers, lower flower male or sterile, upper flower bisexual and long awned, lower lemma glabrous, upper lemma hairy, on dolomitic soil, among rocks, between stones, mountains, on the slopes, see *Bulletin of Miscellaneous Information Kew* 1897: 298. 1897 and 1936(5): 321, 324. 1936, *Kew Bulletin* 21(1): 123. 1967, *Taxon* 27(2-3): 301. 1978.

in South Africa: kliphawer, felshafer

D. scopulorum (J.B. Phipps) J.B. Phipps (*Gazachloa scopulorum* J.B. Phipps) (Latin *scopulus*, *i* "a rock, cliff," Greek *skopelos* "peak, promontory," Latin *scopulae, arum* "a little broom," *scopula* "a broom-twig")

South Africa. Perennial, tufted, leaves linear to filiform, spikelets in triads, see *Kirkia* 5(2): 229. 1966.

Danthorhiza Tenore = *Avenula* (Dumort.) Dumort., *Helictotrichon* Besser, *Helictotrichon* Besser ex Schult. & Schult.f.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see *Histoire des Plantes de Dauphiné* 142, t. 4. 1787, *Observations sur les Graminées de la Flore Belgique* 122. 1824, Michele Tenore (1780-1861), *Flora Napolitana* Napoli 1811[-1838], *London Journal of Botany* 2: 420. 1843, *Synopsis Plantarum Glumacearum* 1: 328. 1854, *Bulletin de la Société Botanique de Belgique* 7(1): 68. 1868 and Jason Richard Swallen (1903-1991), "The grass genus *Amphibromus*." *Amer. J. Bot.* 18: 411-415. 1931, *Feddes Repertorium* 45: 7. 1938, *N. Amer. Fl.* 17: 568. 1939, S.W.L. Jacobs & L. Lapinuro, "The Australian species of *Amphibromus* (Poaceae)." in *Telopea* 2: 715-729. 1986, *A Key to Australian Grasses* 1-150. 1990, *Contributions from the United States National Herbarium* 48: 108-109, 139-140. 2003.

x *Danthosieglingia* Domin

Danthonia x *Sieglingia*.

See *Preslia* 13-15: 39. 1935, *Genera Graminum* 374. 1986.

Dasiola Raf. = *Vulpia* Gmelin

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, type *Dasiola elliptea* Raf., see *Flora Badensis Alsatica* 1: 8. 1805, *Neogenyton* 4. 1825, *Prodromus Florae Hispanicae* 1: 91. 1861 and *Rhodora* 47(556): 106. 1945, *Flora Mesoamericana* 6: 228. 1994, *Bothalia* 27: 75-82. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Bothalia* 29(2): 335-341. 1999, *Systematic Botany* 27(2): 241-251. 2002, *Contributions from the United States National Herbarium* 48: 244-245, 690-694. 2003.

***Dasyochloa* Willd. ex Rydb.** = *Dasyochloa* Rydberg, *Dasyochloa* Willd. ex Steud., *Erioneuron* Nash

From the Greek *dasy* "shaggy, thick, hairy, rough" and *chloe*, *chloa* "grass, young grass."

One species, New World. Chloridoideae, Cynodonteae, Munroinae, or Eragrostideae, perennial, wiry, erect or decumbent, ascending, caespitose, stoloniferous, leaves mostly basal, sheaths ciliate, ligule a line of hairs, leaf blades linear often curved and pungent, plants bisexual, white-woolly inflorescence a raceme or a panicle partially included in upper sheath, primary branches appressed to main axis, disarticulation above glumes, spikelets solitary laterally compressed, 4-10 florets per spikelet, 2 glumes more or less equal, second glume awned, lemma lobed or

cleft, palea hairy, 3 stamens, ovary glabrous, 2 white stigmas, widespread in creosote-tarbrush scrub, open habitats, rocky places, slopes, closely related to *Munroa* and *Erioneuron*, type *Dasyochloa pulchella* (Kunth) Willd. ex Rydb., see *Systema Vegetabilium* 2: 34, 599. 1817, *Nomenclator Botanicus. Editio secunda* 1: 484. 1840 and *Flora of the Southeastern United States* ... 143, 1327. 1903, *Agricultural Experiment Station of the Agricultural College of Colorado. Bulletin* 100: 18, 37. 1906 (also *Flora of Colorado*, in *Bulletin of the Colorado State University Agricultural Experiment Station* 100: 1-447. 1906), *Contributions from the United States National Herbarium* 17: 181-189. 1913, *Bot. Jahrb.* 76: 281-384. 1954, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 36. 1956, *American Journal of Botany* 48(7): 565-573. 1961, *Kurtziana* 10: 51-67. 1977, *Dominguezia* 2: 1-17. 1981, *Kew Bulletin* 37: 133-162. 1982, *Lilloa* 36: 131-138. 1983, *Sida* 14: 531-549. 1991, *American Journal of Botany* 81: 622-629. 1994, *Sida* 16(3): 413-426. 1995 [Anatomical study of *Erioneuron* and *Dasyochloa* (Poaceae: Chloridoideae: Eragrostideae) in North America], *Sida* 17(4): 645-666. 1997 [A revision of *Erioneuron* and *Dasyochloa* (Poaceae: Eragrostideae)], *Smithsonian Contr. Bot.* 87: 27. 1997, *Contributions from the United States National Herbarium* 41: 65-66, 115-116. 2001.

Species

D. pulchella (Kunth) Willd. ex Rydberg (*Dasyochloa pulchella* (Kunth) Rydberg)

Central Mexico, southwestern U.S. A desert grass, see *Nova Genera et Species Plantarum* 1: 126[folio], 1: 155-156[quarto], t. 47. 1816, *Systema Vegetabilium, editio decima sexta* 1: 332. 1825, *Révision des Graminées* 1: 108. 1829, *Nomenclator Botanicus. Editio secunda* 1: 484. 1840, *Pacific Railroad Reports* 4: 156. 1857, *Revisio Generum Plantarum* 2: 789. 1891 and *Fl. Colorado* 18, 37. 1906, *A Flora of California* 1: 141. 1912, *American Journal of Botany* 48(7): 572. 1961, *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Flora Novo-Galiciana* 14: 1-436. 1983, *Smithsonian Contr. Bot.* 87: 27. 1997, *Sida* 17(4): 645-666. 1997.

in Mexico: zacate borreguero

***Dasypoa* Pilger** = *Poa* L.

From the Greek *dasy* "shaggy, thick, hairy, rough" and *poa* "grass, pasture grass."

One-three species, Peru, Guatemala, Mexico. Pooideae, Poodae, Aveneae, or Pooideae, Poodae, Poeae, or Pooideae, Poeae, Poinae, annual or perennial, unarmed, herbaceous, caespitose, auricles absent, leaf blades linear, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, spikelets flattened, hairy callus, 2 glumes more

or less equal or subequal, upper glume saccate, palea present, 2 membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, often referred to *Poa*, type *Dasypoa tenuis* Pilger, see *Species Plantarum* 1: 67-70. 1753, *Encyclopédie Méthodique, Botanique* 2: 462. 1788, *Flora Antarctica* 397. 1847, *Synopsis Plantarum Glumacearum* 1: 426. 1854, *Linnaea* 30(1): 8. 1859, *Anales de la Universidad de Chile* 94: 164. 1896, *Revista de la facultad de Agronomía; Universidad Nacional de La Plata* 3: 628. 1897, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 716-717. 1898 and *Contr. U.S. Natl. Herb.* 17(3): 374. 1913, *Anales de Sociedad Científica Argentina* 86: 238. 1918, *Novon* 8(2): 187-202. 1998, *Contributions from the United States National Herbarium* 48: 245, 505-580. 2003.

Species

D. tenuis Pilger (*Poa anfamensis* Negritto & Anton; *Poa conglomerata* Rupr. ex Peyr.; *Poa conglomerata* Rupr.; *Poa dactyliformis* Steud.; *Poa maullinica* Phil.; *Poa micranthera* Hack.; *Poa scaberula* Hook.f.) (Chile, Maullin)

Argentina, Chile, Peru, Mexico. Tufted, inflorescence erect, green and purplish florets, lower glume 1-nerved, upper glume 3-nerved, moist places, riverbanks, flats, along streams, see *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 235. 1842, *Flora Antarctica* 2: 378. 1846, *Synopsis Plantarum Glumacearum* 1: 426. 1854, *Linnaea* 30(1): 8. 1859, *Anales de la Universidad de Chile* 94: 164. 1896, *Revista de la facultad de Agronomía; Universidad Nacional de La Plata* 3: 628. 1897, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 716-717. 1898 and *Anales del Museo Nacional de Buenos Aires* 21: 154. 1911, *Contr. U.S. Natl. Herb.* 17(3): 374. 1913, *Anales de Sociedad Científica Argentina* 86: 238. 1918, *Darwiniana* 35(1-4): 159-161, f. 1. 1998.

Dasypyrum (Cosson & Durieu) T. Durand
= *Dasypyrum* (Cosson & Durieu) Maire,
Haynaldia Schur, *Pseudosecale* (Godron)
Degen, *Secalidium* Schur

From the Greek *dasy* "thick" and *pyros* "grain, wheat."

About 2-5 species, Mediterranean region, southeast Europe, Turkey, North Africa. Pooideae, Triticodae, Triticeae, or Pooideae, Triticeae, Triticinae, annual or perennial, herbaceous, auricles present, leaf blades linear, ligule an unfringed membrane, plants bisexual, dense inflorescence spicate, raceme narrowly oblong, single spikelets, 2- to 4-flowered, the 2 lowest florets bisexual, 2 hairy glumes more or less equal or subequal and tapering into the awns, glumes 2-keeled and 3- to 4-nerved, lemmas keeled and awned, palea present, 2 free and membranous lodicules, 3 stamens,

ovary hairy, 2 stigmas, stony slopes, intergeneric hybrids with *Aegilops*, type *Dasypyrum villosum* (L.) P. Candargy, see *Species Plantarum* 1: 84-87. 1753, *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770, *Index Sem. Horto Bot. Berol.* 1846: 13. 1846, *Sert. Fl. Transsilv.* 91. 1853, *Exploration Scientifique de l'Algerie, Botanique II, Phanérogamie* 202. Paris 1855, *Flore de France ... Prospectus* 3: 599. 1856, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 16: 37. 1866, *Enumeratio Plantarum Transsylvanicae* 807. Mai-Sep 1866, *Index Generum Phanerogamorum* 504. 1888 and *Archives de Biologie Végétale Pure et Appliquée* 1: 35, 62. 1901, *Flora Velebitica* 1: 574-575. 1936, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33: 101. 1942, *Fl. Afrique Nord* 3: 333. 1955, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 120. 1971[1972], *Hereditas; genetiskt arkiv.* 114: 237-244. 1991, *Nordic Journal of Botany* 11: 135-142. 1991, *Acta Phytotaxonomica Sinica* 37(2): 125-130. 1999, *Contributions from the United States National Herbarium* 48: 245, 382, 590, 610. 2003, Roberta J. Mason-Gamer, "The β -amylase genes of grasses and a phylogenetic analysis of the Triticeae (Poaceae)." *Am. J. Bot.* 92: 1045-1058. 2005.

Species

D. breviaristatum (H. Lindb.) Fred. (*Haynaldia breviaristata* H. Lindb.; *Triticum breviaristatum* (H. Lindb.) H. Lindb.)

Europe. See *Acta societatis scientiarum fennica. Series B. Opera biologica* 1: 17. 1932, *Nordic Journal of Botany* 11(2): 140. 1991.

D. hordeaceum (Coss. & Durieu) P. Candargy (*Dasypyrum hordeaceum* (Coss. & Durieu) Maire, nom. illeg., non *Dasypyrum hordeaceum* (Coss. & Durieu) P. Candargy; *Triticum hordeaceum* Coss. & Durieu)

North Africa.

D. villosum (L.) P. Candargy (*Agropyron villosum* (L.) Link; *Dasypyrum villosum* (M. Bieb.) Maire; *Pseudosecale villosum* (L.) Degen; *Secale villosum* L.; *Triticum villosum* (L.) M. Bieb.; *Triticum villosum* (L.) F. Herm., nom. illeg., non *Triticum villosum* (L.) M. Bieb.)

Crete. See *Flora Taurico-Caucasica* 3: 94. 1819, *Hortus Regius Botanicus Berolinensis* 1: 31. 1827 and *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 38. 1936, *Taxon* 49(2): 257. 2000.

Davidsea Soderstrom & Ellis =
Schizostachyum Nees

Named for the botanist Gerrit Davidse, agrostologist, Missouri Botanical Garden.

One species, Sri Lanka. Bambusoideae, Bambusodae, Bambuseae, Bambusinae, or Bambusoideae, Bambusodae, Bambuseae, Melocanninae, perennial, erect and arching, branched, unarmed, uniaespitose, sympodial, leafy, cylindrical, woody, persistent, densely clumped, culm sheaths deciduous, rhizomes pachymorph shortly necked, plants bisexual, inflorescence determinate, 1 glume per spikelet, upper glume 11- to 15-nerved, 2 bracts, lemmas convolute, palea 2-keeled, 3 free and membranous ciliate lodicules, 6 stamens, yellow anthers, ovary glabrous, 3 stigmas shortly plumose, used for making baskets, type *Davidsea attenuata* (Thwaites) Soderstr. & R.P. Ellis, see *Enum. Pl. Zeyl.* 375. 1864, *Trans. Linn. Soc. London* 26: 143-144. 1868 and *Handb. Fl. Ceylon* 5: 317. 1900, *Lingnan Science Journal* 14: 567-602. 1935, *Blumea* 2: 86-97. 1936, *Fieldiana, Botany* 24(2): 38-331. 1955, *Grasses of Ceylon* 25. 1956, *Kew Bulletin* 38(2): 321-331. 1983, *Grass Systematics and Evolution* 225-238. 1987, *Smithsonian Contrib. Bot.* 72: 59-64, f. 38-41. 1988, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 272-283. Calcutta 1989, *Plant Resources of South-East Asia (PROSEA)* (Pl Res SEAs) vol. 7: 130-145, 153-154. 1995 [Bamboos], *Contributions from the United States National Herbarium* 39: 112. 2000.

Species

D. attenuata (Thwaites) Soderstr. & Ellis (*Bambusa attenuata* Thwaites; *Teinostachyum attenuatum* (Thw.) Munro, also spelled *attenuata*)

Sri Lanka. Uniaespitose, tough, hard, erect, strongly arching, rhizomes sympodial, glume many-nerved

Davyella Hackel = *Neostapfia* Burt Davy

For the British botanist Joseph Burt Davy, 1870-1940 (d. Birmingham), traveler, farmer, 1903 Fellow of the Linnean Society, agrostologist, student of the flora of California and author of *Check-Lists of the Forest Trees and Shrubs of the British Empire*. Oxford 1935, *A Manual of the Flowering Plants and Ferns of the Transvaal with Swaziland, South Africa*. London (Longmans, Green & Co.) 1926-1932, "The vernacular and botanical names of some South African plants." *Transv. Agric. J.* 2: 298-313. 1904, and *The Classification of Tropical Woody Vegetation-Types*. Oxford 1935; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 122. London 1994; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement III*. 271-274. 1995; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; Alain Campbell White & Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937; J.H. Barnhart, *Biographical notes upon botanists*. 1: 427. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964.

Chloridoideae, Orcuttieae, or Chloridoideae, Cynodonteae, Orcuttiinae, see *Reise um die Erde* 2: 14. 1834, *Bulletin de l'Herbier Boissier* 5: 947. 1897, *Erythea, a Journal of Botany, West American and General*. 6(11): 109. 1898, *Erythea* 7: 43. 1899, *Österreichische Botanische Zeitschrift* 49: 134. 1899 and B. Crampton, "The grass genera *Orcuttia* and *Neostapfia*: a study in habitat and morphological specialization." *Madroño* 15: 97-110. 1959, J.R. Reeder, "The tribe Orcuttieae and the subtribes of Pappophoreae (Gramineae)." *Madroño* 18: 20-28. 1965, J.R. Reeder, "Systematics of the tribe Orcuttieae (Gramineae) and the description of a new segregate genus, *Tuctoria*." *American Journal of Botany* 69(7): 1082-1095. 1982, *Kew Bulletin* 40: 737-744. 1985, *Contributions from the United States National Herbarium* 41: 66, 175. 2001.

Decandolia Bastard = *Agrostis* L.

Named after the Swiss botanist Augustin Pyramus de Candolle, 1778-1841, among his most valuable writings are *Plantarum historia succulentarum*. Paris 1798-1837, *Catalogus plantarum horti botanici monspeliensis*. Montpellier, Paris, Strasbourg 1813 and *Plantes rares du Jardin de Genève*. Genève, Paris 1825 [-1827]; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 306. 1965; Jacques Julien Houtton de Labillardière (1755-1834), *Novae Hollandiae plantarum specimen*. 2: 33, t. 176. 1806; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 64. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; P.E. Pilet, in *D.S.B.* 3: 43-45. 1981; Stafleu & Cowan, *Taxonomic literature*. 1: 438-452. Utrecht 1976; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997.

Pooideae, Poeae, Agrostidinae, type *Decandolia stolonifera* (L.) Bastard, see *Species Plantarum* 1: 61-63. 1753, *Essai sur la Flore du Département de Maine et Loire* 15, 28-29. 1809, *Essai d'une Nouvelle Agrostographie* 5, 146-147, t. 3, f. 2, t. 4, f. 7. 1812 and *Fl. N. Amer.* 17: 515. 1937, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89, 245. 2003.

Decaryella A. Camus

The genus was named after M. Raymond Decary, ca. 1890-1973, plant collector in Madagascar, he collected about 19,000 specimens of vascular plants, fungi and bryophytes; see Raymond Decary & Ravoanarivo, "La médication anti-rabique chez les Antandroy." in *Bull. Acad. Malg.* 9: 17. 1926; Laurence J. Dorr, *Plant Collectors in Madagascar and the Comoro Islands*. 115-116. 1997.

One species, Madagascar. Chloridoideae, Cynodonteae, annual, herbaceous, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence racemose, single loose raceme, solitary spikelets flattened, long pungent pedicel, 2 glumes coriaceous more or less equal, stiff subulate awn, lemma 1-3-nerved, palea present, open habitats, dry areas, dry bushland, type *Decaryella madagascariensis* A. Camus, see *Bulletin de la Société Botanique de France* 78: 177. 1931.

Species

D. madagascariensis A. Camus

Madagascar. Glumes 5-nerved

Decaryochloa A. Camus = *Hickelia* A. Camus

After M. Raymond Decary, ca. 1890-1973, plant collector in Madagascar.

One species, Madagascar. Bambusoideae, Bambusodae, Bambuseae, Bambusinae, Hickeliinae, perennial, persistent, branching, climber, scandent, leafy, woody, several branch complement, rhizomes pachymorph, plants bisexual, inflorescence compound, 1-3 spikelets with a spatheform sheath, 1-flowered, 2-4 glumes, lowest glumes 13-nerved and the others 21-23-nerved, lemma coriaceous and convolute, palea coriaceous and convolute, small lodicules, 6 stamens diadelphous, ovary hairy, 3 stigmas, fleshy pericarp, in forest, forest shade or sunny sites, type *Decaryochloa diadelpa* A. Camus, see *Reliquiae Haenkeanae* 1: 256. 1830 and *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 179: 479-480. 1924, *Bulletin de la Société Botanique de France* 71: 899. 1925, *Archives du Muséum d'Histoire Naturelle*, sér. 6, 12: 603. Paris 1935, *Bulletin de la Société Botanique de France* 93: 242. 1946 [1947], *Kew Bulletin* 52(3): 593-600. 1997.

Species

D. diadelpa A. Camus

Madagascar. Scandent, see *Bulletin de la Société Botanique de France* 93: 244. 1946 [1947].

Deina Alef. = *Triticum* L.

Pooideae, Triticeae, Triticinae, type *Deina polonica* (L.) Alef., see *Species Plantarum* 1: 85-87. 1753, *Species Plantarum, Editio Secunda* 127. 1762, *Oekonomisch-technische Flora Böhmens* 1: 425. 1836, *Annales des Sciences Physiques et Naturelles, d'Agriculture et de l'Industrie, Publiées par la Société Royale d'Agriculture, etc., de Lyon*. 5: 103-196, pl. 2-10. 1842 [*Descriptions et figures des céréales européennes*], *Landwirtschaftliche Flora* 335-336. 1866, *Botanisches Centralblatt* 73: 339. 1898 and A.

Prati, *Vocabolario etimologico italiano*. Torino 1951, *Feddes Repert.* 95(7-8): 497. 1984, *Taxon* 35: 144-149. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 75: 37-44. 1990, *Wageningen Agricultural University Papers* 94-7: 1-512. 1994, *Contributions from the United States National Herbarium* 48: 245, 676-684. 2003.

Demazeria Dumort.

Orth. var., referring to *Desmazeria* Dumort.

Pooideae, Poeae, Ammochloinae, see *Commentationes Botanicae* 26-27. 1822, Johann Heinrich Friedrich Link (1767-1851), *Hortus regius botanicus berolinensis*. 1: 159. Berolini [Berlin] 1827 and *Nord. J. Bot.* 1: 20. 1981, *Contributions from the United States National Herbarium* 48: 256. 2003.

Dendragrostis Nees ex B.D. Jacks. = *Chusquea* Kunth, *Dendragrostis* B.D. Jacks., *Dendragrostis* Nees

From the Greek *dendron* "a tree" and *agrostis*, *agrostidos* "weed, couch grass," an allusion to the habit of the plant.

Bambusoideae, Bambuseae, Chusqueinae, see *Synopsis Plantarum* 1: 254. 1822, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Linnaea* 9(4): 467. 1835, *Index Kewensis* 727. 1893 and *Flora Mesoamericana* 6: 202-210. 1994, *The Bamboos* 33-44. 1997 [Diversity, biogeography and evolution of *Chusquea*.], Emmet J. Judziewicz et al., *American Bamboos* 199-223. Smithsonian Institution Press, Washington and London 1999, *Contributions from the United States National Herbarium* 39: 36-52. 2000.

Dendrocalamopsis (L.C. Chia & H.L. Fung)

Keng f. = *Bambusa* Schreb., *Dendrocalamopsis* Q.H. Dai & X.L. Tao

Resembling the genus *Dendrocalamus* Nees.

About two species, tropics, Asia. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, sympodial, manifold branching, main branch thick and long, culm sheath deciduous, sheath auricles small, sheath blade erect, leaf large, pseudopanicule, 6 stamens, 3 stigmas, type *Dendrocalamopsis oldhamii* (Munro) Keng f., see *Genera Plantarum* 1: 236. 1789, *Species Plantarum, Editio quarta* 2: 245. 1799, *Linnaea* 9(4): 476-477. 1835, *Transactions of the Linnean Society of London* 26(1): 109. 1868 and *Indian Forester* 58: 7. 1932, *Lingnan University Science Bulletin* 9: 66-67. 1940, *Acta Phytotaxonomica Sinica* 18(2): 211-216. 1980, *Acta Phytotaxonomica Sinica* 20: 210. 1982, *Journal of Bamboo Research* 2(2): 11-12, 148.

1983, *Kew Bulletin, Additional Series* 13: 54-55. 1986, *Journal of Bamboo Research* 7(4): 9, 13. 1988, *Journal of South China Agricultural University* 10(2): 43, 45-46. 1989, *Bamboo Research in Asia* 1990(1): 3. 1990, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. *The Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 29-35, 54-55. 2000, *Taxon* 53(2): 527-528. 2004.

Species

D. beecheyana (Munro) Keng f. (*Arundarbor beecheyana* (Munro) Kuntze; *Bambusa beecheyana* Munro; *Bambusa beecheyana* var. *pubescens* (P.F. Li) W.C. Lin; *Dendrocalamopsis beecheyana* var. *beecheyana*; *Dendrocalamopsis beecheyana* var. *pubescens* (P.F. Li) Keng f.; *Neosinocalamus beecheyanus* (Munro) Keng f. & T.H. Wen; *Sinocalamus beecheyanus* (Munro) McClure; *Sinocalamus beecheyanus* var. *pubescens* P.F. Li) (named for the English Frederick William Beechey, 1796-1856, traveler, geographer and explorer; see Sir William J. Hooker & G.A.W. Arnott, 1799-1868, *The Botany of Captain Beechey's Voyage*; comprising an account of the Plants collected by Messrs. Lay and Collie ... during the voyage to the Pacific and Bering's Strait, performed in H.M.S. *Blossom* ... 1825-1828. London [1830-] 1841; George Tradescant Lay, 1800-1845, *The Zoology of Captain Beechey's Voyage* compiled ... by G.T.L. 1839; G.F. Lamb, *Franklin. Happy Voyager. Being the Life and Death of Sir John Franklin*. London 1956; Sir Edward Augustus Inglefield, *A Summer Search for Sir John Franklin ... With short notices ... by Dr. S. on the Meteorology and Geology*. London 1853; Sten Nadolny, *Die Entdeckung der Langsamkeit*, München 1983; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement II: Be-Bo*. 39-40. 1993; John Dunmore, *Who's Who in Pacific Navigation*. 17-20. Honolulu 1991; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 61. London 1994; J.H. Barnhart, *Biographical notes upon botanists*. 1: 152. 1965; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. 319, 327. Cambridge, Harvard University Press 1967; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 123. Berlin & Hamburg 1989; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 504. Ansbach 1852; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898.] Leipzig 1981; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Isaac Henry Burkill (1870-1965), *Chapters on the History of Botany in India*. Delhi 1965; H.R. Fletcher & W.H. Brown, *Royal Botanic Garden Edinburgh, 1670-1970*.

Edinburgh 1970; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London 1904; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. London 1918; Günther Schmid, *Chamisso als Naturforscher. Eine Bibliographie*. Leipzig 1942)

Asia, China, Guangxi, Guangdong. Tall, pruinose, massive culms with the upper portion arched and drooping, culm top bending, leathery culm-sheaths green with orange tips when fresh, leaf blades lanceolate and glabrous with a toothed margin, auricles with elongate tips and hairy margins, leaf sheath with longitudinal stripes and fine white hairs on the back, ligule with a toothed edge, spikelets purple and grouped at each node, ornamental, young shoots edible, culms used for water pipes and construction materials, see *Transactions of the Linnean Society of London* 26(1): 108. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Lingnan University Science Bulletin* 9: 67. 1940, *Sun-yatsenia* 6(3-4): 205-212, pl. 36-38. 1946, *Journal of Bamboo Research* 2(1): 12. 1983.

in English: Beechey bamboo, silk-ball bamboo

D. beecheyana (Munro) Keng f. var. ***pubescens*** (P.F. Li) Keng f. (*Bambusa beecheyana* Munro; *Bambusa beecheyana* var. *pubescens* (P.F. Li) Lin; *Sinocalamus beecheyanus* var. *pubescens* P.F. Li, also *beecheyana*; *Sinocalamus pubescens* (P.F. Li) Keng f.)

China. Top slightly bending but not drooping, basal internodes pubescent, branching at lower part of the culm

D. oldhamii (Munro) Keng f. (*Arundarbor oldhamii* (Munro) Kuntze; *Bambusa oldhamii* Munro; *Dendrocalamopsis oldhamii* (Munro) Keng f.; *Dendrocalamopsis oldhamii* f. *oldhamii*; *Leleba oldhamii* (Munro) Nakai; *Sinocalamus oldhamii* (Munro) McClure) (named for the English botanical collector Richard Oldham, 1837-1864, Kew gardener who collected in China and eastern Asia; see Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. 682-688, 1091. [Reprint of the original edition, St. Petersburg 1898.] Leipzig 1981; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. London 1969; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 526. London 1994)

Southern China, Taiwan. Erect, tall, robust, large, caespitose, young culms covered with white waxy powder, clump forming, strong culms growing in a cluster, thick-walled and soft, glabrous, dense fastigiata to semifastigiata habit, internodes glaucous when young, branching at the higher part of the culm, branches several from each node and most of branches fascicled, culm leaves deciduous, culm sheath very large and glabrous, ligule very short, sheath auricles tiny or absent, irritating hairs, leaf sheath glabrous, inflorescence a leafy panicle, spikelets narrowly

ovate and sessile in small clusters, glumes ovate and obtuse, lemmas broadly ovate and coriaceous, palea soft, 3 lanceolate lodicules, stamens exerted, hairy ovary ovoid, 3 feathery stigmas, ornamental, cultivated as an orchard wind-break, shoots soft and tasty, young shoots cooked or raw, canes used as a source of pulp, for making furniture and weaving, requires moist soil, along roadsides and riverbanks, see *Transactions of the Linnean Society of London* 26(1): 109. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Journal of Japanese Botany* 9(1): 16. 1933, *Lingnan University Science Bulletin* 9: 67. 1940, *Journal of Bamboo Research* 2(1): 12. 1983.

in English: Oldham bamboo, Oldham's bamboo

in Japan: ryoku-chiku (= green bamboo)

in Okinawa: matakku, matuku

D. oldhamii (Munro) Keng f. forma *revoluta* (W.T. Lin & J.Y. Lin) W.T. Lin (*Bambusa oldhamii* Munro f. *revoluta* W.T. Lin & J.Y. Lin)

China, Guangdong. Internodes dark green with yellow stripes, sheath glabrous, sheath ligule denticulate.

Dendrocalamus Nees = Klemachloa R.

Parker, *Neosinocalamus* Keng f.,

Patellocalamus W.T. Lin, *Sellulocalamus* W.T.

Lin, *Sinocalamus* McClure

From the Greek *dendron* "a tree" and *kalamos* "a reed, cane," referring to the shape of the stems of these huge clump-forming woody bamboos; Latin *calamus*, *i* (Plinius).

About 30-35/55 species, tropical and subtropical, Southeast Asia, Indomalayan region, India, Sri Lanka, China, Philippine Islands. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, perennial, tall, sympodial, usually erect, pluricaespitose, unarmed, arborescent, woody and persistent, densely to strongly tufted, huge clump-forming woody bamboos, culms cylindrical and thin-walled, culm tops usually drooping, densely ramified rootstock, rhizomes pachymorph, the flowering culms leafy, culms with furry wax, white waxy powder on the young culms, branched above, a dominant middle branch, branches usually borne from midculm nodes, culm nodes glabrous, culm sheaths deciduous in their entirety, sheath auricles indistinct, sheath blade often turned outside down, culm internodes solid or hollow, small to inconspicuous auricles of the culm leaves, plants bisexual, flowering iterant, inflorescence a large panicle, pseudospikelets in groups at nodes of flowering branches, spikelets with perfect florets and 1 sterile or reduced, few florets usually perfect, bracts with 1 ciliate keel, glumes 2-3 or more, lemmas sometimes with an awn point, palea of lower florets 2-keeled, lodicules absent or three, 6 stamens, ovary ovoid-obovoid and hairy above, 1-3 short-hairy stigmas, can be

propagated by cutting, weed species, used for making baskets and for paper manufacturing, construction equipment, edible shoots, important timber bamboos, growing in open disturbed forests, valleys, dry areas with a monsoon season, wet and humid tropics, type *Dendrocalamus strictus* (Roxb.) Nees, see *Linnaea* 9(4): 476-477. 1835 and *Indian Forester* 58: 7. 1932, *Lingnan University Science Bulletin* 9: 66-67. 1940, *Flora of Java* 3: 633. 1968, *Acta Phytotaxonomica Sinica* 18: 211-216. 1980, *Journal of Bamboo Research* 2: 12, 148. 1983, *Genera Graminum* 40, 41, 54-55. 1986 [*Kew Bulletin, Additional Series* 13], *Journal of Bamboo Research* 7(3): 1-19 and 7(4): 1-19. 1988, *Journal of South China Agricultural University* 10(2): 40-47. 1989 [The genus *Dendrocalamus* Nees and its neighboring two new genera from China.], *Journal of Bamboo Research* 8(1): 25-43, f. 6-10 and 8(4): 30-36. 1989, *Bamboo Research in Asia* 1990(1): 3. 1990, *Bamb. Res.* 42: 5-6. 1990, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. *The Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 54-55, 64, 79, 97, 112, 113. 2000.

Species

D. asper (Schult. & Schult.f.) Backer ex K. Heyne (*Arundarbor asper* Rumphius; *Arundarbor bitung* (J.H. Schultes) Kuntze; *Arundo aspera* (J.H. Schultes) Oken; *Bambusa aspera* Schult. & Schult.f.; *Bambusa aspera* Schult.f.; *Bambusa bitung* J.H. Schultes; *Bambusa flagellifera* Griffith ex Munro; *Bambusa macroculmis* A. & C. Rivière; *Dendrocalamus asper* (J.H. Schultes) Backer ex K. Heyne; *Dendrocalamus flagellifer* Munro; *Dendrocalamus macroculmis* (A. Rivière) Houzeau; *Dendrocalamus merrillianus* (Elmer) Elmer; *Gigantochloa aspera* (Schult. & Schult.f.) Kurz; *Gigantochloa aspera* (Schult.f.) Kurz; *Gigantochloa aspera* Kurz ex Teijsmann & Binn.; *Schizostachyum bitung* (J.H. Schultes) Steudel; *Schizostachyum loriforme* Munro; *Sinocalamus flagellifer* (Munro) Nguyen; *Sinocalamus macroculmis* (A. Rivière) Nguyen)

Southeast Asia, origin not certain. Very tall, hollow, densely tufted, sympodial, closely growing, erect, pendulous tips, young culms densely pubescent, mature culms very large and very strong and durable, thick-walled, swollen nodes, upper internodes longer than the lower, internodes at culm base very short, lowest nodes with many aerial roots, old sheaths caducous, sheath ligule narrow and wavy, sheath blade ovate-lanceolate, 5-9 leaves on each twig, pseudospikelets often in spherical dense clusters at the nodes of leafless branches, spikelets slightly laterally compressed, 4-5 florets, 1-2 glumes, lemmas fringed, palea keels fringed, no lodicules, 6 stamens, propagated by cuttings, widely cultivated in tropical Asia, naturalized, ornamental, edible young shoots, sheaths often used for making masks,

internodes used as containers for water, culms used for building material and also for lighting fire by friction, found in wastelands, on various soil types, slopes of hills, well-drained heavy soils, on sandy and rather acidic soils, can be confused with *Gigantochloa levis* (Blanco) Merrill, see *Herbarium Amboinense* 4: 11. 1743, *Syst. Veg.* 7(2): 1352-1354. 1830, *Syn. Pl. Glumac.* 1: 332. 1854, *Catalogus Plantarum in Horto Botanico Bogoriensi* 20. 1866, *Trans. Linn. Soc. London* 26: 150. 1868, *Indian Forester* 1: 219-269, 340-341. 1876, *Bull. Soc. Acclim.* sér. 3 5: 624. 1878, *Rev. Gen. Pl.* 2: 761. 1891 and *Bamb.* 2: 263. 1908, *Tropical Planting and Gardening* edition 5 166. 1949, *Economic Botany* 11: 235-243. 1957, *Gard. Bull. Singapore* 16: 100.103, f. 25. 1958, *Flora of Java* 3: 633-634. 1968, *Pl. Resources S.E. Asia* 7: 80-83. 1995.

in English: giant bolo, giant bamboo, rough giant bamboo, sweet bamboo

in Batak: buluh batung

in Indonesia: awi bitung, bambu betung, buluh batung

in Laos: hok

Malayan names: beting, betong, buloh beting, buloh betong, buloh panching, buluh beting, buluh betong, buluh betung, rebong Cina, rebung (young shoots)

in Philippines: botong, bukawe, butong

in Singapore: rebong China

in Sundanese: awi bitung

in Thailand: phai-tong

in Vietnam: manh tong

in New Guinea: kakar

D. bambusoides Hsueh & D.Z. Li (*Sellulocalamus bambusoides* (Hsueh & D.Z. Li) W.T. Lin)

China, Yunnan. Top slightly bending, thick-walled, pruinose, glabrous, basal internodes with yellow stripes, culm sheath caducous and coriaceous, sheath auricles absent, sheath blade erect, cultivated, used as timber bamboo, see *Journal of Bamboo Research* 6(2): 16, f. 4. 1987, *Journal of South China Agricultural University* 10(2): 44. 1989.

D. barbatus Hsueh & D.Z. Li

China, Yunnan. Culm top bending and drooping, internodes pruinose, sheath caducous and densely pubescent, sheath auricles wavy, sheath ligule dentate, cultivated, ornamental, timber bamboo, see *Journal of Bamboo Research* 7(4): 4, f. 1. 1988.

D. barbatus Hsueh & D.Z. Li var. *internodiiradicatus* Hsueh & D.Z. Li

China. Basal internodes rooted with aerial roots, sheath auricles not bristly, see *Journal of Bamboo Research* 7(4): 6. 1988.

D. bengkalisensis Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

D. birmanicus A. Camus (*Sinocalamus birmanicus* (A. Camus) W.T. Lin)

China, Burma/Myanmar. Culm top drooping, young internodes hairy, coriaceous culm sheath caducous, sheath auricle absent or not developed, sheath ligule denticulate, see *Bull. Mus. Nation. Hist. Nat. Paris* sér. 2 4: 1044. 1932, *Journal of Bamboo Research* 7(4): 7, f. 2. 1988.

D. brandisii (Munro) Kurz (*Arundarbor brandisii* (Munro) Kuntze; *Bambusa brandisii* Munro; *Sinocalamus brandisii* (Munro) Keng f.)

China, India, origin not known. Sympodial, strong, large to very large, tufted or loosely tufted, evergreen, erect with pendulous tips, culm top drooping, culm walls tomentose, nodes slightly swollen, aerial roots on lower half of the culm, sheath caducous, sheath ligule dentate, sheath blade ovate-lanceolate more or less erect, young shoots conical, leaves surface more or less wavy, inflorescence with bracteate heads, much-branched panicle, many small pseudospikelets, spikelet ovoid and minutely pubescent, 2-4 florets, 1-2 empty glumes, lemmas ciliate on the margins, paleas acute or 2-mucronate, 1-2 lodicules or sometimes absent, stamens exerted, ovary hairy, wild and cultivated, human food, young shoots eaten as a vegetable, cane and fiber for construction and basketry, handicrafts, found growing in the tropical forests, in moist west coast climate (in India), evergreen tropical forest, wet areas, along the rivers, well-drained loamy soil, limestone, black loam, see *Trans. Linn. Soc. London* 26: 109. 1868, *Forest Flora of British Burma* 2: 560-561. 1877, *Rev. Gen. Pl.* 2: 761. 1891, *Annals of the Royal Botanic Garden, Calcutta* 7: 90-91, plate 79. 1896 and *Pl. Resources S.E. Asia* 7: 83. 1995.

in English: velvet-leaf bamboo

in India: bulka, wanan

in Laos: hok

in Myanmar: kya-lo-wa, wabo, wa pyu, wapyu

in Thailand: bong, bong yai, maipo, maipuk, maisangmon, maisangyen, phai-bongyai, phai-sangyen, puk, sang yen, saang yen, wa khru, wa khlu, waa khlu pho, wa khlu pho, wa kluea, wakhlu, wa tong tiang

D. buar Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

D. calostachyus (Kurz) Kurz (*Bambusa calostachya* Kurz; *Sinocalamus calostachyus* (Kurz) Keng)

Upper Myanmar, China Yunnan, India. Large, tufted, thick, sheath densely pubescent, sheath ligule very short, leaves lanceolate shortly pubescent beneath, large panicle, curved spikes, spikelets clustered in heads with few small bracts at base, 2-3 glumes many-nerved and with transverse veinlets, stamens exerted, ovary hairy, fringed purple stigma, used for construction purposes and for water vessels (*chungas*), papermaking, could be confused with *Bambusa*

balcooa Roxb., see *J. Asiat. Soc. Bengal* n.s. 42, 2: 250. 1873 and *J. Nanjing Univ.* 1962(1): 34. 1962.

in Myanmar: ura, wapyu, wara, wa pyu, wabo

D. cinctus R.B. Majumd. ex Soderstr. & Ellis

Sri Lanka. Unicaespitose, erect, hard, hollow, thick-walled, culm sheaths hard and brittle, culm leaves deciduous, sympodial pachymorph rhizome, forest, see *Smithsonian Contrib. Botany* 72: 45, f. 30-32. 1988.

D. colletianus Gamble (dedicated to the British botanist Sir Henry Collett, 1836-1901 (Kew, Surrey), plant collector, 1855 Bengal Army, in 1879 a Fellow of the Linnean Society, author of *Flora simlensis*. Calcutta, Simla and London 1902; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 367. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement IV*. 269-270. Königstein 1997; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; A. White & B.L. Sloane, *The Stapelieae*. Pasadena 1937)

Myanmar. Inflorescence a large compound panicle, soft pubescent spikelets, 2-4 fertile flowers with 1 imperfect terminal flower, flowering glume blunt, see *Ann. Royal Bot. Gard. Calcutta* 7: 93, pl. 83. 1896.

D. dumosus (Ridley) Holttum (*Schizostachyum dumosum* Ridl.)

Peninsular Malaysia, Thailand. See *Gard. Bull. Sing.* 11: 296. 1947, *Gard. Bull. Sing.* 16: 96. 1958.

D. elegans (Ridl.) Holttum (*Schizostachyum elegans* Ridl.)

Peninsular Malaysia. See *Journal of the Straits Branch of the Royal Asiatic Society* 73: 146. 1916, *Gard. Bull. Sing.* 11: 296. 1947, *Gard. Bull. Sing.* 16: 95. 1958.

D. farinosus (Keng & P.C. Keng) Chia & H.L. Fung (*Lingnanian farinosa* (Keng & P.C. Keng) P.C. Keng; *Neosinocalamus farinosus* (Keng & P.C. Keng) P.C. Keng; *Sinocalamus farinosus* Keng & P.C. Keng)

India, Laos, Myanmar, China, Guangdong, Guangxi. Slender, drooping, arcuate, young culms pruinose, sheath blade long lanceolate and acuminate, cultivated, ornamental, edible shoots, culm used as construction material and for weaving, found growing on stream banks, hills, limestone foothills, see *J. Wash. Acad. Sci.* 36(3): 79. 1946, *Acta Phytotax. Sin.* 18(2): 215. 1980.

D. farinosus (Keng & P.C. Keng) Chia & H.L. Fung f. ***flavostriatus*** Yi (also spelled ***flavo-striatus***) (*Neosinocalamus farinosus* (Keng & P.C. Keng) P.C. Keng f. *flavostriatus* (Yi) Ohrnb.)

China. See *Bull. Bot. Res.* 6(4): 28. 1986.

D. fugongensis Hsueh & D.Z. Li (*Sinocalamus fugongensis* (Hsueh & D.Z. Li) W.T. Lin)

China, Fugong, Yunnan. Culm top drooping, young culms pruinose, culm sheath caducous, sheath ligule denticulate, leaves erect, edible shoots, culm used as construction material, see *Journal of Bamboo Research* 7(4): 9, f. 3. 1988, *Bamb. Res.* 42: 6. 1990.

D. giganteus Munro (*Bambusa gigantea* Wallich; *Bambusa gigantea* (Munro) Wall. ex A. & C. Rivière; *Dendrocalamus giganteus* Wall. ex Munro; *Sinocalamus giganteus* (Wall. ex Munro) A. Camus; *Sinocalamus giganteus* (Munro) A. Camus)

Southeast tropical Asia, southern Myanmar, northwestern Thailand. Densely tufted, sympodial, culms clustered, thick- or thin-walled, tall and large, young culm pruinose, very fast and rapid growth, erect with arching tips, culm top drooping, branched above, branches clustered and slender, nodes not swollen, lower nodes bearing aerial roots, culm sheaths caducous, auricles of the sheaths without bristles, culm sheaths blades reflexed or bent backwards, leaf blades acuminate or oblique-oblong to round-lanceolate, young shoots purplish, large panicle with slender curved branchlets, few to many pseudospikelets, spikelets ovate and pungent, 4-6 florets, uppermost floret sometimes imperfect, 2 or 3 glumes mucronate, thin mucronate lemmas, 6 stamens, anthers acuminate, ovary hirsute, long style hirsute, fruit oblong, flowers gregariously, the clump dies after flowering, weed species, widely cultivated in tropics, naturalized, ornamental, propagated by clump division, cane used for construction and rural housing, young shoots softly creamy and tender when cooked, a liquor from the leaves, culm sheaths used to make hats and for wrapping, found in humid tropical highlands, natural forests, tropical lowlands, on rich alluvial soils, useful for erosion control, see *Cat. Bot. Gard. Calcutta* 79. 1840, *Trans. Linn. Soc. London* 26(1): 150. 1868, *Bull. Soc. Acclim. sér. 3* 5: 685. 1878, *Fl. Br. Ind.* 7: 406. 1897 and *Grasses of Ceylon* 26. 1956, *Gard. Bull. Sing.* 16: 103-104. 1958, *Bano Biggyan Patrika* 11: 56-62. 1982, *Materials and Organisms* 22: 289-296. 1987, *Edinburgh Journal of Botany* 48: 73-80. 1991, *Cuscatlania* 1: 1-29. 1991, *Edinburgh Journal of Botany* 51: 23. 1994.

in English: bamboo, giant bamboo

in Bengali: tokla bans

in Burma: wa-bo, wabo, ban

in Cambodia: russey prey

in India: bhaloo bans, maroobob, worra

in Indonesia: bambu sembilang, buloh betong

in Japan: kyo-chiku

in Laos: po, po'

Malayan names: buloh sembilang, buloh beetong

in Nepali: rachasi bans, rachhasi bans, dhungre bans, burra bans

in Talaing: dunkaloik

in Thailand: mai-po, phai-pao, phai-pok, poh, pok, po, wa kwa, waa kwaa, waan, wan

in Vietnam: m[aj]nh t[oo]ng to

D. hait Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

D. hamiltonii Munro (*Bambusa falconeri* Munro; *Bambusa maxima* Buchanan-Hamilton; *Bambusa monogynia* Griffith, also spelled *monogyna*; *Dendrocalamus hamiltonii* Nees & Arnott ex Munro; *Dendrocalamus hamiltonii* Nees; *Dendrocalamus maximus* (Buchanan-Hamilton) Kuntze; *Sinocalamus hamiltonii* (Nees & Arnott ex Munro) Nguyen) (after the Scottish botanist Francis Hamilton (*olim* Buchanan), 1762-1829 (Leny, Scotland), M.D. Edinburgh 1783, surgeon in the East India Company (Bengal Medical Service), plant collector, explorer and naturalist, sent by Wellesley (Governor General of India) to study the lands possessed by the East India Company, 1806 Fellow of the Royal Society and in 1816 of the Linnean Society, 1814-1815 Superintendent of the Botanic Garden, Calcutta, among his many works are *A Journey from Madras through the Countries of Mysore, Canara and Malabar*. London 1807, *Genealogies of the Hindus, Extracted from Their Sacred Writings*. Edinburgh 1819 and *An Account of the Fishes Found in the River Ganges and Its Branches*. Edinburgh 1822. See *Claim of Dr. Francis Hamilton Buchanan of Spittal*. (A statement of the claim of the family of Buchanan of Spittal to be considered the chief of the name.) Edinburgh 1826; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. London 1914; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. 138-141. Paris, Leipzig 1845; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; *Memoir and Correspondence of ... Sir J.E. Smith ...* Edited by Lady Pleasance Smith. London 1832; M. Archer, *Natural History Drawings in the India Office Library*. London 1962; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965)

Himalayas, Laos, Nepal, Bhutan, Thailand, China. Caespitose, large, thin-walled or relatively thick-walled, pendulous and flexible, sometimes tall and erect, sometimes culms curved downward, long internodes, grayish white when young then green, unarmed, much branched above, profusely branched root stock, basal internodes with aerial roots, curving branchlets, sheath caducous or persistent and triangular, culm sheaths with triangular auricles and rounded ligule, leaf-sheaths with stiff white hairs, leaf blades ovate-lanceolate, inflorescence borne on a large leafless branch, at the nodes semiglobular heads of pseudospikelets, spikelets blunt or bell-shaped, usually 2 glumes, lemmas recurved and ciliate, stamens exerted and pendulous, ovary hairy, 3 stigmas plumose, flowering sporadically, employed for paper-making, wild and often

cultivated, propagated by culm or branch cuttings, impenetrable thickets of stems, new shoots edible and used for the preparation of a sour pickle (*hiyup*), leaves used as fodder, cane for weaving and basket-making, mats, for temporary constructions and for water conduits, for making the walls of huts, found in mixed forest, rich loamy soil, valleys, along streams, moist places, in moist deciduous and semi-evergreen forests, see *Notulae ad Plantas Asiaticas* 3: 63. Calcutta 1851, *Trans. Linn. Soc. London* 26: 95, 151. 1868, *Rev. Gen. Pl.* 2: 773. 1891.

in English: tama bamboo

in Bhutan: pashing

in India: banh, choya bans, fonay, kaghshi bans, kaghzi, kokua, kokwa, maggar, pao, pecha, seij, tama, wanok, yemyot pao

in Laos: hok, ko hoe

in Nepal: tama

in Thailand: hok, nuan yai, pai hok, phai hok, phai nual yai, phiao, phieo, waa klu

in Vietnam: manh tong nua

Local names: tama bans, ban bans, kumaun, tama, pagshi, pag shi, patsa, chaya, choya, lee shing, choya bans

D. hamiltonii Munro var. *edulis* Munro (*Dendrocalamus edulis* Munro)

India, Myanmar. Soft spikelets, palatable shoots, see *Trans. Linn. Soc. London* 26: 152. 1868 and *Edinb. J. Bot.* 51(1): 24. 1994.

Local names: choya bans, gulyo tama bans, gulyo tama bans, pag shi, tama bans, su, rugvi

D. hamiltonii Munro var. *hamiltonii*

India, Bhutan, Nepal. Pendulous, thin walls, internodes with long aerial roots, culm sheaths persistent, inflorescence densely globular, wild and cultivated, in deciduous forest, used for weaving, edible shoots, animal fodder, see *Trans. Linn. Soc. London* 26: 152. 1868 and *Edinb. J. Bot.* 51(1): 24. 1994.

Local names: choya bans, pag shi, tama bans, lee shing

D. hamiltonii Munro var. *undulatus* Stapleton

India, Nepal. Erect, drooping, arching, culm sheath blades wavy, see *Trans. Linn. Soc. London* 26: 152. 1868 and *Edinb. J. Bot.* 51(1): 24, f. 7. 1994.

Local names: dhungre bans

D. hirtellus Ridl. (*Bambusa klossii* Ridl.) (for the British botanist Cecil Boden Kloss, born 1877, zoologist, Director of Museums in the Straits Settlements and Federated Malay States, plant collector with Herbert Christopher Robinson (1874-1929), 1903 and 1907 Singapore Botanic Gardens, 1923-1931 Director Raffles Museum at Singapore, among his writings are *In the Andamans and Nicobars*. London 1903 and "Mount Kinabalu: A note." *Journ. Fed. Malay*

States Mus. vol. XVI. 1931, in 1928 Mount Kinabalu with J.L. Humphreys (then Governor of North Borneo) and two District Officers, R.F. Evans and G.H. Vinen)

Peninsular Malaysia, Borneo. Slender, attenuated, flexuous, with pendulous tip, whitish and waxy when young, young shoots orange to yellowish, culm sheath with white wax and light brown hairs, sheath blade spreading to reflexed, sheath auricles curled and bristly, leaves lower surface velvet-hairy, inflorescence on leafless branches, spikelets 1- to 2-floreted, culms used for basketry, found in open areas, forest fringes, disturbed forest, open ground, see *Journal of the Straits Branch of the Royal Asiatic Society* 73: 146. 1916, *Fl. Malay Peninsula* 5: 259. 1925, *Gard. Bull. Sing.* 16: 93. 1958.

in Malaysia: buloh kapur, buluh kapur

D. hookeri Munro (*Bambusa altissima* hort. ex Camus; *Bambusa hookeri* Rivière & C. Rivière; *Sinocalamus hookeri* (Munro) Nguyen)

India, Uttar Pradesh, Bhutan, Sikkim, Nepal. Large, flowering sporadically, dense furry wax on the culms, usually naked below, curving branches above, nodding to drooping, stems tufted and thin-walled, nodes with short aerial roots, branches tufted, stem-sheaths very hairy and deciduous, culm sheaths deciduous with round auricles and bristles, leaf-sheaths glabrous and without auricles, large leaves acuminate, large inflorescence paniculate, spikelets ovate or acute, 2 glumes, 6 stamens, ovary hairy, 2-3 plumose stigmas, used for construction and fencing, for making baskets and for vessels, water-buckets, animal fodder, shoots bitter, growing in moist forests, see *Trans. Linn. Soc. London* 26: 151. 1868, *Bull. Soc. Acclim. sér. 3* 5: 642. 1878 and *Edinb. J. Bot.* 51(1): 26. 1994.

in India: denga, ooei, patu, seiat, sejsai, siejong, sijong, skhenheh, skongiong, tili bans, ukotang, ussey

in Bhutan: patu, pagshi, pag shi, bhalu, bhalu bans, kalo bans

in Nepal: tili bans

D. hookeri Munro var. *parishii* (Munro) Blatter

India, Himachal Pradesh, Himalaya. Inflorescence paniculate with globose densely flowered heads, spikelets flattened, 2-3 fertile florets, 1-2 glumes ciliate and minutely pubescent, lemma of upper floret mucronate, paleas ciliate and pubescent, ovary hairy, feathery stigma, see *Trans. Linn. Soc. London* 26: 149. 1868 and *Indian For.* 55: 594. 1929, *Bamb. Res.* 42: 6. 1990.

D. inermis (Keng & P.C. Keng) Yi (*Bambusa sinospinosa* var. *inermis* Keng & P.C. Keng; *Dendrocalamus factitius* Yi)

China. Unarmed, see *Journal Washington Acad. Sci.* 36(3): 80. 1946, *Bull. Bot. Res.* 2(4): 102. 1982, *Journal of Bamboo Research* 10(1): 30, f. 2. 1991, *Journal of Bamboo Research* 12(2): 54. 1993.

D. jianshuiensis Hsueh & D.Z. Li (*Sinocalamus jianshuiensis* (Hsueh & D.Z. Li) W.T. Lin)

China, Yuanyang, Janshui, Yunnan. Culm top drooping, young culm pruinose, culm sheath caducous and coriaceous, sheath auricle not prominent, sheath ligule denticulate, used for construction and fencing, see *Journal of Bamboo Research* 7(4): 14, f. 4. 1988, *Bamb. Res.* 42: 6. 1990.

D. latiflorus Munro (*Bambusa latiflora* (Munro) Kurz; *Bambusa latiflora* Kurz; *Bambusa verticillata* Benthams; *Sinocalamus latiflorus* (Munro) McClure)

Southeast Asia, Taiwan, China, Guangdong, Vietnam, Burma. Erect and arching, pendulous tip, young culm pruinose, densely tufted, sympodial, culm wall thick, each node with several branches at a right angle to culms, lower nodes with aerial roots, coriaceous leaf sheaths, small sheath auricles, sheath ligule with denticulate margin, culm sheaths densely covered with black hairs, small and triangular sheath-blades, leaves oblong-lanceolate to elliptical arranged toward the top of branches, inflorescence a large panicle, clusters of 1-7 pseudospikelets, spikelets ovoid or ovate-oblong and laterally compressed, 6-9 florets all perfect, 3 glumes ovate-triangular, lemmas broadly ovate, palea present, lodicules none, 6 stamens exerted, apex of anthers variable, ovary ovate and hairy, a simple feathery stigma, vegetatively propagated by cuttings, seed rapidly loses its viability, edible young shoots, ornamental, cultivated, used for paper material, sheaths used for wrapping, leaves used to make hats, cane for construction and water pipes, basketry, cultivated elsewhere in Asia, culms clustered, growing in moist fertile soils, high rainfall, see *Fl. Hongk.* 434. 1861, *Transactions of the Linnean Society of London* 26(1): 152, pl. 6. 1868, *Journal of the Asiatic Society of Bengal* 42(2): 250. 1873 and *Lingnan University Science Bulletin* 9: 67. 1940, *Canopy International* 4(4): 6-7. 1978, *The Philippine Agriculturist* 71(2): 199-228. 1988, *Plant Resources of South-East Asia* (PROSEA) (Pl Res SEAs) 7: 87-90. 1995.

in English: ma bamboo, Taiwan giant bamboo, sweet bamboo, sweet giant bamboo

in China: ma chu, ma zhu

in Indonesia: bambu taiwan

in Japan: ma-chiku, machiku, mino-machiku (dark green stripes on the yellow green background of the culms), koro-machiku (with swollen lower part on each internode)

in Malay: rebung

in Myanmar: ura, wa bo, wa ni, wani, wara

in the Philippine Islands: botong, buntong, labong, machiku

in Thailand: khao khwai, mai sangkham, phai zangkum, saang kham, sang kham, wa krue

in Vietnam: m[aj]nh t[oo]ng hoa to, tre ta[uf]

D. latiflorus Munro var. ***magnus*** (Wen) Wen (*Sinocalamus latiflorus* (Munro) McClure var. *magnus* Wen)

China. Erect, not arching, puberulent branches, leaves with transverse veinlets, see *Journal of Bamboo Research* 1(1): 34. 1982, *Journal of Bamboo Research* 10(1): 23. 1991.

D. liboensis Hsueh & D.Z. Li (*Sinocalamus liboensis* Hsueh & D.Z. Li)

China, Guizhou, Libo. Erect, arching and pendulous, young culm pruinose and tomentose, culm sheath coriaceous and caducous, sheath auricles wavy, sheath ligule hairy, 3-9 leaves on each small branch or twig, see *Journal of Bamboo Research* 7(3): 19. 1988, *Journal of Bamboo Research* 8(1): 37, f. 10. 1989.

D. longifimbriatus Gamble (*Sinocalamus longifimbriatus* (Gamble) Nguyen)

Thailand, Vietnam. See *Ann. Roy. Bot. Gard. Calcutta* 7: 92, pl. 81. 1896.

in Myanmar: myinwa, wamyin, wa pyaw

D. longispathus (Kurz) Kurz (*Bambusa longispatha* Kurz; *Dendrocalamus longispathus* Kurz)

Northern Thailand, India, Myanmar, Bangladesh. Caespitose, huge, large, tufted, glaucous green when young, nodes slightly swollen and often bearing aerial roots, long papery culm-sheath, sheath blade lanceolate reflexed, sheath auricles membranaceous and bristly along the edge, sheath ligule toothed with brown bristles, inflorescence on leafless or leafy branches, large panicles, spikelets few to many-flowered, 2-3 glumes, spicate clusters of spikelets, ovary sometimes acute, stigma hairy, propagation by 1-year-old culms, ornamental, young shoots edible, used for papermaking, as a fuel, for baskets and containers of food grains, temporary constructions, furniture, mats, found along rivers and streams, fertile loam, moist hill slopes, in mixed and disturbed forest, moist areas, moist mixed forests, see *J. Asiat. Soc. Bengal* n.s. 42, 2: 250. 1873.

in India: goti, khang, ooei, ora, orah, rupai, rawnal

in Myanmar: waya, talagu, talagu wa

in Thailand: bong paa, bong pa, hok dam, lamma lok, lammalok, mai hokdam, mai sang phai, phai lammalok, ya

D. macroculmis (Rivière) J. Houz. (*Bambusa macroculmis* Rivière)

Asia. See *Herbarium Amboinense* 4: 11. 1743, *Syst. Veg.* 7: 1352-1354. 1830, *Syn. Pl. Glumac.* 1: 332. 1854, *Catalogus Plantarum in Horto Botanico Bogoriensi* 20. 1866, *Trans. Linn. Soc. London* 26: 150. 1868, *Indian Forester* 1: 221. 1876, *Bull. Soc. Acclim. sér. 3* 5: 624. 1878, *Rev. Gen. Pl.* 2: 761. 1891 and *Bamb.* 2: 263. 1908, *Gard. Bull. Singapore* 16: 100, f. 25. 1958, *Pl. Resources S.E. Asia* 7: 80. 1995.

D. membranaceus Munro (*Dendrocalamus strictus* not Nees; *Oxytenanthera lacei* Gamble)

Myanmar. Strong, culm top bending, straight to very straight, sympodial, loosely clumped, young culms pruinose, nodes ringed and prominent, basal nodes with aerial roots, branched from all nodes, culm sheath glabrous or pubescent and often longer than the internode, sheath auricles wavy and not prominent, sheath ligule dentate, sheath blade ovate-lanceolate, leaf blades lanceolate to narrowly lanceolate, leaves hispid above and hairy beneath, inflorescence of globular spinescent heads, spikelets slightly flattened and nearly glabrous, 2-3 fertile florets, 2 empty glumes, lemmas mucronate, stamens exerted, ovary hispid and glabrous, plumose stigma, can be propagated by seed and by rhizome and culm cuttings, flowers gregariously, flowering cycle unknown, raised as an ornamental plant, used for building purposes, basketry, matting, weaving, handicrafts and furniture, edible young shoots with a slight bitter taste, occurs in moist forests, deciduous forest, lowlands, monsoon forest, similar to *Dendrocalamus strictus* (Roxb.) Nees, see *Transactions of the Linnean Society of London* 26(1): 149. 1868 and *Bull. Misc. Inform. Kew* 385. 1910, *The Indian Journal of Experimental Biology* 22: 312-332. 1984, *Journal of Bamboo Research* 7(4): 2. 1988, *The Indian Forester* 114: 637-649. 1988, *Plant Resources of South-East Asia* 7: 90-92. 1995, *Kew Bulletin* 52: 238. 1997.

in English: waya bamboo, white bamboo, yellow bamboo

in China: huangzhu

in Laos: s'a:ng, hok hnhaix

in Myanmar: waya, wa pyu, wamu, wapyu, mailai law, maisang

in Thailand: lai, mai nuan, phai nuan, phai-sangdoi, phai-sangnuan, saang doi, wa mee, wa mu, waa mee, wae mee, waa tong tiang

D. membranaceus Munro f. ***fimbriligulatus*** Hsueh & D.Z. Li

China. Ligule fimbriate, culm sheath shorter than internode, see *Journal of Bamboo Research* 7(4): 4. 1988.

D. membranaceus Munro f. ***pilosus*** Hsueh & D.Z. Li

China. Internodes pilose or villous, see *Journal of Bamboo Research* 7(4): 3. 1988.

D. membranaceus Munro f. ***striatus*** Hsueh & D.Z. Li

China. Internodes with stripes, see *Journal of Bamboo Research* 7(4): 3. 1988.

D. merrillianus (Elmer) Elmer (*Dendrocalamus parviflorus* Hackel; *Gigantochloa merrilliana* Elmer)

Philippines. Used for making ropes.

in the Philippine Islands: bayog, bayugin, bukai, botong, butong, kauayan, kauayan-bayog

D. messeri Blatter

Myanmar. See *The Grasses of Burma* Calcutta 1945.

in Myanmar: wabo-e

D. mianningensis Q. Li & X. Chiang

China, Sichuan, Mianning. Culm top drooping, thin, slender, long, young culms pruinose, sheath ligule irregular, sheath blade lanceolate, clustered branching, 5-7 leaves on each twig, leaves lanceolate white pubescent beneath.

D. minor (McClure) Chia & H.L. Fung (*Sinocalamus minor* McClure)

China. Culm top bending and drooping, young culms pruinose, sheath auricles minute, sheath ligule with ciliate margin, sheath blade ovate-lanceolate or lanceolate, leaves broadly lanceolate, cultivated, used for construction purposes and for weaving, along streams and riverbanks, see *Sunyatsenia* 6(1): 47, pl. 11-12. 1941, *Acta Phytotax. Sin.* 18(2): 215. 1980.

D. minor (McClure) Chia & H.L. Fung f. ***amoenus*** (Q.H. Dai & C.F. Huang) Ohrnb. (*Dendrocalamus minor* var. *amoenus* (Q.H. Dai & C.F. Huang) Hsueh & D.Z. Li; *Sinocalamus minor* var. *amoenus* Q.H. Dai & C.F. Huang)

China, Guangxi, Guangdong. Culm top bending and drooping, young culms pruinose, internodes yellowish, leaves broadly lanceolate, ornamental, cultivated, used for construction purposes and for weaving, see *Acta Phytotax. Sin.* 19(2): 261, f. 1. 1981, *Journal of Bamboo Research* 8(1): 39. 1989.

D. multispiculatus Lauterbach & K. Schumann

Papua New Guinea. See *Die Flora der deutschen Schutzgebiete in der Südsee* 187, 189. 1901.

D. nudus Pilger (*Sinocalamus nudus* (Pilger) Nguyen)

Thailand. See *Repertorium Specierum Novarum Regni Vegetabilis* 3: 117. 1906.

D. ovatus N.H. Xia & Chia

China. Along watersides, streams and riverbanks, see *Acta Phytotax. Sin.* 31(1): 61, f. 1. 1993.

D. pachystachyus Hsueh & D.Z. Li (*Sinocalamus pachystachyus* (Hsueh & D.Z. Li) W.T. Lin)

China, Yunnan. Erect, arching, bending or slightly drooping, young internodes pruinose, culm sheath caducous almost solid, sheath ligule denticulate, leaves pubescent, edible shoots, see *Journal of Bamboo Research* 7(3): 17. 1988, *Journal of Bamboo Research* 8(1): 25, f. 6. 1989, *Bamb. Res.* 42: 6. 1990.

D. parishii Munro (*Dendrocalamus hookeri* Munro var. *parishii* (Munro) Blatter; *Sinocalamus parishii* (Munro) W.T. Lin) (for the English (b. Calcutta) botanist Rev. Charles Samuel Pollock Parish, 1822-1897 (d. Somerset), collector of plants in Burma and the Andaman Islands, from 1852 to 1878 chaplain at Maulmain (or Moulmein), Burma (Myanmar), an authority on Burmese orchids, contributed to *Journ. As. Soc. Bengal*. See Pahpoo, editor, *The Instructor and Morning Star*. Maulmain 1853-1857, [continued as:] *The Morning Star*. Maulmain 1858; Ernest Nelmes &

William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 171-172. [1931]; Merle A. Reinikka, *A History of the Orchid*. Timber Press 1996; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 534. 1994; I.H. Vegter, *Index Herbariorum*. Part II (5), *Collectors N-R*. Regnum Vegetabile vol. 109. 1983)

India, Himachal Pradesh, China, Yunnan. Inflorescence paniculate with globose densely flowered heads, spikelets flattened, see *Trans. Linn. Soc. London* 26: 149. 1868 and *Indian For.* 55: 594. 1929, *Bamb. Res.* 42: 6. 1990.

D. patellaris Gamble (*Ampelocalamus patellaris* (Gamble) Stapleton; *Dendrocalamus patellaria* Gamble)

India, Nepal, China. Caespitose, evergreen, soft, top drooping, thin walled, nodes with soft hairy ring, internodes whitish below the nodes, leaf sheath densely pubescent and fringed on the margins, sheath blade revolute, leaves shortly petiolate, 1-2 glumes membranous, lemmas ciliate and densely tomentose, paleas ciliate on the keels, 0-2 lodicules, stamens exerted, ovary hairy above, 3 stigmas plumose, used for making arrow heads and baskets, as construction material and for weaving, see *Ann. Roy. Bot. Gard. Calcutta* 7: 86, pl. 75. 1896 and *Edinb. J. Bot.* 51(3): 321. 1994, *Kew Bulletin* 51(4): 811. 1996.

in India: footoong, lyas, nibha, pagjiok, pagjiok pao

D. peculiaris Hsueh & D.Z. Li (*Sinocalamus peculiaris* (Hsueh & D.Z. Li) W.T. Lin)

China, Yunnan. Erect, arching, drooping, internodes pubescent, culm sheath caducous, sheath auricles ciliate, sheath ligule serrate, leaves ovate and erect, ornamental, timber bamboo, see *Journal of Bamboo Research* 7(3): 18. 1988, *Journal of Bamboo Research* 8(1): 32, f. 8. 1989, *Bamb. Res.* 42: 7. 1990.

D. pendulus Ridl. (*Cephalostachyum malayense* Ridley; *Schizostachyum subcordatum* Ridley)

Peninsular Malaysia. Sympodial, slender, smooth, attenuated, closely tufted, flexuous, dark green, erect and arching over, pendulous tip, white wax below the prominent nodes, slender and very long branches, culm sheath narrowing toward the apex, leaf blade glabrous, inflorescence of pseudospikelets densely clustered in heads at each node, several glumes, one or rarely two perfect florets, used for basketry and handicrafts, growing in forest margins, foothills, hillsides, secondary forest, disturbed areas, see *Journal of the Straits Branch of the Royal Asiatic Society* 44: 210. 1905, *Journal of the Straits Branch of the Royal Asiatic Society* 57: 5-122. 1911, *Journal of the Straits Branch of the Royal Asiatic Society* 82: 168-204. 1920, *Gard. Bull. Singapore* 16: 90-93, f. 22-23. 1958, *Journal of the American Bamboo Society* 7(1-2): 1-15. 1989, *Pl. Resources S.E. Asia* 7: 92-93. 1995.

in Peninsular Malaysia: buloh akar, buloh tali, buluh akar

D. poilanei A. Camus (for Eugène Poilane, 1887/1888-1964, a plant collector; see I.H. Vegter, *Index Herbariorum*. Part II (5), *Collectors N-R*. Regnum Vegetabile vol. 109. 1983; Clyde F. Reed, *Bibliography to Floras of Southeast Asia*. 146. [Dedicated to E. Poilane & M. Poilane.] Baltimore, Maryland 1969)

Vietnam. See *Bull. Mus. Nation. Hist. Nat. Paris* 31: 205. 1925.

D. pulverulentus Chia & But

China, Guangdong. Young culm pruinose, almost glabrous, culm sheath caducous, sheath auricles absent or minute, sheath ligule ciliate, sheath blade lanceolate, used for weaving, see *Hong Kong Bamb.* 62. 1985, *Kew Bulletin* 43(1): 115, f. 1. 1988.

in English: powdered giant bamboo

D. ronganensis Q.H. Dai & D.Y. Huang

China. See *Journal of Bamboo Research* 14(3): 3, f. 2. 1995.

D. rongchengensis Yi & C.Y. Sia (*Bambusa rongchengensis* (Yi & C.Y. Sia) D.Z. Li)

China, Sichuan. Young culms pruinose, basal internodes often with aerial roots, most of the branches fascicled, sheath caducous, sheath auricles delicate, sheath ligule more or less truncate or arched and ciliate, sheath blade ovate triangular, leaf blades ovate-lanceolate or long lanceolate, see *Journal of Bamboo Research* 7(4): 20, f. 1. 1988, *Acta Bot. Yunn.* 16(1): 41. 1994.

D. sahnii Naithani and Bahadur

India, Himalaya, Arunachal Pradesh. Caespitose, striate, thin-walled, internodes glabrous, thick nodes, culm sheaths glabrous and shining inside rough and hairy outside, ligule dentate or fimbriate, inflorescence paniculate, heads of bracteate spikelets, 2 glumes ciliate, lemmas ciliate, paleas 2-keeled, 6 stamens, ovary hairy, stigma hairy, see *Indian Journal of Forestry* vol. 4(4): 280-286. 1981, *Indian For.* 108: 212, f. 1. 1982.

D. sapidus Q.H. Dai & D.Y. Huang

China. See *Journal of Bamboo Research* 14(3): 1, f. 1. 1995.

D. semiscandens Hsueh & D.Z. Li

China, Yunnan. Erect, top drooping, arching to scandent or slant, young culms tomentose, sheath caducous, sheath ligule truncate and entire, sheath blade erect and lanceolate to triangular, leaves ovate-lanceolate, edible shoots, see *Journal of Bamboo Research* 7(3): 17. 1988, *Journal of Bamboo Research* 8(1): 28, f. 7. 1989.

D. sericeus Munro (*Dendrocalamus strictus* (Roxb.) Nees var. *sericeus* (Munro) Gamble)

India. Strong culms, densely tufted, culm sheaths long ciliate on the edges, leaves lanceolate long-acuminate, leaf sheaths striate and keeled, ligule narrow and fimbriate

in Thailand: saang mon, sang mon

D. sikkimensis Oliver (*Dendrocalamus sikkimensis* Gamble ex Oliver)

East Nepal, Bhutan, Sikkim, India, China, Yunnan. Large, stems tufted and thin-walled, erect to nodding, top bending, few culms, aerial roots, branched at the top, sheaths densely covered with brown to orange hairs, culm sheaths deciduous, leaf sheath with long bristles, long bristles on the large auricles on the culm sheaths, new shoots with horizontal culm sheath blades, sheath ligule denticulate, inflorescence with stiff nodose branches, upper floret sterile and reduced, spikelets ovate or in dense globular heads, 3-4 empty glumes, lemmas mucronate and ciliate, 6 stamens exerted, ovary hairy, stigma hairy, wild or cultivated, used for water and milk vessels (*chungas*), as construction materials, shoots bitter edible, the foliage used as animal fodder, can be used for pulp and paper, according to some author the foliage could be poisonous, growing in mixed forest, see *Hooker's Icon. Pl.* 18(3): t. 1770. 1888 and *Edinb. J. Bot.* 51(1): 26. 1994.

in Bhutan: pougriang, pugriang, zhang, demtshar, dem chherring, dhungre bans

in India: bhalu bans, pugriang, rawami, rawmi, sangau, wadah, wedah

in Nepal: bhalu bans

D. sinicus Chia & J.L. Sun (*Sinocalamus sinicus* (Chia & J.L. Sun) W.T. Lin)

China. Large, culm top drooping, internodes cylindrical, young culm pruinose, sheath coriaceous to solid, sheath auricles narrow and wavy, sheath blade broadly lanceolate and erect, sheath ligule truncate, leaves ovate-lanceolate, used as construction material, for water pipes, probably the largest bamboo species in China, see *Bamb. Res.* 1(1): 10. 1982, *Bamb. Res.* 42: 6. 1990.

in China: mai-bo

D. sinuatus (Gamble) Holttum (*Gigantochloa sinuata* (Gamble) Nguyen; *Oxytenanthera sinuata* Gamble; *Pseudoxytenanthera sinuata* (Gamble) Nguyen)

Asia, Laos, Vietnam, Malaysia. Used for basketry, see *Ann. Roy. Bot. Gard. Calcutta* 7: 71, pl. 62. 1896 and *Gard. Bull. Sing.* 11: 296. 1947, *Gard. Bull. Sing.* 16: 97. 1958.

in Malay: buloh akar

D. somdevai Naithani

India. Caespitose, appressed culms, see *The Indian Forester* 119(6): 504-506. 1993.

D. strictus (Roxb.) Nees (*Arundo hexandra* Roxb. ex Munro; *Bambos stricta* Roxb.; *Bambusa hexandra* Roxb. ex Munro; *Bambusa glomerata* Royle ex Munro; *Bambusa pubescens* Loddiges ex Loudon; *Bambusa pubescens* Loddiges ex Lindley; *Bambusa stricta* (Roxb.) Roxb.; *Bambusa stricta* Roxb.; *Bambusa tanaea* Buch.-Ham.; *Bambusa verticillata* Rottler; *Dendrocalamus prainiana* Varmah &

Bahadur; *Dendrocalamus strictus* var. *prainiana* Gamble; *Nastus strictus* (Roxb.) Sm.)

Nepal, Himalayas, Myanmar, India, Thailand. Sympodial, polymorphic, densely to strongly tufted, erect-drooping, slightly bending, much curved above half of its height, solid culms variable in size according to the locality, stems usually hollow with thick walls, densely packed clumps, rhizome pachymorph, nodes somewhat swollen, young stems green with a white waxy bloom, basal nodes often with aerial roots, culm sheaths usually hairy and triangular in shape, branches and branchlets produced along the whole length of the stem, leaf sheaths glabrous, sheaths auricles distinct and tiny, leaf blades linear-lanceolate, leaves rough and hairy, inflorescence in dense globular heads, spikelets in large leafless pseudopanicles, spikelets spiny-tipped, fertile spikelets with 2-3 perfect florets and 2 or more empty glumes, fertile spikelets intermixed with many sterile smaller ones, 6 anthers, ovary ovate, 1 feathery stigma purple, flowering sporadically and flowering culms die after flowering, gregarious flowering cycle varies from 25-45 years, cultivated elsewhere in tropics, can be successfully propagated by seed and by rhizome cuttings, ornamental, medicinal, tonic and astringent, suitable for reclamation of ravine land, very drought-resistant, in dry areas is deciduous, young shoots and seeds commonly used as food, leaves readily eaten by cattle, leaves given to horses in cough infections, stems used extensively for building and furniture, scaffolding, poles, for making baskets and mats, used for spear staffs, valuable in paper manufacture, hollowed out stems utilized for water pipes for irrigation purposes, occurs naturally in tropical and subtropical regions of South Asia, grows on all soils with good drainage, sandy loams, in dry or moderately dry regions, deciduous forest, mixed deciduous forest, see *Plants of the Coast of Coromandel* 1(4): 58. London 1795-1820, *Hort. Beng.* 25. 1814, *Hort. Brit.* 124. 1830, *Linnaea* 9(4): 476-477. 1835, *Trans. Linn. Soc. London* 26: 147. 1868, *Ann. Roy. Bot. Gard. Calcutta* 7: 78, 80, pl. 68-69. 1896, *Fl. Brit. Ind.* 7: 404. 1897 and *Indian Forest Records* (new series, *Silviculture*) 2(4): 75-173. 1936, *Gard. Bull. Sing.* 16: 98. 1958, *Bamb. Res. Asia* 22. 1980, *The Indian Forester* 114: 637-649. 1988, *The Indian Forester* 117: 621-624. 1991, *Pl. Resources S.E. Asia* 7: 93-97. 1995.

in English: male bamboo, Calcutta bamboo, solid bamboo, stone bamboo, dark bamboo, hog bamboo

in Colombia: caña de Calcuta

in India: arinkantam, bans, bans kaban, bans kabban, bans khurd, bansa, bansi, banskaban, banskhurd, bas, bharivel, bhariyel, bhoverlit, buru mat, cheriyamula, chittiveduru, gandu bidiru, gattiveduru, kaattumungil, kal, kal-mungil, kallumula, kalmula, kalmungil, kanakaveduru, kanka, karail, karali, karanai, karinalimula, karinakana, kibbidiru, kiri bidiru, kiribiduru, kopar, kussub, lathi bans, lakdibans, lavakiri, lenkri, manwal, mungil, nakor vans, nakur bans,

narbans, narvel, panje bidiru, panji beduru, patuvedaru, raativeduru, saadanapuvvedaru, sadanapa vedroo, sadanapa veduru, salia, salia bhanso, salimbo bhanso, sannaveduru, sinnamungil, sirumungil, siruvari, vaenu, vansha, vasi, veduru, velu, yavaphala

in Laos: s'ang

Malayan names: buloh batu, buloh tumpat, buloh berang

in Myanmar: myin-wa, myinwa

in Nepal: bans

in Thailand: nuan, nuang, phaet, phai sang, phai taa dam, phai ta dam, phai taadam, saang, sang, wa me pre, wa mee loe, wa mi loe

in Vietnam: t[aaf]m v[oo]ng

D. strictus (Roxb.) Nees var. *prainiana* Gamble

India. Lemmas almost glabrous, see *Ann. Roy. Bot. Gard. Calcutta* 7: 80, pl. 69a. 1896.

D. strictus (Roxb.) Nees var. *sericeus* (Munro) Brandis (*Dendrocalamus sericeus* Munro; *Dendrocalamus sericeus* var. *latifolius* A. Camus; *Dendrocalamus strictus* (Roxb.) Nees var. *sericeus* (Munro) Gamble)

India, Bihar. Strong, densely tufted, lemmas silky pubescent, paleas pointed, see *Trans. Linn. Soc. London* 26: 148. 1868.

D. textilis N.H. Xia, Chia & Z.Y. Xia

China. See *Acta Phytotax. Sinica* 31(1): 63, f. 2. 1993.

D. tibeticus Hsueh & Yi (*Sinocalamus tibeticus* (Hsueh & Yi) W.T. Lin)

China, Yunnan, Tibet. Glabrous, sheath caducous, sheath ligule ciliate, leaves erect, edible shoots, culms used as construction material, see *J. Bamb. Res.* 2(1): 31, f. 3. 1983, *J. S. China Agr. Univ.* 10(2): 45. 1989.

D. tomentosus Hsueh & D.Z. Li (*Sinocalamus tomentosus* (Hsueh & D.Z. Li) W.T. Lin)

China. Erect, arching, scandent, climber, pubescent to tomentose when young, culm sheath caducous and coriaceous, monsoon forests, rainforests, evergreen broad-leaved forests, see *J. Bamb. Res.* 7(3): 18. 1988, *J. Bamb. Res.* 8(1): 34, f. 9. 1989, *Bamb. Res.* 42: 7. 1990.

D. tsiangii (McClure) Chia & H.L. Fung (*Lingnania tsiangii* McClure)

China, Guangdong, Guizhou. Young culms pruinose, yellowish green to green, most of branches clustered or fascicled, sheath caducous densely pubescent, sheath auricles and cilia absent, sheath ligule present, sheath blade lanceolate and scabrous, leaves lanceolate or long lanceolate or elliptic, cultivated, found growing along streams and riverbanks, see *Sunyatsenia* 6(1): 41, pl. 9. 1941, *Acta Phytotax. Sin.* 18(2): 216. 1980, *J. Bamb. Res.* 10(1): 34, f. 3. 1991.

D. tsiangii (McClure) Chia & H.L. Fung f. *striatus* Yi & H.R. Qi (*Neosinocalamus affinis* f. *striatus* Yi & H.R. Qi) China. *Bull. Bot. Res.* 5(4): 131. 1985, *J. Bamb. Res.* 10(1): 34. 1991.

D. tsiangii (McClure) Chia & H.L. Fung f. *viridistriatus* Z.H. Song

China, Guizhou, Libo. Culms yellow with green stripes

D. wabo Brandis ex Camus

Myanmar.

Local name: wabo

D. yunnanicus Hsueh & D.Z. Li (*Sinocalamus yunnanicus* (Hsueh & D.Z. Li) W.T. Lin)

China. Culm top drooping, young culm slightly pruinose, culm sheath caducous and coriaceous, sheath ligule truncate and wavy, sheath auricles small and wavy, sheath blade ovate-lanceolate, cultivated, shoots edible, culms used as construction materials, for water pipes, see *J. Bamb. Res.* 7(4): 17, f. 5. 1988, *Bamb. Res.* 42: 7. 1990.

Dendrochloa C.E. Parkinson = *Schizostachyum* Nees

From the Greek *dendron* "a tree" and *chloe, chloa* "grass, young grass."

A monotypic genus, Burma/Myanmar. Bambusoideae, Bambusodae, Bambuseae, Bambusinae, or Bambusoideae, Bambuseae, Melocanninae, perennial, woody, unarmed, pluricaespitose, leaf blades pseudopetiolate linear-lanceolate, rhizomes leptomorph, plants bisexual, inflorescence paniculate determinate, spikelets solitary compressed laterally, 2 glumes, palea present, 3 lodicules membranous, 6 stamens, ovary glabrous, 3 stigmas, often referred to *Schizostachyum*, type *Dendrochloa distans* C.E. Parkinson, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829 and *Indian Forester* 59: 707-709. 1933, *Lingnan Science Journal* 14: 567-602. 1935, *Blumea* 2: 86-97. 1936, *Fieldiana, Botany* 24(2): 38-331. 1955, *Kew Bulletin* 38(2): 321-331. 1983, *Grass Systematics and Evolution* 225-238. 1987, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 272-283. Calcutta 1989, *Indian Forester* 117(1): 68. 1991, *Plant Resources of South-East Asia (PROSEA)* (Pl Res SEAs) vol. 7: 130-145, 153-154. 1995 [Bamboos], *Contributions from the United States National Herbarium* 39: 112. 2000.

Species

D. distans C.E. Parkinson

Myanmar.

Deschampsia P. Beauv. = *Airidium* Steud., *Aristavena* F. Albers & Butzin, *Avenella* (Bluff & Fingerh.) Drejer, *Avenella* Parl., *Campella* Link, *Czerniaevia* Ledeb., *Czerniaevia* (Ledeb.) Ledeb., *Czerniaevia* Turcz. ex Griseb., *Erioblastus* Honda, *Erioblastus* Honda ex Nakai, *Homoiachne* Pilger, *Lerchenfeldia* Schur, *Monandraira* E. Desv., *Podinapus* Dulac, *Rytidosperma* Steud., *Vahlodea* Fries

Genus dedicated to the French botanist Louis Auguste Deschamps, 1765-1842, naturalist, surgeon, participant in the voyage of *La Recherche* with d'Entrecasteaux. See Maurice Hocquette, *Louis-Auguste Deschamps. 1765-1842: sa vie, son oeuvre.* [Bulletin trimestriel de la Société académique des antiquaires de la Morinie: Mémoire. tom. 39 - *Journal de mon voyage sur la Recherche* by Deschamps, 7-51.] 1970; J.H. Barnhart, *Biographical notes upon botanists.* 1: 445. 1965; Jonathan Wantrup, *Australian Rare Books, 1788-1900.* Hordern House, Sydney 1987; Cornelis Gijbert Gerrit Jan van Steenis (1901-1986) et al., *Louis Auguste Deschamps.* London 1954 [Bulletin of the British Museum (Natural History). Historical Series. vol. 1. no. 2]; Ambroise Marie François Joseph Palisot de Beauvois, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées.* 91. Paris 1812.

About 40/50(-60) species, temperate and circumpolar regions of both hemispheres, tropical mountains and tropics at high altitudes. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Airinae, perennial or annual, glabrous, herbaceous, unbranched, tussock-forming, usually caespitose or decumbent, tufted, erect and slender, rhizomatous or stoloniferous, glabrous nodes, hollow internodes, auricles absent, ligule membranous, leaves rough or scabrous mostly basal and shorter than the culms, leaf blades linear and usually flat, plants bisexual, sometimes viviparous, inflorescence a panicle loose to compact and much-branched, small and delicate spikelets compressed laterally, 2-flowered, lower floret sessile, 2 glumes subequal and acute, lemmas thin and denticulate with a slender dorsal or subapical awn or awnless, callus small and shortly bearded to pubescent, palea present, 2 lodicules joined or free, 3 stamens or sometimes 1-2, ovary glabrous without the apical appendage, endosperm solid, weed species, native pasture species, grows in wet areas at high altitudes, meadows, moist and fertile soils, upland grasslands, woods, woodland, rainforest, pampas, grasslands, moorland, in shade and in open habitats, similar to *Aira*, *Helictotrichon* and *Trisetum*, type *Deschampsia cespitosa* (L.) P. Beauv., see *Species Plantarum* 1: 61-70. 1753, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Hortus Regius Botanicus Berolinensis* 1: 122. 1827, *Flora Germanica Excursoria* 50. 1830, *Flora Excursoria Hafniensis* 32. 1838, *Botaniska Notiser* 1842:

141, 178. 1842, *A Manual of the Botany of the Northern United States* 605. 1848, *Flora italiana, ossia descrizione delle piante ...* 1: 246. 1848, *Flora Rossica* 4(13): 420, 422. 1852, *Synopsis Plantarum Glumacearum* 1: 423, 425. 1854, *Hist. física y política de Chile ... Botánica* 6: 341. 1854 [*Flora Chilena*], *A Manual of the Botany of the Northern United States. Second Edition* 572. 1856, *Enumeratio Plantarum Transsilvaniae* 753. 1866, *Flore du Département des Hautes-Pyrénées* 82. 1867, *Die Natürlichen Pflanzenfamilien* 2(2): 54. 1887 and *J. Fac. Sci. Tokyo* 3: 142. 1930, *American Journal of Botany* 32(6): 298-311. 1945, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 556. 1949, *Botaniska Notiser* 1953(3): 356. 1953, *British Antarctic Survey Scientific Reports* 60: 1-202, 1-6 pls. 1968, *Willdenowia* 5(3): 473. 1969, *Willdenowia* 8(1): 83. 1977, *Flora Patagónica* 3: 1-583. 1978, *Taxon* 28(1,2-3): 225-235. 1979, *Turun yliopiston julkaisuja - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Fragmenta Floristica et Geobotanica* 28: 117-144. 1982, *Flora of Tierra del Fuego* 1-396. 1983, *Gayana, Botánica* 42: 1-157. 1985, *Bot. Zhurn. SSSR* 70(5): 698-700. 1985, *New Phytologist* 102: 449-467. 1986, *Symbolae Botanicae Upsaliensis* 27: 183-192. 1986, *Bot. Zhurn.* 72: 1069-1074. 1987, *Sida* 12: 409-417. 1987, *Agrociencia* 71: 61-69. 1988, *Willdenowia* 20: 139-152. 1991, *Flora Mesoamericana* 6: 235. 1994, *Plant Systematics and Evolution* 205: 99-110. 1997, *Am. J. Bot.* 85: 1688-1694. 1998, *Am. J. Bot.* 86: 1637-1644. 1999, *Botanical Journal of the Linnean Society* 134: 495-512. 2000 [The *Deschampsia cespitosa* complex in central and northern Europe: a morphological analysis.], Fusheng S. Xiong, Erin C. Mueller and Thomas A. Day, "Photosynthetic and respiratory acclimation and growth response of Antarctic vascular plants to contrasting temperature regimes." *Am. J. Bot.* 87: 700-710. 2000, Matthew A. Gitzendanner & Pamela S. Soltis, "Patterns of genetic variation in rare and widespread plant congeners." *Am. J. Bot.* 87: 783-792. 2000, *Am. J. Bot.* 87: 1128-1137. 2000, *Am. J. Bot.* 88: 583-587, 1088-1095, 2252-2258. 2001, *Contributions from the United States National Herbarium* 48: 96, 119, 139, 228, 242, 245-256, 312, 388, 422, 453, 581, 687-688. 2003, *Am. J. Bot.* 90: 1197-1206, 1313-1320. 2003, Jorge Chiapella & Nina S. Probatova, "The *Deschampsia cespitosa* complex (Poaceae: Aveneae) with special reference to Russia." *Botanical Journal of the Linnean Society* 142(2): 213-228. June 2003, *Am. J. Bot.* 91: 1709-1725. 2004, Ulf Molau, Urban Nordenhäll & Bente Eriksen, "Onset of flowering and climate variability in an alpine landscape: a 10-year study from Swedish Lapland." *Am. J. Bot.* 92: 422-431. 2005, *Journal of Ecology* 93(3): 471-481. June 2005, *Global Change Biology* 11(6): 869-880. June 2005, *Conservation Biology* 19(3): 955-962. June 2005, *Oikos* 109(3): 513-520. June 2005, Stein Rune Karlsen, Arve Elvebakk and Bernt Johansen, "A vegetation-based method to map climatic variation in the arcticboreal

transition area of Finnmark, northeasternmost Norway." *Journal of Biogeography* 32(7): 1161-1186. July 2005, *New Phytologist* 167(1): 309-319. July 2005.

Species

D. airiformis (Steud.) Benth. & Hook. (*Agrostis desvauxii* Phil.; *Deschampsia airiformis* (Steud.) Parodi, nom. illeg., non *Deschampsia airiformis* (Steud.) Benth. & Hook.f.; *Trisetum airiforme* Steud.)

Chile. See *Synopsis Plantarum Glumacearum* 1: 229. 1854, *Linnaea* 33(3-4): 288. 1864, *Genera Plantarum* 3: 1158. 1883 and *Darwiniana* 8: 469. 1949.

D. antarctica E. Desv. (*Aira aciphylla* Franch.; *Aira antarctica* Hook.f., nom. illeg., non *Aira antarctica* G. Forst.; *Airidium elegantulum* Steud.; *Deschampsia aciphylla* (Franch.) Speg.; *Deschampsia elegantula* (Steud.) Parodi; *Deschampsia tenella* Phil.)

Argentina, Chile, Antarctic. Restricted to the more temperate part of the Antarctic peninsula, mud, boggy spots, see *Icones Plantarum* 2: t. 150. 1837, *Flora Chilena* 6: 338. 1854, *Synopsis Plantarum Glumacearum* 1: 423. 1854, *Mission Scientifique du Cap Horn, Botanique* 5: 384. 1889, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 89. 1896, *Anales de la Universidad de Chile* 94: 25. 1896 and *Reports of the Princeton University Expeditions to Patagonia ... Botany* 8 (Suppl.): 47. 1915, *Darwiniana* 8: 452. 1949.

in English: hairgrass

D. argentea (Lowe) Lowe

Portugal, Madeira. Vulnerable species, small, found in wet rocky cliffs.

in Portuguese: barba de bode

D. berteriana (Kunth) Trin. (*Aira berteriana* (Kunth) Steud.; *Avena villosa* Bertol.; *Deschampsia berteriana* (Kunth) F. Meigen, nom. illeg., non *Deschampsia berteriana* (Kunth) Trin.; *Deschampsia berteriana* var. *berteriana*; *Deschampsia berteriana* var. *parvispicula* Parodi; *Deschampsia desvauxii* Pilg.; *Monandrya berteriana* (Kunth) E. Desv.; *Trisetum berterianum* Kunth; *Trisetum bertolonii* Jonsell)

South America. See *Opuscoli Scientifici* 4: 222. 1820, *Révision des Graminées* 2: 457, t. 142. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 10. 1836, *Synopsis Plantarum Glumacearum* 1: 220. 1854, *Flora Chilena* 6: 343. 1854, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 17: 228. 1893 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 557. 1949, *Darwiniana* 8: 466. 1949, *Botanical Journal of the Linnean*

Society 76(4): 320. 1978, *Gayana, Botánica* 57(2): 185-186. 2000.

D. brevifolia R. Br. (*Aira arctica* Spreng.; *Aira brevifolia* Pursh; *Aira caespitosa* var. *arctica* (Spreng.) Thurb. ex A. Gray; *Aira caespitosa* var. *brevifolia* (R. Br.) Trautv., nom. illeg., non *Aira caespitosa* var. *brevifolia* Parnell; *Aira curtifolia* (Scribn.) Rydb.; *Deschampsia arctica* (Spreng.) Merr.; *Deschampsia arctica* (Spreng.) Schischkin; *Deschampsia brachyphylla* Nash, nom. illeg., non *Deschampsia brachyphylla* Phil.; *Deschampsia caespitosa* subsp. *brevifolia* (R. Br.) Tzvelev, nom. illeg., non *Deschampsia caespitosa* var. *brevifolia* Griseb.; *Deschampsia caespitosa* subsp. *brevifolia* (R. Br.) Tzvelev; *Deschampsia curtifolia* Scribn.; *Deschampsia glauca* C. Hartm.; *Poa evagens* Simmons)

America. See *Flora Americae Septentrionalis*; or, ... 1: 76. 1814, *Handbok i Skandnaviens Flora* 448. 1820, *Chloris Melvillianiana* 33. 1823, *Systema Vegetabilium, editio decima sexta* 4: Cur. Post. 32. 1827, *Flora Rossica* 4(13): 422. 1852, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1863: 78. 1863, *Anales de la Universidad de Chile* 94: 23. 1896 and *Memoirs of the New York Botanical Garden* 1: 37. 1900, *Circular, Division of Agrostology, United States Department of Agriculture* 30: 7. 1901, *Rhodora* 4(43): 143. 1902, *The Vascular Plants in the Flora of Ellesmereland* 165-166. 1906, *Flora of the Rocky Mountains, second edition* 1112. 1922, *Journal of the College of Agriculture, Hokkaido Imperial University* 11: 2. 1922.

D. caespitosa (L.) P. Beauv. (also spelled *caespitosa*) (*Agrostis caespitosa* (L.) Salisb.; *Aira alpicola* (Rydb.) Rydb.; *Aira ambigua* Michx.; *Aira aristulata* Torr.; *Aira caespitosa* L.; *Aira caespitosa* Muhl., nom. illeg., non *Aira caespitosa* L.; *Aira caespitosa* var. *ambigua* (Michx.) Pursh; *Aira caespitosa* var. *genuina* Rchb.; *Aira caespitosa* var. *montana* Vasey, nom. illeg., non *Aira caespitosa* var. *montana* Rchb.; *Aira caespitosa* L.; *Aira caespitosa* L. subsp. *caespitosa*; *Aira latifolia* (Hochst. ex A. Rich.) Steud., nom. illeg., non *Aira latifolia* Hook.; *Aira major* Syme ex Sowerby; *Aira major* subsp. *caespitosa* (L.) Syme ex Sowerby; *Aira parviflora* Thuill.; *Aira pungens* (Rydb.) Rydb.; *Aira wilhelmsii* Steud.; *Avena caespitosa* (L.) Kuntze; *Campella caespitosa* (L.) Link; *Deschampsia alpicola* Rydb.; *Deschampsia ambigua* P. Beauv. ex B.D. Jacks.; *Deschampsia andina* Phil.; *Deschampsia biebersteiniana* Schult.; *Deschampsia caespitosa* (L.) P. Beauv.; *Deschampsia caespitosa* subsp. *genuina* (Rchb.) W.E. Lawr.; *Deschampsia caespitosa* var. *alpina* Vasey ex Beal, nom. illeg., non *Deschampsia caespitosa* var. *alpina* Gaudin; *Deschampsia caespitosa* var. *brevifolia* Griseb.; *Deschampsia caespitosa* var. *brevifolia* Vasey ex Beal, nom. illeg., non *Deschampsia caespitosa* var. *brevifolia* Griseb.; *Deschampsia caespitosa* var. *confinis* Vasey ex Beal; *Deschampsia caespitosa* var. *genuina* (Rchb.) O.H. Volk; *Deschampsia caespitosa* var. *latifolia* (Hochst. ex A. Rich.) Hook.f.; *Deschampsia caespitosa* var.

montana Vasey ex Beal; *Deschampsia caespitosa* var. *pungens* (Rydb.) B. Boivin.; *Deschampsia caespitosa* var. *strictior* Kurtz; *Deschampsia caespitosa* subsp. *genuina* (Rchb.) Volk.; *Deschampsia caespitosa* subsp. *genuina* (Rchb.) W.E. Lawr.; *Deschampsia caespitosa* subsp. *glauca* (Hartman) Hartman; *Deschampsia caespitosa* subsp. *orientalis* Hultén; *Deschampsia caespitosa* subsp. *paramushirensis* (Honda) Tzvelev; *Deschampsia caespitosa* subsp. *parviflora* (Thuill.) Jarmolenko & Soo; *Deschampsia caespitosa* var. *abbei* Boivin; *Deschampsia caespitosa* var. *alpicola* (Rydb.) Á. & D. Löve & Kapoor; *Deschampsia caespitosa* var. *alpina* Vasey ex Beal, nom. illeg., non *Deschampsia caespitosa* var. *alpina* Gaudin ex Ducommun; *Deschampsia caespitosa* var. *arctica* Vasey; *Deschampsia caespitosa* var. *confinis* Vasey ex Beal; *Deschampsia caespitosa* var. *genuina* (Rchb.) O.H. Volk; *Deschampsia caespitosa* var. *glauca* (Hartman) Lindm.f., non Regel; *Deschampsia caespitosa* var. *intercotidalis* Boivin; *Deschampsia caespitosa* var. *latifolia* (Hochst. ex A. Rich.) Hook.f.; *Deschampsia caespitosa* var. *littoralis* (Gaudin) Richter; *Deschampsia caespitosa* var. *longiflora* Beal; *Deschampsia caespitosa* var. *mackenzieana* (Raup) Boivin; *Deschampsia caespitosa* var. *maritima* Vasey; *Deschampsia caespitosa* var. *parviflora* (Thuiller) Coss. & Germain; *Deschampsia caespitosa* var. *pungens* (Rydb.) B. Boivin; *Deschampsia caespitosa* var. *strictior* Kurtz; *Deschampsia confinis* (Vasey ex Beal) Rydb.; *Deschampsia glauca* Hartm.; *Deschampsia latifolia* Hochst. ex A. Rich.; *Deschampsia mackenzieana* Raup; *Deschampsia paramushirensis* Honda; *Deschampsia pumila* (Ledeb.) Ostenf.; *Deschampsia pungens* Rydb.; *Deschampsia sukatschewii* (Popl.) Rosh.; *Podionapus caespitosus* (L.) Dulac; *Triodia splendida* Steud.)

Cosmopolitan. Perennial bunchgrass, very variable and highly complex, very polymorphic species, large, coarse, stiff, leafy at base, erect or ascending or slightly geniculate at base, hairless, slender to robust, densely tufted, shortly rhizomatous or no rhizomes, forming large tussocks, fibrous root system, entire conspicuous ligule acute and membranous, keeled sheath, leaf blade flat or convolute or sometimes inrolled, coarse leaves rigid and ridged above, paniculate inflorescence turns dark or purple color at maturity, lax and open panicle pyramidal to cylindrical, hermaphrodite florets homogamous, shining spikelets narrow and silvery-purple, chasmogamous spikelets, glumes membranous and keeled, lemma apices deeply notched, lemmas with a straight awn variable in length, palea acute and 2-toothed, anthers yellow or purple, glabrous grain laterally compressed and brown, showy ornamental, useful for erosion control and for wetland restoration, suitable for reclamation of disturbed sites, coarse fodder, forage, can be grazed throughout the year, weed species, can be used for hay and for doormats, container plant, very resistant to cold and to a long snowy period, widespread, found in wet areas at high altitudes, temperate regions of the world, on

alpine-subalpine meadow, disturbed stony places, in coastal marshes and swamps, gravelly shores, thickets, sandy shores, wet flush in alpine herbfield, serpentine barrens, fields, wetland, in bogs and along streams, fresh wet meadows, in wet mountain meadows, boggy areas, springs and stream banks, riverbanks, moist position, see *Species Plantarum* 1: 64-65. 1753, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 23. Londini [London] (Nov-Dec) 1796, *Flora Boreali-Americana* 1: 61. 1803, *Essai d'une Nouvelle Agrostographie* 91, 149, 160, t. 18, f. 3. 1812, *Flora Americae Septentrionalis; or, ...* 1: 77. 1814, *Descriptio uberior Graminum* 85. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 132. 1823, *Mantissa* 2: 380. 1824, *Hortus Regius Botanicus Berolinensis* 1: 122. 1827, *Agrostographia Germanica* 1: t. 96, f. 1682. 1834, *Choix Pl. Nouv.-Zél.* 12. 1846, *Tentamen Florae Abyssinicae ...* 2: 413. 1850, *Synopsis Plantarum Glumacearum* 1: 219, 249. 1854, *Flore du Département des Hautes-Pyrénées* 82. 1867, *English Botany, ... third edition* 11: 63-64. 1873, *Anales de la Universidad de Chile* 43: 564. 1873, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 294. 1878, *Indig. Grasses N.Z.* t. 37. 1879, *Bulletin of the Torrey Botanical Club* 15: 48. 1888, *Index Kewensis* 1: 735. 1893, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 19: 421. 1894, *T.N.Z.I.* 27: 354. 1895, *Grasses of North America for Farmers and Students* 2: 368-369. 1896 and *Bulletin of the Torrey Botanical Club* 32(11): 601. 1905, *Man. N.Z. Fl.* 876. 1906, *Bulletin of the Torrey Botanical Club* 36: 533. 1909, *Bulletin of the Torrey Botanical Club* 39(3): 103. 1912, *Flora of the Rocky Mountains, second edition* 1112. 1922, *American Journal of Botany* 32: 302. 1945, *Le Naturaliste Canadien* 75: 84. 1948, *N.Z. J. Bot.* 25: 455-457. 1987.

in English: fescue-leaved hairgrass, tufted hairgrass, tufted hair-grass, California hairgrass, tussock grass, salt and pepper grass

in French: canche cespitouse, canche gazonnante

D. cespitosa (L.) P. Beauv. subsp. ***alpina*** (L.) Tzvelev (*Aira alpina* L.; *Deschampsia alpina* (L.) Roem. & Schult.)

North Europe, Canada, Labrador, Quebec. Perennial, endangered grass, caespitose, erect, see *Species Plantarum* 65. 1753, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812.

D. cespitosa (L.) P. Beauv. subsp. ***beringensis*** (Hultén) W.E. Lawr. (*Deschampsia aleutica* Tatew. & Ohwi; *Deschampsia beringensis* Hultén; *Deschampsia beringensis* var. *atkensis* Hultén; *Deschampsia cespitosa* var. *arctica* Vasey; *Deschampsia cespitosa* var. *longiflora* Beal; *Deschampsia cespitosa* var. *maritima* Vasey)

Russia, northern America, Canada, U.S. Perennial bunchgrass, tufted, robust, leaves mostly basal, ligule lanceolate,

forage, used for wetland restoration and development and for disturbed-site revegetation, found along muddy shores in coastal habitats of northern latitudes of Canada and Alaska, maritime and southern to northern coastal regions of Alaska, see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Bulletin of the Torrey Botanical Club* 15: 48. 1888, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13: no. 45, t. XLV. 1893 [1892], *Grasses of North America for Farmers and Students* 2: 369. 1896 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 3(5): 107, t. 4, f. 9, f. a. 1927, *Journal of the Faculty of Agriculture of the Hokkaido University* 36: 95. 1934, *Flora of the Aleutian Islands* 81. 1937, *American Journal of Botany* 32: 302. 1945.

in English: Bering hairgrass, Bering's tufted hairgrass, tufted hairgrass

D. cespitosa (L.) P. Beauv. subsp. ***borealis*** (Trautv.) Á. Löve & D. Löve (*Aira caespitosa* var. *borealis* Trautv.; *Deschampsia borealis* (Trautv.) Roshev.; *Deschampsia cespitosa* subsp. *borealis* (Trautv.) Tzvelev; *Deschampsia cespitosa* var. *borealis* (Trautv.) Kom.; *Deschampsia cespitosa* var. *borealis* (Trautv.) Trautv.; *Deschampsia cespitosa* var. *minor* Trautv., nom. illeg., non *Deschampsia cespitosa* var. *minor* Schlect.; *Deschampsia sukatschewii* (Popl.) Roshev.; *Deschampsia sukatschewii* subsp. *borealis* (Trautv.) Tzvelev; *Deschampsia sukatschewii* subsp. *minor* (Kom.) Tzvelev)

Europe. Perennial, found in mesophytic meadows, see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812 and *Opera Botanica* 5: 65. 1961, *Novosti Sist. Vyss. Rast.* 32: 182. 2000.

D. cespitosa (L.) P. Beauv. subsp. ***bottnica*** (Wahlenb.) G.C.S. Clarke (*Aira bottnica* Wahlenb.; *Deschampsia bottnica* (Wahlenb.) Trin.; *Deschampsia cespitosa* subsp. *bottnica* (Wahlenb.) Tzvelev) (Bothnia and Gulf of Bothnia)

Europe. Perennial, see *Flora Lapponica* 1: 36, t. 4. 1812, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812 and *Botanical Journal of the Linnean Society* 76(4): 363. 1978.

D. cespitosa (L.) P. Beauv. subsp. ***brevifolia*** (R. Br.) Tzvelev (*Deschampsia brevifolia* R. Br.; *Deschampsia cespitosa* var. *brevifolia* Griseb.; *Deschampsia cespitosa* var. *brevifolia* Vasey ex Beal, nom. illeg., non *Deschampsia cespitosa* var. *brevifolia* Griseb.; *Poa evagens* Simmons)

Russia, Siberia, northern America, Canada. Perennial, caespitose, small, erect, glabrous, leaves mostly basal, ligule membranous and acuminate, very short awn, found in disturbed sites, along streams, floodplains, lakeshores, slopes, wet meadows, marshes, imperfectly drained moist areas, see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Chloris Melvillianiana* 33. 1823, *Grasses of North America for Farmers and Students* 2: 369. 1896 and *The Vascular Plants in the Flora of Ellesmereland* 2: 165-166. Kristiania [Oslo] 1906, *Phytologia* 71: 390-413. 1991.

in English: Bering hairgrass, Arctic hairgrass

D. cespitosa (L.) P. Beauv. subsp. **cespitosa** (*Aira ambigua* Michx.; *Aira biebersteiniana* (Schult.) Steud.; *Aira brevifolia* M. Bieb., nom. illeg., non *Aira brevifolia* Pursh; *Aira caespitosa* var. *ambigua* (Michx.) Pursh; *Aira caespitosa* var. *montana* Vasey, nom. illeg., non *Aira caespitosa* var. *montana* Rchb.; *Aira cespitosa* L.; *Aira cespitosa* var. *setifolia* Bisch. ex W.D.J. Koch; *Aira major* Syme ex Sowerby; *Aira major* subsp. *caespitosa* (L.) Syme ex Sowerby; *Aira rhenana* (Gremli) Nyman; *Avena disticha* Lam.; *Deschampsia alpicola* Rydb.; *Deschampsia ambigua* P. Beauv. ex B.D. Jacks.; *Deschampsia anadyrensis* V.N. Vassil.; *Deschampsia andraei* Aursw.; *Deschampsia austrobohemica* Deyl; *Deschampsia biebersteiniana* Schult.; *Deschampsia cespitosa* f. *alpicola* (Chrtek & Jirasek) Soó; *Deschampsia cespitosa* (L.) P. Beauv. subsp. *alpicola* Chrtek & V. Jirásek; *Deschampsia cespitosa* subsp. *anadyrensis* (V.N. Vassil.) Á. Löve & D. Löve; *Deschampsia cespitosa* subsp. *austrobohemica* (Deyl) Conert; *Deschampsia cespitosa* subsp. *gaudinii* K. Richt.; *Deschampsia cespitosa* (L.) P. Beauv. subsp. *littoralis* (Gaudin) Rchb.; *Deschampsia cespitosa* (L.) P. Beauv. subsp. *mezensis* (Senjan.-Korcz. & Korcz.) Tzvelev; *Deschampsia cespitosa* (L.) P. Beauv. subsp. *parviflora* (Thuill.) Chrtek & V. Jirásek; *Deschampsia cespitosa* var. *alpicola* (Rydb.) D. Löve & B.M. Kapoor; *Deschampsia cespitosa* var. *alpina* Vasey ex Beal, nom. illeg., non *Deschampsia cespitosa* var. *alpina* Gaudin ex Ducommun; *Deschampsia cespitosa* var. *brevifolia* Griseb.; *Deschampsia cespitosa* var. *brevifolia* Vasey ex Beal, nom. illeg., non *Deschampsia cespitosa* var. *brevifolia* Griseb.; *Deschampsia cespitosa* var. *cespitosa*; *Deschampsia cespitosa* var. *montana* Vasey ex Beal; *Deschampsia cespitosa* var. *pallida* Gren. & Godr.; *Deschampsia cespitosa* var. *pungens* (Rydb.) B. Boivin; *Deschampsia cespitosa* var. *setifolia* (Bisch. ex W.D.J. Koch) Griseb.; *Deschampsia cespitosa* var. *vivipara* Gray; *Deschampsia mezensis* Senjan.-Korcz. & Korcz.; *Deschampsia pungens* Rydb.; *Deschampsia rhenana* Gremli; *Deschampsia vodopjanoviae* O.D. Nikif.)

Cosmopolitan. Perennial, along streams, see *Species Plantarum* 1: 64-65. 1753, *Encyclopédie Méthodique, Botanique* 1: 333. 1783, *Flora Boreali-Americana* 1: 61. 1803, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Flora Americae Septentrionalis*; or, ... 1: 77. 1814, *Flora Taurico-Caucasica* 3: 63. 1819, *Mantissa* 2: 380. 1824, *Flora Rossica* 4(13): 421. 1852, *Synopsis Plantarum Glumacearum* 1: 219. 1854, *Botanische Zeitung, Berlin* 14: 205. 1856, *English Botany, ... third edition* 11: 63-64. 1873, *Plantae Europaeae* 1: 56. 1890, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 294. 1878, *Index Kewensis* 1: 735. 1893, *Grasses of North America for Farmers and Students* 2: 368-369. 1896 and *Bulletin of the Torrey Botanical Club* 32(11): 601. 1905, *Bulletin of the Torrey Botanical Club* 39(3): 103. 1912, *Le*

Naturaliste Canadien 75: 84. 1948, *Arctic and Alpine Research* 3(2): 143. 1971, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 120. 1971[1972], *Botaniska Notiser* 128(4): 503. 1975[1976], *Folia Geobotanica et Phytotaxonomica* 19(1): 101. 1984, *Bot. Zhurn. (Moscow & Leningrad)* 72(12): 1666. 1987.

in English: tufted hairgrass, tufted hair-grass

D. cespitosa (L.) P. Beauv. subsp. **glauca** (Hartm.) C. Hartm. (*Deschampsia cespitosa* subsp. *glauca* (C. Hartm.) Tzvelev; *Deschampsia cespitosa* var. *glauca* (C. Hartm.) Sam., nom. illeg., non *Deschampsia cespitosa* var. *glauca* Regel; *Deschampsia glauca* C. Hartm.)

Russia, Europe. Perennial, see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Handbok i Skandinavians Flora* 448. 1820 and *Svensk Botanisk Tidskrift* 13: 253. 1919.

D. cespitosa (L.) P. Beauv. subsp. **holciformis** (J. Presl) W.E. Lawrence (*Aira holciformis* (J. Presl) Steud.; *Deschampsia holciformis* J. Presl)

Northern America, U.S., Canada. Perennial, see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Reliquiae Haenkeanae* 1(4-5): 251. 1830, *Synopsis Plantarum Glumacearum* 1: 221. 1854 and *American Journal of Botany* 32: 302. 1945.

in English: California hairgrass, Pacific hairgrass

D. cespitosa (L.) P. Beauv. subsp. **obensis** (Roshev.) Tzvelev (*Deschampsia obensis* Roshev.)

Russia, Siberia, Europe. Perennial

D. cespitosa (L.) P. Beauv. subsp. **orientalis** Hultén (*Deschampsia sukatschewii* (Popl.) Roshev.)

Europe, Arctic Europe, China, Japan. Perennial, see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812 and *Kongliga Svenska Vetenskapsakademiens Handlingar* III 5: 109, t. 5, f. a, b. 1927, *Ark. Fl.* 84. 1986.

D. cespitosa (L.) P. Beauv. subsp. **paludosa** (Schübl. & G. Martens) G.C.S. Clarke (*Aira cespitosa* L. subsp. *paludosa* Schübl. & G. Martens; *Aira caespitosa* var. *fluviatilis* G. Mey.; *Aira paludosa* Wibel, nom. illeg., non *Aira paludosa* Roth; *Aira wibeliana* Sond.; *Aira wibeliana* Sond. ex Koch; *Deschampsia aenea* Trin. ex Ledeb.; *Deschampsia alpina* var. *wibeliana* (Sond. ex Koch) Krylov; *Deschampsia cespitosa* var. *wibeliana* (Sond. ex Koch) Griseb.; *Deschampsia paludosa* (Schübl. & G. Martens) K. Richt.; *Deschampsia wibeliana* (Sond.) Parl.; *Deschampsia wibeliana* (Sond. ex Koch) Parl.)

Europe. Perennial, wetlands, freshwater tidal areas, see *Primitiae Florae Werthemensis* 118. Ienae 1797, *Chloris Hanoverana* 639. 1836, *Synopsis Florae Germanicae et Helveticae (edition 2)* 915. 1844, *Flora Rossica* 4(13): 421. 1852, *Plantae Europaeae* 1: 56. 1890 and *Botanical Journal of the Linnean Society* 76(4): 363. 1978.

D. cespitosa (L.) P. Beauv. subsp. *parviflora* (Thuill.) K. Richt. (*Aira altissima* Moench, nom. illeg., non *Aira altissima* Lam.; *Aira parviflora* Thuill.; *Deschampsia cespitosa* var. *parviflora* (Thuill.) Coss. & Germ.)

Europe. See *Flore des Environs de Paris* 1: 38. 1799, *Flore Descriptive et Analytique des Environs de Paris* 2: 806. 1861, *Plantae Europaeae* 1: 56. 1890.

D. cespitosa (L.) P. Beauv. subsp. *rhenana* (Gremli) Kerguélen (*Aira alpina* var. *rhenana* (Gremli) Brand; *Aira caespitosa* var. *littoralis* Gaudin; *Aira littoralis* (Gaudin) Godet; *Aira littoralis* (Gaudin) Godr. ex Nyman, nom. illeg., non *Aira littoralis* (Gaudin) Godet; *Aira littoralis* subvar. *rhenana* (Gremli) Asch. & Graebn.; *Deschampsia cespitosa* subsp. *littoralis* (Gaudin) K. Richt.; *Deschampsia littoralis* (Gaudin) Reut.; *Deschampsia littoralis* var. *rhenana* (Gremli) Hack.; *Deschampsia rhenana* Gremli; *Glyceria repanda* (Gaudin) Nutt.)

Europe. See *The Genera of North American Plants* 1: 177. 1818, *Flora Helvetica* 1: 323. 1828, *Flore du Jura* 2: 803. 1853, George F. Reuter (1805-1872), *Catalogue des Plantes Vasculaire qui croissent naturellement aux environs de Genève (édition 2)* 236. 1861, *Excursionsflora für die Schweiz (édition 2)* 418. 1874, *Conspectus florae europaeae: seu Enumeratio methodica plantarum phanerogamarum Europae indigenarum, indicatio distributionis geographicae singularum etc.* 807. 1882, *Lejeunia* 110: 56. 1883, *Plantae Europaeae* 1: 56. 1890, *Synopsis der mitteleuropäischen Flora* 2: 293. 1899, *Mitteilungen des Badischen Botanischen Vereins* 317. 1899 and *Synopsis der Deutschen und Schweizer Flora* 3: 2731. 1907.

D. cespitosa (L.) P. Beauv. var. *alpina* Schur (*Agrostis vivipara* Steud., nom. illeg., non *Agrostis vivipara* Biv. ex Roemer & Schultes; *Aira alpina* L.; *Aira alpina* Roth ex Schur, nom. illeg., non *Aira alpina* L.; *Aira alpina* var. *vivipara* (Steud.) Lange, nom. illeg., non *Aira alpina* var. *vivipara* Parnell; *Aira caespitosa* subsp. *alpina* (L.) Hook.f.; *Aira caespitosa* var. *alpina* Gaudin; *Aira caespitosa* var. *alpina* Hoppe; *Aira laevigata* Sm.; *Aira major* subsp. *alpina* (L.) Syme ex J.E. Sowerby; *Aira vivipara* Steud.; *Avena alpina* (L.) Trin., nom. illeg., non *Avena alpina* Sm.; *Deschampsia alpina* (L.) Roem. & Schult.; *Deschampsia alpina* var. *alpina*; *Deschampsia cespitosa* subsp. *alpina* (L.) Tzvelev, nom. illeg., non *Deschampsia cespitosa* var. *alpina* Schur; *Deschampsia cespitosa* var. *alpina* (Hoppe) Honda, nom. illeg., non *Deschampsia cespitosa* var. *alpina* Schur; *Deschampsia cespitosa* var. *alpina* Gaudin ex Ducommun, nom. illeg., non *Deschampsia cespitosa* var. *alpina* Schur; *Deschampsia laevigata* (Sm.) Roem. & Schult.)

Europe. See *Species Plantarum* 65. 1753, *Tent. Fl. Germ.* 2(1): 98. 1789, *English Botany* 30: t. 2102. 1810, *Systema Vegetabilium* 2: 686. 1817, *Flora* 166. 1817-1823, *Fundamenta Agrostographiae* 157. 1820, *Flora Helvetica* 1: 323. 1828, *Synopsis Plantarum Glumacearum* 1: 222. 1854,

Österreichische Botanische Zeitschrift 9: 326. 1859, *The Student's Flora of the British Islands* 3: 437. 1870, *English Botany, ... third edition* 11: 65. 1877, *Conspectus Florae Groenlandicae* 1: 163. 1880 [*Meddelelser om Grønland ... Tredie Hefte.*] and *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 139. 1930, *Taxon* 49(2): 243. 2000.

D. cespitosa (L.) P. Beauv. var. *mackenzieana* (Raupe) B. Boivin

North America, Canada. See *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812 and *Journal of the Arnold Arboretum* 17: 205, t. 190. 1936, *Le Naturaliste Canadien* 94(4): 524. 1967, *Checklist of the Vascular Plants of the Northwest Territories Canada* i-viii, 1-607. 1980.

in English: Mackenzie hairgrass

in French: deschampsie du bassin du Mackenzie

D. cespitosa (L.) P. Beauv. var. *parviflora* (Thuill.) Coss. & Germain (*Aira altissima* Moench, nom. illeg., non *Aira altissima* Lam.; *Aira parviflora* Thuill.; *Deschampsia cespitosa* subsp. *parviflora* (Thuill.) K. Richt.)

Europe. Perennial, leaf blades narrow, see *Flore des Environs de Paris* 1: 38. 1799, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Flore Descriptive et Analytique des Environs de Paris* 2: 806. 1861, *Plantae Europaeae* 1: 56. 1890.

D. cespitosa (L.) P. Beauv. var. *pulchra* (Nees & Meyen) Nicora (*Aira pulchra* (Nees & Meyen) Steud.; *Deschampsia pulchra* Nees & Meyen; *Deyeuxia grata* Keng)

Chile. Perennial, grassy slopes, see *Gramineae* 24-25. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19 (Suppl. 1): 156-157. 1843, *Synopsis Plantarum Glumacearum* 1: 220. 1854 and *Sunyatsenia* 6(2): 87-90, f. 2. 1941, *Darwiniana* 18(1-2): 101. 1973, *Flora Patagónica* 3: 1-583. 1978.

D. chapmanii Petrie (*Deschampsia novae-zelandiae* Petrie)

New Zealand. Stoloniferous, erect or ascending, branched, slender, tufted, leafy, forming swards, leaf sheath ribbed, ligule acuminate, loose slender inflorescence paniculate, glumes unequal, lemma mucronate or with a subterminal awn, moist areas, grasslands, sea level to alpine, subantarctic, see *Fl. Antarct.* 1: 102, t. 56. 1845, *J. Linn. Soc. Bot.* 19: 111. 1881, *Transactions and Proceedings of the New Zealand Institute* 23: 401-402. 1891, *Rev. Gen. Pl.* 2: 789. 1891, *J. Bot.* 29: 238. 1891 and *New Zealand Journal of Botany* 27: 553. 1989, *New Zealand Journal of Botany* 29: 101-116. 1991, *Fl. New Zealand* 5: 309. 2000.

D. christophersenii C.E. Hubb. (Erling Christophersen, b. 1898)

Tristan da Cunha, Inaccessible. Indeterminate species, see *Bulletin of the British Museum (Natural History), Botany* 8: 388. 1981.

in English: hairgrass

D. congestiformis W.E. Booth (*Calamagrostis purpurascens* R. Br.)

North America, Montana, Canada, Arctic regions. Vulnerable species, coastal, seacoast, see *Botanical Appendix to Captain Franklin's Narrative* 731. 1823 and *Rhodora* 45(538): 414. 1943.

in English: Montana hairgrass

D. cordilleranum Hauman

Argentina. See *Anales de Sociedad Científica Argentina* 86: 231. 1918.

D. danthonioides (Trin.) Munro ex Bentham (*Aira calycina* (J. Presl) Steud.; *Aira danthonioides* Trin.; *Deschampsia calycina* J. Presl; *Deschampsia danthonioides* var. *gracilis* (Vasey) Munz; *Deschampsia gracilis* Vasey; *Trisetum glabrum* Buckley) (for the French botanist D. (Étienne) Danthoine, fl. 1788, agrostologist)

Northern America. Annual, small, simple, tufted, auricles absent, sheaths open, ligules pointed, a narrow and erect flower head, lemmas purplish, bent awn, found in waste ground, vernal pools, on dry slopes, gravel, roadsides, mesas, damp bare soil, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 57. 1830, *Reliquiae Haenkeanae* 1(4-5): 251. 1830, *Synopsis Plantarum Glumacearum* 1: 220. 1854, *Plantae Hartwegianae* (Plantae Hartwegianae imprimis Mexicanas adjectis nonnullis Grahamianis enumerat novasque describit). 342. London 1839-1857, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862, *Botanical Gazette* 10: 224. 1885.

in English: annual hairgrass

D. domingensis Hitchc. & Ekman

Dominican Republic. See *Manual of the Grasses of the West Indies* 67, f. 37. 1936.

D. elongata (Hook.) Munro ex Bentham (*Aira aciphylla* Franch.; *Aira aciphylla* var. *pumila* Franch.; *Aira elongata* Hook.; *Aira vaseyana* Rydb.; *Deschampsia aciphylla* (Franch.) Speg.; *Deschampsia cespitosa* subsp. *beringensis* (Hultén) W.E. Lawr.; *Deschampsia ciliata* (Vasey ex Beal) Rydb.; *Deschampsia elongata* (Hook.) Munro; *Deschampsia elongata* var. *ciliata* Vasey ex Beal; *Deschampsia elongata* var. *tenuis* Vasey ex Beal; *Deyeuxia schaffneri* E. Fourn.; *Dichanthium fecundum* S.T. Blake)

Alaska, western U.S., Mexico, Argentina, Chile. Perennial bunchgrass, slender, erect, densely tufted, leaves mostly basal and hairlike, ligules pointed, open sheaths smooth, auricles absent, flat or folded blades, narrow panicle, pale-green to purple flower head, pointed glumes, blunt-tipped lemmas, reproduces from seeds and tillers, provides excellent forage in mountain meadows, occurs in a wide variety of habitats including forest openings, commonly found in

moist soil in open to shaded habitats, damp open places, damp red soil, dry red rocky soils, dry or damp bare soil, in moderate to dry habitats, on moist slopes, along stream banks, in moist forests, subalpine forest, riparian forest, in many wetland and riparian habitats, woodlands, grasslands, meadows, marshes, valley floodplains, stream and lake margins, see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Flora Boreali-Americana* 2: 243, t. 228. 1840, *Plantas Hartwegianae imprimis Mexicanas* 342. 1857, *Bulletin de la Société Botanique de France* 24: 181. 1877, *Mex. Pl.* 2: 107. 1886, *Mission Scientifique du Cap Horn, Botanique* 5: 384. 1889, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 89. 1896, *Grasses of North America for Farmers and Students* 2: 371-372. 1896 and *Reports of the Princeton University Expeditions to Patagonia ... Botany* 8: 200. 1904, *Flora of the Rocky Mountains* 60. 1917, *Flora of the Rocky Mountains, second edition* 1112. 1922, *Kongliga Svenska Vetenskapsakademiens Handlingar* 3(5): 107, t. 4, f. 9, f. a. 1927, *University of Queensland Papers: Department of Biology* 2(3): 51. 1944, *American Journal of Botany* 32: 302. 1945, *Phytologia* 37(4): 317-407. 1977, *Las Gramíneas de México* 2: 1-344. 1987.

in English: slender hairgrass, hairgrass

D. flexuosa (L.) Trinius (*Aira flexuosa* L.; *Aira flexuosa* var. *montana* Brongn., nom. illeg., non *Aira flexuosa* var. *montana* Huds.; *Aira nitida* (J. Presl) Steud., nom. illeg., non *Aira nitida* Biehler; *Aira stricta* (Hack.) Nyman; *Aira versicolor* Roem. & Schult.; *Aira vestita* Steud.; *Arundo flexuosa* (L.) Clairv.; *Avena flexuosa* (L.) Mert. & Koch, nom. illeg., non *Avena flexuosa* Schrank; *Avenella flexuosa* (L.) Parl.; *Avenella flexuosa* (L.) Drejer; *Avenella flexuosa* (L.) Drejer subsp. *montana* (L.) Á. Löve & D. Löve; *Avenella flexuosa* (L.) Drejer subsp. *flexuosa*; *Deschampsia flexuosa* (L.) Nees; *Deschampsia flexuosa* f. *flavescens* Slyven; *Deschampsia flexuosa* var. *montana* (L.) Griseb.; *Deschampsia fuegina* Phil.; *Deschampsia macloviana* Gand.; *Deschampsia martinii* Phil.; *Deschampsia nitida* J. Presl; *Deschampsia philippii* Macloskie; *Deschampsia stricta* Hack.; *Deschampsia tenella* Phil., nom. illeg., non *Deschampsia tenella* Petrie; *Deschampsia vestita* (Steud.) Hauman; *Lerchenfeldia flexuosa* (L.) Schur subsp. *montana* (L.) Tzvelev; *Lerchenfeldia flexuosa* (L.) Schur; *Lerchenfeldia flexuosa* (L.) Schur subsp. *flexuosa*; *Podionapus flexuosus* (L.) Dulac; *Salmasia flexuosa* (L.) Bubani)

Boreal eastern North America and Eurasia, South America. Perennial, tufted, hairless, slender and wiry stems, erect or geniculate at base, turf making, sometimes with short rhizomes, obtuse ligule deeply lobed and truncate, leaf sheath rounded membranous to submembranous, tightly inrolled wavy and glabrous leaves thread-like and dark green, open and loose inflorescence more or less erect, spikelets tinged purple and silvery white, glumes subequal, lemma awned and scabrous, lemma apices notched or minutely denticulate, awns twisted and bent to geniculate, weed species,

useful for erosion control, native pasture species, forage, very resistant to cold and to a long snowy period, occurs in acidic soils, damp ground, turfy places, ledges dry open soils, dry woods, wet meadows, rocky slopes, dry to wet sandy loam soil, wasteland, see *Species Plantarum* 1: 65. 1753, *Manuel d'Herborisation en Suisse et en Valais* 16. 1811, *Systema Vegetabilium* 2: 679. 1817, *Reliquiae Haenkeanae* 1(4-5): 251. 1830, *Bull. Sci. Acad. Imp. Sci. Saint Pétersbourg* 1: 66. 1836, *Flora Excursoria Hafniensis* 32. 1838, *Flora italiana, ossia descrizione delle piante ...* 1: 246. 1848, *Flora Rossica* 4(13): 420. 1852, *Synopsis Plantarum Glumacearum* 1: 220, 424. 1854, *Enumeratio Plantarum Transsilvaniae* 753. 1866, *Flore du Département des Hautes-Pyrénées* 83. 1867, *Anales de la Universidad de Chile* 94: 23-25. 1896 and *Flora Pyrenaea ...* 4: 319. 1901, *Reports of the Princeton University Expeditions to Patagonia ...* *Botany* 8: 961. 1906, *Bulletin de la Société Botanique de France* 60: 28. 1913, *Le Bambou* 9: 337. 1929, *The Flora of Canada* 2: 93-545. 1978 [1979].

in English: crinkled hairgrass, common hairgrass, wavy grass, wavy hairgrass, wavy hair grass

in French: canche flexueuse

D. flexuosa (L.) Trin. var. **flexuosa** (*Aira flexuosa* L.; *Avenella flexuosa* (L.) Drej.; *Lerchenfeldia flexuosa* (L.) Schur)

Northeast and South America, Canada, U.S., Chile, Argentina. Perennial, see *The Flora of Canada* 2: 93-545. 1978 [1979].

in English: wavy grass

D. flexuosa (L.) Trin. var. **ligulata** Stapf

Asia, Borneo, Philippines. Perennial, erect, densely tufted, see *Trans. Linn. Soc. London, Bot.* 4: 248. 1894.

D. flexuosa (L.) Trin. var. **montana** (L.) Griseb. (*Avenella flexuosa* (L.) Drej. subsp. *montana* (L.) Á. & D. Löve; *Deschampsia flexuosa* (L.) Trin. subsp. *montana* (L.) Á. & D. Löve; *Deschampsia flexuosa* var. *montana* (L.) Ducommun, nom. illeg., non *Deschampsia flexuosa* var. *montana* (L.) Griseb.; *Deschampsia flexuosa* (L.) Trin. var. *pallida* Berl.; *Lerchenfeldia flexuosa* (L.) Schur subsp. *montana* (L.) Tzvelev)

Northern America, Canada, U.S. Perennial, alpine, see *Species Plantarum* 65. 1753, *Flora Rossica* 4(13): 420. 1852.

in English: Montana wavy grass

D. gracillima Kirk

New Zealand. Perennial, subalpine to alpine, slender, erect, densely tufted, open, culms often hidden by leaf sheaths, ligule acute, leaves stiff, stiff and erect panicle, bisexual florets light green when young and golden-brown at maturity, glumes variable, glumes subequal or unequal, lemma hyaline 4-toothed, when present a very small subapical awn, palea bifid, rocky ground, boggy spots, see *Journal of*

Botany, British and Foreign 29: 237. 1891 and *Fl. New Zealand* 5: 312. 2000.

D. kingii (Hook.f.) E. Desv. (*Aira elatior* Steud.; *Aira grandiflora* Nees ex Steud., nom. illeg., non *Aira grandiflora* (Bertol.) Bertol.; *Aira kingii* Hook.f.; *Deschampsia grandiflora* Macloskie; *Deschampsia grandiflora* B.D. Jacks.; *Deschampsia kingii* (Hook.f.) Macloskie, nom. illeg., non *Deschampsia kingii* (Hook.f.) E. Desv.; *Trisetum dozei* Franch.)

South America. Sandy beaches, see *Flora Antarctica* 2: 376, t. 135. 1846, *Synopsis Plantarum Glumacearum* 1: 220, 423. 1854, *Flora Chilena* 6: 335. 1854, *Mission Scientifique du Cap Horn, Botanique* 5: 384, pl. 9 & f. a-e. 1889, *Index Kewensis* 1: 735. 1893 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, I [2]*, *Botany* 8(1,5,1): 201-202. 1904.

D. koelerioides Regel (*Deschampsia cespitosa* subsp. *koelerioides* (Regel) Tzvelev; *Deschampsia koelerioides* (Peyr.) Benth., nom. illeg., non *Deschampsia koelerioides* Regel)

Europe, Russia. See *Linnaea* 30(1): 5-6. 1859, *Bulletin de la Société Impériale des Naturalistes de Moscou* 41: 299. 1868, *Journal of the Linnean Society, Botany* 19: 96. 1881.

D. laxa Phil. (*Calamagrostis hirthii* Phil.; *Deschampsia kingii* (Hook.f.) E. Desv.; *Trisetum dozei* Franch.) (named for Adolfo/Adolphus Hirth, botanist and plant collector in Chile, a specialist of Orchidaceae)

Southern America, Chile, Argentina. Perennial, see *Flora Antarctica* 2: 376. 1846, *Flora Chilena* 6: 335. 1854, *Linnaea* 29(1): 92. 1858, *Anales de la Universidad de Chile* 94: 22. 1896, *Mission Scientifique du Cap Horn, Botanique* 5: 384, pl. 9 & f. a-e. 1899.

D. liebmänniana (E. Fourn.) Hitchc. (*Deschampsia straminea* Hitchc.; *Deyeuxia liebmänniana* E. Fourn.)

America, Mexico. Alpine, rocky places, good forage, see *Bulletin de la Société Botanique de France* 24: 181. 1877, *Mexic. Pl.* 2: 106. 1886 and *Contributions from the United States National Herbarium* 17(3): 323. 1913, *Fl. Novogaliciana* 14: 396. 1983.

D. littoralis (Gaudin) Reuter (*Aira caespitosa* var. *littoralis* Gaudin; *Deschampsia cespitosa* (L.) P. Beauv. subsp. *littoralis* (Gaudin) Rchb.; *Deschampsia cespitosa* subsp. *rhenana* (Gremli) Kerguelen; *Deschampsia littoralis* var. *rhenana* Gremli; *Deschampsia rhenana* Gremli)

France, Germany, Switzerland. Indeterminate species, coastal, riparian, see *Flora Helvetica* 1: 323. 1828, *Lejeunia* 110: 56. 1883 and *Flora Reipublicae Popularis Sinicae* 9(3): 151, t. 38, f. 7-9. 1987.

in French: canche des rives

D. looseriana Parodi (for the Chilean botanist G. Looser, 1898-1982. See *Darwiniana* 2: 138. 1928; *Revista Univ. (Santiago)* 19(3): 271-272. 1934; *Aliso* 11: 533. 1987; J.H.

Barnhart, *Biographical notes upon botanists*. 2: 401. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 242. 1972; Clodomiro Marticorena, *Bibliografía Botánica Taxonómica de Chile*. Monographs in Systematic Botany from the Missouri Botanical Garden, vol. 41: 371-378. 1992)

America, Chile. See *Darwiniana* 8: 460. 1949.

D. looseriana Parodi var. *looseriana*

America.

D. looseriana Parodi var. *triandra* Parodi

America. See *Darwiniana* 8: 464. 1949.

D. mackenzieana Raup (*Deschampsia cespitosa* var. *mackenzieana* (Raup) B. Boivin)

Canada, Saskatchewan, Lake Athabaska. Sand dune endemic, vulnerable grass with low genetic variability, perennial, suitable to survive in the active sand dune complex, sandy beach, similar to *Deschampsia cespitosa* (L.) P. Beauv., see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812 and *Journal of the Arnold Arboretum* 17: 205, t. 190. 1936, *Le Naturaliste Canadien* 94(4): 524. 1967, *Checklist of the Vascular Plants of the Northwest Territories Canada* i-viii, 1-607. 1980.

in English: Mackenzie hairgrass

in French: deschampsie du bassin du Mackenzie

D. maderensis (Hackel & Bornm.) Buschm. (*Deschampsia foliosa* var. *maderensis* Hack. & Bornm.)

Portugal, Madeira. Endangered species, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 401. 1903, *Phyton* (Buenos Aires) 2: 276. 1950.

D. media (Gouan) Roemer & Schultes (*Aira media* Gouan; *Aira refracta* Lag.)

Europe. Loose clumps, dark blue-green bristle-like leaves, silvery or purplish to brown airy flower plumes, useful for erosion control, see *Illustrationes et Observationes Botanicae* 3. 1773 and *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 12: 82. 1981.

in French: canche moyenne

D. mejlandii C.E. Hubb.

Tristan da Cunha, Inaccessible. Indeterminate species, see *Bulletin of the British Museum (Natural History)*, *Botany* 8: 389. 1981.

in English: hairgrass

D. mendocina Parodi

Argentina. See *Darwiniana* 8: 447. 1949.

D. micrantha Phil.

South America. See *Anales de la Universidad de Chile* 94: 24. 1896.

D. monandra Parodi (*Deschampsia glauca* (E. Desv.) Parodi, nom. illeg., non *Deschampsia glauca* C. Hartm.; *Monandraira glauca* E. Desv.)

Chile. See *Fl. Chile* 6: 342, t. 79, f. 1. 1853 and *Darwiniana* 8: 467. 1949, *Revista Argentina de Agronomía* 20: 12. 1953, *Gayana, Botánica* 42: 1-157. 1985.

D. novae-zelandiae Petrie

New Zealand. Lemma minutely denticulate, awnless, see *Fl. Antarct.* 1: 102, t. 56. 1845, *J. Linn. Soc. Bot.* 19: 111. 1881, *Transactions and Proceedings of the New Zealand Institute* 23: 401-402. 1891, *Rev. Gen. Pl.* 2: 789. 1891, *J. Bot.* 29: 238. 1891 and *New Zealand Journal of Botany* 27: 553. 1989, *New Zealand Journal of Botany* 29: 101-116. 1991, *Fl. New Zealand* 5: 309. 2000.

D. nubigena Hillebr. (*Aira nubigena* (Hillebr.) Hitchc.; *Deschampsia australis* Hillebr.; *Deschampsia australis* auct. non Nees ex Steud.; *Deschampsia australis* Nees ex Steud. subsp. *nubigena* (Hillebr.) Skottsberg; *Deschampsia australis* Nees ex Steud. var. *gracilis* Skottsberg; *Deschampsia australis* Nees ex Steud. var. *nubigena* (Hillebr.) Skottsberg; *Deschampsia australis* Nees ex Steud. var. *tenuissima* (Skottsberg) Skottsberg; *Deschampsia pallens* Hillebr.)

U.S., Hawaii. Perennial tussock-forming, growing in sub-alpine grassland, slopes, in alpine dry shrubland, see *Flora of the Hawaiian Islands* 520-521. 1888 and *Memoirs of the Bernice Pauahi Bishop Museum* ... 8(3): 145, f. 30. 1922, *Acta Horti Gothoburgensis* 15: 279. 1944.

in English: alpine hairgrass, hairgrass

in Hawaii: kalamaloa

D. parvula (Hook.f.) Desv. (*Aira parvula* Hook.f.; *Deschampsia parvula* (Hook.f.) Macloskie, nom. illeg., non *Deschampsia parvula* (Hook.f.) Desv.; *Trisetum parvulum* (Hook.f.) Speg.)

South America. See *Flora Antarctica* 2: 377. 1846, *Flora Chilena* 6: 339. 1854, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 89. 1896 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, I [2]*, *Botany* 8(1,5,1): 202-203. 1904.

D. patula (Phil.) Pilg. ex Skottsberg. (*Deschampsia elegantula* var. *patula* (Phil.) Parodi; *Monandraira patula* Phil.)

South America. See *Anales de la Universidad de Chile* 43: 565. 1873 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 56: 175. 1916, *Darwiniana* 8: 454. 1949.

D. pusilla Petrie

New Zealand. Alpine, tufted, compact, leafy, branched at base, ligule acute, leaf sheath membranous, panicle more or less compact and dense, glumes equal to subequal, lemma toothed with short terminal mucro, see *Transactions and Proceedings of the New Zealand Institute* 23: 403. 1891

and *New Zealand Journal of Botany* 29: 101-116. 1991, *Fl. New Zealand* 5: 313. 2000.

D. refracta (Lag.) Roem. & Schult. (*Deschampsia media* (Gouan) Roem. & Schult. subsp. *refracta* (Lag.) Paunero)

Asia, Europe. See *Illustrationes et Observationes Botanicae* 3. 1773 and *Bulletin de la Société Botanique de France* 125(5-6): 318. 1978, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 12: 87. 1981.

D. reuteri Pilg. (*Homalachna grandiflora* (Boiss. & Reut.) Pilg.) (after the Swiss botanist George François Reuter, 1805-1872, botanical collector. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 147. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 330. Boston, Mass. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 231. Oxford 1964; M. Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. Madrid 1858; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14 Aufl. 1993; Stafleu & Cowan, *Taxonomic literature*. 4: 742-744. 1983; H. Margot, "Essai d'une flore de l'île de Zante." *Mém. Soc. Phys. Gen.* viii. [Genève, 1841]; Pierre Edmond Boissier (1810-1885), *Pugillus plantarum novarum Africae borealis Hispanicaeque australis*, auctoribus E. Boissier et G.F. Reuter. Geneva, Ex Typographia F. Ramboz et Socii, 1852; Pierre Edmond Boissier, *Diagnoses plantarum novarum hispanicarum praesertim in Castella nova lectarum* / auctoribus E. Boissier et G.F. Reuter. Geneva: Typis Ferdinandi Ramboz, 1842)

Europe. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 227, 555. 1949.

D. rhenana Greml. (*Aira alpina* var. *rhenana* (Greml.) Brand; *Aira caespitosa* subsp. *rhenana* (Greml.) Nyman; *Aira littoralis* subvar. *rhenana* (Greml.) Asch. & Graebn., nom. illeg., non *Aira littoralis* (Gaudin) Godet; *Deschampsia caespitosa* subsp. *rhenana* (Greml.) Kerguélen; *Deschampsia cespitosa* subsp. *rhenana* (Greml.) Kerguélen; *Deschampsia littoralis* var. *rhenana* (Greml.) Hack.)

Germany, Switzerland. Indeterminate species, see *Excursionsflora für die Schweiz* edition 2, 418. Aarau 1874, *Synopsis der mitteleuropäischen Flora* 2: 293. 1899 and *Synopsis der Deutschen und Schweizer Flora* 3: 2731. 1907, *Lejeunia* 110: 56. 1983.

D. robusta C.E. Hubb.

Tristan da Cunha. Indeterminate species, see *Bulletin of the British Museum (Natural History)*, *Botany* 8: 391. 1981.

D. setacea (Huds.) Hack. (*Aira montana* var. *setacea* (Huds.) Huds.; *Aira setacea* Huds.; *Aristavena setacea*

(Huds.) F. Albers & Butzin; *Deschampsia discolor* (Thuill.) P. Beauv.; *Deschampsia thuilleri* Gren. & Godr.)

Europe. Vulnerable, useful for erosion control, wetland, damp heath, see *Flora Anglica* 30. 1762, *Flora Anglica, Editio Altera* 35. 1778, *Catalogue Raisonné des Graminées du Portugal* 33. Coimbra 1880 and *Willdenowia* 8(1): 83. 1977.

in English: bog hair grass

D. sukatschewii (Popl.) Roshev. (*Aira caespitosa* var. *submutica* Trautv.; *Aira sukatschewii* Popl.; *Deschampsia caespitosa* subsp. *orientalis* Hultén; *Deschampsia cespitosa* subsp. *orientalis* Hultén; *Deschampsia sukatschewii* subsp. *orientalis* (Hultén) Tzvelev; *Deschampsia sukatschewii* subsp. *submutica* (Trautv.) Tzvelev)

Russia, Europe. See *Kongliga Svenska Vetenskapsakademien Handlingar* III 5: 109, t. 5, f. a, b. 1927, *Flora URSS* 2: 246. 1934, *Novosti Sist. Vyss. Rast.* 32: 182. 2000.

D. tenella Petrie (*Deschampsia tenella* Phil., nom. illeg., non *Deschampsia tenella* Petrie)

New Zealand. Tufted, slender, leafy, arect or geniculate at base, leaf sheath membranous, ligule acuminate, soft filiform leaves, panicle very lax with branches erect to spreading, glumes unequal, lemma toothed, awnless or with a subapical awn, sea level to alpine, boggy places, along streams and on stream banks, grassland, see *Transactions and Proceedings of the New Zealand Institute* 23: 402. 1891, *Anales de la Universidad de Chile* 94: 25. 1896 and *Transactions and Proceedings of the New Zealand Institute* 33: 329. 1901, *Fl. New Zealand* 5: 313. 2000.

D. turczaninowii Litv. (*Deschampsia caespitosa* subsp. *turczaninowii* (Litv.) Tzvelev) (for the Russian botanist Porphir Kiril Nicolai Stepanowitsch Turczaninow, 1796-1863 (or 1864), traveler, botanical explorer, administrator; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 408. 1965; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898.] Leipzig 1981; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 257. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; Stafleu & Cowan, *Taxonomic literature*. 6: 537-541. 1986; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980)

Russia, Irkutsk. Indeterminate species, see *Species Plantarum* 1: 64-65. 1753, *Essai d'une Nouvelle Agrostographie* 91: 91. 1812.

D. venustula Parodi

South America. See *Darwiniana* 8: 450, f. 12. 1949.

D. wacei C.E. Hubb.

Tristan da Cunha. Indeterminate species, see N.M. Wace & M.W. Holdgate, *Man and Nature in the Tristan da Cunha Islands*. Gland and Cambridge, IUCN. (IUCN Monograph No. 6) 1976, *Bulletin of the British Museum (Natural History)*, Botany 8: 392. 1981, Y.M. Chamberlain, M.W. Holdgate and N.M. Wace, "The littoral ecology of Gough Island, South Atlantic Ocean." *Tethys*. 11: 302-319. 1985.

Desmazeria Dumort. = *Brizopyrum* Link,
Cutandia Willk., *Sclerochloa* P. Beauv.,
Scleropoa Griseb.

Commemorating the French botanist John (Jean) Baptiste Henri Joseph Desmazieres, 1786-1862, merchant, horticulturist, author of *Plantes cryptogames du Nord de la France*. Lille 1825-1851; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 447. 1965; Barthélemy Charles Joseph Dumortier (1797-1878), *Commentationes Botanicae*. 26. Tournay 1822.

About 3-5 species, Mediterranean, Europe. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Ammochloinae, annual, glabrous, herbaceous, culm internodes hollow, leaves linear and narrow, plants bisexual, inflorescence a single raceme or paniculate, panicle rigid and 1-sided, spikelets on stout pedicels, 2 glumes unequal and coriaceous, upper glume longer, lower glume 3-nerved, lemmas narrowly ovate and keeled, awnless, palea present, 2 free and membranous lodicules, 3 stamens, 2 stigmas, sandy places, open habitats, dry sandy places, related to *Cutandia* Willk., type *Desmazeria sicula* (Jacq.) Dumort., see *Species Plantarum* 1: 67-70, 72-76. 1753, *Essai d'une Nouvelle Agrostographie* 97-98, 174, 177. 1812, *Commentationes Botanicae* 26-27. 1822, Johann Heinrich Friedrich Link (1767-1851), *Hortus regius botanicus berolinensis*. 1: 44, 159, 280. Berolini [Berlin] 1827, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 431. 1846, Vincenzo (Vincentius) Tineo (1791-1856), *Plantarum rariorum Siciliae minus cognitarum* ... 2: 17-18. Panormi 1846, *Botanische Zeitung*. Berlin 18: 130. 1860, *Catalogue Raisonné des Plantes Vasculaires de la Tunisie* 482. 1896 and *Contr. U.S. Natl. Herb.* 10: 2. 1906, *Botanical Journal of the Linnean Society* 76: 350-352. 1978, *Nord. J. Bot.* 1: 20. 1981, *Annali di Botanica* 45: 75-102. 1987, *Boletim da Sociedade Broteriana*, ser. 2 61: 281-304. 1988, *Anales del Jardín Botánico de Madrid* 47: 411-417. 1990, *Flora Mediterranea* 1: 229-236. 1991, *Contributions from the United States National Herbarium* 48: 151, 241, 256, 608-609. 2003.

Species

D. philistaea (Boiss.) H. Scholz (*Scleropoa philistaea* Boiss.)

Europe. See *Diagnoses plantarum orientalium novarum*, ser. 1, 13: 60. 1853, *Bulletin de la Société Botanique de France* 19: 83. 1872 and *Willdenowia* 6(2): 291. 1971, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 94: 556-561. 1974.

D. rigida (L.) Tutin (*Catapodium rigidum* (L.) C.E. Hubb. ex Dony; *Catapodium rigidum* (L.) Dony; *Catapodium rigidum* subsp. *rigidum*; *Festuca rigida* (L.) Rasp.; *Glyceria rigida* (L.) Sm.; *Poa rigida* L.; *Sclerochloa rigida* (L.) Link; *Scleropoa rigida* (L.) Griseb.)

Europe, Asia. Annual, small, rigid, stems geniculate at the base, panicle 1-sided and contracted, spikelets on a short thick pedicel, lemmas obtuse and 3-nerved, see *Flora Anglica* 10. 1754, *Amoen. Acad.* 4: 265. 1759, *Flora Caroliniana, secundum* ... 80. 1788, *Prodromus Florae Novae Hollandiae* 179. 1810, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 90. 1821, *English Flora* 1: 119. 1824, *Annales des Sciences Naturelles, Botanique* 5: 445. 1825, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 431. 1844, *Flore de Département des Hautes-Pyrénées* 90. 1867, *Flora of the Southern United States* 609. 1897 and *Flora of the British Isles* 1434. 1952, Charles Abbot (1761-1817), *Flora Bedfordiensis*, ... 437. 1953, *Bot. J. Linn. Soc.* 91: 439. 1985, *Flora of SA* 4: 1888. 1986, *Grasses of New South Wales* 136. 1991, *The Grasses of Tasmania* 52. 1991, *Taxon* 49(2): 256. 2000.

in English: fern grass, hard poa, rigid fescue

in Morocco: mahadoun srhir

D. rigida (L.) Tutin subsp. *hemipoa* (Delile ex Spreng.) Stace (*Festuca hemipoa* Delile ex Spreng.; *Scleropoa hemipoa* (Delile ex Spreng.) Parl.)

Europe, Asia. See *Botanical Journal of the Linnean Society* 76: 352. 1778, *Systema Vegetabilium, editio decima sexta* 4(2): 36. 1827, *Flora italiana, ossia descrizione delle piante* ... 1: 472. 1848[-1850].

D. rigida (L.) Tutin var. *major* (C. Presl) Stace (*Sclerochloa patens* C. Presl; *Sclerochloa rigida* var. *major* C. Presl; *Scleropoa rigida* var. *major* (C. Presl) Lousley)

Europe, Asia. See *Botanical Journal of the Linnean Society* 76: 352. 1778, *Cyperaceae et Gramineae Siculae* 45. 1820, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 90. 1821, *Flora Sicula* (Presl) 1: xlv. Pragae [Praha] 1826 and *Journal of Botany, British and Foreign* 77: 22. 1939.

D. sicula (Jacq.) Dumort. (*Brizopyrum siculum* (Jacq.) Link; *Cynosurus siculus* Jacq.; *Demazeria sicula* (Jacq.) Dumort.; *Eragrostis sicula* (Jacq.) K. Koch; *Poa sicula* (Jacq.) Jacq.)

Europe. See *Observationum Botanicarum* 2: 22, t. 43. 1767, *Genera Plantarum* 23. 1776, *Collectanea* 2: 304. 1789, *Hortus Regius Botanicus Berolinensis* 1: 159. 1827, *Linnaea* 21(4): 408. 1848 and *Flora Sicula* (Lojacono) 3: 378. 1909.

Desmostachya (Hook.f.) Stapf =
Desmostachya (Stapf) Stapf, *Desmostachys*
 Miers (Icacinaeae), *Stapfiola* Kuntze

Greek *desmos* “a bond, band, binding material” and *stachys* “a spike, a narrow inflorescence,” possibly referring to the habit.

One species, Old World tropics. Chloridoideae, Eragrostidae, perennial, stout, herbaceous, erect, robust, rhizomatous, tufted, auricles absent, ligule a fringe of hairs, lower sheaths leathery and persistent around the base of the stem, leaves rigid ending in a filiform tip, plants bisexual, inflorescence narrow and cylindrical, numerous racemes erect or curving arranged on a long central axis, spikelets sessile and densely imbricate, spikelets falling entire, 2 acute glumes unequal to very unequal, lemmas keeled and acute, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, a good desert fodder, species considered sacred among Hindus, open habitats, salt marshes, coastal, arid regions, dry soils, sandy wadis, closely related to *Eragrostis* Wolf, see *The Flora of British India* 7: 324. 1897, *Flora Capensis* 7: 316. 1898 and *Lexicon Generum Phanerogamarum* 532. 1903.

Species

D. bipinnata (L.) Stapf (*Briza bipinnata* L.; *Coelachyrum longiglume* Napper; *Cynosurus durus* Forssk., nom. illeg., non *Cynosurus durus* L.; *Desmostachya cynosuroides* (Retz.) Haines; *Desmostachya cynosuroides* Stapf ex Massey; *Eragrostis bipinnata* (L.) Muschl., nom. illeg., non *Eragrostis bipinnata* (L.) Schum.; *Eragrostis bipinnata* (L.) Schum.; *Eragrostis cynosuroides* (Retz.) P. Beauv., also spelled *cynosurioides*; *Leptochloa bipinnata* (L.) Hochst.; *Poa cynosuroides* Retz., also spelled *cynosurioides*; *Pogonarthria bipinnata* (L.) Chiov.; *Stapfiola bipinnata* (L.) Kuntze; *Uniola bipinnata* L.; *Uniola bipinnata* (L.) L.)

Northeast tropical Africa, Ethiopia, Sudan, Somalia, India, China. Perennial, harsh, vigorous, erect, stout, coarse, robust, tufted, tussocky, tall, leafy, branching from the base, rhizomatous, stout creeping rootstock, rhizomes spreading, leaf blades linear, sheaths glabrous, ligule a dense ring of hairs, leaves in compact basal rosette, basal leaves crowded, coarse inflorescence, cylindrical panicles spike-like, strongly compressed spikelets ovate to linear-oblong closely packed on short branches, glumes unequal, good fodder, low to good grazing value, grazed when young, used as a fodder in mixture with grain and wheat, weed species, thatching grass, culms and rhizomes considered diuretic, a good sand binder, useful for erosion control, produces a strong fiber used for making coarse ropes, common in arid regions, damp situations, plains, saline *usar* soils, savannah, sandy and waterlogged sites, banks of water courses, in dry hot situations, ditches, sandy desert areas and semidesert,

canal banks, waste ground, drains, this species is considered sacred by the Brahmins, see *Flora Palaestina* 12. 1756, *Species Plantarum, Editio Secunda* 1: 204. 1762, *Flora* 38: 422. 1855, *Die Pflanzenwelt Ost-Afrikas* 50: 113. 1895 and *Flora Capensis* 7: 632. 1900, *Lexicon Generum Phanerogamarum* 532. 1903, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 49: 74. 1907, *Annuario del Reale Istituto Botanico di Roma* 8(3): 362. 1908, Nicholas B. Peet, Andrew R. Watkinson, Diana J. Bell and Uday. R. Sharma, “The conservation management of *Imperata cylindrica* grassland in Nepal with fire and cutting: an experimental approach.” *Journal of Applied Ecology* 36(3): 374-387. June 1999, *Taxon* 49(2): 248. 2000.

in English: halfa grass

in India: aswalayana darbha gaddi, barhi, chir, daab, daabh, dab, dabhat, dabvi, dabwi, darbh, darbha, darbha pull, darbhapullu, davoli, davolia, dhab, dharbe, dib, drab, drabh, dubha, durbha, durbka, durpa, durva, garbha, hrasva, khusa, koosha, kurava, kus, kusa, kush, kusha, kushadarbh, kushadarbha, kutha, kutupa, pavithra, sadanapu veduru, soochyagra, yainabhooshana

in Arabic: chalfi, halfa, hhalfe

in Egypt: halfa

in Mali: budaur, halfa

in Sahara (Tassili): taksést, tébastawt

in Sudan: halfa

in Yemen: halafi

Despretzia Kunth = *Senites* Adans., *Zeugites*
 P. Browne

Centothecoideae, Centothecae, or Panicoideae, Centothecae, type *Despretzia mexicana* Kunth, see *The Civil and Natural History of Jamaica in Three Parts* 341. 1756, *Systema Naturae, Editio Decima* 2: 1306. 1759, *Nomenclator Botanicus edition 3*, edition 3, 270. 1797, *Species Plantarum. Editio quarta* 4: 204. 1805, *Révision des Graminées* 2: 485, t. 157. 1831, *Nomenclator Botanicus. Editio secunda* 2: 798. 1841, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 247. 1842 and *Contributions from the United States National Herbarium* 12(3): 127. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 6: 158. 1908, *Symbolae Antillarum* 6: 3. 1909, *Contributions from the United States National Herbarium* 17(3): 370. 1913, *Contributions from the United States National Herbarium* 18(7): 392. 1917, *Symbolae Antillarum* 8: 51. 1920, *Flora Novo-Galiciana* 14: 413. 1983, *Flora Mesoamericana* 6: 248-249. 1994, *Contributions from the United States National Herbarium* 46: 177, 569, 639-641. 2003.

Devauxia Kunth = *Devauxia* R. Br.
(Centrolepidaceae), *Glyceria* R. Br.

Possibly after the French botanist Nicaise Auguste Desvaux, 1784-1856, in 1817 Director of the Angers Botanic Garden, among his works are *Nomologie botanique*. Angers 1817 and *Flore de l'Anjou*. Angers 1827. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 447. 1965; Robert Brown (1773-1858), *Prodromus florae Novae Hollandiae*. 252. 1810; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964.

Pooideae, Poodae, Meliceae, see *Species Plantarum* 1: 67, 75. 1753, *Prodromus Florae Novae Hollandiae* 179, 252, 532. 1810, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 367. 1833, *Syn. Pl. Glum.* 1: 287, 317. 1854, *Bull. Soc. Roy. Bot. Belgique* 7: 67. 1868 and *Aquatic and Wetland Plants of Southeastern United States Monocotyledons* 1-712. 1979, *Contributions from the United States National Herbarium* 48: 256, 371-379. 2003.

Deyeuxia Clarion ex P. Beauv. =
Sclerodeyeuxia (Stapf) Pilger

Genus dedicated to the French Nicolas Deyeux, 1745-1837, professor of pharmacology at Paris, editor of *Bibliothèque physico-économique*, joint author with Antoine Auguste (Augustin) Parmentier (1737-1818) of *Précis d'expériences et observations sur les différentes espèces de lait*. [1799], among his publications are *Analyse des nouvelles eaux minérales de Passy*, communiquée à l'École de médecine de Paris. Paris 1808 and *Considérations chimiques et médicales sur le sang des ictériques*, présentées ... à l'École de médecine de Paris. Paris 1804; see Ambroise Marie François Joseph Palisot de Beauvois, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 43, pl. IX. Paris 1812; Antoine A. Parmentier, *Examen chymique des pommes de terre*. Paris 1773.

About 20-42/110-200 species, Australasia, Malaysia, New Guinea. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Agrostidinae, perennial, coarse, herbaceous, erect or decumbent at base, more or less scabrous, caespitose, forming clumps or tussocks, sometimes rhizomatous, ligule membranous, leaf sheath rounded, leaves more or less rigid and flat or inrolled, plants bisexual, inflorescence paniculate contracted and more or less spicate, panicle dense or open and spreading, spikelets numerous and overlapping or laterally compressed, chasmogamous or cleistogamous, 1 bisexual floret, spikelets rarely 2-flowered, 2 glumes awnless more or less equal and keeled, lemma stiff and membranous, when present fine dorsal awn bent and twisted,

callus hairy, palea hyaline and 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, caryopsis compressed fusiform, ornamental, short flowering time, some species with awns early deciduous, found in highland and subalpine regions, pampas, there is considerable taxonomic confusion concerning this genus, this group is currently under revision and review, often included in *Calamagrostis* Adans., see also *Dichelachne* Endl. and the related genus *Agrostis* L., type *Deyeuxia montana* P. Beauv., see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Essai d'une Nouvelle Agrostographie* 43-44. 1812, *Observations sur les Graminées de la Flore Belgique* 126. 1824, *Conspectus Regni Vegetabilis* 50. 1828, *Révision des Graminées* 1: 77. 1829 and *Contr. U.S. Natl. Herb.* 24(6): 169. 1925, *Revista Argentina de Agronomía* 16(2): 62. 1949, *Revista Argentina de Agronomía* 20(1): 14. 1953, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 94-95, 97-98, 201-204. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 505, 507-508, 517, 523. 1959, *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 63(3): 229-251. 1960, *Darwiniana* 19(2-4): 404-412. 1975 [Z.E. Rúgolo de Agrasar, Novedades en el género *Deyeuxia* Clarion (Gramineae).], *Darwiniana* 21(2-4): 417-453. 1978, *American Journal of Botany* 71: 285-293. 1984, *Parodiana* 4(1): 73-95, 100. 1986, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 51-55. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 73: 294-295. 1988, *Willdenowia* 18: 243-252. 1988, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1671-1673. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Cytologia* 56: 437-452. 1991 [Cytogenetic studies on some Kashmir grasses. VIII Tribe Agrostideae, Festuceae and Paniceae], *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Flora Mesoamericana* 6: 240-241. 1994, Xenia Villavicencio, *Revision der Gattung Deyeuxia in Bolivien: eine taxonomisch-anatomische studie ...* 1-304. Berlin 1995, *Flora of Ethiopia and Eritrea* 7: 51-52. 1995, *New Zealand Journal of Botany* 33: 1-33. 1995, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996, *Flora Mediterranea* 8: 251-262. 1998, *Opera Botanica* 137: 1-42. 1999, *New Zealand Journal of Botany* 37: 63-70. 1999, *Journal of Biogeography* 27(5): 1107-1121. Sep 2000, *Telopea* 9(3): 439-448. 2001, *Global Ecology and Biogeography* 10(2): 133-146. Mar 2001, *Austral. Ecology* 26(2): 205-212. Apr 2001, *Contributions from the United States National Herbarium* 48: 191-227. 2003, *Austral. Ecology* 29(2): 201-208. Apr 2004, *Global Change Biology* 10(10): 1801-1809. Oct 2004, *Ecography* 28(1): 88-98. Feb 2005, *Plant Pathology* 54(2): 161-168. Apr 2005.

Species

D. accedens Vickery (*Calamagrostis accedens* (Vickery) Govaerts)

Tasmania, New South Wales, Victoria. Perennial, caespitose, slender, ligule membranous and truncate, auricles absent, basal leaf sheaths scabrous, leaves mostly basal, leaves more or less scabrous and not hard-tipped, inflorescence a panicle open or contracted, spikelets laterally compressed, glumes keeled, lemma awned, palea broad and 2-keeled, fruit glabrous and longitudinally grooved, growing in open habitats, open forest, see *Contributions from the New South Wales National Herbarium* 1: 61. 1940, *World Checklist of Seed Plants* 3(1): 9. 1999.

D. acuminata Vickery (*Calamagrostis acuminata* (Vickery) Govaerts)

New South Wales, Victoria, Tasmania. Perennial, erect, loosely tufted, robust slender, ligule membranous and truncate, auricles absent, basal leaf sheaths scabrous, leaf blade deeply grooved or channelled, erect to nodding large panicle, glumes keeled and unequal, lemma ovate and awned, palea 2-keeled, fruit glabrous and longitudinally grooved, grows in woodland, see *Contributions from the New South Wales National Herbarium* 1: 73. 1940, *World Checklist of Seed Plants* 3(1): 9. 1999.

D. affinis M. Gray (*Calamagrostis affinis* (M. Gray) Govaerts)

New South Wales, Victoria. Perennial, rare, small, geniculate or ascending, loosely tufted, ligule membranous, auricles absent, basal leaf sheaths glabrous, leaves mostly basal, leaves stiff and more or less hirsute, a contracted and oblong panicle, glumes purple, lemma ovate and more or less awned, palea hyaline, fruit elliptical and longitudinally grooved, found in moist or rocky areas, alpine herbfield, see *Contributions from Herbarium Australiense* 26: 9. 1976, *World Checklist of Seed Plants* 3(1): 9. 1999.

D. angustifolia Vickery (*Calamagrostis angustifolia* Kom.; *Deyeuxia angustifolia* (Kom.) Y.L. Chang, nom. illeg., non *Deyeuxia angustifolia* Vickery)

New South Wales. Rare species, perennial, slender, densely tufted, ligule membranous and truncate, auricles absent, basal leaf sheaths scabrous, leaves mostly basal, oblong and erect panicle, glumes more or less subequal, lemma awned, callus glabrous, fruit glabrous and longitudinally grooved, grows in swamps, see *Contributions from the New South Wales National Herbarium* 1: 67. 1940, *Claves Plantarum Chinae Boreali-Orientalis* Beijing 1959.

in English: narrow-leaf bent-grass

D. appressa Vickery (*Calamagrostis appressa* (Vickery) Govaerts)

New South Wales. Endangered species, perennial, erect, ligule membranous and truncate, auricles absent, basal leaf sheaths densely pubescent, leaves mostly basal hairy to

pubescent, leaf blade grooved, erect and contracted panicle green or purple, spikelets compressed, glumes unequal and very acute, lemma narrow-lanceolate and awned, palea 2-keeled and narrowly truncate, fruit glabrous and longitudinally grooved, wet places, see *Contributions from the New South Wales National Herbarium* 1: 54. 1940, *World Checklist of Seed Plants* 3(1): 9. 1999.

D. apsleyensis D.I. Morris (from Apsley River area, north of Apsley Gorge, Tasmania)

Tasmania. Rare species, perennial, loosely tufted, ligule membranous and obtuse, auricles absent, basal leaf sheaths densely pubescent, leaves mostly basal, green to purple panicle, hermaphrodite florets 1 per spikelet, glumes subequal to unequal, lemma bidentate and awned, palea 2-keeled and 2-veined, fruit glabrous and longitudinally grooved, eucalypt forests, see *Muelleria* 7(2): 160, 162-164, f. 11b, 12. 1989.

in English: Apsley bent-grass

D. aucklandica (Hook.f.) Zotov (*Agrostis aucklandica* Hook.f.; *Agrostis setifolia* (Hook.f.) Hook.f., nom. illeg., non *Agrostis setifolia* Brot.; *Calamagrostis setifolia* (Hook.f.) Cockayne; *Deyeuxia filiformis* var. *aucklandica* (Hook.f.) Zotov; *Deyeuxia setifolia* Hook.f.)

New Zealand. Perennial, montane to alpine, small, tussocky, tufted, compact, erect or curved and sometimes geniculate at base, leaf blade folded, leaf sheath more or less coriaceous and ribbed, ligule truncate, panicle spike-like, glumes nerved and acute, lemma membranous ovate-lanceolate, awn stout and curved to reflexed, palea keels scabrous, grassland, see *Flora Antarctica* 1: 96. 1845 [1844?], *Flora Novae-Zelandiae* 1: 299, t. 65B. 1853, *Handbook of the New Zealand Flora* 329. 1864 and *New Zealand Department Lands Report Botanical Survey Tongariro National Park* 35. 1908, *Transactions of the Royal Society of New Zealand* 73: 235. 1943, *Records of the Dominion Museum* 5: 139. 1965, Frans A. Stafleu & Richard S. Cowan, *Taxonomic literature*. 2: 270. 1979, *New Zealand J. Bot.* 33: 6-7. 1995.

D. avenoides (Hook.f.) Buchanan (*Agrostis avenoides* Hook.f.; *Calamagrostis avenoides* (Hook.f.) Cockayne; *Deyeuxia avenoides* var. *brachyantha* Hack.)

New Zealand. Perennial, alpine, slender, erect or curved, decumbent base, tufted, leaf sheath membranous, ligule ciliate, inflorescence more or less erect or nodding, cleistogamous or chasmogamous, glumes lanceolate, lemma membranous, awned from near the base of the lemma, palea keels scabrous to scabrid, open areas, forest, grassland, see *Handbook of the New Zealand Flora* 330. 1864, *Indigenous Grasses of New Zealand* add. et corrig. 11. 1880 and *Manual of the New Zealand Flora* 871. 1906, *New Zealand Department Lands Report Botanical Survey Tongariro National Park* 35. 1908, *New Zealand J. Bot.* 33: 8, 10. 1995.

in English: mountain oat grass

D. benthamiana Vickery (*Calamagrostis benthamiana* (Vickery) Govaerts; *Deyeuxia scabra* Benth.)

Tasmania, Victoria. Perennial, rare species, caespitose or tufted, erect, ligule membranous and truncate, auricles absent, basal leaf sheaths scabrous, leaves mostly basal, leaf blade scabrous, panicle open to contracted, glumes subequal and keeled, lemma with short awn, fruit glabrous and longitudinally grooved, found in mountain forest, wet areas, resembles *Deyeuxia frigida* F. Muell. ex Benth., see *Contributions from the New South Wales National Herbarium* 1: 63. 1940, *World Checklist of Seed Plants* 3(1): 9. 1999. in English: Bentham's bent-grass

D. brachyathera (Stapf) Vickery (*Calamagrostis brachyathera* (Stapf) Govaerts; *Dichelachne brachyathera* Stapf)

Tasmania, Victoria, New South Wales. Perennial, rare species, erect, tufted, ligule membranous and truncate, auricles absent, basal leaf sheaths scabrous, leaves mostly basal, leaves flat and scabrous, green to purple contracted panicle, cleistogamous spikelets, glumes unequal and strongly keeled, lemma acute and awned, palea membranous and 2-keeled, fruit glabrous and longitudinally grooved, shade species, found in damp places, swamp, see *Bulletin of Miscellaneous Information Kew* 1906: 203. 1906, *Contributions from the New South Wales National Herbarium* 1: 68. 1940, *Blumea* 22(1): 5-12. 1974, *World Checklist of Seed Plants* 3(1): 9. 1999.

in English: short bent-grass

D. breviglumis Benth. (*Agrostis breviglumis* (Benth.) F. Muell.)

Australia. See *Flora Australiensis: A Description ...* 7: 584. 1878, *Systematic Census of Australian Plants ...* 133. 1882.

D. carinata Vickery (*Calamagrostis carinata* (Vickery) Govaerts)

Tasmania, New South Wales, Victoria. Perennial, tufted, erect or decumbent, ligule membranous and truncate, auricles absent, basal leaf sheaths scabrous, leaves mostly basal, dense cylindrical panicle green and purple, spikelets imbricate, cleistogamous spikelets or chasmogamous spikelets, glumes unequal and keeled, the lower glume mucronate, upper glume subacuminate, lemma awned, palea very narrow-truncate, fruit glabrous and longitudinally grooved, in montane areas, damp and swamps, see *Contributions from the New South Wales National Herbarium* 1: 58. 1940, *World Checklist of Seed Plants* 3(1): 10. 1999.

in English: keeled bent-grass

D. contracta (F. Muell. ex Hook.f.) Vickery (*Agrostis contracta* F. Muell. ex Hook.f.; *Deyeuxia scabra* sensu Rodway)

Tasmania, Victoria, New South Wales. Perennial, erect or ascending, caespitose, ligule membranous and obtuse, auricles absent, basal leaf sheaths scabrous or glabrous, leaves mostly basal, leaf blade flat or folded, green to purple panicle

erect or nodding, cleistogamous or chasmogamous spikelets, glumes unequal and acute, lemma lanceolate and awned, palea 2-keeled, fruit glabrous and longitudinally grooved, see *Flora Tasmaniae* 2: 116, t. 161. 1860.

D. crassiuscula Vickery (*Agrostis nivalis* F. Muell.; *Calamagrostis crassiuscula* (Vickery) Govaerts; *Calamagrostis nivalis* (F. Muell.) Maiden & Betche, nom. illeg., non *Calamagrostis nivalis* (Wedd.) Hack. ex Buchtien; *Deyeuxia nivalis* (F. Muell.) Benth., nom. illeg., non *Deyeuxia nivalis* Wedd.) (Latin *crassus*, a, um "thick")

Victoria, New South Wales. Perennial, erect or ascending, coarse, forming open and loose clumps or tussocks, ligule membranous and ciliate, auricles absent, basal leaf sheaths scabrous, leaves mostly basal, leaf blade rigid, broad and scabrous leaves flat and bright green, dense panicle shiny green and spike-like, spikelets turgid, glumes unequal, lemma lanceolate and awned, palea membranous and 2-dentate, fruit glabrous and longitudinally grooved, ornamental, found in subalpine and high altitudes grasslands, damp areas, see *Trans. & Proc. Vict. Inst. (Melbourne)* 43. 1854-1855, *Bulletin de la Société Botanique de France* 22: 176 (err. type. 156), 180. 1875 and *A Census of New South Wales Plants* 21. 1916, *Contributions from the New South Wales National Herbarium* 1: 59. 1940, *World Checklist of Seed Plants* 3(1): 10. 1999.

in English: bent-grass

D. curta Wedd. (*Calamagrostis cephalantha* Pilg.; *Calamagrostis curta* (Wedd.) Hitchc.; *Deyeuxia lagurus* Wedd.)

Southern America, Bolivia. See *Bulletin de la Société Botanique de France* 22: 176 (err. typ. 156), 179-180. 1875 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 42: 61. 1908, *Contributions from the United States National Herbarium* 24(8): 376. 1927.

D. curta Wedd. var. *longearistata* Turpe

Southern America, Argentina. Rare species, see *Mono-graphs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994.

D. decipiens (R. Br.) Vickery (*Agrostis decipiens* R. Br.; *Calamagrostis decipiens* (R. Br.) Govaerts; *Cinna decipiens* (R. Br.) Kunth; *Vilfa decipiens* (R. Br.) P. Beauv.)

Tasmania, Victoria, New South Wales. Perennial, rare, erect, caespitose, ligule membranous and obtuse, auricles absent, basal leaf sheaths scabrous, leaves mostly basal, a nodding panicle, palea hyaline, fruit glabrous and longitudinally grooved, grows on sandy soils, wet places, see *Prodromus Florae Novae Hollandiae* 172. 1810, *Révision des Graminées* 1: 67. 1829 and *Contributions from the New South Wales National Herbarium* 1: 70. 1940, *World Checklist of Seed Plants* 3(1): 10. 1999.

in English: trickery bent-grass

D. densa Benth. (*Agrostis densa* (Benth.) F. Muell.; *Calamagrostis austrodensa* Govaerts; *Calamagrostis densa* (Benth.) Maiden & Betche; *Calamagrostis minor* var. *densa* (Benth.) J.M. Black)

South Australia, Victoria, Tasmania. Perennial, rare, erect or geniculate, tufted, slender or stout, glabrous, ligule membranous and obtuse, auricles absent, basal leaf sheaths more or less glabrous, leaves mostly basal, green panicle dense and contracted, glumes subulate and subequal, lemma acute and more or less deeply 4-toothed or cleft, awn attached near the middle of the lemma, bristle present, palea acuminate and bidentate, glabrous fruit ovoid and longitudinally grooved, shade species, on stream banks, heaths and sedge-lands, open habitats, see *Flora Australiensis: A Description ... 7: 582*. 1878, *Systematic Census of Australian Plants ... 133*. 1882 and *World Checklist of Seed Plants* 3(1): 9. 1999.

in English: heath bent-grass

D. drummondii (Steudel) Vickery (*Deyeuxia drummondii* (Steud.) Benth.; *Pentapogon drummondii* Steud.)

Western Australia. Annual, decumbent, tufted or caespitose, ligule membranous and smooth, auricles absent, basal leaf sheaths glabrous, leaves mostly basal, leaves flat and linear, a contracted panicle green or purple, glumes green and purplish, lemma awned, palea shortly bifid, fruit glabrous and longitudinally grooved, extinct or presumed extinct species, see *Synopsis Plantarum Glumacearum* 1: 120. 1854, *Flora Australiensis: A Description ... 7: 580*. 1878 and *Contr. New South Wales Natl. Herb.* 1: 49 (1940).

D. frigida F. Muell. ex Benth. (*Agrostis frigida* F. Muell.; *Calamagrostis frigida* (F. Muell. ex Benth.) Maiden & Betche; *Deyeuxia accedens* Vickery; *Deyeuxia scabra* sensu Rodway)

Tasmania, Victoria, New South Wales. Perennial, tall and rather stout, caespitose, forming erect and slender tussocks, stems erect or geniculate and ascending, ligule membranous and obtuse, auricles absent, basal leaf sheaths glabrous or scabrous, leaves mostly basal, green leaves flat and flaccid, greenish to purple panicle open and spreading, cleistogamous or chasmogamous spikelets, glumes very unequal, prominent awns, fruit glabrous and longitudinally grooved, ornamental, found in cool and moist situations, alpine woodland and grassland.

in English: alpine bent-grass

D. gunniana (Nees) Benth. (*Agrostis breviglumis* (Benth.) F. Muell., l.c.; *Agrostis gunniana* (Nees) F. Muell.; *Calamagrostis breviglumis* (Benth.) Maiden & Betche; *Calamagrostis gunniana* (Nees) Reeder; *Deyeuxia breviglumis* Benth.; *Echinopogon gunnianus* Nees)

Tasmania, New South Wales, Victoria, Queensland. Perennial, slender, erect or ascending, tufted or caespitose, ligule membranous and obtuse, auricles absent, basal leaf sheaths scabrous, leaves mostly basal, inflorescence an erect panicle

green to purple, glumes ovate, lemma truncate and awned, palea membranous, fruit glabrous and longitudinally grooved, shady areas, damp places, swamps and margins of wet situations, riverbanks, see *London Journal of Botany* 2: 413. 1843, *Flora Australiensis: A Description ... 7: 584*. 1878, *Systematic Census of Australian Plants ... 133*. 1882 and *Journal of the Arnold Arboretum* 31: 323. 1950.

in English: Gunn's bent-grass

D. imbricata Vickery (*Calamagrostis imbricata* (Vickery) Govaerts) (overlapping, Latin *imbrico* "to cover with tiles," *imbrex* "a hollow tile")

Australia, Queensland, New South Wales. Perennial, caespitose, forming erect and slender tussocks, bright green leaves basal and tapered, smooth culms erect and striate, ligule membranous and truncate, auricles absent, basal leaf sheaths scabrous and pubescent, leaves mostly basal, green or purplish panicles dense and spike-like, small spikelets crowded and compressed, glumes unequal, lemma awned, palea keeled, fruit glabrous and longitudinally grooved, pasture grass, ornamental and attractive when in flower, see *Contributions from the New South Wales National Herbarium* 1: 55. 1940, *World Checklist of Seed Plants* 3(1): 10. 1999.

in English: bent-grass

D. inaequalis Vickery (*Calamagrostis inaequalis* (Vickery) Govaerts)

Western Australia. Annual, tufted, ligule membranous, auricles absent, basal leaf sheaths scabrous, leaves mostly basal, leaves linear and acute, a panicle dense and contracted, glumes dissimilar and keeled, lemma shortly dentate and awned, palea 2-keeled, fruit glabrous and longitudinally grooved, see *Contributions from the New South Wales National Herbarium* 1: 49. 1940, *World Checklist of Seed Plants* 3(1): 10. 1999.

D. innominata D.I. Morris

Tasmania, New South Wales, Victoria. Perennial, erect, slender, more or less densely tufted, ligule membranous and truncate, auricles absent, leaves mostly basal, leaf blade folded or inrolled, pale green or purple panicle, glumes subequal and acute, awn absent or readily deciduous, palea hyaline and with green keels, fruit glabrous and longitudinally grooved, in alpine moorlands, heaths, hillsides or slopes, see *Muelleria* 7(2): 164-167, f. 13-14. 1989.

D. kashmiriana Bor (*Calamagrostis kashmiriana* (Bor) Govaerts; *Deyeuxia hackelii* Bor, nom. illeg., non *Deyeuxia hackelii* (Lillo) Parodi)

India, Kashmir, Jammu. Indeterminate species, see Nayar, M.P. & Sastry, A.R.K. (eds.). (1987). *Red Data Book of Indian Plants*. vol. 1. Calcutta: Botanical Survey of India, *World Checklist of Seed Plants* 3(1): 10. 1999.

D. lacustris Edgar & Connor

New Zealand. Perennial, tufted, erect or geniculate at the base, cleistogamous, leaf blade folded, leaf sheath papery glabrous, ligule erose, compact cylindrical panicle, glumes subequal, awn twisted and recurved, see *New Zealand Journal of Botany* 37: 68-70, f. 5. 1999.

D. lawrencei Vickery (*Calamagrostis lawrencei* (Vickery) Govaerts) (the name honors Robert William Lawrence, 1807-1833 (in Tasmania), a young settler and botanical collector in Tasmania, Western Mountains, communicated specimens to Sir William Hooker; see M.N. Chaudhri, I.H. Vegter & C.M. De Wal, *Index Herbariorum*, Part II (3), *Collectors I-L*. Regnum Vegetabile vol. 86. 1972; N.S. Lander, "Revision of the Australian genus *Lawrencia* Hook. (Malvaceae: Malveae)." in *Nuytsia*. 5(2): 201-271. 1984; N.S. Lander, "Collections of *Lawrencia* Hook. destroyed by fire, April 1984." in *Kingia*. 1(1): 1-8. 1987; J.D. Hooker, *Flora Tasmaniae*. London 1855; Joseph Henry Maiden (1859-1925), "Records of Western Australian botanists." *W. Austral. Nat. Hist. Soc.* 3: 5-33. 1906; J.H. Willis, "Botanical pioneers in Victoria." *Vict. Naturalist*. 66(5): 83-89. 1949; A. Lasègue, *Musée botanique de Benjamin Delessert*. 328. Paris 1845; G. Bentham, *Flora Australiensis*. 189-190. 1863; W.J. Hooker, in *Hooker's Icones Plantarum*. 3: t. 261, 262. 1840)

Tasmania. Perennial, caespitose, ligule obtuse and membranous, auricles absent, leaves mostly basal, a green to purple panicle, spikelets imbricate, glumes subequal, lemma ovate and awned, palea truncate and minutely lacinate, fruit glabrous and longitudinally grooved, extinct or presumed extinct species, see *Contributions from the New South Wales National Herbarium* 1: 48. 1940, *World Checklist of Seed Plants* 3(1): 10. 1999.

in English: Lawrence's bent-grass

D. mckiei Vickery (*Calamagrostis mckiei* (Vickery) Govaerts) (for Ernest Norman McKie, 1882-1948)

New South Wales, Queensland. Perennial, erect, loosely tufted, leaves along the culm, ligule obtuse and membranous, auricles absent, basal leaf sheaths scabrous, inflorescence a large panicle spreading and nodding, glumes obtuse and keeled, lemma awned, callus short, palea bifid, fruit glabrous and longitudinally grooved, found in mountain forests, see *Contributions from the New South Wales National Herbarium* 1: 72. 1940, *World Checklist of Seed Plants* 3(1): 11. 1999.

D. mesathera Stapf ex Vickery (*Calamagrostis mesathera* (Stapf ex Vickery) Govaerts)

Tasmania, New South Wales, Victoria. Perennial, erect or geniculate, ligule truncate and membranous, basal leaf sheaths glabrous, auricles absent, leaves mostly basal, straw-colored and dense panicle, glumes keeled and more or less equal, lemma lanceolate and awned, fruit glabrous and longitudinally grooved, in swamps, on riverbanks, see *Contributions from the New South Wales National*

Herbarium 1: 53. 1940, *World Checklist of Seed Plants* 3(1): 11. 1999.

D. microseta Vickery (*Calamagrostis microseta* (Vickery) Govaerts)

New South Wales, Victoria. Perennial, erect, slender, loosely tufted, ligule obtuse and membranous, basal leaf sheaths scabrous, auricles absent, leaves mostly basal, an oblong panicle, spikelets compressed, glumes unequal, lemma lanceolate and awned, palea 2-keeled, elliptical fruit longitudinally grooved, in wet areas, see *Contributions from the New South Wales National Herbarium* 1: 66. 1940, *World Checklist of Seed Plants* 3(1): 11. 1999.

D. minor Benth. (*Agrostis minor* (Benth.) J.M. Black; *Agrostis minor* F. Muell. ex Benth.; *Agrostis quadriseta* var. *minor* F. Muell. ex Benth.; *Calamagrostis minor* (Benth.) J.M. Black; *Calamagrostis minor* Benth.; *Deyeuxia minor* F. Muell. ex Benth.)

South Australia, Victoria, Tasmania. Perennial, rare, slender, erect or decumbent, tufted, culms 3-noded, ligule obtuse and membranous, basal leaf sheaths scabrous to glabrous, auricles absent, leaves mostly basal, leaves filiform, more or less cylindrical spike-like green or purple panicle, glumes subequal and acute, lemma 4-nerved and 4-toothed, awn inserted near the middle of the lemma, bristle absent, palea shining and 2-keeled, fruit glabrous and longitudinally grooved, found in wet sclerophyll forest, see *Novae Hollandiae Plantarum Specimen* 1: 25, t. 32. 1805, *Prodromus Florae Novae Hollandiae* 1: 171. 1810, *Flora Australiensis: A Description ...* 7: 582. 1878 and *Transactions and Proceedings of the Royal Society of South Australia* 60: 165. 1936.

in English: small bent-grass

D. monticola (Roemer & Schultes) Vickery (*Agrostis monticola* Roem. & Schult.; *Agrostis montana* R. Br.; *Vilfa montana* (R. Br.) P. Beauv.; *Deyeuxia montana* (R. Br.) Benth., non P. Beauv.; *Deyeuxia quadriseta* var. *montana* (R. Br.) Ewart)

Tasmania, New South Wales, Victoria. Perennial, tufted or caespitose, erect or decumbent, ligule ciliate and membranous, basal leaf sheaths scabrous to glabrous, auricles absent, leaves mostly basal, leaf blade rolled, inflorescence a green to purple panicle dense and much contracted, spikelets imbricate, glumes unequal and keeled, lemma with a dorsal awn, fruit glabrous and longitudinally grooved, in woodland or grassland, in wet sclerophyll and rocky places, open habitats.

in English: mountain bent

D. monticola (Roemer & Schultes) Vickery var. *monticola*
Tasmania, New South Wales, Victoria. Inflorescence green to purple, leaves rolled.

D. monticola (Roemer & Schultes) Vickery var. *valida* Vickery

New South Wales. Inflorescence purple, basal leaf sheaths purple, leaves slightly rolled or involute.

D. nepalensis Bor

Western and Central Nepal. Perennial, terete, smooth, short ligule membranous, basal leaf sheath smooth, leaf blades linear mostly folded, leaves filiform, rhizomatous, inflorescence paniculate with smooth branches, spikelets acuminate, lower glumes flattened, lemma elliptic-oblong, palea 2-nerved, 3 stamens, stigmas plumose, along riverbanks, cliffs, streams, see *Kew Bulletin* 1957: 411. 1958.

D. nudiflora Vickery (*Calamagrostis nudiflora* (Vickery) Govaerts)

New South Wales. Perennial, geniculate at the lower nodes and ascending, slender, ligule truncate and membranous, basal leaf sheaths scabrous, auricles absent, leaves mostly basal, inflorescence green and few-flowered, glumes narrow and unequal, lemma truncate, callus glabrous, palea narrow and 2-keeled, awn absent, fruit glabrous and longitudinally grooved, shade species, in open habitats, see *Contributions from the New South Wales National Herbarium* 1: 67. 1940, *World Checklist of Seed Plants* 3(1): 11. 1999.

D. parviseta Vickery (*Calamagrostis parviseta* (Vickery) Reeder)

Tasmania, New South Wales, Victoria, Queensland. Perennial, erect or ascending, loosely tufted, ligule truncate and membranous, auricles absent, leaves mostly basal, panicle loose and spreading, glumes subequal and keeled, lemma truncate and awned, palea membranous and 2-keeled, fruit glabrous and longitudinally grooved, shade species, rainforest, damp sites, see *Contributions from the New South Wales National Herbarium* 1: 71. 1940, *Journal of the Arnold Arboretum* 31: 324. 1950.

D. parviseta Vickery var. *boormanii* Vickery (named after John Luke Boorman, fl. 1899-1919, botanist, plant collector in Australia)

Victoria, New South Wales. Glumes subequal, callus bearded and silky, see *Contr. New South Wales Natl. Herb.* 1: 72 (1940).

D. parviseta Vickery var. *parviseta*

New South Wales, Tasmania, Victoria, Queensland. Glumes unequal and shorter than the florets.

D. pungens N.G. Walsh

Victoria, East Gippsland. Perennial, caespitose, auricles absent, leaves mostly basal, ligule chartaceous and acute, leaves scabrous, a purple spike-like panicle, glumes more or less equal in length, lemma mucicous or awned, palea 2-keeled, fruit glabrous and longitudinally grooved, see *Muelleria* 7(4): 452. 1992.

D. quadriseta (Labill.) Benth. (*Agrostis diaphora* Trin.; *Agrostis lobata* R. Br.; *Agrostis quadriseta* (Labill.) R. Br.; *Agrostis quadriseta* var. *lobata* (R. Br.) Hook.f.; *Agrostis*

quadriseta var. *paniculata* Hook.f.; *Avena quadriseta* Labill.; *Bromidium lobatum* (R. Br.) Nees; *Bromidium quadriseta* (Labill.) Nees; *Bromidium quadrisetum* (Labill.) Nees; *Calamagrostis quadriseta* (Labill.) Sprengel; *Vilfa lobata* (R. Br.) P. Beauv.)

New Zealand, Australia. Perennial, variable to very variable, montane to subalpine, densely or loosely tufted, glabrous, rigid stems, slender to robust, erect or curved, forming sparse tussocks, auricles absent, leaves mostly basal, leaf sheaths subcoriaceous and ribbed, ligule membranous and obtuse, basal leaf sheaths glabrous or scabrous, leaf blade deeply channelled, stiff and dull green leaves more or less flat or inrolled, bright green panicles crowded and spike-like, spikelets small and crowded, glumes acute and subequal, lemma nerved and toothed, awn almost basal, central awn geniculate, bristle absent, anthers yellow or purple, fruit glabrous and longitudinally grooved, shade species, open habitats, damp places and moist areas, disturbed areas, along roadsides, boggy spots, clay, see *Novae Hollandiae Plantarum Specimen* 1: 25, t. 32. 1805, *Prodromus Florae Novae Hollandiae* 1: 171. 1810, *Systema Vegetabilium, editio decima sexta* 1: 253. 1824, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 416. 1843, *Flora Australiensis: A Description ...* 7: 581. 1878 and *Contributions from the New South Wales National Herbarium* 1: 43-82. 1940.

in English: reed bent-grass

D. reflexa Vickery (*Calamagrostis reflexa* (Vickery) Govaerts)

New South Wales. Perennial, loosely tufted, erect, rigid, auricles absent, ligule membranous and obtuse, leaves grooved or channelled and scabrous, basal leaf sheaths scabrous to pubescent, large and erect panicle spreading and nodding, glumes unequal, lemma awned, palea 2-keeled and narrowly truncate, fruit glabrous and longitudinally grooved, in montane woodland, along roadsides, see *Contributions from the New South Wales National Herbarium* 1: 69. 1940, *World Checklist of Seed Plants* 3(1): 11. 1999.

D. rodwayi Vickery (*Calamagrostis rodwayi* (Vickery) Govaerts)

Tasmania, New South Wales, Victoria, Queensland. Perennial, slender, erect or ascending, tufted, leaves mostly basal, auricles absent, ligule membranous and truncate, basal leaf sheaths scabrous, green to purple panicle contracted, cleistogamous spikelets, glumes unequal and diverging, lemma lanceolate and awned, palea 2-keeled, fruit glabrous and longitudinally grooved, in montane woodland, wet sclerophyll forests, see *Contributions from the New South Wales National Herbarium* 1: 60. 1940, *World Checklist of Seed Plants* 3(1): 11. 1999.

D. scaberula Vick. (*Calamagrostis austroscaberula* Govaerts; *Deyeuxia scabra* sensu Rodway)

Tasmania, New South Wales, Victoria. Perennial, erect, slender, tufted, leaves mostly basal, auricles absent, ligule membranous and truncate, basal leaf sheaths more or less scabrous, leaves usually rather scabrous, green and purple panicle open or contracted, cleistogamous or chasmogamous spikelets, glumes subequal, palea membranous and 2-keeled, fruit glabrous and longitudinally grooved, shade species, in rocky areas, see *Contributions from the New South Wales National Herbarium* 1: 64. 1940, *World Checklist of Seed Plants* 3(1): 9. 1999.

in English: rough bent-grass

D. simlensis Bor (*Calamagrostis simlensis* (Bor) G. Singh) India, Simla, Himachal Pradesh. Extinct to endangered species, perennial, erect, stout, glabrous, unbranched, leaf blades very narrow and rough, very long ligule membranous, loose panicles, spikelets lanceolate, lower glume lanceolate, upper glume lanceolate and recurved at the apex, lemma awned, straight awn exerted, 3 stamens, see *Indian Forest Records. Botany* 3(5): 149-150. 1941, *Grasses of Burma, Ceylon, India and Pakistan* 397-400. 1960, *Taxon* 33(1): 94. 1984, M.P. Nayar & A.R.K. Sastry (eds.), *Red Data Book of Indian Plants*. vol. 1: 292. Calcutta: Botanical Survey of India 1987.

D. talariata N.G. Walsh

Australia, Victoria, New South Wales. Perennial, shortly rhizomatous, ligule truncate, basal leaf sheaths more or less glabrous, leaves folded and mostly basal, auricles absent, a cylindrical and contracted panicle, lemma muticous or awned, plumose rachilla, long silky callus, palea membranous and 2-keeled, rare species, grows in *Sphagnum*-rich heath, closely allied to *Deyeuxia affinis* M. Gray, see *Muelleria* 7(3): 379-387. 1991.

D. youngii (Hook.f.) Buchanan (*Agrostis youngii* Hook.f.; *Calamagrostis petriei* Hack.; *Calamagrostis youngii* (Hook.f.) Petrie; *Calamagrostis youngii* var. *petriei* (Hack.) Petrie; *Deyeuxia petriei* (Hack.) Cheeseman; *Deyeuxia youngii* var. *petriei* (Hack.) Cheeseman)

New Zealand. Perennial, tufted, narrow, small, leaf blade stiff, leaf sheath papery and ribbed, ligule ciliate, panicle shortly branched, glumes more or less membranous, awn straight, anthers with a tuft of hairs to penicillate, open habitats, dry hillsides, rocky sites, see *Handbook of the New Zealand Flora* 330. 1864, *Indigenous Grasses of New Zealand* add. et corrig. 11. 1880 and *Transactions and Proceedings of the New Zealand Institute* 35: 380. 1903, *Manual of the New Zealand Flora* 872. 1906, *Transactions and Proceedings of the Royal Society of New Zealand* 47: 57. 1915, *Manual of the New Zealand Flora* 162. 1925, *New Zealand Journal of Botany* 33: 1-33. 1995.

Diachroa Nutt. = *Leptochloa* P. Beauv.

Greek *dia* "through" and *chroa* "color, to color."

Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, type *Diachroa procumbens* (Muhl.) Nutt., see *Essai d'une Nouvelle Agrostographie* 71, 161. 1812, *Descriptio uberior Graminum* 160. 1817, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *Nomenclator Botanicus. Editio secunda* 1: 497. 1840 and *Contr. U.S. Natl.* 24(6): 180. 1925, S.T. Blake, "*Plinthanthesis* and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae)." *Contributions from the Queensland Herbarium* 14: 3. 1972, *Brittonia* 31: 399-404. 1979, *Kew Bulletin* 37: 133-162. 1982, *American Journal of Botany* 81: 622-629. 1994, *Taxon* 43: 123. 1994, *Flora Mesoamericana* 6: 260-261. 1994, H.P. Linder & G.A. Verboom, "Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex." *Telopea* 6(4): 597-627. 1996, H.P. Linder, "Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae)." *Telopea* 7(3): 269-274. 1997, N. Snow, "Nomenclatural changes in *Leptochloa* P. Beauv. sensu lato (Poaceae, Chloridoideae)." *Novon* 8: 78. 1998, *Contributions from the United States National Herbarium* 41: 66, 130-137. 2001.

Diachyrium Griseb. = *Sporobolus* R. Br.

Greek *dia* "through" and *achyron* "chaff, husk."

Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, Sporobolinae, or Chloridoideae, Zoysieae, Sporobolinae, type *Diachyrium arundinaceum* Griseb., see *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Fragments de Algunas Plantas Filipinas* 25. 1851, *Pl. Lorentz.* 209-210, t. 2, f. 8. 1874, *Nom. Bot.* 2: 1274. 1874, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 257-258, t. 2, f. 8. 1874 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 300. 1921, *Flora of the Guianas, Series A: Phanerogams* 606-615. 1990, *Blumea* 35(2): 393-458. 1991, *American Journal of Botany* 81: 622-629. 1994, *Flora Mesoamericana* 6: 273-276. 1994, *Sida* 16: 529-544. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Australian Systematic Botany* 12(3): 375-448. 1999, *Contributions from the United States National Herbarium* 41: 66, 200-219. 2001.

Diacisperma Kuntze = *Disakisperma* Steud., *Leptochloa* P. Beauv.

Greek *ake, akis* "tip, thorn, a sharp point" and *sperma* "a seed."

Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, see *Essai d'une Nouvelle Agrostographie* 71, 161. 1812, *Synopsis Plantarum Glumacearum* 1: 287. 1854[1855] and *Lexikon Generum Phanerogamarum* 169. 1903, *Contr. U.S. Natl.* 24(6): 180. 1925, N. Snow, "Nomenclatural

changes in *Leptochloa* P. Beauv. sensu lato (Poaceae, Chloridoideae).” *Novon* 8: 78. 1998, *Contributions from the United States National Herbarium* 41: 66, 70, 130-137. 2001.

Diandranthus Liou = *Miscanthus* Andersson

From the Greek *di, dis* “two, double,” *aner, andros* “male, stamen” and *anthos* “flower.”

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, see *Primitiae Florae Amurensis* 331. 1859 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 391. 1930, *Journal of Japanese Botany* 25(1-2): 7. 1950, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 233. 1957, *Bull. Fac. Agric. Mie University* 17: 57, 59. 1958, *Pl. Taxonomic Soc. Korea, Seoul* 1972: 17-18. 1972, *Flora Xizangica* 5: 308. 1987, *Journal of Huazhong Agricultural University* (Suppl.): 56-60. 1989, *Flora Mesoamericana* 6: 378-379. 1994, *Sida* 16(2): 233-244. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Vascular Plants of the Hengduan Mountains* 2: 2297. 1994, *Sida* 16(3): 551-580. 1995, *J. Fujian Acad. Agric. Sci.* 11(3): 19-22. 1996, *Flora Reipublicae Popularis Sinicae* 10(2): 10. 1997, *Journal of Plant Research* 115: 381-392. 2002, *Contributions from the United States National Herbarium* 46: 294-295, 550-557. 2003.

Diandrochloa De Winter = *Eragrostis* Wolf, *Roshevitzia* Tzvelev

The generic name is derived from the Greek *di, dis* “two, double,” *aner, andros* “male, stamen” and *chloe, chloa* “grass, young grass” (Latin *helus* or *olus* or *holus, leris* “greens, garden herbs, legumes” used for *Smyrniolum olusatrum* L.), referring to the number of stamens, alluding to 2-staminate florets.

Australasia, Americas, Africa. Chloridoideae, Eragrostidae, Eragrostidinae, annual or perennial, tufted, unarmed, herbaceous, erect or geniculate, auricles absent, membranous ligule unfringed, plants bisexual, open or contracted panicle, spikelets solitary, glumes 2 very unequal or subequal, palea present, 2 lodicules fleshy and glabrous, 2 stamens, ovary glabrous, 2 stigmas, open habitats and in shade, sometimes referred to and often included in *Eragrostis* Wolf, type *Diandrochloa namaquensis* (Nees ex Schrad.) De Winter, see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809 and *Bothalia* 7(2): 387-390. 1960, *Acta Bot. Neerl.* 15: 157. 1966, *Bot. Zhurn. (Moscow & Leningrad)* 53: 311. 1968, *Rhodora* 80: 390-403. 1978, *Contributions from the United States National Herbarium* 41: 66, 81-115, 192. 2001.

Diandrolyra Stapf

Two-anthered *Olyra*, from the Greek *di, dis* “two, double,” *aner, andros* “male, stamen” and the genus *Olyra* L., referring to the reduced stamen number.

About 1-6 species, Panama, Brazil. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, low growing, clump-forming, herbaceous, unbranched, unarmed, tufted, flowering culms leafy, decumbent floriferous culms, auricles absent, ligule a fringed membrane, leaf blades oblong oblong-lanceolate, plants monoecious, inflorescence shortly racemose and terminal, spikelets paired, female spikelet elliptic, glumes 2 subequal, male spikelets with glumes reduced or lacking, spikelets with 2-3 stamens and 3 staminodes, lemmas leathery, palea present, 3 lodicules free and fleshy, 2 plumose stigmas, male spikelet ovary sterile with 3 stigmas, shade species, in forest, undisturbed forest, moist sites, rainforests, along rivers and streams, related to *Piresia* and *Buergersiochloa*, type *Diandrolyra bicolor* Stapf, see *Bulletin of Miscellaneous Information Kew* 1906: 204. 1906, *Biotropica* 6: 141-153. 1974, *Brittonia* 37(1): 1-5. 1985 [*Diandrolyra tatiana* (Poaceae: Olyreae), a new herbaceous bamboo from Brazil], Emmet J. Judziewicz et al., *American Bamboos* 270-272. 1999, *Contributions from the United States National Herbarium* 39: 55-56. 2000.

Species

***D. bicolor* Stapf**

Panama, Brazil, origin unknown.

***D. tatiana* Soderstr. & Zuloaga** (named for Tatiana Sendlusky, b. 1922)

Brazil. Rhizomatous.

Diandrostachya (C.E. Hubb.) Jacq.-Fél. = Loudetiopsis Conert

Greek *di, dis* “two, double,” *aner, andros* “male, stamen” and *stachys* “a spike.”

South America, tropical Africa. Panicoideae, Panicodae, Arundinelleae, perennial or annual, herbaceous or with woody reedlike culms, large, unarmed, erect, hollow, auricles absent, ligule fringed, plants bisexual, open inflorescence paniculate, spikelets in triplets, 2 glumes very unequal, female-fertile lemma longer than the lower glume, palea present, 2 free and fleshy lodicules, 2 stamens, ovary glabrous, 2 red stigmas, suitable for thatching, open areas, savannah, woodland, damp or swampy areas, rocky places, bare ground, sometimes referred to and often placed in *Loudetiopsis*, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458, 460. 1829 and *Bulletin of Miscellaneous Information Kew* 1934: 431. 1934, *Bulletin of Miscellaneous Information Kew* 1936(5): 320, 321, 322. 1936,

Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 77(2-3): 226-354, f. 18. 1957, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 407-408. 1960, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Contributions from the United States National Herbarium* 46: 177, 285. 2003.

Diarina Raf. = *Diarrhena* P. Beauv.

Greek *di* “two” and *arrhen* “male.”

Pooideae, Diarrheneae, type *Diarina sylvatica* Raf., see *Methodus Plantas Horti Botanici ...* 191. 1794, *Flora Boreali-Americana* 1: 67, t. 10. 1803, *Medical Repository, ser. 2*, 5: 352. 1808, *Essai d'une Nouvelle Agrostographie* 142, 160, 162, t. 25, f. 2. 1812, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819 and *Rhodora* 34: 204. 1932, E.D. Merrill, *Index Rafinesquianus*. The plant names published by C.S. Rafinesque, etc. 75. Jamaica Plain, Massachusetts, U.S. 1949, *Bulletin of the Torrey Botanical Club* 118: 128-136. 1991 [A revision of *Diarrhena* (Poaceae) in the United States.], *Contributions from the United States National Herbarium* 48: 269. 2003.

Diarrhena P. Beauv. = *Corycarpus* Spreng., *Diarina* Raf., *Korycarpus* Lag., *Korycarpus* Zea ex Lag., *Neomolinia* Honda, *Neomolinia* Honda & Sakis., *Onoea* Franch. & Sav., *Roemeria* Roem. & Schult., *Roemeria* Zea ex Roem. & Schult.

From the Greek *di* “two” and *arrhen* “male,” referring to the stamens.

Four-five species, eastern U.S., Russia, East Asia, Japan. Pooideae, Diarrheneae, perennial, herbaceous, ligule membranous, leaf blades narrowly lanceolate, inflorescence an open or contracted panicle, spikelets laterally compressed, 2-5 fertile florets and an uppermost floret reduced, 2 glumes unequal, lemma cartilaginous to coriaceous, palea 2-nerved, 2 membranous lodicules, 1-3 stamens, ovary glabrous, 2 stigmas, grain knobbed or beaked at tip, in woodland, shade, type *Diarrhena americana* P. Beauv., see *Essai d'une Nouvelle Agrostographie* 142. 1812, *Genera et species plantarum*, quae aut novae sunt aut nondum recte cognoscuntur ... 4, 34. Matriti [Madrid] 1816, *Systema Vegetabilium* 1: 61, 287. 1817, Constantine Samuel Rafinesque, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts*. 89: 104. Aug 1819, Kurt Polycarp Joachim Sprengel (1766-1833), *Systema Vegetabilium* Editio decima sexta 1: 123. Gottingae 1825[1824], *Enumeratio plantarum in Japonia sponte crescentium*. 2: 178. Paris [1873] 1875-1879 and *Journal of the Faculty of Science: University of Tokyo*,

Botany 3(1): 110. 1930, *Rhodora* 34: 204. 1932, *Flora of the Prairies and Plains of Central North America* 114. 1932, *Acta Phytotaxonomica et Geobotanica* 10: 134. 1941, E.D. Merrill, *Index rafinesquianus*. 75. 1949, *Bot. Mag. (Tokyo)* 70: 8-12. 1957, *Novosti Sist. Vyss. Rast.* 1968: 29. 1968, *Diss. Abstr. Int. B.* 32: 3812-3813. 1972, *Taxon* 29: 645-666. 1980, *Journal of the Arnold Arboretum* 66: 188. 1985, *Bulletin of the Torrey Botanical Club* 118: 128-136. 1991 [A revision of *Diarrhena* (Poaceae) in the United States.], *Ecological Research* 17(6): 705-716. Nov 2002, *Contributions from the United States National Herbarium* 48: 238, 269, 419, 604. 2003, Paula J. Rudall & Richard M. Bateman, “Evolution of zygomorphy in monocot flowers: iterative patterns and developmental constraints.” *New Phytologist* 162(1): 25-44. Apr 2004.

Species

D. americana P. Beauv. (*Corycarpus diandrus* Kuntze; *Diarina festucoides* Raf.; *Diarina sylvatica* Raf.; *Diarrhena americana* var. *americana*; *Diarrhena arundinacea* (Zea ex Lag.) Rydb.; *Diarrhena diandra* Alph. Wood; *Diarrhena festucoides* (Raf.) Fernald; *Festuca americana* Michx. ex P. Beauv.; *Festuca diandra* Moench; *Festuca diandra* Michx., nom. illeg., non *Festuca diandra* Moench; *Korycarpus arundinaceus* Zea ex Lag.; *Roemeria zae* Roem. & Schult.)

U.S. See *Species Plantarum* 1: 73-76. 1753, *Methodus Plantas Horti Botanici ...* 191. 1794, *Flora Boreali-Americana* 1: 67, t. 10. 1803, *Medical Repository, ser. 2*, 5: 352. 1808, *Essai d'une Nouvelle Agrostographie* 142, 162, t. 25, f. 2. 1812, *Genera et species plantarum* 4. 1816, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *A Class-book of Botany* 612. 1847, *Revisio Generum Plantarum* 2: 772. 1891 and *Flora of the Prairies and Plains of Central North America* 114. 1932.

D. mandshurica Maxim. (*Neomolinia mandshurica* (Maxim.) Honda)

Eurasia. See *Mélanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. Saint Pétersbourg* 12: 932. 1888 and *Botanical Magazine* 46: 2. 1932.

D. obovata (Gleason) Brandenburg (*Diarrhena americana* var. *obovata* Gleason)

U.S. See *Phytologia* 4(1): 21. 1952, *Bulletin of the Torrey Botanical Club* 118(2): 135. 1991.

Diastemanthe Steudel = *Stenotaphrum* Trin.

Probably from the Greek *diastema*, *diastematos* “interval, distance” and *anthos* “flower.”

Panicoideae, Paniceae, Setariinae, or Panicoideae, Panicodae, Paniceae, see *Flora Caroliniana, secundum ...* 249. 1788, *Fundamenta Agrostographiae* 175-176. 1820, Ernst Gottlieb von Steudel, *Synopsis plantarum glumacearum*. 1: 360. 1854, *Revisio Generum Plantarum* 2: 794. 1891 and

Brittonia 24: 210. 1972, *Contributions from the United States National Herbarium* 46: 608-609. 2003.

Diastemenanthe Desv. = *Stenotaphrum* Trin.

Greek *diastema*, *diastematos* “interval, distance” and *anthos* “flower.”

Panicoideae, Paniceae, Setariinae, or Panicoideae, Panicodae, Paniceae, type *Diastemenanthe platystachys* Steud., see *Fundamenta Agrostographiae* 175-176. 1820, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 179, t. 8, f. 4. 1831, *Synopsis plantarum glumacearum*. 1: 360. 1854 and Jonathan Deininger Sauer (b. 1918), “Revision of *Stenotaphrum* (Gramineae: Paniceae) with attention to its historical geography.” *Brittonia* 24(2): 202-222. 1972, *Flora of Tropical East Africa* 451-898. 1982, *Crop Science (Florida)* 22: 469-473. 1982, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Flora Mesoamericana* 6: 364. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Contributions from the United States National Herbarium* 46: 608-609. 2003.

Dichaetaria Nees ex Steudel

Greek *dicha* “in two,” *dis* “twice” and *chaite* “bristle, mane, long hair,” possibly referring to the nature of the spikes.

One species, southern India, Sri Lanka. Arundinoideae, Danthoniaeae, perennial, caespitose, tussocky, unarmed, unbranched, creeping, herbaceous, rhizomatous, woody rootstock, auricles absent, leaves mainly basal, ligule a fringed membrane, plants bisexual, open inflorescence paniculate or contracted racemose, sometimes branched in the lower part of the panicle, spikelets not falling entire, florets 2, lower floret perfect, awnlike sterile lemma, 2 glumes very unequal or equal, lower glume early deciduous, lemma minutely bifid and awned, palea present entire or notched, 2 free and membranous lodicules, 3 stamens, very long anthers, ovary glabrous, 2 stigmas, forest shade, dense woodlands, resembling *Gymnopogon*, type *Dichaetaria wightii* Nees ex Steud., see *Syn. Pl. Glumac.* 1: 145. 1854, *Enum. Pl. Zeyl.* 5: 372, 444. 1864 and *Handb. Fl. Ceylon* 5: 281. 1900, *Exkursionsflora von Java ...* 1: 152. 1911, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 471. 1960.

Species

D. wightii Nees ex Steud. (*Gymnopogon rigidus* Thw.; *Gymnopogon rigidus* Döll, nom. illeg., non *Gymnopogon rigidus* Thwaites; *Gymnopogon wightii* (Nees) Koord.)

Sri Lanka. Perennial, erect, rhizomatous, glabrous, leaves chiefly basal, leaf blades acuminate and pointed, panicle much exserted, lower lemma cartilaginous, callus acute,

palea furrowed between the keels, see *Essai d'une Nouvelle Agrostographie* 41, 164. 1812.

Dichantherium (Hitchc. & Chase) Gould = *Dicantherium* (Hitchc. & Chase) Gould, *Panicum* L.

Greek *dicha* “in two” and *anthele* “a type of inflorescence, a little flower,” *antheleon*, *anthyllion* is a diminutive of *anthos* “flower, blossom.”

About 120 species, America. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Panicinae, perennial, herbaceous, rhizomatous, auricles absent, ligule fringed or unfringed, basal leaves differing from culm leaves, often with hidden cleistogenes in the leaf sheaths, rosette of leaves, plants bisexual, cleistogamous or chasmogamous, inflorescence paniculate, 2 glumes very unequal, lower glume often tiny or minute, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, weed species, often in *Panicum*, type *Dichantherium dichotomum* (L.) Gould, see *Species Plantarum* 1: 55, 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 123, 125-126, 129. 1816, *Mantissa* 2: 256. 1824, *De Graminibus Paniceis* 223. 1826, *Department of Agriculture. Botanical Division. Bulletin* 8: 28, 31. 1889 and *Gray's Manual of Botany (edition 7)* 106, 109, 113-114. 1908, *Contributions from the United States National Herbarium* 15: 13-15, 20, 142-143, 151, 158, 165, 171, 176, 179, 200, 208, 240, 250, 258, 278, 292, 294, 300, 312. 1910, *North American Flora* 3(2): 198-200, 205-207, 209. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 243. 1931, *Journal of the Faculty of Science: University of Tokyo, Botany* 9: 119. 1965, *Brittonia* 26(1): 59. 1974, B.A. Gould & C.A. Clark, “*Dichantherium* (Poaceae) in the United States and Canada.” *Ann. Missouri Bot. Gard.* 65(4): 1088-1132. 1978, *Willdenowia* 8: 511-515. 1979, *Brittonia* 32: 353-364. 1980, *Journal of Human Evolution* 10: 565-583. 1981, *J. Agr. Trop. Bot. Appl.* 30: 159-168. 1983, *Grass Systematics and Evolution* 299-300. 1987, *Flora Mesoamericana* 6: 302-318. 1994, *Darwiniana* 3(1-4): 53-60. 1995, *Blumea* 41: 181-216, 416. 1996, *Taxon* 45: 319-320. 1996, *Taxon* 47: 869. 1998, *Taxon* 48: 376. 1999, *Am. J. Bot.* 88: 1988-1992. 2001 [Phylogenetics of Paniceae (Poaceae)], Liliana M. Giussani, J. Hugo Cota-Sánchez, Fernando O. Zuloaga and Elizabeth A. Kellogg, “A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis.” *Am. J. Bot.* 88: 1993-2012. 2001, *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 17(2): 297-314. 2001, *Sida* 20(1): 165-166. 2002, *Am. J. Bot.* 90: 796-821. 2003 [A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae.], *Am. J. Bot.* 90: 1306-1312. 2003 [Genetic and historical relationships among geothermally

adapted *Agrostis* (bentgrass) of North America and Kamchatka: evidence for a previously unrecognized, thermally adapted taxon.], *Contributions from the United States National Herbarium* 46: 177-192, 306-441. 2003, *New Phytologist* 161(2): 549-555. Feb 2004, *Journal of Ecology* 92(3): 409-421. June 2004, *Am. J. Bot.* 91: 1046-1051. 2004 [Herbivory alters the expression of a mixed-mating system.], *Restoration Ecology* 12(4): 503-515. Dec 2004, *Journal of Applied Ecology* 42(1): 129-138. Feb 2005 [Vegetation-site relationships of roadside plant communities in West Virginia, U.S.].

Species

D. aciculare (Desv. ex Poir.) Gould & C.A. Clark (*Chasea angustifolia* (Elliott) Nieuwl.; *Dichantherium aciculare* subsp. *neuranthum* (Griseb.) Freckmann & Lelong; *Dichantherium angustifolium* (Elliott) Gould; *Panicum aciculare* Desv. ex Poir.; *Panicum aciculare* var. *aciculare*; *Panicum aciculare* var. *arenicoloides* (Ashe) Beetle; *Panicum aciculare* var. *ovinum* (Scribn. & J.G. Sm.) Beetle; *Panicum angustifolium* Elliott; *Panicum arenicola* Ashe; *Panicum arenicoloides* Ashe; *Panicum curtisii* Steud.; *Panicum curtisii* Chapm., nom. illeg., non *Panicum curtisii* Steud.; *Panicum delawareense* Ashe; *Panicum filirameum* Ashe; *Panicum fusiforme* Hitchc.; *Panicum nemopanthum* Ashe; *Panicum neuranthum* Griseb.; *Panicum neuranthum* var. *ramosum* Griseb.; *Panicum nitidum* var. *angustifolium* (Elliott) A. Gray; *Panicum orthophyllum* Ashe; *Panicum ovinum* Scribn. & J.G. Sm.; *Panicum pinetorum* Swallen; *Panicum pungens* Muhl. ex Scribn. & Merr., nom. illeg., non *Panicum pungens* Poir.; *Panicum redivivum* Trin. ex Steud.; *Panicum setaceum* Muhl.; *Panicum subuniflorum* Bosc ex Spreng.; *Panicum walteri* Pursh; *Panicum walteri* Elliott, nom. illeg., non *Panicum walteri* Pursh)

America. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Flora Americae Septentrionalis; or, ...* 1: 66-67. 1814, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 274. 1816, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 115, 129. 1816, *Descriptio uberior Graminum* 99. 1817, *Systema Vegetabilium, editio decima sexta* 1: 312. 1825, *North American Gramineae and Cyperaceae* 2: 112. 1835, *Nomenclator Botanicus. Editio secunda* 2: 262. 1841, *Synopsis Plantarum Glumacearum* 1: 66. 1855, *Flora of the Southern United States* 573. 1860, *Catalogus plantarum cubensium ...* 232. 1866, *Journal of the Elisha Mitchell Scientific Society* 15: 42, 56. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 3. 1899 and *Journal of the Elisha Mitchell Scientific Society* 16: 88-90. 1900, *North Carolina Agricultural Research Service: Bulletin* 175: 116. 1900, *Bulletin, Division of Agrostology United States Department of Agriculture* 27: 2. 1900, *Contributions from the United States National Herbarium* 12(6): 222. 1909, *Contr. U.S. Natl. Herb.* 15: 166, 175. 1910, *American*

Midland Naturalist 2: 64. 1911, *Proceedings of the Biological Society of Washington* 55: 93. 1942, *Bulletin of the Torrey Botanical Club* 69: 539, f. 1. 1942, *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1116. 1978 [1979], *Phytologia* 48(2): 192. 1981, *Sida* 20(1): 167. 2002.

D. aciculare (Desv. ex Poir.) Gould & C.A. Clark var. **aciculare** (*Dichantherium aciculare* subsp. *neuranthum* (Griseb.) Freckmann & Lelong; *Panicum aciculare* var. *angustifolium* (Elliott) Wipff & S.D. Jones; *Panicum aciculare* var. *arenicoloides* (Ashe) Beetle; *Panicum angustifolium* Elliott; *Panicum arenicola* Ashe; *Panicum arenicoloides* Ashe; *Panicum bennettense* W.V. Br.; *Panicum chrysopsidifolium* Nash; *Panicum curtisii* Steud.; *Panicum curtisii* Chapm., nom. illeg., non *Panicum curtisii* Steud.; *Panicum delawareense* Ashe; *Panicum filirameum* Ashe; *Panicum nemopanthum* Ashe; *Panicum neuranthum* Griseb.; *Panicum orthophyllum* Ashe; *Panicum ovinum* Scribn. & J.G. Sm.; *Panicum pinetorum* Swallen; *Panicum pungens* Muhl. ex Scribn. & Merr., nom. illeg., non *Panicum pungens* Poir.; *Panicum redivivum* Trin. ex Steud.; *Panicum setaceum* Muhl.; *Panicum striatum* Muhl. ex Fournet; *Panicum subuniflorum* Bosc ex Spreng.; *Panicum subvillosum* Ashe)

South America. See *Mexicanas Plantas* 2: 19. 1886 and *Journal of the Elisha Mitchell Scientific Society* 16: 86. 1900, *Bulletin of the Torrey Botanical Club* 69: 539, f. 1. 1942, *Phytologia* 77(6): 457. 1994 [1995].

D. aciculare (Desv. ex Poir.) Gould & C.A. Clark var. **ramosum** (Griseb.) Davidse (*Chasea angustifolia* (Elliott) Nieuwl.; *Dichantherium aciculare* subsp. *angustifolium* (Elliott) Freckmann & Lelong; *Dichantherium aciculare* subsp. *fusiforme* (Hitchc.) Freckmann & Lelong; *Dichantherium angustifolium* (Elliott) Gould; *Dichantherium fusiforme* (Hitchc.) Harvill; *Panicum aciculare* Desv. ex Poir.; *Panicum aciculare* var. *angustifolium* (Elliott) Wipff & S.D. Jones; *Panicum aciculare* var. *arenicoloides* (Ashe) Beetle; *Panicum angustifolium* Elliott; *Panicum arenicoloides* Ashe; *Panicum fusiforme* Hitchc.; *Panicum neuranthum* var. *ramosum* Griseb.; *Panicum nitidum* var. *angustifolium* (Elliott) A. Gray)

South America. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 129. 1816, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 274. 1816, *North American Gramineae and Cyperaceae* 2: 112. 1835, *Catalogus plantarum cubensium ...* 232. 1866 and *Journal of the Elisha Mitchell Scientific Society* 16: 89. 1900, *Contributions from the United States National Herbarium* 12(6): 222. 1909, *American Midland Naturalist* 2: 64. 1911, *Brittonia* 26(1): 59. 1974, *Castanea* 42(2): 177. 1977, *Phytologia* 48(2): 192. 1981, *Novon* 2(2): 104. 1992, *Phytologia* 77(6): 457. 1994 [1995], *Sida* 20(1): 167. 2002.

D. acuminatum (Sw.) Gould & C.A. Clark (*Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark; *Dichanthelium acuminatum* var. *thurowii* (Scribn. & J.G. Sm.) Gould & C.A. Clark; *Dichanthelium lanuginosum* (Elliott) Gould; *Panicum acuminatum* Sw.; *Panicum acuminatum* Salzm. ex Döll, nom. illeg., non *Panicum acuminatum* Sw.; *Panicum acuminatum* var. *acuminatum*; *Panicum acuminatum* var. *thurowii* (Scribn. & J.G. Sm.) C.F. Reed; *Panicum auburne* Ashe; *Panicum ciliosum* Nash; *Panicum lanuginosum* Elliott; *Panicum lanuginosum* J. Presl, nom. illeg., non *Panicum lanuginosum* Elliott; *Panicum olivaceum* Hitchc. & Chase; *Panicum thurowii* Scribn. & J.G. Sm.)

Cuba, Puerto Rico, Mexico, U.S., Missouri, California, Arkansas, Colombia, Venezuela. Perennial, erect, branched, hairy, low, decumbent, caespitose, shortly rhizomatous, ligules tufts of white hairs, leaves elongated, hairy spikelets, usually occurs in wetlands and along streams, moist open areas, wet meadows, rich soils, open fields, wet prairies, moist places in woods, along roadsides, see *Species Plantarum* 1: 58. 1753, *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Prodromus Plantarum Indiae Occidentalis* 11. 1825, *Reliquiae Haenkeanae* 1(4-5): 306. 1830, *A Class-book of Botany* 786. 1861, *Flora of the British West Indian Islands* 553. 1864, *Flora Brasiliensis* 2(2): 234. 1877, *Bulletin of the Torrey Botanical Club* 24: 41-42, 196-197. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 51-52. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 568. 1899, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 5. 1899 and *North Carolina Agricultural Research Service: Bulletin* 175: 115. 1900, *Bulletin of the Torrey Botanical Club* 30(7): 380. 1903, *Rhodora* 8(95): 208. 1906, *Contributions from the United States National Herbarium* 15: 225, 229, f. 234, 241. 1910, *American Midland Naturalist* 11(2): 45. 1928, *Phytologia* 4(1): 21. 1952, *Brittonia* 26(1): 60. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1125. 1978 [1979], *Phytologia* 48(2): 192-193. 1981, *Phytologia* 49(1): 40. 1981, *Brittonia* 36(3): 269-271. 1984, *Phytologia* 67(6): 451-452, 472. 1989, *Phytologia* 77(6): 458. 1994 [1995].

in English: Western panic grass, Pacific panic grass, Western witch grass, Western panicum, panic grass

D. acuminatum (Sw.) Gould & C.A. Clark var. **acuminatum** (*Dichanthelium acuminatum* (Sw.) Gould & C. Clark; *Dichanthelium acuminatum* var. *thurowii* (Scribn. & J.G. Sm.) Gould & C.A. Clark; *Dichanthelium lanuginosum* (Elliott) Gould; *Panicum acuminatum* Sw. var. *acuminatum*; *Panicum auburne* Ashe; *Panicum ciliosum* Nash; *Panicum comophyllum* Nash; *Panicum lanuginosum* Elliott; *Panicum lanuginosum* J. Presl, nom. illeg., non *Panicum lanuginosum* Elliott; *Panicum lindheimeri* var. *tennesseense* (Ashe) Farw.; *Panicum olivaceum* Hitchc. & Chase; *Panicum*

orangense Ashe; *Panicum tennesseense* Ashe; *Panicum thurowii* Scribn. & J.G. Sm.)

Cuba, Puerto Rico, U.S., California, Missouri, Colombia, Venezuela. Annual or perennial, on dry sand or beaches, rich soils, usually occurs in wetlands, subalpine forests, old fields and thickets, under moist conditions in riparian habitats, chaparral, see *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Reliquiae Haenkeanae* 1(4-5): 306. 1830, *Bulletin of the Torrey Botanical Club* 24(4): 196-197. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 52, 113. 1898 and 1899, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 5. 1899, *Bulletin of the Torrey Botanical Club* 26(11): 568. 1899 and *North Carolina Agricultural Research Service: Bulletin* 175: 115. 1900, *Bulletin of the Torrey Botanical Club* 30(7): 380. 1903, *Contributions from the United States National Herbarium* 15: 220, 225, f. 234. 1910, *American Midland Naturalist* 11(2): 45. 1928, *Brittonia* 26(1): 60. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1125. 1978 [1979].

in English: Pacific panic grass, woolly panic grass, panic grass, Western panicum, thermal witchgrass, acuminate panic grass

D. acuminatum (Sw.) Gould & C.A. Clark var. **densiflorum** (E.L. Rand & Redfield) Gould & C.A. Clark (*Dichanthelium acuminatum* subsp. *spretum* (Schult.) Freckmann & Lelong; *Dichanthelium spretum* (Schult.) Freckmann; *Panicum acuminatum* var. *densiflorum* (E.L. Rand & Redfield) Lelong; *Panicum nitidum* var. *densiflorum* E.L. Rand & Redfield; *Panicum spretum* Schult.)

America. See *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788, *Mantissa* 2: 248. 1824, *Flora of Mount Desert Island, Maine* 174. 1894 and *Annals of the Missouri Botanical Garden* 65(4): 1127. 1978 [1979], *Phytologia* 48(1): 102. 1981, *Brittonia* 36(3): 270. 1984, *Sida* 20(1): 168. 2002.

D. acuminatum (Sw.) Gould & C.A. Clark var. **fasciculatum** (Torr.) Freckmann (*Dichanthelium acuminatum* subsp. *fasciculatum* (Torr.) Freckmann & Lelong; *Dichanthelium acuminatum* var. *acuminatum*; *Panicum dichotomum* var. *fasciculatum* Torr.)

America. See *A Flora of the Northern and Middle Sections of the United States* 145. 1824 and *Phytologia* 48(1): 108. 1981, *Sida* 20(1): 167. 2002.

D. acuminatum (Sw.) Gould & C.A. Clark var. **lindheimeri** (Nash) Gould & C.A. Clark (*Dichanthelium acuminatum* subsp. *lindheimeri* (Nash) Freckmann & Lelong; *Dichanthelium lanuginosum* var. *lindheimeri* (Nash) Freckmann, nom. illeg., non *Dichanthelium lanuginosum* var. *lindheimeri* (Nash) Harvill; *Dichanthelium lindheimeri* (Nash) Gould; *Panicum acuminatum* var. *lindheimeri* (Nash) Beetle; *Panicum acuminatum* var. *lindheimeri* (Nash) C.F.

Reed, nom. illeg., non *Panicum acuminatum* var. *lindheimeri* (Nash) Beetle; *Panicum acuminatum* var. *lindheimeri* (Nash) Lelong, nom. illeg., non *Panicum acuminatum* var. *lindheimeri* (Nash) Beetle; *Panicum funstonii* Scribn. & Merr.; *Panicum lanuginosum* Elliott var. *lindheimeri* (Nash) Fernald; *Panicum lanuginosum* var. *septentrionale* Fernald; *Panicum lindheimeri* Nash)

Northern America, U.S., California. Perennial, caespitose, found in dry woodlands, moist conditions, dry or moist sterile soil in the open, usually occurs in wetlands, riverbank, see *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Bulletin of the Torrey Botanical Club* 24(4): 196-197. 1897 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 4. 1901, *Rhodora* 36(423): 77. 1934, *Brittonia* 26(1): 60. 1974, *Phytologia* 39(4): 270. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1127. 1978 [1979], *Phytologia* 48(2): 193. 1981, *Brittonia* 36(3): 262-273. 1984, *Phytologia* 67(6): 452. 1989, *Sida* 20(1): 168. 2002.

in English: Lindheimer panic grass, Pacific panic grass

D. acuminatum (Sw.) Gould & C.A. Clark var. **longiligulatum** (Nash) Gould & C.A. Clark (*Dichanthelium acuminatum* subsp. *longiligulatum* (Nash) Freckmann & Lelong; *Dichanthelium leucothrix* (Nash) Freckmann; *Dichanthelium longiligulatum* (Nash) Freckmann; *Panicum acuminatum* var. *longiligulatum* (Nash) Lelong; *Panicum leucothrix* Nash; *Panicum longiligulatum* Nash)

America. See *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *Bulletin of the Torrey Botanical Club* 24(1): 41-42. 1897, *Bulletin of the Torrey Botanical Club* 26(11): 574. 1899 and *Annals of the Missouri Botanical Garden* 65(4): 1127. 1978 [1979], *Phytologia* 48(1): 101-102. 1981, *Brittonia* 36(3): 270. 1984, *Sida* 20(1): 168. 2002.

D. adenorhachis (Zuloaga & Morrone) Zuloaga (*Panicum adenorhachis* Zuloaga & Morrone)

South America, Brazil. See *Annals of the Missouri Botanical Garden* 78(1): 154-156, f. 2. 1991, *American Journal of Botany* 90(5): 816. 2003.

D. aequivaginatatum (Swallen) Zuloaga (*Panicum aequivaginatatum* Swallen; *Panicum appressifolium* Swallen; *Panicum belmonte* Renvoize; *Panicum thinophilum* Renvoize)

America. See *Contributions from the United States National Herbarium* 29(6): 271. 1949, *Memoirs of the New York Botanical Garden* 9(3): 258. 1957, *Kew Bulletin* 37(2): 325, f. 4. 1982, *Kew Bulletin* 39(1): 180. 1984, *American Journal of Botany* 90(5): 816. 2003.

D. assurgens (Renvoize) Zuloaga (*Panicum assurgens* Renvoize; *Panicum assurgens* H. St. John, nom. illeg., non *Panicum assurgens* Renvoize)

America. See *Kew Bulletin* 37(2): 325, f. 3. 1982, *Phytologia* 63(5): 368. 1987, *American Journal of Botany* 90(5): 816. 2003.

D. boreale (Nash) Freckmann (*Dichanthelium boreale* (Nash) Freckmann; *Panicum bicknellii* Nash; *Panicum bicknellii* Nash var. *bicknellii*; *Panicum bicknellii* var. *calliphyl- lum* (Ashe) Gleason; *Panicum boreale* Nash; *Panicum calliphyl- lum* Ashe; *Panicum bicknellii* Nash var. *bushii* (Nash) Farw.; *Panicum boreale* Nash var. *michiganense* Farw.; *Panicum bushii* Nash)

Northern America. Leaf blades long and slender, open woods, shores and meadows, moist woods and fields, see *Bulletin of the Torrey Botanical Club* 22(10): 421-422. 1895, *Bulletin of the Torrey Botanical Club* 24(4): 193-194. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 31, 42. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 568. 1899 and *Papers of the Michigan Academy of Science, Arts and Letters* 1: 85. 1923, *Rhodora* 42(500): 306-307. 1940, *Phytologia* 4(1): 21. 1952, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978, *Phytologia* 39(4): 268-272. 1978.

in English: Northern panic grass

D. boscii (Poir.) Gould & C.A. Clark (*Dichanthelium boscii* (Poir.) Gould & C.A. Clark; *Panicum boscii* Poir.; *Panicum boscii* var. *molle* (Vasey) Hitchcock & Chase; *Panicum boscii* var. *molle* (Vasey ex Ward) Hitchc. & Chase; *Panicum latifolium* var. *australe* Vasey; *Panicum porterianum* Nash; *Panicum waltheri* Poir., nom. illeg., non *Panicum waltheri* Pursh)

Eastern United States. Perennial, tufted, dark green, ground cover species, forming small clumps, culms glabrous or hairy, hairy joints, wide leaves more or less glabrous to pubescent, leaf sheaths glabrous, spikelets green papillose to pubescent, ornamental grass, prefers on dry woods and moist woods, in shade near streams, hardwood, well-drained shaded areas, see *Species Plantarum* 1: 58-59. 1753, *Encyclopédie Méthodique, Botanique* 4: 278, 282. 1816, *Bulletin of the United States National Museum* 22: 135. 1881, *Department of Agriculture. Botanical Division. Bulletin* 8: 34. 1889, *Bulletin of the Torrey Botanical Club* 22(10): 420. 1895 and *Rhodora* 10(112): 64. 1908, *Annals of the Missouri Botanical Garden* 65(4): 1101. 1978 [1979], *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988.

in English: panic grass, Bosc's panic grass

in French: panic de Bosc

D. cabreræ (Zuloaga & Morrone) Zuloaga (*Panicum cabreræ* Zuloaga & Morrone)

South America. See *Annals of the Missouri Botanical Garden* 78(1): 156-158, f. 3. 1991, *American Journal of Botany* 90(5): 816. 2003.

D. caparoense (Zuloaga & Morrone) Zuloaga (*Panicum caparaoense* Zuloaga & Morrone)

South America. See *Annals of the Missouri Botanical Garden* 80(1): 153, f. 36. 1993, *American Journal of Botany* 90(5): 816. 2003.

D. clandestinum (L.) Gould (*Chasea clandestina* (L.) Nieuwl.; *Dichantherium clandestinum* (L.) Gould; *Milium clandestinum* (L.) Moench; *Panicum clandestinum* L.; *Panicum clandestinum* Wall. ex B.D. Jacks.; *Panicum clandestinum* var. *pedunculatum* (Torr.) Torr.; *Panicum decoloratum* Nash; *Panicum latifolium* var. *clandestinum* (L.) Pursh; *Panicum pedunculatum* Torr.)

Northern America, U.S. Perennial or annual, prostrate to erect, fibrous root system, nodes and internodes sometimes hairy, leaf sheaths covered with short stiff hairs, ligules membranous, wide leaves, bases of the leaf blades heart-shaped and completely surrounding the sheath, hairy spikelets, silvery flowers, can be a troublesome weed of pastures and hayfields, ornamental grass, occurs in mesic to dry woods, on thickets and fields, along streams, dry habitats, edge of field and wet prairies, shores and alluvial woods borders, sandy railroad bank, see *Species Plantarum* 1: 58-59. 1753, *Methodus Plantas Horti Botanici* ... 204. 1794, *Flora Americae Septentrionalis*; or, ... 1: 68. 1814, *A Flora of the Northern and Middle Sections of the United States* 141. 1824, *A Flora of the State of New York* 2: 426. Albany 1843, *Index Kewensis* 2: 411. 1894, *Bulletin of the Torrey Botanical Club* 26(11): 570. 1899 and *Contr. U.S. Natl. Herb.* 12: 118. 1908, *American Midland Naturalist* 2: 64. 1911, *Brittonia* 26(1): 59. 1974.

in English: deer tongue, deer tongue grass, tioga deer tongue grass, hidden panic grass

D. commutatum (Schult.) Gould (*Dichantherium albomaculatum* (Scribn.) Gould; *Dichantherium commutatum* (Schult.) Gould; *Dichantherium commutatum* var. *ashei* (T.G. Pearson ex Ashe) Mohlenbr.; *Dichantherium jooii* (Vasey) Mohlenbr.; *Digitaria commutata* Schult.f.; *Panicum albomaculatum* Scribn.; *Panicum alsophilum* Swallen; *Panicum ashei* T.G. Pearson ex Ashe; *Panicum commelinifolium* Ashe, nom. illeg., non *Panicum commelinifolium* Rudge; *Panicum commutatum* Schult.; *Panicum commutatum* (Schult.f.) Nees, nom. illeg., non *Panicum commutatum* Schult.; *Panicum commutatum* Schultes var. *ashei* (G. Pearson ex Ashe) Fernald; *Panicum commutatum* var. *joorii* (Vasey) Fernald; *Panicum commutatum* var. *latifolium* Scribn.; *Panicum commutatum* var. *minor* Vasey; *Panicum curranii* Ashe; *Panicum divergens* Kunth; *Panicum enslinii* Trin.; *Panicum jooirii* Vasey; *Panicum leiophyllum* E. Fourn., nom. illeg., non *Panicum leiophyllum* Nees; *Panicum manatense* Nash; *Panicum mutabile* Scribn. & J.G. Sm. ex Nash; *Panicum nervosum* Muhl. ex Elliott, nom. illeg., non *Panicum nervosum* Lam.; *Panicum nitidum* var. *majus*

Pursh; *Panicum polyneuron* Steud.; *Panicum subsimplex* Ashe)

U.S. Caespitose, forage, dry rocky hills, oak woods, fields, in dry rocky woods, see *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 91. 1809, *Flora Americae Septentrionalis*; or, ... 1: 67. 1814, *Nova Genera et Species Plantarum* 1: 102. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1: 122. 1816, *Mantissa* 2: 242. 1824, *Linnaea* 7(3): 274. 1824, *De Graminibus Paniceis* 230. 1826, *Révision des Graminées* 1: 36. 1829, *Mantissa* 2: 262. 1832, *Florae Africae Australioris Illustrationes Monographicae* 26-27. 1841, *Plantae Novae vel Minus Notae* ... 39. 1842, *Synopsis Plantarum Glumacearum* 1: 91. 1854, *Mexicanas Plantas* 2: 20. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 31, 34. 1889, *Bulletin of the Torrey Botanical Club* 20: 476. 1893, *Conspectus Florae Africae* 5: 743-744. 1894, *Grasses of North America for Farmers and Students* 2: 141. 1896, *Bulletin of the Torrey Botanical Club* 24(1): 42. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 29, 35. 1898, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1899 and *Circular, Division of Agrostology, United States Department of Agriculture* 19: 2-3. 1900, *North Carolina Agricultural Experiment Station Bulletin* 175: 115. 1900, *Flora of the Southeastern United States* ... 103, 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 310. 1910, *Rhodora* 36(423): 83. 1934, *Rhodora* 39(466): 388. 1937, *Contributions from the United States National Herbarium* 29(9): 422. 1950, *Brittonia* 26(1): 59. 1974, *Brittonia* 32: 357. 1980, *Erigenia* 6: 26. 1985, *Sida* 20(1): 169. 2002.

in Mexico: panizo blanco

D. congestum (Renvoize) Zuloaga (*Panicum congestum* Renvoize)

America. See *Kew Bulletin* 37(2): 329, f. 6A-B. 1982, *American Journal of Botany* 90(5): 816. 2003.

D. cucaense (Zuloaga & Morrone) Zuloaga (*Panicum cucaense* Zuloaga & Morrone)

South America. See *Annals of the Missouri Botanical Garden* 78(1): 158, 160-161, f. 5. 1991, *American Journal of Botany* 90(5): 816. 2003.

D. cumbucana (Renvoize) Zuloaga (*Panicum cumbucana* Renvoize)

South America. See *Kew Bulletin* 37(2): 332, 7C-D. 1982, *American Journal of Botany* 90(5): 816. 2003.

D. davidsei (Zuloaga & Morrone) Zuloaga (*Panicum davidsei* Zuloaga & Morrone)

South America. See *Annals of the Missouri Botanical Garden* 78(1): 158, f. 4. 1991, *American Journal of Botany* 90(5): 816. 2003.

D. depauperatum (Muhl.) Gould (*Dichantherium depauperatum* (Muhl.) Gould; *Panicum depauperatum* Muhl.; *Panicum depauperatum* var. *depauperatum*; *Panicum*

depauperatum var. *involutum* (Torrey) Alph. Wood; *Panicum depauperatum* var. *laxum* Vasey; *Panicum depauperatum* var. *psilophyllum* Fernald; *Panicum involutum* Torr.; *Panicum junceum* Trin.; *Panicum muhlenbergii* Spreng., nom. illeg., non *Panicum muhlenbergii* Schult.; *Panicum rectum* Roem. & Schult.; *Panicum sprengelii* Kunth; *Panicum strictum* Pursh, nom. illeg., non *Panicum strictum* R. Br.; *Panicum strictum* var. *psilophyllum* (Fernald) Farw.)

North America, U.S. Caespitose, dry or sandy soil, open woods, sterile land, see *Catalogus Plantarum Americae Septentrionalis* 9. 1813, *Flora Americae Septentrionalis*; or, ... 1: 69. 1814, *Descriptio uberior Graminum* 112. 1817, *Systema Vegetabilium* 2: 457. 1817, *A Flora of the Northern and Middle Sections of the United States* 144. 1823, *Systema Vegetabilium, editio decima sexta* 1: 314. 1825, *De Graminibus Paniceis* 220. 1826, *Révision des Graminées* 1: 39. 1829, *A Class-book of Botany* 786. 1861, *Department of Agriculture. Botanical Division. Bulletin* 8: 29. 1889, *Bulletin of the Torrey Botanical Club* 26(11): 575. 1899 and *Contr. U.S. Natl. Herb.* 15: 151. 1910, *Rhodora* 23(272): 193-194. 1921, *Papers of the Michigan Academy of Science, Arts and Letters* 26: 5. 1941, *Le Naturaliste Canadien* 94: 526. 1967, *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978.

in English: starved panic grass, poverty panic grass

D. dichotomum (L.) Gould (*Chasea dichotoma* (L.) Nieuwl.; *Dichanthelium caerulescens* (Hack. ex Hitchc.) Correll; *Dichanthelium dichotomum* (L.) Gould; *Dichanthelium dichotomum* var. *dichotomum*; *Dichanthelium microcarpon* (Muhl. ex Elliott) Mohlenbr.; *Dichanthelium nitidum* (Lam.) Mohlenbr.; *Panicum angustifolium* J. Le Conte ex Torr., nom. illeg., non *Panicum angustifolium* Elliott; *Panicum barbulatum* Michx.; *Panicum caerulescens* Hack. ex Hitchc.; *Panicum dichotomum* L.; *Panicum dichotomum* Forssk., nom. illeg., non *Panicum dichotomum* L.; *Panicum dichotomum* var. *barbulatum* (Michx.) Alph. Wood; *Panicum dichotomum* var. *commune* S. Watson & J.M. Coult.; *Panicum dichotomum* var. *dichotomum*; *Panicum dichotomum* var. *divaricatum* Vasey; *Panicum dichotomum* var. *nitidum* (Lam.) Alph. Wood; *Panicum dichotomum* var. *nodiflorum* (Lam.) Griseb.; *Panicum dichotomum* var. *roanokense* (Ashe) Lelong; *Panicum dichotomum* var. *viride* Vasey; *Panicum dichotomum* var. *yadkinense* (Ashe) Lelong; *Panicum maculatum* Ashe, nom. illeg., non *Panicum maculatum* Aubl.; *Panicum microcarpon* Muhl. ex Elliott; *Panicum multirameum* Scribn.; *Panicum nitidum* Lam.; *Panicum nitidum* var. *barbulatum* (Michx.) Chapm.; *Panicum nitidum* var. *pauciflorum* Britton; *Panicum nitidum* var. *viride* (Vasey) Britton; *Panicum nodiflorum* Lam.; *Panicum pubescens* var. *barbulatum* (Michx.) Britton; *Panicum ramulosum* var. *viride* (Vasey) Porter; *Panicum roanokense* Ashe; *Panicum subbarbulatum* Scribn. & Merr.; *Panicum tremulum* Spreng.; *Panicum yadkinense* Ashe)

Mexico, U.S., Venezuela, Cuba, Bahamas. Caespitose, forage, found in dry thin woods, among shrubs, thickets and fields, woodland, in moist meadows, open areas, see *Species Plantarum* 1: 58. 1753, *Flora Aegyptiaco-Arabica* 20. 1775, *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *Flora Boreali-Americana* 1: 49. 1803, *A Sketch of the Botany of South-Carolina and Georgia* 1: 127. 1816, *Descriptio uberior Graminum* 118. 1817, *Manual of Botany of the Northern States. Second Edition.* 342. 1818, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 103. 1821, *A Flora of North America: Containing ...* 145. 1824, *De Graminibus Paniceis* 242. 1826, *North American Gramineae and Cyperaceae* 2: 111. 1835, *A Class-book of Botany* 786. 1861, *Flora of the British West Indian Islands* 553. 1864, *Catalogus plantarum cubensium ...* 234. 1866, *The American Botanist and Florist* pt. 2: 393. 1871, *Department of Agriculture. Botanical Division. Bulletin* 8: 30-31. 1889, *Transactions of the New York Academy of Sciences* 9(1-2): 14. 1889, *Catalogue of the Plants Found in New Jersey* 280. 1889, *A Manual of the Botany of the Northern United States* (edition 6) 633. 1890, *Bulletin of the Torrey Botanical Club* 20: 194. 1893, *Flora of the Southern United States* 586. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 44. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 569. 1899 and *Circular, Division of Agrostology, United States Department of Agriculture* 19: 2. 1900, *Journal of the Elisha Mitchell Scientific Society* 16: 85. 1900, *Circular, Division of Agrostology, United States Department of Agriculture* 29: 9. 1901, *Contr. U.S. Natl. Herb.* 12: 117. 1908, *Contributions from the United States National Herbarium* 12(6): 219. 1909, *Contr. U.S. Natl. Herb.* 15: 181, 185, 191. 1910, *American Midland Naturalist* 2: 64. 1911, *Brittonia* 26(1): 59. 1974, *Journal of the Arnold Arboretum* 60(1): 154. 1979, *Brittonia* 36(3): 265-266. 1984, *Erigenia* 6: 26. 1985, *Phytologia* 67(6): 452-453. 1989, *Annals of the Missouri Botanical Garden* 80(1): 157. 1993, *Phytologia* 77(6): 460. 1994 [1995].

in English: forking panic grass, forked panic grass

D. dichotomum (L.) Gould subsp. *mattamuskeetense* (Ashe) Freckmann & Lelong (*Dichanthelium annulum* (Ashe) LeBlond; *Dichanthelium dichotomum* (L.) Gould; *Dichanthelium dichotomum* subsp. *mattamuskeetense* (Ashe) Freckmann & Lelong; *Dichanthelium mattamuskeetense* (Ashe) Mohlenbr.; *Dichanthelium mattamuskeetense* (Ashe) LeBlond, nom. illeg., non *Dichanthelium mattamuskeetense* (Ashe) Mohlenbr.; *Panicum annulum* Ashe; *Panicum annulum* Ashe var. *glabrescens* Gleason; *Panicum clutei* Nash; *Panicum dichotomum* L. var. *mattamuskeetense* (Ashe) Lelong; *Panicum mattamuskeetense* Ashe; *Panicum mattamuskeetense* Ashe var. *clutei* (Nash) Fernald; *Panicum mattamuskeetense* var. *mattamuskeetense*)

U.S., Lake Mattamuskeet, North Carolina. See *Species Plantarum* 1: 58. 1753, *Journal of the Elisha Mitchell Scientific Society* 15: 45, 58. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 569. 1899 and *Contr. U.S. Natl. Herb.* 15: 185-186. 1910, *Rhodora* 39(466): 386. 1937, *Brittonia* 26(1): 59. 1974, *Brittonia* 36(3): 265. 1984, *Erigenia* 6: 26. 1985, *Phytologia* 67(6): 452. 1989, *Sida* 19(4): 826-828, 832. 2001, *Sida* 20(1): 169. 2002.

D. dichotomum (L.) Gould subsp. **yadkinense** (Ashe) Freckmann & Lelong (*Dichanthelium dichotomum* (L.) Gould; *Dichanthelium dichotomum* var. *dichotomum*; *Dichanthelium yadkinense* (Ashe) Mohlenbr.; *Panicum dichotomum* L.; *Panicum dichotomum* var. *yadkinense* (Ashe) Lelong; *Panicum dumus* Desv.; *Panicum maculatum* Ashe, nom. illeg., non *Panicum maculatum* Aubl.; *Panicum yadkinense* Ashe)

America. Perennial, herbaceous, caespitose, erect or geniculate at base, erect or leaning, sparsely branching, grazed, moist soils, bottomlands, swamps, woods, see *Species Plantarum* 1: 58. 1753, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 192. 1831, *Journal of the Elisha Mitchell Scientific Society* 15: 44. 1898 and *Journal of the Elisha Mitchell Scientific Society* 16: 85. 1900, *Contr. U.S. Natl. Herb.* 12: 117. 1908, *Contr. U.S. Natl. Herb.* 15: 195. 1915, *Brittonia* 26(1): 59. 1974, *Brittonia* 36(3): 266. 1984, *Erigenia* 6: 27. 1985, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988, *Sida* 20(1): 170. 2002.

D. dichotomum (L.) Gould var. **dichotomum** (*Chasea dichotoma* (L.) Nieuwl.; *Dichanthelium dichotomum* (L.) Gould; *Dichanthelium dichotomum* var. *dichotomum*; *Panicum barbulatum* Michx.; *Panicum dichotomum* L.; *Panicum dichotomum* var. *barbulatum* (Michaux) Wood; *Panicum dichotomum* L. var. *dichotomum*; *Panicum dichotomum* var. *viride* Vasey; *Panicum nitidum* var. *viride* (Vasey) Britton; *Panicum ramulosum* var. *viride* (Vasey) Porter)

U.S. Caespitose, forage, dry places, open woods, rocky areas, see *Species Plantarum* 1: 58. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Flora Boreali-Americana* 1: 49. 1803, *A Class-book of Botany* 786. 1861, *Department of Agriculture. Botanical Division. Bulletin* 8: 30. 1889, *Transactions of the New York Academy of Sciences* 9(1-2): 14. 1889, *Bulletin of the Torrey Botanical Club* 20: 194. 1893 and *Contr. U.S. Natl. Herb.* 12: 117. 1908, *Contr. U.S. Natl. Herb.* 15: 191. 1910, *American Midland Naturalist* 2: 64. 1911, *Brittonia* 26(1): 59. 1974.

in English: forking panic grass, forked panic grass

D. dichotomum (L.) Gould var. **nitidum** (Lam.) LeBlond (*Dichanthelium dichotomum* subsp. *nitidum* (Lam.) Freckmann & Lelong; *Panicum nitidum* Lam.)

America. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791 and *Sida* 19(4): 829-830. 2001, *Sida* 20(1): 169. 2002.

D. dichotomum (L.) Gould var. **ramulosum** (Torr.) LeBlond (*Dichanthelium dichotomum* subsp. *microcarpon* (Muhl. ex Elliott) Freckmann & Lelong; *Dichanthelium microcarpon* (Muhl. ex Elliott) Mohlenbr.; *Panicum dichotomum* var. *ramulosum* (Torr.) Lelong; *Panicum microcarpon* Muhl. ex Elliott; *Panicum nitidum* var. *ramulosum* Torr.)

America. See *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 127. 1816, *A Flora of the Northern and Middle Sections of the United States* 146. 1824 and *Brittonia* 36(3): 265. 1984, *Erigenia* 6: 26. 1985, *Sida* 19(4): 830-831. 2001, *Sida* 20(1): 169. 2002.

D. dichotomum (L.) Gould var. **roanokense** (Ashe) LeBlond (*Dichanthelium dichotomum* subsp. *roanokense* (Ashe) Freckmann & Lelong; *Panicum curtivaginum* Ashe; *Panicum dichotomum* var. *roanokense* (Ashe) Lelong; *Panicum roanokense* Ashe)

South America, U.S. See *Journal of the Elisha Mitchell Scientific Society* 15: 44. 1898 and *Journal of the Elisha Mitchell Scientific Society* 16: 85. 1900, *Brittonia* 36(3): 265. 1984, *Sida* 19(4): 831. 2001, *Sida* 20(1): 170. 2002.

D. dichotomum (L.) Gould var. **unciphyllum** (Trin.) Davidse (*Dichanthelium dichotomum* (L.) Gould var. *tenu* (Muhl.) Gould & C.A. Clark; *Dichanthelium dichotomum* var. *unciphyllum* (Trin.) Davidse; *Dichanthelium ensifolium* var. *unciphyllum* (Trin.) B.F. Hansen & Wunderlin; *Dichanthelium tenue* (Muhl.) Freckmann & Lelong; *Panicum acuminatum* var. *unciphyllum* (Trin.) Lelong; *Panicum concinnius* A.S. Hitchc. & Chase; *Panicum dichotomum* var. *tenu* (Muhl.) C.F. Reed; *Panicum dichotomum* var. *tenu* (Muhl.) Zuloaga & Morrone, nom. illeg., non *Panicum dichotomum* var. *tenu* (Muhl.) C.F. Reed; *Panicum dichotomum* L. var. *unciphyllum* (Trin.) Wipff & S.D. Jones; *Panicum gracilicaule* Nash, nom. illeg., non *Panicum gracilicaule* Rendle; *Panicum tenue* Muhl.; *Panicum unciphyllum* Trin.)

Mexico, U.S., Belize. In sandy soils, see *Species Plantarum* 1: 58. 1753, *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *Descriptio uberior Graminum* 118. 1817, *De Graminibus Paniceis* 242. 1826 and *Circ. Div. Agrostol. U.S.D.A.* 27: 4. 1900, *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1119. 1978 [1979], *Brittonia* 36(3): 269. 1984, *Annals of the Missouri Botanical Garden* 75: 1647. 1988 [1989], *Phytologia* 67(6): 453. 1989, *Novon* 2(2): 104. 1992, *Annals of the Missouri Botanical Garden* 80(1): 157. 1993, *Phytologia* 77(6): 460. 1994 [1995], *Sida* 20(1): 171. 2002.

D. ensifolium (Baldwin & Elliott) Gould (*Dichanthelium dichotomum* var. *ensifolium* (Baldwin ex Elliott) Gould & C.A. Clark; *Panicum chamaelonche* Trin.; *Panicum dichotomum* var. *ensifolium* (Baldwin ex Elliott) C.F. Reed; *Panicum ensifolium* Baldwin ex Elliott; *Panicum nitidum* var. *ensifolium* (Baldwin ex Elliott) Vasey)

America. See *Species Plantarum* 1: 58. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 126. 1816, *De Graminibus Paniceis* 242. 1826, *Department of Agriculture. Botanical Division. Bulletin* 8: 29. 1889 and *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1119. 1978 [1979], *Phytologia* 67(6): 453. 1989.

D. ensifolium (Baldwin & Elliott) Gould var. *breve* (Hitchc. & Chase) B.F. Hansen & Wunderlin (*Dichantherium chamaelonche* subsp. *breve* (Hitchc. & Chase) Freckmann & Lelong; *Dichantherium dichotomum* var. *breve* (Hitchc. & Chase) Gould & C.A. Clark; *Panicum breve* Hitchc. & Chase; *Panicum chamaelonche* var. *breve* (Hitchc. & Chase) Lelong; *Panicum ensifolium* var. *breve* (Hitchc. & Chase) Wipff & S.D. Jones)

America. See *Contributions from the United States National Herbarium* 15: 271, f. 301. 1910, *Annals of the Missouri Botanical Garden* 65(4): 1120. 1978 [1979], *Brittonia* 36(3): 267. 1984, *Annals of the Missouri Botanical Garden* 75: 1646. 1988 [1989], *Phytologia* 77(6): 460. 1994 [1995], *Sida* 20(1): 168-169. 2002.

D. ensifolium (Baldwin & Elliott) Gould var. *ensifolium*
America.

D. hebotos (Trin.) Zuloaga (*Panicum hebotos* Trin.; *Panicum hebotos* var. *genuinum* Döll; *Panicum infusum* Swallen; *Panicum mirandum* Luces; *Panicum subtiliracemosum* Renvoize; *Panicum subtipaniculatum* S.A. Renvoize)

South America, Brazil. Swampy places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3(1, 2-3): 301. 1834, *Flora Brasiliensis* 2(2): 252. 1877 and *Journal of the Washington Academy of Sciences* 32(6): 163, f. 8. 1942, *Phytologia* 14(2): 82. 1966, *Kew Bulletin* 42: 922. 1987, *Hatschbach's Paraná Grasses* 39. 1988, *American Journal of Botany* 90(5): 816. 2003.

D. heliophilum (Chase ex Zuloaga & Morrone) Zuloaga (*Panicum heliophilum* Chase ex Zuloaga & Morrone)

South America. See *Annals of the Missouri Botanical Garden* 78(1): 152-154, f. 1. 1991, *American Journal of Botany* 90(5): 816. 2003.

D. hirstii (Swallen) Kartesz (*Panicum hirstii* Swallen)
America. See *Rhodora* 63(752): 236. 1961.

D. isachnoides (Munro ex Hillebr.) C.A. Clark & Gould (*Panicum isachnoides* Hillebrand; *Panicum isachnoides* Munro ex Hillebrand; *Panicum isachnoides* var. *kilohanae* Skottsbo.)

Hawaii. Rare species, see *Flora of the Hawaiian Islands* 501. 1888 and *Brittonia* 30: 57. 1978.

D. itatiaiae (Swallen) Zuloaga (*Panicum itatiaiae* Swallen)
South America. See *Phytologia* 14(2): 81. 1966, *American Journal of Botany* 90(5): 816. 2003.

D. koolauense (St. John & Hosaka) C.A. Clark & Gould (*Panicum imbricatum* var. *oreoboloides* Whitney; *Panicum koolauense* H. St. John & Hosaka; *Panicum oreoboloides* (Whitney) Skottsbo.)

Hawaii. Vulnerable species, see *Flora of the Hawaiian Islands* 501. 1888 and *Occasional Papers of the Bernice Pauahi Bishop Museum* 11(13): 3, f. 1.; t. 1. 1935, *Occasional Papers of the Bernice Pauahi Bishop Museum* 13(16): 173. 1937, *Acta Horti Gothoburgensis* 15: 292. 1944, *Brittonia* 30: 58. 1978.

D. latifolium (L.) Harvill (*Dichantherium latifolium* (L.) Gould & C.A. Clark; *Milium latifolium* (L.) Moench; *Panicum latifolium* L.; *Panicum latifolium* Ham., nom. illeg., non *Panicum latifolium* L.; *Panicum latifolium* L.f., nom. illeg., non *Panicum latifolium* L.; *Panicum macrocarpon* J. Le Conte ex Torr.; *Panicum schenckii* Ashe)

U.S. Perennial bunchgrass with distinct vernal and autumnal phases, erect, more or less glabrous, green fine leaves, green flowers, yellow grain, grass with distinct vernal and autumnal phases, medium drought tolerance, open habitats, thickets, often rocky woods, dry woods and dry sandy oak woods, oak savannahs and oak woodlands, old pasture along stream, wetlands and grassy woods, see *Species Plantarum* 1: 58-59. 1753, *Methodus Plantas Horti Botanici ...* 204. 1794, *Flora Americae Septentrionalis; or, ...* 1: 68. 1814, *Manual of Botany of the Northern States. Second Edition.* 341. 1818, *Prodromus Plantarum Indiae Occidentalis* 10. 1825, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 240. 1842, *Flora Brasiliensis* 2(2): 207. 1877, *Bulletin of the United States National Museum* 22: 135. 1881, *Mexicanas Plantas* 2: 32. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 34. 1889, *The Flora of British India* 7: 39. 1896 and *North Carolina Agricultural Experiment Station Bulletin* 175: 116. 1900, *Contr. U.S. Natl. Herb.* 12: 118. 1908, *Castanea* 42(2): 177. 1977, *Annals of the Missouri Botanical Garden* 65(4): 1101, 1162. 1978 [1979].

in English: broad-leaved panic grass, broad leaved panic, broad-leaf witchgrass, broadleaved panicum, panic grass, broadleaf rosette grass

in French: panic à feuilles larges

D. laxiflorum (Lam.) Gould (*Panicum aureum* Muhl. ex Scribn. & Merr., nom. illeg., non *Panicum aureum* (P. Beauv.) Trin.; *Panicum caricifolium* Scribn. ex Ashe; *Panicum dichotomum* var. *laxiflorum* (Lam.) Beal; *Panicum laxiflorum* Lam.; *Panicum laxiflorum* var. *strictirameum* (Hitchc. & Chase) Fernald; *Panicum laxiflorum* var. *strictirameum* (Hitchc. & Chase) Beetle, nom. illeg., non *Panicum laxiflorum* var. *strictirameum* (Hitchc. & Chase) Fernald; *Panicum pyriforme* Nash; *Panicum rariflorum*

Rupr., nom. illeg., non *Panicum rariflorum* Lam.; *Panicum ruprechtii* E. Fourn., nom. illeg., non *Panicum ruprechtii* Fenzl; *Panicum xalapense* Kunth; *Panicum xalapense* subsp. *strictirameum* Hitchc. & Chase;)

South America. Open places, damp sites, fodder, see *Species Plantarum* 1: 58. 1753, *Encyclopédie Méthodique, Botanique* 4: 748. 1798, *Nova Genera et Species Plantarum* 1: 103. 1815 [1816], *Bulletins de l'Académie Royale des Sciences, des Lettres et des Beaux Arts de Belgique, Classe des Sciences* 9(2): 240. 1842, *Mexicanas Plantas* 2: 21. 1886, *Contributions from the United States National Herbarium* 3(1): 30. 1892, *Bulletin of the Torrey Botanical Club* 20: 479. 1893, *Grasses of North America for Farmers and Students* 2: 139. 1896, *Flora of the Southern United States* 586. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 57. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 579. 1899 and *U.S. Department of Agriculture: Circular* 27: 4. 1900, *Contributions from the United States National Herbarium* 15: 161, 164, f. 148. 1910, *Rhodora* 36(423): 75. 1934, *Brittonia* 26(1): 60. 1974, *Phytologia* 48(2): 191. 1981.

in Mexico: pasto

D. leibergii (Vasey) Freckmann (*Milium leibergii* (Vasey) Lunell; *Panicum leibergii* (Vasey) Scribn.; *Panicum leibergii* Scribn.; *Panicum leibergii* var. *baldwinii* Lepage; *Panicum leibergii* var. *leibergii*; *Panicum scoparium* var. *leibergii* Vasey; *Panicum scribnerianum* var. *leibergii* (Vasey) Scribn.)

America. See *Bulletin of the Torrey Botanical Club* 22(10): 421. 1895 and *American Midland Naturalist* 4: 213. 1915, *Le Naturaliste Canadien* 86: 67. 1959, *Phytologia* 39(4): 271. 1978.

D. linearifolium (Scribn.) Gould (*Dichanthelium linearifolium* var. *wernerii* (Scribn.) Mohlenbr.; *Panicum linearifolium* Scribn.; *Panicum linearifolium* var. *linearifolium*; *Panicum linearifolium* var. *wernerii* (Scribn.) Fernald; *Panicum strictum* Pursh var. *linearifolium* (Scribn.) Farw.; *Panicum wernerii* Scribn.)

U.S. Perennial, tufted, densely pilose sheaths, ligule a ring of hairs, leaves along the stems, inflorescence a slender panicle, spikelets glabrous and strongly flattened, upper glume beakless, second lemma shiny and hardened, occurs in grasslands and open woods, among shrubs, hillsides, dry low forest, open habitats, oak savannahs and oak woodlands, dry soils and dry stony or sandy areas, light soils, slopes and rock crevice habitat, see *An Illustrated Flora of the Northern United States* 3: 500-501, f. 268A. 1898, *U.S. Department of Agriculture. Division of Botany. Bulletin* 11: 42, t. 1. 1898 and *Rhodora* 23(272): 194. 1921, *American Midland Naturalist* 11(2): 44. 1928, *Brittonia* 26(1): 60. 1974.

in English: slender-leaved panic grass, narrow-leaved panic grass, linear-leaved panic grass, linear-leaf panic grass, low

white-haired panic grass, white-haired panic grass, panic grass, spring panic, slim-leaf witchgrass

D. macrospermum Gould (*Panicum macrospermum* (Gould) Aragón & M.M. Castillo; *Panicum macrospermum* (Gould) Espejo & López-Ferrari)

Mexico. See *Brittonia* 32: 358. 1980, *Las Gramíneas de México* 5: 75. 1999, *Acta Botánica Mexicana* 51: 62. 2000.

D. malacophyllum (Nash) Gould (*Panicum malacophyllum* Nash; *Panicum scoparium* var. *minus* Scribn.)

America. See *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 48. 1894, *Bulletin of the Torrey Botanical Club* 24(4): 198. 1897 and *Brittonia* 26(1): 60. 1974.

D. nodatum (Hitc. & Chase) Gould (*Panicum nodatum* Hitchc. & Chase)

U.S. See *Contributions from the United States National Herbarium* 15: 293, f. 331. 1910, *Brittonia* 26(1): 60. 1974.

D. nudicaule (Vasey) B.F. Hansen & Wunderlin (*Panicum nudicaule* Vasey)

America. See *Department of Agriculture. Botanical Division. Bulletin* 8: 31. 1889 and *Novon* 11(3): 367. 2001.

D. oligosanthos (Schult.) Gould (*Dichanthelium oligosanthos* var. *oligosanthos*; *Panicum oligosanthos* Schultes; *Panicum pauciflorum* Elliott, nom. illeg., non *Panicum pauciflorum* R. Br.; *Panicum scoparium* var. *angustifolium* Vasey; *Panicum scoparium* var. *pauciflorum* Scribn.)

Northern America, U.S. Forage, see *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *A Sketch of the Botany of South-Carolina and Georgia* 1: 120. 1816, *Mantissa* 2: 256. 1824, *Department of Agriculture. Botanical Division. Bulletin* 8: 32. 1889, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 48. 1894, *Bulletin of the Torrey Botanical Club* 22(10): 421. 1895, *Bulletin of the Torrey Botanical Club* 26(11): 572, 576. 1899 and *Rhodora* 36(423): 80. 1934, *Brittonia* 26(1): 60. 1974, *Phytologia* 39(4): 269. 1978, *Sida* 20(1): 170. 2002, *Flora of North America North of Mexico* 25: 746. 2003.

in Mexico: panizo de hoja ancha

D. ovale (Elliott) Gould & C.A. Clark (*Dichanthelium ovale* var. *ovale*; *Panicum acuminatum* var. *consanguineum* (Kunth) Wipff & S.D. Jones; *Panicum ciliferum* Nash; *Panicum commonsianum* Ashe; *Panicum erythrocarpon* Ashe; *Panicum ovale* R. Br.; *Panicum ovale* Elliott; *Panicum ovale* var. *ovale*; *Panicum villosissimum* Nash; *Panicum villosissimum* var. *pseudopubescens* (Nash) Fernald)

North America, U.S., Carolinas, Georgia. Found in drifting sands along the coast, sand hills, swampy areas, along rivers, see *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *A Voyage to Abyssinia, and Travels into the ...* appendix: 62. 1814, *A Sketch of the Botany of South-Carolina and*

Georgia 1: 123. 1816, *Révision des Graminées* 1: 36. 1829, *North American Gramineae and Cyperaceae* 2: 111. 1835, *Bulletin of the Torrey Botanical Club* 23: 149. 1896 and 24(4): 195-196. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 55. 1898, *Bulletin of the Torrey Botanical Club* 25(2): 83-84. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 577. 1899 and *Journal of the Elisha Mitchell Scientific Society* 16: 90. 1900, *Rhodora* 36(423): 79. 1934, *Annals of the Missouri Botanical Garden* 65(4): 1114. 1978 [1979], *Brittonia* 36(3): 262-273. 1984, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988, *Phytologia* 67(6): 452. 1989, *Phytologia* 77(6): 456-464. 1994 [1995].

D. pedicellatum (Vasey) Gould (*Panicum pedicellatum* Vasey; *Panicum transiens* Swallen)

America. See *Department of Agriculture. Botanical Division. Bulletin* 8: 28. 1889 and *Journal of the Washington Academy of Sciences* 21(17): 436. 1931, *Brittonia* 26(1): 60. 1974.

D. peristypum (Zuloaga & Morrone) Zuloaga (*Panicum peristypum* Zuloaga & Morrone)

America. See *Novon* 1(3): 113-115, f. 2. 1991 and *American Journal of Botany* 90(5): 816. 2003.

D. perlongum (Nash) Freckmann (*Dichanthelium linearifolium* (Scribn.) Gould; *Panicum depauperatum* var. *perlongum* (Nash) B. Boivin; *Panicum perlongum* Nash; *Panicum strictum* var. *perlongum* (Nash) Farw.)

America. See *Prodromus Florae Novae Hollandiae* 190. 1810, *Descriptio uberior Graminum* 112. 1817, *An Illustrated Flora of the Northern United States* 3: 500, f. 268A. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 575. 1899 and *American Midland Naturalist* 11(2): 44. 1928, *Le Naturaliste Canadien* 94: 526. 1967, *Brittonia* 26(1): 60. 1974, *Phytologia* 39(4): 269. 1978.

D. petropolitanum (Zuloaga & Morrone) Zuloaga (*Panicum petropolitanum* Zuloaga & Morrone)

South America. See *Annals of the Missouri Botanical Garden* 78(1): 161-162, f. 6. 1991, *American Journal of Botany* 90(5): 816. 2003.

D. polyanthes (Schult.) Mohlenbr. (*Dichanthelium sphaerocarpon* var. *isophyllum* (Scribn.) Gould & C.A. Clark; *Dichanthelium sphaerocarpon* var. *polyanthes* (Schult.) Gould; *Panicum firmandum* Steud.; *Panicum microcarpon* Muhl., nom. illeg., non *Panicum microcarpon* Muhl. ex Elliott; *Panicum microcarpon* var. *isophyllum* Scribn.; *Panicum multiflorum* Elliott, nom. illeg., non *Panicum multiflorum* Poir.; *Panicum polyanthes* Schultes; *Panicum sphaerocarpon* var. *isophyllum* (Scribn.) Angelo; *Panicum sphaerocarpon* var. *isophyllum* (Scribn.) Wipff & S.D. Jones, nom. illeg., non *Panicum sphaerocarpon* var. *isophyllum* (Scribn.) Angelo; *Panicum sphaerocarpon* var. *polyanthes* (Schult.) Sherif)

U.S. Perennial, tall, clumped, caespitose, very small spikelets, growing in wet soils, dry or damp, dry woods or moist woods, floodplains, drainage channels, wet meadows, open areas, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 122, 125. 1816, *Descriptio uberior Graminum* 111. 1817, *Mantissa* 2: 257. 1824, *Synopsis Plantarum Glumacearum* 1: 418. 1854 [or 1855], *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 51, f. 54. 1894 and *Contr. U.S. Natl. Herb.* 15: 255. 1910, *Brittonia* 26(1): 60. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1105. 1978 [1979], *Sida* 10(2): 191. 1983, *Erigenia* 6: 26. 1985, *Phytologia* 71(2): 85. 1991, *Phytologia* 77(6): 460. 1994.

D. portoricense (Desv. ex Ham.) B.F. Hansen & Wunderlin (*Dichanthelium portoricense* subsp. *patulum* (Scribn. & Merr.) Freckmann & Lelong; *Dichanthelium sabulorum* var. *patulum* (Scribn. & Merr.) Gould & C.A. Clark; *Panicum heterophyllum* Muhl.; *Panicum onslowense* Ashe; *Panicum portoricense* Desv. ex Ham.; *Panicum portoricense* var. *nashianum* (Scribn.) Lelong; *Panicum webberianum* Nash)

U.S. See *Transactions of the American Philosophical Society* 3: 160. 1793, *Prodromus Plantarum Indiae Occidentalis* 11. 1825, *Bulletin of the Torrey Botanical Club* 23: 149. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 7: 79, f. 61. 1897 and *Journal of the Elisha Mitchell Scientific Society* 16: 88. 1900, *Circular, Division of Agrostology, United States Department of Agriculture* 27: 9. 1900, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978, *Brittonia* 36(3): 267. 1984, *Annals of the Missouri Botanical Garden* 75: 1637-1657. 1988, *Sida* 20(1): 170-171. 2002.

D. pycnocladus (Tutin) Davidse (*Dichanthelium pycnocladus* (Tutin) Davidse; *Panicum albociliatum* Swallen; *Panicum pycnocladus* Tutin; *Panicum tiricaense* Swallen; *Panicum tiricaoides* Swallen)

South America, Venezuela. See *Journal of Botany, British and Foreign* 72(864): 340, f. 10. 1934, *Brittonia* 3(2): 149. 1939, *Memoirs of the New York Botanical Garden* 9(3): 400-401. 1957, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 942, 1258. 1993.

D. ravenelii (Scribn. & Merr.) Gould (*Panicum ravenelii* Scribn. & Merr.; *Panicum scoparium* var. *major* Vasey)

South America. See *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *Department of Agriculture. Botanical Division. Bulletin* 8: 32. 1889 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 36. 1901, *Brittonia* 26(1): 60. 1974.

D. sabulorum (Lam.) Gould & C.A. Clark (*Dichanthelium sabulorum* var. *sabulorum*; *Panicum acutatatum* Steud.; *Panicum deltae* Parodi ex Burkart; *Panicum demissum* Trin.; *Panicum demissum* f. *decalvatum* (Döll) Ekman; *Panicum demissum* f. *villosum* (Döll) Ekman; *Panicum fultum* Hack.; *Panicum latiglume* Döll; *Panicum latiglume* var. *decalvatum*)

Döll; *Panicum latiglume* var. *villosum* Döll; *Panicum pen-canum* Phil.; *Panicum polycladum* Ekman; *Panicum sabulorum* Lam.; *Panicum sabulorum* var. *polycladum* (Ekman) R.A. Palacios)

Argentina, Uruguay, southern Brazil, Bolivia, Paraguay. Perennial, prostrate, erect, knotty base decumbent, shortly rhizomatous, upper lemma and palea smooth, along roadsides, see *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *Species Graminum* 3: t. 319. 1829-1830, *Synopsis Plantarum Glumacearum* 1: 86. 1854, *Flora Brasiliensis* 2(2): 257. 1877, *Anales de la Universidad de Chile* 93: 713. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 9. 1900, *Rhodora* 8(95): 209. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 342. 1909, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 24, t. 3, f. 2. 1912, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 28. 1913, *Boletín de la Sociedad Argentina de Botánica* 12: 291, f. 4-5. 1968, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969, *Annals of the Missouri Botanical Garden* 65(4): 1112. 1978 [1979], *Darwiniana* 29: 289-370. 1989, *Phytologia* 67(6): 452. 1989, *Novon* 1(3): 111-118. 1991, *Annals of the Missouri Botanical Garden* 80(1): 119-190. 1993, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 59: 1-156. 2000.

D. sabulorum (Lam.) Gould & C.A. Clark var. **cordatum** (Zuloaga & Morrone) Zuloaga (*Panicum sabulorum* var. *cordatum* Zuloaga & Morrone)

South America. See *Novon* 1(3): 117-118. 1991, *American Journal of Botany* 90(5): 817. 2003.

D. sabulorum (Lam.) Gould & C.A. Clark var. **polycladum** (Ekman) Zuloaga (*Panicum demissum* Trin.; *Panicum sabulorum* Lam. var. *polycladum* (Ekman) R.A. Palacios)

Argentina, Brazil, Bolivia, Paraguay, Chile. Perennial, see *Species Graminum* 1828-1836 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 24, t. 3, f. 2. 1912, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2a): 316. 1969, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978 [1979], *Annals of the Missouri Botanical Garden* 80(1): 119-190. 1993.

D. sabulorum (Lam.) Gould & C.A. Clark var. **sabulorum** South America.

D. scabriusculum (Elliott) Gould & C.A. Clark (*Panicum aculeatum* Hitchcock & Chase; *Panicum dichotomum* var. *elatum* Vasey; *Panicum eriophorum* Schult.; *Panicum lanuginosum* Bosc ex Spreng., nom. illeg., non *Panicum lanuginosum* Elliott; *Panicum nealleyi* Vasey; *Panicum recognitum* Fernald; *Panicum scabriusculum* Elliott; *Panicum viscidum* var. *scabriusculum* (Elliott) Beal)

U.S., Florida. Stems erect or ascending, somewhat harsh, light green bands at each stem node, leaf blades tapering to rounded points, sheath margin hairy, ligule minute,

spikelets stalked green to purple, grain smooth, might be found in a wet marshy area or in shallow water, in marshy substrates, wet woods, moist areas, depressions, shores of ponds, lakes and ditches, see *Species Plantarum* 1: 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1: 121, 123, t. 7(3). 1816, *Systema Vegetabilium, editio decima sexta* 1: 319. 1825, *Mantissa* 3(Add. 1): 591. 1827, *Bulletin of the Torrey Botanical Club* 13(2): 25. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 31. 1889, *Grasses of North America for Farmers and Students* 2: 143. 1896 and *North Carolina Agricultural Experiment Station Bulletin* 175: 115. 1900, *Contr. U.S. Natl. Herb.* 15: 298. 1910, *Phytologia* 4(1): 21. 1952, *Annals of the Missouri Botanical Garden* 65(4): 1110. 1978 [1979].

in English: woolly panicum, woolly panic grass, panic grass, sheathed panic grass

D. sciurotis (Trin.) Davidse (*Panicum cordifolium* Steud., nom. illeg., non *Panicum cordifolium* Desv.; *Panicum diffusulum* Salzm. ex Steud.; *Panicum rostellatum* Trin.; *Panicum sciurotis* Trin.; *Panicum sciurotis* var. *breviglume* Döll; *Panicum sciurotis* var. *molliusculum* Döll; *Panicum tri-chopiptum* Steud.)

Brazil and Guyana, Venezuela. Panicle branches entangled, spikelets not glutinous, found in shady or open places, forest edge, riverbanks, among shrubs and trees, see *De Graminibus Paniceis* 228. 1826, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 288. 1834, *Synopsis Plantarum Glumacearum* 1: 85, 89. 1854, *Flora Brasiliensis* 2(2): 250-251. 1877 and *Novon* 1(1): 4. 1991, *Novon* 2(2): 104. 1992, *Ann. Missouri Bot. Gard.* 80: 171. 1993.

D. sciurotoides (Zuloaga & Morrone) Davidse (*Panicum sciurotoides* Zuloaga & Morrone)

South America. See *Novon* 1(1): 1, f. la-h. 1991, *Novon* 2(2): 104. 1992.

D. scoparium (Lam.) Gould (*Chasea pubescens* (Lam.) Nieuwl.; *Panicum laxiflorum* var. *pubescens* (Lam.) Chapm., nom. illeg., non *Panicum laxiflorum* var. *pubescens* Vasey; *Panicum nitidum* var. *velutinum* Döll; *Panicum pubescens* Lam.; *Panicum scoparium* Lam.; *Panicum scoparium* Rudge, nom. illeg., non *Panicum scoparium* Lam.; *Panicum scoparium* S. Watson ex Nash, nom. illeg., non *Panicum scoparium* Lam.; *Panicum scoparium* var. *genuinum* Scribn.; *Panicum viscidum* Elliott)

U.S. Caespitose, endangered, spreading, trailing, leaning, hairy nodes, leaf sheath hairy at the base, growing in open habitats, low ground, damp and moist soils, moist sand, seasonally flooded places, wetlands, dry to mesic sites, grassland areas, open wet meadows, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Encyclopédie Méthodique, Botanique* 4: 744, 748. 1798, *Plantarum Guianae Rariorum Icones et Descriptiones ...*

1: 21, t. 29. 1805, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123, t. 7(3). 1816, *Flora Brasiliensis* 2(2): 247. 1877, *Department of Agriculture. Botanical Division. Bulletin* 8: 32. 1889, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 48. 1894, *Bulletin of the Torrey Botanical Club* 22: 421. 1895, *Flora of the Southern United States* 586. 1897 and *U.S.D.A. Div. Agrostol. Bull.* 24: 36. 1901, *Contr. U.S. Natl. Herb.* 15: 294. 1910, *American Midland Naturalist* 2: 64. 1911.

in English: velvet panic grass, velvety panic grass, broom panic grass, panic grass, panicum

D. sendulskyii (Zuloaga & Morrone) Zuloaga (*Panicum sendulskyii* Zuloaga & Morrone)

South America. See *Novon* 6(3): 310, f. 1, 4. 1996, *American Journal of Botany* 90(5): 817. 2003.

D. sphaerocarpon (Elliott) Gould (*Dichantherium sphaerocarpon* var. *floridanum* (Vasey) Davidse; *Dichantherium sphaerocarpon* var. *sphaerocarpon*; *Panicum auburne* Ashe; *Panicum dichotomum* var. *sphaerocarpon* (Elliott) Alph. Wood; *Panicum heterophyllum* Sw. ex Wikstr.; *Panicum inflatum* Scribn. & J.G. Sm.; *Panicum kalmii* Sw. ex Wikstr.; *Panicum microcarpon* var. *sphaerocarpon* (Elliott) Vasey; *Panicum nitidum* var. *crassifolium* A. Gray; *Panicum sphaerocarpon* Elliott; *Panicum sphaerocarpon* subsp. *inflatum* (Scribn. & J.G. Sm.) Hitchc.; *Panicum sphaerocarpon* Salzm. ex Steud., nom. illeg., non *Panicum sphaerocarpon* Elliott; *Panicum vicarium* E. Fourn.)

U.S. Perennial bunchgrass, caespitose, stiff, erect to spreading, leaf-blades and stems not hairy, basal leaves differing from culm leaves, leaf sheath with ciliate margins, ligule ciliate, panicle with slender branches, spikelets ovoid, lower floret sterile, upper floret hermaphrodite, glumes very unequal, stigmas purple, forage, medicinal value, sometimes used as abortifacient, found along streams and rivers, dry to mesic, seaside dunes, open areas, glades, beaches and dunes, woods, grasslands and prairies, dry fields, roadside, soil rocky and dry, damp ground, see *Species Plantarum* 1: 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 125, 127. 1816, *Mantissa* 2: 257. 1824, *Adnotationes Botanicae* 6. 1829, *North American Gramineae and Cyperaceae* 1: 30. 1834, *Synopsis Plantarum Glumacearum* 1: 51. 1853, *A Class-book of Botany* 786. 1861, *The Grasses of the United States* 12. 1883, *Mexicanas Plantas* 2: 20. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 33. 1889, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 51, f. 54. 1894, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 5. 1899 and *North Carolina Agricultural Research Service: Bulletin* 175: 115. 1900, *Contributions from the United States National Herbarium* 15: 253, 256, f. 275. 1910, *Manual of the Grasses of the United States* 643, 913. 1935, *Brittonia* 26(1): 60. 1974, *Sida* 10(2): 191. 1983, *Phytologia* 71(2):

85. 1991, *Novon* 2(2): 104. 1992, *Phytologia* 77(6): 460. 1994, *Darwiniana* 37: 109. 1999.

in English: round-fruited panic grass, spherical-fruited panic grass, round-seed panic grass, spherical panic grass, panic grass

in Mexico: panizo redondo

in Nicaragua: walang

D. sphaerocarpon (Elliott) Gould var. *floridanum* (Vasey) Davidse (*Dichantherium erectifolium* (Nash) Gould & C.A. Clark; *Panicum erectifolium* Nash; *Panicum floridanum* Trin.; *Panicum floridanum* (Vasey) Chapm., nom. illeg., non *Panicum floridanum* Trin.; *Panicum sphaerocarpon* var. *floridanum* Vasey)

North America, U.S. See *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 125. 1816, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 248. 1834, *Department of Agriculture. Botanical Division. Bulletin* 8: 33. 1889, *Bulletin of the Torrey Botanical Club* 23: 148. 1896 and *Annals of the Missouri Botanical Garden* 65(4): 1105. 1978 [1979], *Novon* 2(2): 104. 1992.

D. sphaerocarpon (Elliott) Gould var. *sphaerocarpon*

U.S.

D. stigmatum (Trin.) Zuloaga (*Panicum hebotas* var. *glabratum* Döll; *Panicum lanuginosum* J. Presl, nom. illeg., non *Panicum lanuginosum* Elliott; *Panicum missionum* Ekman; *Panicum missionum* Mez, nom. illeg., non *Panicum missionum* Ekman; *Panicum mollicomum* Kunth; *Panicum pynocladus* Tutin; *Panicum stigmatum* Trin.)

Brazil, Paraguay, Uruguay, northern Argentina. Erect, tufted, often leaning on vegetation, panicle branches glandular, in open areas, forest margins, damp shady places, see *De Graminibus Paniceis* 194. 1826, *Reliquiae Haenkeanae* 1(4-5): 306. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 108. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3(1, 2-3): 301. 1834, *Flora Brasiliensis* 2(2): 225, 252. 1877 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 19, t. 3, f. 1. 1912, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 74. 1917, *Journal of Botany, British and Foreign* 72(864): 340, f. 10. 1934, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993, *American Journal of Botany* 90: 817. 2003.

D. stipiflorum (Renvoize) Zuloaga (*Panicum stipiflorum* Renvoize)

Brazil. Herbaceous, prostrate, along roadsides, small streams and riverbanks, damp sand, see *Kew Bulletin* 37(2):

329, f. 7A-B. 1982, *American Journal of Botany* 90: 817. 2003.

D. strigosum (Muhl. ex Elliott) Freckmann (*Panicum strigosum* Muhl. ex Elliott; *Panicum strigosum* var. *strigosum*) North America. See *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 126. 1816 and *Brittonia* 33(3): 457. 1981.

D. strigosum (Muhl. ex Elliott) Freckmann var. **glabrescens** (Griseb.) Freckmann (*Dichantheium strigosum* subsp. *glabrescens* (Griseb.) Freckmann & Lelong; *Panicum dichotomum* var. *glabrescens* Griseb.; *Panicum strigosum* var. *glabrescens* (Griseb.) Lelong)

North America. See *Flora of the British West Indian Islands* 553. 1864 and *Brittonia* 33(3): 457. 1981, *Sida* 20(1): 171. 2002.

D. strigosum (Muhl. ex Elliott) Freckmann var. **leucoblepharis** (Trin.) Freckmann (*Dichantheium strigosum* subsp. *leucoblepharis* (Trin.) Freckmann & Lelong; *Panicum leucoblepharis* Trin.; *Panicum strigosum* var. *leucoblepharis* (Trin.) Lelong)

America. See *Clavis agrostographiae antiquioris*. Ueber-sicht des Zustandes der Agrostographie bis auf Linné; und Versuch einer Reduction der alten Synonyme der Gräser auf die heutigen Trivialnahmen. Coburg 1822 and *Brittonia* 33(3): 457. 1981, *Brittonia* 36(3): 264. 1984, *Sida* 20(1): 171. 2002.

D. strigosum (Muhl. ex Elliott) Freckmann var. **strigosum** North America.

D. superatum (Hack.) Zuloaga (*Panicum superatum* Hack.) Brazil. Perennial, erect, short knotty rhizomes, panicle branches appressed, found in damp open places, see *Österreichische Botanische Zeitschrift* 51: 427. 1901, *American Journal of Botany* 90: 817. 2003.

D. surrectum (Chase ex Zuloaga & Morrone) Zuloaga (*Panicum missionum* Mez, nom. illeg., non *Panicum missionum* Ekman; *Panicum surrectum* Chase ex Zuloaga & Morrone)

South America. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 74. 1917, *Novon* 1(3): 111, f. 1. 1991, *American Journal of Botany* 90(5): 817. 2003.

D. telmatum (Swallen) Zuloaga (*Panicum telmatum* Swallen) (Greek *telma*, *telmatos* “marsh”)

South America. See *Phytologia* 14(2): 81. 1966, *American Journal of Botany* 90(5): 817. 2003.

D. umbonulatum (Swallen) Davidse (*Panicum alcobense* Swallen; *Panicum alsophilum* Swallen; *Panicum rami-parum* Swallen; *Panicum umbonulatum* Swallen)

Guatemala. Montane, upper slopes, see *Contributions from the United States National Herbarium* 29(9): 420, 422-423. 1950, *Novon* 2(2): 81-110. 1992, *Flora Mesoamericana* 6: 322-326. 1994.

D. viscidellum (Scribn.) Gould (*Panicum blakei* Swallen; *Panicum furtivum* Swallen; *Panicum longiculme* Swallen; *Panicum tremulosum* Mez; *Panicum viscidellum* Scribn.)

Venezuela. Forage, riverbeds, gravelly banks, see *Circular, Division of Agrostology, United States Department of Agriculture* 19: 2. 1900, *Contr. U.S. Natl. Herb.* 15: 296. 1910, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 76. 1917, *Journal of the Washington Academy of Sciences* 21(1): 15. 1931, *Contributions from the United States National Herbarium* 29(9): 421-422. 1950, *Brittonia* 32: 357. 1980.

D. wilcoxianum (Vasey) Freckmann (*Dichantheium oligo-anthes* var. *wilcoxianum* (Vasey) Gould & C.A. Clark; *Milium wilcoxianum* (Vasey) Lunell; *Panicum oligo-anthes* var. *wilcoxianum* Barkworth & al.; *Panicum wilcoxianum* Vasey; *Panicum wilcoxianum* var. *breitungii* B. Boivin)

America. See *Mantissa* 2: 256. 1824, *Department of Agriculture. Botanical Division. Bulletin* 8: 32. 1889 and *American Midland Naturalist* 4: 213. 1915, *Le Naturaliste Canadien* 94: 526. 1967, *Phytologia* 39(4): 269. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1107. 1978 [1979], *Flora of North America North of Mexico* 25: 746. 2003.

D. xanthophysum (A. Gray) Freckmann (*Dichantheium xanthophysum* (A. Gray) Freckmann; *Panicum xanthophysum* A. Gray; *Panicum xanthophysum* f. *amplifolium* Scribn.)

North America, Ontario, U.S., Wisconsin, Pennsylvania. Rare, perennial, hairy nodes, leaf sheaths hairy, dry sandy soils, open habitats, open woods and clearings, endangered in Pennsylvania, see *North American Gramineae and Cyperaceae* 1: no. 28. 1834 and *Flora of Vermont (edition 3)* 14, 104. 1900, *Phytologia* 39(4): 271. 1978.

in English: slender panic grass, panic grass, slender rosette grass, yellow panic grass, yellow-bladdered panic grass

in French: panic jaunâtre

Dichanthium Willemet = *Bothriochloa* Kuntze, *Capillipedium* Stapf, *Diplasanthum* Desv., *Eremopogon* Stapf, *Lepeocercis* Trin.

From the Greek *dicha* “in two” and *anthos* “a flower,” referring to the lower sessile spikelets or to the kinds of spikelets.

About 16/20(-30) species, Old World tropics. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Sorghinae, perennial or rarely annual, herbaceous, branched or simple, sometimes decumbent or geniculate, rhizomatous or stoloniferous, tufted, forming upright tussocks, sometimes with extensive creeping stolons, leaves sometimes aromatic or not, hairy or bearded culm nodes, auricles absent, ligule membranous

and usually ciliate or fringed, leaves usually glaucous, plants bisexual, inflorescence terminal or also axillary, solitary or compound racemes digitately or subdigitately arranged at the summit of the culm, homogamous pairs and obtuse sessile spikelets, lower or basal spikelets either male or sterile, sessile spikelets bisexual and dorsally compressed or imbricate, callus obtuse, fragile rachis, 2 glumes more or less equal or subequal, lower glume boat-shaped and chartaceous to cartilaginous, upper lemma entire and awned, glabrous awn bent about the middle, pedicellate spikelets male or sterile and unawned, palea absent or present, 2 lodicules free and fleshy, 1-3 stamens, ovary glabrous, 2 stigmas, fruits compressed, ornamental and attractive, weed species more or less aromatic, native pasture species, important fodder grasses, highly palatable and productive, woodland, disturbed ground, open places, marshes, subdesert, intergeneric hybridisation with *Bothriochloa* Kuntze and *Capillipedium* Stapf, type *Dichanthium nodosum* Willemet (*Dichanthium annulatum* (Forssk.) Stapf), see *Species Plantarum* 2: 1045. 1753, Paul Usteri (1768-1831), in *Annalen der Botanik*. [*Annalen der Botanik*] 18: 11. 1796, *Fundamenta Agrostographiae* 203, t. 18. 1820, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 170, t. 8, f. 1. 1831, *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887, *Revisio Generum Plantarum* 2: 762. 1891 and *Flora of Tropical Africa* 9: 182-183. 1917, *Boissiera* 9: 159, 163, 170. 1960, *Amer. J. Bot.* 53: 97. 1966, *Bol. Soc. Arg. Bot.* 12: 206-227. 1968, *Taxon* 19: 339-340. 1970, *Kew Bulletin* 32: 579. 1978, *Syst. Bot.* 8(2): 168-184. 1983, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Fascicles of Flora of India* 15: 1-30. 1984, *Bulletin of Botanical Research* 6(1): 97-98, f. 1. 1986, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Austrobaileya* 3(1): 79-99. 1989, *Acta Botanica Indica* 18: 240-246. 1990, *Journal of Cytology and Genetics* 25: 140-143, 147-148, 322-323. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Flora Mesoamericana* 6: 383-386. 1994, *Journal of Applied Ecology* 36(6): 1035-1050. Dec 1999 [Temporal and spatial patterns in drought-related tree dieback in Australian savannah.], *Weed Research* 40(1): 11-26. Feb 2000, *Darwiniana* 38(1-2): 127-186. 2000, *Restoration Ecology* 8(2): 170-174. June 2000, *Grass and Forage Science* 55(3): 201-208. Sep 2000, *Am. J. Bot.* 88: 1993-2012. 2001, *Journal of Applied Ecology* 38(5): 897-909. Oct 2001, R.J. Fensham, R.J. Fairfax and J.E. Holman, "Response of a rare herb (*Trioncinia retroflexa*) from semiarid tropical grassland to occasional fire and grazing." *Austral. Ecology* 27(3): 284-290. June 2002, *Contributions from the United States National Herbarium* 46: 135-141, 192-193. 2003, *Austral. Ecology* 28(5): 539-552. Oct 2003 [Vegetation indicators of salinity in northern Queensland.], *Plant, Cell and Environment* 26(1)2: 1963-1972. Dec 2003 [Photosynthetic oxygen exchange in C4 grasses: the role of oxygen as electron acceptor.], Jill Landsberg & Gabriel Crowley, "Monitoring rangeland biodiversity: Plants as

indicators." *Austral. Ecology* 29(1): 59-77. Feb 2004, *Austral. Ecology* 29(1): 108-120. Feb 2004 [Monitoring ecological indicators of rangeland functional integrity and their relation to biodiversity at local to regional scales.], *Weed Biology and Management* 4(4): 218-221. Dec 2004, *Journal of Phytopathology* 153(1): 1-4. Jan 2005, Sue McIntyre and David Tongway, "Grassland structure in native pastures: links to soil surface condition." *Ecological Management and Restoration* 6(1): 43-50. Apr 2005.

Species

D. affine (R. Br.) A. Camus (*Andropogon acutiusculus* Hack.; *Andropogon affinis* R. Br.; *Andropogon annulatus* Forssk. var. *humilis* Benth.; *Andropogon chrysatherus* F. Muell.; *Andropogon sericeus* R. Br.; *Andropogon sericeus* f. *ciliatus* Domin; *Andropogon sericeus* f. *glaberrimus* Domin; *Andropogon sericeus* f. *puberulus* Domin; *Andropogon sericeus* var. *mollis* F.M. Bailey; *Dichanthium acutiusculum* (Hack.) A. Camus; *Dichanthium affine* (R. Br.) A. Camus; *Dichanthium caricosum* subvar. *racemosum* Roberty; *Dichanthium humilium* J. Black; *Dichanthium sericeum* (R. Br.) A. Camus; *Dichanthium sericeum* (R. Br.) Guillaumin, nom. illeg., non *Dichanthium sericeum* (R. Br.) A. Camus; *Dichanthium sericeum* subsp. *sericeum*; *Sorghum affine* (R. Br.) Kuntze; *Sorghum affine* E.G. Camus & A. Camus, nom. illeg., non *Sorghum affine* (R. Br.) Kuntze)

South Australia, Western Australia, Queensland, Northern Territory, New South Wales. Perennial, erect and geniculate, tall and slender clumps, bluish green leaves, nodes hairy or bearded, racemes silky greenish and purplish, pasture species, not often grazed, attractive, woodland, grassland, savannah, very similar to *Dichanthium sericeum* (R. Br.) A. Camus, see *Prodromus Florae Novae Hollandiae* 201. 1810, *Linnaea* 25(4): 443. 1853, *Monographiae Phanerogamarum* 6: 575. 1889, *Revisio Generum Plantarum* 6: 791. 1891 and *Queensland Agricultural Journal* 30: 316. 1913, *Bibliotheca Botanica* 85(2): 267. 1915, *Bulletin du Muséum d'Histoire Naturelle* 27: 549. 1921, *Flore Générale de l'Indo-Chine* 2: 321. 1922, *Bulletin de la Société Botanique de France* 88: 791. 1942, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 165. 1960, *Proc. Roy. Soc. Queensland* 80: 67. 1969.

in English: blue grass, dwarf blue grass

D. annulatum (Forssk.) Stapf (*Andropogon annulatus* Forssk.; *Andropogon annulatus* var. *subrepens* Hack.; *Andropogon comosus* Link, nom. illeg., non *Andropogon comosus* Spreng.; *Andropogon garipensis* Steud.; *Andropogon ischaemum* Roxb. ex Wight, nom. illeg., non *Andropogon ischaemum* L.; *Andropogon nodosus* (Willemet) Nash; *Andropogon obtusus* Nees; *Andropogon scandens* Roxb.; *Bothriochloa tuberculata* W.Z. Fang; *Dichanthelium*

annulatum Stapf; *Dichanthium nodosum* P. Willemet, nom. illeg.; *Lepeocercis annulata* (Forssk.) Nees)

Southeast Asia, India, China, tropical Africa. Perennial, herbaceous, very variable, often tufted to densely tufted, slender, usually simple or branched, geniculately ascending, twisting and ascending to semidecumbent to prostrate, creeping, forming erect tussocks or clumps, with elaborate root system, often stoloniferous, culm nodes hairy to often bearded, ligules a truncate membrane, leaf blades somewhat rigid, leaves glaucous and basal, paniculate inflorescence of compound and several racemes subdigitate and shortly pedunculated, racemes densely villous, spikelets subimbricate or closely overlapping, sessile spikelet bisexual, pedicelled spikelets male or neuter, lower floret barren, upper floret hermaphrodite, pedicellate spikelet without a pit, sessile spikelets narrowly oblong and awned, lower glume cartilaginous without a pit, upper lemma awned, 3 stamens, ovary glabrous, weed species, under grazing forms open turf, used for rough lawns, attractive, very palatable both as pasture and hay, excellent fodder, forage, readily eaten by horses and all kinds of cattle, suitable for silage, low nutritive value, drought-resistant, survives short-term flooding, stands very heavy grazing, naturalized, widely used for hay in India, tolerates saline soils well, useful for erosion control, excellent ground cover, occurs along roadsides, bushy places, open disturbed places, pasture, in grassland on rocky ground, stony and sandy plains, sandstone, waste ground, gravelly soil, open forest, by water, woodland, irrigated land, moist soil, slopes and disturbed clearings, canal banks, tropics and subtropics, stream channels, old established pastures, on calcareous substrates, see *Flora Aegyptiaco-Arabica* 173. 1775, *Hortus Bengalensis, or a catalogue ...* 7. 1814, *Hortus Regius Botanicus Berolinensis* 1: 239. 1827, *Catalogue of Indian Plants* 65-112. 1834, *The Botany of Captain Beechey's Voyage* 243. 1838, *Flora Africae Australioris Illustrationes Monographicae* 98. 1841, *Synopsis Plantarum Glumacearum* 1: 379. 1854, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 1: 327. 1897 and *North American Flora* 17(2): 122. 1912, *Flora of Tropical Africa* 9: 178. 1917, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Bulletin of Botanical Research* 6(1): 97-98, f. 1. 1986, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Acta Botanica Indica* 18: 240-246. 1990, *Journal of Cytology and Genetics* 25: 140-143, 147-148, 322-323. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: Santa Barbara grass, Diaz blue stem, ringed beard grass, Hindi grass, brahman grass, Delhi grass, Kleberg grass, Kleberg bluestem, Angleton grass, marvel grass, Sheda grass

in Spanish: pajón, yerba de vias, pitilla

in the Caribbean: ti fwen, petit foin

in Mexico: zacate angleton pretoria, zu-uc

in Arabic: hemeira, abu-qasaba

in East Africa: domar, jebin, aus guran

in Mali: ebastan

in Sudan: lukh

in India: bansi, bara jergi, belia marwel, bharo-bheru, daroya, dhrow, donda, dunda, ganjala garike hullu, gavat, gawat, ginja, guhar marwel, handi daroya, janewa, janewah, janewar, jarga, jaunera, jinjva, kail, karr, khel (the scandent form), khulairia khel, lahan marvel, lahan marwel, loari, machhari, maliyar, mara vaale hullu, marvalyan hullu, marvel, miniyar, minyar, nalli, nilon, palmaha, palvaan hullu, palvan, palwal, palwan, palwanh, parwal, phalwan, phulaira, sam payen, sheda, turmurgah, urukan hullu, zinjoo, zinjvo, zinzma

in the Philippines: alabang grass

in Thailand: ya hindi, ya waen

in Vietnam: song tha'o to

D. annulatum (Forssk.) Stapf var. ***annulatum*** (*Andropogon papillosus* Hochst. ex A. Rich.)

Tropical Africa, southwest Asia, India, Indonesia. Racemes subdigitate, sessile spikelet with lower glume pubescent to villous and not pitted, growing on dunes and alluvial plains, hillsides, plains, disturbed areas, cultivated grounds, irrigated fields.

D. annulatum (Forssk.) Stapf var. ***papillosum*** (Hochst. ex A. Rich.) de Wet & J.R. Harlan (*Andropogon annulatus* var. *papillosus* (Hochst. ex A. Rich.) Hook.f.; *Andropogon papillosus* Hochst. ex A. Rich.; *Dichanthium papillosum* (Hochst. ex A. Rich.) Stapf)

Southern Africa, Ethiopia, Tanzania, Kenya. Perennial, variable, branched, erect, tufted or densely tufted, shortly rhizomatous, ring of hairs around the nodes, ligule membranous, leaf blade flattened, leaf sheath glabrous, racemes subdigitate, spikelets paired, sessile spikelet with lower glume not pitted villous and fringed, pedicelled spikelet awnless, palatable, occurs on heavy soils, in moist areas, rocky stream beds, cultivated soils, wet places, vleis, riverbanks, omiramba, sometimes confused with *Bothriochloa* species, see *Tentamen Florae Abyssinicae ...* 2: 457. 1850, *The Flora of British India* 7(21): 197. 1897 [1896] and *Flora of Tropical Africa* 9: 179. 1917, *Willdenowia* 1: 269. 1954.

in English: medio bluestem

in South Africa: vleivingergras, vleyfingergras

D. aristatum (Poir.) C.E. Hubb. (*Andropogon aristatus* Poir.; *Andropogon aristatus* (L.) Raspail, nom. illeg., non *Andropogon aristatus* Poir.; *Andropogon caricosus* subsp. *mollicomus* (Kunth) Hack.; *Andropogon caricosus* L. var. *mollicomus* (Kunth) Hack.; *Andropogon mollicomus* Kunth; *Andropogon nodosus* Nash; *Andropogon nodosus* (Willemet) Nash; *Dichanthium annulatum* (Forssk.) Stapf;

Dichanthium nodosum Willemet; *Diplasanthum lanosum* Desv.; *Lepeocercis mollicoma* (Kunth) Nees)

India. Perennial, tufted or weakly tufted, vigorous, slender erect culms or ascending, velvety below the inflorescence, sometimes rooting from the lower nodes, culm nodes bearded by very short spreading hairs or glabrous when old, leaf blade flattened, ligule a fringed membrane, inflorescence terminal and axillary, compound racemes sparsely villous, spikelets imbricate and paired, sessile spikelets elliptic to obovate, pitless, lower glume pilose and fringed, weed species, very drought-resistant, very palatable, excellent fodder grass, forage, grown as a pasture grass, can stand heavy grazing, salt-tolerant, survives short-term flooding, naturalized, a prolific seeder, occurs in disturbed areas, calcareous substrates, moist areas, natural pastures, heavy soil, roadsides, uncultivated lands, closely related to *Dichanthium annulatum* (Forssk.) Stapf, see *Centuria II. Plantarum ... 2: 7*. 1756, *Species Plantarum, Editio Secunda* 1480. 1763, *Annalen der Botanick. editor Usteri* 18: 11. 1796, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 585. 1811, *Annales des Sciences Naturelles (Paris)* 5: 307. 1825, *Révision des Graminées* 1: 365, t. 96. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 170, t. 8, f. 1. 1831, *Edinburgh New Philosophical Journal* 18: 185. 1835, *Monographiae Phanerogamarum* 6: 569. 1889 and *North American Flora* 17(2): 122. 1912, *Bulletin of Miscellaneous Information Kew* 1939(10): 654. 1939.

in English: Angleton bluestem, Angleton grass, wilder grass, bluestem, rainbow vlei grass

in Spanish: puntero

in the Caribbean: ti fwen, petit foin

in Mexico: popotillo robusto, zacate angleton aristado

in Japan: oni-sasa-gaya

in South Africa: reënboogvleigras

D. armatum (Hook.f.) Blatter & McCann (*Andropogon armatus* Hook.f.)

India, Western Ghats, Maharashtra. Rare and threatened species, annual, erect, tufted, leaf blades linear, inflorescence subdigitate, lower glume of sessile spikelet pitted, lower glume of pedicellate spikelets bristly, on stony soils, see *The Flora of British India* 7(21): 197. 1897 [1896] and *Journal of the Bombay Natural History Society* 32: 425. 1928, *The Bombay Grasses* 5: 91-92, t. 59. 1935, *Grasses of Burma ...* 134. 1960.

D. caricosum (L.) A. Camus (*Andropogon caricosus* L.; *Andropogon caricosus* subsp. *genuinus* Hack.; *Andropogon filiformis* Pers.; *Andropogon filiformis* Roxb., nom. illeg., non *Andropogon filiformis* Pers.; *Andropogon serratum* Retz., nom. illeg., non *Andropogon serratus* Thunb.; *Dichanthium annulatum* (Forssk.) Stapf; *Dichanthium aristatum* (Poir.) C.E. Hubb.; *Dimeria filiformis* (Roxb.)

Hochst. ex Miq.; *Heteropogon concinnus* Thwaites; *Lepeocercis serrata* (Retz.) Trin.)

Asia temperate and tropical, southern China, Indonesia, India, Sri Lanka. Annual or perennial, forming small clumps, prostrate, creeping to very shortly creeping at base, geniculately ascending, rooting at the lower nodes, densely tufted, rhizomatous, often stoloniferous, slender culms simple or branched, erect, nodes bearded or glabrous, vigorous stolons, auricles absent, minute ligule short and membranous, sheaths flattened and glabrous, leaves glabrous and somewhat rigid, spiciform racemes silky and more or less nodding, spikelets beaked with tuft of short bristles at base, spikelets almost distichous and imbricate, sessile spikelets hermaphrodite, lower floret empty, upper floret bisexual, pedicelled spikelets male, first glume of the sessile spikelet not pitted, 3 stamens, ovary glabrous, weed species, native pasture species, drought-resistant, withstands rather long dry periods, quite tolerant of waterlogging, excellent or not very palatable, used as pasture and hay grass, good fodder grass, forage, persistent under heavy grazing, very resistant to heavy grazing, potential seed contaminant, colonize and spread by both seed and runners, grows poorly in dry weather, similar to *Dichanthium annulatum* (Forssk.) Stapf, found in dry sandy habitats, open sunny places, savannah, swampy places, open humid woodland, along roadsides, see *Species Plantarum, Editio Secunda* 1480. 1763, *Observationes Botanicae* 5: 21. 1789, C.H. Persoon, *Synopsis Plantarum* 1: 103. Paris 1805, *Hortus Bengalensis, or a catalogue ...* 6. 1814, *Fundamenta Agrostographiae* 203, t. 18. 1820, *Acta Societatis Regiae Scientiarum Indo-Neerlandicae* III. 4: 35. 1851, *Enumeratio Plantarum Zeylanicae* 368. 1864, *Monographiae Phanerogamarum* 6: 569. 1889 and *Flora of Tropical Africa* 9: 178. 1917, *Bulletin du Muséum National d'Histoire Naturelle* 27: 549. 1921, *Kew Bulletin* 1939: 654. 1939, *Grasses of Ceylon* 191. 1956, *Grasses of Burma ...* 134. 1960.

in English: hay grass, nadi blue grass, Nadi bluegrass, Nandi bluegrass, Antigua hay grass, Indian bluestem, nawai grass

in India: bari kail, bilaria kandi, detara, detta, kanda bathhada hullu, kartah, khel, kheral, killa machhar, marvel, motha marwel, palmanega gadi, parihullu, urukun hullu

in Sri Lanka: geta mana

in Thailand: yaa nuat chaochuu, ya nuat chao chu, ya waen, yaa waen

D. compressum (Hook.f.) Jain & Deshpande (*Andropogon compressus* Hook.f.)

India, Maharashtra. Rare and threatened species, perennial, densely tufted, leaf blades linear-lanceolate and finely acuminate, aromatic, lower glume of sessile spikelets hairy, forming patches, grows in gravelly soils, see *The Flora of British India* 7(21): 172-173. 1896 and *The Bombay Grasses* 83-84, t. 53. 1935, *Grasses of Burma ...* 106. 1960,

Bulletin of the Botanical Survey of India 20(1-4): 133. 1978[1979].

D. fecundum S.T. Blake

Western Australia, Queensland, Northern Territory. Perennial, slender, branched, erect or geniculate, forming erect tussocks, glaucous leaves, green or purplish racemes solitary or in group, a decreaser species, useful for erosion control, fodder, forage, very nutritious, attractive, produces good hay, in damp open places, grassland, woodland, see *University of Queensland Papers: Department of Biology* 2(3): 51. 1944.

in English: curly blue grass

D. foveolatum (Delile) Roberty (*Andropogon foveolatus* Delile; *Andropogon monostachys* Spreng.; *Andropogon strictus* Roxb.; *Eremopogon foveolatus* (Delile) Stapf; *Eremopogon strictus* (Roxb.) A. Camus; *Hypogynium foveolatum* (Delile) Haines)

Asia, Africa, India, Sri Lanka. Perennial, wiry, very slender, tufted or densely tufted, much-branched, erect or ascending, nodes bearded, spathiform leaf sheaths, basal sheaths silky, ligule membrane-like, leaves narrow almost filiform, terminal and axillary racemes solitary and long-exserted, awn on one side of spike, lower glume of sessile spikelet pitted, pedicelled spikelet pitted or not, upper lemma sometimes bidentate, palatable after seeding, good hay and silage, valuable desert fodder, used by cattle when young, sometimes a thatching grass, pioneer grass, a weed of irrigation, found in sandy areas, subdesert grassland, shallow sandy soils, sand dunes, bushland, deciduous bushland, sandy coastal plains, usually near the sea, open areas, rocky hillsides, rich black soil, see *Description de l'Egypte. Histoire naturelle*. Tom. second. 1: 16, pl. 8, f. 2. Paris 1812 and *Flora of Tropical Africa* 9: 183. 1917, *Boissiera*. 9: 170. 1960, *Grasses of Burma ...* 148-149. 1960, *Fl. Tamilnadu Carnatic* 2: 866-867, pl. 866, 867. 1982, *Fl. Pakistan, Poaceae* 143: 279-280. 1982, *Fl. Tamilnadu Carnatic* 3: 1834-1835. 1983.

in India: boari, gandhila, girgua, girji munhak, junjhli, kard gandhel, lokhandi, mujna, murjaini, murjnah, silkia marwel, sirwala, usar janewah

in Mali: okras, tirichit, tirikit

in Somalia: saren, dalan

D. humilius (Benth.) J.M. Black (*Andropogon annulatus* var. *humilis* Benth.)

Central Australia. See *Transactions and Proceedings of the Royal Society of South Australia* 60: 165. 1936.

D. maccannii Blatter

India, Maharashtra. Vulnerable and threatened species, annual, tufted, nodes bearded, leaf blades hairy, racemes solitary or two, growing in gravelly soils, open areas, grasslands, high rainfall areas, see *Journal of the Bombay Natural History Society* 32: 357-358, pl. 2. 1927, *The Bombay*

Grasses 5: 92, t. 60. 1935, *Grasses of Burma ...* 135. 1960, *Bol. Soc. Arg. Bot.* 12: 219. 1968.

D. mucronulatum Jansen

Malaysia, Malay Peninsula. Rare species, hairy awn, upper lemma sometimes bidentate, found on rocks, see *Acta Botanica Neerlandica* 1(3): 473, f. 2. 1952.

D. oliganthum (Hochst. ex Steud.) Cope (*Andropogon oliganthus* Hochst. ex Steud.; *Heteropogon oliganthus* (Hochst. ex Steud.) Blatt. & McCann; *Indochloa oligantha* (Hochst. ex Steud.) Bor)

Asia. See *Synopsis Plantarum Glumacearum* 1: 368. 1854 and *Journal of the Bombay Natural History Society* 32: 623. 1928, *Kew Bulletin* 1854: 79. 1954, *Kew Bulletin* 35(3): 703. 1980.

D. pallidum (Hook.f.) Stapf ex C.E. Fischer (*Apocopsis pallida* Hook.f.)

India, Tamil Nadu. Indeterminate species, see *The Flora of British India* 7: 143. 1896 and *Flora of the Presidency of Madras* 10: 1740, 1741. 1934.

D. panchaganiense Blatter & McCann (*Dichanthium panchaganiense* Blatt. & McCann)

India, Panchgani Plateau, Maharashtra. Rare and threatened species, small, annual, bearded nodes, leaf blades acuminate, racemes solitary or digitate, found on open rocky places, see *Journal of the Bombay Natural History Society* 32: 357-358, pl. 1. 1927, *The Bombay Grasses* 90-91, f. 58. 1935, *Grasses of Burma ...* 135. 1960, *Bol. Soc. Arg. Bot.* 12: 220. 1968.

D. queenslandicum B. Simon

Australia, Queensland. Vulnerable species, see *Austrobaileya* 1(5): 457. 1982.

in English: king bluegrass

D. sericeum (R. Br.) A. Camus (*Andropogon sericeus* R. Br.; *Andropogon affinis* R. Br.; *Dichanthium affine* (R. Br.) A. Camus; *Dichanthium sericeum* (R. Br.) Guillaumin, nom. illeg., non *Dichanthium sericeum* (R. Br.) A. Camus)

Asia tropical, Papua New Guinea, Western Australia, Queensland, Northern Territory, Victoria, New South Wales. Perennial, branched, erect and slender, tussocky nature, vigorous, bluish green and purplish, culm nodes bearded or with long white hairs, slender leaves sometimes hairy, sheath hairy, racemes with white and bluish silky hairs, spikelets paired and crowded, lowest pairs of spikelets sterile and reduced to glumes, callus shortly bearded, pedicellate spikelets sterile, a heavy seeder, not very extensive root system, natural pastures for sheep and cattle, cultivated, forage, good soft hay, highly nutritious and very palatable in the green state, eaten by stock and native animals, grains food for small birds, highly ornamental, declines under very high grazing pressures on poor soils, sensitive to frost, growing in open grassland on heavy black soils, full sun,

see *Bulletin du Muséum d'Histoire Naturelle* 27: 549. 1921, *Bulletin de la Société Botanique de France* 88: 791. 1942.

in English: Australian bluestem, silky bluegrass, silky bluestem, Queensland bluegrass

D. sericeum (R. Br.) A. Camus subsp. **humilius** (J.M. Black) B.K. Simon (*Dichanthium humilius* J.M. Black; *Dichanthium humilius* (Benth.) J.M. Black)

New South Wales. Annual, see *Transactions and Proceedings of the Royal Society of South Australia* 60: 165. 1936, *Austrobaileya* 3: 83. 1989.

D. sericeum (R. Br.) A. Camus subsp. **polystachyum** (Benth.) B.K. Simon (*Andropogon sericeus* var. *polystachyus* Benth.; *Andropogon superciliatus* Hack.; *Andropogon tenuiculmus* Reznik; *Andropogon tenuiculus* Steud.; *Dichanthium superciliatum* (Hack.) A. Camus; *Dichanthium tenuiculum* (Steud.) S.T. Blake; *Sorghum superciliatum* (Hack.) Kuntze)

Australia, Asia. See *Prodromus Florae Novae Hollandiae* 1: 201. 1810, *Synopsis Plantarum Glumacearum* 1: 371. 1854, *Flora Australiensis: A Description ...* 7: 530. 1878, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 239. 1885, *Revisio Generum Plantarum* 2: 792. 1891 and *Bulletin du Muséum d'Histoire Naturelle* 27: 550. 1921, *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 5: 495. 1933, *Proceedings of the Royal Society of Queensland* 80: 69. 1969, *Austrobaileya* 3(1): 84. 1989.

D. sericeum (R. Br.) A. Camus subsp. **sericeum** (*Dichanthium affine* (R. Br.) A. Camus)

New South Wales. Perennial, palatable, nutritious, high-yielding, makes good hay.

D. setosum S.T. Blake

Queensland, New South Wales, Western Australia. Perennial, erect, sheath glabrous, racemes hairy and purple, lowest pairs of spikelets male, callus often densely bearded, pedicellate spikelets male, a vulnerable species, woodland, grassland, *University of Queensland Papers: Department of Biology* 2(3): 50. 1944.

D. tenue (R. Br.) A. Camus (*Andropogon tenuis* R. Br.)

Queensland, New South Wales. Perennial, erect, sheath glabrous, racemes not hairy, lowest pairs of spikelets sterile, callus densely bearded, pedicellate spikelets male, see *Bulletin du Muséum d'Histoire Naturelle* 27: 549. 1921.

in English: small bluegrass

D. tenuiculum (Steudel) S.T. Blake (*Andropogon tenuiculum* Steud.; *Dichanthium superciliatum* (Hackel) A. Camus)

Western Australia, Queensland, Northern Territory. Perennial and robust grass, slender and vigorous tussocks, bearded nodes, leaves bluish green to blue and very scabrous, culms robust and branched, racemes in a terminal and digitate or tasselled inflorescence, very valuable pasture

grass, woodland and floodplains, wetter heavy soil, cracking clays, see *Synopsis Plantarum Glumacearum* 1: 371. 1854 and *Proceedings of the Royal Society of Queensland* 80: 69. 1969.

in English: tassel blue grass

D. woodrowii (Hook.f.) S.K. Jain & Deshpande (*Amphiphis woodrovii* (Hook.f.) A. Camus; *Andropogon woodrovii* Hook.f.; *Bothriochloa woodrovii* (Hook.f.) A. Camus)

India, Maharashtra. Vulnerable and threatened species, aromatic, tufted, woody rootstock, leaf blades scabrid, sessile spikelets oblong-lanceolate, plains, low rainfall areas, see *The Flora of British India* 7: 173. 1896 and *The Bombay Grasses* 84. 1935, *Grasses of Burma ...* 110. 1960, *Bulletin of the Botanical Survey of India* 20(1-4): 134. 1978[1979].

Dichelachne Endl.

From the Greek *dis* "twice," *chele* "a horse's hoof," *dicheilon* "bilabrum," *dicheleo* "divide the hoof" and *achne* "chaff, glume," referring to the bilobed lemmas, to the bifid palea; see Stephan L. Endlicher, *Prodromus florae Norfolkicae*. 20. (May-June) 1833.

About 5-9 species, New Guinea, Pacific, Australasia, New Zealand, Timor. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Agrostidinae, annual or perennial, tufted, herbaceous, slender, nodding, wiry, auricles absent, leaf sheaths pubescent to glabrous, ligule a short unfringed membrane truncate, leaf blade usually scabrous and flat or convolute, plants bisexual, inflorescence a dense contracted spike-like panicle, spikelets compressed laterally and solitary, cleistogamous or chasmogamous, 1 bisexual floret, 2 glumes acuminate equal or unequal, lemma entire or minutely bifid at apex, lemma with a long slender awn, the upper part of the lemma glabrous, hairy callus present, callus short and blunt, palea narrow, 2 lodicules free and hyaline or membranous, numbers of stamens variable 1-3, ovary glabrous, 2 stigmas plumose, grains can irritate the skin, pasture grasses, growing in upland grasslands, clearings, forest margins, open habitats, subalpine, often confused with *Calamagrostis* Adans., *Agrostis* L., *Stipa* and *Deyeuxia* Clarion ex P. Beauv., type *Dichelachne montana* Endl., see *Prodromus Florae Norfolkicae* 20. 1833 and *N.Z. J. Sci. Tech.* 34A: 369-371. 1952, *N.Z. J. Sci. Tech.* 38A: 742-751. 1957, *Blumea* 22(1): 5-12. 1974 [A taxonomic revision of *Dichelachne* Endl. (Gramineae) with some new combination in *Stipa* L. and *Oryzopsis*.], *New Zealand Journal of Botany* 20: 303-309. 1982, *New Zealand Journal of Botany* 29: 101-116. 1991, *Telopea* 5(2): 325-328. 1993 [Review of *Dichelachne* (Gramineae) in Australia], *Fl. N.S.W.* 4: 582-584. 1993, *New Zealand Journal of Botany* 37: 63-70. 1999, *Telopea* 9(3): 439-448. 2001 [The genus *Lachnagrostis* (Gramineae) in Australia], *Contributions from the United States National Herbarium* 48: 270. 2003, *Restoration*

Ecology 11(2): 223-230. June 2003, *Weed Biology and Management* 4(4): 218-221. Dec 2004, Ralph Woodford, “‘Dorrobbee Grass’: Relic of the past or icon of the future?” *Ecological Management and Restoration* 6(1): 68-69. Apr 2005 [Dorrobbee is an Aboriginal word for the Coolamon tree *Syzygium moorei*.]

Species

D. crinita (L.f.) Hook.f. (*Agrostis crinita* (L.f.) R. Br., nom. illeg., non *Agrostis crinita* (Schreb.) Moench; *Agrostis crinita* (Trin. & Rupr.) Nees, nom. illeg., non *Agrostis crinita* (Schreb.) Moench; *Anthoxanthum crinitum* L.f.; *Apera crinita* (L.f.) P. Beauv.; *Cinna crinita* (L.f.) Trin.; *Deyeuxia crinita* (L.f.) Zotov; *Dichelachne comata* Trin. & Rupr.; *Dichelachne crinita* var. *intermedia* Hack. ex Cheeseman; *Dichelachne forsteriana* Trin. & Rupr.; *Dichelachne hookeriana* Trin. & Rupr.; *Dichelachne longiseta* Trin. & Rupr.; *Dichelachne sciurea* (R. Br.) Hook.f.; *Muhlenbergia crinita* (L.f.) Trin.; *Muhlenbergia mollicoma* Nees ex Hook.f.)

Australia to Pacific, New Zealand. Perennial, tufted, erect or ascending, more or less stout, culms narrow-plumed, leaves mostly basal, auricles absent, leaf sheath softly hairy, ligule chartaceous ciliate, basal leaf sheaths keeled, green and purple erect spike-like panicle densely branched, spikelets numerous, cleistogamous spikelets and chasmogamous spikelets, glumes subulate to linear-lanceolate and subequal or unequal, lemma subulate and awned, awn falcate and twisted, awn column straight, palea narrowly ovate, anthers yellow or purple, low fodder value, fruit oblong and laterally compressed, stems for paper-making, found in open habitats, in grassland or woodland, on sandy soils, in grassland remnants, lowland and montane zones, see *Supplementum Plantarum* 13: 90. 1781 [1782], *Prodromus Florae Novae Hollandiae* 170. 1810, *Essai d'une Nouvelle Agrostographie* 31, 147, 151. 1812, *Fundamenta Agrostographiae* 118. 1820, *De Graminibus unifloris et sesquifloris* 192, 296, t. 5, f. 13. Petropoli 1824, *Species Graminum Stipaceorum* 3-5. 1842, *London Journal of Botany* 2: 414. 1843, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 5: 4. 1843, *Flora Novae-Zelandiae* 1: 293-294. 1853 and *Manual of the New Zealand Flora* 874. 1906, *The Natural History of Juan Fernandez and Easter Island* 2(5): 61-84. 1922, *Manual of the New Zealand Flora* 163. 1925, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 234. 1943, *Blumea* 22(1): 10. 1974, Arthur D. Chapman, editor, *Australian Plant Name Index*. 981. Canberra 1991.

in English: long-hair plume-grass, longhair plumegrass, long-haired plumegrass, cloven-foot plumegrass, plume grass

D. hirtella N.G. Walsh

New South Wales, South Australia, Victoria. Annual or perennial, erect, often hairy, densely or sparsely tufted,

more or less tussocky, leaves mostly basal, auricles absent, ligule membranous, basal leaf sheaths keeled or not keeled, leaves channelled, contracted panicle green or green and purple, tall flowering stems, cleistogamous and chasmogamous spikelets, glumes subequal, lower glume shortly subulate, lemma hispid-pubescent and awned, palea membranous, anthers yellow or purple, fruit laterally and ventrally compressed, in open habitats, dry sclerophyll montane woodland, eucalypt woodland, heathy woodland, see *Muelleria* 7: 451-456. 1992.

D. inaequiglumis (Hackel ex Cheeseman) Edgar & Connor (*Dichelachne micrantha* (Cav.) Domin var. *inaequiglumis* (Hackel ex Cheeseman) Domin; *Dichelachne rara* sensu Jessop, non (R. Br.) Vickery; *Dichelachne sciurea* (R. Br.) Hook.f. var. *inaequiglumis* Hackel ex Cheeseman)

New Zealand, Tasmania, New South Wales, Victoria, Queensland. Perennial, tufted, more or less erect, more or less tussocky, rather small, leaves mostly basal, auricles absent, leaf sheath glabrous or scabrid, ligule membranous and truncate, basal leaf sheaths keeled, leaves flat and scabrid, panicle loose and few-branched, cleistogamous and chasmogamous, glumes unequal elliptic-lanceolate, lemma keeled, awn twisted with straight column, palea hyaline and 2-keeled, anthers yellow, fruit oblong and laterally compressed, lowland and montane zones, in eucalypt woodland, *Eucalyptus pauciflora* woodland, *Danthonia* grassland, moist area on open granite slope, swamp areas, wet sclerophyll forest, open habitats, often confused with *Dichelachne micrantha* (Cav.) Domin, see *Flora Novae-Zelandiae* 1: 294. 1853 and *Manual of the New Zealand Flora* 874. 1906, *Bibliotheca Botanica* 85: 353. 1915, *New Zealand Journal of Botany* 20(3): 307. 1982.

D. lautumia Edgar & Connor

New Zealand. Perennial, tufted, leaf sheath papery glabrous, ligule truncate and ciliate, dense panicle linear-lanceolate, glumes equal or subequal, awn column twisted, palea keels prickly, 3 stamens, see *New Zealand Journal of Botany* 33: 11. 1995 and 37: 67-68, f. 4. 1999.

D. longiseta Trinius & Rupr. (*Dichelachne crinita* sensu Jessop, non (L.f.) Hook.f.; *Dichelachne crinita* (L.f.) Hook.f.)

South Australia. Perennial, tufted, leaves flat and more or less glabrous, silvery panicle dense and spike-like, awn untwisted and flexuous, not grazed, see *Supplementum Plantarum* 90. 1781, *Species Graminum Stipaceorum* 5. 1842, *Flora Novae-Zelandiae* 1: 293. 1853.

in English: long-hair plume-grass

D. micrantha (Cav.) Domin (*Agrostis sciurea* R. Br.; *Dichelachne crinita* (L.f.) var. *intermedia* Hack. ex Cheesem.; *Dichelachne inaequiglumis* (Hack. ex Cheeseman) Edgar & Connor; *Dichelachne micrantha* var. *inaequiglumis* (Hack. ex Cheeseman) Domin; *Dichelachne micrantha* var. *micrantha*; *Dichelachne montana* Endl.;

Dichelachne sciurea (R. Br.) Hook.f.; *Dichelachne sciurea* var. *inaequiglumis* Hack. ex Cheeseman; *Dichelachne vulgaris* Trin. & Rupr.; *Muhlenbergia sciurea* (R. Br.) Trin. ex Kunth; *Muhlenbergia sciurea* (R. Br.) Trin., nom. illeg., non *Muhlenbergia sciurea* (R. Br.) Trin. ex Kunth; *Stipa dichelachne* Steud.; *Stipa micrantha* Cav.; *Vilfa sciurea* (R. Br.) P. Beauv.)

Australia, New Guinea, New Zealand, Pacific. Perennial, tufted, slender, erect, stout, rigid, leaves mostly basal, auricles absent, leaf sheath minutely hairy, ligule more or less membranous and truncate, basal leaf sheaths keeled, gray-green leaves flat and more or less glabrous and stiff, a green or green and purple erect panicle dense and spike-like, tall flowering stems, awns of the grass seed forming a dense cylindrical mass around the dense flowering spikes, cleistogamous spikelets and chasmogamous spikelets, glumes subequal or unequal, lemma chartaceous and awned, awn curving and twisted, palea narrowly oblong or narrowly ovate, anthers yellow or purple, fruit oblong and glabrous, shade-tolerant, not grazed, low fodder value, in dry or wet sclerophyll forest, roadsides, banks, on sandstone and clay soils, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 42, 467, f.2. 1799, *Prodromus Florae Novae Hollandiae* 171. 1810, *Essai d'une Nouvelle Agrostographie* 16, 148, 182. 1810, *Prodromus Florae Norfolkicae* 20. 1833, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 218. 1833, *Nomenclator Botanicus. Editio secunda* 1: 502. 1840, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 308. 1841, *Species Graminum Stipaceorum* 3. 1842, *Flora Novae-Zelandiae* 1: 294. 1853 and *Manual of the New Zealand Flora* 874. 1906, *Bibliotheca Botanica* 85: 353. 1915, *Blumea* 22: 9. 1974, *New Zealand Journal of Botany* 20(3): 307. 1982.

in English: short-hair plume-grass, shorthair plumegrass

D. parva B.K. Simon

New South Wales, Victoria, Queensland. Perennial, caespitose, glabrous, leaves mostly basal, auricles absent, ligule membranous and obtuse, basal leaf sheaths glabrous or scabrous, leaves flat or involute, loose and open panicle, glumes unequal, lemma keeled and awned, palea hyaline and 2-keeled, anthers white cream or purple to brown, usually in woodland, in damp sites on sandstone or granite, in montane areas, closely related to *Dichelachne inaequiglumis* (Hackel ex Cheeseman) Edgar & Connor, see *Austrobaileya* 1(5): 462. 1982, *Telopea* 5: 325-326. 1993.

D. rara (R. Br.) Vickery (*Agrostis rara* R. Br.; *Dichelachne micrantha* var. *rara* (R. Br.) Domin; *Dichelachne novoguineensis* (Pilg.) Pilg.; *Dichelachne sieberiana* Trin. & Rupr.; *Muhlenbergia novoguineensis* Pilg.; *Muehlenbergia rara* (R. Br.) Trin.; *Muhlenbergia rara* (R. Br.) Nees ex Hook.;

Muhlenbergia rara var. *macrostachya* Nees ex Hook.; *Vilfa rara* (R. Br.) P. Beauv.)

New South Wales, Victoria, Tasmania. Perennial, tufted, more or less tussocky, stout or slender, ligule entire or lobed, leaves mostly basal, auricles absent, basal leaf sheaths glabrous or scabrous, leaves stiff and channelled, more or less lax panicle green or green and purple, glumes more or less equal or subequal, lemma oblong and awned, awn geniculate with twisted column, palea hyaline and 2-keeled, anthers yellow or purple or white, fruit oblong and ventrally compressed, usually in dry eucalypt woodland, open habitats, on stony ground, disturbed sites, among rocks in *Eucalyptus* forest, on rocky slopes in open *Eucalyptus* forest, granite hill, stringybark-whitegum forest, see *Prodromus Florae Novae Hollandiae* 1: 171. 1810, *Essai d'une Nouvelle Agrostographie* 16, 148, 182. 1810, *Species Graminum Stipaceorum* 2-3. 1842, *London Journal of Botany* 2: 414. 1843 and *Bibliotheca Botanica* 85: 353. 1915, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62: 457. 1929, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 69: 254. 1938, *Contributions from the New South Wales National Herbarium* 1: 337. 1951, *Blumea* 22(1): 8. 1974, *New Zealand Journal of Botany* 20(3): 303. 1982.

D. sieberiana Trinius & Rupr. (also spelled *sieberana*) (*Dichelachne micrantha* (Cav.) Domin var. *setifolia* Benth.; *Dichelachne rara* (R. Br.) Vickery; *Dichelachne rara* (R. Br.) Vickery subsp. *asperula* Veldkamp; *Dichelachne rara* subsp. *rara*; *Dichelachne sciurea* (R. Br.) Hook.f. var. *setifolia* Benth.) (for the Bohemian naturalist Franz Wilhelm Sieber, 1789-1844 (d. Prague), natural history collector and traveler, botanist, plant collector in South Africa, Mauritius and Australia, in 1823 in New South Wales, among his publications are *Herbarium florae aegyptiacae*. Wien 1820, *Reise nach der Insel Kreta*. Leipzig und Sorau 1823 and *Reise von Cairo nach Jerusalem*. Prag, Leipzig 1823, sent Andreas Döllinger, Franz (Francis) Kohaut (d. 1822) and Joseph Schmidt to collect for him in Sénégal; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 275. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; F.C. Dietrich, in *Jahrb. Konigl. Bot. Gart. Mus. Berlin*. 1: 278-306. 1881; D.J. Carr & S.G.M. Carr, editors, *People and Plants in Australia*. 1981; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 257. Palermo 1988; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 322-323. A.A. Balkema Cape Town 1981; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 191-192. Paris 1882; Heinrich Gottlieb Ludwig Reichenbach (1793-1879), *Conspectus Regni Vegetabilis*. 145. Lipsiae 1828; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 74. 1971; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*.

244. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980; G. Schmid, *Goethe und die Naturwissenschaften*. Halle 1940)

Eastern Australia. Annual or short-lived perennial, stout or slender, scabrous to pubescent, tufted, small compact tussocks, ligule membranous not lobed, leaves mostly basal, auricles absent, basal leaf sheaths keeled, leaves stiff and channelled, green or green and purple panicle more or less contracted or very lax, spikelets sparse, cleistogamous and chasmogamous, glumes unequal, lemma scabrous, awn usually geniculate at the base of the column, awn column very tightly twisted, palea membranous and 2-keeled, yellow or purple anthers, fruit oblong and laterally compressed, found in woodland, moist area on open granite slope, along roadsides, waste ground, tall eucalypt woodland, stony slope of mountain, mixed dry sclerophyll forest, see *Prodromus Florae Novae Hollandiae* 1: 171. 1810, *Species Graminum Stipaceorum* 2-3. 1842, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5: 2. 1843 and *Contributions from the New South Wales National Herbarium* 1: 337. 1951.

in English: Sieber's plume-grass, plume-grass

Dichromus Schldl. = Paspalum L.

From the Greek *dichromos* "of two colors."

Panicoideae, Paniceae, Paspalinae, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Transactions of the Linnean Society of London* 2: 83, t. 16. 1794, *Graminum Monographiae ... Pars. I. Paspalum. Reimaria* 216. 1810, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 163. 1831, *Botanische Zeitung. Berlin* 10: 17. 1852 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 46: 193, 443-527. 2003.

Dictyochloa (Murb.) E.G. Camus = Ammochloa Boiss.

From the Greek *diktyon* "a net" and *chloe, chloa* "grass."

Pooideae, Poodae, Aveneae, see *Diagnoses plantarum orientarium novarum* ser. 1. 2(13): 51-52. 1854, *Annales des Sciences Naturelles, Botanique, sér. 4* 1: 229. 1854 and *Acta Universitatis Lundensis* 36(4): 12. 1900, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 63: 1. 45. 1931, *Kew Bulletin, Additional Series* 13: 109. 1986 [*Genera Graminum*].

Didactylon Zoll. & Moritzi = Dimeria R. Br.

From the Greek *didactylos, didaktylon* "two-fingered, two-toed."

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, type *Didactylon simplex* Zoll. & Morr., see *Prodromus Florae Novae Hollandiae* 1: 204. 1810, *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844* 99. 1845-1846.

Didymochaeta Steudel = Agrostis L., Bromidium Nees & Meyen

From the Greek *didymos* "double" and *chaite* "bristle, mane, long hair," see Ernst Gottlieb von Steudel (1783-1856), *Synopsis plantarum glumacearum*. 1: 185. Apr 1854.

Pooideae, Poeae, Agrostidinae, see *Species Plantarum* 1: 61-63. 1753, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Fundamenta Agrostographiae* 128, t. 10. 1820, *Gramineae* 22-23. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 154. 1843, *Flora Chilena* 6: 320. 1854, *Synopsis Plantarum Glumacearum* 1: 185. 1854 and *Records Dom. Mus.* 5(15): 142-143. 1965, *Fl. Fenn.* 5: 29. 1971, *Darwiniana* 24(1-4): 187-216. 1982, *Taxon* 41: 556. 1992, *New Zealand Journal of Botany* 33: 1-33. 1995, *Taxon* 44: 611-612. 1995, *Telopea* 9(3): 439-448. 2001, *Contributions from the United States National Herbarium* 48: 152-153, 270, 419-420. 2003.

Diectomis Kunth = Andropogon L.

Perhaps from the Greek *diektenno* "divide through the midst," or from *diek* "out through" and *tome* "stump" or *tomis* "knife."

One species, tropics. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual, caespitose, solid, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets paired and flattened, 2 glumes subequal, palea present, 2 fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, native pasture species, forest and savannah, sandy soils, grassland, often in *Andropogon*, type *Diectomis fastigiata* (Sw.) P. Beauv., see *Species Plantarum* 2: 1045-1046. 1753, *Essai d'une Nouvelle Agrostographie* 132, 160. 1812, *Mémoires du Muséum d'Histoire Naturelle* 2: 69. 1815, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 268. 1832, *Flora Brasiliensis* 2(4): 303. 1883 and *Bolletino della Società Botanica Italiana* 1917: 57. 1917, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64, 193. 2003.

Species

D. fastigiata (Sw.) P. Beauv. (*Andropogon diatherus* Steud.; *Andropogon fastigiatus* Swartz; *Andropogon hochstetteri* Steud.; *Cymbachne fastigiata* (Sw.) Roberty; *Diectomis fastigiata* Kunth; *Diectomis fastigiata* (Swartz) Kunth, nom. illeg., non *Diectomis fastigiata* (Sw.) P. Beauv.; *Heteropogon hochstetteri* (Steud.) Schweinf.; *Heteropogon hochstetteri* (Steud.) Andersson ex Schweinf.; *Pollinia fastigiata* (Sw.) Spreng.; *Sorghum fastigiatum* (Sw.) Kuntze)

Tropical Africa. Annual, tufted, rare, erect, herbaceous, coarse, leaf blades flat and linear, ligule a glabrous membrane, solitary racemes terminal and lateral, inflorescence often partially enclosed by the upper leaf sheaths, racemes single and axillary, lower glume of sessile spikelet deeply grooved, lower glume of pedicellate spikelet papery and long-awned, forage, grazed when young, used for thatching, found in dry sandy soil, shallow soil, loamy sand, bare gravelly soil, on lava flow, riverbank, edge of forest, rocky hillsides, along roadsides, dry bushland, open areas, open pine forest, dry savannah, dry fallows, open savannah, sandstone, see *Nova Genera et Species Plantarum seu Prodrromus* 26. 1788, *Essai d'une Nouvelle Agrostographie* 132, 160. 1812, *Plantarum Minus Cognitarum Pugillus* 2: 13. 1815, *Nova Genera et Species Plantarum* 1: 193. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 378, 384. 1854, *Revisio Generum Plantarum* 2: 791. 1891 and *Boissiera*. 9: 255. 1960, *Flowering Plants of Jamaica* 1972, *Phytologia* 37(4): 317-407. 1977, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Cuscatlania* 1(6): 1-29. 1991.

in Guinea: fugolo

in Nigeria: bayan maraya, garbazam, jam bauje, yama

in Mexico: pastomato común

Diectomis P. Beauv. = Anadelphia Hack.

Perhaps from the Greek *diektenno* "divide through the midst," or from *diek* "out through" and *tome* "stump" or *tomis* "knife."

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, see *Species Plantarum* 2: 1045. 1753, *Essai d'une Nouvelle Agrostographie* 132-133, 160, t. 23. 1812, *Mémoires du Muséum d'Histoire Naturelle* 2: 69. 1815, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 240-241. 1885, *Die Natürlichen Pflanzenfamilien* 2(2): 27. 1887 and *Journal de Botanique (Morot)* 19: 100. 1905, *Flora of Tropical Africa* 9: 399-400. 1919, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 172. 1950, *Kew Bulletin* 20: 275-285. 1966.

Dielsiochloa Pilg.

In honor of the German botanist Friedrich Ludwig Emil Diels, 1874-1945, from 1900-1901 plant collector in Western Australia, Director of Berlin-Dahlem Botanic Garden and Museum, friend and companion of Ernst Georg Pritzel (1875-1946), contributed to H.G.A. Engler & K.A.E. Prantl *Die Natürlichen Pflanzenfamilien* edition I and edition 2, to Engler *Das Pflanzenreich*, his works include *Beiträge zur Kenntniss der Vegetation und Flora von Ecuador*. Stuttgart 1937, *Ersatzstoffe aus dem Pflanzenreich*. [Edited by Diels.] Stuttgart 1918, *Jugendformen und Blütenreife im Pflanzenreich*. Berlin 1906 and *Die Pflanzenwelt von West-Australien südlich des Wendekreises*. Leipzig 1906; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 454. 1965; Gottfried Wilhelm Johannes Mildbraed (1879-1954), in *Bot. Jb.* 74(2): 173-198. 1948 (Obituary and bibliography); Friedrich Ludwig Emil Diels (1874-1945) & Ernst Georg Pritzel (1875-1946), in *Botanische Jahrbücher*. 35: 88, f. 6 A-L. Apr 1904; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 102. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 241. University of Pennsylvania Press, Philadelphia 1964.

One species, Peru. Pooideae, Poodae, Aveneae, perennial, tufted, herbaceous, ligule membrane-like, plants bisexual, compact inflorescence paniculate, oblong panicle, 6-10-flowered, lower 2-3 florets fertile, wavy rachilla, 2 glumes unequal, lower glume 1-nerved, upper glume 3-nerved, lemmas membranous and keeled, straight dorsal awn, palea and lodicules present, 2-3 stamens, ovary glabrous, 2 stigmas, open habitats, grassland, montane, related to *Trisetum*, type *Dielsiochloa floribunda* (Pilg.) Pilg., see *Species Plantarum* 1: 76-78. 1753, *Syn. Pl.* 1: 97. 1805 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 73: 99. 1943.

Species

D. floribunda (Pilg.) Pilg. (*Bromus mandonianus* Henrard; *Dielsiochloa floribunda* var. *floribunda*; *Dielsiochloa floribunda* var. *majus* Pilg.; *Dielsiochloa floribunda* var. *weberbaueri* (Pilg.) Pilg.; *Trisetum floribundum* Pilg.; *Trisetum floribundum* var. *weberbaueri* (Pilg.) Louis-Marie; *Trisetum weberbaueri* Pilg.)

South America. Spikelets disarticulating only above glumes, upper florets sterile, lemma dorsally awned, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 505-506. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 23: 177. 1926, *Rhodora* 30(359): 244. 1928, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 73: 101. 1943.

Digastrium (Hackel) A. Camus =
Ischaemum L.

Greek *di, dis* “two, double” and *gaster* “belly, paunch.”

Two species, Australia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Ischaeminae, perennial, herbaceous, auricles absent, ligule membranous, plants bisexual, inflorescence spicate or racemose, inflated joints and pedicels, spikelets paired sessile and pedicellate, 2 glumes subequal 5- to 7-nerved, palea and lodicules present, 3 stamens, ovary glabrous, 2 stigmas, pedicellate spikelets sterile reduced to glumes, usually *Ischaemum* sect. *Digastrium* (A. Camus) Roberty, see *Species Plantarum* 2: 1045, 1049. 1753, *Monographiae Phanerogamarum* 6: 250. 1889 and *N. Amer. Fl.* 17: 94. 1909, Aimée Antoinette Camus (1879-1965), in *Bulletin du Muséum d'Histoire Naturelle.* 27: 372. Paris 1921, *Boissiera* 331. 1960, *Flora Mesoamericana* 6: 386-387. 1994, *Contributions from the United States National Herbarium* 46: 275-276. 2003.

Species

D. baileyi (C.E. Hubb.) Pilg. (*Ischaemum baileyi* C.E. Hubb.)

Australia, Queensland. See *Icones Plantarum* 33 (pl. 3263): 2. 1935, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 128. 1940.

D. fragile (R. Br.) A. Camus (*Ischaemum fragile* R. Br.)

Australia. See *Prodromus Florae Novae Hollandiae* 202, 205. 1810 and *Bulletin de la Société Botanique de France* 70: 850. 1923.

Digitaria Adans. = *Tripsacum* L.

Latin *digitus* “a finger.”

Panicoideae, Andropogonodae, Maydeae, or Panicoideae, Andropogoneae, Tripsacinae, see C. Linnaeus, *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Familles des Plantes* 2: 38, 550. 1763, *Revisio Generum Plantarum* 2: 772. 1891 and *Botanical Gazette* 41: 294. 1906, *Boletín de la Sociedad Botánica de México* 25: 1-21. 1941, *Rhodora* 66: 371-374. 1964, *Bot. Mus. Leafl. Harv.* 20: 289-316. 1964, *Bot. Mus. Leafl. Harv.* 22: 33-62. 1967, *Phytologia* 33(3): 203-227. 1976, *American Journal of Botany* 68: 269-276. 1981, *Systematic Botany* 8: 243-249. 1983, *American Journal of Botany* 70: 706-711. 1983, *Flora Mesoamericana* 6: 398-400. 1994, *American Journal of Botany* 82(1): 57-63. 1995, *American Journal of Botany* 85(9): 1237-1242. 1998, *Contributions from the United States National Herbarium* 46: 623-627. 2003.

Digitaria Heist. ex Fabr. = *Digitaria* Fabr.,
Gramerium Desv., *Paspalum* L., *Syntherisma*
Walter

Latin *digitus* “a finger.”

Panicoideae, Paniceae, Paspalinae, see *Enumeratio Methodica Plantarum* 207. 1759, *Flora Caroliniana, secundum ...* 76. 1788, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 165, t. 7, f. 1. 1831 and *Contributions from the United States National Herbarium* 46: 443-527. 2003.

Digitaria Haller = *Acicarpa* Raddi, *Digitaria*
Adans., *Digitaria* Heist. ex Fabr., *Digitariella*
De Winter, *Digitariopsis* C.E. Hubb.,
Elytrobalepharum (Steud.) Schltld.,
Elytrobalepharum Steud., *Eriachne* Phil.,
Gramerium Desv., *Leptoloma* Chase,
Sanguinaria Bubani, *Sanguinella* Gleichen,
Syntherisma Walter, *Trichachne* Nees, *Valota*
Adans.

From the Latin *digitus, i* (possibly from *dic-idus* see *dic-is* and *dicere*) “a finger;” referring to the spikes, to the shape of the radiating inflorescence branches; see Albrecht von Haller (1708-1777), *Historia stirpium indigenarum Helvetiae inchoata.* 244. Bernae 1768; Giovanni Semerano, *Le origini della cultura europea.* Dizionario della lingua Latina e di voci moderne. 2(2): 385. Leo S. Olschki Editore, Firenze 1994.

About 200-330 species, cosmopolitan, mainly in tropical and warm temperate regions. Panicoideae, Paniceae, or Panicoideae, Paniceae, Digitariinae, annual or perennial, habitat variable, herbaceous, rhizomatous or stoloniferous, caespitose, erect or decumbent at base and rooting from lower nodes, glabrous nodes, blade rolled in bud, auricles absent, ligule membranous and unfringed, leaves often soft and hairy linear to lanceolate, plants bisexual, extremely variable in inflorescence, slender-fingered inflorescences, digitate inflorescence linear racemose and spicate, spikelets rarely solitary usually paired or ternate, spikelets sessile and pedicellate, 2 florets, upper floret bisexual or perfect, lower floret sterile or staminate or neuter, glumes 1 per spikelet or 2 and very unequal, lower glume tiny or absent, upper glume variable, fertile lemma awnless and tough, when present hidden cleistogenes in the leaf sheaths, palea present, 2 lodicules glabrous and fleshy, 3 stamens, ovary glabrous without the apical appendage, 2 red stigmas, fruit compressed, many weedy species, weeds of pasture plants, cultivated fodder, lawns and/or playing fields, native pasture species, grain crop, staple crop, cereals on infertile soils, eaten like millet, most species in the genus

are still considered good forage grasses, ornamental and attractive when in flower, open habitats, infertile soils, pampas, rainforest, grasslands, weedy ground, sandy beaches, sandy soils, a difficult genus often difficult to recognize, serious taxonomic problems, type *Digitaria sanguinalis* (L.) Scop., see *Species Plantarum* 1: 55. 1753, *Enumeratio Methodica Plantarum* 207. 1759, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Familles des Plantes* 2: 38, 495, 550. 1763, *Neuste Reich. Pl.* 2: 4. 1764, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Flora Caroliniana, secundum ...* 76. 1788, *Agrostografia Brasiliensis* 31, t. 1, f. 4. 1823, *De Graminibus Paniceis* 48, 76. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 20, 85, 87. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 165, t. 7, f. 1. 1831, *A Manual of the Botany of the Northern United States* 611. 1848, *Synopsis Plantarum Glumacearum* 1: 37-38. 1855 [1853], *Linnaea* 26: 533. 1855, *Anales de la Universidad de Chile* 36: 207-208. 1870, *Flora Australiensis: A Description ...* 7: 464. 1878 and *Flora Pyrenaea ...* 4: 256. 1901, *Österreichische Botanische Zeitschrift* 51: 290. 1901, *Proceedings of the Biological Society of Washington* 19(34): 191-192. 1906, *Notulae Systematicae. Herbarium du Museum de Paris* 2: 216. 1912, *Flora of Tropical Africa* 9: 424. 1919, *Hooker's Icones Plantarum* 35: t. 3420. 1940, *Monograph of the Genus Digitaria* 573, 851, 866. 1950, *Bothalia* 7: 467. 1961, *Journal of the Arnold Arboretum* 47(3): 270-272. 1966, *Blumea* 21(1): 1-80. 1973, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Flora of Tropical East Africa* 451-898. 1982, *Taxon* 33: 126-134. 1984, *Brunonia* 6: 131-213. 1984, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Annali di Botanica* 45: 75-102. 1987, *Acta Biologica Cracoviensia, Series Botanica* 28: 65-85. 1986, *Sida* 12(1): 209-222. 1987, *Journal of Cytology and Genetics* 22: 12-22, 161-162. 1987, *Folia Primatologica* 48: 78-120. 1987, *Lagasalia* 15: 130-133. 1988, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Phytologia* 64: 390-398. 1988, *Journal of Cytology and Genetics* 25: 147-148, 322-323. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Cytologia* 56: 437-452. 1991, *Bothalia* 21(2): 163-170. 1991, *Investigatio et Studium Naturae* 12: 48-65. 1992, *Flora Mesoamericana* 6: 365-371. 1994, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Systematic Botany* 19(4): 613-627. 1994, *Sylvia Phillips, Flora of Ethiopia and Eritrea* 7: 245-257. 1995, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Darwiniana* 35(1-4): 29-36. 1998, *Am. J. Bot.* 85: 1266-1272. 1998, *Genera Graminum* 298-300. 1999, *Am. J. Bot.* 87: 412-417. 2000, *Grassland of China* 2000(5): 1-5. 2000, *Am. J. Bot.* 88: 1240-1249, 1988-1992, 1993-2012. 2001, *Darwiniana* 40: 171-190. 2002, *Am. J. Bot.* 89: 829-835. 2002, *Contributions from the United States National Herbarium* 46: 13, 193-213, 230, 242-243, 284, 558, 611-612, 622-623,

634. 2003, *Am. J. Bot.* 90: 796-821. 2003, *Austral. Ecology* 30(1): 79-90. Feb 2005, *Weed Research* 45(1): 64-73. Feb 2005, *Restoration Ecology* 13(1): 49-60. Mar 2005, *Grass and Forage Science* 60(1): 46-58. Mar 2005, Erika L. Geiger & Guy R. McPherson, "Response of semidesert grasslands invaded by nonnative grasses to altered disturbance regimes." *Journal of Biogeography* 32(5): 895-902. May 2005, *Restoration Ecology* 13(2): 413-424. June 2005.

Species

D. sp.

in Guatemala: grama de bermudas, kox, pelo de macho, rixquiaktap, rixquiatap

D. abludens (Roemer & Schultes) Veldkamp (*Digitaria granularis* (Trinius ex Spreng.) Henrard; *Digitaria granularis* (Spreng.) Henrard; *Digitaria pedicellaris* (Trin. ex Hook.f.) Prain; *Digitaria pedicellaris* (Hook.f.) Prain; *Panicum abludens* Roem. & Schult.; *Panicum pedicellare* (Trin. ex Hook.f.) Hack.; *Panicum pedicellare* Hack., nom. illeg., non *Panicum pedicellare* (Trin. ex Hook.f.) Hack.; *Paspalum granulare* Trin. ex Spreng.; *Paspalum pedicellare* Trin. ex Hook.f.; *Paspalum pedicellare* Trinius ex Steudel; *Paspalum pedicellatum* Nees ex Steud.)

Southeast Asia. Annual, slender, upright, leaves linear and hispid, see *Systema Vegetabilium* 2: 457. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 47. 1821, *Grasses N. W. India* 1. 1883, *The Flora of British India* 7: 19. 1896 and *Österreichische Botanische Zeitschrift* 51: 330. 1901, *Bengal Plants* 890. 1903, *Philippine Journal of Science* 1(Suppl.): 4. 268. 1906, *Monograph of the Genus Digitaria* 302, f. 891. 1950, *Blumea* 21(1): 53-55, f. 11d, 12. 1973.

in India: gandu akkaabu hullu

D. abyssinica (Hochst. ex A. Rich.) Stapf (*Dichanthium scalarum* (Schweinf.) Gilliland; *Digitaria abyssinica* var. *scalarum* (Schweinf.) Stapf; *Digitaria ciliaris* Vanderyst, nom. illeg., non *Digitaria ciliaris* (Retz.) Koeler; *Digitaria eichingeri* Mez; *Digitaria hackelii* (Pilg.) Stapf; *Digitaria merkeri* Mez; *Digitaria mutica* Rendle; *Digitaria scalarum* (Schweinf.) Chiov.; *Digitaria scalarum* var. *elgonensis* C.E. Hubb. & Snowden; *Digitaria somalensis* Chiov.; *Digitaria tangaensis* Henrard; *Digitaria velutina* var. *glabrescens* Gilli; *Digitaria vestita* Fig. & De Not.; *Digitaria vestita* subv. *elgonensis* (C.E. Hubb. & Snowden) Henrard; *Digitaria vestita* var. *scalarum* (Schweinf.) Henrard; *Panicum abyssinicum* Hochst. ex A. Rich.; *Panicum hackelii* Pilg., nom. illeg., non *Panicum hackelii* (Arechav.) Arechav.; *Panicum kafuroensis* K. Schum.; *Panicum muticum* A. Rich., nom. illeg., non *Panicum muticum* Forssk.; *Panicum scalarum* Schweinf.; *Panicum scalarum* var. *elatior* Chiov.; *Syntherisma abyssinica* (Hochst. ex A. Rich.) Newbold)

Tropical Africa, Ethiopia, Gabon, Tanzania, Nigeria, South Africa, Uganda, Zimbabwe, Kenya, Sri Lanka, Arabia.

Perennial, erect and decumbent, weak, trailing, creeping at base, mat-forming, ruderal, rhizomatous with wiry slender long rhizomes, roots fibrous, culms branched, leaf blade flat and bluish green, basal sheaths glabrous, ligule membranous, leaves linear to lanceolate, solitary or whorled racemes on a short axis, spikelets glabrous and paired, upper glume and lower lemma glabrous, lower glume a membranous scale, noxious weed species, invasive, pioneer coloniser, useful to control erosion, good soil-binder, a troublesome weed of many crops, economic plant, cultivated pasture, fairly palatable when young, nutritious, common in more humid areas, found in moist shady places and roadsides, mountains, along streams, rich soils and cultivated land, sandy loam, slopes, dry soils and muddy soils, disturbed ground, riverbanks, in clumps on bare roadside bank, clearings, rocky roadside, grassland and wetland, forest edge, abandoned fields, gardens, see *Tentamen Florae Abyssinicae* ... 2: 360, 362. 1850, *Memorie della Reale Accademia delle Scienze di Torino* 2 14: 356, f. 22. 1854, *Bulletin de l'Herbier Boissier* 2, App. 2: 20. 1894, *Annuario del Reale Istituto Botanico di Roma* 6: 166, t. 9. 1896, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 334. 1897 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 119. 1901, *Bulletin of Miscellaneous Information Kew* 1907: 213. 1907, *Journal of the Linnean Society, Botany* 40: 229. 1911, *Resultati scientifici della Missione Stefanini-Paoli nella Somalia italiana. Vol. 1. Le collezioni botaniche...* 1: 225. Firenze 1916, *Bulletin agricole du Congo Belge* 10: 242. 1919, *Flora of Tropical Africa* 9: 459. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 193. 1921, *Torreyana* 24: 8. 1924, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 206, Anhang 60. 1930, *Bulletin of Miscellaneous Information Kew* 1934: 111. 1934, *Blumea* 1(1): 103. 1934, *Monograph of the Genus Digitaria* 3, 670, 785. 1950, *Annalen des Naturhistorischen Museums in Wien* 69: 39. 1966.

in English: couch grass, couch finger grass, African couch, African couch grass, blue couch, blue couch grass, Abyssinian finger grass, Dunn's finger grass, East African finger grass, finger grass

in Somalia: garghuro, houla, domar

in East Africa: chemorut, domaar, domar, houla, ekenyambi, garguro, lumbugu, lumbugu sogule, ombugu, sangari, sanguri, siratet, sirdi, thangari

in South Africa: Dunns-vingergras, kweekvingergras

D. acrotricha (Steud.) Roberty (*Eriochloa fatmensis* (Hochst. & Steud.) Clayton; *Helopus acrotrichus* Steud.; *Panicum fatmense* Hochst. & Steud.)

Africa. See *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Tentamen Florae Abyssinicae* ... 2: 370. 1850, *Synopsis Plantarum Glumacearum* 1: 100. 1854, *Journal*

of the Linnean Society, Botany 7: 226. 1864, *Flora Australiensis: A Description* ... 7: 463. 1878, *Die Pflanzenwelt Ost-Afrikas* C: 100, 102. 1895, *Queensland Agricultural Journal* 1: 234. 1897 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 52: 435. 1907, *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Flora of Tropical Africa* 9: 500, 540. 1919, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 697. 1919, *Bothalia* 1: 260. 1924, *Bulletin de l'Institut Française d'Afrique Noire* 17: 63. 1955, *Kew Bulletin* 30(1): 108. 1975, *J. Cytol. Genet.* 20: 205-206. 1985, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

D. acuminatissima Stapf (*Digitaria acuminatissima* subsp. *inermis* Goetgh.; *Digitaria acuminatissima* var. *conformis* Henrard)

Tropical Africa. Annual, tall, robust, stout, tufted, growing in large patches, rooting at the lower nodes, leaves linear, long stiff racemes digitate to subdigitate, spikelets paired, lower glume a scale, lower lemma acuminate and pubescent, grain lanceolate, provides some grazing, a weed of cultivation, usually in damp areas, riversides, floodplains, heavy grazed lands, riparian flats, see *Flora of Tropical Africa* 9: 441. 1919, *Monograph of the Genus Digitaria* 7-8. 1950, *Kew Bulletin* 29: 517. 1974, *Bulletin du Jardin Botanique National de Belgique* 45(3-4): 418. 1975.

in East Africa: malaaso

D. adamaouensis Van der Zon

Cameroon. See *Wageningen Agricultural University Papers* 92(1-2): 537,327. 1992.

D. adscendens (Kunth) Henrard (*Asprella digitaria* Lam.; *Digitaria adscendens* subsp. *marginata* (Link) Henrard; *Digitaria australis* Willd. ex Trin.; *Digitaria brevifolia* Link; *Digitaria cayoensis* Swallen; *Digitaria chinensis* Hornem.; *Digitaria ciliaris* (Retz.) Koeler; *Digitaria commutata* Schult.f.; *Digitaria fimbriata* Link; *Digitaria henryi* Rendle; *Digitaria inaequale* (Link) Spreng.; *Digitaria marginata* Link; *Digitaria marginata* var. *fimbriata* (Link) Stapf; *Digitaria sanguinalis* (L.) Scop.; *Digitaria sanguinalis* f. *commutata* (Schult.f.) Haines; *Digitaria sanguinalis* var. *marginata* (Link) Fernald; *Panicum adscendens* Kunth; *Panicum brachyphyllum* Steud.; *Panicum brevifolium* (Link) Kunth, nom. illeg., non *Panicum brevifolium* L.; *Panicum commutatum* (Schult.f.) Nees, nom. illeg., non *Panicum commutatum* Schult.; *Panicum fimbriatum* (Link) Kunth; *Panicum glaucescens* Nees, nom. illeg., non *Panicum glaucescens* Kunth; *Panicum henryi* (Rendle) Makino & Nemoto; *Panicum neesii* Kunth; *Panicum ornithopus* Trin. ex Spreng.; *Panicum sanguinale* subvar. *marginatum* (Link) Döll; *Paspalum inaequale* Link; *Paspalum sanguinale* var. *commutatum* (Schult.f.) Haines; *Syntherisma fimbriatum* (Link) Nash; *Syntherisma henryi* (Rendle) Honda, nom. illeg., non *Syntherisma henryi*

(Rendle) Newbold; *Syntherisma henryi* (Rendle) Newbold; *Syntherisma marginatum* (Link) Nash)

North and South America. Annual weed species, branching and spreading, decumbent base, creeping and rooting by runners, prostrate to ascending, forming dense mats, leaf sheaths long papillose-pilose, leaf blades glabrous or sparingly pilose below, flowering shoots ascending, rachis winged, racemes digitate, spikelets narrow ellipsoid, first glume small and scale-like, spreads rapidly, propagation by seed and runners, palatable to livestock, used for fodder and hay, found in moist areas, wayside, stream bed, waste places, near or along roadsides, riverbanks, lawns and cultivated areas, gardens, see *Species Plantarum* 1: 57. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Observationes Botanicae* 4: 16. 1786, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816], *Hortus Regius Botanicus Hafniensis* 8. 1819, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 102-103. 1821, *Linnaea* 7(3): 274. 1824, *Systema Vegetabilium, editio decima sexta* 1: 271. 1825, *Hortus Regius Botanicus Berolinensis* 1: 225-226. 1827, *Révision des Graminées* 1: 32. 1829, *Mantissa* 2: 262. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Avec l'Histoire de l'Académie* VI 3: 201. 1835, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 364, f. 27. 1852, *Synopsis Plantarum Glumacearum* 1: 42. 1853, *Plantae Junghuhnianae* 3: 380. 1854, *Encyclopédie Méthodique, Botanique* 1: 167. 1891, *The Flora of British India* 7: 15. 1896, *Bulletin of the Torrey Botanical Club* 25: 302. 1898 and *Journal of the Linnean Society, Botany* 36(253): 323. 1904, *Flora of Tropical Africa* 9: 440-441. 1919, *Rhodora* 22(258): 103. 1920, *The Botany of Bihar and Orissa* 5: 1007. 1924, *Torreyia* 24: 9. 1924, *Botanical Magazine (Tokyo)* 38: 128. 1924, *Flora of Japan* 1472. 1925, *Blumea* 1(1): 92. 1934, *Journal of the Washington Academy of Sciences* 28(1): 8. 1938, *Acta Phytotaxonomica et Geobotanica* 11: 28. 1942, *Monograph of the Genus Digitaria* 11, 125, 255, 431, 552, 679, 998-999. Leiden 1950, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Bulletin du Jardin Botanique National de Belgique* 39: Suppl. 1327. 1969, *Brittonia* 23(3): 293-324. 1971, *Flora of the Galápagos Islands* 823-892. 1971, *An Annotated Catalogue of the Vascular Plants of West Pakistan and Kashmir* 117. 1972, *Journal of Cytology and Genetics* 18: 58-59, 60-61. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Sida* 12(1): 209-222. 1987, Tsuyoshi Kobayashi and Yoshimichi Hori, "Photosynthesis and water-relation traits of the summer annual C4 grasses, *Eleusine indica* and *Digitaria adscendens*, with contrasting trampling tolerance." *Ecological Research* vol. 15, iss. 2: 165-174. June 2000.

in English: crabgrass, Henry's crabgrass, hairy crabgrass, finger grass

in Mali: sanaounou ya

in India: arisi pillu, chansarieu, hennu akkibu hullu, shikool, takri, takria, tara

in Thailand: yaa plong khaao nok

D. aegyptiaca Willd. (*Digitaria sanguinalis* subsp. *aegyptiaca* (Willd.) Henrard; *Digitaria sanguinalis* var. *aegyptiaca* (Willd.) Maire & Weiller; *Digitaria sanguinalis* var. *aegyptiaca* (Willd.) Abdallah & Sa'ad, nom. illeg., non *Digitaria sanguinalis* var. *aegyptiaca* (Willd.) Maire & Weiller; *Panicum aegyptiacum* Retz., nom. illeg., non *Panicum aegyptiacum* Gouan; *Panicum sanguinale* var. *aegyptiacum* (Willd.) Reichardt)

Africa, Eurasia. See *Observationes Botanicae* 3: 8. 1783, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 9. 1809, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 21: 30. 1871 and *Monograph of the Genus Digitaria* 17, 115. 1950, *Flore de l'Afrique du Nord*: 1: 299. 1952.

D. aequatoriensis (Hitc.) Henrard (*Digitaria aequiglumis* (Hack. & Arechav.) Parodi; *Syntherisma aequatoriensis* Hitc.)

South America. Perennial, caespitose, among bushes, see *Contributions from the United States National Herbarium* 24(8): 426. 1927, *Mededeelingen van 's Rijks-Herbarium* 61: 5. 1930.

D. aequiglumis (Hackel & Arechav.) Parodi (*Deschampsia brasiliensis* (Louis-Marie) Valencia; *Digitaria aequiglumis* var. *laetevirens* (Mez) Henrard; *Digitaria campestris* Henrard; *Digitaria chillanensis* Phil. ex Henrard; *Digitaria laetevirens* Mez; *Digitaria lanuginosa* (Nees) Henrard; *Panicum aequiglume* Hackel & Arechav.; *Panicum aequiglume* var. *aequiglume*; *Panicum debile* Desf.; *Panicum debile* Phil.; *Panicum debile* var. *aequiglume* (Hack. & Arechav.) Hack.; *Panicum ramosum* Arechav., nom. illeg., non *Panicum ramosum* L.; *Panicum tridactylum* Phil.; *Paspalum lanuginosum* Nees; *Paspalum lanuginosum* Willd. ex Steud., nom. illeg., non *Paspalum lanuginosum* Nees; *Paspalum lanuginosum* Nees; *Paspalum tridactylum* Phil.; *Syntherisma aequiglumis* (Hack. & Arechav.) Hitc.)

Southern Brazil, Uruguay, Argentina, Chile. Annual, herbaceous, erect or geniculate, tufted, stoloniferous, sometimes rooting from lower nodes, leaves linear and acuminate, sheath glabrous or hairy, panicle of slender digitate racemes, spikelets in pairs, lower glume absent, second glume and first lemma more or less equal, fertile floret smooth, roadside weed, sandy soils, swampy ground, coastal areas, very similar to *Digitaria ciliaris* (Retz.) Koeler, see *Flora Atlantica* 1: 59. 1798, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 91. 1809, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 63. 1829, *Nomenclator Botanicus. Editio secunda* 2: 271. 1841, *Anales del Museo Nacional de Montevideo* 1: 111, 113, t. 7. 1894, *Anales de la Universidad de Chile* 93: 712-713.

1896 and *Bengal Plants* 1181. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 69. 1904, *Contributions from the United States National Herbarium* 12(6): 210. 1909, *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 261: 30. 1912, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Revista de la Facultad de Agronomía y Veterinaria* 4: 47. 1922, *Rhodora* 30: 242. 1928 [1929], *Mededeelingen van's Rijks-Herbarium* 61: 5. 1930, *Blumea* 1(1): 97. 1934, *Journal of the Faculty of Agriculture of the Hokkaido University* 36: 97. 1934, *Revista Argentina de Agronomía* 8: 128. 1941, *Monograph of the Genus Digitaria* 29, 370. 1950, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 351-366. 1969, *Gayana, Botánica* 44(1-4): 25-32. 1987.

D. aequiglumis (Hackel & Arechav.) Parodi var. *aequiglumis*

South America.

D. aequiglumis (Hackel & Arechav.) Parodi var. *laetevirens* (Mez) Henrard (*Digitaria laetevirens* Mez; *Digitaria lanuginosa* (Nees) Henrard; *Paspalum lanuginosum* Nees; *Paspalus lanuginosus* Nees)

South America. See *Flora Brasiliensis seu Enumeratio Plantarum* 63. 1829 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Mededeelingen van's Rijks-Herbarium* 61: 5. 1930, *Monograph of the Genus Digitaria* 29, 370. 1950.

D. ambigua (Lam. & DC.) Mérat (*Paspalum ambiguum* Lam. & DC.)

Europe. See *Flore Française ... Troisième Édition* 3: 16. 1805.

D. ammophila Hughes (*Digitaria ammophila* var. *macrolepis* Henrard; *Panicum ammophilum* F. Muell., nom. illeg., non *Panicum ammophilum* Steud.; *Panicum divaricatissimum* R. Br. var. *ammophilum* (Trin.) Benth.; *Panicum divaricatissimum* var. *ammophilum* (F. Muell.) Benth.) (from the Greek *ammos* "sand" and *philos* "loving")

South Australia, Western Australia, Queensland, Northern Territory, New South Wales, Victoria. Perennial, tough, grayish pubescent, caespitose, forming erect tussocks, slender culms erect or geniculate, sheath velvety, villous or softly hairy leaves, long and rigid racemes spreading at maturity, spikelets covered with long white silky hairs, first glume minute and ovate, upper glume and sterile lemma densely villous, fertile floret pointed, ornamental when in flower, useful pasture grass, natural mixed pastures, dry regions, sandy soils, sand hills, red soils, drought-resistant, see *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1854-1855: 46. 1855, *Flora Australiensis: A Description ...* 7: 468. 1878 and *Bulletin of Miscellaneous Information Kew* 1923(9): 313. 1923, *Monograph of the Genus Digitaria* 810. 1950.

in English: hairy umbrella grass, silky umbrella grass, spider grass

D. andringitrensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 73: 915. 1926.

D. angolensis Rendle (*Digitaria verrucosa* C.E. Hubb.; *Digitaria yokoensis* Vanderyst; *Panicum angolense* (Rendle) K. Schum.)

Tropical Africa. Annual, loosely tufted, often decumbent, racemes digitate or subdigitate, spikelets in triplets, upper glume and lower lemma hairy, usually in sandy soils, dry edge of swamp, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2(1): 165. 1899 and *Botanischer Jahresbericht* 27: 1. 457. 1901, *Bulletin of Miscellaneous Information Kew* 1928(1): 40. 1928, *Bulletin agricole du Congo Belge* 16: 659, 660. 1963, *Flora of Tropical East Africa* 451-898. 1982.

D. apiculata Stent (*Digitaria maitlandii* Stapf & C.E. Hubb.)

Africa, Swaziland. Weedy, cultivated fields, along trails, see *Bulletin of Miscellaneous Information Kew* 1927: 266. 1927, *Bothalia* 3: 155. 1930, *Bulletin du Jardin Botanique National de Belgique* 32: 127. 1932.

D. arechavaletae Roseng., B.R. Arrill. & Izag. (*Anthaenania hackelii* Arechav.; *Digitaria adusta* var. *hackelii* (Arechav.) Henrard; *Digitaria phaeothrix* var. *hackelii* (Arechav.) Henrard; *Panicum hackelii* (Arechav.) Arechav.; *Syntherisma hackelii* (Arechav.) Chase) (for the Spanish botanist José Arechavaleta y Balpardo, 1838-1912, pharmacist, in 1852 to Uruguay; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 72. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 14. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Uruguay. See *Anales del Museo Nacional de Montevideo* 1: 96, t. 5. 1894, *Anales del Museo de Historia Natural de Montevideo* 1: 555, t. 5. 1897 and *Proceedings of the Biological Society of Washington* 19(34): 191. 1906, *Mededeelingen van's Rijks-Herbarium* 61: 2. 1930, *Monograph of the Genus Digitaria* 563. 1950, *Gramíneas Uruguayas* 307, f. 126. 1970.

D. arenicola (Swallen) Beetle (*Digitaria ciliata* var. *arenicola* (Swallen) R.D. Webster; *Digitaria cognata* var. *arenicola* (Swallen) R. Webster; *Leptoloma arenicola* Swallen; *Leptoloma cognata* var. *arenicola* (Swallen) Gould)

U.S., Texas. Sandy areas, sand hills, see *Elenchus Plantarum Novarum* 6. 1816 and *Proceedings of the Biological Society of Washington* 19: 192. 1906, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 50. 1940, *Contributions from the Texas Research Foundation, Botanical Studies* 1(1): 1. 1950, *Leaflets of Western Botany* 6(8): 162. 1951,

The Southwestern Naturalist 15(3): 391. 1971, *Systematic Botany* 13(4): 594. 1988, *Systematic Botany* 19(4): 613-627. 1994.

in English: sand witch grass, sand crab grass

D. argillacea (A.S. Hitchc. & Chase) Fernald (*Digitaria hirtigluma* Hitchc.; *Digitaria lecardii* (Pilg.) Stapf; *Syntherisma argillacea* A.S. Hitchc. & Chase)

Southern America, Guatemala, Honduras, Nicaragua, U.S., Texas. Annual, herbaceous, erect, forage, invasive, a weed of cultivation, along roadsides and trails, waste places, fallows, see *Contributions from the United States National Herbarium* 18(7): 296. 1917, *Rhodora* 22(258): 104. 1920, *Proceedings of the Biological Society of Washington* 40: 83. 1927, *Willdenowia* 9(1): 68. 1979, *Darwiniana* 40(1-4): 175. 2002.

in English: tropical crab grass

in Nigeria: sialbo

in Senegal: fono ni kafini

D. argillacea (A.S. Hitchc. & Chase) Fernald var. ***argillacea***

Southern America.

D. argillacea (A.S. Hitchc. & Chase) Fernald var. ***nulliseta*** A.S. Vega & Rúgolo

Ecuador. See *Darwiniana* 40(1-4): 175, f. 1. 2002.

D. argyrograpta (Nees) Stapf (Greek *argyros* “silver, silvery” and *graptos* “painted”)

Mozambique, South Africa, Swaziland. Perennial, tufted, rhizomatous, rhizomes knotty, culms branched from the lower nodes, leaf blade flattened or folded, ligule a papery membrane, basal sheath hairy, upright paired racemes, spikelets silky with sharp tips, palatable grass, high grazing value, drought-resistant, a weed in lawns, occurs in semiarid grassland, on stony or heavy soils, in open grassland, in bushveld, disturbed areas.

in English: silver finger grass, small finger grass

in South Africa: silvervingergas, kleinvingergas

D. argyrotricha (Andersson) Chiov. (*Digitaria argyrotricha* (Andersson ex Peters) Chiov.; *Digitaria xanthotricha* auct. non (Hack.) Stapf; *Panicum argyrotrichum* Andersson; *Panicum argyrotrichum* Andersson ex Peters; *Panicum argyrotrichum* var. *tenne* Andersson ex Peters, also spelled *tenu*e)

Tropical Africa, Mozambique, Tanzania, Ghana. Annual, cup-shaped, erect or sprawling, tufted or trailing, geniculately ascending, rooting at lower nodes, leaves linear or lanceolate, inflorescence of digitate racemes, fluffy spikelets in threes, a weed of cultivation, used as a binder, growing in disturbed areas, coastal dunes, sandy soils, sandy coastal sites, see *Naturwissenschaftliche Reise nach Mosambique ...* 548. 1864 and *Resultati Scientifici della*

Missione Stefanini-Paoli nella Somalia Italiana 1: 183. 1916, *Flora of Tropical Africa* 9: 451. 1919.

D. aridicola Napper

Africa. Native pasture species, see *Kirkia* 3: 123. 1963.

D. aristulata (Steudel) Stapf (*Panicum aristulatum* Steud.)

Africa, Mali, Senegal. Rare species, see *Synopsis Plantarum Glumacearum* 1: 42. 1853.

D. atra Luces

Venezuela. Perennial or annual, elegant, caespitose, shortly rhizomatous, lower sheaths persistent at the base, ligule membranous, ternate spikelets, very dark upper florets, membranous glumes, lower glume truncate and reduced or absent, spikelets lack both glumes, lower floret with cartilaginous lemma, see *Journal of the Washington Academy of Sciences* 32(6): 157, 159, f. 4. 1942, Andrea S. Vega & Zulma Rúgolo de Agrasar, “Morphological interpretation of the spikelet in *Digitaria atra* (Poaceae: Panicoideae: Paniceae) and emended generic description.” *Am. J. Bot.* 88: 1670-1674. 2001.

D. badia (Scribn. & Merr.) Fernald (*Panicum badius* Scribn. & Merr.; *Syntherisma badia* (Scribn. & Merr.) Chase) (from the Latin *badius*, *a*, *um* “brown, chestnut-colored”)

U.S., Mexico. See *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 12, f. 3. 1901, *Proceedings of the Biological Society of Washington* 19(34): 191. 1906, *Rhodora* 22: 104. 1920.

D. bailey (Benth.) Hughes (*Panicum baileyi* Benth.)

Australia. See *Flora Australiensis: A Description ...* 7: 471. 1878 and *Bulletin of Miscellaneous Information Kew* 1923(9): 311. 1923.

D. bakeri (Nash) Fernald (*Digitaria gracillima* (Scribn.) Fernald; *Panicum gracillimum* Scribn.; *Syntherisma bakeri* Nash) (for C.H. Baker)

America, U.S. See *Bulletin of the Torrey Botanical Club* 23: 146. 1896, *Bulletin of the Torrey Botanical Club* 25: 296. 1898 and *Rhodora* 22(258): 101-102. 1920.

D. balansae Henr.

Paraguay. See *Mededeelingen van's Rijks-Herbarium* 61: 2. 1930.

D. barbinodis Henr.

Tropical Africa, Mali, Nigeria. Annual, clumped, slender. in Nigeria: ndai, nde

D. benthamiana Henrard (*Digitaria papposa* (R. Br.) P. Beauv.; *Panicum autumnale* F. Muell., nom. illeg., non *Panicum autumnale* Bosc ex Spreng.; *Panicum papposum* var. *leiostachyum* Benth.)

Australia. See *Prodromus Florae Novae Hollandiae* 192. 1810, *Essai d'une Nouvelle Agrostographie* 51, 160. 1812, *Systema Vegetabilium, editio decima sexta* 1: 320. 1825,

Fragmenta Phytographiae Australiae 8: 196. 1874, *Flora Australiensis: A Description ...* 7: 469. 1878 and *Blumea* 1(1): 99. 1934, *Brunonia* 6(2): 131-216. 1983[1984].

D. bicornis (Lam.) Roemer & Schultes (*Digitaria adscendens* subsp. *chrysoblephara* (Figari & De Not.) Henrard; *Digitaria adscendens* subsp. *chrysoblephara* (Fig. & De Not.) R.R. Stewart; *Digitaria adscendens* var. *criniformis* Henrard; *Digitaria adscendens* var. *fimbriata* (Link) Cufod.; *Digitaria barbata* Willd.; *Digitaria barbulata* Desv.; *Digitaria bicornis* (Lam.) Loud.; *Digitaria bicornis* subsp. *gamblei* Henrard; *Digitaria bicornis* subsp. *lamarciana* Henrard; *Digitaria biformis* Willd.; *Digitaria biformis* subsp. *desvauxii* Henrard; *Digitaria biformis* subsp. *willdenowii* Henrard; *Digitaria biformis* Willd. var. *chrysoblephara* (Figari & De Not.) Beetle; *Digitaria biformis* var. *chrysoblepharis* (Fig. & De Not.) Beetle; *Digitaria biformis* var. *biformis*; *Digitaria biformis* var. *chrysoblepharis* (Fig. & De Not.) Beetle; *Digitaria biformis* var. *rachiseta* Bor; *Digitaria chrysoblephara* Figari & De Not.; *Digitaria ciliaris* subsp. *chrysoblephara* (Fig. & De Not.) R.B. Majumdar, nom. illeg., non *Digitaria ciliaris* subsp. *chrysoblephara* (Fig. & De Not.) S.T. Blake; *Digitaria ciliaris* subsp. *chrysoblephara* (Fig. & De Not.) S.T. Blake; *Digitaria ciliaris* var. *chrysoblephara* (Figari & De Not.) R. Stewart; *Digitaria ciliaris* var. *chrysoblepharis* (Fig. & De Not.) Beetle, nom. illeg., non *Digitaria ciliaris* var. *chrysoblephara* (Fig. & De Not.) R.R. Stewart; *Digitaria commutata* Schult.f.; *Digitaria corymbosa* subsp. *marathensis* Henrard; *Digitaria diversiflora* Swallen; *Digitaria fimbriata* Link; *Digitaria heterantha* (Hook.f.) Merr.; *Digitaria marginata* Link var. *fimbriata* (Link) Stapf; *Digitaria queenslandica* Henrard; *Digitaria rottleri* Roem. & Schult.; *Digitaria sanguinalis* f. *barbata* (Willd.) Mez ex Henrard; *Digitaria sanguinalis* f. *commutata* (Schult.f.) Haines; *Digitaria setigera* subsp. *marathensis* (Henrard) Henrard ex Bor; *Panicum adpressum* Willd.; *Panicum aegyptiacum* Retz.; *Panicum aegyptiacum* var. *blepharanthum* (Hack. ex T. Durand & Schinz) Chiov.; *Panicum barbatum* (Willd.) Kunth, nom. illeg., non *Panicum barbatum* Lam.; *Panicum bicorne* (Lam.) Kunth; *Panicum biforme* (Willd.) Kunth; *Panicum ciliare* A. Rich., nom. illeg., non *Panicum ciliare* Retz.; *Panicum commutatum* (Schult.f.) Nees, nom. illeg., non *Panicum commutatum* Schult.; *Panicum fimbriatum* (Link) Kunth; *Panicum glaucescens* Nees, nom. illeg., non *Panicum glaucescens* Kunth; *Panicum neesii* Kunth; *Panicum sanguinale* L. var. *barcaldinense* Domin; *Panicum sanguinale* L. var. *biforme* (Willd.) T. Durand & Schinz; *Panicum sanguinale* var. *blepharanthum* Hack. ex T. Durand & Schinz; *Panicum sanguinale* var. *macrostachyum* Hack. ex T. Durand & Schinz; *Paspalum bicorne* Lam.; *Paspalum bicornis* Lam.; *Paspalum heteranthum* Hook.f.; *Paspalum sanguinale* var. *commutatum* (Schult.f.) Haines; *Syntherisma barbatum* (Willd.) Nash, also spelled *barbata*; *Syntherisma fimbriatum* (Link) Nash)

Tropics and subtropics. Annual, sometimes perennial, flexible, more or less branched, upright to decumbent, geniculate-spreading, diffuse, scrambling, trailing, caespitose, stoloniferous, rooting at nodes, ligule membrane-like, leaves pubescent or hairy or often hispid, inflorescence irregularly whorled, racemes arranged in pairs along a common axis, paired spikelets one subsessile and one pedicelled, first glume minute or absent, second glume ciliate or villous, fertile lemma not hard, weed species, economic plant, fodder, found along roadsides, disturbed places, waste places, drained soils, cultivated grounds, on sandy riverbanks, sandy sites, wet sand, wet riverbed, dry hillsides, open areas, in soybean and corn fields, often confused with *Digitaria ciliaris* (Retz.) Koeler, see *Species Plantarum* 1: 57. 1753, *Observationes Botanicae* 3: 8. 1783, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 4: 193. 1803, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 91-92. 1809, *Systema Vegetabilium* 2: 470-471. 1817, *Linnaea* 7(3): 274. 1824, *Hortus Regius Botanicus Berolinensis* 1: 226. 1827, *Révision des Graminées* 1: 33. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 100. 1829, *Hort. Brit.* 24. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 166. 1831, *Mantissa* 2: 262. 1832, *Tentamen Florae Abyssinicae ...* 2: 360. 1850, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 364, f. 27. 1852, *Conspectus Florae Africae* 5: 762-763. 1894, *The Flora of British India* 7: 15-16. 1896, *Bulletin of the Torrey Botanical Club* 25: 302-303. 1898 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 296. 1908, *Bibliotheca Botanica* 85: 295. 1915, *Flora of Tropical Africa* 9: 440. 1919, *An Enumeration of Philippine Flowering Plants* 1: 54. 1923, *The Botany of Bihar and Orissa* 5: 1007. 1924, *Monograph of the Genus Digitaria* 64, 68, 125, 152, 612, 978-979. 1950, *Webbia* 11: 309, 318, 346. 1955, *Grasses of Burma ...* 299. 1960, *Rhodora* 65(764): 356. 1963, *Proceedings of the Royal Society of Queensland* 81: 12. 1969, *Bulletin of the Botanical Society of Bengal* 25(1-2): 26. 1971, *An Annotated Catalogue of the Vascular Plants of West Pakistan and Kashmir* 117. 1972, *Kew Bulletin* 29(2): 444. 1974, *Phytologia* 48(2): 190. 1981, *Phytologia* 49(1): 38. 1981.

in English: Asian crab grass, Asia crab grass, southern crab grass, tropical crab grass, finger grass

in the Caribbean: zèb fin, herbe fine

in Mexico: cangrejo

in Spanish: horquetilla, falsa pata de gallina, zacate seleya

in El Salvador: zacate seleya

D. blakei Henrard (*Digitaria orbata* Hughes)

Australia. See *Bulletin of Miscellaneous Information Kew* 1923(9): 312. 1923, *Monograph of the Genus Digitaria* 78-79, 895. 1950.

D. bonplandii Henrard (*Digitaria corynotricha* (Hack.) Henrard; *Panicum gerdessii* f. *pleostachya* Hack.)

Brazil. Erect, ascending, see *Österreichische Botanische Zeitschrift* 51: 333, 335. 1901, *Bulletin de l'Herbier Boissier*, sér. 2, 4(3): 271. 1904, *Mededeelingen van 's Rijks-Herbarium* 61: 2. 1930, *Monograph of the Genus Digitaria* 80-82. 1950.

D. brazzae (Franch.) Stapf (*Digitaria lomanensis* Mez; *Digitaria moninensis* Rendle; *Digitaria sulcigluma* Chiov.; *Panicum brazzae* Franch.; *Panicum moninense* (Rendle) Schum.) (for the Italian-born (Castel Gandolfo, Rome) French explorer Count Pierre (Pietro) Paul François Camille Savorgnan de Brazza, 1852-1905 (Dakar, Senegal, French West Africa), colonial administrator who founded the French (Middle) Congo, entered the French naval academy, 1874 became a French citizen, explored Equatorial Africa (he added an area three times the size of France to the French empire in Africa), between 1875 and 1878 this first mission covered 900 miles of inland territory (discovering many plant and animal species unknown in Europe), 1879-82 the French government authorized a second mission, 1880 he reached the Congo River, founded Brazzaville, in 1886 he was named governor general of the French Congo, wrote *Conférences et lettres de P. Savorgnan de Brazza sur ses trois explorations dans l'Ouest africain, de 1875 à 1886*. Paris 1887. See C. de Chavannes, *Avec Brazza. Souvenir de la mission de l'Ouest-Africain*. 1935; Francesco Savorgnan di Brazza, *L'Uomo che donò un Impero*. Vita e opera di Pietro Savorgnan di Brazza. Firenze 1945; Robert de Saint Jean, "Deux témoignages sur les colonies: Las Casas et André Gide." *La Revue hebdomadaire*. 36e année, n 47: 358-364. 19 novembre 1927; Peter Forbath, *The River Congo: The Discovery, Exploration, and Exploitation of the World's Most Dramatic River*. NY, Harper 1977)

Tropical Africa, Namibia, Kalahari. Perennial, tufted to densely tufted, unbranched, hairy nodes, ligule membranous, basal sheaths densely hairy, basal leaves flat and velvety, racemes digitately arranged, hairy spikelets, lower lemma depressed, generally on sandy soils, in open bushveld, woodland, in sour grassland, stony slopes and hill-sides, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 354. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2: 164. 1899 and *Annali di Botanica* 13: 41. 1914, *Flora of Tropical Africa* 9: 447. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 192. 1921.

in English: brown finger grass

in South Africa: bruinvingergras

D. breidoensis Robyns & Van der Veken (*Digitaria leptorhachis* (Pilg.) Stapf; *Panicum leptorhachis* Pilg.)

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 119. 1901,

Flora of Tropical Africa 9: 462. 1919, *Bulletin du Jardin Botanique de l'État* 22: 146. 1952.

D. breedlovei R.W. Pohl & Davidse

Mexico. See *Novon* 2(2): 106, f. 8. 1992.

D. brevifolia Link (*Digitaria adscendens* (Kunth) Henrard; *Digitaria ciliaris* (Retz.) Koeler; *Panicum brachyphyllum* Steud.; *Panicum brevifolium* (Link) Kunth, nom. illeg., non *Panicum brevifolium* L.)

See *Observationes Botanicae* 4: 16. 1786, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816], *Hortus Regius Botanicus Berolinensis* 1: 225. 1827, *Révision des Graminées* 1: 32. 1829, *Synopsis Plantarum Glumacearum* 1: 42. 1853 and *Blumea* 1(1): 92. 1934.

D. breviglumis (Domin) Henrard (*Digitaria diminuta* Hughes; *Digitaria fumida* S.T. Blake; *Panicum breviglume* Domin)

Queensland, New South Wales. Perennial, loosely caespitose, sheath with fine hairs, leaves hairy, spikelets loosely arranged, lower glume minute, upper glume glabrous, sterile lemma glabrous, fertile lemma apiculate and yellowish to black at maturity, in dry woodland, among shrubs, on sandy soils, see *Bulletin of Miscellaneous Information Kew* 1923(9): 312. 1923, *Monograph of the Genus Digitaria* 92. 1950, *Proceedings of the Royal Society of Queensland* 84(5): 62. 1973.

D. brownii (Roemer & Schultes) Hughes (*Digitaria brownii* var. *monostachya* (Benth.) Hughes; *Panicum brownii* Roemer & Schultes, also *brownii*; *Panicum glarae* F. Muell.; *Panicum laniflorum* Nees; *Panicum leucophaeum* Benth., nom. illeg., non *Panicum leucophaeum* Kunth; *Panicum leucophaeum* Kunth var. *monostachyum* Benth.; *Panicum villosum* R. Br., nom. illeg., non *Panicum villosum* Lam.; *Trichachne brownii* (Roem. & Schult.) Henrard) (from the Greek *leukophaes* "white-gleaming," *leukophaeos* "whitish gray, ash-colored") (after the Scottish botanist Robert Brown, 1773-1858, taxonomist, naturalist and plant collector, 1795 took an M.D. at the University of Edinburgh, 1801-1803 circumnavigated Australia on Flinders' voyage, 1811 Fellow of the Royal Society, 1822 Fellow of the Linnean Society and President of that Society (1849-1853), 1827 Keeper of Botany Dept. in the British Museum, London, librarian to Sir Joseph Banks and to the Linnean Society of London, among his many works are *On the Natural Order of Plants Called Proteaceae*. London 1810, *On the Asclepiadeae*. London 1810, *A Brief Account of Microscopical Observations ... on the Particles Contained in the Pollen of Plants*. [The supplemental paper, "Additional Remarks on Active Molecules," appeared in the *Philosophical Magazine* in September 1829] London 1828 and *Prodromus florae Novae Hollandiae et Insulae van-Diemen*. London 1810)

South Australia, Queensland, New South Wales, Victoria, Western Australia, Northern Territory. Perennial, rhizomatous, erect, forming thick tussocks, culms slender and geniculate, base slightly swollen and densely hairy, leaves narrow and flaccid with wavy margins, panicle of digitate and spreading racemes, spikelets in pairs silky-white or purplish, first glume minute, sterile lemma densely hairy, palatable foliage and stems, readily eaten by stock, moderate nutritive value, valuable pasture grass and forage species, attractive when in flower, silvery brown to purple fluffy seed heads that grow on weeping stems, leaves curl and twist as they dry, drought-tolerant, common in mulga and bloodwood communities on sandy and hard red earths, occurs on medium-textured red earths and shallow soils, dry areas, sandy soils, common in upland and lowland areas, can also be found in creek banks, see *Prodromus Florae Novae Hollandiae* 1: 192. 1810, *Systema Vegetabilium* 2: 462. 1817, *London Journal of Botany* 2: 410. 1843, *Linnaea* 25(4): 445. 1853, *Flora Australiensis: A Description ...* 7: 472. 1878 and *Bulletin of Miscellaneous Information Kew* 1923(9): 313. 1923, *Mededeelingen van 's Rijks-Herbarium* 61: 10. 1930.

in English: cotton panic grass, weeping cotton grass, cotton grass

D. brunoana Raimondo

East Africa. Perennial, rhizomatous, leaves triangular, digitate racemes, spikelets in threes, lower glume often absent, upper glume hairy, lower lemma pubescent, on sandy soils, coastal, coastal sand, see *Giornale Botanico Italiano* 122(5-6): 252. 1988[1989].

D. caespitosa Ridl. (*Digitaria caespitosa* Boivin ex A. Camus, nom. illeg., non *Digitaria caespitosa* Ridl.; *Digitaria caespitosa* Boivin ex Baron; *Digitaria longiflora* (Retz.) Pers.; *Paspalum longiflorum* Retz.)

Asia. See *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805 and *The Flora of the Malay Peninsula* 5: 215. 1925, *Bulletin de la Société Botanique de France* 73: 914. 1926, *Blumea* 21: 64. 1973.

D. calcarata Clayton

See *Kew Bulletin* 29(3): 524. 1974.

D. californica (Benth.) Henrard (*Eriachne rigida* Phil.; *Panicum californicum* Benth.; *Panicum friesii* Hack. ex R.E. Fr.; *Panicum insulare* var. *lachnanthum* (Torr.) Kuntze; *Panicum lachnanthum* Torr., nom. illeg., non *Panicum lachnanthum* Hochst.; *Panicum saccharatum* Buckley; *Trichachne californica* (Benth.) Chase; *Trichachne saccharatum* (Buckley) Nash; *Valota saccharata* (Buckley) Chase)

Northern and southern America, U.S., New Mexico, Texas, Arizona, Mexico, Uruguay, Argentina, Bolivia, Peru. Perennial bunchgrass, long-lived, rhizomatous, desert grass, slender, dark bluish green, hard round and succulent stems, smooth purple to green internode, spikelets covered with

white silvery hairs, seeds drop from the branches at maturity, useful grass, rapid growth, highly palatable green forage, frequently overgrazed, tolerates relatively heavy grazing over long periods, forage for livestock and wildlife, common in arid and semiarid grasslands, found on plains and hillsides, disturbed areas, along roadsides, on well-drained sites, semidesert grassland, wooded savannah, very closely related to *Digitaria sellowii* (Müll. Hal.) Henrard, see *The Botany of the Voyage of H.M.S. Sulphur, Under the Command of Captain Sir Edward Belcher ... during the Years 1836-1842*. London 1844[-1846], *Pacif. Railr. Rep.* 7(3): 21. 1855, *Botanische Zeitung. Berlin* 19(43): 315. 1861, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 2. 1866, *Anales de la Universidad de Chile* 36: 208. 1870, *Revisio Generum Plantarum* 3(3): 361. 362. 1898 and *Flora of the Southeastern United States ...* 83. 1903, *Nova Acta Regiae Societatis Scientiarum Upsaliensis* IV 1: 170. 1905, *Proceedings of the Biological Society of Washington* 19(34): 188. 1906, *Journal of the Washington Academy of Sciences* 23(10): 455. 1933, *Blumea* 1(1): 99. 1934, *Monograph of the Genus Digitaria* 109. 1950.

in English: California crab grass, cotton top, California cotton top, Arizona cotton top, cotton grass, Arizona cotton grass

in Spanish: punta blanca, pasto plateado

in Mexico: punta blanca, zacate mano, zacate punta blanca

D. californica (Benth.) Henrard var. ***californica***

Northern and southern America.

D. californica (Benth.) Henrard var. ***villosissima*** Henrard Antilles, Aruba. See *Monograph of the Genus Digitaria* 109. 1950.

D. campestris Henrard (*Digitaria aequiglumis* (Hack. & Arechav.) Parodi)

Asia. See *Anales del Museo Nacional de Montevideo* 1: 113. 1894 and *Revista de la Facultad de Agronomía y Veterinaria* 4: 47. 1922, *Blumea* 1(1): 97. 1934.

D. capitipila Stapf (*Digitaria compressa* Stapf)

Mozambique. See *Flora of Tropical Africa* 9: 445. 1919, *Flora of Tropical East Africa* 451-898. 1982.

D. catamarcensis Rúgolo

Argentina. See *Hickenia* 1(5): 22. 1976.

D. cayoensis Swallen (*Digitaria abortiva* Reeder; *Digitaria adscendens* (Kunth) Henrard; *Digitaria adscendens* Henrard; *Digitaria hirsuta* Swallen; *Digitaria marginata* Link; *Digitaria sanguinalis* subsp. *ciliaris* (Retz.) Arcang.; *Digitaria sanguinalis* var. *marginata* (Link) Fernald; *Panicum adscendens* Kunth; *Panicum linkianum* Kunth; *Panicum sanguinale* subsp. *marginatum* (Link) Thell.; *Panicum sanguinale* subvar. *marginatum* (Link) Döll; *Panicum sanguinale*

var. *ciliare* (Retz.) Vasey; *Syntherisma marginatum* (Link) Nash)

British Honduras, Mexico, Belize, Cayo. Annual, caespitose, branched, glabrous, leaves linear, pilose spikelets, on sandy areas, sandy fields, rocky stream beds, open areas, savannah, see *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Observationes Botanicae* 4: 16. 1786, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816], *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 102. 1821, *Révision des Graminées* 1: 33. 1829, *Flora Brasiliensis* 2(2): 133. 1877, *Compendio della Flora Italiana* 762. Dec 1883, U.S. Department of Agriculture. Division of Botany. Bulletin no. 8 22. 1889 and *North American Flora* 17(2): 154. 1912, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 699. 1919, *Rhodora* 22(258): 103. 1920, *Journal of the Washington Academy of Sciences* 23(10): 455. 1933, *Blumea* 1(1): 92. 1934, *Journal of the Washington Academy of Sciences* 28(1): 8-9. 1938, *Annals of the Missouri Botanical Garden* 30(2): 172. 1943, *Journal of the Arnold Arboretum* 29: 291, t. 2. 1948, *Blumea* 21: 32. 1973.

D. chacoensis (Parodi) Henrard (*Digitaria phaeothrix* (Trin.) Parodi; *Digitaria phaeothrix* var. *chacoensis* Parodi)

Argentina. See *Species Graminum* 1: t. 91. 1828 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 19. 1928, *Monograph of the Genus Digitaria* 560, 562. 1950.

D. chaseae Henrard

Brazil. See *Monograph of the Genus Digitaria* 118-119, 883. 1950.

D. ciliaris (Retz.) Koeler (*Asprella digitaria* Lam.; *Digitaria abortiva* Reeder; *Digitaria adscendens* Henrard; *Digitaria adscendens* (Kunth) Henrard; *Digitaria adscendens* subsp. *adscendens*; *Digitaria adscendens* subsp. *chrysoblephara* (Fig. & De Not.) Henrard; *Digitaria adscendens* subsp. *marginata* (Link) Henrard; *Digitaria adscendens* subsp. *nubica* (Stapf) Henrard; *Digitaria adscendens* var. *criniformis* Henrard; *Digitaria adscendens* var. *fimbriata* (Link) Cufod.; *Digitaria adscendens* var. *pes-avis* (Büse) Henrard; *Digitaria adscendens* var. *rachiseta* Henrard; *Digitaria adscendens* var. *typica* Henrard; *Digitaria bififormis* Willd.; *Digitaria brevifolia* Link; *Digitaria chrysoblephara* Fig. & De Not.; *Digitaria ciliaris* (Retz.) Pers., nom. illeg., non *Digitaria ciliaris* (Retz.) Koeler; *Digitaria ciliaris* Vanderyst, nom. illeg., non *Digitaria ciliaris* (Retz.) Koeler; *Digitaria ciliaris* subsp. *chrysoblephara* (Fig. & De Not.) S.T. Blake; *Digitaria ciliaris* subsp. *marginata* (Link) S.K. Jain & Doli Das; *Digitaria ciliaris* subsp. *nubica* (Stapf) S.T. Blake; *Digitaria ciliaris* var. *chrysoblephara* (Fig. & De Not.) R.R. Stewart; *Digitaria ciliaris* var. *criniformis* (Henrard) R.R. Stewart; *Digitaria ciliaris* var. *criniformis* (Link) R.R. Stewart; *Digitaria ciliaris* var. *criniformis* (Henrard) R.B. Majumdar; *Digitaria ciliaris* var. *fimbriata* (Link) S.K. Jain & Doli Das; *Digitaria ciliaris* var.

rhachiseta (Henrard) A.S. Vega & Rúgolo; *Digitaria fimbriata* Link; *Digitaria henryi* Rendle; *Digitaria inaequale* (Link) Spreng.; *Digitaria marginata* Link; *Digitaria marginata* var. *ciliaris* (Retz.) Hook.f. ex Ridl.; *Digitaria marginata* var. *fimbriata* (Link) Stapf; *Digitaria marginata* var. *linkii* Stapf; *Digitaria marginata* var. *nubica* Stapf; *Digitaria nuda* subsp. *senegalensis* Henrard; *Digitaria pes-avis* Büse; *Digitaria sanguinalis* (L.) Scop.; *Digitaria sanguinalis* sensu Ekm. in part, non (L.) Scop.; *Digitaria sanguinalis* f. *ciliaris* (Retz.) Hook.f. ex Haines; *Digitaria sanguinalis* subsp. *ciliaris* (Retz.) Arcang.; *Digitaria sanguinalis* subsp. *ciliaris* (Retz.) Domin; *Digitaria sanguinalis* var. *ciliaris* (Retz.) Parl.; *Digitaria sanguinalis* var. *fimbriata* (Link) Stapf ex Merr.; *Digitaria sanguinalis* var. *marginata* (Link) Fern.; *Digitaria sanguinalis* var. *rhachiseta* (Henr.) Boivin; *Digitaria sasakii* (Honda) Tuyama; *Digitaria tarapacana* Phil.; *Digitaria timorensis* (Kunth) Bal.; *Milium ciliare* (Retz.) Moench; *Milium ciliatum* Muhl., nom. illeg., non *Milium ciliare* (Retz.) Moench; *Panicum adscendens* Kunth; *Panicum aegyptiacum* Retz.; *Panicum aegyptiacum* var. *blepharanthum* (Hack. ex T. Durand & Schinz) Chiov.; *Panicum ascendens* Hemsl.; *Panicum bifforme* (Willd.) Kunth; *Panicum brachyphyllum* Steud.; *Panicum brevifolium* (Link) Kunth, nom. illeg., non *Panicum brevifolium* L.; *Panicum ciliare* Retz.; *Panicum ciliare* A. Rich., nom. illeg., non *Panicum ciliare* Retz.; *Panicum fimbriatum* (Link) Kunth; *Panicum fimbriatum* (Link) J. Presl, nom. illeg., non *Panicum fimbriatum* (Link) Kunth; *Panicum henryi* (Rendle) Makino & Nemoto; *Panicum inaequale* (Link) E. Fourn., nom. illeg., non *Panicum inaequale* F. Muell.; *Panicum inaequale* E. Fourn. ex Hemsl.; *Panicum linkianum* Kunth; *Panicum marginellum* Schrad.; *Panicum ornithopus* Trin. ex Spreng.; *Panicum pes-avis* (Büse) Hook.f. ex Koord.; *Panicum sanguinale* L.; *Panicum sanguinale* subsp. *marginatum* (Link) Thell.; *Panicum sanguinale* subvar. *marginatum* (Link) Döll; *Panicum sanguinale* var. *bifforme* (Willd.) Hack. ex T. Durand & Schinz; *Panicum sanguinale* var. *blepharanthum* Hack. ex T. Durand & Schinz; *Panicum sanguinale* var. *ciliare* (Retz.) St.-Amans, nom. illeg., non *Panicum sanguinale* var. *ciliare* St.-Amans; *Panicum sanguinale* var. *ciliare* (Retz.) Vasey; *Panicum sanguinale* var. *ciliare* St.-Amans; *Panicum sanguinale* var. *fimbriatum* (Link) Usteri; *Panicum sanguinale* var. *macrostachyum* Hack. ex T. Durand & Schinz; *Panicum timorense* Kunth; *Paspalum ciliare* (Retz.) DC.; *Paspalum inaequale* Link; *Paspalum sanguinale* (L.) Lam.; *Paspalum sanguinale* var. *ciliare* (Retz.) Hook.f.; *Sanguinaria ciliaris* (Retz.) Bubani; *Spartina pubera* Hassk.; *Syntherisma ciliare* (Retz.) Schrad.; *Syntherisma ciliaris* (Retz.) Schrad.; *Syntherisma fimbriatum* (Link) Nash; *Syntherisma henryi* (Rendle) Newbold; *Syntherisma henryi* (Rendle) Honda, nom. illeg., non *Syntherisma henryi* (Rendle) Newbold; *Syntherisma marginata* (Link) Nash; *Syntherisma marginatum* (Link) Nash; *Syntherisma sanguinalis* subsp. *ciliaris*

(Retz.) Masam. & Yanagih.; *Syntherisma sanguinalis* var. *ciliaris* (Retz.) Honda; *Syntherisma sasakii* Honda)

Pantropical. Annual, vigorous, hairy, spreading or trailing stems, geniculately ascending, erect or decumbent at base and rooting from lower nodes, branching culms, tufted, sheath keeled and pilose, ligule membranous and truncate, leaves oblong-lanceolate acute and hispid or glabrous or sparsely pilose, erect inflorescences, slender and digitate or subdigitate racemes, green-grayish or purplish spikelets paired and lanceolate, fertile floret grayish or slightly purplish, lower glume nerveless and very small or absent, second glume villous, lower lemma hairy, grains used as a famine food, economic plant, a variable and polymorphic species widely naturalized, forage species, good green fodder, best fed after flowering, quite palatable, good pasture, good hay, for silage used only after flowering, a common bad weed of crops, a weed of maize and rice in the tropics, occasional weed in roadbed, useful for erosion control, grows on poor soils, lawn, weedy places, open habitats, along trails, sandy soils and loams, rocky soil along river margin, in sand behind beach, field borders, disturbed areas and waste places, open savannah, coarse sand, alluvial plains, ditches, very similar to *Digitaria sanguinalis* (L.) Scopoli, see *Species Plantarum* 1: 57. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Observationes Botanicae* 3: 8. 1783, *Observationes Botanicae* 4: 16. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Methodus Plantas Horti Botanici ...* 66. 1802, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Syn. Pl.* 1: 85. 1805, *Flora Germanica* 1: 160. 1806, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 92. 1809, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816], *Descriptio uberior Graminum* 77. 1817, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 102-103. 1821, *Flora Agenaise* 25. 1821, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 83. 1821, *Systema Vegetabilium, editio decima sexta* 1: 271. 1825, *Hortus Regius Botanicus Berolinensis* 1: 225-226. 1827, *Révision des Graminées* 1: 32-33. 1829, *Reliquiae Haenkeanae* 1(4-5): 298. 1830, *Enum. Pl.* 1: 83. 1833, *Linnaea* 12(4): 428. 1838, *Catalogus Plantarum in Horto Botanico Bogoriensi Culturarum Alter* 18. 1844, *Flora italiana, ossia descrizione delle piante ...* 1: 126. 1848, *Tentamen Florae Abyssinicae ...* 2: 360. 1850, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 364, f. 27. 1852, *Synopsis Plantarum Glumacearum* 1: 42. 1853, *Plantae Junghuhnianae* 3: 380. 1854, *Flora Brasiliensis* 2(2): 133. 1877, *Compendio della Flora Italiana* 762. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 485, 490. 1885, *Mexicanas Plantas* 2: 17. 1886, *U.S. Department of Agriculture. Division of Botany. Bulletin no. 8* 22. 1889, *Journal de Botanique (Morot)* 4(7): 138. 1890, *Encyclopédie Méthodique, Botanique* 1: 167. 1891, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 80. 1891,

Conspectus Florae Africae 5: 762-763. 1894, *The Flora of British India* 7: 15. 1896, *Bulletin of the Torrey Botanical Club* 25: 302. 1898 and *Flora Pyrenaea ...* 4: 257. 1901, *Journal of the Linnean Society, Botany* 36(253): 323. 1904, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 50: 455. 1905, *Annuario del Reale Istituto Botanico di Roma* 8(3): 296. 1908, *Exkursionsflora von Java ...* 1: 128. 1911, *North American Flora* 17(2): 154. 1912, *Bulletin agricole du Congo Belge* 10: 242. 1919, *Flora of Tropical Africa* 9: 440-441. 1919, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 699. 1919, *Rhodora* 22(258): 103. 1920, *An Enumeration of Philippine Flowering Plants* 1: 55. 1923, *Torreya* 24: 9. 1924, *The Botany of Bihar and Orissa* 5: 1008. 1924, *Botanical Magazine (Tokyo)* 38: 120, 128. 1924, *Flora of Japan* 1472. 1925, *The Flora of the Malay Peninsula* 5: 214. 1925, *Botanical Magazine* 39: 41. 1925, *Blumea* 1(1): 92. 1934, *Preslia* 13-15: 47. 1935, *Transactions of the Natural History Society of Taiwan* 31: 327. 1941, *Journal of Japanese Botany* 18: 13. 1942, *Journal of the Arnold Arboretum* 29: 291, t. 2. 1948, *Monograph of the Genus Digitaria* 11, 125, 255, 431, 552, 831, 998. 1950, *Grasses of Ceylon* 150. 1956, *Grasses of Burma ...* 198-299. 1960, *Bulletin du Jardin Botanique National de Belgique* 39: Suppl. 1327. 1969, *Proceedings of the Royal Society of Queensland* 81: 12. 1969, *Biologia* 16: 23. 1970, *Bulletin of the Botanical Society of Bengal* 25(1-2): 76. 1971, *Blumea* 21: 32. 1973, *Indian Forester* 99(9): 572. 1973, *Annot. Cat. Vasc. Pl. W. Pakistan & Kashmir* 29(2): 444. 1974, *Kew Bulletin* 29(2): 444. 1974, *Journal of Geobotany; or the Hokuriku Journal of Botany* 23(2): 48. Kanazawa, Japan 1975, *Journal of Geobotany; or the Hokuriku Journal of Botany* 23(3): 74. 1976, *N.Z. DSIR Bull.* 219: 166. 1977, *Phytologia* 43(1): 105. 1979.

in English: finger grass, tropical finger grass, Henry's crab grass, wild crab grass, hairy crab grass, crab grass, smooth crab grass, tropical crab grass, large crab grass, southern crab grass, summer grass, bird's acha, bamboo grass

in Spanish: gramilla

in the Caribbean: zèb fin, herbe fine

in Mexico: cangrejo, zacate pangola

in Guinea: axeretet, ityit

in Senegal: bar basyan

in Sierra Leone: sáána vòònu, sáána vòònu ya

in South Africa: tropiese vingergras

in Yoruba: eéran

in Hawaii: kukaepua'a

in Niue: saulangi

in India: akkaabu hullu, arotaro, bara takria, chamarien, charmara, chhinke, chikkari, dinohi, dobra, dubra, fakri, fakria, farw, hen, hennu akkaabu hullu, hombaale hullu, kabdai, karsih, kawai, khurash, koli kalamhullu, korkol jodi, kurad, makar jali, makur jalee, mandiya, modhan,

mothi-kabbal, mothi-kabbal takri, raha, rirga, sahri, sanna-kki hullu, sehri, shangali gaddi, shikaol, shikar, shimpagyan hullu, shimpigyanhullu, sikka, siuri, suka, takri, takriya, tara, taro, thakhriya, thapashi hullu, tikhria

in Indonesia: jampang jemprak, jelamparam, suket ceker ayam

in Malaysia: caker ayam

in the Philippines: baludyangan, saka-saka

in Sri Lanka: akki pul, arisi pul, guru tana

in Thailand: ya plong khao nok, ya-plongkhaonok, yah tin nok

in Vietnam: túc hình leo

D. ciliaris var. **rhachiseta** (Henrard) A.S. Vega & Rúgolo (*Digitaria adscendens* var. *rhachiseta* Henrard; *Digitaria sanguinalis* var. *rhachiseta* (Henrard) B. Boivin)

Tropics. See *Flora Carniolica, Editio Secunda* 1: 52. 1771 and *Monograph of the Genus Digitaria* 11, 999. 1950, *Phytologia* 43(1): 105. 1979.

D. clavitricha R.W. Pohl

Panama. See *Novon* 2(2): 108. 1992.

D. coenicola (F. Muell.) Hughes (*Leptoloma coenicola* (F. Muell.) Chase; *Panicum coeniculum* F. Muell.)

South Australia, Queensland, New South Wales, Victoria, Western Australia, Northern Territory. Perennial, tufted, forming erect tussocks, culms erect or geniculate, base swollen and densely hairy, sheaths woolly to pubescent, leaves densely grayish pubescent with velvety hairs, racemes not branched, racemes spreading at maturity, hairy spikelets paired and linear-lanceolate, economic plant, ornamental when in flower, alluvial soils, dry areas, red sandy clay loams and clay loams, grassland, dense tall shrubland, valuable pasture grass, palatable and nutritious, see *Transactions of Proceedings of the Royal Society of Victoria* 1: 45. 1855 and *Proceedings of the Biological Society of Washington* 19(34): 192. 1906, *Bulletin of Miscellaneous Information Kew* 1923(9): 313. 1923, *Contributions from the New South Wales National Herbarium* 1(6): 328-329. 1950 [1951].

in English: spider grass, finger panic grass, umbrella grass

D. cognata (Schult.) Pilg. (*Digitaria cognata* subsp. *cognata*; *Leptoloma cognatum* (Schult.) Chase, also spelled *cognata*; *Panicum autumnale* Bosc ex Spreng.; *Panicum cognatum* Schult.; *Panicum divergens* Muhl.; *Panicum divergens* Muhl. ex Elliott, nom. illeg., non *Panicum divergens* Kunth; *Panicum fragile* Kunth; *Panicum nudum* Walter)

Northern America, New Mexico, U.S., Florida. Perennial, caespitose, leaf blades wrinkled along the margins, inflorescence open and diffuse, single terminal spikelet at the tip of each branch, stigma purple to red, forage, most frequently found on prairie soils, sandy areas, dunes, turf, dry

sandy soil near rivers, shallow rocky soil, see *Flora Caroliniana, secundum ...* 73. 1788, *Catalogus Plantarum Americae Septentrionalis* 9. Lancaster 1813, *A Sketch of the Botany of South-Carolina and Georgia* 1: 130. 1816, *Mantissa* 2: 235. 1824, *Systema Vegetabilium, editio decima sexta* 1: 320. 1825, *Révision des Graminées* 1: 36. 1829, *Department of Agriculture. Botanical Division. Bulletin* 8: 35. 1889 and *Proceedings of the Biological Society of Washington* 19(34): 192. 1906, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 50. 1940, *Contributions from the Texas Research Foundation, Botanical Studies* 1(1): 1. 1950, *Systematic Botany* 13(4): 594. 1988, *Sida* 13(1): 120. 1988, *Systematic Botany* 19(4): 613-627. 1994.

in English: Carolina crab grass, fall witch grass, fall witch weed, diffuse crab grass

in Mexico: zacate escobilla, zacate escobillo

D. cognata (Schult.) Pilg. var. **cognata** (*Leptoloma cognata* (Schult.) Chase; *Leptoloma cognatum* (J.A. Schultes) Chase; *Panicum autumnale* Bosc ex Spreng.; *Panicum autumnale* var. *pubiflorum* Vasey; *Panicum cognatum* Schult.; *Panicum divergens* Muhl. ex Elliott, nom. illeg., non *Panicum divergens* Kunth; *Panicum fragile* Kunth; *Panicum nudum* Walter)

U.S. Found in in very dry sandy soils, see *Department of Agriculture. Botanical Division. Bulletin* 8: 35. 1889 and *Proceedings of the Biological Society of Washington* 19(34): 192. 1906.

D. cognata (Schult.) Pilg. var. **pubiflora** Vasey ex L.H. Dewey (*Digitaria cognata* subsp. *pubiflora* (Vasey ex L.H. Dewey) Wipff; *Digitaria cognata* subsp. *pubiflora* (Vasey) Wipff; *Panicum autumnale* var. *pubiflorum* Vasey ex L.H. Dewey; *Panicum autumnale* var. *pubiflorum* Vasey)

U.S. See *Department of Agriculture. Botanical Division. Bulletin* 8: 35. 1889 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 50. 1940, *Sida* 13(1): 120. 1988.

D. collina (Balansa) Henrard (*Digitaria collina* Salisb.; *Panicum collina* Balansa)

Asia. See *Blumea* 1(1): 97. 1934.

D. comifera Pilg. (*Digitaria lunularis* Henrard)

Africa, Burundi. Annual, tufted, racemes subdigitate, lower floret dark, upper glume hairy, lower lemma glabrous or hairy, usually in sandy places, along roadsides, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 708. 1942, *Monograph of the Genus Digitaria* 414. 1950, *Flora of Tropical East Africa* 451-898. 1982.

D. compacta (Roth ex Roemer & Schultes) Veldkamp (*Axonopus corymbosus* (Roxb.) Schult.; *Digitaria bifasciculata* (Trin.) Henrard; *Digitaria compacta* (Roth ex Roem. & Schult.) A. Camus; *Digitaria corymbosa* (Roxb.) Merr.; *Digitaria corymbosa* subsp. *roxburghiana* Henrard; *Digitaria cruciata* var. *esculenta* Bor; *Digitaria fascicularis* Link; *Panicum bifasciculatum* Trin.; *Panicum corymbosum*

Roxb.; *Panicum fasciculare* Trin.; *Panicum sanguinale* var. *corymbosum* (Roxb.) Kuntze; *Panicum schraderi* Kunth; *Paspalum compactum* Roth ex Roem. & Schult.; *Paspalum corymbosum* (Roxb.) Kunth; *Reimaria fascicularis* Link; *Syntherisma corymbosa* (Roxb.) Hosok.)

Asia, India, Philippines, Taiwan. Annual, smooth, ascending from a creeping and geniculate base, robust, glabrous, sometimes rooting from the lower nodes, sheaths glabrous, leaf blades lanceolate-acuminate, ligule truncate and membrane-like, inflorescence spiciform spreading at the top of the culm, small spikelets, lower floret sterile, upper floret bisexual, lower glume very small or absent, very sensitive to drought, weed of maize, excellent fodder grass much relished by cattle, grain eaten as a cereal, flour used to make bread or porridge, found on cut lawns, poor and rich soils, see *Hortus Bengalensis, or a Catalogue ...* 7. 1814, *Systema Vegetabilium* 2: 316. 1817, *Flora Indica; or Descriptions ...* 1: 295. 1820, *Mantissa* 2: 177. 1824, *De Graminibus Paniceis* 76. 1826, *Hortus Regius Botanicus Berolinensis* 1: 223. 1827, *Révision des Graminées* 1: 25, 32. 1829, *Hortus Regius Botanicus Berolinensis* 2: 203. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 199. 1834, *Révision des Graminées* 2: 785. 1891 and *An Enumeration of Philippine Flowering Plants* 1: 53. 1922, *Flore Générale de l'Indo-Chine* 7(3-4): 399, f. 8. 1922, *Mededeelingen van's Rijks-Herbarium* 61: 10. 1930, *J. Soc. Trop. Agric. Taiwan* 6: 664. 1934, *Transactions of the Natural History Society of Taiwan* 24: 199. 1934, *Monograph of the Genus Digitaria* 943. 1950, *Webbia* 11: 353. 1955, *Blumea* 21(1): 71. 1973.

in India: charmara, kabdai, kewai, sehri, siuri

D. conjugata (Roxb.) Schult. (*Panicum conjugatum* Roxb.) Asia. See *Hortus Bengalensis, or a Catalogue ...* 82. 1814, *Mantissa* 2: 262. 1824.

D. connivens (Trin.) Henr. (*Digitaria ciliaris* (Retz.) Koeler; *Panicum connivens* Trin.)

Brazil. Perennial, littoral, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 206. 1834 and *Mededeelingen van's Rijks-Herbarium* 61: 6. 1930, *Flora Illustrata Catarinense* 1(Gram.): 443-906. 1982, *Sida* 14(2): 145-167. 1990.

D. corynotricha (Hack.) Henrard (*Digitaria bonplandii* Henrard; *Digitaria connivens* (Trin.) Henrard; *Digitaria gerdesii* (Hack.) Parodi; *Digitaria gerdesii* var. *boliviensis* Henrard; *Digitaria mattogrossensis* (Pilg.) Henrard; *Digitaria singularis* Mez; *Panicum adustum* var. *mattogrossensis* Pilg.; *Panicum corynotrichum* Hack.)

South America. Erect, ascending, sandy places, sandy clay, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 101.

1829 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 131. July 1901, *Österreichische Botanische Zeitschrift* 51: 335. Sep 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 7: 57. 1923, *Mededeelingen van's Rijks-Herbarium* 61: 1-2, 6. 1930, *Monograph of the Genus Digitaria* 80-82, 287. 1950.

D. costaricensis R.W. Pohl

Costa Rica. Perennial, very villous, decumbent, branched, velvety to villous leaves, inflorescence erect, vulnerable species, found in roadside ditch, along roadsides, on dry margins of a swamp, dry marshy areas, irrigation ditches, see *Fieldiana, Botany* 38(2): 5, f. 1. 1976, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Sida* 14(2): 145-167. 1990, *Flora Mesoamericana* 6: 365-371. 1994.

D. cruciata (Nees ex Steudel) A. Camus (also *crociata*) (*Digitaria cruciata* Nees ex Hook.; *Panicum cruciatum* Nees ex Steud.; *Panicum sanguinale* var. *cruciatum* (Nees ex Steud.) Hook.f.; *Paspalum sanguinale* (L.) Lam. var. *cruciatum* (Nees ex Steudel) Hook.f.; *Paspalum sanguinale* var. *cruciatum* Hook.f.)

India, China, Southeast Asia, Asia temperate and tropical. Annual, prostrate to decumbent, erect or geniculately spreading, branched culms rooting at the nodes, leaf blade linear, sheath base pubescent, ligule lacerate, leaves glabrous or pubescent, racemes paired or subwhorled, 2 florets, spikelets appressed and imbricate, lower floret sterile, upper floret bisexual, branch rachis flattened, spikelets oblong-elliptic, minute first glume triangular, second glume rounded, lemma of lower floret glabrous, small millet, economic plant, grain eaten as a cereal, flour used to make bread or porridge, fodder grass much relished by cattle, weed of wheat and maize, wild and cultivated, field borders, disturbed habitats, gardens, roadsides, see *Synopsis Plantarum Glumacearum* 1: 39. 1855 [1853 or 1854], *The Flora of British India* 7: 14. 1896 and *Flore Générale de l'Indo-Chine* 7(3-4): 399, f. 8. 1922, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 378. 1926, *Webbia* 11: 353. 1955, *Grasses of Burma ...* 300. 1960, *Blumea* 21(1): 72. 1973.

in India: kewari, raishan, sheri

D. ctenantha (F. Muell.) Hughes (*Digitaria robusta* Hughes; *Panicum ctenanthum* F. Muell.) (from the Greek *kteis*, *ktenos* "a comb" and *anthos* "flower")

South Australia, Queensland, Western Australia, Northern Territory. Annual or perennial, erect or geniculate, leaves pubescent, racemes spreading at maturity, spikelets paired and lanceolate, found in sandy soils, near beach and sandy shores, see *Fragmenta Phytographiae Australiae* 8: 153. 1874 and *Bulletin of Miscellaneous Information Kew* 1923(3): 310. 1923.

in English: comb finger grass

D. curtigluma Hitchc.

Panama. Good forage, see *Proceedings of the Biological Society of Washington* 40: 84. 1927.

D. curvinervis (Hack.) Fernald. (*Panicum curvinerve* Hack.; *Syntherisma curvinervis* (Hack.) Hitchc. & Chase)

America. See *Österreichische Botanische Zeitschrift* 51: 335. 1901, *Contributions from the United States National Herbarium* 18(7): 295. 1917, *Rhodora* 22(258): 103. 1920.

D. cuyabensis (Trin.) Parodi (*Digitaria corynotricha* (Hack.) Henrard; *Digitaria cuiabensis* (Trin.) Parodi; *Digitaria lanuginosa* (Nees) Henrard; *Digitaria lanuginosa* var. *cuyabensis* (Trin.) Henrard; *Digitaria malacophylla* (Hitchc.) Henrard; *Panicum cuyabense* Steud.; *Panicum cuyabense* Trin. ex Steud.; *Panicum cuyabense* Trin.; *Paspalum lanuginosus* Nees; *Syntherisma cuyabensis* (Trin.) Hitchc.; *Syntherisma malacophylla* Hitchc.)

South America. Stoloniferous, sandy areas, see *Flora Brasiliensis seu Enumeratio Plantarum* 63. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 206. 1834, *Nomenclator Botanicus. Editio secunda* 2: 255. 1841, *Synopsis Plantarum Glumacearum* 1: 42. 1854 and *Österreichische Botanische Zeitschrift* 51: 335. Sep 1901, *Contributions from the United States National Herbarium* 22(6): 466, 468, f. 79. 1922, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 378. 1926, *Mededeelingen van 's Rijks-Herbarium* 61: 2, 4-5. 1930, *Monograph of the Genus Digitaria* 164. 1950, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 351-366. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 473-487. 1970, *Darwiniana* 19: 65-166. 1974, *Flora Illustrada Catarinense* 1(Gram.): 443-906. 1982, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

D. dactylon (L.) Scop. (*Cynodon dactylon* (L.) Pers.; *Panicum dactylon* L.)

Europe. See *Species Plantarum* 1: 58. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1772, *Syn. Pl.* 1: 85. 1805.

D. debilis (Desf.) Willd. (*Digitaria bangweolensis* Pilg.; *Digitaria debilis* var. *gigantea* Rendle; *Digitaria debilis* var. *reimarioides* Henrard; *Digitaria decipiens* Fig. & De Not.; *Digitaria sanguinalis* var. *debilis* (Desf.) Prain; *Digitaria variabilis* Fig. & De Not.; *Panicum debile* Desf.; *Panicum debile* var. *reimarioides* (Andersson) Hack. ex T. Durand & Schinz; *Panicum reimarioides* Andersson; *Paspalum debile* Poir., nom. illeg., non *Paspalum debile* Michx.; *Paspalum sanguinale* (L.) Lam.; *Paspalum sanguinale* var. *debile* Hook.f.; *Syntherisma debilis* (Desf.) Skeels)

Europe, Africa, Benin, Madagascar, Ethiopia, Ghana, Kenya, Namibia. Annual or perennial, prostrate at base, geniculately ascending, mat-forming, decumbent and

rooting from the lower nodes, racemes subdigitate, spikelets solitary or paired, upper glume acuminate, seeds may be eaten, grains used as a famine food, lawn grass, excellent fodder grass, cut for hay, good pasture, moist habitats, damp sites, shallow pools, wet meadows, moist depressions, damp places, banks, sandy soils, rocky places near rivers or streams, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Flora Atlantica* 1: 59. 1798, *Encyclopédie Méthodique, Botanique* 5: 34. 1804, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 91. 1809, *Memorie della Reale Accademia delle Scienze di Torino* II 14: 357, 359. 1854, *Naturwissenschaftliche Reise nach Mossambique ...* 547. 1864, *Conspectus Florae Africae* 5: 746. 1894, *The Flora of British India* 7: 16. 1896, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2: 163. 1899 and *Bengal Plants* 1181. 1903, *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 199. 1915, *Annaes de Sciencias Naturaes* 19: 69. Oporto 1934, *Monograph of the Genus Digitaria* 168. 1950.

in English: finger grass

in Gambia: findi bano, ja-jeo

in Mali: bana iddu, fonio ladde, musa ladel, narkata, séremé ladde, subcoré

in Nigeria: dalaliliho, damaliiliho, damaliiliyel, eeran, harkiyaa, harkiiyaa, iburun daajii, ilulo egogu ezu, karantin dawaki, yayaghol

in Senegal: kombardiagandal, niarh-e-pic, rukh

in Sierra Leone: agbel, ndewi, ndiwi, pouve, pouvei

in Upper Volta: banguéré, gossolo, taramanté, tetemtie-haga, tetumté

in Yoruba: eeran

D. decipiens Fig. & De Not. (*Digitaria debilis* (Desf.) Willd.)

Africa. See *Flora Atlantica* 1: 59. 1798, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 91. 1809, *Memorie della Reale Accademia delle Scienze di Torino* II 14: 359. 1854.

D. decumbens Stent (*Digitaria cuyabensis* (Trin.) Parodi; *Digitaria eriantha* Steud.; *Digitaria eriantha* subsp. *pentzii* (Stent) Kok; *Digitaria pentzii* Stent; *Digitaria pentzii* var. *minor* Stent) (after Carolus Johannes Pentz, author of *De Diosma*. Praeside Carolo Petro Thunberg dissertationes academicae. Upsaliae [1797]; see Carl Peter Thunberg (1743-1828), *Prodromus plantarum Capensium: quas in promontorio Bonae Spei Africes, annis 1772-1775 collegit ...* Upsaliae 1800)

South Africa, Transvaal. Perennial, creeping, stoloniferous, much-branched, decumbent, often rooting from the lower nodes, glabrous spikelets, no viable seeds, spreads very rapidly by stolons, grows vigorously when established, weed species, cultivated fodder under irrigation, low in

protein, susceptible to frosts, tolerates heavy grazing, resists trampling, will survive droughts, can withstand temporary flooding, produces good pasture when grown with legumes, found in grassy areas, fertile well-drained soils, black soil, wet sand, heavy clays, see *Flora* 12: 468. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 206. 1834 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 378. 1926, *Bothalia* 3(1): 147-148, 150. 1930, *Flore de l'Afrique du Nord*: 1: 301. 1952, *Bothalia* 13(3-4): 457. 1981.

in English: crabgrass, Pangola grass, Pangola digit grass

in Mexico: zacate pangola

D. delicatula Stapf

Tropical Africa. Annual, erect, good fodder.

in Nigeria: iburun daji

D. diagonalis (Nees) Stapf (*Digitaria diagonalis* var. *hirsuta* (De Wild. & T. Durand) Troupin; *Digitaria trichopodia* Stent; *Digitaria uniglumis* (Hochst. ex A. Rich.) Stapf; *Digitaria uniglumis* var. *major* Stapf; *Panicum diagonale* Nees; *Panicum diagonale* var. *robustius* Hack. ex T. Durand & Schinz; *Panicum uniglume* Hochst. ex A. Rich.; *Syntherisma uniglumis* (Hochst. ex A. Rich.) Newbold)

Tropical Africa, Angola, Benin, Kenya, Nigeria, Swaziland, eastern Zimbabwe, South Africa, Namibia, Tanzania. Perennial, tufted, robust, variable, erect and unbranched, bulbous base, basal sheaths break up when old, ligule membranous, spreading inflorescence, ascending solitary or whorled racemes, dark brown to black spikelets, white bristles between the spikelets, lower glume usually absent, seeds eaten by small birds, thatching grass, low grazing value, leaves reasonably hard and unpalatable, sometimes reported as an excellent grazing and fodder grass, usually grows on slopes in sandy soil, grass savannah, vleis, in open grassland and open patches in bushveld, in moist areas, sour grassland, moist habitats and damp places, slopes, miombo woodlands, see *Florae Africae Australioris Illustrationes Monographicae* 23. 1841, *Tentamen Florae Abyssinicae* ... 2: 370. 1850, *Conspectus Florae Africae* 5: 747. 1894, *Flora Capensis* 7: 381. 1898 and *Flora of Tropical Africa* 9: 476. 1919, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(93): 266. 1928, *Bothalia* 3: 155. 1930.

in English: brown-seed finger grass

in Nigeria: geene sabbere

in South Africa: bruinsaadvingergras

D. didactyla Willd. (*Digitaria caespitosa* Boivin ex A. Camus, nom. illeg., non *Digitaria caespitosa* Ridl.; *Digitaria camusiana* Henrard; *Digitaria didactyla* var. *decalvata* Henrard; *Digitaria didactyla* var. *peninsula* (Ohwi) Henrard, also spelled *penisula*; *Digitaria peninsulae* Ohwi;

Digitaria swazilandensis Stent; *Digitaria truncata* Henrard ex A. Camus; *Panicum bicornis* Sieber ex Steud., nom. illeg., non *Panicum bicornis* (Lam.) Kunth; *Panicum commutatum* var. *didactylum* (Willd.) Nees; *Panicum didactylum* (Willd.) Kunth; *Panicum gracile* Nees, nom. illeg., non *Panicum gracile* R. Br.; *Panicum gracile* Nees ex Spreng., nom. illeg., non *Panicum gracile* R. Br.; *Panicum sanguinale* var. *bicornis* Drake; *Panicum sanguinale* var. *brevispicatum* Maiden; *Panicum subtile* R. Br. ex Nees; *Paspalum sanguinale* var. *didactylum* (Willd.) A. Camus)

Mascarene Islands, Queensland, New South Wales, Asia. Perennial, slender, low growing, short, erect, stoloniferous and rhizomatous, shallow rooted, often forming a dense turf, branching and rooting from the nodes, glaucous to bluish green, ligule truncate, lowermost sheath pilose or hirsute, inflorescence stiffly erect, racemes digitate, spikelets appressed and paired on unequal pedicels, lower glume minute or absent, upper glume white hairy, sterile lemma finely hairy, fertile floret yellowish and smooth, ornamental, cultivated, palatable, native pasture species, provides useful grazing for steers, a pioneer of cleared land, survives droughts and temporary flooding, grown as a lawn grass, playing fields, putting greens, turf grass, good ground cover, excellent value for erosion control, spreads rapidly by runners, invades speargrass pastures, forms a dense mat which resists the invasion of most weeds, grows in damp sandy soils, disturbed sites and swamps, best on sandy loams and loams, see *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 91. 1809, *Systema Vegetabilium, editio decima sexta* 4(2): 33. 1827, *Flora* 11: 300. 1828, *Révision des Graminées* 1: 33. 1829, *Florae Africae Australioris Illustrationes Monographicae* 26. 1841, *Synopsis Plantarum Glumacearum* 1: 41. 1853, *Flore de la Polynésie Française* 250. 1893 and *Agricultural Gazette of New South Wales* 21: 789. 1910, *Notulae Systematicae. Herbarium du Muséum de Paris* 2: 223. 1912, *Bulletin de la Société Botanique de France* 73: 914. 1926, *Bothalia* 3: 150. 1930, *Blumea* 1(1): 111. 1934, *Bulletin of the Tokyo Science Museum* 18: 7. 1947, *Monograph of the Genus Digitaria* 112, 182, 987, 991. 1950, *Grasses of Burma* ... 300. 1960, *Blumea* 21: 45. 1973.

in English: blue finger grass, blue grass, blue couch grass, bluegrass, blue couch, Mauritius blue, blue Serangoon grass, green Serangoon grass, Queensland blue couch, Queensland blue, Swazi grass, Swaziland fingergrass

in French: petit gazon

in Rodrigues Islands: gazon

in South Africa: skaapvingergras, Swazigras, Swazilandvingergras

D. diffusa Vickery

Queensland, New South Wales. Perennial, slender, delicate, decumbent, branching and rooting at lower nodes, sheath pilose, spikelets mostly paired white or purple, lower glume

nerveless, fertile floret dark to black, in open woodland, see *Contributions from the New South Wales National Herbarium* 3(2): 84. 1961.

D. dioica Killeen & Rúgolo

Bolivia. See T.J. Killeen & Z.E. Rúgolo de Agrasar, "Taxonomy and reproductive biology of *Digitaria dioica* and *D. neesiana* (Gramineae: Paniceae)." *Systematic Botany* 17(4): 594, 603. 1992.

D. distans (Chase) Fernald (*Digitaria leucites* (Trin.) Henrard; *Panicum leucites* Trin.; *Syntherisma distans* Chase)

Bolivia. Good forage, see *De Graminibus Paniceis* 85. 1826 and *Contributions from the United States National Herbarium* 17(3): 220. 1913, *Rhodora* 22(258): 103. 1920, *Mededeelingen van's Rijks-Herbarium* 61: 6. 1930.

D. divaricata Henrard (*Digitaria velutina* (Forssk.) P. Beauv.; *Phalaris velutina* Forssk.)

East Africa. See *Flora Aegyptiaco-Arabica* 17. 1775, *Essai d'une Nouvelle Agrostographie* 51, 173. 1812 and *Blumea* 1(1): 96. 1934.

D. divaricatissima (R. Br.) Hughes (*Digitaria divaricatissima* var. *dasyantha* Henrard; *Digitaria macractinia* (Benth.) Hughes; *Digitaria macractinia* subsp. *leichhardtiana* Henrard; *Digitaria macractinia* subsp. *muelleriana* Henrard; *Digitaria macractinia* var. *nudiflora* Henrard; *Leptoloma divaricatissima* (R. Br.) Chase; *Leptoloma macractinia* (Benth.) Chase; *Panicum divaricatissimum* R. Br.; *Panicum divaricatissimum* var. *glaberrimum* Benth.; *Panicum divaricatissimum* var. *macractinia* (Benth.) Domin; *Panicum divaricatissimum* var. *normale* Benth.; *Panicum macractinium* Benth.)

South Australia, Queensland, New South Wales, Victoria. Perennial, erect, tufted, forming slender tussock, very sparse root system with very few roots, base swollen and densely hairy, leaves hairy, sheaths more or less hairy, culms erect or geniculate, rigid racemes spreading at maturity, greenish paired spikelets, pasture species, ornamental when in flower, growing in sandy soils, woodland, slopes, on dark gray sandy loam, see *Prodromus Florae Novae Hollandiae* 192. 1810, *Flora Australiensis: A Description ...* 7: 468. 1878 and *Proceedings of the Biological Society of Washington* 19(34): 192. 1906, *Bibliotheca Botanica* 85: 293. 1915, *Bulletin of Miscellaneous Information Kew* 1923(9): 314. 1923, *Monograph of the Genus Digitaria* 199, 830-831, 865. 1950.

in English: umbrella grass, spider panic grass, spider grass, stargrass, cotton panic

D. diversiflora Swallen (*Digitaria bicornis* (Lam.) Roem. & Schult.; *Paspalum bicorne* Lam.)

Jamaica. Along roadsides, open areas, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Système Vegetabilium* 2: 470. 1817 and *Rhodora* 65(764): 356.

1963, *Manual of the Vascular Plants of Texas* i-xv, 1-1881. 1970, *Blumea* 21(1): 1-80. 1973, *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Flora of Puerto Rico and Adjacent Islands: A Systematic Synopsis* 1-342. 1982, *Flora Novo-Galiciana* 14: 1-436. 1983.

D. diversinervis (Nees) Stapf (*Digitaria albomarginata* Stent; *Digitaria diversinervis* (Nees) Stapf var. *woodiana* Henrard; *Panicum diversinerve* Nees; *Panicum diversinervis* Nees) (after the Natal (born in England, Notts) botanist John Medley Wood, 1827-1915 (d. Durban), 1852 to Durban, from 1882 to 1903 Curator of the Natal Botanic Garden and Director of the Natal Herbarium (1903-1913), his writings include *An Analytical Key to the Natural Orders and Genera of Natal Indigenous Plants*. Durban 1888, "Poisonous plants." *Natal Mercury*. 1894, "Indigenous food plants." *Rep. Colon. Herb. (Natal)* 1900: 12-24. 1901, *Handbook to the Flora of Natal*. Cape Town 1907 and *Catalogue of Plants in Natal Botanic Gardens*. Durban 1890, with Maurice Smethurst Evans (1854-1920) wrote *Natal Plants*. Durban 1898-1912; see Alain White & Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 753. 1994; J.H. Barnhart, *Biographical notes upon botanists*. 3: 516. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 442. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 379-381. Cape Town 1981; Ernest Nelves & William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 338-340. [1931]; Gordon Douglas Rowley, *A History of Succulent Plants*. Mill Valley, California 1997; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Africa, South Africa, Swaziland. Perennial, rhizomatous and stoloniferous, mat-forming, rhizomes knotty, racemes digitate, lower glume a scale, useful grass, ornamental, lawn, usually growing in sandy coastal areas, see *Florae Africae Australioris Illustrationes Monographicae* 23. 1841, *Flora Capensis* 7: 379. 1898 and *Kew Bulletin* 1934: 110. 1934, *Monograph of the Genus Digitaria* 201. 1950.

in English: Richmond finger grass, Richmond grass, Wynberg finger grass, Richmond and Wynberg finger grass

in South Africa: Richmond-vingergras, Wynberg-vingergras

D. doellii Mez

Brazil. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Monograph of the Genus Digitaria* 202. 1950.

D. dolichophylla Henrard (*Digitaria filiformis* var. *dolichophylla* (Henrard) Wipff)

U.S., Florida. See *Descriptio Graminum in Gallia et Germania* 26. 1802 and *Blumea* 1(1): 94. 1934, *Phytologia* 80(5): 348. 1996.

in English: Caribbean crab grass

D. dunensis Goetgh.

Africa. See *Bulletin du Jardin Botanique National de Belgique* 45(3-4): 416. 1975.

D. dusenii Chase ex Renv. (*Digitaria purpurea* Swallen)

Brazil. Perennial, caespitose, pilose leaf blades filiform to linear, spikelets shortly hairy, similar to *Digitaria phaeothrix* (Trin.) Parodi, *Digitaria neesiana* Henr. and *Digitaria enodis* (Hack.) Parodi, see *Contributions from the United States National Herbarium* 29(6): 265-266. 1948 [1949], *Kew Bulletin* 42: 923. 1987.

D. effusa Veldkamp

Vietnam. See *Blumea* 44(2): 447. 1999.

D. eggersii (Hack.) Henr. (*Panicum eggersii* Hack.; *Trichachne eggersii* (Hack.) Henr. *Valota eggersii* (Hack.) A.S. Hitchc. & Chase)

U.S. Subtropical dry forest, clay loam, in exposed rock crevices, see *Österreichische Botanische Zeitschrift* 51: 292. 1901, *Contributions from the United States National Herbarium* 18(7): 292. 1917, *Mededeelingen van 's Rijks-Herbarium* 61: 10. 1930, *Blumea* 1(1): 97. 1934, *Flora of the Netherlands Antilles* 1: 121-203. 1963.

in English: Egger's crab grass

D. ekmanii Hitchc. (*Digitaria ekmanii* var. *curtisii* Henrard)

America, Cuba. See *Manual of the Grasses of the West Indies* 176. 1936, *Monograph of the Genus Digitaria* 213, 696, 939. 1950.

D. endlichii Mez (*Digitaria milanijana* (Rendle) Stapf; *Panicum milanijanum* Rendle)

Tanzania. See *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Flora of Tropical Africa* 9: 430. 1919, *Blumea* 1(1): 93. 1934.

D. enodis (Hack.) Parodi (*Digitaria enodis* (Hack. ex Arechav.) Parodi; *Paspalum enode* Hack. ex Arechav.)

Argentina. Glabrous leaf blades filiform and involute, growing on hard soil, similar to *Digitaria phaeothrix* (Trin.) Parodi, *Digitaria neesiana* Henr. and *Digitaria dusenii* Chase ex Renv., see *Anales del Museo Nacional de Montevideo* 1: 75. 1894 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 378. 1926, *Darwiniana* 19: 65-166. 1974.

D. eriantha Steudel (*Digitaria bechuanica* (Stent) Henr.; *Digitaria commutata* subsp. *eriantha* (Steud.) Maire; *Digitaria decumbens* Stent; *Digitaria dinteri* Henr.; *Digitaria eriantha* subsp. *eriantha*; *Digitaria eriantha* subsp. *pentzii* (Stent) Kok; *Digitaria eriantha* subsp. *stolonifera* (Stapf) Kok; *Digitaria eriantha* subsp. *transvaalensis* Kok;

Digitaria eriantha var. *stolonifera* Stapf; *Digitaria geniculata* Stent; *Digitaria glauca* sensu Stent, non A. Camus; *Digitaria glauca* A. Camus; *Digitaria glauca* var. *bechuanica* Stent; *Digitaria pentzii* Stent; *Digitaria pentzii* var. *minor* Stent; *Digitaria pentzii* Stent var. *stolonifera* (Stapf) Henr.; *Digitaria polevansii* Stent; *Digitaria seriata* Stapf; *Digitaria setivalva* Stent; *Digitaria smutsii* Stent; *Digitaria stentiana* Henr.; *Digitaria valida* Stent; *Digitaria valida* Stent var. *glauca* Stent; *Syntherisma eriantha* (Steud.) Newbold (*Digitaria smutsii* Stent dedicated to the South African amateur botanist Jan Christiaan Smuts, 1870-1950 (d. near Irene, Transvaal), philosopher, plant collector; see Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 326-327. 1981; Gilbert Westacott Reynolds, *The Aloes of South Africa*. Balkema, Rotterdam 1982) (*Digitaria stentiana* Henr. named for the South African botanist Sydney Margaret Stent, 1875-1942 (d. Pretoria), agrostologist; see M. Gunn & L.E. Codd, *Botanical Exploration of Southern Africa*. 334. 1981)

Subtropical southern Africa, Tanzania, Angola, Mozambique, Namibia, Swaziland, South Africa, Zimbabwe. Perennial, robust, stout, densely tufted, erect or slightly curved, ascending, extremely variable, branched or unbranched, dense basal leaf cover, forming small clumps, forming open turf, often rooting from the lower nodes, stoloniferous with strong-growing stolons, knotty compact rhizomes, basal leaf sheaths hairy and silky, ligule membranous, upper area of the leaves smooth and glabrous, inflorescence racemose, densely packed erect racemes arranged digitately, lower glume a membranous scale sheath, usually retain its seed in the inflorescence, economic plant, weed species, aggressive, slow to establish, excellent hay, high feeding value, cultivated fodder grass, very high grazing value, excellent pasture grass, highly digestible, highly palatable when young and vigorous, useful for erosion control and slope conservation, improves soil structure, tolerates drought well, withstands trampling and overgrazing, it does not produce viable seeds, often found on sandy soils, in shelter of shrubs, rocky or stony ground, in sandy and stony soil, shale banks, on damp soil, plains and hills, along vleis, along rivers, granite sands, poor soils or fertile clay, on wet sands or heavy clays, woodland savannah, highveld, among boulders, closely related to *Digitaria milanijana* (Rendle) Stapf, taxonomy of *Digitaria eriantha* is complicated, see *Flora* 12: 468. 1829, *Flora Capensis* 7: 375. 1898 and *Bothalia* 1: 268, t. 5-6. 1924, *Bulletin de la Société Botanique de France* 73: 914. 1927, *Bothalia* 3: 147-152, 154. 1930, *Blumea* 1(1): 97. 1934, *Monograph of the Genus Digitaria* 295, 544, 975. 1950, *Flore de l'Afrique du Nord*: 1: 301. 1952, *Bothalia* 13(3-4): 357, 457. 1981.

in English: finger grass, common finger grass, Smuts finger grass, woolly finger grass, Pongola finger grass, Pangola finger grass, digit grass, Pangola digit grass, pongola grass, Pangola grass, Pangola river grass

in Spanish: pangola, pasto pangola

in Southern Africa: bloukruisgras, gewone vingergras, hoenderspoortgras, kleinvingergras, kortbeenhoenderspoortgras, kruisgras, Smuts vingergras, vingergras, wolliges fingergras, wolvingergras; isikonko (Zulu); mangole maseka (Tswana); moeane (Sotho); mmoyane (South Sotho)

D. eriogona (Roth) G.K. Link (*Digitaria stricta* Roth)

Africa. See *Systema Vegetabilium* 2: 474. 1817, *Hortus Regius Botanicus Berolinensis* 1: 227. 1827.

D. eriostachya Mez (*Digitaria eriostachya* Peter, nom. illeg., non *Digitaria eriostachya* Mez; *Digitaria fallens* Parodi)

Southern America, Argentina, Brazil, Paraguay. Perennial, found in moist areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Feddes Repertorium, Beiheft* 40(1): 216. 1931.

D. evrardii Van der Veken

Zaire. Annual, herbaceous, erect, see *Bulletin du Jardin Botanique de l'État* 28(1): 88. 1958.

D. exasperata Henrard (*Digitaria milanijana* (Rendle) Stapf; *Panicum milanijanum* Rendle)

Zanzibar. See *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Flora of Tropical Africa* 9: 430. 1919, *Monograph of the Genus Digitaria* 236. 1950.

D. exilis (Kippist) Stapf (*Panicum exile* (Kippist) Stapf ex A. Chev.; *Paspalum exile* Kippist; *Syntherisma exilis* (Kippist) Newbold)

West Africa. Annual, delicate, free-tillering, erect, inflorescence aterminal digitate panicle, slender sessile racemes, spikelets acute, sterile lower floret, bisexual fertile upper floret, staple crop, tolerant of poor sandy soils, economic plant, host of some mycotoxins, human and animal food, extremely nutritious cereal, a very important crop, can be utilized in ways similar to rice, straw used as forage, cereals on infertile soils, fodder, only cultivated, can be cut for silage, very small grains used as a famine food, resembles mustard seeds, ground into flour and cooked as a gruel, in Nigeria a flour from acha and baobab grains used together, grains used for brewing beer, grows well on poor sandy and infertile soils, adapted to wetter areas, commonly grown along rivers, often confused with and considered by many authors as a synonym of *Digitaria iburua* Stapf, see *Proceedings of the Linnean Society of London* 1: 157. 1842 and *Bulletin of Miscellaneous Information Kew* 1915: 385. 1915, *Exploration Botanique de l'Afrique Occidentale Française ...* 1: 726. 1920, National Research Council, Board on Science and Technology for International Development, *Lost Crops of Africa, Vol I: Grains*. National Academy Press, Washington, D.C. 1996, *Journal of Biogeography* vol. 27, iss. 5: 1049-1064. Sep 2000, *International Journal of Food Science and Technology* 38(4):

403-410. Apr 2003, *Journal of Food Quality* vol. 27, iss. 6: 506-510, 511-517. Dec 2004.

in English: hungry rice, hungry millet, hungry koos, fonio millet, fundi millet, fundi, black fonio, white fonio, acha grass, white acha, mouldy acha

in French: fogno, fundi, petit mil, millet digitale, fonio

Local names: fundi, acha, achna, fonio

in Spanish: digitaria

in Dahomey: podgi

in Gambia: dibong, findi, findi ba, findo, monyimonyo, mormor

in Ghana: atcha, epich, kabega

in Guinea: kpende, kpendo, fayaon, foigné, foignié, foinye, fonde, fongo, foni, fonie, fonié, fonio, fonyo, founde, foundé, foundiouné, founié, funde, fundé, fundenyó, fundi-une, funie, kpendo, pende, podé, podegui, podégui, pounié, punie, tau

in Guinea-Bissau: bofinhè, fènhe, findo, fonio, fundo, rote, uante, udote, urote, urrote

in Ivory Coast: fini, pohim, pohin, pom

in Mali: faïné, fani, fanom, feni, findi, fingi, fini, fodio, foni, fonio, foundé, fundé, funi, po, pon, serémé, tau

in Niger: entaya, fingi, fira, fodio, fonio, foyo

in Nigeria: acca, accà, accaa, accàà, accari, acha, akang, anea, beenci, beentsu, burma, bwrik, cà, caba, chehel, chung, cikai, cun, derè, difera, firo, fulubihi, gashish, giya, gumba, imeru, impuke, intaya, ira, irya, kashá, kasha, kolimo, kreb, kunu, mili, ndat, ntiya, num-mwi, omburu, osikapa acha, pocho, pyeng, salla, san, sarembe, siring, suung, suuru, sùurù, syinang, tuk, tuwo, wete, weté, zor

in Senegal: dekolé, ebonay, ebonyaie, eboniyaie, efoleb, efoled, fide, find, findi, fonden, fonden ibala, fonden ife-syax, fonden i swegt, fonden i swget, fonio, fono, geponden, n'dendue, n'dengue, ndengue, sanglé, séréné

in Sierra Leone: ampindi, apende, apende pafunf, apende palel, apende pa siragbe, apeni, apote, fani, fonde, fondiba, fonye, funa, funde, funde na, fundenyi, fundi, fundili, funi, funye, kaene, kpendo, kputi, millet, mpende, paene, peni, penile, pote, siragbe, yele fui

in Togo: figm, kafea, nfon, pigim, tschamma

in Upper Volta: apendi, fan fan kanpene, fen, ffan, fo, foni, pue, pwe, sereme

in Yoruba: sùurù

D. eylesii C.E. Hubb. (named for the British botanist Frederick Eyles, 1864-1937 (d. Salisbury, Rhodesia), plant collector in Rhodesia, his writings include "A record of plants collected in Southern Rhodesia: Arranged on Engler's System." *Trans. R. Soc. S. Africa*. 273-564. 1916, "A preliminary list of the plants of Southern Rhodesia." *S. Afr. J. Sci.* 8: 277-321. 1912 and "Constituents of the flora of Southern

Rhodesia." *S. Afr. J. Sci.* 17: 181-184. 1921; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 238. 1994)

Africa, Namibia, South Africa. Perennial, tufted, unbranched culms, creeping rhizomes, leaf sheath round, ligule a short membranes, leaf blades flattened, racemes in pairs or threes, dark spikelets, bristles between the spikelets absent, useful for erosion control, hydrophyte, growing in wet areas, vleis, riverbanks, see *Bulletin of Miscellaneous Information Kew* 1926: 246. 1926, *Bulletin du Jardin Botanique National de Belgique* 45(3-4): 401. 1975.

in English: Eyles finger grass

in South Africa: swartsaadtweevingergras

D. fallens Parodi (*Digitaria eriostachya* Mez)

Argentina. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 375, f. 2. 1926.

D. fibrosa (Hack.) Stapf (*Panicum fibrosum* Hack.)

Africa, Asia. See *Österreichische Botanische Zeitschrift* 51(9): 330. 1901, *Bulletin of Miscellaneous Information Kew* 1912(10): 428. 1912.

D. fibrosa (Hack.) Stapf var. ***yunnanensis*** (Henrard) L. Liou (*Digitaria yunnanensis* Henrard)

China. See *Bulletin of Miscellaneous Information Kew* 1912(10): 428. 1912, *Monograph of the Genus Digitaria* 804. 1950, *Flora Reipublicae Popularis Sinicae* 10(1): 314, t. 98: 5-9. 1990.

D. fiebrigii (Hack.) A. Camus (*Digitaria hirtigluma* Hitchc.; *Panicum fiebrigii* Hack.; *Syntherisma fiebrigii* (Hack.) Chase)

America. See *Repertorium Specierum Novarum Regni Vegetabilis* 8: 46. 1910, *Journal of the Washington Academy of Sciences* 13(20): 436. 1923, *Bulletin du Muséum d'Histoire Naturelle* 30: 106. 1924, *Proceedings of the Biological Society of Washington* 40: 83. 1927.

D. filiculmis (Nees ex Miq.) Ohwi (*Digitaria longiflora* (Retz.) Pers.; *Digitaria violascens* Link; *Paspalum filiculme* Nees ex Miq.)

China. See *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805, *Hortus Regius Botanicus Berolinensis* 1: 229. 1827, *Prolusio florum japonicae Amstelodami* [Amsterdam], Traiecti ad Rhenum [Utrecht] [1865] 1866-1867 and *Acta Phytotaxonomica et Geobotanica* 11: 32. 1942.

D. filiformis (L.) Koeler (*Digitaria filiformis* (L.) Muhl., nom. illeg., non *Digitaria filiformis* (L.) Koeler; *Digitaria laeviglumis* Fern.; *Digitaria villosa* (Walter) Pers.; *Panicum filiforme* Garcke, nom. illeg., non *Panicum filiforme* L.; *Panicum filiforme* L.; *Paspalum filiforme* (L.) Fluegge, nom. illeg., non *Paspalum filiforme* Sw.; *Paspalum furcatum*

Fluegge var. *filiforme* (L.) Döll; *Syntherisma filiformis* (L.) Nash; *Syntherisma villosa* Walter)

Brazil, Bolivia, Mexico, Argentina, Paraguay, northern and southern America, U.S., Florida. Perennial or annual, erect, caespitose, rachis of the raceme slender and scarcely winged, lower blades commonly pilose, low forage value, inhabits waste places and crops, open areas, along roadsides, dry soils, gravelly or sandy open soil, see *Species Plantarum* 57. 1753, *Flora Caroliniana, secundum ...* 77. 1788, *Descriptio Graminum in Gallia et Germania* 26. 1802, *Syn. Pl.* 1: 85. 1805, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 139. 1810, *Descriptio uberior Graminum* 131. 1817, *Flora von Deutschland* edition 2 360. 1851, *Flora Brasiliensis* 2(2): 104. 1877, *Bulletin of the Torrey Botanical Club* 22(10): 420. 1895, *Flora Analytica d'Italia* 1: 51. 1896 and *Rhodora* 22(258): 102. 1920, *Biological Series, Catholic University of America* 11: 130. Washington, D.C. 1915-1943, *Rhodora* 36(421): 19. 1934, *Phytologia* 80(5): 348. 1996.

in English: slender crab grass, crab grass, American slender grass, finger grass, slender finger grass, shaggy crab grass

D. filiformis (L.) Koeler var. ***dolichophylla*** (Henrard) Wipff (*Digitaria dolichophylla* Henrard)

Cuba, northern and southern America, U.S., Florida. Perennial, threatened species, see *Descriptio Graminum in Gallia et Germania* 26. 1802 and *Blumea* 1(1): 94. 1934, *Phytologia* 80(5): 348. 1996.

in English: Caribbean crab grass

D. filiformis (L.) Koeler var. ***filiformis***

America. See *Descriptio Graminum in Gallia et Germania* 26. 1802.

D. filiformis (L.) Koeler var. ***laeviglumis*** (Fernald) Wipff (*Digitaria laeviglumis* Fernald)

America. See *Rhodora* 22(258): 102. 1920, *Phytologia* 80(5): 348. 1996.

D. flaccida Stapf (*Digitaria elegans* Stapf; *Digitaria melinoides* Mez; *Digitaria nitens* Rendle; *Digitaria stolzii* Mez; *Panicum nitens* (Rendle) K. Schum.; *Panicum nitens* Merr., nom. illeg., non *Panicum nitens* (Rendle) K. Schum.) (after the German missionary Adolf Ferdinand Stolz, 1871-1917, plant and orchid collector (Nyassaland, Africa), merchant; see A.J.M. Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19(2): 863. 1965; Richard Neuhauss, *Deutsch Neu-Guinea*. Berlin 1911; Alain White (1880-1951) & Boyd Lincoln Sloane (1886-1955), *The Stapelieae*. Pasadena 1937)

South Africa. Perennial, bluish, tufted, rhizomatous with knotty rhizomes, silky hairy panicles, spikelets paired, upper glume and lower lemma silky, common in mountain sourveld, abandoned fields, on sandy dry riverbank, eroded areas, see *Flora Capensis* 7: 382. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861*

2(1): 165. 1899 and *Publications of the Bureau of Science Government Laboratories* 17: 8-9. 1904, *Flora of Tropical Africa* 9: 474. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 191. 1921.

in English: flaccid finger grass

D. flexilis Henrard (*Digitaria longiflora* (Retz.) Pers.; *Paspalum longiflorum* Retz.)

Uganda. See *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805 and *Monograph of the Genus Digitaria* 258, 879. 1950.

D. floribunda Goetgh. (*Digitaria perrottetii* (Kunth) Stapf; *Panicum perrottetii* Kunth)

Africa. See *Révision des Graminées* 395, t. 111. 1831 and *Flora of Tropical Africa* 9: 435. 1919, *Bulletin du Jardin Botanique National de Belgique* 45(3-4): 415. 1975.

D. floridana A.S. Hitchc. (*Syntherisma floridana* (A.S. Hitchc.) A.S. Hitchc.; *Syntherisma floridanum* Hitchc.)

U.S., Florida. Endangered species, sandy pine woods, sand hill, turf grass, see *Proceedings of the Biological Society of Washington* 41: 163. 1928, *Manual of the Southeastern Flora* 51. 1933.

in English: Florida crab grass, turf grass

D. fluminensis Mez

Brazil. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 7. 1921.

D. foliosa Lag. (*Digitaria foliosa* Stent, nom. illeg., non *Digitaria foliosa* Lag.; *Paspalum distichum* L.; *Paspalum foliosum* (Lag.) Kunth; *Paspalum vaginatum* Sw.)

Cuba. See *Systema Naturae, Editio Decima* 855. 1759, *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Genera et species plantarum* 4. 1816, *Révision des Graminées* 1: 25. 1829 and *Contr. U.S. Natl. Herb.* 12: 136. 1908, *Taxon* 21: 546. 1972, *Taxon* 25: 513. 1976, *Flora Illustrada Catarinense* 1(Gram.): 909-1407. 1982, *Taxon* 32: 281. 1983, *Las Gramíneas de México* 5: 1-466. 1999.

D. fragilis (Steud.) Luces (*Digitaria rhachitricha* Henrard; *Paspalum fragile* Steud.)

America. See *Synopsis Plantarum Glumacearum* 1: 17-18. 1855 [1853 or 1854] and *Blumea* 1(1): 95. 1934, *Journal of the Washington Academy of Sciences* 32(6): 160. 1942.

D. fulva Bosser

Madagascar. See *Adansonia*, sér. 2, 8: 516. 1968.

D. fusca Chiov. (*Digitaria fusca* (J. Presl) Merr., nom. illeg., non *Digitaria fusca* Chiov.; *Digitaria milaniana* (Rendle) Stapf; *Paspalum fuscum* J. Presl; *Syntherisma fusca* (J. Presl) Scribn.)

Africa, Katanga. See *Reliquiae Haenkeanae* 1(4-5): 214. 1830, *Transactions of the Linnean Society of London, Botany* 4: 56. 1894, *Annual Report of the Missouri Botanical*

Garden 10: 49, t. 10, 11. 1899 and *Nuovo Giornale Botanico Italiano n.s.* 26: 62. 1919, *Flora of Tropical Africa* 9: 430. 1919, *Philippine Journal of Science* 35: 4. 1926, *Flora of Tropical East Africa* 451-898. 1982.

D. fuscescens (Presl) Henrard (*Digitaria fuscescens* (J. Presl) J.W. Moore, nom. illeg., non *Digitaria fuscescens* (J. Presl) Henrard; *Digitaria longiflora* (Retz.) Pers.; *Digitaria pseudo-ischaemum* Büse; *Panicum fuscescens* J. Presl; *Panicum pseudo-ischaemum* (Büse) Boerl.; *Paspalum fuscescens* J. Presl; *Paspalum micranthum* Desv.; *Paspalum micranthum* Döll, nom. illeg., non *Paspalum micranthum* Desv.; *Syntherisma fusca* (J. Presl) Scribn.; *Syntherisma fuscescens* (J. Presl) Scribn.)

Southeast Asia, India, Philippines, Vietnam, Asia tropical, Indonesia, Malaysia, Sri Lanka, Thailand. Annual, creeping, decumbent, ascending, stoloniferous or rhizomatous, rooting at the nodes, 2 or 3 inflorescence branches, spikelets glabrous, lower glume absent or vestigial, weed and variable species, lawn grass, economic plant, naturalized, weed of rice in Indonesia, found in savannah, woods, weedy waste places, fields borders, roadsides, along trails, very similar and often confused with *Digitaria longiflora* (Retz.) Pers., see *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805, *Reliquiae Haenkeanae* 1(4-5): 213. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 160. 1831, *Plantae Junghuhnianae* 3: 382. 1854, *Annales du Jardin Botanique de Buitenzorg* 8: 52. 1890, *Annual Report of the Missouri Botanical Garden* 10: 49, t. 10, 11. 1899 and *Mededeelingen van 's Rijks-Herbarium* 61: 8. 1930, *Bernice P. Bishop Museum Bulletin* 102: 19. 1933, *Grasses of Burma ...* 301. 1960.

in English: yellow crab grass, crabgrass

in Hawaii: creeping kukaepua'a

D. gallaensis Chiov. (*Digitaria milaniana* (Rendle) Stapf)

Africa, Ethiopia. See *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Resultati scientifici della Missione Stefanini-Paoli nella Somalia italiana. Vol. I. Le collezioni botaniche ...* 226. 1916, *Flora of Tropical Africa* 9: 430. 1919.

D. gardneri Henrard

America. See *Blumea* 1(1): 105-106. 1934.

D. gayana (Kunth) A. Chev. (*Digitaria elegantula* Mez; *Digitaria gayana* (Kunth) Stapf; *Panicum didymostachyum* Steud.; *Panicum gayanum* Kunth)

Tropical Africa, Tanzania, Zambia, Kalahari. Annual, tufted to loosely tufted, clumped, purplish, shortly rhizomatous, leaf sheaths more or less glabrous or with stellate hairs, silky inflorescence, racemes digitate, lower lemma hairy, when old spikelets with cobwebbed trichomes, fluffy seeds, weed species, grazed when young, found in disturbed areas, fallows, sandy soils, in wooded savannah area, impoverished soils, woodland, see *Révision des Graminées* 1: 239,

t. 31. 1829, *Synopsis Plantarum Glumacearum* 1: 97. 1854 and *Sudania* 1: 163. 1911, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 192. 1921.

in Gambia: barto jarge messengo

in Ghana: mpuru, povianga rido

in Mali: debbo daneya, gague, mussa korui kungue, ngassa ni kungué

in Niger: dgaram buwa, gaddyi, gagi, gaji, kala'n kofoa, kalankafoa, kan faléy, kanar, lillimo, m'bwa, télégít, yel, wan tinigit

in Nigeria: furfurar ba fillatani, furfurar gyaatumii, furfurar tsoohuwaa, furfurar tsuhuwa, gajele, gaji, kalanhuwa, kal-eru, kamfalwa, karan, karani

in Senegal: gergetem, nkolu yagé

D. gazensis Rendle (*Digitaria antunesii* Mez; *Digitaria herpocladus* Pilg., also spelled *herpocladus*; *Digitaria nyassana* Mez, also spelled *nyssana*; *Digitaria parlatorei* (Steud.) Chiov. var. *microstachya* Chiov.; *Digitaria proxima* Henr.; *Digitaria sanguinalis* var. *interrupta* Rendle; *Digitaria usambarica* Mez; *Digitaria villosissima* Chiov.; *Panicum parlatorei* Steud.) (for the Italian botanist Filippo (Philippus, Filippo) Parlatore, 1816-1877, physician, M.D. Palermo 1837, botanical explorer, plant collector, professor of botany (Istituto degli Studi Superiori di Firenze), founded the Istituto Botanico (in Museo di via Romana, Florence), his writings include *Memoria su di una membrana sierosa dell'occhio*. Palermo 1834, *Trattato teorico-pratico del chòlera asiatico*, osservato in Palermo nel 1837. Palermo 1837, *Breve cenno sulla vita e sulle opere del barone A. Bivona Bernardi*. Palermo 1837, *Prospetto dello stato della botanica in Sicilia nel principio del secolo XIX*. Palermo 1838, *Biografia di F.G.V. Broussais*. Palermo 1839, *Flora Panormitana*. Panormi 1839, "Dubbi sui limiti assegnati da Cuvier alle diverse rivoluzioni del Globo." *Gazzetta Toscana delle Scienze Mediche Fisiche*. anno III. 1845, *Flora palermitana*. Firenze 1845, *Elogio di Jacopo Gràber de Hemso*. Firenze 1849, *Elogio storico di Luigi Colla*. Firenze 1850, *Elogio di Filippo Barker Webb*. Firenze 1856, *Necrologia di Roberto Brown*. Firenze 1859, *Elogio di Alessandro Humboldt*. Firenze 1860, *Coniferas novas nonnullas descripsit Philippus Parlatore*. Florentiae [1863], *Rimedio popolare per la cura del chòlera*. Palermo 1867, *Cenno cronologico di Adolfo Brongniart*. Firenze 1870 and *Flora italiana*. [vols. 6-10 edited. by T. Caruel, 1830-1898] Firenze 1848-1893, with Philip Barker Webb wrote *Florula aethiopic-aegyptiaca*. Florentiae 1851. See Giuseppe M. Mira, *Bibliografia Siciliana*. 2: 181-185. Palermo 1881; Stafleu & Cowan, *Taxonomic literature*. 4: 66-72. 1983; Philip Barker Webb (1793-1854) & Sabin Berthelot (1794-1880), *Histoire naturelle des Iles Canaries*. Paris [1835-] 1836-1850; J.H. Barnhart, *Biographical notes upon botanists*. 3: 51. Boston 1965; Ethelyn Maria Tucker, *Catalogue*

of the library of the Arnold Arboretum of Harvard University. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 301. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 221. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Tropical Africa, Mozambique, Kenya, Uganda, Zimbabwe, Namibia. Perennial, tufted, rhizomatous with knotty rhizomes, sometimes stoloniferous, lower leaf sheaths hairy, racemes almost digitate, spikelets hairy and paired, upper floret purplish, a good grazing grass, useful for erosion control, commonly found in waterlogged black clays, sandy soil, in heavily grazed turf, along roadsides, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2: 164. 1899 and *Journal of the Linnean Society, Botany* 40: 228. 1911, *Annali di Botanica* 13: 41. 1914, *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 200. 1915, *Nuovo Giornale Botanico Italiano, n.s.* 26: 61. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 192-193. 1921, *Blumea* 1(1): 104. 1934.

D. geniculata Stent (*Digitaria eriantha* Steud.)

South Africa. See *Flora* 12: 468. 1829 and *Bothalia* 3: 154. 1930.

D. gentilis Henrard

Senegal, Africa. Rare species, see *Monograph of the Genus Digitaria* 284. 1950.

D. gerdessii (Hack.) Parodi var. **boliviensis** Henrard (*Digitaria corynotricha* (Hack.) Henrard; *Panicum corynotrichum* Hack.)

America. See *Österreichische Botanische Zeitschrift* 51: 335. 1901, *Mededeelingen van's Rijks-Herbarium* 61: 2. 1930, *Monograph of the Genus Digitaria* 287. 1950.

D. gerdessii (Hack.) Parodi (*Panicum gerdessii* Hack.)

America. See *Österreichische Botanische Zeitschrift* 51: 333. 1901, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 7: 57. 1923.

D. gibbosa (R. Br.) P. Beauv. (*Digitaria orthostachya* Stapf & Jesson; *Panicum gibbosum* R. Br.; *Panicum orthostachyum* (Stapf & Jesson) Ewart & Davies; *Syntherisma gibbosa* (R. Br.) Chase)

Australia. See *Flora Caroliniana, secundum ...* 76. 1788, *Prodromus Florae Novae Hollandiae* 193. 1810, *Essai d'une Nouvelle Agrostographie* 160. 1812 and *Bulletin of*

Miscellaneous Information Kew 1915: 93. 1915, *The Flora of the Northern Territory* 38. 1917, *Contributions from the United States National Herbarium* 24: 171. 1925.

D. glabra (Schrad.) P. Beauv. (*Digitaria ischaemum* (Schreb.) Schreb. ex Muhl.; *Panicum ischaemum* Schreb.; *Syntherisma glabrum* Schrad.)

Europe. See *Specimen Florae Erlangensis* 16. 1804, *Flora Germanica* 1: 163. 1806, *Essai d'une Nouvelle Agrostographie* 51. 1812, *Descriptio uberior Graminum* 131. 1817, *Compendio della Flora Italiana* 44. 1868.

D. glauca A. Camus (*Digitaria eriantha* Steud.; *Digitaria glauca* Stent, nom. illeg., non *Digitaria glauca* A. Camus) Madagascar, Africa. See *Flora* 12: 468. 1829 and *Flora of Tropical Africa* 9: 430. 1919, *Bulletin de la Société Botanique de France* 73: 914. 1927, *Bothalia* 3: 151-152. 1930.

D. gracilentia Henrard (*Digitaria milaniana* (Rendle) Stapf)

America. See *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Monograph of the Genus Digitaria* 296. 1950.

D. gracillima (Scribn.) Fern. (*Digitaria bakeri* (Nash) Fernald; *Panicum gracillimum* Scribn.; *Syntherisma bakeri* Nash; *Syntherisma gracillima* (Scribn.) Nash) (named for C.H. Baker, botanical collector)

U.S., Florida. Tall, caespitose, simple leaves, endangered species, scrub, see *Bulletin of the Torrey Botanical Club* 23: 146. 1896, *Bulletin of the Torrey Botanical Club* 25: 295-296. 1898 and *Rhodora* 22(258): 101-102. 1920, *Listados Florísticos de México* 4: i-v, 1-246. 1986.

in English: long-leaf crab grass

D. griffithii (Hook.f.) Henrard

Southern India. Annual or perennial, geniculate, spreading, leaves hispid, leaf blades elongate, panicles loosely flowered, branchlets and pedicels often spreading, first glume absent or minute, fodder, see *Fl. Br. Ind.* 7: 15. 1896 and *Blumea* 1: 100. 1934, *Grasses of Burma* ... 301. 1960.

D. gymnostachys Pilg.

Africa, Tanzania. Perennial, tufted, racemes subdigitate, spikelets paired, lower and upper glumes scaly, internode between glumes and spikelet, common on sandy soils, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 709. 1942.

D. hackelii (Pilg.) Stapf (*Digitaria abyssinica* (Hochst. ex A. Rich.) Stapf; *Panicum hackelii* Pilg., nom. illeg., non *Panicum hackelii* (Arechav.) Arechav.)

Tropical Africa. See *Tentamen Florae Abyssinicae* ... 2: 360. 1850 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 119. 1901, *Bulletin of Miscellaneous Information Kew* 1907: 213. 1907, *Flora of Tropical Africa* 9: 459. 1919, *Flora of Tropical East Africa* 451-898. 1982.

D. hengduanensis L. Liou

China. Sandy places, riverside, see *Botanical Research: Contributions from the Institute of Botany, Academia Sinica* 4: 37. 1989.

D. henrardii Veldkamp

Philippines. See *Blumea* 21(1): 55, f. 12. 1973.

D. henryi Rendle (*Digitaria adscendens* (Kunth) Henrard; *Digitaria ciliaris* (Retz.) Koeler; *Panicum henryi* (Rendle) Makino & Nemoto; *Syntherisma henryi* (Rendle) Newbold; *Syntherisma henryi* (Rendle) Honda, nom. illeg., non *Syntherisma henryi* (Rendle) Newbold)

China, Japan, Asia temperate, Taiwan. Dunes of black sand, see *Observationes Botanicae* 4: 16. 1786, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816] and *Journal of the Linnean Society, Botany* 36(253): 323. 1904, *Botanical Magazine* 38: 128. 1924, *Torreya* 24: 9. 1924, *Flora of Japan* 1472. 1925, *Blumea* 1(1): 92. 1934.

D. herpocladus Pilg. (*Digitaria gazensis* Rendle)

Africa, America. Open woods, see *Journal of the Linnean Society, Botany* 40: 228. 1911, *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 200. 1915.

D. hiascens Mez

South Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 193. 1921.

D. hirsuta Swallen

Panama. Endangered species, growing in sandy areas, see *Annals of the Missouri Botanical Garden* 30(2): 172. 1943.

D. hispida (Thunb.) Spreng. (*Arthraxon hispidus* var. *hispidus*; *Phalaris hispida* Thunb.)

Asia, Japan. See *Flora Japonica, ...* 44. 1784, *Systema Vegetabilium, editio decima sexta* 1: 271. 1825 and *Botanical Magazine* 26(307): 214. 1912, *Blumea* 27(1): 255-300. 1981.

D. hitchcockii (Chase) Stuckert (*Trichachne hitchcockii* (Chase) Chase; *Valota hitchcockii* Chase)

U.S., Texas. Perennial, on dry soils, dry prairie soil, see *Proceedings of the Biological Society of Washington* 24: 110. 1911, *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 287. 1914, *Journal of the Washington Academy of Sciences* 23(10): 454. 1933.

in English: short-leaf crab grass, short-leaf cotton top

D. hololeuca Henrard

Brazil. Open areas, sandy places, see *Monograph of the Genus Digitaria* 327. 1950.

D. homblei Robyns (*Digitaria compressa* Stapf)

Tropical Africa. Perennial, caespitose, grassy woodland, see *Flora of Tropical Africa* 9: 445. 1919, *Mémoires de l'Institut*

Royal Colonial Belge; Section des Sciences Naturelles et Médicales 1: 27. 1931.

in English: iburu of the bush

in Nigeria: iburun daji

D. horizontalis Willd. (*Agrostis digitata* (Sw.) Poir., nom. illeg., non *Agrostis digitata* Lam.; *Axonopus digitatus* (Sw.) P. Beauv.; *Digitaria digitata* (Sw.) Urb., nom. illeg., non *Digitaria digitata* Büse; *Digitaria horizontalis* Ohwi; *Digitaria jamaicensis* Spreng.; *Digitaria sanguinalis* (L.) Scop.; *Digitaria sanguinalis* sensu Ekm. in part, non (L.) Scop.; *Digitaria sanguinalis* (L.) Scop.; *Digitaria sanguinalis* f. *umbraticola* (Kunth) Mez ex Henrard; *Digitaria sanguinalis* var. *horizontalis* (Willd.) Rendle; *Digitaria setigera* Roth; *Digitaria setosa* Desv.; *Digitaria setosa* Desv. ex Ham.; *Digitaria umbrosa* Link, nom. illeg., non *Digitaria umbrosa* (Retz.) Pers.; *Milium digitatum* Sw.; *Panicum hamiltonii* Kunth; *Panicum horizontale* (Willd.) G. Mey.; *Panicum porranthum* Steud.; *Panicum sanguinale* L.; *Panicum sanguinale* subsp. *horizontale* (Willd.) Hack.; *Panicum sanguinale* var. *cognatum* Hack. ex Schweinf.; *Panicum sanguinale* var. *digitatum* (Sw.) Hack. ex Urb.; *Panicum sanguinale* var. *horizontale* (Willd.) Schweinf.; *Panicum sanguinale* var. *porranthum* (Steud.) Franch.; *Panicum stipatum* J. Presl; *Panicum umbraticola* Kunth; *Paspalum digitatum* (Sw.) Kunth; *Paspalum oxanthum* Steud.; *Syntherisma digitata* (Sw.) Hitchc.; *Syntherisma setosa* (Desv.) Nash; *Syntherisma setosa* (Desv. ex Ham.) Nash)

Pantropical, Indian Ocean, West Africa, Brazil, Bolivia, Venezuela, tropical America, Peru, Colombia, Mexico, U.S., West Indies, Florida. Annual, erect, decumbent or semiprostrate, creeping or ascending, stoloniferous below, flowering culms erect or ascending, leaf blades long and tapering, sheaths flattened and hispid with long spreading hairs, ligule a short membrane, leaves finely hairy, inflorescence broom-like with more or less arching-drooping spikes very slender, racemes more or less digitately arranged, spikelets 2-flowered, lower floret reduced, upper floret bisexual, 2 glumes, lower glume very small, fertile lemma 5-nerved, 3 stamens, stigmas purple, a good pasture grass, weed of cultivation, inhabits waste places and crops, seasonal creeks, disturbed situations, marshy areas, along roadsides, along ditches, sandy soils, in soybean fields, gardens, see *Species Plantarum* 1: 57. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 92. 1809, *Encyclopédie Méthodique, Botanique Suppl.* 1: 258. 1810, *Essai d'une Nouvelle Agrostographie* 12, 154, 167. 1812, *Systema Vegetabilium* 2: 474. 1817, *Primitiae Florae Essequeboensis ...* 54. Gottingae 1818, *Systema Vegetabilium, editio decima sexta* 1: 272. 1825, *Prodromus Plantarum Indiae Occidentalis* 6. 1825, *Hortus Regius Botanicus Berolinensis* 1: 227. 1827, *Révision des Graminées* 1: 24, 33. 1829, *Reliquiae*

Haenkeanae 1(4-5): 297. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 84. 1833, *Synopsis Plantarum Glumacearum* 1: 27, 42. 1855, *Bulletin de l'Herbier Boissier* 2: App. 2, 18. 1894, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 354. 1895, *Bulletin of the Torrey Botanical Club* 25: 300. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2(1): 163. 1899 and *Symbolae Antillarum* 4: 86. 1903, *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 8. 1906, *Contributions from the United States National Herbarium* 12(3): 142. 1908, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 69. Vienna 1908, *Symbolae Antillarum* 8: 24. 1920, C.E. Hubbard & R.E. Vaughan, *The Grasses of Mauritius and Rodriguez* 88. *The Crown Agents for the Colonies*, London 1940, *Botanical Magazine* (Tokyo) 55: 541. 1941, *Monograph of the Genus Digitaria* 332, 828. 1950.

in English: Jamaican crab grass, hay grass, crabgrass, finger grass, wild findi

in Spanish: horquetilla, falsa pata de gallina, zacate pangoliilla, pangoliilla

in the Caribbean: zèb fin, herbe fine

in Gambia: ja jeo

in Mali: fonio ladde, hana iddu, mussa ladde, narkata, serémé ladde, subcoré

in Niger: ardyiaré, ardyia, arthya, bawja kala'n kafoa, echkaru-walia, gaddyi, ishibaen, ishiban, kan faléy, kanar, laalowol, markya, tyurké

in Nigeria: damaliliho, eeran, eran tapa, harakiyaa, karanin dawaki, yayaghol

in Senegal: ebusé, rukh, sivandan

in Sierra Leone: agbel, gbel, minasabine, ndewe, pejeui, pejui, pouve, pouvei, puvei, yaya

in Upper Volta: banguéré, gossolo, petrepin, taramanté, tetemtie-haga, tetumté, tintinterega

in Yoruba: eeran, eran tapa

D. hubbardii Henrard (*Digitaria neurachnoides* Vickery)

Queensland, New South Wales. Perennial, caespitose, villous and swollen at the base, sheaths more or less scabrous, racemes solitary with spikelets in pairs from the base, upper glume hairy or silky, sterile lemma hairy or silky, woodland, poor soils, see *Monograph of the Genus Digitaria* 334. 1950, *Contributions from the New South Wales National Herbarium* 1(6): 327-328. 1950 [1951], *Brunonia* 7: 131-216. 1983.

D. humbertii A. Camus

Africa.

D. humifusa Pers. (*Digitaria humifusa* Mazziari, nom. illeg., non *Digitaria humifusa* Pers.; *Digitaria ischaemum* (Schreb.) Schreb. ex Muhl.; *Panicum humifusum* (Pers.)

Kunth; *Panicum ischaemum* Schreb.; *Paspalum humifusum* (Pers.) Poir.; *Syntherisma humifusum* (Pers.) Rydb.)

Eurasia. See *Specimen Florae Erlangensis* 16. 1804, *Syn. Pl.* 1: 85. 1805, *Encyclopédie Méthodique, Botanique* 4: 316. 1816, *Descriptio uberior Graminum* 131. 1817, *Révision des Graminées* 1: 33. 1829, Domenico Mazziari, *Flora Corcirese* 2: 464. 1834, *Oekonomisch-technische Flora Böhmens* 1: 497. 1836 and *Memoirs of the New York Botanical Garden* 1: 469. 1900.

D. hyalina Robyns & Van der Veken

Africa. See *Bulletin du Jardin Botanique de l'État* 22: 150. 1952.

D. hydrophila Van der Veken

Africa. See *Bulletin du Jardin Botanique de l'État* 25: 326. 1955.

D. hystrioides Vickery (Greek *hystrix*, *hystrichos* "porcupine, bristles")

Western Australia, Queensland, New South Wales. Perennial, grayish, base swollen and very hirsute, leaf sheaths densely hirsute, long and rigid racemes spreading at maturity, densely hairy spikelets, lower lemma sterile, fertile lemma shining, dry areas, grassland, see *Contributions from the New South Wales National Herbarium* 1(6): 324-327. 1950 [1951].

in English: umbrella grass

D. iburua Stapf (*Syntherisma iburua* (Stapf) Newbold)

Benin, Nigeria, Togo, West Africa, sub-Saharan Western Africa. Annual, very variable, loosely tufted, dark brown spikelets, white grain, grains used as a famine food, eaten like millet, can be utilized in ways similar to rice, cereals on infertile soils, grows well on poor sandy soils, similar to couscous, economic and useful plant, also cultivated, found in isolated pockets, often confused with and considered by many authors as a synonym of *Digitaria exilis* (Kippist) Stapf, see *Bulletin of Miscellaneous Information Kew* 1915: 382, f. 1. 1915, National Research Council, Board on Science and Technology for International Development, *Lost Crops of Africa, Vol I: Grains*. National Academy Press, Washington, D.C. 1996.

in English: black acha, black fonio, little fonio, ibourou, iburuza millet

in French: fonio noir, manne noir, ibourou

in Nigeria: abouru, aburo, aburoo, aburu, acca, accà, alas, but, cub yey, cun ceren, cun yei, dere, ibiroo, ibiròdò, ibulu, iburoo, iburòdò, iburuu, impwinci, makari, nas, ndat, ngas, nunghe, nunghwe, san, sin, uete suit, utangho, utango, wete swit, wusuwusu

in Togo: afio-ouaroun, afio uarun, tchapalo

in West Africa: iburu

D. imbricata R.D. Webster

Australia. See *Brunonia* 6(2): 184-185. 1983 [1984]

D. inaequale (Link) Spreng. (*Digitaria adscendens* (Kunth) Henrard; *Digitaria ciliaris* (Retz.) Koeler; *Panicum adscendens* Kunth; *Panicum inaequale* (Link) E. Fourn., nom. illeg., non *Panicum inaequale* F. Muell.; *Paspalum inaequale* Link)

America, Eurasia. See *Observationes Botanicae* 4: 16. 1786, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816], *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 103. 1821, *Systema Vegetabilium, editio decima sexta* 1: 271. 1825, *Mexicanas Plantas* 2: 17. 1886 and *Blumea* 1(1): 92. 1934.

D. induta Swallen

America, Brazil. See *Contributions from the United States National Herbarium* 29(6): 266-267. 1948 [1949].

D. insularis (L.) Fedde (*Acicarpa sacchariflora* Raddi; *Agrostis villosa* Poir. ex Steud.; *Andropogon fabricii* Ekman ex Henrard; *Andropogon insularis* L.; *Digitaria insularis* (L.) Mez; *Digitaria insularis* (L.) Mez ex Ekman, nom. illeg., non *Digitaria insularis* (L.) Fedde; *Digitaria leucophaea* (Kunth) Stapf; *Digitaria sacchariflora* (Nees) Henrard; *Leptocoryphium penicilligerum* Speg.; *Milium hirsutum* P. Beauv.; *Milium villosum* Sw.; *Millium villosum* Sw.; *Monachne unilateralis* Roem. & Schult.; *Monachne unilateralis* P. Beauv.; *Panicum duchaissingii* Steud.; *Panicum falsum* Steud.; *Panicum gavanianum* Steud. ex Lechler; *Panicum gavanianum* Steud. ex Döll; *Panicum insulare* (L.) G. Mey.; *Panicum insulare* var. *insulare*; *Panicum insulare* var. *leucophaeum* (Kunth) Kuntze; *Panicum insulare* var. *typicum* Hack.; *Panicum lanatum* Rottb.; *Panicum leucophaeum* Kunth; *Panicum saccharoides* A. Rich., nom. illeg., non *Panicum saccharoides* Trin.; *Panicum unilaterale* (P. Beauv.) Raspail; *Panicum unilaterale* (P. Beauv.) Desv., nom. illeg., non *Panicum unilaterale* (P. Beauv.) Raspail; *Saccharum polystachyum* Sieber ex Kunth; *Schoenus fabri* Rottb., Cyperaceae; *Scirpoides fabri* Rottb., Cyperaceae; *Syntherisma insularis* (L.) Millsp. & Chase; *Trichachne insularis* (L.) Nees; *Trichachne nutans* (L.) Baum; *Trichachne penicilligera* (Speg.) Parodi; *Trichachne sacchariflora* Nees; *Tricholaena insularis* (L.) Griseb.; *Valota insularis* (L.) Chase; *Valota penicilligera* (Speg.) Chase ex Parodi)

Tropical America, Mexico, Argentina, Brazil, Bolivia, Venezuela, southern U.S., Florida, Jamaica. Perennial bunchgrass, straight, dense tuft-forming, sometimes sticky, caespitose, more or less erect, hard and knotty rhizomes, cataphylls densely soft-hairy, spreading at the base, leaves flat, sheaths apically carinate, ligule membranous, lowermost sheaths densely hairy, panicle contracted and dense, spikelets with long hairs, fertile lemma dark brown and lanceolate-acuminate, glume and sterile lemma with brown ascending hairs, fruit beaked, widely naturalized elsewhere,

noxious weed, usually avoided by livestock, in wetlands or nonwetlands, in dry regions at lower elevations, pastures, waste places, rangelands, cultivated soils, grazed areas, along roadsides, disturbed places, pineapple fields, coffee plantations, sandy plains, often occurs after burning, see *Systema Naturae, Editio Decima* 1304. 1759, *Deliciae gallo-belgicae* 37. 1768, *Descriptiones Plantarum Rariorum* 28. 1772, *Acta Literaria Universitatis Hafniensis* 1: 269, t. 1, f. 2. 1776, *Nova Genera et Species Plantarum seu Prodrum* 24. 1788, *Essai d'une Nouvelle Agrostographie* 13, 49, t. 5, 10, f. 5, 9. 1812, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816], *Systema Vegetabilium* 2: 468. 1817, *Primitiae Florae Essequeboensis* ... 60. 1818, *Agrostografia Brasiliensis* 31, t. 1, f. 4. 1823, *Annales des Sciences d'Observation* 1: 448. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 86-87. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 190. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 124. 1833, *Nomenclator Botanicus* edition 2 1: 43. 1840, *Historia Fisica Politica y Natural de la Isla de Cuba, Botanica* 11: 306. 1850, *Synopsis Plantarum Glumacearum* 1: 67, 93. 1854, *Berberides Americae Australis* 56. 1857, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 265. 1857, *Flora Brasiliensis* 2(2): 137. 1877, *Anales de Sociedad Científica Argentina* 16: 102. Buenos Aires 1883, *Flora Capensis* 7: 382. 1898, *Revisio Generum Plantarum* 3(3): 361, 362. 1898 and *Publications of the Field Columbian Museum, Botanical Series* 1: 473. 1902, *Anales del Museo Nacional de Buenos Aires* 70. 1903, *Proceedings of the Biological Society of Washington* 19(34): 188. 1906, *Contr. U.S. Natl. Herb.* 12: 126. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11: 17. 1912, *Mededeelingen van 's Rijks-Herbarium* 40: 44. 1921, *Revista de la Facultad de Agronomía y Veterinaria* 4: 46. 1922, *Blumea* 1(1): 99. 1934, *Gramineas Bonaerenses, edition 3*, 86, 89. 1939, *Blumea* 21: 49. 1973, *Taxon* 33: 96. 1984.

in English: sourgrass, sour grass, bed grass, long grass, cotton grass, feather-top grass

in Argentina: camalote

in Bolivia: kapipururu

in the Caribbean: zèb à blé, herbe à blé

in Mexico: ne-bob, plumerillo café, zacate mano punta café, zacate Taiwan

in Paraguay: capi'í pororó

in Spanish: cola de gato, rabo de zorra, rabo de zorro

D. ischaemum (Schreber ex Schweigg.) Schreber ex Muhlenberg (*Digitaria ambigua* (Lam. & DC.) Mérat; *Digitaria glabra* (Schr.) P. Beauv.; *Digitaria humifusa* Pers.; *Digitaria ischaemum* (Schreb.) Schreb. ex Muhl.; *Digitaria ischaemum* Muhl.; *Digitaria ischaemum* var. *mississippiensis* (Gattinger) Fern.; *Digitaria linearis* Krock. ex Crép., nom. illeg., non *Digitaria linearis* (L.) Pers.; *Panicum*

ambiguum (Lam. & DC.) Le Turq.; *Panicum ambiguum* Lapeyr.; *Panicum americanum* L.; *Panicum arenarium* M. Bieb.; *Panicum glabrum* (Schr.) Gaudin; *Panicum humifusum* (Pers.) Kunth; *Panicum ischaemum* Schreb.; *Panicum ischaemum* Schreb. ex Schweigg.; *Panicum phaeocarpum* var. *drummondianum* Nees; *Paspalum ambiguum* Lam. & DC.; *Paspalum ambiguum* Salzm. ex Döll, nom. illeg., non *Paspalum ambiguum* Lam. & DC.; *Paspalum glabrum* Alph. Wood, nom. illeg., non *Paspalum glabrum* Poir.; *Paspalum glabrum* Cassidy, nom. illeg., non *Paspalum glabrum* Poir.; *Paspalum humifusum* (Pers.) Poir.; *Pennisetum americanum* (L.) K. Schum.; *Pennisetum americanum* (L.) Leek; *Syntherisma glabrum* Schrad.; *Syntherisma humifusum* (Pers.) Rydb.; *Syntherisma ischaemum* (Schreb. ex Schweigg.) Nash (Latin *ischaemon* for a kind of styptic herb (Plinius), Greek *ischo*, *ischein* "to restrain, hold, check" and *haima* "blood," *ischaimos* "staunching blood, styptic," the seeds of some species were used to stop bleeding, Theophrastus (*HP.* 9.15.3) applied *ischaimos* to a plant used as a styptic, a species of *Andropogon*)

Eurasia, Asia temperate and tropical, China, Japan, Pakistan. Annual, decumbent, geniculate and ascending, prostrate or spreading, usually much branched, rooting at the lower nodes, caespitose, loosely or densely tufted, youngest leaf rolled, auricle absent, leaves and sheath glabrous, inflorescence very slender and spreading, racemes digitate, spikelets pubescent and usually ternate, unequal pedicels, first glume minute or absent, noxious weed species, invasive, potential seed contaminant, naturalized, economic plant, forage, inhabits waste places and turfgrass, trampled habitats, wet ground, floodplain forest, on dry gravelly roadsides, grassy fields, disturbed areas, open disturbed areas, open fallow fields, along creeks and riverbanks, open places, sandy soil, see *Species Plantarum* 56. 1753, *Specimen Florae Erlangensis* 16. 1804, *Syn. Pl.* 1: 85. 1805, *Flore Française ... Troisième Édition* 3: 16. 1805, *Flora Germanica* 1: 163. 1806, *Agrostologia Helvetica, definitionem* ... 1: 22. 1811, *Essai d'une Nouvelle Agrostographie* 51. 1812, *Catalogus Plantarum Americae Septentrionalis* 9. 1813, *Fl. Environs de Rouen* 28. 1816, *Encyclopédie Méthodique, Botanique* 4: 316. 1816, *Descriptio uberior Graminum* 131. 1817, *Histoire Abrégée des Plantes des Pyrénées* 31. 1818, *Hortus Regius Botanicus Berolinensis* 1: 229. 1827, *Révision des Graminées* 1: 33. 1829, *Oekonomisch-technische Flora Böhmens* 1: 497. 1836, *Florae Africae Australioris Illustrationes Monographicae* 22. 1841, *Manual de la Flore de Belgique (éd. 2)* 335. 1866, *The American Botanist and Florist* 2: 390. 1871, *Flora Brasiliensis* 2(2): 59. 1877, *Bulletin Colorado Agricultural College, Colorado Experiment Station* 12: 91. 1890, *Die Pflanzenwelt Ost-Afrikas* 5B: 51. 1895, *Synopsis der mitteleuropäischen Flora* 2: 67. 1899 and *Memoirs of the New York Botanical Garden* 1: 469. 1900, *Zeitschrift für Naturwissenschaften* 79: 52. 1907, *North American Flora* 17(2):

151. 1912, *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten. Beihefte* 30(1912): 136. 1913, *Botanical Magazine* 38: 126. 1924, *Blumea* 1(1): 91. 1934, *Acta Phytotaxonomica et Geobotanica* 11: 32. 1942, *Monograph of the Genus Digitaria* 355. 1950, *Kew Bulletin* 1951: 166. 1951, *Journal of the Elisha Mitchell Scientific Society* 80(2): 172. Raleigh, North Carolina 1964, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 123. 1971[1972], *Brunonia* 7: 131-216. 1983, *Genera Graminum* 298-300. 1986, P.W. Hattersley, "Variations in photosynthetic pathway," in T.R. Soderstrom, K.W. Hilu, C.S. Campbell and M.E. Barkworth [eds.], *Grass Systematics and Evolution*, 49-64. Smithsonian Institute, Washington, D.C., U.S. 1987, P.W. Hattersley & L. Watson, "Diversification of photosynthesis," in G.P. Chapman [editor], *Grass Evolution and Domestication*, 38-116. Cambridge University Press, Cambridge, UK., 1992, Daniel R. Taub & Manuel T. Lerdau, "Relationship between leaf nitrogen and photosynthetic rate for three NAD-ME and three NADP-ME C4 grasses." *Am. J. Bot.* 87: 412-417. 2000.

in English: crab grass, small crab grass, smooth summer grass, smooth crab grass

D. ischaemum (Schreber ex Schweigg.) Schreber ex Muhlenberg var. *ischaemum*

Eurasia.

D. ischaemum (Schreber ex Schweigg.) Schreber ex Muhlenberg var. *mississippiensis* (Gatt.) Fernald (*Panicum glabrum* var. *mississippiensis* Gatt.; *Panicum lineare* var. *mississippiensis* (Gatt.) Gatt. ex Beal; *Syntherisma linearis* var. *mississippiensis* (Gatt.) Nash)

America. See *Species Plantarum, Editio Secunda* 1: 85. 1762, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 39. 1894, *Grasses of North America for Farmers and Students* 2: 111. 1896, *Bulletin of the Torrey Botanical Club* 25: 300. 1898 and *Rhodora* 22(258): 103. 1920.

D. jansenii Veldkamp (after the Dutch botanist Pieter Jansen, 1882-1955, agrostologist, worked on Malesian grasses; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 246. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 195. 1972)

Indonesia. See *Blumea* 21(1): 29, f. 4. 1973.

D. jubata (Griseb.) Henrard (*Paspalum jubatum* Griseb.)

Asia. Fodder, see *Nachr. Konigl. Ges. Wiss. Georg-Augusts-Univ.* 3: 84. 1868 and *Blumea* 1(1): 100. 1934.

D. junghuhniana (Steud.) Henrard (*Digitaria junghuhniana* (Nees ex Steud.) Henrard; *Digitaria pruriens* var. *arnottiana* (Nees ex Steud.) Nees & Arn. ex Büse; *Panicum arnottianum* Nees ex Steud.; *Panicum junghuhnianum* Nees ex Steud.)

Asia. Perennial, rhizomatous, found in open disturbed areas, see *Synopsis Plantarum Glumacearum* 1: 59, 63. 1853 [1854], *Plantae Junghuhnianae* 3: 380. 1854 and *Mededeelingen van 's Rijks-Herbarium* 61: 11. 1930.

D. killeenii A.S. Vega & Rúgolo

America, Bolivia. See *Systematic Botany* 27(2): 252-256, f. 1-2. 2002.

D. laetevirens Mez (*Digitaria aequiglumis* (Hack. & Arechav.) Parodi; *Digitaria aequiglumis* var. *laetevirens* (Mez) Henrard; *Digitaria lanuginosa* (Nees) Henrard; *Panicum aequiglume* Hack. & Arechav.; *Paspalus lanuginosus* Nees)

South America. See *Flora Brasiliensis seu Enumeratio Plantarum* 63. 1829, *Anales del Museo Nacional de Montevideo* 1: 113. 1894 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Revista de la Facultad de Agronomía y Veterinaria* 4: 47. 1922, *Mededeelingen van 's Rijks-Herbarium* 61: 5. 1930, *Monograph of the Genus Digitaria* 370. 1950, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 351-366. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 473-487. 1970, *Darwiniana* 19: 65-166. 1974, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

D. lanceolata R.D. Webster

Australia. See *Brunonia* 6(2): 187-188. 1983 [1984].

D. lanuginosa (Nees) Henrard (*Digitaria aequiglumis* (Hack. & Arechav.) Parodi; *Digitaria aequiglumis* var. *laetevirens* (Mez) Henrard; *Digitaria cuyabensis* (Trin.) Parodi; *Panicum aequiglume* Hack. & Arechav.; *Paspalus lanuginosus* Nees)

South America, Brazil. See *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 378. 1926, *Flora Brasiliensis seu Enumeratio Plantarum* 63. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 206. 1834, *Anales del Museo Nacional de Montevideo* 1: 113. 1894 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Revista de la Facultad de Agronomía y Veterinaria* 4: 47. 1922, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 378. 1926, *Mededeelingen van 's Rijks-Herbarium* 61: 5. 1930, *Monograph of the Genus Digitaria* 164, 370. 1950.

D. laxa (Rchb.) Parodi (*Panicum recalvum* (Nees) Kunth; *Reimaria laxa* Rchb.; *Trichachne laxa* (Rchb.) Hitchc.; *Trichachne recalva* Nees; *Valota laxa* (Rchb.) Hitchc. & Chase)

Brazil. See *Révision des Graminées* 1: 39. 1829, *Analyse des Familles de Plantes* 58. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 88, 98. 1829 and *Contributions*

from the United States National Herbarium 18(7): 292. 1917, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 18. 1928, *Manual of the Grasses of the West Indies* 165. 1936.

D. lecardii (Pilg.) Stapf (*Panicum sanguinale* var. *lecardii* Pilg.) (for the Belgian botanist Th. Lecard, d. 1880, plant collector in Senegal and Mali; see F.N. Hepper & F. Neate, *Plant Collectors in West Africa*. 48. 1971; Auguste Jean Baptiste Chevalier, *Flore vivante de l'Afrique Occidentale Française*. 1: xxvii-xxx. Paris 1938; J.H. Barnhart, *Biographical notes upon botanists*. Boston 1965)

Tropical Africa. Spreading, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 118. 1901, *Flora of Tropical Africa* 9: 450. 1919.

D. lehmanniana Henrard

South America. Highlands, forest, mountain, see *Blumea* 1(1): 107. 1934, *Monograph of the Genus Digitaria* 490. 1950, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Boletín de la Sociedad Argentina de Botánica* 12: 386. 1968, *Revista de Ciencias (San Marcos)* 74: 48-57. 1986, *Ruizia*; *Monografías del Jardín Botánico* 13: 1-480. 1993.

D. lehmanniana Henrard var. *dasyantha* Rúgolo (*Digitaria nervalis* Henrard)

South America. See *Monograph of the Genus Digitaria* 490-491. 1950, *Boletín de la Sociedad Argentina de Botánica* 12: 386. 1968.

D. lehmanniana Henrard var. *lehmanniana*

South America.

D. leiantha (Hack.) Parodi (*Digitaria adusta* var. *leiantha* (Hack.) Parodi; *Panicum adustum* Nees var. *leianthum* Hack.; *Syntherisma leiantha* (Hack.) Hitchc.)

Southern America, Argentina. Perennial, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 101. 1829 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 271. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 342. 1909, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 7: 57. 1923, *Contributions from the United States National Herbarium* 24(8): 426. 1927, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13. 1928, *Monograph of the Genus Digitaria* 388. 1950, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

D. lemeeana A. Camus (after the French botanist Albert Marie Victor Lemée, 1872-; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 367. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Africa. See *Bulletin de la Société Botanique de France* 192: 51. 1945.

D. leptalea Ohwi

Asia, Japan. See *Acta Phytotaxonomica et Geobotanica* 11(1): 31. 1942.

D. leptalea Ohwi var. *reticulmis* Ohwi

Asia, Japan, Taiwan. See *Acta Phytotaxonomica et Geobotanica* 11(1): 31. 1942.

D. leptorrhachis (Pilg.) Stapf (*Digitaria bredoensis* Robyns & Van der Veken; *Digitaria chevalieri* Stapf; *Digitaria leptorrhachis* (Pilg.) Stapf; *Digitaria nigritianum* (Hack.) Stapf; *Digitaria richardsonii* Mez; *Panicum leptorrhachis* Pilg.; *Panicum nigritianum* Hack., nom. illeg., non *Panicum nigritianum* Hack. ex T. Durand & Schinz)

Africa, Tanzania, Nigeria, Sudan, Mali. Annual or short-lived perennial, cup-shaped, decumbent, wiry, ascending, culms rooting at the lower nodes, leaf sheaths pubescent, edible seeds, weed of irrigation, good forage when young, found in moist areas, bottomland, loam, sandy soils, black loamy sand, under trees, damp waste places, roadsides, farmland, see William Balfour Baikie, *Narrative of an Exploring Voyage up the Rivers Kwora and Binue — Commonly Known as the Niger and Tsadda — in 1854*. London 1856, Samuel Crowther [Missionary Bishop of the Niger Territory] and John Christopher Taylor, *Niger Expedition of 1857-1859*. 1859 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 119. 1901, *Österreichische Botanische Zeitschrift* 51: 293. 1901, *Flora of Tropical Africa* 9: 458, 462-463. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 193. 1921, *Bulletin du Jardin Botanique de l'État* 22: 146. 1952, Ernest W. Marwick, William Balfour Baikie: *Explorer of the Niger: A Centenary Survey*. Kirkwall 1965, F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 6, 8. Utrecht 1971.

in Ivory Coast: koronemi

in Nigeria: geroreje, ilanwode

D. leucites (Trin.) Henrard (*Digitaria distans* (Chase) Fernald; *Digitaria leucites* var. *glabella* (Chase) Henrard; *Digitaria leucites* var. *leucites*; *Digitaria panicea* (Sw.) Urb.; *Digitaria velutina* (DC.) Hitchc., nom. illeg., non *Digitaria velutina* (Forssk.) P. Beauv.; *Milium filiforme* Lag.; *Milium filiforme* Roxb., nom. illeg., non *Milium filiforme* Lag.; *Milium paniceum* Sw.; *Milium velutinum* DC.; *Panicum leucites* Trin.; *Paspalum velutinum* (DC.) Kunth; *Syntherisma distans* Chase; *Syntherisma velutina* (DC.) Chase; *Syntherisma velutina* subsp. *glabella* Chase; *Syntherisma velutina* subsp. *velutina*)

Asia, America. Erect, stoloniferous, creeping, fodder, pasture ground, see *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Catalogus plantarum horti botanici monspeliensis* 126. 1813, *Genera et species plantarum* 2. 1816, *Flora Indica; or Descriptions ...* 1: 317. 1820, *De Graminibus Paniceis* 85. 1826, *Révision des Graminées* 1: 27. 1829 and *Proceedings of the Biological Society of Washington* 19(34): 191. 1906, *Contributions from the United*

States National Herbarium 17(3): 220. 1913, *Rhodora* 22(258): 103. 1920, *Symbolae Antillarum* 8: 23. 1920, *Proceedings of the Biological Society of Washington* 40: 84. 1927, *Mededeelingen van's Rijks-Herbarium* 61: 6. 1930, *Monograph of the Genus Digitaria* 395. 1950.

in Mexico: pasto

D. leucocoma (Nash) Urb. (*Digitaria villosa* (Walter) Pers.; *Panicum leucocomum* (Nash) Scribn.; *Syntherisma leucocoma* Nash; *Syntherisma villosa* Walter)

America, U.S. See *Flora Caroliniana, secundum ...* 77. 1788, *Syn. Pl.* 1: 85. 1805, *Bulletin of the Torrey Botanical Club* 25: 295. 1898, *Bulletin, Division of Agrostology United States Department of Agriculture* edition 2, 7: 58. 1898 and *Symbolae Antillarum* 8: 24. 1920.

D. leucostachya (Domin) Henrard (*Digitaria leucostachya* (Domin) Vickery, nom. illeg., non *Digitaria leucostachya* (Domin) Henrard; *Panicum leucostachyum* Domin)

Queensland, New South Wales, Northern Territory. Perennial, caespitose, pedicellate spikelets in pairs, spikelets densely silky hairy, lower glume minute or absent, upper glume densely silky, sterile lemma densely silky, fertile floret acuminate and dark, sandy soils, coastal areas, see *Bibliotheca Botanica* 85: 299. 1915, *Monograph of the Genus Digitaria* 399. 1950, *Contributions from the New South Wales National Herbarium* 1(6): 324. 1950 [1951], *Brunonia* 7: 131-216. 1983.

D. linearis (L.) Pers. (*Agrostis linearis* Retz.; *Digitaria linearis* (Krock.) Waga ex Rostaf.; *Digitaria linearis* Krock. ex Crép., nom. illeg., non *Digitaria linearis* (L.) Pers.; *Digitaria linearis* (Retz.) Spreng.; *Digitaria linearis* Schult.f.; *Panicum lineare* Krock., nom. illeg., non *Panicum lineare* L.; *Panicum lineare* L.; *Syntherisma linearis* Nash)

America, Europe. See *Species Plantarum, Editio Secunda* 85. 1762, *Observationes Botanicae* 4: 19. 1786, *Flora Silesiaca* 1: 95. 1787, *Syn. Pl.* 1: 85. 1805, *Systema Vegetabilium, editio decima sexta* 1: 271. 1825, *Manual de la Flore de Belgique (éd. 2)* 335. 1866, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 22: 99. 1872, *Bulletin of the Torrey Botanical Club* 22(10): 420. 1895, *Synopsis der mitteleuropäischen Flora* 2: 67. 1899 and *Acta Soc. Sci. Nat. Morav.* 2: 744. 1926.

D. livida Henrard

Africa, Zimbabwe. See *Blumea* 1(1): 101. 1934.

D. lomanensis Mez (*Digitaria brazzae* (Franch.) Stapf; *Panicum brazzae* Franch.)

Africa. See *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 354. 1895 and *Flora of Tropical Africa* 9: 447. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 192. 1921.

D. longiflora (Retz.) Pers. (*Agrostis lenta* Sol. ex Aiton; *Digitaria caespitosa* Ridl.; *Digitaria corradii* Chiov. ex Chiarugi; *Digitaria curvipes* Mez; *Digitaria eriolepis* Hen-

rard; *Digitaria filiculmis* (Nees ex Miq.) Ohwi; *Digitaria flexilis* Henrard; *Digitaria friesii* Pilg.; *Digitaria fuscescens* (J. Presl) Henrard; *Digitaria fuscescens* (J. Presl) J.W. Moore, nom. illeg., non *Digitaria fuscescens* (J. Presl) Henrard; *Digitaria hatusimae* Ohwi; *Digitaria linearis* Schult.f.; *Digitaria longiflora* Hack. ex Henrard, nom. illeg., non *Digitaria longiflora* (Retz.) Pers.; *Digitaria longiflora* var. *prorepens* Henrard; *Digitaria malesiae* Ohwi; *Digitaria oblongo-ovata* Ohwi; *Digitaria preslii* (Kunth) Henrard; *Digitaria preslii* var. *glabrata* Henrard; *Digitaria propinqua* (R. Br.) P. Beauv.; *Digitaria propinqua* Gaudich., nom. illeg., non *Digitaria propinqua* (R. Br.) P. Beauv.; *Digitaria pseudo-durva* var. *minus* (Nees) Miq.; *Digitaria roxburghii* Spreng.; *Digitaria speciosa* Henrard; *Digitaria tenuiflora* (R. Br.) P. Beauv.; *Digitaria tenuiflora* Stapf; *Milium filiforme* Roxb., nom. illeg., non *Milium filiforme* Lag.; *Panicum argyrotrichum* T. Durand & Schinz; *Panicum longiflorum* (Retz.) J.G. Gmel.; *Panicum parvulum* Trin.; *Panicum propinquum* R. Br.; *Panicum pseudo-durva* Nees; *Panicum pseudo-durva* var. *gracillimum* Nees; *Panicum pseudo-durva* var. *minus* Nees; *Panicum tenuiflorum* R. Br.; *Paspalum bifarium* Edgew.; *Paspalum brevifolium* Fluegge; *Paspalum brevifolium* var. *propinquum* (R. Br.) Benth.; *Paspalum filiculme* Nees ex Miq.; *Paspalum filiculme* Nees ex Thwaites; *Paspalum fuscescens* J. Presl; *Paspalum longiflorum* Retz.; *Paspalum nematodes* Schult.f.; *Paspalum preslii* Kunth; *Paspalum pubescens* J. Presl, nom. illeg., non *Paspalum pubescens* Muhl. ex Willd.; *Syntherisma fuscescens* (J. Presl) Scribn.; *Syntherisma longiflora* (Retz.) Skeels; *Syntherisma pubescens* (J. Presl) Scribn.)

Pantropical. Annual or short-lived perennial, blue-green, woody base, erect or decumbent, erect or prostrate and creeping, compact turf forming, stoloniferous with widely creeping stolons, without rhizomes, more or less smooth or hairy leaf sheaths, leaves linear to lanceolate and acute, digitately arranged curved racemes on a winged rachis, spikelets pubescent borne in triplets or in pairs, lower glume absent or minute or vestigial, upper glume pubescent and sharply pointed, sterile lemma hairy, upper lemma gray or pallid, palea with hairy margin, grain sometimes used as a famine food, good fodder grass, native pasture species, used for plaiting, naturalized, ornamental, ruderal, common lawn weed species, a weed of cultivation, a pioneer on moist sandy to rocky soils, a grass of open land, pasture ground, dunes, open habitats, sandy soils, disturbed areas, fallows, roadsides, waste places, moist fields borders, see *Observationes Botanicae* 4: 15. 1786, *Hortus Kewensis; or, a Catalogue ... The second edition* 1: 96. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 158. 1791, *Syn. Pl.* 85. 1805, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 150. 1810, *Prodromus Florae Novae Hollandiae* 193. 1810, *Essai d'une Nouvelle Agrostographie* 51, 160, 171. 1812, *Flora Indica; or Descriptions*

... 1: 317. 1820, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 1: 410. 1826, *Reliquiae Haenkeanae* 1(4-5): 213-214. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 47. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 205. 1834, *Florae Africae Australioris Illustrationes Monographicae* 21, 117. 1841, *Journal of the Asiatic Society of Bengal* 21: 157. 1852, *Flora van Nederlandsch Indië* 3: 439. 1857, *Enumeratio Plantarum Zeylaniae* 358. 1864, *Prolusio florae japonicae* 2: 274 [162]. 1867, *Flora Australiensis: A Description ...* 7: 461. 1878, *Annual Report of the Missouri Botanical Garden* 10: 49-50, t. 10. 1899 and U.S. Department of Agriculture Bureau of Plant Industry *Bulletin* 261: 30. 1912, *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 200. 1915, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *The Flora of the Malay Peninsula* 5: 215. 1925, *Contr. U.S. Natl. Herb.* 24(8): 427. 1927, *Mededeelingen van 's Rijks-Herbarium* 61: 8. 1930, *Bernice P. Bishop Museum Bulletin* 102: 19. 1933, *Botanical Magazine* (Tokyo) 55: 543. 1941, *Acta Phytotaxonomica et Geobotanica* 11: 32. 1942, *Bulletin of the Tokyo Science Museum* 18: 6-7. 1947, *Monograph of the Genus Digitaria* 258, 589, 591, 819, 824, 837, 875, 879-881. 1950, *Webbia* 8: 68. 1951, *Grasses of Burma ...* 302. 1960, *Blumea* 21: 64, 67. 1973, *Flora of Tropical East Africa* 451-898. 1982, *Flora Mesoamericana* 6: 365-371. 1994.

in English: false couch finger grass, Indian crab grass, wire crab grass

in French: fonio, fonio sauvage

in Gambia: findo, projajawo

in Guinea: egwereb, funyeriti

in Guinea-Bissau: buaede, curè, djadje, djadje maudo, djadjeo, fonio tcholi, fundo, fundo bravo, guarcam, iete, imbilo, obife, oife, pebife, upadja, ura

in Mali: saana voonu ana

in Nigeria: eran, harkiya, harkiyani zomo

in Senegal: egreb, fini, fono, nyalendi

in Sierra Leone: fuine, ndiwi, ndiwo, ngokagbu, nyina-voni, puwe

in Togo: epik, impwi, ipwi

in Upper Volta: mobi

in Yoruba: eran

in India: doddakki hullu, kanka jariya, pakuru gaddi, tapari hullu, thapari hullu

D. lunularis Henrard (*Digitaria comifera* Pilg.)

Africa. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 708. 1942, *Monograph of the Genus Digitaria* 414. 1950.

D. macractinia (Benth.) Hughes (*Digitaria divaricatissima* (R. Br.) Hughes; *Leptoloma macractinia* (Benth.) Chase; *Panicum divaricatissimum* R. Br.; *anicum divaricatissimum* var. *macractinia* (Benth.) Domin; *Panicum macractinium* Benth.)

Australia. See *Prodromus Florae Novae Hollandiae* 192. 1810, *Flora Australiensis: A Description ...* 7: 468. 1878 and *Proceedings of the Biological Society of Washington* 19(34): 192. 1906, *Bibliotheca Botanica* 85: 293. 1915, *Bulletin of Miscellaneous Information Kew* 1923(9): 314. 1923, *Monograph of the Genus Digitaria* 830-831, 865. 1950, *Brunonia* 7: 131-216. 1983.

D. macroblephara (Hack.) Stapf (*Digitaria brevipes* Mez; *Digitaria macroblephara* (Hack.) Paoli; *Panicum macroblepharum* Hack.)

Tropical Africa, Kenya, Sudan, Uganda, Tanzania. Perennial, knotty rootstock, basal sheaths silky, nodes villous to pilose, leaves linear, racemes digitate or subdigitate, spikelets loosely paired, lower glume a scale, upper glume villous to pilose, lower lemma silky, high value grazing grass, drought-resistant, grows in arid and semiarid areas, low deciduous bushland, see *Mémoires de l'Herbier Boissier* 20: 7. 1900, *Miss. Somal. Ital. Merid.* 1913: 245. 1916, *Flora of Tropical Africa* 9: 434. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 194. 1921.

in English: couch grass

D. macroglossa Henrard (*Digitaria littoralis* Salisb.; *Digitaria littoralis* Stent, nom. illeg., non *Digitaria littoralis* Salisb.; *Digitaria natalensis* Stent)

South Africa. See *Prodr. Stirp. Chap. Allerton* 19. 1796 and *Bothalia* 3(1): 152-153. 1930, *Monograph of the Genus Digitaria* 404, 406, 419. 1950.

D. madagascariensis Bosser

Madagascar. See *Adansonia sér.* 2, 8: 518. 1968.

D. magna (Honda) Tuyama (*Digitaria magna* (Honda) Honda; *Digitaria mollicoma* (Kunth) Henrard; *Panicum hayatae* var. *magnum* (Honda) Makino & Nemoto; *Paspalum mollicomun* Kunth; *Syntherisma hayatae* var. *magna* Honda; *Syntherisma magna* (Honda) Honda; *Syntherisma magna* (Honda) Honda)

Japan. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 47. 1833 and *Botanical Magazine* 38: 128. 1924, *Flora of Japan* 1472. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 294-295. 1930, *Blumea* 1(1): 97. 1934, *Journal of Japanese Botany* 18(1): 13-14. 1942, *Botanical Magazine* (Tokyo) 56: 14. 1942.

D. maitlandii Stapf & C.E. Hubb. (*Digitaria apiculata* Stent; *Digitaria apiculata* var. *hirta* Goetgh.; *Digitaria ken-*

iensis Pilg.; *Digitaria maitlandii* var. *glabra* Van der Veken) (dedicated to the Kew gardener Thomas Douglas Maitland, 1885-1976, traveler, botanical collector in Africa, W. Cameroon and S. Nigeria (Lagos, Calabar), Uganda; see F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 53. 1971; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 1-110. Paris 1968; F. Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*, (A.E.T.F.A.T.). 69-75. Lisbon 1962; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 463. London 1994) Zambia, South Africa. Perennial, tufted, unbranched, branched rhizome absent, leaf blade flattened and hairy, racemes arranged semidigitately, purplish or dark spikelets in groups of three, weedy, usually in mountainous grassland, abandoned fields, cultivated fields, along trails, on slopes, on loamy soils, see *Bulletin of Miscellaneous Information Kew* 1927: 266. 1927, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(93): 267. 1928, *Bothalia* 3: 155. 1930, *Bulletin du Jardin Botanique National de Belgique* 32: 127. 1932, *Bulletin du Jardin Botanique National de Belgique* 45(3-4): 401. 1975.

in English: Drakensberg finger grass

in South Africa: Drakensberg-vingergras

D. malacophylla (Hitchc.) Henrard (*Digitaria cuyabensis* (Trin.) Parodi; *Digitaria lanuginosa* (Nees) Henrard; *Panicum cuyabense* Trin.; *Paspalus lanuginosus* Nees; *Syntherisma malacophylla* Hitchc.)

South America. Sandy areas, see *Flora Brasiliensis seu Enumeratio Plantarum* 63. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 206. 1834 and *Contributions from the United States National Herbarium* 22(6): 466, f. 79. 1922, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 378. 1926, *Mededeelingen van 's Rijks-Herbarium* 61: 4-5. 1930.

D. maniculata Stapf

Tropical Africa, Namibia. Annual, rooting from the lower nodes, spikelets paired, lower glume completely clasping the spikelet, usually in sandy soils, sandy flats near the rivers or streams, see *Flora of Tropical Africa* 9: 466. 1919.

D. marginalis Kunth ex Henrard

Asia. See *Monograph of the Genus Digitaria* 429. 1950.

D. marginata Link (*Digitaria adscendens* (Kunth) Henrard; *Digitaria adscendens* var. *adscendens*; *Digitaria cayoensis* Swallen; *Digitaria ciliaris* (Retz.) Koeler; *Digitaria sanguinalis* (L.) Scop.; *Panicum adscendens* Kunth; *Panicum sanguinale* L.; *Syntherisma sanguinalis* (L.) Dulac)

South America. See *Species Plantarum* 1: 57. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Observationes*

Botanicae 4: 16. 1786, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816], *Enumeratio Plantarum Horti Regii Bero-linensis Altera* 1: 102. 1821, *Hortus Regius Botanicus Bero-linensis* 1: 226. 1827, *Flore du Département des Hautes-Pyrénées* 77. 1867, *The Flora of British India* 7: 15. 1896 and *Flora of Tropical Africa* 9: 440-441. 1919, *Observationes Botanicae* 7: 401. 1922, *The Flora of the Malay Peninsula* 5: 214. 1925, *Blumea* 1(1): 92. 1934, *Journal of the Washington Academy of Sciences* 28(1): 8. 1938, *Fieldiana, Botany* 24(2): 38-331. 1955.

in English: finger-grass

D. marianensis Mez (*Digitaria latronum* Henrard; *Digitaria mariannensis* Merr., nom. illeg., non *Digitaria mariannensis* Mez; *Digitaria mezii* (Mez) Kaneh.)

Pacific. See *Flora Micronesica* 401. 1933, *Blumea* 1(1): 97. 1934, *Blumea* 21(1): 1-80. 1973.

D. mariannensis Merr. (*Digitaria kangeanensis* Ohwi; *Digitaria pectinata* Henrard; *Digitaria virens* Ridl.; *Digitaria virens* subsp. *pectinata* (Henrard) Henrard; *Syntherisma mariannensis* (Merr.) Hosok.; *Syntherisma mezii* (Merr.) Hosok.)

Philippines, Australia. Fine grass, see *Philippine Journal of Science* 9: 54. 1914, *Bulletin of Miscellaneous Information Kew* 1926: 478. 1926, *Mededeelingen van 's Rijks-Herbarium* 61: 19. 1930, *J. Soc. Trop. Agric. Taiwan* 6: 664. 1934, *Transactions of the Natural History Society of Taiwan* 24: 198. 1934, *Bulletin of the Tokyo Science Museum* 18: 6. 1947, *Monograph of the Genus Digitaria* 533. 1950, *Blumea* 21(1): 1-80. 1973.

D. mattogrossensis (Pilg.) Henrard (*Digitaria corynotricha* (Hack.) Henrard; *Panicum adustum* var. *mattogrossensis* Pilg.; *Panicum corynotrichum* Hack.)

South America. See *Österreichische Botanische Zeitschrift* 51: 335. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 131. 1901, *Mededeelingen van 's Rijks-Herbarium* 61: 1-2. 1930.

D. megapotamica Mez (*Panicum elephantipes* Nees, nom. illeg., non *Panicum elephantipes* Nees ex Trin.; *Panicum elephantipes* Nees ex Trin.)

South America. See *De Graminibus Panicis* 206. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 165. 1829 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 7. 1921, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Darwiniana* 29: 289-370. 1989, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

D. microbachne (J. Presl) Henrard (*Digitaria horizontalis* Ohwi; *Digitaria lanosa* Llanos; *Digitaria setigera* Roth; *Digitaria subhorizontalis* Ohwi; *Panicum microbachne* J.

Presl; *Panicum sanguinale* var. *microbachne* (J. Presl) Hack.; *Syntherisma microbachne* (J. Presl) Hitchc.)

Asia, Philippines. See *Species Plantarum* 1: 57. 1753, *Systema Vegetabilium* 2: 474. 1817, *Reliquiae Haenkeanae* 1(4-5): 298. 1830, *Fragmenta Florae Philippinae* 28. 1851, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 13(2): 259. 1890 and *Memoirs of the Bernice Pauahi Bishop Museum* 8(3): 177. 1922, *Mededeelingen van's Rijks-Herbarium* 61: 13. 1930, *Botanical Magazine* (Tokyo) 55: 541. 1941, *Acta Phytotaxonomica et Geobotanica* 11: 261. 1942, *J. Arnold Arbor.* 29: 292. 1948, *Monograph of the Genus Digitaria* 452, 454, 945. 1950.

D. milanjana (Rendle) Stapf (*Digitaria boivini* Henrard; *Digitaria bulbosa* (Henrard) Peter; *Digitaria endlichii* Mez; *Digitaria endlichii* subsp. *meziana* Henrard; *Digitaria exasperata* Henrard; *Digitaria fusca* Chiov.; *Digitaria gallaensis* Chiov.; *Digitaria gracilentia* Henrard; *Digitaria kilimandscharica* Mez; *Digitaria milanjana* subsp. *eylesi-ana* Henrard; *Digitaria milanjana* var. *abscondita* Henrard; *Digitaria mombasana* C.E. Hubb.; *Digitaria polevansii* subsp. *peteriana* (Peter) Henrard; *Digitaria setivalva* Stent; *Digitaria stapfii* Henrard; *Digitaria swynnertonii* Rendle; *Panicum milanjanum* Rendle; *Panicum sanguinale* var. *scabriglume* Hack.) (*Digitaria boivini* Henrard dedicated to the French botanist Louis Hyacinthe Boivin, 1808-1852 (Brest), traveler and plant collector (islands of the Indian Ocean and coasts of Africa, Canary Islands); see F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 11. 1971; J.H. Barnhart, *Biographical notes upon botanists*. 1: 212. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Mary Gunn & Leslie Edward W. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement II*. 286-287. Königstein 1993; Mary Wilkins Ellert, in *Cactus and Succulent Journal*. vol. 68(2): 88-91. 1996)

Tropical and subtropical Africa. Perennial or annual, variable, vigorous, erect or geniculately ascending, creeping and ascending, straight, tufted to loosely tufted, strongly stoloniferous, long mauvish colored stolons, rhizomatous with branched rhizomes elongate, dense foliage, basal sheaths glabrous to hairy, leaves rough and linear, racemes digitate or subdigitate, pubescent to rough spikelets in pairs, triquetrous winged rachis, lower glume ovate, upper glume nerved and ciliate, spiny bristles on the lemmas present or absent, nerves of the lower lemma scaberulous, grains eaten by baboons, stock fodder, very high grazing value, highly palatable, natural pasture, forage, suitable for horses and cattle, economic plant, requires moist conditions, prefers fertile soils, it does not tolerate waterlogging, naturalized,

coloniser, a weed of cultivation, excellent drought resistance, persistent under heavy grazing, usually found in small patches among trees, occurs on red soil stream banks, woodland and thicket, open spaces, irrigated land, on heavy black seasonally waterlogged soils, seasonally waterlogged grassland, mixed deciduous woodland, sandy soils, on moist sandy soils, disturbed areas and abandoned cultivations, related to *Digitaria eriantha* Steudel, see *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 78: 399. 1905, *Journal of the Linnean Society, Botany* 40: 227, t. 6, f. 6-10. 1911, *Resultati scientifici della Missione Stefanini-Paoli nella Somalia italiana. Vol. 1. Le collezioni botaniche* ... 226. Firenze 1916, *Flora of Tropical Africa* 9: 430. 1919, *Nuovo Giornale Botanico Italiano, n.s.* 26: 62. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 194. 1921, *Bothalia* 1: 268, t. 6. 1924, *Bulletin of Miscellaneous Information Kew* 1926: 247, f. 4. 1926, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 208. 1930, *Blumea* 1(1): 93. 1934, *Monograph of the Genus Digitaria* 79, 101, 236, 296, 458-459, 580, 705. 1950, J.B. Hacker, M.H. Andrew, J.G. McIvor and J.J. Mott, "Evaluation in contrasting climates of dormancy characteristics of seed of *Digitaria milanjana*." *Journal of Applied Ecology* 21(3): 961-969. 1984, W.M. Musila, J.I. Kinyamario and P.D. Jungerius, "Vegetation dynamics of coastal sand dunes near Malindi, Kenya." *African Journal of Ecology* 39(2): 170-177. June 2001, *Journal of Agronomy and Crop Science* 187(4): 259-267. Dec 2001, Shimane W. Makhabu, Balisana Marotsi and J. Perkins, "Vegetation gradients around artificial water points in the Central Kalahari Game Reserve of Botswana." *African Journal of Ecology* 40(2): 103-109. June 2002, *Journal of Applied Ecology* 40(1): 137-149. Feb 2003 [Long-term, livestock-mediated redistribution of nitrogen and phosphorus in an East African savannah.], *Journal of Applied Ecology* 40(3): 430-444. June 2003 [The impact of cattle ranching on large-scale vegetation patterns in a coastal savannah in Tanzania.], *Journal of Applied Ecology* 41(1): 45-58. Feb 2004. [Regulation of shrub dynamics by native browsing ungulates on East African rangeland.]

in English: Makarikari finger grass, Milanje finger grass, woolly finger grass, digit grass, Jarra digit grass, Jarra grass, Madagascar crab grass, Milanje grass

in Spanish: milanjana

in Thailand: ya mardi digit

in South Africa: Makarikari vingergras, Milanje vingergras, panvingergras

in Tropical Africa: kakondo ka uffele

D. milanjana (Rendle) Stapf var. *abscondita* Henrard

Tropical Africa. See *Monograph of the Genus Digitaria* 79, 101, 236, 296, 458-459, 580, 705. 1950.

D. minima R.D. Webster

Australia. Coastal dunes, sandy places, see *Brunonia* 6(2): 192. 1984.

D. mollicoma (Kunth) Henrard (*Digitaria elevatovenulosa* Ohwi; *Digitaria elevatovenulosa* var. *glabra* Ohwi; *Digitaria hayatae* (Honda) Honda ex Ohwi; *Digitaria hayatae* Honda; *Digitaria magna* (Honda) Tuyama; *Digitaria magna* (Honda) Honda; *Digitaria mollicoma* var. *mollicoma*; *Panicum hayatae* (Honda) Makino & Nemoto, nom. illeg., non *Panicum hayatae* Camus; *Panicum hayatae* var. *magnum* (Honda) Makino & Nemoto; *Paspalum molle* J. Presl, nom. illeg., non *Paspalum molle* Poir.; *Paspalum mollicomun* Kunth; *Syntherisma hayatae* Honda; *Syntherisma hayatae* var. *magna* Honda; *Syntherisma magna* (Honda) Honda; *Syntherisma magna* (Honda) Honda; *Syntherisma molle* (J. Presl) Scribn.)

Asia. See *Reliquiae Haenkeanae* 1(4-5): 213. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 47. 1833, *Annual Report of the Missouri Botanical Garden* 10: 50. 1899 and *Botanical Magazine* 38: 128. 1924, *Flora Japonica* 1472. 1925 [also *Flora of Japan*], *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 291, 294-295. 1930, *Blumea* 1(1): 97. 1934, *Acta Phytotaxonomica et Geobotanica* 11(1): 30. 1942, *Bot. Mag. Tokyo* 56: 14. 1942, *Journal of Japanese Botany* 18(1): 13. 1942, *Bulletin of the Tokyo Science Museum* 18: 6. 1947, *Monograph of the Genus Digitaria* 819, 877. 1950.

D. mombasana C.E. Hubb. (*Digitaria milaniana* (Rendle) Stapf; *Panicum milanianum* Rendle)

Tropical Africa. Moist sandy soils, see *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Flora of Tropical Africa* 9: 430. 1919, *Bulletin of Miscellaneous Information Kew* 1926: 247, f. 4. 1926.

D. moninensis Rendle (*Digitaria brazzae* (Franch.) Stapf; *Panicum brazzae* Franch.)

Angola. See *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 354. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2: 164. 1899 and *Flora of Tropical Africa* 9: 447. 1919.

D. monobotrys (Veken) Clayton (*Digitariopsis monobotrys* Van der Veken)

Africa, Tanzania. Indeterminate species, see *Bulletin du Jardin Botanique de l'État* 27: 729. 1957, *Kew Bulletin* 29(3): 524. 1974.

D. monodactyla (Nees) Stapf (*Digitaria monodactyla* var. *explicata* Stapf; *Digitaria monodactyla* var. *monodactyla*; *Panicum monodactylum* Nees)

Tropical Africa, Tanzania, South Africa, Zimbabwe, Swaziland. Perennial, densely tufted, culms with hairy cataphylls, leaf sheath round, ligule a short papery membrane, leaf blade hairy or glabrous, solitary spike-like raceme straight when mature, spikelets paired, upper glume and

lower lemma with yellow hairs, upper lemma not black at maturity, well grazed, low grazing value, relatively palatable, common in open sour grassland, highland sourveld, mixed bushveld, open habitats, in disturbed areas, on sour sandveld, savannah, in stable grassland, sandy soil, on moist soils, on shallow sandy poorly-drained soils, see *Flora Africae Australioris Illustrationes Monographicae* 21. 1841, *Flora Capensis* 7: 373. 1898 and *Flora of Tropical Africa* 9: 442. 1919, *African Journal of Ecology* 37(2): 168-179, 194-201. June 1999, *African Journal of Ecology* 38(1): 31-37. Mar 2000, *African Journal of Ecology* 39(3): 313-316. Sep 2001, *African Journal of Ecology* 40(1): 100-102. Mar 2002.

in English: one-finger grass

in Southern Africa: eenvingergras; bohobe-ba-linonyana, bohobe-ba-dinonyana (Sotho)

D. monopholis Clayton

Africa, Tanzania. Indeterminate species, see *Kew Bulletin* 29(3): 524. 1974.

D. multiflora Swallen

Belize, Nicaragua. Rare, see *Journal of the Washington Academy of Sciences* 28(1): 7-8. 1938.

D. myriostachya (Hack.) Henrard (*Panicum myriostachyum* Hack.)

Asia. See *Österreichische Botanische Zeitschrift* 51: 294. 1901, *Mededeelingen van 's Rijks-Herbarium* 61: 5. 1930.

D. myurus Stapf

Africa, Tanzania. Indeterminate species, see *Flora of Tropical Africa* 9: 477. 1919.

D. nardifolia Stapf (*Digitaria setifolia* Stapf; *Panicum fibrosum* Hack.)

Tropical Africa, Guinea. See *Flora Capensis* 7: 376. 1898 and *Österreichische Botanische Zeitschrift* 51(9): 330. 1901, *Flora of Tropical Africa* 9: 444. 1919.

D. natalensis Stent (*Digitaria littoralis* Salisb.; *Digitaria littoralis* Stent, nom. illeg., non *Digitaria littoralis* Salisb.; *Digitaria littoralis* sensu Stent, non Salisb. var. *prostrata* Stent; *Digitaria macroglossa* Henr.; *Digitaria macroglossa* Henrard var. *prostrata* (Stent) Henr.; *Digitaria natalensis* subsp. *stentiana* Henrard; *Digitaria rigida* Stent)

Mozambique, South Africa, Namibia, Swaziland. Perennial, tufted, rhizomatous with knotty rhizomes, lower leaf sheaths rusty brown, ligule membranous, racemes digitate, subtropical, thornveld, sandy places, see *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 19. Londini [London] (Nov-Dec) 1796 and *Bothalia* 3: 151-153. 1930, *Blumea* 1(1): 93. 1934, *Monograph of the Genus Digitaria* 419. 1950, *African Journal of Ecology* 38(1): 31-37. Mar 2000, *African Journal of Ecology* 39(2): 170-177. June 2001 [Vegetation dynamics of coastal sand dunes near Malindi, Kenya.], *African Journal of Ecology* 41(1): 45-48. Feb

2004. [Regulation of shrub dynamics by native browsing ungulates on East African rangeland.]

in English: prostrate coast finger grass, coast finger grass
in South Africa: kruipkusvingergras, strandveldvingergras

D. nealleyi Henrard (*Digitaria sanguinalis* (L.) Scop.)

Africa. See *Species Plantarum* 1: 57. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1771 and *Blumea* 1(1): 94. 1934.

D. neesiana Henr. (*Digitaria neesiana* (Nees) Henrard; *Panicum vestitum* Kunth; *Trichachne velutina* Nees; *Trichachne vestita* (Kunth) Kuhlmann.; *Valota vestita* (Kunth) Kuhlmann.)

Brazil. Pilose leaf blades linear or filiform, similar to *Digitaria phaeothrix* (Trin.) Parodi, *Digitaria enodis* (Hack.) Parodi and *Digitaria dusenii* Chase ex Renv., see *Révision des Graminées* 1: 39. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 90. 1829 and *Blumea* 1(1): 99. 1934, *Comissão de Linhas Telegráficas Estratégicas de Matto Grosso ao Amazonas, Botanica* 11: 40-41, 47, 93. 1922, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

D. nematostachya (F.M. Bailey) Henrard (*Panicum nematostachyum* F.M. Bailey)

Australia. See *Queensland Botanical Bulletin* 16: 2. 1903, *Monograph of the Genus Digitaria* 487. 1950, *Brunonia* 7: 131-216. 1983.

D. nemoralis Henrard

Tropics, Zimbabwe. See *Monograph of the Genus Digitaria* 488. 1950.

D. nigritianum (Hack.) Stapf (*Digitaria leptorhachis* (Pilg.) Stapf; *Panicum nigritianum* Hack.)

Tropical Africa. See *Österreichische Botanische Zeitschrift* 51: 293. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 119. 1901, *Flora of Tropical Africa* 9: 462-463. 1919.

D. nodosa Parlatores (*Digitaria commutata* subsp. *nodosa* (Parl.) Maire; *Digitaria eriantha* auct. non Steud.; *Digitaria parlatoresii* (Steud.) Chiovenda; *Digitaria pirifera* (Chiov.) Henrard; *Digitaria pirifera* Chiov.; *Panicum commutatum* var. *nodosum* (Parl.) Hack. ex T. Durand & Schinz; *Panicum pabulare* Aitch. & Hemsl.; *Panicum parlatoresii* Steud.; *Panicum piriferum* Chiov.; *Paspalum sanguinale* var. *pabulare* (Aitch. & Hemsl.) Hook.f.; *Syntherisma nodosa* (Parl.) Newbold)

Tropical Africa, Kenya, Ethiopia, Somalia, Tanzania, Canary Islands, Yemen, Pakistan. Perennial, variable, erect, swollen and bulbous at the base, tufted, rhizomes absent, nodes glabrous, basal sheaths silky, linear leaves usually glabrous, racemes digitate or subdigitate, spikelets elliptic silky pubescent, lower glume a scale, upper glume hairy, lower lemma villous, found on sandy light-orange soil, dry stony hills, stabilized or fixed dunes, often confused with

Digitaria macroblephara (Hack.) Stapf, see *Plantae Novae vel Minus Notae opusculis diversis olim descriptae generibus quibusdam speciebusque novis adjectis iterum recognitae* ... 39. Parisiis 1842, *Synopsis Plantarum Glumacearum* 1: 40. 1855 [1853], *Journal of the Linnean Society, Botany* 19: 190. 1882, *Conspectus Florae Africae* 5: 744. 1894, *The Flora of British India* 7: 15. 1896 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 295-296. 1908, *Annali di Botanica* 13: 41. 1914, *Resultati Scientifici della Missione Stefanini-Paoli nella Somalia Italiana* 225. 1916, *Torreya* 24: 9. 1924, *Monograph of the Genus Digitaria* 568. 1950, *Flore de l'Afrique du Nord* 1: 301. 1952.

D. nuda Schumacher (*Agrostis digitata* (Sw.) Poir., nom. illeg., non *Agrostis digitata* Lam.; *Axonopus digitatus* (Sw.) P. Beauv.; *Digitaria adscendens* (Kunth) Henrard; *Digitaria adscendens* var. *rachiseta* Henrard; *Digitaria borbonica* Desv.; *Digitaria diamesa* (Steud.) A. Chev.; *Digitaria diamesum* (Steud.) Henrard; *Digitaria digitata* (Sw.) Urb., nom. illeg., non *Digitaria digitata* Büse; *Digitaria jamaicensis* Spreng.; *Digitaria nuda* subsp. *schumacheriana* Henrard; *Milium digitatum* Sw.; *Panicum diamesum* Steud.; *Panicum digitatum* Asch. & Graebn., nom. illeg., non *Panicum digitatum* Gilib.; *Panicum horizontale* var. *subcompositum* Nees; *Panicum sanguinale* L.; *Panicum sanguinale* var. *digitatum* (Sw.) Hack. ex Urb.; *Paspalum digitatum* (Sw.) Kunth; *Syntherisma digitata* (Sw.) A.S. Hitchc.)

Tropical Africa, Benin, Asia. Annual, tufted, decumbent at the base, geniculate and ascending, rooting from the lower nodes, racemes digitate or subdigitate, lower glume absent or reduced to a minute rim, grain used as a famine food, weed species, good stock grass, good pasture, hay, found in open habitats, disturbed areas, lawns, along rivers, sandy sites, arable land, waste places, farmland, irrigated fields, see *Species Plantarum* 1: 57. 1753, *Nova Genera et Species Plantarum seu Prodrum* 24. 1788, *Encyclopédie Méthodique, Botanique Suppl.* 1: 258. 1810, *Essai d'une Nouvelle Agrostographie* 12, 154, 167. 1812, *Systema Vegetabilium, editio decima sexta* 1: 272. 1825, *Beskrivelse af Guineiske planter* 45. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 65. 1828, *Révision des Graminées* 1: 24. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 167. 1831, *Florae Africae Australioris Illustrationes Monographicae* 24. 1841, *Synopsis Plantarum Glumacearum* 1: 42. 1853 and *Symbolae Antillarum* 4: 86. 1903, *Contributions from the United States National Herbarium* 12(3): 142. 1908, *Synopsis der mitteleuropäischen Flora* 2(1): 112. 1920, *Symbolae Antillarum* 8: 24. 1920, *Blumea* 1(1): 92. 1934, *Revue internationale de botanique appliquée et d'agriculture tropicale* 27(297-298): 284. Paris 1947, *Monograph of the Genus Digitaria* 11, 177, 831, 952, 999. 1950, *Blumea* 21(1): 1-80. 1973, *Sida* 12(1): 209-222. 1987, W. M. Musila, J. I. Kinyamario, P. D. Jungerius, "Vegetation dynamics of coastal sand dunes

near Malindi, Kenya." *African Journal of Ecology* 39(2): 170-177. June 2001.

in English: naked crab grass, wild findi, large crab grass, hairy finger grass, hairy crab grass

in Gambia: findi bano

in Ghana: harkiya

in Niger: acha, arthya, foku, gaddyi, kir-kanarié, lallo, thyurké

in Nigeria: harakiya, sheshe

in Sierra Leone: ndiwi

in Thailand: ya tinka

D. nyssana Mez (*Digitaria gazensis* Rendle)

Africa, Nyassaland. See *Journal of the Linnean Society, Botany* 40: 228. 1911, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 192. 1921.

D. oblongo-ovata Ohwi (*Digitaria longiflora* (Retz.) Pers.; *Paspalum longiflorum* Retz.)

Asia, Indonesia. See *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805 and *Bulletin of the Tokyo Science Museum* 18: 7. 1947, *Blumea* 21(1): 1-80. 1973.

D. oraria R.D. Webster

Australia. Coastal dunes, sandy places, see *Brunonia* 6(2): 195. 1984.

D. orbata Hughes (*Digitaria blakei* Henrard)

Queensland, New South Wales. Perennial, rhizomatous, sheath glabrous, leaves glabrous or hairy, spikelets mostly in pairs and densely arranged, lower glume absent or minute, upper glume glabrous and nerveless, sterile lemma glabrous, fertile floret apiculate and dark at maturity, on poor soils, see *Bulletin of Miscellaneous Information Kew* 1923(9): 312. 1923, *Monograph of the Genus Digitaria* 78. 1950.

in English: finger grass

D. pacifica Stapf

Polynesia. See *Bulletin of Miscellaneous Information Kew* 1906: 77, f. 3a, c. 1906.

D. pampinosa Henrard

Brazil. See *Monograph of the Genus Digitaria* 514. 1950.

D. panicea (Sw.) Urban (*Agrostis jamaicensis* Poir.; *Axonopus paniceus* (Sw.) P. Beauv.; *Digitaria leucites* (Trin.) Henrard; *Digitaria panicea* Willd. ex Steud.; *Milium paniceum* Sw.; *Panicum filiforme* L.; *Panicum leucites* Trin.; *Syntherisma filiformis* (L.) Nash; *Syntherisma paniceum* (Sw.) Nash; *Syntherisma panicea* (Sw.) Nash)

Mexico, West Indies, Jamaica. Dry areas, sandy places, see *Species Plantarum* 57. 1753, *Nova Genera et Species Plantarum seu Prodrromus* 24. 1788, *Encyclopédie Méthodique, Botanique Suppl.* 1: 258. 1810, *Essai d'une Nouvelle*

Agrostographie 12, 154, 168. 1812, *De Graminibus Panicis* 85. 1826, *Nomenclator Botanicus. Editio secunda* 1: 508. 1840, *Bulletin of the Torrey Botanical Club* 22(10): 420. 1895 and *North American Flora* 17(2): 152. 1912, *Symbolae Antillarum* 8: 23. 1920, *Mededeelingen van's Rijks-Herbarium* 61: 6. 1930, *Fieldiana, Botany* 24(2): 38-331. 1955.

in English: millet crab grass

D. paniculata Soderstrom & McVaugh (*Digitaria paniculata* Soderstr. ex McVaugh)

Mexico, Jalisco. Rare species, collected in open areas, woodland, open oak woods, see *Flora Novo-Galiciana* 14: 143-144, f. 12. 1983.

D. papposa (R. Br.) P. Beauv. (*Digitaria benthamiana* Henrard; *Digitaria papposa* var. *leiostachyum* Benth.; *Leptoloma papposa* (R. Br.) Hughes; *Panicum papposum* R. Br.)

Australia. See *Prodrromus Florae Novae Hollandiae* 192. 1810, *Essai d'une Nouvelle Agrostographie* 160. 1812, *Flora Australiensis: A Description ...* 7: 469. 1878 and *Bulletin of Miscellaneous Information Kew* 1923(9): 314. 1923, *Blumea* 1(1): 99. 1934, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961.

D. paraguayensis Henrard

Paraguay. See *Mededeelingen van's Rijks-Herbarium* 61: 15. 1930.

D. parva Swallen

Brazil. Open areas, moist grassland, see *Contributions from the United States National Herbarium* 29(6): 266. 1948 [1949].

D. parviflora (R. Br.) Hughes (*Digitaria patula* (Hornem.) Henrard; *Digitaria sanguinalis* var. *australis* (Spreng.) Merr., nom. illeg., non *Digitaria sanguinalis* var. *australis* Griseb.; *Digitaria striata* Hughes; *Panicum australe* Spreng.; *Panicum parviflorum* R. Br.; *Panicum parviflorum* var. *pilosum* Benth.; *Panicum steudelium* var. *striatum* Domin; *Panicum striatulum* Schult.f.; *Panicum striatum* R. Br., nom. illeg., non *Panicum striatum* Lam.; *Paspalum parviflorum* (R. Br.) K. Schum. & Hollrung, nom. illeg., non *Paspalum parviflorum* Rhode ex Fluegge; *Paspalum patulum* Hornem.; *Syntherisma parviflora* (R. Br.) Newbold)

Queensland, New South Wales. Perennial, caespitose, tufted, base villous or hairy, sheaths more or less villous, very small spikelets paired and crowded, lower glume reduced, upper glume more or less equal to the sterile lemma, fertile floret turgid and apiculate, flowers deep brown, coastal woodland, see *Prodrromus Florae Novae Hollandiae* 192. 1810, *Hortus Regius Botanicus Hafniensis* 1: 78. 1813, *Mantissa* 2: 252. 1824, *Systema Vegetabilium, editio decima sexta* 1: 309. 1825, *Flora Australiensis: A Description ...* 7: 471. 1878 and *Flora of Manila* 78. 1912, *Bibliotheca Botanica* 85: 296. 1915, *Torreya* 24: 9. 1924,

Bulletin of Miscellaneous Information Kew 1923(9): 311. 1923, *Blumea* 1(1): 101. 1934.

in English: small-flowered finger panic grass, small-flower finger grass, finger grass

D. paspaliformis Woods

See Joseph Woods, 1776-1864, *The Tourist's Flora: a descriptive catalogue of the flowering plants and ferns of the British Islands, France, Germany, Switzerland, Italy, and the Italian Islands ...* 396. London 1850, *Bot. Zeit.* 8: 806-808. 8 Nov. 1850.

D. patagiata Henrard (from the Latin *patagiatus, a, um* "ornamented with a border," Greek *patageios* "a gold edging or border")

Tropical Africa, Senegal. Annual, creeping, a weed of cultivation and rice fields, moist soils, see *Monograph of the Genus Digitaria* 525. 1950.

D. patens (Sw.) Henr. (*Trichachne patens* Swallen)

U.S., Texas. Good forage, found in dry areas, dry prairies, see *American Journal of Botany* 19(5): 442, f. 5. 1932, *Blumea* 1(1): 99. 1934.

in English: Texas cotton top

in Mexico: zacate mano texano

D. pauciflora A.S. Hitchc. (*Syntherisma pauciflora* (A.S. Hitchc.) A.S. Hitchc.; *Syntherisma pauciflorum* Hitchc.)

Northern America, U.S., Florida, Everglades National Park. Perennial, endangered and rare species, usually occurs in wetlands, occasionally found in nonwetlands, see *Proceedings of the Biological Society of Washington* 41: 162. 1928, *Manual of the Southeastern Flora* 51. 1933.

in English: finger grass, particular grass, two-spike crab grass, two-spike finger grass, Florida pineland crab grass, few-flowered crab grass, Everglades grass

D. pearsonii Stapf (*Digitaria abyssinica* var. *velutina* (Chiov.) Henrard; *Digitaria lancifolia* Henrard; *Panicum abyssinicum* var. *velutinum* Chiov.) (for the English botanist Henry Harold Welch Pearson, 1870-1916 (d. Wynberg, Cape Town, South Africa), professor of botany, plant collector and botanical explorer, 1901 Fellow of the Linnean Society, 1916 Fellow of the Royal Society, edited *The Annals of the Bolus Herbarium*; see A.C. Seward, "H.H.W. Pearson, F.R.S., Sc.D. (Cambridge)." in *The Annals of the Bolus Herbarium*. vol. II, Part III: 131-147. July 1917; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 304. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 573. University of Pennsylvania Press, Philadelphia 1964; Mary Gunn & Leslie Edward W. Codd, *Botanical Exploration of Southern Africa*. 275-276. A.A. Balkema, Cape Town 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 542. London 1994)

Tropical Africa, Malawi, Tanzania. Straggling, grassland, along trail, open areas, partial shade, see *Annuario del Reale Istituto Botanico di Roma* 8(3): 294. 1908, *Flora of Tropical Africa* 9: 434. 1919, *Blumea* 1(1): 102. 1934, *Monograph of the Genus Digitaria* 3. 1950.

D. pectinata Henrard (*Digitaria mariannensis* Merr., nom. illeg., non *Digitaria marianensis* Mez; *Digitaria virens* subsp. *pectinata* (Henrard) Henrard; *Syntherisma marianensis* (Merr.) Hosok.; *Syntherisma mezii* (Merr.) Hosok.)

Indonesia. See *Philippine Journal of Science* 9: 54. 1914, *Mededeelingen van 's Rijks-Herbarium* 61: 19. 1930, *Transactions of the Natural History Society of Taiwan* 24: 198. 1934, *J. Soc. Trop. Agric. Taiwan* 6: 664. 1934, *Monograph of the Genus Digitaria* 533. 1950.

D. pedicellaris (Trin. ex Hook.f.) Prain (*Digitaria abludens* (Roem. & Schult.) Veldkamp; *Digitaria granularis* (Trin. ex Spreng.) Henrard; *Panicum abludens* Roem. & Schult.; *Panicum pedicellare* (Trin. ex Hook.f.) Hack.; *Panicum pedicellare* Hack., nom. illeg., non *Panicum pedicellare* (Trin. ex Hook.f.) Hack.; *Paspalum granulare* Trin. ex Spreng.; *Paspalum pedicellare* Trin. ex Hook.f.)

India. See *Systema Vegetabilium* 2: 457. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 47. 1821, *The Flora of British India* 7: 19. 1896 and *Österreichische Botanische Zeitschrift* 51: 330. 1901, *Bengal Plants* 890. 1903, *Philippine Journal of Science* 1(Suppl.): 4. 268. 1906, *Monograph of the Genus Digitaria* 302, 891. 1950, *Blumea* 21(1): 53-55, f. 11d, 12. 1973.

D. pellita Stapf

Africa, Angola. See *Flora of Tropical Africa* 9: 447. 1919.

D. peninsulae Ohwi (*Digitaria didactyla* Willd.; *Digitaria didactyla* var. *peninsula* (Ohwi) Henrard, also spelled *penisula*)

Singapore. See *Enumeratio Plantarum Horti Botanici Bero-linensis ...* 91. 1809 and *Bulletin of the Tokyo Science Museum* 18: 7. 1947, *Monograph of the Genus Digitaria* 991. 1950.

D. pennata (Hochst.) T. Cooke (*Digitaria pennata* var. *pilosa* Chiov.; *Digitaria pennata* var. *shettyana* R. P. Pamdy & B. L. Vyas; *Panicum pennatum* Hochst.; *Paspalum pennatum* (Hochst.) Hook.f.)

Northern India, Tanzania, Kenya, Ethiopia. Perennial, suffrutescent, wiry, weak, ascending, woody, tufted, base with silky-pubescent scales, rhizomatous, leaves lanceolate, racemes radiating and whorled, spikelets lanceolate, lower glume a tiny scale or absent, upper glume as long as the spikelet, lower lemma ribbed, found in shady places, open woodland, stony areas, plains, in dry *Acacia-Commiphora* scrub, see *Flora* 38: 197. 1855, *The Flora of British India* 7: 16. 1896 and *The Flora of the Presidency of Bombay* 2: 941. 1908, *Plantae Novae vel Minus Notae e regione Aethi-opica* 24. 1928 [1911-1951, also *Plantae Novae vel Minus*

Notae ex Aethiopia, series published in different journals], *Journal of Economic and Taxonomic Botany* 5(2): 475. 1984.

in East Africa: domaar

D. perpusilla Pilg. (Latin *perpusillus* “very small, very little”)

New Guinea. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 69: 253. 1938, *Blumea* 21(1): 1-80. 1973.

D. perrieri A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 72: 153. 1925.

D. perrottetii (Kunth) Stapf (*Digitaria floribunda* Goetgh.; *Digitaria perrottetii* var. *angustifolis* Henrard; *Milium minutiflorum* Trin.; *Panicum cristatum* Andersson, nom. illeg., non *Panicum cristatum* (J. Presl) Steud.; *Panicum perrottetii* Kunth; *Panicum pseudoagrostis* Steud.; *Paspalum perrottetii* Hook.f.; *Syntherisma perrottetii* (Kunth) Chase) (for the French (Swiss-born) gardener George (Georges) Guerrard) Samuel Perrottet, 1793-1870 (Pondicherry), sericulturist, agronomical and government botanist, traveler and plant collector, botanical explorer, in 1824 went to Senegal, West Africa, Director of the Agricultural Station (Senegal), co-author with Jean Baptiste Antoine Guillemain (1796-1842) and Achille Richard (1794-1852) of *Florae Senegambiae tentamen*. [The families arranged after De Candolle, Ranunculaceae to Myrtaceae.] Paris, London 1830-1833, his works include *Catalogue raisonné des plantes introduites dans les colonies françaises de Bourbon et de Cayenne*. Paris 1824 and *Catalogue des plantes du jardin botanique et d'acclimatation du gouvernement à Pondichéry*. Pondichéry 1867; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 71. 1965; Joseph Vallot, “Études sur la flore du Sénégal.” in *Bull. Soc. Bot. de France*. 29: 186. Paris 1882; F.N. Williams, “Collectors of Gambian plants.” in *Bull. Herb. Boiss.* sér. 2, 7: 84. Geneva 1907; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; R.W.J. Keay, “Botanical Collectors in West Africa prior to 1860” in *Comptes Rendus A.E.T.F.A.T.* 55-68. Lisbon 1962; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 223. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Isaac Henry Burkill, *Chapters on the History of Botany in India*. 9-10. Delhi 1965; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London 1904; A. White & B.L. Sloane, *The Stapelieae*. Pasadena 1937; Giovanni Borghesi, *Lettera scritta da Pondisceri a' 10 di Febbraio 1704 dal dottore Giovanni Borghesi medico della missione spedita alla China dalla Santità*

di N.S. Papa Clemente XI. Roma, Zenobi 1705; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 64. 1971; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Tropical Africa. Annual, tufted, coarse, erect, decumbent and rooting from the lower nodes, all the racemes whorled, spikelets solitary or paired, grazed by cattle and sheep, usually in shady areas, sandy soils, damp places, bushland, disturbed sites, old cultivated fields, see *Révision des Graminées* 395, t. 111. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 121. 1834, *Synopsis Plantarum Glumacearum* 1: 71. 1854, *Naturwissenschaftliche Reise nach Mossambique ...* 548. 1864, *The Flora of British India* 7: 20. 1896 and *Proceedings of the Biological Society of Washington* 19(34): 191. 1906, *Flora of Tropical Africa* 9: 435. 1919, *Monograph of the Genus Digitaria* 949. 1950, *Bulletin du Jardin Botanique National de Belgique* 45(3-4): 415. 1975.

in English: whorled finger grass

in Senegal: baket, siangan

in Tanzania: mahwa kinyaturu

D. pes-avis Büse (*Digitaria adscendens* var. *pes-avis* (Büse) Henrard; *Digitaria ciliaris* (Retz.) Koeler; *Digitaria ciliaris* var. *pes-avis* (Büse) S.K. Jain & Doli Das; *Panicum pes-avis* (Büse) Hook.f. ex Koord.)

Indonesia. See *Observationes Botanicae* 4: 16. 1786, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Plantae Junghuhnianae* 3: 380. 1854 and *Exkursionsflora von Java ...* 1: 128. 1911, *Monograph of the Genus Digitaria* 552, f. 998. 1950, *Indian Forester* 99(9): 572. 1973.

D. petelotii Bor (after the French botanist Paul Alfred Pételot, 1885-(after) 1940, bryologist, in Vietnam, lauréat de l'Académie des Sciences, chargé de cours à la Faculté Mixte de Médecine et de Pharmacie de Saigon, Chef de la Division de Botanique du Centre de Recherches Scientifiques et Techniques, his works include “La botanique en Indochine. Bibliographie.” *Bull. Econ. Indochine*. 32: 587-632. 1929, *Les plantes médicinales du Cambodge, du Laos et du Viêt Nam*. Saigon 1952-1954 and “Bibliographie botanique de l'Indochine.” *Arch. Rech. Agron. Past. Viêt Nam*. 24: 1-102. 1955, with Charles Cresson wrote *Catalogue des produits de l'Indochine, Produits médicaux*. 1928-1935; see E. Perrot & P. Hurrier, *Matière médicale et pharmacopée sino-annamite*. Paris 1907; Stafleu & Cowan, *Taxonomic literature*. 4: 189. 1983; L. Menaut, “La matière médicale cambodgienne.” *Bull. Econ. Indochine*. 1929; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Southeast Asia, Thailand. Indeterminate species, see *Blumea* 1(1): 109. 1934.

D. phaeothrix (Trin.) Parodi (*Digitaria chacoensis* (Parodi) Henrard; *Digitaria phaeothrix* var. *chacoensis* Parodi; *Panicum adustum* Nees; *Panicum adustum* var. *phaeothrix* (Trin.) Hack.; *Panicum ferrugineum* (Nees) Kunth, nom. illeg., non *Panicum ferrugineum* Trin.; *Panicum phaeothrix* Trin.; *Trichachne ferruginea* Nees)

Brazil, Southern America, Argentina, Uruguay. Glabrous leaf blades filiform and involute, similar to *Digitaria neesiana* Henr., *Digitaria enodis* (Hack.) Parodi and *Digitaria dusenii* Chase ex Renv., see *Species Graminum* 1828-1836, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 90, 101. 1829, *Révision des Graminées* 1: 39. 1829, *Anales del Museo Nacional de Montevideo* 1: 96, t. 5. 1894 and *Bulletin de l'Herbier Boissier* sér. 2, 4(3): 271. 1904, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 19. 1928, *Monograph of the Genus Digitaria* 560, 562-563, 645. 1950, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 351-366. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 473-487. 1970, *Darwiniana* 19: 65-166. 1974, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

D. phaeothrix (Trin.) Parodi var. **adusta** (Nees) Rúgolo (*Digitaria adusta* (Nees) Griseb.; *Digitaria adusta* var. *leucotricha* (Hack.) Parodi; *Digitaria leiantha* (Hack.) Parodi; *Digitaria leiantha* var. *leucotricha* (Hack.) Henrard; *Panicum adustum* Nees; *Panicum adustum* var. *leucotrichum* Hack.; *Syntherisma adusta* (Nees) Chase)

South America. See *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 101-102. 1829, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 306. 1879 and *Bulletin de l'Herbier Boissier*, sér. 2, 4(3): 271. 1904, *Proceedings of the Biological Society of Washington* 19(34): 191. 1906, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 19, 21. 1928, *Mededeelingen van 's Rijks-Herbarium* 61: 2. 1930.

D. phaeothrix (Trin.) Parodi var. **hackelii** (Arechav.) Henrard (*Anthaenantia hackelii* Arechav.; *Digitaria adusta* var. *hackelii* (Arechav.) Henrard; *Digitaria arechavaletae* Roseng., B.R. Arrill. & Izag.; *Digitaria hackelii* (Pilg.) Stapf; *Panicum hackelii* (Arechav.) Arechav.; *Syntherisma hackelii* (Arechav.) Chase)

South America. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 306. 1879, *Anales del Museo Nacional de Montevideo* 1: 96, t. 5. 1894, *Anales del Museo de Historia Natural de Montevideo* 1: 555, t. 5. 1897 and *Proceedings of the Biological Society of Washington* 19(34): 191. 1906, *Flora of Tropical Africa* 9: 459. 1919, *Mededeelingen van 's Rijks-Herbarium* 61: 2. 1930, *Monograph of the Genus Digitaria* 563. 1950, *Gramíneas Uruguayas* 307, f. 126. 1970.

D. phaeothrix (Trin.) Parodi var. **phaeothrix**

South America.

D. phaeothrix (Trin.) Parodi var. **saltensis** (Henrard) Rúgolo (*Digitaria saltensis* Henrard)

South America. See *Monograph of the Genus Digitaria* 645, 903. 1950, *Darwiniana* 19(1): 111, f. 11f-j. 1974.

D. phaeotricha (Chiov.) Robyns

West Africa. See *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 1: 28. 1931, *Bulletin of Miscellaneous Information Kew* 1934: 111. 1934.

D. phaeotricha (Chiov.) Robyns var. **patens** W. Clayton

West Africa, Guinea, Sierra Leone. Rare species, tropical and subtropical moist broadleaf forests, see *Kew Bulletin* 23: 294. 1969.

D. pilosa Willd. (*Digitaria pilosa* Michx.; *Digitaria pilosa* Pieri, nom. illeg., non *Digitaria pilosa* Willd.)

U.S. See *Flora Boreali-Americana* 1: 45. 1803, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1: 91. 1809.

D. pinetorum Hitchc.

Cuba. Endangered species, collected in forest, pineland, see *Manual of the Grasses of the West Indies* 176. 1936.

D. pirifera Chiov. (*Digitaria nodosa* Parl.; *Digitaria pirifera* (Chiov.) Henrard)

Africa. See *Plantae Novae vel Minus Notae opusculis diversis olim descriptae generibus quibusdam speciebusque novis adjectis iterum recognitae* ... 39. Parisiis 1842, *Synopsis Plantarum Glumacearum* 1: 40. 1855 [1853], *Journal of the Linnean Society, Botany* 19: 190. 1882, *Conspectus Florae Africae* 5: 744. 1894, *The Flora of British India* 7: 15. 1896 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 295-296. 1908, *Annali di Botanica* 13: 41. 1914, *Resultati Scientifici della Missione Stefanini-Paoli nella Somalia Italiana* 225. 1916, *Torreya* 24: 9. 1924, *Monograph of the Genus Digitaria* 568. 1950, *Flore de l'Afrique du Nord* 1: 301. 1952.

D. pittieri (Hack.) Henrard (*Panicum pittieri* Hack.; *Trichachne pittieri* (Hack.) Hitchc.; *Valota pittieri* (Hack.) Chase)

South America. See *Österreichische Botanische Zeitschrift* 51: 367. 1901, *Proceedings of the Biological Society of Washington* 19(34): 188. 1906, *Proceedings of the Biological Society of Washington* 40: 83. 1927, *Blumea* 1(1): 99. 1934, *Monograph of the Genus Digitaria* 570. 1950, *Flora Mesoamericana* 6: 365-371. 1994.

D. planiculmis Henrard

Madagascar. See *Blumea* 1(1): 112. 1934.

D. platycaulis (Poir.) Desv. (*Anastrophus platycaulis* (Poir.) Nash ex Small; *Axonopus compressus* (Sw.) P. Beauv.; *Axonopus compressus* var. *compressus*; *Milium compressum* Sw.; *Panicum platycaulon* (Poir.) Kuntze; *Paspalum platycaulon* Poir.; *Paspalum vaginatum* Sw.)

See *Nova Genera et Species Plantarum seu Prodrumus* 21, 24. 1788, *Encyclopédie Méthodique, Botanique* 5: 34. 1804, *Essai d'une Nouvelle Agrostographie* 12, 154. 1812, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers*

1: 166. 1831, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Flora of the Southeastern United States ...* 79. 1903, *Contr. U.S. Natl. Herb.* 12: 136. 1908.

D. platycarpa (Trin.) Stapf (*Panicum platycarpum* Trin.; *Syntherisma platycarpa* (Trin.) Honda)

Asia, Ogasawara-Shoto. Rare species, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 198. 1834 and *Österreichische Botanische Zeitschrift* 51: 367. 1901, *Bulletin of Miscellaneous Information Kew* 1906: 78. 1906, *Botanical Magazine* (Tokyo) 38: 123. 1924.

D. poggeana Mez (*Digitaria major* (Van der Veken) Clayton; *Digitariopsis major* Van der Veken) (the specific name honors the German botanist Dr. Paul Pogge who collected in Central Africa in the middle of the 19th century)

Zaire. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 191. 1921, *Bulletin du Jardin Botanique de l'État* 25: 330. 1955, *Kew Bulletin* 29(3): 523. 1974.

D. polevansii Stent (*Digitaria bulbosa* subsp. *polevansii* (Stent) Henrard; *Digitaria seriata* Stapf)

South Africa. See *Flora of Tropical Africa* 9: 432. 1919, *Bothalia* 3: 149. 1930, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 208. 1930, *Monograph of the Genus Digitaria* 101, 103, 580. 1950.

D. polybotrya Stapf (*Panicum nigritianum* Hack., nom. illeg., non *Panicum nigritianum* Hack. ex T. Durand & Schinz)

Tropical Africa. Riverbanks, sandy places, see *Österreichische Botanische Zeitschrift* 51: 293. 1901, *Flora of Tropical Africa* 9: 462. 1919.

D. polyphylla Henrard

Tropics. Perennial, rhizomatous and stoloniferous or tufted, with knotty rhizomes, culms branched and unbranched, lower leaves reduced, racemes digitate, usually on sandy and stony ground, in low rainfall areas, see *Blumea* 1(1): 97. 1934.

D. porrecta S.T. Blake (*Digitaria coenicola* (F. Muell.) Hughes var. *ramosa* Vickery) (Latin *porrectus, a, um* "stretched outwards and forward, long, extended")

Queensland, New South Wales. Perennial, endangered species, grayish pubescent, loosely caespitose, erect or geniculate and ascending, base swollen, culms hairy, sheath hairy, long and rigid racemes spreading at maturity, lower glume glabrous, upper glume pubescent, upper lemma acuminate, occurs on grassland and on cracking clays, grassland, black clay soil, see *Bulletin of Miscellaneous Information Kew* 1923(9): 313. 1923, *Contributions from the New South Wales National Herbarium* 1(6): 328-329. 1950 [1951], *Proceedings of the Royal Society of Queensland* 84(5): 63-65. 1973.

in English: finger panic grass

D. puberula Link (*Digitaria stricta* Roth; *Panicum puberulum* (Link) Kunth)

Asia. See *Species Plantarum* 1: 55. 1753, *Systema Vegetabilium* 2: 474. 1817, *Mantissa* 2: 8, 163. 1824, *Révision des Graminées* 1: 32. 1829, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853].

D. pubiflora (Vasey) Wipff (*Digitaria cognata* subsp. *pubiflora* (Vasey) Wipff; *Panicum autumnale* var. *pubiflorum* Vasey; *Panicum autumnale* var. *pubiflorum* Vasey ex L.H. Dewey, nom. illeg., non *Panicum autumnale* var. *pubiflorum* Vasey)

America. See *Systema Vegetabilium, editio decima sexta* 1: 320. 1825, *Department of Agriculture. Botanical Division. Bulletin* 8: 35. 1889, *Contributions from the United States National Herbarium* 2: 508. 1894 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 246. 1931, *Sida* 13(1): 120. 1988, *Syst. Bot.* 19: 625. 1994, *Sida* 19(4): 923. 2001.

D. pulchella Griseb. (*Mniochloa pulchella* (Griseb.) Chase; *Panicum strephiodoides* Hack.; *Strephium pulchellum* (Griseb.) C. Wright)

Cuba. See *Catalogus plantarum cubensium ...* 231. 1866, *Anales de la Academia de Ciencias Medicas ...* 8: 202. 1871 and *Österreichische Botanische Zeitschrift* 51: 291. 1901, *Proceedings of the Biological Society of Washington* 21: 186. 1908, *Manual of the Grasses of the West Indies* 1-439. 1936, *Fontqueria* 46: [i-ii], 1-259. 1997.

D. purpurea Swallen (*Digitaria dusenii* Chase ex Renvoize; *Digitaria pentzii* Stent)

Brazil. See *Bothalia* 3: 147. 1930, *Contributions from the United States National Herbarium* 29(6): 251-275. 1948 [1949], *Kew Bulletin* 42: 923. 1987.

D. pusilla Ridl.

Asia. See *The Flora of the Malay Peninsula* 5: 215. 1925.

D. queenslandica Henrard (*Digitaria bicornis* (Lam.) Roem. & Schult.; *Paspalum bicorne* Lam.)

Australia. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Systema Vegetabilium* 2: 470. 1817 and *Monograph of the Genus Digitaria* 612, f. 996. 1950, *Blumea* 21(1): 1-80. 1973, *Sida* 12(1): 209-222. 1987.

D. radiata (Roth) Spreng. (*Cynodon radiatus* Roth)

Asia. See *Systema Vegetabilium* 2: 411. 1817, *Systema Vegetabilium, editio decima sexta* 1: 272. 1825.

D. radicata (Presl) Miquel (*Digitaria chinensis* var. *hirsuta* Ohwi; *Digitaria formosana* Rendle; *Digitaria formosana* var. *hirsuta* (Honda) Henrard; *Digitaria propinqua* Gaudich., nom. illeg., non *Digitaria propinqua* (R. Br.) P. Beauv.; *Digitaria radicata* var. *hirsuta* (Ohwi) C.C. Hsu; *Digitaria sanguinalis* var. *multinervis* (Honda) Kitag.; *Digitaria sanguinalis* var. *timorensis* (Kunth) Hayata; *Digitaria*

tenuispica Rendle; *Digitaria timorensis* (Kunth) Balansa; *Digitaria timorensis* subsp. *kunthiana* Henrard; *Digitaria timorensis* subsp. *timorensis*; *Digitaria timorensis* var. *hirsuta* (Ohwi) Henrard; *Digitaria timorensis* var. *timorensis*; *Panicum formosanum* (Rendle) Makino & Nemoto; *Panicum formosanum* var. *hirsuta* (Honda) Makino & Nemoto; *Panicum radicosum* J. Presl; *Panicum radicosum* var. *procerior* J. Presl; *Panicum sanguinale* var. *multinerve* (Honda) Makino & Nemoto; *Panicum sanguinale* var. *timorense* (Kunth) Hack.; *Panicum timorense* Kunth; *Paspalum sanguinale* var. *timorense* (Kunth) A. Camus; *Spartina glabriuscula* Hassk.; *Syntherisma formosana* (Rendle) Honda; *Syntherisma formosana* subsp. *hirsuta* (Honda) Masam. & Yanagih.; *Syntherisma formosana* var. *hirsuta* Honda; *Syntherisma multinervis* (Honda) Honda; *Syntherisma sanguinalis* var. *multinervis* Honda; *Syntherisma tenuispica* (Rendle) Keng

Africa, Australia, Southeast Asia, China, Taiwan, India, Indonesia, Malaysia, Nepal, Papua New Guinea, Thailand, Vietnam. Delicate, prostrate, much-branched, leaf sheaths smooth, leaf blades lanceolate and light blue green, ligule membranous, racemes with a winged rachis, spikelets narrow and stalked, lower glume minute, upper glume membranous, lemma lanceolate, palea leathery, weed of rice, a good fodder plant, lawn grass, occurs in open fields and shady places, see *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 1: 410. 1826, *Reliquiae Haenkeanae* 1(4-5): 297. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 83. 1833, *Catalogus Plantarum in Horto Botanico Bogoriensi Cultarum Alter* 18. 1844, *Flora van Nederlandsch Indië* 3: 437. 1857, *Journal de Botanique (Morot)* 4(7): 138. 1890 and *Botanisk Tidsskrift* 24: 41. 1901, *Journal of the Linnean Society, Botany* 36(253): 323-324, 326-327. 1904, *Bulletin de l'Herbier Boissier sér. 2, 4(6)*: 528. 1904, *Notulae Systematicae. Herbarium du Museum de Paris* 2: 222. 1912, *Botanical Magazine* 38: 121-123. 1924, *Transactions of the Natural History Society of Taiwan* 31: 1472. 1925, *Flora of Japan* 1471-1472, 1476. 1925, *Report of the First Scientific Expedition to Manchoukou* 4(4): 65, 105. 1936, *Acta Phytotaxonomica et Geobotanica* 11(1): 29. 1942, *Monograph of the Genus Digitaria* 265, 838, 993-994. 1950, *Flora of Taiwan* 5: 549. 1978.

in English: Timorese crab grass

D. ramularis (Trin.) Henrard (*Digitaria tenuissima* Hughes; *Panicum ramulare* Trin.; *Panicum tenuissimum* Benth., nom. illeg., non *Panicum tenuissimum* Mart. ex Schrank)

Queensland, New South Wales. Perennial, slender, villous at the base, leaves hairy, sheath villous to hirsute, spikelets paired and loosely arranged, upper glume glabrous, sterile lemma glabrous, fertile lemma dark or black at maturity, see *De Graminibus Paniceis* 244. 1826 and *Bulletin of*

Miscellaneous Information Kew 1923(9): 312. 1923, *Blumea* 1(1): 101. 1934, *Monograph of the Genus Digitaria* 735-736. 1950, *Blumea* 21: 52. 1973, *Brunonia* 6: 202-203. 1984.

D. recta Hughes (*Digitaria violascens* Link)

Australia, Queensland. See *Hortus Regius Botanicus Bero-linensis* 1: 229. 1827 and *Bulletin of Miscellaneous Information Kew* 1923(9): 311. 1923.

D. remota Henrard (*Digitaria wallichiana* (Henrard) Veldkamp; *Digitaria wallichiana* subsp. *remota* (Henrard) Veldkamp)

Indonesia. See *Blumea* 3(3): 474. 1940, *Blumea* 21(1): 50. 1973.

D. remotigluma (De Winter) Clayton (*Digitaria remotigluma* De Winter; *Digitariella remotigluma* De Winter)

East Africa, South Africa, Namibia. Annual, tufted, decumbent at the base and rooting from the lower nodes, racemes digitate, spikelets in pairs, internode between lower and upper glume, upper glume acute to acuminate, lower lemma acute, common in sandy soil, damp areas, see *Bothalia* 7: 467. 1961, *Kew Bulletin* 29(3): 520. 1974.

D. richardsonii Mez (*Digitaria leptorhachis* (Pilg.) Stapf) Nigeria. See *Flora of Tropical Africa* 9: 462. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 193. 1921.

D. rigida Stent (*Digitaria natalensis* Stent)

South Africa. See *Bothalia* 3: 151. 1930.

D. rivae (Chiov.) Stapf (*Digitaria botryostachya* Stapf; *Panicum rivae* Chiov.)

Tropical Africa, eastern Africa, Ethiopia. Perennial, tufted to densely tufted, shortly rhizomatous with knotty rhizomes, basal sheaths silky, linear to lanceolate leaves, spikelets paired and narrowly ovate, lower glume a scale, upper glume hairy to villous, lower lemma silky, a weed of cultivated fields, growing in moist areas, alluvial soils, floodplains, sandy soils, flooded places, under the light shade of trees, see *Annuario del Reale Istituto Botanico di Roma* 7: 62, t. 3, f. 2. 1897 and *Bulletin of Miscellaneous Information Kew* 1907: 213. 1907, *Flora of Tropical Africa* 9: 456. 1919. in East Africa: domar, gharo-gharo, garogaro

D. rukwae Clayton

Africa, Tanzania, Chunya, Rukwa. Perennial, rhizomatous, tufted, scaly rhizomes, basal sheath glabrous or silky, inflorescence panicle-like, racemes arranged irregularly, upper floret brown, lower lemma with fine brown hairs, flood plain grassland, alluvial soils, see *Kew Bulletin* 29(3): 521. 1974.

D. sabulicola Henrard

Brazil. See *Blumea* 1(1): 108. 1934.

D. sacchariflora (Nees) Henrard (*Acicarpa sacchariflora* Raddi; *Andropogon insularis* L.; *Digitaria insularis* (L.)

Fedde; *Digitaria insularis* (L.) Mez ex Ekman, nom. illeg., non *Digitaria insularis* (L.) Fedde; *Digitaria sacchariflora* (Raddi) Henrard; *Leptocoryphium penicilligerum* Speg.; *Panicum insulare* var. *penicilligerum* (Speg.) Hack.; *Panicum insulare* var. *sacchariflorum* (Nees) Hack.; *Panicum leucophaeum* var. *sacchariflorum* (Raddi) Hack.; *Panicum penicilligerum* (Speg.) Hack.; *Panicum sacchariflora* (Nees) Steud.; *Panicum sacchariflorum* (Raddi) Steud.; *Trichachne penicilligera* (Speg.) Parodi; *Trichachne sacchariflora* Nees; *Trichachne sacchariflora* (Raddi) Nees; *Valota penicilligera* (Speg.) Chase ex Parodi)

Southern America, Argentina. Herbaceous, disturbed ground, see *Systema Naturae, Editio Decima* 1304. 1759, *Agrostografia Brasiliensis* 31, t. 1, f. 4. 1823, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 87. 1829, *Synopsis Plantarum Glumacearum* 1: 97. 1854, *Anales de Sociedad Científica Argentina* 16: 102. 1883 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 9: 11, 93. 1902 and 1903, *Anales del Museo Nacional de Buenos Aires* 11(3): 70-71, t. 4. 1904, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11: 17. 1912, *Revista de la Facultad de Agronomía y Veterinaria* 4: 46. 1922, *Blumea* 1(1): 99. 1934, *Gramineas Bonaerenses, edition 3*, 86, 89. 1939, *Flora Ilustrada de Entre Ríos* (Argentina) 6(2): 351-366. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 473-487. 1970, *Darwiniana* 19: 65-166. 1974, *Flora Ilustrada Catarinense* 1(Gram.): 443-906. 1982, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Flora del Paraguay* 23: i-iv, 1-327. 1994, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

D. saltensis Henrard (*Digitaria phaeothrix* (Trin.) Parodi var. *saltensis* (Henrard) Rúgolo)

Uruguay, Salto, San Antonio. Depressions, low lying ground, see *Monograph of the Genus Digitaria* 645. 1950, *Darwiniana* 19(1): 111, f. 11f-j. 1974.

D. sanguinalis (L.) Scop. (*Asperella digitaria* Lam.; *Cynodon praecox* (Walter) Roem. & Schult.; *Dactylon sanguinale* (L.) Vill.; *Digitaria adscendens* (Kunth) Henrard; *Digitaria fimbriata* Link; *Digitaria horizontalis* Willd.; *Digitaria marginata* Link; *Digitaria marginata* var. *fimbriata* (Link) Stapf; *Digitaria nealleyi* Henrard; *Digitaria plebeia* Phil.; *Digitaria praecox* (Walter) Willd.; *Digitaria sanguinalis* subsp. *vulgaris* (Schrad.) Henrard; *Digitaria sanguinalis* var. *marginata* (Link) Fernald; *Digitaria sanguinalis* var. *sanguinalis*; *Digitaria vulgaris* (Schrad.) Besser; *Milium sanguinale* (L.) Roxb.; *Panicum adscendens* Kunth; *Panicum fimbriatum* (Link) Kunth; *Panicum linkianum* Kunth; *Panicum marginellum* Schrad.; *Panicum sanguinale* L.; *Panicum sanguinale* subsp. *marginatum* (Link) Thell.; *Panicum sanguinale* subvar. *marginatum* (Link) Döll; *Panicum sanguinale* var. *vulgare* (Schrad.) Döll; *Paspalum sanguinale* (L.) Lam.; *Syntherisma fimbriatum*

(Link) Nash; *Syntherisma marginatum* (Link) Nash; *Syntherisma praecox* Walter; *Syntherisma sanguinalis* (L.) Dulac; *Syntherisma vulgare* Schrad.; *Syntherisma vulgaris* Schrad.)

Cosmopolitan, Eurasia. Annual, tufted, hairy, spreading, often purplish, stems slender and ascending, branched at the base, base decumbent, creeping and rooting at the nodes, leaf sheath with long ciliate hair, ligule membranous, auricles absent, leaves narrow and linear-lanceolate with thickened margins, youngest leaf rolled, racemes slender and spreading or digitate, spikelets usually paired and elliptic, upper glume and lemma spiny along the nerves, lower glume minute and nerveless, fertile floret grayish or purplish, lemma of lower floret scabrid, palatable, fodder, forage grass in pastures, low grazing value, a variable species widely naturalized, invasive, noxious, strongly rooted, weed species of maize and peanuts, economic plant, grown for hay, used in making paper, edible seed used as a flour, a decoction of the plant is used in the treatment of gonorrhoea, leaves might be cyanogenic, very similar to *Digitaria ciliaris* (Retz.) Koeler, occurs in disturbed places and habitats, cultivated fields, waste places, gardens, sandy soils, lawns, poor soils, along roadsides, see *Species Plantarum* 1: 57. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Observationes Botanicae* 4: 16. 1786, *Histoire des Plantes de Dauphiné* 2: 69. 1787, *Flora Caroliniana, secundum ...* 76. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 167, 176. 1791, *Flora Atlantica* 1: 59. 1798, *Flora Germanica* 1: 161. 1806, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 9, 91-92. 1809, *Hortus Bengalensis, or a catalogue ...* 8. 1814, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 412. 1817, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 102. 1821, *Enumeratio Plantarum* 5. 1822, *Systema Vegetabilium, editio decima sexta* 1: 309. 1825, *De Graminibus Paniceis* 77. 1826, *Hortus Regius Botanicus Berolinensis* 1: 226. 1827, *Flora Helvetica* 1: 154. 1828, *Révision des Graminées* 1: 33. 1829, *Mantissa* 2: 262. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 83. 1833, *Oekonomisch-technische Flora Böhmens* 1: 498. 1836, *Linnaea* 12(4): 428. 1838, *Rheinische Flora* 126. 1843, *Flora italiana, ossia descrizione delle piante ...* 1: 126. 1848, *Linnaea* 21: 436. 1848, *Flora Rossica* 4(14): 468. 1853, *Synopsis Plantarum Glumacearum* 1: 39. 1855 [1853], *Enumeratio Plantarum Transsylvanicae* 722. 1866, *Flore du Département des Hautes-Pyrénées* 77. 1867, *Anales de la Universidad de Chile* 48 [43]: 557. 1873, *Flora Brasiliensis* 2(2): 133. 1877, *Compendio della Flora Italiana* 762. 1883, *The Flora of British India* 7: 15-16. 1896, *Bulletin of the Torrey Botanical Club* 25: 302. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2(1): 163-164. 1899, *Synopsis der mitteleuropäischen Flora* 2: 65. 1899 and *Bengal Plants* 1181. 1903, *Bulletin de l'Académie*

Internationale de Géographie, Botanique 19(240): IV. 1909. Oct. 1909, *Sudania* 33, 30. 1911-1914, *North American Flora* 17(2): 154. 1912, *Flora of Manila* 78. 1912, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 699. 1919, *Flora of Tropical Africa* 9: 440. 1919, *Rhodora* 22(258): 103. 1920, *An Enumeration of Philippine Flowering Plants* 1: 55. 1923, *The Botany of Bihar and Orissa* 5: 1007-1008. 1924, *Botanical Magazine* 38: 121-122. 1924, *American Midland Naturalist* 10: 23. 1926, *Blumea* 1(1): 92-94. 1934, *Preslia* 13-15: 47. 1935, *Nomina Plantarum Japonicarum. Editio Emendata* 506. 1939, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 216. 1941, *Journal of Japanese Botany* 18: 8. 1942, *Monograph of the Genus Digitaria* 4, 11, 17, 64, 298, 332, 492-493, 651, 653, 657, 661, 664, 985, 999. 1950, *Flore de l'Afrique du Nord* 1: 299. 1952, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 124. 1971[1972], *Rhodora* 76(805): 57. 1974, *Phytologia* 43(1): 105. 1979, *Flora of Puerto Rico and Adjacent Islands: A Systematic Synopsis* 1-342. 1982, *Proc. N.Z. Grasslands Assoc.* 51: 47-50. 1990, *The Plant Journal* 23(4): 497-506. Aug 2000, *Weed Research* 42(5): 342-350. Oct 2002.

in English: finger grass, crab finger grass, hairy finger grass, crab grass, early crab grass, hairy crab grass, large crab grass, crop grass, manna, landgrass, Polish millet, summer grass, wild millet

in French: manne terrestre, digitale à fleurs rouges

in Spanish: garrachuelo, falsa pata de gallina, horquetilla, pata de gallina, pendejuelo

in Argentina: cebadilla, pasto cuaresma

in Paraguay: cebadilla

in Uruguay: pasto colchón, pata de gallina

in Arabic: dafira

in Morocco: rjel-el-rhorab

in Southern Africa: koopersaadgras, kruisgras, kruisvingergras, vingergras; moqopshoe, moqopshwe, moqhoshowa (Sotho)

in India: killa, rai, rayad, rayar, safed rai, sailria, sika

in Thailand: yaa teenkaa, yaa tinkaa

in China: ma tang, yu, ma t'ang, yang ma

D. sanguinalis (L.) Scop. f. *illinoensis* Ebinger
North America. See *Rhodora* 76(805): 57. 1974.

D. sanguinalis (L.) Scop. f. *sanguinalis*
America.

D. sejuncta (Hack. ex Pilg.) Henrard (*Digitaria sanguinalis* (L.) Scop.; *Panicum sejunctum* Hack. ex Pilg.)

South America. Along roadsides, grassy roadsides, see *Species Plantarum* 1: 57. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 19.

1899 and *Mededeelingen van's Rijks-Herbarium* 61: 5. 1930.

D. sellowii (Müll. Hal.) Henrard (*Digitaria similis* Beetle ex Gould; *Digitaria similis* Beetle; *Digitaria swalleniana* Henrard; *Trichachne affinis* Swallen; *Trichachne sellowii* Müll. Hal.)

Brazil. Along roadsides, very closely related to *Digitaria californica* (Benth.) Henr., see *Botanische Zeitung. Berlin* 19(43): 315. 1861 and *Blumea* 1: 99. 1934, *Contributions from the United States National Herbarium* 29(6): 264-265. 1948 [1949], *Monograph of the Genus Digitaria* 722. 1950, *Rhodora* 65(764): 355. 1963, *Phytologia* 37(4): 344. 1977, *Journal of the Arnold Arboretum* 60(2): 320. 1979.

D. seminuda Stapf (*Digitaria atrofusca* (Hack.) A. Camus; *Panicum atrofuscum* Hack.)

Sierra Leone. See *Journal of the Linnean Society, Botany* 29: 63. 1891 and *Flora of Tropical Africa* 9: 446. 1919, *Bulletin du Muséum d'Histoire Naturelle* 30: 106. 1924, *Kew Bulletin* 29: 519. 1974, *Flora of Tropical East Africa* 451-898. 1982.

D. seriata Stapf (*Digitaria bulbosa* (Henrard) Peter subsp. *polevansii* (Stent) Henrard; *Digitaria polevansii* Stent)

Tropical Africa, Kalahari. Perennial, tufted, erect, base bulbous with hairy scales, stoloniferous and rhizomatous, knotty and woody rhizomes, ligule membranous, leaf blade expanded, basal leaf sheaths keeled and silky, racemes digitate or subdigitate, spikelets hairy, palatable, mostly on sandy soils, see *Flora of Tropical Africa* 9: 432. 1919, *Bothalia* 3: 149. 1930.

in English: Kuruman finger grass

in Southern Africa: Kurumanvingergras, sandveld fingergras

D. sericea (Honda) Honda (*Syntherisma sericea* Honda)

Asia, Japan. See *Botanical Magazine* 38: 127. 1924, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 298. 1930, *Acta Phytotaxonomica et Geobotanica* 11: 28. 1942.

D. serotina (Walt.) Michx. (*Paspalum serotinum* (Walter) Fluegge; *Syntherisma serotina* Walt.)

U.S., Florida, Louisiana. Perennial or annual, mat-forming, stoloniferous with creeping stolons, membranous ligule, leaves crowded, very short blades, hairy leaves and sheaths, flowering stems ascending or erect, reproduces by seed and stolons, a lawn weed, found in pastures and moist disturbed areas, lawns and low wet places, a weed in St. Augustine lawn, *Stenotaphrum secundatum* (Walter) Kuntze, see *Flora Caroliniana, secundum ...* 76. 1788, *Flora Boreali-Americana* 1: 46. 1803, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 145. 1810.

in English: dwarf crab grass, blanket crab grass, rabbit crab grass, late-fruited crab grass

D. setifolia Stapf (*Digitaria bovonii* Chiov.; *Digitaria nardifolia* Stapf; *Panicum fibrosum* Hack.)

South Africa. Perennial, densely tufted, racemes subdigitate, spikelets in pairs or in threes, female fertile floret dark, upper glume and lower lemma with brown hairs, growing in damp places or vleis, in mountain sourveld areas, see *Flora Capensis* 7: 376. 1898 and *Österreichische Botanische Zeitschrift* 51(9): 330. 1901, *Bulletin of Miscellaneous Information Kew* 1912(10): 428. 1912, *Annali di Botanica* 13: 40. 1914, *Flora of Tropical Africa* 9: 444. 1919.

in English: fine-leaved finger grass

D. setigera Roth (*Axonopus corymbosus* (Roxb.) Schult.; *Cynodon setigerus* (Roth) A. Rich. ex Hassk.; *Digitaria consanguinea* Gaudich.; *Digitaria corymbosa* (Roxb.) Merr.; *Digitaria extensa* (Hook.f.) Henrard; *Digitaria hainanensis* Hitchc. ex Keng; *Digitaria horizontalis* Willd.; *Digitaria lanosa* Llanos; *Digitaria marginata* var. *extensa* (Hook.f.) Camus & A. Camus; *Digitaria microbachne* subsp. *presliana* Henrard; *Digitaria microbachne* var. *longivillosa* Henrard; *Digitaria microstachya* Henrard; *Digitaria pruriens* (Fisch. ex Trin.) Büse; *Digitaria pruriens* var. *microbachne* (J. Presl) Fosberg; *Digitaria microbachne* (J. Presl) Henrard; *Digitaria sanguinalis* f. *extensa* (Hook.f.) Haines; *Digitaria sanguinalis* var. *extensa* (Hook.f.) Rendle; *Digitaria sanguinalis* var. *pruriens* (Fisch. ex Trin.) Prain; *Digitaria setigera* Roth ex Roem. & Schult.; *Digitaria subhorizontalis* Ohwi; *Digitaria timorensis* var. *norfolkiana* (Nees ex Endl.) Henrard; *Lasiolytrum pilosum* Steud. ex Jard.; *Panicum chrysanthum* Steud.; *Panicum corymbosum* Roxb.; *Panicum dilatatum* Steud.; *Panicum extensum* Nees & Arn. ex Wight; *Panicum fimbriatum* var. *setigerum* (Roth) E. Fourn.; *Panicum microbachne* J. Presl; *Panicum norfolkianum* Nees ex Endl.; *Panicum pruriens* Fisch. ex Trin.; *Panicum pruriens* var. *glabrum* Nees; *Panicum sanguinale* var. *extensa* (Hook.f.) Matsumara; *Panicum sanguinale* var. *humifusum* Hack.; *Panicum sanguinale* var. *microbachne* (J. Presl) Hack.; *Panicum sanguinale* var. *pruriens* (Fisch. ex Trin.) Drake; *Panicum sanguinale* var. *reimarioides* (Brongn.) Drake; *Panicum setigerum* (Roth) Boerl., nom. illeg., non *Panicum setigerum* Retz.; *Paspalum consanguineum* (Gaudich.) Kunth; *Paspalum reimarioides* Brongn.; *Paspalum sanguinale* var. *extensum* Hook.f.; *Paspalum sanguinale* var. *pruriens* (Fisch. ex Trin.) Hook.f.; *Setaria chrysantha* (Steud.) Heynh.; *Syntherisma consanguinea* (Gaudich.) Skeels; *Syntherisma corymbosa* (Roxb.) Hosok.; *Syntherisma digitata* (Sw.) Hitchc.; *Syntherisma microbachne* (J. Presl) Hitchc.; *Syntherisma pruriens* (Fisch.) Arthur; *Syntherisma pruriens* (Fisch. ex Trin.) Arthur; *Syntherisma sanguinalis* (L.) Dulac; *Syntherisma sanguinalis* var. *evalvula* Honda; *Syntherisma sanguinalis* var. *extensa* (Hook.f.) Honda; *Syntherisma sanguinalis* var. *pruriens* (Fisch. ex Trin.) Honda

U.S., Hawaii, Australia, Asia temperate and tropical, Southeast Asia, China, Nepal, India, Indonesia, Taiwan, Malaysia, Vietnam, Thailand. Annual or short-lived perennial, variable, erect, sprawling, creeping, long-stemmed, decumbent at base and rooting from lower nodes, leaf sheaths folded and ribbed, ligule membranous, hispid leaves oblong-lanceolate, inflorescence branches bunched together, first glume more or less absent to hardly distinguishable, weed species, a weed of rice in the tropics, forage, economic plant palatable to stock, occurs in open and weedy site back of strand, near or along roadsides, in open and disturbed site at edge of lawn, in shady woods, moist regions, waste place, see *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 92. 1809, *Systema Vegetabilium* 2: 474. 1817, *Flora Indica; or Descriptions ...* 1: 295. 1820, *Novae Plantarum Species* 37. 1821, *Mantissa* 2: 177. 1824, *De Graminibus Paniceis* 77. 1826, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 410. 1830, *Reliquiae Haenkeanae* 1(4-5): 298. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 46. 1833, *Prodromus Florae Norfolkicae* 18. 1833, *Voyage autour du Monde* 140, t. 20. 1833, *Catalogue of Indian Plants* 141. 1837, *Catalogus Plantarum in Horto Botanico Bogoriensi Cultarum Alter* 17. 1844, *Alphabetische und Synonymische Aufzählung der Gewächse* 2: 661. 1846, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 97. 1850, *Fragmenta Florae Philippinae* 28. 1851, *Plantae Junghuhnianae* 3: 379. 1854, *Synopsis Plantarum Glumacearum* 1: 39. 1855 [1853], *Mémoires de la Société des Sciences Naturelles de Cherbourg* 5: 299. 1857, *Flore du Département des Hautes-Pyrénées* 77. 1867, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 233. 1885, *Mexicanas Plantas* 2: 18. 1886, *Annales du Jardin Botanique de Buitenzorg* 8: 52. 1890, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 13(2): 259. 1890, *Flore de la Polynésie Française* 249-250. 1893, *The Flora of British India* 7: 15. 1896, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2(1): 163. 1899 and *Bengal Plants* 1181. 1903, *Index plantarum japonicarum sive enumeratio plantarum ...* 2(1): 72. 1905, *Contributions from the United States National Herbarium* 12(3): 142. 1908, *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 282: 33. 1913, *Torreya* 19: 83. 1919, *An Enumeration of Philippine Flowering Plants* 1: 53. 1922, *Memoirs of the Bernice Pauahi Bishop Museum ...* 8(3): 177. 1922, *Observationes Botanicae* 7: 401. 1922, *The Botany of Bihar and Orissa* 5: 1007. 1924, *Botanical Magazine* 38: 122. 1924, *Mededeelingen van 's Rijks-Herbarium* 61: 13. 1930, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 298-299. 1930, *Blumea* 1(1): 100. 1934, *J. Soc. Trop. Agric. Taiwan* 6: 664. 1934, *Transactions of the Natural History Society of Taiwan* 24: 199. 1934,

Sunyatsenia 3(1): 18-19. 1935, *Bot. Mag. Tokyo* 55: 541. 1941, *Acta Phytotaxonomica et Geobotanica* 11: 261. 1942, *Journal of the Arnold Arboretum* 29: 292. 1948, *Monograph of the Genus Digitaria* 152, 452, 454, 748, 942-943, 945, 994. 1950, *Phytologia* 5(7): 289. 1955, *Webbia* 11: 309, 346. 1955, *Blumea* 21: 38-40, f. 6a. 1973.

in English: itchy crab grass, East Indian crab grass, slender crabgrass, crab grass

in Hawaii: kukaepua'a, mau'u kukaepua'a

D. setigera Roth var. *setigera*

Asia. Perennial, decumbent, stoloniferous, sometimes rooting at the nodes, see *Systema Vegetabilium* 2: 474. 1817.

D. siamensis Henrard

Thailand. See *Monograph of the Genus Digitaria* 692. 1950.

D. similis Beetle ex Gould (*Digitaria affinis* Opiz ex Bercht., nom. illeg., non *Digitaria affinis* Roem. & Schult.; *Digitaria similis* Beetle; *Digitaria sellowii* (Müll. Hal.) Henrard; *Trichachne affinis* Swallen; *Trichachne affinis* Chase ex C.P. Cowan; *Trichachne sellowii* Müll. Hal.)

Mesoamerica. Along roadsides, see *Oekonomisch-technische Flora Böhmens* 1: 500. 1836, *Botanische Zeitung. Berlin* 19(43): 315. 1861 and *Blumea* 1: 99. 1934, *Rhodora* 65(764): 355. 1963, *Contr. Estudio Gram. Mexico* 6: 7 (1973, *Phytologia* 37(4): 344. 1977, *Journal of the Arnold Arboretum* 60(2): 320. 1979, *Listados Florísticos de México* 1: 119. 1983, *Flora Mesoamericana* 6: i-xvi, 1-543. 1994, *Flora Mesoamericana* 6: 365-371. 1994.

in English: roadside crab grass

D. simpsonii (Vasey) Fernald (*Panicum sanguinale* var. *simpsonii* Vasey; *Panicum simpsonii* (Vasey) Beal; *Syntherisma simpsonii* (Vasey) Nash)

U.S., Florida. Vulnerable species, see *Contributions from the United States National Herbarium* 3(1): 25. 1892, *Grasses of North America for Farmers and Students* 2: 109. 1896, *Bulletin of the Torrey Botanical Club* 25: 297. 1898 and *Rhodora* 22(258): 103. 1920.

in English: Isle-of-pines crab grass, Simpson's crab grass

D. singularis Mez (*Digitaria corynotricha* (Hack.) Henrard; *Digitaria sejuncta* (Hack. ex Pilg.) Henrard; *Panicum corynotrichum* Hack.; *Panicum sejunctum* Hack. ex Pilg.)

Paraguay, Brazil. Growing in clumps, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 19. 1899 and *Österreichische Botanische Zeitschrift* 51: 335. Sep 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Mededeelingen van's Rijks-Herbarium* 61: 2, 5. 1930.

D. smutsii Stent (*Digitaria eriantha* Steud.)

South Africa. See *Flora* 12: 468. 1829 and *Bothalia* 1: 268, t. 5. 1924.

D. somalensis Chiov. (*Digitaria abyssinica* (Hochst. ex A. Rich.) Stapf; *Panicum abyssinicum* Hochst. ex A. Rich.)

East Africa, Somalia. See *Tentamen Florae Abyssinicae ...* 2: 360. 1850 and *Bulletin of Miscellaneous Information Kew* 1907: 213. 1907, *Resultati Scientifici della Missione Stefanini-Paoli nella Somalia Italiana* 1: 224. 1916, *Flora Somala* 2: 443. 1932.

D. sparsifructus Ohwi

Asia, Indonesia. See *Bulletin of the Tokyo Science Museum* 18: 7. 1947.

D. stapfii Henrard (*Digitaria milaniana* (Rendle) Stapf; *Panicum milanianum* Rendle)

Tropical Africa. See *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Flora of Tropical Africa* 9: 430. 1919, *Monograph of the Genus Digitaria* 705. 1950.

D. stenostachya Hughes (*Panicum stenostachyum* Benth., nom. illeg., non *Panicum stenostachyum* Thwaites)

Australia. See *Flora Australiensis: A Description ...* 7: 470. 1878 and *Bulletin of Miscellaneous Information Kew* 1923(9): 311. 1923.

D. stoloniferissima Vanderyst

Africa. See *Bulletin agricole du Congo Belge* 10: 241. 1919, *Bulletin agricole du Congo Belge* 33: 389. 1963.

D. stricta Roth (*Agrostis pilosa* Retz.; *Digitaria denudata* Link; *Digitaria puberula* Link; *Digitaria royleana* (Nees ex Hook.f.) Prain; *Digitaria stricta* Roth ex Roem. & Schult.; *Digitaria stricta* Gaudich., nom. illeg., non *Digitaria stricta* Roth; *Digitaria stricta* H.B. Willd. ex Steud.; *Panicum denudatum* (Link) Kunth; *Panicum kunthii* Steud.; *Panicum puberulum* (Link) Kunth; *Panicum pseudosetaria* Steud.; *Paspalum royleanum* Nees ex Hook.f.; *Paspalum royleanum* Nees ex Thwaites; *Setaria stricta* (Roth) Kunth; *Syntherisma royleana* (Nees ex Hook.f.) Newbold)

Asia temperate and tropical, China, India, Nepal, Pakistan, Sri Lanka. Annual, tufted, erect or decumbent at base, spreading, rooting from lower nodes, ligule erose, leaves linear and very acute, panicles well exerted, slender peduncles, spikelets acute, both glumes absent or the upper glume minute to vestigial or reduced to a scale, lemma of upper floret reticulate, see *Species Plantarum* 1: 55. 1753, *Observationes Botanicae* 6: 22. 1791, *Systema Vegetabilium* 2: 474. 1817, *Mantissa* 2: 8, 163. 1824, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 409. 1826, *Hortus Regius Botanicus Berolinensis* 1: 222. 1827, *Révision des Graminées* 1: 32-33, 47. 1829, *Révision des Graminées* 1: Suppl. IX. 1830, *Nomenclator Botanicus. Editio secunda* 1: 508. 1840, *Nomenclator Botanicus. Editio secunda* 2: 258. 1841, *Synopsis Plantarum Glumacearum* 1: 37, 39, 47. 1855 [1853, 1854], *Enumeratio Plantarum Zeylaniae* 358. 1864, *Flora Brasiliensis* 2(2): 130. 1877, *The Flora of British India* 18. 1896 and *Bengal*

Plants 1182. 1903, *Torreyia* 24: 9. 1924, *Mededeelingen van 's Rijks-Herbarium* 61: 18. 1930, *Transactions of the Natural History Society of Taiwan* 24: 198. 1934, *Monograph of the Genus Digitaria* 175. 1950, *Webbia* 11: 336. 1955, *Grasses of Burma* ... 305. 1960.

in India: chini jara, lahan lona

D. swalleniana Henrard (*Digitaria sellowii* (Müll. Hal.) Henrard; *Digitaria similis* Beetle ex Gould; *Digitaria similis* Beetle; *Trichachne affinis* Swallen; *Trichachne sericea* Swallen)

Warm regions, southern America, Brazil. Spikelets long hairy, lower lemma hairy and glabrous, found along roadsides, sandy areas, open places, very similar to *Digitaria insularis* (L.) Mez, see *Botanische Zeitung. Berlin* 19(43): 315. 1861 and *Blumea* 1: 99. 1934, *Contributions from the United States National Herbarium* 29(6): 264-265. 1949, *Monograph of the Genus Digitaria* 722. 1950, *Rhodora* 65(764): 355. 1963, *Phytologia* 37(4): 344. 1977, *Journal of the Arnold Arboretum* 60(2): 320. 1979.

D. swazilandensis Stent

Tropical Africa, Mozambique, South Africa, Swaziland, Zimbabwe. Perennial, branched, not very palatable, suitable for wet areas, thrives on poor soils, tolerates drought, suitable for stabilising waterways and table drains, see *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 91. 1809 and *Bothalia* 3: 156. 1930.

in English: Swaziland finger grass, Swazi grass, Richmond finger grass, swazi

D. swynnertonii Rendle (*Digitaria milanijana* (Rendle) Stapf; *Panicum milanijanum* Rendle)

Zimbabwe. See *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Journal of the Linnean Society, Botany* 40: 227, t. 6, f. 6-10. 1911, *Flora of Tropical Africa* 9: 430. 1919.

D. tandilensis Kuntze (*Danthonia cirrhata* Hack. & Arechav.; *Danthonia tandilensis* Kuntze)

South America, Argentina. See *Revisio Generum Plantarum* 3(3): 349. 1898 and *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 16: 38. 1900, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Courier Forschungsinstitut Senckenberg* 186: 69-103. Frankfurt am Main 1995, *Sendtnera* 3: 11-93. 1996.

D. tenuiflora Stapf (*Digitaria longiflora* (Retz.) Pers.; *Digitaria tenuiflora* (R. Br.) P. Beauv.; *Panicum tenuiflorum* R. Br.; *Paspalum longiflorum* Retz.)

America. See *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805, *Prodromus Florae Novae Hollandiae* 193. 1810, *Essai d'une Nouvelle Agrostographie* 51, 160, 171. 1812.

D. tenuis (Nees) Henrard (*Digitaria tenuispica* Rendle; *Digitaria tenuissima* Hughes; *Panicum insulare* var. *tenerrimum*

(Kunth) Hack.; *Panicum tenerrimum* Kunth; *Trichachne tenuis* Nees)

America. See *Primitiae Florae Essequiboensis* ... 60. 1818 [*Primitiae florae essequiboensis* adjectis descriptionibus centum circiter stirpium novarum, observationibusque criticis, auctore Georgio Friderico Wilhelmo Meyer. Gottingae 1818], *Denkschriften der Koeniglich-Baierischen Botanischen Gesellschaft in Regensburg* 2: 26. 1822, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 89. 1829, *Révision des Graminées* 1: 39. 1829, *Flora Australiensis: A Description* ... 7: 470. 1878 and *Journal of the Linnean Society, Botany* 36(253): 326-327. 1904, *Anales del Museo Nacional de Buenos Aires* 11: 71. 1904, *Bulletin of Miscellaneous Information Kew* 1923(9): 312. 1923, *Blumea* 1: 99. 1934, *Blumea* 21: 52. 1973, *Brunonia* 6: 202. 1983.

D. ternata (Hochst. ex A. Rich.) Stapf (*Cynodon ternatus* A. Rich.; *Digitaria argyrostachya* (Steud.) Fernald; *Digitaria argyrostachya* var. *glabrescens* (Büse) Henrard; *Digitaria argyrostachya* var. *hirticulmis* Henrard; *Digitaria ropalotricha* Büse; *Digitaria ropalotricha* var. *glabrescens* Büse; *Digitaria ternata* (A. Rich.) Stapf ex Dyer; *Digitaria ternata* (A. Rich.) Stapf; *Digitaria ternata* f. *glabrispicula* Cufod.; *Panicum argyrostachyum* Steud.; *Panicum phaeocarpum* Nees; *Panicum phaeocarpum* var. *gracile* Nees; *Panicum ropalotrichum* (Büse) Koord.; *Panicum ropalotrichum* Büse ex Koord.; *Panicum ternatum* (A. Rich.) Hochst. ex A. Rich.; *Panicum ternatum* (A. Rich.) Hochst. ex Steud.; *Panicum ternatum* Hochst.; *Paspalum ternatum* (A. Richard) Hook.f.; *Syntherisma argyrostachya* (Steud.) Hitchc. & Chase; *Syntherisma ternata* (Hochst. ex A. Rich.) Newbold; *Syntherisma ternata* (A. Rich.) Newbold)

Tropical and southern Africa, Southeast Asia, China, India, Nepal. Annual, tufted or loosely tufted, variable, decumbent or erect, hairy, leaf sheaths glabrous, ligule membranous, leaves oblong and acute, racemes erect and sessile, pedicel with a corona of hairs, spikelets crowded and mostly ternate, spikelets densely pubescent to hairy, fertile floret dark purplish to black, upper glume shorter than the spikelet, upper glume and lower lemma hairy, lower glume absent, garden weed species, naturalized, economic plant, palatable, low grazing value, good forage grass, usually on damp places, waste places, scrubby irrigation ditches, in high rainfall areas, gardens, on wet compacted soils, field borders, disturbed ground, shaded disturbed places, uncultivated lands, along roadsides, weedy places, see *Flora* 24(2): 19. 1841, *Florae Africae Australioris Illustrationes Monographicae* 22-23. 1841, *Tentamen Florae Abyssinicae* ... 2: 405. 1850, *Plantae Junghuhnianae* 3: 381. 1854, *Synopsis Plantarum Glumacearum* 1: 40. 1855 [1853], *The Flora of British India* 7: 17. 1896, *Flora Capensis* 7: 376. 1898 and *Exkursionsflora von Java* ... 1: 126. 1911, *Systematisches Verzeichnis der zum Herbar Koorders ... Buitenzorg/Batavia 1910-1913 [-1914]*, *Contributions from the United States National Herbarium* 18(7): 294.

1917, *Rhodora* 22(258): 103. 1920, *Torreya* 24: 9. 1924, *Mededeelingen van 's Rijks-Herbarium* 61: 16. 1930, *Monograph of the Genus Digitaria* 49, 633, 889. 1950, *Enumeratio Plantarum Aethiopiae Spermatophyta* 1333. 1969.

in English: black-seed finger grass, blackseed crab grass

in Cameroon: fafabo debbo

in Southern Africa: soetvingergras, swartsaadvingergras; moeane, moqopshwe (Sotho)

in India: bili akkaabu hullu

D. texana A.S. Hitchc. (*Digitaria albicoma* Swallen; *Digitaria runyonii* A.S. Hitchc.; *Digitaria subcalva* A.S. Hitchc.)

Northern America, U.S., Texas. Found in sandy areas, oak wood, flats, sandy woods, low ground, sand flats near the riverbanks, near a marsh, sandy oak woods, see *Proceedings of the Biological Society of Washington* 41: 162. 1928, *Journal of the Washington Academy of Sciences* 23(10): 455. 1933, *American Journal of Botany* 21(3): 138, f. 4. 1934, *Journal of the Washington Academy of Sciences* 30(5): 214, f. 3. 1940.

in English: Texan crab grass, Texan finger grass

D. thouaresiana (Fluegge) A. Camus (*Digitaria melanochila* Stapf; *Digitaria scaettae* Robyns; *Digitaria scaettae* var. *glabra* Robyns & Van der Veken; *Digitaria tricolostulata* (Hack.) Henrard; *Panicum puberulum* var. *tricolostulatum* Hack.; *Paspalum thouarsianum* Fluegge) (after the French botanist Louis-Marie Aubert du Petit-Thouars, 1758-1831, traveler and plant collector, among his publications are *Mélanges de botanique et de voyages* ... Paris 1811, *Plantes des îles de l'Afrique australe* ... Paris [1804], *Genera nova madagascariensia*. [Paris 1806], *Histoire particulière des plantes orchidées* ... Paris 1822 and *Histoire des végétaux recueillis dans les îles australes d'Afrique* ... Paris 1806 [-1808]; see Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 98. Palermo 1988; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 109. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

East Africa. Annual, herbaceous, tufted to loosely tufted, racemes subdigitate, pedicel without a corona of hairs, upper glume and lower lemma hairy, upper floret dark brown to black, grows in marshy places, disturbed sites and seasonally inundated areas, bushland, clearings, see *Graminum Monographiae* ... Pars I. *Paspalum*. *Reimaria* 1: 148. 1810 and *Flora of Tropical Africa* 9: 453. 1901, *Österreichische Botanische Zeitschrift* 51: 332. 1901, *Bulletin de la Société Botanique de France* 75: 914. 1928, *Mémoires de l'Institut Royal des Sciences Naturelles de Belgique* 1: 31. 1931, *Blumea* 1(1): 101. 1934, *Bulletin du Jardin Botanique de l'État* 22: 148. 1952.

D. thwaitesii (Hack.) Henrard (*Panicum thwaitesii* Hack.) (for the British (b. Bristol) botanist George Henry Kendrick Thwaites, 1812-1882 (d. Kandy, Sri Lanka), plant collector, member of Botanical Society of London, from 1849 to 1880 Superintendent and Director of Royal Botanic Gardens at Peradeniya, 1854 Fellow of the Linnean Society, 1865 Fellow of the Royal Society, with Joseph Dalton Hooker (1817-1911) & William Ferguson (1820-1887) wrote *Enumeratio plantarum zeylanicae: an enumeration of Ceylon plants*. London [1858-] 1864; see Isaac Henry Burkill (1870-1965), *Chapters on the History of Botany in India*. Delhi 1965; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 315, 403. Dresden 1916; Hook.f. in Bentham & Hooker, *Gen. Pl.* 1: 751. 1867; J.C. Willis, in *Ann. Royal Bot. Gard. Peradeniya*. 1: 7-10. 1901; H. Triemen, *Handbook Fl. Ceylon*. 2: 200. 1894 [A *Handbook to the Flora of Ceylon*. London 1893-1931]; Clarke in Hook.f., *Fl. British India*. 2: 526. 1879; J.H. Barnhart, *Biographical notes upon botanists*. 3: 383. 1965; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 685. 1994; R. Desmond, *The European Discovery of the Indian Flora*. 164-166. Oxford 1992; Ernest Nelmes & William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 131-132. 1932; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 401. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 410. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; A.H.G. Alston, *The Kandy Flora*. Colombo 1938; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Sri Lanka. Perennial, erect, stolons absent, ligules short and denticulate, first glume minute or absent, lower lemma strongly nerved, see *Oesterr. Bot. Z.* 2. 51: 334. 1901, *Blumea* 1: 101. 1934, *Grasses of Burma* ... 306. 1960.

D. timorensis (Kunth) Balansa (*Digitaria chinensis* var. *hirsuta* Ohwi; *Digitaria propinqua* Gaudich., nom. illeg., non *Digitaria propinqua* (R. Br.) P. Beauv.; *Digitaria radicata* (J. Presl) Miq.; *Digitaria tenuispica* Rendle; *Digitaria timorensis* var. *hirsuta* (Ohwi) Henrard; *Panicum radicosum* J. Presl; *Panicum sanguinale* var. *timorense* (Kunth) Hack.; *Panicum timorense* Kunth; *Paspalum sanguinale* var. *debile* Hook.f.; *Paspalum sanguinale* var. *timorense* (Kunth) A. Camus; *Syntherisma tenuispica* (Rendle) Keng)

Asia. See *Species Plantarum* 1: 57. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Tableau Encyclopédique et Méthodique* ... *Botanique* 1: 176. 1791, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne* ... *Botanique*

1: 410. 1826, *Reliquiae Haenkeanae* 1(4-5): 297. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 83. 1833, *Prodromus Florae Norfolkicae* 18. 1833, *Flora van Nederlandsch Indië* 3: 437. 1857, *Journal de Botanique (Morot)* 4(7): 138. 1890 and *Botanisk Tidsskrift* 24: 41. 1901, *Journal of the Linnean Society, Botany* 36(253): 326-327. 1904, *Bulletin de l'Herbier Boissier sér. 2*, 4(6): 528. 1904, *Notulae Systematicae. Herbarium du Muséum de Paris* 2: 222. 1912, *Acta Phytotaxonomica et Geobotanica* 11(1): 29. 1942, *Monograph of the Genus Digitaria* 747-748, 838, 994. 1950, *Blumea* 21(1): 1-80. 1973.

D. tomentosa (J. König ex Rottler) Henrard (*Digitaria tomentosa* (Koenig ex Willd.) Henrard; *Leptoloma tomentosum* (J. König ex Rottler) Gould; *Milium capillare* Roth; *Milium capillare* Roth ex Roem. & Schult.; *Milium tomentosum* J. König ex Rottler; *Milium tomentosum* J. König ex Willd.; *Panicum subglume* Trin.)

Southern India, Sri Lanka. Perennial, wiry, erect, spreading, geniculate, leaves pubescent or glabrous, inflorescence a panicle, spikelets dispersed and solitary, first glume absent, second glume reduced or absent, lemma of upper floret rugose, forest shade, see *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 4: 220. 1803, *Systema Vegetabilium* 2: 320. 1817, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 292. 1834 and *Blumea* 1(1): 100. 1934, *Grasses of Burma ...* 306. 1960, *Brittonia* 26(1): 60. 1974, *Flora Tamilnadu Carnatic* 3: 1840. 1983, *Blumea* 30(2): 279-318. 1985.

D. tonsa Hughes

Australia. See *Bulletin of Miscellaneous Information Kew* 1923(9): 313. 1923.

D. tricholaenoides Stapf

South Africa, Swaziland. Perennial, tufted, mat-forming, soft red to purplish hairs, strongly rhizomatous, rhizome horizontal to oblique, overlapping sheaths, ligule a fringed membrane, racemes arranged digitately or semidigitately, spikelets in clusters, upper glume with silvery or purplish hairs, high grazing value, palatable grass, generally in bushveld, open habitats, on stony slopes, in sour bushveld areas, open sour grassland, undisturbed veld, open savannah, sandveld, grassland, highveld grassland, rocky mountains and hills, stony soils, see *Flora Capensis* 7: 381. 1898.

in English: purple finger grass

in South Africa: persvingergras

D. trinervis Van der Veken

Africa. Short-living perennial, creeping, mat-forming, inflorescence with 3-8 branched racemes dispersed along a common axis, montane grassland, see *Bulletin du Jardin Botanique National de Belgique* 45(3-4): 402. 1975.

D. vaginata (Sw.) Magnier (*Panicum vaginatum* (Sw.) Gren. & Godr., nom. illeg., non *Panicum vaginatum* Nees; *Paspalum vaginatum* Sw.; *Sanguinaria vaginata* (Sw.) Bubani)

Asia. See *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Flore de France ... Prospectus* 3: 462. 1856, *Scrinia Florae Selectae* 6: 120. 1887 and *Flora Pyrenaea ...* 4: 258. 1901, *Contr. U.S. Natl. Herb.* 12: 136. 1908, *Blumea* 30(2): 279-318. 1985.

D. valida Stent (*Digitaria eriantha* Steud.)

South Africa. See *Flora* 12: 468. 1829 and *Bothalia* 3: 148-149. 1930, *Monograph of the Genus Digitaria* 976. 1950.

D. velutina (Forssk.) P. Beauv. (*Digitaria divaricata* Henrard; *Digitaria fenestrata* (Hochst. ex A. Rich.) Rendle; *Digitaria horizontalis* auct. non Willd.; *Digitaria ulugurensis* Pilg.; *Digitaria velutina* (DC.) Hitchc., nom. illeg., non *Digitaria velutina* (Forssk.) P. Beauv.; *Digitaria zeyheri* (Nees) Henr.; *Panicum abyssinicum* Hochst. ex A. Rich.; *Panicum abyssinicum* var. *setigerum* Chiov.; *Panicum fenestratum* Hochst. ex A. Rich.; *Panicum forskalii* C. Chr.; *Panicum psilostachyum* Hochst. ex T. Durand & Schinz; *Panicum redemptum* Chiov.; *Panicum sanguinale* var. *cognatum* Hack. ex Schweinf.; *Panicum sanguinale* var. *fenestratum* Schweinf.; *Panicum zeyheri* Nees; *Phalaris velutina* Forssk.) (the specific name honors the German botanist and plant collector Carl (Karl) Ludwig Philipp Zeyher, 1799-1858, in South Africa, coll. 1822, 1824, 1825, 1828, 1829-31; coll. 1831-1832 with Christian Frederic Ecklon (1795-1868), wrote *Enumeratio plantarum africae australis extra-tropicae*. 280. Hamburg 1835-1836[-1837]; see William Jackson Hooker (1785-1865), *London J. Bot.* 2: 163-165. 1843, 5: 242. 1846; *Kew J. Bot.* 2: 61-62. 1850; I.H. Vegter, *Index Herbariorum. Part II (7), Collectors T-Z. Regnum Vegetabile* vol. 117. 1988; *Catalogue of the Books, Manuscripts, Maps and Drawings in the British Museum (Natural History)*. 2: 504 and 5: 2389. Weinheim 1964; Stafleu & Cowan, *Taxonomic literature*. 7: 534-535. 1988; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 540. 1965; C.F. Ecklon, "Nachricht über die von Ecklon und Zeyher unternommenen Reisen und deren Ausbeute in botanischer Hinsicht." *Linnaea*. 8: 390-400. 1833; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. Oxford 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Alain White & Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Tropical East Africa, South Africa, Mozambique, Sudan, Yemen. Annual, mat-forming, tufted to very loosely tufted,

branched, terrestrial, slender, ascending and often bent at nodes, often decumbent and rambling, stoloniferous, rooting from the lower nodes, roots fibrous, leaf sheath keeled, leaves softly hairy to pilose, ligule membranous, lax and delicate racemes diverging from a central axis, loosely imbricate spikelets lanceolate and pointed, lower glume reduced or a scale or absent, upper glume and lower lemma almost glabrous, yellowish to brown grain, whole plant eaten by local people, produces few leaves, palatable, little grazing value, grains eaten by baboons, pioneer plant, native pasture species, frequently invasive, noxious weed of arable land and gardens, weed of coffee and qat, occurs in disturbed places, pathsides, in high rainfall areas, in partial shade, open habitats, farmland, uncultivated lands, fallows, in *Acacia* and *Euphorbia* scrub, along lakeshores, under plantation crops, on sandy soils, wastes and cultivated fields, gardens, old cultivated lands and roadsides, in moist places, shallow sand, often found in damp patches where rainwater collects and in shade, grassland, see *Flora Aegyptiaco-Arabica* 17. 1775, *Essai d'une Nouvelle Agrostographie* 51, 173. 1812, *Florae Africae Australioris Illustrationes Monographicae* 25. 1841, *Tentamen Florae Abyssinicae ... 2*: 360-361. 1850, *Bulletin de l'Herbier Boissier* App. 11: 18. 1894, *Conspectus Florae Africae* 5: 768. 1894, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2: 163. 1899 and *Annuario del Reale Istituto Botanico di Roma* 8: 297. 1908, *Nuovo Giornale Botanico Italiano n.s.* 19: 418. 1912, *Dansk Botanisk Arkiv* 4(3): 12. 1922, *Proceedings of the Biological Society of Washington* 40: 84. 1927, *Blumea* 1(1): 96, 105. 1934, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 709. 1942, *Annalen des Naturhistorischen Museums in Wien* 69: 39. 1966.

in English: flaccid finger grass, long-plumed finger grass, long-plume finger grass, velvet finger grass, velvet crab grass, annual couch grass

in East Africa: epada, eriau

in South Africa: langpluim-vingergras, slapvingergras

D. venezuelae Henrard (*Digitaria glabriculumis* Swallen)

Venezuela. See *Monograph of the Genus Digitaria* 780-781. 1950, *Fieldiana, Botany* 28(1): 18. 1951, *Flora of the Venezuelan Guayana Project* 1995.

D. venezuelae Henrard var. ***fendleri*** Henrard

Venezuela. See *Monograph of the Genus Digitaria* 781. 1950.

D. venezuelae Henrard var. ***venezuelae***

Venezuela.

D. vestita Fig. & De Not. (*Digitaria abyssinica* (Hochst. ex A. Rich.) Stapf; *Digitaria vestita* subvar. *elgonensis* (C.E. Hubb. & Snowden) Henrard; *Panicum abyssinicum* Hochst. ex A. Rich.)

Africa. See *Tentamen Florae Abyssinicae ... 2*: 360. 1850, *Memorie della Reale Accademia delle Scienze di Torino* 2 14: 356, f. 22. 1854 and *Bulletin of Miscellaneous Information Kew* 1907: 213. 1907, *Bulletin of Miscellaneous Information Kew* 1934: 111. 1934, *Monograph of the Genus Digitaria* 670, 785, 932. 1950.

D. villiculmis Henrard

Venezuela. See *Blumea* 1(1): 106. 1934.

D. villosa (Walter) Pers. (*Digitaria domingensis* (Zuccagni) A. Roem. & Schult.; *Digitaria filiformis* (L.) Koeler; *Digitaria filiformis* var. *villosa* (Walt.) Fern.; *Digitaria leucocoma* (Nash) Urb.; *Digitaria obtusa* Swallen; *Digitaria pilosa* Michx.; *Digitaria villosa* hort. ex Trin.; *Panicum domingense* Zuccagni; *Panicum leucocomum* (Nash) Scribn.; *Paspalum carolinianum* Poir.; *Syntherisma leucocoma* Nash; *Syntherisma villosa* Walter)

U.S., Florida, Louisiana. Vulnerable species, caespitose, annual or possibly perennial, erect, occurs occasionally along firelands and roadsides, see *Flora Caroliniana, secundum ... 77*. 1788, *Descriptio Graminum in Gallia et Germania* 26. 1802, *Flora Boreali-Americana* 1: 45. 1803, *Syn. Pl.* 1: 85. 1805, *Obs. Bot. Cent.* 1 (11): 21. 1806, *Collectanea* 123. 1809, *Encyclopédie Méthodique, Botanique* 4: 311. 1816, *Systema Vegetabilium* 2: 475. 1817, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 1: 199. 1834, *Bulletin of the Torrey Botanical Club* 25: 295. 1898, *Bulletin, Division of Agrostology United States Department of Agriculture*, edition 2, 7: 58. 1898 and *Symbolae Antillarum* 8: 24. 1920, *Rhodora* 36(421): 19. 1934, *Phytologia* 4(7): 425. 1953, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Phytologia* 80(5): 348-349. 1996.

in English: shaggy crab grass, hairy finger grass

in Mexico: zacate cangrejo piloso

D. violascens Link (*Digitaria bogoriensis* Ohwi; *Digitaria chinensis* (Nees) A. Camus, nom. illeg., non *Digitaria chinensis* Hornem.; *Digitaria digitata* Büse; *Digitaria filiculmis* (Nees ex Miq.) Ohwi; *Digitaria fusca* (J. Presl) Merr., nom. illeg., non *Digitaria fusca* Chiov.; *Digitaria ischaemum* var. *asiatica* Ohwi; *Digitaria ischaemum* var. *intersita* Ohwi; *Digitaria ischaemum* var. *lasiophylla* (Honda) Ohwi; *Digitaria ischaemum* var. *violascens* (Link) Radford; *Digitaria pertenuis* Büse; *Digitaria pertenuis* var. *glabra* (Boerl.) Ohwi; *Digitaria pseudo-durva* (Nees) Schtdl.; *Digitaria recta* Hughes; *Digitaria ropalotricha* var. *villosa* (Keng) Tuyama; *Digitaria thwaitesii* var. *tonkinensis* Henrard; *Digitaria vidascens* Link; *Digitaria violascens* var. *intersita* (Ohwi) Ohwi; *Digitaria violascens* var. *lasiophylla* (Honda) Tuyama; *Digitaria violascens* var. *villosa* Keng; *Digitaria zeyheri* (Nees) Henrard; *Panicum digitatum* (Büse) Koord., nom. illeg., non *Panicum digitatum* Gilib.; *Panicum digitatum* (Büse) Koord., nom. illeg., non *Panicum digitatum*

Asch. & Graebn.; *Panicum fuscum* C. Presl ex Döll, nom. illeg., non *Panicum fuscum* Sw.; *Panicum pertenu* (Büse) Boerl.; *Panicum pertenu* var. *glabrum* Boerl.; *Panicum pseudo-durva* Nees; *Panicum pseudo-durva* var. *majus* Nees; *Panicum pseudo-ischaeum* var. *elongata* Boerl.; *Panicum steudelium* Domin; *Panicum violascens* (Link) Kunth; *Panicum zeyheri* Nees; *Paspalum chinense* Nees; *Paspalum filiculme* Nees ex Miq.; *Paspalum fuscum* J. Presl; *Paspalum minutiflorum* Steud., nom. illeg., non *Paspalum minutiflorum* Desv.; *Paspalum pertenu* (Büse) Backer; *Syntherisma chinensis* (Nees) A.S. Hitchc.; *Syntherisma fusca* (J. Presl) Scribn.; *Syntherisma helleri* Nash; *Syntherisma ischaemum* var. *lasiophylla* Honda; *Syntherisma violascens* (Link) Nash)

Throughout the tropics, Southeast Asia, Sri Lanka, Thailand, Vietnam, Indonesia, Malaysia, Philippines, China, India, Japan. Annual or sometimes perennial, geniculate or more or less erect, low-growing, sometimes decumbent and mat-forming, spreading, tufted, without stolons, leaf blades glabrous or hispid, ligule membranous, leaves linear and acute, sheaths pilose apically, racemes erect and slender, rachis winged, bearing shortly hairy spikelets in triplets to the base, spikelets closely pressed to the branches, glumes appressed-puberulent, lower glume minute or absent, fertile lemma black and shining, propagation by seed, invasive weed species, fairly persistent, naturalized, economic plant very palatable, withstands heavy grazing, occurs in disturbed places, field borders, wastelands, lawns, cultivated areas, old plantations, grassy roadsides, in natural open grasslands, sandy riverbanks, moist and semidry areas, old fields, woodland margins, in small bare patch, see *Descriptio uberior Graminum* 131. 1817, *Hortus Regius Botanicus Berolinensis* 1: 229. 1827, *Révision des Graminées* 1: 33. 1829, *Reliquiae Haenkeanae* 1(4-5): 214. 1830, *The Botany of Captain Beechey's Voyage* 231. 1837, *Florae Africae Australioris Illustrationes Monographicae* 21, 25, 117. 1841, *Plantae Junghuhnianae* 3: 381. 1854, *Linnaea* 26(4): 458. 1854, *Synopsis Plantarum Glumacearum* 1: 17. 1855 [1853], *Prolusio florae japonicae* 2: 274 [162?]. 1867, *Flora Brasiliensis* 2(2): 130. 1877, *Annales du Jardin Botanique de Buitenzorg* 8: 51-52. 1890 [1889], *Minnesota Botanical Studies* 1(10-11): 798, t. 44. 1897, *Annual Report of the Missouri Botanical Garden* 49, t. 11. 1899 and *Proceedings of the Academy of Natural Sciences of Philadelphia* 61(3): 488. 1909, *Exkursionsflora von Java ...* 1: 128. 1911, *Bulletin du Jardin Botanique de Buitenzorg, sér. 2*, 12: 25. 1913, *Bibliotheca Botanica* 85: 296. 1915, *Contributions from the United States National Herbarium* 22(6): 468. 1922, *Notulae Systematicae. Herbarier du Museum de Paris* 4: 48. 1923, *Bulletin of Miscellaneous Information Kew* 1923(9): 311. 1923, *Botanical Magazine* 38: 126. 1924, *Philippine Journal of Science* 35: 4. 1926, *Blumea* 1(1): 105. 1934, *Sunyatsenia* 3(1): 19. 1935, *Journal of Japanese Botany* 18(1): 15, 18-19. 1942,

Acta Phytotaxonomica et Geobotanica 11: 32. 1942, *Bulletin of the Tokyo Science Museum* 18: 5, 7. 1947, *Monograph of the Genus Digitaria* 742, 876. 1950, *Flora of Japan* 67. 1953, *Grasses of Burma ...* 307. 1960, *Journal of the Elisha Mitchell Scientific Society* 80(2): 172. 1964, *Blumea* 21: 63-64. 1973.

in English: smooth crab grass, violet crab grass, finger grass, crab grass

in Thailand: yaa paak khwaai, ya pak khwai

in Hawaii: kukaepua'a uka

D. virens Ridl. (*Digitaria mariannensis* Merr., nom. illeg., non *Digitaria marianensis* Mez)

Pacific. See *Philippine Journal of Science* 9: 54. 1914, *Bulletin of Miscellaneous Information Kew* 1926: 478. 1926, *Mededeelingen van 's Rijks-Herbarium* 61: 19. 1930, *Monograph of the Genus Digitaria* 533. 1950.

D. wallichiana (Nees) Stapf (*Digitaria remota* Henrard; *Digitaria wallichiana* (Henrard) Veldkamp; *Digitaria wallichiana* (Steud.) Stapf; *Panicum multibrachiatum* Hochst. ex Steud.; *Panicum multibracteatum* Hochst. ex Steud.; *Panicum wallichianum* Nees; *Panicum wallichianum* Steud.; *Paspalum perrottetii* Hook.f.)

Tropical Africa, Sri Lanka, southern India. Perennial, often decumbent, slender, knotted at the base, rooting at the lower nodes, sheaths hispid, leaf blades hirsute to hairy, open inflorescences, spreading branches, spikelets appressed, first glume absent or reduced to a minute scale, second glume pubescent and nerved, lower lemma pubescent, used as fodder, growing in the mountains, forest shade, moist open grasslands, along trails and roadsides, see *Synopsis Plantarum Glumacearum* 1: 41, 74. 1853-1854, *The Flora of British India* 7: 20. 1896 and *Flora of Tropical Africa* 9: 436. 1919, *Blumea* 3(3): 474. 1940, *Grasses of Burma ...* 307. 1960, *Blumea* 21(1): 50. 1973.

Digitariella De Winter = *Digitaria* Haller

The diminutive of *Digitaria* Haller.

Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Digitariinae, see *Bothalia* 7: 467. 1961, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Genera Graminum* 298-300. 1999, *Contributions from the United States National Herbarium* 46: 193-213. 2003.

Digitariopsis C.E. Hubb. = *Digitaria* Haller

Resembling *Digitaria* Haller.

About two species, tropical Africa. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Digitariinae, annual or perennial, unbranched, herbaceous, tufted, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence

spicate, solitary or paired spikelets flattened, 1 glume per spikelet, lower glume absent, upper glume spurred, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, often in *Digitaria*, type *Digitariopsis red-headii* C.E. Hubbard, see *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Carniolica, Editio Secunda* 1: 52. 1771 and *Hooker's Icones Plantarum* 35: t. 3420. 1940, *Bothalia* 7: 467. 1961, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Genera Graminum* 298-300. 1999, *Contributions from the United States National Herbarium* 46: 193-213. 2003.

Species

D. monobotrys Van der Veken (*Digitaria monobotrys* (Veken) Clayton)

Africa, Tanzania. Indeterminate species, see *Bulletin du Jardin Botanique de l'État* 27: 729. 1957, *Kew Bulletin* 29(3): 524. 1974.

D. major Van der Veken (*Digitaria major* (Van der Veken) Clayton; *Digitaria poggeana* Mez)

Zaire. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 191. 1921, *Bulletin du Jardin Botanique de l'État* 25: 330. 1955, *Kew Bulletin* 29(3): 523. 1974.

Dignathia Stapf

From the Greek *dis* “twice” and *gnathos*, *gnathmos* “jaw, cheek,” referring to the hardened glumes.

About 5 species, tropical East Africa to northeast India, Arabia. Chloridoideae, Cynodonteae, annual or perennial, herbaceous, unarmed, caespitose, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence a false spike or a cylindrical false raceme, spikelets separated by short internodes, terminal spikelet sterile and reduced, 2 subequal or very unequal glumes hard and longer than the floret, lemma keeled and shortly awned, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, dry areas, bushland, type *Dignathia gracilis* Stapf, see *Hooker's Icones Plantarum* 30: t. 2950. 1911, *Flora of Ethiopia and Eritrea* 7: 180. 1995.

Species

D. aristata Cope

Kenya. See *Kew Bulletin* 46(4): 710. 1991.

D. ciliata C.E. Hubb. (*Dignathia pilosa* (C.E. Hubb.) C.E. Hubb.)

Ethiopia. Perennial, subshrubby, woody, tufted, erect, wiry, much-branched, leaf sheath slightly inflated, inflorescence usually more or less exserted, dense narrowly oblong silky hairy head, spikelets ovate, glumes lanceolate and silky-ciliate with finely acuminate tips, lemma acute and awned,

growing in sand dunes, dry sandy open bushland, see *Kew Bulletin* 1934: 114. 1934, *The Families of Flowering Plants. II. Monocotyledons* 2: 216. 1934.

in Somalia: fodarder

D. gracilis Stapf

Africa, Mozambique, Kenya. Annual, spikelet with rostrate tip, prickly glumes, sand dunes, low shrubland.

D. hirtella Stapf

India, southern Arabia, Ethiopia. Annual, loosely tufted, erect or decumbent, wiry, leaves flat and narrow, ligule a ciliate rim, inflorescence exserted from the leaf sheath, terminal spike-like raceme, spikelets with rostrate tip, glumes shortly pubescent to ciliate, lower glume s-shaped, upper glume gibbous or swollen below, among rocks, on sandy soils, heavy grazed areas, deciduous bushland, stony slopes, disturbed sites, cultivated fields, open scrub.

in Somalia: halfa, sakbir

D. villosa C.E. Hubb.

Somalia. Perennial, subshrubby, erect, tussocky, short, low, woody, tough, branched, imbricate leaf sheaths, inflated uppermost sheath surrounding or embracing the inflorescence, short woody rhizome, spikelets ovate, ciliate to villos glumes subequal, lemma acuminate with an awn point, on red sand, limestone, stony soil, bushland, see *Bulletin of Miscellaneous Information Kew* 1936(5): 293. 1936.

in Somalia: yeris

Digraphis Trin. = *Baldingera* P. Gaertn., B. Mey. & Scherb., *Phalaris* L., *Phalaroides* Wolf

From the Greek *dis* “twice” and *graphis* “brush, pencil.”

Pooideae, Poeae, Phalaridinae, see *Species Plantarum* 1: 54-55. 1753, *Genera Plantarum* 11. 1776, *Methodus Plantas Horti Botanici ...* 201. 1794, *Flora der Wetterau* 1: 43, 96. 1799, *Fundamenta Agrostographiae* 127. 1820, *Bulletin Botanique [Genève]* 1: 220. 1830, *The Grasses of Britain* 188, t. 82. 1845, *Synopsis Plantarum Glumacearum* 1: 11. 1853, and *Iowa State College Journal of Science* 36(1): 1-96. 1961, *Taxon* 40(3): 475-485. 1991, *Taxon* 41: 567. 1992, *Flora Mesoamericana* 6: 236-237. 1994, *Webbia* 49(2): 265-329. 1995, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 140, 270-271, 479-488. 2003.

Diheteropogon (Hackel) Stapf

From the Greek *di* “two,” *heteros* “different” and *pogon* “a beard.”

About 5 species, tropical and South Africa. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, herbaceous, caespitose, slender,

branched or unbranched, erect, sometimes woody at the base, ligule an unfringed membrane, leaf blades linear, plants bisexual, inflorescence spicate or paniculate, paired racemes, compound panicle, sessile spikelet subterete, callus pungent, pedicelled spikelets awnless, 2 glumes more or less equal, 2-keeled lower glume coriaceous and deeply grooved, upper lemma bilobed, lower lemma sterile, awns more or less pungent, palea present, 2 lodicules free, 3 stamens, ovary glabrous, 2 stigmas, more or less palatable, species of open habitats, savannah, poor stony soils, rocky hills, impoverished soil, ruderal, closely related to *Andropogon*, see *Monographiae Phanerogamarum* 6: 647, 649. 1889 and *Bulletin agricole du Congo Belge* 9: 240. 1918, *Bulletin du Jardin Botanique de l'État* 6: 33, t. 31, f. 17-26. 1919, *Hooker's Icones Plantarum* 31: t. 3093. 1922, *Flore Agrostologique du Congo Belge* 152. 1929, *Bulletin agricole du Congo Belge* 25: 409. 1934, *Kew Bulletin* 1936(5): 296. 1936, *Kew Bulletin* 20: 73-76. 1966, *Kew Bulletin* 21: 485. 1968, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Flora of Ethiopia and Eritrea* 7: 317. 1995, David C. Hartnett, Andre F. Potgieter and Gail W.T. Wilson, "Fire effects on mycorrhizal symbiosis and root system architecture in southern African savannah grasses." *African Journal of Ecology* 42(4): 328-337. Dec 2004.

Species

D. amplectens (Nees) W.D. Clayton (*Andropogon amplectens* Nees; *Cymbachne amplectens* (Nees) Roberty)

South Africa. Perennial, tufted, not aromatic, young growth waxy, short scaly rhizomes, leaf sheath rounded, ligule a short membrane, two terminal racemes, spikelets sessile and awned, spikelets pedicellate and awnless, lacking swollen raceme bases, used for thatching, relatively palatable, good forage when young, hay, common in sour grassland, in bushveld, stony slopes, compacted ground, poor shallow soils, woodland, see *Species Plantarum* 2: 1045. 1753, *Florae Africae Australioris Illustrationes Monographicae* 102, 104. 1841 and *Bulletin de l'Institut Française d'Afrique Noire* 22: 105. 1960, *Kew Bulletin* 20: 75. 1966.

in English: broad-leaved bluestem

in Mali: keru goy

in Senegal: bu garabali, cicca, garabali, ndang, nianga, sèl, wâ

in South Africa: breeblaarandropogon

in Upper Volta: garraabal, garraabe

D. amplectens (Nees) W.D. Clayton var. ***catangensis*** (Chiov.) Clayton (*Andropogon amplectens* var. *catangensis* Chiov.)

South Africa, Sudan, Zaire, Tanzania. Leaf blades broadly cordate at base, see *Annali di Botanica* 13: 38. 1914.

D. filifolius (Nees) Clayton (*Andropogon filifolius* (Nees) Steud.; *Cymbachne filifolia* (Nees) Roberty; *Heteropogon filifolius* Nees)

South Africa. Perennial, tufted, unbranched, rhizomatous, bluish green, leaf blade thread-like or wiry, ligule an inconspicuous ring of hairs, inflorescence spatheate with two terminal racemes, spikelets paired, hard and unpalatable, very low grazing value, only grazed when young, common in open mountain sourveld, in bushveld areas, in coastal regions, on slopes, on sandy and loamy soils, see *Synopsis Plantarum Glumacearum* 1: 374. 1854 and *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 243. 1960.

in English: wire bluestem, thread-leaved bluestem, thread-leaved andropogon

in South Africa: draadbloustamgras, draadbloustam, smalblaarblougras, hloko

D. grandiflorus (Hack.) Stapf (*Andropogon grandiflorus* Hack.; *Heteropogon grandiflorus* (Hack.) Rendle; *Heteropogon grandiflorus* (Hack.) Roberty)

South Africa. See *Flora* 68(7): 127. 1885, *Caribbean Affairs* 2(1): 153. 1899 and *Boissiera*. 9: 137. 1960.

D. hagerupii Hitchc. (*Heteropogon hagerupii* (Hitchc.) Roberty) (for the Danish botanist Olaf Hagerup, 1889-1961, traveler, botanical collector in West Africa, see F.N. Hepper & F. Neate, *Plant Collectors in West Africa*. 35. 1971; J.H. Barnhart, *Biographical notes upon botanists*. 2: 100. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 158. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 191. 1973; Carl Frederik Albert Christensen (1872-1942), *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926 and *Den danske botaniske litteratur 1880-1911*. Kopenhagen 1913; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Tropical Africa. Annual, fodder, on dry sites, sandy places, see *Proceedings of the Biological Society of Washington* 43: 89. 1930, *Boissiera*. 9: 137. 1960.

in Niger: araerichrich, ararhas-rarhasbôlinka, garlabal, haramdam, kara, lallâ, serméy, shamréy

in Nigeria: dakwumbei, galla bar, galla bari, karairayau, kararayau, kararayau, shabrai, shamrai, tokari

in Upper Volta: garraabal, garraabe

Dilepyrum Michx. = *Muhlenbergia* Schreb.

Greek *di, dis* “two, twice” and *lepyron* “a rind, husk, shell,” referring to the scaly involucre.

Chloridoideae, Cynodonteae, Muhlenbergiinae, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Flora oder allgemeine Botanische Zeitung*. 11: 301. 1828 and *Flora Mesoamericana* 6: 276-286. 1994, *American Journal of Botany* 81: 622-629. 1994, *Madroño* 42(4): 427-449. 1995, *Sida* 17: 349-365. 1996, *Brittonia* 50(1): 23-50. 1998, P.M. Peterson, “Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostideae).” *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 67, 143-173. 2001.

Dilepyrum Raf. = *Oryzopsis* Michx.

Greek *di, dis* and *lepyron* “a rind, husk, shell.”

Stipoideae, Stipeae or Poodeae, Stipeae, Stipinae or Arundinoideae, Stipeae, see *Flora Boreali-Americana* 1: 51, t. 9. 1803, *Medical Repository*, ser. 2, 5: 353. 1808, *Essai d'une nouvelle Agrostographie* 17, 18, 173. 1812, *Fundamenta Agrostographiae* 109, 110. 1820, *Species Graminum Stipaceorum* 9, 16, 19. 1842, *Synopsis Plantarum Glumacearum* 1: 419-420. 1854, *Proceedings of the California Academy of Sciences* 4: 168. 1872, *Contributions from the United States National Herbarium* 1(8): 267. 1893, *Anales del Museo Nacional de Buenos Aires* 4: 179, f. 2. 1895 and *Anales del Museo Nacional de Montevideo* 4(2): 4-6, 10-12, f. 2a-c, 4. 1901, *Journal of the Linnean Society, Botany* 36(254): 382. 1904, *Contributions from the United States National Herbarium* 11: 109. 1906, *Bulletin of the Torrey Botanical Club* 39(3): 102. 1912, *U.S. Dept. Agric. Bull.* 772: 156, 158. 1920, *Bot. Gaz.* 107: 1-32. 1945, E.D. Merrill, *Index rafinesquianus*. 75. 1949, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 211. 1957, *Notes Roy. Bot. Gard. Edinburgh* 33: 341-408. 1975, *Flora Tsinlingensis* 1(1): 145. 1976, *Acta Phytotaxonomica Sinica* 19(4): 354, 435. 1981, *Grasses: Systematics and Evolution* 75-82. 2000, *Contributions from the United States National Herbarium* 48: 271, 469-473. 2003.

Dileucaden (Raf.) Steud. = *Panicum* L.

Greek *di, dis, leukos* “white” and *aden* “gland.”

Panicoideae, Panicodae, Paniceae, Panicinae, see *Species Plantarum* 1: 55, 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 117. 1816, *Révision des Graminées* 1: 219. 1829, *Bulletin Botanique [Genève]* 1: 220. 1830 and *Flora of the Southeastern United States ...* 104, 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910,

North American Flora 3(2): 200, 210. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 242. 1931, E.D. Merrill, *Index rafinesquianus*. 75. 1949, *Taxon* 33: 126-134. 1984, *Flora Mesoamericana* 6: 302-318. 1994, *Blumea* 41: 181-216, 416. 1996, *Taxon* 45: 319-320. 1996, *Taxon* 47: 869. 1998, *Taxon* 48: 376. 1999, *Contributions from the United States National Herbarium* 46: 306-441. 2003.

Dilophotriche (C.E. Hubb.) Jacq.-Fél. = *Dilophotriche* Jacq.-Fél., *Loudetiopsis* Conert

Greek *dilophos* “double-crested” and *thrix, trichos* “hair.”

About three species, West Africa, Senegal to Ivory Coast. Panicoideae, Panicodae, Arundinelleae, annual or perennial, unbranched, herbaceous, erect, cylindrical, slender, caespitose, auricles absent, ligule fringed, plants bisexual, open inflorescence paniculate, spikelets in triads, 2 glumes unequal, lemmas bilobed, upper lemma with 2 hair tufts, palea keels wingless, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, in moist ground, damp places, rainforest, related to *Trichopteryx* and *Loudetiopsis*, often in *Loudetiopsis*, see *Bulletin of Miscellaneous Information Kew* 1897: 294. 1897 and *Bulletin of Miscellaneous Information Kew* 1936(5): 322. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 277, 281. 1957, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 407-408. 1960, *Kirkia* 5: 235-258. 1966, *Contributions from the United States National Herbarium* 46: 285. 2003.

Species

D. occidentalis Jacq.-Fél. (*Loudetiopsis occidentalis* (Jacq.-Fél.) Clayton)

Tropical Africa. See *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1960, *Kew Bulletin* 21(1): 123. 1967.

D. pobeguini Jacq.-Fél. (*Loudetiopsis pobeguini* (Jacq.-Fél.) W.D. Clayton)

Tropical Africa. Annual, tufted, growing in moist places, see *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1960, *Kew Bulletin* 21(1): 123. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

in Guinea-Bissau: udubunoro

D. tristachyoides (Trin.) Jacq.-Fél. (*Arundinella tristachyoides* (Trin.) Roberty; *Danthoniopsis tristachyoides* (Trin.) Jacq.-Fél.; *Danthoniopsis tuberculata* (Stapf) Jacq.-Fél.; *Loudetiopsis tristachyoides* (Trin.) Conert; *Panicum tristachyoides* Trin.; *Tristachya microstachya* Nees ex Steud.; *Tristachya tristachyoides* (Trin.) C.E. Hubb.; *Tristachya tuberculata* Stapf)

Tropical Africa. Perennial, tufted, low grazing value, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 106. 1836, *Synopsis Plantarum Glumacearum* 1: 238. 1854, *Bulletin of Miscellaneous Information Kew* 1897: 294. 1897 and *Contr. U.S. Natl. Herb.* 24 (8): 423. 1927, *Bull. Misc. Inform. Kew* 1935: 309. 1935, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 423, 424. 1950, *Petite Flore de l'Ouest-Africain* 392. 1954, *Bulletin de l'Institut Française d'Afrique Noire* 17: 56. 1955, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 291. 1957, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1960.

in Guinea: alafasyen, wodion

in Guinea-Bissau: udu-bunoro, udubunoro

in Sierra Leone: fainyinyogi, foni, keep, kulebinyi

Dimeiostemon Raf. = *Andropogon* L.

Perhaps from the Greek *dis* "twice," *meion* "less, smaller" and *stemon* "stamen."

Panicoideae, Andropogoneae, Andropogoninae, type *Dimeiostemon vaginatus* Raf. ex B.D. Jacks., see *Species Plantarum* 2: 1045-1046. 1753, C.S. Rafinesque, *Neogenyton*. 4. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 268. 1832, *Index Kewensis* 1: 760. 1893 and *Bolletino della Società Botanica Italiana* 1917: 57. 1917, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64, 213. 2003.

Dimeria R. Br. = *Didactylon* Zoll. & Mor., *Haplachne* Presl, *Psilostachys* Steud., *Psilostachys* Turcz. (Euphorbiaceae), *Pterygostachyum* Steud.; *Pterygostachyum* Nees ex Steud., *Woodrowia* Stapf

From the Greek *di* "two" and *meros* "part," referring to the racemes.

About 35-40 species, Madagascar, Southeast Asia, India, China, Indonesia, Australia. Panicoideae, Andropogonodeae, Andropogoneae, Andropogoninae, annual or perennial, herbaceous, straggling, weak to delicate, caespitose, auricles present or absent, ligule an unfringed membrane, leaves acute to acuminate, plants bisexual, spicate or racemose inflorescence terminal, single or digitate racemes, spikelets usually imbricate or distant, spikelets more or less deciduous falling entire at maturity, spikelets borne singly and

shortly pedicelled, raceme rachis flattened or not, at maturity the pair of racemes coil inwards forming a ball, truncate callus, 2 glumes more or less equal, glumes usually keeled often winged, lower floret reduced to a barren lemma, upper floret perfect, upper lemma oblong and bilobed with a glabrous awn, palea absent or minute, lodicules absent, 2 stamens, ovary glabrous, 2 stigmas, open places, in open swampy places, glades, in or near forest, lowlands, lower montane forest, forest margins, type *Dimeria acinaciformis* R. Br., see *Prodromus florae Novae Hollandiae* 204. 1810, *Fund. Agrost.* 167, t. 14. 1820, *Reliquiae Haenkeanae* 1(4-5): 234, 235, t. 38. 1830, *Bulletin de la Société Impériale des Naturalistes de Moscou* 16: 58. 1843, *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844* 99. 1845-1846, *Synopsis Plantarum Glumacearum* 1: 413. 1854, *Nat. Pfl.-Fam.* 2, 2: 22. 1887, *Hooker's Icones Plantarum* 25: t. 2447. 1896 and *Die Flora der deutschen Schutzgebiete in der Südsee ...*: 165. Leipzig 1901, *Kew Bulletin* 7: 553-592. 1953, *Boissiera* 397-402. 1960, Houyuan Lu and Kam-Biu Liu, "Morphological variations of lobate phytoliths from grasses in China and the southeastern United States." *Diversity & Distributions* 9(1): 73-87. Jan 2003.

Species

D. acinaciformis R. Br. (*Saccharum acinaciforme* (R. Br.) Spreng.)

Australia. See *Species Plantarum* 1: 54. 1753, *Prodromus Florae Novae Hollandiae* 204. 1810, *Systema Vegetabilium, editio decima sexta* 1: 282. 1825.

D. aristata (Hack.) Senaratna (*Dimeria lehmannii* Hook.f., non (Nees ex Steud.) Hack.; *Dimeria lehmannii* var. *aristata* Hackel)

India, Sri Lanka. Perennial, erect or ascending, rachis margins ciliate, spikelets narrowly oblong, winged upper glume more or less obtuse or acute, upper lemma awned, similar to *Dimeria fuscescens* Trin., see *Monographiae Phanerogamarum* 6: 83. 1889 and *Handb. Fl. Ceylon* 5: 196. 1900, *Grasses of Ceylon* 163. 1956 [or *Peradeniya Manual* 163. 1956], *Grasses of Burma ...* 142. 1960.

D. avenacea (Retz.) C.E.C. Fischer (*Anthoxanthum avenaceum* Retzius; *Dimeria acinaciformis* R. Br.; *Dimeria acutipes* Bor; *Dimeria avenacea* var. *elatior* (Hook.f.) Bor; *Dimeria elatior* (Hook.f.) Senaratna; *Dimeria pusilla* Thwaites; *Dimeria pusilla* var. *elatior* Hook.f.)

Southern India, Chennai, Sri Lanka. Annual, erect, weak, slender, delicate, solitary racemes, spikelets narrowly oblong, glumes glabrous to pubescent, upper glume awned, lower glume acuminate and wingless, callus cuneate, upper lemma awned, seasonally inundated areas, open sandy places, flooded plains, see *Observationes Botanicae* 3: 8. 1783, *Enumeratio Plantarum Zeylaniae* 369. 1864, *The Flora of British India* 7(21): 103. 1897 [1896] and *Handb.*

Fl. Ceylon 5: 195. 1900, *Kew Bulletin* 1932: 72. 1932, *Kew Bulletin* 7: 560, 562. 1953, *Grasses of Ceylon* 161-162. 1956, *Grasses of Burma* ... 138-139. 1960, *Boissiera* 399-402. 1960.

D. ballardii Bor (*Dimeria fuscescens* Hook.f., non Trin.; *Dimeria fuscescens* var. *robusta* Hook.f.; *Dimeria fuscescens* var. *zeylanica* Hack.)

Sri Lanka. Perennial, montane, leaves basal, forming a sod, racemes divergent, spikelets narrowly elliptic oblong, callus rounded, glumes scabrid, lower glume winged, upper glume acuminate and winged, upper lemma awned, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 335. 1832, *Monographiae Phanerogamarum* 6: 85. 1889 and *Handb. Fl. Ceylon* 5: 198. 1900, *Kew Bulletin* 1952: 584. 1952, *Grasses of Ceylon* 162-163. 1956, *Grasses of Burma* ... 139. 1960.

D. blatteri Bor

India, Western Ghats, Maharashtra. Annual, leaf blades linear and acuminate, racemes subdigitate, spikelets awned, upper lemma bilobed and awned, awn geniculate, rare, growing in open areas, see *Kew Bulletin* 1949: 70. 1949, *Grasses of Burma* ... 140. 1960.

D. chloridiformis (Gaud.) K. Schumann & Lauterbach (*Andropogon chloridiformis* Gaudich.; *Dimeria ciliata* Merr.)

Southeast Asia. Robust, allied to *Dimeria aristata* (Hack.) Senaratna, see *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 412. 1826 and *Die Flora der deutschen Schutzgebiete in der Südsee* 165. 1901, *Philippine Journal of Science* 9: 262. 1914.

D. ciliata Merr. (*Dimeria chloridiformis* (Gaudich.) K. Schum. & Lauterb.)

Philippines. See *Philippine Journal of Science* 9: 262. 1914, *Journal of the Arnold Arboretum* 29(4): 325-326. 1948, *Technical Bulletin, Botany Branch, Queensland Department of Primary Industries* 3: 11. 1978.

D. dipteros Reeder

New Guinea. Lower glume more or less winged, allied to *Dimeria aristata* (Hack.) Senaratna, see *Journal of the Arnold Arboretum* 29(4): 324-325, pl. 6. 1948.

D. fuscescens Trinius

Sri Lanka, Nepal, Thailand, India. Perennial, robust, erect, decumbent, geniculately ascending, rooting at the nodes, racemes divergent, wavy rachis, spikelets narrowly oblong, callus rounded to blunt to subtruncate, glumes keeled and ciliate, upper glume acute and winged, lower glume wingless, upper lemma awned, damp places, grassy areas, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques,*

Physiques et Naturelles 2: 335. 1832 and *Grasses of Burma* ... 140. 1960.

D. gracilis Steud. (*Dimeria gracilis* Nees ex Steud.; *Dimeria laxiuscula* Trimen; *Dimeria leptorhachis* subsp. *genuina* Hack.; *Dimeria pilosissima* Thw., non Trin.)

India, Chennai, Sri Lanka. Perennial, slender, erect, leaf blades stiffly erect and pilose, rachis and pedicels filiform, spikelets linear-oblong, callus truncate, glumes keeled and ciliate, upper glume acuminate and wingless, lower glume wingless, upper lemma awned, wet places, see *Synopsis Plantarum Glumacearum* 1: 413. 1855, *Enum. Pl. Zeyl.* 369. 1864, *Journal of Botany, British and Foreign* 23: 272. 1885, *Monographiae Phanerogamarum* 6: 89. 1889 and *Handb. Fl. Ceylon* 5: 199. 1900, *Grasses of Ceylon* 164. 1956, *Grasses of Burma* ... 140. 1960.

D. lehmannii (Nees ex Steud.) Hack. (*Dimeria alata* Hook.f.; *Dimeria lehmannii* var. *mutica* Hack.; *Pterygostachyum lehmannii* Steud.; *Pterygostachyum lehmannii* Nees ex Steud.)

India, Chennai, Sri Lanka. Perennial, erect, ascending, leaf blades more or less villous to pilose or glabrous, spikelets narrowly oblong awnless or bristly, callus truncate, glumes keeled and ciliate, lower glume sometimes glabrous, upper glume winged, lower glume winged on the keel, in grassy places, see *Syn. Pl. Glumac.* 1: 413. 1855, *Monographiae Phanerogamarum* 6: 82-83. 1889, *Fl. Br. Ind.* 7: 105. 1896 and *Handb. Fl. Ceylon* 5: 197. 1900, *Grasses of Ceylon* 164. 1956, *Grasses of Burma* ... 139. 1960.

D. leptorhachis Hack. (also spelled *leptorachis*) (*Dimeria leptorhachis* subsp. *velutina* Hack.; *Dimeria pilosissima* Trin. var. *glabra* Trimen; *Dimeria velutina* (Hack.) Bor)

India, Chennai, Sri Lanka. Perennial, tufted, erect, leaf blades more or less pilose or pubescent, distant spikelets, pedicels cuneate, slender rachis, callus truncate, glumes keeled, lower glume wingless, upper glume acuminate and wingless, upper lemma awned, see *Monographiae Phanerogamarum* 6: 89-90. 1889, *J. Bot.* 23: 272. 1889 and *Grasses of Burma* ... 144. 1960.

D. ornithopoda Trin. (*Andropogon filiformis* Roxb., nom. illeg., non *Andropogon filiformis* Pers.; *Andropogon roxburghianus* Schult.; *Chrysopogon filiformis* Voigt; *Dimeria filiformis* (Roxb.) Hochst.; *Dimeria filiformis* (Roxb.) Hochst. ex Miq.; *Dimeria ornithopoda* var. *tenera* (Trin.) Hackel; *Dimeria stipaeformis* Miq.; *Dimeria stipiformis* Miq.; *Dimeria tenera* Trin.; *Psilostachys filiformis* Dalz. & Gibs.)

Asia, India. Annual, narrow-leaved, found in disturbed areas, see *Synopsis Plantarum* 1: 103. 1805, *Fundamenta Agrostographiae* 167, t. 14. 1820, *Mantissa* 2: 451. 1824, *Flora Indica; or Descriptions* ... 1: 260. 1820, *Hort. Calcutt.* 704. 1845, *Acta Societatis Regiae Scientiarum Indo-Neerlandicae* III. 4: 35. 1851, *The Bombay Flora* ... 305. 1861.

in Japan: karimata-gaya

D. ornithopoda Trin. subsp. *ornithopoda* (*Andropogon filiformis* Roxb., nom. illeg., non *Andropogon filiformis* Pers.; *Andropogon roxburghianus* Schult.; *Chrysopogon filiformis* Voigt; *Dimeria filiformis* (Roxb.) Hochst.; *Dimeria filiformis* (Roxb.) Hochst. ex Miq.; *Dimeria ornithopoda* var. *tenera* (Trin.) Hackel; *Dimeria stipaeformis* Miq.; *Dimeria stipiformis* Miq.; *Dimeria tenera* Trin.; *Psilostachys filiformis* Dalz. & Gibs.)

Asia, India.

D. pubescens Hack. (*Dimeria ceylanica* Bor; *Dimeria kurumthotticalana* K.C. Jacob; *Dimeria trimenii* Hook.f.)

Southern India, Sri Lanka. Perennial, tufted, carpet forming, erect, leaves basal, leaf blades hirsute or pilose, spikelets narrowly oblong-elliptic, rachis flat, callus rounded, lower glume more or less winged, winged upper glume finely pointed to acuminate, upper lemma awned, rocky places, damp areas, see *Monographiae Phanerogamarum* 6: 83. 1889 and *Handb. Fl. Ceylon* 5: 196, 198. 1900, *J. Bombay Nat. Hist. Soc.* 47: 49. 1947, *Kew Bulletin* 1952: 562, 580. 1952, *Grasses of Ceylon* 161, 163. 1956, *Grasses of Burma* ... 140, 144. 1960.

D. tenera Trin. (*Dimeria ornithopoda* subsp. *ornithopoda*; *Dimeria ornithopoda* var. *tenera* (Trin.) Hack.)

Asia. See *Fundamenta Agrostographiae* 167, t. 14. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 335. 1834, *Monographiae Phanerogamarum* 6: 81. 1889.

D. thwaitesii Hack. (*Dimeria pusilla* Thw. var. *pallida* Hook.f.; *Dimeria pusilla* var. *pallida* Thwaites ex Hook.f.)

Southern India, Chennai, Sri Lanka. Annual, erect, racemes solitary, rachis flat, spikelets oblong to narrowly oblong, callus rounded, glumes ciliate, lower glume wingless, upper glume winged and awned, upper lemma awned, rocky places, damp areas, see *Enumeratio Plantarum Zeylanicae* 369. 1864, *Monographiae Phanerogamarum* 6: 78. 1889, *Fl. Br. Ind.* 7: 103. 1896 and *Handb. Fl. Ceylon* 5: 197. 1900, *Grasses of Ceylon* 162. 1956, *Grasses of Burma* ... 144. 1960.

D. woodrowii Stapf

India, Maharashtra, Karnataka, Goa. Rare, annual, leafy, leaf blades linear and finely acuminate, racemes erect and then incurved, spikelets sublinear, each racemes rachis coiled into a loop, upper lemma awned, in open rocky places, plains, coastal areas, hills, see *Icones Plantarum* pl. 24. sub. t. 2312. 1894, *Fl. Brit. India* 7: 104. 1896 and *Grasses of Burma* ... 144. 1960.

Dimesia Raf. = *Anthoxanthum* L., *Hierochloe* R. Br.

Pooideae, Poeae, Phalaridinae, type *Dimesia fragrans* Raf., see *Species Plantarum* 1: 28. 1753, *Flora Peruviana, et Chilensis Prodrum* 125. 1794, *Systema Vegetabilium Florae Peruviana, et Chilensis* 1: 251. 1798, *Prodromus Florae Novae Hollandiae* 208. 1810, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812 and *Darwiniana* 19(2-4): 422-457. 1975, *Flora Patagónica* 3: 276-285. 1978, *Gayana, Botánica* 42: 1-157. 1985, *Regnum Veg.* 127: 19. 1993, *Contributions from the United States National Herbarium* 48: 111-115, 271, 384-386. 2003.

Dimorphochloa S.T. Blake = *Cleistochloa* C.E. Hubb.

From the Greek *dis* "twice" (*di* "two"), *morphe* "a form, shape" and *chloe*, *chloa* "grass," referring to the inflorescence, some spikelets are cleistogamous and the others chasmogamous.

One species, Australia. Panicoideae, Panicodae, Paniceae, perennial, tufted, wiry, branched, bushy, auricles absent, ligule a fringe of hairs, plants bisexual, cleistogamous and chasmogamous, terminal and axillary inflorescence, glumes 1 or 2 per spikelets, lemmas mucronate, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 red stigmas, often in *Cleistochloa*, type *Dimorphochloa rigida* S.T. Blake, see *Species Plantarum* 1: 55. 1753, *Plantae Javanicae Rariores* 15, 18, 20. 1838 and *Flora of Tropical Africa* 9: 739. 1920, *Hooker's Icones Plantarum* 33: t. 3209. 1933, *Blumea* 3(3): 161. 1938, *University of Queensland: Department of Biology, Papers* 1(19): 1. 1941, *Gramineae. Flora of New South Wales* 19(1): 66-67. 1961, *The Australian Paniceae (Poaceae)*: 30-33. 1987, Jannink and Veldkamp, "Revision of Chionachninae (Gramineae: Andropogoneae)." *Blumea* 47(3): 545-580. 2002, *Flora of Australia* 43: 275, 354. 2002.

Species

D. rigida S.T. Blake (*Cleistochloa rigida* (S.T. Blake) R.D. Webster; *Cleistochloa rigida* (S.T. Blake) Clayton, nom. illeg., non *Cleistochloa rigida* (S.T. Blake) R.D. Webster)

Australia, Queensland and New South Wales. Perennial, shrubby, fertile floret mucronate, dry scrub, sandstone, see *University of Queensland: Department of Biology* 1(19): 2, t. 1. 1941, *Kew Bulletin* 42(2): 401-403. 1987.

in English: wire grass

Dimorphostachys Fourn. = *Paspalum* L.

From the Greek *dimorphos* "of twin form, two formed" and *stachys* "spike."

Panicoideae, Paniceae, Paspalinae, type *Dimorphostachys monostachya* (Kunth) E. Fourn., see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Transactions of the Linnean Society of London* 2: 83, t. 16. 1794, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 163. 1831, *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 80: 441. 1875, *Mexicanas Plantas* 2: 14. 1886 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *U.S.D.A. Bull.* 772: 227. 1920, *Contributions from the United States National Herbarium* 46: 213-214, 443-527. 2003.

Dinaeba Delile = *Dinebra* Jacq.

Orth. var., see *Fragmentos de Algunas Plantas Filipinas* 77, pl. 121, f. 1. 1809, *Essai d'une Nouvelle Agrostographie* 98. 1812, *Description de l'Égypte, ... Histoire Naturelle, Tom. Second* 26. 1813 [1812], *Nova Genera et Species Plantarum* 1: 172, t. 51. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 291-292. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 280. 1833.

Dineba Delile ex P. Beauv. = *Dinebra* Jacq.

Orth. var., see *Fragmentos de Algunas Plantas Filipinas* 77, pl. 121, f. 1. 1809, *Essai d'une Nouvelle Agrostographie* 98. 1812, *Nova Genera et Species Plantarum* 1: 172, t. 51. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 291-292. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 280. 1833.

Dinebra Jacq.

Probably derived from the Arabic *dineiba*, diminutive of *danab* "tail," possibly alluding to the inflorescence, to the acuminate glumes; see Nikolaus Joseph Baron von Jacquin (1727-1817), *Fragmenta botanica*. 77, t. 121, f. 1. Viennae Austriae [1800-] 1809.

About 3 species, tropical Africa, India, Madagascar. Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, annual, tufted, herbaceous, decumbent, unbranched, auricles absent, leaf blades linear, ligule a very narrow fringed membrane, plants bisexual, inflorescence spicate or paniculate along a central axis, racemes elongated or cuneate, spikes deciduous or persistent, spikelets closely imbricate and sessile, 1- to several-flowered, 2 elongate glumes subequal exceeding and enclosing the florets, lemmas keeled with or without a mucro, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 red stigmas, weed, shade species or species of open habitats, amongst bushes, wet clays, savannah, in seasonally inundated areas, wet places, in open grassland, streamsides, waterlogged soils, disturbed areas, cultivated fields, related to *Leptochloa*, type

Dinebra arabica Jacq., see *Species Plantarum* 1: 71-73. 1753, *De Fructibus et Seminibus Plantarum ...* 1: 7. 1788, *Fragmenta Botanica* 77, 98, t. 121, f. 1. 1809, *Essai d'une Nouvelle Agrostographie* 71. 1812, *Systema Vegetabilium* 2: 34, 600. 1817, *Hortus Regius Botanicus Berolinensis* 1: 44, 280. 1827, *Proceedings of the Linnean Society of London* 1: 95. 1841, *Ann. Mag. Nat. Hist.* 7: 221. 1841, *Synopsis Plantarum Glumacearum* 1: 301. 1854, *Hooker's Icones Plantarum* 14: t. 1377. 1882, *A List of the Grasses of N.W. India, Indigenous and Cultivated* 33. 1883 and *Kew Bulletin* 28(3): 411-418. 1973 [The genus *Dinebra* Jacq. (Gramineae).], *Journal of Cytology and Genetics* 21: 152-154. 1986, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Flora of Ethiopia and Eritrea* 7: 105-107. 1995, *Contributions from the United States National Herbarium* 41: 20-33, 67-68. 2001, R.O. Karar et al., "Factors influencing the weed flora in the Gezira Scheme, Sudan." *Weed Research* 45(2): 121-129. Apr 2005, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

D. perrieri (A. Camus) Bosser (*Craspedorhachis perrieri* A. Camus)

Africa. See *Notulae Systematicae. Herbarium du Museum de Paris* 15(2): 134. 1956, *Adansonia*, sér. 2, 8: 515. 1968.

D. polycarpha S.M. Phillips

Uganda. Annual, erect or ascending, loosely tufted, slender, leaf blades acute, ligule ciliate, open inflorescence, distant spreading linear spikes, spikelets wedge-shaped and closely imbricate, glumes linear-lanceolate acuminate-aristate, lemmas 2-lobed, open places, bushland.

D. retroflexa (Vahl) Panz. (*Cynosurus retroflexus* Vahl; *Dinebra aegyptiaca* Delile; *Dinebra arabica* Jacq.; *Dinebra brevifolia* Steud.; *Dinebra retroflexa* (Forssk.) Panz.; *Dinebra retroflexa* var. *brevifolia* (Steud.) T. Durand & Schinz; *Eleusine calycina* Roxb.; *Leptochloa arabica* (Jacq.) Kunth)

Tropical Africa, Iraq, South Africa. Annual, tufted to loosely tufted, decumbent, creeping and ascending, erect or ascending, straggling, leafy, usually branching from the base, leaf blades flat and flaccid, ligule a short membrane, leaves narrow ending in a fine point, narrow inflorescence of sessile alternate spikes, spikes arranged on the primary axis and more or less erect when young, spikelets 1- to 3-flowered glabrous and loosely imbricate, glumes more or less equal ending in a fine aristate point, lemmas glabrous and awnless or pilose, very ornamental, often a weedy escape in cultivation, weed in ricefields and cotton fields, little grazing value, probably nutritious, fodder and pasture grass, when soft occasionally eaten by cattle and buffaloes, common in disturbed areas moist and wet, in cultivated irrigated

fields, in open grassland, red clay soil, waterlogged soils, dry locations, ricefields and sugarcane fields, see *Symbolae Botanicae*, ... 2: 20. 1791, *Fragmenta Botanica* 77, 98, t. 121, f. 1. 1809, *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 59-60, 20, t. II, f. 1, 2 a-f. 1813-1814, *Description de l'Égypte*, ... *Histoire Naturelle*, Tom. Second 26, t. 11, f. 3. 1813, *Denkschr. kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 4: 309-310, pl. 12. 1814, *Flora Indica; or Descriptions* ... 1: 347. 1820, *Révision des Graminées* 1: 91. 1829, *Synopsis Plantarum Glumacearum* 1: 299. 1854, *Conspectus Florae Africae* 5: 865. 1894.

in English: cat's tail grass

in Arabic: am kachena, denab, negil el-nimr

in Nigeria: am kachena, firki, kikiko-masakiya

in South Africa: katstert gras

in India: aalu, bara sarpot, baria, halgyan hullu, huligyan hullu, jaddee, kaali kauli, kharia, lona, lonia, madhvaalu, maljhanji, nari baalada gandu hullu, udullaan hullu, wadata toka gaddee, wadata toka

D. retroflexa (Vahl) Panz. var. ***condensata*** S.M. Phillips

Eastern and southern Africa, Tanzania. Annual, slender, much branched and rooting from the lower nodes, loosely tufted, straggling and ascending, decumbent base, linear and densely crowded inflorescence, spikelets cuneate, glumes coriaceous, lemmas ovate, weed in ricefields, disturbed areas, cultivated fields, waterlogged soils, along roadsides, see *Kew Bulletin* 28(3): 412. 1973.

in English: cat's tail grass

in South Africa: katstert gras, katestertgras

D. retroflexa (Vahl) Panz. var. ***retroflexa*** (*Cynosurus retroflexus* Vahl; *Dactylis paspaloides* Willd.; *Dinebra aegyptiaca* Delile; *Dinebra arabica* Jacq.; *Dinebra brevifolia* Steud.; *Dinebra paspaloides* (Willd.) P. Beauv.; *Dinebra retroflexa* var. *brevifolia* (Steud.) T. Durand & Schinz; *Eleusine calycina* Roxb.; *Leptochloa arabica* (Jacq.) Kunth; *Leptochloa calycina* (Roxb.) Kunth)

North Africa, Iraq. Annual, erect, prostrate, foliage basal, open inflorescence, spikes linear oblong, spikelets 1-2-flowered, on dry pasture ground, see *Hortus Berolinensis* 111. 1809, *Essai d'une Nouvelle Agrostographie* 98, 160. 1812, *Révision des Graminées* 1: 91. 1829.

in India: bara sarpot, maljhanji, wadata toka gaddee

Dinochloa Büse

From the Greek *deinos* "terrible, powerful, mighty" and *chloe*, *chloa* "grass," referring to the tall and climbing-scrambling bamboos.

About 20/25(-27) species, south east Asia, Peninsular Malaysia, Thailand, Sumatra. Bambusoideae, Bambusoideae, Bambuseae, Bambusinae, perennial, sympodial, open

tufted, woody, armed or unarmed, thorny or rough, branched, scandent, climbing or vining around other plants, usually solid, persistent, flowering culms leafy, zig-zag internodes, persistent sheaths, basal portion of culm sheaths hard and coarse with rugose girdle, sheath auricles present or absent, young shoots purplish green or green, 3-18 branches at each node, leaf blades more or less large, plants bisexual, pseudospikelets typically small, 1 floret, 2-3 glumes unequal and ventricose, palea rounded on the back, no lodicules, 6 stamens, anthers with apiculate tips, ovary glabrous, 3 stigmas plumose, fruit a berry more or less globose with fleshy pericarp, young culms first erect and straight, a watery sap from freshly cut culms, weed species very difficult to eradicate, culms used for making baskets, growing wild, secondary forest, forest margins, on dry clay soil, hill, along roadsides, undisturbed forest, lowland dipterocarp forest, burnt forest, type *Dinochloa tjankorreh* (Schult.) Büse, see *Plantae Junghuhnianae* 3: 387-388. 1854, *Journal of the Asiatic Society of Bengal* new series, vol. 42, 2(4): 227-254. 1873, *Preliminary Report on the Forest and other Vegetation of Pegu* Calcutta 1875, *Forest Flora of British Burma*, vol. 2. Calcutta 1877, *Annals of the Royal Botanic Garden Calcutta* vol. 7. 1896 and *Indian Trees* London 1906, *The Grasses of Burma* Calcutta (Baptist Mission Press) 1945, *Bambusées* 1913, *An Enumeration of Philippine Flowering Plants* (Bureau of Printing, Dept. of Agriculture and Natural Resources, Bureau of Science, Manila, Publications no. 18) Manila 1925[1923], *Bamboo Research in Asia*: Proceedings of a workshop held in Singapore, 28-30 May 1980 (editors G. Lessard & A. Chouinard) Ottawa 1980, *Kew Bulletin* 36(3): 613-633. 1981, *Flora Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, Calcutta 1989, S.J. Willott, D.C. Lim, S.G. Compton and S.L. Sutton, "Effects of selective logging on the butterflies of a Bornean rainforest." *Conservation Biology* 14(4): 1055-1065. Aug 2000, Mark G.L. Van Nieuwstadt, Douglas Sheil and Kuswata Kartawinata, "The ecological consequences of logging in the burned forests of East Kalimantan, Indonesia." *Conservation Biology* 15(4): 1183-1186. Aug 2001, *Global Ecology and Biogeography* 13(2): 129-140. Mar 2004.

Species

D. spp.

in English: climbing bamboo

D. alata McClure

Vietnam. See *J. Arnold Arboretum* 23: 100. 1942.

D. albociliata Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

D. andamanica Kurz (*Dinochloa scandens* R.B. Majumdar, not Kuntze; *Dinochloa tjankorreh* var. *andamanica* (Kurz) Gamble)

India, Andaman and Nicobar Islands. Creeping, solitary or single, evergreen, stout, rooting at the nodes or often climbing over trees, branches geniculate, numerous slender branchlets, nodes swollen, leaves ovate-lanceolate attenuate at the base into a very short petiole, leaf sheaths appressed, ligule ciliate, narrow inflorescence paniculate, spikelets 1-flowered, glumes muticous, stamens included, 2 stigmas, forming impenetrable tangled thickets, very long culms used as ropes, young shoots used as vermifuge, see *Journal of the Asiatic Society of Bengal* n.s. 42, 2(4): 253. 1873, *Preliminary Report on the Forest and other Vegetation of Pegu* App. B, 95. 1875, *Forest Flora of British Burma* 2: 570. 1877, *Annals of the Royal Botanic Garden Calcutta* 7: 415. 1896 and *Bambusées* 169. 1913, *The Grasses of Burma* 23. Calcutta 1945, *Bamboo Research in Asia* 22. 1980, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* 277. Calcutta 1989.

in Andamans: baradahbarat, baradahbarat, bulu akar

D. barbata S. Dransfield

Indonesia. See *Kew Bulletin* 51(1): 115, f. 7. 1996.

D. compactiflora (Kurz) McClure (*Melocalamus compactiflorus* (Kurz) Benth. and Hook.f.; *Melocalamus compactiflorus* (Kurz) Benth.; *Pseudostachyum compactiflorum* Kurz)

India, Assam. Climbing over tall trees, solid, rough, scrambling, scandent, spreading, nodes swollen, culm sheaths hard and brittle, leaves oblong-lanceolate, auricles narrow and fringed with stiff bristles, culms used for basket making, growing in hills and mountains, thickets, clearings, see *Journal of the Asiatic Society of Bengal* n.s. 42, 2(4): 252. 1873 and *Grasses of Burma* 23. 1945, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* 278. 1989.

in Burma: kaleo, nachinwa, nanchinwa, usawi, wa nwe, wa nwe kok

in India: sairil

in Thailand: mai hang chang, mai lai mong, phai hang chang

in Vietnam: ca truc, tre lim

D. cordata S. Dransfield

Indonesia. Disturbed forest, primary forest, see *Kew Bulletin* 51(1): 108, f. 2. 1996.

D. darvelana S. Dransfield (named after Darvel Bay, Sabah)

Malaysia, Sabah, Indonesia. Sheath auricles with long bristles, in forest margins, see *Kew Bull.* 44(3): 435-437, f. 1. 1989.

D. dielsiana Pilger (*Dinochloa diffusa* Merrill; *Schizostachyum dielsianum* (Pilger) Merrill)

Philippines. In forest, see *Fragmenta Florae Philippinae* 1: 148. Leipzig, Paris and London 1904, *Philipp. J. Sci.* 1(Suppl. 5): 391. 1906.

D. elmeri Gamble (probably for the American botanist Adolph Daniel Edward Elmer, 1870-1942, plant collector

in Borneo, California, Washington and in the Philippines. See Elmer Drew Merrill, *Plantae Elmerianae Borneenses*. Berkeley 1929; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. Regnum Vegetabile vol. 9. 1957)

Philippines. Disturbed forest, forest shade, primary forest, see *Philipp. J. Sci.* C: 280. 1910.

D. erecta Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

D. glabrescens Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

D. gracilis (Majumdar) Bennet and Jain (*Melocalamus gracilis* Majumdar)

India. Terete culms, ciliate auricles nonfalcate and deciduous, acute nodal buds, see *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* 278. 1989.

D. hirsuta S. Dransfield

Indonesia. Disturbed forest, primary forest, see *Kew Bulletin* 51(1): 115, f. 6. 1996.

D. indica (Majumdar) Bennet (*Melocalamus indicus* Majumdar)

India. Scandent, evergreen, solid, arching over trees, hanging downward, culm nodes with woody rings, very long culms used for basket making, see *Bull. Bot. Surv. India* 25(1-4): 236. 1983 [1985].

D. kostermansiana S. Dransfield (after the Dutch botanist André Joseph Guillaume Henri Kostermans (born 1907), explorer, taxonomist, plant collector, his writings include *Studies in South American Malpighiaceae, Lauraceae and Hernandiaceae*, especially of Suriname. Amsterdam 1936, "Las Lauráceas chilenas." *Revista Univ.* (Santiago). 24(1): 201-232. 1939, "Notas sobre as Lauraceae-Lauroidae sul americanas." *Bol. Técn. Inst. Agron.* 28: 49-75. 1953, "The genus *Firmiana* Marsili. (Sterculiaceae)." *Reinwardtia*. 4(2): 281-310. 1957, "The New World species of *Cinnamomum* Trew. (Lauraceae)." *Reinwardtia*. 6(1): 17-24. 1961, "New and critical Malaysian Plants. - II, IV, VI, VII." in *Reinwardtia*. 3(1): 1-25. 1954, 4(1): 1-40. 1956, 5(3): 341-369. 1960, 7(1): 19-46. 1965, "A monograph of the genus *Parinari* Aublet. (Rosaceae-Chrysobalanoideae) in Asia and the Pacific region." *Reinwardtia*. 7(2): 147-213. 1965, "A monograph of *Aglaia*, sect. *Lansium* Kosterm (Meliaceae)." *Reinwardtia*. 7(3): 221-282. 1966 and "Notes on Ceylonese ebony trees (Ebenaceae)." *Ceylon J. Sci., Biol. Sci.* 12: 89-108. 1977. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 315. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 218. 1972; August Adriaan Pulle (1878-1955), edition, *Flora of Suriname*. Amsterdam 1932 etc.; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flow-ering Plants of Mexico*. Philadelphia 1964)

Indonesia. Disturbed montane forest, primary forest, see *Kew Bulletin* 51(1): 108, f. 3. 1996.

D. luconiae (Munro) Merrill (*Arundarbor luconiae* (Munro) Merrill; *Bambusa luconiae* Munro; *Dinochloa aguilarii* Gamble; *Dinochloa ciliata* Kurz; *Dinochloa scandens* var. *angustifolia* Hackel ex Merrill; *Dinochloa tjankorreh* var. *angustifolia* Hackel ex Merrill)

Indonesia, Philippines. See *Trans. Linn. Soc. London* 26: 115. 1868, *Journal of the Asiatic Society of Bengal* n.s. 42, 2(4): 253. 1873, *Rev. Gen. Pl.* 2: 761. 1891 and *Philipp. J. Sci.* 1(Suppl. 5): 392. 1906, *Philipp. J. Sci.* C: 280. 1910, *An Enumeration of Philippine Flowering Plants* 1: 100. 1925[1923].

in the Philippine Islands: bika, bikal, buloau, bulokau, malilit, osiu, timak usiu

D. maclellandii (Munro) Kurz (*Arundarbor maclellandii* (Munro) Kuntze; *Bambusa maclellandii* Munro)

India, Assam, West Bengal. Scandent, evergreen, erect, geniculate, often climbing, straggling, with zig-zag culms, with persistent loose sheaths, leaves acuminate, nodes swollen, culm sheaths cylindrical and leathery, ligule entire or serrate, growing mainly in tropical lowland rain forests, see *Trans. Linn. Soc. London* 26: 114. 1868, *Journal of the Asiatic Society of Bengal* n.s. 42, 2(4): 253. 1873, *Rev. Gen. Pl.* 2: 761. 1891.

in Thailand: phai lueai, phai luei

D. macrocarpa Elmer

Philippines. Scandent, climbing, sprawling, straggling, along streams, riverbanks, see *Leaflets of Philippine Botany* 7(114): 2675. 1915.

D. malayana S. Dransfield (*Dinochloa scandens* not Kuntze)

Malaysia. Forest margins, see *Gard. Bull. Singapore* 16: 84. 1958, *Kew Bulletin* 51(1): 110, f. 4. 1996.

in Thailand: phai khlan

D. matmat S. Dransfield

Java, Indonesia. See *Kew Bulletin* 55(2): 495-497. 2000.

D. nicobariana Majumdar

India, North Nicobar, Katchal Island. Climbing, erect to suberect, slender, hairy, green, numerous branchlets from the nodes, densely hairy leaf sheaths, also in coastal forests, see *Flora Indicae Enumeratio: Monocotyledonae, Bambusoideae* 277. 1989.

D. obclavata S. Dransfield

Malaysia, Sabah. Thin-walled culms, leaf blades hairy, spikelets flattened and ovate-lanceolate, club-shaped fruits, see *Kew Bulletin* 36(3): 620. 1981.

D. oblonga S. Dransfield

Philippines. See *Kew Bulletin* 51(1): 113, f. 5. 1996.

D. orenuda McClure

China. Scandent, see *Lingnan Univ. Sci. Bull.* 9: 18. 1940.

D. palawanensis (Gamble) S. Dransfield (*Schizostachyum palawanense* Gamble)

Philippines. See *Philipp. J. Sci.* C5(4): 274. 1910, *Kew Bulletin* 51(1): 106, f. 1. 1996.

D. prunifera S. Dransfield

Malaysia, Sabah. Thick-walled culms, leaf blades rough, sheath auricles with long bristles, spikelets elongate flattened, young shoots waxy, globose fruits, found in disturbed areas, see *Kew Bull.* 36(3): 622, f. 4. 1981.

D. pubiramea Gamble (*Dinochloa scandens* var. *pubiramea* Merrill)

Philippines, Malaysia. See *Philipp. J. Sci.* C: 279. 1910, *J. Bamb. Res.* 7(3): 26-28. 1988.

in the Philippine Islands: bukao

D. robusta S. Dransfield (*Dinochloa scandens* not Kuntze)

Malaysia, Sabah, Philippines. Climbing, robust, tough, thick walls, small leaf blades, on alluvial soil, forest shade, secondary forest, see *Kew Bulletin* 36(3): 630-632, f. 8. 1981, *Kew Bull.* 47(3): 402. 1992.

D. scabrida S. Dransfield

Malaysia, Sabah, Indonesia. Solid, weed species, found along roadsides, lowland forest, see *Kew Bull.* 36(3): 628, f. 7. 1981.

D. scandens (Blume) O. Kuntze (*Bambusa scandens* Blume; *Chusquea amplopaniculata* Steud.; *Dinochloa scandens* var. *normalis* Kuntze; *Dinochloa tjankorreh* (J.H. Schultes) Büse; *Nastus tjankorreh* J.H. Schultes; *Schizostachyum parviflorum* Munro)

Indonesia, West Java. Sympodial, open, scrambling, numerous slender branches somewhat drooping, inflorescence on leafless branchlets, fruits hard, culms used for making baskets, young shoots edible, growing in primary forests, see *Flora* 7: 291. 1824, *Syst. Veg.* 7, 2: 1358. 1830, *Plantae Junghuhnianae* 3: 388. 1854, *Syn. Pl. Glumac.* 1: 337. 1854, *Trans. Linn. Soc. London* 26: 153. 1868, *Revis. Gen. Pl.* 1: 773. 1891 and *Kew Bulletin* 36(3): 630. 1981, *Kew Bulletin* 51(1): 104. 1996.

in English: zigzag bamboo

in Indonesia: cankoreh

in the Philippine Islands: baka, bakau, balikao, balikau, balilit, bayokau, bia, bika, bukau, bukau, bulukau, burukau, imak, timak, usiu

in Thailand: phai khlan, phai lueai

D. sipitangensis S. Dransf. (named after Sipitang, Sabah)

Malaysia, Sabah, Brunei. Solid, found along roadsides, sandy soils, forest margins, see *Kew Bulletin* 36(3): 620, f. 3. 1981.

D. sublaevigata S. Dransf.

Malaysia, Sabah. Solid, climbing, sympodial, stiffly hairy, broad leaf blades, huge inflorescence, leaf blades used for wrapping a glutinous rice (*hokkien bak chang*), young shoots edible, found along roadsides, lowlands, forest, see *Kew Bull.* 36(3): 626, f. 6. 1981.

in Malaysia: buloh wadan

D. trichogona S. Dransfield

Malaysia, Sabah, Borneo. Sympodial, climbing, solid culms, broad leaf blades smooth, culm sheath hairy at the base, culm sheath ligule lacinate, weed, young shoots edible, leaf blades used for wrapping a glutinous rice (*hokkien bak chang*), found along roadsides, forest margins, see *Kew Bull.* 36(3): 624, f. 5. 1981.

in Malaysia: buloh wadan

D. truncata Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

D. utilis McClure

China. Used for making paper, see *Lingnan Univ. Sci. Bull.* 9: 20. 1940.

Diperium Desv. = *Mnesithea* Kunth

Possibly from the Greek *dis* “twice, double” and *pera* “a pouch, sac.”

Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, type *Diperium cylindricum* Desv., see *Révision des Graminées* 1: 153-154. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 180, t. 9, f. 3. 1831 and *Flora of the Guianas. Series A, Phanerogams* 8: 143-146. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Journal of Cytology and Genetics* 29(2): 125-131. 1994, *Flora Mesoamericana* 6: 396-397. 1994, *Contributions from the United States National Herbarium* 46: 214, 295-296. 2003.

***Diplachne* P. Beauv. = *Cleistogenes* Keng,
Leptochloa P. Beauv.**

From the Greek *diploos* “double” and *achne* “chaff, glume,” referring to the bilobed lemma.

About (4-)15/18 species, tropical and subtropical. Chloridoideae, Cynodonteae, perennial or rarely annual, herbaceous, aquatic or semiaquatic, stoloniferous or caespitose, fibrous roots, erect or geniculate, glabrous nodes, hollow internodes, ligule membranous, glabrous or hairy leaves, blade flat or inrolled or involute, plants bisexual, cleistogamous or chasmogamous, inflorescence a contracted panicle of spike-like racemes, spikelets solitary dorsally compressed, florets bisexual and numerous, 2 rather large glumes subequal to very unequal, lemmas membranous and closely imbricate, paleas 2-keeled, 2 free and fleshy

lodicules, 3 stamens, ovary glabrous, 2 plumose stigmas, hidden cleistogenes when present in the leaf sheaths, ornamental, weed species, shade species, forage grass, pampas, rainforest, woodland, savannah, growing in or near water, dry and swampy soils, wet conditions, sometimes referred to and included in *Leptochloa* P. Beauv., serious taxonomic problems, type *Diplachne fascicularis* (Lam.) P. Beauv., see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie* 71, 80-81, 161, pl. 15, 16, f. 1, 9. 1812, *Gen. N. Amer. Pl.* 1: 76. 1818, *Trans. Amer. Phil. Soc.* ser. 2, 5: 147. 1835, *A Manual of the Botany of the Northern United States* 588. 1848, *Synopsis Plantarum Glumacearum* 1: 210. 1854, *Anales de la Universidad de Chile* 36: 211. 1870 and *Synopsis der mitteleuropäischen Flora* 2: 339. 1900, *Contr. U.S. Natl.* 24(6): 180. 1925, *Sinensia* 5: 147. 1934, *Revista Sudamericana de Botánica* 6(5-6): 145. 1940, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 78(2): 208-245. 1959, S.T. Blake, “*Plinthanthesis* and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae).” *Contributions from the Queensland Herbarium* 14: 3. 1972, *Brittonia* 31(3): 400. 1979, *Kew Bulletin* 37: 133-162. 1982, *Taxon* 43: 123. 1994, *Flora Mesoamericana* 6: 260-261. 1994, *Darwiniana* 33(1-4): 233-256. 1995 [Los géneros *Diplachne* y *Leptochloa* (Gramineae, Eragrosteae) de la Argentina y países limítrofes.], H.P. Linder & G.A. Verboom, “Generic limits in the *Rytidosperma* (Danthoniaceae, Poaceae) complex.” *Telopea* 6(4): 597-627. 1996, H.P. Linder, “Nomenclatural corrections in the *Rytidosperma* complex (Danthoniaceae, Poaceae).” *Telopea* 7(3): 269-274. 1997, N. Snow, “Nomenclatural changes in *Leptochloa* P. Beauv. sensu lato (Poaceae, Chloridoideae).” *Novon* 8: 78. 1998, *Functional Ecology* 12(4): 640-645. Aug 1998, *Grass and Forage Science* 53(3): 270-278. Sep 1998 [Salinity effects on the early development stages of *Panicum coloratum*: cultivar differences.], *Journal of Ecology* 88(6): 940-949. Dec 2000, *Contributions from the United States National Herbarium* 41: 68-70, 130-137. 2001, Chen Liang, D.L. Michalk and G.D. Millar, “The ecology and growth patterns of *Cleistogenes* species in degraded grasslands of eastern Inner Mongolia, China.” *Journal of Applied Ecology* 39(4): 584-594. Aug 2002, M. Ajmal Khan & Salman Gulzar, “Light, salinity, and temperature effects on the seed germination of perennial grasses.” *Am. J. Bot.* 90: 131-134. 2003, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

***D.* sp.**

in Thailand: yaa tao

D. carinata (Griseb.) Hack. (*Atropis carinata* Griseb.; *Diplachne uninervia* (J. Presl) Parodi; *Leptochloa fusca* subsp. *uninervia* (J. Presl) N. Snow; *Leptochloa uninervia*

(J. Presl) Hitchc. & Chase; *Megastachya uninervia* J. Presl; *Puccinellia carinata* (Griseb.) Ponert)

Europe, Spain. See *Révision des Graminées* 1: 91. 1829, *Reliquiae Haenkeanae* 1(4-5): 283. 1830, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 291. 1879 and *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 16: 253. 1900, *Contributions from the United States National Herbarium* 18(7): 383. 1917, *Revista del Centro de Estudiantes de Agronomía y Veterinaria. Buenos Aires* 18: 147. 1925, *Feddes Repertorium* 84(9-10): 739. 1974, *Novon* 8(1): 79. 1998.

D. chloridiformis Hack. (*Baldomiria chloridiformis* (Hack. ex Stuck.) Herter; *Baldomiria chloridiformis* (Hack.) Herter; *Leptochloa chloridiformis* (Hack.) Parodi)

South America. Perennial, caespitose, shortly rhizomatous, branching mainly from the axillar buds of the innovation zone, see *Anales del Museo Nacional de Buenos Aires* 13: 498. 1906, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 4: 184, f. 5-6. 1918, *Revista Sudamericana de Botánica* 6(5-6): 145, f. 10. 1940.

in English: Argentina sprangletop, Argentine sprangletop

D. cuspidata Launert

Africa. Perennial, tufted, geniculate, ligule membranous, racemes spreading horizontally, lemma rounded and awned, see *Prodromus einer Flora von Südwestafrika* 34(160): 221. 1970.

D. eleusine Nees (*Leptochloa eleusine* (Nees) Cope & N. Snow; *Triodia eleusine* (Nees) T. Durand & Schinz; *Uralespis eleusine* (Nees) Steud.)

South Africa. Perennial, tufted, shortly rhizomatous, culms geniculate and ascending, ligule membranous with a hairy margin, spikes arranged irregularly on the primary axis, spikelets overlapping, lemma obtuse to notched, a shade species, growing under trees, on stony slopes, rocky slopes, on sandy soils, on peat soil, see *Florae Africae Australioris Illustrationes Monographicae* 255. 1841, *Synopsis Plantarum Glumacearum* 1: 248. 1855, *Conspectus Florae Africae* 5: 877. 1894 and *Novon* 8(1): 78. 1998.

in English: large scale grass

in Southern Africa: langbeenskubgras

D. fascicularis (Lam.) P. Beauv. (*Cynodon fascicularis* (Lam.) Raspail; *Diachroa procumbens* (Muhl.) Nutt.; *Diplachne acuminata* Nash; *Diplachne fascicularis* P. Beauv.; *Diplachne maritima* Bicknell; *Diplachne patens* E. Fourn., nom. illeg., non *Diplachne patens* (J. Presl) E. Desv.; *Diplachne procumbens* (Muhl.) Nash, nom. illeg., non *Diplachne procumbens* Arechav.; *Diplachne tracyi* Vasey; *Festuca aquatica* Bosc ex Roem. & Schult.; *Festuca clandestina* Muhl.; *Festuca fascicularis* Lam.; *Festuca fusca* L.; *Festuca polystachya* Michx.; *Festuca procumbens* Muhl.; *Festuca prostrata* Muhl.; *Festuca prostrata* Muhl.

ex Scribn. & Merr.; *Festuca texana* Steud.; *Festuca thouini* Steud.; *Leptochloa acuminata* (Nash) Mohlenbr.; *Leptochloa fascicularis* Griseb. ex Benth.; *Leptochloa fascicularis* (Lam.) A. Gray; *Leptochloa fascicularis* var. *acuminata* (Nash) Gleason; *Leptochloa fascicularis* var. *maritima* (Bicknell) Gleason; *Leptochloa fusca* (L.) Kunth; *Leptochloa fusca* subsp. *fascicularis* (Lam.) N. Snow; *Leptochloa polystachya* (Michx.) Kunth; *Leptochloa tracyi* (Vasey) Beal; *Tridens veralensis* Catasús; *Tridens virens* Nees; *Uralespis composita* Buckley; *Uralespis virens* (Nees) Kunth; *Uralespis composita* Buckley)

U.S. Annual, tufted, bluish green, coarse, succulent, sometimes prostrate, densely branched from near the base, sheaths glabrous and often purplish, ligule elongate and often lacerate, no auricles, blades flat to involute, panicle branches basally included in the sheath, nearly smooth panicle branches, awned lemmas, grain brown, tolerant of saline habitats, common in salt marshes, wetlands, in water at edge of clay quarry, roadside swales, shores, stream banks, alkali flats and ditches, in irrigated crops, seacoasts, places of temporarily standing water, reservoirs, brackish water along lakes and rivers, see *Systema Naturae, Editio Decima* 2: 876. 1759, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 189. 1791, *Flora Boreali-Americana* 1: 66. 1803, *Essai d'une Nouvelle Agrostographie* 81, 160, pl. 16 f. 9. 1812, *Descriptio uberior Graminum* 160, 162. 1817, *Systema Vegetabilium* 2: 615. 1817, *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *Révision des Graminées* 1: 91. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 476. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 319. 1833, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *A Manual of the Botany of the Northern United States* 588. 1848, *Synopsis Plantarum Glumacearum* 1: 310-311. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 94-95. 1862, *Journal of the Linnean Society, Botany* 19: 108. 1881, *Mexicanas Plantas* 2: 148. 1886, *Bulletin of the Torrey Botanical Club* 15: 40. 1888, *Grasses of North America for Farmers and Students* 2: 436. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 5. 1900, *Manual of the Flora of the Northern States and Canada* 128. 1901, *Bulletin of the Torrey Botanical Club* 35(4): 195. 1908, *Phytologia* 4(1): 21. 1952, *Illustrated Flora of Illinois* 293. 1973, *Acta Botanica Cubana* 4: 4. 1980, *Novon* 8(1): 78. 1998.

in English: loose-flowered sprangletop, bearded sprangletop, sprangletop, salt meadowgrass, salt sprangletop, salt-pond grass

in Mexico: cabezuela de primavera, tapete panizo, zacate anual gigante

D. fusca (L.) P. Beauv. ex Roem. & Schult. (*Diplachne fusca* (L.) P. Beauv. ex Stapf, nom. illeg., non *Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult.; *Diplachne fusca* (L.) P. Beauv. ex Stuck., nom. illeg., non *Diplachne fusca*

(L.) P. Beauv. ex Roem. & Schult.; *Diplachne malabarica* (L.) Merr.; *Diplachne muelleri* Benth.; *Diplachne reptatrix* (L.) Druce; *Eragrostis procera* (Roxb.) Steud.; *Festuca fusca* L.; *Festuca reptatrix* L.; *Leptochloa contracta* (Retz.) Blatt. & McCann; *Leptochloa fusca* (L.) Kunth; *Poa ambigua* Elliott; *Poa contracta* Retz.; *Poa malabarica* L.; *Poa procera* Roxb.; *Tridens indicus* Nees ex Wight; *Triodia ambigua* R. Br.; *Triodia ambigua* (Elliott) Benth. ex Vasey, nom. illeg., non *Triodia ambigua* R. Br.; *Uralespis fusca* (L.) Steud.) (Latin *fuscus*, *a*, *um* “dark, brown, black, dusky;” Latin *repto*, *avi*, *atum* “to creep, crawl”)

Africa, America, and Australia. Perennial or rarely annual or biennial, erect or geniculate, glabrous, smooth, soft, caespitose, forming dense and leafy well-rooted tussocks, usually branched, white membranous ligule, leaf sheaths loose and chartaceous, leaves green to purplish, blade flat or slightly inrolled or folded or convolute, inflorescence with branches erect or slightly spreading, rather dense and bristly panicles green to purplish, usually dark spikelets crowded and linear to narrow-elliptic, florets loosely imbricate, glumes unequal, upper glume mucronate or mucronulate, lemmas narrow-oblong and bifid, palea concave, 3 stamens, weed species very variable in growth form, sometimes stoloniferous, palatable, grazed by stock, decorative tussocks, excellent tolerance to salinity, good tolerance to flooding, found in or near wet places or water, aquatic, heavy soils, salt flats and margins of salt pans, mudflats, clay loams, clays, dams or ponds, vleis, floodplains and depressions, lagoons, near swamp or permanent water, rice fields, inundated saline soils, inundated heavy soils, brackish soils, canal banks, brackish swamps, confused with *Diplachne muelleri* Benth., see also *Leptochloa fusca* (L.) Kunth subsp. *fusca*, see *Species Plantarum* 69. 1753, *Systema Naturae*, *Editio Decima* 2: 876. 1759, *Species Plantarum* edition 2. 109. 1762, *Observationes Botanicae* 3: 11. 1783, *Prodromus Florae Novae Hollandiae* 183. 1810, *A Sketch of the Botany of South-Carolina and Georgia* 1: 165. 1816, *Systema Vegetabilium*, *editio decima sexta* 2: 615. 1817, *Flora Indica*, or *Descriptions ...* 1: 334. 1820, *Révision des Graminées* 1: 91. 1829, *Synopsis Plantarum Glumacearum* 1: 247, 266. 1854, *Enum. Pl. Zeyl.* 5: 372. 1864, *Department of Agriculture. Special Report* 63: 35. 1883 and *Flora Capensis* 7: 591. 1900, *Handb. Fl. Ceylon* 5: 301. 1900, *Anales del Museo Nacional de Buenos Aires* 11: 128. 1904, *Bulletin of the Torrey Botanical Club* 60: 635. 1933, *Scientific Monograph [Imperial Council of Agricultural Research]* 5: 243. 1935, *Grasses of Ceylon* 83. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 492. 1960, Malee Nanakorn et al., “*In vitro* selection of salt-tolerant cell lines in kallar grass [*Diplachne fusca* (L.) Beauv.]” *Weed Biology and Management* 3(1): 49-52. Mar 2003.

in English: brown beetle grass, pale beetle grass, swamp grass, brown-flowered swamp grass

in Niger: bu-firdi, dulyiara, garmaka, hamsi'ngéy, hé-aoéy, kowang

in South Africa: kuilgras

in Arabic: sayfoun

in India: choti gandar, narra, raeva, reeva

D. gatacrei Stapf (*Cleistogenes gatacrei* (Stapf) Bor; *Kenigia gatacrei* (Stapf) Cope)

Asia. See *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 487. 1960, *Kew Bulletin* 35(3): 701. 1980.

D. gigantea Launert (*Leptochloa gigantea* (Launert) Cope & N. Snow)

Africa, Zambia. Perennial, rare, robust, aquatic, reedlike, rhizomatous, spikelets overlapping, lemma awned, usually on sandbanks, along rivers and streams, see *Boletim da Sociedade Broteriana, ser. 2* 47: 349, f. 2. 1973, *Novon* 8(1): 79. 1998.

D. maeotica Klokov & Zoz (*Cleistogenes bulgarica* (Bornm.) Keng)

Bulgaria, Eurasia. See *Botanisches Centralblatt* 36: 156. 1888 and *Sinensia* 5(1-2): 152-154, f. 3. 1934.

D. malayana C.E. Hubb. (*Leptochloa malayana* (C.E. Hubb.) Jansen ex Veldkamp)

Asia. See *Essai d'une Nouvelle Agrostographie* 71. 1812 and *Bulletin of Miscellaneous Information Kew* 1934: 106. 1934, *Blumea* 19: 64. 1971.

in Thailand: yaa tao, ya tao

D. monticola (Chase) McNeill (*Gouinia latifolia* (Griseb.) Vasey; *Leptochloa monticola* Chase; *Tricuspis latifolia* Griseb.)

West Indies, Haiti. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 259-260. 1874, *Genera Plantarum* 3: 1178. 1883, *Contributions from the United States National Herbarium* 1(9): 365. 1895 and *Journal of the Washington Academy of Sciences* 17: 73, f. 2. 1927, *Contributions from the United States National Herbarium* 41: 122-123. 2001.

D. muelleri Benth. (*Leptochloa fusca* (L.) Kunth subsp. *muelleri* (Benth.) N. Snow; *Leptochloa muelleri* (Benth.) Stace)

South Australia, New South Wales, Queensland, Western Australia, Northern Territory. Perennial or annual, erect, tufted, sheath loose, ligule lacerated, blade flat or incurved, panicle narrow with branches erect, spikelets pale at maturity linear and almost sessile, 8-13 florets, lower glume acute to mucronate, lemmas shortly mucronate, lemmas and paleas almost flat, in or near wet places or water, in depressions, often confused with *Diplachne fusca* (L.) P. Beauv., see *Révision des Graminées* 1: 91. 1829, *Flora Australiensis: A Description ...* 7: 619. 1878 and *Watsonia* 18(4): 413. 1991, *Novon* 8(1): 78. 1998.

D. pallida Hack.

South Africa. See *Bulletin de l'Herbier Boissier* 3(8): 387. 1895.

D. parviflora (R. Br.) Benth. (*Triodia parviflora* R. Br.)

South Australia, Victoria, New South Wales, Queensland, Western Australia, Northern Territory. Perennial, smooth and shiny, forming dense and tall tussocks, erect and glabrous, loose sheaths, ligule lacinate, green and scabrous leaves, blade flat or slightly inrolled or folded, green and dense panicles much branched, numerous solitary spikelets shortly stalked and narrowly elliptic, glumes acute or obtuse, lower glume narrow-ovate, upper glume narrowly oblong, lemma mucronate or shortly awned, palea glabrous, ornamental, usually in or near the water, floodplains and depressions, seasonal flooding and moist places, palatable, forage grass, grazed by stock, see *Prodromus Florae Novae Hollandiae* 182. 1810, *Flora Australiensis: A Description* ... 7: 620. 1878.

in English: small-flowered beetle grass

D. uninervia (J. Presl) Parodi (*Atropis carinata* Griseb.; *Diplachne carinata* (Griseb.) Hack.; *Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult.; *Diplachne fusca* var. *macrotricha* Hack.; *Diplachne procumbens* Arechav.; *Diplachne uninervia* f. *abbreviata* Parodi; *Diplachne uninervia* var. *procumbens* (Arechav.) Parodi; *Eragrostis uninervia* (J. Presl) Steud.; *Festuca fusca* L.; *Leptochloa fusca* (L.) Kunth; *Leptochloa fusca* (L.) Kunth subsp. *uninervia* (J. Presl) N. Snow; *Leptochloa uninervia* (J. Presl) Hitchc.; *Leptochloa uninervia* (J. Presl) Hitchc. & Chase; *Megastachya uninervia* J. Presl; *Puccinellia carinata* (Griseb.) Ponert)

America. Annual or short-lived perennial, tufted, smooth, branching from the lower nodes, ligule membranous, blade inrolled or flat, inflorescence spreading with branches spreading, spikelets pedicellate, florets 4-6 with the uppermost often reduced, glumes unequal, lemmas apiculate, palea 2-keeled, grows in ditches and drains, salt-tolerant, see *Systema Naturae, Editio Decima* 2: 876. 1759, *Systema Vegetabilium, editio decima sexta* 2: 615. 1817, *Révision des Graminées* 1: 91. 1829, *Reliquiae Haenkeanae* 1(4-5): 283. 1830, *Synopsis Plantarum Glumacearum* 1: 278. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 291. 1879, *Anales del Museo Nacional de Montevideo* 1: 414. 1894 and *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 16: 253. 1900, *Anales del Museo Nacional de Buenos Aires* 21: 130. 1911, *Contributions from the United States National Herbarium* 18(7): 383. 1917, *Revista del Centro de Estudiantes de Agronomía y Veterinaria. Buenos Aires* 18: 147. 1925, *Revista de la facultad de agronomía; universidad nacional de La Plata* 6: 36. 1927, *Revista de la*

Facultad de Agronomía y Veterinaria 6: 37. 1927, *Feddes Repertorium* 84(9-10): 739. 1974, *Novon* 8(1): 79. 1998.

Diplachyrium Nees = *Muhlenbergia* Schreb.

Greek *diploos* "double" and *achyron* "chaff, husk."

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Diplachyrium rarum* Nees, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Flora oder allgemeine Botanische Zeitung*. 11: 301. 1828 and *Flora Mesoamericana* 6: 276-286. 1994, *American Journal of Botany* 81: 622-629. 1994, *Madroño* 42(4): 427-449. 1995, *Sida* 17: 349-365. 1996, *Brittonia* 50(1): 23-50. 1998, *Genera Graminum* 376. 1999, P.M. Peterson, "Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostideae)." *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 143-173. 2001.

Diplasanthum Desv. = *Dichanthium* Willemet

From the Greek *diplosios* "double" and *anthos* "flower."

Panicoideae, Andropogoneae, Sorghinae, type *Diplasanthum lanosum* Desv., see *Annalen der Botanick. editor Usteri* 18: 11. 1796, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 170, t. 8, f. 1. 1831 and *Contributions from the United States National Herbarium* 46: 192-193, 214. 2003.

Diplax Solander ex J.J. Bennett = *Diplax* J.J. Bennett, *Ehrharta* Thunb.

From the Greek *diplex*, *diplos* "in double folds, twofold, double."

Ehrhartoideae, Ehrharteae, type *Diplax avenacea* Raoul, see *Kongl. Vetenskaps Akademiens Handlingar* 40: 217, pl. 8. 1779, John Joseph Bennett (1801-1876) & Robert Brown, *Plantae Javanicae rariores*. 11. London 1838, *Annales des Sciences Naturelles; Botanique, sér. 3* 2: 116. 1844 and *Contributions from the United States National Herbarium* 39: 56. 2000.

Diplocea Raf. = *Triplasis* P. Beauv.

Chloridoideae, Cynodonteae, see *Essai d'une Nouvelle Agrostographie* 81, pl. 16, f. 10. 1812, *American Journal of Science* 1: 252. 1818 and *Contributions from the United States National Herbarium* 41: 70, 230-231. 2001.

Diplogon Poir. = *Diplogon* Raf. (Asteraceae),
Diplogon R. Br.

From the Greek *diploos* “double” and *pogon* “beard,” orthographic variant of *Diplopogon* R. Br., see *American Monthly Magazine and Critical Review* 4: 195. 1819.

Diplopogon R. Br. = *Dipogonia* P. Beauv.

From the Greek *diploos* “double” and *pogon* “a beard,” referring to the lobes of the lemma.

One species, Australia. Arundineae, perennial, tufted, herbaceous, auricles absent, ligule fringed, leaf blades pungent, plants bisexual, panicle capitate, central awn of lemma twisted, palea and lodicules present, 3 stamens, ovary glabrous, 2 stigmas, wet places, similar to *Amphipogon*, see Robert Brown (1773-1858), *Prodromus florae Novae Hollandiae* 176. 1810 and *Taxon* 29: 645-666. 1980, Nigel P. Barker, “The relationships of *Amphipogon*, *Elytrophorus* and *Cyperochloa* (Poaceae) as suggested by rbcL sequence data.” *Telopea* 7(3): 205-213. 1997, *Flora of Australia* 43: 374. 2002.

Species

D. setaceus R. Br. (*Amphipogon setaceus* (R. Br.) T.D. Macfarl.; *Dipogonia setacea* (R. Br.) P. Beauv.)

Australia.

in English: bristle grass, bristly diplopogon

Dipogon Steudel = *Dipogon* Liebm.
(Fabaceae), *Sorghastrum* Nash

Greek *di* “two” and *pogon* “a beard.”

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Sorghinae, see *Methodus Plantas Horti Botanici ...* 207. 1794, *Transactions of the Linnean Society of London* 10: 302. 1811, *A Sketch of the Botany of South-Carolina and Georgia* 1: 144. 1816, C.S. Rafinesque, *Seringe Bull. Bot.* 1: 221. 1830, *Nomenclator Botanicus. Editio secunda* 1: 518. 1840, *Annales des Sciences Naturelles; Botanique, série 4* 2: 374. 1854, *Index Kewensis* 2: 606. 1894 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Flora of Tropical Africa* 9: 111. 1917, E.D. Merrill, *Index rafinesquianus*. 76. 1949, *University of California Publications in Botany* 23(6): 324. 1950, *Contributions from the United States National Herbarium* 46: 214, 594-598. 2003.

Dipogonia P. Beauv. = *Diplopogon* R. Br.

From the Greek *di* “two” and *pogon* “a beard;” see *Prodromus Florae Novae Hollandiae* 176. 1810, A.M.F.J. Palisot

de Beauvois, *Essai d'une nouvelle Agrostographie*, ou nouveaux genres des Graminées. 125, 160. Paris 1812 and *Flora of Australia* 43: 374. 2002.

Diptychum Dulac = *Sesleria* Scop.

Greek *diptychos* “double-folded, a pair of, doubled,” Latin and Greek *diptycha* for the double shell of the oyster.

Pooideae, Poodae, Seslerieae, see *Species Plantarum* 1: 59, 63, 72-73. 1753, Petri Arduini ... *Animadversionum botanicarum* specimen. Patavii 1759, *Flora Carniolica* 189. 1760, *Animadversionum Botanicarum Specimen Alterum* 18. 1764, *Flore de Département des Hautes-Pyrénées* 81. 1867 and *Opera Botanica Cech.* 3: 104, 176, 230. 1946, *Ind. Nom. Genericorum* 3: 1607. 1979, *Fitologija* 39: 72-77. 1991, *Caryologia* 51: 123-132. 1998, *Opera Botanica* 137: 1-42. 1999, *Botanika Chronika* 13: 133-140. 2000, *Contributions from the United States National Herbarium* 48: 611. 2003.

Disakisperma Steud. = *Leptochloa* P. Beauv.

Perhaps from the Greek *dis* “twice” and *sakkos* “bag, pouch, sack;” *disakkion* “saddle-bag, panniers” and *sperma* “seed;” or from the Greek *ake*, *akis* “tip, thorn, a sharp point.”

Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, type *Disakisperma mexicana* Steud., see *Essai d'une Nouvelle Agrostographie* 71, 161. 1812, *Synopsis Plantarum Glumacearum* 1: 287. 1854[1855] and *Lexikon Generum Phanerogamarum* 169. 1903, *Contr. U.S. Natl.* 24(6): 180. 1925, N. Snow, “Nomenclatural changes in *Leptochloa* P. Beauv. sensu lato (Poaceae, Chloridoideae).” *Novon* 8: 78. 1998, *Contributions from the United States National Herbarium* 41: 70, 130-137. 2001.

Disarrenum Labill. = *Hierochloe* R. Br.

Greek *dis* “twice” and *arrhen* “male;” referring to the flowers.

Pooideae, Poeae, Phalaridinae, type *Disarrenum antarcticum* Labill., see *Species Plantarum* 1: 28. 1753, *Flora Peruviana, et Chilensis Prodromus* 125. 1794, *Systema Vegetabilium Florae Peruviana et Chilensis* 1: 251. 1798, Jacques Julien Houtton de Labillardière (1755-1834), *Novae Hollandiae plantarum specimen.* 2: 82-83, t. 232. 1807, *Prodromus Florae Novae Hollandiae* 208. 1810, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812 and *Darwiniana* 19(2-4): 422-457. 1975, *Flora Patagónica* 3: 276-285. 1978, *Gayana, Botánica* 42: 1-157. 1985, *Regnum Veg.* 127: 19. 1993, *Contributions from the United States National Herbarium* 48: 111-115, 271. 2003.

Dissanthelium Trin. = *Graminastrum* E.H.L. Krause, *Phalaridium* Nees & Meyen, *Stenochloa* Nutt.

Greek *dissos* “of two kinds, double” and *anthelion*, *anthylion*, a diminutive of *anthos* “flower, blossom,” referring to the small florets.

About 16-17 species, Andes, Mexico, California, Peru and Bolivia. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Poinae, perennial bunchgrass or annual, tufted, herbaceous, stoloniferous, rhizomatous, dwarf, auricles absent, narrow leaf blades, ligule a fringed membrane, plants bisexual, open or contracted inflorescence paniculate, small few-flowered panicles, very short rachilla, 2 glumes equal to subequal, glumes longer than the awnless 2-flowered spikelets or as long as spikelet, lemmas membranous and keeled, 3 stamens, ovary glabrous, 2 stigmas, high-Andean punas and páramos, open habitats, related to *Relchela*, type *Dissanthelium supinum* Trin., see *Linnaea* 10(3): 305. 1836, *Gramineae* 29. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 161. 1843, *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 25. 1848, *J. Acad. Nat. Sci. Philadelphia*, ser. 2, 1: 189. 1848 and *Beihefte zum Botanischen Centralblatt* 32(2): 348. 1914, *Phytologia* 11(6): 361-376. 1965, *Kurtziana* 25: 157-163. 1997, S.A. Renvoize, *Gramíneas de Bolivia* 158-162. 1998, *Contributions from the United States National Herbarium* 48: 271-273, 380, 479, 617. 2003.

Species

D. aequale Swallen & Tovar (*Dissanthelium laxifolium* Swallen & Tovar)

Bolivia. Perennial, erect, caespitose, glumes equal linear-lanceolate, lower lemma scabrous, see *Phytologia* 11: 368, 370. 1965.

D. amplivaginatum Tovar

Peru. See *Publicaciones del Museo de Historia Natural “Javier Prado.” Serie B. Botánica* 33: 7. 1985.

D. breve Swallen & Tovar (*Dissanthelium calycinum* (J. Presl) Hitchc.; *Dissanthelium densum* Swallen & Tovar; *Dissanthelium expansum* Swallen & Tovar)

Peru. See *Journal of the Washington Academy of Sciences* 13(11): 224. 1923, *Phytologia* 11: 371, 374. 1965.

D. brevifolium Swallen & Tovar

Peru. See *Phytologia* 11: 375. 1965.

D. californicum (Nutt.) Hook. (*Stenochloa californica* Nutt.)

North America. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 25. 1848, *Hooker’s Icones Plantarum* 4: 56, t. 1375. 1881.

in English: California dissanthelium

D. calycinum (J. Presl) Hitchc. (*Brizopyrum calycinum* J. Presl; *Deschampsia mathewsii* Ball; *Dissanthelium breve* Swallen & Tovar; *Dissanthelium sclerochloides* Steud. ex E. Fourn.; *Dissanthelium supinum* Trin.; *Poa calycina* (J. Presl) Kunth)

South America, Peru, Bolivia. Annual or short-lived perennial, tufted, leaf blades linear, contracted panicle more or less exserted, lemmas scaberulous, see *Reliquiae Haenkeanae* 1(4-5): 281. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 326. 1833, *Linnaea* 10(3): 305. 1836, *Journal of the Linnean Society, Botany* 22: 60. 1885, *Mexicanas Plantas* 2: 112. 1886 and *Journal of the Washington Academy of Sciences* 13(11): 224. 1923, *Novon* 8(2): 201. 1998.

D. calycinum (J. Presl) Hitchc. subsp. *calycinum*

South America.

D. calycinum (J. Presl) Hitchc. subsp. *mathewsii* (Ball) Soreng (*Deschampsia mathewsii* Ball; *Dissanthelium mathewsii* (Ball) R.C. Foster & L.B. Sm.; *Dissanthelium sclerochloides* Steud. ex E. Fourn.)

South America. See *Journal of the Linnean Society, Botany* 22: 60. 1885 and *Phytologia* 12(5): 249. 1965, *Novon* 8(2): 201. 1998.

D. giganteum Tovar

South America, Peru. See *Publicaciones del Museo de Historia Natural “Javier Prado.” Serie B. Botánica* 33: 8. 1985.

D. laxifolium Swallen & Tovar (*Dissanthelium aequale* Swallen & Tovar)

South America. See *Phytologia* 11: 368, 370. 1965.

D. longifolium Tovar

Peru. See *Publicaciones del Museo de Historia Natural “Javier Prado.” Serie B. Botánica* 33: 9. 1985.

D. longiligulatum Swallen & Tovar

Bolivia. Perennial, ascending, rhizomatous, leaf blades linear and acute, dense panicles spiciform, glumes equal oblong-lanceolate, lower lemma scabrous, see *Phytologia* 11: 369. 1965.

D. macusaniense (E.H.L. Krause) R.C. Foster & L.B. Sm. (*Dissanthelium minimum* Pilg.; *Graminastrum macusaniense* E.H.L. Krause; *Vilfa macusaniensis* Steud. ex Lechler)

Peru. Annual, leaf blades linear and acute, contracted inflorescence, panicle long and exserted, glumes lanceolate, lemmas scabrous bidentate, see *Berberides Americae Australis* 56. 1857 and *Beihefte zum Botanischen Centralblatt* 32(2): 348. 1914, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 28. 1920, *Phytologia* 12(5): 249. 1965.

D. peruvianum (Nees & Meyen) Pilg. (*Airopsis peruviana* Meyen; *Phalaridium peruvianum* Nees & Meyen)

Peru. Annual, leaf blades linear and acute, contracted panicle oblong, glumes ovate, lemmas acute and glabrous, see *Reise um die Erde* 1: 484. 1834, Gramineae 29. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 161-162. 1843 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 378. 1906.

D. pygmaeum Swallen & Tovar

Peru. See *Phytologia* 11: 367. 1965.

D. rauhii Swallen & Tovar

Peru. See *Phytologia* 11: 376. 1965.

D. semitectum Swallen & Tovar

Peru. See *Phytologia* 11: 370. 1965.

D. trollii Pilger

Bolivia. Perennial, rhizomatous, leaf blades linear and acute, contracted panicle, lemmas glabrous, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 778. 1933.

Dissochondrus (W.F. Hillebrand) Kuntze

From the Greek *dissos* "of two kinds, double, in pairs" and *chondros* "cartilage, gristle," referring to the fertile florets.

One species, Hawaii. Panicoideae, Panicodae, Paniceae, perennial, caespitose, auricles present, leaf blades pseudopetiolate, plants bisexual, contracted inflorescence paniculate, a spiciform panicle, both florets similar and bisexual, each spikelet subtended by 1 to several bristles, 2 glumes unequal, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade species, slopes, allied to *Setaria*, type *Dissochondrus bifidus* Kuntze, see *Flora of the Hawaiian Islands* 503. 1888, *Revisio Generum Plantarum* 2: 770. 1891.

Species

D. biflorus Kuntze ex Hack.

Hawaii. Lower floret resembling the upper, lower glume 5-nerved, upper glume 7-9-nerved.

Distichlis Raf. = *Trisiola* Raf.

From the Greek *distichos* "in two rows, in two ranks," *dis* "twice" and *stichos* "rank," referring to the leaves, to the conspicuous phyllotaxy; see Constantine Samuel Rafinesque, in *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts*. 89: 104. Aug 1819.

About 5/6(-12) species, New World, America, Canada to Argentina, Australia. Chloridoideae, Cynodonteae, Monanthochloinae, perennial, polymorphic, short, halophytic, herbaceous, coarse and prickly, erect, rarely stoloniferous, rhizomatous with long creeping rhizomes, usually strongly

or conspicuously distichous leaves, auricles absent, sheaths ciliate or not, ligule a ciliate rim or a very short membrane fringed with hairs, leaf blade narrow and almost pungent-pointed, solid internodes, plants dioecious or rarely monoecious, inflorescence exerted usually contracted racemose or spicate or paniculate, spikelets solitary and several-flowered, male spikelets thin, glumes very unequal or more or less equal, second glume awnless, lemmas hairless and awnless, palea keels narrowly winged, hairy callus absent, 2 truncate lodicules free and fleshy, 3 stamens, 2 stigmas, fruit ellipsoid, weed species, forage, not very palatable, mat-forming, salinity indicator, alkali and salt grass, grows in coastal saline habitats, open habitats, seashores and deserts, gypsum flats of deserts, inland alkaline and saline habitats, sandy flats, dunes and coasts above salt marshes, type *Distichlis maritima* Raf., see *Fl. Ludov.* 144. 1817, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *Neogenyton* 4. 1825 and *Rhodora* 27: 67-72. 1925, *Fl. Victoria* 145. 1931, *Bulletin of the Torrey Botanical Club* 70(6): 638-650. 1943 [The North American variations of *Distichlis spicata*.], *Gram. Bonar.* edition 4: 28. 1946, *Fieldiana, Botany* 24(2): 38-331. 1955, *Rev. Arg. Agron.* 22: 86-94. 1955 [The grass genus *Distichlis*.], *Madroño* 18: 33-39. 1965, *Willdenowia* 5: 472. 1969, *Grasses Tasmania* 132. 1991, P.J. Clarke & P. Adam, "*Distichlis distichophylla* (Labill.) Fassett, a new coastal record for a salt marsh grass in New South Wales." *Wetlands (Australia)*. 12(2): 13-15. 1993, *Flora Mesoamericana* 6: 258. 1994, *Fontqueria* 46: [i-ii], 1-259. 1997, S.A. Renvoize, *Gramíneas de Bolivia* 291-292. 1998, Geraldine L. Dodd & Lisa A. Donovan, "Water potential and ionic effects on germination and seedling growth of two cold desert shrubs." *Am. J. Bot.* 86: 1146-1153. 1999, Ewald Weber & Carla M. D'Antonio, "Germination and growth responses of hybridizing *Carpobrotus* species (Aizoaceae) from coastal California to soil salinity." *Am. J. Bot.* 86: 1257-1263. 1999, *Contributions from the United States National Herbarium* 41: 70-73, 232. 2001, *Flora of Australia* 43: 111, 163, 230. 2002, *Am. J. Bot.* 89: 472-478, 592-601, 659-666, 1847-1851. 2002, *Flora Fanerogámica Argentina*, Poaceae, parte 5. Tribu Eragrostidae. 86: 1-68. 2003, Hester L. Bell & James W. O'Leary, "Effects of salinity on growth and cation accumulation of *Sporobolus virginicus* (Poaceae)." *Am. J. Bot.* 90: 1416-1424. 2003, *Am. J. Bot.* 91: 1-9. 2004, *Journal of Ecology* 92(1): 72-85. Feb 2004, *Restoration Ecology* 12(3): 368-375, Sep 2004, *Conservation Biology* 18(6): 1525-1532, Dec 2004, *Ecology Letters* 7(12): 1155-1162. Dec 2004, *Restoration Ecology* 12(4): 533-545. Dec 2004, Jinglan Wu, Denise M. Seliskar and John L. Gallagher, "The response of plasma membrane lipid composition in callus of the halophyte *Spartina patens* (Poaceae) to salinity stress." *Am. J. Bot.* 92: 852-858. 2005, J.J. James et al., "Multiple resources limit plant growth and function in a saline-alkaline desert community." *Journal of Ecology* 93(1): 113-126. Feb 2005, *Global Change Biology* 11(3):

369-377. Mar 2005, *Journal of Ecology* 93(2): 279-290. Apr 2005 [The role of coastal ecotones: a case study of the salt marsh/upland transition zone in California.], *Conservation Biology* 19(2): 473-481. Apr 2005, C.E. Proffitt, "Spartina alterniflora genotype influences facilitation and suppression of high marsh species colonizing an early successional salt marsh." *Journal of Ecology* 93(2): 404-416. Apr 2005, *Biological Journal of the Linnean Society* 85(2): 157-166. June 2005.

Species

D. ammobia Phil. (*Brizopyrum douglasii* (Nees) Hook. & Arn.; *Poa curva* Nees ex Steud.; *Poa douglasii* Nees) (Greek *ammos* "sand" and *bio* "to live," referring to the native or preferred habitat)

Chile. See *Annals of Natural History* 1: 284. 1838, *The Botany of Captain Beechey's Voyage* 404. 1840, *Synopsis Plantarum Glumacearum* 1: 259. 1854, *Anales de la Universidad de Chile* 43: 569. 1873.

D. australis (Speg.) Villamil (*Monanthochloe australis* Speg.)

South America, Argentina. Arid areas, see *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 196. 1902, *Kurtziana* 5: 388. 1969.

D. dentata Rydb. (*Distichlis spicata* subsp. *stricta* (Torr.) Thorne; *Distichlis spicata* var. *stricta* (Torr.) Scribn.; *Distichlis stricta* (Torr.) Rydb.; *Distichlis stricta* var. *dentata* (Rydb.) C.L. Hitchc.)

U.S. See *Annals of the Lyceum of Natural History of New York* 1(1): 155-156. 1824, *Bulletin of the California Academy of Sciences* 2: 415. 1887, *Memoirs of the Torrey Botanical Club* 5(4): 51. 1894 and *Bulletin of the Torrey Botanical Club* 32(11): 602. 1905, *Bulletin of the Torrey Botanical Club* 36: 536. 1909, *Vascular Plants of the Pacific Northwest* 1: 553. 1969, *Aliso* 9(2): 195. 1978.

D. distichophylla (Labill.) Fassett (*Distichlis maritima* sensu Benth., non Raf.; *Distichlis maritima* Raf.; *Distichlis spicata* sensu J. Black; *Distichlis spicata* subsp. *stricta* (Torr.) Thorne; *Distichlis spicata* var. *stricta* (Torr.) Scribn.; *Festuca distichophylla* (Labill.) Hook.f., nom. illeg., non *Festuca distichophylla* Michx.; *Poa distichophylla* (Labill.) R. Br., nom. illeg., non *Poa distichophylla* Gaudin; *Poa paradoxa* Roem. & Schult.; *Uniola distichophylla* Labill.)

South Australia, New South Wales, Victoria, Tasmania. Perennial, dioecious, unisexual, stoloniferous, endangered, halophytic, low growing, coarse and prickly, rigid, long creeping rhizomes, ascending or decumbent culms, often has closely bunched stems and leaves, leaf sheath glabrous, distichous leaves rigid and almost pungent-pointed, ligule a ciliate rim, leaf blade rolled or flat, spikelets in a short terminal spike or raceme, glumes keeled and nerved, lemmas nerved, stigma conspicuous on female plants, anthers conspicuous on male plants, fodder grass, low forage value,

salinity indicator plant, tolerant of periodically flooded or very wet soils, useful for stabilising saline soils, sand binder in coastal areas, suitable for revegetation in salt marsh and tidal or freshwater wetlands, grows in saline soils, moist surfaces, dunes, coast and salt marshes, from sandy to loams and clays, dune and coast above salt marsh, areas of high salinity, in or around shallow pools, near-shore areas, see *Novae Hollandiae Plantarum Specimen* 1: 21, t. 24. 1804, *Prodromus Florae Novae Hollandiae* 182. 1810, *Systema Vegetabilium* 2: 569. 1817, *Annals of the Lyceum of Natural History of New York* 1(1): 155-156. 1824, *Flora Tasmaniae* 2: 127. 1858, *Bulletin of the California Academy of Sciences* 2: 415. 1887, *Memoirs of the Torrey Botanical Club* 5(4): 51. 1894 and *Rhodora* 27: 71. 1925, *Aliso* 9(2): 195. 1978.

in English: emu grass, salt grass, Australian salt grass, Australian salt, salt marsh grass, river couch

D. hirsuta Phil. (*Distichlis mendocina* Phil.; *Distichlis spicata* var. *mendocina* (Phil.) Hack.)

Chile. See *Anales de la Universidad de Chile* 36: 209. 1870, *Bulletin of the California Academy of Sciences* 2: 415. 1887 and *Anales del Museo Nacional de Buenos Aires* 11: 513. 1906.

D. humilis Phil. (*Distichlis misera* Phil.; *Distichlis spicata* var. *humilis* (Phil.) Kuntze)

South America, Argentina, Chile. Perennial, halophyte, low, prostrate, leaf blades pointed, forage, salt and flood-tolerant, common in moist areas, floodplains, depressions occasionally flooded, marshes, see *Bulletin of the California Academy of Sciences* 2: 415. 1887, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 86. Leipzig 1891, *Revisio Generum Plantarum* 3(3): 350. 1898.

in Peru: chiji

D. laxiflora Hack. (*Distichlis scoparia* f. *laxiflora* (Hack.) Beetle)

South America, Argentina. See *Anales del Museo Nacional de Buenos Aires* 21: 141. 1911, *Revista Argentina de Agronomía* 22(2): 86-94. 1955, *Flora de la Provincia de Buenos Aires* 4(2): 47-50, 53-60, 128-136, 198-211, 320-323, 433-460, 585-588, 594-602. 1970.

D. palmeri (Vasey) Fassett ex I.M. Johnst. (*Distichlis palmeri* (Vasey) Fassett; *Uniola palmeri* Vasey) (for the American botanist Edward Palmer, 1831-1911, ethnologist, to U.S. 1849, botanical and zoological collector, traveler, naturalist, physician, 1853-1855 La Plata Expedition, botanical explorer, described the ethnobotany and aboriginal medical practice of the American Southwest)

North America, Mexico, Sonora Desert. Short, wiry, halophytic, salt-tolerant, nutritious and delicious grains were harvested and eaten by native peoples (Cocopa/Cucapá Indians, the Colorado River delta), useful for erosion control, common in coastal habitats, wetlands, tidal and intertidal

salt marshes, freshwater salt marshes and mangrove forests, floodplains, see *Garden & Forest* 2: 401, f. 124. 1889 and *Proceedings of the California Academy of Sciences, Series 4*, 12: 984. 1924, F.B. Kniffen, "The primitive cultural landscape of the Colorado delta." *Univ. of California Publ. in Geol.* 5: 43-66. 1931, *Memoir San Diego Society of Natural History* 12: 1-140. 1981, Yensen, S.B. & C.W. Weber, "Composition of *Distichlis palmeri* grain, a saltgrass." *J. Food Sci.*, 51: 1089-1090. 1986.

in English: salt grass, Palmer's grass, Palmer's saltgrass

in Mexico: trigo gentil, pasto salado, zacate salado, trigo salado

D. scoparia (Kunth) Arechav. (*Distichlis scoparia* (Nees ex Kunth) Arechav.; *Poa scoparia* Kunth; *Uniola scoparia* (Nees ex Kunth) Steud.)

South America, Argentina, Uruguay, Chile. Halophyte, rigid leaves, common in moist areas, floodplains, depressions occasionally flooded, marshes, see *Révision des Graminées* 2: 535, t. 182. 1829 [1832], *Synopsis Plantarum Glumacearum* 1: 281. 1854, *Anales del Museo Nacional de Montevideo* 1: 457, t. 58. 1897 and *Anales del Museo Nacional de Buenos Aires* 21: 141. 1911, *Revista Argentina de Agronomía* 22(2): 90. 1955, *Flora Patagónica* 3: 498. 1978.

in Mexico: pelo de chanco, pasto salado

in Argentina: yuyos salados

D. scoparia (Kunth) Arechav. var. ***erinacea*** (Beetle) Nicora (*Distichlis scoparia* f. *erinacea* Beetle)

Argentina. See *Anales del Museo Nacional de Montevideo* 1: 457, t. 58. 1897 and *Revista Argentina de Agronomía* 22(2): 90. 1955, *Flora Patagónica* 3: 498. 1978.

D. scoparia (Kunth) Arechav. var. ***scoparia***

Argentina.

D. spicata (L.) E. Greene (*Agropyron peruvianum* (Lam.) Roem. & Schult.; *Brachypodium peruvianum* Roem. & Schult. ex Kunth; *Briza spicata* (L.) Lam., nom. illeg., non *Briza spicata* Burm.f.; *Brizopyrum americanum* (L.) Link; *Brizopyrum boreale* J. Presl; *Brizopyrum ovatum* Nees ex Steud.; *Brizopyrum prostratum* var. *erectum* E. Fourn.; *Brizopyrum prostratum* var. *humile* E. Fourn.; *Brizopyrum spicatum* (L.) Hook. & Arn.; *Brizopyrum thalassicum* (Kunth) Nees; *Distichlis maritima* Raf.; *Distichlis mendocina* Phil.; *Distichlis nodosa* Raf.; *Distichlis spicata* subsp. *stricta* (Torr.) Thorne; *Distichlis spicata* var. *andina* Beetle; *Distichlis spicata* var. *borealis* (J. Presl) Beetle; *Distichlis spicata* var. *dentata* (Rydb.) C.L. Hitchc.; *Distichlis spicata* var. *distichophylla* (Michx.) Beetle; *Distichlis spicata* var. *divaricata* Beetle; *Distichlis spicata* var. *mendocina* (Phil.) Hack.; *Distichlis spicata* var. *mendocina* Beetle ex Renvoize; *Distichlis spicata* var. *nana* Beetle; *Distichlis spicata* var. *stolonifera* Beetle; *Distichlis spicata* var. *stricta* (Torr.) Scribn.; *Distichlis spicata* var. *stricta* (Torr.) Beetle, nom. illeg., non *Distichlis spicata* var. *stricta* (Torr.) Scribn.;

Distichlis stricta (Torr.) Rydb.; *Distichlis stricta* (Torr.) Rydb. var. *dentata* (Rydb.) C.L. Hitchc.; *Distichlis thalassica* (Kunth) E. Desv.; *Distichlis thalassica* var. *mendocina* (Phil.) Kurtz; *Festuca distichophylla* Michx.; *Festuca multiflora* Walter; *Festuca triticea* Lam. ex Kunth; *Festuca triticooides* Lam.; *Megastachya thalassica* (Kunth) Roem. & Schult.; *Poa borealis* (J. Presl) Kunth; *Poa michauxii* Kunth; *Poa thalassica* Kunth; *Triticum peruvianum* Lam.; *Uniola distichophylla* (Michx.) Roem. & Schult.; *Uniola spicata* L.; *Uniola stricta* Torr.; *Uniola thalassica* (Kunth) Trin.)

North and South America, U.S., California. Perennial sodgrass, halophytic, dioecious, short and wiry, low and spreading, widely creeping, harsh, erect, rigid, extensively rhizomatous with sharp-pointed rhizomes, tough and scaly rootstocks, shallow root system, overlapping sheaths glabrous or sparsely hairy, ligule inconspicuous, distichous leaf arrangement, leaves thin and narrow on a slender stem, stiff harsh and somewhat spiny leaves, salt glands on the leaves excreting excess salt, broad spike-like inflorescence, spikelets linear, 6-12 florets, male and female flowers on separate plants, glumes subequal, 2 cuneate lodicules, 3 stamens in male plants, invasive weed species, a pioneer species, reproduction mainly vegetative, large and dense monocultures, fair to good forage, low nutritive value, food source for geese and other birds, seeds eaten by numerous species of waterfowl and small mammals, provides cover for small wildlife species, moderate to high drought tolerance, used for binding sandy soils, useful for wind and erosion control, very flood-tolerant, found in moist saline areas, above the normal high tide line on the shore, along streams, salt flats, wet grasslands, disturbed riparian sites, on alkaline soil near springs or stream beds, around springs, wetland, along salt marshes, upper margins of marshes, in the higher elevations of a salt marsh, lakeshores, on subirrigated alkali flats and soils, in salt and brackish coastal marshes, seeps, roadside ditches, see *Species Plantarum* 71. 1753, *Encyclopédie Méthodique, Botanique* 1: 465. 1785, *Flora Caroliniana, secundum ...* 81. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 191, 212. 1791, *Flora Boreali-Americana* 1: 67. 1803, *Nova Genera et Species Plantarum* 1: 157. 1815 [1816], *Systema Vegetabilium* 2: 590, 596, 761. 1817, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *Annals of the Lyceum of Natural History of New York* 1(1): 155-156. 1824, *Hortus Regius Botanicus Berolinensis* 1: 160. 1827, *Révision des Graminées* 1: 111. 1829, *Reliquiae Haenkeanae* 1(4-5): 280. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 359. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 325-326, 543. 1833, *The Botany of Captain Beechey's Voyage* 403. 1840, *Gramineae* 29. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 161. 1843, *Synopsis Plantarum Glumacearum* 1: 282. 1854, *Flora Chilena*

6: 397. 1854, *Anales de la Universidad de Chile* 36: 209. 1870, *Anales de la Universidad de Chile* 48: 570. 1873, *Bulletin de la Société Botanique de Belgique* 15: 474. 1876, *Mexicanas Plantas* 2: 120. 1886, *Bulletin of the California Academy of Sciences* 2: 415. 1887, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 86. 1891, *Memoirs of the Torrey Botanical Club* 5(4): 51. 1894, *Grasses of North America for Farmers and Students* 2: 519. 1896, *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 15: 521. 1897, *Revisio Generum Plantarum* 3(3): 350. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 513. 1906, *Bulletin of the Torrey Botanical Club* 70(6): 643-645, 647-648, f. 1, 3-6, 8-10, 12. 1943, *Rhodora* 47(557): 148. 1945, *Revista Argentina de Agronomía* 22(2): 93. 1955, *Aliso* 9(2): 195. 1978, *Gramíneas de Bolivia* 292. 1998, Denise M. Seliskar & John L. Gallagher, "Exploiting wild population diversity and somaclonal variation in the salt marsh grass *Distichlis spicata* (Poaceae) for marsh creation and restoration." *Am. J. Bot.* 87: 141-146. 2000.

in English: salt grass, inland saltgrass, coastal saltgrass, spicate saltgrass, desert saltgrass, seashore saltgrass, alkali grass, spike grass, marsh spikegrass

in Mexico: huizapol, huizapole, pasto espigado del pantano, pasto salado playero, pelo de chanco, tequizquizacatl, zacahuistle, zacate salado

D. spicata (L.) Greene subsp. ***spicata***

North and South America.

D. spicata (L.) Greene subsp. ***stricta*** (Torr.) Thorne

North and South America.

D. spicata (L.) Greene var. ***andina*** Beetle

Bolivia. See *Revista Argentina de Agronomía* 22(2): 93. 1955.

D. spicata (L.) Greene var. ***borealis*** (J. Presl) Beetle (*Brizopyrum boreale* J. Presl; *Poa borealis* (J. Presl) Kunth)

America. See *Reliquiae Haenkeanae* 1(4-5): 280. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 326. 1833 and *Bulletin of the Torrey Botanical Club* 70(6): 643, f. 1, 8. 1943.

D. spicata (L.) Greene var. ***divaricata*** Beetle

North America, California. See *Bulletin of the Torrey Botanical Club* 70(6): 647, f. 10. 1943.

D. spicata (L.) Greene var. ***mendocina*** (Phil.) Hack. (*Distichlis deserticola* Phil.; *Distichlis hirsuta* Phil.; *Distichlis hirta* Phil.; *Distichlis mendocina* Phil.; *Distichlis spicata* f. *hirta* (Phil.) Kuntze; *Distichlis spicata* var. *marginata* (Phil.) Kuntze; *Distichlis spicata* var. *mendocina* Beetle ex Renvoize; *Distichlis spicata* var. *thalassica* (Kunth) Kuntze; *Distichlis thalassica* (Kunth) E. Desv.; *Distichlis thalassica* var. *mendocina* (Phil.) Kurtz; *Distichlis thalassica* var.

pectinata Griseb.; *Distichlis thalassica* var. *thalassica*; *Poa thalassica* Kunth)

North and South America. See *Nova Genera et Species Plantarum* 1: 157. 1815 [1816], *Flora Chilena* 6: 397. 1854, *Anales de la Universidad de Chile* 36: 209. 1870, *Anales de la Universidad de Chile* 48: 570. 1873, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 291. 1879, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 86. 1891, *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 15: 521. 1897, *Revisio Generum Plantarum* 3(3): 350. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 513. 1906.

D. spicata (L.) Greene var. ***mexicana*** Beetle

Mexico. See *Bulletin of the Torrey Botanical Club* 70: 648, f. 5. 1943.

D. spicata (L.) Greene var. ***nana*** Beetle

North America, U.S., California. See *Bulletin of the Torrey Botanical Club* 70: 647, f. 3, 9. 1943.

D. spicata (L.) Greene var. ***spicata***

North and South America, Mexico, U.S., Peru, Uruguay, Argentina, Bolivia. Useful for erosion control, see *Bulletin of the California Academy of Sciences* 2: 415. 1887.

in English: salt grass, coastal saltgrass, seashore saltgrass

in Mexico: huizapol, zacate salado, zacahuistle

D. spicata (L.) Greene var. ***stolonifera*** Beetle

North America, U.S., California. See *Bulletin of the Torrey Botanical Club* 70(6): 644, f. 4, 12. 1943.

D. spicata (L.) Greene var. ***stricta*** (Torr.) Scribn. (*Agrostis pungens* Bertero; *Brizopyrum spicatum* var. *strictum* (Torr.) A. Gray ex S. Watson; *Distichlis araucana* Phil.; *Distichlis distichophylla* (Labill.) Fassett; *Distichlis marginata* var. *stricta* (Torr.) Thurb.; *Distichlis maritima* var. *stricta* (Torr.) Thurb.; *Distichlis prostrata* (Kunth) E. Desv.; *Distichlis spicata* subsp. *stricta* (Torr.) Thorne; *Distichlis spicata* var. *distichophylla* (Michx.) Beetle; *Distichlis spicata* var. *laxa* Vasey ex Beal; *Distichlis spicata* var. *stricta* (Torr.) Beetle, nom. illeg., non *Distichlis spicata* var. *stricta* (Torr.) Scribn.; *Distichlis stricta* (Torr.) Rydb.; *Distichlis stricta* var. *dentata* (Rydb.) C.L. Hitchc.; *Distichlis stricta* var. *laxa* (Vasey ex Beal) Fawc. & West ex Munz; *Distichlis tenuifolia* Phil.; *Distichlis viridis* Phil.; *Festuca distichophylla* Michx.; *Festuca spicata* Nutt., nom. illeg., non *Festuca spicata* Pursh; *Megastachya prostrata* (Kunth) Roem. & Schult.; *Poa distichophylla* (Labill.) R. Br., nom. illeg., non *Poa distichophylla* Gaudin; *Poa paradoxa* Roem. & Schult.; *Poa prostrata* Kunth; *Uniola distichophylla* Labill.; *Uniola flexuosa* Buckley; *Uniola multiflora* Nutt.; *Uniola prostrata* (Kunth) Trin.; *Uniola stricta* Torr.)

North and South America, Mexico, U.S., California, Arizona, Canada, Peru, Uruguay, Argentina, Bolivia. Perennial grass, halophyte, dioecious, male and female plants, erect, coarse, low, stiff, harsh, short, rhizomatous, forming large dense colonies, extensively creeping scaly rootstocks, leaf blades rigid and pointed, overlapping sheaths, small yellowish inflorescence, invasive, colonizer, good nesting cover, poor forage value, grazed by cattle, can tolerate flooding, useful for erosion control, important food source for the birds, seeds sometimes eaten by wildlife, salt-tolerant, adapted to saline environments, a pioneer species on salt flats and shorelines, common in high salinity wetlands, along railroad and salty waste areas, disturbed areas, wet or moist meadows, saline seep areas, ditches, around the margins of the salt flats, in alkaline soils and sites, in salt marshes and alkaline habitats, open flats, saline parts of desert meadows, marshes, floodplains, low-lying saline areas, muds, from sand and gravel to clay, see *Flora Boreali-Americana* 1: 67. 1803, *Novae Hollandiae Plantarum Specimen* 1: 21, t. 24. 1804, *Prodromus Florae Novae Hollandiae* 182. 1810, *Nova Genera et Species Plantarum* 1: 157. 1815 [1816], *Systema Vegetabilium* 2: 569, 590. 1817, *The Genera of North American Plants* 1: 72. 1818, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *Annals of the Lyceum of Natural History of New York* 1(1): 155-156. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 55. 1836, *Transactions of the American Philosophical Society, new series*, 5: 148. 1837, *The Botany of Captain Beechey's Voyage* 403. 1840, *Flora Chilena* 6: 398. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 99. 1862, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 385. 1871, *Geological Survey of California, Botany* 2: 306. 1880, *Bulletin of the California Academy of Sciences* 2: 415. 1887, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 86. 1891, *Memoirs of the Torrey Botanical Club* 5(4): 51. 1894, *Grasses of North America for Farmers and Students* 2: 519. 1896, *Anales de la Universidad de Chile* 94: 162-163. 1896 and *Bulletin of the Torrey Botanical Club* 32(11): 602. 1905, *Bulletin of the Torrey Botanical Club* 36: 536. 1909, *Rhodora* 27: 71. 1925, *A Manual of Southern California Botany* 52, 597. 1935, *Man. Grass. U.S.* 838. 1935, *Bulletin of the Torrey Botanical Club* 70(6): 645, f. 6. 1943, *Rhodora* 47(557): 148. 1945, *Vascular Plants of the Pacific Northwest* 1: 553. 1969, *Aliso* 9(2): 195. 1978, *Madroño* 26: 100-101. 1978.

in English: salt grass, marsh spikegrass, inland saltgrass, desert saltgrass, seashore saltgrass, interior salt grass

in Mexico: pequeña grama, salado desierto, zacate salado

Distomomischus Dulac = *Vulpia* C.C. Gmel.

From the Greek *distomos* "double-mouthed, with two entrances" and *mischos* "stalk."

Pooideae, Poaceae, Loliinae, type *Distomomischus myuros* (L.) Dulac, see *Species Plantarum* 1: 73. 1753, *Flora Badensis Alsatica* 1: 8. 1805, *Genera Plantarum* 101. 1836, *Flore du Département des Hautes-Pyrénées* 91. 1867, *Die Natürlichen Pflanzenfamilien* 2(2): 75. 1887 and *Botaniska Notiser* 130: 173-187. 1977, *Nordic Journal of Botany* 1(1): 17-26. 1981, *Flora Mesoamericana* 6: 228. 1994, *Bothalia* 27: 75-82. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Bothalia* 29(2): 335-341. 1999, *Systematic Botany* 27(2): 241-251. 2002, *Contributions from the United States National Herbarium* 48: 274, 690-694. 2003.

Doellochloa Kuntze = *Gymnopogon* P. Beauv., *Monochaete* Döll

After the German botanist Johann Christoph Döll, 1808-1885, librarian; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 461. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 104. Boston, Mass. 1972; Stafleu & Cowan, *Taxonomic literature*. 1: 665-666. Utrecht 1976.

Chloridoideae, Cynodonteae, type *Doellochloa fastigiata* (Nees) Kuntze, see *Essai d'une Nouvelle Agrostographie* 41, 164. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 430. 1829, *Fl. Bras.* 2(3): 78. 1878, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888, *Revisio Generum Plantarum* 2: 773. 1891 and *Nat. Pflanzenfam.* (edition 2) 14d: 94. 1956, *Brittonia* 23(3): 293-324. 1971, *Contributions from the United States National Herbarium* 41: 73, 124-127, 142. 2001.

Dolichochoete (C.E. Hubb.) J.B. Phipps = *Tristachya* Nees

From the Greek *dolichos* "long" and *chaite* "bristle, mane, long hair."

Panicoideae, Arundinelleae, type *Dolichochoete rehmannii* (Hack.) J.B. Phipps, see *Bull. Herb. Boissier* 3(8): 384. 1895, *Bulletin of Miscellaneous Information Kew* 1897: 295. 1897, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 334. 1897 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 458. 1913, *Bulletin du Jardin Botanique de l'État* 6: 45, t. 34. 1919, *Bulletin of Miscellaneous Information Kew* 1934: 263. 1934, *Bull. Misc. Inform. Kew* 1936(5): 322. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 226-354. 1957, *Kirkia* 4: 109-112.

1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Flora Mesoamericana* 6: 378. 1994.

Donacium Fr. = *Arundo* L., *Eudonax* E.M. Fries

Greek *donax* and Latin *donax*, *donacis* for “a kind of reed.”

Arundinoideae, Arundineae, see *Species Plantarum* 1: 81. 1753, *Botaniska Notiser* 1843: 132. 1843 and *Contributions from the United States National Herbarium* 46: 113-115, 214. 2003.

Donax P. Beauv. = *Arundo* L., *Donax* Lour. (Marantaceae)

Latin *donax* and Greek *donax*, *donakos* for “a kind of reed or cane.”

Arundinoideae, Arundineae, type *Donax arundinaceus* P. Beauv., see *Species Plantarum* 1: 81. 1753, *Flora Cochinchinensis* 1: 1, 11-12. 1790, *Essai d'une Nouvelle Agrostographie* 77-78, 152, 161. 1812 and *Contr. U.S. Natl. Herb.* 24: 184. 1925, *Contributions from the United States National Herbarium* 46: 113-115, 214. 2003.

Drake-Brockmania Stapf = *Heterocarpha* Stapf & C.E. Hubb.

Named for the British naturalist Ralph Evelyn Drake-Brockman, b. 1875, physician, plant collector in Somaliland and Ethiopia, from 1904 to 1915 Army medical officer in Abyssinia and Somaliland, author of *British Somaliland*. London 1912 and *The Mammals of Somaliland*. London 1910; see Alain Campbell White & Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937; J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 1: 470. Boston 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 216. London 1994; Alexander Bryson, *Report on the Climate and Principal Diseases of the African Station*. London 1847; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement VI: Do-E*. 88-89. Königstein 2000.

One to two species, eastern tropical Africa, Arabia, Tanzania, Sudan to Somalia. Chloridoideae, Eragrostideae, annual or perennial, herbaceous, unarmed, tufted, decumbent, auricles absent, glandular, ligule an unfringed membrane, plants bisexual, inflorescence spicate and contracted, short compact deciduous racemes, spikelets densely imbricate and strongly laterally compressed, glumes lanceolate, upper glume oblong-lanceolate 7- to 17-nerved, lower glume 1- to 5-nerved and exceeding the lowest lemma, palea present, 2 glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas,

open habitats, saline sites, damp places, savannah, sandy soils, related to *Leptochloa*, see *Mémoires de l'Herbier Boissier* 20: 6. 1900, *Bulletin of Miscellaneous Information Kew* 1912: 197. 1912, *Bulletin of Miscellaneous Information Kew* 1929: 263. 1929, *Kew Bulletin* 29(2): 267-270. 1974, *Flora of Ethiopia and Eritrea* 7: 108-110. 1995.

Species

D. haareri (Stapf & C.E. Hubb.) S.M. Phillips (*Eleusine conglomerata* Peter; *Eleusine conglomerata* f. *littoralis* Peter; *Eleusine conglomerata* var. *littoralis* (Peter) Peter; *Heterocarpha haareri* Stapf & C.E. Hubb.)

Africa, Tanzania. See *Bulletin of Miscellaneous Information Kew* 1929: 263. 1929, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(Anhang): 78-79, t. 42a-b. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(Anhang): 270. 1931, *Kew Bulletin* 29(2): 268. 1974.

D. somalensis Stapf (*Eleusine somalensis* Hack.)

Kenya, Ethiopia, Somalia. Annual, prostrate, sometimes rooting from the nodes, flowering stem erect or ascending, spikelets densely imbricate and not disarticulating, glumes unequal and papery, lower glume narrowly lanceolate and mucronate, lemmas villous and keeled, see *Mémoires de l'Herbier Boissier* 20: 6. 1900, *Bulletin of Miscellaneous Information Kew* 1912: 197. 1912.

Dregeochloa Conert

For the German plant collector and botanist Jean François (Johann Franz) Drège, 1794-1881 (Altona), botanical explorer, traveler, arrived at the Cape in 1826, his writings include *Zwei pflanzengeografische Dokumente*. Leipzig [1843-1844], *Catalogus plantarum exsiccatarum Africae australioris, quas emturis offert*. 1837-1840 and also *Linnaea*. 19: 583-680. 1847 and 20: 183-258. 1847, with the Prussian botanist Ernst Heinrich Friedrich Meyer (1791-1858) wrote *Commentariorum de plantis Africae australioris*. Leipzig & Königsberg 1835 [1836, 1838], he was the brother of Carl Friedrich Drège (1791-1867). See George Arnott Walker Arnott (1799-1868), “Notes on some South African plants.” *Hook., J.Bot.* 3: 147-156. 1841; J.H. Barnhart, *Biographical notes upon botanists*. 1: 471. 1965; Peter MacOwan, “Personalalia of botanical collectors at the Cape.” *Trans. S. Afr. Philos. Soc.* 4(1): xlix-l. 1884-1886; J.H. Verduyn den Boer, *Botanists at the Cape*. 55-58. Cape Town and Stellenbosch 1929; Gilbert Westacott Reynolds, *The Aloes of South Africa*. 58, 60. Rotterdam 1982; John Hutchinson (1884-1972), *A Botanist in Southern Africa*. 642. London 1946; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 704. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 107. 1972; A. White & B.L. Sloane, *The Stapelieae*.

Pasadena 1937; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 704. Ansbach 1852; Gordon Douglas Rowley, *A History of Succulent Plants*. California 1997; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 145, 317, 382, 386, 389. Cape Town 1981.

About 2 species, Cape Province, drier parts of southern Africa, South and southwest Africa, Namibia. Arundinoideae, Danthoneiae, perennial, unarmed, herbaceous, low, more or less unbranched, stoloniferous, tufted, stiff acicular leaves, auricles absent, ligule a fringe of hairs, with branched creeping rhizomes, plants bisexual, inflorescence racemose or paniculate, 2 subequal glumes 5- to 7-nerved, palea hairy, 2 glabrous lodicules free and fleshy, 3 stamens, ovary hairy, 2 stigmas, fruit with free thick pericarp, open habitats, dry rocky places, over rocks, sandy soils, sometimes referred to *Danthonia* sensu lato, resembling *Rytidosperma*, see *Senckenbergiana Biologica* 47: 335. 1966.

Species

D. calviniensis Conert (Calvinia district, South Africa)

South Africa. Perennial, shortly rhizomatous, swollen at the base, old leaf sheaths persistent, pungent leaves, panicle contracted, lemma lobes acuminate, central awn geniculate, see *Senckenbergiana Biologica* 47: 340. 1966.

D. pumila (Nees) Conert (*Danthonia pumila* Nees)

South Africa. Perennial, shortly rhizomatous, basal scales, pungent and spiny leaves, inflorescence a raceme, lemma densely pubescent, desert rocky areas, loose sand, see *Florae Africae Australioris Illustrationes Monographicae* 323. 1841 and *Senckenbergiana Biologica* 47: 338. 1966.

Drepanostachyum Keng f. =

Himalayacalamus Keng f., *Sinarundinaria* Nakai

From the Greek *drepane*, *drepanon* “a sickle” and *stachys* “a spike,” the flowering branchlets are sickle-shaped.

About 11-16 species, subtropical. Bambusoideae, Bambuseae, sympodial, treelike or shrubby, unicaspitose, culms erect below and pendulous above, thin-walled, joint swollen, culm sheaths scabrous or pubescent, sheath ligule developed, sheath blade awl-shaped, leaves slender and long lanceolate, rhizomes pachymorph, flowering semelautant, inflorescence a large panicle, 2 glumes, 3 stamens, 2 stigmas, used for weaving, fodder, the plants browsed by livestock, deciduous forests, along roadsides, evergreen forests, subtropical forests, type *Drepanostachyum falcatum* (Nees) Keng f., see *Journal of Japanese Botany* 11(1): 1. 1935, *Journal of Bamboo Research* 2(1): 15-16, 23-24. 1983, *Kew Bulletin* 44(2): 349-367. 1989.

Species

D. annulatum Stapleton

Bhutan. Internodes dark green, culm sheaths more or less glabrous, leaf sheaths glabrous, auricles usually absent, forest, see *Edinburgh Journal of Botany* 51(3): 305-307, f. 1. 1994.

Local names: him, ban nigalo

D. breviligulatum Yi

China. See *Journal of Bamboo Research* 12(4): 42-45, f. 1. 1993.

D. breviligulatum Yi f. ***discrepans*** Yi

China. See *Journal of Bamboo Research* 12(4): 45. 1993.

D. exauritum W.T. Lin

China. See *Journal of Bamboo Research* 11(1): 30. 1992.

D. falcatum (Nees) Keng f. (*Arundinaria falcata* Nees; *Chimonobambusa falcata* (Nees) Nakai; *Fargesia falcata* (Nees) T.P. Yi; *Pleioblastus falcatus* (Nees) T.Q. Nguyen; *Sinarundinaria falcata* (Nees) C.S. Chao & Renvoize)

India, Asia. Annual, shrubby, gregarious, smooth, cylindrical, covered with a whitish bloom when young, nodes swollen, culm branches densely fasciculate, culm sheaths papery, ligule elongate and dentate, inflorescence on separate leafless culms, racemes subtended by short bracts, spikelets bearing 2 empty glumes, 1-2 fertile florets, terminal rudimentary floret, ovary glabrous, 2 stigmas plumose, used for making fishing rods and *hookah* tubes, decoration, baskets and grain vats, common in forest undergrowth, high terraces, moist situation, hill slopes, evergreen forests, rich sandy loam, see *Linnaea* 9(4): 478. 1834, *Annals of the Royal Botanic Garden, Calcutta*. 7: 13. 1896 and *Journal of the Arnold Arboretum* 6(3): 151. 1925, *Journal of Bamboo Research* 2(1): 16. 1983, *Flora Xizangica* 5: 33. 1987, *Kew Bulletin* 44: 357-358. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 225. 1990, *Monogr. Bamboo* 84. 1993.

in English: Himalayan bamboo

in India: gadh ringal, garo, gero, ghar ringal, go ringal, godra ringal, gol ringal, gola ringal, lombang, nagre, namlang, nargual, narri, nigal, nirgal, nurkat, pisto, ringal, spiag, spikso, u-kadui-namang

D. hirsutissimum W.D. Li & Y.C. Zhong

China. See *Journal of Bamboo Research* 16(1): 52, f. 1-5. 1997.

D. intermedium (Munro) Keng f. (*Arundinaria intermedia* Munro; *Chimonobambusa intermedia* (Munro) Nakai; *Sinarundinaria intermedia* (Munro) Chao & Renvoize)

Bhutan, India, Sikkim, Darjeeling. Slender, thin, caespitose, smooth, internodes dark green, nodes swollen with a prominent ring, culm sheaths papery and more or less glabrous, leaves linear-lanceolate to oblong-lanceolate, leaf sheaths glabrous, auricles usually absent, inflorescence on leafless

branches, 3 stamens, culms used for making fishing-rods and hookah-tubes, hedge, arrows, also used as fuel, leaves used for fodder, thatching, roofing and making baskets, see *Transactions of the Linnean Society of London* 26(1): 28. 1868 and *Journal of the Arnold Arboretum* 6: 151. 1925, *Journal of Bamboo Research* 2(1): 18. 1983, *Kew Bulletin* 44(2): 357. 1989.

Local names: nigala, nigalo, ningalo, parmiok, permiok, permyok, prongnok, purmak, purmia, purmiak, purmiok, titay, tite nigalo

D. khasianum (Munro) Keng f. (*Arundinaria khasiana* Munro; *Chimonobambusa khasiana* (Munro) Nakai; *Drepanostachyum khasianum* (Munro) Majumdar, nom. illeg., non *Drepanostachyum khasianum* (Munro) Keng f.; *Drepanostachyum suberectum* (Munro) R.B. Majumdar; *Sinarundinaria falcata* (Nees) C.S. Chao & Renvoize)

Bhutan, India, Sikkim, Darjeeling. Slender, bushy, smooth, internodes dark green, nodes prominent, culm sheaths glabrous and papery, leaves very short-petiolate, leaf sheaths glabrous, auricles absent, axillary panicle, spikelets on separate leafless branches, 2 glumes mucronate, lemmas mucronate and minutely scabrous, paleas 2-keeled, 3 lodicules fimbriate, 3 stamens, ovary glabrous, 2 stigmas plumose, flowering gregarious and periodical, culms used for construction of houses and thatching, fishing rods, as fuel, mostly in warm temperate to subtropical zone, see *Linnaea* 9(4): 478. 1834, *Transactions of the Linnean Society of London* 26(1): 28. 1868 and *Journal of the Arnold Arboretum* 6: 151. 1925, *Journal of Bamboo Research* 2(1): 18. 1983, *Kew Bulletin* 44(2): 357. 1989, *Fl. Ind. Enumerat.-Monocot.* 277. 1989, *Edinb. J. Bot.* 51: 308. 1994.

in India: namlang, namlong, udait-namlang, titi-ningalo

Local names: daphe, ban nigalo

D. kurzii (Gamble) Ohrenb. (*Arundinaria kurzii* Gamble; *Drepanostachyum kurzii* Majumdar; *Drepanostachyum kurzii* (Gamble) Pandey ex D.N. Tewari)

Myanmar. Low bushy bamboo, thin, smooth, striate internodes, nodes prominent with a thick ring formed by the bases of fallen culm-sheath, branchlets many and fascicled with swollen joints, very thin leaves linear-lanceolate short petiolate, slender leaf sheaths striate ending into a callus, short ligule ciliate, see *Annals of the Royal Botanic Garden. Calcutta.* 7: 25, t. 25. 1896 and *A Monograph on Bamboo* 90. Dehra Dun 1993.

D. luodianense (Yi & R.S. Wang) Keng f. (*Ampelocalamus luodianensis* Yi & R.S. Wang)

China, Luodian, Guizhou. Erect, drooping, liana-like, smooth, glabrous, many slender branches, culms slightly swollen, young culm with white powder, basal internodes solid, internodes of twigs swollen, sheath caducous, sheath blade lanceolate and erect, sheath ligule truncate and pubescent, see *Acta Phytotaxonomica Sinica* 19(3): 332-334, pl.

1. 1981, *Journal of Bamboo Research* 4(2): 3-5, f. 1. 1985, *Journal of Bamboo Research* 5(2): 35. 1986.

D. melicodum P.C. Keng

China. See *Journal of Bamboo Research* 5(2): 35, f. 6. 1986.

D. microphyllum (Hsueh & Yi) P.C. Keng (*Ampelocalamus microphyllum* (J.R. Xue & T.P. Yi) J.R. Xue & T.P. Yi; *Neomicrocalamus microphyllum* (J.R. Xue & T.P. Yi) Keng f. & T.P. Yi; *Neosinocalamus microphyllum* (J.R. Xue & T.P. Yi) Keng f. & T.P. Yi; *Sinocalamus microphyllum* Hsueh & Yi)

China. Erect or slanting, smooth, cylindrical, green or yellowish green, slightly pruinose when young, many branches clustered on each node, sheath blade linear-lanceolate, no sheath auricles or cilia, sheath ligule truncate or concave, leaves narrow-lanceolate and papery, culm used for weaving, rope making, papermaking, see *Lingnan University Science Bulletin* 9: 66. 1940, *J. Yunnan. For. Coll.* 1: 71-73, f. 2. 1982, *Journal of Bamboo Research* 2(2): 10, 12, 14. 1983, *Journal of Bamboo Research* 4(2): 7-8. 1985, *Journal of Bamboo Research* 12(4): 46. 1993.

D. naibunense (Hayata) P.C. Keng (*Ampelocalamus naibunensis* (Hayata) T.H. Wen; *Arthrostylidium naibunensis* (Hayata) W.C. Lin; *Arundinaria naibunensis* Hayata; *Bambusa naibunensis* (Hayata) Nakai; *Chimonobambusa naibunensis* (Hayata) McClure; *Leleba naibunensis* (Hayata) Nakai; *Pleioblastus naibunensis* (Hayata) Kanehira & Sasaki; *Pseudosasa naibunensis* (Hayata) Makino)

Taiwan. Erect culm top drooping, slanting, scandent, manifold branching, sheath deciduous and papery, sheath blade linear, sheath auricles tiny shortly ciliate, sheath ligule truncate, leaves narrow lanceolate, see *Journal of the College of Science, Imperial University of Tokyo* 30(1): 408-409. 1911, *Journal of Bamboo Research* 5(2): 32, f. 4. 1986, *Journal of Bamboo Research* 6(3): 34. 1987.

in English: Naibun bamboo

in China: Nei men zhu

in Japan: Naibun medake

D. polystachyum (Kurz ex Gamble) R.B. Majumdar (*Arundinaria polystachya* Kurz ex Gamble; *Chimonobambusa polystachya* (Kurz ex Gamble) Nakai; *Drepanostachyum polystachyum* (Kurz ex Gamble) Pandey ex Tewari)

India. Shrubby, branchlets many and fasciculate, leaves rounded and short petiolate, an axillary panicle on leafy branches, spikelets pedicellate, 2 glumes acuminate, lemmas ciliate, paleas 2-keeled, 3 lodicules, 3 stamens, ovary glabrous, 2 plumose stigmas, mostly in warm temperate to subtropical zone, on dry hills, rocky slopes, ridges, near streams, see *Flora of Bhutan [The Grasses of Bhutan]* 3(2): 508. 2000.

D. saxatile (Hsueh & Yi) P.C. Keng (*Ampelocalamus saxatile* (Hsueh & Yi) Hsueh & Yi; *Sinocalamus saxatilis* Hsueh & Yi)

China, Sichuan, Yunnan. Erect culm top drooping, arcuate, slanting, scandent, scabrous, manifold branching or many branches clustered at each node, sheath shedding late and papery, sheath blade linear-lanceolate, no sheath auricles, sheath ligule truncate, leaves narrow lanceolate to long lanceolate, for weaving and making threads, see *J. Yunnan For. Coll.* 1: 69, f. 1. 1982, *Journal of Bamboo Research* 2(2): 14. 1983, *Journal of Bamboo Research* 4(2): 5. 1985, *Journal of Bamboo Research* 12(4): 46. 1993.

D. scandens (Hsueh & W.D. Li) Keng f. (*Ampelocalamus scandens* Hsueh & W.D. Li)

China, Guizhou. Liana-like, culm hairy to tomentose, manifold branching, sheath shorter than internode shedding late or persistent, sheath blade lanceolate, sheath auricles small shortly ciliate, sheath ligule with long cilia, leaves lanceolate, see *Journal of Bamboo Research* 4(2): 5-7, f. 2. 1985, *Journal of Bamboo Research* 12(4): 46. 1993.

D. suberectum (Munro) R.B. Majumdar (*Arundinaria suberecta* Munro)

India, Arunachal Pradesh, Meghalaya, Sikkim. Erect, wiry, shrubby, smooth, graceful, clumped, in thick clumps, nodes swollen, internodes with very small cavities, branchlets in fascicles, culm sheaths papery, leaves linear-lanceolate very short petiolate, culms used for making huts, mostly in warm temperate to subtropical zone, hill forest, along banks of rivers and streams, see *Transactions of the Linnean Society of London* 26(1): 32. 1868 and *Bull. Bot. Survey India* 25: 236. 1985.

in India: lambnang, namlang, udadai namlang, ukadai-namlang

Drymochloa Holub = *Festuca* L.

From the Greek *drymos* “a wood, forest, thicket” and *chloa* “grass.”

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, type *Drymochloa drymeja* (Mert. & W.D.J. Koch) Holub, see *Species Plantarum* 1: 73-74. 1753 and *Folia Geobotanica et Phytotaxonomica* 19(1): 96, 99. 1984, *Watsonia* 16: 300. 1987, *American Journal of Botany* 80(1): 76-82. 1993, *Flora Mesoamericana* 6: 223-227. 1994, *American Journal of Botany* 82(10): 1287-1299. 1995, *Phytologia* 83: 85-88. 1997 [1998], *Preslia* 70: 111-113. 1998, *New Zealand Journal of Botany* 36: 329-367. 1998, *Systematic Botany* 27(2): 241-251. 2002, *Contributions from the United States National Herbarium* 48: 312-368. 2003.

Drymonaetes Fourr. = *Festuca* L., *Schedonorus* P. Beauv.

From the Greek *drymos* “a wood, forest, thicket” and *etes* “a fellow, neighbour, mate, associate.”

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, see *Species Plantarum* 1: 73-74. 1753, *Essai d'une Nouvelle Agrostographie* 99, 162, 177, pl. 19, f. 2. 1812, *Annales de la Société Linnéenne de Lyon, sér. 2*, 17: 187. 1869, *Nomencl. Bot.* 2: 1071. 1874 and *Contr. U.S. Natl. Herb.* 24(6): 193. 1925, *Watsonia* 16: 300. 1987, *Novosti Sist. Vyss. Rast.* 23: 14. 1988, *American Journal of Botany* 80(1): 76-82. 1993, *Flora Mesoamericana* 6: 223-227. 1994, *American Journal of Botany* 82(10): 1287-1299. 1995, *Phytologia* 83: 85-88. 1997 [1998], *Preslia* 70: 111-113. 1998, *New Zealand Journal of Botany* 36: 329-367. 1998, *Systematic Botany* 27(2): 241-251. 2002, *Contributions from the United States National Herbarium* 48: 274, 312-368, 605-607. 2003.

Dryopoa Vickery

From the Greek *dryos* “oak, tree” and *poa* “grass, pasture grass,” see Joyce Winifred Vickery (1908-1979), in *Contributions from the New South Wales National Herbarium*. 3: 195. 1963.

One species, southeast Australia, Victoria, Tasmania, New South Wales, Tasmania. Pooideae, Poodae, Poeae, perennial, robust, tall, caespitose, reedlike, herbaceous, unbranched, hollow internodes, auricles absent, leaf sheaths not keeled, ligule lacinate, leaves linear-lanceolate, plants bisexual, inflorescence panicate and open, spikelets elliptic, hermaphrodite florets protandrous, vestigial foliar structure subtending the inflorescence rarely present or absent, 2 glumes more or less equal, lemma nerves raised, palea keels wingless, 2 lodicules free and membranous, 3 stamens, ovary hairy and oblong, 2 stigmas, grows in wet sclerophyll forest, eucalypt woodland, similar to *Scolochloa* Link, see *Flora of Australia* 43: 267. 2002.

Species

D. dives (F. Muell.) Vickery (*Festuca dives* F. Muell.; *Glyceria dives* (F. Muell.) Benth.; *Glyceria dives* (F. Muell.) F. Muell. ex Benth.; *Panicularia dives* (F. Muell.) Kuntze; *Poa dives* (F. Muell.) F. Muell.)

Perennial, erect, coarse, robust, smooth, hollow, sheaths open to the base, ligule membranous to stiff, green or purple panicle erect and open, glumes with scabrous keels, lemmas bilobed, sometimes awned, palea narrowly elliptic or elliptic, anthers yellow or purple, ovary apex hairy to hispid, fruit compressed, rare species in Tasmania, see *Fragmenta Phytographiae Australiae* 3: 147. 1863, *Flora Australiensis: A Description ...* 7: 659. 1878, *Systematic Census of Australian Plants ...* 134. 1882 and *Contributions from the New South Wales National Herbarium* 3: 196. 1963.

in English: giant mountain grass

Dupontia R. Br.

One to two species, Arctic, Melville Island, Asia, northern America. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Poinae, perennial, herbaceous, rhizomatous or stoloniferous, auricles absent, leaf blades linear, ligule an unfringed membrane, plants bisexual, inflorescence paniculate open or contracted, spikelets 1- to 4-flowered, 2 glumes 1- to 3-nerved, lemmas 3- to 5-nerved, palea present, 2 lodicules free and membranous, 3 stamens, ovary glabrous, 2 stigmas, wet places, open habitats, similar to *Arctophila*, type *Dupontia fisheri* R. Br., see *Chloris Melvilliana* 32-33. 1823, *Gen. Pl.* 3(2): 1197. 1883 and *Nordic Journal of Botany* 13(6): 615-629. 1993, M.A. Shirazi et al., "The role of thermal regime in tundra plant community restoration." *Restoration Ecology* 6(1): 111-117. Mar 1998, *Global Change Biology* 5(5): 547-562. June 1999, *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, *Global Change Biology* 6(7): 835-842. Oct 2000, D.A. Walker et al., "Hierarchical subdivision of Arctic tundra based on vegetation response to climate, parent material and topography." *Global Change Biology* 6(s1): 19-34. Dec 2000, *Global Change Biology* 7(8): 919-932. Dec 2001 [Methane emissions from wetlands and their relationship with vascular plants: an Arctic example.], I.T. Handa, R. Harmsen & R.L. Jefferies, "Patterns of vegetation change and the recovery potential of degraded areas in a coastal marsh system of the Hudson Bay lowlands." *Journal of Ecology* 90(1): 86-99. Feb 2002, *Contributions from the United States National Herbarium* 48: 274-275. 2003, Richard J. Abbott & Christian Brochmann, "History and evolution of the arctic flora: in the footsteps of Eric Hultén." *Molecular Ecology* 12(2): 299-313. Feb 2003, *Journal of Biogeography* 30(4): 521-535. Apr 2003, *Global Change Biology* 9(8): 1185-1192. Aug 2003, *Journal of Ecology* 91(6): 1022-1033. Dec 2003, *Ecography* 27(2): 242-252. Apr 2004, C. Brochmann et al., "Polyploidy in arctic plants." *Biological Journal of the Linnean Society* 82(4): 521-536. Aug 2004, *Journal of Ecology* 92(6): 1001-1010. Dec 2004 [Nutrient limitation of plant growth and forage quality in Arctic coastal marshes.], H.E. Epstein et al., "The nature of spatial transitions in the Arctic." *Journal of Biogeography* 31(12): 1917-1933. Dec 2004, *Global Change Biology* 11(4): 525-536. Apr 2005, *Journal of Avian Biology* 36(3): 173-178. May 2005, *Global Change Biology* 11(6): 856-868, 869-880. June 2005.

Species

D. fisheri R. Br. (*Arundo hyperborea* Trin. ex Steud.; *Donax kotzebuensis* Trin. ex Rupr.; *Dupontia fisheri* f. *aristata* (Malte ex Polunin) Lepage; *Dupontia fisheri* subsp. *fisheri*; *Dupontia fisheri* subsp. *psilosantha* (Rupr.) Hultén; *Dupontia fisheri* var. *aristata* Malte ex Polunin; *Dupontia fisheri* var. *psilosantha* (Rupr.) Trautv.; *Grapphephorum fisheri* (R. Br.) A. Gray; *Melica fisheri* (R. Br.) Spreng.)

Arctic. See *Chloris Melvilliana* 33. 1823, *Systema Vegetabilium, editio decima sexta* 4: 32. 1827, *The Botany of Captain Beechey's Voyage* 132. 1832, *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 64-65, t. 6. 1845 [1846], *Synopsis Plantarum Glumacearum* 1: 236. 1854, *Annals of the Botanical Society of Canada* 1: 57. 1861, *Consp. Fl. Eur.* 4: 808. 1882, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13: 88, pl. LXXXVIII. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 3: 337. 1907, *Bulletin of the National Museum of Canada* 92: 79-80, pl. 2, f. c. 1940, *Acta Universitatis Lundensis* 38: 226, map 163b. 1942, *Nature Canada* 81: 256. 1954, *Novosti Sist. Vyss. Rast.* 10: 91. 1973.

in English: tundra grass

D. fisheri R. Br. subsp. *fisheri* (*Colpodium humile* Lange; *Colpodium humile* (M. Bieb.) Griseb.; *Colpodium langei* Gand.; *Dupontia fisheri* f. *aristata* (Malte ex Polunin) Lepage; *Dupontia fisheri* subsp. *pelligera* (Rupr.) Tzvelev; *Dupontia fisheri* var. *aristata* Malte ex Polunin; *Dupontia fisheri* var. *fisheri*; *Dupontia fisheri* var. *pelligera* (Rupr.) Trautv.; *Dupontia pelligera* (Rupr.) Nyman; *Dupontia pelligera* (Rupr.) Á. Löve & Ritchie, nom. illeg., non *Dupontia pelligera* (Rupr.) Nyman; *Grapphephorum fisheri* var. *fisheri*; *Poa pelligera* Rupr.)

Canada, Greenland, United States. See *Chloris Melvilliana* 33. 1823, *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 64-65, t. 6. 1845 [1846], *Annals of the Botanical Society of Canada* 1: 57. 1861, *Consp. Fl. Eur.* 4: 808. 1882, *Novaia Zemlia's Vegetation* 16, t. 1, f. 1. 1885 and *Nat. Canada* 81: 256. 1954, *Canadian Journal of Botany* 44: 431. 1966, *Novosti Sist. Vyss. Rast.* 10: 91. 1973.

D. fisheri R. Br. subsp. *psilosantha* (Rupr.) Hultén (*Dupontia fisheri* f. *micrantha* (Holm) Polunin; *Dupontia fisheri* f. *psilosantha* (Rupr.) Polunin; *Dupontia fisheri* var. *flavescens* Hook. & Arn.; *Dupontia fisheri* var. *psilosantha* (Rupr.) Trautv.; *Dupontia micrantha* Holm; *Dupontia psilosantha* Rupr.; *Dupontia psilosantha* var. *flavescens* (Hook. & Arn.) Vasey; *Dupontia psilosantha* var. *psilosantha*; *Grapphephorum fisheri* var. *psilosanthum* (Rupr.) A. Gray; *Grapphephorum psilosanthum* (Rupr.) E. Fourn.; *Poa psilosantha* Rupr.)

Russia. See *Chloris Melvilliana* 33. 1823, *The Botany of Captain Beechey's Voyage* 132. 1832, *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 64-65, t. 6. 1845 [1846], *Annals of the Botanical Society of Canada* 1: 57. 1861, *Bulletin de la Société Botanique de France* 24: 182. 1877, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13: 88, pl. LXXXVIII. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 3: 337. 1907, *Bulletin of the National Museum of Canada* 92: 79-80. 1940, *Acta Universitatis Lundensis* 38: 226, map 163b. 1942.

Duthiea Hackel = *Thrixgyne* Keng,
Triavenopsis Candargy

For the British botanist John Firminger Duthie, 1845-1922 (Sussex), 1875 Fellow of the Linnean Society, professor of natural history, plant collector in India, wrote *The Orchids of the North-Western Himalaya*. Calcutta 1906; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 486. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 110. 1972; Isaac Henry Burkill (1870-1965), *Chapters on the History of Botany in India*. Delhi 1965; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992.

Some three species, Afghanistan, China, Himalayas. Pooideae, Aveneae, perennials, tufted, rhizomatous or caespitose, culms erect and leafy, herbaceous, unbranched above, auricles absent, ligule an unfringed membrane, leaf blades linear and narrow, plants bisexual, inflorescence paniculate and narrowly cylindrical, few spikeleted or many spikeleted, 2- to 3-flowered, 2 glumes subequal rounded on the back, lower glume 5- to 9-nerved, upper glume 7- to 13-nerved, lemmas membranous to coriaceous, palea 2-keeled, lodicules absent, 3 stamens, ovary hairy, long pubescent persistent style, 2 stigmas, caryopsis beaked, open habitats, grassy slopes, related to *Metcalfia*, type *Duthiea bromoides* Hack., see *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 45: 200. 1896 and *Archives de Biologie Végétale Pure et Appliquée* 1: 64-65. 1901, *Sunyatsenia* 6: 80, 82-85, t. 13. 1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 201. 1957.

Species

D. brachypodia (P. Candargy) Keng & Keng f. (*Duthiea brachypodium* (P. Candargy) Keng & Keng f.; *Duthiea nepalensis* Bor; *Triavenopsis brachypodium* P. Candargy)

Asia, Nepal, Bhutan. Perennial, erect, alpine, terete, 2- to 3-noded, leaf blade linear, erect inflorescence, raceme cylindrical, spikelets cylindrical and awnless, 1 floret, lower glumes lanceolate-acuminate, lowest lemma elliptic-oblong 2-lobed, see *Archives de Biologie Végétale Pure et Appliquée* 1: 64-65. 1901, *Kew Bulletin* 1953: 550. 1954, *Acta Phytotaxonomica Sinica* 10(2): 182. 1965.

D. bromoides Hack.

Asia. See *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 45: 200. 1895.

D. oligostachya (Munro) Stapf (*Arrhenatherum oligostachyum* (Munro) Potzta; *Avena oligostachya* Munro; *Helictotrichon oligostachyum* (Munro) Holub)

Asia. Spikelets 1-flowered, see *Journal of the Linnean Society, Botany* 18: 108. 1880, *Hooker's Icones Plantarum* 25: 2474. 1896 and *Willdenowia* 4: 400. 1968.

Dybowskia Stapf = *Hyparrhenia* Andersson
ex Fourn.

For the French Jean Dybowski, plant collector in Senegal, Ivory Coast and Mali, see *Flora of Tropical Africa* 9: 382. 1919; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 27. 1971.

One species, tropical Africa. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Anthistiriinae, annual, herbaceous, leafy, unbranched, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence spatheate, glumes 2 more or less equal, lower glume 11- to 13-nerved, upper glume 3-nerved, palea present, 2 free lodicules fleshy and ciliate or glabrous, 3 stamens, ovary glabrous, 2 stigmas, rainforest, type *Dybowskia seretii* (De Wild.) Stapf, see *Mexicanas Plantas* 2: 51, 67. 1886 and *Flora of Tropical Africa* 9: 382-383. 1919, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 8: 107. 1960, W.D. Clayton, "A revision of the genus *Hyparrhenia*." *Kew Bulletin, Additional Series* 2: 1-196. 1969, *Anais do XXXII Congresso Nacional de Botanica* 44-57. 1981, *Contributions from the United States National Herbarium* 46: 254-257. 2003.

Species

D. dybowskii (Franch.) Dandy (*Andropogon dybowskii* Franch.; *Andropogon seretii* De Wild.; *Dybowskia seretii* (De Wild.) Stapf; *Hyparrhenia dybowskii* (Franch.) Robertson)

Africa. See *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 334. 1895 and É.A.J. De Wildeman (1866-1947), "Études de systématique et de géographie botaniques sur la flore du Bas- et du Moyen-Congo" in *Annales du Musée du Congo (Belge). Botanique. Sér. 5 Congo-Kasai*. 152, t. 40 (1). 1910, *Flora of Tropical Africa* 9: 383. 1919, *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Boissiera*. 9: 107. 1960.

E

Eatonia Raf. = *Panicum L.*

After the American botanist Amos Eaton, 1776-1842 (New York), geologist, a prolific writer, among his numerous writings are *A Manual of Botany for the Northern States*. Albany 1817, *Chemical Instructor*. Albany 1826, *Geological Text-Book*. Albany 1830 and *An Index to the Geology of the Northern States*. Troy 1820. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 491. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 112. 1972; J. Ewan, editor, *A Short History of Botany in the United States*. 164. New York and London 1969; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; William Jay Youmans, editor, *Pioneers of Science in America*. 111-118. New York 1896; Jeannette E. Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Harvard University Press 1967; Ethel M. MacAllister, *Amos Eaton, Scientist and Educator*. Philadelphia 1941; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Samuel Reznick, in *D.S.B.* 4: 273-275. 1981.

Panicoideae, Panicoideae, Paniceae, Panicinae, see *Species Plantarum* 1: 55, 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 117. 1816, *Révision des Graminées* 1: 219. 1829, *Bulletin Botanique [Genève]* 1: 220. 1830 and *Flora of the Southeastern United States* ... 104, 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *North American Flora* 3(2): 200, 210. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 242. 1931, *Taxon* 33: 126-134. 1984, *Flora Mesoamericana* 6: 302-318. 1994, *Blumea* 41: 181-216, 416. 1996, *Taxon* 45: 319-320. 1996, *Taxon* 47: 869. 1998, *Taxon* 48: 376. 1999, *Contributions from the United States National Herbarium* 46: 306-441, 537. 2003.

Eccoilopus Steudel = *Spodiopogon Trin.*

Greek *ek* "from, out of" and *koilos* "hollow," *ekkoilos* "sunken" and *pous, podos* "a foot," referring to the rachilla or to the nature of culms.

About 4 species, Asia. Panicoideae, Andropogoneae, Saccharinae, or Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial, tufted, ligule membranous,

leaf blades falsely petiolate, inflorescence an open or contracted panicle, tough rachis, 2 glumes subequal, palea present, ovary glabrous, 2 stigmas, closely related to and often placed in *Spodiopogon*, see *Fundamenta Agrostographiae* 192, t. 17. 1820, *Synopsis Plantarum Glumacearum* 1: 123. 1854 and *Contributions from the United States National Herbarium* 46: 607. 2003, Houyuan Lu & Kam-Biu Liu, "Morphological variations of lobate phytoliths from grasses in China and the southeastern United States." *Diversity & Distributions* 9(1): 73-87. Jan 2003.

Species

E. bambusoides Keng f. (*Eccoilopus bambusoides* (Keng) L. Liou; *Spodiopogon bambusoides* Keng)

China. See *Guihaia* 13(3): 320-321. 1993.

E. cotulifer (Thunb.) A. Camus (*Andropogon cotulifer* Thunb.; *Eccoilopus andropogonoides* Steud.; *Eulalia cotulifera* (Thunb.) Munro; *Miscanthus cotulifer* (Thunb.) Benth.; *Saccharum cotuliferum* (Thunb.) Roberty; *Spodiopogon cotulifer* (Thunb.) Hack.)

Asia, China, India. See *Flora Japonica*, ... 41. 1784, *Synopsis Plantarum Glumacearum* 1: 124. 1854, *Annales Museum Botanicum Lugduno-Batavi* 2: 289. 1866, *Journal of the Linnean Society, Botany* 19(115-116): 65. 1881, *Monographiae Phanerogamarum* 6: 187. 1889 and *Annales de la société linneenne de Lyon, sér. 2* 70: 1, 92. 1923, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 36. 1960.

E. hookeri (Hack.) Grassl (*Erianthus hookeri* Hack.; *Erianthus longisetosus* var. *hookeri* (Hack.) Bor; *Saccharum hookeri* (Hack.) V. Naray. ex Bor; *Saccharum longisetosum* var. *hookeri* (Hack.) Bor; *Saccharum longisetosum* (Andersson) V. Naray. ex Bor var. *hookeri* (Hack.) U. Shukla)

Asia tropical, Bhutan, India. See *Monographiae Phanerogamarum* 6: 142. 1889 and *Flora of Assam* 5(1): 461. 1940, *Grasses of Burma* ... 151. 1960, *Proc. 14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 243. 1972.

E. longisetosus (Andersson) Grassl (*Erianthus longisetosus* Andersson; *Saccharum longisetosum* var. *longisetosum*)

India, Asia tropical, Nepal. See *Journal of the Linnean Society, Botany* 25: 82, 85, t. 34. 1889 and *14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 243. 1972.

Eccoptocarpha Launert

Greek *ekkopteon* “one must excise, one must cut to pieces,” *ekkopto* “cut, extirpate” and *karphos* “a scale, stalk, chip of straw,” referring to the upper glume and lower lemma resembling woven fabric.

One species, Tanzania, Zambia. Panicoideae, Panicoideae, Paniceae, annual, herbaceous, ligule fringed, plants bisexual, inflorescence racemose, spikelets single obovate, 2 subequal glumes 5-nerved, palea awnless 2-nerved, lodicules present, 3 stigmas, ovary glabrous, 2 stigmas, type *Eccoptocarpha obconiciventrifera* Launert, resembling *Brachiaria humidicola* (Rendle) Schweick., see *Senckenbergiana Biologica* 46(2): 124, 126, f. 1-22. 1965.

Species

E. obconiciventrifera Launert

Tropical Africa. Savannah, open habitats.

Echinalysium Trin. = Elytrophorus P. Beauv.

From the Greek *echinos* “a hedgehog” and *halysis* “a chain, bondage.”

Arundinoideae, Arundineae, see *Essai d'une nouvelle Agrostographie* 67, pl. XIV, f. II. Paris 1812, *Fundamenta Agrostographiae* 142. 1820 and *Telopea* 7(3): 205-213. 1997.

Echinanthus Cerv. = Tragus Haller

From the Greek *echinos* “a hedgehog” and *anthos* “a flower.”

Chloridoideae, Cynodonteae, Zoysiinae, or Chloridoideae, Cynodonteae, Traginae, see *Fam. Pl.* 2: 31, 581. 1763, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 203. 1768, *Flora Pedemontana* 2: 241. 1785, *Gen. Pl.* edition 8: 55. 1789, *Naturaleza* 1: 351. 1870, *Revisio Generum Plantarum* 2: 780. 1891 and *Cytologia* 19: 97-103. 1954, *Kew Bulletin* 36(1): 55-61. 1981, *Bothalia* 24(1): 92-96. 1994, *Flora Mesoamericana* 6: 298. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Flora Mediterranea* 8: 307-313. 1998, *Thaiszia* 9(1): 31-40. 1999, *Flora of Ecuador* 68: 124-125. 2001, *Contributions from the United States National Herbarium* 41: 73, 220-221. 2001.

Echinaria Desf. = Panicastrella Moench

Greek *echinos* “a hedgehog,” referring to the flowers, to the prickly inflorescence.

One species, Mediterranean, Asia. Pooideae, Pooideae, Seslerieae, annual, herbaceous, erect or ascending, ligule an unfringed membrane, auricles absent, leaf blades linear, plants bisexual, panicle capitate and exserted, sterile and

bract-like spikelets at the base of the inflorescence, spikelets 1- to 4-flowered, 2 membranous and very unequal glumes mucronate, lower glume 2-nerved, lemmas coriaceous and rounded, spinous awns, palea 2-awned, lodicules present or absent, 3 stamens, ovary hairy, 2 stigmas, dry open places, type *Echinaria capitata* (L.) Desf., see *Species Plantarum* 2: 1049-1050. 1753, *Enumeratio Methodica Plantarum* 206. 1759, *Familles des Plantes* 2: 35, 597. 1763, *Methodus Plantas Horti Botanici ...* 205. 1794, *Flora Atlantica* 2: 385. 1799, *Botanische Zeitung. Berlin* 6: 415. 1848, *Prodromus Florae Hispanicae* 1: 42. 1861, *Compendio della Flora Italiana* 41. 1867 and *Flora of the Southeastern United States ...* 109, 1327. 1903, *American Midland Naturalist* 4: 214. 1915, *Flore de l'Afrique du Nord* 3: 15. 1955, *Bulletin de la Société des Sciences Naturelles du Maroc* 37: 145. 1957, *Iowa State College Journal of Science* 37: 259-351. 1963, *Anales del Jardín Botánico de Madrid* 44: 509-512. 1987, *Fl. Libya* 145: 58. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Bocconea, Monographiae Herbarii Mediterranei Panormitani* 1: 303-364. 1991.

Species

E. capitata (L.) Desf. (*Cenchrus capitatus* L.)

Morocco. Annual, roots fibrous, species of open habitats.

in French: echinaria en petite tête

in Morocco: rass-diel-knafed

Echinaria Fabr. = Cenchrus L.

Greek *echinos* “a hedgehog,” referring to the flowers.

Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Cenchrinae, see *Species Plantarum* 2: 1049-1050. 1753, *Enumeratio Methodica Plantarum* 206. 1759 and *Contributions from the United States National Herbarium* 22: 45-77. 1929, *Journal of the Washington Academy of Sciences* 45(5): 135-143. 1955, *Iowa State College Journal of Science* 37(3): 259-351. 1963 [Taxonomy and distribution of the genus *Cenchrus*], *Kurtziana* 4: 95-129. 1967, *Taxon* 33: 126-134. 1984, *Acta Amazonica* 14(1-2): 95-127. 1984, *Flora Mesoamericana* 6: 374-375. 1994, *Flora of Ethiopia and Eritrea* 7: 275-279. 1995, *Sida* 19(3): 523-530. 2001 [Nomenclatural changes in *Pennisetum* (Poaceae: Paniceae)], *Contributions from the United States National Herbarium* 46: 144-150, 215. 2003.

Echinochlaena Spreng. = Echinolaena Desv.

From the Greek *echinos* “a hedgehog” and *chlaena, chlaenion* “cloak, blanket.”

Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Paspalinae, see *Genera plantarum* 65. 1830 and *Flora*

Mesoamericana 6: 302. 1994, *Contributions from the United States National Herbarium* 46: 224-225. 2003.

Echinochloa P. Beauv. = *Ornithospermum*
Dumoulin, *Tema* Adans.

From the Greek *echinos* “a hedgehog, sea-urchin” and *chloe, chloa* “grass” (Latin *herba, ae*, Akkadian *harbu, harpu* “early harvest,” *qallum, qa-a-lu* “lowly, small,” *aru, eru, harum* “blossom, sprout, germ”), referring to the bristly spikelets, to the inflorescence branches; see Ambroise Marie François Joseph Palisot de Beauvois, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 53, pl. XI, f. 2. Paris 1812.

About 30-40 species, cosmopolitan, tropical to warm temperate areas. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Panicinae, annual or perennial, herbaceous, prostrate, erect or decumbent, sometimes rooting at the lower nodes, floating, stout and sometimes succulent, caespitose, with or without rhizomes, glabrous nodes, internodes solid or hollow, auricles absent, sheaths open and compressed, ligule present or often absent, leaves linear to narrow-lanceolate to linear-lanceolate, plants bisexual, inflorescence terminal and dense of racemes arranged along a central axis, hispidulous cuspidate or awned spikelets in 4 rows, short-stipitate and hispid spikelets plano-convex, florets 2, lower floret sterile or male, upper floret hermaphrodite, 2 glumes very unequal, glumes and/or sterile lemmas usually awned or sometimes mucronate or mucronulate, back of fertile lemma adaxial, palea present, 2 lodicules joined or free and fleshy, stamens 3, ovary glabrous without the apical appendage, 2 stigmas red, fruit small and compressed, common weed species, weeds of cultivated ground and arable land (including rice paddies), cultivate fodder, native pasture species, ornamental and decorative when in flower, more or less palatable to livestock, grain crop species, usually associated with wet or damp places, damp and ruderal habitats, open habitats, pampas, grasslands, swamps, disturbed ground, rainforest, in water, ditches, marshes and marshy places, moist ground, water courses, weedy places, a difficult genus many of the species are difficult to distinguish because there is so much variation within species, similar to *Brachiaria*, type *Echinochloa crusgalli* (L.) P. Beauv., see *Species Plantarum* 1: 55. 1753, *Familles des Plantes* 2: 496. 1763, *Fl. Bourg.* 1: 495. 1782, *Essai d'une Nouvelle Agrostographie* 53, 161, 169, t. 11, f. 2. 1812, *Observations sur les Graminées de la Flore Belgique* 137-138. 1823 [1824] *Flora Brasiliensis seu Enumeratio Plantarum* 2: 255. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 194, 213. 1834, *A Manual of the Botany of the Northern United States* 614. 1848, *Flora Brasiliensis* 2(2): 139. 1877,

Flora Australiensis: A Description ... 7: 465. 1878 and *Kariba Studies*, vol. II. Manchester University Press, Manchester 1962, *Primates* 10: 103-148. 1969, *Zambian Papers* 5. Manchester University Press, Manchester 1971, *Brittonia* 23(3): 293-324. 1971, *Folia Primatologica* 15: 1-35. 1971, *Amer. Midl. Nat.* 87: 36-59. 1972, *Econ. Bot.* 37: 255-282, 283-291. 1983, *Journal of Cytology and Genetics* 18: 58-61. 1983, *Cytologia* 50: 907-912. 1985, *Proceedings of the Indian Academy of Sciences. Plant Sciences* 96: 71-78. 1986, *Folia Primatologica* 48: 78-120. 1987, *Cytologia* 53: 93-96. 1988, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Phytologia* 64: 390-398. 1988, *Flora of the Guianas. Series A, Phanerogams* 8: 186-192. 1990, *Journal of Cytology and Genetics* 25: 140-143, 147-148. 1990, *Cytologia* 56: 437-452. 1991, *Fitologija* 39: 72-77. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 77(7): 125-126. 1992, *Investigatio et Studium Naturae* 12: 48-65. 1992, *Journal of Wuhan Botanical Research* 11: 293-299. 1993, *Plant Systematics and Evolution* 189: 247-257. 1994, *Flora Mesoamericana* 6: 329-330. 1994, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Proceedings of the Indian Science Congress Association* 81(3, 8): 112. 1994, *Flora Mediterranea* 5: 340-345. 1995, *Darwiniana* 35(1-4): 29-36. 1998, S.A. Renvoize, *Gramineas de Bolivia* 424-428. 1998, *Opera Botanica* 137: 1-42. 1999, Christopher J. Still & Christopher B. Field, “A manual for the C4 fan club.” *Am. J. Bot.* 86: 1502-1504. 1999, *Grassland of China* 2000(5): 1-5. 2000, *Am. J. Bot.* 88: 62-67, 337-347, 1993-2012. 2001, *Am. J. Bot.* 89: 211-219, 410-416. 2002, *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 215-224. 2003, *Weed Research* 45(1): 18-26, 74-79. Feb 2005, *Restoration Ecology* 13(1): 49-60. Mar 2005, *Weed Research* 45(2): 94-102, 121-129. Apr 2005, *Weed Biology and Management* 5(1): 35-38. Mar 2005, *Molecular Ecology* 14(7): 2097-2110. June 2005, *Weed Biology and Management* 5(2): 46-52. June 2005 [Red rice (*Oryza sativa* L.) and barnyardgrass (*Echinochloa* spp.) biotype susceptibility to postemergence-applied imazamox.], *Weed Biology and Management* 5(2): 39-45, 62-68. June 2005, *Journal of Agronomy and Crop Science* 191(3): 162-171, 172-184, 185-194, 195-201. June 2005, *Journal of Phycology* 41(3): 515-522. June 2005, *Weed Research* 45(3): 202-211, 220-227. June 2005.

Species

E. sp.

in English: barnyard millet

in Mongolia: osun honug

in Thailand: ya plong

in Vietnam: loofng vuwjc, l[oof]ng v[uwj]c

E. callopus (Pilg.) Clayton (*Brachiaria callopus* (Pilg.) Stapf; *Brachiaria stipitata* C.E. Hubb.; *Brachiaria verdickii* Robyns; *Panicum callopus* Pilg.)

Tropical Africa, Central African Republic. Annual, tufted, spongy culms, relished by cattle, swampy places, shallow pools, seasonal ponds, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 46. 1902, *Flora of Tropical Africa* 9: 533. 1919, *Bulletin du Jardin Botanique de l'État* 9(3): 179. 1932, *Bulletin of Miscellaneous Information Kew* 1933: 498. 1933, *Kew Bulletin* 34(3): 560. 1980.

E. chacoensis P.W. Michael ex Renvoize

Bolivia. Annual or short-lived perennial, robust, ligule ciliate, leaf blades glabrous, lax inflorescence racemose, spikelets ovate and mucicous, lower glume acute, upper glume acuminate, palea absent, upper lemma suborbicular and apiculate, weed of cultivation, in disturbed places, see *Kurtziana* 24: 161. 1995.

E. colona (L.) Link (specific epithet commonly misspelled *colonium*) (*Brachiaria longifolia* Gilli; *Chamaeraphis brachiariaeformis* (Steud.) Kuntze; *Echinochloa colona* f. *vivipara* Beetle; *Echinochloa colona* f. *zonalis* (Guss.) Wiegand; *Echinochloa colona* var. *equitans* (Hochst. ex A. Rich.) Cufod.; *Echinochloa colona* var. *zonalis* (Guss.) Wooton & Standl.; *Echinochloa colonum* (L.) Link; *Echinochloa colonum* var. *zonalis* (Guss.) Wooton & Standl.; *Echinochloa crusgalli* f. *longiseta* (Trin.) Farw.; *Echinochloa crus-galli* subsp. *colona* (L.) Honda; *Echinochloa crusgalli* subsp. *colona* (L.) Honda; *Echinochloa crusgalli* var. *longiseta* (Trin.) Hara; *Echinochloa divaricata* Dressl.; *Echinochloa equitans* (Hochst. ex A. Rich.) C.E. Hubb.; *Echinochloa verticillata* Berhaut; *Echinochloa zonalis* (Guss.) Parl.; *Milium colonum* (L.) Moench; *Milium colonum* (L.) Kunth; *Oplismenus colonus* (L.) Kunth; *Oplismenus colonus* var. *zonalis* (Guss.) Schrad.; *Oplismenus crusgalli* (L.) Dumort.; *Oplismenus crusgalli* var. *colonium* (L.) Coss. & Durieu; *Oplismenus muticus* Phil.; *Oplismenus repens* J. Presl; *Panicum brachiariiforme* Steud.; *Panicum colonum* L.; *Panicum colonum* f. *maculatum* Arechav.; *Panicum colonum* var. *angustatum* Peter; *Panicum colonum* var. *atroviolaceum* Hack.; *Panicum colonum* var. *equitans* (Hochst. ex A. Rich.) Hack. ex T. Durand & Schinz; *Panicum colonum* var. *humile* Nees; *Panicum colonum* var. *zonale* (Guss.) L.H. Dewey; *Panicum crusgalli* L.; *Panicum crusgalli* subsp. *colona* (L.) Makino & Nemoto; *Panicum crusgalli* subsp. *colonium* (L.) Makino & Nemoto; *Panicum crusgalli* var. *colonium* Cosson ex Richter; *Panicum crusgalli* var. *colonium* (L.) Fiori; *Panicum crusgalli* var. *longisetum* Trin.; *Panicum crusgalli* var. *minor* Thw.; *Panicum echinocloa* T. Durand & Schinz; *Panicum equitans* Hochst. ex A. Rich.; *Panicum incertum* Bosc ex Steud.; *Panicum musei* Steud.; *Panicum prorepens* Steud.; *Panicum zonale* Guss.; *Setaria brachiariiformis* (Steud.) T. Durand & Schinz)

Tropics and subtropics. Always annual or rarely perennial, leafy, robust, simple or much branched in the lower part, erect or geniculately ascending, semiprostrate, weak, creeping

and ascending, emergent, trailing or floating, tufted, often rooting at the nodes, rhizomes absent, sometimes shortly stoloniferous, leaves linear-lanceolate and very acute, ligule absent, sheaths glabrous, leaf blades folded in the bud, inflorescence paniculate linear and erect, 4-rowed racemes, unbranched and widely spaced panicle branches, inflorescence contracted and lacking bristles, spikelets crowded and never awned, spikelets ovate-elliptic to subglobose arranged in 4 rows, lower floret male or barren, lower glume membranous acute to mucronate, upper glume acute or cuspidate, yellowish to whitish fertile lemma elliptic to ovate, lower lemmas unawned, grains whitish eaten in times of scarcity, economic plant, young plants and shoots eaten raw with rice, seed used as a millet, also cultivated, a valuable grazing grass during the growth period, used for forage, very to extremely palatable succulent fodder and hay, heavily grazed in wet areas, food for waterfowl and baboons, grain crop species, seed can be cooked whole or ground into a flour and used as a mush or porridge, can be a serious weed species especially in rice and in irrigated areas, potential seed contaminant, usually occurs in wetlands and moist soils, in or near water, rich soils, pans, vleis, open meadows, margins of pools and streams, in swampy places and seasonally flooded grassland, floodplains, along the banks of lakes and rivers, grassland plains, edge of saline waterholes, on heavy soils, roadside ditches and railroads, in ponds and swamps, marshes, seepage zone, lowlands in open and wet situations, damp or shady depressions, gardens, in overgrazed or trampled sites, disturbed places and habitats, waste places and cultivated fields, irrigated fields, irrigated ditches, on sandy loam to clayey soils, coastal dunes, see *Systema Naturae, Editio Decima* 2: 870. 1759, *Methodus Plantas Horti Botanici ...* 202. 1794, *Nova Genera et Species Plantarum* 1: 108. 1815 [1816], *Flora Indica; or Descriptions ...* 1: 307. 1820, *Observations sur les Graminées de la Flore Belgique* 138. 1823, *Florae Siculae Prodromus* 1: 62. Napoli 1827, *Species Graminum* 1828-1836, *Reliquiae Haenkeanae* 1(4-5): 321. 1830, *Hortus Regius Botanicus Berolinensis* 2: 209. 1833, *Linnaea* 12(4): 429. 1838, *Nomenclator Botanicus. Editio secunda* 2: 258. 1841, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19(Suppl. 1): 139. 1843, *Flora Palermitana* 1: 119. 1845, *Tentamen Florae Abyssinicae ...* 2: 365. 1850, *Exploration Scientifique de l'Algérie* 2: 28. 1854, *Synopsis Plantarum Glumacearum* 1: 46, 54, 58, 63. 1855 [1853], *Enum. Pl. Zeyl.* 5: 359. 1864, *Naturwissenschaftliche Reise nach Mossambique ...* 2: 549. 1864, *Plantae Europaeae* 1: 26. 1890, *Revisio Generum Plantarum* 2: 771. 1891, *Conspectus Florae Africae* 5: 743, 748, 772. 1894, *Contributions from the United States National Herbarium* 2(3): 502. 1894, *Anales del Museo Nacional de Montevideo* 1: 119. 1894, *Anales de la Universidad de Chile* 93: 714. 1896 and *Handb. Fl. Ceylon* 5: 136. 1900, *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Vierteljahrsschrift der*

Naturforschenden Gesellschaft in Zürich 56: 71. 1911, *New Mexico Agricultural Experiment Station: Bulletin* 81: 45. 1912, *Rhodora* 23(267): 53. 1921, *Nuova Flora Analitica d'Italia* 1: 79. 1923, *Botanical Magazine* (Tokyo) 37: 122. 1923, *The Flora of the Malay Peninsula* 5: 223. 1925, *Flora of Japan* 1470. 1925, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 179, 132 & Anhang, 33. 1930, *Handb. Fl. Ceylon* 6: 325. 1931, *Rev. Appl. Biol.* 13: 901. 1933, *Trop. Agric.* 82: 209. 1934, *Trop. Agric.* 86: 339. 1936, *Botanical Magazine* 52: 231. 1938, *Trop. Agric.* 96: 35. 1941, *Cytologia* 19: 97-103. 1954, *Mémoires de la Société Botanique de France* 1953-54: 9. 1954, *Exploration du Parc National de la Garamba* 4: 47. 1956, *Grasses of Ceylon* 126, pl. 22. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 127. 1959, *Grasses of Burma ...* 308, f. 34. 1960, *Annalen des Naturhistorischen Museums in Wien* 69: 39. 1966, *Enumeratio Plantarum Aethiopiae Spermatophyta* 39(Suppl.): 1320. 1969, *Brittonia* 23(3): 293-324. 1971, *Phytologia* 48(2): 189. 1981, *Fl. Trop. East Afr., Gramineae* (part 3). 1982, *Cytologia* 50: 907-912. 1985, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Proceedings of the Indian Academy of Sciences. Plant Sciences* 96: 71-78. 1986, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: Shama millet, millet rice, awnless barnyard grass, little barnyard grass, Indian barnyard millet, sawa millet, bird's rice, jungle rice, jungle rice grass, corn panic grass, Kalahari water grass, marsh grass, swamp grass, Decan grass

in French: blé du Dekkan

in Spanish: arrocillo, arroz del monte, grama de agua, pasto colorado, pasto del arroz

in Argentina: pasto de Cuaresma

in the Caribbean: zèb a diri, herbe à riz

in Ecuador: arrocillo, liendre de puerco

in Mexico: arroz de monte, arroz del monte, grama de agua

in Arabic: abu-rokba, aseral, bu rekuba, tadjabar, taggabar

in Gambia: manisena, myrameseu

in Mali: aseral, asseray, burugue, hudo belle, hu'do wendu, ichiban, ntéguéréké, ntéguéré ké, tadjabar, taggabar, yakabré, yakauré

in Mauritania: azz

in Niger: akechöf, bang subu, bangu subu, guirza, hudom diam, il-azra, katabarya, nyerejeje, nyeryaare, sabbné, tagabalet, tegabart

in Nigeria: baya, bu rekuba, difera, garaji, sabe, saben ruwa

in Senegal: baro, bin drima, burugué, gadri, hudo belle, hudo wendu, mbaket, mbakit, mbris, ndiadié, nteguéré ké, yakabré, yakauré

in Sierra Leone: suribani

in Somalia: agar, domar, dorar

in South Africa: kleinwatergras, moerasgras, watergras

in southern Rhodesia: zengeza, tso boda

in Sudan: difra

in Upper Volta: koulia mossoum, kulia mossum, pagga pucci

in Bhutan: jam, chok chokpa ngyon, jama, sama, molera

in Burma: myet-thi, pazun-sa-myet

in Japan: wase-bie, ko-hime-hie

in India: borur, chatta, chichohi, dhunia, gawa, gotbarta, jangli samak, jangli sawan, jangli sawank, jangli sawuk, jharai, jiria, kaadu haaraka hullu, karum pullu, karumpul, othagaddi, othagaddi, oyia, pachushama, pacushama, pakud, pullam payiru, sama-ghas, samak, sanwak, sanwan, saonrel, saonria, sauri, sawa, sawak, sawan, sawank, saweli, sawuk, shama, shamak, sirmakar, sivaen, solni, todia, tor, varsanam pillu, varsanam pullu, woodoo gaddi, wundu

in Indonesia: jajagoan leutik, rumput bebek, rumput jajagoan kecil, tuton, watuton

in Laos: khauz nôk

in Malaysia: padi burong, padi burung, rumput kusa kusa

in the Philippine Islands: bulang, dakayang, dukayang, guinga, pulang puwit, tiribuhan, tumi

in Sri Lanka: adipul, giratana

in Thailand: ya kap kae, yaa kapkae, ya khao nok, yaa khao nok, ya nok khao, ya-nokkhao, yaa nok khao, ya noksi-chomphu, ya plong nok, yaa plong nok

in Vietnam: co'lông vu'c

E. crus-galli (L.) P. Beauv. (*Echinochloa colonum* (L.) auct.; *Echinochloa crus-galli* subsp. *spiralis* (Vasinger) Tzvelev; *Echinochloa crus-galli* var. *edulis* Hitchc.; *Echinochloa crus-galli* var. *mitis* (Pursh) Peterm.; *Echinochloa crus-galli* var. *zelayensis* (Kunth) Hitchc.; *Echinochloa cruscorvi* (L.) P. Beauv.; *Echinochloa crusgalli* (L.) P. Beauv.; *Echinochloa crusgalli* f. *echinata* (Willd.) Moramiu; *Echinochloa crusgalli* f. *longiseta* (Döll) Pinto de Silva; *Echinochloa crusgalli* f. *vittata* F.T. Hubb.; *Echinochloa crusgalli* f. *zelayensis* (Kunth) Farw.; *Echinochloa crusgalli* subsp. *muricata* (Kunth) Shinnery; *Echinochloa crusgalli* subsp. *zelayensis* (Kunth) Shinnery; *Echinochloa crusgalli* var. *aristata* Gray; *Echinochloa crusgalli* var. *cruscorvi* (L.) Mathieu; *Echinochloa crusgalli* var. *echinata* (Willd.) Honda; *Echinochloa crusgalli* var. *echinatum* (Willd.) A. Chev.; *Echinochloa crusgalli* var. *echinatum* (Willd.) Honda; *Echinochloa crusgalli* var. *longiseta* (Döll) Podp.; *Echinochloa crusgalli* var. *longiseta* (Trin.) Hara; *Echinochloa crusgalli* var. *michauxii* House; *Echinochloa crusgalli* var. *muricata* Farw.; *Echinochloa crusgalli* var. *zelayensis* (Kunth) Hitchc.; *Echinochloa echinata* (Willd.) P. Beauv.; *Echinochloa glabrescens* Kossenko; *Echinochloa glabrescens* Munro ex Hook.f.; *Echinochloa muricata* (P. Beauv.) Fernald; *Echinochloa pungens* (Poir.) Rydb.;

Echinochloa pungens var. *coarctata* Fernald & Griscom; *Echinochloa spiralis* Vasinger; *Echinochloa subverticillata* Pilg.; *Echinochloa zelayensis* (Kunth) Schult.; *Milium crus-galli* (L.) Moench; *Oplismenus crus-corvi* (L.) Dumort.; *Oplismenus crusgalli* (L.) Dumort.; *Oplismenus echinatus* (Willd.) Kunth; *Oplismenus muricatus* Kunth; *Oplismenus zelayensis* Kunth; *Orthopogon crusgalli* (L.) Spreng.; *Orthopogon echinatus* (Willd.) Spreng.; *Panicum cruscorvi* L.; *Panicum crusgalli* L.; *Panicum crus-galli* L.; *Panicum crus-galli* var. *mite* Pursh; *Panicum crusgalli* var. *aristatum* Pursh; *Panicum crusgalli* var. *echinatum* (Willd.) Döll; *Panicum crusgalli* var. *longisetum* Döll, nom. illeg., non *Panicum crusgalli* var. *longisetum* Trin.; *Panicum crusgalli* var. *longisetum* Trin.; *Panicum crusgalli* var. *stagninum* Trimen ex Hook.f., non *Panicum stagninum* Retz.; *Panicum echinatum* Willd.; *Panicum grossum* Salisb.; *Panicum muricatum* Michx., nom. illeg., non *Panicum muricatum* Retz.; *Panicum pungens* Poir.; *Pennisetum crusgalli* (L.) Baumg.; *Setaria muricata* P. Beauv. (Latin *crus-galli* = cock's spur)

Tropical and warm temperate regions. Annual bunchgrass, very variable, tufted, erect and stout, vigorous, with a somewhat decumbent base, rhizomes absent, fibrous root system, leaf sheaths smooth, basal sheaths commonly purplish or reddish, ligules and auricles absent, more or less glabrous leaves elongate and very acute, youngest leaf rolled, seed heads dense and drooping, bristly inflorescence erect or nodding, panicle rather compact, lanceolate to ovate racemes spreading and purplish, acute and awned spikelets on scabrous bristly rachis, lower floret sterile, glumes pubescent, lower glume obtuse to acute, upper glume sometimes shortly awned, lower lemma acute and sometimes awned, female-fertile lemma smooth and shining on the back, grain ovate and water dispersed, edible seeds, very polymorphic and pioneer grass, there are several botanical varieties and forms, medicinal plant used in diseases of spleen, the plant is an important habitat for waterfowl and pheasant, seldom grazed by any animal, poor grazing for wildlife and livestock, harsh and unpalatable at maturity, fair to poor forage value for livestock, suitable for ensilage, can be cultivated for hay and as a cereal, seed used as a millet, roasted seed a coffee substitute, young shoots eaten raw or cooked, seeds eaten by songbirds and waterfowl, seeds furnish some food for ground birds, noxious weed species of fields and rice, a vigorous competitor for soil nitrogen in rice crops, invasive, useful for erosion control and habitat rehabilitation, suitable for reclamation of saline and alkaline areas, potential seed contaminant, toxic levels of nitrate have been reported in barnyard grass, tolerates poor drainage and flooding, intolerant of dense shade and severe drought, usually occurs in wetlands and wet places, rich soils, in swampy ground, brackish marsh, in sown pasture, in freshwater swamps, in moist disturbed sites, in temporarily flooded palustrine wetlands and seasonally wet habitats, in moist poorly drained areas, in shallow water or

after drawdown, on silts and clays in ponds and depressions, in shallow water around the periphery of rice fields, in wet meadows and prairie communities, channels, waste areas and agricultural land, in fields and ditches, river bottoms, marshes, floodplains and along lakeshores and stream banks, see *Species Plantarum* 1: 56. 1753, *Systema Naturae, Editio Decima* 2: 870. 1759, *Methodus Plantas Horti Botanici ...* 202. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 18. Londini [London] (Nov-Dec) 1796, *Flora Boreali-Americana* 1: 47. 1803, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1032. 1809, *Essai d'une Nouvelle Agrostographie* 51, 53, 161, 169-170, 178, t. 11, f. 2. 1812, *Flora Americae Septentrionalis; or, ...* 1: 66. 1814, *Encyclopédie Méthodique, Botanique* 4: 273. 1816, *Enumeratio Stirpium Transsilvaniae* 3: 277. 1816, *Nova Genera et Species Plantarum* 1: 108. 1815 [1816], *A Natural Arrangement of British Plants* 2: 158. 1821, *Observations sur les Graminées de la Flore Belgique* 138, 151. 1823, *Mantissa* 2: 269. 1824, *Systema Vegetabilium, editio decima sexta* 1: 307. 1825, *Révision des Graminées* 1: 45. 1829, *Hortus Berolinensis* 2: 209. 1833, *Flore Générale de Belgique, Spermatophytes* 1: 585. 1855, *Flora Brasiliensis* 2(2): 141, 143. 1877, *The Flora of British India* 7: 31. 1896 and *Handb. Fl. Ceylon* 5: 136. 1900, *Contr. U.S. Natl. Herb.* 12(3): 117. 1908, *Rhodora* 17(198): 106. 1915, *Rhodora* 18: 232. 1916, *United States Department of Agriculture: Bulletin* 772: 238. 1920, *Contr. U.S. Natl. Herb.* 22: 140. 1920, *New York State Museum Bulletin* 243-244: 42. 1923, *Revue internationale de botanique appliquée et d'agriculture tropicale* 13: 902. 1923, *Botanical Magazine* 37: 120. 1923, *Brittonia* 1(2): 81. 1931, *Handb. Fl. Ceylon* 6: 325. 1931, *Rhodora* 37(436): 136-137, pl. 336, f. 1-2. 1935, *Manual of the Grasses of the United States* 841. 1935, *Botanical Magazine* (Tokyo) 52: 231. 1938, *Agronomia Lusitana* 2: 227. 1940, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 451. 1941, *Trop. Agric.* 96: 35, pl. 11, f. 1. 1941, *Papers of the Michigan Academy of Science, Arts and Letters* 28: 4. 1941, *Rhodora* 56(662): 33. 1954, *Grasses of Ceylon* 127. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 127. 1959, *Grasses of Burma ...* 310. 1960, *Amer. Midl. Naturalist* 87: 54. 1972, *Proc. Conf. Weed Control in Rice* 291-306. 1983.

in English: barnyard grass, common barnyard grass, large barnyard grass, barn grass, barn rice, barnyard millet, Japanese barnyard millet, Japanese millet, billion dollar grass, cockspur grass, cockspur panic grass, cock's spur grass, cock's spur, cock-foot panicum, cock's foot, jungle rice grass, panic grass, water grass, chicken-panic grass

in French: pattes de poule, pied de coq

in Spanish: pata de gallo, grama morada, pasto alemán, pasto mijillo, pie de gallina, zacate de agua, arrocillo gigante, cola de caballo

in Mexico: grama de agua, grama morada, pasto alemán, pasto mijillo

in Arabic: dineiba

in Morocco: finnikû, panic des marais, panic crête de coq

in southern Africa: blousaadgras, hanepootmanna; joang-ba-masimo (Sotho)

in Bhutan: jam, jama, chhera ngon, sama, molera

in Burma: myet-ih

in Cambodia: smao bek kbol

in China: bai gen miao, pai, wu ho, shui pai, han pai

in India: adban samo, banti, bara sanwak, barasanwak, bari bhodore, bharta, bharti, bovar, bura shama, burashama, datia, dhand, dul, horma, jal sawank, jalsamoka, jarotha, kaadu dabbe hullu, kunda buttam gadi, oothupul, pacad, pedda wendu, pedda woondoo, peddawundu, sama, samak, sanwak, sarvank, simpigana hullu

in Indonesia: gagaja-han, jajagoan, jawan

in Japan: inu-bie

in Lhadaki: jagma, jamag, ljamag

in Malaysia: padi burong, padi burung, rumput kekusa basar

in Mongolia: osun honug

in the Philippine Islands: bayokibok, dawa-dawa, dawa-dawahan, lagtom, marapagay

in Sri Lanka: kutirai val pul, maratu

in Thailand: ya-khaomok, ya-khaonok, yaa plong, ya plong laman, ya plonglaman

in Vietnam: cô'long vûc, song chong

E. crus-galli var. *mitis* (Pursh) Peterm. (*Echinochloa crus-galli* f. *brevisetata* (Döll) Pinto de Silva; *Echinochloa crus-galli* f. *mitis* (Pursh) Farw.; *Echinochloa crus-galli* f. *purpurea* (Pursh) Farw.; *Echinochloa crus-galli* var. *brevisetata* (Döll) Neill.; *Echinochloa crus-galli* var. *brevisetata* (Döll) Podp.; *Echinochloa crus-galli* var. *microstachya* (Wiegand) Shinnery; *Echinochloa crus-galli* var. *mitis* (Pursh) Peterm.; *Echinochloa crus-galli* var. *mutica* (Elliott) Rydb.; *Echinochloa crus-galli* var. *mutica* Wooton & Standl., nom. illeg., non *Echinochloa crus-galli* var. *mutica* (Elliott) Rydb.; *Echinochloa microstachya* (Wiegand) Rydb.; *Echinochloa muricata* var. *ludoviciana* Wiegand; *Echinochloa muricata* var. *microstachya* Wiegand; *Echinochloa muricata* var. *multiflora* Wiegand; *Echinochloa muricata* var. *occidentalis* Wiegand; *Echinochloa occidentalis* (Wiegand) Rydb.; *Echinochloa pungens* (Poir.) Rydb.; *Echinochloa pungens* var. *ludoviciana* (Wiegand) Fernald & Griscom; *Echinochloa pungens* var. *microstachya* (Wiegand) Fernald & Griscom; *Echinochloa pungens* var. *multiflora* (Wiegand) Fernald & Griscom; *Echinochloa pungens* var. *occidentalis* (Wiegand) Fernald & Griscom; *Echinochloa pungens* var. *wiegandii* Fassett; *Echinochloa zelayensis* var. *macera* Wiegand; *Oplismenus crus-galli* (L.) Dumort.; *Oplismenus crus-galli* var. *muticus* (Elliott) Alph. Wood; *Panicum crus-galli* var. *brevisetum* Döll; *Panicum crus-galli* f. *hispidum* Kuntze;

Panicum crus-galli var. *brevisetum* Döll; *Panicum crus-galli* var. *mite* Pursh; *Panicum crus-galli* var. *muticum* Elliott; *Panicum crus-galli* var. *purpureum* Pursh; *Panicum scindens* Nees ex Steud.)

Asia, China. See *Flora Americae Septentrionalis*; or, ... 1: 66. 1814, *A Sketch of the Botany of South-Carolina and Georgia* 1: 114. 1816, *Observations sur les Graminées de la Flore Belgique* 138. 1823 [1824], *Flora Lipsiensis Excursoria* 82. 1838, *Synopsis Plantarum Glumacearum* 1: 47. 1854, *Flora Badensis Alsatica* 1: 232. 1855 [1857], *Flora von Nieder-Oesterreich* 31. 1859, *The American Botanist and Florist* 4: 393. 1871, *Revisio Generum Plantarum* 2: 783. 1891 and *Colorado Experiment Station Bulletin* 100: 21. Fort Collins, CO. 1906, *New Mexico Agricultural Experiment Station: Bulletin* 81: 45. 1912, *Rhodora* 17: 106. 1915, *Rhodora* 23(267): 54, 58-60. 1921, *Brittonia* 1(2): 81-82. 1931, *Rhodora* 37(436): 137. 1935, *Agronomia Lusitana* 2: 227. 1940, *Rhodora* 51(601): 2. 1949, *Rhodora* 56(662): 34. 1954.

E. crus-galli var. *zelayensis* (Kunth) Hitchc. (*Echinochloa crus-galli* f. *zelayensis* (Kunth) Farw.; *Echinochloa crus-galli* subsp. *zelayensis* (Kunth) Shinnery; *Echinochloa crus-galli* var. *zelayensis* (Kunth) Hitchc.; *Echinochloa zelayense* (Kunth) Schult.; *Echinochloa zelayensis* (Kunth) Schult.; *Oplismenus zelayensis* Kunth; *Panicum crus-pici* Willd. ex Döll, *Panicum crus-galli* var. *pygmaeum* Kuntze; *Panicum crus-galli* var. *zelayense* (Kunth) Stratman; *Panicum zelayense* (Kunth) Steud.)

Asia. See *Nova Genera et Species Plantarum* 1: 108. 1815 [1816], *Mantissa* 2: 269. 1824, *Nomenclator Botanicus. Editio secunda* 2: 265. 1841, *Flora Brasiliensis* 2(2): 143. 1877, *Revisio Generum Plantarum* 2: 783. 1891 and *Bulletin, Division of Agrostology United States Department of Agriculture* 772: 238. 1920, *Manual of the Grasses of the United States* 841. 1935, *Biological Series, Catholic University of America* 19: 60. Washington, D.C. 1935 [Superceded by: *Biological Studies, Catholic University of America.*], *Papers of the Michigan Academy of Science, Arts and Letters* 28: 4. 1941, *Rhodora* 56(662): 33. 1954.

E. crus-pavonis (Kunth) J.A. Schultes (*Echinochloa composita* J. Presl ex Nees; *Echinochloa crus-galli* var. *crus-pavonis* (Kunth) Hitchc.; *Echinochloa crus-galli* f. *sabulicola* (Nees) Farw.; *Echinochloa crus-galli* f. *sabulonum* (Trin.) Farw.; *Echinochloa crus-galli* var. *crus-pavonis* (Kunth) Hitchc.; *Echinochloa crus-galli* var. *cruspavonis* (Kunth) Hitchc.; *Echinochloa cruspavonis* (Kunth) Schult.; *Echinochloa sabulicola* (Nees) Hitchc.; *Echinochloa zelayensis* (Kunth) Schult.; *Echinochloa zelayensis* var. *subaristata* Wiegand; *Oplismenus angustifolius* E. Fourn.; *Oplismenus crus-pavonis* Kunth; *Oplismenus jamaicensis* Kunth; *Oplismenus sabulicolus* (Nees) Kunth; *Panicum aristatum* Macfad., nom. illeg., non *Panicum aristatum* Retz.; *Panicum colonum* L.; *Panicum colonum* var. *bussei* Pilg. ex Peter; *Panicum*

crus-galli var. *sabulicolum* Trin.; *Panicum crus-pavonis* (Kunth) Nees; *Panicum crus-pavonis* var. *rostratum* Stapf; *Panicum crusgalli* var. *aristatum* G. Mey., nom. illeg., non *Panicum crusgalli* var. *aristatum* Pursh; *Panicum crusgalli* var. *sabulicolum* (Nees) Döll; *Panicum crusgalli* var. *sabulicolum* (Nees) Trin.; *Panicum horridum* Salzm. ex Steud.; *Panicum jamaicensis* (Kunth) Steud.; *Panicum sabulicola* Nees; *Panicum subulicola* Nees)

Tropical Africa, tropical America, South Africa. Annual or short-lived perennial, stout, robust, erect to decumbent and rooting from the lower nodes, tufted, rhizomes absent, nodes glabrous, ligules absent or inconspicuous, sheaths glabrous often purplish, blades glabrous, inflorescence erect or drooping with spreading racemes on slender and wavy branches, racemes compound often with short branches, hispid spikelets elliptic and more or less clustered, lower floret sterile or male, lower glume acute to acuminate, awnless upper glume acuminate to cuspidate, lower lemmas usually awned, upper lemma ovate and dark, lower paleas absent or present, grain dark and ovate, naturalized, economic plant, palatable, grazing for stock, edible grain, weed species of cultivation and rice fields, occurs almost always in wetlands, shallow water, wet places, creeks, streamsides, along stream banks, swamps, moist places, irrigated fields, disturbed areas, borders of ponds, see *Icon. Descr. Gram. Austriac.* 3: 35. 1805, *Essai d'une Nouvelle Agrostographie* 1: 53, 161, 169, t. 11, f. 2. 1812, *Nova Genera et Species Plantarum* 1: 108. 1815 [1816], *Primitiae Florae Essequiboensis* ... 53. 1818, *Mantissa* 2: 269. 1824, *Species Graminum* 1828-1836, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 258-259. 1829, *Botanical Miscellany* 2: 115. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 145, 147. 1833, *Nomenclator Botanicus. Editio secunda* 2: 257. 1841, *Synopsis Plantarum Glumacearum* 1: 47. 1854, *Flora Brasiliensis* 2(2): 142. 1877, *Mexicanas Plantas* 2: 40. 1886, *Flora Capensis* 7: 396. 1899 and *Contributions from the United States National Herbarium* 17(3): 257. 1913, *Contributions from the United States National Herbarium* 22(3): 148. 1920, *Rhodora* 23(267): 54, 60. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 179, 181. 1930, *Rhodora* 51: 3. 1949, *Acta Scientiarum Naturalium Universitatis Sunyatseni* 1986(3): 78. 1986.

in English: Gulf barnyard grass, South America barnyard grass, Gulf cock's spur, gulf cockspur

in Portuguese: capim do bengo

in Angola: capim do bengo, sunga

in Guinea-Bissau: nhamo, quéo

in Senegal: tiimbela

in Sierra Leone: ka-fon, yofoni

in South Africa: hanekamgras

E. crus-pavonis (Kunth) J.A. Schultes var. ***crus-pavonis*** (*Echinochloa composita* J. Presl ex Nees; *Echinochloa crusgalli* f. *sabulicola* (Nees) Farw.; *Echinochloa crusgalli* f. *sabulonum* (Trin.) Farw.; *Echinochloa crus-galli* var. *crus-pavonis* (Kunth) Hitchc.; *Echinochloa crusgalli* var. *crus-pavonis* (Kunth) Hitchc.; *Echinochloa crusgalli* var. *cruspavonis* (Kunth) Hitchc.; *Echinochloa cruspavonis* (Kunth) Schult.; *Echinochloa cruspavonis* var. *cruspavonis*; *Echinochloa sabulicola* (Nees) Hitchc.; *Oplismenus angustifolius* E. Fourn.; *Oplismenus crus-pavonis* Kunth; *Oplismenus cruspavonis* Kunth; *Oplismenus jamaicensis* Kunth; *Oplismenus sabulicolus* (Nees) Kunth; *Panicum aristatum* Macfad., nom. illeg., non *Panicum aristatum* Retz.; *Panicum crus-galli* var. *sabulicolum* Trin.; *Panicum crusgalli* var. *aristatum* G. Mey., nom. illeg., non *Panicum crusgalli* var. *aristatum* Pursh; *Panicum crusgalli* var. *sabulicolum* (Nees) Trin.; *Panicum crusgalli* var. *sabulicolum* (Nees) Döll; *Panicum crus-pavonis* (Kunth) Nees; *Panicum horridum* Salzm. ex Steud.; *Panicum jamaicensis* (Kunth) Steud.; *Panicum sabulicola* Nees)

Mexico, the Caribbean, Bolivia, Argentina. Panicles usually drooping, see *Icon. Descr. Gram. Austriac.* 3: 35. 1805, *Essai d'une Nouvelle Agrostographie* 1: 53, 161, 169, t. 11, f. 2. 1812, *Nova Genera et Species Plantarum* 1: 108. 1815 [1816], *Primitiae Florae Essequiboensis* ... 53. 1818, *Mantissa* 2: 269. 1824, *Species Graminum* 1828-1836, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 258-259. 1829, *Botanical Miscellany* 2: 115. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 145, 147. 1833, *Nomenclator Botanicus. Editio secunda* 2: 257. 1841, *Synopsis Plantarum Glumacearum* 1: 47. 1854, *Flora Brasiliensis* 2(2): 142. 1877, *Mexicanas Plantas* 2: 40. 1886 and *Contributions from the United States National Herbarium* 17(3): 257. 1913, *Contributions from the United States National Herbarium* 22(3): 148. 1920, *Report of the Michigan Academy of Science, Arts and Letters* 21: 349. 1920, *Fl. Novo-Galic.* 14: 151. 1983.

in English: barnyard grass, gulf cockspur

E. crus-pavonis (Kunth) J.A. Schultes var. ***macera*** (Wiegand) Gould (the epithet also spelled *macera* or *macra*) (*Echinochloa crus-galli* var. *zelayensis* (Kunth) A.S. Hitchc.; *Echinochloa crusgalli* var. *macera* (Wiegand) Shinnery; *Echinochloa crus-pavonis* (Kunth) Schult.; *Echinochloa cruspavonis* var. *macera* (Wiegand) Gould; *Echinochloa zelayensis* (Kunth) J.A. Schultes; *Echinochloa zelayensis* var. *subaristata* Wiegand; *Echinochloa zelayensis* var. *macera* Wiegand)

North America, Mexico. Panicles usually stiffly erect, see *Mantissa* 2: 269. 1824 and *Rhodora* 23(267): 54. 1921, *Rhodora* 56(662): 34. 1954, *The Southwestern Naturalist* 15(3): 391. 1971.

in English: gulf cockspur

E. dietrichiana P.W. Michael

Australia. See *Telopea* 8(3): 403. 1999.

E. echinata (Willd.) P. Beauv. (*Echinochloa crusgalli* (L.) P. Beauv.; *Echinochloa crusgalli* var. *crusgalli*; *Echinochloa echinata* Nakai; *Echinochloa echinata* var. *decipiens* Wiegand; *Panicum crusgalli* L.; *Panicum echinatum* Willd.)

See *Species Plantarum* 1: 56. 1753, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1032. 1809, *Essai d'une Nouvelle Agrostographie* 53, 161, 169. 1812 and *Rhodora* 23: 60. 1921, *Rhodora* 51: 3. 1949, *Bulletin of the National Science Museum* 31: 137. 1952.

E. elliptica P.W. Michael & Vickery

Australia. Perennial, tufted, erect, weed in rice, economic plant, aquatic, soil banks, see *Telopea* 2(1): 28. 1980.

E. esculenta (A. Braun) H. Scholz (*Echinochloa crus-galli* subsp. *utilis* (Ohwi & Yabuno) T. Koyama; *Echinochloa crusgalli* subsp. *utilis* (Ohwi & Yabuno) T. Koyama; *Echinochloa crusgalli* var. *utilis* (Ohwi & Yabuno) Kitam.; *Echinochloa utilis* Ohwi & Yabuno; *Panicum esculentum* A. Braun) (Latin *esculentus, a, um* "edible, suitable for human food, good to eat")

Eastern Asia, Japan. Annual, fast growing, tufted, vigorous, rhizomes absent, erect and stout, leaf sheaths glabrous and chartaceous, ligules absent, dense inflorescence with erect or spreading branches, panicle very compact, spikelets crowded in irregular rows along the rachis of the erect-spreading racemes, spikelets purplish and shortly acute on scabrous pedicels, lower florets sterile, glumes unequal, lower glume mucronate, upper glume acute, lower lemmas shortly acuminate, fertile lemma shortly apiculate and smooth, lower palea 2-lobed, grain brownish to dark to white, heavy seeder, economic plant, sometimes a weedy escape from cultivation excellent palatability, makes good hay and silage, grown for grazing and fodder, cultivated for forage and grain, fairly drought-tolerant, used as a soil stabilizer and for quick cover on newly cultivated land, seeds eaten by seed-eating birds, prefers sandy loams to clay loams, coastal sands, stony wastelands, often confused with *Echinochloa frumentacea* Link, see *Index Seminum [Berlin]* 1861(App.): 3. 1861 and *Acta Phytotaxonomica et Geobotanica* 20: 50-51. 1962, *Acta Phytotaxonomica et Geobotanica* 36(1-3): 93. 1985, *Grasses of Japan and its Neighboring Regions* 503. 1987, *Taxon* 41(3): 522-523. 1992.

in English: Japanese barnyard millet, Japanese millet, Shirohie millet, Ankee millet, Sanwa millet, blue panicum

in French: millet japonais

in Spanish: mijo japonés

in Japan: hie

E. formosensis (Ohwi) S.L. Dai

Asia. See *Acta Scientiarum Naturalium Universitatis Sunyatseni* 1986(3): 78. 1986.

E. frumentacea Link (*Echinochloa colona* var. *frumentacea* (Roxb.) Ridl.; *Echinochloa crus-galli* subsp. *edulis* A.S. Hitchc.; *Echinochloa crus-galli* var. *frumentacea* (Link) E.G. Camus & A. Camus; *Echinochloa crus-galli* var. *frumentacea* W. Wight; *Echinochloa crusgalli* var. *frumentacea* (Link) W. Wight; *Oplismenus frumentaceus* (Link) Kunth; *Oplismenus frumentaceus* (Roxb.) Kunth; *Panicum crusgalli* L.; *Panicum crusgalli* var. *frumentaceum* (Link) Trimen; *Panicum crusgalli* var. *frumentaceum* (Roxb.) Trimen; *Panicum frumentaceum* Roxb., nom. illeg., non Salisb.)

India. Annual, more or less erect, semiprostrate habit, tufted, rhizomes absent, robust, stout, vigorous early grower, leafy, herbaceous, inflated, glabrous, leaf sheaths glabrous or chartaceous, ligules absent, inflorescences incurves or slightly drooping at maturity, panicle compact and continuous, spikelets awnless, always pale spikelets acute to obtuse on scabrous pedicels, florets 2 or 3, lower florets sterile, lower glume shortly acute, upper glume shortly acute, lower lemmas usually unawned, shining fertile lemma ovate to elliptic and with a short tip, lower paleas subequal to the lower lemmas, turgid and whitish grain dorsally compressed, economic plant extremely palatable, largely cultivated as a cereal for its edible seeds, fodder and widely used forage, requires rich moist and well-drained soil, used as a soil stabilizer and for temporary control of erosion in newly cleared and ploughed sandy soils, a rapid grower, cropping 6 weeks after sowing, sometimes a weedy escape from cultivation, seed cooked and used as a millet, seed can be cooked whole or can be ground into a flour, the plant is useful in constipation, probably derived from *Echinochloa colona* (L.) Link, often confused with *Echinochloa esculenta* (A. Braun) H. Scholz, occurs in wet grasslands and waste ground, roadsides and fields, see *Species Plantarum* 1: 56. 1753, *Hortus Bengalensis, or a Catalogue ...* 7. 1814, *Flora Indica; or Descriptions ...* 1: 307. 1820, *Hortus Regius Botanicus Berolinensis* 1: 204. 1827, *Révision des Graminées* 1: 45. 1829, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 104. 1885 and *Bulletin agricole du Congo Belge* 10: 244. 1919, *The Flora of the Malay Peninsula* 5: 223. 1925, *Trop. Agric.* 96: 35, pl. 1, f. 2. 1941, *Acta Phytocologia et Geobotanica Sinica* 11: 39. 1942, *Grasses of Ceylon* 127. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 127. 1959, *Grasses of Burma ...* 311. 1960, *Novosti Sist. Vyss. Rast.* 1968: 17. 1968.

in English: Siberian millet, Japanese millet, Japanese barnyard millet, Sanwa millet, Indian barnyard millet, barnyard millet, barnyard grass, white panic grass, white panicum, white panic, jungle rice, billion dollar grass

in India: arikel hoo, arunga, avipriya, bavto, bonta chamalu, bonta shama, bontachamalu, bontashama, bonth shama, bootha shama, chama, chamala, chamalo, chamalu, janglisama, janglisamak, jhangora, jhungara, kaadu haaraka hullu, kodow, kodravaha, kudiravalli, kudraivali pillu,

kuthiraivaali, mandira, oddalu, oodalu, pullchaamai, raa-jadhaanya, rail pullu, sama, samai, samak, same, samei, samo, samo ghas, samuka, samul, sanwa, sanwak, sanwan, savai, save, sawa, sawan, sawan-bhedeha, sawank, schama, shama, shamula, shyama, shyamaka, sukumaara, syama dhan, thribeeja, thrinabeejotthama, warugu

in Sri Lanka: mondi, raja maratu, tavali

in China: shan tzu

E. geminata (Forssk.) Roberty (*Panicum geminatum* Forssk.; *Paspalidium geminatum* (Forssk.) Stapf; *Setaria geminata* (Forssk.) Veldkamp)

Africa. See *Flora Aegyptiaco-Arabica* 18. 1775 and *Flora of Tropical Africa* 9: 583. 1920, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afr. Noire*, Sér. A, 17: 64. 1955, *Blumea* 39(1-2): 377. 1994.

E. glabrescens Munro ex Hook.f.

India, Afghanistan. Annual, tufted, glabrous, smooth, compressed, erect or ascending, usually simple, sometimes rooting from the lower nodes, leaf blades pointed, leaf sheaths loose, panicle compact and shortly exserted, spiciform racemes, spikelets awnless, lower lemma convex on the back and smooth, a weed in paddy fields, see *Fl. Br. Ind.* 7(21): 31. 1896 and *Grasses of Burma ...* 311. 1960.

E. haploclada (Stapf) Stapf (*Echinochloa aristifera* (Peter) Robyns & Tournay; *Echinochloa haploclada* var. *stenostachya* Chiov.; *Panicum aristiferum* Peter; *Panicum haplocladum* Stapf) (from the Greek *haplos* "simple, single" and *klados* "a branch")

Ethiopia, Tanzania, Mozambique, Sudan, Kenya, South Africa, Uganda, Zimbabwe. Perennial, aquatic, often wiry, very variable, tufted, rhizomatous, ligule absent or fringe of hairs but usually without ligules, inflorescence reddish and lanceolate, racemes densely crowded, spikelets appressed and more or less hispid, lower floret male, lower lemma acute or awned, a good seed producer, useful for erosion control, low grazing value, well grazed only when young, grains eaten by people, occurs on stream banks and in swamps, edge of pond, dry river beds, marshy swamps, moist grassland, marshes, floodplain grasslands, open areas of the coasts, from sandy loams to alluvial silts, in heavy black clays and areas with open water, paddy fields, in wet areas and on seasonally waterlogged ground, in low wet areas, in seasonally flooded lowlands and ditches, see *Bulletin of Miscellaneous Information Kew* 1908: 59. 1908, *Flora of Tropical Africa* 9: 613. 1920, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 179, 181, t. 22, f. 3. 1930, *Flora Somalia* 2: 445. 1932, *Flore des Spermatophytes du Parc National Albert* 3: 93. 1955.

in Somalia: sabul, sabool

in East Africa: aselele

E. helodes (Hack.) Parodi (*Panicum helodes* (Hack.) Hauman; *Panicum spectabile* var. *gracile* Kuntze ex Hicken;

Panicum spectabile var. *helodes* Hack.; *Pseudechinochloa helodes* (Hack.) Herter)

Argentina. See *Anales del Museo Nacional de Buenos Aires* 11: 74. 1904, *Chloris Platensis Argentina* 33. Buenos Aires 1910, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 72, f. 4. 1925, *Fl. Illustr. Urug.* 1: 127. 1942, *Revista Sudamericana de Botánica* 7(6-8): 196. 1943.

E. hirtella Schult

Santo Domingo. See *Mantissa* 2: 269. 1824.

E. holciformis (Kunth) Chase (*Berchtoldia holciformis* (Kunth) E. Fourn.; *Berchtoldia junciformis* Hemsl.; *Oplismenus holciformis* Kunth; *Orthopogon holciformis* (Kunth) Spreng.; *Panicum holciforme* (Kunth) Steud.)

Mexico, Guatemala. Usually aquatic, useful forage grass, see *Nova Genera et Species Plantarum* 1: 107. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 307. 1825, *Nomenclator Botanicus. Editio secunda* 2: 257. 1841, *Synopsis Plantarum Glumacearum* 1: 48. 1854, *Biologia Centrali-Americana; ... Botany ...* 3: 501. 1885, *Mexicanas Plantas* 2: 41. 1886 and *Proceedings of the Biological Society of Washington* 24: 155. 1911.

in Spanish: camalote, triguillo, zacate camalote, zacate pinto

in Mexico: camalote, camelote, zacate camalote, zacate camelote

E. holubii (Stapf) Stapf (*Echinochloa pyramidalis* (Lam.) Hitchc. & Chase; *Panicum holubii* Stapf; *Panicum pyramidale* Lam.)

South Africa. Perennial, hydrophyte, rhizomatous, tufted, erect or geniculate, sometimes rooting from the lower nodes, ligule absent or a fringe of short hairs, leaf sheaths rounded, leaf blade expanded or folded, racemes not crowded arranged at irregular intervals on the central axis, lower floret male or sterile, lower lemma awnless, palatable, able to withstand heavy grazing, common in swampy areas, seasonally inundated areas, vleis, may form dense stands, often regarded as a synonym of *Echinochloa pyramidalis* (Lam.) A.S. Hitchc. & Chase, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Flora Capensis* 7: 394. 1899 and *Contributions from the United States National Herbarium* 18(7): 345. 1917, *Flora of Tropical Africa* 9: 606. 1920, *Flora of Tropical East Africa* 451-898. 1982.

in English: Kalahari water grass

in southern Africa: Kalahariwatergras, vley igelhirse

E. hostii (M. Bieb.) Link (*Echinochloa cruscgalli* subsp. *hostii* (M. Bieb.) K. Richt.; *Echinochloa cruscgalli* var. *hostii* (M. Bieb.) A. Chev., nom. illeg., non *Echinochloa cruscgalli* var. *hostii* (M. Bieb.) Podp.; *Echinochloa cruscgalli* var. *hostii* (M. Bieb.) Podp.; *Echinochloa hostii* (M. Bieb.) Boros ex Holub, nom. illeg., non *Echinochloa hostii* (M. Bieb.) Link; *Echinochloa hostii* (M. Bieb.) Stev., nom.

illeg., non *Echinochloa hostii* (M. Bieb.) Link; *Panicum crusgalli* var. *hostii* (M. Bieb.) Richt.; *Panicum hostii* M. Bieb.) (after the Austrian botanist Nicolaus Thomas Host, 1761-1834, Imperial physician to Franz I, author of *Synopsis plantarum in Austria provinciisque adiacentibus sponte crescentium*. Vindobonae [Wien] 1797 and *Flora austriaca*. Viennae 1827-1831. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 207. Boston 1965; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 727. Stuttgart 1993; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. 402. Paris 1845; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 452. Ansbach 1852)

Europe. See *Essai d'une Nouvelle Agrostographie* 1: 53, 161, 169, t. 11, f. 2. 1812, *Flora Taurico-Caucasica* 3: 56. 1819, *Hortus Regius Botanicus Berolinensis* 2: 209. 1833, *Plantae Europaeae* 1: 26. 1890 and *Revue internationale de botanique appliquée et d'agriculture tropicale* 13: 902. 1933, *Preslia* 36: 253. 1964.

E. intermedia (Vahl ex Hornem.) Roem. & Schult. (*Panicum intermedium* Vahl ex Hornem.)

Europe. See *Hortus Regius Botanicus Hafniensis* 1: 82. 1813, *Systema Vegetabilium* 2: 447. 1817.

E. inundata Michael & Vickery

Australia, South Australia, New South Wales, Queensland. Annual, erect, tufted, rhizomes absent, ligules absent, blade usually glabrous, inflorescence more or less spike-like with erect and wavy branches, panicle narrow and slightly nodding or drooping, spikelets crowded in irregular rows along the bristly rachis of the racemes, lower glume acute to acuminate, upper glume acuminate and sometimes shortly awned, lower lemma sometimes awned, upper lemma greenish to yellowish, native fodder, Aboriginal food plant, in or near water courses, sometimes confused with *Echinochloa turneriana* (Domin) J. Black, see *Telopea* 1(1): 46. 1975.

in English: channel millet

E. jaliscana McVaugh

Mexico. See *Flora Novo-Galiciana* 14: 153, f. 13. 1983.

E. jubata Stapf

Tropical Africa, South Africa, Mozambique. Perennial, aquatic, often floating in water, rhizomatous, stoloniferous, ligule absent or a fringe of hairs, compact inflorescence, spikelets closely packed, lower floret male or sterile, lower lemma awned, common in water and stream, see *Flora of Tropical Africa* 9: 619. 1920.

E. kimberleyensis P.W. Michael & Vickery

Western Australia. See *Telopea* 2(1): 25. 1980.

E. lacunaria (F. Muell.) Michael & Vickery (*Panicum lacunarium* F. Muell.) (from the Latin *lacuna*, *ae* "pit, depression, hole")

Australia, New South Wales, Victoria. Annual, tufted, erect, rhizomes absent, ligules absent, spikelets on short pedicels and sometimes with a short pedicels, glumes and lower lemma glabrous or scabrous and without small spines, lower glume acute, upper glume acuminate, yellowish fertile lemma smooth and shining, in or near water courses, reduced to synonymy in *Echinochloa crus-galli* (L.) P. Beauv., see *Transactions and Proceedings of the Philosophical Institute of Victoria* 1854-1855: 47. 1855 and *Telopea* 1(1): 44. 1975.

E. lelievrei (A. Chev.) Berhaut (*Echinochloa scabra* (Lam.) Roem. & Schult.; *Panicum lelievrei* A. Chev.; *Panicum scabrum* Lam.)

Africa. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Systema Vegetabilium* 2: 479. 1817 and *Mémoires de la Société Botanique de France* 1953-54: 9-12. 1954.

E. longearistata Nash (*Echinochloa walteri* (Pursh) A. Heller; *Panicum walteri* Pursh)

U.S. Wet places, see *Flora Americae Septentrionalis; or, ...* 1: 66-67. 1814 and *Catalogue of North American Plants North of Mexico (edition 2)* 21. 1900, *Flora of the South-eastern United States ...* 84. 1903, *Manual of the Grasses of the United States (edition 2, revised by A. Chase)* 1951, *American Midland Naturalist* 87(1): 36-59. 1972.

E. macrandra P.W. Michael & Vickery

Australia. Annual, swamp, damp mud, see *Telopea* 2(1): 27. 1980.

E. micans Kossenko

Eurasia, Taiwan, China.

E. microstachya (Wiegand) Rydb. (*Echinochloa crusgalli* var. *mitis* (Pursh) Peterm.; *Echinochloa muricata* var. *microstachya* Wiegand; *Panicum crusgalli* var. *mite* Pursh)

America, West Indies. Annual, robust to slender, tufted, erect, rhizomes absent, ligules absent, stiff panicles, spikelets elliptic to ovate and with spinules at base, lower glume acute and shortly pointed or cuspidate, upper glume acuminate or cuspidate and with spinules at base, lower lemma acuminate or awned or very shortly awned, shining back of fertile lemma acuminate, weed of ricefields, wastelands, see *Essai d'une Nouvelle Agrostographie* 1: 53, 161, 169, t. 11, f. 2. 1812, *Flora Americae Septentrionalis; or, ...* 1: 66. 1814, *Flora Lipsiensis Excursoria* 82. 1838 and *Rhodora* 23(267): 58-60. 1921, *Brittonia* 1(2): 82. 1931.

in English: prickly barnyard grass

E. muricata (P. Beauv.) Fern. (*Echinochloa crusgalli* (L.) P. Beauv.; *Echinochloa crusgalli* subsp. *muricata* (Kunth) Shinnery; *Echinochloa muricata* Fernald; *Echinochloa*

pungens (Poir.) Rydb.; *Oplismenus muricatus* Kunth; *Panicum muricatum* Michx., nom. illeg., non *Panicum muricatum* Retz.; *Panicum pungens* Poir.; *Setaria muricata* P. Beauv.; *Setaria muricata* Roem. & Schult.)

North America. Annual, panicles green to purplish, polymorphic species, forage, usually occurs in wetlands and floodplains, in moist and disturbed sites, border of lakes and waste places, marshes and roadsides, shores, used in meal or flour, see *Species Plantarum* 1: 56. 1753, *Flora Boreali-Americana* 1: 47. 1803, *Essai d'une Nouvelle Agrostographie* 51, 161, 169-170, 178, t. 11, f. 2. 1812, *Encyclopédie Méthodique, Botanique* 4: 273. 1816, *Systema Vegetabilium* 2: 495. 1817, *Révision des Graminées* 1: 45. 1829 and *Rhodora* 17: 106. 1915, *Rhodora* 23(267): 58-60. 1921, *Brittonia* 1(2): 81-82. 1931, *Rhodora* 56(662): 33. 1954, *Le Monde des Plantes, intermédiaire des botanistes* 88(446): 3. 1993.

in English: rough barnyard grass, barnyard grass, cockspear grass, wild millet

E. muricata (P. Beauv.) Fern. var. ***microstachya*** Wieg. (*Echinochloa crus-galli* var. *mitis* (Pursh) Peterm.; *Echinochloa crusgalli* var. *microstachya* (Wiegand) Shinnery; *Echinochloa microstachya* (Wieg.) Rydb.; *Echinochloa muricata* subsp. *microstachya* (Wiegand) Jauzein; *Echinochloa muricata* var. *multiflora* Wiegand; *Echinochloa muricata* var. *occidentalis* Wieg.; *Echinochloa muricata* var. *wiegandii* Fassett; *Echinochloa occidentalis* (Wieg.) Rydb.; *Echinochloa pungens* var. *microstachya* (Wiegand) Fernald & Griscom; *Echinochloa pungens* var. *multiflora* (Wieg.) Fern. & Griseb.; *Echinochloa pungens* var. *wiegandii* Fassett; *Echinochloa wiegandii* (Fassett) McNeill & Dore; *Panicum scindens* Nees ex Steud.)

Western part of North America. Annual, with small spikelets and short awns, lower lemmas unawned or awned, occurs in marshes and shores, waste places and roadsides, sandy roadsides, see *Synopsis Plantarum Glumacearum* 1: 47. 1853 and *Rhodora* 17: 106. 1915, *Rhodora* 23(267): 58-60. 1921, *Brittonia* 1(2): 81-82. 1931, *Rhodora* 37(436): 137. 1935, *Rhodora* 51(601): 2. 1949, *Rhodora* 56(662): 34. 1954, *Le Naturaliste Canadien* 103(6): 557. 1976, *Sida* 15(3): 527-532. 1993.

in English: rough barnyard grass, barnyard grass

E. muricata (P. Beauv.) Fern. var. ***muricata*** (*Echinochloa crusgalli* f. *longiseta* (Trin.) Farw.; *Echinochloa crusgalli* subsp. *muricata* (Kunth) Shinnery; *Echinochloa crusgalli* var. *michauxii* House; *Echinochloa crusgalli* var. *muricata* Farw.; *Echinochloa muricata* Fernald; *Echinochloa muricata* var. *ludoviciana* Wieg.; *Echinochloa pungens* (Poir.) Rydb.; *Echinochloa pungens* var. *coarctata* Fern. & Griseb.; *Echinochloa pungens* var. *ludoviciana* (Wieg.) Fern. & Griseb.; *Echinochloa pungens* var. *pungens*; *Oplismenus muricatus* Kunth; *Panicum muricatum* Michx., nom. illeg.,

non *Panicum muricatum* Retz.; *Panicum pungens* Poir.; *Setaria muricata* Roem. & Schult.)

Eastern North America. Annual, lower lemmas usually awned, used in meal or flour, usually occurs in wetlands and floodplains, edge of pond, brackish marsh, border of lakes and waste places, marshes and roadsides, shores, see *Flora Boreali-Americana* 1: 47. 1803, *Encyclopédie Méthodique, Botanique* 4: 273. 1816, *Systema Vegetabilium* 2: 495. 1817, *Species Graminum* 2: t. 162. 1829, *Révision des Graminées* 1: 45. 1829 and *Rhodora* 17(198): 106. 1915, *Rhodora* 23(267): 58-60. 1921, *New York State Museum Bulletin* 243-244: 42. 1923, *Brittonia* 1(2): 81. 1931, *Rhodora* 37(436): 136-137, pl. 336, f. 1-2. 1935, *Rhodora* 56(662): 33. 1954.

in English: rough barnyard grass, barnyard grass, cockspear grass

E. najada (Hack. & Arechav.) Parodi (*Oplismenus najada* (Hack. & Arechav.) Parodi; *Oplismenus najada* (Hack. & Arechav.) Parodi; *Panicum najadum* Hack. & Arechav.)

South America. See *Anales del Museo Nacional de Montevideo* 1: 125, t. 7bis, 8. 1894 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 75. 1925, *Notas del Museo de la Plata, Botánica* 2 (Bot. 11): 4, f. 1. 1937, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

E. nervosa (Stapf) Roberty (*Acroceras gabunense* (Hack.) Clayton; *Commelinidium nervosum* Stapf; *Panicum gabunense* Hack.)

Africa. Perennial, scrambling, prostrate at the base, rooting at the lower nodes, fodder, found in forest shade, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 70. 1889 and *Flora of Tropical Africa* 9: 629. 1920, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afr. Noire Sér. A*, 17: 64. 1955, *Kew Bulletin* 34(3): 557. 1979 [1980].

E. notabilis (Hook.f.) Rhind (*Panicum mosambicense* Hack.; *Panicum notabile* Hook.f.; *Urochloa mosambicensis* (Hack.) Dandy)

Asia, India. See *Boletim da Sociedade Broteriana* 6: 140. 1888, *The Flora of British India* 7: 32. 1896 and *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Grass. Burma* 50. 1945.

E. obtusiflora Stapf

Africa. Annual, erect, grain used as famine food, a weed of rice fields, wet places, shallow pools, see *Flora of Tropical Africa* 9: 606. 1920.

in English: kuskus grass

in Nigeria: difra

E. oplismenoides (E. Fourn.) A.S. Hitchc. (*Berchtoldia oplismenoides* E. Fourn.; *Echinochloa crus-pavonis* var. *decipiens* (Wiegand) Fassett; *Echinochloa echinata* var. *decipiens* Wiegand; *Echinochloa oplismenioides* (Fourn.) A.S. Hitchc.)

U.S., Arizona, Mexico, Guatemala. Annual, erect, succulent, glabrous, branching from the lower nodes, sheaths more or less glabrous or papillose, ligules present or absent, narrow panicles, lower florets sterile, lower lemmas unawned or awned, lower paleas absent or present, fodder, found in wet grasslands, see *Mexicanas Plantas* 2: 41. 1886 and *Contributions from the United States National Herbarium* 22(3): 136, f. 27. 1920, *Rhodora* 23: 60. 1921, *Rhodora* 51: 3. 1949.

in Mexico: pasto

E. oryzetorum A. Chev. (*Echinochloa scabra* (Lam.) Roem. & Schult.; *Panicum oryzetorum* Balansa; *Panicum scabrum* Lam.)

Tropical Africa. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Systema Vegetabilium* 2: 479. 1817, *Journal de Botanique (Morot)* 4: 141. 1890 and *Revue internationale de botanique appliquée et d'agriculture tropicale* 14: 18. 1934.

E. oryzicola (Vasinger) Vasinger (*Echinochloa crus-galli* var. *oryzicola* (Vasinger) Ohwi; *Echinochloa phyllopogon* (Stapf) Stapf ex Kossenko; *Echinochloa phyllopogon* subsp. *oryzicola* (Vasinger) Kossenko; *Panicum oryzicola* Vasinger; *Panicum phyllopogon* Stapf)

Asia. See *Icones Plantarum* 27: t. 2698. 1901, *Flora URSS* 2: 33. 1934, *Acta Phytotaxonomica et Geobotanica* 11(1): 38. 1942, *Cytologia* 50: 907-912. 1985, Hoai Thi Thu Nguyen et al. "Effects of salt stress on ion accumulation and antioxidative enzyme activities of *Oryza sativa* L. and *Echinochloa oryzicola* Vasing." *Weed Biology and Management* 5(1): 1-7. Mar 2005.

E. oryzoides (Ard.) Fritsch (*Echinochloa coarctata* Kossenko; *Echinochloa coarctata* Stev. ex Kossenko; *Echinochloa commutata* Schult.; *Echinochloa crusgalli* subsp. *hostii* (M. Bieb.) K. Richt.; *Echinochloa crusgalli* subsp. *oryzoides* (Ard.) A. Bolòs & Masclans; *Echinochloa crusgalli* var. *macrocarpa* (Vasinger) Ohwi; *Echinochloa crusgalli* var. *macrocarpa* (Vasinger) Morariu, nom. illeg., non *Echinochloa crusgalli* var. *macrocarpa* (Vasinger) Ohwi; *Echinochloa crusgalli* var. *oryzoides* (Ard.) Lindm.; *Echinochloa hostii* (M. Bieb.) Boros ex Holub, nom. illeg., non *Echinochloa hostii* (M. Bieb.) Link; *Echinochloa hostii* (M. Bieb.) Stev., nom. illeg., non *Echinochloa hostii* (M. Bieb.) Link; *Echinochloa macrocarpa* Vasinger; *Echinochloa oryzicola* (Vasinger) Vasinger; *Echinochloa phyllopogon* (Stapf) Stapf ex Kossenko; *Panicum coarctatum* Steven ex Trin.; *Panicum crusgalli* var. *grandiflorum* Döll; *Panicum crusgalli* var. *oryzoides* (Ard.) Fiori; *Panicum hostii* M.

Bieb.; *Panicum musei* Steud.; *Panicum oryzicola* Vasinger; *Panicum oryzoides* Ard.; *Panicum phyllopogon* Stapf)

Origin unknown or uncertain, Eurasia. Annual, erect, slender, densely tufted, rhizomes absent, nodes glabrous, sheaths glabrous, ligules absent, slender panicles, racemes strongly drooping, spikelets elliptic and acuminate, lower florets sterile, lower glume acute to acuminate, upper glume acuminate and cuspidate, lower lemma acuminate or awned, fertile lemma broad-elliptic and with a greenish tip, lower paleas well developed, grains light brown or tan, economic plant, occurs almost always in wetlands and in the flooded portion of the rice fields, cereal, widely naturalized, weed species of drains, a common weed of rice fields throughout the world, paddy-rice mimic weed, see *Species Plantarum* 1: 56. 1753, Petri Arduini ... *Animadversionum botanicarum* specimen. Patavii 1759, Petri Harduini veronensis horti publici patavini custodis *animadversionum botanicarum specimen alterum*. Venetia 1764, *Essai d'une Nouvelle Agrostographie* 1: 53, 161, 169, t. 11, f. 2. 1812, *Flora Taurico-Caucasica* 3: 56. 1819, *Mantissa* 2: 267. 1824, *De Graminibus Paniceis* 137. 1826, *Synopsis Plantarum Glumacearum* 1: 58. 1853 [1854], *Flora Brasiliensis* 2(2): 142. 1877, *Plantae Europaeae* 1: 26. 1890, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 41: 742. 1891 and *Icones Plantarum* 27: t. 2698. 1901, *Svensk Fanerogamflora* 69. 1918, *Nuova Flora Analitica d'Italia* 1: 79. 1923, *Flora URSS* 2: 739. 1934, *Journal of Japanese Botany* 18: 541. 1942, *Collectanea Botanica; a Barcinonensi Botanico Instituto Edita* 4: 420. Barcelona 1955, *Preslia* 36: 253. 1964, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 336-348, 437-445. 1969, *Flora Republicii Socialiste Romaniaa* 12: 86. 1972, T. Yabuno, "A biosystematic study on *Echinochloa oryzoides* (Ard.) Fritsch." *Cytologia* 49: 673-678. 1984, *Cytologia* 50: 907-912. 1985, *Ruizia; Monografías del Jardín Botánico* 13: 1-480. 1993, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Sida* 20(2): 525-548. 2002.

in English: hairy millet, early water grass, rice-field barnyard grass

in India: nellukku chakkalatthi

E. pachychloa Kossenko

China.

E. paludigena Wiegand (*Echinochloa paludigena* var. *soluta* Wiegand)

U.S., Florida, Texas. Rare species, annual, sheaths glabrous, ligules absent, panicles erect to slightly drooping, spikelets greenish or purplish, lower lemmas usually awned, lower paleas well developed, native to swamps, riverbanks and other wet habitats, see *Rhodora* 23(267): 64-65. 1921.

in English: Florida cock's-spur grass, Florida cockspar

E. persistens Z.S. Diao

China. See *Acta Botanica Yunnanica* 10(3): 371-372, f. 1. 1988.

E. phyllopogon (Stapf) Stapf ex Kossenko (*Echinochloa crusgalli* subsp. *oryzicola* (Vasinger) T. Koyama; *Echinochloa crusgalli* var. *oryzicola* (Vasinger) Ohwi; *Echinochloa oryzicola* (Vasinger) Vasinger; *Echinochloa oryzoides* (Ard.) Fritsch; *Echinochloa oryzoides* subsp. *phyllopogon* (Stapf) Tzvelev; *Echinochloa phyllopogon* subsp. *oryzicola* (Vasinger) Kossenko; *Echinochloa phyllopogon* subsp. *stapfiana* Kossenko; *Panicum oryzicola* Vasinger; *Panicum phyllopogon* Stapf)

Eurasia, Russia. See *Animadversionum Botanicarum Specimen Alterum* 2: 16, t. 5. 1764, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 41: 742. 1891 and *Icones Plantarum* 27: t. 2698. 1901, *Flora URSS* 2: 33. 1934, *Acta Phytotaxonomica et Geobotanica* 11(1): 38. 1942, *Grasses of Japan and its Neighboring Regions* 503. 1987, Albert J. Fischer, "Enhanced effect of thiobencarb on bispyribac-sodium control of *Echinochloa phyllopogon* (Stapf) Koss. in California rice (*Oryza sativa* L.)." *Weed Biology and Management* 4(4): 206-212. Dec 2004.

E. picta (J. König) P.W. Michael (*Panicum pictum* J. König) Asia tropical, India, Indonesia, Vietnam, Thailand, South-east Asia. Ligule a fringe of hairs, see *Der Naturforscher* 23: 204. 1788 and *Philippine Journal of Weed Science* 5: 18. 1978, *Micronesica* 18(2): 45-102. 1982.

E. polystachya (Kunth) A.S. Hitchc. (*Echinochloa polystachya* (Kunth) Roberty, nom. illeg., non *Echinochloa polystachya* (Kunth) Hitchc.; *Echinochloa polystachya* var. *spectabilis* (Nees ex Trin.) Mart. Crov.; *Echinochloa spectabilis* (Nees ex Trin.) Link; *Echinolaena polystachya* Kunth; *Oplismenus polystachyus* Kunth; *Panicum bonplandianum* Steud.; *Panicum polystachyum* (Kunth) Steud., nom. illeg., non *Panicum polystachion* L.; *Panicum spectabile* Nees ex Trin.; *Pseudechinolaena spectabilis* (Nees ex Trin.) Herter)

Central and southern America, Belize, Mexico, Brazil, Bolivia, Uruguay, Cuba, Ecuador, West Indies to Paraguay, Costa Rica, southern U.S. Perennial with glabrous culms, herbaceous, aquatic or semiaquatic, floating, nonrhizomatous, creeping, spreading, usually in colonies or dense masses, coarse and pubescent, spongy, rooting base and decumbent culms, nodes densely hispid with yellowish hairs, sheaths mostly glabrous, leaves scabrid, ligule a yellowish line of stiff hairs, inflorescence dense and pendent, racemes unbranched, spikelets awned, upper glume acuminate or mucronate, lemmas awned, oval seeds, weed species, economic plant, forage and very palatable fodder, used for grazing and hay, it does not tolerate drought and frosts, forms dense stands in seasonal swamps, adapted to wet to very wet soils and swampy places, grows in coastal marshes, on lakeshores and along rivers, often in standing water, swamps and ditches near the coasts, brackish

swamps, along inundated plains, similar to *Echinochloa walteri*, see *Nova Genera et Species Plantarum* 1: 107, 119. 1815 [1816], *Nomenclator Botanicus* 589. 1821, *De Graminibus Paniceis* 138. 1826, *Hortus Regius Botanicus Berolinensis* 2: 209. 1833, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 145. 1833, *Synopsis Plantarum Glumacearum* 1: 48. 1853 and *Contributions from the United States National Herbarium* 22(3): 135. 1920, *Revista Argentina de Agronomía* 9: 318. 1942, *Revista Sudamericana de Botánica* 9: 118. 1953, *Petite Flore de l'Ouest-Africain* 398. 1954.

in English: creeping river grass, carib grass, German grass
in Spanish: yerba de río, arroceras, zacate arrocillo, hierba de cayena, pasto alemán, zacate alemán, gramalote

in Mexico: alemán, arroceras, hierba de cayena, zacate alemán, zacate arrocillo

in Panama: caña de caballo

Local name: moli galla

E. polystachya (Kunth) Hitchc. var. ***polystachya*** America.

E. polystachya (Kunth) Hitchc. var. ***spectabilis*** (Nees ex Trin.) Mart. Crov. (*Echinochloa polystachya* var. *spectabilis* (Nees) Mart. Crov.; *Echinochloa spectabilis* (Nees) Link; *Echinochloa spectabilis* (Nees ex Trin.) Link; *Oplismenus spectabilis* (Nees ex Trin.) Kunth; *Panicum spectabile* Nees, nom. illeg., non *Panicum spectabile* Nees ex Trin.; *Panicum spectabile* Nees ex Trin.; *Pseudechinolaena spectabilis* (Nees ex Trin.) Herter)

Brazil, Argentina, Paraguay, Peru. Herbaceous, stoloniferous, caespitose, aquatic, forming large colonies or mats, floating to seasonally floating, emergent, with swollen pubescent cauline nodes, pubescent leaf sheaths, growing on the water, river edge, see *Nova Genera et Species Plantarum* 1: 107. 1815 [1816], *De Graminibus Paniceis* 138. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 262. 1829, *Hortus Regius Botanicus Berolinensis* 2: 209. 1833, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 145. 1833 and *Contributions from the United States National Herbarium* 22(3): 135. 1920, *Revista Argentina de Agronomía* 9: 318. 1942, *Revista Sudamericana de Botánica* 9: 118. 1953.

in Spanish: gramalote

E. praestans P.W. Michael

Australia, Papua New Guinea. See *Telopea* 2(1): 31. 1980.

E. pyramidalis (Lam.) A.S. Hitchc. & Chase (*Echinochloa guadeloupensis* (Hack.) Wiegand; *Echinochloa holubii* (Stapf) Stapf; *Echinochloa pyramidalis* var. *guadeloupensis* (Hack.) Stehlé; *Echinochloa quadrifaria* (Hochst. ex A. Rich.) Chiov.; *Echinochloa quadrifaria* var. *atroviolacea* (A. Rich.) Chiov.; *Echinochloa senegalensis* Mez; *Echinochloa verticillata* Berhaut; *Panicum atroviolaceum* A.

Rich.; *Panicum crus-galli* L.; *Panicum crusgalli* L.; *Panicum crusgalli* var. *molle* Pilg. ex Peter; *Panicum crus-galli* var. *polystachyum* Asch. & Schweinf.; *Panicum excurrans* Trin.; *Panicum frumentaceum* Benth.; *Panicum holubii* Stapf; *Panicum plicatum* Lam.; *Panicum pyramidale* Lam.; *Panicum pyramidale* var. *hebetatum* Stapf; *Panicum pyramidale* var. *quadrifarium* (Hochst. ex A. Rich.) Chiov.; *Panicum pyramidale* var. *spadiceum* Peter; *Panicum quadrifarium* Hochst. ex A. Rich.; *Panicum setarioides* Steud.; *Panicum spadiceum* Peter; *Panicum spectabile* Nees ex Trin.; *Panicum spectabile* var. *gadeloupense* Hack.; *Setaria excurrans* (Trin.) Miq.; *Setaria plicata* (Lam.) T. Cooke (after Dr Emil Holub, 1847-1902 (d. Vienna), author, physician, naturalist, traveler in southern Africa; see J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. Regnum Vegetabile vol. 9. 1957; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 190-192. 1981)

Tropical Africa, South Africa, Madagascar. Perennial bunchgrass with solid stems densely tangled and floating, erect, emergent, creeping, geniculately ascending and rooting at the lower nodes, firm, stout, robust, tall, coarse, reedlike, rhizomatous with scaly rhizomes, stoloniferous, forming floating mats, ligule a fringe of hairs or absent, sheaths mostly glabrous, inflorescences more or less erect with short pedicels, racemes simple or compound, spikelets acute and shortly pointed, lower floret male, lower glume hairy, upper glume hairy to glabrous, lower lemma depressed on back and cuspidate, fertile lemma elliptic and shining, heavy seed producer, grains used for flour, thatching grass, vegetable salt, a bad weed of cultivation, economic plant, naturalized, grain crop species, excellent fodder grass for all stock, useful hay and silage, young growth very palatable, useful for erosion control or conservation purposes, drought resistant, occurs in grasslands and floodplain grasslands, heavy clay mud, riversides, in wet clay soils, alongside water and in floating meadows, lakeshores, seasonally flooded alluvial clay, in swampy areas or areas subjected to periodical inundations, see *Species Plantarum* 1: 56. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *De Graminibus Paniceis* 138. 1826, *Tentamen Florae Abyssinicae ...* 2: 367-368. 1850, *Synopsis Plantarum Glumacearum* 1: 74. 1853, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 1: 328. 1897, *Flora Capensis* 7: 394, 396. 1899 and *The Flora of the Presidency of Bombay* 2: 919. 1908, *Annuario del Reale Istituto Botanico di Roma* 8(3): 298. 1908, *Contributions from the United States National Herbarium* 18(7): 345. 1917, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 56. 1917, *Bulletin agricole du Congo Belge* 10: 244. 1919, *Flora of Tropical Africa* 9: 606. 1920, *Rhodora* 23: 63. 1921, *Bulletin agricole du Congo Belge* 16: 670. 1925, *Abhandlungen der Königlich-Gesellschaft der Wissenschaften, Göttingen*.

Mathematisch-Physikalische Klasse N.F. 13(2): 110. 1928, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 179, 180, 182. 1930, *Malpighia* 34: 537. 1937, *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 275. 1939, *Caribbean Forester* 5: 188. 1944, *Mémoires de la Société Botanique de France* 1953-54: 9. 1954.

in English: antelope grass, Limpopo grass, Kalahari water grass

in Spanish: pasto limpago

in Arabic: gandum, um suf

in Angola: mulanje-a-mbinda, oljungue, songue

in Gambia: jarge ba, nyara ba, nyaro ba

in Mali: farka teli, fingui, hudo wendu, kimbaka tioké, kussein, lingui, ponyo

in Mozambique: chenga

in Niger: bundammi, burgu, garsa maddi, gudum, gundum, ngarami

in Nigeria: gallabari, gayanshi, geron tsuntsu, gundam, gyaushe, iwa, karairayau, karankabau, kasha, kreb, roobaa, shabrai, shamrai, taagol, tokari, ukasu, um suf, zaza

in Senegal: ay, burguké, didéré, égil, hudu wendu, kimbaka tioké, lingui, samamgate, samangate, sil, telagor

in South Africa: Limpopo-gras, olifantsgras, Kalahari-watergras, vleigras

in Sudan: difrat el-bahar

in Upper Volta: baukarara, kulumodo

E. ramosa (L.) Roberty (*Brachiaria ramosa* (L.) Stapf; *Panicum ramosum* L.; *Urochloa ramosa* (L.) T.Q. Nguyen)

Africa. See *Mantissa Plantarum* 29. 1767 and *Flora of Tropical Africa* 9: 542. 1919, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afr. Noire*, Sér. A, 17: 64. 1955, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Flora of Tropical East Africa* 451-898. 1982, *Blumea* 41(2): 413-437. 1996.

E. reptans (L.) Roberty (*Brachiaria reptans* (L.) C.A. Gardner & C.E. Hubb.; *Panicum reptans* L.; *Urochloa reptans* (L.) Stapf)

Africa. See *Systema Naturae, Editio Decima* 2: 870. 1759, *Mantissa Plantarum* 29. 1767 and *Flora of Tropical Africa* 9: 542. 1919, *Flora of Tropical Africa* 9: 601. 1920, *Hooker's Icones Plantarum* 34(3): t. 3363, p. 3. 1938, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afr. Noire*, Sér. A, 17: 64. 1955, *Flora of Tropical East Africa* 451-898. 1982, *Darwiniana* 31(1-4): 43-109. 1992, *Blumea* 41(2): 413-437. 1996.

E. rotundiflora Clayton (*Brachiaria obtusiflora* (Hochst. ex A. Rich.) Stapf; *Echinochloa obtusiflora* Stapf; *Panicum obtusiflorum* Hochst. ex A. Rich.; *Panicum obtusiflorum* A. Rich., nom. illeg., non *Panicum obtusiflorum* Hochst. ex A. Rich.)

Africa, Ethiopia, Sudan. Annual, erect or geniculately ascending, coarse, ligule absent, with compound racemes, stipitate *Brachiaria*-like spikelets, excellent grazing, fodder for all stock, swamps, savannah land, see *Tentamen Florae Abyssinicae* ... 2: 367. 1850, *Histoire Physique, Politique et Naturelle de l'Île de Cuba ... Botanique*. — *Plantes Vasculaires* 3: 305. 1853 and *Flora of Tropical Africa* 9: 533. 1919, *Flora of Tropical Africa* 9: 606. 1920, *Kew Bulletin* 34(3): 560. 1980, *Flora of Ethiopia and Eritrea* 7: 212, 214, 220. 1995.

E. scabra (Lam.) Roem. & Schult. (*Echinochloa lelievrei* (A. Chev.) Berhaut; *Echinochloa oryzetorum* A. Chev.; *Echinochloa stagnina* (Retz.) P. Beauv.; *Panicum burgu* A. Chev.; *Panicum crusgalli* var. *leiostachyum* Franch.; *Panicum crusgalli* var. *maximum* Franch.; *Panicum crusgalli* var. *sieberiana* Asch. & Schweinf.; *Panicum crusgalli* var. *stoloniferum* Schweinf. & Muschl.; *Panicum crusgalli* var. *submuticum* Franch.; *Panicum lelievrei* A. Chev.; *Panicum oryzetorum* A. Chev., nom. illeg., non *Panicum oryzetorum* Balansa; *Panicum scabrum* Lam.; *Panicum scabrum* subsp. *burgu* (A. Chev.) A. Chev.; *Panicum scabrum* subsp. *lelievrei* A. Chev.; *Panicum scabrum* subsp. *oryzetorum* A. Chev.; *Panicum scabrum* var. *franchetii* A. Chev.; *Panicum scabrum* var. *leiostachyum* (Franch.) A. Chev.; *Panicum scabrum* var. *submuticum* (Franch.) A. Chev.; *Panicum sieberianum* (Asch. & Schweinf.) Sickenb.; *Panicum stagninum* Retz.; *Panicum subaristatum* Peter)

Tropics, Africa, Asia. Canals, irrigation canals, riverbanks, along streams, see *Species Plantarum* 1: 56. 1753, *Observationes Botanicae* 5: 17. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Essai d'une Nouvelle Agrostographie* 53, 161, 171. 1812, *Systema Vegetabilium* 2: 479. 1817, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 347-348. 1895 and *Mémoires de l'Institut Égyptien* 4: 300. 1901, *Compte Rendu de l'Association Française pour l'Avancement des Sciences* 29(2): 642, 651-652. 1901, *A Manual of Flora of Egypt by Dr. Reno Muschler* ... 1: 52. Berlin 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 169, 179, 180 & Anhang, 31, t. 21, f. 1. 1930, *Revue internationale de botanique appliquée et d'agriculture tropicale* 14: 18. 1934, *Mémoires de la Société Botanique de France* 1953-54: 9-12. 1954, *Flora of Tropical East Africa* 451-898. 1982.

E. stagnina (Retz.) P. Beauv. (*Echinochloa lelievrei* (A. Chev.) Berhaut; *Echinochloa scabra* (Lam.) Roem. & Schult.; *Oplismenus stagninus* (Retz.) Kunth; *Orthopogon stagninus* (Retz.) Spreng.; *Panicum burgu* A. Chev.; *Panicum burgu* var. *submuticum* (Franch.) A. Chev.; *Panicum crusgalli* L.; *Panicum crusgalli* var. *leiostachyum* Franch.; *Panicum crusgalli* var. *maximum* Franch.; *Panicum crusgalli* var. *stagninum* (Retz.) T. Durand & Schinz; *Panicum crusgalli* var. *stagninum* (Retz.) Ridl., nom. illeg., non *Panicum crusgalli* var. *stagninum* (Retz.) T. Durand & Schinz; *Panicum crusgalli* var. *submuticum* Franch.; *Panicum*

lelievrei A. Chev.; *Panicum lelievrei* var. *leiostachyum* (Franch.) A. Chev.; *Panicum oryzetorum* Balansa; *Panicum scabrum* Lam.; *Panicum scabrum* subsp. *burgu* (A. Chev.) A. Chev.; *Panicum scabrum* var. *leiostachyum* (Franch.) A. Chev.; *Panicum scabrum* var. *submuticum* (Franch.) A. Chev.; *Panicum stagninum* Retz.; *Panicum stagninum* var. *burgu* (A. Chev.) Chev.)

Tropical Africa, Madagascar, Southeast Asia, India, Thailand, Indonesia, Sri Lanka, the Philippines. Short-lived perennial and annual, aquatic, robust, glabrous, smooth, sprawling, decumbent and rooting at the lower nodes, trailing leafy stems, upper parts ascending, simple or sparsely branched, herbaceous, thick and spongy, usually somewhat inflated, rhizomatous and stoloniferous, ligule a fringe of hairs or densely long-ciliate, acuminate leaf blades flat or involute, leaf sheaths loose, inflorescence open with flexuous and nodding racemes, spikelets ovate and hairy to hispid, lower floret male or sterile, lower lemma awned, troublesome weed of paddy fields, a vegetable salt from the ashes, cultivated, rich fodder, coarse but palatable hay, economic plant very productive and highly palatable, readily grazed by stock, grain eaten in time of scarcity, sweet culms, useful thatching grass, pith used for caulking boats, in the Niger basin used as sugar, often floating on the water surface, forming dense colonies, grows along rivers and in lakes and lagoons, dry arid and wet zones, sandy soils, in standing water, in stagnant pools and marshes, streamsides, irrigation ditches, swamps, waterways, marshes, rivers, irrigation channels, in cultivated fields, on banks of lakes, see *Species Plantarum* 1: 56. 1753, *Observationes Botanicae* 5: 17. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Essai d'une Nouvelle Agrostographie* 53, 161, 171. 1812, *Systema Vegetabilium* 2: 479. 1817, *Systema Vegetabilium, editio decima sexta* 1: 307. 1825, *Révision des Graminées* 1: 44. 1829, *Journal de Botanique (Morot)* 4: 141. 1890, *Conspectus Florae Africae* 5: 745. 1894, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 347-348. 1895, *Fl. Br. Ind.* 7: 30. 1896 and *Handb. Fl. Ceylon* 5: 135. 1900, *Compte Rendu de l'Association Française pour l'Avancement des Sciences* 29(2): 642, 651-652. 1901, *Materials for a Flora of the Malayan Peninsula* 3: 132. 1907, *Exploration Botanique de l'Afrique Occidentale Française* ... 1: 730. 1920, *Handb. Fl. Ceylon* 6: 325. 1931, *Trop. Agric.* 96: 35, pl. 2, f. 2. 1941, *Mémoires de la Société Botanique de France* 1953-54: 9-12. 1954, *Grasses of Ceylon* 128. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 127. 1959, *Grasses of Burma* ... 311. 1960, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961.

in English: burgu grass, hippo grass, long-awned water grass, long-awn water grass, umvuma grass, water grass, sweet reed, honey reed of the Niger

in French: roseau sucré, roseau à miel du Niger

in Arabic: alwa, helew

in Guinea-Bissau: quéo

in Mali: aluala, birbou, birgou, borgan, bourgou, burdi kama-rege, burdi kamareje, burgu lé, burgu ni, ekaywod, gamaraho, gamawa, gambarawo, katu, kundu, kundu hari, nomo ara, nomo ari, nomo hara, nomo hari, perepere ntiokè

in Niger: beargu, burgo, burgu, burgu abbahi, koundou

in Nigeria: alwa, bonekouan, burgu, burugu, helew, sakera, siseri, swandzwin, wuruguhó

in Senegal: burgu

in southern Africa: langnaaldwatergras, watergras; bohomba-liliba (Sotho)

in southwest Africa/Namibia: sumpf

in Upper Volta: burgu, moignima

in the Philippine Islands: bungalon, balili, timsim, timsin, bayakibok, banago, lagtom-na-pula, lagtomna pula, uraroi, kompay

in India: banti, bontha oddu, dul, gandu bhatthada hullu, kaadu dhaabi hullu, kadu dabhai hullu, pedda ooda

in Sri Lanka: wel maratu

in Thailand: yaa plong, ya plong, ya plong yai, yaa plong yai

E. telmatophila Michael & Vickery (Greek *telma*, *telmatos* “marsh” and *philos* “lover, loving”)

Australia, Queensland, New South Wales, Western Australia. Annual, erect to spreading, stout, tufted, sometimes branching below, rhizomes absent, ligule absent, blades glabrous, dense panicles erect or slightly nodding or drooping, glumes unequal, lower glume acute, upper glume pointed or awned, lower lemma awned, yellowish fertile lemma narrow-elliptic and smooth, creamy to yellowish to brownish oblong grain, grows in or near ponds and streams, on damp sand flats, swamps, see *Telopea* 1(1): 44. 1975.

in English: swamp barnyard grass

E. turneriana (Domin) J.M. Black (*Echinochloa turneriana* Domin; *Panicum turnerianum* Domin)

Australia, Queensland, New South Wales. Annual, erect, robust, tufted, fast growing, rhizomes absent, ligules absent, blade often glabrous, panicle narrow, on short pedicels spikelets ovate to elliptic and sometimes shortly awned, lower glume shortly mucronate, upper glume rarely awned, lower lemma sometimes shortly awned, fertile lemma elliptic and smooth, heavy seeder, seed will not germinate unless flooded, economic plant, palatable and nutritious, forage, grain a valuable human food in dry times, tolerates seasonal flooding and will not tolerate drought, grows in heavy cracking clays and silty clays, in or near water courses, floodplains, seasonally flooded heavy clay soils, see *Bibliotheca Botanica* 85: 307. 1915, *Flora South Australia (edition 2)* 1: 72. 1943.

in English: channel millet, native millet, swamp millet, western millet, wild millet, wild sorghum, native sorghum

E. ugandensis Snowden & C.E. Hubb.

Tropical East Africa, South Africa. Annual, stoloniferous, tufted, aquatic, ligule a fringe of hairs, inflorescence linear, spikelets pubescent, lower floret sterile, lower lemma acute or awned, common in swamps, see *Bulletin of Miscellaneous Information Kew* 1936(5): 315. 1936.

E. verticillata Berhaut (*Echinochloa colona* (L.) Link; *Echinochloa pyramidalis* (Lam.) Hitchc. & Chase; *Panicum colonum* L.; *Panicum pyramidale* Lam.)

Tropical Africa. See *Systema Naturae, Editio Decima* 2: 870. 1759, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Hortus Regius Botanicus Berolinensis* 2: 209. 1833 and *Contributions from the United States National Herbarium* 18(7): 345. 1917, *Mémoires de la Société Botanique de France* 1953-54: 9. 1954, *Sida* 20(2): 525-548. 2002.

E. walteri (Pursh) A. Heller (*Berchtoldia oplismenoides* E. Fourn.; *Echinochloa crusgalli* subvar. *laevigata* (Wiegand) Farw.; *Echinochloa crusgalli* var. *hispidus* Farw.; *Echinochloa longearistata* Nash; *Echinochloa oplismenoides* (E. Fourn.) Hitchc.; *Echinochloa walteri* (Pursh) A. Heller; *Echinochloa walteri* f. *brevisetata* Fernald & Griscom; *Echinochloa walteri* f. *laevigata* Wiegand; *Echinochloa walteri* f. *walteri*; *Echinochloa walteri* var. *laevigata* (Wiegand) S.R. Hill; *Oplismenus colonus* var. *walteri* (Kunth) E. Fourn.; *Oplismenus crusgalli* var. *hispidus* Alph. Wood; *Oplismenus hispidus* Alph. Wood; *Oplismenus longisetus* Kunth; *Oplismenus walteri* Kunth; *Orthopogon hispidus* Spreng.; *Panicum crusgalli* var. *hispidum* Elliott; *Panicum crusgalli* var. *hispidum* (Muhl.) Döll, nom. illeg., non *Panicum crusgalli* var. *hispidum* Elliott; *Panicum crusgalli* var. *walteri* (Pursh) Farw.; *Panicum hirtellum* Walter, nom. illeg., non *Panicum hirtellum* L.; *Panicum hispidum* Muhl., nom. illeg., non *Panicum hispidum* G. Forst.; *Panicum longisetum* Torr.; *Panicum walteri* Pursh; *Panicum walteri* Muhl., nom. illeg., non *Panicum walteri* Pursh; *Panicum walteri* Elliott, nom. illeg., non *Panicum walteri* Pursh)

Northern America, U.S., Florida. Perennial or annual, erect, caespitose, thick stems, ligules absent, smooth leaf blades flat and linear, sheaths with stiff hairs, panicles erect to slightly drooping, spikelets elliptic-ovate and bristly, lower glume attenuate, upper glume acuminate or shortly awned, lower lemmas usually awned, grains white to brown, grain used as meal or flour, a food for many kinds of birds, growing in clumps in and beside water or in farmlands, often in shallow water and brackish marshes, floodplains and low ground, seasonally flooded pool, riverbanks, wet places, shores and salt marshes borders, in both disturbed and undisturbed sites although not in rice fields, see *Flora Caroliniana, secundum ...* 72. 1788, *Flora Americae Septentrionalis; or, ...* 1: 66-67. 1814, *A Sketch of the Botany of South-Carolina and Georgia* 1: 114-115. 1816, *Descriptio uberior Graminum* 107-108. 1817, *American Journal of*

Science 4: 58. 1822, *Systema Vegetabilium, editio decima sexta* 1: 307. 1825, *Révision des Graminées* 1: 45. 1829, *A Class-book of Botany* 604. 1847, *The American Botanist and Florist* 2: 393. 1871, *Flora Brasiliensis* 2(2): 142. 1877 and *Catalogue of North American Plants North of Mexico (edition 2)* 21. 1900, *Flora of the Southeastern United States ...* 84. 1903, *Report of the Michigan Academy of Science, Arts and Letters* 6: 202. 1904, *Contributions from the United States National Herbarium* 12(6): 183-258, vii-xi. 1909, *Contr. U.S. Natl. Herb.* 22: 138. 1920, *Rhodora* 23(267): 62. 1921, *American Midland Naturalist* 9: 4. 1925, *Rhodora* 37(436): 137. 1935, *Manual of the Grasses of the West Indies* 1-439. 1936, *Castanea* 51(4): 277. 1986.

in English: long-awn cock's-spur grass, Walter's millet, coast cockspur, coast cockspur grass

Echinolaena Desv. = Chasechloa A. Camus

From the Greek *echinos* "a hedgehog" and *chlaena, chlaenion* "cloak."

About 6-8 species, South America. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Paspalinae, annual or perennial, erect, herbaceous, rhizomatous or stoloniferous, auricles absent, leaf blades linear to lanceolate, plants bisexual, inflorescence racemose terminal or axillary, 1 to several racemes on a central axis, paired spikelets lanceolate compressed laterally, 2 glumes subequal 3- to 9-nerved to 7- to 9-nerved, lower glume membranous to coriaceous armed with tubercle-based bristles, upper glume acute or acuminate, palea 2-nerved, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, in tropical dry forests, prairies, moist ground, open marshy places, linked to *Ichnanthus*, type *Echinolaena hirta* Desv., see *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 75. 1813, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 127-128. 1829 and *Bulletin de la Société Botanique de France* 95: 330-331. 1949, *Brittonia* 23(3): 293-324. 1971, *Flora Mesoamericana* 6: 302. 1994, *Darwiniana* 35(1-4): 29-36. 1994, J. Rosales et al., "Native colonizing species and degraded land restoration in La Gran Sabana, Venezuela." *Restoration Ecology* 5(2): 147-155. June 1997, *Gramíneas de Bolivia* 377-381. 1998, *Am. J. Bot.* 88: 1993-2012. 2001, *Ceiba* 42(1): 1-71. 2001[2002], *Contributions from the United States National Herbarium* 46: 224-225. 2003, *Am. J. Bot.* 90: 796-821. 2003, A.J.B. Santos et al., "Effects of fire on surface carbon, energy and water vapour fluxes over *campo sujo* savannah in central Brazil." *Functional Ecology* 17(6): 711-719. Dec 2003.

Species

***E. ecuadoriana* Filg.**

Ecuador. See *Nordic Journal of Botany* 14(4): 379, f. I-J. 1994.

***E. gracilis* Swallen**

Guatemala, Colombia. Perennial, delicate, branched, decumbent, rooting at the lower nodes, leaf blades hispid narrowly lanceolate, short solitary racemes subtended by a small oblong bract, spikelets lanceolate acuminate, glumes herbaceous, lower lemma membranous, see *Journal of the Washington Academy of Sciences* 23(10): 457. 1933.

***E. inflexa* (Poir.) Chase** (*Cenchrus inflexus* Poir.; *Cenchrus inflexus* R. Br., nom. illeg., non *Cenchrus inflexus* Poir.; *Cenchrus marginalis* Rudge; *Echinolaena hirta* Desv.; *Echinolaena scabra* Kunth; *Panicum echinolaena* Nees; *Panicum echinolaena* var. *ciliatum* Nees; *Panicum echinolaena* var. *glabrum* Nees ex Döll; *Panicum echinolaena* var. *pilosum* Döll; *Panicum echinolaena* var. *tomentellum* Döll; *Panicum echinolaena* var. *velutinum* Döll; *Panicum echinolaena* var. *villosum* Nees; *Panicum jacobinae* Steud.; *Panicum marginale* (Rudge) Hack.; *Pseudechinolaena inflexa* (Poir.) Pittier)

Brazil, Bolivia. Short-lived perennial, loosely tufted, erect, ascending from a decumbent base, sometimes scrambling, glabrous or hispid, stiff, stoloniferous or rhizomatous, leaf blades lanceolate pungent, racemes solitary terminal and 1-sided, a small bract subtending the raceme, spikelets lanceolate and hispid, lower glume coriaceous and acuminate, upper glume acuminate, upper lemma coriaceous, common in rocky areas, hillsides, see *Species Plantarum* 2: 1049. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Encyclopédie Méthodique, Botanique* 6: 50. 1804, *Plantarum Guianae Rariorum Icones et Descriptiones ...* 19, t. 25. 1805, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 75. 1813, *Nova Genera et Species Plantarum* 1: 118, t. 38. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 128. 1829, *Synopsis Plantarum Glumacearum* 1: 55. 1854, *Flora Brasiliensis* 2(2): 180. 1877 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 9. 1906, *Proceedings of the Biological Society of Washington* 24: 117. 1911, *Flora of Tropical Africa* 9: 494. 1919, *Boletín Técnico. Ministerio de Agricultura y Cria.* 41. 1937.

***E. minarum* (Nees) Pilg.** (*Ichnanthus lilloi* Hack.; *Ichnanthus minarum* (Nees) Döll; *Ichnanthus riparius* Swallen; *Ichnanthus sandiense* Mez; *Oplismenus minarum* Nees; *Oplismenus secundus* J. Presl; *Panicum minarum* (Nees) Steud.; *Panicum sandiense* Mez; *Panicum secundum* (J. Presl) Steud., nom. illeg., non *Panicum secundum* Trin.)

Northern Argentina, Bolivia, Brazil, Peru. Annual or perennial, branched, delicate, decumbent, geniculate, rooting at the lower nodes, leaf blades lanceolate acuminate, inflorescence racemose, spikelets paired, glumes herbaceous, lower glume acuminate or aristulate, upper glume acute, lower lemma membranous, upper lemma oblong, common in disturbed open places on poor soils, see *Essai d'une Nouvelle*

Agrostographie 56. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 268-269. 1829, *Reliquiae Haenkeanae* 1(4-5): 322. 1830, *Nomenclator Botanicus. Editio secunda* 2: 259, 263. 1842, *Flora Brasiliensis* 2(2): 294. 1877 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 288. 1914, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 124): 5. 1921, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 246. 1931, *Phytologia* 11(3): 150. 1964, *Syst. Bot.* 12: 213. 1987.

E. oplismenoides (Munro ex Döll) Stieber (*Ichnanthus oplismenoides* Munro ex Döll)

South America. See *Flora Brasiliensis* 2(2): 288. 1877 and *Systematic Botany* 12: 212. 1987.

E. standleyi (Hitchc.) Stieber (*Ichnanthus standleyi* Hitchc.)

America. See *Contributions from the United States National Herbarium* 24(9): 662. 1930, *Systematic Botany* 12: 214. 1987.

Echinopogon P. Beauv. = *Ancistragrostis*
S.T. Blake, *Hystericina* Steud.

From the Greek *echinos* “a hedgehog” and *pogon* “a beard,” alluding to the stiff awns or to the inflorescence.

About 7 species, Australia, New Zealand, New Guinea. Pooideae, Poodae, Aveneae, perennial or annual, herbaceous, rhizomatous or caespitose, scabrous, nodes glabrous, internodes solid or hollow, leaf sheath rounded, ligule short and membranous, auricles absent, leaves flat and narrow, plants bisexual, panicle spiciform to capitate, oblong to ovate spike-like panicle more or less bristly, spikelets more or less sessile and compressed laterally, spikelets with rachilla extension, 1 bisexual floret, densely crowded florets, 2 membranous glumes acute usually equal or subequal and keeled, almost leathery lemma bilobed or bidentate with stiff terminal or subapical awn, straight untwisted awn, hairy callus, palea minutely apically notched, 2 lodicules free and ciliate, stamens 3, ovary apex hairy or glabrous, stigmas 2, weeds, fodder grass, moderate forage value, growing in grassland, open woodland, related to *Calamagrostis*, type *Echinopogon ovatus* (Forster f.) P. Beauv., see *Essai d'une nouvelle Agrostographie*. 42, 148, 161. 1812, *Synopsis Plantarum Glumacearum* 1: 35, 37. 1855 [1853] and *Hooker's Icones Plantarum* 33: tab 3261. 1935, *Blumea, Supplement* 3: 56, f. 1. 1946, *Flora of Australia* 43: 12, 221, 272. 2002, *Restoration Ecology* 11(4): 489-503. Dec 2003, *Molecular Ecology* 13(6): 1455-1467. June 2004.

Species

E. caespitosus C.E. Hubbard

New South Wales, Queensland, New Guinea. Perennial, erect or rarely geniculate, loosely or densely tufted, leaves mostly basal, auricles absent, ligule obtuse or truncate, basal leaf sheaths keeled, leaves more or less scabrous to pilose, green panicle erect and contracted, chasmogamous spikelets, the flower spike is a short and dense head of bristly flowers, glumes lanceolate equal or subequal, lemma oblong to ovate, median awn, palea hyaline to membranous, anthers yellow, fruit ventrally compressed and longitudinally grooved, can cause “staggers” if grazed when young, often in disturbed areas, common in woodland, on sandstone and clay soils, forest or grassland, see *Hooker's Icones Plantarum* 33: tab 3261. 1935.

in English: tufted hedgehog-grass

E. caespitosus C.E. Hubb. var. ***caespitosus***

New South Wales, Queensland, New Guinea. Tufted, more or less scabrid, erect or nearly so, sometimes with loose small open tussock, spikelets often dark colored, glumes scaberulous, growing on hillsides in *Eucalyptus* forests, in dry sclerophyll forest.

in English: tufted hedgehog-grass

E. caespitosus C.E. Hubb. var. ***cunninghamii*** C.E. Hubb.

New South Wales. Glumes more or less pubescent to puberulous, see *Hooker's Icones Plantarum* 33: (tab 3261) 7. 1935.

E. cheelii C.E. Hubb. (after the Australian (b. England, Kent) botanist Edwin Cheel, 1872-1951 (d. Sydney), one of the contributors to *The Flora of the Northern Territory* by Alfred J. Ewart & Olive B. Davies. Melbourne 1917, with the Australian naturalist Sir John Burton Cleland (1878-1971) wrote Notes on Australian Fungi. no. IV. *Polyporus, Fomes and Hexagona*. 1918 and *Notes on the Early Stages of Development of *Lysurus gardneri*-L. australiensis*, etc. 1918; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 144. London 1994)

New South Wales, Victoria. Perennial, loosely caespitose or tufted, leaves mostly basal, auricles absent, ligule membranous, basal leaf sheaths not keeled, leaves dull pale green, green or whitish green erect or nodding panicle, spikelets densely crowded on short branches, glumes acute to acuminate, lemma with rigid awn, palea narrowly ovate and membranous, yellow anthers, hispid fruit ventrally compressed and longitudinally grooved, growing often in damp places in forest and grasslands, dry sclerophyll forest, open native scrub along water or river, see *Hooker's Icones Plantarum* 33: (t. 3261) 3. 1935.

in English: long-flower hedgehog-grass, long-flowered hedgehog-grass

E. intermedius C.E. Hubb.

New South Wales, Queensland. Perennial, green, solitary or loosely tufted, oblique or decumbent at base, rhizomatous with a slender rhizome, leaves mostly basal, auricles

absent, ligule membranous, basal leaf sheaths keeled, a stiffly erect green panicle fully exerted, spikelets densely crowded on short branches, glumes narrow-lanceolate with keel ciliate, lemma subulate, rigid and hispid to scabrous awn, palea with apical setae or without apical setae, anthers yellow or white, glabrous fruit ventrally compressed and longitudinally grooved, in damp sites, shady places, open habitats, on creek banks, see *Hooker's Icones Plantarum* 33: t. 3261. 1935.

in English: erect hedgehog-grass

E. mckiei C.E. Hubb. (for Ernest Norman McKie, 1882-1948)

New South Wales, northern and southern Tablelands. Perennial, rhizomatous and loosely tufted, slender rhizomes, auricles absent, ligule membranous and truncate, basal leaf sheaths keeled, leaf blade channelled, green panicle erect and dense, spikelets chasmogamous and spreading, glumes pubescent, lemma apically 2-toothed, awn rigid, palea narrowly oblong, anthers yellow, glabrous fruit dorsiventrally compressed and longitudinally grooved, found in soil of granite formation, in sclerophyll forest or grassland, see *Hooker's Icones Plantarum* 33: (t. 3261) 9. 1935.

E. nutans C.E. Hubb.

New South Wales, Queensland. Perennial, rhizomatous and loosely tufted, with a slender rhizome, auricles absent, ligule membranous, basal leaf sheaths keeled, inflorescence a green nodding and dense panicle, spikelets erect and spreading, cleistogamous spikelets, glumes membranous, lemma linear, awn rigid and scabrous, palea 2-keeled with keels wingless, anthers yellow, hispid fruit longitudinally grooved, in partial shade, useful for erosion control, in open habitats, sclerophyll forest or grassland, see *Hooker's Icones Plantarum* 33: (t. 3261) 4. 1935.

E. nutans C.E. Hubb. var. *major* C.E. Hubb.

New South Wales. Ovary glabrous, see *Hooker's Icones Plantarum* 33: (t. 3261) 5. 1935.

E. nutans C.E. Hubb. var. *nutans*

New South Wales, Queensland. Slender grass, weak, inflorescence nodding and pale green, ovary shortly hispid, in open habitats, sclerophyll forest or grassland, along roadsides.

in English: nodding hedgehog-grass.

E. ovatus (Forster f.) P. Beauv. (*Agrostis ovata* Forster f.; *Cinna ovata* (G. Forst.) Kunth; *Echinopogon aspera* Trinius; *Echinopogon novae-zelandiae* Gand.; *Echinopogon ovatus* Sieber; *Echinopogon ovatus* var. *pubiglumis* C.E. Hubb.; *Echinopogon purpurascens* Gand.; *Echinopogon sieberi* Steud.; *Echinopogon virens* Gand.; *Hystericina alopecuroides* Steud.)

Australia. Perennial or annual, solitary culms or tufted, decumbent and sometimes geniculate at base, geniculate-

erect or ascending from rhizome system, slender, loose green tufted grass with erect scabrid culms, slender creeping rhizome, auricles absent, leaf sheath appressed to culms, ligule membranous and not lobed or finely denticulate, basal leaf sheaths not keeled, leaves flat, green panicle ovoid to oblong, flower head like a ball, spikelets linear-oblong and chasmogamous, glumes acute or obtuse and ciliate on the keel, scabrous awns tipped red, awn stout and straight, palea narrowly ovate and hyaline to membranous, palea keels ciliate, anthers yellow, ovary apex hairy, hispid fruit longitudinally grooved, shade tolerant, shady bank of gully under eucalyptus, grassy shrubby areas, among stones, dry banks, hillsides in *Eucalyptus* forest, on clay habitats, waste places, wet sclerophyll woodland and by creeks, rhizomatous perennial in sandy soil, young plants poisonous to stock, can cause "staggers" if grazed when young, this grass similar to *Echinopogon caespitosus* C.E. Hubb., in New Zealand recorded pathogenic association with *Claviceps purpurea* (Fr.) Tulasne, see *Florulae Insularum Australium Prodrum* 40. 1786, *Essai d'une Nouvelle Agrostographie* 42, 148, 161, t. 9, f. 5. 1812, *Révision des Graminées* 1: 67. 1829, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853], *Indig. Grasses N.Z.* t. 13B 1878 and *Manual of the New Zealand Flora* 150. 1925, *Hooker's Icones Plantarum* 33: (t. 3261) 7-8. 1935.

in English: rough-bearded grass, forest hedgehog-grass, hedgehog-grass

E. phleoides C.E. Hubb.

Australia. Perennial, slender rhizome, auricles absent, ligule membranous and truncate, basal leaf sheaths scabrous or glabrous, leaves hispid, dense and cylindrical panicle not bristly, spikelets linear-oblong, glumes pubescent, lemma with a mucro, growing on limestone, see *Hooker's Icones Plantarum* 33: (t. 3261) 10. 1935.

Ectosperma Swallen = *Ectosperma* Vaucher (Algae), *Swallenia* Soderstr. & H.F. Decker

From the Greek *ektos* "outside, without, external things" and *sperma* "a seed," referring to the capsules.

Chloridoideae, Cynodonteae, type *Ectosperma alexandrae* Swallen, see Jean Pierre Étienne Vaucher, 1763-1841, *Histoire des conferves d'eau douce ...* Genève 1803, *Journal of the Washington Academy of Sciences* 40(1): 19-21. 1950, *Anatomy of the Monocotyledons, I: Gramineae*. 1960, *Recent Advances in Botany* 1: 133-145. 1961, *Madroño* 17(3): 88. 1963, *Fremontia* 7(2): 3-6. 1979, *Inventory of Rare and Endangered Vascular Plants of California*, 3rd edition. 1984, *Madroño* 48(3): 152-161. 2001, *Contributions from the United States National Herbarium* 41: 73, 220. 2001.

Ectrosia R. Br.

From the Greek *ektrosis* “miscarriage,” possibly referring to the fertile flowers in the spikelets.

About 10-14 species, tropical Australia, Papua New Guinea to the Philippines. Chloridoideae, Eragrostideae, or Cynodonteae, annual or perennial, herbaceous, caespitose, auricles absent, ligule a fringe of hairs, plants bisexual, inflorescence paniculate open to contracted, spikelets slender flattened laterally, 4 or more flowered, long straight rachilla internodes, lower florets bisexual, upper florets sterile and long-awned, 2 glumes usually very unequal, lemmas keeled and some lemmas aristulate or awned, palea not winged, 2 lodicules fleshy and glabrous, stamens 3, ovary glabrous, 2 white stigmas, open habitats, poor soils, depressions, sandy soils, closely related to *Heterachne*, type *Ectrosia leporina* R. Br., see Robert Brown (1773-1858), *Prodromus florae Novae Hollandiae* 185. 1810 and *Hooker's Icones Plantarum* 34: t. 3312. 1936, *University of Queensland Papers: Department of Botany* 1(18): 1-3. 1941 [also “Studies on Queensland Grasses, II” in *Univ. Queensland Dept. Biol. Pap.*], *Proceedings of the Royal Society of Queensland* 81: 20. 1969, *Blumea* 47(1): 157-204. 2002, *Flora of Australia* 44B: 426-439. 2005.

Species

E. agrostoides Benth.

Australia. Annual, inflorescence with capillary branchlets, see *Flora Australiensis: A Description ...* 7: 634. 1878.

E. anomala C.E. Hubb.

Australia. Annual, rachilla zig-zag, lemma 3-nerved, palea keels ciliolate or ciliate, see *Hooker's Icones Plantarum* 34: t. 3312, p. 14. 1936.

E. appressa S.T. Blake

Australia. Annual, see *University of Queensland Papers: Department of Botany* 1(18): 1. 1941.

E. blakei C.E. Hubb. (for S.T. Blake)

Australia. Vulnerable and endangered species, annual, see *Hooker's Icones Plantarum* 34: t. 3312. 1936.

E. confusa C.E. Hubb.

Australia. Annual, see *Hooker's Icones Plantarum* 34: t. 3312. 1936.

E. danesii Domin

Australia. Annual, see *Bibliotheca Botanica* 85: 406, t. 15, f. 3-4, 1915.

E. gulliveri F. Muell. (named for the brothers T.A. & Benjamin Gulliver, on instructions from Baron F. von Mueller, traveled aboard the Eagle and collected plants for him around Sweers Island, the Gilbert, Norman and Flinders Rivers in the Gulf of Carpentaria and at Caledon Bay)

Australia. Lemmas hairy and 5- to 9-nerved, see *Fragmenta Phytographiae Australiae* 8: 201. 1874 and *Bibliotheca Botanica* 85: 407, f. 94. 1915, *Hooker's Icones Plantarum* 34: t. 3312. 1936.

E. gulliveri F. Muell. var. *gulliveri*

Australia.

E. gulliveri F. Muell. var. *squarrulosa* (Domin) C.E. Hubb. (*Ectrosia squarrulosa* Domin; *Ectrosia squarrulosa* f. *minor* Domin; *Ectrosia squarrulosa* f. *normalis* Domin)

Australia. See *Bibliotheca Botanica* 85: 407-408. 1915, *Hooker's Icones Plantarum* 34: t. 3312, p. 16. 1936.

E. lasioclada (Merr.) S.T. Blake (*Ectrosia eragrostoides* Domin; *Eragrostis lasioclada* Merr.)

Australia, Queensland. Perennial or annual, lemma awns short, often in *Eragrostis* and *Ectrosiopsis*, see *Philippine Journal of Science* 1(Suppl.): 382. 1906, *Bibliotheca Botanica* 85: 407. 1915, *Reinwardtia* 2(2): 268. 1953, *Proceedings of the Royal Society of Queensland* 84(5): 65. 1973.

E. laxa S.T. Blake

Australia. Annual, sandy areas, see *University of Queensland Papers: Department of Botany* 1(18): 1. 1941.

E. leporina R. Br.

Australia, Queensland. Annual or perennial, tufted, spikes purplish to reddish, found in barren soil, see *Prodromus florae Novae Hollandiae* 186. 1810, *Flora Australiensis: A Description ...* 7: 634. 1878 and *Bibliotheca Botanica* 85: 409. 1915, *Hooker's Icones Plantarum* 34: t. 3312. 1936.

E. leporina R. Br. var. *leporina* (*Ectrosia leporina* var. *longiglumis* C.E. Hubb.; *Ectrosia leporina* var. *pauciflora* C.E. Hubb.; *Ectrosia leporina* var. *spadicea* (R. Br.) Domin; *Ectrosia spadicea* R. Br.)

Australia. Perennial, see *Prodromus Florae Novae Hollandiae* 186. 1810 and *Bibliotheca Botanica* 85: 409. 1915.

E. leporina R. Br. var. *micrantha* Benth.

Australia. Annual, see *Flora Australiensis: A Description ...* 7: 634. 1878 and *Man. Grasses New Guinea* 74, t. 26. 1969.

E. nervilemma (B.K. Simon) Nightingale (*Planichloa nervilemma* B.K. Simon)

Australia. Ephemeral, see *Austrobaileya* 2: 212-215. 1986, *Fl. Australia* 44B: 461. 2002.

E. ovata Nightingale

Australia. Annual, see *Fl. Australia* 43: 376. 2002.

E. scabrida C.E. Hubb.

Australia. Annual, see *Hooker's Icones Plantarum* 34: t. 3312. 1936.

E. schultzei Benth.

Australia. Annual or perennial, see *Flora Australiensis: A Description ...* 7: 633. 1878 and *Hooker's Icones Plantarum* 34: t. 3312. 1936, *Fl. Kimberley Region* 1134, f. 327C. 1992.

E. schultzi Benth. var. *annua* C.E. Hubb.

Australia. Annual or short-lived perennial, see *Hooker's Icones Plantarum* 34: t. 3312, p. 8. 1936.

E. schultzi Benth. var. *schultzi*

Australia. Semiaquatic.

**Ectrosiopsis (Ohwi) Ohwi ex Jansen =
Ectrosiopsis (Ohwi) Jansen**

Resembling the genus *Ectrosia* R. Br.

One species, Australia, New Guinea, Caroline Islands. Chloridoideae, Eragrostideae, or Cynodonteae, perennial, herbaceous, unarmed, unbranched, caespitose, leaves mostly basal, auricles absent, ligule a fringe of hairs, plants bisexual, without cleistogamous spikelets, inflorescence a contracted panicle, spikelets flattened and linear, hidden cleistogenes, 2 deciduous glumes very unequal, lemmas lightly keeled, awn present or absent, palea with wingless keels, 2 free and fleshy lodicules, stamens 3, found in sandy areas, depressions, damp sites, damp sandy areas, open habitats, related to *Steirachne* and *Eragrostis*, type *Ectrosiopsis subtriflora* (Ohwi) Ohwi, see *Bulletin of the Tokyo Science Museum* 18: 1. 1947, *Acta Botanica Neerlandica* 1(3): 474. 1952, *Reinwardtia* 2: 267. 1953, *Am. J. Bot.* 50: 633. 1963, *Blumea* 47(1): 157-204. 2002, *Flora of Australia* 44B: 428. 2005.

Species

E. lasioclada (Merr.) Jansen (*Ectrosia eragrostoides* Domin; *Ectrosia lasioclada* (Merr.) S.T. Blake; *Ectrosiopsis aruensis* Jansen; *Ectrosiopsis curvifolia* Jansen; *Ectrosiopsis subaristata* (Chase) Jansen; *Eragrostis lasioclada* Merr.; *Eragrostis subaristata* Chase)

Southeast Asia, Indonesia. See *Philippine Journal of Science* 1(Suppl.): 382. 1906, *Bibliotheca Botanica* 85: 407. 1915, *Journal of the Arnold Arboretum* 20: 305. 1939, *Acta Botanica Neerlandica* 1(3): 474, f. 2. 1952, *Reinwardtia* 2(2): 268-269. 1953, *Proceedings of the Royal Society of Queensland* 84(5): 65. 1973.

Ehrhartia Benth.

Orthographic variant of *Ehrharta* Thunb., see G. Bentham, in *Journal of the Linnean Society. Botany*. 19: 56. 1881.

Ehrharta Thunberg = *Diplax* Sol. ex Bennett, *Microlaena* R. Br., *Petriella* Curzi (Fungi), *Petriella* Zotov, *Tetrarrhena* R. Br., *Trochera* Rich., *Zotovia* Edgar & Connor

After the German (Swiss-born) botanist Jakob Friedrich Ehrhart, 1742-1795, naturalist, 1773-1776 pupil of

Linnaeus, from 1780 to 1795 government botanist at Herrenhausen, author of *Beiträge zur Naturkunde ... Hannover und Osnabrück 1787-1792*. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 499. 1965; F.A. Stafleu & R.S. Cowan, *Taxonomic literature*. 1: 731-734. Utrecht 1976; Th. Krok (1834-1921), *Bibliotheca Botanica Suecana*. Uppsala, Stockholm [1925]; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; *Kongl. Vetenskaps Academiens Handlingar*. 40: 216-217, pl. 8. 1779; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 113. 1972; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971.

About 25-38 species, mostly tropical and southern Africa, Indonesia to New Zealand. Bambusoideae, Oryzodae, Ehrharteae, or Ehrhartoideae, Ehrharteae, annual and perennial, tufted, wiry, stoloniferous or rhizomatous, stems erect or scandent or decumbent, herbaceous or woody and persistent, leaf blades flat or rolled, auricles present or absent, short ligule truncate and membranous or a ring of hairs, leaves flat and linear to linear-lanceolate, plants bisexual, cleistogamous or chasmogamous, inflorescence usually a narrow panicle or rarely a raceme, spikelets pedicellate and solitary, spikelets 3-flowered, spikelets with 1 bisexual flower above 2 sterile ones, 2 glumes unequal and keeled, sterile lemmas awnless or terminal awned and hairy or glabrous, fertile lemma keeled and sometimes with earlike appendages at the base, palea narrow 2-nerved, 2 lodicules free and toothed, stamens 1 to 6, ovary glabrous without the apical appendage, 2 stigmas, cleistogenes occur in *Ehrharta stipoides* Labill. (*Microlaena stipoides* (Labill.) R. Br.), weed species, cultivated fodder, sand binder, useful for erosion control, larval food hosts for the butterflies, butterfly larvae have been found on these plants within South Australia, shade species or species of open habitats, habitat variable, wet places, native pasture grasses, coastal sand dunes, forest glades, type *Ehrharta capensis* Thunb., see *Species Plantarum* 1: 63-66. 1753, *Kongl. Vetenskaps Academiens Handlingar* 40: 216-217, pl. 8. 1779, *Observations sur la Physique, sur L'Histoire Naturelle et sur les Arts*. 13: 225. 1779, *Prodromus Florae Novae Hollandiae* 209-210. 1810, *Plantae Javanicae Rariores* 11. 1838, *Annales des Sciences Naturelles; Botanique, sér. 3* 2: 116. 1844 and *Lexicon* 364. 1903, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 235. 1943, *Nucleus* 3: 81-110. 1960, *Botanical Gazette* 124: 264-270. 1963, *New Zealand J. of Botany* 15: 531-534. 1977, *Blumea* 28: 181-194. 1982, K.W. Hilu & K. Wright, "Systematics of Gramineae: a cluster analysis study." *Taxon* 31: 9-36. 1982, *Grass Systematics and Evolution* 310-324. 1987, *Bothalia* 18: 114-119. 1988, *Bothalia* 19: 125-132. 1989 [Chromosome studies on African plants. 9. Chromosome numbers in *Ehrharta* (Poaceae: Ehrharteae).], L.G. Clark, W. Zhang

& J.F. Wendel, "A phylogeny of the grass family (Poaceae) based on *ndhF* sequence data." *Systematic Botany* 20: 436-460. 1995, *Flora of Ethiopia and Eritrea* 7: 10, 12. 1995, R.J. Soreng & J.I. Davis, "Phylogenetics and character evolution in the grass family (Poaceae): Simultaneous analysis of morphological and chloroplast DNA restriction site character sets." *Botanical Review* 64: 1-85. 1998, *New Zealand Journal of Botany* 36: 569, 571-573, f. 4. 1998, *Am. J. Bot.* 86: 1735-1741. 1999, *Am. J. Bot.* 87: 96-107. 2000, *Flora of New Zealand* 5: 40-44. 2000, *Contributions from the United States National Herbarium* 39: 56, 116. 2000, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang & De-Yuan Hong, "A phylogeny of the rice tribe Oryzaceae (Poaceae) based on *matK* sequence data." *Am. J. Bot.* 89: 1967-1972. 2002, G.A. Verboom, H.P. Linder & W.D. Stock, "Phylogenetics of the grass genus *Ehrharta*: evidence for radiation in the summer-arid zone of the South African Cape." *Evolution* 57: 1008-1021. 2003, G. Anthony Verboom, H. Peter Linder & William D. Stock, "Testing the adaptive nature of radiation: growth form and life history divergence in the African grass genus *Ehrharta* (Poaceae: Ehrhartoideae)." *Am. J. Bot.* 91: 1364-1370. 2004, Michael J. Sanderson, Jeffrey L. Thorne, Niklas Wikström & Kåre Bremer, "Molecular evidence on plant divergence times." *Am. J. Bot.* 91: 1656-1665. 2004, *Restoration Ecology* 12(1): 44-51. Mar 2004, *Molecular Ecology Notes* 4(2): 262-264. June 2004, *Austral. Ecology* 30(1): 74-78. Feb 2005, *Plant Pathology* 54(2): 161-168. Apr 2005.

Species

E. barbinodis Nees ex Trin. (*Ehrharta barbinodis* Nees)

South Africa. Perennial, tufted, erect, shrubby, straggling, tussocky, branched, woody, short leaves with sharp points, sterile lemmas hairy, palatable, usually in rocky places, heavily grazed areas, hillsides, among shrubs, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 66. 1839, *Florae Africae Australioris Illustrationes Monographicae* 215. 1841 and *Bothalia* 19: 125-132. 1989.

in South Africa: kruppelgras

E. brevifolia Schrad.

South Africa. Annual, glaucous, see *Göttingische gelehrte Anzeigen (unter der Aufsicht der Königl. Gesellschaft der Wissenschaften)* 3: 2077. 1821.

E. brevifolia Schrad. var. *brevifolia*

South Africa. Annual, erect, glaucous to blue-green, spikelets terete, sterile lemmas rounded, in sandy soils.

E. brevifolia Schrad. var. *cuspidata* Nees

South Africa. Annual, erect, reddish, spikelets compressed, sterile lemmas aristate, in sandy soils, hillsides, dry riverbeds, see *Florae Africae Australioris Illustrationes Monographicae* 215. 1841.

E. bulbosa Sm.

South Africa. Tufted, rhizomatous, bulblike swelling, lowest culm node bulbous, sterile lemmas corrugated, see Sir James Edward Smith (1759-1828), *Plantarum icones hactenus ineditae*. t. 33. Londini 1789-1791.

E. calycina J.E. Smith (*Aira capensis* L.f.; *Ehrharta adscendens* Schrad.; *Ehrharta auriculata* Steud.; *Ehrharta geniculata* (Thunb.) Thunb.; *Ehrharta laxiflora* Schrad.; *Ehrharta ovata* Nees; *Ehrharta paniculata* Sw. ex Poir.; *Ehrharta undulata* Nees ex Trin.; *Ehrharta undulata* var. *calycina* (Sm.) Nees; *Melica festucoides* Licht. ex Trin., nom. illeg., non *Melica festucoides* Licht. ex Roem. & Schult.; *Melica geniculata* Thunb.; *Trochera calycina* (Sm.) P. Beauv.)

Africa, South Africa. Perennial bunchgrass, rarely annual, plant habit and growth form variable, erect, prostrate, straggling, tufted, decumbent culm bases, sometimes or rarely stoloniferous, often with a creeping branched rhizome, roots fibrous and shallow, purple swollen nodes, leaf sheath keeled, short ligule membranous, green to red-green leaves flat and finely toothed, auricles ciliate, flowering stem erect or loosely arching with maturity, purple-red branched panicle loose and narrow, spikelets oblong, sterile florets subequal, sterile florets subequal, glumes subequal, upper glume glabrous, sterile lemmas with long soft hairs or shortly bearded, dark grains, seeds profusely, reproduces by seed and rhizomes, aggressive and highly invasive weed, a rapidly spreading pest naturalized elsewhere, cultivated fodder, highly palatable, useful pasture species on soils of low fertility, grazed by domestic animals, range reseeding and revegetation of disturbed areas, soil stabilization uses, useful to prevent soil erosion and for sand stabilisation, drought and frost resistant, susceptible to heavy grazing, common on the coastal sand dunes and sandy places, shady places, stabilized sand dunes, among shrubs, rocky places, a widespread weed of roadsides and bushland on sandy soils, wildlands, heavily grazed veld, see *Supplementum Plantarum* 108. 1781 [1782], *Plantarum Icones Hactenus Ineditae* pl. 33. Londini 1789-1791, Carl Peter Thunberg (1743-1828) *Prodromus Plantarum Capensium*: quas in promontorio Bonae Spei Africes, annis 1772-1775 collegit... 21. Upsaliae 1794-1800, *Flora Indica ... nec non Prodromus Florae Capensis* 192. 1800, *Encyclopédie Méthodique. Botanique ... Supplément* 2: 542. 1811, *Essai d'une Nouvelle Agrostographie* 62, t. 12, f. 4. 1812, *Göttingische gelehrte Anzeigen ...* 3: 2077-2078. 1821, *Flora* 12: 491. 1829, *Linnaea* 7(3): 336. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 70. 1839, *Florae Africae Australioris Illustrationes Monographicae* 1: 209. 1841 and *Restoration Ecology* 6(1): 83-93. Mar 1998, Martin A. Smith et al., "Comparative seed germination ecology of *Austrostipa compressa* and

Ehrharta calycina (Poaceae) in a Western Australian *Bankisia* woodland." *Austral. Ecology* 24(1): 35-42. Feb 1999, *Restoration Ecology* 8(2): 196-208. June 2000, *Austral. Ecology* 25(5): 487-496. Oct 2000, *Austral. Ecology* 25(6): 588-599. Dec 2000, *Ecological Management and Restoration* 3(1): 28-36. Apr 2002, *Functional Ecology* 16(6): 705-713. Dec 2002, *Diversity & Distributions* 9(6): 469-483. Nov 2003, *Restoration Ecology* 12(1): 44-51. Mar 2004, I.G. Pascoe et al., "Ustilospores of *Tilletia ehrhartae*, a smut of *Ehrharta calycina*, are common contaminants of Australian wheat grain, and a potential source of confusion with *Tilletia indica*, the cause of Karnal bunt of wheat." *Plant Pathology* 54(2): 161-168. Apr 2005.

in English: common ehrharta, ehrharta, perennial veld grass, perennial veldt grass, veldt grass

in South Africa: gewone ehrharta, polgras

E. capensis Thunb. (*Ehrharta cartilaginea* Sm.; *Ehrharta mnemateia* L.f.; *Ehrharta nutans* Lam.)

Southern Africa. Perennial, blue-green to glaucous to dark green, erect, tufted, rhizomatous, different growth forms, bulbous rootstock, mass of lateral roots, lowest culm node bulbous, leaves sinuate along the edges, spikelets borne on long and thin pedicels, sterile lemmas corrugated, leaves very palatable, good quality grass, the common name derived from the small tubers resembling wheat kernels originating just above the root system, baboons often eat these nutgrass-like structures, usually found in the rocky soil, see *Kongl. Vetenskaps Academiens Handlingar* 40: 216-217, pl. 8. 1779, *Plantarum Icones Hactenus Ineditae* pl. 33. 1790 and G.A. Verboom, W.D. Stock & H.P. Linder, "Determinants of postfire flowering in the geophytic grass *Ehrharta capensis*." *Functional Ecology* 16(6): 705-713. Dec 2002.

in South Africa: bobbejaankoring

E. delicatula Stapf

South Africa. Annual, leafy, awnless, sterile lemmas corrugated, earlike appendages at the base of the second sterile lemma, growing among shrubs, rock outcrops, arid areas or damp places, stream beds, between rocks, see *Bulletin of Miscellaneous Information Kew* 1897: 288. 1897.

E. dura Nees ex Trin. (*Ehrharta dura* Nees)

South Africa. Perennial, tufted, rhizomatous, erect, basal leaf sheaths hard, reddish leaf sheath, leaves lanceolate, weed species, growing in open habitats, moist areas, sandstone, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 59. 1839.

in South Africa: brandgras

E. eburnea Gibbs-Russ.

South Africa, Cape Province. Tufted, lowest culm nodes bulbous, basal sheaths purplish, sterile lemmas hairy on the keel, rare species, see *Bothalia* 15(1-2): 145. 1984.

E. erecta Lamarck (*Ehrharta panicea* Sm.; *Ehrharta paniciformis* Nees ex Trin.; *Panicum deflexum* Guss., nom. illeg., non *Panicum deflexum* Schumach.; *Trochera panicea* (Sm.) Kuntze; *Trochera panicea* Baill.)

South Africa. Perennial, variable, weakly or loosely tufted, slender, erect or ascending from a decumbent base, sometimes rooting at the lower nodes, sometimes sprawling, culms branched, creeping rhizome, annual-like rootstock, auricles ciliate, leaf sheaths glabrous or shortly hairy, membranous ligule lacerate and glabrous, leaves flat and soft, open or contracted panicle erect or nodding, spikelets pale green, glumes unequal, sterile lemmas glabrous and unawned, stamens 6, invasive weed naturalized elsewhere, a supply of food for the adult butterflies, in South Australia larval food hosts for the butterflies, a widespread weed in moist places, shady locations, waste places, along roadsides, disturbed creeklines and grazed woodlands, coastal dunes and sandy soils, stabilized sand dunes, see *Encyclopédie Méthodique, Botanique* 2: 347. 1786, *Plantarum Icones Hactenus Ineditae* 9. 1789, Michele Tenore (1780-1861), *Flora Napolitana* 5: 320. Napoli 1835-1836[-1838] *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 64. 1839, *Revisio Generum Plantarum* 2: 795. 1891, *Histoire des Plantes* 12: 171, f. 313, f. 314. 1893.

in English: veld grass, Lamarck's ehrharta, upright veldt grass, panic veldt grass, panic veldt grass, perennial grass

in southern Africa: kholane, kgalane, kgolane (Sotho)

E. erecta Lamarck var. ***abyssinica*** (Hochst.) Pilg. (*Ehrharta abyssinica* Hochst.)

Tropical Africa, southern Arabia, Ethiopia. Perennial, loosely tufted, rambling, slender, straggling, ascending or erect, leaf blades flat, open or contracted panicle, spikelets oblong, lowest spikelets reduced to lemmas, glumes unequal, upper glume ovate-oblong, lower glume ovate, fertile lemma lanceolate, sterile lemmas lanceolate and awnless, moist soils, disturbed areas, rocky shaded places, forest margins, cliffs, mountain gullies, plantations, see *Flora* 38: 193. 1855 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 508. 1926.

E. erecta Lamarck var. ***erecta***

South Africa, India. Perennial or annual, tufted, lax, prostrate, stoloniferous, sterile lemma rounded, growing in shady moist places, among shrubs and trees, along roadsides, ditches.

E. erecta Lamarck var. ***natalensis*** Stapf

South Africa. Perennial or annual, tufted, lax or loose, prostrate, leaf blade flexuous, ligule a pointed membrane,

narrow panicle with slender racemes, upper sterile lemma often bearded, growing in shady moist places, edge of dunes, among shrubs, shade of forest edge, along stream banks, see *Flora Capensis* 7: 671. 1900.

in English: veld grass

in southern Africa: kholane, kgalane, kgolane (Sotho)

E. longiflora Smith (*Ehrharta aristata* Thunb.; *Ehrharta banksii* Gmel.; *Ehrharta eckloniana* Schrad. ex Schult. & Schult.f.; *Ehrharta longiflora* Ecklon ex Schult. & Schult.; *Ehrharta longiflora* var. *eckloniana* (Schrad. ex Schult. & Schult.f.) Nees; *Ehrharta longiflora* var. *longisetata* (Schrad.) Nees; *Ehrharta longiflora* var. *urvilleana* (Kunth) Nees; *Ehrharta longisetata* Schrad.; *Ehrharta urvilleana* Kunth) (for the English (b. London) botanist Sir Joseph Banks, 1743-1820 (d. Spring Grove, Isleworth, Middx), patron of science, plant collector, naturalist, explorer and traveler, at 9 years of age went to Harrow and at thirteen to Eton (he left at eighteen), 1766 Fellow of the Royal Society, in 1766 sailed in the *Niger* to Labrador and Newfoundland (with his friend Captain Constantine John Phipps, 1744-1792, later Lord Mulgrave, and under the command of Sir Thomas Adams), in 1768 accompanied Captain James Cook's first voyage to "New Holland" (Banks took with him the medical botanist Daniel Carl Solander (1733-82), the naturalist Herman Sporing, the botanical artist Sydney Parkinson (1745-1771, d. Indian Ocean) and the draftsman Alexander Buchan), from 1778 to 1820 President of the Royal Society, in 1779 married Lady Dorothea Hugessen (1758-1828), baronet in 1781, in 1788 Fellow of the Linnean Society, author of *An Account of the Voyages ... in the Southern Hemisphere*. London 1773, co-author with Daniel Solander of *Illustrations of Australian Plants Collected in 1770 during Captain Cook's Voyage Round the World in HMS "Endeavour"*. London 1900-1905; see George A. Foote, in *D.S.B. (or Dictionary of Scientific Biography*. Editor in Chief Charles Coulston Gillispie) 1: 433-437. New York 1981; Harold B. Carter, *Sir Joseph Banks (1743-1820): A Guide to Biographical and Bibliographical Sources*. Winchester 1987; John Cawte Beaglehole, editor, *The "Endeavour" Journals of Joseph Banks 1768-1771*. Sydney 1962, *The Journals of Captain James Cook on His Voyages of Discovery*. Edited by J.C. Beaglehole, etc. 1955, and *The Voyage of the Endeavour 1768-1771*. Cambridge 1968; Thomas Pennant (1726-1798), *A Tour in Scotland and Voyage to the Hebrides*. London 1774-76; J.H. Barnhart, *Biographical notes upon botanists*. 1: 111. 1965; A. Kaeppeler, *Cook's Voyages Artifacts in Leningrad, Berne and Florence Museums*. Honolulu 1978; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; Sydney Parkinson, *A Journal of a Voyage to the South Seas, in His Majesty's Ship, the Endeavour*. London 1773; Carl Linnaeus (Linné) (filius), 1741-1783, *Supplementum Plantarum*. 15, 126. Brunsvigae [Braunschweig] 1782; A.G.E. Jones, *Ships employed in the South*

Seas Trade 1775-1861. Registrar General of Shipping and Seamen: Transcripts of Registers of Shipping 1787-1862. [Canberra 1986] and *Ships Employed in the South Seas Trade 1775-1849*. Burwood, Victoria [1992]; Hans Walter Lack & Victoria Ibáñez, "Recording color in late eighteenth century botanical drawings: Sydney Parkinson, Ferdinand Bauer & Thaddäus Haenke." *Curtis's Botanical Magazine*. vol. 14(2): 87-100. May 1997; John Dunmore, *Who's Who in Pacific Navigation*. University of Hawaii Press, Honolulu 1991)

South Africa. Annual, lax, tufted, erect or geniculately ascending, often decumbent at the base, leafy, often with secondary inflorescences developing from the lower nodes, auricles ciliate, ligule truncate or lacerate, leaf sheath keeled and submembranous, leaves flat and soft, terminal panicle open and narrow, spikelets often nodding, glumes persistent and unequal, sterile lemmas scabrid and bearded at the base, awns on the lemmas, ornamental, weed, cover plant, growing on sandy moist soils, waste places, riverbeds, in the shade of shrubs and trees, wet places, in roadside drainage ditches, in disturbed areas, along roadsides, gardens, see *Plantarum Icones Hactenus Ineditae* t. 32. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 549. 1791, *Prodromus Plantarum Capensium: quas in promontorio Bonae Spei Africes, annis 1772-1775 collegit...* 66. 1794-1800, *Göttingische gelehrte Anzeigen ...* 3: 2078. 1821, *Systema Vegetabilium* 7(2): 1376. 1830, *Révision des Graminées* 2: 189, t. 6. 1830, *Florae Africae Australioris Illustrationes Monographicae* 220. 1841 and Marsusi Narhardiyati & Winston J. Bailey, "Biology and natural enemies of the leafhopper *Balclutha incisa* (Matsumura) (Hemiptera: Cicadellidae: Deltocephalinae) in southwestern Australia." *Australian Journal of Entomology* 44(2): 104-109. May 2005.

in English: annual veldt grass, oat-seed grass, annual veld grass

E. longifolia Schrad.

South Africa, Cape Province. Annual or perennial, rare, erect, vigorous, tufted, rhizomatous, bulbous bases, lowest culm node bulbous, useful for erosion control, common on sandy soils, along roadsides, see *Göttingische gelehrte Anzeigen ...* 3: 2077. 1821.

in English: annual veldt grass, annual veldt grass

E. longigluma C.E. Hubb.

Southern Africa. Perennial, rhizomatous, ligule a short membrane, narrow panicle with slender racemes, glumes longer than the florets, sterile lemmas awnless, earlike appendages at the base of the second sterile lemma, probably palatable, unknown grazing value, found in grassland, on mountain slopes, moist places, mountain grassland, high mountain grassveld, see *Bulletin of Miscellaneous Information Kew* 1933: 501. 1933.

E. melicoides Thunb. (*Ehrharta melicoides* Sw. ex Trin.; *Ehrharta melicoides* Willd. ex Nees)

Southern Africa. Perennial, rhizomatous, tufted, compact, dense, spreading, tussocky, culms not swollen, thick old leaf sheaths, thickened runners at the base of the plant, root system well developed, leaves basal, inflorescence an open plume with a slender central axis, individual spikelets attached to the central axis by means of long slender pedicels, sterile lemmas awnless, earlike appendages at the base of the second sterile lemma, palatable, grazable, usually in rocky places, burned areas, veld, in overgrazed grassland, see *Prodromus Plantarum Capensium* ... 192. 1800.

in Afrikaans: haasgras

in South Africa: soetbewertjiekweek

E. microlaena Nees ex Trin. (*Ehrharta microlaena* Nees)

South Africa. Perennial, rare, erect, tufted, basal leaf sheaths pale, leaf blades reduced, sterile lemmas awned, in mountain fynbos, damp places, streamsides, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 59. 1839.

E. ottonis Kunth ex Nees

South Africa. Rhizomatous, tufted, lowest culm node bulbous, usually in disturbed areas, see *Florae Africae Australioris Illustrationes Monographicae* 201. 1841.

E. pusilla Nees ex Trin. (*Ehrharta pusilla* Nees)

South Africa. Annual, glaucous, leaf sheaths inflated, earlike appendages at the base of the second sterile lemma, grows on sandy soils, dry stream beds, moist places, sandy riverbeds, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 68. 1839.

E. ramosa (Thunb.) Thunb. (*Ehrharta aphylla* Schrad.; *Ehrharta ramosa* (Thunb.) Sw. ex Trin.; *Ehrharta ramosa* Smith ex Steud.; *Ehrharta ramosa* subsp. *aphylla* (Schrad.) Gibbs-Russ.; *Ehrharta ramosa* subsp. *ramosa*; *Ehrharta ramosa* var. *aphylla* (Schrad.) E. Gluckman; *Ehrharta ramosa* var. *mucronata* Nees; *Ehrharta ramosa* var. *ramosa*; *Ehrharta ramosa* var. *tuberosa* Nees; *Melica ramosa* Thunb.)

South Africa. Perennial, rhizomatous to strongly rhizomatous, straggling culms, see *Prodromus Plantarum Capensium*, ... 21. 1794, *Prodromus Plantarum Capensium*, ... 192. 1800, *Flora* 12: 491. 1829.

E. ramosa (Thunb.) Thunb. subsp. *aphylla* (Schrad.) Gibbs-Russ. (*Ehrharta aphylla* Schrad.; *Ehrharta ramosa* var. *aphylla* (Schrad.) E. Gluckman)

South Africa. Perennial, robust, woody, shrubby, rhizomatous, inflorescence paniculate open, glumes longer than

sterile lemmas, sterile lemmas usually mucronate, earlike appendages at the base of the second sterile lemma, growing between rocks, in dry areas, see *Journal of South African Botany* 8(4): 273. 1942, *Bothalia* 19(2): 191. 1989.

E. ramosa (Thunb.) Thunb. subsp. *ramosa*

South Africa. Perennial, robust, woody, shrubby, rhizomatous, leafless, inflorescence paniculate contracted, glumes shorter than sterile lemmas, sterile lemmas usually mucronate, earlike appendages at the base of the second sterile lemma, growing between rocks, stony places, sandy soils, in dry areas.

E. rehmannii Stapf (after the Austrian-Polish plant collector and botanist Dr. Anton(i) Rehmman (Rehman), 1840-1917, geographer, traveler, plant collector in South Africa (1875-1877 and 1879-1880), author of "Geo-botaniczne stosunki Poludniowej Afryki." (Phytogeographical conditions in South Africa, or The geo-botanical relationship of South Africa) *Akad. Umiej. Krakowie Pam. Wyd. Mat. - Przyrod.* 5: 28-96. 1879, Abstracts in *Bot. Zbl.* 1880: 1119-1128, *Einige Notizen über die Vegetation der nördlichen Gestade des Schwarzen Meeres.* Brünn 1871 [1872]; see H.N. Dixon & A. Gepp, "Rehmann's South African mosses." *Kew Bull.* 1923: 193-238. 1923; J.H. Barnhart, *Biographical notes upon botanists.* 3: 139. Boston 1965; Stafleu & Cowan, *Taxonomic literature.* 4: 655-656. 1983; G. Murray, *History of the Collections Contained in the Natural History Departments of the British Museum.* 1: 176. 1904; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 328. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 230. 1964; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa.* 292-294. 1981; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. 1993)

Southern Africa. See *Bulletin of Miscellaneous Information Kew* 1897: 288. 1897 and *Flora Capensis* 7: 676-677. 1900, *Bothalia* 19(2): 193-194. 1989.

E. rehmannii Stapf subsp. *filiformis* (Nees) Gibbs-Russ. (*Ehrharta rehmannii* subsp. *filiformis* (Stapf) Gibbs.-Russ.; *Ehrharta rehmannii* var. *filiformis* Stapf)

South Africa. Perennial, tufted, erect or straggling, open raceme with several spikelets, glumes membranous, sterile lemmas glabrous, earlike appendages at the base of the second sterile lemma, growing in moist places, streamsides, between rocks, see *Flora Capensis* 7: 677. 1900, *Bothalia* 19(2): 193. 1989.

E. rehmannii Stapf subsp. *rehmannii*

South Africa. Perennial, tufted, erect, inflorescence racemose or paniculate, glumes membranous, sterile lemmas hairy to scabrous, earlike appendages at the base of the second sterile lemma, grows in mountain slopes, rocky areas, stream banks, shady places, under trees.

E. rehmannii Stapf subsp. *subspicata* (Stapf) Gibbs-Russ. (*Ehrharta subspicata* Stapf)

South Africa. Perennial, rare, erect, tufted, inflorescence narrowly racemose, appressed spikelets, glumes more or less coriaceous, earlike appendages at the base of the second sterile lemma, growing in moist places, sandy soils, see *Flora Capensis* 7: 676. 1900, *Bothalia* 19(2): 194. 1989.

E. rupestris Nees ex Trin. (*Ehrharta rupestris* Nees, nom. illeg., non *Ehrharta rupestris* Nees ex Trin.; *Trochera rupestris* (Nees ex Trin.) Kuntze)

South Africa. Perennial, rhizomatous, see *Revisio Generum Plantarum* 795. 1891.

E. rupestris Nees ex Trin. subsp. *dodii* (Stapf) Gibbs-Russ. (*Ehrharta dodii* Stapf) (named for Anthony Hurt Woolley-Dod, 1861-1948, with the South African (British born, Nottingham) businessman and botanist Harry Bolus, 1834-1911, wrote *A List of the Flowering Plants and Ferns of the Cape Peninsula*. 1903; see Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 378-379. Cape Town 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 752. London 1994; J.H. Barnhart, *Biographical notes upon botanists*. 3: 514. Boston 1965; Frans A. Stafleu & Richard S. Cowan, *Taxonomic literature*. 7: 428-429. 1988)

South Africa. Perennial, rare, rhizomatous, herbaceous, leaf blades erect, inflorescence racemose, sterile lemma glume-like, growing in wet places, among rocks, mountains, see *Flora Capensis* 7: 670. 1900, *Bothalia* 15: 150. 1984.

E. rupestris Nees ex Trin. subsp. *rupestris*

South Africa. Perennial, rare, rhizomatous, leaf blades folded and distichous, inflorescence racemose, sterile lemma glume-like, growing among rocks, mountain slopes.

E. rupestris Nees ex Trin. subsp. *tricostata* (Stapf) Gibbs-Russ. (*Ehrharta tricostata* Stapf)

South Africa. Perennial, shrubby to suffrutescent, rhizomatous, inflorescence racemose, spikelets oblong, sterile lemma glume-like, common on wet areas, on mountain slopes, see *Flora Capensis* 7: 669. 1900, *Bothalia* 15: 150. 1984.

E. setacea Nees

South Africa. Perennial, culms dimorphic, rhizomatous, inflorescence racemose, flowering culms decumbent, see *Bothalia* 15: 151. 1984.

E. setacea Nees subsp. *disticha* Gibbs-Russ.

South Africa. Perennial, rare, suffrutescent or shrubby, erect, rhizomatous, leaf blades distichous, inflorescence racemose, sterile lemma glume-like, common on dry places, rocky ground, mountain slopes.

E. setacea Nees subsp. *scabra* (Stapf) Gibbs-Russ. (*Ehrharta setacea* var. *scabra* Stapf)

South Africa. Perennial, rare, suffrutescent or shrubby, erect, rhizomatous, stoloniferous, leaf blades scabrous, inflorescence racemose, sterile lemma short and glume-like, growing among rocks, disturbed areas, seepage sites, mountain, see *Flora Capensis* 7: 669. 1900.

E. setacea Nees subsp. *setacea*

South Africa. Perennial, suffrutescent or shrubby, erect, rhizomatous, rigid leaf blades, inflorescence racemose, sterile lemma short and glume-like.

E. setacea Nees subsp. *uniflora* (Burch. ex Stapf) Gibbs-Russ. (*Ehrharta uniflora* Burch. ex Stapf)

South Africa. Perennial, rhizomatous, herbaceous, trailing or sprawling, inflorescence racemose, sterile lemma short and glume-like, common in wet places, forest margins, see *Flora Capensis* 7: 670. 1900.

E. stipoides Labill. (*Microlaena stipoides* (Labill.) R. Br.)

Australia, the Philippines, Indonesia, Papua New Guinea, New Zealand. Perennial, branched, erect, sprawling, smooth, thin, glabrous, shortly rhizomatous and stoloniferous, ligule a fringed membrane, cleistogenes, glumes smooth and keeled, sterile florets lemmas scabrous or scabrid, fertile floret lemma glabrous and smooth, commonly found in woodland on sandstone and clay soils, mountains, disturbed sites, shaded or semishaded sites, lawns, semi-shade in forests, along streams, high fertility, grazed situations, see *Novae Hollandiae Plantarum Specimen* 1: 91, t. 118. 1805, *Prodromus Florae Novae Hollandiae* 210. 1810 and *New Zealand J. of Botany* 15: 531-534. 1977.

E. thunbergii Gibbs-Russ. (*Aira villosa* L.f.; *Ehrharta gigantea* Ehrhart ex Steud; *Ehrharta gigantea* Nees ex Trin.; *Ehrharta gigantea* Sw., nom. illeg.; *Ehrharta gigantea* Thunb.; *Ehrharta gigantea* (Thunb.) Sw.; *Ehrharta villosa* (L.f.) Schult. ex Schult. & Schult.f.; *Ehrharta virgata* Launert; *Melica gigantea* Thunb.) (the name honors the Swedish botanist and physician Carl Peter Thunberg, 1743-1828 (Tunaberg, near Uppsala, Sweden), 1772 medical doctor at Uppsala, a pupil of Carl Linnaeus, plant collector, explorer, traveler, naturalist, professor of botany and medicine at Uppsala, to the Cape and interior with the British gardener and plant collector Francis Masson (1741-1805), among his numerous writings are *Flora japonica*. Lipsiae 1784, *Voyage en Afrique et en Asie*, principalement au Japon, pendant les années 1770-1779. Paris 1794, *Icones plantarum japonicarum*. Upsaliae [Uppsala] 1794-1805 and *Prodromus plantarum Capensium*: quas in promontorio Bonae Spei Africes, annis 1772-1775 collegit... Upsaliae 1794-1800; see Thorgny Ossian Bolivar Napoleon Krok (1834-1921), *Bibliotheca botanica suecana*. 705-716. Stockholm, Uppsala 1925; Mia C. Karsten, *The Old Company's Garden at the Cape and its Superintendents: Involving an Historical Account of Early Cape Botany*. Cape Town 1951; M.C. Karsten, "Carl Peter Thunberg. An Early Investigator of Cape Botany." *Journal of*

South Africa Botany. 5: 1-27 and 87-155. 1939; Gunnar Eriksson, in *D.S.B.* 13: 391-392. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 382. 1965; Stafleu & Cowan, *Taxonomic literature*. 6: 306-334. 1986; Gilbert Westacott Reynolds (1895-1967), *The Aloes of South Africa*. Balkema, Rotterdam 1982; H. Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 643. [d. 1822] 1996; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 790. 1993; Hans Oscar Juel (1863-1931), *Plantae Thunbergianae*. Uppsala 1918; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. 1975; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 400. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 254. Oxford 1964; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; F.A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. 1971; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 347-350. Cape Town 1981; S. Lenley et al., *Catalog of the Manuscript and Archival Collections and Index to the Correspondence of John Torrey*. Library of the New York Botanical Garden. 470. 1973; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 270. Palermo 1988; Alain White & Boyd Lincoln Sloane, *The Stapeliaceae*. Pasadena 1937; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 80. 1971; John Hutchinson (1884-1972), *A Botanist in Southern Africa*. London 1946)

Southern Africa. Perennial, tufted, rhizomatous, erect, robust leafless culms, overlapping hairy cataphylls, glumes shining or translucent, sterile lemmas hairy, common in sandy soil, coastal sand, see *Bothalia* 17(2): 192. 1987.

E. triandra Nees ex Trin. (*Ehrhartia triandra* Nees)

South Africa. Annual, erect, leafy, lax, delicate, sterile lemmas awned and not bearded at base, 3 stamens, shade species, disturbed areas, rock outcrop, along roadsides, rocks, shrubs and in shade of shrubs, wet places, on scraped roadsides, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 61. 1839.

E. villosa Schult.f. (*Aira villosa* L.f.; *Ehrhartia villosa* (L.f.) Schult.f. ex Schult. & Schult.f.; *Ehrhartia villosa* Schult.; *Ehrhartia villosa* Schult. & Schult.f.)

South Africa, Cape Province. Perennial, strongly rhizomatous with robust creeping long rhizomes, canelike stems, robust leafless culms, sheath smooth, ligule ciliolate or ciliate, purplish panicle erect or a raceme, spikelets spreading or nodding, sterile florets similar and densely villous, glumes subequal and acute, sterile lemmas with long soft hairs and bearded at the base, sterile lemmas awned, weedy and invasive species, pasture grass, useful for soil erosion control, on sand dunes as a sand binder, usually on coastal sand dunes and sandy places, see *Systema Vegetabilium, editio decima sexta* 7(2): 1374. 1830.

in English: pyp grass, pipe grass, dunegrass

E. villosa Schult.f. var. ***maxima*** Stapf (*Ehrhartia gigantea* (Thunb.) Sw.; *Ehrhartia gigantea* (Thunb.) Thunb.; *Melica gigantea* Thunb.)

South Africa. Perennial, rare, tufted, robust, erect, often rooting at the lower nodes, sometimes rhizomatous, rhizomes naked, inflated leaf sheath, open unilateral panicle, inflorescence subtended by leaf sheath, lemmas long-haired and shortly awned, suitable for erosion control, useful sand binder and stabilizer, usually grows on sand, on coastal sand dunes, see *Prodromus Plantarum Capensium*, ... 21. 1794, *Prodromus Plantarum Capensium*, ... 192. 1800, *Transactions of the Linnean Society of London* 6: 58, t. 4, f. 8. 1802 and *Flora Capensis* 7: 681. 1900.

in English: dunegrass, dune ehrhartia

in South Africa: doppiesgras

E. villosa Schult.f. var. ***villosa***

South Africa. Perennial, rare, robust, tufted, rhizomatous, inflorescence exerted from leaf sheath, sterile lemmas hairy, useful for erosion control, usually on sand dunes.

Ehrhartia F.H. Wigg. = *Ehrhartia* Weber, *Homalocenchrus* Mieg, *Leersia* Sw., *Leersia* Sol. ex Sw.

Orthographic variant of *Ehrhartia* Thunb.

Bamusoideae, Oryzodae, Oryzeae, Oryzinae, or Ehrhar-toideae, Oryzeae, Oryzinae, type *Ehrhartia clandestina* F.H. Wigg., see *Primitiae Florae Holsaticae* 63-64. 1780, *Nova genera et species plantarum seu Prodromus descriptionum vegetabilium maximam partem incognitorum*. 1, 21. 1788, C.S. Rafinesque, *Neogenyton*, or Indication of Sixty-Six New Genera of Plants of North America. 4. 1825, William Griffith (1810-1845), *Icones plantarum asiaticarum*. 3: t. 144. Calcutta 1847-1854, G. Bentham, in *Journal of the Linnean Society. Botany*. 19: 56. 1881, *Index Kewensis* 1: 312. 1895 and *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, E.D. Merrill, *Index rafinesquianus*. 75. 1949, E. Launert, "A survey of the genus *Leersia* in Africa." *Senckenbergiana Biologica* 46: 129-153. 1965, *Iowa St. J. Sci.* 44: 215-270. 1969,

Journal of the Arnold Arboretum 69(3): 263. 1988, *Flora Mesoamericana* 6: 221-222. 1994, *Contributions from the United States National Herbarium* 39: 56, 63, 64-67. 2000.

Ekmanochloa Hitchc.

For the Swedish botanist Erik Leonard Ekman, 1883-1931, explorer, plant collector in Argentina, Brazil, Cuba and Hispaniola. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 502. 1965; Carl Frederik Albert Christensen (1872-1942), *The Collection of Pteridophyta Made in Hispaniola by E.L. Ekman 1917 and 1924-1930*. Stockholm 1936 in *Kongl. Vetenskaps Akademiens Handlingar*. Ser. 3. bd. 16. no. 2; [Por el Dr. Erik L. Ekman.], *Excursión Botánica al Nord-Oeste de la República Dominicana*. Santo Domingo 1930; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964.

Two species, eastern Cuba, the Caribbean. Bambusoideae, Oryzodae, Olyreae, Olyrinae, perennial, erect, herbaceous, unarmed, caespitose, unbranched, dimorphic culms, tuberous, ligule a minute unfringed membrane, leaf sheaths glabrous or pubescent, auricles absent, leaf blades narrowly lanceolate or suppressed, flowering culms leafless, plants monoecious, inflorescence a pair of slender racemes, all the fertile spikelets unisexual, female spikelet lanceolate, male florets 2 or 3 staminate, 2 glumes herbaceous and acute, lower glume 5-nerved, upper glume 3-nerved, slenderly awned lemma cartilaginous or coriaceous, palea present, 3 membranous lodicules, no stamens, ovary glabrous, 2 stigmas, shade species, lowlands, rocky places, limestone cliffs, pine savannahs, type *Ekmanochloa subaphylla* Hitchc., see *Fl. Friburg*. 1: 172. 1825 and *Manual of the Grasses of the West Indies* 374-377. 1936, *Blumea, Suppl.* 3: 62. 1946, *Brittonia* 34: 25-29. 1982, *Brittonia* 37: 22-35. 1985, *Annals of the Missouri Botanical Garden* 80(4): 846-861. 1993, *American Bamboos* 272-274. 1999, *Contributions from the United States National Herbarium* 39: 56. 2000.

Species

E. aristata Ekman

Cuba. See *Manual of the Grasses of the West Indies* 377, f. 343B. 1936.

E. subaphylla Hitchc.

Cuba. Leaf blades may be suppressed or greatly reduced, photosynthetic function transferred to the culm, glumes emarginate and short, male florets 2 staminate.

Electra Panz. = *Electra* DC. (Compositae, alt. Asteraceae), *Schismus* P. Beauv.

Arundinoideae, Arundineae, or Danthonioideae, Danthonieae, type *Electra calycina* (Loefl.) Panz., see *Species*

Plantarum 1: 73. 1753, *Syn. Pl.* 1: 97. 1805, *Essai d'une nouvelle Agrostographie* 73, 162, 177, t. 15, f. 4. Paris 1812, *Ideen zu einer künftigen Revision der Gattungen der Gräser...* 49. 1813, *Denkschriften der Königlichen Akademie der Wissenschaften zu Muenchen* 4: 253-312. 1813 [1814], *Flora* 12: 490. 1829, *Prodromus Systematis Naturalis Regni Vegetabilis* 5: 630. 1836 and *Contr. U.S. Natl. Herb.* 24: 181. 1925, *Abhandlungen herausgegeben von der Senckenbergischen Naturforschenden Gesellschaft* 532: 1-81. 1974 [Revision der Gattung *Schismus* (Poaceae: Arundinoideae: Danthonieae)], *Contributions from the United States National Herbarium* 46: 225, 558-560. 2003.

Eleusine Gaertner

From Eleusis, a very ancient city and deme (a township or division, a commune) of Attica, famous for the mysteries of Ceres, about 14 miles northwest of Athens; to the west of the town lay the Rharian, where Demeter, the Greek goddess of earth's fruits, was said to have sown the first seeds of corn; Demeter (Ceres for the Romans) was the daughter of Cronus and Rhea, and sister of Zeus, by whom she became the mother of Persephone; see Joseph Gaertner (1732-1791), *De fructibus et seminibus plantarum*. 1: 7, t. I. Stuttgart, Tübingen 1788.

About 9 species, tropical and subtropical, eastern and north-eastern tropical Africa, South America. Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, Eleusininae, annual or perennial, tufted or mat-forming, glabrous, herbaceous, more or less flattened, more or less erect to geniculate ascending, sometimes rooting at the lower nodes, rhizomatous, rarely stoloniferous, auricles absent, sheaths compressed and strongly keeled, ligule a fringed membrane, leaves flat or folded, plants bisexual, inflorescence spicate and terminal, unilateral branches, primary branches digitate or subdigitate terminating in a spikelet, bisexual and strongly compressed laterally spikelets several-flowered, spikelets secund and sessile to subsessile, florets bisexual, reduced floret at apex, 2 very unequal glumes keeled and awnless, lower glume 1-nerved, upper glume 3-7-nerved, lemmas entire with a prominent keel, palea keels winged or wingless, 2 minute lodicules joined or free, stamens 3, ovary glabrous, 2 plumose stigmas white or dark, small fruit sculptured, common weed species, often HCN toxic, ornamental when in flower, grain crop species, savannah and upland grassland, open habitats, weedy places, a taxonomically difficult genus consisting of closely related species linked to *Acrachne* and *Dactyloctenium* Willd., type *Eleusine coracana* (L.) Gaertner, see *De Fructibus et Seminibus Plantarum ...* 1: 7. 1788, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 75. 1813, *Rel. Haenk.* 1: 273. 1830 and *Contributions from the United States National Herbarium* 12(6): 183-258, vii-xi. 1909, *Fl. Trop. Afr.* 9: 22. 1917,

Contributions from the United States National Herbarium 24(9): 662. 1930, *Gram. Bonar.* edition 4: 28. 1946, *Bull. Soc. Bot. Fr.* 103: 272. 1956, *Acta Bot. Sin.* 9: 67. 1960, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, S.M. Phillips, "A survey of the genus *Eleusine* (Gramineae) in Africa." *Kew Bulletin* 27: 251-270. 1972, *Econ. Bot.* 30: 199-208. 1976, *Kew Bulletin* 37: 133-162. 1982, *American Journal of Botany* 71: 550-557. 1984, *Systematic Botany* 12: 214. 1987, *Folia Primatologica* 48: 78-120. 1987, *Plant Systematics and Evolution* 178: 225-233. 1991 [Quantitative nuclear DNA changes in *Eleusine* (Gramineae).], *American Journal of Botany* 80(6): 705-710. 1993, *American Journal of Botany* 81: 622-629. 1994, *Flora Mesoamericana* 6: 272. 1994, *Flora of Ethiopia and Eritrea* 7: 138-142. 1995, *Proceedings of the Indian Science Congress Association* 82(3, 8): 80. 1995, *Hereditas; genetiskt arkiv.* 122: 189-195. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996 [Flora of St. John, U.S. Virgin Islands], *Gramíneas de Bolivia* 328-330. 1998, *Am. J. Bot.* 85: 1704-1709. 1998, *Am. J. Bot.* 86: 476-481, 614-633, 940-947. 1999, *Am. J. Bot.* 87: 412-417. 2000, J.G. McIvor & S. Mark Howden, "Dormancy and germination characteristics of herbaceous species in the seasonally dry tropics of northern Australia." *Austral. Ecology* 25(3): 213-222. June 2000, *Am. J. Bot.* 88: 1065-1070. 2001, *Contributions from the United States National Herbarium* 41: 73-77. 2001, *Flora Fanerogámica Argentina* 86: 1-68. 2003, *Am. J. Bot.* 90: 1513-1521. 2003, *Restoration Ecology* 13(1): 49-60. Mar 2005, *Conservation Biology* 19(2): 411-420. Apr 2005, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005, *Weed Research* 45(3): 228-235. June 2005.

Species

E. coracana (L.) Gaertner (also spelled ***coracan***) (*Cynosurus coracana* L.; *Cynosurus coracanus* L.; *Eleusine cerealis* Salisb.; *Eleusine cerealis* Ehrenb. ex Sweet, nom. illeg., non *Eleusine cerealis* Salisb.; *Eleusine coracana* var. *alba* Körn.; *Eleusine coracana* var. *atra* Körn.; *Eleusine coracana* var. *fusca* Körn.; *Eleusine coracana* var. *stricta* (Roxb.) Nees; *Eleusine coracana* var. *tocussa* (Fresen.) Franch.; *Eleusine dagussa* Schimp. ex Regel; *Eleusine indica* subsp. *coracana* (L.) Lye; *Eleusine indica* var. *brachystachya* Trin.; *Eleusine indica* var. *coracana* (L.) Fiori; *Eleusine indica* var. *stricta* (Roxb.) Chiov.; *Eleusine luco* Welw.; *Eleusine pilosa* Gilli; *Eleusine sphaerosperma* Stokes; *Eleusine stricta* Roxb.; *Eleusine stricta* var. *alboabbreviata* Cif.; *Eleusine stricta* var. *alboelongata* Cif.; *Eleusine stricta* var. *fuscoabbreviata* Cif.; *Eleusine stricta* var. *fuscoelongata* Cif.; *Eleusine stricta* var. *rufoabbreviata* Cif.; *Eleusine stricta* var. *rufoelongata* Cif.; *Eleusine tocussa* Fresen.)

Old World tropics, East Africa, Uganda. Annual, stout, very adaptable, robust, a low rainfall plant, thrives under hot

conditions, sometimes branching at the upper nodes, erect to ascending, often lodged or prostrate, densely tufted, tillering, root system fibrous and strong, tough leaves flat or folded, inflorescence spicate and involute, packed seed heads, spikes more or less digitate and broad, racemes curving inwards when in fruit, florets hermaphrodite, terminal florets sometimes sterile or male, spikelets persistent and very closely imbricate, lemmas broad-ovate or deeply boat-shaped, palea broadly winged, 3 stamens, small grains globose and usually dark brown, high methionine grain, perhaps a cultigen of the wild species *Eleusine indica* (L.) Gaertner or derives from *Eleusine africana* Kennedy-O'Byrne, flour used for treatment of chicken-pox, grain rather unpalatable but highly nutritious and sustaining, grains eaten by baboons, widely grown in warm regions of Africa and Asia, one of the best dryland crops, straw very tough, valuable fodder, recommended for diabetics, food grain, garden weeds, famine crop, birdseed, used for cooking breads and beer or boiled into a thick porridge (*nsima*), the grain is fermented for alcoholic drinks, the plant is reported to be diaphoretic, diuretic and vermifuge, useful for erosion control, withstand some salinity, can tolerate some waterlogging, found on porous soils, disturbed ground, in ordinary garden soil, roadsides and banks, in highland and lowland, in dry areas, rich loams, on black cotton soils, poor shallow upland soils, in savannah areas with moderate rainfall, on red lateritic loams, is being abandoned in Africa, see *Systema Naturae, Editio Decima* 2: 875. 1759, *Sp. Pl.* edition 2. 106. 1762, *De Fructibus et Seminibus Plantarum...* 1: 8, t. 1, f. 11. 1788, *Icones Stirpium Rariorum* 19. 1796, *A Botanical Materia Medica* 1: 149. 1812, *Flora Indica; or Descriptions ...* 1: 344. 1820, *Species Graminum* 1828-1836, *Hortus Britannicus* 571. 1830, *Museum Senckenbergianum* 2: 141. 1837, *Florae Africae Australioris Illustrationes Monographicae* 251. 1841, *Apontamentos Phytogeographicos sobre a flora da provincia de Angola na Africa equinocial...* 591. 1859, *Gartenflora* 21: 205. 1872, *Handbuch des Getreidebaus* 1: 329. Bonn 1885, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 377. 1893 and *Nuovo Giornale Botanico Italiano* n.s., 26: 83. 1919, *Nuova Flora Analitica d'Italia* 1: 114. 1923, *Atti dell'Istituto Botanico dell'Università di Pavia* 2: 172-173. 1944, *Grasses of Ceylon* 80. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1956, *Grasses of Burma ...* 492. 1960, *Annalen des Naturhistorischen Museums in Wien* 69: 50. 1965 [1966], *American Journal of Botany* 63: 1311-1318. 1976, *American Journal of Botany* 71 (4): 550-557. 1984, *Lidia* 4: 150. 1999, P. Loganathan, R. Sunita, A.K. Parida & S. Nair, "Isolation and characterization of 2 genetically distant groups of *Acetobacter diazotrophicus* from a new host plant *Eleusine coracana* L." *Journal of Applied Microbiology* 87(1): 167-172. July 1999, R. Rathour, B.M. Singh & P. Plaha, "Host species-specific protoplast damaging activity of spore germination fluids of blast pathogen

Magnaporthe grisea." *Journal of Phytopathology* 150(10): 576-578. Oct 2002.

in English: Indian millet, African millet, finger millet, African finger millet, millet, raagi, ragi, ragi millet, black millet, tamba millet, poko grass, rapoko grass, kurrakan millet, koracan millet, korakan, kurkan

in French: eleusine, coracan, millet de Yokoama, millet patte-de-canard

in Spanish: mijo africano

in Arabic: tailabon

in Bhutan: kompa, kong pu, memja, menja, kodo, maung zo

in Cambodia: chëng krahs, chë:ng kra:hs, si:ng söng

in China: can zi

in India: ambali raagi, bahupathraka, bavto, bhuchara, chaldra, cholu, dunkia, gondodo, guchha, iragi, kadhina, kaezh varagu, kanisha, kapai, kayur, kelvaragu, kelvaregu, keppai, koda, kode, kodo, kodon, kodra, kora, korakan, krishna, kurakhan, kutra, labra koda, lanchhana, madhulika, makra, maliyasa, mandal, mandua, mandwa, marna, marooa, marua, maud, merua, munrwee, murha, murooa, muthaari, muttari, naachani, naachni, nachiri, nachni, nachno, nachoni, nagli, nanchano, nangkli, nangli, narttaka, natchanee, navto, nrityakunda, pachmi, pedda, peddaraagulu, ponassa, raagi, raagi hittu, raagi huttu, raagulu, raahi, raaji, raajika, ragi, ragi millet, ragulu, rajika, rotka, sodee, sodi, soma, tamidalu, thamidelu, thaviddu, tsjetti pulli

in Indonesia: jaba, jampang carulang, sukut lulangan

in Laos: pha:k kh'wa:y

in Malaysia: ragi, rumput sambau

in Nepal: kodo, maruvaa

in South Laos: (people Nya Hön) teneraa

in Sri Lanka: belatana, korakan, kurakkan, walmal kurakkan

in Thailand: khao pang sam ngam, khao-pang-samngam, khaao paang saam ngaam

in Vietnam: ke chan vit

in Angola: luca, luco, oluku

in East Africa: kal (Luo)

in Ethiopia: dagussa, dagusa

in Malawi: usanje, khakwe, mawe, mawere, malesi, mulimbi, lipoko, lupoko

in Niger: hëèni

in Nigeria: chargari, interrkoum, interrkum, kpana, kpana hos, kpanàà hos, kpanàà zeng, kuttung, oka tamba, sarga, tamba, tambà, tambaa, tomba, wanda

in Somalia: uemba, wemba, uembe

in South Africa: korakan, pokogras, rapoko, vingermanna

in southern Rhodesia: uluPoko, nDundu, chiKwai, chiNyamande

in Tanzania: bulo, bege

Local names: coracan, dagussa, gagussa, garindi, ragi, rupuko

E. coracana (L.) Gaertner subsp. *africana* (Kenn.-O'Byrne) Hilu & de Wet (*Eleusine africana* Kennedy-O'Byrne; *Eleusine indica* (L.) Gaertn. subsp. *africana* (Kenn.-O'Byrne) S.M. Phillips)

Pantropical, Asia, Africa. Annual or perennial, rather or moderately robust, tufted, extensive and vigorous root system, leaf sheath compressed, ligule a ciliate fringe, leaf blades shiny and keeled, racemes arranged digitately or subdigitately on the primary axis, flowering culm green, spikelets awnless, weed species, tetraploid, glumes acute, lower glume winged on the keel, lemmas lanceolate and acute, progenitor of finger millet, weed species, low grazing value, tough and unpalatable as it matures, utilized by livestock in the young stage, toxic to stock, grain crop, fermented for alcoholic drinks, seeds viable for many years, grains used to make flour and cereal, grains eaten by baboons, occurs in disturbed areas, grassland, savannah, slopes, limestone, streams and ditches, see *De Fructibus et Seminibus Plantarum*.... 1: 8. 1788 and *Kew Bulletin* 12: 65. 1957, *Kew Bulletin* 27(2): 259. 1972, *Economic Botany* 30: 202. 1976, *Phytologia* 78(5): 411. 1994.

in English: goose grass, African goose grass, African finger millet, wild finger millet, Bermuda grass, crab grass, crow-foot grass, dog's tail, wire grass, yard grass

in Somalia: baldole

in southern Africa: Afrikaanse osgras, jongosgras, jongospol, osgras, sterkpol, rapokagras; makha (Shona); maseka (Tswana); moseli (Sotho); pokwana (Ndebele); unyankomo (Zulu)

in Yoruba: ajilekege, oyinbo otosi

E. coracana (L.) Gaertn. subsp. *coracana* (*Cynosurus coracanus* L.; *Eleusine tocussa* Fresen.)

Cereal, widely cultivated in tropic, subtropic and warm temperate regions of Africa and Asia, the grains fermented for alcoholic drinks, see *De Fructibus et Seminibus Plantarum*.... 1: 8. 1788.

in English: coracan millet, caracan millet, finger millet

in Spanish: dagussa, mijo africano

in French: coracan, mil rouge

in India: ragi

E. floccifolia (Forssk.) Spreng. (*Chloris floccifolia* (Forssk.) Poir.; *Cynosurus floccifolius* Forssk.)

Ethiopia, Yemen. Perennial, coarse, densely tufted, branched below, tough leaves usually folded and hairy along the margins, ligule a ciliolate membrane, tough rhizome, slender subdigitate inflorescence, ascending or spreading spikes, elliptic spikelets, glumes unequal, lemmas acute, pasture, heavy clay soils, ditch sides and wet places, grassy

field borders, damp areas and pond margins, high rainfall areas, along roadsides, see *Flora Aegyptiaco-Arabica* 21. 1775, *Encyclopédie Méthodique. Botanique ... Supplément* 2: 238. 1811, *Systema Vegetabilium, editio decima sexta* 1: 350. 1824 and *Kew Bulletin* 27(2): 251-270. 1972, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974.

in Somalia: gurgor

E. indica (L.) Gaertner (*Agropyrum geminatum* Schult.; *Chloris repens* Steud.; *Cynodon indicus* (L.) Raspail; *Cynosurus indicus* L.; *Eleusine distachya* Nees; *Eleusine distans* Moench; *Eleusine domingensis* Sieber ex Schult., nom. illeg., non *Eleusine domingensis* (Jacq.) Pers.; *Eleusine glabra* Schumacher.; *Eleusine gonantha* Schrank; *Eleusine gouini* E. Fourn.; *Eleusine gracilis* Salisb.; *Eleusine inaequalis* E. Fourn. ex Hemsl.; *Eleusine inaequalis* E. Fourn.; *Eleusine incana* Gaertn.; *Eleusine indica* Steud.; *Eleusine indica* (L.) Gaertner var. *major* E. Fourn.; *Eleusine indica* (L.) Gaertner var. *monostachya* F.M. Bailey; *Eleusine indica* (L.) Gaertner var. *oligostachya* Honda; *Eleusine indica* var. *sandaensis* Vanderyst; *Eleusine japonica* Steud.; *Eleusine marginata* Lindl.; *Eleusine rigidifolia* E. Fourn. ex Hemsl.; *Eleusine rigidifolia* E. Fourn.; *Eleusine scabra* E. Fourn.; *Eleusine scabra* E. Fourn. ex Hemsl.; *Eleusine textilis* Welw.; *Juncus bulbosus* Lour.; *Juncus loureiroanus* Schult. & Schult.f.; *Triticum geminatum* Spr.)

Pantropics and subtropics, origin paleotropics. Annual or short-lived perennial, rather coarse, vigorous, slender to robust, compact, glabrous, smooth, stoloniferous, extensive root system, forming thick clumps, culms laterally flattened, erect or spreading, ascending or prostrate and branching at the base, leaf sheaths hairy or smooth and flattened to keeled, shiny leaves flat or folded, ligule a tuft of hairs or minutely fringed, a cluster of digitate and terminal spikes green and sessile, awnless, loosely overlapping spikelets lanceolate and flattened, 2 glumes persistent, keeled glumes and lemmas, glumes shorter than the lemmas and oblong-lanceolate to narrow ovate, lemmas lanceolate and not incurved, palea membranous and narrowly winged, lodicules membranous, 3 stamens, anthers yellow to purplish, stigmas purple, rugose grain oblong reddish brown to black, infusion of macerated leaves drunk as a remedy for urine retention, infusion eases vaginal bleeding, used as flour for bread or soup in times of scarcity, a very strong and particularly tough fibrous root system, generally unpalatable to stock, eaten when young, when mature foliage is very tough, cyanogenic or HCN toxic, can be poisonous to stock, has been recorded as causing the deaths of calves and sheep, culms used for hats, can withstand flood inundation for limited periods, a very polymorphic species, suitable for stabilizing sandy soils, similar to and confused with *Lepidochloa digitata* (R. Br.) Domin, a common aggressive noxious weeds of lawns and playing fields, common in bare or

disturbed areas, lowlands, low hills, sandy soils, compacted soils, in ordinary garden soil, yards, sandy riverbanks, garden weeds and arable land, cultivated areas, waste places and along roadsides, hill forest, on rocky roadside and gravel, wet plains, farm tracks, on floodplains and shores, thickets, damp pasture, areas exposed to trampling, see *Species Plantarum* 1: 72-73. 1753, *Systema Naturae, Editio Decima* 2: 875. 1759, *Encyclopédie Méthodique, Botanique* 2: 188. 1786, *De Fructibus et Seminibus Plantarum...* 1: 8. 1788, *Methodus Plantas Horti Botanici ...* 210. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 19. Londini [London] (Nov-Dec) 1796, *Flora Indica; or Descriptions ...* 1: 344. 1820, *Sylloge Plantarum Novarum* 1: 191. 1824, *Mantissa* 2: 323. 1824, *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *Beskrivelse af Guineiske planter* 53-54. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 73-74. 1828, *Species Graminum* 1828-1836, *Agrostologia Brasiliensis* 440. 1829 (or *Flora Brasiliensis seu Enumeratio Plantarum in Brasilia ... Stuttgartiae et Tubingae* 1829-1833), *Reise um die Erde* 1: 92. 1834, *Nomenclator Botanicus. Editio secunda* 1: 353, 549. 1840, *Synopsis Plantarum Glumacearum* 1: 211. 1854, *Linnaea* 30(1): 125. 1859, *Enum. Pl. Zeyl.* 5: 371. 1864, *Journal of Travel and Natural History* 1: 31. 1868, *Flora Brasiliensis* 2(3): 86. 1878, *Bulletin de la Société Botanique de France* 27: 296. 1880, *Biologia Centrali-Americana; ... Botany ...* 3: 565. 1885, *Mexicanas Plantas* 2: 145-146. 1886, *Plantae Europaeae* 1: 67. 1890, *Synopsis der mitteleuropäischen Flora* 2: 91. 1899 and *Handb. Fl. Ceylon* 5: 277. 1900, *The Queensland Flora* 6: 1898. 1902, *Nuovo Giornale Botanico Italiano* n.s., 26: 83. 1919, *Bulletin agricole du Congo Belge* 11: 122. 1920, *Nuova Flora Analitica d'Italia* 1: 114. 1923, *Webbia* 8: 113. 1951, *Grasses of Ceylon* 80, pl. 9. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma ...* 493. 1960, *Kew Bulletin* 27: 269. 1972, *Lidia* 4: 150. 1999, Linghe Zeng & Wm. Vance Baird, "Inheritance of resistance to anti-microtubule dinitroaniline herbicides in an "intermediate" resistant biotype of *Eleusine indica* (Poaceae)." *Am. J. Bot.* 86: 940-947. 1999, *Taxon* 49(2): 249. 2000, Tsuyoshi Kobayashi & Yoshimichi Hori, "Photosynthesis and water-relation traits of the summer annual C4 grasses, *Eleusine indica* and *Digitaria adscendens*, with contrasting trampling tolerance." *Ecological Research* 15(2): 165-174. June 2000, B.S. Ismail et al. "Germination and seedling emergence of glyphosate-resistant and susceptible biotypes of goosegrass (*Eleusine indica*[L.] Gaertn.)." *Weed Biology and Management* 2(4): 177-185. Dec 2002, Y. Sunohara & H. Ikeda, "Effects of trampling and ethephon on leaf morphology in trampling-tolerant *Plantago asiatica* and *Eleusine indica*." *Weed Research* 43(3): 155-162. June 2003.

in English: yardgrass, cheddah, cypress rosette grass, iron grass, yard grass, wire grass, goose grass, Indian goose grass, bull grass, fowlfoot grass, landgrass, rapoko grass,

rapoka grass, barnyard grass, crab grass, crowfoot grass, crowsfoot grass, crow's-foot grass, wild finger millet, dutch grass

in French: pied de poule, eleusine

in Spanish: grama de caballo, pata de gallina, pato de ganso

in Argentina: pata de ganso

in the Caribbean: pyé poul, pied de poule

in Colombia: hierba dulce

in Cuba: pata de gallina

in Mexico: grama de caballo, pasto rapoka, pata de gallo, pata de ganso, yok-maas, yuk-maas, zacate de ganso, zacate guácima

in Nicaragua: sagádi

in Puerto Rico: pata de gallina

in West Indies: cheddah, fowl foot, pied poule, pye pul

in Arabic: negil

in Benin: gamatori, gomateri, tchouan, torohundo

in Cameroon: esinge singe

in Congo: kimbandzia, kimbandza, kimboundia

in East Africa: bek, ekitu, enguruma, kasibauti, malulu, orutaratari, ribanchore

in Ghana: akpenté, tangana, tanganga

in Guinea-Bissau: albali, blikatchor, butchuque

in Guinea: gbénéwoulou, tayondo, diandiali, tarassa, trassa, bintirima, gbintima, tièmbi, siguiri, tiguilini, siguirigni, sékédi

in Ivory Coast: assumoamata, diridire, essuema, kama, kpedé, kwedé, n'tena, siganzi

in Mali: gondnema, guentneman, nassi gargagué, so pegou

in Niger: aghaeji, aghaji, bari kengéy, diliaré, hak'orin karé, najim, tababé, tujy

in Nigeria: angolo, berison lei, berisonlei, berrison lei, ciyyaawar tuujii, elade, ele, ese kannkanna, ese kannakanna, ile, gbagi, gbegi, jighir, sargande, seragade, seragalde, sye-syè, tnatna, tuji, tuujii

in Senegal: budi darate, budi dukhot, gondirima, gondnema, guentneman, mondon darate, nassi gargagué, ratam fambé, vodvod

in Sierra Leone: dutasa, gbantama, lutasa, ngetae wuli, ngetewi, ngetewuli, ngete wu, ngete wulo, ngete wulo ha, ngitwa, sigiri, taiyondo, tese, tigbiri na, tigrinyi, tunkun de

in southern Africa: Indiese osgras, jongosgras, jongospol, osgras, ospol, sterkpol; lia-ngoetsi (Sotho); umnyalakhobe (Zulu); unyankomo (Ndebele)

in Upper Volta: garga, gatan, tar ganga, targanga

in Yoruba: gbagi, gbegi, gbegidina, ese kannakanna

in Bhutan: cholop, shade jhar, kongpu ngoon, daday, kodho jhar

in Cambodia: choeung kras

in India: chaodhara, chichora, gadha charwa, gadha chichora, gadha mandwi, ghada mandwi, ghod-chabba, gur-chawa, gurra gadi, hakki kaalina hullu, hechhuli hullu, jhingri, jhinjhor, kaaruchodi, kakariya, khurd, khurd mendi, kuror, lijhar, madanya, madhulika, mandial jori, mahar nachni, makaraita, makraila, mal ankuri, malankur, malankuri, malnkuri, mandla, mandwa, medwari, mirwari, nandia, nandimukhi, phanghad, ran nachani, thippa raagi, thippa ragi, thoseria pandhad

in Japan: o-hi-shiba

in Laos: nia pak kouay

Malayan name: rumpu sambau

in Okinawa: shipu-kusa, ibafusa

in the Philippine Islands: apidan, bakis-bakistan, barangan, bikad-bikad, bila-bila, bugtusan, dinapaiuk, gagabutan, kabit-kabit, palagtiki, paragis, parangis, parangis-sabungan, sabung-sabungan, sambali

in Sri Lanka: belatana, walmal kurakkan

in Thailand: ya pak khok, yaa paak khok, ya pak khwai, yaa paak khwaai, ya phak khwai, yaa phaak khwaai, yaa teenkaa, yaa teennok, ya tin nok, ya tin ka, yaa tinkaa, yoe khum

in Vietnam: tranh tam thao, co man trau, co viron trau, co chi tia, co dang, co bac

in the Pacific: mosie fahitalo

in Hawaii: manienie ali'i

in Samoa: lau ta'a ta'a, ta'a ta'a

in Tonga: takataka, takataka 'a leala

E. indica (L.) Gaertn. subsp. *indica* (*Cynosurus indicus* L.; *Eleusine distans* Moench; *Eleusine glabra* Schumach.; *Eleusine gracilis* Salisb.; *Eleusine indica* (L.) Gaertn.; *Eleusine indica* (L.) Gaertner var. *monostachya* F.M. Bailey; *Eleusine indica* var. *sandaensis* Vanderyst; *Eleusine textilis* Welw.)

Asia, India. Annual, stoloniferous, tufted, spikelets disarticulating at maturity, growing on rocky soil, ruderal, see *Species Plantarum* 1: 72-73. 1753, *De Fructibus et Seminibus Plantarum*... 1: 8. 1788, *Methodus Plantas Horti Botanici ...* 210. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 19. (Nov-Dec) 1796, *Beskrivelse af Guineiske planter* 53-54. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 73-74. 1828, *Journal of Travel and Natural History* 1: 31. 1868 and *The Queensland Flora* 6: 1898. 1902, *Bulletin agricole du Congo Belge* 11: 122. 1920, *Taxon* 49(2): 249. 2000.

in English: goose grass

in South Africa: osgras

E. intermedia (Chiov.) S.M. Phillips (*Eleusine indica* var. *intermedia* Chiov.)

Ethiopia. Perennial, tufted, leaf blades flat or folded, ligule a ciliolate membrane, stout rhizomes, inflorescence of ascending or spreading clustered spikes, spikelets elliptic, lemmas lanceolate-oblong, bushland, see *Webbia* 8: 113. 1951, *Kew Bulletin* 27: 269. 1972.

E. jaegeri Pilg. (*Eleusine jaegeri* var. *maxima* Peter)

Tropical and southern Africa, Tanzania. Perennial bunchgrass, coarse, densely tufted, very tough tussocks, compressed branching culms, leaf blades tightly folded, ligule a ciliate fringe, stiff leaves with sharp edges, stiff inflorescence, slender spikes on a short axis, spikelets densely crowded, unpalatable and avoided by stock, useful for erosion control and soil stabilization, used for weaving baskets, dominant in open areas, upland grassland, in dark volcanic sand, tussock grassland, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43(1): 93. 1909, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1) Anhang: 78. 1930.

in English: Manyatta grass

in Kenya: mafutiana

in Tanzania: arumakutiyni, ormakutian lendini, oramakutya

in Ethiopia: akirma

E. kigeziensis S.M. Phillips

Uganda. Perennial, tufted, branching at the lower nodes, leaf blades folded, ascending rhizome, inflorescence digitate with spikes loosely ascending to widely spreading, spikelets narrowly oblong, upper glume and lemmas with 3-nerved keel, lower glume narrowly winged on the keel, in forest, grassland, see *Kew Bulletin* 27: 266. 1972.

E. multiflora Hochst. ex A. Rich. (*Eleusine multiflora* Hochst.; *Eragrostis kwaiensis* Peter) (Tanzania, Usambaras, Kwai)

East tropical Africa, Yemen, Kenya, Tanzania, Ethiopia. Annual, ascending, loosely tufted, erect or decumbent, slender, internodes solid, leaves sparsely villous and acute, ligule truncate, inflorescence shortly racemose, short spikes oblong to ovate, lemmas cuspidate or mucronate, spikelets ovate, 5- to 15-flowered, glumes keels winged, lemmas narrowly ovate, anthers yellowish cream, fodder, ornamental, weed of cultivated fields, disturbed gravelly places, open habitats, bushveld, grassveld, see *Tentamen Florae Abyssinicae ...* 2: 412. 1850 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1) Anhang: 99. 1930, *Flora Novo-Galiciana* 14: 157. 1983.

in Spanish: pata de ganzo

in Mexico: pasto

E. semisterilis S.M. Phillips

Kenya. Racemes with imbricate spikelets terminating with a sterile spikelet, see *Kew Bulletin* 27: 263. 1972.

E. tristachya (Lam.) Lam. (*Agropyron geminatum* (Spreng.) Schult.; *Cynosurus tristachyos* Lam.; *Eleusine barcinonensis* Costa; *Eleusine coracana* sensu J. Black, non (L.) Gaertner; *Eleusine indica* var. *brachystachya* Trin.; *Eleusine indica* var. *condensata* Döll; *Eleusine indica* var. *tristachya* (Lam.) Fiori; *Eleusine leucosperma* Bernh. ex Steud.; *Eleusine oligostachya* Link; *Eleusine tristachis* Schrank; *Eleusine tristachya* (Lam.) Kunth; *Eleusine tristachya* f. *latifolia* Hack.; *Eleusine tristachyos* (Lam.) Lam.; *Triticum geminatum* Spreng.) (Latin *Barcinonensis*, e “of Barcelona”)

South America, Bolivia, southern Brazil to northern Argentina. Perennial or short-lived perennial bunchgrass, low, tufted, coarse, stout, erect, oblique or ascending, decumbent, densely spreading, sometimes shortly stoloniferous, culms striate and compressed, sheath keeled and coriaceous, ligule ciliolate or ciliate, leaves strongly keeled and flat or folded, a cluster of digitate and sessile short broad spikes, spikes usually 2 or 3, spikelets narrowly-ovoid and densely overlapping, unequal glumes obtuse and glabrous, lemmas keeled and acute, palea keels winged or wingless, lodicules 3-lobed, invasive weed species of no grazing value, forage, common on disturbed ground, wasteland, disturbed weedy places, heavy soils, along roadsides, on open slopes, moist savannah, lawns, golf courses, similar to *Eleusine indica* (L.) Gaertner, confused with *Eleusine coracana* (L.) Gaertner, see *Encyclopédie Méthodique, Botanique* 2: 188. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 203. 1791 [1792], *Sylloge Plantarum Novarum* 1: 191. 1824, *Systema Vegetabilium, editio decima sexta* 1: 326. 1825, *Mantissa* 3(Add. 1): 655. 1827, *Hortus Regius Botanicus Berolinensis* 1: 60. 1827, *Species Graminum* 1828-1836, *Révision des Graminées* 1: 92. 1829, *Nomenclator Botanicus. Editio secunda* 1: 549. 1840, *Flora Brasiliensis* 2(3): 86. 1878 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 280. 1904, *Nuova Flora Analitica d'Italia* 1: 114. 1923, *Fl. SE Queensland* 3: 179, f. 27E. 1989, *Fl. New South Wales* 4: 528. 1993, *Fl. Victoria* 2: 570, f. 114c. 1994.

in English: American goose grass, crab grass, American crowfoot grass, goose grass, 3-spike goose grass

Elionurus Humb. & Bonpl. ex Willd. =
Callichloea Steud., *Elionurus* Kunth,
Elyonurus Humb. & Bonpl. ex Willd.,
Elyonurus Kunth & Bonpl. ex Willd.,
Elyonurus Kunth ex Willd., *Habrurus* Hochst.

From the Greek *heleios* “dor-mouse” (Aristoteles, *Historia animalium*. 600b 12 etc.) and *oura* “a tail,” the old racemes are like the tail of a dor-mouse; or from *elyo* “to cover, to wind” and *oura*, referring to the nature of the glume; or from *elyein* “to roll” and *oura*, alluding to the racemes, curling when old; see Carl L. von Willdenow, *Species Plantarum*. edition 4, 4(2): 941. 1806.

About 15-25 species, tropical and subtropical, Africa, America, Australia. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial or annual, herbaceous and unbranched, tufted, erect or ascending, internodes solid, sheaths terete, leaves narrow and sometimes aromatic, blades flat or folded or involute, auricles absent, ligule a densely ciliate and very short membrane-like, plants bisexual, inflorescence a single terminal flexuous raceme, spikelets paired and dissimilar, sessile spikelet fertile and 2-flowered, large cuneate callus of sessile spikelet, lower floret sterile, upper floret bisexual, glumes very unequal to subequal, lower glume 2-keeled and ciliate, pedicellate spikelet reduced and sterile, palea present or absent, 2 lodicules free and fleshy, stamens 3, ovary glabrous, anthers brown or yellow or purple, stigmas red, fruit compressed, native pasture species, livestock forages of grasslands and savannahs, essential oils, open habitats, along streams and rivers, savannah, rainforest, grasslands, pampas, dry soils, sandy soils, sand dunes, close to *Loxodera* Launert, type *Elionurus tripsacoides* Humb. & Bonpl. ex Willd., see *Species Plantarum. Editio quarta* 4(2): 941-942. 1805 [1806], *Nov. Gen. Sp.* 1: 192. 1815, *Mémoires du Muséum d'Histoire Naturelle* 2: 69. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 1: 257. 1840, *Flora* 39: 90. 1856 and *Kew Bulletin* 32: 665-675. 1978, *Flora Mesoamericana* 6: 395-396. 1994, *Flora of Ethiopia and Eritrea* 7: 356-359. 1995, *Taxon* 47: 737-738. 1998 [P.M. Peterson et al., "Proposal to conserve the name *Elionurus* (Poaceae, Andropogoneae) with that spelling."], *Gramíneas de Bolivia* 611-614. 1998, *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, *Taxon* 49: 273. 2000 [R.K. Brummitt, "Report of the Committee for Spermatophyta: 49."], Liliana M. Giussani et al., "A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis." *Am. J. Bot.* 88: 1993-2012. 2001, *European Journal of Soil Science* 52(1): 93-101. Mar 2001, *European Journal of Soil Science* 53(1): 29-35. Mar 2002, *European Journal of Soil Science* 53(4): 553-562. Dec 2002, *Contributions from the United States National Herbarium* 46: 144, 225-230, 246. 2003, *Restoration Ecology* 12(4): 552-558. Dec 2004.

Species

E. adustus (Trin.) Ekman (*Andropogon adustus* Trin.; *Andropogon latiflorus* Nees ex Steud.; *Elionurus latiflorus* (Nees ex Steud.) Hack.; *Elionurus latiflorus* var. *adustus* (Trin.) Hack.; *Elionurus muticus* (Spreng.) Kuntze; *Elyonurus adustus* (Trin.) Ekman; *Elyonurus latiflorus* (Nees ex Steud.) Hack.)

Brazil, Nordeste, Ceara. Sandy soils, see *Systema Vegetabilium, editio decima sexta* 4(2): 32. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 259. 1832, *Synopsis Plantarum Glumacearum* 1: 364. 1854, *Flora Brasiliensis* 2(4): 307. 1883,

Monographiae Phanerogamarum 6: 337. 1889, *Revisio Generum Plantarum* 3(3): 350. 1898 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 6. 1913, *Darwiniana* 1: 107. 1924, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958.

E. barbiculmis Hackel (*Elionurus barbiculmis* var. *parviflorus* Scribn.; *Elionurus candidus* var. *barbiculmis* (Hack.) Roberty; *Elionurus muticus* var. *barbiculmis* (Hack.) Beetle; *Elyonurus barbiculmis* Hack.; *Elyonurus barbiculmis* var. *parviflorus* Scribn.; *Elyonurus muticus* var. *barbiculmis* (Hack.) Beetle)

U.S., Northern America, Mexico. Perennial, forage, medicinal value, see *Flora Brasiliensis* 2(4): 306. 1883, *Monographiae Phanerogamarum* 6: 339. 1889, *Revisio Generum Plantarum* 3(3): 350. 1898 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 1. 1901, Boissiera. *Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 264. 1960, *Phytologia* 35(3): 223. New York 1977.

in English: woolly spike grass, woollyspike balsamscale

in Mexico: zacate colorado, zacate lanudo

E. bilinguis (Trin.) Hackel (*Andropogon bilinguis* Trin.; *Elionurus tripsacoides* subvar. *bilinguis* (Trin.) Roberty)

South America. See *Species Plantarum. Editio quarta* 4(2): 941-942. 1806, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 262. 1832, *Flora Brasiliensis* 2(4): 308. 1883 and Boissiera. *Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 259. 1960.

E. ciliaris Kunth (*Andropogon ciliaris* (Kunth) Trin., nom. illeg., non *Andropogon ciliaris* (P. Beauv.) Raspail; *Elionurus pobeguinii* Stapf; *Elionurus tenax* Stapf; *Elionurus tripsacoides* subvar. *ciliaris* (Kunth) Roberty; *Elionurus tripsacoides* var. *ciliaris* (Kunth) Hack.; *Elyonurus ciliaris* Kunth; *Elyonurus tripsacoides* var. *ciliaris* (Kunth) Hack.; *Tripsacum ciliare* (Kunth) Raspail (after the French botanist Charles Henri Oliver Pobéguin, 1856-1951, colonial administrator in French Africa, plant collector in West Africa (French Guinea and Ivory Coast), author of *Essai sur la flore de la Guinée française* produits forestiers, agricoles et industriels. Paris 1906 and *Les plantes médicinales de la Guinée*. Paris 1912; see Auguste Jean Baptiste Chevalier (1873-1956), *Flore vivante de l'Afrique Occidentale Française*. 1938; J.H. Barnhart, *Biographical notes upon botanists*. 3: 93. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 65. 1971)

Africa, Benin. Perennial, herbaceous, more or less tufted, branched, leaf blades linear or filiform, racemes terminal and axillary, lower glume pilose on back, leaves and roots aromatic, more or less unpalatable, found in forest, similar to *Elionurus tripsacoides*, see *Species Plantarum. Editio quarta* 4(2): 941. 1806, *Nova Genera et Species Plantarum* 1: 193, t. 63. 1815 [1816], *Annales des Sciences Naturelles (Paris)* 5: 306. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 260. 1832, *Monographiae Phanerogamarum* 6: 333. 1889 and *Journal de Botanique (Morot)* 19: 99. 1905, *Bulletin of Miscellaneous Information Kew* 1909: 422. 1909, *Boissiera*. 9: 260. 1960, *Fl. Novo-Galic.* 14: 159. 1983.

in Spanish: espartillo

in Nigeria: gamba, gámbà, gashin fulani, raneraneho, raneraneho doyonbole

E. citreus (R. Br.) Benth. (*Andropogon citreus* R. Br.; *Elionurus citreus* (R. Br.) Munro ex Benth.; *Elionurus papuanus* Lauterb. & K. Schum.) (Latin *citrus*, i “the citron tree,” Greek *kitrea*, *kitrion* “citron-tree,” *kitron* “citron”)

Western Australia, New South Wales, Queensland, Northern Territory, New Guinea. Perennial fodder grass, slender, erect and glabrous, loosely caespitose, forming slender clumps, leaves linear and lemon-scented, culms branched from the upper nodes, spikelets paired each dissimilar and overlapping, sterile pedicellate spikelet reduced to 2 glumes, tropical and subtropical regions, grows in sandy soils, near rivers, gravels of stream beds, sand dunes, along the coast, see *Prodromus Florae Novae Hollandiae* 1: 203. 1810, *Flora Australiensis: A Description ...* 7: 510. 1878 and *Die Flora der deutschen Schutzgebiete in der Südsee* 171. 1901, *Kew Bulletin* 32(3): 665-672. 1978.

in English: lemon-scented grass, native lemon grass

E. elegans Kunth (*Andropogon elegans* (Kunth) Gay ex Steud.)

West Africa, Benin. Annual, tufted, hairs arranged in tufts on warts, low grazing value, see *Révision des Graminées* 1: 361, t. 84. 1830, *Synopsis Plantarum Glumacearum* 1: 364. 1854.

in Gambia: koningo nikko

in Mali: bimbilé, hudo fello, kamere, kilaburu, komé, sabi

in Nigeria: gambar kureegéé, rane raneho, raneraneho doyonkole

in Senegal: bimbilé, gedetian, gen u diar, genudiar

in Upper Volta: naa nwo, ner saagha, ner sar

E. hirtifolius Hack.

West Africa, Sudan. Perennial, wiry, tufted, hairs arranged in tufts on warts, cattle fodder, grass savannah, see *Monographiae Phanerogamarum* 6: 341-342. 1889.

in Nigeria: gambar kureegéé, rane raneho, raneraneho doyonkole

E. latiflorus (Nees ex Steud.) Hack. (*Andropogon latiflorus* Nees ex Steud.; *Elionurus adustus* (Trin.) Ekman; *Elionurus latiflorus* Nees; *Elionurus muticus* (Spreng.) Kuntze; *Elyonurus adustus* (Trin.) Ekman; *Elyonurus latiflorus* (Nees ex Steud.) Hack.; *Elyonurus muticus* (Spreng.) Kuntze)

Brazil, Nordeste. See *Systema Vegetabilium, editio decima sexta* 4(2): 32. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 259. 1832, *Synopsis Plantarum Glumacearum* 1: 364. 1854, *Flora Brasiliensis* 2(4): 307. 1883, *Monographiae Phanerogamarum* 6: 337. 1889, *Revisio Generum Plantarum* 3(3): 350. 1898 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 369. 1909.

E. lividus Hackel (*Elionurus candidus* var. *lividus* (Hack.) Roberty)

South America, Paraguay. See *Flora Brasiliensis* 2(4): 306. 1883, *Monographiae Phanerogamarum* 6: 337-338. 1889 and *Boissiera*. 9: 265. 1960.

E. muticus (Spreng.) Kuntze (*Anatherum megapotamicum* Spreng.; *Andropogon adustus* Trin.; *Andropogon caespitosus* A. Rich.; *Andropogon candidus* Trin.; *Andropogon chlorostachys* Trin.; *Andropogon dubius* Kunth; *Andropogon latiflorus* Nees ex Steud.; *Andropogon megapotamicus* Spreng.; *Andropogon rostratus* (Nees) Trin.; *Andropogon tenuifolius* Steud.; *Andropogon thymiodorus* (Nees) Steud., also spelled *thimiodorus*; *Elionurus adustus* (Trin.) Ekman; *Elionurus adustus* var. *adustus*; *Elionurus adustus* var. *calvescens* (Hack.) Hicken; *Elionurus argenteus* Nees; *Elionurus argenteus* var. *argenteus*; *Elionurus argenteus* var. *caespitosus* (A. Rich.) Hack.; *Elionurus argenteus* var. *genuinus* Hack.; *Elionurus argenteus* var. *thimiodorus* (Nees) Stapf; *Elionurus barbiculmis* var. *barbiculmis*; *Elionurus candidus* (Trin.) Hack.; *Elionurus candidus* var. *bisetosis* Hack. & Lindm.; *Elionurus candidus* var. *candidus*; *Elionurus chevalieri* Stapf; *Elionurus glaber* Phill.; *Elionurus glaber* var. *glaber*; *Elionurus glaber* Phill. var. *villosus* Phill.; *Elionurus gobariensis* Vanderyst; *Elionurus latiflorus* (Nees ex Steud.) Hack.; *Elionurus latiflorus* var. *adustus* (Trin.) Hack.; *Elionurus latiflorus* var. *calvescens* Hack.; *Elionurus latiflorus* var. *genuinus* Hack.; *Elionurus latiflorus* var. *gracilescens* Hack.; *Elionurus latiflorus* var. *latiflorus*; *Elionurus latiflorus* var. *pectinatus* Hack.; *Elionurus marunguensis* Duvign.; *Elionurus megapotamicus* (Spreng.) Herter; *Elionurus muticus* var. *calvescens* (Hack.) Hack. ex Kunze; *Elionurus muticus* var. *gracilescens* (Hack.) Hack. ex Kunze; *Elionurus muticus* var. *gracilescens* (Hack.) Hack. ex Kuntze; *Elionurus muticus* var. *muticus*; *Elionurus planifolius* Renvoize; *Elionurus preto-riensis* E. Phill.; *Elionurus prostratus* Kunth; *Elionurus*

rostratus Burm.; *Elionurus rostratus* Nees; *Elionurus thimiodorus* Nees; *Elionurus viridulus* Hack.; *Elyonurus adustus* (Trin.) Ekman; *Elyonurus argenteus* Nees; *Elyonurus candidus* (Trin.) Hack.; *Elyonurus candidus* var. *bisetosus* Hack. & Lindm.; *Elyonurus candidus* var. *candidus*; *Elyonurus glaber* E. Phillips; *Elyonurus latiflorus* (Nees ex Steud.) Hack.; *Elyonurus megapotamicus* (Spreng.) Herter; *Elyonurus muticus* (Spreng.) Kuntze; *Elyonurus planifolius* Renvoize; *Elyonurus rostratus* Nees; *Lycurus muticus* Spreng.) (Latin *muticus, a, um* "blunt," awnless)

Tropical and southern Africa, Brazil to Argentina, Yemen. Perennial, erect, herbaceous, unbranched, densely tufted, forming clumps or dense clumps, at base remains of old leaf-sheaths, aromatic, leaves mostly basal, leaf sheath thin and rounded, ligule a dense ring of hairs, leaf blade narrow and thread-like, single spike-like inflorescence with silky white hairs, upright and silver woolly spike, racemes solitary terminal, mature inflorescence curled and sickle-shaped, each raceme enclosed by the sheath of the upper leaf, spikelets paired, 2-lobed lower glume, sessile spikelets bisexual and awned, pedicelled spikelet male or sterile and awnless, provides some grazing before flowering, very low grazing value, hard and very unpalatable, the roots are chewed to alleviate toothache, occurs in moderately dry areas, well-drained mountain ridges, open deciduous bushland, heavily grazed fields, overgrazed veld, swampy places, wet savannah, savannah and grassland, mixed savannah, burned and mixed savannah, poor stony soils, cliff tops, along drainage, among boulders, coastal sand dunes, hill-sides, shallow soil, see *Systema Vegetabilium, editio decima sexta* 4(2): 32-33. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 357. 1829, *Révision des Graminées* 1: 166. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 259-261. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 480. 1833, *Florae Africae Australioris Illustrationes Monographicae* 95-96. 1841, *Tentamen Florae Abyssinicae ...* 2: 451. 1850, *Synopsis Plantarum Glumacearum* 1: 364-365. 1854, *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 361. 1866, *Flora Brasiliensis* 2(4): 306-307. 1883, *Monographiae Phanerogamarum* 6: 337, 339-340. 1889, *Flora Capensis* 7: 333. 1898, *Revisio Generum Plantarum* 3(3): 350. 1898 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 5, t. 1. 1900, *Anales del Museo Nacional de Buenos Aires* 13: 414. 1906, *Mémoires de la Société Botanique de France* 8: 100. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 6. 1913, *Bulletin agricole du Congo Belge* 13: 326. 1922, *Darwiniana* 1: 107. Buenos Aires 1924, *Bothalia* 3: 261-262. 1937, *Revista Sudamericana de Botánica* 6: 135. 1940, *Bulletin de la Société Botanique de Belgique* 90: 240. 1958, *Kew Bulletin* 32(3): 669, f. 1. 1978, *Bothalia*

24: 241-246. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in English: lemon grass, wire lemongrass, lemon-scented grass, matras grass, silky grass, Simon grass, sour grass, wine grass, wire grass

in Somalia: gaterghan, gat er gan

in southern Africa: elsgras, haasgras, klein-haasgras, koperdraad, koperdraadgras, krulgras, laventalgras, lekker-ruikgras, lomoegras, matrasgras, polgras, suurgras, suurpol, wildebeesgras, wildebeestegras, silberschwanz; hlöoko, hloko, hlooko, sehloko, sehlooko (Sotho); isinama (Zulu)

in southwest Africa/Namibia: silberschwanz

E. planifolius Renvoize (*Elionurus muticus* (Spreng.) Kuntze)

Venezuela, Bolivia, Suriname, Brazil. Perennial, caespitose, delicate, leaves basal, leaf blades flat and blunt, villous racemes, sessile spikelet perfect, lower glume herbaceous elliptic-oblong, upper glume membranous narrow ovate, spikelet pedicellate staminate, see *Systema Vegetabilium, editio decima sexta* 4(2): 32. 1827, *Revisio Generum Plantarum* 3(3): 350. 1898 and *Kew Bulletin* 32(3): 669, f. 1. 1978.

E. platypus (Trin.) Hack. (*Andropogon donianus* Benth.; *Andropogon platypus* Trin.; *Elionurus brazzae* Franch.; *Elionurus pallidus* K. Schum.; *Elyonurus platypus* (Trin.) Hack.)

Africa, Benin. Perennial, caespitose, fodder, pasture grass, savannah, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 261. 1832, *Niger Flora* 570. 1849, *Boletim da Sociedade Broteriana* 3: 135. Coimbra, Portugal 1885, *Monographiae Phanerogamarum* 6: 335-336. 1889, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 323. 1895, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 326. 1897 and *Kew Bulletin* 32(3): 665-672. 1978.

in Sierra Leone: eti, kgabont, leti, lkagbont, tele

E. royleanus Nees ex A. Rich. (*Andropogon elegantissimus* Steud.; *Andropogon elegantissimus* var. *arabicus* Steud.; *Andropogon grisebachii* (J.A. Schmidt) Steud.; *Elionurus grisebachii* J.A. Schmidt; *Elionurus royleanus* var. *albiflorus* Terracc.; *Elionurus royleanus* var. *insularis* Terracc.; *Elionurus royleanus* var. *niveus* Chiov.; *Ratzburgia schimperii* Steud.; *Rottboellia elegantissima* Hochst. ex Steud.)

East Africa, Ethiopia, Mauritania, India. Annual, branched, slender, tufted, erect or geniculate and ascending, leaves flat, inflorescence branched, racemes axillary with reddish spathes, sessile spikelet lanceolate, lower glume of sessile spikelet toothed to warty, pedicelled spikelet narrowly lanceolate, palatable, on silty soils, grassy places, open areas, dry open sites, stony ground, degraded soils, see *Nomenclator Botanicus. Editio secunda* 2: 439, 474. 1841, *Tentamen*

Florae Abyssinicae ... 2: 471. 1850, *Beiträge zur Flora der Cap Verdischen Inseln* 154. Heidelberg 1852, *Synopsis Plantarum Glumacearum* 1: 364-365. 1854, *Annuario del Reale Istituto Botanico di Roma* 5: 94. 1894 and *Nuovo Giornale Botanico Italiano* n.s., 19: 416. 1912, *Kew Bulletin* 32(3): 665-672. 1978.

E. tripsacoides Humb. & Bonpl. ex Willd. (*Anatherum tripsacoides* (Humb. & Bonpl. ex Willd.) Spreng.; *Andropogon nuttallii* Chapm.; *Andropogon tripsacoides* (Humb. & Bonpl. ex Willd.) Steud.; *Elionurus nuttallianus* (Chapm.) Benth. ex Vasey; *Elionurus nuttallii* (Chapm.) Benth. ex Vasey; *Elionurus nuttallii* (Chapm.) Vasey; *Elionurus trapnellii* C.E. Hubb.; *Elionurus tripsacoides* Willd.; *Elionurus tripsacoides* subvar. *ambiguus* Henrard; *Elionurus tripsacoides* subvar. *sericeus* (Hack.) Roberty; *Elionurus tripsacoides* var. *brevidentatus* Hack.; *Elionurus tripsacoides* var. *ciliaris* (Kunth) Hack.; *Elionurus tripsacoides* Humb. & Bonpl. ex Willd. var. *genuinus* Hack.; *Elionurus tripsacoides* var. *sericeus* Hack.; *Elionurus tripsacoides* var. *subcandidus* Kuntze; *Elionurus tripsacoides* var. *tripsacoides*; *Elionurus welwitschii* Rendle; *Elyonurus ciliaris* Kunth; *Elyonurus nuttallii* (Chapm.) Vasey; *Elyonurus tripsacoides* Humb. & Bonpl. ex Willd.; *Elyonurus tripsacoides* var. *ciliaris* (Kunth) Hack.; *Elyonurus tripsacoides* var. *sericeus* Hack.; *Elyonurus tripsacoides* var. *tripsacoides*; *Rottboellia ciliata* Nutt.) (named for Colin Graham Trapnell, with the English (b. Chislehurst, Kent) botanist John Patrick Micklethwait Brenan, (1917-1985), and the South African botanist Percy James Greenway (1897-1980) plant collectors in northern and southern Rhodesia and Nyasaland; see J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 295. 1994; F. Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*, (A.E.T.F.A.T.). 69-75. Lisbon 1962; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 103. Cape Town 1981; *Kew Bulletin*. 5: 211-226. 1950 and 7: 227-236, 441-457. 1957; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 13. Utrecht 1971)

Tropical Africa, U.S., Paraguay, Argentina. Perennial, tufted, leaf blades linear and convolute, racemes terminal and axillary, lower glume of sessile spikelets glabrous, fodder, low forage value, forming dense clumps, in sandy loam soils, sandy soils, open habitats, savannah, see *Species Plantarum*. Editio quarta 4(2): 941. 1806, *Nova Genera et Species Plantarum* 1: 193, t. 63. 1815 [1816], *The Genera of North American Plants* 1: 83. 1818, *Systema Vegetabilium*, editio decima sexta 1: 290. 1825, *Synopsis Plantarum Glumacearum* 1: 364. 1854, *Flora of the Southern United States* 580. 1860, *The Grasses of the United States* 17. 1883, *A Descriptive Catalogue of the Grasses of the United States* 25. 1885, *Monographiae Phanerogamarum* 6: 333-334.

1889, *Revisio Generum Plantarum* 3(3): 351. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 137. 1899 and *Mededeelingen van's Rijks-Herbarium* 40: 41. 1921, *Bulletin of Miscellaneous Information Kew* 1933: 498. 1933, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 260. 1960.

in English: pan-american balsamscale

in Mexico: colitas

E. tripsacoides Humb. & Bonpl. ex Willd. var. *sericeus* Hackel (*Elionurus tripsacoides* Humb. & Bonpl. ex Willd.; *Elionurus tripsacoides* subvar. *sericeus* (Hack.) Roberty)

Mexico, Veracruz. Rare, native pasture species, see *Species Plantarum*. Editio quarta 4(2): 941. 1806, *Monographiae Phanerogamarum* 6: 334. 1889 and *Boissiera*. 9: 260. 1960.

x *Elyhordeum* Mansfeld ex N.V. Zizin & K.A. Petrowa

Elymus x *Hordeum*.

See *Der Züchter. Zeitschrift für Theoretische und Angewandte Genetik* 25: 164. 1955, *Genera Graminum* 374. 1986.

x *Elyleymus* B.R. Baum

Elymus x *Leymus*.

See *Canadian Journal of Botany* 57: 947. 1979, *Genera Graminum* 374. 1986.

Elymandra Stapf = *Pleiadelphia* Stapf

From the Greek *elymos* "a cereal, millet" and *aner*, *andros* "man, stamen."

About 4-6 species, tropical Africa, Brazil. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae or Panicoideae, Andropogoneae, Anthistiriinae, annual or perennial, herbaceous, coarse, tufted, branched, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, a pair of slender racemes long-exserted, spikelets in pairs or in triplets, dark sessile spikelets subterete with pungent callus, male-only spikelets or sterile pairs at the base, terminal heterogamous triad, olive-green homoganmous spikelets, 2 glumes more or less equal, lower glume not grooved, upper glume awned, upper lemma bilobed and awned, palea absent, 2 free and fleshy small lodicules, 3 stamens, ovary glabrous, 2 stigmas, pedicellate spikelets male and awnless, shade species or open habitats, sandy soils, open sand veld, savannah woodland, along roadsides, waste places, poor sandy soil in savannah, related to *Parahyparrhenia* and *Heteropogon*, type *Elymandra androphila* (Stapf) Stapf, see *Species Plantarum* 2: 1045. 1753, *Methodus Plantas Horti Botanici* ... 207. 1794, *Syn.*

Pl. 2: 533. 1807, *Mexicanas Plantas* 2: 51, 67. 1886 and *Flora of Tropical Africa* 9: 293, 320-321, 407-408. 1919, *Hooker's Icones Plantarum* 30: t. 3121. 1927, *Journal d'Agriculture Tropicale* 1: 48. 1954, *Kew Bulletin* 20(2): 287-293. 1966, W.D. Clayton, "A revision of the genus *Hyparrhenia*" in *Kew Bulletin, Additional Series* 2: 1-196. 1969, *Contributions from the United States National Herbarium* 46: 229, 539. 2003.

Species

E. androphyla (Stapf) Stapf (*Andropogon androphilus* Stapf; *Heteropogon androphilus* (Stapf) Roberly)

Tropical Africa, French Guinea. Perennial, coarse, upper glume awnless, thatching grass, see *Journal de Botanique (Morot)* 19: 103. 1905, *Boissiera*. 9: 142. 1960, *Bulletin de l'Institut Française d'Afrique Noire* 22: 110. 1960.

in Sierra Leone: fualobi, lofuna

E. archaelymandra (Jacq.-Fél.) Clayton (*Hyparrhenia archaelymandra* Jacq.-Fél.)

Africa, Senegal. At the base of each raceme 2 homogamous pairs of spikelets separated by an internode, see *Journal d'Agriculture Tropicale* 1(1-4): 48, t. 7. 1954, *Kew Bulletin* 20(2): 291. 1966, *Kew Bulletin, Additional Series* 2: 173. 1969.

E. grallata (Stapf) Clayton (*Hyparrhenia eylesii* C.E. Hubb.; *Hyparrhenia grallata* Stapf)

Tropical Africa, Mozambique. Perennial, rare, tufted, spikelets olive-green to dark brown, in open sand veld, sandy soil in woodland, see *Flora of Tropical Africa* 9(2): 320-321. 1919, *Bulletin of Miscellaneous Information Kew* 1928(1): 37-38. 1928, *Kew Bulletin* 20(2): 292. 1966.

E. lithophila (Trin.) Clayton (*Andropogon bovonei* Chiov.; *Andropogon lithophilus* Trin.; *Hyparrhenia lithophila* (Trin.) Pilg.; *Sorghum lithophilum* (Trin.) Kuntze)

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 277. 1832, *Revisio Generum Plantarum* 2: 792. 1891 and *Nuovo Giornale Botanico Italiano*, n.s., 26: 59. 1919, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 174. 1940, *Kew Bulletin* 20(2): 292-293. 1966.

E. subulata Jacq.-Fél.

Tropical Africa. Annual, tufted, floodplains, waste places, flooded areas, poor soils, savannah, see *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 170, f. 11-2. 1950.

in Guinea: chelbi, kelbi

x *Elymopyrum* Ciferri & Giacomini

See *Nomencl. Fl. Ital.* 1: 52. 1950, *Genera Graminum* 374. 1986.

x *Elymopyrum* Cugnac

Agroelymus, *Agropyron* x *Elymus*.

See *Bulletin de la Société d'Histoire Naturelle des Ardennes* 14. 1938, *Bull. Soc. Bot. France* 86: 28. 1939, *Genera Graminum* 374. 1986.

x *Elymordeum* Lepage

Elymus x *Hordeum*.

See *Le Naturaliste Canadien* 84: 97. 1957, *Genera Graminum* 374. 1986.

x *Elymostachys* Tzvelev

Elymus x *Psathyrostachys*.

See *Novosti Sist. Vyssh. Rast.* 9: 58. 1972, *Genera Graminum* 374. 1986.

x *Elymotrigia* Hylander

Elymus x *Elytrigia*.

See *Nord. Karlväxtfl* 1: 371. 1953, *Genera Graminum* 374. 1986.

x *Elymotriticum* P. Fourn.

Elymus x *Triticum*.

See *Les Quatre Flores de la France* 88. 1935, *Genera Graminum* 374. 1986.

Elymus L. = *Anthosachne* Steud., *Asperella* Humb., *Asprella* Willd., *Braconotia* Godr., *Campeiostrachys* Drobow, *Chretomeris* Nutt. ex J.G. Sm., *Clinelymus* (Griseb.) Nevski, *Cockaynea* Zotov, *Crithopyrum* Steud., *Cryptopyrum* Heynh., *Elysitanion* Bowden, *Elytrigia* Desv., *Festucopsis* (C.E. Hubb.) Melderis, *Goulardia* Husn., *Gymnostichum* Schreb., *Hystrix* Moench, *Kengyilia* C. Yen & J.L. Yang, *Peridictyon* Seberg & al., *Polyantherix* Nees, *Roegneria* K. Koch, *Semeiostrachys* Drobow, *Sitanion* Raf., *Sitospelos* Adans., *Stenostachys* Turcz., *Terrellia* Lunell, *Zeia* Lunell

From the Greek name *elymos* "millet" (*elyo* "to cover"); see Carl Linnaeus, *Species Plantarum*. 83. 1753 and *Genera Plantarum*. edition 5. 36. 1754.

Some 20 or 120-200 species, cosmopolitan, cool temperate regions. Pooideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, culms erect or ascending or decumbent, slender to stout, coarse, open, tussocky, herbaceous, leafy, unbranched above, densely to loosely tufted, with long spreading and creeping rhizomes or without rhizomes, culm nodes glabrous, culm internodes hollow, ligule membranous and short, leaf blade flat and linear, foliage clumps, plants bisexual, chasmogamous and cleistogamous, inflorescence an unbranched terminal spike, spicate and bristled inflorescence erect or nodding with spikelets sessile, spikelets several-flowered and solitary or in groups of 2 or 3 at each node, florets long-awned to mucronate, glumes persistent and unequal, lemmas lanceolate-oblongate and rounded on the back or keeled at the apex, awned or awn absent, spikelets with a callus at the base or also a pedicel, paleas 2-keeled, 2 ciliate lodicules free and membranous, ovary hairy with apical corona, stigmas white, fruit compressed dorsiventrally, sand binder, the grain in this genus is worth collecting for food, tussocks are very palatable and palatability depends often on the soils, found in woodland and steppes, hillsides, dunes in saline areas, nomenclatural problems, considerable taxonomic confusion concerning this genus and the related genera *Agropyron* Gaertn. and *Elytrigia* Desv., intergeneric hybrids with *Sitanion* Raf. and *Triticum* L., type *Elymus sibiricus* L., see *Species Plantarum* 1: 83-84. 1753, *Familles des Plantes* 2: 36, 606. 1763, *Botanisches Magazin (Römer & Usteri)* 7: 5. 1790, *Methodus Plantas Horti Botanici ...* 294-295. 1794, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 132. 1809, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, *Annals of Natural History* 1: 284. 1838, *Flore de Lorraine* 3: 191. 1844, *Nomenclator Botanicus Hortensis* 2: 174. 1846, *A Manual of the Botany of the Northern United States* 604. 1848, *Linnaea* 21(4): 413. 1848, *Flora Rossica* 4(13): 330. 1852, *Synopsis Plantarum Glumacearum* 1: 237, 354. 1854, *Bulletin de la Société Impériale des Naturalistes de Moscou* 35(2): 311, 330. 1862, *Genera Plantarum* 3(2): 1207. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 88. 1887, *Index Kewensis* 1: 836. 1893, *Consp. Fl. Afr.* 5: 935. 1895, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 83. 1899, *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 10, 12-13, 15, 17, 19-20, t. 3. 1899 and *American Midland Naturalist* 4: 227. 1915, *Prop. Brit. Bot.* 121. 1929, *Flora Uzbekistanica* 1: 281, 300, 539-540. 1941, E.D. Merrill, *Index rafinesquianus* 76. 1949, *Nordisk Kärleväxtflora* 1: 371. 1953, *Bot. Not.* 1953: 58. 1953, *N.Z. J. Sci. Tech.* 35B: 315-343. 1954, *Evolution* 10: 415-420. 1956, *T.R.S.N.Z.* 84: 757. 1957, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 183-184, 186-188. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 301, 352, 357, 366, 371, 373, 391, 398-399, 404-406, 408. 1959, *New Zealand J. Sci.* 5: 95-119. 1962, *Journal of Nanjing Agricultural University* 1: 19, 22-23, 31, 43, 45, 64, 68, 72, 75-76, 79, 82. 1963, *Canadian Journal of Botany* 42: 554. 1964, *Canadian Journal of Botany* 45: 721. 1967, D.R. Dewey, "A worldwide survey of the genus *Elymus*-its phylogeny, taxonomy, and breeding potential." *Proc. Western Grass Breeders Conf.* 22: 13-20. 1973 (Conference Proceedings), *Canadian Journal of Botany* 57: 947. 1979, *New Zealand Journal of Botany* 20: 169-186. 1982, D.R. Dewey, "Historical and current taxonomic perspectives of *Agropyron*, *Elymus* and related genera." *Crop Sci.* (Madison) 23: 639. 1983, *Feddes Repert.* 95: 425-521. 1984 [Conspectus of the Triticeae.], *Journal of Wuhan Botanical Research* 3(4): 325-330. 1985, M.E. Barkworth & D.R. Dewey, "Genomically based genera in the perennial Triticeae of North America: identification and membership." *American Journal of Botany* 72(5): 767-776. 1985, *Genome* 29: 150-155. 1987, *Taxon* 36: 493. 1987, *Botanical Gazette* 150: 462-468. 1989 [Karyotype analysis of the Patagonian *Elymus*], *Agron. Abstr.* 1989: 102. 1989, *International Organization of Plant Systematists Newsletter* 13: 20-21. 1989, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Taxon* 41: 562-563. 1992, *Genome* 35: 881-885. 1992, *Plant Systematics and Evolution* 180: 1-13. 1992, *Theor. Appl. Gen.* 86: 288-294. 1993, *Genome* 36: 147-151. 1993, *Pl. Syst. Evol.* 185: 33-53. 1993, *Pl. Syst. Evol.* 186: 193-212. 1993, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Flora Mesoamericana* 6: 246-247. 1994, *New Zealand Journal of Botany* 32: 125-154. 1994, *Taxon* 44: 611-612. 1995, *Genome* 39: 1093-1101. 1996, C. Baden, S. Frederiksen & O. Seberg, "A taxonomic revision of the genus *Hystrix* Moench (Triticeae, Poaceae)." *Nord. J. Bot.* 17(5): 449-467. 1997, G Houle, "Interactions between resources and abiotic conditions control plant performance on subarctic coastal dunes." *Am. J. Bot.* 84: 1729. 1997, *Am. J. Bot.* 85: 1364-1368. 1998, *Nordic Journal of Botany* 18(1): 89-94. 1998, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 120(4): 503-543. 1998 [A taxonomic revision of the *Elymus* L. s.l. (Poaceae, Triticeae) in South America], *Opera Botanica* 137: 1-42. 1999, Zhou Yong-Hong, Zheng You-Liang, Yang Jun-Liang & Yen Chi, "Relationships among species of *Hystrix* Moench and *Elymus* L. assessed by RAPDs." *Genetic Resources and Crop Evolution* 47(2): 191-196. Apr 2000, *Kurtziana* 28(2): 287-295. 2000, *Systematic Botany* 26(4): 757-768. 2001 [Origin of North American *Elymus* (Poaceae: Triticeae) allotetraploids based on granul-bound starch synthase gene sequences.], Kesara Ananthawat-Jónsson & Sigríður K. Bödvarsdóttir, "Genomic and genetic relationships among species of *Leymus* (Poaceae: Triticeae) inferred from 18S-26S ribosomal genes." *Am. J. Bot.* 88: 553-559. 2001, Jean-Michel Gagné & Gilles Houle, "Factors responsible for *Honckenya peploides* (Caryophyllaceae) and *Leymus mollis* (Poaceae) spatial segregation on

subarctic coastal dunes." *Am. J. Bot.* 89: 479-485. 2002, *Contributions from the United States National Herbarium* 48: 111, 123, 145-146, 228, 234, 237, 241, 279-310, 379, 381, 402, 583, 603-604, 610, 612-614, 617, 652-653, 694. 2003, *Am. J. Bot.* 90: 85-92, 1708-1719. 2003, *Am. J. Bot.* 91: 1709-1725. 2004, *Am. J. Bot.* 92: 833-841, 1045-1058. 2005, *Weed Biology and Management* 5(2): 62-68. June 2005, *Entomologia Experimentalis et Applicata* 115(3): 427-433. June 2005, *Journal of Applied Ecology* 42(3): 577-586. June 2005, *Weed Research* 45(3): 165-174, 202-211. June 2005, *Journal of Phytopathology* 153(6): 358-365. June 2005, M. Hofmann & J. Isselstein, "Species enrichment in an agriculturally improved grassland and its effects on botanical composition, yield and forage quality." *Grass and Forage Science* 60(2): 136-145. June 2005, *Journal of Ecology* 93(3): 632-648, June 2005, *Journal of Biogeography* 32(6): 1085-1106. June 2005, *Journal of Biogeography* 32(7): 161-1186. July 2005.

Species

E. abolinii (Drobow) Tzvelev (*Agropyron abolinii* Drobow; *Gouardia abolinii* (Drobow) Ikonn.; *Roegneria abolinii* (Drobow) Nevski)

China. Spikes nodding, spreading awns, see *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 42. 1925, *Genome* 32: 468-474. 1989.

E. africanus Á. Löve (*Agropyron elymoides* P. Candargy, nom. illeg., non *Agropyron elymoides* Hack.; *Anthosachne elymoides* (Hochst. ex A. Rich.) Nevski; *Elymus triticoides* Buckley; *Triticum elymoides* Hochst. ex A. Rich.)

Ethiopia. Perennial, tufted, slender, leaf blades narrowly linear, ligule truncate, slender inflorescence spicate and loose, spikelets 5- to 6-flowered, glumes subequal, lemmas narrowly lanceolate-oblong, stout awn strongly recurving, related to *Elymus longiaristatus* (Boiss.) Tzvelev, see *Tentamen Florae Abyssinicae ...* 2: 440. 1850 and *Archives de Biologie Végétale Pure et Appliquée* 1: 57. 1901, *Feddes Repertorium* 95(7-8): 468. 1984.

E. agropyroides J. Presl (*Elymus agropyroides* var. *brevimucronatus* Hauman; *Elymus albowianus* Kurtz; *Elymus angulatus* J. Presl; *Elymus antarcticus* Hook.f.)

South America, Chile, Argentina. Bunchgrass, rhizomatous, useful for erosion control, see *Reliquiae Haenkeanae* 1(4-5): 264-265. 1830, *Flora Antarctica* 2: 388. 1847, *Revista del Museo de La Plata* 7: 401. 1896 and *Bot. Jahrb. Syst.* 120(4): 511. 1998.

E. alashanicus (Keng) S.L. Chen (*Elymus alashanicus* (Keng ex Keng & S.L. Chen) S.L. Chen; *Roegneria alashanica* Keng ex Keng & S.L. Chen)

China. Glumes much shorter than the first lemma and glabrous on both surfaces, lemmas without awns, glabrous rachilla, see *Journal Nanjing University. Natural Sciences Edition* 3: 73. 1963, *Bulletin of the Nanjing Botanical*

Garden, Mem. Sun Yat Sen 8. 1988-1989 [Sun Yat-Sen Tomb and Memorial] [*Nanjing Zhongshan Zhiwuyuan yanjiu lunwenji*], *Bulletin of Botanical Research* 14(2): 142. 1994.

E. alaskanus (Scribn. & Merr.) Á. Löve (*Agropyron alaskanum* B.A. Yurtsev & N.N. Petrovski; *Agropyron alaskanum* Scribn. & Merr.; *Agropyron boreale* (Turcz.) Drobow subsp. *alaskanum* (Scribn. & Merr.) Melderis; *Agropyron boreale* subsp. *hyperarcticum* (Polunin) Melderis; *Agropyron latiglume* (Scribn. & J.G. Sm.) Rydb.; *Agropyron violaceum* subsp. *violaceum* sensu Hultén; *Agropyron violaceum* var. *hyperarcticum* Polunin; *Agropyron violaceum* var. *latiglume* Scribn. & J.G. Sm.; *Elymus alaskanus* subsp. *borealis* (Turcz.) Á. Löve & D. Löve; *Elymus alaskanus* subsp. *latiglumis* (Scribn. & J.G. Sm.) Á. Löve; *Elymus kronokensis* var. *alaskanus* (Scribn. & Merr.) Jaaska; *Roegneria alaskana* (Scribn. & Merr.) Jurtzev & V.V. Petrovsky; *Roegneria alaskana* (Scribn. & Merr.) V.N. Vassil.; *Roegneria borealis* (Turcz.) Nevski; *Roegneria borealis* subsp. *hyperarctica* (Polunin) Á. Löve & D. Löve; *Roegneria latiglumis* (Scribn. & J.G. Sm.) Beetle; *Triticum boreale* Turcz.)

Circumpolar, Arctic Islands, Canada, U.S., Alaska. Perennial, caespitose, polymorphic, loosely tufted, erect or decumbent, glabrous or with short hairs on the stem nodes, auricles present or absent, leaf sheath glabrous and open at the base, ligule a fringed membrane with apices truncate, inflorescence a terminal spike, spikelets single sessile, glumes oblong or broadly lance-shaped, lemmas lanceolate, within this taxon several species and subspecies have been distinguished, found in sandy soils, in moist to dry sites, gravel, on disturbed soils, slopes, gravel river bed, cliffs, see *Contributions from the United States National Herbarium* 13(3): 85. 1910, *Arkiv för Botanik, Andra Serien* 7(1): 19. 1968, *Taxon* 19(2): 299. 1970.

in English: Alaska wild rye, Alaskan wildrye

E. alaskanus (Scribn. & Merr.) Á. Löve subsp. *alaskanus* (*Agropyron alaskanum* Scribn. & Merr.; *Agropyron boreale* subsp. *alaskanum* (Scribn. & Merr.) Melderis; *Agropyron boreale* var. *alaskanum* (Scribn. & Merr.) Welsh)

Northern America, Canada, British Columbia, Columbia Basin region.

in English: Alaska wild rye

E. alaskanus (Scribn. & Merr.) Á. Löve subsp. *borealis* (Turcz.) Á. Löve & D. Löve (*Agropyron boreale* (Turcz.) Drob.; *Agropyron boreale* (Turcz.) Drob. ex Polunin; *Agropyron boreale* subsp. *boreale*; *Agropyron boreale* var. *boreale*; *Agropyron kronokense* Kom.; *Agropyron kronokensis* Kom.; *Agropyron latiglume* subsp. *eurasiaticum* Hultén; *Agropyron latiglume* subsp. *subalpinum* (L. Neumann) Vestergr.; *Elymus alaskanus* subsp. *borealis* (Turcz.) Melderis; *Elymus alaskanus* subsp. *scandicus* (Nevski) Melderis; *Elymus alaskanus* subsp. *subalpinus* (L. Neumann) Á. Löve & D. Löve; *Elymus kronokensis* (Kom.) Tzvelev; *Elymus kronokensis* subsp. *borealis* (Turcz.) Tzvelev; *Ely-*

mus kronokensis subsp. *subalpinum* (L. Neumann) Tzvelev; *Elymus kronokensis* var. *borealis* (Turcz.) Tzvelev; *Elymus kronokensis* var. *scandicus* (Nevski) Tzvelev; *Elymus sajanensis* (Nevski) Tzvelev; *Roegneria borealis* (Turcz.) Nevski; *Roegneria borealis* subsp. *borealis*; *Roegneria kronokensis* (Kom.) Tzvelev; *Roegneria sajanensis* Nevski; *Roegneria scandica* Nevski; *Triticum boreale* Turcz.; *Triticum violaceum* f. *subalpinum* L. Neumann)

America. See *Bulletin de la Société Impériale des Naturalistes de Moscou* 29: 58. 1856 and *Repertorium Specierum Novarum Regni Vegetabilis* 13: 87. 1914, *Feddes Repertorium* 13: 87. 1915, *Flora URSS* 2: 624. 1934, *Acta Universitatis Lundensis, n.s.* 38: 259. 1942, *Arkticheskaia Flora SSSR* 2: 246. 1964, *Novosti Sist. Vyss. Rast.* 9: 61. 1972, *Novosti Sist. Vyss. Rast.* 10: 24. 1973, *Botaniska Notiser* 128(4): 502. 1975 [1976], *Botanical Journal of the Linnean Society* 76(4): 374-375. 1978, *Novosti Sist. Vyss. Rast.* 32: 182. 2000.

E. alaskanus (Scribn. & Merr.) Á. Löve subsp. ***hyperarcticus*** (Polunin) Á. Löve & D. Löve (*Agropyron boreale* subsp. *hyperarcticum* (Polunin) Melderis; *Agropyron boreale* var. *hyperarcticum* (Polunin) S.L. Welsh; *Agropyron latiglume* var. *pilosiglume* Hultén; *Agropyron vernicosum* Nevski ex Grubov; *Agropyron violaceum* var. *hyperarcticum* Polunin; *Elymus hyperarcticus* (Polunin) Tzvelev; *Elymus sajanensis* subsp. *hyperarcticus* (Polunin) Tzvelev; *Elymus vernicosus* (Nevski ex Grubov) Tzvelev; *Roegneria borealis* subsp. *hyperarctica* (Polunin) Á. Löve & D. Löve; *Roegneria borealis* var. *hyperarctica* (Polunin) Melderis; *Roegneria hyperarctica* (Polunin) Tzvelev)

America. See *Bulletin of the Torrey Botanical Club* 36: 539. 1909, *Flora URSS* 2: 624. 1934, *Bulletin of the National Museum of Canada* 92: 95, pl. 4. 1940, *Acta Universitatis Lundensis, n.s.* 38: 259. 1942, *Svensk Botanisk Tidskrift* 44: 161. 1950, *Acta Horti Gothoburgensis* 20: 188. 1956, *Arkticheskaia Flora SSSR* 2: 44. 1964, *Arkiv för Botanik, Andra Serien* 7(1): 19. 1968, *Novosti Sist. Vyss. Rast.* 9: 61. 1972, *Novosti Sist. Vyss. Rast.* 10: 24. 1973, *Anderson's Flora of Alaska and Adjacent Parts of Canada* 546. 1974, *Botaniska Notiser* 128(4): 502. 1975 [1976].

E. alaskanus (Scribn. & Merr.) Á. Löve subsp. ***latiglumis*** (Scribn. & J.G. Sm.) Á. Löve (*Agropyron latiglume* (Scribn. & J.G. Sm.) Rydb.; *Agropyron trachycaulum* var. *latiglume* (Scribn. & J.G. Sm.) Beetle; *Agropyron violaceum* (Hornem.) Lange; *Agropyron violaceum* var. *alboviride* (Hultén) Melderis; *Elymus trachycaulus* subsp. *latiglumis* (Scribn. & J.G. Sm.) Barkworth & D.R. Dewey; *Elymus trachycaulus* subsp. *violaceus* (Hornem.) Á. & D. Löve; *Elymus trachycaulus* var. *latiglumis* (Scribn. & J.G. Sm.) Beetle; *Roegneria violacea* (Hornem.) Melderis)

Northern America, Canada, British Columbia, Columbia Basin region, U.S., Alaska. See *Bulletin, Division of Agronomy United States Department of Agriculture* 4: 30. 1897

and *Bulletin of the Torrey Botanical Club* 36: 539. 1909, *Taxon* 29(1): 166. 1980.

E. albicans (Scribn. & J.G. Smith) Á. Löve (*Agropyron albicans* Scribn. & J.G. Smith; *Agropyron albicans* var. *albicans*; *Agropyron albicans* var. *griffithii* (Scribn. & J.G. Sm. ex Piper) Beetle; *Agropyron albicans* var. *griffithsii* (Scribn. & J.G. Sm. ex Piper) Beetle; *Agropyron dasystachyum* subsp. *albicans* (Scribn. & J.G. Sm.) D.R. Dewey; *Agropyron griffithii* Scribn. & J.G. Sm. ex Piper; *Agropyron griffithsii* Scribn. & J.G. Sm. ex Piper; *Agropyron x bowdenii* B. Boivin [*Agropyron spicatum* x *trachycaulum*]; *Elymus albicans* var. *albicans*; *Elymus albicans* var. *griffithii* (Scribn. & J.G. Sm. ex Piper) Dorn; *Elymus griffithii* (Scribn. & J.G. Smith ex Piper) Á. Löve; *Elymus griffithsii* (Scribn. & J.G. Sm. ex Piper) Á. Löve; *Elymus lanceolatus* subsp. *albicans* (Scribn. & J.G. Smith) Barkworth & D.R. Dewey; *Elymus lanceolatus* subsp. *x albicans* (Scribn. & J.G. Sm.) Barkworth & D.R. Dewey [*Elymus lanceolatus* X *Pseudoroegneria spicata*]; *Elytrigia dasystachya* subsp. *albicans* (Scribn. & J.G. Sm.) D.R. Dewey; *Roegneria albicans* (Scribn. & J.G. Sm.) Beetle; *Roegneria albicans* var. *albicans*; *Roegneria albicans* var. *griffithii* (Scribn. & J.G. Sm. ex Piper) Beetle; *Roegneria albicans* var. *griffithsii* (Scribn. & J.G. Sm. ex Piper) Beetle)

U.S. See *Bulletin, Division of Agronomy United States Department of Agriculture* 4: 32. 1897 and *Proceedings of the Biological Society of Washington* 18: 148. 1905, *Madroño* 10: 94. 1949, *Rhodora* 54(643): 196. 1952, *Bulletin of the Torrey Botanical Club* 81(1): 33. 1954, *Phytologia* 43(1): 105. 1979, *Taxon* 19(1): 166-167. 1980, *Brittonia* 35(1): 31. 1983, *Great Basin Naturalist* 43(4): 568. 1983 [1984], *Phytologia* 55(3): 212. 1984, *Vascular Plants of Wyoming* 298. 1988.

E. alienus (Keng) S. L. Chen (*Elymus alienus* (Keng ex Keng & S.L. Chen) S.L. Chen; *Roegneria aliena* Keng; *Roegneria aliena* Keng ex Keng & S.L. Chen; *Roegneria foliosa* Keng; *Roegneria foliosa* Keng ex Keng & S.L. Chen)

China. Loosely tufted, leaf sheaths longer than internodes, glumes oblong-lanceolate, lemmas lanceolate, awned, see *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 184. 1957, *Journal Nanjing University. Natural Sciences Edition* 1: 31-32. 1963, *Novon* 7(3): 227. 1997.

E. andinus Trin. (*Elymus andinus* Poepp. ex Trin.; *Elymus angulatus* J. Presl; *Elymus chubutensis* Speg.; *Elymus leptostachyus* Speg.)

South America, Chile, Argentina. Perennial, long rhizomatous, found on wet meadows, see *Reliquiae Haenkeanae* 1(4-5): 264. 1830, *Linnaea* 10(3): 304. 1835-1836, *Revista de la Facultad de Agronomia; Universidad Nacional de La Plata* 3(32-33): 631-632. 1897 and *Bot. Jahrb. Syst.* 120(4): 511-512. 1998.

E. angulatus J. Presl (*Agropyron antarcticum* Parodi; *Agropyron breviaristatum* Hitchc.; *Elymus agropyroides* J. Presl; *Elymus agropyroides* var. *agropyroides*; *Elymus agropyroides* var. *brevimucronatus* Hauman; *Elymus albowianus* Kurtz; *Elymus andinus* Poepp. ex Trin.; *Elymus antarcticus* Hook.f.; *Elymus antarcticus* var. *antarcticus*; *Elymus antarcticus* var. *fulvescens* Kurtz; *Elymus asper* Nees ex Steud.; *Elymus breviaristatus* (Hitchc.) Á. Löve, nom. illeg., non *Elymus breviaristatus* Keng ex Keng f.; *Elymus chonoticus* Phil.; *Elymus chubutensis* Speg.; *Elymus corralensis* Phil.; *Elymus gayanus* E. Desv.; *Elymus gracilis* Phil.; *Elymus hitchcockii* Davidse; *Elymus latiglumis* Phil.; *Elymus leptostachyus* Speg.; *Elymus muticus* Phil.; *Elymus oreophilus* Phil.; *Elymus palenae* Phil.; *Elymus paposanus* Phil.; *Elymus pratensis* Phil.; *Elymus rigescens* Trin.; *Elymus uniflorus* Phil.; *Elymus vaginatus* Phil.; *Elymus valdiviae* Steud.; *Elytrigia antarctica* (Parodi) Covas; *Elytrigia breviaristata* (Hitchc.) Covas ex J.H. Hunz. & Xifreda; *Elytrigia breviaristata* (Hitchc.) Covas; *Hordeum valdiviae* (Steud.) Schenck)

South America, Chile, Peru. Rhizomatous, leaf blades linear and pungent, spikes lax or straight, scabrid spikelets solitary or paired, glumes acuminate or awned, lemmas attenuate, see *Reliquiae Haenkeanae* 1(4-5): 264-265. 1830, *Linnaea* 10(3): 304. 1835-1836, *Flora Antarctica* 2: 388. 1847, *Synopsis Plantarum Glumacearum* 1: 349. 1854, *Flora Chilena* 6: 467. 1854, *Linnaea* 29(1): 104. 1858, *Florula Atacamensis seu Enumeratio ...* 56. 1860, *Linnaea* 33(3-4): 300-304. 1864, *Revista del Museo de La Plata* 7: 401. 1896, *Anales de la Universidad de Chile* 94: 347-349. 1896, *Revista de la Facultad de Agronomía; Universidad Nacional de La Plata* 3(32-33): 631-632. 1897 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 109. 1909, *Anales de Sociedad Científica Argentina* 86: 79. 1918, *Contributions from the United States National Herbarium* 24(8): 353. 1927, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3: 48, f. 17-18. 1940, *Feddes Repertorium* 95(7-8): 471. 1984, *Bulletin of Botanical Research* 4(3): 191-192. 1984, *Darwiniana* 27: 562. 1986, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993, *Bot. Jahrb. Syst.* 120(4): 511-512. 1998.

E. antarcticus Hook.f. (*Elymus agropyroides* J. Presl; *Elymus albowianus* Kurtz; *Elymus angulatus* J. Presl; *Elymus antarcticus* var. *fulvescens* Kurtz; *Elymus latiglumis* Phil.)

Southern America, Chile. Perennial bunchgrass, short rhizomatous, wide leaves, lemmas and glumes awned, growing along roadsides, see *Reliquiae Haenkeanae* 1(4-5): 264-265. 1830, *Flora Antarctica* 2: 388. 1847, *Linnaea* 33(3-4): 302. 1864, *Revista del Museo de La Plata* 7: 401. 1896.

E. antiquus (Nevski) Tzvelev (*Agropyron antiquus* Nevski (also spelled *antiquum*); *Elymus parviglumis* (Keng) Á. Löve; *Roegneria parviglumis* Keng)

Nepal, China. Perennial.

E. apricus Á. Löve & Connor

New Zealand. Perennial, erect, golden-green tussock, uppermost internode short, long flower stalk, auricles clasping or absent, ligule ciliate, spikelets divergent, glumes more or less equal, curved awns on seeds, palatable, pioneer grass, high drought and wind tolerance, see *New Zealand Journal of Botany* 20(2): 182. 1982.

in English: blue wheat grass

E. araucanus (Parodi) Á. Löve (*Agropyron araucanum* (Parodi) Parodi; *Agropyron attenuatum* var. *araucanum* Parodi; *Elymus glaucescens* Seberg; *Elymus magellanicus* (E. Desv.) Á. Löve; *Elytrigia araucana* (Parodi) Covas ex J.H. Hunz. & C. Xifreda)

Southern America, Argentina. Perennial, see *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3: 35, f. 12, t. 8. 1940, *Feddes Repertorium* 95(7-8): 471-472. 1984, *Darwiniana* 27(1-4): 561. 1986, *Plant Systematics and Evolution* 166: 99. 1989.

E. aristiglumis (Keng & S.L. Chen) S.L. Chen (*Roegneria aristiglumis* Keng & S.L. Chen)

China. Found along roadsides, stony places, see *Journal Nanjing University. Natural Sciences Edition* 3(1): 55, f. 4. 1963, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1987: 9. 1987[1988].

E. arizonicus (Scribner & J.G. Smith) Gould (*Agropyron arizonicum* Scribn. & J.G. Smith; *Agropyron caninum* var. *majus* Scribn., nom. illeg., non *Agropyron caninum* var. *majus* (Leers) Baumg.; *Agropyron spicatum* var. *arizonicum* (Scribn. & J.G. Sm.) M.E. Jones; *Elytrigia arizonica* (Scribn. & J.G. Sm.) D.R. Dewey; *Pseudoroegneria arizonica* (Scribn. & Merr.) Á. Löve)

Northern America, U.S., Texas, Mexico. Perennial, forage, medicinal, see *Bulletin of the Torrey Botanical Club* 10: 32. 1883, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 27-28, 33. 1897 and *Contributions to Western Botany* 14: 19. 1912, *Man. Grass. U.S.* 773. 1935, *Madroño* 9(4): 125. 1947, *Taxon* 29(1): 168. 1980, *Brittonia* 35(1): 31. 1983, *Genome* 32: 640-645. 1989.

in English: Arizona wheatgrass, Arizona ryegrass, Arizona wild rye

in Mexico: agropiron azul, triguillo de Arizona

E. atratus (Nevski) Hand.-Mazz. (*Clinelymus atratus* Nevski)

Asia, China. Perennial, see *Symbolae Sinicae* 7(5): 1292. 1936.

E. bakeri (E.E. Nelson) Á. Löve (*Agropyron bakeri* E.E. Nelson; *Agropyron trachycaulum* var. *bakeri* (E.E. Nelson) Boivin; *Elymus trachycaulus* subsp. *bakeri* (E.E. Nels.) Á. Löve)

North America, U.S. Perennial, see *Botanical Gazette* 38: 378. 1904, *The Canadian Field-Naturalist* 45: 201. 1931, *Rhodora* 56(662): 28. 1954, *Le Naturaliste Canadien* 94: 520. 1967, *Taxon* 29(1): 167. 1980, *Feddes Repertorium* 95(7-8): 460. 1984.

in English: Baker's wild rye, Baker's wheatgrass

E. barbicallus (Ohwi) S.L. Chen (*Agropyron barbicallum* Ohwi; *Elymus barbicallus* (Ohwi) Á. Löve; *Roegneria barbicalla* Ohwi)

Asia, China. Caespitose, slender spikes, awns straight, see *Acta Phytotaxonomica et Geobotanica* 11(4): 257. 1942, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1987: 9. 1987[1988].

E. batalinii (Krasn.) Á. Löve (*Agropyron batalinii* (Krasn.) Roshev.; *Elytrigia batalinii* (Krasn.) Nevski; *Kengyilia batalinii* (Krasn.) J.L. Yang, C. Yen & B.R. Baum; *Triticum batalinii* Krasn.)

Estonia, Russia. See *Feddes Repertorium* 95(7-8): 473. 1984, *Canadian Journal of Botany* 71(2): 343. 1993.

E. borianus (Melderis) Cope (*Agropyron borianum* Melderis; *Elymus borianus* (Melderis) Á. Löve)

Pakistan. See *Grasses of Burma ...* 659, 690. 1960, *Flora of Pakistan* 143: 617. 1982, *Feddes Repertorium* 95(&-8): 454. 1984, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 110: 7-15. 1988.

E. brachyaristatus Á. Löve (*Clinelymus breviaristatus* Keng)

Asia, China. Caespitose, nodding spikes, unawned, found in irrigation ditches, see *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 190. 1957, *Feddes Repertorium* 95(7-8): 449. 1984, *Taxon* 36: 493. 1987, *Acta Botanica Boreali-Occidentalia Sinica* 17(2): 238-241. 1997.

E. brachyphyllus (Boiss. & Hausskn.) Á. Löve (*Agropyron brachyphyllum* Boiss. & Hausskn.; *Agropyron brachyphyllum* Boiss. & Hausskn. ex Boiss.; *Elymus brachyphyllus* (Boiss. & Hausskn. ex Boiss.) Á. Löve)

Asia, Iran. A natural hybrid, see *Flora Orientalis* 5: 663. 1884 and *Feddes Repertorium* 95(7-8): 458. 1984.

E. breviaristatus Keng ex Keng f. (*Agropyron breviaristatum* Hitchc.; *Elymus breviaristatus* (Hitchc.) Á. Löve, nom. illeg., non *Elymus breviaristatus* Keng ex Keng f.)

Asia, China. See *Contributions from the United States National Herbarium* 24(8): 353. 1927, *Feddes Repertorium* 95(7-8): 471. 1984, *Bulletin of Botanical Research* 4(3): 191-192. 1984.

E. breviaristatus Keng ex Keng f. subsp. ***scabrifolius*** (Döll) Á. Löve (*Agropyron scabrifolium* (Döll) Parodi; *Elymus parodii* Seberg & G. Petersen; *Elymus scabrifolius* (Döll) J.H. Hunz.; *Elytrigia scabrifolia* (Döll) Covas ex J.H. Hunz. & Xifreda; *Triticum repens* var. *scabrifolium* Döll)

Southern America, Uruguay, Argentina. Perennial bunchgrass, found in moist sites, see *Reliquiae Haenkeanae* 1(4-5): 265-266. 1830, *Flora Brasiliensis* 2(3): 226. 1880 and *Feddes Repertorium* 95(7-8): 471. 1984, *Darwiniana* 27(1-4): 562. 1986, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 120(4): 530. 1998, *Darwiniana* 35(1-4): 167. 1998.

E. buschianus (Roshev.) Tzvelev (*Agropyron buschianum* Roshev.; *Roegneria buschiana* (Roshev.) Nevski)

Asia, Russia, Caucasus. Found in rock streams, stony slopes, alpine belt, see *Flora URSS* 2: 620. 1934, *Novosti Sist. Vyss. Rast.* 9: 61. 1972.

E. caesifolius Á. Löve (*Roegneria glaucifolia* Keng; *Roegneria glaucifolia* Keng ex Keng & S.L. Chen)

Asia, China. See *Journal Nanjing University. Natural Sciences Edition* 3: 57. 1963, *Feddes Repertorium* 95: 448. 1984.

E. calderi Barkworth (*Agropyron dasystachyum* subsp. *yukonense* auct. non (Scribn. & Merr.) D.R. Dewey; *Agropyron yukonense* auct. non Scribn. & Merr.; *Elymus lanceolatus* subsp. *yukonensis* auct. non (Scribn. & Merr.) Á. Löve; *Elymus x yukonensis* auct. non (Scribn. & Merr.) Á. Löve (pro sp.); *Elytrigia dasystachya* subsp. *yukonensis* auct. non (Scribn. & Merr.) D.R. Dewey (for James Alexander Calder, 1915-1990, a taxonomist who worked extensively in western Canada)

Northern America, U.S., Canada, Yukon. Perennial, often forming large stands, open habitats, sandy alkaline soils, see *Systematic Botany* 21(3): 349-354. 1996[1997].

E. californicus (Bolander ex Thurb.) Gould (*Asperella californica* (Bol. ex Thurb.) Beal; *Asperella californica* Benth. ex Beal; *Gymnostichum californicum* Bol. ex Thurb.; *Hystrix californica* (Bolander ex Thurb.) Kuntze)

U.S., California. Perennial, occurs in riparian habitats, in wetlands and in nonwetlands, rare species, see *Geological Survey of California, Botany* 2: 327. 1880, *Revisio Generum Plantarum* 2: 778. 1891, *Grasses of North America for Farmers and Students* 2: 657. 1896 and *Madroño* 9(4): 127. 1947.

in English: California bottle-brush grass, California bottle grass, California bottlebrush grass

E. canadensis L. (*Clinelymus canadensis* (L.) Nevski; *Elymus brachystachys* Scribn. & Ball; *Elymus canadensis* f. *calvescens* (Fernald) Bowden; *Elymus canadensis* f. *glaucifolius* (Muhl. ex Willd.) Fernald; *Elymus canadensis* subsp. *wiegandii* (Fernald) Á. Löve; *Elymus canadensis* var. *brachystachys* (Scribn. & Ball) Farw.; *Elymus canadensis* var. *glaucifolius* (Muhl. ex Willd.) Torr.; *Elymus canadensis* var. *hirsutus* (Farw.) Dorn; *Elymus canadensis* var. *pendulus* Eaton & J. Wright; *Elymus canadensis* var. *philadelphicus* (L.) Farw.; *Elymus canadensis* var. *robustus* (Scribn. & J.G. Sm.) Mackenzie & Bush; *Elymus canadensis* var. *wiegandii*

(Fernald) Bowden; *Elymus crescendus* L.C. Wheeler; *Elymus diversiglumis* Scribn. & C.R. Ball; *Elymus glaucifolius* Muhlenb. ex Willd.; *Elymus occidentalis* Scribn.; *Elymus philadelphicus* L.; *Elymus philadelphicus* var. *hirsutus* Farw.; *Elymus philadelphicus* var. *pendulus* (Eaton & J. Wright) Farw.; *Elymus robustus* Scribn. & J.G. Sm.; *Elymus robustus* var. *vestitus* Wiegand; *Elymus wiegandii* Fernald; *Elymus wiegandii* f. *calvescens* Fernald; *Hordeum canadense* (L.) Asch. & Graebn.; *Hordeum patulum* Moench; *Roegneria canadensis* (L.) Hyl.; *Sitanion brodiei* Piper; *Terrellia canadensis* (L.) Lunell; *Terrellia canadensis* var. *glaucifolia* (Muhl. ex Willd.) Lunell ex Hitchc.; *Terrellia diversiglumis* (Scribn. & C.R. Ball) Lunell (David Arthur Brodie, b. 1868)

Northern America. Perennial bunchgrass, loosely tufted, tall, greenish, coarse, robust, erect, shortly rhizomatous, clump-forming, roots fibrous, culms hollow, stems tough and woody at maturity, auricles present, ligules finely hairy, smooth sheaths open to the base, leaves scabrous bluish green to green, leaf blade flat and pointed, terminal spikes arching and bristly, 2 spikelets to a node, greenish flowers, narrow glumes slightly roughened and stiff, lemmas lanceolate and rough, awns curved and sharp, ornamental, good ground cover for dry sunny slopes, can be used for binding sand dunes, useful for erosion control, self-seeding tendencies, foliage and spikes turn tan in fall, when young is palatable to all classes of livestock, drought intolerant, naturalized in prairie, usually found dry habitats, in a disturbed part of a sand prairie, in open woods, gravelly banks of rivers, fields, stream banks and waste areas, disturbed roadsides, in moist to sandy meadows, chaparral, desert grasslands, in wetlands or nonwetlands, alluvial woods, sandy beaches, dry sandy gravelly or rocky soil, hybridizes with slender wheatgrass (*Elymus trachycaulus* (Link) Gould ex Shinners), Texas wildrye (*Elymus interruptus* Buckl.) and Virginia wildrye (*Elymus virginicus* L.), see *Species Plantarum* 1: 83-85. 1753, *Centuria I. Plantarum* ... 1: 6. 1755, *Methodus Plantas Horti Botanici* ... 199. 1794, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1: 131. 1809, *A Flora of the Northern and Middle Sections of the United States* 1(1): 137. 1824 [1823], *A Manual of Botany* 232. 1840, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 37. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 13: 49. 1898, *Erythea* 7: 100. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 48, f. 22. 1901, *Synopsis der mitteleuropäischen Flora* 2: 745. 1902, *American Midland Naturalist* 4: 228. 1915, *Rhodora* 20(233): 90. 1918, *Report of the Michigan Academy of Science, Arts and Letters* 21: 357. 1920, *American Midland Naturalist* 10: 314. 1927, *Rhodora* 35(414): 191-193. 1933, *Nordisk Kärnväxtflora* 1: 381. 1953, *Canadian Journal of Botany* 42: 574-575. 1964, *Taxon* 29(1): 167.

1980, *Vascular Plants of Wyoming* 298. 1988, *Genome* 33: 123-130. 1990, *Cytologia* 56: 431-436. 1991.

in English: Canada wild rye, Canada wild-rye, Canada wild-rye, Canadian wild rye, nodding wild rye

in Mexico: zacate silvestre del Canadá

E. canadensis L. var. *brachystachys* (Scribn. & C.R. Ball) Farw. (*Elymus brachystachys* Scribn. & C.R. Ball; *Elymus philadelphicus* var. *brachystachys* (Scribn. & C.R. Ball) Farw.)

North America. See *Amoenitates Academicæ* ... 4: 266. 1759 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 47, f. 21. 1901, *Report of the Michigan Academy of Science, Arts and Letters* 21: 357. 1920, *American Midland Naturalist* 10: 314. 1927.

E. canadensis L. var. *canadensis*

North America.

E. canadensis L. var. *robustus* (Scribn. & J.G. Sm.) Mack. & Bush (*Elymus canadensis* f. *crescendus* Ramaley; *Elymus canadensis* var. *villosus* Bates; *Elymus crescendus* (Ramaley) W.A. Wheeler; *Elymus glaucifolius* var. *crescendus* (Ramaley) Bush; *Elymus glaucifolius* var. *robustus* (Scribn. & J.G. Sm.) Bush; *Elymus philadelphicus* var. *robustus* (Scribn. & J.G. Sm.) Farw.; *Elymus robustus* Scribn. & J.G. Sm.)

America. See *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1: 131. 1809, *Minnesota Botanical Studies* 1: 114. 1894, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 37. 1897 and *Man. Fl. Jackson County* 38. 1902, *Minnesota Botanical Studies* 3: 106. 1903, *American Botanist* 20: 17. 1914, *American Midland Naturalist* 10: 83, 87, 314. 1926-1927.

E. canaliculatus (Nevski) Tzvelev (*Agropyron canaliculatum* Nevski; *Elymus longearistatus* (Boiss.) Tzvelev; *Elymus longearistatus* subsp. *canaliculatus* (Nevski) Tzvelev)

Asia, China, Nepal. High altitude grass, see *Novosti Sist. Vyss. Rast.* 9: 62. 1972, *Cathaya* 7: 35-52. 1995.

E. caninus L. (*Agropyron caninum* (L.) Pall. ex Hegi; *Agropyron biflorum* (Brign.) Schult.; *Agropyron caninum* (L.) P. Beauv.; *Agropyron donianum* F.B. White; *Brachypodium caninum* (L.) Lindm.; *Elytrigia canina* (L.) Drobow; *Gouardia canina* (L.) Husn.; *Roegneria behmii* Melderis; *Roegneria canina* (L.) Nevski; *Roegneria doniana* (F.B. White) Melderis; *Roegneria tuskaulensis* Vass.; *Triticum biflorum* Brign.; *Triticum caninum* L.; *Triticum rupestre* Link; *Zeia canina* (L.) Lunell)

Asia, Turkey, Russia, Europe, India. See *Species Plantarum* 1: 86-87. 1753, *Flora suecica* (2): 39. 1755, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Essai d'une Nouvelle Agrostographie* 100, 102, 146, pl. 19, f. 35. 1812, *Linnaea* 21(4): 413. 1848, Pierre Tranquille Husnot (1840-1929), *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 83.

Cahan [Caen] 1899 and *Illustrierte Flora von Mittel-Europa* 1: 488. 1908, *Moniteur du Jardin Botanique de Tiflis* 22: 2. 1912, *American Midland Naturalist* 226. 1915, *Svensk Fanerogamflora* 104. 1918, *Flora Uzbekistanica* 1: 285, 539. 1941, *Turun yliopiston julkaisuja - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Genome* 30: 879-884. 1988, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 110: 7-15. 1988, *Bot. Zhurn. (Moscow & Leningrad)* 75: 118-120. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Hereditas; genetiskt arkiv* 113: 109-119. 1990, *Flora Mediterranea* 1: 229-236. 1991, *Plant Systematics and Evolution* 180: 1-13. 1992, *Genome* 35: 230-237. 1992, *Plant Systematics and Evolution* 185: 35-53. 1993, *Nordic Journal of Botany* 13: 353-367. 1993, *Plant Systematics and Evolution* 186: 193-212. 1993, *Watsonia* 20: 63-66. 1994, *Plant Systematics and Evolution* 191: 199-201. 1994, *Pakistan Journal of Botany* 26: 353-366. 1994, *Plant Systematics and Evolution* 197: 1-17. 1995, *Plant Systematics and Evolution* 209: 63-73. 1998, *Acta Botanica Yunnanica* 21(4): 449-454. 1999, *Taxon* 49(2): 258. 2000.

in English: bearded couch, bearded wild rye, fibrous wheatgrass, awned wheatgrass

E. caucasicus (K. Koch) Tzvelev (*Agropyron caucasicum* (K. Koch) Grossh.; *Roegneria caucasica* K. Koch; *Roegneria linczevskii* Czopanzov)

Iran, Russia. See *Linnaea* 21(4): 413. 1848 and *Novosti Sist. Vyss. Rast.* 6: 24. 1970, *Novosti Sist. Vyss. Rast.* 9: 61. 1972, *Genome* 34: 860-867. 1991 [Cytogenetics of *Elymus caucasicus* and *Elymus longearistatus* (Poaceae: Triticeae)], *Plant Systematics and Evolution* 185: 35-53. 1993.

E. ciliaris (Trin.) Tzvelev (*Agropyron ciliare* (Trin.) Ohwi; *Roegneria ciliaris* (Trin.) Nevski; *Triticum ciliare* Trin.)

China. Caespitose, found along roadsides, see *Enumeratio Plantarum, quas in China Boreali* 72. 1833 and *Novosti Sist. Vyss. Rast.* 9: 61. 1972.

E. ciliaris (Trin.) Tzvelev subsp. ***amurensis*** (Drobow) Tzvelev (*Agropyron amurense* Drobow)

China, Russia, Ussuri, Amur. Perennial, see *Novosti Sist. Vyss. Rast.* 9: 61. 1972.

E. ciliaris (Trin.) Tzvelev subsp. ***ciliaris*** (*Agropyron ciliare* (Trin.) Franch.; *Roegneria ciliaris* (Trin.) Nevski; *Triticum ciliare* Trin.)

Asia temperate, China, Korea.

E. ciliaris (Trin.) Tzvelev subsp. ***japonicus*** Á. Löve (*Agropyron japonicum* Honda)

Asia temperate, Japan. See *Botanical Magazine* 41: 384. 1927, *Feddes Repertorium* 95: 459. 1984, *Novon* 7(3): 228. 1997.

E. clivorum Melderis

Turkey. Rare species, see *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 77. 1984.

E. confusus (Roshev.) Tzvelev (*Agropyron confusum* Roshev.; *Roegneria confusa* (Roshev.) Nevski)

Asia temperate, China, Mongolia. Spikes pendulous, single spikelets, coarse awns, found in gravelly dark brown soil, grassland, rocky sites, moist areas, see *A Botanical Materia Medica* 5: 150. 1924, *Flora URSS* 2: 605. 1934, *Nordic Journal of Botany* 13: 353-367. 1993 [Two new Tibetan species of *Elymus* (Poaceae: Triticeae) and their genomic relationships.], *Plant Systematics and Evolution* 197: 1-17. 1995 [Interspecific hybridizations with *Elymus confusus* and *E. dolichatherus*, and their genomic relationships (Poaceae: Triticeae).].

E. cordilleranus Davidse & R.W. Pohl (*Agropyron attenuatum* (Kunth) Roem. & Schult.; *Agropyron boliviicum* P. Candargy; *Agropyron magellanicum* (E. Desv.) Hack.; *Agropyron magellanicum* var. *secundum* (J. Presl) Hauman & Van der Veken; *Agropyron secundum* J. Presl; *Elymus attenuatus* (Griseb.) K. Richt.; *Elymus attenuatus* Á. Löve, nom. illeg., non *Elymus attenuatus* (Griseb.) K. Richt.; *Elymus bolivianus* (P. Candargy) Á. Löve; *Elymus giganteus* var. *attenuatus* Griseb.; *Elytrigia attenuata* (Kunth) Covas ex J.H. Hunz. & Xifreda; *Elytrigia attenuata* Covas; *Triticum attenuatum* Kunth; *Triticum magellanicum* var. *secundum* (J. Presl) Speg.; *Triticum secundum* (J. Presl) Kunth)

Bolivia, Andes. Caespitose, rhizomatous, leaf blades acute linear and rigid, spikes dense, spikelets scabrous, glumes bidentulate, lemmas acute muticous or awned, páramos, puna, see *Nova Genera et Species Plantarum* 1: 180. 1815 [1816], *Systema Vegetabilium* 2: 751. 1817, *Reliquiae Haenkeanae* 1(4-5): 266. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 442. 1833, *Flora Rossica* 4(13): 332. 1852, *Plantae Europaeae* 1: 132. 1890, *Anales del Museo Nacional de Buenos Aires* 5: 98-99. 1896 and *Wissenschaftliche Ergebnisse der Schwedischen Expedition nach den Magallansländern* 3(5): 231[alt. 331]. 1900, *Archives de Biologie Végétale Pure et Appliquée* 1: 25, 46. 1901, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1* [2], *Botany* 8(1,5,1): 246-247. 1904, *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 25. 1917, *Feddes Repertorium* 95(7-8): 471, 473. 1984, *Darwiniana* 27(1-4): 562. 1986, *Novon* 2(2): 100. 1992.

E. coreanus Honda (*Asperella coreana* (Honda) Nevski; *Clinelymus coreanus* (Honda) Honda; *Hystrix coreana* (Honda) Ohwi; *Leymus coreanus* (Honda) K.B. Jensen & R.R.C. Wang)

Asia, Korea. See *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 17. 1930, *Flora URSS* 2: 693. 1934, *Botanical Magazine* 50: 571. 1936, *Journal of Japanese Botany* 12(9): 653. 1936, *International Journal of Plant Sciences* 158: 877. 1997, *Nordic Journal of Botany*

18(1): 89-94. 1998 [Comparison of the Giemsa C-banded karyotype of *Hystrix coreana* and *H. patula* (Poaceae, Triticeae)].

E. curvatus Piper (*Elymus submuticus* (Hook.) Smyth; *Elymus virginicus* var. *submuticus* Hook.; *Terrellia curvata* (Piper) Lunell; *Terrellia curvata* (Piper) Nevski)

Northern America, U.S., Pacific Northwest. See *Flora Boreali-Americana* 2: 255. 1840 and *Bulletin of the Torrey Botanical Club* 30: 233. 1903, *Transactions of the Kansas Academy of Science* 25: 99. 1913, *American Midland Naturalist* 4: 228. 1919.

E. dahuricus Turcz. ex Griseb. (*Clinelymus cylindricus* (Franch.) Honda; *Clinelymus dahuricus* (Turcz. ex Griseb.) Nevski; *Elymus cylindricus* (Franch.) Honda, nom. illeg., non *Elymus cylindricus* Pohl; *Elymus franchetii* Kitag.)

China, Asia temperate, Japan, India, Nepal. Perennial bunchgrass, short-lived, shallow-rooted, fodder, forage, useful for erosion control, see *Flora Rossica* 4(13): 331. 1852, *Nouvelles archives du muséum d'histoire naturelle* II 7: 152. 1884 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 17-18. 1930, *Rep. First Sc. Exped. Manchoukuo, Sect. IV* 4: 101. Tokyo 1934-1940 [Report of the first Scientific expedition to Manchoukuo under the leadership of Shigeyasu Tokunaga, June-October 1933. Sect. IV: *Index florae jeholensis*, cum appendice: plantae novae vel minus cognitae ex Manshuria, by Takenoshin Nakai, Masaji Honda, Yoshisuko Stake, & Masao Kitagawa.], *Journal of Japanese Botany* 43: 189. 1968, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 110: 7-15. 1988, *Pakistan Journal of Botany* 26: 353-366. 1994.

in English: Dahurian wildrye

in French: élyme de Daourie

in Japan: hamamugi

E. dahuricus Turcz. ex Griseb. subsp. ***dahuricus*** (*Elymus cylindricus* (Franch.) Honda, nom. illeg.; *Elymus dahuricus* subsp. *cylindricus* (Franch.) N. R. Cui; *Elymus dahuricus* var. *cylindricus* Franch.)

Asia temperate. Perennial, found in waste area.

E. dahuricus Turcz. ex Griseb. subsp. ***excelsus*** (Turcz. ex Griseb.) Tzvelev (*Clinelymus tangutorum* Nevski; *Elymus excelsus* Turcz. ex Griseb.; *Elymus tangutorum* (Nevski) Hand.-Mazz.)

Europe, Russia. See *Flora Rossica* 4(13): 331. 1852 and *Novosti Sist. Vyss. Rast.* 8: 63. 1971.

E. dentatus (Hook.f.) Tzvelev (*Agropyron dentatum* Hook.f.; *Elymus dentatus* (Hook.f.) Cope)

Russia. Perennial, spikes erect and reddish to purplish, found in moist meadows, see *The Flora of British India* 7(22): 370-371. 1897 [1896] and *Flora of Pakistan* 143: 623. 1982.

E. dentatus (Hook.f.) Tzvelev subsp. ***dentatus***

Eurasia, Russia, Asia.

E. diversiglumis Scribner & C.R. Ball (*Elymus canadensis* L.; *Elymus canadensis* L. var. *interruptus* (Buckley) Church; *Elymus interruptus* Buckley; *Terrellia diversiglumis* (Scribn. & C.R. Ball) Lunell)

North America U.S. See *Species Plantarum* 1: 83-84. 1753, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 99. 1862 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 48, f. 22. 1901, *American Midland Naturalist* 4: 228. 1915.

in English: interrupted wildrye, various glumed wildrye, unequal-glumed wildrye

E. dolichatherus (Keng ex Keng & S.L. Chen) Á. Löve (*Roegneria dolichathera* Keng ex Keng & S.L. Chen)

Asia. See *Journal Nanjing University. Natural Sciences Edition* 3: 19. 1963, *Feddes Repertorium* 95(7-8): 453. 1984, *Plant Systematics and Evolution* 197: 1-17. 1995.

E. donianus (F.B. White) Á. Löve & D. Löve (*Agropyron donianum* F.B. White)

Europe, Iceland, Greenland. See *Scottish Naturalist* 10: 232. 1890 and *Taxon* 13: 201. 1964, *International Organization of Plant Biosystematists Newsletter* 13: 20-21. 1989.

E. drobovii (Nevski) Tzvelev (*Agropyron drobovii* Nevski; *Roegneria drobovii* (Nevski) Nevski; *Semeiostachys drobovii* (Nevski) Drobow)

Russia. Stiff and narrow spikes, short and straight awns, see *Flora Uzbekistanica* 1: 284. 1941, *Novosti Sist. Vyss. Rast.* 9: 61. 1972.

E. elongatus (Host) Runemark (*Agropyron elongatum* (Host) P. Beauv.; *Agropyron rigidum* (Schrad.) P. Beauv.; *Elymus elongatus* (Host) Greuter; *Elytrigia elongata* (Host) Nevski; *Lophopyrum elongatum* (Host) Á. Löve; *Thinopyrum elongatum* (Host) D.R. Dewey; *Triticum elongatum* Host; *Triticum giganteum* Roth; *Triticum rigidum* Schrad.)

Africa, Eurasia. Perennial, caespitose, glabrous, robust, erect, without creeping rhizomes, leaves rigid, inflorescence erect, lax spike narrow, spikelets lanceolate or ovate-lanceolate, awnless glumes ovate-oblong or lanceolate, lemma notched and awnless, revegetator, fodder, forage, considered to be a synonym of *Elytrigia elongata* (Host) Nevski, see *Icones et Descriptiones Graminum Austriacorum* 2: 18, t. 23. 1802, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812, *Catalogus plantarum horti botanici monspeliensis* 153. 1813 and *Hereditas; genetiskt arkiv.* 70(2): 156. 1972, *Annales Musei Goulandris* 1: 73. 1973, *Taxon* 29(2-3): 351. 1980, *Gene Manipulation in Plant Improvement* 274. 1984, *Biologisches Zentralblatt* 105: 361-368. 1986, *South African Journal of Botany* 54: 541-550. 1988, *Genome* 30: 361-365, 903-914. 1988, *Genome* 33: 283-293. 1990, *Genome* 36: 102-111, 641-651. 1993, *Anales del*

Jardín Botánico de Madrid 51(2): 280. 1994, *Plant Systematics and Evolution* 197: 225-231. 1995.

in English: tall wheat grass

in French: chiendent allongé

in Spanish: agropiro alargado

E. elongatus (Host) Runemark subsp. *ponticus* (Podp.) Melderis (*Elytrigia elongata* auct. ross., non (Host) Nevski; *Thinopyrum ponticum* (Podp.) Barkworth & D.R. Dewey; *Triticum elongatum* Host; *Triticum ponticum* Podp.)

Europe. See *Icones et Descriptiones Graminum Austriae* 2: 18, t. 23. 1802 and *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 52: 681. 1902, *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973, *Botanical Journal of the Linnean Society* 76(4): 377. 1978, *American Journal of Botany* 72(5): 772. 1985, *Botanical Journal of the Linnean Society* 112: 149-157. 1993, *Botanical Journal of the Linnean Society* 117: 159-168. 1995.

E. elongatus (Host) Runemark subsp. *turcicus* (McGuire) Melderis (*Elytrigia pontica* subsp. *turcica* (P.E. McGuire) Jarvie & Barkworth; *Elytrigia turcica* P.E. McGuire; *Lophopyrum turcicum* (P.E. McGuire) McGuire ex A. Love)

Europe. See *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973, *Folia Geobotanica et Phytotaxonomica* 18(1): 108, t. 7. 1983, *Feddes Repertorium* 95(7-8): 489. 1984, *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 81. 1984, *Nordic Journal of Botany* 12(2): 162. 1992.

in Turkey: puta otu

E. elymoides (Raf.) Swezey (*Aegilops hystrix* Nutt.; *Chretomeris trichoides* Nutt. ex J.G. Sm.; *Elymus difformis* Nutt. ex J.G. Sm.; *Elymus glaber* (J.G. Sm.) Burt Davy; *Elymus hystrix* (Nutt.) M.E. Jones, nom. illeg., non *Elymus hystrix* L.; *Elymus insularis* (J.G. Sm.) M.E. Jones; *Elymus minor* (J.G. Sm.) M.E. Jones; *Elymus pubiflorus* (J.G. Sm.) Burt Davy; *Elymus sitanion* Schult.; *Hordeum elymoides* (Raf.) Schenck; *Polyantherix hystrix* (Nutt.) Nees; *Sitanion albescens* Elmer; *Sitanion basalticola* Piper; *Sitanion brevifolium* J.G. Sm.; *Sitanion caespitosum* J.G. Sm.; *Sitanion ciliatum* Elmer; *Sitanion cinereum* J.G. Sm.; *Sitanion elymoides* Raf.; *Sitanion glabrum* J.G. Sm.; *Sitanion hystrix* (Nutt.) J.G. Smith; *Sitanion hystrix* var. *brevifolium* (J.G. Sm.) C.L. Hitchc.; *Sitanion hystrix* var. *hordeoides* (Suksd.) C.L. Hitchc.; *Sitanion hystrix* var. *hystrix*; *Sitanion insulare* J.G. Sm.; *Sitanion latifolium* Piper; *Sitanion longifolium* J.G. Sm.; *Sitanion marginatum* Scribn. & Merr.; *Sitanion minus* J.G. Sm.; *Sitanion molle* J.G. Sm.; *Sitanion montanum* J.G. Sm.; *Sitanion polyantherix* J.G. Sm.; *Sitanion pubiflorum* J.G. Sm.; *Sitanion rigidum* J.G. Sm.; *Sitanion strigosum* J.G. Sm.; *Sitanion velutinum* J.G. Sm.; *Sitanion velutinum* Piper)

Northern America, U.S., California, Pacific Northwest. Perennial bunchgrass, solitary, densely tufted, sheaths open to the base, short ligule more or less membranous, auricles

present or absent, flat leaf blades, long and bristly spike-like flower head, spikelets commonly 2 per node, spike partially enclosed in the uppermost sheath, narrow glumes, lemma more or less rough, long sharp awns present or absent, forage, very palatable to moderately palatable, tolerant of saline and alkaline soils, useful for erosion control, suitable for rehabilitation of disturbed sites, occurs under dry conditions, on dry to moist sites, rocky slopes, sandy soils, along roadsides, mountain meadows, disturbed arid to semiarid areas, disturbed areas of deserts, in nonwetlands, open habitats, open grassland sites and open forest, see *The Genera of North American Plants* 1: 86. 1818, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, *Mantissa* 2: 426. 1824, *Annals of Natural History* 1: 284. 1838, *Doane College Natural History Studies* 1: 155. 1891, *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 12-19, t. 2, 3. 1899, *Erythea* 7: 99. 1899 and *University of California Publications in Botany* 1: 57-58. 1902, *Bulletin of the Torrey Botanical Club* 29(7): 469-470. 1902, *Bulletin of the Torrey Botanical Club* 30: 233-234. 1903, *Botanical Gazette* 36: 57-58. 1903, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 109. 1907, *Contributions to Western Botany* 14: 20. 1912.

in English: squirrel tail, squirreltail, squirreltail grass, bottlebrush squirreltail, bottlebrush, western bottle-brush grass

E. elymoides (Raf.) Swezey subsp. *brevifolius* (J.G. Smith) Barkworth (*Elymus brevifolius* (J.G. Sm.) M.E. Jones; *Elymus elymoides* var. *brevifolius* (J.G. Sm.) Dorn; *Elymus longifolius* (J.G. Sm.) Gould; *Sitanion brevifolium* J.G. Sm.; *Sitanion hystrix* (Nutt.) J.G. Smith var. *brevifolium* (J.G. Sm.) C.L. Hitchc.; *Sitanion longifolium* J.G. Smith; *Sitanion velutinum* Piper)

Northern America, California, Mexico. Perennial, erect, fodder, usually occurs in nonwetlands, occasionally found on wetlands, see *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 15, 17-18, t. 2, 3. 1899 and *Contributions to Western Botany* 14: 20. 1912, *Vascular Plants of the Pacific Northwest* 1: 701. 1969, *Brittonia* 26(1): 60. 1974, *Vascular Plants of Wyoming* 298. 1988.

in English: short-leaved squirrel tail, squirreltail

in Mexico: pasto

E. elymoides (Raf.) Swezey subsp. *californicus* (J.G. Smith) Barkworth (*Sitanion californicum* J.G. Smith; *Sitanion hystrix* (Nutt.) J.G. Smith var. *californicum* (J.G. Sm.) F.D. Wilson; *Sitanion rigidum* var. *californicum* (J.G. Sm.) Smiley)

Northern America, California. Perennial, glumes with awns shorter than the lemma awns, usually occurs in nonwetlands, occasionally found on wetlands, see *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 13, 15, t. 2. 1899 and *University of*

California Publications in Botany 9: 99. 1921, *Brittonia* 15: 316. 1963, *Phytologia* 83(4): 306. 1997 [1998].

in English: California squirreltail, squirreltail

E. elymoides (Raf.) Swezey subsp. ***elymoides*** (*Aegilops hystrix* Nutt.; *Elymus sitanion* J.A. Schultes; *Sitanion elymoides* Raf.; *Sitanion hystrix* (Nutt.) J.G. Sm.)

Northern America, U.S., California, Nevada. Perennial, glume awns longer than the lemma awns, 2 teeth at the tip of the glume, usually occurs in nonwetlands, occasionally found on wetlands, see *The Genera of North American Plants* 1: 86. 1818, *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 15, t. 2. 1899 and *Bull. Torrey Bot. Club* 89: 217-228. 1962, *Bull. Torrey Bot. Club* 91: 396-405. 1965, *Bot. Gaz.* 128: 11-16. 1967, *Bull. Torrey Bot. Club* 94: 395-404. 1967, *Bot. Gaz.* 129: 309-315, 316-322. 1968, *Am. J. Bot.* 56: 664-670. 1969, *Bot. Gaz.* 130: 203-213. 1969, *Bot. Gaz.* 131: 210-216. 1970, *Am. J. Bot.* 58: 902-908. 1971, *Am. J. Bot.* 68: 216-225. 1981.

in English: squirreltail

E. elymoides (Raf.) Swezey subsp. ***hordeoides*** (Suksd.) Barkworth (*Elymus hordeoides* (Suksdorf) Barkworth & D.R. Dewey; *Sitanion hordeoides* Suksdorf; *Sitanion hystrix* var. *hordeoides* (Suksdorf) C.L. Hitchc.)

California, U.S., Oregon. Perennial, usually occurs in nonwetlands, occasionally found on wetlands, see *Werdenda* 1(2): 4-5. 1923, *Vascular Plants of the Pacific Northwest* 1: 701. 1969, *American Journal of Botany* 72(5): 772. 1985, *Phytologia* 83(4): 306. 1997 [1998].

in English: barley squirreltail, squirreltail

E. enysii (Kirk) Á. Löve & Connor (*Agropyron enysii* Kirk) New Zealand. Pioneer grass, more or less geniculate, slender, tufted or open, drooping, rooting at nodes, stoloniferous, ligule erose, auricles present, compact inflorescence, glumes more or less equal, lemma apex bifid, palea apex pointed and bifid, high wind tolerance, found in stream banks, swamps, seepages, see *Transactions and Proceedings of the New Zealand Institute* 26: 272. 1894, *Transactions and Proceedings of the New Zealand Institute* 27: 352. 1895 and *Illus. Fl. N.Z.* 2: t. 234. 1914, *New Zealand Journal of Botany* 20(2): 183. 1982.

in English: wheatgrass

E. erosiglumis Melderis

Turkey. Rare species, see *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 78. 1984.

E. falcis Connor

New Zealand. Pioneer grass, prostrate to ascendine, auricles tiny or absent, leaf blades falcate, glumes more or less equal, palea apex pointed and bifid, occasionally cleistogamous, high wind and drought tolerance, river beds, rocky places, along streams, see *New Zealand Journal of Botany* 32: 132, f. 3. 1994.

in English: wheatgrass

E. farctus (Viv.) Runem. ex Melderis (*Agropyron junceiforme* (Á. & D. Löve) Á. & D. Löve; *Agropyron junceum* (L.) P. Beauv.; *Agropyron junceum* subsp. *mediterraneum* Simonet; *Elymus junceus* Fisch.; *Elytrigia juncea* (L.) Nevski; *Elytrigia juncea* (L.) Nevski subsp. *juncea*; *Elytrigia juncea* subsp. *mediterranea* (Simonet) Hyl.; *Elytrigia junceiformis* Á. & D. Löve; *Thinopyrum junceum* (L.) Á. Löve; *Triticum farctum* Viv.; *Triticum junceum* L.) (from the Latin *farctus*, *a*, *um* participle of *farcio*, *farsi*, *farctum* "to stuff, fill full, to cram, to fill")

Mediterranean, Turkey, Israel, Europe. Perennial, rhizomatous, with long creeping rhizomes, stems rigid and glabrous, rigid leaves convolute or flat, spike narrow, fragile racemes, keeled glumes awnless and narrow-lanceolate or oblong, lemma unawned and glabrous, sand-binder especially in saline areas, closely related to *Elymus elongatus* (Host) Runemark, sometimes considered to be a synonym of *Elytrigia juncea* (L.) Nevski subsp. *juncea*, see *Annals of Botany* 1(2): 159. 1804 and *Botanical Journal of the Linnean Society* 76(4): 382. 1978, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991.

in English: Russian wild rye, sand couch grass, sand couch, sea wheatgrass

in French: chiendent des sables

in Spanish: grama de las playas

E. fedtschenkoi Tzvelev (*Agropyron curvatum* Nevski; *Roegneria fedtschenkoi* (Tzvelev) N.R. Cui; *Roegneria fedtschenkoi* (Tzvelev) J.L. Yang & C. Yen, nom. illeg., non *Roegneria fedtschenkoi* (Tzvelev) N.R. Cui)

Asia, Pakistan, Russia. Perennial, spikes purplish, awned, found in rocky slopes, mountains, see *Novosti Sist. Vyss. Rast.* 10: 21. 1973, *Claves Plantarum Xinjiangensium* 1: 158. 1982, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Canadian Journal of Botany* 69(2): 288. 1991.

E. fibrosus (Schrenk) Tzvelev (*Triticum fibrosum* Turcz.; *Roegneria fibrosa* (Schrenk) Nevski; *Agropyron fibrosum* Schrenk)

Finland, Russia. Two-sided spikes, subequal glumes, lemmas with subulate-acuminate tips, see *Bulletin de l'Académie Impériale des Sciences de Saint Pétersbourg* 3: 209. 1845 and *Bot. Zhurn. (Moscow & Leningrad)* 80(2): 87-90. 1995.

E. fibrosus (Schrenk) Tzvelev subsp. ***fibrosus*** (*Agropyron fibrosum* (Schrenk) P. Candargy; *Roegneria fibrosa* (Schrenk) Nevski; *Triticum fibrosum* Schrenk)

Finland, Russia.

E. fibrosus (Schrenk) Tzvelev subsp. ***subfibrosus*** (Tzvelev) Tzvelev (*Elymus subfibrosus* (Tzvelev) Tzvelev; *Roegneria subfibrosa* Tzvelev)

Russia, Siberia. See *Flora Arctica URSS* 2: 238. 1964, *Novosti Sist. Vyss. Rast.* 10: 25. 1973.

E. foliosus (Keng) S.L. Chen (*Elymus foliosus* (Keng ex Keng & S.L. Chen) S.L. Chen; *Elymus semicostatus* subsp. *foliosus* (Keng) Á. Löve; *Roegneria foliosa* Keng; *Roegneria foliosa* Keng ex Keng & S.L. Chen)

Asia, China. See *Journal Nanjing University. Natural Sciences Edition* 3: 32. 1963, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1987: 9. 1987[1988].

E. gayanus E. Desv. (*Elymus angulatus* J. Presl; *Elymus gracilis* Phil.; *Elymus valdiviae* Steud.; *Hordeum valdiviae* (Steud.) Schenck)

Southern America, Chile, Argentina. Perennial, rhizomatous, found in dry areas with free drainage, see *Reliquiae Haenkeanae* 1(4-5): 264. 1830, *Flora Chilena* 6: 467. 1854, *Synopsis Plantarum Glumacearum* 1: 349. 1854, *Linnaea* 33(3-4): 301. 1864 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 109. 1909, *Bot. Jahrb. Syst.* 120(4): 511-512. 1998.

E. glabriflorus (Vasey ex L.H. Dewey) Scribn. & C.R. Ball (*Elymus australis* var. *glabriflorus* (Vasey ex L.H. Dewey) Wiegand; *Elymus canadensis* var. *glabriflorus* Vasey ex L.H. Dewey; *Elymus virginicus* var. *glabriflorus* (Vasey ex L.H. Dewey) Bush; *Elymus virginicus* var. *glaucus* Beal)

North America. See *Species Plantarum* 1: 83-84. 1753, *Contributions from the United States National Herbarium* 2(3): 550. 1894, *Grasses of North America for Farmers and Students* 2: 653. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 46, 49-50, f. 20, 23. 1901, *Rhodora* 20(233): 84. 1918, *American Midland Naturalist* 10: 62. 1926, *Sida* 13: 241-250. 1988.

E. glabriflorus (Vasey ex L.H. Dewey) Scribn. & C.R. Ball var. ***australis*** (Scribn. & C.R. Ball) J.J.N. Campb. (*Elymus australis* Scribn. & C.R. Ball; *Elymus virginicus* f. *australis* (Scribn. & C.R. Ball) Fernald; *Elymus virginicus* var. *australis* (Scribn. & C.R. Ball) Hitchc.)

America, U.S. See *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 46, f. 20. 1901, *Indiana Department of Conservation, Publication* 82: 113. 1929, *Rhodora* 35(414): 198. 1933, *Novon* 5(2): 128. 1995.

E. glabriflorus (Vasey ex L.H. Dewey) Scribn. & C.R. Ball var. ***glabriflorus***

America.

E. glaucissimus (Popov) Tzvelev (*Agropyron glaucissimum* Popov; *Roegneria glaucissima* (M. Pop.) Filatova)

Russia. Nodding spikes, see *Bulletin de la Société Impériale des Naturalistes de Moscou* 57: 84. 1938, *Novosti Sist. Vyss. Rast.* 9: 61. 1972.

E. glaucus Buckley (*Clinelymus glaucus* (Buckley) Nevski; *Clinelymus glaucus* subsp. *californicus* Nevski; *Clinelymus glaucus* subsp. *coloratus* Nevski; *Elymus americanus* Vasey

& Scribn. ex Cassidy; *Elymus angustifolius* Burt Davy; *Elymus angustifolius* var. *caespitosus* Burt Davy; *Elymus glaucus* Regel; *Elymus glaucus* var. *breviaristatus* Burt Davy; *Elymus glaucus* var. *maximus* Burt Davy; *Elymus hispidulus* Burt Davy; *Elymus mackenzii* Bush; *Elymus marginalis* Rydb.; *Elymus nitidus* Vasey; *Elymus petersonii* Rydb.; *Elymus sibiricus* var. *americanus* S. Watson & J.M. Coult.; *Elymus sibiricus* var. *glaucus* (Buckley) Ramaley; *Elymus villosus* var. *glabriusculus* Torr.; *Terrellia glauca* (Buckley) Lunell) (named after Kenneth Kent Mackenzie, 1877-1934)

Northern America, Canada, U.S., California. Perennial bunchgrass, tufted, stiff-stemmed, light bluish, erect, short-lived, stoloniferous or shortly rhizomatous, commonly grows in small tufts of only a few stems, vigorous fibrous root system well branched, sheaths open, auricles present, inflorescence a dense erect and narrow spike, more than 1 spikelet per node, spikelets are 2 or rarely 3 per node or solitary at the upper and lower nodes, glumes narrow lance-shaped with edges transparent, curved or straight awn, very small grain, viable plant species, fodder, forage, drought-tolerant, not tolerant of shallow soils, planted near the coast to stabilize sand dunes, occurs from near sea level to sub-alpine montane sites, in sandy soils, among rocky knolls, moist or dry open thickets and shores, along lakeshores, in meadows, open woods and dry to moist hillsides, on moderately moist soils, see *Species Plantarum* 1: 83. 1753, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 131. 1809, *Pacif. Railr. Rep.* 4(5): 157. 1857, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 99-100. 1862, *Bulletin of the Torrey Botanical Club* 13(7): 120. 1886, *Bulletin Colorado State University Experiment Station* 12: 57. 1890, *A Manual of the Botany of the Northern United States (edition 6)* 673. 1890, *Minnesota Botanical Studies* 9: 112. 1894 and *A Flora of Western Middle California* 79-81. 1901, *Bulletin of the Torrey Botanical Club* 36: 539-540. 1909, *American Midland Naturalist* 4: 228. 1915, *American Midland Naturalist* 10: 53. 1926.

in English: blue wildrye, Western ryegrass, smooth wildrye

E. glaucus Buckley subsp. ***glaucus*** (*Elymus glaucus* var. *breviaristatus* Burt Davy)

California, northern America, Canada, U.S., Alaska. Perennial, usually occurs in nonwetlands, occasionally found on wetlands.

in English: blue wildrye, western ryegrass, Western rye, smooth wildrye

E. glaucus Buckley subsp. ***jepsonii*** (Burt Davy) Gould (*Clinelymus glaucus* var. *pubescens* Nevski; *Clinelymus velutinus* (Scribn. & Merr.) Nevski; *Elymus divergens* Burt Davy; *Elymus edentatus* Suksd.; *Elymus glaucus* f. *jepsonii* (Burt Davy) H. St. John; *Elymus glaucus* var. *jepsonii* Burt Davy; *Elymus glaucus* var. *tenuis* Vasey; *Elymus parishii* Burt Davy & Merr.; *Elymus velutinus* Scribn. & Merr.)

California, western North America. Perennial bunchgrass, green, often bent at the base, lower sheaths purple, spikes erect, lemmas glabrous to scabrid-pubescent, usually occurs in nonwetlands, occasionally found on wetlands, see *Contributions from the United States National Herbarium* 1(8): 280. 1893 and *A Flora of Western Middle California* 79-80. 1901, *University of California Publications in Botany* 1: 58. 1902, *Bulletin of the Torrey Botanical Club* 29(7): 466-467. 1902, *Werdenda* 1(2): 4. 1923, *Madroño* 9(4): 126. 1947.

in English: Jepson's blue wildrye, Western ryegrass

E. glaucus Buckley subsp. ***mackenzii*** (Bush) J.J.N. Campb. (*Elymus mackenzii* Bush)

North America. See *American Midland Naturalist* 10: 53. 1926, *Journal of the Kentucky Academy of Sciences* 63(1): 93. 2002.

E. glaucus Buckley subsp. ***virescens*** (Piper) Gould (*Elymus glaucus* subsp. *virescens* (Piper) Á. Löve, nom. illeg., non *Elymus glaucus* subsp. *virescens* (Piper) Gould; *Elymus glaucus* var. *virescens* (Piper) Bowden; *Elymus howellii* Scribn. & Merr.; *Elymus pubescens* Burt Davy; *Elymus strigatus* H. St. John; *Elymus virescens* Piper)

California, northern America, Canada, U.S., Alaska, Oregon, Pacific States. Perennial, usually occurs in nonwetlands, occasionally found on wetlands, see *Erythraea* 7: 101. 1899 and *A Flora of Western Middle California* 78. 1901, *Contributions from the United States National Herbarium* 13: 88. 1910, *Rhodora* 17(197): 102-103. 1915, *Madroño* 9(4): 126. 1947, *Canadian Journal of Botany* 42: 560. 1964, *Feddes Repertorium* 95: 450. 1984.

in English: Virginia blue wildrye, blue wildrye, Virginia wildrye

E. gmelinii (Ledeb.) Tzvelev (*Agropyron gmelinii* (Ledeb.) Scribn. & J.G. Sm.; *Agropyron turczaninovii* Drobow; *Roegneria glaucissima* (M. Pop.) Filatova; *Roegneria gmelinii* (Ledeb.) Kitag.; *Roegneria turczaninovii* (Drobow) Nevski; *Semeiostachys turczaninovii* (Drobow) Drobow; *Triticum caninum* var. *gmelinii* Ledeb.; *Triticum rupestre* Turcz. ex Ganesch., nom. illeg., non *Triticum rupestre* Link)

Europe, Russia. Perennial, caespitose, spikes dark purple to reddish, curved awns, growing in loam soil, dark brown soil, gravelly soil, silt loam, open grassland, abandoned wheat fields, high mountain meadows, see *Flora Altaica* 1: 118. 1829 and *Botanical Gazette* 150: 84-92. 1989.

E. grandiglumis (Keng ex Keng & S.L. Chen) Á. Löve (*Roegneria grandiglumis* Keng ex Keng & S.L. Chen)

China, Asia. See *Genome* 33: 563-570. 1990 [Cytology, fertility, and morphology of *Elymus kengii* (Keng) Tzvelev and *E. grandiglumis* (Keng) A. Löve (Triticeae: Poaceae)].

E. himalayanus (Nevski) Tzvelev (*Agropyron himalayanum* (Nevski) Melderis; *Roegneria himalayana* Nevski; *Roegneria hyperarctica* (Polunin) Tzvelev)

Asia. See *Bulletin of the National Museum of Canada* 92: 95, pl. 4. 1940, *Grasses of Burma* ... 662. 1960, *Flora Arctica URSS* 2: 244. 1964, *Novosti Sist. Vyss. Rast.* 9: 61. 1972, *Genome* 35: 230-237. 1992 [Interspecific hybridization between *Elymus himalayanus* and *E. schrenkianus*, and other *Elymus* species (Triticeae: Poaceae)].

E. hirsutus J. Presl (*Clinelymus borealis* (Scribn.) Nevski; *Elymus borealis* Scribn.; *Elymus ciliatus* Scribn.; *Elymus hirsutus* Schreb. ex Roem. & Schult.)

Northern America, U.S., Alaska, Canada. Perennial, slender, forming small clumps, sheaths open, auricles present or absent, short ligules, nodding or slightly drooping spike-like flower head, spikelets loosely arranged more than 1 per node, awned glumes with transparent edges, long hairs along the margin of the lemmas, awns straight to slightly curved, common in wet places, in natural meadows, woodlands and dry to moist slopes, see *Systema Vegetabilium* 2: 776. 1817, *Reliquiae Haenkeanae* 1: 264. 1830, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 57, t. 16. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 27: 9. 1900. in English: boreal wildrye, hairy wildrye, Northern ryegrass

E. hispidus (Opiz) Melderis (*Agropyron hispidum* Opiz; *Elytrigia intermedia* (Host) Nevski; *Thinopyrum intermedium* (Host) Barkworth & D.R. Dewey; *Triticum glaucum* Desf. ex DC.; *Triticum intermedium* Host)

Europe, Asia. Blue foliage, see *Icones et Descriptiones Graminum Austriacorum* 3: 23, t. 22. 1805, *Oekonomisch-technische Flora Böhmens* 1: 425. 1836 and *Botanical Journal of the Linnean Society* 76(4): 380. 1978, *American Journal of Botany* 72(5): 772. 1985, *Botanical Journal of the Linnean Society* 117: 159-168. 1995, *Flora Mediterranea* 7: 204-213. 1997.

E. hispidus (Opiz) Melderis subsp. ***barbulatus*** (Schur) Melderis (*Agropyron barbulatum* Schur; *Agropyron glaucum* var. *trichophorum* (Link) Beck.; *Agropyron intermedium* subsp. *trichophorum* (Link) Asch. & Graebn.; *Agropyron intermedium* var. *trichophorum* (Link) Halácsy; *Agropyron trichophorum* (Link) K. Richt.; *Agropyron truncatum* subsp. *trichophorum* (Link) Soó; *Elytrigia intermedia* (Host) Nevski subsp. *trichophora* (Link) Tzvelev; *Elytrigia trichophora* (Link) Nevski; *Thinopyrum intermedium* (Host) Barkworth & D.R. Dewey; *Triticum intermedium* Host; *Triticum trichophorum* Link)

Europe. See *Linnaea* 17(4) 395. 1844, *Verhandlungen und Mittheilungen des Siebenbürgischen Vereins für Naturwissenschaften zu Hermannstadt* 4: 91. 1853 and *Botanical Journal of the Linnean Society* 76(4): 381. 1978, *American Journal of Botany* 72(5): 772. 1985.

in Turkey: ilamuk

E. hitchcockii Davidse (*Agropyron breviaristatum* Hitchc.; *Elymus angulatus* J. Presl; *Elymus breviaristatus* (Hitchc.) Á. Löve, nom. illeg., non *Elymus breviaristatus* Keng ex Keng f.; *Elytrigia breviaristata* (Hitchc.) Covas ex J.H. Hunz. & Xifreda)

North America, U.S. See *Reliquiae Haenkeanae* 1(4-5): 264. 1830 and *Contributions from the United States National Herbarium* 24(8): 353. 1927, *Feddes Repertorium* 95(7-8): 471. 1984, *Bulletin of Botanical Research* 4(3): 191-192. 1984, *Darwiniana* 27: 562. 1986, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993, *Bot. Jahrb. Syst.* 120(4): 511. 1998.

E. hoffmannii K.B. Jensen & K.H. Asay

Turkey. Perennial, may be used for seeding, revegetation, see *International Journal of Plant Sciences* 157(6): 750-758. 1996.

in English: wheatgrass

E. hondae (Kitag.) S.L. Chen (*Roegneria hondae* Kitag.)

China. See *Report of the First Scientific Expedition to Manchoukuo* 6(4): 118-119. 1942, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1987: 9. 1987[1988].

E. hybridus (Keng ex Keng & S.L. Chen) S.L. Chen (*Roegneria hybrida* Keng ex Keng & S.L. Chen)

China. See *Journal Nanjing University. Natural Sciences Edition* 3(1): 18. 1963, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1987: 9. 1987[1988].

E. hyperarcticus (Polunin) Tzvelev (*Agropyron boreale* subsp. *hyperarcticum* (Polunin) Melderis; *Agropyron latiglume* var. *pilosiglume* Hultén; *Agropyron vernicosum* Nevski ex Grubov; *Agropyron violaceum* (Hornem.) Lange; *Agropyron violaceum* (Hornem.) Vasey; *Agropyron violaceum* var. *hyperarcticum* Polunin; *Elymus alaskanus* subsp. *hyperarcticus* (Polunin) Á. & D. Löve; *Elymus sajanensis* (Nevski) Tzvelev; *Elymus sajanensis* subsp. *hyperarcticus* (Polunin) Tzvelev; *Roegneria borealis* var. *hyperarctica* (Polunin) Melderis; *Roegneria hyperarctica* (Polunin) Tzvelev)

U.S., North America. See *Flora Danica* 12(35): t. 2044. 1832, J.M.C. Lange (1818-1898), *Conspectus Florae Groenlandicae [Meddelelser om Grønland ... Tredie Hefte.]* 1: 155. 1880 and *Bulletin of the National Museum of Canada* 92: 95, pl. 4. 1940, *Arkticheskaia Flora SSSR* 2: 44. 1964, *Arkiv för Botanik, Andra Serien* 7(1): 19. 1968, *Taxon* 19(2): 299. 1970, *Novosti Sist. Vyss. Rast.* 9: 61. 1972, *Novosti Sist. Vyss. Rast.* 10: 24. 1973, *Botaniska Notiser* 128(4): 502. 1975 [1976].

E. hystrix L. (*Aegilops hystrix* Nutt.; *Asperella echidnea* Raf.; *Asperella hystrix* (L.) Humb.; *Asperella hystrix* var. *bigeloviana* Fernald; *Asperella hystrix* var. *hystrix*; *Asprella americana* Nutt.; *Asprella angustifolia* Nutt.; *Asprella hystrix* (L.) Willd.; *Asprella major* Fresen. ex Steud.; *Elymus hystrix* (Nutt.) M.E. Jones, nom. illeg., non *Elymus hystrix*

L.; *Elymus hystrix* var. *bigelovianus* (Fernald) Mohlenbr.; *Elymus hystrix* L. var. *hystrix*; *Elymus pseudohystrix* Schult.; *Gymnostichum hystrix* (L.) Schreb.; *Gymnostichum patulum* (Moench) Lunell; *Hordeum hystrix* (L.) Schenck, nom. illeg., non *Hordeum hystrix* Roth; *Hystrix elymoides* Mack. & Bush; *Hystrix hystrix* (L.) Millsp.; *Hystrix patula* Moench; *Hystrix patula* var. *bigeloviana* (Fernald) Deam; *Zeocriton hystrix* (L.) P. Beauv.)

Northern America, eastern U.S. Useful for erosion control, found in woods and thickets, see *Species Plantarum* 1: 560. 1753, *Botanisches Magazin (Römer & Usteri)* 7: 5. 1790, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 132. 1809, *Beschreibung der Gräser* 2: 127, t. 47. 1810, *Essai d'une Nouvelle Agrostographie* 115, 182. 1812, *The Genera of North American Plants* 1: 86. 1818, *American Monthly Magazine and Critical Review* 4: 190. 1819, *Mantissa* 2: 427. 1824, *Transactions of the American Philosophical Society, new series*, 5: 151. 1835, *Nomenclator Botanicus. Editio secunda* 1: 152. 1840, *Bulletin, West Virginia Agricultural Experiment Station* 24(2): 474. 1892 and *Man. Fl. Jackson County* 39. 1902, *Botanisch Jaarboek* 40: 109. 1907, *Contr. U.S. Natl. Herb.* 12: 124. 1908, *Contributions to Western Botany* 14: 20. 1912, *American Midland Naturalist* 4: 228. 1915, *Rhodora* 24: 230. 1922, *Indiana Department of Conservation, Publication* 82: 117. 1929, *Phytologia* 4(1): 21. 1952, *Illustrated Flora of Illinois* 206. 1972, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991, *Plant Systematics and Evolution* 185: 35-53. 1993, *Plant Systematics and Evolution* 191: 199-201. 1994, *Nordic Journal of Botany* 17(5): 449-467. 1997.

in English: eastern bottle-brush, bottlebrush grass

E. hystrix L. var. ***bigelovianus*** (Fernald) Bowden (also spelled ***bigeloviana***) (*Asperella hystrix* var. *bigeloviana* Fernald; *Elymus hystrix* f. *bigelovianus* (Fernald) Dore; *Elymus hystrix* var. *bigelovianus* (Fernald) Mohlenbr.; *Hystrix patula* f. *bigeloviana* (Fernald) Gleason; *Hystrix patula* var. *bigeloviana* (Fern.) Deam)

Northern America, U.S. See *Methodus Plantas Horti Botanici ...* 295. 1794 and *Rhodora* 24: 230. 1922, *Indiana Department of Conservation, Publication* 82: 117. 1929, *Phytologia* 4(1): 21. 1952, *Canadian Journal of Botany* 42: 588. 1964, *Illustrated Flora of Illinois* 206. 1972, *Le Naturaliste Canadien* 103(6): 557. 1976.

E. hystrix L. var. ***hystrix*** (*Asperella echidnea* Raf.; *Asperella hystrix* (L.) Humb.; *Elymus pseudohystrix* Schult.; *Gymnostichum patulum* (Moench) Lunell; *Hystrix elymoides* Mack. & Bush; *Hystrix hystrix* (L.) Millsp.; *Hystrix patula* Moench; *Hystrix patula* var. *patula*)

U.S. See *Species Plantarum* 1: 560. 1753, *Botanisches Magazin (Römer & Usteri)* 7: 5. 1790, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 132. 1809, *Beschreibung der Gräser* 2: 127, t. 47. 1810, *Essai d'une Nouvelle Agrostographie* 115, 182. 1812, *American Monthly*

Magazine and Critical Review 4: 190. 1819, *Mantissa* 2: 427. 1824, *Transactions of the American Philosophical Society, new series*, 5: 151. 1835, *Nomenclator Botanicus. Editio secunda* 1: 152. 1840, *Bulletin, West Virginia Agricultural Experiment Station* 24(2): 474. 1892 and *Man. Fl. Jackson County* 39. 1902, *Botanisch Jaarboek* 40: 109. 1907, *Contr. U.S. Natl. Herb.* 12: 124. 1908, *American Midland Naturalist* 4: 228. 1915, *Rhodora* 24: 230. 1922, *Indiana Department of Conservation, Publication* 82: 117. 1929, *Phytologia* 4(1): 21. 1952, *Illustrated Flora of Illinois* 206. 1972, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991, *Plant Systematics and Evolution* 185: 35-53. 1993, *Plant Systematics and Evolution* 191: 199-201. 1994, *Nordic Journal of Botany* 17(5): 449-467. 1997.

E. interruptus Buckley (*Elymus canadensis* var. *interruptus* (Buckl.) Church; *Elymus diversiglumis* Scribn. & C.R. Ball; *Elymus occidentalis* Scribn.; *Elymus virginicus* subsp. *interruptus* (Buckley) Á. Löve; *Terrellia diversiglumis* (Scribn. & C.R. Ball) Lunell)

North America, U.S., Texas. Perennial, see *Species Plantarum* 1: 84. 1753, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 99. 1862, *Bulletin, Division of Agrostology United States Department of Agriculture* 13: 49. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 48, f. 22. 1901, *American Midland Naturalist* 4: 228. 1915, *Man. Grass. U.S.* 844. 1935, *Rhodora* 69(778): 133. 1967, *Feddes Repertorium* 95(7-8): 452. 1984.

in English: Texas wildrye, interrupted wildrye

E. jacquemontii (Hook.f.) Tzvelev (*Agropyron jacquemontii* Hook.f.; *Elymus jacquemontii* (Hook.f.) Cope, nom. illeg., non *Elymus jacquemontii* (Hook. f.) Tzvelev; *Elymus longearistatus* (Boiss.) Tzvelev)

Asia. See *The Flora of British India* 7(22): 369-370. 1897 [1896] and *Novosti Sist. Vyss. Rast.* 9: 62. 1972, *Flora of Pakistan* 143: 622. 1982, *Plant Systematics and Evolution* 186: 193-212. 1993 [Meiotic studies of *Elymus nutans* and *E. jacquemontii* (Poaceae, Triticeae) and their hybrids with *Pseudoroegneria spicata* and seventeen *Elymus* species.]

E. japonicus (Hack.) Á. Löve (*Asperella japonica* Hack.) Asia, Japan. See *Feddes Repertorium* 95(7-8): 465. 1984.

E. jufinshanicus (C.P. Wang & H.L. Yang) S.L. Chen (*Roegneria alashanica* Keng var. *jufinshanica* C.P. Wang & H.L. Yang; *Roegneria jufinshanica* (C.P. Wang & H.L. Yang) L.B. Cai) (China, Nei Mongol, Daqingshan-Jufinshan, Inner Mongolia)

China. Glumes equal or subequal to the first lemma and densely pubescent on the inner surface, lemmas awned, densely pubescent rachilla, see *Bulletin of Botanical Research* 4(4): 87-88, f. 5. 1984, *Novon* 7(3): 228-229. 1997, *Acta Phytotaxonomica Sinica* 35(2): 170-171. 1997.

E. kengii Tzvelev (*Elymus kengii* S.L. Chen; *Elymus kengii* (Keng) Tzvelev; *Kengyilia hirsuta* var. *hirsuta*)

Russia. Alpine meadow, see *Taxon* 36: 493. 1987, *Genome* 33: 563-570, 668-673. 1990, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 3. 1991 [1992].

E. kokonoricus (Keng ex Keng & S.L. Chen) Á. Löve (*Kengyilia kokonorica* (Keng ex Keng & S.L. Chen) J.L. Yang, C. Yen & B.R. Baum; *Roegneria kokonorica* Keng ex Keng & S.L. Chen) (Kokonor Lake of Qinghai, Dong-He County, Qinghai Prov.)

Asia, China. See *Journal Nanjing University. Natural Sciences Edition* 3: 88. 1963, *Feddes Repertorium* 95(7-8): 455. 1984, *Hereditas; genetiskt arkiv.* 116(1-2): 27. 1992, *Acta Phytotaxonomica Sinica* 37(2): 117-124. 1999.

E. kronokensis (Kom.) Tzvelev (*Agropyron kronokense* Kom.; *Agropyron kronokensis* Kom.; *Agropyron latiglume* (Scribn. & J.G. Sm.) Rydb.; *Agropyron latiglume* subsp. *subalpinum* (Neuman) Vesterg.; *Elymus alaskanus* subsp. *borealis* (Turcz.) Á. Löve & D. Löve; *Elymus alaskanus* subsp. *borealis* (Turcz.) Melderis; *Elymus alaskanus* subsp. *scandicus* (Nevski) Melderis; *Elymus alaskanus* subsp. *subalpinus* (Neuman) Á. Löve & D. Löve; *Elymus kronokensis* subsp. *borealis* (Turcz.) Tzvelev; *Elymus kronokensis* var. *borealis* (Turcz.) Tzvelev; *Elymus kronokensis* var. *scandicus* (Nevski) Tzvelev; *Roegneria borealis* (Turcz.) Nevski; *Roegneria kronokensis* (Kom.) Tzvelev; *Roegneria sajanensis* Nevski; *Roegneria scandica* Nevski; *Triticum boreale* Turcz.; *Triticum violaceum* f. *subalpinum* Neuman)

Northern America, Russia. Alpine, dry tundra, see *Bulletin de la Société Impériale des Naturalistes de Moscou* 29: 58. 1856, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 30. 1897 and Leopold Martin Neuman (1852-1922), *Sveriges Flora (fanerogamerna)* utgifven af L. M. Neuman 726. Lund 1901 [Collaborator: Fredrik Elias Ahlfgvengren, 1862-1921], *Bulletin of the Torrey Botanical Club* 36: 539. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 13: 87. 1914, *Feddes Repertorium* 13: 87. 1915, *Flora URSS* 2: 624. 1934, *Arkticheskaia Flora SSSR* 2: 246. 1964, *Novosti Sist. Vyss. Rast.* 9: 61. 1972, *Novosti Sist. Vyss. Rast.* 10: 24. 1973, *Botaniska Notiser* 128(4): 502. 1975 [1976], *Botanical Journal of the Linnean Society* 76(4): 374-375. 1978, *Novosti Sist. Vyss. Rast.* 32: 182. 2000.

E. kronokensis (Kom.) Tzvelev subsp. *subalpinus* (Neuman) Tzvelev (*Agropyron boreale* (Turcz.) Drobow; *Elymus kronokensis* subsp. *subalpinum* (L. Neumann) Tzvelev; *Triticum violaceum* f. *subalpinum* Neuman)

Russia. See *Sveriges Flora (fanerogamerna)* utgifven af L. M. Neuman 726. 1901, *Novosti Sist. Vyss. Rast.* 10: 24. 1973.

E. lanceolatus (Scribner & J.G. Smith) Gould (*Agropyron dasystachyum* (Hook.) Scribn.; *Agropyron lanceolatum* Scribn. & J.G. Sm.)

Northern America, Pacific Northwest, U.S., Colorado. Perennial, long-lived, blue-green, coarse, erect, sod-forming, spreading readily from branched rhizomes, aggressive creeping root system, auricles present, sheath open and densely hairy, ligule short, stiff and inrolled leaf blades, flower head erect and stiff, well-spaced spikelets, rounded glumes, lemmas rarely awned, awns slightly divergent, high drought tolerance, useful for conservation of disturbed areas and for critical areas stabilization, growing on sandy soils along lakeshores, benches, sandy loam, dry hillsides, dry banks, exposed flats and ridges, well-drained meadows, riverbanks and sandy dunes, open habitats, gravelly creek beds, on heavy alkaline flats, see *Flora Boreali-Americana* 2: 254. 1840, *Bulletin of the Torrey Botanical Club* 10(7): 78. 1883, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 34. 1897 and *Madroño* 10: 94. 1949, *Genome* 32: 468-474. 1989, *Genome* 36: 72-76. 1993.

in English: streamside wild rye, thick-spike wheatgrass, thickspike wildrye

E. lanceolatus (Scribn. & J.G. Sm.) Gould subsp. *albicans* (Scribn. & J.G. Sm.) D.R. Dewey (*Agropyron albicans* Scribn. & J.G. Sm.; *Agropyron albicans* var. *griffithsii* (Scribn. & J.G. Sm. ex Piper) Beetle; *Agropyron dasystachyum* (Hook.) Scribn. & J.G. Sm. subsp. *albicans* (Scribn. & J.G. Sm.) D.R. Dewey; *Agropyron griffithsii* Scribn. & J.G. Sm. ex Piper; *Elymus albicans* (Scribn. & J.G. Sm.) Á. Löve; *Elymus griffithsii* (Scribn. & J.G. Sm.) Á. Löve; *Elymus lanceolatus* subsp. *x albicans* (Scribn. & J.G. Sm.) Barkworth & D.R. Dewey [*Elymus lanceolatus* X *Pseudoroegneria spicata*]; *Elytrigia dasystachya* (Hook.) Á. & D. Löve subsp. *albicans* (Scribn. & J.G. Sm.) D.R. Dewey; *Roegneria albicans* (Scribn. & J.G. Sm.) Beetle)

Northern America, Canada, U.S. See *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 32. 1897 and *Taxon* 19(1): 166. 1980, *Great Basin Naturalist* 43(4): 568. 1983 [1984].

in English: Montana wheatgrass.

E. lanceolatus (Scribn. & J.G. Smith) Gould subsp. *lanceolatus* (*Agropyron dasystachyum* (Hook.) Scribn. & J.G. Sm.; *Agropyron dasystachyum* (Hook.) Scribn.; *Agropyron dasystachyum* (Hook.) Vasey; *Agropyron dasystachyum* var. *dasystachyum*; *Agropyron dasystachyum* var. *riparium* (Scribn. & J.G. Sm.) Bowden; *Agropyron dasystachyum* var. *subvillosum* (Hook.) Scribn. & J.G. Sm.; *Agropyron elmeri* Scribn.; *Agropyron lanceolatum* Scribn. & J.G. Sm.; *Agropyron riparium* Scribn. & J.G. Sm.; *Agropyron smithii* var. *riparium* (Scribn. & J.G. Sm.) M.E. Jones; *Agropyron subvillosum* (Hook.) E. Nelson; *Andropogon riparium* Scribn. & J.G. Sm.; *Elymus lanceolatus* var. *riparius* (Scribn. & J.G. Sm.) Dorn; *Elymus riparius* (Scribn. & J.G. Sm.) Gould, nom. illeg., non *Elymus riparius* Wiegand; *Elymus rydbergii* Gould; *Elymus subvillosus* (Hook.) Gould; *Elytrigia*

dasystachya (Hook.) Á. & D. Löve; *Elytrigia riparia* (Scribn. & J.G. Sm.) Beetle; *Triticum dasystachyum* (Hook.) A. Gray; *Triticum repens* var. *acutum* Vasey ex Scribn. & J.G. Sm.; *Triticum repens* var. *dasystachyum* Hook.; *Triticum repens* var. *subvillosum* Hook.; *Zeia dasystachyum* (Hook.) Lunell; *Zeia riparia* (Scribn. & J.G. Sm.) Lunell)

Northern America, U.S., California. Perennial, useful for erosion control, fodder, forage, occurs in sandy soil under dry conditions, see *Flora Boreali-Americana* 2: 254. 1840, *A Manual of the Botany of the Northern United States* 602-1848, *Bulletin of the Torrey Botanical Club* 10(7): 78. 1883, *The Grasses of the United States* 45. 1883, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 33-35. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 54-55, t. 12. 1898 and *Memoirs of the New York Botanical Garden* 1: 64. 1900, *Botanical Gazette* 38: 378. 1904, *Contributions to Western Botany* 14: 19. 1912, *American Midland Naturalist* 4: 226-227. 1915, *Rhodora* 20(233): 84-86. 1918, *Man. Grass. U.S.* 773. 1935, *Madroño* 9(4): 127. 1947, *Madroño* 10(3): 94. 1949, *Bulletin of the Torrey Botanical Club* 81(1): 33. 1954, *Canadian Journal of Botany* 43: 1434. 1965, *Phytologia* 55(3): 211. 1984, *Vascular Plants of Wyoming* 298. 1988.

in English: stream bank wheatgrass, Northern wheatgrass, thick-spiked wheatgrass, thick-spike wheatgrass

E. lanceolatus (Scribn. & J.G. Sm.) Gould subsp. *psammophilus* (Gillett & Senn) Á. Löve (*Agropyron dasystachyum* (Hook.) Scribn. & J.G. Sm. subsp. *psammophilum* (Gillett & Senn) D.R. Dewey; *Agropyron dasystachyum* var. *psammophilum* (Gillett & Senn) E.G. Voss; *Agropyron psammophilum* Gillett & H. Senn; *Agropyron psammophilum* f. *aristatum* J.M. Gillett & H. Senn; *Elytrigia dasystachya* (Hook.) Á. & D. Löve subsp. *psammophila* (Gillett & Senn) D.R. Dewey; *Elytrigia dasystachya* var. *psammophila* (Gillett & Senn) Cronq.)

Northern America, U.S., Canada. Perennial, see *Bulletin of the Torrey Botanical Club* 10(7): 78. 1883 and *Bulletin of the Torrey Botanical Club* 81(1): 33. 1954, *Canadian Journal of Botany* 39: 1170-1171. 1961, *Rhodora* 68: 437. 1966, *Taxon* 29(1): 167. 1980, *Brittonia* 35(1): 31. 1983, *Manual of the Vascular Plants of Northeastern United States and Adjacent Canada (edition 2)* 864. 1991.

in English: stream bank wheatgrass.

E. lanceolatus (Scribn. & J. G. Sm.) Gould subsp. *yukonensis* (Scribn. & Merr.) Á. Löve (*Agropyron yukonense* Scribn. & Merr.; *Elytrigia dasystachya* (Hook.) Á. & D. Löve subsp. *yukonensis* (Scribn. & Merr.) D.R. Dewey)

Northern America, U.S., Canada. Perennial, see *Contributions from the United States National Herbarium* 13(3): 85. 1910, *Taxon* 29(1): 168. 1980, *Feddes Repertorium* 95: 470. 1984.

in English: Yukon wheatgrass

E. laxiflorus (Keng ex Keng & S.L. Chen) Á. Löve (*Roegneria laxiflora* Keng ex Keng & S.L. Chen)

Asia, China. See *Journal Nanjing University. Natural Sciences Edition* 3: 75. 1963, *Feddes Repertorium* 95(7-8): 455. 1984.

E. lazicus (Boiss.) Melderis

Turkey. See *Flora Orientalis* 5: 661. 1884 and *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 79. 1984.

E. lazicus (Boiss.) Melderis subsp. ***lazicus***

Turkey. Rare species.

E. leianthus (Keng) S.L. Chen, (*Elymus leianthus* (Keng ex Keng & S.L. Chen) S.L. Chen; *Roegneria leiantha* Keng; *Roegneria leiantha* Keng ex Keng & S.L. Chen)

China. Two-sided spikes, subequal glumes, see *Acta Nanjing Univ. (Biol.)* 3: 42. 1963, *Novon* 7(3): 229. 1997.

E. longearistatus (Boiss.) Tzvelev (*Agropyron aitchisonii* (Boiss.) P. Candargy; *Agropyron canaliculatum* Nevski; *Agropyron flexuosissimum* Nevski; *Agropyron jacquemontii* Hook.f.; *Agropyron longearistatum* (Boiss.) Boiss.; *Agropyron longearistatum* var. *aitchisonii* Boiss.; *Anthosachne jacquemontii* (Hook.f.) Nevski; *Anthosachne longearistata* (Boiss.) Nevski; *Brachypodium longearistatum* Boiss.; *Elymus canaliculatus* (Nevski) Tzvelev; *Elymus jacquemontii* (Hook.f.) Tzvelev; *Roegneria canaliculata* (Nevski) Ohwi; *Roegneria longearistata* (Boiss.) Drobow)

Iran, Russia, from Turkey to Pakistan, the Himalayas. Caespitose, green, erect, spreading culms, glaucous leaves, drooping spikes purplish colored, very long-awned, palea more or less equalling the lemma body, see *Diagnoses plantarum orientalium novarum, ser. 1*, 1(7): 127. 1846, *Flora Orientalis* 5: 660. 1884, *The Flora of British India* 7(22): 369-370. 1897 [1896] and P.C. Candargy, *Monografia tës fules ton krithodon. Étude monographique sur la tribu des Hordées ... au Muséum d'Histoire Naturelle de Paris en 1897-1898-1899*. [Archs. Biol. Vég., Athènes, fasc. 1, 1901. pp. 11-68.] 1901, *Flora URSS* 2: 598. 1934, *Flora Uzbekistanica* 1: 280. 1941, *Novosti Sist. Vyss. Rast.* 9: 62. 1972, *Feddes Repertorium* 95(7-8): 468. 1984, *Genome* 34: 860-867. 1991 [Cytogenetics of *Elymus caucasicus* and *Elymus longearistatus* (Poaceae: Triticeae)], *Plant Systematics and Evolution* 185: 35-53. 1993, *Cathaya* 7: 35-52. 1995.

E. longearistatus (Boiss.) Tzvelev subsp. ***sintenisii*** Melderis

Turkey. Rare species, see *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 79. 1984.

E. macgregorii R.E. Brooks & J.J.N. Campb.

North America, U.S. See *Flora URSS* 2: 612. 1934, *Journal of the Kentucky Academy of Sciences* 61(2): 88. 2000.

E. macrochaetus (Nevski) Tzvelev (*Agropyron macrochaetum* (Nevski) Bondar.; *Agropyron macrochaetum* (Nevski) Melderis; *Roegneria macrochaeta* Nevski; *Semeiostachys macrochaeta* (Nevski) Drobow)

Asia temperate, Tajikistan. Perennial, green spikes unilateral, awned, lemma awns short, see *Novosti Sist. Vyss. Rast.* 9: 61. 1972.

E. macrourus (Turcz. ex Steud.) Tzvelev (*Agropyron dasystachyum* var. *sericeum* auct. non Boivin; *Agropyron dasystachyum* var. *sericeum* (Hitchc.) B. Boivin; *Agropyron macrourum* (Turcz. ex Steud.) Drobow; *Agropyron nomokonovii* Popov; *Agropyron sericeum* auct. non A.S. Hitchc.; *Roegneria macrourea* (Turcz. ex Steud.) Nevski; *Triticum macrourum* Turcz. ex Steud.)

Russia, Eastern Siberia, northwest North America. Perennial, erect, loosely tufted, sometimes shortly rhizomatous, spikes slender and narrow, grazed by livestock and wildlife, can be used for revegetation of disturbed sites, useful for erosion control, occurs in riparian stands, on alluvial flats, along roadsides, riverbanks, disturbed sites, sand and gravel bars, see *Synopsis Plantarum Glumacearum* 1: 343. 1854, *Bulletin of the Torrey Botanical Club* 10(7): 78. 1883 and *American Journal of Botany* 2: 309. 1915, *Le Naturaliste Canadien* 94: 520. 1967.

in English: thick-spike wild rye, tufted wheatgrass, wheatgrass

E. magellanicus (E. Desv.) Á.Löve (*Agropyron antarcticum* Parodi; *Agropyron araucanum* (Parodi) Nicora; *Agropyron attenuatum* var. *araucanum* Parodi; *Agropyron attenuatum* var. *ruizianum* Parodi; *Agropyron fuegianum* (Speg.) Kurtz; *Agropyron fuegianum* (Speg.) Macloskie, nom. illeg., non *Agropyron fuegianum* (Speg.) Kurtz; *Agropyron fuegianum* f. *submutica* Kurtz; *Agropyron fuegianum* var. *brachyatherum* Parodi; *Agropyron fuegianum* var. *chaetophorum* Parodi; *Agropyron fuegianum* var. *patagonicum* (Speg.) Hauman & Van der Veken; *Agropyron fuegianum* var. *polystachyum* Parodi; *Agropyron magellanicum* (E. Desv.) Hack.; *Agropyron magellanicum* var. *festucoides* (Speg.) Hauman & Van der Veken; *Agropyron magellanicum* var. *glabrivalva* (Speg.) Macloskie & Dusén; *Agropyron magellanicum* var. *glabrivalva* (Speg.) Hauman & Vandervek., nom. illeg., non *Agropyron magellanicum* var. *glabrivalva* (Speg.) Macloskie & Dusén; *Agropyron magellanicum* var. *pubiflorum* (Steud.) Hauman & Vandervek.; *Agropyron patagonicum* (Speg.) Parodi; *Agropyron patagonicum* var. *australe* Parodi; *Agropyron patagonicum* var. *festucoides* (Speg.) Parodi; *Agropyron patagonicum* var. *macrochaetum* (Parodi) Nicora; *Agropyron patagonicum* var. *patagonicum*; *Agropyron pubiflorum* (Steud.) P. Candargy; *Agropyron pubiflorum* (Steud.) Parodi, nom. illeg., non *Agropyron pubiflorum* (Steud.) P. Candargy; *Agropyron pubiflorum* var. *aristatum* P. Candargy; *Agropyron pubiflorum* var. *fragile* Parodi; *Agropyron pubiflorum* var.

megastachyum P. Candargy; *Agropyron pubiflorum* var. *microstachyum* P. Candargy; *Agropyron pubiflorum* var. *tridentatum* P. Candargy; *Agropyron pubiflorum* var. *trifidum* P. Candargy; *Agropyron remotiflorum* Parodi; *Agropyron remotiflorum* var. *macrochaetum* Parodi; *Agropyron secundum* J. Presl; *Elymus antarcticus* Hook.f.; *Elymus araucanus* (Parodi) Á. Löve; *Elymus fuegianus* (Speg.) Á. Löve; *Elymus glaucescens* Seberg, nom. illeg. or incorrect; *Elymus notius* Á. Löve; *Elymus pubiflorus* (J.G. Sm.) Burt Davy; *Elymus remotiflorus* (Parodi) Á. Löve; *Elytrigia antarctica* (Parodi) Covas; *Elytrigia araucana* (Parodi) Covas ex J.H. Hunz. & Xifreda; *Elytrigia araucana* Covas; *Elytrigia fuegiana* (Speg.) Covas ex J.H. Hunz. & Xifreda; *Elytrigia fuegiana* (Speg.) Covas; *Elytrigia patagonica* (Speg.) Covas ex J.H. Hunz. & Xifreda; *Elytrigia pubiflora* (Steud.) Tzvelev; *Trisetum glaucum* d'Urv. ex Macloskie; *Trisetum secundum* (J. Presl) Kunth ex Macloskie; *Triticum fuegianum* Speg.; *Triticum fuegianum* var. *patagonicum* Speg.; *Triticum magellanicum* (Desv.) Speg.; *Triticum magellanicum* var. *festucoides* Speg.; *Triticum magellanicum* var. *glabrivalva* Speg.; *Triticum magellanicum* var. *lasiopoda* Speg.; *Triticum magellanicum* var. *patagonica* (Speg.) De Wild.; *Triticum magellanicum* var. *pubiflorum* (Steud.) Speg.; *Triticum magellanicum* var. *secundum* (J. Presl) Speg.; *Triticum pubiflorum* Steud.; *Triticum repens* var. *magellanicum* E. Desv.; *Triticum secundum* (J. Presl) Kunth)

Falkland Islands, Argentina, Chile. Perennial, shortly rhizomatous, leaves glaucous, along roadsides, sandy soil, see *Reliquiae Haenkeanae* 1(4-5): 266. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 442. 1833, *Flora Antarctica* 2: 388. 1847, *Flora Chilena* 6: 452. 1854, *Synopsis Plantarum Glumacearum* 1: 429. 1854, *Revista del Museo de La Plata* 7: 401. 1896, *Anales del Museo Nacional de Buenos Aires* 5: 98-99, t. 4, f. A. 1896, *Revista de la Facultad de Agronomía; Universidad Nacional de La Plata* 3(30-31): 587-588. 1897 and *Wissenschaftliche Ergebnisse der Schwedischen Expedition nach den Magalansländern* 3(5): 231[alt. 331]. 1900, *Archives de Biologie Végétale Pure et Appliquée* 1: 28, 49. 1901, *University of California Publications in Botany* 1: 58. 1902, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2]*, *Botany* 8(1,5,1): 205, 208, 245-247. 1904, *Rep. Princeton Univ. Exp. Patagonia, Botany, Suppl.* 8(3): 64. 1914 [1915], *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 25. 1917, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3: 19, 22-23, 25, 34-36, 38, 40, 48, 57, 59, f. 5-8, 12-15, 17-18, 21. 1940, *Novosti Sist. Vyss. Rast.* 10: 33. 1973, *Flora Patagónica* 8(3): 458. 1978, *Feddes Repertorium* 95(7-8): 471-472. 1984, *Darwiniana* 27(1-4): 561-562. 1986, *Botanical Gazette* 150: 462-468. 1989, *Plant Systematics and Evolution* 166: 91-104. 1989 [A biometrical analysis of the South American *Elymus glaucescens* complex (Poaceae:

Triticeae).], *Genome* 36: 72-76. 1993, *Bot. Jahrb. Syst.* 120(4): 521-523. 1998.

in English: Bowles golden wild rye

E. mayebaranus (Honda) S.L. Chen (*Agropyron mayebaranum* Honda)

China, Japan. See *Botanical Magazine* 41: 384. 1927, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1987: 9. 1987[1988], *Willdenowia* 19: 449-451. 1990.

E. melantherus (Keng) Á. Löve (*Agropyron melantherum* Keng; *Kengyilia melanthera* (Keng) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia melanthera* (Keng) S.L. Chen, nom. illeg., non *Kengyilia melanthera* (Keng) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia thoroldiana* var. *melanthera* (Keng) L.B. Cai; *Roegneria melanthera* (Keng) Keng; *Roegneria melanthera* (Keng) Keng ex Keng & S.L. Chen)

China. Perennial, found in sand dune areas, sandy loam, stabilized sand dune, see *Sunyatsenia* 6(1): 62-63. 1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 187. 1957, *Journal Nanjing University. Natural Sciences Edition* 3: 78. 1963, *Feddes Repertorium* 95(7-8): 455. 1984, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991 [1992], *Hereditas; genetiskt arkiv.* 116(1-2): 28. 1992, *Bulletin of Botanical Research* 14(2): 141. 1994, *International Journal of Plant Sciences* 157(1): 136-141. 1996, *Acta Phytotaxonomica Sinica* 37(5): 463. 1999.

E. mendocinus (Parodi) Á. Löve (*Agropyron mendocinum* Parodi; *Elytrigia mendocina* (Parodi) Covas ex J.H. Hunz. & Xifreda; *Elytrigia mendocina* (Parodi) Covas; *Leymus mendocinus* (Parodi) Dubcovs., Schlatter & Echaide)

South America. See *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3: 14, f. 2-3. 1940, *Feddes Repertorium* 95(7-8): 472. 1984, *Darwiniana* 27(1-4): 562. 1986, *Genome* 35: 881-885. 1992, *Genome* 40: 518. 1997, *Bot. Jahrb. Syst.* 120(4): 528. 1998.

E. microlepis (Melderis) Melderis (*Agropyron microlepis* Melderis; *Elymus microlepis* (Melderis) Á. Löve)

Western Nepal. Perennial, slender, caespitose, leaf sheath glabrous, loose inflorescence, nodding spikes, 4-6 florets in each spikelet, glumes narrowly lanceolate and acute, lemma narrowly lanceolate, palea 2-keeled, see *Grasses of Burma ...* 692. 1960, *Enumeration of the Flowering Plants of Nepal* 1: 131. 1978, *Feddes Repertorium* 95(7-8): 456. 1984.

E. multiflorus (Banks & Sol. ex Hook.f.) Á. Löve & Connor (*Agropyron kirkii* Zotov; *Agropyron multiflorum* (Banks & Sol. ex Hook.f.) Kirk ex Cheeseman; *Triticum multiflorum* Banks & Sol. ex Hook.f.)

Australia, New South Wales, Victoria, Queensland, South Australia. Perennial, erect, tufted, ligule hyaline to membranous entire to lacerate, auricles present, basal leaf sheaths not keeled, leaf blade flat or involute, inflorescence

of cleistogamous spikelets, a single spike or a raceme, spikelets homomorphic or heteromorphic, hermaphrodite spikelets sessile or subsessile, straight awns, palea minutely narrowly elliptic and 2-keeled, fruit oblong, occurs on well-drained sandy soils, on the banks of waterways, on the edge of water courses, on clays, see *Flora Novae-Zelandiae* 1: 311. 1853 and *Man. N.Z. Fl.* 921-922. 1906, *T.R.S.N.Z.* 73: 233. 1943, *New Zealand Journal of Botany* 20(2): 183. 1982.

in English: common wheat grass

E. multiflorus (Banks & Sol. ex Hook.f.) Á. Löve & Connor var. ***kingianus*** (Endl.) Connor (*Agropyron kingianum* (Endl.) Patrie; *Elymus kingianus* (Endl.) Á. Löve; *Triticum kingianum* Endl.)

Australia. See *Prodromus Florae Norfolkicae* 21. 1833 and *Transactions and Proceedings of the New Zealand Institute* 47: 18. 1915, *Feddes Repertorium* 95: 469. 1984, *Kew Bulletin* 45(4): 680. 1990.

E. multiflorus (Banks & Sol. ex Hook.f.) Á. Löve & Connor var. ***multiflorus*** (*Agropyron multiflorum* var. *longisetum* Hack.; *Elymus multiflorus* var. *longisetus* (Hack.) Á. Löve & Connor)

Eastern Australia, New Zealand. Tufted, stoloniferous, open, many-noded, palea apex blunt, many-flowered spikelets, in coastal and inland areas.

E. multisetus (J.G. Smith) Burt Davy (*Elymus multisetus* (J.G. Sm.) M.E. Jones, nom. illeg., non *Elymus multisetus* (J.G. Sm.) Burt Davy; *Elymus sitanion* var. *jubatum* J.G. Sm.; *Sitanion breviaristatum* J.G. Sm.; *Sitanion jubatum* J.G. Sm.; *Sitanion multisetum* J.G. Sm.; *Sitanion polyantherix* J.G. Sm.; *Sitanion strictum* Elmer; *Sitanion villosum* J.G. Sm.)

U.S., Pacific Northwest, California, western North America. Perennial, useful for restoration and reclamation, occurs in sandy soil under dry conditions, loamy coarse sand, chaparral, subalpine forest, see *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 10-12. 1899 and *University of California Publications in Botany* 1: 57. 1902, *Botanical Gazette* 36: 59. 1903, *Contributions to Western Botany* 14: 20. 1912, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991.

in English: big squirrel tail, big wild rye, big squirrel tail grass

E. mutabilis (Drobow) Tzvelev (*Agropyron angustiglume* Nevski; *Agropyron angustiglume* subsp. *irendykense* Nevski; *Agropyron ilmense* Roshev. ex Nevski; *Agropyron mutabile* Drobow; *Agropyron oschense* Roshev. ex Nevski; *Agropyron transiliense* Popov; *Gouardia mutabilis* (Drobow) Ikonn.; *Roegneria angustiglumis* (Nevski) Nevski; *Roegneria mutabilis* (Drobow) Hyl.; *Roegneria mutabilis* subsp. *varsugensis* (Meld.) Á. Löve & D. Löve; *Roegneria mutabilis* var. *varsugensis* Melderis; *Roegneria*

oschensis Nevski; *Roegneria transiliensis* (M. Pop.) Filatova)

Russia. Spikes unilateral, see *Upsala Universitets Arsskrift* 7: 36. 1945, *Botaniska Notiser* 1953(3): 358. 1953, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 110: 7-15. 1988, *Genome* 35: 881-885. 1992.

E. mutabilis (Drobow) Tzvelev subsp. ***mutabilis*** (*Agropyron angustiglume* Nevski)

Russia.

E. mutabilis (Drobow) Tzvelev subsp. ***praecaespitosus*** (Nevski) Tzvelev (*Agropyron praecaespitosum* Nevski; *Elymus praecaespitosus* (Nevski) Tzvelev; *Roegneria praecaespitosa* (Nevski) Nevski)

Asia, Mongolia. See *Novosti Sist. Vyss. Rast.* 10: 22. 1973, *Novon* 7(3): 229. 1997.

E. mutabilis (Drobow) Tzvelev var. ***oschensis*** (Nevski) Tzvelev (*Roegneria oschensis* Nevski)

Russia. Riverbanks, see *Flora URSS* 2: 619. 1934, *Novosti Sist. Vyss. Rast.* 12: 94. 1975.

E. nakaii Á. Löve (*Elymus nakaii* (Kitag.) Á. Löve; *Roegneria nakaii* Kitag.)

Asia, China, Korea. See *Journal of Japanese Botany* 17(4): 236. 1941, *Feddes Repertorium* 95(7-8): 454. 1984, *Grassland of China* 4: 53-60. 1989, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Acta Phytotaxonomica Sinica* 30(4): 342-345. 1992.

E. nepalensis (Melderis) Melderis (*Agropyron nepalense* Melderis; *Elymus nepalensis* (Melderis) Á. Löve)

Western and central Nepal. Perennial, caespitose, leaf blade flat, short ligule, loose inflorescence erect, spikelets oblong-lanceolate, 3-5 florets in each spikelet, unequal glumes narrowly lanceolate, lemma narrowly lanceolate, palea narrowly lanceolate and 2-keeled, on open and shady places, slopes, see *Grasses of Burma ...* 692. 1960, *Enum. Fl. Pl. Nepal* 1: 131. 1978, *Feddes Repertorium* 95(7-8): 460. 1984.

E. nevskii Tzvelev (*Agropyron ugamicum* Drobow; *Elymus dentatus* subsp. *ugamicus* (Drobow) Tzvelev; *Elymus nevskii* (Drobow) Tzvelev; *Gouardia ugamica* (Drobow) Ikonn.; *Roegneria ugamica* (Drobow) Nevski; *Semeiostachys ugamica* (Drobow) Drobow)

China. Perennial bunchgrass, stems and spikes reddish, spikes unilateral and erect, large glumes, lemmas mucronate, growing on rocky places.

E. nipponicus Jaaska (*Agropyron yezoense* Honda; *Elymus kurilensis* Prob.; *Elymus yezoensis* (Honda) T. Osada; *Roegneria yezoensis* (Honda) Ohwi)

Asia, Japan. See *Botanical Magazine* 43: 292. 1929, *Acta Phytotaxonomica et Geobotanica* 10: 98. 1941, *Bulletin of*

the National Science Museum, Series B, Botany 14: 57-61. 1988, *Illustr. Grasses of Japan* 738. 1989.

E. nodosus (Nevski) Melderis (*Agropyron nodosum* (Stev. ex Bieb.) Nevski; *Elytrigia caespitosa* (K. Koch) Nevski; *Elytrigia caespitosa* subsp. *caespitosa*; *Elytrigia caespitosa* subsp. *nodosa* (Nevski) Tzvelev; *Elytrigia nodosa* (Nevski) Nevski)

Europe. See *Flora URSS* 2: 646. 1934, *Botanical Journal of the Linnean Society* 76(4): 376. 1978.

E. nodosus (Nevski) Melderis subsp. **gypsicolus** Melderis (also spelled **gypsicola** and **gypsecolus**)

Turkey. Rare species, growing in gypsum slopes, see *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 82. 1984.

E. nodosus (Nevski) Melderis subsp. **platyphyllus** Melderis
Turkey. Rare species, found in dry pastures, see *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 80. 1984.

E. nutans Griseb. (*Clinelymus nutans* (Griseb.) Nevski)

Russia, Asia. Bunchgrass, spikes purple, useful for erosion control, see *Die geographische Verbreitung der Pflanzen Westindiens* 3: 72. 1868 and *Journal of Wuhan Botanical Research* 3(4): 325-330. 1985, *Journal of Cytology and Genetics* 21: 155. 1986, *Plant Systematics and Evolution* 186: 193-212. 1993 [Meiotic studies of *Elymus nutans* and *E. jacquemontii* (Poaceae, Triticeae) and their hybrids with *Pseudoroegneria spicata* and seventeen *Elymus* species.], S.K. Dong et al. "Productivity and persistence of perennial grass mixtures under competition from annual weeds in the alpine region of the Qinghai-Tibetan Plateau." *Weed Research* 45(2): 114-120. Apr 2005.

E. pamiricus Tzvelev (*Elymus schrenkianus* subsp. *pamiricus* (Tzvelev) Tzvelev)

Pamir. See *Systema Vegetabilium, editio decima sexta* 1: 326. 1825, *Bulletin de la Classe Physico-Mathématique de l'Académie Impériale des Sciences de Saint Pétersbourg* 3: 305. 1845, *Acta Horti Petrop.* 7: 591. 1881 and *Archives de Biologie Végétale Pure et Appliquée* 1: 40. 1901, *Flora Uzbekistanica* 1: 300, 540. 1941, *Novosti Sist. Vyss. Rast.* 9: 62. 1972, *Genome* 35: 230-237. 1992.

E. panormitanus (Parl.) Tzvelev (*Agropyron panormitanum* Parl.; *Roegneria panormitana* (Parl.) Nevski; *Semeiostachys panormitana* (Parl.) Drobow; *Triticum panormitanum* (Parl.) Bertol.)

Asia, Syria, Israel, Europe, Sicily. See *Rariorum Plantarum et haud cognitarum in Sicilia sponte provenientium ...* 2: 20. Panormi 1840, *Flora Italica* 4: 780. 1841 and *Flora Uzbekistanica* 1: 281. 1941, *Genome* 30: 879-884. 1988, *International Journal of Plant Sciences* 156: 731-739. 1995.

E. parishii Burt Davy & Merr. (*Elymus glaucus* subsp. *jepsonii* (Burt Davy) Gould; *Elymus glaucus* var. *jepsonii* Burt Davy)

U.S., California. Growing on wooded slopes, see *A Flora of Western Middle California* 79. 1901, *University of California Publications in Botany* 1: 58. 1902, *Madroño* 9(4): 126. 1947.

E. parviglume (Keng ex Keng & S.L. Chen) Á. Löve (*Roegneria parvigluma* Keng; *Roegneria parvigluma* Keng ex Keng & S.L. Chen)

Asia. See *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 185. 1957, *Journal Nanjing University. Natural Sciences Edition* 3: 47. 1963, *Feddes Repertorium* 95(7-8): 467. 1984, *Plant Systematics and Evolution* 187: 191-211. 1993, *Nordic Journal of Botany* 15(1): 3-37. 1995.

E. patagonicus Speg.

Argentina. Perennial bunchgrass, glumes awned, useful for erosion control, see *Revista de la Facultad de Agronomía; Universidad Nacional de La Plata* 3(32-33): 630. 1897 and *Genome* 35: 881-885. 1992, *Bot Jahrb. Syst.* 120: 532. 1998.

E. pendulinus (Nevski) Tzvelev (*Agropyron pendulinum* (Nevski) Vorosch.; *Roegneria pendulina* Nevski)

Asia, China, Mongolia, Russia. Perennial, slender curved spikes, straight awns, found in dry shrubby hillsides, moist places, see *Flora URSS* 2: 616-617, pl. 45: 6. 1934.

E. pendulinus (Nevski) Tzvelev subsp. **brachypodioides** (Nevski) Tzvelev (*Elymus brachypodioides* (Nevski) Peschkova; *Roegneria brachypodioides* Nevski)

Mongolia, Asia, Russia. Perennial, found in disturbed dry sandy soil, meadow, rocky and gravelly soil, along roadsides, dark brown soil.

E. pendulinus (Nevski) Tzvelev subsp. **multiculmis** (Kitag.) Á. Löve (*Roegneria multiculmis* Kitag.)

China, Asia.

E. pendulinus (Nevski) Tzvelev subsp. **pendulinus** (*Elymus semicostatus* subsp. *scabridulus* (Ohwi) Á. Löve; *Elymus sinicus* (Ohwi) ined.; *Roegneria sinica* Keng)

Asia, China. Slender spikes.

E. pilosus (J. Presl) Á. Löve (*Agropyron pilosum* J. Presl; *Elymus pilosus* Muhl.; *Triticum pilosum* (J. Presl) Kunth, nom. illeg., non *Triticum pilosum* Seenus)

South America. See *Transactions of the American Philosophical Society* 3: 161. 1793, *Reliquiae Haenkeanae* 1(4-5): 267. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 442. 1833 and *Feddes Repertorium* 95(7-8): 472. 1984, *Bot Jahrb. Syst.* 120: 537. 1998.

E. praeruptus Tzvelev (*Agropyron interruptum* Nevski; *Roegneria interrupta* (Nevski) Nevski; *Semeiostachys interrupta* (Nevski) Drobow)

Russia, Asia. Perennial, see *Novosti Sist. Vyss. Rast.* 9: 61. 1972.

E. pringlei Scribn. & Merr.

North America, Mexico. See *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 30. 1901.

E. pseudonutans Á. Löve (*Agropyron nutans* Keng; *Elymus nutans* Griseb.; *Roegneria nutans* (Keng) Keng; *Roegneria nutans* (Keng) Keng ex Keng & S.L. Chen)

China, Asia. Found in subalpine shrub meadow, see *Sunyatzenia* 6(1): 63-64. 1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 185. 1957, *Journal Nanjing University. Natural Sciences Edition* 3: 48. 1963, *Feddes Repertorium* 95(7-8): 467. 1984.

E. purpuraristatus Chao P. Wang & H.L. Yang

Mongolia, Asia. See *Bulletin of Botanical Research* 4(4): 83-84, f. 1. 1984.

E. purpurascens (Keng ex Keng & S.L. Chen) Á. Löve (*Roegneria purpurascens* Keng ex Keng & S.L. Chen)

China, Asia. See *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 185. 1957, *Journal Nanjing University. Natural Sciences Edition* 3: 56. 1963, *Feddes Repertorium* 95(7-8): 448. 1984.

E. ramosus Desf. (*Elymus ramosus* (Trin.) Filatova; *Leymus ramosus* (Trin.) Tzvelev; *Triticum ramosum* Trin.)

Russia. See *Flora Altaica* 1: 114-115. 1829, *Tableau de l'École de Botanique* 18, 387. 1829.

E. rectisetus (Nees) Á. Löve & Connor (*Agropyron scabrum* (R. Br.) P. Beauv.; *Anthosachne scabra* (R. Br.) Nevski; *Roegneria scabra* (R. Br.) J.L. Yang & C. Yen; *Triticum scabrum* R. Br.; *Vulpia rectiseta* Nees)

Australia. Perennial, coarse, open, decumbent and drooping, leaf sheath pubescent to irsute, ligule truncate, auricles clasping, leaf blade pilose and velutinous, long drooping inflorescences, awns straight or rarely strongly recurved, glumes unequal, palea apex blunt, unpalatable, growing on sandy soils, along roadsides, poor pastures, open habitats, waste ground, see *Nov. Holl. Pl.* 1: 26. 1805, *Prodromus Florae Novae Hollandiae* 178. 1810, *Essai d'une Nouvelle Agrostographie* 102, 146, 181. 1812 and *Heredity* 10: 129-160. 1956, *New Zealand Journal of Botany* 20(2): 183. 1982, *American Journal of Botany* 74: 477-496. 1987, *Canadian Journal of Botany* 69(2): 291. 1990, *Crop Science* 31: 1527-1532. 1991, *Crop Science* 37: 717-723. 1997, *Australian Systematic Botany* 12: 593-604. 1999.

E. repens (L.) Gould (*Agropyron caesium* J. Presl & C. Presl; *Agropyron elongatiforme* Drobow; *Agropyron junceum* var. *repens* (L.) Marsson; *Agropyron repens* (L.) P. Beauv.; *Agropyron repens* f. *aristatum* (Schumacher) Holmb., nom. illeg., non *Agropyron repens* var. *aristatum* Schreb. ex Baumg.; *Agropyron repens* f. *geniculatum* Farw.; *Agropyron repens* f. *heberhachis* Fernald; *Agropyron repens* f. *pilosum* (Scribn.) Fernald; *Agropyron repens* f. *repens*;

Agropyron repens f. *setiferum* Fernald; *Agropyron repens* f. *stoloniferum* Farw.; *Agropyron repens* f. *trichorrhachis* Rohlena; *Agropyron repens* subvar. *pubescens* (Döll) Litard.; *Agropyron repens* var. *aristatum* (Döll) Roshev., nom. illeg., non *Agropyron repens* var. *aristatum* Schreb. ex Baumg.; *Agropyron repens* var. *caesium* (J. Presl & C. Presl) Schur; *Agropyron repens* var. *nemorale* Andersson ex Farw.; *Agropyron repens* var. *pilosum* Scribn.; *Agropyron repens* var. *pubescens* (Döll) Tzvelev; *Agropyron repens* var. *repens*; *Agropyron repens* var. *subulatum* Roem. & Schult.; *Agropyron repens* var. *subulatum* (Schreb. ex Schweigg. & Körte) Rchb., nom. illeg., non *Agropyron repens* var. *subulatum* Roem. & Schult.; *Agropyron repens* var. *vulgare* Döll; *Agropyron repens* var. *vulgare* (Döll) Kneuck.; *Agropyron sachalinense* Honda; *Agropyron subulatum* (Schreb. ex Schweigg. & Körte) Herter, nom. illeg., non *Agropyron subulatum* (Sol. ex P. Russell) Roem. & Schult.; *Braconotia officinarum* Godr.; *Elymus neogaeus* Steud.; *Elymus repens* subsp. *caesius* (J. Presl & C. Presl) Soó; *Elymus repens* var. *aristatus* (Schreb. ex Baumg.) Melderis & D.C. McClint.; *Elytrigia elongatiformis* (Drobow) Nevski; *Elytrigia repens* (L.) Desv. ex B.D. Jacks.; *Elytrigia repens* (L.) Desv. ex Nevski, nom. illeg., non *Elytrigia repens* (L.) Desv. ex B.D. Jacks.; *Elytrigia repens* subsp. *caesia* (J. Presl & C. Presl) Dostál; *Elytrigia repens* var. *aristata* Prokudin; *Elytrigia repens* var. *caesium* (J. Presl & C. Presl) Prokudin; *Elytrigia repens* var. *glauca* (Döll) Tzvelev; *Elytrigia repens* var. *pubescens* (Döll) Prokudin; *Elytrigia repens* var. *repens*; *Elytrigia repens* var. *subulatum* (Roem. & Schult.) Prokudin; *Elytrigia repens* var. *vulgare* (Döll) Prokudin; *Trisetum repens* subsp. *magellanicum* (E. Desv.) Macloskie; *Triticum infestum* Salisb.; *Triticum repens* L.; *Triticum repens* f. *pubescens* Döll; *Triticum repens* var. *aristatum* Schumacher; *Triticum repens* var. *aristatum* Döll; *Triticum repens* var. *caesium* (J. Presl & C. Presl) Laest.; *Triticum repens* var. *caesium* Döll, nom. illeg., non *Triticum repens* var. *caesium* (J. Presl & C. Presl) Laest.; *Triticum repens* var. *glaucum* Döll; *Triticum repens* var. *magellanicum* E. Desv.; *Triticum repens* var. *subulatum* (Roem. & Schult.) Nees; *Triticum repens* var. *vulgare* Döll; *Triticum subulatum* Schreb. ex Schweigg. & Körte; *Zeia repens* (L.) Lunell)

America. See *Species Plantarum* 1: 85-87. 1753, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 27. 1796, *Enumeratio Plantarum in Partibus Saellandiae Septentrionalis et Orientalis* quam edidit Christ. Frieder. Schumacher. 1: 38. Hafniae 1801-1803, *Flora Erlangensis* ser. 2, 1: 143. 1811, *Essai d'une Nouvelle Agrostographie* 102, 146, 180, t. 20, f. 2. 1812, *Systema Vegetabilium* 2: 754. 1817, *Deliciae Pragenses* 213. 1822, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 450. 1829, *Flora Germanica Excursoria* I, t. 20: f. 1383. 1834, *Flore de Lorraine* 3: 192. 1844, *Synopsis Plantarum Glumacearum* 1: 349. 1854, *Flora Chilena* 6: 452. 1854, *Botaniska Notiser* 1856: 78. 1856, *Flora des Grossherzogthums Baden* 128-130.

Carlsruhe 1855 [1857], *Enumeratio Plantarum Transsilvaniae* 808. 1866, *Index Kewensis* 1: 836. 1893, *Flora of Mount Desert Island, Maine* 183. 1894 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 6: 91. 1900, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 7: 154. 1901, *Report of the Michigan Academy of Science, Arts and Letters* 6: 203. 1904, Rev. George Macloskie (1834-1919), *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1* [2], *Botany* 8(1,5,1): 205. 1904 [J. Pierpont Morgan Publication Fund. 3 vols. 1903-1914], *American Midland Naturalist* 4: 227. 1915, *Hartmans Handbok i Skandinaviens Flora* 2: 274. 1926, *Archives de Botanique, Mémoires* 2: 11. 1928, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 177. 1931, *Rhodora* 35(413): 184. 1933, *Revista Sudamericana de Botánica* 6(5-6): 147. 1940, *Madroño* 9(4): 127. 1947, *Contributions of the Arctic Institute [Catholic University of America]* 9F: 46. Washington, D.C. 1958, *Magyar Flóra* 6: 185. 1980, *Folia Musei Rerum Naturalium Bohemiae Occidentalis* 21: 16. 1984.

E. repens (L.) Gould subsp. ***repens***

America.

E. retusus Á. Löve (*Agropyron muticum* (Keng ex Keng & S.L. Chen) Tzvelev; *Elymus muticus* Phil.; *Kengyilia mutica* (Keng ex Keng & S.L. Chen) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia mutica* (Keng ex Keng & S.L. Chen) S.L. Chen, nom. illeg., non *Kengyilia mutica* (Keng ex Keng & S.L. Chen) J.L. Yang, C. Yen & B.R. Baum; *Roegneria mutica* Keng; *Roegneria mutica* Keng ex Keng & S.L. Chen)

Asia, China. See *Linnaea* 33: 300. 1864 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 188. 1957, *Journal Nanjing University. Natural Sciences Edition* 3: 87. 1963, *Feddes Repertorium* 95(7-8): 455. 1984, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991 [1992], *Hereditas; genetiskt arkiv*. 116(1-2): 27-28. 1992, *Bulletin of Botanical Research* 14(2): 142. 1994, *Novon* 5(3): 297. 1995, *Bot. Jahrb. Syst.* 120(4): 512. 1998.

E. rigidulus (Keng ex Keng & S.L. Chen) Á. Löve (*Kengyilia rigidula* (Keng ex Keng & S.L. Chen) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia rigidula* (Keng ex Keng & S.L. Chen) S.L. Chen, nom. illeg., non *Kengyilia rigidula* (Keng ex Keng & S.L. Chen) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia rigidula* var. *rigidula*; *Roegneria rigidula* Keng ex Keng & S.L. Chen; *Roegneria rigidula* Keng)

China, Asia. See *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 188. 1957, *Journal Nanjing University. Natural Sciences Edition* 3: 77. 1963, *Feddes Repertorium* 95(7-8): 455. 1984, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991 [1992], *Hereditas;*

genetiskt arkiv. 116(1-2): 27. 1992, *Bulletin of Botanical Research* 14(2): 140-141. 1994.

E. riparius Wiegand (*Agropyron riparium* Scribn. & J.G. Sm.; *Elymus canadensis* var. *riparius* (Wieg.) Boivin; *Elymus riparius* (Scribn. & J.G. Sm.) Gould, nom. illeg., non *Elymus riparius* Wiegand; *Elymus salinus* M.E. Jones) (U.S., Utah, Top of Salina Pass)

Northern America, Utah. Perennial, herbaceous, growing in moist woods, in rather alkaline soils, alluvial flats, meadows, along stream banks, thickets, see *Species Plantarum* 1: 83-84. 1753, *Proceedings of the California Academy of Sciences, Series 2*, 5: 725. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 35. 1897 and *Rhodora* 20(233): 84-86. 1918, *Madroño* 9(4): 127. 1947, *Le Naturaliste Canadien* 94: 524. 1967.

in English: river-bank wild rye, riverbank wildrye

E. sacandros Connor

New Zealand. Tufted, erect, open, branched, many noded, rooting at the nodes, auricles usually absent, leaf blades thin and long, glumes unequal, lemma with recurved awn, palea apex bifid, cliffs, coastal, see *New Zealand Journal of Botany* 32: 138, f. 7. 1994.

E. sajanensis (Nevski) Tzvelev (*Agropyron sajanense* (Nevski) Grubov; *Elymus alaskanus* subsp. *borealis* (Turcz.) Á. Löve & D. Löve; *Elymus alaskanus* subsp. *sajanensis* (Nevski) Á. Löve; *Roegneria sajanensis* Nevski; *Triticum boreale* Turcz.)

Russia. See *Bulletin de la Société Impériale des Naturalistes de Moscou* 29: 58. 1856 and *Flora URSS* 2: 624. 1934, *Taxon* 19(2): 299. 1970, *Novosti Sist. Vyss. Rast.* 9: 61. 1972, *Botaniska Notiser* 128(4): 502. 1975 [1976], *Feddes Repertorium* 95(7-8): 463. 1984.

E. sajanensis (Nevski) Tzvelev subsp. ***hyperarcticus*** (Polunin) Tzvelev (*Agropyron boreale* subsp. *hyperarcticum* (Polunin) Melderis; *Agropyron latiglume* var. *pilosiglume* Hultén; *Agropyron violaceum* var. *hyperarcticum* Polunin; *Elymus alaskanus* subsp. *hyperarcticus* (Polunin) Á. Löve & D. Löve; *Elymus hyperarcticus* (Polunin) Tzvelev; *Roegneria borealis* subsp. *hyperarctica* (Polunin) Á. Löve & D. Löve; *Roegneria borealis* var. *hyperarctica* (Polunin) Melderis; *Roegneria hyperarctica* (Polunin) Tzvelev)

Russia, Northern America. See *Bulletin of the National Museum of Canada* 92: 95, pl. 4. 1940, *Novosti Sist. Vyss. Rast.* 10: 24. 1973.

E. scaber (R. Br.) Á. Löve (also ***scabrus***) (*Agropyron scabrum* (R. Br.) P. Beauv.; *Anthosachne scabra* (R. Br.) Nevski; *Festuca scabra* Vahl; *Festuca scabra* Labill., nom. illeg., non *Festuca scabra* Vahl; *Roegneria scabra* (R. Br.) J.L. Yang & C. Yen; *Triticum scabrum* R. Br.)

Australia. Short-lived perennial or annual, slender, tufted, stiff, leaves flat or filiform, spike loose and drooping, cleistogamous spikelets, upper florets and awns finally

divergent, glumes lanceolate, lemmas narrow and rigid, awns slender and scabrous, palatable, see *Symbolae Botanicae*, ... 2: 21. 1791, *Novae Hollandiae Plantarum Specimen* 1: 22, t. 26. 1804, *Prodromus Florae Novae Hollandiae* 178. 1810, *Essai d'une Nouvelle Agrostographie* 102, 146, 181. 1812 and *Feddes Repertorium* 95(7-8): 468. 1984, *Canadian Journal of Botany* 69(2): 291. 1990.

in English: common wheatgrass, rough wheatgrass

E. scaber (R. Br.) Á. Löve var. ***plurinervis*** (Vickery) B.K. Simon (*Agropyron scabrum* var. *plurinerve* Vickery)

Australia, New South Wales, Queensland. Perennial, morphologically variable, erect, tufted, leaves shortly auriculate, basal leaf sheaths not keeled, ligule hyaline to membranous, inflorescence a single open spike, cleistogamous and distichous spikelets, hermaphrodite florets 6-7 per spikelet, long or short-awned, awns geniculate at maturity, palea narrowly elliptic, fruit oblong and glabrous, growing along roadsides and highways, clay loam, open fields, dark clay loam soil, see *Contributions from the New South Wales National Herbarium* 1(6): 342. 1951, *Austrobaileya* 2(3): 242. 1986.

in English: wheatgrass

E. scaber (R. Br.) Á. Löve var. ***scaber*** (*Agropyron scabrum* (R. Br.) P. Beauv. var. *scabrum*)

Australia. Inflorescence drooping, glumes acute to acuminate, forage, found in clay loam soil, along roadsides, floodplain, stream banks, open fields, dark clay loam soil, near rivers.

in English: common wheatgrass

E. scabrifolius (Döll) J.H. Hunz. (*Agropyron attenuatum* var. *platense* Parodi; *Agropyron condensatum* J. Presl; *Agropyron magellanicum* var. *condensatum* (J. Presl) Hauman & Van der Veken; *Agropyron repens* var. *scabrifolium* (Döll) Arechav.; *Agropyron scabrifolium* (Döll) Parodi; *Elymus brevistaratus* subsp. *scabrifolius* (Döll) Á. Löve; *Elymus condensatus* J. Presl; *Elymus parodii* Seberg & G. Petersen; *Elytrigia scabrifolia* (Döll) Covas ex J.H. Hunz. & Xifreda; *Elytrigia scabrifolia* (Döll) Covas; *Triticum condensatum* (J. Presl) Kunth; *Triticum magellanicum* var. *condensata* (J. Presl) Speng.; *Triticum repens* var. *scabrifolium* Döll)

South America. See *Essai d'une Nouvelle Agrostographie* 102, 146, 180, t. 20, f. 2. 1812, *Systema Vegetabilium* 2: 751. 1817, *Reliquiae Haenkeanae* 1(4-5): 265-266. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 442. 1833, *Flora Brasiliensis* 2(3): 226. 1880, *Anales del Museo Nacional de Buenos Aires* 5: 98-99. 1896, *Anales del Museo Nacional de Montevideo* 1(6): 510, t. 66. 1897 and *Wissenschaftliche Ergebnisse der Schwedischen Expedition nach den Magallansländern* 3(5): 231[err. typ. 331]. 1900, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2]*, *Botany* 8(1,5,1): 246. 1904, *Anales Museo Nacional de Historia Natural de*

Buenos Aires 29: 25. 1917, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3: 33, t. 7. 1940, Lorenzo Raimundo Parodi (1895-1966), *Gramíneas Bonaerenses, edition 4*, 88, 98. Buenos Aires 1946-1947 [First edn: Extracto de la Revista Centro Estudiantes de Agronomía y Veterinaria, Universidad de Buenos Aires no. 120 ... 1925], *Feddes Repertorium* 95(7-8): 471. 1984, *Bulletin of Botanical Research* 4(3): 191-192. 1984, *Darwiniana* 27(1-4): 562. 1986, *Darwiniana* 35(1-4): 167. 1998, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 120(4): 530. 1998.

E. scabriglumis (Hack.) Á. Löve (*Agropyron agroelymoides* (Hicken) J.H. Hunz.; *Agropyron repens* var. *scabriglume* Hack.; *Agropyron scabriglume* (Hack.) Parodi; *Agropyron tilcarensis* J.H. Hunz.; *Elymus antarcticus* f. *agroelymoides* Hicken; *Elymus tilcarensis* (J.H. Hunz.) Á. Löve; *Elytrigia scabriglume* (Hack.) Covas; *Elytrigia scabriglume* Covas; *Elytrigia scabriglumis* (Hack.) Covas ex J.H. Hunz. & Xifreda; *Elytrigia tilcarensis* (J.H. Hunz.) Covas ex J.H. Hunz. & Xifreda; *Elytrigia tilcarensis* (J.H. Hunz.) Covas) (Argentina, Prov. Jujuy, Dep. Tilcara, Tilcara)

Argentina, Southern America. Perennial bunchgrass, coarse, see *Anales del Museo Nacional de Buenos Aires* 21: 175. 1911, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 2: 8. 1915, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3: 28, f. 10, t. 4. 1940, *Revista de Investigaciones Agrícolas* 7: 74. 1953, *Kurtziana* 3: 121-125. 1966, *Feddes Repertorium* 95(7-8): 472-473. 1984, *Darwiniana* 27(1-4): 563. 1986, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 120(4): 535. 1998.

E. schrenkianus (Fisch. & C.A. Mey.) Tzvelev (*Agropyron pseudostrigosum* Candargy; *Agropyron schrenkianum* (Fisch. & C.A. Mey.) P. Candargy; *Campeiostrachys schrenkiana* (Fisch. & C.A. Mey.) Drobow; *Roegneria schrenkiana* (Fisch. & C.A. Mey.) Nevski; *Triticum schrenkianum* Fisch. & C.A. Mey.; *Triticum strigosum* f. *planifolium* Regel; *Triticum strigosum* var. *planifolium* Regel) (for the German botanist Alexander Gustav von Schrenk (Schrenck), 1816-1876, traveler; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 241. 1965; H.N. Cloukie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 240. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; A. Lasègue, *Musée botanique de Benjamin Delessert*. 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 252. Regione Siciliana, Palermo 1988)

China, Russia, Mongolia, Bhutan, Nepal. Found in alpine meadows, along streams, riverside, slopes, see *Systema*

Vegetabilium, editio decima sexta 1: 326. 1825, *Bulletin de la Classe Physico-Mathématique de l'Académie Impériale des Sciences de Saint Pétersbourg* 3: 305. 1845, *Acta Horti Petrop.* 7: 591. 1881 and *Archives de Biologie Végétale Pure et Appliquée* 1: 40. 1901, *Flora Uzbekistanica* 1: 300, 540. 1941, *Novosti Sist. Vyss. Rast.* 9: 62. 1972, *Genome* 35: 230-237. 1992 [Interspecific hybridization between *Elymus himalayanus* and *E. schrenkianus*, and other *Elymus* species (Triticeae: Poaceae).].

E. schugnanicus (Nevski) Tzvelev (*Agropyron schugnanicum* Nevski; *Roegneria schugnanica* (Nevski) Nevski; *Roegneria schugnanica* (Nevski) Tzvelev) (Tadzhikistan-Tajikistan, Schugnan)

China, Pakistan, Asia. See *Novosti Sist. Vyss. Rast.* 9: 62. 1972.

E. sclerus Á. Löve (*Brachypodium durum* Keng; *Elymus durus* Hedw. ex Steud.; *Roegneria dura* (Keng) Keng)

China, Asia. See *Nomenclator Botanicus. Editio secunda* 1: 550. 1840 and *Sunyatsenia* 6(1): 54-55. 1941, *Feddes Repertorium* 95(7-8): 448. 1984.

E. scribneri (Vasey) M.E. Jones (*Agropyron scribneri* Vasey; *Elymus trachycaulus* subsp. *scribneri* (Vasey) Á. Löve)

U.S., California, western North America, Montana, Canada. Perennial, alpine, racemes tardily disarticulating, disturbed sites, see *Bulletin of the Torrey Botanical Club* 10: 128. 1883 and *Contributions to Western Botany* 14: 20. 1912, *Rhodora* 56(662): 28. 1954, *Feddes Repertorium* 95(7-8): 461. 1984.

in English: Scribner's wheat grass, spreading wheatgrass, Scribner's wild rye

E. semicostatus (Nees ex Steud.) Melderis (*Agropyron japonicum* Vasey ex Wickson; *Agropyron kuramense* Melderis; *Agropyron semicostatum* (Nees ex Steud.) Nees ex Boiss.; *Agropyron semicostatum* Nees ex Steud.; *Agropyron striatum* (Nees ex Steud.) Hook.f.; *Elymus kuramensis* (Melderis) Cope; *Elymus semicostatus* (Nees ex Steud.) Á. Löve, nom. illeg., non *Elymus semicostatus* (Nees ex Steud.) Melderis; *Elymus semicostatus* subsp. *striatus* (Nees ex Steud.) Á. Löve; *Roegneria semicostata* (Nees ex Steud.) Kitag.; *Triticum semicostatum* Nees ex Steud.; *Triticum striatum* Nees ex Steud.)

Asia, India, Nepal, Afghanistan, Pakistan. Slender, nodding, pasture, low palatability, high altitude grass, see *Synopsis Plantarum Glumacearum* 1: 346. 1854, *Flora Orientalis* 5: 662. 1884, *U.S.D.A. Div. Bot. Annual Report* 1891: 6. 1892 and *Enumeration of the Flowering Plants of Nepal* 1: 132. 1978, *Feddes Repertorium* 95(7-8): 453. 1984, *Nordic Journal of Botany* 14(1): 7-21. 1994, *Plant Systematics and Evolution* 189: 1-13. 1994, *Plant Systematics and Evolution* 191: 199-201. 1994.

in English: drooping wildrye

E. sibiricus L. (*Clinelymus sibiricus* (L.) Nevski; *Elymus krascheninnikovi* Roshev.; *Elymus pendulosus* Hodgson; *Elymus praetervisus* Steud.; *Elymus tener* L.f.; *Hordeum sibiricum* (L.) Schenck; *Triticum arctasianum* F. Herm.; *Triticum arktasianum* F. Herm.; *Triticum sibiricum* Willd.)

Temperate Asia, East Europe, U.S. Perennial, erect, slender, clumped, nodes black, leaves thin and pointed, spikes dense and pendent, greenish spikelets in pairs, glumes linear and awned, very rough lemmas oblong-lanceolate to lanceolate, awn curved, valuable hay and pasture grass, suitable for arid situations, see *Species Plantarum* 1: 83-85. 1753, *Supplementum Plantarum* 114. 1781 [1782], *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 135. 1809, *Synopsis Plantarum Glumacearum* 1: 348. 1854 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40(1): 109. 1907, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 40, 42. 1936, *Rhodora* 58: 144, f. 1. 1956, *Taxon* 44: 611-612. 1995.

in English: Siberian wildrye, wildrye

E. sierrus Gould (also spelled *sierrae*) (*Agropyron caninum* f. *pringlei* (Scribn. & J.G. Sm.) Pease & A.H. Moore; *Agropyron caninum* f. *pringlei* (Scribn. & J.G. Sm.) Pease & A.H. Moore; *Agropyron gmelinii* (Griseb.) Scribn. & J.G. Sm. var. *pringlei* Scribn. & J.G. Smith; *Agropyron pringlei* (Scribner & Smith) A.S. Hitchc.; *Agropyron spicatum* var. *pringlei* (Scribn. & J.G. Sm.) M.E. Jones; *Elymus pringlei* Scribn. & Merr.; *Elymus trachycaulus* subsp. *sierrus* (Gould) Á. Löve)

U.S., Pacific Northwest, California, Wyoming. Perennial, mountain and subalpine forest, occurring in rocky soil in slope habitats, see *Essai d'une Nouvelle Agrostographie* 102, 146. 1812, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 31, 33. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 30. 1901, *Rhodora* 12(136): 75-76. 1910, *A Flora of California* 1: 183. 1912, *Contributions to Western Botany* 14: 19. 1912, *Madroño* 9(4): 125. 1947, *Rhodora* 56(662): 28. 1954, *Feddes Repertorium* 95(7-8): 461. 1984.

in English: Sierra wildrye

E. sinicus (Keng) S.L. Chen (*Elymus sinicus* (Keng ex Keng & S.L. Chen) S.L. Chen; *Roegneria sinica* Keng; *Roegneria sinica* Keng ex Keng & S.L. Chen)

China. Variable species, see *Journal Nanjing University. Natural Sciences Edition* 1: 33. 1963, *Novon* 7(3): 229. 1997.

E. sinicus (Keng) S.L. Chen var. *medius* (Keng) S.L. Chen & G.H. Zhu (*Roegneria media* (Keng) L.B. Cai; *Roegneria sinica* var. *media* Keng)

China. See *Journal Nanjing University. Natural Sciences Edition* 1: 35. 1963, *Acta Phytotaxonomica Sinica* 35(2): 175. 1997, *Novon* 12(3): 427-428. 2002.

E. solandri (Steud.) Connor (*Triticum solandri* Steud.)

New Zealand. Prostrate to decumbent, erect or ascending, open, stoloniferous or tufted, rooting at the nodes, leaf sheath keeled, ligule truncate, auricles clasping, glumes unequal and keeled, lemma central nerve extending into recurved awn, see *London J. Bot.* 3: 417. 1844, *Synopsis Plantarum Glumacearum* 1: 347. 1854, *Handbook N.Z. Flora* 343. 1864 and *Archives de biologie végétale pure et appliquée* 1: 39. Athens 1901, *New Zealand Journal of Botany* 32: 140, f. 8. 1994.

E. sosnowskyi (Hackel) Melderis (*Agropyron sosnowskyi* Hack.; *Elytrigia sosnowskyi* (Hack.) Nevski; *Pseudoroegneria sosnowskyi* (Hack.) Á. Löve)

Turkey. Rare species, see *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 80. 1984, *Feddes Repertorium* 95(7-8): 445. 1984.

E. stebbinsii Gould (*Agropyron parishii* Scribner & J.G. Smith; *Elymus parishii* Burt Davy & Merr.; *Elytrigia parishii* (Scribn. & J.G. Sm.) D.R. Dewey) (Samuel Bonsall Parish, 1838-1928)

U.S., Nevada, California. Perennial, rare, occurring under dry conditions in slope habitats, chaparral, see *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 28. 1897 and *University of California Publications in Botany* 1: 58. 1902, *Madroño* 9(4): 126. 1947, *Brittonia* 35(1): 31. 1983, *Phytologia* 83(5): 345-365. 1997.

in English: Stebbin's wild rye, Parish wheatgrass, California wheat grass

in Mexico: agropiro de Parish

E. stebbinsii Gould subsp. *septentrionalis* Barkworth

North America. See *Phytologia* 83(5): 360, f. 3-4. 1997 [1998].

E. stebbinsii Gould subsp. *stebbinsii*

North America.

E. stenachyrus (Keng ex Keng & S.L. Chen) Á. Löve (*Agropyron stenachyrum* (Keng ex Keng & S.L. Chen) Tzvelev; *Kengyilia stenachyra* (Keng ex Keng & S.L. Chen) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia stenachyra* (Keng ex Keng & S.L. Chen) S.L. Chen, nom. illeg., non *Kengyilia stenachyra* (Keng ex Keng & S.L. Chen) J.L. Yang, C. Yen & B.R. Baum; *Roegneria stenachyra* Keng ex Keng & S.L. Chen)

China. See *Journal Nanjing University. Natural Sciences Edition* 3: 79. 1963, *Feddes Repertorium* 95(7-8): 456. 1984, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991 [1992], *Hereditas; genetiskt arkiv*. 116(1-2): 27. 1992, *Bulletin of Botanical Research* 14(2): 141. 1994.

E. stenostachyus (Melderis) Á. Löve (*Agropyron stenostachyum* Melderis; *Elymus stenostachyus* (Melderis) O. Anders & D. Podlech)

Asia, Pakistan. See *Flora Iranica* 70: 175. 1970, *Feddes Repertorium* 95(7-8): 454. 1984, *Mitteilungen der Botanischen Staatssammlung München* 12: 315. 1976.

E. strictus (Keng ex Keng & S.L. Chen) Á. Löve (*Roegneria stricta* Keng ex Keng & S.L. Chen; *Roegneria stricta* Keng)

China. Perennial, caespitose, spikes slender and erect, straight awns, found on silty clay, riverbanks, see *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 396, f. 325. 1959, *Journal Nanjing University. Natural Sciences Edition* 3: 68. 1963, *Feddes Repertorium* 95(7-8): 458. 1984, *Botanical Gazette* 150: 84-92. 1989 [Genome analysis, morphology, and taxonomy of *Elymus gmelinii* and *E. strictus* (Poaceae: Triticeae).]

E. strictus (Keng ex Keng & S.L. Chen) Á. Löve var. ***crassus*** (L.B. Cai) S.L. Chen & G.H. Zhu (*Roegneria crassa* L.B. Cai)

China. See *Acta Phytotaxonomica Sinica* 34(3): 332, pl. 2, f. 10-16. 1996, *Novon* 12(3): 428. 2002.

E. submuticus (Hook.) Smyth (*Clinelymus submuticus* Keng; *Elymus curvatus* Piper; *Elymus submuticus* (Keng) Á. Löve, nom. illeg., non *Elymus submuticus* (Hook.) Smyth; *Elymus submuticus* Keng ex Keng f., nom. illeg., non *Elymus submuticus* (Hook.) Smyth; *Elymus virginicus* f. *submuticus* (Hook.) R.W. Pohl; *Elymus virginicus* var. *arcuatus* Alph. Wood; *Elymus virginicus* var. *jenkinsii* Bowden, also *jenkinsii*; *Elymus virginicus* var. *submuticus* Hook.; *Terrellia curvata* (Piper) Lunell; *Terrellia curvata* (Piper) Nevski; *Terrellia virginica* (L.) Nevski)

Northern America, U.S. Thickets and alluvium, sandy soil, see *Species Plantarum* 1: 84. 1753, *Flora Boreali-Americana* 2: 255. 1840, *The American Botanist and Florist* 2: 405. 1871 and *Bulletin of the Torrey Botanical Club* 30: 233. 1903, *Transactions of the Kansas Academy of Science* 25: 99. 1913, *American Midland Naturalist* 4: 228. 1915, *American Midland Naturalist* 4: 228. 1919, *Manual of the Grasses of the United States* 847. 1935, *American Midland Naturalist* 38: 549. 1947, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 78, 191. 1957, *Canadian Journal of Botany* 42: 583. 1964, *Feddes Repertorium* 95(7-8): 449. 1984, *Bulletin of Botanical Research* 4(3): 192-193. 1984, *Sida* 13: 241-250. 1988.

E. svensonii G.L. Church

U.S., Tennessee, Kentucky. Vulnerable species, see *Rhodora* 69(778): 134-135, f. 1-2, 12. 1967

in English: Svenson's wild rye.

E. tenuis (Buchanan) Á. Löve & Connor (*Agropyron scabrum* var. *tenuis* Buchanan)

New Zealand. Prostrate, open, slender, trailing, stoloniferous, elongating flowering culms, ligule ciliate, occasionally cleistogamous, awned glumes, lemma smooth, see *Essai d'une Nouvelle Agrostographie* 102, 146, 181. 1812, *Indigenous Grasses of New Zealand*, t. 57b, Add. & Corr. 11. 1880 and *New Zealand Journal of Botany* 20(2): 183. 1982, *Novon* 7(3): 229. 1997.

E. tenuispicus (J.L. Yang & Y.H. Zhou) S.L. Chen (*Roegneria tenuispica* J.L. Yang & Y.H. Zhou)

China. Nodding spikes, lemmas with straight awns, see *Novon* 4(3): 307-309, f. 1-2. 1994, *Novon* 7(3): 229. 1997.

E. thoroldianus (Oliv.) G. Singh (*Agropyron thoroldianus* Oliv.; *Kengyilia thoroldiana* (Oliv.) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia thoroldiana* (Oliv.) S.L. Chen, nom. illeg., non *Kengyilia thoroldiana* (Oliv.) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia thoroldiana* var. *thoroldiana*; *Roegneria thoroldiana* (Oliv.) Keng ex Keng & S.L. Chen; *Roegneria thoroldiana* (Oliv.) Keng)

Asia, China. See *Hooker's Icones Plantarum* 23(3): pl. 2262. 1893 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 188. 1957, *Grasses of Burma, Ceylon, India and Pakistan* 696. 1960, *Journal Nanjing University. Natural Sciences Edition* 3: 79. 1963, *Taxon* 32(4): 640. 1983, *Feddes Repertorium* 95(7-8): 456. 1984, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991 [1992], *Hereditas; genetiskt arkiv*. 116(1-2): 27. 1992, *Bulletin of Botanical Research* 14(2): 141. 1994, *International Journal of Plant Sciences* 157(1): 136-141. 1996.

E. tibeticus (Melderis) G. Singh (*Agropyron tibeticum* Melderis; *Roegneria tibetica* (Melderis) H.L. Yang)

China, Tibet. See *Grasses of Burma ...* 696. 1960, *Taxon* 32(4): 640. 1983, *Flora Reipublicae Popularis Sinicae* 9(3): 72. 1987, *Plant Systematics and Evolution* 189: 1-13. 1994.

E. tilcarensis (J.H. Hunz.) Á. Löve (*Agropyron tilcarensis* J.H. Hunz., also *tilcarensis*; *Elytrigia tilcarensis* (J.H. Hunz.) Covas ex J.H. Hunz. & Xifreda; *Elytrigia tilcarensis* (J.H. Hunz.) Covas)

South America, Argentina. See *Kurtziana* 3: 121-125. 1966, *Feddes Repertorium* 95(7-8): 473. 1984, *Darwiniana* 27(1-4): 563. 1986.

E. trachycaulus (Link) Gould ex Shinners (*Agropyron brevifolium* Scribn.; *Agropyron caninum* f. *fernaldii* Pease & A.H. Moore; *Agropyron caninum* f. *pilosifolium* Pease & A.H. Moore; *Agropyron caninum* subsp. *majus* (Vasey) C.L. Hitchc.; *Agropyron caninum* var. *andinum* (Scribn. & J.G. Smith) C.L. Hitchc.; *Agropyron caninum* var. *hornemannii* (Koch) Pease & Moore; *Agropyron caninum* var. *mitchellii* S.L. Welsh; *Agropyron caninum* var. *pauciflorum* (Schur) Volkart; *Agropyron caninum* var. *tenerum* (Vasey) Pease & A.H. Moore; *Agropyron missuricum* (Spreng.) Farw.; *Agropyron novae-angliae* Scribn.; *Agropyron parishii* var. *laeve*

Scribn. & J.G. Sm.; *Agropyron pauciflorum* Schur; *Agropyron pauciflorum* (Schwein.) Hitchc. ex Silveus, nom. illeg., non *Agropyron pauciflorum* Schur; *Agropyron pauciflorum* (Schwein.) Hitchc.; *Agropyron pauciflorum* subsp. *majus* (Vasey) Melderis; *Agropyron pauciflorum* subsp. *novae-angliae* (Scribn.) Melderis; *Agropyron pauciflorum* subsp. *teslinense* (Porsild & Senn) Melderis; *Agropyron pauciflorum* var. *novae-angliae* (Scribn.) Taylor & MacBryde; *Agropyron repens* var. *tenerum* (Vasey) Beal; *Agropyron subsecundum* (Link) Hitchc. var. *andinum* (Scribn. & J.G. Smith) Hitchc.; *Agropyron tenerum* Vasey; *Agropyron tenerum* subsp. *majus* (Vasey) Piper; *Agropyron tenerum* subsp. *trichocoleum* Piper; *Agropyron tenerum* var. *ciliatum* Scribn. & J.G. Sm.; *Agropyron tenerum* var. *longifolium* Scribn. & J.G. Sm.; *Agropyron tenerum* var. *novae-angliae* (Scribn.) Farw.; *Agropyron teslinense* Porsild & Senn; *Agropyron trachycaulon* (Link) Steud.; *Agropyron trachycaulon* (Link) hort. ex Steud.; *Agropyron trachycaulon* (Link) Malte ex H.F. Lewis; *Agropyron trachycaulon* (Link) Malte, nom. illeg., non *Agropyron trachycaulon* (Link) Malte ex H.F. Lewis; *Agropyron trachycaulon* var. *ciliatum* (Scribn. & J.G. Sm.) Gleason, nom. illeg., non *Agropyron trachycaulon* var. *ciliatum* (Scribn. & J.G. Sm.) Malte; *Agropyron trachycaulon* var. *fernaldii* (Pease & A.H. Moore) Malte; *Agropyron trachycaulon* var. *glaucescens* Malte; *Agropyron trachycaulon* var. *majus* (Vasey) Fernald; *Agropyron trachycaulon* var. *novae-angliae* (Scribn.) Fernald; *Agropyron trachycaulon* var. *tenerum* (Vasey) Malte; *Agropyron trachycaulon* var. *trichocoleum* (Piper) Malte; *Agropyron violaceum* (Hornem.) Lange subsp. *andinum* (Scribn. & J.G. Smith) Melderis; *Agropyron violaceum* var. *andinum* Scribn. & J.G. Sm.; *Agropyron violaceum* var. *major* Vasey; *Crithopyrum trachycaulon* hort. ex Steud.; *Elymus novae-angliae* (Scribn.) Tzvelev; *Elymus pauciflorus* (Schwein.) Gould, nom. illeg., non *Elymus pauciflorus* Lam.; *Elymus trachycaulis* (Link) Gould; *Elymus trachycaulis* (Link) Hoover, nom. illeg., non *Elymus trachycaulis* (Link) Gould ex Shinners; *Elymus trachycaulis* subsp. *andinus* (Scribn. & J.G. Sm.) Á. Löve & D. Löve; *Elymus trachycaulis* subsp. *novae-angliae* (Scribn.) Tzvelev; *Elymus trachycaulis* subsp. *teslinensis* (Porsild & Senn) Á. Löve; *Elymus trachycaulis* var. *andinus* (Scribn. & J.G. Sm.) Dorn; *Elymus trachycaulis* var. *majus* (Vasey) Beetle; *Roegneria novae-angliae* (Scribn.) Jurtzev & V.V. Petrovsky; *Roegneria pauciflora* (Schwein.) Hyl.; *Roegneria trachycaula* (Link) Nevski; *Roegneria trachycaulon* (Link) Nevski; *Triticum missuricum* Spreng.; *Triticum pauciflorum* Schwein.; *Triticum repens* var. *tenerum* Vasey; *Triticum trachycaulon* Link; *Zeia tenera* (Vasey) Lunell)

Northern America, U.S., California. Perennial, short-lived, moderately coarse, slender, green to bluish and glabrous, caespitose growth habit, culms erect and clustered, roots dense and fibrous, lacks auricles or has very small ones,

leaf sheaths glabrous and round, ligule a membrane ciliate and rounded, spikes erect to nodding with 1 spikelet per node, spikelets overlapping, glumes lance-shaped and broad, lemma glabrous and usually unawned, tolerant of salinity, a pioneer species, excellent feed, grows on moist well-drained soils of medium texture, along river flats, beaches and floodplains, in wetlands or nonwetlands, mountain meadows, open woods and forests, barrens and banks, see *Species Plantarum* 1: 86. 1753, *Essai d'une Nouvelle Agrostographie* 102, 146, 180, t. 20, f. 2. 1812, *Narr. Exped. St. Peter's River* 2: 383. 1824 [William Hypolitus Keating (1799-1840), *Narrative of an Expedition to the Sources of St. Peter's River; Lake Winnepeek, Lake of the Woods, etc.*: performed in the year 1823, by order of the Hon. J.C. Calhoun, Secretary of War under the command of Stephen H. Long, Major U.S.T.E. / compiled from the notes of Major Long, Messrs. Say, Keating, and Colhoun, by William H. Keating. Philadelphia: H.C. Carey & I. Lea, 1824.], *Systema Vegetabilium, editio decima sexta* 1: 325. 1825, *Hortus Regius Botanicus Berolinensis* 2: 189. 1833, *Synopsis Plantarum Glumacearum* 1: 344. 1854, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 293. 1878 [1879], *Botanical Gazette* 10: 258. 1885, *Contributions from the United States National Herbarium* 1(8): 280. 1893, *Grasses of North America for Farmers and Students* 2: 637. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 30. 1897 and *Fl. Vermont* 9: 103. 1900, *Bulletin of the Torrey Botanical Club* 32: 543, 546. 1905, *Rhodora* 12(136): 71, 73-75. 1910, *American Midland Naturalist* 4: 227. 1915, *American Midland Naturalist* 12: 48. 1930, *The Canadian Field-Naturalist* 45: 201. 1931, *Annual Report National Museum of Canada (1930)* 42. 1932, *Bulletin of the National Museum of Canada* 68: 44-46. 1932, *Rhodora* 35: 171, 174. 1933, *Texas Grasses* 158. 1933, *Flora URSS* 2: 599. 1934, *American Journal of Botany* 21(3): 132. 1934, *Uppsala Universitets Arsskrift* 7: 36, 89. 1945, *Madroño* 9(4): 126. 1947, *Phytologia* 4(1): 21. 1952, *Rhodora* 56(662): 28. 1954, *Leaflets of Western Botany* 10(16): 340. 1966, *Arkiv för Botanik, Andra Serien* 7(1): 20. 1968, *Novosti Sist. Vyss. Rast.* 10: 23. 1973, *Anderson's Flora of Alaska and Adjacent Parts of Canada* 546. 1974, *Naturaliste Can.* 103: 554. 1976, *Novosti Sist. Vyss. Rast.* 14: 245. 1977, *Genome* 33: 123-130. 1990, *Cytologia* 56: 431-436. 1991.

in English: slender wheatgrass, slender wild rye

in Mexico: agropiro de Parish, agropiro delgado, triguillo largo

E. trachycaulus (Link) Gould ex Shinnars subsp. ***andinus*** (Scribn. & J.G. Sm.) Á. Löve (*Agropyron andinum* (Scribn. & J.G. Sm.) Rydb.; *Agropyron biflorum* subsp. *andinum* (Scribn. & J.G. Sm.) Piper; *Agropyron caninum* var. *andinum* (Scribn. & J.G. Sm.) Pease & A.H. Moore; *Agropyron*

latiglume var. *andinum* (Scribn. & J.G. Sm.) Malte; *Agropyron subsecundum* var. *andinum* (Scribn. & J.G. Sm.) Hitchc.; *Agropyron trachycaulum* f. *andinum* (Scribn. & J.G. Sm.) Beetle; *Agropyron violaceum* subsp. *andinum* (Scribn. & J.G. Sm.) Melderis; *Agropyron violaceum* var. *andinum* Scribn. & J.G. Sm.; *Elymus trachycaulus* f. *andinus* (Scribn. & J.G. Sm.) Beetle; *Elymus trachycaulus* subsp. *andinus* (Scribn. & J.G. Sm.) Á. Löve & D. Löve; *Elymus trachycaulus* var. *andinus* (Scribn. & J.G. Sm.) Dorn)

South America. See *Systema Vegetabilium* 2: 760. 1817, *Conspectus Florae Groenlandicae* 1: 155. 1880, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 30. 1897 and *Bulletin of the Torrey Botanical Club* 32: 547. 1905, *Bulletin Colorado State University Experiment Station* 100: 54. 1906, *Bulletin of the Torrey Botanical Club* 36: 539. 1909, *Rhodora* 12(136): 75. 1910, *The Canadian Field-Naturalist* 45: 201. 1931, *Bulletin of the National Museum of Canada* 68: 36. 1932, *American Journal of Botany* 21(3): 131-132. 1934, *Rhodora* 54(643): 196. 1952, *Rhodora* 56(662): 28. 1954, *Arkiv för Botanik, Andra Serien* 7(1): 19. 1968, *Botaniska Notiser* 128(4): 502. 1975 [1976], *Phytologia* 55(3): 210. 1984, *Vascular Plants of Wyoming* 298. 1988.

E. trachycaulus (Link) Gould ex Shinnars subsp. ***glaucus*** (Pease & A.H. Moore) Cody (*Agropyron caninum* f. *glaucum* Pease & A.H. Moore; *Agropyron trachycaulum* var. *glaucum* (Pease & A.H. Moore) Malte)

North America. See *Rhodora* 12(136): 71. 1910, *The Canadian Field-Naturalist* 45: 201. 1931, *Bulletin of the National Museum of Canada* 68: 47. 1932, *The Canadian Field-Naturalist* 108(1): 93. 1994.

E. trachycaulus (Link) Gould ex Shinnars subsp. ***latiglumis*** (Scribn. & J. G. Sm.) Barkworth & D.R. Dewey (*Agropyron latiglume* (Scribn. & J.G. Sm.) Rydb.; *Agropyron violaceum* var. *latiglume* Scribn. & J.G. Sm.; *Elymus alaskanus* subsp. *latiglumis* (Scribn. & J.G. Sm.) Á. Löve; *Elymus trachycaulus* subsp. *violaceus* (Hornem.) Á. Löve & D. Löve)

Northern America, U.S., Canada, Alaska. See *Botaniska Notiser* 128(4): 502. 1975 [1976], *Great Basin Naturalist* 43(4): 562. 1983 [1984].

in English: Alaska wild rye

E. trachycaulus (Link) Gould ex Shinnars subsp. ***novae-angliae*** (Scribn.) Tzvelev (*Agropyron novae-angliae* Scribn.; *Agropyron pauciflorum* subsp. *novae-angliae* (Scribn.) Melderis; *Agropyron repens* var. *novae-angliae* Scribn. & J.G. Sm.; *Agropyron tenerum* var. *novae-angliae* (Scribn.) Farw.; *Agropyron trachycaulum* var. *novae-angliae* (Scribn.) Fernald; *Elymus novae-angliae* (Scribn.) Tzvelev; *Roegneria novae-angliae* (Scribn.) Jurtzev & V.V. Petrovsky)

North America. See *Essai d'une Nouvelle Agrostographie* 102, 146, 180, t. 20, f. 2. 1812, *Botanical Gazette* 10: 258.

1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 1897 and *Fl. Vermont* 9: 103. 1900, *Report of the Michigan Academy of Science, Arts and Letters* 21: 355. 1920, *The Canadian Field-Naturalist* 45: 201. 1931, *Rhodora* 35(413): 174. 1933, *Arkiv för Botanik, Andra Serien* 7(1): 20. 1968, *Novosti Sist. Vyss. Rast.* 10: 23. 1973, *Novosti Sist. Vyss. Rast.* 14: 245. 1977.

E. trachycaulus (Link) Gould ex Shinnars subsp. ***subsecundus*** (Link) Á. Löve & D. Löve (*Agropyron caninoides* (Ramaley) Beal; *Agropyron caninoides* var. *pubescens* Scribn. & J.G. Sm.; *Agropyron caninum* f. *ciliatum* (Scribn. & J.G. Sm.) Pease & A.H. Moore; *Agropyron caninum* f. *pubescens* (Scribn. & J.G. Sm.) Pease & A.H. Moore; *Agropyron caninum* var. *pubescens* Scribn. & J.G. Sm.; *Agropyron caninum* var. *richardsonii* (Schr.) M.E. Jones; *Agropyron caninum* (L.) P. Beauv. var. *unilaterale* (Cassidy) C.L. Hitchc.; *Agropyron laeve* (Scribn. & J.G. Smith) A.S. Hitchc.; *Agropyron parishii* Scribn. & J.G. Sm. var. *laeve* Scribn. & J.G. Sm.; *Agropyron pauciflorum* (Schwein.) A.S. Hitchc. var. *glaucum* (Pease & Moore) Taylor; *Agropyron pauciflorum* subsp. *laeve* (Scribn. & J.G. Sm.) Gould; *Agropyron richardsonii* (Schr.) P. Candargy; *Agropyron richardsonii* Schr. ex Scribn. & J.G. Sm.; *Agropyron richardsonii* Schr.; *Agropyron richardsonii* var. *ciliatum* Scribn. & J.G. Sm.; *Agropyron subsecundum* (Link) A.S. Hitchc.; *Agropyron subsecundum* var. *subsecundum*; *Agropyron tenerum* subsp. *trichocoleum* Piper; *Agropyron tenerum* var. *ciliatum* Scribn. & J.G. Sm.; *Agropyron trachycaulum* (Link) Malte ex H.F. Lewis; *Agropyron trachycaulum* f. *caninoides* (Ramaley) B. Boivin; *Agropyron trachycaulum* f. *ciliatum* (Scribn. & J.G. Sm.) Dore; *Agropyron trachycaulum* var. *caerulescens* Malte; *Agropyron trachycaulum* var. *ciliatum* (Scribn. & J.G. Sm.) Malte; *Agropyron trachycaulum* var. *ciliatum* (Scribn. & J.G. Sm.) Gleason, nom. illeg., non *Agropyron trachycaulum* var. *ciliatum* (Scribn. & J.G. Sm.) Malte; *Agropyron trachycaulum* var. *glaucum* (Pease & Moore) Malte; *Agropyron trachycaulum* var. *hirsutum* Malte; *Agropyron trachycaulum* var. *pilosiglume* Malte; *Agropyron trachycaulum* var. *richardsonii* (Schr.) Malte ex H.F. Lewis; *Agropyron trachycaulum* var. *trichocoleum* (Piper) Malte; *Agropyron trachycaulum* var. *unilaterale* (Cassidy) Malte; *Agropyron trachycaulum* var. *unilaterale* Malte; *Agropyron unilaterale* (L.) P. Beauv.; *Agropyron unilaterale* Cassidy, nom. illeg., non *Agropyron unilaterale* (L.) P. Beauv.; *Agropyron violaceum* f. *caninoides* Ramaley; *Cryptopyrum richardsonii* Heynh.; *Elymus donianus* subsp. *subsecundum* (Link) Á. Löve & D. Löve; *Elymus laevis* (Scribn. & J.G. Sm.) Hoover; *Elymus pauciflorus* subsp. *laeve* (Scribn. & J.G. Sm.) Gould; *Elymus pauciflorus* subsp. *subsecundus* (Link) Gould; *Elymus subsecundus* (Link) Á. Löve & D. Löve; *Elymus subsecundus* (Link) Hoover, nom. illeg., non *Elymus subsecundus* (Link) Á. Löve & D. Löve; *Elymus trachycaulus* subsp. *glaucus* (Pease & Moore) Cody; *Elymus*

trachycaulus subsp. *subsecundus* (Link) Gould; *Elymus trachycaulus* var. *unilateralis* (Cassidy) Beetle; *Roegneria subsecunda* (Link) Melderis; *Triticum richardsonii* Schr.; *Triticum subsecundum* Link; *Zeia richardsonii* (Schr.) Lunell)

Northern America, U.S., Canada. Perennial, lemmas awned, forage, occurs under moist conditions, in wetlands or non-wetlands, subalpine forest, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 207. 1791, *Essai d'une Nouvelle Agrostographie* 102, 146. 1812, *Hortus Regius Botanicus Berolinensis* 2: 190. 1833, *Linnaea* 12(4): 467. 1838, *Nomenclator Botanicus* 2: 174. 1846, *Bulletin Colorado State University Experiment Station* 12: 63. 1890, *Contributions from the United States National Herbarium* 1(8): 279. 1893, *Minnesota Botanical Studies* 1: 107-108. 1894, *Grasses of North America for Farmers and Students* 2: 635, 640. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 28-30. 1897 and *Archives de Biologie Végétale Pure et Appliquée* 1: 23, 43. 1901, *Bulletin of the Torrey Botanical Club* 32: 546. 1905, *Rhodora* 12(136): 71-73, 76-77. 1910, *Contributions to Western Botany* 14: 18. 1912, *A Flora of California* 1: 181. 1912, *American Midland Naturalist* 4: 227. 1915, *The Canadian Field-Naturalist* 45: 201. 1931, *Bulletin of the National Museum of Canada* 68: 45-48. 1932, *American Journal of Botany* 21(3): 131. 1934, *Man. Grasses U.S.* 778. 1935, *Madroño* 9(4): 126. 1947, *Phytologia* 4(1): 21. 1952, *Taxon* 13(6): 201. 1964, *Leaflets of Western Botany* 10(16): 339-340. 1966, *Le Naturaliste Canadien* 94: 520. 1967, *Botaniska Notiser* 128(4): 502. 1975 [1976], *Nature Canada* 103(6): 554. 1976, *Phytologia* 55(3): 210. 1984.

in English: slender wheatgrass, bearded wheatgrass

E. trachycaulus (Link) Gould ex Shinnars subsp. ***teslinensis*** (A.E. Porsild & Senn) Á. Löve (*Agropyron pauciflorum* subsp. *teslinense* (A.E. Porsild & Senn) Melderis; *Agropyron teslinense* A.E. Porsild & Senn)

America. See *Texas Grasses* 158. 1933, *Bulletin of the National Museum of Canada* 121: 98. 1951, *Arkiv för Botanik, Andra Serien* 7(1): 20. 1968, *Taxon* 29(1): 167. 1980.

E. trachycaulus (Link) Gould ex Shinnars subsp. ***trachycaulus*** (*Agropyron brevifolium* Scribn.; *Agropyron caninum* (L.) P. Beauv. subsp. *majus* (Vasey) C.L. Hitchc.; *Agropyron caninum* var. *andinum* (Scribn. & J.G. Sm.) C.L. Hitchc.; *Agropyron caninum* var. *hornemannii* (Koch) Pease & Moore; *Agropyron caninum* var. *mitchellii* Welsh; *Agropyron novae-angliae* Scribn.; *Agropyron pauciflorum* Schur; *Agropyron pauciflorum* (Schwein.) Hitchc. ex Silveus, nom. illeg., non *Agropyron pauciflorum* Schur; *Agropyron pauciflorum* (Schwein.) Hitchc.; *Agropyron pauciflorum* subsp. *majus* (Vasey) Melderis; *Agropyron pauciflorum* subsp. *novae-angliae* (Scribn.) Melderis; *Agropyron pauciflorum* subsp. *teslinense* (Porsild & Senn) Melderis; *Agropyron pauciflorum* var. *novae-angliae* (Scribn.) Taylor &

MacBryde; *Agropyron subsecundum* var. *andinum* (Scribn. & J.G. Sm.) A.S. Hitchc.; *Agropyron tenerum* Vasey; *Agropyron teslinense* Porsild & Senn; *Agropyron trachycaulum* (Link) Malte ex H.F. Lewis; *Agropyron trachycaulum* var. *majus* (Vasey) Fern.; *Agropyron trachycaulum* var. *novae-angliae* (Scribn.) Fern.; *Agropyron violaceum* subsp. *andinum* (Scribn. & J.G. Sm.) Melderis; *Agropyron violaceum* var. *andinum* Scribn. & J.G. Sm.; *Elymus donianus* subsp. *virescens* (Lange) Á. & D. Löve; *Elymus novae-angliae* (Scribn.) Tzvelev; *Elymus pauciflorus* (Schwein.) Gould, nom. illeg.; *Elymus trachycaulus* subsp. *andinus* (Scribn. & J.G. Sm.) Á. & D. Löve; *Elymus trachycaulus* subsp. *novae-angliae* (Scribn.) Tzvelev; *Elymus trachycaulus* subsp. *teslinensis* (Porsild & Senn) Á. Löve; *Elymus trachycaulus* var. *andinus* (Scribn. & J.G. Sm.) Dorn; *Elymus trachycaulus* var. *majus* (Vasey) Beetle; *Roegneria pauciflora* (Schwein.) Hyl.; *Roegneria trachycaula* (Link) Nevski; *Triticum pauciflorum* Schwein.; *Triticum trachycaulum* Link)

Northern America, U.S., Canada. Perennial, lemmas unawned or with short awns, useful for erosion control, fodder, forage, occurs under dry and moist conditions, in wetlands or nonwetlands, open soils, subalpine forest, chaparral.

in English: slender wheatgrass

E. trachycaulus (Link) Gould ex Shinnars subsp. ***violaceus*** (Hornem.) Á. Löve & D. Löve (*Agropyron biflorum* subsp. *latiglume* (Scribn. & J.G. Sm.) Piper; *Agropyron biflorum* var. *hornemanni* (W.D.J. Koch) Fedtsch.; *Agropyron caninum* var. *hornemannii* (W.D.J. Koch) Pease & A.H. Moore; *Agropyron caninum* var. *latiglume* (Scribn. & J.G. Sm.) Pease & A.H. Moore; *Agropyron latiglume* (Scribn. & J.G. Sm.) Rydb.; *Agropyron trachycaulum* var. *latiglume* (Scribn. & J.G. Sm.) Beetle; *Agropyron violaceum* (Hornem.) Lange; *Agropyron violaceum* var. *latiglume* Scribn. & J.G. Sm.; *Agropyron violaceum* subsp. *violaceum*; *Agropyron violaceum* var. *violaceum*; *Elymus alaskanus* subsp. *latiglumis* (Scribn. & J.G. Sm.) Á. Löve; *Elymus trachycaulus* subsp. *latiglumis* Barkworth & D.R. Dewey; *Elymus trachycaulus* var. *latiglumis* (Scribn. & J.G. Sm.) Beetle; *Elymus violaceus* (Hornem.) Feilberg; *Roegneria latiglumis* (Scribn. & J.G. Sm.) Nevski; *Roegneria violacea* (Hornem.) Melderis; *Triticum biflorum* var. *hornemannii* W.D.J. Koch; *Triticum caninum* var. *violaceum* (Hornem.) Laest.; *Triticum latiglume* (Scribn. & J.G. Sm.) F. Herm.; *Triticum violaceum* Hornem.; *Triticum violaceum* f. *violaceum*)

Northern America, U.S., Alaska, Canada. Vigorous, resistant to drought, see Giovanni de Brignoli di Brunnhoff (1774-1857), *Fasciculus Rariorum Plantarum Foro-Julien-sium*. 18. Urbini 1810, *Essai d'une Nouvelle Agrostographie* 102, 146. 1812, *Systema Vegetabilium* 2: 760. 1817, *Flora Danica* 12(35): t. 2044. 1832, *Synopsis Florae Germanicae et Helveticae* (edition 2) 953. 1843, *Botaniska*

Notiser 1856: 77. 1856, *Conspectus Florae Groenlandicae* 1: 155. 1880, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 30. 1897 and *Bulletin of the Torrey Botanical Club* 32: 547. 1905, *Bulletin of the Torrey Botanical Club* 36: 539. 1909, *Rhodora* 12(136): 73-74. 1910, *The Canadian Field-Naturalist* 45: 201. 1931, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 40. 1936, *Svensk Botanisk Tidskrift* 44: 159. 1950, *Rhodora* 54(643): 196. 1952, *Taxon* 19(2): 299. 1970, *Botaniska Notiser* 128(4): 502. 1975 [1976], *Taxon* 29(1): 166. 1980, *Great Basin Naturalist* 43(4): 562. 1983 [1984], *Phytologia* 55(3): 209. 1984, *Meddelelser om Grønland, Bioscience* 15: 12. 1984.

in English: violet wheatgrass

E. trachycaulus (Link) Gould ex Shinnars subsp. ***virescens*** (Lange) Á. Löve & D. Löve (*Agropyron violaceum* var. *virescens* Lange; *Elymus donianus* subsp. *virescens* (Lange) Á. Löve & D. Löve; *Roegneria virescens* (Lange) Böcher, Holmen & Jakobsen)

America. See *Conspectus Florae Groenlandicae* 1: 155. 1880 and *Taxon* 13: 201. 1964, *Grønlands Flora* (edition 2) 294. 1966, *Botaniska Notiser* 128(4): 502. 1975[1976].

E. transbaicalensis (Nevski) Tzvelev (*Agropyron pallidissimum* Popov; *Agropyron transbaicalense* Nevski; *Elymus mutabilis* subsp. *transbaicalensis* (Nevski) Tzvelev; *Elymus pallidissimus* (Popov) Peshkova; *Roegneria burjatika* Sipliv.; *Roegneria transbaicalensis* (Nevski) Nevski)

Mongolia, Russia. See *Novosti Sist. Vyss. Rast.* 10: 67. 1973.

E. transhyrcanus (Nevski) Tzvelev (*Agropyron leptourum* (Nevski) Grossh.; *Agropyron transhyrcanum* (Nevski) Bondar.; *Elytrigia vvedenskyi* Drobow; *Roegneria leptoura* Nevski; *Roegneria transhyrcana* Nevski; *Semeiostachys leptoura* (Nevski) Drobow)

Russia, Iran. Bunchgrass, coarse, slender, erect, glaucous to green, narrow and slender inflorescences, awnless or mucronate spikes, on rocky soil, see *Novosti Sist. Vyss. Rast.* 9: 61. 1972, *Botanical Journal of the Linnean Society* 117: 159-168. 1995.

E. tridentatus (Yen & J.L. Yang) S.L. Chen (*Roegneria tridentata* Yen & J.L. Yang)

China. Lemmas oblong-lanceolate, rocky places, slopes, see *Novon* 4(3): 310-313, f. 1-2. 1994, *Novon* 7(3): 229. 1997.

E. tschimganicus (Drobow) Tzvelev (*Agropyron tschimganicum* Drobow; *Elymus czimganicus* (Drobow) Tzvelev; *Roegneria czimganicus* (Drobow) Nevski; *Roegneria tschimganica* (Drobow) Nevski)

Asia, China, Tajikistan, Siberia. Caespitose, drooping spikes, recurved awns, found on riverbanks, see *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 40. 1925, *Flora URSS* 2: 604. 1934.

E. tsukushiensis Honda (*Agropyron semicostatum* var. *tsukushiense* (Honda) Ohwi; *Agropyron tsukushiense* (Honda) Ohwi; *Agropyrum tsukushiense* (Honda) Ohwi; *Agropyrum tsukushiense* var. *tsukushiense*; *Clinelymus tsukushiensis* (Honda) Honda; *Elymus tsukushiensis* Honda; *Roegneria tsukushiensis* (Honda) Ohwi; *Roegneria tsukushiensis* (Honda) B. Rong Lu, C. Yen & J.L. Yang, nom. illeg., non *Roegneria tsukushiensis* (Honda) Ohwi)

China, Korea, Japan. Caespitose, lemmas only hispid along margins, weedy, awned, slender drooping spikes, along roadsides, ditches, see *Flora Orientalis* 5: 662. 1884 and *Botanical Magazine* 50: 391, 572. 1936, *Acta Phytotaxonomica et Geobotanica* 6(1): 54. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 99. 1941, *Acta Botanica Yunnanica* 12(3): 245. 1990.

E. tsukushiensis Honda var. *transiens* (Hack.) Osada (*Agropyron kamoji* Ohwi; *Agropyron semicostatum* var. *transiens* Hack.; *Agropyron tsukushiense* var. *transiens* (Hack.) Ohwi; *Elymus kamoji* (Ohwi) S.L. Chen; *Roegneria kamoji* (Ohwi) Ohwi ex Keng)

China, Japan, Korea. See *Bulletin de l'Herbier Boissier, sér. 2*, 3(6): 507. 1903, *Illustr. Grasses Japan* 738. 1989, *Journal of Japanese Botany* 65(9): 266. 1990, *Acta Phytotaxonomica Sinica* 37(2): 125-130. 1999.

E. tsukushiensis Honda var. *tsukushiensis* (*Agropyron tsukushiense* (Honda) Ohwi)

Japan.

E. uralensis (Nevski) Tzvelev (*Agropyron uralense* Nevski; *Roegneria uralensis* (Nevski) Nevski)

China, Russia, Mongolia, Siberia. See *Flora URSS* 2: 614. 1934, *Novosti Sist. Vyss. Rast.* 8: 63. 1971.

E. uralensis (Nevski) Tzvelev subsp. *komarovii* (Nevski) Tzvelev (*Agropyron komarovii* Nevski; *Elymus komarovii* (Nevski) Tzvelev; *Roegneria komarovii* (Nevski) Nevski)

China, Mongolia, Russia, Siberia. On rocky soils, see *Novosti Sist. Vyss. Rast.* 10: 22. 1973.

E. uralensis (Nevski) Tzvelev subsp. *tianschanicus* (Drobow) Tzvelev (*Agropyron tianschanicum* Drobow; *Roegneria tianschanica* (Drobow) Nevski)

China, Asia. See *Novosti Sist. Vyss. Rast.* 10: 22. 1973.

E. uralensis (Nevski) Tzvelev subsp. *uralensis*

Asia.

E. vaillantianus (Wulfen & Schreb.) K.B. Jensen (*Agropyron repens* f. *vaillantianum* (Wulfen & Schreb.) Fernald; *Agropyron repens* var. *subulatum* Roem. & Schult.; *Agropyron repens* var. *vaillantianum* (Wulfen & Schreb.) Roem. & Schult.; *Agropyron vaillantianum* (Wulfen & Schreb.) Trautv.; *Elymus x pseudorepens* (Scribn. & J.G. Sm. (pro sp.)) Barkworth & D.R. Dewey [*Elymus lanceolatus* x *trachycaulus*]; *Elytrigia repens* var. *vaillantianum* (Wulfen &

Schreb.) Prokudin; *Elytrigia vaillantianum* (Wulfen & Schreb.) Beetle; *Triticum vaillantianum* Wulfen & Schreb.)

Northern America, Mexico. Shortly rhizomatous, slender spikes, excellent forage, see *Specimen Florae Erlangensis* 1: 143. 1804, *Essai d'une Nouvelle Agrostographie* 102, 146, 180, t. 20, f. 2. 1812, *Systema Vegetabilium* 2: 754-755. 1817, *Index Kewensis* 1: 836. 1893, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 34. 1897 and *Rhodora* 35(413): 184. 1933, *Great Basin Naturalist* 43(4): 568. 1983 [1984], *Phytologia* 55(3): 211. 1984, *Genome* 32(4): 645. 1989.

in Mexico: agropiro vaillantiano

E. varius (Keng ex Keng & S.L. Chen) Tzvelev (*Roegneria varia* Keng ex Keng & S.L. Chen; *Roegneria varia* Keng)

China. Perennial, found in subalpine meadows, see *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 187. 1957, *Journal Nanjing University. Natural Sciences Edition* 3: 70. 1963.

E. villosus Muhl. ex Willd. (*Elymus arkansanus* Scribn. & Ball; *Elymus canadensis* var. *villosus* (Muhl. ex Willd.) Shinnars, nom. illeg., non *Elymus canadensis* var. *villosus* Bates; *Elymus ciliatus* Muhl.; *Elymus ciliatus* Scribn., nom. illeg., non *Elymus ciliatus* Muhl.; *Elymus hirsutus* Schreb. ex Roem. & Schult.; *Elymus propinquus* Fresen. ex Steud., also spelled *propinguus*; *Elymus striatus* var. *ballii* Pammel; *Elymus striatus* var. *villosus* (Muhl. ex Willd.) A. Gray; *Elymus villosus* Trin ex Fedtsch.; *Elymus villosus* f. *arkansanus* (Scribn. & C.R. Ball) Fernald; *Elymus virginicus* subsp. *villosus* (Muhl. ex Willd.) Á. Löve; *Hordeum villosum* (Muhl. ex Willd.) Schenck; *Hordeum x caespitosum* Scribn. (pro sp.); *Terrellia villosa* (Muhl. ex Willd.) Baum)

North America, Canada, U.S. Perennial, useful for erosion control, found in woods, wet places, stream banks, moist woods and marshes, thickets, shores, see *Species Plantarum* 1: 83-85. 1753, *Species Plantarum. Editio quarta* 1(1): 470. 1797, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1: 131. 1809, *Descriptio uberior Graminum* 179. 1817, *Systema Vegetabilium* 2: 776. 1817, *A Manual of the Botany of the Northern United States* 603. 1848, *Synopsis Plantarum Glumacearum* 1: 349. 1854, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 57, t. 16. 1898, *Proceedings of the Davenport Academy of Natural Sciences* 7: 245. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 45, f. 19. 1901, *The Grasses of Iowa* 2: 347, f. 246. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 109. 1907, *Proceedings of the Biological Society of Washington* 41: 160. 1928, *Rhodora* 35(414): 195. 1933, *Rhodora* 56(662): 28. 1954, *Canadian Journal of Botany* 57(8): 947. 1979, *Feddes Repertorium* 96(7-8): 452. 1984.

in English: hairy wild rye, wild rye

E. villosus Muhl. ex Willd. var. *arkansanus* (Scribn. & Ball) J.J. Campbell (*Elymus arkansanus* Scribn. & Ball; *Elymus striatus* var. *arkansanus* (Scribn. & C.R. Ball) Hitchc.; *Elymus villosus* f. *arkansanus* (Scribn. & C.R. Ball) Fernald)

America. See *Species Plantarum. Editio quarta* 1(1): 470. 1797 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 45, f. 19. 1901, *Rhodora* 8(95): 212. 1906, *Rhodora* 35(414): 195. 1933, *Novon* 5(2): 128. 1995.

E. villosus Muhl. ex Willd. var. *villosus*

America.

E. virginicus L. (*Elymus carolinianus* Walter; *Elymus durus* Hedw. ex Steud.; *Elymus hirsutiglumis* Scribn.; *Elymus hordeiformis* Desf.; *Elymus jejunus* (Ramaley) Rydb.; *Elymus striatus* Willd.; *Elymus striatus* Schreb. ex Muhl.; *Elymus virginicus* f. *jejunus* Ramaley; *Elymus virginicus* var. *intermedius* (Vasey) Bush; *Elymus virginicus* var. *jejunus* (Ramaley) Bush; *Elymus virginicus* var. *micromeris* Schmolli; *Elymus virginicus* var. *minor* Vasey ex L.H. Dewey; *Elymus virginicus* var. *typicus* Fernald; *Hordeum cartilagineum* Moench; *Hordeum striatum* (Willd.) Schenck; *Hordeum virginicum* (L.) Schenck; *Leptothrix virginica* (L.) Dumort.; *Terrellia jejuna* (Ramaley) Nevski; *Terrellia striata* Lunell; *Terrellia virginica* (L.) Nevski; *Terrellia virginica* (L.) Lunell)

North America, U.S., Florida, Arizona, Texas. Perennial, erect, tufted, smooth, unbranched, with short rhizomes, leaves flat and scabrous, leaf sheaths glabrous, spikes erect and stiff, the lower part of the spike often enclosed by the sheath, glumes firm and yellow, lemmas glabrous beneath and scabrous above, straight awn, palatable to livestock, useful for erosion control, forage, occurs in riparian areas, meadows and riverbanks, along streams, low woods, moist woods, see *Species Plantarum* 1: 84-85. 1753, *Flora Caroliniana, secundum ...* 82. 1788, *Transactions of the American Philosophical Society* 3: 161. 1793, *Methodus Plantas Horti Botanici ...* 199. 1794, *Species Plantarum. Editio quarta* 1(1): 470. 1797, *Tableau de l'École de Botanique* 1: 15. 1804, *Nomenclator Botanicus. Editio secunda* 1: 550. 1840, *Bulletin de la Société Botanique de Belgique* 7: 66. 1868, *Minnesota Botanical Studies* 9: 114. 1894, *Contributions from the United States National Herbarium* 2(3): 550. 1894 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 109. 1907, *Contr. U.S. Natl. Herb.* 12: 124. 1908, *Bulletin of the Torrey Botanical Club* 36: 539. 1909, *American Midland Naturalist* 4: 228. 1915, *American Midland Naturalist* 10: 65. 1926, *Rhodora* 35: 198. 1933, *Rhodora* 39(466): 416-417. 1937.

in English: Virginia wildrye

E. virginicus L. var. *halophilus* (Bickn.) Wiegand (*Elymus halophilus* Bickn.; *Elymus virginicus* f. *lasiolepis* Fernald; *Terrellia halophila* (E.P. Bicknell) Nevski)

North America. Along seacoast, see *Bulletin of the Torrey Botanical Club* 35(4): 201. 1908, *Rhodora* 20(233): 83. 1918, *Rhodora* 35(414): 198. 1933.

in English: Virginia wildrye

E. virginicus L. var. *intermedius* (Vasey ex A. Gray) Bush (*Elymus canadensis* var. *intermedius* Vasey ex A. Gray; *Elymus hirsutiglumis* Scribn.; *Elymus intermedius* M. Bieb.; *Elymus intermedius* Scribn. & J.G. Sm., nom. illeg., non *Elymus intermedius* M. Bieb.; *Elymus virginicus* f. *hirsutiglumis* (Scribn.) Fernald; *Elymus virginicus* var. *hirsutiglumis* (Scribn.) Hitchc.; *Terrellia hirsutiglumis* (Scribn.) Nevski)

America, Russia. Riverbanks, see *Flora Taurico-Caucasica* 1: 82. 1808, *A Manual of the Botany of the Northern United States (edition 6)* 673. 1890, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 38. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 58. 1898 and *Rhodora* 10(112): 65. 1908, *American Midland Naturalist* 10: 60. 1926, *Rhodora* 35(414): 198. 1933.

E. virginicus L. var. *submuticus* Hook. (*Elymus curvatus* Piper; *Elymus submuticus* (Hook.) Smyth; *Elymus virginicus* f. *submuticus* (Hook.) R.W. Pohl; *Elymus virginicus* var. *arcuatus* Alph. Wood; *Terrellia curvata* (Piper) Lunell; *Terrellia curvata* (Piper) Nevski)

Southern America, U.S., Canada. See *Flora Boreali-Americana* 2: 255. 1840, *The American Botanist and Florist* 2: 405. 1871 and *Bulletin of the Torrey Botanical Club* 30: 233. 1903, *Transactions of the Kansas Academy of Science* 25: 99. 1913, *American Midland Naturalist* 4: 228. 1915, *American Midland Naturalist* 4: 228. 1919, *Manual of the Grasses of the United States* 847. 1935, *American Midland Naturalist* 38: 549. 1947.

E. virginicus L. var. *virginicus* (*Elymus australis* Scribn. & Ball; *Elymus glabriflorus* (Vasey) Scribn. & Ball; *Elymus glabriflorus* var. *australis* (Scribn. & Ball) J.J. Campbell; *Elymus hirsutiglumis* Scribn.; *Elymus jejunus* (Ramaley) Rydb.; *Elymus striatus* Willd.; *Elymus virginicus* var. *australis* (Scribn. & Ball) A.S. Hitchc.; *Elymus virginicus* var. *glabriflorus* (Vasey) Bush; *Elymus virginicus* var. *hirsutiglumis* (Scribn.) A.S. Hitchc.; *Elymus virginicus* var. *intermedius* (Vasey) Bush; *Elymus virginicus* var. *jejunus* (Ramaley) Bush)

North America. Found in thickets and alluvium, shores.

in English: Virginia wildrye

E. vulpinus Rydb. (*Agropyron pseudorepens* var. *vulpinum* (Rydb.) Boivin; *Agropyron* x *pseudorepens* notho morph. *vulpinum* (Rydb.) Bowden; *Agropyron vulpinum* (Rydb.) A.S. Hitchc.)

Northern America, U.S., Alberta, British Columbia, Saskatchewan, Montana, Nebraska. Endangered species, see *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 34. 1897 and *Archives de Biologie*

Végétale Pure et Appliquée 1: 23, 43. 1901, *Bulletin of the Torrey Botanical Club* 36: 540. 1909, *Proceedings of the Biological Society of Washington* 41: 159. 1928, *American Journal of Botany* 21: 132. 1934, *Canadian Journal of Botany* 43: 1443. 1965.

in English: Rydberg's wild rye

E. wawawaiensis J. Carlson & Barkworth (Washington, Whitman County, Wawawai, near Snake River)

Northern America, U.S. Perennial bunchgrass, densely tufted, vigorous, fine stemmed, pale green, narrow leaves, awns divergent, heat and drought-tolerant, see *Phytologia* 83(4): 327-328. 1997 [1998].

in English: Snake River wheatgrass, bluebunch wheatgrass

E. wiegandii Fernald (*Elymus canadensis* L.; *Elymus canadensis* f. *calvescens* (Fernald) B. Boivin; *Elymus canadensis* f. *calvescens* (Fernald) Bowden; *Elymus canadensis* f. *wiegandii* (Fernald) Scoggan; *Elymus canadensis* subsp. *wiegandii* (Fern.) Á. Löve; *Elymus canadensis* var. *wiegandii* (Fern.) Bowden; *Elymus wiegandii* f. *calvescens* Fernald; *Elymus wiegandii* f. *wiegandii*)

Canada, U.S. Along riverbanks, thickets, in woods, alluvial soil, see *Species Plantarum* 1: 83-84. 1753 and *Rhodora* 35(414): 192-193. 1933, *Canadian Journal of Botany* 42(5): 574-575. 1964, *The Flora of Canada* 2: 269. 1978, *Taxon* 29(1): 167. 1980.

in English: Canada wildrye

E. yezoensis Honda (*Agropyron yezoense* Honda; *Elymus kurilensis* Prob.; *Elymus nipponicus* Jaaska; *Elymus yezoensis* (Honda) T. Osada; *Roegneria yezoensis* (Honda) Ohwi)

Japan. See *Botanical Magazine* 43: 292. 1929, *Acta Phytotaxonomica et Geobotanica* 10: 98. 1941, *Illustr. Grasses of Japan* 738. 1989.

E. yubaridakensis (Honda) Ohwi (*Clinelymus yubaridakensis* Honda)

Japan. Indeterminate species, see *Botanical Magazine* 50: 572. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 54. 1937.

E. x dorei Barkworth & D.R. Dewey (*Elymus x dorei* (Bowden) Barkworth & D.R. Dewey; x *Agroelymus dorei* Bowden)

North America, Canada. See *Canad. J. Bot.* 45: 715. 1967, *Amer. J. Bot.* 72(5): 772. 1985.

E. x ebingeri G.C. Tucker [*Elymus hystrix* x *Elymus virginicus*]

North America, U.S., Canada. See *Harvard Pap. Bot.* 1(9): 83. 1996.

E. x hansenii Scribner [*Elymus glaucus* x *elymoides*, or *Elymus glaucus* x *multisetus*] (*Elymus hansenii* Scribn.; *Elymus leckenbyi* (Piper) Piper; *Sitanion anomalum* J.G. Sm.; *Sitanion hansenii* (Scribn.) J.G. Sm.; *Sitanion leckenbyi* Piper; *Sitanion planifolium* J.G. Sm.; *Sitanion rubescens*

Piper; *Sitanion x hansenii* (Scribn.) J.G. Smith (pro sp.); x *Elysitanion hansenii* (Scribn.) Bowden [*Elymus glaucus* var. *glaucus* x *Sitanion jubatum*])

U.S., California. Open habitats, dry places, see *Bull. Div. Agrostol., U.S.D.A.* 11: 56, f. 12. 1898 [also *U.S. Department of Agriculture. Division of Botany. Bulletin*, or *U.S.D.A. Div. Bot. Bull.*], *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 19-20, t. 4. 1899, *Erythea* 7: 100. 1899 and *Bulletin of the Torrey Botanical Club* 30: 234. 1903, *Contributions from the United States National Herbarium* 11: 151. 1906, *Proceedings of the Biological Society of Washington* 41: 160. 1928, *Brittonia* 15: 321. 1963, *Canadian Journal of Botany* 45: 721. 1967.

E. x lineariglumis Seberg & Petersen (*Agropyron elymoides* Hack. ex Dusén; *Agropyron elymoides* Hack.; *Cockaynea elymoides* (Hack. ex Dusén) Zotov; *Cockaynea elymoides* (Hack.) Zotov; *Elymus elymoides* (Raf.) Swezey; x *Elyhordeum elymoides* (Hack.) J.H. Hunz. & Xifreda [*Elymus magellanicus* x *Hordeum tetraploideum*])

Northern America. See *Doane College Natural History Studies* 1: 155. 1891 and *Svenska Expeditionen till Magellansland* 3(5): 232. 1900, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 233. 1943, *Der Züchter. Zeitschrift für Theoretische und Angewandte Genetik* 25: 164. 1955, *Bot. Jahrb. Syst.* 120(4): 528. 1998, *Kurtziana* 28(2): 292. 2000.

E. x maltei Bowden [*Elymus canadensis* x *virginicus*] (*Elymus maltei* Bowden; *Elymus mollis* f. *simulans* Bowden; x *Terrelymus maltei* (Bowden) B.R. Baum [*Elymus x maltei* Bowden])

North America, Canada. See *Canad. J. Bot.* 35: 970, 981. 1957, *Canad. J. Bot.* 42: 575. 1964, *The Flora of Canada* 2: 93-545. 1978[1979], *Canad. J. Bot.* 57(8): 947. 1979.

E. x mossii (Lepage) Barkworth & D.R. Dewey [*Elymus canadensis* x *trachycaulus*] (x *Agroelymus mossii* Lepage [*Agropyron sericeum* x *Elymus canadensis*, or *Agropyron trachycaulum* x *Elymus canadensis*])

North America, Canada. See *Bulletin du Muséum d'Histoire Naturelle* 33: 538. 1927, *Naturaliste Canad.* 92: 214. 1965, *Amer. J. Bot.* 72(5): 772. 1985.

E. x palmerensis (Lepage) Barkworth & D.R. Dewey [*Elymus macrourus* x *sibericus*] (*Elymus palmerensis* (Lepage) Barkworth & D.R. Dewey; x *Agroelymus hodgsonii* Lepage [*Agropyron repens* x *Elymus canadensis*]; x *Agroelymus palmerensis* Lepage [*Agropyron sericeum* x *Elymus canadensis*])

U.S., Alaska. See *Bulletin du Muséum d'Histoire Naturelle* 33: 538. 1927, *Le Naturaliste Canadien* 79: 257-258. 1952, *Amer. J. Bot.* 72(5): 772. 1985.

E. x pinaloensis (Pyrah) Barkworth & D.R. Dewey [*Elymus arizonicus* x *elymoides*] (x *Agrositanion pinaloensis* Pyrah,

also spelled *pinalenoensis* [*Agropyron arizonicum* x *Sitanion hystrix* var. *brevifolium*]

America. See *Great Basin Naturalist* 43(1): 135, f. 5, 7, 9. 1983, *American Journal of Botany* 72(5): 772. 1985.

E. x pseudorepens (Scribn. & J.G. Sm.) Barkworth & D.R. Dewey [*Elymus lanceolatus* x *trachycaulus*] (*Agropyron pseudorepens* Scribn. & J.G. Sm.; *Agropyron pseudorepens* var. *magnum* Scribn. & J.G. Sm.; *Agropyron pseudorepens* var. x *sennii* B. Boivin [*Agropyron dasystachyum* var. *psammophilum* x *trachycaulum*]; *Agropyron repens* f. *vaillantianum* (Wulfen & Schreb.) Fernald; *Agropyron repens* var. *subulatum* Roem. & Schult.; *Agropyron repens* var. *vaillantianum* (Wulfen & Schreb.) Roem. & Schult.; *Agropyron tenerum* subsp. *magnum* (Scribn. & J.G. Sm.) Piper; *Agropyron tenerum* var. *pseudorepens* (Scribn. & J.G. Sm.) M.E. Jones; *Agropyron trachycaulum* f. *pseudorepens* (Scribn. & J.G. Sm.) Beetle; *Agropyron vaillantianum* (Wulfen & Schreb.) Trautv.; *Agropyron* x *pseudorepens* Scribn. & J.G. Sm.; *Elymus pauciflorus* subsp. *pseudorepens* (Scribn. & J.G. Sm.) Gould; *Elymus pseudorepens* Barkworth & D.R. Dewey; *Elymus vaillantianus* (Wulfen & Schreb.) K. B. Jensen; *Elytrigia repens* var. *vaillantianum* (Wulfen & Schreb.) Prokudin; *Elytrigia vaillantianum* (Wulfen & Schreb.) Beetle; *Triticum vaillantianum* Wulfen & Schreb.; *Zeia pseudorepens* (Scribn. & J.G. Sm.) Lunell)

Northern America. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 207. 1791, *Specimen Florae Erlangensis* 1: 143. 1804, *Essai d'une Nouvelle Agrostographie* 102, 146, 180, t. 20, f. 2. 1812, *Systema Vegetabilium* 2: 754-755. 1817, *Botanical Gazette* 10: 258. 1885, *Index Kewensis* 1: 836. 1893, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 34-35. 1897 and *Bulletin of the Torrey Botanical Club* 32: 546. 1905, *Contributions to Western Botany* 14: 19. 1912, *American Midland Naturalist* 4: 226. 1915, *The Canadian Field-Naturalist* 45: 201. 1931, *Rhodora* 35(413): 184. 1933, *Man. Grass. U.S.* 775. 1935, *Madroño* 10(3): 94. 1949, *Rhodora* 54(643): 196. 1952, *Le Naturaliste Canadien* 94: 520. 1967, *Great Basin Naturalist* 43(4): 568. 1983 [1984], *Phytologia* 55(3): 211. 1984, *Genome* 32(4): 645. 1989.

E. x russellii (Melderis) Cope (*Agropyron russellii* Melderis; *Elymus russellii* (Melderis) Cope; *Roegneria russellii* (Melderis) J. L. Yang & Yen)

Asia, Pakistan. See *Grasses of Burma ...* 694. 1960, *Flora of Pakistan* 143: 618. 1982, *Canadian Journal of Botany* 69(2): 291. 1990.

E. x saundersii Vasey [*Elymus elymoides* x *trachycaulus*] (*Agropyron saundersii* (Vasey) Hitchc.; *Elymus saundersii* Vasey; *Elymus saundersii* var. *californicus* Hoover;

x *Agrositanion saundersii* (Vasey) Bowden [*Agropyron trachycaulum* x *Sitanion hystrix*])

U.S., Colorado. See *Bulletin of the Torrey Botanical Club* 11: 126. 1884 and *Proceedings of the Biological Society of Washington* 41: 159-160. 1928, *Leaflets of Western Botany* 3(11): 255. 1943, *Canadian Journal of Botany* 45: 720. 1967.

E. x yukonensis (Scribn. & Merr.) Á. Löve (*Agropyron yukonense* Scribn. & Merr.; *Elymus lanceolatus* subsp. *yukonensis* (Scribn. & Merr.) Á. Löve; *Elytrigia dasystachya* subsp. *yukonense* (Scribn. & Merr.) D.R. Dewey)

Northern America, U.S. See *Contributions from the United States National Herbarium* 13(3): 85. 1910, *Madroño* 10: 94. 1949, *Bulletin of the Torrey Botanical Club* 81(1): 33. 1954, *Taxon* 29(1): 168. 1980, *Brittonia* 35(1): 31. 1983, *Feddes Repertorium* 95: 470. 1984.

Elymus Mitch. = *Zizania* L.

Greek name *elymos* "millet" (*elyo* "to cover"), nom. illeg., non *Elymus* L.

Ehrhartoideae, Oryzeae, Zizaniinae, see *Species Plantarum* 2: 991. 1753, *Diss. Brev. Bot. Zool.* 32. 1769 and *American Midland Naturalist* 4: 214. 1915, *Phytologia* 72: 6. 1992, *Sida* 17(3): 533-549. 1997, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, *Contributions from the United States National Herbarium* 39: 56, 116-118. 2000.

Elyonurus Willd. = *Elionurus* Humb. & Bonpl. ex Willd.

Orthographic variant for *Elionurus* Humb. & Bonpl. ex Willd.; from the Greek *heleios* "a dor-mouse" and *oura* "a tail," referring to the shape of the spikes.

Panicoideae, Andropogoneae, Rottboelliinae, see P.M. Peterson & al., "Proposal to conserve the name *Elionurus* (Poaceae, Andropogoneae) with that spelling." *Taxon* 47: 737-738. 1998, R.K. Brummitt, "Report of the Committee for Spermatophyta: 49." *Taxon* 49: 273. 2000, *Contributions from the United States National Herbarium* 46: 225-229. 2003.

x Elysitanion Bowden = *Elymus* L.

Elymus x *Sitanion*.

See *Canadian Journal of Botany* 45: 721. 1967, *Genera Graminum* 374. 1986, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Elytrigia Desv. = *Elymus* L., *Lophopyrum* Á. Löve, *Pascopyrum* Á. Löve, *Psammopyrum* Á. Löve, *Pseudoroegneria* (Nevski) Á. Löve, *Thinopyrum* Á. Löve, *Trichopyrum* Á. Löve

Greek *elytron* “sheath, cover” or a combination of the generic names *Elymus* and *Triticum*.

About 5-8 species, Eurasia, north and south temperate. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, stout, glaucous, aromatic, herbaceous, unbranched, rhizomatous with long and creeping rhizomes, auricles present or absent, sheaths margins free or joined, ligule truncate membrane-like, leaf blade flat or involute, plants bisexual, inflorescence a single spike erect or drooping with more or less sessile spikelets, spikelets solitary and distichous, rachis tough, florets hermaphrodite, glumes falling with spikelet, glumes more or less equal to very unequal and lanceolate to linear, lemmas lanceolate and rounded on the back, awned or awnless or mucronate, palea 2-nerved and 2-keeled, 2 lodicules membranous and ciliate, stamens 3, ovary hairy with apical corona, 2 stigmas, weed species, hay, occur in sand dunes, nomenclatural problems, there is considerable taxonomic confusion concerning this genus, sometimes referred to and often included in *Agropyron*, *Elymus* and *Thinopyrum*, hybrids with *Agropyron*, *Hordeum*, *Aegilops*, *Leymus*, *Lophopyrum*, *Secale*, *Triticum* and *Thinopyrum*, type *Elytrigia repens* (L.) Desv. ex B.D. Jacks., see *Species Plantarum* 1: 83. 1753, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Index Kewensis* 1: 836. 1893 and *American Midland Naturalist* 4: 227. 1915, *Prop. Brit. Bot.* 121. 1929, *Flora Uzbekistanica* 1: 281, 300, 539-540. 1941, *Bot. Not.* 1953: 58. 1953, *N.Z. J. Sci. Tech.* 35B: 315-343. 1954, *Evolution* 10: 415-420. 1956, *T.R.S.N.Z.* 84: 757. 1957, *New Zealand J. Sci.* 5: 95-119. 1962, *Canadian Journal of Botany* 42: 554. 1964, *Canadian Journal of Botany* 45: 721. 1967, *Taxon* 29(2-3): 351. 1980, *New Zealand Journal of Botany* 20: 169-186. 1982, *Gene Manipulation in Plant Improvement* 274. 1984, *Feddes Repertorium* 95(7-8): 489. 1984, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 87: 49-50. 1986, *Genome* 29: 150-155. 1987, *Genome* 30: 903-914. 1988, *Agron. Abstr.* 1989: 102. 1989, *Taxon* 41: 562-563. 1992, *Theor. Appl. Gen.* 86: 288-294. 1993, *Genome* 36: 147-151, 641-651. 1993, *Pl. Syst. Evol.* 185: 33-53. 1993, *Pl. Syst. Evol.* 186: 193-212. 1993, *New Zealand Journal of Botany* 32: 125-154. 1994, *Taxon* 44: 611-612. 1995, *Genome* 39: 1093-1101. 1996, M.E. Barkworth, “Taxonomic and nomenclatural comments on the Triticeae in North America.” *Phytologia* 83(4): 302-311. 1997, *Journal of Ecology* 90(2): 394-403. Apr 2002, *Plant Breeding* 120(1): 79-81. Mar 2001 [Development of dominant nuclear male-sterile lines with a blue seed marker in durum and common wheat.], *Restoration Ecology* 10(2):

195-203. June 2002, *Contributions from the United States National Herbarium* 48: 279-310, 431, 589, 590, 653-654, 657. 2003, *Hereditas* 139(1): 18-27. Sep 2003, *Plant Pathology* 53(4): 538-538. Aug 2004, *Conservation Biology* 18(4): 947-956. Aug 2004 [Postfire seeding for erosion control: Effectiveness and impacts on native plant communities.], *Oikos* 107(2): 393-405. Nov 2004, *Restoration Ecology* 12(4): 568-574. Dec 2004, Aïcha Refoufi, M.-A. Esnault and J.-E. Levasseur, “Characterization of a novel 9-ploid hybrid ($2n = 63$) with 4 genomes in an *Elytrigia* complex (Poaceae).” *Botanical Journal of the Linnean Society* 147: 501-598. 2005, Roberta J. Mason-Gamer, “The β -amylase genes of grasses and a phylogenetic analysis of the Triticeae (Poaceae).” *Am. J. Bot.* 92: 1045-1058. 2005, *Journal of Ecology* 93(1): 138-147. Feb 2005.

Species

E. alata (Drobow) Nevski (*Agropyron alata* (Drobow) Á. Löve) (Kyrgyzstan, Khirgizia, Terskei-Alatau mountains, southwest of Prshevsk)

Russia, Asia. Spikes narrow and dark, single spikelets, short awns.

E. bessarabica (Savul. & Rayss) Dubovik (*Agropyron bessarabicum* Savul. & Rayss; *Thinopyrum bessarabicum* (Savul. & Rayss) Á. Löve)

Asia, Turkey, Bulgaria, Black Sea. Perennial, occurs in sea-shore sand dunes, sandy marsh.

E. caespitosa (K. Koch) Nevski

Armenia, Turkey, Pakistan, Asia, Europe. Perennial, loosely tufted, long flower heads, purple rachis, along roadsides, rocky dry places, scrub and grassland, sometimes confused with *Elymus nodosus* (Nevski) Melderis.

E. caespitosa (K. Koch) Nevski subsp. *caespitosa* (*Agropyron caespitosum* K. Koch; *Elymus nodosus* (Nevski) Melderis subsp. *caespitosus* (K. Koch) Melderis; *Lophopyrum caespitosa* (K. Koch) Á. Löve)

Asia, Iran, Turkey, Pakistan.

E. caespitosa (K. Koch) Nevski subsp. *nodosa* (Nevski) Tzvelev (*Agropyron nodosum* Nevski; *Elymus nodosus* (Nevski) Melderis; *Elytrigia nodosa* (Nevski) Nevski; *Lophopyrum nodosum* (Nevski) Á. Löve)

Europe, Eurasia. Densely to loosely tufted.

E. corsica (Hackel) J. Holub

Corsica. Rare species.

in French: élyme de Corse

E. curvifolia (Lange) Holub (*Agropyron curvifolium* Lange; *Elymus curvifolius* (Lange) Melderis; *Lophopyrum curvifolium* (Lange) Á. Löve)

Europe, Spain, Portugal.

E. disticha (Thunb.) Prokudin ex Á. Löve (*Agropyron distichum* (Thunb.) P. Beauv.; *Elymus distichus* (Thunb.) Melderis)

South Africa.

E. elongata (Host) Nevski (*Agropyron elongatum* (Host) P. Beauv.; *Agropyron rigidum* (Schrad.) P. Beauv.; *Elymus elongatus* (Host) Runemark; *Lophopyrum elongatum* (Host) Á. Löve; *Thinopyrum elongatum* (Host) D.R. Dewey; *Triticum elongatum* Host; *Triticum giganteum* Roth; *Triticum rigidum* Schrad.)

Africa, Eurasia, Armenia. Perennial bunchgrass, herbaceous, tufted, glabrous, coarse, robust, vigorous, without creeping rhizomes, leaves rigid, spike narrow, spikelets lanceolate or ovate-lanceolate, awnless glumes ovate-oblong or lanceolate, lemma notched and awnless, revegetation, fodder, forage, drought-resistant, growing on wet saline soils, seaside sandy beach, on canal bank along salt marsh, on wet alkaline soils, considered to be a synonym of *Elymus elongatus* (Host) Runemark, see also *Thinopyrum elongatum* (Host) D.R. Dewey.

in English: tall wheatgrass

in French: chiendent allongé

in Spanish: agropiro alargado

E. intermedia (Host) Nevski (*Agropyron intermedium* (Host) P. Beauv.; *Agropyron trichophorum* (Link) K. Richt.; *Elymus hispidus* (Opiz) Melderis subsp. *barbulatus* (Schur) Melderis; *Elymus hispidus* subsp. *hispidus*)

Asia temperate, Asia tropical, Europe. Forage, cultivated, see also *Thinopyrum intermedium* (Host) Barkworth & D.R. Dewey.

in English: intermediate wheatgrass, intermediate pubescent wheatgrass, wild triga

E. intermedia (Host) Nevski subsp. *gentryi* (Melderis) Á. Löve (*Agropyron gentryi* Melderis; *Elymus gentryi* (Melderis) Melderis; *Elytrigia gentryi* (Melderis) Tzvelev; *Thinopyrum gentryi* (Melderis) D.R. Dewey)

Iran. Perennial.

E. intermedia (Host) Nevski subsp. *intermedia* (*Agropyron aucheri* Boiss.; *Agropyron barbulatum* Schur; *Agropyron glaucum* (Desf.) Roem. & Schult.; *Agropyron intermedium* (Host) P. Beauv.; *Agropyron intermedium* var. *trichophorum* (Link) Hal.; *Agropyron trichophorum* (Link) K. Richt.; *Elymus hispidus* (Opiz) Melderis; *Elymus hispidus* subsp. *barbulatus* (Schur) Melderis; *Elymus hispidus* subsp. *hispidus*; *Elytrigia intermedia* subsp. *barbulata* (Schur) Á. Löve; *Elytrigia trichophora* (Link) Nevski; *Thinopyrum intermedium* (Host) Barkworth & D.R. Dewey; *Thinopyrum intermedium* subsp. *barbulatum* (Schur) Barkworth & D.R. Dewey; *Triticum intermedium* Host; *Triticum trichophorum* Link)

Eurasia, Asia temperate and tropical, Europe. Perennial, herbaceous, steel blue, creeping-rooted, sod-forming, leaves short-involute, almost evergreen foliage, lemma with a short apical point, fodder, forage, pasture, hay, useful for erosion control, growing on saline soils, areas of low soil moisture, in dry soil.

in English: intermediate wheatgrass, barbed intermediate wheatgrass, pubescent wheatgrass

E. intermedia (Host) Nevski subsp. *podperae* (Nábelek) Á. Löve (*Agropyron ciliatiflorum* Roshev.; *Agropyron podperae* Nábelek; *Elymus hispidus* subsp. *podperae* (Nábelek) Melderis)

Iran, Iraq, Turkey, Asia. Caespitose, green, coarse, erect, spreading, shortly rhizomatous, flat leaves pubescent, rigid spikes short and slender, reddish to purplish spikelets curved, glumes truncate or obtuse to acute, mucronate lemmas.

E. intermedia (Host) Nevski subsp. *pulcherrima* (Grossh.) Tzvelev (*Agropyron popovii* Drobow; *Agropyron pulcherrimum* Grossh.; *Elymus hispidus* subsp. *pulcherrimum* (Grossh.) Melderis)

Iran, Asia, Turkey, Eurasia, Europe. Pubescent spikes, awned.

E. juncea (L.) Nevski

Africa, Algeria, Mediterranean, Europe, coastal.

E. juncea (L.) Nevski subsp. *boreali-atlantica* (Simonet & Guin.) Hyl. (*Agropyron junceiforme* (Á. & D. Löve) Á. & D. Löve; *Agropyron junceum* (L.) P. Beauv. subsp. *boreali-atlanticum* Simonet & Guin.; *Elytrigia junceiformis* Á. Löve & D. Löve; *Thinopyrum junceiforme* (Á. Löve & D. Löve) Á. Löve; *Elymus farctus* subsp. *boreali-atlanticus* (Simonet & Guin.) Melderis)

Europe. Perennial, herbaceous, coastal.

in English: North Atlantic wheatgrass

in Danish: strand-kvik

E. juncea (L.) Nevski subsp. *juncea* (*Agropyron junceum* (L.) P. Beauv.; *Agropyron junceum* subsp. *mediterraneum* Simonet; *Elymus farctus* (Viv.) Runemark ex Melderis; *Elytrigia juncea* subsp. *mediterranea* (Simonet) Hyl.; *Thinopyrum junceum* (L.) Á. Löve; *Triticum junceum* L.)

Europe, Asia, Israel, Syria, Algeria, the Mediterranean. Growing along coast, sand dune habitats, sandy dunes beach areas, salt resistant.

in English: sand couch, sea wheatgrass

in French: chiendent des sables

in Spanish: grama de las playas

E. lolioides (P. Candargy) Nevski (*Agropyron lolioides* P. Candargy; *Elymus lolioides* (P. Candargy) Melderis; *Triticum lolioides* Kar. & Kir.)

Russia. In moist bottom lands.

E. pontica (Podp.) Holub (*Lophopyrum ponticum* (Podp.) Á. Löve; *Thinopyrum ponticum* (Podp.) Barkworth & D.R. Dewey; *Triticum ponticum* Podp.)

Europe, Armenia, Asia, Iran. Perennial bunchgrass, erect, growing on seashore sand dunes.

E. pungens (Pers.) Tutin (*Agropyron littorale* Dumort.; *Agropyron pungens* (Pers.) Roem. & Schult.; *Elymus pungens* (Pers.) Melderis; *Triticum littorale* Host; *Triticum pungens* Pers.)

Russia, Europe. Perennial, herbaceous, maritime-arenicolous, ballast, brackish streams, ditches and rubbish heaps, coastal sands.

in English: saltmarsh wheatgrass

E. pungens (Pers.) Tutin subsp. *campestris* (Gren. & Godr.) Á. Löve (*Agropyron campestre* Gren. & Godr.; *Elymus pungens* subsp. *campestris* (Gren. & Godr.) Melderis)

Russia, Europe. Perennial.

E. pungens (Pers.) Tutin subsp. *pungens* (*Agropyron pungens* (Pers.) Roem. & Schult.; *Elymus pungens* (Pers.) Melderis; *Triticum pungens* Pers.)

Eurasia. Perennial, erect, rhizomatous, auricles present, ligule hyaline, basal leaf sheaths not keeled, leaves more or less pointed, a single spike oblong and contracted, spikelets imbricate and distichous, hermaphrodite florets, chasmogamous spikelets, lemmas blunt or pointed, mucronate or awned, ovary pilose, very variable species, on low sand dunes, coastal, marshes and lake margins.

in English: sea couch, sea twitch

E. pycnantha (Godron) Á. Löve (*Agropyron pungens* (Pers.) Roem. & Schult. var. *acadiense* (F.T. Hubbard) Fernald; *Agropyron pycnanthum* (Godr.) Godr. & Gren.; *Elymus pycnanthus* (Godr.) Melderis; *Elytrigia pungens* (Persoon) Tutin; *Elytrigia pycnantha* (Godr.) Rauschert, nom. illeg., non *Elytrigia pycnantha* (Godr.) Á. Löve; *Triticum pycnanthum* Godr.)

Europe. Perennial, erect or geniculate, open, tufted, rhizomatous, strongly spreading, wiry rhizomes, inflorescence erect, glumes subequal, lemma coriaceous and keeled, occurs in salt marshes, sandy shores, sand dunes, mudflats, see *Mémoires, Société d'Émulation du Doubs*, sér. 2, 5: 10. 1854 and *List of British Plants* 84. 1908, *Prodrome de la Flore Corse* 1: 186. 1910, *Botanical Journal of the Linnean Society* 76(4): 378. 1978, *Taxon* 29(2-3): 351. 1980, *Feddes Repertorium* 93(1-2): 17. 1982, *Phytologia* 83(4): 304. 1997 [1998].

in English: sea couch

E. rechingeri (Runemark) Holub (*Agropyron rechingeri* Runemark; *Elymus farctus* subsp. *rechingeri* (Runemark) Melderis; *Elymus rechingeri* (Runemark) Runemark)

Syria, Europe, Greece, Asia.

E. repens (L.) Nevski (*Agropyron firmum* J. Presl; *Agropyron leersianum* (Wulfen ex Schweigg.) Rydb.; *Agropyron repens* (L.) P. Beauv.; *Agropyron repens* f. *geniculatum* Farw.; *Agropyron repens* f. *heberhachis* Fernald; *Agropyron repens* f. *pilosum* (Scribn.) Fernald; *Agropyron repens* f. *setiferum* Fernald; *Agropyron repens* f. *stoloniferum* Farw.; *Agropyron repens* f. *vaillantianum* (Wulfen & Schreb.) Fernald; *Agropyron repens* var. *bromiforme* Schur; *Agropyron repens* var. *glaucescens* Peterm.; *Agropyron repens* var. *pilosum* Scribn.; *Agropyron repens* var. *subulatum* (Schreb.) Roemer & J.A. Schultes; *Agropyron repens* var. *vulgare* Döll; *Agropyron sachalinense* Honda; *Braconotia officinarum* Godr.; *Elymus repens* (L.) Gould; *Elytrigia repens* (L.) Desv. ex W.D. Jackson; *Elytrigia repens* (L.) Desv.; *Elytrigia repens* (L.) Desv. ex Nevski; *Elytrigia repens* var. *vaillantiana* (Wulfen & Schreb.) Prokudin; *Elytrigia vaillantiana* (Wulfen & Schreb.) Beetle; *Triticum firmum* (J. Presl) Link; *Triticum infestum* Salisb.; *Triticum leersianum* Wulfen ex Schweigg.; *Triticum repens* L.; *Triticum vaillantianum* Wulfen & Schreb.; *Zeia repens* (L.) Lunell)

Europe, Mediterranean area, Libya to Morocco. Perennial, herbaceous, variable, sometimes tufted, stiff, robust, green or bluish green, glabrous or more or less densely hairy, rhizomatous with tough and branching rhizomes sharp-pointed, culms erect or bent below, decumbent and rooting from the nodes, auricles clasp the stems, ligule membranous minutely fringed, leaf sheaths open and mostly hairless, leaves stiff and rolled in bud, spike narrow and dense, usually overlapping and flattened spikelets, 2 glumes smooth or rough, lemmas keeled, lemma acute or shortly awned, awned or unawned glumes and lemmas, bad and noxious weed aggressive and highly competitive, a serious weed widely naturalized in temperate regions, lawn grass, cultivated and planted, rhizome diuretic and depurative, pasture forage or hay, flavoring, fodder, easily reproduces vegetatively from rhizomes and by seed, a very variable grass with many regional biotypes, very resistant to cold and heat, very resistant to drought, growing on peat soil or on shallow mineral soils, pastures, gardens, ditches, disturbed areas, cultivated fields, grassy banks, along roadsides, waste ground, ballast land, from dry to wet soils, see *Species Plantarum* 1: 86. 1753, *Enumeratio Plantarum in Partibus Saellandiae Septentrionalis et Orientalis* 1: 38. Hafniae 1801-1803, *Specimen Florae Erlangensis* 1: 143. 1804, *Journal de Botanique, rédigé par une société de botanistes* 1: 73. 1813, *Cat. Pl. Palat.* 5. 1814, *Systema Vegetabilium* 2: 754-755. 1817, *Enum. Pl. Palat.* 16. 1830, *Agrostographia Germanica* 1: t. 20, f. 1386. 1834, *Bulletin de la Société Impériale des Naturalistes de Moscou* 14: 866. 1841, *Flora Brasiliensis* 2(3): 226. 1880, *Index Kewensis* 1: 836. 1893 and *Botaniska Notiser* 1953: 357. 1953, *Novosti Sist. Vyss. Rast.* 10: 31. 1973, *Novosti Sist. Vyss. Rast.* 12: 125, 225. 1975, *Taxon* 29(2-3): 351. 1980, *Claves Pl. Xinjiang* 1: 166. 1982, *Feddes Repertorium* 95(7-8):

485. 1984, *Phytologia* 55(3): 211. 1984, *Folia Musei Rerum Naturalium Bohemiae Occidentalis* 21: 16. 1984, *Taxon* 35(1): 198. 1986, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 120(4): 538. 1998, *Acta Botanica Boreali-Occidentalis Sinica* 18(2): 286, f. 2. 1998, *Folia Geobotanica et Phytotaxonomica* 28(1): 107. 1993.

in English: couch, twitch, couch grass, couch wheatgrass, English couch grass, English couch, couth, scutch, quick grass, whickens, wiry grass, quitch grass, witchgrass, twitch grass, wheat grass, quack grass, quackgrass, dog grass, shelly grass, knot grass, devils-grass, scutch grass

in French: chiendent rampant, petit chiendent, chiendent commun, chiendent

in Turkey: ayirik otu, ayrik otu

in Spanish: grama canina

in Mexico: acaxacahuistli, grama, k'an-suuk

in Arabic: najem, nedjil, khafour, seboulet el-far, guzmir, affar, thil

in South Africa: bloukweek, kweekgras, kweekkoringras, strand kweek

E. repens (L.) Nevski subsp. ***elongatiformis*** (Drobow) Tzvelev (*Agropyron elongatiforme* Drobow; *Elymus repens* subsp. *elongatiformis* (Drobow) Melderis; *Elytrigia elongatiformis* (Drobow) Nevski)

Eurasia, Turkey, Russia, Iran. See *Novosti Sist. Vyss. Rast.* 10: 31. 1973.

in English: quackgrass

E. repens (L.) Nevski subsp. ***repens*** var. ***aristata*** (L.) Nevski (*Triticum repens* L.; *Agropyron repens* (L.) P. Beauv.; *Zeia repens* (L.) Lunell; *Elymus repens* (L.) Gould; *Agropyron caesium* J. Presl & C. Presl; *Agropyron sachalinense* Honda; *Braconotia officinarum* Godron; *Triticum imbricatus* Lam.; *Triticum vaillantianum* Wulfen & Schreb.)

Eurasia, Turkey, Russia, Iran. Rhizomatous with wiry and extensive rhizomes, erect, auricles present, inflorescence a single spike narrowly oblong and contracted, spikelets imbricate and distichous, chasmogamous and strongly spreading spikelets.

E. repens (L.) Nevski subsp. ***repens*** var. ***repens***

Eurasia, Turkey, Russia, Iran. Rhizomatous with wiry rhizomes, erect, auricles present, ligule hyaline, a single spike narrowly oblong, spikelets imbricate and distichous, fleshy lodicules, a bad weed, used as a diuretic, a very variable species.

in English: couch, couch grass, couch wheat grass, scutch, quick grass, quitch grass, witch grass, twitch grass, quack grass

E. scirpea (C. Presl) Holub (*Agropyron scirpeum* C. Presl; *Agropyron scirpeum* var. *flaccidifolium* Boiss. & Heldr.;

Elymus flaccidifolius (Boiss. & Heldr.) Melderis; *Lophopyrum scirpeum* (C. Presl) Á. Löve; *Thinopyrum scirpeum* (C. Presl) D.R. Dewey)

Greece, Turkey, Algeria. See *Cyperaceae et Gramineae Siculae* 49. 1820 and *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973.

E. tilcareense (Hunz.) Covas (*Agropyron tilcareense* J.H. Hunz.)

Argentina, Tilcara - Jujuy. Endangered species, see *Anales del Museo Nacional de Buenos Aires* 21: 175. 1911, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 2: 8. 1915, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 3: 28, f. 10, t. 4. 1940, *Revista de Investigaciones Agrícolas* 7: 74. 1953, *Kurtziana* 3: 121-125. 1966, *Feddes Repertorium* 95(7-8): 472-473. 1984, *Darwiniana* 27(1-4): 563. 1986, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 120(4): 535. 1998.

E. varnensis (Velen.) Holub (*Agropyron varnense* (Velen.) Hayek; *Elymus hispidus* subsp. *varnensis* (Velen.) Melderis; *Elymus varnensis* (Velen.) Runemark; *Trichopyrum varnense* (Velen.) Á. Löve; *Triticum varnense* Velen.)

Europe. See *Feddes Repertorium, Beiheft* 30: 222. 1932 [also *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30: 222. 1932], *Hereditas; genetiskt arkiv.* 70(2): 156. 1972, *Folia Geobotanica et Phytotaxonomica* 12(4): 426. 1977, *Botanical Journal of the Linnean Society* 76(4): 381. 1978, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 87: 49. 1986.

E. x littorea (Schumach.) Hyl. (*Agropyron x acutum* (DC.) Roem. & Schult.; *Elytrigia x acuta* (DC.) Tzvelev; *Triticum littoreum* Schumach.)

Europe, Russia.

E. x obtusiuscula (Lange) Hyl. (*Agropyron x obtusiusculum* Lange)

Europe.

Elytrolepharum (Steud.) Schldl. = Digitaria Haller

From the Greek *elytron* "sheath, cover" and *blepharon* "an eyelid."

Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Digitariinae, see *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Linnaea* 26(5): 533. 1855, *Synopsis Plantarum Glumacearum* 1: 37, 43. 1855 and *Bothalia* 7: 467. 1961, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Genera Graminum* 298-300. 1999, *Contributions from the United States National Herbarium* 46: 193-213. 2003.

Elytrophorus P. Beauv. = *Echinalysium* Trin.

From the Greek *elytron* “a sheath, cover” and *phoros* “bearing, carrying,” referring to the sheathing glumes; see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*, ou nouveaux genres des Graminées. 67, pl. XIV, f. II. Paris 1812.

About 2-4 species, Australia, tropical Africa and Asia. Arundinoideae, Arundineae, or Danthonioideae, Dantho-
nieae, annual or short-lived perennial, herbaceous, glabrous, ascending, tufted or caespitose, internodes solid, auricles absent, ligule a fringed to an unfringed membrane, narrow and flat leaves oblong to linear, plants bisexual, inflorescence a spike-like raceme or a compound spike, globular clusters of spikelets strongly compressed laterally and subtended by acuminate bracts, chaffy involucre, florets bisexual and several, lower floret perfect, 2 hispid glumes more or less equal, lemmas acuminate-awned and naviculate, palea bifid and winged on the keels, 1-2 lodicules free and fleshy, 1-3 stamens, ovary glabrous, 2 stigmas, weed of cultivation, green manure, forage, dry or wet places, water holes, ditches, rainforest, in or near water, depressions, resembling *Tribolium*, type *Elytrophorus articulatus* P. Beauv. (*Elytrophorus spicatus* (Willd.) E.G. Camus & A. Camus), see *Essai d'une nouvelle Agrostographie* 67, pl. XIV, f. II. Paris 1812, *Fundamenta Agrostographiae* 142. 1820 and *Amer. J. Bot.* 81: 1601-1610. 1994, Nigel P. Barker, “The relationships of *Amphipogon*, *Elytrophorus* and *Cyperochloa* (Poaceae) as suggested by rbcL sequence data.” *Telopea* 7(3): 205-213. 1997, *Austral. Syst. Bot.* 11: 41-52. 1998.

Species

E. globularis Hack.

Tropical Africa. Annual, panicle narrow, globose clusters of spikelets subtended by bracts, stiff awns, pasture, palatable when young, common in shallow water, vleis, damp places, see *Bulletin de l'Herbier Boissier*, sér. 2, 2: 935. 1902.

E. spicatus (Willd.) E.G. Camus & A. Camus (*Dactylis spicata* Willd.; *Echinalysium articulatum* Trin.; *Echinalysium strictum* Trin.; *Elytrophorus articulatus* P. Beauv.; *Sesleria spicata* (Willd.) Spreng.)

Australia, Africa, Tanzania, Ethiopia, Nigeria, China, Thailand, India, Nepal, Sri Lanka, Indonesia. Annual or short-lived perennial, tufted, small, erect or weakly geniculate, simple or sparsely branched, culms hispid or bristly-hairy, leaf blades hispid and flat, ligule a membranous rim, sheaths loose, clusters of ovate spikelets, florets bisexual, the uppermost floret sterile and reduced to a lemma, glumes narrowly lanceolate and ciliate on the margins, lemmas with a straight or curved awn, paleas membranous, weed species, forage, palatable, lacks bulk, grows in or near water, damp clay soils, seasonally swampy places, grassland, vleis, creeks,

margins of swamps, rice fields, see *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 416. 1801, *Essai d'une Nouvelle Agrostographie* 74, 167, 173. 1812, *Enum. Pl. Zeyl.* 5: 374. 1864 and *Handb. Fl. Ceylon* 5: 288. 1900, *Fl. Gen. Indo-Chine* 7: 547. 1923, *Handb. Fl. Ceylon* 6: 338. 1931, *Grasses of Ceylon* 78. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma* ... 493. 1960.

in English: spike grass

in Niger: wuré dalam

in Senegal: cedar, kobin, ndedar, sedar

in India: balha, khet kapuri, kolhati, nela anthabu hullu, suria, vavaltenai, vayal thinai

x Elytrordeum Hylander

Elytrigia x *Hordeum*.

See *Nord. Karlväxtfl.* 1: 369. 1953, *Bot. Not.* 1953: 357. 1953, *Genera Graminum* 374. 1986.

Elytrostachys McClure

From the Greek *elytron* “a sheath, cover” and *stachys* “a spike.”

Two species, Central and South America, Honduras to Venezuela. Bambusoideae, Bambusodae, Bambuseae, Arthro-
stylidiinae, perennial, unarmed, viviparous, sympodial, persistent, scrambler, clambering, more or less scandent, subviny, woody, solitary branching, flowering culms leafy, spathiform sheaths, auricular bristles very prominent, leaf blades strongly reflexed, plants bisexual, inflorescence compound with pseudospikelets, 1-spikelet racemes gathered into a fascicle, glumes very unequal, lemma compressed, palea present and awnless, 3 free and membranous lodicules, stamens 6, ovary glabrous with a conical appendage, stigmas 2, rain forest, lowland, monsoon forest, wet lowland, open places, type *Elytrostachys typica* McClure, see *Journal Washington Acad. Sci.* 32(6): 173-174, 176, f. 4-6. 1942, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Annals of the Missouri Botanical Garden* 79(1): 160-183. 1992 [A revision of *Atractantha* (Poaceae: Bambusoideae: Bambuseae)], *Flora Mesoamericana* 6: 197. 1994, *American Bamboos* 175-177. 1999, *Contributions from the United States National Herbarium* 39: 56-57. 2000.

Species

E. clavigera McClure

Paraguay, Colombia, Nicaragua, Honduras. See *Journal Washington Acad. Sci.* 32(6): 173-174, 176, f. 5-6. 1942, *Annals of the Missouri Botanical Garden* 79(1): 163. 1992.

E. typica McClure

Venezuela, Colombia, Honduras. See *Journal Washington Acad. Sci.* 32(6): 174, f. 5-6. 1942.

Endallex Raf. = *Phalaris* L., *Phalaroides* Wolf

Pooideae, Poeae, Phalaridinae, see Constantine S. Rafinesque, in *Seringe Bull. Bot.* 1: 220. 1830 [also *Bulletin Botanique [Genève]*] and E.D. Merrill, *Index rafinesquianus*. 75. Jamaica Plain, Massachusetts, U.S. 1949, *Contributions from the United States National Herbarium* 48: 310, 479-488. 2003.

Endodia Raf. = *Leersia* Sw., *Leersia* Sol. ex Sw.

Bambusoideae, Oryzodae, Oryzeae, Oryzinae, or Ehrhar-toideae, Oryzeae, Oryzinae, type *Leersia lenticularis* Michx., see *Nova genera et species plantarum seu Prodr-omus descriptionum vegetabilium maximam partem incog-nitorum*. 1, 21. 1788, *Flora Boreali-Americana* 1: 39. 1803, C.S. Rafinesque, *Neogenyton, or Indication of Sixty-Six New Genera of Plants of North America*. 4. 1825, William Griffith (1810-1845), *Icones plantarum asiaticarum*. 3: t. 144. Calcutta 1847-1854, *Index Kewensis* 1: 312. 1895 and *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, E.D. Merrill, *Index rafinesquianus*. 75. 1949, E. Launert, "A survey of the genus *Leersia* in Africa." *Senckenbergiana Biologica* 46: 129-153. 1965, *Iowa St. J. Sci.* 44: 215-270. 1969, *Journal of the Arnold Arboretum* 69(3): 263. 1988, *Flora Mesoamericana* 6: 221-222. 1994, *Contributions from the United States National Herbarium* 39: 57, 64-67. 2000.

Enneapogon Desv. ex P. Beauv. = *Calotheria* Wight and Arn., *Calotheria* Steud., *Enneapogon* P. Beauv., *Pappophorum* Schreb.

From the Greek *ennea* "nine" and *pogon* "a beard," referring to the soft plumose awns and to the lobes of the lemmas; see Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie, ou nou-veaux genres des Graminées*. 81, 161. Paris 1812.

About 28-30 species, mainly warm and tropical regions of Africa, Australia, tropics and subtropics. Chloridoideae, Pappophoreae, or Chloridoideae, Eragrostideae, Cotteinae, annual and short-lived perennial, erect and slender, stiff and wiry, herbaceous, often glandular-hairy, caespitose or form-ing dense or sparse tussocks, internodes hollow, nodes hairy, some species with disarticulating culms, auricles present or absent, sheaths terete, ligule a rim of hairs, flat or rolled leaves linear and narrow, plants bisexual, inflorescence a feathery and contracted spike-like panicle terminal or axil-lary, spikelets shortly pedicellate and not disarticulating between the florets, sometimes cleistogamous spikelets borne in the basal leaf sheaths, lower florets 1-3 bisexual,

uppermost florets sterile or rudimentary or sometimes reduced to awns or to a brush-like appendage, 2 glumes 5- to 21-nerved more or less equal or very unequal or slightly unequal, many plumose awned lemma lobes, lemmas rounded on the back and nerved, female-fertile lemmas 9-lobed apically awned, awns equal and plumose to ciliate, 2 free and fleshy lodicules, stamens 3, ovary glabrous, 2 stig-mas, small ovoid fruit compressed, decorative and ornament-al, weed species, native pasture species, palatable and nutritious, found in grasslands and bushland, open habitats, arid and semiarid areas, semidesert and dry regions, type *Enneapogon desvauxii* P. Beauv. ex Desv., see *Genera Plan-tarum* 2: 787. 1791, *Symbolae Botanicae, ...* 3: 10, t. 51. 1794, *Essai d'une Nouvelle Agrostographie* 81, 161. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Phy-siques et Naturelles* 1(1): 91. 1830, *émoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 202. 1831, *Syn-opsis Plantarum Glumacearum* 1: 199. 1854, *Die Natürli-chen Pflanzenfamilien* 2(2): 64. 1887 and *U.S. Dept. Agric. Bull.* 772: 83. 1920, *Proc. Linn. Soc.* 153: 52-91. 1941, *Kew Bulletin* 22: 393-401. 1968, *Bothalia* 18: 114-119. 1988, E.K.Z. Kakudidi, M. Lazarides and J.A. Carnahan, "A revi-sion of *Enneapogon* (Poaceae, Pappophoreae) in Australia." *Aust. Syst. Bot.* 1(4): 325-353. 1988, *Austral. Ecology* 24(3): 193-198. June 1999, R.W.S Fynn and T.G O'Connor, "Effect of stocking rate and rainfall on rangeland dynamics and cattle performance in a semiarid savannah, South Africa." *Journal of Applied Ecology* 37(3): 491-507. June 2000, *Contributions from the United States National Her-barium* 41: 37, 78, 178-181. 2001, *African Journal of Ecol-ogy* 40(2): 103-109. June 2002 [Vegetation gradients around artificial water points in the Central Kalahari Game Reserve of Botswana.], Sian Sullivan and Rick Rohde, "On non-equilibrium in arid and semiarid grazing systems." *Journal of Biogeography* 29(1)2: 1595-1618. Dec 2002, *Austral. Ecology* 28(2): 182-195. Apr 2003, *Journal of Biogeogra-phy* 30(5): 783-802. May 2003, *Journal of Biogeography* 31(5): 831-841. May 2004, *Weed Biology and Management* 4(3): 154-167. Sep 2004, David C. Hartnett, Andre F. Pot-gieter and Gail W.T. Wilson, "Fire effects on mycorrhizal symbiosis and root system architecture in southern African savannah grasses." *African Journal of Ecology* 42(4): 328-337. Dec 2004, *Flora of Australia* vol. 44B, Poaceae 3: 188-202. 2005, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005 [Caryopsis morphology of the Chlori-doideae (Gramineae) and its systematic implications.].

Species

E. sp.

in Morocco: gsiba, tawujjimt n-tgerdayt

in Niger: kokinshi, taebza-tagemer, tasbat n-aejemar, tâzbat n'jâmar

E. asperatus C.E. Hubb.

Australia.

E. avenaceus (Lindley) C.E. Hubb. (*Pappophorum avenaceum* Lindley)

Australia. Annual or short-lived perennial, tufted, forming small open tufts, base pubescent to hirsute to densely villous, simple or sparsely branched and culms not disarticulating, leaves scabrous with glandular hairs, panicle loosely contracted and ovate to lanceolate, fertile florets usually 2 or 4, glumes membranous and unequal, lowest lemma winged on the margins, awns plumose to feathery, upper florets similar, a valuable grazing species, very palatable when green and dry, regenerates rapidly, grows on sandy soils, on stony ridges, on calcareous and alluvial soils, infertile red earths, sandy calcareous soils, calcareous earths with sandy loam to sandy clay loam texture, in arid and semiarid areas.

in English: bottle-washers, bottlewashers, common bottle-washers, common bottle-washers, oat grass, native oat grass

E. caerulescens (Gaudich.) N.T. Burbidge (*Pappophorum caerulescens* Gaudich.) (Latin *caeruleum*, *i* "blue")

South Australia, Western Australia, Northern Territory. Annual or short-lived perennial, with glandular hairs, leafy and tufted near the base, compact and capitate panicle more or less ovate to lanceolate, glumes membranous, susceptible to dry periods, provides excellent forage, lacks bulk, requires heavy rain, indicator of good or fair range condition, see *Voyage autour de Monde exécuté pendant les Années 1836 et 1837 sur la Corvette la Bonite ... Botanique* 409. 1826 and *Proceedings of the Linnean Society of London* 153(1): 87. 1941.

E. cenchroides (Roemer & Schultes) C.E. Hubb. (*Enneapogon abyssinicus* (Hochst.) Rendle; *Enneapogon cenchroides* (Licht. ex Roemer & Schultes) C.E. Hubb.; *Enneapogon cenchroides* (Licht.) C.E. Hubb.; *Enneapogon mollis* Lehm.; *Pappophorum abyssinicum* Hochst.; *Pappophorum cenchroides* Licht.; *Pappophorum cenchroides* Licht. ex Roem. & Schult.; *Pappophorum cenchroides* var. *albescens* Schweinf.; *Pappophorum molle* (Lehm.) Kunth; *Pappophorum robustum* Hook.f.; *Pappophorum senegalense* Steud.) (like the genus *Cenchrus* L., Greek *kenchros* "millet")

South Africa, Mozambique, Tanzania, Uganda, Sudan, India, Yemen. Annual or short-lived perennial bunchgrass, variable, robust, coarse, sometimes branched, loosely tufted, erect or semierect, generally geniculate, not bulbous at base, densely covered with glandular hairs, leaf sheath rounded and hairy, ligule a row of short hairs, basal leaves few, leaf blades with short hairs and a rough margin, panicle loosely contracted, spikes pointed, contracted panicle branches spreading somewhat at maturity, upper glume generally 3-nerved, lemmas with 9 hairy to ciliate awns, third lemma vestigial or barren, valuable forage, pioneer grass,

useful for erosion control, weed species able to withstand long droughts, ground cover, growing in gravelly grassland, dry areas, dry sandy or stony soils, sandy wasteland, gypsum, woodland, cultivated ground, heavy soils, bushland, dry *Acacia-Commiphora* bushland, orange sandy plain, escarpment foothills, on disturbed areas, disturbed clay grassland, sandy soils, along roadsides, overgrazed veld, often confused with *Schmidtia kalahariensis* Stent or *Enneapogon persicus*, see *Systema Vegetabilium* 2: 616. 1817, *Novarum et Minus Cognitarum Stirpium Pugillus* 3: 40. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 255. 1833, *Synopsis Plantarum Glumacearum* 1: 199. 1854, *Flora* 38: 202. 1855, *Bulletin de l'Herbier Boissier*, sér. 2, App. 2: 99. 1894, *The Flora of British India* 7(22): 302. 1897 [1896], *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 229. 1899 and *Bulletin of Miscellaneous Information Kew* 1934: 119. 1934.

in English: common nine-awned grass, common nine-awned grass, nine-awned grass, furgrass, Sabigrass, sourgrass

in southern Africa: gewone negenaaldgras, negenaaldgras, suurgras, dassiegras, tuingras, eenjarige negenaaldgras, eenjähriqes neunborstengras, vaalsuurgras (Afrikaans); kabwele (Tonga); letsoa (Sotho)

in southwest Africa/Namibia: neunborsten sauergras

E. clelandii N.T. Burb. (after the Australian naturalist Sir John Burton Cleland, 1878-1971, botanist, ethnologist, explorer and plant collector, from 1920 to 1948 professor of pathology at the University of Adelaide, between August 1929 and August 1936 made numerous excursions into Central Australia (in connection with the Board for Anthropological Research, University of Adelaide, and the South Australian Museum), knighted in 1964, his works include *The Ancient Family of Cleland*. London 1905, *Royal Society of New South Wales, Sydney*. Presidential Address. Sydney 1918, *Toadstools and Mushrooms and other Larger Fungi of South Australia*. Adelaide 1934, with Edwin Cheel (1872-1951) wrote Notes on Australian Fungi. no. IV. *Polyporus, Fomes and Hexagona*. 1918 and *Notes on the Early Stages of Development of Lysurus gardneri-L. australiensis*, etc. 1918, with Thomas Harvey Johnston (1881-1951) wrote *Notes on Worm Nests in Australian Cattle due to Filaria, Onchocerca gibsoni, and on Similar Structures in Camels*. 1911, with Dr. C. Fenner wrote *The Geography and Botany of the Adelaide Coast*. Adelaide 1935. See E.C. Black, editor, *Memoirs of John McConnell Black*. Adelaide 1971; Constance Margaret Eardley (1910-1978), "John McConnell Black, A.L.S., M.B.E. (1855-1951)." *Trans. R. Soc. S. Aust.* 76: i-vi. 1953, and "John Burton Cleland - a tribute on his eightieth birthday." *Trans. R. Soc. S. Aust.* 82: 339-341. 1959; John Anderson Gilruth (1871-1937) and Georgina Sweet, *Onchocerca gibsoni: The Cause of Worm Nodules in Australian Cattle*. 1911; J.H. Barnhart, *Biographical notes upon botanists*. 1: 356. 1965; J. Lanjouw and F.A.

Stafleu, *Index Herbariorum. Collectors A-D*. Utrecht 1954; John McConnell Black (1855-1951), in *Transactions and Proceedings of the Royal Society of South Australia*. 56: 46, t. II, f. 3. 1932; Dennis John Carr and S.G.M. Carr (1912-1988), editors, *People and Plants in Australia*. London 1981; Garrison and Morton, *Medical Bibliography*. 4648, 5474. 1961)

South Australia, Western Australia, Northern Territory, Queensland. Short-lived perennial, branched, compact panicle linear or lanceolate to elliptic, glumes membranous, native pasture species, moderately palatable, see *Proceedings of the Linnean Society of London* 153(1): 80-81. 1941.

in English: Cleland nine-awn

E. cylindricus N.T. Burb.

Australia. Annual or short-lived perennial, pubescent or pilose, glandular, culms disarticulating at the nodes, panicle spike-like and cylindrical, glumes membranous with hyaline margins, a valuable grazing species, unpalatable to stock, grows on sandy or loamy red soils, sandy loam to sandy clay loam, on shallow soils, calcareous earths, calcareous rocks and soils, see *Proceedings of the Linnean Society of London* 153(1): 89-91, f. 5. 1941.

in English: limestone oat grass, jointed nine-awned, jointed nine-awn, jointed bottle-washers

E. decipiens Kakudidi

Australia.

E. desvauxii P. Beauv. (*Agrostis ciliata* Pall. ex Roshev., nom. illeg., non *Agrostis ciliata* Thunb.; *Czerniaevia rupestris* Turcz. ex Kom.; *Enneapogon brachystachyus* (Jaub. & Spach) Stapf; *Enneapogon desvauxii* P. Beauv. ex Desv.; *Enneapogon lophotrichus* Chiov. ex Chiarugi; *Enneapogon phleoides* Roemer & Schultes, also spelled *phleoides*; *Enneapogon pusillus* Rendle; *Enneapogon wrightii* (S. Watson) C.E. Hubbard; *Enneapogon wrightii* (S. Watson) Roshev.; *Pappophorum boreale* Griseb.; *Pappophorum boreale* C.C. Gmel. ex B. Fedtsch., nom. illeg., non *Pappophorum boreale* Griseb.; *Pappophorum brachystachyum* Jaub. & Spach; *Pappophorum fasciculatum* Chiov.; *Pappophorum figarianum* F. & De Not.; *Pappophorum jaminianum* Coss. & T. Durand & Boiss.; *Pappophorum mexicanum* Griseb. ex E. Fourn.; *Pappophorum mexicanum* Griseb. ex Hemsl.; *Pappophorum nanum* Steud.; *Pappophorum phleoides* Turcz.; *Pappophorum pusillum* (Rendle) K. Schum.; *Pappophorum vincentianum* J.A. Schmidt; *Pappophorum wrightii* S. Wats.; *Raspalia rupestris* Turcz. ex Kom.) (named for the French botanist Nicaise Auguste Desvaux, 1784-1856, in 1817 Director of the Angers Botanic Garden, among his works are *Nomologie botanique*. Angers 1817 and *Flore de l'Anjou*. Angers 1827; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 447. 1965; Robert Brown (1773-1858), *Prodromus florae Novae Hollandiae*. 252. 1810; Ida Kaplan Langman, *A Selected Guide to the*

Literature on the Flowering Plants of Mexico. University of Pennsylvania Press, Philadelphia 1964)

Tropical Africa, southern Africa, India, China, Mexico, U.S., New Mexico, South America. Annual or perennial bunchgrass, rather short-lived or semiperennial, slender, wiry, small, erect or geniculately ascending, often decumbent, branched, densely tufted, dense basal leaf cover, stoloniferous, rooting at the lower nodes, often forming dense mat, glandular, very fine leaf blades filiform finely tapering, leaf sheaths rounded, ligule a fringe of hairs, old basal leaf sheaths fibrous and persistent, leaves folded and hairy, panicle spike-like unbranched and densely branched, cleistogenes in basal leaf sheaths, flower stalks sometimes purplish, vestigial third floret, hairy lemma, hairy seed heads, lemma 9 awns fringed or silky, a prolific seeder, forage, moderately palatable, grazed by sheep and goats, found in desert and semidesert areas, limestone hills, dry calcareous soils, arid and semiarid regions, in desert scrub and desert grassland areas, waste places, open stony plains, overgrazed veld, gravelly plains, coastal sand, degraded sites, on rocky slopes and gravelly bajadas, sometimes confused with *Enneapogon lophotrichus*, see *Essai d'une Nouvelle Agrostographie* 82, 161, t. 16, f. 11. 1812, *Systema Vegetabilium* 2: 616. 1817, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 202. 1831, *Annales des Sciences Naturelles; Botanique, sér. 3* 14: 365. 1850, *Illustrationes Plantarum Orientalium* 4: 34, t. 324. 1850-1853 [1851] *Flora Rossica* 4(13): 404. 1852, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 254. 1852, *Beiträge zur Flora der Cap Verdischen Inseln* 144. 1852, *Synopsis Plantarum Glumacearum* 1: 200. 1854, *Bulletin de la Société Impériale des Naturalistes de Moscou* 29(1): 30. 1856, *Proceedings of the American Academy of Arts and Sciences* 18: 178. 1883, *Flora Orientalis* 5: 558. 1884, *Biologia Centrali-Americana; ... Botany ...* 3: 586. 1885, *Mexicanas Plantas* 2: 133. 1886, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 229. 1899 and *Flora Capensis* 7: 654-655. 1900, *Just's Botanischer Jahresbericht*. 27: 458. 1901 [also *Botanischer Jahresbericht, or Bot. Jahresber. (Just)*], *Plantae Novae vel Minus Notae ex Aethiopia* 31. 1928, *Flora URSS* 2: 297. 1934, *Zlaki SSSR* 418. 1937, *Proc. Linn. Soc. London* 57. 1940-1941, *Webbia* 8: 119. 1951, *Grasses of Saudi Arabia* 220-222. 1989.

in English: pappus grass, eight-day grass, eightday grass, eightdays grass, nine-awned pappus grass, nine-awn feather pappus grass, feather pappus grass, spike pappus grass, spike pappusgrass, Wright's-pappusgrass

in Mexico: pasto ladera, zacate cola de zorra, zacate ladera, zacate lobero

in Somalia: harfo

in South Africa: kalkgras, wondergras, agdae gras, agtdae-gras, kurzähriges neunborstengras

E. eremophilus Kakudidi

Australia.

E. glaber N.T. Burbidge

Tropical Western Australia, Northern Territory. Useful for erosion control, see *Proceedings of the Linnean Society of London* 153(1): 72-73. 1941

E. gracilis (R. Br.) P. Beauv. (*Pappophorum gracile* R. Br.)

Queensland, New South Wales. Annual or perennial, tufted, slender, with a thickened or knotty base, culms branched and not disarticulating, leaves pubescent to glabrous, inflorescence spicate, 1 fertile floret, glumes acute or acuminate and entire, body of basal lemma thickened, awns plumose, forage, useful for erosion control, found on red earths, woodland, in rock crevices, in open forests, see *Prodromus Florae Novae Hollandiae* 185. 1810, *Essai d'une Nouvelle Agrostographie* 82, 161, 171. 1812.

in English: slender nine-awn, slender bottle-washers

E. intermedius N.T. Burb.

Australia, Queensland. Perennial, tufted, hirsute to pubescent and thickened base, culms branched and not disarticulating, leaves pubescent and glandular, panicle spicate, fertile florets 2 or rarely 1, glumes membranous and glandular, awns plumose, second floret similar to first, upper florets reduced, grows on red earth soils, species often confused with *Enneapogon polyphyllus* (Domin) N.T. Burb., see *Proceedings of the Linnean Society of London* 153(1): 67-68. 1941.

in English: tall bottle-washers, tall bottlewash

E. lindleyanus (Domin) C.E. Hubb. (*Enneapogon pallidus* var. *brevisetus* N.T. Burb.; *Pappophorum lindleyanum* Domin) (dedicated to the English (b. near Norwich) botanist John Lindley, 1799-1865 (d. Middlesex), horticulturist, 1818 he went to London, 1820 Fellow of the Linnean Society, 1828 Fellow of the Royal Society, taxonomist, botanical artist, 1828/1829-1860 professor of botany at University College London, author of numerous and valuable botanical and horticultural works, his writings include *The Genera and Species of Orchideaceous Plants*. London 1830-1840 and *Sertum orchideaceum*. London [1837-] 1838 [-1841] he was the son of the nurseryman George Lindley (ca. 1769-1835); see William T. Stearn, in *D.S.B.* 8: 371-373. 1981; Brent Elliott, "Lindley's legacy." *The Garden*. 123(11): 808-809. Nov 1998; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 158. Regione Siciliana, Palermo 1988; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 429. London 1994; Stafleu and Cowan, *Taxonomic literature*. 3: 49-60. Utrecht 1981; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; J.H. Barnhart, *Biographical notes upon botanists*. 2: 386. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the*

Hunt Institute portrait collection. 239. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 200. Oxford 1964; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Warren R. Dawson, *The Banks Letters, a Calendar of the Manuscript Correspondence of Sir Joseph Banks*. London 1958; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 463. 1973; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. Oxford 1975; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. London 1918; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808 - 1841*. 1967; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; Francis Wall Oliver, editor, *Makers of British Botany*. Cambridge 1913; Emil Bretschneider, *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898] Leipzig 1981; H.R. Fletcher, *Story of the Royal Horticultural Society, 1804-1968*. Oxford 1969; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980; Mea Allan, *The Hookers of Kew*. London 1967; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; Merle A. Reinikka, *A History of the Orchid*. Timber Press 1996)

South Australia, Queensland, Western Australia, Northern Territory, New South Wales. Perennial, tufted, wiry and erect, forming compact tussocks, culms hirsute and not disarticulating, leaves linear and smooth to scabrous, purplish panicle globular to oblong, spikelets shortly awned, 1 fertile floret, glumes truncate, body of basal lemma not thickened, awns plumose, decorative, attractive, tough, growing on rocky and stony soils, on loamy or sandy soils, see *Bibliotheca Botanica* 20: 379. 1915, *Bulletin of Miscellaneous Information Kew* 1934: 450. 1934.

in English: wiry nine-awn, conetop nine-awn

E. lophotrichus Chiov. ex H. Sholz & P. Koenig (*Enneapogon lophotrichus* Chiov. ex Chiarugi)

Ethiopia, Somalia, Arabia, Egypt. Annual or perennial, tufted, leaf blades linear filiform and ascending, oblong panicle loosely contracted, glumes pinkish, fertile lemma hairy on the back, awns ciliate, third lemma well developed but barren, absence of cleistogenes in the basal leaf sheaths, semidesert, hillsides, slopes, among rocks, dry stony soils, open shrubland, dry lowlands, similar to and often confused with *Enneapogon desvauxii* and *Enneapogon persicus*, see *Illustrationes Plantarum Orientalium* 4: 34, t. 324. 1850-1853 [1851] and *Webbia* 8: 119. 1951, *Willdenowia* 13(2): 369. 1983.

E. mollis Lehm. (*Enneapogon cenchroides* (Licht.) C.E. Hubb.; *Pappophorum molle* (Lehm.) Kunth)

U.S. See *Systema Vegetabilium* 2: 616. 1817, *Novarum et Minus Cognitarum Stirpium Pugillus* 3: 40. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 255. 1833 and *Bulletin of Miscellaneous Information Kew* 1934: 119. 1934.

in English: soft feather pappus grass

E. nigricans (R. Br.) P. Beauv. (*Enneapogon flavescens* (Lindl.) N.T. Burb.; *Enneapogon pallidus* (R. Br.) P. Beauv. p.p.; *Pappophorum flavescens* Lindl.; *Pappophorum nigricans* R. Br.)

South Australia, Queensland, Victoria, New South Wales. Perennial, tufted, black-green, wiry, stiff, small and sparse tussocks, culms usually simple and not disarticulating, leaves pubescent with glandular hairs, ornamental inflorescence a spike-like panicle, dark purple to blackish panicle oblong to narrow-cylindrical and dense, 1 fertile floret, glumes membranous and unequal, lemma with stiff awns, body of lowest lemma ribbed, awns plumose, a prolific seeder, susceptible to summer fires and overgrazing, slow growing, forage, much grazed, native pasture species, found in dry inland regions, grassy wetland, shrublands, degraded sites, grasslands, on red and red-brown earths, well-drained sandy loam soils, see *Prodromus Florae Novae Hollandiae* 185. 1810, *Essai d'une Nouvelle Agrostographie* 82, 161, 171. 1812.

in English: black heads, blackhead grass, black top grass, black grass, nigger heads, nigger head grass, niggerhead, pappus grass, bottle washers

E. oblongus N.T. Burb. (*Pappophorum lindleyanum* Domin var. *glaucum* Domin; *Pappophorum nigricans* R. Br. var. *barbinode* Domin)

South Australia, Queensland, Western Australia, Northern Territory. Perennial, stout and erect, forming sparse tussocks, bluish green and hairy leaves, purplish panicle compact and dense, small and crowded spikelets, inland regions, stony soils, moderately grazing value, often previously confused with *Pappophorum lindleyanum* Domin, see *Proceedings of the Linnean Society of London* 153(1): 85-86. 1941.

in English: purple-head nine-awn, purplehead nineawn, rock nineawn

E. pallidus (R. Br.) P. Beauv. (*Pappophorum pallidum* R. Br.)

Northern Territory, Western Australia. See *Prodromus Florae Novae Hollandiae* 185. 1810, *Essai d'une Nouvelle Agrostographie* 82, 161, 171. 1812 and *Proceedings of the Linnean Society of London* 153(1): 80. 1941.

E. persicus Boiss. (*Enneapogon elegans* (Nees ex Steud.) Stapf; *Enneapogon glumosus* (Hochst.) Maire & Weiller; *Enneapogon schimperanus* (Hochst. ex A. Rich.) Renvoize; *Pappophorum aucheri* Jaub.; *Pappophorum elegans* Nees

ex Steud.; *Pappophorum glumosum* Hochst.; *Pappophorum persicum* (Boiss.) Steud.; *Pappophorum schimperanum* Hochst. ex A. Rich.; *Pappophorum turcomanicum* Trautv.)

Tropical Africa, southwestern Asia, India. Perennial or annual, tufted, slender, wiry, tussocky, low, inrolled leaf blades often widely diverging, panicle loosely or densely contracted, glumes purplish, awns ciliate, lemma shortly hairy, third lemma developed and sterile, fourth lemma vestigial, palatable, browsed, useful for erosion control, grows in open habitats, dry stony soils, alluvial soil, gravel, grassland, woodland, sandy soils, dry rocky waste places, see *Diagnoses plantarum orientalium novarum* 1(5): 71. 1844, *Tentamen Florae Abyssinicae ...* 2: 403. 1850, *Illustrationes Plantarum Orientalium* 4: 32, t. 323. 1851, *Synopsis Plantarum Glumacearum* 1: 199-200. 1854, *Flora* 38: 203. 1855 and *Bulletin of Miscellaneous Information Kew* 1907: 224. 1907, *Flore de l'Afrique du Nord*: 2: 193. 1953, *Kew Bulletin* 22: 400. 1968.

in Somalia: dikil, jabioki, aus

E. polyphyllus (Domin) N.T. Burb. (*Pappophorum nigricans* R. Br. var. *polyphyllum* Domin; *Pappophorum nigricans* var. *pallidum* sensu Domin, non (R. Br.) Domin)

South Australia, Queensland, Western Australia, Northern Territory, New South Wales. Annual or perennial, tufted, sticky, hispid with fine glandular hairs, culms sparsely branched and not disarticulating, panicle spike-like, spikelets 5- or 6-flowered, 1 fertile floret, glumes more or less equal, lemma thickened and flattened, awns plumose, a pioneer and coloniser, regenerates rapidly after burning, fodder, a valued grazing species, nutritious when young, readily grazed, responds to rain in 4 or 5 days, grows on sandy soils, in spinifex areas, on alluvial or river floodplains, arid lands, on heavy cracking clays and stony ridges, on deep or shallow sandy or clayey soils, see *Bibliotheca Botanica* 20: 381. 1915, *Proceedings of the Linnean Society of London* 153(1): 69, f. 2. 1941.

in English: leafy nine-awn, leafy nineawn, limestone bottlewashers, woolly oat grass, oat grass

E. pretoriensis Stent

South Africa. Perennial, tufted, unbranched, base erect, yellow sheaths, branched contracted panicle, lemma awns fringed, usually on rocky areas, see *Bothalia* 1(3): 174-176, t. 3. 1922, *Kew Bulletin* 22: 399. 1968.

E. purpurascens (R. Br.) P. Beauv. (*Pappophorum purpurascens* R. Br.)

Australia, Queensland, Northern Territory. Perennial, erect, wiry and slender, attractive, forming short and sparse tussocks, leaves glandular hairy and linear, purplish panicle oblong to narrow-cylindrical and dense, lemma with prominent awns, weak growing, found in open woodlands, grassland, rocky or stony soils, see *Prodromus Florae Novae*

Hollandiae 185. 1810, *Essai d'une Nouvelle Agrostographie* 82, 161, 171. 1812.

in English: purple nineawn, nine awn grass

E. robustissimus (Domin) N.T. Burb.

Australia.

E. scaber Lehm. (*Enneapogon benguellensis* Rendle; *Pappophorum benguellense* (Rendle) K. Schum.; *Pappophorum laxum* Chiov.; *Pappophorum scabrum* (Lehm.) Kunth) (Benguela, Angola; see H. Capello [Hermenegildo Carlos Brito Capelo] and Roberto Ivens, *From Benguella to the Territory of Yacca*. Description of a journey into Central and West Africa ... by H.C. and R.I., Officers of the Royal Portuguese Navy Expedition organized in the years 1877-1880. Sampson Low & Co. London 1882; James Johnston, *Reality versus Romance in South Central Africa*. An account of a journey across the continent from Benguella on the West, ... to the Mouth of Zambesi on the East Coast. London 1893)

South Africa. Perennial or sometimes annual, tufted, small, branched, erect, leaf blades expanded or rolled, glandular, awns and leaf blades prickly, dense basal leaf cover, ligule a fringe of short hairs, leaf sheaths rounded and hairy, panicle rather loosely contracted, nonciliate awns, glumes sparsely pilose, lemma hairy on the back, awns of fertile lemma scabrid or scaberulous, third lemma vestigial, low grazing value, growing in sandy riverbanks, dry areas, along roadsides, in sand, see *Novarum et Minus Cognitarum Stirpium Pugillus* 3: 41. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 255. 1833, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 230. 1899 and *Botanischer Jahresbericht* 27: 458. 1901, *Annali di Botanica* 10(3): 411. 1912, *Flore de l'Afrique du Nord*: 2: 196. 1953.

in South Africa: klipgras, rauhgranniges neunbortsengras

E. scaber Lehm. var. *scaber*

South Africa. Perennial, tufted, open panicle branched, growing among rocks.

in South Africa: klipgras, rauhgranniges neunbortsengras

E. schimperianus (Hochst. ex A. Rich.) Renvoize (*Calothesia elegans* Wight & Arn. ex Steud.; *Enneapogon dipsaceus* G.C. Wall. ex Hook.f.; *Enneapogon elegans* (Nees ex Steud.) Stapf; *Enneapogon elegans* (Steud.) Stapf; *Enneapogon glumosus* (Hochst.) Maire & Weiller; *Enneapogon persicus* Boiss.; *Enneapogon schimperanus* (Hochst. ex A. Rich.) Renvoize; *Pappophorum elegans* Nees ex Steud.; *Pappophorum glumosum* Hochst.; *Pappophorum molle* sensu Schwartz p.p.; *Pappophorum schimperanum* Hochst. ex A. Rich.; *Pappophorum schimperianum* Hochst. ex A. Rich.)

Yemen. Perennial, tufted, basal leaf sheaths not fibrous, leaves usually involute and pubescent, panicle spike-like, lowest lemma with ciliate awns, growing in stony bushland,

open rocky plains, see *Diagnoses plantarum orientalium novarum* 1(5): 71. 1844, *Tentamen Florae Abyssinicae* ... 2: 403. 1850, *Synopsis Plantarum Glumacearum* 1: 199. 1854, *Flora* 38: 203. 1855, *The Flora of British India* 7(22): 301. 1897 [1896] and *Bulletin of Miscellaneous Information Kew* 1907: 224. 1907, *Flore de l'Afrique du Nord*: 2: 193. 1953, *Kew Bulletin* 22: 400. 1968.

E. scoparius Stapf (*Enneapogon filifolius* (Pilg.) Stapf ex Garabedian; *Enneapogon filifolius* (Pilg.) Pilg.; *Pappophorum filifolium* Pilg.; *Pappophorum scoparium* (Stapf) Chiov.; *Pappophorum setifolium* Hochst.)

Southern tropical Africa, Yemen. Perennial, wiry, slender, erect, thin, branched, swollen base subbulbous to knotty, tufted to densely tufted, profusely branched, rhizomatous, leaf sheath very hairy and rounded, ligule a ring of hairs, leaf blades filiform and hairy, tough wiry leaves, densely contracted spike-like panicle unbranched, lemmas with 9 hairy to ciliate awns, third lemma reduced, moderately to very palatable, low grazing value, weed species used for broom-making, growing on open grassland, dry situations, under trees in disturbed veld, arid sweet bushveld, on sand, dry grasslands, on well-drained stony hills, limestone, on stony slopes, among rocks, stony hills, shallow soils, closely related to *Enneapogon cenchroides*, see *Flora Capensis* 7: 656. 1900, *Annuario del Reale Istituto Botanico di Roma* 8(3): 358. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 419. 1914, *Annals of the South African Museum* 16: 424. 1925, *Willdenowia* 1: 210. 1954, *Kew Bulletin* 22: 397. 1968.

in English: wiry nine-awned grass, bottlebrush grass

in Somalia: caws mullaax

in southern Africa: borseltjiegras, dasgras, kalkgras, hard-enegenaaldgras, besen neunborstengras; joang-ba-mafika (Sotho)

E. spathaceus Gooss.

South Africa. Perennial, rhizomatous, tufted, hairy cataphylls, woody rootstock, more or less glandular, open panicle branched, lemma awns hairy, usually in sandveld, see *Bulletin of Miscellaneous Information Kew* 1934: 200. 1934.

E. truncatus Kakudidi (*Enneapogon flavescens* auct. non (Lindl.) N.T. Burb.)

Queensland, New South Wales. Perennial, tufted, glabrous, culms usually branched and not disarticulating, leaves glabrous or pubescent, inflorescence spicate and exserted, 1 fertile floret, glumes entire and acute, body of lowest lemma strongly ribbed, awns plumose, grows in open woodland or grassland, see *Australian Systematic Botany* 1(4): 350. 1988.

E. virens (Lindl.) Kakudidi (*Pappophorum virens* Lindley)

Queensland, New South Wales. Perennial, tufted, culms usually branched and not disarticulating, inflorescence spi-

cate, 1 fertile floret, glumes entire and acuminate, basal lemma hairy on the back, awns plumose, grows in open woodland, see *Journal of an Expedition into the Interior of Tropical Australia* 360. 1848.

Enodium Pers. ex Gaudin = *Molinia*
Schrank

From the Greek *enodios*, *enodion* “on the way, blisters, nets, seen on the way.”

Arundinoideae, Arundineae, type *Enodium caeruleum* (L.) Gaudin, see *Baiersche Flora* 1: 100, 334. 1789, *Agrostologia Helvetica, definitionem ...* 1: 145. 1811, *Handbok i Skandnaviens Flora, Fjerde Upplagan* 32. 1843 and *U.S. Dept. Agric. Bull.* 772: 50. 1920, *Contributions from the United States National Herbarium* 46: 230, 296. 2003.

Enteropogon Nees = *Macrostachya* A. Rich., *Sauge-tia* Hitchc. & Chase

From the Greek *enteron* “intestine” and *pogon* “beard,” probably referring to the bearded callus or to the beards in the axils of the spikes; see John Lindley (1799-1865), *A Natural System of Botany*. Second edition, with numerous additions and corrections, and a complete list of genera, with their synonyms. 448. London 1836.

About 9-17 species, tropics, Africa, Asia, Australia, Pacific. Chloridoideae, Cynodonteae, Chloridineae, annual or perennial, herbaceous, usually branched, caespitose, glabrous nodes, auricles absent, ligule a short ciliate membranous rim or a minutely fringed membrane, leaves flat and glabrous, plants bisexual, hidden cleistogenes present or absent, inflorescence a single terminal slender drooping spike, digitate spike or spikes arranged digitately and spreading at maturity, almost sessile spikelets compressed dorsiventrally and disarticulating above the glumes and between the florets, spikelets with 1 hermaphrodite dorsally flattened awned floret and 1 awned rudiment, only the lowest floret fertile, second floret male or sterile, spikelets solitary and secund, 2 glumes unequal and keeled, upper glume acute to shortly awned, lower lemma rounded on the back and long-awned, reduced upper lemma awned or awnless, callus bearded, palea present, 2 free and fleshy lodicules, stamens 3, anthers cream, ovary glabrous, 2 stigmas, small ellipsoid fruit longitudinally grooved, leaves harsh when old, shade species, drought resistant, adapted to medium to dry areas, growing in arid and semiarid places, open habitats, tropical savannah on sand or clay, rainforest, moist conditions, very closely related to and often confused with *Chloris* Sw., type *Enteropogon melicoides* (Koenig ex Willd.) Nees, see *Essai d'une Nouvelle Agrostographie* 41, 71, 74, 84, 164, 167, 176. 1812, *A Natural System of Botany* second edition 381, 448, 485. 1836, *Tentamen Fl. Abyss.* 2:

408. 1850 and *Contrib. U.S. Nat. Herbarium* 18: 378. 1917, *Kew Bulletin* 21: 105-110. 1967, D.E. Anderson, “Taxonomy of the genus *Chloris* (Gramineae).” *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Taxon* 33: 126-134. 1984, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Telopea* 3: 217-221. 1988, *Flora Mesoamericana* 6: 289. 1994, *Austral. Ecology* 25(2): 140-149. Apr 2000, *Flora of Ecuador* 68: 103-105. 2001, *Contributions from the United States National Herbarium* 41: 78-79, 139, 193. 2001, *Ecological Management and Restoration* 2(3): 179-188. Dec 2001, Ian Cole, Jean Metcalfe and Terry Koen, “The effect of removing seed from florets on germination and field establishment in a Wallaby Grass (*Austrodanthonia fulva*) accession.” *Ecological Management and Restoration* 5(2): 134-136. Aug 2004, *Ecological Management and Restoration* 6(1): 16-27. Apr 2005, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, “Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications.” *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

E. acicularis (Lindley) Lazarides (*Chloris acicularis* Lindley; *Chloris acicularis* var. *queenlandiae* Domin; *Chloris moorei* F. Muell.)

South Australia, Western Australia, Queensland, Victoria, New South Wales, Northern Territory. Perennial, tufted, glabrous to sparsely pilose, erect and tough, robust, forming tussocks, very sparse root system, sheath glabrous, ligule membranous, leaves linear and acuminate, many spikes radiating from the end of the culm, spikes rigid and spreading horizontally, purplish spikelets, glumes persistent and lanceolate, lemmas awned, lower lemma acute and notched, indicator of good to fair range condition, useful for erosion control, attractive and ornamental when in flower, salinity resistant, can tolerate or susceptible to heavy grazing and flooding, food for butterflies, forage, native pasture species, moderately palatable when dry, high palatable and grazed when young, widespread, found in fertile sandy and alluvial soils, in dry regions, arid and semiarid places, on alluvial fans, alluvial plains at the base of ranges and hills, channels, under trees in open woodland, on margins of claypans, moist conditions, on calcareous soils under gidgee, in shallow soils, closely related to *Enteropogon ramosus*, see *Linnaea* 25(4): 444. 1853 and *Bibliotheca Botanica* 85: 368. 1915, *Australian Journal of Botany, Supplementary Series* 5: 31. 1972.

in English: umbrella grass, branching umbrella grass, windmill grass, spider grass, curly windmill grass

E. barbatus C.E. Hubb.

Somalia, Ethiopia, Kenya. Perennial, tufted, erect, forming dense tussocks, leaf blades narrowly linear or inrolled, sheaths keeled and loosely hairy, spike solitary silky hairy,

upper glume 2-dentate and mucronate, fertile lemma hairy and 2-dentate, callus of fertile lemma bearded or long-silky, overgrazed areas, dry sandy soils, *Acacia* bushland, degraded woodland, see *Bulletin of Miscellaneous Information Kew* 1941: 196. 1941.

E. brandegei (Vasey) W.D. Clayton (*Chloris brandegei* (Vasey) Swallen; *Diplachne brandegei* Vasey; *Gouinia brandegei* (Vasey) Hitchc.; *Leptochloa brandegei* (Vasey) Hitchc.) (after the California botanist Townsend (Townsend) Stith Brandegee, 1843-1925, plant collector, civil engineer, topographer, botanical explorer (Southwest U.S. and Mexico) and collector, founder of *Zoe*, author of "A collection of plants from Baja California." *Proc. Calif. Acad. Sci.* ser. ii. 2: 117-225. 1889, husband of Mary Katherine Layne Currant Brandegee (1844-1920); see J.H. Barnhart, *Biographical notes upon botanists*. 1: 240. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 50. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ira Loren Wiggins (1899-1987), *Flora of Baja California*. 42-43. Stanford, California 1980; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Gordon Douglas Rowley, *A History of Succulent Plants*. Mill Valley, California 1997; M.E. Jones, "Katherine Brandegee." in *Desert Plant Life*. 4: 41, 51, 65, 70. 1932)

North America, Mexico. See *Genera Plantarum* 3: 1178. 1883, *Proceedings of the California Academy of Sciences, Series 2*, 2: 213. 1889 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 33: 21. 1903, *American Journal of Botany* 22: 41. 1935, *Kew Bulletin* 37: 419. 1982.

E. chlorideus (J. Presl) W.D. Clayton (*Chloris chloridea* (J. Presl) Hitchc.; *Chloris clandestina* Scribn. & Merr.; *Chloris longifolia* (E. Fourn.) Vasey, nom. illeg., non *Chloris longifolia* Steud.; *Dinebra chloridea* J. Presl; *Eutriana chloridea* (J. Presl) Kunth; *Gymnopogon longifolius* E. Fourn.; *Gymnopogon virletii* E. Fourn.)

North and South America, Venezuela, Mexico, U.S., Texas. Perennial, erect, simple, caespitose, rhizomatous, hidden cleistogenes, rhizanthogenes on underground rhizomes, nodes and internodes glabrous, ligule ciliate, good forage, see *Fundamenta Agrostographiae* 161. 1820, *Reliquiae Haenkeanae* 1(4-5): 291. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 280. 1833, *Synopsis Plantarum Glumacearum* 1: 205. 1854, *Mexicanas Plantas* 2: 144. 1886 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 25. 1901, *Proceedings of the Biological Society of Washington* 41: 162. 1928, *Kew Bulletin* 37: 419. 1982.

in English: bury-seed umbrella grass, buryseed chloris

in Mexico: verdillo cacahuatoide

E. dolichostachyus (Lag.) Keng ex Lazarides (*Chloris digitata* (Roxb.) Steud.; *Chloris dolichostachya* Lag.; *Chloris incompleta* Roth; *Chloris incompleta* Roth ex Roem. & Schult.; *Chloris panicea* Willd.; *Chloris radiata* Heyne ex Roth, nom. illeg., non *Chloris radiata* (L.) Sw.; *Chloris roxburghii* Edgew.; *Chloris tetrameris* Trin.; *Enteropogon dolichostachyus* (Lag.) Keng; *Lophacme incompleta* (Roth) Chiov.; *Melica digitata* Roxb.)

China, India, Sri Lanka, Southeast Asia, Thailand, Afghanistan, Australia. Perennial, terete or compressed, tufted, robust, tussock-forming, ascending or scrambling, erect or procumbent, branched, wiry, cylindrical, smooth, sometimes rooting at the lower nodes, external ligule absent, leaf sheaths cylindrical, leaf blades tapering to a fine point, inflorescence a terminal whorl of spikes, long naked peduncle, spikelets secund and 2-awned, 2 florets, 1 floret perfect and 1 floret neuter, glumes membranous and acuminate, palea scabrid, fodder grass, eaten by cattle before flowering, growing on rocky slopes, tropical forest, damp places or shady sites, hedges, thickets, plantations, dry zones, among bushes, along roadsides, similar to *Enteropogon acicularis* and *Enteropogon minutus*, see *Species Plantarum. Editio quarta* 4: 923. 1806, *Encyclopédie Méthodique. Botanique ... Supplément 2*: 236. 1811, *Genera et species plantarum* 5. 1816, *Systema Vegetabilium* 2: 607. 1817, *Flora Indica; or Descriptions ...* 1: 328. 1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 64. 1821, *Novae Plantarum Species* 61. 1821, *Gram. Unifl. Sesquifl.* 235. 1824, *Journal of the Asiatic Society of Bengal* 21: 183. 1851, *Synopsis Plantarum Glumacearum* 1: 207. 1854, *Flora Capensis* 7(2): 316. 1898 and *Handb. Fl. Ceylon* 5: 275. 1900, *Annuario del Reale Istituto Botanico di Roma* 8: 350. 1908, *Grasses of Ceylon* 88. 1956, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 197. 1957, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 466. 1960, *Australian Journal of Botany, Supplementary Series* 5: 31. 1972.

in India: bamna, bansi, hika gadi, kanthari gadi, maituwa, mathaniya, melamalai hullu, sainder, tekhadia

E. macrostachyus (Hochst. ex A. Rich.) Munro ex Benth. (*Chloris macrostachya* Hochst. ex A. Rich.; *Chloris simplex* Schumach.; *Enteropogon macrostachyus* K. Schum. ex Engl.; *Enteropogon macrostachyus* (A. Rich.) Benth.; *Enteropogon simplex* (Schumach.) A. Chev.; *Macrostachya abyssinica* Hochst.; *Megastachya abyssinica* Steud.; *Megastachya abyssinica* Hochstätter ex Steud.)

Tropical Africa, Namibia, tropical Arabia. Perennial bunchgrass or annual, erect, densely tufted, leafy, termitophile, basal sheaths glabrous rounded or keeled, ligule a ciliate rim, leaves finely pointed, spikes or racemes solitary, spikelets glabrous, glumes unequal, upper glume short-awned, lemmas awned, lowest lemma scabrid, good seeder, good drought tolerance, thatching grass, useful for erosion

control, palatable, good grazing, growing in semiarid climates, *Acacia* bushland, open bushland, grassland, on saline sites, along water courses, canal banks, disturbed places, in shallow rocky clay, on alluvial silts, floodplains, rocky soils, savannah, brown clay soil, light shade, semishady soil, burned and cleared areas, red sandy soil, under trees, loose sandy loams and loams, in moist loamy sand, flat terrain, along roadsides, see *Beskrivelse af Guineiske planter* 54. 1827, *Tentamen Florae Abyssinicae ...* 2: 408. 1850, *Synopsis Plantarum Glumacearum* 1: 203. 1854, *Journal of the Linnean Society, Botany* 19: 101. 1881, *Abhandlungen der Königlich-Akademie der Wissenschaften in Berlin* 31. 1894 and *Revue de Botanique Appliquée et d'Agriculture Tropicale* 14(150): 125. 1934.

in English: bush rye, mopane grass, needle grass

E. minutus Lazarides

Australia, Queensland. Tussocky, robust, wiry, branched, flat glaucous leaf blades, external ligule a minute ciliate membrane, inflorescences digitate, flexible spikes, filiform awn, in sandy soils, alluvial soils, water courses, lagoons, similar to *Enteropogon acicularis* and *Enteropogon ramosus*, see *Australian Journal of Botany, Supplementary Series* 5: 28. 1972, *Flora of Australia* vol. 43, Poaceae 1: 328. 2002.

E. mollis (Nees) Clayton (*Chloris angustiflora* F. Aresch.; *Chloris anisopoda* Scribn. ex B.L. Rob.; *Chloris leptantha* Hitchc. ex Urb.; *Chloris luetzelburgii* Hitchc.; *Chloris mollis* (Nees) Swallen; *Chloris rupestris* (Ridl.) Hitchc.; *Gymnopogon mollis* Nees; *Gymnopogon rupestre* Ridl., also spelled *rupestris*) (after the German botanist Philipp von Luetzelburg, 1880-1948, explorer, plant collector in north-eastern Brazil and Amazonia, from 1928 to 1929 companion of Rondon, among his writings are *Mappas botanicos do Nordeste do Brasil* organizados por Philipp von Luetzelburg. Rio de Janeiro 1925, (his thesis) in *Flora* 100: 145-212. 1910 and *Estudo botânico do Nordeste*. Rio de Janeiro 1925-1926; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 410. 1965; Stafleu and Cowan, *Taxonomic literature*. 3: 190-191. Utrecht 1981)

West Indies, Colombia, Brazil, Venezuela, Peru, Ecuador. Annual, densely caespitose, erect, simple, wiry, nodes and internodes glabrous, sheaths glabrous or hispid, leaves pubescent to pilose, ligule ciliate, leaf blades long-attenuate, single or clustered racemes, spikelets imbricate, awned, glumes subequal, lemma lanceolate, callus bearded, 2 stamens, plants cleistogamous, dry steppes, coastal lowlands, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 427. 1829, Nils Johann Andersson (Anderson), 1821-1880, *En Verldsomsegling Skildrad I Bref*. [First edition, the first account of the first Swedish circumnavigation in the *Eugenie*, 1851-1852] Stockholm 1854, *Journal of the Linnean Society, Botany* 27: 73. 1890 and *Proceedings of the American Academy of Arts and Sciences* 38: 118. 1902,

F.W.C. Areschoug (1830-1908), *Plantae sub itinere navis bellicae Eugeniae anno 1852 a N. J. Andersson circa Guayaquil collectae* 118. 1910, *Symbolae Antillarum* 7: 166. 1912, *Proceedings of the Biological Society of Washington* 36: 197. 1923, *Manual of the Grasses of the West Indies* 126. 1936, *North American Flora* 17: 596. 1939, *Kew Bulletin* 37: 419. 1982.

E. monostachyos (Vahl) K. Schum. (also spelled ***monostachyus***) (*Chloris monostachya* (Vahl) Poir., nom. illeg., non *Chloris monostachya* Michx.; *Cynosurus monostachyos* Vahl; *Eleusine monostachys* (Vahl) Spreng.; *Enteropogon badamicum* Bhide; *Enteropogon melicoides* (J. König ex Rottler) Nees; *Enteropogon melicoides* (Rottler) Nees; *Enteropogon melicoides* (J. König ex Willd.) Nees; *Enteropogon monostachyos* (Vahl) K. Schum. ex Engler; *Ischaemum melicoides* J. König ex Rottler; *Leptochloa monostachyos* (Vahl) Roem. & Schult.; *Leptochloa monostachya* (Vahl) P. Beauv. ex Roem. & Schult.; *Rabdochloa monostachya* (Vahl) P. Beauv.; *Rottboellia pilosa* Roth ex Roem. & Schult., nom. illeg., non *Rottboellia pilosa* Roth ex Roem. & Schult.; *Rottboellia triacantha* Roth)

Tropical Africa, Asia, Mozambique, India, Sri Lanka, Burma. Perennial, tufted, usually ascending and rooting at the lower nodes, tussock-forming, compact at the base, leaf sheaths keeled and flattened, racemes solitary, spikelets 3-awned, 3-flowered spikelet, 3 florets, 2 florets perfect and 1 neuter, lowest lemma scabrous, third floret reduced to a lemma, nutritive fodder grass, useful for erosion control, growing in dry and arid zones, savannah, scrub, along roadsides, see *Species Plantarum* 1: 72-73. 1753, *De Fructibus et Seminibus Plantarum...* 1: 7. 1788, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 4: 211. 1803, *Species Plantarum. Editio quarta* 4(2): 941. 1806, *Encyclopédie Méthodique, Botanique, Suppl.* 2: 238. 1811, *Systema Vegetabilium* 2: 581, 785. 1817, *Novae Plantarum Species* 43. 1821, *Systema Vegetabilium, editio decima sexta* 1: 349. 1825, *Abhandlungen der Preussischen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 17. 1894, *Die Pflanzenwelt Ost-Afrikas* C: 110. 1895 and *Grasses of Ceylon* 93. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 472. 1960.

in English: needle grass

in India: kannai pullu

E. monostachyos (Vahl) K. Schum. subsp. ***africanus*** Clayton

Southern tropical Africa. Perennial, tufted, leaf sheaths keeled and flattened, 2-flowered spikelets, lemma of lower floret awned, shade species, growing in sandy soils near rivers, see *Kew Bulletin* 21: 109. 1967.

E. paucispiceus (Lazarides) B.K. Simon (*Enteropogon unispiceus* var. *paucispiceus* Lazarides)

Australia, southeast Queensland. Slender, tufted, compact, external ligule absent or a membrane ciliate, sparse inflorescences, smooth floret, in heavy soils, slopes, sandstone, close to *Enteropogon unispiceus*, see *Australian Journal of Botany, Supplementary Series 5*: 27, f. 10. 1972, *Austrobaileya* 2(1): 1. 1984.

E. prieurii (Kunth) W.D. Clayton (*Chloris cryptostachya* Steud. ex J.A. Schmidt; *Chloris multiradiata* Hochst.; *Chloris prieurii* Kunth; *Chloris punctulata* Hochst. ex Steud.; *Chloris subtriflora* Steud.) (named for Leprieur)

Tropical Africa, Arabia. Annual, tufted, erect or geniculate ascending, leaf blades flat, leaf sheaths keeled, digitate inflorescence of ascending racemes, spikelets long-awned, upper glume mucronate, hairy lemmas, dorsally flattened lemma and grain, good forage, growing in deep white sand, dry sandy soils, open bush, poor soils, disturbed places, see *Révision des Graminées* 1: 89. 1829, *Beiträge zur Flora der Cap Verdischen Inseln* 148. 1852, *Synopsis Plantarum Glumacearum* 1: 205, 208. 1854 and *Kew Bulletin* 37: 419. 1982.

in English: Prieur's umbrella grass

in Arabic: kraa l'grab

in Mali: pedu kéé, pedu kúú

in Mauritania: kraa l'grab

in Niger: buta'n kurégé, fulan kosey, garago, ikardan'allagh, ikardan n'allagh, karidinalak

in Nigeria: kafar gauraka

in Senegal: genudar, genumbam, las o fam, las a koy, laspis

in Upper Volta: nanarde, nanargal, ngangarde

E. ramosus B.K. Simon (*Chloris acicularis* auct. non Lindley; *Chloris acicularis* Lindl. var. *queenslandiae* Domin)

Australia, Queensland. Perennial, glabrous, tufted, tussocky, branched from the lower nodes, sheath glabrous, external ligule absent, leaves often twisted and more or less smooth, spikes digitate and spreading, glumes persistent and linear, lower lemma acuminate and minutely scabrous, third lemma minute or absent, coarse and unpalatable when old, moderately palatable when young, food for butterflies, found mainly in drainage lines and river floodplains, alluvial plains, arid and semiarid regions, in small depressions, savannah woodland, see *Journal of an Expedition into the Interior of Tropical Australia* 33. 1848 and *Bibliotheca Botanica* 85: 368. 1915, *Austrobaileya* 2(1): 1. 1984.

in English: curly windmill grass, tussock umbrella grass, windmill grass, creek windmill grass

E. rupestris (J.A. Schmidt) A. Chev. (*Ctenium rupestre* J.A. Schmidt; *Enteropogon ruspolianum* Chiov.; *Enteropogon somalensis* Chiov.) (Italian (b. Tiganesti, Romania) explorer Eugenio Ruspoli, 1866-1893 (Burgi, Somalia, killed by an elephant), ethnologist, botanical and zoological collector, naturalist, son of Emanuele Ruspoli, 1837-1899)

Central Africa, Mauritania, Capo Verde Islands, Namibia, Botswana, Sudan. Perennial, branched to much-branched, bushy or shrubby, wiry, leafy, tufted, pale cataphylls, short woody rhizome, leaf blades flat, leaf sheaths rounded and glabrous, rat-tail like inflorescence with inconspicuously awned spikes, spike solitary, spikelets 2-flowered occasionally a third floret present, lemma of lower floret awned, second lemma sterile, not drought resistant, low grazing value, culms used for roofing and thatching, growing among rocks, open *Acacia* bushland, dry habitats, deep red sand, tree grassland, black clay, silty soils, seasonally flooded grassy plains, similar to *Enneapogon macrostachyus*, see *Beiträge zur Flora der Cap Verdischen Inseln* 148. 1852, *Annuario del Reale Istituto Botanico di Roma* 7: 72, t. 3, f. 3. 1897 and *Revue de Botanique Appliquée et d'Agriculture Tropicale* 15: 1048. 1935.

in Niger: gubuwarem, niéré-dhu

in Somalia: gorrer, baldole, gauwadiri, gauwadere, gowdere

E. sechellensis (Baker) Durand & Schinz (*Ctenium sechellense* Baker; *Ctenium sechellarum* Baker; *Enteropogon leptophyllus* Benth.; *Enteropogon sechellarum* (Baker) Benth.)

Eastern Africa, Somalia, Madagascar, Mozambique, the Seychelles. Perennial, wiry, tufted, sheaths flattened and keeled, racemes solitary, on stabilized dunes, red sand, see *Flora of Mauritius and the Seychelles ...* 452. 1877, *Journal of the Linnean Society, Botany* 19: 101. 1881, *Conspectus Florae Africae* 5: 859. 1895.

E. somalense Chiov. (also spelled *somalensis*)

Africa, Kenya. Perennial, tufted, spreading habit, growing in seasonally waterlogged sites, heavy soils, see *Annuario del Reale Istituto Botanico di Roma* 6: 170, t. 16. 1896.

E. unispiceus (F. Muell.) Clayton (*Chloris unispicea* F. Muell.)

Australia, eastern Queensland, Pacific, Taiwan. Slender, tufted, compact, branched, leaves basal, external ligule absent, inflorescence a single spike or digitate, lower glume muticous or aristulate, basal lemma narrowly lanceolate acuminate, similar to *Enteropogon paucispiceus*, see *Fragmenta Phytographiae Australiae* 7: 118. 1870 and *Transactions of the Linnean Society of London, Botany*, ser. 2, 6: 305. 1903, *Kew Bulletin* 21: 108. 1967.

in English: windmill grass

Entolasia Stapf

From the Greek *entos* "within, inside" and *lasios* "shaggy, hairy, woolly," referring to the densely silky hairy lemmas.

About 5 species, tropical Africa, Australia. Panicoideae, Panicoideae, Paniceae, perennial, erect and branched, more or less scandent, rambling, wiry, bushy or shrubby, sometimes herbaceous, straggly or loosely tufted, shortly or long

rhizomatous, hollow internodes, leaf blades linear to lanceolate, auricles absent, ligule fringed, sheath glabrous or hairy, leaves disarticulating or persistent, bisexual plants, inflorescence a panicle or spike, primary axis with short racemes, florets awnless, spikelets pedicellate usually solitary, florets 2, lower floret sterile and the upper bisexual, 2 glumes unequal, lower glume 0- to 3-nerved short and triangular, upper glume 3- to 7-nerved, upper lemmas densely silky hairy, palea hairy, 2 fleshy and glabrous lodicules, stamens 3, ovary glabrous without the apical appendage, 2 stigmas, shade species, dry woodland, marshy places, rain-forest, damp grassland and dry forest, open habitats, groundcovers, type *Entolasia olivacea* Stapf, see *Flora of Tropical Africa* 9: 739. 1920, Liliana M. Giussani, J. Hugo Cota-Sánchez, Fernando O. Zuloaga and Elizabeth A. Kellogg, "A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis." *Am. J. Bot.* 88: 1993-2012. 2001, *Austral. Ecology* 27(2): 121-131. Apr 2002, *Ecological Management and Restoration* 3(1): 15-27. Apr 2002, *Ecological Management and Restoration* 3(3): 188-199. Dec 2002, *Restoration Ecology* 11(4): 489-503, Dec 2003, *Austral. Ecology* 30(3): 250-260, May 2005.

Species

E. imbricata Stapf

Tropical Africa. Perennial, simple, rhizomatous, tufted, glabrous, stemmy, soft, erect, nodes usually bearded, linear leaves, solitary inflorescence racemose, racemes appressed to the axis, green spikelets, fodder grass, very palatable, useful for erosion control, with the potential to grow in waterlogged areas, found in swamps, wetlands, in sandy and swampy places by rivers and in miombo, floodplains, see *Flora of Tropical Africa* 9: 739. 1920, *Flora of Tropical East Africa* 451-898. 1982.

in English: Bungoma grass

E. marginata (R. Br.) Hughes (*Panicum marginatum* R. Br.)

Australia, Victoria, Queensland, New South Wales. Perennial, variable, shortly rhizomatous, straggling or shrubby, scrambling, slender and wiry, branched near base, trailing culms often rooting at lower nodes, sheath glabrous or hairy, ligule hairy, more or less erect panicle, spikelets solitary, lower lemma sterile, naturalized in the Hawaiian Islands, groundcover, damp areas on sandy soils, forest margins, pasture, see *Prodromus Florae Novae Hollandiae* 1: 190. 1810 and *Bulletin of Miscellaneous Information Kew* 1923: 331. 1923.

in English: bordered panic, bordered panic grass, Australian panic grass, margined panic

E. olivacea Stapf (*Panicum endolasion* Mez ex Peter)

Tropical Africa. Perennial, rhizomatous, erect, geniculate, branched, leaves pointed, spikelets green, shade species,

usually in moist places, low ground, flooded depressions, see *Flora of Tropical Africa* 9: 740. 1920, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 173 & Anhang, 24, t. 19, f. 1. 1930.

E. stricta (R. Br.) Hughes (*Panicum strictum* R. Br.; *Panicum strictum* Bosc ex Roem. & Schult., nom. illeg., non *Panicum strictum* R. Br.)

Queensland, New South Wales. Perennial, rhizomatous, straggling or shrubby, slender and wiry, forming loose and straggling tufts, new growth bright glossy green, culms erect or straggling, sheath glabrous or hairy, panicle narrow and terminal, green or purplish solitary spikelets, lower lemma sterile, ornamental, provides food for seed eating birds, common in woodland on sandstone usually amongst rocks, shallow sandy or stony soils, dry areas on sandy soils, see *Prodromus Florae Novae Hollandiae* 190. 1810, *Systema Vegetabilium* 2: 447. 1817, *Flora Australiensis: A Description ...* 7: 486. 1878 and *Bulletin of Miscellaneous Information Kew* 1923(9): 331. 1923.

in English: wiry panic

E. whiteana C.E. Hubb.

Queensland, New South Wales. Perennial, rhizomatous, tussocky, straggling or shrubby, slender and wiry, culms branched at the nodes, sheath glabrous or hairy, spikelets solitary, lower lemma sterile, groundcover, growing in damp areas on sandy soils, on dry barren rocky slopes, see *Hooker's Icones Plantarum* 34: t. 3338. 1937.

Entoplocamia Stapf

Probably from the Greek *entos* "within, inside" and *plokamos* "lock of hair," possibly referring to the shape of the spikelets.

One species, southwest and southern Africa, Namibia. Chloridoideae, annual, unarmed, herbaceous, robust, unbranched, glabrous, auricles absent, ligule a short fringe of hairs, leaves mostly basal, plants bisexual, inflorescence spicate or racemose, spikelets solitary or clustered, lower 2 florets barren, 2 glumes acuminate 3- to 5-nerved, lemmas ciliate on margins, spiky awns, palea 2-nerved 2-keeled, lodicules absent, 3 stamens, ovary glabrous, stigmas 2, growing in depressions where moisture collects, sandy rocky hills, brackish soil, desert, open habitats, savannah, on heavy stony soils, stony slopes, type *Entoplocamia aristulata* (Hack. & Rendle) Stapf, see *Flora Capensis* 7: 318. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 228. 1899 and *Bolletino della Società Botanica Italiana* 45. 1924.

Species

E. aristulata (Hack. & Rendle) Stapf (*Tetrachne aristulata* Hack. & Rendle)

South Africa. Annual, stout, leaf blades prickly, leaf sheaths expanded and glabrous, inflorescence a spike or spike-like racemes, spiny spikelets sessile or pedicelled, lemma papery, short awn deflexed, palatable, dry river beds, see *Journal of Botany, British and Foreign* 29: 72. 1891 and *Flora Capensis* 7: 711. 1900.

in South Africa: veldskoengras, knoppiesgras, knopfgras

Ephobopogon Steud. = *Microstegium* Nees

From the Greek *ephebeia* “adolescence, youth,” *ephebos* “boy, young girl, one arrived at adolescence” and *pogon* “beard.”

Panicoideae, Andropogoneae, Saccharinae, see *A Natural System of Botany* 2nd edn., 447. 1836, *Nomenclator Botanicus. Editio secunda* 1: 556. 1840 and *Contributions from the United States National Herbarium* 46: 230, 292. 2003.

Epicampes J. Presl = *Muhlenbergia* Schreb.

From the Greek *epikampes* “curved, curling, convex,” perhaps referring to the rhizomes.

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Epicampes stricta* J. Presl, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Essai d'une Nouvelle Agrostographie* 28, t. 7, f. 10, t. 3, f. 20. 1812, *Systema Vegetabilium, editio decima sexta* 1: 262. 1825, K.B. Presl, *Reliquiae Haenkeanae* 1(4-5): 235, t. 39. 1830, *Nomenclator Botanicus. Editio secunda* 1: 41. 1840, *Gramineae* 12-13. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 144-145. 1843, *Die Natürlichen Pflanzenfamilien* 2(2): 97. 1887, *Revisio Generum Plantarum* 3(3): 357. 1898 and *Contributions to Western Botany* 14: 7. 1912, *Ill. Fl. N. U.S.* (edition 2) 1: 184. 1913, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 69-70. 1956, *Contributions from the United States National Herbarium* 34(4): 112. 1967, *Flora Mesoamericana* 6: 276-286. 1994, *American Journal of Botany* 81: 622-629. 1994, *Madroño* 42(4): 427-449. 1995, *Sida* 17: 349-365. 1996, *Brittonia* 50(1): 23-50. 1998, P.M. Peterson, “Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostideae).” *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 79-81, 143-173. 2001.

Eragrostiella Bor

The diminutive of the related genus *Eragrostis* Wolf; see Norman Loftus Bor (1893-1972), *The Indian Forester*. 66: 269. 1940 and *Flora of Assam*. 5: 105. 1940.

Some 5 species, India, Myanmar (Burma), Sri Lanka, northern Australia, eastern Africa. Chloridoideae, Eragrostideae, perennial, compactly and densely caespitose, herbaceous, internodes hollow, basal sheaths persistent and fibrous when old, ligule a short ciliate membrane, leaf blades usually narrow and filiform, plants bisexual, inflorescence linear and spike-like or a single raceme, spikes solitary and slender, spikelets solitary, bisexual and sessile spikelets, perfect florets, spikelets rachilla and callus hairy, 2 glumes equal and keeled, lower glume carinate 1-nerved, upper glume 1- to 3-nerved, lemmas keeled deciduous awnless, palea keels narrowly winged, 2 small fleshy lodicules, stamens 3, ovary glabrous, 2 stigmas plumose, dry and wet areas, dry bushland, shallow soil, grassland, open habitats, wasteland, sandy soils, rocky places, type *Eragrostiella leioptera* (Stapf) Bor, see *Genera Plantarum* 23. 1776, *Journal of the Linnean Society, Botany* 19: 117. 1881 and *Indian Forester* 66: 269. 1940, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 493-495. 1960, *Contributions from Herbarium Australiense* 22: 1-7. 1976, *Trop. Grasses SE Asia* 172-173. 1980, *Flora of Ethiopia and Eritrea* 7: 129. 1995, *New Phytologist* 156(3): 327-349. Dec 2002, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

E. bifaria (Vahl) Bor (*Catapodium bifarium* (Vahl) Link; *Catapodium coromandelianum* (J. König ex Rottler) Link; *Eragrostiella coromandelina* (J. König ex Rottler) Keng f. & L. Liou, sometimes spelled *coromandeliana*; *Eragrostis bifaria* (Vahl) Wight ex Steud., nom. illeg., non *Eragrostis bifaria* (Vahl) Wight; *Eragrostis coromandeliana* (J. König ex Rottler) Trin.; *Poa bifaria* Vahl; *Poa coromandeliana* J. König ex Rottler; *Poa coromandelina* J. König ex Rottler)

Sri Lanka, India. Perennial, slender, erect, simple, glabrous, compact, leaf blades scabrous and pilose, leaves filiform often curved, spikelets closely imbricate, glumes membranous or coriaceous, lemmas membranous and mucous, paleas acute with winged keels, a resurrection plant, fodder grass eaten by cattle, roots used for flavouring Burmese *cheroots*, dry and wet areas, savannah, sandy and rocky ground, grassland, see *Symbolae Botanicae, ...* 2: 19. 1791, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 4: 191. 1803, *Hortus Regius Botanicus Berolinensis* 2: 194. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 415. 1830, *Catalogue of Indian Plants* 105. London 1833-1837, *Synopsis Plantarum Glumacearum* 1: 264. 1854 and *Handb. Fl. Ceylon* 5: 298. 1900, *Indian Forester* 66: 270. 1940, *Fl. Assam* 5: 107. 1940, *Grasses of Ceylon* 77. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma, Ceylon, India and Pakistan* 494. 1960, *Acta Botanica Sinica* 9: 50. 1960.

in India: chiraka, chota bhankta, chota blankta, godaru hullu, gubbikal gaddi, jadi hullu, kodimara hullu, moi, nooli gaddi, nosai hullu, nose hullu, oothu hullu, punya safed, punya sufed, udu thallam, wooda tallum

E. bifaria (Vahl) Bor var. *bifaria* (*Eragrostis bifaria* var. *australiana* F.M. Bailey)

India, Burma, northeastern Australia, eastern Africa. Perennial, densely caespitose, leaves convolute and filiform, solitary spikes, narrow spikelets, see *The Queensland Flora* 6: 1908. 1902, *Contributions from Herbarium Australiense* 22: 6. 1976.

E. bifaria (Vahl) Bor var. *secunda* (Nees ex Steud.) Lazarides (*Eragrostiella secunda* (Nees ex Steud.) Bor; *Eragrostis secunda* Nees ex Steud.)

India, Sri Lanka. Perennial, grassland, see *Synopsis Plantarum Glumacearum* 1: 264. 1854 and *Handb. Fl. Ceylon* 5: 298. 1900, *Indian Forester* 66: 270. 1940, *Fl. Assam* 5: 107. 20 July 1940, *Grasses of Ceylon* 77. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma, Ceylon, India and Pakistan* 495. 1960, *Contributions from Herbarium Australiense* 22: 6. 1976.

E. bifaria (Vahl) Bor var. *walkeri* (Stapf) Lazarides (*Eragrostiella walkeri* (Stapf) Bor; *Eragrostis walkeri* Stapf)

India, Sri Lanka. Perennial, robust, flat leaves, along roadsides, see *A Handbook to the Flora of Ceylon* 5: 298. 1900, *Indian Forester* 66: 270. 1940, *Fl. Assam* 5: 107. 1940, *Grasses of Ceylon* 78. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma, Ceylon, India and Pakistan* 495. 1960, *Contributions from Herbarium Australiense* 22: 7. 1976.

E. brachyphylla (Stapf) Bor (*Eragrostis brachyphylla* Stapf; *Panicum cordifolium* Steud., nom. illeg., non *Panicum cordifolium* Desv.)

India, Sri Lanka. Perennial, robust, compact, ligule densely ciliate, leaf sheaths scabrous, leaf blades glabrous and smooth, spikelets compressed and crowded, glumes more or less equal, lemmas obtuse, palea wings ciliolate, forest, rocky places, dry areas, along roadsides, see *Synopsis Plantarum Glumacearum* 1: 85. 1854, *The Flora of British India* 7: 327. 1896 and *Indian Forester* 66: 270. 1940, *Fl. Assam* 5: 107. 1940, *Grasses of Burma, Ceylon, India and Pakistan* 494. 1960.

E. collettii (Stapf) Bor (*Eragrostis collettii* Stapf)

Myanmar. See *The Flora of British India* 7(22): 326. 1897 [1896] and *Indian Forester* 66: 270. 1940.

E. leioptera (Stapf) Bor (*Eragrostis leioptera* Stapf)

India. See *The Flora of British India* 7(22): 325. 1897 [1896] and *Indian Forester* 66: 270. 1940.

E. nardoides (Trinius) Bor (*Catapodium nepalense* Link; *Eragrostis nardoides* Trinius)

Asia, Nepal. Perennial, tufted, wiry, culms erect, leaves filiform, see *Hortus Regius Botanicus Berolinensis* 2: 194. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 415. 1830 and *Indian Forester* 66: 270. 1940, *Flora of Assam* 5: 107. 1940, *Contributions from Herbarium Australiense* 22: 1-7. 1976.

Eragrostis N.M. Wolf = *Acamptoclados* Nash, *Boriskellera* Terechov, *Boriskerella* Terechov, *Diandrochloa* De Winter, *Erochloe* Raf., *Erosion* Lunell, *Exagrostis* Steud., *Macrolepharus* Philippi, *Megastachya* P. Beauv., *Neeragrostis* Bush, *Psilantha* (K. Koch) Tzvelev, *Roshevitzia* Tzvelev, *Stiburus* Stapf, *Thellungia* Stapf, *Triphlebia* Stapf, *Vilfagrostis* Döll

From the Greek *eros* "love" and *agrostis*, *agrostidos* (*agros* "a field, country") "grass, weed, couch grass"; Latin *agrostis*, is "couch-grass, quitch-grass" (Pseudo Apuleius Barbarus); some suggested from *era* "earth"; see Nathaniel Matthaeus von Wolf, *Genera plantarum vocabulis characteristicis definita*. 23. [Danzig] 1776; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 99. Berlin & Hamburg 1989; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 328. Ansbach 1852.

About 250(-300)/350 cosmopolitan species, mostly tropical and subtropical, temperate. Chloridoideae, Eragrostideae, Eragrostidinae, annual and perennial bunchgrass, erect, usually herbaceous or sometimes shrubby or woody and persistent, delicate, wiry or canelike, slender, sometimes decumbent, usually caespitose, forming tussocks or spreading clumps, rhizomatous or stoloniferous, auricles absent, leaf blade narrow and flat, ligule a line of hairs, sheaths glandular, leaves linear and finely acuminate, plants perfect-flowered or dioecious, chasmogamous or cleistogamous, inflorescence open or contracted, a compound panicle or false spike exerted or partially included in upper sheath, rachilla fragile or tough, bisexual and compressed laterally spikelets, spikelets disarticulating at maturity or disarticulation commencing at the base of spikelet or spikelets falling entire, florets few to many, florets bisexual or the upper sterile and reduced, glumes more or less equal, glumes often early deciduous, glabrous entire lemma, 3-nerved lemmas awnless or mucronate or acute-tipped, lodicules usually present and when present 2 free and fleshy, stamens 1-3, ovary glabrous, 2 plumose stigmas, ornamental, showy and decorative branched inflorescences, used for reseeding denuded land, some species may naturalize readily, soil binder, planted to stabilize soil, weedy species, cultivated fodder, drought resistant, staple cereal, more or less

unpalatable, native pasture species, grain crop species, more or less glandular and aromatic, disturbed ground, weedy places, sandy or poor soils, poor dry soils, grasslands, rain-forest, pampas, open habitats, a large and difficult genus, a wide range of variation, type *Eragrostis minor* Host, see *Species Plantarum* 1: 67. 1753, *Genera Plantarum* 23. 1776, *Gen. Sp.* 63, 65. 1781, *Gram. Austr.* 4: 15. 1809, *Essai d'une Nouvelle Agrostographie* 74, 167. 1812, *Neogenyton* 4. 1825, *Nomenclator Botanicus. Editio secunda* 1: 622. 1840, *Florae Africae Australioris Illustrationes Monographicae* 384. 1841, *Linnaea* 21: 405. 1848, *Linnaea* 29: 96-110. 1858, *Flora Brasiliensis* 2(3): 137. 1878, *Flora Australiensis: A Description ...* 7. 1878, *Journal of the Linnean Society, Botany* 19: 117. 1881, *Flora Orientalis* 5: 599. 1883, *Fl. Cap.* 7: 318. 1898, *Hooker's Icones Plantarum* 27: t. 2612. 1899 and *Flora Capensis* 7(4): 696-697. 1900, *Flora of the Southeastern United States* 139-140, 143-144. 1903, *Transactions of the Academy of Science of St. Louis* 13(7): 178. 1903, *American Midland Naturalist* 4: 221. 1915, *Bulletin of Miscellaneous Information Kew* 1920(3): 97-98, f. 1-11. 1920, *Delectus Seminum Hortus Botanicus Reg. Kujbyshev* 13. 1938, *Bothalia* 7: 387-390. 1960, *Acta Botanica Neerlandica* 15: 147-161. 1966, *Flora of Iraq* 9. 1968, *Bot. Zhurn.* (Moscow & Leningrad) 53: 311. 1968, *Folia Primatologica* 15: 1-35. 1971, *Flora of Tropical East Africa* 177-450. 1974, *Folia Primatologica* 21: 36-60. 1974, *Fieldiana* 4: 207-226. 1980, *Journal of Human Evolution* 10: 565-583. 1981, *Flora Illustrata Catarinense* 1(Gram.): 333-364. 1981, *Kew Bulletin* 37: 133-162. 1982, *Flora of the Guianas. Series A, Phanerogams* 8: 200-221. 1990, *Taxon* 43: 383-422. 1994, *Flora Mesoamericana* 6: 263-272. 1994, *Flora of Ethiopia and Eritrea* 7: 110-129. 1995, *Austral. Syst. Bot.* 10: 77-187. 1997, *Genera Graminum* 215-217. 1999, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, "Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B." *Am. J. Bot.* 87: 96-107. 2000, *Contributions from the United States National Herbarium* 41: 9, 20, 66, 81-115, 116, 120, 139-140, 175, 191, 192, 219, 220, 230, 239. 2001, Melvin R. Duvall, Jeffrey D. Noll and Alexandra H. Minn, "Phylogenetics of Paniceae (Poaceae)." *Am. J. Bot.* 88: 1988-1992. 2001, *Blumea* 47(1): 157-204. 2002, *Flora of Australia* 44B: 346-409. 2005, *Journal of Applied Ecology* 42(1): 129-138. Feb 2005, *Journal of Biogeography* 32(2): 311-327. Feb 2005, *Global Change Biology* 11(2): 266-277. Feb 2005, *Austral. Ecology* 30(1): 24-39. Feb 2005, *Journal of Biogeography* 32(3): 453-466. Mar 2005, *Plant Pathology* 54(2): 161-168. Apr 2005, *Ecological Management and Restoration* 6(1): 16-27, 43-50. Apr 2005, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005, *Journal of Biogeography* 32(5): 895-902. May 2005, *Austral. Ecology* 30(3): 336-347. May 2005, *Restoration Ecology* 13(2): 380-389. June 2005.

Species

E. sp.

in Nigeria: saraaho debbo

in Thailand: ya khai hao, yaa krok, yaa langkaa

E. abrumpens Kabuye

Africa. Shedding of the spikelets intact, see *Kew Bulletin* 28(3): 530. 1973[1974].

E. acraea De Winter

South Africa, Zimbabwe. Perennial, stout, robust, tufted, inflorescence open or contracted, spikelets appressed on the branches, glumes rough, lemma keeled, narrow and long palea, pasture, palatable when young, thatching grass, common in disturbed areas, mountain, stony places, between rocks, see *Kirkia* 1: 100. 1961.

E. acutiflora (Kunth) Nees (*Eragrostis acutiflora* (Kunth) J. Presl, nom. illeg., non *Eragrostis acutiflora* (Kunth) Nees; *Eragrostis acutiflora* var. *humilior* J. Presl; *Eragrostis flavescens* J. Presl; *Megastachya acutiflora* (Kunth) Roem. & Schult.; *Poa acutiflora* Kunth; *Poa flavescens* (J. Presl) Kunth)

Brazil, Mexico, Peru to Bolivia, Venezuela. Perennial, glabrous, caespitose, dense, erect to geniculate, compact, spreading, foliage mostly basal, leaf sheaths ciliate at the summit, ligules ciliolate-membranous, leaf blades flat and glabrous, panicle open to contracted, spikelets acute and strongly compressed, 7- to 21-flowered, glumes narrowly lanceolate, lemma apex acuminate to attenuate or subaristate, 2 stamens, common in moist areas, savannahs, sandy gravelly roadsides, see *Nova Genera et Species Plantarum* 1: 161. 1815 [1816], *Systema Vegetabilium* 2: 588. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 501-502. 1829, *Reliquiae Haenkeanae* 1(4-5): 277-278. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 343. 1833.

E. acutiglumis Parodi

Brazil, Uruguay, Argentina. See *Notas del Museo de la Plata, Botánica* 2(Bot. 11): 7, f. 3. 1937.

E. advena (Stapf) S.M. Phillips (*Theellungia advena* Stapf)

Australia, Queensland, New South Wales. Perennial, erect, wiry, compact, tufted, cleistogamous, panicles spiciform, spikelets congested, florets 1-5, unequal glumes persistent or tardily deciduous, see *Bulletin of Miscellaneous Information Kew* 1920(3): 98, f. 1-11. 1920, *Kew Bulletin* 37(1): 159. 1982.

E. aegyptiaca (Willd.) Delile (*Eragrostis aegyptiaca* Delile; *Eragrostis aegyptiaca* Willd., nom. illeg., non *Eragrostis aegyptiaca* (Willd.) Delile; *Eragrostis aegyptiaca* (Willd.) Link, nom. illeg., non *Eragrostis aegyptiaca* (Willd.) Delile; *Poa aegyptiaca* Willd.)

Tropical Africa. Annual, tufted, browsed by cattle, in open habitats, open waste places, see *Enumeratio Plantarum*

Horti Botanici Berolinensis, ... 107. 1809, *Description de l'Égypte*, ... *Histoire Naturelle*, Tome Second 157, t. 4, f. 2. 1813, *Hortus Regius Botanicus Berolinensis* 1: 191. 1827, *Index Seminum [Berlin]* 3. 1857.

E. aegyptiaca (Willd.) Delile subsp. *humifusca* H. Scholz Sudan. See *Willdenowia* 26: 231, f. 2. 1996.

E. aethiopica Chiov.

South Africa, Uganda, Tanzania, Mozambique, Ethiopia. Annual, tufted, erect, slender, glabrous sheaths, loose or very diffuse inflorescence, elliptic panicle, linear spikelets distant and breaking from the base, glumes subequal or very unequal, lemma ovate and membranous, palea keels smooth, common in black clay soil, red sand, vleis, sandy fields, riverbeds, along lakeshore, silt, damp sand, grassland, see E. Chiovenda, *Graminacee dell'Harar e dei Somali* raccolte dall'ing. Luigi Robecchi-Bricchetti (1855-1926)... 1897 and *Ann. Ist. Bot. Roma* 8: 373. 1908, *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: gelmis

E. airoides Nees (*Agrosticula brasiliensis* (Raddi) Herter; *Aira brasiliensis* Raddi; *Airopsis millegrana* Griseb.; *Atropis millegrana* Griseb.; *Eragrostis airoides* var. *pluriflora* Döll; *Eragrostis brasiliensis* (Raddi) Nees; *Eragrostis triflora* Ekman; *Poa airoides* (Nees) Kunth, nom. illeg., non *Poa airoides* Koeler; *Poa brasiliensis* Raddi; *Sporobolus brasiliensis* (Raddi) Hack.; *Sporobolus ramosissimus* Kunth; *Vilfa ramosissima* (Kunth) Trin.)

The Caribbean to Argentina, Brazil, Paraguay. Perennial, caespitose, erect, low, leaf blades flat or inrolled, ornamental, leaves glabrous, ligules ciliolate, delicate inflorescence oblong and much-branched, diffuse panicle ovate, spikelets 1- to 3-flowered, pinkish red flushed flowers, glumes subequal lanceolate-ovate, 3 stamens, forming colonies, sandy areas, savannahs, seasonally inundated areas, disturbed places, see *Agrostografia Brasiliensis* 36, 51. 1823, *Flora Brasiliensis* 2: 497-499, 509-510. 1829, *Révision des Graminées* 2: 269, t. 46. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 360. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 58. 1840, *Abhandlungen der Königlich Gesellschaft der Wissenschaften zu Göttingen* 19: 252. 1874, *Plantae Lorentzianae* 204. 1874, *Flora Brasiliensis* 2(3): 137. 1878 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 278. 1904, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 42, t. 4, f. 1. 1912, *Revista Sudamericana de Botánica* 6: 145. 1939.

in English: darnel love grass

E. alveiformis Lazarides

Australia, Queensland, New South Wales. Perennial, compact, tufted, tussocky, open panicles, acute spikelets

lanceolate or ovate, 12- to 33-many loose florets, similar to *Eragrostis leptostachya*, see *Australian Systematic Botany* 10(1): 96. 1997.

E. amabilis (L.) Wight & Arnott ex Nees (*Cynodon amabilis* (L.) Raspail; *Cyperus paniculatus* M. Blanco (Cyperaceae); *Eragrostis amabilis* f. *varia* Kuntze; *Eragrostis amabilis* var. *plumosa* (Retz.) E.G. Camus & A. Camus; *Eragrostis ciliaris* (L.) R. Br.; *Eragrostis ciliaris* var. *patens* Chapm. ex Beal; *Eragrostis mangalorica* Hochst. ex Steud., nom. illeg., non *Eragrostis mangalorica* Hochst.; *Eragrostis plumosa* (Retz.) Link; *Eragrostis tenella* (L.) P. Beauv. ex Roem. & Schult.; *Eragrostis tenella* var. *koeningii* Kuntze; *Eragrostis tenella* var. *plumosa* (Retz.) Stapf; *Eragrostis tenella* var. *viscosa* (Retz.) Stapf; *Eragrostis viscosa* (Retz.) Trin.; *Erochloe amabilis* Raf. ex B.D. Jacks.; *Erochloe spectabilis* (Pursh) Raf. ex B.D. Jacks.; *Megastachya amabilis* (L.) P. Beauv.; *Megastachya tenella* (L.) Bojer; *Poa amabilis* L.; *Poa plumosa* Retz.; *Poa spectabilis* Pursh; *Poa tenella* L.)

Old World. Annual, caespitose, erect or decumbent, spreading, delicate, branched, glabrous, glandular below the nodes, not viscid, slender, leafy, sheaths hairy near the blade, leaf blade linear and acutely tipped, ligule a dense rim of hairs, open oblong panicles with capillary branches, spikelets compressed ovate to oblong, 4- to 8-flowered, glumes keeled, lower glume lanceolate, upper glume ovate, lemma broadly ovate to oblong, palea hairy on the back, 3 stamens, ornamental grass naturalized elsewhere in neotropics, used for lawns, a weed species common in open areas, dry forests, along roadsides, wet black soil, sandy fields, near cultivated fields, see *Species Plantarum* 1: 68-69. 1753, *Observationes Botanicae* 4: 20. 1786, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 4: 185. 1803, *Essai d'une Nouvelle Agrostographie* 74, 167, 173. 1812, *Flora Americae Septentrionalis*; or, ... 1: 80-81. 1814 [1813], *Systema Vegetabilium, editio decima sexta* 2: 576. 1817, *Narrative of an Expedition to Explore the River Zaire* 478. 1818, *Annales des Sciences Naturelles, Botanique* 5: 302. 1825, *Hortus Regius Botanicus Berolinensis* 1: 192. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 397. 1830, *Flora de Filipinas* 32. 1837, *Hortus Mauritianus* 369. 1837, *The Botany of Captain Beechey's Voyage* 251. 1838, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Synopsis Plantarum Glumacearum* 1: 265. 1854, *Plantae Junghuhnianae* 3: 348-349. 1854, *J. Linn. Soc. Bot.* 6: 43. 1862, *Revisio Generum Plantarum* 2: 774. 1891, *Index Kewensis* 1: 886. 1893, *Die Pflanzenwelt Ost-Afrikas* 50: 115. 1895, *Grasses of North America for Farmers and Students* 2: 479. 1896, *The Flora of British India* 7: 315-316. 1896 and *Bulletin du Muséum d'Histoire Naturelle* 25: 498. 1919, *Flore Générale de l'Indo-Chine* 7: 557. 1923, *Regnum Veg.* 119: 309. 1988 [by Nicolson, Suresh et Manilal], *Journal of Economic and*

Taxonomic Botany 22: 216, t. 2. 1998, *Taxon* 49(2): 254. 2000.

in English: bug's egg grass, Japanese love grass, love grass, feather lovegrass

in Spanish: yerba de amor

in Mexico: saksuuk

in India: budi, rejhra

E. ambleia W.D. Clayton

Kenya. Annual, panicle elliptic with stiff branches, spikelets linear and shortly pedicelled, glumes subequal, lemmas oblong-elliptic, palea keels scabrous, on sandy soil, open bushland, see *Kew Bulletin* 27(1): 152. 1972.

E. ancashensis Paul M. Peterson, N. Refulio-R. & O. Tovar (*Eragrostis pilgeri* Fedde) (Ancash, Recuay, Cordillera Blanca, Andes, Peru)

Peru. Found along roadsides, dark green spikelets, considered to be a synonym of *Eragrostis pilgeri* Fedde, see *Just's Botanischer Jahresbericht*. 3: 18. 1908, Peterson, P.M., N. Refulio-Rodriguez, and O. Tovar, "Eragrostis ancashensis (Poaceae: Chloridoideae). A new species from Ancash, Peru." *Sida* 19(1): 65-70. 2000.

E. andicola R.E. Fr. (*Eragrostis andicola* Pilg., nom. illeg., non *Eragrostis andicola* R.E. Fr.)

Argentina. See *Nova Acta Regiae Societatis Scientiarum Upsaliensis, ser. 4*, 1(1): 180. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 377. 1906.

E. annulata Rendle ex Scott-Elliot (*Eragrostis annulata* Chiov., nom. illeg., non *Eragrostis annulata* Rendle ex Scott-Elliot)

South Africa, Kalahari, Namaqualand. Annual, tufted, glandular, erect or geniculate, usually branched, leaf blades soft and expanded, ligule a fringe of short hairs, leaf sheaths rounded and hairy, inflorescence an open branched panicle, spikelets spreading, secondary axes not whorled, slender pedicels, swollen-tipped glandular hairs, glandular ring around each pedicel, low grazing value, usually on stony places, desert, sandy soils, in disturbed areas, see *Journal of Botany, British and Foreign* 29: 72. 1891, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 233. 1899 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 63-64. 1903.

in English: ring windgrass

in South Africa: ringwindhalmgras, ring windhalm

E. apiculata Döll

Brazil. See *Flora Brasiliensis* 2(3): 145. 1878.

E. aquatica Honda

Japan. See *Botanical Magazine* (Tokyo) 42: 508. 1928.

in Japan: numa-kazekusa

E. arenicola C.E. Hubb.

Tropical Africa. Annual, tufted, glandular, not sticky, contracted inflorescence, spikelets crowded, palea keels hairy, a weed of cultivation, usually growing in sandy soil, shallow soil, open dry places, disturbed areas, irrigated cultivations, along roadsides, cultivated land, see *Kew Bulletin* 4: 345. 1949.

in Nigeria: kamboora fage, kambura face

E. aristata De Winter

Namibia. Annual, tufted, erect, geniculate, lemma deeply lobed at the apex, along riverbeds, moist places, see *Bothalia* 7: 469. 1961.

E. aristiglumis Kabuye

Tanzania. Indeterminate species, see *Kew Bulletin* 26(1): 83. 1971.

E. articulata (Schrank) Nees (*Eragrostis articulata* (Schrank) Nees var. *eglandulosa* Nicora; *Eragrostis articulata* var. *glabrescens* Henrard; *Eragrostis articulata* var. *pauciflora* Döll; *Eragrostis brasiliensis* (Raddi) Nees var. *delta* Nees; *Eragrostis glareosa* Trin.; *Eragrostis neesii* Trin. var. *laxa* Jedwabn.; *Eragrostis pilosissima* Link; *Eragrostis villosa* Salzm. ex Steud., nom. illeg., non *Eragrostis villosa* Trin.; *Poa articulata* Schrank; *Poa brasiliensis* Raddi; *Poa pilosissima* (Link) Kunth)

South America, Paraguay, Argentina, Brazil. Annual, caespitose, small, erect, coarse, foliage hirsute, acuminate leaf blades linear or linear-lanceolate, open inflorescence, ovate or oblong panicles with stiff branches, spikelets awnless and breaking up from the base upward, pedicels stiff with a swollen articulation, weed and pioneer, along roadsides, in disturbed ground, sand dunes, similar to *Eragrostis neesii*, see *Sylloge Plantarum Novarum* 1: 194. 1824, *Hortus Regius Botanicus Berolinensis* 1: 189. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 497, 502-503. 1829, *Révision des Graminées* 1: 112. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405-406. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 339. 1833, *Synopsis Plantarum Glumacearum* 1: 276. 1854, *Flora Brasiliensis* 2(3): 142. 1878 and *Bulletin du Jardin Botanique de l'État* 6: 58, t. 2. 1919, *Mededeelingen van 's Rijks-Herbarium* 40: 69. 1921, *Botanisches Archiv* 5(3-4): 206. 1924, *Revista Argentina de Agronomía* 7(4): 272, 259, f. 4C, 5B. 1940, *Iheringia, Bot.* 55: 86. 2001.

E. aspera (Jacq.) Nees (*Eragrostis devolvens* Gand.; *Eragrostis laxiflora* Schrad.; *Eragrostis paniculata* (Roxb.) Steud.; *Eragrostis quintasii* Gand.; *Poa aspera* Jacq.; *Poa paniculata* Roxb.)

Tropical Africa, India. Annual, vigorous, weakly tufted, coarse, erect, leaf sheath round and pilose, ligule a ring of short hairs, large open delicate feathery panicles elliptic to ovate, 6- to 22-flowered, spikelets pedicellate breaking up

from the top downward, awnless, glumes subequal, lemma obtuse to truncate, palea keels scabrid, 3 stamens, low grazing value, common weed species in disturbed and old cultivated areas, disturbed stony places, along roadsides, on foot trail, gardens, shady areas, uncultivated lands, poor sandy soils, wadis, see *Hortus Botanicus Vindobonensis* 3: 32, t. 56. 1776, *Flora Indica; or Descriptions ...* 1: 341. 1820, *Linnaea* 12(4): 451. 1838, *Florae Africae Australioris Illustrationes Monographicae* 408. 1841, *Synopsis Plantarum Glumacearum* 1: 266. 1854 and *Bulletin de la Société Botanique de France* 66(7): 300. 1919 [1920], *Repertorium Specierum Novarum Regni Vegetabilis* 40: (Anhang 107) 1930: 331. 1931, *Kew Bulletin* 47(2): 277-282. 1992.

in English: rough love grass

in Gambia: numu ju tio

in Ghana: buruburua, buruburwa

in Nigeria: odudo ezi, ogagai, yayanga

in southern Africa: grootpluim-eragrostis (Afrikaans); jatsa (Sotho); kabwele (Tonga)

E. astrepta S.M. Phillips

Ethiopia. Annual, tufted, rigid, ascending, glandular, leaf blades rigid and subacute, inflorescence contracted, panicles terminal and axillary, 10- to 14-flowered, spikelets linear-lanceolate, lemmas ovate subacute, open ground, resembling *Eragrostis minor*, see *Kew Bulletin* 46(1): 111. 1991.

E. atropioides Hillebrand

Hawaii. Growing in subalpine dry grassland, high shrublands, wet places, see *Flora of the Hawaiian Islands* 531. 1888.

in English: hard-stem love grass, hard-stemmed love grass

E. atrovirens (Desf.) Trin. ex Steud. (*Eragrostis atrovirens* Lange; *Eragrostis atrovirens* Trin.; *Eragrostis atrovirens* var. *hesperidum* Emb. & Maire; *Eragrostis atroviridis* Maire; *Eragrostis biformis* (Kunth) Benth.; *Eragrostis bromoides* Jedwabn., nom. illeg., non *Eragrostis bromoides* (Vahl) Steud.; *Eragrostis chariis* (Schult.) Hitchc.; *Eragrostis chariis* auct. non (J.A. Schultes) A.S. Hitchc.; *Eragrostis chloromelas* Steud.; *Eragrostis elegantula* (Kunth) Nees ex Steud., nom. illeg., non *Eragrostis elegantula* Nees; *Eragrostis inamoena* K. Schum.; *Eragrostis nutans* auct. non (Retz.) Nees ex Steud.; *Poa atrovirens* Desf.; *Poa biformis* Kunth; *Poa chariis* Schult.)

Tropical Africa, Southeast Asia, China, India. Perennial, tufted, tussock-forming, variable, vigorous, stout, culms blue-green, erect or geniculate, usually simple or branched, glabrous, auricles bearded, leaves mostly basal and stiffly pointed, leaf sheaths purplish and smooth, leaf blades inrolled when dry, ligule a shallow rim, inflorescence contracted and loose, terminal panicle with capillary branches, spikelets laterally compressed and tinged with purple when young, glumes subequal, lower glume lanceolate and

purplish, upper glume boat-shaped, lemma tough, palea narrow with margins infolded, 3 stamens, grains eaten by birds, good fodder, grazed by all stock, low to medium grazing value, thatching grass, growing in open pastures, hill forest, wet sites, pond, marshes, secondary situations, along roadsides, clay soil, sandy soil, damp places, swamps, streams, see *Flora Atlantica* 1: 73, t. 14. 1798, *Mantissa* 2: 314. 1824, *Révision des Graminées* 1: 114. 1829, *Révision des Graminées* 2: 471, t. 149. 1831, *Nomenclator Botanicus. Editio secunda* 1: 562. 1840, *Niger Flora* 568. 1849, *Synopsis Plantarum Glumacearum* 1: 266, 271. 1854, *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 47. 1860, *Die Pflanzenwelt Ost-Afrikas* C: 115. 1895 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 21: 38. 1915, *Botanisches Archiv* 5(3-4): 190. 1924, *Lingnan Science Journal* 7: 193. 1929 [1931], *Botanical Magazine* (Tokyo) 45: 298. 1931, *Bulletin de la Société des Sciences Naturelles du Maroc* 13: 293. 1933, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 28: 385. 1937, *Bulletin du Jardin Botanique de l'État* 25: 243. 1955, *Grasses of Burma ...* 503. 1960, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Cytology and Genetics* 22: 12-22. 1987, *Journal of Cytology and Genetics* 23: 118-131. 1988.

in English: Thalia lovegrass

in Cameroon: saraji

in Gambia: n'diro

in Ghana: atuabo, tsintsiyar fadamaa

in Mali: ngwose

in Niger: aejir, ajiaji, alwa, butanyé, daazi, habrigy, intaya, kanar, kanda, sarahol-fadama, sorkwa-soro, taeshit, tapo, telolot

in Nigeria: burburuwar rafi, karfa, tsintsiyar fadamàà, tsintsiiyar fadamàà

in Senegal: ferala

in Sierra Leone: foni

in India: injipul

in Mexico: pasto

E. attenuata A.S. Hitchc. (*Sporobolus scaber* Phil.)

Peru, Chile. Vulnerable species, common on sandy slopes, see *Florula Atacamensis seu enumeratio plantarum ...* 54. Halis Saxonom [Halle] 1860 and *Contributions from the United States National Herbarium* 24(8): 340. 1927, *Gayana, Botánica* 51(1): 1-10. 1994, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 54: 1-109. 1998.

E. australasica (Steudel) C.E. Hubb. (*Glyceria australasica* Steudel; *Glyceria ramigera* (F. Muell.) Benth.; *Panicularia australasica* (Steud.) Kuntze; *Poa ramigera* F. Muell.)

South Australia, Western Australia, Victoria, Queensland, New South Wales. Perennial tussock grass, semiaquatic, canelike, erect or ascending, coarse, twiggy, stout, robust, shortly rhizomatous, large spreading clumps, shrubby and woody, base swollen and thickened by cataphylls, with a coating of whitish wax, much branched at lower and upper nodes, leaf blade often rolled, leaves linear and rigid or coriaceous, leaves disarticulating from the sheaths, much-branched panicle loose and spreading, spikelets linear, glumes lanceolate and acuminate to acute, lemmas ovate and often notched, palea 2-keeled, provides fodder for native fauna and feral pigs, drought and flood tolerant, salt-tolerant, may become a nuisance, used for thatching and fencing, fiber, provides habitat and cover for wildlife, common in wet conditions and moist depressions, in arid and semiarid regions, wetlands, in low lying areas subject to intermittent flooding, roadside drains, shallow depressions, swamps and lakes, seasonal swamps, slightly saline and heavy clay soils, ponds and dams, claypans, tabledrains, see *Synopsis Plantarum Glumacearum* 1: 286. 1854, *Revisio Generum Plantarum* 1: 782. 1891 and *Kew Bulletin* 1941: 26. 1941.

in English: cane grass, bamboo grass, swamp canegrass

E. bahamensis Hitchc.

Bahamas. Found on rocky shores, see *Annual Report of the Missouri Botanical Garden* 1893: 149, t. 14. 1893 and *Manual of the Grasses of the West Indies* 1-439. 1936.

E. bahiensis Schrad. ex Schult. (*Eragrostis bahiensis* (Steud.) Herter, nom. illeg., non *Eragrostis bahiensis* Schrad. ex Schult.; *Eragrostis bahiensis* Roem. & Schult.; *Eragrostis bahiensis* Schrad. ex Schultes f. *riparia* Burkart; *Eragrostis bahiensis* var. *bahiensis*; *Eragrostis bahiensis* var. *contracta* Döll; *Eragrostis bahiensis* var. *laxiuscula* Döll; *Eragrostis blepharophylla* Jedwabn.; *Eragrostis elatior* Stapf; *Eragrostis expansa* Link; *Eragrostis firma* Trin.; *Eragrostis macra* Jedwabn.; *Eragrostis microstachya* (Link) Link; *Eragrostis pilosa* var. *bahiensis* (Schrad. ex Schult.) Kuntze; *Eragrostis psammodes* Trin.; *Eragrostis psammodes* var. *microstachya* (Link) Döll; *Poa expansa* (Link) Kunth, nom. illeg., non *Poa expansa* J.F. Gmel.; *Poa microstachya* Link; *Poa psammodes* (Trin.) Kunth)

South America, Peru and Brazil to Argentina. Perennial, variable, caespitose, erect or geniculately ascending, simple, basal leaves, glabrous below the nodes, leaf blades linear acuminate, ligules ciliate, leaf sheaths ciliate at the summit, open panicle spike-like ovate or oblong and moderately branched with flexuous branches, spikelets strongly laterally compressed and awnless, 5- to 40-flowered, spikelets breaking up from the base upward, lanceolate to ovate glumes keeled and unequal, lemmas broadly ovate and leathery, 2 stamens, common along roadsides, disturbed habitats, seasonally humid savannah, coast, in damp places, seasonal ponds, lakeshores, in sandy soil near riverbanks,

damp grasslands, similar to *Eragrostis atrovirens*, see *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Mantissa* 2: 318. 1824, *Hortus Regius Botanicus Berolinensis* 1: 185, 190. 1827, *Révision des Graminées* 1: 113. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 400. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 328. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 74. 1836, *Synopsis Plantarum Glumacearum* 1: 208. 1854, *Flora Brasiliensis* 2(3): 151, 153. 1878, *Revisio Generum Plantarum* 3(2,2): 353. 1898 and *Flora Capensis* 7: 617. 1900, *Mededeelingen van's Rijks-Herbarium* 40: 68. 1921, *Botanisches Archiv* 5(3-4): 197, 200. 1924, *Hortus Regius Botanicus Berolinensis* 2: 294. 1933, *Estudios Botánicos en la Región Uruguay* 14(1): 85, f. 339. 1941, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Listados Florísticos de México* 1: 1-123. 1983, S.A. Renvoize, *The Grasses of Bahia* 68-69. 1984, *Annals of the Missouri Botanical Garden* 77(1): 153. 1990, *Willdenowia* 22: 268. 1992, S.A. Renvoize, *Gramíneas de Bolivia* 321. 1998, *Revista Brasileira de Botânica* 23(2): 177-194. 2000, *Iheringia, Série Botânica* 55: 23-169. 2001.

in English: Bahia love grass

E. bahiensis Schrad. ex Schult. var. ***bahiensis*** (*Eragrostis elatior* Stapf; *Eragrostis elatior* Hack., nom. illeg., non *Eragrostis elatior* Stapf; *Eragrostis expansa* Link; *Eragrostis hackelii* Hassl.; *Eragrostis macra* Jedwabn.; *Eragrostis psammodes* Trin.; *Poa bahiensis* Schrad. ex Schult.; *Poa brasiliensis* Raddi)

Brazil, Bolivia, Argentina. Inflorescence with delicate branches, sandy soils, see *Agrostografia Brasiliensis* 51. 1823, *Mantissa* 2: 318. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 497-499. 1829 and *Flora Capensis* 7: 617-618. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 374. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 8: 47. 1910.

E. bahiensis Schrad. ex Schult. var. ***contracta*** Döll

Brazil, Uruguay, Argentina. Inflorescence with rigid branches, contracted spike-like panicle, see *Flora Brasiliensis* 2(3): 151. 1878 and *Willdenowia* 22: 268. 1992.

E. barbinodis Hack.

Africa, Transvaal, Mozambique. Perennial, tufted, sprawling, geniculate to decumbent, stoloniferous, rooting at the nodes, unbranched culm nodes hairy, open inflorescence, rachilla persistent, forage, growing in sandy soils, black turf, red sandy loam, see *Bulletin de l'Herbier Boissier* 3(8): 390. 1895.

E. barrelieri Daveau (*Eragrostis poaeoides* var. *barrelieri* (Daveau) Fiori; *Eragrostis vulgaris* Coss. & Germ.; *Eragrostis vulgaris* subsp. *barrelieri* (Daveau) R.C.V. Douin)

(dedicated to the French botanist Jacques Barrelier [Jacobus Barrelierus], 1606-1673, physician, Dominican monk, traveler, author of *Plantae per Galliam, Hispaniam et Italiam observata* ... Opus posthumum, editum cura et studio Antonio de Jussieu, medici. Paris 1714; see Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 33. Regione Siciliana, Palermo 1988; Blanche Henrey, *No Ordinary Gardener - Thomas Knowlton, 1691-1781*. Edited by A.O. Chater. British Museum (Natural History). London 1986)

Tropical Africa, southwestern Asia, Mediterranean. Annual, tufted to loosely tufted, simple or much branched near the base, erect or geniculate, sprawling to decumbent, prostrate, fibrous root, leaf sheaths glandular and ciliate, ligules ciliate, leaf blades flat or rolled without crateriform glands on the margins, inflorescence open and glandular, 7- to 20-flowered, panicles terminal and axillary, axils of inflorescence glabrous, spikelets linear-oblong breaking up from the bottom upward, glumes unequal without crateriform glands on the nerve, glumes and lemmas acute or obtuse, lemmas membranous and flattened, scabrid palea keels, 3 stamens, grain oblong or elliptic-oblong, forage, browsed by all stock, weed species naturalized elsewhere, often aromatic, growing on disturbed ground, cultivated land, sandy soil, gardens, road verges, gravelly roadsides, floodplains, Sub-Saharan Africa to northeast Africa, see *Journal de Botanique* (Morot) 8: 289. 1894 and *Flora Analitica d'Italia* 1: 82. 1908, *Flore Complète Illustrée en Couleurs de France, Suisse et Belgique* 12: 32. 1927-1932, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 1 30: 369. 1939, *Flore de l'Afrique du Nord*: 2: 173. 1953.

in English: pitted love grass, Mediterranean love grass, love grass

in French: éragrostis de Barrelier

in Mexico: pasto

in Arabic: lehmeire

in Mauritania: lehméire

in Somalia: agar

E. barteri C.E. Hubbard

Tropical Africa. Caespitose, woody, browsed, little grazing value, found in rocky sites, river beds, sandy places, sand banks, see *Bulletin of Miscellaneous Information Kew* 1936(5): 311. 1936, *Fl. W. Trop. Afr.*, 2: 514, in clavi, 516. 1936.

E. basedowii Jedwabnick (*Eragrostis concinna* sensu Benth., partly, non Steudel) (after the anthropologist Herbert Basedow, 1881-1933, geologist and botanical collector in central Australia, explorer, from March to November 1903 prospector to the South Australian Government North-West Prospecting Expedition, author of *The Australian Aboriginal*. Adelaide 1925, *Journal of the Government north-west expedition*. Royal Geographical Society of

Australasia. South Australian Branch. Adelaide 1914 and *Catalogue of Minerals in the Technological Museum of the South Australian School of Mines and Industries*. Adelaide 1907; see J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954)

South Australia, New South Wales, Queensland, Northern Territory. Annual, densely tufted, erect to ascending, sometimes branched, leaves more or less pilose, sheaths more or less bearded, blade rolled or flat, inflorescence contracted and often interrupted, panicles terminal and axillary, spikelets ovate to linear-oblong densely overlapping and flattened, florets 9-30, lemmas coriaceous and curved, palea with keels hirsute, grows on inland sand dunes, see *Prodrum Florae Novae Hollandiae* 180. 1810, *Synopsis Plantarum Glumacearum* 1: 279. 1854 and *Botanisches Archiv* 4: 328. 1923.

in English: neat love grass

E. benthamii Mattei (*Eragrostis brownii* var. *patens* Benth.; *Eragrostis brownii* sensu Jessop; *Eragrostis rara* Domin; *Eragrostis philippica* Jedwabnick) (after the English botanist George Bentham, 1800-1884, taxonomist, from 1829 to 1840 Secretary of the Horticultural Society, 1862 Fellow of the Royal Society of London and in 1826 of the Linnean Society, from 1861 to 1874 President of the Linnean Society, among his most valuable writings are *Handbook of the British Flora*. London 1858, *Flora hongkongensis*. London 1861, *Labiatarum genera et species*. London 1832-1836, *The Botany of the Voyage of H.M.S. Sulphur, under the Command of Captain Sir Edward Belcher ... during the Years 1836-1842*. London 1844[-1846] and *Catalogue des plantes indigènes des Pyrénées et du bas Languedoc*. Paris 1826 author of most of the *Genera Plantarum* (London 1862-1883) of Bentham and Joseph Dalton Hooker (1817-1911) and in collaboration with Ferdinand Mueller of *Flora Australiensis*. London 1863-1878; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 165. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 34. 1972; George Taylor, in *D.S.B.* 2: 614-615. 1981; B. Daydon Jackson, *George Bentham*. London 1906; Francis Wall Oliver (1864-1951), editor, *Makers of British Botany*. Cambridge 1913; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 130. Oxford 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 447. 1973; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980)

New Zealand, Australia. Perennial, compactly tufted, not branched, leaves glabrous and smooth, leaf blade rolled, panicle open or contracted, spikelets elliptic to ovate or linear to oblong, florets 5-24, glumes persistent and more or less acuminate, green lemmas membranous and

lanceolate, palea 2-keeled, occurs in woodland on sandy soils, see *Flora Australiensis: A Description ...* 7: 647. 1878 and *Contribuzioni alla Biologia Vegetale* 4: 237. 1909, *New Zealand Journal of Botany* 29: 117-129. 1991.

in English: common love grass, love grass, Brown's lovegrass, Bentham's love grass

E. bergiana (Kunth) Trin. (*Poa bergiana* Kunth) (the Swedish physician Peter (Petrus) Jonas Bergius, 1730-1790, botanist and plant collector, pupil of Linnaeus, from 1766-1790 professor of natural history and pharmacy in Stockholm, author of *Semina Muscorum detecta ... disputat ...* Pehr Jonas Bergius. Upsaliae 1750, *Descriptiones plantarum ex Capite Bonae Spei*. Stockholmiae 1767 (plants collected by J.A. Auge, employed by the East India Company at Cape Town) and *Materia medica e regno vegetabili, sistens simplicia officinalia, pariter atque culinaria*. Editio secunda correctior. Stockholm 1778; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 169. 1965; Peter MacOwan, "Personalia of botanical collectors at the Cape." *Trans. S. Afr. Philos. Soc.* 4(1): xxxiv. 1884-1886; Martin Heinrich Karl von Lichtenstein (1780-1857), *Travels in Southern Africa*. London 1812-1815; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 37. 1988; Gilbert Westacott Reynolds, *The Aloes of South Africa*. 44, 87. Rotterdam 1982; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; C. Linnaeus, *Mantissa Plantarum Altera*. 152, 241. 1771; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 35. 1972)

South Africa, Namibia. Perennial, rhizomatous, tufted, mat-forming, leaf sheaths hairy, inflorescence branched, spikelets purplish densely clustered, lowest lemma obtuse to broadly obtuse, pasture, soil binder, useful for erosion control, often confused with *Eragrostis truncata* Hack., usually growing in disturbed places, eroded areas, see *Révision des Graminées* 2: 549, t. 189. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 71. 1836.

in English: kwagga love grass

in South Africa: kalk-eragrostis, kalk-kweek, kwaggakweek (Afrikaans)

E. berteroniana (Schult.) Steud. (*Megastachya berteroniana* Schult.; *Poa berteroniana* (Schult.) Kunth)

The Caribbean. See *Mantissa* 2: 330. 1824, *Révision des Graminées* 1: 112. 1829, *Nomenclator Botanicus. Editio secunda* 1: 562. 1840 and *Acta Botanica Cubana* 4: 1-11. 1980, *Fontqueria* 46: [i-ii], 1-259. 1997.

E. bicolor Nees (*Eragrostis bicolor* Boiss., nom. illeg., non *Eragrostis bicolor* Nees)

South Africa, Namibia. Perennial bunchgrass, tufted to densely tufted, short, erect, unbranched, occasionally geniculate, shortly rhizomatous, with horizontal or oblique rhizome, ligule a fringe of short hairs, upper leaf sheaths rounded, leaves mostly basal, leaf sheaths of basal leaves flattened, open inflorescence paniculate, secondary axes not whorled, lemma bicolored, forming small clumps, fairly palatable, pasture, grazed, ground cover, useful for erosion control, growing in clay soils, brackish areas, wet soils, dry river beds, see *Florae Africae Australioris Illustrationes Monographicae* 407. 1841, *Flora Orientalis* 5: 581. 1884.

in English: vlei love grass, speckled vlei grass, bicolor lovegrass

in South Africa: blousaadgras, fynvleigras, kleinblousaadgras, pangras, polgras, zweifarbiges straußgras, vlei-eragrostis (Afrikaans)

E. biflora Hack. (*Eragrostis biflora* Hack. ex Schinz)

Kalahari. Annual, tufted, flimsy, erect or geniculate, leaf sheath keeled, ligule a ring of short hairs, leaf blade thin and expanded, long inflorescence open, much-branched panicle with long and slender pedicels, spikelets with 1 or 2 florets green to purplish, weed, low grazing value, shade species, common in disturbed areas and moist disturbed areas, gardens, in shade under trees and bushes, savannah, grassland, see *Bulletin de l'Herbier Boissier* 3(8): 390. 1895.

in English: shade eragrostis

in southern Africa: krulblaargras (Afrikaans), skadu-eragrostis, zweiblütiger windhalm

E. botryodes W.D. Clayton (*Eragrostis atrovirens* var. *congesta* Robyns & Tournay)

Congo, Zaire. Perennial, tufted, erect or ascending, loosely geniculate, panicle ovate, spikelets narrowly ovate and clustered, 7- to 25-flowered, florets imbricate at the base, glumes subequal and narrowly ovate, lemmas narrowly ovate and acute, moist habitats, in marshy places, swampy grasslands, see *Nomenclator Botanicus. Editio secunda* 1: 562. 1840 and *Bulletin du Jardin Botanique de l'État* 25: 243. 1955, *Kew Bulletin* 27(1): 153. 1972.

E. brainii (Stent) Launert (*Pogonarthria brainii* Stent)

Africa, Zimbabwe. Strongly developed racemes, see *Flora Capensis* 7: 316. 1898 and *Bulletin of Miscellaneous Information Kew* 1932: 325. 1932, *Senckenbergiana Biologica* 47(4): 307. 1966.

E. braunii Schweinf.

Arabia, Yemen. Perennial, tufted, vigorous, leaf blades flat, stiff leaves, sheaths glabrous or pilose, spike-like panicle long and narrow, 6- to 12-flowered, spikelets linear breaking up from the bottom upward, glumes unequal, palea persistent, 3 stamens, quite palatable, found on steep grassy slopes, see *Bulletin de l'Herbier Boissier* 2(App. 2): 38. 1894.

E. brizantha Nees

South Africa, Namibia. Annual, tufted, erect or geniculate, spikelets densely crowded, rachilla fragile, palea glandular, growing in sandy soils, rivers, disturbed areas, see *Flora Africa Australioris Illustrationes Monographicae* 411. 1841 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 82. 1911.

E. brownii (Kunth) Nees (*Eragrostis atrovirens* f. *brownii* Hack.; *Eragrostis browneana* Nees; *Eragrostis brownei* (Kunth) Nees ex Steud.; *Eragrostis brownii* (Kunth) Wight; *Eragrostis brownii* (Kunth) Nees ex Steudel; *Eragrostis brownii* Nees; *Eragrostis bulbifera* Steud.; *Eragrostis cumingii* var. *novoguineensis* Jansen; *Eragrostis polymorpha* (R. Br.) Jedwabn., nom. illeg., non *Eragrostis polymorpha* Roem. & Schult.; *Eragrostis pubescens* (R. Br.) Steud.; *Eragrostis spartinoideus* Steud.; *Eragrostis vulcanica* Jedwabn.; *Eragrostis zeylanica* Nees & Meyen; *Eragrostis zeylanica* var. *glomerata* Nees; *Megastachya polymorpha* (Nees) P. Beauv.; *Poa brownei* Kunth; *Poa brownii* Kunth; *Poa polymorpha* R. Br., nom. illeg., non *Poa polymorpha* Wibel; *Poa pubescens* R. Br.; *Uniola spicata* Llanos) (dedicated to the Scottish (b. Montrose, Scotland) botanist Robert Brown, 1773-1858 (London, England), taxonomist, naturalist and plant collector, 1795 took an M.D. at the University of Edinburgh, 1801-1803 circumnavigated Australia on Flinders' voyage, 1811 Fellow of the Royal Society, 1822 Fellow of the Linnean Society and President of that Society (1849-1853), 1827 Keeper of Botany Dept. in the British Museum, London, librarian to Sir Joseph Banks and to the Linnean Society of London, among his many works are *On the Natural Order of Plants Called Proteaceae*. London 1810, *On the Asclepiadeae*. London 1810, *A Brief Account of Microscopical Observations ... on the Particles Contained in the Pollen of Plants*. [The supplemental paper, "Additional Remarks on Active Molecules," appeared in the *Philosophical Magazine* in September 1829] London 1828 and *Prodromus florae Novae Hollandiae et Insulae van-Diemen*. London 1810; see William T. Stearn, in *D.S.B.* 2: 516-522. 1981; P.I. Edwards, "Robert Brown (1773-1858) and the natural history of Matthew Flinders voyage in *H.M.S. Investigator*. 1801-1805." *J. Soc. Bibliophy Nat. Hist.* 7: 385-407. 1976; Edmund Tyrell Artis (1789-1847), *Antediluvian Phytology*, illustrated by a collection of the fossil remains of plants peculiar to the coal formations of Great Britain. [Fossil plants, 4to, first edition, with the assistance of Robert Brown.] London 1825; Matthew Flinders (1774-1814), *A voyage to Terra Australis*. London 1814; K.A. Austin, *The Voyage of the "Investigator" 1801-1803: Commander Matthew Flinders R.N. Adelaide* 1964; W.E. Parry, *Journal of a Voyage for the Discovery of a North-West passage*. London 1824; J.H. Barnhart, *Biographical notes upon botanists*. 1: 263. 1965; Stafleu and Cowan, *Taxonomic literature*. 1: 364-369. Utrecht 1976; Frans A. Stafleu and Erik A. Mennega, *Taxonomic*

literature. Supplement III: Br-Ca. 138-142. 1995; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; F. Griffiths, editor *Politics of the Northwest Passage*. Kingston 1987; Bern. Keating, *The Northwest Passage*. Chicago 1970; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. 139, 145-147, 163-164, 197. Hordern House, Sydney 1987; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 55. 1972; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 140. Oxford 1964)

Australia. Perennial, tufted, slender, forming spreading clumps, leaf sheath glabrous and rounded, ligule ciliate, leaf blades rolled and smooth, bright green leaves, inflorescence contracted or sometimes open to very lax, loose and open panicles, sessile purplish and flat spikelets usually densely overlapping, pedicels of the spikelets very short, subequal or unequal glumes acute and keeled, palea 2-keeled, stamens 3, attractive and decorative, forage, a good pasture grass, may become invasive, common in woodland and native pasture, plains, usually near water, on stream banks, moist depressions, waste ground, swampy ground, sandy places, savannah, see *Prodromus Florae Novae Hollandiae* 180-181. 1810, *Essai d'une Nouvelle Agrostographie* 74, 167, 175. 1812, *Révision des Graminées* 1: 112. 1829, *Catalogue of Indian Plants* 105. London 1833-1837, *Nomenclator Botanicus. Editio secunda* 1: 562. 1840, *Fl. Afr. Austr.* 396. 1841, *Gramineae* 72-73. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 204-205. 1843, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 101-102. 1850, *Synopsis Plantarum Glumacearum* 1: 265, 267, 279. 1854, *Flora Australiensis: A Description ...* 7: 647. 1878 and *Botany Bulletin, Department of Agriculture, Queensland* 16: 2. 1903, *Queensland Agricultural Journal* 27: 70, t. 20. 1911, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 21: 38. 1915, *Botanisches Archiv* 5: 188. 1924, *N.Z. DSIR Bull.* 49: 67. 1936, *Reinwardtia* 2(2): 271. 1953, *New Zealand Journal of Botany* 29: 117-129. 1991, *Fl. N.S.W.* 4: 534-544. 1993, *Australian Syst. Bot.* 10: 77-187. 1997.

in English: common love grass, Brown's love grass, bay grass

in India: asata, chir, choti khidi, jenkua, khari

E. burmanica Bor

Asia, Burma. See *Bulletin of Miscellaneous Information Kew* 1951: 166. 1951.

in Thailand: yaa krok, ya krok

E. caesia Stapf (*Eragrostis caesia* Ekman & Mansf.)

South Africa, Zimbabwe. Perennial, densely tufted, glaucous, ligule a ring of hairs, leaf blade usually rolled, sheaths papery, inflorescence a dense and contracted panicle, lemma with black dots or elongate black patches, palea keels hairy, tussock grass, forage, grazed pasture, for goats and sheep, grassland, moist sites, slopes, shallow soil, mountainous grassland, seepage areas, see *Flora Capensis* 7(4): 599. 1900.

in English: blackpatch lovegrass

in South Africa: lemena, modulana, tschaane, tshaane

E. caespitosa Chiov.

Northeast tropical Africa. Perennial, erect, tufted, rather wiry, low growing, basal shoots with hard yellow scales, stems densely set with short leaves, numerous small purple narrowly oblong panicles rather dense, spikelets oblong disarticulating between the florets, glumes lanceolate, lemmas membranous, seed in the form of naked caryopses, well grazed, of moderate nutritive value, useful for erosion control, growing in dry sandy places, dry overgrazed soils, on poor sandy soils, grassland, in arid and semiarid areas, semidesert and abandoned cultivation, see *Annali di Botanica* 13(3): 373. 1915, *Kew Bulletin* 47(2): 277-282. 1992.

in English: cushion love grass

E. camerunensis W.D. Clayton

Tropical Africa. Perennial, densely tufted, grazed by stock, grassy places, wasteland, montane grassland, see *Kew Bulletin* 20: 265, f. 3. 1966.

E. capensis (Thunb.) Trin. (*Briza capensis* Thunb.; *Eragrostis capensis* (Link) Jedwabn., nom. illeg., non *Eragrostis capensis* (Thunb.) Trin.)

South Africa, Mozambique, Tanzania, Angola, Kenya. Perennial bunchgrass, densely tufted, erect, slender, straw colored and sometimes purplish, leaves mostly basal, leaf sheaths smooth and round, old sheaths closely packed at base, no ligule or an inconspicuous ring of short hairs, narrow panicles sparsely branched, spikelets flattened, florets closely imbricate, greenish to purplish lemma granular, palatable grass, native pasture species, common in poorly drained areas, along vleis, waterlogged soil, disturbed clay loam, very shallow soil, rocky and disturbed places, open sour grassland, dry stream bed, on riverbanks, rocky soil, poor granite sandveld, moist areas, see *Prodromus Plantarum Capensium*, ... 21. 1794, *Hortus Regius Botanicus Berolinensis* 1: 195. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 400. 1830 and *Botanisches Archiv* 5(3-4): 183. 1924.

in English: Cape love grass, small heart-seed grass, heart-seed lovegrass

in southern Africa: bosluisgras, hartjie-eragrostis, hartjiesgras (Afrikaans); baroa, barwa, barwana, senana (Sotho); umbimbane (Zulu)

in Thailand: yaa kon hep, ya kon hep

E. capillaris (L.) Nees (*Aira capillacea* Lam.; *Eragrostis capillaris* (L.) Steud., nom. illeg., non *Eragrostis capillaris* (L.) Nees; *Eragrostis pilosa* var. *capillaris* (L.) Kuntze; *Eragrostis tenuis* Steud.; *Eragrostis tenuis* A. Gray, nom. illeg., non *Eragrostis tenuis* Steud.; *Poa capillaris* L.; *Poa tenuis* Elliott, nom. illeg., non *Poa tenuis* Clairv.)

U.S. Annual, caespitose, erect, capillary culms, leaves erect and flat, sheaths pilose, open panicle oblong or elliptic, spikelets with long pedicels, glumes acute, lemmas acute and rounded on the back, occurs in dry, sandy or rocky soil, waste places, along roadsides and on recently cleared areas, see *Species Plantarum* 68. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 177. 1791, *A Sketch of the Botany of South-Carolina and Georgia* 1: 156. 1816, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 505. 1829, *Synopsis Plantarum Glumacearum* 1: 273. 1854, *A Manual of the Botany of the Northern United States (edition 6)* 661. 1890, *Revisio Generum Plantarum* 3: 353. 1898 and *Contr. U.S. Natl. Herb.* 12: 121. 1908, *Report of the Michigan Academy of Science, Arts and Letters* 17: 182. 1916.

in English: lace grass, lacegrass, tiny lovegrass

E. capitula Lazarides

Australia, Queensland. Perennial, leaves hirsute, compact capitate panicles, spikelets more or less sessile, florets closely overlapping, 3 stamens, see *Australian Systematic Botany* 10: 103. 1997.

E. capitulifera Chiov. (*Eragrostis cephalotes* Chiov. ex Chiarugi)

Ethiopia. Perennial, low, tussocky, tough leaf sheaths clustered at the base, leaf blades soft and acute, inflorescence solitary and capitate, spikelets shortly exerted from the uppermost sheaths, 6- to 8-flowered, glumes lanceolate-oblong, lemmas with green nerves, palea keels scabrid, sandy or loamy soils, grassland, see *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 282. 1939, *Webbia* 8: 101. 1951.

E. cassa Lazarides

Australia, Queensland. Perennial, open sparse panicle, spikelet with 2 persistent sterile lemmas, fertile lemma strongly curved and orbicular, similar to *Eragrostis paniciformis*, see *Australian Systematic Botany* 10: 104. 1997.

E. cataclasta Nicora (Greek prefix *kato*, *kata* "below, downward, down from" and *klastos* "broken in pieces")

Argentina, South America. See *Flora Illustrada de Entre Ríos (Argentina)* 2: 189-190, f. 66. 1969.

E. cenolepis W.D. Clayton

Tropical Africa. Perennial, densely tufted, low grazing value, moist soils, see *Kew Bulletin* 20: 266, f. 4. 1966.

in Guinea: fonyi choli

E. chabouisii Bosser

Madagascar. See *Adansonia* sér. 2, 8(4): 513-522. 1968.

E. chalarantha Gilli

Africa. See *Annalen des Naturhistorischen Museums in Wien* 69: 46. 1966.

E. chalarothyrsos C.E. Hubb. (from the Greek *chalaros*, *chalaron* "loose, slack" and *thyrsos* "a panicle")

East Africa, Ghana, Sierra Leone. Perennial, erect, densely tufted, robust, shortly rhizomatous, narrow leaf blades convolute and filiform, inflorescence diffuse, ovate panicle loose and open, spikelets ovate, 9- to 34-flowered, florets not imbricate at the base, glumes subequal, lemmas narrowly ovate and acute, palea keels scabrid or ciliolate, swampy places, seasonally inundated fields, bushland, grassland, similar to *Eragrostis paniciformis*, see *Kew Bulletin* 1936(5): 310. 1936.

E. chapelierii (Kunth) Nees (*Poa chapelierii* Kunth)

Tropical Africa, South Africa, Sudan, Madagascar, Mozambique, Uganda, Tanzania. Perennial, densely tufted, erect, basal sheaths usually glabrous, dense and narrow inflorescence, spikelets reddish brown, lemma acute-acuminate, 2 anthers, rare in South Africa, weed, common in cultivated lands, see *Révision des Graminées* 2: 543, t. 186. 1832, *Flora Africae Australioris Illustrationes Monographicae* 392. 1841.

in southern Africa: bruinsaadgras

E. chiquitaniensis T. Killeen (San José de Chiquitos, Chiquitos, Bolivia)

South America, Bolivia, Paraguay. Annual, caespitose, endangered, pubescent, erect, branched, foliage hirsute, ligules ciliate, leaf blades linear and acuminate, inflorescence oblong with rigid branches, open panicle, spikelets narrowly oblong to pyramidal, 4- to 12-flowered, glumes subequal, imbricate lemmas ovate and acute, palea ciliate on the keels, savannah, open habitats, deciduous savannah, alluvial soil, closely related to *Eragrostis articulata*, see *Annals of the Missouri Botanical Garden* 77(1): 153-154, f. 3. 1990.

E. chloromelas Steud. (*Eragrostis atrovirens* (Desf.) Trin. ex Steud.; *Eragrostis curvula* (Schr.) Nees; *Poa atrovirens* Desf.) (Greek *chloros* "green" and *melas* "black")

South Africa. Perennial bunchgrass, tufted, culms erect and not branched, densely clumping, dense basal tufts of filiform and curling leaves, ligule a ring of hairs, basal sheaths glabrous, inflorescence open and lax, much-branched open panicle, purplish branches filiform and flexible, lower branches usually solitary, spikelets narrowly obovate and dark olive to gray-green, seed in the form of naked

caryopses, seed-heads are distinctly diamond shaped, spreads well by seed, easily killed by frost, palatability rather low, can withstand heavy grazing, used for making ropes, soil binder, adapted to semidesert conditions and very drought resistant, in time of scarcity and famine the seeds are used for making bread, a valuable grass in semidesert tropical grassland areas, hillslopes, disturbed areas or undisturbed stony slopes, overgrazed or trampled veld, disturbed veld, along roadsides, on sandy to loamy soils, rocky ridges, low lying areas, very similar to *Eragrostis curvula* (Schr.) Nees, see *Flora Atlantica* 1: 73, t. 14. 1798, *Göttingische gelehrte Anzeigen (unter der Aufsicht der Königl. Gesellschaft der Wissenschaften)* 3: 2073. 1821, *Nomenclator Botanicus. Editio secunda* 1: 562. 1840, *Flora Africae Australioris Illustrationes Monographicae* 397. 1841, *Synopsis Plantarum Glumacearum* 1: 271. 1854.

in English: blue love grass, boer love grass, curly leaf

in southern Africa: blouvleigras, krulblaar, krulblaargras, fyngras, fynvleigras, grootblouaadgras, growwvleigras, vleigras (Afrikaans); moseeka, moseka, tsane (Sotho)

E. cilianensis (All.) Vignolo ex Janch. (*Briza eragrostis* L.; *Briza major* L. ex Kunth; *Briza megastachya* (Koeler) hort. ex Roem. & Schult.; *Briza megastachya* (Koeler) Steud.; *Briza oblonga* Moench; *Briza purpurascens* Muhl.; *Calotheca purpurascens* (Muhl.) Spreng.; *Eragrostis argentina* Jedwabn.; *Eragrostis borysthenica* Klokov; *Eragrostis cilianensis* (All.) Janch.; *Eragrostis cilianensis* (All.) Link ex Vignolo; *Eragrostis cilianensis* (All.) F.T. Hubb., nom. illeg., non *Eragrostis cilianensis* (All.) Vignolo ex Janch.; *Eragrostis cilianensis* (All.) Mosher, nom. illeg., non *Eragrostis cilianensis* (All.) Vignolo ex Janch.; *Eragrostis cilianensis* (All.) Maire & Weiller; *Eragrostis cilianensis* (All.) Vignolo; *Eragrostis cilianensis* subsp. *major* (Rouy) Maire & Weiller; *Eragrostis cilianensis* subsp. *megastachya* (Koeler) Maire & Weiller; *Eragrostis cilianensis* var. *major* (Holst) Maire; *Eragrostis eragrostis* (L.) MacMill., nom. illeg., non *Eragrostis eragrostis* (L.) P. Beauv.; *Eragrostis eragrostis* (L.) Blatt. & McCann, nom. illeg., non *Eragrostis poaeoides* P. Beauv. ex Roem. & Schult.; *Eragrostis eragrostis* (L.) H. Karst., nom. illeg., non *Eragrostis eragrostis* (L.) P. Beauv.; *Eragrostis eragrostis* var. *megastachya* (Koeler) Farw.; *Eragrostis major* Host; *Eragrostis major* var. *subbiloba* Chiov.; *Eragrostis megastachya* (Koeler) Link; *Eragrostis megastachya* f. *nana* Lorentz & Niederl.; *Eragrostis megastachya* var. *cilianensis* (All.) Asch. & Graebn.; *Eragrostis minor* var. *major* (L. ex Kunth) Beck; *Eragrostis minor* var. *megastachya* (Koeler) Burt Davy; *Eragrostis multiflora* (Forssk.) Asch., nom. illeg., non *Eragrostis multiflora* Trin.; *Eragrostis multiflora* var. *cilianensis* (All.) Maire; *Eragrostis multiflora* var. *glandulifera* Chiov.; *Eragrostis multiflora* var. *insularis* A. Terracc.; *Eragrostis multiflora* var. *subbiloba* Chiov.; *Eragrostis oblonga* (Moench) Baumg.; *Eragrostis pappiana* (Chiov.) Chiov.; *Eragrostis pappiana* var. *insularis* A. Terracc. ex Chiov.; *Eragrostis pappii* Gand.;

Eragrostis poaeoides var. *megastachya* (Koeler) A. Gray; *Eragrostis virletii* E. Fourn.; *Eragrostis vulgaris* Coss. & Germ.; *Eragrostis vulgaris* subsp. *major* Rouy; *Eragrostis vulgaris* subsp. *megastachya* (Koeler) Douin; *Eragrostis vulgaris* var. *megastachya* (Koeler) Coss. & Germ.; *Erosion cilianense* (All.) Lunell; *Erosion ciliare* Lunell; *Megastachya eragrostis* (L.) P. Beauv. ex Roem. & Schult.; *Megastachya oblonga* (Moench) P. Beauv.; *Megastachya obtusa* (Nutt.) Schult.; *Megastachya purpurascens* (Muhl.) Schult.; *Poa cilianensis* All.; *Poa eragrostis* (L.) Brot., nom. illeg., non *Poa eragrostis* L.; *Poa megastachya* Koeler; *Poa multiflora* Forssk.; *Poa nuttallii* Spreng.; *Poa obtusa* Nutt., nom. illeg., non *Poa obtusa* Muhl.; *Poa philadelphica* W.P.C. Barton)

Mediterranean region, Africa, China, India. Annual bunchgrass, shallow-tufted, several culms from the base, highly variable, slender or stout, glandular below the nodes, terete or compressed, simple or branched, erect or ascending or geniculate and branched at the lower nodes, often prostrate at the base then erect, sprawling to decumbent and prostrate, weak root system, basal sheaths glabrous, ligule softly ciliate, crateriform glands mostly on leaf blades, erect and glandular panicles with ascending branches, 10- to 40-flowered, spikelets narrowly oblong and compressed breaking up from the bottom upward, glumes and lemmas keeled, glumes cartilaginous and boat-shaped, cartilaginous to papery lemmas ovate and subacute, palea keels entire or ciliate and scabrid, stamens 3, grains almost spherical, free-seeding, grains eaten by baboons, grows quickly, widely naturalized elsewhere, makes fair hay when mixed with other species, not very palatable or unpalatable to stock, species of no grazing value, eaten by cattle when young, often aromatic and stinking, unpleasant odour when fresh, native pasture species, when ingested fresh or dry reported to cause sickness in horses, in Lesotho the grains are used in time of famine for human food, pioneer species, suitable for reseeding denuded pastoral land in arid areas, straw for matting and thatching, a common weed in irrigation areas, agricultural fallows, vegetable garden, coastal plains, along washes in desert scrub and desert grassland, on arable land, in heavy bottomland soils, on rocky slopes, on bare ground, cultivation and disturbed ground, roadsides, mixed shrubland, railroads, dry roadside gravel, sandy flats, in deep red sand, on denuded land in semiarid areas, on partially denuded grassland, wasteland, on poor soils, rocky overgrazed pasture, overgrazed dry pastures, see *Species Plantarum* 1: 68, 70. 1753, *Flora Aegyptiaco-Arabica* 21. 1775, *Flora Pedemontana* 2: 246, t. 91, f. 2. 1785, *Methodus Plantas Horti Botanici* ... 185. 1794, *Descriptio Graminum in Gallia et Germania* 181. 1802, *Flora Lusitanica* 1: 103. 1804, *Icones et Descriptiones Graminum Austriacorum* 4: 14, t. 24. 1809, *Essai d'une Nouvelle Agrostographie* 74, 167, 175. 1812, *Enumeratio Stirpium Transsylvanicae* 3: 238. 1816, *Descriptio uberior Graminum* 154. 1817, *Systema*

Vegetabilium 2: 584-585. 1817, *The Genera of North American Plants* 1: 67. 1818, *Compendium Florae Philadelphicae* 1: 62. 1818, *Mantissa* 2: 326. 1824, *Systema Vegetabilium, editio decima sexta* 1: 344, 348. 1825, *Hortus Regius Botanicus Berolinensis* 1: 187. 1827, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 371. 1833, *Nomenclator Botanicus. Editio secunda* 1: 225. 1840, *Flore des Environs de Paris* 2: 641. 1845, *A Manual of the Botany of the Northern United States. Second Edition* 563. 1856, *Enum. Pl. Zeyl.* 5: 373. 1864, *Flora der Provinz Brandenburg* 1: 841. 1864, *Deutsche Flora. Pharmaceutisch-medicinische Botanik...* 389. 1881, *Expedición al Río Negro, Botánica* 272. 1881, *Mexicanas Plantas* 2: 116. 1886, *Flora von Nieder-Österreich* 1: 88. 1890, *The Metaspermae of the Minnesota Valley* 75. 1892 and *Synopsis der mitteleuropäischen Flora* 2: 371. 1900, *Handb. Fl. Ceylon* 5: 297. 1900, *A Flora of Western Middle California* 60. 1901, *Malpighia* 18: 386. 1904, *Bulletin de la Société Botanique de France* 54: 24. 1907, *Mitteilungen des Naturwissenschaftlichen Vereins der Universität Wien* 5(9): 110. 1907, *Annuario del Reale Istituto Botanico di Roma* 8(3): 370-371. 1908, *Flore de France* 14: 262. 1913, *American Midland Naturalist* 4: 221. 1915, *Report of the Michigan Academy of Science, Arts and Letters* 17: 182. 1916, *Collez. Bot.* 1: 187. 1916, *University of Illinois Agricultural Experiment Station Bulletin* 205: 381. 1918, *Bulletin de la Société Botanique de France* 66(7): 299-300. 1919 [1920], *Botanisches Archiv* 5(3-4): 193. 1924, *Journal of the Bombay Natural History Society* 33: 492. 1929, *Handb. Fl. Ceylon* 6: 340. 1931, *Flore Complète Illustrée en Couleurs de France, Suisse et Belgique* 12: 32. 1934, *American Midland Naturalist* 4: 221. 1937, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 369. 1939, *Catalogue des Plantes du Maroc* 4: 935. 1941, *Flore de l'Afrique du Nord* 2: 175-176. 1953, *Grasses of Ceylon* 76. 1956, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 48: 480. 1957, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma ...* 503. 1960, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Taxon* 35: 696-701. 1986, *Annali di Botanica* 45: 75-102. 1987, *Journal of Cytology and Genetics* 22: 12-22. 1987, *Journal of Cytology and Genetics* 23: 118-131. 1988, *Bothalia* 21(2): 163-170. 1991, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Fitologija* 39: 72-77. 1991, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Monocotiledóneas Mexicanas: una Sinopsis Florística* 10: 7-236. 2000, *Iheringia, Bot.* 55: 62. 2001.

in English: black grass, gray love grass, gray love grass, snake grass, spreading love grass, strongly scented love grass, stinking eragrostis, stink love grass, stink grass, love grass, sparrow grass

in Brazil: capim-mimoso-fedido, capim-mimoso, capim-pé
in Mexico: amor seco, amorseco, pasto amor hediondo, pastoapestoso, pasto llorón

in Arabic: agmellil, azmelil, tannesmirt, tukurit
 in Mali: burdi koladé, fitirde, sama labi, samba gambi, saraho lejyudi, saraho lekyudi, subu tufé, wolo kamamba
 in Mauritania: agmellil, azmelil, tannesmirt, tukurit
 in Nigeria: ako yayangan, aman mussà, budaree, budari, bulbulin mussà, bunsurun fādámàà, bunsurun fage, eran awo, koomayyàà, kumayyàà
 in Senegal: samba labi
 in Somalia: ramag, domar, agar, doie, doye
 in southern Africa: blousoetgras, rysgras, soetgras, stink eragrostis, stinkgras, tuingras (Afrikaans); matatane, moseeka (Sotho)
 in Upper Volta: kolo rasé, nuanganu
 in Yoruba: ako yayangan, eran awo
 in India: bettada akabu hullu, bettada akkaabu hullu, chiriya ke chaolai, godamiri, kaodia, malka falka, poongya, pungjia, ranpohe
 in Japan: suzume-gaya (= sparrow grass)

E. cilianensis (All.) Vignolo ex Janch. subsp. *cilianensis*
 Israel, Eurasia.

E. cilianensis (All.) Vignolo ex Janch. subsp. *starosselskyi* (Grossh.) Tzvelev (*Eragrostis starosselskyi* Grossh.)
 Israel, Jordan.

in English: Kazakhstan stink lovegrass

E. ciliaris (L.) R. Br. (*Andropogon amboinicus* (L.) Merr.; *Cynodon ciliaris* (L.) Raspail; *Eragrostis amboinica* (L.) Druce; *Eragrostis boryana* (Willd.) Steud.; *Eragrostis ciliaris* (L.) Link, nom. illeg., non *Eragrostis ciliaris* (L.) R. Br.; *Eragrostis ciliaris* (L.) Nees, nom. illeg., non *Eragrostis ciliaris* (L.) R. Br.; *Eragrostis ciliaris* subsp. *brachystachya* (Boiss.) H. Scholz; *Eragrostis ciliaris* var. *arabica* (Jaub. & Spach) Asch. & Schweinf.; *Eragrostis ciliaris* var. *brachystachya* Boiss.; *Eragrostis ciliaris* var. *ciliaris*; *Eragrostis ciliaris* var. *comta* (Link) Schrad.; *Eragrostis ciliaris* var. *laxa* Kuntze; *Eragrostis comta* Link; *Eragrostis lapida* Hochst., a misspell.; *Eragrostis lepida* (Hochst. ex A. Rich.) Hochst. ex Steud.; *Eragrostis lobata* Trin.; *Eragrostis pulchella* Parl.; *Eragrostis villosa* Trin.; *Macrolepharus contractus* Phil.; *Megastachya boryana* (Willd.) Roem. & Schult.; *Megastachya ciliaris* (L.) P. Beauv.; *Poa amboinica* L.; *Poa boryana* Willd.; *Poa ciliaris* L.; *Poa comta* (Link) Kunth; *Poa elegans* Poir.; *Poa lepida* Hochst. ex A. Rich.; *Poa lobata* (Trin.) Kunth; *Poa pulchella* Parl., nom. illeg., non *Poa pulchella* Salisb.) (after the French naturalist Jean Baptiste Georges Geneviève Marcellin Bory de Saint-Vincent, 1778-1846, microscopist, traveler, geographer and explorer, with Baudin in Australia 1801, on the Isle de Bourbon and Canary Islands 1801-1802, took part in the voyage of the *Coquille* commanded by Louis-Isidor Duperrey (1786-1865), author of *Voyage dans les quatres principales îles des mers d'Afrique*. Paris 1804, *Sur les*

Grenadilles ou Passionnaires. Bruxelles 1819 and *Histoire des hydrophytes, ou plantes agames des eaux*. Paris 1829, joint author of *Dictionnaire classique d'histoire naturelle*. Paris 1822-1831. See P. Romieux, *Les carnets de Bory de Saint-Vincent 1813-1815*. Paris 1934; J.H. Barnhart, *Biographical notes upon botanists*. 1: 224. 1965; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 46. Boston, Mass. 1972; M. Colmeiro y Penido, *La Botánica y los Botánicos de la Peninsula Hispano-Lusitana*. Madrid 1858; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Jacques Julien Houtton de Labillardière (1755-1834), *Novae Hollandiae plantarum specimen*. 1: 81. 1805; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 48. Regione Siciliana, Palermo 1988; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942; Wilma George, in *D.S.B.* 2: 320-321. 1981; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987)

Tropical India, Africa and America. Annual or short-lived perennial, slender, wiry, tufted or loosely tufted, simple, erect or often slightly geniculate, terete, leaf sheath glabrous or pilose, ligule a ring of short hairs, leaves with scabrid margins, inflorescence a contracted woolly panicle spiciform, densely clustered spikelets purple with stiff hairs, 6- to 11-flowered, spikelets oblong to ovate breaking up from the top downward, 2 glumes subequal strongly keeled and compressed, lemmas oblong with hairy keels, palea keels hairy to conspicuously ciliate, stamens 2 or 3, weak stigmas, grains collected in time of scarcity, native pasture species, good forage for stock, a weed of cultivation naturalized elsewhere, susceptible to long drought, useful for fixing dunes, used for thatching, common in disturbed areas and sandy soils, fields and wadi beds, ruderal, lawn grass, coastal dunes, coastal sandy places, moist sandy soils, on red sand, savannah, in bushveld, overgrazed veld, sandy soil on river margin, cultivated lands, open areas, semidesert shrubland, weedy ground, sometimes in saline plains and habitats, see *Systema Naturae, Editio Decima* 2: 875. 1759, *Mantissa Plantarum* 557. 1771, *Encyclopédie Méthodique, Botanique* 5: 87. 1804, *Enum. Hort. Berol.* 109. 1809, *Essai d'une Nouvelle Agrostographie* 74, 167, 174. 1812, *Systema Vegetabilium* 2: 592. 1817, James Hingston Tuckey (1776-1816), *Narrative of an Expedition to Explore the River Zaire*, usually called the Congo, in South Africa, in 1816... 478. London 1818, *Fundamenta Agrostographiae* 137. 1820, *Annales des Sciences Naturelles, Botanique* 5: 302.

1825, *Hortus Regius Botanicus Berolinensis* 1: 192-193. 1827, *Révision des Graminées* 1: 113. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 512-514. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 396. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 346. 1833, *Linnaea* 12(4): 451. 1838, *Nomenclator Botanicus. Editio secunda* 1: 562. 1840, *Tentamen Florae Abyssinicae ...* 2: 424. 1850, *Flora* 38: 327. 1855, *Linnaea* 29(1): 101. 1858, *Flora Orientalis* 5: 582. 1884, *Revisio Generum Plantarum* 2: 774. 1891, *The Flora of British India* 7: 315. 1896, *Grasses of North America for Farmers and Students* 2: 479. 1896 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 61-62. 1903, *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 78: 403. 1905, *Contr. U.S. Natl. Herb.* 12: 121. 1908, *An Interpretation of Rumphius's Herbarium Amboinense* Publication No. 9: 88. 1917, *Report. Botanical Exchange Club. London.* 1916: 621. 1917, *Handb. Fl. Ceylon* 6: 340. 1931, *Bulletin de la Société Botanique de France* 101: 397. 1954, *Grasses of Ceylon* 72. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma ...* 506. 1960, *Willdenowia* 7(2): 420. 1974, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 22: 12-22. 1987, *Journal of Cytology and Genetics* 23: 118-131. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Blumea* 37(1): 227-237. 1992, *Iheringia, Bot.* 55: 37. 2001.

in English: Mutema love grass, woolly love grass, gopher-tail love grass, gophertail lovegrass

in Spanish: hierba de hormiga

in Brazil: capim-penacho, capim-de-rola, capim-de-canário, capim-mimoso

in Mexico: pasto

in Arabic: rauwaj

in India: tor chandbol, undar-punchho

in Gambia: ndirra, ndirra sina, n'dyiro, nbumu ju tio, numu ju tyo, nyantan, yiti ma kora

in Ghana: kumburar kama

in Guinea: ologuélé

in Mali: fitti fitti, kiu pitè, paguire jaule, sambu gambi, sorghobo, sorgobo, subu, subu furiafurua, subu koré, tadjit, wolo gaman, wolo kaman

in Nigeria: agbado esin, aknuse, alielie nkuku, barata, burburwa, burburwar fādámàà, dutaleho, eeran awo, eran esin, eran awo, gantaska, gafar fatin, hatsàà hatsàà, iwo awo, irungbon, irungbon efon, karangiyaa, kashe saura, katsàà katsàà, kelaselem, kooko esin, koomayyàà, kumbura kama, kunbura kama, matsandaka, matsandaka tsumbe, namijin tsintsiyàà, ogbe agufon, ogbe agunfon, oka esin, rauwaj, sagaje, saraaho, saraaho gorko, sarawal, tappo, tsintsiiyar fadamàà, tsumbè, yayangan

in Senegal: diamblogor, diamblokori, diisis gor, itimakoro, kiu pitè, mbangati, paguire jaule, salguf, salguf utak, sambu gambi, sorghobo, wolo gaman, wolo kaman

in Sierra Leone: funfuri, peni fafagbe, peni fafagbi, peni pagbel, sankabesukwi, serelinyaxe

in southern Africa: wollerige-eragrostis; lehola-le-letso-lalipere (Sotho); muchila bwende (Tonga)

in Yoruba: agbado esin, eeran awo, eran esin, eran awo, iwo awo, irungbon, irungbon efon, kooko esin, ogbe agufon, ogbe agunfon, oka esin, yayangan

E. ciliaris (L.) R. Br. var. *ciliaris* (*Eragrostis ciliaris* var. *comta* (Link) Schrad.; *Poa ciliaris* L.)

Tropics. See *Systema Naturae, Editio Decima* 875. 1759, *Hortus Regius Botanicus Berolinensis* 1: 193. 1827, *Linnaea* 12(4): 451. 1838 and *Contr. U.S. Natl. Herb.* 12: 121. 1908.

E. ciliaris (L.) R. Br. var. *laxa* Kuntze (*Eragrostis ciliaris* (L.) R. Br.)

West Indies. See *Revisio Generum Plantarum* 2: 774. 1891 and *Iheringia, Bot.* 55: 37. 2001.

E. cimicina Launert

Angola, Zambia, Zimbabwe. Perennial, rhizomatous, tufted, open inflorescence, florets closely packed and overlapping at the base, lemma shiny, grows on sandy loam on floodplains, see *Prodromus einer Flora von Südwestafrika* 34(160): 221. 1970.

E. clelandii S.T. Blake

South Australia. Seeds ground and made into dampers, see *Transactions and Proceedings of the Royal Society of South Australia* 67: 49. 1943.

in English: Cleland's love grass

E. collina Trin. (*Aira arundinacea* L.; *Boriskellera arundinacea* (L.) Terechov; *Eragrostis arundinacea* (L.) Roshev., nom. illeg., non *Eragrostis arundinacea* Jedwabn.; *Festuca arundinacea* (L.) Lilj., nom. illeg., non *Festuca arundinacea* Schreb.; *Poa arundinacea* (L.) Link, nom. illeg., non *Poa arundinacea* Moench; *Poa collina* (Trin.) K. Koch, nom. illeg., non *Poa collina* Host; *Poa heteroclita* Desv.; *Psilantha arundinacea* (L.) Tzvelev)

Russia. See *Species Plantarum* 1: 64, 73. 1753, *Methodus Plantas Horti Botanici ...* 186. 1794, *Utkast til en Svensk Flora, Andra Uplagan* 47. 1798, *Hortus Regius Botanicus Berolinensis* 1: 176. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 413. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 204. 1831, *Linnaea* 21(4): 405. 1848 and *Flora URSS* 2: 319, t. 24, f. 10, a, b. 1934, *Delectus Seminarum Hortus Botanicus Reg. Kujbyshev* 13. 1938, *Bot. Zhurn. (Moscow & Leningrad)* 53: 311. 1968.

E. concinna (R. Br.) Steud. (*Poa concinna* R. Br.; *Poa venusta* Roem. & Schult.)

Australia. Perennial, compact, tufted, glabrous, smooth, pruinose, sparse terminal panicles, spikelets sometimes cleistogamous, similar to *Eragrostis fallax*, see *Prodromus Florae Novae Hollandiae* 180. 1810, *Systema Vegetabilium* 2: 573. 1817, *Synopsis Plantarum Glumacearum* 1: 279. 1854.

E. condensata (J. Presl) Steud. (*Brizopyrum condensatum* (J. Presl) E. Fourn.; *Distichlis condensata* (J. Presl) Hemsl.; *Eragrostis densissima* Hack.; *Eragrostis lehmannii* Pilg.; *Eragrostis tenax* (Kunth) Steud.; *Megastachya condensata* J. Presl; *Megastachya tenax* (Kunth) Roem. & Schult.; *Poa condensata* (J. Presl) Kunth; *Poa tenax* Kunth) (dedicated to the German botanist Friedrich Carl Lehmann, 1850-1903, explorer, plant and orchid collector in Central and South America (Guatemala, Costa Rica, Colombia, Ecuador), mining engineer, German Consul in Colombia)

Ecuador. Perennial, shrubby, caespitose, erect, glabrous, leaf sheaths overlapping, ligule ciliate, leaf blades flat to involute, panicles condensed and spicate with appressed branches, spikelets compressed narrowly lanceolate to oblong-ovate, 4- to 12-flowered, glumes membranous ovate to lanceolate, lemmas membranous broadly ovate, 3 stamens, on open sandy slopes, see *Prodromus Systematis Naturalis Regni Vegetabilis* 1: 160. 1815 [1816], *Systema Vegetabilium* 2: 587. 1817, *Reliquiae Haenkeanae* 1(4-5): 284. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 344. 1833, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Synopsis Plantarum Glumacearum* 1: 278. 1854, *Biologia Centrali-Americana; ... Botany ...* 3(20): 578. 1885, *Mexicanas Plantas* 2: 121. 1886, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 32. 1899 and *Österreichische Botanische Zeitschrift* 52: 304. 1902.

E. conferta (Elliott) Trin. (*Eragrostis glomerata* (Walter) L.H. Dewey; *Eragrostis japonica* (Thunb.) Trin.; *Poa conferta* Elliott; *Poa glomerata* Walter)

U.S. See *Flora Japonica*, ... 51. 1784, *Flora Caroliniana, secundum ...* 80. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 158. 1816, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405, 409. 1830, *Contributions from the United States National Herbarium* 2(3): 543. 1894.

E. confertiflora (J.M. Black) J.M. Black (*Eragrostis interrupta* P. Beauv. var. *densiflora* J. Black, not *Eragrostis densiflora* Rendle) (Latin *confertus*, *a*, *um* "crowded," *confertiflorus*, *a*, *um* "with the flowers crowded together")

South Australia, Queensland, Northern Territory. Annual, erect or ascending, leafy near the base, leaves flat and smooth, panicle spike-like, dense clusters of shortly pedicellate spikelets linear or narrowly oblong, glumes ovate

and more or less acute, lemmas ovate-oblong and obtuse, species of no grazing value, see *Transactions and Proceedings of the Royal Society of South Australia* 48: 253. 1924, *Transactions and Proceedings of the Royal Society of South Australia* 55: 136, f. 2. 1931.

in English: spike love grass

E. congesta Oliv.

Malawi, Zaire, South Africa, Uganda, Tanzania. Perennial, tufted, reddish, erect to geniculate, ligules dark, clusters of spikelets, common in moist areas, disturbed places, along roadsides, boggy grounds, see *Transactions of the Linnean Society of London* 29: 175. 1875 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: (Anhang 101), t. 59, f. 2-3. 1930; 324. 1931.

in Tanzania: mahwa kinyaturu

E. contrerasii R.W. Pohl (*Neeragrostis contrerasii* (R.W. Pohl) P.M. Peterson)

Guatemala. See *Transactions of the Academy of Science of St. Louis* 13(7): 178. 1903, *Iowa State Journal of Research* 51(3): 323, f. 1. 1977, *Smithsonian Contributions to Botany* 87: 35. 1997.

E. crassinervis Hack.

Namibia. Perennial, stoloniferous, tufted, narrow inflorescence more or less unbranched, greenish purplish spikelets appressed to the axis, common in moist places, vleis, river beds, on brackish soils, see *Bulletin de l'Herbier Boissier, sér. 2*, 1: 774. 1901.

E. crateriformis Lazarides

Australia. Annual, tufted, culms with crateriform glands, panicles contracted, linear pedicellate spikelets, vestigial terminal floret, glumes dissimilar, palea 3-lobed, similar to *Eragrostis pilosa*, see *Australian Systematic Botany* 10(1): 108. 1997.

E. cubensis Hitchc.

The Caribbean, Cuba. See *Contributions from the United States National Herbarium* 12(6): 243. 1909, *Manual of the Grasses of the West Indies* 1-439. 1936, *Fontqueria* 46: [i-ii], 1-259. 1997.

E. cumingii Steud. (*Eragrostis bleeseri* Pilg.; *Eragrostis brownii* (Kunth) Nees ex Steud.; *Eragrostis brownii* (Kunth) ex Chapman) Nees ex Steud.; *Eragrostis brownii* Nees; *Eragrostis cumingii* var. *kisarensis* Jansen; *Eragrostis cumingii* var. *novoguineensis* Jansen; *Eragrostis cumingii* var. *rindjaniensis* Jansen; *Eragrostis distans* Hack.; *Eragrostis reflexa* Hack.; *Eragrostis simplex* Scribn.; *Uniola paniculata* Llanos) (for Hugh Cuming, 1791-1865 (d. London), British traveler and plant collector (in South America and Philippines), Fellow of the Linnean Society 1832, shell collector; see A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 183-184. London

1994; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997)

Asia, Indonesia, Australia. Annual, variable, polymorphic, erect or ascending, sprawling, inflorescences terminal and axillary, terminal panicles open or spiciform, often cleistogamous, gibbous lemma, grain strongly compressed, noxious weed, along roadsides, seasonally wet sites, arid regions, white sand, sandy soil, on coastal sand dunes, see *Fragmentos de algunas plantas de Filipinas* 32. 1851, *Synopsis Plantarum Glumacearum* 1: 266. 1854 and *Bulletin, Division of Agrostology United States Department of Agriculture* 7: (edition 3)250, f. 244. 1900, *Philippine Bur. Govt. Lab. Bull.* 35: 81. 1906, *Philippine Journal of Science* 3(3): 168. 1908, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(91): 112. 1927, *Reinwardtia* 2(2): 271-272. 1953, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Rhodora* 80: 390-403. 1978.

in English: Cuming's love grass, lovegrass

in India: bharru

E. curtipedicellata Buckley (*Eragrostis brevipedicellata* A. Gray; *Eragrostis viscosa* Scribn., nom. illeg., non *Eragrostis viscosa* (Retz.) Trin.)

U.S., Texas, Mexico. Perennial, sticky, frequently found on limestone or granite prairies, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97, 336. 1862, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 51, t. 7. 1898.

in English: gummy love grass, shortstalked lovegrass

E. curvula (Schrader) Nees (*Eragrostis chloromelas* Steud.; *Eragrostis curvula* var. *atrata* (Schweinf.) Cufod.; *Eragrostis curvula* var. *conferta* Nees; *Eragrostis curvula* var. *valida* Stapf; *Eragrostis jeffreysii* Hack.; *Eragrostis robusta* Stent; *Eragrostis subulata* Nees; *Eragrostis thunbergiana* Steud. var. *atrata* Schweinf.; *Poa curvula* Schrad.)

Africa, southern Africa. Perennial bunchgrass, apomictic, very variable, vigorous and long-lived, more or less thickened at base, flimsy to stout, stiff, slender or robust, simple or branched, densely clumped or strongly tufted, erect or ascending, sometimes bent at the lower nodes, extensive root system, roots fibrous, ligule a ring of short hairs, leaf sheaths pubescent and ribbed, leaf blade flat or rolled, dense or open panicle erect or pendent, spikelets short-stipitate and narrow-oblong to oblong to linear breaking up from the bottom upward, unequal glumes acute and glabrous, lemmas lanceolate-oblong with apex obtuse, palea persistent, stamens 3, minute seeds creamy to dark orange, edible grains as famine food, reproducing by seed, ornamental, a good forage producer, cultivated fodder, good hay, serious weed species naturalized elsewhere, a valuable native pasture species, good palatability or palatability low except when young, the young succulent growth generally palatable and nutritious to stock, quite drought-tolerant, tolerates fire, good cold tolerance, very tolerant of salinity, very

similar to *Eragrostis chloromelas* Steud., groundcover, valuable in erosion control and soil binder, to stabilize soil in tea estates, adapted to many habitats, common in disturbed land, moist sandy soils, stony flats, acid to loamy soils, dry areas, dry rocky soils, waste areas, on roadsides and water courses, on well-drained sandy soils, uncultivated lands, in high rainfall areas, along edge of road, stony mountains, see *Göttingische gelehrte Anzeigen unter der Aufsicht der Königl.* 3: 2073. 1821, *Nomenclator Botanicus. Editio secunda* 2(1): 564. 1840, *Florae Africae Australioris Illustrationes Monographicae* 397. 1841, *Synopsis Plantarum Glumacearum* 1: 271. 1854, *Bulletin de l'Herbier Boissier, sér. 2, App. 2*: 101. 1894, *Revisio Generum Plantarum* 3(1): 351. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 244. 1899 and *Bothalia* 2: 288. 1927, *Cytologia* 19: 97-103. 1954, *Bulletin du Jardin Botanique National de Belgique* 38: 1251. 1968, *Bothalia* 17: 135-136. 1987, *Lagascalia* 15: 119-124. 1988, *Journal of Cytology and Genetics* 23: 118-131. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990.

in English: African love grass, boer love grass, Ermelo love grass, weeping grass, weeping love grass, wire grass

in southern Africa: bergsoetgras, blougras, blousaadgras, digsaad eragrostis, hardegras, jongosgras, kaffergras, oulandsgras, oulandergras, renostergras, vleigras, fyngras, fynvleigras, growwevleigras (Afrikaans); matolo, motolo, moseka, moseeka (Sotho); seritsoana (Zulu)

in Spanish: pasto llorón

in Brazil: capim chorão

in Mexico: amor seco curvado

E. curvula (Schrader) Nees var. ***curvula***

Africa.

E. curvula (Schrader) Nees var. ***valida*** Stapf

South Africa, Natal. See *Flora Capensis* 7: 600-601. 1900, *Fl. Il. Catarin.* 1(GRAM): 363. 1981.

E. cylindrica (Roxb.) Nees (*Eragrostis cylindrica* (Roxb.) Nees ex Hook. & Arn.; *Eragrostis cylindrica* (Roxb.) Steud., nom. illeg., non *Eragrostis cylindrica* (Roxb.) Nees; *Poa cylindrica* Roxb.)

China, Taiwan, Nepal. See *Flora Indica; or Descriptions ...* 1: 335. 1820, *The Botany of Captain Beechey's Voyage* 251. 1838.

in English: knotted lovegrass

E. cylindriflora Hochst. (*Eragrostis annulata* Chiov., nom. illeg., non *Eragrostis annulata* Rendle ex Scott-Elliot; *Eragrostis cylindriflora* var. *gymnorhachis* Schweinf.; *Eragrostis gymnorhachis* (Schweinf.) Chiov. ex Chiarugi; *Eragrostis horizontalis* Peter; *Eragrostis multipilosa* Hochst. ex Mattei)

Tropical Africa. Annual or weak perennial, bunchgrass, tufted to loosely tufted, open, erect or geniculate, rooting at lower nodes, dark to brown nodes, leaf blades expanded or rolled, leaf sheaths glandular, ligule a fringe of short hairs, foliage sparse, inflorescence an open panicle, lowest branches of the inflorescences whorled, cylindrical spikelets, lowest lemma papery to membrane-like, pioneer grass of little agricultural value, good grazing for all stock, grains and leaves eaten by baboons, a weed of irrigation, in disturbed ground and along roadside, grassland, rocky soil, abandoned field, overgrazed fields, sandy soils, red sandy soil, river beds, depressions, see *Flora* 38: 324. 1855, *Bulletin de l'Herbier Boissier* 2(App. 2): 40. 1894 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 63-64. 1903, *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 7: 29-36. 1909, *Webbia* 8: 104. 1951.

in English: cylinderflower lovegrass

in South Africa: blousaadgras, naakte windhalmgras, kahler windhalm

E. deflexa A.S. Hitchc.

Hawaii. Endangered or extinct species, open areas, open woods, see *Memoirs of the Bernice Pauahi Bishop Museum* 8(3): 131, f. 18. 1922.

in English: Pacific lovegrass, bent lovegrass

E. desertorum Domin

Queensland, Northern Territory, New South Wales. Perennial with arching stolons, rhizomatous, erect, wiry, base swollen and thickened by woolly cataphylls, rooted tufts, leaf blade rolled, inflorescence open, florets 6-46, glumes and lemmas acute and keeled, palea 2-keeled, 2 stamens, grows in sandy areas of the inland, similar to *Eragrostis eriopoda*, see *Biblioth. Bot.* 20(85): 404. 1915.

in English: woollybutt

E. desolata Launert

Zimbabwe. Rare species, see *Boletim da Sociedade Broteriana, ser. 2* 35: 18. 1961.

E. diarrhena (Schult. & Schult.f.) Steud. (*Eragrostis interrupta* var. *diarrhena* (Schult. & Schult.f.) Stapf; *Eragrostis interrupta* var. *koenigii* (Kunth) Stapf; *Eragrostis koenigii* Link; *Poa diandra* Roxb., nom. illeg., non *Poa diandra* R. Br.; *Poa diarrhena* Schult. & Schult.f.)

Eurasia. Grazed or eaten by the cattle, see *Flora Indica; or Descriptions ...* 1: 337. 1820, *Hortus Regius Botanicus Berolinensis* 2: 294. 1833, *Synopsis Plantarum Glumacearum* 1: 266. 1854, *The Flora of British India* 7: 316. 1896 and *Fl. Pres. Madras* 10: 1826. 1934.

E. dielsii Pilger ex Diels & Pritzel (*Eragrostis falcata* sensu Benth., non Gaudich.) (in honor of the German botanist Friedrich Ludwig Emil Diels, 1874-1945, from 1900-1901 plant collector in Western Australia)

Australia. Annual or short-lived perennial, tufted, more or less scabrous, simple or branched, erect or ascending or prostrate, base often swollen, hairy cataphylls, leaf blade rolled, slender leaves glabrous and scabrous, panicle spike-like or contracted, spikelets linear and more or less straight or curved, glumes persistent and ovate, forage, not grazed when gray-black after light rainfall, highly palatable to sheep and kangaroos when dry or green, useful for erosion control, usually in high salinity areas, in mallee on light clay soils of the inland, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 35: 76. 1904.

in English: mallee love grass, mulka love grass, mulka grass, mulka

E. diffusa Buckley (*Eragrostis pectinacea* (Michx.) Nees; *Eragrostis purshii* var. *delicatula* Munro ex Scribn.; *Eragrostis purshii* var. *diffusa* (Buckley) Vasey) (for the German (b. Saxony) botanist Frederick (Friedrich, Fredric, Frederic) Traugott Pursh (Pursch), 1774-1820 (d. Montreal, Canada), traveler, gardener, plant collector, among his writings is *Flora Americae septentrionalis*. London 1814. See Thomas Potts James (1803-1882), *Journal of a Botanical Excursion in the Northeastern Parts of the States of Pennsylvania and New York during the Year 1807*. By Frederick Pursh. Philadelphia 1869; Joseph Ewan, in *D.S.B.* 11: 217-219. 1981; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 766. Stuttgart 1993; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. 1975; J.H. Barnhart, *Biographical notes upon botanists*. 3: 116. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 229. Oxford 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Joseph Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Cambridge, Harvard University Press 1967; J.W. Harshberger, *The Botanists of Philadelphia and their Work*. 113-117. 1899; Edwin M. Betts, editor, "Thomas Jefferson's Garden Book, 1766-1824." in *Mem. Amer. Phil. Soc.* 22: 1-704. Philadelphia 1944; Joseph Ewan and Nesta Ewan, "John Lyon, Nurseryman, and Plant Hunter, and His Journal, 1799-1814." in *Transactions of the American Philosophical Society*. 53(2): 1-69. 1963; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; William Darlington (1782-1863), *Reliquiae Baldwinianae*. Philadelphia 1843)

U.S., Texas. Annual, leaf blade margins scabrid, inflorescence paniculate with spreading branches, stamens 3, caryopsis elliptic, found in waste places and fields, along roadsides and railways, some botanists synonymize this

taxon with *Eragrostis pectinacea* (Michaux) Nees ex Steudel, see *Flora Boreali-Americana* 1: 69. 1803, *Florae Africae Australioris Illustrationes Monographicae* 406. 1841, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97. 1862, *Bulletin of the Torrey Botanical Club* 10(1): 30. 1883, *Contributions from the United States National Herbarium* 1(2): 59. 1890 and *Journal of the Washington Academy of Sciences* 23(10): 449. 1933, *Man. Grass. U.S.* 849. 1935, *Fieldiana, Botany* 24(2): 38-331. 1955, *Phytologia* 37(4): 317-407. 1977.

in English: western love grass, spreading lovegrass, lovegrass, diffuse love grass

E. dinteri Stapf (*Bulletin of Miscellaneous Information Kew* 1906: 29. 1906)

Africa, Angola. Annual, aromatic, tufted, erect, upright or geniculate and rooting at lower nodes, basal leaf sheaths more or less glabrous, lemma acuminate, palea keels entire, common in red sandy soils, deep sandy soils, disturbed areas, see *Bulletin of Miscellaneous Information Kew* 1906: 29. 1906.

E. ecarinata Lazarides

Australia, Northern Territory. Perennial, erect, compact, tufted, tussocky, ligule a fringe of hairs, leaf sheaths overlapping, inflated florets, paleas with auricle-like flaps on the keels, similar to *Eragrostis paniciformis*, see *Australian Systematic Botany* 10(1): 114. 1997.

E. echinochloidea Stapf

Zimbabwe, Namibia, Botswana, South Africa. Perennial, tufted, unbranched, upright or geniculate, leaf margin with sunken glands, leaf sheaths keeled and papery, ligule a fringe of short hairs, leaf blade expanded or rolled, inflorescence a panicle sparsely branched, densely packed spikelets on solitary branches, spikelets shortly pedicellate and compressed, lower glume acuminate, palea acute, palea keels broad and notched, pioneer grass, fairly palatable pasture, medium palatability while still green, low grazing value, spikelets eaten by humans and baboons, drought resistant, an indicator of disturbed veld, found on rocky slopes, sandy soils, disturbed soils, disturbed sandy places, shallow moist soils, disturbed areas, roadsides, along washes, around pans, cultivated and uncultivated lands, disturbed veld, see *Flora Capensis* 7: 627. 1900.

in English: thick grass, tick grass, African love grass

in South Africa: bosluisgras, krummelgras, hirse straußgras

E. ekmanii A.S. Hitchc. (*Eragrostis diandra* (R. Br.) Steud.; *Eragrostis elongata* (Willd.) J. Jacq.; *Eragrostis stenoclada* J. Presl; *Poa elongata* Willd.; *Poa stenoclada* (J. Presl) Kunth) (for the Swedish botanist Erik Leonard Ekman, 1883-1931)

Cuba. Endangered species, common in sandy pinelands, see *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 108. 1809, *Prodromus Florae Novae Hollandiae* 180. 1810,

Eclogae Graminum Rariorum 3. 1813, *Reliquiae Haenkeanae* 1(4-5): 278. 1830, *Révision des Graminées* 1: Suppl. XXVIII. 1830, *Synopsis Plantarum Glumacearum* 1: 279. 1854 and *Manual of the Grasses of the West Indies* 43, f. 22. 1936.

E. elatior Stapf (*Eragrostis bahiensis* Schrad. ex Schult.; *Eragrostis bahiensis* var. *bahiensis*; *Eragrostis elatior* Hack., nom. illeg., non *Eragrostis elatior* Stapf; *Eragrostis pilosa* var. *bahiensis* (Schrad. ex Schult.) Kuntze)

South Africa. Perennial, tufted, rhizomatous, slender inflorescence usually unbranched, spikelets solitary and distant, upper glume lanceolate, common in riverbanks, rocky places along rivers, periodically inundated areas, see *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Mantissa* 2: 318. 1824, *Revisio Generum Plantarum* 3(2,2): 353. 1898 and *Flora Capensis* 7: 617-618. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 374. 1909.

E. elegantissima Chiov.

Sahel, Sudan, Chad, Upper Volta, Niger. Annual, slender, wiry, leaf blades narrowly linear finely acute, panicle open and elliptic, spikelets linear, 10- to 45-flowered, glumes subequal, palea keels scabrid, lemmas narrowly lanceolate-oblong, resembling *Eragrostis tremula*, see *Annuario del Reale Istituto Botanico di Roma* 8: 367. 1908.

E. elliotii S. Watson (*Eragrostis acuta* A.S. Hitchc.; *Eragrostis campestris* Trin.; *Eragrostis macropoda* Pilg.; *Eragrostis nitida* (Elliott) Chapm., nom. illeg., non *Eragrostis nitida* Link; *Poa nitida* Elliott, nom. illeg., non *Poa nitida* Lam.)

U.S., Texas, the Caribbean. Perennial bunchgrass or annual, caespitose, erect, simple, glabrous, leaves mostly basal, narrow powder-blue foliage, inflorescence paniculate, found in dry sandy soil, open areas, open grassland, savannah, hummocks, along roadsides, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 162. 1816, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 72. 1836, *Flora of the Southern United States* 564. 1860, *Proceedings of the American Academy of Arts and Sciences* 25: 140. 1890 and *Symbolae Antillarum* 4: 106. 1903, *Proceedings of the Biological Society of Washington* 41: 159. 1928.

in English: Elliott lovegrass, blue love grass

E. elongata (Willd.) J.F. Jacq. (*Eragrostis cambessediana* (Kunth) Steud.; *Eragrostis diandra* (R. Br.) Steudel; *Eragrostis ekmanii* Hitchc.; *Eragrostis stenoclada* J. Presl; *Poa cambessediana* Kunth; *Poa diandra* R. Br.; *Poa elongata* Willd.) (for the French botanist Jacques Cambessèdes, 1799-1863, agronomist, plant collector, traveler, among his works are *Mémoire sur la famille des Sapindacées*. Paris 1829 and *Enumeratio plantarum quas in insulis Balearibus collegit J.C.* Paris 1827. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 301. 1965; M. Colmeiro y Penido,

La Botánica y los Botánicos de la Península Hispano-Lusitana. 1858; Victor Jacquemont (1801-1832), *Voyage dans l'Inde par Victor Jacquemont, pendant les années 1828 à 1832*. Paris 1841-1844; Auguste François César Prouvençal de Saint-Hilaire (1779-1853), *Flora Brasiliae Meridionalis*. Parisii 1825; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Australia. Perennial or annual, smooth, caespitose, erect and slender tussocks, simple, glabrous, leafy and compact near the base, sometimes branched at the lower nodes, bright green glabrous leaves, leaf blades flat or rolled, culms erect and simple or branched, narrow and contracted panicle usually spike-like or open, sessile or subsessile clusters of green to purplish and flattened spikelets, glumes acuminate, lemmas cartilaginous and shortly acuminate to acute, palea 2-keeled and glabrous, 2-3 stamens, often on inundated sandy soils, see *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1: 108. 1809, *Prodromus Florae Novae Hollandiae* 180. 1810, *Eclogae Graminum Rariorum* 3. 1813, *Reliquiae Haenkeanae* 1(4-5): 278. 1830, *Révision des Graminées* 1: Suppl. XXVIII. 1830, *Révision des Graminées* 2: 469, t. 148. 1831, *Synopsis Plantarum Glumacearum* 1: 279. 1854 and *Flora Capensis* 85: 400. 1915, *Manual of the Grasses of the West Indies* 43, f. 22. 1936.

in English: clustered love grass, common love grass, long love grass, close-headed love grass

in India: bara bhurbhuri, bharru

Malayan name: rumput kutu kerbau

E. eriopoda Benth. (Greek *erion* "wool" and *pous* "foot")
Western Australia, Queensland, Northern Territory, South Australia, New South Wales. Perennial and usually simple, wiry and erect, dense and spreading clumps, hirsute or woolly at the base of clumps, base swollen and thickened by woolly cataphylls, rhizomatous or with deep root system, knotty and woolly rhizomes, rolled leaves, sheaths ciliate on both margins, inflorescence open and much branched, spikelets more or less straight or curved and not woolly, florets 8-24, glumes and lemmas keeled and with margins translucent, heavy-seeding, a cover plant, very hardy and decorative species, extremely resistant to drought and grazing, survive severe droughts, regrows rapidly after burning, valuable fodder, eaten by domestic stock and kangaroos when green, new growth palatable or moderately palatable, becomes very fibrous when dry, grows in red sandy areas, coastal plains, open habitats, hind dunes, on shallow sandy soils, on river floodplains, red earths, semiarid and arid regions, on limestone slopes, see *Flora Australiensis: A Description* ... 7: 648. 1878.

in English: naked woollybutt grass, woollybutt, woollybutt grass, neverfail

E. erosa Scribn. ex Beal

U.S., Texas, Mexico. See *Grasses of North America for Farmers and Students* 2: 483. 1896.

in English: Chihuahuan love grass

E. exasperata Peter

East Africa. Delicate open panicle, ovate spikelets, palea keels ciliolate, frequent in gravel along road, closely related to *Eragrostis paniciformis*, see *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 108. 1930.

E. excelsa Griseb. (*Eragrostis glumacea* E. Fourn.; *Eragrostis prolifera* (Sw.) Steud.; *Poa prolifera* Sw.)

Mexico, the Caribbean. Perennial bunchgrass, large, forming large clumps, in moist areas, sandy places, roadsides, marsh, see *Nova Genera et Species Plantarum seu Prodromus* 27. 1788, *Synopsis Plantarum Glumacearum* 1: 278. 1854, *Catalogus plantarum cubensium* ... 227. 1866, *Mexicanas Plantas* 2: 117. 1886.

E. exigua Lazarides

Australia. Annual, tufted, slender, ascending, branched, ligule membranous, panicles decompound loosely contracted, spikelets 3- to 7-flowered, vestigial terminal floret, glumes persistent, palea 3-lobed, alluvial soils, seasonally flooded areas, similar to *Eragrostis tenellula*, see *Australian Systematic Botany* 10(1): 118. 1997.

E. falcata (Gaudich.) Gaudich. ex Steudel (*Eragrostis trichophylla* Benth.; *Poa falcata* Gaudich.)

South Australia, New South Wales, Western Australia, Northern Territory, Queensland. Perennial, tufted, rhizomatous, sometimes stoloniferous, wiry, erect or ascending, simple or branched, thickened at the base, leaves filiform, inflorescence open, spikelets purple and sometimes curved, florets 8-40, subequal glumes cartilaginous and obtuse to acute, lemmas cartilaginous and keeled, grain ovoid, salt-tolerant fodder plant, grows in sandy areas, palatable, see *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne* ... *Botanique* 408, t. 25. 1830, *Nomenclator Botanicus. Editio secunda* 1: 563. 1840, *Flora Australiensis: A Description* ... 7: 644. 1878 and *Anales del Museo Nacional de Buenos Aires* 21: 138. 1911.

in English: sickle love grass

E. fallax Lazarides

Western Australia, Northern Territory, Queensland. Perennial, tufted, compact, robust, tussocky, lower sheaths overlapping, panicles terminal and axillary, chasmogamous and cleistogamous spikelets, unequal glumes, alluvial soils, seasonally flooded areas, similar to *Eragrostis concinna*, see *Australian Systematic Botany* 10(1): 120. 1997.

E. fastigiata Cope

Africa. Perennial, tufted, branched, leaves rolled and wiry, amongst rocks, open habitats, hillsides.

E. fenshamii B.K. Simon (for R.J. Fensham, Queensland agrostologist and ecologist)

Australia. Perennial, tufted, densely rhizomatous, open panicles, spikelets long-pedicellate, florets loosely overlapping, unequal glumes persistent, 3 stamens, similar to *Eragrostis spartinooides* and *Eragrostis rigidiuscula*, see *Fl. Australia* 43: 333. 2002, *Fl. Australia* 44B: 377, 460. 2005.

E. ferruginea (Thunb.) P. Beauv. (*Poa ferruginea* Thunb.)

China, Japan, Nepal, India, Korea. Useful for erosion control, see *Systema Vegetabilium. Editio decima quarta* 14: 114. 1784, *Essai d'une Nouvelle Agrostographie* 71, 162, 174. 1812 and *Symbolae Sinicae* 7(5): 1282. 1936, *Botanical Magazine* (Tokyo) 51: 95. 1937, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 178. 1957, *Acta Botanica Yunnanica* 16(1): 24. 1994.

in Japan: kaze-kusa

E. ferruginea (Thunb.) P. Beauv. var. ***fujianensis*** N.X. Zhao & X.T. Ma

Asia, China. See *Essai d'une Nouvelle Agrostographie* 71, 162, 174. 1812 and *Acta Botanica Yunnanica* 16(1): 24. 1994.

E. filicaulis Lazarides

Western Australia, Northern Territory, Queensland. Perennial, filiform, tufted, compact, slender, leafy, hairy leaf blades, panicles spiciform or contracted, 2 minute anthers, in seasonally wet areas, sandy ridges, see *Australian Systematic Botany* 10(1): 121. 1997.

E. fosbergii Whitney

Hawaii. Perennial, endangered or rare species, found in dry forest, see *Occasional Papers of the Bernice Pauahi Bishop Museum* 13(8): 75, f. 1. 1937.

in English: Fosberg's lovegrass

E. fractus S.C. Sun & H.Q. Wang

China. See *Acta Phytotaxonomica Sinica* 19(4): 513-514, f. 1, 3. 1981.

E. frankii C.A. Meyer ex Steud. (*Eragrostis capillaris* (L.) Nees; *Eragrostis capillaris* var. *frankii* (C.A. Mey. ex Steud.) Farw.; *Eragrostis erythrogona* Nees ex Steud.; *Eragrostis frankii* var. *brevipes* Fassett; *Eragrostis frankii* var. *frankii*; *Poa micrantha* Schult.; *Poa parviflora* Nutt., nom. illeg., non *Poa parviflora* R. Br.)

U.S. Annual, somewhat decumbent, common along roadsides, on sandy soil, sandy riverbanks, in waste ground, mudflats of streams, see *The Genera of North American Plants* 1: 67. 1818, *Mantissa* 2: 305. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 505. 1829, *Synopsis Plantarum Glumacearum* 1: 273. 1854 and *Report of the*

Michigan Academy of Science, Arts and Letters 17: 182. 1916, *Rhodora* 34(401): 95. 1932.

in English: sandbar lovegrass, love grass

E. galpinii Stent (after Ernest Edward Galpin, 1858-1941, banker and plant collector, author of "A contribution to the knowledge of the flora of Drakensberg." *S. Afr. J. Sci.* 6: 209-229. 1909 and *Botanical Survey of the Springbok Flats, Transvaal*. Cape Town [1927] [Botanical Survey of South Africa. Memoir. no. 12], he left more or less 16,000 sheets to the National Herbarium in Pretoria; see J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectores E-H. Regnum Vegetabile* vol. 9. 1957; Gilbert Westacott Reynolds, *The Aloes of South Africa*. Balkema, Rotterdam 1982)

South Africa, Transvaal. See *Bothalia* 1: 176, t. 4. 1922.

E. gangetica (Roxb.) Steud. (*Eragrostis cambessediana* (Kunth) Steud.; *Eragrostis elegantula* (Kunth) Nees ex Steud., nom. illeg., non *Eragrostis elegantula* Nees; *Eragrostis elegantula* Nees; *Eragrostis flamignii* De Wild.; *Eragrostis luzoniensis* Steud.; *Eragrostis ovina* Hochst. ex A. Rich.; *Eragrostis stenoclada* J. Presl; *Eragrostis stenophylla* Hochst. ex Miq.; *Eragrostis willdenowii* Nees ex Steud.; *Poa cambessediana* Kunth; *Poa elegantula* Kunth; *Poa gangetica* Roxb.; *Poa ovina* A. Rich.)

Tropical Africa, Southeast Asia, India. Annual or short-lived perennial, variable, spreading, tufted to loosely tufted, erect or geniculate, simple or branched, glabrous, wiry, stout, coarse, knotty base, leaf blades finely pointed, ligule a shallow rim or a ciliolate membrane, leaf sheaths smooth and rather loose, very narrow leaves glabrous and mostly basal, grayish inflorescence, open linear-oblong panicles finally nodding, spikelets flat, long and slender pedicels, glumes subequal or unequal, lemmas flattened, a good fodder grass, pasture grass, heavily grazed when young, can be made into hay, a weed of cultivation, used for brooms, found in mountains, depressions, open habitats, grassland and savannah, low lying ground, heavy ground, open areas near marshes, vleis, temporary vleis, waste places, see *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1: 108. 1809, *Prodromus Florae Novae Hollandiae* 180. 1810, *Eclogae Graminum Rariorum* 3. 1813, *Flora Indica; or Descriptions* ... 1: 341. 1820, *Reliquiae Haenkeanae* 1(4-5): 278. 1830, *Révision des Graminées* 1: Suppl. XXVIII. 1830, *Révision des Graminées* 2: 469, t. 148. 1831, *Nomenclator Botanicus. Editio secunda* 1: 565. 1840, *Tentamen Florae Abyssinicae* ... 2: 428. 1850, *Analecta botanica indica* ... 2: 27. 1851, *Verh. Konink.-Nederl. Inst.* 3: 4, 39. 1851 (also *Analecta botanica indica* ... 1851), *Synopsis Plantarum Glumacearum* 1: 266, 269, 279. 1854 and *Handb. Fl. Ceylon* 5: 293. 1900, *Flora Capensis* 85: 400. 1915, *Manual of the Grasses of the West Indies* 43, f. 22. 1936, *Grasses of Ceylon* 73. 1956, *Grasses of Burma* ... 508. 1960.

in English: slim-flower love grass

in Arabic: rauwaj

in Gambia: ndirra, ndirra sina, n'dyiro, nbumu ju tio, numu ju tio, numu ju tyo, nyantan

in Ghana: kumburar kama

in Guinea: ologuélé

in Mali: edegelè, fitti fitti, kiu pitè, paguire jaule, paguiri jaule, sambu gambi, sasàà poana, sorghobo, sorgobo, subu, subu furiafuria, subu koré, tadjit, wolo gaman, wolo kaman

in Nigeria: agbado esin, aknuse, alieli nkuku, barata, burburwa, burburwar fadama, burburwar fadámàà, dudaleho, dutaleho, eeran awo, eran esin, eran awo, gantaska, gafar fatin, hatsàà hatsàà, iwo awo, irungbon, irungbon efon, karangiyaa, kashe saura, katsàà katsàà, kelaselem, kooko esin, koomanyar rafi, koomayyàà, kumbura kama, kumbura kama, matsandaka, matsandaka tsumbe, namijin tsintsiyàà, ogbe agufon, ogbe agunfon, oka esin, rauwaj, sagaje, saraaho, saraaho gorko, sarawal, shagaje, tappo, tsintsiiyar fadamàà, tsumbè, yayangan

in Senegal: diambul, diambul ambel, idadapen, idanapen, kiu pitè, mbangati, paguire jaule, salguf, salguf utak, sambu gambi, sorghobo, sorgobo, wolo gaman, wolo kaman

in Sierra Leone: bonjii, funfuri, kupika, leti, peni fafagbe, peni fafagbi, peni pabakbil, peni pagbel, rungarohun, san-kabesukwi, serelinyaxe

in southern Africa: wollerige-eragrostis; leholale-letso-lipere (Sotho); muchila bwende (Tonga)

in Yoruba: agbado esin, eeran awo, eran esin, eran awo, iwo awo, irungbon, irungbon efon, kooko esin, ogbe agufon, ogbe agunfon, oka esin, yayangan

in India: asara, jenkua, kaluargi, khari, thoda

in Thailand: yaa krok, ya krok

E. georgi A. Chev. (dedicated to the French (b. Caen) Colonial Administrator (*Administrateur des Colonies*) Georges Marie Patrice Charles Le Testu, 1877-1967 (d. Caen), traveler, explorer, plant collector in West Africa, 1900-1902 Dahomey, 1904-1906 Mozambique, 1907-1934 Gabon and Ubangi-Shari, 1935 Botanic Garden at Caen; see Auguste Jean Baptiste Chevalier (1873-1956), *Flore vivante de l'Afrique Occidentale Française*. 1: xxvii-xxx. Paris 1938; N. Hallé, in *Adansonia*. sér. 2, 7: 263-273. 1967; F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 50. 1971; H. Lecomte, *Les Bois de la Forêt d'Analamazaotra*. Madagascar 1922; François Pellegrin (1881-1965), *La Flore du Mayombe d'après les Récoltes de M. Georges Le Testu*. [in *Mémoires de la Société Linnéenne de Normandie*. XXVI vol. Two parts] Caen 1924-1928)

Gabon. See *Bulletin du Muséum d'Histoire Naturelle* 20: 471. 1948.

E. glabrata Nees (*Poa glabrata* (Nees) Kunth)

South Africa. See *Linnaea* 7(3): 332. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 344. 1833.

E. glandulosa L.H. Harv.

Mexico. stream bank, see *Bulletin of the Torrey Botanical Club* 81(5): 406. 1954.

E. glandulosipedata De Winter

South Africa, Transvaal. Annual, tufted, geniculate, lowest branches of the inflorescence whorled, lowest lemma elliptic or ovate, pasture, fodder, common in sand, high moisture areas, disturbed sites, see *Bothalia* 7: 469. 1961.

E. glischra Launert (from the Greek *glischros* "sticky, clammy, gluey, glutinous")

Zimbabwe. Rare species, see *Boletim da Sociedade Brotariana*, ser. 2 35: 21. 1961.

E. gloeodes Ekman

Brazil. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 38-40, t. 4, 6. 1911, *Revista Brasileira de Botânica* 23(2): 177-194. 2000, *Iheringia, Série Botânica* 55: 23-169. 2001.

E. gloephylla S.M. Phillips (Greek *gloios* "gum, slippery, glutinous," Latin *gluten*, *inis* "glue, a connecting tie," *glus*, *utis* "glue")

Ethiopia. Annual, tufted, erect, sticky, glandular, leaf blades linear, viscid on the sheaths and underside of the leaf blades, contracted panicle, spikelets sessile and narrowly oblong, 6- to 19-flowered, glumes unequal and narrowly lanceolate, lemmas oblong and truncate, palea keels scabrous, found in red sand, limestone, closely related to *Eragrostis psammophila* S.M. Phillips, resembling *Eragrostis cilianensis*, see *Kew Bulletin* 42(4): 929. 1987, *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: baldoleh

E. glomerata (Walter) L.H. Dewey (*Diandrochloa glomerata* (Walter) Burkart; *Eragrostis aturensis* (Kunth) Trin. ex Steud.; *Eragrostis brasiliensis* (Raddi) Nees; *Eragrostis conferta* (Elliott) Trin.; *Eragrostis elegans* Nees; *Eragrostis elegans* var. *laxiflora* Arechav.; *Eragrostis hapalantha* Trin.; *Eragrostis interrupta* (Lam.) Döll, nom. illeg., non *Eragrostis interrupta* P. Beauv.; *Eragrostis interrupta* var. *laxiflora* Döll; *Eragrostis interrupta* var. *parviflora* Döll; *Eragrostis japonica* (Thunb.) Trin.; *Eragrostis pallida* Vasey; *Megastachya aturensis* (Kunth) Roem. & Schult.; *Megastachya glomerata* (Walter) Schult.; *Poa aturensis* Kunth; *Poa brasiliensis* Spreng.; *Poa conferta* Elliott; *Poa elegans* Willd. ex Spreng., nom. illeg., non *Poa elegans* Poir.; *Poa glomerata* Walter; *Poa interrupta* Lam.; *Poa walteri* Kunth)

America. Ditches, channels, see *Flora Japonica*, ... 51. 1784, *Flora Caroliniana, secundum* ... 80. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 185. 1791, *Nova Genera et Species Plantarum* 1: 161. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 158. 1816, *Systema Vegetabilium* 2: 587. 1817, *Mantissa* 2: 327. 1824, *Systema Vegetabilium, editio decima sexta* 1:

342-343. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 497-499, 510, 608. 1829, *Révision des Graminées* 1: 116. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405, 409. 1830, *Nomenclator Botanicus. Editio secunda* 1: 562. 1840, *Flora Brasiliensis* 2(3): 157-158. 1878, *Contributions from the United States National Herbarium* 1(8): 285. 1893, *Contributions from the United States National Herbarium* 2(3): 543. 1894, *Anales del Museo Nacional de Montevideo* 1: 444. 1896 and *Bothalia* 7(2): 387-388. 1960, *Boletín de la Sociedad Argentina de Botánica* 12: 287. 1968, *Brittonia* 23(3): 293-324. 1971.

E. glutinosa (Sw.) Trin. (*Eragrostis leonina* Hitchc. & Chase; *Eragrostis sudans* Griseb.; *Poa glutinosa* Sw.) (*Eragrostis leonina* Hitchc. & Chase named for the French-born Cuban botanist Joseph Sylvestre (José Silvestre) Sauget y Barbis (aka Frère Léon, Hermano León, Brother León), 1871-1955, Havana 1905, author of *Las exploraciones botánicas de Cuba*. Habana 1918 and "Nouveaux Anastrophia de la flore cubaine." *Contr. Inst. Bot. Univ. Montreal*. 49: 77-86. 1944, with Hermano Alain (Dr. E.E. Lioger) wrote *Flora de Cuba*. Habana 1946-1963; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 210. 1965; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 234. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 262. 1973)

Virgin Islands, Cuba, Jamaica, Mexico. Vulnerable species, growing in thickets, along roadsides, see *Nova Genera et Species Plantarum seu Prodrromus* 26. 1788, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 397. 1830, *Catalogus plantarum cubensium ...* 227. 1866 and *Contributions from the United States National Herbarium* 18(7): 388. 1917.

in English: sticky love grass

E. grandiflora J.G. Sm. & Bush

U.S. See *Transactions of the American Philosophical Society, new series*, 5: 146. 1835, *Linnaea* 22(3): 344. 1849, *A Class-book of Botany* 796. 1861, *Annual Report of the Missouri Botanical Garden* 6: 117, t. 55. 1895 and *Rhodora* 40(477): 331. 1938.

E. grandis Hillebrand (*Eragrostis grandis* var. *oligantha* Hillebrand; *Eragrostis grandis* var. *polyantha* Hillebrand)

Hawaii. See *Flora of the Hawaiian Islands* 528. 1888.

in English: large Hawaii lovegrass

in Hawaii: kawelu

E. guangxiensis S.C. Sun & H.Q. Wang

China. See *Acta Phytotaxonomica Sinica* 19(4): 514, f. 1, 4. 1981.

E. guatemalensis Witherspoon

Guatemala, South America. Perennial, caespitose, erect, simple, glabrous, leaves mostly basal, ligule a shallow rim, see *Annals of the Missouri Botanical Garden* 64: 324. 1977 [1978], *Flora Mesoamericana* 6: 263-272. 1994.

E. guianensis Hitchc.

Venezuela, South America. Annual, tufted, leaves mostly delicate, ligules ciliolate, leaf blades inrolled, inflorescence ovate, few-branched open panicle, spikelets linear to oblong, 19- to 55-flowered, florets strongly overlapping, glumes lanceolate, lemmas acute to obtuse, palea keels scaberulous, 2 stamens, sandy savannahs, sand, open grassland, see *Contributions from the United States National Herbarium* 22(6): 454, f. 78. 1922.

E. gummiflua Nees

South Africa, Botswana, Namibia, Mozambique. Perennial bunchgrass, tufted or densely tufted, wiry, sticky at the nodes, leaf sheaths shiny and sticky, ligule a membrane with hairy margin, hard and slightly contracted panicle, glabrous spikelets, rachilla fragile, hard and unpalatable, used for broom-making and some kind of an ointment used to promote fertility of the bulls, growing in shallow sandy soil, rocky soil, disturbed areas, along roadsides, open grassland, open habitats, open patches in bushveld, see *Florae Africae Australioris Illustrationes Monographicae* 393. 1841.

in English: gum grass, sticky-stem love grass

in southern Africa: gomgras, kleeftgras, kleeftalm eragrostis, koperdraadgras, taaigras; khita-poho, thita-poho, kgitapoho, likonono, dikonono, dikonokono, lefielo (Sotho)

E. habrantha Rendle (Greek *habros* "delicate, graceful, beautiful, pretty" and *anthos* "flower")

Tropical Africa, Angola, Mozambique. Perennial, tufted, erect, linear inflorescence much-branched, spikelets ovate, lowest floret persistent, in thicket-grown fields, sandy soils, vleis, along rivers, open habitats, open damp areas, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 246. 1899.

E. hackelii Hassl. (*Eragrostis bahiensis* var. *bahiensis*; *Eragrostis elatior* Stapf; *Eragrostis elatior* Hack., nom. illeg., non *Eragrostis elatior* Stapf)

Tropical Africa, South America, Paraguay. See *Mantissa* 2: 318. 1824 and *Flora Capensis* 7: 617-618. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 374. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 8: 47. 1910.

E. henrardii Jansen (after the Dutch pharmacist Jan Theodor Henrard, 1881-1974, agrostologist, 1921-1946 Curator of the Rijksherbarium at Leiden, among his writings are *A Monograph of the Genus Aristida*. Leyden 1929-1932 and *Monograph of the Genus Digitalia*. Leiden 1950. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 158. 1965; Elmer Drew Merrill (1876-1956), "A botanical bibliography

of the islands of the Pacific." *Contr. U.S. Natl. Herb.* 30(1): 148. 1947; August Adriaan Pulle (1878-1955), editor, *Flora of Suriname* (Netherlands Guyana). [Gramineae, by J.T. Henrard and Gerda Jane Hillegonda Amshoff, 1913-1985] 1948; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 171. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 220. 1973)

Southwest Africa. See *Bulletin de la Société Botanique de France* 2: 311. 1855 and *Blumea, Supplement* 3: 42. 1946.

E. heteromera Stapf

Angola, Malawi, Mozambique, South Africa, Tanzania, Namibia, Ethiopia. Perennial bunchgrass, wiry, tufted, unbranched, slender, leaf sheath keeled, basal leaf sheaths glabrous or inconspicuously hairy, leaf blade with a delicate tip, open panicle with lax and flexible branches, spikelets purple to green appressed to the branchlets, pasture, reasonably palatable, useful for erosion control, growing in moist sites, in disturbed rocky soil, depressions, moist sandy soils, red clay or black clay soil, grassland, bushveld, disturbed areas, see *Flora Capensis* 7: 610. 1900.

in English: bronze lovegrass

in southern Africa: rooikopergras

E. hierniana Rendle (*Eragrostis uniglumis* Hack.) (named for the British botanist William Philip Hiern, 1839-1925 (Barnstaple, Devon), plant collector, 1873 Fellow of the Linnean Society, 1903 Fellow of the Royal Society, among his writings are *Catalogue of the African Plants Collected by Dr. Friedrich Welwitsch in 1853-1861.* London 1896-1901, *Index abecedarius.* An alphabetical index to the first edition of the *Species Plantarum* of Linnaeus. London 1904, "Further notes on Ebenaceae, with description of a new species." *J. Botany.* 13: 353-357. 1875 and "On the peculiarities and distribution of Rubiaceae in tropical Africa." *J. Linn. Soc. Bot.* 16: 248-280. 1877, with Francisco Manoel Carlos de Mello de Ficalho (1837-1903) wrote *Memoria sobre algumas plantas da Africa Central colligidas pelo Major Serpa Pinto.* Lisbon 1883. See J.H. Barnhart, *Biographical notes upon botanists.* 2: 172. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 183. Oxford 1964; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum.* 190. London 1904; William Henry Harvey and Otto Wilhelm Sonder, *Flora Capensis.* 1904; Major Serpa Pinto, *How I Crossed Africa.* Hartford, Conn. 1881; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute*

portrait collection. 174. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933)

South Africa, Tanzania. Perennial, tufted, geniculate, lemma glabrous, palea keels hairy, in damp places, moist sandy soils, disturbed areas, along rivers, old cultivated lands, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 237. 1899 and *Proceedings of the Rhodesia Scientific Association* 7(2): 66. 1908.

E. hirsuta (Michx.) Nees (*Eragrostis hirsuta* var. *hirsuta*; *Eragrostis hirsuta* var. *laevivaginata* Fern.; *Eragrostis hypnoides* (Lam.) Britton, Sterns & Poggenb.; *Eragrostis sporoboloides* J.G. Sm. & Bush; *Erosion hypnoides* (Lam.) Lunell; *Megastachya hypnoides* (Lam.) P. Beauv.; *Neeragrostis hypnoides* (Lam.) Bush; *Poa hirsuta* Michx.; *Poa hypnoides* Lam.; *Poa reptans* Michx. var. *caespitosa* Torr.; *Poa simplex* Walter)

U.S. Perennial, common on sand washes, valley and creek alluvium, sandy roadsides and wastes, see *Flora Caroliniana, secundum ...* 70. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 185. 1791, *Flora Boreali-Americana* 1: 68-70, t. 11. 1803, *Essai d'une Nouvelle Agrostographie* 74, 167, 175. 1812, *A Flora of the Northern and Middle Sections of the United States* 1: 115. 1823, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 508. 1829, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888, *Annual Report of the Missouri Botanical Garden* 6: 116, t. 54. 1895 and *Transactions of the Academy of Science of St. Louis* 13: 180. 1903, *American Midland Naturalist* 4: 221. 1915, *Rhodora* 41(490): 500-501. 1939.

in English: big top lovegrass, stout love grass

E. hirta E. Fourn. (*Eragrostis intermedia* var. *praetermissa* (L.H. Harv.) Witherspoon; *Eragrostis praetermissa* L.H. Harv.)

Mexico, South America, Belize. Perennial, caespitose, erect, simple, glabrous, leaves mostly basal, ligule a shallow rim, open panicles, see *Mexicanas Plantas* 2: 115. 1886 and *Journal of the Washington Academy of Sciences* 21(17): 437. 1931, *Journal of the Washington Academy of Sciences* 23(10): 450. 1933, *Bulletin of the Torrey Botanical Club* 81(5): 408. 1954, *Annals of the Missouri Botanical Garden* 64: 327-328. 1977 [1978].

E. hirta E. Fourn. var. *hirta*

Mexico, South America.

E. hirta E. Fourn. var. *longiramea* (Swallen) Witherspoon (*Eragrostis longiramea* Swallen)

Mexico, South America. See *Journal of the Washington Academy of Sciences* 21(17): 437. 1931, *Annals of the Missouri Botanical Garden* 64: 328. 1977.

E. hirticaulis Lazarides

Australia, Northern Territory. Perennial, hirsute foliage, leaf sheaths overlapping, spiciform panicles, florets chasmogamous and cleistogamous, 3 stamens, in sandy soils, see *Australian Systematic Botany* 10(1): 122. 1997.

E. hispida K. Schumann

Tropical East Africa. Useful for erosion control, leaves revive after desiccation, in sandy open area, see *Die Pflanzenwelt Ost-Afrikas* C: 114. 1895.

E. hispida K. Schumann var. ***psilothyrsus*** Peter

Tropical East Africa. See *Die Pflanzenwelt Ost-Afrikas* C: 114. 1895 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: Anhang 102. 1930; 326. 1931.

E. hochstetteri Steud. (the German botanist Christian Ferdinand Hochstetter, 1787-1860, clergyman, with E.G. Steudel founded the Esslinger Reiseverein, plant collector, 1838 voyage to Portugal and the Açores, his writings include "Plantarum nubucarum nova genera." in *Flora*. 24: 369-377. 1841 and *Nova genera plantarum Africae*. Regensburg 1842. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 184. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 184. Oxford 1964; Georg [Heinrich] Wilhelm Schimper (1804-1878), W. Schimper's *Reise nach Algier in ... 1831 und 1832 ...* Herausgegeben von [C.F. Hochstetter and E. Steudel], etc. Stuttgart 1834; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 177. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Africa, Sudan. See *Synopsis Plantarum Glumacearum* 1: 268. 1854.

E. homblei De Wild.

Africa, Tanzania. Tufted, open areas, see *Bulletin du Jardin Botanique de l'État* 6: 66, t. 3. 1919.

E. homomalla Nees (*Eragrostis hygrophila* C.E. Hubb. & Schweick.)

Tropical Africa, South Africa. Annual, tufted, erect to decumbent, spikelets linear to oblong, palea keels smooth, common in moist soils, brackish depressions, see *Florae Africae Australioris Illustrationes Monographicae* 406. 1841 and *Bulletin of Miscellaneous Information Kew* 1939: 651. 1940.

in South Africa: reengrassie

E. hondurensis R.W. Pohl

Honduras. Annual, caespitose, glandular, densely viscid, erect, branched, glabrous, ligule a ciliate membrane, open panicle, growing in waste ground, abandoned field, along

small streams, see *Iowa State Journal of Research* 54(3): 319, f. 1. 1980.

E. hooki De Wild.

Africa. See *Bulletin du Jardin Botanique de l'État* 6: 64, t. 4. 1919.

E. horizontalis Peter (*Eragrostis cylindriflora* Hochst.)

Tropical Africa. See *Flora* 38: 324. 1855.

E. hornemanniana Nees (the Danish botanist Jens Wilken Hornemann, 1770-1841, from 1805 to 1841 editor of *Flora danica*; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 204. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 182. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Günther Schmid, *Chamisso als Naturforscher. Eine Bibliographie*. Leipzig 1942; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898.] Leipzig 1981; C.F.A. Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926)

Africa. See *Florae Africae Australioris Illustrationes Monographicae* 395. 1841.

E. hosakai O. Deg. (also spelled ***hosakae***) (after E.Y. Hosaka)

Hawaii. Extinct/endangered species.

in English: Hosaka love grass, Hosaka's love grass

E. hugoniana Rendle

Asia, China. See *Journal of the Linnean Society, Botany* 36(254): 414-415. 1904.

E. huillensis Rendle (Huilla is a place in Angola)

Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 242. 1899.

E. humbertii A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 94: 42. 1947.

E. humidicola Napper

Tanzania, Zaire, Kenya, Uganda. Caespitose, pioneer grass, see *Kirkia* 3: 114. 1963.

E. hygrophila C.E. Hubb. & Schweick. (*Eragrostis homomalla* Nees)

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 406. 1841 and *Bulletin of Miscellaneous Information Kew* 1939: 651. 1940.

E. hypnoides (Lam.) Britton, Sterns & Poggenburg (*Eragrostis hirsuta* (Michx.) Nees; *Eragrostis reptans* (Michx.)

Nees; *Eragrostis reptans* var. *contracta* Döll; *Eragrostis reptans* var. *laxior* Döll; *Eragrostis reptans* var. *pygmaea* Döll; *Erosion hypnoides* (Lam.) Lunell; *Megastachya breviflora* E. Fourn.; *Megastachya corymbifera* E. Fourn.; *Megastachya gouinii* E. Fourn. ex Hemsl.; *Megastachya gouinii* E. Fourn.; *Megastachya hypnoides* (Lam.) P. Beauv.; *Neeragrostis hypnoides* (Lam.) Bush; *Poa carinata* Poir.; *Poa hypnoides* Lam.; *Poa reptans* Michx.; *Poa reptans* var. *caespitosa* Torr.)

North America, Canada to Argentina, South America. Annual, monoecious, prostrate or erect, creeping, spreading and rooting at nodes, forming dense and flat mats, glabrous, branched, extensively stoloniferous, sheaths glabrous and overlapping, ligule a tuft of hairs, leaf blades mostly glabrous, small panicles open to condensed, several-flowered spikelets without awns and flattened, glumes linear-lanceolate to lanceolate, lemmas ovate and pointed, nerves of lemma thickened, 2 stamens, reddish to golden brown grains, common on gravelly or sandy shores, disturbed places, damp areas, muddy stream banks, in sandy areas, alluvial bars, wetlands, borders of streams and rivers, wet soil and wet sand, edge of ponds and lakes, along flooded riverbanks, sandy riverbanks, sandy banks of lakes, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 185. 1791, *Flora Boreali-Americana* 1: 68-70, t. 11. 1803, *Encyclopédie Méthodique, Botanique* 5: 86. 1804, *Essai d'une Nouvelle Agrostographie* 74, 167, 175. 1812, *A Flora of the Northern and Middle Sections of the United States* 1: 115. 1823, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 508, 514. 1829, *Flora Brasiliensis* 2(3): 148-149. 1878, *Biologia Centrali-Americana; ... Botany ...* 3: 576. 1885, *Mexicanas Plantas* 2: 119. 1886, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888 and *Transactions of the Academy of Science of St. Louis* 13: 180. 1903, *American Midland Naturalist* 4: 221. 1915.

in English: creeping love grass, teal love grass, smooth creeping grass, pony grass

in Mexico: pan caliente

E. imbecilla Steud. (*Eragrostis imbecilla* Benth., nom. illeg., non *Eragrostis imbecilla* Steud.; *Leptochloa debilis* Stapf ex C.E. Hubb.; *Leptochloa decipiens* (R. Br.) Stapf ex Maiden; *Leptochloa decipiens* (R. Br.) Druce, nom. illeg., non *Leptochloa decipiens* (R. Br.) Stapf ex Maiden; *Poa decipiens* R. Br.)

Australia. See *Prodromus Florae Novae Hollandiae* 181. 1810, *Synopsis Plantarum Glumacearum* 1: 279. 1854, *Flora Australiensis: A Description ...* 7: 643. 1878 and *Agricultural Gazette of New South Wales* 20: 307. 1909, *Report. Botanical Exchange Club. London.* 1916: 632. 1917, *Bulletin of Miscellaneous Information Kew* 1941: 26. 1941, *Flora of Australia* 44B: 448. 2005.

E. imberbis (Franch.) Prob. (*Eragrostis pilosa* var. *imberbis* Franch.)

Asia, Mongolia. See *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Nouvelles archives du muséum d'histoire naturelle, sér. 2, 7*: 145. 1884.

E. inamoena K. Schum. (*Eragrostis atrovirens* (Desf.) Trin. ex Steud.; *Poa atrovirens* Desf.)

East Africa, South Africa. Perennial, tufted, rhizomatous, short or long rhizome, basal sheaths glabrous, inflorescence open to contracted, spikelets greenish, membranous palea obovate, usually in sandy soils, seasonally flooded areas, marshy places, see *Flora Atlantica* 1: 73, t. 14. 1798, *Nomenclator Botanicus. Editio secunda* 1: 562. 1840, *Die Pflanzenwelt Ost-Afrikas* C: 115. 1895.

E. incana Maury

South America, Venezuela. See *Journal de Botanique, rédigé par une société de botanistes* 3: 163, f. 6. 1889.

E. incrassata Cope

Africa, Somalia. Perennial, woody, spreading, mat-forming, much branched at the base, tufted, long stoloniferous and rhizomatous, with creeping woody rhizomes and stolons, leaves distichous, panicle oblong, glumes ovate and acute, lemmas membranous, palea keels scabrous, growing in damp places, near running water, see *Kew Bulletin* 47(2): 280. 1992.

in Somalia: ris

E. infecunda J.M. Black

South Australia, Victoria. Perennial, simple or branched, wiry, thickened or knotty at the base, ligule a fringe of hairs, rhizomes and stolons, leaves glabrous and smooth, stiff leaf blades flat or involute, panicle loose and contracted, spikelets more or less linear, loose florets, acuminate and lanceolate glumes more or less deciduous or persistent, lemmas persistent and lanceolate, 3 stamens, stipitate grain, alluvial soils, roadsides, seasonally flooded habitats, see *Transactions and Proceedings of the Royal Society of South Australia* 55: 137, pl. 6, f. 4. 1931.

E. insulatlantica A. Chev.

Capo Verde Islands. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 15: 1042. 1935.

E. intermedia A.S. Hitchc. (*Eragrostis lugens* var. *major* Vasey ex L.H. Dewey)

U.S., Texas, Florida, Mexico. Perennial bunchgrass, spreading, coarse, tufted, erect, ascending, basal culm buds, light straw yellow, sheaths hairy at the throat, long and slender leaves, large open inflorescence, erect panicle, large and loose fruiting stalks, a good cattle forage species, palatable, growing in moist places, in canyons, on rocky slopes in desertscrub and desert grassland, rocky hillsides, open woods, rich soils, on sands and sandy loams, on dry or sandy prairies, dry slopes, disturbed sites, desert grasslands,

undisturbed grassland, semidesert grasslands, chaparral, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 505-506. 1829, *Contributions from the United States National Herbarium* 2(3): 542. 1894 and *Journal of the Washington Academy of Sciences* 23(10): 450. 1933, *Bulletin of the Torrey Botanical Club* 81(5): 407-408. 1954, *Annals of the Missouri Botanical Garden* 64: 325-327. 1977 [1978].

in English: plains love grass

in Mexico: pasto amor de las praderas, pasto amor de los llanos, zacate amor de planicie, zacate de amor, zacate llanero, zacate pradera, zacate volador

E. intermedia A.S. Hitchc. var. ***appressa*** Witherspoon

Mexico. See *Annals of the Missouri Botanical Garden* 64: 325. 1977 [1978].

E. intermedia A.S. Hitchc. var. ***intermedia***

Mexico.

E. intermedia A.S. Hitchc. var. ***oreophila*** (L.H. Harv.) Witherspoon (*Eragrostis oreophila* L.H. Harv.)

U.S. See *Journal of the Washington Academy of Sciences* 23(10): 450. 1933, *Bulletin of the Torrey Botanical Club* 81(5): 407. 1954, *Annals of the Missouri Botanical Garden* 64: 326. 1977 [1978].

E. interrupta (R. Br.) P. Beauv. (*Eragrostis interrupta* (Lam.) Döll, nom. illeg., non *Eragrostis interrupta* P. Beauv.; *Eragrostis interrupta* (Nutt.) Trel., nom. illeg., non *Eragrostis interrupta* P. Beauv.; *Eragrostis interrupta* P. Beauv.; *Eragrostis interrupta* (R. Br.) Steud.; *Poa interrupta* Lam.)

New South Wales, Queensland. Perennial, tufted, robust, spreading, often pruinose, eglandular, not aromatic, overlapping sheaths, leaf blades flat or rolled, inflorescences contracted, panicles contracted or spiciform, spikelets sessile and densely overlapping, glumes and lemmas acute and keeled, lemma 3- to 5-nerved, palea 2-keeled and glabrous, 3 stamens, coastal, in sandy soils near the coast, beach sands, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 185. 1791, *Prodromus Florae Novae Hollandiae* 1: 180. 1810, *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Transactions of the American Philosophical Society, new series*, 5: 196. 1837, *Linnaea* 12(4): 452. 1838, *Florae Africae Australioris Illustrationes Monographicae* 410. 1841, *Synopsis Plantarum Glumacearum* 1: 268, 279. 1854, *Flora Brasiliensis* 2(3): 157-158. 1878, *Report of the United States Geological Survey of the Territories* 4: 237. 1891, *Conspectus Florae Africae* 5: 884. 1894, *The Flora of British India* 7: 316. 1896 and *Queensland Agricultural Journal* 30: 320. 1913, *Transactions and Proceedings of the Royal Society of South Australia* 48: 253. 1924, *Transactions and Proceedings of the Royal Society of South Australia* 55: 136, f. 2. 1931, *Fl. of Australia* 43: 333. 2002.

in India: bhedki, ghodel, motha lona, nil kassum, sun pankha
in Thailand: yaa khamong, ya khamong

E. jacobiana B.K. Simon

Australia. Annual or perennial, slender, tufted, erect, ligule a fringe of hairs, open panicles, reddish spikelets, 2-3 stamens, similar to *Eragrostis brownii*, see *Fl. of Australia* 43: 334. 2002, *Fl. of Australia* 44B: 399, 460. 2005.

E. jacquini Schrad.

Asia. See *Linnaea* 12(4): 450. 1838.

E. japonica (Thunb.) Trin. (*Catabrosa micrantha* Hochst. ex A. Rich.; *Diandrochloa diarrhena* (Schult. & Schult.f.) A.N. Henry; *Diandrochloa diplachnoides* (Steud.) A.N. Henry; *Diandrochloa glomerata* (Walter) Burkart; *Diandrochloa japonica* (Thunb.) A.N. Henry; *Diandrochloa namaquensis* (Nees ex Schrad.) De Winter; *Eragrostis aturensis* (Kunth) Trin. ex Steud.; *Eragrostis aurea* Steud.; *Eragrostis brasiliana* Nees; *Eragrostis conferta* (Elliott) Trin.; *Eragrostis diarrhena* (Schultes) Steudel; *Eragrostis diplachnoides* Steudel, Greek *diploos*, *diploos* "double" and *achne* "chaff, glume"; *Eragrostis elegans* Nees; *Eragrostis elegans* var. *laxiflora* Arechav.; *Eragrostis glomerata* (Walter) L.H. Dewey; *Eragrostis hapalantha* Trin.; *Eragrostis interrupta* (Lam.) Döll, nom. illeg., non *Eragrostis interrupta* P. Beauv.; *Eragrostis interrupta* var. *diarrhena* (Schult. & Schult.f.) Stapf; *Eragrostis interrupta* var. *laxiflora* Döll; *Eragrostis interrupta* var. *parviflora* Döll; *Eragrostis interrupta* var. *tenuissima* (Schrad. ex Nees) Stapf; *Eragrostis japonica* (Thunb. ex A. Murray) Trin.; *Eragrostis japonica* var. *interrupta* (Lam.) Henrard; *Eragrostis milleflora* Steud.; *Eragrostis minutiflora* J. Presl; *Eragrostis namaquensis* Nees ex Schrad., from Namaqualand, in western South Africa; *Eragrostis namaquensis* var. *diploachnoides* (Steud.) Clayton; *Eragrostis pallida* Vasey; *Eragrostis tenella* var. *japonica* (Thunb.) Roem. & Schult.; *Eragrostis tenellula* (Kunth) Steud.; *Eragrostis tenuissima* Schrad. ex Nees; *Glyceria micrantha* Steud.; *Megastachya aturensis* (Kunth) Roem. & Schult.; *Megastachya brasiliensis* Schult. ex B.D. Jacks.; *Megastachya glomerata* (Walter) Schult.; *Panicum leptanthum* Steud.; *Poa aturensis* Kunth; *Poa aurea* (Steud.) Walp.; *Poa biflora* Retz.; *Poa brasiliensis* Spreng., nom. illeg., non *Poa brasiliensis* Raddi; *Poa conferta* Elliott; *Poa diandra* Roxb., nom. illeg., non *Poa diandra* R. Br.; *Poa diarrhena* Schult., Greek *di* "two" and *arrhen* "male"; *Poa diarrhena* Schult. & Schult.f.; *Poa glomerata* Walter; *Poa interrupta* Lam.; *Poa japonica* Thunb.; *Poa sporoboloides* A. Rich.; *Poa tenella* R. Br., nom. illeg., non *Poa tenella* L.; *Poa tenellula* Kunth; *Roshevitzia diarrhena* (Schult. & Schult.f.) Tzvelev; *Roshevitzia diplachnoides* (Steud.) Tzvelev; *Roshevitzia glomerata* (Walter) Tzvelev; *Roshevitzia japonica* (Thunb.) Tzvelev; *Sporobolus confertiflorus* A. Rich.; *Sporobolus verticillatus* Nees; *Vilfa confertiflora* (A. Rich.) Steud.)

Pantropical. Annual or short-lived perennial, variable, herbaceous, erect, sometimes geniculate below, clumped or loosely tufted, stems flimsy, mostly simple or with ascending

branches, branching from the lower and middle nodes, leaf sheaths overlapping, truncate ligule membranous and fimbriate or ciliolate or glabrous, leaves acuminate, inflorescence paniculate compact and interrupted, loose or dense panicles open and ovoid to ovoid-oblong, 4- to 12-flowered, short-stipitate spikelets linear disarticulating between the florets, spikelets breaking up from the apex downward, loosely imbricate florets, minute glumes subequal ovate to ovate-lanceolate, small lemmas lanceolate-oblong to ovate, keels of paleas minutely hispid or smooth, 2 stamens, ornamental, grazed by all stock and game, infusion of the fresh leaves used externally as a poultice for headaches, delicate spikelets, weed species widely naturalized in tropics, grazed or eaten by the cattle, common near water, sandy soils, in sand at riverbank, cultivated fields, marshy swales, open wet grasslands, damp soil beside rivers and streams, drainage ditches, see *Flora Japonica*, ... 51. 1784, *Flora Caroliniana, secundum* ... 80. 1788, *Observationes Botanicae* 5: 19. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 185. 1791, *Prodromus Florae Novae Hollandiae* 1: 181. 1810, *Nova Genera et Species Plantarum* 1: 161. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1: 158. 1816, *Systema Vegetabilium* 2: 576, 587. 1817, *Flora Indica; or Descriptions* ... 1: 337. 1820, *Mantissa* 2: 327, 616, 620. 1824, *Systema Vegetabilium, editio decima sexta* 1: 342. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 510-511, 608. 1829, *Révision des Graminées* 1: 113. 1829, *Reliquiae Haenkeanae* 1(4-5): 274. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405, 409. 1830 [1831], *Linnaea* 12(4): 452. 1838, *Nomenclator Botanicus. Editio secunda* 1: 562. 1840, *Florae Africae Australioris Illustrationes Monographicae* 410. 1841, *Annales Botanicae Systematicae* 1: 940. 1848-1849, *Tentamen Florae Abyssinicae* ... 2: 397, 426. 1850, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 101. 1850, *Synopsis Plantarum Glumacearum* 1: 79, 265, 267-268, 279, 287. 1854, *Flora Brasiliensis* 2(3): 157-158. 1878, *Contributions from the United States National Herbarium* 1(8): 285. 1893, *Contributions from the United States National Herbarium* 2(3): 543. 1894, *Anales del Museo Nacional de Montevideo* 1: 444. 1896, *The Flora of British India* 7: 316. 1896 and *Handb. Fl. Ceylon* 6: 339. 1931, *Blumea* 3(3): 424. 1940, *Grasses of Ceylon* 70-71. 1956, *Bothalia* 7(2): 388-389. 1960, *Grasses of Burma* ... 507-509. 1960, *Bulletin of the Botanical Survey of India* 9: 290. 1968, *Boletín de la Sociedad Argentina de Botánica* 12: 287. 1968, *Bot. Zhurn. (Moscow & Leningrad)* 53: 311. 1968, *Novosti Sist. Vyss. Rast.* 7: 50. 1970 [1971], *Kew Bulletin* 25(2): 251. 1971, *Fl. Pakistan* 143. *Poaceae* 88. 1982, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Cytology and Genetics* 23: 118-131. 1988, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

in English: Japanese love grass, pond love grass
 in India: kaadu gasagase hullu, kanjira pullu, pini hullu
 in Japan: kogome-kaze-kusa, kogome-kazekusa
 in the Philippines: grama
 in Thailand: yaa waai, ya wai
 in Arabic: lehmeré
 in Gambia: farangtambo
 in Mauritania: lehmeré
 in Nigeria: bafulatana, fain rumeja

E. jardinii Steud. (*Centotheca mucronata* (Poir.) Kuntze) (for the French botanist Désiré Édélestan (Édéstan) Stanislas Aimé Jardin, 1822-1896, traveler, 1845-1848 plant collector in West Africa, Inspector General of the French Navy, among his writings are *Le Cafétier et le Café. Monographie historique, scientifique et commerciale de cette rubiacée. Suivie d'un index bibliographique*. Paris 1895, "Herborisations sur la côte occidentale d'Afrique ... 1845-1848" in *Nouvelles Annales de la Marine et des Colonies*. Paris 1850-1851 and *Aperçu sur la flore du Gabon*. Paris 1891; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 247. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 461. Boston, Mass. 1973; Ignatz Urban, editor, *Symbolae Antillanae*. 3: 67. Berlin 1902; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 166-167. 1947; J. Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 182. Paris 1882; F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 42. 1971)

Africa. See *Encyclopédie Méthodique, Botanique* 5: 91. 1804, *Synopsis Plantarum Glumacearum* 1: 269. 1854, *Revisio Generum Plantarum* 2: 765. 1891.

E. jeffreysii Hack.

South Africa, Zimbabwe, Kalahari. Perennial, robust, woody, hard, tough, compressed, tufted, erect, unbranched, leaf blade stiff and rolled, basal leaf sheaths hairy or silky, leaves mostly basal, ligule a fringe of hairs, inflorescence a rigid and open panicle, of little value as forage, usually in sandy moist areas, see also *Eragrostis curvula* (Schrad.) Nees, see *Proceedings of the Rhodesia Scientific Association* 7(2): 68. 1908.

in South Africa: geelhoutpluimgras, gelbholz straußgras

E. jerichoensis B.K. Simon

Australia, Queensland, Jericho. Perennial, tufted, erect, ligule a fringe of hairs, open panicles, orbicular spikelets, 3 stamens, similar to *Eragrostis brownii*, see *Fl. of Australia* 43: 332. 2002, *Fl. of Australia* 44B: 406, 460. 2005.

E. karasbergensis L. Bolus

Africa, Namibia. See *Annals of the Bolus Herbarium* 1: 110. 1915.

E. katandensis Lebrum ex Mimeur

Africa. See *Mus. Hist. Nat. (Paris) Bull.* 23: 128. 1951.

E. keniensis Pilg.

Africa, Kenya. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(90): 1125. 1927.

E. kennedyae F. Turner (the type is from Wonnaminta Station, near Broken Hill; for a Mrs. Kennedy)

Central Australia, Western Australia, Northwest Territories, Queensland. Short-lived perennial or annual, tufted, slender and thin, simple and wiry, pubescent and thickened base, ligule a fringe of hairs, leaves often glaucous, panicle spike-like or loosely contracted, pedicellate ovate spikelets compressed laterally, ovate and subacute glumes strongly keeled, lemmas ovate, 2-3 stamens, not palatable, similar to *Eragrostis exigua*, see *Proceedings of the Linnean Society of New South Wales* 8: 535. 1894 and *Grasses of Central Australia* 141, pl. 40b. 1970, *Fl. New South Wales* 4: 542. 1993.

in English: small-flowered love grass

E. kingesii De Winter

Southwest Africa, Namibia. Annual, tufted, erect to decumbent, glandular, basal leaf sheaths glabrous, inflorescence more or less contracted, spikelets lanceolate, lower glume keeled, lemma acute, palea keels scabrid, weed, common in disturbed soils, desert, along roadsides, see *Bothalia* 7: 470. 1961.

E. kinshasaensis Vanderyst

Africa, Kinshasa. See *Bulletin agricole du Congo Belge* 11: 118. 1920.

E. kiwuensis Jedwabn. (*Eragrostis schweinfurthii* var. *kiwuensis* (Jedwabn.) S.M. Phillips)

Africa, Kiwu. See *Botanisches Archiv* 5(3-4): 206. 1924, *Kew Bulletin* 42(4): 930. 1987.

E. kneuckeri Hackel & Bornm.

Egypt. Rare species, see *Magyar Botanikai Lapok* 11: 12. Budapest 1912.

E. koenigii (Kunth) Steud. (*Eragrostis koenigii* Link; *Poa koenigii* Kunth)

Asia. See *Hortus Regius Botanicus Berolinensis* 2: 294. 1833, *Synopsis Plantarum Glumacearum* 1: 266. 1854, *The Flora of British India* 7: 316. 1896 and *Fl. Pres. Madras* 10: 1826. 1934.

E. kohorica Quézel

North Africa. See *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 48: 83. 1957.

E. kossinskyi Roshev. (*Diandrochloa diarrhena* (Schult. & Schult.f.) A.N. Henry) (after C. Kossinsky)

Eurasia. See *Bulletin of the Botanical Survey of India* 9: 290. 1968.

E. kuchariana S.M. Phillips (Kuchar)

Africa, Somalia. Annual, leaf sheaths hairy and glandular, ligule a line of hairs, panicle diffuse, spikelets linear disarticulating between the florets, glumes unequal, lemmas papery, palea keels scabrous, orange sand, see *Kew Bulletin* 46(1): 111-117. 1991, *Kew Bulletin* 47(2): 277-282. 1992.

E. kuschelii Skottsbo. (*Eragrostis peruviana* var. *macranthera* Skottsbo.) (after Kuschel)

South America, Chile. Annual, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 396. 1830 and *Kongl. Götheborgska Vetenskaps och witterhets Samhällets Handlingar. Vetenskaps Afdelningen* 5(6): 81, f. 43, 44 b-i. 1937, *Arkiv för Botanik, Andra Serien* 4(15): 485, t. 21-2, 22. 1962 [1963] and 4(12): 417. 1961 [1963], *Gayana, Botánica* 42: 1-157. 1985, *Gayana, Botánica* 51(1): 1-10. 1994.

E. kwaiensis Peter (*Eleusine multiflora* Hochst. ex A. Rich.)

Africa, Tanzania, Kwai. See *Tentamen Florae Abyssinicae ...* 2: 412. 1850 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1) Anhang: 99. 1930, *Kew Bulletin* 27(2): 251-270. 1972, *Fl. Novo-Galic.* 14: 157. 1983.

E. kwamouthensis Vander.

Africa, Kasai. See *Bulletin agricole du Congo Belge* 11: 119. 1920.

E. lacunaria F. Muell. ex Benth. (*Eragrostis falcata* var. *piliger* Domin; *Eragrostis rankingii* Bailey)

Australia. Annual or short-lived perennial, tufted, small, sparse and short, simple or branched, wiry, more or less pubescent and thickened base, leaf blade usually rolled, leaves filiform and convolute, panicle open, stiffly spreading linear and narrow spikelets, lemmas and glumes cartilaginous, grain compressed, useful forage, grows on clay soils, adapted to hot and sandy situations, subtropical, similar to *Eragrostis falcata*, *Eragrostis longipedicellata* and *Eragrostis subtilis*, see *First Gen. Report.* 20. 1853, *Fl. Austral.* 7: 649. 1878, *Dept. Agr. Brisbane Bot. Bull.* 2: 22. 1891 [also *Bot. Bull. Dept. Agric., Queensland*] and *Grasses of Central Australia* 135, pl. 38c. 1970, *Fl. New South Wales* 4: 540. 1993.

in English: purple love grass

E. laeviglumis Jedwabn.

Australia. See *Botanisches Archiv* 5(3-4): 209. 1924.

E. laevissima Hack.

South Africa. Perennial or annual, tufted, erect or geniculate, glandular, sometimes rhizomatous with oblique rhizome, inflorescence open, spikelets oblong, usually in brackish and sandy soils, see *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 170. 1911.

E. lamarckii Steud. (*Eragrostis tremula* Hochst. ex Steud.)

Asia, Africa. See *Synopsis Plantarum Glumacearum* 1: 269. 1854.

E. lamprospicula De Winter

South Africa, Transvaal, Zimbabwe. Perennial, tufted, geniculate, not sprawling habit, basal sheath glabrous, spikelets grayish, lower glume lanceolate, palea keels entire, common in open habitats, open places, brackish flats, bare brack flats, see *Bothalia* 7: 471. 1961.

E. lanicaulis Lazarides

Australia. Perennial, tussocky, wiry, rhizomatous, base bulbous or knotty, lower sheaths overlapping, panicles spiciform, palea 3-toothed, grain compressed dorsally, see *Australian Systematic Botany* 10(1): 126. 1997.

E. laniflora Benth. (*Eragrostis eriopoda* var. *laniflora* (Benth.) J.M. Black)

Australia. Perennial, simple, wiry and erect, vigorous, tussocky, rhizomatous, dense and spreading clumps, base swollen and thickened by woolly cataphylls, stout and branched rhizome knotty and woolly, leaves rigid and inrolled, inflorescence open to racemose with hairy spikelets, panicle sparse and much branched, linear-oblong or elliptic spikelets straight or sometimes curved, florets 6-42, woolly and softly hairy at the base of each floret, glumes and lemmas ovate and keeled, lemmas dark purplish, palea 2-keeled, 3 stamens, fodder plant moderately palatable, very hardy and attractive, decorative when in flower, useful as a sand binder, common in dry regions, deep loose sandy soils and dunes, red-brown sandy soils, related to *Eragrostis eriopoda*, see *Flora Australiensis: A Description ...* 7: 648. 1878 and *Flora South Australia (edition 2)* 1: 79. 1922, *Fl. New South Wales* 4: 537. 1993.

in English: hairy woollybutt grass, woollybutt grass, hairy-flowered woollybutt

E. lanipes C.E. Hubbard (*Eragrostis clelandii* S.T. Blake) (Latin *lana*, ae "wool" and *pes, pedis* "a foot")

South Australia, Western Australia. Perennial, simple or sparsely branched, wiry or slender and smooth, forming spreading clumps, woolly and bulbous or knotty at base, flat or inrolled leaves, ligule a fringe of hairs, loose open panicle, green to purplish hairy spikelets oblong or ovate, glumes broadly ovate with ciliate margins, lemmas hairy orbicular often purple, 3 stamens, forage, grazed, susceptible to moisture stress, decorative when in flower, see *Bulletin of Miscellaneous Information Kew* 1934: 449. 1934.

in English: love grass

E. lappula Nees (*Eragrostis lappula* Nees var. *divaricata* Stapf; *Eragrostis lappula* var. *lappula*)

East Africa, South Africa. Perennial, tufted, light green, shortly rhizomatous, erect, palea keels hairy, pasture, palatable, growing in red clay soil, sandy dambo, waste ground, moist sandy soils, seasonally flooded areas, river

beds, see *Florae Africae Australioris Illustrationes Monographicae* 412. 1841 and *Flora Capensis* 7: 628. 1900.

E. lasseri Luces

Venezuela. See *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 6, f. 3. 1953.

E. ledermannii Pilg. (after the Swiss horticulturist Carl Ludwig Ledermann, 1875-1958, traveler, explorer, collected in West Cameroon (Kamerun, Cameroun), wrote "Eine botanische Wanderung nach Deutsch-Adamaua." *Mitteil. Deutsch. Schutzge.* 25: 20-55. 1912; see F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 48-49. 1971; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 1-110. Paris 1968; Frank Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*, (A.E.T.F.A.T.). 69-75. Lisbon 1962; F.N. Hepper, "C. Ledermann's botanical collecting localities in Kamerun (Cameroun) 1908-1909." *Kew Bulletin*. 29(2): 365-381. 1974)

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 45: 210. 1910.

E. leersiiformis Launert (resembling *Leersia* Swartz)

South Africa, Zambia. Annual, tufted, erect to geniculate, inflorescence open with spreading branches, palea keels ciliate, see *Prodromus einer Flora von Südwestafrika* 34(160): 224. 1970.

E. lehmanniana Nees (*Eragrostis lehmanniana* Nees var. *ampla* Stapf) (possibly after the German botanist Johann Georg Christian Lehmann, 1792-1860, professor of natural history at the Hamburg Johanneum and Director of the Hamburg Botanical Garden, his works include *Plantae Preissianae ... Plantarum quas in Australasia occidentali et meridionali-occidentali annis 1838-41 collegit L. Preiss. Hamburgi 1844-1847[-1848]*, *Semina in horto botanico hamburgensi 1822 collecta*. Hamburgi 1823 and *Novarum et minus cognitarum stirpium pugillus I-X* etc. Hamburgi 1828-1857; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 363. 1965; J.C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Frans A. Stafleu and Richard S. Cowan, *Taxonomic literature*. 2: 819-824. 1979; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 462. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Jeannette E. Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. 376. 1967; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie.

Leipzig 1942; John Hutchinson (1844-1972), *A Botanist in Southern Africa*. 578, 582. London 1946)

South Africa, Mozambique, Namibia, Zimbabwe. Perennial bunchgrass, variable, slender to strong, clump forming, usually branched, sometimes unbranched, tufted, usually geniculate, slightly spreading, stoloniferous, prostrate stems root at the nodes, fibrous roots, basal leaves, ligule a fringe of short hairs, leaf blade expanded or somewhat rolled, leaves sharp pointed, papery lower leaf sheaths, rigid inflorescence, panicle lax and open, stiff secondary axes and pedicels, small seeds, useful for erosion control, suitable for range restoration purposes, used for range reseeding in warm semideserts areas, widely used for roadside stabilization, gives a rapid soil cover, quite tolerant of drought, cultivated for hay and pasture, forage, weed species naturalized elsewhere, aggressive and very competitive, it should not be too closely grazed, palatable when green, of low palatability when mature, adapted to semiarid tropical and subtropical summer rainfall areas, common in semiarid environments, sandy open savannah, disturbed soils, dry disturbed open areas, sandy- to sandy loam-textured soils, on gravelly bajadas, along roadsides, chaparral, along sandy washes in desert scrub and desert grassland, in semidesert grassland, closely related to *Eragrostis trichophora* Cosson & Durieu, see *Florae Africae Australioris Illustrationes Monographicae* 402. 1841 and *Flora Capensis* 7: 602. 1900, Erika L. Geiger and Guy R. McPherson, "Response of semi-desert grasslands invaded by non-native grasses to altered disturbance regimes." *Journal of Biogeography* 32(5): 895-902. May 2005.

in English: land grass, Lehmann love grass, Lehmann's love grass, Eastern Province vlei grass

in South Africa: Eastern province vlei grass, blousaadsoetgras, growwevleigras, kleinblousaadgras, kleinsoetgras, knietjiesgras, Lehmann-eragrostis, lidjiesgras, soetgras-blousaadgras, soetgras, gewöhnliches straußgras

E. lehmanniana Nees var. *chaunantha* (Pilg.) De Winter (*Eragrostis chaunantha* Pilg.)

South Africa. Perennial, tufted, erect, prostrate stems rooting at the nodes, culm nodes and internodes hairy, inflorescence open, spikelets linear, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 84. 1907, *The Grasses and Pastures of South Africa* 147. 1955.

E. lehmanniana Nees var. *lehmanniana*

South Africa, Zimbabwe. Perennial, tufted, often branched, erect, sometimes rooting at the geniculate lower nodes, glabrous culm internodes, lower sheaths papery, ligule a ring of white hairs, leaf blade with a hard tip, contracted to open panicle, linear spikelets dark green to grayish green, palea keels thin, fodder, pasture grass, palatable when green, withstands heavy grazing, suitable for erosion control, useful in the stabilization of denuded and eroded sites,

common in disturbed soils, sandy to sandy loam soils, overgrazed veld, along roadsides, uncultivated lands, very dry areas, over limestone, denuded veld.

in English: land grass, Lehmann love grass, Lehmann's love grass, Eastern Province vlei grass

in South Africa: Eastern province vlei grass, blousaadsoetgras, growwevleigras, kleinblousaadgras, kleinsoetgras, knietjiesgras, Lehmann-eragrostis, lidjiesgras, soetgras-blousaadgras, soetgras, gewöhnliches straußgras

E. lepida (Hochst. ex A. Rich.) Hochst. ex Steud. (*Eragrostis ciliaris* (L.) R. Br.; *Eragrostis lepida* Hochst. ex A. Rich.; *Poa lepida* Hochst. ex A. Rich.)

Sudan, Ethiopia, Kenya. Annual, panicle loose and open, spikelets oblong, florets loose and divergent, glumes lanceolate, upper glume often mucronate, lemmas membranous and mucronate, palea hairy, found in disturbed areas, near water, see *Systema Naturae, Editio Decima* 875. 1759, *Narrative of an Expedition to Explore the River Zaire* 478. 1818, *Tentamen Florae Abyssinicae ... 2*: 424. 1850, *Flora* 38: 327. 1855.

E. lepriurii Steud. (*Eragrostis diplachnoides* Steud.) (after the French botanist F.M.R. Leprieur, 1799-1869, a dispenser in the French Navy, between 1824-29 in Senegambia, in 1829 returned to France and began his *Flora* continued by [Jean Baptiste] Antoine Guillemin (1796-1842), George Samuel Perrottet (1793-1870) and Achille Richard (1794-1852) as *Florae Senegambiae tentamen*. Paris (Treuttel et Wurtz), London 1830-1833; see Joseph Vallot (1854-1925), "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 168-238. Paris 1882; R.W.J. Keay, "Botanical Collectors in West Africa prior to 1860." in *Comptes Rendus A.E.T.F.A.T.* 55-68. Lisbon 1962; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 49. 1971; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London 1904; J.H. Barnhart, *Biographical notes upon botanists*. Boston 1965)

Senegal, Africa. See *Synopsis Plantarum Glumacearum* 1: 268-269. 1854.

E. leptantha Trin. (*Eragrostis mexicana* (Hornem.) Link; *Eragrostis mexicana* subsp. *virescens* (J. Presl) S.D. Koch & Sánchez Vega; *Poa leptantha* (Trin.) Kunth; *Poa mexicana* Hornem.)

Brazil. See *Hortus Regius Botanicus Hafniensis* 2: 953. 1815, *Hortus Regius Botanicus Berolinensis* 1: 190. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405. 1830, *Reliquiae Haenkeanae* 1(4-5): 276. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 339. 1833 and *Phytologia* 58: 380. 1985.

E. leptocalymma Pilg.

Asia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 84. 1907.

E. leptocarpa Benth.

South Australia, Queensland, New South Wales, Western Australia, Northern Territory. Annual or short-lived perennial, tufted, slender, simple or branched, erect or geniculate and rooting at the lower nodes, purple near the base, ligule a fringe of hairs, leaf blades flat or rolled, inflorescence open often lax to drooping, decompound panicles, spikelets linear loosely flowered, florets 6-12, vestigial apical floret, rounded on the back or keeled glumes linear to lanceolate or ovate, lemmas notched and lanceolate, not grazed, a weed of disturbed areas and gardens, floodways, similar to *Eragrostis parviflora*, see *Flora Australiensis: A Description* ... 7: 644. 1878.

in English: drooping love grass

E. leptophylla A.S. Hitchc.

U.S., Hawaii. Sandy plain, see *Memoirs of the Bernice Pauahi Bishop Museum* 8(3): 133, f. 21. 1922.

in English: mountain love grass

E. leptostachya (R. Br.) Steudel (*Eragrostis molybdea* Vicker; *Eragrostis osakai* O. Deg.; *Eragrostis rara* Domin; *Poa leptostachya* R. Br.)

Queensland, New South Wales, Victoria. Perennial, compact or loosely tufted, slender, leafy, erect, usually with glandular rings below nodes, leaf sheath keel glandular, leaf blades rolled or flat, open and spreading inflorescence paniculate, spikelets green on short glandular pedicels, florets 4-12, glumes unequal, glumes and lemmas acute and smooth, stamens 3, grain truncate, naturalized elsewhere, common in woodland and native pasture, similar to *Eragrostis alveiformis*, see *Prodromus Florae Novae Hollandiae* 180. 1810, *Synopsis Plantarum Glumacearum* 1: 279. 1854 and *Contr. New South Wales Natl. Herb.* 1: 338. 1950, *Austral. Grasses* 2: 45, pl. 7. 1968.

in English: paddock love grass, Australian love grass

E. leucosticta Nees ex Döll (*Eragrostis leucosticta* Nees)

Brazil, Paraguay. Leaves acuminate, panicle open, see *Flora Brasiliensis* 2(3): 144. 1878 and *Revista Brasileira de Botânica* 23(2): 177-194. 2000, *Iheringia, Série Botânica* 55: 23-169. 2001.

E. lichiangensis Jedwabn.

China, Yunnan, Lichiang. See *Botanisches Archiv* 5(3-4): 204. 1924.

E. lincangensis B.S. Sun & S. Wang

China, Yunnan. See *Acta Botanica Yunnanica* 11(3): 305-306, f. 3. 1989.

E. lindeniana Steud. (*Eragrostis maypurensis* (Kunth) Steud.; *Poa maypurensis* Kunth)

Venezuela. See *Nova Genera et Species Plantarum* 1: 161-162. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 276, 278. 1854.

E. lindmanii Hack. (*Eragrostis neesii* Trin.; *Eragrostis neesii* var. *lindmanii* (Hack.) Ekman) (dedicated to the Swedish botanist Carl Axel Magnus Lindman, 1856-1928, traveler, 1892-1894 in Brazil; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 386. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 239. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 200. 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 268. 1973; Frederico Carlos Hoehne, M. Kuhlmann and Oswaldo Handro, *O jardim botânico de São Paulo*. 1941)

South America, Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 339. 1833 and *Kongliga Svenska Vetenskaps Akademiens Handlingar* 34(6): 19, t. 10A. 1900, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 51. 1913, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970.

E. lingulata W.D. Clayton

Tropical Africa. Annual, loosely tufted, browsed by cattle, weedy places, see *Kew Bulletin* 20: 269, f. 5. 1966.

E. lobata Trin. (*Eragrostis ciliaris* (L.) R. Br.; *Poa ciliaris* L.; *Poa lobata* (Trin.) Kunth)

Mauritius. See *Systema Naturae, Editio Decima* 875. 1759, *Narrative of an Expedition to Explore the River Zaire* 478. 1818, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 396. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 346. 1833.

E. longapaniculata De Wild.

Africa. See *Bulletin du Jardin Botanique de l'État* 6: 67, t. 2. 1919.

E. longifolia Hochst. ex Steud. (*Eragrostis longifolia* Hochst.; *Eragrostis longifolia* Hochst. ex A. Rich.; *Eragrostis pobeguïnii* C.E. Hubb.; *Poa longifolia* Hochst. ex A. Rich., nom. illeg., non *Poa longifolia* Trin.)

Ethiopia, Yemen. Perennial, erect, rare, wiry, densely tufted, slender, basal sheaths coriaceous and swollen, leaf blades narrowly linear and flexuous, sheaths and leaf blades softly pilose, narrow panicle spike-like and very short, spikelets oblong to ovate, 5- to 17-flowered, florets loosely imbricate, lower glume lanceolate-oblong, upper glume ovate, lemmas

shortly acuminate, rocky places, grassland, related to *Eragrostis pobeguinii*, see *Flora* 24(1): 23. 1841, *Tentamen Florae Abyssinicae* ... 2: 425. 1850, *Synopsis Plantarum Glumacearum* 1: 268. 1854 and *Bulletin of Miscellaneous Information Kew* 1936(5): 312. 1936.

E. longipedicellata B.K. Simon

Australia, Queensland. Perennial, hispid, erect, filiform, rhizomatous, slender, compact, tufted, eglandular, knotty base, minute ligule, leaf blades filiform flexuose, open panicles, long-pedicellate spikelets, 3 stamens, similar to *Eragrostis lacunaria*, see *Austrobaileya* 1(5): 465. 1982.

E. lugens Nees (*Eragrostis flaccida* Lindm.; *Eragrostis lugens* f. *pallida* Hack.; *Eragrostis lugens* Nees subsp. *flaccida* (Lindm.) Hack.; *Eragrostis lugens* subsp. *lugens*; *Eragrostis lugens* var. *glabrata* Döll; *Eragrostis lugens* var. *glabrescens* Döll; *Eragrostis pilosa* (L.) P. Beauv. var. *lugens* (Nees) Griseb.; *Eragrostis pilosa* var. *lugens* Kuntze, nom. illeg., non *Eragrostis pilosa* var. *lugens* (Nees) Griseb.; *Eragrostis polytricha* Nees; *Eragrostis soratensis* Jedwabn.; *Poa lugens* (Nees) Kunth; *Poa polytricha* (Nees) Kunth)

South America, Brazil, Paraguay, Mexico to Argentina. Perennial, caespitose, erect or ascending, sometimes geniculate below, simple, glabrous, prominent nodes, leaves mostly basal, ligule ciliate, leaf blades involute to flat, open panicle ovate, secondary panicle branches and pedicels spreading, 2- to 7-flowered, flattened spikelets narrowly lanceolate, keeled glumes broadly ovate to narrowly lanceolate, lemmas broadly ovate and membranous, palea keels scaberulous, 3 stamens, forage, common in grassland, open sandy places, rocky areas, low prairies, similar to *Eragrostis soratensis*, see *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 505-508. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 331. 1833, *Flora Brasiliensis* 2(3): 140-141. 1878, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 290. 1879, *Contributions from the United States National Herbarium* 2(3): 542. 1894, *Revisio Generum Plantarum* 3(3): 352, 353. 1898 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 17, t. 9A. 1900, *Anales del Museo Nacional de Buenos Aires* 21: 134. 1911, *Botanisches Archiv* 5(3-4): 213. 1924, *Contr. U.S. Natl. Herb.* 24(8): 343. 1927, *Iheringia, Série Botânica* 55: 117, 125. 2001.

in English: mourning love grass

in Mexico: amor seco llorón, amor seco llorón, chuchun-arimbicua, cola de zorra, jiuatsiri eh' eti (Purépecha)

in Brazil: pasto-ilusão, capim-branco

E. lurida J. Presl (*Eragrostis bahiensis* var. *boliviensis* Henrard; *Eragrostis contracta* Pilg.; *Eragrostis contristata* Meyen; *Eragrostis contristata* Nees & Meyen; *Poa lurida* (J. Presl) Kunth)

Colombia, Bolivia, Peru, Argentina. Annual or perennial, herbaceous, mostly glabrous, erect, shrubby, caespitose, sometimes geniculate below, forming small clumps, leaf sheaths overlapping, leaves linear, ligule ciliate, dense inflorescence, panicle contracted, glomerate lobes of spikelets, 3-10 florets, glumes broadly ovate to lanceolate, lemmas broadly ovate and membranous, 3 stamens, forage, along roadsides, sandy areas, dry rocky hillsides, in moist places, rocky alluvial fans, see *Mantissa* 2: 318. 1824, *Reliquiae Haenkeanae* 1(4-5): 276. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 342. 1833, *Reise um die Erde* 1: 484. 1834, *Gramineae* 31-32. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 163-164. 1843 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 376. 1906, *Mededeelingen van's Rijks-Herbarium* 40: 68. 1921. in Ecuador: paja de burro, milín

E. lutensis Cope

Africa, Somalia. Perennial, tufted, scabrous leaves stiff and pungent, crateriform glands lacking, elliptic panicle, spikelets oblong, glumes unequal, lemmas obtuse and papery, palea keels scabrous, on floodplain, shallow water, see *Kew Bulletin* 50(1): 113, f. 3A-B. 1995.

E. lutescens Scribn.

U.S. Sandy banks, see *Circular, Division of Agrostology, United States Department of Agriculture* 9: 7. 1899.

in English: 6-weeks love grass

E. mabrana Schweinf.

Arabia. See *Bulletin de l'Herbier Boissier* 2(Append. 2): 24. 1894.

E. macilentata (A. Rich.) Steud. (*Eragrostis decidua* Hochst.; *Eragrostis dekindtii* Pilg.; *Eragrostis pseudonigra* Mattei ex Borzi; *Poa macilentata* A. Rich.)

Uganda, Tanzania, Nigeria, Angola, Yemen, Sudan. Annual, coarse to delicate, tufted to loosely tufted, leaf sheaths glabrous or sparsely hairy, leaf blades flat, diffuse spreading panicle, long pedicellate spikelets linear to narrowly ovate, spikelets oblong breaking up from the bottom upward, 4- to 18-flowered, acuminate glumes unequal to subequal, lemmas narrowly ovate and acute, palea persistent with scabrid keels, 3 stamens, good grazing, browsed by stock, weed of high rainfall areas, open habitats, evergreen bushland, forest, cultivated land, forest edge, roadsides, waste places, see *Tentamen Florae Abyssinicae* ... 2: 428. 1850, *Synopsis Plantarum Glumacearum* 1: 268. 1854, *Flora* 38: 324. 1855 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 83. 1907, *Contr. Biol. Veg. R. Ist. Bot. Palermo* 4: 246. 1909.

E. macra Jedwabn. (*Eragrostis bahiensis* Schrad. ex Schult.; *Eragrostis bahiensis* var. *bahiensis*)

Brazil. See *Mantissa* 2: 318. 1824 and *Botanisches Archiv* 5(3-4): 200. 1924, *Iheringia, Série Botânica* 55: 147. 2001.

E. macrochlamys Pilg.

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 48: 346. 1912.

E. macrochlamys Pilg. var. ***macrochlamys***

South Africa. Annual, tufted, erect and geniculate, sometimes procumbent, basal sheaths glabrous, inflorescence glandular, lemma acute, palea keels entire, common in sandy soils, river courses, disturbed areas, along roadsides.

E. macrochlamys Pilg. var. ***wilmaniae*** (C.E. Hubb. & Schweick.) De Winter

South Africa. Annual, tufted, erect and geniculate, sometimes procumbent, basal sheaths glabrous, inflorescence not glandular, lemma acute, palea keels entire, common in sandy soils, moist areas, river courses, disturbed areas, along roadsides, see *The Grasses and Pastures of South Africa* 176. 1955.

E. macrothyrsa Hack.

Paraguay, Bolivia. Foliage basal, panicle branches alternate, lemmas acuminate, forest margin, see *Repertorium Specierum Novarum Regni Vegetabilis* 8: 47. 1910.

E. maderaspatana Bor (*Eragrostis willdenowiana* Nees ex Hook.f., nom. illeg., non *Eragrostis willdenowiana* Nees ex Hook. & Arn.)

India. See *The Flora of British India* 7: 322. 1896 and *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 509. 1960.

in India: kari jondu hullu

E. magna Hitchc.

Peru, South America. Common on rocky grasslands, see *Contributions from the United States National Herbarium* 24(8): 341. 1927.

E. mahrana Schweinf. (*Eragrostis hararensis* Chiov., sometimes spelled *haranensis*)

Africa, Ethiopia, Arabia, Somalia. Perennial, bushy, tough, spiny, robust, glaucous, leaves pungent, imbricate sheaths, panicle ovate, spikelets shortly pedicelled, glumes lanceolate, lemmas membranous, palea keels scabrous, alluvium, dry sandy soils, gravel, see *Annuario del Reale Istituto Botanico di Roma* 6: 163. 1896 and *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: gubangub

E. malayana Stapf

Asia, Borneo. See *The Flora of British India* 7(22): 317. 1897 [1896].

in Thailand: ya khai hep, yaa krok, yaa lang kaa, ya langka

E. margaritacea Stapf (*Eragrostis rotifer* Rendle)

Transvaal, Botswana. Perennial, erect, caespitose, ponds, see *Flora Capensis* 7: 604. 1899, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 242. 1899.

E. marquisensis F. Brown (*Leptochloa marquisensis* (F. Br.) P.M. Peterson & Judz.)

Marquesas. Rare species, see *Bernice P. Bishop Museum Bulletin* 84: 81, t. 9b. 1931, *Taxon* 39(4): 659. 1990.

E. mauiensis A.S. Hitchc.

Hawaii. Extinct or endangered species, sand hills, see *Memoirs of the Bernice Pauahi Bishop Museum* ... 8(3): 129, f. 16. 1922.

in English: Maui lovegrass

E. maypurensis (Kunth) Steud. (*Eragrostis acuminata* Döll; *Eragrostis amoena* J. Presl; *Eragrostis lindeniana* Steud.; *Eragrostis maypurensis* (Kunth) Döll, nom. illeg., non *Eragrostis maypurensis* (Kunth) Steud.; *Eragrostis maypurensis* var. *densiuscula* Pilg.; *Eragrostis maypurensis* var. *meratiana* (Kunth) Pilg.; *Eragrostis meratiana* (Kunth) Steud.; *Eragrostis panamensis* J. Presl; *Eragrostis squarrosa* E. Fourn.; *Eragrostis vahlii* (Roem. & Schult.) Nees; *Eragrostis vahlii* var. *polyantha* Döll; *Megastachya amoena* (J. Presl) E. Fourn.; *Megastachya amoena* E. Fourn. ex Hemsl.; *Megastachya maypurensis* (Kunth) Roem. & Schult.; *Megastachya panamensis* (J. Presl) E. Fourn.; *Megastachya panamensis* E. Fourn. ex Hemsl.; *Megastachya swainsonii* Raddi; *Poa alata* Desv.; *Poa maypurensis* Kunth; *Poa meratiana* Kunth; *Poa racemosa* Vahl; *Poa squarrosa* Salzm. ex Steud.; *Poa vahlii* Roem. & Schult.) ("Crescit in opacatis sylvarum Orinocensium inter Cataractam Sancti Josephi Maypurensium et confluentem Sipapum...")

North and South America, Mexico, Brazil, Venezuela, Honduras. Annual, variable, tufted, erect or decumbent, simple or branched, glabrous, leaves basal, leaf blades linear and acuminate, ligules ciliolate, inflorescence oblong to ovate, spikelets elliptic more or less divergent from panicle branches, 11- to 65-flowered, florets overlapping, glumes narrowly lanceolate and subequal or unequal, lemmas orange-tinged with apex slightly recurved, 2 stamens, fodder, eaten by the rodent Capibara (common names: yovuni, unkum, kapiur, cuesto, tota, ronsoco, capibaro, chigüire, capihuara), growing in disturbed areas, dry open habitats, pastures, roadsides, riverbanks, rocky places, hard soil, mangrove edge, savannahs, margin of marshes, sand dunes, see *Nova Genera et Species Plantarum* 1: 161-162. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 563, 588. 1817, *Agrostografia Brasiliensis* 52. 1823, *Flora Brasiliensis* 2: 499-500. 1829, *Reliquiae Haenkeanae* 1(4-5): 275, 277. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 206. 1831, *Révision des Graminées* 2: 539, t. 184. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 342. 1833, *Synopsis Plantarum Glumacearum* 1: 274, 276, 278. 1854, *Flora Brasiliensis* 2(3): 153-155. 1878, *Biologia Centrali-Americana; ... Botany ...* 3: 572, 574. 1885, *Mexicanas Plantas* 2: 118. 1886 and *Botanische Jahrbücher für Systematik*,

Pflanzengeschichte und Pflanzengeographie 70: 348-349. 1939, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Flora de Veracruz* 82: 115. 1994.

in Mexico: pan caliente, pasto

E. megalosperma F. Muell ex Benth. (*Sporobolus indicus* var. *intermedius* F.M. Bailey)

Queensland, New South Wales. Perennial, erect, branched, tufted, compact, leafy tussocky, shortly rhizomatous, eglanular, often branched at lower nodes, leaf blades rolled, inflorescence contracted, spiciform panicle, glumes unequal and persistent, glumes and lemmas acute and keeled, 3 stamens, grain obtuse, occurs in woodland and semiarid native pasture, see *Flora Australiensis: A Description ...* 7: 644. 1878 and *Flora of New South Wales* 4: 542. 1993.

E. membranacea Hack. ex Schinz

Africa, Zambia, Zimbabwe. Annual, sometimes aquatic, erect, tufted, basal sheaths glabrous, inflorescence open, lemma ovate, palea keels entire, 3 anthers, found in moist areas, around water courses, sometimes in shallow water, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 148. 1888.

E. mexicana (Hornem.) Link (*Eragrostis alba* J. Presl; *Eragrostis chilensis* (Moris) Nees; *Eragrostis cordobensis* Jedwabn.; *Eragrostis leptantha* Trin.; *Eragrostis limbata* E. Fourn.; *Eragrostis limbata* var. *major* E. Fourn.; *Eragrostis mexicana* var. *neomexicana* (Vasey ex L.H. Dewey) Beetle; *Eragrostis mexicana* var. *pygmaea* Döll; *Eragrostis neomexicana* Vasey ex L.H. Dewey; *Eragrostis pauciflora* Trin. ex E. Fourn. ex Hemsl.; *Eragrostis pauciflora* Trin. ex E. Fourn.; *Eragrostis purshii* var. *major* E. Fourn.; *Eragrostis rahmeri* Phil.; *Eragrostis virescens* J. Presl; *Poa alba* (J. Presl) Kunth; *Poa chilensis* Moris; *Poa leptantha* (Trin.) Kunth; *Poa mexicana* Hornem.; *Poa mexicana* Lag., nom. illeg., non *Poa mexicana* Hornem.)

North and South America, U.S., Mexico, Argentina, Brazil, Paraguay. Annual, loosely tufted, robust, sometimes with a glandular depression below the nodes, more or less branched, flimsy, erect or ascending or decumbent, sprawling, ligule ciliate, leaf blades flat, loose or open panicle oblong to ovoid, 5 to 15 florets, spikelets narrow-ovate to narrow-oblong or linear, membranous glumes lanceolate to ovate, lemmas ovate or lanceolate-ovate, stamens 3, fodder, a weed of urban areas, ballast, disturbed open areas, slopes, near cultivated fields, on waste ground, muddy soil, edge of river, hard ground, trampled soil, along roadsides, see *Hortus Regius Botanicus Hafniensis* 2: 953. 1815, *Genera et species plantarum* 3. 1816, *Hortus Regius Botanicus Berolinensis* 1: 190. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405. 1830, *Ann. Storia Nat.* 4: 60. 1830, *Reliquiae Haenkeanae* 1(4-5): 276, 279. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 339, 343. 1833, *Nova Acta*

Academiae Caesareae Leopoldino-Carolinae Germanicae Naturae Curiosorum 19: Suppl. 1: 32, 1841; 164. 1843, *A Manual of the Botany of the Northern United States* edition 2. 564. 1856, *Flora Brasiliensis* 2(3): 143. 1878, *Biol. Cent.-Amer. Bot.* 3: 573, 575. 1883, *Mexicanas Plantas* 2: 116-117. 1886, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 88. 1891, *Contributions from the United States National Herbarium* 2(3): 542. 1894 and *Botanisches Archiv* 5(3-4): 208. 1924, *Brittonia* 23(3): 293-324. 1971, *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Fl. Novo-Galic.* 14: 168. 1983, *Phytologia* 58: 379. 1985, *Cuscatlania* 1(6): 1-29. 1991, *Las Gramíneas de México* 3: 78. 1991, *Iheringia, Série Botânica* 55: 164. 2001.

in English: Mexican lovegrass, love grass

in Mexico: bayal, bayal-suuk, pasto amor, zacate de agua, zacate de amor mexicano

E. mexicana (Hornem.) Link subsp. ***mexicana*** (*Eragrostis limbata* E. Fourn.; *Eragrostis mexicana* var. *mexicana*; *Eragrostis neomexicana* Vasey ex L.H. Dewey; *Poa mexicana* Hornem.; *Poa mexicana* Lag., nom. illeg., non *Poa mexicana* Hornem.)

North and South America, U.S., Mexico, Argentina, Brazil, Paraguay. Annual, spikelets ovate to oblong, weed species, see *Hortus Regius Botanicus Hafniensis* 2: 953. 1815, *Genera et species plantarum* 3. 1816, *Hortus Regius Botanicus Berolinensis* 1: 190. 1827, *Mexicanas Plantas* 2: 116. 1886, *Contributions from the United States National Herbarium* 2(3): 542. 1894 and *Fl. Novo-Galic.* 14: 168. 1983, *Phytologia* 58: 379. 1985.

in English: Mexican lovegrass

in Mexico: pasto amor, zacate de agua, zacate de amor mexicano

E. mexicana (Hornem.) Link subsp. ***virescens*** (J. Presl) S.D. Koch & Sánchez Vega (*Eragrostis cordobensis* Jedwabn.; *Eragrostis delicatula* Trin.; *Eragrostis orcuttiana* Vasey; *Eragrostis pilosa* (L.) P. Beauv.; *Eragrostis pilosa* var. *delicatula* (Trin.) Hack.; *Eragrostis scabra* Phil.; *Eragrostis virescens* J. Presl)

U.S., Argentina, Brazil, Paraguay, Peru. Annual, erect, herbaceous, spikelets linear to linear-lanceolate, weed species, roadsides, see *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Hortus Regius Botanicus Berolinensis* 1: 190. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405. 1830, *Reliquiae Haenkeanae* 1(4-5): 276. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 329. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 73. 1836 *Florula Atacamensis seu enumeratio plantarum*, quas

in itinere per desertum atacamense observavit Dr. R. Philippi ... 55. Halis Saxonum [Halle] 1860, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 88. 1891, *Contributions from the United States National Herbarium* 1(8): 269. 1893 and *Anales del Museo Nacional de Buenos Aires* 11: 133. 1904, *Botanisches Archiv* 5(3-4): 208. 1924, *Phytologia* 58: 380. 1985, *Iheringia, Série Botânica* 55: 164. 2001.

in English: Mexican lovegrass, Chilean love grass

in South Africa: Chileense eragrostis

E. mexicana (Hornem.) Link var. ***mexicana*** (*Eragrostis limbata* E. Fourn.; *Eragrostis neomexicana* Vasey ex L.H. Dewey)

North and South America, U.S., Mexico. Annual, spikelets ovate to oblong, weed species, see *Hortus Regius Botanicus Hafniensis* 2: 953. 1815, *Genera et species plantarum* 3. 1816, *Hortus Regius Botanicus Berolinensis* 1: 190. 1827, *Mexicanas Plantas* 2: 116. 1886, *Contributions from the United States National Herbarium* 2(3): 542. 1894 and *Fl. Novo-Galic.* 14: 168. 1983, *Phytologia* 58: 379. 1985.

in English: Mexican lovegrass

in Mexico: pasto amor, zacate de agua, zacate de amor mexicano

E. micrantha Hack.

Namibia, South Africa. Perennial short-lived, tufted, weak, unbranched, erect, leaf sheath glabrous, leaf blade filiform, much-branched and spreading panicle, glumes more or less unequal, lemma greenish and keeled, little grazing value, generally in moist areas, disturbed places, moist places near vleis, wet areas, in light shade, see *Bulletin de l'Herbier Boissier* 3(8): 389. 1895.

in English: finesse grass

in South Africa: finessegras

E. microcarpa Vickery

Australia, Queensland, New South Wales. Perennial, slender, wiry, densely tufted, forming spreading clumps woolly at base, leaf blade rolled, pyramidal panicle open and loose, green overlapping spikelets, 3 stamens, grain obtuse, ornamental, moist and wet conditions, moist soils, in woodland on clay soils, similar to *Eragrostis parviflora*, see *Contributions from the New South Wales National Herbarium* 1(6): 339. 1951, *Flora of New South Wales* 4: 541. 1993.

in English: love grass

E. minor Host (*Eragrostis brizoides* Costa; *Eragrostis eragrostis* (L.) H. Karst., nom. illeg., non *Eragrostis eragrostis* (L.) P. Beauv.; *Eragrostis eragrostis* (L.) P. Beauv.; *Eragrostis eragrostis* var. *microstachya* (Coss. & Germ.) Farw.; *Eragrostis minore* Host; *Eragrostis multiflora* var. *pappiana* Chiov.; *Eragrostis pappiana* (Chiov.) Chiov.; *Eragrostis pilosa* var. *minor* (Host) Kuntze; *Eragrostis poaeiformis*

Link; *Eragrostis poaeiodes* P. Beauv.; *Eragrostis poaeoides* P. Beauv. ex Roem. & Schult.; *Eragrostis poaeoides* P. Beauv., nom. illeg., non *Eragrostis minor* Host; *Eragrostis poaeoides* var. *laxiflora* Döll; *Eragrostis poiformis* Link; *Eragrostis suaveolens* A.K. Becker ex Claus; *Eragrostis vulgaris* Coss. & Germ.; *Eragrostis vulgaris* J. Presl ex Steud.; *Eragrostis vulgaris* subsp. *poaeoides* (P. Beauv. ex Roem. & Schult.) R.C.V. Douin; *Eragrostis vulgaris* var. *microstachya* Coss. & Germ.; *Poa eragrostis* L.; *Poa poaeoides* P. Beauv.; *Poa poaeiodes* P. Beauv.)

Eurasia, Egypt, China, Yemen, Nepal, Pakistan, Israel, tropical Africa. Annual or short-lived perennial, caespitose, densely tufted to loosely tufted, erect or decumbent or prostrate, slender, usually sparsely branched, glandular rings below the nodes, crateriform glands along the leaf blade margins, ligule ciliate, leaf sheaths loose, leaf blade narrow-linear and acuminate, panicle rather dense or open with spreading branches, spikelets narrowly oblong or sometimes linear breaking up from the bottom upward, florets loosely imbricate, glumes unequal or subequal boat-shaped, papery lemmas broadly ovate and obtuse, palea keels scabrid, stamens 3, grains eaten in time of scarcity, weed species naturalized elsewhere, sometimes aromatic or stinking, eaten by cattle when young, found on edge of irrigation ditch, wadi beds, waste places, sandy or stony soils along water courses, railroads and along roadsides, disturbed and weedy places, see *Species Plantarum* 1: 68. 1753, *Descriptio Graminum in Gallia et Germania* 181. 1802, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, *Essai d'une Nouvelle Agrostographie* 71, 162, 174, t. 14, f. 11. 1812, *Systema Vegetabilium* 2: 574. 1817, *Hortus Regius Botanicus Berolinensis* 1: 188. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 401. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 371. 1833, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Flore des Environs de Paris* 2: 641. 1845, *Beiträge zur Pflanzenkunde des Russischen Reiches* 8: 266. 1851, *Flora Brasiliensis* 2(3): 149. 1878, *Deutsche Flora. Pharmaceutisch-medicinische Botanik...* 389. 1881, *Flora von Nieder-Österreich* 1: 88. 1890, *Revisio Generum Plantarum* 2: 774. 1891, *Revisio Generum Plantarum* 3(2): 353. 1898 and *A Flora of Western Middle California* 60. 1901, *Flora Descriptiva é Illustrada de Galicia* 3: 318. Santiago 1909, *American Midland Naturalist* 10: 306. 1927, *Flore Complète Illustrée en Couleurs de France, Suisse et Belgique* 12: 32. 1927-1932, *Grasses of Ceylon* 75. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma ...* 512. 1960, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 1234. 1971[1972], *Phytologia* 37(4): 317-407. 1977, *Journal of Cytology and Genetics* 18: 58-61. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 23: 118-

131. 1988, *Acta Botanica Yunnanica* 11(3): 307. 1989, *Journal of Cytology and Genetics* 25: 147-148. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Revista Brasileira de Botânica* 23(2): 177-194. 2000.

in English: smaller stinkgrass, small stinkgrass, little love grass, love grass, low love grass

in Arabic: azmelil

in Mauritania: azmelil

in India: dodda purale hullu, maitari mulmul, sanna oogu hullu

E. moggii De Winter (the specific name honors the South African botanist A.O.D. Mogg, author of "An autecological note on the poisonous Gifblaar (*Dichapetalum cymosum* (Hook.) Engl.)." *S. Afr. J. Sci.* 27: 368-375. 1930, "A method of veld estimation." *S. Afr. J. Sci.* 17: 222-226. 1921 and *Important plants of Sterkfontein*. University of Witwatersrand. Johannesburg 1975)

Africa. See *Bothalia* 9: 137. 1966.

E. moggii De Winter var. **moggii**

Africa, Mozambique. Perennial, erect, tufted, geniculate to decumbent and rooting at the nodes, inflorescence open, spikelets linear, found in sandy soils, open habitats, open forests.

E. mokensis Pilg. (*Eragrostis moritzii* Jedwabn.) (Equatorial Guinea, Fernando Po) (named for the German botanical explorer Johann Wilhelm Karl Moritz, 1797-1866, collector in West Indies and Venezuela; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 514. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. 482, 505. Paris 1845; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 112. Edinburgh 1970)

South America, Venezuela, Brazil. Annual, slender, tillered, montane, a weed of cultivation, browsed by stock, see *Plantarum vascularium genera secundum ordines ...* 1: 188, 280. 1840 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 419. 1914, *Botanisches Archiv* 4: 328. 1923, *Annals of the Missouri Botanical Garden* 75(2): 456-521. 1988, *Sida* 16(4): 769-771. 1995, *Revista Brasileira de Botânica* 23(2): 177-194. 2000, *Iheringia, Série Botânica* 55: 23-169. 2001.

E. mollior Pilg. ex R.E. Fr. (*Eragrostis mollior* (Pilger) Pilg.)

Africa, Tanzania. Densely tufted, along trails, roadsides, see *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 213. 1916, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 13: 409. 1936.

E. molybdea Vickery

New South Wales, Queensland, Victoria. Perennial, tufted, sometimes glandular, blade flat or rolled, inflorescence

open, spikelets green, florets 8-19, glumes and lemmas acute and keeled, grain truncate, occurs in woodland or native pasture, often in *Eragrostis leptostachya*, see *Contributions from the New South Wales National Herbarium* 1: 338. 1951.

E. monandra Hack. (*Briza bidentata* Roseng., B.R. Arrill. & Izag.; *Rhombolytrum monandrum* (Hack.) Nicora & Rúgolo)

Brazil. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 320. 1909, *Boletim de la Facultad de Agronomia de Universidad de la Republica, Montevideo* 105: 24. 1968, *Darwiniana* 23(1): 279-309. 1981, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 1-191. 1987.

E. montana Balansa

Cambodia. See *Journal de Botanique* (Morot) 4(8): 168. 1890.

E. monticola (Gaudich.) Hillebr. (*Poa monticola* Gaudich.)

Hawaii. See *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 408. 1830, *Flora of the Hawaiian Islands* 531. 1888.

in Hawaii: kalamalo

E. montufari (Kunth) Steud. (*Eragrostis boliviensis* Jedwabn.; *Eragrostis buchtienii* Hack.; *Eragrostis pastoensis* (Kunth) Trin.; *Megastachya montufari* (Kunth) Roem. & Schult.; *Poa montufari* Kunth)

Bolivia, Venezuela to Argentina. Perennial, tufted, leaf blades acuminate, inflorescence ovate to oblong, spikelets clustered and oblong, 3- to 8-flowered, glumes unequal, lemmas lanceolate, 3 stamens, disturbed places, see *Nova Genera et Species Plantarum* 1: 159. 1815 [1816], *Systema Vegetabilium* 2: 586. 1817, *Botanisches Archiv* 5(3-4): 205. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4(2): 71. 1836, *Nomenclator Botanicus. Editio secunda* 1: 563. 1840, *Syn. Pl. Glum.* 1: 275. 1854 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 157. 1908.

E. namaquensis Nees ex Schrad. (*Diandrochloa namaquensis* (Nees ex Schrad.) De Winter; *Eragrostis interrupta* var. *namaquensis* (Nees ex Schrad.) Dur. & Schinz; *Eragrostis japonica* (Thunb.) Trin.; *Eragrostis namaquensis* Hochst.; *Poa japonica* Thunb.)

South Africa. See *Flora Japonica, ...* 51. 1784, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405. 1830, *Linnaea* 12(4): 452. 1838, *Synopsis Plantarum Glumacearum* 1: 264, 268. 1854, *Conspectus Florae Africae* 5: 884. 1894 and *Flora Capensis* 7: 630. 1900, *Vierteljahrsschrift der Naturforschenden Gesellschaft*

in *Zürich* 56: 83. 1911, *Bothalia* 7(2): 388-389. 1960, *Kew Bulletin* 25(2): 251. 1971.

E. nebulosa Stapf (*Eragrostis planiculmis* Nees)

Transvaal. Moist places, depressions, see *Florae Africae Australioris Illustrationes Monographicae* 391. 1841 and *Flora Capensis* 7: 603. 1900.

E. neesii Trin. (*Eragrostis brasiliensis* (Raddi) Nees; *Eragrostis lindmanii* Hack.; *Eragrostis neesii* var. *lindmanii* (Hack.) Ekman; *Eragrostis villosa* Salzm. ex Steud., nom. illeg., non *Eragrostis villosa* Trin.; *Poa brasiliensis* Raddi; *Poa neesii* (Trin.) Kunth)

Bolivia, Uruguay, Brazil, Argentina, Paraguay. Annual or perennial, tufted, leaves acuminate and mostly basal, inflorescence oblong, panicle congested narrowly oblong, spikelets oblong, 7-20-flowered, gland-like articulations on the pedicels, glumes unequal and acute, lemmas ovate and imbricate, common in disturbed places, open areas, sandy places, see *Agrostografia Brasiliensis* 51. 1823, *Sylloge Plantarum Novarum* 1: 194. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 497-499, 502-503. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 339. 1833, *Synopsis Plantarum Glumacearum* 1: 276. 1854 and *Kongliga Svenska Vetenskaps Akademiens Handlingar* 34(6): 19, t. 10A. 1900, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 51. 1913, *Botanisches Archiv* 5(3-4): 206. 1924, *Annals of the Missouri Botanical Garden* 77(1): 155. 1990, *Iheringia, Série Botânica* 55: 86. 2001.

E. neesii Trin. var. *expansiflora* Nicora

Argentina. Caespitose, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405. 1830 and *Revista Argentina de Agronomía* 7: 258, 265, f. 3. 1940.

E. neesii Trin. var. *lindmanii* (Hack.) Ekman (*Eragrostis lindmanii* Hack.)

Argentina, Brazil. Annual, spikelets ovate-elliptic, see *Kongliga Svenska Vetenskaps Akademiens Handlingar* 34(6): 19, t. 10A. 1900, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 51. 1913.

E. neesii Trin. var. *neesii*

South America.

E. nevinii Hance (for Rev. Joseph Cook Nevin, 1835-1912, plant collector in China, see Emil Bretschneider, *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898.] 706-707. Leipzig 1981; E.H.M. Cox, *Plant-hunting in China: A History of Botanical Exploration in China and the Tibetan Marches*. London 1945)

China, Vietnam, Taiwan. Gravelly sandy loam, waste area, see *Journal of Botany, British and Foreign* 18(214): 302-303. 1880.

E. nigerica A. Chev. (*Eragrostis atropurpurea* Hochst. ex Steud.; *Eragrostis paniculata* Thwaites, nom. illeg., non *Eragrostis paniculata* (Roxb.) Steud.)

Africa, Sudan. See *Synopsis Plantarum Glumacearum* 1: 267. 1855 [1854], *Enumeratio Plantarum Zeylaniae* 373. 1864 and *Bulletin du Muséum d'Histoire Naturelle* 20: 470. 1948.

E. nigra Nees ex Steud. (*Eragrostis aspera* (Jacq.) Nees; *Eragrostis paniculata* Thw., nom. illeg., non *Eragrostis paniculata* (Roxb.) Steud.)

China, Peninsular India, Sri Lanka, Southeast Asia, Indonesia. Perennial, very variable, caespitose, robust or not, compact at the base, simple or branched, erect, sometimes decumbent, ligule a ciliate rim, sheaths rather loose or tight, leaves lanceolate and sharply pointed, large lax spreading panicle, spikelets seated on pedicels, loosely imbricate florets, glumes subequal and strongly nerved, smooth palea keels, fodder grass, grazed or eaten by the cattle, weed species in tea plantations, in the forest margins, along paths, see *Hortus Botanicus Vindobonensis* 3: 32, t. 56. 1776, *Flora Indica; or Descriptions ...* 1: 341. 1820, *Florae Africae Australioris Illustrationes Monographicae* 408. 1841, *Synopsis Plantarum Glumacearum* 1: 266-267. 1854, *Enumeratio Plantarum Zeylaniae* 373. 1864 and *Handb. Fl. Ceylon* 5: 295. 1900, *Handb. Fl. Ceylon* 6: 340. 1931, *Grasses of Ceylon* 74. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 24. 1959, *Grasses of Burma ...* 511. 1960.

E. nigra Nees ex Steud. var. *cochinchinensis* A. Camus

Asia, Indochina. See *Bulletin du Muséum d'Histoire Naturelle* 25: 498. 1919.

E. nigra Nees ex Steud. var. *trachycarpa* Benth. (*Eragrostis trachycarpa* (Benth.) Domin)

Australia. See *Flora Australiensis: A Description ...* 7: 643. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 9: 552. 1911.

E. nigricans (Kunth) Steud. (*Eragrostis nigricans* var. *tristis* (Jedwabn.) Pilg.; *Eragrostis subatra* Jedwabn.; *Eragrostis tristis* Jedwabn.; *Megastachya nigricans* (Kunth) Roem. & Schult.; *Poa atrovirens* Willd. ex Spreng., nom. illeg., non *Poa atrovirens* Desf.; *Poa nigricans* Kunth)

Colombia, Peru, Chile, Bolivia, Argentina. Annual, erect, glabrous, herbaceous or subherbaceous, sometimes geniculate, leaf sheaths sparsely pilose, leaf blades linear, compact inflorescence paniculate, spikelets arranged in glomerules, 2-5 florets, stout pedicels stiffly spreading and divaricate, glumes and lemmas membranous, subequal glumes ovate to lanceolate, lemmas ovate, 3 stamens, forage, occurs near cultivated fields, disturbed roadsides, rocky slopes, see *Nova Genera et Species Plantarum* 1: 159. 1815

[1816], *Systema Vegetabilium* 2: 586. 1817, *Systema Vegetabilium, editio decima sexta* 1: 340. 1825, *Nomenclator Botanicus. Editio secunda* 1: 563. 1840 and *Botanisches Archiv* 5(3-4): 205. 1924, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 778. 1933, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Nómina de las plantas recolectadas en el Valle de Cochabamba* 2: 17-86. 1966, *Ecología en Bolivia* 34: 45-70. 2000.

in Ecuador: milin

E. nigricans (Kunth) Steud. var. *nigricans*

South America.

E. nigricans (Kunth) Steud. var. *punensis* Nicora

Argentina. See *Nomenclator Botanicus. Editio secunda* 1: 563. 1840 and *Boissiera*. 54: 65, f. 16. 1998.

E. nindensis Ficalho & Hiern (*Eragrostis denudata* Hack. ex Schinz; *Eragrostis denudata* Hack.) (Upper course of river Ninda, Angola)

Tanzania, South Africa, Mozambique, Namibia. Perennial, polymorphic, bright green to reddish brown, 1-noded, densely tufted, upright, slender, unbranched, soft, leaves pointed, leaf sheaths hard, ligule a fringe of short hairs, leaves forming a basal tuft, oblique creeping rhizome, inflorescence racemose with rigid primary axis, open or slightly contracted panicle, spikelets solitary or clustered, rachilla fragile, lowest lemma acute, palea keels entire, vigorous wild teff relatively palatable, forage, sheep fodder, resurrection grass, leaves revive after desiccation, drought resistant, common in arid and semiarid areas, stony sandy soils, among rocks, on bare patches, see *Transactions of the Linnean Society of London, Botany* 2: 32. 1881, *Bulletin de l'Herbier Boissier* 3(8): 392. 1895.

in English: love grass, wether love grass

in South Africa: agtdaepluimgras, hamelgras, acht-tage straußgras

E. nutans (Retz.) Nees ex Steud. (*Eragrostis chariis* (Schult.) Hitchc.; *Eragrostis elegantula* (Kunth) Nees ex Steud., nom. illeg., non *Eragrostis elegantula* Nees; *Eragrostis nutans* (Retz.) Boiss., nom. illeg., non *Eragrostis nutans* (Retz.) Nees ex Steud.; *Eragrostis nutans* (Retz.) Nees; *Poa chariis* Schult.; *Poa elegans* Roxb., nom. illeg., non *Poa elegans* Poir.; *Poa elegantula* Kunth; *Poa nutans* Retz.)

Japan, Taiwan, India, Sri Lanka. Perennial, tufted, simple or branched, erect or sometimes geniculate, ligule a ciliolate membrane, leaf sheaths coriaceous, dense inflorescence, panicle contracted, florets contiguous, glumes subequal, palea persistent and ciliolate on the keels, grazed or eaten by the cattle, coastal, moist ground, pasture, in dry and arid zones, sandy places, similar to *Eragrostis atrovirens* (Desf.) Trin. ex Steud., see *Observationes Botanicae* 4: 19. 1786, *Hortus Bengalensis, or a Catalogue ...* 82. 1814, *Mantissa*

2: 314. 1824, *Révision des Graminées* 1: 114. 1829, *Catalogue of Indian Plants* 105. 1834, *Nomenclator Botanicus. Editio secunda* 1: 563. 1840, *Synopsis Plantarum Glumacearum* 1: 266. 1854, *Flora Orientalis* 5: 583. 1884, *Fl. Br. Ind.* 7: 318. 1896 and *Handb. Fl. Ceylon* 5: 294. 1900, *Lingnan Science Journal* 7: 193. 1929 [1931], *Grasses of Ceylon* 73. 1956, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 511. 1960, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 23: 118-131. 1988.

in India: asara, asaunra, bhulwa, chota asara, ghodila, ghodila, ghui, kaadu gasagase hullu, kaadu jade navane hullu, kaluargi, khajuria, kutti pushli, lal bali, lamcha, lumra, mumkara, nakurmaral, rasaurah, sur, uranki gaddi, urenka, urenke

in Thailand: yaa khaem, ya khaem

E. oblonga (Moench) Baumg. (*Briza oblonga* Moench; *Eragrostis cilianensis* (All.) Vignolo ex Janch.)

Eurasia. See *Flora Pedemontana* 2: 246. 1785, *Methodus Plantas Horti Botanici ...* 185. 1794, *Essai d'une Nouvelle Agrostographie* 74, 167, 175. 1812, *Enumeratio Stirpium Transsilvaniae* 3: 238. 1816 and *Mitteilungen des Naturwissenschaftlichen Vereins der Universität Wien* 5: 110. 1907, *Taxon* 35: 697. 1986.

E. obtusa Munro ex Ficalho & Hiern (*Eragrostis obtusa* Munro ex Durand & Schinz; *Eragrostis obtusa* Munro ex Stapf)

South Africa, Lesotho. Perennial bunchgrass, sometimes annual, densely clumped, often geniculate, leaf sheath glabrous and with a collar, inflorescence open and lax to contracted, panicle ovoid open to slightly contracted with the lower branches usually solitary, spikelets oval to oblong-oval, spikelets stipitate and flattened, glume and lemma keeled, lemma obtuse to round, palea keels entire, heavy seeder, leaves palatable, useful for erosion control, weed species, drought resistant, common on dry loam, disturbed areas, along roadsides, clay loam soil, disturbed roadside, edge of irrigated field, ungrazed pasture, heavily grazed areas, overgrazed pasture, sandy clay pasture, see *Transactions of the Linnean Society of London, Botany* 2: 32. 1881, *Conspectus Florae Africae* 5: 886. 1894, *Flora Capensis* 7: 625. 1898.

in English: dew grass

in South Africa: douvatgras

E. obtusiflora (E. Fourn.) Scribn. (*Brizopyrum obtusiflorum* Fourn.)

Mexico, U.S. Perennial, herbaceous, erect, greenish, rhizomatous, see *Mexicanas Plantas* 2: 120. 1886, *Bulletin, Division of Agrostology United States Department of Agriculture* 8: 10, t. 5. 1897.

in English: alkali love grass

in Mexico: zacahuixtle, zacate jihuite

E. olida Lazarides

Australia. Perennial, glandular, compact, tufted, tussocky, knotty base, leaf blades pungent, overlapping leaf sheaths, viscid, aromatic, prickly, panicles loose to open, 2-3 stamens, see *Austral. Syst. Bot.* 10: 137. 1997.

E. oligostachya Launert ex Cope

Zambia. See *Kew Bulletin* 53(1): 151, f. 4D-E. 1998.

E. olivacea K. Schum. (*Eragrostis lasiantha* Stapf)

East Africa, Ethiopia, Mozambique, Malawi, Tanzania. Perennial, tussocky, tufted, erect, reddish, leaf blades tough, basal sheaths papery, inflorescence dark gray, panicle diffuse to contracted, spikelets flattened, 5-20-flowered, glumes subequal, lemmas narrowly ovate, palea keels ciliate, ornamental grass, forage, viscous roots, found in moist meadow, open woodland, grassland, heavy soil, see *Bulletin of Miscellaneous Information Kew* 1906: 82. 1906.

E. omahekensis De Winter (the specific name from the Herero *Omaheke*, a term used for the sandy woodland savannah of Southwest Africa; the Herero people, a group of closely related Bantu-speaking peoples of southwestern Africa. See H. Beiderbecke, *Life among the Hereros in Africa*. New York 1922; Frank R. Vivel, *The Herero of Western Botswana*. St. Paul 1956; Dr. Emil Holub, *Sieben Jahre in Sud-Afrika*. Wien 1881)

South Africa. Annual, tufted, erect or geniculate at the basal nodes, may form pure stands, usually with a glandular ring beneath the node, leaf blade expanded and linear, leaves sharp pointed and flexible, leaf sheaths keeled and open, inflorescence a contracted panicle, spikelets densely clustered on the side branches, a glandular ring below the lowest whorl of secondary axes, stiff glume, lowest lemma papery, palea keels scabrid, pasture, used to make good hay, found in disturbed areas, sand, along roadsides, cultivated lands, old lands, can be confused with *Eragrostis cylindriflora* Hochst., see *Bothalia* 7: 473. 1961.

in South Africa: sandveldpluimgras, sandveld windhalm

E. orcuttiana Vasey (*Eragrostis mexicana* subsp. *virescens* (J. Presl) S.D. Koch & Sánchez Vega)

U.S. See *Hortus Regius Botanicus Berolinensis* 1: 190. 1827, *Reliquiae Haenkeanae* 1(4-5): 276. 1830, *Contributions from the United States National Herbarium* 1(8): 269. 1893 and *Phytologia* 58: 380. 1985.

E. orthoclada Hack. (*Eragrostis longipila* Hack.; *Eragrostis villamontana* Jedwabn.)

Brazil, Paraguay. Perennial, caespitose, herbaceous, erect, leaf blades linear and acuminate, inflorescence narrowly oblong, panicle branches verticillate, spikelets sessile or pedicellate, 3- to 10-flowered, glumes subequal and acute, lemmas oblong and acute, 3 stamens, dry areas, sandy soils, arid places, scrub forest, similar to *Eragrostis macrothyrsa*, see *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 281. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 132. 1911,

Botanisches Archiv 5(3-4): 197. 1924, *Iheringia, Série Botânica* 55: 67. 2001.

E. palisoti Dur. & Schinz

Africa. See *Conspectus Florae Africae* 5: 887. 1894.

E. pallens Hack.

Mozambique, South Africa, Namibia, Kalahari. Perennial, densely tufted, coarse, robust, erect, smooth, glabrous, culms generally yellow, leaves mostly basal, rigid and hard leaf blades, sheath yellow when old, ligule a ring of short hairs, leaf sheaths persistent and tough, open or contracted panicle, spikelets shortly pedicellate, lowest lemma obtuse, palea ovate to obovate, unpalatable and avoided by cattle, sometimes used for thatching, found on sandy areas, in moist sandy soil, bushveld, dry woodlands, around seasonal pans, broad-leaved savannah, see *Bulletin de l'Herbier Boissier* 3(8): 392. 1895.

in English: broom love grass, broom grass

in Botswana: motsikiri

in South Africa: besemgras, gemsbokgras, sandveld straußgras

E. palmeri S. Watson (*Eragrostis caudata* E. Fourn., nom. illeg., non *Eragrostis caudata* Nees ex Steud.) (the American botanist Edward Palmer, 1831-1911, ethnologist, botanical explorer, to U.S. 1849, botanical and zoological collector, traveler, naturalist, physician, 1853-1855 La Plata Expedition, described the ethnobotany and aboriginal medical practice of the American Southwest)

U.S., Texas, Mexico. See *Proceedings of the American Academy of Arts and Sciences* 18: 182. 1883, *Mexicanas Plantas* 2: 115. 1886.

in English: Rio Grande love grass

in Mexico: amor seco

E. panamensis J. Presl (*Eragrostis maypurensis* (Kunth) Steud.; *Megastachya panamensis* (J. Presl) E. Fourn.)

Panama. See *Nova Genera et Species Plantarum* 1: 161-162. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 277. 1830, *Synopsis Plantarum Glumacearum* 1: 276. 1854, *Mexicanas Plantas* 2: 118. 1886.

E. paniciformis (A. Braun) Steud. (*Poa paniciformis* A. Braun)

Ethiopia, Kenya, Zambia, Uganda, Tanzania. Perennial, loosely tufted, erect or geniculate, leaf sheaths purple, much-branched panicle, ovate spikelets sometimes loosely contracted, 7- to 25-flowered, glumes and lemmas narrowly ovate, ciliolate palea-keels, fodder grass, grazed, a weed of cultivation and irrigation, in sandy soil, moist habitats, ditches, irrigation channels, swampy grasslands, closely related to *Eragrostis exasperata*, see *Flora* 24: 274. 1841, *Synopsis Plantarum Glumacearum* 1: 268. 1854.

E. pappiana (Chiov.) Chiov. (*Eragrostis multiflora* var. *pappiana* Chiov.)

Africa.

E. papposa (Roem. & Schult.) Steud. (*Eragrostis aulacosperma* (Fresen.) Steud.; *Eragrostis rigidifolia* Hochst. ex Engl.; *Eragrostis rigidifolia* Schweinf.; *Eragrostis speirostachya* Coss. & Dur.; *Eragrostis sporostachya* (Coss. & Dur.) Coss. & Dur.; *Eragrostis vulgaris* var. *sporostachya* Coss. & Dur.; *Megastachya papposa* Roem. & Schult.; *Poa aulacosperma* Fresen.; *Poa papposa* Dufur. ex Roem. & Schult.)

Ethiopia, Kenya, Sudan, Uganda, Tanzania, Yemen, India, Nepal. Short-lived perennial, compact, tufted, stiff leaves, leaf sheaths glabrous, ovate panicle open or contracted, spikelets linear breaking up from the bottom upward, glumes unequal, lemmas membranous, palea persistent, weed of cultivation, useful for erosion control, found in shallow soil, rocky places, open stony hillsides, sandy and gravelly soil, dry alluvial plains, sandy loam basic soil, see *Systema Vegetabilium* 2: 585. 1817, *Museum Senckenbergianum* 2: 144. 1837, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Exploration Scientifique de l'Algérie* 2: 148. 1855, *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 1: 47. 1860, *Abhandlungen der Preussischen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 1891: 134. 1892, *Bulletin de l'Herbier Boissier* 2(App. 2): 39. 1894 and *Kew Bulletin* 47(2): 277-282. 1992.

in Somalia: manun, dihi, harfo, manoun, tingleh

E. paradoxa Launert

Africa, Zimbabwe. Rare species, low growing, leaves revive after desiccation.

E. parviflora (R. Br.) Trin. (*Eragrostis pellucida* (R. Br.) Steud.; *Eragrostis pilosa* sensu Benth., non (L.) P. Beauv.; *Poa parviflora* R. Br.; *Poa pellucida* R. Br.)

Australia. Annual or short-lived perennial, tufted, simple or sparsely branched, erect or ascending, leaf blade flat or rolled, panicle loose or open and sometimes drooping, dark olive-green and linear spikelets, glumes and lemmas keeled and glabrous, glumes acute to acuminate, lemmas membranous and lanceolate, palea 2-keeled, grain subglobose, sometimes semiaquatic, heavy seeding, fodder, not grazed, invasive species, a weed of irrigation, see *Prodromus Florae Novae Hollandiae* 181. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 411. 1830, *Synopsis Plantarum Glumacearum* 1: 279. 1854.

in English: weeping love grass, soft love grass, love grass

E. pascua S.M. Phillips

Northeast tropical Africa, Ethiopia, Eritrea. Annual, tufted, erect or ascending, leaf blades acuminate, panicle open, spikelets narrowly oblong, 7- to 21-flowered, glumes lanceolate, lemmas oblong to elliptic, palea keels scabrid,

moist habitats, grassland, closely related to *Eragrostis nigra* Steud., see *Kew Bulletin* 46(1): 111-117. 1991.

E. pastoensis (Kunth) Trin. (*Eragrostis boliviensis* Jedwabn.; *Eragrostis buchtienii* Hack.; *Eragrostis contracta* Pilg.; *Eragrostis lehmannii* Pilg.; *Eragrostis montufari* (Kunth) Steud.; *Eragrostis olmedoi* (Kunth) Steud.; *Eragrostis setifolia* (Benth.) Steud., nom. illeg., non *Eragrostis setifolia* Nees; *Eragrostis trichophylla* Benth.; *Eragrostis virescens* J. Presl; *Eragrostis virescens* var. *trichophylla* Hack.; *Eragrostis virescens* var. *trichophylla* (Benth.) Hack. ex Stuck.; *Megastachya montufarii* (Kunth) Roem. & Schult.; *Megastachya olmedoi* (Kunth) Roem. & Schult.; *Megastachya pastoensis* (Kunth) Roem. & Schult.; *Poa montufari* Kunth; *Poa olmedoi* Kunth; *Poa pastoensis* Kunth; *Poa setifolia* Benth.) (*Eragrostis buchtienii* Hack. dedicated to Dr. Otto Buchtien, b. 1859; "Crescit in montibus Peruanis et Loxae ad vias, juxta domum botanici hispani Don Vicente Olmedo..." Don Vicente de Olmedo, in 1790 in Ecuador; Colombia, Pasto, Mt. Arand; "Crescit in alta planitie Chillensi prope la Hacienda de Don Carlos Montufar...")

Brazil, Peru, Bolivia, Ecuador, South America. Perennial bunchgrass, tufted, erect, sometimes geniculate, leaf sheaths overlapping, ligule ciliate, leaf blades involute or flat, inflorescence contracted or open, panicle ovate, 2-8 florets, loosely overlapping spikelets, lemmas and glumes membranous, glumes broadly ovate to lanceolate, lemma with conspicuous lateral nerves, 3 stamens, along roadsides, dry rocky hillsides, slopes, pastures, see *Nova Genera et Species Plantarum* 1: 159-160. 1815 [1816], *Systema Vegetabilium* 2: 586-587. 1817, *Botanisches Archiv* 5(3-4): 205. 1824, *Reliquiae Haenkeanae* 1(4-5): 276. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 71. 1836, *Nomenclator Botanicus. Editio secunda* 1: 563-564. 1840, *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas adjectis nonnullis Grahamianis enumerat novisque describit) 262. London 1846 [1839-1857], *Synopsis Plantarum Glumacearum* 1: 274-275. 1854, *Flora Australiensis: A Description ...* 7: 644. 1878, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 32. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 376. 1906, *Anales del Museo Nacional de Buenos Aires* 13: 505. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 6: 157. 1908, *Anales del Museo Nacional de Buenos Aires* 21: 138. 1911.

E. patens Oliv.

Kenya, Zambia, Uganda, Tanzania, Mozambique, South Africa. Annual, tufted, ruderal, erect to decumbent to procumbent, inflorescence spike-like, lemma mucronate or awned, palea keels hairy, native pasture species, found in disturbed places, open areas, overgrazed veld, on sandy soil,

seepages, see *Transactions of the Linnean Society of London* 29: 175. 1875, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 382. 1895 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: Anhang, 101. 1930; 323. 1931.

in English: annual love grass, spreading annual love grass
in southern Africa: kleinbosluisgras; chisokwechamuganu (Tonga)

E. patentipilosa Hack. (*Eragrostis patenti-pilosa* Hack.; *Eragrostis pseudosclerantha* Chiov.)

Kenya, Zambia, Tanzania, South Africa. Perennial, tufted, weak, geniculate culms rooting from the lower nodes, sometimes stoloniferous, leaf sheath keeled and hairy, ligule a ring of short hairs, open panicle, spikelets on pedicels of different lengths, spikelets gray to grayish green, little grazing value, growing in red clay soils, under trees, roadsides, uncultivated lands, disturbed areas, overgrazed and trampled veld, bare taches, see *Proceedings of the Rhodesia Scientific Association* 7(2): 67. 1908, *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 285. 1939.

in English: footpath love grass

in southern Africa: voetpad-eragrostis

E. patentissima Hack.

South Africa, Transvaal. Perennial bunchgrass, tufted, geniculate at the base, rhizomatous, stout rhizomes, ligule a ring of short and long hairs, basal sheaths glabrous, leaf blade often rolled, inflorescence an ovate open spreading panicle, spikelets at the end of very long stalks, lemma acuminate, palea keels entire, attractive and ornamental, a palatable grass early grazed by cattle, forage, pasture, growing in rocky clay loam, open habitats, on alluvium, open areas, sandy seepages, disturbed areas, damp places, see *Bulletin de l'Herbier Boissier* 3(8): 391. 1895.

E. patula (Kunth) Steud. (*Eragrostis tenuifolia* (A. Rich.) Hochst. ex Steud.; *Megastachya patula* (Kunth) Roem. & Schult.; *Poa patula* Kunth; *Poa tenuifolia* A. Rich.)

Ecuador, Colombia to Bolivia, Africa. Perennial or annual, tufted, leaf blades acuminate, inflorescence oblong and delicate, 4- to 16-flowered, glumes and lemmas deciduous, glumes unequal and acute, lemmas oblong, 3 stamens, along roadsides, see *Nova Genera et Species Plantarum* 1: 158-159. 1815 [1816], *Systema Vegetabilium* 2: 585. 1817, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Tentamen Florae Abyssinicae ...* 2: 425. 1850, *Synopsis Plantarum Glumacearum* 1: 268. 1854.

E. paupera Jedw. (*Eragrostis falcata* sensu A.S. Hitchc., non Gaud. ex Steud.; *Eragrostis whitneyi* Fosberg; *Eragrostis whitneyi* var. *caumii* Fosberg) (named for Edward Leonard Caum, 1893-1952)

Hawaii. See *Botanisches Archiv* 5(3-4): 214. 1924, *Occasional Papers of the Bernice Pauahi Bishop Museum* 15(3): 39, f. 1b, 2a-b. 1939.

in English: Oahu love grass

E. pectinacea (Michx.) Nees ex Jedwabn. (*Eragrostis bri-zoides* Schult.; *Eragrostis caroliniana* (Biehler) Scribn.; *Eragrostis cognata* Steud.; *Eragrostis delicatula* Trin.; *Eragrostis diffusa* Buckley; *Eragrostis diffusa* var. *diffusa*; *Eragrostis nuttalliana* Steud.; *Eragrostis pectinacea* (Michx.) Nees; *Eragrostis pectinacea* (Michx.) Steud., nom. illeg., non *Eragrostis pectinacea* (Michx.) Nees; *Eragrostis pennsylvanica* Scheele; *Eragrostis pilosa* var. *caroliniana* (Biehler) Farw.; *Eragrostis purshii* Schrad. ex A. Gray; *Eragrostis purshii* Schrad.; *Eragrostis purshii* var. *delicatula* Munro ex Scribn.; *Eragrostis purshii* var. *diffusa* (Buckley) Vasey; *Eragrostis purshii* var. *pauciflora* E. Fourn.; *Eragrostis spectabilis* var. *sparsihirsuta* Farw.; *Eragrostis tephrosanthos* Schult.; *Eragrostis tracyi* Hitchc.; *Eragrostis unionis* Steud.; *Poa caroliniana* Biehler; *Poa diandra* hort. ex Schrad., nom. illeg., non *Poa diandra* R. Br.; *Poa eragrostis* Elliott, nom. illeg., non *Poa eragrostis* L.; *Poa nuttallii* Kunth, nom. illeg., non *Poa nuttallii* Spreng.; *Poa pectinacea* Michx.; *Poa tenella* Nutt., nom. illeg., non *Poa tenella* L.)

South and Central America, Brazil, Peru, Venezuela, Mexico, U.S., Florida, Texas, New Mexico. Annual, erect, often basally decumbent or sometimes spreading at base, densely caespitose, nonstoloniferous, leaf sheaths overlapping, ligules ciliate, leaf blades flat to involute, flowering heads rather delicate, open panicles with branches solitary or paired, spikelets narrow and nonglandular, 6 to 22 florets, lemmas and glumes keeled and ovate-lanceolate, 3 stamens, fodder, weed species mainly on sandy soils, common on roadside sand, dry shores, sandy shores, sand bars, ditches, railroad embankments, wetland, waste places and fields, cultivated land, open areas, muddy soils, pastures, disturbed upland habitats, on dry bare soil, see *Flora Boreali-Americana* 1: 69. 1803, *Plantarum Novarum ex Herbario Sprengelii Centuriam, speciminis loco inauguralis...* 10. Halle 1807, *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Flora Americae Septentrionalis; or, ...* 1: 81. 1814 [1813], *A Sketch of the Botany of South-Carolina and Georgia* 1: 161-162. 1816, *The Genera of North American Plants* 1: 67. 1818, *Mantissa* 2: 316, 319. 1824, *Révision des Graminées* 1: 116. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 73. 1836, *Linnaea* 12(4): 451. 1838, *Nomenclator Botanicus. Editio secunda* 1: 563-564. 1840, *Florae Africae Australioris Illustrationes Monographicae* 406. 1841, *Flora* 27: 58. 1844, *Synopsis Plantarum Glumacearum* 1: 272-273. 1854, *A Manual of the Botany of the Northern United States* edition 2. 564-565. 1856, *Flora of the Southern United States* 564. 1860, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97. 1862, *Bulletin of the Torrey Botanical Club* 10(1): 30. 1883, *Mexicanas Plantas* 2: 116. 1886, *Contri-*

Contributions from the United States National Herbarium 1(2): 59. 1890, *Memoirs of the Torrey Botanical Club* 5(4): 49. 1894 and *Report of the Michigan Academy of Science, Arts and Letters* 17: 182. 1916, *American Midland Naturalist* 10: 306. 1927, *American Journal of Botany* 21(3): 130, f. 1. 1934, *Man. Grass. U.S.* 849. 1935, *Monocotiledóneas Mexicanas: Una Sinopsis Florística* 10: 7-236. 2000.

in English: Carolina love grass, Carolina eragrostis, tufted love grass, purple love grass, small love grass

in Mexico: pasto

E. pectinacea (Michx.) Nees ex Jedwabn. var. ***miserrima*** (Fourn.) J. Reeder (*Eragrostis arida* A.S. Hitchc.; *Eragrostis delicatula* Trin.; *Eragrostis diffusa* var. *arida* (Hitchc.) Beetle; *Eragrostis parvula* Steud.; *Eragrostis pilosa* var. *delicatula* (Trin.) Hack.; *Eragrostis purshii* var. *miserrima* E. Fourn.; *Eragrostis tephrosanthos* J.A. Schultes; *Poa tephrosanthos* Spreng. ex Schult.)

U.S., Mexico, Costa Rica. Annual, branched, nonglandular, often basally decumbent, see *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Mantissa* 2: 316. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 73. 1836, *Florae Africae Australioris Illustrationes Monographicae* 406. 1841, *Synopsis Plantarum Glumacearum* 1: 277. 1854, *A Manual of the Botany of the Northern United States* edition 2. 564. 1856, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97. 1862, *Mexicanas Plantas* 2: 116. 1886 and *Anales del Museo Nacional de Buenos Aires* 11: 133. 1904, *Journal of the Washington Academy of Sciences* 23(10): 449. 1933, *Phytologia* 37(4): 317-407. 1977, *Phytologia* 60(2): 154. 1986.

E. pectinacea (Michx.) Nees ex Jedwabn. var. ***pectinacea*** (*Eragrostis caroliniana* auct. non (Spreng.) Scribn.; *Eragrostis diffusa* Buckl.; *Eragrostis purshii* Schrad. ex A. Gray; *Eragrostis purshii* var. *diffusa* (Buckley) Vasey; *Poa pectinacea* Michx.)

U.S. See *Flora Boreali-Americana* 1: 69. 1803, *Florae Africae Australioris Illustrationes Monographicae* 406. 1841, *Synopsis Plantarum Glumacearum* 1: 272-273. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97. 1862, *Contributions from the United States National Herbarium* 1(2): 59. 1890 and *American Midland Naturalist* 10: 306. 1927.

in English: spreading lovegrass, tufted love grass

E. pectinacea (Michx.) Nees ex Jedwabn. var. ***tracyi*** (A.S. Hitchc.) P.M. Peterson (*Eragrostis tracyi* A.S. Hitchc.) (after Samuel Mills Tracy, 1847-1920)

U.S. See *Florae Africae Australioris Illustrationes Monographicae* 406. 1841 and *American Journal of Botany*

21(3): 130, f. 1. 1934, *Rhodora* 80(823): 390-403. 1978, *Sida* 17(1): 106. 1996.

E. perbella K. Schum. (*Eragrostis araiostachya* Chiov.)

East Africa, Somalia, Tanzania, Kenya. Perennial, loosely tufted, leaves not pungent, panicle oblong to ovate, spikelets oblong, glumes lanceolate and acute, membranous lemmas acute to apiculate, palea keels scabrous, coastal bushland, see *Die Pflanzenwelt Ost-Afrikas* C: 115. 1895 and *Flora Somala* 2: 458, f. 246. 1932.

E. peregrina Wiegand (*Eragrostis multicaulis* Steud.; *Eragrostis pilosa* (L.) P. Beauv.; *Eragrostis pilosa* f. *multicaulis* (Steud.) I.C. Chung)

Europe, America. See *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Synopsis Plantarum Glumacearum* 1: 426. 1854 and *Rhodora* 19: 95. 1917, *Journal of the Washington Academy of Sciences* 45(7): 215. 1955.

E. perennans Keng

China. In open fields, see *Sunyatsenia* 3(1): 16-17. 1935.

E. perennis Döll

Uruguay, Argentina, Brazil, Bolivia. Perennial bunchgrass, base fibrous, caespitose, erect, leaves mostly basal, leaf blades erect and linear, inflorescence oblong, panicle stiffly branched, spikelets clustered, 6- to 10-flowered, glumes unequal, lemmas ovate and imbricate, 3 stamens, see *Flora Brasiliensis* 2(3): 144. 1878.

E. pergracilis S.T. Blake (Latin *pergracilis*, *is*, *e* "very slender")

South Australia, Queensland, Western Australia, Northern Territory, New South Wales. Annual or short-lived perennial, spreading, tufted, smooth, simple, very slender, erect or decumbent or prostrate, filiform, leaf blades rolled, panicle contracted and often dense, spikelets linear-filiform and curved, glumes ovate and keeled or rounded on the back, entire or notched lemmas oblong or broadly elliptic, palea 2-keeled, dorsally flattened grain, grows in dry areas, silty loam, claypans, streamlines, mulga scrubs, similar to *Eragrostis dielsii*, see *Proceedings of the Royal Society of Queensland* 59(7): 154-155. 1948.

in English: love grass

E. peruviana (Jacq.) Trin. (*Eragrostis deserticola* Phil.; *Eragrostis peruviana* var. *brachythyrsa* Pilg.; *Koeleria multiflora* Regel & Herter; *Poa peruviana* Jacq.)

Chile, Peru. Annual, prostrate, leaves basal, ligule membranous, forage, common on loose sandy soils, see *Collectanea* 1: 107. 1786 [1787], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 396. 1830, *Index Seminum [St. Petersburg]* 23. 1858, *Florula Atacamenensis seu enumeratio plantarum...* 55. *Halis Saxonum* [Halle] 1860 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 375. 1906,

Kongl. Götheborgska Wetenskaps och witterhets Samhällets Handlingar. Wetenskaps Afdelningen 5(6): 81, f. 43, 44 b-i. 1937, Arkiv för Botanik, Andra Serien 4(15): 485, t. 21-2, 22. 1962 [1963] and 4(12): 417. 1961 [1963], *Gayana, Botánica* 42: 1-157. 1985, *Gayana, Botánica* 51(1): 1-10. 1994.

in Spanish: pasto

E. petersii Trin. (possibly named after the German entomologist Wilhelm Carl Hartwig Peters, 1815-1883, naturalist, zoologist, physician and traveler, professor of medicine (1851) and zoology (1856), 1842-1848 in South and East Africa and India, joint author of *Naturwissenschaftliche Reise nach Mossambique*. Berlin [1861-] 1862-1864, wrote *Ueber Wohnen und Wandern der Thiere. Vortrag*, etc. Berlin 1867. See F.A. Maximilian Kuhn (1842-1894), *Filices africanæ ... Accedunt filices Deckenianæ et Petersianæ*. Lipsiæ [Leipzig] 1868; Otto Kersten (1839-1900), *Geographische Nachrichten für Welthandel und Volkswirtschaft ... unter der ... Redaktion von Dr. O.K.* [Berlin - Central-Verein für Handelsgeographie, etc. Geographische Nachrichten, etc.] Berlin 1879; Carl Claus von der Decken (1833-1865), *Baron C.C. von der Decken's Reisen in Ost Afrika in 1859-61*. Leipzig & Heidelberg 1869-1879; Friedrich Gerhard Rohlfs (1831-1896), *Kufra ... Reise von Tripolis nach der Oase Kufra*. Leipzig 1881; J.H. Barnhart, *Biographical notes upon botanists*. 3: 73. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 580. University of Pennsylvania Press, Philadelphia 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

Tahiti. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 75. 1836.

E. petraea Lazarides

Australia, Western Australia, Northwest Territories. Perennial, tufted, lower sheaths overlapping, open decoupled panicles, first floret reduced to an empty lemma, glumes dissimilar, 3 stamens, see *Austral. Syst. Bot.* 10: 141. 1997.

E. petrensis Renvoize & Longhi-Wagner

Brazil. Perennial, caespitose, linear leaf blades acuminate, panicle oblong or spike-like with contracted branches, spikelets breaking up from the apex downward, glumes subequal, found among rocks, see *Kew Bulletin* 41(1): 71. 1986.

E. piercei Benth. (*Coelachyrum piercei* (Benth.) Bor)

Beluchistan, Pakistan. See *Icones Plantarum* 4: 1370. 1881 and *Kew Bulletin* 7(2): 226. 1952.

E. pilgeri Fedde (*Eragrostis ancashensis* P.M. Peterson, Refulio & Tovar; *Eragrostis andicola* R.E. Fr.; *Eragrostis*

andicola Pilg., nom. illeg., non *Eragrostis andicola* R.E. Fr.; *Eragrostis andicola* f. *humilior* Pilg.; *Eragrostis andicola* var. *robustior* Pilg.; *Eragrostis carazensis* Pilg.; *Eragrostis pilgeriana* Hitchc., nom. illeg., non *Eragrostis pilgeriana* Dinter ex Pilg.) (Peru, Caraz)

South America, Peru. Along roadsides, see *Nova Acta Regiae Societatis Scientiarum Upsaliensis, ser. 4*, 1(1): 180. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 377. 1906, *Just's botanischer Jahresbericht*. 3: 18, t. 34. Berlin 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 27. 1920, *Contributions from the United States National Herbarium* 24(8): 342. 1927, *Sida* 19(1): 66-70, f. 1. 2000, *Sida* 19(4): 1157-1161. 2001 [A new synonym for *Eragrostis pilgeri* (Poaceae: Eragrostideae)].

E. pilgeriana Dinter ex Pilg. (*Eragrostis pilgeriana* Hitchc., nom. illeg., non *Eragrostis pilgeriana* Dinter ex Pilg.)

South Africa, Africa. Annual, spikelets disarticulating below the glumes at maturity, palea keels winged, growing on disturbed areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 420. 1914, *Bot. Archiv*. 4: 327. 1923, *Contributions from the United States National Herbarium* 24(8): 342. 1927.

E. pilosa (L.) P. Beauv. (*Eragrostis chilensis* (Moris) Nees; *Eragrostis damiensiana* (Bonnet) Thell.; *Eragrostis damiensiana* var. *condensata* (Hack.) Thell.; *Eragrostis damiensiana* var. *laxior* Thell.; *Eragrostis filiformis* Link; *Eragrostis gracilis* Schrad.; *Eragrostis gracilis* Velen.; *Eragrostis linkii* (Kunth) Steud.; *Eragrostis multicaulis* Steud.; *Eragrostis pellucida* Steud.; *Eragrostis peregrina* Wiegand; *Eragrostis perplexa* L.H. Harvey; *Eragrostis pilosa* f. *multicaulis* (Steud.) I.C. Chung; *Eragrostis pilosa* subsp. *damiensiana* (Bonnet) Thell.; *Eragrostis pilosa* var. *condensata* Hack.; *Eragrostis pilosa* var. *damiensiana* Bonnet; *Eragrostis pilosa* var. *perplexa* (L.H. Harvey) S.D. Koch; *Eragrostis senegalensis* Chev., nom. illeg., non *Eragrostis senegalensis* Nees; *Eragrostis tenuiflora* Rupr. ex Steud.; *Eragrostis verticillata* (Cav.) P. Beauv.; *Eragrostis verticillata* (Cav.) Roem. & Schult.; *Poa chilensis* hort., Parl. ex Steud.; *Poa chilensis* Moris; *Poa eragrostis* Walter, nom. illeg., non *Poa eragrostis* L.; *Poa linkii* Kunth; *Poa pilosa* L.; *Poa senegalensis* Desv.; *Poa verticillata* Cav.)

Tropical Africa, South Africa, Europe. Annual, tufted to loosely tufted, slender and sometimes delicate, robust or weak, flimsy, foliage mostly basal, sometimes or rarely glandular, simple or sparsely branched, erect or usually ascending, often decumbent at the base then erect, spreading to erect, ligule a ring of short hairs, leaf sheaths loose, leaf blade flat or rolled, open inflorescence ovoid to pyramidal, lacy panicles sometimes nodding, hairs in the axils of the lower panicle branches, very narrow linear spikelets, gray or purple spikelets stipitate and breaking up from the

base upward, 3- to 7-flowered, florets loosely imbricate and erect, glumes unequal to very unequal and the lower very small, glumes and lemmas acute and smooth, stamens 3, very small grain oblong or elliptic-oblong, progenitor of teff, native pasture species, a good fodder, grains edible, famine food, drought resistant, weed species of cultivation and disturbed ground, fallow farmland, gravelly sites, disturbed habitats and gardens, along forest margins, old fields, vleis, damp muddy or sandy banks along streams, riverbanks, roadsides, wetlands, railroads, waste places, barnyards and sandy places, sandy soils in wet areas, see *Species Plantarum* 1: 68. 1753, *Nicolai Josephi Jacquin Miscellanea austriaca* ... 2: 364. 1781, *Flora Caroliniana, secundum* ... 80. 1788, *Icones et Descriptiones Plantarum, quae aut sponte* ... 1(3): 63, pl. 93. 1791, *Plantarum Novarum ex Herbario Sprengelii Centuriam* 10. 1807, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, *Essai d'une Nouvelle Agrostographie* 71, 162, 175-176. 1812, *Flora Americae Septentrionalis; or, ...* 1: 80. 1814, *Systema Vegetabilium* 2: 575. 1817, *Mantissa* 2: 318. 1824, *Hortus Regius Botanicus Berolinensis* 1: 191. 1827, *Révision des Graminées* 1: 113. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 505-506. 1829, *Ann. Storia Nat.* 4: 60. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 204. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 73. 1836, *Linnaea* 12(4): 451. 1838, *Nomenclator Botanicus. Editio secunda* 2: 359. 1841, *Nova Acta Academiae Caesareae Leopoldino-Carolinae Germanicae Naturae Curiosorum* 19: Suppl. 1: 32, 1841; 164. 1843, *Agrostographia Germanica* 52, f. 425. 1850, *Archiv für Naturgeschichte* 18: 361. 1852, *Synopsis Plantarum Glumacearum* 1: 268, 273, 426. 1854, *Linnaea* 27(4): 478-479. 1854 [1856], *Enum. Pl. Zeyl.* 5: 209. 1864, *Annales Museum Botanicum Lugduno-Batavi* 2: 280. 1866, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 290. 1879, *Acta Horti Petrop.* 7: 622. 1881, *Nouvelles archives du muséum d'histoire naturelle sér. 2* 7: 145. 1884, *Annales du Jardin Botanique de Buitenzorg* 8: 75. 1890, *Revisio Generum Plantarum* 3(2,2): 352-354. 1898 and *Synopsis der mitteleuropäischen Flora* 2: 374. 1900, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzegeographie* 7: 13. 1901, *Schedae ad Herbarium Florae Rossicae* 4: 44. 1902, *Anales del Museo Nacional de Buenos Aires* 11: 133. 1904, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 52: 438. 1908, *Report of the Michigan Academy of Science, Arts and Letters* 17: 182. 1916, *Rhodora* 19: 95. 1917, *Nuova Flora Analitica d'Italia* 1: 123. 1923, *Repertorium Specierum Novarum Regni Vegetabilis* 24: 323, 327-328. 1928, *Revue internationale de botanique appliquée et d'agriculture tropicale* 14: 120. 1934, *Report of the First Scientific Expedition to Manchoukou* 4(2): 6, t. 1. 1935, *Bulletin de la Société Botanique de France* 87: 276. 1940

[1941], *Botanical Magazine* (Tokyo) 55(654): 277. 1941, *Bulletin of the Torrey Botanical Club* 81(5): 409. 1954, *Journal of the Washington Academy of Sciences* 45(7): 215. 1955, *Grasses of Ceylon* 74. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma* ... 512. 1960, *Fl. Trop. East Africa, Gramineae* 3: 214. 1974, *Illinois Biological Monographs* 48: 28. 1974, *Journal of Cytology and Genetics* 18: 58-61. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Willdenowia* 18(1): 218-219. 1988, *Journal of Cytology and Genetics* 23: 118-131. 1988, *Journal of Cytology and Genetics* 25: 147-148. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Fl. Australia* 50: 472. 1993, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Taxon* 49(2): 256. 2000.

in English: Indian love grass, India love grass, hairy love grass, soft love grass, slender meadow grass, love grass

in French: pâturin poilu

in Spanish: barba de indio

in Brazil: capim-peludo, capim-mimoso, capim-orvalho, capim-barbicha-de-alemão

in Mexico: amorseco piloso, jaragua gris

in Arabic: daifa, lakemera, lekmera, l'hemera, ozeb'an, rauwaj, tanmairit

in Gambia: ndirra sina, numu ju tio, nyantan

in Guinea: ologuélé

in Mali: kiu pité, paguiri jaule, sambu gambi, sorgobo, subu, subu furiafuria, subu koré, tadjit, wolo gaman, wolo kaman

in Mauritania: daifa, lakemera, lekmera, l'hemera, ozeb'an, tanmairit

in Niger: fululu, gafal-diauwulé, gangani subu, gengen subu, kanda, taeshit, tajjit

in Nigeria: agbado esin, aknuse, barata, barati, baratri, burburwa, burburwa, burburwa fadamàà, dutaleho, eeran awo, gantaska, gafarafa-tsintsiiyàà, irungbon efon, iwo awo, ogbe agufon, oka esin, rauwaj, saraaho, sarawal, shagaje, tsintsiiyàà, tsintsiiyàà fadamàà, tsumbé, tuppo, yayangan

in Senegal: diambul, kiu pité, paguiri jaule, salguf, sambu gambi, sorgobo, wolo gaman, wolo kaman

in Sierra Leone: funfuri, peni fafahbi, peni pagbel, sankabesuwi

in South Africa: fynsaadgras, reëngrassie, sagte-eragrostis

in Upper Volta: siiwuko, zanha bur

in Yoruba: agbado esin, eeran awo, irungbon efon, iwo awo, ogbe agufon, oka esin, yayangan

in Japan: ô-niwa-hokori

in China: hua mei cao

in India: barah chundria, bhloni, burwai, chiriaka-dana, chiriya ka dana, gadar ppunch, gadar punch, galgala, jhusa, kaadu sanna saame hullu, kadu sanna samai hullu, kutaki,

kuthira val pul, nika sanwak, nikasanwak, palichhi, phularwa

in Thailand: yaa ko, ya ko

E. pilosa (L.) P. Beauv. var. *perplexa* (L.H. Harv.) S.D. Koch (*Eragrostis perplexa* L.H. Harv.)

North America, U.S. See *Bulletin of the Torrey Botanical Club* 81(5): 409. 1954, *Illinois Biological Monographs* 48: 28. 1974.

E. pilosa (L.) P. Beauv. var. *pilosa*

North America, U.S.

E. plana Nees (*Diplachne hackeliana* Thell.; *Diplachne hackeliana* var. *probstii* Thell.; *Eragrostis plana* var. *hackeliana* (Thell.) Probst; *Eragrostis plana* var. *probstii* (Thell.) Probst)

Mozambique, South Africa, Zambia, Malawi, Lesotho. Strongly perennial, sometimes or rarely glandular, densely tufted, erect, narrow, rigid, tough, stiff, coarse, aromatic, forming small clumps, prominent ligule ciliate, overlapping basal leaf sheaths, leaf sheath strong and with a fanlike appearance, leaves upright and strong, inflorescence contracted at the tip and open at the base, narrow panicle with short branches, spikelets appressed to the branches, short unequal glumes, lower glume scale-like, lemma membranous, stamens 3, weed, used for treating fractures, pasture, unpalatable to relatively unpalatable, low grazing value, grazed when young, strong leaves used for weaving, occurs on disturbed soil, overgrazed and burnt areas, low lying areas, hill pasture, overgrazed veld, high veld grassland, old lands, along roadsides and trampled areas, stream banks and stream beds in the wetland, uncultivated lands, damp places, waterlogged places, in high rainfall regions, see *Florae Africae Australioris Illustrationes Monographicae* 390. 1841 and *Mittheilungen der Naturforschenden Gesellschaft Bern* 9(Bericht 21): 8. 1929-1931, *New Zealand Journal of Botany* 29: 117-129. 1991, *Edinburgh Journal of Botany* 48: 73-80. 1991, *Revista Brasileira de Botânica* 23(2): 177-194. 2000, *Iheringia, Série Botânica* 55: 23-169. 2001.

in English: ox grass, fan love grass, tough love grass, South African love grass

in southern Africa: baiesterkgras, beesgras, blousaadgras, jongosgras, jongospol, kruilgras, osgras, ospolgras, oulandergras, taaipol, taaipoleragrostis, taaipol-eragrostis, verdompsterkpolgras, vleigras; modula, modila (Sotho); umtshiki (Zulu)

in Brazil: capim-annoni, capim-chorão, capim-teff

E. planiculmis Nees (*Eragrostis nebulosa* Stapf)

Mozambique, South Africa, Swaziland, Lesotho. Perennial, erect, tufted, compacted, leaves in a basal tuft, basal sheaths glabrous, open and much-branched inflorescence, spikelets linear, lemma dark green, palea keel narrow and linear, edible grains as famine food, growing in disturbed areas,

vlei margins, depressions, see *Florae Africae Australioris Illustrationes Monographicae* 391. 1841 and *Flora Capensis* 7: 603. 1900.

in English: broom love grass

in southern Africa: besem-eragrostis, besemeragrostis, besemgras, blousaadgras, fynblousaadgras, fynvleigras, kleinblousaadgras; masapo-lokane (Sotho)

E. plumbea Scribn. ex Beal

Mexico. See *Grasses of North America for Farmers and Students* 2: 484. 1896 and *Fl. Novo-Gal.* 14: 484. 1983.

E. plurigluma C.E. Hubb.

Sierra Leone. Swampy places, fields, see *Bulletin of Miscellaneous Information Kew* 1934: 116. 1934.

E. plurinodis Swallen ex Luces

Venezuela, Brazil. Perennial, tufted, stoloniferous, leaf blades inrolled, leaves glabrous, ligules ciliate, inflorescence narrowly pyramidal, 9- to 30-flowered, florets strongly overlapping, glumes acuminate, spikelets disarticulating downward or upward, 2 stamens, fields, savannahs, related to *Eragrostis rufescens* and *Eragrostis bahiensis* var. *contracta* Döll, see *Journal of the Washington Academy of Sciences* 32(6): 158, f. 2. 1942.

E. poa Stapf

Africa. Moist ground, see *Descriptio Graminum in Gallia et Germania* 181. 1802, *Essai d'une Nouvelle Agrostographie* 162. 1812, *Systema Vegetabilium* 2: 574. 1817, *A Manual of the Botany of the Northern United States. Second Edition* 563. 1856, *Flora von Nieder-Österreich* 61. 1859, *Bulletin de la Société Impériale des Naturalistes de Moscou* 41(2): 295. 1868, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 291. 1878, *Flora Brasiliensis* 2(3): 149. 1878, *Acta Horti Petrop.* 7: 621. 1881, *Plantae Europaeae* 1: 73. 1890, *Journal de Botanique (Morot)* 8: 289. 1894 and *Flora Capensis* 7: 605. 1900, *Flora Analitica d'Italia* 1: 82. 1908.

E. pobeguini C.E. Hubb. (*Eragrostis longifolia* Hochst. ex Steud.)

West Africa. See *Synopsis Plantarum Glumacearum* 1: 268. 1854 and *Bulletin of Miscellaneous Information Kew* 1936(5): 312. 1936.

E. polyademia Matt.

Eritrea. See *Boll. Ort. Bot. Giard. Palermo* 9: 60. 1910.

E. polymorpha Roem. & Schult. (*Eragrostis cilianensis* (All.) Link ex Vignolo; *Eragrostis polymorpha* (R. Br.) Jedwabn., nom. illeg., non *Eragrostis polymorpha* Roem. & Schult.; *Eragrostis polymorpha* (Willd. ex P. Beauv.) Druce, nom. illeg., non *Eragrostis polymorpha* Roem. & Schult.; *Eragrostis polymorpha* (Willd. ex P. Beauv.) Steud., nom. illeg., non *Eragrostis polymorpha* Roem. & Schult.; *Eragrostis polymorpha* Trin., nom. illeg., non *Eragrostis*

polymorpha Roem. & Schult.; *Poa polymorpha* R. Br., nom. illeg., non *Poa polymorpha* Wibel; *Poa polymorpha* Willd. ex P. Beauv., nom. illeg., non *Poa polymorpha* Wibel)

India, Madras. See *Flora Pedemontana* 2: 246. 1785, *Prodromus Florae Novae Hollandiae* 180. 1810, *Essai d'une Nouvelle Agrostographie* 74, 167, 175. 1812, *Systema Vegetabilium* 2: 575. 1817, *Nomenclator Botanicus. Editio secunda* 1: 562, 564. 1840, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 101-102. 1850 and *Malpighia* 18: 386. 1904, *Botanisches Archiv* 5: 188. 1924, *Taxon* 35: 697. 1986.

E. polytricha Nees (*Eragrostis floridana* Hitchc.; *Eragrostis fragilis* Swallen; *Eragrostis lugens* Nees; *Eragrostis lugens* var. *glabrata* Döll; *Eragrostis lugens* var. *glabrescens* Döll; *Eragrostis lugens* var. *villosa* Döll; *Eragrostis polytricha* var. *glabrior* Döll; *Eragrostis polytricha* var. *hirsutior* Döll; *Eragrostis purpusii* Jedwabn.; *Eragrostis trichocolea* Hack. & Arechav.; *Eragrostis trichocolea* var. *floridana* (Hitchc.) Witherspoon; *Poa polytricha* (Nees) Kunth)

U.S., Florida, Bolivia, Brazil, Argentina, Venezuela, Chile, Mexico, Paraguay. Perennial, tufted, erect, simple, glabrous, foliage mainly basal, leaf blades attenuate and folded, leaves more or less villous, ligules ciliate, inflorescence broadly ovate, open panicle, spikelets oblong, 1- to 5-flowered, glumes subequal, lemmas more or less glabrous to scabrid or scaberulous, 3 stamens, common in disturbed places, savannahs, open habitats, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 505-508. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 331. 1833, *Flora Brasiliensis* 2(3): 140-141. 1878, *Anales del Museo Nacional de Montevideo* 1: 444. 1896 and *American Journal of Botany* 2: 308. 1915, *Botanisches Archiv* 5(3-4): 201. 1924, *Fieldiana, Botany* 28(1): 18. 1951, *Annals of the Missouri Botanical Garden* 64: 328. 1977, *Iheringia, Série Botânica* 55: 117. 2001.

E. porosa Nees (*Eragrostis podotricha* Chiov. ex Chiarugi) Ethiopia, Mozambique, South Africa, Yemen, Zambia. Annual, sticky, erect or geniculate, a glandular ring beneath the nodes, loosely or densely tufted, open, unbranched or sparsely branched, leaves sharp pointed, ligule a fringe of short hairs, leaf sheath stiffly pilose, leaf blades usually expanded, panicle open or sometimes contracted, lowest branches of the inflorescence whorled, spikelets linear breaking up from the bottom upward, palea persistent, pioneer grass considered an indicator of retrogression of the veld, very palatable, grazed, common in sandy or stony soil, around rivers, roadsides, around farm buildings, fields borders, in disturbed areas, dry scrubland, see *Florae Africae Australioris Illustrationes Monographicae* 401. 1841 and *Flora Capensis* 7: 605. 1900, *Webbia* 8: 102. 1951.

in English: blue windgrass

in South Africa: blousoetgras, windgras, gemeiner windhalm

E. potamophila Lazarides

Australia, Western Australia, Northwest Territories. Perennial, tufted, erect, curly leaves, ligule minute, open decompound panicles, glumes unequal, 2-3 stamens, similar to *Eragrostis petraea*, see *Austral. Syst. Bot.* 10: 143. 1997.

E. praetermissa L.H. Harv. (*Eragrostis hirta* E. Fourn.; *Eragrostis intermedia* Hitchc.; *Eragrostis intermedia* var. *praetermissa* (L.H. Harv.) Witherspoon)

Guatemala. See *Mexicanas Plantas* 2: 115. 1886 and *Journal of the Washington Academy of Sciences* 23(10): 450. 1933, *Bulletin of the Torrey Botanical Club* 81(5): 408. 1954, *Annals of the Missouri Botanical Garden* 64: 324-329. 1977 [1978].

E. pringlei Mattei (*Eragrostis pusilla* Scribn. ex Beal, nom. illeg., non *Eragrostis pusilla* Hack.; *Eragrostis scribneriana* Hitchc.) (after the American botanist Cyrus Guernsey Pringle, 1838-1911, Quaker, plant collector (Pacific States and Mexico), wrote *The Record of a Quaker Conscience. C. Pringle's Diary*. New York 1918. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 111. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 318. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ezra Brainerd (1844-1924), "Cyrus Guernsey Pringle." *Rhodora*. 13: 225-232. 1911; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Helen Burns Davis, *Life and Work of Cyrus Guernsey Pringle*. Burlington, Vt. 1936; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 335-336. 1973; Ira L. Wiggins, *Flora of Baja California*. 42. Stanford, California 1980; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 596. University of Pennsylvania Press, Philadelphia 1964; Gordon Douglas Rowley, *A History of Succulent Plants*. California 1997; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Mexico. Dry rocky hills, see *Grasses of North America for Farmers and Students* 2: 481. Nov 1896 and *Contributions from the United States National Herbarium* 17(3): 361. 1913, *Phytologia* 37(4): 317-407. 1977.

E. procera (Roxb.) Steud. (*Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult.; *Festuca fusca* L.; *Poa procera* Roxb.)

Asia, India. See *Systema Naturae, Editio Decima* 2: 876. 1759, *Ess. Agrost.* 80, 163. 1812, *Systema Vegetabilium, editio decima sexta* 2: 615. 1817, *Flora Indica; or Descriptions ...* 1: 334. 1820, *Synopsis Plantarum Glumacearum* 1: 266. 1854.

E. procumbens Nees

South Africa. Annual, tufted, geniculate or procumbent, basal sheaths hairy or glabrous, spikelets appressed to the branches, rachilla not fragile, lemmas acute more or less mucronate, palea keels entire, weed species, usually in sandy soils, disturbed areas, depressions, along water courses, see *Florae Africae Australioris Illustrationes Monographicae* 386. 1841.

E. prolifera (Sw.) Steud. (*Eragrostis diversiflora* Vasey; *Eragrostis domingensis* (Pers.) Steud.; *Eragrostis excelsa* Griseb.; *Eragrostis fascicularis* Trin.; *Eragrostis gigantea* Trin.; *Eragrostis haenkei* J. Presl; *Eragrostis linearis* (Schumacher.) Benth.; *Eragrostis maxima* E. Fourn., nom. illeg., non *Eragrostis maxima* Baker; *Eragrostis salzmännii* Steud.; *Poa domingensis* Pers.; *Poa haenkei* (J. Presl) Kunth; *Poa prolifera* Sw.)

North and Central America, Guatemala, Venezuela, Colombia, Brazil, Mexico, Panama. Perennial, caespitose, erect, coarse, usually simple, glabrous, rigid, basal leaves, ligule a shallow rim, forming large clumps, sand-binding, common at edge of salt flats, in open habitats, coastal, on dunes, on subtropical sandy beaches, see *Nova Genera et Species Plantarum seu Prodrum* 27. 1788, *Syn. Pl.* 1: 88. 1805, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 403. 1830, *Reliquiae Haenkeanae* 1(4-5): 279. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 6 1: 343. 1833, *Synopsis Plantarum Glumacearum* 1: 277-278. 1854, *Catalogus plantarum cubensium ...* 227. 1866, *Mexicanas Plantas* 2: 114-115. 1886, *Contributions from the United States National Herbarium* 1(8): 285. 1893.

in English: Dominican love grass

in Mexico: ya-ax-suuk

in Angola: disangalala, masangalala, sangalala

in Senegal: dika dika, dikadika

E. psammodes Trin. (*Eragrostis bahiensis* Schrad. ex Schult.; *Eragrostis bahiensis* var. *bahiensis*; *Eragrostis pilosa* var. *bahiensis* (Schrad. ex Schult.) Kuntze; *Poa psammodes* (Trin.) Kunth)

Brazil. See *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Mantissa* 2: 318. 1824, *Hortus Regius Botanicus Berolinensis* 1: 185. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 400. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 328. 1833, *Flora Brasiliensis* 2(3): 153. 1878, *Revisio Generum Plantarum* 3(2,2): 353. 1898.

E. psammophila S.M. Phillips

Somalia. Annual, slender, small, sheaths pilose, ovate panicle, spikelets narrow oblong, glumes unequal, diffuse open panicle, straight-sided spikelets, lemmas papery and

truncate at the tip, palea keels scabrid, glossy grain, dry bushland, on red sandy soils, related to *Eragrostis gloeophylla* S.M. Phillips, see *Kew Bulletin* 46(1): 111-117. 1991, *Kew Bulletin* 47(2): 277-282. 1992.

E. pseudo-obtusa De Winter (*Eragrostis obtusa* x *Eragrostis echinochloidea*)

South Africa. Perennial, erect, tufted, basal sheaths glabrous, inflorescence more or less dense and sparsely branched, spikelets congested, rachilla fragile, palea keeled and notched, growing in shallow sandy soils, disturbed places, along stream beds, in moist areas, dams, ditches.

in English: dew grass

E. pseudo-teff Peter

South Africa. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: Anhang, 107, t. 65, f. 1, 1930; 331. 1931.

E. pseudopoa C.E. Hubb.

Tanzania. Indeterminate species, densely tufted, see *Kew Bulletin* 1934: 115. 1934.

E. pseudosclerantha Chiov. (*Eragrostis patenti-pilosa* Hack.)

East Africa, Ethiopia, South Africa. Perennial, short-lived, sprawling, often stoloniferous, geniculate, rooting at the nodes, leaves in a dense basal tuft, spikelets greenish, rachilla persistent, lower glume lanceolate, weed, common in stony areas, disturbed places, open habitats or under the trees, see *Proceedings of the Rhodesia Scientific Association* 7(2): 67. 1908, *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 285. 1939.

in English: foothpath love grass

E. puberula Steud. (*Poa leptoclada* A. Rich.)

Abyssinia. See *Tentamen Florae Abyssinicae ...* 2: 422. 1850, *Synopsis Plantarum Glumacearum* 1: 268. 1854.

E. pubescens (R. Br.) Steud. (*Eragrostis brownii* Nees; *Poa pubescens* R. Br.)

Queensland, New South Wales, New Guinea. Perennial, loosely tufted, erect, prostrate or scrambling, eglandular, sprawling, leaf blade rolled, large open panicles, spikelets subsessile, florets 12-90 closely overlapping, glumes unequal, glumes and lemmas acute and glabrous, lemma 3- to 5-nerved, 3 stamens, in sandy soils along the coast, dunes, alluvial soils, see *Prodrum Florae Novae Hollandiae* 181. 1810, *Synopsis Plantarum Glumacearum* 1: 279. 1854 and *Blumea* 47(1): 157-204. 2002.

E. purpurascens (Spreng.) Schult. (*Eragrostis megapotamica* (Spreng.) Schult.; *Poa megapotamica* Spreng.; *Poa purpurascens* Spreng.)

South America, Uruguay. See *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* 33. Halae [Halle] [1818 or 1819], *Mantissa* 2: 317. 1824, *Systema Vegetabi-*

lium, editio decima sexta 4: Cur. Post. 35. 1827, *Mantissa* 3(add. I): 617. 1827.

E. pusilla Hack. (*Diandrochloa pusilla* (Hack.) De Winter; *Eragrostis pusilla* Scribn. ex Beal, nom. illeg., non *Eragrostis pusilla* Hack.)

Africa, Kalahari. Annual, tufted, inflorescence branches spreading, found near water, sandy soil, see *Bulletin de l'Herbier Boissier* 4(App. 3): 27. Sep 1896, *Grasses of North America for Farmers and Students* 2: 481. Nov 1896 and *Bothalia* 7(2): 388, 389-390. 1960.

E. pycnantha (Phil.) Parodi ex Nicora (*Poa pycnantha* Phil.) (Greek *pyknos* "dense, numerous, compact, crowded" and *anthos* "a flower")

Chile. See *Anales de la Universidad de Chile* 94: 165. 1896 and *Gayana, Botánica* 51(1): 4. 1994.

E. pygmaea De Winter

Namibia. Annual, tufted, erect or decumbent, glandular, basal sheaths hairy to villous, inflorescence contracted, spikelets lanceolate, rachilla persistent, lemma acute, found in sandy flats, shallow depressions, desert, sand dunes, see *Bothalia* 10: 72. 1969.

E. racemosa (Thunb.) Steud. (*Eragrostis chalcantha* Trin.; *Poa chalcantha* (Trin.) Kunth; *Poa racemosa* Thunb.) (Greek *chalkeios* "of copper, of bronze," *chalkanthon* "solution of blue vitriol" and *anthos* "flower," Greek *chalcas, ados* for *chrysanthemon*, see Dioscorides)

Tropical and southern Africa, Sudan, Madagascar, Mozambique, Lesotho. Perennial bunchgrass, small to dwarf, densely tufted, dark green to reddish brown, upright, forming small tufts, leaves mostly basal, leaf sheath round and veined, inconspicuous ligule a ring of hairs, inflorescence open or contracted, dark greenish spikelets shortly pedicellate and slightly rough, rachilla persistent, glumes boat-shaped, often confused with *Eragrostis nindensis* Fical. & Hiern, pasture, relatively palatable, low grazing value, useful for ground cover and erosion control, common in heavily grazed areas, among other grasses, near water's edge, bushveld, open grassland, semiarid grasslands, rocky ground, moist sites, stony soils, vleis, riverbanks, clay loam, in heavy red clay soil, on sandy roadside, shallow sandy soil, see *Prodromus Plantarum Capensium*, ... 21. 1794, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 401. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 339. 1833, *Synopsis Plantarum Glumacearum* 1: 271. 1854 and *Raccolte Botaniche (Embryophyta diploidalia) fatte dai Missionari della Consolata nel Kenya* 135. Modena 1935.

in English: narrow heart love grass

in southern Africa: smalhartjie eragrostis, smalhartjiesgras, barwa, barwana

E. raynaliana Lebrun (for Jean Raynal, 1933-1979, and Aline Marie Raynal, b. 1937)

Cameroon. Vulnerable species, see *Adansonia* 9: 567, f. 1. 1970.

E. reflexa Hack. (*Eragrostis cumingii* Steud.)

The Philippines. See *Synopsis Plantarum Glumacearum* 1: 266. 1854 and *Philippine Journal of Science* 3(3): 168. 1908.

E. refracta (Muhl. ex Elliott) Scribn. (*Eragrostis acuta* A.S. Hitchc.; *Eragrostis campestris* Trin.; *Eragrostis campestris* var. *refracta* Chapm.; *Eragrostis longeradiata* Steud.; *Eragrostis pectinacea* (Michx.) Nees ex Jedwabn. var. *refracta* (Muhl. ex Elliott) Chapm.; *Eragrostis virginica* (Zuccagni) Steud.; *Poa amabilis* Walter, nom. illeg., non *Poa amabilis* L.; *Poa pectinacea* Michx. var. *refracta* (Muhl.) Chapman; *Poa reflexa* Elliott ex Scribn. & Merr.; *Poa refracta* Muhl. ex Elliott; *Poa virginica* Zuccagni)

U.S., Texas. Perennial, tufted, foliage mostly basal, ligules ciliolate, leaf blades flat, open ovate inflorescence, spikelets linear-oblong, 11- to 13-flowered, glumes lanceolate, 2 stamens, clumping grass, ornamental and attractive, dry soils, savannahs, white sand, damp soil, see *Centuria I. Observationum Botanicarum* 1: [p. 12] no. 25. Zürich 1806, *Collectanea* 124. 1806, *A Sketch of the Botany of South-Carolina and Georgia* 1: 162. 1816, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 72. 1836, *Synopsis Plantarum Glumacearum* 1: 272-273. 1854, *Flora of the Southern United States* 564. 1860, *Proceedings of the American Academy of Arts and Sciences* 25: 140. 1890, *Memoirs of the Torrey Botanical Club* 5(4): 49. 1894, *Flora of the Southern United States* 617. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 27: 5. 1900, *Proceedings of the Biological Society of Washington* 41: 159. 1928.

in English: coastal love grass, meadow love grass

E. remotiflora De Winter

South Africa. Short-lived perennial or annual, weak, erect, sometimes geniculate, tufted, inflorescence open, rachilla persistent, pasture, growing in wet areas, disturbed places, vleis, riverbanks, floodplains, in semiarid regions, see *Bothalia* 7: 477, f. 5. 1961.

E. reptans (Michx.) Nees (*Eragrostis capitata* (Nutt.) Nash; *Eragrostis hypnoides* (Lam.) Britton, Sterns & Poggenb.; *Eragrostis reptans* (Michx.) J. Presl, nom. illeg., non *Eragrostis reptans* (Michx.) Nees; *Eragrostis squarrosa* E. Fourn.; *Eragrostis weigeltiana* Bush; *Eragrostis weigeltiana* (Rchb. ex Trin.) Bush; *Megastachya fasciculata* E. Fourn.; *Megastachya reptans* (Michx.) P. Beauv.; *Neeragrostis reptans* (Michx.) Nicora; *Neeragrostis weigeltiana* Bush; *Poa capitata* Nutt.; *Poa dioica* Michx. ex Poir.;

Poa dioica Vent. ex Kunth, nom. illeg., non *Poa dioica* Michx. ex Poir.; *Poa reptans* Michx.; *Poa weigeltiana* Rchb. ex Trin.) (the German botanist Christoph Weigelt, d. 1828, physician, plant collector (Suriname); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 471. 1965; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845)

U.S., Mexico. Annual, dioecious, erect, mat-forming, rooting at the nodes, sheaths short glandular-pubescent, ligule a fringe of hairs, globose to oblong panicles, pistillate and staminate inflorescences, spikelets sometimes purplish, grain brownish, common on gravelly or sandy shores, muddy stream banks, in sandy areas, open ground, alluvial bars, along flooded riverbanks, trampled clay soil, wetlands, borders of streams and rivers, wet soil and wet sand, edge of ponds and lakes, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 185. 1791, *Flora Boreali-Americana* 1: 69-70, t. 11. 1803, *Encyclopédie Méthodique, Botanique* 5: 87. 1804, *Essai d'une Nouvelle Agrostographie* 74, 167, 175. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 514. 1829, *Reliquiae Haenkeanae* 1(4-5): 275. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 410. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 336. 1833, *Transactions of the American Philosophical Society, new series*, 5: 146. 1835, *Flora Brasiliensis* 2(3): 148-149. 1878, *Mexicanas Plantas* 2: 118, 120. 1886, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888 and *Manual of the Flora of the Northern States and Canada* 1042. 1901, *Transactions of the Academy of Science of St. Louis* 13: 178, 180. 1903, *Revista Argentina de Agronomía* 29: 5. 1963.

in English: creeping lovegrass, hairy creeping lovegrass, pony grass, love grass

in Mexico: pan caliente

E. retinens Hack. & Arechav. (*Eragrostis retinens* var. *pergamensis* Parodi)

South America, Uruguay, Argentina. On sandy soils, see *Anales del Museo Nacional de Montevideo* 1: 445-446, t. 56. 1896 and *Notas del Museo de la Plata, Botánica* 2(11): 6. 1937.

E. rigida (Vasey) Scribn. (*Diplachne rigida* Vasey; *Eragrostis rigida* A. Camus; *Eragrostis sessilispica* Buckley)

U.S. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97. 1862, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 304. 1891, U.S. Department of Agriculture. Division of Botany. *Bulletin* 12(2): t. 44. 1891 and *Flora of the Southeastern United States ...* 140. 1903, *Man. Grass. U.S.* 852. 1935, *Bulletin de la Société Botanique de France* 96: 167. 1949.

E. rigidifolia Schweinf. (*Eragrostis papposa* (Roem. & Schult.) Steud.; *Eragrostis rigidifolia* Hochst. ex Engl.; *Eragrostis rigidifolia* Hochst. ex Stapf)

Europe, Africa, Asia. See *Systema Vegetabilium* 2: 585. 1817, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Abhandlungen der Preussischen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 1891: 134. 1892, *Bulletin de l'Herbier Boissier* 2(App. 2): 39. 1894, *The Flora of British India* 7: 323. 1896.

E. rigidior Pilg. (*Eragrostis seineri* Jedwabn.)

East Africa, Tropical Africa, Kalahari. Perennial, rigid, tufted or densely tufted, straight or geniculate, rooting at lower nodes, culm nodes glabrous, profusely branched, papery basal sheaths, ligule a ring of short hairs, leaf blade strongly curling when dry, leaves hard and coarse, open to slightly contracted panicle, lower branches in a whorl, spikelets linear to oblong, rachilla fragile, glumes unequal, native pasture species, forage, low palatability, low grazing value, giving a high yield, palatable only in the young stage, useful for erosion control, common in alluvial sand, sandy and heavy loamy soils, open areas, disturbed areas, open grassland, uncultivated lands, old cultivated lands, overgrazed veld, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 48: 347. 1912, *Botanisches Archiv* 5(3-4): 194. 1924.

in English: curly-leaved love grass, curlyleaf love grass, curly-leaf, broad-leaved love grass, broad-leaved curly leaf

in South Africa: blousaadgras, krulblaar, krulblaarpluimgras, breëkrulblaar, krulblaar-eragrostis, soetgras, kräusel straußgras

in southwest Africa/Namibia: kräusel strausgrass

E. rigidiuscula Domin

Australia, Northern Territory. Rare species, perennial, leaf sheaths overlapping, leaf blades curling when old, scabrous inflorescences, open spreading panicles, 3 stamens, see *Bibliotheca Botanica* 85: 393. 1915.

E. riobrancensis Judz. & P.M. Peterson (*Eragrostis retinens* Hack. & Arechav.)

South America, Brazil. Perennial, tufted, glabrous, unbranched, leaf blades somewhat pungent, leaves glabrous and coriaceous, ligules ciliolate, lemmas narrowly lanceolate, inflorescence ovate, spikelets linear-oblong, 7- to 17-flowered, florets closely overlapping, glumes lanceolate, lemmas lanceolate, palea keels scabrid, solitary cleistogamous spikelets hidden within the sheaths, 2 stamens, sandy places, riverbanks, grasslands, savannahs, lowland, see *Anales del Museo Nacional de Montevideo* 1: 445-446, t. 56. 1896 and *Brittonia* 42: 47, f. 1. 1990.

E. riparia (Willd.) P. Beauv. (*Eragrostis amabilis* var. *riparia* (Willd.) E.G. Camus & A. Camus; *Eragrostis plumosa* var. *maritima* Trimen; *Eragrostis plumosa* var. *maritima* Thw. ex Trimen; *Eragrostis tenella* var. *riparia*

(Willd.) Hook.f.; *Eragrostis tenella* var. *riparia* (Willd.) Stapf; *Megastachya riparia* (Willd.) Roem. & Schult.; *Megastachya riparia* (Willd.) Nees, nom. illeg., non *Megastachya riparia* (Willd.) Roem. & Schult.; *Poa amboinica* Retz., nom. illeg., non *Poa amboinica* L.; *Poa riparia* Willd.)

Southern India, the Philippines, Sri Lanka, Papua New Guinea. Annual or short-lived perennial, not glandular, ascending or decumbent, compact, branched, ligule ciliate, leaf sheaths loose and fibrous when old, inflorescence spiciform and not viscid, panicle densely compact, florets loosely imbricate, glumes subequal to unequal, palea curved, palatable to stock, maritime, coastal, wet zones, beaches, sandy foreshores, see *Observationes Botanicae* 4: 20. 1786, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 4: 185. 1803, *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Systema Vegetabilium* 2: 593. 1817, *Hortus Regius Botanicus Berolinensis* 1: 192. 1827, *Agrost. Bras.* 512. 1829 [or *Flora Brasiliensis seu Enumeratio Plantarum* 512. 1829], *Syn. Pl. Glum.* 1: 265. 1854, *Syst. Cat. Ceylon Pl.* 109. 1885, *The Flora of British India* 7: 315. 1896 and *Handb. Fl. Ceylon* 5: 291. 1900, *Flore Générale de l'Indo-Chine* 7: 557. 1923, *Grasses of Ceylon* 72. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma ...* 513. 1960.

E. robusta Stent (*Eragrostis curvula* (Schrud.) Nees; *Eragrostis valida* Stent, nom. illeg., non *Eragrostis valida* Pilg.)

South Africa. See *Göttingische gelehrte Anzeigen unter der Aufsicht der Königl.* 3: 2073. 1821, *Florae Africae Australioris Illustrationes Monographicae* 397. 1841 and *Bothalia* 1: 172. 1922, *Bothalia* 2: 288. 1927.

E. rogersii C.E. Hubb. (named for the South African (b. England, Dorset) botanist, missionary, Archdeacon of Pietersburg (Transvaal), Frederick Arundel Rogers, 1876-1944 (d. London), botanical collector in South Africa, Belgian Congo and Rhodesia, author of *Provisional List of Flowering Plants and Ferns Found in the Divisions of Albany and Bathurst*. Grahamstown 1909, son of the Rev. William Moyle Rogers (1835-1920, d. Hants); see J.H. Barnhart, *Biographical notes upon botanists.* 3: 171. 1965; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa.* 298-299. Cape Town 1981; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 336. 1972; Alain White (1880-1951) and Boyd Lincoln Sloane (1886-1955), *The Stapelieae.* Pasadena 1937; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists.* 592. London 1994; Stafleu and Cowan, *Taxonomic literature.* 4: 858. 1983) (the English Rev. William Moyle Rogers, 1835-1920 (d. Bournemouth, Hants), botanist, batologist, plant collector in South Africa, 1881 Fellow of the Linnean Society, author of *An Essay at a Key to British Rubi.* London 1893 and *Handbook of British Rubi.* London 1900; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 172. 1965; Mary

Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa.* 299. 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 336. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 234. 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1917-1933; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum.* 1: 177. 1904; A. White and B.L. Sloane, *The Stapelieae.* Pasadena 1937; Stafleu and Cowan, *Taxonomic literature.* 4: 860-861. 1983) Zimbabwe, Zambia. Annual, tufted, geniculate, rooting at the nodes, basal sheaths glabrous, spikelets distant, rachilla fragile, lemma acute more or less mucronate, palea keels entire, growing in sand, disturbed sandy soils, see *Proceedings of the Rhodesia Sci. Assn.* 32: 56. Bulawayo 1933, *Bulletin of Miscellaneous Information Kew* 1934: 115. 1934.

E. rojasii Hack. (for the Paraguayan botanist Teodor (Teodoro) Rojas, 1877-1954, plant collector with E. Hasler; see Stafleu and Cowan, *Taxonomic literature.* 4: 868. Utrecht 1983)

South America, Paraguay. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 373. 1909.

E. rotifer Rendle (*Eragrostis margaritacea* Stapf)

Kalahari, South Africa, Botswana, Transvaal, Zambia, Zimbabwe, Tanzania, Mozambique, Namibia, Angola. Perennial, tufted, erect, sometimes decumbent, greenish white, stiff, glabrous, basal leaf sheaths densely hairy and keeled, sparsely branched, leaf blades rolled or expanded, ligule a fringe of short hairs, inflorescence open with the lowest branches whorled, glandular rings above and below the whorls, open drooping panicle, spikelets contracted, rachilla persistent, readily eaten in dry times, common in alluvial sand, damp places, ponds, sandy soils in moist areas, riverbeds, vleis, disturbed areas, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 242. 1899, *Flora Capensis* 7: 604. 1899.

in Namibia: vleipluimgras, vley straußgras

E. rottleri Stapf

South India, Tranquebar. Extinct, annual, leaves flat or convolute, panicles oblong and open, viscid below the panicle, rachilla persistent, spikelets linear, 6-12 flowers, glumes subequal, lemma oblong, palea persistent, 3 stamens, coastal, plains, see *The Flora of British India* 7(22): 321. 1897 [1896] and *Flora Presid. Madras* 1827. 1934, *Grasses of Burma ...* 513. 1960.

E. rubens (Lam.) Hochst. ex Miq. (*Eragrostis rubens* Hochst.; *Eragrostis rubens* (Lam.) Steud., nom. illeg., non *Eragrostis rubens* (Lam.) Hochst. ex Miq.; *Poa rubens* Lam.)

India. See *Verh. Nederl. Inst.* III 4: 38. 1851, *Analecta Botanica Indica* 1851, *Synopsis Plantarum Glumacearum* 1: 265. 1854.

E. rufescens Schrad. ex Schult. (*Eragrostis acicularis* Trin.; *Eragrostis affinis* Salzm. ex Steud.; *Eragrostis cuspidata* (Schult.) Link; *Eragrostis floribunda* Schrad. ex Schult.; *Eragrostis inconstans* Nees; *Eragrostis inconstans* var. *rufescens* (Schrad. ex Schult.) Nees; *Eragrostis multipes* S. Moore; *Eragrostis polyneura* Jedwabn.; *Eragrostis rufescens* Schrad., nom. illeg., non *Eragrostis rufescens* Schrad. ex Schult.; *Eragrostis vahlii* var. *coarctata* Döll; *Megastachya cuspidata* Schult.; *Poa rufescens* Schrad. ex Schult.)

North and South America, Brazil, Bolivia, Nicaragua, Mexico. Annual, tufted, erect, leaf blades linear and acuminate, ligule membranous, leaves stiff, inflorescence oblong to ovate-oblong, erect panicle, spikelets oblong to narrowly oblong, 8- to 40-flowered, glumes subequal and ovate, lemmas ovate and acute, 3 stamens, in damp places on sandy soil, pine forest, clay soil, on dry places, seasonally humid savannahs, roadsides, along small stream, open or shady situations, similar to *Eragrostis acutiflora*, see *Mantissa* 2: 319, 329. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 495, 499-500. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 406. 1830, *Hortus Regius Botanicus Berolinensis* 2: 293. 1833, *Linnaea* 12(4): 450. 1838, *Synopsis Plantarum Glumacearum* 1: 277. 1854, *Flora Brasiliensis* 2(3): 152, 155. 1878, *Transactions of the Linnean Society of London, Botany* 4: 511. 1895 and *Botanisches Archiv* 5(3-4): 205. 1924, *Bulletin du Muséum d'Histoire Naturelle sér. 2*, 17: 69. 1945, *Novon* 2(2): 101. 1992.

E. rufescens Schrad. ex Schult. var. *mesoamericana* Davidse

Honduras. See *Novon* 2(2): 101. 1992.

E. rufescens Schrad. ex Schult. var. *rufescens* (*Calotheca cuspidata* Spreng.; *Eragrostis acicularis* Trin.; *Eragrostis affinis* Salzm. ex Steud.; *Eragrostis cuspidata* (Schult.) Link; *Eragrostis multipes* S. Moore; *Eragrostis polyneura* Jedwabn.; *Megastachya cuspidata* Schult.; *Poa acicularis* (Trin.) Kunth; *Poa cuspidata* Nutt.; *Poa cuspidata* Roth, nom. illeg., non *Poa cuspidata* Nutt.; *Poa pungens* Nutt., nom. illeg., non *Poa pungens* Georgi)

South America, Brazil. Rocky places, see Johann Gottlieb Georgi (1729-1802), *Geographisch-Physikalische und Naturhistorische Beschreibung des Russischen Reichs ...* 4: 693. Königsberg 1797-1800, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Compendium Florae Philadelphicae* 1: 61. 1818, *The Genera of North American Plants* 1: 66. 1818, *Novae Plantarum Species* 72. 1821, *Mantissa* 2: 329. 1824, *Systema Vegetabilium, editio decima sexta* 1: 348. 1825, *Mémoires*

de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles 1(4): 406. 1830, *Hortus Regius Botanicus Berolinensis* 2: 293. 1833, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 342. 1833, *Synopsis Plantarum Glumacearum* 1: 277. 1854, *Transactions of the Linnean Society of London, Botany* 4: 511. 1895 and *Botanisches Archiv* 5(3-4): 205. 1924.

E. sabinae Launert (named for Sabine Bleissner, b. 1943, plant collector in South Africa)

South Africa. Perennial, tufted, stoloniferous, leaves mostly basal, greenish white, basal sheaths densely hairy, inflorescence open, spikelets loosely clustered, rachilla persistent and fragile, growing in brackish soil, saline soils, around springs, vleis, see *Prodromus einer Flora von Südwestafrika* 34(160): 225. 1970.

E. sabulicola Pilg. ex Jedwabn. (*Eragrostis sabulicola* Pilg. ex Koechlin, nom. illeg., non *Eragrostis sabulicola* Pilg. ex Jedwabn.; *Eragrostis sabulicola* Pilg. ex Schltr.; *Eragrostis sabulicola* Pilger ex De Wild.)

Africa. See Kolonial-Wirtschaftliches Komitee. *Westafrikanische Kautschuk-Expedition... 1899-1900 ...* 269. Berlin (Verlag des Kolonial-Wirtschaftlichen Komitees, ...) 1900, *Études de systématique et de géographie botaniques sur la flore de Bas- et du Moyen-Congo* 2: 15. 1907, *Botanisches Archiv* 5(3-4): 214. 1924, *Bulletin de la Société Botanique de France* 108: 5. 1961.

E. sabulosa (Steud.) Schweick. (*Calotheca sabulosa* Steud.; *Sporobolus virginicus* (L.) Kunth)

South Africa. Perennial, tufted, rhizomatous, creeping rhizomes, very dense inflorescences dark olive-gray, spikelets densely crowded and appressed, palea keels ciliate, confused with *Sporobolus virginicus* (L.) Kunth, growing in sandy soils, beach sand, see *Species Plantarum* 1: 63. 1753, *Flora* 12(2): 488. 1829, *Révision des Graminées* 1: 67. 1829 and *Repertorium Specierum Novarum Regni Vegetabilis* 43: 91-92. 1938.

E. saresberiensis Launert (Vetus Saresberie = Salisbury)

Zimbabwe. See *Boletim da Sociedade Broteriana, ser. 2* 35: 22. 1961.

E. sarmentosa (Thunb.) Trin. (*Eragrostis sarmentosa* (Thunb.) Nees, nom. illeg., non *Eragrostis sarmentosa* (Thunb.) Trin.; *Poa sarmentosa* Thunb.)

Mozambique, Zimbabwe, South Africa, Zambia. Perennial, tufted, rhizomatous, mat-forming, geniculate, decumbent, rooting at the nodes, inflorescence narrow and contracted with thick pedicels, spikelets greenish to purplish, rachilla persistent and fragile, useful for erosion control, growing in moist sandy areas, along floodplains, in disturbed overgrazed areas, see *Prodromus Plantarum Capensium, ...* 21. 1794, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques,*

Physiques et Naturelles 1(4): 398. 1830, *Linnaea* 7(3): 330. 1832.

E. saxatilis Hemsley

St. Helena. Rare species, among rocks, dry places, see *Report on the Scientific Results of the Voyage of H.M.S. Challenger* 1(2): 90, t. 50. 1884.

E. scabra Phil. (*Eragrostis mexicana* subsp. *virescens* (J. Presl) S.D. Koch & Sánchez Vega)

Chile. See *Hortus Regius Botanicus Berolinensis* 1: 190. 1827, *Reliquiae Haenkeanae* 1(4-5): 276. 1830, *Florula Atacamensis seu enumeratio ...* 55. 1860 and *Phytologia* 58: 380. 1985.

E. scaligera Salzm. ex Steud. (*Eragrostis bahiensis* non Schrad. ex Schult., sensu Lemée; *Eragrostis rufescens* var. *laurentiana* Benoist; *Eragrostis virginica* (Zuccagni ex Roemer) Steud.; *Poa virginica* Zuccagni ex Roemer)

South America, Brazil, U.S. Perennial, tufted, knotted, foliage mostly basal, ligules ciliolate-membranous, leaf blades attenuate, leaves coarse and glabrous, inflorescence both terminal and axillary, spikelets elliptical to linear-oblong, 9- to 45-flowered, florets closely overlapping, glumes lanceolate-ovate, 2 stamens, cleistogamous spikelets in the axils of the middle and upper leaves, common along sandy roadsides, coastal sand dunes, related to *Eragrostis bahiensis* and to *Eragrostis atrovirens*, see *Mantissa* 2: 319. 1824, *Synopsis Plantarum Glumacearum* 1: 277. 1854 and *Bulletin du Muséum d'Histoire Naturelle sér. 2*, 17: 69. 1945, *Fl. Guy. Franç.* 1: 92. 1955, *Brittonia* 27: 123-126. 1975.

in English: tender lovegrass, coastal lovegrass

E. schimperi (A. Rich.) Benth. (*Harpachne schimperi* A. Rich.) (for the German botanist Andreas Franz Wilhelm Schimper, (born Strasbourg, France) 1856-1901 (d. Basel, Switzerland), son of Wilhelm Philipp Schimper (1808-1880, d. Strasbourg, France [then part of Germany], professor of natural history and geology at the University of Strasbourg), interested in plant geography, worked with Julius von Sachs (1832-1897) at Würzburg, 1880-1881 traveled in the eastern United States, 1882-1883 with the German botanist Friedrich Richard Adalbert Johow (1859-1933) to the West Indies (Barbados, Trinidad, Venezuela and Dominica), 1886 Brazil, Jena 1888-1901 editor of *Botanische Mittheilungen aus den Tropen*, 1889-1890 Ceylon and Java, succeeds the German botanist Georg Albrecht Klebs (1857-1918) at Basel, 1898 professor of botany at the University of Basel, 1898-1899 with the German *Valdivia* Deep Sea Expedition (“Deutsche Tiefsee-Expedition”) for study of plankton, visited Cameroon, among his works are *Untersuchungen über die Proteinkristalloide der Pflanzen*. Strasbourg 1878, *Taschenbuch der medicinisch-pharmaceutischen Botanik und pflanzlichen Drogenkunde*. Strassburg 1886, *Die epiphytische Vegetation Amerikas*. Jena 1888, *Die indo-malaysche Strandflora ...* Jena 1891 and “Rhizophoraceae.” in *Nat. Pflanzenfam.* 3(7): 42-48.

1892 and 49-56. 1893, until 1898 worked in the laboratory of Eduard Adolf Strasburger (1844-1912) at Bonn. See A.P.M. Sanders, in *D.S.B.* 12: 165-167. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 225. 1965; H. Schenk, “A.F.W. Schimper.” in *Berichte der Deutschen botanischen Gesellschaft, XIX, Generalversammlungsheft*. 1: 54-70. 1901; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 311. Cape Town 1981; Heinz Tobien, in *D.S.B.* 12: 167-168. 1981; P.W. Richards, in *D.S.B.* 12: 168-169. 1981; Ignatz Urban, editor, *Symbolae Antillanae*. 1: 150-151. 1898 and 3: 120. 1902; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 352. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 679. University of Pennsylvania Press, Philadelphia 1964; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 72. Utrecht 1971)

Brazil. See *Tentamen Florae Abyssinicae ...* 2: 431. 1850, *Icones Plantarum* 14: 1371. 1881.

E. schultzii Benth. (*Eragrostis brownii* var. *schistacea* F.M. Bailey; *Eragrostis elongata* var. *brachyclados* Domin)

Australia. Perennial, robust, tussocky, sprawling, leaf blades coriaceous, ligule minute, clustered spikelets, 3 stamens, see *Flora Australiensis: A Description ...* 7: 646. 1878 and *Bot. Bull. Dept. Agric., Queensland* 16: 2. 1903, *Biblioth. Bot.* 20(85): 400. 1915, *Flora of Australia* 44B: 376-377, 460. 2005.

E. schweinfurthiana Jedwabn. (*Eragrostis cilianensis* (All.) Link ex Vignolo)

Africa. See *Flora Pedemontana* 2: 246. 1785 and *Malpighia* 18: 386. 1904, *Botanisches Archiv* 5(3-4): 194. 1924, *Taxon* 35: 697. 1986.

E. schweinfurthii Chiov. (*Eragrostis kiwuensis* Jedwabn.; *Eragrostis multiflora* auct.) (for the German botanist Georg August Schweinfurth, 1836-1925, explorer, traveler, botanical collector in East and North Africa (tropical Africa and Arabia), ethnologist, among many other works he was the author of *Au coeur de l'Afrique 1868-1871. Voyages et découvertes dans les régions inexplorées de l'Afrique Centrale*. Traduit ... sur les éditions Anglaise et Allemande. Paris 1875, *Illustration de la flore d'Egypte*. Le Caire 1887, *Sur la flore des anciens jardins arabes d'Egypte*. Le Caire 1888, *The Heart of Africa*. London 1873, *Beitrag zur Flora Aethiopiens*. Berlin 1867 and *Novae species aethiopicae*. [Wien 1868]; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 249. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*.

357. 1972; Stafleu and Cowan, *Taxonomic literature*. 5: 430-437. 1985; G.E. Wickens, "Dr. G. Schweinfurth's journeys in the Sudan." *Kew Bulletin*. 27(1): 129-146. 1972; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." in *Webbia*. 19: 861-863. 1965; G.E. Wickens, "J.D.C. Pfund, a botanist in the Sudan with the Egyptian Military Expeditions, 1875-1876." *Kew Bulletin*. 24(1): 191-216. 1970; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 191-192. Paris 1882; A. White and B.L. Sloane, *The Stapeleae*. Pasadena 1937)

Tropical Africa, Arabia, Yemen. Annual or short-lived perennial, usually erect, simple or sparsely branched, sheaths and leaf blades usually pilose, glandular on the culms, a glandular ring below the culm nodes, ligule a ciliolate membrane, panicle open with short stiff spreading branches, spikelets breaking up from the bottom upward, florets tightly imbricate, lemmas cartilaginous, palea persistent, weed, along roadsides, on montane grassland, compacted soil, in high rainfall areas, loamy sand, waterlogged places, see *Annuario del Reale Istituto Botanico di Roma* 8(3): 368-369. 1908.

E. schweinfurthii Chiov. var. ***kiwuensis*** (Jedwabn.) S.M. Phillips (*Eragrostis kiwuensis* Jedwabn.)

Arabia, Yemen. Panicle contracted and spike-like, see *Botanisches Archiv* 5(3-4): 206. 1924, *Kew Bulletin* 42(4): 930. 1987.

E. sclerantha Nees (lemmas cartilaginous)

Africa. Perennial, densely tufted, basal sheaths hairy, ligule a fringe of short hairs, inflorescence an open panicle, unknown grazing value, growing among rocks and sandy soils, see *Florae Africae Australioris Illustrationes Monographicae* 388. 1841.

E. sclerantha Nees subsp. ***sclerantha***

Zimbabwe, Angola. Perennial, tufted, basal sheaths densely hairy to woolly, inflorescence spreading and dark olive-green, spikelets appressed to the branches or spreading, rachilla persistent, lemma acute, palea keels entire, growing in sandy soils.

E. sclerantha Nees subsp. ***villosipes*** (Jedwabn.) Launert (*Eragrostis sclerantha* Nees var. *villosipes* (Jedwabn.) De Winter; *Eragrostis villosipes* Jedwabn.)

Tropical Africa. Perennial, erect, densely tufted, basal sheaths densely hairy to woolly, leaves in a dense basal tuft, olive-green inflorescence contracted and narrow, spikelets appressed and usually solitary, rachilla persistent, see *Botanisches Archiv* 5(3-4): 202. 1924, *The Grasses and Pastures of South Africa* 166. 1955, *Boletim da Sociedade Broteriana, ser. 2* 35: 19. 1961.

E. sclerochlaena Chiov.

Africa. See *Annali di Bot.* 13: 57. 1914.

E. sclerophylla Trin. (*Poa sclerophylla* (Trin.) Kunth)

South America, Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 412. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 340. 1833.

E. scopelophila Pilg. (*Eragrostis karasbergensis* L. Bolus) (Greek *skopelos* "a high rock, peak," referring to the habitat) (the South African botanist Harriet Margaret Louisa Bolus (née Kensit), 1877-1970, with Frank Bolus, 1870-1945, and R. Glover wrote "Flowering plants and ferns collected on the Great Karasberg by the Percy Sladen Memorial Expedition, 1912-1913." *Ann. Bolus Herb.* 1: 9-19, 72-75, 97-114. 1914-1915)

Namibia, Karasberg, Africa. Perennial, shrubby, dwarf, much branched from the nodes, wiry, hard, smooth, erect or geniculate, woody at the base, many nodes, leaf blade expanded, ligule a whorl of short hairs, leaf sheaths rounded and smooth, basal sheath glabrous, greenish inflorescence, open and rigid panicle, rachilla persistent and fragile, pedicels of all spikelets with glandular rings, pasture, fairly palatable when green, growing in mountainous regions, steep slopes, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 421. 1914.

in South Africa: bergpluimgras, fels straußgras

E. scotelliana Rendle

Tropical Africa. Annual, loosely tufted, aromatic, strongly lemon scented, rocky sites, see *Journal of the Linnean Society, Botany* 30: 99. 1894.

E. secunda Nees ex Steud. (*Eragrostiella bifaria* var. *secunda* (Nees ex Steud.) Lazarides; *Eragrostiella secunda* (Nees ex Steud.) Bor)

Asia, Sri Lanka. See *Synopsis Plantarum Glumacearum* 1: 326. 1896 and *Indian Forester* 66: 270. 1940, *Contributions from Herbarium Australiense* 22: 6. 1976.

E. secundiflora J. Presl (*Eragrostis beyrichii* J.G. Sm.; *Eragrostis compacta* Salzm. ex Steudel; *Eragrostis oxylepis* (Torr.) Torr.; *Eragrostis rufescens* Schrad. ex Schult. var. *subfasciculata* Döll; *Eragrostis secundiflora* subsp. *oxylepis* (Torr.) S.D. Koch; *Eragrostis secundiflora* J. Presl var. *capitata* (E. Fourn.) Beetle; *Eragrostis vahlii* var. *subfasciculata* Döll; *Eragrostis yucatana* L.H. Harv.; *Megastachya oxylepis* (Torr.) E. Fourn. var. *capitata* E. Fourn.; *Poa compacta* Salzm. ex Steudel; *Poa secundiflora* (J. Presl) Kunth)

Mexico, U.S., Florida, New Mexico, Texas, Bolivia, Peru. Perennial or annual, caespitose, blue-green, low growing, branching or simple, coarse, glabrous, erect or ascending, branches appressed, ligules ciliolate, leaf blades linear and acuminate, basal leaves, inflorescence oblong to narrowly ovate, dense panicle, clusters of sessile or short-pedicelled

spikelets, spikelets linear-elliptical and usually tinged with red, florets strongly overlapping and disarticulating from the top downward, glumes subequal, lemmas ovate and imbricate, 2 stamens, weedy, invades all overgrazed sites, along roadsides and paths, on shallow and disturbed sites, sand dunes, open sandy soils, dry rocky places, lowland savannahs, seasonally flooded areas, related to *Eragrostis acutiflora*, see *Mantissa* 2: 319. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 499-500. 1829, *Reliquiae Haenkeanae* 1(4-5): 276. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 342. 1833, *Nomenclator Botanicus. Editio secunda* 2: 359. 1841, *Exploration of the Red River of Louisiana* 301, t. 19. 1853, *Synopsis Plantarum Glumacearum* 1: 275. 1854, *Pacific Railroad Reports* 4: 156. 1857, *Flora Brasiliensis* 2(3): 152, 155. 1878, *Mexicanas Plantas* 2: 118. 1886, *Annual Report of the Missouri Botanical Garden* 6: 117, t. 56. 1895 and *Bulletin of the Torrey Botanical Club* 81(5): 406. 1954, *Rhodora* 80(823): 397. 1978, *Phytologia* 54(1): 1-2. 1983.

in English: red lovegrass

E. secundiflora J. Presl subsp. ***oxylepis*** (Torr.) S.D. Koch (*Eragrostis beyrichii* J.G. Sm.; *Eragrostis interrupta* (Nutt.) Trel., nom. illeg., non *Eragrostis interrupta* P. Beauv.; *Eragrostis oxylepis* (Torr.) Torr.; *Eragrostis oxylepis* var. *beyrichii* (J.G. Sm.) Shinnars; *Eragrostis secundiflora* J. Presl; *Eragrostis secundiflora* var. *capitata* (E. Fourn.) Beetle; *Eragrostis veraecrucis* Rupr.; *Megastachya oxylepis* (Torr.) E. Fourn.; *Megastachya oxylepis* E. Fourn. ex Hemsl.; *Poa interrupta* Nutt., nom. illeg., non *Poa interrupta* Lam.; *Poa oxylepis* Torr.)

Mexico, U.S., Florida, New Mexico, Texas. Perennial, tufted, branching, panicle green to purplish, spikelets flat and crowded, common on sandy soil, invades all overgrazed sites, see *Reliquiae Haenkeanae* 1(4-5): 276. 1830, *Transactions of the American Philosophical Society, new series*, 5: 196. 1837, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 235. 1842, *Exploration of the Red River of Louisiana* 301, t. 19. 1853, *Pacific Railroad Reports* 4: 156. 1857, *Biologia Centrali-Americana; ... Botany ...* 3: 574. 1885, *Mexicanas Plantas* 2: 118. 1886, *Report of the United States Geological Survey of the Territories* 4: 237. 1891, *Annual Report of the Missouri Botanical Garden* 6: 117, t. 56. 1895 and *Field & Laboratory* 20(1): 34. 1952, *Rhodora* 80(823): 397. 1978, *Phytologia* 54(1): 1-2. 1983.

in English: red lovegrass

E. secundiflora J. Presl subsp. ***secundiflora***

Mexico, Brazil, Peru, Bolivia. See *Reliquiae Haenkeanae* 1(4-5): 276. 1830.

in English: red lovegrass

E. seminuda Trin. (*Eragrostis barbigrumis* Jedwabn.; *Eragrostis seminuda* var. *glabrata* Döll; *Eragrostis seminuda*

var. *hirta* Döll; *Eragrostis seminuda* var. *pilosissima* Döll; *Poa seminuda* (Trin.) Kunth)

Paraguay, Brazil to northern Argentina. Perennial, tufted, erect, leaf blades linear and acuminate, panicle ovate much branched, spikelets ovate-oblong, 2- to 5-flowered, glumes unequal, lemmas ciliate on the margins, very similar to *Eragrostis polytricha*, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 406. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 340. 1833, *Flora Brasiliensis* 2(3): 143. 1878 and *Botanisches Archiv* 5(3-4): 192. 1924, *Iheringia, Série Botânica* 55: 114. 2001.

E. senegalensis Nees (*Eragrostis senegalensis* Chev., nom. illeg., non *Eragrostis senegalensis* Nees)

Africa. See *Linnaea* 10(Litt.-Ber.): 116. 1836 and *Revue internationale de botanique appliquée et d'agriculture tropicale* 14: 120. 1934.

E. sennei Chiov.

Africa. See *Kew Bulletin* 47(2): 281. 1992.

E. sennii Chiov. (*Eragrostis abrumpens* Kabuye) (after the Italian botanist Lorenzo Senni, 1879-1954, botanical explorer, traveler, forester, Console della milizia forestale; see A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937)

Ethiopia, Somalia, Kenya. Annual, slender, tufted, erect, ascending, leaf blades flat or inrolled, sparse panicle, spikelets oblong and strongly laterally compressed, 9- to 32-flowered, glumes narrowly lanceolate and acuminate, lemmas with recurved tip shortly acuminate, palea keeled and winged, weed, heavily grazed grassland, lowland, calcareous soils, bushland, disturbed areas, cultivated land, denuded areas, see *Flora Somalia* 2: 460, f. 247. 1932, *Kew Bulletin* 28(3): 530. 1973[1974].

E. sessilispica Buckley (*Acamptocladus sessilispicus* (Buckl.) Nash; *Bromus hordeaceus* subsp. *thominei* (Hardouin) Braun-Blanq.; *Bromus thominei* Hardouin; *Diplachne rigida* Vasey; *Eragrostis rigida* (Vasey) Scribn.; *Leptochloa rigida* Munro ex Vasey; *Rhabdochloa rigida* (Munro ex Vasey) Kuntze)

U.S., Mexico. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97. 1862, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): t. 44. 1891, *Revisio Generum Plantarum* 2: 788. 1891, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 304. 1891 and *Flora of the Southeastern United States ...* 140. 1903, *L'origine et le développement des Flores dans le Massif Central de France* 113. 1923, *Man. Grass. U.S.* 852. 1935, *Bromus of North America* 138. 1995.

in English: tumble lovegrass

E. seticaulis Chiov.

Africa. See *Nuov. Giorn. Bot. Ital. n. ser.* 26: 70. 1919.

E. setifolia Nees (*Eragrostis chaetophylla* Steudel; *Eragrostis setifolia* (Benth.) Steud., nom. illeg., non *Eragrostis setifolia* Nees; *Poa setifolia* Benth.) (Greek *chaite* “bristle, mane, crest, foliage” and *phyllon* “a leaf”)

Australia. Perennial without arching stolons, eglandular, rhizomatous, compact, tufted, simple, thin or slender and wiry, forming spreading clumps, hairy and knotty swollen base, leaves flat or inrolled and linear, leaf blades with sharp and thickened margins, green and contracted inflorescence rather loose to dense, flattened and linear spikelets straight or curved, florets 9-36(-70) rounded on the back or keeled glumes ovate and more or less entire or notched, lemmas keeled and with hyaline margins, palea 2-keeled, 2-3 stamens, heavy seeding, a decreaser species, an indicator of good range condition, survive severe droughts, responds rapidly to rainfall, heavily grazed in poor seasons, useful pasture grass, moderately palatable, valuable fodder, eaten green or dry by domestic stock and kangaroos, unpalatable with age, ornamental when in flower, common in moist soils, open habitats, on cracking clay and fine alluvial soils, arid and semiarid areas, heavy or light clay soils, degraded areas, see *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 419. 1843, *Plantae Hartwegianae* (Plantae Hartwegianae imprimis Mexicanas adjectis nonnullis Grahamianis enumerat novasque describit). 262. London 1839-1857, *Synopsis Plantarum Glumacearum* 1: 274, 279. 1854, *Flora Australiensis: A Description ...* 7: 649. 1878.

in English: bristly love grass, neverfail, neverfail grass, narrow-leaved neverfail, narrow-leaf neverfail

E. sicula (Jacq.) K. Koch (*Brizopyrum siculum* (Jacq.) Link; *Cynosurus siculus* Jacq.; *Demazeria sicula* (Jacq.) Dumort.; *Desmazeria sicula* (Jacq.) Dumort.; *Poa sicula* (Jacq.) Jacq.)

Europe. See *Observationum Botanicarum* 2: 22, t. 43. 1767, *Commentationes Botanicae* 27. 1822, *Hortus Regius Botanicus Berolinensis* 1: 159. 1827, *Linnaea* 21(4): 408. 1848.

E. silveana Swallen (after William Arents Silveus, 1875-1953)

U.S., Mexico. Along railroads, see *American Journal of Botany* 19(5): 438, f. 3. 1932.

in English: Silveus' lovegrass

E. simplex Scribn. (*Eragrostis brownei* Kunth ex Chapm., nom. illeg., non *Eragrostis brownei* (Kunth) Nees ex Steud.; *Eragrostis cumingii* Steud.)

U.S. See *Synopsis Plantarum Glumacearum* 1: 266. 1854, *Flora of the Southern United States* 664. 1883 and *Bulletin, Division of Agrostology United States Department of Agriculture* 7: (edition 3)250, f. 244. 1900, *Rhodora* 80: 395. 1978.

E. simpliciflora (J. Presl) Steud. (*Eragrostis delicatula* Trin.; *Eragrostis tephrosanthos* Schult.; *Megastachya simpliciflora* J. Presl; *Poa simpliciflora* (J. Presl) Kunth)

Mexico, South America, Costa Rica. Annual, caespitose, erect to prostrate, branched, glabrous, leaves velvety at the base, leaf blades linear, panicle dense to open, growing in disturbed areas, marshy sites, grassy places, roadsides, moist soils, see *Mantissa* 2: 316. 1824, *Reliquiae Haenkeanae* 1(4-5): 283. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 343. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 73. 1836, *Synopsis Plantarum Glumacearum* 1: 278. 1854.

E. solida Nees (*Eragrostis affinis* Salzm. ex Steud.; *Eragrostis eucampta* Pilg.; *Eragrostis mattogrossensis* Pilg.; *Eragrostis mattogrossensis* f. *glabrescens* Pilg.; *Eragrostis rufescens* var. *spiciramea* Döll; *Eragrostis solida* var. *mattogrossensis* (Pilg.) Pilg.; *Poa solida* (Nees) Kunth)

Paraguay, Bolivia, Argentina, Brazil. Perennial, erect, caespitose, leaf blades rigid and acuminate to pungent, inflorescence oblong to ovate, spikelets elliptic-oblong and clustered, 10- to 22-flowered, glumes subequal, lemmas elliptic or oblong, 2 stamens, weed, grassland, sandy areas, weel drained soil, rocky sites, open habitats, see *Mantissa* 2: 319. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 501. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 336. 1833, *Synopsis Plantarum Glumacearum* 1: 277. 1854, *Flora Brasiliensis* 2(3): 152. 1878 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 141. 1902, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 70(3): 346, 347. 1939.

E. soratensis Jedwabn. (*Eragrostis botterii* E. Fourn.; *Eragrostis brachypodon* Hack.; *Eragrostis lugens* Nees) (Bolivia, La Paz, Sorata, Ticacirca)

Peru, Bolivia, Argentina. Perennial, caespitose, erect or decumbent, leaf blades acuminate, inflorescence ovate or oblong, spikelets ovate or oblong, 3- to 6-flowered, glumes unequal and acute, lemmas ovate and imbricate, 3 stamens, chaparral, stony places, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 505-506. 1829, *Mexicanas Plantas* 2: 115. 1886 and *Botanisches Centralblatt* 120: 548. 1912, *Botanisches Archiv* 5(3-4): 213. 1924, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958.

E. sororia Domin (*Eragrostis diandra* var. *gillivrayi* Domin)

Queensland, Victoria, New South Wales, New Guinea. Perennial, polymorphic, tufted, erect or scrambling, leaf blade flat or rolled, inflorescence open or contracted and interrupted, spiciform panicle, florets 5-25, glumes deciduous, glumes and lemmas acute, lemma gibbous, 2 stamens, sometimes cleistogamous, on sandy soils, in woodland and native pasture, see *Biblioth. Bot.* 20(85): 399, pl. xvi, f. 1-5. 1915.

E. spartinoides Steud. (*Eragrostis brownii* Nees; *Eragrostis cumingii* var. *novaguineensis* Jansen; *Eragrostis elongata* var. *brachyclados* Domin; *Eragrostis elongata* var. *festucoides* Domin)

The Philippines, Australia. Perennial, tufted, wiry, open panicles, many-flowered spikelets, glumes and lemmas cartilaginous, 2-3 stamens, strongly compressed grain, see *Catalogue of Indian Plants* 105. London 1833-1837, *Synopsis Plantarum Glumacearum* 1: 265. 1854 and *Biblioth. Bot.* 20(85): 400. 1915, *Reinwardtia* 2: 271. 1953.

E. speciosa (Roemer & Schultes) Steudel (*Eragrostis oldfieldii* Domin; *Poa speciosa* Roem. & Schult.)

South Australia, Queensland, Northern Territory, Western Australia, New South Wales. Perennial, tufted, compact, forming slender tussocks, bright bluish green, mostly simple, eglandular, linear and rolled leaves, inflorescence contracted and often interrupted, grayish and narrow panicles spike-like often or sometimes drooping, flattened and clustered spikelets, florets 9-69(-145) closely overlapping, glumes and lemmas acute and keeled, palea 2-keeled, 2 stamens, very hardy species, useful for erosion control, semi-arid areas, alluvial beds, sandy floodways, see *Systema Vegetabilium* 2: 573. 1817, *Synopsis Plantarum Glumacearum* 1: 279. 1854.

in English: handsome love grass

E. spectabilis (Pursh) Steud. (*Eragrostis geyeri* Steudel; *Eragrostis pectinacea* var. *spectabilis* (Pursh) A. Gray; *Eragrostis spectabilis* var. *sparsihirsuta* Farw.; *Eragrostis spectabilis* var. *spectabilis*; *Eragrostis velutina* Schrad.; *Erochloe spectabilis* (Pursh) Raf. ex B.D. Jacks.; *Megastachya spectabilis* (Pursh) Roem. & Schult.; *Poa amabilis* Walter, nom. illeg., non *Poa amabilis* L.; *Poa hirsuta* var. *spectabilis* (Pursh) Torr.; *Poa pectinacea* Geyer ex Steud., nom. illeg., non *Poa pectinacea* Michx.; *Poa spectabilis* Pursh; *Poa villosa* Beyr. ex Schrad.)

North America, U.S., Canada, Mexico. Perennial, erect to spreading, densely tufted, shortly rhizomatous, sheaths smooth or hairy, leaves rigid and ascending, bright purple to pinkish inflorescences, spikelets oblong to linear on thread-like stalks, glumes and lemmas acute, palatable, common on coastal sands, loose sand, old fields, sandy habitats, along railroads and roadsides, dry sterile soils, moist to dry soils, floodplains, sand savannah, rocky open grounds, see *Flora Caroliniana, secundum ...* 80. 1788, *Flora Boreali-Americana* 1: 68. 1803, *Flora Americae Septentrionalis; or, ...* 1: 81. 1814 [1813], *Systema Vegetabilium* 2: 589. 1817, *A Flora of the Northern and Middle Sections of the United States* 1(1): 114. 1823, *Linnaea* 12(4): 451. 1838, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Synopsis Plantarum Glumacearum* 1: 272. 1854, *A Manual of the Botany of the Northern United States. Second Edition* 565. 1856, *Index Kewensis* 1: 886. 1893 and *American Midland Naturalist* 10: 306. 1927.

in English: purple love grass, petticoat climber, sand love grass, tumbleweed lovegrass, tumble grass, ice cream grass

E. spicata Vasey (*Eragrostis spicata* (Heyne ex Stapf) Jeddabn., nom. illeg., non *Eragrostis spicata* Vasey; *Sporobolus tenuispica* Hack.)

Mexico, Paraguay. Robust, shade species, see *Botanical Gazette* 16(5): 146. 1891, *The Flora of British India* 7: 313. 1897 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 344. 1909, *Archives de Botanique* 5(3-4): 185. 1924.

in English: spiked lovegrass, spicate lovegrass, spike lovegrass

E. squamata (Lam.) Steud. (*Poa squamata* Lam.)

Tropical Africa, Zaire, Mali, Ghana, Nigeria. Perennial, caespitose, grazed by all stock, waste places, along roadsides, sandy areas, see *Encyclopédie Méthodique, Botanique* 1: 185. 1791, *Synopsis Plantarum Glumacearum* 1: 274. 1854.

in Nigeria: obumbe

in Senegal: diambul, firand, jambul, selguf u tan

in Sierra Leone: funfuri, ka soi, wunsune

E. stagnalis Lazarides

Australia, Northwest Territories, Queensland. Perennial, slender, tufted, erect, eglandular, open drooping panicles, 3 stamens, see *Austral. Syst. Bot.* 10: 152. 1997.

E. stapfii De Winter

Southern tropical Africa. Perennial, erect, tufted, basal sheaths glabrous, leaves in a dense basal tuft, inflorescence open with lowest branches whorled, lemma not strongly keeled, growing in sandy soils, shallow sand, in wet disturbed areas, see *The Grasses and Pastures of South Africa* 152. 1955.

E. stenoclada J. Presl (*Eragrostis elongata* (Willd.) J. Jacq.; *Eragrostis gangetica* (Roxb.) Steud.; *Poa gangetica* Roxb.; *Poa stenoclada* (J. Presl) Kunth)

Peru, the Philippines. See *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 108. 1809, *Eclogae Graminum Rariorum* 3. 1813, *Flora Indica; or Descriptions ...* 1: 341. 1820, *Reliquiae Haenkeanae* 1(4-5): 278. 1830, *Révision des Graminées* 1: Suppl. XXVIII. 1830, *Enum. Pl.* 1: 343. 1833, *Synopsis Plantarum Glumacearum* 1: 266. 1854.

E. stenostachya (R. Br.) Steud. (*Poa stenostachya* R. Br.)

Australia, Northwest Territories. Perennial, erect or stoloniferous, leaf blades acute, open panicles, unequal glumes, palea keels short, 3 stamens, see *Prodromus Florae Novae Hollandiae* 181. 1810, *Synopsis Plantarum Glumacearum* 1: 279. 1854.

E. stenothyrsa Pilg.

South Africa. Perennial, tufted, leaves in a dense basal tuft, inflorescence contracted, spikelets yellowish to purplish,

rachilla persistent, growing in moist areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 421. 1914.

E. sterilis Domin

Australia, Queensland. Perennial, eglandular, tufted, compact, erect, panicles loose to dense, linear spikelets, many closely overlapping florets, glumes unequal, stamens usually 2, see *Bibliotheca Botanica* 85: 403, pl. xvi, figs. 6-8. 1915.

E. stolonifera A. Camus

Madagascar. See *Notulae Systematicae. Herbarium de Paris* 13: 263. 1949.

E. suaveolens A.K. Becker ex Claus (*Eragrostis minor* var. *suaveolens* (A.K. Becker ex Claus) Schmalh.; *Eragrostis suaveolens* Koch)

Eurasia, Russia. See *Beiträge zur Pflanzenkunde des Russischen Reiches* 8: 266. 1851.

in English: candy lovegrass

E. subsecunda (Lam.) E. Fourn. (*Poa subsecunda* Lam.)

Southern China, Southeast Asia, Malesia. Perennial, erect or decumbent, wiry, ovate panicles loosely contracted, spikelets linear shortly pedicellate, stamens 3, see *Mexicanas Plantas* 2: 118. 1886.

E. subtilis Lazarides

Australia. Perennial, very slender, leaf blades rolled, open panicles with stiffly spreading spikelets, lemma 1- to 3-nerved, stamens 3, grain compressed, similar to *Eragrostis lacunaria*, in red sands, near water courses, saline soils, see *Australian Systematic Botany* 10(1): 155, 1997.

E. superba Peyr. (*Eragrostis superba* f. *contracta* Piovano; *Eragrostis superba* f. *expansa* Piovano; *Eragrostis superba* var. *contracta* Peter)

Southern and tropical Africa. Perennial bunchgrass, densely tufted, tussocky, tough, smooth, erect or ascending, often geniculate, glabrous, simple or with a sparsely branched base, sometimes branched at the nodes, green vegetative growth, leaves coriaceous, leaf sheaths keeled, basal leaf sheaths persistent, curved ciliate ligule, leaves flat or involute, spike-like panicle, secondary axes rarely branched, spikelets strongly laterally compressed, florets strongly overlapping, spikelets toothed at the sides and heart-shaped, coriaceous glumes persistent and lanceolate, lemmas winged, palea keels broadly winged and thickened, 3 stamens, heavy seeder, escaped from cultivation, large seed-heads rather ornamental, very to fairly palatable, utilized as hay, forage, cultivated fodder, gives a high yield, weed of cultivation, native pasture species, stemmy and unpalatable at maturity, quick growing, dense undergrowth provides a habitat for wildlife, useful for erosion control and stabilization of bare soils, used for reseeding denuded land in dry areas, good drought tolerance, high tolerance to salinity and

alkalinity, grows on poor sandy soils, plains, omiramba, slopes, stony soils, sandy clay loam brushland, coastal bushland, in arid and semiarid land, in wooded grassland, disturbed sandy clay, disturbed sandy roadside, on dry sandy beach, disturbed rocky roadside, red sandy soil, clay loams and clays, shallow rocky clay, clay loam grassland, gravelly grassland, alluvial sand and irrigated orchards, black clay soil, drainage furrows, see *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftliche Classe* 38: 584. Vienna 1860 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: Anhang, 107, t. 63, f. 2, 1930; 330. 1931, *N. Giorn. Bot. Ital.* 63: 682. 1957.

in English: flat-seed love grass, heart-seed grass, heart-seed love grass, veld love grass, love grass, Masai love grass, sawtooth love grass, Wilman love grass, Wilman's love grass

in Spanish: pasto avena

in southern Africa: bosluissaadgras, bosluisgras, weeluisgras, breësaadgras, herz straußgras, buffelsgras, hartjiesgras, knoppiesgras, plakkiesgras, platsaad-eragrostis, platsaadgras, skulpsaadjiegras, soetgras, visgras, werluisaadgras, weeluiseragrostis; kampinupinu (Tonga); umadolwana (Zulu)

in Mozambique: cununo

in southwest Africa/Namibia: strausgras

E. swallenii A.S. Hitchc. (for the American botanist Jason Richard Swallen, 1903-1991, agrostologist, with U.S.D.A Bureau of Plant Industry, among his works are "Three new grasses from Mexico and Chile." *J. Wash. Acad. Sci.* 26: 207-209. 1936 and "Gramineae." in *Flora of Panama. Ann. Missouri Bot. Gard.* 30: 104-280. 1943; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 351. 1965; T.W. Bosser, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 390. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* University of Pennsylvania Press, Philadelphia 1964)

U.S., Mexico. Fodder, common on sandy prairie, see *Journal of the Washington Academy of Sciences* 23(10): 451. 1933.

in English: Swallen's love grass, Swallen lovegrass

in Mexico: pasto

E. sylviae Cope (named for Sylvia M. Phillips)

Africa, Malawi. Perennial, tufted, basal leaf sheaths glabrous, inflorescence branches stiff, rachilla concealed, on montane grassland, see *Kew Bulletin* 53(1): 163, 7J-K. 1998.

E. taffzagra Steud.

Abyssinia. See *Synopsis Plantarum Glumacearum* 1: 268. 1854.

E. tef (Zuccagni) Trotter (*Cynodon abyssinicus* (Jacq.) Raspail; *Eragrostis abessinica* (Jacq.) Link; *Eragrostis abyssinica* (Jacq.) Link; *Eragrostis abyssinica* Link; *Eragrostis pilosa* (L.) P. Beauv. subsp. *abyssinica* (Jacq.) Asch. & Graebn.; *Eragrostis pilosa* var. *tef* (Zucc.) Fiori; *Poa abyssinica* Jacq.; *Poa cerealis* Salisb.; *Poa tef* Zuccagni)

Northeast Africa, Ethiopia. Annual bunchgrass, upright or spreading, solitary or tufted, slender, glabrous, forming scanty tufts, ligule a ring of hairs, leaf sheath usually rounded, leaf-blades narrow and folded, inflorescence pendent and loose, inflorescence open or contracted, panicle narrow with long flexuous drooping branches, spikelet usually 5-flowered, spikelets lanceolate and long-stipitate breaking up very slowly at maturity, florets persistent, rachilla persistent, glumes unequal, lemma lanceolate-oblong and persistent, palea keels scabrous, 3 stamens, violet-red and white varieties, famine crop possibly derived from *Eragrostis pilosa* (L.) P. Beauv., edible seeds, one of the faster growing hay crops known, food and fodder, straw used in brick manufacture, cultivated cereal, high grazing value, extremely palatable and very well grazed, valuable hay and pasture grass suitable for all kinds of stock, widely grown for hay, seed eaten by wildlife and cattle, cultivated by the ancient Egyptians, a staple cereal in Ethiopia, grain crop species, good for erosion control, in Ethiopia grains ground to flour and used for making unleavened bread and a pancake (*injera*), susceptible to frost, tolerant of drought, common on sandy loams or black soils, flood channels, weedy places, gardens, cultivated lands, disturbed veld, heavy loams, waste ground, along roadsides, similar to *Eragrostis pilosa*, see *Nicolai Josephi Jacquin Miscellanea austriaica ...* 2: 364. 1781, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 20. Londini [London] (Nov-Dec) 1796, *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Annales des Sciences Naturelles (Paris)* 5: 302. 1825, *Hortus Regius Botanicus Berolinensis* 1: 192. 1827 and *Synopsis der mitteleuropäischen Flora* 2: 374. 1900, *Bollettino della Società Botanica Italiana* 1918: 62. 1918, *Nuova Flora Analitica d'Italia* 1: 123. 1923, *Atti dell'Istituto Botanico dell'Università di Pavia* 2: 168. 1944, Amanda L. Ingram and Jeff J. Doyle, "The origin and evolution of *Eragrostis tef* (Poaceae) and related polyploids: evidence from nuclear *waxy* and plastid *rps16*." *Am. J. Bot.* 90: 116-122. 2003.

in English: teff grass, love grass, tef, teff, teff flour, red teff grass

in French: mil éthiopien

in South Africa: tefgras, tef

in Yemen: tahaf

in Northeast Africa: t'ef, tafi, taf, tef, teff (Ethiopia)

in India: teff hagaiz, teff tseddia

E. tenax (Kunth) Steud. (*Eragrostis condensata* (J. Presl) Steud.; *Eragrostis densissima* Hack.; *Eragrostis lehmannii* Pilg.; *Eragrostis tenax* Jedwabn., nom. illeg., non *Eragrostis tenax* (Kunth) Steud.; *Megastachya condensata* J. Presl; *Megastachya tenax* (Kunth) Roem. & Schult.; *Poa tenax* Kunth)

Ecuador, Peru, Bolivia. See *Prodromus Systematis Naturalis Regni Vegetabilis* 1: 160. 1815 [1816], *Systema Vegetabilium* 2: 587. 1817, *Reliquiae Haenkeanae* 1(4-5): 284. 1830, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Synopsis Plantarum Glumacearum* 1: 278. 1854, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 32. 1899 and *Österreichische Botanische Zeitschrift* 52: 304. 1902, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927.

E. tenella (L.) P. Beauv. ex Roem. & Schult. (*Eragrostis amabilis* (L.) Wight & Arn. ex Nees; *Eragrostis amabilis* (L.) Arn. ex Nees; *Eragrostis elegans* Nees; *Eragrostis interrupta* P. Beauv.; *Eragrostis plumosa* (Retz.) Link; *Eragrostis tenella* Nees, nom. illeg., non *Eragrostis tenella* (L.) P. Beauv. ex Roem. & Schult.; *Eragrostis tenella* var. *breviculmis* Stapf; *Eragrostis tenella* var. *plumosa* (Retz.) Stapf; *Megastachya tenella* (L.) Bojer; *Poa amabilis* L.; *Poa plumosa* Retz.; *Poa tenella* L.)

Old World Tropics. Annual or short-lived perennial, delicate, slender and leafy, flimsy, tufted to loosely tufted to densely tufted, loose, small, frequently branched, more or less erect or widely spreading or geniculate, often decumbent, semiprostrate, leaf-sheaths slipping from the culm, sheaths glabrous or pubescent to pilose, ligule a fringe of hairs, leaves mostly basal narrow-acuminate and flat, fragile root system, inflorescence loose and open with spreading spikelets, long narrow terminal panicle ovoid to oblong, small spikelets oblong and short-stipitate breaking up from the top upward, loosely imbricate florets, all flowers bisexual or the upper ones rudimentary, rachilla fragile, glumes 2 usually unequal and membranous, lemma blunt and oblong, keels of palea long-ciliate, stamens 3, stigmas white, very nutritious grains, weed species springing up after rain, grows quickly, a good grazing grass, eaten by cattle and horses, grazed by water buffaloes, limited fodder value, hay, low quality forage, often a synonym for *Eragrostis amabilis* (L.) Wight & Arn. ex Nees, found in moist sandy soils, well-grazed grassland, sand banks, lawns, on damp sand, disturbed places, waste places, cultivated lands, gardens, dry rocky soils, along roadsides, arable land, see *Species Plantarum* 1: 68-69. 1753, *Flora Japonica, ...* 51. 1784, *Observationes Botanicae* 4: 20. 1786, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 4: 185. 1803, *Essai d'une Nouvelle Agrostographie* 74, 167, 173. 1812, *Systema Vegetabilium, editio decima sexta* 2: 576. 1817, *Annales des Sciences Naturelles, Botanique* 5:

302. 1825, *Hortus Regius Botanicus Berolinensis* 1: 192. 1827, *Hortus Mauritianus* 369. 1837, *The Botany of Captain Beechey's Voyage* 251. 1838, *Florae Africae Australioris Illustrationes Monographicae* 405. 1841, *Enum. Pl. Zeyl.* 5: 373. 1864, *Revisio Generum Plantarum* 2: 774. 1891, *The Flora of British India* 7: 315-316. 1896, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 233. 1899 and *A Handbook to the Flora of Ceylon* 5: 290-291. 1900, *Flore Générale de l'Indo-Chine* 7: 557. 1923, *Handb. Fl. Ceylon* 6: 339. 1931, *Kew Bulletin* 1939: 654. 1939, *Grasses of Ceylon* 69, pl. 8. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma* ... 513. 1960, *J. Cytol. Genet.* 7-8: 161-164. 1973, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Flora of Puerto Rico and Adjacent Islands: A Systematic Synopsis* 1-342. 1982, *Interpretation of Van Rheedee's Hort. Mal.* 309. 1988, *Memoir San Diego Society of Natural History* 16: 1-66. 1989, *Ruizia; Monografías del Jardín Botánico* 13: 1-480. 1993, *Taxon* 49(2): 254. 2000.

in English: bug's egg grass, feather love grass, Japanese love grass, lovegrass

in Hawaii: hakonokono

in Japan: nuka-kaze-kusa

in India: bade, bara bhurbhura, bara bhurbhuri, bari chinairi, bharbhuri, bharbhuri bara, bharbusi, bhedki, bholoni, bhurbhuri, budhan, charpat, chini, chinnagarikai gaddi, chiri ka khet, chiri ko bajro, chiria chuna, dhane, dhooria, galgala, ghodel, ichkoi, jhusa, kothi subathi hullu, mondia jori, motha lona, palinji, pathrike hullu, phularwa, pithi, poopul, pothika gaddi, safed bhurki, sanna puralai hullu, sipar gadi, tsjana pullu

in Indonesia: jukut karukuan, luh-buluhan, sukut emprit-empritan

in Laos: hnhaaz nhung

in Malaysia: rumput tulang belalang

in Thailand: ya harng krarork, ya khai hep lek

in Vietnam: xuân tha'o min

in Niger: awajé, buluui, lamlamko, tadjik, talka kambé, tashiban' taegagad, tegabart tan shiban

in Nigeria: askan dawaki, budo mboju, ilulu nza, ite eiye, iwa igun, ori awo

in Senegal: duyui, duyuy, ndisis

in Sierra Leone: nyina foni

in Yoruba: ite eiye, iwa igun, ori awo

E. tenellula (Kunth) Steudel (*Eragrostis interrupta* P. Beauv. var. *tenuissima* Stapf ex Hook.f.; *Eragrostis japonica* sensu Jessop, non (Thunb.) Trin.; *Eragrostis japonica* (Thunb.) Trin.; *Eragrostis tenella* sensu Benth., non (L.) P. Beauv. ex Roem. & Schult.; *Poa tenellula* Kunth)

Australia, Africa, Asia. Annual, delicate, loosely or densely tufted, simple or often branched, erect or ascending or semi-prostrate, leaf blades flat, ligule a fimbriate membrane, often drooping panicles open and decompound, spikelets linear 3- to 12-flowered, terminal floret vestigial, glumes persistent, lemmas ovate, palea 2-keeled 3-lobed, 2 stamens, grows in dry and tropical areas, in disturbed places, not grazed, moderately palatable, related to *Eragrostis japonica*, see *Flora Japonica*, ... 51. 1784, *Révision des Graminées* 1: 113. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405. 1830, *Synopsis Plantarum Glumacearum* 1: 279. 1854.

in English: delicate love grass

E. tenuiflora Rupr. ex Steud. (*Eragrostis pilosa* (L.) P. Beauv.; *Poa pilosa* L.)

Africa, Ethiopia. See *Species Plantarum* 1: 68. 1753, *Essai d'une Nouvelle Agrostographie* 71, 162, 175. 1812, *Synopsis Plantarum Glumacearum* 1: 268. 1854.

E. tenuifolia (A. Rich.) Hochst. ex Steud. (*Eragrostis callocarpa* K. Schum., also spelled *collocarpa*; *Eragrostis parviglumis* Hochst. ex Steud.; *Eragrostis patula* (Kunth) Steud.; *Eragrostis tenuifolia* (A. Rich.) Steud.; *Eragrostis tenuifolia* Hochst.; *Poa patula* Kunth; *Poa tenuifolia* A. Rich.)

Tropical Africa, North Africa, Asia. Annual or short-lived perennial, widely naturalized, tufted, weak, slender, glandular, erect or rarely geniculate, branched, thick clumps, compressed basal shoots, tough leaves and stems, leaf sheath loose and keeled, ligule a hairy ring, light green leaves long and very narrow, lax and open panicle oblong to ovate, diffuse seed head, elongated spikes, axils of inflorescence branches hairy, spikelet margin serrate, spikelets greenish brown to dark green breaking up from the bottom upward, florets loosely imbricate, rachilla persistent, glumes unequal or subequal, glumes and lemmas obscurely keeled or not keeled, palea 2-keeled, 3 stamens, seeds reddish brown and very small, low grazing value due to its wiry leaves, a problem weed of sportsfields and parks, a weed of cultivation, colonizing large areas, quickly builds up a huge seedbed, grazed by the cattle, grows in recreation and camping areas, football fields, on rocky soil, sandy and gravelly soils, turf, arable lands and undisturbed areas, disturbed open areas, tea estates, forests, wadi, open habitats, open grassland, grassland subject to heavy grazing, grasslands, infertile and compacted sites, edge of river, in moist places, muddy sites, open patches in bushveld, playgrounds, footpaths and other high traffic areas, allied to *Eragrostis plana*, see *Nova Genera et Species Plantarum* 1: 158-159. 1815 [1816], *Systema Vegetabilium* 2: 585. 1817, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Flora* 10 24(Intell.1): 20. 1841, *Tentamen Florae Abyssinicae* ... 2: 425. 1850 [1851], *Synopsis Plantarum Glumacearum* 1:

267-268. 1854, *Die Pflanzenwelt Ost-Afrikas* C: 114. 1895 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: Anhang, 110, t. 66, f. 2, 1930: 336. 1931, *Opera Botanica* 121: 159-172. 1993.

in English: wire grass, love grass, elastic grass, elastic love grass

in India: dodda garike hullu, machendi

in East Africa: arombo

in South Africa: elastiese-eragrostis

E. tephrosanthos Schult. (*Eragrostis arida* Hitchc.; *Eragrostis caroliniana* (Biehler) Scribn.; *Eragrostis delicatula* Trin.; *Eragrostis diffusa* var. *arida* (Hitchc.) Beetle; *Eragrostis pectinacea* (Michx.) Nees; *Eragrostis pectinacea* var. *miserrima* (E. Fourn.) Reeder; *Eragrostis pilosa* var. *delicatula* (Trin.) Hack.; *Eragrostis purshii* Schrad.; *Eragrostis simpliciflora* (J. Presl) Steud.; *Megastachya simpliciflora* J. Presl; *Poa caroliniana* Biehler; *Poa pectinacea* Michx.; *Poa tephrosanthos* Spreng. ex Schult.)

Southwest U.S., West Indies, Argentina. Annual, tufted, erect, often decumbent at the base and rooting at the nodes, leaves glabrous, ligules ciliolate, open inflorescence, 7- to 11-flowered, glumes broadly lanceolate, lower florets acute, 3 stamens, weed, medicinal value, along roadsides, disturbed places, gardens, see *Flora Boreali-Americana* 1: 69. 1803, *Plantarum Novarum ex Herbario Sprengelii Centarium* 10. 1807, *Essai d'une Nouvelle Agrostographie* 71: 162, 175. 1812, *Mantissa* 2: 316. 1824, *Reliquiae Haenkeanae* 1(4-5): 283. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 73. 1836, *Linnaea* 12(4): 451. 1838, *Florae Africae Australioris Illustrationes Monographicae* 406. 1841, *Synopsis Plantarum Glumacearum* 1: 278. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97. 1862, *Mexicanas Plantas* 2: 116. 1886, *Memoirs of the Torrey Botanical Club* 5(4): 49. 1894 and *Anales del Museo Nacional de Buenos Aires* 11: 133. 1904, *Journal of the Washington Academy of Sciences* 23(10): 449. 1933, *Phytologia* 37(4): 317. 1977, *Phytologia* 60(2): 154. 1986.

in English: love grass

E. terecaulis Renvoize (Latin *teres*, *retis* (*tero*) "rounded off, smoothed, shapely" and *caulis* "the stalk, the stem of a plant")

Bolivia. Perennial, caespitose, geniculate, leaf blades linear and acute, lax inflorescence oblong or ovate, spikelets narrowly oblong, 3- to 5-flowered, glumes lanceolate and membranous, lemmas lanceolate, paleas exserted, 3 stamens, see *Gramíneas de Bolivia* 324. 1998.

E. trachyantha Cope

Somalia. Annual, erect or geniculate and ascending, leaves without crateriform glands on the margins, spikelets linear,

glumes unequal and very acute, lemmas coriaceous, palea keels scabrous, see *Kew Bulletin* 50(1): 115, f. 3C-D. 1995.

E. trachycarpa (Benth.) Domin (*Eragrostis nigra* var. *trachycarpa* Benth.)

New South Wales, Queensland, Victoria. Perennial, small tussock grass, small basal tuft yellowish green, leaf blade rolled, slender much-branched stems, wide spreading panicle, spikelets loosely flowered, florets 2-7 loosely overlapping, upper floret vestigial, glumes and lemmas acute and keeled, palea glabrous 2-keeled 3-toothed, 3 stamens, grows on dry soils, occurs in woodland or native pasture, moist depressions, damp sites, the plant is regarded as vulnerable, see *Flora Australiensis: A Description ...* 7: 643. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 9: 552. 1911.

in English: rough-grain love grass

E. tracyi A.S. Hitchc. (*Eragrostis pectinacea* (Michx.) Nees; *Eragrostis pectinacea* var. *tracyi* (Hitchc.) P.M. Peterson)

U.S., Florida. Vulnerable species, see *Flora Boreali-Americana* 1: 69. 1803, *Florae Africae Australioris Illustrationes Monographicae* 406. 1841 and *American Journal of Botany* 21(3): 130, f. 1. 1934, *Sida* 17(1): 106. 1996.

in English: Sanibel lovegrass

E. tremula Hochst. ex Steud. (*Eragrostis lamarckii* Steud.; *Eragrostis multiflora* Trin.; *Eragrostis rhachitricha* Hochst. ex Miq.; *Eragrostis serpula* Chiov.; *Poa multiflora* Roxb., nom. illeg., non *Poa multiflora* Forssk.; *Poa tremula* Lam.)

Tropical Africa, India, Nepal, Southeast Asia, Pakistan. Annual or short-lived perennial, densely tufted to loosely tufted, smooth and glabrous, very leafy, often decumbent, erect or geniculately ascending, trembling, aromatic roots, sheaths striate and bearded, ligule a rim of short stiff hairs, leaves mostly basal and finely pointed, inflorescence a pyramidal panicle rather loose and widely spreading, long-pediced and trembling spikelets, 15- to 60-flowered, florets closely imbricate, glumes subequal and narrowly ovate, lemmas ovate and membranous, palea keels scaberulous, thatching grass, useful for erosion control, quite palatable, a very good fodder grass, eaten by all animals, can be ensilaged or used for broom production, used to make mats and cordage, famine food, grains eaten, a sand-loving species, ruderal, common in abandoned cultivation, waste places, sandy roadside, on poorly cultivated ground, in low rainfall areas, on sandy soils and light sandy soils, resembling *Eragrostis elegantissima*, see *Encyclopédie Méthodique, Botanique* 1: 185. 1791, *Flora Indica; or Descriptions ...* 1: 340. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 401. 1830, *Analecta botanica indica ...* 2: 25. 1851, *Synopsis Plantarum Glumacearum* 1: 269. 1854 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 66-67. 1903.

in French: éragrostis des pays sahéliens, éragrostide des pays sahéliens

in Arabic: am djiangka, lehmleiche, rauwaj

in Gambia: ndirra, ndirra sina, n'dyiro, nbumu ju tio, numu ju tyo, nyantan

in Ghana: komaya, kumburar kama

in Guinea: boni boni fou, ologuélé

in Mali: fitti fitti, kiu pitè, paguire jaule, sambu gambi, sorghobo, sorgobo, subu, subu koré, tadjit, wolo gaman, wolo kaman

in Mauritania: lehmleiche

in Niger: balata, bibirua, bululé, burburwa, busabah, kanda, komaya, kullum, kulmü, saraho, taegerbert, taelaewlaewt, taelulu, taeshit, tamayét, tegabart, wuluho

in Nigeria: aknuse, barata, berberinoa, burburwa, burburwar fädámàà, dutaleho, gafar fatin, gandaska, gantaska, iyo, karangiyaa, kashe saura, kumbura kama, kunbura kama, matsandaka, matsandaka tsumbe, rauwaj, sagaje, saraaho, saraaho gorko, sarawal, tsumbè

in Senegal: kiu pité, mbangati, mbelkem, mbelken, otokama, paguire jaule, salguf, salguf utak, sambu gambi, sèlgue, sorghobo, sorgobo, wolo gaman, wolo kaman

in Sierra Leone: funfuri, peni fafagbe, peni fafagbi, peni pagbel, sankabesukwi, sankabesuwi

in southern Africa: wollerige-eragrostis; leholala-le-letso-lalipere (Sotho); muchila bwende (Tonga)

in Sudan: bano, bannu

in Yoruba: agbado eshin, agbado esin, oka esin, eeran awo, eran esin, eran awo, iwo awo, irungbon, irungbon efon, kooko esin, ogbe agufon, ogbe agunfon, yayangan

in India: bansa, bhamiri, chankam buti, chankan buti, chiri ka chanwalia, chiri-ka-khet, chirka, kalunji, laki, lukki

E. triangularis Henrard

Paraguay. See *Repertorium Specierum Novarum Regni Vegetabilis* 23(18-25): 301. 1927.

E. trichocolea Hack. & Arech. (*Eragrostis floridana* Hitchc.; *Eragrostis polytricha* Nees; *Poa polytricha* (Nees) Kunth)

South America. Sandy areas, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 507-508. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 331. 1833, *Anales del Museo Nacional de Montevideo* 1: 444. 1896 and *American Journal of Botany* 2: 308. 1915.

in English: hairy-sheath love grass

E. trichocolea Hack. & Arech. var. ***floridana*** (A.S. Hitchc.) Witherspoon (*Eragrostis floridana* A.S. Hitchc.; *Eragrostis polytricha* Nees; *Eragrostis purpusii* Jedwabn.)

U.S. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 507-508. 1829, *Anales del Museo Nacional de Montevideo*

1: 444. 1896 and *American Journal of Botany* 2: 308. 1915, *Botanisches Archiv* 5(3-4): 201. 1924, *Annals of the Missouri Botanical Garden* 64: 328. 1977.

in English: hairy-sheath love grass

E. trichodes (Nutt.) Alph. Wood (*Eragrostis capillacea* Jedwabn.; *Eragrostis grandiflora* J.G. Sm. & Bush; *Eragrostis pilifera* Scheele; *Eragrostis tenuis* Steud.; *Eragrostis tenuis* A. Gray, nom. illeg., non *Eragrostis tenuis* Steud.; *Eragrostis tenuis* var. *texensis* Vasey; *Eragrostis trichodes* var. *pilifera* (Scheele) Fernald; *Eragrostis trichodes* var. *trichodes*; *Poa trichodes* Nutt.)

U.S., Texas. Perennial bunchgrass, vigorous, flimsy, erect, tufted, stiff, rooting at the nodes, dark green, sheaths hairy at the throat, a ring of hairs at the base of the leaf, leaves long-acuminate and flat, loose inflorescence oblong to elliptic, green or purple spikelets lanceolate to lanceolate-oblong and long-stipitate, glumes narrow lanceolate, lemma ovate-oblong, panicles elegant, deep root system, small seed, good drought resistance, ornamental, suitable for reclaiming disturbed sites, forage, fodder, highly palatable and nutritious, leaves tender and palatable at all stages of growth, found in silty clay, gravelly loam, on sandy soils, open alluvial lands, sandy hills, sand prairie, border of lakes, prairies, heavy soils, see *Transactions of the American Philosophical Society, new series*, 5: 146. 1835, *Linnaea* 22(3): 344. 1849, *Synopsis Plantarum Glumacearum* 1: 273. 1854, *A Class-book of Botany* 796. 1861, *A Manual of the Botany of the Northern United States (edition 6)* 661. 1890, *Contributions from the United States National Herbarium* 1(2): 59. 1890, *Annual Report of the Missouri Botanical Garden* 6: 117, t. 55. 1895 and *Botanisches Archiv* 5(3-4): 196. 1924, *Rhodora* 40(477): 331. 1938.

in English: love grass, sand love grass, icre cream grass, tall love grass, thread love grass

E. trichophora Coss. & Durieu (*Eragrostis atherstonei* Stapf, also spelled *atherstonii*; *Eragrostis henrardii* Jansen; *Eragrostis trichophora* var. *glabriculumis* Hack. ex Pilg.) (the English (b. Nottingham) botanist William Guybon Atherstone, 1814-1898 (d. Grahamstown, C.P., South Africa), physician and plant collector, geologist, naturalist; see Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 82-83. Cape Town 1981)

South Africa, tropical Africa, Kalahari, Transvaal. Perennial bunchgrass, glandular on culms and leaf sheaths, usually branched from the lower nodes, sometimes stoloniferous, erect or geniculate, wiry, slender, tufted, sometimes rooting at the lower nodes, may form dense stands, leaves pointed, leaf blades expanded or rolled, basal sheaths papery, ligule a ring of short hairs, leaf sheaths keeled, open panicle with stiff branches arranged in whorls around the primary axis, hairy ring immediately beneath each whorl, rachilla fragile and persistent, glumes almost equal, 2-3 stamens, pioneer grass, forage, relatively palatable, invasive, a good grass for

thatching, found in and around pools formed by overflowing rivers, ducks nest underneath it, common in grassland, clay loam, drains, omiramba, savannah, red clay soil, sandy areas, sandy to sandy loam soils, bushveld, disturbed areas, overgrazed veld, border of rivers, overflowing rivers, along roadsides, in and around pools formed in periodically flooded areas, similar to *Eragrostis curvula*, closely related to *Eragrostis cylindriflora*, see *Bulletin de la Société Botanique de France* 2: 311. 1855 and *Flora Capensis* 7: 607. 1900, *Blumea, Supplement* 3: 42. 1946, *Willdenowia* 1: 218. 1954.

in English: Atherstone's grass, Atherstone love grass, love grass, hairy love grass, Cochise love grass

in South Africa: blousaad, blousaadgras, blousaad soetgras, harige-pluimgras, haariges straußgras, soetgras, behaarde pluimgras, behaarde windhalmgras

in Zimbabwe: umachitshane

E. tridentata Cope

Somalia. Annual, inflorescence capitate subtended by the elongated uppermost leaves, spikelets elliptic-oblong, florets lax and divergent, glumes lanceolate, lemmas oblong 3-toothed or 3-nerved, palea keels hairy, open areas, rocky places, coastal plains, see *Kew Bulletin* 47(2): 280. 1992.

E. triquetra Lazarides

Australia. Perennial, slender, compact, tufted, filiform, curly leaves, panicles contracted, 2-3 stamens, see *Australian Systematic Botany* 10(1): 162. 1997.

E. truncata Hack.

Namibia, South Africa. Perennial, erect or geniculate, prostrate or decumbent, tufted to densely tufted, slender, glabrous, smooth, dark nodes conspicuous, rhizomatous, short and profusely branched rhizome, mat-forming, ligule a fringe of short hairs, leaf blade very short and hard, basal sheaths densely woolly, leaves rigid, compact panicle, spikelets sessile and closely packed on central axis, lowest lemma truncate, pasture, palatable, common along disturbed roadsides, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 405. 1889.

in South Africa: bloupolgras, gemsbokgras, gestutzähriges straußgras

E. turgida (Schumach.) De Wild. (*Poa turgida* Schumach.)

Tropical Africa. Annual, loosely tufted, grain eaten in time of scarcity, good grazing, weedy places, along roadsides, see *Beskrivelse af Guineiske planter* 66-67. 1827.

in Guinea: diadié, ologonelé

in Nigeria: alkamar kwadi, ite emo, iti emo, samereeho, vutaleho

E. turgida (Schumach.) De Wild. var. *iverensis* Chevalier (also spelled *ivorensis*)

Ivory Coast. See *Bulletin du Muséum d'Histoire Naturelle* 20: 473. 1948.

E. udawnensis Ohwi

Asia. See *Acta Phytotaxonomica et Geobotanica* 22: 139. 1967.

E. uniglumis Hack. (*Eragrostis hierniana* Rendle)

Africa. Damp places, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 237. 1899 and *Proceedings of the Rhodesia Scientific Association* 7(2): 66. 1908.

E. uniolae Nees (*Briza uniolae* (Nees) Nees ex Steud.; *Poidium uniolae* (Nees) Matthei)

Brazil. See *Göttingische gelehrte Anzeigen unter der Aufsicht der Königl.* 3: 2074. 1821, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 494. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 365. 1833, *Synopsis Plantarum Glumacearum* 1: 283. 1854, *Conspectus Florae Africae* 5: 891. 1894 and *Willdenowia Beiheft* 8: 93. 1975.

E. unioloides (Retzius) Nees ex Steudel (*Eragrostis amabilis* sensu Stapf; *Eragrostis rubens* Hochst.; *Poa unioloides* Retz.)

Tropical Asia, Southeast Asia, Oceania. Annual or short-lived perennial, extremely variable, tufted or solitary, slender, leafy, foliage mostly basal, simple or branched, erect or ascending from a geniculate base, erect or decumbent and rooting at the lowermost nodes, sometimes almost prostrate, often compact at the base, leaf sheaths chartaceous to membranous and often tinged with purple, leaves narrowly oblong and acute, crateriform glands absent, ligule a ciliolate membrane or a shallow rim with hairs, inflorescence loose to open or contracted and compact, lanceolate to ovoid panicles loose or dense, spikelets ovoid to cylindrical and laterally compressed, 11-43 florets, lower florets all fertile, tightly imbricate florets, zig-zag shaped rachilla, glumes subequal and packed, lower glume keeled and lanceolate, lemma ovate and overlapping, palea oval but forked at the tip, stamens 2-3, forage, green manure, good fodder grass for cattle and horses, not readily grazed by livestock, it does not withstand heavy grazing, weed species naturalized in tropics and subtropics, common along roadsides, disturbed ground, swampy fields, cultivated land, grazing grounds, sandy soil, periodically flooded areas, lowlands in thickets, near running fresh water, irrigated rice fields, see *Observationes Botanicae* 5: 19. 1788 [t.p. 1789], *The Botany of Captain Beechey's Voyage* 251. 1838, *Synopsis Plantarum Glumacearum* 1: 264. 1854, *Enum. Pl. Zeyl.* 5: 373. 1864, *Fl. Br. Ind.* 7: 317. 1896 and *Handb. Fl. Ceylon* 5: 293. 1900, *Handb. Fl. Ceylon* 6: 340. 1931, *Journal of the Bombay Natural History Society* 47: 48-51. 1947, *Grasses of Ceylon* 72. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma ...* 515. 1960, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 23: 118-131. 1988.

in English: Chinese love grass

in India: chanda mama gadi, chota loniya, ichkoch, konee, lahorla, loniya, motichava, poi, poke, udara gaddi

in Indonesia: padang togu, rumput udang

in Malaysia: rumput kolam padang

in Thailand: yaa hoi khiat, ya hoi khiat, yaa khai puu, ya khai pu, ya-khaipu, yaa kho, ya kho, yaa krok nuu, ya krok nu, yaa mung krataai, ya mung kratai

in Vietnam: xuân tha' o do'

E. urbaniana A.S. Hitchc.

The Caribbean. See *Symbolae Antillarum* 7: 167. 1912.

in English: Urban's love grass

E. uvida Lazarides

Australia, Northwest Territories, Queensland. Annual or short-lived perennial, erect or ascending, thin leaves, ligule a fimbriate membrane, spiciform panicles contracted, linear spikelets compressed, 11-25 loose florets, palea 3-lobed, 2 stamens, similar to *Eragrostis confertiflora*, see *Australian Systematic Botany* 10(1): 164. 1997.

E. vacillans Rendle

Africa. Sandy pastures, fields, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 249. 1899.

E. valida Pilg. (*Eragrostis valida* Stent, nom. illeg., non *Eragrostis valida* Pilg.)

Africa. See *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 214. 1915, *Bothalia* 1: 172. 1922.

E. vallsiana Boechat & Longhi-Wagner

Brazil. See *Iheringia, Série Botânica* 51(2): 179, f. 1A-C, 2-3A-D. 1998.

E. variabilis (Gaudich.) Gaudich. ex Hook. & Arn. (*Eragrostis niuhauensis* Whitney; *Eragrostis variabilis* (Gaud.) Steud.; *Eragrostis variabilis* (Gaudich.) Hillebr.)

Hawaii. Bunchgrass, found in coastal dry grassland, basalt cliffs, rock crevices on steep basalt sea cliffs, rocky sites, in coastal dry or mesic forest, wetland, see *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 408. 1830, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *Flora of the Hawaiian Islands* 528-529. 1888 and *Occasional Papers of the Bernice Pauahi Bishop Museum* 12(5): 6, f. 2. 1936.

in Hawaii: kawelu, 'emoloa, 'emo-loa, kalamalo

E. vatovae (Chiov.) S.M. Phillips (*Acrachne vatovae* Chiov.; *Eragrostis vatovae* (Chiov.) Chiov.)

Somalia. Annual, low, contracted panicle, spikelets clustered on short pedicels, glumes subequal and lanceolate, lemmas rounded, palea persistent with scabrous keels, see *Atti della Reale Accademia d'Italia. Memorie della classe di scienze fisiche, matematiche e naturali* 11(2): 65. 1940,

Kew Bulletin 37(1): 159. 1982, *Kew Bulletin* 47(2): 277-282. 1992.

E. velutina Schrad. (*Eragrostis spectabilis* (Pursh) Steud.) U.S. See *Flora Americae Septentrionalis; or, ...* 1: 81. 1814 [1813], *Linnaea* 12(4): 451. 1838, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840.

E. vernix Boechat & Longhi-Wagner

Brazil. See *Iheringia, Série Botânica* 51(2): 181, f. 1D-E, 2-3E-H. 1998.

E. viguieri A. Camus (for the French botanist René Viguier, 1880-1931; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 436. 1965; Elmer Drew Merrill, in *Contr. U.S. Natl. Herb.* 30(1): 307. 1947 and in *Bernice P. Bishop Mus. Bull.* 144: 186. 1937)

Europe. See *Bulletin de la Société Botanique de France* 102: 347. 1956.

E. villamontana Jedwabn. (*Eragrostis longipila* Hack.; *Eragrostis orthoclada* Hack.)

Bolivia. See *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 281. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 132. 1911, *Botanisches Archiv* 5(3-4): 197. 1924, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Sida* 16(4): 769-771. 1995, *Revista Brasileira de Botânica* 23(2): 177-194. 2000, *Iheringia, Série Botânica* 55: 67. 2001.

E. vinicolor A. Chev.

Sudan, Africa. See *Bulletin du Muséum d'Histoire Naturelle* 20: 472. 1948.

E. virescens J. Presl (*Eragrostis cordobensis* Jedwabn.; *Eragrostis mexicana* (Hornem.) Link; *Eragrostis mexicana* subsp. *virescens* (J. Presl) S.D. Koch & Sánchez Vega; *Poa virescens* (J. Presl) Kunth)

South America, Argentina, Mexico. Annual, erect or geniculate, tufted, basal leaf sheaths glabrous, ligule inconspicuous to shortly fringed, inflorescence an open panicle, spikelets rachilla persistent, palea keels scabrid, unknown grazing value, growing in sandy soils, disturbed areas, cultivated fields, gardens, lands, roadsides, see *Hortus Regius Botanicus Hafniensis* 2: 953. 1815, *Hortus Regius Botanicus Berolinensis* 1: 190. 1827, *Reliquiae Haenkeanae* 1(4-5): 276. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 329. 1833, *Bulletin de la Société Botanique de France* 19: 319. 1872, *Flora Australiensis: A Description ...* 7: 644. 1878 and *Anales del Museo Nacional de Buenos Aires* 13: 505. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 138. 1911, *Botanisches Archiv* 5(3-4): 208. 1924, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Phytologia* 58: 380. 1985, *Iheringia, Série Botânica* 55: 164. 2001.

in English: chilean love grass

E. viscosa (Retz.) Trin. (*Eragrostis amabilis* (L.) Wight & Arn. ex Nees; *Eragrostis mangalorica* Hochst. ex Steud.,

nom. illeg., non *Eragrostis mangalorica* Hochst.; *Eragrostis retinorrhoea* Steud.; *Eragrostis tenella* (L.) P. Beauv. ex Roem. & Schult. var. *viscosa* (Retzius) Stapf; *Eragrostis viscosa* Scribn., nom. illeg., non *Eragrostis viscosa* (Retz.) Trin.; *Eragrostis viscosa* var. *pilosissima* (Hochst. ex A. Rich.) Hochst.; *Eragrostis warmingii* Hack.; *Poa glutinosa* Roxb. ex Stapf, nom. illeg., non *Poa glutinosa* Sw.; *Poa viscosa* Retz.; *Poa viscosa* var. *pilosissima* Hochst. ex A. Rich.) (for the Danish (b. Mandø) botanist Johannes Eugenius Bülow Warming, 1841-1924 (Copenhagen), the founder of plant ecology, plant geographer, taxonomist, morphologist, traveler, explorer and plant collector, student of the vegetation of tropical South America (Brazil, West Indies, Venezuela) and of the Arctic flora (Greenland and Norway), 1863-1866 in Lagoa Santa (Minas Gerais, Brazil), 1885-1911 Director of the Botanical Garden at Copenhagen, professor of botany at Stockholm and Copenhagen, among his numerous publications are *Die Blüthe der Compositen*. Bonn 1876, *Lagoa Santa*. Copenhagen 1892, *Plantensamfund*. Copenhagen 1895 [English transl., *Oecology of Plants: An Introduction to the Study of Plant-Communities*. Oxford 1909] and *Om Caryophyllaceernes Blomster*. Copenhagen 1890, secretary to the Danish zoologist P.W. Lund; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 460. 1965; D. Müller, in *D.S.B.* 14: 181-182. 1981; F.A. Stafleu and R.S. Cowan, *Taxonomic literature*. 7: 71-81. 1988; C.F.A. Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 426. Boston, Mass. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 427. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; C.J.É. Morren, *Correspondance botanique*. Liège 1884)

Tropical Africa, India, Thailand, Philippines, Malaysia. Annual or short-lived perennial, glandular and densely viscid, short, caespitose, loosely tufted, often decumbent at the base, erect or ascending or geniculate, glabrous, culms thin and rather wiry, branched to strongly branched, a sticky substance at each node, leaf sheath keeled and covered with a sticky substance at the top, ligule membranous and hairy to ciliate, leaves rather stiff, inflorescence contracted and rather dense to compact, spike-like open panicle with many short glandular branches and branchlets, purplish hairy spikelets, florets loosely imbricate, spikelets rachilla fragile, glumes equal or subequal, margins of glumes and lemmas not ciliate, paleas hairy, 3 stamens, strong smelling or sweet scented, poor grazing grass, weed of tea estates, naturalized elsewhere, growing in sandy areas, saline flats, coastal, waste dry places, dry sandy and shallow soils, sandy foreshores, disturbed sites, disturbed natural veld, along river

beds, uncultivated lands, along roadsides, open sunny areas, mopani veld, see *Species Plantarum* 68. 1753, *Observationes Botanicae* 4: 20. 1786, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 397. 1830, *The Botany of Captain Beechey's Voyage* 251. 1838, *Tentamen Florae Abyssinicae ...* 2: 424. 1850, *Synopsis Plantarum Glumacearum* 1: 265, 268. 1854, *Flora* 38: 329. 1855, *The Flora of British India* 7: 315-316. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 51, t. 7. 1898 and *Handb. Fl. Ceylon* 5: 291. 1900, *Österreichische Botanische Zeitschrift* 52: 305. 1902, *Handb. Fl. Ceylon* 6: 339. 1931, *Fieldiana, Botany* 24(2): 38-331. 1955, *Grasses of Ceylon* 70. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma ...* 515. 1960, *Taxon* 33: 126-134. 1984, *Journal of Cytology and Genetics* 25: 322-323. 1990, *Blumea* 47(1): 157-204. 2002.

in English: sticky love grass, viscid love grass

in India: ante purule hullu, banka gaddi, bhulani, bhulni, bhurbhur, bhurbhusi, bhurbur, bhurbusi, chikti, chippal

in southwest Africa/Namibia: klebriger windhalm

in southern Africa: klewerige-eragrostis; musizyamaula (Tonga)

E. volgensis Roshev.

Russia.

E. volkensis Pilg. (after the German botanist Georg Ludwig August Volkens, 1855-1917, in 1884-1885 traveler in the Egyptian-Arab Desert, collaborator of A. Engler and Simon Schwendener (1829-1919), explorer, among his works are *Exkursionen am Kilima-Ndjaru*. Berlin 1895, *Der Kilimandscharo*. Berlin 1897, *Die Vegetation der Karolinen*. Leipzig 1901, *Die Botanische Zentralstelle für die Kolonien*. Berlin 1907 and *Beiträge zur Flora von Mikronesien*. Leipzig und Berlin 1914. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 443. 1965; Sir Harry Hamilton Johnston (1858-1927), *Der Kilima-Ndjaru*. Leipzig 1886; Alex Johnston, *The Life and Letters of Sir Harry Johnston*. London 1929; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 421. Boston, Mass. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 308. 1947)

East Africa, South Africa, Zaire. Perennial, tufted, wiry, straggling, climbing, thin, procumbent, weak, mat forming, leaf blades often reflexed, with slender rhizomes, panicle ovate, dark spikelets, 6- to 16-flowered, spikelets rachilla persistent, glumes obtuse, lemmas broadly ovate, palea keels winged and scabrid, found in moist soils, damp places, mountainous areas, upland grassland, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43(1): 95. 1909.

E. wahowensis Trin. (*Poa wakowensis* (Trin.) Kunth)

Hawaii. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 412. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 328. 1833.

E. walkeri Stapf (*Eragrostiella bifaria* var. *walkeri* (Stapf) Lazarides; *Eragrostiella walkeri* (Stapf) Bor)

Asia, Sri Lanka. See *A Handbook to the Flora of Ceylon* 5: 298. 1900, *Indian Forester* 66: 270. 1940, *Contributions from Herbarium Australiense* 22: 7. 1976.

E. walteri Pilg. (*Brachychloa schiemaniana* (Schweick.) S.M. Phillips; *Heterocarpha schiemaniana* Schweick.)

South Africa. Perennial, aquatic, hydrophyte, floating, tufted, stoloniferous, erect, semidecumbent, straggling, matted, geniculate, narrow inflorescence sparsely branched, spikelets rachilla persistent and fragile, upper glume awned, growing in damp soil, brackish places around seepage areas, running water or stagnant, sand dunes, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 452. 1941, *Der Züchter. Zeitschrift für theoretische und angewandte Genetik* 31(4): 192-193, f. 1. 1961, *Kew Bulletin* 37: 158. 1982.

E. weberae Peter

Africa. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: Anhang, 104, t. 61, f. 2, 1930; 327. 1931.

E. weberbaueri Pilger (after the German botanist August Weberbauer, 1871-1948 (Lima), explorer, plant collector in Peru, Director of the Botanical Garden and Agricultural Station at Victoria, W. Cameroon, professor of botany and pharmaceutical botany, Director of the Parque zoológico y botánico de Lima, Peru, his works include *Plantas tóxicas que sirven para la pesca en el Perú*. [Lima 1933], *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. Leipzig 1911, "Die Vegetationsgliederung des nördlichen Peru um 5° südl. Br." *Bot. Jahrb. Syst.* 50(Suppl.): 72-94. 1914 and *Phytogeography of the Peruvian Andes*, in James Francis Macbride (1892-1976), *Flora of Peru*. pt. 1. 1936 [Field Museum of Natural History. Botanical Series. vol. 13]; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 469. 1965; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 60. Paris 1968; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 429. Boston, Mass. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 84. 1971; T. Harper Goodspeed, *Plant Hunters in the Andes*. University of California Press, Berkeley and Los Angeles 1961)

South America, Peru, Chile. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 375. 1906, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Gayana, Botánica* 51(1): 1-10. 1994.

E. welwitschii Rendle

Tropical Africa. Annual, loosely tufted, purplish, slender, erect, leaf blades flat and acute, ligule a minute rim, open panicle, spikelets spaced, 6- to 30-flowered, glumes unequal, lemmas lanceolate, palea keels scabrid, a weed of cultivation, fodder, waste places, roadsides, cultivation, arable land, heavily grazed pasture, open grassland, farmland, resembling *Eragrostis macilenta* (A. Rich.) Steud.

in Sierra Leone: serenlinox

E. whitneyi Fosberg (*Eragrostis whitneyi* var. *caumii* Fosberg) (named for Edward Leonard Caum, 1893-1952)

Hawaii. See *Botanisches Archiv* 5(3-4): 214. 1924, *Occasional Papers of the Bernice Pauahi Bishop Museum* 15(3): 39, 41, f. 1b, 2a-b. 1939.

E. wightiana (Steudel) Benth. (*Eragrostis wightiana* (Nees ex Steud.) Benth.; *Leptochloa wightiana* Nees ex Steud.; *Myriostachya wightiana* (Nees ex Steud.) Hook.f.)

Asia. See *Synopsis Plantarum Glumacearum* 1: 209. 1854, *Journal of the Linnean Society, Botany* 19: 117. 1881, *Icones Plantarum* 14: t. 1381. 1882, *The Flora of British India* 7: 327. 1896.

E. wolgensis Roshev.

Russia. See *Acta Horti Petrop.* 40: 163, f. 91. 1928.

E. xerophila Domin (*Eragrostis xerophila* F. Br., nom. illeg., non *Eragrostis xerophila* Domin; *Leptochloa xerophila* P.M. Peterson & Judz.)

Australia. Perennial, forming spreading and leafy clumps, stout and knotted rhizomes, base swollen and thickened by woolly cataphylls, culms simple and wiry, leaves linear and rigid or coriaceous, leaf blade flat, inflorescence open, green to purplish panicles, flattened and clustered spikelets linear or lanceolate, florets 6-30(-76) loosely overlapping, glumes ovate and sometimes erose, lemmas glabrous and keeled, palea 3-lobed, 3 stamens, heavy seeding, ornamental, good bulk, moderately palatable, pasture grass, valuable fodder for domestic stock and kangaroos, drought resistant, tolerant of grazing, tolerant of saline and calcareous soils, an indicator of good range condition, common on clay soils and in stony deserts, open grassland, arid and semiarid areas, intergrades with *Eragrostis xerophila*, see *Journal of the Linnean Society, Botany* 41: 281, t. 12, f. 18-20. 1912, *Bernice P. Bishop Museum Bulletin* 84: 82, t. 9a. 1931, *Taxon* 39: 659. 1990.

in English: knottybutt never-fail, neverfail, knottybutt grass

E. zeylanica Nees & Meyen (*Eragrostis brownii* Nees; *Eragrostis elongata* sensu Stapf; *Eragrostis zeylanica* Munro) Sri Lanka. Perennial, caespitose, eglandular, wiry, erect or geniculate, simple or sparsely branched, leaves stiff and acuminate, ligule a ciliolate membrane, leaf sheaths cartilaginous, inflorescence paniculate loose and interrupted, panicle exserted, florets closely imbricate, glumes subequal and membranous, see *Essai d'une Nouvelle Agrostographie* 74, 167, 175. 1812, *Eclogae Graminum Rariorum* 3, t. 3. 1813, *Catalogue of Indian Plants* 105. London 1833-1837, *Gramineae* 72-73. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 204-205. 1843, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 101-102. 1850, *Enum. Pl. Zeyl.* 5: 373. 1864, *Journal of the Linnean Society, Botany* 13: 137. 1873, *The Flora of British India* 7: 319. 1896 and *Handb. Fl. Ceylon* 5: 295. 1900, *Grasses of Ceylon* 74. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma ...* 515. 1960.

in Thailand: yaa waai, yawai, ya wai

Eremitis Döll = *Pariana* Aublet

Greek *eremos* "lonely, solitary, desert," referring to a kind of inflorescence, buried like a peanut, the hidden cleistogenes subterranean.

Some 1-7 species, eastern Brazil, tropical South America. Bambusoideae, Olyreae, Parianeae, or Bambusoideae, Olyreae, Parianinae, perennial, herbaceous, uppermost sheath spathiform, ligule membranous, plants monoecious, inflorescence spiciform enclosed by uppermost sheath, female spikelet sessile, 2 stamens, ovary glabrous, 2 stigmas, cleistogamous inflorescences present, in evergreen forest, type *Eremitis monothalamia* Döll (nom. illeg. superfl. for *Pariana parviflora* Trin.), see J.B.C.F. Aublet, *Histoire des Plantes de la Guiane Française*. 876, t. 337. Paris 1775, *Flora Brasiliensis* 2(2): 338, pl. 48. 1877, *Die Natürlichen Pflanzenfamilien* 2(2): 88. 1887 and *The Families of Flowering Plants* II. Monocotyledons ... 2: 219. London 1934, *Journal of the Linnean Society, Botany* 50: 337-362. 1936, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Biotropica* 3: 1-16. 1971, *Smithsonian Contr. Bot.* 44: 20. 1980, *Flora of the Guianas. Series A, Phanerogams* 440-446. 1990, *Novon* 2(2): 81-110. 1992, *Ruizia* 13: 1-480. 1993, *Flora Mesoamericana* 6: 216-218. 1994, V.C. Hollowell, "Systematic relationships of *Pariana* and associated neotropical taxa." *The Bamboos* 4: 45-60. 1997, Khidir W. Hilu and Lawrence A. Alice, "Evolutionary implications of *matK* indels in Poaceae." *Am. J. Bot.* 86: 1735-1741. 1999, *American Bamboos* 274-277. 1999, *Contributions from the United States National Herbarium* 39: 57, 93-97. 2000, *Flora de Nicaragua in Monographs in Systematic Botany from the Missouri Botanical Garden* 2001.

Species

E. parviflora (Trin.) C.E. Calderón and Soderstr. (*Eremitis monothalamia* Döll; *Pariana microstachya* Döll; *Pariana monothalamia* (Döll) Tutin; *Pariana parviflora* Trin.)

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 105. 1834, *Flora Brasiliensis* 2(2): 338-339, pl. 48. 1877 and *Journal of the Linnean Society, Botany* 50(334): 349. 1936, *Smithsonian Contributions to Botany* 44: 20. 1980.

Eremium Seberg & Linde-Laursen = *Leymus* Hochst.

From the Greek *eremos* "lonely, solitary, desert, lone, desolate," *eremia* "desert," alluding to the arid habitat and to the tolerance of the extreme drought.

One species, Argentina. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, tufted, herbaceous, unbranched, auricles present, plants bisexual, inflorescence spicate, spikelets flattened, 2 glumes subequal 1- to 3-nerved, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, open habitats, desert, type *Eremium erianthum* (Phil.) Seberg & Linde-Laursen, see *Species Plantarum* 1: 85. 1753, *Reliquiae Haenkeanae* 1(4-5): 265. 1830, *Flora* 31: 118. 1848 and *Nom. Prop. Int. Bot. Congr. Cambridge* (England) 1930: 121. 1929, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 20. 1930, *Flora URSS* 2: 708. 1934, *Systematic Botany* 21(2): 3-15. 1996 [*Eremium*, a new genus of the Triticeae (Poaceae) from Argentina], *Genome* 40: 505-520. 1997, *Contributions from the United States National Herbarium* 48: 310, 422-425. 2003.

Species

E. erianthum (Phil.) Seberg & Linde-Laursen (*Elymus barbatus* Kurtz; *Elymus erianthus* Phil.; *Elymus erianthus* var. *aristatus* Hicken; *Elymus erianthus* var. *spgazzinii* Hauman; *Elymus spgazzinii* Kurtz; *Leymus erianthus* (Phil.) Dubcovs.)

Argentina. See *Anales del Museo Nacional de Chile. Primera Sección — Zoolojía* 13, t. 3, f. 2. 1892, *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 15: 522, 506. 1897 and *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 16: 259. 1900, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 2: 8. 1915, *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 410. 1917, *Genome* 35: 881-885. 1992, *Plant Systematics and Evolution* 191: 199-201. 1994, *Systematic Botany* 21(1): 11, f. 4. 1996, *Genome* 40(4): 518. 1997.

Eremocaulon Soderstrom & Londoño =
Criciuma Soderstr. & Londoño

Greek *eremos* “lonely, solitary” and *kaulos* “a stem, a branch or stalk,” referring to the spaced solitary culms.

One to five species, America. Bambusoideae, Bambuseae, Guaduinae, sympodial, woody, erect and arching, hollow, thick-walled, culm leaves leathery, pseudospikelets linear-lanceolate, florets with membranous lemmas, 3 lodicules, 6 stamens, ovary hairy, 2 stigmas plumose, disturbed areas of forest, edge of road, type *Eremocaulon aureofimbriatum* Soderstrom & Londoño, see *American Journal of Botany* 74(1): 27-39. 1987 [Two new genera of Brazilian bamboos related to *Guadua* (Poaceae: Bambusoideae: Bambuseae).], Emmet J. Judziewicz et al., *American Bamboos* 234-238. 1999, *Contributions from the United States National Herbarium* 39: 57. 2000, *Systematic Botany* 27(4): 703-721. 2002 [A revision of the Brazilian bamboo genus *Eremocaulon* (Poaceae: Bambuseae: Guaduinae)].

Species

E. amazonicum Londoño

Brazil.

E. asymmetricum (Soderstr. & Londoño) Londoño (*Criciuma asymmetrica* Soderstr. & Londoño)

Brazil.

E. aureofimbriatum Soderstrom & Londoño

Brazil. Erect, arching.

E. capitatum (Trin.) Londoño (*Arundarbor capitata* (Trin.) Kuntze; *Bambusa capitata* Trin.; *Guadua capitata* (Trin.) Munro; *Schizostachyum capitatum* (Trin.) Rupr.)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3(1): 626-627. 1835, *Bambuseae* 46-47, t. 17, f. 46. 1839, *Transactions of the Linnean Society of London* 26(1): 81, 123. 1868, *Revisio Generum Plantarum* 2: 761. 1891.

E. setosum Londoño & L.G. Clark

Brazil.

Eremochlamys Peter = *Tricholaena* Schrad.
ex Schult. & Schult.f.

From the Greek *eremos* “lonely, solitary” and *chlamys* “cloak.”

Panicoideae, Paniceae, Melinidinae, type *Eremochlamys littoralis* Peter, see *Bibliotheca Botanica* 138: 1-149. 1988 [Revision der Melinideae Hitchcock (Poaceae, Pani-

coideae)], *Contributions from the United States National Herbarium* 46: 287. 2003.

Eremochloa Büse = *Pectinaria* (Benth.)
Hack.

From the Greek *eremos* “lonely, solitary, desert, desolate” and *chloe, chloa* “grass,” alluding to the arid habitat; see Friedrich Anton Wilhelm Miquel (1811-1871), *Plantae Junghuhnianae*. Enumeratio plantarum, quas in insulis Java et Sumatra, detexit Fr. Junghuhn. 3: 357. 1854.

About 9-10 species, temperate or tropical Asia, India, Sri Lanka, southern China, western Malaysia, Australia. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, coarse, creeping, caespitose or stoloniferous, forming dense clumps, internodes solid, ligule shortly membranous, sheaths with compressed keels, stiff blades linear and narrow, auricles absent, plants bisexual, inflorescence terminal, solitary terminal and exserted spike-like raceme, bisexual imbricate spikelets, florets 2, the lower floret male or staminate, upper floret bisexual or perfect, fertile spikelets sessile and overlapping, 2 glumes unequal, lower glume 2-keeled 5- to 9-nerved, upper glume 3-nerved, female-sterile spikelets vestigial, palea hyaline and nerveless, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas plumose, fruit small and compressed, lower glume of sessile spikelet with a row of marginal spines, useful for erosion control, grassland, playing fields, lawnglass, related to *Coelorachis*, type *Eremochloa horneri* Büse, see *Species Plantarum* 2: 1049. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 296. 1832, *Plantae Junghuhnianae* 3: 357. 1854, *Journal of the Linnean Society, Botany* 19: 71. 1881, *Die Natürlichen Pflanzenfamilien* 2(2): 26. 1887 and *Flora Mesoamericana* 6: 397. 1994, *Blumea* 46(2): 399-420. 2001 [Revision of *Eremochloa* (Gramineae-Andropogoneae-Rottboelliinae)], *Contributions from the United States National Herbarium* 41: 19. 2001, *Contributions from the United States National Herbarium* 46: 230. 2003, *Diversity & Distributions* 9(5): 385-398. Sep 2003, *Restoration Ecology* 12(2): 190-199. June 2004, *Ecological Management and Restoration* 6(1): 43-50. April 2005, *Austral. Ecology* 30(4): 445-464. June 2005.

Species

E. bimaculata Hackel

Australia, India, Malesia. Perennial, tufted, erect, stout rootstock and roots, ligule hairy, inflorescence curved, spikelets dissimilar and paired, glumes unequal, lemmas similar and translucent, in tropical and subtropical woodland, see *Monographiae Phanerogamarum* 6: 265. 1889.

in English: poverty grass

in Thailand: yaa haang nok yuung, ya hang nok yung

E. ciliaris (L.) Merr. (*Andropogon leersioides* (Munro) F. Muell.; *Eremochloa horneri* Büse; *Eremochloa leersioides* (Munro) Hack.; *Ischaemum leersioides* Munro; *Nardus ciliaris* L.)

U.S., Southeast Asia. Tufted, terrestrial, delicate, fanlike base, ligule a hairy membrane, leaf sheath flattened and keeled with inrolled margins, leaf blades linear and flattened, single terminal curved inflorescence, spikelets in alternate pairs, lower glume ovate with purple bristles, upper glume hairy, lemmas and paleas hyaline, grows in dry sandy or rocky areas, a good fodder, considered a rare species in Australia, see *Species Plantarum* 1: 53. 1753, *Plantae Junghuhnianae* 3: 357. 1854, *Proceedings of the American Academy of Arts and Sciences* 4: 363. 1860, *Fragmenta Phytographiae Australiae* 8: 118. 1873, *Monographiae Phanerogamarum* 6: 264. 1889 and *Philippine Journal of Science* 1(Suppl. 5): 331-332. 1906.

in English: fringed centipede grass, centipede grass

E. ciliaris (L.) Merr. var. *elata* Reeder

U.S., Papua New Guinea. See *Philippine Journal of Science* 1(Suppl. 5): 331-332. 1906, *Journal of the Arnold Arboretum* 29: 351. 1948.

E. eriopoda C.E. Hubb.

Asia, Thailand. Sandy places, saline, see *Hooker's Icones Plantarum* 34: t. 3376. 1939.

in Thailand: yaa hang krarok, ya hang krarok, yaa haang krok

E. muricata (Retz.) Hackel (*Aegilops muricata* Retz.; *Andropogon pectinatus* (Trin.) Steud.; *Coelorachis muricata* (Retz.) Brongn.; *Ischaemum pectinatum* Trin.; *Rottboellia muricata* (Retz.) Retz.)

Southern India, Thailand, Australia, Burma. Perennial, rhizomatous, leaf blades flat, inflorescence racemose more or less flattened, raceme exserted, lower glume with fanlike wings at the tip, endangered plant in Australia, growing in sandy soils, see *Observationes Botanicae* 2: 27. 1781, *Observationes Botanicae* 3: 12. 1783, *Voyage autour du Monde* 8: 64, t. 14. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 296. 1832, *Synopsis Plantarum Glumacearum* 1: 369. 1854, *Monographiae Phanerogamarum* 6: 262. 1889 and *Handb. Fl. Ceylon* 5: 220. 1900, *Grasses of Ceylon* 179. 1956, *Grasses of Burma ...* 146. 1960.

E. ophiuroides (Munro) Hackel (*Agrostis crinita* Rich. ex Trin. & Rupr., nom. illeg., non *Agrostis crinita* (Schreb.) Moench; *Andropogon ophiuroides* (Munro) F. Muell.; *Eremochloa ophiuroides* var. *longifolia* Hayata; *Ischaemum*

ophiuroides Munro; *Sehima ciliare* (L.) Robery subvar. *ophiuroides* (Munro) Robery)

China, Southeast Asia, Vietnam, Asia temperate and tropical. Perennial, stoloniferous, forming dense clumps, prostrate growth, high root density, flattened and keeled leaf sheath, ligule minute, leaves hairy, compressed racemes spicate and axillary, slender and laterally compressed rachis, flat spikelets, lower glume winged, lemma and palea hyaline, sprouts from stolons, reproduces by seed, caryopsis enclosed in a wax coating, shade tolerant, considered drought-tolerant to drought intolerant, used for lawns and/or playing fields, ornamental, cultivated and naturalized, occurs on wet grasslands, industrial sites, roadsides and sandy roadsides, found on disturbed sites, grows on the sandy acid soils, see *Species Graminum Stipaceorum* 4. 1842, *Proceedings of the American Academy of Arts and Sciences* 4: 363. 1860, *Fragmenta Phytographiae Australiae* 8: 118. 1873, *Monographiae Phanerogamarum* 6: 261. 1889 and *Icones plantarum formosandarum nec non et contributiones ad floram formosanam* 7: 78-79, f. 46. 1918, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 318. 1960.

in English: centipede grass, lazy man's grass

E. petelotii Merr.

Asia. Inflorescence axillary, see *University of California Publications in Botany* 10: 423. 1924.

E. zeylanica Hackel (*Eremochloa zeylanica* (Hack. ex Trimen) Hack.; *Eremochloa zeylanica* (Trimen) Hack.; *Ischaemum falcatum* Thwaites; *Ischaemum zeylanicum* Hack. ex Trimen)

Sri Lanka. Perennial, tufted, leaf blades acute, inflorescence racemose exserted, lower glume elliptic, see *Enumeratio Plantarum Zeylanicae* 436. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6: 263. 1889 and *Handb. Fl. Ceylon* 5: 221. 1900, *Grasses of Ceylon* 179. 1956, *Grasses of Burma ...* 148. 1960.

Eremochloe S. Watson = *Blepharidachne* Hack.

Greek *eremos* "lonely, solitary, desolate" and *chloe* "grass"; nom. illeg., non *Eremochloa* Büse.

Chloridoideae, type *Eremochloe kingii* S. Watson, see *Plantae Junghuhnianae* 357. 1854, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 5: 382, t. 40, f. 10-16. 1871, *Monographiae Phanerogamarum* 6: 261. 1889 and *U.S.D.A. Bull.* 772: 78. 1920, *Contributions from the United States National Herbarium* 41: 19, 115. 2001.

Eremopoa Roshev.

From the Greek *eremos* “solitary, lonely” and *poa* “grass, pasture grass,” referring to the habitat.

About 4-5 species, Mediterranean, China, western and central Asia. Pooideae, Poeae, Poinae, or Pooideae, Poodae, Poeae, annual, herbaceous, hollow, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, panicle branches whorled, spikelets pedicellate, 2 glumes unequal to very unequal, lower glume 1-nerved, upper glume 3-nerved, lemmas lanceolate to narrowly oblong, palea 2-nerved 2-keeled, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, type *Eremopoa persica* (Trin.) Roshev., see *Species Plantarum* 1: 67-70, 73-76. 1753, *Linnaea* 21(4): 409-410. 1848, *Flora Tasmaniae* 1(4): 353, t. 98. 1857, *Die Natürlichen Pflanzenfamilien* 2(2): 73. 1887, *The Flora of British India* 7(22): 337. 1897 [1896] and *Fl. URSS* 2: 429-430, 756, t. 32, f. 8. 1934, *Taxon* 33: 756-760. 1984, *Flora of Turkey and the East Aegean Islands* 9: 486-501. 1986 [1985], *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, *Flora Mediterranea* 8: 307-313. 1998, *Contributions from the United States National Herbarium* 48: 310-311. 2003.

Species

E. altaica (Trin.) Roshev. (*Aira altaica* Trin.; *Eremopoa bellula* (Regel) Roshev.; *Festuca bellula* Regel; *Nephelochloa altaica* (Trin.) Griseb.; *Poa altaica* Trin.; *Poa diaphora* Trin.)

Russia. See *Flora Altaica* 1: 97. 1829, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 2: 526. 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 69-70. 1836, *Diagnoses plantarum orientalium novarum* 1(5): 72. 1844, *Flora Rossica* 4(13): 367. 1852 and *Flora URSS* 2: 431, t. 32, f. 12, 13. 1934.

E. oxyglumis (Boiss.) Roshev. (*Eremopoa altaica* subsp. *oxyglumis* (Boiss.) Tzvelev; *Eremopoa persica* var. *oxyglumis* (Boiss.) Grossh.; *Eremopoa songarica* (Schrenk) Roshev.; *Poa diaphora* Trin.; *Poa persica* var. *oxyglumis* Boiss.)

Russia. See *Flora Orientalis* 5: 610. 1884 and *Flora URSS* 2: 430-431, 756, t. 32, f. 9, 10, 11. 1934, *Bot. Zhurn. (Moscow & Leningrad)* 51(8): 1104. 1966.

E. multiradiata (Trautv) Roshev. (*Eremopoa persica* subsp. *multiradiata* (Trautv.) Tzvelev; *Poa palustris* var. *multiradiata* Trautv.)

Russia. See *Flora URSS* 2: 430, t. 32, f. 7a. 1934, *Zlazi SSSR* 479. 1976.

E. persica (Trin.) Roshev. (*Aira altaica* Trin.; *Festuca heptantha* K. Koch; *Festuca persica* (Trin.) K. Koch; *Festuca*

polygama K. Koch; *Nephelochloa persica* (Trin.) Griseb.; *Poa heptantha* (K. Koch) Steud.; *Poa persica* Trin.; *Poa polygama* (K. Koch) Steud.)

Iran. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 373. 1830, *Diagnoses plantarum orientalium novarum* 1(5): 72. 1844, *Linnaea* 21(3): 409-410. 1848, *Flora Rossica* 4(13): 366. 1852, *Synopsis Plantarum Glumacearum* 1: 255. 1854 and *Flora URSS* 2: 430, t. 32, f. 8. 1934.

E. songarica (Schrenk) Roshev. (*Eremopoa altaica* subsp. *oxyglumis* (Boiss.) Tzvelev; *Eremopoa altaica* subsp. *songarica* (Schrenk) Tzvelev; *Eremopoa glareosa* Gamajun. ex Pavlov; *Eremopoa oxyglumis* (Boiss.) Roshev.; *Eremopoa persica* var. *oxyglumis* (Boiss.) Grossh.; *Eremopoa persica* var. *songarica* (Schrenk) Bor; *Glyceria songarica* Schrenk; *Nephelochloa songarica* (Schrenk) Griseb.; *Poa paradoxa* Karav. & Kir., nom. illeg., non *Poa paradoxa* Roem. & Schult.; *Poa persica* var. *oxyglumis* Boiss.; *Poa persica* var. *songarica* (Schrenk) Stapf; *Poa songarica* (Schrenk) Boiss.; *Poa songarica* var. *argaea* Hauskn. & Bornm. ex R.R. Mill; *Poa subtilis* Schur)

Eurasia. See *Enumeratio Plantarum Novarum* 1: 1. 1841, *Bulletin de la Société Impériale des Naturalistes de Moscou* 864. 1841, *Flora Rossica* 4(13): 367. 1852, *Enumeratio Plantarum Transsilvaniae* 776. 1866, *Flora Orientalis* 5: 610-611. 1884, *The Flora of British India* 7(22): 337. 1897 [1896] and *Flora URSS* 2: 430-431, 756, t. 32, f. 9, 10, 11. 1934, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 532. 1960, *Bot. Zhurn. (Moscow & Leningrad)* 51(8): 1104. 1966.

Eremopogon Stapf = Andropogon L., Dichanthium Willemet

From the Greek *eremos* “solitary, lonely” and *pogon* “beard,” referring to the spikelets.

About 4 species, Old World. Panicoideae, Andropogoneae, Sorghinae or Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, herbaceous, caespitose, branched, auricles absent, plants bisexual, inflorescence racemose, spikelets paired, each inflorescence branch with a basal sheath, 2 glumes subequal, lower glume 2-keeled, upper glume 2-nerved, palea absent, 2 lodicules, 3 stamens, ovary glabrous, 2 stigmas, usually in or sometimes referred to *Dichanthium*, type *Eremopogon foveolatus* (Delile) Stapf, see *Species Plantarum* 2: 1045-1046. 1753, *Annalen der Botanick. ed. Usteri* 18: 11. 1796, *Flora Indica; or Descriptions ...* 1: 265. 1820, *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *Flora of Tropical Africa* 9: 182-183. 1917, *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 208. 1921 [1922], *Journal of the Bombay Natural History Society* 32: 427. 1928, *Trudy Bot. Inst.*

Komarova Akad. Nauk S.S.S.R., Ser: 8, Paleobot. 63. 1936, Fl. Trop. E. Afr. Gramineae 770. 1982, Taxon 41: 556. 1992, Taxon 44: 611-612. 1995, Contributions from the United States National Herbarium 46: 20-64, 192-193, 230. 2003.

Species

E. delavayi (Hack.) A. Camus (*Andropogon bootanensis* Hook.f.; *Andropogon delavayi* Hack.; *Schizachyrium bootanense* (Hook.f.) A. Camus; *Schizachyrium delavayi* (Hack.) Bor)

Asia. See *Monographiae Phanerogamarum* 6: 404-405. 1889, *The Flora of British India* 7: 166-167. 1896 and *Annales de la Société Linnéenne de Lyon*, sér. 2, 68: 208. 1921 [1922], *Ann. Linn. Lyon* 70: 90. 1923, *Indian Forest Records, Botany* 1: 95. 1939.

E. foveolatus (Delile) Stapf (*Andropogon foveolatus* Delile; *Andropogon monostachys* Spreng.; *Andropogon strictus* Roxb.; *Eremopyrum strictus* (Roxb.) A. Camus; *Hypogynium foveolatum* (Delile) Haines)

India, Africa. A good fodder desert grass, eaten by the camels, see *Description de l'Égypte, ... Histoire Naturelle, Tome Second* 2: 160. 1812 [or 16, t. 8. f. 2. 1813], *Hortus Bengalensis, or a Catalogue ...* 82. 1814, *Plantarum Minus Cognitarum Pugillus* 2: 9. 1815, *Flora Indica; or Descriptions ...* 1: 265. 1820 and *Flora of Tropical Africa* 9: 183. 1917, *Annales de la Société Linnéenne de Lyon*, sér. 2, 68: 208. 1921 [1922], *The Botany of Bihar and Orissa* Pt. 5: 1041. 1924, *Annali di Botanica* 45: 75-102. 1987.

in India: boari, ghandel, kard, namala chettu, nanaballu gaddi, nanabalu gaddi

E. tuberculatus (Hack.) A. Camus (*Andropogon tuberculatus* Hack.; *Dichanthium tuberculatum* (Hack.) Cope; *Dichanthium tuberculatum* (Hack.) G. Singh)

Asia. See *Monographiae Phanerogamarum* 6: 404. 1889 and *Annales de la Société Linnéenne de Lyon*, sér. 2, 68: 208. 1921 [1922], *Kew Bulletin* 35(3): 703. 1980, *Journal of Economic and Taxonomic Botany* 8(2): 497. 1986.

Eremopyrum (Ledeb.) Jaub. & Spach

From the Greek *eremos* "solitary, lonely" and *pyros* "wheat," an allusion to the nature of the seeds.

About 5 species, Mediterranean, Turkey, central Asia, Pakistan. Pooideae, Triticeae, Hordeinae, or Pooideae, Triticeae, annual, caespitose, herbaceous, auricles present, ligule an unfringed membrane, leaf blades linear to linear-lanceolate, plants bisexual, racemes oblong, spikelets solitary, 2 glumes linear to narrowly ovate, lemmas keeled with nerves converging upward, palea present, 2 free membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, stony places, slopes, similar to *Agropyron*, type *Eremopyrum orientale* (L.) Jaub. & Spach, see *Species Plantarum*

1: 84-87. 1753, *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770, *Flora Altaica* 1: 112. 1829, *Annales des Sciences Naturelles; Botanique, sér. 3* 14: 360. 1851, *Illustrationes Plantarum Orientalium* 4: 27, t. 319. 1851, *Enumeratio Plantarum Transsilvaniae* 807-808. 1866, *Genera Plantarum* 3(2): 1203. 1883 and *Canadian Journal of Botany* 36: 539-546. 1958, *Biol. Zentralbl.* 101: 208. 1982, *Nordic Journal of Botany* 11: 271-285. 1991, *Journal of August 1st Agricultural College* 15(1): 21-24. 1992, *Nordic Journal of Botany* 13: 481-493. 1993, *Acta Genetica Sinica* 22(2): 116-121. 1995, *Acta Genetica Sinica* 23(2): 117-123. 1996, *J. Sichuan Agric. Univ.* 15(3): 316-322. 1997, *Scientia Agricultura Sinica* 31(2): 63-69. 1998, *Flora Mediterranea* 8: 307-313. 1998, *Contributions from the United States National Herbarium* 48: 311-312. 2003, *Journal of Biogeography* 30(5): 649-685. May 2003.

Species

E. bonaepartis (Spreng.) Nevski (also spelled *buonapartis*) (*Agropyron bifforme* F. & De Not.; *Agropyron bonaepartis* (Spreng.) T. Durand & Schinz; *Agropyron bonaepartis* var. *pilosum* Grossh.; *Agropyron buonapartis* (Spreng.) T. Durand & Schinz; *Agropyron kotschyanum* Boiss. & Hohen.; *Agropyron orientale* var. *sublanuginosum* Drobow; *Agropyron patulum* (Willd.) Trin.; *Agropyron squarrosus* (Roth) Link; *Agropyron squarrosus* var. *kotschyanum* (Boiss. & Hohen.) Hack.; *Agropyron turkestanicum* Gand.; *Dasyphyrum sinaicum* (Steud.) P. Candargy; *Eremopyrum bonaepartis* f. *hirsutum* (Bertol.) Bowden; *Eremopyrum bonaepartis* subsp. *hirsutum* (Bertol.) Melderis; *Eremopyrum bonaepartis* subsp. *sublanuginosum* (Drobow) A. Löve; *Eremopyrum bonaepartis* var. *hirsutum* (Bertol.) Grossh.; *Eremopyrum bonaepartis* var. *pakistanicum* Melderis; *Eremopyrum bonaepartis* var. *sublanuginosum* (Drobow) Melderis; *Eremopyrum bonaepartis* var. *turkestanicum* (Gand.) Tzvelev; *Eremopyrum confusum* Melderis; *Eremopyrum confusum* var. *glabrum* Melderis; *Eremopyrum confusum* var. *pakistanicum* (Melderis) Melderis; *Eremopyrum hirsutum* (Bertol.) Nevski; *Eremopyrum kotschyanum* (Boiss. & Hohen.) P. Candargy; *Eremopyrum patulum* (Willd.) P. Candargy; *Eremopyrum squarrosus* (Roth) Jaub.; *Eremopyrum squarrosus* var. *hirsutum* P. Candargy; *Hordeum hirsutum* Bertol.; *Secale pungens* Pers.; *Triticum bonaepartis* Spreng.; *Triticum kotschyanum* (Boiss. & Hohen.) Steud.; *Triticum orientale* var. *squarrosus* (Roth) Regel; *Triticum patulum* Willd.; *Triticum sinaicum* Steud.; *Triticum squarrosus* Roth; *Triticum squarrosus* subvar. *macrostachyum* Cosson & Durieu)

Eurasia, Mediterranean. See A.W. Roth (1757-1834), *Neue Beyträge zur Botanik* 1: 128. Frankfurt a.M. 1802, *Syn. Pl.* 1: 108. 1805, *Flora Taurico-Caucasica* 1: 86. 1808, *Systema Vegetabilium* 2: 757. 1817, *Fundamenta Agrostographiae* 152. 1820, *Hortus Regius Botanicus Berolinensis* 1: 32. 1827, *Novi Commentarii Academiae Scientiarum Instituti Bononiensis* 5: 421, t. 40, f. 5-6. 1842,

Illustrationes Plantarum Orientalium 4: 28, t. 320. 1851, *Memorie della Reale Accademia delle Scienze di Torino*, ser. 2 12: 260. 1852, *Diagnoses plantarum orientaliu novarum*, ser. 1, 13: 69. 1854, *Synopsis Plantarum Glumacearum* 1: 346. 1855 [1854], *Exploration Scientifique de l'Algérie* 2: 206. 1855, *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 502: 11. 1885, *Index Generum Phanerogamorum* 504. 1888, *Conspectus Florae Africae* 5: 936. 1894 and *Archives de Biologie Végétale Pure et Appliquée* 1: 33, 35, 59-60, 62. 1901, *Bulletin de la Société Botanique de France* 60: 420. 1913, A.A. Grossheim (1888-1948), *Flora Kavkaza* 1: 134, 343. 1928-1934, *Fl. URSS* 2: 663, pl. 47a, f. 8 a-d. 1934, *Arkiv för Botanik, Andra Serien* 2: 305. 1952, *Grasses of Burma ...* 697. 1960, *Canadian Journal of Botany* 40: 1703. 1962, *Taxon* 16: 68. 1967, *Novosti Sist. Vyss. Rast.* 10: 36. 1973, *Feddes Repertorium* 95(7-8): 506. 1984, *Nordic J. Bot.* 11: 279. 1991.

E. bonaepartis (Spreng.) Nevski subsp. *hirsutum* (Bertol.) Melderis (*Hordeum hirsutum* Bertol.)

Eurasia. See *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 81. 1984.

E. orientale (L.) Jau See b. & Spach (*Agropyron orientale* (L.) Roem. & Schult.; *Agropyron orientale* var. *medians* Maire; *Eremopyrum orientale* subsp. *eu-orientale* Maire; *Secale orientale* L.; *Secale orientale* var. *sibirica* Willd.; *Triticum orientale* (L.) M. Bieb.; *Triticum orientale* subvar. *macrostachyum* Cosson & Durieu; *Triticum orientale* var. *typicum* Regel)

North Africa, Mediterranean. See *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der Gesammten Naturkunde* 2: 118, t. 4, f. 3-3a. Berlin 1799, *Flora Taurico-Caucasica* 1: 86. 1808, *Systema Vegetabilium* 2: 757. 1817, *Illustrationes Plantarum Orientalium* 4: 27, t. 319. 1851, *Exploration Scientifique de l'Algérie* 2: 205. 1855, *Acta Horti Petrop.* 7: 588. 1881 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 31: 48. 1940, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 99. 1942, *Nordic J. Bot.* 11: 277. 1991.

E. triticeum (Spreng.) Nevski (*Agropyron prostratum* (Pall.) P. Beauv.; *Agropyron prostratum* (Pall.) Roem. & Schult., nom. illeg., non *Agropyron prostratum* (Pall.) P. Beauv.; *Agropyron prostratum* var. *biflorum* K. Koch; *Agropyron pumilum* (L.f.) P. Beauv.; *Agropyron triticeum* Gaertn.; *Eremopyrum prostratum* (Pall.) P. Candargy; *Secale prostratum* Pall.; *Secale pumilum* (L.f.) Pers.; *Triticum prostratum* (Pall.) L.f.; *Triticum pumilum* L.f.)

Russia, Eurasia. See *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 540. 1770, Pyotr (Peter) Simon Pallas (1741-1811), *Reise durch verschiedene Provinzen des russischen Reichs ...* 1: 485. St. Petersburg 1771-1776, *Supplementum Plantarum* 114-115.

1781 [1782], *Syn. Pl.* 1: 109. 1805, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812, *Systema Vegetabilium* 2: 757. 1817, *Linnaea* 21(4): 425. 1848 and *Archives de Biologie Végétale Pure et Appliquée* 1: 32, 58. 1901, *Acta Inst. Bot. Acad. Sc. URSS*, Ser. 1, 1: 18. 1933, *Nordic J. Bot.* 11: 276. 1991.

Eriachne Phil. = *Digitaria* Haller

Greek *erion* "wool" and *achne* "chaff, glume."

Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Digitariinae, type *Eriachne rigida* Phil., see *Bothalia* 7: 467. 1961, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Genera Graminum* 298-300. 1999, *Contributions from the United States National Herbarium* 46: 193-213, 230. 2003.

Eriachne R. Br. = *Achneria* P. Beauv., *Eriachne* Phil., *Massia* Balansa

From the Greek *erion* "wool" and *achne* "chaff, glume," referring to the hairy lemma or to cataphylls.

About 48-51 species, Asia and mostly Australia. Arundoideae (or Panicoideae), Eriachneae, annual or chiefly perennial, forming clumps or tussocks, rhizomatous or caespitose, usually with wiry culms, herbaceous, ligule a ciliate membrane, leaves sometimes rigid and spine-like, leaf blade flat or convolute, plants bisexual, cleistogamous or chasmogamous, inflorescence paniculate open or contracted, rarely racemose, bisexual and solitary spikelets, florets 2 perfect, upper floret sometimes reduced or absent, 2 glumes more or less equal and persistent, lemmas leathery or membranous and hairy on the back, awned or awnless, palea 2-keeled and more or less bifid, the apex of the palea entire or divided, 2 lodicules free and fleshy, stamens 3 or rarely 2, ovary glabrous, 2 stigmas, fodder in open range, of limited importance as pasture grass, grow on poor soils, savannah, arid and semiarid areas, inland regions and on the coast, type *Eriachne squarrosa* R. Br., see *Prodromus florae Novae Hollandiae*. 183. 1810, *Essai d'une Nouvelle Agrostographie* 72-73, 146. 1812, *Anales de la Universidad de Chile* 36: 207-208. 1870, *Journal de Botanique (Morot)* 4(8): 165. 1890 and *Acta Phytotaxonomica et Geobotanica* 11: 183. 1942, *Bulletin of the Torrey Botanical Club* 88: 11-20. 1961, Eck-Boorsboom, M.H.J. van, "A revision of *Eriachne* R. Br. (Gramineae) in Asia and Malesia." *Blumea* 26: 127, 130. 1980, M. Lazarides, "The genus *Eriachne* (Eriachneae, Poaceae)." *Australian Systematic Botany* 8(3): 355-452. 1995, Liliana M. Giussani, J. Hugo Cota-Sánchez, Fernando O. Zuloaga and Elizabeth A. Kellogg, "A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis." *Am. J. Bot.* 88: 1993-2012. 2001, *Journal of Biogeography*

28(3): 325-343. Mar 2001, *Austral. Ecology* 29(2): 156-176. Apr 2004, *Plant Pathology* 53(4): 475-484. Aug 2004, *Flora of Australia* vol. 44B, Poaceae 3: 132-175. 2005, *Austral. Ecology* 30(1): 24-39. Feb 2005.

Species

E. agrostidea F. Muell.

Australia, Northern Territory, Port Darwin. Annual or ephemeral, slender, mainly basal foliage, similar to *Eriachne filiformis*, see Mueller, F.J.H. von, Fascicles 50-57. *Fragmenta Phytographiae Australiae* 7: 82. 1870 and *Australian Systematic Botany* 8: 363. 1995.

E. aristidea F. Muell. (*Eriachne aristidea* var. *aristidea*; *Eriachne aristidea* var. *elegans* Domin; *Eriachne aristidea* var. *minor* Hartley; *Eriachne aristidea* var. *typica* Domin)

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Annual or short-lived perennial, slender, densely tufted, leafy, compact, stems bearded at the nodes, leaves flat and folded, panicle loose, few solitary and stalked spikelets, 2 florets, glumes hirsute to aristate, lemma villous on the back and tapering into a straight awn, palea bifid and silky, useful for erosion control, usually not very palatable, readily grazed when green, usually trampled or blown away, an inland species, stabilizer of loose sandy soils, an indicator of poor range condition, grows on loose sandy soils, sand dunes, see *Fragmenta Phytographiae Australiae* 5: 205. 1866 and *Journal of the Linnean Society, Botany* 41: 279. 1912, *Journal of the Linnean Society, Botany* 52: 344. 1942.

in English: three-awned wanderrie, threeawn wanderrie, three-awn wanderrie grass, broad-leaved wanderrie grass

E. armitii Benth. (also *armitti*) (*Eriachne armitii* F. Muell. ex Benth.) (Gilbert River, Armit)

Western Australia, Northern Territory, Queensland. Annual or short-lived perennial, ascending, spreading, branched, useful for erosion control, occurs on periodically flooded flats, red and yellow earths, related to *Eriachne stipacea*, similar to *Eriachne squarrosa*, see *Flora Australiensis: A Description ...* 7: 627. 1878 and *Australian Systematic Botany* 8: 366. 1995.

in English: longawn wanderrie

E. avenacea R. Br. (*Aira avenacea* (R. Br.) Spreng.; *Eriachne setacea* Benth.)

Western Australia, Northern Territory, Darwin and Gulf District. Annual or short-lived perennial, slender, compact, thin, hispid, variable, strongly many-nerved glumes, close to *Eriachne melicacea* and *Eriachne bleeseri*, see *Prodromus Florae Novae Hollandiae* 184. 1810, *Systema Vegetabilium, editio decima sexta* 1: 278. 1825, *Flora Australiensis: A Description ...* 7: 629. 1878.

E. axillaris Lazarides

Northern Territory, Darwin and Gulf District. Annual, slender, filiform, axillary and cleistogamous inflorescences, smooth glabrous glumes, palea pubescent, grain strongly compressed, see *Australian Systematic Botany* 8(3): 368, f. 260. 1995.

E. basalis Lazarides

Northern Territory, Darwin and Gulf District. Annual, axillary spikelets and racemes, acuminate glumes many-nerved, related to *Eriachne burkittii*, see *Australian Systematic Botany* 8(3): 369, f. 26B, 28K, 29J. 1995.

E. basedowii Hartley

Northern Territory, Arnhem Land. Perennial, wiry, bulbous, woolly, simple, compact inflorescences spiciform, villous panicles, see Hartley, W., "New species and varieties of *Eriachne* R. Br. family Gramineae." *Journal of the Linnean Society, Botany* 52: 344. 1942.

E. benthamii Hartley (*Eriachne ovata* var. *pallida* Benth.) (after the English (b. Devon) botanist George Bentham, 1800-1884 (London), nephew of Jeremy Bentham, taxonomist, from 1829 to 1840 Secretary of the Horticultural Society, 1862 Fellow of the Royal Society of London and in 1826 of the Linnean Society, from 1861 to 1874 President of the Linnean Society, among his most valuable writings are *Handbook of the British Flora*. London 1858, *Flora hongkongensis*. London 1861, *Labiatarum genera et species*. London 1832-1836, *The Botany of the Voyage of H.M.S. Sulphur, under the Command of Captain Sir Edward Belcher ... during the Years 1836-1842*. London 1844[-1846] and *Catalogue des plantes indigènes des Pyrénées et du bas Languedoc*. Paris 1826 author of most of the *Genera Plantarum* (London 1862-1883) of Bentham and Joseph Dalton Hooker (1817-1911) and in collaboration with Ferdinand Mueller of *Flora Australiensis*. London 1863-1878, his herbarium amounted to over 100,000 specimens. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 165. 1965; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 34. 1972; George Taylor, in *D.S.B.* 2: 614-615. 1981; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; B. Daydon Jackson, *George Bentham*. London 1906; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Francis Wall Oliver (1864-1951), editor, *Makers of British Botany*. Cambridge 1913; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 130. Oxford 1964; Mea Allan, *The Hookers of Kew*. London 1967; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 447. 1973; Merle A. Reinikka, *A History of the Orchid*. Timber Press

1996; Emil Bretschneider, *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898] Leipzig 1981; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980)

Northern Territory, Central Australia. Perennial, robust, glaucous or bluish green, forming dense and coarse tussocks, leathery leaves flat or inrolled, powdery blooms, panicle dense, lemmas with recurved awn, not eaten, areas subject to partial inundation, moist soils, warm inland regions, see *Flora Australiensis: A Description ...* 7: 631. 1878 and *Journal of the Linnean Society, Botany* 52: 345. 1942.

in English: swamp wanderrie grass

E. bleeseri Pilger (named for Florenz August Karl Bleeser, 1871-1942, of the Australian Post Office, botanical collector in the Northern Territory)

Northern Territory, Darwin and Gulf District. Perennial, slender, simple, thickened base, leaves densely hispid, aristulate lemmas, wetland, similar to *Eriachne melicacea* and *Eriachne avenacea*, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(91): 113. 1927.

E. brevifolia R. Br. (*Achneria brevifolia* (R. Br.) P. Beauv.) Australia. Cited by Sprengel as a synonym of *Eriachne mucronata* R.Br., base name for *Achneria brevifolia* (R. Br.) P. Beauv., see *Prodromus Florae Novae Hollandiae* 184. 1810, *Essai d'une Nouvelle Agrostographie* 73, 146. 1812.

E. burkittii Jansen (*Eriachne burkittii* var. *burkittii*; *Eriachne burkittii* var. *hirsutissima* Jansen; *Eriachne burkittii* var. *laidlawii* (Jansen) Eck-Boorsboom; *Eriachne laidlawii* Jansen)

Northern Territory, Darwin and Gulf District, Queensland. Short-lived perennial, glaucous or pruinose, leafy, open drooping panicle, scabrous lemma, recurved awn, palea beaked, similar to *Eriachne stipacea*, see *Mededeelingen van's Rijks-Herbarium* 59: 1. 1930, Eck-Boorsboom, M.H.J. van, "A revision of *Eriachne* R. Br. (Gramineae) in Asia and Malesia." in *Blumea*. 26: 127-128, 131, 133. 1980.

E. capillaris R. Br. (*Achneria capillaris* (R. Br.) P. Beauv.; *Achneria capillaris* (Thunb.) Stapf, nom. illeg., non *Achneria capillaris* (R. Br.) P. Beauv.; *Aira hispida* Sprengel; *Holcus capillaris* Thunb.)

Northern Territory, Darwin and Gulf District, North Coast, Arnhem Bay. Annual or ephemeral, slender, compact, branched and fastigiate, glabrous, hispid basal foliage, open panicle, spikelets obovate, awnless florets, similar to *Eriachne filiformis* and *Eriachne agrostidea*, see *Prodromus Plantarum Capensium, ...* 20. 1794, *Prodromus Florae Novae Hollandiae* 184. 1810, *Essai d'une Nouvelle Agrostographie* 73, 146. 1812, *Systema Vegetabilium, editio*

decima sexta 1: 276. 1825, *Hooker's Icones Plantarum* 27(1): t. 2604, 1-2. 1899.

E. ciliata R. Br. (*Aira ciliata* (R. Br.) Spreng.; *Eriachne gracilescens* Domin)

Western Australia, Northern Territory, Queensland. An increaser species, slender, annual or ephemeral, branched, culms and foliage hispid, short rigid leaf blades, lacking bulk, low forage value, on degraded soils, similar to *Eriachne capillaris*, *Eriachne semiciliata* and *Eriachne agrostidea*, see *Prodromus Florae Novae Hollandiae* 184. 1810, *Systema Vegetabilium, editio decima sexta* 1: 278. 1825 and *Feddes Repert. Spec. Nov. Regni Veg.* 10: 118. Nov 1911, *Bibliotheca Botanica* 85: 354. Dec 1915.

in English: slender wanderrie grass

E. compacta Lazarides

Northern Territory, Darwin and Gulf District, Kakadu National Park. Annual, slender, branched, compact ovate panicles, see *Australian Systematic Botany* 8(3): 377, f. 26F, 28F-G. 1995.

E. fastigiata Lazarides

Western Australia, Northern Territory. Annual, slender, branched, fastigiate, leaves hispid, racemose inflorescences, ribbed glumes and lemmas, awnless lemmas, similar to *Eriachne pulchella*, see Lazarides, M., in *Journal of the Royal Society of Western Australia*. 42(2): 22, 33. t. 1, f. 1. 1959, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961.

E. festucacea F. Muell.

Western Australia, Northern Territory. Coarse, caespitose, perennial, simple, glabrous, smooth, base thickened, tussocky, fibrous roots, glossy cataphylls, narrow panicles, open floret, divergent lemma, aristulate glumes, usually unpalatable, grazed the green shoots, see *Fragmenta Phytographiae Australiae* 5: 205. 1866 and *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961.

in English: plains wanderrie grass

E. filiformis Hartley

Queensland, Northern Territory, Darwin and Gulf District, Arnhem Land. Slender, annual, branched, leaves mostly basal, similar to *Eriachne agrostidea*, *Eriachne humilis* and *Eriachne capillaris*, see *Journal of the Linnean Society, Botany* 52: 343. 1942.

E. flaccida Hartley

Western Australia, Northern Territory. Perennial, base thickened, valuable source of fodder, palatable to cattle, resistant to grazing and drought, an indicator of good range condition, related to *Eriachne ovata* and *Eriachne benthamii*, see *Journal of the Linnean Society, Botany* 52: 346. 1942.

E. gardneri Hartley (after Charles Austin Gardner, 1896-1970, from 1928 to 1960 Government Botanist and Curator

of Western Australia Herbarium, with H.W. Bennetts wrote *The Toxic Plants of Western Australia*. 1956)

Western Australia. Annual or perennial, glaucous, branched, cover plant, found in arid areas, on coastal sand dunes, sandy riverbanks, see *Journal of the Linnean Society, Botany* 52: 344. 1942.

E. glabrata (Maiden) Hartley (*Eriachne obtusa* R. Br. var. *glabrata* Maiden)

Queensland, New South Wales. Perennial, loosely or densely tufted, leaf blade rolled and glabrous, a compact panicle, 2 florets, glumes equal and ribbed, lemmas pubescent and awnless, palea awnless and more or less pubescent, on sandy soils, coastal areas, similar to *Eriachne insularis*, see *Agricultural Gazette of New South Wales* 19: 836, t. 1. 1908, *Journal of the Linnean Society, Botany* 52: 342, 347. 1942.

E. glandulosa Lazarides

Western Australia. Perennial, simple, base thickened and fibrous, leaves mainly basal, leaf sheaths persistent, glandular panicle, similar to *Eriachne bleeseri*, see *Australian Systematic Botany* 8(3): 384, f. 28L. 1995.

E. glauca R. Br. (*Aira laevis* Spreng.)

Western Australia, Northern Territory, Queensland, Gulf of Carpentaria. Perennial, glabrous, pruinose, smooth, branched, leafy, herbaceous, dense or loose panicles, grazed when young, tough and unpalatable when mature, an increaser species, on heavily grazed fields, clay, see *Prodromus Florae Novae Hollandiae* 184. 1810 and *Austral. Syst. Bot.* 8(3): 355-452. 1995.

in English: pan wanderrie grass

E. glauca R. Br. var. *glauca*

Western Australia, Northern Territory, Queensland, Gulf of Carpentaria. Culm nodes glabrous, see *Prodromus Florae Novae Hollandiae* 184. 1810 and *Journal of the Linnean Society, Botany* 52: 343. 1942.

E. glauca R. Br. var. *barbinodis* Hartley

Western Australia, Northern Territory, Queensland, North Kennedy District. Culm nodes bearded, growing on swamps, see *Prodromus Florae Novae Hollandiae* 184. 1810 and *Journal of the Linnean Society, Botany* 52: 343. 1942, *Austral. Syst. Bot.* 8: 387. 1995.

E. helmsii Domin (*Eriachne helmsii* (Domin) Hartley; *Eriachne helmsii* Domin ex Hartley; *Eriachne mucronata* sensu J. Black, non R. Br.; *Eriachne mucronata* R. Br. var. *helmsii* Domin; *Eriachne mucronata* R. Br. var. *villiculmis* Domin) (species dedicated to Richard Helms, 1842-1914, naturalist and botanist)

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Perennial, bluish green, coarse, erect or spreading or decumbent, wiry, tough, forming loose or straggly tussocks, base of the plant woolly and

thickened or bulbous, leaves firmly pointed and rough, leaf blade flat, panicle narrow and open, 2 florets, spikelets pale or straw colored and pedicellate, glumes glabrous and acute, lemmas awnless and with silky hairs, palea awnless, unpalatable appearance, heavily or seldom grazed, an indicator of poor range condition, on sandy soils, sandplains, on stony and shallow ground, inland regions, similar to *Eriachne mucronata*, see *Bibliotheca Botanica* 85: 361-362. Dec 1915 [= *Beiträge zur Flora und Pflanzengeographie Australiens* 362. Dec 1915, pro syn.], *Journal of the Linnean Society, Botany* 52: 346. 1942.

in English: woollybutt wanderrie, woollybutt wanderrie grass, buck wanderrie grass

E. humilis Hartley

Northern Territory, Queensland, Thursday Island. Annual or ephemeral, slender, branched, smooth, glabrous, leaves basal, leaf blades filiform, loose panicles, found on rocky places, related to *Eriachne agrostidea* and *Eriachne filiformis*, see *Journal of the Linnean Society, Botany* 52: 343. 1942.

E. imbricata Lazarides

Western Australia. Perennial, wiry, knotty base, branched, leaf sheaths overlapping, panicles spiciform, similar to *Eriachne bleeseri* and *Eriachne glandulosa*, see *Australian Systematic Botany* 8(3): 389, f. 27A. 1995.

E. insularis Domin

Queensland, Moreton District. Perennial, branched, leafy, compact, wiry, open panicle, awnless spikelets, hirsute florets, many-nerved glumes, similar to *Eriachne pallescens* var. *gracilis*, see *Bibliotheca Botanica* 85: 362. 1915.

E. laidlawii Jansen (*Eriachne burkittii* var. *laidlawii* (Jansen) Eck-Boorsb.) (named for the Australian botanist William Laidlaw, born in Scotland ca. 1866-1925, migrated to Victoria in 1908, 1924-1925 Government Botanist and Director of the Royal Botanic Gardens Melbourne, he died at the Gardens; see Richard Thomas Martin Pescott, *The Royal Botanic Gardens, Melbourne: A History from 1845 to 1970*. Published Melbourne: Oxford University Press, 1982; R.T.M. Pescott, "The Royal Society of Victoria from then, 1854 to now, 1959." *Proceedings of the Royal Society of Victoria*, vol. 73, no. 7, pp. 1-40. 1961; R.T.M. Pescott, *Collections of a Century: the History of the First Hundred Years of the National Museum of Victoria*, by R.T.M. Pescott; foreword by Sir Russell Grimwade [Melbourne]: National Museum of Victoria 1954)

Australia. See *Mededeelingen van's Rijks-Herbarium* 59: 1. 1930, Eck-Boorsboom, M.H.J. van, "A revision of *Eriachne* R. Br. (Gramineae) in Asia and Malesia." in *Blumea*. 26: 127-128, 131, 133. 1980.

E. lanata Lazarides

Western Australia, Great Sandy Desert. Perennial, compact, tufted, base thickened, branched or simple, hispid, leaf

blades curved, open panicle, awnless spikelets, see *Australian Systematic Botany* 8(3): 391, f. 26 J, K, 29D-E. 1995.

E. major (Ewart & O.B. Davies) Lazarides (*Eriachne obtusa* var. *major* Ewart & O.B. Davies)

Northern Territory, Darwin and Gulf District. Perennial, wiry, base knotty, open panicles, grain compressed, see *The Flora of the Northern Territory* 44. 1917, *Australian Systematic Botany* 8(3): 392, f. 26G, 28J. 1995.

E. meliacea F. Muell.

Australia. A variant of *Eriachne melicacea* F. Muell.

E. melicacea F. Muell.

Western Australia, Northern Territory, Victoria River District, Queensland. Annual or short-lived perennial, branched, leaves hispid, linear panicles, awnless spikelets, glumes many-nerved, palea with ciliate flaps, similar to *Eriachne avenacea*, see *Fragmenta Phytographiae Australiae* 5: 205. 1866 and *Queensland Agricultural Journal* 27: 69, t. 19. 1911.

E. minuta Lazarides

Northern Territory, Darwin and Gulf District, Kakadu National Park. Annual or ephemeral, delicate, branched, slender, leaves hispid to pilose, open panicles, tiny spikelets, 3-nerved hairy glumes, see *Australian Systematic Botany* 8(3): 395, f. 26L, 30D. 1995.

E. mucronata R. Br. (*Achneria mucronata* (R. Br.) P. Beauv.; *Aira mucronata* (R. Br.) Spreng.; *Eriachne inermis* Pilg.; *Eriachne mucronata* var. *bimucronata* Domin; *Eriachne mucronata* var. *desertorum* C.A. Gardner; *Eriachne mucronata* var. *elongata* (Benth.) Domin; *Eriachne mucronata* var. *glabrifolia* Domin; *Eriachne obtusa* R. Br.; *Eriachne ovata* Nees var. *pedicellata* J.M. Black; *Eriachne scleranthoides* var. *elongata* Benth.)

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Perennial, tufted and usually branched, wiry, tough, spiny, slender or dense, forming compact or loose tussocks, base of the plant shortly hairy, leaf blade flat or folded, distichous leaves stiff and pungent or sharply pointed, panicles purplish narrow and exerted, glumes glabrous, lemma awnless, lemma distinctly mucronate and villous, unpalatable or inaccessible to stock, semi-arid and arid areas, inland tropical and subtropical regions, used as lead indicator in Queensland, similar to *Eriachne obtusa* and *Eriachne helmsii*, see *Prodromus Florae Novae Hollandiae* 184. 1810, *Essai d'une Nouvelle Agrostographie* 73, 146. 1812, *Systema Vegetabilium, editio decima sexta* 1: 276. 1825, *Fragmenta Phytographiae Australiae* 8: 233. 1874, *Flora Australiensis: A Description ...* 7: 631. 1878 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 35: 75. 1904, *Bibliotheca Botanica* 85: 359-361, 385, f. 80, 81. 1915, *Flora South Australia* 1: 71. 1922, *Journal of the Linnean*

Society, Botany 52: 346. 1942, *Flora of Western Australia* 1(1): 51. 1952.

in Australia: mountain wanderrie, mountain wanderrie grass
E. mucronata R.Br. subsp. *eumucronata* Domin
Nom. inval., see also *Eriachne mucronata* subsp. *mucronata*.

E. mucronata R.Br. subsp. *mucronata*

See also *Eriachne mucronata* subsp. *eumucronata* Domin.

E. mucronata R.Br. subsp. *scleranthoides* (F. Muell.) Domin (*Eriachne scleranthoides* F. Muell.)

Australia. Leaves distichous and pungent, see *Fragmenta Phytographiae Australiae* 8: 233. 1874 and *Bibliotheca Botanica* 85: 359, 385, f. 80. 1915.

E. mucronata R.Br. var. *mucronata*

See also *Eriachne mucronata* subsp. *typica* Domin.

E. nervosa Ewart & Cookson

Northern Territory, Queensland. Perennial, glaucous or bluish green, robust, coarse, forming dense tussocks, leaves leathery and glaucous, culms shiny and purplish, panicle dense and purplish, hairy spikelets with long terminal awnlike points, on heavy clay soils, moist soils, similar to *Eriachne benthamii*, see *The Flora of the Northern Territory* 44, t. 4. 1917.

in Australia: plains wanderrie grass

E. nodosa Lazarides

Northern Territory, Darwin and Gulf District. Annual, branched, glabrous, open panicles, awnless spikelets, similar to *Eriachne obtusa* and *Eriachne major*, see *Australian Systematic Botany* 8(3): 401, f. 26M, 27I. 1995.

E. obtusa R. Br. (*Achneria obtusa* (R. Br.) P. Beauv.; *Eriachne obtusa* var. *glauca* Domin; *Eriachne obtusa* var. *obtusa*; *Eriachne obtusa* var. *typica* Domin)

Western Australia, Northern Territory, Queensland, Gulf of Carpentaria. Perennial, variable, wiry, branched, glabrous, base thickened, awnless spikelets, lemmas with ciliate margins, tropical savannah, resembles *Eriachne mucronata*, see *Prodromus Florae Novae Hollandiae* 184. 1810, *Essai d'une Nouvelle Agrostographie* 73, 146. 1812 and *Agricultural Gazette of New South Wales* 19: 836, t. 1. 1908, *Bibliotheca Botanica* 85: 362. 1915.

in English: northern wanderrie, wanderrie grass

E. obtusa R. Br. var. *major* Ewart & O.B. Davies (*Eriachne major* (Ewart & O.B. Davies) Lazarides)

Northern Territory. See *The Flora of the Northern Territory* 44. 1917, *Australian Systematic Botany* 8(3): 392, f. 26G, 28J. 1995.

E. ovata Nees (*Eriachne nana* Pilger; *Eriachne ovata* var. *nana* S. Moore; *Eriachne ovata* var. *ovata*; *Eriachne ovata* var. *villosa* Benth.; *Eriachne preissiana* Nees) (after the German botanist Johann August Ludwig Preiss, 1811-1883,

traveler, plant collector, from 1838 to 1842 in Western Australia; see Johann G.C. Lehmann (1792-1860), *Plantae Preissianae* sive enumeratio plantarum quas in Australasia occidentali et meridionali-occidentali annis 1838-41 collegit L. Preiss. Hamburgi 1844-1847[-1848]; J.H. Barnhart, *Biographical notes upon botanists*. 3: 107. 1965; D.J. Carr and S.G.M. Carr, editors, *People and Plants in Australia*. 1981; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 287. Cape Town 1981; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; F. Ludwig Emil Diels (1874-1945), *Die Pflanzenwelt von West-Australien südlich des Wendekreises*. 1906, in H.G.A. Engler, *Die Vegetation der Erde*. no. VII. 1906; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; N.S. Lander, "Asteraceae specimens collected by Johann August Ludwig Preiss.," in *Kingia*. 1(1): 9-19. 1987)

South Australia, Western Australia, Northern Territory. Perennial, stout, coarse, variable, forming dense tussocks, base thickened, leaves erect and glabrous, culms smooth, panicle contracted, spikelets numerous, glumes glabrous, lemma awnless, lemma exserted and mucronate, palea tip with 2 apical setae, eaten by stock, on heavy soils, sandplains, moist ground, rocky places, related to *Eriachne flaccida* and *Eriachne benthamii*, see *London Journal of Botany* 2: 416. 1843, *Plantae Preissianae* sive enumeratio plantarum ... 2: 102. Hamburgi 1844-1847[-1848], *Flora Australiensis: A Description* ... 7: 631. 1878, *Journal of the Linnean Society, Botany* 34: 229. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 35: 75. 1904, *Flora South Australia* 1: 71. 1922, *Transactions and Proceedings of the Royal Society of South Australia* 46: 565. 1922.

in Australia: swamp wanderrie, swamp wanderrie grass

E. pallescens R. Br. (*Aira chinensis* Retz.; *Aira effusa* Spreng.; *Eriachne chinensis* Hance; *Eriachne hookeri* Munro; *Tricholaena chinensis* (Retz.) Domin)

Northern Territory, Queensland, Cook District, New South Wales. Perennial, loosely to densely tufted, forming erect tussocks, leaves linear and ribbed, culms slender and branched in the lower parts, very sparse panicles, purplish spikelets on slender stalks, 2 florets, glumes acuminate and glabrous, lemmas awned and covered with silky hairs, awn terminal and straight, palea bifid and silky, may naturalize, ornamental, useful for erosion control, grows in coastal areas, ridge, steep slopes, in sandy and stony soils, white sand, see *Observationes Botanicae* 3: 10. 1783, *Prodromus Florae Novae Hollandiae* 184. 1810, *Annales des Sciences Naturelles; Botanique, série 4* 15: 228. 1861, *Journal of the Linnean Society, Botany* 6: 42. 1862 and *Bibliotheca Botanica* 85: 327. 1915, Eck-Boorsboom, M.H.J. van, "A revision of *Eriachne* R. Br. (Gramineae) in Asia and Malesia." *Blumea* 26: 127-138 (133-135). 1980, *Bibliotheca Botanica* 138: 1-149. 1988.

in Australia: wanderrie grass

in Thailand: ya chom chon, yaa nuat moen, ya nuat moen, yaa phraek saai, ya phraek sai

E. pallescens R. Br. var. ***gracilis*** (Brongn.) Lazarides (*Eriachne anomala* Hartley; *Eriachne gracilis* Brongn.; *Eriachne stricta* Steud.)

Queensland, Moluccas. Spikelets with 1-2 florets, see *Prodromus Florae Novae Hollandiae* 184. 1810, *Voyage autour du Monde* 2(2): 25. 1829, *Synopsis Plantarum Glumacearum* 1: 237. 1854 and *Journal of the Linnean Society, Botany* 52: 345. 1942, Lazarides, M., "The genus *Eriachne* (Eriachneae, Poaceae)." *Australian Systematic Botany* 8(3): 406-407, f. 27L, 29M-N. 1995.

E. pallescens R. Br. var. ***pallescens*** (*Eriachne chinensis* Hance; *Eriachne hookeri* Munro; *Eriachne muelleri* Domin; *Eriachne pallescens* var. *muelleri* (Domin) Hartley; *Eriachne yarrabensis* Domin)

Queensland, Northern Territory. Perennial, erect and slender, forming erect tussocks, sparse panicles, purplish spikelets 2-flowered, lemmas awned, see *Prodromus Florae Novae Hollandiae* 184. 1810, *Annales des Sciences Naturelles; Botanique, série 4* 15: 228. 1861, *Journal of the Linnean Society, Botany* 6: 42. 1862 and *Repertorium Specierum Novarum Regni Vegetabilis* 10: 118. 1911, *Bibliotheca Botanica* 85: 356. 1915, *Journal of the Linnean Society, Botany* 52: 345. 1942, *Blumea* 26: 134. 1980.

in Australia: wanderrie grass

E. pauciflora W. Fitzg.

Western Australia. Perennial or annual, branched at the lower nodes, beaked palea, similar to *Eriachne sulcata* and *Eriachne rara*, see Fitzgerald, W.V., *Journal and Proceedings of the Royal Society of Western Australia* 3: 115. 1918.

E. pulchella Domin

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Annual, densely tufted, slender, small, delicate, stems geniculate, panicle dense and oblong to oblong-lanceolate, spikelets shortly pedicellate, 2 florets, glumes glabrous and acute, hairy lemma awnless and mucronate, palea 2-lobed glabrous or silky, on sandy soils, see *Repertorium Specierum Novarum Regni Vegetabilis* 9: 552. 1911, Lazarides, M., "The genus *Eriachne* (Eriachneae, Poaceae)." in *Australian Systematic Botany* 8(3): 409. 1995.

in English: pretty wanderrie grass

E. pulchella Domin subsp. ***dominii*** (Hartley) Lazarides (*Eriachne dominii* Hartley; *Eriachne tuberculata* Domin)

Western Australia, Northern Territory, Queensland. Branched, see *Repertorium Specierum Novarum Regni Vegetabilis* 9: 552. 1911, *Journal of the Linnean Society, Botany* 41: 280, t. 11, f. 14-17. 1912, *Journal of the Linnean Soci-*

ety, *Botany* 52: 348. 1942, *Australian Systematic Botany* 8(3): 410, f. 261, 30G-I. 1995.

E. pulchella Domin subsp. ***pulchella*** (*Eriachne isingiana* J.M. Black) (for Mr. Ernest Horace Ising, 1884-1973, collector; see Kraehenbuehl, D.N. and Campbell, M.W., "Ernest Horace Ising: Tribute to a fine botanical worker." *South Australian Naturalist*, vol. 50, no. 2, pp. 19-27. 1975) Western Australia, South Australia. Short-lived, slender, compact leafy base, simple or sparsely branched, small dense panicles, see *Repertorium Specierum Novarum Regni Vegetabilis* 9: 552. 1911, Black, J.M., *Transactions and Proceedings of the Royal Society of South Australia* 57: 148, t. 9, f. 6. 1933.

E. rara R. Br. (*Aira rara* (R. Br.) Spreng.)

Western Australia, Northern Territory, Queensland. Perennial, loosely tufted, leaf blade ribbed and flat, loose open panicle, 2 florets, glumes aristate and equal, lemmas silky, awn terminal and curved, palea silky and bifid, on sandy soils, coastal species, similar to *Eriachne armitii* and *Eriachne squarrosa*, see *Prodromus Florae Novae Hollandiae* 183. 1810, *Systema Vegetabilium, editio decima sexta* 1: 278. 1825 and *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Australian Systematic Botany* 8(3): 411. 1995.

E. schultzi F. Muell. (*Eriachne stipacea* var. *schultzi* (F. Muell.) Benth.) (named for Frederick Schultze, or Schultz, naturalist, 1868-1869 botanical collector on Goyder's Northern Territory Survey to Darwin)

Northern Territory, Darwin and Gulf District, Queensland. Perennial, base thickened, simple, glabrous, similar to *Eriachne squarrosa* and *Eriachne stipacea*, related to *Eriachne sulcata*, see *Fragmenta Phytographiae Australiae* 8: 137. 1873, *Flora Australiensis: A Description ...* 7: 627. 1878 and *Australian Systematic Botany* 8: 412. 1995.

E. scleranthoides F. Muell. (*Eriachne mucronata* subsp. *scleranthoides* (F. Muell.) Domin; *Eriachne mucronata* var. *scleranthoides* (F. Muell.) Domin; *Eriachne scleranthoides* var. *scleranthoides*)

Northern Territory, Western Australia, Central Australia. Perennial, shrubby, woolly, strongly branched, base thickened, overlapping leaf sheaths, leaf blades distichous and pungent, similar to *Eriachne mucronata*, see *Fragmenta Phytographiae Australiae* 8: 233. 1874, *Flora Australiensis: A Description ...* 7: 631. 1878 and *Bibliotheca Botanica* 85: 359, f. 80. 1915.

in English: Mount Olga wanderrrie grass

E. semiciliata Lazarides

Northern Territory, Darwin and Gulf District. Annual, slender, leafy, branched, hispid, glumes obtuse, similar to *Eriachne ciliata*, see *Australian Systematic Botany* 8(3): 415, f. 29F, I, 30A. 1995.

E. squarrosa R. Br. (*Aira squarrosa* (R. Br.) Spreng.)

Northern Territory, Queensland, Cook District, Western Australia, Malesia. Perennial, simple, hispid to hirsute, glumes hirsute elongate, similar to *Eriachne armitii* and *Eriachne sulcata*, see *Prodromus Florae Novae Hollandiae* 183. 1810, *Systema Vegetabilium, editio decima sexta* 1: 278. 1825 and *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Blumea* 26: 127-138 (135-136). 1980.

E. stipacea F. Muell. (*Eriachne stipacea* var. *hirsuta* Hartley; *Eriachne stipacea* var. *stipacea*)

Northern Territory, Darwin, Queensland, Cook District. Perennial or annual, simple, loose hairy panicles, long-acuminate glumes, 2-awned paleas, on wet places, similar to *Eriachne squarrosa* and *Eriachne rara*, see *Fragmenta Phytographiae Australiae* 5: 206. 1866, *Fragmenta Phytographiae Australiae* 8: 137. 1873, *Flora Australiensis: A Description ...* 7: 627. 1878 and *Journal of the Linnean Society, Botany* 52: 342. 1942.

E. sulcata Hartley

Northern Territory, Western Australia, Goody Goody. Perennial, simple or sparsely branched, nodes bearded and tuberculate, dense panicles, hirsute glumes, awned 2-sulcate lemmas, shortly beaked paleas, similar to *Eriachne schultzi* and *Eriachne pauciflora*, see *Journal of the Linnean Society, Botany* 52: 342. 1942.

E. tenuiculmis Hartley (*Achneria pallida* (Nees) T. Durand & Schinz; *Eriachne pallida* Benth.)

Western Australia, Dampier's Archipelago. Perennial, base thickened, branched, glabrous, rigid leaf blades, loose linear panicles, glumes glabrous, see *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 275. 1841, *Conspectus Florae Africae* 5: 836. 1894 and *Journal of the Linnean Society, Botany* 52: 346. 1942.

E. triodioides Domin (*Eriachne triodioides* var. *dietrichiae* Domin; *Eriachne triodioides* var. *triodioides*) (named for the German botanist Amalie Dietrich, née Nellen, 1822-1891, in Australia 1863-1873; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 454. Boston 1965; Christian Luerssen, 1843-1916, *Zur Flora von Queensland*. Verzeichniss der von Frau Amalie Dietrich in den Jahren 1863 bis 1873 an der Nordostküste von Neuholland gesammelten Pflanzen. [Collector: Amalie Dietrich, née Nellen, 1822-1891] [Hamburg] 1874-1875; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 102. Boston, Mass. 1972; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913)*. Nebst Aufzählung seiner Sammlungen. 1916; Dennis John Carr and S.G.M. Carr, editors, *People and Plants in Australia*. London 1981)

Northern Territory, Queensland, Cook District, Western Australia. Perennial, robust, simple or branched at the base, tussocky, large spikelets, glumes hairy or glabrous, lemma awned 2-sulcate, palea bifid, deep sands, similar to *Eri-*

achne nervosa, see *Bibliotheca Botanica* 85: 356, f. 79. 1915.

E. trisetata Nees ex Steud. (*Megalachne zeylanica* Thw.; *Massia trisetata* (Nees ex Steud.) Balansa)

Sri Lanka, India, Southeast Asia, Australia, Northern Territory, Queensland, Western Australia. Perennial, tussock-forming, erect and simple, smooth, leaf sheaths bearded at mouth, leaves curly when dry, loose inflorescence, drooping panicle, floret shorter than the glumes, each floret with an apically-awned lemma and 2-awned palea, glumes subequal, awns of the palea slightly shorter than the awn of the lemma, weed, see *Synopsis Plantarum Glumacearum* 1: 237. 1854, *Enumeratio Plantarum Zeylanicae* 5: 372, 444. London Dec 1864, *Journal de Botanique (Morot)* 4(8): 165. 1890 and *Handb. Fl. Ceylon* 5: 266. 1900, *Grasses of Ceylon* 52. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 23. 1959, Eck-Boorsboom, M.H.J. van, "A revision of *Eriachne* R. Br. (Gramineae) in Asia and Malesia." in *Blumea* 26: 127-138 (136-137). 1980.

in Sri Lanka: pini tuttiri, pinituttiri, pinitutturi

E. vesiculosa Lazarides

Northern Territory, Darwin and Gulf District. Perennial, herbaceous, branched, fastigiate, glabrous, nodes bearded, leaf blades convolute, loose open panicles, often cleistogamous florets, glumes mucicous, grooved lemmas, palea biaristate, similar to *Eriachne stipacea* and *Eriachne burkittii*, see M. Lazarides, "The genus *Eriachne* (Eriachneae, Poaceae)." *Australian Systematic Botany* 8(3): 423-424, f. 27F. 1995.

Erianthecium Parodi

Referring to the florets, perhaps from the Greek *erion* "wool" and *theke* "a case."

One species, Uruguay, southern Brazil. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Brizinae, perennial, herbaceous, tuberous or bulbous, tufted, auricles absent, ligule an unfringed membrane, plants bisexual, cleistogamous, inflorescence paniculate, dense panicle, 3- to 4-flowered, spikelets flattened and usually with female fertile florets only, awned, 2 glumes unequal or subequal, lower glume 3- to 5-nerved, upper glume 7-nerved, lemmas coriaceous and densely pubescent, palea pubescent with ciliate keels, 2 lodicules free and membranous, 3 stamens, ovary glabrous, 2 stigmas pubescent, low forage value, related to *Sesleria*, type *Erianthecium bulbosum* Parodi, see *Notas del Museo de la Plata, Botánica* 8: 75-100. 1943, *Journal of Japanese Botany* 39(6): 161-164. 1964 [Notes on *Erianthecium* and *Ammochloa*], *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 1-191. 1987, *Contributions from the United States National Herbarium* 48: 312. 2003.

Species

E. bulbosum Parodi

Uruguay. Open habitats, rocky places, stony slopes, see *Notas del Museo de la Plata, Botánica* 8(Bot. 40): 77, f. 1. 1943, Rosengurt et al., *Gramíneas Uruguayas* 117. 1970.

Erianthus Michaux = *Eulalia* Kunth, *Miscanthus* Andersson, *Ripidium* Trin., *Saccharum* L.

From the Greek *erion* "wool" and *anthos* "flower," referring to the appearance of the inflorescence, to the woolly glumes.

About 0-28 species, Europe, Asia, Sahara, tropical America. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial, tufted, reedlike, simple, auricles absent, ligule membranous more or less ciliate, plants bisexual, cleistogamous or chasmogamous, inflorescence paniculate, 2 glumes more or less equal, lower glume 2-keeled 2-nerved, upper glume 3-nerved, palea present, 2 free and fleshy lodicules, stamens 3, ovary glabrous, 2 stigmas, often in and hybrids with *Saccharum*, type *Erianthus saccharoides* Michx. (*Anthoxanthum giganteum* Walter), see *Species Plantarum* 1: 54. 1753, *Journal für die Botanik* 1800(2): 127. 1801, André Michaux, *Flora Boreali-Americana*. 1: 54-55. Paris 1803, *Fundamenta Agrostographiae* 169. 1820 and *N. Amer. Fl.* 17: 90. 30 June 1909, *Lloydia* 21(3): 157-188. 1958, *Darwiniana* 23: 559-585. 1981, *Flora Mesoamericana* 6: 378-379. 1994, *Contributions from the United States National Herbarium* 46: 230-233, 241, 294-295, 546, 550-557. 2003.

Species

E. sp.

in the Pacific Islands: a'eho, e poo-aiho

Erioblastus Honda = *Deschampsia* P. Beauv., *Erioblastus* Honda ex Nakai, *Erioblastus* Nakai ex Honda, *Vahlodea* Fr.

Greek *erion* "wool" and *blastos* "bud, sprout, germ, ovary, sucker."

Pooideae, Poeae, Airinae, see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Botaniska Notiser* 1842: 141, 178. 1842, *Handbok i Skandinaviens Flora, Fjerde Upplagan* 30. 1843, *A Manual of the Botany of the Northern United States* 605. 1848, *A Manual of the Botany of the Northern United States. Second Edition* 572. 1856, *Die Natürlichen Pflanzenfamilien* 2(2): 54. 1887 and *Rep. Fl. Mt. Daisetsu (Stud. Nat. Monum. Japan Bot.)* 12(1): 73. 1930 [Report on the vegetation of Daisetsusan Mts. and

their vicinities, in: Preserv. Natural Monuments Japan, vol. 12(1): 1-80, pl. 1-19, map 1-2.], *J. Fac. Sci. Tokyo, Bot.*, 3: 142. 1930, F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 253. 1989, R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 629. 1993, *Willdenowia* 20: 139-152. 1991, *Flora Mesoamericana* 6: 235. 1994, *Plant Systematics and Evolution* 205: 99-110. 1997, *Botanical Journal of the Linnean Society* 134: 495-512. 2000 [The *Deschampsia cespitosa* complex in central and northern Europe: a morphological analysis.], *Contributions from the United States National Herbarium* 48: 245-256, 312, 687-688. 2003.

Eriochaeta Figari & De Not. = Pennisetum Rich.

From the Greek *erion* “wool” and *chaite* “bristle, long hair.”

Panicoideae, Panicodae, Paniceae, Cenchrinae, type *Eriochaeta secundiflora* F. & De Not., see *Synopsis Plantarum* 1: 72. 1805, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1036-1037. 1809, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Flora* 25(Beibl. 2): 2. 1842, *Systematisches Verzeichniss der im Indischen Archipel* 60. 1854, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 374-375. 1854, *Flora Brasiliensis* 2(2): 305, 308. 1877 and *Contr. U.S. Natl. Herb.* 22: 210-211. 1921, *Flora of Tropical Africa* 9: 956-957, 962, 966. 1934, *Amer. J. Bot.* 64: 161-176. 1977, *Econ. Bot.* 31: 163-174. 1977, *Flora Mesoamericana* 6: 371-374. 1994, *Contributions from the United States National Herbarium* 46: 527-536. 2003.

Eriochloa Kunth = Aglycia Steud., Alycia Willd. ex Steud., *Glandiloba* (Raf.) Steud., *Helopus* Trin., *Monachne* P. Beauv., *Oedipachne* Link

Woolly grass, hairy spikelets and pedicels, from the Greek *erion* “wool” and *chloe, chloa* “grass”; see Friedrich W.H.A. von Humboldt, Aimé J.A. Bonpland and Carl S. Kunth, *Nova Genera et Species Plantarum*. 1: 94-95. Lutetiae Parisorum [Paris] 1815-1825.

About 20-35 species, subtropical, tropical and warm regions. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Melinidinae, annual or perennial, softly herbaceous, branched or unbranched, decumbent, clumped, stoloniferous, hairy nodes, hollow internodes, ligule ciliate or a fringed membrane, auricles absent, flattened blades rolled in bud, plants bisexual, open and large inflorescence racemose or paniculate, racemes simple or compound along a central axis, spikelets solitary or clustered or paired, spike-

lets pedicellate and in 2 rows on 1 side of the rachis, characteristic hardened and cupuliform callus or beadlike structure at the base of each spikelet, florets 2, lower floret sterile or male, terminal floret fertile, 2 glumes usually very unequal or dissimilar, the lower glume very reduced or vestigial is the cupuliform callus, upper glume usually awned, short lemma mucronate and coriaceous, palea 2-nerved and 2-keeled or reduced or suppressed, 2 broadly cuneate lodicules free and fleshy, stamens 3, ovary glabrous, 2 stigmas red, fruit compressed, weed species, cultivated fodders, highly palatable nutritious, native pasture species, damp ground, rainforest, weedy places, grasslands, open habitats, *Paspalum*-like, see *Flora Boreali-Americana* 1: 47. 1803, *Essai d'une Nouvelle Agrostographie* 49, 168, t. 10, f. 10. 1812, *Nova Genera et Species Plantarum* 1: 94-95, t. 30. 1815 [1816] [folio, 1: 78. 1816], *Fundamenta Agrostographiae* 103-104, t. 4. 1820 [1822], *Hortus Regius Botanicus Berolinensis* 1: 51, 273, 1827, *Bulletin Botanique [Genève]* 1: 220. 1830, *Nomenclator Botanicus. Editio secunda* 1: 37, 66. 1840 and *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *N. Amer. Fl.* 17: 157. 1912, *Acta Phytotaxonomica et Geobotanica* 11: 41. 1942, *Fieldiana, Botany* 24(2): 38-331. 1955, *Kurtziana* 2: 95-106. 1965, *Amer. J. Bot.* 66: 907-913. 1979, *Iselya* 2: 15-19. 1983, *Flora Novo-Galiciana* 14: 1-436. 1983, R.B. Shaw & R.B. Webster, “The genus *Eriochloa* (Poaceae: Paniceae) in North and Central America.” *Sida* 12(1): 165-207. 1987, *Folia Primatologica* 48: 78-120. 1987, *Flora Mesoamericana* 6: 333-335. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, Melvin R. Duvall, Jeffrey D. Noll and Alexandra H. Minn, “Phylogenetics of Paniceae (Poaceae).” *Am. J. Bot.* 88: 1988-1992. 2001, *Am. J. Bot.* 88: 1993-2012. 2001, *African Journal of Ecology* 40, issue 1: 1-9. Mar 2002 [Fire frequency and species associations in perennial grasslands of southwest Ethiopia], *Contributions from the United States National Herbarium* 46: 233-239, 242, 246-247, 296-297, 298. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Weed Biology and Management* 3(4): 197-203. Dec 2003, *Restoration Ecology* 12(3): 368-375. Sep 2004, Renata Reinheimer, Raúl Pozner and Abelardo C. Vegetti, “Inflorescence, spikelet, and floral development in *Panicum maximum* and *Urochloa plantaginea* (Poaceae).” *Am. J. Bot.* 92: 565-575. 2005.

Species

E. acuminata (J. Presl) Kunth (*Eriochloa gracilis* (E. Fourn.) Hitchc.; *Eriochloa lemmonii* Vasey & Scribn.; *Eriochloa lemmonii* var. *gracilis* (E. Fourn.) Gould; *Helopus acuminatus* (J. Presl) Steud.; *Helopus gracilis* E. Fourn.; *Piptatherum acuminatum* J. Presl)

Southwest U.S., New Mexico, Louisiana, Arkansas. Annual, forage, weed species of corn and soybeans, economic plant, see *Reliquiae Haenkeanae* 1(4-5): 221. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 72. 1833, *Nomenclator Botanicus. Editio secunda* 1: 747. 1840, *Botanical Gazette* 9(12): 185, pl. 2. 1884, *Mexicanas Plantas* 2: 13. 1886 and *Journal of the Washington Academy of Sciences* 23(10): 455. 1933, *Leaflets of Western Botany* 6(2): 51. 1950, *Taxon* 33: 126-134. 1984.

in English: taper-tip cup grass, cup grass

in Colombia: liendre de puerco

E. acuminata (J. Presl) Kunth var. ***acuminata*** (*Eriochloa gracilis* (E. Fourn.) Hitchc.; *Eriochloa gracilis* var. *gracilis*; *Eriochloa lemmonii* var. *gracilis* (E. Fourn.) Gould; *Eriochloa montevidensis* Griseb.; *Helopus acuminatus* (J. Presl) Steud.; *Helopus gracilis* E. Fourn.; *Piptatherum acuminatum* J. Presl)

Southwest U.S., Arizona, New Mexico, Louisiana, Arkansas, California. Annual, glabrous, caespitose, decumbent, smooth leaves, reproduce from the germination of abundant seeds, weed species, potentially a pest, growing in cultivated and disturbed sites, margin of field, floodplain soils, see *Reliquiae Haenkeanae* 1(4-5): 221. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 72. 1833, *Nomenclator Botanicus. Editio secunda* 1: 747. 1840, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 306. 1879, *Symbolae ad Floram Argentinam* 306. Göttingen 1879, *Botanical Gazette* 9(12): 185, pl. 2. 1884, *Mexicanas Plantas* 2: 13. 1886 and *Journal of the Washington Academy of Sciences* 23(10): 455. 1933, *Leaflets of Western Botany* 6(2): 51. 1950, *Sida* 12(1): 165-207. 1987, Kucera, Clair L., *The Grasses of Missouri* 1998.

in English: Southwestern cup grass, taper-tipped cup grass, taper-tip cup grass

E. acuminata (J. Presl) Kunth var. ***minor*** (Vasey) R.B. Shaw (*Eriochloa gracilis* (E. Fourn.) Hitchc. var. *minor* (Vasey) Hitchc.; *Eriochloa lemmonii* var. *minor* (Vasey) Beetle; *Eriochloa punctata* var. *minor* Vasey; *Eriochloa texana* Mez)

Northern America, U.S., Mexico, New Mexico. Annual, see *Prodromus Plantarum Indiae Occidentalis* 5. 1825, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 72. 1833, *Botanical Gazette* 9(12): 185, pl. 2. 1884, *Contributions from the United States National Herbarium* 3(1): 21. 1892 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 12. 1921, *Journal of the Washington Academy of Sciences* 23(10): 455-456. 1933, *Phytologia* 54(1): 2. 1983, *Sida* 12(1): 174. 1987.

in English: small Southwestern cup grass, plains cup grass

E. aristata Vasey (*Eriochloa boxiana* Hitchc.; *Eriochloa punctata* var. *aristata* (Vasey) M.E. Jones) (named for Harold Edmund Box, b. 1898)

Northern and southern America, U.S., Mexico, Guatemala. Annual, forage, found in damp places, open areas, abandoned lands, swamps, see *Bulletin of the Torrey Botanical Club* 13(12): 229. 1886 and *Contributions to Western Botany* 14: 11. 1912, *Publications of the Carnegie Institution of Washington* 436: 339. 1934, *Sida* 12(1): 174. 1987.

in English: awned cup grass, bearded cup grass

E. aristata Vasey var. ***aristata*** (*Eriochloa punctata* var. *aristata* (Vasey) M.E. Jones)

Northern America, U.S., California. Annual.

in English: pointed cup grass

in Spanish: zacate taza

E. aristata Vasey var. ***boxiana*** (Hitchc.) R.B. Shaw (*Eriochloa boxiana* Vasey; *Eriochloa montevidensis* Griseb.)

Central and South America. Sandy places, near beaches, see *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 306. 1879 [*Symbolae ad Floram Argentinam* 306. Göttingen 1879], *Bulletin of the Torrey Botanical Club* 13(12): 229. 1886 and *Publications of the Carnegie Institution of Washington* 436: 339. 1934, *Sida* 12: 177. 1987.

E. australiensis Stapf ex Thell. (*Eriochloa longiflora* S.T. Blake)

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Annual, multistemmed, green to light green, leaves glabrous, leaf sheaths hairy and more or less inflated, panicle with many erect branches, short pedicels, racemes erect and appressed, silky and alternate spikelets long-acuminate, lower glume cupuliform, fertile lemma mucronate, economic plant, useful for erosion control, forage, palatable, see *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 697. 1919.

in English: Australian cup grass

E. boliviensis Renvoize

South America, Bolivia, Brazil. Annual, tufted, leaf blades linear and acuminate, pubescent racemes, solitary spikelets, lower glume reduced, moist sites.

E. contracta A.S. Hitchc. (*Helopus mollis* Müll.Stuttg., or Müll.Hal.)

Northern America, U.S., Arkansas. Annual, pubescent stems and blades, linear leaves, narrow inflorescence, short racemes, spikelet with a cuplike structure, awned fertile lemma, short grain, weedy grass, invasive, economic plant, naturalized, seeds are the only source of reproduction, grows on moist fields and ditches, open places, old fields, shade, in loose sand, corn and sorghum fields, pond banks, often in alluvial fields and river valleys, roadsides, waste ground and disturbed sites, see *Botanische Zeitung. Berlin*

19(43): 314. 1861 and *Proceedings of the Biological Society of Washington* 41: 163. 1928, *Sida* 12(1): 165-207. 1987.

in English: prairie cup grass, dense cup grass

E. crebra S.T. Blake (Latin *creber*, *bra*, *brum* “thick, close, numerous, clustered”)

Northern Territory, Queensland, New South Wales. Annual or shortly perennial, caespitose, erect, multistemmed, leaves glabrous and flat, leaf sheath smooth and glabrous, panicle with several scabrous branches, spikelets crowded and overlapping on the racemes, spikelets usually silky or sparsely hairy and acute or shortly acuminate, lower glume cupuliform, fertile lemma mucronate, forage, economic plant, indeterminate plant in Victoria, useful for erosion control, grows in dry grassland, on dark brown clay, in open grassland, confused with *Eriochloa pseudoacrotricha* (Stapf ex Thellung) J.M. Black, see *Proceedings of the Royal Society of Queensland* 59(7): 156-157. 1948.

in English: tall cup grass, cup grass

E. decumbens F.M. Bailey (*Eriochloa acrotricha* var. *decumbens* (F.M. Bailey) Domin; *Eriochloa nubica* (Steud.) Hack. & Stapf ex Thell.)

Australia, Pacific. See *Synopsis Plantarum Glumacearum* 1: 100. 1854, *Queensland Agricultural Journal* 1: 234. 1897 and *Bibliotheca Botanica* 85: 290. 1915, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 697. 1919.

E. distachya Kunth (*Eriochloa tridentata* (Trin.) Kuhl.; *Helopus brachystachys* Trin.; *Paspalum brachystachyum* (Trin.) Trin.; *Paspalum tridentatum* Trin.)

Costa Rica, Bolivia, Paraguay. Perennial, caespitose, erect or geniculate, branched, leaf blades linear and acuminate, leaves pilose or subglabrous, solitary spikelets, lower glume reduced, dry or moist habitats, see *Nova Genera et Species Plantarum* 1: 95, t. 30. 1815 [1816], *De Graminibus Panicis* 119. 1826, *Species Graminum* 3: t. 277. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 133. 1834 and *Comissão de Linhas Telegraficas, Botanica* 67(Bot. 11): 89. 1922.

E. eggersii Hitchc.

Ecuador. See *Contributions from the United States National Herbarium* 24(8): 430. 1927.

E. fatmensis (Hochst. & Steud.) W.D. Clayton (*Brachiaria leucacantha* (Schum.) Stapf; *Digitaria acrotricha* (Steud.) Roberty; *Eriochloa acrotricha* (Hook.f.) Schinz; *Eriochloa acrotricha* Hack. ex Thell., nom. illeg.; *Eriochloa acrotricha* (Steud.) Hack., nom. illeg., non *Eriochloa acrotricha* (Hook.f.) Schinz; *Eriochloa acrotricha* (Steud.) Thell.; *Eriochloa annulata* var. *acrotricha* (Steud.) Benth.; *Eriochloa fouchei* Stent; *Eriochloa nubica* (Steud.) Hack. & Stapf ex Thell.; *Eriochloa procera* auct. non (Retz.) C.E. Hubbard; *Eriochloa punctata* var. *acrotricha* (Steud.) K. Schum.;

Helopus acrotrichus Steud., nom. illeg. superfl.; *Helopus nubicus* Steud.; *Panicum acrotrichum* Hook.f.; *Panicum annulatum* A. Rich.; *Panicum fatmense* Hochst. & Steud.; *Panicum leucacanthum* Schum.; *Paspalum dimidiatum* L.)

Tropical and South Africa, Yemen, Thailand, India. Annual, leafy, clumped, creeping and ascending, erect or geniculately ascending, floating culms, ligule a dense fringe of hairs, linear leaf-blades, inflorescence narrow, silky spikelets paired, lower floret sterile, a tiny beadlike swelling below each spikelet, lower glume absent, upper glume shortly awned or attenuate to an awnlet, upper lemma mucronate, palea absent, seeds shed easily, used for thatching, naturalized, a weed on arable land, grains eaten by humans and wild animals, quite palatable, good grazing grass, grazed by stock, useful for erosion control, little drought tolerance, tolerates seasonal flooding and slightly saline soils, grows on alluvial soil in dry areas, marshes, wadi beds, black clay, dry arid localities, seasonally flooded disturbed places, inundated fields and seasonally flooded soils, dry sandy soils, lake sides, heavy soils, areas of cultivation, irrigated fields, on stream banks and roadsides, lagoon flats, damp and swampy places in grassland, on sandy and alluvial loams, sandy depressions, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Tentamen Florae Abyssinicae ...* 2: 370. 1850, *Synopsis Plantarum Glumacearum* 1: 100. 1854, *Journal of the Linnean Society, Botany* 7: 226. 1864, *Flora Australiensis: A Description ...* 7: 463. 1878, *Die Pflanzenwelt Ost-Afrikas* C: 100, 102. 1895, *Queensland Agricultural Journal* 1: 234. 1897 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 52: 435. 1907, *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Flora of Tropical Africa* 9: 500, 540. 1919, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 697. 1919, *Bothalia* 1: 260. 1924, *Bulletin de l'Institut Française d'Afrique Noire* 17: 63. 1955, *Kew Bulletin* 30(1): 108. 1975, *J. Cytol. Genet.* 20: 205-206. 1985, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, Phillips, S., *Flora of Ethiopia and Eritrea* 7: 1-420. 1995.

in English: tropical cup grass, ants millet

in Niger: buteri, kormoto

in Nigeria: geron kiyasi, geron kiyashi, gheron kiyashi

in Somalia: dalad, dhalad, darabo, agar

E. grandiflora (Trin.) Benth. (*Helopus grandiflorus* Trin.; *Paspalum ctenastachyum* Trin.)

Brazil, Paraguay, Bolivia. Perennial, caespitose, straight and erect, leaf blades linear and attenuate, racemes strongly unilateral, spikelets acute, lower glume reduced, in grassland, see *Species Graminum* 1828-1836, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 133. 1834, *Journal of the Linnean Society, Botany* 19: 39.

1881 and *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

E. hackelii Honda

Japan. See *Botanical Magazine* (Tokyo) 37: 115. 1923.

E. leersioides (Munro) Hack.

U.S. Weed, probably introduced.

in English: sharp cup grass

E. lemmonii Vasey and Scribner (*Eriochloa lemmonii* var. *lemmonii*) (named for the American botanist John Gill Lemmon, 1832-1908, plant collector in Southern Arizona and Huachuca Mountains near Sierra Vista, correspondent of Asa Gray, he married Sara Allen Plummer (1836-1923), wrote *Conifers of the Pacific Slope*. [Oakland, California 1902]. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 367 and 3: 93. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 262. 1973; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 234. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Joseph Ewan, editor, *A Short History of Botany in the United States*. 12. 1969; J.W. Harshberger, *The Botanists of Philadelphia*. Philadelphia 1899; *Botanical Gazette* 9: 185, t. 2. 1884; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Ira L. Wiggins, *Flora of Baja California*. Stanford, California 1980; *Desert Plants*. vol. 1 no. 1, August 1979)

Northern America, U.S., Arkansas, Arizona, Texas, Sinaloa, Mexico, Sonora, Chihuahua. Rare species, forage, see *Botanical Gazette* 9(12): 185, pl. 2. 1884, *Mexicanas Plantas* 2: 13. 1886, *Contributions from the United States National Herbarium* 3(1): 21. 1892 and *Leaflets of Western Botany* 6(2): 51. 1950, *Phytologia* 54(1): 2. 1983, *Sida* 12: 184. 1987.

in English: canyon cup grass

E. longiflora S.T. Blake

Australia. See *Papers from the Department of Botany, University of Queensland* 1(18): 18. 1941.

E. macclounii Stapf (named for the British forester John McClounie, 1895-1897 and 1902-1903 botanical collector in Tropical Africa, Malawi, Zambia, author of *Rainfall Forecasts and Estimates from 1st June, 1903 to 31st May 1904* [Zomba, Nyasaland, Malawi] 1903; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists* 448.

London 1994; Association for the Taxonomic Study of the Flora of Tropical Africa. Plenary Meeting (13th: 1991: Zomba: Malawi) Proceedings of the 13th plenary meeting of AETFAT, Zomba Malawi, 2-11 Apr, 1991 / edited by J.H. Seyani and A.C. Chikuni. - Zomba: National Herbarium and Botanical Gardens, 1994. -2 Vols.)

Tanzania, Mozambique, Botswana. Annual, tufted, upper glume awned, lower floret staminate, palea present, found in grassland, floodplain, flooded grasslands, see *Flora of Tropical Africa* 9: 501. 1919.

E. meyeriana (Nees) Pilg. (*Eriochloa borumensis* sensu Hack., non Stapf; *Eriochloa meyeriana* subsp. *grandiglumis* (Stent & Rattray) Gibbs.-Russ.; *Panicum meyerianum* Nees; *Panicum meyerianum* var. *grandiglume* Stent & Rattray; *Panicum mite* Steud.; *Panicum schimperianum* Hochst. ex A. Rich.)

Tropical and South Africa, Arabia, Yemen, Tanzania, Swaziland, Botswana. Perennial, often woody, erect, decumbent, creeping and ascending, rooting from the lower nodes, branched to much-branched, often scrambling, forming large clumps, ligule a ciliate fringe, leaves flat, inflorescence a rather narrow panicle with lax pedunculated racemes along an axis, racemes often compound, spikelets glabrous paired or densely clustered on branchlets, lower floret paleate, lower glume present, upper glume acute, upper lemma mucronate, useful for erosion control, common in saline flooded grasslands, scrubby vegetation, swamps, on riverbanks, streambanks, wet wooded grasslands, see *Flora of Africa Australioris Illustrationes Monographicae* 32. 1841, *Tentamen Florae Abyssinicae ...* 2: 371. 1850, *Synopsis Plantarum Glumacearum* 1: 68. 1854 and *Bulletin de l'Herbier Boissier, sér. 2*, 1: 765. 1901, *Proceedings of the Rhodesia Scientific Association* 32: 28. 1933, *Die Natürlichen Pflanzenfamilien* edition 2 14e: 56. 1940, *Bothalia* 13(3-4): 457. 1981.

E. meyeriana subsp. *grandiglumis* (Stent & Rattray) Gibbs-Russell (*Panicum meyerianum* Nees var. *grandiglume* Stent & Rattray)

South Africa, Zimbabwe. Perennial, rare, lower glume acute, found along riverbanks, floodplains, low veld, see *Proceedings of the Rhodesia Scientific Association* 32: 28. 1933, *Bothalia* 13(3-4): 457. 1981.

E. meyeriana subsp. *meyeriana* (*Eriochloa borumensis* sensu Hack., non Stapf; *Panicum meyerianum* Nees var. *meyerianum*)

Tropical Africa, South Africa. Perennial or annual, robust, geniculate, rooting at the lower nodes, upper glume acute, found along riverbanks and lakeshore, floodplains, sandy soils, wet places.

E. michauxii (Poir.) A.S. Hitchc. (*Eriochloa debilis* Mez; *Eriochloa longifolia* (Vasey) Vasey; *Eriochloa mollis* (Michx.) Kunth; *Eriochloa mollis* var. *longifolia* Vasey; *Panicum georgicum* Spreng.; *Panicum michauxianum*

Schult.; *Panicum michauxii* Poir.; *Panicum molle* Michx., nom. illeg., non *Panicum molle* Sw.) (named for the French explorer André Michaux, 1746-1803 (died on an expedition to Madagascar), botanist and plantsman, plant collector, 1782-1785 Persia, 1785-1796 North America, author of *Flora Boreali-Americana*. 1: 51. Paris 1803 [Repr. New York 1973, intro. by J. Ewan], father of the French botanist François-André Michaux (1770-1855). See Stafleu and Cowan, *Taxonomic literature*. 3: 456-464. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 2: 485. 1965; Warren R. Dawson, *The Banks Letters*. London 1958; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. 3: 185. London 1796-1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; Jeannette E. Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Harvard University Press 1967; J. Ewan, editor, *A Short History of Botany in the United States*. 1969; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 134. Berlin & Hamburg 1989; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 751. Stuttgart 1993; Helmut Genauß, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 384. Basel 1996; Joseph Ewan, in *D.S.B.* 9: 365-366. [d. 1802] 1981; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; William Darlington, *Reliquiae Baldwinianae*. Philadelphia 1843; E. Earnest, *John and William Bartram, Botanists and Explorers 1699-1777, 1739-1823*. Philadelphia 1940; John Dunmore, *Who's Who in Pacific Navigation*. Honolulu 1991)

U.S., Alabama, Florida, Georgia, South Carolina, Louisiana. Vulnerable species, see *Flora Boreali-Americana* 1: 47. 1803, *Encyclopédie Méthodique, Botanique Suppl.* 4: 278. 1816, *Mantissa* 2: 227. 1824, *Systema Vegetabilium, editio decima sexta* 1: 308. 1825, *Révision des Graminées* 1: 30. 1829, *Bulletin of the Torrey Botanical Club* 13(2): 25. 1886, *Contributions from the United States National Herbarium* 3(1): 21. 1892 and *Contributions from the United States National Herbarium* 12(3): 147. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 12. 1921, *Proceedings of the Biological Society of Washington* 41: 163. 1928, *Sida* 12(1): 165-207. 1987.

in English: Michaux cup grass, Michaux's cup grass, long-leaf cup grass

E. michauxii (Poir.) A.S. Hitchc. var. ***michauxii*** (*Eriochloa debilis* Mez; *Eriochloa longifolia* (Vasey) Vasey; *Eriochloa mollis* (Michx.) Kunth; *Eriochloa mollis* var. *longifolia* Vasey; *Eriochloa mollis* var. *mollis*; *Panicum digitarioides* Raspail ex Kunth; *Panicum georgicum* Spreng.; *Panicum*

michauxianum Schult.; *Panicum michauxii* Poir.; *Panicum michauxii* Roem. & Schult.; *Panicum molle* Michx., nom. illeg., non *Panicum molle* Sw.)

U.S., Georgia. Coastal freshwater and brackish marshes, flatwoods, see *Flora Boreali-Americana* 1: 47. 1803, *Encyclopédie Méthodique, Botanique Suppl.* 4: 278. 1816, *Systema Vegetabilium* 2: 427. 1817, *Mantissa* 2: 227. 1824, *Systema Vegetabilium, editio decima sexta* 1: 308. 1825, *Révision des Graminées* 1: 30. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 53. 1833, *Bulletin of the Torrey Botanical Club* 13(2): 25. 1886, *Contributions from the United States National Herbarium* 3(1): 21. 1892 and *Contributions from the United States National Herbarium* 12(3): 147. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 12. 1921.

E. michauxii (Poir.) A.S. Hitchc. var. ***simpsonii*** (Hitchc.) A.S. Hitchc.

U.S., Florida. Vulnerable and threatened species, see *Contributions from the United States National Herbarium* 12(3): 147. 1908, *Proceedings of the Biological Society of Washington* 41: 163. 1928.

in English: cup grass, Simpson's cup grass

E. montevidensis Griseb. (*Eriochloa montevidensis* f. *subcolorata* Hack.; *Eriochloa punctata* var. *montevidense* (Griseb.) Herter; *Eriochloa punctata* (L.) Desv. ex Ham.; *Eriochloa punctata* var. *montevidensis* (Döll) Herter; *Helopus annulatus* var. *montevidensis* Döll; *Milium punctatum* L.)

Uruguay, Argentina. See *Systema Naturae, Editio Decima* 872. 1759, *Prodromus Plantarum Indiae Occidentalis* 5. 1825, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 306. 1879 [also *Symb. Fl. Argent.* 306. 1879] and *Anales del Museo Nacional de Buenos Aires* 11: 65. 1904, *Anales del Museo Nacional de Montevideo*, ser. 2, 3(1): 47. 1929.

E. nana Arriaga

Argentina. See *Hickenia* 2(32): 139-142. 1995.

E. nelsonii Scribner & J.G. Sm.

Mexico. Forage, see *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 12-13. 1897.

E. nelsonii Scribner & J.G. Sm. var. ***nelsonii***

America.

E. nelsonii Scribner & J.G. Sm. var. ***papillosa*** R.B. Shaw

Mexico. Forage, see *Flora Novo-Galiciana* 14: 178, f. 5e-f. 1983.

E. pacifica Mez

Ecuador, Peru. Annual, erect or spreading, branched, more or less pubescent, sheath margins ciliate, ligule a row of hairs, leaf blades narrowly lanceolate, ascending or spreading racemes, spikelets densely pubescent, first

glume lacking, second glume extending into an awn, sterile lemma pointed, fertile lemma mucronate or awn-pointed, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921, *Contr. U.S. Natl. Herb.* 24: 429, 430. 1927, *Sida* 12: 192. 1987.

E. parvispiculata C.E. Hubb.

Tropical East Africa, Zanzibar. Perennial, tufted, upper glume mucronate, rare, confused with *Eriochloa fatmensis* (Hochst. & Steud.) W.D. Clayton, found along riverbanks, floodplains, sandy soils, wet places, see *Bulletin of Miscellaneous Information Kew* 1934: 111. 1934.

E. peruviana Mez

South America. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 12. 1921.

E. polystachya Kunth (*Brachiaria mutica* (Forssk.) Stapf; *Eriochloa polystachya* Hook.f., nom. illeg., non *Eriochloa polystachya* Kunth; *Eriochloa polystachya* Ridl., nom. illeg., non *Eriochloa polystachya* Kunth; *Eriochloa punctata* (L.) Desv. ex Ham. var. *subglabra* (Nash) Urb.; *Eriochloa subglabra* (Nash) Hitchc.; *Helopus polystachys* (Kunth) Trin. ex Steud., also spelled *polystachyus*; *Milium polystachyon* (Kunth) Spreng.; *Monachne subglabra* Nash; *Paspalum polystachyum* (Kunth) Raspail, nom. illeg., non *Paspalum polystachyum* R. Br.)

Northern and southern America, Mexico, Brazil, Venezuela, Jamaica, Cuba, Suriname. Annual or perennial, rather thick, densely tufted, branched, trailing, creeping, decumbent, erect, rooting at the lower nodes, velvety nodes, basal sheaths hirsute, ligule a ring of hairs, leaves spreading, panicle terminal, spikes spreading or ascending, spikelets acute subtended by a dark disc, glumes more or less hairy, fertile lemma wrinkled, green fruits, growing in dense colonies, cultivated, naturalized, economic plant, withstands waterlogging, palatable, fodder, forage, noxious weed, potential seed contaminant, weed of rice in Indonesia, similar to *Brachiaria mutica* (Forssk.) Stapf and *Brachiaria purpurascens* (Raddi) Henrard, grows in humid areas, wet soils, roadsides, along riverbanks, wetlands, see *Flora Aegyptiaco-Arabica* 20. 1775, *Nova Genera et Species Plantarum* 1: 95, t. 31. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 252. 1825, *Annales des Sciences Naturelles, Botanique* 5: 301. 1825, *Nomenclator Botanicus. Editio secunda* 1: 747. 1840, *The Flora of British India* 7: 20. 1896 and *Symbolae Antillarum* 4: 85. 1903, *Bulletin of the Torrey Botanical Club* 30(7): 374. 1903, *Materials for a Flora of the Malayan Peninsula* 3: 127. Singapore 1907 [printed at the Methodist's Publishing House], *Contributions from the United States National Herbarium* 12(6): 208. 1909, *A Census of New South Wales Plants* 16. 1916, *Flora of Tropical Africa* 9: 526. 1919, *Ciencia e Cultura (São Paulo)* 29: 1032-1034. 1977, *Flora of Puerto*

Rico and Adjacent Islands: A Systematic Synopsis 1-342. 1982, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Canad. J. Bot.* 65: 2297-2309. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: Carib grass, Carib cup grass, early spring grass
in Spanish: malojilla

in the Caribbean: para, faux para

in Colombia: janeiro

in Mexico: janeiro, pasto caribe, pasto palojilla, zacate de caribe

E. procera (Retz.) C.E. Hubb. (*Agrostis procera* Retz.; *Agrostis procera* A. Rich., nom. illeg., non *Agrostis procera* Retz.; *Agrostis ramosa* (Retz.) Poir.; *Eriochloa annulata* (Fluegge) Kunth; *Eriochloa polystachya* Hook.f., nom. illeg., non *Eriochloa polystachya* Kunth; *Eriochloa polystachya* var. *annulata* (Fluegge) Maiden & Betche; *Eriochloa procera* var. *procera*; *Eriochloa ramosa* (Retz.) Kuntze; *Eriochloa ramosa* var. *barbata* Peter; *Helopus annulatus* (Fluegge) Nees; *Helopus laevis* Trin.; *Milium ramosum* Retz.; *Paspalum annulatum* Fluegge; *Piptatherum annulatum* (Fluegge) J. Presl, nom. illeg., non *Piptatherum annulatum* Raddi; *Thysanolaena procera* (Retz.) Mez (from the Latin *procera*, a, um, "high, tall")

Tropics, Africa, Asia, Australia. Short lived perennial or slender annual, leafy, herbaceous, caespitose, erect or ascending or sprawling, with many branches or simple, rooting at the lower nodes, leaf blades long-acuminate and finely pointed, leaf sheath smooth and glabrous, ligule a fringe of hairs, panicles contracted and loose, spikelets solitary or paired, glabrous pedicel, fertile floret mucronate, lower glume minute and cupular sterile lemma acute, naturalized weed of cultivation, ruderal, high tolerance of saline condition, good nutritious fodder, forage crop, palatable, grows on disturbed ground, grassland, open areas, jungle, damp areas, scrubs, wetlands, wet places, marshland, heavy soils, seasonally flooded sites, along irrigation canals, plantations, see *Observationes Botanicae* 4: 19. 1786, *Observationes Botanicae* 6: 22. 1791, *Graminum Monographiae ... Pars. I. Paspalum. Reimaria* 133. 1810, *Encyclopédie Méthodique, Botanique Suppl.* 1: 257. 1810, *Nov. Gen. Sp.* [quarto] 1: 95, [folio] 1: 79. 1816, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 49. 1821, *Révision des Graminées* 1: 30. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 17. 1829, *Reliquiae Haenkeanae* 1(4-5): 221. 1830, *Voyage de Découvertes autour du Monde ... sur la corvette L'Astrolabe pendant les Années 1826-1829...* *Botanique* 1: 125. 1832, *Enum. Pl. Zeyl.* 5: 358. 1864, *Revisio Generum Plantarum* 2: 775. 1891, *The Flora of British India* 7: 20. 1896 and *Handb. Fl. Ceylon* 5: 126. 1900, *A Census of New South Wales Plants* 16. 1916, *Botanisches Archiv* 1(1): 27. 1922, *Repertorium Specierum Novarum Regni Vegetabilis* 40(Beih): 159. 1930, *Bulletin of Miscellaneous Information Kew*

1930: 256. 1930, *Handb. Fl. Ceylon* 6: 316. 1931, *Reinwardtia* 2(2): 276. 1953, *Grasses of Ceylon* 147. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 128. 1959, *Grasses of Burma* ... 312. 1960, *Dansk Botanisk Arkiv* 20(2): 160. 1962, *Micronesica* 18(2): 45-102. 1982, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: spring grass

in India: karungaani pul, karungani pillu, maathangi hullu, maathanka pullu, mathanka pillu, tadambaran pullu, tandambaran pillu

in Thailand: yaa nok, ya nok, ya yung, yaa yuung

E. pseudoacrotricha (Stapf ex Thellung) J.M. Black (*Eriochloa procera* (Retz.) C.E. Hubb. var. *involucrata* (Hack.) Jansen; *Eriochloa pseudoacrotricha* (Stapf ex Thell.) C.E. Hubb. ex S.T. Blake, nom. illeg., non *Eriochloa pseudoacrotricha* (Stapf ex Thell.) J.M. Black; *Eriochloa punctata* (L.) Desv. ex Ham. var. *acrotricha* sensu J. Black; *Eriochloa ramosa* (Retz.) Kuntze var. *involucrata* Hack.; *Eriochloa ramosa* var. *pseudoacrotricha* Stapf ex Thellung) (Greek *akron*, *akros* “summit, extremity, terminal” and *thrix*, *trichos* “hair”)

Australia. Annual or short-lived perennial, loosely caespitose, several stems, leaves glabrous and flat, smooth or glabrous leaf sheath narrow and not inflated, panicle with several erect scabrous branches, short and pilose pedicels, spikelets hairy to silky and ovate-acute to long-acuminate, lower glume cupular, fertile lemma mucronate, economic plant, forage, palatable, widespread in native grassland, see *Philippine Journal of Science* 1(Suppl.): 349. 1906, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 697. 1919, *Flora of South Australia (edition 2)* 68. 1943, *Transactions and Proceedings of the Royal Society of South Australia* 67: 43. 1943, *Reinwardtia* 2(2): 276. 1953.

in English: early spring grass, plain grass, perennial cup grass

E. punctata (L.) Desv. ex Hamilton (*Agrostis decipiens* Salzm. ex Steud.; *Agrostis punctata* (L.) Lam.; *Eriochloa kunthii* G. Mey.; *Eriochloa montevidensis* Griseb.; *Eriochloa polystachya* var. *punctata* (L.) Maiden & Betche; *Eriochloa punctata* f. *intermedia* Parodi; *Eriochloa punctata* f. *punctata*; *Eriochloa punctata* (L.) Desv.; *Eriochloa punctata* Hochst., nom. illeg., non *Eriochloa punctata* (L.) Desv. ex Ham.; *Eriochloa punctata* var. *montevidense* (Griseb.) Herter; *Eriochloa punctata* var. *montevidensis* (Döll) Herter; *Eriochloa punctata* var. *parodii* Herter; *Eriochloa punctata* var. *punctata*; *Helopus cognatus* Steud.; *Helopus kunthii* (G. Mey.) Trin. ex Steud.; *Helopus punctatus* (L.) Nees; *Helopus punctatus* var. *cognatus* (Steud.) Döll; *Helopus punctatus* var. *punctatus*; *Milium punctatum* L.; *Monachne punctata* (L.) Nash; *Oedipachne punctata* (L.) Link; *Paspalum punctatum* (L.) Fluegge; *Paspalus*

punctatus (L.) Fluegge; *Piptatherum punctatum* (L.) P. Beauv.)

West Indies, southern U.S. to northern Argentina, Venezuela, Brazil, Bolivia. Annual or perennial, branched, herbaceous, glabrous, loosely tufted, decumbent base, culms geniculate ascending, stoloniferous, dark green leaves, nodes densely hairy, secondary racemes sparse more or less bilateral, silvery and nearly sessile acuminate spikelets, oblong fruits, seeds rarely viable, quite palatable hay, cultivated fodder, usually cut for green chop, invasive weed species, withstands flooding, little drought tolerance, vigorous growth, propagated vegetatively, prefers moist sandy loams, along rivers and streamlets, moist places, sandy riverbank, damp grassland, frequently found in dry seeded rice, soya bean, maize and cotton, old fields, see *Systema Naturae, Editio Decima* 872. 1759, *Amoen. Acad.* 5: 392. 1759 [1760], *Encyclopédie Méthodique, Botanique* 1: 58. 1783, *Graminum Monographiae* ... Pars. I. *Paspalum. Reimaria* 127. 1810, *Essai d'une Nouvelle Agrostographie* 18: 168, 173, t. 5, f. 11. 1812, *Primitiae Florae Essequiboensis* ... 46. 1818, *Prodromus Plantarum Indiae Occidentalis* 5. 1825, *Hortus Regius Botanicus Berolinensis* 1: 51. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 16. 1829, *Nomenclator Botanicus. Editio secunda* 1: 747. 1840, *Synopsis Plantarum Glumacearum* 1: 100-101. 1854, *Flora Brasiliensis* 2(2): 125. 1877, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24(1): 306. 1879, *Symbolae ad Floram Argentinam* 306. Göttingen 1879, *Bulletin of the Torrey Botanical Club* 13(12): 229. 1886, *Contributions from the United States National Herbarium* 3(1): 21. 1892, *Die Pflanzenwelt Ost-Afrikas* C: 100. 1895 and *Bulletin of the Torrey Botanical Club* 30(7): 374. 1903, *Symbolae Antillarum* 4: 85. 1903, *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *Contributions to Western Botany* 14: 11. 1912, *A Census of New South Wales Plants* 16. 1916, *Anales del Museo Nacional de Montevideo*, ser. 2, 3(1): 47. 1929, *Kurtziana* 2: 102. 1965, *Hickenia* 1: 73-78. 1977, *Sida* 12: 174. 1987.

in English: Carib grass, Louisiana cup grass, everlasting grass, punctate cup grass

in Spanish: pasto amargo

in Bolivia: avenilla

in Mexico: piojillo peludo

E. sericea (Scheele) Munro ex Vasey (*Helopus junceus* Müll. Hal.; *Panicum sericatum* Scheele ex Steud.; *Paspalum racemosum* Nutt., nom. illeg., non *Paspalum racemosum* Lam.; *Paspalum sericeum* Scheele)

Northern America, Mexico, U.S., Texas, Oklahoma. Perennial bunchgrass, large tufts, blades soft and lax, ligule a dense ring of straight hairs, narrow inflorescence, pale seed head, each spikelet with a cuplike structure, conspicuously hairy pedicel, forage, palatable, grazing for wildlife and for

livestock, grassland habitat, most common in prairies and grassy openings, grassy plains, grows best on hills and ridges, see *Transactions of the American Philosophical Society, new series*, 5: 145. 1837, *Linnaea* 22(3): 341. 1849, *Synopsis Plantarum Glumacearum* 1: 58. 1854, *Botanische Zeitung. Berlin* 19(43): 314. 1861, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(1): t. 1. 1890 and *Contributions from the United States National Herbarium* 28(1): i-xvii, 1-310. 1929, *Sida* 12(1): 165-207. 1987.

in English: silky cup grass, Texas cup grass, cup grass

E. setosa (A. Rich.) Hitchc. (*Eriochloa filifolia* Hitchc.; *Piptatherum setosum* A. Rich.)

The Caribbean, West Indies, Cuba. Perennial, tufted, slender, leaf blades filiform, inflorescence long-exserted, spikelets loosely arranged, second glume and sterile lemma acuminate to awn-tipped, see *Historia Fisica Politica y Natural de la Isla de Cuba, Botanica* 11: 311. 1850 and *Contributions from the United States National Herbarium* 12(6): 207-208. 1909, *Manual of the Grasses of the West Indies* 182-183. 1936.

E. setosa (A. Rich.) Hitchc. var. ***ekmanii*** (Hitchc.) R.B. Shaw (*Eriochloa ekmanii* Hitchc.)

Cuba. Perennial, slender, tufted, branched, decumbent at base, leaf sheaths puberulent, leaf blades flat or involute, see *Manual of the Grasses of the West Indies* 183. 1936, *Sida* 12: 202. 1987.

E. setosa (A. Rich.) Hitchc. var. ***setosa***

South America.

E. stapfiana Clayton (*Eriochloa borumensis* Stapf)

Tropical East Africa. Perennial, tufted, robust, leaf sheath shortly hairy, inflorescence ascending, a contracted panicle, spikelets with dark pedicels, lower floretstaminate, upper glume mucronate or awned, lemma with a sharp tip, pasture grass, grows on heavy soils, in wet areas, riverbanks, see *Kew Bulletin* 30(1): 109. 1975.

in English: harpoon grass

in South Africa: harpoengras

E. stevensii Davidse (*Eriochloa multiflora* Renvoize)

Nicaragua, Ecuador. Erect, savannah, see *Novon* 2(4): 325, f. 3A-F. 1992, *Kew Bulletin* 50(2): 345, f. 2. 1995.

E. tridentata (Trin.) Kuhl. (*Eriochloa distachya* Kunth; *Helopus tridentatus* (Trin.) Steud.; *Paspalum tridentatum* Trin.)

South America. See *Nova Genera et Species Plantarum* 1: 95, t. 30. 1815 [1816], *De Graminibus Paniceis* 119. 1826, *Synopsis Plantarum Glumacearum* 1: 100. 1854 and *Commissão de Linhas Telegraficas, Botanica* 67(Bot. 11): 89. 1922.

E. villosa (Thunb.) Kunth (*Eriochloa villosa* var. *stenantha* Ohwi; *Helopus villosus* (Thunb.) Nees; *Helopus villosus* (Thunb.) Nees ex Steud., nom. illeg., non *Helopus villosus*

(Thunb.) Nees; *Paspalum distichum* Houtt., nom. illeg., non *Paspalum distichum* L.; *Paspalum villosum* Thunb.)

Asia temperate, China, Japan, Taiwan. Annual, densely pubescent, dark green, loosely clumped, erect, tillers profusely at base, adventitious root can form at base of plant, leaf sheath open near the collar and overlaps at base, leaf sheath densely covered with very short hairs, ligule a fine fringe of hairs, no auricle present, linear and velvety leaves, 1 leaf blade edge wrinkled or crinkled, several racemes per panicle, very large oval to roundish seeds hang in 2 rows from the raceme, spikelets pubescent and elliptic, very hairy pedicels, hardened first glume, upper lemma mucronate, cuplike depression at the base of the seed, seed light green to tan-brown to purple depending upon maturity, seeds shatter readily as they mature, economic plant, ornamental, naturalized, a prolific seed producer, potential seed contaminant, aggressive competitor with most crops, weed species in corn fields, see *Natuurlijke Historie* 13: 167, t. 89, f. 4. 1782 [this is a Dutch version of Linnaeus, *Syst. Nat.* edition 12, 1767, amended and enlarged], *Nova Acta Soc. Sc. Upsal.* 4: 40. 1783, *Flora Japonica, ...* 45. 1784, *Révision des Graminées* 1: 30. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 17. 1829, *Nomenclator Botanicus* 1(2): 747. 1840, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 49. 1885 and *Repertorium Specierum Novarum Regni Vegetabilis* 36(936-941): 41. 1934, *Journal of Cytology and Genetics* 18: 26-33, 60-61. 1983, *Blumea* 30: 279-318. 1985, *Journal of Cytology and Genetics* 22: 161-162. 1987.

in English: hairy cup grass, woolly cup grass, Chinese cup grass

in Japan: naruko-bie (= clapper *Echinochloa*)

E. weberbaueri Mez

Peru. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921.

Eriochrysis P. Beauv. = *Leptosaccharum* (Hack.) A. Camus, *Plazerium* Kunth

From the Greek *erion* "wool" and *chrysos* "gold, golden," referring to the color of the hairs.

About 7 species, tropics of America and Africa, India. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial, tufted, herbaceous, unbranched, internodes hollow, leaves mostly basal, auricles absent, ligule a fringed membrane, sometimes shortly rhizomatous, plants bisexual, narrow inflorescence spicate or paniculate, several rufous racemes more or less appressed or compact, spikelets paired sessile and pedicellate, pedicelled spikelets male, sessile spikelet bisexual and bearded, 2 glumes more or less equal,

lower glume 2-keeled or broadly convex, upper glume 1- to 3-nerved, upper lemmas awnless, palea absent, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, species of open habitats, found in swamps, marshes, riverbanks and moist places, allied to *Saccharum*, type *Eriochrysis cayennensis* P. Beauv., see *Species Plantarum* 1: 54. 1753, *Essai d'une Nouvelle Agrostographie* 8, t. 4, f. 11. 1812, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 474. 1833, *Flora Brasiliensis* 2(4): 253. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 24. 1887, *Monographiae Phanerogamarum* 6: 29. 1889 and *Bulletin de la Société Botanique de France* 70: 736. 1923, A.S. Hitchcock, *Manual of the Grasses of the West Indies* 380. 1936, *Bulletin of the Botanical Society of Bengal* 8: 143-148. 1954, *Flora Mesoamericana* 6: 379. 1994, *Flora of Ethiopia* 293-295. 1995, *Phytologia* 14(2): 89. 1966, L. Catus Guerra, "Las gramíneas (Poaceae) de Cuba, I." *Fontqueria* 46: [i-ii], 1-259. 1997, *Gramíneas de Bolivia* 566-571. 1998, *Global Ecology and Biogeography* 7(6): 441-455. Nov 1998 [The nature of savannah heterogeneity in the Orinoco Basin.], *Contributions from the United States National Herbarium* 46: 239-240, 284, 539. 2003.

Species

E. brachypogon (Stapf) Stapf (*Eriochrysis brachypogon* subsp. *australis* J.G. Anderson; *Saccharum brachypogon* Stapf)

Tropical Africa, Central African Republic. Perennial, tufted, erect, tussocky, fibrous old leaf sheaths, leaf blades narrowly linear, inflorescence hairs shorter than the spikelets, sessile spikelet 3-denticulate, rare, common in riverbanks, floodplains, seasonal ponds, vleis, bogs, marshy grassland, see *Bulletin de la Société Botanique de France* 55: 97. 1908, *Flora of Tropical Africa* 9: 93. 1917.

E. cayennensis P. Beauv. (also *cayanensis*) (*Andropogon cayennensis* (P. Beauv.) Raspail; *Eriochrysis caryanensis* P. Beauv.; *Eriochrysis glabrifolia* Swallen; *Panicum lagopus* Willd. ex Spreng.; *Saccharum cayennense* (P. Beauv.) Benth.; *Saccharum cayennense* var. *genuinum* Hack.; *Saccharum cayennense* var. *laxiusculum* Hack.; *Typha latifolia* L., Typhaceae)

Mexico to Argentina, Uruguay. Perennial, caespitose, erect, herbaceous, leaf blades densely velvety, leaves lanceolate, compact silky panicle, sessile spikelet lanceolate, found in marshy places, marshy grassland, open areas, savannah and wet savannah, in or near water, wet ground, floodplains, in standing water, along roadsides, bogs and pond, stream banks, moist slopes, see *Species Plantarum* 2: 971. 1753, *Essai d'une Nouvelle Agrostographie* 8, t. 4, f. 11. 1812, *Annales des Sciences Naturelles (Paris)* 5: 307. 1825, *Systema Vegetabilium, editio decima sexta* 1: 265. 1825, *Journal of the Linnean Society, Botany* 19: 66. 1881, *Flora Brasiliensis* 2(4): 253. 1883 and *N. Amer. Fl.* 17: 3. 1909,

The Genera of South African Flowering Plants 78. 1951, *Phytologia* 14(2): 90. 1966.

E. filiformis (Hack.) Filg. (*Andropogon filiforme* Hack. ex A. Camus, nom. illeg., non *Andropogon filiformis* Pers.; *Leptosaccharum filiforme* (Hack.) A. Camus; *Saccharum filiforme* Hack.)

America. See *Monographiae Phanerogamarum* 6: 29. 1889 and *Bulletin de la Société Botanique de France* 70: 737. 1923, *Novon* 7(3): 231-233, f. 1. 1997.

E. holcooides (Nees) Kuhl. (*Anatherum holcooides* Nees; *Andropogon holcooides* (Nees) Kunth; *Saccharum holcooides* (Nees) Hack.; *Saccharum holcooides* var. *brevipilum* Hack.; *Saccharum holcooides* var. *penicillare* Hack.)

Colombia to Paraguay. Perennial, erect, herbaceous, caespitose, growing in damp places, marshy grassland, open areas, in or near water, seasonal ponds, wet ground, floodplains, in standing water, along roadsides, bogs and ponds, stream banks, wet savannah, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 324. 1829, *Révision des Graminées* 1: 49, t. 160. 1829, *Flora Brasiliensis* 2(4): 254. 1883, *Monographiae Phanerogamarum* 6: 126. 1889 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 89. 1922.

E. pallida Munro (*Eriochrysis munroana* (Hack.) Pilg.; *Saccharum munroanum* Hack.; *Saccharum pallidum* (Munro) Benth.; *Saccharum pallidum* (Munro) Roberty, nom. illeg., non *Saccharum pallidum* (Munro) Benth.)

Tropical East Africa, Tanzania. Perennial, densely tufted, slender, erect, leaf blades narrowly linear, inflorescence hairs longer than the spikelets, sessile spikelet acute, common in riverbanks, marshy grassland, vleis, wet meadows, damp places, wet ground, floodplains, in standing water, along roadsides, seasonal ponds, bogs and ponds, see *The Genera of South African Plants* 2: 440. 1868, *Journal of the Linnean Society, Botany* 19: 66. 1881, *Monographiae Phanerogamarum* 6: 124. 1889 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 648. 1932, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 361. 1960.

E. purpurata (Rendle) Stapf (*Saccharum purpuratum* Rendle)

Tropical East Africa. See *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Flora of Tropical Africa* 9: 92. 1917.

E. rangacharii Fischer

India, Tamil Nadu, Nilgiri District. Probably extinct, perennial, tufted, erect, nodes villous, ligule shortly ciliate, leaf blades very narrow and acute, dense inflorescence, narrow panicle, 3-4 racemes sessile, 1 spikelet sessile and the other pedicelled, glumes subequal, 2 lodicules, 3 stamens, growing in hills, slopes, see *Bulletin of Miscellaneous Information*

Kew 1932: 246-247. 1932 [*Kew Bulletin*], *Flora Presid. Madras* 1710. 1934, *Grasses of Burma* ... 152. 1960.

E. warmingiana (Hack.) Kuhl. (*Eriochrysis warmingiana* (Hack.) Pilg.; *Saccharum holcooides* var. *warmingianum* (Hack.) Roberty; *Saccharum warmingiana* Hack.)

America, Bolivia, Brazil. Erect, leaf blades acute and vil-
lous, oblong panicle, spikelets sessile lanceolate, moist hab-
itats, see *Flora Brasiliensis* 2(4): 254. 1883 and *Commissão
de Linhas Telegraficas, Botanica* 67(Bot. 11): 29-30, 89.
1922, *Notizblatt des Botanischen Gartens und Museums zu
Berlin-Dahlem* 9(89): 1034. 1926, *Boissiera*. 355. 1960.

E. x concepcionensis Killeen [*Eriochrysis cayennensis* P.
Beauv. x *Eriochrysis laxa* Swallen] (*Eriochrysis concep-
cionensis* Killeen)

Mexico to Argentina, Bolivia. Perennial, caespitose, erect,
foliage mostly basal, leaf blades villous and acute, densely
silky cylindrical panicle, sessile spikelets lanceolate, wet
habitats, seasonally humid savannah, see *Annals of the Mis-
souri Botanical Garden* 77(1): 157, f. 4. 1990.

Eriocoma Nutt. = *Achnatherum* P. Beauv.,
Eriocoma Kunth (Asteraceae), *Oryzopsis*
Michx.

From the Greek *erion* “wool” and *kome* “hair of the head,
hair,” referring to the seeds.

Stipoideae, Stipeae or Pooideae, Stipeae, Stipinae or Arun-
dinoideae, Stipeae, type *Eriocoma hymenoides* (Roem. &
Schult.) Rydb., see *Flora Boreali-Americana* 1: 51, t. 9.
1803, *Essai d'une Nouvelle Agrostographie* 19, 146, pl. 6,
f. 7. 1812, *The Genera of North American Plants* 1: 40.
1818, *Nova Genera et Species Plantarum* [folio] 4: 210,
268, t. 396. 1818, *Fundamenta Agrostographiae* 109. 1820,
Species Graminum Stipaceorum 16, 19. 1842, *Genera Plan-
tarum* 3(2): 1143. 1883 and *Bulletin of the Torrey Botanical
Club* 39(3): 102. 1912, *Contr. U.S. Natl. Herb.* 24(6): 181.
1925, *Grasses: Systematics and Evolution* 75-82. 2000,
Contributions from the United States National Herbarium
48: 15-18, 312, 469-473. 2003.

Eriolytrum Kunth = *Panicum* L.

From the Greek *erion* “wool” and *elytron* “sheath, cover,
scale, husk.”

Panicoideae, Panicodae, Paniceae, Panicinae, see *Species
Plantarum* 1: 55, 58. 1753, *A Sketch of the Botany of South-
Carolina and Georgia* 1(2): 117. 1816, *Révision des
Graminées* 1: 219. 1829, *Bulletin Botanique [Genève]* 1:
220. 1830 and *Flora of the Southeastern United States* ...
104, 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910,
North American Flora 3(2): 200, 210. 1915, *Notizblatt des*

Botanischen Gartens und Museums zu Berlin-Dahlem
11(104): 242. 1931, *Taxon* 33: 126-134. 1984, *Flora
Mesoamericana* 6: 302-318. 1994, *Blumea* 41: 181-216,
416. 1996, *Taxon* 45: 319-320. 1996, *Taxon* 47: 869. 1998,
Taxon 48: 376. 1999, *Contributions from the United States
National Herbarium* 46: 306-441, 537. 2003.

Erioneuron Nash = *Dasyochloa* Willd. ex
Rydb., *Tridens* Roem. & Schult.

Greek *erion* “wool” and *neuron* “nerve,” referring to palea
hairs.

About 3-5 species, southwest U.S., Mexico, Argentina.
Chloridoideae, Eragrostideae, or Chloridoideae, Cynodon-
teae, Munroinae, perennial, herbaceous, densely caespitose
or not, erect, stoloniferous or not, leaves mostly basal, auri-
cles absent, ligule a line of hairs, plants bisexual, inflores-
cence a panicle exserted, spikelets solitary laterally
compressed, 2 glumes unequal or more or less equal, lem-
mas emarginate or lobed and shortly awned, palea ciliate
to villous, 2 fleshy lodicules cuneate, stamens 1-3, ovary
glabrous, 2 stigmas, found in rocky slopes, open habitats,
a segregate from *Tridens*, closely related to *Munroa* and
Dasyochloa, type *Erioneuron pilosum* (Buckley) Nash, see
Systema Vegetabilium 2: 34, 599. 1817, *Nomenclator Botan-
icus. Editio secunda* 1: 484. 1840 and *Flora of the South-
eastern United States* ... 143, 1327. 1903, *Agricultural
Experiment Station of the Agricultural College of Colorado.
Bulletin* 100: 18, 37. 1906 (also *Flora of Colorado*, in
*Bulletin of the Colorado State University Agricultural
Experiment Station* 100: 1-447. 1906), *Contributions from
the United States National Herbarium* 17: 181-189. 1913,
Bot. Jahrb. 76: 281-384. 1954, *Die natürlichen Pflanzen-
familien, Zweite Auflage* 14d: 36. 1956, *American Journal
of Botany* 48: 565-573. 1961, *Kurtziana* 10: 51-67. 1977,
Dominguezia 2: 1-17. 1981, *Kew Bulletin* 37: 133-162.
1982, *Lilloa* 36: 131-138. 1983, *Sida* 14: 531-549. 1991,
American Journal of Botany 81: 622-629. 1994, *Sida* 16(3):
413-426. 1995 [Anatomical study of *Erioneuron* and *Dasy-
ochloa* (Poaceae: Chloridoideae: Eragrostideae) in North
America.], *Sida* 17(4): 645-666. 1997 [A revision of *Erio-
neuron* and *Dasyochloa* (Poaceae: Eragrostideae).], *Smith-
sonian Contr. Bot.* 87: 27. 1997, *Global Change Biology*
5(6): 659-668. Aug 1999, *Contributions from the United
States National Herbarium* 41: 65-66, 115-116. 2001, *Oikos*
98(2): 284-298. Aug 2002, *Global Change Biology* 9(8):
1223-1233. Aug 2003 [*In situ* litter decomposition and litter
quality in a Mojave Desert ecosystem: effects of elevated
atmospheric CO₂ and interannual climate variability.], Qing
Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-
Xiao Liu, “Caryopsis morphology of the Chloridoideae
(Gramineae) and its systematic implications.” *Botanical
Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

E. avenaceum (Kunth) Tateoka (*Dasyochloa avenacea* (Kunth) Willd. ex Steud.; *Erioneuron avenaceum* var. *grandiflorum* (Vasey) Gould, *Erioneuron grandiflorum* (Vasey) Tateoka; *Erioneuron nealleyi* var. *grandiflorum* (Vasey) Beetle; *Koeleria avenacea* (Kunth) Spreng.; *Sieglingia avenacea* (Kunth) Kuntze; *Sieglingia avenacea* var. *grandiflora* (Vasey) L.H. Dewey; *Sieglingia grandiflora* (Vasey) Beal; *Sieglingia nealleyi* (Vasey) L.H. Dewey; *Tricuspis avenaceus* (Kunth) Thurb. ex A. Gray; *Tridens avenaceus* (Kunth) Hitchc.; *Tridens grandiflora* (Vasey) Wooton & Standl.; *Tridens grandiflora* Vasey; *Triodia avenacea* Kunth; *Triodia avenacea* var. *breviaristata* Kurtz; *Triodia grandiflora* Vasey; *Uralepis avenacea* (Kunth) Kunth; *Uralepis avenacea* var. *viridiflora* E. Fourn.)

Mexico, Argentina, southern Bolivia. Perennial, leaf blades coriaceous, panicle spiciform, spikelets oblong, lemmas ovate or oblong 2-lobed or 2-dentate, fodder, stony places, see *Nova Genera et Species Plantarum* 1: 156, t. 48. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 332. 1825, *Révision des Graminées* 1: 108. 1829, *Nomenclator Botanicus. Editio secunda* 1: 484. 1840, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 335. 1862, *Mexicanas Plantas* 2: 110. 1886, *Contributions from the United States National Herbarium* 1(2): 59. 1890, *Revisio Generum Plantarum* 2: 789. 1891, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): t. 36. 1891, *Revista del Museo de La Plata* 5: 299, 301. 1893, *Contributions from the United States National Herbarium* 2(3): 538. 1894, *Grasses of North America for Farmers and Students* 2: 471. 1896 and *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 4, 1(1): 179. 1905, *New Mexico Agricultural Experiment Station: Bulletin* 81: 129. 1912, *Contributions from the United States National Herbarium* 17(3): 357. 1913, *Revista Argentina de Agronomía* 4(4): 255-256, f. 4. 1937, *American Journal of Botany* 48(7): 572. 1961, *Phytologia* 27(6): 442-443. 1974, *Brittonia* 26(1): 60. 1974, *Kurtziana* 10: 62-63, 65. 1977, *Phytologia* 49(1): 39. 1981, *Lilloa* 36: 115. 1983, *Flora Novo-Galiciana* 14: 1-436. 1983, *Taxon* 33: 126-134. 1984.

in Mexico: falso tridente, falso tridente avenaceo, pasto, zacate

E. avenaceum (Kunth) Tateoka var. ***avenaceum***

South America.

E. avenaceum (Kunth) Tateoka var. ***kurtzianum*** (Parodi) Anton (*Dasyochloa kurtziana* (Parodi) Caro; *Tridens avenaceus* var. *kurtziana* Parodi)

Argentina. See *Contributions from the United States National Herbarium* 17(3): 357. 1913, *Revista Argentina de Agronomía* 4(4): 256. 1937, *Kurtziana* 10: 62. 1977, *Dominguezia* 2: 7, f. 3. 1981.

E. avenaceum (Kunth) Tateoka var. ***longiglume*** (Parodi) Anton (*Dasyochloa longiglumis* (Parodi) Caro; *Dasyochloa*

longiglumis var. *cabrerae* Caro; *Dasyochloa longiglumis* var. *longiglumis*; *Erioneuron avenaceum* var. *cabrerae* (Caro) E.A. Sánchez; *Tridens avenaceus* var. *longiglumis* Parodi)

South America. See *Contributions from the United States National Herbarium* 17(3): 357. 1913, *Revista Argentina de Agronomía* 4(4): 255, f. 4. 1937, *Kurtziana* 10: 65. 1977, *Dominguezia* 2: 8, 13, f. 4. 1981, *Lilloa* 36: 115. 1983.

E. avenaceum (Kunth) Tateoka var. ***pygmaeum*** (Hack.) Anton (*Dasyochloa pygmaea* (Hack.) Caro; *Tridens avenaceus* var. *pygmaea* (Hack.) Parodi; *Triodia avenacea* var. *pygmaea* Hack.)

South America. See *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 4, 1(1): 179. 1905, *Contributions from the United States National Herbarium* 17(3): 357. 1913, *Revista Argentina de Agronomía* 4(4): 253, f. 3. 1937, *Kurtziana* 10: 63. 1977, *Dominguezia* 2: 8. 1981.

E. nealleyi (Vasey) Tateoka (*Erioneuron avenaceum* var. *nealleyi* (Vasey) Gould; *Sieglingia nealleyi* (Vasey) L.H. Dewey; *Tricuspis nealleyi* (Vasey) A. Heller; *Tridens nealleyi* (Vasey) Wooton & Standl.; *Triodia nealleyi* Vasey)

America. Forage, see *Bulletin of the Torrey Botanical Club* 15: 49. 1890, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): t. 36. 1891, *Contributions from the United States National Herbarium* 2(3): 538. 1894 and *Catalogue of North American Plants North of Mexico (edition 2)* 28. 1900, *New Mexico Agricultural Experiment Station: Bulletin* 81: 129. 1912, *American Journal of Botany* 48(7): 572. 1961, *Phytologia* 27(6): 442-443. 1974, *Brittonia* 26(1): 60. 1974.

in Mexico: falso tridente blanco

E. pilosum (Buckley) Nash (*Sieglingia acuminata* (Benth. ex Vasey) Kuntze; *Sieglingia pilosa* (Buckley) Nash; *Tricuspis acuminata* Munro ex A. Gray; *Tricuspis pilosa* (Buckley) A. Heller; *Tridens pilosus* (Buckley) Hitchc.; *Triodia acuminata* Benth. ex Vasey; *Triodia pilosa* (Buckley) Merr.; *Triodia pilosa* (Buckley) Bush, nom. illeg., non *Triodia pilosa* (Buckley) Merr.; *Uralepis pilosa* Buckley)

Argentina. Forage, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 94, 335. 1862, *Revisio Generum Plantarum* 2: 789. 1891, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): 32. 1891, *Revista del Museo de La Plata* 5: 299. 1893, *An Illustrated Flora of the Northern United States* 3: 504. 1898, *Revisio Generum Plantarum* 3(2): 367. 1898 and *Catalogue of North American Plants North of Mexico (edition 2)* 2: 28. 1900, *Circular, Division of Agrostology, United States Department of Agriculture* 32: 9. 1901, *Transactions of the Academy of Science of St. Louis* 12(6): 67. 1902, *Flora of the Southeastern United States ...* 144, 1327. 1903, *Agricultural Experiment Station of the Agricultural College of Colorado. Bulletin* 100: 18, 37. 1906, *Contributions from the United States National Herbarium* 17(3): 357. 1913,

Man. Grass. U.S. 971. 1935, *Revista Argentina de Agronomía* 4(4): 251, f. 2A-B. 1937, *Darwiniana* 18: 104. 1973, *Kurtziana* 10: 58. 1977, *Darwiniana* 22(1-3): 171. 1979, *Dominguezia* 2: 4, f. 1. 1981, *Lilloa* 36: 135. 1983, *Sida* 17: 657. 1997.

in English: hairy erioneuron

E. pilosum (Buckley) Nash var. ***longearistatum*** (Kurtz) Anton (*Dasyochloa argentina* (Kuntze) Caro; *Dasyochloa argentina* var. *argentina*; *Dasyochloa argentina* var. *aristiglumis* Caro; *Dasyochloa argentina* var. *parodiana* (E.A. Sánchez) Caro; *Erioneuron avenaceum* var. *longiaristatum* (Kurtz) Beetle; *Erioneuron pilosum* var. *argentinum* (Kuntze) Nicora; *Erioneuron pilosum* var. *aristiglumis* (Caro) E.A. Sánchez; *Erioneuron pilosum* var. *parodianum* E.A. Sánchez; *Sieglingia argentina* Kuntze; *Tridens pilosus* var. *argentina* (Kuntze) Parodi; *Triodia argentina* (Kuntze) K. Schum.; *Triodia avenacea* var. *longearistata* Kurtz)

South America. See *Revista del Museo de La Plata* 5: 299. 1893, *Revisio Generum Plantarum* 3(2): 367. 1898 and *Just's Botanischer Jahresbericht*. 26(1): 331. 1900, *Contributions from the United States National Herbarium* 17(3): 357. 1913, *Revista Argentina de Agronomía* 4(4): 251, f. 2C-D. 1937, *American Journal of Botany* 48(7): 572. 1961, *Darwiniana* 18: 104. 1973, *Kurtziana* 10: 58. 1977, *Darwiniana* 22(1-3): 171. 1979, *Phytologia* 49(1): 39. 1981, *Dominguezia* 2: 4, 7, f. 1, 2. 1981, *Lilloa* 36: 135. 1983.

E. pilosum (Buckley) Nash var. ***mendocinum*** (Parodi) Nicora (*Tridens pilosus* var. *mendocina* Parodi)

South America. See *Revista Argentina de Agronomía* 4(4): 251, f. 2A-B. 1937, *Darwiniana* 18: 104. 1973.

E. pilosum (Buckley) Nash var. ***pilosum***

America.

E. pulchellum (Kunth) Tateoka (*Dasyochloa pulchella* (Kunth) Willd. ex Rydb.; *Dasyochloa pulchella* Willd. ex Steud.; *Koeleria pulchella* (Kunth) Spreng.; *Sieglingia pulchella* (Kunth) Kuntze; *Tricuspis pulchella* (Kunth) Torr.; *Tridens pulchellus* (Kunth) Hitchc.; *Triodia pulchella* Kunth; *Uralepis pulchella* (Kunth) Kunth)

U.S. Small, herbaceous, clumped, prickly, lemmas emarginate, found in open areas, sandy soils, often a synonym of *Dasyochloa pulchella* (Kunth) Willd. ex Rydb., see *Nova Genera et Species Plantarum* 1: 126[folio], 1: 155-156[quarto], t. 47. 1816, *Systema Vegetabilium, editio decima sexta* 1: 332. 1825, *Révision des Graminées* 1: 108. 1829, *Nomenclator Botanicus. Editio secunda* 1: 484. 1840, *Pacific Railroad Reports* 4: 156. 1857, *Revisio Generum Plantarum* 2: 789. 1891 and *Fl. Colorado* 18, 37. 1906, *A Flora of California* 1: 141. 1912, *American Journal of Botany* 48(7): 572. 1961, *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Flora Novo-Galiciana* 14: 1-436. 1983, *Smithsonian Contr. Bot.* 87: 27. 1997, *Sida* 17(4): 645-666. 1997.

in English: fluff grass

in Mexico: zacate borrego, zacate borreguero, zacate pelillo, zacatito

Eriopodium Hochst. = Andropogon L.

From the Greek *erion* "wool" and *podion* "little foot."

Panicoideae, Andropogoneae, Andropogoninae, in syn. sub *Andropogon eucomus*, see *Species Plantarum* 2: 1045-1046. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 268. 1832, *Flora* 29: 115. 1846 and *Bolletino della Società Botanica Italiana* 1917: 57. 1917, *Acta Bot. Neerl.* 15: 157. 1966, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64, 240. 2003.

Erochloe Raf. = Eragrostis Wolf

Chloridoideae, Eragrostideae, Eragrostidinae, see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, C.S. Rafinesque, *Neogenyton*, or Indication of Sixty-Six New Genera of Plants of North America. 4. 1825 and E.D. Merrill, *Index rafinesquianus*. 75. 1949, *Acta Bot. Neerl.* 15: 157. 1966, *Contributions from the United States National Herbarium* 41: 81-115, 116. 2001.

Erosion Lunell = Eragrostis Wolf

Chloridoideae, Eragrostideae, Eragrostidinae, see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809 and *American Midland Naturalist* 4: 221. 1915, *Acta Bot. Neerl.* 15: 157. 1966, *Contributions from the United States National Herbarium* 41: 81-115, 116. 2001.

Erucaria Cerv. = Bouteloua Lag., Chondrosium Desv., Chondrosium Desv., Erucaria Gaertn. (Brassicaceae)

Chloridoideae, Cynodonteae, Boutelouinae, type *Erucaria glandulosa* Cerv., see *De Fructibus et Seminibus Plantarum...* 2: 298. Apr-May 1791, *Variedades de Ciencias, Literatura y Artes* 2(4, 21): 134, 141. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Gen. Sp. Nov.* 5. 1816, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Naturaleza [Sociedad mexicana de historia natural]* 1: 347. 1870, *Die Natürlichen Pflanzenfamilien* 2(2): 59. 1887 and *Annals of the Missouri Botanical Garden*

66(3): 358. 1979 [1980], *Contributions from the United States National Herbarium* 41: 20-33, 52-55, 116-117. 2001.

Erythranthera Zotov = *Danthonia* DC.,
Rytidosperma Steud.

From the Greek *erythros* "red" and *anthera* "anther," having red anthers; see Victor Dmitrievich Zotov (1908-1977), "Synopsis of the Grass Subfamily Arundinoideae in New Zealand." in *New Zealand Journal of Botany*. 1(1): 124. 1963.

About 2-3 species, Australia, New Zealand. Arundinoideae, Danthoneae, Arundineae, or Danthonioideae, Danthoneae, perennial, tiny, dwarf, herbaceous, tufted or rhizomatous, often form a dense sward, glabrous nodes and hollow internodes, ligule a very short fringed membrane, leaf blade flat or folded, plants bisexual, inflorescence a raceme or a panicle, spikelets not secund, 2 glumes more or less equal, lower glume 3- to 5-nerved, upper glume 3-nerved, lemmas toothed and more or less glabrous, palea 2-nerved and 2-keeled, 2 lodicules toothed and joined or free, 3 stamens, ovary glabrous, 2 stigmas, fruit small, palatable to stock, alpine areas and open habitats, threatened alpine flora, sometimes referred to *Rytidosperma* and *Danthonia* sensu lato, type *Erythranthera australis* (Petrie) Zotov, see *Synopsis Plantarum Glumacearum* 1: 425. 1854 and *New Zealand Journal of Botany* 1(1): 124. 1963, H.P. Linder & G.A. Verboom, "Generic limits in the *Rytidosperma* (Danthoneae, Poaceae) complex." *Telopea* 6(4): 613. 1996, H.P. Linder, "Nomenclatural corrections in the *Rytidosperma* complex (Danthoneae, Poaceae)." *Telopea* 7(3): 269-274. 1997.

Species

E. australis (Petrie) Zotov (*Danthonia australis* (Petrie) Zotov; *Danthonia petriei* (Petrie) Zotov; *Danthonia petriei* var. *mucronulata* (Hack. ex Cheeseman) Zotov; *Rytidosperma australe* (Petrie) Connor & Edgar; *Rytidosperma australe* (Petrie) Clayton & Renvoize ex Connor & Edgar; *Rytidosperma australe* (Petrie) H.P. Linder, nom. illeg., non *Rytidosperma australe* (Petrie) Clayton & Renvoize ex Connor & Edgar; *Triodia australis* Petrie; *Triodia australis* var. *mucronulata* Hack. ex Cheeseman)

Victoria, Tasmania, New South Wales, New Zealand. Perennial, tufted, delicate, erect, branched, smooth, glabrous, leaf blade folded and bristle-like, a raceme exserted, floret 1, glumes ovate and nerved, lemmas glabrous and obtuse, palea 2-keeled with keels and apex ciliate, swampy places, see *Transactions and Proceedings of the New Zealand Institute* 22: 442. 1890 and *Manual of the New Zealand Flora* 897. 1906, *Transactions and Proceedings of the Royal Society of New Zealand* 73(3): 234. 1943, *New Zealand Journal*

of Botany 1: 125. 1963, *New Zealand Journal of Botany* 25(1): 166. 1987, *Telopea* 6(4): 613. 1996.

E. pumila (Kirk) Zotov (*Atropis pumila* Kirk; *Danthonia kirkii* Zotov; *Rytidosperma pumilum* (Kirk) Clayton & Renvoize ex Connor & Edgar; *Rytidosperma pumilum* (Kirk) Connor & Edgar; *Rytidosperma pumilum* (Kirk) H.P. Linder, nom. illeg., non *Rytidosperma pumilum* (Kirk) Clayton & Renvoize ex Connor & Edgar; *Triodia pumila* (Kirk) Hack.; *Triodia pumila* (Kirk) Hack. ex Cheeseman) New Zealand, Australia, New South Wales, Kosciuszko National Park. Perennial, tufted, delicate or inconspicuous, culms erect and smooth, leaves often curved or folded, broad papery sheaths, inflorescence racemose longer than the leaves, spikelets held against the flowering stem, 2-4 florets bisexual, lanceolate and nerved glumes, the flowers are completely enclosed by the glumes, usually silky hairy lemmas, palea 2-toothed and 2-keeled with keels ciliate, species vulnerable with a very narrow geographic distribution, tolerant of low temperature, recently renamed *Rytidosperma pumilum* (Kirk) H.P. Linder but it is still listed as *Erythranthera pumila* (Kirk) Zotov in the Schedules of the TSC Act, Threatened Species Conservation Act 1995, State of New South Wales, see *Transactions and Proceedings of the New Zealand Institute* 14: 379. 1882 and *Manual of the New Zealand Flora* 896. 1906, *T.R.S.N.Z.* 73(3): 234. 1943, *New Zealand Journal of Botany* 1: 124-125. 1963, *New Zealand Journal of Botany* 25(1): 166. 1987, *Telopea* 6(4): 615. 1996.

in English: feldmark grass (feldmark is a Norwegian name meaning *mountain field*)

Euchlaena Schrader = *Reana* Brign., *Zea* L.

Greek *eu* and *chlaena* "cloak, covering," referring to the stigma or to the fruting spikes.

About 4 species, Mexico, the Caribbean. Panicoideae, Andropogonodae, Andropogoneae, Maydeae, or Panicoideae, Andropogoneae, Tripsacinae, annual or perennial, herbaceous, robust, simple, auricles absent, ligule an unfringed membrane, plants monoecious, all the fertile spikelets unisexual, male spikelets in terminal panicles, pistillate spikelets in axillary spikes, 2 glumes subequal, palea present, lodicules absent, no stamens, ovary glabrous, 2 stigmas, cultivated fodder, often referred to and placed in *Zea* L. (*Zea* sect. *Euchlaena* (Schrader) Kuntze), type *Euchlaena mexicana* Schrad., see *Species Plantarum* 2: 971-972. 1753, Heinrich Adolph Schrader (1767-1836), *Index seminum horti academici goettingensis*. 3. 1832, *Annales des Sciences Naturelles; Botanique, sér. 3* 12: 365. 1849 and *Lexikon Generum Phanerogamarum* 600. 1904, *Amer. J. Bot.* 67: 1000. 1980, *Flora Mesoamericana* 6: 400-401. 1994, Alan R. Orr, Kevin Mullen, Darcey Klaahsen and Marshall D. Sundberg, "Inflorescence development in

a high-altitude annual Mexican teosinte (Poaceae).” *Am. J. Bot.* 89: 1730-1740. 2002, *Contributions from the United States National Herbarium* 46: 240-241, 543, 635-639. 2003.

Species

E. luxurians Durieu & Asch. (*Euchlaena luxurians* Miers; *Euchlaena mexicana* Schrad.; *Euchlaena mexicana* var. *luxurians* (Durieu & Asch.) Haines; *Reana luxurians* Durieu; *Zea luxurians* (Durieu & Asch.) R.M. Bird; *Zea mays* subsp. *luxurians* (Durieu & Asch.) H.H. Iltis; *Zea mexicana* subsp. *luxurians* (Durieu & Asch.) Greb.)

Guatemala. Excellent fodder grass, requires a rich soil and plenty of irrigation, see *Species Plantarum* 2: 971-972. 1753, *Index seminum horti academici goettingensis*. 3. 1832, *Linnaea* 8: Lit.-Ber. 25. 1833, *Bulletin de la Société Nationale d'Acclimatation de France* 19: 581. 1872, *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1876: 164. 1876 and *Lexikon Generum Phanerogamarum* 599. 1904, *The Botany of Bihar and Orissa* 6: 1065. 1924, *Flore de la Guayane Française* [Albert Lemée, Brest] 1: 160. 1955, *Phytologia* 23(2): 249. 1972, *Taxon* 27(4): 363. 1978, *American Journal of Botany* 67: 1000. 1980, *Verzeichnis Landwirtschaftlicher und Gärtnerischer Kulturpflanzen (ohne Zierpflanzen)* (edition 2) 3: 1594-1595. 1986.

in Colombia: teocinte

E. mexicana Schrad. (*Euchlaena luxurians* Durieu & Asch.; *Euchlaena mexicana* var. *luxurians* (Durieu & Asch.) Haines; *Reana luxurians* Durieu; *Zea mays* subsp. *mexicana* (Schrad.) H.H. Iltis; *Zea mays* subsp. *mexicana* H.H. Iltis; *Zea mexicana* (Schrad.) Kuntze; *Zea mexicana* (Schrad.) Reeves & Mangelsd., nom. illeg., non *Zea mexicana* (Schrad.) Kuntze)

Mexico. Fodder for cattle and horses, irrigated areas, see *Species Plantarum* 2: 971-972. 1753, *Index seminum horti academici goettingensis*. 3. 1832, *Linnaea* 8: Lit.-Ber. 25. 1833, *Bulletin de la Société Nationale d'Acclimatation de France* 19: 581. 1872, *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1876: 164. 1876 and *Lexikon Generum Phanerogamarum* 599. 1904, *The Botany of Bihar and Orissa* 6: 1065. 1924, *American Journal of Botany* 29(10): 817. 1942, *Annual Rev. Genetics* 5: 450. 1971, *Phytologia* 23(2): 249. 1972, *American Journal of Botany* 67: 1000. 1980, *Cytologia* 51: 527-547. 1986, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Cuscatania* 1(6): 1-29. 1991.

in India: makhari, makya bajra, makya gehuma, makya janera

in Mexico: cocopi

E. perennis Hitchc. (*Zea perennis* (Hitchc.) Reeves & Mangelsd.; *Zea perennis* (Hitchc.) Reeves & Mangelsd. subsp. *perennis*)

Mexico. See *Journal of the Washington Academy of Sciences* 12(8): 207. 1922, *American Journal of Botany* 29(10): 817. 1942, *Agro-Ciencia* 58: 113-126. 1984, *Cytologia* 50: 643-648. 1985, *Genética Ibérica* 38: 27-45. 1986.

x *Euchlaeza* Jan. Ammal ex Bor

Euchlaena x *Zea*.

See *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 266. 1960, *Genera Graminum* 375. 1986.

Euclasta Franchet = *Indochloa* Bor

From the Greek *eu* “good” and *klastos* “broken in pieces.”

About 2 species, tropical Africa, tropical America, India. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Sorghinae, annual, herbaceous, rambling, branched, aromatic, plants bisexual, inflorescence terminal and axillary, racemes solitary or clustered, 2 glumes subequal, more or less flat lower glume 2-keeled and 9-nerved, upper glume 3-nerved, upper lemma entire, awns hairy or glabrous, palea absent, 2 free and glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas, dry sand, deciduous bushland, damp sand, partial shade, shade species or open habitats, wooded grassland, savannah, similar to *Dichanthium*, type *Euclasta glumacea* Franch., see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 335-336, t. 8. 1895 and *Kew Bulletin* 9: 75-76. 1954, *Fieldiana, Botany* 24(2): i-ix, 1-390. 1955, *Flowering Plants of Jamaica* 1-848. 1972, *Flora Mesoamericana* 6: 386. 1994, *Fontqueria* 46: [i-ii], 1-259. 1997, *Weed Research* 41(6): 475-490. Dec 2001, *Contributions from the United States National Herbarium* 46: 241, 273. 2003.

Species

E. clarkei (Hack.) Cope (*Andropogon clarkei* Hack.; *Dichanthium clarkei* (Hack.) Haines; *Indochloa clarkei* (Hack.) Bor) (for the eminent British botanist Charles Baron Clarke, 1832-1906 (Kew, Surrey), mathematician, worked on Indian botany, specialist on Cyperaceae, in 1867 Fellow of the Linnean Society, 1869-1871 Superintendent Calcutta Botanical Gardens, in 1882 Fellow of the Royal Society, contributed to *Flora of British India*, his writings include *Compositae indica*. London [1876] and *A Review of the Ferns of Northern India*. London 1880. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 352. 1965; H.N. Clouie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 146. Oxford 1964; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 140. London 1904; Ernest Nemes (1895-1959) and William Cuthbertson (c. 1859-1934), *Curtis's Botanical Magazine Dedications, 1827-1927*. 242-244. [1931]; Isaac Henry Burkill (1870-1965), *Chapters on the History of Botany in India*. 144-

146. Delhi 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 206. University of Pennsylvania Press, Philadelphia 1964)

Africa. See *Österreichische Botanische Zeitschrift* 41: 49. 1891 and *The Botany of Bihar and Orissa* pt. 5: 1040. 1924, *Kew Bulletin* 1954: 76. 1954, *Kew Bulletin* 35(3): 704. 1980.

E. condylotricha (Hochst. ex Steud.) Stapf (*Amphilophis piptatherus* (Hack.) Nash; *Andropogon condylotrichus* Hochst. ex Steud.; *Andropogon condylotrichus* var. *palmeri* Chiov.; *Andropogon condylotrichus* var. *piptatherus* (Hack.) Chiov.; *Andropogon piptatherus* Hack.; *Andropogon piptatherus* var. *palmeri* Hack.; *Bothriochloa piptathera* (Hack.) Gould; *Dichanthium condylotrichum* (Hochst. ex Steud.) Roberty; *Euclasta glumacea* Franch.; *Euclasta graminea* T. Durand & H. Durand; *Sorghum piptatherum* (Hack.) Kuntze)

Tropical Africa, America. Annual, weak, slender, rambling, geniculately ascending, a weed of rice fields, forage, grazed by cattle or unpalatable, found in partial shade, deciduous bushland, savannah, wooded grassland, see *Synopsis Plantarum Glumacearum* 1: 377. 1854, *Flora Brasiliensis* 2(4): 293. 1883, *Monographiae Phanerogamarum* 6: 580. 1889, *Revisio Generum Plantarum* 2: 792. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 336, t. 8. 1895, *Malpighia* 12: 77. 1898 and *Sylloge florae congolanae* 649. 1909, *North American Flora* 17(2): 127. 1912, *Flora of Tropical Africa* 9: 181. 1917, *Bulletin de l'Institut Française d'Afrique Noire* 22: 108. 1960, *The Southwestern Naturalist* 15(3): 391-392. 1971.

in Guinea: ayen gekol

in Nigeria: kuse togun, ride bara, tusun zake

in Sierra Leone: funfure khamena

in Upper Volta: minga

Eudonax Fr. = *Arundo* L., *Donacium* E. M. Fries, *Donax* P. Beauv.

From the Greek *eu* "good, fine" and *donax*, *donakos* "a kind of reed."

Arundinoideae, Arundineae, see *Species Plantarum* 1: 81. 1753, *Botaniska Notiser* 1843: 132. 1843 and *Fl. Bermuda* 29. 28 Feb 1918, *Contributions from the United States National Herbarium* 46: 113-115, 214, 241. 2003.

Eufournia Reeder = *Calamochloa* E. Fourn., *Calamochloe* Rchb., *Sohnsia* Airy Shaw

Dedicated to the French botanist Eugène Pierre Nicolas Fournier, 1834-1884, wrote *Mexicanas Plantas*. Paris 1872

and 1886 [Associates: Émile Bescherelle, 1828-1903, Joseph Decaisne, 1807-1882, and William Nylander, 1822-1899], contributed to C.F.P. von Martius *Flora Brasiliensis*. 1885; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 563. 1965; J. Decaisne, editor, *Mission scientifique au Mexique et dans l'Amérique centrale*. Paris 1868-1897; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 131. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 172. 1973; George H.M. Lawrence, in *D.S.B.* 10: 165-166. 1981.

Chloridoideae, Cynodonteae, type *Eufournia filifolia* (E. Fourn.) Reeder, see *Conspectus Regnum Vegetabilis ... Pars I*. 1828, *Bulletin de la Société Botanique de France* 24: 177-178. 1877 and *The Families of Flowering Plants* 2: 199-229. 1934, *Journal of the Washington Academy of Sciences* 46: 109-112. 1956, *American Journal of Botany* 51: 453-463. 1964, *Kew Bulletin* 18(2): 272. 1965, *Brittonia* 19: 244. 1967, *Bulletin of the Torrey Botanical Club* 94: 1-17. 1967, *Contributions from the United States National Herbarium* 41: 35, 117, 195. 2001.

Euklastaxon Steud. = *Andropogon* L.

From the Greek *eu* "good, well," *klastos* "broken in pieces" and *axon* "axis."

Panicoideae, Andropogoneae, Andropogoninae, type *Euklastaxon tenuifolius* Steud., see *Species Plantarum* 2: 1045-1046. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 268. 1832, *Flora* 29: 115. 1846, *Synopsis Plantarum Glumacearum* 1: 412. 28-29 Nov 1854 [1855] and *Bolletino della Società Botanica Italiana* 1917: 57. 1917, *Acta Bot. Neerl.* 15: 157. 1966, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64, 241. 2003.

Eulalia Kunth = *Pseudopogonatherum* A. Camus, *Puliculum* Haines, *Puliculum* Stapf ex Haines

The genus was named to honor the painter and botanical artist Eulalie Delile, who illustrated *Voyage dans l'Inde par Victor Jacquemont, pendant les années 1828 à 1832*. Paris 1841-1844, by the French naturalist Victor Jacquemont (1801-1832), *Révision des Graminées*. Paris 1829-1834, by the German botanist Karl Sigismund Kunth (1788-1850),

Voyage aux Indes Orientales ... pendant 1825-29. Paris [1846], by Charles Bélanger (1805-1881), *Flora Brasiliae Meridionalis*. Parisii 1825-1833, by Auguste François César Prouvençal de Saint-Hilaire (1779-1853), and other works by Jean Baptiste George Geneviève Marcellin Bory (1778-1846) and Jules Paul Benjamin Delessert (1773-1847). Some suggested a derivation from the Greek *eu* "well" and *lalo* "to speak," well-spoken-of.

About 30 species, Old World tropics, tropical and subtropical. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial or rarely annual, variable, tufted or caespitose or forming tussocks, herbaceous, rhizomatous, simple, erect, sometimes decumbent, internodes solid, auricles absent, leaf blades linear, ligule a membrane densely ciliate or unfringed, plants bisexual, inflorescence digitate and plumose or silky-villous composed of subdigitate racemes bearing pairs of sessile and pedicellate spikelets, awned fertile pedicelled spikelets, florets 2, lower floret reduced or sometimes suppressed, upper floret perfect, 2 glumes more or less equal, lower glume cartilaginous to subcoriaceous, upper glume sometimes awned, upper lemma linear to oblong, awns hairy or glabrous, palea small or absent, 2 small lodicules free and fleshy, stamens 2-3, ovary glabrous, 2 stigmas, weed species, palatable to stock, native pasture species, grassland, moist places and sandy soils, maritime sand, open habitats, related to *Saccharum*, type *Eulalia aurea* (Bory) Kunth, see K.S. Kunth, *Révision des Graminées*. 1: 160. Paris 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 90. 1836, *Die Natürlichen Pflanzenfamilien*. 2(2): 24. 1887, *Monographiae Phanerogamarum* 6: 189, t. 1, f. 13. 1889, *Revisio Generum Plantarum* 2: 788. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2* 68: 203-205. 1921, *Fl. Indo-Chine* 7: 254. 1922, *The Botany of Bihar and Orissa* 5: 1018. 1924, *Bulletin of the Tokyo Science Museum* 18: 2. 1947, *Index Grass Sp.* 3: 203. 1962, *Journal of Biogeography* 26(6): 1255-1280. Nov 1999, *Ecological Research* 15(3): 357-359. Sep 2000, *Ecological Management and Restoration* 2(1): 17-27. Apr 2001, *Contributions from the United States National Herbarium* 46: 241. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Ecological Research* 18(1): 99-102. Jan 2003, *Austral. Ecology* 28(2): 182-195. Apr 2003, *Systematic Entomology* 28(3): 279-322. June 2003, *Entomological Science* 6(2): 63-70. June 2003, *Restoration Ecology* 11(4): 483-488. Dec 2003, John Pearn, "The world's longest surviving paediatric practices: Some themes of Aboriginal medical ethnobotany in Australia." *Journal of Paediatrics and Child Health* 41(5-6): 284-290. May 2005.

Species

E. sp.

in Thailand: yaa kaai, yaa ra ruen, yaa raruen

E. annua B.K. Simon

Australia. See *Austrobaileya* 3(1): 84-86, f. 2. 1989.

E. aurea (Bory) Kunth (*Andropogon aureus* Bory; *Erianthus aureus* (Bory) P. Beauv.; *Eulalia concinna* Nees ex Steud.; *Eulalia fulva* (R. Br.) Kuntze; *Eulalia geniculata* Stapf; *Pollinia aurea* (Bory) Benth.; *Pollinia fulva* (R. Br.) Benth.; *Saccharum fulvum* R. Br.)

Tropical Africa, Zambia. Perennial, erect tussocks, creeping rhizomatous, short rhizomes, green or reddish or bluish leaves, culms erect and branching, often decumbent, with trailing stolons, sheaths glabrous, dark reddish to golden brown racemes digitately arranged and densely hairy, spikelets in pairs with silky reddish brown hairs, glumes silky and subequal, lower lemma absent, a decreaser species, grazed when young, palatable to stock, unpalatable when dry, native pasture species, attractive when in flower, drought and grazing tolerant, occurs on dry areas, creek banks, grassland, earthy sands, coastal dunes, in local depressions, sandy red earths, along drainage lines, red and gray clays and calcareous soils, seepage, water courses and ephemeral water courses, floodplains, mainly on medium textured red earth soils in periodically flooded areas, see *Voyage dans les Quatre Principales Îles des Mers d'Afrique* 1: 367, t. 21. 1804, *Essai d'une Nouvelle Agrostographie* 14, 150, 162. 1812, *Révision des Graminées* 1: 160. 1829, *Synopsis Plantarum Glumacearum* 1: 412. 1855, *Journal of the Linnean Society, Botany* 19: 67. 1881 and *Flora of Tropical Africa* 9: 101. 1917.

in English: sugar grass, silky browntop grass, silky brown-top, browntop

E. contorta (Brongn.) Kuntze (*Eulalia contorta* (Brongn.) Pilg.; *Pogonatherum contortum* Brongn.; *Pollinia articulata* Trinius; *Pseudopogonatherum contortum* (Brongn.) A. Camus)

Annual, tufted, slender, leaves linear, spikelets pedicellate, see *Voyage autour du Monde* 2(2): 90, t. 17. 1831, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Annales de la Société Linnéenne de Lyon, ser. 2* 68: 205. 1921, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 121. 1940, *Journal of the Arnold Arboretum* 31: 130-132. 1950, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 140, 237. 1957, *Flora Hainanica* 4: 455, 540. 1977.

E. fastigiata (Nees ex Steudel) Haines (*Andropogon loharduggae* C.B. Clarke ex Duthie; *Erianthus fastigiatus* (Nees ex Steud.) Hackel; *Eulalia fastigiata* (Nees ex Steud.) Stapf ex Bor; *Eulalia fastigiata* (Nees ex Steud.) Stapf ex Heyne; *Eulalia fastigiata* Stapf ex Haines; *Saccharum fastigiatum* Nees ex Steud.)

India, Orissa. Rhizomatous, erect, leaves glabrous, racemes whorled, see *Synopsis Plantarum Glumacearum* 1: 409. 1854 [1855], *The Fodder Grasses of Northern India* 34. 1888, *Monographiae Phanerogamarum* 6: 150. 1889 and

The Botany of Bihar and Orissa 5: 1014, 1017. 1924, *Flora of Assam* 5: 336. 1940.

E. irritans (R. Br.) Kuntze (*Pogonatherum irritans* (R. Br.) Roberty; *Pollinia irritans* (R. Br.) Benth.; *Pseudopogonatherum irritans* (R. Br.) A. Camus; *Pseudopogonatherum irritans* (R. Br.) Ohwi, nom. illeg., non *Pseudopogonatherum irritans* (R. Br.) A. Camus; *Saccharum irritans* R. Br.)

Australia. See *Prodromus Florae Novae Hollandiae* 1: 203. 1810, *Essai d'une Nouvelle Agrostographie* 56, 176, pl. 11, f. 7. 1812, *Flora Australiensis: A Description ...* 7: 525-526. 1878, *Genera Plantarum* 3(2): 1127. 1883, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 204-205. 1921 [1922], *Bulletin of the Tokyo Science Museum* 18: 3. 1947, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 386. 1960.

E. leschenaultiana (Decne.) Ohwi (*Andropogon aureo-fulvus* Steud.; *Andropogon leschenaultianus* Decne.; *Erianthus cumingii* (Nees) F. Muell.; *Eulalia cumingii* (Nees) A. Camus; *Pollinia cumingii* Nees; *Pollinia cumingii* var. *genuina* Hack.; *Pollinia fulva* var. *cumingii* (Nees) Domin)

Asia. See *Nouvelles Annales du Museum d'Histoire Naturelle* 3: 357. 1834, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 98. 1850, *Synopsis Plantarum Glumacearum* 1: 373. 1854, *Fragmenta Phytographiae Australiae* 8: 118. 1873, *Flora Australiensis: A Description ...* 7: 526. 1878 and *Bibliotheca Botanica* 85(2): 258. 1915, *Annales de la Société Linnéenne de Lyon, sér. 2* 68: 203. 1921, *Bulletin of the Tokyo Science Museum* 18: 2. 1947.

E. mackinlayi (F. Muell. ex Benth.) Kuntze (*Eulalia mackinlayi* (F. Muell. ex Benth.) S.T. Blake; *Pollinia mackinlayi* F. Muell. ex Benth.)

Australia. See *Flora Australiensis: A Description ...* 7: 527. 1878, *Revisio Generum Plantarum* 2: 775. 1891 and *Australian Journal of Botany* 2: 108. 1954.

E. manipurensis Bor

India. Awnless, see *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 156. 1960.

E. mollis (Griseb.) Kuntze (*Erianthus mollis* Griseb.; *Pogonatherum molle* (Griseb.) Roberty; *Pollinia mollis* (Griseb.) Hackel)

Perennial, tufted, hairy, leaves flat, spikelets sessile, see A.H.R. Grisebach (1814-1879), *Die geographische Verbreitung der Pflanzen Westindiens* Göttingen 1865, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Boissiera*. 383. 1960.

E. monostachya (Balansa) A. Camus (*Pollinia monostachya* Balansa)

Asia. Large callus, see *Genera Plantarum* 3(2): 1127. 1883, *Journal de Botanique (Morot)* 4: 81. 1890 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 204. 1921 [1922].

E. phaeothrix (Hack.) Kuntze (*Andropogon pilosus* Willd. ex Wight; *Erianthus aureus* Nees ex Wight; *Pollinia phaeothrix* Hack.)

Southern India, Sri Lanka. Perennial, tussocky, slender, basal sheaths tomentose, leaves mainly radical or basal, inflorescence shortly racemose, spikelets elliptic-oblong, lower glume obtuse to truncate, upper lemma awned, see *Catalogue of Indian Plants* 1690. 1834, *Monographiae Phanerogamarum* 6: 168. 1889, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Handb. Fl. Ceylon* 5: 204. 1900, *Grasses of Ceylon* 170. 1956, *Grasses of Burma ...* 156. 1960, *Taxon* 34: 159-164. 1985.

E. polyneura (Pilg.) Stapf (*Pollinia polyneura* Pilg.)

Kenya. Perennial, ascending, loosely tussocky, shortly rhizomatous, leaf blades tough and hispid, leaf sheaths keeled, subdigitate erect racemes, spikelets hairy on the back, lower glume narrowly elliptic-oblong, upper glume truncate and ciliate, upper lemma bifid, upland, swampy places, grassland, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 39: 597. 1907, *Flora of Tropical Africa* 9: 99. 1917.

E. quadrinervis (Hackel) Kuntze (*Eulalia quadrinervis* Sur; *Pollinia quadrinervis* Hackel; *Pollinia villosa* Munro ex Benth., nom. illeg., non *Pollinia villosa* Spreng.; *Pollinia villosa* var. *chefuensis* Franch.; *Pseudopogonatherum quadrinerve* (Hack.) Ohwi)

Southeast Asia, India. Perennial, tufted, stout, slender, rounded, hairy or smooth, stout woody rootstock, ligule short and hairy, leaf sheath smooth with scattered hairs, spreading leaves linear-acuminate and rather stiff, inflorescence racemose, racemes erect and nodding, rachis with long hairs, spikelets in pairs, lower glume narrow and keeled, upper glume hairy, lemma long awned, palea hyaline, drought resistant, rather fibrous, low value as a fodder grass, growing in open areas on slopes, rocky places, open grassy slopes, see *Flora Hongkongensis* 420-421. 1861, *Monographiae Phanerogamarum* 6: 158. 1889, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Botany and Zoology; Theoretical and Applied* 6: 1868. 1938, *Bulletin of the Tokyo Science Museum* 18: 3. 1947, *Journal of Economic and Taxonomic Botany* 6(1): 185. 1985.

in English: sugar grass, silky browntop, 4-veined eulalia

in India: parai

in Japan: un-nuke-modoki

E. ridleyi (Hack.) A. Camus (*Pollinia ridleyi* Hack.)

Asia. Truncate glumes, see *Genera Plantarum* 3(2): 1127. 1883, *Österreichische Botanische Zeitschrift* 11(1): 7. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 204. 1921 [1922].

E. siamensis Bor

Asia, Thailand. Tufted, erect, see *Kew Bulletin* 1954: 499. 1954.

in Thailand: yaa kaai, ya kai, yaa ra ruen, yaa raruen

E. smitinandiana Bor

Asia, Thailand. Tufted, erect, rocky places, see *Kew Bulletin* 10: 256-257. 1956.

in Thailand: yaa kaai, yaa ra ruen, ya raruen, yaa raruen

E. speciosa (Debeaux) Kuntze (*Erianthus speciosus* Debeaux; *Eulalia speciosa* var. *velutina* (Hack.) Bor; *Eulalia velutina* (Hack.) Kuntze; *Pollinia speciosa* (Debeaux) Hack.; *Pollinia velutina* Hack.; *Pseudopogonatherum speciosum* (Debeaux) Ohwi)

Northern India, Indochina. Perennial, erect, robust, stout, inflorescence racemose, see *Actes de la Société Linnéenne de Bordeaux* 32: 53. 1878, *Monographiae Phanerogamarum* 6: 159. 1889, *Revisio Generum Plantarum* (1): 775. 1891 and *Bulletin de l'Herbier Boissier, sér. 2, 4(6)*: 532. 1904, *Botanical Magazine* (Tokyo) 38: 58. 1924, *Bulletin of the Tokyo Science Museum* 18: 3. 1947, *Man. Grasses Korea* 39. 1955, *Journal of the Washington Academy of Sciences* 45(7): 213. 1955, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 157. 1960.

E. thwaitesii (Hack.) Kuntze (*Pollinia thwaitesii* Hack.)

Sri Lanka. Perennial, tufted, leaves mainly radical or basal, basal leaf sheaths glabrous, inflorescence racemose and hairy, spikelets elliptic-oblong, lower glume villous, upper lemma bidentate and awned, growing in swampy places, see *Revisio Generum Plantarum* (1): 775. 1891, *Monographiae Phanerogamarum* 6: 163. 1889, *Revisio Generum Plantarum* (1): 775. 1891 and *Handb. Fl. Ceylon* 5: 203. 1900, *Grasses of Ceylon* 169. 1956, *Grasses of Burma ...* 157. 1960.

E. trispicata (Schult.) Henrard (*Andropogon hexastachyus* (Hochst.) Steud.; *Andropogon trispicatus* Schult.; *Andropogon tristachyos* Roxb., nom. illeg., non *Andropogon tristachyus* Kunth; *Andropogon tristachyus* Kunth; *Erianthus hexastachyus* Hochst.; *Eulalia argentea* Brongn.; *Eulalia tristachya* (Roxb.) Kuntze; *Pogonatherum tristachyum* (Kunth) Roberty; *Pollinia argentea* Trinius; *Pollinia argentea* (Brongn.) Trin.; *Pseudopogonatherum trispicatum* (Schult.) Ohwi; *Saccharum tristachyum* Steud., nom. illeg., non *Andropogon trispicatus* Schult.)

Asia, Nepal, India to China, Australia. Perennial, tufted, tussocky, slender and glabrous, erect, smooth, leafy, delicate, flexuous, leaves flat, basal leaf sheaths glabrous, inflorescence slightly spreading, spikelets sessile, lower glume pilose, upper lemma bifid and awned, low fodder value, good grass for grazing when young, coarse when old, thatching, humid savannah, black soil, grassland, see *Hortus Bengalensis, or a Catalogue ...* 6. 1814, *Nova Genera et Species Plantarum* [quarto]1: 187, [folio] 1: 151. 1815

[1816], *Flora Indica; or Descriptions ...* 1: 261. 1820, *Mantissa* 2: 452. 1824, *Voyage autour du Monde* 2(2): 92. 1830 [1831], *Voy. Coq. Bot.* 2: 92. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 90. 1836, *Verh. Nederl. Inst.* III 4: 35. 1851, *Anal. Bot. Ind.* 2: 23. 1851, *Synopsis Plantarum Glumacearum* 1: 380, 408. 1854 [1855], *Monographiae Phanerogamarum* 6: 430. 1889, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Handb. Fl. Ceylon* 5: 204. 1900, *Blumea* 3(3): 453. 1940, *Bulletin of the Tokyo Science Museum* 18: 3. 1947, *Grasses of Ceylon* 169. 1956, *Boissiera*. 383. 1960, *Grasses of Burma ...* 157. 1960, *Journal of Cytology and Genetics* 15: 51-57. 1980.

in India: belia marwel, bhabar grass, chota kusal, chota kussal, gandli, gonchi, kaudi, krer, liyun gadi, marwel, roira, sona jhara, tam, thrishoola gaddi

E. villosa (Thunb.) Nees (*Andropogon villosus* Thunb., nom. illeg., non *Andropogon villosus* Lam.; *Erianthus villosus* (Thunb.) Steud.; *Erianthus villosus* (Thunb.) F. Muell., nom. illeg., non *Erianthus villosus* (Thunb.) Steud.; *Pogonatherum villosum* (Thunb.) Roberty)

Tropical East Africa, South Africa, Madagascar, India. Perennial, erect, densely tufted, unbranched, tussocky, softly villous, robust, leaf blades flat and hard, leaf sheath round and hairy, ligule a dark membrane, slender inflorescence, white hairy racemes arranged digitately, spikelets paired and glabrous on the back, twisted awn, weed species, low grazing value, unpalatable grass, common in open grassland, tea plantation, on rocky shallow soils, on slopes, veld, hillsides, see *Species Plantarum* 2: 1045-1046. 1753, *Prodromus Plantarum Capensium, ...* 20. 1794, *Nomenclator Botanicus. Editio secunda* 1: 567. 1840, *Florae Africae Australioris Illustrationes Monographicae* 91. 1841, *Fragmenta Phytographiae Australiae* 8: 118. 1873 and *Boissiera*. 383. 1960, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995.

in English: golden velvet grass

in South Africa: geel fluweelgras

Eulaliopsis Honda = *Pollinidium* Haines, *Pollinidium* Stapf ex Haines

Resembling the genus *Eulalia* Kunth.

Two species, India and Southeast Asia, China, Afghanistan, Taiwan, Philippine Islands. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial, densely tufted or caespitose, herbaceous, branched, ligule a fringed membrane, leaves linear and narrow to very narrow and tapering to a sharp fine point, plants bisexual, inflorescence axillary,

2-4 digitate racemes on a peduncle, spikelets with involucre hairs, spikelets paired sessile and pedicellate both awned, hermaphrodite florets, florets 2, lower floret sterile or male, upper floret bisexual, 2 glumes more or less equal, lower glume not 2-keeled, upper glume shortly awned or not, shortly awned upper lemma entire or 2-dentate, palea present, 2 free and ciliate lodicules, 3 stamens, ovary glabrous, 2 stigmas, weed species, used in papermaking and for cordage, resistant to burning, open habitats, dry hill-sides, dry slopes, type *Eulaliopsis angustifolia* (Trin.) Honda, see *Botanical Magazine* (Tokyo) 37: 124. 1923 [alt. 38: 56. 1924], *The Botany of Bihar and Orissa* 5: 1020. 1924, *Journal of the Bombay Natural History Society* 72(3): 815. 1975[1976].

Species

E. binata (Retz.) C.E. Hubb. (*Andropogon binatum* Retz.; *Andropogon involutus* Steud.; *Andropogon notopogon* Steud.; *Andropogon obvallatus* Steud.; *Eulaliopsis angustifolia* (Trin.) Honda; *Ischaemum angustifolium* (Trinius) Hackel; *Ischaemum binatum* (Retz.) Büse ex de Vriese; *Pollinidium angustifolium* (Trin.) Haines; *Pollinidium binatum* (Retz.) C.E. Hubb.; *Spodiopogon angustifolius* Trin.; *Spodiopogon binatus* (Retz.) Roberty; *Spodiopogon involutus* (Steud.) W. Watson)

India. Perennial, slender, erect, smooth, tufted, hardly branched, woolly at the base, tough and persistent basal sheaths, ligule a ridge of short hairs, leaves glabrous and mostly basal, cylindrical stout racemes on filiform peduncles, spikelets in pairs and hairy, upper floret hermaphrodite, ridged lower glume, employed in papermaking and for making ropes and mats, not eaten by cattle, prefers dry habitats, dry slopes, see *Observationes Botanicae* 5: 21. 1789, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 300. 1832, *Plantae novae et minus cognitae Indiae Batavae Orientalis...* Amsterdam, Londres, Paris 1845, *Synopsis Plantarum Glumacearum* 1: 373. 1854, *Plantae Indiae Batavae Orientalis ...* 103. Lugduni-Batavorum Oct 1857, *Himalayan Districts of the Northwestern Provinces of India* 392. 1882, *Hooker's Icones Plantarum* 18: pl. 1773. 1888 and *Botanical Magazine* (Tokyo) 38: 56. 1924, *The Botany of Bihar and Orissa* 5: 1020. 1924, *Bulletin of Miscellaneous Information Kew* 1932(2): 72. 1932, *Hooker's Icones Plantarum* 33(3): t. 3262, p. 6. 1935, *Petite Flore de l'Ouest-Africain* 403. 1954, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: sawai grass, Bharbur grass, Bhabur grass

in India: babar, babbar, babui, bachkron, bagai, baggar, baib, bamoth, ban kush, bankas, bhabar, bhankas, Bharbur grass, munji, nulka gadi, sabai, som

E. sykesii Bor (named for the English botanist James Sykes Gamble, 1847-1925 (d. Liss, Hants), forester, 1871-1879

Indian Forest Service, 1877 Fellow of the Linnean Society, 1899 elected a Fellow of the Royal Society, among his writings *A Manual of Indian Timbers*. Calcutta 1881 and *List of the Trees, Shrubs and Large Climbers Found in the Darjeeling District, Bengal*. Calcutta 1878, with Cecil Ernest Claude Fischer (1874-1950) and Stephen Troyte Dunn (1868-1938) wrote *Flora of Presidency of Madras*. London [1915-]-1936, with Sir George King (1840-1909) and Andrew Thomas Gage (1871-1945) "Materials for a Flora of the Malay Peninsula." in *Journal of the Asiatic Society of Bengal*. vol. 58-74. Calcutta 1889-1936. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 26. 1965; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 169. Oxford 1964; Clyde F. Reed, *Bibliography to Floras of Southeast Asia*. Baltimore, Maryland 1969)

Western Nepal. Perennial, caespitose, geniculate, woolly at the base, leaf blade narrowly linear and folded, leaves hairy on both surfaces, terminal racemes, lower glumes oblong, upper glumes keeled and awned, plumose stigmas, see *Kew Bulletin* 12(3): 412. 1957.

Eupogon Desv. = *Andropogon* L.

From the Greek *eu* and *pogon* "a beard."

Panicoideae, Andropogoneae, Andropogoninae, see *Species Plantarum* 2: 1045-1046. 1753, *Prodromus Plantarum Indiae Occidentalis* 9. 1825, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 171. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 268. 1832, *Flora* 29: 115. 1846, *Synopsis Plantarum Glumacearum* 1: 412. 28-29 Nov 1854 [1855] and *Bolletino della Società Botanica Italiana* 1917: 57. 1917, *Acta Bot. Neerl.* 15: 157. 1966, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64, 241-242. 2003.

Euraphis (Trin.) Lindley = *Boissiera* Hochst. ex Steud., *Euraphis* (Trin.) Kuntze

From the Greek *eu* "well" and *raphis* "a needle."

Pooideae, Triticodae, Bromeae, type *Euraphis pumilio* (Trin.) Kuntze, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 92. 1830, *Flora* 21: 25. 1838, *Nomenclator Botanicus. Editio secunda* 1: 213. 1840, *The Vegetable Kingdom* 115. 1846, *Revisio Generum Plantarum* 1: 776. 1891.

Eustachys Desvaux = *Chloris* Sw.,
Chloroides Fisch. ex Regel, *Chloroides* Regel,
Eustachys Salisb. (Liliaceae), *Langsdorffia*
 Regel, *Schultesia* Spreng.

From the Greek *eu* "fine, good" and *stachys* "a spike," referring to the beauty of the spikes and dark brown lemmas; see A.N. Desvaux, in *Nouv. Bull. Sci. Soc. Philom. Paris*. 2: 188. 1810.

About 8-12 species, tropics and subtropics, mainly in the New World, tropical America, West Indies, tropical and southern Africa. Chloridoideae, Cynodonteae, Chloridinae, annual or perennial, glabrous, herbaceous, rhizomatous or tufted, caespitose, glabrous nodes, solid internodes, auricles absent, leaf sheaths compressed or strongly keeled, ligule a short fringe of hairs, leaves distichous, plants bisexual, short racemes digitate, spikelets solitary and secund, spikelets disarticulating above the glumes, florets 2 usually dark brown at maturity, lower floret fertile, upper floret sterile, 2 persistent and very unequal glumes shorter than the lemmas, upper glume obtuse to 2-lobed with a short awn apical or subapical, lemmas awnless or mucronate, fertile lemma mucronate and densely ciliate, palea present, 2 free and fleshy lodicules, stamens 3, ovary glabrous, 2 stigmas, trigonous and small fruit, native pasture species, cultivated, fodder grass, habitat variable, found in savannahs, grassland, open habitats, roadsides, sometimes included in and barely separable from *Chloris* Sw., type *Eustachys petraea* (Sw.) Desv., see *Nova Genera et Species Plantarum seu Prodrum* 1, 25. 1788, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188-189. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 17. 1815, *Conspectus Regni Vegetabilis* 4. 1828, *Index Seminum [St. Petersburg]* 28. 1863, *The Genera of Plants* 33. 1866 and *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Flora Ilustrada Catarinense* 1(Gram.): 1-435. 1981, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Flora Mesoamericana* 6: 288-289. 1994, A.M. Molina, "Revisión taxonómica del género *Eustachys* Desv. (Poaceae: Chloridoideae, Cynodonteae) de Sudamérica." *Candollea* 51(1): 225-272. 1996, *Fontqueria* 46: [i-ii], 1-259. 1997, *Gramíneas de Bolivia* 353-355. 1998, *Journal of Biogeography* vol. 26, issue 6: 1307-1321. Nov 1999, E. William Hamilton III, Samuel J. McNaughton and James S. Coleman, "Molecular, physiological, and growth responses to sodium stress in C4 grasses from a soil salinity gradient in the Serengeti ecosystem." *Am. J. Bot.* 88: 1258-1265. 2001, *Contributions from the United States National Herbarium* 41: 39-52, 117-118, 222-223. 2001, *Restoration Ecology* 12(2): 190-199. June 2004, *Restoration Ecology* 12(4): 615-625. Dec 2004, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis

morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

E. bahiensis (Steud.) Herter (*Chloris bahiensis* Steud.; *Chloris capensis* var. *bahiensis* (Steud.) Parodi; *Chloris caribaea* Spreng.; *Eragrostis bahiensis* (Steud.) Herter, nom. illeg., non *Eragrostis bahiensis* Schrad. ex Schult.; *Eustachys caribaea* auct.; *Eustachys caribaea* (Spreng.) Herter; *Eustachys paspaloides* subsp. *caribaea* (Spreng.) Nowack)

South America, Brazil, Bolivia, Argentina, Uruguay, Paraguay. Perennial, tufted, see *Systema Vegetabilium, editio decima sexta* 1: 295. 1825, *Synopsis Plantarum Glumacearum* 1: 208. 1854 and *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 56. 1910, *Revista Sudamericana de Botánica* 6: 147. 1940, *Estudios Botánicos en la Región Uruguaya* 14(1): 85, f. 339. 1941 [1942], *Rev. Sudamer. Bot.* 7: 196. 1943, *Revista Argentina de Agronomía* 20: 26. 1953, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Flora Ilustrada Catarinense* 1(Gram.): 1-435. 1981, *Sida* 12(1): 227-232. 1987, *Annals of the Missouri Botanical Garden* 77(1). 125-201. 1990, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 17(1-2): 53-57. 1995.

E. bahiensis (Steud.) Herter var. *robusta* A.M. Molina

South America, Brazil. See *Candollea* 51(1): 260, f. 7A-I, 8D. 1996.

E. brevipila (Roseng. & Izag.) Caro & E.A. Sánchez (*Chloris brevipila* Roseng. & Izag.)

South America, Uruguay. See *Boletín de la Sociedad Argentina de Botánica* 12: 120, f. 2. 1968, *Kurtziana* 6: 124. 1971.

E. calvescens (Hack.) Caro & Sanchez (*Chloris calvescens* Hack.)

Southern Brazil to northern Argentina. Lower lemma oblong, see *Bulletin de l'Herbier Boissier, sér.* 2, 4(3): 279. 1904, *Kurtziana* 6: 128. 1971.

E. caribaea (Spreng.) Herter (*Chloris bahiensis* f. *bahiensis*; *Chloris bahiensis* f. *glabrescens* Hack.; *Chloris capensis* auct. non (Houtt.) Thellung; *Chloris capensis* var. *bahiensis* (Steud.) Parodi; *Chloris capensis* var. *glabrescens* (Hack.) Parodi; *Chloris caribaea* Spreng.; *Chloris glabrescens* (Hack.) Roseng. & Izag.; *Chloris pendula* Salzm. ex Steud.; *Eragrostis bahiensis* (Steud.) Herter; *Eustachys bahiensis* (Steud.) Herter; *Eustachys glabrescens* (Hack.) Caro & E.A. Sánchez; *Eustachys paspaloides* subsp. *caribaea* (Spreng.) Nowack; *Paspalum gardnerianum* var. *gardnerianum*)

America, Bolivia and Brazil to Argentina. Perennial, leaf blades linear, lower lemma ciliate on the margins, common

in disturbed places, along roadsides, see *Systema Vegetabilium*, editio decima sexta 1: 295. 1825, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 103. 1850, *Synopsis Plantarum Glumacearum* 1: 208. 1854 and *Repertorium Specierum Novarum Regni Vegetabilis* 8: 46. 1910, *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 56. 1910, *Revista Sudamericana de Botánica* 6: 147. 1940, *Estudios Botánicos en la Región Uruguaya* 14(1): 85, f. 339. 1941 [1942], *Revista Argentina de Agronomía* 20: 26. 1953, *Boletín de la Sociedad Argentina de Botánica* 12: 123. 1968, *Kurtziana* 6: 120. 1971, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Flora Ilustrada Catarinense* 1(Gram.): 1-435. 1981, *Sida* 12(1): 227-232. 1987, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 17(1-2): 53-57. 1995.

in English: Caribbean finger grass

E. distichophylla (Lagasca) Nees (*Chloris acuminata* Trin.; *Chloris argentina* (Hack.) Lillo & Parodi; *Chloris argentinensis* (Hack.) Lillo & Parodi, nom. illeg., non *Chloris argentina* (Hack.) Lillo & Parodi; *Chloris confertifolia* Trin.; *Chloris distichophylla* Lag.; *Chloris distichophylla* var. *acuminata* (Trin.) Hack.; *Chloris distichophylla* var. *argentina* Hack.; *Chloris distichophylla* var. *argentina* Hack. ex Stuck.; *Chloris distichophylla* var. *genuina* Hack.; *Chloris dolichostachya* Lag.; *Chloris fasciculata* Schrad. ex Schult.; *Chloris paytensis* Steud., named for Payta, Peru; *Enteropogon dolichostachyus* (Lag.) Keng ex Lazarides; *Enteropogon dolichostachyus* (Lag.) Keng; *Eustachys argentina* (Hack.) Herter, nom. illeg., non *Eustachys argentinensis* (Hack.) Herter; *Eustachys argentinensis* (Hack.) Herter; *Eustachys confertifolia* (Trin.) Kunth; *Paspalum superbum* Spreng.) (from the Latin *distichus* "consisting of 2 rows," Greek *distichos* "in 2 rows, in 2 ranks" and *phyllon* "leaf")

Peru, Chile, Argentina, Brazil, Paraguay. Perennial bunchgrass, herbaceous, rhizomatous, simple, erect, purplish at the base, tufted, ligule membranous, leaves loose and often scabrous, inflorescence digitate, spikes more or less erect or curved, florets 2, lower floret fertile, upper floret sterile and acute, glumes hyaline, upper glume scabrous and sometimes awned, lower lemma acuminate and bearded, upper lemma inflated and rough, cultivated, fodder, ornamental, sometimes a weedy escape, possibly poisonous, fruits diuretic and leaves febrifuge, disturbed areas, see *Systema Naturae*, Editio Decima 846, 855, 1359. 1759, *Genera et species plantarum* 4. 1816, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 74. 1821, *Mantissa* 2: 339. 1824, *Systema Vegetabilium*, editio decima sexta 1: 248. 1825, *Species Graminum* 1828-1836, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 418. 1829, *Révision des Graminées* 1: 88. 1829, *Synopsis Plantarum Glumacearum* 1: 207. 1854 and *Bulletin de l'Herbier Boissier*, sér. 2, 4:

279. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 113. 1904, *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 4: 180. 1918, *Revista de la Facultad de Agronomía y Veterinaria* 2: 283. 1919, *Revista Sudamericana de Botánica* 6(5-6): 146. 1940, *Estudios Botánicos en la Región Uruguaya* 1: 86, f. 341. 1941, *Revista Sudamericana de Botánica* 7(6-8): 196. 1943, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 197. 1957, *Fl. Ill. Pl. Prim. Sin. Gramin.* 471. 1959, *Australian Journal of Botany, Supplementary Series* 5: 1-51. 1972, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *J. Cytol. Genet.* 20: 205-206. 1985.

in English: evergreen chloris, weeping finger grass

in Bolivia: penacho

in Brazil: capim cebola, capim batatal, pasto plumero, pé de galinha, pasto borla, cocorobó, graminha de araraquara

E. floridana Chapman (*Chloris floridana* (Chapman) Alph. Wood)

U.S., Florida, Alabama. Vulnerable species, growing in sand hills and flatwoods, see *Flora of the Southern United States* 557. 1860, *The American Botanist and Florist* 407. 1871.

in English: two-spike finger grass, twospike fingergrass, two-spiked finger grass, Florida finger grass

E. glauca Chapman (*Chloris glauca* (Chapman) Wood)

North America, U.S., Florida. Wetlands, see *Flora of the Southern United States* 557. 1860, *The American Botanist and Florist* 407. 1871.

in English: saltmarsh finger grass

E. neglecta (Nash) Nash (*Chloris neglecta* Nash)

U.S., Florida. Vulnerable species, see *Bulletin of the Torrey Botanical Club* 22(10): 423-424. 1895, *Bulletin of the Torrey Botanical Club* 25: 450. 1898.

in English: four-spike finger grass, fourspike finger grass

E. paranensis A.M. Molina

South America, Brazil. See *Candollea* 51(1): 234, f. 3A-J, 8A. 1996.

E. paspaloides (Vahl) Lanza & Mattei (*Andropogon capensis* Houtt., nom. illeg.; *Andropogon muticum* L.; *Chloris capensis* Thell.; *Chloris capensis* (Houtt.) Thell.; *Chloris capensis* (Houtt.) Merr., nom. illeg., non *Chloris capensis* (Houtt.) Thell.; *Chloris equitans* Trin.; *Chloris paspaloides* Hochst.; *Chloris petraea* Thunb., nom. illeg., non *Chloris petraea* Sw.; *Cynosurus paspaloides* Vahl; *Eustachys mutica* (L.) Cufod.)

Tropical and southern Africa, Arabia, Yemen. Perennial, tufted, leafy, bright green to blue-green, at first geniculate and rooting at the nodes, upright or ascending, shortly stoloniferous and shortly rhizomatous, base strongly flattened, purple nodes, leaf sheaths folded and strongly com-

pressed, ligule an inconspicuous ring of hairs, leaf blades sharply keeled and folded, digitate inflorescence, unequal glumes, lower glume boat-shaped, upper glume oblong-elliptic and shortly awned, lemma more or less mucronate, fertile lemma ovate, native pasture species, palatable grass, very high grazing value, well grazed and nutritious, can stand heavy grazing, growing in disturbed road verges, roadsides, loams and black cracking clays, shallow rocky soils, dry grassland, in arid and semiarid areas, loose sandy loams, on stony soil, fixed dunes, often on seasonally waterlogged ground, disturbed sites, undisturbed ground, in open woodlands, in rocky soil, open grasslands, red loams and red earths, bushveld and fynbos, see *Symbolae Botanicae*, ... 2(27): 21. 1791, *Prodromus Plantarum Capensium*, ... 1: 20. 1794, *Systema Vegetabilium, editio decima sexta* 1: 295. 1825, *Species Graminum* 1828-1836, *Flora* 38: 206. 1885 and *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 56. 1910, *Bulletin du Jardin Botanique National de Belgique* 38: 1293. 1968, *Bothalia* 24(1): 92-96. 1994, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytchimie* 17(1-2): 53-57. 1995.

in English: fan grass, brown Rhodes grass, red Rhodes grass
in southern Africa: bruinkruisgras, bruinhoenderspoor, bruinhoenderspoorgras, bruinsaadvingergras, bruinvingergras, gifgras, hoenderspoorgras, kruisgras; sebokunyana (Sotho); umbungane (Zulu)

E. paspaloides (Vahl) Lanza & Mattei subsp. ***caribaea*** (Spreng.) Nowack (*Chloris bahiensis* Steud.; *Chloris bahiensis* f. *glabrescens* Hack.; *Chloris capensis* var. *bahiensis* (Steud.) Parodi; *Chloris capensis* var. *glabrescens* (Hack.) Parodi; *Chloris caribaea* Spreng.; *Chloris glabrescens* (Hack.) Roseng. & Izag.; *Eragrostis bahiensis* (Steud.) Herter, nom. illeg., non *Eragrostis bahiensis* Schrad. ex Schult.; *Eustachys bahiensis* (Steud.) Herter; *Eustachys bahiensis* var. *bahiensis*; *Eustachys caribaea* (Spreng.) Herter; *Eustachys glabrescens* (Hack.) Caro & E.A. Sánchez)

Brazil, Paraguay. See *Systema Vegetabilium, editio decima sexta* 1: 295. 1825 and *Repertorium Specierum Novarum Regni Vegetabilis* 8: 46. 1910, *Repertorium Specierum Novarum Regni Vegetabilis* 10(251-253): 289. 1912, *Revista Sudamericana de Botánica* 6: 147. 1940, *Estudios Botánicos en la Región Uruguay* 14(1): 85, f. 339. 1941, *Rev. Sudamer. Bot.* 7: 196. 1943, *Revista Argentina de Agronomía* 20: 20, 26. 1953, *Boletín de la Sociedad Argentina de Botánica* 12: 123. 1968, *Kurtziana* 6: 120. 1971, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytchimie* 17(1-2): 57. 1995, *Candollea* 51: 255. 1996.

E. paspaloides (Vahl) Lanza & Mattei subsp. ***paspaloides*** America.

E. petraea (Sw.) Desv. (*Agrostis complanata* Aiton; *Chloris petraea* Sw.; *Chloris septentrionalis* Müll. Hal.; *Chloris swartziana* Döll.; *Chloris swartzii* Müll. Hal.; *Chloris uliginosa* Hack.; *Eustachys petrea* (Sw.) Desv.; *Eustachys uliginosa* (Hack.) Herter; *Schultesia petraea* (Sw.) Spreng.)

North and South America, Uruguay, U.S., Florida, Cuba, Mexico, Argentina, Jamaica, Brazil. Perennial, tufted, herbaceous, light bluish green color, erect or ascending, shortly stoloniferous or rhizomatous, culms compressed and glabrous, basal leaves, lower lemma ciliolate and gibbous, upper lemma obconical, cultivated, turf grass, salt intolerant, growing in sandy places, near small streams, on roadsides, open ground, under coconut palms at edge of sea, along roads in flatwoods, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Hortus Kewensis; or, a catalogue ... The second edition* 1: 96. 1789, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 17. 1815, *Botanische Zeitung. Berlin* 19(46): 340-341. 1861, *Flora Brasiliensis* 2(3): 68-69. 1878 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 320. 1909, *Revista Sudamericana de Botánica* 6(5-6): 147. 1940, *Fieldiana, Botany* 24(2): 38-331. 1955.

in English: pinewoods finger grass, finger grass

in Mexico: barbas de indio, box-ya'ax-suuk, ox-top'suuk

E. retusa (Lag.) Kunth (*Chloris argentina* (Hack. ex Stuck.) Lillo & Parodi; *Chloris argentinensis* (Hack. ex Stuck.) Lillo & Parodi, nom. illeg., non *Chloris argentina* (Hack.) Lillo & Parodi; *Chloris distichophylla* var. *argentina* Hack.; *Chloris distichophylla* var. *argentina* Hack. ex Stuck.; *Chloris retusa* Lag.; *Eustachys argentina* (Hack. ex Stuck.) Herter; *Eustachys argentina* (Hack.) Herter, nom. illeg., non *Eustachys argentinensis* (Hack.) Herter; *Eustachys argentinensis* (Hack. ex Stuck.) Herter; *Eustachys argentinensis* (Lillo & L. Parodi) Herter)

South America, southern Brazil to Argentina, Uruguay. Ornamental bunchgrass, herbaceous, coarse, more or less leafy, upper floret truncate, lower lemma ciliate on the margins, useful for erosion control, forage, rocky places, hillsides, open areas, see *Genera et species plantarum* 4-5. 1816, *Révision des Graminées* 1: 88. 1829 and *Anales del Museo Nacional de Buenos Aires* 11: 113. 1904, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 4: 180. 1918, *Revista de la Facultad de Agronomía y Veterinaria* 2: 283. 1919, *Revista Sudamericana de Botánica* 6(5-6): 146. 1940, *Estudios Botánicos en la Región Uruguay* 1: 86, f. 341. 1941, *Revista Sudamericana de Botánica* 7(6-8): 196. 1943, *Candollea* 51: 246. 1996.

in English: Argentine finger grass, windmill grass

in Brazil: capim-coquerinho

in Spanish: pata-de-gallo

E. swalleniana A.M. Molina

America. See *Candollea* 51(1): 232, f. 2A-H, 8A. 1996.

E. uliginosa (Hack.) Herter (also spelled ***uliginosus*** or ***ulignosa***) (*Chloris dusenii* Ekm.; *Chloris petraea* Sw.; *Chloris swartziana* Döll; *Chloris uliginosa* Hack.; *Eustachys petraea* (Sw.) Desv.; *Eustachys petrea* (Sw.) Desv.; *Schultesia petraea* (Sw.) Spreng.)

South America, southern Brazil to northern Argentina, Uruguay, Paraguay. Lower lemma gibbous, useful for erosion control, found in swampy places, often in *Eustachys petraea*, see *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 17. 1815, *Flora Brasiliensis* 2(3): 68-69. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 320. 1909, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(11): 26, t. 4, f. 2, t. 6, f. 14. 1911, *Revista Sudamericana de Botánica* 6(5-6): 147. 1940.

Euthryptochloa Cope

From the Greek *eu* “well, fine,” *thrypto* “to break in pieces, weaken” and *chloe*, *chloa* “grass.”

One species, Southeast Asia. Pooideae or Bambusoideae, perennial, loosely caespitose, herbaceous, auricles absent, leaf blades narrowed into a false petiole, ligule membranous, plants bisexual, inflorescence a large open to contracted panicle, spikelets all alike, floret 1, 2 glumes unequal, lower glume 1-nerved, upper glume 3-nerved, lemma 3-nerved, palea resembling lemma but 2-veined, lodicules 3 or 2, stamens 3, stigmas 2, along streams, mountain slopes, roadsides, forest, resembling *Cyathopus*, type *Euthryptochloa longiligula* Cope, see *J. Linn. Soc., Bot.* 19: 59. 1881 and *Kew Bulletin* 42(3): 707-709. 1987.

Species

E. longiligula Cope (*Euthryptochloa longiligulata* Cope)

China. Robust, solitary or tufted, montane, stiff, erect or climbing, unbranched, leaf sheaths smooth, ligule an unfringed membrane, leaf blades apex acuminate, ligule scabrous, panicle branches widely spreading at maturity, spikelets gaping at maturity and glossy, lemma narrowly ovate with apex obtuse, palea present.

Eutriana Trin. = *Bouteloua* Hornem. ex P. Beauv., *Bouteloua* Lag.

For the Colombian (b. Zipaquirá) botanist José Jerónimo (or Gerónimo) Triana, 1834-1890 (d. Paris), traveler, plant collector, botanical explorer, journalist, his writings include *Nuevos jeneros i especies de plantas para la flora*

Neo-Granadina. Bogotá 1854 and *Prodromus florum Novogranatensis*. Paris 1862-1867, pupil of Francisco Javier Matis (the last survivor of the Mutis botanical expedition); see Enrique Pérez Arbeláez, in *D.S.B.* 13: 463-464. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 400. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 406. Boston, Mass. 1972; M. Colmeiro y Penido, *La Botánica y los Botánicos de la Peninsula Hispano-Lusitana*. Madrid 1858; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Chloridoideae, Cynodonteae, Boutelouinae, type *Eutriana curtispindula* (Michx.) Trin., see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Essai d'une Nouvelle Agrostographie* 40. 1812, *Gen. Sp. Nov.* 5. 1816), *Fundamenta Agrostographiae* 161. 1820, *De Graminibus unifloris et sesquifloris* 242. Petropoli 1824, *Genera Plantarum* 94. 1836 and *Contributions from the United States National Herbarium* 41: 20-33, 118-120. 2001.

Exagrostis Steudel = Eragrostis Wolf

See *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, *Nomenclator Botanicus. Editio secunda* 1: 622. 1840 and *Acta Bot. Neerl.* 15: 157. 1966, *Contributions from the United States National Herbarium* 41: 81-115, 120. 2001.

Exothea Andersson

From the Greek *exo* “outside” and *theke* “a case.”

One species, tropical Africa, Vietnam. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial, densely caespitose, herbaceous, branched or unbranched, auricles present, leaf blades linear, plants bisexual, inflorescence racemose, a pair of short racemes subtended by a narrow spatheole, spikelets of sexually distinct forms on the same plant, 2 glumes more or less equal, lower glume 9-nerved, upper glume 3-nerved, palea present, 2 free and glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas, species of open habitats, grassland, upland, similar to *Hyparrhenia*, type *Exothea abyssinica* (Hochst. ex A. Rich.) Andersson, see *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 3, 2: 253, t. 3. 1856.

Species

E. abyssinica (Hochst. ex A. Rich.) Andersson. (*Andropogon exothecus* Hack.; *Andropogon monatherus* A. Rich.;

Anthistiria abyssinica Hochst. ex A. Rich.; *Exothea abyssinica* (A. Rich.) Andersson; *Hyparrhenia abyssinica* (Hochst. ex A. Rich.) Roberty; *Hyparrhenia monathera* (A. Rich.) Schweinf.)

Tropical Africa, Tanzania, mostly in central Africa. Perennial, coarse, densely to loosely tufted, robust, tussocky, herbaceous, tough leaves, inflorescence a single raceme-pair, glabrous spikelets, good frost tolerance, tolerates low soil fertility, grazed only when young, grows on seasonally wet ground, open field, along roadsides, wet meadow, montane grassland, on poorly drained areas, along streams, slopes, see *Tentamen Florae Abyssinicae* ... 2: 449, 462. 1850, *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 3, 2: 253, t. 3. 1857, *Beitrag zur Flora Aethiopiens* ... 300, 310. 1867, *Mexicanas Plantas* 2: 51, 67. 1886, *Monographiae Phanerogamarum* 6: 617, 632. 1889 and *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de*

Genève 9: 108. 1960, *Kew Bulletin, Additional Series* 2: 1-196. 1969 [A revision of the genus *Hyparrhenia*].

Exydra Endl. = *Glyceria* R. Br.

Perhaps from the Greek *exo* "outside" and *hydor* "water."

Pooideae, Poodae, Meliceae, type *Exydra aquatica* (L.) Endl., see *Species Plantarum* 75. 1753, *Prodromus Florae Novae Hollandiae* 1: 179. 1810, *Observations sur les Graminées de la Flore Belgique* 110-111. 1823 [1824], *Flora Posoniensis* 119. 1830 and *Botaniska Notiser* 1919: 97. 1919, *Aquatic and Wetland Plants of Southeastern United States Monocotyledons* 1-712. 1979, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Watsonia* 15: 38-39. 1984, *Acta Biologica Cracoviensia, Series Botanica* 27: 57-74. 1985, *Contributions from the United States National Herbarium* 48: 312, 371-379. 2003.

F

Falimiria Rchb. = *Arthrostachya* Link,
Falimiria (Reichenb.) Rchb., *Gaudinia* P.
Beauv.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see *Essai d'une Nouvelle Agrostographie* 95, 153, 164. 1812, *Consp. Regn. Veg.* 54. 1828, *Flore du Département des Hautes-Pyrénées* 68. 1867 and *Acta Universitatis Lundensis* 36(1): 27. 1900, *Contr. U.S. Natl. Herb.* 24: 192. 1925, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Contributions from the United States National Herbarium* 48: 121, 312, 370. 2003.

Falona Adans. = *Cynosurus* L., *Phalona*
Dumort.

From the Greek *phalos*, *phalon* "shining, bright, white."

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Cynosurinae, type *Falona echinata* (L.) Dumort., see *Species Plantarum* 1: 72-73. 1753, *Familles des Plantes* 2: 496. 1763, *Observations sur les Graminées de la Flore Belgique* 114. 1823 [1824] *Genera Plantarum* 3(2): 1183. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 73. 1887 and *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991, *Flora Mesoamericana* 6: 228-229. 1994, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 13-14. 1997, *Taxon* 49(2): 249. 2000, *Contributions from the United States National Herbarium* 48: 242, 312, 488-489. 2003.

Fargesia Franchet = *Thamnocalamus* Munro

After Père Paul Guillaume Farges, 1844-1912, naturalist, a French missionary in China.

About 2-3 or 80-83 species, China, Vietnam, Myanmar (Burma), temperate. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Arundinariinae, or Thamnocalaminae, perennial, sympodial, woody and persistent, shrub or small tree, thick wall, cylindrical, 3 or more branches at each node, sheath persistent or shedding late, sheath blade narrow and long, pachymorph rhizomes, plants unarmed and bisexual, inflorescence terminal dense panicle, apical panicle or raceme, 2 glumes hairy and acuminate,

lower glume 5-nerved, upper glume 7-9-nerved, palea present, 3 lodicules membranous and ciliate, 3 stamens, 2-3 stigmas, problems for nomenclature and taxonomy, often referred to *Thamnocalamus*, type *Fargesia spathacea* Franch., see *Flora Boreali-Americana* 1: 73. 1803, *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 3(3): 746, pl. 5, f. 3. 1843, *Transactions of the Linnean Society of London* 26(1): 33, 34, 157. 1868, *Journal Linn. Soc. Bot.* 19: 31. 1881, *Gen. Pl.* 3(2): 1208. 1883, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 2: 93. 1887, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1067. 1893 [1894] and *Florula austro-higoensis sive enumeratio plantarum in provincia Higo australe sponte nascentium ...* 86. Japan 1931, *Journal of Japanese Botany* 11(1): 1-2. 1935, *Acta Phytotax.* 6: 355. 1957, *Smithsonian Contrib. Bot.* 44: 21. 1980, *J. Bamboo Res.* 1: 15-18. 1982, *Journal of Bamboo Research* 2(1): 23-24. 1983, *Journal of Bamboo Research* 4(1): 19. 1985, *Journal of Bamboo Research* 7(2): 16-17, 31, 51, 84. 1988, *Kew Bulletin* 44(2): 349-367. 1989, *Taxon* 45(2): 278. 1994, *Conservation Biology* 13(6): 1360-1370. Dec 1999, *Conservation Biology* vol. 17, issue 2: 558-565. Apr 2003.

Species

F. acuticontracta T.P. Yi

China, Gongshan, Yunnan. Culm top slender and tapering, thick culm base, internode usually not pruinose, 3-11 branches at each node, sheath persistent and shorter than internode, sheath auricles absent, sheath ligule arcuate or truncate, leaves lanceolate, culm used for fishing rods, handles, for weaving, found in evergreen hardwood forests, see *Journal of Bamboo Research* 7(2): 98-101, f. 30. 1988.

F. adpressa T.P. Yi

China, Yunnan. Young culm pruinose, sheath annulus slightly convex, most branches fascicled, sheath persistent and shorter than internode, sheath blade linear-lanceolate, sheath auricles absent or tiny, sheath ligule circular, leaves linear-lanceolate, see *Journal of Bamboo Research* 4(2): 26-27, f. 8. 1985.

F. albocerea J.R. Xue [also Hsueh] & T.P. Yi (*Borinda albocerea* (J.R. Xue & T.P. Yi) Stapleton)

China, Yunnan, Lushui. Culm pruinose, glabrous, almost solid, coriaceous sheath shedding late, papery sheath blade

linear-lanceolate, sheath auricles absent or tiny, see *Journal of Bamboo Research* 7(2): 45-47, f. 11. 1988, *Kew Bulletin* 53(2): 455. 1998.

F. altior T.P. Yi

China, Yunnan. Young culm pruinose, coriaceous and caducous sheath longer than the internode, sheath blade linear-lanceolate, sheath auricles absent, sheath ligule purple glabrous, leaves narrowly lanceolate, culm used for fishing rods, handles, for weaving, found on stream banks, slopes, see *Journal of Bamboo Research* 7(2): 65-68, f. 18. 1988.

F. ampullaris T.P. Yi (*Arundinaria intermedia* Munro; *Drepanostachyum intermedium* (Munro) Keng f.)

China, Tibet. Young culm pruinose, clumped, most branches fascicled and slender, sheath contracted like a bottleneck and shedding late, sheath auricles absent, leaves narrowly lanceolate, used for weaving, see *Transactions of the Linnean Society of London* 26(1): 28. 1868 and *Journal of Bamboo Research* 2(2): 18, pl. 1. 1983.

F. angustissima T.P. Yi (*Arundinaria ferax* Keng; *Fargesia ferax* (Keng) T.P. Yi; *Sinarundinaria ferax* (Keng) Keng f.)

China, Sichuan. Young culm pruinose, distinct fine longitudinal stripes, 5-10 branches clustered, sheath persistent and much longer than internode, no auricles, sheath ligule truncate, leaves narrowly lanceolate, culm used for weaving, shrubby feeder plants for giant pandas, found under evergreen broad-leaved forest, see *Sinensia* 7(3): 408, f. 1. 1936, *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal of Bamboo Research* 2(2): 39. 1983, *Journal of Bamboo Research* 4(2): 21-22, f. 4. 1985.

F. aurita T.P. Yi (*Fargesia aurita* J.R. Xue & C.M. Hui, nom. illeg., non *Fargesia aurita* T.P. Yi; *Fargesia decurvata* J.L. Lu; *Fargesia scabrida* T.P. Yi)

China. Food for pandas, see *Journ. Henan Agric. Coll.* 2: 74, f. 6. 1981, *Journal of Bamboo Research* 4(2): 22-25, f. 6, 8. 1985, *Bulletin of Botanical Research* 18(3): 258, f. 1. 1998.

F. brevipaniculata (Hand.-Mazz.) Z.Y. Li & D.Z. Fu (*Arundinaria brevipaniculata* Hand.-Mazz.; *Arundinaria chungii* Keng; *Sinarundinaria brevipaniculata* (Hand.-Mazz.) Keng f.; *Sinarundinaria chungii* (Keng) Keng f.; *Yushania brevipaniculata* (Hand.-Mazz.) T.P. Yi; *Yushania chungii* (Keng) Z.P. Wang & G.H. Ye)

Asia temperate, China. See *Kaiserliche Akademie der Wissenschaften in Wien. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger.* 57: 237. 1920, *Icon. Pl. Omeiensium* 1(2): t. 53. 1944, *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 93. 1981, *Journal of Bamboo Research* 5(1): 44. 1986, *Vascular Plants of the Hengduan Mountains* 2: 2163. 1994.

F. brevipes (McClure) T.P. Yi (*Arundinaria brevipes* McClure; *Sinarundinaria brevipes* (McClure) Keng f.)

China. See *Sunyatsenia* 6(1): 28-32, t. 7. 1941, *Technical Bulletin of the National Forestry Research Bureau* 8: 14. 1948, *Journal of Bamboo Research* 7(2): 113-114. 1988.

F. brevissima T.P. Yi (*Fargesia scabrida* T.P. Yi)

China, Sichuan. Young culm pruinose, culm sheath shedding late, sheath blade triangular or broadly lanceolate, sheath auricles and cilia absent, sheath ligule glabrous, leaves lanceolate, edible shoots, culm used for weaving, see *Bulletin of Botanical Research* 5(4): 128-129, f. 5. 1985, *Journal of Bamboo Research* 4(2): 24-25, f. 8. 1985.

F. caduca T.P. Yi

China, Yunnan, Jinggu. Young culm pruinose, sheath caducous shorter than internode, sheath blade triangular or broadly lanceolate, sheath auricles and cilia absent, sheath ligule truncate and glabrous, greenish shoots, leaves narrowly lanceolate, in hardwood forests, see *Journal of Bamboo Research* 7(2): 108-110, f. 33. 1988.

F. canaliculata T.P. Yi

China, Sichuan. Sheath caducous and longer than internode, 5-7 fascicled branches at each node, sheath auricles and cilia absent, sheath ligule concave, leaves narrowly lanceolate or narrowly triangular, culm very hard used as timber, edible shoot, food for giant pandas, see *Journal of Bamboo Research* 4(1): 19-20, f. 1. 1985.

F. circinata J.R. Xue [also Hsueh] & T.P. Yi

China, Yunnan. Solid, 7-11 branches at each node, sheath coriaceous and longer than internode, sheath blade linear-lanceolate, sheath ligule truncate, leaves deciduous and papery, see *Journal of Bamboo Research* 7(2): 81-84, f. 24. 1988.

F. collaris T. P. Yi

China, Tibet. Culm annulus and sheath annulus convex, most branches fascicled, sheath coriaceous, sheath auricles absent, sheath ligule truncate or oblique, leaves lanceolate, used for weaving.

F. communis T.P. Yi

China, Gongshan, Yangbi, Yunnan. Culm pruinose, greenish, 4-10 branches at each node, slender longitudinal stripes, sheath persistent and much longer than the internode, sheath auricles absent, sheath ligule truncate, leaves lanceolate, used for weaving, in evergreen hardwood forests, see *Journal of Bamboo Research* 7(2): 51-53, f. 13. 1988.

F. concinna T.P. Yi

China. Young culm greenish, used for papermaking, see *Acta Botanica Yunnanica* 10(4): 437-438, f. 1. 1988.

F. conferta T.P. Yi (*Fargesia scabrida* T.P. Yi)

China, Sichuan. Internode not pruinose, sheath persistent and shorter than the internode, sheath blade erect linear-lanceolate, sheath auricles present or absent, sheath ligule convex, leaves narrow-lanceolate, shoots purplish red, see

Bulletin of Botanical Research 5(4): 123-125, f. 2. 1985, *Journal of Bamboo Research* 4(2): 24-25, f. 8. 1985.

F. contracta T.P. Yi

China, Lushui, Baoshan, Yunnan. Powdery culm green to greenish-yellow, 3-6 branches per node, sheath persistent, sheath blade linear-lanceolate and erect, sheath auricles absent, sheath ligule truncate, leaves narrow-lanceolate, in evergreen hardwood forests, see *Journal of Bamboo Research* 7(2): 60-63, f. 16. 1988.

F. contracta T.P. Yi f. *evacuata* T.P. Yi

China, Lushui, Yunnan. Hollow internodes, see *Journal of Bamboo Research* 7(2): 63. 1988.

F. contracta T.P. Yi f. *fugonensis* J.R. Xue & J.K. Duan

China. See *Journal of Bamboo Research* 7(2): 60-63, f. 16. 1988, *Bulletin of Botanical Research* 18(3): 271, f. 9. 1998.

F. crassinoda T.P. Yi

China, Tibet. Young culm pruinose, 3-6 branches fascicled, sheath caducous and coriaceous, sheath blade erect, sheath auricles absent, no cilia, sheath ligule circular, papery leaves narrow-lanceolate, used in house buildings, fencing.

F. cuspidata (Keng) Z.P. Wang & G.H. Ye (*Arundinaria cuspidata* Keng; *Fargesia hsuehana* T.P. Yi; *Sinarundinaria cuspidata* (Keng) Keng f.; *Thamnocalamus cuspidatus* (Keng) Keng f.)

China. Grows in woods, forest, see *Sinensia* 7(3): 410, f. 3. 1936, *Technical Bulletin of the National Forestry Research Bureau* 8: 15. 1948, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 153. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 1: 25. 1959, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 95. 1981, *Journal of Bamboo Research* 7(2): 53-57, f. 14 and 104-108, f. 32. 1988, *Kew Bulletin* 53(2): 455-456. 1998.

F. declivis T.P. Yi

China, Yunnan, Gongshan. Erect, slanting, leaning, liana-like, young internodes pruinose, 3-5 branches at each node, sheath persistent, leaves narrow-lanceolate, see *Journal of Bamboo Research* 7(2): 101-104, f. 31. 1988.

F. decurvata J.L. Lu (*Fargesia aurita* T.P. Yi; *Fargesia dracocephala* T.P. Yi; *Thamnocalamus dracocephalus* (T.P. Yi) Demoly)

China, Hubei. Young culm pruinose, 3-7 branches on each node, culm sheath shedding late, sheath blade narrow linear to triangular, sheath auricles absent or tiny, sheath ligule very short, 2-4 leaves on each twig, leaf blade lanceolate, see *Journ. Henan Agric. Coll.* 2: 74, f. 6. 1981, *Bulletin of Botanical Research* 5(4): 127-128, f. 4. 1985, *Journal of Bamboo Research* 4(2): 22-24, f. 6. 1985, *Bulletin de l'Association Française de Botanique* 14: 30. 1991.

F. demissa T.P. Yi

China, Ningxia. Young culm pruinose, glabrous, green or purplish green, sheath persistent and shorter than the internode, sheath blade narrow linear to triangular, sheath auricles absent, no cilia, sheath ligule truncate, ornamental, see *Journal of Bamboo Research* 7(2): 93-96, f. 28. 1988.

F. denudata T.P. Yi (*Thamnocalamus denudatus* (T.P. Yi) Demoly)

China, Sichuan, Wudu, Wenxian. Young culm pruinose, 4-15 slender drooping branches per node, culm sheath caducous and about two thirds of internode, no sheath auricles and cilia, sheath ligule truncate, leaves linear-lanceolate or lanceolate, food for giant pandas, in forest of broad-leaved trees and coniferous, see *Journal of Bamboo Research* 4(1): 20-22, f. 2. 1985.

in China: quebao jianzhu

F. dracocephala T.P. Yi (*Thamnocalamus dracocephalus* (T.P. Yi) Demoly)

China, Yunnan, Wenxian, Gansu. Young culm pruinose, glabrous, coriaceous culm sheath shedding late and shorter than the internode, sheath blade narrow linear to triangular, sheath auricles absent and no cilia, sheath ligule truncate, food for giant pandas, see *Journ. Henan Agric. Coll.* 2: 74, f. 6. 1981, *Bulletin of Botanical Research* 5(4): 127-128, f. 4. 1985, *Journal of Bamboo Research* 4(2): 22-24, f. 6. 1985, *Bulletin de l'Association Française de Botanique* 14: 30. 1991.

F. dulcicula T.P. Yi

China. See *Journal of Bamboo Research* 11(2): 9, f. 2. 1992.

F. dura T.P. Yi

China, Yunnan. Young culm pruinose, greenish, culm nearly solid and waxy, sheath persistent and longer than internode, sheath blade narrow linear to linear-lanceolate, sheath auricles absent and no cilia, sheath ligule truncate, leaves linear-lanceolate, see *Journal of Bamboo Research* 7(2): 34-36, f. 7. 1988.

F. edulis J.R. Xue & T.P. Yi (*Borinda edulis* (J.R. Xue & T.P. Yi) Stapleton)

China, Lushui, Baoshan. Culm pruinose, green, with longitudinal stripes, 4-7 branches at each node, sheath shedding late, sheath blade erect, sheath auricles absent, sheath ligule truncate or concave, shoots edible, culm used for weaving or for papermaking, in evergreen hardwood forests, see *Journal of Bamboo Research* 7(2): 53-57, f. 14. 1988, *Kew Bulletin* 53(2): 455. 1998.

F. elegans T.P. Yi

China, Sichuan. Young culm pruinose, hollow culm, see *Acta Botanica Yunnanica* 14(2): 136, f. 2. 1992.

F. emaculata T.P. Yi

China, Sichuan. Young culm pruinose, 10-17 fascicled branches, sheath persistent and coriaceous and shorter than internode, sheath blade erect and linear-lanceolate, sheath

auricles absent and no cilia, leaves narrowly lanceolate, food for giant panda, in alpine coniferous forests, see *Journal of Bamboo Research* 4(2): 29-30, f. 11. 1985.

F. exposita T.P. Yi

China. See *Journal of Bamboo Research* 11(2): 12, f. 3. 1992.

F. extensa Yi (*Sinarundinaria extensa* Yi)

China, Tibet. Young culm pruinose, about 5-7 branches per node, sheath auricles absent and no cilia, sheath ligule palmate, sheath blade erect, leaves narrow-lanceolate.

F. fansipanensis T.Q. Nguyen (*Borinda fansipanensis* (T.Q. Nguyen) Stapleton)

Vietnam. See *Kew Bulletin* 53(2): 455. 1998.

F. farcta T.P. Yi

China, Tibet. Young culm pruinose, longitudinal striae, solid, 3-10 fascicled branches, sheath shedding late and longer than internode, sheath auricles tiny, leaves narrow-lanceolate.

F. ferax (Keng) T.P. Yi (*Arundinaria ferax* Keng; *Sinarundinaria ferax* (Keng) Keng f.)

China, Shimian, Sichuan, Kangding. Young culm pruinose, purple-spotted sheath persistent and longer than internode, sheath auricles absent, sheath ligule drooping, leaves narrow-lanceolate, food for pandas, along roadsides, along riverbanks and streams, see *Sinensia* 7(3): 408, f. 1. 1936, *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal of Bamboo Research* 2(2): 39. 1983.

in China: feng shi jian zhu

F. fractiflexa T.P. Yi

China, Sichuan, Yunnan. Culm asymmetrical, zigzag, 5-7 slender branches fascicled, sheath deciduous, sheath auricles absent and no cilia, sheath ligule protruding, leaves narrow-lanceolate, strips used for weaving, food for pandas, see *Journal of Bamboo Research* 4(1): 22-23, f. 3. 1985.

in China: sao-ba zhu

F. frigida T.P. Yi (*Sinarundinaria glabrifolia* Yi)

China, Tibet. Young culm pruinose, most branches fascicled, young shoots purplish red, sheath shedding late, no auricles, sheath ligule truncate, leaves narrow-lanceolate.

F. fungosa T.P. Yi (*Borinda fungosa* (T.P. Yi) Stapleton; *Yushania fungosa* (Yi) Demoly)

China. See *Bulletin of Botanical Research* 5(4): 121-123, f. 1. 1985, *Kew Bulletin* 53(2): 456. 1998.

F. funiushanensis T.P. Yi

China. See *Acta Botanica Yunnanica* 13(4): 375-376, f. 1. 1991.

F. gongshanensis T.P. Yi

China, Yunnan, Gongshan. Young culm pruinose, 5-15 branches at each node, young shoots purplish red, sheath

persistent or shedding late and longer than internode, sheath blade linear-lanceolate, no sheath auricles and no cilia, sheath ligule truncate, leaves narrow-lanceolate, culm used for weaving, found in evergreen hardwood forest, see *Journal of Bamboo Research* 7(2): 57-60, f. 15. 1988.

F. grossa T.P. Yi (*Sinarundinaria grossa* Yi)

China, Tibet. Culm not pruinose, most branches fascicled, young shoots purplish red, sheath coriaceous, no sheath auricles, sheath ligule truncate, leaves narrow-lanceolate.

F. gyirongensis T.P. Yi

China, Tibet. Young culm pruinose and glabrous, sheath coriaceous and caducous, sheath blade linear-lanceolate, no sheath auricles and no cilia, papery leaves lanceolate.

F. hainanensis T.P. Yi

China, Hainan. Slender, longitudinal striae, 3-7 branches not fascicled or clustered, sheath persistent and coriaceous, sheath blade linear-lanceolate, no sheath auricles, sheath ligule arcuate with silky margin, 2-3 leaves on each twig, leaves narrow-lanceolate, see *Bulletin of Botanical Research* 3(3): 151, pl. 1. 1983.

F. hsuehana T.P. Yi (also spelled *hsuehiana*) (*Borinda hsuehana* (T.P. Yi) Stapleton)

China, Yunnan. 6-9 branches at each node, sheath persistent shorter than the internode, no cilia and no sheath auricles, sheath ligule truncate, leaves narrow-lanceolate, in evergreen hardwood forests, slopes, hills, see *Journal of Bamboo Research* 7(2): 104-108, f. 32. 1988, *Kew Bulletin* 53(2): 456. 1998.

F. hygrophylla J.R. Xue & T.P. Yi (also spelled *hygrophylla*)

China, Yunnan. Young culm pruinose, 5-14 branches at each node, sheath persistent and much longer than internode, no sheath auricles, sheath ligule truncate, strong leaves lanceolate, used for weaving, handles, farm tools, see *Journal of Bamboo Research* 7(2): 74-76, f. 21. 1988.

F. jiulongensis T.P. Yi

China, Sichuan, Jiulong. Young culm pruinose and powdery, shoot light red to purplish, culm sheath caducous and longer than internode, sheath blade truncate linear-lanceolate, no sheath auricles and no cilia, leaves narrow-lanceolate, shoot edible, culm used for weaving, food for pandas, see *Journal of Bamboo Research* 4(2): 22, f. 5. 1985.

F. lincangensis T.P. Yi

China, Yunnan, Lincang. Culm greenish glabrous not pruinose, shedding late or persistent culm sheath coriaceous and shorter than internode, sheath blade linear-lanceolate, sheath auricles present or absent, leaves lanceolate, edible shoot, culm used for weaving, see *Journal of Bamboo Research* 7(2): 96-98, f. 29. 1988.

F. lushuiensis J.R. Xue & T.P. Yi (*Borinda lushuiensis* (J.R. Xue & T.P. Yi) Stapleton)

China, Lushui, Yunnan. Young culm pruinose and glabrous, 2-9 branches at each node, sheath caducous and shorter than internode, no sheath auricles and no cilia, sheath ligule truncate, leaves narrowly-lanceolate, see *Journal of Bamboo Research* 7(2): 111-113, f. 34. 1988, *Kew Bulletin* 53(2): 457. 1998.

F. mairei (Hack. ex Hand.-Mazz.) T.P. Yi (*Arundinaria mairei* Hack. ex Hand.-Mazz.; *Arundinaria mairei* Hack.; *Indocalamus mairei* (Hack. ex Hand.-Mazz.) McClure; *Sinarundinaria mairei* (Hack.) Keng f.; *Sinarundinaria mairei* (Hack. ex Hand.-Mazz.) Keng f.) (named for the French botanical collector Edouard Ernest Maire, 1848-1932, missionary in Yunnan, China, died in Dongchuan, Yunnan)

China, Yunnan, Dayao. Young culm silky, sheath persistent and longer than internode, edible shoot, culm used for weaving, in evergreen hardwood forests, see *Kaiserliche Akademie der Wissenschaften in Wien. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger*. 62: 255. 1926, *Symb. Sin.* 7: 1273. 1936, *Lingnan University Science Bulletin* 9: 24. 1940, *Technical Bulletin of the National Forestry Research Bureau* 8: 114. 1948, *Journal of Bamboo Research* 7(2): 50. 1988.

F. mali T.P. Yi (*Arundinaria maling* Gamble; *Fargesia maling* (Gamble) H. Simon ex D. McClintock; *Sinarundinaria maling* (Gamble) C.S. Chao & Renvoize; *Yushania maling* (Gamble) R.B. Majumdar; *Yushania maling* (Gamble) D.C. McClint. & Stapleton, nom. illeg., non *Yushania maling* (Gamble) R.B. Majumdar; *Yushania maling* (Gamble) Demoly, nom. illeg., non *Yushania maling* (Gamble) R.B. Majumdar)

China, Sichuan. Glabrous, waxy, sheath coriaceous shedding late, sheath blade erect, sheath auricle and cilia absent, sheath ligule triangular with wavy serrate margin, 2-4 leaves on each twig, leaves linear-lanceolate, culm used for weaving, see *Bulletin of Miscellaneous Information Kew* 1912: 139. 1912, *Kew Bulletin* 44: 356 (1989, *Acta Botanica Yunnanica* 11(1): 37-38, f. 2. 1989, *Bamboo Soc. Newsl.* 12: 10. 1991, *Fl. Ind. Enumerat.-Monocot.* 15: 6. 1992.

F. maluo T.P. Yi

China. See *Journal of Bamboo Research* 11(2): 6. 1992.

F. melanostachys (Hand.-Mazz.) T.P. Yi (*Arundinaria acutissima* Keng; *Arundinaria forrestii* Keng; *Arundinaria melanostachys* Hand.-Mazz.; *Sinarundinaria acutissima* (Keng) Keng f.; *Sinarundinaria forrestii* (Keng) Keng f.; *Sinarundinaria melanostachys* (Hand.-Mazz.) Keng f.) (named for the British traveler George Forrest, 1873-1932, plant collector in China, F.L.S. 1924; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 558 and 2: 121. Boston 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Alice Margaret Coats, *The Quest for Plants. A History of the Horticultural Explorers*. London 1969; I.C. Hedge

and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 80. Edinburgh 1970; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. [1931]; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 130, 162. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 210. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 2: 43-44. 1979 and 6: 430-431. 1986; J.M. Cowan, *The Journeys and Plant Introduction of George Forrest*. R.H.S. 1952; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 116, 254-255, 690. London 1994; Brenda McLean, *A Pioneering Plantsman: A.K. Bulley and the Great Plant Hunters*. London, The Stationery Office 1997; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980; H.J. Noltje, in *The New Plantsman*. 5(1): 63-64. Mar 1998; [Anon.], in *Hortus*. no. 44: 120-121. [referring about *A Botanical Pioneer in South West China*, by Heinrich Handel-Mazzetti, translator and publisher David Winstanley, 1996] Winter 1997)

China, Gongshan, Yunnan, Weixi. Culm pruinose when young, 3-11 branches on each node, sheath persistent and longer than the internode, sheath blade triangular or broadly lanceolate, sheath auricles and cilia absent, purple sheath ligule triangular, leaves lanceolate and glabrous, culm used for fishing rods, see *Kaiserliche Akademie der Wissenschaften in Wien. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger*. 61: 23. 1924, *Bulletin of Miscellaneous Information Kew* 1936(1): 106-107. 1936, *Technical Bulletin of the National Forestry Research Bureau* 8: 13-14. 1948, *Journal of Bamboo Research* 2(2): 39. 1983.

F. membranacea T.P. Yi

China, Sichuan. Straight culm, sheath persistent, sheath blade erect, similar to *Fargesia fractiflexa* Yi, see *Acta Botanica Yunnanica* 14(2): 135, f. 1. 1992.

F. murielae (Gamble) T.P. Yi (also spelled *murieliae*) (*Arundinaria murielae* Gamble; *Arundinaria spathacea* (Franch.) D.C. McClint.; *Bambusa murielae* E.H. Wilson; *Fargesia spathacea* Franch.; *Sinarundinaria murielae* (Gamble) Nakai; *Thamnocalamus murieliae* (Gamble) Demoly; *Thamnocalamus spathaceus* (Franch.) Soderstr.; *Thamnocalamus spathaceus* (Franch.) C.D. Chu & C.S. Chao, nom. illeg., non *Thamnocalamus spathaceus* (Franch.) Soderstr.) (after Ernest Henry Wilson's daughter, Muriel, Mrs George L. Slate, d. 1976)

China. Variable, culm slightly pruinose when young, similar to *Fargesia orbiculata* Yi, see *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1067. 1893 and *Bulletin of Miscellaneous Information Kew* 1920(10): 344-345. 1920, *Journal of Japanese Botany* 11(1): 1-2. 1935, *Brittonia* 31(4): 495.

1979, *Acta Phytotaxonomica Sinica* 18(1): 23. 1980, *Bamboo Research* 1: 5. 1981, *Journal of Bamboo Research* 2(1): 39. 1983, *Bulletin de l'Association Française de Botanique* 13: 10. 1990.

in English: umbrella bamboo

in China: shennong jianzhu

F. nitida (Mitford) Keng f. ex T.P. Yi (*Arundinaria nitida* Mitford ex Stapf; *Arundinaria nitida* Mitford; *Bambusa nitida* hort.; *Fargesia nitida* (Mitford ex Stapf) Keng f. ex T.P. Yi; *Semiarundinaria nitida* Q.T. Shi; *Sinarundinaria nitida* Nakai; *Sinarundinaria nitida* (Mitford) Nakai; *Sinarundinaria nitida* (Mitford ex Stapf) Nakai; *Sinoarundinaria nitida* Hillier; *Thamnocalamus nitidus* (Mitford) Demoly; *Thamnocalamus nitidus* (Mitford ex Stapf) Demoly)

Songpan, Wenchuan, Sichuan, Gansu, Ningxia, China. Arching when old, sympodial, 5-18 slender branches at each node, sheath persistent, no auricles or cilia, sheath ligule arcuate, leaves linear-lanceolate, culms used to weave baskets, a food plant for giant panda, see *Transactions of the Linnean Society of London* 26(1): 28. 1868, *Gard. Chron.* 3rd ser. 15: 301. 1894, *Gardener's Chronicle & Agricultural Gazette* ser. III 18: 186, f. 33. 1895, *Bull. Misc. Inform. Kew* 109: 20. 1896 and *Journal of Japanese Botany* 11(1): 1. 1935, *Bamb. Res. Asia* 58. 1980, *Journal of Bamboo Research* 6(4): 14. 1987, *Bambou* 9: 13. 1991, *Edinb. J. Bot.* 51: 308. 1994.

in English: fountain bamboo, hardy blue bamboo

in China: Huaxi jianzhu

in Japan: sen-chiku

F. obliqua T.P. Yi

China, Songpan, Sichuan. Young culm pruinose, sheath oblong or elliptic, sheath blade erect, sheath auricles absent, sheath ligule arcuate, leaves oblong-lanceolate, a food plant for the giant panda, see *Acta Botanica Yunnanica* 8(1): 48-50, f. 1. 1986.

F. orbiculata T.P. Yi

China, Yunnan. Young culm pruinose with longitudinal stripes, 5-18 fascicled branches at each node, sheath persistent, no sheath auricles, sheath ligule arcuate, shoot edible, culm used for furniture, see *Journal of Bamboo Research* 7(2): 22-25, f. 3. 1988.

F. papyrifera T.P. Yi (*Borinda papyrifera* (T.P. Yi) Stapleton)

China, Yunnan. Young culm pruinose with longitudinal stripes, 3-5 branches per node, sheath caducous, sheath auricles absent, sheath ligule more or less concave, edible shoot, culm used for papermaking, for weaving, punt poles, in hardwood forests, see *Journal of Bamboo Research* 7(2): 42-45, f. 10. 1988, *Kew Bulletin* 53(2): 457. 1998.

F. parvifolia T.P. Yi

China. See *Journal of Bamboo Research* 10(2): 15. 1991.

F. pauciflora (Keng) T.P. Yi (*Arundinaria pauciflora* Keng; *Fargesia pauciflora* (Keng) T.P. Yi; *Sinarundinaria pauciflora* (Keng) Keng f.)

China, Sichuan. Longitudinally striped, densely silky, sheath persistent or shedding late, sheath blade linear-lanceolate, no sheath auricle and no cilia, sheath ligule truncate or arcuate, leaves narrowly lanceolate, food for pandas, see *Journal of the Washington Academy of Sciences* 26: 397. 1936, *Technical Bulletin of the National Forestry Research Bureau* 8: 14. 1948, *Journal of Bamboo Research* 4(2): 25-26. 1985, *Bulletin of Botanical Research* 5(4): 125. 1985.

F. perlonga J.R. Xue & T.P. Yi (*Borinda perlonga* (J.R. Xue & T.P. Yi) Stapleton)

China, Yunnan, Kunming. Sheath persistent much longer than the internode, sheath auricles tiny or absent, sheath ligule truncate, papery leaves lanceolate, see *Journal of Bamboo Research* 7(2): 79-81, f. 23. 1988, *Kew Bulletin* 53(2): 457. 1998.

F. pleniculmis (Hand.-Mazz.) T.P. Yi (*Arundinaria pleniculmis* Hand.-Mazz.)

China, Yunnan, Gongshan. Young culm glabrous and pruinose, 1-3 leaves on each twig, edible shoot, see *Symbolae Sinicae* 7(5): 1276-1277. 1936, *Journal of Bamboo Research* 7(2): 113. 1988.

F. plurisetosa T.H. Wen

China, Yunnan. Sheath persistent and much longer than the internode, manifold branching, sheath blade triangular or broadly lanceolate, no sheath auricle, 3-6 leaves on each twig, leaves lanceolate and silky, see *Journal of Bamboo Research* 3(2): 27, f. 3. 1984.

F. porphyrea T.P. Yi

China, Yunnan. Young culm whitish silky, not pruinose, shoot red purplish, 5-11 branches at each node, sheath persistent and shorter than the internode, no auricles and no cilia, sheath ligule truncate, leaves linear-lanceolate, edible shoot, internodes used for making flutes, see *Journal of Bamboo Research* 7(2): 84-87, f. 25. 1988.

F. praecipua T.P. Yi

China, Yunnan. Green, 6-12 branches at each node, sheath persistent, no auricles and no cilia, sheath ligule truncate or slightly concave, leaves lanceolate, used for making handicrafts, crossbows, in evergreen hardwood forests, see *Journal of Bamboo Research* 7(2): 68-71, f. 19. 1988.

F. qinlingensis T.P. Yi & J.X. Shao

China, Shaanxi. Young culm glabrous and pruinose, sheath auricles sickle-shaped, sheath ligule truncate, leaf blade lanceolate or narrowly lanceolate, a feeding plant for giant pandas, see *Journal of Bamboo Research* 6(1): 42-45, f. 1. 1987.

F. robusta T.P. Yi (*Thamnocalamus robustus* (T.P. Yi) Demoly)

China, Wenchuan, Sichuan. Sheath caducous or shedding late, 15-20 branches clustered, no auricles and no cilia, sheath ligule truncate, leaves lanceolate or linear-lanceolate, food for pandas, edible shoots, culm used for weaving, for making walking stick, see *Journal of Bamboo Research* 4(2): 28-29, f. 10. 1985, *Bulletin de l'Association Française de Botanique* 13: 10. 1990.

in English: walking stick bamboo

in China: Guaigun zhu

F. rufa T.P. Yi

China, Sichuan, Gansu. Smooth, pruinose, glabrous, sheath shedding late and much longer than internode, sheath blade linear-lanceolate, no auricles or cilia, sheath ligule truncate or concave, leaves linear-lanceolate, food for pandas, see *Journal of Bamboo Research* 4(2): 27, f. 9. 1985.

F. sagittata T.P. Yi

China. Dark green, 7-10 branches at each node, sheath persistent and much longer than the internode, sheath blade erect, no sheath auricles, sheath ligule concave or truncate, twigs slender, leaves lanceolate, used for making handicrafts, crossbow, in evergreen hardwood forests, see *Journal of Bamboo Research* 7(2): 63-65, f. 17. 1988.

F. scabrida T.P. Yi

China, Sichuan, Songpan, Wenxian. Clumped, 3-8 branches per node, sheath persistent, sheath blade erect, no sheath auricles, leaves lanceolate, food for pandas, see *Journal of Bamboo Research* 4(2): 24-25, f. 8. 1985.

in English: yellow bamboo, rough-flowered bamboo

in China: huang zhu, cao hua jian zhu, kongxin zhu

F. semicoriacea T.P. Yi

China, Yunnan, Dongchuan. Young culm pruinose, shoot purple with brown spots, sheath persistent, purplish green sheath blade linear-lanceolate, no sheath auricles and no cilia, sheath ligule purple and truncate, leaves narrow-lanceolate, see *Journal of Bamboo Research* 7(2): 71-73, f. 20. 1988.

F. semiorbiculata T.P. Yi (*Sinarundinaria semiorbiculata* Yi)

China, Tibet. Young culm pruinose, shoot purple, sheath coriaceous yellowish, sheath blade linear-lanceolate to triangular, no sheath auricles and cilia, sheath ligule present and scabrous, leaves narrowly lanceolate, see *Journal of Bamboo Research* 2(2): 40, f. 9. 1983.

F. setosa T.P. Yi (*Sinarundinaria setosa* Yi)

China, Tibet. Culm top slightly bending, pruinose, young internode silky, sheath persistent or shedding late, sheath blade linear-lanceolate to triangular, sheath auricles absent, sheath ligule truncate, leaves lanceolate.

F. similaris J.R. Xue & T.P. Yi

China, Yunnan. Yellowish, glabrous, 3-8 fascicled branches, culm sheath yellow shorter than internode, sheath blade erect, sheath auricles absent, sheath ligule truncate, leaves narrow lanceolate, see *Journal of Bamboo Research* 7(2): 25-28, f. 4. 1988.

F. solida T.P. Yi

China, Yunnan. Pruinoso, longitudinal stripes, 4-9 branches at each node, sheath persistent and longer than the internode, sheath blade erect, no sheath auricles and no cilia, sheath ligule protruding, in hardwood forests, along riverbanks and streams, see *Journal of Bamboo Research* 7(2): 47-50, f. 12. 1988.

F. spathacea Franch. (*Arundinaria spathacea* (Franch.) D.C. McClint.; *Fargesia murielae* (Gamble) T.P. Yi; *Thamnocalamus spathaceus* (Franch.) Soderstr.; *Thamnocalamus spathaceus* (Franch.) C.D. Chu & C.S. Chao, nom. illeg., non *Thamnocalamus spathaceus* (Franch.) Soderstr.)

China. See *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1067. 1893 and *Bulletin of Miscellaneous Information Kew* 1920(10): 344-345. 1920, *Journal of Japanese Botany* 11(1): 1-2. 1935, *Brittonia* 31(4): 495. 1979, *Acta Phytotaxonomica Sinica* 18(1): 23. 1980, *Bamboo Research* 1: 5. 1981, *Journal of Bamboo Research* 2(1): 39. 1983, *Bulletin de l'Association Française de Botanique* 13: 10. 1990.

in English: arrow bamboo

in China: Jianzhu

F. stenoclada T.P. Yi

China, Sichuan. Erect, pruinose, sheath caducous and coriaceous, sheath blade erect, no sheath auricles, sheath ligule arcuate or nearly truncate, 1-2 leaves on each twig, leaves linear-lanceolate, food for pandas, culm used for fishing rods, for weaving, see *Journal of Bamboo Research* 8(2): 30-33, f. 1. 1989.

in English: slender branched arrow bamboo

in China: Xizhi Jianzhu

F. strigosa T.P. Yi

China, Yunnan. Young culm pruinose, 5-10 branches at each node, sheath persistent and shorter than the internode, sheath blade linear-lanceolate, sheath auricles absent and no cilia, sheath ligule arcuate or truncate, leaves narrow-lanceolate, see *Journal of Bamboo Research* 7(2): 90-93, f. 27. 1988.

F. subflexuosa T.P. Yi

China, Yunnan. Sigmoid to asymmetrical, young culm pruinose, 2-7 branches at each node, sheath caducous and longer than the internode, no sheath auricles and no cilia, sheath ligule concave or truncate, used for weaving, found in hardwood forests, see *Journal of Bamboo Research* 7(2): 36-39, f. 8. 1988.

F. sylvestris T.P. Yi

China, Yunnan. Young culm pruinose and greenish, 6-10 branches at each node, sheath persistent coriaceous, sheath blade linear-lanceolate, no sheath auricles and no cilia, sheath ligule truncate, leaves narrowly lanceolate, see *Journal of Bamboo Research* 7(2): 31-34, f. 6. 1988.

F. tenuilignea T.P. Yi

China, Yunnan. Greenish, glabrous, young culm more or less pruinose, 8-11 branches at each node, sheath persistent and coriaceous yellowish brown, sheath blade linear-lanceolate, no sheath auricles, sheath ligule truncate, leaves lanceolate, edible shoot, culm used for papermaking, for weaving, see *Journal of Bamboo Research* 7(2): 39-42, f. 9. 1988.

F. unguata T.P. Yi

China. See *Journal of Bamboo Research* 8(1): 22-24, f. 5. 1989.

F. utilis T.P. Yi

China, Yunnan. Greenish, young culm more or less pruinose, 7-18 fascicled branches per node, sheath persistent and longer than the internode, no sheath auricles and no cilia, edible shoot, culm used in house building, see *Journal of Bamboo Research* 7(2): 28-31, f. 5. 1988.

F. vicina (Keng) T.P. Yi (*Arundinaria vicina* Keng; *Pseudosasa vicina* (Keng) T.Q. Nguyen; *Sinarundinaria vicina* (Keng) Keng f.)

China. See *Sinensia* 7(3): 410, f. 2. 1936, *Symb. Sin.* 7: 1275. 1936, *Technical Bulletin of the National Forestry Research Bureau* 8: 14. 1948, *Journal of Bamboo Research* 7(2): 113. 1988.

F. wuliangshanensis T.P. Yi

China. Longitudinal stripes, 3-4 leaves on each twig, resembles *Fargesia glabrifolia* Yi, culm used for weaving, see *Acta Botanica Yunnanica* 10(4): 438-440, f. 2. 1988.

F. yuanjiangensis Xue & T.P. Yi

China, Yunnan, Yuanjiang. Shrubby, pruinose, glabrous, 15-18 branches at each node, sheath persistent and longer than the internode, sheath blade erect linear-lanceolate, no sheath auricles, sheath ligule truncate, leaves narrow-lanceolate, see *Journal of Bamboo Research* 7(2): 76-79, f. 22. 1988.

F. yulongshanensis T.P. Yi

China, Yunnan. Pruinoso when young, several branches at each node, shoots purplish, sheath shedding late or persistent, sheath blade linear-lanceolate, sheath auricles absent, sheath ligule truncate or concave, leaves narrowly lanceolate, edible shoot bitter, strips used in weaving, see *Journal of Bamboo Research* 7(2): 87-90, f. 26. 1988.

F. yunnanensis J.R. Xue & T.P. Yi (*Sinarundinaria yunnanensis* (J.R. Xue & T.P. Yi) J.R. Xue & D.Z. Li; *Yushania yunnanensis* (J.R. Xue & T.P. Yi) Keng f. & T.H. Wen)

China, Yunnan, Sichuan, Kunming. Young culm glabrous or sparsely silky, sheath persistent coriaceous, yellowish, no sheath auricles and no cilia, purple sheath ligule truncate, leaf lanceolate, shoot edible, see *Journal of Bamboo Research* 6(2): 21. 1987 and 6(4): 16. 1987, *Bulletin of Botanical Research* 5(4): 125-126, f. 3. 1985.

F. zayuensis T.P. Yi

China, Tibet. Culm hollow, longitudinal stripes, 5-10 fascicled branches at each node, sheath coriaceous shedding late and shorter than internode, no sheath auricles, sheath ligule truncate, 1-3 leaves on each twig, see *Journal of Bamboo Research* 7(2): 20-22, f. 2. 1988.

Farrago W.D. Clayton

Latin *farrago* "mixed fodder for cattle, mash, hodge-podge, a trifle," possibly referring to the spikelets or to the complex racemelets.

One species, Africa, Tanzania. Chloridoideae, Zoysiinae, annual, herbaceous, unarmed, wiry, slender, unbranched, auricles absent, leaf blades acuminate, ligule a fringe of hairs, plants bisexual, inflorescence a unilateral false raceme or a false spike, 1 fertile and 2 vestigial spikelets, 2 glumes more or less equal and dorsally compressed, lower glume long-awned and asymmetrical, upper glume symmetrical and shortly awned, lemma a nerveless scale, palea present, 2 free and glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, rocky places, type *Farrago racemosa* Clayton, see *Kew Bulletin* 21: 125. 1967, Carina K. Anttila, Curtis C. Daehler, Nathan E. Rank and Donald R. Strong, "Greater male fitness of a rare invader (*Spartina alterniflora*, Poaceae) threatens a common native (*Spartina foliosa*) with hybridization." *Am. J. Bot.* 85: 1597-1601. 1998.

Species***F. racemosa*** Clayton

Tanzania.

Fartis Adans. = *Zizania* L.

Ehrhartoideae, Oryzaceae, Zizaniinae, see *Species Plantarum* 2: 991. 1753, *Familles des Plantes* 2: 37, 557. 1763, *Diss. Brev. Bot. Zool.* 32. 1769 and *American Midland Naturalist* 4: 214. 1915, *Phytologia* 72: 6. 1992, *Sida* 17(3): 533-549. 1997, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, *Contributions from the United States National Herbarium* 39: 116-118. 2000.

Fasciculochloa B.K. Simon & C.M. Weiller= *Steinchisma* Raf.

Latin *fasciculus* “a small bundle, packet,” *fascicularia* “things carried in bundles” and *chloe*, *chloa* “grass,” referring to the fasciculate spikelets.

One species, Australia, southeast Queensland. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, herbaceous, caespitose, branched or unbranched, auricles absent, linear leaves, ligule a fringed membrane, plants bisexual, inflorescence paniculate, spikelets fasciculate and terminal, 2 glumes very unequal to subequal, palea awnless, 2 glabrous lodicules, 2 stamens, ovary glabrous, 2 stigmas, type *Fasciculochloa sparshottiorum* B.K. Simon & C.M. Weiller, see *Seringe Bull. Bot.* 1: 220. 1830 [also *Bulletin Botanique [Genève]* 1: 220. 1830] and *Flora of the Southeastern United States ...* 105. 1903, *Austrobaileya* 4(3): 369-379. 1995 [*Fasciculochloa*, a new grass genus (Poaceae: Paniceae) from southeastern Queensland], *Austrobaileya* 5(3): 585-586. 1999 [*Steinchisma hians* (Elliott) Nash, the correct name for *Fasciculochloa sparshottiorum* B.K. Simon & C.M. Weiller], *Contributions from the United States National Herbarium* 46: 607-608. 2003, *Austrobaileya* 6(3): 561-562. 2003 [*Steinchisma laxa* (Sw.) Zuloaga, the correct name for *Cliffordiochloa parvispiculata* B.K. Simon].

Species

F. sparshottiorum B.K. Simon & C.M. Weiller (*Aira incompleta* Bosc ex Steud.; *Panicum hians* Elliott; *Panicum hians* var. *palescens* Döll; *Panicum jejunum* Trin.; *Panicum megapotamicum* Spreng.; *Panicum milioides* Nees, nom. illeg., non *Panicum milioides* Nees ex Trin.; *Panicum milioides* Nees ex Trin.; *Panicum milioides* var. *filifolium* R.A. Palacios; *Panicum oblongiflorum* Desv.; *Steinchisma hians* (Elliott) Nash ex Small; *Steinchisma hians* (Elliott) Nash) (named for P. Sparshott and K.M. Sparshott, Queensland Herbarium, Brisbane Botanic Gardens)

Tropical Australia. Perennial, delicate, caespitose, clumped, forming colonies, panicle ovate with long spreading branches, terminal spikelets, lower glume 3-nerved, upper glume not saccate 3- to 5-nerved, lower palea ciliolate, disturbed places, moist ground, rocky or stony places, marshy meadows, depressions, open areas, often in *Steinchisma hians*, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 118. 1816, *De Graminibus Panicis* 225. 1826, *Systema Vegetabilium, editio decima sexta* 4(2): 34. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 175. 1829, *Bulletin Botanique [Genève]* 1: 220. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 193. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série.*

Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 2(1): 103. 1836, *Nomenclator Botanicus* editor 2 1: 45. 1840, *Flora Brasiliensis* 2(2): 240. 1877 and *Flora of the Southeastern United States ...* 105. 1903, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 302. 1969, *Austrobaileya* 4(3): 374, f. 1-4. 1995, *Ann. Missouri Bot. Gard.* 85: 647-649. 1998.

Fendleria Steudel = Achnatherum P. Beauv., Oryzopsis Michx.

Named for the German-born American explorer August (Augustus) Fendler, 1813-1883, traveler, botanical and plant collector in North and South America, with the American botanist Asa Gray (1810-1888) wrote *Plantae fendlerianae novi-mexicanae*. [Philadelphia 1849]. See F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 103. Berlin & Hamburg 1989; J.H. Barnhart, *Biographical notes upon botanists*. 1: 534. 1965; Daniel Cady Eaton (1834-1895), *Filices wrightianae et fendlerianae*. 1860; A.H. Dupree, *Asa Gray — American Botanist, Friend of Darwin*. J. Hopkins 1988; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 124. 1972; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 164. Oxford 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 164. 1973; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950.

Pooideae, Stipeae, Stipinae, type *Fendleria rhynchelytroides* Steud., see *Flora Boreali-Americana* 1: 51, t. 9. 1803, *Essai d'une Nouvelle Agrostographie* 17-19, 146, 173. 1812, *The Genera of North American Plants* 1: 40. 1818, Carl Bernhard von Trinius (1778-1844), *Fundamenta Agrostographiae*. 109-110. Viennae 1820, *Reliquiae Haenkeanae* 1: 222. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 122, 123. 1834, *Species Graminum Stipaceorum* 9, 16, 19, 20, 22. 1842, *Flora Chilena* 6: 265. 1854, *Synopsis Plantarum Glumacearum* 1: 419-420. 1854, *Genera Plantarum* 3(2): 1142. 1883 and *U.S. Dept. Agric. Bull.* 772: 156, 158. 1920, *Contr. U.S. Natl. Herb.* 24(6): 181. 1925, *Darwiniana* 7: 14. 1947, *Gayana Bot.* 47: 15. 1990, *Taxon* 39: 608. 1990, *Contributions from the United States National Herbarium* 48: 15-18, 469-473, 494-495. 2003.

Ferrocalamus Hsueh & P.C. Keng =
Indocalamus Nakai

From the Latin *ferrum* "iron" and *calamus* "a reed, cane."

Two species, China, Yunnan. Bambuseae, Arundinariinae, monopodial, 1 branch at each node, stout, culm wall thick, large leaves, tubercular aerial roots at base of branch, sheath thick coriaceous hard but fragile, apical panicle, 3 stamens, 2 stigmas, thick and fleshy pericarp, used for roofing, type *Ferrocalamus strictus* J.R. Xue & Keng f., see *Flora Boreali-Americana* 1: 73. 1803 and *Journal of the Arnold Arboretum* 6(3): 148. 1925, *Taxon* 6(7): 203. 1957, *Acta Phytotaxonomica Sinica* 18(1): 24-25. 1980, *Journal of Bamboo Research* 1: 3, 21, 137. 1982 [1981], *Acta Phytotaxonomica Sinica* 23(6): 460, 462. 1985, E. Uchimura, "Growth environment and characteristics of some tropical bamboos." *Bamboo Journal* No. 4: 51-60. 1987, *J. Nanjing Univ. Nat. Sci.* 26(2): 282-290. 1990, *Bambou* 7: 22. 1990, K. Wang and C. Hsueh, "A preliminary study on geographical distribution and types of bamboo forest in Xishuangbanna, Yunnan, China." *Guihaia* 14(2): 144-150. 1994, J. Xue, Y. Yang, C. Hui and R. Li (eds.). *Bamboo Resources in Yunnan and Their Exploitation and Utilization*. Yunnan Press of Sciences and Technology, Kunming, China. 1995, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. *The Bamboos* 5: 61-81. 1997, Li De-Zhu, "Notes on Bambusoideae (Gramineae) in Yunnan and adjacent Sichuan and Burma." *Acta Botanica Yunnanica* vol. 24 no. 5. 2002 [in Chinese], Y. Yang, K. Tian, J. Hao and S. Pei, "Biodiversity and biodiversity conservation in Yunnan, China." *Biodiversity and Conservation* 13(4): 813-826. Apr 2004.

Species

F. rimosivaginus T.H. Wen

China. Sheath papery, leaf sheath glabrous, see *Journal of Bamboo Research* 1(2): 3. 1982, *Journal of Bamboo Research* 3(2): 26, f. 2. 1984.

F. strictus J.R. Xue [also Hsueh] & P.C. Keng [also Keng f.]

China, Yunnan. Type species, solid base, sheath coriaceous, sheath auricles absent, leaf sheath ciliate, sheath blade linear-lanceolate, 1 or 3-5 branches at each node, large leaves long cuspidate, used for handicrafts, leaves used as roofing materials, see *Journal of Bamboo Research* 1(2): 3. 1982.

Festuca L. = *Amphigenes* Janka, *Anatherum* Nabelek, *Argillochloa* W.A. Weber, *Bucetum* Parnell, *Drymochloa* Holub, *Drymonaetes* Fourr., *Festucaria* Fabr., *Festucaria* Hesit. ex Fabr., *Gnomonia* Lunell, *Gramen* Krause, *Helleria* E. Fourn., *Hellerochloa* Rauschert,

Hesperochloa (Piper) Rydb., *Leiopoa* Ohwi, *Leucopoa* Griseb., *Lojaconoa* Gand., *Nabelekia* Roshev., *Pseudobromus* K. Schum., *Schedonorus* P. Beauv., *Tzvelevia* E.B. Alexeev, *Wasatchia* M.E. Jones

From the Latin *festuca*, *ae* "a straw, stalk" but also "a straw-like weed among barley, *Avena sterilis* L. or *Aegilops ovata* L." (Plinius), Akkadian *desu* "broken, smashed," *dasu* "to thresh"; see Carl Linnaeus, *Species Plantarum*. 73. 1753 and *Genera Plantarum*. edition 5. 33. 1754.

Some 300(-360)/450 species, cosmopolitan, cold and temperate regions and tropical mountains. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, perennial, variable, densely or loosely tufted, glabrous, herbaceous, rhizomatous or stoloniferous, erect or decumbent, forming swards or tussocks, stems flimsy or rigid, culms stout or slender, leaves auriculate or nonauriculate, ligule membranous and usually short, sheath margins joined or free, leaves flat and linear to linear-lanceolate, glabrous nodes, culm internodes solid or hollow, plants bisexual, occasionally dioecious, inflorescence a panicle dense or loose, spikelets solitary and often on long pedicels, upper floret vestigial, glumes more or less equal narrow and keeled, glumes shorter than the spikelets and shorter than the lemmas, lemmas rounded on the back and tapering into a short straight awn or awnless, awn terminal or nearly so, hairy callus absent, palea apically notched, 2 lodicules free and membranous, 3 stamens, ovary without the apical appendage, stigmas white, fruit compressed and grooved, pasture and lawn grasses, useful and ornamental, playing fields, occur in hillsides, alpine zones, rainforest, grasslands, dry grasslands, moist valley bottoms, pampas, mountains, plains, meadows, a difficult genus close to *Poa* and *Bromus*, the closely related genus *Vulpia* C.C. Gmelin has an annual habit, intergeneric hybrids with *Vulpia* C.C. Gmelin, *Lolium* L. and *Bromus* L., see *Species Plantarum* 1: 73-74, 83. 1753, *Enumeratio Methodica Plantarum* 207. 1759, *Essai d'une Nouvelle Agrostographie* 99, 162, 177, pl. 19, f. 2. 1812, *Systema Vegetabilium* 698-710. 1817, *Synopsis Florae Germanicae et Helveticae* 813. 1837, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 444. 1841, *Deutschl. Fl.* 643. 1849, *Flora Rossica* 4(13): 383, 388. 1852, *Linnaea* 30(5): 619. 1860, *Annales de la société linnéenne de Lyon, sér. 2* 17: 187. 1869, *The Grasses of Scotland* 104, 106. 1872, *Nomencl. Bot.* 2: 1071. 1874, *Mexicanas Plantas* 2: 128-129. 1886, *Flora Europaea* 25: 341. 1891, *Die Pflanzenwelt Ost-Afrikas ...* 108. Berlin 1895 and *Contributions from the United States National Herbarium* 10: 10. 1906, *Contributions to Western Botany* 14: 16. San Francisco 1912, *Bulletin of the Torrey Botanical Club* 39: 106. 1912, *Beihefte zum Botanischen Centralblatt* 32(2): 331. 1914, *American Midland Naturalist* 4: 224. 1915, *Contr. U.S. Natl. Herb.* 24(6): 193. 1925, *J. Linn. Soc. London* 48: 57-77. 1928,

- Candollea* 4: 293-307. 1931, *Acta Phytotaxonomica et Geobotanica* 1: 66. 1932, *Bothalia* 6: 139-151. 1951, *N.Z. J. Sci.* 3: 468-509. 1960, *New Zealand Journal of Botany* 6: 293-308. 1968, *Techn. Bull. U.S.D.A.* 1392: 7. 1968, *Brittonia* 23(3): 293-324. 1971, *Zlaki SSSR* 2: 393. 1976, *Turun yliopiston julkaisuja — Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Taxon* 31(3): 561. 1982, *Phytologia* 55(1): 1. 1984, *Folia Geobotanica et Phytotaxonomica* 19(1): 95-96. 1984, *Publicaciones del Museo de Historia Natural "Javier Prado."* Serie B. Botánica 32: 1-12. 1984, *Watsonia* 16: 300. 1987, *Novosti Sist. Vyss. Rast.* 23: 14. 1988, *Canadian Journal of Botany* 69: 1425-1432. 1991, *Parodiana* 7: 91-99. 1992, *Novon* 3: 239-243. 1993, *American Journal of Botany* 80(1): 76-82. 1993, *Flora Mesoamericana* 6: 223-227. 1994, *Flora of Ethiopia and Eritrea* 7: 23-27. 1995, *American Journal of Botany* 82(10): 1287-1299. 1995, Stammers M., J. Harris, G.M. Evans, M.D. Hayward and J.W. Forster, "Use of random PCR (RAPD) technology to analyze phylogenetic relationships in the *Lolium/Festuca* complex." *Heredity* 74: 19-27. 1995, *Phytologia* 83: 85-88. 1997 [1998], *Preslia* 70: 111-113. 1998, *New Zealand Journal of Botany* 36: 329-367. 1998, *Opera Botanica* 137: 1-42. 1999, *Systematic Botany* 27(2): 241-251. 2002, *Contributions from the United States National Herbarium* 48: 119, 191, 274, 312-368, 379-380, 383, 421, 422, 605-607, 694. 2003, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, "The evolution of nuclear genome structure in seed plants." *Am. J. Bot.* 91: 1709-1725. 2004, Gregory P. Cheplick, "Recovery from drought stress in *Lolium perenne* (Poaceae): are fungal endophytes detrimental?" *Am. J. Bot.* 91: 1960-1968. 2004, Ulf Molau, Urban Nordenhäll and Bente Eriksen, "Onset of flowering and climate variability in an alpine landscape: a 10-year study from Swedish Lapland." *Am. J. Bot.* 92: 422-431. 2005, *Plant Pathology* 54(2): 250-250. Apr 2005, *Entomologia Experimentalis et Applicata* 115(3): 387-392, 417-426, 427-433. June 2005, *Molecular Ecology Notes* 5(2): 401-405. June 2005 [Sixty simple sequence repeat markers for use in the *Festuca-Lolium* complex of grasses.], *Journal of Ecology* 93(3): 471-481, 576-583, 632-648. June 2005, *Molecular Ecology* 14(7): 2111-2132. June 2005, *Journal of Applied Ecology* 42(3): 498-506, 567-576. June 2005, *Environmental Microbiology* 7(6): 780-788. June 2005, *Global Change Biology* 11(6): 869-880, 894-908. June 2005, *Allergy* 60(6): 801-807. June 2005, *Conservation Biology* 19(3): 955-962. June 2005, *Ecology Letters* 8(6): 652-661. June 2005, *New Phytologist* 166(3): 1069-1074. June 2005, *Grass and Forage Science* 60(2): 109-118. June 2005, M. Hofmann and J. Isselstein, "Species enrichment in an agriculturally improved grassland and its effects on botanical composition, yield and forage quality." *Grass and Forage Science* 60(2): 136-145. June 2005, *Journal of Ecology* 93(3): 493-501. June 2005, I.P. Armstead et al., "Identification of perennial ryegrass (*Lolium perenne* (L.)) and meadow fescue (*Festuca pratensis* (Huds.)) candidate orthologous sequences to the rice *Hd1(Se1)* and barley *HvCO1 CONSTANS*-like genes through comparative mapping and microsynteny." *New Phytologist* 167(1): 239-247. July 2005, *Journal of Biogeography* 32(7): 1161-1186. July 2005.
- Species**
- F. abyssinica*** Hochst. ex A. Rich. (*Festuca abyssinica* Hochst.; *Festuca abyssinica* f. *aristulata* St.-Yves; *Festuca abyssinica* var. *schimperiana* (A. Rich.) St.-Yves; *Festuca restituta* Steud.; *Festuca rigidula* Steud.; *Festuca schimperiana* A. Rich.)
- Tropical Africa, Zaire, Kenya, Malawi, Ethiopia. Perennial, variable, ascending, loosely tufted, leafy, inflorescence purplish, panicle contracted, spikelets narrowly elliptic, 2- to 7-flowered, broad enveloping glumes, lower glume 3-nerved, found in sandy grassland, upland grassland, alpine moors, moist situations, see *Tentamen Florae Abyssinicae* ... 2: 432-433. 1850 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(90): 1132. 1927, *Candollea* 4: 84. 1929.
- F. acanthophylla*** E. Desv. (*Festuca acanthophylla* f. *vivipara* St.-Yves; *Festuca acuta* Phil.; *Festuca desvauxii* Phil.; *Festuca desvauxii* var. *ampla* St.-Yves; *Festuca desvauxii* var. *desvauxii*; *Festuca peruviana* E.B. Alexeev)
- Chile. See *Flora Chilena* 6: 434. 1854, *Linnaea* 33(3-4): 295. 1864, *Anales de la Universidad de Chile* 94: 175. 1896 and *Candollea* 3: 190, 298. 1927.
- F. actae*** Connor
- New Zealand. Perennial, slender, erect or geniculate at the base, tussocky, glaucous, leaf blades disarticulating at the collar, inflorescence paniculate, rachis prickly, glumes unequal and keeled, lemma rounded, palea deeply bifid, lodicules lobed or entire, anthers yellow, ovary apex hispid, see *New Zealand Journal of Botany* 36(3): 335. 1998.
- F. aequipaleata*** E. Fourn. (*Festuca tolucensis* subsp. *aequipaleata* (E. Fourn.) Piper)
- Mexico. See *Nova Genera et Species Plantarum (quarto ed.)* 1: 153. 1815 [1816], *Biologia Centrali-Americana; ... Botany* ... 3(20): 581. 1885, *Mexicanas Plantas* 2: 125. 1886 and *Contributions from the United States National Herbarium* 16(5): 198. 1913.
- F. africana*** (Hack.) Clayton (*Brachyelytrum africanum* Hack.; *Pseudobromus africanus* (Hack.) Stapf; *Pseudobromus silvaticus* K. Schum.)
- South Africa, Kenya. Perennial, in large tufts, rhizomatous, inflorescence branches flexuous, spikelets solitary and 1-flowered, glumes unequal, lemma awned and 3-nerved, shade species, in forest, near streams, see *Bulletin de l'Herbier Boissier* 3(8): 382. 1895 and *Flora Capensis* 7: 763. 1900, *Kew Bulletin* 40: 727. 1985.

F. aguana E.B. Alexeev (*Festuca panamica* E.B. Alexeev) Guatemala. See *Bot. Zhurn. (Moscow & Leningrad)* 66: 1493. 1981, *Bot. Zhurn. (Moscow & Leningrad)* 67: 1290. 1982.

F. agustini Lindinger

Europe, Spain, Canary Islands. Rare species, see *Abhandlungen aus dem Gebiet der Auslandskunde*. Reihe C: *Naturwissenschaften* 21(8): 298. Hamburg 1926.

F. airoides Lam. (*Festuca airoides* (Koeler) Mutel, nom. illeg., non *Festuca airoides* Lam.; *Festuca ovina* L. subsp. *ovina* var. *supina* (Schur) Hack.; *Festuca ovina* var. *supina* (Schur) Hack.; *Poa airoides* Koeler)

Europe. See *Encyclopédie Méthodique, Botanique* 2: 464. 1788, *Descriptio Graminum in Gallia et Germania* 194. 1802, *Flore Française* 4: 115. 1837 and *Fragmenta Floristica et Geobotanica* 28: 363-369. 1982.

in English: tufted fescue

F. albida Lowe (*Festuca albida* (Turcz. & Trin.) Malyshev, nom. illeg., non *Festuca albida* Lowe; *Parafestuca albida* (Lowe) E.B. Alexeev)

Portugal, Madeira. Rare species, see *Transactions of the Cambridge Philosophical Society* 4: 10. 1831.

F. alpina Suter (*Festuca alpina* Host, nom. illeg., non *Festuca alpina* Suter; *Festuca ovina* var. *alpina* (Suter) Wimm. & Grab.)

Europe, Alps, Pyrénées. Glabrous, spikelets yellow-green, upper glume linear to oblong-lanceolate and acuminate, lemma oblong-lanceolate, subalpine, see *Icones et Descriptiones Graminum Austriacorum* 4: 36, t. 63. 1809.

F. altaica Trin. (*Festuca altaica* Trin. f. *pallida* Jordal; *Festuca altaica* f. *vivipara* Jordal; *Festuca altaica* subsp. *eu-altaica* var. *genuina* subvar. *typica* St.-Yves; *Festuca altaica* Trin. subsp. *scabrella* (Torr. ex Hook.) Hultén; *Festuca altaica* subsp. *scabrella* (Torr.) Hultén; *Festuca altaica* var. *major* (Vasey) Gleason; *Festuca altaica* Trin. var. *scabrella* (Torr. ex Hook.) Breitung; *Festuca altaica* var. *scabrella* (Torr.) Breitung; *Festuca campestris* Rydb.; *Festuca hallii* (Vasey) Piper; *Festuca scabrella* Torr. ex Hook.; *Festuca scabrella* Torr.; *Festuca scabrella* subsp. *scabrella*; *Festuca scabrella* var. *major* Vasey; *Festuca scabrella* var. *scabrella*)

Circumboreal, Asia, China, Russia, Siberia, Altai, Mongolia. Perennial bunchgrass, erect, densely tufted, greenish or green, rarely rhizomatous, leaves mostly basal, sheaths glabrous or glabrescent, auricles present or absent, ligules ciliate, leaf blades erect, purplish or dark purple inflorescences, glumes unequal with margins ciliate, ovary apex pubescent, highly palatable forage to livestock and wildlife, useful in rehabilitation projects, useful for roadside plantings, growing in forest steppe, open forests, montane and subalpine grasslands, loam and silty loams, grasslands, dark mountain brown soil, alpine meadows, woodland

opening, wet meadow area, see *Flora Altaica* 1: 109-110. 1829, *Flora Boreali-Americana* 2: 252, t. 233. 1840 and *American Midland Naturalist* 58: 12. 1957, *Canad. J. Bot.* 62: 1744. 1984, *Canadian Journal of Botany* 70: 1940-1944. 1992, *Journal of Ecology* 90(2): 325-337. Apr 2002, *Functional Ecology* 18(5): 692-699. Oct 2004, *Global Change Biology* 10(12): 1996-2004. Dec 2004.

in English: Altai fescue, plains rough fescue, mountain rough fescue, alpine rough fescue, northern rough fescue, rough fescue

F. altaica Trin. f. *pallida* Jordal

U.S., Alaska. See *Rhodora* 54(638): 36. 1952.

F. altaica Trin. f. *vivipara* Jordal

U.S., Alaska. See *Rhodora* 54(638): 36. 1952.

F. altaica Trin. subsp. *altaica*

Alaska, British Columbia. Perennial, densely caespitose, rarely rhizomatous or with short inconspicuous rhizomes, yellowish to dark green foliage, 3-5 florets per spikelet, in tundra meadows.

in English: northern rough fescue

F. altaica Trin. subsp. *hallii* (Vasey) Harms (*Festuca hallii* (Vasey) Piper; *Melica hallii* Vasey)

North America, British Columbia, Manitoba, Colorado, Rocky Mountains. Perennial bunchgrass, bluish or gray-green, somewhat shortly rhizomatous, mat-forming, dead sheaths persisting, 2-3 florets per spikelet, grows along the foothills and in mountain grasslands, see *Botanical Gazette* 6: 296. 1881 and *Contributions from the United States National Herbarium* 10: 31. 1906, *Madroño* 32(1): 9. 1985.

in English: plains rough fescue

F. altaica Trin. subsp. *scabrella* (Torr.) Hultén (*Festuca altaica* Trin. subsp. *scabrella* (Torr. ex Hook.) Hultén; *Festuca campestris* Rydb.)

British Columbia, Alberta, Montana, Oregon. Perennial bunchgrass, densely caespitose, forms large clumps, rarely rhizomatous, bluish gray-green to glaucous, 4-6 florets per spikelet, see *Flora Altaica* 1: 109-110. 1829, *Flora Boreali-Americana* 2: 252, t. 233. 1840 and *Memoirs of the New York Botanical Garden* 1: 57. 1900.

in English: mountain rough fescue

F. altissima All. (*Festuca altissima* Boiss., nom. illeg., non *Festuca altissima* All.; *Festuca sylvatica* Vill., non Huds.; *Festuca sylvatica* (Pollich) Vill.; *Poa sylvatica* Pollich; *Schedonorus altissimus* (All.) P. Beauv.)

Europe, Denmark, Eurasia. Clump-forming, fibrous roots, useful for erosion control, found in meadows, see *Essai d'une Nouvelle Agrostographie* 177. 1812.

in Danish: skov-svingel

in Mexico: zacatón criollo, zacate del volcán

F. amethystina L. (*Festuca amethystina* All.; *Festuca amethystina* auct.; *Festuca amethystina* Host, nom. illeg., non *Festuca amethystina* L.)

Central Europe, Turkey. Perennial, stems flimsy, mauve, dense tussocks, leaves with very narrow soft blades, branched and flexuous panicle, glumes unequal, lemma acute to shortly awned, useful for erosion control, sometimes cultivated as an ornamental, see *Species Plantarum* 1: 74. 1753, *Flora Pedemontana* 2: 252. 1785 and *Bull. Soc. Bot. Centre-Ouest* 10: 117. 1989, *Taxon* 49(2): 250. 2000.

in English: tufted fescue, amethyst fescue

F. amethystina L. subsp. ***amethystina***

Alps and central Europe. See *Species Plantarum* 1: 74. 1753, *Flora Pedemontana* 2: 252. 1785 and *Bull. Soc. Bot. Centre-Ouest* 10: 117. 1989, *Taxon* 49(2): 250. 2000.

F. amethystina L. subsp. ***kummeri*** (Beck) Markgr.-Dann. (*Festuca amethystina* L. subsp. *amethystina* var. *kummeri* Beck; *Festuca amethystina* var. *kummeri* Beck)

Europe. See *Botanical Journal of the Linnean Society* 76(4): 326. 1978.

F. amethystina L. subsp. ***orientalis*** Krajina

Central Europe. See *Species Plantarum* 1: 74. 1753, *Flora Pedemontana* 2: 252. 1785 and *Bull. Soc. Bot. Centre-Ouest* 10: 117. 1989, *Taxon* 49(2): 250. 2000.

F. amethystina L. subsp. ***ritschlii*** (Hack.) Lemke ex Markgr.-Dann. (*Festuca amethystina* L. subsp. *amethystina* var. *cechoslovenica* Krajina; *Festuca amethystina* L. subsp. *amethystina* var. *ritschlii* Hack.)

North-central Europe. See *Botanical Journal of the Linnean Society* 76(4): 327. 1978.

F. ammobia Pavlick (*Festuca arenaria* Osbeck, non Lam.; *Festuca rubra* subsp. *arenaria* (Osbeck) Syme; *Festuca rubra* L. subsp. *arenicola* E.B. Alexeev; *Festuca rubra* subsp. *densiuscula* Hack. ex Piper; *Festuca rubra* L. var. *megastachys* auct. non (Gaudin) Hegi; *Festuca rubra* L. subsp. *megastachys* sensu Piper p.p. non Gaudin; *Festuca rubra* var. *arenaria* (Osbeck) Fries; *Festuca rubra* var. *lanuginosa* Mert. & Koch; *Festuca rubra* var. *megastachys* auct. non (Gaudin) Hegi) (from the Greek *amos* "sand" and *bio* "to live," referring to the native or preferred habitat)

Northern America, U.S. Perennial, see *Species Plantarum* 1: 74. 1753 and *Contributions from the United States National Herbarium* 10(1): 22. 1906, *Phytologia* 82(2): 77. 1997.

in English: sand fescue

F. ampla Hack.

Europe, Portugal, Spain. Useful for erosion control, see *Catalogue Raisonné des Graminées du Portugal* 26. 1880.

F. amplissima Rupr. (*Festuca amplissima* Rupr. ex Hemsley; *Festuca amplissima* Rupr. ex E. Fourn., nom. illeg., non *Festuca amplissima* Rupr.; *Festuca amplissima* var. *amplis-*

sima; *Festuca fratercula* Rupr. ex E. Fourn.; *Festuca fratercula* Rupr.; *Uniola effusa* E. Fourn.; *Uniola muelleri* E. Fourn.)

America, Mexico. Fodder, see *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 236. 1842, *Mexicanas Plantas* 2: 122, 124-125. 1886.

in Mexico: zacate criollo

F. amplissima Rupr. ex Hemsley subsp. ***magdalenaensis*** Stancik

Colombia. See *Preslia* 75(4): 341-343, f. 1. 2003 [2004].

F. anatolica Markgr.-Dann.

Turkey. See *Willdenowia* 11(2): 202. 1981.

F. anatolica Markgr.-Dann. subsp. ***borealis*** Markgr.-Dann. (also spelled ***borealiis***)

Turkey. Rare species, see *Willdenowia* 11(2): 202. 1981.

F. ancachsana E.B. Alexeev (*Festuca distichovaginata* f. *apogama* St.-Yves) (Ancachs, a coastal province of central Peru, lying between the departments of Lima and Libertad, and west of the Marafion river)

Peru. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 511. 1906, *Candollea* 3: 221. 1927.

F. andicola Kunth (*Festuca racemosa* Willd. ex Spreng.)

Ecuador. See *Nova Genera et Species Plantarum (quarto ed.)* 1: 153. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 352. 1825.

F. archeri E.B. Alexeev

Tasmania. Plants bisexual, chasmogamous spikelets, inflorescence a purple panicle, hermaphrodite spikelets pedicellate, anthers yellow, see *Novosti Sist. Vyss. Rast.* 24: 8. 1987.

F. arenaria Lam. (*Arundo alopecuroides* Gaudich. ex Mirb.; *Festuca arenaria* Kit. ex Steud., nom. illeg., non *Festuca arenaria* Lam.; *Festuca arenaria* Osbeck; *Festuca rubra* subsp. *arenaria* (Osbeck) O. Schwarz; *Festuca rubra* subsp. *arenaria* (Osbeck) Syme; *Festuca rubra* var. *lanuginosa* F. Mertens & W. Koch; *Festuca villosa* Schweigg.; *Poa alopecuroides* (Gaudich. ex Mirb.) Kunth; *Poa robusta* Steud.)

Europe, Russia. Sandy areas, swamps, see *Species Plantarum* 1: 74. 1753, *Encyclopédie Méthodique, Botanique* 1: 191. 1791, *Annales des Sciences Naturelles, Botanique* 5: 100. 1825, *Révision des Graminées* 1: 116. 1829, *Nomenclator Botanicus. Editio secunda* 1: 628. 1840, *Synopsis Plantarum Glumacearum* 1: 426. 1854.

F. arenicola (Prodán) Soó (*Festuca cinerea* Vill. subsp. *arenicola* (Prodán) Beldie; *Festuca pallens* subsp. *arenicola* Prodán)

Europe. See *Acta Botanica Academiae Scientiarum Hungaricae* 18(3-4): 365. Budapest 1973.

F. argentina (Speg.) Parodi (*Festuca cavillieri* St.-Yves; *Poa argentina* Speg.)

Argentina. See *Revista de la facultad de Agronomía; Universidad Nacional de La Plata* 3(30-31): 584. 1897 and *Candollea* 3: 192, f. 27. 1927, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 11: 498. Buenos Aires 1935.

F. argentinensis (St.-Yves) Türpe (*Festuca scirpifolia* subsp. *buchtienii* var. *argentinensis* St.-Yves; *Festuca scirpifolia* var. *argentinensis* St.-Yves)

Argentina, Chile, Bolivia. Caespitose, robust, erect, foliage mostly basal, leaf blades involute rigid, contracted panicle linear with scabrous branches, spikelets elliptic-lanceolate, 3-5-flowered, glumes lanceolate acuminate, lemmas lanceolate muticous or awned, stony places, see *Candollea* 5: 138. 1932, *Darwiniana* 15(1-2): 254. 1969

F. arizonica Vasey (*Festuca altaica* subsp. *arizonica* (Vasey) St.-Yves; *Festuca ovina* var. *arizonica* (Vasey) Hack. ex Beal; *Festuca pinetorum* Swallen; *Festuca scabrella* var. *asperrima* Hack. ex Beal; *Festuca scabrella* var. *vaseyana* Hack. ex Beal; *Festuca vaseyana* Hack. ex Beal)

Northern America, U.S., New Mexico. Perennial bunchgrass, greenish to blue-green, densely tufted, erect, densely clustered stems, sheaths glabrescent and persisting, auricles present, ligules ciliate, leaves stiff and wiry, open panicle with several spreading branches, spikelets scattered, glumes unequal, ovary apex pubescent to densely hairy, wiry seed stalks, palatable to moderately palatable, forage, used for soil stabilization and range revegetation, useful for erosion control, drought-tolerant, growing on gravelly or rocky soils, see *Flora Altaica* 1: 109-110. 1829, *Flora Boreali-Americana* 2: 252, t. 233. 1840, *Contributions from the United States National Herbarium* 1(8): 277. 1893, *Grasses of North America for Farmers and Students* 2: 598. 1896, *Grasses of North America* (edition 2) 2: 601, 605. 1896 and *Candollea* 2: 267. 1925, *Contributions from the United States National Herbarium* 29(9): 397. 1950, *Phytologia* 82(2): 76. 1997.

in English: Arizona fescue, mountain bunchgrass, pinegrass
in Mexico: cañuela arizonica

F. arundinacea Schreber (*Bromus arundinaceus* (Schreb.) Roth; *Festuca arundinacea* (L.) Lilj., nom. illeg., non *Festuca arundinacea* Schreb.; *Festuca arundinacea* Vill., nom. illeg., non *Festuca arundinacea* Schreb.; *Festuca elatior* L.; *Festuca elatior* subsp. *arundinacea* (Schreb.) Celak.; *Festuca elatior* subsp. *arundinacea* (Schreb.) Hack.; *Festuca elatior* L. subsp. *elatior*; *Festuca elatior* subvar. *orientalis* Hack.; *Festuca elatior* var. *arundinacea* Schreb.; *Festuca elatior* var. *arundinacea* (Schreb.) Wimm.; *Festuca orientalis* (Hack.) V. Krecz. & Bobrov; *Festuca pratensis* Huds. var. *arundinacea* Hack.; *Lolium arundinaceum* (Schreb.) Darbysh.; *Schedonorus arundinaceus* (Schreb.) Dumort.; *Schedonorus elatior* (L.) P. Beauv.)

Europe, temperate Asia, northwest Africa. Long-lived perennial bunchgrass, erect and stout, tufted, green to dark green, hollow, herbaceous, aggressive and vigorous, unbranched, forms heavy clumps, sometimes tussock-forming, almost reedlike, deep-rooted, roots tough and coarse, short-rhizomatous or without rhizomes, rarely stoloniferous, sheaths smooth to slightly roughened, auricles claw-like and strong, dead sheaths remain at the base of the plant, ligule a minute rim truncate, leaves with a rough upper surface, leaf blade flat and grooved, inflorescence an open to narrow branched panicle, green to purple panicle loose with unequal twin branches, chasmogamous spikelets, 3-10-flowered, uppermost floret often reduced, glumes 2 per spikelet, glumes lanceolate and unequal, lemmas awnless to short-awned, lemma stiff with a terminal awn or mucro, palea 2-keeled with wingless keels, ovary apex hairy or glabrous, grain compressed and reddish, planted as a pasture grass, cultivated for hay and fodder, turf, forage, palatable when young and succulent, coarse and tough when mature, noxious and invasive weed widely naturalized elsewhere, potential seed contaminant, ornamental, sometimes poisonous due to phytotoxins, drought-resistant, resistant to trampling, tolerant of poor drainage and seasonal flooding, ground cover, excellent soil improver, colonizes bare soil, useful in rehabilitation and watershed protection, suitable for reclamation of surface mines and for erosion control, usually found on both wet and dry sites, marshes, in grazed woods, bottomlands, meadows, eroded patches, open habitats, ditches, in fallow and abandoned fields, damp hollows, disturbed areas, along roadsides, railroad tracks, on heavy clay soils or on deep loam, fields and open grounds, swampy verges, occasionally referred to as *Festuca elatior* L., see *Species Plantarum* 1: 64, 75. 1753, *Spicilegium Florae Lipsicae* 57. 1771, *Tentamen Florae Germanicae* 2: 141. 1789, *Essai d'une Nouvelle Agrostographie* 177, pl. 19, f. 2. 1812, *Monographia Festucarum Europearum* 152, 154. 1882 and *Brittonia* 19: 131. 1967, *Bothalia* 16: 59. 1986, Clay K., "Effects of fungal endophytes on the seed and seedling biology of *Lolium perenne* and *Festuca arundinacea*." *Oecologia* 73: 358-362. 1987, *Taxon* 40: 135-137. 1991, *Novon* 3(3): 241. 1993, D.J. Gibson and J.A. Newman, "*Festuca arundinacea* Schreber (*F. elatior* L. ssp. *arundinacea* (Schreber) Hackel)." *Journal of Ecology* 89(2): 304-324. Apr 2001, Zeng-Yu Wang, Yaxin Ge, Megann Scott and German Spangenberg, "Viability and longevity of pollen from transgenic and nontransgenic tall fescue (*Festuca arundinacea*) (Poaceae) plants." *Am. J. Bot.* 91: 523-530. 2004.

in English: reed fescue, red fescue, tall fescue, meadow fescue, tall meadow fescue, giant fescue, New Zealand tall fescue, alta fescue

in Mexico: cañuela alta, cañuela descollada, pasto, tupiku, uitsaku

in French: fétuque élevée, fétuque roseau

in Morocco: âguzmîr, guzmîr

in southern Africa: langswenkgras; serakoe (Sotho)

F. arundinacea Schreb. subsp. **arundinacea** (*Festuca elatior* subsp. *arundinacea* (Schreb.) Celak.; *Festuca elatior* var. *arundinacea* (Schreb.) Wimmer; *Lolium arundinaceum* (Schreb.) Darbysh.; *Poa phoenix* Scop.; *Schedonorus arundinaceus* (Schreb.) Dumort.; *Schedonorus phoenix* (Scop.) Holub)

Europe, Russia, Tunisia, Turkey. Perennial, see *Species Plantarum* 1: 64, 75. 1753, *Spicilegium Florae Lipsicae* 57. 1771, *Fl. carniol.* edition 2, 1: 74. 1772, *Tentamen Florae Germanicae* 2: 141. 1789, *Essai d'une Nouvelle Agrostographie* 177, pl. 19, f. 2. 1812, *Fl. Schles.* edition 3, 59. 1857, *Prodr. Fl. Bohmen* 1: 51. 1867, *Monographia Festucarum Europearum* 152, 154. 1882 and *Webbia* 21: 616. 1966, *Brittonia* 19: 131. 1967, *Bothalia* 16: 59. 1986, *Taxon* 40: 136. 1991, *Novon* 3(3): 241. 1993, *Preslia* 70: 113. 1998, *Bot. Zhurn.* (Moscow & Leningrad) 84: 114. 1999.

in English: tall fescue

F. arundinacea Schreb. subsp. **atlantigena** (St.-Yves) Auquier (*Festuca fenas* Lag. subsp. *corsica* (Hack.) K. Richt.; *Festuca arundinacea* Schreb. subsp. *arundinacea* var. *minutiflora* (St.-Yves) Litard.; *Festuca elatior* var. *atlantigena* St.-Yves; *Festuca elatior* subvar. *minutiflora* St.-Yves; *Festuca elatior* var. *minutiflora* (St.-Yves) Litard.)

Southwest Europe, Morocco. Perennial, see *Spicilegium Florae Lipsicae* 57. 1771 and *Candollea* 1: 36. 1922, *Bull. Soc. Bot. France* 71: 125. 1924, *Candollea* 10: 141. 1945, *Société pour l'Echange des Plantes Vasculaires de l'Europe et du Bassin Méditerranéen: Bulletin* 16: 142. 1976.

F. arundinacea Schreb. subsp. **atlantigena** (St.-Yves) Auquier f. **pseudomairei** (Litard. & Maire) Auquier (*Festuca elatior* f. *pseudomairei* Litard. & Maire)

Morocco. See *Contr. fl. Maroc* no. 194. 1931, *Société pour l'Echange des Plantes Vasculaires de l'Europe et du Bassin Méditerranéen: Bulletin* 16: 142. 1976.

F. arundinacea Schreb. subsp. **cirtensis** (St.-Yves) Gami-sans (*Festuca elatior* var. *cirtensis* St.-Yves; *Festuca elatior* var. *letourneuxiana* St.-Yves)

Algeria, Corsica. See *Spicilegium Florae Lipsicae* 57. 1771 and *Candollea* 1: 34, 36. 1922, *Flore de l'Afrique du Nord* 3: 152. 1952, *Cytologia* 36: 3. 1971, *New Phytol.* 78: 661-674. 1977, *Cat. Pl. Vasc. Corse* 63. 1985.

F. arundinacea Schreb. subsp. **fenas** (Lag.) Arcang. (*Festuca arundinacea* subsp. *fenas* (Lag.) Bornm.; *Festuca arundinacea* Schreb. subsp. *interrupta* (Desf.) Tzvelev; *Festuca arundinacea* var. *glaucescens* auct.; *Festuca elatior* var. *glaucescens* Boiss.; *Festuca fenas* Lag.; *Festuca fenas* Lag. subsp. *fenas*; *Festuca glaucescens* auct.; *Festuca interrupta* Desf.)

South and southeast Europe, Algeria. Perennial, see *Spicilegium Florae Lipsicae* 57. 1771, *Elench. pl.* 4. 1816,

Giovanni Arcangeli (1840-1921), *Compendio della Flora Italiana*, edition 2, 61. Torino, Roma 1894 and *Repertorium Specierum Novarum Regni Vegetabilis* 25: 330. 1928, *Z. Pflanzenzücht.* 76: 250-257. 1976, *New Phytol.* 78: 661-674. 1976.

F. arundinacea Schreb. subsp. **orientalis** (Hack.) Tzvelev (*Festuca arundinacea* subsp. *orientalis* (Kern. ex Hack) Tzvelev; *Festuca arundinacea* var. *orientalis* (Hack.) K. Richt.; *Festuca orientalis* A. Kern. ex Hack.; *Festuca orientalis* (Hack.) Krecz. & Bobrov)

Asia, Syria, Israel, Pakistan, southeast and eastern central Europe. Perennial, near beach, sandy habitat, open habitats, see *Pl. eur.* 1: 102. 1890 and *Fl. URSS* 2: 531. 1934, *Biologia* (Bratislava) 36: 85-88. 1981.

F. arundinacea Schreb. subsp. **uechtriziana** (Wiesb.) Hegi (*Festuca uechtriziana* Wiesb.)

France. Useful for erosion control, see *Oesterr. Bot. Z.* 28: 218. 1878 and *Ill. Fl. Mitt.-Eur.* 1: 345. 1908, *Webbia* 21: 621. 1966.

F. arvernensis Auquier, Kerguélen & Markgr.-Dann. (*Festuca arvernensis* subsp. *costei* (St.-Yves) Auquier & Kerguélen; *Festuca glauca* Lam., non Vill. var. *glauca*; *Festuca glauca* Lam., non Vill.; *Festuca ovina* var. *glauca* (Lam.) W.D.J. Koch)

Europe, France, Auvergne. Ornamental grass, see *Lejeunia* 89: 15, 22. 1977.

in English: field fescue

in Danish: blå-svingel

F. asperella E.B. Alexeev (*Festuca lugens* (E. Fourn.) Hitchc. ex Hern.-Xol.; *Festuca mirabilis* Piper)

Mexico. High mountain, see *Mexicanas Plantas* 2: 123. 1886 and *Contributions from the United States National Herbarium* 10: 47. 1906, *Boletín de la Sociedad Botánica de México* 23: 165. 1958, *Bot. Zhurn.* (Moscow & Leningrad) 66: 1496. 1981.

F. asperula Vickery (*Festuca asperula* Opiz)

New South Wales, Victoria, Tasmania. Perennial, tufted, erect and slender, rhizomatous or sometimes stoloniferous, bluish green or purplish, auricles absent, sheath open to base, ligule thick and obtuse, very rough leaves linear and inrolled, green to purple panicle open and branched, uppermost floret often reduced, chasmogamous spikelets, glumes awnless and keeled, lemmas mucronate or awned, palea 2-keeled, anthers yellow, ovary apex usually glabrous, moist forests, in montane woodland or grassland, tussock grass suitable for planting, see *Contributions from the New South Wales National Herbarium* 1: 12. 1939.

in English: graceful fescue

F. asplundii E.B. Alexeev (*Festuca sodiroana* Hack. ex Sodiro; *Festuca sublimis* f. *vivipara* St.-Yves)

Ecuador. See *Anales de la Universidad Central del Ecuador* 3(25): 483. 1889, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 718. 1898 and *Candollea* 3: 255. 1927.

F. aurasiaca Batt. & Trab. (*Festuca deserti* subsp. *aurasiaca* (Batt. & Trab.) St.-Yves)

Algeria. See *Candollea* 1: 27. 1922.

F. auriculata Drob. (*Festuca lenensis* Drob.)

Siberia. See *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990.

F. azucarica E.B. Alexeev

Colombia, Cordillera Central, cerro Pan de Azucar. Páramos, see *Bot. Zhurn. (Moscow & Leningrad)* 69: 1546. 1984.

F. baffinensis Polunin (*Festuca brachyphylla* var. *arctica* (St.-Yves) Litard.; *Festuca brachyphylla* Schult. & Schult.f. var. *arctica* subvar. *pubiculmis* (St.-Yves) Litard.; *Festuca brachyphylla* var. *pubiculmis* (St.-Yves) Litard.; *Festuca brevifolia* var. *arctica* St.-Yves; *Festuca brevifolia* var. *arctica* St.-Yves subvar. *pubiculmis* St.-Yves; *Festuca brevifolia* subvar. *pubiculmis* St.-Yves)

Circumpolar, northern America, Canada, Baffin Island. Densely tufted, green to deep bluish green, erect, hairy, no rhizomes, internodes densely pubescent, stem densely hairy below the flower head, leaves mostly in a basal tuft, dead sheaths at the base of the stem, sheaths glabrous and entire, auricles present, ligules ciliate and membranous, dark purple or purple brown compact panicle or dense 1-sided spike, spikelets pedicellate, glumes unequal, lemma rounded on the back and rough, ovary apex with a few sparse hairs, occurs in wet meadows, imperfectly drained moist areas, on seepage slopes, on floodplains, lakeshores, on moist disturbed soils, alpine sites, slopes, tundra, margins of ponds, along streams, cliffs, resembles alpine fescue *Festuca brachyphylla* Schult. & Schult.f., see *Candollea* 2: 253-254. 1925, *Candollea* 3: 330. 1928, *Bulletin of the National Museum of Canada* 92(Biol. 24): 91, t. 3. 1940, *Candollea* 10: 108. 1945.

in English: Baffin Island fescue, Baffin fescue

F. bajacaliforniana Gonz.-Led. & S.D. Koch

Mexico. See *Novon* 4(1): 28, f. 3. 1994.

F. balcanica (Acht.) Markgr.-Dann.

Europe. See *Botanical Journal of the Linnean Society* 76(4): 326. 1978.

F. balcanica (Acht.) Markgr.-Dann. subsp. *neicevii* (Acht.) Markgr.-Dann. (*Festuca xanthina* Roem. & Schult. subsp. *neicevii* Acht.)

Europe. See *Botanical Journal of the Linnean Society* 76(4): 327. 1978.

F. bargusinensis Malyshev

Russia. Indeterminate species, see *Novosti Sist. Vyss. Rast.* 7: 296. 1970 [1971].

F. beamanii E.B. Alexeev

Guatemala. See *Bot. Zhurn. (Moscow & Leningrad)* 66: 1500. 1981.

F. beckeri (Hack.) Trautv. (*Festuca beckeri* (Hack.) Fedtsch.; *Festuca laeviuscula* Klokov; *Festuca ovina* L. subsp. *beckeri* Hack.; *Festuca quercopinctorum* Klokov)

Russia, Estonia, Poland. Bunchgrass, vigorous, found on rocky shallow soil, dune areas, see *Monographia Festucarum Europearum* 100. 1882.

F. beckeri (Hack.) Trautv. subsp. *beckeri*

Russia.

F. beckeri (Hack.) Trautv. subsp. *polesica* (Zapal.) Tzvelev (*Festuca polesica* Zapal.; *Festuca querceto-pinctorum* Klokov)

Asia, Russia, Europe. Swamp.

F. beckeri (Hack.) Trautv. subsp. *sabulosa* (Andersson) Tzvelev (*Festuca ovina* var. *sabulosa* Andersson; *Festuca sabulosa* (Andersson) H. Lindb.)

Europe, Estonia, Russia.

F. benthamiana (Benth.) Vickery (*Festuca benthamiana* Vickery; *Festuca duriuscula* L. var. *aristata* Benth.)

South Australia. Perennial, caespitose, slender, stems erect and stiff, auricles absent, ligule truncate, leaves narrow-linear to filiform, green to purple panicle erect and open, chasmogamous spikelets, lemma with a fine awn, palea narrowly ovate or narrowly elliptic, anthers yellow or purple, ovary glabrous, fruit compressed and furrowed, on dry plains, considered extinct in South Australia, see *Contributions from the New South Wales National Herbarium* 1: 13. 1939, Briggs, J.D. & Leigh, J.H. (1996). *Rare or Threatened Australian Plants*. Melbourne, Australia: CSIRO Publications and Walter, K.S. and Gillett, H.J. [editors] (1998). *1997 IUCN Red List of Threatened Plants*. Compiled by the World Conservation Monitoring Centre. IUCN - The World Conservation Union, Gland, Switzerland and Cambridge, U.K.

in English: Bentham's fescue

F. bidenticulata E.B. Alexeev

Mexico. See *Bot. Zhurn. (Moscow & Leningrad)* 66: 1496. 1981.

F. boliviana E.B. Alexeev

Bolivia. Caespitose, ligule ciliate, leaf blades pointed, dense panicle linear, spikelets linear-lanceolate, 3-4-flowered, glumes acute, lemmas muticous or mucronulate, ovary glabrous, alluvial soil, rocky habitats, see *Bot. Zhurn. (Moscow & Leningrad)* 70: 1243. 1985.

F. borderii (Hack.) K. Richt. (*Festuca borderii* Hack.; *Festuca ovina* L. subsp. *borderii* Hack.)

Europe. See *Monographia Festucarum Europearum* 113. 1882, *Plantae Europaeae* 1: 97. 1890.

F. boyacensis Stancik

Colombia. Páramos, see *Darwiniana* 41(1-4): 128-129, f. 7f-k. 2003.

F. brachyphylla Schult. & Schult.f. (*Festuca brachyphylla* f. *flavida* Polunin; *Festuca brachyphylla* Schult. & Schult.f. subsp. *brachyphylla*; *Festuca brachyphylla* var. *arctica* (St.-Yves) Litard.; *Festuca brachyphylla* var. *brachyphylla*; *Festuca brevifolia* R. Br., nom. illeg., non *Festuca brevifolia* Muhl.; *Festuca brevifolia* var. *arctica* St.-Yves; *Festuca jensenii* O. Gjaerevoll & L. Ryvarde, also spelled *jenseni*; *Festuca ovina* L. f. *brachyphylla*; *Festuca ovina* f. *subspicata* Lange; *Festuca ovina* subsp. *brachyphylla* (Schult. & Schult.f.) Piper; *Festuca ovina* subsp. *brevifolia* (S. Watson) Hack.; *Festuca ovina* var. *borealis* Lange; *Festuca ovina* var. *brachyphylla* (Schult. & Schult.f.) Piper; *Festuca ovina* var. *brachyphylla* (Schult. & Schult.f.) Hitchc.; *Festuca ovina* var. *brevifolia* S. Watson)

Eurasia, Europe, northern America, Arctic Islands. Perennial, bright green or glaucous, erect, tufted or loosely caespitose, glabrous or scabrous, internodes hairless to sparsely hairy, dead sheaths remain at the base, auricles present or absent, leaves mostly in a basal tuft, sheaths glabrous to slightly hairy, pale or deep purple spike-like inflorescences, spikelets pedicellate, lemmas smooth or hairy at the tip, useful for erosion control, used for soil stabilization and range revegetation, growing at high altitudes, in wet meadows, on sand and dry gravel, along streams, on dry slopes, in river beds or along the banks, river terraces, imperfectly drained moist areas, tundra, closely related and very similar to *Festuca minutiflora* Rydberg and *Festuca saximontana* Rydb., see *Species Plantarum* 1: 73-74. 1753, *Chloris Melvilliana* 31. 1823, *Mantissa* 3 (Add. 1): 646. 1827, *United States Geological Exploration [sic] of the Fortieth Parallel*. Botany 389. 1871, *Conspectus Florae Groenlandicae* 1: 179. 1880, *Botanisches Centralblatt* 8: 406. 1881 and *Contributions from the United States National Herbarium* 10(1): 27. 1906, Ill. *Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Candollea* 2: 253. 1925, *Manual of the Grasses of the United States* 76, 860. 1935, *Candollea* 10: 108. 1945, *Canad. J. Bot.* 62: 2452. 1984, *Watsonia* 16: 300. 1987, *Diversity* 16: 44. 2000, *Amer. J. Bot.* 88: 869-882. 2001 [Siri Fjellheim, Reidar Elven and Christian Brochmann, "Molecules and morphology in concert. II. The *Festuca brachyphylla* complex (Poaceae) in Svalbard.], *Bot. J. Linn. Soc.* 137: 107-126. 2001, Janet L. Jorgensen, Ivana Stehlik, Christian Brochmann and Elena Conti, "Implications of ITS sequences and RAPD markers for the taxonomy and biogeography of the *Oxytropis campestris* and *O.*

arctica (Fabaceae) complexes in Alaska." *Am. J. Bot.* 90: 1470-1480. 2003.

in English: alpine fescue, rock fescue, short-leaf fescue

F. brachyphylla Schult. & Schult.f. f. *flavida* Polunin

North America.

F. brachyphylla Schult. & Schult.f. subsp. *brachyphylla* (*Festuca brevifolia* R. Br., non Muhlenberg; *Festuca brevifolia* subvar. *genuina* St.-Yves; *Festuca ovina* L. subsp. *brevifolia* (S. Watson) Hack. p.p.; *Festuca ovina* L. var. *alpina* (Gaudin.) W.D.J. Koch; *Festuca ovina* L. var. *borealis* Lange; *Festuca ovina* L. var. *brachyphylla* (Schult. & Schult.f.) Piper; *Festuca ovina* L. var. *brevifolia* S. Watson p.p.)

Northern America, U.S., circumpolar. Perennial, green or glaucous, tufted, sheaths glabrous, auricles present or absent, ligules ciliate, occurs on sandy beaches, see *Mantissa* 3 (Add. 1): 646. 1827.

in English: alpine fescue

in Mexico: cañuela borreguera

F. brachyphylla Schult. & Schult.f. subsp. *breviculmis* Frederiksen

North America, southwestern U.S., California. Perennial, herbaceous, on alpine sites, considered synonymous with *Festuca brachyphylla* subsp. *coloradensis* Frederiksen, see *Mantissa* 3 (Add. 1): 646. 1827.

in English: short-leaf fescue, short-leaved fescue

F. brachyphylla Schult. & Schult.f. subsp. *coloradensis* Frederiksen (*Festuca brachyphylla* Schult. & Schult.f. subsp. *breviculmis* Frederiksen; *Festuca brachyphylla* Schult. & Schult.f., pro parte; *Festuca brevissima* Jurtzev; *Festuca ovina* subsp. *alaskana* Holmen; *Festuca ovina* var. *brevifolia* auct. p.p.)

Northern America, southwestern U.S., New Mexico, California. Densely tufted, green to glaucous, erect, sheaths glabrous, auricles present, ligules ciliate, glumes glabrous or hairy, grows on alpine sites, see *Species Plantarum* 1: 73-74. 1753.

in English: Colorado fescue

F. breistrofferi Chas, Kerguélen & Plonka

France, Europe. Vulnerable species, see *Lejeunia* 142: 9. 1993.

in French: fétuque de Breistroffer

F. breviaristata Pilg. (*Festuca breviaristata* Krajina, nom. illeg., non *Festuca breviaristata* Pilg.; *Festuca subulifolia* Benth.)

Ecuador. See *Plantas Hartwegianas imprimis Mexicanas* 262. 1846, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 717-718. 1898.

F. brevifolia Muhl. (*Festuca brevifolia* R. Br., nom. illeg., non *Festuca brevifolia* Muhl.; *Triplasis purpurea* (Walter) Chapm.)

North America, U.S. See *Catalogus Plantarum Americae Septentrionalis* 13. 1813, *Chloris Melvilliana* 31. 1823.

F. brevifolia Muhl. var. **utahensis** St.-Yves (*Festuca brachyphylla* var. *utahensis* (St.-Yves) Litard.)

North America, U.S., Colorado, Utah. Tufted, alpine, erect, small, sheaths glabrous or glabrescent, auricles present or absent, ligules ciliate, glumes unequal, ovary apex densely hairy or pubescent, see *Candollea* 2: 257. 1925 and *Candollea* 10: 108. 1945.

F. breviglumis Swallen (*Bromus cernuus* Swallen)

Costa Rica. See *Contributions from the United States National Herbarium* 29(9): 398. 1950, *Boletín de la Sociedad Botánica de México* 23: 26-28, f. 1. 1958 [1959].

F. brevipila R. Tracey (*Festuca brevipila* Tracey; *Festuca duriuscula* auct. non L.; *Festuca longifolia* forma *villosa* (Schrad.) Dore, non *Festuca ovina* var. *villosa* Schrad.; *Festuca longifolia* auct. pl.; *Festuca ovina* var. *duriuscula* hort.; *Festuca ovina* L. subsp. *ovina* var. *duriuscula* Hack. subvar. *trachyphylla* Hack.; *Festuca ovina* subsp. *eu-ovina* var. *duriuscula* subvar. *trachyphylla* Hack.; *Festuca ovina* var. *duriuscula* auct. non (L.) Koch; *Festuca trachyphylla* (Hack.) Krajina, nom. illeg.)

Europe, Eurasia. Densely tufted, bluish green, erect, open sheaths entire and persisting, auricles present, ligules ciliate, leaf blades plicate, ovary apex glabrous, cultivated crop, ornamental, used as ground cover and for land stabilization, disturbed areas, lawn grass, turf, naturalized elsewhere, see *Monographia Festucarum Europaeum* 91. 1882 and *Acta Botanica Bohemica* 9: 190, t. 2, f. 5-6. 1930, *Plant Systematics and Evolution* 128(3-4): 287. 1977, *Bot. J. Linn. Soc.* 106: 393. 1991, *Phytologia* 82: 73-78. 1997, *Watsonia* 17: 293. 1998.

in English: hard fescue, sheep fescue

F. brevissima Jurtzev (*Festuca brachyphylla* subsp. *coloradensis* Fred.; *Festuca brachyphylla* var. *brevissima* (Jurtzev) Kosh.; *Festuca brevissima* f. *pallida* (Holmen) Frederiksen; *Festuca ovina* subsp. *alaskana* Holmen, pro parte; *Festuca ovina* subsp. *alaskana* f. *pallida* Holmen; *Festuca ovina* var. *alaskana* (Holmen) Welsh; *Festuca ovina* var. *alaskensis* Holmen)

Northern America, U.S., Canada, Alaska, Yukon Territory, Russia. Densely tufted, sheaths glabrous and entire, auricles present, ligules ciliate, open panicle with spreading branches, rare species, grows on rocky tundra, see *Species Plantarum* 1: 73-74. 1753, *Mantissa* 3 (Add. 1): 646. 1827 and *Botaniska Notiser* 117(2): 114. Lund 1964.

in English: Alaska fescue

F. brigantina (Markgr.-Dann.) Markgr.-Dann. (*Festuca ovina* L. subsp. *brigantina* Markgr.-Dann.)

Portugal. Endangered species, see *Botanical Journal of the Linnean Society* 76(4): 328. 1978.

F. buchtienii Hack. (*Festuca dolichophylla* J. Presl; *Festuca humilior* Nees & Meyen; *Festuca scirpifolia* subsp. *buchtienii* (Hack.) St.-Yves)

Bolivia. Caespitose, erect, leaf blades involute and rigid, lax panicle oblong or linear-oblong with scabrous branches, spikelets elliptic-lanceolate, 4-5-flowered, glumes linear-lanceolate, lemmas lanceolate acute mucronate, see *Reliquiae Haenkeanae* 1(4-5): 258. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 403. 1833, *Gramineae* 35. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 167. 1843 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 160. 1908, *Candollea* 3: 227. 1927.

F. burnatii St.-Yves

Europe, Spain. Useful for erosion control, see *Annuaire du Conservatoire et Jardin Botaniques de Genève* 16: 347, t. 4. 1913, *Botanical Journal of the Linnean Society* 146: 331-337. 2004.

F. caerulescens Desf. (*Festuca caerulescens* Boiss. ex Hack., nom. illeg., non *Festuca caerulescens* Desf.; *Festuca caerulescens* Ten., nom. illeg., non *Festuca caerulescens* Desf.; *Schedonorus caerulescens* (Desf.) Roem. & Schult.)

Europe, Sicily, Italy. Useful for erosion control, see *Flora Atlantica* 1: 87. 1798, *Systema Vegetabilium* 2: 699. 1817, *Flora Napolitana* 3: 81. 1824-1829, *Monographia Festucarum Europaeum* 167. 1882.

F. cajamarcae Pilg. (*Festuca distichovaginata* var. *cajamarcae* (Pilg.) St.-Yves; *Festuca dolichophylla* J. Presl)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 258. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 511, 513. 1906, *Candollea* 3: 222. 1927.

F. caldasii (Kunth) Kunth

South America. See *Nova Genera et Species Plantarum (quarto ed.)* 1: 151. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 356. 1825, *Agrost. Bras.* 473. 1829 [*Flora Brasiliensis seu Enumeratio Plantarum* 473. 1829], *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 407. 1833, *Révision des Graminées* 1: 132. 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 76. 1836 and *Bull. Torrey Bot. Club* 75: 81. 1948, *Kew Bulletin* 39(1): 184. 1984, *Sida* 20(3): 1015-1022. 2003.

F. californica Vasey (*Bromus kalmii* var. *aristulatus* Torrey; *Festuca altaica* var. *aristulata* (Torrey) St.-Yves; *Festuca aristulata* (Torr.) Shear ex Piper; *Festuca aristulata* subsp. *parishii* Piper; *Festuca aristulata* var. *aristulata*; *Festuca californica* var. *parishii* (Piper) Hitchc.; *Festuca californica* var. *californica*; *Festuca californica* var. *parishii* (Piper)

Hitchc.; *Festuca hitchcockiana* E.B. Alexeev; *Festuca parishii* (Piper) Hitchc.)

Northern America, U.S., California. Perennial bunchgrass, herbaceous, with basal culm buds, densely tufted or densely clumped stems, glaucous, erect, rhizomes absent, sheaths glabrous or hairy, auricles present, leaf blades firm and scabrous, conspicuous dead leaf sheaths at the plant base, inflorescence an open sparsely branched panicle, panicle branches usually occur in pairs, glumes unequal, lemma acuminate or short awned, colonizer, recommended for stabilizing or restoring disturbed or degraded areas, suitable for erosion control and for wildlife food and cover, found in dry habitats and moist stream banks, damp red soil, thickets, prairies, wood borders, open dry ground, in both open and shaded places, open forests, dry rocky soil, see *A Manual of the Botany of the Northern United States* 600. 1848, *Contributions from the United States National Herbarium* 1(8): 277. 1893 and *Contributions from the United States National Herbarium* 10: 32-33. 1906, *A Flora of California* 1: 169. 1912, *Illustrated Flora of the Pacific States* 1: 222. 1923, *Candollea* 2: 273. 1925.

in English: California fescue

F. californica Vasey var. *californica*

U.S.

F. californica Vasey var. *parishii* (Piper) Hitchc. (*Festuca aristulata* subsp. *parishii* Piper; *Festuca parishii* (Piper) Hitchc.)

U.S. See *Contributions from the United States National Herbarium* 10(1): 33. 1906, *A Flora of California* 1: 169. 1912, *Illustrated Flora of the Pacific States* 1: 222. 1923.

F. callieri (Hack. ex St.-Yves) Markgr.-Dann. (*Festuca callieri* (Hack.) Dörf. ex Domin; *Festuca callieri* (Hack.) Markgr.-Dann.; *Festuca ovina* L. subsp. *sulcata* Hack. var. *callieri* St.-Yves; *Festuca ovina* var. *callieri* Hack. ex St.-Yves; *Festuca ovina* var. *callieri* Hack.; *Festuca sulcata* var. *callieri* Hack.)

Turkey, Asia, Greece. Bunchgrass, on black soil, see *Candollea* 3: 347. 1928, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 278. 1932.

F. calligera (Piper) Rydberg (*Festuca amethystina* var. *asperrima* Hack. ex Beal; *Festuca ovina* subsp. *calligera* Piper)

Northern America, southwestern U.S., New Mexico, Arizona. Perennial bunchgrass, green or glaucous, vigorous, many-stemmed, densely tufted, erect, strongly rooted, sheaths glabrous or hairy, auricles present, leaves mostly basal hard and wiry, inflorescence usually rather open with ascending side branches, erect and slender flower stalks, glumes unequal, forage, moderately palatable, highly nutritious seed heads, not particularly shade tolerant, found in dry habitats, open areas, see *Species Plantarum* 1: 73-74. 1753, *Grasses of North America for Farmers and Students*

2: 601. 1896 and *Contributions from the United States National Herbarium* 10(1): 27. 1906, *Bulletin of the Torrey Botanical Club* 36: 537. 1909.

in English: southwest fescue, western sheep fescue

F. callosa (Piper) St. Yves (*Festuca ovina* subsp. *callosa* Piper)

America, Mexico. Fodder, see *Species Plantarum* 1: 73-74. 1753 and *Contributions from the United States National Herbarium* 17(3): 379. 1913, *Candollea* 2: 291. 1925.

in Mexico: zacate

F. campestris Rydb. (*Festuca altaica* subsp. *scabrella* (Torr.) Hultén; *Festuca altaica* Trin. var. *major* (Vasey) Gleason; *Festuca altaica* var. *scabrella* (Torr.) Breitung; *Festuca doreana* Looman; *Festuca scabrella* var. *major* Vasey)

North America, U.S. Perennial bunchgrass, densely tufted, glaucous to bluish, erect, short rhizomes present or absent, both living and dead leaf sheaths at the base, sheaths glabrous or glabrescent, ligules ciliate, erect and stiff leaves, stiff inflorescence branches, bluish green inflorescences, glumes smooth or slightly rough, lemma rough, forage, palatable, common on prairies, forest openings, dry habitats, in dry-to-moist meadows, montane and subalpine zones, see *Flora Altaica* 1: 109-110. 1829, *Flora Boreali-Americana* 2: 252, t. 233. 1840, *Contributions from the United States National Herbarium* 1(8): 278-279. 1893 and *Memoirs of the New York Botanical Garden* 1: 57. 1900, *Phytologia* 4(1): 21. 1952, *American Midland Naturalist* 58: 12. 1957, *Budd's Flora of the Canadian Prairie Provinces*. Canadian Government Publish Centre. 128. 1979.

in English: rough fescue, prairie fescue, mountain rough fescue, foothills rough fescue, buffalo bunchgrass

F. camusiana St.-Yves (*Bromus dissitiflorus* Baker; *Festuca dissitiflora* Steud. ex Griseb.; *Festuca saximontana* Rydb.)

Madagascar. Related to *Festuca chodatiana* (St.-Yves) E.B. Alexeev, see *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 287. 1879, *Journal of the Linnean Society, Botany* 20: 301. 1883 and *Bulletin de la Société Botanique de Genève* 18: 156. 1926.

F. canadensis E.B. Alexeev (*Festuca saximontana* Rydb.)

North America, Canada. On the sand dunes, considered to be synonymous with *Festuca saximontana* Rydb., see *Bulletin of the Torrey Botanical Club* 36: 536. 1909.

F. cappadocica (Hackel) Markgr.-Dann.

Turkey. Rare species, see *Willdenowia* 11(2): 207. 1981.

F. caprina Nees (*Festuca nubigena* Jungh. subsp. *caprina* (Nees) St.-Yves)

Tropical Africa, Malawi, Tanzania, South Africa. Perennial, variable, tufted to densely tufted, clump-forming, rhizomatous, ligule a short unfringed membrane, leaves filiform, old sheaths persisting as fibers, inflorescence open loose

panicle, lemmas awned, probably highly palatable, unknown grazing value, used for making ropes, common in moist areas, wet places, slopes, vleis, open meadows, moist mountain grassveld, high altitude, near stream, on stream bank in dry soil, around rock outcrop, see *Florae Africae Australioris Illustrationes Monographicae* 443. 1841.

in English: goat-bearded grass, goat-beard grass

in South Africa: bokbaardgras, letsiri, letswiri

F. carazana Pilg. (*Festuca distichovaginata* var. *carazana* (Pilg.) St.-Yves; *Festuca dolichophylla* J. Presl)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 258. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 511. 1906, *Candollea* 3: 220. 1927.

F. carchiense Stancik

Ecuador. See *Folia Geobotanica et Phytotaxonomica* 39(1): 98-100, f. 1, 1-5. 2004.

F. carnuntina R. Tracey (*Festuca stricta* subsp. *carnuntina* (R. Tracey) G. Pils; *Festuca valesiaca* Schleich. ex Gaudin subsp. *pseudodalmatica* (Krajina) Soó)

Europe. See *Plant Systematics and Evolution* 128(3-4): 289. 1977, *Phyton. Annales Rei Botanicae* 24(1): 54. Horn, Austria. 1984.

F. cartagana E.B. Alexeev

Costa Rica. See *Bot. Zhurn. (Moscow & Leningrad)* 67: 1291. 1982.

F. casapaltensis Ball (*Bromus weberbaueri* Pilg.)

Peru. See *Journal of the Linnean Society, Botany* 22: 62. 1885 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 517. 1906.

F. castilloniana Türpe

Argentina. See *Lilloa* 33(13): 285, f. 1. 1973.

F. cataonica (Hackel ex Boiss.) Markgr.-Dann. (also spelled *catonica*) (*Festuca ovina* subsp. *cataonica* Hack. ex Boiss.)

Turkey. Rare species, see *Willdenowia* 11(2): 207. 1981.

F. chimborazensis E.B. Alexeev

Ecuador. See *Bot. Zhurn. (Moscow & Leningrad)* 69: 1549. 1984.

F. chimborazensis E.B. Alexeev subsp. *micacochensis* Stancik

Ecuador. See *Folia Geobotanica et Phytotaxonomica* 39(1): 105, f. 3, 6-10. 2004.

F. chionobia Egor. & Sipl. (*Festuca auriculata* subsp. *chionobia* (Egor. & Sipl.) Tzvelev)

Eurasia, Russia. See *Novosti Sist. Vyss. Rast.* 6: 226. 1970, *Zlaki SSSR* 407. 1976.

F. chiriquensis Swallen

Panama. Open habitats, see *Annals of the Missouri Botanical Garden* 30(2): 116. 1943.

F. chita Stancik

Colombia. See *Darwiniana* 41(1-4): 129, f. 13a-f. 2003.

F. chitagana Stancik

Colombia. See *Darwiniana* 41(1-4): 130-131, f. 12g-k. 2003.

F. chodatiana (St.-Yves) E.B. Alexeev (*Festuca camusiana* subsp. *chodatiana* St.-Yves)

Tanzania. Perennial, slender, weak, ascending, loosely tufted, leaf blades linear not auriculate, panicle lax with loosely ascending branches, spikelets narrowly oblong, 3- to 5-flowered, florets loosely imbricate, glumes narrowly lanceolate acute, lower glume 1-nerved, upper glume 3-nerved, lemmas acuminate with the awn terminal, ovary top hairy, forest, upland forest, closely related to *Festuca camusiana* St.-Yves, see *Bulletin de la Société Botanique de Genève* ser. 2 18: 158, f. 2. 1926, *Bot. Zhurn. (Moscow & Leningrad)* 71(8): 1113. 1986.

F. chrysophylla Phil. (*Festuca deserticola* var. *chrysophylla* (Phil.) St.-Yves; *Festuca deserticola* var. *juncea* St.-Yves; *Festuca juncea* Phil., nom. illeg., non *Festuca juncea* (L.) Moench; *Festuca saltana* St.-Yves)

Chile, Argentina, Bolivia. Caespitose, ascending, arching, foliage mostly basal, leaf blades papery, lax panicles linear, spikelets elliptic-oblong, 3- to 5-flowered, glumes subulate or linear-lanceolate, lemmas lanceolate acuminate or mucronate, ovary apex pubescent, stony places, see *Methodus Plantas Horti Botanici ...* 190. 1794, *Florula Atacemensis seu Enumeratio ...* 56. 1860, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 88, 89. 1891 and *Candollea* 3: 209, 305, f. 96. 1927.

F. cinerea Vill. (*Festuca glauca* var. *cinerea* (Vill.) Schrad.)

Europe, southern France, northwestern Italy. Densely caespitose, variable, scabrous leaves hard and pruinose, dense panicle, violet spikelets glaucous and pruinose, upper glume lanceolate and acuminate, lemma lanceolate and acuminate, often confused with *Festuca glauca* Vill., see *Systema Plantarum Europae* 1: 8. Vienna 1786, *Linnaea* 12(4): 457. 1838.

F. circinata Griseb.

Argentina. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 288. 1879.

F. circummediterranea Patzke (*Festuca circummediterranea* var. *gracilis* (Hack.) Markgr.-Dann.; *Festuca laevis* var. *gracilis* (Hack.) K. Richt.; *Festuca ovina* L. subsp. *laevis* Hack. var. *laevis*; *Festuca ovina* subvar. *gracilis* Hack.)

Europe. See *Plantae Europaeae* 1: 96. 1890 and *Österreichische Botanische Zeitschrift* 122(4): 261. Vienna 1973.

F. cirrosa (Speg.) Parodi (*Festuca erecta* var. *cirrosa* Speg.; *Festuca longidiurna* Parodi)

Argentina. See *Flore des Iles Malouines* 4: 31. 1825, *Anales del Museo Nacional de Buenos Aires* 5: 95. 1896 and *Revista Argentina de Agronomía* 20(4): 190, 214. 1953.

F. cleefiana E.B. Alexeev

Colombia. See *Bot. Zhurn. (Moscow & Leningrad)* 69: 1548. 1984.

F. clementei Boiss. (*Festuca clementei* var. *plicata* (Hack.) Pau; *Festuca duriuscula* var. *clementei* (Boiss.) Boiss.)

Spain. Rare species, see *Elenchus Plantarum Novarum* 90. 1838, *Österreichische Botanische Zeitschrift* 27: 48. 1877 and *Cavanillesia* 4: 49. 1931.

F. coahuilana Gonz.-Led, & S.D. Koch

Mexico. See *Novon* 4(1): 27, f. 2. 1994.

F. cochabambana E.B. Alexeev (*Festuca ulochaeta* sensu Hitchc., non Nees ex Steud.)

Bolivia. Rhizomatous, loosely tufted, leaf blades pubescent to scabrous, lax panicles, spikelets lanceolate, 4-5-flowered, glumes linear-lanceolate and acuminate, lower lemma lanceolate awned, paleas glabrous, ovary apex pubescent, see *Bot. Zhurn. (Moscow & Leningrad)* 70: 1241. 1985.

F. cocuyana Stancik

Colombia. Páramos, see *Darwiniana* 41(1-4): 133-135, f. 12a-e. 2003.

F. colombiana E.B. Alexeev

Colombia. Páramos, see *Bot. Zhurn. (Moscow & Leningrad)* 69: 1546, f. 2, 7-8. 1984.

F. compressifolia J. Presl (*Festuca fibrifera* Pilg.)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 259. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 509. 1906.

F. contracta Kirk (*Festuca erecta* d'Urv., nom. illeg., non *Festuca erecta* (Huds.) Wallr.; *Festuca paludicola* Roiv.)

Antarctic, southern America, Chile, Argentina, Falkland Islands. Perennial, tufted, tussocky, glaucous, nodes hidden, leaf sheath glabrous, narrow panicle compact and spike-like, inflorescence branches stiff and erect, spikelets closely packed, cleistogamous, glumes more or less equal, lemma prickly, lodicules lobed, purple anthers, ovary apex glabrous, found in rocky areas, see *Transactions and Proceedings of the New Zealand Institute* 27: 353. 1895 and *Annales Botanici Societatis Zoologicae-Botanicæ Fennicæ "Vanamo"* 28: 200. Helsinki 1954, *New Zealand J. Bot.* 36: 471-476. 1998.

F. copei Renvoize

Bolivia. Caespitose, leaf blades scabrous, lax panicle oblong with flexuous branches, spikelets closely packed, 4- to 7-flowered, glumes lanceolate or subulate, lemmas

lanceolate, palea keels scabrous, ovary glabrous, rocky slopes, see *Gramíneas de Bolivia* 117. 1998.

F. coromotensis B. Briceño

Venezuela, Laguna de Coromoto. See *Ernstia* 4(3-4): 76-77, f. 5-6. 1994.

F. costata Nees

South Africa. Perennial, variable, forming clumps, erect, rhizomatous, tough, short or long rhizomes, old sheaths persisting as coarse fibers, leaves inrolled, inflorescence open panicle, spikelets 3- to 7-flowered, lemma acute or awned, common in moist areas, wet places, vleis, mountain grassveld, high altitude, see *Florae Africae Australioris Illustrationes Monographicae* 447. 1841.

in English: tussock fescue

in South Africa: polswenkgras

F. costei (St.-Yves) Markgr.-Dann. (*Festuca arvernensis* subsp. *costei* (St.-Yves) Auquier & Kerguélen; *Festuca hervieri* subsp. *costei* (St.-Yves) O. Bolòs, Masalles & Vigo; *Festuca ovina* L. subsp. *laevis* Hack. var. *gallica* Hack. ex St.-Yves subvar. *costei* St.-Yves; *Festuca ovina* subvar. *costei* St.-Yves)

Europe. See *Lejeunia* 89: 22. 1977, *Botanical Journal of the Linnean Society* 76(4): 327. 1978.

F. coxii (Petrie) Hack. (*Agropyron coxii* Petrie; *Agropyron coxii* Petrie)

New Zealand. Tufted, tussocky, tall, many-leaved shoots, sometimes geniculate, sometimes rooting at nodes, culms included by leaf blades, ligule ciliate, compact and short inflorescence paniculate, spikelets shortly pedicelled and imbricate, florets long-awned, chasmogamous, glumes unequal, lodicules hairy, ovary hispid, coastal, seaside rocks, cliffs, see *Transactions and Proceedings of the New Zealand Institute* 34: 395. 1902, *Manual of the New Zealand Flora* 919. 1906, *New Zealand J. Bot.* 36: 339. 1998.

F. cratericola Markgr.-Dann.

Turkey. Rare species, see *Willdenowia* 11(2): 203. 1981.

F. cretacea T. Pop. & Proskor. (*Festuca cretacea* (Lavr.) Czern. ex Krecz. & Bobrov; *Festuca issatchenkoi* St.-Yves; *Festuca rubra* subsp. *cretacea* Lavr.; *Festuca rubra* L. subsp. *rubra* var. *cretacea* Lavrenko)

Europe, Russia. Useful for erosion control, see *Candollea* 5: 134. 1932.

F. cryptantha T. Cope

Yemen. Perennial, densely tufted, erect, leaves convolute and filiform often curved, linear panicle spike-like, spikelets sessile on the axis, glumes longer than the spikelet, lowest lemma shortly awned, common on cliff ledges, see *Kew Bulletin* 39(4): 834. 1984.

F. cumminsii Stapf (*Festuca rubra* L. subsp. *schlagintweitii* St.-Yves) (for the German travelers, explorers and plant

collectors Adolf von Schlagintweit (1829-1857) and his brother Hermann Alfred Rudolph von Schlagintweit-Sakünlinski (1826-1882); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 228. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 353. 1972; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898] Leipzig 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 5: 187-189. 1985) Europe, India. See *The Flora of British India* 7: 349. 1896 and *Candollea* 3: 389. 1928.

F. cundinamarcae E.B. Alexeev

Colombia. Páramos, see *Bot. Zhurn. (Moscow & Leningrad)* 69: 1548. 1984.

F. curvula Gaudin (*Festuca cinerea* Vill. subsp. *curvula* (Gaudin) Beldie; *Festuca duriuscula* var. *curvula* (Gaudin) Sen.; *Festuca glauca* var. *curvula* (Gaudin) Schur)

Europe. See *Bulletin de l'Académie Internationale de Géographie, Botanique* 24: 103. 1914.

F. cuzcoensis Stancik & Peterson

South America. See *Sida* 20(1): 21-29. 2002.

F. cyllenica Boiss. & Heldr. (*Festuca varia* var. *cyllenica* (Boiss. & Heldr.) Hack.)

Greece. See *Diagnoses plantarum orientalium novarum* 1842-1859, *Monographia Festucarum Europearum* 175. 1882.

F. cyllenica Boiss. & Heldr. subsp. ***uluana*** Markgr.-Dann. Turkey. Rare species, see *Willdenowia* 11(2): 206. 1981.

F. cyrnea (St.-Yves & Litard.) Markgr.-Dann. (*Festuca cyrnea* (Litard. ex St.-Yves) Markgr.-Dann.; *Festuca rubra* L. subsp. *eu-rubra* Hack. var. *cyrnea* Litard. & St.-Yves; *Festuca rubra* var. *cyrnea* St.-Yves & Litard.) (from the Latin *Cyrneus, a, um* "Corsican")

Europe. See *Bulletin de la Société Botanique de France* 71: 122. 1924, *Botanical Journal of the Linnean Society* 76(4): 327. 1978.

F. dahurica (St.-Yves) Krecz. & Bobrov (*Festuca dahurica* subsp. *mongolica* S.R. Liou & Ma; *Festuca ovina* var. *dahurica* St.-Yves)

Asia, Mongolia, Siberia, Russia. On sandy soil.

F. dalmatica (Hack.) K. Richt. (*Festuca ovina* L. subsp. *sulcata* Hack. var. *dalmatica* Hack.; *Festuca ovina* var. *dalmatica* Hack.)

Europe.

F. dasyantha Kunth

Ecuador. See *Nova Genera et Species Plantarum* 1: 154-155. 1815 [1816].

F. dasyclada Hackel ex Beal (*Argillochloa dasyclada* (Hack. ex Beal) W.A. Weber) (from the Greek *dasys* "thick, hairy, shaggy" and *klados* "a branch")

Northern America, U.S., Utah, Colorado. Perennial, rare species, bluish-green or glaucous, densely tufted, sheaths glabrous, auricles present or absent, ligules ciliate, internodes densely pubescent, glumes unequal, ovary apex pubescent, alpine and dry habitats, see *Grasses of North America* (edition 2) 2: 602. 1896 and *Phytologia* 55(1): 1. 1984, *Phytologia* 82(2): 76. 1997.

in English: sedge fescue, oil shale fescue, Utah fescue

F. declina Darbysh.

Mexico. See *Novon* 5(2): 129, f. 1. 1995.

F. decolorata Markgr.-Dann.

Turkey. Rare species, see *Willdenowia* 11(2): 203. 1981.

F. deflexa Connor

New Zealand. Slender, tufted, tussocky, erect, rooting at the nodes, glaucous, leaf sheath keeled, ligule ciliate, panicle branches wide-angled to widely spaced, glumes unequal, palea apex bifid to deeply bifid, lodicules hairy, ovary apex hispid, in grassland, rocky places, see *New Zealand Journal of Botany* 36(3): 341. 1998.

F. degenii (St.-Yves) Markgr.-Dann. (*Festuca ovina* L. subsp. *ovina* var. *glauca* (Lam.) Hack. subvar. *degenii* St.-Yves; *Festuca ovina* subvar. *degenii* St.-Yves; *Festuca pallens* f. *degenii* (St.-Yves) Soó) (for the Hungarian botanist Arpád von Degen (de Degen), 1866-1934, author of *Flora velebica*. Budapest 1936-1938; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 434. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 97. 1972)

Europe. See *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 116. 1971 [1972], *Botanical Journal of the Linnean Society* 76(4): 328. 1978.

F. densiflora Tovar

Southern America, Peru. Endangered species, see *Memorias del Museo de Historia Natural "Javier Prado"* 16: 71, t.16B. Universidad de San Marcos, Lima 1972.

F. densipaniculata E.B. Alexeev

Ecuador. See *Bot. Zhurn. (Moscow & Leningrad)* 69: 1551. 1984.

F. dentiflora Alexeev ex Stancik & Peterson

Peru. Perennial, loosely tufted, erect, glabrous, leaf sheaths membranous, ligule membranous, panicles ovate, spikelets ovate, 4-5 florets perfect, glumes lanceolate, 2-dentate lemma and palea, 3 stamens, closely related to *Festuca caldasii* (Kunth) Kunth, see *Sida* 20(3): 1015-1022. 2003.

F. deserticola Phil. (*Festuca deserticola* var. *deserticola*; *Festuca deserticola* var. *paupera* (Phil.) St.-Yves; *Festuca oligantha* Phil. ex St.-Yves; *Festuca paupera* Phil.)

Chile. See *Florula Atacamensis seu Enumeratio ...* 56. 1860, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 89. 1891 and *Candollea* 3: 211. 1927.

F. dichoclada Pilg. (*Festuca quadridentata* Kunth; *Festuca quadridentata* var. *dichoclada* (Pilg.) St.-Yves)

Peru. See *Nova Genera et Species Plantarum* 1: 154. 1815 [1816] and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 514. 1906, *Candollea* 3: 265. 1927.

F. diclina Darbysh.

Mexico. Alpine and subalpine, see *Novon* 5(2): 129, f. 1A-F, 2A-C. 1995.

F. diffusa Dumort. (*Festuca bartherei* Timb.-Lagr.; *Festuca diffusa* Vassiliev, nom. illeg., non *Festuca diffusa* Dumort.; *Festuca megastachys* Hegetschw.; *Festuca multiflora* Hoffm.; *Festuca rubra* L.; *Festuca rubra* subsp. *bartherei* (Timb.-Lagr.) P. Fourn.; *Festuca rubra* subsp. *fallax* (Thuill.) Nyman; *Festuca rubra* L. subsp. *multiflora* (Hoffm.) V. Jirásek; *Festuca rubra* L. subsp. *planifolia* sensu Hayek, non Hack. pro var.; *Festuca rubra* L. subsp. *rubra* var. *grandiflora* Hack.)

Europe. See *Flore des Environs de Paris* (edition 2) 1: 50. 1799, *Observations sur les Graminées de la Flore Belgique* 106. 1823.

F. dimorpha Guss. (*Festuca carpatica* F. Dietr.; *Festuca dimorpha* Janka; *Festuca laxa* var. *dimorpha* (Guss.) Fiori; *Festuca laxa* var. *dimorpha* (Guss.) P. Fourn., nom. illeg., non *Festuca laxa* var. *dimorpha* (Guss.) Fiori; *Festuca laxa* var. *dimorpha* (Guss.) St.-Yves, nom. illeg., non *Festuca laxa* var. *dimorpha* (Guss.) Fiori)

Europe, Italy, France. Useful for erosion control, see *Plantae Rariores* 34, t. 6. 1826, *Österreichische Botanische Zeitschrift* 16: 101. 1866 and *Bulletin de la Société Botanique de France* 71: 132. 1924.

F. dissitiflora Steudel ex Griseb. (*Festuca dissitiflora* Steud.; *Festuca dissitiflora* Stapf ex St.-Yves; *Festuca dissitiflora* Steud. ex Lechler; *Festuca dissitiflora* subsp. *eudissitiflora* St.-Yves; *Festuca dissitiflora* var. *genuina* St.-Yves; *Festuca rigescens* (J. Presl) Kunth)

Southern America, Argentina, Catamarca, Jujuy, La Rioja, Salta. Rare species, see *Reliquiae Haenkeanae* 1(4-5): 260. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 403. 1833, *Berberides Americae Australis* 56. 1857, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 287. 1879 and *Bulletin de la Société Botanique de Genève* 18: 156. 1926, *Candollea* 3: 244. 1927.

F. distichovaginata Pilg. (*Festuca distichovaginata* f. *apogama* St.-Yves; *Festuca distichovaginata* fo. *distichovaginata*; *Festuca distichovaginata* subvar. *angustiflora* St.-Yves; *Festuca distichovaginata* subvar. *distichovaginata*;

Festuca distichovaginata var. *distichovaginata*; *Festuca distichovaginata* var. *genuina* St.-Yves; *Festuca dolichophylla* J. Presl)

Peru, Argentina. See *Reliquiae Haenkeanae* 1(4-5): 258. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 511. 1906, *Candollea* 3: 219, 221, 307. 1927.

F. divergens Tovar

Southern America, Peru. Bunchgrass, rare, inflorescence purple, resembling *Festuca peruviana*, see *Memorias del Museo de Historia Natural "Javier Prado"* 16: 51, t. 11B. 1972.

F. djimilensis Boiss. & Balansa (*Festuca calceolaris* Somm. & Levier)

Europe. See *Bulletin de la Société Botanique de France* 21: 18. 1874, *Nuovo Giornale Botanico Italiano*, n. ser., 4: 211. 1897.

F. dolichophylla J. Presl (*Diplachne scirpifolia* J. Presl; *Festuca buchtienii* Hack.; *Festuca cajamarcae* Pilg.; *Festuca carazana* Pilg.; *Festuca distichovaginata* Pilg.; *Festuca distichovaginata* var. *cajamarcae* (Pilg.) St.-Yves; *Festuca distichovaginata* var. *carazana* (Pilg.) St.-Yves; *Festuca dolichantha* Keng ex Keng f.; *Festuca horridula* Pilg.; *Festuca inarticulata* Pilg.; *Festuca laeteviridis* Pilg.; *Festuca laeteviridis* var. *laeteviridis*; *Festuca laeteviridis* var. *lasiorrhachis* (Pilg.) St.-Yves, also spelled *lasiorrhachis*; *Festuca lasiorrhachis* Pilg., also spelled *lasiorrhachis*; *Festuca pflanzii* Pilg.; *Festuca scirpifolia* (J. Presl) Kunth; *Festuca scirpifolia* subsp. *euscirpifolia* St.-Yves; *Festuca scirpifolia* subsp. *scirpifolia*; *Festuca scirpifolia* subsp. *tarmensis* (Pilg.) St.-Yves; *Festuca scirpifolia* var. *genuina* St.-Yves; *Festuca scirpifolia* var. *inarticulata* (Pilg.) St.-Yves; *Festuca scirpifolia* var. *scirpifolia*; *Festuca setifolia* Steud. ex Griseb.; *Festuca subulifolia* Benth.; *Festuca tarmensis* Pilg.; *Festuca weberbaueri* Pilg.; *Festuca weberbaueri* var. *foliosa* Pilg.; *Poa dactyloides* Kunth, nom. illeg., non *Poa dactyloides* Aubl.) (Peru, Cajamarca; Peru, Ancash, Cordillera Negra, Caraz)

Southern America, Peru, Bolivia. Perennial bunchgrass, tufted, forming dense and large clumps, erect to prostrate, leaf blades filiform, narrow panicles linear, spikelets elliptic-oblong, 4- to 7-flowered, florets purplish to brown to pinkish, glumes lanceolate, lemmas lanceolate acuminate, palea keels scabrous, ovary glabrous, palatable, growing in mountain meadow, in boggy spots, in sheltered arroyos, among rocks, in moist areas, grasslands, scrubs, dry roadsides, pasture, in moist quebrada, hillsides, see *Prodromus Systematis Naturalis Regni Vegetabilis* 1: 163. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 258, 261. 1830, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 203. 1874 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 508, 510-516. 1906, *Repertorium Specierum Novarum*

Regni Vegetabilis 6: 160. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 188. 1913, *Candollea* 3: 220, 222, 224-225, 232, 239. 1927.

in Bolivia: chillagua, paja churca

F. donax Lowe

Portugal, Madeira. Vulnerable species, see *Transactions of the Cambridge Philosophical Society* 4: 9. 1831.

F. dracomontana Linder

South Africa. Perennial, rare, rhizomatous, inflorescence open panicle, spikelets 3- to 7-flowered, lemmas awned, found in high mountains, sour grassveld, see *Bothalia* 16(1): 59. 1986.

F. drymeja Mert. & W.D.J. Koch (*Drymochloa drymeja* (Mert. & W.D.J. Koch) Holub; *Festuca exaltata* C. Presl; *Festuca montana* M. Bieb., nom. illeg., non *Festuca montana* Savi; *Poa bakuensis* Litv. ex Rosh.; *Poa drymeja* (Mert. & W.D.J. Koch) Heynh.)

Asia, Armenia, Iran, Europe. Useful for erosion control, see *Flora Taurico-Caucasica* 3: 75. 1819 and *Folia Geobotanica et Phytotaxonomica* 19(1): 99. 1984.

F. durandoi Clauson (also spelled *durandii*) (*Festuca spadicica* subsp. *durandoi* (Clauson) Jahand. & Maire)

Europe, Spain, Algeria, Morocco. See *Fontqueria* 48: 82. 1997.

F. durandoi Clauson subsp. *capillifolia* (Pau ex Willk.) Rivas Ponce, Cebolla & M.B. Crespo (*Festuca spadicica* var. *capillifolia* Pau ex Willk.)

Spain. Rare species, see *Prodromus Florae Hispanicae*, Suppl. 26. 1893 and *Fontqueria* 31: 256. 1991.

F. duriotagana Franco & Rocha Afonso

Portugal. Vulnerable species, see *Boletim da Sociedade Brotariana*, ser. 2 54: 91. 1980 [1981].

F. duvalii (St.-Yves) Stohr (*Festuca duvalii* (St.-Yves) Markgr.-Dann.; *Festuca duvalii* (St.-Yves) Soó; *Festuca duvalii* Markgr.-Dann.; *Festuca ovina* L. subsp. *sulcata* Hack. var. *duvalii* St.-Yves; *Festuca ovina* subvar. *duvalii* St.-Yves; *Festuca ovina* var. *duvalii* St.-Yves)

Europe. See *Species Plantarum* 1: 73-74. 1753 and *Bulletin de la Société Botanique de France* 71: 38. 1924, *Verh. Bot. Ver. Brand.* 77: 94. 1937, *Acta Botanica Academiae Scientiarum Hungaricae* 2: 201. 1955.

F. earlei Rydberg (*Festuca brachyphylla* var. *utahensis* (St.-Yves) Litard.; *Festuca brevifolia* var. *utahensis* St.-Yves; *Festuca rubra* L.) (named for Franklin Sumner Earle, 1856-1929)

North America, New Mexico. Alpine, loosely tufted, green or yellowish green, sheaths glabrous, auricles present, ligule ciliate, open panicle, spikelets scattered, glumes unequal, ovary apex densely pubescent or hairy, see *Species Plantarum* 1: 74. 1753 and *Bulletin of the Torrey Botanical Club*

32(11): 608. 1905, *Candollea* 2: 257. 1925, *Candollea* 10: 108. 1945.

F. edlundiae S. Aiken, Consaul & Lefkovitch (named for Dr. Sylvia A. Edlund, Geological Survey of Canada, studied the vegetation in the Arctic Archipelago over many years, see Kathy L. Young, Ming-ko Woo and Sylvia A. Edlund, "Influence of Local Topography, Soils, and Vegetation on Microclimate and Hydrology at a High Arctic Site, Ellesmere Island, Canada." in *Arctic, Antarctic, and Alpine Research*. An Interdisciplinary Journal. vol. 29, No. 3, pp. 270-284. Aug 1997)

North America, Canada, Arctic. Densely tufted, erect, decumbent, usually somewhat prostrate, branched, greenish, glabrous, leaves mostly in a basal tuft, conspicuous and persisting sheaths glabrous or densely hairy, auricles present, ligules ciliate, dark purple inflorescences, glumes unequal, ovary apex glabrous, common in tundra, alkaline habitats, imperfectly drained moist areas, disturbed environments, see *Systematic Botany* 20(3): 374-392, f. 1a-g. 1995, *Canadian Journal of Botany* 75(9): 1527-1555. 1997.

F. elatior L. (*Avena secunda* Salisb.; *Bromus elatior* (L.) Koeler; *Bromus pratensis* (Huds.) Spreng., nom. illeg., non *Bromus pratensis* Lam.; *Bucetum elatius* (L.) Parnell; *Bucetum pratense* (Huds.) Parnell; *Festuca americana* (Pers.) F. Dietr.; *Festuca arundinacea* Schreb.; *Festuca elatior* Ucria, nom. illeg., non *Festuca elatior* L.; *Festuca elatior* St.-Yves, nom. illeg., non *Festuca elatior* L.; *Festuca elatior* var. *pratensis* (Huds.) A. Gray; *Festuca fluitans* var. *pratensis* (Huds.) Huds.; *Festuca poaeoides* Michx., nom. illeg., non *Festuca poaeoides* Thuill.; *Festuca poaeoides* var. *americana* Pers.; *Festuca pratensis* Huds.; *Gnomonia elatior* (L.) Lunell; *Schedonorus americanus* (Pers.) Roem. & Schult.; *Schedonorus elatior* (L.) P. Beauv.; *Schedonorus pratensis* (Huds.) P. Beauv.; *Tragus elatior* Panz. ex B.D. Jacks.)

Europe, Asia. Perennial, tufted, rhizomatous, leaf sheaths glabrous, large auricles present, inflorescence lanceolate to ovate nodding panicle, spikelets 3- to 10-flowered, lemmas acute or awned, pasture, forage, found in disturbed places, along or near streams, along roadsides, see *Species Plantarum* 1: 75. 1753, *Essai d'une Nouvelle Agrostographie* 99, 163, 177, pl. 19, f. 2. 1812, *Systema Vegetabilium* 2: 706. 1817, *The Grasses of Scotland* 105, 107, t. 46. 1842, *Index Kewensis* 2: 1098. 1895 and *American Midland Naturalist* 4: 224. 1915, *Revue Bretonne de Botanique Pure et Appliquée* 2: 87. Rennes 1927, *Brittonia* 19: 129-132. 1967, *Bothalia* 16: 59. 1986.

in English: meadow fescue, English bluegrass, randall grass, tall fescue

in French: fétuque-roseau, grande fétuque

in Morocco: gousmir

in Colombia: cañuela alta

F. elegans Boiss. (*Festuca merinoi* Pau)

Europe, Spain. Useful for erosion control, see *Elenchus Plantarum Novarum* 92. 1838 and *Botanical Journal of the Linnean Society* 146: 331-337. 2004.

F. elmeri Scribn. & Merr. (*Festuca elmeri* subsp. *elmeri*; *Festuca elmeri* subsp. *luxurians* Piper; *Festuca elmeri* var. *conferta* (Hack. ex Beal) A.S. Hitchc.; *Festuca howellii* Hack. ex Beal; *Festuca jonesii* Vasey var. *conferta* Hack. ex Beal; *Festuca viridula* var. *howellii* (Hack. ex Beal) St.-Yves) (for the American botanist Adolph Daniel Edward Elmer, 1870-1942, plant collector in Borneo, California, Washington and in the Philippines; see Elmer Drew Merrill, *Plantae Elmerianae Borneenses*. Berkeley 1929; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. Regnum Vegetabile vol. 9. 1957) (*Festuca jonesii* Vasey dedicated to the American plant collector Marcus Eugene Jones, 1852-1934, botanist, explorer, mining engineer, Latinist, botanized in Texas and Colorado, collected widely in the Intermountain West. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 262. Boston 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 246. 1973; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 277, 361. 1916; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Northern America, northwestern and southwestern U.S., California, Oregon. Perennial, tufted, sheaths glabrous and open, ligules ciliate, auricles absent, open panicle, spikelets loosely scattered, glumes unequal, lemma hispid, ovary apex pubescent, see *Contributions from the United States National Herbarium* 1(8): 278. 1893, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 93. 1893, *Grasses of North America* (edition 2) 2: 591, 593. 1896 and *Bulletin of the Torrey Botanical Club* 29(7): 468. 1902, *Contributions from the United States National Herbarium* 10(1): 38. 1906, *Candollea* 2: 266. 1925, *American Journal of Botany* 21(3): 128. 1934, *Phytologia* 82(2): 76. 1997.

in English: coast fescue, coast range fescue, Elmer fescue

F. elviae B. Briceño

Venezuela. Páramos, see *Ernstia* 4(3-4): 77-78, f. 2-4. 1994.

F. engleri Pilg. (*Pseudobromus engleri* (Pilg.) Clayton)

Kenya to Malawi. Lemmas scaberulous, ovary apex hairy, similar to *Festuca mekiste* W.D. Clayton, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 85. 1907, *Kew Bulletin* 23: 293. 1969.

F. eriopoda Vickery (*Austrofestuca eriopoda* (Vickery) S.W.L. Jacobs; *Festucella eriopoda* (Vickery) E.B. Alexeev)

Australia, New South Wales, Victoria. Perennial, slender and erect, greenish, forming dense tussocks, leaves rough

and linear, panicle slender and open, decorative, moist soils, forage grass, see *Contributions from the New South Wales National Herbarium* 1: 10. 1939 and *Telopea* 3(4): 602. 1990.

in English: lanky fescue, snow fescue

F. eriostoma Hack. (*Festuca orthophylla* var. *eriostoma* (Hack.) St.-Yves)

Argentina. Similar to *Festuca orthophylla*, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 717. 1898 and *Österreichische Botanische Zeitschrift* 53: 32. 1903, *Candollea* 3: 195. 1927, *Bot. Zhurn.* 69: 348. 1984.

F. eskia Ramond ex DC. (*Festuca eskia* Lej.; *Festuca varia* Haenke subsp. *eskia* (Ramond ex DC.) Hack.; *Schedonorus eskia* (Ramond ex DC.) P. Beauv.)

Europe, Pyrénées, France, Spain. A calcifuge species, dense carpeting habit, stems flimsy, creeping rhizomes, leaves filiform and stiff, blades acute to pungent, pendent and ovoid panicles, spikelets narrowly ovate, lemmas acute and mucronate, useful for erosion control, rock garden, see *Essai d'une Nouvelle Agrostographie* 177. 1812 and *Botanical Journal of the Linnean Society* 146: 331-337. 2004.

F. extremiorientalis Ohwi (*Festuca subulata* subsp. *japonica* (Hack.) T. Koyama & Kawano; *Festuca subulata* var. *japonica* Hack.)

Asia, China, Japan, Siberia, Russia. Useful for erosion control, see *Bulletin de l'Herbier Boissier* 7(9): 713. 1899 and *Botanical Magazine* (Tokyo) 45: 194. 1931.

F. fiebrigii Pilg. (*Festuca procera* Kunth)

Bolivia. Caespitose, erect, pungent leaf blades filiform and involute, lax panicle oblong, lax spikelets elliptic, 4-8-flowered, glumes lanceolate or subulate, lemmas lanceolate, paleas scabrous, ovary glabrous, see *Nova Genera et Species Plantarum* (quarto ed.) 1: 154. 1815 [1816] and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 510. 1906.

F. filiformis Pourret (*Festuca capillata* Lam.; *Festuca filiformis* C. Sm. ex Link, nom. illeg., non *Festuca filiformis* Pourret; *Festuca filiformis* Lam., nom. illeg., non *Festuca filiformis* Pourret; *Festuca filiformis* Steud., nom. illeg., non *Festuca filiformis* Pourret; *Festuca ovina* subsp. *capillata* (Lam.) Kozłowska; *Festuca ovina* subsp. *tenuifolia* (Sibth.) Celak.; *Festuca ovina* var. *capillata* (Lam.) Alef., nom. illeg., non *Festuca ovina* var. *capillata* (Lam.) Mathieu; *Festuca ovina* var. *capillata* (Lam.) Mathieu; *Festuca ovina* var. *capillata* (Lam.) Hack., nom. illeg., non *Festuca ovina* var. *capillata* (Lam.) Mathieu; *Festuca ovina* var. *capillata* (Lam.) Mathieu, based on *Festuca capillata* Lam., nom. illeg.; *Festuca ovina* var. *tenuifolia* (Sibth.) Roem. & Schult.; *Festuca ovina* var. *tenuifolia* (Sibthorp) Sm.; *Festuca ovina* var. *tenuifolia* (Sibth.) Duby; *Festuca ovina* var. *tenuifolia* (Sibth.) Mert. & W.D.J. Koch; *Festuca ovina* var. *tenuifolia*

(Sibth.) Mert. ex W.D.J. Koch; *Festuca tenuifolia* Sibth.; *Poa capillata* Mérat)

Europe. Densely tufted or shortly stoloniferous, glaucous or waxy blue, erect, scabrid leaves, conspicuous and persisting sheaths glabrous or densely hairy, auricles present, ligules ciliate, panicle very narrow, spikelets overlapping, glumes unequal, lemma awnless or mucronate, palea apex narrow and bifid, lodicules entire or lobed, ovary apex glabrous, ornamental lawn grass, ground cover, found in dry fields, scrubs, riverbeds, see *Species Plantarum* 1: 73-74. 1753, *Mém. Acad. Roy. Sci. Toulouse* 3: 319. 1788, *Flora Oxoniensis* 44. 1794, *Flore des Environs de Paris* 38. 1812, *Systema Vegetabilium* 2(2): 714. 1817, *Synopsis Plantarum Glumacearum* 1: 302. 1854, *Monographia Festucarum Europearum* 85. 1882 and *Bull. Soc. Bot. France* 125: 117. 1978, *Bot. J. Linn. Soc.* 106: 347-397. 1991, *Taxon* 42: 413. 1993

in English: hair fescue, fine-leaved sheep fescue, fine-leaf sheep fescue, sheep fescue, slender fescue

F. fimbriata Nees (*Festuca ampliflora* Döll)

Central and southern Brazil. Lemmas awnless, found in swampy places, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 472-473. 1829, *Flora Brasiliensis* 2(3): 116, pl. 34. 1878 and *Bot. Zhurn. (Moscow & Leningrad)* 69: 348. 1984, *Parodiana* 7: 91-99. 1992.

F. flacca Hack. ex E.B. Alexeev (*Festuca flacca* Hack. ex Sodiro; *Festuca subulata* var. *fraseriana* St.-Yves)

Ecuador. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(2): 173. 1832, *Anales de la Universidad Central del Ecuador* 3(25): 483. 1889 and *Candollea* 3: 451. 1928, *Bot. Zhurn. (Moscow & Leningrad)* 69(11): 1543. 1984.

F. fragilis (Luce) B. Briceño (*Festuca fragilis* Luce; *Helleria fragilis* Luce; *Hellerochloa fragilis* (Luce) Rauschert)

South America. See *Journal of the Washington Academy of Sciences* 32(6): 157, f. 1. 1942, *Taxon* 31(3): 561. 1982, *Ernstia* 4(3-4): 78-79, f. 1a. 1994.

F. frederikseniae E.B. Alexeev (*Festuca duriuscula* var. *hirsuta* Lange, nom. illeg., non *Festuca duriuscula* var. *hirsuta* (Host) Gaudin; *Festuca ovina* var. *hirsuta* Lange, nom. illeg., non *Festuca ovina* var. *hirsuta* Link; *Festuca vivipara* (L.) Sm.; *Festuca vivipara* subsp. *hirsuta* Frederiksen; *Festuca vivipara* subsp. *hirsuta* (Schol.) Fred.; *Festuca vivipara* var. *hirsuta* Schol.)

North America, Canada, Europe, Greenland. Densely tufted, glaucous or greenish blue, erect, conspicuous and persisting sheaths glabrescent or hairy, auricles present, ligules ciliate, vegetatively proliferating inflorescences, glumes unequal, ovary apex glabrous, pioneer grass, arctic or cold coastal habitats, see *Species Plantarum* 1: 73-74.

1753, *Flora Britannica* 1: 114. 1800, *Conspectus Florae Groenlandicae* 1: 179-180. 1880 and *Nordic J. Bot.* 1(3): 287-288. 1981.

F. frigida (Hack.) K. Richt. (*Festuca buschiana* (St.-Yves) Tzvelev; *Festuca frigida* Hack.; *Festuca frigida* (Hackel) Grossh.; *Festuca rubra* subsp. *buschiana* St.-Yves)

Spain. Rare species, see *Botanisches Centralblatt* 8: 406. 1881.

F. gautieri (Hackel) K. Richt. (*Festuca crinum-ursi* hort., non Rum.; *Festuca gautieri* subsp. *scoparia* (Kerner & Hackel) Kerguelen; *Festuca scoparia* A. Kerner ex Nyman non Hook.f.; *Festuca varia* subsp. *scoparia* Kerner & Hackel; *Festuca varia* var. *gautieri* Hack.)

Europe, northeastern Spain, southwestern France. Leaves pungent and curved, dense panicle, spikelets yellow-green, upper glume ovate-lanceolate and short-acuminate, lemma lanceolate and acuminate, mucronate or unawned, see *Plantae Europaeae* 1: 105. 1890 and *Lejeunia* 110: 58. 1983, *Botanical Journal of the Linnean Society* 146: 331-337. 2004.

F. gigantea (L.) Vill. (*Bromus giganteus* L.; *Festuca bonasorum* Bornm.; *Festuca gigantea* Krock.; *Festuca pseudogigantea* Ovcz. & Shibkova; *Forasaccus giganteus* (L.) Bubani; *Lolium giganteum* (L.) Darbyshire; *Schedonorus giganteus* (L.) Holub; *Trisetum flaccidum* (Hack. ex Hook.f.) R.R. Stewart; *Zerna gigantea* (L.) Panz. ex B.D. Jacks.)

Europe, West and Central Asia, North Africa, India, Himachal Pradesh, Jammu and Kashmir, Meghalaya, Uttar Pradesh, Bhutan, Nepal. Perennial bunchgrass, stems tufted, erect, bright green to deep green, sheaths open, auricles present, ligules very short and without cilia, leaves glabrous and linear, blades flat and acute, loose and nodding panicles lanceolate to ovate, glumes unequal, lemmas awned, awn bent, ovary apex glabrous, fodder, tolerant of shade, dry sites or wet soils, see *Species Plantarum* 1: 77. 1753, *Index Kewensis* 2: 1249. 1895, *The Flora of British India* 7: 280. 1896 and *Brittonia* 5: 431. 1945, *Novon* 3: 241. 1993, *Phytologia* 83: 86. 1997, *Preslia* 70: 113. 1998, *Bot. Zhurn. (Moscow & Leningrad)* 84: 114. 1999, *Taxon* 49(2): 248. 2000.

in English: giant fescue

F. gilbertiana E.B. Alexeev ex S.M. Phillips

Ethiopia. Perennial, erect, densely tussocky, wiry, leaf blades smooth and filiform, panicle few-spiculate and racemose, spikelets narrowly oblong, 3- to 4-flowered, glumes unequal and acute, lemmas narrowly lanceolate-oblong awned, ovary apex hairy, montane grassland, see *Nordic Journal of Botany* 14(6): 649, f. 1. 1994, *Flora of Ethiopia* 7: 27. 1995.

F. glabrata Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 16: 30, t. 6A. 1972.

F. glacialis Miégev.

Europe, Pyrénées, Alps. Dense tussocks, stems flimsy, old leaf sheaths at the base, gray-green leaves filiform and obtuse, narrow and branched panicles, spikelets solitary, lemmas acute not awned or mucronate, see *Bulletin de la Société Botanique de France* 21: 9. 1874.

F. glauca Vill. (*Festuca arvensis* Augier, Kerguelen & Markgr.; *Festuca cinerea* var. *glauca* Stohr; *Festuca glauca* auct.; *Festuca glauca* Plan. ex Willk. & Lange, nom. illeg., non *Festuca glauca* Vill.; *Festuca glauca* Lam., nom. illeg., non *Festuca glauca* Vill.; *Festuca glaucantha* (Hack.) Blocki; *Festuca ovina* proles. *glauca* (Vill.) Douin; *Festuca ovina* subsp. *glauca* (Lam.) Hack. ex Hegi; *Festuca ovina* subvar. *glauca* (Lam.) G. Mey., nom. illeg., non *Festuca ovina* var. *glauca* Fries; *Festuca ovina* L. var. *glauca* (Vill.) Hackel; *Festuca ovina* var. *glauca* (Lam.) Kozłowska, nom. illeg., non *Festuca ovina* var. *glauca* Fries; *Festuca ovina* var. *glauca* (Vill.) W.D.J. Koch, nom. illeg., non *Festuca ovina* var. *glauca* Fries)

Europe, France. Perennial, stems upright and flimsy, densely tufted, blue-green leaves glabrous and glaucous, rigid blades filiform and obtuse, erect and obovate panicles, spikelets elliptic to oblong, lemmas with a short spine at apex, awn bent, ornamental, cultivated, often confused with *Festuca cinerea* Vill., see *Species Plantarum* 1: 73-74. 1753, *Encyclopédie Méthodique, Botanique* 2: 459. 1788, *Synopsis Florae Germanicae et Helveticae* 812. 1837, *Prodromus Florae Hispanicae* 1: 95. 1861, *Botanisches Centralblatt* 8: 405. 1881, *Österreichische Botanische Zeitschrift* 39: 155. 1889 and *Lejeunia*, n.s., 89: 1-92. 1977, *Bot. J. Linn. Soc.* 106: 390-393. 1991.

in English: blue fescue, grey fescue, gray fescue

F. glumosa Hack. ex E.B. Alexeev (*Festuca glumosa* Hack. ex Sodiro; *Festuca ovina* subvar. *jamesonii* St.-Yves)

Ecuador, Andes. See *Anales de la Universidad Central del Ecuador* 3(25): 483. 1889 and *Candollea* 3: 166. 1927, *Bot. Zhurn. (Moscow & Leningrad)* 69(11): 1549. 1984.

F. glyceriantha Pilg. (*Festuca scirpifolia* subsp. *glyceriantha* (Pilg.) St.-Yves)

Peru. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 403. 1833 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 516. 1906, *Candollea* 3: 231. 1927.

F. gracilior (Hack.) Markgr.-Dann. (*Festuca ovina* L. subsp. *ovina* var. *duriuscula* Hack. subvar. *gracilior* Hack.; *Festuca ovina* subvar. *gracilior* Hack.)

Europe. See *Monographia Festucarum Europearum* 90. 1882 and *Botanical Journal of the Linnean Society* 76(4): 325. 1978.

F. gracillima Hook.f. (*Festuca gracillima* var. *brevifolia* Spag.; *Festuca gracillima* var. *genuina* St.-Yves)

Argentina, Antarctic, Chile. Perennial, found in openings in a forested plain, sandy loam soil, see *Fl. Antarct.* 2: 383. 1847, *Anales del Museo Nacional de Buenos Aires* 5: 95. 1896 and *Candollea* 3: 175. 1927.

F. gracillima Hook.f. var. ***glacialis*** Rúgolo & Nicora

Argentina, Antarctic. See *Anales del Instituto de la Patagonia: Serie Ciencias Naturales, Punta Arenas (Chile)* 9: 141-144. 1978, *Boletín de la Sociedad Argentina de Botánica* 25: 464. 1988.

F. gracillima Hook.f. var. ***gracillima***

Argentina, Antarctic.

F. grandiaristata Markgr.-Dann.

Greece. Rare species, see *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 56(217): 101. 1976.

F. groenlandica (Schol.) Frederiksen (*Festuca brachyphylla* var. *groenlandica* Schol.)

North America, Greenland. Densely tufted, green to glaucous, sheaths scabrous and open, auricles present, green to purple lanceolate inflorescence, very dense panicle, ovary apex glabrous, see *Mantissa* 3 (Add. 1): 646. 1827 and *Skrifter om Svalbard og Nordishavet* 62: 72. 1934, *Nordic Journal of Botany* 2(6): 533. 1983.

F. guestphalica Boenn. ex Reichb. (*Festuca guestfalica* Boenn. ex Reichb.; *Festuca guestphalica* Schur; *Festuca lemanii* auct., non Bastard; *Festuca ovina* L.; *Festuca ovina* subsp. *guestphalica* (Boenn. ex Reichb.) K. Richt.; *Festuca ovina* L. subsp. *ovina* var. *formula* (Hack.) Hegi; *Festuca ovina* subvar. *guestfalica* (Boenn. ex Reichb.) Hack.)

Europe. See *Species Plantarum* 1: 73-74. 1753, *Enumeratio Plantarum Transsilvaniae* 790. 1866, *Monographia Festucarum Europearum* 87. 1882, *Plantae Europaeae* 1: 93. 1890 and *Watsonia* 16: 300. 1987, *Bot. J. Linn. Soc.* 106: 366. 1991.

F. halleri All. (*Festuca halleri* Pucc. ex Parl., nom. illeg., non *Festuca halleri* All.; *Festuca hallerioides* Schur) (after the Swiss scientist (Victor) Albrecht von Haller, 1708-1777 (d. Bern), physician, M.D. 1727, botanist, poet, experimental physiologist, naturalist, studied medicine at Tübingen, studied botany and anatomy under Johann Georg Duvernoy (1692-1759), studied anatomy and surgery with Bernhard Siegfried Albinus, founded the Göttingen University herbarium, edited *Disputationes chirurgicae selectae*. Lausanne 1755-56, compiled bibliographies, conducted a monthly journal, his writings include *Bibliotheca botanica*. Tiguri [Zürich] 1771-1772, *Elementa physiologiae corporis humani*. [8 volumes.] Lausanne, Berne 1757-1766, *Hermannii Boerhaave Praelectiones academicae in proprias institutiones rei medicae edidit*. Göttingen 1739-1744, *Icones anatomicae*. Göttingen 1743-1754, *Deux mémoires sur le mouvement du sang*. [Transl. by Tissot, reviewed by

Haller, from papers contributed to the *Commentarii Societatis Regiae Scientiarum Gottingensis*. vols. IV (1754) and VI (1756)] Lausanne et Paris 1756, *Deux mémoires sur la formation des os*, fondés sur des expériences. [First edition] Lausanne 1758, *Primae lineae physiologiae in usum praelectionum academicarum*. [Second enlarged edition, a summary of Haller's lectures] Göttingen 1751 and *Historia stirpium indigenarum Helvetiae inchoata*. Bern 1768. See Susanna Lundsgaard-Hansen-von Fischer, in *Berner Beiträge zur Geschichte der Medizin und der Naturwissenschaften*. no. 18. 1959; Erich Hintzsche, in *D.S.B.* 6: 61-67. 1981; Garrison and Morton, *Medical Bibliography*. 397, 438, 585, 587-588. New York 1961; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 121-122. Palermo 1988; Heinrich Bernard Ruppis (1688-1719), *Flora jenensis*. edition 3. Jenae 1745; J.C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. 5: 266-267. London 1796-1800; J.H. Barnhart, *Biographical notes upon botanists*. 2: 115. 1965; Richard Eimas, compiler and editor, *Heirs of Hippocrates*. The Development of Medicine in a Catalogue of Historic Books in the Hardin Library for the Health Sciences, the University of Iowa. 3rd edition. Univ. of Iowa Press, Iowa City 1990; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 415. Ansbach 1852; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 176. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. Oxford 1975; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Stafleu and Cowan, *Taxonomic literature*. 2: 24-29. 1979; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 160. 1972; Alexander B. Adams, *Eternal Quest: The Story of the Great Naturalists*. New York 1969)

Europe. See *Flora Pedemontana* 2: 253. 1785, *Giornale Botanico Italiano* 1: 121. 1844, *Enumeratio Plantarum Transsilvaniae* 790. 1866.

F. halleri All. subsp. **halleri** (*Festuca decipiens* Clairv.)

Europe.

F. halleri All. subsp. **halleri** var. **bicknellii** (St.-Yves) Markgr.-Dann.

Europe.

F. halleri All. subsp. **scardica** (Griseb.) Markgr.-Dann. (*Festuca ovina* L. subsp. *ovina* var. *scardica* Griseb.; *Festuca ovina* var. *scardica* Griseb.)

Europe. See *Botanical Journal of the Linnean Society* 76(4): 327. 1978.

F. hallii (Vasey) Piper (*Dalucum hallii* (Vasey) Lunell; *Festuca altaica* subsp. *hallii* (Vasey) Harms; *Festuca altaica*

subsp. *eu-altaica* var. *genuina* subvar. *hallii* (Vasey) St.-Yves; *Festuca altaica* Trin. subsp. *hallii* (Vasey) Harms; *Festuca altaica* subvar. *hallii* (Vasey) St.-Yves; *Festuca confinis* subsp. *rabiosa* Piper; *Festuca kingii* var. *rabiosa* (Piper) Hitchc.; *Festuca scabrella* Torr.; *Festuca scabrella* subsp. *hallii* (Vasey) W.A. Weber; *Hesperochloa kingii* var. *rabiosa* (Piper) Swallen; *Melica hallii* Vasey) (probably named after Elihu Hall, 1822-1882)

North America, northwestern and northcentral U.S., Canada. Densely tufted, bluish, sometimes rhizomatous, erect, sheaths glabrous and open, auricles present, ligules ciliate, glumes subequal with ciliate margins, ovary apex pubescent, common on dry habitats, prairies, see *Flora Boreali-Americana* 2: 252, t. 233. 1840, *Botanical Gazette* 6: 296. 1881, *Bulletin of the Torrey Botanical Club* 11: 126. 1884, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 36. 1897 and *Contributions from the United States National Herbarium* 10: 31, 41. 1906, *American Midland Naturalist* 4: 221. 1915, *Candollea* 2: 271. 1925, *American Journal of Botany* 21(3): 128. 1934, *Proceedings of the Biological Society of Washington* 54: 45. 1941, *University of Colorado Studies: Series in Biology* 7: 8. 1961, *Madroño* 32(1): 9. 1985.

in English: plains rough fescue, Hall's fescue

F. hatico Stancik

Colombia. See *Darwiniana* 41(1-4): 119-120, f. 121-p. 2003.

F. hawaiiensis A.S. Hitchc.

U.S., Hawaii, Pacific. Perennial, vulnerable species, found in rich soil, moist areas, wooded hills, see *Memoirs of the Bernice Pauahi Bishop Museum* 8(3): 115, f. 4. 1922.

in English: Hawaiian fescue, Hawaii fescue

F. henriquesii Hack. (*Festuca henriquezii* Hack.)

Portugal. Endangered species, see *Botanisches Centralblatt* 8: 406. 1881, *Monographia Festucarum Europearum* 126. 1882.

F. hephaestophila Nees ex Steud. (*Festuca tolucensis* var. *hephaestophila* (Nees ex Steud.) Nees ex Hook.)

Guatemala. See *Nova Genera et Species Plantarum (quarto ed.)* 1: 153. 1815 [1816], *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 105. 1850, *Synopsis Plantarum Glumacearum* 1: 310. 1854.

F. herrerae Davidse

Costa Rica. Páramos, see *Novon* 2(4): 322, f. 1A-D. 1992.

F. hervieri Patzke (*Festuca dura* Host; *Festuca hervieri* (St.-Yves) Patzke; *Festuca hervieri* subsp. *costei* (St.-Yves) O. Bolòs, Masalles & Vigo; *Festuca ovina* var. *gallica* (Hack.) St.-Yves ex Litard.; *Festuca ovina* L. subsp. *laevis* Hack. var. *gallica* Hack. ex St.-Yves subvar. *gallica*; *Festuca ovina* L. subsp. *sulcata* Hack. var. *gallica* Hack. ex St.-Yves; *Festuca ovina* L. subsp. *laevis* Hack. var. *gallica* Hack. ex

St.-Yves; *Festuca ovina* L. subsp. *laevis* Hack. var. *marginata* Hack.; *Festuca ovina* subvar. *hervieri* St.-Yves)

Europe, France. See *Bulletin de la Société Botanique de Belgique* 55: 106, f. 2. 1923, *Decheniana* 114: 213. Bonn 1962, *Cahiers Naturalistes* 38: 5. 1982.

F. heteromalla Pourret (*Festuca diffusa* Dumort.; *Festuca fallax* Thuill.; *Festuca multiflora* Hoffmann; *Festuca rubra* L. subsp. *fallax* (Thuill.) Nyman; *Festuca rubra* L. var. *multiflora* (Hoffmann) Aschers. & Graebn.)

Europe. Perennial, occurs in damp soils, along roadsides, disturbed sites, see *Mémoires de l'Académie des Sciences, Inscriptions et Belles-Lettres de Toulouse* 3: 319. 1788, *Flore des Environs de Paris* (edition 2) 1: 50. 1799, *Consp. Fl. Eur.* 827. 1882.

in English: varioushair fescue

F. heterophylla Lam. (*Festuca duriuscula* var. *heterophylla* (Lam.) St.-Amans; *Festuca heterophylla* Haenke ex Jacq., nom. illeg., non *Festuca heterophylla* Lam.; *Festuca heterophylla* Vill., nom. illeg., non *Festuca heterophylla* Lam.; *Festuca heterophylla* Wahlenb.; *Festuca rubra* subsp. *heterophylla* (Lam.) Hack.; *Festuca rubra* var. *heterophylla* (Lam.) Mutel)

Turkey, Eurasia, Europe. Perennial, ornamental naturalized elsewhere, found in forests, see *Species Plantarum* 1: 74. 1753, *Monographia Festucarum Europearum* 130. 1882.

in English: shade fescue, variousleaf fescue, various-leaf fescue

F. hieronymi Hack. (*Festuca erecta* var. *mutica* Griseb.; *Festuca hieronymi* subvar. *typica* St.-Yves)

Argentina, Bolivia. Caespitose, leaf blades acuminate and convolute, lax panicle ovate-oblong with scabrous branches, spikelets lanceolate and glabrous, 4-7-flowered, glumes linear-lanceolate, lemmas lanceolate mucicous or mucronate, palea keels scabrous, ovary glabrous, dry stony places, see *Flore des Iles Malouines* 4: 31. 1825, *Abhandlungen der Königlich-Gesellschaft der Wissenschaften zu Göttingen* 19: 202. 1874 and *Österreichische Botanische Zeitschrift* 53: 33. 1903, *Candollea* 3: 252. 1927, *Bot. Zhurn. (Moscow & Leningrad)* 69: 351. 1984.

F. hieronymi Hack. var. ***expansa*** (St.-Yves) Türpe (*Festuca hieronymi* f. *panicula expansa* Hack.; *Festuca hieronymi* subvar. *expansa* St.-Yves)

Argentina. See *Anales del Museo Nacional de Buenos Aires* (ser. 3) 6: 523. 1906, *Candollea* 3: 254. 1927, *Darwiniana* 15: 242. 1969.

F. hieronymi Hack. var. ***hieronymi***

Argentina.

F. hintoniana E.B. Alexeev

Mexico. See *Bot. Zhurn. (Moscow & Leningrad)* 67: 1292. 1982.

F. holubii Stancik

Ecuador. Moist páramos, see *Folia Geobotanica et Phytotaxonomica* 39(1): 102-103, f. 1, 6-10. 2004.

F. horridula Pilg. (*Festuca dolichophylla* J. Presl)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 258. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 514. 1906.

F. howellii Hack. ex Beal (*Festuca elmeri* Scribn. & Merr.; *Festuca viridula* var. *howellii* (Hack. ex Beal) St.-Yves)

North America, U.S. See *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 93. 1893, *Grasses of North America for Farmers and Students* 2: 591. 1896 and *Bulletin of the Torrey Botanical Club* 29(7): 468. 1902, *Candollea* 2: 266. 1925.

F. huamachucensis Infantes

Peru. See *Revista de Ciencias [Lima]* 54: 107. 1952.

F. humbertii Litard. & Maire (for the French botanist Henri Humbert, 1887-1967, botanical traveler, explorer of Madagascar)

Morocco. Rare species, see *Mémoires de la Société des Sciences Naturelles du Maroc* 15: 56. Rabat 1927.

F. humilior Nees & Meyen

Peru, Bolivia, Argentina. Caespitose, leaves basal, lax panicle linear, spikelets elliptic-oblong, 3-6-flowered, glumes lanceolate acuminate, lemmas lanceolate acuminate, palea scabrous or ciliolate, moist places, see *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19 (Suppl. 1): 35. 1841.

F. hyperborea Holmen ex Frederiksen (*Festuca brachyphylla* sensu Schol., non Schult. & Schult.f.; *Festuca hyperborea* Holmen)

Greenland, Canada. Densely tufted, low, erect, green to purple to pinkish tinged, leaves mostly in a basal tuft, sheaths glabrous and entire, dead sheaths accumulating under leaves of the growing plant, auricles present or absent, ligules ciliate and membranous, flag leaf blades short and spoon-shaped, spikelets pedicellate, glumes unequal, ovary apex glabrous, found in imperfectly drained moist areas, see *Botaniska Notiser* 130(3): 273. Lund 1977.

F. hypsophila Phil. (*Festuca deserticola* var. *hypsophila* (Phil.) St.-Yves)

Bolivia, Chile. Caespitose, erect, robust, ligule densely ciliate, leaves pointed, linear panicle with pubescent branches, spikelets elliptic, 3- to 4-flowered, glumes lanceolate with margins ciliate, lemmas lanceolate, palea keels pubescent, ovary glabrous, see *Florula Atacamensis seu Enumeratio* ... 56. 1860, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 89. 1891 and *Candollea* 3: 210. 1927

F. hystrix Boiss. (*Festuca duriuscula* var. *hystrix* (Boiss.) Boiss.; *Festuca indigesta* var. *hystrix* (Boiss.) Willk. ex Willk. & Lange)

Europe, Spain. See *Elenchus Plantarum Novarum* 89. 1838, *Prodromus Florae Hispanicae* 1: 94. 1861.

F. idahoensis Elmer (*Festuca amethystina* subvar. *idahoensis* (Elmer) St.-Yves; *Festuca amethystina* subvar. *robusta* St.-Yves; *Festuca idahoensis* var. *idahoensis*; *Festuca idahoensis* Elmer var. *oregona* (Hack. ex Beal) C.L. Hitchc.; *Festuca idahoensis* var. *roemerii* Pavlick; *Festuca ingrata* (Hack. ex Beal) Rydb.; *Festuca ingrata* var. *ingrata*; *Festuca ingrata* var. *nudata* Vasey ex Rydb.; *Festuca occidentalis* Hook. var. *ingrata* (Hack. ex Beal) B. Boivin; *Festuca occidentalis* Hook. var. *oregona* (Hack. ex Beal) Boivin; *Festuca ovina* L. var. *columbiana* Beal; *Festuca ovina* L. var. *ingrata* Hack. ex Beal; *Festuca ovina* L. var. *oregona* Hack. ex Beal; *Festuca roemerii* (Pavlick) E.B. Alexeev)

North America, western U.S., Canada. Perennial bunchgrass, long-lived, bluish or yellowish green, small, erect, strongly caespitose, vigorous, densely tufted in large bunches, strong root system, internodes smooth, dead sheaths remain at the base, ligule with fringed margin, sheaths firm and entire, leaves smooth and mostly basal, flower head with erect to slightly diverging branches, awned seeds, drought-tolerant, poor tolerance to salinity, suitable for seeding on rangelands and for rehabilitation of disturbed sites, forage, palatable while green, ground cover, found on rocky soil, along roadsides, in mesic grasslands, dry and rocky slopes, in meadows, on well-drained loams, on well-drained loamy to sandy soils, in dry sandy soil in open sun, coastal prairies and annual grasslands, sagebrush, forest, plains grasslands, in both disturbed and undisturbed sites, sometimes confused with *Festuca occidentalis* Hook., very similar to *Festuca saximontana* Rydb., see *Species Plantarum* 1: 73-74. 1753, *Flora Boreali-Americana* 2: 249. 1840, *Grasses of North America for Farmers and Students* 2: 598-599. 1896 and *Botanical Gazette* 36: 53. 1903, *Bulletin of the Torrey Botanical Club* 32(11): 608. 1905, *Bulletin Colorado Agricultural College, Colorado Experiment Station* 100: 50. 1906, *Candollea* 2: 260, 264. 1925, *Le Naturaliste Canadien* 94(4): 524. 1967, *Vascular Plants of the Pacific Northwest* 1: 577. 1969, *Phytologia* 43(1): 105. 1979, *Canadian Journal of Botany* 61(1): 350. 1983.

in English: Idaho fescue, blue bunchgrass, bluebunch fescue, blue fescue

F. idahoensis Elmer subsp. *idahoensis* (*Festuca amethystina* var. *asperrima* subvar. *idahoensis* (Elmer) St.-Yves; *Festuca amethystina* var. *asperrima* subvar. *robusta* St.-Yves, pro parte; *Festuca idahoensis* var. *oregona* (Hack. ex Beal) C.L. Hitchc.; *Festuca ingrata* (Hack. ex Beal) Rydb.; *Festuca ingrata* var. *nudata* Vasey ex Rydb.; *Festuca occidentalis* var. *ingrata* (Hack. ex Beal) B. Boivin; *Festuca ovina* subsp. *ingrata* (Hack. ex Beal) Piper; *Festuca ovina*

var. *columbiana* Beal; *Festuca ovina* var. *ingrata* Hack. ex Beal; *Festuca ovina* var. *oregona* Hack. ex Beal, non *Festuca oregona* Vasey)

North America, U.S., Canada. Perennial bunchgrass, densely tufted, yellowish green or glaucous, erect, sheaths conspicuous and persisting, ligules ciliate, glumes unequal, ovary apex glabrous, forage, palatable while green, ornamental, dry habitats, montane and subalpine zones, prairies, grasslands, open areas, see *Grasses N. Amer.* 2: 598. 1896 and *Botanical Gazette* 36: 53. 1903.

in English: Idaho fescue, blue bunchgrass

F. idahoensis subsp. *roemerii* (Pavlick) S.G. Aiken (*Festuca amethystina* var. *asperrima* subvar. *robusta* St.-Yves, p.p.; *Festuca idahoensis* var. *roemerii* Pavlick; *Festuca roemerii* (Pavlick) E.B. Alexeev)

North America, northwestern and southwestern U.S., Canada. Densely tufted, bluish green or glaucous, erect, sheaths conspicuous and persisting, ligules ciliate, glumes unequal, ovary apex glabrous, dry habitats, prairies, see *Botanical Gazette* 36: 53. 1903, *Canadian Journal of Botany* 61(1): 350. 1983, *Canadian Journal of Botany* 75(9): 1542. 1997.

F. ilgazensis Markgr.-Dann.

Turkey. Rare species, see *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 56(272): 115. 1976.

F. imbaburensis Stancik

Ecuador. See *Folia Geobotanica et Phytotaxonomica* 39(1): 100-102, f. 3, 1-5. 2004.

F. inarticulata Pilg. (*Festuca dolichophylla* J. Presl; *Festuca scirpifolia* var. *inarticulata* (Pilg.) St.-Yves)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 258. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 403. 1833 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 516. 1906, *Candollea* 3: 225. 1927.

F. indigesta Boiss. (*Festuca duriuscula* subsp. *indigesta* (Boiss.) P. Fourn.; *Festuca duriuscula* var. *indigesta* (Boiss.) Boiss.; *Festuca ovina* subsp. *indigesta* (Boiss.) Hack.)

Morocco, Europe, Spain. See *Species Plantarum* 1: 73-74. 1753, *Elenchus Plantarum Novarum* 91. 1838 and *Bot. J. Linn. Soc.* 106: 351. 1991.

F. indigesta Boiss. subsp. *alleizettei* (Litard.) Kerguélen (*Festuca ovina* var. *alleizettei* Litard.) (for Aymar Charles Alleizette (d'Aleizette), Paris 1884-1967)

Europe, foothills of C. Pyrénées. See *Species Plantarum* 1: 73-74. 1753 and *Lejeunia* 75: 158. 1975.

F. indigesta Boiss. subsp. *aragonensis* (Willk. ex Willk. & Lange) Kerguélen (*Festuca indigesta* subsp. *aragonensis* (Willk.) Kerguélen; *Festuca indigesta* var. *aragonensis* Willk. ex Willk. & Lange; *Festuca ovina* L. subsp. *duriuscula* auct. lusit. pro parte)

France, Spain. See *Species Plantarum* 1: 73-74. 1753, *Prodromus Florae Hispanicae* 1: 94. 1861 and *Lejeunia* 75: 158. 1975.

F. indigesta Boiss. subsp. ***hackeliana*** (St.-Yves) Markgr.-Dann. (*Festuca ovina* L. subsp. *duriuscula* auct. lusit. pro parte; *Festuca ovina* L. subsp. *indigesta* Hack. var. *hackeliana* St.-Yves; *Festuca ovina* var. *hackeliana* St.-Yves)

Spain. See *Species Plantarum* 1: 73-74. 1753, *Elenchus Plantarum Novarum* 91. 1838 and *Bulletin de la Société Botanique de France* 56: 356. 1909, *Candollea* 1: 6. 1922, *Botanical Journal of the Linnean Society* 76(4): 328. 1978, *Boletim da Sociedade Broteriana, ser. 2* 54: 97. 1980 [1981].

F. indigesta Boiss. subsp. ***indigesta*** (*Festuca ovina* L. subsp. *indigesta* Hack.; *Festuca ovina* L. subsp. *indigesta* Hack. var. *indigesta*)

Europe, Spain. See *Species Plantarum* 1: 73-74. 1753, *Elenchus Plantarum Novarum* 91. 1838 and *Bot. J. Linn. Soc.* 106: 351. 1991.

F. indigesta Boiss. subsp. ***litardierei*** (St.-Yves) Kerguélen (*Festuca ovina* var. *litardierei* St.-Yves)

Europe, Italy. See *Species Plantarum* 1: 73-74. 1753, *Elenchus Plantarum Novarum* 91. 1838 and *Lejeunia* 75: 159. 1975.

F. indigesta Boiss. subsp. ***molineri*** (Litard.) Kerguélen (*Festuca ovina* var. *molineri* Litard.)

France, Spain. See *Species Plantarum* 1: 73-74. 1753, *Elenchus Plantarum Novarum* 91. 1838 and *Lejeunia* 75: 159. 1975.

F. intercedens (Hack.) Lüdi ex Bech. (*Festuca ovina* L. subsp. *ovina* var. *intercedens* Hack.; *Festuca alpina* var. *intercedens* Hack.)

Europe. See *Species Plantarum* 1: 73-74. 1753 and *Berichte der Schweizerischen Botanischen Gesellschaft* 50: 388. 1940.

F. jaliscana E.B. Alexeev

Mexico. See *Bot. Zhurn. (Moscow & Leningrad)* 66: 1493. 1981.

F. jeanpertii (St.-Yves) Markgr. (*Festuca ovina* L. subsp. *laevis* Hack. var. *gallica* Hack. ex St.-Yves subvar. *heldreichii* Hack.; *Festuca ovina* var. *jeanpertii* St.-Yves)

Europe. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 276. 1932.

F. jeanpertii (St.-Yves) Markgr. subsp. ***campana*** (N.Terracc.) Markgr.-Dann. (*Festuca campana* N. Terracc.; *Festuca ovina* L. subsp. *ovina* var. *duriuscula* Hack. subvar. *campana* De Not.)

Europe. See *Botanical Journal of the Linnean Society* 76(4): 325. 1978.

F. juncifolia St.-Amans (*Festuca dumetorum* L.; *Festuca juncifolia* Chaub.; *Festuca rubra* L. subsp. *dumetorum* Hack.; *Festuca rubra* subsp. *juncifolia* (St.-Amans) Litard.; *Festuca rubra* var. *dumetorum* (L.) Gaudin; *Festuca sabulicola* Dufour)

Europe. See *Flora Agenaise* 40, t. 5. 1821, *Flore de France ... Prospectus* 3: 575. 1855, *Botanisches Centralblatt* 8: 406. 1881 and *List of British Plants*, edition 2 132. 1928, *Lejeunia* 57: 16. 1971, *Watsonia* 15: 38-39. 1984.

F. karatavica (Bunge) B. Fedtsch. (*Leucopoa karatavica* (Bunge) V.I. Krecz. & Bobrov; *Poa karatavica* Bunge)

Asia temperate. See *Flora URSS* 2: 496. 1934.

F. kashmiriana Stapf (*Festuca duriuscula* Duthie, nom. illeg., non *Festuca duriuscula* L.; *Festuca kashmiriana* auct. p.p.; *Festuca kashmiriana* var. *ligulata* Stapf; *Festuca rubra* subsp. *kashmiriana* (Stapf) St.-Yves)

Asia, India. See *Species Plantarum* 1: 74. 1753, *The Flora of British India* 7: 351. 1896 and *Candollea* 3: 395. 1928. in English: dog fescue

F. killickii Kenn.-O'Byrne (see A.P. Backer, D.J.B. Killick and D. Edwards, *A Plant Ecological Bibliography and Thesaurus for Southern Africa up to 1975*. Memoirs of the Botanical Survey of South Africa. No. 52. 1986; Bernard De Winter (b. 1924), M. De Winter and Donald Joseph Boomer Killick, *Sixty-Six Transvaal Trees*. Pretoria 1966 and *Know Your Trees: A Selection of Indigenous South African Trees*. Cape Town 1973)

South Africa. Perennial, glabrous, erect, coarse, tufted, rhizomatous, leaves mostly basal, sheaths glabrous, leaf blades inrolled, inflorescence open pyramidal panicle, spikelets 4- to 6-flowered and pedicelled, lemmas acute or shortly awned, found in grassveld, subalpine, along streams, high altitudes, see *Kew Bulletin* 16: 461. 1963.

F. kingii (S. Watson) Cassidy (*Festuca confinis* Vasey; *Festuca kingii* (S. Watson) Scribn.; *Festuca watsoni* Nash; *Hesperochloa kingii* (S. Watson) Rydb.; *Leucopoa kingii* (S. Watson) W.A. Weber; *Poa kingii* S. Watson; *Wasatchia kingii* (S. Watson) M.E. Jones)

North America, northwestern and southwestern U.S. Perennial, dioecious, densely tufted, bluish green, erect, sheaths open and entire, auricles present or absent, ligule ciliate, leaf blades flat or plicate, separate female and male plants, glumes unequal or subequal, lemma awn absent, ovary apex pubescent, common on dry to moist grasslands, see *Synopsis Plantarum Glumacearum* 1: 316. 1854, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 387. 1871, *Bulletin of the Torrey Botanical Club* 11: 126. 1884, *Bulletin Colorado State University Experiment Station* 12: 36. 1890, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 36. 1897 and *Bulletin of the Torrey Botanical Club* 39(3): 106. 1912,

Contributions to Western Botany 14: 16. 1912, *University of Colorado Studies: Series in Biology* 23: 2. 1966.

in English: spike fescue

F. komarovii Krivot.

Mongolia, Siberia. On mountain brown soil.

F. korabensis (Jáv. ex Markgr.-Dann.) Markgr.-Dann. (*Festuca violacea* Schleich. ex Gaudin subsp. *violacea* var. *korabensis* Jáv. ex Markgr.-Dann.; *Festuca violacea* var. *korabensis* Jav. ex I. Markgraf-Dannenberg)

Europe. See *Botanical Journal of the Linnean Society* 76(4): 326. 1978.

F. kronenburgii Hack. (also spelled *kronenbergii* or *kranenburgii*)

Europe. See *Österreichische Botanische Zeitschrift* 11: 132. 1905.

F. kurtziana St.-Yves (*Festuca cabreræ* Parodi) (for the Argentine botanist Angel Lulio Cabrera, b. 1908, author of "Notes on the Brazilian Senecioneae." *Brittonia*. 7: 53-74. 1950; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 295. 1965) (dedicated to the German botanist Friz Kurtz, 1854-1920, Argentina/Córdoba 1884-1915 professor of botany. See Nikolai Michailovic Alboff (Albow, Albov) (1866-1897), "Contributions à la flore de la Terre de Feu. II. Énumération des plantes du canal de Beagle et de quelques autres endroits de la Terre de Feu. [Cyperaceae and Gramineae by F. Kurtz]" *Revista Mus. La Plata*. 7: 355-402. 1896; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J.H. Barnhart, *Biographical notes upon botanists*. 2: 329. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 223. 1972)

South America, Argentina. Leaves divergent and scabrous to rough, leaf sheaths reddish, found on sandy loam soil, on the edges of a stream, see *Candollea* 3: 201, f. 31. 1927, *Revista Argentina de Agronomía* 20: 200. 1953.

F. laegaardii Stancik

Ecuador. Margins of swamps, see *Folia Geobotanica et Phytotaxonomica* 39(1): 107-109, f. 4, 6-10. 2004.

F. laeteviridis Pilg. (*Festuca dolichophylla* J. Presl)

Bolivia. Ligule membranous, green leaves, leaf blades scabrous and pointed, panicles linear with branches pubescent, spikelets elliptic, 6- to 7-flowered, glumes lanceolate acute or attenuate, lemmas lanceolate acute and scabrous, palea keels scabrous, related to *Festuca boliviana*, see *Reliquiae Haenkeanae* 1(4-5): 258. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 508, 510. 1906, *Candollea* 3: 237, 239. 1927.

F. lahonderei Kerguelen & Plonka

France. Endangered species, see *Bulletin de la Société Botanique du Centre-Ouest, Nouvelle Série* 19: 18. 1988.

in French: féтуque de Lahondère

F. lanatifolia Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 16: 22, t.4A. 1972.

F. lanifera E.B. Alexeev

Bolivia. Caespitose, leaves mainly basal, leaf blades filiform and acute, linear panicles with branches pubescent, spikelets lanceolate, 4-flowered, glumes linear-lanceolate mucous, lemmas lanceolate mucronate, palea tip pubescent, ovary glabrous, see *Bot. Zhurn. (Moscow and Leningrad)* 70(9): 1246. 1985.

F. lapidosa Markgr.-Dann. (*Festuca lapidosa* (Degen) Markgr.-Dann.; *Festuca ovina* L. subsp. *ovina* var. *lapidosa* Degen)

Europe.

F. lasiorrhachis Pilg. (*Festuca dolichophylla* J. Presl; *Festuca laeteviridis* var. *lasiorrhachis* (Pilg.) St.-Yves)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 258. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 508, 510. 1906, *Candollea* 3: 239. 1927.

F. laxa Host (*Festuca laxa* Schleich. ex Steud., nom. illeg., non *Festuca laxa* Host)

Europe. See *Icones et Descriptiones Graminum Austriae* 2: 58, t. 80. 1802, *Nomenclator Botanicus. Editio secunda* 1: 630. 1840.

F. lazistanica Alexeev

Turkey. Rare species, see *Willdenowia* 11(2): 206. 1981.

F. lemanii T. Bastard (*Festuca duriuscula* auct.; *Festuca longifolia* auct. pro parte, non Thuill.; *Festuca ovina* f. *lemanii* (Bastard) Hack. ex Stohr; *Festuca ovina* f. *lemanii* (Bastard) Hack.; *Festuca ovina* subvar. *lemanii* (Bastard) Krajina; *Festuca ovina* var. *duriuscula* auct.; *Festuca trachyphylla* auct., non (Hack.) Krajina)

Europe, France. Perennial, in sandy places, arid areas, see *Monographia Festucarum Europearum* 87. 1882 and *Acta Botanica Bohemica* 9: 189, 193. 1955, *Watsonia* 17: 289-299. 1989, *Bot. J. Linn. Soc.* 106: 383. 1991.

in English: hard fescue

F. lenensis Drobow (*Festuca albifolia* var. *tschujensis* (Reverd.) Serg.; *Festuca albiflora* Reverd.; *Festuca auriculata* Drobow; *Festuca lenensis* subsp. *albiflora* (Reverd.) Tzvelev; *Festuca lenensis* var. *albifolia* (Reverd.) Tzvelev; *Festuca lenensis* var. *villosula* Kosh.; *Festuca ovina* subsp. *alaskana* Holmen, pro parte; *Festuca ovina* var. *alaskana* Holmen) (Lena River, Russia)

Russia, Mongolia, Siberia, North America, northwestern U.S., Alaska, Canada. Perennial, densely tufted, bluish green or glaucous, erect, sheaths conspicuous and persisting, auricles present, ligules ciliate, glumes unequal, ovary

apex glabrous, ground cover, dry habitats, prairies, mountain steppe, rocky sites, light brown soil, gravelly soil, see *Species Plantarum* 1: 73-74. 1753 and *Botaniska Notiser* 117(2): 114. 1964.

in English: tundra fescue

F. levingei Stapf

India, Jammu, Kashmir. Endangered species, see *The Flora of British India* 7: 352. 1897.

F. ligulata Swallen

North America, U.S., Texas, Mexico, Chisos Mountains, Big Bend National Park. Perennial, loosely tufted, a rhizomatous base, slender stems, rough leaves curving upward, palatable forage grass, endangered species, historical sites in Culverson County and the Guadalupe Mountains have been extirpated, see *Amer. J. Bot.* 19 (5): 436, f. 1. 1932.

in English: Guadalupe fescue

F. lilloi Hack. (*Festuca lilloi* var. *lilloi*; *Festuca setifolia* Steud. ex Griseb.; *Festuca setifolia* Steud. ex Lechler; *Festuca setifolia* var. *lilloi* (Hack.) St.-Yves; *Festuca tucumanica* E.B. Alexeev)

Argentina. See *Berberides Americae Australis* 56. 1857, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 203. 1874 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 300-301. 1914, *Candollea* 3: 217. 1927, *Darwiniana* 15: 231, f. 13. 1969, *Bot. Zhurn. (Moscow & Leningrad)* 69: 349. 1984.

F. litvinovii (Tzvelev) E.B. Alexeev (*Festuca pseudosulcata* subsp. *litvinovii* (Tzvelev) Tzvelev; *Festuca pseudosulcata* var. *litvinovii* Tzvelev)

China, Mongolia. Mountain grass, see *ovosti* Sist. Vyss. Rast. 13: 31. 1976.

F. livida (Kunth) Willd. ex Spreng. (*Bromus lividus* Kunth; *Festuca cacuminis* Hemsley ex Ball; *Festuca grandiflora* Steud., nom. illeg., non *Festuca grandiflora* Lam.; *Festuca livida* Schur, nom. illeg., non *Festuca livida* (Kunth) Willd. ex Spreng.; *Festuca livida* Willd.; *Festuca livida* (Kunth) Trin.; *Helleria livida* (Kunth) E. Fourn.; *Hellerochloa livida* (Kunth) Rauschert; *Schedonorus lividus* (Kunth) Roem. & Schult.)

Northern America, U.S., Texas, Mexico. Rare species, nodding inflorescence, see *Nova Genera et Species Plantarum* 1: 150. 1815 [1816], *Systema Vegetabilium* 2: 707. 1817, *Systema Vegetabilium, editio decima sexta* 1: 353. 1825, *Synopsis Plantarum Glumacearum* 1: 311. 1854, *Enumeratio Plantarum Transsylvanicae* 787. 1866, *Journal of the Linnean Society, Botany* 22: 62. 1885, *Mexicanas Plantas* 2: 129. 1886 and *Taxon* 31(3): 561. 1982.

F. liviensis (Verg.) Markgr.-Dann. (*Festuca ovina* subsp. *liviensis* (Verg.) O. Bolòs, Masalles & Vigo; *Festuca ovina* L. subsp. *ovina* var. *liviensis* Verg.; *Festuca ovina* var. *liviensis* Verg.)

Europe. See *Bulletin de la Société d'Histoire Naturelle de Toulouse* 57: 180, f. 1. 1928, *Botanical Journal of the Linnean Society* 76(4): 327. 1978.

F. longifolia Thuill. (*Festuca caesia* Sm.; *Festuca longifolia* Hegetschw. & Heer; *Festuca longifolia* Viv.; *Festuca ovina* var. *duriuscula* (L.) W.D.J. Koch; *Festuca trachyphylla* (Hack.) Krajina)

Europe, France. Perennial bunchgrass, densely tufted, herbaceous, semierect, low-growing, bright or dark green, leafy, leaves somewhat harsh, turf, attractive, drought-resistant, useful on infertile soils or droughty areas, dry open soil, sandy areas, see *Species Plantarum* 1: 73-74. 1753, *Synopsis Florae Germanicae et Helveticae* 812. 1837, *Monographia Festucarum Europearum* 91. 1882 and *Acta Botanica Bohemica* 9: 190, t. 2, f. 5-6. 1930, *Lejeunia*, n.s., 89: 1-82. 1977, *Watsonia* 17: 289. 1988, *Bot. J. Linn. Soc.* 106(3): 87. 1991, D.J. Gibson and I. Taylor, "*Festuca longifolia* Thuill. (*F. glauca* auct. non Vill., *F. glauca* var. *caesia* (Sm.) Howarth, *F. caesia* Sm.)." *Journal of Ecology* 93(1): 214-226. Feb 2005.

in English: hard fescue, fescue

F. longigluma Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 16: 27, t. 5B. 1972.

F. longipes Stapf (*Festuca longipes* Stapf ex Dyer)

South Africa. Perennial, rhizomatous, long and slender rhizomes, inflorescence branches rigid and straight, glumes and lemmas awnless, on stony slopes, light shade, mountains, edges of forests, see *Flora Capensis* 7: 721. 1900.

F. longivaginata Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 16: 34, t. 7A. 1972.

F. loricata (Griseb.) Pilg. (*Festuca dissitiflora* subsp. *loricata* (Griseb.) St.-Yves; *Festuca dissitiflora* var. *euloricata* St.-Yves; *Festuca dissitiflora* var. *loricata* Griseb.)

South America. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 287. 1879 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 515. 1906, *Candollea* 3: 247. 1927

F. luciarum Connor

New Zealand. Tufted, prostrate to ascending, stoloniferous, swollen shoots, leaf sheath wider than leaf blade, small panicles, spikelets imbricate, glumes unequal, glume apex ciliate, lemma prickly-toothed, lodicules lobed, ovary apex hispid or glabrous, on rocky places, cliffs, grassland, see *New Zealand Journal of Botany* 36(3): 343. 1998.

F. lucida Stapf (*Festuca lucida* Stapf ex Hook.f.)

India, Jammu and Kashmir, Himachal Pradesh, Uttar Pradesh. Indeterminate species, see *Fl. Brit. Ind.* 7: 355. 1896 (or 1897).

F. lugens (Fourn.) A. Hitchc. (*Festuca asperella* E.B. Alexeev; *Festuca mirabilis* Piper; *Uniola lugens* E. Fourn.)

America. Fodder, high mountain, meadows, see *Mexicanas Plantas* 2: 123. 1886 and *Contributions from the United States National Herbarium* 10: 47. 1906, *Boletín de la Sociedad Botánica de México* 23: 165. 1958, *Bot. Zhurn. (Moscow & Leningrad)* 66: 1496. 1981.

in Mexico: pasto

F. macedonica J. Vetter

Greece. Rare species, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 69: 547. 1939.

F. macrophylla Hochst. ex A. Rich. (*Festuca nubigena* var. *macrophylla* (Hochst. ex A. Rich.) St.-Yves)

Ethiopia. Perennial, erect, wiry, densely tussocky, stiff leaf blades filiform to acicular, narrow panicle many-spiculate with short branches ascending, spikelets wedge-shaped, 3- to 5-flowered, glumes unequal, lower glume acuminate-aristate, upper glume narrowly lanceolate-oblong, lemmas narrowly lanceolate-oblong and awned, ovary apex hairy, montane grassland, closely related to *Festuca obturbans* St.-Yves, see *Tentamen Florae Abyssinicae* ... 2: 434. 1850 and *Revue Bretonne de Botanique Pure et Appliquée* 2: 79. 1927, *Flora of Ethiopia* 7: 25-27. 1955.

F. madida Connor

New Zealand. Tufted, tussocky, slender, smooth, forming clumps, nodes hidden, long-auricled, leaf sheath glabrous, flowers cleistogamous, short inflorescences, glumes unequal and keeled, palea shortly bifid, lodicules lobed, ovary apex hispid, boggy spots, alpine and subalpine, mountains, wet sites, shrubs, see *New Zealand Journal of Botany* 36(3): 345, 471-476. 1998.

F. magellanica Lam. (*Festuca hystricola* (Hack.) E.B. Alexeev; *Festuca ovina* subsp. *hystricola* Hack.; *Festuca ovina* subsp. *magellanica* (Lam.) St.-Yves; *Festuca ovina* subvar. *dusenii* St.-Yves; *Festuca ovina* subvar. *eulamarkiana* St.-Yves; *Festuca ovina* var. *antarctica* Hack.; *Festuca ovina* var. *hystricola* Hack.; *Festuca ovina* var. *lamarckiana* St.-Yves; *Festuca ovina* var. *magellanica* (Lam.) Hack.; *Festuca ovina* var. *wilczekii* St.-Yves; *Festuca pyrogea* Speg.) (Straits of Magellan)

South America, Argentina, Chile. Perennial, dark blue to green, growing in open sites, see *Species Plantarum* 1: 73-74. 1753, *Encyclopédie Méthodique, Botanique* 2: 461. 1788, *Anales del Museo Nacional de Buenos Aires* 5: 97. 1896 and *Candollea* 3: 163, 168. 1927.

F. magensiana Potztal

Chile. See *Willdenowia* 2(2): 166. 1959.

F. magniflora E.B. Alexeev (*Festuca grandiflora* Steud.; *Festuca pallescens* var. *grandiflora* Parodi)

Argentina. See *Synopsis Plantarum Glumacearum* 1: 311. 1854 and *Revista Argentina de Botánica* 20(4): 211. 1953, *Bot. Zhurn. (Moscow & Leningrad)* 69: 351. 1984.

F. mairei St.-Yves (*Festuca mairei* Hack. ex Hand.-Mazz., nom. illeg., non *Festuca mairei* St.-Yves) (for the French botanist René Charles Joseph Ernest Maire, 1878-1949, professor of botany in Algeria, physician, mycologist, an authority on N. African flora; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 438. Boston 1965; Louis Emberger (1897-1969) and René Maire, *Catalogue des plantes du Maroc, spermatophytes et ptéridophytes*. 1941; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 249. 1972; Frans A. Stafleu and Richard S. Cowan, *Taxonomic literature*. 3: 257-260. 1981; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 299. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. *Regnum Vegetabile* vol. 9. 1957; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 53. 1971; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937)

Morocco, Algeria. Perennial, gray-green, erect, clump-forming, leaves semirigid, panicles slender and sparsely branched, useful for erosion control, see *Candollea* 1: 45. 1922, *Fontqueria* 48: 81-82. 1997.

in English: Atlas fescue

F. matthewsii (Hack.) Cheeseman (*Festuca matthewsii* (Hack.) St.-Yves, nom. illeg., non *Festuca matthewsii* (Hack.) Cheeseman; *Festuca ovina* subsp. *matthewsii* Hack.; *Festuca ovina* var. *matthewsii* (Hack.) Cheeseman; *Festuca petriei* Howarth; *Festuca petriei* f. *petriei*)

New Zealand. Tussocky, glaucous, leaf blades persisting on sheath, lemmas glabrous, lodicules hairy, ovary apex hispid, in grasslands, see *Species Plantarum* 1: 73-74. 1753 and *Transactions and Proceedings of the New Zealand Institute* 35: 385. 1903, *Manual of the New Zealand Flora* 918. 1906, *Manual of the New Zealand Flora* 205. 1925, *Revue Bretonne de Botanique Pure et Appliquée* 2: 19, 53. 1927, *Journal of the Linnean Society London* 48: 68. 1928, *New Zealand J. Bot.* 36: 347. 1998.

F. matthewsii (Hack.) Cheeseman subsp. *aquilonia* Connor
New Zealand. Scabrous to scabrid, glaucous, culm internodes prickly, scabrid leaves, inflorescence wide-angled, rachis prickly, awned spikelets, glumes unequal and keeled, palea apex deeply bifid, ovary apex hispid, in grassland, see

Manual of the New Zealand Flora 205. 1925, *New Zealand Journal of Botany* 36(3): 351. 1998.

F. matthewsii (Hack.) Cheeseman subsp. *latifundii* Connor
New Zealand. Tall, glaucous, tussocky, scabrid to rough leaves, leaf sheath glabrous, panicle erect, glumes unequal, lemma keeled, palea bifid, ovary apex hispid, on hillsides, plains, grassland, see *New Zealand Journal of Botany* 36(3): 352. 1998.

F. matthewsii (Hack.) Cheeseman subsp. *matthewsii*
New Zealand. Tufted or shortly stoloniferous, culm internodes glabrous, leaf sheath keeled, leaf blades thick, awned florets, glumes unequal and keeled, palea acute and deeply bifid, lodicules often lobed, ovary apex hispid, in grassland, see *Manual of the New Zealand Flora* 205. 1925.

F. matthewsii (Hack.) Cheeseman subsp. *pisamontis* Connor (Mt. Pisa)

New Zealand. Erect, slender, leaf blades thin, culm internodes glabrous or prickly, loosely branched inflorescence, florets conspicuously awned, glumes unequal, palea acute, lodicules lobed, ovary apex hispid, see *Manual of the New Zealand Flora* 205. 1925, *New Zealand Journal of Botany* 36(3): 354. 1998.

F. mekiste W.D. Clayton

Kenya. Perennial, robust, stout, leaf blades broadly linear, open inflorescence, panicle narrowly ovate with flexuous branches, spikelets linear-oblong, 4- to 5-flowered, florets loosely imbricate, glumes narrowly lanceolate acuminate, lemmas narrowly elliptic-oblong and awned, ovary glabrous, woodland, upland forest, similar to *Festuca engleri*, see *Kew Bulletin* 23: 293. 1969.

F. meyenii (St.-Yves) E.B. Alexeev (*Festuca orthophylla* var. *meyenii* St.-Yves)

South America. See *Candollea* 3: 198. 1927, *Bot. Zhurn. (Moscow & Leningrad)* 69: 348. 1984.

F. minutiflora Rydberg (*Festuca brachyphylla* var. *endotera* (St.-Yves) Litard.; *Festuca brevifolia* var. *endotera* St.-Yves; *Festuca brevifolia* var. *utahensis* St.-Yves; *Festuca ovina* var. *minutiflora* (Rydb.) J.T. Howell)

North America, southwestern and south central U.S., Canada. Perennial, loosely to densely tufted, green, erect, delicate, smooth stem, sheaths entire and glabrous, auricles present, ligules ciliate, leaf blades bristle-like, small and narrow flower head with short branchlets, glumes unequal, lemma pointed and rough, ovary apex pubescent, on dry sandy soils, dry stony slopes, in meadows, alpine zone, in subalpine openings, see *Species Plantarum* 1: 73-74. 1753 and *Bulletin of the Torrey Botanical Club* 32(11): 608-609. 1905, *Candollea* 2: 254, 257. 1925, *Candollea* 10: 108. 1945, *Leaflets of Western Botany* 6(7): 151. 1951.

in English: small-flower fescue, small-flowered fescue, smallflower fescue

F. monguensis Stancik

Colombia. Páramos, see *Darwiniana* 41(1-4): 139, f. 8a-e. 2003

F. monticola Phil. (*Festuca commersonii* Franch., nom. illeg., non *Festuca commersonii* Spreng.; *Festuca gracillima* var. *monticola* (Phil.) St.-Yves; *Festuca subandina* Phil.; *Festuca subantarctica* Parodi; *Poa monticola* Phil.)

South America, Chile, Argentina. See *Anales de la Universidad de Chile* 43: 576. 1873, *Anales de la Universidad de Chile* 94: 177. 1896 and *Candollea* 3: 178. 1927, *Revista Argentina de Agronomía* 20: 225. 1953.

F. morenensis Matthei

Chile. See *Gayana, Botánica* 37: 54, f. 6A, 24A. 1982.

F. morisiana Parl. (*Festuca rubra* f. *morisiana* (Parl.) Emil Schmid ex Arzei & V. Picci)

Europe, Italy, Sardinia. Vulnerable species, see *Giornale Botanico Italiano* 2(1): 377. 1845 and *Archivio Botanico e Biogeografico Italiano* 49(1-2): 8. 1973.

F. muelleri Vickery (dedicated to the German-born (Rostock) Australian scientist Baron Sir Ferdinand Jacob (Jakob) Heinrich von Mueller (Müller), 1825-1896 (d. Melbourne), botanist, pharmacist, botanical explorer, plant collector, 1847 to Australia, 1856 collected with A.C. Gregory in Kimberley, from 1857-1873 Director of the Melbourne Botanical Garden, 1852-1896 Government botanist Victoria, 1859 Fellow of the Linnean Society, 1861 Fellow of the Royal Society, a prolific writer, among his very numerous writings are *The Plants Indigenous to the Colony of Victoria*. Melbourne 1860-1865, *The Fate of Dr. Leichhardt, and a Proposed New Search for His Party*. [Melbourne 1865] and *Key to the System of Victorian Plants*. Melbourne 1885-1888, contributed to George Bentham (1800-1884), *Flora Australiensis*. London 1863-1878. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 524. 1965; Stafleu and Cowan, *Taxonomic literature*. 3: 615-625. 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 505. London 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; G. Murray, *History of the Collections Contained in the Natural History Departments of the British Museum*. 1: 170. 1904; M. Willis, *By their Fruits: A Life of Ferdinand von Mueller, Botanist and Explorer*. Sydney, London 1949; E.D. Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 139-140. 1937; I.H. Vegter, *Index Herbariorum*. Part II (7), *Collectors T-Z*. Regnum Vegetabile vol. 117. 1988; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 276. 1972; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 135-136. [1931]; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 215. Oxford 1964; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh

1970; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987)

Australia, New South Wales, Kosciuszko National Park, Victoria. Perennial, tufted, branched, slender and erect, forming coarse tussocks, auricles absent, ligule a membranous rim, leaves channeled and very rough to scabrous, green to purplish panicle nodding and loose, chasmogamous spikelets, uppermost floret often reduced, hermaphrodite florets 3-5(-7) per spikelet, glumes awnless, palea 2-keeled, 2 lodicules joined at the base, anthers yellow or purple, ovary glabrous, fruit compressed, grows in grassland and montane woodland, eucalypt woodlands, subalpine and subhumid woodlands, see *Contributions from the New South Wales National Herbarium* 1(1): 9. 1939.

in English: alpine fescue

F. multinodis Petrie & Hack.

New Zealand. Glaucous, open, densely caespitose, prostrate to ascending, scrambling, stoloniferous, many-noded stolons, leaf sheath ribbed, inflorescence structure variable, glumes unequal and keeled, lemma glaucous, palea acute and shortly bifid, lodicules lobed or bifid, ovary glabrous or hispid, coastal, found in rocky places, coastal cliffs, rocky slopes, shores, bluffs, see *Trans. and Proc. New Zealand Inst.* 44: 186. 1912, *New Zealand Journal of Botany* 6: 295-308. 1968, *New Zealand J. Bot.* 36: 355. 1998.

F. nardifolia Griseb. (*Festuca nardifolia* var. *genuina* St.-Yves)

Argentina. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften, Göttingen. Mathematisch-Physikalische Klasse* 24: 286. 1879 and *Candollea* 3: 170. 1927.

F. nardifolia Griseb. var. ***calchaquiensis*** (Hack.) St.-Yves (*Festuca calchaquiensis* Hack.)

Argentina. See *Anales del Museo Nacional de Buenos Aires* 13: 520. 1906, *Candollea* 3: 171, f. 8. 1927.

F. nardifolia Griseb. var. ***nardifolia***

Argentina.

F. nemoralis Turpe

Bolivia, Argentina. Caespitose, erect, leaf blades flat or involute, leaves scabrous, lax panicle oblong, lax spikelets elliptic-lanceolate, 3- to 8-flowered, acute or acuminate glumes linear-lanceolate, lemmas lanceolate acuminate, palea keels ciliolate, ovary apex pubescent to hispid, see *Darwiniana* 15(1-2): 189-283. 1969.

F. nereidaensis Stancik

Colombia. See *Darwiniana* 41(1-4): 139-140, f. 8f-k. 2003.

F. nevadensis (Hack.) Markgr.-Dann. (*Festuca nevadensis* (Hack.) K. Richt.; *Festuca rubra* L. subsp. *nevadensis* Hack.)

Europe. See *Monographia Festucarum Europearum* 146. 1882 and *Botanical Journal of the Linnean Society* 76(4): 327. 1978, *Candollea* 41: 163-171. 1986.

F. nigrescens Lam. (*Festuca nigrescens* Gaudin, nom. illeg., non *Festuca nigrescens* Lam.; *Festuca nigrescens* Steud., nom. illeg., non *Festuca nigrescens* Lam.; *Festuca rubra* L. subsp. *commutata* Gaudin; *Festuca rubra* L. subsp. *fallax* (Thuill.) Hayek; *Festuca rubra* L. subsp. *rubra* var. *commutata* Gaudin; *Schedonorus nigrescens* (Lam.) P. Beauv.)

Europe. Perennial, densely tufted, forming a turf, not stoloniferous, rhizomes absent, usually erect or geniculate at the base, auricles absent, ligule a minute and membranous rim, dark green leaves soft and filiform, green to purple panicle elongated and narrow, uppermost floret often reduced, hermaphrodite florets 3-8 per spikelet, glumes unequal and awnless, upper glume ovate-lanceolate to lanceolate, lemma lanceolate and long-acuminate tapering to an awn, palea acute and 2-keeled, anthers yellow or purple, ovary glabrous, fruit deeply furrowed, usually in dry open areas, sandy and dry, roadsides, ditches, planted as a lawn grass or pasture, see *Species Plantarum* 1: 74. 1753, *Encyclopédie Méthodique, Botanique* 2: 460. 1788, *Essai d'une Nouvelle Agrostographie* 177. 1812, *Flora Helvetica* 1: 287. 1828, *Synopsis Plantarum Glumacearum* 1: 311. 1854.

in English: chewing fescue

F. nigrescens Lam. subsp. ***microphylla*** (St.-Yves) Markgr.-Dann. (*Festuca rubra* L. subsp. *microphylla* St.-Yves)

Europe. See *Decheniana* 117: 195. 1964, *Botanical Journal of the Linnean Society* 76(4): 327. 1978.

F. nigriflora (Hitche.) Negritto & Anton (*Poa nigriflora* Hitche.)

America. See *Contributions from the United States National Herbarium* 24(8) 330. 1927, *Novon* 9(4): 542, f. 1. 1999.

F. niphobia (St.-Yves) Kerguélen (*Festuca ovina* subvar. *niphobia* St.-Yves)

Europe. See *Bull. Soc. Bot. Fr.* 123(5-6): 320. 1976.

F. nitida Kit. ex Schult. (*Festuca nitida* Kit.; *Festuca nitida* Wulf, nom. illeg., non *Festuca nitida* Kit. ex Schult.; *Festuca violacea* Schleich. ex Gaudin subsp. *violacea* var. *minor* Hack.; *Schedonorus nitidus* (Kit. ex Schult.) Roem. & Schult.)

Europe. See *Systema Vegetabilium* 2: 706. 1817, *Flora Norica Phanerogama* 146. 1858.

F. norica (Hack.) K. Richt. (*Festuca amethystina* var. *norica* (Hack.) St.-Yves; *Festuca rubra* var. *norica* Hack.; *Festuca violacea* Schleich. ex Gaudin subsp. *norica* (Hack.) Hegi; *Festuca violacea* subsp. *norica* (Hack.) Hack. ex Hegi)

Europe. See *Species Plantarum* 1: 74. 1753, *Alpina* 3: 57. Winterthur 1808, *Flora Norica Phanerogama* 146. 1858, *Monographia Festucarum Europearum* 135. 1882 and *Bulletin de la Société Botanique de France* 71: 125. 1924, *Pl. Syst. Evol.* 136: 73-124. 1980.

F. novae-zelandiae (Hack.) Cockayne (*Festuca novae-zelandiae* J.B. Armstr.; *Festuca ovina* subsp. *novae-zelandiae* Hack.; *Festuca ovina* subsp. *novae-zelandiae* var. *eu-novae-zelandiae* Howarth; *Festuca ovina* subsp. *novae-zelandiae* var. *novae-zelandiae* subvar. *novae-zelandiae*; *Festuca ovina* subsp. *novae-zelandiae* var. *novae-zelandiae* subvar. *pruinosa* Howarth; *Festuca ovina* var. *novae-zelandiae* (Hack.) Cheeseman)

New Zealand. Perennial, harsh, scabrid, caespitose, leaf sheath striate, leaf blades rolled, leaves tightly packed together, panicle with erect or loose branches, panicle rachis shortly prickly, glumes unequal, palea acute and shortly bifid, lodicules lobed, ovary apex hispid, useful for erosion control, found in riverbeds, grasslands, see *Species Plantarum* 1: 73-74. 1753, *New Zealand Country J.* 5: 57. 1881 and *Transactions and Proceedings of the New Zealand Institute* 35: 384. 1903, *Manual of the New Zealand Flora* 917. 1906, *Trans. and Proc. New Zealand Inst.* 48: 178. 1916, *Journal of the Linnean Society London* 48: 63-64. 1928, *New Zealand Journal of Botany* 6: 295-308. 1968, *New Zealand Journal of Botany* 8: 76-81. 1970, *New Zealand Journal of Botany* 31: 133-138. 1993, *New Zealand Journal of Botany* 32: 227-235. 1994, *New Zealand Journal of Botany* 37: 503-509. 1999.

in English: fescue tussock, hard tussock

F. nubigena Jungh. (*Festuca nubigena* Jungh. ex Büse, nom. illeg., non *Festuca nubigena* Jungh.)

Asia, Indonesia. See *Plantae Junghuhnianae* 3: 346. 1854 and *Blumea* 41: 217-222. 1996.

F. obturbans St.-Yves

Yemen, Ethiopia, Tanzania, Kenya. Perennial, rare, densely tufted, erect, filiform leaves inrolled and scabrid, linear panicle, 5- to 10-flowered, upper glume lanceolate, lowest lemma shortly awned, ovary glabrous, resembling *Festuca macrophylla* Hochst. ex A. Rich., see *Revue Bretonne de Botanique Pure et Appliquée* 2: 83. 1927, *Candollea* 4: 98. 1929.

F. occidentalis Hook. (*Festuca longiseta* Hegetschw. & Heer; *Festuca occidentalis* var. *occidentalis*; *Festuca ovina* var. *polyphylla* Vasey ex Beal; *Festuca rubra* var. *longiseta* (Hack.) sensu Beal)

North America, U.S., Canada, British Columbia. Perennial, densely tufted, green, erect, slender, hairlike basal leaves, sheaths glabrous or hairy, auricles present or absent, ligules ciliate, leaf blades plicate, open panicle with slender branches, spikelets loosely scattered, glumes unequal and pointed, lemma awned and membranous, ovary apex pubescent to densely hairy, forage, useful for erosion control, found in meadows, stream banks, rocky slopes, open moist woods and edges of woods, damp red soil, lake margins, along roadsides, see *Species Plantarum* 1: 73-74. 1753, *Flora Boreali-Americana* 2: 249. 1840, *Grasses of North*

America for Farmers and Students 2: 597. 1896 and *Nov. Syst. Pl. Vasc.* 22: 16. 1985.

in English: western fescue

F. occitanica (Litard.) Auquier & Kerguélen (*Festuca ovina* L. subsp. *ovina* var. *occitanica* Litard.; *Festuca ovina* var. *occitanica* Litard.)

Europe. See *Candollea* 10: 122. 1945, *Lejeunia* 75: 162. 1975.

F. ochroleuca Timb.-Lagr. (*Festuca duriuscula* subsp. *ochroleuca* (Timb.-Lagr.) P. Fourn.) (Greek *ochros*, *ochra* "pale yellow, yellow ochre" and *leukos* "white")

Europe. See *Bulletin de la Société d'Histoire Naturelle de Toulouse* 3: 129. 1869.

F. ochroleuca Timb.-Lagr. subsp. ***heteroidea*** (Verg.) Markgr.-Dann. (*Festuca ovina* L. subsp. *indigesta* Hack. var. *heteroidea* Verg.; *Festuca ovina* var. *heteroidea* Verg.)

Europe. See *Botanical Journal of the Linnean Society* 76(4): 327. 1978.

F. oelandica (Hack.) K. Richt. (*Festuca rubra* L. subsp. *rubra* var. *oelandica* Hack.; *Festuca rubra* var. *oelandica* Hack.)

Europe. See *Species Plantarum* 1: 74. 1753, *Plantae Europaeae* 1: 100. 1890.

F. olympica J. Vetter ex Hayek (*Festuca olympica* Vetter)

Greece. Rare species, see *Beihefte zum Botanischen Centralblatt* 45: 307. 1928.

F. orizabensis E.B. Alexeev (*Festuca procera* var. *mexicana* Rupr. ex E. Fourn.; *Festuca procera* var. *mexicana* Rupr.)

Mexico. See *Nova Genera et Species Plantarum (quarto ed.)* 1: 154. 1815 [1816], *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 236. 1842, *Mexicanas Plantas* 2: 124. 1886 and *Bot. Zhurn. (Moscow & Leningrad)* 66: 1497. 1981.

F. oroana Stancik

Ecuador. Densely tussocky, in mountain forest, see *Folia Geobotanica et Phytotaxonomica* 39(1): 104-105, f. 2, 6-10. 2004.

F. orthophylla Pilg. (*Festuca orthophylla* subvar. *boliviana* (Pilg.) St.-Yves; *Festuca orthophylla* subvar. *glabrescens* (Pilg.) St.-Yves; *Festuca orthophylla* var. *boliviana* Pilg.; *Festuca orthophylla* var. *euorthophylla* St.-Yves; *Festuca orthophylla* var. *glabrescens* Pilg.; *Festuca orthophylla* var. *orthophylla*)

Chile, Argentina, Peru, Bolivia. Caespitose, basal leaves papery, leaves pungent, oblong panicle contracted with short ascending branches, 4- to 5-flowered, glumes coriaceous lanceolate acute, lemmas lanceolate coriaceous, rocky places, dunes, similar to *Festuca eriostoma*, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 717. 1898 and *Botanische*

Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 37: 507-508. 1906, *Candollea* 3: 196-197. 1927, *Contr. U.S. Natl. Herb.* 24: 291-556. 1927, *Bot. Zhurn. (Moscow and Leningrad)* 69: 348. 1984.

F. ovina L. (*Avena ovina* (L.) Salisb.; *Bromus ovinus* (L.) Scop.; *Festuca amethystina* var. *asperrima* Hack. ex Beal; *Festuca brevifolia* var. *utahensis* St.-Yves; *Festuca calligera* (Piper) Rydb.; *Festuca diffusa* Vassiliev, nom. illeg., non *Festuca diffusa* Dumort.; *Festuca guestphalica* Boenn. ex Reichb.; *Festuca malzewii* (Litv.) Reverd. (also spelled *malzevii*); *Festuca minutiflora* Rydb.; *Festuca ovina* Kom. & Aliss., nom. illeg., non *Festuca ovina* L.; *Festuca ovina* f. *ovina*; *Festuca ovina* subsp. *brachyphylla* (Schult. & Schult.f.) Piper; *Festuca ovina* subsp. *calligera* Piper; *Festuca ovina* subsp. *callosa* Piper; *Festuca ovina* subsp. *elata* (Drob.) Tzvelev; *Festuca ovina* subsp. *elliptica* (Beal) Piper; *Festuca ovina* subsp. *guestphalica* (Boenn. ex Reichb.) K. Richt.; *Festuca ovina* subsp. *ovina*; *Festuca ovina* subsp. *saximontana* (Rydb.) St.-Yves; *Festuca ovina* subvar. *guestfalica* (Boenn. ex Reichb.) Hack.; *Festuca ovina* var. *duriuscula* A. Gray ex Porter & J.M. Coult., nom. illeg., non *Festuca ovina* var. *duriuscula* (L.) W.D.J. Koch; *Festuca ovina* var. *elata* Drob.; *Festuca ovina* var. *malzewii* Litv.; *Festuca ovina* var. *ovina*; *Festuca ovina* var. *rydbergii* St.-Yves; *Festuca ovina* var. *vivipara* L.; *Festuca saximontana* Rydb.; *Festuca vulgaris* (W.D.J. Koch) Hayek; *Gnomonia ovina* (L.) Lunell)

Northern temperate regions, Europe. Perennial bunchgrass, small, forming dense tussocks or clumps, stems flimsy and upright, sheaths glabrous or scabrous, auricles very reduced or absent, ligules very short and ciliate, stiff blades filiform and infolded, leaves yellowish green or glaucous, panicles erect and branched, spikelets elliptic to oblong, glumes acute and stiff, lemmas acute, lodicules ciliate, ovary apex glabrous, weed species, turf, lawn, ornamental grass cultivated and naturalized elsewhere, pasture grass, cold and drought tolerant to resistant, useful for erosion control, used for soil stabilization and range revegetation, found in very dry soils, on shallow chalky soils, dry fields and along roadsides, on very shallow stony soils, open woods, dry sterile soils, on sandy or gravelly soils, see *Species Plantarum* 1: 73-74. 1753, *Flora Suecica, Editio Secunda Aucta et Emendata* 31. 1755, *Flora Carniolica* 1: 77. 1772, *Mantissa* 3 (Add. 1): 646. 1827, *Flora Germanica Excursoria* 140(3). 1831, *Synopsis of the Flora of Colorado* 150. 1874, *Monographia Festucarum Europearum* 87. 1882, *Plantae Europaeae* 1: 93. Leipzig 1890, *Grasses of North America for Farmers and Students* 2: 601, 603. 1896 and *Bulletin of the Torrey Botanical Club* 32(11): 608-609. 1905, *Contributions from the United States National Herbarium* 10(1): 27, 43. 1906, *Bulletin of the Torrey Botanical Club* 36: 536-537. 1909, *Contributions from the United States National Herbarium* 17(3): 379. 1913, *American Midland Naturalist*

4: 224. 1915, *Candollea* 2: 245, 257. 1925, *Watsonia* 16: 300-301. 1987, *Bot. J. Linn. Soc.* 106: 366. 1991.

in English: sheep's fescue, sheep fescue, ovina

in French: fétuque des moutons, fétuque ovine

F. ovina L. subsp. ***hirtula*** (W.G. Travis) M.J. Wilk. (*Festuca ovina* subsp. *hirtula* (Hack. ex Travis) M.J. Wilkinson; *Festuca ovina* subvar. *hirtula* Hack. ex Travis)

Europe. Tufted, erect, ridged, leaf sheath open and keeled, short leaves, narrow inflorescence paniculate, glumes unequal, lemma margins hair fringed, palea apex bifid, lodicules lobed, ovary glabrous, found in wastelands, grassland, see *Species Plantarum* 1: 73-74. 1753 and *Botanical Exchange Club and Society of the British Isles* 3: 512. 1914.

F. ovina L. var. ***vivipara*** L. (*Festuca ovina* f. *vivipara* (L.) St.-Yves; *Festuca ovina* subvar. *vivipara* (L.) Hack.; *Festuca supina* subsp. *vivipara* (L.) Richt.; *Festuca tenuifolia* var. *vivipara* (L.) Richt.; *Festuca vivipara* (L.) Smith)

North America, U.S., Montana, Europe, Greenland, Russia, Iceland. Perennial, caespitose, dense tufts of basal leaves, grows on gravelly prairies, on alpine slopes, alpine meadows, moist or dry meadows, see *Species Plantarum* 1: 73-74. 1753, *Flora Suecica, Editio Secunda Aucta et Emendata* 31. 1755, *Flora Britannica* 1: 114. 1800, *Monographia Festucarum Europearum* 89. 1882, *Plantae Europaeae* 1: 93. 1890 and *Candollea* 2: 244. 1925, *Watsonia* 16: 301. 1987.

in English: viviparous sheep fescue, bulbiferous sheep fescue

F. oviniformis J. Vetter

Greece. Rare species, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 69: 547. 1939.

F. pachyphylla Degen ex Nyár. (*Festuca rupicola* Heuff. subsp. *pachyphylla* (Degen) Beldie; *Festuca rupicola* subsp. *pachyphylla* (Deg. ex Nyar.) Beldie)

Europe. See *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 8: 233. 1858 and *Flora Republicii Socialiste Romania* 12: 555. 1972, *Fitologija* 39: 72-77. 1991.

F. pallens Host (*Festuca cinerea* Vill. subsp. *pallens* (Host) Stohr; *Festuca duriuscula* var. *pallens* (Host) Krajina; *Festuca glauca* auct.; *Festuca glauca* subsp. *pallens* (Host) K. Richt.; *Festuca glauca* subsp. *pallens* (Host) O. Schwarz; *Festuca vaginata* auct.)

Europe. Useful for erosion control, see *Icones et Descriptiones Graminum Austriacorum* 2: 63, t. 88. 1802 and *Acta Botanica Bohemica* 9: 195. 1930.

F. pallens Host subsp. ***pallens*** (*Festuca cinerea* Vill. subsp. *pallens* (Host) Stohr)

Europe. See *Icones et Descriptiones Graminum Austriacorum* 2: 63, t. 88. 1802 and *Acta Botanica Bohemica* 9: 195. 1930.

F. pallescens (St.-Yves) Parodi (*Festuca gracillima* subvar. *pallescens* St.-Yves; *Festuca gracillima* subvar. *typica* St.-Yves; *Festuca gracillima* var. *patagonica* Speg.; *Festuca gracillima* var. *ramosa* St.-Yves; *Festuca simpliciuscula* (Hack.) E.B. Alexeev)

South America, Argentina, Chile. Perennial bunchgrass, useful for erosion control, see *Revista de la facultad de Agronomía; Universidad Nacional de La Plata* 3: 586. 1897 and *Candollea* 3: 177, 293, 296. 1927, *Revista Argentina de Botánica* 20(4): 206, f. 4. 1953, *Darwiniana* 28: 153-161. 1987, *Canadian Journal of Botany* 69: 2756-2761. 1991.

F. pallescens (St.-Yves) Parodi var. **foliosa** Parodi

Argentina. See *Revista Argentina de Botánica* 20(4): 206, f. 4. 1953.

F. pallescens (St.-Yves) Parodi var. **pallescens** (*Festuca gracillima* subvar. *pallescens* St.-Yves)

South America, Argentina, Chile. See *Revista Argentina de Botánica* 20(4): 206, f. 4. 1953.

F. pallescens (St.-Yves) Parodi var. **scabra** (St.-Yves) Parodi (*Festuca gracillima* f. *scabra* St.-Yves)

South America, Argentina. See *Candollea* 3: 296. 1927, *Revista Argentina de Agronomía* 20: 210. 1953.

F. pampeana Speg.

South America. See *Contribucion al estudio de la flora de la Sierra de la Ventana ...* 73. 1896 and *Boletín de la Sociedad Argentina de Botánica* 25: 415-423. 1988.

F. panciana (Hack.) K. Richt. (*Festuca ovina* L. subsp. *sulcata* Hack. var. *panciana* Hack.)

Europe, Bulgaria. See *Fitologija* 39: 72-77. 1991.

F. panda Swallen

South America, Chile. See *Journal of the Washington Academy of Sciences* 26(5): 209. 1936.

F. paniculata (L.) Schinz & Thell. (*Anthoxanthum paniculatum* L.)

Europe, South Europe, mountains. Erect, densely tufted, leaves stiff, panicles ovate to obovate more or less dense, spikelets broadly ovate, lemmas acute and unawned, see *Species Plantarum* 28. 1753 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 58: 40. 1913.

F. paphlagonica (St.-Yves) Markgr.-Dann. (*Festuca ovina* var. *paphlagonica* St.-Yves)

Turkey. See *Bulletin de la Société Botanique de France* 71: 32. 1924, *Willdenowia* 11(2): 208. 1981.

F. paphlagonica (St.-Yves) Markgr.-Dann. subsp. **paphlagonica**

Turkey. Rare species, see *Bulletin de la Société Botanique de France* 71: 32. 1924, *Willdenowia* 11(2): 208. 1981.

F. paradoxa Desv. (*Festuca nutans* Biehler, nom. illeg., non *Festuca nutans* Moench; *Festuca nutans* Spreng., nom. illeg., non *Festuca nutans* Moench; *Festuca nutans* var. *major* Vasey; *Festuca nutans* var. *major* Vasey ex Beal; *Festuca nutans* var. *palustris* Alph. Wood; *Festuca nutans* var. *shortii* (Kunth ex Wood) Beal; *Festuca nutans* var. *shortii* Beal; *Festuca shortii* Kunth ex Wood; *Gnomonia nutans* (Biehler) Lunell; *Gnomonia nutans* Lunell; *Poa nutans* (Biehler) Link; *Poa nutans* Link, nom. illeg., non *Poa nutans* Retz.) (named for the American (Kentucky) botanist Charles Wilkins Short, 1794-1863, physician, 1815 M.D. University of Pennsylvania, corresponded with Asa Gray, professor of *materia medica* and medical botany Transylvania University (Lexington, Kentucky), with John Esten Cooke editor of *Transylvania Journal of Medicine and the Associate Sciences*. Lexington 1828-1831, with Robert Peter (1805-1894) and Henry A. Griswold (fl. 1835) wrote *Catalogue of the Native ... Plants and Ferns of Kentucky*. Lexington 1833, among his works are *Florula Lexingtoniensis*. [1828-1829] and *A Sketch of the Progress of Botany in Western America*. Lexington 1836; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 273. Boston 1965; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808 - 1841*. Cambridge, Harvard University Press 1967; Ronald Lewis Stuckey (b. 1938), editor, *Scientific Publications of Charles Wilkins Short*. New York 1978; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 365. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Howard Atwood Kelly and Walter Lincoln Burrage, *Dictionary of American Medical Biography*. New York 1928; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 169. 1989)

Northern America, U.S. Perennial, tufted, in small clumps, green or yellowish green, erect, sheaths open, auricles absent, ligules ciliate, spikelets clustered, lodicules without marginal teeth, ovary apex pubescent, found in moist areas, disturbed areas, dry to mesic wooded slope, open ground and thickets, loamy soil, see *Mantissa Prima Florae Halensis* 34. 1807, *Enumeratio Plantarum* 1: 86. 1821, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 209. 1831, *The American Botanist and Florist* pt. 2: 399. 1871, *Department of Agriculture. Special Report* 63: 43. 1883, *Grasses of North America for Farmers and Students* 2: 589. 1896 and *American Midland Naturalist* 4: 224. 1915.

in English: cluster fescue, clustered fescue

F. parciflora Swallen

Southern America, Ecuador. Páramos, see *Contributions from the United States National Herbarium* 29(6): 255. 1948 [1949], *Folia Geobotanica et Phytotaxonomica* 39(1): 107. 2004.

F. parishii (Piper) A.S. Hitchc. (*Festuca altaica* var. *parishii* (Piper) St.-Yves; *Festuca aristulata* subsp. *parishii* Piper; *Festuca californica* Vasey; *Festuca californica* Vasey var. *parishii* (Piper) A.S. Hitchc.) (named for Samuel Bonsall Parish, 1838-1928)

Northern America, southwestern U.S., California, San Bernardino Mountains. Densely tufted, alpine, greenish, erect, sheaths hairy and open, auricles absent, ligules ciliate, inflorescence paniculate, glumes unequal and hairy, ovary apex pubescent, occurs on dry benches, hills, see *Contributions from the United States National Herbarium* 1(8): 277. 1893 and *Contributions from the United States National Herbarium* 10(1): 33. 1906, *A Flora of California* 1: 169. 1912, *Illustrated Flora of the Pacific States* 1: 222. 1923.

in English: Parish's California fescue

F. parodiana (St.-Yves) Nicora (*Festuca subulata* var. *parodiana* St.-Yves)

South America. See *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 11: 499-500. 1935, *Hickenia* 2(57): 267. 1998.

F. parodii St.-Yves

South America, Argentina. See *Candollea* 3: 308, f. 97. 1927.

F. parvipaleata Jansen

New Guinea. See *Acta Botanica Neerlandica* 2: 370. 1953.

F. parvipaniculata Hitchc.

Peru, Bolivia. Perennial, caespitose, foliage mainly basal, leaf blades linear and papery, narrow panicles contracted, spikelets elliptic, 3- to 6-flowered, glumes scabrous and lanceolate-acute, lemmas lanceolate-acuminate and awned, palea keels ciliolate, see *Contributions from the United States National Herbarium* 24(8) 322. 1927.

F. peristerea (J. Vetter) Markgr.-Dann.

Europe. See *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 56: 138. 1976.

F. peruviana Infantes

Ecuador, Peru, Bolivia. Caespitose, foliage basal, leaf blades glabrous and pungent, oblong panicles, spikelets oblong, 4- to 5-flowered, glumes lanceolate-oblong and blunt to acute, lemmas lanceolate and scabrous, moist habitats, resembling *Dielsiochloa floribunda* and *Festuca divergens*, see *Revista Ci.* (Lima) 54: 103. 1952.

F. petersonii Renvoize

South America. Caespitose, lax panicles, spikelets elliptic, 3-flowered, glumes lanceolate scabrous, lemmas lanceolate

acuminate, palea keels scabrous, ovary glabrous, stony places, see *Gramíneas de Bolivia* 122. 1998.

F. picturata Pils (*Festuca picta* Kit. ex Schult., nom. illeg., non *Festuca picta* J.F. Gmel.; *Festuca rubra* var. *picta* (Kit. ex Schult.) Hack.; *Festuca violacea* subsp. *picta* (Kit. ex Schult.) Brand; *Festuca violacea* var. *picta* (Kit. ex Schult.) Nyman)

Europe. See *Species Plantarum* 1: 74. 1753, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 187. 1791, *Alpina* 3: 57. 1808, *Oestreichs Flora ... zweyte ... Auflage* 1: 236. 1814, *Botanisches Centralblatt* 8: 406. 1881, *Conspectus florum europaeae: seu Enumeratio methodica plantarum phanerogamarum Europae indigenarum, indicatio distributionis geographicae singularum etc.* 828. 1882 and *Illustrierte Flora von Mittel-Europa* 1: 339. 1908, *Plant Systematics and Evolution* 136(1-2): 92. 1980.

F. pilar-franceii Stancik

Colombia. See *Darwiniana* 41(1-4): 121, f. 14a-e. 2003.

F. pinetorum Swallen (*Festuca arizonica* Vasey)

Mexico. See *Contributions from the United States National Herbarium* 1(8): 277. 1893 and *Contributions from the United States National Herbarium* 29(9): 397. 1950.

F. pirinica Horvat ex Markgr.-Dann. (*Festuca alpina* sensu Acht., non Suter)

Bulgaria. Rare species, see *Botanical Journal of the Linnean Society* 76(4): 324. 1978.

in English: pirinian fescue

F. plebeia R. Br.

Australia, Tasmania. Perennial, stoloniferous and caespitose, ligules lobed, leaves mostly basal, auricles absent, leaves filiform, green to purple panicle open or contracted, hermaphrodite florets 4-6 per spikelet, chasmogamous spikelets, subtending foliar structure present or absent, palea membranous to chartaceous, anthers yellow or purple, ovary glabrous, fruit compressed and furrowed, rocky areas, wet places, considered rare species in Tasmania, see *Contributions from the New South Wales National Herbarium* 1: 11. 1939, J.D. Briggs & J.H. Leigh, *Rare or Threatened Australian Plants*. Melbourne, Australia: CSIRO Publications 1996, K.S. Walter and H.J. Gillett [editors], *1997 IUCN Red List of Threatened Plants*. Compiled by the World Conservation Monitoring Centre. IUCN — The World Conservation Union, Gland, Switzerland and Cambridge, U.K. 1998.

F. polesica Zapal. (*Festuca beckeri* (Hack.) Trautv. subsp. *polesica* (Zapal.) Tzvelev; *Festuca beckeri* subsp. *sabulosa* (Andersson) Tzvelev; *Festuca querceto-pinetorum* Klokov)

Central Europe, Poland. See *Fragmenta Floristica et Geobotanica* 28: 363-369. 1982.

F. polita (Halácsy) Tzvelev (*Festuca ovina* f. *polita* Halácsy; *Festuca ovina* L. subsp. *ovina* var. *polita* Halácsy)

Europe. See *Bot. Zurn. (Kiev)* 56(9): 1255. 1971, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 56: 105-106. 1976.

F. polycolea Stapf (*Festuca ovina* subsp. *polycolea* (Stapf) St.-Yves)

China, India, Nepal, Bhutan. On rocky clay loam, subalpine meadow, see *The Flora of British India* 7: 349. 1897 and *Candollea* 3: 373. 1928.

F. pontica E.B. Alexeev ex Markgr.-Dann.) (*Festuca pontica* (E.B. Alexeev) Markgr.-Dann.)

Turkey. Rare species.

F. porcii Hack.

Europe, Eurasia. Useful for erosion control, see *Flora Republicii Socialiste Romania* 12: 524. 1972, *Bot. Zhurn.* 72: 1069-1074. 1987.

F. potosiana Renvoize

Bolivia. Caespitose, panicles linear with short branches, spikelets elliptic, 3- to 4-flowered, glumes lanceolate, lemmas lanceolate, palea keels scabrous, ovary glabrous, rocky areas, stony slopes, see *Gramíneas de Bolivia* 122. 1998.

F. pratensis Hudson (*Bromus pratensis* (Huds.) Spreng.; *Bucetum pratense* (Huds.) Parn.; *Festuca americana* (Pers.) F. Dietr.; *Festuca elatior* auct. Amer.; *Festuca elatior* sensu J. Black; *Festuca elatior* L. subsp. *elatior*; *Festuca elatior* subsp. *pratensis* (Huds.) Hack.; *Festuca elatior* var. *pratensis* (Huds.) A. Gray; *Festuca fluitans* var. *pratensis* (Huds.) Huds.; *Festuca poaeoides* var. *americana* Pers.; *Lolium festuca* Raspail ex Mutel; *Lolium pratense* (Huds.) Darbysh.; *Schedonorus pratensis* (Huds.) P. Beauv.; *Tragus pratensis* (Huds.) Panz. ex B.D. Jacks.)

Europe, West Asia. Perennial, loosely tufted, green to deep green, stout, smooth, unbranched, erect above a geniculate base, often with decumbent stem bases, with or without rhizomes, brown dead sheaths, sheaths open and round, ligule membranous and ciliate, auricles smooth, leaf blades flat and scabrous and slightly rough to the touch, narrow panicles with twin branches, 6 or more flowers per spikelet, uppermost floret often reduced, glumes acute and awnless, lemma stiff and usually awnless, palea 2-keeled, ovary apex glabrous, grain reddish, noxious weed, invasive and widely naturalized elsewhere, cultivated fodder, forage, pasture grass, useful for erosion control and for stabilizing the soil, growing in abandoned pastures, steep slopes, meadows, roadsides, fields, disturbed areas, grasslands, moist shores, on peat soils, on clay soils, see *Species Plantarum* 1: 75. 1753, *Flora Anglica* 37. 1762, *Essai d'une Nouvelle Agrostographie* 99, 163, 177. 1812, *Manual of Botany for North America. Fifth edition* 634. 1867, *Botanisches Centralblatt* 8: 407. 1881 and *Brittonia* 19: 131. 1967, *Bothalia* 16: 59. 1986, *Taxon* 40: 135. 1991, *Novon* 3(3): 242. 1993.

in English: meadow fescue, English bluegrass

in French: fétuque des prés

F. pratensis Huds. subsp. ***apennina*** (De Not.) Hegi (*Festuca apennina* De Not.; *Festuca pratensis* subsp. *apennina* (De Not.) Beldie; *Festuca arundinacea* Schreb. subsp. *arundinacea* var. *megalostachys* Stebler; *Festuca elatior* var. *apennina* (De Not.) Hack.)

Europe, Alps, Appennini. Perennial, see *Repertorium Florae Ligusticae* 468. 1844.

F. pratensis Huds. subsp. ***pratensis*** (*Schedonorus pratensis* (Huds.) P. Beauv.)

Asia, Europe. Auricles glabrous, see *Flora Anglica* 37. 1762, *Ess. agrostogr.* 99, 163, 177. 1812 and *Phytologia* 83: 86. 1997.

F. presliana Hitchc. (*Bromus depauperatus* J. Presl; *Festuca depauperata* Bertol.)

America, Europe. See *Reliquiae Haenkeanae* 1(4-5): 263. 1830, *Flora Italica* 1: 620. 1834 and *Contributions from the United States National Herbarium* 24(8): 320. 1927, *Novost. Sist. Vyss. Rast.* 23: 10. 1986.

F. pringlei St.-Yves (*Festuca amplissima* var. *elliptica* Beal; *Festuca ovina* subsp. *elliptica* (Beal) Piper)

Mexico. See *Species Plantarum* 1: 73-74. 1753, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 236. 1842, *Grasses of North America for Farmers and Students* 2: 603. 1896 and *Candollea* 2: 305. 1925.

F. procera Kunth (*Diplachne procera* (Kunth) Spreng.; *Diplachne procera* Spreng.; *Festuca dolichophylla* J. Presl; *Festuca fiebrigii* Pilg.; *Festuca leioclada* Hack. ex Sodiro; *Festuca orgyalis* Willd. ex E. Fourn.; *Festuca orgyalis* Willd. ex Spreng.; *Festuca peruviana* E.B. Alexeev, nom. illeg., non *Festuca peruviana* Infantes; *Festuca scabra* Willd. ex Steud.; *Festuca sublimis* Pilg.; *Festuca sublimis* Pilg. f. *sublimis*) (named for Karl August Gustav Fiebrig, 1879-1951)

South America, Ecuador, Peru. Herbaceous, bunchgrass, see *Nova Genera et Species Plantarum* 1: 154. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 351. 1825, *Nomenclator Botanicus. Editio secunda* 1: 632. 1840, *Anales de la Universidad Central del Ecuador* 3(25): 483. 1889, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 718. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 510. 1906, *Novosti Sist. Vyss. Rast.* 23: 12. 1986.

F. prolifera (Piper) Fernald (*Festuca prolifera* (Piper) Fern. var. *lasiolepis* Fern.; *Festuca prolifera* var. *prolifera*; *Festuca rubra* f. *vivipara* Eames; *Festuca rubra* L. subsp. *arctica* auct. non (Hack.) Govor.; *Festuca rubra* subsp. *prolifera* Piper; *Festuca rubra* var. *prolifera* (Piper) Piper; *Festuca rubra* var. *prolifera* (Piper) B.L. Rob.)

Northern America, U.S. Perennial, high mountains, see *Species Plantarum* 1: 74. 1753 and *Contributions from the United States National Herbarium* 10(1): 21. 1906, *Rhodora* 10: 65. 1908, *Rhodora* 11(125): 89. 1909, *Rhodora* 35(412): 133, 136, pl. 241, f. 3-4. 1933.

in English: prolific fescue

F. psammophila (Hack. ex Celak.) Fritsch (*Festuca cinerea* subsp. *psammophila* (Hackel ex Celak.) Stohr; *Festuca glauca* subsp. *psammophila* (Hackel) O. Schwarz; *Festuca glauca* subsp. *psammophila* Hack. ex Celak.; *Festuca glauca* var. *psammophila* (Celak.) Stohr; *Festuca ovina* subvar. *psammophila* Hack.; *Festuca pallens* subsp. *psammophila* (Hack. ex Celak.) Tzvelev)

Europe, Russia. Useful for erosion control, see *Species Plantarum* 1: 73-74. 1753, *Histoire des Plantes de Dauphiné* 2: 99. 1787, *Icones et Descriptiones Graminum Austriacorum* 2: 63, t. 88. 1802 and *Feddes Repertorium* 85(7-8): 566. 1974, *Gleditschia* 4: 72. 1976, *Feddes Repertorium* 101(1-2): 31. 1990.

F. pseudodalmatica Krajina ex Domin (*Festuca bornmuelleri* (Hack.) Krecz. & Bobrov; *Festuca dalmatica* subsp. *dalmatica* var. *pseudodalmatica* (Krajina) Beldie; *Festuca dalmatica* subsp. *pseudodalmatica* (Krajina) Beldie; *Festuca dalmatica* var. *pseudodalmatica* (Krajina) Beldie; *Festuca karadagensis* Hadac & Chrtek; *Festuca ovina* subsp. *bornmuelleri* Hack.; *Festuca ovina* subvar. *asperrima* Hack.; *Festuca ovina* var. *sulcata* subvar. *asperrima* Hack.; *Festuca pseudodalmatica* Krajina; *Festuca sulcata* subvar. *wagneri* Degen, Thaisz & Flatt; *Festuca sulcata* var. *asperrima* (Hackel) Hack.; *Festuca valesiaca* subsp. *pseudodalmatica* (Krajina) Soó; *Festuca valesiaca* var. *pseudodalmatica* (Krajina) Nyár.; *Festuca valesiaca* var. *wagneri* (Degen, Thaisz & Flatt) auct.)

Asia, Armenia, Turkey, Iran, Russia, Europe. Useful for erosion control, see *Repertorium Specierum Novarum Regni Vegetabilis* 2: 71. 1906, *Acta Botanica Bohemica* 9: 206. 1930, *Flora URSS* 2: 510. 1934, *Folia Geobotanica et Phytotaxonomica* 4: 212. 1969 and *Novosti Sist. Vyssh. Rast.* 15: 60. 1979.

F. pseudodalmatica Krajina ex Domin subsp. *asperrima* (Hack.) E.B. Alexeev (*Festuca ovina* subvar. *asperrima* Hack.)

Asia, Armenia, Iran, Turkey. See *Novosti Sist. Vyssh. Rast.* 15: 60. 1979.

F. pseudodalmatica Krajina ex Domin subsp. *pseudodalmatica* (*Festuca valesiaca* subsp. *pseudodalmatica* (Krajina ex Domin) Soó)

Armenia, Iran, Russia, Turkey, Europe. See *Repertorium Specierum Novarum Regni Vegetabilis* 2: 71. 1906, *Acta Botanica Bohemica* 9: 206. 1930, *Flora URSS* 2: 510. 1934, *Folia Geobotanica et Phytotaxonomica* 4: 212. 1969, *Novosti Sist. Vyssh. Rast.* 15: 60. 1979.

F. pseudoeskia Boiss. (*Festuca pseudoeskia* Boiss.; *Festuca pseudo-eskia* Boiss.)

Spain. Rare species, see *Botanical Journal of the Linnean Society* 146: 331-337. 2004.

F. pseudodura Steud. (*Festuca halleri* All. subsp. *dura* Hegi)

Europe.

F. pseudosupina Vetter (*Festuca pseudo-supina* Vetter)

Greece. Rare species, see *Österreichische Botanische Zeitschrift* 85: 63. 1936.

F. pseudotrichophylla Patzke (*Festuca rubra* L. subsp. *rubra* var. *yvesiana* Litard. & Maire)

Europe. See *Decheniana* 117: 195. 1964.

F. pseudovina Hack. ex Wiesb. (*Festuca ovina* L. subsp. *sulcata* Hack. var. *pseudovina* Hack.; *Festuca pulchra* Schur; *Festuca valesiaca* Schleich. ex Gaudin subsp. *pseudovina* (Hack. ex Wiesb.) Hegi; *Festuca valesiaca* var. *pseudovina* (Hackel ex Wiesb.) Schinz ex R. Keller)

Europe, Siberia. Perennial, useful for erosion control, see *Oesterr. Bot. Z.* 30: 126. 1880 and *Novosti Sist. Vyssh. Rast.* 15: 62. 1979.

in English: pseudovina

F. pseudovivipara (Pavlick) Pavlick (*Festuca rubra* f. *pseudovivipara* Pavlick)

America, Canada. See *Phytologia* 57(1): 5. 1985, *Phytologia* 82(2): 77. 1997.

F. pubigluma Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 16: 31, t. 6B. 1972.

F. puccinellii Parl. (*Festuca rubra* var. *puccinellii* (Parl.) Fiori; *Festuca violacea* Schleich. ex Gaudin subsp. *nigricans* (Hack.) Hegi; *Festuca violacea* subsp. *puccinellii* (Parl.) Foggi, Gr. Rossi & Signorini) (after the Italian botanist Benedetto Luigi Puccinelli, 1808-1850, professor of botany, 1830-1850 Director of the Botanical Garden of Lucca, his works include *Synopsis plantarum in Agro Lucensi sponte nascentium*. Lucae [Lucca] 1841 [-1848]. See Filippo Parlatore (1816-1877), *Flora Italiana*. 1: 366. 1848; J.H. Barnhart, *Biographical notes upon botanists*. 3: 114. 1965; Paolo Emilio Tomei, "Benedetto Puccinelli botanico." *Riv. Arch. St. Econ. Cost.* 3(4): 28-30. 1975; P.E. Tomei, "L'opera micologica di Benedetto Puccinelli, lucchese." *Micologia Italiana*. 5(2): 33-35. 1976; P.E. Tomei and M.E. Seghieri, "I cultori di botanica in Lucchesia dal XVI al XIX secolo." *Atti Ist. Bot. Lab. Critt. Univ. Pavia*. 14(6): 249-271. 1981; P.E. Tomei and S. Lucchesi, *Le indagini micologiche in Lucchesia*. Lucca 1980; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 175. 1904; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 319. 1972; E.M.

Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

Europe. See *Species Plantarum* 1: 74. 1753, *Alpina* 3: 57. 1808, *Flora italiana, ossia descrizione delle piante ...* 1: 440. 1850, *Flora Analitica d'Italia* 1: 91. 1896 and *Candollea* 52: 415. 1997, *Canadian Journal of Botany* 77: 998, f. 6. 1999.

F. pulchella Schrad. (*Schedonorus pulchellus* (Schrad.) P. Beauv.)

Europe. See *Essai d'une Nouvelle Agrostographie* 177. 1812.

F. punctoria Sm.

North Turkey, mountains. Rigid, tufted, densely caespitose, glaucous and blue-gray, blades terete and filiform, leaves acute and pungent, dense panicles lanceolate to narrowly obovate, spikelets obovate, lemmas glaucous and awned, considered rare species in Turkey, very attractive and ornamental, found in limestone, dry slopes, see Ekim, T., Koyuncu, M., Erik, S., Ilarslan, R., et al. (eds.). (1989). *Türkiye'nin tehlike altındaki nadir ve endemik bitki türleri*. [List of rare, threatened and endemic plants in Turkey prepared according to IUCN Red Data Book categories]. (Serie no: 18). Ankara: Türkiye Tabiatini Koruma Dernegi [Turkish Association for the Conservation of Nature and Natural Resources]

F. pungens Vahl (*Aeluropus pungens* (Vahl) Boiss., nom. illeg., non *Aeluropus pungens* (M. Bieb.) C. Koch; *Festuca pungens* Kit.; *Festuca pungens* Lam.; *Odysea mucronata* (Forssk.) Stapf)

Yugoslavia. See *Flora Aegyptiaco-Arabica* 22. 1775, *Symbolae Botanicae, ...* 1: 10, t. 2. 1790, *Flora Orientalis* 5: 595. 1884 and *Hooker's Icones Plantarum* 31: t. 3100. 1922.

F. purpurascens Banks & Sol. ex Hook.f. (*Festuca davilae* Phil.; *Festuca dumetorum* Phil., nom. illeg., non *Festuca dumetorum* L.; *Festuca glaucophylla* Phil.; *Festuca insularis* Steud.; *Festuca laxiflora* Phil., nom. illeg., non *Festuca laxiflora* A. Rich.; *Festuca lechleriana* Steud.; *Festuca philippii* Bech.; *Festuca platyphylla* Steud.; *Festuca purpurascens* f. *aristata* St.-Yves; *Festuca purpurascens* f. *scabriuscula* St.-Yves; *Festuca purpurascens* var. *aristata* E. Desv.; *Festuca purpurascens* var. *genuina* St.-Yves; *Festuca purpurascens* var. *platyphylla* (Steud.) St.-Yves; *Festuca purpurascens* var. *submutica* E. Desv.; *Festuca serranoi* Phil.; *Festuca trachylepis* Hack. ex Druce; *Festuca trachylepis* Hackel)

South America, Argentina. Perennial, grows in open areas, see *Flora Antarctica* 2: 383. 1847, *Flora Chilena* 6: 429. 1854, *Synopsis Plantarum Glumacearum* 1: 312, 428. 1854, *Linnaea* 29(1): 98. 1858, *Linnaea* 33(3-4): 297. 1864, *Anales de la Universidad de Chile* 94: 176, 178. 1896 and *Botanical Exchange Club of the British Isles. Report* 4: 30.

1915, *Candollea* 3: 267-268, 271. 1927, *Candollea* 7: 520. 1938, *Bot. Zhurn.* (Moscow & Leningrad) 69: 348. 1984.

F. pyrenaica Reut. (*Festuca rubra* L. subsp. *pyrenaica* Hack.)

Pyrenées. Tufted, long rhizomatous, stems ascending, basal leaves, spikelets gray-violet, upper glume oblong-lanceolate and long-acuminate, lemma lanceolate and long-acuminate, awned.

F. pyrogea Speg. (*Festuca magellanica* Lam.; *Festuca ovina* subvar. *pubispicula* St.-Yves; *Festuca ovina* var. *pyrogea* (Speg.) Hack.)

South America, Argentina. See *Species Plantarum* 1: 73-74. 1753, *Encyclopédie Méthodique, Botanique* 2: 461. 1788, *Anales del Museo Nacional de Buenos Aires* 5: 97. 1896 and *Wissenschaftliche Ergebnisse der Schwedischen Südpolar-Expedition 1901-1903* 4(4): 7. 1906, *Candollea* 3: 163. 1927.

F. pyrogea Speg. var. *elata* Parodi

Argentina. See *Revista Argentina de Agronomía* 20: 197. 1953.

F. pyrogea Speg. var. *pyrogea*

South America.

F. quadridentata Kunth (*Diplachne quitensis* Spreng.; *Festuca dichoclada* Pilg.; *Festuca flexuosa* Willd. ex Kunth; *Festuca quadridentata* subsp. *kunthiana* St.-Yves; *Festuca quadridentata* subsp. *quadridentata*; *Festuca quadridentata* var. *genuina* St.-Yves; *Festuca quadridentata* var. *quadridentata*; *Sesleria quitensis* Spreng.)

Ecuador. See *Essai d'une Nouvelle Agrostographie* 80. 1812, *Nova Genera et Species Plantarum* 1: 154. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 329, 351. 1825, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 407. 1833 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 514. 1906, *Candollea* 3: 263, 265-266. 1927.

F. quadriflora Honck. (*Festuca pumila* Vill.; *Festuca pumila* Chaix; *Festuca quadriflora* Walter, nom. illeg., non *Festuca quadriflora* Honck.; *Festuca rigidor* (Mutel) K. Richt.)

Europe, mountains. Scabrous, leaves almost pungent, lax and erect panicle, spikelets glaucous, upper glume ovate-lanceolate and long-acuminate, lemma broad-lanceolate and acuminate, awned, see *Botanical Journal of the Linnean Society* 146: 331-337. 2004.

F. queriana Litard. (*Festuca querana* Litard.)

Spain. Rare species, see *Cavanillesia* 8: 54. 1936.

F. reclinata Swallen

Colombia. Páramos, see *Contributions from the United States National Herbarium* 29(6): 254-255. 1948 [1949].

F. reverchonii Hack.

Spain. Rare species, see *Österreichische Botanische Zeitschrift* 53: 30. 1903.

F. richardii E.B. Alexeev (*Festuca abyssinica* f. *perpusilla* St.-Yves; *Festuca abyssinica* f. *setifolia* St.-Yves)

East Africa, Ethiopia. Perennial, compact, erect, densely tufted, panicle linear with erect branches, spikelets lanceolate, 3-4-flowered, glumes enveloping, lemmas narrowly elliptic and awned, ovary glabrous, on stony places, high mountain grassland, see *Tentamen Florae Abyssinicae* ... 2: 432. 1850 and *Candollea* 4: 86. 1929, *Bot. Zhurn.* (Moscow & Leningrad) 71(8): 1109. 1986, *Flora of Ethiopia* 7: 25. 1995.

F. richardsonii Hook. (*Festuca richardsonii* Hook. subsp. *cryophila* (Krecz. & Bobr.) Á. & D. Löve; *Festuca rubra* f. *arctica* Hack.; *Festuca rubra* L. subsp. *arctica* (Hack.) Govor.; *Festuca rubra* subsp. *cryophila* (Krecz. & Bobr.) Hultén; *Festuca rubra* subsp. *richardsonii* (Hook.) Hultén; *Festuca rubra* var. *lanuginosa* F. Mertens & W. Koch; *Festuca rubra* var. *mutica* Hartman)

North America, Canada, U.S., Greenland, Arctic. Perennial, loosely caespitose, glaucous or greenish, erect, sheaths glabrescent and entire, auricles absent, ligules ciliate, glumes unequal, ovary apex glabrous, sea-coast, see *Species Plantarum* 1: 74. 1753, *Flora Boreali-Americana* 2: 250. 1840 and *Flora URSS* 2: 519, 767, t. 40, f. 16a-d. 1934, *Acta Universitatis Lundensis*, n.s., 38: 246, map 178c. 1942, *Phytologia* 57(1): 11. 1985.

in English: Richardson's fescue

F. rigescens (J. Presl) Kunth (*Diplachne brevifolia* J. Presl; *Diplachne rigescens* J. Presl; *Festuca andicola* Kunth; *Festuca dissitiflora* Steud. ex Griseb.; *Festuca dissitiflora* Steud. ex Lechler; *Festuca haenkei* Kunth; *Festuca haenkei* var. *genuina* St.-Yves; *Festuca haenkei* var. *haenkei*; *Festuca haenkei* var. *humilior* (Nees & Meyen) St.-Yves; *Festuca humilior* Nees & Meyen; *Festuca scirpifolia* subsp. *stuebelii* (Pilg.) St.-Yves, also spelled *stuebelii*; *Festuca stuebelii* Pilg.) (for the German plant collector Moritz Alphons Stübel, 1835-1904, explorer and geologist, naturalist, traveler (Egypt, South and Central America, Europe), made volcanological studies, his writings include *Die Vulkanberge von Ecuador* ... Berlin 1897 and *Die Vulkanberge von Colombia* ... Dresden 1906; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 343. 1965; August Weberbauer (1871-1948), *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. Leipzig 1911)

Peru, Argentina, Ecuador, Bolivia. Perennial bunchgrass, caespitose, erect, forming small clumps, bases of leaf sheaths reddish, leaf blades involute, panicle contracted, spikelets oblong, 3- to 6-flowered, glumes lanceolate with ciliolate margins, lemmas lanceolate acuminate or awned, palea keels ciliolate, found in disturbed areas, grasslands, wet spots, edge of swamps, see *Reliquiae Haenkeanae*

1(4-5): 260-261. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 403. 1833, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19 (Suppl. 1): 35. 1841, *Berberides Americae Australis* 56. [Edited by G. Zeller] Stuttgartiae 1857, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 287. 1879, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 717. 1898 and *Candollea* 3: 204, 206, 229. 1927.

F. rigidifolia Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 16: 26, t.5A. 1972

F. riloensis (Hack. ex Hayek) Markgr.-Dann. (*Festuca halleri* All. subsp. *riloensis* Hack. ex Hayek)

Europe. See *Beihefte zum Botanischen Centralblatt* 45: 307. 1928, *Botanical Journal of the Linnean Society* 76(4): 317. 1978.

F. rivularis Boiss. (*Festuca duriuscula* var. *rivularis* (Boiss.) Boiss.; *Festuca rubra* var. *rivularis* (Boiss.) Hack.)

Europe, Portugal, France. See *Elenchus Plantarum Novarum* 90. 1838, *Voyage botanique dans le midi de l'Espagne* 2: 671. 1844.

F. roblensis Gonz.-Led.

Mexico. See *Novon* 8(2): 147, f. 1. 1998.

F. robustifolia Markgr.-Dann. (*Festuca ovina* L. subsp. *ovina* var. *duriuscula* Hack. subvar. *robusta* Hack., non Mutel pro spec.)

Europe. See *Botanical Journal of the Linnean Society* 76(4): 328. 1978.

F. roemerii (Pavlick) E.B. Alexeev (*Festuca idahoensis* subsp. *roemerii* (Pavlick) S.G. Aiken; *Festuca idahoensis* Elmer var. *roemerii* Pavlick)

Northern America, U.S. Perennial, see *Botanical Gazette* 36: 53. 1903, *Canad. J. Bot.* 61(1): 350. 1983, *Novosti Sist. Vyssh. Rast.* 22: 23. 1985, *Canadian Journal of Botany* 75(9): 1542. 1997, *Canad. J. Bot.* 76: 179. 1998.

in English: Roemer's fescue

F. roigii Dubcovs. & Rúgolo

Argentina. See *Boletín de la Sociedad Argentina de Botánica* 26(3-4): 235-242. 1990 [*Festuca roigii* (Poaceae), nueva especie, diferencias morfológicas y citológicas con *F. simpliciuscula*].

F. rosei Piper

Northern America, Mexico, Guatemala. Rare species, see *Contributions from the United States National Herbarium* 10: 45. 1906.

F. rothmaleri (Litard.) Markgr.-Dann. (*Festuca rubra* L. subsp. *rubra* var. *rothmaleri* Litard.; *Festuca rubra* L. var. *rothmaleri* Litard.)

Europe. See *Cavanillesia* 8: 57. 1936, *Botanical Journal of the Linnean Society* 76(4): 325. 1978, *Candollea* 41: 163-171. 1986.

F. rubra L. (*Festuca asperula* sensu H. Eichler; *Festuca aucta* V. Krecz. & Bobrov; *Festuca diffusa* Dumort.; *Festuca duriuscula* L.; *Festuca duriuscula* var. *rubra* (L.) Alph. Wood, nom. illeg., non *Festuca duriuscula* var. *rubra* Parnell; *Festuca earlei* Rydb.; *Festuca egena* V. Krecz. & Bobrov; *Festuca glaucescens* Hegetschw. & Heer, nom. illeg., non *Festuca glaucescens* Roth; *Festuca oregona* Vasey; *Festuca ovina* subsp. *duriuscula* (L.) Kozłowska; *Festuca ovina* subsp. *rubra* Hook.; *Festuca ovina* var. *duriuscula* (L.) Hack.; *Festuca ovina* var. *duriuscula* (L.) W.D.J. Koch; *Festuca ovina* var. *rubra* (L.) Sm.; *Festuca prolifera* (Piper) Fernald; *Festuca prolifera* var. *prolifera*; *Festuca rubra* f. *prolifera* Hyl., nom. illeg., non *Festuca rubra* subsp. *prolifera* Piper; *Festuca rubra* subsp. *aucta* (V. Krecz. & Bobrov) Hultén; *Festuca rubra* subsp. *glaucoidea* Piper; *Festuca rubra* subsp. *megastachya* (Gaudin) Piper; *Festuca rubra* subsp. *prolifera* Piper; *Festuca rubra* subvar. *juncea* Hack.; *Festuca rubra* subvar. *pruinosa* Hack.; *Festuca rubra* var. *densiuscula* (Hack. ex Piper) Hitchc.; *Festuca rubra* var. *littoralis* Vasey ex Beal, nom. illeg., non *Festuca rubra* var. *littoralis* G. Mey.; *Festuca rubra* var. *megastachys* Gaudin; *Festuca rubra* var. *multiflora* Asch. & Graebn.; *Festuca rubra* var. *pauciflora* Scribn.; *Festuca rubra* var. *prolifera* (Piper) B.L. Rob.; *Festuca rubra* var. *pruinosa* (Hack.) Piper; *Festuca vallicola* Rydb.; *Poa tenuifolia* var. *oregona* (Vasey) Vasey)

Circumboreal, Europe, northern temperate, Asia, North America. Perennial, very variable, bluish green to glaucous, slender, vigorous, herbaceous, loosely caespitose, loosely to densely tufted, stiff and erect stems from a curved base, hollow culms, usually long rhizomatous and creeping, slender rhizomes, leaves mostly basal, auricles absent or reduced, ligule a narrow rim, lower sheaths disintegrate into loose fibers, leaves pubescent and filiform, inflorescence a lax green to purple panicle with solitary branches, uppermost floret reduced, glumes unequal and awnless, upper glume lanceolate and acuminate, lemmas awned to awnless, awn variable, palea acute and 2-keeled, lodicules usually lobed, anthers yellow or purple, ovary glabrous or sometimes hispidat apex, fruit glabrous and furrowed, flowers chasmogamous, weed species naturalized elsewhere, lawn and pasture grass, cultivated fodder, may colonize disturbed areas, forming a turf, good ground cover, useful for erosion control and revegetation of high-altitude disturbed lands, can be used to revegetate burned lands, not shade tolerant, somewhat tolerant of salinity and resistant to salt sprays, tolerates spring flooding and some waterlogging, able to withstand some drought, usually found on dry to wet sites, wetland habitats, in damp areas, open habitats, in mountain meadows and clearings, on freshwater shores, on sand dunes, very close to the shores, hillsides, fields, in channel

banks on waterways, bogs, dry beaches, cliffs, abandoned roads, on disturbed sites and on disturbed subalpine sites, dry woods, roadsides, along highway and railway rights-of-way, highway slopes, waste ground, irrigation ditches, ballast, marshes, swamps and at the upper zone of tidal salt marshes, coastal headlands, includes many subspecies and many varieties, subspecies are considered to be species by some authors, see *Species Plantarum* 1: 73-74. 1753, *Observations sur les Graminées de la Flore Belgique* 106. 1823, *English Flora* 1: 139. 1824, *Flora Helvetica* 1: 287. 1828, *Synopsis Florae Germanicae et Helveticae* 812. 1837, *Die Flora der Schweiz* 93. 1840, *The American Botanist and Florist* 2: 399. 1871, *Botanical Gazette* 2(10): 126-127. 1877, *Botanisches Centralblatt* 8: 405. 1881, *Monographia Festucarum Europearum* 139. 1882, *The Student's Flora of the British Islands* edition 3. 497. 1884, *Botanical Exchange Club and Society of the British Isles* 1884: 119. 1885, *A Descriptive Catalogue of the Grasses of the United States* 85. 1885, *Proceedings of the American Academy of Arts and Sciences* 28: 123. 1893, *Grasses of North America for Farmers and Students* 2: 607. 1896 and *Memoirs of the New York Botanical Garden* 1: 57. 1900, *Synopsis der mitteleuropäischen Flora* 2: 299. 1900, *Bulletin of the Torrey Botanical Club* 32(11): 608. 1905, *Contributions from the United States National Herbarium* 10(1): 21-22. 1906, *Rhodora* 10: 65. 1908, *Bulletin de l'Académie Polonaise des Sciences: Classe 2e, sér. B*, 1925: 332. 1925, *Rhodora* 35(412): 133. 1933, *Flora URSS* 2: 518, 523, 767, 769, t. 40, f. 18 a-d. 1934, *Manual of the Grasses of the United States* 877. 1935, *Flora of the Aleutian Islands* 97. 1937, *Uppsala Universitets Årsskrift* 7: 83. Uppsala 1945, *Novosti Sist. Vyssh. Rast.* 15: 44. 1979, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Plant Systematics and Evolution* 147: 227-236. 1984, *Canadian Journal of Botany* 63: 227-231. 1985, *Phytologia* 57: 8. 1985, *Watsonia* 16: 302. 1987, *Bot. Zhurn.* 72: 1069-1074. 1987, *Anales Jard. Bot. Madrid* 50: 216. 1992, *Plant Systematics and Evolution* 182: 21-28. 1992, *Taxon* 49(2): 250. 2000.

in English: red fescue, creeping fescue, creeping red fescue
in Mexico: cañuela roja

F. rubra L. f. *psilolemma* Pavlick

U.S., Alaska. See *Phytologia* 57(1): 6-7. 1985.

F. rubra L. subsp. *arctica* (Hack.) Govor. (*Festuca cryophila* V. Krecz. & Bobrov; *Festuca eriantha* Honda; *Festuca kirelowii* Steud.; *Festuca richardsonii* Hook.; *Festuca rubra* f. *arctica* Hack.; *Festuca rubra* subsp. *cryophila* (V. Krecz. & Bobrov) Hultén; *Festuca rubra* subsp. *kirelowii* (Steud.) Tzvelev; *Festuca rubra* subsp. *richardsonii* (Hook.) Hultén; *Festuca rubra* var. *alaica* Drobow; *Festuca rubra* var. *cryophila* (V. Krecz. & Bobrov) Reverd.; *Festuca rubra* var. *cyrnea* St.-Yves & Litard.; *Festuca rubra* var. *dijimilensis*

Hack. ex Boiss.; *Festuca rubra* var. *glabrata* Hultén; *Festuca rubra* var. *mutica* Hartm.; *Festuca villiflora* Steud.)

Arctic, Canada, U.S., Siberia. See *Handbok i Skandinavien Flora, Tredje Upplagen* 2: 27. 1838, *Flora Boreali-Americana* 2: 250. 1840, *Synopsis Plantarum Glumacearum* 1: 306, 313. 1854, *Monographia Festucarum Europearum* 140. 1882, *Flora Orientalis* 5: 621. 1884 and *Candollea* 1: 62, 19-20. 1922, *Bull. Soc. Bot. France* 71: 122. 1924, *Botanical Magazine* 42: 135. 1928, *Flora URSS* 2: 519, 767, t. 40, f. 16a-d. 1934, *Acta Universitatis Lundensis*, n. s., 38: 246. 1942, *Kongliga Svenska Vetenskapsakademiens Handlingar* 8(5): 64. 1964, *Botanical Journal of the Linnean Society* 76(4): 327. 1978, *Phytologia* 57(1): 11. 1985, *Taxon* 52(3): 593. 2003.

F. rubra L. subsp. ***arenaria*** (Osbeck) Syme (*Bromus secundus* J. Presl; *Festuca arenaria* Osbeck; *Festuca rubra* L. subsp. *arenaria* (Osbeck) O. Schwarz; *Festuca rubra* L. subsp. *arenaria* (Osbeck) F. Aresch.; *Festuca rubra* L. subvar. *arenaria* (Osbeck) Hack.; *Festuca rubra* L. var. *arenaria* (Osbeck) Fries; *Festuca rubra* L. var. *lanuginosa* Mert. & Koch; *Festuca rubra* var. *villosa* Vasey ex Macoun, nom. illeg., non *Festuca rubra* var. *villosa* Mert. ex Koch ex Röhl.; *Festuca villosa* Schweigg.)

Northwestern Europe, Baltic Region, U.S. Perennial, often treated as synonymous with *Festuca rubra* subsp. *richardsonii* (Hook.) Hultén, see *Species Plantarum* 1: 73-74. 1753, *Flora Hallandica* 28. 1818, *Reliquiae Haenkeanae* 1(4-5): 263. 1830, *English Botany*, ... third edition 11: t. 1726. 1872, *Monographia Festucarum Europearum* 140. 1882, *Catalogue of Canadian Plants* 2(4): 236. 1888 and *Mitteilung der Thüringischen Botanischen Gesellschaft* 1(1): 87. Weimar 1949, *Phytologia* 57(1): 6. 1985.

in English: red fescue

F. rubra L. subsp. ***asperifolia*** (St.-Yves) Markgr.-Dann. (*Festuca rubra* subvar. *asperifolia* St.-Yves)

South Europe. See *Annuaire du Conservatoire et Jardin Botaniques de Genève* 125. 1913, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 56: 143. 1976, *Anales Jard. Bot. Madrid* 50: 214. 1992.

F. rubra L. subsp. ***aucta*** (Krecz. & Bobr.) Hultén (*Festuca aucta* Krecz. & Bobr.; *Festuca rubra* var. *paludicola* Kom.)

North America, U.S. Perennial, see *Species Plantarum* 1: 73-74. 1753 and *Flora Peninsulae Kamtschatka* 1: 188. 1927, *Flora URSS* 2: 518, 767. 1934, *Flora of the Aleutian Islands* 97. 1937.

in English: red fescue

F. rubra L. subsp. ***commutata*** Gaudin (*Festuca fallax* Thuill.; *Festuca nigrescens* Lam.; *Festuca nigrescens* subsp. *nigrescens*; *Festuca rubra* subsp. *commutata* (Gaudin) Markgr.-Dann.; *Festuca rubra* subvar. *eu-commutata* St.-Yves)

Europe. Vigorous, habit caespitose, creeping by underground stems, panicle widely branched, grows in clumps, not highly palatable, used for lawns and erosion control, found in pastures, riverbeds, along roadsides, waste places, see *Species Plantarum* 1: 73-74. 1753, *Encyclopédie Méthodique, Botanique* 2: 460. 1788, *Flore des Environs de Paris* (éd. 2) 1: 50. 1799, *Flora Helvetica* 1: 287. 1828, *Botanisches Centralblatt* 8: 407. 1881 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 129. 1913.

in English: chewing's fescue, chewing fescue

F. rubra L. subsp. ***densiuscula*** Hack. ex Piper (*Festuca densiuscula* (Hack. ex Piper) E.B. Alexeev; *Festuca rubra* subsp. *arenicola* E.B. Alexeev; *Festuca rubra* subsp. *pruinosa* (Hack.) Piper; *Festuca rubra* subvar. *densiuscula* (Hack. ex Piper) St.-Yves; *Festuca rubra* subvar. *pruinosa* Hack.; *Festuca rubra* var. *densiuscula* (Hack. ex Piper) Hitchc.; *Festuca rubra* var. *genuina* subvar. *densiuscula* (Hack. ex Piper) St.-Yves; *Festuca rubra* var. *littoralis* Vasey ex Beal)

North America, northwestern and southwestern U.S. Tufted, glaucous or green, erect, sheaths glabrous or glabrescent, auricles absent, ligules ciliate, leaf blades erect, lemma glabrous, awned or unawned, used as a sand binder, growing on sand dunes by the sea, coastal, low moist ground, see *Species Plantarum* 1: 73-74. 1753, *Botanical Exchange Club and Society of the British Isles* 1884: 119. 1885 and *Contributions from the United States National Herbarium* 10(1): 22. 1906, *Candollea* 2: 240. 1925, *Revue Bretonne de Botanique Pure et Appliquée* 2: 65. 1927, *Manual of the Grasses of the United States* 877. 1935.

F. rubra L. subsp. ***fallax*** (Thuill.) Nyman (*Festuca diffusa* Dumort.; *Festuca fallax* Thuill.; *Festuca heteromalla* Pourret; *Festuca nigrescens* Lam.; *Festuca rubra* f. *megastachys* (Gaudin) Holmb.; *Festuca rubra* subsp. *megastachya* (Gaudin) Piper; *Festuca rubra* var. *commutata* Gaudin; *Festuca rubra* var. *fallax* (Thuill.) Hack.; *Festuca rubra* var. *megastachys* Gaudin)

Europe. Perennial bunchgrass, semierect, moderately low-growing, not rhizomatous, dark to bright green, leaf sheaths red or white, ornamental, ground cover, see *Species Plantarum* 1: 73-74. 1753, *Flore des Environs de Paris* (éd. 2) 1: 50. 1799, *Observations sur les Graminées de la Flore Belgique* 106. 1823, *Flora Helvetica* 1: 287. 1828, *Botanisches Centralblatt* 8: 407. 1881 and *Contributions from the United States National Herbarium* 10: 21. 1906.

in English: chewing's fescue

F. rubra subsp. ***juncea*** (Hack.) K. Richt. (*Festuca rubra* L. subsp. *juncea* (Hack.) Soó; *Festuca rubra* subvar. *juncea* Hack.; *Festuca rubra* var. *juncea* (Hack.) P. Fourn.; *Festuca steineri* Patzke)

Europe. See *Species Plantarum* 1: 73-74. 1753, *Monographia Festucarum Europearum* 139. 1882, *Plantae*

Europeae 1: 99. 1890 and *Decheniana* 117: 195. 1964, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 117. 1971 [1972], *Cah. Nat.* 38: 9. 1982.

F. rubra L. subsp. ***litoralis*** (G. Mey.) Auquier (*Festuca helgolandica* Patzke; *Festuca rubra* L. subsp. *rubra* var. *litoralis* G. Mey.; *Festuca rubra* var. *litoralis* G. Mey.)

Western Europe, Baltic Region. Coastal, see *Species Plantarum* 1: 73-74. 1753, *Chloris Hanoverana* 621. 1836 and *Bulletin de la Société Botanique de Belgique* 38: 191. 1968.

F. rubra L. subsp. ***mediana*** (Pavlick) Pavlick (*Festuca rubra* var. *mediana* Pavlick)

Europe. See *Phytologia* 57(1): 8. 1985, *Phytologia* 82(2): 77. 1997.

F. rubra L. subsp. ***pruinosa*** (Hack.) Piper (*Festuca densiuscula* (Hack. ex Piper) E.B. Alexeev; *Festuca rubra* subvar. *densiuscula* (Hack. ex Piper) St.-Yves; *Festuca rubra* subvar. *pruinosa* Hack.; *Festuca rubra* var. *densiuscula* (Hack. ex Piper) Hitchc.; *Festuca rubra* var. *pruinosa* Hack.)

Europe. See *Species Plantarum* 1: 73-74. 1753, *Botanical Exchange Club and Society of the British Isles* 1884: 119. 1885 and *Contributions from the United States National Herbarium* 10(1): 22. 1906.

F. rubra L. subsp. ***pseudorivularis*** Markgr.-Dann. (*Festuca rivularis* subsp. *pseudorivularis* (Markgr.-Dann.) H. Scholz)

Turkey. Rare species, see *Species Plantarum* 1: 73-74. 1753 and *Willdenowia* 11(2): 206. 1981, *Willdenowia* 23(1-2): 116. 1993.

F. rubra subsp. ***richardsonii*** (Hook.) Hultén (*Festuca richardsonii* Hook.; *Festuca rubra* f. *arctica* Hack.; *Festuca rubra* subsp. *arctica* Govor.)

North America, Canada. Caespitose or not caespitose, rhizomatous, erect, glabrous, leaves mostly basal, sheaths fused, inflorescence paniculate or spike-like, spikelets pedicellate, see *Species Plantarum* 1: 73-74. 1753, *Flora Boreali-Americana* 2: 250. 1840, *Monographia Festucarum Europearum* 140. 1882 and *Acta Universitatis Lundensis*, n.s., 38: 246, map 178c. 1942.

F. rubra L. subsp. ***rubra*** (*Festuca glaucescens* Hegetschw. & Heer, nom. illeg., non *Festuca glaucescens* Roth; *Festuca kitaibeliana* Schult.; *Festuca multiflora* Hoffm., nom. illeg., non *Festuca multiflora* Walter; *Festuca rubra* f. *rubra*; *Festuca rubra* subsp. *glaucoidea* Piper; *Festuca rubra* L. subsp. *juncea* (Hack.) Soó; *Festuca rubra* subsp. *multiflora* (Asch. & Graebn.) Jir. ex Dostal; *Festuca rubra* subsp. *multiflora* Piper; *Festuca rubra* L. subsp. *vulgaris* (Gaudin) Hayek; *Festuca rubra* subvar. *glaucescens* Hack.; *Festuca rubra* var. *glaucescens* Hack.; *Festuca rubra* L. var. *juncea* (Hackel) Richter; *Festuca rubra* var. *lanuginosa* Mert. & W.D.J. Koch; *Festuca rubra* var. *multiflora* Asch. &

Graebn.; *Festuca rubra* var. *rubra*; *Festuca rubra* var. *vulgaris* St.-Yves)

Europe, Eurasia. Perennial, alpine to subalpine to lowland areas, low-growing, semierect, dark green, strong or weak creeping, habit rhizomatous, red sheaths, ornamental, useful for erosion control, grows in fields, open habitats, roadsides, salt marshes, see *Species Plantarum* 1: 73-74. 1753, *Mantissa* 2: 398. 1824, *Monographia Festucarum Europearum* 139. 1882 and *Synopsis der mitteleuropäischen Flora* 2: 299. 1900, *Contributions from the United States National Herbarium* 10(1): 22. 1906, *Candollea* 3: 402. 1928.

in English: red fescue

in French: féтуque rouge

F. rubra L. subsp. ***secunda*** (J. Presl) Pavlick (*Bromus secundus* J. Presl; *Festuca rubra* var. *pubescens* Vasey ex Beal, nom. illeg., non *Festuca rubra* var. *pubescens* Spenn.; *Festuca rubra* var. *secunda* (J. Presl) Scribn.)

North America. Perennial, see *Species Plantarum* 1: 73-74. 1753, *Reliquiae Haenkeanae* 1(4-5): 263. 1830, *Grasses of North America for Farmers and Students* 2: 607. 1896, *Annual Report of the Missouri Botanical Garden* 10: 39. 1899 and *Phytologia* 57(1): 6. 1985.

in English: red fescue

F. rubra L. subsp. ***thessalica*** Markgr.-Dann.

Europe, Greece. See *Species Plantarum* 1: 73-74. 1753 and *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 56: 144. 1976.

F. rubra L. subsp. ***vallicola*** (Rydb.) Pavlick (*Festuca vallicola* Rydb.)

North America. Perennial, see *Species Plantarum* 1: 73-74. 1753 and *Memoirs of the New York Botanical Garden* 1: 57. 1900, *Phytologia* 57(1): 13. 1985.

in English: red fescue

F. rubra L. var. ***littoralis*** Vasey (*Festuca rubra* L.; *Festuca rubra* subsp. *mediana* (Pavlick) Pavlick; *Festuca rubra* var. *littoralis* Vasey ex Beal, nom. illeg., non *Festuca rubra* var. *littoralis* G. Mey.)

Northern America, Pacific Northwest, U.S. Perennial, low growing, slender, creeping, bright green, shade and salt tolerant, see *Species Plantarum* 1: 73-74. 1753, *Grasses of North America for Farmers and Students* 2: 607. 1896 and *Contr. U.S. Natl. Herb.* 10: 22. 1906, *Phytologia* 57: 8. 1985, *Phytologia* 82(2): 77. 1997.

in English: red fescue

F. rubra L. var. ***planifolia*** Hack. (*Festuca dumetorum* f. *planifolia* (Hack.) Druce; *Festuca juncifolia* var. *planifolia* (Hack.) Druce; *Festuca planifolia* (Hack.) Fritsch)

Russia, Europe. See *Species Plantarum* 1: 73-74. 1753, *Botanisches Centralblatt* 8: 406. 1881 and *List of British Plants*, edition 2 132. 1928.

in English: red fescue

F. rupicaprina (Hack.) A. Kern. (*Festuca rupicaprina* (Hackel) Beck)

Europe. Useful for erosion control, see *Flora von Nieder-Österreich* 1: 104. Wien 1890.

F. rupicola Heuff. (*Festuca ganeschii* Drob.; *Festuca hirsuta* Host; *Festuca ovina* L. subsp. *sulcata* Hack.; *Festuca ovina* subsp. *sulcata* Hack. var. *sulcata*; *Festuca ovina* var. *hirsuta* Link, nom. illeg., non *Festuca ovina* var. *hirsuta* (Host) St.-Amans; *Festuca recognita* Reverd.; *Festuca sulcata* (Hackel) Nyman; *Festuca sulcata* (Hack.) Beck; *Festuca sulcata* subvar. *wagneri* Degen, Thaisz & Flatt; *Festuca valesiaca* subsp. *sulcata* (Hack.) Schinz & R. Keller; *Festuca valesiaca* subsp. *sulcata* (Hackel) Schinz ex R. Keller; *Festuca valesiaca* subsp. *valesiaca* var. *ganeschii* (Drob.) Tzvelev; *Festuca valesiaca* var. *hirsuta* E.B. Alexeev; *Festuca valesiaca* var. *wagneri* (Degen, Thaisz & Flatt) auct.)

Europe, Balkans, Siberia. Perennial bunchgrass, low-growing, densely tufted, sometimes reddish to glaucous, leaves scabrous and wiry, lax panicles, spikelets green, upper glume ovate-lanceolate and acuminate, lemma lanceolate to ovate-lanceolate, awned, useful for erosion control, low mountains, on the edge of woods, moist ravines, clearings, in arid areas, see *Icones et Descriptiones Graminum Austriacorum* 2: 61, t. 85. 1802, *Agrostologia Helvetica, definitionem ...* 1: 242. 1811, *Hortus Regius Botanicus Berolinensis* 2: 261. 1833, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 8: 233. 1858, *Botanisches Centralblatt* 8: 405. 1881, *Monographia Festucarum Europaeum* 215. 1882 and *Flora der Schweiz* (edition 2) 26. 1905, *Novosti Sist. Vyss. Rast.* 9: 42. 1972, *Flora Republicii Socialiste Romania* 12: 547. 1972, *Fragmenta Floristica et Geobotanica* 28: 363-369. 1982, *Fitologija* 39: 72-77. 1991.

F. rupicola Heuff. subsp. ***rupicola*** (*Festuca sulcata* (Hack.) Nyman; *Festuca valesiaca* Schleich. ex Gaudin subsp. *sulcata* (Hack.) Schinz & R. Keller)

Europe.

F. rupicola Heuff. subsp. ***saxatilis*** (Schur) Rauschert (*Festuca rupicola* subsp. *saxatilis* (Schur) Beldie; *Festuca rupicola* subsp. *saxatilis* (Schur) Tausch; *Festuca rupicola* subsp. *saxatilis* (Schur) Tzvelev; *Festuca saxatilis* Schur; *Festuca valesiaca* Schleich. ex Gaudin subsp. *saxatilis* (Schur) E.B. Alexeev)

South and East Carpathians. See *Flora Republicii Socialiste Romania* 12: 522. 1972.

F. rzedowskiana E.B. Alexeev

Mexico. See *Bot. Zhurn. (Moscow & Leningrad)* 66: 1500. 1981.

F. sanctae-marthae Stancik

Colombia, Magdalena, Sierra Nevada de Santa Marta. Páramos, slopes, see *Preslia* 75(4): 343-345, f. 2. 2003 [2004].

F. saximontana Rydberg (*Festuca brachyphylla* subsp. *saximontana* (Rydb.) Hultén; *Festuca brachyphylla* Schultes & Schultes f. var. *rydbergii* (St.-Yves) Cronquist; *Festuca canadensis* E.B. Alexeev; *Festuca ovina* L.; *Festuca ovina* subsp. *saximontana* (Rydb.) St.-Yves; *Festuca ovina* var. *purpusiana* St.-Yves; *Festuca ovina* var. *rydbergii* St.-Yves; *Festuca ovina* L. var. *saximontana* (Rydb.) Gleason; *Festuca purpusiana* (St.-Yves) Tzvelev; *Festuca saximontana* subsp. *purpusiana* (St.-Yves) Tzvelev; *Festuca saximontana* subsp. *saximontana*; *Festuca saximontana* var. *purpusiana* (St.-Yves) Fred. & Pavlick; *Festuca saximontana* var. *robertsiana* Pavlick; *Festuca saximontana* var. *saximontana*)

North America, U.S., Canada, New Mexico. Perennial, bluish gray to pale green, densely tufted, smooth stems, without rhizomes, dead sheaths remain at the base of the plant, leaf blades stiff, erect flower head, unequal glumes rounded to slightly keeled, lemmas rounded and smooth on the back, small tufted plants, grows in dry to mesic meadows from the montane to subalpine zone, on mountain crests, see *Species Plantarum* 1: 73-74. 1753, *Mantissa* 3 (Add. 1): 646. 1827 and *Bulletin of the Torrey Botanical Club* 36: 536. 1909, *Candollea* 2: 245, 247. 1925, *Acta Universitatis Lundensis* 38(1): 242. 1942, *Phytologia* 4(1): 21. 1952, *Nordic Journal of Botany* 2(6): 534. 1983, *Canadian Journal of Botany* 62(11): 2452. 1984, *Manual of the Vascular Plants of Northeastern United States and Adjacent Canada* (edition 2) 864. 1991.

in English: Rocky Mountain fescue

F. saximontana subsp. ***purpusiana*** (St.-Yves) Tzvelev (also spelled ***purpusina***) (*Festuca ovina* subsp. *saximontana* var. *purpusiana* St.-Yves; *Festuca ovina* var. *purpusiana* St.-Yves; *Festuca ovina* var. *supina* sensu Piper, non (Hack.) Schur; *Festuca purpusiana* Tzvelev; *Festuca purpusiana* (St.-Yves) Tzvelev; *Festuca saximontana* var. *purpusiana* (St.-Yves) Frederiksen & Pavlick; *Festuca supina* sensu Rydb., non Schur)

Northern America, northwestern and southwestern U.S. Perennial, densely tufted, alpine, variable, glaucous, erect, sheaths persisting and glabrous, auricles present, ligules ciliate, ovary apex glabrous, subalpine and alpine, see *Bulletin of the Torrey Botanical Club* 36: 536. 1909, *Candollea* 2: 247. 1925, *Nordic Journal of Botany* 2(6): 534. 1983.

F. saximontana Rydberg subsp. ***saximontana*** (*Festuca brachyphylla* subsp. *saximontana* (Rydb.) Hultén; *Festuca brachyphylla* var. *rydbergii* (St.-Yves) Cronquist; *Festuca canadensis* E.B. Alexeev; *Festuca ovina* subsp. *pseudovina* sensu Piper, non *Festuca pseudovina* Hack. ex Weisb.; *Festuca ovina* subsp. *saximontana* (Rydb.) St.-Yves; *Festuca ovina* subsp. *saximontana* var. *rydbergii* St.-Yves; *Festuca ovina* var. *rydbergii* St.-Yves; *Festuca ovina* var. *saximontana* (Rydb.) Gleason; *Festuca saximontana* Rydb. var. *robertsiana* Pavlick)

North America, U.S., Greenland, Canada. Perennial, densely tufted, green or glaucous, sheaths persisting and glabrous, auricles present, ligules ciliate, found on sand dunes, dry habitats, see *Species Plantarum* 1: 73-74. 1753, *Mantissa* 3 (Add. 1): 646. 1827 and *Bulletin of the Torrey Botanical Club* 36: 536. 1909, *Candollea* 2: 245. 1925, *Acta Universitatis Lundensis* 38(1): 242. 1942, *Phytologia* 4(1): 21. 1952, *Manual of the Vascular Plants of Northeastern United States and Adjacent Canada* (edition 2) 864. 1991.

in English: Rocky Mountain fescue

F. saximontana var. ***purpusiana*** (St.-Yves) Frederiksen & Pavlick (*Festuca ovina* var. *purpusiana* St.-Yves; *Festuca purpusiana* (St.-Yves) Tzvelev) (dedicated to the German botanical explorer Carl (Karl) Albert (Alberto) Purpus, 1851-1941, botanist, botanical and plant collector in Mexico and southwest United States)

North America, U.S., California. Perennial, herbaceous, see *Species Plantarum* 1: 73-74. 1753 and *Bulletin of the Torrey Botanical Club* 36: 536. 1909, *Candollea* 2: 247. 1925, *Nordic Journal of Botany* 2(6): 534. 1983.

in English: Rocky Mountain fescue

F. saximontana var. ***saximontana***

North America.

F. scabra Vahl (*Festuca scabra* Labill., nom. illeg., non *Festuca scabra* Vahl; *Festuca scabra* Lag., nom. illeg., non *Festuca scabra* Vahl; *Festuca scabra* Willd. ex Steud.)

South Africa. Perennial, dioecious, erect, very variable, densely caespitose, deeply rooted, often rhizomatous, long or oblique creeping rhizome, culm bases bulbous and deeply buried, leaf sheaths velvety and fibrous, panicle usually contracted and sometimes spike-like, spikelets 3- to 7-flowered, lemmas generally awnless, pasture, heavily grazed, useful for erosion control, forming small clumps, common in undisturbed lands, disturbed ground, high altitude, deep loose soil, mountain grassveld, moist areas, in semishade, poor sandy soil, near stream, open riverbanks, see *Symbolae Botanicae, ...* 2: 21. 1791, *Novae Hollandiae Plantarum Specimen* 1: 22, t. 26. 1805, *Genera et species plantarum* 4. 1816, *Nomenclator Botanicus. Editio secunda* 1: 632. 1840.

in English: munnik fescue

in South Africa: munnik fescue, munnik swenkgras

F. scabrifolia Renvoize (*Festuca dissitiflora* var. *trachyphylla* St.-Yves; *Festuca trachyphylla* (Hack.) Kraj.)

Bolivia. Caespitose, erect, leaves basal, ligule sparsely ciliate, scabrous leaf blades rigid and filiform, panicles linear with pubescent branches, oblong spikelets, 3- to 8-flowered, glumes narrowly-lanceolate and scabrous, scabrous lemmas lanceolate acuminate or awned, palea 2-dentate pubescent or scabrous, see *Candollea* 3: 246. 1927.

F. scabriuscula Phil. (*Festuca compressifolia* J. Presl; *Festuca neuquenensis* St.-Yves var. *aspera* St.-Yves; *Festuca pascua* Phil.; *Festuca robusta* var. *scabriuscula* (Phil.) St.-Yves; *Festuca steudelii* Phil.; *Festuca sublimis* Pilg.; *Festuca weberbaueri* Pilg.) (Argentina, Neuquen)

South America, Argentina, Chile. Useful for erosion control, forming large clumps, in rocky areas, along streams, see *Linnaea* 29(1): 98. 1858, *Anales Univ. Chile* 94: 176-177. 1896 and *Candollea* 3: 187, 298, 300. 1927.

F. scariosa (Lag.) Asch. & Graebn. (*Festuca granatensis* Boiss.; *Festuca scariosa* Lag. ex Willk.; *Poa scariosa* Lag.)

Morocco, Europe, Spain. See *Prodromus Florae Hispanicae* 1: 96. 1861 and *Botanical Journal of the Linnean Society* 146: 331-337. 2004.

F. scirpifolia (J. Presl) Kunth (*Diplachne scirpifolia* J. Presl; *Festuca dolichophylla* J. Presl; *Festuca scirpifolia* subsp. *scirpifolia*; *Festuca scirpifolia* var. *scirpifolia*)

South America, Peru. See *Reliquiae Haenkeanae* 1(4-5): 258, 261. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 403. 1833.

F. sclerophylla Boiss. ex Bisch. (*Festuca sclerophylla* Boiss. & Hohen.; *Leucopoa sclerophylla* (Boiss. ex Bisch.) V.I. Krecz. & Bobrov; *Leucopoa sclerophylla* (Boiss. & Hohen.) V. Krecz. & Bobrov)

Armenia, Iran, Russia. Perennial bunchgrass, useful for erosion control, see *Annales des Sciences Naturelles; Botanique, sér. 3* 12: 358. 1849, *Diagnoses plantarum orientarium ser. 1*, 13: 59. 1853 and *Flora URSS* 2: 497. 1934.

F. setifolia Steud. ex Griseb. (*Festuca dolichophylla* J. Presl; *Festuca lilloi* Hack.; *Festuca setifolia* Steud. ex Lechler; *Festuca setifolia* var. *genuina* St.-Yves; *Festuca setifolia* var. *setifolia*; *Festuca tucumanica* E.B. Alexeev)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 258, 261. 1830, *Berberides Americae Australis* 56. 1857, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 203. 1874 and *Annuaire du Conservatoire et Jardin Botanique de Genève* 17: 300-301. 1914, *Candollea* 3: 215, 217. 1927, *Bot. Zhurn. (Moscow & Leningrad)* 69: 349. 1984.

F. sibirica Hack. ex Boiss. (*Festuca albida* (Turcz. & Trin.) Malyshev, nom. illeg., non *Festuca albida* Lowe; *Leucopoa albida* (Turcz. ex Trin.) V.I. Krecz. & Bobrov; *Leucopoa kreczetoviczii* Sobolevsk.; *Leucopoa sibirica* (Turcz. & Trin.) Griseb. ex Ledeb.; *Poa albida* Turcz. ex Trin.)

China, Mongolia. Mountain steppe, light brown soil, mountain meadows, black-brown mountain soil, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 387. 1830, C.F. von Ledebour (1785-1851), *Flora Rossica sive enumeratio plantarum in totius imperii Rossici provinciis Europaeis, Asiaticis et America-*

nis hucusque observatarum. 4: 388. Stuttgartiae, E. Schweizerbart, 1842-1853, *Flora Orientalis* 5: 626. 1884 and *Flora URSS* 2: 495, pl. 39: 1, a-f. 1934.

F. simensis Hochst. ex A. Rich.

Ethiopia, Sudan, Uganda. Perennial, ascending or decumbent, loosely tufted, leaf blades linear, spreading falcate auricles, with slender rhizomes, open inflorescence loosely ascending, narrow panicles erect or nodding, spikelets narrowly oblong, 2-5-flowered, glumes acute or acuminate, lower glume narrowly lanceolate 1-nerved, upper glume 3-nerved lanceolate-oblong, lemmas acute with subterminal awn, ovary glabrous, along streams and riverbanks, see *Tentamen Florae Abyssinicae* ... 2: 433. 1850 and *Flora of Ethiopia* 7: 27. 1995.

F. simpliciuscula (Hack.) E.B. Alexeev (*Festuca gracillima* subvar. *gracillima*; *Festuca gracillima* var. *ramosa* St.-Yves; *Festuca pallescens* (St.-Yves) Parodi; *Festuca rubra* var. *simpliciuscula* Hack.)

Argentina, Patagonia. See *Flora Antarctica* 2: 383. 1847 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 7(2): 10, f. 2. 1907, *Candollea* 3: 177, 296. 1927, *Revista Argentina de Botánica* 20(4): 206, f. 4. 1953, *Bot. Zhurn. (Moscow & Leningrad)* 69: 351. 1984, *Boletín de la Sociedad Argentina de Botánica* 26(3-4): 235-242. 1990.

F. sinensis Keng ex E.B. Alexeev (*Festuca sinensis* Keng ex S.L. Lu; *Festuca sinensis* Keng)

China. Grassland, subalpine meadow, silt loam, see *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 163. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 126, t. 91. 1959, *Acta Phytotaxonomica Sinica* 30(6): 536-537. 1992.

F. sipylea (Hack.) Markgr.-Dann. (*Festuca ovina* L. subsp. *sipylea* Hack.)

Europe. See *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 56: 110. 1976.

F. sodiroana Hack. ex E.B. Alexeev (*Festuca pichincha* Hack. ex Sodiro; *Festuca sodiroana* Hack. ex Sodiro)

Ecuador. See *Anales de la Universidad Central del Ecuador* 3(25): 483. 1889 and *Bot. Zhurn. (Moscow & Leningrad)* 69: 1545. 1984.

F. soratana E.B. Alexeev (*Festuca mutica* Wulf; *Festuca tectoria* subsp. *mandoniana* var. *mutica* St.-Yves; *Festuca tectoria* var. *mutica* St.-Yves)

Bolivia, Europe. Caespitose, leaf blades linear, oblong panicle with branches pubescent, spikelets elliptic, 4-9-flowered, glumes scabrous lanceolate acute or acuminate, lemmas lanceolate acute or acuminate, palea keels ciliate, ovary glabrous, see *Flora Norica Phanerogama* 145. 1858 and *Candollea* 3: 243. 1927, *Bot. Zhurn. (Moscow & Leningrad)* 70(9): 1244. 1985.

F. sororia Piper (*Festuca fratercula* auct. non Rupr. ex Fourn.; *Festuca fratercula* Rupr.; *Festuca subulata* Trin. var. *sororia* (Piper) St.-Yves)

North America, southwestern U.S., New Mexico. Tufted, alpine, rare, green, erect, stout, sheaths hairy and open, auricles absent, ligules ciliate, ovary apex pubescent, growing in shady areas, in open woods and meadows, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(2): 173. 1832, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 236. 1842, *Mexicanas Plantas* 2: 124. 1886 and *Contributions from the United States National Herbarium* 1(5): 197. 1913, *Candollea* 2: 285. 1925.

in English: ravine fescue

F. soukupii Stancik

Ecuador. Swampy places, see *Folia Geobotanica et Phytotaxonomica* 39(1): 103-104, f. 2, 1-5. 2004.

F. spadicea L. (*Schedonorus spadiceus* (L.) Roem. & Schult.)

Europe. See *Systema Vegetabilium* 2: 700. 1817.

F. spectabilis Jan. (*Festuca coarctata* Hack.; *Festuca nemorosa* Dalla Torre & Sarnth.; *Festuca sieberi* Tausch; *Festuca sieberi* subsp. *carniolica* (K. Richt.) Hegi; *Festuca sieberi* subsp. *sieberi*)

Albania, Greece. Perennial bunchgrass, spreading, semierect, rhizomatous, coarse stems, coarse bluish erect basal leaves, open panicles, useful for erosion control, found on steep shale slope, on steep rocky slope, see *Elenchus Plantarum Novarum* 2. 1826.

F. spectabilis Jan. subsp. *affinis* (Boiss. & Heldr. ex Hack.) Hack. (*Festuca affinis* Boiss. & Heldr. ex Hack.; *Festuca croatica* A. Kern. ex Hack.; *Festuca spectabilis* subsp. *affinis* Hack.)

Europe. See *Monographia Festucarum Europearum* 189. 1882.

F. spectabilis Jan. subsp. *spectabilis* (*Festuca carniolica* (Hack.) K. Richt.; *Festuca spectabilis* Jan subsp. *carniolica* (Hack.) Hayek; *Festuca spectabilis* var. *carniolica* Hack.)

Europe. See *Monographia Festucarum Europearum* 189. 1882.

F. stapfii E.B. Alexeev (*Festuca aristata* C. Koch; *Festuca undata* subvar. *aristata* (Stapf) St.-Yves; *Festuca undata* var. *aristata* Stapf)

Asia. See *Linnaea* 21(4): 412. 1848, *The Flora of British India* 7(22): 350-351. 1897 [1896] and *Candollea* 3: 453. 1928.

F. stebeckii Renvoize (for Stephan G. Beck, botanical collector in Bolivia and Peru; see *Parodiana* 7: 20. 1992, *Anal. Jard. Bot. Madrid* 51: 58. 1993, *Brittonia* 46: 311. 1994,

Novon 7: 246. 1997, *BiolLania* 6: 510. 1997, *Sida* 20(1): 15. 2002, *Novon* 13(1): 110. 2003)

Bolivia. Tufted, leaf blades linear acuminate, inflorescence scabrous, lax panicles oblong, spikelets oblong, 7-8-flowered, glumes lanceolate attenuate, lemmas lanceolate scabrous, palea keels scabrous, ovary glabrous, see *Gramineas de Bolivia* 121-122. 1998.

F. steinbachii E.B. Alexeev

Bolivia. Rhizomatous, tufted, nodes glabrous, leaf blades glabrous linear, lax panicles with flexuous branches, spikelets lanceolate, 3-flowered, glumes linear-lanceolate and acuminate, lemmas acuminate or awned, lower lemma lanceolate and scabrous, palea scabrous 2-dentate, ovary glabrous, see *Bot. Zhurn. (Moscow & Leningrad)* 70(9): 1243. 1985.

F. stenantha (Hack.) K. Richt. (*Festuca ovina* L. subsp. *laevis* Hack. var. *stenantha* Hack.)

Europe.

F. stricta Host (*Festuca duriuscula* var. *stricta* (Host) Schur; *Festuca stricta* Poir., nom. illeg., non *Festuca stricta* Host; *Festuca stricta* Schleich. ex Gaudin, nom. illeg., non *Festuca stricta* Host; *Festuca stricta* Westb. ex Fedtsch.; *Festuca valesiaca* Schleich. ex Gaudin subsp. *stricta* (Host) Hegi)

Central Europe. Useful for erosion control, see *Icones et descriptiones graminum austriacorum...* 2: 62, t. 86. Vindobonae [Wien] 1801-1809, *Alpina* 3: 59. 1808, *Encyclopédie Méthodique, Botanique*, Suppl. 2: 636. 1812, *Enumeratio Plantarum Transsilvaniae* 787. 1866.

F. stubelii Pilg. (*Festuca rigescens* (J. Presl) Kunth; *Festuca scirpifolia* subsp. *stubelii* (Pilg.) St.-Yves; *Festuca stubelii* Pilg.; *Festuca stuebelii* Pilg.; *Festuca tectoria* subsp. *mandoniana* St.-Yves)

Bolivia. Caespitose, leaves basal, leaf blades filiform and rigid, lax panicles linear or oblong with branches flexuous to rigid, spikelets elliptic-oblong, 4-8-flowered, glumes pubescent lanceolate or subulate, lemmas lanceolate scabrous acuminate or aristate, paleas ciliolate, ovary glabrous, dry slopes, see *Reliquiae Haenkeanae* 1(4-5): 260. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 403. 1833, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 717. 1898 and *Candollea* 3: 229, 240, 242, f. 60. 1927.

F. stuckertii St.-Yves

Argentina. See *Candollea* 3: 304, f. 95. 1927.

F. subantarctica Parodi (*Festuca commersonii* Spreng.; *Festuca commersonii* Franch., nom. illeg., non *Festuca commersonii* Spreng.; *Festuca monticola* Phil.; *Festuca thermarum* Phil.)

Argentina, Uruguay, Patagonia. See *Systema Vegetabilium, editio decima sexta* 1: 353. 1825, *Anales de la Universidad*

de Chile 21(4): 385. 1862, *Anales de la Universidad de Chile* 43: 576. 1873, *Mission Scientifique du Cap Horn, Botanique* 5: 388, t. 8. f. C & (b-e). 1889 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1* [2], *Botany* 8(1,5,1): 234. 1904, *Revista Argentina de Agronomía* 20: 225. 1953.

F. subulata Trin. (*Bromelica subulata* (Trin.) Farw.; *Festuca jonesii* Vasey; *Festuca jonesii* var. *jonesii*; *Festuca subulata* var. *jonesii* St.-Yves; *Festuca subulata* var. *jonesii* (Vasey) St.-Yves; *Festuca subverticillata* (Pers.) E.B. Alexeev) (for the American plant collector Marcus Eugene Jones, 1852-1934, botanist, explorer, mining engineer, Latinist, botanized in Texas and Colorado, collected widely in the Intermountain West, among his writings are *Ferns of the West*. Salt Lake City, Utah 1882 and *Revision of North-American Species of Astragalus*. Salt Lake City, Utah 1923. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 262. Boston 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 246. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 277, 361. 1916; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950)

North America, southwestern and northwestern U.S., Canada. Perennial bunchgrass, tufted, densely clumped stems, green, leafy, erect, basal culm buds, sometimes shortly rhizomatous, occasionally stoloniferous, persistent dead leaf sheaths at the plant base, auricles absent, ligules ciliate, flat leaf blades drooping, open and loose panicle, spikelets loosely arranged, ovary apex pubescent, a pioneer grass, occurs in forests and woodlands, in both open and shaded areas, in moist to dry areas, on mesic to moist sites, thickets, on dry red rocky soil, mountain meadows and mountain grasslands, disturbed sites, coastal mountain valleys, wet benches, along stream banks or in forest meadows, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(2): 173. 1832, *Contributions from the United States National Herbarium* 1(8): 278. 1893 and *Candollea* 2: 284. 1925.

in English: bearded fescue, nodding fescue

F. subulata Trin. var. *subulata*

North America.

F. subuliflora Scribner (*Festuca ambigua* Vasey, non *Festuca ambigua* Le Gall; *Festuca denticulata* Beal; *Festuca subbiflora* Suksd.; *Festuca subulifolia* Benth.)

Northern America, southwestern and northwestern U.S., Canada. Perennial, tufted, stout, green, more or less leafy base, erect, sheaths open and smooth to hairy, auricles absent, ligules ciliate and small, open widely branched flower head, spikelets loosely arranged, unequal glumes very narrow, lemma awn crinkled or twisted, lemma tip minutely 2-toothed, ovary apex pubescent, forage, generally grows in woods, near streams, in moist and partly shaded sites in forest and woodland, on damp red soil, in meadows, on moist slopes, gravel, alpine to subalpine, see *Catalogue of Canadian Plants* 2(5): 396. 1890, *Contributions from the United States National Herbarium* 1(8): 277. 1893, *Grasses of North America for Farmers and Students* 2: 589. 1896 and *Phytologia* 82(2): 76. 1997.

in English: crinkle-awn fescue, crinkle-awned fescue, coast range fescue

in Mexico: pasto, tupiku, uitsaku

F. subulifolia Benth. (*Festuca breviaristata* Pilg.; *Festuca dolichophylla* J. Presl; *Festuca ferreyrae* Tovar; *Festuca toluensis* var. *subulifolia* (Benth.) St.-Yves)

Ecuador, Colombia. See *Nova Genera et Species Plantarum (quarto ed.)* 1: 153. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 258. 1830, *Plantas Hartwegianas imprimis Mexicanas* 262. 1846, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 717-718. 1898 and *Candollea* 2: 302, 316. 1925, *Publicaciones del Museo de Historia Natural "Javier Prado."* Serie B. *Botánica* 32: 8. 1984, *Novosti Sist. Vyss. Rast.* 23: 18. 1986.

F. subulifolia Benth. var. *vivipara* Stancik

Ecuador. Marshy places, see *Darwiniana* 41(1-4): 144, f. 10g. 2003.

F. subverticillata (Persoon) E.B. Alexeev (*Festuca nutans* var. *palustris* Muhl. ex Piper; *Festuca obtusa* Biehler; *Festuca obtusa* Muhl.; *Festuca obtusa* Spreng.; *Festuca obtusa* var. *sprengeliana* St.-Yves; *Festuca obtusa* f. *pilosifolia* Dore; *Festuca pseudoduriuscula* Steud.; *Festuca subulata* Trin.; *Panicum debile* Poir., nom. illeg., non *Panicum debile* Desf.; *Panicum divaricatum* Michx., nom. illeg., non *Panicum divaricatum* L.; *Panicum gracilentum* Poir.; *Panicum patentissimum* Roem. & Schult., nom. illeg., non *Panicum patentissimum* Desv. ex Poir.; *Poa brachiata* Desv.; *Poa festucoides* Le Conte ex Torrey, nom. illeg., non *Poa festucoides* Lam.; *Poa laxa* Lam., nom. illeg., non *Poa laxa* Haenke; *Poa subverticillata* Pers.; *Schedonorus obtusus* (Biehler) Roem. & Schult.; *Steinchisma divaricatum* Raf. ex B.D. Jacks.)

Northern America, southeastern and northeastern U.S., Canada. Perennial, tufted, green, erect, sheaths open, auricles absent, ligules ciliate, open panicle, spikelets loosely scattered, palea glabrous, ovary apex pubescent, grows in moist woods and clearings, forest and woodland, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 183. 1791, *Transactions of the American Philosophical Society*

3: 161. 1793, *Flora Boreali-Americana* 1: 50. 1803, *Plantarum Novarum ex Herbario Sprengelii Centuriam* 11. 1807, *Encyclopédie Méthodique, Botanique, Suppl.*, 4: 276, 283. 1816, *Systema Vegetabilium* 2: 448, 710. 1817, *Manual of Botany of the Northern States. Second Edition.* 367. 1818, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 204. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(2): 173. 1832, *Synopsis Plantarum Glumacearum* 1: 312. 1854, *Index Kewensis* 2: 982. 1895 and *Contributions from the United States National Herbarium* 10: 34. 1906, *Candollea* 2: 276. 1925, *Novosti Sist. Vyss. Rast.* 17: 52. 1980.

in English: nodding fescue

F. subverticillata (Pers.) E.B. Alexeev f. *pilosifolia* (Dore) Darbysh. (*Festuca obtusa* f. *pilosifolia* Dore)

North America. See *Syn. Pl.* 1: 92. 1805, *Plantarum Novarum ex Herbario Sprengelii Centurium* 11. 1807 and *Le Naturaliste Canadien* 103(6): 560. 1976, *Novosti Sist. Vyss. Rast.* 17: 52. 1980, *Phytologia* 82(2): 77. 1997.

F. subverticillata (Pers.) E.B. Alexeev f. *subverticillata*

North America.

F. sumapana Stancik

Colombia. Páramos, see *Darwiniana* 41(1-4): 144-145, f. 7l-p. 2003.

F. superba Parodi ex Türpe

Argentina. See *Darwiniana* 15: 210. 1969.

F. swollenii E.B. Alexeev

Panama. See *Bot. Zhurn. (Moscow & Leningrad)* 66: 1495. 1981.

F. takedana (Hack.) Ohwi (*Festuca takedana* Ohwi; *Leipooa nuda* (Hack.) Ohwi; *Poa nuda* Hack.)

Japan. Rare species, see *Species Plantarum* 1: 73-74. 1753, *Flora Rossica* 4(13): 383, 388. 1852 and *Feddes Repertorium* 2(18): 70-71. 1906, *Botanical Magazine* 24: 112. 1910, *Ill. Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Acta Phytotaxonomica et Geobotanica* 1: 66-67. 1932, *Acta Phytotaxonomica et Geobotanica* 4: 33. 1935, *Flora of Japan* 114. 1953, *Watsonia* 16: 300. 1987, *Grasses of Japan and its Neighboring Regions* 508. 1987.

F. talamancensis Davidse

Costa Rica. Inflorescences nodding, paramós, open areas, see *Novon* 2(4): 324, f. 1E-F. 1992.

F. tancitaroensis Gonz.-Led. & S.D. Koch

Mexico. See *Novon* 4(1): 25, f. 1. 1994.

F. tarmensis Pilg. (*Festuca dolichophylla* J. Presl; *Festuca ferreyrae* Tovar; *Festuca scirpifolia* subsp. *tarmensis* (Pilg.) St.-Yves)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 258. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 403.

1833 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 515. 1906, *Candollea* 3: 232. 1927, *Publicaciones del Museo de Historia Natural "Javier Prado."* Serie B. *Botánica* 32: 8. 1984.

F. tatrae (Czakó) Degen (*Festuca amethystina* L. subsp. *tatrae* (Czakó) Soó; *Festuca amethystina* L. subsp. *amethystina* var. *tatrae* Czakó; *Festuca amethystina* L. subvar. *tatrae* (Czakó) St.-Yves; *Festuca amethystina* var. *tatrae* Czakó)

Central Europe, Czechoslovakia. Useful for erosion control, see *Jahrb. Ungar. Karpathen Ver.* 15: 271. 1888 and *Revue Bretonne de Botanique Pure et Appliquée* 2: 78. 1927.

F. taurica (Hack.) A. Kern. ex Trautv. (*Festuca ovina* L. subsp. *sulcata* Hack. var. *taurica* Hack.)

Europe.

F. tectoria St.-Yves (*Festuca sublimis* Pilg.; *Festuca tectoria* subsp. *tectoria*; *Festuca tectoria* var. *tectoria*)

Peru, Ecuador. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 718. 1898 and *Candollea* 3: 240, 242-243, f. 60. 1927.

F. tenuiculmis Tovar (*Poa annua* L.)

Peru. See *Species Plantarum* 1: 68. 1753 and *Memorias del Museo de Historia Natural "Javier Prado"* 16: 55, t. 12B. 1972, *Blumea* 38: 421. 1994, *Taxon* 49(2): 254. 2000.

F. tenuifolia Sibth. (*Festuca capillata* Lam.; *Festuca filiformis* Pourret; *Festuca ovina* L. subsp. *tenuifolia* (Sibth.) Peterm.; *Festuca ovina* subsp. *tenuifolia* (Sibth.) Celak.; *Festuca ovina* var. *tenuifolia* (Sibth.) Mert. ex W.D.J. Koch)

Western and central Europe. Perennial, herbaceous, densely caespitose, blue-green foliage, lax panicles, spikelets green, upper glumes oblong-lanceolate and acuminate, lemma ovate-lanceolate and mucronate, awn absent, ornamental, occurs in dry habitats, dry pastures, open ground and oak woods, see *Species Plantarum* 1: 73-74. 1753, *Histoire et mémoires de l'académie royale des sciences ...* 3: 319. Toulouse 1788, *Flora Oxoniensis* 44. 1794, *Prodromus der Flora von Böhmen* 50. 1867 and *Bot. J. Linn. Soc.* 106: 374. 1991.

in English: hair fescue

F. thermanum Phil. (*Festuca commersonii* Franch., nom. illeg., non *Festuca commersonii* Spreng.; *Festuca neuquenensis* St.-Yves; *Festuca neuquenensis* var. *parodiana* St.-Yves; *Festuca subandina* Phil.; *Festuca subantarctica* Parodi)

Chile. See *Systema Vegetabilium, editio decima sexta* 1: 353. 1825, *Anales de la Universidad de Chile* 21(4): 385. 1862, *Anales de la Universidad de Chile* 43: 576. 1873, *Mission Scientifique du Cap Horn, Botanique* 5: 388, t. 8. f. C & (b-e). 1889, *Anales de la Universidad de Chile* 94: 177. 1896 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2], Botany*

8(1,5,1): 234. 1904, *Candollea* 3: 298. 1927, *Revista Argentina de Agronomía* 20: 225. 1953.

F. thurberi Vasey (*Festuca tolucensis* Kunth subsp. *thurberi* St.-Yves; *Festuca tolucensis* subsp. *thurberi* (Vasey) St.-Yves; *Poa festucoides* M.E. Jones, nom. illeg., non *Poa festucoides* Lam.; *Poa kaibensis* M.E. Jones) (named in honor of George Thurber, 1821-1890, quartermaster of the United States Mexican Boundary Commission, botanist and professor of botany and horticulture at Michigan Agricultural College 1859-1863, editor of the American Agriculturist)

North America, southwest and south central U.S., Colorado. Perennial bunchgrass, vigorous, densely tufted, green, erect, robust, persistent and dried sheath, vegetative shoots arising from within existing sheaths, auricles absent, ligules without cilia, leaves scabrous and mostly basal, ovary apex pubescent, forage, not highly palatable, sensitive to heavy grazing, occurs on subalpine meadows, on undisturbed sites, dry meadows, sandy loam soils, open slopes, steep slopes, on both bare soil and litter, on mountain grassland ranges, open parks, deep and well-drained soils, see *Nova Genera et Species Plantarum* 1: 153. 1815 [1816], *Catalogue of Plants* 56. 1874, *Proceedings of the California Academy of Sciences, Series 2*, 5: 723. 1895, *Erythea* 4(2): 36. 1896 and *Candollea* 2: 304. 1925.

in English: Thurber's fescue

F. ticinensis (Markgr.-Dann.) Markgr.-Dann. (*Festuca ovina* L. subsp. *ticinensis* Markgr.-Dann.)

Europe. See *Botanical Journal of the Linnean Society* 76(4): 328. 1978.

F. toca Stancik

Colombia. See *Darwiniana* 41(1-4): 123-125, f. 10h-m. 2003.

F. tolucensis Kunth (*Festuca aequipaleata* E. Fourn., nom. illeg., non *Festuca aequipaleata* E. Fourn.; *Festuca liebmännii* E. Fourn. ex Hemsl.; *Festuca liebmännii* E. Fourn.; *Festuca multiculmis* Steud.; *Festuca musashiensis* Honda; *Festuca procera* var. *mexicana* Rupr.; *Festuca tolucensis* subsp. *aequipaleata* (E. Fourn.) Piper; *Festuca tolucensis* subsp. *eutolucensis* St.-Yves; *Festuca tolucensis* subsp. *tolucensis*; *Festuca tolucensis* var. *tolucensis*) (Japan, Hondo, Asakawa, prov. Musashi) (Mexico, between Islahuaca and Toluca)

Mexico. Glaucous to light blue-green, shortly awned, blades rolled, fine leaves round in cross section, forage, growing in large clumps, among low shrubs, see *Nova Genera et Species Plantarum* 1: 153. 1815 [1816], *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 236. 1842, *Synopsis Plantarum Glumacearum* 1: 310. 1854, *Mexicanas Plantas* 2: 124-125. 1886 and *Candollea* 3: 215. 1927.

F. tolucensis Kunth subsp. *perijae* Stancik (*Serranía De Perijá*, also called *Sierra De Perijá*, the northward extension of the Andean Cordillera Oriental, forming part of the border between Colombia and Venezuela)

Colombia. See *Darwiniana* 41(1-4): 146, f. 11a-f. 2003.

F. tovarensis Stancik & Peterson (*Festuca tovariensis* Stancik & P.M. Peterson)

South America, Peru. See *Sida* 20(1): 21-29. 2002.

F. trachyphylla (Hackel) Krajina (*Festuca brevipila* Tracey; *Festuca cinerea* auct. non Vill.; *Festuca cinerea* var. *trachyphylla* (Hack.) Stohr; *Festuca duriuscula* auct. non L.; *Festuca duriuscula* subsp. *trachyphylla* (Hack.) Rohlena; *Festuca duriuscula* var. *cinerea* auct. non (Vill.) Krajina; *Festuca duriuscula* var. *trachyphylla* (Hack.) Richter; *Festuca longifolia* auct. non Thuill.; *Festuca longifolia* Viv.; *Festuca michiganica* E.B. Alexeev; *Festuca ovina* auct. non L.; *Festuca ovina* subvar. *trachyphylla* Hack.; *Festuca ovina* subvar. *trachyphylla* (Hack.) Maire; *Festuca ovina* var. *duriuscula* auct. non (L.) W.D.J. Koch; *Festuca ovina* var. *trachyphylla* (Hack.) Druce; *Festuca stricta* subsp. *trachyphylla* (Hack.) Patzke ex Pilz; *Festuca trachyphylla* Hack. ex Druce)

Europe. Perennial, herbaceous, coarse, densely tufted, blue-green to pale-green, without rhizomes, dead sheaths remain at the base, auricles present, purplish sheaths open, leaf blade bristle-like and rough, narrow flower head, unequal glumes rounded on the back, lemmas glabrous or hairy, forage, drought-tolerant, grows in disturbed areas, see *Species Plantarum* 1: 73-74. 1753, *Flore des Environs de Paris*, edition 2 50. 1799, *Monographia Festucarum Europearum* 91. 1882, *Plantae Europaeae* 1: 94. 1890 and *List of British Plants* 83. 1908, *Report. Botanical Exchange Club. London*. 4(1): 29. 1914 [1915], *Acta Botanica Bohemica* 9: 190, t. 2, f. 5-6. 1930, *Flore de l'Afrique du Nord*: 3: 126. 1955, *Plant Systematics and Evolution* 128(3-4): 287. 1977, *Lejeunia*, n.s., 89: 1-82. 1977, *Phyton. Annales Rei Botanicae* 24: 58. Horn 1984, *Taxon* 49(2): 250. 2000.

in English: hard fescue, rough-leaved fescue, sheep fescue

F. trichophylla (Ducros) K. Richter (*Festuca rubra* var. *trichophylla* Ducros; *Festuca trichophylla* (Gaudin) K. Richter)

Europe. See *Flora Helvetica* 1: 288. 1828, *Plantae Europaeae* 1: 100. 1890 and *Annuaire du Conservatoire et Jardin Botanique de Genève* 125. 1913, *Anales del Jardín Botánico de Madrid* 50(2): 209-220. 1992.

F. trollii E.B. Alexeev

Bolivia. Caespitose, leaf blades linear, leaves scabrous and villous, panicles linear with pubescent branches, spikelets lanceolate, 5- to 9-flowered, glumes lanceolate, lemmas lanceolate mucronate, palea apex pubescent, see *Bot. Zhurn. (Moscow & Leningrad)* 70(9): 1245. 1985.

F. tucumanica E.B. Alexeev (*Festuca breviaristata* Pilg.; *Festuca lilloi* Hack.; *Festuca lilloi* var. *breviaristata* Türpe; *Festuca setifolia* Steud. ex Griseb.; *Festuca setifolia* var. *genuina* St.-Yves; *Festuca setifolia* var. *lilloi* (Hack.) St.-Yves)

South America. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 203. 1874, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 717-718. 1898 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 300-301. 1914, *Candollea* 3: 215, 217. 1927, *Darwiniana* 15: 231, f. 13. 1969, *Bot. Zhurn. (Moscow & Leningrad)* 69: 349. 1984.

F. tunicata E. Desv. (*Festuca asperata* Phil.; *Festuca barrazi* Muñoz; *Festuca berteroniana* Steud.; *Festuca coiron* Steud.; *Festuca robusta* Phil., nom. illeg., non *Festuca robusta* Mutel; *Festuca tunicata* f. *scabra* St.-Yves; *Festuca tunicata* f. *tunicata*)

Chile. See *Flora Chilena* 6: 434. 1854, *Synopsis Plantarum Glumacearum* 1: 311-312. 1854, *Linnaea* 29(1): 99. 1858, *Linnaea* 33(3-4): 296. 1864 and *Candollea* 3: 184. 1927, *Agricultura Técnica (Santiago)* 8: 82. 1948, *Bol. Soc. Argent. Bot.* 3: 116. 1950.

F. ulochaeta Nees ex Steud. (*Festuca leptothrix* Trin. ex Döll; *Festuca leptothrix* Trin. ex Steud.; *Vulpia ulochaeta* Nees ex Döll)

Ecuador to Brazil. Tussocky grass, leaf blades glabrous, large clumps forming, lemmas with filiform slender flexuous awns, growing in forest shade, forest edge, similar to *Festuca cochabambana*, often confused with *Bromus brachyanthera* Döll, see *Species Plantarum* 1: 73. 1753, *Nomenclator Botanicus. Editio secunda* 1: 630. 1840, *Synopsis Plantarum Glumacearum* 1: 305. 1854, *Flora Brasiliensis* 2(3): 115. 1878 and *Ill. Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Watsonia* 16: 300. 1987, *Parodiana* 7: 91-99. 1992.

F. ultramafica Connor

New Zealand. Tufted, shortly rhizomatous, ligule ciliate, pungent leaves, stiff leaf blades, narrow panicle, long-awned florets, glumes unequal, palea acute and deeply bifid, lodicules lobed, ovary apex hispid or glabrous, see *New Zealand Journal of Botany* 36(3): 363. 1998.

F. uninodis Hack. (*Festuca binodis* (Hack. ex St.-Yves) Lillo; *Festuca uninodis* f. *binodis* Hack. ex St.-Yves; *Festuca uninodis* f. *uninodis*)

Argentina. See *Anales del Museo Nacional de Buenos Aires* 13: 520. 1906, *Flora de la Provincia de Tucumán, Gramíneas* 55. 1916, *Candollea* 3: 234. 1927.

F. uralensis (Tzvelev) E.B. Alexeev (*Festuca callieri* (Hack.) Dörfel. ex Domin; *Festuca callieri* (Hack.) Markgr.-Dann.; *Festuca callieri* (Hack. ex St.-Yves) Markgr.-Dann.;

Festuca callieri (Hack. ex St.-Yves) Markgr.-Dann. subsp. *uralensis* Tzvelev)

Europe, Russia. See *Candollea* 3: 347. 1928, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 278. 1932.

F. vaginalis (Benth.) Laegaard (*Poa vaginalis* Benth.)

Mexico. See *Plantas Hartwegianas imprimis Mexicanas* 261. 1846 and *Novon* 8(1): 30. 1988, *Folia Geobotanica et Phytotaxonomica* 39(1): 107, f. 3, 11-15. 2004.

F. vaginata Waldst. & Kit. ex Willd. (*Festuca pallens* Host; *Festuca vaginata* auct.)

Europe, Russia. See *Icones et Descriptiones Graminum Austriacorum* 2: 63, t. 88. 1802, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 116. 1809.

F. valdesii Gonz.-Led. & S.D. Koch

Mexico. See *Novon* 8(2): 149, f. 2. 1998.

F. valentina (St.-Yves) Markgr.-Dann. (*Festuca ovina* L. subsp. *ovina* var. *valentina* St.-Yves; *Festuca ovina* subsp. *valentina* (St.-Yves) O. Bolòs, Masalles & Vigo; *Festuca ovina* var. *valentina* St.-Yves)

Europe. See *Botanical Journal of the Linnean Society* 76(4): 328. 1978, *Collect. Bot.* 17(1): 96. 1987 [1988].

F. valesiaca Schleich. ex Gaudin (*Festuca duriuscula* var. *valesiaca* (Reichb.) Mutel; *Festuca duriuscula* var. *vallesiaca* (Schleich. ex Gaudin) Celak.; *Festuca ovina* subsp. *valesiaca* (Schleich. ex Gaudin) Kozłowska; *Festuca ovina* var. *valesiaca* (Schleich. ex Gaudin) Koch, nom. illeg., non *Festuca ovina* var. *valesiaca* (Schleich. ex Gaudin) Link; *Festuca ovina* var. *valesiaca* (Schleich. ex Gaudin) Link; *Festuca ovina* var. *valesiaca* (Schleich. ex Gaudin) Schleich. ex Link; *Festuca valesiaca* Gaudin; *Festuca valesiaca* Reichb., nom. illeg., non *Festuca valesiaca* Schleich. ex Gaudin; *Festuca vallesiana* Schleich.)

Europe, Asia temperate, Armenia, Iran, Mongolia. Perennial, low-growing, blue green, leaves pruinose, panicle interrupted, spikelets pruinose, upper glume oblong-lanceolate and abrupt-acuminate, lemma subulate more or less glabrous or ciliate, ornamental, forage, grazed, calcareous soil, rocky sites, see *Agrostologia Helvetica, definitionem ...* 1: 242. 1811, *Hortus Regius Botanicus Berolinensis* 2: 267. 1833, *Synopsis Florae Germanicae et Helveticae* 812. 1837, *Prodromus der Flora von Böhmen* 722. 1881 and *Bulletin International de l'Académie Polonaise des Sciences et des Lettres: Classe des Sciences Mathématiques et Naturelles: Série B: Sciences Naturelles* 1925: 336. 1925.

F. valesiaca Schleich. ex Gaudin subsp. *saxatilis* (Schur) E.B. Alexeev (*Festuca rupicola* subsp. *saxatilis* (Schur) Rauschert; *Festuca saxatilis* Schur)

Armenia, Romania, Europe. See *Enum. pl. Transsilv.* 791. 1866 and *Feddes Repert.* 63: 276. 1960, *Vestn. Moskovsk. Univ., Ser. 6, Biol.* 5: 49. 1972.

F. valesiaca Schleich. ex Gaudin subsp. *valesiaca* (*Festuca ovina* var. *valesiaca* (Schleich. ex Gaudin) Schleich. ex Link)

Asia, India, Armenia, Russia, Europe. See *Hort. Berol.* 2: 267. 1833 and *Novosti Sist. Vyssh. Rast.* 15: 58. 1979.

F. varia Haenke (*Avena varia* (Haenke) Raspail)

Europe, Alps. Leaves pungent, lax panicle, spikelets violet and glaucous, upper glume short-acuminate and broad-lanceolate to broad-ovate-lanceolate, awned, open meadows, moist to seasonally dry, subalpine meadow zones, see *Collectanea* 2: 94. 1788, *Annales des Sciences Naturelles* 5: 439. 1825.

F. varia Haenke subsp. *alpestris* (Roem. & Schult.) Hack.

Europe. See *Bot. Centralbl.* 8: 407. 1801, *Monographia Festucarum Europearum.* 1882.

F. varia Haenke subsp. *scoparia* A. Kern. & Hack. (*Festuca gautieri* subsp. *scoparia* (Kerner & Hackel) Kerguélen)

Europe. See *Lejeunia* 110: 58. 1983.

F. vasconcensis (Markgr.-Dann.) Auquier & Kerguélen (*Festuca ovina* L. subsp. *vasconcensis* Markgr.-Dann.)

Europe. See *Bulletin du Centre d'Etudes et de Recherches Scientifiques. Biarritz* 10(2): 321. 1974, *Bull. Soc. Bot. Fr.* 123(5-6): 320. 1976.

F. venezuelana Stancik

Venezuela. Páramos, see *Darwiniana* 41(1-4): 111-112, f. 15b-l. 2003.

F. ventanica Speg.

Argentina, Buenos Aires, Sierra Ventana. Rare species, see Carlos Luigi Spegazzini (1858-1926), *Contribucion al estudio de la flora de la Sierra de la Ventana ...* 72. La Plata 1896 and *Boletín de la Sociedad Argentina de Botánica* 25: 415-423. 1988.

F. venusta St.-Yves

Mongolia, Russia. Mountain steppe, poorly drained areas.

F. versuta Beal (*Festuca johnsonii* (Vasey) Piper; *Festuca nutans* var. *johnsonii* Vasey; *Festuca obtusa* subsp. *versuta* (Beal) St.-Yves; *Festuca texana* Vasey, nom. illeg., non *Festuca texana* Steud.)

North America, U.S. Perennial, contains endophytes, tufted, green or glaucous, slender, glabrous, erect, sheaths open, auricles present or absent, ligules without cilia, open panicle, ovary apex pubescent, spikelets loosely arranged, found in forest and woodland, moist shaded sites, see *Bulletin of the Torrey Botanical Club* 13(7): 119. 1886, *Contributions from the United States National Herbarium* 2(3): 548. 1894, *Grasses of North America for Farmers and Students* 2: 589. 1896 and *Contributions from the United States National Herbarium* 10: 35. 1906, *Candollea* 2: 280. 1925.

in English: Texas fescue

F. villipalea (St.-Yves) E.B. Alexeev (*Festuca dissitiflora* subsp. *loricata* var. *villipalea* St.-Yves)

Peru, Bolivia. Caespitose, erect, ligules ciliolate, leaf blades densely scabrous or shortly pubescent, lax panicles linear with scabrous branches, spikelets elliptic-oblong, 3- to 4-flowered, scabrous glumes lanceolate, lemmas lanceolate acuminate or mucronate, palea apex pubescent, ovary glabrous, see *Candollea* 3: 250. 1927, *Bot. Zhurn. (Moscow & Leningrad)* 70(9): 1244. 1985.

F. violacea Schleich. ex Gaudin (*Festuca rubra* subsp. *violacea* (Gaudin) Hack.; *Festuca rubra* var. *violacea* (Gaudin) Hack.; *Festuca violacea* Gaudin; *Schedonorus violaceus* (Gaudin) P. Beauv.)

Europe, Greece, Italy. Useful for erosion control, see *Species Plantarum* 1: 74. 1753, *Alpina* 3: 57. 1808, *Agrost. Helv.* 1: 231. 1811, *Essai d'une Nouvelle Agrostographie* 177. 1812, *Botanisches Centralblatt* 7(12): 406. 1881 and *Candollea* 52: 411. 1997, *Canad. J. Bot.* 77: 995. 1999.

F. violacea Schleich. ex Gaudin subsp. *handellii* Markgr.-Dann.

Europe, Greece. See *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 56: 139. 1976.

F. violacea Schleich. ex Gaudin subsp. *macrathera* (Hack.) Markgr.-Dann. (*Festuca macrathera* (Hack.) Pignatti & Markgr.-Dann.; *Festuca violacea* f. *macrathera* (Hack.) Hayek; *Festuca violacea* subsp. *macrathera* (Hack.) Markgr.-Dann.; *Festuca violacea* Schleich. ex Gaudin subsp. *macrathera* (Hack. ex Beck) Markgr.-Dann.; *Festuca violacea* Schleich. ex Gaudin subsp. *violacea* var. *macrathera* (Hack. ex Beck) Markgr.-Dann.; *Festuca violacea* var. *macrathera* Hack.)

Europe, Italy. See *Alpina* 3: 57. 1808, *Annalen des K. K. Naturhistorischen Hofmuseums* 2: 45. Vienna 1887 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 283. 1933, *Botanical Journal of the Linnean Society* 76(4): 326. 1978, *Flora Analytica d'Italia* 3: 493. 1982.

F. violacea Schleich. ex Gaudin subsp. *violacea*

Europe, France. See *Alpina* 3: 57. 1808.

F. viridula Vasey (*Festuca howellii* Hack. ex Beal; *Festuca viridula* var. *howellii* (Hack. ex Beal) St.-Yves; *Festuca viridula* var. *vaseyana* St.-Yves; *Festuca viridula* var. *viridula*; *Gnomonia viridula* (Vasey) Lunell)

North America, northwestern and southwestern U.S., Canada. Perennial, green, erect, densely tufted, small clumps forming, shortly rhizomatous, dead sheaths do not remain around the base of the plants, open sheaths entire and glabrous, auricles present, ligules ciliate, flower head open to somewhat contracted, glumes unequal and distinctly keeled, lemmas keeled, awnless or awned, ovary apex densely pubescent, forage, palatable, common in dry habitats, dry

slopes, subalpine or alpine meadows, see *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 93. 1893, *Contr. U.S. Natl. Herb.* 1: 279. 1893, *Grasses of North America for Farmers and Students* 2: 591. 1896 and *American Midland Naturalist* 4: 224. 1915, *Candollea* 2: 265-266. 1925.

in English: green fescue, green-leaf fescue, mountain bunchgrass, mountain bunchfescue

F. vivipara (L.) Sm. (*Festuca frederikseniae* E.B. Alexeev; *Festuca ovina* f. *vivipara* (L.) St.-Yves; *Festuca ovina* L. subsp. *ovina* var. *vivipara* L.; *Festuca ovina* subvar. *vivipara* (L.) Hack.; *Festuca ovina* var. *vivipara* L.; *Festuca supina* auct. non Schur.; *Festuca supina* subsp. *vivipara* (L.) Richt.; *Festuca tenuifolia* var. *vivipara* (L.) Ducommun; *Festuca vivipara* auct. non (L.) Sm.; *Festuca vivipara* (L.) Sm. subsp. *glabra* Frederiksen; *Festuca vivipara* subsp. *vivipara*; *Festuca vivipara* var. *vivipara*; *Festuca viviparoides* Krajina ex Pavlick)

North Europe, Russia, North America. Perennial, spikelets producing small plantlets, waterside of lakes and streams, see *Species Plantarum* 1: 73-74. 1753, *Flora Suecica, Editio Secunda Aucta et Emendata* 31. 1755, *Flora Britannica* 1: 114. 1800, *Monographia Festucarum Europearum* 89. 1882 and *Candollea* 2: 244. 1925, *Canadian Journal of Botany* 62: 2454. 1984, *Novosti Sist. Vyss. Rast.* 22: 28. 1985, *Symbolae Botanicae Upsaliensis* 27: 155-167. 1986, *Watsonia* 16: 301. 1987, *Bot. J. Linn. Soc.* 106: 371. 1991.

in English: northern fescue

F. viviparoides Krajina ex Pavlick (*Festuca brachyphylla* f. *vivipara* Skvortsov; *Festuca brevifolia* R. Br. var. *arctica* Saint-Yves subv. *genuina* f. *vivipara* Saint-Yves; *Festuca ovina* var. *vivipara* L. pro parte; *Festuca supina* auct. non Schur.; *Festuca vivipara* auct. non (L.) Sm.; *Festuca vivipara* subsp. *glabra* Frederiksen; *Festuca vivipara* var. *glabra* Frederiksen; *Festuca viviparoides* subsp. *krajinae* Pavlick; *Festuca viviparoides* var. *krajinae* Pavlick)

North America, U.S., British Columbia. Caespitose, glaucous, erect, glabrous or hairy, leaves mostly basal, sheaths fused, ligule membranous, inflorescence paniculate, spikelets pedicellate, palea absent, found in imperfectly drained moist areas, often confused with *Festuca baffinensis* Polunin or *Festuca brachyphylla* Schult. & Schult.f., see *Flora Britannica* 1: 114. 1800 and *Nordic Journal of Botany* 1: 288 (-289). 1981, *Canadian Journal of Botany* 62: 2454, 2457. 1984.

in English: northern fescue

F. viviparoides Krajina ex Pavlick subsp. *krajinae* Pavlick
North America. See *Canadian Journal of Botany* 62: 2457. 1984.

F. viviparoides Krajina ex Pavlick subsp. *viviparoides*
North America.

F. vizzavonae Ronniger

Europe. See *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 68: 226. 1918, *Parlatorea* 2: 130. 1997.

F. vulpioides Steud. (*Festuca vulpioides* Schur)

South Africa. Perennial, rare, tufted or sprawling, narrow and contracted panicle, lemmas acute or awned, found at high altitudes, see *Enumeratio Plantarum Transsilvaniae* 794. 1866.

F. wagneri Degen, Thaisz & Flatt (*Festuca wagneri* (Degen, Thaisz & Flatt) Krajina)

Hungary, Romania. Rare species, see *Acta Botanica Academiae Scientiarum Hungaricae* 18(1-2): 174. 1973.

F. washingtonica E.B. Alexeev

North America, northwestern U.S. Densely tufted, green to bright green, erect, closed sheaths, auricles absent, ligules ciliate, ovary apex densely hairy, growing in semiarid areas.

F. weberbaueri Pilg. (*Festuca dolichophylla* J. Presl; *Festuca weberbaueri* var. *foliosa* Pilg.; *Festuca weberbaueri* var. *weberbaueri*)

South America, Peru. Bunchgrass, erect foliage, leaf sheath reddish basally, ligule short or very short to minute, auricles erect and papery, leaves stiff and erect, inflorescence flexuous down curving, glumes and lemmas purple tipped, palatable to stock only when green, found in moist places, bottoms, low spots, streamsides, swales, forming large tussocks, see *Reliquiae Haenkeanae* 1(4-5): 258. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 512-513. Leipzig 1906.

in Peru: ichu

F. werdermannii St.-Yves

Chile. See *Candollea* 3: 301. 1927, *Bot. Zhurn. (Moscow & Lenigrad)* 69: 349. 1984.

F. willdenowiana Schult. & Schult.f. (*Festuca guatemalica* E.B. Alexeev; *Festuca mexicana* Roem. & Schult.; *Festuca mexicana* Willd., nom. illeg., non *Festuca mexicana* Roem. & Schult.)

America. See *Systema Vegetabilium* 2: 732. 1817, *Systema Vegetabilium, editio decima sexta* 1: 356. 1825, *Mantissa* 3: 650. 1827 and *Bot. Zhurn. (Moscow & Lenigrad)* 66: 1498. 1981.

F. woodii Stancik

Colombia. See *Darwiniana* 41(1-4): 107, f. 2g-l. 2003.

F. woronowii Hackel

Turkey, Eurasia. See *Bulletin de la Société Botanique de France* 129. 1924, *Willdenowia* 11(2): 207-208. 1981.

F. woronowii Hackel subsp. *argaea* Markgr.-Dann.

Turkey. Rare species, see *Willdenowia* 11(2): 207. 1981.

F. xanthina Roem. & Schult. (*Festuca varia* Haenke subsp. *xanthina* (Roem. & Schult.) Hack.)

Europe. Useful for erosion control, see *Systema Vegetabilium* 2: 721. 1817

F. xenophontis Markgr.-Dann.

Turkey. Rare species, see *Willdenowia* 11(2): 204. 1981.

F. ziganensis Markgr.-Dann.

Turkey. Rare species, see *Willdenowia* 11(2): 205. 1981.

F. x villosa-vivipara (Rosenv.) E.B. Alexeev (*Festuca ovina* f. *x villosa-vivipara* Rosenv.; *Festuca rubra* f. *prolifera* Hyl., nom. illeg., non *Festuca rubra* subsp. *prolifera* Piper)

Europe. See *Species Plantarum* 1: 74. 1753, *Meddelelser om Grønland* 3(3): 735. 1892 and *Uppsala Universitets Arsskrift* 7: 83. 1945, *Novosti Sist. Vyss. Rast.* 22: 23. 1985.

Festucaria Heist. ex Fabr. = Festuca L., Festucaria Fabr.

Referring to *Festuca* L.

Pooideae, Poeae, Loliinae, see *Species Plantarum* 1: 73-74. 1753, *Enumeratio Methodica Plantarum* 207. 1759 and *Ill. Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Watsonia* 16: 300. 1987, *Contributions from the United States National Herbarium* 48: 312-368. 2003.

Festucaria Link = Vulpia Gmelin

Referring to *Festuca* L., pertaining to *Festuca*.

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, type *Festucaria psilantha* (Link) Link, see *Species Plantarum* 1: 73-74. 1753, *Enumeratio Methodica Plantarum* 207. 1759, *Flora Badensis Alsatica* 1: 8. 1805, *Observations sur les Graminées de la Flore Belgique* 99, 100. 1824, *Genera Plantarum* 101. 1836, *Linnaea* 17(4): 398. 1844, *Die Natürlichen Pflanzenfamilien* 2(2): 75. 1887 and *Ill. Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Nordic Journal of Botany* 1(1): 17-26. 1981, *Watsonia* 16: 300. 1987, *Flora Mesoamericana* 6: 228. 1994, *Bothalia* 27: 75-82. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Bothalia* 29(2): 335-341. 1999, *Systematic Botany* 27(2): 241-251. 2002, *Contributions from the United States National Herbarium* 48: 368, 690-694. 2003.

Festucella E.B. Alexeev = Austrofestuca (Tzvelev) Alexeev

The diminutive of *Festuca* L.

1 species, eastern Australia. Pooideae, Poodae, Poeae, perennial, densely caespitose, herbaceous, unbranched, glabrous, leaves mainly basal, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets flattened, 2 glumes more or less equal or

subequal, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, type *Festucella eriopoda* (Vickery) E.B. Alexeev, see *Bot. Zhurn.* 56: 1257. 1971, *New Zealand Journal of Botany* 24: 425-503. 1986, *New Zealand Journal of Botany* 36: 329-367. 1998.

Species

F. eriopoda (Vickery) E.B. Alexeev (*Austrofestuca eriopoda* (Vickery) S.W.L. Jacobs; *Festuca eriopoda* Vickery)

Australia, New South Wales, Victoria. Perennial, slender and erect, greenish, forming dense tussocks, leaves rough and linear, panicle slender and open, lower glume 3-nerved, upper glume 3-5-nerved, decorative, moist soils, forage grass, see *Contributions from the New South Wales National Herbarium* 1: 10. 1939, *Telopea* 3(4): 602. 1990.

in English: lanky fescue, snow fescue

Festucopsis (C.E. Hubbard) Melderis = *Elymus* L.

Resembling the genus *Festuca* L.

Two species, Albania, High Atlas of Morocco. Pooideae, Triticoideae, Triticeae, perennial, caespitose, herbaceous, leaves nonauriculate, connate basal sheaths, ligule a very short unfringed membrane, old basal sheaths fibrous, plants bisexual, inflorescence a single spike, 2 glumes more or less equal or subequal, lower glume 1-3-nerved or 3-4-nerved, upper glume 3-6-nerved, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, open habitats, stony ground, rocky places, see *Botanical Journal of the Linnean Society* 76: 317. 1978, *Willdenowia* 21: 87-104. 1991, *Contributions from the United States National Herbarium* 48: 279-307, 312-368. 2003.

Species

F. festucoides (Maire) Á. Löve (*Agropyron festucoides* Maire; *Agropyron festucoides* f. *acutiflorum* (Emb.) Brichambaut & Sauvage; *Agropyron festucoides* f. *atherantha* Brichambaut & Sauvage; *Agropyron festucoides* f. *muticum* (Emb.) Brichambaut & Sauvage; *Agropyron festucoides* subvar. *acutiflorum* (Emb.) Maire & Weiller; *Agropyron festucoides* subvar. *aristulatum* Maire & Weiller; *Agropyron festucoides* subvar. *glabrum* (Maire) Maire & Weiller; *Agropyron festucoides* subvar. *muticum* (Emb.) Maire & Weiller; *Agropyron festucoides* subvar. *muticum* (Emb.) Emb.; *Agropyron festucoides* var. *leiorrhachis* (Maire) Maire & Weiller; *Agropyron festucoides* var. *pseudofestucoides* (Emb.) Maire & Weiller; *Agropyron pseudofestucoides* (Emb.) Emb.; *Agropyron pseudofestucoides* f. *glabrum* Maire; *Agropyron pseudofestucoides* f. *leiorrhachis* Maire; *Agropyron pseudofestucoides* var. *acutiflorum* Emb.; *Agropyron pseudofestucoides* var. *mutica* Emb.)

Morocco, Grand Atlas. See *Bulletin de la Société des Sciences Naturelles du Maroc* 8: 142. 1928, *Bulletin de la Société des Sciences Naturelles du Maroc* 15: 191. 1935, *Flore de l'Afrique du Nord* 460. 1936, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 95, 369-370. 1939, *Bulletin de la Société des Sciences Naturelles du Maroc* 34: 245, 250. 1954, *Flore de l'Afrique du Nord* 3: 321-322, 332. 1955, *Feddes Repertorium* 95(7-8): 442. 1984.

F. serpentina (C.E. Hubb.) Melderis (*Agropyron festucifolium* Czernj. & C.D. Chase; *Agropyron kosaninii* Czernj. & Soska, nom. illeg., non *Agropyron kosaninii* Nábelek; *Brachypodium albanicum* Auct. & Kitan.; *Brachypodium serpentina* C.E. Hubb.)

North Africa. See *Hooker's Icones Plantarum* 33: t. 3280. 1935, *Novosti Sist. Vyss. Rast.* 1966: 302, 306. 1966, *Journal of the Linnean Society, Botany* 76: 317. 1978, *Willdenowia* 21: 87-104. 1991, *Berichte des Geobotanischen Instit. der Eidgenössische Techn. Hochschule Stiftung Rübel* 57: 182-192. Zürich 1991, *Candollea* 50(2): 457-493. 1995, *Plant Systematics and Evolution* 201: 75-82. 1996.

x Festulolium Asch. & Graebn.

Festuca x *Lolium*.

See *Synopsis der mitteleuropäischen Flora* 2(1): 768. 1902, *Genera Graminum* 375. 1986, *Contributions from the United States National Herbarium* 48: 368. 2003.

x Festulpia Stace & Cotton

Festuca x *Vulpia*.

See *Watsonia* 10: 136. 1974, *Genera Graminum* 375. 1986.

Fibichia Koeler = *Cynodon* Rich.

Chloridoideae, Cynodonteae, Chloridinae, type *Fibichia umbellata* Koeler (nom. illeg. superfl. for *Panicum dactylon* L.), see *Descriptio Graminum in Gallia et Germania* 302. 1802, *Syn. Pl.* 1: 85. 1805 and *Contributions from the United States National Herbarium* 41: 59-63, 121. 2001.

Filgueirasia Gerald F. Guala

Dedicated to Dr. Tarciso S. Filgueiras.

Two species, Brazil. Bambusoideae, Bambuseae, Arthrostylidiinae, perennial, caespitose, erect, coarse, branch complement 1-15, culm leaves lanceolate, compact knotty rhizomes, florets 3-15 per spikelet, lodicules ovate, good forage for domestic stock and wildlife, cerrado, open savannah, Brazilian planalto, see *Smithsonian Contributions to Botany* 9: 9-12, figs. 1-2. 1973, *Contributions from the*

United States National Herbarium 39: 12. 2000, *Bamboo Science & Culture: The Journal of the American Bamboo Society* 17(1): 1-3. 2003 [A new genus of bamboos from the cerrados of Brazil].

Species

F. arenicola (McClure) Guala (*Apoclada arenicola* McClure)

Brazil, Matto Grosso. Culm leaves deciduous, midculm branch complements with usually 1-3 primary branches in vegetative condition, raceme of 1-4 spikelets, drought-tolerant, sandy soils, see *Smithsonian Contr. Bot.* 9: 9, f. 1-2. 1973.

F. cannavieria (Silveira) Guala (*Apoclada cannavieira* (Silveira) McClure; *Arundinaria cannavieira* Alvaro da Silveira)

Brazil. Culm leaves persistent, midculm branch complements with usually 5-15 primary branches in vegetative condition, sandy soils, see *Flora Boreali-Americana* 1: 73. 1803 and *Arquivos do Museu Nacional do Rio de Janeiro* 22: 101, f. 2. 1919, *Smithsonian Contr. Bot.* 9: 12, f. 3. 1973, *Edinburgh Journal of Botany* 48: 73-80. 1991.

Filipedium Raizada & S.K. Jain = *Capillipedium* Stapf

Latin *filum* "thread" and *pes, pedis* "a foot," see also *Capillipedium* Stapf, Latin *capillus, i* "the hair" and *pes, pedis*, referring to the spikelet, pedicels and base are ciliate.

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, type *Filipedium planipedicellatum* (Bor) Raiz. & Jain, see *Flora of Tropical Africa* 9: 11, 169. 1917, *Journal of the Bombay Natural History Society* 49: 682-683. 1951.

Fimbribambusa Widjaja

Two species, Indonesia. Sympodial, erect, loosely tufted, spreading crest on each node, lodicules entire, 6 stamens, ovary glabrous and ovoid, type *Fimbribambusa horsfieldii* (Munro) Widjaja, see *Transactions of the Linnean Society of London* 26(1): 115. 1868 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 175. 1914, *Reinwardtia* 11(2): 80-83. 1997.

Species

F. horsfieldii (Munro) Widjaja (*Bambusa horsfieldii* Munro)
Indonesia.

F. microcephala (Pilg.) Widjaja (*Dendrocalamus microcephalus* Pilg.)

Indonesia.

Fingerhuthia Nees ex Lehm. = *Fingerhuthia* Nees, *Lasiotrichos* Lehm.

After the German botanist Carl (Karl) Anton Fingerhuth, 1798-1876, physician, author of *Tentamen florulae lichenum Eiffliaeae*. [Norimbergae] Nürnberg 1829 and *Monographia generis Capsici*. Düsseldorf 1832, with the German botanist Mathias Joseph Bluff (1805-1837) wrote Sectio 1 [*Plantae phanerogamicae seu vasculosae*. 1825-1826] of *Compendium florum Germanicae*; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 541. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. Stuttgart 1993.

About 1 or 2 species, southern Africa, Afghanistan, Arabia. Chloridoideae, Eragrostideae, or Chloridoideae, Eragrostideae, Unioliinae, perennial or annual, unarmed, caespitose, herbaceous, unbranched, bend of the culms at the nodes, auricles absent, ligule a fringe of hairs, leaves mainly basal, plants bisexual, inflorescence racemose or paniculate, spikelets falling entire, 1 fertile floret, 2 glumes more or less equal and shortly awned, upper glume and lower glume 1-nerved, lemmas entire and shortly awned, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas white, open habitats, desert areas, along roadsides, rocky hillsides, savannah, dry riverbeds, type *Fingerhuthia africana* Nees ex Lehm., see *Semina in Horto Botanico Hamburgensi* 1834: 7. 1834 [also *Delectus Seminum quae in Horto Hamburgensium Botanico* 1834: 7. 1834], *Linnaea* 10, litt.: 112. 1836 and *Journal of Applied Ecology* 37(3): 491-507. June 2000, *Contributions from the United States National Herbarium* 41: 121, 130. 2001, *Journal of Biogeography* 31(5): 831-841. May 2004.

Species

F. africana Nees ex Lehm. (*Fingerhuthia afghanica* Boiss.; *Fingerhuthia africana* Lehman ex Aitch., nom. illeg., non *Fingerhuthia africana* Lehm.; *Fingerhuthia africana* Lehm.)

Afghanistan, Arabia, Angola, Namibia, South Africa. Perennial bunchgrass, sometimes annual and smaller, very variable, robust, more or less leafy, unbranched, rhizomatous, erect, tufted to densely tufted, slender rhizomes, fairly strong root system, leaf blade expanded, ligule a ring of short hairs, leaves ending in a sharp point, inflorescence dense cylindrical spike-like panicle, spikelets single and flattened, each glume shortly awned and shortly hairy on the keels, lemma apex rounded, reasonably palatable, pasture, growing on open grassland, rocky hillsides, on dry stony hills, along roadsides, on well drained sandy and gravelly soils, shallow rocky soil, disturbed sites, waste grounds, on stream bank, cliffs, dry regions, on lime-rich and stony soils, see *Semina in Horto Botanico Hamburgensi*

1834: 7. 1834, *Journal of the Linnean Society, Botany* 10: 193. 1882, *Flora Orientalis* 5: 569. 1884.

in English: thimble grass

in South Africa: vingerhoedgras, stechdegengras, kalkgras

F. sesleriiformis Nees (also spelled *sesleriaeformis*)

Namibia, South Africa. Perennial bunchgrass, robust, rhizomatous, rhizome robust, ligule a fringe of short hairs, basal leaf sheaths shining, inflorescence spike-like panicle, glumes shortly hairy on the keels, lemma apex acuminate, usually forming clumps or large tussocks, pasture, palatable or relatively palatable when young, stiff brooms making, useful for erosion control, found in moist sand in stream bed, in waterlogged and poorly drained soils, in vleis and near rivers, dry stream bank, overgrazed fields, black clay in vleis, see *Florae Africae Australioris Illustrationes Monographicae* 138. 1841.

in English: thimble grass

in South Africa: vingerhoedgras

Fiorinia Parl. = *Aira* L.

Pooideae, Poaceae, Airinae, see *Species Plantarum* 1: 63-66. 1753, *Flora italiana, ossia descrizione delle piante* ... 1: 232. 1848[-1850] and *Amer. J. Bot.* 21: 135. 1934, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 89-96, 368. 2003.

Flavia Heist. ex Fabr. = *Anthoxanthum* L.,

Flavia Fabricius

Latin *flavus* "pure yellow," see also *Anthoxanthum* L., Greek *anthos* "flower" and *xanthos* "yellow," the spikelets are yellowish.

Pooideae, Poaceae, Phalaridinae, see *Species Plantarum* 1: 28. 1753, *Enumeratio Methodica Plantarum* 206. 1759 and *Regnum Veg.* 127: 19. 1993, *Contributions from the United States National Herbarium* 48: 111-115, 368. 2003.

Flexularia Raf.

Latin *flexus* "a bending, winding."

Chloridoideae, see C.S. Rafinesque, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 105. 1819 and E.D. Merrill, *Index rafinesquianus*. 75. 1949, *Genera Graminum* 376. 1999.

Fluminia Fr. = *Scolochloa* Link

Pooideae, Poaceae, Scolochloinae, type *Fluminia arundinacea* (Roem. & Schult.) Fr., see *Hort. Berol.* 1: 136-137. 1827, *Summa Vegetabilium Scandinaviae* 1: 247. 1846 and

United States Department of Agriculture: Bulletin 772: 38, f. 11. 1920, *Contributions from the United States National Herbarium* 48: 368, 609. 2003.

Foenodorum E.H.L. Krause =

Anthoxanthum L.

Pooideae, Poaceae, Phalaridinae, see *Species Plantarum* 1: 28. 1753 and *Regnum Veg.* 127: 19. 1993, *Contributions from the United States National Herbarium* 48: 111-115, 368. 2003.

Forasaccus Bubani = *Bromus* L.

Latin *foro*, *avi*, *atum* "to bore, pierce" and *saccus* "a sack, bag."

Pooideae, Bromaceae, see *Species Plantarum* 1: 76. 1753 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Flora Pyrenaea* ... 4: 379. 1901, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Bot. Jahrb. Syst.* 102: 447. 1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191, 368-369. 2003.

Fourniera Scribn. = *Bouteloua* Lag.,

Fourniera J. Bommer ex E. Fourn.

(Cyatheaceae), *Soderstromia* C.V. Morton

Possibly dedicated to the French botanist Eugène Pierre Nicolas Fournier, 1834-1884, wrote *Mexicanas plantas*. Paris 1872 and 1886 [Associates: Émile Bescherelle, 1828-1903, Joseph Decaisne, 1807-1882, and William Nylander, 1822-1899], contributed to C.F.P. von Martius *Flora Brasiliensis*. 1885; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 563. 1965; J. Decaisne, editor, *Mission scientifique au Mexique et dans l'Amérique centrale*. Paris 1868-1897; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 131. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 172. 1973; George H.M. Lawrence, in *D.S.B.* 10: 165-166. 1981.

Chloridoideae, Cynodonteae, Boutelouinae, type *Fourniera mexicana* Scribn., see *Annales des Sciences Naturelles; Botanique, sér. 5*, 18: 347. 1873, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 7-9. 1897 and *Leaflets of Western Botany* 10: 327. 1966, *Contributions*

from the *United States National Herbarium* 41: 20-33, 121, 195. 2001.

Froesiochloa G.A. Black

Named for Ricardo de Lemos Fróes, 1891-1960.

About 1 or 2 species, Brazil, French Guiana. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, leafy, herbaceous, ligule an unfringed membrane, plants monoecious, all fertile spikelets unisexual, inflorescence spicate, 1 female spikelet surrounded by 6-10 male spikelets, 2 glumes acuminate, lower glume 3- to 7-nerved, upper glume 3- to 7-nerved, lemma coriaceous, spikelets falling in clusters, palea present, lodicules present, no stamens, ovary glabrous, male florets staminate, forest shade, primary forest, type *Froesiochloa boutelouoides* G.A. Black, see *Fl. Friburg.* 1: 172. 1825 and *Blumea, Suppl.* 3: 62. 1946, *Boletim Técnico do Instituto Agrônomo do Norte* 20: 29-30, pl. 1. Belém, Brazil 1950, *Brittonia* 34: 25-29. 1982, *Brittonia* 37: 22-35. 1985, *Flora of the Guianas. Series A, Phanerogams* 229-233. 1990, *American Bamboos* 278-280. 1999, *Contributions from the United States National Herbarium* 39: 57-58. 2000.

Species

F. boutelouoides G.A. Black

Brazil. See *Boletim Técnico do Instituto Agrônomo do Norte* 20: 30, pl. 1. 1950, *Smithsonian Contributions to Botany* 44: 17, 20. 1980.

Fruentum E.H.L. Krause = *Triticum* L.

Latin *frumentum* "corn, grain."

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 1: 85-87. 1753, *Oekonomisch-technische Flora Böhmens* 1: 425. 1836, *Annales des Sciences Physiques et Naturelles, d'Agriculture et de l'Industrie, Publiées par la Société Royale d'Agriculture, etc., de Lyon.* 5: 103-196, pl. 2-10. 1842 [*Descriptions et figures des céréales européennes*], *Botanisches Centralblatt* 73: 339. 1898 and A. Prati, *Vocabolario etimologico italiano.* Torino 1951, *Feddes Repert.* 95(7-8): 497. 1984, *Taxon* 35: 144-149. 1986, *Wageningen Agricultural University Papers* 94-7: 1-512. 1994 [Wild wheats: a monograph of *Aegilops* L. and *Amblyopyrum* (Jaub. & Spach) Eig.], *Contributions from the United States National Herbarium* 48: 369, 676-684. 2003.

Fussia Schur = *Aira* L.

After Johann Mihály (Michael) Fuss, 1814-1883, botanist, preacher, author of *Flora transsilvaniae excursoria.* Hermannstadt 1866; see J.H. Barnhart, *Biographical notes upon botanists.* 2: 21. 1965.

Pooideae, Poeae, Airinae, type *Fussia praecox* (L.) Schur, see *Species Plantarum* 1: 63, 65-66. 1753, *Enumeratio Plantarum Transsilvaniae* 754. May-Sep 1866 and *U.S. Dept. Agr. Bull.* 772: 116. 1920, *Amer. J. Bot.* 21: 135. 1934, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 89-96, 369. 2003.

G

Galeottia M. Martens & Galeotti =
Galeottia A. Rich. & Galeotti (Orchidaceae),
Galeottia Nees (Acanthaceae), *Krombholzia*
Rupr. ex E. Fourn., *Zeugites* P. Browne

For the French-born Belgian botanist Henri-Guillaume Galeotti, 1814-1858, explorer in Central America, Director of the Botanic Garden of Bruxelles; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 24. 1965; *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 247. 1842; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. 209-211. Paris, Leipzig 1845; *Annales des Sciences Naturelles; Botanique, sér. 3* 3: 25. 1845; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 713. Stuttgart 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; Rogers McVaugh, "Galeotti's Botanical Work in Mexico: The Numbering of his Collections and a Brief Itinerary." *Contr. Univ. Mich. Herb.* 11(5): 291-297. 1972; Michael Joseph Scheidweiler (1799-1861), "Descriptio diagnostica nonnullarum Cactearum quae a domino Galeotti in provinciis Potosi et Guanaxato regni Mexicani inveniuntur. Genus *Ariocarpus*." in *Bull. Acad. Sci. Brux.* 5: 491-492. 1838; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970.

Centothechoideae, Centotheceae, or Panicoideae, Centotheceae, see *The Civil and Natural History of Jamaica in Three Parts* 341. 1756, *Species Plantarum. Editio quarta* 4: 204. 1805, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 247. 1842, *Annales des Sciences Naturelles; Botanique, sér. 3* 3: 25. 1845, *Prodromus Systematis Naturalis Regni Vegetabilis* 11: 291, 311. 1847, *Biologia Centrali-Americana; ... Botany ...* 2(12): 512. 1882 and *Contributions from the United States National Herbarium* 46: 242, 277, 639-641. 2003.

Gamelythrum Nees = *Amphipogon* R. Br.

Possibly from the Greek *gamos* "marriage, stigma, female part" and *elytron* "sheath, cover, scale, husk."

Arundinoideae, Amphipogoneae, see *Prodromus Florae Novae Hollandiae* 175. 1810, *Hooker's London Journal of*

Botany. 2: 415. 1843 and *Contributions from the New South Wales National Herbarium* 1(5): 281-295. 1950.

Gaoligongshania D.Z. Li, J.R. Xue & N.H. Xia
= *Monocladus* L.C. Chia, H.L. Fung & Y.L.
Yang

One species, China, northwestern Yunnan, Gaoligongshan. Bambusoideae, Bambuseae, Arundinariinae, sympodial, shrubby, tufted, scrambling, sometimes epiphytic on trees, rhizomes pachymorph, culms zigzag, branch complement solitary, culm sheaths persistent and leathery, ligules short, auricles large and embracing culms, leaf blades lanceolate and recurved, inflorescence semelauctant and arching, open large panicle on leafy or leafless flowering branches, spikelets 4- to 9-flowered, 2 glumes, lemmas sometimes awned, paleas 2-keeled, 3 lodicules, 3 stamens, ovary glabrous, 3 stigmas plumose, in evergreen broad-leaved forests, medium mountainous area, type *Gaoligongshania megalothyrsa* (Hand.-Mazz.) D.Z. Li, J.R. Xue & N.H. Xia, see *Symbolae Sinicae* 7(5): 1270-1271. 1936, E. Uchimura, "Growth environment and characteristics of some tropical bamboos." *Bamboo Journal* No. 4: 51-60. 1987, *Acta Phytotaxonomica Sinica* 26(3): 211-216, f. 1. 1988, K. Wang & C. Hsueh, "A preliminary study on geographical distribution and types of bamboo forest in Xishuangbanna, Yunnan, China." *Guihaia* 14(2): 144-150. 1994, J. Xue, Y. Yang, C. Hui & R. Li (editors.), *Bamboo Resources in Yunnan and Their Exploitation and Utilization*. Yunnan Press of Sciences and Technology, Kunming, China. 1995, *Acta Phytotaxonomica Sinica* 33(6): 597-601. 1995, D.Z. Li & J.R. Xue, "The diversity and conservation of bamboos in Yunnan, China." *The Bamboos* 6: 83-94. 1997, Li De-Zhu, "Notes on Bambusoideae (Gramineae) in Yunnan and adjacent Sichuan and Burma." *Acta Botanica Yunnanica* vol. 24 no. 5. 2002 [in Chinese], Zhen-Hua Guo, Yong-Yan Chen & De-Zhu Li, "Phylogenetic studies on the *Thamnocalamus* group and its allies (Gramineae: Bambusoideae) based on its sequence data." *Molecular Phylogenetics and Evolution* 22(1): 20-30. 2002, Yang Yuming, Wang Kanglin, Pei Shengji and Hao Jiming, "Bamboo diversity and traditional uses in Yunnan, China." *Mountain Research and Development* 24(2): 157-165. 2004, Y. Yang, K. Tian, J. Hao and S. Pei, "Biodiversity and biodiversity conservation in Yunnan,

China." *Biodiversity and Conservation* 13(4): 813-826. Apr 2004.

Species

G. megalothyrsa (Hand.-Mazz.) D.Z. Li, J.R. Xue & N.H. Xia (*Arundinaria megalothyrsa* Hand.-Mazz.; *Indocalamus megalothyrsa* (Hand.-Mazz.) C.S. Chao & C.D. Chu; *Monocladus macrophyllus* Hsueh & C.M. Hui; *Monocladus megalothyrsus* (Hand.-Mazz.) T.P. Yi; *Yushania megalothyrsa* (Hand.-Mazz.) T.H. Wen)

China, Gaoligong Mountain Range. Covered with white powders when young, culm sheaths persistent yellowish or greenish brown, densely covered by short spiny hairs, auricles falcate, leaf blades oblong lanceolate, leaves sheaths white powdery and densely yellowish hispid, spikelets linear, glumes long awned, lemmas lanceolate, ovary oblong, noninvasive, see *Symbolae Sinicae* 7(5): 1270-1271. 1936, *J. Nanjing Techn. Forest Prod.* 1981(3): 33-44, f. 1-6. 1981 [also *Journal of Nanjing Technological College of Forest Products*], *Journal of Bamboo Research* 6(3): 34. 1987, *Journal of Bamboo Research* 12(2): 54. 1993.

in China: gongshanzhu shu

Garnotia Brongn. = *Berghausia* Endl., *Miquelia* Arn. & Nees

For the French (b. Brest) naturalist Prosper Garnot, 1794-1838 (Paris), M.D. in 1822, assistant surgeon in the French navy and on the voyage of the *Coquille* commanded by Louis-Isidor Duperrey (1786-1865), zoologist and anthropologist (described the Alfurs, a people who inhabit the interior of New Guinea), he made several voyages to Cayenne, Martinique, the Antilles and the South Pacific, he wrote *Essai sur le Cholera-morbus*. Paris 1822 and *Remarques sur la Zoologie des Iles Malouines, faites pendant le voyage autour du monde de la corvette la Coquille, exécuté en 1822-25.* [Paris] 1826. See A.P.M. Sanders, in *Dictionary of Scientific Biography*. Editor in Chief Charles Coulston Gillispie. 5: 276-277. 1981; L.I. Duperrey, *Mémoire sur les opérations géographiques faites dans la campagne de la corvette de S.M. La Coquille*. Paris [1827] and *Voyage autour du Monde exécuté par ordre du Roi sur la corvette La Coquille pendant les années 1822-1825*. Paris 1826; R.P. Lesson, *Journal d'un Voyage Pittoresque autour du Monde exécuté sur la Corvette La Coquille commandée par M. L.I. Duperrey*. Paris 1830 and *Voyage autour du Monde entrepris par ordre du Gouvernement sur la Corvette La Coquille*. Paris 1838-1839; C.A. Sharp, *Duperrey's Visit to New Zealand in 1824*. Wellington 1971; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 164. Cape Town 1981.

Some 29-30 species, tropical Asia, south and eastern Asia to Pacific, Polynesia, northeast Australia, Queensland.

Panicoideae, Panicodae, Arundinelleae, or Andropogoneae, annual or mostly perennial, tufted, rhizomatous or often caespitose, slender, weak or stiff, slender to stout, erect or decumbent, geniculate, auricles absent, ligule a short fringed membrane, leaf blades linear to lanceolate, plants and spikelets bisexual, cleistogamous or chasmogamous, inflorescence a narrow panicle open or contracted, spikelets geminate or solitary or in threes and usually bearded at the base, 1-flowered lanceolate spikelets, a single bisexual floret, when present hidden cleistogenes in the leaf sheaths, 2 glumes more or less equal acute to awned, lower glume convex on the back 3-5-nerved, upper glume 3-5-nerved, lemma 3-nerved cartilaginous and long-awned with geniculate or straight awn, palea auriculate, 2 free and fleshy small lodicules, 3 stamens, ovary glabrous, 2 stigmas, woodland, mostly in shady places, near the edges of forest, open grassland, rocky slopes, moist areas, type *Garnotia stricta* Brongn., see *Voyage autour du Monde* 2(2): 132-133, t. 21. 1832 [also *Voy. La Coquille Bot. Phan.*], *Gramineae* 45-48. 1841, *Genera Plantarum Suppl.* 3: 57. 1843 and *Kew Bulletin* 27: 515-562. 1972, *Bot. Review* (Lancaster) 59(4): 273-343. 1993.

Species

G. acutigluma (Steudel) Ohwi (*Garnotia acutigluma* var. *aberrans* Santos; *Garnotia acutigluma* var. *ambigua* Santos; *Garnotia acutigluma* var. *longiaristata* (Santos) Jansen; *Garnotia acutigluma* var. *subvestita* Santos; *Garnotia caespitosa* Santos; *Garnotia caespitosa* var. *emarginata* Santos; *Garnotia caespitosa* var. *longiuscula* Santos; *Garnotia erecta* Santos; *Garnotia erecta* var. *tonkinensis* Santos; *Garnotia flexuosa* Santos; *Garnotia himalayensis* Santos; *Garnotia himalayensis* var. *lanceolata* Santos; *Garnotia himalayensis* var. *sikkimensis* Santos; *Garnotia khasiana* Santos; *Garnotia khasiana* f. *mucronata* Santos; *Garnotia khasiana* var. *clarkei* Santos; *Garnotia khasiana* var. *hemitrichophylla* Santos; *Garnotia khasiana* var. *partipubens* Santos; *Garnotia longiaristata* Santos; *Garnotia longiaristata* var. *basilanensis* Santos; *Garnotia sandwicensis* Hillebr.; *Garnotia trisetata* Hitchc.; *Garnotia trisetata* var. *decumbens* Keng; *Urachne acutigluma* Steud.)

Asia, Japan. Perennial, caespitose, erect or ascending, branched, glabrous, leaf sheaths usually hirsute, leaf blades linear or lanceolate and acuminate, leaves hirsute, spikelets with bearded base, glumes acuminate-awned, awn of lemma not geniculated, on grassy slopes, along streams, in moist shady places, see *Synopsis Plantarum Glumacearum* 1: 121. 1854, *Flora of the Hawaiian Islands* 1: 513. 1888 and *Lingnan Science Journal* 7: 200-201. 1929 [1931], *Sunyatsenia* 3(1): 18. 1935, *Botanical Magazine* 55: 393. 1941, *Journal of the Arnold Arboretum* 25(1): 92-93, t. 2. 1944, *Natural and Applied Science Bulletin Univ. Philipp.* 10: 67-68, 70-71, 73-74, 76, 78, 80, 84-85, 87, 94. 1950, *Acta Botanica Neerlandica* 2: 382. 1950.

G. acutigluma (Steudel) Ohwi var. *acutigluma*

Java. Densely tufted, much-branched, with strong well-developed root system, leaf blades usually linear, lemma awn tapering to apex, grazed by cattle, useful as a soil binder.

G. acutigluma (Steudel) Ohwi var. *longiseta* (Hack.) V. Prakash & S.K. Jain (*Garnotia stricta* Brongn.; *Garnotia stricta* var. *longiseta* Hack.)

India, the Philippines. Leaf blades usually lanceolate, awn of lemma with crinkled apical portion, see *Voyage autour du Monde* 2(2): 133, t. 21. 1832 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 15: 141. 1909, *Fascicles of Flora of India* 3: 5-6. 1979.

G. arborum Stapf (*Garnotia arborum* Woodrow; *Garnotia arborum* var. *saxicola* Santos) (growing on branches of trees, with mosses)

India, Deccan. Annual, weak, delicate, hispid at nodes, leaf sheaths hispid or glabrous, leaf blades glabrous, lax panicle with horizontally spreading or deflexed branches, few florets, subequal glumes acuminate-awned, lemma long-awned, see *Journal of the Bombay Natural History Society* 13: 439. 1901, *The Flora of the Presidency of Bombay* 2: 1013. 1908, *Natural and Applied Science Bulletin* 10: 143. 1950, *Grasses of Burma* ... 567. 1960, *Kew Bulletin* 27: 536. 1972.

G. arundinacea Hook.f. (*Garnotia arundinacea* var. *globerrima* Santos)

South India. Perennial, erect, trailing, nodes pubescent, leaf blades subcordate broadly lanceolate and finely tipped, contracted inflorescence paniculate, panicle with densely flowered capillary branches, subequal glumes acuminate-awned, lemma awned, see *The Flora of British India* 7: 243. 1896 and *Natural and Applied Science Bulletin* 10: 116. 1950, *Cytologia* 36: 585. 1971, *Kew Bulletin* 27: 532. 1972.

in India: dobrai hullu

G. barbulata (Nees) Janowski (*Garnotia barbulata* (Nees) Miq.; *Miquelia barbulata* Nees)

Asia. See *Gramineae* 46. 1841 and *Philippine Journal of Science* 13(3): 130. 1918, *Repertorium Specierum Novarum Regni Vegetabilis* 17(477-480): 86. 1921.

G. courtallensis (Arn. & Nees) Thwaites (*Berghausia courtallensis* (Arn. & Nees) Endl. ex Miq.; *Berghausia courtallensis* (Arn. & Nees) Miq.; *Berghausia courtallensis* (Arn. & Nees) Endl.; *Garnotia courtallensis* var. *divaricata* Santos; *Garnotia laevis* Santos; *Garnotia laevis* var. *pilosiuscula* Santos; *Garnotia palniensis* Santos; *Garnotia palniensis* var. *seminudata* Santos; *Garnotia puchiparensis* Bor; *Garnotia subinvoluta* Santos; *Garnotia verticillata* Santos; *Miquelia courtallensis* Arn. & Nees)

Southern India, Chennai, Sri Lanka. Annual, weak, slender, branched, not densely caespitose, erect, geniculate or decumbent at base, nodes villous or hirsute, leaf sheaths

hispid, ligule a ciliate membrane, leaf blades lanceolate-acute, leaves hispid or hirsute, inflorescence paniculate with spaced spikelets, panicle few-flowered, awned or awnless, unequal glumes acute or mucronate, lemma with a geniculate awn, see *Gramineae* 47-48. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 179-180. 1843, *Analecta botanica indica* ... 2: 32. 1851, *Nieuwe Verh. Eerste Kl. Konik. Nederl. Inst. Wetensch. Amsterdam* 3: 32. 1851, *Enumeratio Plantarum Zeylaniae* 363. 1864 and *Handb. Fl. Ceylon* 5: 257. 1900, *Indian Forest Records. Botany* 2: 234. 1941, *Natural and Applied Science Bulletin* 10: 143, 146-147, 150-151. 1950, *Grasses of Ceylon* 58. 1956, *Grasses of Burma* ... 567. 1960, *Kew Bulletin* 27: 519. 1972, *Taxon* 34: 159-164. 1985.

G. elata (Arn. ex Miq.) Jan (*Berghausia elata* Arn. ex Miq.; *Garnotia scoparia* Stapf ex Hook.f.; *Garnotia tenuiglumis* Stapf ex Hook.f.)

South India, Uttar Pradesh. Perennial, erect, caespitose, glabrous, leaf sheaths flabellate, leaf blades linear, panicle densely flowered, spikelets scabrid with bearded base, lower glume acuminate to awned, upper glume acuminate, lemma 2-dentate and awned, awn of lemma geniculate and with twisted column, see *Grasses of Burma* ... 567. 1960, *Indian Forester* 92: 640. 1966, *Cytologia* 36: 585. 1971, *Kew Bulletin* 27: 556. 1972, *Taxon* 25: 161. 1976.

G. exaristata Gould (*Garnotia mutica* sensu Bor; *Garnotia tectorum* var. *valide* Santos)

Southern India, Sri Lanka. Perennial, densely caespitose, clumped, unbranched, stiffly erect, leaf blades lanceolate to oblanceolate, panicle densely flowered with branches short and stiff, spikelets awnless, glumes acute-acuminate, lemma acute-mucronate, in moist places, moist meadows, leaves used for thatching, see *Natural and Applied Science Bulletin* 10: 50. 1950, *Grasses of Burma* ... 568. 1960, *Kew Bulletin* 27(3): 558. 1972.

G. fergusonii Trimen (*Garnotia bidentata* Santos; *Garnotia deflexa* Santos; *Garnotia deflexa* var. *affinis* Santos; *Garnotia deflexa* var. *ferruginea* Santos; *Garnotia fergusonii* var. *fastigiata* Hook.f.; *Garnotia zelanica* Santos) (for the British botanist William Ferguson, 1820-1887 (Colombo, Sri Lanka/Ceylon), in 1862 a Fellow of the Linnean Society, 1839-1887 civil servant in Ceylon, amateur botanist, entomologist, collected algae, wrote *The Palmyra Palm. Borasus flabelliformis*. Colombo 1850, contributed to George Henry Kendrick Thwaites (1812-1882) & Joseph Dalton Hooker, *Enumeratio plantarum Zeylaniae*. London [1858-] 1864. See Edward Frederick Kelaart, *Acantho fiat Justitia*, etc. (Correspondence on the *Acanthus mollis*, etc., between E.F. Kelaart, W. Ferguson, etc.) Colombo 1859; J.H. Barnhart, *Biographical notes upon botanists*. 1: 536. 1965; Henry Trimen (1843-1896), *A Handbook to the Flora of Ceylon*. 5: 375. London 1893-1931; Isaac Henry Burkill

(1870-1965), *Chapters on the History of Botany in India*. Delhi 1965)

Southern India, Sri Lanka. Perennial or annual, slender, decumbent or trailing, branched, nodes glabrous or villous, leaf sheaths more or less glabrous, minute membranous ligule, leaf blades thin and linear-lanceolate, panicle with erect-spreading branches, subequal glumes acuminate to awned, lower glume acute-awned from bilobed apex, lemma awn variable, along riverbanks, grassy ditch, moist ridges, see *Journal of Botany, British and Foreign* 27: 170. 1889 and *A Handbook to the Flora of Ceylon* 5: 255-256. 1900, *Natural and Applied Science Bulletin* 10: 108-109, 111. 1950, *Grasses of Ceylon* 57. 1956, *Grasses of Burma* ... 568. 1960, *Kew Bulletin* 27(3): 519, 537. 1972.

G. fuscata Thwaites

Asia, Sri Lanka. Perennial, decumbent and rooting at the lower nodes, leaf sheaths pilose or glabrous, ligule a short membrane, narrow panicle few-flowered, glumes acuminate or short-awned, lemma with a geniculate awn, see *Enumeratio Plantarum Zeylaniae* 363. 1864 and *Handb. to the Flora of Ceylon* 5: 255. 1900, *Grasses of Ceylon* 57. 1956, *Grasses of Burma* ... 568. 1960.

G. mezii Janowsky (*Garnotia stricta* var. *longiseta* Hack.)

Asia. See *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 15: 141. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 17(4-7): 86. 1921, *Natural and Applied Science Bulletin* 10: 92-93. 1950.

G. micrantha Thwaites

Sri Lanka. Perennial, decumbent and erect, leaf sheaths glabrous, awned or awnless, see *Enumeratio Plantarum Zeylaniae* 363. 1864 and *Handb. to the Flora of Ceylon* 5: 256. 1900, *Grasses of Ceylon* 58. 1956, *Grasses of Burma* ... 568. 1960.

G. micrantha Thwaites var. *micrantha*

Sri Lanka.

G. micrantha Thwaites var. *nana* Stapf (*Garnotia panicoides* var. *puberula* Santos)

Sri Lanka. Lemmas awnless, see *The Flora of British India* 7: 244. 1896[1897] and *Natural and Applied Science Bulletin* 10: 59. 1950.

G. mutica (Munro) Druce (*Berghausia mutica* Munro; *Garnotia tectorum* Hook.f.)

Southern India, Sri Lanka. See *Proceedings of the American Academy of Arts and Sciences* 4: 362. 1864, *The Flora of British India* 7: 242-243. 1897 and *Botanical Exchange Club and Society of the British Isles* 4: 624. 1917.

G. panicoides Trimen

Sri Lanka. Perennial or annual, ligule a minute membrane, panicle branches spreading, awnless, see *Journal of Botany, British and Foreign* 27: 170. 1889 and *Enumeratio Plantarum Zeylaniae* 363. 1864 and *Handb. to the Flora of*

Ceylon 5: 257. 1900, *Natural and Applied Science Bulletin* 10: 59. 1950, *Grasses of Ceylon* 58. 1956, *Grasses of Burma* ... 568. 1960.

G. patula (Munro) Benth. (*Berghausia patula* Munro)

Asia, Hong Kong. See *Proceedings of the American Academy of Arts and Sciences* 4: 362. 1860, *Flora Hongkongensis* 416. 1861 and *Natural and Applied Science Bulletin* 10: 102-103. 1950.

G. patula (Munro) Benth. var. *mucronata* L.C. Chia

China. See *Flora Hainanica* 4: 539. 1977.

G. patula (Munro) Benth. var. *mutica* (Munro) Rendle (*Berghausia mutica* Munro; *Garnotia mutica* (Munro) Druce; *Garnotia mutica* (Munro) Janowski, nom. illeg., non *Garnotia mutica* (Munro) Druce; *Garnotia tectorum* Hook.f.; *Garnotia tectorum* var. *burmensis* Santos)

Asia. See *Proceedings of the American Academy of Arts and Sciences* 4: 362. 1864, *The Flora of British India* 7: 242-243. 1897 and *Journal of the Linnean Society, Botany* 36(254): 387. 1904, *Botanical Exchange Club and Society of the British Isles* 4: 624. 1917, *Repertorium Specierum Novarum Regni Vegetabilis* 17(477-480): 86. 1921, *Natural and Applied Science Bulletin Univ. Philipp.* 10: 50. 1950.

G. polypogonoides Munro ex Oliver

Nepal. Perennial, erect, decumbent, stiff, leaf sheaths glabrous to hispid, leaf blades linear acuminate, narrow panicle contracted with ascending branches, spikelets densely bearded at base, glumes subequal and awned, lemma long awned, see *The Flora of British India* 7: 243. 1897 and *Fl. Assam* 5: 153. 1940, *Natural and Applied Science Bulletin* 10: 139. 1950, *Grasses of Burma* ... 567. 1960, *Fl. E. Himal.* 364. 1966, *Kew Bulletin* 27(3): 535. 1972.

G. puchiparensis Bor

South India, Tamil Nadu, Chennai. Annual, densely tufted, stiff, erect, prostrate, rooting at nodes, branched, nodes pubescent, leaf sheaths softly hairy, leaf blades lanceolate acute, leaves hirsute, panicle many-flowered, branches appressed at nodes, scabrid spikelets, glumes unequal, lower glume almost acute, thatching, see *Voyage autour du Monde* 2(2): 133, t. 21. 1832, *Analecta botanica indica* ... 2: 21-22. 1851, *Nieuwe Verh. Eerste Kl. Konik. Nederl. Inst. Wetensch. Amsterdam* 3(4): 33-34. 1851, *The Flora of British India* 7: 243. 1896[1897] and *Repertorium Specierum Novarum Regni Vegetabilis* 17(4-7): 86. 1921, *Indian Forest Records. Botany* 2: 234-236. 1941, *Natural and Applied Science Bulletin* 10: 53. 1950, *Grasses of Burma* ... 569. 1960, *Kew Bulletin* 27(3): 531. 1972.

G. schmidii Hook.f.

India, Nilgiri Hills. Perennial, caespitose, stiffly erect, smooth, leaf sheaths keeled, panicle congested with erect branches, spikelets with densely bearded base, lower glume aristate, upper glume acuminate or mucronate, lemma awned from the 2-lobed apex, very close to *Garnotia elata*,

see *The Flora of British India* 7: 242. 1896[1897] and *Natural and Applied Science Bulletin* 10: 163. 1950, *Grasses of Burma ...* 568. 1960, *Kew Bulletin* 27(3): 558. 1972, *Taxon* 25: 158. 1976.

G. scoparia Thwaites (*Berghausia scoparia* Munro ex Thwaites; *Garnotia alstonii* Santos; *Garnotia atribrunnea* Santos; *Garnotia decidua* Santos; *Garnotia scoparia* Stapf, nom. illeg., non *Garnotia scoparia* Thwaites; *Garnotia thwaitesii* Stapf ex Hook.f.) (dedicated to the British pteridologist Arthur Hugh Garfit Alston, 1902-1958 (d. Barcelona, Spain), traveler, systematic botanist, 1927 F.L.S., 1938-1939 plant collector in Ceylon and Central America, 1953-1954 collected plants in Indonesia, 1947-1958 President British Pteridological Society, 1937-1949 editor of the *British Fern Gazette*, author of *The Kandy flora*. Colombo 1938, the son of Rev. Frank Simpson Alston, 1863-1931; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 45. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 9. 1972; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; *Taxon* 8: 83-86. 1949)

Sri Lanka. Perennial, densely caespitose, stout, stiff, erect, smooth, lower sheaths usually keeled and papery, ligule a minute fringed membrane, panicle loosely contracted with erect branches, glumes scabrous, lower glume acuminate-awned, upper glume acute-acuminate, lemma awn deflexed from the apex, on rocky places, slopes, stream banks, very close to *Garnotia elata*, see *Enumeratio Plantarum Zeylanicae* 363. 1864, *The Flora of British India* 7: 241-242. 1896 and *Natural and Applied Science Bulletin* 10: 154, 156, 158. 1950, *Grasses of Ceylon* 56. 1956, *Grasses of Burma ...* 568. 1960, *Kew Bulletin* 27(3): 555. 1972, *Taxon* 25: 158. 1976.

G. stricta Brongn. (*Berghausia pallens* Arn. ex Miq.; *Berghausia tenella* Arn. ex Miq.; *Garnotia acutigluma* (Steud.) Ohwi; *Garnotia ascendens* Munro ex Hook.f.; *Garnotia pallens* (Arn. ex Miq.) Janowski; *Garnotia puchi-parensis* Bor; *Urachne acutigluma* Steud.)

Asia, Australia. Thatching, see *Voyage autour du Monde* 2(2): 133, t. 21. 1832, *Analecta botanica indica ...* 2: 21-22. 1851, *Nieuwe Verh. Eerste Kl. Konik. Nederl. Inst. Wetensch. Amsterdam* 3(4): 33-34. 1851, *The Flora of British India* 7: 243. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(4-7): 86. 1921, *Indian Forest Records. Botany* 2: 234. 1941, *Natural and Applied Science Bulletin* 10: 53. 1950.

in Japan: ao-shiba (= blue lawngrass)

G. stricta Brongn. var. **longiseta** Hackel (*Garnotia acutigluma* var. **longiseta** (Hack.) V. Prakash & S.K. Jain; *Garnotia mezii* Janowski; *Garnotia mezii* var. **clemensiana** Santos; *Garnotia mezii* var. **longiramosa** Santos; *Garnotia*

mezii var. **maculata** Santos; *Garnotia mezii* var. **papuana** (Ohwi) Santos; *Garnotia mindanaensis* Santos; *Garnotia mindanaensis* var. **longiseta** (Hack.) Santos; *Garnotia mindanaensis* var. **ramosii** Santos; *Garnotia papuana* Ohwi; *Garnotia tortuosa* Santos)

Asia, Australia. Grassland, see *Voyage autour du Monde* 2(2): 133, t. 21. 1832 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 15: 141. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 17(4-7): 86. 1921, *Botanical Magazine* (Tokyo) 56: 1. 1942, *Journal of the Washington Academy of Sciences* 33: 135. 1943, *Natural and Applied Science Bulletin* 10: 92-94, 98-99. 1950, *Fascicles of Flora of India* 3: 5-6. 1979.

G. tenella (Arn. ex Miq.) Janowski (*Berghausia tenella* Arn. ex Miq.; *Garnotia asiatica* Santos; *Garnotia australindica* Santos; *Garnotia brevifolia* Ohwi; *Garnotia fragilis* Santos; *Garnotia fragilis* var. **brevifolia** (Ohwi) Santos; *Garnotia fragilis* var. **lavior** Santos; *Garnotia fragilis* var. **parcitoria** Santos; *Garnotia fragilis* var. **radicans** Santos; *Garnotia linguiformis* Santos; *Garnotia muricola* Santos; *Garnotia muricola* var. **abuensis** Santos; *Garnotia muricola* var. **biswasii** Santos; *Garnotia muricola* var. **subappressa** Santos; *Garnotia nitens* Santos; *Garnotia pahangensis* Santos; *Garnotia parvispicula* Santos; *Garnotia purpurascens* Santos; *Garnotia purpurascens* var. **planiuscula** Santos; *Garnotia tenuis* Santos; *Garnotia tenuis* var. **angustata** Santos)

Asia, India, Indonesia. Perennial, polymorphic, erect or ascending, branched, loosely to densely tufted, often rooting at the lower nodes, leaf sheaths glabrous, leaf blades lanceolate or linear-lanceolate, leaves almost hispid, panicle narrow and contracted, spikelets scabrid, glumes unequal, lower glume acute-awned, lower segment of awn well-twisted, see *Analecta botanica indica ...* 2: 22. 1851, *Nieuwe Verh. Eerste Kl. Konik. Nederl. Inst. Wetensch. Amsterdam* 3(4): 33-34. 1851 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(4-7): 86. 1921, *Fl. Assam* 5: 152. 1940, *Journal of the Arnold Arboretum* 25(1): 89-90, t. 1. 1944, *Bulletin of the Tokyo Science Museum* 18: 9. 1947, *Natural and Applied Science Bulletin Univ. Philipp.* 10: 113, 116, 118-119, 121-125, 127-128, 132-133. 1950, *Grasses of Burma ...* 569. 1960, *Cytologia* 36: 585. 1971, *Kew Bulletin* 27: 528. 1972, *Taxon* 23: 808. 1974, *Cytologia* 40: 453-462. 1975, *Taxon* 25: 158. 1976.

Garnotiella Stapf = *Asthenochloa* Büse

The diminutive of *Garnotia*.

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, type *Garnotiella philippinensis* Stapf, see *Plantae Junghuhnianae* 3: 367, 368. 1854, *Hooker's Icones Plantarum* 25: t. 2494. 1896.

Gastridium P. Beauv.

Diminutive of the Greek *gaster* “abdomen, belly, paunch,” referring to the base of the spikelets, to the basally swollen glumes; see Ambroise M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 21, t. 6, f. 6. Paris 1812.

Some 2-3 species, Mediterranean, North Africa, western Europe. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Agrostidinae, annual, slender, erect, herbaceous, tufted or sometimes solitary, auricles present or absent, ligule membranous, leaf sheath rounded and sometimes keeled above, leaves flat and linear, plants bisexual, a dense spike-like panicle, spikelets compressed laterally and swollen at the base, 1 bisexual floret, 2 unequal glumes persistent on axis and ventricose, lower glume and upper glume 1-nerved, lemmas cartilaginous more or less incised or dentate, awn present or absent, slender dorsal awn or apical, callus short and blunt, palea narrow and 2-keeled, 2 lodicules free and not toothed, 3 stamens, ovary glabrous, styles free, 2 stigmas, small fruit compressed, weed species, disturbed land, open habitats, grassy places, open pasture, arable land, wasteland, along roadsides, linked to *Agrostis*, type *Gastridium australe* P. Beauv., see *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 21, 164, t. 6, f. 6. 1812 and *Willdenowia* 16(1): 65-68. 1986, *Anales del Jardín Botánico de Madrid* 54: 399-406. 1996, *Taxon* 49(2): 243, 252. 2000, *Brittonia* 54(3): 154-163. 2002, *Contributions from the United States National Herbarium* 48: 369-370. 2003.

Species

G. phleoides (Nees & B. Meyen) C.E. Hubbard (*Agrostis phleoides* (Nees & Meyen) Desv.; *Agrostis ventricosa* auct. non Gouan; *Calamagrostis phleoides* (Nees & Meyen) Steud.; *Gastridium lendigerum* sensu Schwartz; *Gastridium lendigerum* (L.) Desv.; *Gastridium lendigerum* var. *longearistatum* Schweinf.; *Gastridium oblongatum* Coincy; *Gastridium ventricosum* sensu J.M. Black, non (Gouan) Schinz & Thellung; *Gastridium ventricosum* (Gouan) Schinz & Thell.; *Gastridium ventricosum* subsp. *phleoides* (Nees & Meyen) Tzvelev; *Lachnagrostis phleoides* Nees & B. Meyen; *Milium lendigerum* L.)

North Africa, Mediterranean. Annual, rare, tufted, glabrous, slender, erect, basal leaf sheaths keeled, leaf blade flat or folded, leaves rough, ligule obtuse membranous, narrow spike-like panicle with short and erect branches, spikelets 1-flowered and linear-oblong, unequal glumes ventricose and linear-lanceolate, pubescent lemma narrowly elliptic with a toothed apex, awn bent, palea elliptic, lodicules with entire margins, anthers yellow or purple, chasmogamous, weed species, occasional weed of disturbed sites, rubbish, in open habitats, open veld, escarpment mountains, often identified as *Gastridium ventricosum* (Gouan) Schinz &

Thell., see *Species Plantarum, Editio Secunda* 91. 1762, *Observations sur les Plantes des Environs d'Angers* 48. 1818, *Gramineae* 14-15. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 146-147. 1843, *Flora Chilena* 6: 320. 1854, *Nomenclator Botanicus. Editio secunda* 1: 251. 1854, *Bulletin de l'Herbier Boissier* 2(App. 2): 30. 1894, *Journal de Botanique (Morot)* 13: 338. 1899 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 58: 39. 1913, *Kew Bulletin* 9: 375. 1954, *Bot. Zhurn.* (St. Petersburg) 51(8): 1104. 1966.

in English: nitgrass

G. scabrum C. Presl (*Milium scabrum* (C. Presl) Guss., nom. illeg., non *Milium scabrum* Rich.)

Mediterranean, Sicily, Turkey. See *Flora Sicula* (Presl) 1: xlv. Pragae [Praha] 1826, *Florae siculae prodromus sive plantarum in Sicilia ulteriori nascentium enumeratio secundum systema Linneanum disposita*. 1: 54. Neapoli 1827-1828.

in German: Rauhes Nissengras

G. ventricosum (Gouan) Schinz & Thell. (*Agrostis australis* L.; *Agrostis lendigera* (L.) Neck.; *Agrostis ventricosa* Gouan; *Alopecurus ventricosus* (Gouan) Hudson; *Avena lendigera* (L.) Salisb.; *Chilochloa ventricosa* P. Beauv. ex Steudel; *Gastridium australe* P. Beauv.; *Gastridium lendigerum* (L.) Desv.; *Gastridium scabrum* C. Presl; *Lachnagrostis phleoides* Nees & Meyen; *Milium lendigerum* L.; *Milium minimum* Pourret ex Willk. & Lange; *Milium scabrum* (C. Presl) Guss., nom. illeg., non *Milium scabrum* Rich.)

Europe. Annual, herbaceous, tufted, erect or geniculate at base, leaf sheath submembranous and smooth or scabrid, ligule truncate or rounded, panicle cylindrical or lanceolate, weed, species characteristic of disturbed places, shallow soils, dry bare soil, Mediterranean coastal shrub community, wet meadow areas, granitic places, rocky red soil, see *Hortus Regius Monspelienensis* 39, t. 1, f. 2. 1762, *Species Plantarum, Editio Secunda* 91. 1762, *Systema Naturae*, Edition 12 2: 90. 1767, *Mant. Pl.* 30. 1767, *Flora Anglica, Editio Altera* 1: 28. 1778, *Elementa botanica ...* 3: 219. 1791, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 23. Londini [London] (Nov.-Dec.) 1796, *Synopsis Plantarum* 1: 80. 1805, *Essai d'une Nouvelle Agrostographie* 21. 164, t. 6, f. 6. 1812, *Observations sur les Plantes des Environs d'Angers* 48. 1818, *Flora Sicula* (Presl) 1: xlv. 1826, *Florae siculae prodromus sive plantarum in Sicilia ulteriori nascentium enumeratio secundum systema Linneanum disposita*. 1: 54. Neapoli 1827-1828, *Nomenclator Botanicus. Editio secunda* 1: 350. 1840, *Gramineae* 14-15. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 146-147. 1843, *Prodromus Florae Hispanicae* 1: 56. 1861 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 58: 39. 1913, *Bot. Zhurn.* (St. Petersburg) 51(8): 1104. 1966, *Folia*

Geobotanica et Phytotaxonomica 23(4): 413. 1988, *Taxon* 49(2): 243, 252. 2000.

in English: nitgrass, nit grass

in Italian: codino maggiore

in German: Südliches Nissengras

Gastropyrum (Jaub. & Spach) Á. Löve =
Aegilops L., *Gastropyrum* (Jaub.) Á. Löve

From the Greek *gaster*, *gastros* “belly” and *glossa* “tongue.”

Pooideae, Triticeae, or Pooideae, Triticeae, Triticinae, type *Gastropyrum ventricosum* (Tausch) Á. Löve, see *Species Plantarum* 1: 85-87. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Illustrationes Plantarum Orientalium* 4: 12. 1851, *Flore de France* 3: 601. 1856 and *Feddes Repert.* 91: 225-228. 1980, *Biologisches Zentralblatt* 101(2): 207-208. 1982, *Genera graminum. Kew Bulletin, Additional Series* 13: 157-158. 1986 [by W.D. Clayton and S.A. Renvoize], *Taxon* 41: 555-556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 20-23, 370. 2003.

Gaudinia P. Beauv. = *Arthrostachya* Link,
Cyclichnium Dulac, *Falimiria* Reichenb.,
Falimiria (Reichenb.) Rchb., *Gaudinia* J. Gay
(Aizoaceae), *Meringurus* Murbeck

Named for the Swiss botanist Jean François Aimé (Gottlieb) Philippe Gaudin, 1766-1833, clergyman, professor of botany at Lausanne, author of *Agrostologia helvetica*. Paris, Genève 1811 and *Flora helvetica*. Zürich 1828-1833. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 33. Boston 1965; see Ambroise Marie François Joseph Palisot de Beauvois, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 95, 104. Paris 1812; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 141. 1972; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 382. Ansbach 1852; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 714. Stuttgart 1993.

About 4 species, Mediterranean. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, annual or biennial, tufted, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence a single spike, bilateral raceme, spikelets sessile and solitary partially embedded in the rachis, several-flowered, 2 glumes subequal or unequal, lower glume 3- to 5-nerved, upper glume 5- to 11-nerved, lemmas coriaceous and keeled with dorsal geniculate awn, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, disturbed places, weedy areas, open habitats, type *Gaudinia fragilis* (L.) P.

Beauv., see *Essai d'une Nouvelle Agrostographie* 95, 153, 164. 1812, *Hortus Regius Botanicus Berolinensis* 1: 151. 1827, *Conspectus Regni Vegetabilis* 54. 1828, *Flore du Département des Hautes-Pyrénées* 68. 1867 and *Acta Universitatis Lundensis* 36(1): 27. 1900, *Contr. U.S. Natl. Herb.* 24: 192. 1925, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Grass and Forage Science* 57(3): 224-231. Sep 2002, *Contributions from the United States National Herbarium* 48: 121, 241, 312, 370. 2003, *Botanical Journal of the Linnean Society* 141(1): 125-131. Jan 2003, W.D. Zhang, S.Y. Chen, G.S. Liu and C.C. Jan, “Seed-set and pollen stigma compatibility in *Leymus chinensis*.” *Grass and Forage Science* 59(2): 180-185, June 2004.

Species

G. fragilis (L.) P. Beauv. (*Avena fragilis* L.)

Algeria, Israel, Europe. Short-lived, pasture grass, weed, along roadsides, useful for erosion control, see *Species Plantarum* 80. 1753, *Essai d'une Nouvelle Agrostographie* 95, 153, 164. 1812 and *Anales del Jardín Botánico de Madrid* 44: 509-512. 1987, *Anales del Jardín Botánico de Madrid* 45: 273. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Taxon* 49(2): 247. 2000.

in French: gaudinie

in Morocco: rhortal-diel-ma

G. hispanica Stace & Tutin

Spain. Awnless, see *Botanical Journal of the Linnean Society* 76: 353. 1978, *Taxon* 33: 351-354. 1984, *Anales del Jardín Botánico de Madrid* 45: 273. 1988.

G. maroccana Trab.

Morocco. Shortly awned, see *Botanical Journal of the Linnean Society* 76: 353-356. 1978.

Gaudinopsis (Boissier) Eig = Gaudiniopsis
(Boiss.) Eig, *Ventenata* Koeler

Resembling *Gaudinia*.

One species, Asia Minor. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Agrostidinae, annual, herbaceous, erect or ascending, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate and contracted, 2 glumes very unequal, lower glume 3-nerved, upper glume 3- to 5-nerved, palea short, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, sometimes referred to *Ventenata*, see *Descriptio Graminum in Gallia et Germania* 272. 1802, *Flora Taurico-Caucasica* 1: 77. 1808, *Flora Orientalis* 5: 540. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis* 26: 74. 1929, *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 81, 85-86. 1982, *Willdenowia* 13(1): 111. 1983, *Notes from the Royal Botanic Garden, Edinburgh* 40(3): 507. 1983, *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 74. 1984,

Conspectus Florae Orientalis 6: 93. 1991, *Contributions from the United States National Herbarium* 48: 370, 688. 2003.

Species

G. macra (Steven ex M. Bieb.) Eig (*Avena macra* Steven ex M. Bieb.; *Ventenata macra* (Steven ex M. Bieb.) Boiss.)

Eurasia. See *Flora Taurico-Caucasica* 1: 77. 1808, *Flora Orientalis* 5: 540. 1884.

Gazachloa J.B. Phipps = *Danthoniopsis* Stapf

Perhaps from the Greek *gaza* “riches, the royal treasure” and *chloe*, *chloa* “grass,” Latin *gaza*, *ae* “wealth.”

Arundinelleae, type *Gazachloa chimanimaniensis* J.B. Phipps, see *Hooker's Icones Plantarum* 31: t. 3075. 1916, *Kirkia* 4: 116. 1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

Gelidocalamus T.H. Wen = *Indocalamus* Nakai

From the Latin *gelidus* “very cold” and *calamus* “a reed, cane.”

About 11-12 species, Taiwan, China, Guangdong, Guangxi, Hunan. Bambusoideae, Bambuseae, Arundinariinae, shrub-like or arbuscular, sympodial, erect, twig short with 2-3 internodes, manifold branching, branches slender and fascicled, internodes cylindrical, leaves with veinlets on both surfaces, sheath persistent, auricles absent or present, sheath blade awl-shaped, large panicle, 6 stamens, 1-2 stigmas, forests and along streams, in mountainous regions, type *Gelidocalamus stellatus* T.H. Wen, see *Flora Boreali-Americana* 1: 73. 1803 and *Journal of the Arnold Arboretum* 6(3): 148, 152. 1925, *Technical Bulletin of the National Forestry Research Bureau* (China) 8: 15. 1948, *Taxon* 6(7): 203, 209. 1957, *Journal of Bamboo Research* 1(1): 21, 140-164. 1982, *Bambou* 7: 22. 1990, Li, Z.-L., The *Flora of China* Bambusoideae project — problems and current understanding of bamboo taxonomy in China. *The Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 63-64. 2000.

Species

G. albopubescens W.T. Lin & Z.J. Feng

China. See *Acta Phytotaxonomica Sinica* 30(6): 561, f. 3, 1-2. 1992.

G. annulatus T.H. Wen

China, Guizhou. Young culms finely pubescent and verrucose, manifold branching, internodes crooked, a branch with 2-4 internodes, sheath persistent with white flecks,

sheath auricles absent, sheath ligule truncate and scabrous, sheath blade narrow, 1-2 leaves on each twig, leaves broadly lanceolate to rectangular, see *Journal of Bamboo Research* 7(1): 27-28, f. 3. 1988.

G. kunishii (Hayata) Keng f. & T.H. Wen (*Arundinaria kunishii* Hayata; *Pleioblastus kunishii* Hayata; *Pleioblastus kunishii* (Hayata) Ohki; *Pleioblastus kunishii* Ohki; *Pseudosasa kunishii* (Hayata) Makino & Nemoto; *Pseudosasa kunishii* Makino & Nemoto; *Pseudosasa taiwanensis* Masamune & Mori; *Sinarundinaria kunishii* (Hayata) Kanehira & Hatusima; *Sinobambusa kunishii* (Hayata) Nakai; *Sinobambusa kunishii* Nakai)

Taiwan. Culms hollow and green below the nodes, normally three branches on each node, nodes of lower culm with aerial roots, more branches clustered at upper part of the culm, sheath coriaceous caducous purplish red, sheath auricles inconspicuous, sheath ligule truncate with a ciliate margin, sheath blade narrow-lanceolate to linear-lanceolate, 1-3 or more leaves on each twig, leaves elliptic to lanceolate, used for fences and for making pipes, see *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 6: 136-137, f. 47. 1916, *Botanical Magazine* (Tokyo) 42: 581. 1928, *Flora of Japan* edition. 2. 1389. 1931, *Science Education [Rika Kyô-iku]* 15: 77. Tokyo 1932, *Transactions of the Natural History Society of Taiwan* 29: 23, 25. 1939, *Transactions of the Natural History Society of Taiwan* 30: 239. 1940, *Journal of Bamboo Research* 2(1): 20. 1983.

in Japan: Taiwan-yadake

G. latifolius Q.H. Dai & T. Chen

China, Guangxi. Dark green, densely silky, 3-8 branches on each node and only 1 leaf on each branch, sheath auricles absent, sheath without dark purple flecks and hispid, no sheath auricles, sheath blade linear-lanceolate and wrinkled, sheath ligule short, leaves ovate lanceolate, used for arrow shaft, leaves used for wrapping rice food, see *Journal of Bamboo Res.* 4(1): 53-55, f. 1. 1985.

G. longüinternodus T.H. Wen & S.C. Chen

China, Hunan. Young internodes densely silky, manifold branching, branches clustered together, sheath coriaceous persistent, sheath auricles elliptic and conspicuous and glabrous, sheath blade lanceolate, 1-3 leaves on each twig, leaves broad-lanceolate to elliptic, see *Journal of Bamboo Res.* 5(2): 24, f. 6. 1986.

G. monophyllus (Yi & B.M. Yang) B.M. Yang (*Yushania monophylla* Yi & B.M. Yang)

China. See *Journal of Bamboo Res.* 5(1): 50, f. 18. 1986, *Nat. Sci. J. Hunan Norm. Univ.* 12(4): 338. 1989.

G. multifolius B.M. Yang

China, Jiangxi. Sheath green, sheath auricles absent, sheath ligule truncate or concave, sheath blade linear-lanceolate glabrous, 4-6 branches on each node, 2-4 leaves on each

branch, leaves lanceolate or ovate pubescent beneath, see *Nat. Sci. J. Hunan Norm. Univ.* 9(3): 4-6, f. 2, 3. 1986.

G. rutilans T.H. Wen

China, Zhejiang. Young culms glaucous, slender branches, not pruinose, sheath pubescent or hispid, sheath auricles absent, sheath ligule arcuate, leaves sheathless, see *Journal of Bamboo Res.* 2(1): 66, f. 18. 1983.

G. solidus C.D. Chu & C.S. Chao

China, Guangxi. Culms solid, robust, green, straight, pubescent, 4-5 branches per node, branch with 3-4 internodes, sheath persistent, auricles inconspicuous, sheath ligule convex with a ciliate margin, sheath blade linear-lanceolate, 1-3 leaves on each branch, leaves broad-lanceolate, used for hedge, leaves used for wrapping rice food, see *Journal of Nanjing Institute of Forestry* 1984(2): 75, f. 2. 1984.

G. stellatus T.H. Wen (*Gelidocalamus monophyllus* (T.P. Yi & B.M. Yang) B.M. Yang; *Yushania monophylla* T.P. Yi & B.M. Yang)

China, Jiangxi. Type species, green, glabrous, pruinose, culms hollow and glaucous below the nodes, sheath persistent, sheath auricles inconspicuous, twig slender, only 1 leaf on each twig, leaves lanceolate to broad-lanceolate, edible shoot, ornamental, see *Journal of Bamboo Res.* 1(1): 22-23, f. 1. 1982, *Journal of Bamboo Research* 5(1): 50, f. 18. 1986, *Nat. Sci. J. Hunan Norm. Univ.* 12(4): 338. 1989, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

G. subsolidus W.T. Lin & Z.J. Feng

China. Young culms glaucous, auricles absent, leaves sheathing, see *J. Nanjing Inst. For.* 1984(2): 73-75, f. 1. 1984, *Guihaia* 10(1): 18-19, f. 3. 1990.

G. tessellatus T.H. Wen & C.C. Chang

China, Libo, Guizhou. White tomentum, silky, sheath coriaceous, sheath auricles absent, sheath with dark purple flecks and glabrous, leaves broad-lanceolate, see *Journal of Bamboo Res.* 1(1): 24, f. 2. 1982.

G. velutinus W.T. Lin & X.B. Ye

China. Conspicuous auricles oblong and velutinous, see *Acta Phytotaxonomica Sinica* 26(3): 233-245, f. 14. 1988.

Genea (Dumort.) Dumort. = *Bromus* L.,
Genea Vittad. (Fungi)

From the Greek *genea* "race, family, offspring, generation."

Pooideae, Bromeae, see *Species Plantarum* 1: 76-78. 1753, *Observations sur les Graminées de la Flore Belgique* 116. 1823 [1824], *Monogr. Tubercularum* 27. 1831, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from*

the United States National Herbarium 48: 154-191, 370. 2003.

Geopogon Steud. = *Chloris* Sw.

From the Greek *gea* "earth, land, ground" and *pogon* "beard."

Chloridoideae, Cynodonteae, Chloridinae, see *Nova Genera et Species Plantarum seu Prodromus* 1, 25. 1788, *Nomenclator Botanicus. Editio secunda* 1: 353. 1840 and *Contributions from the United States National Herbarium* 41: 39-52. 2001.

Germainia Balansa & Poitr. =
Balansochloa Kuntze, *Chumsriella* Bor,
Germainia Post & Kuntze (Lamiaceae, alt.
Labiatae), *Sclerandrium* Stapf & C.E. Hubb.

About 8-9 species, northern Australia, Southeast Asia, tropics. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial or sometimes annual, herbaceous, tufted, stoloniferous, auricles absent, ligule membranous, plants monoecious, capitate inflorescence enclosed by a bractiform involucre of sessile spikelets, digitate racemes, large imbricate sessile spikelets, pedicelled spikelets enclosed by an involucre of sessile spikelets, all the fertile spikelets unisexual, sessile spikelets male or barren, pedicelled spikelets female, male and female-fertile spikelets mixed in the inflorescence, sessile and involucral spikelets awnless, 2 male florets, 2 glumes more or less equal or subequal, coriaceous to papery lower glume 0- to 5-nerved, upper glume 0- to 3-nerved, palea present, lodicules absent, no stamens, ovary glabrous, 2 stigmas, desert and arid places, savannah, type *Germainia capitata* Balansa & Poitr., see *Bulletin de la Société d'Histoire Naturelle de Toulouse* 7: 344, f. 1-9. 1873, *Flora Australiensis: A Description ...* 7: 518. 1878, *Journal de Botanique (Morot)* 4: 83. 1890 and *Lexikon Generum Phanerogamarum* 247. 1903 [1904], *Bulletin du Muséum d'Histoire Naturelle* 25: 285. 1919, O. Stapf & Charles Edward Hubbard, *Hooker's Icones Plantarum*. Ser. 5. 3, t. 3262. 1935, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 124. 1940, *Australian Journal of Botany* 2: 108. 1954, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Dansk Botanisk Arkiv* 23(4): 467-471. 1968, *Thai Forest Bulletin. Botany* 6: 29-59. 1972, *Genera Graminum* 337-338. 1999, *Blumea* 45: 443-475. 2000.

Species

G. capitata Balansa & Poitr. (*Themeda capitata* (Balansa & Poitr.) Roberty)

Southeast Asia. See *Bulletin de la Société d'Histoire Naturelle de Toulouse* 7: 344, f. 1-9. 1873 and *Boissiera*.

Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève 101. 1960, *Queensland Dept. Prim. Ind. Bot. Branch Tech. Bull.* no. 3: 11. 1978, *Blumea* 45: 443-475. 2000.

G. flosculosa (F. Muell.) C.E. Hubb. (*Anthistiria flosculosa* F. Muell.)

Australia. See *Fragmenta Phytographiae Australiae* 10: 75. 1876 and *Kew Bulletin* 1934: 445. 1934, *Thai Forest Bulletin. Botany* 6: 46. 1972 [under "dubious species"].

G. grandiflora (S.T. Blake) Chai-Anan (*Sclerandrium grandiflorum* S.T. Blake)

Australia. See *Australian Journal of Botany* 2: 108. 1954, *Thai Forest Bulletin. Botany* 6: 44, figs 1. 8. 1972.

in English: yellow spear grass

G. lanipes Hook.f.

Asia, India. See *The Flora of British India* 7(21): 163. 1897 [1896].

G. pilosa Chai-Anan

Thailand. Lower glume chartaceous, see *Thai Forest Bulletin. Botany* 6: 39, f. 3. 1972.

G. tenax (Balansa) Chai-Anan (*Lophopogon tenax* Balansa; *Sclerandrium tenax* (Balansa) Pilg.)

Thailand. Lower glume papery, see *Journal de Botanique (Morot)* 4: 83. 1890 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 124. 1940, *Thai Forest Bulletin. Botany* 6: 35. 1972.

G. thailandica (Bor) Chai-Anan (*Chumsriella thailandica* Bor)

Thailand. Lower glume chartaceous, see *Dansk Botanisk Arkiv* 23: 467. 1968, *Thai Forest Bulletin. Botany* 6: 37. 1972.

G. truncatiglumis (F. Muell. ex Benth.) Chai-Anan (*Ischaemum truncatiglume* F. Muell. ex Benth.; *Lophopogon truncatiglumis* (F. Muell. ex Benth.) Hack.; *Sclerandrium truncatiglume* (F. Muell. ex Benth.) Stapf & C.E. Hubb.)

Asia, Australia. See *Flora Australiensis: A Description* ... 7: 518. 1878, *Monographiae Phanerogamarum* 6: 255. 1889 and *Hooker's Icones Plantarum* 33: t. 3262. 1935, *Thai Forest Bulletin. Botany* 6: 45, figs. 1, 9. 1972.

Gerritea Zuloaga, Morrone & Killeen

Dedicated to Gerrit Davidse, agrostologist, Missouri Botanical Garden.

One species, Bolivia. Panicoideae, Panicodae, Paniceae, perennial, herbaceous, branched, tufted, erect and procumbent, rigid, ligule a fringed membrane, plants bisexual, inflorescence paniculate and terminal, 2 florets, spikelets flattened and solitary, 2 glumes unequal to subequal, lower glume 3-nerved, lower lemma glabrous, palea present, 2

free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas cream or white, shady places, moist areas, see *Novon* 3(2): 213-219. 1993.

Species

G. pseudopetiolata Zuloaga, Morrone & Killeen

Bolivia. Lax inflorescence, panicle elliptic-oblong, see *Novon* 3(2): 213, f. 1-2. 1993.

Gigachilon Seidl = *Triticum* L.

Probably from the Greek *gigas* "a giant" and *cheilos*, *chilos* "lip."

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 1: 85-87. 1753, *Oekonomisch-technische Flora Böhmens* 1: 425. 1836, *Annales des Sciences Physiques et Naturelles, d'Agriculture et de l'Industrie, Publiées par la Société Royale d'Agriculture, etc., de Lyon*. 5: 103-196, pl. 2-10. 1842 [*Descriptions et figures des céréales européennes*] and *Feddes Repert.* 95(7-8): 497. 1984, *Taxon* 35: 144-149. 1986, *Wageningen Agricultural University Papers* 94-7: 1-512. 1994, *Contributions from the United States National Herbarium* 48: 370, 676-684. 2003.

Gigantochloa Kurz ex Munro = *Gigantochloa* Munro

From the Greek *gigas*, *gigantos* "a giant" and *chloe*, *chloa* "grass," giant bamboos.

About 15-37 species, Southeast and tropical Asia, Indomalayan forests, Assam to Malaya. Bambusoideae, Bambusoideae, Bambuseae, Bambusinae, perennial, sympodial, robust, straight, usually large, erect to suberect, more or less scandent, usually never climbing or clambering, arborescent, woody to moderately thick-walled, basal nodes with short aerial roots, manifold branching, branching at upper part of the culm, unarmed, densely tufted, persistent, naked at the base, rhizomes pachymorph, young culm often coarsely hairy, culm sheath deciduous, blades erect first then spreading, large leaves auriculate, inflorescences on branches of leafless culms, plants bisexual, large compound inflorescence, pseudospikelets at nodes of flowering branches, 2 to several glumes present, long narrow empty lemma, palea of all florets strongly 2-keeled, lodicules absent or present, 6 stamens, ovary hairy, 1 stigma plumose or 1-3, useful species, wild or cultivated, naturalized, in forest margins, along rivers and dry riverbeds, steep slopes, heavy clay soils, humid tropics, forest, lowlands and highlands, wastelands, disturbed forests, wet montane forests, type *Gigantochloa atter* (Hassk.) Kurz, see *Natuurkundig Tijdschrift voor Nederlandsch-Indië* 27: 226. 1864, *Transactions of the Linnean Society of London* 26(1): 123. 1868 and *Fieldiana, Botany* 24(2): 38-331. 1955, *Taxon* 5: 28-

30. 1956, *Reinwardtia* 10(3): 291-380. 1987, *Plant Resources of South-East Asia* 7: 1-191. 1995, Li, Z.-L., *The Flora of China Bambusoideae project — problems and current understanding of bamboo taxonomy in China. The Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 58. 2000.

Species

G. spp.

Common names: awi ater, awi hideung, awi lengka tali, awi tali, awi tela, awi temen, awi ular, bambu apus, bambu hitam, bambu lengka tali, bambu tali, bulok busi, buluh awi, buluh didi, buluh elang, buluh hariman, buluh koreng, buluh kuring, buluh kuring biasa, buluh kuring hitam, buluh leku-kai, buluh mario, buluh mayan, buluh munti, buluh serik, buluh soriak, buluh sorik, buluh tali, paring tali, perreng keles, perreng queles, perreng tale, pring apus, pring ireng, pring jajang kapur, pring jajang kertas, pring Jawa, pring legi, pring tali, pring ulung, pring wulung, tiying putih, tiying tabah, tiying tali, tyng tali, wado, wapado, watho, wato

G. achmadii Widjaja

Indonesia, Sumatra. Internodes yellowish green, culm sheath dark brown pubescent, blade ovate, inflorescence on leafless branch, groups of pseudospikelets at each node, culms used for construction, in forest, see *Reinwardtia* 10(3): 373. 1987.

in Indonesia: buluh apa, buluh apo

G. albociliata (Munro) Kurz (*Dendrocalamus albociliata* (Munro) J.L. Sun; *Gigantochloa albo-ciliata* (Munro) Kurz; *Oxytenanthera albociliata* Munro; *Pseudotenanthera albociliata* (Munro) R.B. Majumdar; *Pseudoxytenanthera albociliata* (Munro) T.Q. Nguyen)

Myanmar, Thailand, China, Yunnan. Arborescent, densely tufted, sympodial, evergreen or deciduous, walls moderately thick, young culms densely pubescent, culms elongate-arcuate, top bending, nodes prominent, internodes light green, manifold branching, branches arising at nodes, culm sheaths folded and coriaceous, sheath blade erect, sheath auricles inconspicuous, sheath ligule present and developed, leaves glaucescent beneath, leaf blades linear-lanceolate and chartaceous, slender spreading branchlets bearing clusters of 10-20 pseudospikelets at each node, spikelets elongate-linear more or less curved, 1-2 male florets and 1-2 hermaphrodite florets, 1-2 empty glumes, paleas 2-keeled, stamens long-exserted, ovary pubescent, 2 stigmas, can be propagated by seed and by rhizome cuttings, flowers sporadically and gregariously, seeds from such sporadic flowering are sterile, often deciduous in the dry season, a troublesome weed, cultivated ornamental garden plant, young shoots eaten as a vegetable, used in light construction, fences, furniture, for weaving, raw material for paper, in dry forest hills, dry tropical mixed forest, well-drained

soils, see *Transactions of the Linnean Society of London* 26(1): 129. 1868, S. Kurz (1834-1878), *Preliminary Report on the Forest and other Vegetation of Pegu* App. A: 136, App. B: 93. Calcutta 1875, *Forest Flora of British Burma* 2: 555. 1877 and *Fl. Ind. Enumerat.-Monocot.* 280. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

in Cambodia: rosey khlech

in India: kalia, kalisuneti

in Myanmar: wa-hpyu-ka-le

in Thailand: hai, phai-rai, phai-ruaklek, phai ruak, phai sot

G. albopilosa K.M. Wong (*Gigantochloa latifolia* var. *alba* Holttum)

Peninsular Malaysia. Stiffly erect, see *Gard. Bull. Sing.* 16: 133. 1958.

Local names: buluh apa, buluh pahit

G. albovestita (Holttum) K.M. Wong (*Gigantochloa scortechinii* var. *albovestita* Holttum)

Peninsular Malaysia. Erect, see *Gard. Bull. Sing.* 16: 124. 1958.

G. apus (Schult. & Schult.f.) Kurz (*Bambusa apus* Schult. & Schult.f.; *Gigantochloa apus* (J.H. Schultes) Kurz ex Munro; *Gigantochloa kurzii* Gamble; *Gigantochloa takserah* Camus; *Schizostachyum apus* (Schult. & Schult.f.) Steud.)

India, Indonesia, Myanmar, Thailand. Strongly tufted, open, sympodial, erect, drooping, shiny, glabrous, culm size variable, branched from the upper half portion of the culm, culm sheaths persistent, nodes slightly swollen, leaf blades lanceolate, leafy panicles, groups of pseudospikelets and each group with up to 30 pseudospikelets, slender spikelets narrowly ovate with 3 perfect florets, 2-3 empty glumes, lemmas with stiff pointed apex, paleas acute, ovary densely hairy at the apex, stigma plumose, flowers very rarely, commonly propagated by rhizome and culm cuttings, young shoots very bitter eaten as a vegetable once the taste is removed, used for building materials and for making strings, roofings and walls, basketry, fishery and cooking utensils, weaving hats, grows in open areas or disturbed forests, tropical humid lowlands, on sandy soil or clay soil, along riverbanks, on hill slopes, see *Systema Vegetabilium* 7(2): 1353. 1830, *Synopsis Plantarum Glumacearum* 1: 332. 1854, *Natuurkundig Tijdschrift voor Nederlandsch-Indië* 27: 226. 1864, *Annals of the Royal Botanic Garden, Calcutta* 7: 65, t. 56. 1896 and *Fieldiana, Botany* 24(2): 38-331. 1955, *Reinwardtia* 10(3): 348-353. 1987, *PROSEA* 7: 100-102. 1995.

in India: tekserah

in Indonesia: bambu tali, bambu apus, pring tali, pring apus, awi tali

in Thailand: buulo maataa ruusa, phai kriap, phai ta kwang, phai taa kwaang, taa kwaang

Local common names: awi tali (Sundanese), bambu apus, bambu tali, perreng tale, pring apus (Javanese), pring tali, tying tali, wado, wapado, watho, wato

G. atroviolacea Widjaja (*Gigantochloa atter* sensu Kurz; *Gigantochloa atter* f. *nigra* Hildebrand; *Gigantochloa atter* var. *nigra* Gamble; *Gigantochloa verticillata* (Willd.) Munro sensu Backer)

Java, origin unknown. Loosely tufted, clumped, sympodial, branched, variable, thin culms purplish to blackish, lower nodes with aerial roots, young shoots slender, culm sheath auricles rounded, leaf blades lanceolate and glabrous, branches with groups of pseudospikelets, spikelets ovoid-lanceolate, 4 perfect florets and 1 imperfect terminal, glumes mucronate, lemmas acuminate, narrow paleas acute and pointed, lodicules absent, ovary hairy, propagated vegetatively by rhizome or culm cuttings, used for building construction and for making furniture, traditional musical instruments (*angklung*, *calung*, *celempung*, *gambang*) and handicrafts, widely cultivated, young shoots edible, grows in dry areas, humid lowland tropics, limestone, related to *Gigantochloa atter* (Hasskarl) Kurz, see *Annals of the Royal Botanic Garden, Calcutta* 7: 61. 1896 and *Handb. Fl. Java* 2: 275. 1928, *J. American Bamboo Society* 5(3-4): 58, 67. 1984 [1986], *Reinwardtia* 10(3): 323-327, f. 10-12. 1987, *PROSEA* 7: 102-104. 1995.

in English: black bamboo

in Indonesia: bambu hitam, pring ulung, pring wulung, awi hideung

Common names: awi hideung, awi tali, bambu hitam, bambu tali, perreng tale, pring ireng, pring tali, pring ulung, pring wulung, tying tali, wado, wapado, watho, wato

G. atter (Hasskarl) Kurz (*Bambusa atter* Hassk.; *Bambusa atter* Hassk. ex Kurz; *Bambusa thouarsii* Kunth; *Bambusa thouarsii* var. *atter* Hassk.; *Bambusa verticillata* Willd.; *Gigantochloa atter* Munro; *Gigantochloa atter* (Hasskarl) Kurz ex Munro; *Gigantochloa verticillata* (Willd.) Munro sensu Backer p.p.)

Malaya, Indonesia, origin unknown. Large, densely tufted, sympodial, distinct rings on the nodes, lower nodes with aerial roots, culm sheaths auricles rounded to curved outward, leaf blades oblong-lanceolate and glabrous, pseudospikelets groups at the nodes of leafy branches, spikelets ovoid-lanceolate, 4 perfect florets and 1 terminal imperfect, glumes mucronate at apex, lemmas acuminate, paleas acuminate and keeled, lodicules absent, flowers gregariously and subsequently dies, propagated vegetatively by rhizome or culm cuttings, cultivated, young shoots delicious, culms used for building material and for making musical instruments, furniture, see *Species Plantarum. Editio quarta* 2: 245. 1799, *The Cyclopaedia; or, Universal Dictionary of Arts, ...* 24: no. 3. 1819, *Plantae Javanicae Rariores* 41. 1848, *Fl. Nederl. Ind.* 3, 3: 416. 1857, *Natuurkundig Tijdschrift voor Nederlandsch-Indië* 27: 226.

1864, *Transactions of the Linnean Society of London* 26(1): 123, 124, 125. 1868 and *Reinwardtia* 10(3): 315-323, f. 6-9. 1987.

in English: sweet bamboo

in Indonesia: awi temen, bambu ater, buluh jawa, péréng keles, perreng keles, perreng queles, pring legi

in Java: bambu legi (= sweet bamboo)

in the Philippines: kayali

Local names: awi ater, awi hideung, awi tali, bambu apus, bambu hitam, bambu tali, perreng tale, pring apus, pring ireng, pring Jawa, pring tali, pring ulung, pring wulung, tying tali, wado, wapado, watho, wato

G. auriculata (Kurz) Kurz (*Bambusa auriculata* Kurz; *Gigantochloa nigrociliata* var. *hohenackeri* (Fisch.) H.B. Naithani; *Oxytenanthera auriculata* (Kurz) Prain; *Oxytenanthera nigrociliata* (Büse) Munro; *Oxytenanthera nigrociliata* var. *hohenackeri* Fisch.)

Myanmar, India, Bangladesh. Suitable for paper-pulp, see *Plantae Junghuhniana* 3: 389. 1854, *Transactions of the Linnean Society of London* 26(1): 123, 128. 1868, *Journal of the Asiatic Society of Bengal* 39(2): 86. 1870, *Preliminary Report on the Forest and other Vegetation of Pegu* App. A. 137; App. B. 94. 1875, *Forest Flora of British Burma* 2: 557. 1877, *Annals of the Royal Botanic Garden, Calcutta* 7: 55, pl. 49. 1896 and *Bengal Plants* 2: 1234. 1903, *Flora of the Presidency of Madras* 10: 1861. 1934, *Flow. Pl. India, Nepal and Bhutan* 514. 1990.

in India: bolanji, kalia, podah, washut

in Thailand: phai man

Local name: talakuva, talakuwa

G. balui K.M. Wong (after the local vernacular name)

Origin unknown. Densely tufted, large to medium, thin walls, densely clumped, sympodial, erect and arching outward, internodes not waxy, nodes not prominent, culm sheaths with silver hairs, groups of 3-10 pseudospikelets at each node on branches of leafy or leafless culms, spikelets flattened, 2-3 perfect florets and a vestigial terminal one, 3-5 glumes, empty lemma, palea keels hairy, propagated vegetatively by rhizome or culm cuttings, cultivated and wild, young shoots edible, culms used as fishing stakes and for framing, making handicrafts, building structures, growing on rich alluvial sites, secondary forest, along roadsides, wastelands, riverbanks, see *For. Dept. Occ. Papers, Brunei* 1: 1-10. 1990 [also *Brunei Forestry Department, Occasional Papers*], S. Dransfield, "The bamboos of Sabah." *Sabah Forest Record* 14: 38-43. 1992.

in Brunei: buluh balui

in Indonesia: buluh abe

in Malaysia: balui, bambu taris, buluh taris

G. calcicola Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. cochinchinensis A. Camus

Vietnam. See *Bulletin du Muséum d'Histoire Naturelle* 26: 567. 1920, *Bulletin du Muséum d'Histoire Naturelle* 28: 381. 1922, *Fl. Génér. Indo-Chine* 7, 1: 623. 1923.

in Thailand: phai sot

G. compressa R. Parker

Burma. See *Indian Forester* 54: 98, pl. 9. 1928.

in Thailand: phai khaai dam, phai khai dam, phai kam dam

G. felix (Keng) Keng f. (*Oxytenanthera felix* Keng)

China, Yunnan. Green, young culms tomentose, most of the branches spreading, sheath coriaceous and caducous, sheath auricles and cilia absent, sheath blade long-triangular to broadly lanceolate, leaves pubescent underside, edible shoots, culms used in construction and furniture making, see *Journal of the Washington Academy of Sciences* 30(10): 425. 1940, *Journal of Bamboo Research* 3(1): 24. 1984.

G. hasskarliana (Kurz) Backer ex Heyne (*Melocanna hasskarliana* Kurz ex Teijsmann & Binn.; *Schizostachyum hasskarlianum* Kurz) (dedicated to the German botanist Justus Karl Hasskarl, 1811-1894, traveler (Java), author of *Horti malabarici Rheedeani clavis locupletissima*. Dresden 1867, he was a friend of the Dutch physician Pieter Bleeker, 1819-1878, naturalist and zoologist; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 137. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 167. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Peninsular Malaysia, Indonesia. Erect, sympodial, thin-walled, densely tufted, young internodes covered with dark brown hairs, young shoots very slender, culm sheaths triangular with erect and lanceolate blades, sheath ligule irregularly toothed, sheath auricles firm and rimlike, leaf blade lanceolate, leaves glabrous on lower surface, spikelets arranged in clusters at the distal nodes of a shoot terminating a leafy branch, up to a 20 clustered pseudospikelets in a cluster, slender spikelets narrowly ovoid, 3-4 perfect florets and 1 vestigial apical floret, 2 glumes, lodicules absent, 6 stamens, propagated from rhizome and culm cuttings, wild and widely planted, very fast growing, young shoots may be eaten, used as a tall fence and large living hedges, basketry, used to prevent soil erosion and for establishing large living hedges, humid tropics conditions, lowlands, steep hills, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 43. 1820, *Indian Forester* 1: 352. 1876 and *De Nuttige Planten van Nederlandsch- Indië* 1: 299. 1927, *Gard. Bull. Sing.* 16: 118-119. 1958 [also *Gardens' Bulletin*,

Straits Settlements], *Flora of Java* 3: 636-637. 1968, *Reinwardtia* 10(3): 335-339, f. 16-17. 1987.

in Indonesia: bambu lengka tali, bambu tali, bulok busi, buluh sorik

in Thailand: phai phaak man, phai phak, phai phak man

Local common names: awi ater, awi hideung, awi lengka tali, awi tali, awi tela, awi temen, bambu hitam, buluh didi, buluh lekukai, buluh mayan, perreng tale, pring ireng, pring jajang kapur, pring jajang kertas, pring Jawa, pring legi, pring tali, pring ulung, pring wulung, tiying putih, tiying tali, tying tali, wado, wapado, watho, wato

G. heteroclada Stapf

Malaysia, Borneo, Sabah, Mount Kinabalu. See *Journal of the Linnean Society, Botany* 42: 190. 1914.

G. hirtinoda Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. holttumiana K.M. Wong (for Richard E. Holttum, 1895-1990, botanist and bamboo taxonomist, see *Holttum Memorial Volume*. Editor. R.J. Johns. Kew, Royal Botanic Gardens, 1997)

Peninsular Malaysia. Long-bristled culm-sheath ligules, flowers with 3 fringed lodicules, see *Malaysian Forester* 45(3): 346, f. 1-2. 1982, *Reinwardtia* 10(3): 357. 1987.

G. kachinensis E.G. Camus

Burma. See *Les Bambusées* 141. Paris 1913.

G. kathaensis E.G. Camus

Burma. See *Les Bambusées* 141. Paris 1913.

G. kuring Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. latifolia Ridl. (*Gigantochloa latifolia* var. *efimbriata* Holttum)

Peninsular Malaysia, Thailand. Conspicuous leaf ligules, see *The Flora of the Malay Peninsula* 5: 262. 1925, *Gardens' Bulletin, Straits Settlements* 16: 132-133, f. 33A-B. 1958 [also *Gard. Bull. Singapore*], *Reinwardtia* 10: 359, f. 28-29. 1987.

Local names: buluh miang, buloh pahit

G. latifolia Ridl. var. *alba* Holttum

Peninsular Malaysia. Culm sheaths hairy, see *Gardens' Bulletin, Straits Settlements* 16: 133. 1958.

G. latifolia Ridl. var. *efimbriata* Holttum

Peninsular Malaysia, Singapore. Pilose to villous, lemmas not fimbriate, see *Gardens' Bulletin, Straits Settlements* 16: 133. 1958.

G. levis (Blanco) Merrill (*Arundarbor levis* (Blanco) Kuntze; *Bambusa levis* Blanco; *Bambusa levis* (Blanco) Steudel; *Dendrocalamus curranii* Gamble; *Dendrocalamus flagellifer* Munro; *Dendrocalamus latiflorus* Munro;

Gigantochloa robusta Kurz; *Gigantochloa scribneriana* Merrill) (for Hugh McCullum Curran, 1875-1920)

Origin unknown, Malaysia, Indonesia, the Philippines, China, Yunnan. Erect, strong, densely tufted, sympodial, nonwaxy culms, thick-walled, most of branches fascicled, young culms densely covered with brown or white tomentum, nodes not swollen, internodes densely dark hairy, culm sheath broadly triangular and dark hairy, culm sheath caducous and coriaceous, sheath auricles oblong and ciliate, sheath ligule developed and lacerate, inflorescence a cluster of up to 70-75 pseudospikelets at the node, 4-5 perfect florets and a vestigial terminal floret reduced to an empty lemma, 2-3 bracts, 2-3 glumes, 3 lodicules, wild or cultivated and naturalized, propagated vegetatively by rhizome or culm cuttings, vegetable, good quality edible shoots, used as building material, framework, for making rafts, handicraft, fences, water pipes, raw material for papermaking, split for plaiting walls, commonly found on slopes of hills, secondary forest, lowlands, hill forest, can be confused with *Dendrocalamus asper* (Schult. & Schult.f.) Backer ex Heyne and *Gigantochloa thooi* K.M. Wong, see *Species Plantarum. Editio quarta* 2: 245. 1799, *Flora de Filipinas* 1: 272. 1837, *Syn. Pl. Glumac.* 1: 331. 1854, *Transactions of the Linnean Society of London* 26(1): 123, 124, 150, 152, pl. 6. 1868, *Indian Forester* 1: 344. 1876, *Revisio Generum Plantarum* 2: 761. 1891 and *Philippine Journal of Science* 1(Suppl.): 390. 1906, *Philippine Journal of Science* 5: 271, 291. 1910, *Philippine Journal of Science* Sect. C, Botany, 8(4): 203-206. 1913, *American Journal of Botany* 3(2): 61. 1916, *Gardens' Bulletin, Straits Settlements* 16: 1-135. 1958, *Journal of Agricultural Research Quarterly* 20(1): 85-91. 1986, *Reinwardtia* 10(3): 353-357, f. 26-27. 1987, *Sabah Forest Record* 14: i-xi, 1-94. 1992, *Sandakanian* 1: 15-21, f. 1. 1992.

in English: smooth-shoot gigantochloa

in Brunei: buloh betung, buluh betung

in Indonesia: buluh suluk, buluh tup

Local names: anoh, boho, bulih betung, buluh pering, buluh poring, poring, poring bamboo

in Malaysia: paling, pering, poring

in the Philippine Islands: boko, bolo, bongcina, botong, buhong-china, bulung-china, buton, kabolian, kauayang-china, kauayang-puti, kauayan-sina, kayali, patong

G. ligulata Gamble

Peninsular Malaysia, Thailand, China, Yunnan. Densely tufted, sympodial, thick-walled to solid, slender, closely growing, clambering up trees, curved, top drooping, culm with yellow streaks, young culms densely tomentose, nodes prominent, internodes dark green, branching from the lower half of the culm, culm sheath persistent or caducous, sheath blade erect and lanceolate to broadly lanceolate, sheath ligule thin and prominent, sheath auricles more or less

curved and more or less absent or present, large leafed, leaves erect, leaf blades oblong-lanceolate to long-triangular, drooping inflorescence, pseudospikelet clusters at the distal nodes, spikelet ovate-lanceolate, 2-4 perfect flowers and 1 rudimentary sterile floret, 3-4 glumes, lemma fringed, lodicules absent, 6 stamens, flowering cycle poorly known, very variable species, ornamental, vegetable, edible shoots, raw material for paper pulp, used for rural construction and for making mats and baskets, for furniture making, to frame chairs, for weaving, usually found in damp ground, wet tropical monsoon rain forest, mixed forest, overlogged forest, secondary forest, wasteland, sandy soils, along roadsides, forest edge, along streams or ponds, resembles *Gigantochloa latifolia* Ridley, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 67, pl. 58. 1896, *The Flora of British India* 7: 400. 1896 and *Gard. Bull. Singapore* 16: 129-132. 1958, *Reinwardtia* 10(3): 361-365, f. 30-31. 1987, *Journal of the American Bamboo Society* 7(1-2): 1-15. 1989, *Nature Malaysiana* 16(4): 130-135. 1991.

in Peninsular Malaysia: buloh bilalai, buloh gala, buloh mata rusa, buloh tikus, buloh tilan, buloh tumpat, buluh galah, buluh mata rusa, buluh tikus, buluh tilan, buluh tumpat

in Thailand: lai, nae, pao lai, pao laai, phai daam phraa, phai dam phra, phai-damphra, phai laai, phai-lai, phai-nae

G. longiprophylla Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. luteostriata Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. macrostachya Kurz (*Bambusa macrostachya* Kurz; *Oxytenanthera macrostachya* (Kurz) Brandis)

India, Myanmar. Evergreen, large, glaucous when young, nodes hairy and scarcely swollen, lower internodes very short, leaves thin and lanceolate, culm sheaths short and contracted at the summit, leaf sheaths hairy then glabrescent, large inflorescence, leafy panicle, spikelets covered by long-ciliate glumes and lemmas, 2-3 florets hermaphrodite, 2-3 glumes mucronate, paleas 2-keeled, lodicules absent, used for construction and for making mats and baskets, see *Bambuseae* 39, t. 15, f. 35. 1839, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 42: 251. 1873, *Preliminary Report on the Forest and other Vegetation of Pegu* App. A, 137, App. B, 94. Calcutta 1875, *For. Fl. Brit. Burma* 2: 557. 1877 and *Indian Trees* Addenda: 719. 1906, *Smithsonian Contributions to Botany* 9: 68. 1973.

in India: tekserah

in Thailand: hok lam, houk laam, pok lam, wa kle ma, waklema, wa ma, wama, wame, wa me

G. magentea Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. manggong Widjaja

Indonesia, origin unknown. Sympodial, densely tufted, fast growing, internodes smooth, culm sheath persistent, sheath blade erect and triangular, leaf blades lanceolate and glabrous, on leafy branches groups of pseudospikelets, spikelets lanceolate to ovate-lanceolate, 3 perfect florets, 2 glumes, rare, propagated by rhizome cuttings, flowers gregariously, young shoots eaten, used for building construction, scaffolding, paperpulp, growing on riverbanks, slopes, mountains, tropical climate, see *J. American Bamb. Soc.* 5(3-4): 64, 67, 68. 1984 [1986], *Reinwardtia* 10(3): 365-368, f. 32-33. 1987.

in Indonesia: poring manggong, pring manggong, tiying jahe, tiying jawe

G. membranoidea Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. multiculmis A. Camus

Asia, Laos. See *Bulletin de la Société Botanique de France* 76: 769. 1929.

G. nigrociliata (Büse) Kurz (*Bambusa andamanica* Kurz; *Bambusa nigrociliata* Büse; *Gigantochloa andamanica* (Kurz) Kurz; *Oxytenanthera nigrociliata* (Büse) Munro; *Pseudoxytenanthera nigrociliata* (Büse) T.Q. Nguyen; *Schizostachyum serpentinum* Kurz)

Indonesia, Thailand, origin unknown. Sympodial, green to bright green, densely to loosely tufted, nodes not swollen, culm sheaths triangular, sheath blade narrowly triangular more or less erect, leaf blades lanceolate, leaves glabrous upper and pubescent beneath, clusters of pseudospikelets, spikelets ovate-lanceolate and slender, 3 perfect florets, after flowering the clump dies, can be propagated by seed and by cuttings, vegetable, edible shoots, growing along streams and riverbanks, humid tropics, slopes, see *Plantae Junghuhnianae* 3: 389. 1854, *Natuurkundig Tijdschrift voor Nederlandsch-Indië* 27: 226. 1864, *Catalogus Plantarum quae in Horto Botanico Bogoriensi Coluntur* 20. Batavia 1866, *Transactions of the Linnean Society of London* 26(1): 123, 128. 1868, *Journal of the Asiatic Society of Bengal* 39(2): 88. 1870, *Indian Forester* 1: 351. 1876, *Forest Flora of British Burma* 2: 556. 1877 and *Reinwardtia* 10(3): 327-331, f. 13-14. 1987, *Flow. Pl. India, Nepal and Bhutan* 514. 1990, *J. American Bamb. Soc.* 8(1-2): 146-150. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

in English: black-hair giant bamboo, black-haired giant bamboo, giant bamboo, black giant bamboo

in Indonesia: bambu lengka, awi ular, tiying tabah

in Thailand: hai lo, phai lai lo, phai lailo

G. papyracea Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. parviflora (Keng f.) Keng f. (*Oxytenanthera parviflora* Keng f.)

China, Yunnan. Culm top bending, basal internodes with aerial roots, culm green with yellow longitudinal striae, sheath auricles linear and without cilia, sheath ligule denticulate and wavy, sheath blade ovate-triangular and erect, see *Acta Phytotaxonomica Sinica* 6(4): 358-360, pl. 57. 1957, *Journal of Bamboo Research* 3(1): 24. 1984.

G. pruriens Widjaja

Indonesia, North Sumatra. Erect, hairy below the nodes, pseudospikelets at each node, edible shoots, used for building construction, for cooking glutinous rice (*lemang*), see *J. American Bamb. Soc.* 5(3-4): 369, f. 34-36. 1982, *Reinwardtia* 10(3): 369. 1987.

in Indonesia: buluh belangke, buluh regen, buluh yakyak, tiying jahe, tiying jawe

G. pseudoarundinacea (Steud.) Widjaja (*Arundarbor maxima* (Lour.) Kuntze; *Arundo maxima* Lour., nom. illeg., non *Arundo maxima* Forssk.; *Arundo maxima* Oken, nom. illeg., non *Arundo maxima* Forssk.; *Bambusa excelsa* (Trin.) Miq.; *Bambusa maxima* (Lour.) Poir.; *Bambusa pseudoarundinacea* Steud.; *Bambusa verticillata* Willd.; *Gigantochloa maxima* sensu Kurz; *Gigantochloa maxima* (Lour.) Kurz; *Gigantochloa verticillata* (Willd.) Munro; *Melocanna excelsa* Trin.; *Nastus verticillatus* (Willd.) Sm.)

Java, Indonesia, China, origin not known. Large, evergreen, sympodial, densely tufted, lower nodes with aerial roots, rhizomes developing a central mound irregularly raised above the ground, internodes green to yellow-green striped, branches emerging from the basal 4th or 5th node upward, many branches fascicled at each node, culm sheath truncate and deciduous, culm blade ovate-oblong, culm sheath auricles with a wavy rim, sheath ligule indented with ciliate margin, leaf blade lanceolate more or less glabrous, clustered pseudospikelets groups, spikelets ovoid and subacute, 4 perfect florets and 1 sterile, glumes acute and mucronate, lemmas mucronate at apex, paleas acute at apex, 1-3 lodicules variable and fimbriate, widely cultivated, usually quite variable, charcoal from the culms, shoots eaten as a vegetable, used as poles and for building materials, water pipes, roofings and walls, as water pipes, making basketry and musical instruments, growing on hill slopes, humid tropics, on sandy loams, valleys, alluvial soils, see *Flora Cochinchinensis, denuo in Germania edita* 1: 58. 1793, *Species Plantarum. Editio quarta* 2: 245. 1799, *Encyclopédie Méthodique. Botanique ... Supplément* 8: 703, 704. 1808, *The Cyclopaedia; or, Universal Dictionary of Arts, ...* 24: no. 3. 1819, *Clavis Agrostographiae Antiquioris* 105, 397. Coburg 1822, *Syst. Veg.* 7, 2: 1346. 1830, *Allgemeine Naturgeschichte* 3(1): 422. 1841, *Synopsis Plantarum Glumacearum* 1: 330. 1854, *Flora van Nederlandsch Indië* 3: 418. 1855, *Natuurkundig Tijdschrift voor Nederlandsch-Indië* 27: 226. 1864, *Catalogus Plantarum quae in Horto Botanico Bogoriensi Coluntur* 20. 1866, *Transactions of the*

Linnean Society of London 26(1): 123, 124. 1868, *Indian Forester* 1: 343. 1876, *Revisio Generum Plantarum* 2: 761. 1891, *Annals of the Royal Botanic Garden, Calcutta*. 7: 63. 1896 and *Gard. Bull. Singapore* 16: 114-118. 1958, *J. American Bamb. Soc.* 5(3-4): 58, 67. 1982, *Reinwardtia* 10(3): 305-311, f. 1-2. 1987.

in English: greater giant bamboo

in Indonesia: awi andong, awi andong keukeus, awi andong leah, awi gombong, bambu gombong, buluh batuang, buluh batuang danto, pring gombong, pring surat, tiyang jajang suwat

G. pubinervis Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. pubipetiolata Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. ridleyi Holttum

Origin unknown, only known in cultivation. Erect and densely tufted, ornamental, used for thatching and roofing, see *Natuurkundig Tijdschrift voor Nederlandsch-Indië* 27: 226. 1864 and *Gard. Bull. Singapore* 15: 275. 1956 [also *Gardens' Bulletin, Straits Settlements*], *Gard. Bull. Singapore* 16: 1-135. 1958, *Reinwardtia* 10(3): 347, f. 23. 1987.

in Indonesia: tiyang jajang, tiyang jajang batuh, tiyang aya, tiyang kaas

G. robusta Kurz (*Gigantochloa verticillata* (Willd.) Munro sensu Backer)

Indonesia, origin not known. Densely tufted, sympodial, rather variable, lowest nodes with aerial roots, basal portion of the culm yellow striped, internodes nonwaxy, culm sheath triangular with dark pubescence, culm sheath auricles well-developed, leaf blade lanceolate, leaves hairy beneath, groups of pseudospikelets, spikelets ovoid and compressed, 4 perfect florets and 1 imperfect, vegetatively propagated by rhizome or culm cuttings, young shoots eaten as a vegetable, used for building construction and for traditional musical instruments, used as poles and for roofings and walls, water carrying vessel (*kele*), as water pipes, see *Catalogus Plantarum in Horto Botanico Bogoriensi Cultarum Alter* 19. Bataviae 1844, *Indian Forester* 1: 60, 344. 1876 and *Reinwardtia* 10(3): 310-315, f. 3-5. 1987.

in Indonesia: awi mayan, bamboe maijang, bambu mayang, buluh batuang, buluh riau, buluh riaw, tiyang jajang suwat, tiyang jelepung

G. rostrata K.M. Wong (*Bambusa gracilis* Wall.; *Gigantochloa maxima* var. *minor* Holttum; *Oxytenanthera nigrociliata* Munro)

Peninsular Malaysia, Myanmar, China, Yunnan. Erect, top slightly drooping, tufted, culms dark green with yellow stripes, thick-walled, basal nodes with aerial roots, culm sheath caducous and coriaceous, sheath auricles small, sheath ligule dentate, slender spikelets, lemmas apex

pointed and rotate paleas notched to bifid, gregarious flowering and seeding, linear-oblong seeds used as food by the local people, culms used for building huts and making baskets, weaving and raw material for paper manufacture, along streams and lower slips, fertile loam, moist areas, in semideciduous forests, see *A Numerical List of Dried Specimens of plants, in the East India Company's Museum ...* 5033. London 1831-1832, *Catalogus Plantarum quae in Horto Botanico Bogoriensi Coluntur* 20. Batavia 1866, *Bulletin de la Société Nationale d'Acclimatation de France* 3: 5: 682. 1878 and *Gard. Bull. Sing.* 16: 116, f. 29. 1958, *Malaysian Forester* 45(3): 349, f. 3-4. 1982, *Reinwardtia* 10: 333. 1987.

in India: bolangi, kailyai, pani bans, panibans

G. scortechinii Gamble (after the Italian clergyman Rev. Benedetto (Bertold) Scortechini, 1845-1886, botanist, botanical explorer, traveler, from 1871 to 1884 in Queensland (Australia), 1881 Fellow of the Linnean Society, from 1884 to 1886 Government botanist of Perak, plant collector in the Straits settlements, Malay Peninsula, collaborated with Bailey and von Mueller. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 251. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 358. 1972; D.J. Carr & S.G.M. Carr, editors, *People and Plants in Australia*. 1981; Henry Nicholas Ridley (1855-1956), *The Flora of the Malay Peninsula*. London 1922-1925; I.H. Vegter, *Index Herbariorum*. Part II (6), *Collectors S. Regnum Vegetabile* vol. 114. 1986; M.N. Chaudhri, I.H. Vegter and C.M. De Wal, *Index Herbariorum*, Part II (3), *Collectors I-L. Regnum Vegetabile* vol. 86. 1972; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 613. London 1994).

Peninsular Malaysia, Indonesia, Thailand, China, Yunnan. Densely tufted, gregarious species, sympodial, erect, top drooping, young culms pruinose to waxy, young shoots orange-green, basal nodes with aerial roots, branches from the midculm upward, sheath auricles absent, culm sheath coriaceous and with appressed black hairs, sheath ligule developed, leaf blades softly pubescent beneath, globular clusters of pseudospikelets, 2-5 fertile pseudospikelets mixed with sterile ones, flattened spikelets ovate to oblong-ovate, 3-5 perfect florets and 1 imperfect terminal, 2-3 empty glumes, flowering sporadic, wild, cultivated and naturalized, propagated by seed and cuttings, used for fences, handicrafts, building construction, papermaking, basketry, poultry cages, young shoots rather bitter, found in disturbed areas, overlogged forest, sandy loams, ravines, similar to *Gigantochloa wrayi* Gamble, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 62, pl. 53. 1896, *The Flora of British India* 7: 398. 1896 and *Gard. Bull. Sing.* 16: 122-124. 1958, *Nature Malaysiana* 7: 34-39. 1982, *Reinwardtia* 10: 341-347, f. 20-22. 1987, *Journal of Tropical Forest Science* 2(3): 227-234. 1990, *Nature Malaysiana* 16(4):

130-135. 1991, *Journal of Tropical Forest Science* 4(1): 87-93. 1992.

in Indonesia: buloh rayah, buloh semantan, buloh seremai, buloh telor, buluh kapal

Vernacular names: buloh gala, buloh paa, buloh rayah, buloh semantan, buluh galah, buluh minyak, buluh pa'ao, buluh rayah, buluh semantan, buluh telur

G. scortechinii Gamble var. *albovestita* Holttum

Malaysia. Culm sheath with white, auricles glabrous hairs, see *Gardens' Bulletin, Straits Settlements* 16: 124. 1958, *Reinwardtia* 10: 347. 1987.

Common names: buloh gala, buloh paa, buloh rayah, buloh semantan, buloh seremai, buloh telor, buluh galah, buluh minyak, buluh pa'ao, buluh rayah, buluh semantan, buluh telur

G. scortechinii Gamble var. *scortechinii*

Peninsular Malaysia, Thailand, Indonesia. Culm sheath with blackish hairs, auricles bristly.

in Indonesia: buloh rayah, buloh semantan, buloh telor, buluh kapal

G. serik Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. tekserah E.G. Camus

India. See *Les Bambusées* 141. 1913.

G. thoi K.M. Wong (*Gigantochloa levis* sensu Holttum, sensu Widjaja, non (Blanco) Merrill; *Gigantochloa verticillata* (Willd.) Munro sensu Ridley) (named for Tho Yow Pong, 1945-1991, Malaysian entomologist)

Peninsular Malaysia, origin unknown. Densely tufted, sympodial, erect, strong, closely growing, drooping tips, nodes not prominent or swollen, white-waxy internodes, branches at each midculm node, culm sheaths with spreading to reflexed broadly lanceolate blades, sheaths with a semipersistent ring around the node, leaves softly pubescent beneath, pseudospikelets clustered at branch nodes on leafless culms, 4-5 perfect flowers and 1 rudimentary or vestigial terminal flower, 2-3 empty glumes, empty lemma, no lodicules, 6 stamens, cultivated, delicious edible shoots, foliage leaf blades used to prepare *zong zi*, vegetatively propagated by rhizome cuttings or culm cuttings, often confused with *Gigantochloa levis* (Blanco) Merrill, see *Gard. Bull. Sing.* 16: 119-122. 1958, *Reinwardtia* 10(3): 353-357. 1987, *Journal of the American Bamboo Society* 7(1-2): 1-15. 1989, *Sandakania* 1: 18, f. 2. 1992.

Malayan names: buloh betung, buluh beting, buluh betung

G. tomentosa Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. toungoensis Brandis (*Gigantochloa toungoensis* Brandis ex E.G. Camus, nom. illeg., non *Gigantochloa toungoensis* Brandis)

India, Myanmar/Burma. See *Les Bambusées* 140. 1913.

G. velutina Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

G. verticillata (Willd.) Munro (*Arundarbor maxima* (Lour.) Kuntze; *Arundo maxima* Lour., nom. illeg., non *Arundo maxima* Forssk.; *Arundo maxima* Oken, nom. illeg., non *Arundo maxima* Forssk.; *Bambusa excelsa* (Trin.) Miq.; *Bambusa maxima* (Lour.) Poir.; *Bambusa pseudoarundinacea* Steud.; *Bambusa verticillata* Willd.; *Gigantochloa maxima* sensu Kurz; *Gigantochloa maxima* (Lour.) Kurz; *Gigantochloa pseudoarundinacea* (Steud.) Widjaja; *Melocanna excelsa* Trin.; *Nastus verticillatus* (Willd.) Sm.)

Indonesia. Lodicules present, see *Flora Cochinchinensis, denuo in Germania edita* 1: 58. 1793, *Species Plantarum. Editio quarta* 2: 245. 1799, *Encyclopédie Méthodique. Botanique ... Supplément* 8: 703, 704. 1808, *The Cyclopaedia; or, Universal Dictionary of Arts, ...* 24: no. 3. 1819, *Clavis Agrostographiae Antiquioris* 105, 397. Coburg 1822, *Syst. Veg.* 7, 2: 1346. 1830, *Allgemeine Naturgeschichte* 3(1): 422. 1841, *Synopsis Plantarum Glumacearum* 1: 330. 1854, *Flora van Nederlandsch Indië* 3: 418. 1855, *Natuurkundig Tijdschrift voor Nederlandsch-Indië* 27: 226. 1864, *Catalogus Plantarum quae in Horto Botanico Bogoriensi Coluntur* 20. 1866, *Transactions of the Linnean Society of London* 26(1): 123, 124. 1868, *Indian Forester* 1: 343. 1876, *Revisio Generum Plantarum* 2: 761. 1891, *Annals of the Royal Botanic Garden, Calcutta.* 7: 63. 1896 and *Gard. Bull. Singapore* 16: 114, 117. 1958, *J. American Bamb. Soc.* 5(3-4): 58, 67. 1982, *Reinwardtia* 10(3): 305-311, f. 1-2. 1987.

G. vietnamica T.Q. Nguyen

Vietnam. Montane, see *Bot. Zhurn.* 72(6): 829. 1987.

G. vinhphuica T.Q. Nguyen

Vietnam. Montane, see *Bot. Zhurn.* 72(6): 830. 1987.

G. wanet E.G. Camus

Burma. See *Les Bambusées* 141. 1913.

G. wrayi Gamble (*Gigantochloa kurzii* Gamble; *Gigantochloa maxima* var. *viridis* Holttum) (for Leonard Wray, Jr. 1853-1942, the first curator of Perak Museum in 1905, botanical collector in Malaysia with Herbert Christopher Robinson (1874-1929), see "Journal of a collection expedition to the mountain of Batang Padang, Perak." *Jour. Straits Branch Roy. Asiatic Soc.* 21: 123-165. 1890; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists.* 588, 758. London 1994)

Peninsular Malaysia, Thailand. Erect, slightly arching or bending, nonwaxy culms, nodes not prominent or swollen, branches at each midculm node, culm sheaths with spreading to reflexed blades, ligule toothed, leaf blade softly pubescent beneath, 3-4 perfect flowers and 1 terminal vestigial flower, 3-4 empty glumes, empty lemma, no lodicules, 6 stamens, cultivated, vegetatively propagated by rhizome cuttings or culm cuttings, used for basketry, edible shoots,

found on alluvial soils, wasteland, secondary forest, see *Annals of the Royal Botanic Garden, Calcutta* 7: 64-65, pl. 55. 1896 and *Gard. Bull. Singapore* 16: 115, 124, 127, f. 31. 1958, *Reinwardtia* 10: 338-341, f. 18-19. 1987, *J. American Bamb. Soc.* 7(1-2): 1-15. 1989.

in Indonesia: buluh dabo

in Thailand: buulo maataa ruusa, bulo mata rusa, bu lo ma ta ru sa, phai taa kwaang, phai ta kwang, taa kwaang

Malayan names: buloh beti, buloh manis, buloh mata rusa, buloh minyak, buloh semantan, buluh beti, buluh manis, buluh mata rusa, buluh minyak, buluh semantan

G. wunthoensis E.G. Camus

Burma. See *Les Bambusées* 141. 1913.

G. yunzalinensis Brandis (*Gigantochloa yunzalinensis* E.G. Camus)

Burma. See *Les Bambusées* 141. 1913.

Gilglochloa Pilger

For the German botanist Ernst Friedrich Gilg, 1867-1933, taxonomist, contributor to H.G.A. Engler and K.A.E. Prantl *Die Natürlichen Pflanzenfamilien* edition I and edition 2, to Engler's *Das Pflanzenreich*. (with J. Perkins); see J.H. Barnhart, *Biographical notes upon botanists*. 2: 48. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 144. 1972; Stafleu & Cowan, *Taxonomic literature*. 1: 941-942. Utrecht 1976.

One species, tropical Africa, East Africa. Panicoideae, Panicodae, Arundinelleae, annual, herbaceous, unarmed, ligule fringed, plants bisexual, inflorescence paniculate and contracted, panicle spiciform, spikelets purplish, 2 glumes very unequal, lower glume awned 3-nerved, upper glume 3-nerved, upper lemma hairy and bilobed, lower lemma 5- to 7-nerved, palea thickened with keels winged, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, thicket, woodland, segregate from *Danthoniopsis*, type *Gilglochloa indurata* Pilg., see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 415, 416, f. 1. 1914, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

Species

G. indurata Pilger (*Gilglochloa alopecuroides* Peter)

Tanzania. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 416, f. 1. 1914, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 92. 1930, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 226-354, f. 18. 1957.

Ginannia Bubani = *Ginannia* Scop.
(Fabaceae), *Holcus* L.

Pooideae, Poaeae, Holcinae, see *Species Plantarum* 2: 1047-1048. 1753, *Introductio ad Historiam Naturalem* 300. 1777 and *Flora Pyrenaea ...* 4: 321. 1901, *Contributions from the United States National Herbarium* 48: 370-371, 387-388. 2003.

Glandiloba (Raf.) Steud. = *Eriochloa* Kunth

From the Latin *glans*, *glandis* "any acorn-shaped fruit" and *loba*, *ae* "the haulm of Indian millet" or Greek *lobos* "a pod."

Panicoideae, Paniceae, Melinidinae, see *Nova Genera et Species Plantarum* 1: 94-95, t. 30. 1815 [1816], *Bulletin Botanique [Genève]* 1: 220. 1830, *Nomenclator Botanicus. Editio secunda* 1: 687. 1840 and E.D. Merrill, *Index rafinesquianus*. 75. 1949, *Contributions from the United States National Herbarium* 46: 233-239, 242. 2003.

Glaziophyton Franch.

For the French botanist Auguste François Marie Glaziou, 1828-1906, traveler, plant collector in Brazil, author of "Plantae Brasiliae centralis a Glaziou lecta. Liste des plantes du Brésil Central recueillies en 1861-1895." in *Mém. Soc. Bot. France*. 1(3): 1-661. 1905-1913, collaborator of Antoine L.A. Fée (1789-1874) for *Cryptogames vasculaires du Brésil ... avec le concours ... de ...* F.M.G. Strasbourg 1869, with the Swedish botanist Gustaf Oskar Andersson Malme (né Andersson), 1864-1937, wrote *Xyridaceae brasilienses*. Stockholm 1898. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 54. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 145. 1972; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 715. Stuttgart 1993; D. de Andrade Lima, "Plantas das Caatingas." *Academia Brasileira de Ciências*, Rio de Janeiro. 218-219. 1989; Raymond M. Harley, "Plant Diversity: Kew's Role in North-east Brazil." *The Kew Magazine*. vol. 9. 3: 103-116. Aug 1992; Simon Mayo, "*Neoglaziovia variegata* (Bromeliaceae)." *The Kew Magazine*. 9(3): 124-127. Aug 1992.

One species, eastern and central Brazil. Bambusoideae, Bambusodae, Bambuseae, Arthrostylidiinae, perennial, sympodial, caespitose, erect, reedlike or juncooid or rushlike, simple, hollow, herbaceous to woody and persistent, leafless, rhizomes pachymorph, plants bisexual, inflorescence compound and reduced, large terminal false panicle,

spikelet subtended by bract and prophyll, 2 fertile florets plus a rudiment, 0-3 glumes very unequal, palea nerved, 3 free and membranous lodicules, stamens 3, ovary glabrous, stigmas 2, páramos, related to *Myriocladus*, type *Glaziophyton mirabile* Franch., see *Flora Boreali-Americana* 1: 73. 1803, *Journal de Botanique (Morot)* 3(17): 277, f. A. 1889, *Die Natürlichen Pflanzenfamilien* Nachtrag (2-4 Teil) 1: 9. 1897 and *Bambusées* 16, 25. 1913, *Smithsonian Contributions to Botany* 9: 1-148. 1973 [Genera of bamboos native to the New World (Gramineae: Bambusoideae).], Emmet J. Judziewicz et al., *American Bamboos*. 178-180. 1999, *Journal of Biogeography* 26(4): 693-712. July 1999 [Brazilian Páramos I. An introduction to the physical environment and vegetation of the *campos de altitude*.], *Contributions from the United States National Herbarium* 39: 58. 2000.

Species

G. mirabile Franch. (*Arundinaria mirabile* (hort. ex Burb.) Hack.; *Arundinaria palmata* (hort. ex Burb.) Bean; *Bambusa palmata* hort. ex Burb.; *Sasa palmata* (hort. ex Burb.) E.G. Camus; *Sasa palmata* (hort. ex Burb.) Nakai, nom. illeg., non *Sasa palmata* (hort. ex Burb.) E.G. Camus)

Brazil. Slender, small, densely clumped, woody, culms hollow and chambered, rhizomes with elongated necks, flowering culms leafless, synflorescence paniculate and drooping, functional florets ovate obtuse, stigmas plumose, see *Journal de Botanique (Morot)* 3(17): 277, f. A. 1889, *Gardener's Chronicle*, ser. 3 7: 641. 1890, *Gardener's Chronicle*, ser. 3 15: 238. 1894 and *Les Bambusées* 25. 1913, *Trees and Shrubs Hardy in the British Isles* 1: 218. 1914, *Journal of Japanese Botany* 10: 561. 1934.

Glyceria R. Br. = *Desvauxia* P. Beauv. ex Kunth, *Devauxia* Kunth, *Devauxia* R. Br. (Centrolepidaceae), *Exydra* Endl., *Heleochoa* Fries, *Hemibromus* Steud., *Hydrochloa* Hartm., *Hydrochloa* P. Beauv., *Hydropoa* (Dumort.) Dumort., *Nevroloma* Raf., *Plotia* Steud., *Porroteranthe* Steud.

From the Greek *glykys* "sweet," referring to the edible grains of *Glyceria fluitans* (L.) R. Br., alluding to the the sweet seeds that are favored by many waterfowl; see Robert Brown (1773-1858), *Prodromus florae Novae Hollandiae*. 179. 1810.

About 16-40 species, northern hemisphere, North America, Australia, New Zealand, South America, temperate regions. Pooideae, Poodae, Meliceae, perennial, tall, glabrous, herbaceous, usually aquatic or marsh grasses, strongly rhizomatous with creeping rhizomes or stoloniferous, stems reedlike and pithy, culms decumbent and rooting from lower nodes, glabrous nodes, hollow internodes, auricles absent,

leaves mostly basal, sheaths tubular with the margins united, ligule membranous, leaf blades linear and broad or narrow, plants bisexual, inflorescence open or contracted, flowers usually in panicles or rarely in racemes, spikelets solitary and slightly compressed laterally or cylindrical, spikelets stalked and linear to ovate, 2 glumes unequal and ovate to oblong, lower glume 1- to 3-nerved, upper glume 1- to 5-nerved, lemmas rounded on the back and not keeled, lemmas 7- to 9-nerved or ridged, palea 2-keeled, 2 lodicules joined and fleshy, stamens 3 or 2, ovary glabrous, stigmas 2, fruit compressed, vestigial foliar structure subtending the inflorescence absent or present, aquatic weeds, in some of the species the leaves may float on the water surface, spread vigorously in water, useful in controlling erosion of riverbanks, species very palatable, the seeds are eaten by waterfowl, some species may cause cyanogenic poisoning in livestock, found in marshes, moist woodlands, wet and swampy places, sides of lakes and ponds, bog gardens, native pasture grasses, pampas, grasslands, similar to *Puccinellia*, type *Glyceria fluitans* (L.) R. Br., see *Species Plantarum* 1: 67. 1753, *Familles des Plantes* 2: 226. 1763, Noel [Natalis] Joseph de Necker (1730-1793), *Elementa botanica genera genuina*, species naturales omnium vegetabilium detectorum ..., secundum systema omologium seu naturale ... 2: 55. Neowedae ad Rhenum [Neuwied] 1790, *Prodromus Florae Novae Hollandiae* 179, 532. 1810, *Genera Graminum* 8. 1819, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 106. 1819, *Observations sur les Graminées de la Flore Belgique* 111. 1824, *Flora Posoniensis* 119. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 367. 1833, *Floram Scanicam* 202. 1835, *Nomenclator Botanicus. Editio secunda* 2: 356. 1841, Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 393. Ansbach 1852, *Syn. Pl. Glum.* 1: 287, 317. 1854, *Bull. Soc. Roy. Bot. Belgique* 7: 67. 1868 and *American Journal of Botany* 36: 155-165. 1949 [G.L. Church, A cytotaxonomic study of *Glyceria* and *Puccinellia*], *Aquatic and Wetland Plants of Southeastern United States Monocotyledons* 1-712. 1979, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Watsonia* 15: 38-39. 1984, *Acta Biologica Cracoviensia, Series Botanica* 27: 57-74. 1985, *Flora Mesoamericana* 6: 231-232. 1994, *Harvard Papers in Botany* 1(9): 11-90. 1996, Emily K. Green & Susan M. Galatowitsch, "Effects of *Phalaris arundinacea* and nitrate-N addition on the establishment of wetland plant communities." *Journal of Applied Ecology* 39(1): 134-144. Feb 2002, *Contributions from the United States National Herbarium* 48: 256, 312, 371-379, 382, 383, 402, 467, 505, 589. 2003, *Tellus B* 55(3): 737-750. July 2003, Jessica E. Peterson & Andrew H. Baldwin, "Variation in wetland seed banks across a tidal freshwater landscape." *Am. J. Bot.* 91: 1251-1259. 2004, *New Phytologist* 164(3): 413-415. Dec 2004, *Journal of Ecology* 93(1): 168-177. Feb 2005,

Medical and Veterinary Entomology 19(1): 2-21. Mar 2005, *Freshwater Biology* 50(3): 418-437. Mar 2005 [Distribution of aquatic vascular plants in lowland rivers: separating the effects of local environmental conditions, longitudinal connectivity and river basin isolation.], *Oikos* 109(1): 187-195. Apr 2005.

Species

G. acutiflora Torr. (*Festuca acutiflora* (Torr.) Bigelow; *Festuca grandiflora* Spreng. ex Steud., nom. illeg., non *Festuca grandiflora* Lam.; *Hemibromus japonicus* Steud.; *Panicularia acutiflora* (Torr.) Kuntze)

North America. Perennial, herbaceous, spikelets linear-cylindrical, straight and dense inflorescence, lemma acute, projecting palea, very small grain, emergency food, found in ponds and streams, shallow water of pools, muddy shores, paddy fields, swamps, bog garden, see *A Flora of the Northern and Middle Sections of the United States* 1: 104. 1823, *Flora Bostoniensis* third edition ... 39. 1840, *Nomenclator Botanicus. Editio secunda* 1: 630. 1840, *Synopsis Plantarum Glumacearum* 1: 317. 1854, *Revisio Generum Plantarum* 2: 783. 1891.

in English: sharp-scaled mannagrass, sharp-glumed manna grass, creeping manna grass, creeping mannagrass, manna grass, mannagrass

in Japan: mutsuoregusa

G. alnasteretum Komarov (*Glyceria remota* var. *japonica* Hack.)

Japan, Hokkaido, southern and eastern Kamchatka, China. See *Repertorium Specierum Novarum Regni Vegetabilis* 13: 87. 1914.

in Japan: miyamadojotunagi

G. aquatica (L.) J. Presl & C. Presl (*Aira aquatica* L.; *Catabrosa aquatica* (L.) P. Beauv.)

Europe, North temperate. See *Species Plantarum* 1: 64, 66-70, 73-76. 1753, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 20. 1796, *Primitiae Florae Werthemensis* 116. 1799, *Descriptio Graminum in Gallia et Germania* 194. 1802, *Prodromus Florae Novae Hollandiae* 179. 1810, *Mémoires de la Société Impériale des Naturalistes de Moscou* 3, t. 13. 1812, *Essai d'une Nouvelle Agrostographie* 97, 135, 142, 149, 157, 160, 162, 165, pl. 19. 1812, *Genera Graminum* 5. 1819, *Flora Cechica* 25. 1819, *A Natural Arrangement of British Plants* 2: 133. 1821, *Annales des Sciences Naturelles, Botanique* 5: 447. 1825, *Flora Gallica*, éd. 2, 1: 59. 1828, *Flora der Phanerogamischen Gewächse der Umgegend von Leipzig* 96. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 395. 1830, *Flore Française* 4: 115. 1837, *Novitiae Florae Suecicae* 3: Add. 176. 1843, *Prodromus Florae Hispanicae* 1: 77. 1861 and *Botaniska Notiser* 97. 1919, *Arch. Soc. Zool.-Bot. Fenn. Vanamo* 2: 100-106. 1947,

Bot. Zurn. (Kiev) 56(9): 1254. 1971, *Bot. Zhurn. SSSR* 70(5): 698-700. 1985, *Novosti Sist. Vyss. Rast.* 1986: 29. 1986, *Bot. Zhurn. SSSR* 71: 1426-1427. 1986, *Fl. Libya* 145: 84. 1988, *Acta Biologica Cracoviensia, Series Botanica* 33: 37-38. 1991, *Flora Mediterranea* 5: 340-345. 1995, *Opera Botanica* 137: 1-42. 1999, *Flora of Australia* 43: 90. 2002, *Contributions from the United States National Herbarium* 48: 228-230. 2003.

in English: waterhair, water hairgrass, brookgrass, whorlgrass, water whorlgrass, water whorl grass

G. arundinacea Kunth (*Glyceria arundinacea* (Roem. & Schult.) Fr., nom. illeg., non *Glyceria arundinacea* Kunth; *Glyceria maxima* (Hartm.) Holmb. subsp. *arundinacea* (Kunth) Hultén; *Glyceria maxima* subsp. *arundinacea* (Kunth) Hayek; *Poa arundinacea* M. Bieb., nom. illeg., non *Poa arundinacea* Moench)

Europe. On marshy meadows, see *Flora Taurico-Caucasica* 1: 60. 1808, *Systema Vegetabilium* 2: 700. 1817, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 367. 1833, Elias Magnus Fries, *Novitiarum florum suecicae mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845, *Flora der Provinz Brandenburg* 1: 851. 1864, *A Manual of the Botany of the Northern United States* (edition. 6) 667. 1890 and *Feddes Repertorium Specierum Novarum Regni Vegetabilis. Beiheft* 30(3): 271. Berlin 1932, *Novosti Sist. Vyss. Rast.* 8: 81-82. 1971.

G. australis C.E. Hubb. (*Glyceria fluitans* sens. Rodway, atque sens. Morris, atque sens. J.M.Black, non (L.) R. Br.)

South Australia, Victoria, Tasmania, New South Wales. Perennial, stout, glabrous, rhizomatous, creeping rootstock, caespitose or in loose open tussocks, rooting at lower nodes, leaves nonauriculate, sheath closed, ligule hyaline to membranous, a raceme or a panicle unilateral, spikelets almost cylindrical and after broader and flattish, chasmogamous spikelets, vestigial foliar structure subtending the inflorescence absent, glumes thin, lemmas acuminate, palea linear, anthers yellow, fruit compressed, fodder and cover plant, found in fresh water swamps, open habitats, in shallow water, swampy depression, mud, alongside creeks and rivers, in shallow water at margin of reed-swamp, see *Kew Bulletin* 1934: 450. 1934.

in English: manna grass, Australian sweet grass

G. borealis (Nash) Batchelder (*Glyceria borealis* (Nash) A. Nelson, nom. illeg., non *Glyceria borealis* (Nash) Batch.; *Glyceria borealis* (Nash) Piper, nom. illeg., non *Glyceria borealis* (Nash) Batch.; *Glyceria fluitans* var. *angustata* Vasey ex Fernald; *Panicularia borealis* Nash)

North America, U.S., California, Mexico. Perennial, weak, endangered, herbaceous, sometimes decumbent at the base, often producing adventitious roots from submerged lower nodes, no auricles, sheaths glabrous and flattened, ligule rounded or sharply pointed, leaves glabrous, narrow flower

head, panicle branches stiff and erect, spikelets linear, glumes obtuse, lemmas oblanceolate and smooth between slightly rough veins, grain dark brown, grains worth gathering for food, occurs in wetlands and in meadow habitats, in shallow water or mud of streams, around margins, shallow water of lakes and streams, fens, ditches, ponds and marshes, swamps, along lakeshores, similar to *Glyceria fluitans* (L.) R. Br., see *Prodromus Florae Novae Hollandiae* 1: 179. 1810, *Proceedings of the Portland Society of Natural History* 2: 91. 1895, *Bulletin of the Torrey Botanical Club* 24(7): 348-349. 1897 and *Proceedings of the Manchester Institute of Arts and Sciences* 1: 74. 1900, *New Manual of Botany of the Central Rocky Mountains* 74. 1909, *Ill. Fl. Pacific States* 1: 211. 1923.

in English: small floating manna grass, northern manna grass

G. canadensis (Michx.) Trinius (*Briza canadensis* Michx.; *Briza canadensis* Nutt., nom. illeg., non *Briza canadensis* Michx.; *Glyceria canadensis* var. *canadensis*; *Megastachya canadensis* (Michx.) Michx. ex Roem. & Schult.; *Nevroloma canadensis* (Michx.) Raf.; *Panicularia canadensis* (Michx.) Kuntze; *Poa canadensis* (Michx.) Torr.)

North America, Canada, U.S. Perennial, herbaceous, clumped, open inflorescence, drooping branches, green flower clusters, found in swamps, edge of swampy forests, moist woods, marshes, shores and wet shores, wet woods, lakeshore, see *Flora Boreali-Americana* 1: 71. 1803, *Systema Vegetabilium* 2: 593. 1817, *The Genera of North American Plants* 1: 69. 1818, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 106. 1819, *A Flora of the Northern and Middle Sections of the United States* 1: 112. 1823, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 366. 1830, *Revisio Generum Plantarum* 2: 783. 1891, *Bulletin of the Torrey Botanical Club* 21(1): 37. 1894, *Proceedings of the Portland Society of Natural History* 2: 91. 1895 and *American Journal of Botany* 21(3): 128. 1934.

in English: rattlesnake manna grass, rattlesnake grass

G. colombiana Giraldo-Cañas

South America, Colombia. See *Caldasia* 24(1): 9-13. 2002.

G. declinata Bréb. (*Glyceria cookei* Swallen; *Glyceria fluitans* subsp. *declinata* (Bréb.) O. Bolòs, Masalles & Vigo; *Glyceria fluitans* var. *declinata* (Bréb.) Ghisa; *Glyceria notata* subsp. *declinata* (Bréb.) Weeda; *Glyceria plicata* subsp. *declinata* (Bréb.) Weeda; *Glyceria plicata* var. *declinata* (Bréb.) Druce) (for William Bridge Cooke, b. 1908)

Europe, Eurasia, America. Perennial, glabrous, loosely tufted, slender, flaccid, erect or ascending, rooting at the lower nodes, rhizomatous, creeping rootstock, base prostrate or curved, leaves nonauriculate, leaf sheath closed and submembranous, sheath enclosing culm, ligule membranous and truncate or tapered to a point, leaves folded and

flat, a green panicle or raceme unilateral and loose, spikelets almost cylindrical and later broader and flattish, chasmogamous spikelets, glumes thin and unequal, lemmas toothed and scabrous, palea 2-keeled and 2-lobed or deeply bifid, anthers yellow or purple, ovary glabrous, fruit compressed, grows in damp areas, lowland to montane, on alluvial gravel, wet places, damp pasture, stream margins, in shallow ponds, along drains, swamps, see *Prodromus Florae Novae Hollandiae* 1: 179. 1810, *Flore de la Normandie* 354. 1859 and *List of British Plants* 83. 1908, *Journal of the Washington Academy of Sciences* 31(8): 348, f. 1. 1941, *Flora Republicii Socialiste Romania* 12: 441. 1972, *Gorteria* 11(9): 214. Leiden 1983, *Collect. Bot.* 17(1): 96. 1987 [1988], *Gorteria* 16(2): 48. 1990, *New Zealand Journal of Botany* 29: 101-116. 1991.

in English: manna grass, waxy manna grass, Australian sweet grass, sweet grass, glaucous sweet grass

in Finnish: Pikkusorsimo

in Swedish: Blågrönt mannagräs

G. drummondii (Steudel) C.E. Hubb. (*Porroteranthe drummondii* Steud.)

Western Australia. Extinct species, see *Synopsis Plantarum Glumacearum* 1: 287. 1854 and *Kew Bulletin* 1934: 450. 1934.

G. elata (Nash) M.E. Jones (*Glyceria elata* (Lam.) Hitchc.; *Glyceria elata* (Nash) Hitchc., nom. illeg., non *Glyceria elata* (Nash) M.E. Jones; *Glyceria latifolia* J.S. Cotton; *Panicularia elata* Nash; *Panicularia nervata* subsp. *elata* (Nash) Piper)

Northern America, U.S., California, Canada. Perennial, herbaceous, creeping rhizomes, auricles absent, rough sheath, ragged blunt ligules, pyramid-like flower head loose and open, lemmas ridged, palea often almost transparent, grains worth gathering for food, native pasture grass, occurs in wet areas, in wetlands and in montane meadow habitats, seepage areas, swampy places, along streams and rivers, lakeshores and wet meadows, shallow red rocky soil, see *Revisio Generum Plantarum* 1: 783. 1891 and *Memoirs of the New York Botanical Garden* 1: 54. 1900, *Bulletin of the Torrey Botanical Club* 29(9): 573. 1902, *Contributions from the United States National Herbarium* 11: 140. 1906, *Biological Series of the Bulletin of the State University of Montana* 15: 17. Missoula 1910, *A Flora of California* 1: 162. 1912.

in English: fowl manna grass, tall manna grass

G. fluitans (L.) R. Br. (*Desvauxia fluitans* P. Beauv. ex Kunth; *Devauxia fluitans* (L.) P. Beauv. ex Kunth; *Festuca fluitans* L.; *Glyceria fluitans* var. *acutiflora* Döll; *Hydrochloa fluitans* (L.) Hartm.; *Melica fluitans* (L.) Raspail; *Panicularia brachyphylla* Nash; *Panicularia fluitans* (L.) Kuntze; *Poa fluitans* (L.) Scop.)

Temperate regions of the northern hemisphere. Perennial, hairless, herbaceous, lowland to montane, loosely tufted or forming loose masses, stoloniferous, stems horizontal then ascendant, erect or spreading, sometimes prostrate or floating at base, auricles absent, leaf sheath closed and papery, ligule acute or rounded on the top, blade folded when young, panicle-like inflorescence loose and spreading or open at anthesis, spikelets 5- to 14-flowered linear-cylindrical or slightly compressed, glumes unequal, scabrous or minutely scabrid lemmas, palea apex shortly bidentate, foliage relished by the cattle, human food, sweet seed raw or cooked in porridge and soups, a flour from the seed, occasionally cultivated, this grass can cover the surface of ponds or rivers by its stems and its floating leaves, tolerates strongly acid soils, occurs on very wet or boggy soils, in shallow pond margins, shallow water either stagnant or slow flowing, marshes, open swamps, ponds, on riversides, in soft mud on margins, on alluvial or peat soils, see *Species Plantarum* 1: 75. 1753, *Flora Carniolica, Editio Secunda* 73. 1772, *Prodromus Florae Novae Hollandiae* 1: 179. 1810, *Genera Graminum* 8. 1819, *Annales des Sciences Naturelles; Botanique, sér. 5*, 5: 443. 1825, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 367. 1833, *Flora Chilena* 6: 390. 1854, *Flora des Grossherzogthums Baden* 1: 170. 1855 [1857], *Revisio Generum Plantarum* 2: 782. 1891, *Bulletin of the Torrey Botanical Club* 24(7): 349-350. 1897 and *New Zealand Journal of Botany* 29: 101-116. 1991.

in English: float grass, floating sweet grass, floating manna grass, floating meadow grass, water manna grass, water mannagrass, sweet grass, manna grass

in French: glycérie flottante, glyceria pliée

in Morocco: gousmir, bou rokba

G. fluitans (L.) R. Br. subsp. ***fluitans*** var. ***islandica*** Á. Löve Europe.

G. grandis S. Watson (*Glyceria americana* (Torr.) Pammel; *Glyceria arundinacea* Kunth subsp. *grandis* (S. Watson) Tzvelev; *Glyceria flavescens* M.E. Jones; *Glyceria grandis* S. Wats. ex Gray; *Glyceria grandis* f. *pallescens* Fernald; *Glyceria maxima* f. *pallescens* (Fernald) B. Boivin; *Glyceria maxima* subsp. *grandis* (S. Watson) Hultén; *Glyceria maxima* var. *americana* (Torr.) B. Boivin; *Glyceria maxima* var. *grandis* (S. Watson) Breitung; *Panicularia americana* (Torr.) MacMill.; *Panicularia grandis* (S. Watson) Nash; *Poa aquatica* [sensu] Pursh; *Poa aquatica* var. *americana* Torr.)

North America, U.S., California, Canada. Perennial, herbaceous, stout, rhizomatous, no auricles, smooth to slightly rough sheaths, ligules blunt, leaves with rough upper surface and a smooth underside, open and loose flower head with numerous spreading branches, spikelets purplish and slightly flattened, glumes ovate to ovate-lanceolate to pointed, lemmas purplish oblong-lanceolate and nerved,

grain dark brown, rare to extremely rare species, native pasture grass, grows in swampy places, in wet areas along lakeshores, shallow water, ditches, lake-margins, freshwater wetlands, shores, bogs and fens, stream bank, brooksides, meadows and wet meadows, edge habitats, mud of marshes, ponds, lakes, cyanogenic potential, see *Species Plantarum* 1: 67. 1753, *A Flora of the Northern and Middle Sections of the United States* 1: 108. 1823, *A Manual of the Botany of the Northern United States* (edition. 6) 667. 1890, *The Metaspermae of the Minnesota Valley* 81. 1892 and *The Grasses of Iowa* 2: 271. 1905, *Biological Series of the Bulletin of the State University of Montana* 15: 17, t. 2. 1910, *An Illustrated Flora of the Northern United States* 1: 265. 1913, *Botaniska Notiser* 1919: 97. 1919, *Rhodora* 23(274): 231. 1921 [1922], *Man. Grasses U.S.* 865. 1935, *Acta Universitatis Lundensis* 38: 229. 1942, *The Canadian Field-Naturalist* 71(2): 45. 1957, *Le Naturaliste Canadien* 94(4): 524. 1967, *Novosti Sist. Vyss. Rast.* 8: 82. 1971, R. Puls, F.P. Newschwander, J.A. Greenway, "Cyanide poisoning from *Glyceria grandis* S. Wats. ex Gray (tall manna-grass) in a British Columbia beef herd." *Can. Vet. J.* 19: 264-265. 1978.

in English: American manna grass, American mannagrass, tall manna grass, reed mannagrass

G. grandis S. Watson var. ***grandis*** (*Glyceria grandis* f. *grandis*; *Glyceria maxima* subsp. *grandis* (S. Wats.) Hultén; *Glyceria maxima* var. *americana* (Torr.) Boivin; *Panicularia grandis* (S. Wats.) Nash)

North America. Perennial, see *A Manual of the Botany of the Northern United States* (edition. 6) 667. 1890.

in English: American manna grass

G. grandis S. Watson var. ***komarovii*** L. Kelso (*Glyceria hulteniana* Á. Löve)

North America, Eurasia. Perennial, along ditch, see *A Manual of the Botany of the Northern United States* (edition. 6) 667. 1890 and *Rhodora* 36(427): 266. 1934, *Svensk Botanisk Tidskrift* 48: 218. 1954.

in English: American manna grass

G. insularis C.E. Hubb.

Tristan da Cunha. Indeterminate species, see *Bulletin of the British Museum (Natural History), Botany* 8: 394. 1981.

G. ischyronaura Steudel (*Glyceria tonglensis* auct.) (from the Greek *ischyros* "strong" and *neuron* "nerve")

Asia, Japan, Hokkaido, Russia.

in Japan: dojotsunagi

G. latispicea (F. Muell.) Benth. (*Festuca latispicea* F. Muell.; *Glyceria latispicea* (F. Muell.) F. Muell. ex Benth.)

Australia. Perennial, caespitose, ligule membranous and acute, blade flat, inflorescence compact, 2-6 florets, glumes lanceolate, lemmas overlapping, palea 2-keeled and pubescent, grows in wet areas in grassland, along roadsides, see

Fragmenta Phytographiae Australiae 8: 127. 1873, *Flora Australiensis: A Description ...* 7: 658. 1878.

G. leptolepis Ohwi (*Glyceria ussuriensis* Kom.)

Japan, Hokkaido. See *Botanical Magazine* (Tokyo) 45: 381. 1931, *Acta Phytotaxonomica et Geobotanica* 2(3): 164. 1933, *Flora URSS* 2: 460, 758. 1934, *Acta Phytotaxonomica et Geobotanica* 6(3): 151. 1937, *Sinensia* 11: 410. 1940.

in Japan: hirohanodojotsunagi

G. leptorrhiza (Maxim.) Komarov (*Glyceria fluitans* var. *leptorrhiza* Maxim.)

Japan, Hokkaido. See *Primitiae Florae Amurensis* 320. 1859.

in Japan: ukigaya

G. leptostachya Buckley (*Panicularia davyi* Merr.; *Panicularia leptostachya* (Buckley) Piper, nom. illeg., non *Panicularia leptostachya* (Speg.) Macloskie) (for Joseph Burt Davy, 1870-1940)

Northern America, Alaska, California, Oregon, Washington, British Columbia. Perennial, aquatic, herbaceous, rare, usually with rhizomes and erect stems, no auricles, flattened sheaths sometimes rough, sharp-pointed ligules, leaves rough on both surfaces, open flower head, cylindrical spikelets, short membrane-like glumes, lemma strongly nerved, grows in wet meadows and along lakeshores, freshwater-marsh habitats, wetlands, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 95. 1862 and *Rhodora* 4(43): 145-146. 1902, *Fl. N.W. Coast* 59. 1915, Straley, G.B., Taylor, R.L. & Douglas, G.W. "The rare vascular plants of British Columbia." in *Syllogeus*. (59): 165. 1985.

in English: slim-head manna grass, manna grass, slender-spike manna grass, slender-spiked manna grass, davy manna grass

G. lithuanica (Gorski) Gorski (*Glyceria aquatica* subsp. *debilior* (Trin. ex F. Schmidt) T. Koyama; *Glyceria aquatica* var. *debilior* Trin. ex F. Schmidt; *Glyceria debilior* (Trin. ex F. Schmidt) Kudo; *Glyceria lithuanica* (Gorski) Lindm.; *Glyceria orientalis* Kom.; *Glyceria remota* (Forselles) Fr.; *Poa lithuanica* Gorski)

Asia, Japan, Russia, Europe. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 365. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 44: 45. 1909, *Journal of the College of Agriculture, Hokkaido Imperial University* 11: 74. 1922, *Grasses of Japan and its Neighboring Regions* 508. 1987.

in Finnish: Korpisorsimo

in Swedish: Glesgröe

in Japan: karafutodojotsunagi

G. maxima (Hartm.) E. Holmb. (*Catabrosa hydrophila* Link; *Exydra aquatica* (L.) Endl.; *Festuca aquatica* (L.)

Mutel; *Glyceria altissima* (Moench) Schloss. & Vuk.; *Glyceria altissima* Garcke; *Glyceria aquatica* (L.) Wahlb., nom. illeg., non *Glyceria aquatica* (L.) J. Presl & C. Presl; *Glyceria spectabilis* Mertens & W.D.J. Koch; *Heleochoa aquatica* (L.) Drejer; *Hydropoa spectabilis* (Mert. & W.D.J. Koch) Dumort.; *Molinia maxima* Hartm.; *Panicularia aquatica* (L.) Kuntze; *Poa aquatica* L.)

Temperate Eurasia, Europe. Perennial, aquatic or semi-aquatic, tall, wide-leaved, glabrous, caespitose, stout stems erect and unbranched, robust, large, rhizomatous with stout creeping rhizomes, auricles absent, blade acute and a little bit rough, leaf sheaths with prominent midribs or cross-veinlets, frequently with closed sheath, ligule firmly membranous short and pointed in the middle, much-branched panicles broadly ovate to oblong, the inflorescence can be open (chasmogamous) or contracted and symmetrical, yellow to green spikelets oblong, glumes subequal, lemmas obtuse and coriaceous, palea membranous to chartaceous with scabrid keels, anthers yellow, ovary glabrous, dark brown seeds, native pasture grass, used as a forage crop, palatable, a nutritious wetland fodder for cattle, ornamental grass naturalized elsewhere in temperate regions, vigorous growth, extensive root system, potential seed contaminant, reproduces vegetatively, troublesome aquatic weed and aggressive species, has the potential to be a serious invader of wetlands, sometimes forms vast floating mats, forms dense monoculture in fertile sites, forms dense settlements in the most frequently flooded areas, poisonous due to the presence of smut only in fresh foliage, in Australia and New Zealand cattle poisoning due to cyanide production in the young shoots, a poor food-plant and nesting substrate for wetland wildlife, provide shelter for water birds and other aquatic organisms, tolerates strongly acid soils, useful for erosion control, suitable for reducing erosion of riverbanks, grows in slow moving streams, edges of slow flowing streams, lowland swamps, drains, creeks, dams, open habitats, swampy places, pools, waterholes, wet areas, very wet or boggy soils, on alluvial or peat soils, irrigation and drainage channels, ditches, on riversides and waterways, see *Species Plantarum* 1: 67. 1753, *Fl. Gothob.* 18. 1820, *Handbok i Skandnaviens Flora* 56. 1820, *Flora Excursoria Hafniensis* 40. 1838, *Linnaea* 17(4): 405. 1844, *Flora von Nord- und Mittel-Deutschland* edition. 2 375. 1851, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *Revisio Generum Plantarum* 2: 782. 1891 and *Botaniska Notiser* 1919: 97. 1919, *Taxon* 49(2): 255. 2000.

in English: reed meadow grass, meadow reed grass, reed sweet grass, reed manna grass

in Danish: høj sødgræs

in Finnish: Komea sorsimo

in French: glycérie aquatique

G. maxima (Hartm.) Holmb. var. *variegata* Boom & Ruys
North America. Clumped, leaves longitudinally striped green and creamy yellow flushed pink, arching, open heads

of tiny green flowers flushed with purple, ornamental grass, in full sun or shade, grows in heavy clay, in wet soils, stream sides, in lighter soils the plant will spread by rhizomes to the point of being invasive, tends to naturalize itself.

G. melicaria (Michx.) F.T. Hubbard (*Glyceria elongata* (Torr.) Trin.; *Glyceria torreyana* (Spreng.) Hitchc.; *Panicularia elongata* (Spreng.) Kuntze; *Panicularia melicaria* (Michx.) A.S. Hitchc.; *Panicularia torreyana* (Spreng.) Merr.; *Panicum melicarium* Michx.; *Poa elongata* Torr. ex Spreng., nom. illeg., non *Poa elongata* Willd.; *Poa elongata* Torr., nom. illeg., non *Poa elongata* Willd.; *Poa torreyana* Spreng.)

Eurasia. Perennial, herbaceous, erect, found in wet woods, moist soil and mud, stream banks and swamps, forest openings, see *Flora Boreali-Americana* 1: 50. 1803, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 104. 1821, *A Flora of the Northern and Middle Sections of the United States* 1: 112. 1823, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 58. 1836, *Revisio Generum Plantarum* 2: 783. 1891 and *Rhodora* 4(43): 146. 1902, *Rhodora* 8(95): 211. 1906, *Contributions from the United States National Herbarium* 12(3): 149. 1908, *Rhodora* 14(165): 186. 1912.

in English: melic manna grass, northeastern manna grass, slender manna grass

G. multiflora Steud. (*Glyceria fluitans* var. *stricta* E. Desv.; *Glyceria leptostachys* Speg., nom. illeg., non *Glyceria leptostachya* Buckley; *Panicularia leptostachya* (Speg.) Macloskie; *Panicularia leptostachya* (Buckley) Piper, nom. illeg., non *Panicularia leptostachya* (Speg.) Macloskie)

Southern America, Chile, Brazil, Uruguay, Argentina. Perennial, forage, see *Prodromus Florae Novae Hollandiae* 1: 179. 1810, *Synopsis Plantarum Glumacearum* 1: 285. 1854, *Flora Chilena* 6: 390. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 95. 1862, *Anales del Museo Nacional de Buenos Aires* 5: 94, t. 4, f. G. 1896 and *Reports of the Princeton University Expeditions to Patagonia ... Botany* 8: 220. 1904, *Gramíneas Uruguayas* 119. 1970, *Gayana, Botánica* 42: 1-157. 1985, *Darwiniana* 35(1-4): 155-158. 1998, *Caldasia* 24(1): 9-13. 2002.

G. nemoralis (R. Uechtr.) R. Uechtr. & Körn. (*Glyceria plicata* var. *nemoralis* Uechtr.)

Europe, Eurasia, Russia.

G. notata Chevall. (*Glyceria fluitans* var. *plicata* Fr.; *Glyceria plicata* (Fr.) Fr.; *Glyceria turcomanica* Kom.)

Asia, India, Europe, Morocco, Armenia, Eurasia. See *Flore des Environs de Paris* 174. 1827, Elias Magnus Fries (1794-1878), *Novitarum florum suecicarum mantissa* [prima, altera, tertia] et Continuaciones [1-5] [Academic Dissertations].

Lund 1832-1845 and *Flora URSS* 2: 452, 757. 1934, *Gorteria* 16(2): 48. 1990.

in English: plicate sweet-grass

in Finnish: savisorsimo

in Swedish: Skånskt mannagräs

G. nubigena W.A. Anderson

North America, North Carolina, Tennessee. Vulnerable species, see *Rhodora* 35: 321, f. B. 1933, *Manual of the Vascular Flora of the Carolinas* i-lxi, 1-1183. 1968.

in English: Smoky Mountains manna grass, great Smoky Mountains manna grass

G. obtusa (Muhl.) Trinius (*Panicularia obtusa* (Muhl.) Kuntze; *Poa obtusa* Muhl.)

Northern America, U.S., Canada. Perennial, herbaceous, endangered, conelike dense inflorescence, branches all point upward, occurs in wet sandy soils, wet woods, swamps, bogs, moist sandy peaty ground, see *Descriptio uberior Graminum* 147. 1817, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles.* 1(4): 366. 1830, *Revisio Generum Plantarum* 2: 763. 1891.

in English: Atlantic manna grass, coastal manna grass, blunt mannagrass

G. occidentalis (Piper) J.C. Nelson (*Panicularia occidentalis* Piper)

North America, U.S., California, Canada. Perennial, aquatic, herbaceous, seed ground into a flour and used as a cereal, found in freshwater wetlands, in marshy areas, freshwater-marsh habitats, along the sides of lakes, ponds and streams, on wet heavy soil, see *Fl. N.W. Coast* 59. 1915, *Torreyia* 19: 224. 1919, *Vascular Plants of the Pacific Northwest* 1: 1-914. 1969, *Vascular Plants of the Intermountain West, U.S.A.* 6: 1-584. 1977.

in English: Northwestern manna grass, waxy mannagrass, Western manna grass

G. otisii A.S. Hitchc. (*Torreyochloa otisii* (Hitchc.) G.L. Church; *Torreyochloa pallida* var. *pauciflora* (J. Presl) J.I. Davis) (named after Ira Clinton Otis, 1861-1938, collector)

North America, Oregon, Washington. Endangered species, see *Reliquiae Haenkeanae* 1(4-5): 257. 1830 and *American Journal of Botany* 21(3): 128. 1934, *American Journal of Botany* 36: 163-164. 1949, *Manual of the Grasses of the United States* (edition 2, revised by A. Chase). 1951, *Phytologia* 70(5): 364. 1991.

G. plicata (Fries) Fries (*Glyceria fluitans* (L.) R. Br. subsp. *plicata* Fries; *Glyceria fluitans* var. *plicata* Fr.; *Glyceria notata* Chevall.; *Glyceria plicata* Fr.; *Glyceria turcomanica* Kom.)

Eurasia, northwestern Africa. Perennial, prostrate and ascending, rooting and branching at lower nodes, internodes spongy, leaves nonauriculate, leaf sheath papery and closed,

ligule acute membranous, a green panicle erect and contracted or very lax, fragile spikelets, florets readily disarticulating at maturity, glumes unequal membranous, lemma compressed obtuse or slightly lobed, palea chartaceous and 2-keeled with keels narrowly winged, anthers dehiscent, ovary glabrous, growing in open meadows, open habitats, lowland to montane, roadside drains, pools, water meadows, shallow water, in streams and watersides in coniferous woods, marshy valleys, sandy floodplains, ditches, wet conditions, ponds, often considered a synonym of *Glyceria notata* Chevall., see *Flore des Environs de Paris* 174. 1827, Elias Magnus Fries, *Novitiarum florum suecicae mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845 and *Flora URSS* 2: 452, 757. 1934, *New Zealand Journal of Botany* 29: 101-116. 1991, *Darwiniana* 35(1-4): 155-158. 1998.

G. pulchella (Nash) K. Schum. (*Panicularia pulchella* Nash)

Boreal North America, Canada, U.S., Alaska. Perennial, rare, rhizomatous, no auricles, open sheath smooth, pointed membrane-like ligules, drooping flat leaf blades, loose and sometimes drooping flower head, papery glumes pale purplish brown or whitish and transparent, awnless lemmas rough, may be confused with *Glyceria striata* (Lam.) A.S. Hitchcock, see *Bulletin of the New York Botanical Garden* 2(6): 157-158. 1901, *Botanischer Jahresbericht* 29(1): 513. 1903, *Checklist of the Vascular Plants of the Northwest Territories Canada* i-viii, 1-607. 1980, *Flora of Alberta* (edition 2) i-xii, 1-687. 1983, *Flora of the Yukon Territory* i-xvii, 1-669. 1996.

in English: Mackenzie valley manna grass, slender manna grass

G. saltensis Sulekic & Rúgolo

South America, Argentina. See *Darwiniana* 35(1-4): 155-158. 1998.

G. septentrionalis A.S. Hitchc. (*Glyceria arkansana* Fern.; *Panicularia fluitans* var. *septentrionalis* (Hitchc.) Farw.; *Panicularia septentrionalis* (A.S. Hitchc.) E.P. Bicknell)

North America. Perennial, emergent, herbaceous, caespitose, culms decumbent, spikelets linear-cylindric, inflorescence paniculate, rachilla very curved, hairy glumes, found in shores, wet woods, wet mud, wet meadows, wooded depressions, swamps, meadows and shallow water of stream margins, ditches, see *Revisio Generum Plantarum* 2: 782. 1891 and *Rhodora* 8(95): 211. 1906, *Bulletin of the Torrey Botanical Club* 35(4): 196. 1908, *Report of the Michigan Academy of Science, Arts and Letters* 21: 353. 1920, *Rhodora* 31(363): 49. 1929, *Rhodora* 63(745): 24. 1961, *Phytologia* 37(4): 317-407. 1977.

in English: floating manna grass, Eastern manna grass, man-nagrass

G. septentrionalis A.S. Hitchc. var. *arkansana* (Fernald) Steyermark & Kucera (*Glyceria arkansana* Fern.)

Northern America. Rhizomatous, spreading, emergent, eaten by cattle, common in swamps, ponds, see *Rhodora* 63(745): 24. 1961.

in English: Arkansas manna grass

G. septentrionalis A.S. Hitchc. var. *septentrionalis*

Northern America.

G. spicata Guss. (*Glyceria fluitans* (L.) R. Br. subsp. *spicata* (Biv.) Husn.; *Glyceria plicata* var. *spicata* (Guss.) Lange; *Glyceria spicata* (Biv.) Guss.; *Poa spicata* Biv. ex Guss.)

Europe. Swamps, marshes, see *Flora Siculae Synopsis* 2: 784. 1845.

G. striata (Lam.) A.S. Hitchcock (*Briza canadensis* Nutt., nom illeg. non *Briza canadensis* Michx.; *Catabrosa nervata* (Willd.) Link; *Glyceria aquatica* subsp. *nervata* (Willd.) Douin; *Glyceria elata* (Nash ex Rydb.) M.E. Jones; *Glyceria michauxii* Kunth; *Glyceria neogaea* Steud.; *Glyceria nervata* (Willd.) Trin.; *Glyceria nervata* var. *rigida* (Nash) Lunell; *Glyceria nervata* var. *stricta* Scribn. ex Hitchc.; *Glyceria rigida* (Nash) Rydb., nom. illeg., non *Glyceria rigida* (L.) Sm.; *Glyceria striata* subsp. *stricta* (Scribn.) Hultén; *Glyceria striata* var. *stricta* (Scribner) Fernald; *Hydropoa nervata* (Willd.) Dumort.; *Panicularia nervata* (Willd.) Kuntze; *Panicularia nervata* f. *major* Millsp.; *Panicularia nervata* f. *stricta* (Scribn.) House; *Panicularia nervata* var. *filiformis* Farw.; *Panicularia nervata* var. *parviglumis* Scribn. & Merr.; *Panicularia nervata* var. *purpurascens* Farw.; *Panicularia nervata* var. *rigida* Nash; *Panicularia nervata* var. *stricta* (Scribn.) Scribn. ex Hitchc.; *Panicularia nervata* var. *viridis* Farw.; *Panicularia rigida* (Nash) Rydb.; *Panicularia striata* (Lam.) A.S. Hitchc.; *Poa lamarckii* Kunth; *Poa lineata* Pers.; *Poa nervata* Willd.; *Poa parviflora* Pursh, nom. illeg., non *Poa parviflora* R. Br.; *Poa striata* Lam.; *Poa striata* Michx., nom. illeg., non *Poa striata* Lam.; *Poa sulcata* Roem. & Schult., nom. illeg., non *Poa sulcata* Lag.)

Northern America, U.S., California, Canada, Mexico, Guatemala. Perennial, slender, herbaceous, erect, smooth, densely tufted, clumped or single, shortly rhizomatous, stoloniferous, leaf sheaths closed glabrous to rough, ligule rounded and membranous, leaves glabrous to somewhat rough, panicle loosely spreading and open, mature flower head open with slender upward-pointing branches, spikelets ovate often purplish, many-flowered and awnless spikelets, glumes subequal ovate-elliptic and minutely hairy with rough jagged margins, first glume is twice as long as the second, lemmas elliptic and broad, palea keels scabrid, grain shiny dark brown to reddish, grains large and worth gathering for food, naturalized elsewhere, occurs in wetlands and in meadow habitats, moist meadows, light woodland, shady places, sandy soil, open areas, sandy floodplain, low woods, bogs, saturated soil, sand bars, lakeshores,

roadside ditches, fresh wet meadows, wet grounds, ponds, wet woods, wet places, low wet grounds, swamps, springs and stream margins, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 183. 1791, *Species Plantarum. Editio quarta* 1: 389. 1797, *Flora Boreali-Americana* 1: 69. 1803, *Syn. Pl.* 1: 89. 1805, *Flora Americae Septentrionalis; or, ...* 80. 1814, *Systema Vegetabilium* 2: 550. 1817, *The Genera of North American Plants* 1: 69. 1818, *Révision des Graminées* 1: 118. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles.* 1(4): 365. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 362. 1833, *Linnaea* 17(4): 405. 1844, *Synopsis Plantarum Glumacearum* 1: 285. 1854, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *Revisio Generum Plantarum* 1: 783. 1891, *Bulletin, West Virginia Agricultural Experiment Station* 24(2): 473. 1892, *Bulletin, Division of Agrostology United States Department of Agriculture* 13: 44. 1898 and *Memoirs of the New York Botanical Garden* 1: 54. 1900, *Bulletin, Division of Agrostology United States Department of Agriculture* 30: 8. 1901, *Gray's Manual of Botany* (edition. 7) 159. 1908, *American Midland Naturalist* 4: 223. 1915, *Flora of the Rocky Mountains* 83. 1917, *Report of the Michigan Academy of Science, Arts and Letters* 20: 168. 1919, *Report of the Michigan Academy of Science, Arts and Letters* 22: 180. 1921, *New York State Museum Bulletin* 254: 118. 1924, *Proceedings of the Biological Society of Washington* 41: 157. 1928, *Rhodora* 31(363): 47. 1929, *Flora of the Prairies and Plains of Central North America* 122. 1932, *Manual of the South-eastern Flora* 132. 1933, *Rhodora* 37: 263. 1935, *Le Naturaliste Canadien* 94(4): 524. 1967, Jean J. Pan and Keith Clay, "Infection by the systemic fungus *Epichloë glyceriae* and clonal growth of its host grass *Glyceria striata*." *Oikos* 98(1): 37-46. July 2002, Jean J. Pan & Keith Clay, "Epichloë glyceriae infection affects carbon translocation in the clonal grass *Glyceria striata*." *New Phytologist* 164(3): 467-475. Dec 2004.

in English: fowl manna grass, fowl meadow grass, nerved manna grass, meadow manna grass

in Danish: amerikansk sødgræs

G. striata (Lam.) A.S. Hitchcock var. ***mexicana*** Kelso (*Glyceria mexicana* (Kelso) Beetle)

North America. See *Rhodora* 37: 263. 1935, *Phytologia* 48(2): 191. 1981.

G. striata (Lam.) A.S. Hitchcock var. ***striata***

North America.

G. tonglensis C.B. Clarke (*Glyceria caspica* Griseb., nom. illeg., non *Glyceria caspia* Trin.; *Glyceria kashmiriensis* Kelso) (Himalaya, between Darjeeling and Tonglo)

China, Nepal, Asia, India. Foliage relished by the cattle, see *Die geographische Verbreitung der Pflanzen Westindiens* 1865, *Journal of the Linnean Society, Botany* 15: 119. 1876

and *Rhodora* 37(439): 262-263. 1935, *Grasses of Burma, Ceylon, India and Pakistan* 570-571. 1960.

G. tonglensis C.B. Clarke var. ***honshuana*** Kelso

Japan. See *Rhodora* 37: 263. 1935.

G. tonglensis C.B. Clarke var. ***ovatiflora*** Keng f.

China. See *Acta Botanica Yunnanica* 4(3): 274. 1982.

G. triflora (Korsh.) Kom. (*Glyceria aquatica* var. *triflora* Korsh.; *Glyceria arundinacea* subsp. *triflora* (Korsh.) Tzvelev; *Glyceria debilior* auct.; *Glyceria kamtschatica* Kom.; *Glyceria karafutensis* Ohwi; *Glyceria maxima* (Hartm.) Holmb. subsp. *triflora* (Korsh.) Hultén)

Russian Federation. Found in moist areas, floodplains, woods, ditches, see *Flora URSS* 2: 459, 758, t. 34: 17. 1934, *Botanical Magazine* 51(604): 152-153. 1937, E. Hultén (1894-1981), *The Circumpolar Plants. I. Vascular cryptogams, conifers and monocotyledons.* 1: 108. Stockholm 1962 [Kungl. Svenska Vetenskapsakademiens handlingar. Fjärde Serien. Band 8. Nr 5.], *Novosti Sist. Vyss. Rast.* 8: 81. 1971.

G. x gatineauensis Bowden (*Glyceria melicaria* (Michx.) F.T. Hubb. x *Glyceria striata* (Lam.) A.S. Hitchc.) (Canada, Gatineau Park)

Northern America, Canada. See *Canadian Journal of Botany* 38: 126. 1960.

G. x laxa (Scribn.) Scribn. (*Glyceria canadensis* var. *laxa* (Scribn.) A.S. Hitchc.; *Glyceria laxa* Scribn. ex E.L. Rand & Redfield; *Glyceria laxa* (Scribn.) Scribn.; *Glyceria x ottawensis* Bowden; *Panicularia laxa* Scribn.)

Northern America, Canada, U.S. Perennial, see *Prelim. Cat. Pl. Mount Desert* 180. 1890.

in English: limp manna grass, lax mannagrass, northern mannagrass

G. x pedicellata F. Towns.

New Zealand. Branched at base, stoloniferous with long floating stolons, culm internodes spongy, leaf sheaths chartaceous, ligule membranous, leaf blade flat or folded, panicle branches erect or spreading, spikelets persistent, glumes unequal and membranous, lemma obtuse, palea shortly bidentate and keels narrowly winged, anthers indehiscent, found in swamps, along streams, drains, see *Annals and Magazine of Natural History, ser. 2* 5: 105. 1850 and *New Zealand Journal of Botany* 29: 101-116. 1991.

Glyphochloa W.D. Clayton

From the Greek *glypho* "to carve, engrave," *glyphe* "a carving" and *chloe, chloa* "grass."

About 8 species, India. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, annual, herbaceous, branched, slender, geniculate, leaf blades linear to filiform, ligule an unfringed membrane, plants bisexual, inflorescence terminal or axillary, racemose or pseudospicate,

single flattened dorsiventral raceme, lower floret barren, 2 glumes often equal, lower glume long-awned 2-keeled, lemma and palea acute, 2 fleshy lodicules, 3 stamens, similar to *Heteropholis*, type *Glyphochloa forficulata* (C.E.C. Fischer) Clayton, forest floor, moist shady areas, rocky places, see *Mantissa Plantarum* 2: 164. 1767, *Supplementum Plantarum* 13, 114. 1781 [1782] and *Grasses of Burma* ... 190-193. 1960, *Bull. Bot. Surv. India* 12(1-4): 6-17. 1970, *Kew Bulletin* 35(4): 813-818. 1981.

Species

G. acuminata (Hack.) Clayton (*Manisuris acuminata* (Hack.) Kuntze; *Rottboellia acuminata* Hack.)

Karnataka, Maharashtra, Tamil Nadu, Kerala. Annual, lower glume ridged, single awned, rocky areas, moist places, see *Monographiae Phanerogamarum* 6: 291. 1889, *Revisio Generum Plantarum* 2: 779. 1891 and *Kew Bulletin* 35(4): 815. 1981.

G. acuminata (Hack.) Clayton var. *acuminata*

India.

G. acuminata (Hack.) Clayton var. *stocksii* (Hook.f.) Clayton (*Manisuris acuminata* var. *stocksii* (Hook.f.) Jain; *Rottboellia acuminata* var. *stocksii* Hook.f.)

India. See *The Flora of British India* 7(21): 153. 1897 [1896] and *Bulletin of the Botanical Survey of India* 12(1-4): 9. 1970 [1972], *Kew Bulletin* 35(4): 815. 1981.

G. acuminata (Hack.) Clayton var. *woodrowii* (Bor) Clayton (*Manisuris acuminata* var. *woodrowii* Bor)

India. See *Grasses of Burma, Ceylon, India and Pakistan* 191. 1960, *Kew Bulletin* 35(4): 815. 1981.

G. divergens (Hook.f.) Clayton (*Manisuris divergens* (Hack.) Kuntze; *Rottboellia divergens* Hack.)

India, Mysore, Karnataka, Kerala. Rare, annual, 2-awned, leaves basal, upper leaves pilose, lower glume of sessile spikelets bifid and awned, back of the glumes pitted, on hill slopes, grasslands, wet habitats, see *Monographiae Phanerogamarum* 6: 292. 1889, *Revisio Generum Plantarum* 2: 779. 1891 and *Bull. Bot. Surv. India* 9(1-4): 293-294, figs. 1-17. 1967, *Kew Bulletin* 35(4): 815. 1981.

G. divergens (Hook.f.) Clayton var. *hirsuta* (Fischer) Clayton (*Manisuris divergens* var. *hirsuta* (C.E.C. Fisch.) Jain; *Manisuris forficulata* var. *hirsuta* C.E.C. Fisch.)

India. See *Bulletin of Miscellaneous Information Kew* 933: 357f. 6. 1933, *Bulletin of the Botanical Survey of India* 12(1-4): 12. 1970 [1972], *Kew Bulletin* 35(4): 815. 1981.

G. forficulata (Fischer) Clayton (*Manisuris forficulata* Fischer)

Karnataka, Maharashtra, Tamil Nadu. Annual, 2-awned, leaf blades glabrous or hairy, back of the glumes hairy,

common along roadsides, grassy slopes, see *Bulletin of Miscellaneous Information Kew* 1933: 353. 1933, *Kew Bulletin* 35(4): 815. 1981.

G. goensis (Rolla Rao & Hemadri) Clayton (*Manisuris goensis* Rao & Hemadri)

India. See *Bulletin of the Botanical Survey of India* 10: 106. 1968, *Kew Bulletin* 35(4): 815. 1981.

G. henryi Janarth.

India. See *Rheedea* 10(2): 99-101, f. 1. 2000.

G. mysorensis (Jain & Hemadri) Clayton (*Manisuris mysorensis* Jain & Hemadri)

India. See *Bulletin of the Botanical Survey of India* 10: 280. 1969, *Kew Bulletin* 35(4): 815. 1981.

G. ratnagirica (Kulk. & Hemadri) Clayton (*Manisuris ratnagirica* Kulk. & Hemadri)

India. See *Indian Forester* 100(4): 250. 1974, *Kew Bulletin* 35(4): 815. 1981.

G. santapau (Jain & Deshpande) Clayton (*Manisuris santapau* Jain & Desh.)

India, Maharashtra. Annual, tufted, leaves linear and acute, inflorescence erect, racemes solitary, stout internode, lower glume of sessile spikelet awned and densely ciliate, rare, marshy places, see *Bulletin of the Botanical Survey of India* 10(3-4): 277-279. 1969 [1968], *Bulletin of the Botanical Survey of India* 12(1-4): 15, f. 11. 1970, *Kew Bulletin* 35(4): 815. 1981.

G. talbotii (Hook.f.) Clayton (*Manisuris talbotii* (Hook.f.) Bor; *Peltophorus talbotii* (Hook.f.) Camus; *Rottboellia talbotii* Hook.f.)

India, Goa. Vulnerable, annual, leaves linear, stout racemes, sessile spikelets imbricate, long-awned, grassy slopes, hillsides, high rainfall areas, see *The Flora of British India* 7(21): 155. 1897 [1896] and *Bulletin du Muséum d'Histoire Naturelle* 27: 371. 1921, *The Bombay Grasses* 35. 1935, *Grasses of Burma* ... 192, t. 10. 1960, *Bulletin of the Botanical Survey of India* 12(1-4): 16, f. 9. 1970 [1972], *Kew Bulletin* 35(4): 815. 1981.

Gnomonia Lunell = *Festuca* L., *Gnomonia* Ces. & De Not. (Fungi)

From the Greek *gnomon* "interpreter, pointer, carpenter's square, point."

Pooideae, Poeae, Loliinae, see *Commentario della Società Crittogamologica Italiana* 1: 231. 1863 and *American Midland Naturalist* 4: 224. 1915, *Contributions from the United States National Herbarium* 48: 312-368, 379. 2003.

Goldbachia Trin. = *Arundinella* Raddi,
Calamochloe Rchb., *Goldbachia* DC.
(Brassicaceae, alt. Cruciferae)

After the German Karl (Carl) Ludwig Goldbach, 1793-1824.

Panicoideae, Arundinelleae, type *Goldbachia mikanii* Trin. ex Spreng., see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 42, 81. 1820, *Mémoires du Muséum d'Histoire Naturelle* 7: 242. 1821, *Regni Vegetabilis Systema Naturale* 2: 577. 1821, *Agrostografia Brasiliensis* 36-37, t. 1, f. 3. 1823, *Conspectus Regni Vegetabilis* 52. 1828 and *Contributions from the United States National Herbarium* 46: 111-113, 144, 242. 2003.

Gossweilerochloa Renvoize = *Tridens* Roem. & Schult.

For the botanist John Gossweiler, 1873-1952, plant collector, author of *Carta fitogeografica de Angola*. [Luanda] 1939, *Flora exotica de Angola*. Luanda 1950, "Bibliografia das viagens feitas em Angola por exploradores de diversas nacionalidades, cujos relatorios se referem à flora, fauna e agricultura." *Bol. Serv. Agr. Com. Col. Flor.* Ano VII, 28-31: 121-125. 1935, "Elementos para a Historia da Exploração Botanica de Angola." *Bol. Soc. Broter.* 13: 303-304. 1939 and "Relação dos viajantes que coligiram plantas em Angola actualmente depositadas nos institutos botanicos de Londres, Berlim, Paris, Montpelier, Zürich, Lisboa, Coimbra, Cabo da Boa Esperança e Washington onde estão sendo estudadas desde 1868." *Bol. Serv. Agr. Com. Col. Flor.* Ano VII, 28-31: 126-130. 1935; see Alberto Judice Leote Cavaco (b.1916), *Contribution à l'étude de la flore de la Luanda d'après les récoltes de Gossweiler, 1946-1948*. Lisboa 1959 [Publicações culturais da Companhia de Diamantes de Angola, vol. 42].

Chloridoideae, Cynodonteae, see *American Journal of Botany* 48(7): 565-573. 1961, *Darwiniana* 22(1-3): 159-175. 1979, *Kew Bulletin* 33(3): 525-527. 1979, *Dominguezia* 2: 18-20. 1981, *Iheringia*, Ser. Bot. 35: 25-44. 1986, *Flora Mesoamericana* 6: 259. 1994, *American Journal of Botany* 81: 622-629. 1994, *Contributions from the United States National Herbarium* 41: 121-122, 225-228. 2001.

Gouinia E. Fourn. = *Gouinia* E. Fourn. ex Benth., *Gouinia* E. Fourn. ex Benth. & Hook.f., *Gouinia* Benth., *Hackelia* Vasey, *Hackelia* Vasey ex Beal, *Pogochloa* S. Moore, *Schenckochloa* J.J. Ortíz

Named for the French botanist Antoine Gouan (Gouin) (Dupuy des Esquiles, pseud.), 1733-1821, professor of

botany at Montpellier, correspondent of Linnaeus, his principal writings are *Hortus regius monspeliensis*. Lyon 1762, *Flora monspeliaca*. Lyon 1765, *Explication du système botanique du Chevalier von Linné*. Montpellier 1787 and *Description du Ginkgo-Biloba, dit Noyer du Japon*. Montpellier 1812. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 69. 1965; Nikolaus Joseph von Jacquin (1727-1817), *Selectarum stirpium americanarum historia*. 1: 263, t. 179, f. 40. Vindobonae [Wien] 1763; Clap, *Antoine Gouan*, Essais et documents inédits. Montpellier 1955; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; M. Colmeiro y Penido, *La Botánica y los Botánicos de la Peninsula Hispano-Lusitana*. Madrid 1858; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; [Pierre Cusson, Antoine Gouan & P.E. Crassous] Dupuy des Esquiles, *Leçons de Botanique*, faites au jardin royal de Montpellier; par Monsieur Imbert, Professeur & Chancelier en l'Université de Médecine. [A satire directed at François Imbert] en Hollande [Avignon] 1762; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 456. 1973; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 149. 1972; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 115. Palermo 1988; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971.

About 10-13 species, Central and South America, from Mexico to Argentina. Chloridoideae, Cynodonteae, Gouiniinae, perennial, erect, wiry, robust, caespitose, leaf blades linear, auricles absent, sheaths ciliate or not with scabrous margins, ligule a membrane ciliate or not, inflorescence a panicle exserted, racemes on a central axis, spikelets solitary and more or less laterally compressed, 2-6 florets per spikelet, rachilla between each floret, uppermost floret rudimentary and awned, 2 glumes unequal to very unequal and lanceolate, lower glume 1- to 5-nerved, upper glume 1- to 7-nerved, lemmas keeled, palea glabrous or hairy, lodicules truncate, stamens 3, stigmas 2, open habitats, dry open places on hill slopes, thickets, similar to *Silentvalleya* Nair et al., allied to *Leptochloa* P. Beauv., type *Gouinia polygama* E. Fourn., see *Genera Plantarum* 3: 1178. 1883, *Mexicanas Plantas* 2: 103. 1886, *Transactions of the Linnean Society of London, Botany* 4(3): 509, t. 37, f. 9-23. 1895, *Contributions from the United States National Herbarium* 1(9): 365. 1895, *Grasses of North America for Farmers and Students* 2: 438. 1896 and *Journal of the Washington Academy of Sciences* 17: 73, f. 2. 1927, Jason Richard Swallen, "The grass genus *Gouinia*." *Amer. J. Bot.* 22: 31-41. 1935, *Bull. Torrey Botanical Club* 88: 143-152. 1961, *Brittonia* 23(3): 293-324. 1971, *Lilloa* 34(6): 57-88. 1975

[Contribución al conocimiento de las especies argentinas del género *Gouinia* Fournier (Gramineae — Eragrostoideae — Eragrosteae)], *Candollea* 46: 241-249. 1991 [*Schenckochloa* (Poaceae, Chloridoideae, Eragrostoideae), un genero nuevo del noreste de Brasil.], *Acta Botanica Mexicana* 23: 1-33. 1993 [Estudio sistemático del género *Gouinia* (Gramineae, Chloridoideae, Eragrostoideae)], *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Flora Mesoamericana* 6: 262. 1994, *Contributions from the United States National Herbarium* 41: 122-123, 127, 190, 193. 2001, *Hickenia* 3(28): 99-103. 2001, *Flora of Ecuador*. Gramineae (part 2) Subfam. Chloridoideae. 68: 23-25. 2001.

Species

G. barbata (Hack.) Swallen (*Diplachne barbata* Hack.; *Schenckochloa barbata* (Hack.) J.J. Ortíz)

South America. Ligule a line of hairs, see *Österreichische Botanische Zeitschrift* 52: 240. 1902, *American Journal of Botany* 22: 37. 1935, *Candollea* 46(2): 243. 1991.

G. brasiliensis (S. Moore) Swallen (*Pogochloa brasiliensis* S. Moore)

Bolivia, Brazil, Paraguay, Argentina. Leaf blades acuminate, lax racemes, spikelets sessile elliptic, 4- to 5-flowered, lower glume acuminate, upper glume acuminate or 2-dentate, palea keels scabrous, see *Transactions of the Linnean Society of London, Botany* 4(3): 509, t. 37, f. 9-23. 1895 and *American Journal of Botany* 22: 36. 1935.

G. cearensis (Ekman) Swallen (*Diplachne cearensis* Ekman)

South America. Callus bearded, palea shortly 2-awned, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 32, t. 5, f. 3, t. 6, f. 18. 1911, *American Journal of Botany* 22: 39. 1935.

G. gracilis Ekman ex Swallen

Cuba. See *American Journal of Botany* 22: 33, f. 1. 1935.

G. isabelensis J.J. Ortíz

Mexico. See *Acta Botánica Mexicana* 23: 18. 1993.

G. latifolia (Griseb.) Vasey (*Diplachne guatemalensis* Hack.; *Diplachne latifolia* (Griseb.) Hack.; *Diplachne latifolia* Nakai, nom. illeg., non *Diplachne latifolia* (Griseb.) Hack.; *Diplachne monticola* (Chase) McNeill; *Gouinia guatemalensis* (Hack.) Swallen; *Gouinia ramosa* Swallen; *Leptochloa monticola* Chase; *Sieglingia latifolia* (Griseb.) Kuntze; *Tricuspis latifolia* Griseb.)

Argentina, Mexico. Leaf blades acuminate scabrous, lax racemes, spikelets oblong and mainly terminal, 3- to 6-flowered, lower glume acuminate, upper glume acute or obtuse, lemmas 2-dentate, see *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 259-260. 1874, *Revisio Generum Plantarum* 2: 789. 1891, *Contributions from the United States National Herbarium* 1(9):

365. 1895 and *Österreichische Botanische Zeitschrift* 52: 274. 1902, *Botanical Magazine* (Tokyo) 35: 139. 1921, *Journal of the Washington Academy of Sciences* 17: 73, f. 2. 1927, *Publications of the Carnegie Institution of Washington* 436: 333, f. 1. 1934, *Brittonia* 31(3): 401. 1979.

G. latifolia (Griseb.) Vasey var. ***guatemalensis*** (Hack.) J.J. Ortíz

(*Diplachne guatemalensis* Hack.; *Gouinia guatemalensis* (Hack.) Swallen; *Gouinia ramosa* Swallen)

Guatemala. See *Österreichische Botanische Zeitschrift* 52: 275. 1902, *Publications of the Carnegie Institution of Washington* 436: 334. 1934, *American Journal of Botany* 22: 21, 40. 1935, *Acta Botánica Mexicana* 23: 21. 1993.

G. latifolia (Griseb.) Vasey var. ***latifolia***

South America.

G. longiramea Swallen (*Gouinia virgata* (J. Presl) Scribn.)

South America, Mexico. Lemmas 5-7-nerved, see *Reliquiae Haenkeanae* 1(4-5): 263. 1830, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 10. 1897 and *Publications of the Carnegie Institution of Washington* 436: 334, f. 2. 1934.

G. mexicana (Scribn.) Vasey (*Diplachne mexicana* (Scribn.) Hack.; *Leptochloa mexicana* Scribn.)

South America. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 42(2): 302-304, t. 13, f. 6, 6a. 1891, *Contributions from the United States National Herbarium* 1(9): 365. 1895 and *Österreichische Botanische Zeitschrift* 52: 275. 1902.

G. papillosa Swallen

Mexico. See *Publications of the Carnegie Institution of Washington* 436: 334, f. 3. 1934.

G. paraguayensis (Kuntze) Parodi (*Arundinaria paraguayensis* Kuntze; *Gouinia tortuosa* Swallen; *Sieglingia paraguayensis* Kuntze; *Triodia paraguayensis* (Kuntze) Hack.)

Bolivia, Argentina, Paraguay. Delicate, erect, leaf blades scabrous and acuminate, rigid spikes, spikelets elliptic, lower glume acuminate, upper glume acuminate or 2-dentate, lemmas pilose on margins, palea shortly 2-awned, see *Flora Boreali-Americana* 1: 73. 1803, *Prodromus Florae Novae Hollandiae* 182. 1810, *Revisio Generum Plantarum* 3(2): 341. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 127. 1904, *Revista del Museo de La Plata* 34: 176, 192. 1934, *American Journal of Botany* 22: 41. 1935.

G. paraguayensis (Kuntze) Parodi var. ***paraguayensis***

South America.

G. paraguayensis (Kuntze) Parodi var. ***tortuosa*** (Swallen) Turpe (*Gouinia tortuosa* Swallen)

South America, Argentina. See *American Journal of Botany* 22: 41. 1935, *Lilloa* 34(6): 77, f. 2B. 1975.

G. virgata (J. Presl) Scribn. (*Bromus virgatus* J. Presl; *Diplachne virgata* (J. Presl) Hack.; *Festuca fournieriana* Hemsl.; *Festuca laxiflora* A. Rich.; *Festuca laxiflora* Phil., nom. illeg., non *Festuca laxiflora* A. Rich.; *Gouinia brasiliensis* (S. Moore) Swallen; *Gouinia longiramea* Swallen; *Gouinia polygama* E. Fourn. ex Hemsl.; *Gouinia polygama* E. Fourn.; *Gouinia polygama* var. *major* E. Fourn.; *Hackelia angustifolia* Vasey ex Beal; *Leptochloa palmeri* Vasey ex Scribn.; *Leptochloa polygama* (E. Fourn.) Beal; *Pogochloa brasiliensis* S. Moore)

Brazil, Mexico to Bolivia, Chile. Perennial, erect, slender, wiry, unbranched, ligule a membrane finely ciliate, forming small clumps, knotty base, leaf blades linear-lanceolate, inflorescence a very open panicle with scabrid branches, spikelets lanceolate and laterally flattened, 2-3 florets, glumes unequal, lemma 3-nerved, palea keels ciliate, 2 rounded lodicules, 3 stamens, dry scrub, steppes, in coastal lowland, related to *Glyceria brasiliensis*, see *Species Plantarum* 1: 73-76. 1753, *Reliquiae Haenkeanae* 1(4-5): 263. 1830, *Historia Fisica Política y Natural de la Isla de Cuba, Botanica* 11: 318. 1850, *Linnaea* 29(1): 98. 1858, *Biologia Centrali-Americana*; ... *Botany* ... 3(20): 581. 1885, *Mexicanas Plantas* 2: 103. 1886, *Transactions of the Linnean Society of London, Botany* 4(3): 509, t. 37, f. 9-23. 1895, *Grasses of North America for Farmers and Students* 2: 437-438. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 10. 1897 and *Österreichische Botanische Zeitschrift* 52: 276. 1902, *Publications of the Carnegie Institution of Washington* 436: 334, f. 2. 1934, *American Journal of Botany* 22: 36. 1935, *Acta Bot. Mex.* 23: 28. 1993.

in Mexico: gramilla perdiz

G. virgata (J. Presl) Scribn. var. *robusta* J.J. Ortíz
Mexico. See *Acta Botánica Mexicana* 23: 30. 1993.

G. virgata (J. Presl) Scribn. var. *virgata*
South America.

Goulardia Husn. = *Elymus* L.

Pooideae, Triticodae, Triticeae, or Pooideae, Triticeae, Hordeinae, type *Goulardia canina* (L.) Husn., see *Species Plantarum* 1: 83-84. 1753, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 83. 1899 and D.R. Dewey, "Historical and current taxonomic perspectives of *Agropyron*, *Elymus* and related genera." *Crop Sci.* (Madison) 23: 639. 1983, *Feddes Repert.* 95: 425-521. 1984 [Conspectus of the Triticeae], M.E. Barkworth & D.R. Dewey, "Genomically based genera in the perennial Triticeae of North America: identification and membership." *American Journal of Botany* 72(5): 767-776. 1985, *Genome* 29: 150-155. 1987, *Theor. Appl. Gen.* 86: 288-294. 1993, *Genome* 36: 147-151. 1993, *Pl. Syst. Evol.* 185: 33-53. 1993, *Pl. Syst. Evol.* 186: 193-212. 1993, *New Zealand Journal of*

Botany 32: 125-154. 1994, *Genome* 39: 1093-1101. 1996, *Contributions from the United States National Herbarium* 48: 279-307, 379. 2003.

Gouldochloa J. Valdés, Morden & S.L. Hatch = *Chasmanthium* Link

Named for Frank W. Gould, 1913-1981, North American agrostologist, botanical collector in Dominican Republic, Mexico and United States of America, author of *Texas Plants-A Checklist and Ecological Summary*, 3rd Edition, College Station, Texas: Texas Agricultural Experiment Station, Texas A&M University, 1975, *Common Texas Grasses: An Illustrated Guide* 1978, *Grass Systematics*, McGraw-Hill, New York 1968, with Valloo Kapadia wrote *The Grasses of Texas*, Texas A&M University Press 1975.

Centothecoideae, Centothecae, or Panicoideae, Centothecae, perennial, caespitose, erect, decumbent to ascending, flowering culms leafy, ligule a fringed membrane, plants bisexual, contracted inflorescence paniculate, 2 glumes subequal, palea 2-keeled, 2 free lodicules, 1 stamen, ovary glabrous, 2 stigmas, open habitats, sometimes referred to *Chasmanthium*, type *Gouldochloa curvifolia* Valdés-Reyna, Morden & S.L. Hatch, see *Hortus Regius Botanicus Bero-linensis* 1: 159. 1827 and *Southw. Nat.* 11(2): 145-189. 1966, *Southw. Nat.* 11(4): 415-455. 1966 [Revision of grasses traditionally referred to *Uniola*, II. *Chasmanthium*], *Systematic Botany* 11(1): 112-119. 1986 [*Gouldochloa*, a new genus of centothecoid grasses from Tamaulipas, Mexico], *Contributions from the United States National Herbarium* 46: 158-159, 242. 2003.

Species

G. curvifolia Valdés-Reyna, Morden & S.L. Hatch (*Chasmanthium curvifolium* (Valdés-Reyna, Morden & S.L. Hatch) Wipff & S.D. Jones)

America, Mexico. Glumes 7- to 9-nerved, see *Systematic Botany* 11(1): 112-118, f. 1-5. 1986, *Phytologia* 69(6): 469. 1990 [1991].

Gracilea Koenig ex Hook.f. = *Melanocenchris* Nees

Chloridoideae, Cynodonteae, type *Gracilea nutans* Hook.f., see *Nova Graminum Genera* 31. 1780 [21 Dec 1779], *Der Gesellschaft naturforschender Freunde zu Berlin, neue Schriften* 4: 218. 1803, *Novae Plantarum Species* 33. 1821, *Proceedings of the Linnean Society of London* 1: 94, 95. 1841, *Nomenclator Botanicus. Editio secunda* 2: 379. 1841, *Illustrationes Plantarum Orientalium* 4: 38, pl. 326. 1850-1853, *Revisio Generum Plantarum* 1(2): 780. 1891, *The Flora of British India* 7: 283, 300. 1896 and *Handb. Fl. Ceylon* 5: 284, 286. 1900, *Flora of the Presidency of*

Madras 10: 1831. 1934, *Kew Bulletin* 1935: 148. 1935, *Grasses of Ceylon* 87, 92. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 123. 1959, *Grasses of Burma ...* 473, 620, f. 74. 1960.

Gramen Krause = *Festuca* L., *Gramen* Ség.,
Gramen W. Young, *Secale* L.

Latin *gramen*, *graminis* “a blade of grass, a plant, herb, couch-grass.”

Pooideae, Poeae, Loliinae, see *Species Plantarum* 1: 73, 84. 1753, *Plantae Veronenses* 3: 145. 1754, *Catalogue d'Arbres Arbustes et Plantes Herbacées d'Amérique* 36. 1783 and *Beihefte zum Botanischen Centralblatt* 32(2): 331. 1914, *Torreyia* 16: 244-245. 1916, *Watsonia* 16: 300. 1987, *Contributions from the United States National Herbarium* 48: 312-368, 379-380, 610. 2003.

Gramen Séguier = *Secale* L.

Latin *gramen*, *graminis* “a blade of grass, a plant, herb, couch-grass.”

Pooideae, Triticaceae, Triticinae, see *Species Plantarum* 1: 73, 84. 1753, *Plantae Veronenses* 3: 145. 1754, *Catalogue d'Arbres Arbustes et Plantes Herbacées d'Amérique* 36. 1783 and *Beihefte zum Botanischen Centralblatt* 32(2): 331. 1914, *Torreyia* 16: 244-245. 1916, *Watsonia* 16: 300. 1987, *Contributions from the United States National Herbarium* 48: 610. 2003.

Gramerium Desv. = *Digitaria* Haller,
Digitaria Heist. ex Fabr., *Paspalum* L.,
Syntherisma Walter

Latin *gramen*, *graminis* “a blade of grass, a plant, herb, couch-grass, dog's-grass.”

Panicoideae, Paniceae, Digitariinae, type *Gramerium convolutum* Desv., see *Enumeratio Methodica Plantarum* 207. 1759, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Flora Caroliniana, secundum ...* 76. 1788, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 165, t. 7, f. 1. 1831 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 46: 193-213, 242-243, 611-612. 2003.

Graminastrum E.H.L. Krause =
Dissanthelium Trin.

Resembling *gramen*, *graminis* “a blade of grass, a plant, herb, couch-grass, dog's-grass.”

Pooideae, Poeae, Poinae, type *Graminastrum macusaniense* E.H.L. Krause, see *Linnaea* 10(3): 305. 1836, *Gramineae* 29. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 161. 1843, *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 25. 1848 and *Beihefte zum Botanischen Centralblatt* 32(2): 348. 1914, *Contributions from the United States National Herbarium* 48: 271-273, 380. 2003.

Graphephorum Desv. = *Graphephorum*
Honda

From the Greek *graphe* “drawing, painting, picture” and *phoros* “bearing.”

About 2-3 species, North and Central America. Pooideae, Triticodae, Aveneae, or Pooideae, Poeae, Aveninae, perennial, caespitose, herbaceous, ligule membranous, leaf blades linear, auricles absent, plants bisexual, panicle contracted, spikelets 2- to several-flowered, 2 glumes unequal to subequal, lemmas keeled membranous obtuse to acute, palea present, ovary glabrous, stigmas 2, open habitats, boggy spots, meadows, lowland meadows, near water, high mountains, moist sites, sometimes referred to *Trisetum*, type *Graphephorum melicoides* (Michx.) Desv. (also spelled *melicoideum*), see *Syn. Pl.* 1: 97. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Chloris Melvilliana* 32. 1823, *Hortus Regius Botanicus Berolinensis* 1: 136. 1827, *Genera Plantarum* 3(2): 1197. 1883 and *Syn. Mitteleur. Fl.* 2, 1: 342. 1900, *Rhodora* 30(359): 211. 1928, *Journal of Japanese Botany* 10: 693. 1934, *Nord. Karlvoxifl.* 1: 278. 1953, *Contributions from the United States National Herbarium* 48: 380-381. 2003.

Species

G. melicoides (Michx.) Desv. (*Agrostis airoides* (Poir.) Raspail, nom. illeg., non *Agrostis airoides* Torr.; *Aira melicoides* Michx.; *Arundo airoides* Poir.; *Calamagrostis airoides* (Poir.) Steud.; *Deyeuxia airoides* (Poir.) P. Beauv.; *Dupontia cooleyi* A. Gray; *Graphephorum cooleyi* (A. Gray) Farw.; *Graphephorum melicoides* var. *cooleyi* (A. Gray) Scribn.; *Graphephorum melicoides* var. *majus* A. Gray; *Graphephorum melicoideum* (Michx.) Desv.; *Graphephorum melicoideum* var. *cooleyi* (A. Gray) Scribn.; *Graphephorum melicoideum* var. *majus* A. Gray; *Poa melicoides* (Michx.) Nutt.; *Triodia melicoides* (Michx.) Spreng.; *Trisetum melicoides* (Michaux) Scribn.; *Trisetum melicoides* (Michx.) Vasey ex Scribn.; *Trisetum melicoides* subsp. *cooleyi* (A. Gray) Scribn.; *Trisetum melicoides* var. *majus* (A. Gray) A.S. Hitchc.; *Trisetum melicoides* var. *majus* (A. Gray) Scribn.; *Trisetum melicoides* var. *melicoides*)

U.S. Found in gravelly shores, river thickets, see *Flora Boreali-Americana* 1: 62. 1803, *Encyclopédie Méthodique, Botanique* 6: 270. 1804, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Essai d'une Nouvelle Agrostographie* 44, 152, 160. 1812, *The Genera of North American Plants* 1: 68. 1818, *Annales des Sciences Naturelles (Paris)* 5: 449. 1825, *Systema Vegetabilium, editio decima sexta* 1: 331. 1825, *Nomenclator Botanicus. Editio secunda* 1: 249. 1840, *A Manual of the Botany of the Northern United States. Second Edition* 556. 1856, *Proceedings of the American Academy of Arts and Sciences* 5: 191. 1861, *Botanical Gazette* 9: 169. 1884, *Memoirs of the Torrey Botanical Club* 5(4): 53. 1894 and *Rhodora* 8(89): 87. 1906, *Rhodora* 10(112): 65. 1908, *Papers of the Michigan Academy of Science, Arts and Letters* 1: 88. 1923.

in English: purple false oat

G. wolfii (Vasey) Vasey ex Coult. (*Grappheporum brandegei* (Scribn.) Rydb.; *Grappheporum muticum* (Bol.) A. Heller; *Koeleria flexuosa* Domin; *Trisetum brandegei* Scribn.; *Trisetum muticum* (Bol.) Scribn.; *Trisetum subspicatum* var. *muticum* Bol.; *Trisetum wolfii* Vasey; *Trisetum wolfii* f. *muticum* (Bol.) Louis-Marie; *Trisetum wolfii* subsp. *muticum* (Bol.) Scribn.; *Trisetum wolfii* var. *brandegei* (Scribn.) Louis-Marie; *Trisetum wolfii* var. *muticum* (Bol.) Scribn.)

North America, U.S., Colorado. Perennial, grows in wet meadows and along streams, subalpine zones, see *Syn. Pl.* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 88, 149. 1812, *Monthly Report of the Department of Agriculture* 156. 1874, *Geological Survey of California, Botany* 2: 296. 1880, *Bulletin of the Torrey Botanical Club* 10: 64. 1883, *Manual of the Botany ... of the Rocky Mountain Region ...* 423. 1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 50, f. 10. 1898 and *Catalogue of North American Plants North of Mexico* (edition. 2) 31. 1900, *Rhodora* 8(89): 88. 1906, *Bibliotheca Botanica* 65: 31. 1907, *Flora of the Rocky Mountains* 61. 1917, *Rhodora* 30: 241. 1928 [1929].

in English: Wolf's trisetum, beardless false oat, beardless oatgrass

Graya Arn. ex Steud. = *Graya* Endl.
(Chenopodiaceae), *Sphaerocaryum* Nees ex Hook.f.

Panicoideae, Panicodae, Isachneae, see *Genera Plantarum* 1376. 1841, *Nomenclator Botanicus. Editio secunda* 2: 620. 1841, *Synopsis Plantarum Glumacearum* 1: 119. 1854, *Fl. Brit. India* 7(22): 246. 1897 [1896].

Greenia Nutt. = *Greenia* S. Wallman
(Liliaceae), *Limnodea* L.H. Dewey, *Sclerachne* Torr. ex Trin.

Pooideae, Poeae, Aveninae, type *Greenia arkansana* Nutt., see *De Fructibus et Seminibus Plantarum* 2: 188. Apr-May 1791, *Fundamenta Agrostographiae* 116, t. 6. 1820, *Transactions of the American Philosophical Society, new series*, 5: 142. 1835, *Plantae Javanicae Rariores* 15, t. 4. 1838, *Nomenclator Botanicus. Editio secunda* 2: 45. 1841, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 273, 275. 1841, *Synopsis Plantarum Glumacearum* 1: 421. 1854, *Contr. U.S. Natl. Herb.* 2(3): 518. 1894 and *Bot. Zhurn.* 72(3): 391. 1987, *Sida* 19(1): 195-200. 2000, *Contributions from the United States National Herbarium* 48: 381, 426, 608. 2003.

Greslania Balansa

Named for the French agronomist de Greslan.

Three or four species, New Caledonia. Bambusoideae, Bambusodae, Bambuseae, or Bambuseae, Hickeliinae, perennial, sympodial, woody, shrubby, forming dense clumps, unbranched, rhizomes pachymorph, plants bisexual, inflorescence compound bracteate paniculate determinate, spikelets 1-flowered subtended by bract, 2 glumes, awnless, 6 stamens, ovary glabrous, 3 stigmas, fleshy pericarp, slopes, riversides, mountain slopes, marshy places, forests, related to *Nastus*, similar to *Myriocladus* and *Glaziophyton*, type *Greslania montana* Balansa, see *Bulletin de la Société Botanique de France* 19: 319-320. 1873 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 22-24. 1945, *Taxon* 6(7): 203. 1957, R.E. Holtum, *The Bamboos of the Malay Peninsula*. Gardens' Bulletin Singapore 16: 1-135. 1958, *Kew Bulletin* 49: 429-443. 1994, *Bambou* no. 36: 9-10. 2001, Soejatmi Dransfield, "Greslania circinata and Greslania rivularis (Poaceae-Bambusoideae) from New Caledonia." *The Journal of the American Bamboo Society* 16(1): 1-8. 2002.

Species

G. circinata Balansa

New Caledonia. Leaf blades without midribs.

G. montana Balansa

New Caledonia.

G. multiflora Pilger

New Caledonia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 39: 23. 1906.

G. rivularis Balansa

New Caledonia.

Griffithsochloa G.J. Pierce = *Bouteloua* Lag.

Named for David Griffiths, 1867-1935, botanical collector in Mexico and U.S., professor of botany at the University of Arizona, an authority on cacti, 1901 assistant agrostologist Bureau of Plant Industry, United States Department of Agriculture (USDA), author of "Illustrated studies in the genus *Opuntia*: 1." *Report Missouri Bot. Gdn.* 19: 259-272. 1908, "The Grama grasses: *Bouteloua* and related genera." *Contr. U.S. Nat. Herb.* 14: 343-428. 1912. See Joseph Ewan, *Rocky Mountain Naturalists*. 220, 246, 338. The University of Denver Press 1950; Joseph William Blankinship (1862-1938), "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904; *Annual Report of the Missouri Botanical Garden* 19: 259-260, 261-265, t. 21, 23, 24, 26. 1908; *Annual Report of the Missouri Botanical Garden* 21: 165-166, 172-173, t. 19, 20, 26. 1910; *Annual Report of the Missouri Botanical Garden* 22: 25. 1912; *Proceedings of the Biological Society of Washington* 27: 25, 27, 28. 1914; *Proceedings of the Biological Society of Washington* 29: 10, 11, 13. 1916; *Bulletin of the Torrey Botanical Club* 43: 92, 523, 524, 528. 1916; *N. Amer. Fl.* 21(2): 128. 1917; *Bulletin of the Torrey Botanical Club* 46: 199. 1919.

One species, Mexico. Chloridoideae, Cynodonteae, Boutelouinae, perennial, herbaceous, unbranched, caespitose, ligule a fringe of hairs, plants bisexual, inflorescence spiciform, spikelets in triplets, central spikelet 3-flowered and shortly stipitate, 2 linear glumes very unequal, upper lemma 5- to 9-awned, lateral spikelets sessile and 2-flowered, 0-3 stamens, ovary glabrous, 2 stigmas, a new genus segregated from and sometimes referred to *Cathestechum* J. Presl, open habitats, dry areas, scrubs, type *Griffithsochloa multifida* (Griffiths) G.J. Pierce, see *Bulletin of the Torrey Botanical Club* 105(2): 134-138. 1978, *Contributions from the United States National Herbarium* 41: 20-33, 124. 2001.

Species

G. multifida (Griffiths) G.J. Pierce (*Bouteloua multifidum* (Griffiths) Columbus; *Cathestechum multifidum* Griffiths)

Mexico. Perennial, erect, foliage mainly basal, auricles absent, spikelets subtended by solitary bristles, palea 2-keeled, 2 free and fleshy lodicules, 0 or three stamens, fodder, see *Contributions from the United States National Herbarium* 14(3): 360, f. 24. 1912, *Bulletin of the Torrey Botanical Club* 105(2): 134. 1978, *Aliso* 18(1): 63. 1999.

in Mexico: pasto

Guadella Franch. = *Guaduella* Franch.

Guadua Kunth = *Bambusa* Schreb., *Guadua* (Kunth) Hackel

From the vernacular name.

About 24/30-34 species, tropical and subtropical regions of Mexico, southern and northern America. Bambusoideae, Bambuseae, Guaduinae, woody, long and thorny culms, hollow internodes, spiny branches, white hair bands in the nodal regions, large culm leaves with a triangular form, palea keels winged, stamens 6, three feathery stigmas, grows extremely fast, strong, flexible, resistant and lightweight, used for bridges, fences, paper, baskets and all kinds of furniture and construction, useful for erosion control, lowland tropical, lower montane forests, edge of forest, savannah, seasonally inundated areas, cerrado, gallery forests, sometimes in *Bambusa*, type *Guadua angustifolia* Kunth, see *Genera Plantarum* 1: 236. 1789, *Species Plantarum. Editio quarta* 2: 245. 1799, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 150. 1822, *Synopsis Plantarum* 1: 253. 1822, *Die Natürlichen Pflanzenfamilien* 2(2): 95. 1887 and *Österreichische Botanische Zeitschrift* 53: 194. 1903, *Fieldiana, Botany* 24(2): 38-331. 1955, *Taxon* 6(7): 203. 1957, Leonardo Tascón, *Diccionario de provincialismos y barbarismos del Valle del Cauca y quechuismos usados en Colombia*. Biblioteca de la Universidad del Valle, 7, Cali, Editorial Norma 1961, Arturo Pazos, *Glosario de quechuismos colombianos*. 2a. editor, Pasto, Imprenta del Departamento, Secretaria de Educación Pública, Departamento de Extensión Cultural 1966, *Flora Ilustrada Catarinense* 1(Gram.-Supl.): 1-78. 1967, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Ceiba* 19(1): 1-118. 1975, *Annals of the Missouri Botanical Garden* 68: 15-47. 1981, *Fl. Guianas Series A: Phanerogams* 233-243. 1990, *Novon* 1(1): 21-26, 27-32. 1991, *Nordic Journal of Botany* 11: 323-331. 1991, *Systematic Botany* 16(4): 630-638. 1991, *Cuscatlania* 1(6): 1-29. 1991, *Novon* 2(2): 81-110. 1992, *Annals of the Missouri Botanical Garden* 79(4): 737-769. 1992, *Flora Mesoamericana* 6: 194-196. 1994, *Conservation Biology* 11(6): 1339-1353. Dec 1997, Emmet J. Judziewicz et al., *American Bamboos* 239-247. 1999, *Contributions from the United States National Herbarium* 39: 58-62. 2000, *Novon* 12(1): 64-76. 2002, *Botanical Journal of the Linnean Society* 138(1): 45-55. Jan 2002, *Conservation Biology* 17(4): 1106-1117. Aug 2003, *Journal of Biogeography* 31(5): 773-786. May 2004.

Species

G. sp.

in Bolivia: tacuarilla

in Colombia: guadua cebolla, guadua macana, yaripa

in Ecuador: caña brava

in Peru: pacca

in Suriname: kamwata, kwama, kuwama

in Venezuela: juá- juá, puru-puru

G. aculeata Rupr. ex E. Fourn. (*Bambusa aculeata* (Rupr. ex Fourn.) Hitchc.; *Guadua aculeata* var. *aculeata*; *Guadua aculeata* var. *liebmanniana* E.G. Camus; *Guadua inermis* Rupr. ex E. Fourn.; *Guadua intermedia* Rupr. ex E. Fourn.)

Mexico, Guatemala. Building material, medicinal, see *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 84: 198. 1877, *Mexicanas Plantas* 2: 129-130. 1886 and *Contributions from the United States National Herbarium* 17(3): 387. 1913, *Bambusées* 1: 112. 1913, *Annals of the Missouri Botanical Garden* 79(4): 761-762. 1992.

in Central America: taro, tarro

in Mexico: caña brava, caña oate, cu'xqui'hui', cupamu, jimba, motlu-uk, ojtotl, oate, otlatl, tarro, tsahib chahib, tzájib

G. amplexifolia J. Presl (*Arundarbor amplexifolia* (J. Presl) Kuntze; *Bambusa amplexifolia* (J. Presl) Schult.f.)

Mexico, Colombia, Venezuela. Herbaceous, scandent, forming thickets, stems with recurved thorns, green spikelets, green fruits, yellow anthers, see *Reliquiae Haenkeanae* 1(4-5): 256. 1830, *Systema Vegetabilium* 7(2): 1348. 1830, *Revisio Generum Plantarum* 2: 760. 1891 and *Cuscatlania* 1(6): 1-29. 1991.

in Spanish: bambú

in Mexico: oate

in Nicaragua: carriso

G. angustifolia Kunth (*Arundarbor guadua* (Bonpl.) Kuntze; *Bambos aculeata* (Rupr. ex E. Fourn.) Hitchc.; *Bambusa aculeata* (Rupr. ex E. Fourn.) Hitchc.; *Bambusa guadua* Bonpl.; *Bambusa guadua* subsp. *guadua*; *Guadua aculeata* Rupr. ex E. Fourn.; *Guadua aculeata* var. *liebmanniana* E.G. Camus; *Guadua angustifolia* var. *bicolor* Londoño; *Guadua inermis* Rupr. ex E. Fourn.; *Guadua intermedia* Rupr. ex E. Fourn.; *Nastus guadua* (Bonpl.) Spreng.) (for Frederik Michael Liebmann, 1813-1856)

Ecuador, Venezuela, Colombia, Paraguay. Erect, arching, large, tall, woody, stout, giant, hollow, grows very quickly, forming groves and extensive thickets, armed at the base, lower branches strongly thorny with long straight thorns, branched above, rhizomes pachymorph, culm internodes sometimes filled with water, short internodes with broad white band, culm sheaths covered with brown hairs, foliage leaf blades sparsely hairy on both surfaces, ciliolate margins on the foliage leaf sheath, inflorescences axillary, straight or slightly curved pseudospikelets, lemmas with smooth papery margins, paleas with glabrous enfolded margins, glabrous and hispid fusiform ovary, self-reproducing, high quality timber, excellent building material, ideal for

seismic-resistant constructions, rot and insect resistant, drinkable water from the nodes of the stems, found along rivers and streams, forest edge on riverbanks, alluvial soils, see *Plantae Aequinoctiales* 1: 68, t. 20. 1808, *Synopsis Plantarum* 1: 253. 1822, *Systema Vegetabilium, editio decima sexta* 2: 113. 1825, *Flora Brasiliensis* 2(3B): 161-242, t. 44-58. 1880, *Mexicanas Plantas* 2: 129-130. 1886, *Revisio Generum Plantarum* 2: 761. 1891 and *Contributions from the United States National Herbarium* 17(3): 387. 1913, *Les Bambusées* 1: 112. 1913, *Bulletin de l'Académie Internationale de Géographie, Botanique* 26(4): 157, f. 1. 1918, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, Fortunato L. Herrera, *Estudios sobre la flora del departamento del Cuzco*. Lima 1930, E. Yacovleff & F.L. Herrera, "El mundo vegetal de los antiguos peruanos." *Revista del Museo Nacional*. 3: 241-322 and 4: 20-102. Lima 1934-1935, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, John Howland Rowe, "Inca Culture." In *Handbook of South American Indians*. Bureau of American Ethnology, Bulletin 143, 2: 183-330. Washington 1946, *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 65: 379. 1989, *Novon* 2: 41-47. 1992, *Ann. Missouri Bot. Gard.* 79: 737-769. 1992, X. Londoño et als., "Characterization of the anatomy of *Guadua angustifolia* (Poaceae: Bambusoideae) culms." *The Journal of the American Bamboo Society* 16(1): 18-31. 2002, Marta Leonor Marulanda et als., "AFLP analysis of *Guadua angustifolia* (Poaceae: Bambusoideae) in Colombia with emphasis on the Coffee Region." *The Journal of the American Bamboo Society* 16(1): 32-42. 2002, N.M. Riaño, "Plant growth and biomass distribution on *Guadua angustifolia* Kunth in relation to ageing in the Valle del Cauca – Colombia." *The Journal of the American Bamboo Society* 16(1): 43-51. 2002.

in Bolivia: tacuara, tacuar-guasú, tacuaruzú, guadua

in Colombia: guadua

in Ecuador: guadúa, guadua

in Peru: caña de Guayaquil, ipa

in Suriname: kamwata

G. angustifolia Kunth subsp. *chacoensis* (Rojas) S.M. Young & Judd

Argentina, Paraguay, Uruguay.

G. angustifolia Kunth var. *angustifolia* (*Guadua angustifolia* Kunth subsp. *angustifolia*)

South America.

G. angustifolia Kunth var. *bicolor* Londoño

Colombia. See *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 65: 379. 1989.

G. angustifolia Kunth var. *nigra* Londoño

Colombia. See *Novon* 8(4): 423. 1998.

G. barbata (Trin.) Ohrenb.

Brazil.

G. calderoniana Londoño & Judz.

Brazil. See *Novon* 1(1): 27, f. 1, 2. 1991.

G. capitata (Trin.) Munro (*Arundarbor capitata* (Trin.) Kuntze; *Bambusa capitata* Trin.; *Schizostachyum capitatum* (Trin.) Rupr.)

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(6): 626. 1835, *Bambuseae* 46, t. 17. 1839, *Transactions of the Linnean Society of London* 26(1): 81, 123. 1868, *Revis. Gen. Pl.* 2: 761. 1891.

G. chacoensis (Rojas) Londoño & P.M. Peterson (*Bambusa chacoensis* Rojas; *Guadua angustifolia* subsp. *chacoensis* (Rojas) S.M. Young & Judd)

Brazil, Bolivia, Argentina. Erect, arching, forming dense clumps, pseudospikelets straight, dry fruits, see *Synopsis Plantarum* 1: 253. 1822 and *Bulletin de l'Académie Internationale de Géographie, Botanique* 26(4): 157, f. 1. 1918, *Novon* 2(1): 41-46, f. 1-2. 1992, *Ann. Missouri Bot. Gard.* 79: 763. 1992.

in Bolivia: tacuara

G. ciliata Londoño & Davidse

Venezuela, Brazil. Culms hollow, thorns absent, culm leaf sheath usually glabrescent, foliage leaf sheath hirtellous to glabrous, foliage leaf blade erect, lemma margins ciliate, palea keel wing puberulent, see *Novon* 1(1): 21, f. 1-2. 1991, *Novon* 12(1): 68. 2002.

G. distorta (Nees) Ruprecht (*Bambusa distorta* Nees; *Bambusa tagoara* Nees; *Guadua tagoara* (Nees) Kunth)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 532. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 434. 1833, *Linnaea* 9(4): 470. 1834, *Bambuseae* 41, t. 16, f. 59. 1839.

G. fascicularis Döll

Guyana. See *Flora Brasiliensis* 2(3): 186. 1880.

G. glaziovii (Hackel) Camus (*Bambusa glaziovii* Hack.; *Bambusa tagoara* Nees; *Guadua tagoara* (Nees) Kunth; *Guadua tagoara* subsp. *glaziovii* (Hack.) Londoño & L.G. Clark)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 532. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 434. 1833 and *Österreichische Botanische Zeitschrift* 53(5): 194. 1903, *Les Bambusées* 1: 108. 1913, *Novon* 12(1): 76. 2002.

G. glomerata Munro (*Bambusa glomerata* (Munro) McClure)

Brazil, Venezuela, Peru, Ecuador. Ascending, slender, solid or hollow, densely clumped, clambering, woody, 1-7 thorns per node, culm leaf sheaths glabrous, foliage leaf sheath

glabrous, foliage leaf blade erect, rachis of inflorescence hirsute, lower pseudospikelets deflexed, 5-7 bisexual florets, lemma margins glabrous, palea keel wing glabrous to glabrescent, lowland forest margins, riverbanks, damp places, see *Transactions of the Linnean Society of London* 26(1): 79. 1868 and *Smithsonian Contributions to Botany* 9: 66. 1973, *Novon* 12(1): 68. 2002.

in Suriname: kamwata

G. latifolia (Bonpl.) Kunth (*Arundarbor latifolia* (Bonpl.) Kuntze; *Bambusa fragilis* Spruce ex Munro; *Bambusa latifolia* Bonpl.; *Guadua tagoara* non (Nees) Kunth, sensu Pulle; *Nastus latifolia* (Bonpl.) Spreng.)

Venezuela, Brazil, the Caribbean. Woody, erect, climbing, nodding and arching at the summit, nodes thorny, culm leaves coriaceous, rachis of inflorescence silky-pubescent, pseudospikelets erect to divergent, 6-8 florets strongly overlapping, lemmas veined and awned, poisonous and used for arrow points, forming dense thickets, in disturbed habitats, forests, swampy places, riverbanks, see *Plantae Aequinoctiales* 1: 73, t. 21. 1808, *Synopsis Plantarum* 1: 254. 1822, *Syst. Veg.* 2: 113. 1825, *Transactions of the Linnean Society of London* 26(1): 78. 1868, *Revis. Gen. Pl.* 2: 761. 1891 and *Enum. Pl. Suriname* 59. 1906.

G. lindmanii Lindman ex Camus

Brazil. See *Les Bambusées* 1: 113. 1913.

G. longifimbriata Camus (*Bambusa longifimbriata* (E.G. Camus) McClure; *Guadua tagoara* (Nees) Kunth; *Guadua tagoara* subsp. *glaziovii* (Hack.) Londoño & L.G. Clark)

Brazil. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 434. 1833 and *Les Bambusées* 1: 113. 1913, *Novon* 12(1): 76. 2002.

G. longifolia (E. Fourn.) R.W. Pohl (*Arthrostylidium longifolium* (E. Fourn.) E.G. Camus, nom. illeg., non *Arthrostylidium longiflorum* Munro; *Arthrostylidium spinosum* Swallen; *Arundinaria longifolia* E. Fourn.; *Arundinaria longifolia* E. Fourn. ex Hemsl.; *Bambusa longifolia* (E. Fourn.) McClure; *Bambusa swalleniana* McClure; *Guadua spinosa* (Swallen) McClure)

Mexico, Guatemala, Honduras. Perennial, thorny, clambering, building material, medicinal, forming extensive and massive thickets, see *Mexicanas Plantas* 2: 131. 1886 and *Les Bambusées* 68. 1913, *Journal of the Washington Academy of Sciences* 28(1): 6-7. 1938, *Phytologia* 5(3): 82. 1954, *Smithsonian Contributions to Botany* 9: 66, 68. 1973, *Novon* 2: 41-47, 92. 1992.

in Mexico: bambú espinudo, caña brava, cañizo, jimba, jimbillá, nuilchahib, otate, thiin tsab hib

G. macclurei R.W. Pohl & Davidse (after Floyd Alonzo McClure, 1897-1970, American bamboo specialist, economic botanist, 1919-1940 in China, from 1941 at the Smithsonian Institution; see J.H. Barnhart, *Biographical notes upon botanists.* 2: 420. 1965; T.W. Bossert, *Biographical*

dictionary of botanists represented in the Hunt Institute portrait collection. 259. 1972; Stafleu & Cowan, *Taxonomic literature*. 3: 215. Utrecht 1981)

Nicaragua, Honduras. Arching, elongate branches, spreading, see *Novon* 2: 92. 1992, *Revista Biol. Trop.* 39(1): 120. 1991[1992].

G. macrospiculata Londoño & L.G. Clark (*Guadua glomerata* Munro)

Western Amazon Basin, Colombia, Brazil, Peru. Spiny, woody, forming, sympodial, arching, scandent, trailing, climbing, scrambling, clambering, cascading, internodes solid, rhizomes pachymorph and short-necked, culm leaves slightly coriaceous and deciduous, green to reddish green inflorescence, synflorescences terminating leafy or leafless branches, very long pseudospikelets linear-lanceolate, 6-17 fertile florets and a terminal rudimentary floret, 3 lodicules, 6 stamens, ovary glabrous, 3 stigmas plumose, culms used for making frames and arrows, seasonally flooded forests, lowland forests, on riverbanks, see *Transactions of the Linnean Society of London* 26(1): 79. 1868 and *Novon* 12(1): 65-69, f. 1. 2002.

in Brazil: num-chi

in Colombia: num-chi

in Peru: bambu de la tahuampa, cariso, maronilla, morona

G. macrostachya Rupr. (*Bambusa macrostachya* (Rupr.) McClure; *Guadua dioica* Steud.)

Brazil, Peru. Woody, tall, giant, thorny near the base, pseudospikelets erect to divergent, 5-7 florets pubescent and strongly overlapping, forming dense clumps, see *Bambuseae* 39, t. 15, f. 35. 1839, *Syn. Pl. Glumac.* 1: 334. 1854 and *Smithsonian Contributions to Botany* 9: 68. 1973.

G. maculosa (Hack.) E.G. Camus (*Bambusa maculosa* Hack.)

Brazil. See *Österreichische Botanische Zeitschrift* 53: 196. 1903, *Bambusées* 1: 106. 1913.

G. paniculata Munro (*Arundarbor paniculata* (Munro) Kuntze; *Bambusa munroi* Hack.; *Bambusa paniculata* (Munro) Hack.; *Chusquea spinosa* E. Fourn.; *Chusquea spinosa* E. Fourn. ex Hemsl.)

Costa Rica, Brazil, Guatemala, Mexico, Argentina. Spreading stems, erect and strongly arching, thick, woody, dimorphic, nearly cylindrical, thorny below, culms thick-walled, some internodes with water, pubescent pseudospikelets in loose fascicles, 4-7 florets, spikelets green to purplish, palea keels ciliolate, growing in large colonies, forming dense thickets, forest edge, see *Transactions of the Linnean Society of London* 26(1): 85. 1868, *Biol. Cent.-Amer., Bot.* 3: 587. 1885, *Mexicanas Plantas* 2: 131. 1886, *Revisio Generum Plantarum* 2: 761. 1891 and *Österreichische Botanische Zeitschrift* 53: 195. 1903, *Repertorium Specierum Novarum Regni Vegetabilis* 7(149-151): 374. 1909, *Field-*

iana, Botany 24(2): 38-331. 1955, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Novon* 1(1): 27-32. 1991, *Cuscatlania* 1(6): 1-29. 1991, *Edinburgh Journal of Botany* 48: 73-80. 1991, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994.

in Bolivia: tacuara, guapá, baparr

in Venezuela: carrizo

G. paraguayana Döll (*Bambusa paraguayana* (Döll) Bertoni)

Brazil, Argentina, Bolivia, Paraguay. Erect, arching, thorny at the base, forming dense thickets, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(3): 179, t. 48. 1880 and *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969.

in Bolivia: tacuarembó

G. polyclados Döll

Venezuela. See *Flora Brasiliensis* 2(3): 182. 1880.

G. refracta Munro (*Arundarbor refracta* (Munro) Kuntze; *Bambusa refracta* (Munro) McClure)

Brazil. See *Transactions of the Linnean Society of London* 26(1): 84. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Smithsonian Contr. Bot.* 9: 68. 1973.

G. ribbentropii Herter (*Bambusa riograndensis* Dutra; *Bambusa tacuara* Arechav.; *Bambusa trinii* Nees)

Uruguay. See *Anales del Museo Nacional de Montevideo* 1(6): 550, t. 72-73. 1897 and *Revista Sudamericana de Botánica* 6(5-6): 148. 1940.

G. riograndensis (Dutra) Herter (*Bambusa riograndensis* Dutra; *Bambusa trinii* Nees; *Guadua trinii* (Nees) Nees ex Rupr.)

Brazil. See *Linnaea* 9(4): 469. 1834, *Bambuseae* 40, t. 15, f. 38. 1839 and *Revista Sudamericana de Botánica* 6(5-6): 148. 1940.

G. sarcocarpa Londoño & P.M. Peterson

Peru, Bolivia, Brazil. Erect, arching, green culms and flowers, pseudospikelets lanceolate, stamens red, green fleshy fruits, aggressive and running, fruits and young shoots eaten by local people, growing in alluvial soils, see *Systematic Botany* 16(4): 631, f. 1-3. 1991.

G. sarcocarpa Londoño & P.M. Peterson subsp. *purpurea* Londoño & P.M. Peterson

Peru, Bolivia. Erect, arching, flowers purplish, upper portion of the lodicules prickly, ovary hispidulous, fruits fleshy and green, growing in lowland forest, riverbanks, see *Systematic Botany* 16(4): 631, 635, f. 3E-G. 1991.

in Bolivia: tacuara, taquara bambú

G. sarcocarpa Londoño & P.M. Peterson subsp. *sarcocarpa* Peru, Brazil.

G. spinosissima (Hackel) Camus (*Bambusa sinospinosa* McClure; *Bambusa spinosissima* Hack.; *Bambusa tagoara* Nees; *Guadua tagoara* (Nees) Kunth)

Brazil. See *Österreichische Botanische Zeitschrift* 53(5): 197. 1903, *Les Bambusées* 1: 112. 1913, *Lingnan Science Journal* 19(3): 411, t. 19. 1940.

G. superba Huber (*Bambusa superba* (Huber) McClure; *Bambusa tessmannii* (Pilg.) McClure; *Guadua tessmannii* Pilger)

Peru, Bolivia, Brazil, Ecuador. Erect and arching, giant, woody, thorny below, pseudospikelets pubescent, forming dense thickets, see *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 479. 1904, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(100): 124. 1927, *Smithsonian Contributions to Botany* 9: 68. 1973.

in Bolivia: tacuarembó

in Brazil: rafu

G. tagoara (Nees) Kunth (*Arundarbor distorta* (Nees) Kuntze; *Arundarbor tagoara* (Nees) Kuntze; *Bambusa barbata* Trin.; *Bambusa distorta* Nees; *Bambusa glaziovii* Hack.; *Bambusa longifimbriata* (E.G. Camus) McClure; *Bambusa spinosissima* Hack.; *Bambusa tagoara* Nees; *Guadua distorta* (Nees) Rupr.; *Guadua glaziovii* (Hack.) E.G. Camus; *Guadua longifimbriata* E.G. Camus; *Guadua spinosissima* (Hack.) E.G. Camus; *Nastus barbatus* (Trin.) Rupr.)

Brazil. Erect, scandent to subscaudent, arching, leaning, pendent, climbing, secondary branches very elongate, internodes hollow, sympodial, rhizomes pachymorph, very broadly triangular culm leaves coriaceous and deciduous, branches solitary and armed, thorns usually on the lateral branches, synflorescences terminating leafy or leafless branches, pseudospikelets linear-lanceolate, 1-6 fertile florets and a terminal rudimentary floret, 3 lodicules, 6 stamens, ovary fusiform, 3 plumose stigmas, split culms used for water pipes and in construction of mud huts, montane forests, morphological variation, closely resembles *Guadua weberbaueri* and *Guadua sarcocarpa*, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 532. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 434. 1833, *Linnaea* 9(4): 470. 1834, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(6): 627. 1835, *Bambuseae* 41, t. 16, f. 59. 1839, *Bambuseae* 42, t. 17. 1839, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3(1): 132. [1840] 1839, *Revisio Generum Plantarum* 2: 761. 1891 and *Österreichische Botanische Zeitschrift* 53(5): 194, 197. 1903, *Les Bambusées* 1: 108, 112-113. 1913, *Smithsonian*

Contributions to Botany 9: 66. 1973, *Novon* 1: 31. 1991, *Novon* 12(1): 72-76. 2002.

in Bolivia: tacuara, taquara grossa, taquaraçu

G. tagoara (Nees) Kunth subsp. **glaziovii** (Hack.) Londoño & L.G. Clark (*Bambusa glaziovii* Hack.; *Guadua glaziovii* (Hack.) E.G. Camus)

Eastern coast of Brazil. Fimbriate auricles on the foliage leaf sheaths, pseudospikelets narrowly lanceolate with 2-6 fertile florets, forests, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 434. 1833 and *Österreichische Botanische Zeitschrift* 53(5): 194. 1903, *Novon* 12(1): 76. 2002.

G. tagoara (Nees) Kunth subsp. **tagoara**

Eastern coast of Brazil. Foliage leaf sheaths fimbriate but nonauriculate at the summit, pseudospikelets lanceolate with 1-4 fertile florets.

G. tessmannii Pilger (*Bambusa superba* (Huber) McClure; *Bambusa tessmannii* (Pilg.) McClure; *Guadua superba* Huber)

Brazil, Peru. See *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 479. 1904, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(100): 124. 1927, *Smithsonian Contributions to Botany* 9: 68. 1973.

G. tomentosa Hackel & Lindman (*Bambusa tomentosa* (Hack. & Lindm.) McClure; *Guadua trinii* (Nees) Nees ex Rupr.)

Brazil. See *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 20, t. 12. 1900, *Smithsonian Contributions to Botany* 9: 68. 1973.

G. trinii (Nees) Nees ex Rupr. (*Arundarbor trinii* (Nees) Kuntze; *Bambusa ribbentropii* Herter; *Bambusa riograndensis* Dutra; *Bambusa tacuara* Arechav.; *Bambusa tomentosa* (Hack. & Lindm.) McClure; *Bambusa trinii* Nees; *Chusquea heterophylla* Griseb.; *Guadua riograndensis* (Dutra) Herter; *Guadua tomentosa* Hack. & Lindman; *Guadua trinii* var. *scabra* Döll; *Guadua trinii* var. *trinii*)

Argentina, Brazil, Uruguay. See *Linnaea* 9(4): 469. 1834, *Bambuseae* 40, t. 15, f. 38. 1839, *Symbolae ad Floram Argentinam* 285. Göttingen 1879 [also in *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen Phys. Cl.* 24(1): 1-345. 1879], *Flora Brasiliensis seu Enumeratio Plantarum* 2(3): 179. 1880, *Revisio Generum Plantarum* 2: 761. 1891 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 20, t. 12. 1900, *Revista Agric. Rio Grande* 7. 1903, *Revista Sudamericana de Botánica* 5: 147, f. 1. 1938, *Revista Sudamericana de Botánica* 6(5-6): 148. 1940, *Smithsonian Contributions to Botany* 9: 68. 1973.

G. uncinata Londoño & L.G. Clark (*Guadua angustifolia* Kunth)

Colombia, Ecuador, Andes. Suberect to erect, subscaudent, climbing, arching, trailing, nodding, weak, woody, rhizomatous, branches with strongly recurved thorns, forming very dense clumps, internodes densely pubescent with stiff hairs, rhizomes pachymorph, foliage leaf blades with sparse hairs on both surfaces, culm leaves deciduous and triangular, synflorescences terminating leafy or leafless branches, pseudospikelets linear-lanceolate straight to slightly curved, lemmas with smooth papery margins, palea with glabrous enfolded margins, 3 lodicules, 6 stamens, ovary apically densely hispid, 3 plumose stigmas, poor wood quality, found along rivers and streams, foothills of the mountains, in swamps, similar to *Guadua angustifolia*, see *Novon* 12(1): 69-72, f. 2. 2002.

Local name: cachupenda

G. velutina Londoño & L.G. Clark

Mexico. See *Nordic J. Botany* 11(3): 328. 1991.

G. venezuelae Munro (*Arundarbor venezuelae* (Munro) Kuntze; *Bambusa venezuelae* (Munro) McClure)

Venezuela. See *Transactions of the Linnean Society of London* 26(1): 86. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Smithsonian Contributions to Botany* 9: 68. 1973.

G. virgata (Trin.) Rupr. (*Arundarbor virgata* (Trin.) Kuntze; *Bambusa virgata* Trin.)

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(6): 624. 1835, *Bambuseae* 40. 1839, *Revisio Generum Plantarum* 2: 761. 1891.

G. weberbaueri Pilg. (*Bambusa weberbaueri* (Pilg.) McClure; *Guadua latifolia* (Bonpl.) Kunth)

Peru, Bolivia, Ecuador. Erect, arching, scandent, woody, thorny branches, pseudospikelets linear-lanceolate and pubescent, 5-10 florets, upper portion of the lodicules prickly, ovary hispidulous, aggressive and running, forming dense colonies, along riverbanks, see *Syn. Pl.* 1: 254. 1822 and *Repertorium Specierum Novarum Regni Vegetabilis* 1(10): 152. 1905, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Smithsonian Contributions to Botany* 9: 68. 1973.

in Bolivia: tacuara

in Peru: paca, marona, taquara

Guaduella Franch. = *Microbambus* K. Schum.

A diminutive of *Guadua*.

About 6-8 species, West tropical Africa, Sierra Leone to Angola. Bambusoideae, Bambusodae, Guaduellaeae, perennial, sympodial, herbaceous, small sized, unarmed, glabrous, simple to sparsely branched, rhizomatous with

rhizomes pachymorph, culm sheath persistent, leaves non-auriculate, ligule a fringed membrane, plants bisexual, open inflorescence racemose or paniculate, spikelets shortly pedicelled or sessile, 2-4 glumes very unequal, palea present, 3 lodicules free and ciliate, stamens 6, ovary hairy without the apical appendage, stigmas 2, shade species, in forest, rainforest, undergrowth, resembling *Aframomum* Schumann (Zingiberaceae), type *Guaduella marantifolia* Franchet, see *Genera Plantarum* 1: 236. 1789, *Bulletin Mensuel de la Société Linnéenne de Paris* 1: 676. 1887, *Die Natürlichen Pflanzenfamilien* 2(2): 95. 1887, *J. Bot. Paris* 3: 305. 1889, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 336, t. 4. 1897 and *Kew Bulletin* 16: 247-250. 1962, *Kew Bulletin, Additional Series* 13: 46-47. 1986 [*Genera Graminum*], Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, "Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B." *Am. J. Bot.* 87: 96-107. 2000.

Species

G. densiflora Pilg. (*Guaduella foliosa* Pilg.; *Guaduella ledermannii* Pilg.)

Africa, Cameroon. Herbaceous, fertile branches at the base, shade species, in dense rainforest, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 123. 1902, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43: 387. 1909, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 45: 211. 1910, *Kew Bulletin* 16: 247-250. 1962.

G. dichroa T.A. Cope

Africa, Angola. See *Kew Bulletin* 37(4): 660. 1983.

G. foliosa Pilg. (*Guaduella densiflora* Pilg.)

Africa, Gabon. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 45: 211. 1910, *Kew Bulletin* 16: 247-250. 1962.

G. humilis W.D. Clayton

Africa, Nigeria, Cameroon. Rainforest, see *Kew Bulletin* 16: 247-250. 1962.

G. macrostachys (K. Schum.) Pilger (also spelled ***macrostachyus***) (*Guaduella zenkeri* Pilg.; *Microbambus macrostachys* K. Schum.; *Puelia guluensis* Vanderyst)

Africa, Cameroon, Gabon. Herbaceous, found in forest, dense rainforest, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 336, t. 4. 1897 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 123. 1902[1901], *Bull. Agr. Congo Belge* 11(1-2): 125. 1920, *Wissenschaftlichen Ergebnisse der zweiten deutschen Zentral-Afrika-Expedition, Botanik* 2: 93. 1922, *Kew Bulletin* 16: 247-250. 1962.

G. marantifolia Franchet (*Arundarbor marantifolia* (Franch.) Kuntze; *Guaduella longifolia* E.G. Camus; *Guaduella marantifolia* var. *brevifolia* Franchet; *Guaduella marantifolia* var. *duparquetii* Franchet; *Guaduella longifolia* Camus; *Guaduella mildbraedii* Pilg., also spelled *mildbraedii* or *milbreadii*)

Africa, Gabon, Cameroon. Herbaceous, loosely tufted, green to purplish, inflorescence terminal on leafy stem, shady places in dense rainforest, in forest, see *Bulletin Mensuel de la Société Linnéenne de Paris* 1: 676. 1887, *Revisio Generum Plantarum* 2: 761. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 388-389. 1895 and *Les Bambusées* 114, t. 83, f. B. 1913, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 422. 1914, *Kew Bulletin* 16: 247-250. 1962.

G. oblonga Hutchinson ex W.D. Clayton (*Guaduella oblonga* Hutchinson; *Puelia ciliata* Chev., not Franchet)

Africa, Sierra Leone. Herbaceous, short creeping rhizome, forest, rainforest, see *Kew Bulletin* 16: 247. 1962.

in Sierra Leone: esulerokant, kotopi, kotopo, pongi, povi hina, povo hina

G. zenkeri Pilg. (*Guaduella macrostachys* (K. Schum.) Pilg.)

Cameroon. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 123. 1902[1901].

Gymnachne Parodi = *Rhombolytrum* Link

From the Greek *gymnos* “naked” and *achne* “chaff, glume, scale.”

One species, Chile. Pooideae, Poeae, Brizinae, or Pooideae, Poodae, Poeae, perennial, caespitose, herbaceous, auricles absent, narrow leaf blades linear, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, contracted panicle, spikelets flattened laterally, 2 glumes more or less equal, palea keels hairy, 2 free lodicules, 1 stamen, ovary glabrous, 2 stigmas, exposed-cleistogamous, nomenclatural and taxonomic confusion, often in *Rhombolytrum*, type *Gymnachne jaffuelii* Parodi, see *Species Plantarum* 1: 67, 70. 1753, *Prodromus Florae Novae Hollandiae* 182. 1810, *Hortus Regius Botanicus Berolinensis* 2: 296. 1833, *Flora Chilena* 6: 387, t. 81, f. 1. 1854, *Linnaea* 33(3-4): 293. 1864, *Die Natürlichen Pflanzenfamilien* 2(2): 68. 1887, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): t. 33. 1891 and *Manual of the Flora of the Northern States and Canada* 129. 1901, *Notas del Museo de la Plata, Botánica* 3(17): 29, 30, f. 4. 1938, *Revista Argentina de Agronomía* 29(1-2): 19. 1962, *Darwiniana* 23: 298-302.

1981, *Contributions from the United States National Herbarium* 48: 381, 602-603. 2003.

Species

G. koelerioides (Trin.) Parodi (*Gymnachne jaffuelii* Parodi; *Poa koelerioides* Trin.; *Poa philippii* Steud.; *Poa tenuiculmis* Steud.; *Rhombolytrum berterioanum* E. Desv.)

South America. Glumes 3-nerved, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 62. 1836, *Flora Chilena* 6: 387, t. 81, f. 1. 1854, *Synopsis Plantarum Glumacearum* 1: 259, 426. 1855 [1854] and *Notas del Museo de la Plata, Botánica* 3(17): 30, f. 4. 1938, *Revista Argentina de Agronomía* 29(1-2): 19. 1962 [1963].

Gymnandropogon (Nees) Duthie = *Bothriochloa* Kuntze

From the Greek *gymnos* “naked,” *aner, andros* “man, stamen” and *pogon* “a beard.”

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Sorghinae, see Paul Usteri (1768-1831), in *Annalen der Botanick. [Annalen der Botanik]* 18: 11. 1796, *Fundamenta Agrostographiae* 203, t. 18. 1820, *Fund. Agrost.* 203. 1820, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 170, t. 8, f. 1. 1831, *Florae Africae Australioris Illustrationes Monographicae* 103. 1841, Edwin Felix Thomas Atkinson (1840-1890), “Botany [of the Himalayan Districts of the North-Western Provinces].” *Gazetteer North-Western Provinces and Oude*, vol. 10: 638. 1882, *Revisio Generum Plantarum* 2: 762. 1891 and *Flora of Tropical Africa* 9: 182-183. 1917, *Bol. Soc. Arg. Bot.* 12: 206-227. 1968, *Syst. Bot.* 8(2): 168-184. 1983, *Austrobaileya* 3(1): 79-99. 1989, *Flora Mesoamericana* 6: 384-386. 1994, *Darwiniana* 38(1-2): 127-186. 2000, *Contributions from the United States National Herbarium* 46: 135-141. 2003.

Gymnanthelia Andersson = *Cymbopogon* Spreng., *Gymnanthelia* Schweinf.

From the Greek *gymnos* “naked” and *anthele* “a type of inflorescence, a little flower.”

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, see *Plantarum Minus Cognitarum Pugillus* 2: 14-15. 1815, *Beitrag zur Flora Aethiopiens ...* 229. 1867 and *Bot. Porto Rico* 1: 27. 1923, *Contributions from the United States National Herbarium* 46: 167-169, 243. 2003.

Gymnopogon P. Beauv. = *Alloiatheros* Raf., *Alloiatheros* Elliott ex Raf., *Anthopogon* Nutt., *Biatherium* Desv., *Doellochloa* Kuntze, *Monochaete* Döll, *Sciadonardus* Steud.

From the Greek *gymnos* “naked” and *pogon* “a beard.”

About 15 species, North and South America, India, Thailand. Chloridoideae, Cynodonteae, perennial or annual, caespitose, herbaceous, stiff, erect or ascending, internodes hollow, leaves distichous, leaf blades narrowly lanceolate, leaf sheaths margins open, auricles absent, ligule membranous, short scaly rhizomes, plants bisexual, awned, cleistogamous or chasmogamous, 2-flowered, reduced floret at apex, inflorescence spicate subdigitate to nondigitate, panicles with several spicate primary unilateral branches, spikelets solitary and appressed, 2 glumes equal to subequal, palea present, 3 stamens, ovary glabrous, open habitats and shade, pinelands, coastal plain, dry sandy woods, dry sandy soil, related to *Chloris*, type *Gymnopogon ambiguus* (Michx.) Britton, Sterns & Poggenb., see *Species Plantarum* 1: 61-63, 78-79. 1753, *Species Plantarum* 2: 1045. 1753, *Genera Plantarum* 44. 1789, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Essai d'une Nouvelle Agrostographie* 29, 41, 164. 1812, *Mémoires du Muséum d'Histoire Naturelle* 2: 73. 1815, *The Genera of North American Plants* 1: 81. 1818, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 430. 1829, *Bulletin Botanique [Genève]* 1: 221. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 172, 176, t. 8, f. 2. 1831, *Flora* 33: 229. 1850, *Flora Brasiliensis* 2(3): 78-79. 1878, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888, *Revisio Generum Plantarum* 2: 773. 1891 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 94. 1956, *Brittonia* 23(3): 293-324. 1971, *Iowa State College Journal of Science* 45(3): 319-385. 1971 [Taxonomic revision of the genus *Gymnopogon* (Gramineae)], *Flora Mesoamericana* 6: 290. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Global Ecology and Biogeography* 7(6): 441-455. Nov 1998, *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, *Contributions from the United States National Herbarium* 41: 15, 16, 19, 73, 124-127, 142, 194, 2001.

Species

G. ambiguus (Michx.) Britton, Sterns & Poggenb. (*Agrostis boeckleri* Seub. ex Steud.; *Alloiatheros ambiguus* Elliott ex B.D. Jacks.; *Alloiatheros ambiguus* Elliott ex Kunth; *Alloiatheros aristatus* Raf. ex B.D. Jacks.; *Andropogon ambiguus* Michx.; *Andropogon ambiguus* Gennari ex Barbey, nom. illeg., non *Andropogon ambiguus* Michx.; *Andropogon ambiguus* Steud., nom. illeg., non *Andropogon ambiguus* Michx.; *Alloiatheros lepturoides* (Nutt.) Steud.;

Elytrigia gmelinii (Trin.) Nevski; *Gymnopogon distichophyllus* Steudel; *Gymnopogon racemosus* P. Beauv.; *Gymnopogon scoparius* Trin.; *Sciadonardus distichophyllus* Steud.; *Triticum gmelinii* Trin.)

U.S., Florida, Georgia. Perennial, caespitose, suberect or ascending, herbaceous, decumbent at the base, rigid, leaf sheaths overlapping, very short membranous ligule, with short scaly rhizomes, spikes slender and 1-sided, narrow acuminate glumes, lemmas cylindrical and involute, palea 2-keeled, see *Flora Boreali-Americana* 1: 58. 1803, *Essai d'une Nouvelle Agrostographie* 41, 164, t. 9, f. 3. 1812, *The Genera of North American Plants* 1: 82. 1818, *Gram. Unifl. Sesquifl.* 237. 1824, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 284. 1833, *Linnaea* 12(4): 467. 1838, *Nomenclator Botanicus Editio secunda* 2: 55, 643. 1840-1841, *Flora* 33: 229. 1850, *Synopsis Plantarum Glumacearum* 1: 218. 1854, *Florae Sardoae Compendium* 190. 1884, *Index Kewensis* 1: 83. 1893.

in English: bearded skeleton grass

G. aristiglumis Hitchc.

America. See *Proceedings of the Biological Society of Washington* 40: 82. 1927.

G. brevifolius Trin. (*Anthopogon brevifolius* Nutt. ex Trin.; *Anthopogon filiformis* Nutt.; *Gymnopogon racemosus* var. *filiformis* Chapm.; *Gymnopogon racemosus* var. *racemosus*)

U.S., Florida, Georgia. Perennial, see *Gram. Unifl. Sesquifl.* 238. 1824, *Transactions of the American Philosophical Society, new series*, 5: 152. 1835, *Flora of the Southeastern United States* ... 556. 1860.

in English: shortleaf skeleton grass

G. burchellii (Munro) Ekm. (*Gymnopogon burchellii* (Munro ex Döll) Ekman; *Gymnopogon muticus* Hack.; *Leptochloa burchellii* Munro ex Döll; *Rhabdochloa burchellii* (Munro ex Döll) Kuntze)

Southern Brazil to northern Argentina, Bolivia. Perennial, delicate, weak, erect, inflorescence racemose, spikelets muticous 2-flowered, glumes subequal narrowly ovate, lemmas awnless, see *Flora Brasiliensis* 2(3): 93. 1878, *Revisio Generum Plantarum* 2: 788. 1891 and *Anales del Museo Nacional de Buenos Aires* 21: 117. 1911, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 35, t. 1, f. 4. 1912.

G. chapmanianus A.S. Hitchc. (*Gymnopogon floridanus* Swallen)

U.S., Florida, Georgia. Perennial, see *American Journal of Botany* 2: 306. 1915, *North American Flora* 17(8): 607. 1939.

in English: Chapman's skeleton grass

G. doellii Boechat & Valls (*Gymnopogon rigidus* Döll, nom. illeg., non *Gymnopogon rigidus* Thwaites)

Brazil. See *Flora Brasiliensis* 2(3): 80. 1878 and *Bradea, Boletim do Herbarium Bradeanum* 5(28): 314, f. 1. 1990.

G. fastigiatus Nees (*Doellochloa fastigiata* (Nees) Kuntze; *Gymnopogon fastigiatus* subsp. *jubiflorus* (Hitchc.) J.P. Smith; *Gymnopogon jubiflorus* Hitchc.; *Monochaete fastigiata* (Nees) Döll)

Costa Rica, Bolivia, Brazil. Perennial, caespitose, delicate, erect, racemes ascending, spikelets 1-2-flowered, glumes subequal narrowly ovate acuminate, moist savannahs, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 430. 1829, *Flora Brasiliensis* 2(3): 79. 1878, *Revisio Generum Plantarum* 2: 773. 1891 and *Contributions from the United States National Herbarium* 24(8) 412. 1927, *Iowa State Journal of Science* 45: 361. 1971.

G. fastigiatus Nees subsp. *fastigiatus*

America.

G. fastigiatus Nees subsp. *jubiflorus* (Hitchc.) J.P. Smith (*Gymnopogon jubiflorus* Hitchc.)

America. See *Contributions from the United States National Herbarium* 24(8) 412. 1927, *Iowa State Journal of Science* 45: 361. 1971.

G. foliosus (Willd.) Nees

U.S., Florida, Georgia. Annual, densely tufted, glabrous, hollow, foliage strongly distichous, leaf sheaths strongly overlapping, ligules ciliate, fibrous-rooted, 3-8 densely flowered subdigitate racemes, spikelets 2-flowered, lower floret bisexual, upper floret a rudiment, glumes subulate and subequal, in sandy savannahs, dry savannahs, white sand, see *Species Plantarum. Editio quarta* 4: 924. 1806, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 426. 1829.

in English: leafy skeleton grass

G. glaber Caro

Argentina. See *Dominguezia* 5: 17, f. 5. 1982.

G. grandiflorus Roseng., B.R. Arrill. & Izag. (*Gymnopogon brevisetus* (Hack.) J.P. Smith; *Gymnopogon spicatus* var. *brevisetus* Hack.)

South America, Uruguay. See *Revisio Generum Plantarum* 3(2): 354. 1898 and *Anales del Museo Nacional de Buenos Aires* 21: 117. 1911, *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 103: 20, f. 4. 1968, *Iowa State Journal of Science* 45(3): 344. 1971.

G. legrandii Roseng., B.R. Arrill. & Izag. (*Gymnopogon biflorus* var. *ciliatillemma* Burkart; *Gymnopogon swallenii* J.P. Smith)

South America, Uruguay. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 139. 1901, *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 103: 22, f. 5. 1968, *Boletín de la Sociedad Argentina de Botánica* 12: 290, f. 3. 1968, *Iowa State Journal of Science* 45(3): 373. 1971.

G. spicatus (Spreng.) Kuntze (*Gymnopogon biflorus* Pilger; *Gymnopogon biflorus* var. *biflorus*; *Gymnopogon filiformis* Griseb.; *Gymnopogon laevis* Nees; *Gymnopogon laevis* var. *pluriflorus* Döll; *Gymnopogon spicatus* var. *longiaristatus* Kuntze; *Gymnopogon spicatus* var. *pluriflorus* (Döll) Parodi; *Gymnopogon spicatus* var. *pluriflorus* (Döll) Stuck.; *Polypogon spicatus* Spreng.; *Trichochloa spicata* (Spreng.) Schult.)

Mexico to northern Argentina. Perennial, delicate, erect, tufted, glabrous, ligule ciliate-membranous, shortly rhizomatous, loosely ovate panicle, several ascending flexuous racemes borne singly on a long axis, spikelets 1- to 3-flowered, upper floret sterile, glume subequal narrowly lanceolate acuminate, lemmas narrowly lanceolate awned, sandy soils, see *Systema Vegetabilium, editio decima sexta* 1: 243. 1824, *Mantissa* 3: 577. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 428. 1829, *Flora of the British West Indian Islands* 538. 1864, *Flora Brasiliensis* 2(3): 81. 1878, *Revisio Generum Plantarum* 354. 1891 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 139. 1901, *Anales del Museo Nacional de Buenos Aires* 21: 117. 1911.

G. spicatus (Spreng.) Kuntze f. *longiaristatus* (Kuntze) J.P. Smith (*Gymnopogon spicatus* var. *longiaristatus* Kuntze; *Muhlenbergia spicata* (Spreng.) Kunth; *Polypogon spicatus* Spreng.)

South America. See *Systema Vegetabilium, editio decima sexta* 1: 243. 1824, *Révision des Graminées* 1: 64. 1829, *Revisio Generum Plantarum* 354. 1891 and *Iowa State Journal of Science* 45(3): 371-372. 1971.

G. spicatus (Spreng.) Kuntze f. *spicatus*

South America.

Gymnostichum Schreb. = *Elymus* L., *Hystrix* Moench

From the Greek *gymnos* "naked" and *stichos* "a row."

Pooideae, Triticeae, or Pooideae, Triticeae, Hordeinae, type *Gymnostichum hystrix* (L.) Schreb., see *Species Plantarum* 1: 83-84, 560. 1753, *Botanisches Magazin (Römer & Usteri)* 7: 5. 1790, *Methodus Plantas Horti Botanici et agri marburgensis, a staminum situ describendi* ... 294-295. Marburgi Cattorum [Marburg] 1794, *Beschreibung der Gräser Leipzig 1769-1810, A Manual of the Botany of the Northern United States* 604. 1848, *Flora of New Zealand* 1: 312, t. 70. 1853, *Geological Survey of California, Botany* 2: 327. 1880 and *American Midland Naturalist* 4: 228. 1915, *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *New Zealand J. Bot.* 32: 146. 1994, *Taxon* 44: 611-612. 1995, C. Baden, S. Frederiksen and O. Seberg, "A taxonomic revision of the genus *Hystrix* Moench (Triticeae, Poaceae)." *Nord. J. Bot.* 17(5): 449-467. 1997,

Nordic Journal of Botany 18(1): 89-94. 1998, Zhou Yong-Hong, Zheng You-Liang, Yang Jun-Liang and Yen Chi, "Relationships among species of *Hystrix* Moench and *Elymus* L. assessed by RAPDs." *Genetic Resources and Crop Evolution* 47(2): 191-196. Apr 2000, *Contributions from the United States National Herbarium* 48: 279-307, 381, 402. 2003.

Gymnotrix P. Beauv. = *Pennisetum* Rich.

From the Greek *gymnos* "naked" and *thrix*, *trichos* "hair."

Panicoideae, Panicoideae, Paniceae, Cenchrinae, type *Gymnotrix thuarii* P. Beauv., see *Synopsis Plantarum* 1: 72. 1805, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1036-1037. 1809, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Memorie della Reale Accademia delle Scienze di Torino*, ser. 2 14: 374-375. 1854, *Flora Brasiliensis* 2(2): 305, 308. 1877 and *Contr. U.S. Natl. Herb.* 22: 210-211. 1921, *Flora of Tropical Africa* 9: 956-957, 962, 966. 1934, *Amer. J. Bot.* 64: 161-176. 1977, *Econ. Bot.* 31: 163-174. 1977, *Flora Mesoamericana* 6: 371-374. 1994, *Contributions from the United States National Herbarium* 46: 243-244, 527-536. 2003.

Gynerium Willd. ex P. Beauv. = *Gynerium* Bonpl., *Gynerium* P. Beauv., *Gynerium* Humb. & Bonpl.

One species, tropical and subtropical America, Mexico, Peru, Brazil and West Indies, Argentina. Arundinoideae, Danthoieae, or Panicoideae, Gynerieae, perennial, large to huge, giant, stout, woody, erect, often forming dense stands, rhizomatous, auricles absent, ligule fringed, lacking outer ligules or very short, sterile culms crowned by a fan-shaped leaf cluster, plants dioecious, very large and open inflorescence paniculate, solitary spikelets usually 2-flowered, disarticulation above the glumes, 2 glumes very unequal and not persistent, lower glume 1-nerved, upper glume 3-nerved, female lemmas plumose, palea 2-nerved 2-keeled, lodicules present, no stamens, ovary glabrous, 2 stigmas red, male florets 2-staminate, culms and leaves used for thatching, baskets, containers and arrows, found in wet places, secondary woodland, swampy areas, streamside, along riverbanks, type *Gynerium sagittatum* (Aubl.) P. Beauv., see *Species Plantarum* 1: 63-66, 73-76, 81-82. 1753, *Essai d'une Nouvelle Agrostographie* 78, 138, 152-153, 161, 164, pl. 24, f. 6. 1812, *Plantae Aequinoctiales* 2: 112, pl. 115. 1813 and *Brittonia* 23(3): 293-324. 1971, *Kew Bulletin* 49(2): 305-320. 1994 [One or more species of *Gynerium*? (Poaceae)], *Flora Mesoamericana* 6: 252-253. 1994, *Am. J. Bot.* 88: 1993-2012. 2001, *Am. J. Bot.* 89: 494-499. 2002, *Contributions from the United States National*

Herbarium 46: 244-246. 2003, *Conservation Biology* 18(6): 1562-1570. Dec 2004.

Species

G. sagittatum (Aubl.) P. Beauv. (*Aira gigantea* Steud.; *Arundo fastuosa* Willd. ex Steud.; *Arundo festucacea* Willd.; *Arundo rugi* Molina; *Arundo saccharoides* (Bonpl.) Poir.; *Arundo sagittata* (Aubl.) Pers.; *Arundo sagittata* Aubl. ex P. Beauv.; *Donax festucaceus* (Willd.) P. Beauv.; *Festuca donacina* Wahlenb.; *Fluminia festucacea* (Willd.) Hitchc.; *Graphephorum festucaceum* (Willd.) A. Gray; *Gynerium levyi* E. Fourn.; *Gynerium parviflorum* Nees; *Gynerium procerum* P. Beauv.; *Gynerium saccharoides* Bonpl.; *Saccharum sagittatum* Aubl.; *Scolochloa festucacea* (Willd.) Link; *Triodia festucacea* (Willd.) Roth)

Brazil, tropical America. Erect, tough, giant, scrambling, rhizomatous, solid, lower part covered by sheaths, leaves linear 2-ranked, leaf blades borne on main stem, edges of leaves slightly serrated, inflorescence paniculate with drooping branches, large plumose panicles, female spikelets 2-flowered, glumes unequal, long trichomes exceeding the awn, ornamental, growing in dense colonies, medicinal, soil binding, durable culms used for construction and manufacturing purposes, fencing and for fishing poles, a source of arrow shaft, found in damp soil, on the margins of rivers and streams, in seasonally inundated areas, see *Histoire des plantes de la Guiane Françoise* 1: 50. 1775, *Saggio sulla Storia Naturale del Chili* ... 154. 1782, *Syn. Pl.* 1: 102. 1805, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1: 126. 1809, *Encyclopédie Méthodique, Botanique Suppl.* 4: 703. 1816, *Flora Suecica* 1: 64. 1824, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1: 137. 1827, *Enumeratio Plantarum Phaenogamarum in Germania* 1(1): 382. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 463. 1829, *Nomenclator Botanicus. Editio secunda* 1: 144. 1840, *Synopsis Plantarum Glumacearum* 1: 224. 1854, *Proceedings of the American Academy of Arts and Sciences* 5: 191. 1861, *L'illustration horticole* 23: 137. 1876 and E. Yacovleff & F.L. Herrera, "El mundo vegetal de los antiguos peruanos." *Revista del Museo Nacional.* 3: 241-322 and 4: 20-102. Lima 1934-1935, *Acta Biologica Cracoviensis, Series Botanica* 27: 57-74. 1985, *Bot. Zhurn. (Moscow & Leningrad)* 76: 476-479. 1991, de Kroon H. & R. Kalliola, "Shoot dynamics of the giant grass *Gynerium sagittatum* in Peruvian Amazon floodplains, a clonal plant that does show self-thinning." *Oecologia* 101: 124-131. 1995.

in English: uva grass, wild cane, white roseau, arrow grass

in French: roseau à flèche

in Spanish: caña brava

in Bolivia: caña brava, caña de monte, charo, chuchillo, chuchío, shu ru

in Brazil: caña brava

in Colombia: caña brava de tierra caliente, caña flecha, chusque, pajitas del Niño Dios, pindos

in Cuba: caña de Güin, caña flecha

in Ecuador: caña brava, caña veral

in Mexico: caña brava, caña de castilla, carrizo real, otatillo, shiiavén, xita-queza, yaga-xicho-gueza

in Nicaragua: dapa, gániesi haráchan, gániesiharáchan

in Paraguay: cañaboba, carrizo, huiva, lata, zuza

in Peru: caña brava, pintoc

G. sagittatum (Aubl.) P. Beauv. var. ***glabrum*** Renvoize & Kalliola

Bolivia, Brazil, Peru, the Caribbean. Unbranched, dense thickets, tropical lowland, riverbanks and along streams, see *Kew Bulletin* 49(2): 314. 1994.

G. sagittatum (Aubl.) P. Beauv. var. ***sagittatum***

Central America, Brazil, Paraguay. Unbranched or moderately branched, tropical lowland, riverbanks and along streams.

G. sagittatum (Aubl.) P. Beauv. var. ***subandinum*** Renvoize & Kalliola

Central America, Bolivia. Branched, glaucous, tropical lowland, in disturbed sites, riverbeds, sea shores, along roadsides, see *Kew Bulletin* 49(2): 315. 1994.

H

Habrochloa C.E. Hubb.

From the Greek *habros* “delicate, graceful, beautiful, pretty, soft” and *chloe, chloa* “grass”; Akkadian *ebru, ibru*, Hebrew *haber*, Aramaic *habra* “favourite slave, friend”; Akkadian *habaru, kabaru* “to become fat, thick,” *kabru* “fat.”

One species, tropical Africa, East Africa. Arundinoideae, Danthoniaeae, or Eragrostideae, annual, slender, herbaceous, auricles absent, ligule fringed or ciliate, plants bisexual, cleistogamous, delicate and open inflorescence paniculate, spikelets flattened, 2 glumes more or less equal or subequal, lemmas keeled and ciliate on margins, long flexuous awn, palea 2-nerved 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade species, shady banks, hillsides, slopes, type *Habrochloa bullockii* C.E. Hubbard, see G.C. Wittstein, *Etymologisch-botanisches Handwörterbuch*. 2. 1852 and *Hooker's Icones Plantarum* 37: t. 3645. 1967, H. Genast, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 32. Basel 1996.

Species

H. bullockii C.E. Hubb. (named for the British botanist Arthur Allman Bullock, 1906-1980, Kew herbarium, botanical collector in Africa, author of *Flora of Southern Africa*, *Bibliography of South African Botany* (up to 1951), edited by O.A. Leistner, Pretoria 1978, *A Bibliography Relating to the History, Theory and Practice of Botanical Nomenclature*; with Additamenta 1-3/1965-1967, *Taxon* 17: 504-596. 1968 [What is a new taxon?], *Taxon* 9: 93-102. 1960 [Dr. Thomas Archibald Sprague, 1877-1958]. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 280. 1965; I.K. Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 169. 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Central Africa, Malawi, Tanzania, Zambia, Zimbabwe. Glumes 1-nerved.

Habrurus Hochst. = Elionurus Humb. & Bonpl. ex Willd., Elionurus Kunth

From the Greek *habros* “splendid, graceful” and *oura* “a tail.”

Panicoideae, Andropogoneae, Rottboelliinae, see *Species Plantarum. Editio quarta* 4(2): 941-942. 1806, *Mémoires du Muséum d'Histoire Naturelle* 2: 69. 1815 [1816], *Flora* 39: 90. 1856 and *Taxon* 47: 737. 1998, *Taxon* 49: 273. 2000, *Contributions from the United States National Herbarium* 46: 225-230, 246. 2003.

Hackelia Vasey ex Beal = Gouinia E. Fourn. ex Benth. & Hook.f., Hackelia Opiz (Boraginaceae)

Chloridoideae, Cynodonteae, Gouiniinae, see *Oekonomisch-technische Flora Böhmens* 2(1): 146-147. 1838, *Mexicanas Plantas* 2: 103. 1886, *Grasses of North America for Farmers and Students* 2: 438. 1896 and *Amer. J. Bot.* 22: 32. 1935, *Contributions from the United States National Herbarium* 41: 122-123, 127. 2001.

Hackelochloa Kuntze = Manisuris L., Mnesithea Kunth, Rytlix Raf. ex Hitchc.

Named after the Greek *chloe, chloa* “grass” and the Bohemia-born Austrian botanist Eduard Hackel, 1850-1926, agrostologist, high school teacher at St. Pölten and at Graz, his publications include *Monographia Festucarum Europaeorum*. Kassel and Berlin 1882 and *Catalogue raisonné des Graminées du Portugal*. Coimbre [Coimbra] 1880, contributor to Martius, *Flora Brasiliensis, Gramineae* V, fasc. 90, vol. 2 (3): 245-326. 1883; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 106. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. London 1918; Elmer Drew Merrill (1876-1956), *Contr. U.S. Natl. Herb.* 30(1): 141-142. 1947.

About 2 species, tropical. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, annual, caespitose, herbaceous, coarse, sprawling, decumbent, branched near base, culm internodes solid, auricles absent, ligule a very short fringed membrane, leaves linear-lanceolate and flat, plants bisexual, inflorescence axillary, pedunculated flattened

racemes into a compound panicle, pairs of sessile and pedicellate spikelets and a terminal triad, spikelets dissimilar and unawned, globose wrinkled sessile spikelets with 2 florets, upper floret perfect, pedicellate spikelet sterile or male, 2 glumes more or less equal or very dissimilar, lower glume of female-fertile spikelet crustaceous globose or concave and crustaceous or tuberculate or pitted, lower floret barren reduced to a hyaline lemma, palea present or absent, fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, in high-rainfall areas, weedy places, disturbed ground, grassland, similar to *Heteropholis* C.E. Hubbard, sometimes included in *Mnesithea* Kunth, type *Hackelochloa granularis* (L.) Kuntze, see *Révision des Graminées* 1: 153-154. 1829, *Monogr. Phan.* 6: 314. 1889, *Revisio Generum Plantarum* 2: 776. 1891 and *United States Department of Agriculture: Bulletin* 772: 278. 1920, *Fieldiana, Botany* 24(2): 38-331. 1955, *Blumea* 31(2): 281-307. 1986, *Cytologia* 51: 43-50. 1986, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Flora of the Guianas. Series A, Phanerogams* 8: 249-252. 1990, *Cuscatania* 1(6): 1-29. 1991, *Flora Mesoamericana* 6: 398. 1994, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Fontqueria* 46: [i-ii], 1-259. 1997, *Global Ecology and Biogeography* 7(6): 441-455. Nov 1998, *Weed Research* 41(6): 475-490. Dec 2001, *Contributions from the United States National Herbarium* 46: 246, 285-286, 295-296, 550. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003.

Species

H. granularis (L.) Kuntze (*Cenchrus granularis* L.; *Manisuris granularis* (L.) L.f.; *Manisuris granularis* (L.) Sw.; *Manisuris granularis* L.; *Manisuris polystachya* P. Beauv.; *Mnesithea granularis* (L.) de Koning & Sosef; *Rottboellia granularis* (L.) Roberty; *Rytilyx glandulosa* Raf.; *Rytilyx granularis* (L.) Skeels; *Tripsacum granulare* (L.) Raspail)

Southeast Asia, India, Darjeeling, Sikkim. Annual, short-lived, much-branched, slender, erect, flattened and narrow, leaf blades linear-lanceolate, sheaths hairy and inflated, ligule a very short ciliate membrane, leaves hairy to hispid, racemes arranged along an axis, sessile spikelet globose, upper glume crested at the apex, lower glume of sessile spikelet shallowly pitted, the roots are good in cases of enlarged liver and spleen, palatable grazing, fodder for horses, pasture, good hay, weed species eaten by cattle when young, leaves or sheaths somewhat irritant to the skin, ruderal, growing in disturbed places, waste places, dry soil, barren places, grassy slopes, cultivations, weedy sites, see *Mantissa Plantarum* 2: 575. 1771, *Nova Graminum Genera* 37, 40, t. 1, f. 4-7. 1779, *Amoenitates Academici* ... 10: 40. 1779, *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Flore d'Oware* 1: 24, t. 14. 1804, *Annales des Sciences Naturelles, Botanique* 5: 306. 1825, *Bulletin Botanique [Genève]* 1: 219. 1830, *Revisio Generum Plantarum* 2: 776. 1891 and *Handb. Fl. Ceylon* 5: 209. 1900, *U.S. Department*

of Agriculture Bureau of Plant Industry Bulletin 282: 20. 1913, *Grasses of Ceylon* 178. 1956, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 79. 1960, *Grasses of Burma* ... 159. 1960, *Blumea* 31(2): 295. 1986.

in English: lizard-tail grass, hare's maize

in India: chiria, dhaturoghas, guru singu gaddi, kaadu sanna haaraka hullu, kadu sanna harka hullu, kangni, kasiungas, kurujedanai gaddi, moti shimpi, nali poonuku, pairia, palangini, phulwa, ratob, suklu, trinipali

in Japan: Yae-gaya (= Yaeyama grass)

in the Philippine Islands: gingetkaran

in Thailand: yaa kha naeng, ya kha naeng

in Brazil: capim mimosa, mimosinho

in Mexico: sit-suuk

in Mali: bambari ladde, kanyane maka, ngoriri, susan kaba

in Senegal: susan kaba

in Sierra Leone: andande, fesifesi, gungulwi, kanyane maka, sanywanya, tamedi sarana

in Upper Volta; njadere, soham kamani, suambu kamana, zoomena

H. porifera (Hackel) Rhind (*Cenchrus granularis* L.; *Manisuris porifera* Hackel; *Mnesithea granularis* (L.) de Koning & Sosef)

India, Sikkim, Darjeeling. Annual, lower glume of sessile spikelet deeply pitted, see *Mantissa Plantarum* 2: 575. 1771, *Österreichische Botanische Zeitschrift* 41(2): 48. 1891 and *Grasses of Burma* 77. 1945, *Blumea* 31(2): 295. 1986.

Hainardia Greuter = Monerma (Willd.)

Coss. & Dur., *Monerma* P. Beauv.

Presumably after P. Hainardi, Swiss phytogeographer; see Werner Rodolfo Greuter, born 1938, Director of the Herbarium of the Botanischer Garten und Botanisches Museum Berlin-Dahlem, in *Boissiera*. 13: 178. 1967.

Monotypic genus, Mediterranean, Europe to Middle East. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Ammochloinae, annual, caespitose, erect to decumbent, herbaceous and branched above the base, slender, glabrous, solid internodes, leaves nonauriculate, sheaths terete, ligule membranous and truncate, leaves linear and flat or involute, plants bisexual, a slender single cylindrical spike straight or curved, spikelets sessile and solitary, 1 bisexual floret, spikelets edgeways to rhachis, 1 stiff glume per spikelet, first glume absent, second glume present, lemmas hyaline and 3-nerved, palea thin with keels wingless, 2 lodicules free and membranous, stamens 1-3, anthers yellow, ovary glabrous, 2 stigmas white, fruit narrowly oblong to

ellipsoid, naturalized elsewhere in temperate regions, weed of disturbed places, meadows and areas subject to flooding, lakes, salt flats, black sand beach, swamps and estuaries, occurring in coastal and salt-marsh habitats, adapted to saline soils, usually occurs in wetlands, resembles *Parapholis* C.E. Hubbard, type *Hainardia cylindrica* (Willd.) W. Greuter, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Essai d'une Nouvelle Agrostographie* 116-117, 168, 176-177, t. 20, f. 10. 1812 and *Contr. U.S. Natl. Herb.* 24: 201. 1925, H. Runemark, "A revision of *Parapholis* and *Monerma* (Gramineae) in the Mediterranean." *Bot. Not.* 115: 1-17. 1962, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 13: 179-180. 1967, *Gayana, Botánica* 42: 1-157. 1985, *Kew Bulletin, Additional Series* 13: 111. 1986, *New Zealand Journal of Botany* 29: 101-116. 1991, *Feddes Repert.* 106: 169-171. 1995, *Harvard Pap. Bot.* 8: 65. 1996, *Contributions from the United States National Herbarium* 48: 381-382, 453. 2003.

Species

H. cylindrica (Willd.) W. Greuter (*Lepturus cylindricus* (Willd.) Trinius; *Lepturus cylindricus* var. *cylindricus*; *Lolium cylindricum* (Willd.) Asch. ex Graebner; *Monerma cylindrica* (Willd.) Cosson & Durieu; *Monerma monandra* P. Beauv.; *Monerma subulata* (Savi) P. Beauv.; *Ophiurus cylindricus* (Willd.) P. Beauv.; *Ophiurus cylindricus* (Willd.) P. Beauv.; *Rottboellia cylindrica* Willd.)

Mediterranean. Annual, semiaquatic, tufted, stiff, erect or ascending, smooth, glabrous, ligule membranous and glabrous, leaf sheaths submembranous glabrous, blade flat, stiff cylindrical green spike straight or slightly curved, spikelets 1-flowered, glumes very hard and rigid, a single glume green and linear-lanceolate, lower glume suppressed, lemmas with very short lateral nerves, palea 2-keeled, fruit dorsiventrally compressed, weed, salt-tolerant, useful fodder and cover plant, usually grows on saline and alkaline soils, in open sands, coastal salt marshes, moist places, meadows, roadsides, sometimes confused with *Hemarthria* R. Br., see *Species Plantarum. Editio quarta* 1: 464. 1797, *Essai d'une Nouvelle Agrostographie* 116-117, 168, 176-177, t. 20, f. 10. 1812, *Fundamenta Agrostographiae* 123. 1820, *Exploration Scientifique de l'Algérie* 2: 214. 1855 and *Synopsis der mitteleuropäischen Flora* 2: 761. 1902, *Boissiera.* 13: 178. 1967.

in English: common barbgrass, hard grass, thin tail, monerma, barb grass

Hakonechloa Makino ex Honda

Fuji-Hakone-Izu (Hakone-yama), Japan.

One species, Japan. Arundinoideae, Arundineae, perennial, shortly rhizomatous, herbaceous, unarmed, unbranched,

rhizomes leptomorph, auricles absent, ligule a fringed or ciliolate membrane, plants bisexual, small inflorescence paniculate, 2 glumes unequal to very unequal to very dissimilar, lemmas membranous with margins pilose, straight awn, palea 2-keeled 2-nerved, free and fleshy lodicules present, 3 stamens, ovary glabrous, 2 stigmas, type *Hakonechloa macra* (Munro) Honda, see *Botanical Magazine* (Tokyo) 26: 237. 1912, *Journal of Japanese Botany* 5: 24. 1928, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 133. 1930, *Illustrated Flora of Nippon* 859. 1940, *Jissai-Engei* 26: 1085. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 267. 1941, *Contributions from the United States National Herbarium* 46: 246. 2003.

Species

H. macra (Munro) Honda (*Phragmites macer* Munro)

Japan. See *Journal of Botany, British and Foreign* 15: 298, 350. 1877 and *Botanical Magazine* (Tokyo) 26: 237. 1912.

H. macra (Munro) Honda var. ***albo-marginata*** Makino (*Hakonechloa macra* (Munro) Honda)

Japan. See *Botanical Magazine* (Tokyo) 26: 237. 1912, *Illustrated Flora of Nippon* 859. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 267. 1941.

H. macra (Munro) Honda var. ***albo-variegata*** Makino (*Hakonechloa macra* (Munro) Honda)

Japan. See *Botanical Magazine* (Tokyo) 26: 237. 1912, *Jissai-Engei* 26: 1085. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 267. 1941.

H. macra (Munro) Honda var. ***aureola*** Makino (*Hakonechloa macra* (Munro) Honda)

Japan. See *Botanical Magazine* (Tokyo) 26: 237. 1912, *Journal of Japanese Botany* 5: 24. 1928, *Acta Phytotaxonomica et Geobotanica* 10: 267. 1941.

Halochloa Griseb. = Halochloa Kütz. (Algae), Monanthochloe Engelm.

From the Greek *hals*, *halos* "salt, sea" and *chloe*, *chloa* "grass."

Chloridoideae, Cynodonteae, Monanthochloinae, see *Botanische Zeitung. Berlin* 1: 55. 1843, *Transactions of the Academy of Science of St. Louis* 1: 436, 437, pl. 13-14. 1859, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 285. 1879 and *Contributions from the United States National Herbarium* 41: 127, 142. 2001, *Flora Fanerogámica Argentina* 86: 1-68. 2003.

Halopyrum Stapf

From the Greek *hals*, *halos* "salt, sea" and *pyros* "grain, wheat," see *Hooker's Icones Plantarum* 25: t. 2448. 1896.

One species, from Mozambique to Sri Lanka, Indian Ocean, northeast Africa. Chloridoideae, Eragrostideae, perennial, herbaceous, robust, tough, vigorous, tufted, spreading, strongly stoloniferous, internodes bearded, thick roots woolly, auricles absent, sheaths coriaceous, ligule fringed to woolly-ciliate, stiff leaves junciform, plants bisexual, inflorescence spicate or paniculate with short racemes appressed along a long central axis, panicle contracted, spikelets solitary and flattened, 2 glumes acute and coriaceous, lower glume 3-5-nerved, upper glume 5-7-nerved, lemmas acute and mucronate, palea 2-nerved 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 plumose stigmas, useful for erosion control, little value as fodder, open habitats, coastal, shores, see *Flora of Ethiopia and Eritrea* 7: 94-95. 1995, W.M. Musila, J.I. Kinyamario and P.D. Jungerius, "Vegetation dynamics of coastal sand dunes near Malindi, Kenya." *African Journal of Ecology* 39(2): 170-177. June 2001, M. Ajmal Khan and Salman Gulzar, "Light, salinity, and temperature effects on the seed germination of perennial grasses." *Am. J. Bot.* 90: 131-134. 2003, Hester L. Bell and James W. O'Leary, "Effects of salinity on growth and cation accumulation of *Sporobolus virginicus* (Poaceae)." *Am. J. Bot.* 90: 1416-1424. 2003, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

H. mucronatum (L.) Stapf (*Briza mucronata* (L.) Lam.; *Brizopyrum mucronatum* (L.) Wight; *Brizopyrum mucronatum* Nees; *Desmazeria uniolooides* Deflers, also spelled Defleors; *Eragrostis mucronata* (L.) Defleors, nom. illeg., non *Eragrostis mucronata* Roem. & Schult.; *Triticum repens* Thwaites, nom. illeg., non *Triticum repens* L.; *Uniola mucronata* L.)

Africa, Indian Ocean. Perennial, coarse, rigid, robust, woody, tough, tussocky, strongly branched, dead stalks protect new growth, leaves inrolled and filiform, narrow inflorescence very lax, panicles loose, without hidden cleistogenes, callus of each floret bearded, lemmas rounded on the back and shortly mucronate, useful sand binder, abundant on sand dunes by the sea, in small depressions, coastal sand, dunes near the ocean, see *Species Plantarum* 1: 86. 1753, *Species Plantarum, Editio Secunda* 1: 104. 1762, *Encyclopédie Méthodique, Botanique* 1: 465. 1785, *Syst. Veget.* 2: 577. 1817, *A Numerical List of Dried Specimens* no. 8898. 1849 [Wallich's Catalogue], *Enum. Pl. Zeyl.* 376. 1864, *Bull. Soc. Bot. France* 34: 69. 1887, Albert Deflers (1841-1921), *Voyage au Yémen, Journal d'une excursion botanique faite en 1887 dans les montagnes de l'Arabie heureuse suivi du Catalogue de plantes.* 220. Paris 1889, *Hooker's Icones Plantarum* 25: t. 2448. 1896 and *Handb. Fl. Ceylon* 5: 299. 1900, *Grasses of Ceylon* 67. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 124. 1959, *Grasses of Burma* ... 516. 1960, *Taxon* 49(2): 258. 2000, M. Ajmal Khan and Salman Gulzar, "Light, salinity, and temperature effects on the seed

germination of perennial grasses." *American Journal of Botany* 90: 131-134. 2003.

in Somalia: sido

in India: uppukarai pullu

Haplachne Presl = *Dimeria* R. Br.

From the Greek *haplos* "simple, single" and *achne* "chaff, glume, scale."

Andropogoneae, type *Haplachne pilosissima* J. Presl, see *Prodromus Florae Novae Hollandiae* 204. 1810, *Reliquiae Haenkeanae* 1(4-5): 234-235, t. 38. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 326. 1832.

Harpachne Hochst. ex A. Rich. = *Harpachne* A. Rich.

Latin *harpago* "a grappling-hook," Greek *harpagos*, *harpagē* "a hook" and *achne* "chaff, glume, scale."

Two species, tropical Africa, Arabia, North and northeast Africa. Chloridoideae, Eragrostideae, perennial, herbaceous, unbranched, unarmed, tufted, auricles absent, glandular, ligule a fringe of hairs, plants bisexual, bottlebrush-like inflorescence racemose or paniculate, a single raceme or a false spike, reflexed spikelets hanging on slender pedicels, florets increasing in size upward, hooked or pungent pedicel, 2 glumes very unequal, lemmas keeled acute to acuminate, palea short and gibbous, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 white stigmas, open habitats, open stony ground, savannah, type *Harpachne schimperi* A. Rich., see *Tentamen Florae Abyssinicae* ... 2: 431-432. 1850.

Species

H. bogdanii Kenn.-O'Byrne (*Harpachne bogdanii* Kenn.-O'Byrne ex Bogdan) (named for A.V. Bogdan, author of *Tropical Pasture and Fodder Plants (Grasses and Legumes)* London/New York Longman Publishing Group 1977)

Kenya. See D.C. Edwards & A.V. Bogdan, *Important Grassland Plants of Kenya* Nairobi 1951, *Revised List of Kenya Grasses* ... 17. 1958, *Hooker's Icones Plantarum* 36: t. 3596. 1962.

H. schimperi A. Rich. (*Eragrostis schimperi* (A. Rich.) Benth.; *Harpachne schimperi* Hochst. ex A. Rich.)

Ethiopia, Uganda. Perennial, densely tufted, slender, panicle oblong, racemes solitary, spikelets densely crowded and falling entire, villous pedicels, glumes unequal, a wide-spread weed, stemmy grass, low grazing value, sandy areas, grassland, see *Icones Plantarum* 14: 1371. 1881.

in East Africa: aginga (Luo)

Harpochloa Kunth

From the Greek *harpe* “sickle” and *chloe, chloa* “grass.”

One-two species, southern Africa, Lesotho. Chloridoideae, Cynodonteae, perennial, densely caespitose, unarmed, herbaceous, unbranched, leaves mostly basal, often forming small mats, auricles absent, ligule a fringed membrane, basal sheaths keeled and persistent, plants bisexual, inflorescence a single raceme usually nondigitate, spikelets in 2 rows, incomplete florets distal to the female-fertile florets, 2 dark green glumes very unequal, upper glume rounded on back, lower glume keeled and awnless, lemma keeled and bidenticulate, palea present, lodicules free and fleshy, 3 stamens (in hermaphrodite and male florets), ovary glabrous, 2 dark stigmas, species of open habitats, grassland, overgrazed areas, on moist stony slopes, type *Harpochloa capensis* Kunth, see *Révision des Graminées* 1: 92. 1829, *Revisio Generum Plantarum* 764. 1891, *Transactions of the Linnean Society of London, Botany* 4: 57, t. 10, f. 7-12. 1894 and *Flora Capensis* 7: 637. 1900, *Bothalia* 21(2): 163-170. 1991, *Bothalia* 24(1): 92-96. 1994.

Species

H. falx (L.f.) Kuntze (*Chloris falcata* (L.f.) Sw.; *Cynosurus falcatus* (L.f.) Thunb.; *Eleusine falcata* (L.f.) Spreng.; *Melica falx* L.f.)

South Africa. Perennial, tufted, rhizomatous, sheath glabrous, ligule an inconspicuous fringed membrane, stiff leaves with a blunt tip, single unilateral spike curved in a sickle shape when mature, spikelets flattened and woolly, pasture, relatively palatable in an early stage, unpalatable and hard when mature, occurs on well-drained stony soils, among boulders, slopes, compacted soil, see *Supplementum Plantarum* 109. 1781, *Prodromus Plantarum Capensium*, ... 23. 1794, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 160, t. 1, f. 1. 1801, *Systema Vegetabilium, editio decima sexta* 1: 349. 1825.

in English: caterpillar grass

in South Africa: ruspergras, bohole, mothene

H. pseudoharpechloa (Chiov.) Clayton (*Rendlia pseudoharpechloa* Chiov.)

Africa. See *Annali di Botanica* 13: 53, 55. 1914, *Kew Bulletin* 37: 419. 1982.

Haynaldia Schur = *Dasypyrum* (Coss. & Durieu) T. Durand, *Haynaldia* Kanitz (Campanulaceae), *Haynaldia* Pant. (Campanulaceae), *Haynaldia* Schulzer (Campanulaceae)

For the Hungarian botanist Stephan Franz Ludwig Hayland, 1816-1891, clergyman; see J.H. Barnhart, *Biographical*

notes upon botanists. 2: 144. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 168. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933.

Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Triticinae, see *Exploration Scientifique de l'Algerie, Botanique II, Phanérogamie* 202. Paris 1855, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 16: 37. 1866, *Enumeratio Plantarum Transsilvaniae* 807. 1866, *Index Generum Phanerogamorum* 504. 1888 and *Archives de Biologie Végétale Pure et Appliquée* 1: 35, 62. 1901, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33: 101. 1942, *Fl. Afrique Nord* 3: 333. 1955, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 120. 1971[1972], *Hereditas; genetiskt arkiv*. 114: 237-244. 1991, *Nordic Journal of Botany* 11: 135-142. 1991, *Acta Phytotaxonomica Sinica* 37(2): 125-130. 1999, *Plant Breeding* 118(3): 215-219. July 1999, *Plant Breeding* 118(4): 293-296. Sep 1999, *Plant Breeding* 119(1): 21-24. Jan 2000, *Plant Breeding* 119(6): 449-454. Dec 2000, *Plant Breeding* 120(4): 285-289. Aug 2001, *Plant Breeding* 120(5): 375-380. Oct 2001, *Contributions from the United States National Herbarium* 48: 245, 382. 2003, *Plant Breeding* 122(3): 283-284. June 2003, *Molecular Plant Pathology* 5(4): 235-252. July 2004, H. Li, X. Chen, Z.Y. Xin, Y.Z. Ma, H.J. Xu, X.Y. Chen and X. Jia, “Development and identification of wheat *Haynaldia villosa* T6DL.6VS chromosome translocation lines conferring resistance to powdery mildew.” *Plant Breeding* 124(2): 203-205. Apr 2005, *Weed Biology and Management* 5(2): 62-68. June 2005.

x Haynaldoticum Ciferri & Giacomini

Haynaldia x *Triticum*.

See *Nomencl. Fl. Ital.* 1: 50. 1950, *Genera Graminum* 375. 1986.

Hekaterosachne Steud. = Oplismenus P. Beauv.

From the Greek *hekateros* “each of 2, each singly” and *achne* “chaff, glume, scale.”

Panicoideae, Paniceae, Panicinae, type *Hekaterosachne elatior* Steud., see *Flore d'Oware* 2: 14-15, t. 68. 1807 [1810], *Synopsis Plantarum Glumacearum* 1: 118. 2-3 Mar 1854 [1855] and *Flora Mesoamericana* 6: 299-300. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *New Zealand Journal of Botany* 34: 447-462. 1996, *Castanea* 64(2): 201-202. 1999, *Contributions from the United States National Herbarium* 46: 299-303. 2003.

Heleochloa Fr. = *Glyceria* R. Br., *Puccinellia* Parl.

Greek *helos* “swamp, a marsh, bog” and *chloe*, *chloa* “grass.”

Pooideae, Poodae, Meliceae, or Pooideae, Poeae, Puccinelliinae, see *Species Plantarum* 75. 1753, *Prodromus Florae Novae Hollandiae* 1: 179. 1810, *Observations sur les Graminées de la Flore Belgique* 110-111. 1823 [1824], *Flora Posoniensis* 119. 1830 and *Botaniska Notiser* 1919: 97. 1919, *Aquatic and Wetland Plants of Southeastern United States Monocotyledons* 1-712. 1979, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Watsonia* 15: 38-39. 1984, *Acta Biologica Cracoviensia, Series Botanica* 27: 57-74. 1985, *Flora Mesoamericana* 6: 231-232. 1994, *Grasses: Systematics and Evolution* 61-74. 2000, *Contributions from the United States National Herbarium* 48: 371-379, 591-601. 2003.

Heleochloa (Fr.) Drejer = *Puccinellia* Parl.

Greek *helos* “swamp, a marsh, bog” and *chloe*, *chloa* “grass.”

Pooideae, Poeae, Puccinelliinae, see *Fl. Excurs. Hafn.* 39. 1838, *Summa Veg. Scand.* 1: 77. 1845 and *Grasses: Systematics and Evolution* 61-74. 2000, *Contributions from the United States National Herbarium* 48: 382, 591-601. 2003.

Heleochloa Host ex Roem. = *Crypsis* Aiton

Greek *helos* “swamp, a marsh, bog” and *chloe*, *chloa* “grass.”

Chloridoideae, Cynodonteae, Sporobolinae, or Chloridoideae, Zoysieae, Sporobolinae, type *Heleochloa alopecuroides* (Pill. & Mitt.) Roem., see *Hortus Kewensis; or, a Catalogue ...* 1: 48. 1789, *Collectanea ad omnem rem botanicam spectantia partim e propriis, partim ex amicorum schedis manuscriptis concinnavit et edidit J.J. Roemer*. Turici [Zürich], apud H. Gessnerum, [1806-]1809, *Prodromus Florae Novae Hollandiae* 1: 179. 1810, *Essai d'une Nouvelle Agrostographie* 24. 1812, E.M. Fries, *Corpus Florarum Provincialium Sueciae. I. Floram Scanicam* 202. Uppsala 1835[-1837], *Flora Excursoria Hafniensis* 39. 1838, *Novitiae Florae Suecicae. Edit. Altera* 1: 8. 1839, *Flora italiana, ossia descrizione delle piante ...* 1: 366-367. 1848 and *Bull. Research Council of Israel* 11D: 91-126. 1962, *Systematic Botany* 4(4): 267-280. 1979, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Preslia* 64: 193-206. 1992, *Contributions from the United States National Herbarium* 41: 56-57, 143-173. 2001.

Heleochloa P. Beauv. = *Phleum* L.

Greek *helos* “swamp, a marsh, bog” and *chloe*, *chloa* “grass.”

Pooideae, Poeae, Alopecurinae, type *Heleochloa phalaroides* (Koel.) P. Beauv., see *Essai d'une Nouvelle Agrostographie* 24. 1812 and *Flora Mesoamericana* 6: 242. 1994, *Plant Systematics and Evolution* 203: 11-25. 1996, *Willdenowia* 29(11-12): 45-49. 1999, *Contributions from the United States National Herbarium* 48: 382, 491-494. 2003.

Helictotrichon Besser ex Roem. & Schultes f.

= *Amphibromus* Nees, *Avenastrum* Jess., *Avenastrum* Opiz, *Avenochloa* Holub, *Avenula* (Dumort.) Dumort., *Danthorhiza* Tenore, *Helictotrichon* Besser, *Helictotrichon* Schult., *Heuffelia* Schur, *Stipavena* Vierh.

From the Greek *heliktos* “twisted, a spiral, rolled” (*helisso* “to wind, to turn round”) and *thrix*, *trichos* “hair, spine,” an allusion to the twisted awns.

About 60-100 species, tropical mountains, temperate Eurasia, Africa, Southeast Asia, North and South America. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, perennial, herbaceous, slender and erect, unbranched, caespitose, forming tussocks, internodes hollow, auricles absent, sheaths rounded, ligule an unfringed membrane, leaf blades flat and ribbed and linear, rounded basal hummocks of foliage, plants bisexual, arching inflorescence, panicle usually narrow and erect, 2-several fertile florets plus 1-2 reduced florets, hermaphrodite florets and the uppermost rudimentary, flowers in compound panicles erect or nodding or drooping, panicles slender and cylindrical, usually spikelets oblong, awn twisted and abruptly bent, 2 hyaline glumes very unequal or subequal, lower glume 1- to 3-nerved, upper glume 3- to 5-nerved, lemmas with hyaline margins and bifid with a bent awn, palea present, 2 lodicules free and membranous, 3 stamens, ovary hairy or glabrous, 2 stigmas, chasmogamous or cleistogamous, ornamental, native pasture species, found in meadows, margin of woods, open habitats, dry hillsides, type *Helictotrichon sempervirens* (Vill.) Pilg., see *Species Plantarum* 1: 79-81. 1753, *Flora Anglica* 42. 1762, *Flora Napolitana* 1: x. Napoli 1811, *Observations sur les Graminées de la Flore Belgique* 122. 1824, *Syst. Veg. Mant.* 3: 526. 1827, *Synopsis Florae Germanicae et Helveticae* 795. 1837, *London Journal of Botany* 2: 420. 1843, *Synopsis Plantarum Glumacearum* 1: 328. 1854, *A Manual of the Botany of the Northern United States. Second Edition* 573. 1856, *Deutschlands Gräser und Getreidearten* 53, 214, f. 95. Leipzig 1863, *Enumeratio Plantarum Transsilvaniae* 760. 1866, *Bulletin de la Société Botanique de Belgique* 7(1): 68. 1868 and *Verhandlungen*

der Gesellschaft Deutscher Naturforscher und Ärzte 85(2): 671-672. 1914, *Introd. S. African Grasses* 32. 1931, *Feddes Repertorium* 45: 7. 1938, *N. Amer. Fl.* 17(8): 568. 1939, *Bot. Jahrb.* 75: 321-332. 1951, *Philipp Maximilian Opiz und seine Bedeutung für die Pflanzentaxonomie* 123-126. Praha 1958, *Acta Horti Botanici Pragensis* 1962: 75-86. 1962[1963], *Folia Geobot. Phytotax.* 2: 402. 1967, *Canadian Journal of Botany* 52(11): 2259. 1974, *Folia Geobotanica et Phytotaxonomica* 11(3): 294. 1976, *Preslia* 49: 203-221. 1977, *Plant Systematics and Evolution* 203: 181-281. 1997, *Grasses: Systematics and Evolution* 61-74. 2000, *Molecular Phylogenetics and Evolution* 21(2): 198-217. 2001, *Contributions from the United States National Herbarium* 48: 108-109, 138-139-140, 244, 382-383, 384, 650. 2003, M. Castro and J.A. Rosselló, "Chromosome numbers in plant taxa endemic to the Balearic Islands." *Botanical Journal of the Linnean Society* 148(2): 219-228. June 2005.

Species

H. altaicum Tzvelev (*Helictotrichon desertorum* subsp. *altaicum* (Tzvelev) Holub; *Helictotrichon desertorum* subsp. *centroasiaticum* Holub; *Helictotrichon desertorum* var. *centroasiaticum* (Holub) Tzvelev)

Mongolia. See *Feddes Repertorium* 45: 7. 1938, *Zlaki SSSR* 250. 1976.

H. altius (Hitchc.) Ohwi (*Avena altior* Hitchc.)

China. See *Proceedings of the Biological Society of Washington* 43: 96. 1930, *Journal of Japanese Botany* 17(8): 440. 1941.

H. anatolicum Holub (*Avenochloa pubescens* subsp. *anatolica* (Holub) Soó)

Anatolia, Eurasia. See *Feddes Repertorium* 85(7-8): 436. 1975.

H. angustum C.E. Hubbard

Yemen, Kenya. Perennial, erect, tufted, very narrow leaf blades, panicle linear with erect branches, florets well exerted from the glumes, lower glume 1-nerved, upper glume 3-nerved, smooth or scabrid lemmas, geniculate awn, common on rocky slopes, loam, see *Bulletin of Miscellaneous Information Kew* 1936(5): 330. 1936.

H. asperum (Munro ex Thwaites) Bor (*Arrhenatherum virescens* (Nees ex Steud.) Potztl; *Avena aspera* Munro ex Thwaites; *Avena aspera* var. *roylei* Hook.f.; *Avena roylei* (Hook.f.) Keng; *Avenastrum asperum* (Munro ex Thwaites) Vierh.; *Avenastrum asperum* var. *roylei* (Hook.f.) Hand.-Mazz.; *Helictotrichon roylei* (Hook.f.) Keng; *Helictotrichon virescens* sensu Senaratna, non (Nees ex Steudel) Henrard; *Trisetum variabile* var. *virescens* E. Desv.; *Trisetum virescens* Nees ex Steud.)

Sri Lanka, India. Perennial, caespitose, shortly rhizomatous, erect or decumbent, knotty rhizomes, leaf sheaths glabrous

to softly pubescent, ligule glabrous or pubescent, nodding inflorescence paniculate, uppermost floret rudimentary, glumes acute to awned, awn once geniculate, lemmas very scabrous, palea ciliate on the keels, white stigmas, in montane grasslands, along streams and riverbanks, pastures, closely related to *Helictotrichon virescens* (Nees ex Steudel) Henrard, see *Synopsis Plantarum Glumacearum* 1: 226. 1854, *Enumeratio Plantarum Zeylaniae* 372. 1864, *The Flora of British India* 7: 277. 1896 and *Handb. Fl. Ceylon* 5: 265. 1900, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2]*, *Botany* 8(1,5,1): 206. 1904, *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1914, *Bulletin of the Fan Memorial Institute of Biology* 7: 36. 1936, *Symbolae Sinicae* 7(5): 1293. 1936, *Indian Forest Records. Botany* 1: 68. 1938, *Blumea* 3(3): 425. 1940, *Grasses of Ceylon* 51. 1956, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 200. 1957, *Grasses of Burma ...* 438. 1960, *Willdenowia* 4: 400. 1968, *Blumea* 28(2): 338, 340. 1983, *Blumea* 41: 410. 1996.

H. barbatum (Nees) Schweick. (*Arrhenatherum barbatum* (Nees) Potztl; *Arrhenatherum namaquense* (Schweick.) Potztl; *Bromus barbatooides* Beal; *Helictotrichon namaquense* (Nees) Schweick.; *Trisetum barbatum* Nees)

South Africa. Perennial, tufted, rare to very rare, leaves flat, growing in mountain slopes, see *Florae Africae Australioris Illustrationes Monographicae* 345. 1841, *Synopsis Plantarum Glumacearum* 1: 229. 1854, *Grasses of North America for Farmers and Students* 2: 614. 1896 and *Bothalia* 3: 189-190. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 328. 1951.

H. breviaristatum (Barratte in Battand. & Trab.) Henrard (*Avena breviaristata* Barratte in Battand. & Trab.; *Avenochloa breviaristata* (Barratte in Battand. & Trab.) Holub; *Avenula breviaristata* (Barratte in Battand. & Trab.) Holub)

Asia. See *Flore d'Alger* 2: 184. 1895 and *Blumea* 3(3): 430. 1940, *Acta Horti Botanici Pragensis* 1962: 82. 1962, *Folia Geobotanica et Phytotaxonomica* 11(3): 294. 1976.

H. bromoides (Gouan) C.E. Hubb. (*Avena bromoides* Gouan; *Avenastrum bromoides* (Gouan) Vierh.; *Avenastrum bromoides* (Gouan) C.E. Hubb. & Sandwith, nom. illeg., non *Avenastrum bromoides* (Gouan) Vierh.; *Avenochloa bromoides* (Gouan) Holub; *Avenula bromoides* (Gouan) H. Scholz; *Avenula bromoides* (Gouan) M. Lánz, nom. illeg., non *Avenula bromoides* (Gouan) H. Scholz)

Europe. Useful for erosion control, see *Hortus Regius Monspelienensis* 52. 1762 and *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1914, *Bulletin of Miscellaneous Information Kew* 1928(4): 154. 1928, *Kew Bulletin* 1939: 101. 1939, *Acta Horti Botanici Pragensis* 1962: 82. 1962, *Willdenowia* 7(2): 420. 1974, *Lagascalia*

13(1): 114. 1984, M. Röser, *Dissertationes Botanicae* 145: 1-250. 1989.

H. canescens (Buckley) Clayton (*Trisetum canescens* Buckley; *Trisetum cernuum* Trin.; *Trisetum cernuum* subsp. *canescens* (Buckley) Calder & Roy L. Taylor; *Trisetum cernuum* var. *canescens* (Buckley) Beal)

U.S. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 61. 1830, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862, *Grasses of North America for Farmers and Students* 2: 380. 1896 and *Canadian Journal of Botany* 43(11): 1389. 1965, *Kew Bulletin* 40(4): 727-729. 1984[1985].

H. capense Schweick. (*Arrhenatherum capense* (Schweick.) Potztal)

South Africa. Perennial, indeterminate, tufted, leaf blades filiform to linear, lemma scabrous, growing in disturbed places, sandy soils, see *Bothalia* 3: 193. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 328. 1951.

H. compactum (Boiss. & Heldr.) Henrard (*Arrhenatherum compactum* (Boiss. & Heldr.) Potztal; *Avena compacta* Boiss. & Heldr.; *Avenastrum compactum* (Boiss. & Heldr.) Halácsy; *Danthonia compacta* (Boiss. & Heldr.) Grossh.; *Danthonia compacta* Boiss. & Heldr.; *Danthoniastrum compactum* (Boiss. & Heldr.) Holub; *Metcalfia compacta* (Boiss. & Heldr.) Clayton)

Asia, Greece. See *Diagnoses plantarum orientalium novarum ser. I*, 1(7): 122-123. 1846 and *Conspectus Florae Graecae* 3: 370. 1904, *Flora Kavkaza* (edition 2) 1: 217. 1939, *Blumea* 3(3): 430. 1940, *Willdenowia* 4: 399. 1968, *Folia Geobotanica et Phytotaxonomica* 5: 436. 1970, *Kew Bulletin* 40(4): 727-729. 1984[1985], *Fitologija* 39: 72-77. 1991.

H. compressum (Heuff.) Henrard (*Avena bromoides* subsp. *compressa* (Heuff.) Lindb.; *Avena compressa* Heuff.; *Avena pratensis* subsp. *compressa* (Heuff.) St.-Yves; *Avena protensis* var. *compressa* (Heuff.) Fiori; *Avenastrum compressum* (Heuff.) Vierh.; *Avenochloa compressa* (Heuff.) Holub; *Avenula compressa* (Heuff.) W. Sauer & Cmelit.; *Avenula compressa* (Heuff.) Holub, nom. illeg., non *Avenula compressa* (Heuff.) W. Sauer & H. Chmelitschek; *Helictotrichon compressum* (Heuff.) Potztal, nom. illeg., non *Helictotrichon compressum* (Heuff.) Henrard)

Turkey, Greece. Useful for erosion control, see *Flora* 18: 244. 1835 and *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1914, *Nuova Flora Analitica d'Italia* 1: 110. 1923, *Candollea* 4: 458. 1931, *Acta Societatis Scientiarum Fennicae* n. ser. B. 12: 12. 1932, *Blumea* 3(3): 429. 1940, *Acta Horti Botanici Pragensis* 1962: 84. 1962, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976, *Mitteilungen der Botanischen Staatssammlung*

München 12: 582. 1976, *Bibliotheca Botanica* 144: 1-238. 1995.

H. dahuricum (Kom.) Kitag. (*Avena dahurica* Kom.; *Avena planiculmis* subsp. *dahurica* Kom.; *Avenastrum dahuricum* (Kom.) Roshev.; *Avenochloa dahurica* (Kom.) Holub; *Avenula dahurica* (Kom.) W. Sauer & H. Chmelitschek; *Avenula dahurica* (Kom.) Holub, nom. illeg., non *Avenula dahurica* (Kom.) W. Sauer & H. Chmelitschek; *Helictotrichon dahuricum* (Kom.) Henrard, nom. illeg., non *Helictotrichon dahuricum* (Kom.) Kitag.)

Asia, Russia. See *Flora Peninsulae Kamtschatka* 1: 159. 1927, *Flora URSS* 2: 275, pl. 21: 5, 6. 1935 [1934], *Report of the Institute of Scientific Research, Manchoukuo* 3(1): 77. 1939, *Blumea* 3(3): 429. 1940, *Acta Horti Botanici Pragensis* 1962: 84. 1962, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976, *Mitteilungen der Botanischen Staatssammlung München* 12: 582. 1976.

H. decorum (Janka) Henrard (*Arrhenatherum decorum* (Janka) Potztal; *Avena besseri* auct., non Griseb.; *Avena decora* Janka; *Avenastrum decorum* (Janka) Degen; *Avenastrum decorum* (Janka) Vierh.; *Avenochloa decora* (Janka) Soó)

Europe, Romania. See *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1914, *Blumea* 3(3): 4330. 1940, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 329. 1951, *Feddes Repertorium* 85(7-8): 436. 1974, *Plant Systematics and Evolution* 203: 181-281. 1997.

H. desertorum (Less.) Nevski (*Arrhenatherum desertorum* (Less.) Potztal; *Avena besseri* Griseb., nom. illeg., non *Avena hostii* Boiss. & Reut.; *Avena desertorum* Less.; *Avena desertorum* Less. var. *desertorum*; *Avenastrum basalticum* Podp.; *Avenastrum besseri* (Griseb.) Koczw.; *Avenastrum desertorum* (Less.) Podp.; *Avenastrum desertorum* (Less.) Podp. subsp. *desertorum*; *Helictotrichon besseri* (Griseb.) Klokov; *Helictotrichon desertorum* (Less.) Pilg.; *Helictotrichon desertorum* subsp. *basalticum* (Podpera) Holub)

Europe, Russia. See *Linnaea* 9(2): 208. 1834, *Flora Rossica* 4(13): 415. 1852 and *Österreichische Botanische Zeitschrift* 52: 249. 1912, *Feddes Repertorium* 45: 7. 1938, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 329. 1951, *Zlaki SSSR* 250. 1976, *Plant Systematics and Evolution* 203: 181-281. 1997.

H. desertorum (Less.) Nevski subsp. *basalticum* (Podp.) Holub (*Avena besseri* Griseb.; *Avena desertorum* Less. var. *basaltica* Podp.; *Avenastrum besseri* (Griseb.) Koczw.; *Avenastrum desertorum* (Less.) Podp. var. *basalticum* Podp.; *Helictotrichon besseri* (Griseb.) Klokov)

Europe. See *Linnaea* 9(2): 208. 1834, *Flora Rossica* 4(13): 415. 1852 and *Österreichische Botanische Zeitschrift* 52: 249. 1912, *Österreichische Botanische Zeitschrift* 75: 242. 1926, *Feddes Repertorium* 45: 7. 1938, *Botanische*

Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 75: 329. 1951, *Zlaki SSSR* 250. 1976, *Plant Systematics and Evolution* 203: 181-281. 1997.

H. desertorum (Less.) Nevski subsp. ***desertorum***

Russia.

H. dodii (Stapf) Schweick. (*Avenastrum dodii* Stapf) (named for the British botanist Anthony Hurt Woolley-Dod, 1861-1948, plant collector in South Africa and California, with the South African (British born, Nottingham) businessman and botanist Harry Bolus, 1834-1911, wrote *A List of the Flowering Plants and Ferns of the Cape Peninsula*. 1903; see Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 378-379. Cape Town 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 752. London 1994; J.H. Barnhart, *Biographical notes upon botanists*. 3: 514. Boston 1965; Frans A. Stafleu and Richard S. Cowan, *Taxonomic literature*. 7: 428-429. 1988; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 267, 441. Boston, Mass. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

South Africa. Perennial, tufted, leaf blades flat, panicle very dense and contracted, spikelets yellowish, glumes lanceolate, lemmas glabrous with long lobes, growing in disturbed places, vleis margins, coastal sand flats, see *Flora Capensis* 7: 475. 1899 and *Bothalia* 3: 197. 1937.

H. elongatum (Hochst. ex A. Rich.) C.E. Hubb. (*Arrhenatherum elongatum* (Hochst. ex A. Rich.) Potztl; *Avena festuciformis* Hochst.; *Avena muriculata* Stapf; *Avena neesii* (Hochst. ex Steud.) Hook.f.; *Avenastrum elongatum* (Hochst. ex A. Rich.) Pilg.; *Danthonia elongata* Hochst. ex A. Rich., nom. illeg., non *Danthonia elongata* Hochst.; *Helictotrichon elongatum* (A. Rich.) C.E. Hubb.; *Trisetum neesii* Hochst. ex Steud.)

Yemen, Tanzania, Uganda. Perennial, erect or ascending, tufted, slender, geniculate at the base, fibrous roots, panicle linear-oblong with loosely ascending branches, inflorescence often nodding, spikelets narrowly oblong 2-4-flowered, glumes enveloping acute to acuminate, lower glume 2-3-nerved, awn geniculate, provides grazing for all stock, common in montane grasslands, forest, in high rainfall areas, open grassland, upland grassland, along ditches and in marshes, savannah, woodland, loamy sand, scrub, see *Species Plantarum* 1: 73-74. 1753, *Tentamen Florae Abyssinicae* ... 2: 419. 1850, *Synopsis Plantarum Glumacearum* 1: 227. 1854, *Flora* 38: 275. 1855, *Journal of the Linnean Society, Botany* 7: 229. 1864, *Bulletin of Miscellaneous Information Kew* 1897: 291. 1897 and *Ill. Fl. U.S. Canada*, edition 2, 1: 269. 1913, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 517, 518, 519. 1926, *Kew Bulletin* 1936(5): 335. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie*

75: 328. 1951, *Watsonia* 16: 300. 1987, *Opera Botanica* 121: 159-172. 1993.

H. galpinii Schweick. (*Arrhenatherum galpinii* (Schweick.) Potztl)

South Africa. Perennial, tufted, leaves woolly, panicle contracted, glumes broadly lanceolate, lemmas prickly or scabrid, grows in wet places, grassland, see *Bothalia* 3: 192. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 327. 1951.

H. hackelii (Henriq.) Henrard (*Arrhenatherum hackelii* (Henriq.) Samp.; *Avena hackelii* Henriq.; *Avenastrum hackelii* (Henriq.) Vierh.; *Avenochloa hackelii* (Henriq.) Holub; *Avenula hackelii* (Henriq.) Holub; *Helictotrichon hackelii* (Henriq.) Potztl, nom. illeg., non *Helictotrichon hackelii* (Henriq.) Henrard)

Europe. See *Boletim da Sociedade Broteriana* 20: 87. 1905, *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1914, *Anais da Faculdade de Ciências Porto* 17: 45. 1931, *Blumea* 3(3): 430. 1940, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 330. 1951, *Acta Horti Botanici Pragensis* 1962: 84. 1962, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976.

H. hideoi (Honda) Ohwi

Asia, Japan. See *Botanical Magazine* (Tokyo) 40: 435. 1926, *Acta Phytotaxonomica et Geobotanica* 6: 292. 1937.

H. hideoi (Honda) Ohwi subsp. ***abietetorum*** (Ohwi) T. Koyama (*Avena abietetorum* Ohwi; *Helictotrichon abietetorum* (Ohwi) Ohwi)

Japan. See *Acta Phytotaxonomica et Geobotanica* 6(3): 151. 1937, *Journal of Japanese Botany* 17(8): 441. 1941, *Grasses of Japan and its Neighboring Regions* 509. 1987.

H. hirtulum (Steud.) Schweick. (*Arrhenatherum hirtulum* (Steud.) Potztl; *Trisetum hirtulum* Steud.)

South Africa. Perennial, tufted, slender, weak, short-lived, lax panicle spike-like, glumes unequal, lemma scabrid, growing on mountain slopes, wet areas, shady places, disturbed areas, see *Bothalia* 3: 193. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 327. 1951.

H. hookeri (Scribn.) Henrard (*Arrhenatherum hookeri* (Scribn.) Potztl; *Avena americana* (Scribn.) Scribn.; *Avena hookeri* Scribn.; *Avena pratensis* var. *americana* Scribn.; *Avenastrum asiaticum* Roshev.; *Avenochloa asiatica* (Roshev.) Holub; *Avenochloa hookeri* (Scribn.) Holub; *Avenula hookeri* (Scribn.) Holub; *Helictotrichon asiaticum* (Roshev.) Grossh.; *Helictotrichon asiaticum* (Roshev.) Henrard, nom. illeg., non *Helictotrichon asiaticum* (Roshev.) Grossh.)

Mongolia, Russia, northern America, U.S., Canada. Perennial, forage, see *Botanical Gazette* 11: 177. 1886, *The True Grasses* 123. 1890, *Bulletin, Division of Agrostology United*

States Department of Agriculture 7; 183, f. 165. 1897 and *Izv. Bot. Sada Akad. Nauk SSSR* 30: 772. 1932, *Blumea* 3(3): 429. 1940, *Acta Horti Botanici Pragensis* 1962: 82, 84. 1962, *Willdenowia* 4: 400. 1968, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976.

in English: spikecoat

H. lachnanthum (Hochst. ex A. Rich.) C.E. Hubb. (*Arrhenatherum lachnanthum* (Hochst. ex A. Rich.) Potztal; *Avena lachnantha* (Hochst. ex A. Rich.) Hook.f.; *Avena rothii* Stapf; *Avenastrum lachnanthum* (Hochst. ex A. Rich.) Pilg.; *Avenastrum lachnanthum* (Hochst. ex A. Rich.) Vierh.; *Trisetum lachnanthum* Hochst. ex A. Rich.)

Ethiopia. Perennial, erect, arching, straggling, tufted, weak, slender, inflorescence nodding, lax panicle narrowly oblong with flexuous branches, spikelets 2-4-flowered, florets exserted, rachilla internodes bearded or long silky hairy, lower glume narrowly lanceolate, upper glume narrowly elliptic-oblong, awn geniculate, scrub, upland, sandy places, see *Tentamen Florae Abyssinicae* ... 2: 416. 1850, *Journal of the Linnean Society, Botany* 7: 227. 1864, *Bulletin of Miscellaneous Information Kew* 1897: 292. 1897 and *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1914, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 521. 1926, *Kew Bulletin* 1936(5): 335. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 328. 1951.

H. leianthum (Keng) Ohwi (*Avena leiantha* Keng)

Asia, Japan. Shady places, slopes, see *Bulletin of the Fan Memorial Institute of Biology*: 7(1): 35-36. 1936, *Journal of Japanese Botany* 17(8): 440. 1941.

H. leoninum (Steud.) Schweick. (*Arrhenatherum leoninum* (Steud.) Potztal; *Avena leonina* Steud.)

South Africa. Perennial, tufted, panicle contracted, rachilla internodes glabrous, lemmas papillose, found on mountain slopes, seepage areas, along roadsides and mountain roads, see *Flora* 12: 484. 1829 and *Bothalia* 3: 191. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 328. 1951.

H. longifolium (Nees) Schweick. (*Arrhenatherum longifolium* (Nees) Potztal, nom. illeg., non *Arrhenatherum longifolium* (Thore) Dulac; *Trisetum longifolium* Nees)

South Africa. Perennial, tufted, straggling, tussocky, open clumps forming, leaf blade wiry often rolled, ligule an unfringed short membrane, narrow open panicle, rachilla internodes hairy, palatable, common on moist slopes, disturbed soil, among boulders, mountain slopes, rocky sites, marshy areas, see *Florae Africae Australioris Illustrationes Monographicae* 348. 1841 and *Bothalia* 3: 195. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 327. 1951, *Bothalia* 26(1): 53-61. 1996.

in South Africa: brandgras, mosuhela

H. longum (Stapf) Schweick. (*Arrhenatherum longum* (Stapf) Potztal; *Avena longa* Stapf; *Avenastrum longum* (Stapf) Stapf)

South Africa. Perennial, tufted, rhizomatous, leaves flat, long linear panicle contracted, long spikelets, lemmas granular, common in moist areas, sandy flats, fynbos, see *Bulletin of Miscellaneous Information Kew* 1897: 292. 1897, *Flora Capensis* 7: 473. 1899 and *Bothalia* 3: 189. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 328. 1951, *Bothalia* 26(1): 53-61. 1996.

in South Africa: hawergras

H. macrostachyum (Balansa ex Coss. & Durieu) Henrard (*Arrhenatherum macrostachyum* (Balansa ex Coss. & Durieu) Potztal; *Avena macrostachya* Balansa ex Coss. & Durieu)

Asia. See *Bulletin de la Société Botanique de France* 1: 318. 1854 and *Blumea* 3(3): 430. 1940, *Willdenowia* 4: 400. 1968.

H. milanjanum (Rendle) C.E. Hubb. (*Arrhenatherum milanjanum* (Rendle) Potztal; *Bromus milanjanus* Rendle)

Malawi. Perennial, erect or suberect, decumbent, ascending, loosely tufted, slender, with wiry rhizomes, panicle linear, spikelets narrowly oblong 2-3-flowered, florets long-exserted and well spaced, awn flexuous, grassy areas, along stream banks and trails, upland forest, moist situations, clearings, see *Transactions of the Linnean Society of London, Botany* 4: 59. 1894 and *Kew Bulletin* 1936(5): 334. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 329. 1951.

H. mongolicum (Roshev.) Henrard (*Arrhenatherum mongolicum* (Roshev.) Potztal; *Avena mongolica* Roshev.; *Avena mongolica* subsp. *mongolica* (Roshev.); *Avenastrum mongolicum* (Roshev.) Roshev.)

China, Mongolia. See *Bioactive Plants* 27: 96. 1928, *Candollea* 4: 396-398. 1931, *Flora URSS* 2: 280. 1934, *Blumea* 3(3): 431. 1940, *Willdenowia* 4: 400. 1968.

H. mortonianum (Scribn.) Henrard (*Arrhenatherum mortonianum* (Scribn.) Potztal; *Avena mortoniana* Scribn.)

U.S., Colorado. See *Botanical Gazette* 21: 133, t. 11. 1896 and *Blumea* 3(3): 429. 1940, *Willdenowia* 4: 400. 1968.

H. namaquense (Nees) Schweick. (*Arrhenatherum barbatum* (Nees) Potztal; *Arrhenatherum namaquense* (Schweick.) Potztal; *Bromus barbatooides* Beal; *Helictotrichon barbatum* (Nees) Schweick.; *Trisetum barbatum* Nees; *Trisetum barbatum* Steud., nom. illeg., non *Trisetum barbatum* Nees)

South Africa. Perennial, rare, tufted, leaves flat, panicle ovate and contracted, rachilla internodes bearded, lemmas scabrid, found in sandy flats, see *Florae Africae Australioris*

Illustrationes Monographicae 345. 1841, *Synopsis Plantarum Glumacearum* 1: 229. 1854, *Grasses of North America for Farmers and Students* 2: 614. 1896 and *Bothalia* 3: 189-190. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 328. 1951, *Bothalia* 26(1): 53-61. 1996.

H. natalense (Stapf) Schweick. (*Arrhenatherum natalense* (Stapf) Potzta; *Avenastrum caffrum* var. *natalensis* Stapf)

South Africa. Perennial, tufted, leaves flat, panicle open, rachilla internodes hairy, lemmas glabrous, column of awn twisted, usually on rocky hillsides, wet places, streamsides, riverbanks, see *Flora Capensis* 7: 477. 1899 and *Bothalia* 3: 194, f. 9. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 328. 1951. in South Africa: wildehauer

H. neesii (Steud.) Stace (*Amphibromus neesii* Steud.)

Australia. See *Synopsis Plantarum Glumacearum* 1: 328. 1854 and *Telopea* 2: 718. 1986, *Watsonia* 18: 413. 1991.

H. pallens (Link) J.M. Couderc & Guédès (*Arrhenatherum pallens* (Link) Link; *Avena pallens* Link; *Avenastrum pallens* (Link) Samp.; *Thoreochloa pallens* (Link) Holub)

Europe. See *Journal für die Botanik* 2: 314. 1799, *Hortus Regius Botanicus Berolinensis* 1: 124. 1827 and *Boletim da Sociedade Broteriana, ser. 2* 7: 119. 1931, *Acta Universitatis Carolinae, Biologica* 1962: 154. 1962, *Taxon* 25(1): 188. 1976.

H. planiculme (Schrad.) Besser ex Schult. & Schult.f. (*Avena planiculmis* Schrad.; *Avena pratensis* subsp. *planiculmis* (Schrad.) St.-Yves; *Avenastrum planiculme* (Schrad.) Opiz; *Avenochloa planiculmis* (Schrad.) Holub; *Avenula planiculmis* (Schrad.) H. Chmelitschek & W. Sauer; *Avenula planiculmis* (Schrad.) W. Sauer & Cmel.; *Avenula planiculmis* (Schrad.) Holub, nom. illeg., non *Avenula planiculmis* (Schrad.) H. Chmelitschek & W. Sauer; *Avenula planiculmis* subsp. *angustior* Holub; *Helictotrichon planiculme* (Schrad.) Pilger; *Helictotrichon planiculme* (Schrad.) Henrard; *Helictotrichon planiculme* subsp. *angustius* (Holub) Dostál)

Southwest Asia, Central and southeastern Europe. Stems stout, tussocks, leaf blades acute and smooth, dense panicles of flowers, linear spikelets, ornamental, see *Flora Germanica* 1: 381, t. 6, f. 2. 1806, *Mant.* 3: 526. 1827 and *Candollea* 4: 451. 1931, *Repertorium Specierum Novarum Regni Vegetabilis* 45: 6. 1938, *Acta Horti Botanici Pragensis* 1962: 84. 1962, *Mitteilungen der Botanischen Staatssammlung München* 12: 533. 1976, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976, *Preslia* 49(3): 209. 1977, *Folia Musei Rerum Naturalium Bohemiae Occidentalis* 21: 17. 1984.

H. praeustum (Reichb.) Tzvelev (*Avena adsurgens* Schur ex Simonk.; *Avena praeusta* Reichb.; *Avena pratensis* var. *praeusta* (Reichb.) Murr.; *Avenastrum alpinum* (Smith)

Fritsch; *Avenochloa adsurgens* (Schur ex Simonk.) Holub; *Avenochloa alpina* (Sm.) Holub; *Avenochloa praeusta* (Reichb.) Soják; *Avenula adsurgens* (Schur ex Simonk.) W. Sauer & H. Chmelitschek; *Avenula praeusta* (Reichb.) Holub; *Helictotrichon adsurgens* (Schur ex Simonk.) Conert; *Helictotrichon alpinum* (Sm.) Henrard)

Europe. See *Flora Germanica Excursoria* 140(5). 1830, *Enumeratio Plantarum Transsilvaniae* 162. 1866, *Excursionsflora für Österreich* 53. 1897, *Deutsche Botanische Monatsschrift* 17: 103. 1899 and *Blumea* 3(3): 431. 1940, *Acta Horti Botanici Pragensis* 1962: 82. 1962, *Mitteilungen der Botanischen Staatssammlung München* 12: 543. 1976, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976, *Plant Systematics and Evolution* 203: 181-281. 1997.

H. pratense (L.) Besser (*Aira alpina* L.; *Arrhenatherum pratense* (L.) Samp.; *Avena alpina* Sm.; *Avena alpina* (L.) Trin., nom. illeg., non *Avena alpina* Sm.; *Avena argaea* Boiss.; *Avena australis* Parl.; *Avena pratensis* L.; *Avena versicolor* var. *argaea* (Boiss.) St.-Yves; *Avenastrum pratense* (L.) Opiz; *Avenochloa argaea* (Boiss.) Holub; *Avenochloa pratensis* (L.) Holub; *Avenula alpina* (Sm.) W. Sauer & H. Chmelitschek; *Avenula pratensis* (L.) Dumort.; *Helictotrichon argaeum* (Boiss.) Parsa; *Helictotrichon pratense* (L.) Pilg.; *Heuffelia australis* (Parl.) E. Fourn.; *Heuffelia praeusta* Schur; *Heuffelia pratensis* (L.) Schur; *Trisetum pratense* (L.) Dumort.)

Europe. Perennial, caespitose, sod-forming, reddish, thin leaves, fodder, useful for erosion control, see *Species Plantarum* 65, 80. 1753, *Transactions of the Linnean Society of London* 10: 335. 1811, *Fundamenta Agrostographiae* 157. 1820, *Observations sur les Graminées de la Flore Belgique* 122. 1823 [1824], *Flora italiana, ossia descrizione delle piante ...* 1: 285. 1848, *Enumeratio Plantarum Transsilvaniae* 762. 1866, *Bulletin de la Société Botanique de Belgique* 7(1): 68. 1868, *Annales de la Société Linnéenne de Lyon, sér. 2*, 17: 183. 1869, *Flora Orientalis* 5: 546. 1884 and *Anais da Faculdade de Ciências Porto* 17: 45. 1931, *Candollea* 4: 435, 469. 1931, *Feddes Repertorium* 45: 6. 1938, *Flora of Iran [Parsa]* 5: 641. 1951, *Acta Horti Botanici Pragensis* 1962: 82, 84. 1962, *Mitteilungen der Botanischen Staatssammlung München* 12: 569. 1976, *Folia Musei Rerum Naturalium Bohemiae Occidentalis* 21: 16. 1984, *Flora Analítica de la Provincia de Valencia* 368, 369. 1987, *Fragmenta Floristica et Geobotanica* 35: 101-137. 1991, *Plant Systematics and Evolution* 203: 181-281. 1997.

H. pubescens (Huds.) Besser ex Schult. & Schult.f. (*Arrhenatherum pubescens* (Huds.) Samp.; *Avena laevigata* Schur; *Avena pubescens* Huds.; *Avenastrum laevigatum* (Schur) Domin; *Avenastrum pubescens* (Huds.) Jess. ex Dalla Torre; *Avenastrum pubescens* (Huds.) Jess.; *Avenastrum pubescens* (Huds.) Opiz; *Avenastrum pubescens* var. *laevigatum* (Schur) Jav.; *Avenochloa laevigata* (Schur) Soó; *Avenochloa pubescens* (Huds.) Holub; *Avenochloa pubescens* subsp. *laevigata* (Schur) Soó; *Avenula pubescens*

(Huds.) Dumort.; *Avenula pubescens* subsp. *laevigata* (Schur) Holub; *Helictotrichon laevigatum* (Schur) Potztl; *Helictotrichon pubescens* (Huds.) Pilg.; *Heuffelia pubescens* (Huds.) Schur

Armenia, China, Mongolia, Eurasia. Perennial, pubescent, leaf blade softly long-hairy, panicle branches slender and flexuous, glumes membranous and keeled, awn twisted below, subalpine, palatable, useful fodder, see *Flora Anglica* 42. 1762, Mant. 3: 526. 1827, *Österreichische Botanische Zeitschrift* 10: 72. 1860, *Deutschlands Gräser und Getreidearten* 53, f. 95. Leipzig 1863, *Enumeratio Plantarum Transsilvaniae* 760. 1866, *Bulletin de la Société Botanique de Belgique* 7(1): 68. 1868, *Flora Orientalis* 5: 545. 1884, *Alpenfl.* 44. 1899 and *Magyar Flóra* 1: 80. 1924, *Anais da Faculdade de Ciências Porto* 17: 45. 1931, *Preslia* 13-15: 40. 1935, *Repertorium Specierum Novarum Regni Vegetabilis* 45(1131-1137): 6. 1938, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 330. 1951, *Acta Horti Botanici Pragensis* 1962: 84. 1962, *Feddes Repertorium* 85(7-8): 436. 1974, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 86. 1982, *Acta Botanica Croatica* 43: 315-328. 1984, *Bot. Zhurn. (Moscow & Leningrad)* 71: 1426-1427. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1185. 1990, *Fitologija* 39: 72-77. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Fragmenta Floristica et Geobotanica* 35: 101-137. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Plant Systematics and Evolution* 203: 181-281. 1997.

in English: pubescent oat

H. quadridentulum (Döll) Renvoize (*Amphibromus quadridentulus* Döll; *Amphibromus quadridentulus* (Döll) Swallen; *Avena quadridentula* Döll; *Helictotrichon quadridentulum* Döll)

Brazil, Uruguay, northern Argentina. Found in marshy areas, see *Flora Brasiliensis* 2(3): 100, pl. 29, f. 2. 1878 and *American Journal of Botany* 18: 414. 1931, *Kew Bulletin* 42: 921. 1987.

H. quinquesetum Schweick. (*Helictotrichon quinquesetum* (Steudel) Schweick.)

South Africa. Perennial, tufted, rare to very rare to extremely rare, panicle contracted, see *Bothalia* 3: 188. 1937.

H. requienii (Mutel) Henrard (*Avenochloa requienii* (Mutel) Holub; *Avenula pratensis* subsp. *requienii* (Mutel) Romero Zarco; *Avenula requienii* (Mutel) Holub) (for the French botanist Esprit Requier, 1788-1851 (Corsica), malacologist, traveler and botanical explorer, from 1809 Director of the Botanical Garden of Avignon, correspondent of

Jean Baptiste Mougeot (1776-1858) and Filippo Parlatore (1816-1877), author of *Catalogue des végétaux ligneux qui croissent naturellement en Corse ou qui y sont généralement cultivés*. Avignon 1868; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 145. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 231. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 329. Boston, Mass. 1972; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14 Aufl. Stuttgart 1993)

Europe. See *Flore Française* 4: 62. 1837 and *Blumea* 3(3): 430. 1940, *Acta Horti Botanici Pragensis* 1962: 84. 1962, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976, *Lagascalia* 13(1): 97. 1984.

H. scabrivalvis (Trin.) Govaerts (*Amphibromus scabrivalvis* (Trin.) Swallen; *Avena scabrivalvis* Trin.; *Helictotrichon scabrivalvis* (Trin.) Renvoize, nom. illeg., non *Helictotrichon scabrivalvis* (Trin.) Govaerts)

Europe, Chile. Perennial, rhizomatous, aquatic, leaf blades linear and acute, loose panicles ovate to oblong, spikelets 5-6-flowered, glumes ovate and subequal, lemmas scabrous and bilobed, awn geniculate, ovary pilose, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 28. 1836 and *American Journal of Botany* 18: 413. 1931, *World Checklist of Seed Plants* 2(1): 14. 1996, *Gramíneas de Bolivia* 155, f. 37. 1998.

H. schellianum (Hack.) Kitag. (*Avena pratensis* var. *schelliana* (Hack.) Kors.; *Avena schelliana* Hack.; *Avenastrum schellianum* (Hack.) Roshev.; *Avenastrum schellianum* (Hack.) Podp.; *Avenochloa hookeri* subsp. *schelliana* (Hack.) Soják; *Avenochloa schelliana* (Hack.) Holub; *Avenula hookeri* subsp. *schelliana* (Hack.) Lomon.; *Avenula schelliana* (Hack.) Holub, nom. illeg., non *Avenula schelliana* (Hack.) W. Sauer & H. Chmelitschek; *Avenula schelliana* (Hack.) W. Sauer & Cmel.; *Helictotrichon hookeri* subsp. *schellianum* (Hack.) Tzvelev; *Helictotrichon schellianum* (Hack.) Henrard, nom. illeg., non *Helictotrichon schellianum* (Hack.) Kitag.)

China, Mongolia, Russia. See *Act. Hort. Petrop.* 9: 342. 1884, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. VIIIe Série: Classe Physico-Mathématique* 471. 1898 and *Candollea* 4: 443. 1931, *Flora URSS* 2: 274, pl. 21, 2a. 1934, *Report of the Institute of Scientific Research, Manchoukuo* 3(1): 78. 1939, *Blumea* 3(3): 429. 1940, *Acta Horti Botanici Pragensis* 1962: 85. 1962, *Folia Geobotanica et Phytotaxonomica* 11(3): 295. 1976, *Mitteilungen der Botanischen Staatssammlung München* 12: 582. 1976, *Fl. Sibir. (Poaceae)* 2: 69. 1990.

H. sedenense (Clarion ex DC.) Holub (*Arrhenatherum sedenense* (Clar. ex Lam & DC.) Breistr.; *Avena montana* Vill.; *Avena montana* Vill. var. *montana*; *Avena montana* var. *sedensis* (Clar. ex Lam & DC.) Asch. & Graebn.; *Avena sedenensis* DC.; *Avena sedenensis* Clar. ex Lam & DC.; *Avena sedenensis* Clar. ex DC.; *Helictotrichon montanum* (Vill.) Pilg.; *Helictotrichon montanum* (Vill.) Henrard; *Helictotrichon sedenense* (DC.) Holub; *Helictotrichon sedenense* (Clar. ex Lam & DC.) Holub)

Europe, Spain. See *Hist. Pl. Dauphiné* 1: 286. 1786, *Fl. Franç.* edition 3, 3: 719. 1805, *Synopsis der mitteleuropäischen Flora* 2: 249. 1899 and *Blumea* 3(3): 430. 1940, *Bull. Soc. Bot. France. Sess. Extraord.*, 89: 65. 1966, *Folia Geobot. Phytotax.* 5: 436. 1970, *Anales del Jardín Botánico de Madrid* 41(1): 112. 1984, *Flora Manual dels Països Catalans* 1213. Barcelona 1990, *Plant Systematics and Evolution* 203: 181-281. 1997.

H. sempervirens (Vill.) Pilger (*Avena fallax* Roem. & Schult.; *Avena notarisii* Parl.; *Avena sempervirens* Vill.; *Avena sempervirens* Vill. subsp. *sempervirens*; *Avena sempervirens* Vill. subsp. *notarisii* Nyman; *Avena sempervirens* var. *notarisii* (Parl.) Fiori; *Avenastrum sempervirens* (Vill.) Vierh.; *Avenula sempervirens* (Vill.) Dumort.; *Heuffelia sempervirens* (Vill.) Schur)

Southwest Europe. Stems rigid and erect, tufted, leaf blades rigid and glaucous, loose panicles of flowers, oblong spikelets, ornamental, see *Prospectus de l'Histoire des Plantes de Dauphiné* 17. 1779, *Systema Vegetabilium* 2: 692. 1817, *Flora italiana, ossia descrizione delle piante ...* 1: 279. 1848, *Enumeratio Plantarum Transsilvaniae* 760. 1866, *Bulletin de la Société Botanique de Belgique* 7(1): 68. 1868 and *Flora Analitica d'Italia* 1: 74. 1908, *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1914, *Feddes Repertorium* 45: 7. 1938, *Dissertationes Botanicae* 145: 1-250. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Plant Systematics and Evolution* 203: 181-281. 1997.

H. suffusum (Hitchc.) Ohwi (*Avena suffusca* Hitchc.)

America, China. See *Proceedings of the Biological Society of Washington* 43: 95. 1930, *Journal of Japanese Botany* 17(8): 440. 1941, *Pl. Asiae Centr.* 4: 103. 1968.

H. sulcatum (J. Gay ex Delastre) Henrard (*Avena sulcata* J. Gay ex Delastre; *Avena sulcata* Gay ex Boissier; *Avenastrum sulcatum* (Gay ex Boissier) Vierh.; *Avenastrum sulcatum* (J. Gay ex Delastre) C.E. Hubb. & Sandwith, nom. illeg., non *Avenastrum sulcatum* (Gay ex Boissier) Vierh.; *Avenochloa sulcata* (J. Gay ex Delastre) Holub; *Avenochloa sulcata* (Gay ex Boissier) Holub; *Avenula marginata* (Lowe) Holub subsp. *sulcata* (J. Gay ex Delastre) Franco; *Avenula sulcata* (Gay ex Boissier) Dumort.)

Europe, France. Useful for erosion control, see *Elenchus Plantarum Novarum* 88. 1838, *Flore Analytique et*

Descriptive du Département de la Vienne 477. 1842, *Voyage botanique dans le midi de l'Espagne* 2: 656. Paris 1844, *Bulletin de la Société Botanique de Belgique* 7(1): 68. 1868, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 41. 1897 and *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1913, *Bulletin of Miscellaneous Information Kew* 1928(4): 155. 1928, *Blumea* 3(3): 430. 1940, *Acta Horti Botanici Pragenses* 1962: 85. 1962.

H. tianschanicum (Roshev.) Henrard (*Avena tianschanica* (Roshevitz) Vorosch.; *Avenastrum tianschanicum* Roshev.) Russia. See *Blumea* 3(3): 429. 1940.

H. tibesticum (de Mire & Quezel) Holub

Africa. See *Acta Universitatis Carolinae, Biologica* 1962: 155. 1962.

H. tibeticum (Roshev.) Holub (*Avena mongolica* subsp. *tibetica* (Roshev.) St.-Yves; *Avena tibetica* Roshev.; *Helictotrichon tibeticum* (Roshev.) Keng f.)

China. See *Candollea* 4: 398-399. 1931, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 200. 1957, *Preslia* 31(1): 50. 1959, *Pl. Asiae Centr.* 4: 103. 1968, *Acta Biologica Plateau Sinica* 2: 16. 1984.

H. turcomanicum Czopanov

Eurasia. See *Novosti Sist. Vyss. Rast.* 6: 23. 1970.

H. turgidulum (Stapf) Schweick. (*Arrhenatherum turgidulum* (Stapf) Potzta; *Avena turgidula* Stapf; *Avenastrum turgidulum* Stapf; *Avenastrum turgidulum* (Stapf) Stapf)

South Africa. Perennial, very variable, tufted, leaf blade flattened, ligule a short fringed membrane, dense contracted panicle, spikelets with a bent awn, glumes lanceolate, glabrous lemmas smooth or papillate, palatable, usually in wet areas and near streams, in moist places, along roadsides, on mountain slopes, vleis, on slopes in higher rainfall regions, disturbed areas, see *Bulletin of Miscellaneous Information Kew* 1897: 293. 1897, *Flora Capensis* 7: 474. 1899 and *Bothalia* 3: 196. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 328. 1951, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *South African Journal of Botany* 61: 60-65. 1995, *Bothalia* 26(1): 53-61. 1996.

in English: small cat grass, small oat grass

in South Africa: kleinhawergras, hawergras

H. umbrosum (Hochst. ex Steud.) C.E. Hubb. (*Arrhenatherum umbrosum* (Hochst. ex Steud.) Potzta; *Avenastrum umbrosum* (Hochst. ex Steud.) Pilg.; *Trisetum biflorum* Hochst.; *Trisetum umbrosum* Hochst. ex Steud.)

East Africa, Ethiopia, Sudan. Perennial, erect or suberect, geniculately ascending, slender, tufted, panicle linear, spikelets narrowly oblong 2-4-flowered, florets exserted, rachilla internodes hispid, glumes acute narrowly lanceolate

to narrowly oblong, awn geniculate with a twisted column, upland grassland, see *Essai d'une Nouvelle Agrostographie* 55, 152, 153. 1812, *Flora* 38: 275. 1852, *Synopsis Plantarum Glumacearum* 1: 227. 1854 and *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 671. 1914, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 521. 1926, *Kew Bulletin* 1936(5): 334. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 328. 1951.

H. versicolor (Vill.) Schult. & Schult.f. (*Avena versicolor* Vill.; *Avena versicolor* var. *villarsiana* (Vill.) St.-Yves; *Avenastrum versicolor* (Vill.) Fritsch; *Avenochloa versicolor* (Vill.) Holub; *Avenula versicolor* (Vill.) M. Laínz; *Helictotrichon versicolor* (Vill.) Pilg.)

Europe. Useful for erosion control, see *Histoire des Plantes de Dauphiné* 142, t. 4. 1787, *Mant.* 3: 526. 1827 and *Candollea* 4: 467. 1931, *Feddes Repertorium* 45: 7. 1938, *Acta Horti Botanici Pragensis* 1962: 85. 1962, *Bot. Zhurn.* 72: 1069-1074. 1987, *Dissertationes Botanicae* 145: 1-250. 1989, *Bibliotheca Botanica* 144: 158. 1995, *Plant Systematics and Evolution* 203: 181-281. 1997.

H. virescens (Nees ex Steud.) Henrard (*Arrhenatherum virescens* (Nees ex Steud.) Potztl; *Avena aspera* Munro ex Thwaites; *Avena aspera* var. *roylei* Hook.f.; *Avena roylei* (Hook.f.) Keng; *Avenastrum asperum* (Munro ex Thwaites) Vierh.; *Avenastrum asperum* var. *roylei* (Hook.f.) Hand.-Mazz.; *Helictotrichon asperum* (Munro ex Thwaites) Bor; *Helictotrichon roylei* (Hook.f.) Keng; *Trisetum variabile* UNRANKED. *virescens* Macloskie, nom. illeg., non *Trisetum variabile* var. *virescens* E. Desv.; *Trisetum virescens* Nees ex Steud.) (after the British (b. in India) botanist John Forbes Royle, 1800-1858 (d. Middx), traveler, physician, M.D. München 1833, plant collector, 1833 Fellow of the Linnean Society, 1837 Fellow of the Royal Society, in Bengal (surgeon, East India Company), professor of materia medica, Curator Saharanpur Botanical Garden, his works include *The Cultivation of Cotton in India*. [London 1840], *Review of the Measures Which Have Been Adopted in India for the Improved Culture in Cotton*. London 1857, *An Essay on the Antiquity of Hindoo Medicine*. London 1837, *Medical Education*. London 1845 and *A Manual of Materia Medica and Therapeutics*. London 1847; see M. Archer, *Natural History Drawings in the India Office Library*. London 1962; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; J.H. Barnhart, *Biographical notes upon botanists*. 3: 187. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Mea Allan, *The Hookers of Kew*. London 1967; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 654. Philadelphia 1964; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. London 1914; H.R. Fletcher, *Story*

of the Royal Horticultural Society, 1804-1968. Oxford 1969; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 237. Palermo 1988; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 598. 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. 1918)

China, India, Nepal. Lemmas smooth and shining, see *Synopsis Plantarum Glumacearum* 1: 226. 1854, *Enumeratio Plantarum Zeylanicae* 372. 1864, *The Flora of British India* 7: 277. 1896 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2]*, *Botany* 8(1,5,1): 206. 1904, *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 672. 1914, *Bulletin of the Fan Memorial Institute of Biology* 7: 36. 1936, *Symbolae Sinicae* 7(5): 1293. 1936, *Indian Forest Records. Botany* 68. 1938, *Blumea* 3(3): 425. 1940, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 200. 1957, *Willdenowia* 4: 400. 1968, *Blumea* 28(2): 338, 340. 1983, *Blumea* 41: 410. 1996.

Hellera Döll = *Olyra* L., *Raddia* Bertol.

Bambusoideae, Olyreae, Olyrinae, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Opuscoli Scientifici* 3: 410. 1819, *Flora Brasiliensis* 2(2): 314. 1877 and *Contributions from the United States National Herbarium* 39: 82-88, 107-108. 2000.

Helleria E. Fourn. = *Festuca* L., *Helleria* Nees & C. Mart. (Humiriaceae), *Hellerochloa* Rauschert, *Vantanea* Aubl. (Humiriaceae)

After the Austrian scientist Carl Bartholomäus Heller, 1824-1880 (Vienna), naturalist, traveler, wrote *Reisen in Mexico in den Jahren 1845-1848*. Leipzig 1853, *Darwin und Darwinismus*. Wien 1869, *Das dioptrische Mikroskop*. Wien 1856, *Mexico*. Andeutungen über Boden, Klima, ... Pflanzen und Mineralreich. Wien 1864. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 153. 1965; Joseph Mik, *Flora der Umgebung von Olmütz ... mit einem Vorworte von K.B.H. Olmütz* 1860; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Eugène Pierre Nicolas Fournier, 1834-1884, *Mexicanas plantas*. Paris 1872 and 1886 [Associates: Émile Bescherelle, 1828-1903, Joseph Decaisne, 1807-1882, and William Nylander, 1822-1899].

About 2 species, Venezuela, Mexico. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, perennial, tufted, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, 2 subequal glumes 3-nerved, palea present, 2 free and membranous

lodicules, 3 stamens, ovary glabrous, 2 stigmas, often in *Festuca* (*Festuca* subg. *Helleria* E.B. Alexeev), type *Helleria livida* (Kunth) E. Fourn., see *Species Plantarum* 1: 73-74. 1753, *Histoire des plantes de la Guiane Française* 1: 564, 572, pl. 229. 1775, *Nova Acta Physico-medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum Exhibentia Ephemerides sive Observationes Historias et Experimenta* 12: 38, 40, t. 7. 1824, *Systema Vegetabilium, editio decima sexta* 1: 353. 1825, *Adansonia* 10: 370. 1870, *Mexicanas Plantas* 2: 128-129. 1886 and *Contributions from the United States National Herbarium* 35(2): 25-214. 1961, *Phytologia* 37(4): 317-407. 1977, *Novosti Sist. Vyss. Rast.* 17: 51. 1980, *Novitates Systematicae Plantarum Vascularum* 21: 25-58. 1984, *Watsonia* 16: 300. 1987, *Flora Mesoamericana* 6: 223-227. 1994, *Contributions from the United States National Herbarium* 48: 312-368. 2003.

Species

H. fragilis Luces (*Festuca fragilis* (Luces) B. Briceño; *Hellerochloa fragilis* (Luces) Rauschert)

Venezuela. Páramos, see *Journal of the Washington Academy of Sciences* 32(6): 157, f. 1. 1942, *Taxon* 31(3): 561. 1982, *Ernstia* 4(3-4): 78-79, f. 1a. 1994.

H. livida (Kunth) E. Fourn. (*Bromus lividus* Kunth; *Festuca livida* (Kunth) Trin.; *Festuca livida* (Kunth) Willd. ex Spreng.; *Hellerochloa livida* (Kunth) Rauschert; *Schedonorus lividus* (Kunth) Roem. & Schult.)

Mexico. See *Nova Genera et Species Plantarum* 1: 150. 1815 [1816], *Systema Vegetabilium* 2: 707. 1817, *Systema Vegetabilium, editio decima sexta* 1: 353. 1825, *Mexicanas Plantas* 2: 129. 1886 and *Novosti Sist. Vyss. Rast.* 17: 42-53. 1980, *Taxon* 31(3): 561. 1982.

Hellerochloa Rauschert = *Festuca* L.

Pooideae, Poaeae, Loliinae, see *Species Plantarum* 1: 73-74. 1753, *Systema Vegetabilium, editio decima sexta* 1: 353. 1825 and *Novosti Sist. Vyss. Rast.* 17: 51. 1980, *Taxon* 31(3): 561. 1982, *Watsonia* 16: 300. 1987, *Flora Mesoamericana* 6: 223-227. 1994, *Contributions from the United States National Herbarium* 48: 312-368, 383. 2003.

Helopus Trin. = *Eriochloa* Kunth

Greek *heleos*, *helos* “a marsh, wet, low ground, meadow” and *pous* “a foot.”

Panicoideae, Paniceae, Melinidinae, type *Helopus pilosus* Trin., see *Nova Genera et Species Plantarum* 1: 94-95, t. 30. 1815 [1816], Carl Bernhard von Trinius, *Fundamenta Agrostographiae*. 103-104, t. 4. Viennae 1820 [1822] and *N. Amer. Fl.* 17: 157. 18 Sep 1912, *Kurtziana* 2: 95-106.

1965, *Contributions from the United States National Herbarium* 46: 233-239, 246-247. 2003.

Hemarthria R. Br. = *Lodicularia* P. Beauv., *Rottboellia* L.f.

Perhaps from *haima* “blood” and *arthron* “a joint,” or from *hemi* “half” and *arthron*, referring to the reddish color in the joints or alluding to the resistance to the breaking or to the rachis not splitting; see Robert Brown (1773-1858), *Prodromus florum Novae Hollandiae*. 207. 1810.

About 10-14 species, tropical and subtropical areas of the Old World, mainly in Southeast Asia. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, tufted or rhizomatous, stoloniferous, rambling, ascending or sometimes decumbent and rooting from nodes, herbaceous, branched above, auricles absent, ligule a very short ciliate membrane, leaves flat and linear-lanceolate or linear, plants bisexual, inflorescence a spike-like spatheate raceme pedunculated and linear, flattened dorsiventral single raceme tough and embraced by a subtending sheath, rachides hollowed, bisexual spikelets, pairs of sessile and pedicellate spikelets, sessile spikelet with a triangular callus and 2-flowered, the lower floret sterile and reduced to a hyaline lemma, upper floret perfect with lemma entire and awnless, pedicellate spikelets similar to the female-fertile spikelets, 2 glumes subequal or more or less equal, lower glume of female-fertile spikelet not pitted, upper glume sometimes awned, lemmas nerveless, first lemma sterile, second lemma fertile, palea present, 2 cuneate lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, brown fruits lanceolate and compressed, cleistogamous or chasmogamous, pedicel fused to the rachis internode, weed species, adapted to disturbed open habitats, frequently in wet or moist sites, shores, in water or near water, grassland, pampas, closely related to *Phacelurus* and *Heteropholis*, type *Hemarthria compressa* (L.f.) R. Br., see *Supplementum Plantarum* 13, 114. 1781 [1782], *Prodromus Florae Novae Hollandiae* 207. 1810, *Essai d'une Nouvelle Agrostographie* 108, 166, 176, t. 21, f. 6. 1812, *Voyage autour du Monde* 2: 64, f. 14. 1829 [1831], *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887, *The Flora of British India* 7: 152. 1896 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 198. 1921, *Botaniska Notiser* 119(2): 209-212. 1966, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 447-508. 1969, *Phytologia* 37(4): 317-407. 1977, *Flora Mesoamericana* 6: 396. 1994, *Blumea* 45: 443-475. 2000 [Revision of *Hemarthria* (Gramineae-Andropogoneae-Rottboelliinae)], *Conservation Biology* 15(3): 675-684. June 2001, *Journal of Agronomy and Crop Science* 187(1): 1-9. July 2001, *Contributions from the United States National Herbarium* 46: 247-248, 284, 546-548. 2003, *Ecological Management and Restoration* 4(3): 170-179. Dec 2003.

Species

H. altissima (Poir.) Stapf & C.E. Hubb. (*Andropogon altissimus* (Poir.) Raspail; *Andropogon fasciculatus* (Lam.) Raspail, nom. illeg., non *Andropogon fasciculatus* L.; *Hemarthria capensis* Trin.; *Hemarthria caudiculata* Steud.; *Hemarthria compressa* (L.f.) R. Br.; *Hemarthria compressa* subsp. *altissima* (Poir.) Maire & Weiler; *Hemarthria compressa* var. *fasciculata* (Lam.) Keng; *Hemarthria fasciculata* (Lam.) Kunth; *Hemarthria fasciculata* subsp. *altissima* (Poir.) Maire ex Zangh.; *Hemarthria fasciculata* var. *gracilis* Balansa; *Hemarthria guyanensis* Steud.; *Hemarthria peruviana* Steud.; *Lepturus fasciculatus* (Lam.) Trin.; *Lodicularia capensis* (Trin.) Nees; *Lodicularia fasciculata* (Lam.) P. Beauv.; *Lodicularia peruviana* Nees ex Meyen; *Manisuris altissima* (Poir.) A.S. Hitchc.; *Manisuris compressa* (L.f.) Kuntze; *Manisuris fasciculata* (Lam.) Hitchc.; *Rottboellia altissima* Poir.; *Rottboellia compressa* L.f.; *Rottboellia compressa* subvar. *capensis* (Trin.) Roberty; *Rottboellia compressa* subvar. *fasciculata* (Lam.) Roberty; *Rottboellia compressa* subvar. *gracilis* (Balansa) Roberty; *Rottboellia compressa* var. *fasciculata* (Lam.) Hack.; *Rottboellia fasciculata* Lam.; *Rottboellia heterochroa* Gand.; *Rottboellia spathacea* Ten.)

Tropical Africa, Southeast Asia, India. Perennial with a distinctive rust-red color, aquatic, emergent, leafy, straggling, mat-forming, prostrate habit, rhizomatous with a creeping and branched rhizome, stoloniferous, culms compressed and usually decumbent and rooting from the lower nodes, ligule a ring of soft hairs, leaves smooth and usually folded, inflorescence a solitary cylindrical raceme with reduced spikelets, several racemes from each node, sessile spikelet elliptic-oblong, pedicelled spikelet narrowly lanceolate, lower glume of sessile spikelet obtuse with membranous wings, rhizomes eaten raw by children, stems used for making screens, weed species, tolerates overgrazing, animal food, pasture, excellent forage grass, highly palatable, provides grazing and fodder, readily grazed by all stock, if not overgrazed will compete with most weedy grasses, spreads rapidly by creeping rhizomes and rooted culms, hardy with a good cold tolerance, prefers moist humid soils, requires a high rainfall, can withstand seasonal flooding and seasonal droughts, it does not tolerate long droughts, adapted to the wetter flatwood sites, disturbed places, depressions, standing water, ponds, flooded areas, in rivers and on riverbanks, sandy soils, along vleis and stream edges, swamps and lakes, marshy areas, see *Supplementum Plantarum* 114. 1781 [1782], *Voyage en Barbarie* 2: 105. Paris 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 204. 1791, *Prodromus Florae Novae Hollandiae* 207. 1810, *Essai d'une Nouvelle Agrostographie* 108, 166, 176, t. 21, f. 6. 1812, *Fundamenta Agrostographiae* 123. 1820, *Flora Napolitana Prodr.* 11. 1823 [1826], *Annales des Sciences Naturelles (Paris)* 5: 307, 459, t. 9, f. 3. 1825, *Révision des Graminées* 1: 153.

1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(1): 248. 1832, Franz Julius Ferdinand Meyen (1804-1840), *Reise um die Erde* 2: 71. 1834, *Nomenclator Botanicus. Editio secunda* 1: 748. 1840, *Florae Africae Australioris Illustrationes Monographicae I. Gramineae*. 128. 1841, *Synopsis Plantarum Glumacearum* 1: 359. 1854, *Bulletin de la Société Botanique de France* 21: 11. 1874, *Monographiae Phanerogamarum* 6: 286. 1889, *Revisio Generum Plantarum* 2: 779. 1891 and *American Journal of Botany* 2: 299. 1915, *Bulletin de la Société Botanique de France* 66(7): 302. 1919 [1920], *Bulletin of Miscellaneous Information Kew* 1934(3): 109. 1934, *Journal of the Washington Academy of Sciences* 24(7): 292. 1934, *Contr. Biol. Lab. Chin. Assoc. Advancem. Sci.*, Sect. Bot., 10: 202. 1936, *Flore de l'Afrique du Nord* 1: 261. 1952, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 240. 1957, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 60. 1960, *Flora Tsinlingensis* 1(1): 188. 1976, *Hickenia* 1: 73-78. 1977, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Bothalia* 18: 119-122. 1988, *Blumea* 45(2): 452, 454. 2000.

in English: Batavian quick grass, African joint grass, snake grass, horse grass, couch grass, red vlei grass, halt grass, limpo grass, Floralta limpo grass, red swamp grass, red quick, swamp couch

in Spanish: gramilla canita, pasto clavel

in Nigeria: burgu, damarage, manu

in southern Africa: Bataviese kweek, perdekweek, perdegras, rooikweek, rooivleigras; marotlo-a-mafubelu, marotlo a mafubedu (Sotho, this common name also for *Andropogon appendiculatus* Nees)

H. compressa (L.f.) R. Br. (*Hemarthria coromandelina* Steud.; *Hemarthria glabra* (Roxb.) Blatt. & McCann; *Hemarthria laxa* Nees ex Steud.; *Manisuris compressa* (L.f.) Kuntze; *Rottboellia compressa* L.f.; *Rottboellia compressa* subvar. *laxa* (Nees ex Steud.) Roberty; *Rottboellia compressa* var. *genuina* Hack.; *Rottboellia glabra* Roxb.)

Asia temperate and tropical, China, Japan, India, Indonesia. Perennial, smooth, creeping, climbing, decumbent and rooting from the lower nodes, rhizomatous, leaf blades linear, sessile spikelet narrowly elliptic-oblong, lower glume of sessile spikelet oblong, upper glume acute, moist pasture grass, weed species, swampy soils, see *Supplementum Plantarum* 114. 1781 [1782], *Voyage en Barbarie* 2: 105. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 204. 1791, *Prodromus Florae Novae Hollandiae* 207. 1810, *Hortus Bengalensis, or a Catalogue ...* 8. 1814, *Flora Indica; or Descriptions ...* 1: 353. 1820, *Synopsis Plantarum Glumacearum* 1: 358. 1854, *Monographiae Phanerogamarum* 6: 286, 288. 1889, *Revisio Generum Plantarum*

2: 779. 1891 and *Handb. Fl. Ceylon* 5: 206. 1900, *Journal of the Bombay Natural History Society* 32: 27. 1927, *Handb. Fl. Ceylon* 6: 330. 1931, *Contr. Biol. Lab. Chin. Assoc. Advancem. Sci.*, Sect. Bot., 10: 202. 1936, *Flore de l'Afrique du Nord* 1: 261. 1952, *Grasses of Ceylon* 178. 1956, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 240. 1957, *Grasses of Burma* ... 161. 1960, *Boissiera*. 9: 60. 1960, *Manual of the Korean Grasses* 77. 1966, *Flora Tsinlingensis* 1(1): 188. 1976, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Blumea* 45(2): 454, 469. 2000.

in English: whip grass

in India: baika, biksa, buksha, panie shir, pansheru, shervu panuku, sunku dabbe hullu

in Japan: koba-no-ushi-no-shippei (= small-leaved *Hemarthria*)

H. debilis Bor

Asia, Thailand. Indeterminate species, biaristate, see *Dansk Botanisk Arkiv* 23: 162. 1965, *Blumea* 45(2): 443-475. 2000.

H. longiflora (Hook.f.) A. Camus (*Hemarthria longiflora* var. *tonkinensis* (A. Camus) A. Camus; *Rottboellia longiflora* Hook.f.; *Rottboellia tonkinensis* A. Camus)

Southeast Asia, India, Vietnam, China. Elegant, leaf sheaths smooth and purplish, leaf blades purplish and folded, ligule a rim of hairs, purplish spikes, jointed rachis, spikelets stalked or sessile, gaping glumes, lemmas and paleas hyaline and ovate, see *The Flora of British India* 7: 154. 1896 and *Bulletin du Muséum National d'Histoire Naturelle* 25: 369. 1919, *Flore Générale de l'Indo-Chine* 7: 379-380. 1922, *Blumea* 45(2): 459. 2000.

H. natans Stapf (*Rottboellia compressa* subvar. *natans* (Stapf) Roberty)

Malawi. Perennial, procumbent, flattened, stoloniferous, rooting at the lower nodes, racemes in fascicles in the upper leaf axils, sessile spikelet elliptic-oblong, lower glume of sessile spikelet acute to acuminate, upper glume acute to acuminate, pedicelled spikelet narrowly lanceolate acuminate, wet ground, riverbanks and streams, see *Supplementum Plantarum* 114. 1781 [1782] and *Flora of Tropical Africa* 9: 56. 1917, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 60. 1960.

H. pratensis (Balansa) Clayton (*Coelorachis pratensis* (Balansa) A. Camus; *Rottboellia pratensis* Balansa)

Asia. See *Journal de Botanique (Morot)* 4: 110. 1890 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 198. 1921, *Kew Bulletin* 24(2): 314. 1970.

H. protensa Nees ex Steudel (*Hemarthria humilis* (Keng) Hackel; *Hemarthria vaginata* Büse; *Manisuris protensa* (Nees ex Steudel) Hack.; *Manisuris protensa* (Nees ex

Steud.) Hitchc.; *Rottboellia compressa* subvar. *protensa* (Nees ex Steud.) Roberty; *Rottboellia protensa* Nees ex Steudel; *Rottboellia protensa* (Nees ex Steud.) Hack.; *Rottboellia vaginata* (Büse) Backer) (from the Latin *protendo, di, sum, tum* "to stretch forth, to stretch out, to extend")

India, Nepal, China, Bangladesh, Kaliajuri Area. Lower glume of sessile spikelet oblong-lanceolate, upper glume of the pedicellate spikelet extended into a long minutely hispid apiculus, fodder grass, swamp forest patches, rot resistant, used in the construction of homestead erosion protection works, growing in marshy sites, swamps, remains alive under the water during the monsoons, see *Synopsis Plantarum Glumacearum* 1: 359. 1854, *Plantae Junghuhnianae* 3: 354. 1854, *Monographiae Phanerogamarum* 6: 289. 1889 and *De Nuttige Planten van Nederlandsch- Indië* 1: 176. 1927, *Sunyatsenia* 1(2-3): 128-129. 1933, *Brittonia* 2(2): 127. 1936, *Boissiera*. 6: 60. 1960, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in India: chailla, challiya, dudh chaulia

H. stolonifera Bor

Asia, Thailand. Indeterminate species, see *Dansk Botanisk Arkiv* 23: 163. 1965.

H. uncinata R. Br. (*Hemarthria compressa* sensu Benth., non (L.f.) R. Br.; *Hemarthria foliata* Steud.; *Rottboellia compressa* L.f.; *Rottboellia compressa* subvar. *australis* (Hack.) Roberty; *Rottboellia compressa* subvar. *uncinata* (R. Br.) Roberty; *Rottboellia compressa* var. *australis* Hack.; *Rottboellia compressa* var. *uncinata* (R. Br.) Hack.; *Rottboellia uncinata* (R. Br.) Spreng.; *Rottboellia uncinata* (R. Br.) Sm.)

Queensland, Victoria, South Australia, New South Wales, Western Australia, Tasmania. Perennial, creeping, rigid and branching, culms ascending and rooting at nodes, mat-forming, semiaquatic, solitary and stiff racemes often slightly curved, paired spikelets, glumes coriaceous, anthers purple, low forage value, useful soil binder for erosion control on wet places, sometimes forming dense mats in damp areas, provides habitat for small animals and birds, grows in swamps, wet soils and damp places, resembles *Hainardia cylindrica* (Willd.) Greuter, see *Supplementum Plantarum* 114. 1781 [1782], *Prodromus Florae Novae Hollandiae* 207. 1810, *The Cyclopaedia; or, Universal Dictionary of Arts, ...* 30. 1815, *Systema Vegetabilium, editio decima sexta* 1: 299. 1824 [1825], *Synopsis Plantarum Glumacearum* 1: 259. 1854, *Monographiae Phanerogamarum* 6: 288. 1889 and *Bibliotheca Botanica* 85(2): 261-262, f. 62. 1915, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 6: 60-61. 1960, *Contributions from the New South Wales National Herbarium* 3(2): 83. 1961, *Blumea* 45(2): 465. 2000.

in English: mat grass

H. uncinata R. Br. var. *spathacea* (Domin) Vickery (*Rottboellia compressa* var. *spathacea* Domin)

Queensland, New South Wales. Expanded leaf sheaths, occurs in swamps and creeks, see *Supplementum Plantarum* 114. 1781 [1782], *Prodromus Florae Novae Hollandiae* 207. 1810 and *Bibliotheca Botanica* 85(2): 261-262, f. 62. 1915, *Contributions from the New South Wales National Herbarium* 3(2): 83. 1961.

H. uncinata R. Br. var. *uncinata* (*Hemarthria uncinata* R. Br.)

Queensland, Victoria, South Australia, New South Wales, Western Australia, Tasmania. Leaf sheaths encircling the stem, grows in wet places, see *Prodromus Florae Novae Hollandiae* 207. 1810, *The Cyclopaedia; or, Universal Dictionary of Arts, ...* 30. 1815, *Systema Vegetabilium, editio decima sexta* 1: 299. 1824 [1825], *Monographiae Phanerogamarum* 6: 288. 1889 and *Boissiera*. 6: 60-61. 1960.

Hemibromus Steud. = *Brachypodium* P. Beauv., *Glyceria* R. Br.

From the Greek *hemi* “half” and the genus *Bromus*.

Pooideae, Meliceae, type *Hemibromus japonicus* Steud., see *Prodromus Florae Novae Hollandiae* 179. 1810, *Essai d'une Nouvelle Agrostographie* 100, 101, 155, t. 19, f. 35. 1812, *A Flora of the Northern and Middle Sections of the United States* 1: 104. 1823, *Synopsis Plantarum Glumacearum* 1: 259, 317. 1854, *Annales Museum Botanicum Lugduno-Batavi* 2: 281. 1866 and *Contr. U.S. Natl. Herb.* 24: 196. 1925, *Canadian Journal of Botany* 42(7): 868, pl. 5, f. 4c, 7. 1964, *Flora Mesoamericana* 6: 231-232, 246. 1994, *Contributions from the United States National Herbarium* 48: 143-145, 371-379. 2003.

Hemigymnia Stapf = *Hemigymnia* Griff. (Boraginaceae), *Ottochloa* Dandy

From the Greek *hemi* “half” and *gymnos* “naked,” *hemigymnos* “half-naked.”

Paniceae, type *Panicum nodosum* Franch., see *Species Plantarum* 69. 1753, *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 274. 1816, *Calcutta Journal of Natural History and Miscellany of the Arts and Sciences in India* 3: 363. 1842, *Synopsis Plantarum Glumacearum* 1: 55, 59. 1854, *Contributions à la flore du Congo Français* 38. 1896 and *Flora of Tropical Africa* 9: 741-742. 1920, *Flore Générale de l'Indo-Chine* 7: 455. 1922, *The Flora of the Malay Peninsula* 5: 228. 1925, *Mededeelingen van's Rijks-Herbarium* 61: 12. 1930, *Suppl. Fl. Ceylon* 6: 323-324. 1931, *Journal of Botany, British and Foreign* 69(2): 54-55. 1931, *Journal of the Arnold Arboretum* 29: 267. 1948, *Novon* 13(4): 467-468. 2003.

Hemimunroa Parodi = *Hemimunroa* (Parodi) Parodi, *Munroa* Torr.

From the Greek *hemi* “half” and the genus *Munroa* Torr.

Chloridoideae, Cynodonteae, Munroinae, type *Hemimunroa andina* (Phil.) Parodi, see *Pacif. Railr. Rep.* 4(5,4): 158. 1857, *Die Natürlichen Pflanzenfamilien* 2(2): 65. 1887, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 8: 90. 1891 and *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 34: 180. 1934, *Notas del Museo de la Plata, Botánica* 2(11): 4-6, f. 2. 1937, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 52(3-4): 242. 1978, *Darwiniana* 25: 43-57. 1984, *Sida* 14: 531-549. 1991, *American Journal of Botany* 81: 622-629. 1994, *Contributions from the United States National Herbarium* 41: 127, 174. 2001.

Hemisacris Steud. = *Schismus* P. Beauv.

Arundinoideae, Arundineae, or Danthonioideae, Danthonieae, type *Hemisacris gonatodes* Steud., see *Species Plantarum* 1: 73. 1753, *Syn. Pl.* 1: 97. 1805, *Essai d'une nouvelle Agrostographie* 73, 162, 177, t. 15, f. 4. Paris 1812, *Ideen zu einer künftigen Revision der Gattungen der Gräser...* 49. 1813, *Denkschriften der Königlichen Akademie der Wissenschaften zu Muenchen* 4: 253-312. 1813 [1814], *Flora* 12: 490. 1829 and *Contr. U.S. Natl. Herb.* 24: 181. 1925, *Abhandlungen herausgegeben von der Senckenbergischen Naturforschenden Gesellschaft* 532: 1-81. 1974 [Revision der Gattung *Schismus* (Poaceae: Arundinoideae: Danthonieae)], *Contributions from the United States National Herbarium* 46: 248, 558-560. 2003.

Hemisorghum C.E. Hubb. ex Bor = *Hemisorghum* C.E. Hubb.

From the Greek *hemi* “half” and *Sorghum* Moench.

About 2 species, tropical Asia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial, herbaceous, tufted, ligule membranose densely ciliate and very short, leaf blades flat or rolled, plants bisexual, open inflorescence paniculate nondigitate, large terminal panicle, long loose racemes, paired dissimilar spikelets, sessile spikelet 2-flowered and flattened, upper floret perfect, lower floret reduced to a lemma, pedicelled spikelet staminate or sterile or barren, 2 glumes subequal and dissimilar, lower glume coriaceous and keeled, upper lemma awnless or 2-dentate and awned, palea present or suppressed, 2 free and fleshy glabrous lodicules, 3 stamens, ovary glabrous, 2 red stigmas, open habitats, along streams and riverbanks, hillsides, slopes, a link between *Sorghum* and *Saccharum*, type *Hemisorghum mekongense* (A. Camus) C.E. Hubb., see *Grasses*

of Burma, Ceylon, India and Pakistan (excluding Bambuseae) 686-687. 1960, *Kew Bulletin* 27(3): 447-450. 1972.

Species

H. mekongense (A. Camus) C.E. Hubb. (*Sorghum halepense* var. *mekongense* A. Camus; *Sorghum mekongense* (A. Camus) A. Camus)

Asia. See *Bulletin du Muséum d'Histoire Naturelle* 25: 497. 1919, *Flore Générale de l'Indo-Chine* 7: 323, f. 35. 1922, *Grasses of Burma ...* 687-688. 1960.

H. venustum (Thw.) W.D. Clayton (*Andropogon venustus* Thwaites; *Bothriochloa venusta* (Thwaites) A. Camus; *Capillipedium venustum* (Thwaites) Bor; *Vetiveria venusta* (Thwaites) Willis)

Southern India, Sri Lanka. Perennial, tussocky, basal sheaths flabellate, leaf blades rolled when dry, panicle elliptic to narrowly elliptic, spikelets paired, lower glume keeled, upper lemma 2-dentate, pedicelled spikelet sterile and awnless, see *Enumeratio Plantarum Zeylaniae* 136, 367. 1864 and *Rev. Cat. Pl. Ceylon* 110. 1911 [also *Ann. Bot. Gard. Perad.* 5: 88. 1911], *Bulletin du Muséum d'Histoire Naturelle* 25: 497. 1919, *Flore Générale de l'Indo-Chine* 7: 323, f. 35. 1922, *Annales de la Société Linnéenne de Lyon, sér. 2*, 76: 165. 1931, *Handb. Fl. Ceylon* 6: 332. 1931, *Grasses of Ceylon* 184. 1956, *Grasses of Burma ...* 113. 1960, *Kew Bulletin* 27(3): 448. 1972.

Henrardia C.E. Hubb. = *Aegilops* L., *Rottboellia* L.f.

After the Dutch pharmacist Jan Theodor Henrard, 1881-1974, malacologist, agrostologist, from 1921 to 1946 Curator of the Rijksherbarium at Leiden, among his writings are *A Monograph of the Genus Aristida*. Leyden 1929-1932 and *Monograph of the Genus Digitaria*. Leiden 1950. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 158. 1965; Elmer Drew Merrill (1876-1956), "A botanical bibliography of the islands of the Pacific." *Contr. U.S. Natl. Herb.* 30(1): 148. 1947; August Adriaan Pulle (1878-1955), editor, *Flora of Suriname* (Netherlands Guyana). [Gramineae, by J.T. Henrard and Gerda Jane Hillegonda Amshoff, 1913-1985] 1948; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 171. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 220. 1973.

About 2 species, Middle East, southwest and central Asia, temperate and tropical. Pooideae Triticoideae, Triticeae, annual, herbaceous, auricles present or absent, ligule unfringed membrane, plants bisexual, inflorescence spicate,

slender cylindrical raceme, spikelets solitary and distichous, 2 glumes more or less equal to subequal and enclosing the lemma, lower glume 3-7-nerved, upper glume 5-9-nerved, lemma membranous 3-nerved awnless, palea present, 2 free and membranous lodicules ciliate, 3 stamens, ovary hairy, 2 stigmas, open habitats, dry areas, slopes, type *Henrardia persica* (Boiss.) C.E. Hubb., see *Species Plantarum* 1: 85. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Supplementum Plantarum* 13, 114. 1781 [1782], *Flore de France* 3: 601. 1856 and *Blumea, Supplement* 3: 15, 17. 1946, *Willdenowia* 5(3): 472. 1969, *Feddes Repert.* 91: 225-228. 1980, *Taxon* 41: 555-556. 1992, *Nordic Journal of Botany* 13: 481-493. 1993, *Blumea* 31: 281-307. 1993, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 546-548. 2003, *Contributions from the United States National Herbarium* 48: 20-23, 383, 604. 2003, *Weed Biology and Management* 5(2): 62-68. June 2005.

Species

H. persica (Boiss.) C.E. Hubb. (*Henrardia glabriglumis* (Nevski) Tzvelev; *Henrardia persica* subsp. *glabriglumis* (Nevski) Czopanov; *Henrardia persica* var. *erecta* (Griseb.) C.E. Hubb.; *Henrardia persica* var. *glaberrima* (Hauskn. ex Bornm.) C.E. Hubb.; *Lepturus erectus* (Griseb.) Szov.; *Lepturus erectus* var. *glabratus* G. Westb. ex Roshev.; *Lepturus hirtulus* Regel; *Lepturus incurvatus* (L.) Trin.; *Lepturus incurvatus* var. *erectus* Griseb.; *Lepturus persicus* Boiss.; *Lepturus persicus* var. *armeniacus* Hack. ex Grossh.; *Lepturus persicus* var. *genuinus* Grossh.; *Lepturus persicus* var. *glaberrimus* Hauskn. ex Bornm.; *Lepturus persicus* var. *glabratus* (G. Westb. ex Roshev.) Grossh.; *Lepturus pubescens* (Bertol.) Boiss.; *Lepturus pubescens* var. *glaberrimus* (Hauskn. ex Bornm.) Bornm.; *Lepturus pubescens* var. *persicus* (Boiss.) Bornm.; *Pholiurus glabriglumis* Nevski; *Pholiurus persicus* (Boiss.) A. Camus)

Iran, Pakistan. See *Fundamenta Agrostographiae* 123, t. 8. 1820, *Flora Rossica* 4(13): 325. 1852, *Diagnoses plantarum orientalium novarum* ser. 1, 1(13): 71. Genève, Leipzig, Paris, Como 1854, *Flora Orientalis* 5: 685. 1884 and *Mittheilungen der Thüringischen Botanischen Vereins* 20: 51. 1905, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 60: 191. 1910, *Consp. Gram. Turkest.* 81. 1923, *Annales de la Société Linnéenne de Lyon sér. 2* 69: 90. 1923, *Fl. URSS* 2: 589. 1934, *Flora Kavkaza* 1: 324. 1939, *Blumea, Supplement* 3: 17-19. 1946, *Feddes Repert.* 95: 507. 1984, *Nordic Journal of Botany* 13: 489. 1993.

H. pubescens (Bertol.) C.E. Hubb. (*Henrardia hirtella* Nikiforova; *Henrardia pubescens* subsp. *hirtella* (Nikiforova) Á. Löve; *Lepturus pubescens* (Bertol.) Boiss.; *Pholiurus pubescens* (Bertol.) A. Camus; *Rottboellia pubescens* Bertol.)

Middle East. See *Prodromus Florae Novae Hollandiae* 207. 1810, *Fundamenta Agrostographiae* 131. 1820, *Miscellanea Botanica* 1: 10, t. 1, f. 3-4. 1842, *Flora Orientalis* 5: 685. 1884 and *Annales de la Société Linnéenne de Lyon*, sér. 2, 69: 90. 1923, *Blumea*, Supplement 3: 19. 1946, *Taxon* 16: 68. 1967, *Feddes Repertorium* 95(7-8): 508. 1984.

Heptasetta Koidz. = *Agrostis* L., *Senisetum* Honda

From the Greek *hepta*- “seven” and Latin *saeta* (*seta*), *ae* “a bristle, hair.”

Pooideae, Poeae, Agrostidinae, see *Species Plantarum* 1: 61-63. 1753 and *Botanical Magazine* (Tokyo) 46: 371. 1932, *Botanical Magazine* (Tokyo) 47: 146. 1933, *Fl. Fenn.* 5: 29. 1971, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89, 383, 610. 2003.

Hesperochloa (Piper) Rydb. = *Festuca* L., *Leucopoa* Griseb.

From the Greek *hesperos* “western, at evening” and *chloe*, *chloa* “grass.”

Pooideae, Poeae, Loliinae, type *Hesperochloa kingii* (S. Watson) Rydb., see *Species Plantarum* 1: 73-74. 1753, C.F. von Ledebour, *Flora Rossica* 4(13): 383, 388. 1852 [Grisebach is the author of the Gramineae], *Bulletin Colorado State University Experiment Station* 12: 36. 1890 and *Contributions from the United States National Herbarium* 10: 10. 1906, *Feddes Repertorium* 2(18): 70-71. 1906, *Bulletin of the Torrey Botanical Club* 39(3): 106. 1912, *Ill. Fl. U.S. Canada* edition 2, 1: 269. 1913, *Novosti Sistematiki Vysshchikh Rastenii* 17: 42-53. 1980, *American Journal of Botany* 82(10): 1287-1299. 1995, *Grasses: Systematics and Evolution* 61-74. 2000, *Contributions from the United States National Herbarium* 48: 312-368, 422. 2003.

Hesperostipa (M.K. Elias) Barkworth = *Sparteum* P. Beauv.

From the Greek *hespera* “evening, the west,” *hesperos* “western, at evening” plus *Stipa*.

About 4-5 species, northern America. Stipoideae, Stipeae, or Pooideae, Stipeae, Stipinae, perennial, densely caespitose, herbaceous, branched or unbranched, erect or ascending, auricles absent, ligules membranous, plants bisexual, cleistogamous or chasmogamous, panicles open or contracted, spikelets solitary, 2 subequal glumes acuminate and long-awned, palea and lodicules present, 3 stamens, ovary glabrous, 2 stigmas, weed species, sharp awn may injure grazing animals, open habitats, on seasonally

dry grasslands, sometimes included in *Stipa* L. (*Stipa* sect. *Hesperostipa* M.K. Elias), type *Hesperostipa comata* (Trin. & Rupr.) Barkworth, see *Species Plantarum* 1: 78. 1753, *Essai d'une Nouvelle Agrostographie* 178. 1812, *Species Graminum Stipaceorum* 75. 1842 and L. Abrams, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Special Paper(s): Geological Society of America* 41: 67. 1942, A.S. Hitchcock, *Manual of the Grasses of the United States (edition 2, revised by A. Chase)* 1951, C.L. Hitchcock, A. Cronquist, M. Ownbey and J.W. Thompson, “Vascular Cryptogams, Gymnosperms, and Monocotyledons.” *Vascular Plants of the Pacific Northwest* 1: 1-914. 1969, D.S. Correll and M.C. Johnston, *Manual of the Vascular Plants of Texas* 1970, S.L. Welsh, *Anderson's Flora of Alaska and Adjacent Parts of Canada* 1974, A. Cronquist, A.H. Holmgren, N.H. Holmgren and J.L. Reveal, “Vascular Plants of the Intermountain West, U.S.A.” *Intermountain Flora* 6: 1-584. 1977, H.J. Scoggan, *The Flora of Canada* 2: 93-545. 1978 [1979], E.H. Moss, *Flora of Alberta* (edition 2) 1983, *Taxon* 39(4): 597-614. 1990, *Phytologia* 74(1): 15-16. 1993, W.J. Cody, *Flora of the Yukon Territory* 1996, Clair L. Kucera, *The Grasses of Missouri* University of Missouri Press, Columbia 1998, *Contributions from the United States National Herbarium* 48: 383-384, 617-650. 2003, *Am. J. Bot.* 91: 2004-2012. 2004, *Conservation Biology* 17(2): 420-432. Apr 2003, *Conservation Biology* 17(5): 1425-1434. Oct 2003, *Journal of Applied Ecology* 41(6): 1058-1064. Dec 2004.

Species

H. comata (Trin. & Rupr.) Barkworth (*Stipa comata* Trin. & Rupr.; *Stipa comata* subsp. *intonsa* Piper; *Stipa comata* var. *suksdorfii* H. St. John)

Northern America, U.S., Canada, Saskatchewan, Columbia Basin of British Columbia. Perennial bunchgrass, tufted, erect, leafy, fibrous roots, shallow rooted to medium rooted, basal leaves, sheaths open, ligule membranous, blade usually inrolled, no auricles, narrow flower head with long slender awns, 1-flowered spikelets, glumes almost equal and persistent, lemmas hardened and hairy, flexible and curved awns twisted many times from the tip of the lemma, forage, moderately palatable to wildlife and domestic stock, sharp awn may injure grazing animals, a grassland species, useful for stabilizing eroded or degraded sites, found on dry sandy ground, open valley bottoms, see *Species Graminum Stipaceorum* 75. 1842 and *Contributions from the United States National Herbarium* 11: 109. 1906, *Contr. U.S. Natl. Herb.* 24(7): 232. 1925, *Fl. S.-E. Washington* 61. 1937, *Phytologia* 74(1): 16. 1993.

in English: needle-and-thread grass, needle-and-thread, needlegrass

H. comata (Trin. & Rupr.) Barkworth subsp. ***comata*** (*Stipa comata* Trin. & Rupr.; *Stipa comata* subsp. *intonsa* Piper; *Stipa comata* subsp. *comata*; *Stipa comata* var. *comata*)

Northern America, U.S., Canada. Perennial, see *Species Graminum Stipaceorum* 75. 1842 and *Contributions from the United States National Herbarium* 11: 109. 1906, *Phytologia* 74(1): 16. 1993.

in English: needle-and-thread

H. comata (Trin. & Rupr.) Barkworth subsp. *intermedia* (Scribn. & Tweedy) Barkworth (*Stipa comata* var. *falcata* Boivin p.p.; *Stipa comata* var. *intermedia* Scribn. & Tweedy; *Stipa comata* var. *suksdorfii* St. John; *Stipa spartea* var. *intermedia* (Scribn. & Tweedy) B. Boivin; *Stipa spartea* var. *tweedyi* (Scribn.) M.E. Jones; *Stipa tweedyi* Scribn.)

Northern America, U.S., Canada. Perennial, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 82. 1830, *Species Graminum Stipaceorum* 75. 1842, *Botanical Gazette* 11: 171. 1886, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 47. 1898 and *Contributions to Western Botany* 14: 11. 1912, *Fl. S.-E. Washington* 61. 1937, *Phytologia* 43(1): 106. 1979, *Phytologia* 74(1): 16. 1993.

in English: intermediate needle-and-thread

H. curtiseta (Hitchc.) Barkworth (*Stipa curtiseta* (Hitchc.) Barkworth; *Stipa spartea* subsp. *curtiseta* Hitchc.; *Stipa spartea* var. *curtiseta* Hitchc.)

U.S., Canada. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 82. 1830 and *Contributions from the United States National Herbarium* 24(7): 230. 1925, *Canadian Journal of Botany* 56(6): 624. 1978, *Phytologia* 74(1): 16. 1993.

H. neomexicana (Thurb.) Barkworth (*Stipa neomexicana* (Thurb.) Scribn.; *Stipa pennata* L.; *Stipa pennata* var. *neomexicana* Thurb.)

Northern America, Mexico, U.S. Perennial, forage, see *Species Plantarum* 1: 78. 1753, *Manual of the Botany ... of the Rocky Mountain Region* . . 408. 1885, *American Grasses - II* 132, f. 428. 1899 and *Contr. U.S. Natl. Herb.* 24(7): 220 (1925, *Phytologia* 74(1): 16. 1993.

in English: New Mexico feathergrass, needlegrass

in Mexico: barba blanca, flechilla neomexicana

H. saxicola (Hitchc.) Valdés-Reyna & Barkworth (*Stipa saxicola* Hitchc.)

Northern America, Mexico. See *Contributions from the United States National Herbarium* 24(7): 232, t. 51, f. 1-2. 1925.

H. spartea (Trin.) Barkworth (*Stipa robusta* Nutt. ex Trin.; *Stipa robusta* Nutt. ex Trin. & Rupr.; *Stipa spartea* Trin.; *Stipa spartea* var. *spartea*)

Northern America, Canada, U.S. Perennial bunchgrass, pioneer species, sharp awns may injure grazing livestock, high palatability when plants young and succulent, forage,

upland grassland, dry sand prairies, foothills, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 82. 1830, *Species Graminum Stipaceorum* 69, 75. 1842 and *Contributions to Western Botany* 14: 11. 1912, *Phytologia* 74(1): 16. 1993.

in English: porcupine grass, big needlegrass, short-awn porcupine grass, western porcupine grass

Heterachne Benth.

Greek *heteros* “different, variable” and *achne* “chaff, glume, scale,” the glumes are variable, the lemmas are different; see G. Bentham, in *Hooker's Icones Plantarum*. 13: 40, t. 1250. (Dec) 1877.

About 3 species, northern Australia. Chloridoideae, Eragrostideae, annual, tufted, herbaceous, unbranched, auricles absent, ligule a line of hairs or a ciliate membrane, plants bisexual, inflorescence spicate or paniculate, a contracted panicle spiciform or condensed, cleistogamous or chasmogamous, solitary or paired spikelets oblong to orbicular with zig-zag rachilla, the lower 1-2 florets bisexual, the upper florets sterile and clustered, 2 deciduous glumes subequal or unequal, lower glume 1-nerved, upper glume 1-3-nerved, lemmas strongly flattened with winged keels, palea gibbous with winged keels, 2 fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, damp soil, moist ground, depressions, type *Heterachne gulliveri* Benth., see *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961.

Species

H. abortiva (R. Br.) Hughes (*Eragrostis abortiva* (R. Br.) Steud.; *Poa abortiva* R. Br.)

Tropical Australia. Inflorescence a false spike, spikelets 4-25-flowered, 1-3 bisexual florets, see *Prodromus Florae Novae Hollandiae et Insulae van Diemen* ... 181. London 1810, *Synopsis Plantarum Glumacearum* 1: 279. 1854 and *Botanical Exchange Club of the British Isles. Report* 1916 627. 1917.

H. baileyi C.E. Hubb. (named for John Frederick Bailey, 1866-1938, from 1917 to 1932 Director of the Adelaide Botanic Garden, wrote “Introduction of economic plants into Queensland.” *Proc. R. Soc. Queensland*. 22: 77-102. 1910; the British born Australian botanist Frederick Manson Bailey (1827-1915), 1878 F.L.S., was the father of John Frederick B., he was the author of *Catalogue of the Indigenous and Naturalized Plants of Queensland*. Brisbane 1890, *The Queensland Flora*. Brisbane 1899-1905 and *Comprehensive Catalogue of Queensland Plants both Indigenous and Naturalised*. Brisbane [1913]. See D.J. Carr and S.G.M. Carr, eds., *People and Plants in Australia*. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 1: 104, 105. 1965; *Contributions from the Arnold Arboretum of*

Harvard University. 4: 29, t. IV. 1933; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997).

Australia, Queensland. Inflorescence paniculate, spikelets 3-6-flowered, 1-3 bisexual florets, glumes more or less equal, see *Hooker's Icones Plantarum* 33, sub t. 3283. 1935.

H. gulliveri Benth. (*Heterachne gulliveri* C.E. Hubb.)

Tropical Australia. Inflorescence paniculate, spikelets 3-5-flowered, 1-2 bisexual florets, glumes unequal, lemma margins ciliolate, shrubland, woodland, in sandy and swampy areas, see *Hooker's Icones Plantarum* 13: 39, t. 1250. 1877 and *Hooker's Icones Plantarum* 33, sub t. 3283. 1935.

H. gulliveri Benth. var. *gulliveri*

Tropical Australia. Basal leaf sheaths margins glabrous.

H. gulliveri Benth. var. *major* C.E. Hubb.

Tropical Australia. Basal leaf sheaths margins pilose.

Heterantherium Hochst. ex Jaub. & Spach = *Heterantherium* Hochst., *Heterantherium* Jaub. & Spach

From the Greek *heteros* "different, various" and *anthele* "a type of inflorescence, a floret, a little flower," referring to the inflorescence and to fertile and sterile spikelets.

One species, southwest Asia, Turkey, Pakistan. Pooideae, Triticoideae, Triticeae, annual, herbaceous, nodes bristly, narrow leaves, auricles present, ligule an unfringed membrane, plants bisexual, inflorescence spike-like, raceme oblong, spikelets clustered and flattened, hermaphrodite and sterile spikelets on the same plant, fertile spikelets 1-2-flowered, 2 glumes more or less equal to similar, lemma rounded on the back and long-awned, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, open habitats, dry places, slopes, type *Heterantherium piliferum* (Banks & Sol.) Hochst., see *Illustrationes Plantarum Orientalium auctoribus Comite Jaubert et Eduardo Spach ... Parisiis 1842-1857* and *Nordic Journal of Botany* 13: 481-493. 1993, Roberta J. Mason-Gamer, "The β -amylase genes of grasses and a phylogenetic analysis of the Triticeae (Poaceae)." *Am. J. Bot.* 92: 1045-1058. 2005.

Species

H. piliferum (Banks & Sol.) Hochst. (*Agropyron piliferum* (Hochst.) Benth.; *Elymus pilifer* Banks & Sol.; *Eremopyrum olgae* (Regel) P. Candargy; *Heterantherium aleppicum* Gand.; *Heterantherium assyriacum* Gand.; *Heterantherium hermoneum* Gand.; *Heterantherium piliferum* (Banks & Sol.) Hochst. ex Jaub. & Spach, nom. illeg., non *Heterantherium piliferum* (Banks & Sol.) Hochst.; *Triticum olgae* Regel)

Asia. Glumes awnlike, see *The Natural History of Aleppo* 2: 244. 1794, *Illustrationes Plantarum Orientalium ...* 4: 24, pl. 318. 1842-1857, *Acta Horti Petrop.* 7: 588. 1881, *Transactions of the Linnean Society of London, Botany* 3: 126. 1888 and *Archives de Biologie Végétale Pure et Appliquée* 1: 33. 59. 1901, *Bulletin de la Société Botanique de France* 66(7): 300. 1919 [1920], *Nord. J. Bot.* 13: 486. 1993.

Heteranthoecia Stapf

From the Greek *heteros* "different, variable," *anthos* "flower" and *oikos* "house, any dwelling-place."

One species, tropical Africa. Panicoideae, Panicodae, Isachneae, annual, herbaceous, decumbent, trailing, mat-forming, auricles absent, ligule fringed and narrow, plants bisexual, inflorescence with several short unilateral racemes, spikelets flattened, 2 female fertile florets, lower floret hermaphrodite, 2 glumes more or less equal, upper floret female only, lower lemma narrowly ovate and acute, upper lemma elliptic and obtuse, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, swamps, floodplains, seasonal ponds, shallow water, type *Heteranthoecia isachnoides* Stapf, see *Hooker's Icones Plantarum* 30: t. 2937. 1911, *Willdenowia* 32(2): 237-238. 2002.

Species

H. guineensis (Franch.) Robyns (*Dinebra guineensis* Franch.; *Dinebra tuaensis* Vanderyst; *Heteranthoecia guineensis* (Franchet) Roberty, nom. illeg., non *Heteranthoecia guineensis* (Franch.) Robyns; *Heteranthoecia isachnoides* Stapf)

Tropical Africa. Annual, rooting at the lower nodes, ascending, mat-forming, branched, ligule pubescent, lower floret hermaphrodite, glumes 4-7-nerved, in swamps, pond margins, shallow water, inundated sandy places, shallow streams, see *Species Plantarum* 2: 1049. 1753, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 376. 1895 and *N. Amer. Fl.* 17: 94. 1909, *Hooker's Icones Plantarum* 30: t. 2927. 1911, *Bulletin agricole du Congo Belge* 11: 123. 1920, *Bulletin du Jardin Botanique de l'État* 9(3): 201. 1932.

in Sierra Leone: alate, boxi forotai, silero

Heteranthus Borkh. = *Ventenata* Koeler

Diversely flowered, from the Greek *heteros* "different, variable, diverse" and *anthos* "flower."

Pooideae, Poaceae, Agrostidinae, see *Botaniker* 16-18: 71. 1796, *Descriptio Graminum in Gallia et Germania* 272, 273. 1802 and *Contributions from the United States National Herbarium* 48: 384, 688. 2003.

Heterelytron Jungh. = *Themeda* Forssk.

From the Greek *heteros* “variable, diverse” and *elytron* “sheath, cover, scale, husk.”

Panicoideae, Andropogoneae, Anthistiriinae, type *Heterelytron scabrum* Jungh. see *Flora Aegyptiaco-Arabica* 178. 1775, *Tijdschrift voor Natuurlijke Geschiedenis en Physiologie* 7: 294-295. 1840 and *Contributions from the United States National Herbarium* 46: 248, 613. 2003.

Heterocarpha Stapf & C.E. Hubb. = *Drake-Brockmania* Stapf

From the Greek *heteros* “different, variable” and *karphos* “chip of straw, chip of wood, splinter, nail.”

One species, tropical East Africa. Chloridoideae, Eragrostidae, perennial, stoloniferous, tufted, herbaceous, unbranched, unarmed, auricles absent, leaves lanceolate, ligule a fringed membrane, plants bisexual, inflorescence spicate, short racemes, 2 glumes more or less equal, palea 2-nerved 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2-3 stigmas reddish, open habitats, maritime, sands, saline soils, see *Mémoires de l'Herbier Boissier* 20: 6. 1900, *Bulletin of Miscellaneous Information Kew* 1912: 197. 1912, *Bulletin of Miscellaneous Information Kew* 1929: 263. 1929, *Kew Bulletin* 29(2): 267-270. 1974, *Flora of Ethiopia and Eritrea* 7: 108-110. 1995.

Species

H. haareri Stapf & C.E. Hubb. (*Drake-Brockmania haareri* (Stapf & C.E. Hubb.) S.M. Phillips; *Eleusine conglomerata* Peter; *Eleusine conglomerata* f. *littoralis* Peter; *Eleusine conglomerata* var. *littoralis* (Peter) Peter)

Africa, Tanzania, Ethiopia. Lower glume 1-2-nerved, upper glume 5-8-nerved, see *Bulletin of Miscellaneous Information Kew* 1929: 263. 1929, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(Anhang): 78-79, t. 42a-b. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(Anhang): 270. 1931, *Kew Bulletin* 29(2): 268. 1974.

Heterochaeta Schult. = *Heteranthus* Borkh., *Heterochaeta* Besser ex Schult. & Schult. f., *Heterochaeta* DC. (Asteraceae, alt. Compositae), *Ventenata* Koeler

From the Greek *heteros* “different, variable, various, diverse” and *chaite* “bristle, long hair.”

Pooideae, Poaeae, Agrostidinae, see *Botaniker* 16-18: 71. 1796, *Descriptio Graminum in Gallia et Germania* 272, 273. 1802, *Prodromus Systematis Naturalis Regni Vegetabilis* 5:

282. 1836 and *Contributions from the United States National Herbarium* 48: 384, 688. 2003.

Heterochloa Desv. = *Andropogon* L.

From the Greek *heteros* “different, variable, various, diverse” and *chloe, chloa* “grass.”

Panicoideae, Andropogoneae, Andropogoninae, type *Heterochloa alopecurus* Desv., see *Species Plantarum* 2: 1045-1046. 1753, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 170, t. 8, f. 3. 1831 and *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64, 248. 2003.

Heterolepis Boiss. = *Chloris* Sw., *Heterolepis* Cass. (Asteraceae), *Heterolepis* Ehrenb. ex Boiss.

Chloridoideae, Cynodonteae, Chloridinae, see *Nova Genera et Species Plantarum seu Prodromus* 1, 25. 1788, *Bull. Sci. Soc. Philom. Paris* 1820: 26. 1820, *Flora Orientalis* 5: 554. 1884 and *Contributions from the United States National Herbarium* 41: 39-52. 2001.

Heteropholis C.E. Hubbard = *Mnesithea* Kunth

From the Greek *heteros* “different, dissimilar” and *pholis* “a horny scale.”

About 5 species, Asia, tropical Africa to Indochina, Australia, the Philippines. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, annual or perennial, slender, herbaceous, branched, prostrate to decumbent, rooting at the nodes, leaf blades flat and narrowly lanceolate, auricles present or absent, ligule shortly membranous, plants bisexual, inflorescence racemose, simple racemes cylindrical or flattened, pedicelled spikelets with fused pedicels, sessile spikelet 2-flowered, upper floret perfect, lower floret barren, male spikelets with glumes, 2 glumes more or less equal, lower glume oblong awnless 7-9-nerved, upper glume 3-5-nerved, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, grassland, woodland, edge of forest, sometimes referred to *Mnesithea*, type *Heteropholis sulcata* (Stapf) C.E. Hubb., see *Révision des Graminées* 1: 153-154. 1829 and *Hooker's Icones Plantarum* 36: t. 3548. 1956, R. de Koning, M.S.M. Sosef and J.F. Veldkamp, “A revision of *Heteropholis* and *Thaumas-tochloa* (Gramineae).” *The Gardens' Bulletin Singapore* 36: 137-162. 1983, *Blumea* 31(2): 281-307. 1986 [Generic delimitation of *Rottboellia* and related genera (Gramineae)], *Contributions from the United States National Herbarium*

46: 295-296. 2003, *Austral. Ecology* vol. 28, issue 3: 339-348. June 2003.

Species

H. annua Lazarides (*Mnesithea annua* (Lazarides) de Koning & Sosef)

Australia. See *Nuytsia* 5(2): 288, f. 1c-d, 7f. 1984[1985], *Blumea* 31(2): 295. 1986.

H. benoistii A. Camus (*Mnesithea benoistii* (A. Camus) de Koning & Sosef)

Madagascar. See *Bulletin de la Société Botanique de France* 103: 476. 1956 and *Blumea* 31(2): 287. 1986.

H. cochinchinensis (Lour.) W.D. Clayton (*Mnesithea laevis* (Retz.) Kunth; *Mnesithea laevis* var. *cochinchinensis* (Lour.) de Koning & Sosef; *Ophiuros cochinchinensis* (Lour.) Merr.; *Ophiuros monostachyus* J. Presl; *Ophiuros shimadanus* Ohwi & Odash.; *Ophiuros undatus* Nees; *Ophiurus cochinchinensis* (Lour.) Merr.; *Ophiurus monostachyus* J. Presl; *Ophiurus shimadanus* Ohwi & Odash.; *Paspalum cochinchinense* (Lour.) Roem. & Schult.; *Phleum cochinchinense* Lour.; *Rottboellia corymbosa* var. *cochinchinensis* (Lour.) Roberty; *Rottboellia monostachya* (J. Presl) Schmid; *Thaumastochloa cochinchinensis* (Lour.) C.E. Hubb.; *Thaumastochloa cochinchinensis* f. *cochinchinensis*; *Thaumastochloa cochinchinensis* f. *shimadana* (Ohwi & Odash.) Ohwi; *Thaumastochloa shimadana* (Ohwi & Odash.) Ohwi & Odash.)

Asia. See *Flora Cochinchinensis* 48. 1790, *Systema Vegetabilium* 2: 317. 1817, *Révision des Graminées* 1: 154. 1829 [1829], *Reliquiae Haenkeanae* 1(4-5): 330. 1830, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 100. 1850 and *Transactions of the American Philosophical Society* n. s., 24(2): 39, 72. 1935, *Hooker's Icones Plantarum* 34(1): t. 3313-3314, p. 2. 1936, *Acta Phytotaxonomica et Geobotanica* 5(3): 185. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 151. 1937, *Acta Phytotaxonomica et Geobotanica* 11(3): 178. 1942, *Agronomie Tropicale* (Bruxelles) 13: 193. 1958, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 65. 1960, *Kew Bulletin* 35(4): 816. 1981, *The Gardens' Bulletin Singapore* 36: 137-162. 1983, *Blumea* 31(2): 286. 1986.

in Japan: hime-ushi-no-shippe

H. cochinchinensis (Lour.) W.D. Clayton var. ***chenii*** (C.C. Hsu) Sosef & de Koning (*Mnesithea laevis* (Retz.) Kunth; *Mnesithea laevis* var. *chenii* (C.C. Hsu) de Koning & Sosef; *Ophiuros shimadanus* Ohwi & Odash.; *Ophiurus shimadanus* Ohwi & Odash.; *Thaumastochloa chenii* C.C. Hsu; *Thaumastochloa cochinchinensis* f. *shimadana* (Ohwi & Odash.) Ohwi; *Thaumastochloa shimadana* (Ohwi & Odash.) Ohwi & Odash.)

Singapore. See *Révision des Graminées* 1: 154. 1829 [1829] and *Acta Phytotaxonomica et Geobotanica* 5(3): 185. 1936,

Acta Phytotaxonomica et Geobotanica 6: 151. 1937, *Acta Phytotaxonomica et Geobotanica* 11(3): 178. 1942, *Taiwania* 16(2): 216, 335, f. 2. 1971, *Kew Bulletin* 35(4): 816. 1981, *The Gardens' Bulletin Singapore* 36(1): 149-150, pl. 3, f. b. 1983, *Blumea* 31(2): 286. 1986.

H. nigrescens (Thwaites) C.E. Hubb. (*Manisuris nigrescens* (Thwaites) Kuntze; *Mnesithea nigrescens* (Thwaites) de Koning & Sosef; *Rottboellia myuros* var. *nigrescens* (Thwaites) Roberty; *Rottboellia nigrescens* Thwaites)

Sri Lanka. Annual, prostrate and rooting at the nodes, leaf blades tapering, lower glume muricate, upper glume convex, see *Enumeratio Plantarum Zeylaniae* 364. 1864, *Revisio Generum Plantarum* 2: 780. 1891 and *Handb. Fl. Ceylon* 5: 207. 1900, *Grasses of Ceylon* 180. 1956, *Hooker's Icones Plantarum* 36: t. 3548. 1956, *Grasses of Burma* ... 162. 1960, *Blumea* 31(2): 287. 1986.

H. sulcata (Stapf) C.E. Hubb. (*Manisuris sulcata* (Stapf) Dandy; *Mnesithea sulcata* (Stapf) de Koning & Sosef; *Peltophorus sulcatus* Stapf; *Rottboellia myuros* var. *sulcata* (Stapf) Roberty)

Tropical Africa. See *Flora of Tropical Africa* 9: 59. 1917, *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Hooker's Icones Plantarum* 36: t. 3548, 2. 1956, *Boissiera*. 9: 82. 1960, *The Gardens' Bulletin Singapore* 36: 137-162. 1983, *Blumea* 31(2): 287. 1986.

Heteropogon Pers. = *Spirotheros* Raf.

From the Greek *heteros* "different, variable, other" and *pogon* "a beard," the spikelets are awned and awnless, awned female-fertile and awnless male-fertile; see Christian Hendrik Persoon (1761/1762-1836), *Synopsis Plantarum, seu enchiridium botanicum complectens enumerationem systematicam specierum hucusque cognitorum* ... 2: 533. Parisiis lutetiorum [Paris] 1805-1807.

About 6-7 species, tropics and subtropics. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Anthistirinae, annual or perennial, herbaceous, branched, tufted, stems geniculate, internodes solid, auricles absent, ligule a very short fringed or ciliate membrane, sheaths keeled, leaves linear and narrow, plants bisexual, inflorescence a spatheate panicle, terminal and lateral pedunculated racemes, simple and fragile racemes with homogamous and heterogamous spikelets pairs, florets 2, lower floret sterile reduced to a hyaline lemma, upper floret perfect in the sessile spikelets of the heterogamous pairs, fertile spikelets awned, callus long and pungent, well developed pedicelled spikelet callus, 2 glumes more or less equal, lower glume of sessile spikelet coriaceous and not grooved, pedicelled spikelet male or barren and awnless, upper lemma entire with pubescent awn, palea present or absent, lodicules present or absent, stamens 0-3, ovary glabrous, stigmas 2, fruit compressed

and grooved, weed species, ornamental, good grazing when young, native pasture species, piercing grass, painful to stock, some species with awns or long slender and pungent callus with hygroscopic action and penetrative, often on poor soils, open habitats, dry and stony places, dry open places, rainforest, grassland, related to *Elymandra*, type *Heteropogon glaber* Pers. (*Heteropogon contortus* (L.) P. Beauv. ex Roem. & Schult.), see *Species Plantarum* 2: 1045. 1753, *Synopsis plantarum* 2: 533. 1807, *Bulletin Botanique [Genève]* 1: 221. 1830, *Die Natürlichen Pflanzenfamilien* 2(2): 29. 1887 and *N. Amer. Fl.* 17: 127. 1912, *Kew Bulletin* 1954: 74. 1954, *Folia Primatologica* 21: 36-60. 1974, *Folia Primatologica* 48: 78-120. 1987, *Bulletin of the Botanical Survey of India* 30(1-4): 120-125. 1988, *Flora Mesoamericana* 6: 395. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, Lucia G. Le Roux and Elizabeth A. Kellogg, "Floral development and the formation of unisexual spikelets in the Andropogoneae (Poaceae)." *Am. J. Bot.* 86: 354-366. 1999, *Am. J. Bot.* 88: 1993-2012. 2001, *Contributions from the United States National Herbarium* 46: 248-249, 607. 2003, Renata Reinheimer, Raúl Pozner and Abelardo C. Vegetti, "Inflorescence, spikelet, and floral development in *Panicum maximum* and *Urochloa plantaginea* (Poaceae)." *Am. J. Bot.* 92: 565-575. 2005, *Austral. Ecology* 30(1): 79-90. Feb 2005, *Restoration Ecology* 13(2): 380-389. June 2005, *Austral. Ecology* 30(4): 445-464. June 2005.

Species

H. bellariensis (Hackel) C. Fischer (*Andropogon bellariensis* Hack.; *Parahyparrhenia bellariensis* (Hack.) Clayton)

India, Andhra Pradesh. Indeterminate species, see *Flora* 68(7): 123. 1885 and *Flora of the Presidency of Madras* 10: 1744. 1934, *Kew Bulletin* 27(3): 447-450. 1972, *Bulletin of the Botanical Survey of India* 20(1-4): 149-150. 1978.

H. contortus (L.) P. Beauv. ex Roem. & Schult. (*Andropogon allionii* Lam. ex DC.; *Andropogon bellardi* Bubani; *Andropogon besukiensis* Steud.; *Andropogon contortum* L.; *Andropogon contortus* L.; *Andropogon contortus* subvar. *allionii* (Lam. ex DC.) Hack.; *Andropogon contortus* subvar. *roxburghii* (Nees) Hack.; *Andropogon contortus* subvar. *secundus* (Willd. ex Nees) Hack.; *Andropogon contortus* var. *allionii* (Lam. ex DC.) Hack.; *Andropogon contortus* var. *glaber* Hack.; *Andropogon contortus* var. *glaber* (Pers.) Hack.; *Andropogon firmus* (J. Presl) Kunth; *Andropogon glaber* (Pers.) Raspail, nom. illeg., non *Andropogon glaber* Roxb.; *Andropogon polystachyos* Roxb.; *Andropogon secundus* Willd. ex Nees; *Andropogon secundus* Willd. ex Griseb., nom. illeg., non *Andropogon secundus* Elliott; *Heteropogon allionii* (Lam. ex DC.) Roem. & Schult.; *Heteropogon besukiensis* (Steud.) Miq.; *Heteropogon contortus* (Kunth) Chase; *Heteropogon contortus* (L.) P. Beauv.; *Heteropogon contortus* subvar. *secundus* (Willd. ex Nees) Domin; *Heteropogon contortus* var. *glaber* (Pers.) Hack.;

Heteropogon contortus var. *hirtus* (J. Presl) Fenzl ex Hack.; *Heteropogon firmus* J. Presl; *Heteropogon glaber* Pers.; *Heteropogon hirsutus* P. Beauv.; *Heteropogon hirtus* Pers.; *Heteropogon hispidissimus* Hochst. ex A. Rich.; *Heteropogon hohenackeri* Hochst. ex Miq.; *Heteropogon polystachyus* (Roxb.) Nees, nom. illeg., non *Heteropogon polystachyus* (Roxb.) Schult.; *Heteropogon roxburghii* Nees; *Holcus contortus* (L.) Kuntze ex Stuck.; *Sorghum contortum* (L.) Kuntze (from the Latin *contortus* "twisted, contorted") (for the Italian botanist Carlo Ludovico Allioni, 1728-1804, naturalist, physician, professor of botany, correspondent of Linnaeus, among his works are *Flora pedemontana* sive enumeratio methodica stirpium indigenarum Pedemontii. Torino 1785 and *Rariorum Pedemontii stirpium*. Specimen primum. Augustae Taurinorum [Torino] 1755. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 42. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 8. 1972; Warren R. Dawson, *The Banks Letters*. London 1958; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Arturo Ceruti, "L'Orto Botanico di Torino." *Agricoltura*. 7. 1963; Oreste Mattiolo (1856-1947), *Cronistoria dell'Orto Botanico della Regia Università di Torino*. in *Studi sulla vegetazione nel Piemonte* pubblicati a ricordo del II Centenario della fondazione dell'Orto Botanico della R. Università di Torino. Torino 1929; G. Forneris, "*Flora Pedemontana e Iconographia Taurinensis*." in *Allionia*. 27. 1985-1986; C. Siniscalco and G. Forneris, "Allioni e i botanici esteri suoi contemporanei." *Allionia*. 27. 1985-1986; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 27-28. ["Allione"] Palermo 1988; S. Sitwell and W. Blunt, *Great Flower Books 1700-1900*; a bibliographical Record of two Centuries of finely illustrated Flower Books. London 1956; Claus Nissen, *Die Botanische Buchillustration*. 1951)

Warm temperate regions, throughout tropics and subtropics. Perennial bunchgrass or rarely annual, variable, vigorous, tufted, clumped, hummock forming, coarse, quick growing, blue-green to green to glaucous, erect, branched near the top or unbranched, prostrate to decumbent at base, glabrous, shortly rhizomatous, roots fibrous, leaf sheaths keeled and wrapped around the stem, basal sheaths laterally compressed, ligule membranous and short, leaves oblong and usually folded, inflorescence a raceme solitary or a false panicle, racemes 1 to many, spikelets overlapping, female spikelets with brown hairs, long awns strongly twisted when mature, sessile spikelets with a pungent pointed bearded callus, male spikelets green, pedicellate and lower sterile spikelets unawned, paleas absent, needle-sharp penetrative callus, fruits can become entangled in the wool of sheep

and puncture their skin, an increaser species, seldom cultivated, rarely sown, native pasture species, low to medium palatability, early palatable, good and nutritious only when young, coarse and unpalatable when old, valuable as fodder or hay, forage grass for cattle, eaten by mountain zebra and waterbuck, tillers eaten by baboons, noxious weed species, invasive, does not persist in semiarid areas, does not tolerate flooding and high levels of salinity, fairly tolerant of short-term droughts, useful in soil erosion control, used in India for making coarse mats, a very good grass for thatching or roofing, suitable for paper manufacture, medicinal, used in India for dysentery, fever, myalgia, rheumatism and toothache, widespread in tropical open forest and woodland, savannah, *Acacia* scrub, dry woodland forest, field margins, open places in forest, cliff slopes, sandy alluvial soil, on poor soils, on sandy loams, coarse sand, in loose dry sand, open sandy soils, lawn, roadsides, moist ground, sandy ligh-orange soil, on well drained and stony soils, disturbed sites and flatwoods, hillsides, infertile and shallow soils, grassland, bushveld areas, on rocky slopes and canyons, rocky ground in open places, see *Species Plantarum* edition 1, 2: 1045. 1753, *Flore de France* 3: 97. 1805, *Syn. Pl.* 2: 533. 1807, *Essai d'une Nouvelle Agrostographie* 134. 1812, *Systema Vegetabilium* 2: 835-836. 1817, *Flora Indica; or Descriptions ...* 1: 265. 1820, *Annales des Sciences Naturelles (Paris)* 5: 307. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 364. 1829, *Reliquiae Haenkeanae* 1(4-5): 334. 1830, *Tentamen Florae Abyssinicae ...* 2: 453. 1850, *Analecta botanica indica ...* 2: 24. Amsterdam 1851, *Synopsis Plantarum Glumacearum* 1: 367. 1854, *Flora van Nederlandsch Indië* 3: 494. 1857, *The Flora of British India* 558. 1864, *New Phytologist* 5: 317. London 1873, *Flora Brasiliensis* 2(4): 267-268. 1883, *Boletim da Sociedade Broteriana* 3: 137. 1885, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 238. 1885, *Monographiae Phanerogamarum* 6: 586-587. 1889, *Revisio Generum Plantarum* 2: 791. 1891 and *Handb. Fl. Ceylon* 5: 238. 1900, *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *Révision des Graminées* 1: Suppl. XXXIX. 1930, *Handb. Fl. Ceylon* 6: 333. 1931, *Enum. Pl.* 1: 486. 1933, *Grasses of Ceylon* 200. 1956, *Grasses of Burma ...* 163. 1960, *Bol. Soc. Argent. Bot.* 12: 188. 1968, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Botanica Macaronica* 7: 67-76. 1980, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Acta Botanica Indica* 18: 240-246. 1990, *Journal of Cytology and Genetics* 25: 140-143, 322-323. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Molecular Ecology* 8(12): 2127-2132. Dec 1999.

in English: piercing grass, spear, black spear grass, common spear grass, spear grass, bunch spear grass, bellary grass, wild oats, spider's arrows, stickgrass, twisted tanglehead, tangle grass, tanglehead grass, tanglehead, twisted beardgrass, assegai fix, assegai grass, kusal grass

in French: herbe barbue

in Spanish: hierba torcida, retorcido moreno, barba negra

in Benin: ahira

in East Africa: asilili

in Ghana: ananugai, chiga

in Madagascar: boka ahidambo, boka

in Mali: fila ntaso, fulanu ntaso, guenémé, moloko, niaderé

in Niger: bat-cirey, bat sirey, bata-kirey, mano-selseldé, séoko, uraba, zongwa

in Nigeria: bara babba tudu, bunsurun daji, buzun kura, eru bere, eru buru, jan gargan, kamarahi, silka, sin, tsigà, tsi-igàà, tsiigàà, tsiikaà, yartudu

in Senegal: fila ntaso

in southern Rhodesia: inZala, inzala

in southern Africa: assegaaigras, pylgras, gewone pylgras, gemeines speergras, klitsgras, malgras, pieringgras, steekgras, swartangel; isitupe (Zulu), makurwane (Tswana); selokana, seloka (Sotho)

in Tanzania: Ngonga Kinyaturu, Ng'onga Kinyaturu, Mahwa Kinyaturu

in Upper Volta: bubongnona sando, celbi, celbo, komango, selbo

in Yoruba: eru bere

in China: ti chin, ti chen, chien ken, tu chin

in India: aeddi, bandapuncha, bandarpuncha, barweza, butoo jara, dabhjulyum, dauria, eddi gaddi, ganjali hullu, gantegawta, gundha goorana, hukara gadi, hurwal, kaarda hullu, kala lapa, kantegawta, kari vunugada hullu, kari-unugada hullu, kaseri gaddi, khar, kher, kumeria, kuneria, kunura, kurunsi pullu, kusal, kusali, kusli, lamb, lamp, lampa, lampar, lap, musel, nani sunkhali, nanju hullu, oobina hullu, oosi pul, oosi pullu, pandi bella gaddi, pani pullu, panree pullu, paraura, parba, parbi, pareba, parva, parwa, parwaya, pochati, ponia jara, riskawa, saga, saga jara, sarala, sariala, sarari, sarmal, sarol, sarwala, sarwar, sauri ghas, shora, shurighas, shurval, shurwal, sinkola, sona jara, sookal, sukhli kursali, sukli, sunkhali, sunkari hullu, sura, surari, suraari, suriala, survalu, surwala, surwar, surwara, suryala, tambat, yeddi, yeddi gaddi

in Indonesia: bejeng-benjeng, merakan

in Japan: aka-hige-gaya (= red-bearded grass)

in the Philippine Islands: sibat-sibatan

in Sri Lanka: itana

in Thailand: lem, ya laem, yaa laem, yaa lem, ya-lem, yaa luuk nong, ya luk nong, ya nuat ruesi, yaa nuat ruese, ya-nuatrusi, yaa phung chuu, ya phung chu, yaa rang tak kataen, yaa rang takka taen, ya rang takkataen

in Mexico: aceitilla, barba negra, cabeza enmarañada, guixi biia, quixi pija, retorcido moreno, tola, zacate aceitillo, zacate colorado

in Hawaii: pili, pili grass, lule, native pili grass

H. melanocarpus (Elliott) Benth. (*Andropogon melanocarpus* Elliott; *Andropogon polystachyos* Roxb.; *Andropogon polystictus* Hochst. ex Steud.; *Andropogon scrobiculatus* (Nees) Kunth; *Cymbopogon melanocarpus* (Elliott) Spreng.; *Heteropogon acuminatus* Trin.; *Heteropogon melanocarpus* (Muhl.) Coulter, nom. illeg., non *Heteropogon melanocarpus* (Elliott) Benth.; *Heteropogon polystachyus* (Roxb.) Nees, nom. illeg., non *Heteropogon polystachyus* (Roxb.) Schult.; *Heteropogon polystictus* (Hochst. ex Steud.) Hochst.; *Heteropogon roylei* Nees ex Steud.; *Heteropogon scrobiculatus* (Nees) E. Fourn.; *Sorghum melanocarpum* (Elliott) Kuntze; *Spirotheros melanocarpus* Raf. ex B.D. Jacks.; *Stipa melanocarpa* Muhl.; *Trachypogon scrobiculatus* Nees)

Tropical Africa, India, Southeast Asia, China, America. Annual, erect, herbaceous, woody, reedlike, robust, tufted, stilt roots, leaf sheaths flattened and smooth, leaf blades flat narrowing to a long thin point, short ligule membranous, inflorescence a false panicle, spike-like racemes enclosed in groups by a spathe, each spike-like raceme enclosed by its own spathe, large caudate pedicelled spikelets, pedicellate spikelets lower glumes glandular, poorly utilized, awns dangerous, sweet smell, grazed before anthesis, found along roadsides, mountainous regions, pathsides, rocky places, stony areas, in open sand, pampas, clearings, on abandoned cultivated fields, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 146. 1816, *Descriptio uberior Graminum* 183. 1817, *Flora Indica; or Descriptions ...* 1: 265. 1820, *Systema Vegetabilium, editio decima sexta* 1: 289. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 347, 364. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 254. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 507. 1833, *Synopsis Plantarum Glumacearum* 1: 367, 369. 1854, *Flora* 39 (n. 14): 28. 1856, *Journal of the Linnean Society, Botany* 19(115-116): 71. London 1881, *Mexicanas Plantas* 2: 64. 1886, *Revisio Generum Plantarum* 2: 792. 1891, *Contributions from the United States National Herbarium* 2(3): 493. 1894, *Index Kewensis* 2: 967. London 1895 and *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

in English: sweet tanglehead, tanglehead

in Spanish: arrocillo

in Mexico: barba negra dulce, retorcido negro

in Senegal: balambal

in South Africa: eenjarige assegaagrass, einjähriges speergras

H. polystachyus (Roxb.) Schult. (*Andropogon contortus* subvar. *polystachyus* (Roxb.) Hack.; *Andropogon polystachyos* Roxb.; *Heteropogon contortus* var. *polystachyos* (Roxb.) Deshp.; *Heteropogon polystachyus* (Roxb.) Nees, nom. illeg., non *Heteropogon polystachyus* (Roxb.) Schult.)

India. Indeterminate species, see *Systema Vegetabilium* 2: 836. 1817, *Flora Indica; or Descriptions ...* 1: 265. 1820, *Systema Vegetabilium* 2: 460. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 364. 1829, *Monographiae Phanerogamarum* 6: 588. 1889 and *Bulletin of the Botanical Survey of India* 30(1-4): 121. 1988 [1990].

H. triticeus (R. Br.) Stapf & Craib (*Andropogon ischyranthus* Steud.; *Andropogon liananthus* Steud.; *Andropogon lianatherus* Steud.; *Andropogon segaenensis* Steud.; *Andropogon triticeus* R. Br.; *Heteropogon insignis* Thwaites; *Heteropogon ischyranthus* (Steud.) Miq.; *Heteropogon lianatherus* (Steud.) Miq.; *Heteropogon triticeus* (R. Br.) Stapf ex Craib)

Southern India, Southeast Asia, Thailand, Burma, Sri Lanka, through Indonesia to Australia. Perennial, large and coarse, stout, erect, tall, forming loose tussocks and small clusters, basal sheaths compressed, linear leaves, homogamous spikelets paired and basal, male spikelets acute, female spikelets brown, callus bearded and pungent, lower glume hispid, awn pubescent, ornamental, used by Aborigines for food and fiber, moist soils in tropical woodlands, rocky hillsides, see *Prodromus Florae Novae Hollandiae* 1: 201. 1810, *Synopsis Plantarum Glumacearum* 1: 367. 1854, *Flora van Nederlandsch Indië* 3: 493. 1857, *Enumeratio Plantarum Zeylaniae* 437. 1864 and *Handb. Fl. Ceylon* 5: 239. 1900, *Bulletin of Miscellaneous Information Kew* 1912(10): 432. 1912, *Handb. Fl. Ceylon* 6: 334. 1931, *Grasses of Ceylon* 201. 1956, *Grasses of Burma ...* 165. 1960, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Journal of Phytopathology* vol. 150, issue 4-5: 196-199. May 2002.

in English: wheat spear grass

in Thailand: yaa luuk nong, ya luk nong, ya nong, yaa nong

Heterosteca Desv. = Bouteloua Lag.

Greek *heteros* “different, varying, variable” and *theke* “a case, ovary, sheath.”

Chloridoideae, Cynodonteae, Boutelouinae, type *Heterosteca juncifolia* Desv., see *Nouv. Bull. Sci. Soc. Philom.* Paris 2: 188. 1810 and *Contributions from the United States National Herbarium* 41: 20-33, 127-128. 2001.

Heterostega Kunth = *Bouteloua* Lag.

Orth. var., *Heterosteca* Desv.

Chloridoideae, Cynodonteae, Boutelouinae, see *Mémoires du Muséum d'Histoire Naturelle* 2: 73. 1815 and *Contributions from the United States National Herbarium* 41: 20-33, 127-128. 2001.

Heterostipa (Elias) Barkworth = *Hesperostipa* (M.K. Elias) Barkworth

From the Greek *heteros* "different, diverse" plus the generic name *Stipa* L.

Stipoideae, Stipeae, or Pooideae, Stipeae, Stipinae, see *Phytologia* 74(1): 15-16. 1993, *Contributions from the United States National Herbarium* 48: 383-384, 617-650. 2003.

Heuffelia Schur = *Helictotrichon* Besser ex Schult. & Schult. f., *Heuffelia* Opiz (Cyperaceae)

For the Hungarian botanist Johann A. Heuffel, 1800-1857, physician; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 169. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 174. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 183. Oxford 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see *Enumeratio Plantarum Transsilvaniae* 760. 1866 and *Feddes Repertorium* 45: 7. 1938, *Contributions from the United States National Herbarium* 48: 108-109, 382-383. 2003.

Hexarrhena Presl = *Hilaria* Kunth

From the Greek *hex* "six" and *arrhen* "male, stamen."

Chloridoideae, Cynodonteae, Hilariinae, type *Hexarrhena cenchroides* J. Presl, see *Nova Genera et Species Plantarum* 1: 116-118, pl. 37. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 326, t. 14. 1830 and *Contributions from the United States National Herbarium* 41: 128-129. 2001.

x Hibanobambusa I. Maruyama & H. Okamura = *Hibanobambusa* I. Maruyama, H. Okamura & Murata

Sasa x *Semiarundinaria*.

Bamboo growing in Mt. Hiba, Nogi Country, Shimane Prefecture, Japan. Hybrid, slender, erect, arching, sympodial, culm base bent, leaves lanceolate, sheath deciduous, 2 branches per node, 6 stamens, good wood quality, type *Hibanobambusa tranquillans* (Koidz.) Maruy. & H. Okamura, see *Report Fuji Bamboo Garden* 16: 30. 1971, *Report Fuji Bamboo Garden* 17: 8. 1972, *Acta Phytotax. Geobot.* 30: 151. 1979, *Genera Graminum* 375. 1986.

Species

H. tranquillans (Koidzumi) Maruyama & H. Okamura (*Hibanobambusa tranquillans* Maruy. & H. Okamura; *Phyllostachys tranquillans* (Koidz.) Muroi; *Semiarundinaria tranquillans* Koidz.; *Sinoarundinaria nipponica* Muroi; *Sinoarundinaria tranquillans* (Koidzumi) Muroi)

Japan. Running bamboos, sympodial branching, culm base bent, large leaves, ligule truncated, ornamental, used for hedging and screen, see *Acta Phytotaxonomica et Geobotanica* 10: 314. 1941.

in Japan: inyou-chiku zoku, inyou-chiku, kinmei inyou, kimmei-inyo (green stripes on yellow culms), shiroshima-inyo (numerous white stripes on the leaf blade)

Hickelia A. Camus = *Cephalostachyum* Munro, *Decaryochloa* A. Camus, *Pseudocoix* A. Camus

Named for the French dendrologist Paul Robert Hickel, 1865-1935, forester, a friend of A. Camus.

One species or four, Madagascar, Tanzania. Bambusoideae, Bambusoideae, Bambuseae, Bambusinae, Hickeliinae, perennial, liana, branched, scrambling, trailing, slender, woody, scandent, leaning on trees, pendulous, climber, leafy, persistent, leaves acuminate, small ligules, plants bisexual, inflorescence iterant, spikelets clustered around the nodes, several glumes dimorphic, palea and lodicules present, 6 stamens, ovary hairy, 3 stigmas, forest, along streams, wet places, type *Hickelia madagascariensis* A. Camus, see *Reliquiae Haenkeanae* 1: 256. 1830, *Transactions of the Linnean Society of London* 26(1): 138-139. 1868 and *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 179: 478-480. 1924, *Bulletin de la Société Botanique de France* 71: 899-906. 1925 [1924], *Archives du Muséum d'Histoire Naturelle*, sér. 6, 12: 603. Paris 1935, *Bulletin de la Société Botanique de France* 93: 242, 244. 1947, *Bulletin de la Société Botanique de France* 102: 120-122. 1955, *Taxon* 6(7): 201. 1957, *Kew Bulletin* 49(3): 429-443. 1994 [The genus *Hickelia* (Gramineae-Bambusoideae), by S. Dransfield], *The Journal of the American Bamboo Society* 16(1): 1-8. 2002.

Species

H. africana S. Dransfield (*Pseudocoix perrieri* A. Camus)

Madagascar, Tanzania. Along streams, see *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 179: 478. 1924, *Kew Bulletin* 49(3): 440, f. 2-3. 1994.

H. alaotrensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 102: 120. 1955, *Kew Bulletin* 49(3): 441. 1994.

H. madagascariensis A. Camus

Madagascar. Erect, scrambling, see *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 179: 478-480. 1924, *Bulletin de la Société Botanique de France* 71: 899-906. 1925 [1924], *Kew Bulletin* 49(3): 439, f. 1. 1994.

H. perrieri (A. Camus) S. Dransfield (*Pseudocoix perrieri* A. Camus)

Madagascar. See *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 179: 478-480. 1924, *Kew Bulletin* 49(3): 441, f. 4. 1994.

Hierochloe R. Br. = *Anthoxanthum* L., *Ataxia* R. Br., *Dimeria* Raf., *Dimesia* Raf., *Disarrenum* Labill., *Hierochloe* Gmelin ex R. Br., *Savastana* Schrank, *Torresia* Ruiz & Pavon

Holy grass, from the Greek *hieros* "sacred" and *chloe*, *chloa* "grass," sacred grass, referring to its use in religious ceremonies, fragrant and strewn before church doors and floors on holy festivals; see Robert Brown, *Prodromus florae Novae Hollandiae*. 208. 1810.

About 20-30 species, temperate and cold regions, tropical mountains, arctic or subantarctic. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Phalaridinae, perennial, rhizomatous or tufted, sweetly or strongly coumarin scented, herbaceous, culms hollow, auricles absent, sheaths open and rounded, ligule membranous and not truncate, blade flat, plants bisexual, a loose and open panicle with branches spreading, spikelets ovate laterally compressed, usually 3 florets, lower 2 florets male or incomplete, uppermost floret bisexual, vestigial foliar structure subtending the inflorescence often present, 2 glumes more or less equal to subequal and shining, lower glume 1- to 5-nerved, upper glume 3- to 5-nerved, male lemmas sometimes short-awned, fertile lemma awnless, paleas of male florets 2-keeled, palea of bisexual floret 1-keeled, 2 lodicules free and membranous, stamens 2 in bisexual florets and 3 in staminate florets, ovary glabrous, 2 long plumose stigmas, fruit small and compressed laterally, shade species, common in woods, grasslands and open grassland, tundra, marshes and marshy places, open habitats, close to *Anthoxanthum* and *Phalaris*, type *Hierochloe odorata* (L.) P. Beauv., see *Species Plantarum* 1: 28. 1753, *Baiersche Flora* 1: 100, 337. Regensburg 1789, *Flora Peruviana, et Chilensis Prodromus* 125. 1794, *Systema Vegetabilium Florae Peruviana et Chilensis* 1:

251. 1798, *Novae Hollandiae Plantarum Specimen* 2: 82-83, f. 232. 1807, *Prodromus Florae Novae Hollandiae* 208. 1810, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812, *American Monthly Magazine and Critical Review* 1: 442. 1817, *Révision des Graminées* 1: 22. 1829 and *Fieldiana, Botany* 24(2): 38-331. 1955, *Rec. Dom. Mus.* 5: 101-146. 1965, Weimarck, G. "Variation and taxonomy of *Hierochloë* (Gramineae) in the northern hemisphere." in *Bot. Not.* 124: 129-175. 1971, *New Zealand Journal of Botany* 11: 561-580. 1973, *Darwiniana* 19(2-4): 422-457. 1975 [Las especies del género *Hierochloe* (Gramineae) de Argentina y Chile], *Flora Patagónica* 3: 276-285. 1978, Y. Schouten and J.F. Veldkamp, "A revision of *Anthoxanthum* including *Hierochloë* (Gramineae) in Malaysia and Thailand." *Blumea* 30: 319-351. 1985, H.E. Connor and E. Edgar, "Name changes in the indigenous New Zealand Flora, 1960-1986 and Nomina Nova IV, 1983-1986." *New Zealand Journal of Botany* 25: 115-170. ["*Anthoxanthum* is the older name and species of *Hierochloe* are transferred to it; exceptions are the indigenous New Zealand taxa described by Zotov, etc."] 1987, *Regnum Veg.* 127: 19. 1993, *Flora Mesoamericana* 6: 235-236. 1994, *Global Change Biology* 6(7): 835-842. Oct 2000, *Global Change Biology* vol. 6, issue s1: 19-34. Dec 2000, *Flora of New Zealand* 5: 341-350. 2000, *Journal of Ecology* 89(2): 304-324. Apr 2001, *Contributions from the United States National Herbarium* 48: 111-115, 123, 271, 384-386, 605, 654-655. 2003, *New Phytologist* 162(1): 25-44. Apr 2004, *Journal of Ecology* 92(4): 635-647. Aug 2004, *Molecular Plant Pathology* 5(6): 515-525. Nov 2004, Ulf Molau, Urban Nordenhäll and Bente Eriksen, "Onset of flowering and climate variability in an alpine landscape: a 10-year study from Swedish Lapland." *American Journal of Botany*. 92: 422-431. 2005 [a study on flowering phenology in the Latnjaure Valley, northern Swedish Lapland], *Global Change Biology* 11(4): 525-536. Apr 2005, *Restoration Ecology* 13(2): 257-264. June 2005.

Species

H. alpina (Swartz ex Willd.) Roem. and Schult. (*Aira alpina* auct.; *Aira alpina* Lilj., nom. illeg., non *Aira alpina* L.; *Anthoxanthum monticolum* (Bigelow) Veldkamp; *Dimesia monticola* (Bigelow) Raf.; *Dimesia monticola* Raf. ex B.D. Jacks.; *Hierochloe alpina* var. *aristata* Raspail; *Holcus alpinus* Sw. ex Willd.; *Holcus monticola* Bigelow; *Savastana alpina* (Sw. ex Willd.) Scribn.; *Torresia alpina* (Sw. ex Willd.) Hitchc.)

Norway, Canada. Densely to loosely tufted, ligule is half membrane-like and the other half is long hairs, staminate florets awned, grows in the subalpine and alpine zones, see *Utkast til en Svensk Flora* 49. Upsala 1792, *Species Plantarum. Editio quarta* 4(2): 937. 1806, *New England Journal of Medicine and Surgery, and the Collateral Branches of Science* 5: 334. 1816, *Systema Vegetabilium* 2: 515. 1817,

American Monthly Magazine and Critical Review 1: 442. 1817, *Annales des Sciences d'Observation* 2: 85. 1829, *Index Kewensis* 1: 760. 1893, *Memoirs of the Torrey Botanical Club* 5(3): 34. 1894 and *American Journal of Botany* 2: 300. 1915, *Blumea* 30(2): 347. 1985.

in English: alpine sweet grass

in Finnish: Tunturimaarianheinä

in Swedish: Fjällmyskgräs

in Japan: miyamakobo

H. alpina (Swartz ex Willd.) Roem. and Schult. subsp. **alpina** (*Anthoxanthum monticolum* (Bigelow) Veldkamp; *Anthoxanthum monticolum* subsp. *alpinum* (Sw. ex Willd.) Soreng; *Hierochloe alpina* f. *soperi* Polunin; *Hierochloe alpina* subsp. *orthantha* (T.J. Sørensen) Weim.; *Hierochloe alpina* var. *orthantha* (T.J. Sørensen) Hultén; *Hierochloe monticola* (Bigelow) Á. Löve and D. Löve; *Hierochloe odorata* auct. non (L.) P. Beauv. p.p.; *Hierochloe orthantha* T.J. Sørensen; *Holcus alpinus* Swartz ex Willd.; *Holcus monticola* Bigelow; *Savastana alpina* (Sw. ex Willd.) Scribn.)

North America, Canada. More or less loosely caespitose, aromatic, robust, compact, erect, rhizomatous, leaves mostly in a basal tuft, sheaths persisting, ligule a fringed membrane, inflorescence paniculate, spikelets dark purple at the base, 3 florets per spikelet, awn usually twisted at base and geniculate, white stigma, common along streams, river terraces, slopes, along drainage creek, see *Species Plantarum. Editio quarta* 4(2): 937. 1806, *Systema Vegetabilium* 2: 515. 1817, *Annales des Sciences d'Observation* 2: 85. 1829 and *Blumea* 30(2): 347. 1985.

H. alpina (Swartz ex Willd.) Roem. and Schult. subsp. **orthantha** (Sørensen) G. Weim. (*Anthoxanthum monticolum* (Bigelow) Y. Schouten & Veldkamp; *Anthoxanthum monticolum* subsp. *monticolum*; *Anthoxanthum monticolum* subsp. *orthantha* (Sørensen) G. Tucker; *Hierochloe alpina* var. *orthantha* (Sørensen) Hultén; *Hierochloe monticola* (Bigelow) Á. & D. Löve, non Mez; *Hierochloe orthantha* Sørensen)

Northern America, U.S., Alaska, Canada, northern Labrador, Newfoundland, Ontario, Quebec. Rare species, awn of the upper male floret inserted above the lemma base and straight, see *Systema Vegetabilium* 2: 515. 1817 and *Meddelelser om Grønland* 136(8): 1. 1954, *Blumea* 30(2): 347. 1985.

H. angusta Hitchc. (*Anthoxanthum angustum* (Hitchc.) Ohwi; *Anthoxanthum horsfieldii* var. *angustum* (Hitchc.) Y. Schouten)

Papua New Guinea. Perennial, erect, panicle contracted, lemmas deeply cleft at the tip, fertile lemma awnless, on grassland, see *Brittonia* 2(2): 118. 1936, *Bulletin of the Tokyo Science Museum* 18: 8. 1947, *Blumea* 30(2): 333. 1985.

H. australis (Schrad.) Roemer and Schultes (*Anthoxanthum australe* (Schrad.) Veldkamp; *Holcus australis* Schrad.)

Europe. See *Flora Germanica* 1: 253. 1806, *Systema Vegetabilium* 2: 514. 1817 and *Blumea* 30(2): 347. 1985.

in Finnish: Metsämaarianheinä, Etelän maarianheinä

in Swedish: Finskt myskgräs

H. brunonis Hook.f. (*Hierochloe antarctica* var. *brunonis* (Hook.f.) Zotov)

New Zealand. Loosely tufted, coastal, leaf sheath keeled, ligule membranous, panicle dense and nodding, glumes subequal, sterile florets awned, bisexual floret mucronate, see *Prodromus Florae Novae Hollandiae* 1: 209. 1810, *Flora Antarctica* 1: 93, t. 52. 1845 and *Transactions and Proceedings of the New Zealand Institute* 73: 234. 1943.

H. cuprea Zotov

New Zealand. Alpine, tufted to loosely tufted, robust, leaf sheath glabrous and ligule ciliate, loose inflorescence, glumes subequal, lemma of bisexual floret bearded to densely long-ciliate, see *New Zealand Journal of Botany* 11(3): 571. 1973.

H. equiseta Zotov (*Danthonia buchananii* Hook.f.)

New Zealand. Alpine, tufted to loosely tufted, robust, leaf sheath glabrous and ligule hairy, glumes subequal, awns stout with column twisting, see *Indig. Grasses* t. 35. 1879, *T.N.Z.I.* 14: 385. 1882 and *New Zealand Journal of Botany* 11(3): 568. 1973.

H. flexuosa Hook.f. (*Anthoxanthum flexuosum* (Hook.f.) Veldkamp)

India, Asia, Nepal. See *The Flora of British India* 7: 222. 1896 and *Blumea* 30(2): 347. 1985.

H. fraseri Hook.f. (*Anthoxanthum fraseri* Y. Schouten & Veldkamp; *Hierochloe redolens* var. *fraseri* (Hook.f.) Benth.; *Savastana fraseri* (Hook.f.) Skeels; *Torresia fraseri* (Hook.f.) Hitchc.)

Tasmania, Mt. Field National Park. Unbranched, slender, leaves along the culms, internodes solid, aromatic, ligule membranous, no auricles, leaf sheaths not keeled, panicle purple to dark and somewhat contracted, vestigial foliar structure subtending the inflorescence often present, lower glume elliptic, palea clasped by the lemmas, ovary glabrous, fruit compressed, common amongst rocks, in open rocky and sandy situations, alpine heath, alpine moorland and boulder field, see *Flora Antarctica* 1: 93. 1845, *Fl. Tasm.* 2: 108. 1860 and *Manual of the New Zealand Flora* 856. 1906, *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 248: 21. 1912, *Proceedings of the Biological Society of Washington* 28: 182. 1915.

H. fusca Zotov

New Zealand. Coastal, tufted to loosely tufted, robust, leaf sheath glabrous and ligule hairy, panicle more or less erect, spikelets densely crowded with florets included by glumes,

glumes subequal, slender awns more or less straight, bisexual floret mucicous or mucronate, see *New Zealand Journal of Botany* 11(13): 576. 1973.

H. glabra Trin. (*Anthoxanthum glabrum* (Trin.) Veldkamp; *Hierochloa bungeana* Trin.; *Hierochloa grandiflora* (Litv.) Petrov; *Hierochloa odorata* f. *pubescens* Kryl.; *Hierochloa odorata* subsp. *glabra* (Trin.) Tzvelev; *Hierochloa odorata* subsp. *pubescens* (Kryl.) Hara)

China, Asia, Mongolia, Siberia. Found in open mountain meadows, disturbed areas along roadsides, sandy brown soil, mountain brown soil, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 66. Leipzig 1821, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 82. 1839 and *Novosti Sist. Vyss. Rast.* 10: 83. 1973, *Novosti Sist. Vyss. Rast.* 13: 38. 1976, *Blumea* 30(2): 347-348. 1985, *Fl. Sibir. (Poaceae)* 2: 118. 1990.

H. hirta (Schrank) Borbás (*Anthoxanthum hirtum* (Schrank) Y. Schouten & Veldkamp; *Hierochloa arctica* J. Presl; *Hierochloa hirta* subsp. *arctica* (J. Presl) G. Weim.; *Hierochloa odorata* subsp. *arctica* (J. Presl) Tzvelev; *Hierochloa odorata* subsp. *hirta* (Schrank) Tzvelev; *Savastana hirta* Schrank)

North America, Europe. See *Baiersche Flora* 1: 337. 1789, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812, *Reliquiae Haenkeanae* 1(4-5): 252. 1830 and *Balaton Fl.* 315. 1900, *Bot. Not.* 124: 146. 1971, *Novosti Sist. Vyss. Rast.* 10: 81. 1973, *Blumea* 30(2): 348. 1985, *Symbolae Botanicae Upsaliensis* 27(2): 176. 1987, *Harvard Papers in Botany* 1(9): 66. 1996.

in English: Northern sweet grass

in Finnish: Niittymaarianheinä

in Swedish: Älvmyskgräs

H. hirta (Schrank) Borbás subsp. *arctica* (J. Presl) G. Weim. (*Anthoxanthum hirtum* (Schrank) Y. Schouten & Veldkamp subsp. *arcticum* (J. Presl) G. Tucker; *Hierochloa arctica* J. Presl; *Hierochloa odorata* auct. non (L.) P. Beauv.; *Hierochloa odorata* subsp. *arctica* (J. Presl) Tzvelev)

North America. Perennial, see *Reliquiae Haenkeanae* 1(4-5): 252. 1830.

in English: Northern sweet grass, vanilla grass

in Finnish: Niittymaarianheinä

in Swedish: Nordmyskgräs

H. horsfieldii (Kunth ex Bennett) Maxim. (*Anthoxanthum clarkei* (Hook.f.) Ohwi; *Anthoxanthum horsfieldii* (Kunth ex Bennett) Mez ex Reeder; *Anthoxanthum neesii* Mez; *Ataxia horsfieldii* Kunth ex Bennett; *Ataxia horsfieldii* Kunth; *Ataxia javanica* R. Br. ex Hass.; *Hierochloa clarkei* Hook.f.; *Hierochloa horsfieldii* (Kunth) Maxim.)

Java, Indonesia. Good cattle fodder, see *Révision des Graminées* 1: 22. 1829, *Plantae Javanicae Rariores* 8, t. 3. 1838, *Cat. Pl. Hort. Bot. Bogor.* 16. 1844, *Diagnoses plantarum novarum asiaticarum* 7: 930. 1888, *The Flora of British India* 7: 223. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 291. 1921, *Bulletin of the Tokyo Science Museum* 18: 8. 1947, *Journal of the Arnold Arboretum* 24: 325, 327. 1950.

H. laxa R. Br. ex Hook.f. (*Anthoxanthum laxum* (R. Br. ex Hook.f.) Veldkamp)

India, Western Himalaya, Kashmir. Spreading, erect leafy shoots, rhizomes slender, sweet-scented grass, ensiform leaves, spreading inflorescence paniculate, spikes on slender axis, spikelets shining, elegant, high altitude, see *Species Plantarum* 1: 28. 1753, *The Flora of British India* 7: 222. 1897 [1896] and *Blumea* 30(2): 348. 1985.

H. novae-zelandiae Gand. (*Hierochloa alpina* sensu Hook.f.; *Hierochloa borealis* sensu Hook.f.; *Hierochloa fraseri* sensu Cheeseman)

New Zealand. Alpine, densely to loosely tufted, slender, sometimes rhizomatous, leaf sheath glabrous and ligule membranous, leaf blade margins toothed, lax and spreading panicles, glumes obovate and membranous, awns straight and slender, bisexual floret mucicous or mucronate with subapical mucro, see *Bulletin de la Société Botanique de France* 66(7): 300. 1919 [1920].

H. occidentalis Buckley (*Anthoxanthum occidentale* (Buckl.) Veldkamp; *Anthoxanthum occidentale* (Buckley) G.C. Tucker, nom. illeg., non *Anthoxanthum occidentale* (Buckley) Veldkamp; *Hierochloa macrophylla* Thurb. ex Boland.; *Savastana macrophylla* (Thurb. ex Bol.) Beal; *Torresia macrophylla* (Thurb. ex Bol.) Hitchc.)

North America, U.S. Perennial bunchgrass with white flowers, scented, bisexual floret equalling or exceeding the glume apices, both staminate lemmas mostly glabrous sometimes scabrous distally, grows in shady conditions with average to low water, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862, *Calif. Agric. Soc. Trans.* 1864-65: 132. 1866, *Grasses of North America for Farmers and Students* 2: 187. 1896 and *American Journal of Botany* 2: 300. 1915, *Blumea* 30(2): 348. 1985, *Harvard Papers in Botany* 1(9): 66. 1996.

in English: California sweet grass, California vanilla grass, Western sweetgrass

H. odorata (L.) P. Beauv. (*Anthoxanthum nitens* (Weber) Y. Schouten & Veldkamp; *Avena odorata* (L.) Koeler; *Dimesia fragrans* Raf.; *Hierochloa arctica* J. Presl; *Hierochloa borealis* (Schrad.) Roemer & Schultes; *Hierochloa borealis* Roem. & Schult., nom. illeg.; *Hierochloa fragrans* (Willd.) Roemer & J.A. Schultes; *Hierochloa nashii* (Bickn.) Kaczmarek; *Hierochloa odorata* (L.) Wahlenb.; *Hierochloa odorata* f. *eamesii* Fernald; *Hierochloa odorata* subsp. *dahurica* (Trin.) Printz; *Hierochloa odorata* var. *fragrans*

(Willd.) K. Richter; *Holcus borealis* Schrad.; *Holcus fragrans* Willd.; *Holcus odoratus* L.; *Savastana nashii* E.P. Bicknell; *Savastana odorata* (L.) Scribn.; *Savastana odorata* var. *fragrans* (Willd.) Farw.; *Torresia nashii* (E.P. Bicknell) House; *Torresia odorata* (L.) A.S. Hitchc.)

Circumboreal, North. temperate, Asia, Europe. Perennial and extremely rare grass, extremely long lived, erect, glabrous, herbaceous, aromatic with a strong scent of coumarin or vanilla, long leaves develop from separate sterile basal off-shoots, rhizomatous with an extensive root systems, rhizomes slender and creeping, rhizomes and roots form a dense mat, culms arise from among dead foliage of the preceding year, auricles absent, leaf blade flat, sheaths glabrous or puberulent, ligule membranous, inflorescence an open pyramidal panicle with slender branches spreading to ascending, spikelets 3-flowered, the lower 2 florets staminate, the terminal 1 perfect-flowered and exceeded by the glume apices, glumes subequal, lemmas awnless, largely infertile, rarely produces seed, probably no truly wild sweetgrass populations in the world, cultivated and selected for the length of the leaves, very hardy, spreads rapidly and vigorously, produces very little forage, may be useful for soil stabilization, used to scent clothes, long leaves of sterile shoots are used by Native Americans to make baskets which retain the vanilla-like scent for many years, leaves are dried and made into braids and burned as incense in New Mexico, the peoples of both Europe and North America considered this plant sacred, used in peace and healing rituals, strewn before church doors on saints' days in northern Europe, tea was used for coughs and sore throats, dried leaves can be smoked, usually occurs in wetlands, forest openings, moist meadows on river shore, sandy soils, bogs, under moist conditions in meadow habitats, seeps, low prairies, riparian habitats, shores, stream banks, marshes and salt marshes, occasionally found in nonwetlands, see *Species Plantarum* 2: 1048. 1753, *Descriptio Graminum in Gallia et Germania* 299. 1802, *Flora Germanica* 1: 252. 1806, *Species Plantarum. Editio quarta* 4(2): 936. 1806, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812, *Systema Vegetabilium* 2: 513-514. 1817, *American Monthly Magazine and Critical Review* 1: 442. 1817, *Flora Upsaliensis* 8: 32. 1820, *Reliquiae Haenkeanae* 1(4-5): 252. 1830, *Plantae Europaeae* 1: 31. 1890, *Memoirs of the Torrey Botanical Club* 5(3): 34. 1894, *Bulletin of the Torrey Botanical Club* 25(2): 104, pl. 328. 1898 and *American Midland Naturalist* 3: 198. 1914, *American Journal of Botany* 2: 301. 1915, *Rhodora* 19: 152. 1917, *Report of the Michigan Academy of Science, Arts and Letters* 21: 350. 1920, *New York State Museum Bulletin* 243-244: 58. 1923, K.J. Norstog, "Some observations on the spikelet of *Hierochloë odorata*." in *Bull. Torrey Bot. Club*. 87: 95-98. 1960, *Blumea* 30(2): 348. 1985.

in English: holy grass, vanilla grass, vanilla sweet grass, sweet grass, common sweet grass, manna grass, buffalo grass, Seneca grass, Zebrovka, Mary's grass

in Finnish: Lännenmaarianheinä, Hyvähajuinen maarianheinä

in Swedish: myskgräs, Ängsmyskgräs

in Japan: kobo

H. pauciflora R. Br. (*Anthoxanthum arcticum* Veldkamp; *Hierochloe pauciflora* f. *setigera* E. Lepage; *Savastana pauciflora* (R. Br.) Scribn. & Merr.)

North America, Canada. Single, tiny, noncaespitose, unbranched, rhizomatous, erect, delicate, glabrous, ligule membranous, sheaths glabrous, flag leaf sheaths inflated, purplish and white inflorescences, panicles spike-like with 1-2 spikelets per branch, spikelets 3-flowered, terminal spikelet hermaphrodite, purple anthers, white stigmas, growing in wet meadows, on fluvial deltas and lowlands, on seepage slopes, disturbed areas, around the margins of ponds, marshes, on wet peaty soils, see *Chloris Melvilliana* 35. 1823 and *Blumea* 30(2): 349. 1985.

in English: Arctic sweet grass

H. pluriflora Koidzumi (*Anthoxanthum pluriflorum* (Koidz.) Veldkamp)

Japan. See *Bulletin de l'Herbier Boissier* 7(9): 646. 1899 and *Botanical Magazine* 31: 136. 1917, *Blumea* 30(2): 349. 1985, *Grasses of Japan and its Neighboring Regions* 510. 1987.

in Japan: ezokobo

H. rariflora Hook.f. (*Anthoxanthum rariflorum* (Hook.f.) Veldkamp)

Tasmania, New South Wales, Victoria, Queensland. Perennial, aromatic, wiry, slender or robust, caespitose, erect or geniculate, often scrambling, much branched above, shortly rhizomatous, membranous ligule short and truncate, leaf sheath smooth and not keeled, no auricles, open panicle green to purple, chasmogamous spikelets, vestigial foliar structure subtending the inflorescence often present or absent, glumes green and purplish and unequal, lower 2 lemmas male and usually unawned, palea clasped by the lemmas, ovary glabrous, shade species, fodder, rare species associated with toxic effects, usually occurs in shaded and rocky habitats, on rocky slopes and hillsides, see *Flora Antarctica* 1: 93. 1845 and *Blumea* 30(2): 349. 1985.

in English: scented holy grass, cane holy grass

H. recurvata (Hack.) Zotov (*Hierochloe fraseri* var. *recurvata* Hack.)

New Zealand. Alpine, loosely tufted, usually more or less rhizomatous, leaf sheath glabrous, lax and spreading inflorescence with slender branches, awn of upper male floret with twisting column, bisexual floret with stout subapical awn, see *Systema Vegetabilium* 2: 515. 1817, *Flora Antarctica* 1: 93. 1845 and *Manual of the New Zealand Flora* 856. 1906, *Transactions and Proceedings of the Royal Society*

of New Zealand 73: 235. 1943, *New Zealand Journal of Botany* 11(3): 566. 1973.

H. redolens (M. Vahl) Roemer & Schultes (*Anthoxanthum redolens* (Vahl) P. Royen; *Anthoxanthum redolens* (Vahl) P. Royen var. *redolens*; *Avena redolens* (Vahl) Pers.; *Disarrenum antarcticum* Labill.; *Hierochloe antarctica* var. *redolens* (Vahl) Brongn.; *Hierochloe arenaria* Steud.; *Hierochloe banksiana* Endl.; *Hierochloe magellanica* (Desr.) Hook.f.; *Hierochloe magellanica* Hook.f. ex Steud.; *Hierochloe magellanica* Hook.f.; *Hierochloe moorei* De Paula; *Hierochloe redolens* R. Br. ex Hook.f., nom. illeg., non *Hierochloe redolens* (Vahl) Roem. & Schult.; *Hierochloe redolens* G. Forst. ex R. Br.; *Hierochloe redolens* var. *magellanica* (Hook.f.) Macloskie; *Hierochloe redolens* (Vahl) Roem. & Schult. var. *redolens*; *Hierochloe redolens* var. *typica* Parodi; *Hierochloe sorianoi* De Paula; *Holcus redolens* Vahl; *Melica magellanica* Desr.; *Savastana antarctica* (Labill.) Speg.; *Torresia antarctica* (Labill.) P. Beauv.; *Torresia magellanica* (Desr.) P. Beauv.; *Torresia redolens* (Vahl) Roem. & Schult.)

Australia, New Guinea, New Zealand, South America. Perennial bunchgrass, unbranched, erect, robust, loosely tufted, rhizomatous with a shortly creeping rhizome, no auricles, leaf sheath purple and not keeled, ligule obtuse and firmly membranous to chartaceous, leaves and culms stiffly erect, foliage aromatic with sweet coumarin odor, panicle exserted and open to nodding above, vestigial foliar structure subtending the inflorescence often present or absent, spikelets 3-flowered, glumes unequal, male or sterile lower lemmas with a dorsal awn, awn of upper sterile floret straight, ovary glabrous, fruit compressed, fodder, medium drought tolerance, high wind and frost tolerance, with the squeezed leaves of *Pittosporum eugenioides* A. Cunn. a remedy for "whitemouth" in Maori babies, the pathogen *Uredo karetu* G. Cunn. associated with *Hierochloe redolens* in New Zealand, pioneer species, usually grows in damp situations, wood's edge, páramos, stream banks, cliff bases, wetlands, seepages and swamps, tussock grassland, in swampy ground, see *Symbolae Botanicae, ...* 2: 101, 102. 1791, *Encyclopédie Méthodique, Botanique* 4: 72. 1797, *Syn. Pl.* 1: 100. 1805, *Novae Hollandiae Plantarum Specimen* 2: 83, f. 232. 1807, *Prodromus Florae Novae Hollandiae* 1: 209-210. 1810, *Essai d'une Nouvelle Agrostographie* 63, 160, 164, 179. 1812, *Systema Vegetabilium* 2: 514, 516. 1817, *Ann. Sci. Obs.* 1: 83. 1829, *Voyage autour du Monde* 144, t. 23. 1829, *Annalen des Wiener Museums der Naturgeschichte* 1: 156. 1836, *Flora Antarctica* 1: 91-92. 1844, *Flora Antarctica* 2: 375. 1846, *Synopsis Plantarum Glumacearum* 1: 14. 1853, *Synopsis Plantarum Glumacearum* 1: 416. 1854, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 81. 1896 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 184. 1902, *Reports of the Princeton University Expeditions to Patagonia ... Botany* 5(1): 167. 1904, *Revista del Museo*

de La Plata (Nueva Serie), Sección Botánica 3: 189, 195, f. 1-3. 1941, *New Zealand J. Bot.* 11: 574. 1973, *Boletín de la Sociedad Argentina de Botánica* 15: 393, 396. 1974, *Darwiniana* 19: 422-457. 1975, *Flora Patagónica* 3: 276-285. 1978, *The Alpine Flora of New Guinea* 2: 1185, f. 382. 1979 [1980], *Blumea* 30: 341. 1985, *Ruizia* 13: 165. 1993, *Allertonia* 7: 345. 1998.

in English: sweet holy grass, holy grass, sweet scented grass
in Colombia: étamo real

Maori name: karetu

H. submutica F. Muell. (*Anthoxanthum submuticum* (F. Muell.) Veldkamp)

Australia, New South Wales, Victoria. Perennial, rare, loosely tufted, unbranched, aromatic, rhizomatous, no auricles, leaf sheaths not keeled, ligule membranous and acute, blade flat, a contracted panicle erect to nodding, vestigial foliar structure subtending the inflorescence often present, spikelets 3-flowered, glumes hyaline and subequal, male or sterile lower lemmas usually awnless, ovary glabrous, fruit compressed, alpine, at high altitudes in moist sites, see *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1855: 48. 1855 and *Blumea* 30(2): 349. 1985.

in English: alpine holy grass

Hilaria Kunth = *Hexarrhena* Presl,
Pleuraphis Torrey, *Schleropelta* Buckley,
Symbasiandra Steud.

Dedicated to the French botanist Auguste (Augustin) François César Prouvençal de Saint-Hilaire, 1779-1853 (Loiret, France), plant collector, explorer, entomologist, naturalist, traveler (Brazil and Uruguay), his writings include *Voyage dans le district des diamans et sur le littoral du Brésil*. Paris 1833 and *Flora Brasiliae Meridionalis*. [Written with A. de Jussieu and J. Cambessèdes] Parisiiis 1824[-1833]. See Francisco Guerra, in *D.S.B.* 12: 72. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 200. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 345. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 358. Boston, Mass. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. Second edition. 4: 1064-1071. Utrecht 1983.

About 9-10 species, southwest U.S., Mexico, Venezuela, Guatemala. Chloridoideae, Cynodonteae, or Chloridoideae, Cynodonteae, Hilarinae, perennial, herbaceous, caespitose,

rhizomatous or stoloniferous, branched or not, auricles present or absent, ligule a fringed membrane to a fringe of hairs, plants bisexual, inflorescence spike-like, deciduous racemes appressed to a central axis, bisexual spikelets, triplets of dimorphous spikelets, 2 spikelets staminate and 1 hermaphrodite, lateral spikelets sessile and dorsally compressed, central spikelet subsessile laterally compressed and hidden by the laterals, 2 glumes more or less equal, large involucrel glumes variable, upper glume 5- to 7-nerved, lemma bilobed, palea present, lodicules absent or present, 3 stamens, ovary glabrous, 2 stigmas reddish, native pasture species, species of open habitats, dry plains, arid and semi-arid areas, type *Hilaria cenchroides* Kunth, see *Nova Genera et Species Plantarum* 1: 116-118, pl. 37. 1815 [1816], *Annals of the Lyceum of Natural History of New York* 1: 148-150, t. 10. 1824, *Reliquiae Haenkeanae* 1(4-5): 326, t. 14. 1830, *Nomenclator Botanicus. Editio secunda* 1: 767. 1840, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 1. 1866 and *Fieldiana, Botany* 24(2): 38-331. 1955, E.R. Sohns, "The genus *Hilaria* (Gramineae)." *Journal of the Washington Academy of Sciences* 46(10): 311-321. 1956, *Flora Novo-Galiciana* 14: 1-436. 1983, *Flora Mesoamericana* 6: 297. 1994, *Journal of Ecology* 86(6): 911-921. Dec 1998, C.A. Hoyt, "Pollen signatures of the arid to humid grasslands of North America." *Journal of Biogeography* 27(3): 687-696. May 2000, *New Phytologist* 150(2): 449-458. May 2001, *Conservation Biology* 15(4): 844-855. Aug 2001 [Indices of Grassland Biodiversity in the Chihuahuan Desert Ecoregion Derived from Remote Sensing], *Contributions from the United States National Herbarium* 41: 128-129, 182-183, 193, 220. 2001, Pierre Martre, Gretchen B. North, Edward G. Bobich and Park S. Nobel, "Root deployment and shoot growth for 2 desert species in response to soil rockiness." *American Journal of Botany* 89: 1933-1939. 2002, Laura F. Hueneke, John P. Anderson, Marta Remmenga and William H. Schlesinger, "Desertification alters patterns of aboveground net primary production in Chihuahuan ecosystems." *Global Change Biology* 8(3): 247-264. Mar 2002, *Oikos* 98(2): 284-298. Aug 2002, *Plant, Cell and Environment* 26(1): 163-182. Jan 2003, *Conservation Biology* 17(2): 420-432, 607-615. Apr 2003, *Oikos* 100(3): 497-506. Mar 2003 [Interspecific interactions and biomass allocation among grassland plant species], *Conservation Biology* 17(6): 1703-1711. Dec 2003, *Global Change Biology* vol. 11, issue 5: 749-756. May 2005, Erika L. Geiger and Guy R. McPherson, "Response of semidesert grasslands invaded by non-native grasses to altered disturbance regimes." *Journal of Biogeography* 32(5): 895-902. May 2005.

Species

H. annua Reeder & C. Reeder

Mexico. Along roadsides, see *Madroño* 35(1): 6-9. 1988.

H. belangeri (Steud.) Nash (*Antheophora belangeri* Steud.; *Hilaria cenchroides* Kunth var. *texana* Vasey; *Hilaria texana* (Vasey) Nash; *Schleropelta stolonifera* Buckley) (named for the French naturalist Charles Paulus Bélanger, 1805-1881, botanical explorer, traveler and botanical collector, sent by the French government to establish a botanical garden at Pondicherry/Pondichéry, India, 1853-1881 Director of the botanical garden in Martinique, author of *Voyage aux Indes Orientales* 1833-1836 Paris and *Flora Brasiliae Meridionalis*. Parisii 1825-1833; see Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. 150-153, 562. Paris, Leipzig 1845; Ignatz Urban (1848-1931), editor, *Symbolae Antillanae*. 3(1): 20. Berlin 1902; J.H. Barnhart, *Biographical notes upon botanists*. 1: 156. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 32. 1972; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 92. Cape Town 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

Northern America, Mexico, U.S. Perennial, erect, nodes villous, stoloniferous, ornamental, forage, native pasture species, turf, golf courses, *pastizal mediano abierto*, see *Synopsis Plantarum Glumacearum* 1: 111. 1854, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 1. 1866, *Proceedings of the American Academy of Arts and Sciences* 24: 80. 1889, *Contributions from the United States National Herbarium* 1(2): 53. 1890 and *Flora of the Southern United States* 68. 1903, *North American Flora* 17(2): 135. 1912, *Proceedings of the Biological Society of Washington* 41: 162. 1928.

in English: curly mesquite

in Mexico: rizado, toboso menudo, zacate galleta, zacate mezquite, zacate rizado

H. belangeri (Steud.) Nash var. ***belangeri*** (*Antheophora belangeri* Steud.)

Northern America, Mexico, U.S. Perennial, ornamental, forage, turf, golf courses, see *North American Flora* 17(2): 135. 1912.

in English: curly mesquite

H. belangeri (Steud.) Nash var. ***longifolia*** (Vasey) A.S. Hitchc.

Northern America, Mexico, U.S. Perennial, ornamental, native pasture species, see *Proceedings of the American Academy of Arts and Sciences* 24: 80. 1889 and *North American Flora* 17(2): 135. 1912, *Manual of the Grasses of the United States* 200, 870. 1935.

in English: longleaf curly mesquite

H. cenchroides Kunth (*Hexarrhena cenchroides* J. Presl)

Mexico, Guatemala. Perennial, caespitose, stoloniferous, nodes pubescent, fodder, medicinal, see *Nova Genera et Species Plantarum* 1: 117-118, t. 37. 1815 [1816], *Reliquiae*

Haenkeanae 1(4-5): 326, t. 14. 1830, *Nomenclator Botanicus. Editio secunda* 1: 767. 1840, *Proceedings of the American Academy of Arts and Sciences* 24: 80. 1889, *Contributions from the United States National Herbarium* 1(2): 53. 1890.

in Spanish: espiga negra, toboso menudo, zacate grama

in Mexico: espiga negra, grama, guishi, toboso, zacate galleta, zacate grama

H. ciliata (Scribner) Nash (*Hilaria cenchroides* var. *ciliata* Scribn.; *Hilaria ciliata* (Scribn.) Sohns, nom. illeg., non *Hilaria ciliata* (Scribn.) Nash)

Mexico. Perennial, caespitose, stoloniferous, decumbent, forage, along roadsides, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 293-294, t. 13, f. 2, 2a. 1891 and *North American Flora* 17(2): 136. 1912, *Journal of the Washington Academy of Sciences* 46: 317. 1956, *Taxon* 33: 126-134. 1984.

in Mexico: tempranero anual

H. hintonii Sohns (dedicated to the English (b. London) George Boole Hinton, 1882-1943 (d. Mexico), plant collector in Mexico (1931-1941), botanist; see Charles Glass, "The *Geohintonia* circus." in *Cactus and Succulent Journal*. vol. 69. 1: 3-7. 1997; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 344. London 1994; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. [b. 1883] 1983; J. Hinton and J. Rzedowski, "George B. Hinton, collector of plants in southwestern Mexico." *J. Arnold Arb.* 53: 141-181. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964)

Mexico. See *Journal of the Washington Academy of Sciences* 46(10): 319, f. 30-34. 1956.

H. jamesii (Torr.) Benth. (*Hilaria sericea* Benth.; *Pleuraphis jamesii* Torr.; *Pleuraphis sericea* Nutt. ex Benth.)

U.S., Texas, New Mexico. See *Annals of the Lyceum of Natural History of New York* 1(1): 148-150, t. 10. 1824, *Journal of the Linnean Society, Botany* 19: 62. 1881.

H. mutica (Buckley) Benth. (*Pleuraphis mutica* Buckley)

U.S., Mexico. Perennial, decumbent at base, stoloniferous, lower nodes pubescent, upper nodes glabrous, leaf blades flat or involute, a good forage, alluvial plains, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 95. 1862, *Journal of the Linnean Society, Botany* 19: 62. 1881.

in English: tobosa grass

in Mexico: toboso, toboso común, zacate toboso

H. semplei Sohns (for A.T. Semple, botanical collector)

Mexico. Forage, heavy soil, see *Journal of the Washington Academy of Sciences* 46(10): 319, f. 36-50. 1956.

H. swallenii Cory (for the American botanist Jason Richard Swallen, 1903-1991)

Mexico, U.S. Perennial, forage, see *Wrightia* 1: 215. 1948, *Taxon* 33: 126-134. 1984.

in English: Swallen's curly-mesquite

in Mexico: toboso esbelto

Himalayacalamus Keng f. = *Drepanostachyum* Keng f., *Thamnocalamus* Munro

Kalamos "a reed, cane" from Himalaya.

About 7-9 species, China, Himalaya, subtropical to temperate. Poaceae, Bambusoideae, Bambuseae, Thamnocalaminae, or Bambusoideae, Bambuseae, Arundinariinae, densely caespitose, forming dense clumps, unicaespitose, erect below, rhizomes pachymorph, very short sympodial rhizomes, culm internodes hollow, culm-sheaths deciduous, leaf-sheath without auricles, ligule pubescent, leaf-blades lacking cross-veins, flowering semelautant, inflorescence a large racemose panicle, spikelets usually with 1 fertile floret, 2 glumes strongly nerved, 3 stamens, 3 stigmas, sometimes included in *Thamnocalamus* Munro, used for weaving, type *Himalayacalamus falconeri* (Hook.f. ex Munro) Keng f., see *Flora Boreali-Americana* 1: 73. 1803, *Transactions of the Linnean Society of London* 26(1): 33-34, 157. 1868, *Gen. Pl.* 3(2): 1208. 1883, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 2: 93. 1887 and *Journal of Bamboo Research* 2(1): 15-16, 23-24. 1983, *Kew Bulletin, Additional Series* 13: 43. 1986, *Kew Bulletin* 44(2): 349-367. 1989, *Edinburgh J. Bot.* 51: 308. 1994, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. The *Bamboos* 5: 61-81. 1997, *Flora of New Zealand* 5: 24-25. 2000, *Contributions from the United States National Herbarium* 39: 62-63, 115-116. 2000.

Species

H. asper Stapleton (*Drepanostachyum asper* (Stapleton) Demoly)

Nepal. See *Edinburgh Journal of Botany* 51(3): 310-312, f. 2. 1994, *Bambou*, Association Européenne du Bambou, EBS Section France 29: 13. 1998.

H. brevinodus Stapleton

Nepal. See *Edinburgh Journal of Botany* 51(3): 312-314, f. 3. 1994.

H. collaris (Yi) Ohmb.

China.

H. cupreus Stapleton

Nepal. See *Edinburgh Journal of Botany* 51(3): 314, f. 4. 1994.

H. falconeri (Hook.f. ex Munro) Keng f. (*Arundinaria falconeri* (Hook.f. ex Munro) Benth. & Hook. ex Gamble; *Arundinaria falconeri* (Hook.f. ex Munro) Benth. & Hook.f. ex Duthie; *Arundinaria falconeri* (Hook.f. ex Munro) Benth. & Hook.f.; *Arundinaria falconeri* (Hook.f. ex Munro) Duthie; *Arundinaria nobilis* Mitf.; *Drepanostachyum falconeri* (Hook.f. ex Munro) J.J.N. Campb. ex D.C. McClint.; *Fargesia collaris* Yi; *Fargesia gyirongensis* Yi; *Himalayacalamus falconeri* (Munro) Keng f.; *Thamnocalamus falconeri* Munro; *Thamnocalamus falconeri* Hook.f. ex Munro) (named for the Scottish (d. Forres, Morayshire) botanist Hugh Falconer, 1808-1865 (London), physician, M.D. Edinburgh 1829, plant collector, 1830-1855 in India, 1832 Superintendent of the Serampore [Saharanpur] Botanical Garden, 1844 Fellow of the Linnean Society, 1845 Fellow of the Royal Society, 1848 Superintendent of the Calcutta Botanic Gardens. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 525. 1965; John Chalinor, in *D.S.B.* 4: 518-519. 1981)

India, Bhutan, Sikkim, Nepal. Erect and arching, slender, shrubby, fistular, thick walls, clump-forming, glaucous and greenish, many branches at each node, rhizomes not running, internodes red and smooth, culm sheaths glabrous, leaf sheaths glabrous, auricles absent, large and loose panicle, inflorescence often purplish, 2 glumes, 3 lodicules ciliate on the margins, stamens exerted, ovary glabrous, 3 stigmas long-plumose, cultivated as an ornamental, plant dies after flowering and seeding, new culms with white wax, edible shoots, culms for weaving and mats, basketry, making furniture, animal fodder, on steep mountain slopes, moist ravines, on banks of water courses, see *Transactions of the Linnean Society of London* 26(1): 34. 1868, *The Fodder Grasses of Northern India* 46. 1883, *Genera Plantarum* 3: 1208. 1883, *Annals of the Royal Botanic Garden, Calcutta* 7: 20. 1896 and *Journal of Bamboo Research* 2(1): 24. 1983, *Kew Bulletin* 44: 363. 1989, *Cell and Chromosome Research* 15(3): 12. 1992 [alt. *Bamboo Soc. Newsletter* 15: 12. 1992], *Edinburgh J. Bot.* 51: 308, 314, 316. 1994. in English: fountain bamboo, fairy bamboo

Local name: singhane

in India: bodputra, chye, deo ringal, dev ringal, kag, nigal, pas mung, phusre nagalo, ringal

H. fimbriatus Stapleton

Nepal. See *Edinburgh Journal of Botany* 51(3): 316-318, f. 5. 1994.

H. gyirongensis (Yi) Ohrnb.

China.

H. hookerianus (Munro) Stapleton (*Arundinaria hookeriana* Munro; *Chimonobambusa hookeriana* (Munro) Nakai;

Drepanostachyum hookerianum (Munro) Keng f.; *Sinarundinaria hookeriana* (Munro) C.S. Chao & Renvoize)

India, Sikkim, Darjeeling, Khasia, Bhutan, Nepal, east Himalayas. Caespitose, internodes smooth, nodes prominently ringed, culm sheaths glabrous, leaf sheaths glabrous, auricles absent, new culms with blue wax, 1-2 spikelets, wild and cultivated, animal fodder, seeds boiled and eaten like rice or made into beer, culms used for weaving, see *Transactions of the Linnean Society of London* 26(1): 29. 1868 and *Journal of the Arnold Arboretum* 6(3): 151. 1925, *Journal of Bamboo Research* 2(1): 17. 1983, *Kew Bulletin* 44(2): 358. 1989, *Bamboo Society Newsletter* 17: 21. 1993, *Edinburgh Journal of Botany* 51(3): 318. 1994.

Local names: padang, parang

H. porcatus Stapleton (*Drepanostachyum porcatum* (Stapleton) Demoly)

Nepal. Used for weaving, see *Edinburgh Journal of Botany* 51(3): 318-320, f. 6. 1994, *Bambou*, Association Européenne du Bambou, EBS Section France 29: 13. 1998.

Hippagrostis Kuntze = *Oplismenus* P. Beauv.

From the Greek *hippos* "horse" and *agrostis* "grass, weed, couch grass," forage for horses.

Panicoideae, Paniceae, Panicinae, type *Panicum burmannii* Retz., see *Observationes Botanicae* 3: 10. 1783, *Flore d'Oware* 2: 14, 15, t. 68, f. 1. 1807 [1810], *Revisio Generum Plantarum* 2: 776. 1891 and *Contr. U.S. Natl. Herb.* 22(3): 123. 1920, *Contributions from the United States National Herbarium* 46: 250, 299-303. 2003.

Hitchcockella A. Camus

After the American botanist Albert Spear Hitchcock (né Jennings), 1865-1935 (d. on board the S.S. *City of Norfolk*), agrostologist, explorer and plant explorer, plant collector, promoter of scientific researches, among his numerous and valuable writings are *A Text-book of Grasses*. New York 1914, *The Genera of Grasses of the United States*. Washington [D.C.] 1920, "New species of *Aulacolepis* and other grasses." in *Jour. Wash. Acad. Sci.* 24: 7. 1934, *The Grasses of Hawaii*. Honolulu 1922, "The grasses of Ecuador, Perú, and Bolivia." *Contr. U.S. Natl. Herb.* 24(8): i-v, 291-556, vii-xx. 1927 and *The Grasses of Central America*. Washington [D.C.] 1930, with Paul Carpenter Standley (1884-1963) wrote *Flora of the District of Columbia and Vicinity*. Washington [D.C.] 1919, with Mary Agnes Chase (née Merrill, 1869-1963) wrote *Grasses of the West Indies*. Washington [D.C.] 1917. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 182. 1965; J. Ewan, editor, *A Short History of Botany in the United States*. 14, 20. New York and London 1969; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence*

of John Torrey. Library of the New York Botanical Garden. 224. 1973; Elmer Drew Merrill, "A botanical bibliography of the islands of the Pacific." *Contr. U.S. Natl. Herb.* 30(1): 151-152. 1947; Ignatz Urban, editor, *Symbolae Antillanae*. 1: 70-71. 1898, 3: 61. 1902; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 177. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950.

One species, Madagascar. Bambusoideae, Bambusoideae, Bambuseae, Hickeliinae, perennial, slender, persistent, shrubby, woody, leafy, branched, plants bisexual, inflorescence racemose of 1-3 spikelets, involucre leaf blades protecting the inflorescence, spikelets 1-flowered, 2-4 or several glumes, upper glume lemma-like, lemma keeled and compressed, palea present, stamens 6, ovary glabrous, 2 stigmas, type *Hitchcockella baronii* A. Camus, see *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 181: 253-255. 1925.

Species

H. baronii A. Camus (for the English (b. Westmorland) missionary Rev. Richard Baron, 1847-1907 (d. Lancs), botanist, plant collector in Madagascar, 1882 Fellow of the Linnean Society; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 47. London 1994)

Madagascar. See *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 181: 253. 1925.

Holboellia Hook. = *Holboellia* Wall.
(Lardizabalaceae), *Lopholepis* Decne.

For the Danish botanist Fredrik Ludvig Holbøll, 1765-1829; see Georg Christian Wittstein (1810-1887), *Etymologisch-botanisches Handwörterbuch*. 447. Ansbach 1852; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 114. 1989.

Cynodonteae, type *Holboellia ornithocephala* Hook., see *Tentamen Florae Napalensis Illustratae* 23. Calcutta and Serampore 1824-1826, *Botanical Miscellany* 2: 144. 1831, *Archives du Muséum d'Histoire Naturelle* 1: 147. 1839.

Holcolemma Stapf & C.E. Hubb.

From the Greek *holkos* "a strap, a furrow, a kind of grain" and *lemma* "skin, bark, scale, a sheath."

Four species, Asia and Africa, southern India, Sri Lanka, East Africa, Australia, Queensland. Panicoideae, Panicodae, Paniceae, annual or perennial, weak, slender, herbaceous, geniculately ascending, caespitose to loosely caespitose, knotty rootstock, leaf blades hirsute or hispid, sheaths rounded on the back, ligule a short fringed membrane, leaves flat, auricles absent, plants bisexual, inflorescence a panicle contracted and spicate, spikelets often clustered, the terminal spikelet of each branch subtended by an inconspicuous bristle, spikelets compressed laterally and awnless, upper floret perfect, lower floret male or barren, 2 glumes shorter than spikelet, lower glume 3- to 9-nerved, upper glume 3-5-13-nerved, lemma herbaceous, lower lemma sulcate, upper lemma gibbous and rugose, palea with enlarged keels, free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, in dry areas, shade species, open habitats, coastal, grassland, weedy places, resembling *Paspalidium*, type *Holcolemma canaliculatum* (Nees ex Steud.) Stapf & C.E. Hubb., see *Bulletin of Miscellaneous Information Kew* 1929: 244. 1929, *Kew Bulletin* 32(4): 773-774. 1978, *Flora of Tropical East Africa* 451-898. 1982.

Species

H. canaliculatum (Nees ex Steud.) Stapf & C.E. Hubb. (*Aira interrupta* Rottler ex Steud.; *Hemigymnia canaliculata* (Nees ex Steud.) Alston; *Panicum canaliculatum* Nees ex Steud.; *Panicum canaliculatum* Nees; *Panicum myurum* Wight ex Steud.; *Panicum stenostachyum* Thwaites)

Southern India, Sri Lanka. Perennial, tufted, slender, decumbent, stoloniferous, sheaths usually villous to hispid, ligule a ciliate membrane, small clusters of spikelets, 2 glumes more or less subequal, see *Cat. Indian Pl.* 95, no. 1624. 1833, *Synopsis Plantarum Glumacearum* 1: 55. 1854, *Enum. Pl. Zeyl.* 436. 1864 and *Bulletin of Miscellaneous Information Kew* 1929: 246. 1929, *Handb. Fl. Ceylon* 6: 324. 1931, *Grasses of Ceylon* 123. 1956, *Grasses of Burma* ... 313. 1960.

H. dispar W.D. Clayton (*Panicum inaequale* F. Muell.; *Paspalidium inaequale* (F. Muell.) Hughes; *Setaria inaequalis* (F. Muell.) R.D. Webster)

Africa, Australia. Inflorescence spreading and raceme-like, upper glume papery, see *Fragmenta Phytographiae Australiae* 8: 189. 1874 and *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Kew Bulletin* 42(2): 401-403. 1987, *Sida* 16(3): 443. 1995.

H. inaequale Clayton

Tanzania, Kenya. Perennial, slender, loosely tufted, knotty rootstock, leaves linear, panicle with short appressed branches, spikelets lanceolate, glumes obtuse, lower floret male, upper lemma rugose and shorter than the lower, degraded areas, bushland, grassland, coastal, see *Fragmenta Phytographiae Australiae* 8: 189. 1874 and *Bulletin of*

Miscellaneous Information Kew 1923(9): 317. 1923, *Kew Bulletin* 32(4): 773. 1978, *Sida* 16(3): 443. 1995.

H. transiens (K. Schum.) Stapf & C.E. Hubb. (*Setaria transiens* K. Schum.)

Tanzania. See *Die Pflanzenwelt Ost-Afrikas* 5C: 105. 1895 and *Bulletin of Miscellaneous Information Kew* 1929: 246. 1929.

Holcus L. = *Arthrochloa* R. Br., *Ginannia* Bubani, *Ginannia* Scop. (Fabaceae, alt. Leguminosae), *Homalachna* (Benth. & Hook.) Engl. & Prantl, *Homalachna* Kuntze, *Homalachne* Kuntze, *Homalachne* (Benth. & Hook.) Kuntze, *Homalachne* (Benth. & Hook.) Engl. & Prantl, *Nothololcus* Nash, *Nothololcus* Hitchc., *Nothololcus* Nash ex Hitchc., *Sorghum* Adans., *Sorghum* Adans.

From the Latin *holcus*, i “a barley, a mouse-barley, *Hordeum murinum* Linn.” (Plinius); *holkos*, a Greek name for “a kind of grain or a species of grass or cereal,” perhaps *Sorghum*; see Carl Linnaeus, *Species Plantarum*. 1047. 1753 and *Genera Plantarum*. Edition 5. 469. 1754.

Some 6-9 species, temperate Eurasia, Europe to Asia Minor and Caucasus, Mediterranean to Middle East, North Africa, Canary Islands. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Holcinae, perennial or rarely annual, herbaceous, tufted, leafy with soft velvety foliage, long-rhizomatous to stoloniferous, caespitose, stems erect and flimsy, unbranched, hollow internodes, auricles absent, sheaths open, ligule more or less entire and membranous, leaf blades erect linear to linear-lanceolate, plants bisexual, inflorescence a compound panicle erect or nodding, solitary spikelets stalked and laterally flattened, lower floret perfect and awnless, upper floret staminate with awned lemma, dorsal awn geniculate or hooked or straight, 2 glumes equal to subequal and keeled, lower glume 1-nerved, upper glume 3-nerved, shiny and obtuse lemmas, lower lemma awnless, callus very short, membranous palea narrow and 2-keeled, 2 lodicules free and membranous, 3 stamens, ovary apex glabrous, styles free, 2 stigmas, these ornamental grasses can be increased by lifting and dividing them, weed species, cultivated fodder, invasive and nuisance, shade species or of open habitats, occur around ditches, springs, wet meadows, grasslands, open woodland, disturbed ground, often in *Sorghum* Moench, intergrading with *Deschampsia* P. Beauv., type *Holcus lanatus* L., see *Species Plantarum* 2: 1047-1048. 1753, *Familles des Plantes* 2: 38, 606. 1763, *Introductio ad Historiam Naturalem* 300. Pragae [Praha] 1777, *Chloris Melvillianae: A List of Plants Collected in Melville Island ...* 35. London 1823, *Genera Plantarum* 3(2): 1159. 1883 and *Flora Pyrenaea ...* 4: 321. Milano

1901-1902, *Lexicon Generum Phanerogamarum* 285. 1903, *Die Natürlichen Pflanzenfamilien* 3: 13. 1906, *A Flora of California* 1: 126. 1912, *An Illustrated Flora of the Northern United States* 1: 109, 214. 1913, *New Phytol.* 61: 72-84. 1962, *Botanical Journal of the Linnean Society* 64: 183-198. 1971, *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen, Series C: Biological and Medical Sciences* 85: 413-437. 1982, *Kew Bulletin* 40(4): 727-729. 1984 [1985], *Flora Mesoamericana* 6: 235. 1994, *Journal of Ecology* 86(4): 588-596. Aug 1998, *Journal of Ecology* 87(5): 873-884. Oct 1999, *Grasses: Systematics and Evolution* 61-74. 2000, *Functional Ecology* 15(2): 155-164. Apr 2001, *Plant, Cell and Environment* 24(7): 713-722. July 2001, *Ecology Letters* 4(5): 439-443. Sep 2001, *Journal of Ecology* 89(5): 711-722. Oct 2001, *Ecology Letters* 4(6): 585-594. Nov 2001, *Ecological Research* 16(5): 833-843, Dec 2001, *Ecological Entomology* 27(1): 84-93. Feb 2002, *New Phytologist* 154(1): 53-64. Apr 2002, *Restoration Ecology* 10(2): 173-184. June 2002, *New Phytologist* 155(2): 219-225, 257-264. Aug 2002, *Contributions from the United States National Herbarium* 48: 121, 370-371, 387-388, 468, 614. 2003, *Ecology Letters* 6(3): 170-175, Mar 2003, *Oikos* 104(1): 77-90. Jan 2004, *New Phytologist* 162(2): 365-376. May 2004, *Physiologia Plantarum* 124(1): 41-49. May 2005, *Australian Journal of Entomology* 44(2): 144-149. May 2005, *Allergy* 60(5): 619-625. May 2005, *Allergy* 60(6): 801-807. June 2005, *Environmental Microbiology* 7(6): 780-788. June 2005, *Oikos* 110(1): 115-123. July 2005.

Species

H. annuus Salzm. ex C.A. Mey. (*Holcus setosus* Trin.)

Europe. Annual, weed, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 87. 1839 and *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990.

H. caespitosus Boiss. (*Deschampsia minor* Clayton; *Homalachne caespitosa* (Boiss.) Pilg.; *Homoiachne caespitosa* (Boiss.) Pilg.)

Europe, Spain, Sierra Nevada. Vulnerable species, rhizomatous, densely tufted, mountain, dry and rocky places, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 227, 556. 1949, *Kew Bulletin* 40: 727. 1985.

H. grandiflorus Boiss. & Reut. (*Homalachne grandiflora* (Boiss. & Reut.) Pilg.)

Spain. Rare species, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 227. 1949.

H. lanatus L. (*Aira holcus-lanata* Vill.; *Aira holcus-lanatus* (L.) Vill.; *Avena lanata* (L.) Cav.; *Avena lanata* (L.) Koeler; *Avena pallida* Salisb., nom. illeg., non *Avena pallida*

Thunb.; *Ginannia lanata* (L.) F.T. Hubb.; *Ginannia pubescens* Bubani; *Holcus argenteus* C. Agardh ex Roem. & Schult.; *Holcus glaucus* Willk.; *Holcus mollis* L.; *Notholcus lanatus* (L.) Nash; *Notholcus lanatus* (L.) Nash ex Hitchc.; *Notholcus* Nash ex Hitchc.)

Europe, Eurasia, North Africa, temperate areas. Perennial and usually tufted, adaptable, sea level to montane, sometimes subalpine, gray-green, medium size, fibrous-rooted, erect or geniculate, lacking rhizomes, sometimes stoloniferous, downy or tomentose or softly villous to velvety, stems erect and clustered, unbranched, joints glabrous, hairy ligule membranous and toothed or dentate, flat leaves acuminate and velvety, flowers arranged in a dense or sparse panicle ovoid-oblong, chasmogamous and crowded spikelets light green to pink-purple to violet, florets with a short hooked awn or awnless, glumes boat-shaped and downy, upper glume usually shortly awn-tipped, bisexual lemma acute and keeled, male lemma with a short dorsal awn, awn of upper lemma uncinat, palea hyaline and 2-keeled, anthers yellow, pasture grass, poor forage grass, low palatability to stock, velvety leaves generally avoided by stock, widespread temperate species, an ancestor of the polyploid complex represented by *Holcus mollis* L., a prolific seeder, moderately drought-tolerant, in some countries it is used as a pioneer grass in erodible areas, reported to produce hydrocyanic acid poisoning, a weed of fine turf, an aggressive weed and can become dominant if not controlled, cultivated fodder, sometimes grown for hay, ornamental and attractive in flower, frequently occurs on poor and moist soils, colonises destabilised pastures mostly in wetter areas, optimum on cool and humid soils, moist and fertile soils, meadows, river shores and roadsides, wet localities and damp sites, in white sandy soil, swamps, in disturbed sites, rocky slope, shady areas, low ground or ditches, sterile fields, old fields, see *Species Plantarum* 2: 1048. 1753, *Systema Naturae, Editio Decima* 2: 1305. 1759, *Histoire des Plantes de Dauphiné* 2: 87. 1787, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 24. Londini [London] 1796, *Descriptio Graminum in Gallia et Germania* 303. Francofurti ad Moe-num 1802 and *Flora Pyrenaea ...* 4: 321. 1901, *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten. Beihefte* 3: 63. 1905, *A Flora of California* 1: 126. 1912, *An Illustrated Flora of the Northern United States* 1: 214. 1913, *Rhodora* 18: 234. 1916, *Catálogo de la flora del Rif oriental y principalmente de las Cabilas limitrofes con Melilla...* 128. Melilla 1933, *Phytologia* 38(3): 174. 1978, *Regnum Veg.* 127: 54. 1993, *Grass and Forage Science* 52(3): 336-339. Sep 1997, *European Journal of Biochemistry* 252(2): 200-206. Mar 1998, *Taxon* 49(2): 251. 2000, Jonathan H. Titus and Jan Leps, "The response of arbuscular mycorrhizae to fertilization, mowing, and removal of dominant species in a diverse oligotrophic wet meadow." *Am. J. Bot.* 87: 392-401. 2000, *New Phytologist* 146(3): 493-501. June 2000, *Plant, Cell and Environment* 24(7): 713-722. July 2001, *Journal of Ecology* vol. 90, issue 1: 121-129. Feb

2002, *New Phytologist* 155(1): 163-171. July 2002, *Botanical Journal of the Linnean Society* 139(3): 311-315. July 2002, *New Phytologist* 155(2): 219-225. Aug 2002 [Is differential phytochelatin production related to decreased arsenate influx in arsenate tolerant *Holcus lanatus*?], *Journal of Ecology* 90(5): 753-761. Oct 2002, P.S. Dyer and R.E. Bradshaw, "First report of apothecia of *Tapesia yalundae* occurring on the wild grass *Holcus lanatus* (Yorkshire Fog) in New Zealand." *Plant Pathology* vol. 51, issue 6: 806. Dec 2002, *Entomologia Experimentalis et Applicata* vol. 113, issue 2: 109-116. Nov 2004.

in English: common velvet grass, velvet grass, Yorkshire fog, meadow softgrass, mesquite, tufted softgrass, creeping softgrass, soft meadow grass, woolly soft grass, soft grass
in Spanish: falsa poa

in South Africa: blinkgras, fluweelgras, witgras

H. mollis L. (*Aira holcus-mollis* Vill.; *Aira mollis* (L.) Schreb.; *Avena mollis* (L.) Koeler, nom. illeg., non *Coelachyrum indicum* Hack.; *Avena sylvatica* Salisb.; *Ginannia mollis* (L.) Bubani; *Ginannia mollis* (L.) H. St. John, nom. illeg., non *Ginannia mollis* (L.) Bubani; *Notholcus mollis* (L.) Hitchc.)

Temperate Eurasia. Perennial, sea level to montane, medium size, strongly rhizomatous with thin and creeping rhizomes, soft velvety foliage, stems erect or spreading often decumbent, joints downy or densely hairy to bearded, auricles absent, sheaths glabrous or hirsute, velvety ligule membranous and erose, grayish green leaves acute and flat, inflorescence reddish white to pink, loose or contracted panicles oblong to ovate, florets 2, lower floret perfect and upper staminate, spikelets falling entire, 2 glumes hairy and papery, upper glume awnless, bisexual lemma acute and keeled, male lemma with a slightly bent or straight awn but not hooked, palea slightly shorter than the lemmas, ovary glabrous, fruit glabrous, weed naturalized elsewhere, invasive, ornamental, fodder plant, useful for ground covering, frequent in dry grassy places, shady hedgebanks, on acid soils in open woodland, damp areas, damp pastures, lawns, wasteland, see *Systema Naturae, Editio Decima* 2: 1305. 1759, *Spicilegium Florae Lipsicae* 51. 1771, *Histoire des Plantes de Dauphiné* 2: 88. 1787, *Prodromus stirpium in horto ad Chapel Allerton vigentium* 24. 1796, *Descriptio Graminum in Gallia et Germania* 300. 1802 and *Flora Pyrenaea ...* 4: 321. 1901, *American Journal of Botany* 2: 304. 1915, *Proceedings of the Biological Society of Washington* 41(45): 192. 1928, *Grasses of Ceylon* 49. 1956, *Grasses of Burma ...* 443. 1960, *Lagascalia* 12: 124-128. 1983, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, M.-M. Duckert-Henriod, *Flora Mediterranea* 1: 229-236. 1991, *Taxon* 49(2): 251. 2000.

in English: creeping fog, creeping softgrass, softgrass, German velvet grass, soft fog-grass, creeping soft rush

in French: houlque molle

H. mollis L. subsp. *mollis*

Europe. Stems not thickened and tuberous at the base, a purplish to brownish lax panicle, see *Boletim da Sociedade Broteriana*, ser. 2 63: 29-66. 1990.

in English: creeping fog, creeping softgrass, German velvet grass, soft fog-grass

H. mollis L. subsp. *reuteri* (Boiss.) Tutin (*Holcus mollis* subsp. *reuteri* (Boiss.) Malagarriga; *Holcus reuteri* Boiss.)

Europe, Spain. Perennial, stems thickened and tuberous at the base, inflorescence a whitish narrow panicle, see *Pugillus Plantarum Novarum Africae Borealis Hispaniaeque Australis* 119. Genève 1852 and *Las Subesp. y Variac. Geogr.* 28. 1973, *Botanical Journal of the Linnean Society* 76(4): 363. 1978.

H. setiger Nees

Europe. Annual, tufted or solitary, dark green, leaves mostly basal, auricles absent, basal leaf sheaths keeled, ligule membranous, a purplish panicle erect and contracted, inflorescence of chasmogamous and overlapping spikelets, upper floret sterile, hermaphrodite florets protandrous, upper glume narrowly elliptic or oblong, palea gaping and narrowly ovate, free lodicules, anthers yellow or purple, ovary glabrous, found in sandy soils, sandy loam, damp places, sheltered areas.

H. setiglumis Boiss. & Reut.

Europe. Glumes awned, sandy areas, hillsides, see *Diagnoses Plantarum Novarum Hispanicarum* 27. 1842 and *Anales del Jardín Botánico de Madrid* 45: 273. 1988.

H. setiglumis Boiss. & Reut. subsp. *duriensis* Pinto da Silva

Europe, Portugal, Spain. Indeterminate species.

Hologamium Nees = *Sehima* Forssk.

From the Greek *holos* "complete, all, entire" and *gameo* "to marry."

Panicoideae, Andropogoneae, Ischaeminae, type *Hologamium nervosum* (Rottler ex Roem. & Schult.) Nees, see *Flora Aegyptiaco-Arabica* 178. 1775, *Edinburgh New Philosophical Journal* 18: 185. 1835 and *Contributions from the United States National Herbarium* 46: 569. 2003.

Holosetum Steud. = *Alloteropsis* J. Presl

Greek *holos* "whole, all, entire" and Latin *saeta* (*seta*), *ae* "a bristle, hair."

Panicoideae, Panicoideae, Paniceae, Setariinae, or Panicoideae, Paniceae, Paspalinae, type *Holosetum philippicum* Steud., see *Reliquiae Haenkeanae* 1(4-5): 343-344, t. 47.

1830, *Synopsis Plantarum Glumacearum* 1: 118. 1854 [1855] and *Contributions from the United States National Herbarium* 12(6): 210. 1909, *Annali di Botanica* 13: 47. 1914, *Willdenowia* 4: 209, 21. 1966, *Flora of Tropical East Africa* 451-898. 1982, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Botanical Journal of the Linnean Society* 97: 255-259. 1988, *ASBS Symposium 1990: Indo-Pacific Biogeography*, 14. 1990, *Contributions from the United States National Herbarium* 46: 16. 2003.

Holttumochloa K.M. Wong

After the British botanist Richard Eric Holttum, 1895-1990 (d. London), a specialist on ferns, professor of botany, bambusologist, traveler and botanical explorer (Malay Peninsula), 1927 a Fellow of the Linnean Society; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 197. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 180. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 351. London 1994.

Three species, Peninsular Malaysia. Bambuseae, Bambusiinae, rhizomes sympodial, culms erect to suberect, slender, never climbing, 1 to several pseudospikelets developing in clusters, 1-3 small empty bracts, 1-2 empty glumes, 1-2 bracts subtending prophyllate buds, 2-5 perfect flowers and a terminal vestigial flower, lodicules 3, 6 stamens, 3 stigmas plumose, upper montane forests, hill forest, type *Holttumochloa magica* (Ridl.) K.M. Wong, see *Kew Bulletin* 48(3): 518, 520, f. 1-2. 1993.

Species***H. korbuensis*** K.M. Wong (Gunung Korbu, Perak)

Peninsular Malaysia, Perak. See *Kew Bulletin* 48(3): 520, f. 3. 1993.

H. magica (Ridley) K.M. Wong (*Bambusa elegans* Ridl.; *Bambusa magica* Ridl.)

Peninsular Malaysia. Elegant, ornamental, densely clumped, ascribed with magical properties, see *Journal of the Straits Branch of the Royal Asiatic Society* 44: 208-209. 1905, *Gard. Bull. Sing.* 16: 75. 1958, *Kew Bulletin* 48(3): 520, f. 1-2. 1993.

Local name: buluh perindu

H. pubescens K.M. Wong

Peninsular Malaysia, Kelantan. See *Kew Bulletin* 48(3): 523. 1993.

Homalachna (Benth. & Hook.) Engl. & Prantl
= *Holcus* L.

Greek *homalos* “even, regular, smooth, flat” and *achne* “chaff, glume, scale.”

Poodeae, Aveneae, or Pooideae, Poeae, Holcinae, see *Species Plantarum* 2: 1047-1048. 1753 and *Lexicon Generum Phanerogamarum* 285. 1903, *Die Natürlichen Pflanzenfamilien* 3: 13. 1906, *Contributions from the United States National Herbarium* 48: 387-388. 2003.

Homalachna (Benth. & Hook.) Kuntze =
Holcus L., *Homalachna* (Benth. & Hook.)
Engl. & Prantl

Greek *homalos* “even, regular, smooth, flat” and *achne* “chaff, glume, scale.”

Poodeae, Aveneae, or Pooideae, Poeae, Holcinae, see *Species Plantarum* 2: 1047-1048. 1753, *Genera Plantarum* 3(2): 1159. 1883 and *Lexicon Generum Phanerogamarum* 285. 1903, *Die Natürlichen Pflanzenfamilien* 3: 13. 1906, *Contributions from the United States National Herbarium* 48: 387-388. 2003.

Homalachne (Benth. & Hook.) Engl. & Prantl
= *Holcus* L.

Greek *homalos* “even, regular, smooth, flat” and *achne* “chaff, glume, scale.”

Poodeae, Aveneae, or Pooideae, Poeae, Holcinae, *Holcus* sect. *Homalachne* Benth. & Hook., see *Species Plantarum* 2: 1047-1048. 1753, *Familles des Plantes* 2: 38, 606. 1763, *Introductio ad Historiam Naturalem* 300. Pragae [Praha] 1777, *Chloris Melvilliana*. A list of plants collected in Melville Island... 35. London 1823, *Genera Plantarum* 3(2): 1159. 1883 and *Flora Pyrenaea* ... 4: 321. Milano 1901-1902, *Lexicon Generum Phanerogamarum* 285. 1903, *Die Natürlichen Pflanzenfamilien* 3: 13. 1906, *A Flora of California* 1: 126. 1912, *An Illustrated Flora of the Northern United States* 1: 109, 214. 1913, *New Phytol.* 61: 72-84. 1962, *Kew Bulletin* 40(4): 727-729. 1984 [1985], *Contributions from the United States National Herbarium* 48: 387-388. 2003.

Homalachne (Benth. & Hook.) Kuntze =
Holcus L., *Homalachna* (Benth. & Hook.)
Engl. & Prantl

Greek *homalos* “even, regular, smooth, flat” and *achne* “chaff, glume, scale.”

Poodeae, Aveneae, or Pooideae, Poeae, Holcinae, *Holcus* sect. *Homalachne* Benth. & Hook., see *Species Plantarum* 2: 1047-1048. 1753, *Familles des Plantes* 2: 38, 606. 1763, *Introductio ad Historiam Naturalem* 300. Pragae [Praha] 1777, *Chloris Melvilliana*. A list of plants collected in Melville Island... 35. London 1823, *Genera Plantarum* 3(2): 1159. 1883 and *Flora Pyrenaea* ... 4: 321. Milano 1901-1902, *Lexicon Generum Phanerogamarum* 285. 1903, *Die Natürlichen Pflanzenfamilien* 3: 13. 1906, *A Flora of California* 1: 126. 1912, *An Illustrated Flora of the Northern United States* 1: 109, 214. 1913, *New Phytol.* 61: 72-84. 1962, *Kew Bulletin* 40(4): 727-729. 1984 [1985], *Contributions from the United States National Herbarium* 48: 387-388. 2003.

Homalocenchrus Miègev. = *Leersia* Sw.,
Leersia Sol. ex Sw.

Greek *homalos* “smooth, flat” and *kenchros* “millet,” genus *Cenchrus* L., referring to the flat seeds.

Bambusoideae, Oryzodae, Oryzeae, Oryzinae, or Ehrhartoideae, Oryzeae, Oryzinae, type *Homalocenchrus oryzoides* (L.) Haller, see *Acta Helvetica, Physico-Mathematico-Anatomico-Botanico-Medica* 4: 307. 1760, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 201. 1768, *Nova genera et species plantarum seu Prodromus* descriptionum vegetabilium maximam partem incognitorum. 1, 21. 1788, William Griffith (1810-1845), *Icones plantarum asiaticarum*. 3: t. 144. Calcutta 1847-1854, *Index Kewensis* 1: 312. 1895 and *Contributions from the United States National Herbarium* 12(6): 183-258, vii-xi. 1909, E. Launert, “A survey of the genus *Leersia* in Africa.” *Senckenbergiana Biologica* 46: 129-153. 1965, *Iowa St. J. Sci.* 44: 215-270. 1969, *Journal of the Arnold Arboretum* 69(3): 263. 1988, *Flora Mesoamericana* 6: 221-222. 1994, *Contributions from the United States National Herbarium* 39: 64-67. 2000.

Homoeatherum Nees = *Andropogon* L.,
Homoeatherum Nees ex Lindl.

Greek *homo-* “alike, like, resembling” and *ather* “stalk, barb, spine, beard, awn.”

Panicoideae, Andropogoneae, Andropogoninae, type *Homoeatherum chinense* Nees, see *Species Plantarum* 2: 1045-1046. 1753, *A Natural System of Botany* edition 2 448. 1836 and *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64, 251. 2003.

Homoiachne Pilg. = *Deschampsia* P. Beauv.

From the Greek *homoios* “like, resembling, the same” and *achne* “chaff, glume, scale.”

Pooideae, Poeae, Airinae, type *Homoiachne caespitosa* (Boiss.) Pilg., see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Hortus Regius Botanicus Berolinensis* 1: 122. 1827, *Flora Excursoria Hafniensis* 32. 1838, *Botaniska Notiser* 1842: 141, 178. 1842, *Flore du Département des Hautes-Pyrénées* 82. 1867, *A Manual of the Botany of the Northern United States* 605. 1848, *Flora italiana, ossia descrizione delle piante ...* 1: 246. 1848, *Flora Rossica* 4(13): 420, 422. 1852, *Synopsis Plantarum Glumacearum* 1: 423, 425. 1854, *A Manual of the Botany of the Northern United States. Second Edition* 572. 1856, *Enumeratio Plantarum Transsylvanicae* 753. 1866, *Die Natürlichen Pflanzenfamilien* 2(2): 54. 1887 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 556. 1949, *British Antarctic Survey Scientific Reports* 60: 1-202, 1-6 pls. 1968, *Willdenowia* 8(1): 83. 1977, *Contributions from the United States National Herbarium* 48: 245-256, 388. 2003.

Homolepis Chase

From the Greek *homos* “similar” and *lepis* “scale.”

About 3-4 species, tropical America, Mexico to Brazil. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, annual or perennial, unarmed, erect, creeping, more or less scandent, herbaceous, semiaquatic, tufted, branched, stoloniferous, rooting at the nodes, auricles present, leaf sheaths hispid, ligule membranous or ciliate, plants bisexual, open inflorescence paniculate, lanceolate spikelets flattened and entirely enclosed by the pair of glumes, lower floret sterile or male, upper floret bisexual, 2 glumes more or less equal, lower glume 5- to 9-nerved, upper glume 7- to 9-nerved, lower lemma margins pilose, thin upper lemma cartilaginous with flat margins, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, pioneer species, weed, shade, wet places, openings, ponds, open areas, moist woods, along the edge of the rivers, along roadsides and trails, floodplains, along riverbanks, marshy sites, inundated savannah, resembling *Panicum*, type *Homolepis aturensis* (Kunth) Chase, see *Species Plantarum* 1: 55. 1753, *Nova Genera et Species Plantarum seu Prodrromus* 24. 1788 and *Proceedings of the Biological Society of Washington* 24: 146, f. 12. 1911, *North American Flora* 3(2): 200, 205. 1915, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Hickenia* 1(29): 156. 1978, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Smithsonian Contributions to Botany* 59: i-iii, 1-63. 1985, *Flora of the*

Guianas. Series A, Phanerogams 8: 257-262. 1990, *Edinburgh Journal of Botany* 48: 73-80. 1991, *Flora Mesoamericana* 6: 327-328. 1994, *Global Ecology and Biogeography* 7(6): 441-455. Nov 1998 [The nature of savannah heterogeneity in the Orinoco Basin], *Contributions from the United States National Herbarium* 46: 251-252. 2003.

Species

H. aturensis (Kunth) Chase (*Panicum aturense* Kunth; *Panicum blepharophorum* J. Presl; *Panicum tumescens* Trin.; *Panicum viridiflorum* Nees)

Southern America. Perennial, caespitose, semiaquatic, glabrous, stoloniferous, herbaceous, compressed, hollow, erect, decumbent, straggling, spreading, creeping and rooting at the nodes, leaf sheaths margins silky hairy, lax panicles densely flowered, spikelets narrowly lanceolate, lower floret sterile, upper floret acuminate, densely matted, cultivated, open habitats, along roadsides, seasonally inundated ground, riverbanks, disturbed areas, savannah, near water or in shallow water, see *Nova Genera et Species Plantarum* 1: 103, t. 33. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 135-136. 1829, *Reliquiae Haenkeanae* 1(4-5): 312. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 316. 1834 and *Proceedings of the Biological Society of Washington* 24: 146, f. 12. 1911. in Spanish: carricillo

H. glutinosa (Sw.) Zuloaga & Sodestr. (*Panicum glutinosum* Sw.; *Panicum lindenii* Griseb.; *Panicum obtusiflorum* A. Rich., nom. illeg., non *Panicum obtusiflorum* Hochst. ex A. Rich.)

America tropical, Ecuador, Galápagos, Andean. Perennial, strongly viscid, caespitose, rhizomatous, coarse, herbaceous, hollow, erect, prostrate to semiprostrate, leaning, procumbent, creeping, rooting at the nodes, papery leaves, inflorescence erect, panicle exerted, sticky spikelets, lower floret sterile, weed species, invasive, found on grassy slopes, hillsides, open areas, disturbed areas, along roadsides, humid forests, abandoned plantations, dense shade, see *Nova Genera et Species Plantarum seu Prodrromus* 24. 1788, *Histoire Physique, Politique et Naturelle de l'Île de Cuba ... Botanique. — Plantes Vasculaires* 3: 305. 1853, *Catalogus plantarum cubensium ...* 233. Leipzig 1866 and *Smithsonian Contributions to Botany* 59: 19. 1985.

in English: sticky panic grass

in Peru: parentoqui, palentoqui

H. isocalycia (Meyer) Chase (also spelled *isocalycina*) (*Panicum billbergianum* Beurl.; *Panicum glutinosum* Sw.; *Panicum isocalycium* G. Mey.; *Panicum langei* E. Fourn.; *Panicum olyrachne* Beurl.; *Panicum renggeri* Steud.; *Panicum tumescens* Trin.) (named for the Swedish botanist Gustaf Johan Billberg, 1772-1844, zoologist, author of

Botanicon Scandinaviae seu plantarum in Suecia et Norvegia sponte crescentium icones ... Stockholm, Uppsala, Carlstad, Arosia, Orebrô 1822; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 186. 1965)

Brazil. Annual or short-lived perennial, herbaceous, loosely tufted, hollow, trailing, decumbent or scrambling and often rooting at the lower nodes, leaf blades acuminate with cordate base, inflorescence base included in uppermost sheath, panicle ovate or elliptic and sparsely branched, spikelets acute or blunt, lower floret sterile, glumes ovate, lower lemma margins glabrous, upper lemma with coriaceous margins, forage, along roadsides, common in marshy or damp areas, open habitats, riverbanks, savannah edges, forests, riverbanks, see *Nova Genera et Species Plantarum seu Prodrum* 24. 1788, *Primitiae Florae Essequiboensis ...* 59-60. 1818, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 316. 1834, *Synopsis Plantarum Glumacearum* 1: 89. 1854, *Kongliga Svenska Vetenskapsakademien Handlingar* 40: 112-113. 1854 [1856] and *Proceedings of the Biological Society of Washington* 24: 147. 1911, *Smithsonian Contributions to Botany* 59: 19, 24, 27. 1985.

H. longispicula (Döll) Chase (*Homolepis longiflora* (Benth.) Pilg.; *Homolepis longispicula* (Döll) Kuhlm., nom. illeg., non *Homolepis longispicula* (Döll) Chase; *Ichnanthus longiflorus* Benth.; *Panicum longiflorum* Trin., nom. illeg., non *Panicum longiflorum* (Retz.) J.G. Gmel.; *Panicum longispiculum* Döll)

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 317. 1834, *Flora Brasiliensis* 2(2): 261. 1877, *Journal of the Linnean Society, Botany* 19: 45. 1881 and *Proceedings of the Biological Society of Washington* 24: 147. 1911, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 35. 1940.

H. villaricensis (Mez) Zuloaga & Sodestr. (*Panicum villaricense* Mez)

America tropical, Paraguay. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Smithsonian Contributions to Botany* 59: 29. 1985.

Homopholis C.E. Hubb.

From the Greek *homos* “similar, the same” and *pholis* “a horny scale,” referring to the glumes in the spikelets; see C.E. Hubbard, in *Bulletin of Miscellaneous Information, Kew*. 126. 1934.

About 1-2 species, Australia. Panicoideae, Panicodae, Paniceae, perennial, tufted, stoloniferous, herbaceous, often with leafy shoots at the nodes, hollow internodes, glabrous nodes, leaves narrow, auricles absent, ligule an unfringed membrane, plants bisexual, open panicle, capillary branchlets, terminal spikelets, florets 2, lower floret sterile, upper floret bisexual, 2 glumes more or less equal, glume nerves ribbed, lower glume hairless, upper glume hairy on the back, upper lemma smooth and briefly rostrate, upper glume and lower lemma similar, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, fruit compressed, shade species, in forest, native pasture species, woodland shade, type *Homopholis belsonii* C.E. Hubb., see *Bulletin of Miscellaneous Information Kew* 1934: 126-127. 1934, *Global Change Biology* 8(7): 679-693. July 2002, Wilfried Thuiller, “Patterns and uncertainties of species’ range shifts under climate change.” *Global Change Biology* 10(12): 2020-2027. 2004, *Ecological Management and Restoration* 6(1): 34-42. Apr 2005.

Species

H. belsonii C.E. Hubb. (after E. Belson, original collector)

Queensland, New South Wales. Perennial, rare species, tufted, spreading, rhizomatous or stoloniferous, erect or prostrate, glabrous, sheath glabrous, leaves bluish green and glabrous, panicles rigid and not fully exerted, terminal spikelets, lower glume glabrous, upper glume sparsely hairy, lower sterile lemma strigose between the nerves, useful for pasture, ornamental, not invasive, on heavy soils, poor soils, dry woodland, see *Bulletin of Miscellaneous Information Kew* 1934: 126-127. 1934.

H. proluta (F. Muell.) R.D. Webster (*Panicum prolutum* F. Muell.; *Whalleya proluta* (F. Muell.) Wills & J. Bruhl) (Latin *prolutus, a, um* part. from *proluo, lui, lutum* “to wash forth, to cast out, to moisten, to overflow”)

Queensland, New South Wales, Victoria, South Australia. Perennial, rhizomatous, sheath and leaves glabrous, rigid, leaves flat and glabrous, panicle loose, spikelets purple and acute, inflorescence fully exerted at maturity, lower sterile lemma glabrous, fertile lemma smooth and shining, grows near water, found in dry areas or swamps, native grasslands, in floodways, hills and tablelands, see *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1854/1855: 46. 1855 and *The Australian Paniceae (Poaceae)* 96. 1987, *Australian Systematic Botany* 13: 465, f. 2b. 2000.

in Australia: rigid panic grass, rigid panic, perennial panic grass, pallid panic grass, Coolah grass

Homoplitis Trin. = *Pogonatherum* P. Beauv.

Panicoideae, Andropogoneae, Saccharinae, type *Homoplitis crinita* (Thunb.) Trin., see *Flora Japonica, ...* 40, t. 7. 1784,

Essai d'une Nouvelle Agrostographie 56, 176, pl. 11, f. 7. 1812, *Fundamenta Agrostographiae* 166. 1820 and *Contributions from the United States National Herbarium* 46: 252, 540-541. 2003.

Homopogon Stapf = *Trachypogon* Nees

From the Greek *homos* "similar, the same" and *pogon* "beard," possibly referring to *Trachypogon*.

Panicoideae, Andropogoneae, Germainiinae, type *Homopogon chevalieri* Stapf, see *Mémoires de la Société Botanique de France* 8(b): 103. 1908, *Flora Mesoamericana* 6: 380-381. 1994, *Contributions from the United States National Herbarium* 46: 617-622. 2003.

Homozeugos Stapf

From the Greek *homozygeo* "to be yoked together," *homozygos* "yoked together, in the same row," *zygon* "a yoke," referring to paired spikelets.

About 5-6 species, tropical Africa, Tanzania, Angola. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial, herbaceous, tufted, auricles present or absent, ligule an unfringed membrane, plants bisexual, inflorescence of 1-several digitate racemes, racemes fascicled or solitary, terete spikelets, long callus pungent, 2 glumes more or less equal, lower glume convex 7-8-nerved, upper glume 3-nerved, upper lemma linear 2-dentate with a hairy awn, open habitats, forest, savannah, a segregate from *Eulalia*, type *Homozeugos fragile* Stapf, see *Hooker's Icones Plantarum* 31: t. 3033. 1915.

Species

H. conciliatum Guala

Western Africa, Angola. Inrolled leaves, see *Novon* 12(2): 196-199, f. 1. 2002.

H. eylesii C.E. Hubb.

Southern Africa. See *Bulletin of Miscellaneous Information Kew* 1936(5): 295. 1936.

H. fragile Stapf

West tropical Africa. See *Hooker's Icones Plantarum* 31: t. 3033. 1915.

H. gossweileri Stapf

Guinea, Angola. See *Flora of Tropical Africa* 9: 103. 1917.

H. huillensi (Rendle) Stapf (*Pogonatherum huillense* (Rendle) Roberty; *Pollinia huillensis* Rendle)

Tropical Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 136. 1899 and *Hooker's Icones Plantarum* 31: t. 3033. 1915, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de*

Botanique Systématique de l'Université de Genève 381. 1960.

H. katakton Clayton (Greek *kataktos*, *katakton* "capable of being broken")

Angola. See *Garcia de Orta, Série de Botânica* 1(1-2): 11. 1973, *Novon* 12(2): 196-199, f. 1. 2002.

Hookerochloa E.B. Alekseev = *Austrofestuca* (Tzvelev) Alexeev

One species, eastern Australia. Pooideae, Poodae, Poeae, perennial, herbaceous, erect, caespitose, unbranched, auricles absent or present, leaves mostly basal, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, 2 glumes unequal, lower glume 3-nerved, upper glume 3-5-nerved, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, found in swampy places, boggy or waterlogged sites, near streams, open moist sites, in subalpine swamp, in open forest or grassland, in eucalypt woodland, dry sclerophyll forest, in open areas, rough pasture, type *Hookerochloa hookeriana* (F. Muell. ex Hook.f.) E.B. Alexeev, see *Bot. Zhurn. (Moscow & Leningrad)* 56(9): 1257. 1971, *New Zealand Journal of Botany* 24: 425-503. 1986, *New Zealand Journal of Botany* 36: 329-367. 1998, *Flora of New Zealand* 5: 85-87. 2000.

Species

H. hookeriana (F. Muell. ex Hook.f.) E.B. Alexeev (*Austrofestuca hookeriana* (F. Muell. ex Hook.f.) S.W.L. Jacobs; *Festuca hookeriana* F. Muell. ex Hook.f.; *Poa hookeriana* (F. Muell.) F. Muell.; *Poa hookeriana* (F. Muell. ex Hook.f.) F. Muell.; *Schedonorus hookerianus* (F. Muell. ex Hook.f.) Benth.) (after the British botanist Sir William Jackson Hooker, 1785-1865, from 1841 to 1865 director Royal Botanic Gardens, Kew, father of Sir Joseph Dalton Hooker, 1817-1911, see Stafleu and Cowan, *Taxonomic literature*. 2: 283-301. 1979)

Victoria, New South Wales, Tasmania. Perennial, erect, caespitose, culms stout and robust, bright green, forming coarse and leafy tussocks, glabrous, auricles present or absent, sheath striate, ligule obtuse, leaves scabrous, very loose panicle spreading to nodding, green or purplish spikelets 3-5-flowered, chasmogamous spikelets, vestigial foliar structure subtending the inflorescence present or absent, glumes lanceolate or narrowly elliptic, palea lanceolate, ovary glabrous, fruit compressed and grooved, will not tolerate heavy grazing, in Tasmania grows on dry hillsides under light eucalypt forest in the Central Highlands and East Coast, see *Flora Tasmaniae* 2: 127, t. 165. 1858, *Fragmenta Phytographiae Australiae* 8: 131. 1873, *Flora Australiensis: A Description ...* 7: 656. 1878 and *Telopea* 3(4): 602. 1990.

Hoplismenus Hassk. = *Oplismenus* P. Beauv.

From the Greek *hoplismos* “a weapon,” referring to the awned spikelets.

Panicoideae, Paniceae, Panicinae, see *Species Plantarum* 1: 55. 1753, *Observationes Botanicae* 3: 10. 1783, *Flore d'Oware* 2: 14, 15, t. 68, f. 1. Sep 1810, *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 169. 1812, *Fundamenta Agrostographiae* 181. 1820, *Cat. Hort. Bogor.* 16. 1844, *Tentamen Florae Abyssinicae ...* 2: 377. 1850, *Synopsis Plantarum Glumacearum* 1: 46, 118. 1854, *Flora Brasiliensis* 2(2): 144. 1877, *Indig. Grasses N.Z.* t. 11. 1878, *Revisio Generum Plantarum* 2: 776. 1891 and *Contr. U.S. Natl. Herb.* 22(3): 123. 1920, *U.S. Dept. Agric. Bull.* 772: 238. 20 Mar 1920, *Fieldiana, Botany* 24(2): 38-331. 1955, *Kew Bulletin* 33: 147-157. 1978, *Phanerogamarum Monographiae* 13: 1-213. 1981, *Micronesica* 18: 45-102. 1982, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *New Zealand Journal of Botany* 34: 447-462. 1996, *Contributions from the United States National Herbarium* 46: 299-303. 2003.

x Hordale Ciferri & Giacomini

Hordeum x *Secale*.

See *Nom. Fl. Ital.* 180. 1950, *Genera Graminum* 375. 1986.

x Hordelymus (Jessen) Harz = *Cuviera* Koeler, *Hordelymus* Bachtj & Darevsk, *Hordelymus* (Jess.) Jess. ex Harz, *Hordelymus* (Jess.) Jessen, *Hordelymus* (Jessen) Jessen in Harz, *Leptothrix* (Dumort.) Dumort., *Medusather* P. Candargy, *Orostachys* Steud.

From the genera *Hordeum* L. and *Elymus* L.

One species, Europe, Asia, North Africa. Pooideae, Triticoideae, Triticeae, perennial, herbaceous, caespitose, auricles present, ligule an unfringed membrane, plants bisexual, inflorescence spicate, raceme oblong to linear, spikelets in triplets and distichous, the central spikelet imperfect, 1-2-flowered, 2 glumes subequal or more or less equal, lemma acuminate awned, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, woodland, shade, see *Species Plantarum* 1: 84-85. 1753, *Descriptio Graminum in Gallia et Germania* 1802, *Observations sur les Graminées de la Flore Belgique* 92. 1823 [1824], *Nomenclator Botanicus. Editio secunda* 2: 233. 1841, *Deutschlands Gräser und Getreidearten...* 202. Leipzig 1863, *Bulletin de la Société Botanique de Belgique* 7: 66. 1868, *Landwirthschaftliche Samenkunde* 2: 1147. 1885 and *Archives de Biologie Végétale Pure et Appliquée* 1: 18 (in

clave), 38. 1901, *Bot. Zhurn. (Moscow & Leningrad)* 35: 191. 1950, *New Publications of the U.S. Geological Survey* 17(1-2): 120. 1971[1972], *Flora Republicii Socialiste Romania* 12: 583. 1973, *Giornale Botanico Italiano* 111(1-2): 58. 1977, *Acta Biologica Cracoviensia, Series Botanica* 27: 57-74. 1985, *Taxon* 49(2): 250. 2000, *Contributions from the United States National Herbarium* 48: 388. 2003.

Species

H. europaeus (L.) Harz (*Cuviera europaea* (L.) Koeler; *Elymus europaeus* L.; *Hordelymus europaeus* (L.) K. Jess.; *Leptothrix europaea* (L.) Dumort.)

Eurasia. Useful for erosion control, see *Mant. Pl.* 1: 35. 1767, *Systema Naturae, edition 12* 2: 101. 1767, *Bulletin de la Société Botanique de Belgique* 7: 66. 1868 and *Feddes Rept.* 95: 442. 1984.

in English: wood-barley

x Hordeopyrum Simonet

Agropyron x *Hordeum*.

See *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 201: 1212. 1935, *Genera Graminum* 375. 1986.

x Horderoegneria Tzvelev

Hordeum x *Roegneria*.

See *Flora Arctica URSS* 2: 241. 1964 [*Arkt. Fl. SSSR.*], *Genera Graminum* 375. 1986.

Hordeum L. = *Critesion* Raf., *Critho* E.

Meyer, *Zeocrithon* P. Beauv., *Zeocrithon* Wolf

From the classical Latin name *hordeum*, i “barley” (Plinius, Marcus Porcius Cato, L. Junius Moderatus Columella and Marcus Terentius Varro); Latin *horreum*, i (*horreus*) “a storehouse,” Greek *crithe*, Akkadian *qaritum*, *qiritu* “granary, store room,” Hebrew *qorah* “beam, roof”; “hordea qui dixit, superest ut tritica dicat” Virg., *Georg.* 1, 200 and “antiquissimum in cibis hordeum, sicut Atheniensium ritu apparet et gladiatorum cognomine qui hordearii vocabantur” Plinius; see Carl Linnaeus, *Species Plantarum*. 84. 1753 and *Genera Plantarum*. Edition 5. 37. 1754; Giovanni Semerano, *Le origini della cultura europea*. Dizionario della lingua Latina e di voci moderne. 2(2): 427-428. Leo S. Olschki Editore, Firenze 1994.

Monotypic or 20-40 species, in temperate and subtropical areas of the world. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, annual or perennial, herbaceous, caespitose or solitary, erect or decumbent, flimsy to stout, hollow, basal culm internodes sometimes swollen,

auricles present or absent, leaf sheath glabrous and rounded, ligule a short ciliolate membrane, linear leaves flat or rolled, plants bisexual, cleistogamous or chasmogamous, inflorescence erect or nodding with a tough rachis, unbranched spicate inflorescence, flowers in dense and narrow spike-like panicle, feathery flower heads, spikelets in threes at each inflorescence node, spikelets usually 1-flowered, lateral spikelets usually smaller or incomplete, flowers of lateral spikelets often aborted, central spikelet usually hermaphrodite, 2 stiff glumes narrow and usually long or short awned, glumes persistent, lemma convex awned or unawned, lemma of central spikelet rigid and awned or unarmed, palea entire or notched or bifid, 2 lodicules free and ciliate, 3 stamens, ovary apex coronate and hairy, 2 plumose white stigmas, fruit longitudinally grooved and compressed dorsiventrally, a serious weed species in many countries, grain crop, ornamental, sharp seeds of some species can enter the eyes, skin and wool of sheep, tolerant of saline soils, growing in dry soils, sandy places, rather moist habitats, there is considerable taxonomic confusion concerning this genus, in some floras *Hordeum* is restricted to *Hordeum vulgare* L. while the rest are placed in *Critesion* Raf., intergeneric hybrids with *Elytrigia* Desv., *Agropyron* Gaertner, *Secale* L., *Sitanion* Raf., *Triticum* L., type *Hordeum vulgare* L, see Johannes Loesel (1607-1655), *Flora Prussica*. Editor Johann Gottsched (1668-1704). Regiomonti 1703, *Species Plantarum* 1: 84-85. 1753, *Genera Plantarum* 21. 1776, Leo Victor Felix Henckel von Donnersmarck (1785-1861), *Enumeratio plantarum circa Regiomontum Borussorum sponte crescentium*. Königsberg 1817, Carl (Karl) Gottfried Hagen (1749-1829), *Preussens Pflanzen*. Königsberg 1818, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, Carl (Karl) Wilhelm Eysenhardt (1794-1825), *De accurata plantarum comparatione*, adnexis observationibus in Floram Prussicam. D. Regiomonti 1823, *Index Sem. Hort. Regiomont.* 5. 1848, *Die Natürlichen Pflanzenfamilien* 2(2): 86. 1887 and *Canadian Journal of Botany* 37: 679. 1959, *Acta Bot. Neerl.* 15: 161. 1966, *Econ. Bot.* 20: 350-360. 1966, *Genetica* 64: 93-100. 1984, *American Journal of Botany* 72(5): 767-776. 1985, *Canadian Journal of Botany* 64: 1745-1759. 1986, *Genera Graminum* 154-155. 1986, *Genome* 30: 204-210. 1988, *Phytologia* 67(6): 425. 1989, *Hereditas; genetiskt arkiv.* 110: 289-305. 1989, *Canadian Journal of Botany* 68(11): 2433-2442. 1990, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991, *Nord. J. Bot.* 13: 3-17. 1993 [1992], *Plant Systematics and Evolution* 189: 217-231. 1994 [Relationships between species of *Leymus*, *Psathyrostachys* and *Hordeum* (Poaceae, Triticeae) inferred from Southern hybridization of genomic and cloned DNA probes.], *Flora Mesoamericana* 6: 247. 1994, *Nordic Journal of Botany* 14(2): 117-136. 1994 [A taxonomic revision of *Hordeum* sect. *Critesion*], *Annals of Botany* 73: 195-203. 1994, *Systematic Botany* 21(2): 3-15. 1996, J. Provan, "Polymorphic chloroplast simple sequence

repeat primers for systematic and population studies in the genus *Hordeum*." *Molecular Ecology* 8(3): 505-511. Mar 1999, *Canadian Journal of Botany* 78(12): 1590-1602. 2000, *Am. J. Bot.* 89: 401-409. 2002, *Contributions from the United States National Herbarium* 48: 389-402. 2003, Alisa E. Shaw and Mark R. Brodl, "Heat shock response of warm-incubated barley aleurone layers." *Am. J. Bot.* 90: 40-48. 2003, Jakob S., S.A. Meister and F.R. Blattner, "The considerable genome size variation of *Hordeum* species (Poaceae) is linked to phylogeny, life form, ecology, and speciation rates." *Molecular Biology and Evolution* 21: 860-860. 2004, Scott A. Heckathorn, J. Kathleen Mueller, Stephanie LaGuidice, Bin Zhu, Tara Barrett, Brian Blair and Yan Dong, "Chloroplast small heat-shock proteins protect photosynthesis during heavy metal stress." *Am. J. Bot.* 91: 1312-1318. 2004, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, "The evolution of nuclear genome structure in seed plants." *Am. J. Bot.* 91: 1709-1725. 2004, *Am. J. Bot.* 91: 1022-1035, 1783-1788, 1789-1801, 1834-1845. 2004, Tamara van Mólken, Linda D. Jorritsma-Wienk, Paul H. W. van Hoek and Hans de Kroon, "Only seed size matters for germination in different populations of the dimorphic *Tragopogon pratensis* subsp. *pratensis* (Asteraceae)." *Am. J. Bot.* 92: 432-437. 2005, Jinglan Wu, Denise M. Seliskar and John L. Gallagher, "The response of plasma membrane lipid composition in callus of the halophyte *Spartina patens* (Poaceae) to salinity stress." *Am. J. Bot.* 92: 852-858. 2005, Roberta J. Mason-Gamer, "The β -amylase genes of grasses and a phylogenetic analysis of the Triticeae (Poaceae)." *Am. J. Bot.* 92: 1045-1058. 2005, *Cladistics* 21(1): 15-30. Feb 2005, *New Phytologist* 165(2): 481-492, 591-598. Feb 2005, *Entomologia Experimentalis et Applicata* 114(2): 119-125. Feb 2005, *Plant Breeding* 124(1): 96-98. Feb 2005, *Weed Research* 45(1): 18-26, 48-56. Feb 2005, Neil Jones et al., "Genome conflict in the gramineae." *New Phytologist* 165(2): 391-410. Feb 2005, *New Phytologist* 165(3): 773-780, 813-824, 878-885, 959-962. Mar 2005, *Plant Breeding* 124(2): 133-136, 137-141, 147-153. Apr 2005, *Weed Research* 45(2): 149-156. Apr 2005, *New Phytologist* 166(2): 455-464. May 2005, Louis M.T. Bradbury and al., "The gene for fragrance in rice." *Plant Biotechnology Journal* 3(3): 363-370. May 2005, *Insect Molecular Biology* 14(3): 309-318. June 2005, *Weed Biology and Management* 5(2): 62-68. June 2005, *Physiologia Plantarum* 124(2): 227-235. June 2005, *New Phytologist* 166(3): 907-915, 917-932, 1075-1078. June 2005, *Ecology Letters* 8(6): 652-661. June 2005, *Weed Research* 45(3): 165-174. June 2005, *Molecular Ecology* 14(7): 2065-2073. June 2005, *The Plant Journal* 42(5): 652-662. June 2005, *The Plant Journal* 42(6): 912-922, 923-928. June 2005, *Journal of Agronomy and Crop Science* 191(3): 172-184. June 2005, *European Journal of Soil Science* 56(3): 353-360. June 2005, *Oikos* 109(3): 435-446. June 2005.

Species**H. sp.**

in Hawaii: pale, palaoa huluhulu

in India: barali arishi, barali biyyam, jav, joo, jou, muyo, shaair

H. aegiceras Nees ex Royle (*Critho aegiceras* (Nees ex Royle) E. Mey.; *Hordeum coeleste* var. *trifurcatum* Schldtl.; *Hordeum trifurcatum* (Schldtl. ex Orlov & Åberg) Wender; *Hordeum vulgare* convar. *vulgare*; *Hordeum vulgare* subsp. *aegiceras* (Nees ex Royle) Á. Löve; *Hordeum vulgare* var. *aegiceras* (Nees ex Royle) Aitch.; *Hordeum vulgare* var. *trifurcatum* (Schldtl.) Alef.)

Asia. See *Essai d'une Nouvelle Agrostographie* 114. 1812, *Linnaea* 11(4): 543-544. 1837, *Flora* 26: 233. 1843, *Illustrations of the Botany ... of the Himalayan Mountains ...* 1(11): 418. 1839 [1840], *Ind. Sem. Hort. Regiomont.* 5. 1848, *Landwirthschaftliche Flora* 341. 1866, *Catalogue of the Plants of the Punjab and Sindh* 171. 1869 and *Repertorium Specierum Novarum Regni Vegetabilis* 50: 9. 1941, *Feddes Repertorium* 95(7-8): 435. 1984.

H. agriocrithon Aberg (*Hordeum vulgare* L.; *Hordeum vulgare* subsp. *agriocrithon* (Aberg) Á. Löve)

Asia. Six-rowed barley, fragile rachis, see *Species Plantarum* 1: 84-85. 1753 and *Symb. Bot. Upsal.* 4(2): 93, 148. 1940, *Angewandte Bot.* 22: 116. 1940, *Canad. J. Bot.* 37: 677-681. 1959, *Feddes Repertorium* 95(7-8): 435. 1984, *Cytologia* 57: 51-57. 1992.

H. arizonicum Covas (*Critesion arizonicum* (Covas) Á. Löve; *Hordeum adscendens* Hitchc.)

U.S., Arizona. Annual to biennial or perennial, slender, tufted, glaucous, lower sheaths pubescent, auricles usually absent, spikes pale green, lateral spikelets sterile, grows in saline habitats, canals and ponds, along irrigation ditches, see *Madroño* 10(1): 16-17, pl. 2, f. 11. 1949, *Taxon* 29(1): 166. 1980, *Memoir San Diego Society of Natural History* 12: 1-140. 1981.

in English: Arizona barley, Arizona foxtail

H. bogdani Wilensky (*Critesion bogdani* (Wilensky) Á. Löve; *Hordeum secalinum* var. *bogdani* (Wilensky) Roshev.)

Asia, China, Pakistan, India, Eurasia. Perennial, slender spikes, useful for erosion control, found in ditches, wet habitats, along roadsides, see *Feddes Repertorium* 95(7-8): 438. 1984, *Genome* 29: 594-597. 1987, *Willdenowia* 16: 479-490. 1987, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 110: 7-15. 1988, *Hereditas; genetiskt arkiv.* Mendelian Society of Lund. 112: 109-116. 1990, *Acta Botanica Yunnanica* 12: 57-66. 1990.

H. brachyantherum Nevski (*Critesion brachyantherum* (Nevski) Barkworth & D.R. Dewey; *Critesion brachyantherum* (Nevski) W.A. Weber, nom. illeg., non *Critesion brachyantherum* (Nevski) Barkworth & D.R. Dewey; *Critesion jubatum* (L.) Nevski subsp. *breviaristatum* (Bowden) Á. & D. Löve; *Hordeum boreale* Scribn. & J.G. Sm., nom. illeg., non *Hordeum boreale* Gand.; *Hordeum jubatum* L. subsp. *brachyantherum* (Nevski) Bondar; *Hordeum jubatum* L. subsp. *breviaristatum* Bowden; *Hordeum nodosum* L. var. *boreale* (Scribn. & J.G. Sm.) A.S. Hitchc.; *Hordeum nodosum* var. *boreale* Hitchc.)

Eurasia, Russia, U.S., North America, Canada. Perennial, loosely to densely caespitose, slender to robust, erect to geniculate, sheaths glabrous to densely pubescent, auricles absent, spikes green to purplish, lateral spikelets staminate, found in roadside ditch, in moist meadows, at the edge of marshes or streams along forest openings, grassy areas, see *Species Plantarum* 1: 85. 1753, *Species Plantarum, Editio Secunda* 1: 126. 1762, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 24-25. 1897 and *American Journal of Botany* 21(3): 134. 1934, *Canadian Journal of Botany* 40: 1690-1691. 1962, *Le Naturaliste Canadien* 94: 525. 1967, *Botaniska Notiser* 128(4): 503. 1975[1976], *Genetica* 64: 93-100. 1984, *American Journal of Botany* 72(5): 768. 1985, *Genome* 30: 204-210. 1988, *Phytologia* 67(6): 425. 1989, *Canadian Journal of Botany* 68(11): 2433-2442. 1990, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991, *Nord. J. Bot.* 13: 3-17. 1993 [1992], *Nordic Journal of Botany* 14(2): 117-136. 1994, *Annals of Botany* 73: 195-203. 1994, *Systematic Botany* 21(2): 3-15. 1996.

in English: meadow barley

H. brachyantherum Nevski subsp. *brachyantherum* (*Critesion brachyantherum* (Nevski) Barkworth & D.R. Dewey; *Critesion jubatum* (L.) Nevski subsp. *breviaristatum* (Bowden) Á. & D. Löve; *Hordeum boreale* Scribn. & J.G. Sm., nom. illeg., non *Hordeum boreale* Gand.; *Hordeum jubatum* L. subsp. *breviaristatum* Bowden; *Hordeum jubatum* L. var. *boreale* (Scribn. & J.G. Sm.) Boivin; *Hordeum nodosum* L. p.p.; *Hordeum nodosum* L. var. *boreale* (Scribn. & J.G. Sm.) A.S. Hitchc.; *Hordeum nodosum* var. *boreale* Hitchc.)

Russia, U.S., North America, Canada. Perennial, slender to robust, densely tufted, grows in pastures, along streams and lakeshores, drainage, moist areas, see *Species Plantarum* 1: 85. 1753, *Species Plantarum, Editio Secunda* 1: 126. 1762, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 24-25. 1897 and *Le Naturaliste Canadien* 94: 525. 1967, *Botaniska Notiser* 128(4): 503. 1975[1976], *American Journal of Botany* 72(5): 768. 1985, *Phytologia* 67(6): 425. 1989, *Nord. J. Bot.* 13: 3-17. 1993 [1992], *Annals of Botany* 73: 471-479. 1994.

in English: meadow barley, northern barley

H. brachyantherum Nevski subsp. **californicum** (Covas & G.L. Stebbins) Bothmer, N. Jacobsen & Seberg (*Critesion californicum* (Covas & Stebbins) Á. Löve; *Critesion californicum* subsp. *californicum*; *Hordeum brachyantherum* var. *gracilius* Nevski; *Hordeum californicum* Covas & Stebbins)

U.S., California. Perennial, slender, loosely tufted, basal sheaths usually densely pubescent, occurs in dry meadow, grasslands, see *Madroño* 10: 5. 1949, *Taxon* 29(1): 166. 1980, *Genome* 29: 247-252, 594-597. 1987, *Genome* 32: 1124-1127. 1989, *Nordic Journal of Botany* 11(2): 153. 1991.

in English: California barley, California meadow barley, meadow barley

H. brachyatherum Phil. (*Critesion brachyatherum* (Phil.) Á. Löve)

Chile. See *Anales Univ. Chile* 94: 346. 1896 and *Feddes Repert.* 95(7-8): 440. 1984.

H. brevisubulatum (Trin.) Link (*Hordeum macilentum* Steud.; *Hordeum secalinum* var. *brevisubulatum* Trin.)

China, Asia, India, Nepal. Perennial, useful for erosion control, see *Spicilegium Florae Lipsicae* 148. 1771, *Linnaea* 17(4): 491-492. 1844, *Synopsis Plantarum Glumacearum* 1: 352. 1854 and *Biologisches Zentralblatt* 101(2): 208. 1982, *Genome* 32: 1124-1127. 1989, *Flora Liaoningica* 2: 1159. 1992, *Acta Phytotaxonomica Sinica* 30(4): 342-345. 1992.

H. brevisubulatum (Trin.) Link subsp. **Brevisubulatum** (*Critesion brevisubulatum* (Trin.) Á. Löve; *Hordeum secalinum* var. *brevisubulatum* Trin.)

China, Russia. Perennial, see *Linnaea* 17(4): 491-492. 1844 and *Biologisches Zentralblatt* 101(2): 208. 1982, *Plant Systematics and Evolution* 145: 259-267. 1984, *Willdenowia* 16: 479-490. 1987, *Acta Botanica Yunnanica* 12: 57-66. 1990.

H. brevisubulatum (Trin.) Link subsp. **iranicum** Bothmer (*Critesion iranicum* (Bothmer) Á. Löve; *Hordeum iranicum* (Bothmer) Tzvelev)

Asia, Iran. Perennial, occurs in wet meadow areas, see *Botanisk Tidsskrift* 74(23): 139. 1979, *Feddes Repertorium* 95(7-8): 438. 1984, *Bot. Zhurn. (Moscow & Leningrad)* 78(10): 88. 1993.

H. brevisubulatum (Trin.) Link subsp. **nevskianum** (Bowden) Tzvelev (*Critesion brevisubulatum* subsp. *nevskianum* (Bowden) Á. Löve; *Hordeum nevskianum* Bowden)

Asia, China, Nepal, India. Perennial, see *Canadian Journal of Genetics and Cytology* 7: 396. 1965, *Novosti Sist. Vyss. Rast.* 8: 66. 1971, *Willdenowia* 16: 479-490. 1987.

H. brevisubulatum (Trin.) Link subsp. **turkestanicum** (Nevski) Tzvelev (*Critesion brevisubulatum* subsp. *turkestanicum* (Nevski) Á. Löve; *Hordeum turkestanicum* Nevski)

Eurasia, China, Pakistan. Perennial, see *Linnaea* 17(4): 491-492. 1844 and *Novosti Sist. Vyss. Rast.* 8: 66. 1971, *Plant Systematics and Evolution* 145: 259-267. 1984, *Flora Xizangica* 5: 177. 1987, *Willdenowia* 16: 479-490. 1987.

H. brevisubulatum (Trin.) Link subsp. **violaceum** (Boiss. & Hohen.) Tzvelev (*Hordeum violaceum* Boiss. & Hohen.)

Turkey, Iran. Perennial, found in subalpine regions, in ditches, moist drainage areas, wet areas, meadows and wet meadows, waste areas and roadsides, dry saline sites, moist areas, see *Linnaea* 17(4): 491-492. 1844, *Diagnoses plantarum orientalium novarum, ser. 1*, 2(13): 70. 1853 and *Novosti Sist. Vyss. Rast.* 9: 62. 1972.

H. bulbosum L. (*Critesion bulbosum* (L.) Á. Löve; *Critesion secalinum* (Schreb.) Á. Löve; *Hordeum bulbosum* subsp. *nodosum* (L.) B.R. Baum; *Hordeum jubatum* var. *boreale* (Hitchc.) B. Boivin; *Hordeum kaufmannii* Regel; *Hordeum nodosum* L.; *Hordeum secalinum* Schreb.; *Hordeum strictum* Desf.)

Eastern Mediterranean, Europe, Algeria, Israel. Perennial, caespitose, basal internodes swollen or bulbous, unbranched, auricles present and well-developed, leaf sheaths not keeled, ligule entire to erose, leaves linear and pilose, plants bisexual, a single spike contracted and oblong, spikelets heteromorphic and distichous, 1 floret bisexual per spikelet, palea chartaceous, 3 stamens, ovary pilose, diploid and tetraploid plants, see *Centuria II. Plantarum ...* 115. 1756, *Species Plantarum, Editio Secunda* 1: 126. 1762, *Spicilegium Florae Lipsicae* 148. 1771 and *American Journal of Botany* 21(3): 134. 1934, *Le Naturaliste Canadien* 94: 525. 1967, *Taxon* 29(2-3): 350. 1980, Tutin, T.G. et al. (eds.), "Flora Europaea. vol. 5. Poaceae." University Press Cambridge 1980, *Nord. J. Bot.* 2: 421-434. 1982, *Euphytica* 33: 99-106. 1984, *Feddes Repertorium* 95(7-8): 441. 1984, *Acta Botanica Croatica* 43: 335-340. 1984, *Genetica* 64: 93-100. 1984, *Canadian Journal of Botany* 63(4): 743. 1985, *Anales del Jardín Botánico de Madrid* 41: 361-365. 1985, *Taxon* 34: 531. 1985, *Hereditas; genetiskt arkiv.* 105: 179-185. 1986, *Bjulleten glavnogo botaniceskogo sada* 140: 68-73. 1986, *Annali di Botanica* 45: 75-102. 1987, *Scientia Agricultura Sinica* 21: 32-34. 1988, *Genome* 30: 204-210. 1988, *Genome* 32: 1124-1127. 1989, *Genome* 33: 425-432. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66, 153-205. 1990, *Plant Systematics and Evolution* 172: 141-150. 1990, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991, *Nordic Journal of Botany* 13: 481-493. 1993, *Agriculture and Horticulture* 68: 515-523. 1993, *Journal of Jiangsu Agricultural College* 17(4): 27-30. 1996.

in English: bulbous barley

in French: orge bulbeuse

in Turkey: çavdarcik, yabani arpa

H. capense Thunb. (*Critesion capense* (Thunb.) Á. Löve; *Hordeum nodosum* L.)

South Africa. Perennial, tufted, auricles absent, leaf sheaths fibrous when old, weed species, along riverbanks, riverbeds, see *Centuria II. Plantarum* ... 115. 1756, *Species Plantarum, Editio Secunda* 1: 126. 1762, *Prodromus Plantarum Capensium*, ... 23. 1794 and *American Journal of Botany* 21(3): 134. 1934, *Le Naturaliste Canadien* 94: 525. 1967, *Nord. J. Bot.* 2: 421-434. 1982, *Feddes Repertorium* 95(7-8): 438. 1984, *Taxon* 34: 531. 1985, *Canadian Journal of Botany* 63(4): 743. 1985, *Hereditas; genetiskt arkiv.* 105: 179-185. 1986, *Genome* 30: 204-210. 1988.

in English: Cape wild barley

in southern Africa: Kaapse wildegars, vulletjiestertgras; litse-ba-ntja (Sotho)

H. chilense Roem. & Schult. (*Critesion chilense* (Roem. & Schult.) Á. Löve; *Hordeum chilense* Brongn., nom. illeg., non *Hordeum chilense* Roem. & Schult.; *Hordeum chilense* var. *chilense*; *Hordeum chilense* var. *pseudosecalinum* Haudeman; *Hordeum cylindricum* Steud.; *Hordeum depauperatum* Steud.; *Hordeum secalinum* var. *chilense* E. Desv.)

Southern America, Argentina. Perennial, found on the shore of lakes, see *Spicilegium Florae Lipsicae* 148. 1771, *Systema Vegetabilium* 2: 796. 1817, *Reliquiae Haenkeanae* 1: 327. 1830, *Voyage autour du Monde* 2: 54. 1831, *Flora Chilena* 6: 458. 1854, *Synopsis Plantarum Glumacearum* 1: 353. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 249. 1874 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 272-273, 275-276, 278. 1916, *Hickenia* 1(11): 61. 1977, *Feddes Repertorium* 95(7-8): 439. 1984, *Genome* 29: 683-688. 1987, *Scientia Agricultura Sinica* 21: 32-34. 1988, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 109(3): 380. 1988, *Annals of Botany* 64: 315-324. 1989, *Hereditas; genetiskt arkiv.* 110: 289-305. 1989, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994.

H. comosum J. Presl (*Critesion comosum* (J. Presl) Á. Löve; *Hordeum andinum* Trin.; *Hordeum comosum* var. *bifidum* Parodi ex Nicora; *Hordeum comosum* var. *comosum*; *Hordeum comosum* var. *flavescens* E. Desv.; *Hordeum comosum* var. *humilis* E. Desv.; *Hordeum comosum* var. *rigida* E. Desv.; *Hordeum divergens* Nees & Meyen ex Steud.; *Hordeum jubatum* f. *flavidum* Kuntze; *Hordeum jubatum* f. *versicolor* Kuntze; *Hordeum jubatum* f. *viride* Kuntze; *Hordeum jubatum* var. *comosum* (J. Presl) Kuntze)

Southern America, Argentina. Perennial, useful for erosion control, along streams and rivers, sandy soils, moist places, see *Reliquiae Haenkeanae* 1(4-5): 327. 1830, *Linnaea* 10(3): 304. 1836, *Nomenclator Botanicus* 1: 775. 1840, *Flora Antarctica* 2: 388. 1847, *Flora Chilena* 6: 461. 1854, *Revisio Generum Plantarum* 3: 355. 1898 and *La flore adventice de Montpellier* 158. 1912, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 715. 1919, *Hickenia* 1(11): 61. 1977, *Feddes Repertorium* 95(7-8):

437. 1984, *Genome* 32: 1124-1127. 1989, *Hereditas; genetiskt arkiv.* 110: 289-305. 1989, *Nordic Journal of Botany* 14(2): 117-136. 1994.

H. cordobense Bothmer & al. (*Critesion cordobense* (Bothmer, N. Jacobsen & Nicora) Á. Löve; *Hordeum compressum* auct.; *Hordeum compressum* var. *tenuispicatum* Hack.)

Southern America, Argentina. See *Anales del Museo Nacional de Buenos Aires* 21: 181. 1911, *Botaniska Notiser* 133(4): 544. 1980, *Feddes Repertorium* 95(7-8): 439. 1984, *Genome* 30: 204-210. 1988, *Genome* 32: 1124-1127. 1989, *Hereditas; genetiskt arkiv.* 110: 289-305. 1989.

H. depressum (Scribner & J.G. Smith) Rydb. (*Critesion depressum* (Scribner & J.G. Smith) Á. Löve; *Hordeum nodosum* var. *depressum* Scribn. & J.G. Sm.)

Northern America, western U.S. Annual, loosely caespitose, erect, basal sheaths pubescent, auricles absent, leaf blades sparsely to densely pubescent on both sides, spikes pale green or reddish, lateral spikelets sterile or staminate, occurs in vernal pools and ephemeral habitats, often in alkaline soil, see *Species Plantarum, Editio Secunda* 1: 126. 1762, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 24. 1897 and *Bulletin of the Torrey Botanical Club* 36: 539. 1909, *Taxon* 29(1): 166. 1980, *Canadian Journal of Botany* 66: 401-408. 1988, *Genetica* 79: 147-151. 1989, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991, *Nordic Journal of Botany* 13: 3-17. 1992, *Annals of Botany* 73: 471-479. 1994.

in English: low barley, dwarf barley, alkali barley

H. distichon L. (*Hordeum aestivum* Haller; *Hordeum distichon* convar. *nudum* (L.) Tzvelev; *Hordeum distichon* convar. *zeocrithon* (L.) Tzvelev; *Hordeum distichon* subsp. *nudum* (L.) Rothm.; *Hordeum distichon* subsp. *zeocrithon* (L.) Celak.; *Hordeum distichon* var. *nudum* L.; *Hordeum erectum* Schübler; *Hordeum nudum* Schult.; *Hordeum nutans* Schübler; *Hordeum pseudo-zeocrithon* Metzg.; *Hordeum sativum* subsp. *distichon*; *Hordeum sativum* var. *nudum* (L.) Vilm.; *Hordeum vulgare* convar. *distichon* (L.) Alef.; *Hordeum vulgare* L. subsp. *distichon* Körn.; *Hordeum vulgare* subsp. *distichum* (L.) Thell.; *Hordeum vulgare* var. *distichon* (L.) Hook.f.; *Hordeum zeocrithon* L.; *Zeocrithon distichon* (L.) P. Beauv.)

Europe. Annual, erect, tufted, leaves auriculate, leaf sheaths not keeled, obtuse ligule hyaline and smooth, leaf blade flat and scabrous to pilose, a single spike contracted and oblong, cleistogamous and heteromorphic spikelets, hermaphrodite florets 1 per spikelet, lateral spikelets male, central spikelet female, lemma elliptic and chartaceous, palea acuminate, fruit elliptical and pilose, a cereal crop, on roadsides, see *Species Plantarum* 1: 84-85. 1753, *Essai d'une Nouvelle Agrostographie* 115,165,182. t. 21. f. 2. 1812, *Mantissa* 2: 437. 1824, *Landwirthschaftliche Flora* 342. 1866, *Prodromus der Flora von Böhmen* ... Praha 1867-1881, *Zeitschr. Ges. Brauw.* 175. 1882, *The Flora of British India* 7: 371.

1896, *Vilmorin's Illustrierte Blumengartnerei* 1: 1221. 1896 and *La flore adventice de Montpellier* 161. 1912, *Excursions fl. Deutschl.* 4: 51. 1963, *Flora de la Provincia de Buenos Aires* 4(2): 175-189. 1970, *editionosti Sist. Vyss. Rast.* 10: 55. 1973, *Cytologia* 57: 51-57. 1992, *Taxon* 49(2): 251. 2000.

in English: 2-row barley, 2-rowed barley

in Turkey: arpa

H. erectifolium Bothmer & al.

Southern America, Argentina. See *Willdenowia* 15(1): 85-90. 1985, *Hereditas; genetiskt arkiv.* 110: 289-305. 1989.

H. euclaston Steud. (*Critesion pusillum* subsp. *euclaston* (Steud.) Á. Löve; *Hordeum euclaston* var. *puberulum* Parodi & Nicora; *Hordeum fragile* Godr., nom. illeg., non *Hordeum fragile* Boiss.; *Hordeum pusillum* var. *euclaston* (Steud.) Hauman; *Hordeum subfastigiatum* Döll)

Southern America, Uruguay, Argentina, Brazil. See *Mémoires de la Section des Sciences; Académie des Sciences et Lettres de Montpellier* 1: 455. 1853, *Synopsis Plantarum Glumacearum* 1: 353. 1854, *Flora Brasiliensis* 2(3): 234. 1880 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 297. 1916, *Flora de la Provincia de Buenos Aires* 4(2): 175-189. 1970, *Feddes Repertorium* 95(7-8): 441. 1984, *Hereditas; genetiskt arkiv.* 110: 289-305. 1989, *Genome* 32: 1124-1127. 1989.

H. flexicaule Gand.

Europe. See *Österreichische Botanische Zeitschrift* 31: 46. 1881.

H. flexuosum Nees ex Steud. (*Critesion flexuosum* (Nees ex Steud.) Á. Löve; *Critesion stenostachys* (Godr.) Á. Löve; *Hordeum bonariense* Parodi ex Nicora; *Hordeum pusillum* subsp. *flexuosum* (Nees ex Steud.) Covas; *Hordeum stenostachys* Godr.)

Southern America, Argentina, Colombia. See *Mémoires de la Section des Sciences; Académie des Sciences et Lettres de Montpellier* 1: 455. 1853, *Synopsis Plantarum Glumacearum* 1: 353. 1855 [1854] and *Flora de la Provincia de Buenos Aires* 4(2): 184. 1970, *Hickenia* 1(11): 55-62. 1977, *Feddes Repertorium* 95(7-8): 439, 441. 1984, *Revista de la Universidad Nacional de Río Cuarto* 5: 79-84. 1985, *Hereditas; genetiskt arkiv.* 110: 289-305. 1989.

H. fuegianum Bothmer, N. Jacobsen & R.B. Jørg.

Southern America, Argentina. See *Nordic Journal of Botany* 6(4): 399-410. 1986, *Hereditas; genetiskt arkiv.* 112: 93-107. 1990.

H. glaucum Steudel (*Critesion glaucum* (Steudel) Á. Löve; *Critesion murinum* (L.) Á. Löve; *Critesion murinum* subsp. *glaucum* (Steud.) W.A. Weber; *Critesion murinum* subsp. *glaucum* (Steud.) B.K. Simon, nom. illeg., non *Critesion murinum* subsp. *glaucum* (Steud.) W.A. Weber; *Hordeum leporinum* Link subsp. *glaucum* (Steudel) Booth &

Richardson; *Hordeum leporinum* subsp. *glaucum* (Steud.) T.A. Booth & A.J. Richards; *Hordeum murinum* L.; *Hordeum murinum* L. subsp. *glaucum* (Steudel) Tzelev; *Hordeum murinum* var. *pedicellatum* Pau & Font Quer; *Hordeum pedicellatum* Pau & Font Quer; *Hordeum stebbinsii* Covas; *Zeocriton murinum* (L.) P. Beauv.)

Europe, Mediterranean region. Annual, tufted, geniculate, leaves auriculate, basal leaf sheaths not keeled, ligule membranous and truncate, leaf blade flat and linear, inflorescence spicate dense and elliptic, spikelets in triplets and heteromorphic, lateral spikelets male and pedicellate, central spikelet female and sessile, hermaphrodite florets 1 per spikelet, cleistogamous spikelets, male spikelet with glumes unequal, female spikelet with glumes equal, lemmas of the lateral spikelets much longer than the glumes, 2 lodicules free and hyaline, anthers of the central floret usually black, pilose fruit elliptical or obovoid, pasture species, a widespread weed of disturbed sites, waste ground, grazed woodlands and shrublands, host to several cereal diseases, its sharp seeds can enter the eyes and the skin of sheep, closely resembling *Hordeum leporinum* Link, see *Species Plantarum* 1: 85. 1753, *Essai d'une Nouvelle Agrostographie* 115, 182. 1812, *Linnaea* 9(1): 133. 1834, *Synopsis Plantarum Glumacearum* 1: 352. 1854 and *Iter Maroc.* 96. 1927, *Madroño* 10(1): 17-19, pl. 2. f. 8, 12, 13. 1949, *Can. J. Bot.* 40: 1695. 1960, *Novosti Sist. Vyss. Rast.* 8: 67. 1971, *Botanical Journal of the Linnean Society* 72(2): 150. 1976, *Taxon* 29(2/3): 350. 1980, *Phytologia* 51(6): 374. 1982, *Feddes Repertorium* 95: 440. 1984, *Taxon* 34: 529. 1985, *Pakistan Journal of Botany* 17: 305-307. 1985, *Austrobaileya* 2(3): 241. 1986, *Annali di Botanica* 45: 75-102. 1987, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, *Biologicheskii Zhurnal Armenii* 42: 621-629. 1989, *Genome* 32: 629-639. 1989, *Cytologia* 57: 51-57. 1992, *Bocconea, Monographiae Herbarii Mediterranei Panormitani* 3: 229-250. 1992, *Nordic Journal of Botany* 15(5): 449-458. 1995, *Watsonia* 21: 365-368. 1997.

in English: northern barley grass, wall barley

H. guatemalense Bothmer, N. Jacobsen & R.B. Jørg.

Southern America, Guatemala. See *Willdenowia* 15(1): 86, f. 1B,D,F. 1985, *Genetica* 79: 147-151. 1989, *Hereditas; genetiskt arkiv.* 112: 93-107, 109-116. 1990.

H. hystrix Roth (*Critesion geniculatum* (All.) Á. Löve; *Critesion hystrix* (Roth) Á. Löve; *Critesion marinum* (Huds.) Á. Löve; *Critesion marinum* subsp. *gussoneanum* (Parl.) Barkworth & D.R. Dewey; *Elymus hystrix* L.; *Hordeum geniculatum* All.; *Hordeum gussoneanum* Parl.; *Hordeum hystrix* (L.) Schenck, nom. illeg., non *Hordeum hystrix* Roth; *Hordeum marinum* Huds.; *Hordeum marinum* subsp. *gussoneanum* (Parl.) Thell.; *Hordeum marinum* subsp. *gussoneanum* (Parl.) Anghel & Velican; *Hordeum marinum* var. *gussoneanum* (Parl.) Hyl.; *Hordeum maritimum* subsp. *gussoneanum* (Parl.) Asch. & Graebn.;

Hordeum maritimum subsp. *hystrix* (Roth) Dostál; *Hordeum maritimum* var. *gussonianum* (Parl.) K. Richt.)

Central and Southwest Asia, Mediterranean. Annual, small, solitary or tufted, erect or geniculate, auricles absent, leaf sheaths not keeled, ligule membranous to hyaline, leaf blade flat and hairy to downy, trichomes on the sheaths of lower leaves, spikes ovate to oblong-ovate and bristly, spikelets heteromorphic and strongly imbricate, 1 floret, lateral spikelets barren with stiff and bristle-like glumes, central spikelet fertile and sessile, lemmas unarmed or awned, membranous to chartaceous palea narrowly oblong or narrowly ovate to narrowly elliptic, 2 free and hyaline lodicules, purplish anthers, ovary pilose, fruit ovoid, weed of disturbed ground, swamps, sandy and saline soils, often confused with *Hordeum marinum* Hudson, see *Species Plantarum* 1: 560. 1753, *Flora Anglica, Editio Altera* 1: 57. 1778, *Flora Pedemontana* 2: 259, 3: t. 91, f. 3. 1785, *Catalecta Botanica* 1: 23. 1797, *Flora Palermitana* 1: 246. 1845, *Plantae Europaeae* 1: 131. 1890 and *Synopsis der mitteleuropäischen Flora* 2: 737. 1902, *Botanisch Jaarboek* 40: 109. 1907, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 52: 441. 1908, *Botaniska Notiser* 1953(3): 359. 1953, *Flora Republicii Socialiste Romania* 12: 591. 1972, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 120. 1971[1972], *Taxon* 29(2/3): 350. 1980, *Boletim da Sociedade Broteriana* 54: 240 (1980-81). 1981, *Feddes Repertorium* 95(7-8): 440. 1984, *American Journal of Botany* 72(5): 772. 1985, *Citol. Genet.* (Kiev) 19(6): 428-433. 1985, *Genetika* 24: 1897-1900. 1988, *Biologicheskii Zhurnal Armenii* 41: 473-477. 1988, *Genome* 32: 629-639. 1989, *Nordic Journal of Botany* 9: 1-10. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Genome* 35: 1032-1036. 1992, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 39: 59-65. 1992, *Annals of Botany* 73: 471-479. 1994.

in English: Mediterranean barley, Mediterranean barley grass

H. intercedens Nevski (*Hordeum pusillum* var. *euclaston* (Steud.) Hauman)

U.S., Mexico, southwest California. Annual, rare, loosely caespitose, erect to geniculate, auricles usually absent or tiny, leaf blades sparsely to densely pubescent, pale green spikes, lateral spikelets usually sterile, found in alkaline flats, vernal pools, in flooded and often saline river beds, see *Synopsis Plantarum Glumacearum* 1: 353. 1854 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 297. 1916, *Canadian Journal of Botany* 66: 401-408. 1988, *Genome* 32: 1124-1127. 1989, *Annals of Botany* 73: 471-479. 1994.

in English: bobtail barley, little barley, vernal barley

H. jubatum L. (*Critesion geniculatum* Raf.; *Critesion jubatum* (L.) Nevski; *Critesion jubatum* subsp. *jubatum*; *Elymus jubatus* (L.) Link; *Hordeum caespitosum* Scribn.; *Hordeum*

jubatum var. *caespitosum* (Scribn.) Hitchc.; *Hordeum jubatum* var. *normale* Kuntze; *Hordeum jubatum* var. *pampeanum* Hauman; *Hordeum jubatum* var. *tomentellum* Nevski; *Hordeum pampeanum* (Hauman) Herter; *Hordeum pubiflorum* var. *pampeanum* (Hauman) Melderis)

North America, U.S., Mexico, Northeast Asia. Short-lived perennial or rarely annual, riparian, erect or spreading, densely tufted, stems numerous or solitary, fibrous roots, extensive root system, sheaths glabrous to pubescent, auricles absent, leaf blades scabrous, whitish green to light purplish inflorescences, bristly and soft nodding spikes, lateral spikelets asexual or staminate, long awns straight and silky, prolific seeder, weed species, aggressive, highly ornamental, useful for erosion control, potential for revegetation, pasture grass, sometimes injurious to stock, grows in meadows and prairies around riverbeds and seasonal lakes, on the edges of sloughs and salt marshes, basins, drawdown areas, irrigated pastures and ditches, dry old fields, waste ground, moist places along roadsides, railroads, disturbed sites, often in saline or alkaline habitats, beaches and salt marshes, in grain and hay fields, grassy slopes, flatlands, see *Species Plantarum* 1: 85. 1753, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, *Hortus Regius Botanicus Berlinensis* 1: 19. 1827, *Reliquiae Haenkeanae* 1(4-5): 327. 1830, *Flora Antarctica* 2: 388. 1847, *Mission Scientifique du Cap Horn, Botanique* 5: 389. 1889, *Revisio Generum Plantarum* 3: 355. 1898, *Proceedings of the Davenport Academy of Natural Sciences* 7: 245. 1899 and *Contr. U.S. Natl. Herb.* 12: 124. 1908, *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 285. 1916, *Proceedings of the Biological Society of Washington* 41: 160. 1928, *Flora URSS* 2: 721. 1934, *American Journal of Botany* 21(3): 134. 1934, *Manual Grass. US.* 871. 1935, *Revista Sudamericana de Botánica* 6(5-6): 147. 1940, *Botaniska Notiser* 1953(3): 359. 1953, *Can. J. Bot.* 40: 1686. 1960, *Canadian Journal of Botany* 40: 1686, 1690. 1962, *Le Naturaliste Canadien* 94: 525. 1967, *Bot. Zhurn.* 71: 1426-1427. 1986, *Willdenowia* 16: 479-490. 1987, *Genome* 30: 204-210. 1988, *Genetica* 79: 147-151. 1989, *Canadian Journal of Botany* 68(11): 2433-2442. 1990, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991, *Cytologia* 56: 431-436. 1991, *Cytologia* 57: 51-57. 1992, *Nordic J. Bot.* 14(2): 117-136. 1994, *Systematic Botany* 21(2): 3-15. 1996.

in English: squirreltail barley, squirrel-tail grass, weed long tail, fox-tail barley, foxtail barley, foxtail grass, wild barley, skunktail

in Colombia: cebada rabo de ardilla

in Mexico: cebada cimarrona, cola de zorrillo

H. jubatum L. subsp. *intermedium* Bowden (*Hordeum caespitosum* Scribn. ex Pammel; *Hordeum jubatum* var. *caespitosum* (Scribn. ex Pammel) A.S. Hitchc.)

Northern America, U.S. Slender, found in dry prairies, see *Canadian Journal of Botany* 40: 1686. 1962, *Nordic J. Bot.* 14(2): 117-136. 1994.

in English: bobtail barley

H. jubatum L. subsp. *jubatum* (*Critesion jubatum* (L.) Nevski; *Hordeum jubatum* var. *jubatum*)

Northern America, U.S., Russia, Siberia, Arctic. Densely caespitose, grows on grassy slopes, in moist soil along roadsides and other disturbed areas, in meadows, the edges of sloughs and salt marshes, see *Species Plantarum* 1: 85. 1753 and *Flora URSS* 2: 721. 1934, *Nordic J. Bot.* 14(2): 117-136. 1994.

in English: foxtail barley

H. lechleri (Steud.) Schenck (*Critesion lechleri* (Steud.) Á. Löve; *Elymus lechleri* Steud.; *Hordeum jubatum* f. *violaceum* Kuntze; *Hordeum pubiflorum* var. *intermedia* (Hauman) Melderis; *Hordeum secalinum* f. *intermedia* Hauman; *Hordeum secalinum* var. *pubiflorum* (Hook.f.) Hauman)

South America, Chile, Argentina. Perennial, see *Flora Antarctica* 2: 388. 1847, *Synopsis Plantarum Glumacearum* 1: 430. 1854, *Revisio Generum Plantarum* 3: 355. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 108. 1907, *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 306-307. 1916, *Nordisk Kärleväxtflora* 1: 386. 1953, *Botaniska Notiser* 1953(3): 359. 1953, *Feddes Repertorium* 95(7-8): 437. 1984, *Genetica* 66: 53-61. 1985, *Hereditas; genetiskt arkiv.* 105: 171-177. 1986, *Genome* 30: 204-210. 1988, *Genetika* 25: 2067-2069. 1989, *Hereditas; genetiskt arkiv.* 112: 93-107. 1990, *Nordic J. Bot.* 14(2): 117-136. 1994, *Annals of Botany* 73: 195-203, 471-479. 1994, *Systematic Botany* 21(2): 3-15. 1996.

H. leporinum Link (*Critesion murinum* (L.) Á. Löve subsp. *leporinum* (Link) Á. Löve; *Critesion simulans* (Bowden) Á. Löve; *Hordeum ambiguum* Döll; *Hordeum leporinum* var. *simulans* Bowden; *Hordeum murinum* L.; *Hordeum murinum* sensu J.M. Black, non L.; *Hordeum murinum* L. subsp. *leporinum* (Link) Arcang.; *Hordeum murinum* subsp. *leporinum* (Link) Asch. & Graebn.; *Hordeum murinum* var. *chilense* Brongn.; *Hordeum murinum* var. *leporinum* (Link) K. Richt.; *Hordeum murinum* var. *leporinum* (Link) Arcang.; *Hordeum murinum* var. *velutinum* Speg.; *Hordeum pseudomurinum* Tapp.; *Hordeum rubens* Willk.)

Europe, Asia, Mediterranean. Annual, tufted, erect, spreading or nearly prostrate, auricles absent or present and encircling culm at base, ligule membranous and truncate, leaf sheaths keeled and glabrous, leaf blade flat, dense single erect flowering spike, spikelets heteromorphic and distichous, floret 1, central spikelet fertile with a lanceolate lemma and a straight terminal awn, lateral spikelets barren or male or neuter, anthers of the central floret usually pale, male spikelet with glumes unequal, female spikelet sessile and with glumes equal, lemmas of the lateral spikelets much

longer than the glumes, palea membranous to chartaceous, anthers pale to dark, ovary pilose, yellow obovoid grain, fodder, a widespread weed of crops and pastures, common on disturbed soil of roadsides, lawns, road verges and irrigation ditches, in shade of trees or shrubs, the spikelets a nuisance to man and beast and a contaminant of wool, spear-like seeds highly injurious to sheep, seeds 200 years old found to be viable, see *Species Plantarum* 1: 85. 1753, *Revista de la Facultad de Agronomia y Veterinaria* 30-31: 588. 1822, *Voyage autour du Monde* 2: 56. 1831, *Linnaea* 9(1): 133. 1834, *Synopsis Florae Germanicae et Helveticae (edition 2)* 955. 1845, *Österreichische Botanische Zeitschrift* 25: 109. 1875, *Flora Brasiliensis* 2(3): 231, f. 57. 1880, *Compendio della Flora Italiana* 805. Dec 1884, *Plantae Europaeae* 1: 130. 1890 and *Synopsis der mitteleuropäischen Flora* 1: 739. 1902, *Canadian Journal of Botany* 40: 1694. 1962, *Botanical Journal of the Linnean Society* 72(2): 150. 1976, *Taxon* 29(2/3): 350. 1980, *Feddes Repertorium* 95(7-8): 440. 1984, *Annali di Botanica* 45: 75-102. 1987, *Genome* 32: 629-639. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Canadian Journal of Botany* 68(11): 2433-2442. 1990, *Nordic Journal of Botany* 15(5): 449-458. 1995.

in English: barley grass, common foxtail, wall barley, wild barley

in French: orge des rats

in Morocco: sbult l-far, senbult l-far, tumzin n-tgerdayt

H. marinum Hudson (*Critesion marinum* (Hudson) Á. Löve; *Hordeum hystrix* auct., non Roth; *Hordeum maritimum* With., nom. illeg.; *Hordeum maritimum* O.F. Müll.; *Hordeum maritimum* (Huds.) Stokes; *Hordeum maritimum* subsp. *maritimum*)

Europe, Mediterranean. Annual, loosely to densely tufted, erect or geniculate, cover grass, auricles absent or very short, leaf sheath not keeled, ligule membranous entire to erose, leaf blade flat and linear, a single dense spike oblong or narrowly ovate, cleistogamous and heteromorphic spikelets, floret 1, lateral spikelets male and pedicellate, central spikelet fertile with a linear-lanceolate lemma and a straight terminal awn, female spikelet sessile and with glumes equal, lemma of the lateral spikelets narrow and barren, glumes unequal, chartaceous palea oblong to narrowly ovate or narrowly elliptic, anthers pale, ovary pilose, fruit oblong, weed species, salt-tolerant, a species of coastal and sandy areas, on disturbed or grazed often saline sites, see Robert Morison (1620-1683), *Plantarum historiae universalis oxoniensis*. Pars tertia, post auctoris mortem expleta et absoluta a Jacobo Bobartio [Jacobus Bobartio the younger, c. 1640-1719]. 3: 179, t. 6, f. 5. Oxonii, e Theatro Sheldoniano 1699, *Flora Danica* 4(5t): 630. 1775, *Flora Anglica ... Editio Altera, emendata et aucta.* 1: 57. Londini 1778, *A Botanical Arrangement of British Plants (edition 2)* 1: 127. 1787 and *Anales Museo Nacional de Historia Natural de Buenos*

Aires 28: 288. 1916, *Taxon* 29(2/3): 350. 1980, *Feddes Repertorium* 95(7-8): 439. 1984, *Flora* 178: 177-182. 1986, *Biologicheskii Zhurnal Armenii* 41: 473-477. 1988, *Chromosoma* 96: 119-131. 1988, *Genome* 30: 204-210. 1988, *Canadian Journal of Botany* 68(11): 2433-2442. 1990, *Hereditas; genetiskt arkiv*. 114: 35-39. 1991, *Watsonia* 20: 63-66. 1994.

in English: sea barley, seaside barley, sea barley grass, Mediterranean barley

H. marinum Huds. subsp. **gussoneanum** (Parl.) Thellung (also spelled **gussonianum**) (*Critesion geniculatum* (All.) Á. Löve, nom. illeg., non *Critesion geniculatum* Raf.; *Critesion hystrix* (Roth) Á. Löve; *Critesion marinum* (Hudson) Á. Löve subsp. *gussoneanum* (Parl.) Barkworth & D.R. Dewey; *Elymus hystrix* L.; *Hordeum berterioanum* E. Desv.; *Hordeum berterioanum* var. *pumila* E. Desv.; *Hordeum geniculatum* All.; *Hordeum gussoneanum* Parl.; *Hordeum hystrix* Roth; *Hordeum hystrix* (L.) Schenck, nom. illeg., non *Hordeum hystrix* Roth; *Hordeum marinum* subsp. *gussoneanum* (Parl.) Anghel & Velican; *Hordeum marinum* var. *gussoneanum* (Parl.) Hyl.; *Hordeum maritimum* subsp. *gussoneanum* (Parl.) Asch. & Graebn.; *Hordeum maritimum* subsp. *hystrix* (Roth) Dostál; *Hordeum maritimum* subsp. *hystrix* (Roth) Jirasek; *Hordeum maritimum* var. *gussonianum* (Parl.) K. Richt.; *Hordeum utriculatum* Bertero) (for the Italian botanist Giovanni Gussone, 1787-1866, his writings include *Catalogus plantarum quae osservantur in regio horto serenissimis Francisci Borboni principis juventutis in Boccadifalco prope Panormum*. Neapoli 1821, *Plantae rariores quas in itinere per oras Jonii ac Adriatici maris et per regionis Samnii ac Aprutii collegit Joanne Gussone*. Neapoli 1826, *Florae siculae prodromus sive plantarum in Sicilia ulteriori nascentium enumeratio secundum systema Linneanum disposita*. Neapoli 1827-1828 and *Florae siculae synopsis exhibens plantas vasculares in Sicilia insulisque adjacentibus huc usque detectas, secundum systema Linneanum dispositas*. Neapoli 1842-1844[-1845]; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 101. Boston 1965; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 119-120. Palermo 1988; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Europe. Annual, solitary or tufted, often geniculate, leaf sheaths auriculate, glumes of lateral spikelets more or less scabrid, weed, occurs in grassy fields, waste places, disturbed places, ballast and rubbish dumps, open habitats, along roadsides, in moist waste places, see *Species Plantarum* 1: 560. 1753, *Flora Anglica ... Editio Altera, emendata et aucta*. 1: 57. Londini 1778, *Flora Pedemontana* 2: 259, 3: t. 91, f. 3. 1785, *Catalecta Botanica* 1: 23. 1797, *Amer. J. Sci.* 23: 86. 1833, *Flora Palermitana* 1: 246. 1845, *Flora Chilena* 6: 460. 1854, *Plantae Europaeae* 1: 131. 1890 and *Synopsis der mitteleuropäischen Flora* 2: 737. 1902,

Botanisch Jaarboek 40: 109. 1907, *Botaniska Notiser* 1953(3): 359. 1953, *Flora Republicii Socialiste Romania* 12: 591. 1972, *Taxon* 29(2/3): 350. 1980, *Feddes Repertorium* 95(7-8): 440. 1984, *American Journal of Botany* 72(5): 772. 1985, *Biologicheskii Zhurnal Armenii* 41: 473-477. 1988, *Genetika* 24: 1897-1900. 1988, *Nordic Journal of Botany* 9: 1-10. 1989, *Genome* 32: 629-639. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Genome* 35: 1032-1036. 1992, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 39: 59-65. 1992, *Annals of Botany* 73: 471-479. 1994.

in English: barley, Mediterranean barley

H. marinum Huds. subsp. **marinum** (*Critesion marinum* (Hudson) Á. Löve; *Hordeum maritimum* With., nom. illeg.; *Hordeum maritimum* O.F. Müll.)

Europe, Asia temperate, Syria, Israel, Turkey. Annual, found in disturbed sites, on sandy soils, see *Flora Danica* 4(5t): 630. 1775, *Flora Anglica, Editio Altera* 1: 57. 1778, *A Botanical Arrangement of British Plants (edition 2)* 1: 127. 1787 and *Feddes Repertorium* 95(7-8): 439-440. 1984, *Genetika* 24: 1897-1900. 1988, *Genome* 32: 629-639. 1989, *Nordic Journal of Botany* 9: 1-10. 1989, *Annals of Botany* 73: 471-479. 1994.

in English: sea barley, squirreltail barley, squirreltail grass

H. murinum L. (*Critesion murinum* (L.) Á. Löve; *Critesion murinum* var. *murinum*; *Critesion murinum* var. *leporinum* (Link) Á. Löve; *Hordeum ciliatum* Gilib.; *Hordeum glaucum* Steud.; *Hordeum murinum* var. *genuinum* Gilib.; *Hordeum vaginatum* K. Koch; *Triticum murale* Salisb.; *Zeocriton murinum* (L.) P. Beauv.)

Europe, Asia temperate, Syria, Israel, Russia. Annual, tufted, erect, leaf sheaths not keeled, ligule membranous, auricles present, leaf blade flat and sparsely pilose, a single contracted spike pale green to reddish, spikelets lateral male and pedicellate, hermaphrodite spikelets sessile, cleistogamous and heteromorphic spikelets, palea narrowly elliptic and apically notched, lateral spikelets staminate, fruit pilose obovoid and dorsiventrally compressed, seeds eaten as flour, weed species widely naturalized elsewhere, common on disturbed waste ground, ballast, moist places, riverbanks, steppes, on disturbed sandy soils, fields, roadsides, dry open land, buildings and walls, dwelling surrounding, see *Species Plantarum* 1: 85. 1753, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 27. Londini [London] 1796, *Essai d'une Nouvelle Agrostographie* 115, 182. 1812, *Revista de la Facultad de Agronomia y Veterinaria* 30-31: 588. 1822, *Voyage autour du Monde* 2: 56. 1831, *Linnaea* 9(1): 133. 1834, *Synopsis Plantarum Glumacearum* 1: 352. 1854, *Compendio della Flora Italiana* 805. 1884, *Plantae Europaeae* 1: 130. 1890 and *Iter Maroc*. 96. 1927, *Can. J. Bot.* 40: 1695. 1960, *Novosti Sist. Vyss. Rast.* 8: 67. 1971, *Botanical Journal of the Linnean Society* 72(2): 150. 1976, *Taxon* 29(2/3): 350. 1980, *Phytologia* 51(6): 374. 1982,

Feddes Repertorium 95(7-8): 439-440. 1984, *Taxon* 34: 529. 1985, *Austrobaileya* 2(3): 241. 1986, *Annali di Botanica* 45: 75-102. 1987, *Biologicheskii Zhurnal Armenii* 42: 621-629. 1989, *Cytologia* 57: 51-57. 1992, *Watsonia* 20: 63-66. 1994, *Watsonia* 21: 365-368. 1997.

in English: barley grass, farmer's foxtail, false barley, mouse barley, wall barley grass, wall barley, wild barley, foxtail barley

in French: orge des rats

in Turkey: arpa, yabani arpa

in Arabic: abu stirs

in Argentina: loica cacho

in Morocco: senboul-el-far, zentel-el-far, zentet-el-far

in South Africa: kruipgras, muiswildegars, wildegars, wildegars

in Japan: mugi-kusa

H. murinum L. subsp. **glaucum** (Steudel) Tzvelev (*Critesion glaucum* (Steud.) Á. Löve; *Critesion murinum* (L.) Á. Löve subsp. *glaucum* (Steud.) W.A. Weber; *Critesion murinum* subsp. *glaucum* (Steud.) B.K. Simon, nom. illeg., non *Critesion murinum* subsp. *glaucum* (Steud.) W.A. Weber; *Hordeum glaucum* Steud.; *Hordeum leporinum* subsp. *glaucum* (Steud.) T.A. Booth & A.J. Richards; *Hordeum murinum* var. *pedicellatum* Pau & Font Quer; *Hordeum stebbinsii* Covas)

Eastern Mediterranean, southwest Europe. Annual, spike green to glaucous, central spikelet pedicellate, grows in grassland, waste places, disturbed areas, fields, sandy soils, see *Species Plantarum* 1: 85. 1753, *Essai d'une Nouvelle Agrostographie* 115, 182. 1812, *Linnaea* 9(1): 133. 1834, *Synopsis Plantarum Glumacearum* 1: 352. 1854 and *Iter Maroc*. 96. 1927, *Madroño* 10(1): 17-19, pl. 2. f. 8, 12, 13. 1949, *Can. J. Bot.* 40: 1695. 1960, *Novosti Sist. Vyss. Rast.* 8: 67. 1971, *Botanical Journal of the Linnean Society* 72(2): 150. 1976, *Taxon* 29(2/3): 350. 1980, *Phytologia* 51(6): 374. 1982, *Feddes Repertorium* 95: 440. 1984, *Taxon* 34: 529. 1985, *Pakistan Journal of Botany* 17: 305-307. 1985, *Austrobaileya* 2(3): 241. 1986, *Annali di Botanica* 45: 75-102. 1987, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, *Biologicheskii Zhurnal Armenii* 42: 621-629. 1989, *Genome* 32: 629-639. 1989, *Cytologia* 57: 51-57. 1992, *Bocconea, Monographiae Herbarii Mediterranei Panormitani* 3: 229-250. 1992, *Nordic Journal of Botany* 15(5): 449-458. 1995, *Watsonia* 21: 365-368. 1997.

in English: blue foxtail, foxtail, smooth barley

in Arabic: abu stirs

H. murinum L. subsp. **leporinum** (Link) Arcang. (*Critesion murinum* (L.) Á. Löve subsp. *leporinum* (Link) Á. Löve; *Hordeum ambiguum* Döll; *Hordeum leporinum* Link; *Hordeum leporinum* var. *simulans* Bowden; *Hordeum murinum*

subsp. *leporinum* (Link) Asch. & Graebn.; *Hordeum murinum* var. *chilense* Brongn.; *Hordeum murinum* var. *leporinum* (Link) Arcang.; *Hordeum murinum* var. *leporinum* (Link) K. Richt.; *Hordeum murinum* var. *velutinum* Speng.; *Hordeum pilosum* Steud.)

Mediterranean, South Europe. Annual, spike green to purplish, central spikelet pedicellate, lateral spikelets longer than the central 1, weed, found in moist sites, waste places and ballast, along roadsides, disturbed areas, in arid regions, see *Species Plantarum* 1: 85. 1753, *Revista de la Facultad de Agronomia y Veterinaria* 30-31: 588. 1822, *Voyage autour du Monde* 2: 56. 1831, *Linnaea* 9(1): 133. 1834, *Synopsis Florae Germanicae et Helveticae (edition 2)* 955. 1845, *Österreichische Botanische Zeitschrift* 25: 109. 1875, *Flora Brasiliensis* 2(3): 231, f. 57. 1880, *Compendio della Flora Italiana* 805. 1884, *Plantae Europaeae* 1: 130. 1890 and *Synopsis der mitteleuropäischen Flora* 1: 739. 1902, *Canadian Journal of Botany* 40: 1694. 1962, *Botanical Journal of the Linnean Society* 72(2): 150. 1976, *Taxon* 29(2/3): 350. 1980, *Feddes Repertorium* 95(7-8): 440. 1984, *Annali di Botanica* 45: 75-102. 1987, *Genome* 32: 629-639. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Canadian Journal of Botany* 68(11): 2433-2442. 1990, *Nordic Journal of Botany* 15(5): 449-458. 1995.

in English: farmer's foxtail, foxtail, ballast, mouse barley, hare barley, foxtail barley, leporinum barley

H. murinum L. subsp. **montanum** (Hack.) H. Scholz & Raus (*Hordeum murinum* f. *montanum* Hack.)

Europe, Spain.

H. murinum L. subsp. **murinum** (*Critesion murinum* (L.) Á. Löve; *Critesion murinum* subsp. *murinum*; *Hordeum rubens* Willk.)

Europe. Annual, herbaceous, solitary or tufted, leaf sheaths auriculate, spike rachis disarticulating, central spikelet sessile, lateral spikelets with long ciliate glumes, weed, found in moist places, sandy soils, ballast, waste ground, disturbed areas, see *Species Plantarum* 1: 85. 1753 and *Taxon* 29(2/3): 350. 1980, *Genome* 32: 629-639. 1989, *Watsonia* 20: 63-66. 1994, *Nordic Journal of Botany* 15(5): 449-458. 1995.

in English: wall barley, farmer's foxtail, way barley, wild barley, false barley

in South Africa: muiswildegars

H. murinum L. subsp. **setarium** H. Scholz & Raus

Europe, Greece.

in English: barley grass, false barley

H. muticum J. Presl (*Critesion muticum* (Presl) Á. Löve; *Hordeum andicola* Griseb.; *Hordeum chilense* Roem. & Schult. var. *muticum* (J. Presl) Hauman; *Hordeum muticum* var. *andicola* (Griseb.) Thell.; *Hordeum nodosum* var. *parviflorum* (Hack.) Henrard & Thell.; *Hordeum secalinum* var.

andicola (Griseb.) Hauman; *Hordeum secalinum* var. *parviflorum* Hack.)

Southern America, Argentina, Ecuador, Colombia. Perennial bunchgrass, tufted, procumbent, creeping, terrestrial, herbaceous, inflorescences spreading to prostrate, mountains, along streams, wet areas, see *Reliquiae Haenkeanae* 1: 327. 1830, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 249. 1874, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 285. 1879, *Annales de l'Institut Botanique-Geologique Colonial de Marseille* 3: 388. 1896 and *Anales del Museo Nacional de Buenos Aires* 13: 531, 533. 1906, *Mémoires de la Société des Sciences Naturelles et mathématiques de Cherbourg* 38: 157, 159. 1912 [alt., Albert Thellung, 1881-1928, *La flore adventice de Montpellier* 157. Cherbourg 1912], *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 273, 276, 304, t. 13, f. 3. 1916, *Mededeelingen van's Rijks-Herbarium* 40: 75. 1921, *Feddes Repertorium* 95(7-8): 439. 1984, *Hereditas; genetiskt arkiv*. 110: 289-305. 1989.

H. parodii Covas (*Critesion parodii* (Covas) Á. Löve; *Hordeum parodii* var. *araucanum* Parodi ex Nicora; *Hordeum parodii* var. *parodii*)

Argentina. Rare grass, perennial, useful for erosion control, see *Revista Argentina de Agronomía* 18(2): 74-77. 1951, *Flora de la Provincia de Buenos Aires* 4(2): 175-189. 1970, *Hickenia* 1(11): 59. 1977, *Flora Patagónica* 8(3): 406-440. 1978, *Feddes Repertorium* 95(7-8): 438. 1984, *Genetica* 64: 93-100. 1984, *Nordic Journal of Botany* 6(4): 399-410. 1986, *Hereditas; genetiskt arkiv*. 112: 93-107. 1990, *Cytologia* 56: 431-436. 1991.

H. patagonicum (Hauman) Covas (*Critesion magellanicum* (Parodi ex Nicora) Á. Löve; *Critesion mustersii* (Nicora) Á. Löve; *Critesion santacrucense* (Parodi ex Nicora) Á. Löve; *Critesion setifolium* (Parodi ex Nicora) Á. Löve; *Hordeum chilense* var. *magellanicum* Parodi ex Nicora; *Hordeum maritimum* var. *patagonicum* Hauman; *Hordeum mustersii* Nicora; *Hordeum patagonicum* subsp. *mustersii* (Nicora) Bothmer, Giles & N. Jacobsen; *Hordeum santacrucense* Parodi ex Nicora; *Hordeum setifolium* Parodi ex Nicora)

Argentina, Chile. See *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 288. 1916, *Revista Argentina de Agronomía* 20(2): 63. 1953, *Hickenia* 1(11): 58-59, 61. 1977, *Hickenia* 1(20): 113. 1977, *Feddes Repertorium* 95(7-8): 439. 1984, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 109(3): 376, 378, 380. 1988, *Hereditas; genetiskt arkiv*. 110: 289-305. 1989, *Genome* 32: 1124-1127. 1989.

H. patagonicum (Hauman) Covas subsp. **magellanicum** (Parodi & Nicora) Bothmer & al. (*Critesion magellanicum* (Parodi ex Nicora) Á. Löve; *Hordeum chilense* Roem. & Schult. var. *magellanicum* Parodi & Nicora)

Argentina, Chile. See *Hickenia* 1(11): 61. 1977, *Feddes Repertorium* 95(7-8): 439. 1984, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 109(3): 380. 1988, *Hereditas; genetiskt arkiv*. 110: 289-305. 1989.

H. patagonicum (Hauman) Covas subsp. **mustersii** (Nicora) Bothmer & al. (*Critesion mustersii* (Nicora) Á. Löve; *Hordeum mustersii* Nicora)

Argentina, Chile. Rare grass, see *Hickenia* 1(20): 113. 1977, *Feddes Repertorium* 95(7-8): 439. 1984, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 109(3): 378. 1988, *Hereditas; genetiskt arkiv*. 110: 289-305. 1989.

H. patagonicum (Hauman) Covas subsp. **patagonicum** (*Hordeum maritimum* var. *patagonicum* Hauman)

Argentina. See *Revista Argentina de Agronomía* 20(2): 63. 1953, *Hereditas; genetiskt arkiv*. 110: 289-305. 1989.

H. patagonicum (Hauman) Covas subsp. **santacrucense** (Parodi & Nicora) Bothmer & al. (*Critesion santacrucense* (Parodi ex Nicora) Á. Löve; *Hordeum santacrucense* Parodi & Nicora)

Argentina, Santa Cruz, Chile. See *Hickenia* 1(11): 58. 1977, *Feddes Repertorium* 95(7-8): 439. 1984, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 109(3): 378. 1988, *Hereditas; genetiskt arkiv*. 110: 289-305. 1989, *Genetica* 79: 147-151. 1989.

H. patagonicum (Hauman) Covas subsp. **setifolium** (Parodi & Nicora) Bothmer & al. (*Critesion setifolium* (Parodi ex Nicora) Á. Löve; *Hordeum setifolium* Parodi & Nicora)

Argentina, Santa Cruz. Perennial, see *Hickenia* 1(11): 59. 1977, *Feddes Repertorium* 95(7-8): 439. 1984, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 109(3): 376. 1988, *Hereditas; genetiskt arkiv*. 110: 289-305. 1989.

H. procerum Nevski (*Critesion procerum* (Nevski) Á. Löve; *Hordeum hexaploidum* Covas)

Argentina. See *Revista Argentina de Agronomía* 17(3): 230. 1950, *Feddes Repertorium* 95(7-8): 437. 1984, *Genetica* 64: 93-100. 1984, *Genetica* 66: 53-61. 1985, *Genome* 30: 204-210. 1988, *Hereditas; genetiskt arkiv*. 112: 93-107. 1990, *Nordic Journal of Botany* 14(2): 117-136. 1994, *Annals of Botany* 73: 195-203, 471-479. 1994.

H. pubiflorum Hook.f. (*Critesion pubiflorum* (Hook.f.) Á. Löve; *Hordeum comosum* var. *pubiflorum* (Hook.f.) Thell.; *Hordeum halophilum* Griseb.; *Hordeum halophilum* var. *breviaristatum* Parodi ex Nicora; *Hordeum jubatum* var. *pilosulum* Franch.; *Hordeum pubiflorum* var. *intermedia* (Hauman) Melderis; *Hordeum pubiflorum* var. *pampeanum* (Hauman) Melderis; *Hordeum secalinum* f. *intermedia* Hauman; *Hordeum secalinum* var. *pubiflorum* (Hook.f.) Hauman)

South America, Argentina, Chile. See *Flora Antarctica* 2: 388. 1847, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 249. 1874, *Mission Scientifique du Cap Horn, Botanique* 5: 389. 1889 and *La flore adventice de Montpellier* 158. 1912, *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 285, 306-307. 1916, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 64: 715. 1919, *Botaniska Notiser* 1953(3): 359. 1953, *Nordisk Kärnväxtflora* 1: 386. 1953, *Hickenia* 1(11): 62. 1977, *Feddes Repertorium* 95(7-8): 437. 1984, *Hereditas; genetiskt arkiv.* 110: 289-305. 1989, *Nordic Journal of Botany* 14(2): 117-136. 1994.

H. pubiflorum Hook.f. subsp. **breviaristatum** (Parodi & Nicora) Baden (*Hordeum halophilum* var. *breviaristatum* Parodi ex Nicora; *Hordeum pubiflorum* subsp. *halophilum* (Griseb.) Baden & Bothmer)

Argentina. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 249. 1874 and *Hickenia* 1(11): 62. 1977, *Nordic Journal of Botany* 14(2): 124, f. 1B, 2B-C, 3C-F. 1994, *Nordic Journal of Botany* 16(3): 236, f. 4c. 1996 [1997].

H. pubiflorum Hook.f. subsp. **halophilum** (Griseb.) Baden & Bothmer (*Critesion pubiflorum* subsp. *halophilum* (Griseb.) Á. Löve; *Hordeum halophilum* Griseb.; *Hordeum halophilum* var. *breviaristatum* Parodi ex Nicora; *Hordeum halophilum* var. *halophilum*; *Hordeum jubatum* f. *versicolor* Kuntze; *Hordeum jubatum* f. *violaceum* Kuntze; *Hordeum jubatum* f. *viride* Kuntze; *Hordeum pubiflorum* subsp. *breviaristatum* (Parodi ex Nicora) Baden; *Hordeum pubiflorum* var. *intermedia* (Hauman) Melderis; *Hordeum secalinum* f. *intermedia* Hauman)

Argentina, Chile. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 249. 1874, *Pl. Lorentz.* 201. 1874, *Revisio Generum Plantarum* 3: 355. 1898 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 307. 1916, *Botaniska Notiser* 1953(3): 359. 1953, *Nordisk Kärnväxtflora* 1: 386. 1953, *Hickenia* 1(11): 62. 1977, *Feddes Repertorium* 95(7-8): 437. 1984, *Nordic Journal of Botany* 14(2): 124-125, f. 1B, 2B-C, 3C-F. 1994, *Nordic Journal of Botany* 16(3): 236, f. 4c. 1996 [1997].

H. pubiflorum Hook.f. subsp. **pubiflorum** (*Critesion pubiflorum* (Hook.f.) Á. Löve; *Critesion pubiflorum* subsp. *pubiflorum*; *Hordeum comosum* var. *pubiflorum* (Hook.f.) Thell.; *Hordeum pubiflorum* Hook.f.; *Hordeum secalinum* var. *pubiflorum* (Hook.f.) Hauman)

Argentina, Chile. See *Flora Antarctica* 2: 388. 1847 and *La flore adventice de Montpellier* 158. 1912, *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 306. 1916, *Feddes Repertorium* 95(7-8): 437. 1984.

H. pubiflorum Hook.f. var. **blomii** (Thell.) Melderis (*Hordeum x blomii* Thell. [*Hordeum comosum* x *Hordeum jubatum* var. *pampeanum*]; *Hordeum pubiflorum* Hook.f.)

South America, Argentina, Chile. See *Flora Antarctica* 2: 388. 1847 and *Botaniska Notiser* 1927: 192. 1927, *Botaniska Notiser* 1953(3): 359. 1953.

H. pusillum Nutt. (*Critesion pusillum* (Nutt.) Á. Löve; *Hordeum pusillum* subsp. *pusillum*; *Hordeum pusillum* var. *pubens* A.S. Hitchc.; *Hordeum pusillum* var. *pusillum*; *Hordeum pusillum* var. *typicum* Hauman; *Hordeum riehlii* Steud.) (named for Nicholas Riehl, 1808-1852)

Northern America, U.S., Canada, Mexico. Annual, short, loosely caespitose, erect, fibrous roots, leaf sheaths glabrous to weakly pubescent, auricles usually absent, leaves elongate and narrow, green to yellowish inflorescences, spike bristly, lateral spikelets usually sterile, straight awns, poor grazing, eaten by livestock, the awns on the spikelets may cause injury to the mouths of the animals, found along roadsides, in full sun, roadside ditches and roadside banks, disturbed places, grassy areas, marsh borders, open grasslands, pastures, waste places, saline plains, swamps, see *The Genera of North American Plants* 1: 87. 1818, *Synopsis Plantarum Glumacearum* 1: 353. 1854 [1855] and *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 266, 297. 1916, *Journal of the Washington Academy of Sciences* 23(10): 453. 1933, *Flora de la Provincia de Buenos Aires* 4(2): 184. 1970, *Taxon* 29(1): 166. 1980, *Annals of Botany* 73: 471-479. 1994.

in English: little barley, mouse barley

H. roshevitzii Bowden (*Critesion californicum* subsp. *sibiricum* Á. Löve; *Hordeum sibiricum* Roshev., nom. illeg., non *Hordeum sibiricum* (L.) Schenck)

Asia, China, Russia, Mongolia. Perennial, slender spikes, see *Canadian Journal of Genetics and Cytology* 7: 395. 1965, *Feddes Repertorium* 95(7-8): 438. 1984, *Willdenowia* 16: 479-490. 1987, *Genome* 32: 1124-1127. 1989, *Hereditas; genetiskt arkiv.* 112: 109-116. 1990, *Acta Botanica Yunnanica* 12: 57-66. 1990.

H. secalinum Schreber (*Critesion secalinum* (Schreb.) Á. Löve; *Hordeum nodosum* auct., non L.; *Hordeum nodosum* L.; *Hordeum pratense* Huds.)

Europe, North Africa. Perennial, tufted, hairy, erect, slender, ligule short and truncate, sheaths always hairy to densely pubescent, auricles present, blade rolled when young, slender spike-like inflorescence, spikelets aristate and clustered per 3, central spikelet sessile, 1 flower bisexual, lateral spikelet usually staminate, weed species, tolerates drought, growing on clay soils, in moist saline areas, on normally drained soils, in coastal meadows, see *Centuria II. Plantarum ...* 115. 1756, *Species Plantarum, Editio Secunda* 1: 126. 1762, *Spicilegium Florae Lipsicae* 148. 1771, *Flora Anglica, Editio Altera* 56. 1778, *Flora Antarctica* 2: 388. 1847, *Flora Chilena* 6: 458. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 285. 1879, *Revisio Generum Plantarum* 3(3): 355. 1898 and *Anales del Museo Nacional de Buenos Aires* 13: 533.

1906, *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 304, 306, 307, t. 13, f. 3. 1916, *Fl. Mong. Steppe* 1: 138. 1949, *Taxon* 29(2-3): 350. 1980, *Nord. J. Bot.* 2: 421-434. 1982, *Canadian Journal of Botany* 63(4): 743. 1985, *Hereditas; genetiskt arkiv.* 105: 179-185. 1986, *Genome* 30: 204-210. 1988, *Genome* 32: 1124-1127. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991, *Nordic Journal of Botany* 13: 481-493. 1993, *Nord. J. Bot.* 14(2): 122, 130. 1994, W. Hilbig, *The vegetation of Mongolia*. 1995.

in English: meadow barley

H. stenostachys Godr. (*Critesion stenostachys* (Godr.) Á. Löve; *Hordeum chilense* Roem. & Schult. f. *elongatum* Hauman; *Hordeum chilense* f. *longearistatum* Hauman; *Hordeum chilense* var. *compressum* (Griseb.) Hauman; *Hordeum chilense* var. *longearistatum* Hauman; *Hordeum chilense* var. *muticum* (J. Presl) Hauman; *Hordeum compressum* Griseb.; *Hordeum compressum* var. *superatum* Hack.; *Hordeum compressum* var. *tenuispicatum* Hack.; *Hordeum flexuosum* Nees ex Steud.; *Hordeum muticum* var. *compressum* (Griseb.) Thell.; *Hordeum muticum* var. *superatum* (Hack.) Thell.; *Hordeum secalinum* f. *scabriusculum* Kuntze; *Hordeum secalinum* var. *puberulum* Kuntze; *Hordeum stenostachys* var. *superatum* (Hack.) Stuck.; *Hordeum stenostachys* var. *superatum* (Hack.) Thell. ex Stuck.) (from the Greek *stenos* “narrow” and *stachys* “a spike”)

South America, Argentina, Uruguay, Brazil. Perennial, tufted, leaf sheaths without auricles, narrow slender spikes, rachis disarticulating, pasture, found in moist areas, vleis, seasonally wet areas, disturbed ground, see *Reliquiae Haenkeanae* 1: 327. 1830, *Mémoires de la Section des Sciences; Académie des Sciences et Lettres de Montpellier* 1: 455. 1853, *Synopsis Plantarum Glumacearum* 1: 353. 1855 [1854], *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 249. 1874, *Revisio Generum Plantarum* 3(3): 355. 1898 and *Anales del Museo Nacional de Buenos Aires* 13: 531. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 181. 1911, *La flore adventice de Montpellier* 157. 1912 [also *Mémoires de la Société des Sciences Naturelles de Cherbourg* 38: 157, 159. 1912], *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 303. 1914, *Anales Museo Nacional de Historia Natural de Buenos Aires* 28: 273, 275-276, 278. 1916, *Flora de la Provincia de Buenos Aires* 4(2): 175-189. 1970, *Flora Patagónica* 8(3): 406-440. 1978, *Feddes Repertorium* 95(7-8): 439. 1984, *Revista de la Universidad Nacional de Río Cuarto* 5: 79-84. 1985, *Hereditas; genetiskt arkiv.* 110: 289-305. 1989.

H. tetraploideum Covas (*Critesion tetraploideum* (Covas) Á. Löve)

Southern America. See *Revista Argentina de Agronomía* 20(2): 65. 1953, *Feddes Repertorium* 95(7-8): 438. 1984, *Hereditas; genetiskt arkiv.* 105: 171-177. 1986, *Genetica*

79: 147-151. 1989, *Hereditas; genetiskt arkiv.* 112: 93-107. 1990.

H. vulgare L. (*Hordeum aegiceras* Nees ex Royle; *Hordeum agriocrithon* Åberg; *Hordeum deficiens* Steud. ex A. Braun; *Hordeum distichon* L.; *Hordeum distichon* convar. *zeocrithon* (L.) Tzvelev; *Hordeum distichon* subsp. *zeocrithon* (L.) Celak.; *Hordeum distichum* L.; *Hordeum hexastichum* L.; *Hordeum lagunculiforme* (Bachteev) Bachteev ex Nikif.; *Hordeum polystichon* Haller f.; *Hordeum polystichon* var. *vulgare* (L.) Döll; *Hordeum sativum* Jess.; *Hordeum sativum* Pers.; *Hordeum sativum* var. *vulgare* (L.) K. Richt.; *Hordeum spontaneum* K. Koch; *Hordeum tetrastichum* Stokes; *Hordeum vulgare* convar. *distichon* (L.) Alef.; *Hordeum vulgare* f. *hexastichon* (L.) Hiroe; *Hordeum vulgare* subsp. *agriocrithon* (Åberg) Á. Löve; *Hordeum vulgare* subsp. *deficiens* (Steud. ex A. Braun) Á. Löve; *Hordeum vulgare* subsp. *distichon* (L.) Körn.; *Hordeum vulgare* subsp. *distichum* (L.) Thell.; *Hordeum vulgare* subsp. *hexastichon* (L.) Celak.; *Hordeum vulgare* subsp. *spontaneum* (K. Koch) Asch. & Graebn.; *Hordeum vulgare* var. *distichon* (L.) Hook.f.; *Hordeum vulgare* var. *hexastichon* (L.) Asch.; *Hordeum vulgare* var. *trifurcatum* (Schlecht.) Alef.; *Hordeum zeocrithon* L.; *Zeocrithon distichon* (L.) P. Beauv.)

Eurasia. Annual, largely variable, loosely to densely tufted, usually erect, robust, rough-awned, auricles present, ligule membranous and obtuse, lower sheaths pilose or glabrous, leaf blade flat and ribbed, seminal roots and nodal roots, inflorescence a terminal cylindrical spike, 3 spikelets at each inflorescence node, central spikelet sessile, a single spikelet dense and oblong, cleistogamous and heteromorphic spikelets, floret 1, all the spikelets of the triplet fertile, incomplete florets morphologically similar to hermaphrodite florets, central spikelets and often the lateral spikelet fertile, lateral spikelets sterile, 2 glumes subulate tapering to an awn, palea 2-keeled and narrowly elliptic to narrowly obovate, 2 lodicules, 3 stamens, ovary pilose, 2 plumose white stigmas, grain crop species widely domesticated and cultivated, straw as fodder for livestock, stir-baked as a digestive and lactifuge, used raw as a carminative, a cooling drink from the grains (*sattu*, in India), useful for erosion control on disturbed sites, food and forage crop, numerous cultivars are grown throughout the temperate regions of the world, occurs as a weed on roadsides and rail verges, in low-moisture areas, waste areas, damp soil, see *Species Plantarum* 1: 84-85. 1753, *Syn. Pl.* 1: 108. 1805, *A Botanical Materia Medica* 1: 166. 1812, *Essai d'une Nouvelle Agrostographie* 115,165,182. t. 21. f. 2. 1812, *Flora Friburgensis* 1: 168. 1825, *Linnaea* 11(4): 543-544. 1837, *Illustrations of the Botany ... of the Himalayan Mountains and of the Flora of Cashmere ...* 1(11): 418. London 1839 [Mar-Apr 1840], *Rheinische Flora* 67. 1843, *Del. Sem. Hort. Frib.* 2. 1848, *Linnaea* 21(4): 430-431. 1848, *Deutschlands Gräser und Getreidearten...* 200. Leipzig 1863, *Flora der*

Provinz Brandenburg 1: 873. 1864, *Landwirtschaftliche Flora* 341. 1866, *Prodromus der Flora von Böhmen* 1: 57. Praha 1867, *Catalogue of the Plants of the Punjab and Sindh* 171. London 1869, *Plantae Europaeae* 1: 130. 1890, *The Flora of British India* 7: 371-372. 1896 and *Synopsis der mitteleuropäischen Flora* 2(1): 723. 1900, *La flore adventice de Montpellier* 161. 1912, *Ann. Roy. Agr. Coll. Sweden* 6: 159-216. 1938, *Symb. Bot. Upsal.* 4(2): 93, 148, 1940, *Flore de l'Afrique du Nord* 3: 388. 1955, *Grasses of Ceylon* 48. 1956, *Canad. J. Bot.* 37: 679. 1959, *Grasses of Burma ...* 676-677. 1960, *Novosti Sist. Vyss. Rast.* 10: 55. 1973, *USDA Agric. Handb.* 338: 10. 1979, *Feddes Repertorium* 95(7-8): 435. 1984, *Genetica* 64: 69-76, 93-100. 1984, *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 95: 57. 1985, *Citol. Genet. (Kiev)* 19(6): 428-433. 1985, *Proceedings of the Indian Science Congress Association* 73(3-vi): 174-175. 1986, *Bjulleten glavnogo botaniceskogo sada* 140: 68-73. 1986, *Caryologia* 40: 381-385. 1987, *Journal of Zhejiang Agricultural University* 14(2): 142-148. 1988, *Scientia Agricultura Sinica* 21: 32-34. 1988, *Chromosoma* 96: 119-131. 1988, *Cytologia* 53: 181-191. 1988, *Bulletin of the National Institute of Agrobiological Resources* 4: 153-176. 1988, *Acta Radiobotanica et Genetica* 7: 69-107. 1988, *Kromosomo* 50: 1635-1651. 1988, *Plant Chromosome Research 1987 (Proc. Sino-Jpn. Symp. Pl. Chromos.)*. 1989, *Acta Biologica Cracoviensia, Series Botanica* 30: 63-75. 1989, *Genome* 33: 425-432. 1990, *Acta Genetica Sinica* 17: 168-172. 1990, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Chromosoma* 99: 352-359. 1990, *Hereditas; genetiskt arkiv.* 112: 109-116. 1990, *Chromosoma* 101: 206-213. 1991, *Cytologia* 56: 419-424. 1991, *Cytologia* 57: 51-57. 1992, *Nordic Journal of Botany* 13: 481-493. 1993, *Agriculture and Horticulture* 68: 515-523. 1993, *Chromosoma* 102: 428-432. 1993, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 60: 83-86. 1994, *Japanese Journal of Genetics* 70: 267-271. 1995, *Journal of Plant Research* 108: 209-216. 1995, *Acta Agronomica Sinica* 22(4): 500-507. 1996, *Acta Genetica Sinica* 23(4): 268-275. 1996, *Genes & Genetic Systems* 72: 303-309. 1997, *Taxon* 49(2): 251. 2000, *Journal of Integrative Plant Biology* 47(2): 214-222. Feb 2005 [Cloning, physical mapping and expression analysis of a wheat *Mlo*-like gene].

in English: barley, 6-row barley, 6-rowed barley, common barley, donkey's grass

in French: orge, orge cultivée, paille d'orge longue, paille d'orge courte, orge du Prophète

in Spanish: cebada

in Colombia: cebada

in Mexico: castilla, cebada, cebada perla, guixi-xoba xtila, guixi yaa, guxi-xoba-xtila, ndexu, quixi ya, tago-mani,

xoba yati, xooba-yati, xooba-yati-Castilla-tago-mani, xooa yati

in Turkey: arpa

in Hawaii: hua pale

in Arabic: schaeir, sha'ir, sjaeir

in Mali: farka subu, timsin, tumzein

in Morocco: es-s'îr, sa'îr, zra', timzin, tumzîn, âgulas, âzembô, azenbu, merkez, talabit, tben, sa'îr en-nabbî, sult, orge verte, orge des prémices, paille d'orge longue, paille d'orge courte, orge du Prophète, qsil, bendec

in Nigeria: sa'ir, sha'ir, sha'iruri

in Tunisia: chaîr

in China: da mai, kung mai (= naked barley), mai ya, mou, ta mai, ta mé, tai mak

in India: akshatha, baajri, baarli, baarliyarisi, barlhari, barlibiyam, barliyarishi, barliyarisi, cevad, chak, cheno, chung, dhaanyaraaja, dhanyabhedam, divya, hayapriya, hayeshta, jab, jan, jao, jaon, jau, jav, java, jave, jave godhi, jave godi, jawa, jhotak, jowakhar, juba, kanchuki, medhya, nai, ne, pachcha yavulu, pachhayava, pavithra dhaanya, praveta, saathu, satu, shaktu, shruk, shvethashunga, sitashuka, sitrishuka, soa, spiroka, suj, thazatt, theeksh-nashuka, thuragapriya, tro, yangma, yau, yav, yava, yava arisi, yavaalu, yavaka, ymvah

in Malaysia: barli

in Thailand: khao bale, khao-ba-le

in Tibetan: chag-tshe, bru-rnying, so-ba

H. vulgare L. convar. **distichon** (L.) Alef. (*Hordeum distichon* L.; *Hordeum distichon* convar. *nudum* (L.) Tzvelev; *Hordeum distichon* convar. *zeocrithon* (L.) Tzvelev; *Hordeum distichon* subsp. *nudum* (L.) Rothm.; *Hordeum nudum* Schult.; *Hordeum sativum* var. *nudum* (L.) Vilm.; *Hordeum vulgare* L. subsp. *distichon* (L.) Körn.; *Hordeum vulgare* L. subsp. *distichum* (L.) Thell.; *Hordeum vulgare* var. *distichon* (L.) Hook.f.; *Hordeum zeocrithon* L.)

Europe. Cultivated, see *Species Plantarum* 1: 84-85. 1753, *Mant.* 2: 437. 1824, *Landwirtschaftliche Flora* 342. 1866, *Zeitschr. Ges. Brauw.* 175. 1882, *Fl. Brit. India* 7(22): 371. 1897 [1896] and *La flore adventice de Montpellier* 161. 1912, *Canad. J. Bot.* 37: 679. 1959, *Novosti Sist. Vyss. Rast.* 10: 55. 1973.

H. vulgare L. convar. **vulgare**

Europe.

H. vulgare L. subsp. **distichon** (L.) Körn. (*Hordeum distichon* L.; *Hordeum vulgare* L.; *Hordeum vulgare* convar. *distichon* (L.) Alef.; *Hordeum vulgare* subsp. *distichum* (L.) Thell.)

Europe. Nonbrittle rachis, lateral spikelets barren, spike with 2 rows of fertile spikelets, escaped from cultivation, see *Species Plantarum* 1: 84-85. 1753, *Landwirtschaftliche*

Flora 342. 1866, *Zeitschr. Ges. Brauw.* 175. 1882 and *La flore adventice de Montpellier* 161. 1912, *Canad. J. Bot.* 37: 679. 1959.

in English: 2-rowed barley, 2-rowed barley

H. vulgare L. subsp. **spontaneum** (K. Koch) Asch. & Graebn. (*Hordeum ithaburense* Boiss.; *Hordeum spontaneum* K. Koch; *Hordeum vulgare* L. subsp. *spontaneum* (K. Koch) Thell.)

Africa, Asia temperate and tropical, Europe. Annual, wild form of barley, progenitor of cultivated barley, brittle rachis, husked grains, see *Species Plantarum* 1: 84-85. 1753, *Linnaea* 21(4): 430-431. 1848 and *Synopsis der mitteleuropäischen Flora* 2(1): 723. 1900, *Canad. J. Bot.* 37: 679. 1959, *Hereditas*; *genetiskt arkiv.* 112: 109-116. 1990, *Genome* 33: 425-432. 1990, Edward D. Owuor and al., "Population genetic response to microsite ecological stress in wild barley, *Hordeum spontaneum*." *Molecular Ecology* 6(1)2: 1177-1187. Dec 1997, Timo Turpeinen et al., "Microsatellite diversity associated with ecological factors in *Hordeum spontaneum* populations in Israel." *Molecular Ecology* 10(6): 1577-1591. June 2001, Sergei Volis et al., "Differentiation along a gradient of environmental productivity and predictability in populations of *Hordeum spontaneum* Koch: multilevel selection analysis." *Biological Journal of the Linnean Society* 75(3): 313-318. Mar 2002, K.J.F. Verhoeven et al., "Differential selection of growth rate-related traits in wild barley, *Hordeum spontaneum*, in contrasting greenhouse nutrient environments." *Journal of Evolutionary Biology* 17(1): 184-196. Jan 2004.

in Turkey: arpa, yabani arpa

H. vulgare L. subsp. **vulgare** (*Hordeum aegiceras* Nees ex Royle; *Hordeum agriocrithon* A.E. Åberg; *Hordeum agriocrithon* var. *dawoense* A.E. Åberg; *Hordeum coeleste* var. *trifurcatum* Schldtl.; *Hordeum deficiens* Steud. ex A. Braun; *Hordeum deficiens* var. *nudideficiens* (Körn.) H.V. Harlan; *Hordeum deficiens* var. *steudelii* (Körn.) H.V. Harlan; *Hordeum deficiens* var. *tridax* (Körn.) H.V. Harlan; *Hordeum distichon* L.; *Hordeum distichon* var. *abyssinicum* Ser.; *Hordeum distichon* var. *erectum* Schübl.; *Hordeum distichon* var. *ianthinum* Körn.; *Hordeum distichon* var. *nigricans* Ser.; *Hordeum distichon* var. *nudideficiens* Körn.; *Hordeum distichon* var. *nudum* L.; *Hordeum distichon* var. *nutans* Schübl.; *Hordeum distichon* var. *palmella* H.V. Harlan; *Hordeum distichon* var. *persicum* Körn.; *Hordeum distichon* var. *tridax* Körn.; *Hordeum hexastichon* L.; *Hordeum x intermedium* (Körn.) Carleton; *Hordeum x intermedium* var. *cornutum* (Schrud.) H.V. Harlan; *Hordeum x intermedium* var. *haxtonii* Körn.; *Hordeum x intermedium* var. *mortonii* Körn.; *Hordeum x intermedium* var. *nudihaxtonii* Körn.; *Hordeum irregulare* A.E. Åberg & Wiebe; *Hordeum polystichon* Haller f.; *Hordeum polystichum* var. *trifurcatum* (Schldtl.) Asch. & Graebn.; *Hordeum pyramidatum* R.E. Regel; *Hordeum sativum* Jess.; *Hordeum sativum* Pers.;

Hordeum tetrastichum Stokes; *Hordeum tetrastichum* var. *aethiops* ined.; *Hordeum vulgare* cv. *trifurcatum* (Schldtl.) Alef.; *Hordeum vulgare* subsp. *deficiens* (Steud. ex A. Braun) Á. Löve; *Hordeum vulgare* subsp. *interjectum* Flaksb.; *Hordeum vulgare* subsp. *intermedium* Körn.; *Hordeum vulgare* var. *aethiops* Körn.; *Hordeum vulgare* var. *afghanicum* Vavilov ex N.A. Ivanova; *Hordeum vulgare* var. *coeleste* L.; *Hordeum vulgare* var. *coerulescens* Ser.; *Hordeum vulgare* var. *cornutum* Schrad.; *Hordeum vulgare* var. *deficiens* (Steud. ex A. Braun) Körn.; *Hordeum vulgare* var. *duplinigrum* Körn.; *Hordeum vulgare* var. *himalayense* (Schult.) Körn.; *Hordeum vulgare* var. *horsfordianum* Wittm. ex H.V. Harlan; *Hordeum vulgare* L. var. *hexastichon* (L.) Asch.; *Hordeum vulgare* var. *leiorrhynchum* Körn.; *Hordeum vulgare* var. *nigricans* (Ser.) Körn.; *Hordeum vulgare* var. *nigrum* (Willd.) Peterm.; *Hordeum vulgare* var. *nudum* Spenn.; *Hordeum vulgare* var. *pallidum* Ser.; *Hordeum vulgare* var. *rikotense* R.E. Regel; *Hordeum vulgare* var. *steudelii* Körn.; *Hordeum vulgare* var. *tetrastichon* Celak.; *Hordeum vulgare* var. *violaceum* Körn.; *Hordeum zeocrithon* L.)

Annual, cultivated, central spikelet sterile, lateral spikelets fertile, spike with 4-6 rows of fertile spikelets, escaped from cultivation, soil improver, found in fields and along roadsides, waste places, see *Species Plantarum* 1: 84-85. 1753, *Syn. Pl.* 1: 108. 1805, *A Botanical Materia Medica* 1: 166. 1812, *Essai d'une Nouvelle Agrostographie* 115,165,182. t. 21. f. 2. 1812, *Flora Friburgensis* 1: 168. 1825, *Linnaea* 11(4): 543-544. 1837, *Illustrations of the Botany ... of the Himalayan Mountains and of the Flora of Cashmere ...* 1(11): 418. London 1839 [Mar-Apr 1840], *Rheinische Flora* 67. 1843, *Del. Sem. Hort. Frib.* 2. 1848, *Linnaea* 21(4): 430-431. 1848, *Deutschlands Gräser und Getreidearten...* 200. Leipzig 1863, *Flora der Provinz Brandenburg* 1: 873. 1864, *Landwirtschaftliche Flora* 341. 1866, *Prodromus der Flora von Böhmen* 1: 57. Praha 1867, *Catalogue of the Plants of the Punjab and Sindh* 171. London 1869, *Plantae Europaeae* 1: 130. 1890, *The Flora of British India* 7: 371-372. 1896 and *Synopsis der mitteleuropäischen Flora* 2(1): 723. 1900, *La flore adventice de Montpellier* 161. 1912, *Ann. Roy. Agr. Coll. Sweden* 6: 159-216. 1938, *Symb. Bot. Upsal.* 4(2): 93, 148, 1940, *Journal of the Washington Academy of Sciences* 35: 163. 1945, *Flore de l'Afrique du Nord* 3: 388. 1955, *Grasses of Ceylon* 48. 1956, *Canad. J. Bot.* 37: 679. 1959, *Grasses of Burma ...* 676-677. 1960, *Novosti Sist. Vyss. Rast.* 10: 55. 1973, *USDA Agric. Handb.* 338: 10. 1979, *Feddes Repertorium* 95(7-8): 435. 1984, *Genetica* 64: 69-76, 93-100. 1984, *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 95: 57. 1985, *Citol. Genet.* (Kiev) 19(6): 428-433. 1985, *Proceedings of the Indian Science Congress Association* 73(3-vi): 174-175. 1986, *Bjulleten glavnogo botaniceskogo sada* 140: 68-73. 1986, *Caryologia* 40: 381-385. 1987, *Journal of Zhejiang Agricultural University* 14(2): 142-148. 1988, *Scientia Agricultura Sinica* 21:

32-34. 1988, *Chromosoma* 96: 119-131. 1988, *Cytologia* 53: 181-191. 1988, *Bulletin of the National Institute of Agrobiological Resources* 4: 153-176. 1988, *Acta Radiobotanica et Genetica* 7: 69-107. 1988, *Kromosomo* 50: 1635-1651. 1988, *Plant Chromosome Research 1987 (Proc. Sino-Jpn. Symp. Pl. Chromos.)*. 1989, *Acta Biologica Cracoviensis, Series Botanica* 30: 63-75. 1989, *Genome* 33: 425-432. 1990, *Acta Genetica Sinica* 17: 168-172. 1990, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Chromosoma* 99: 352-359. 1990, *Hereditas; genetiskt arkiv*. 112: 109-116. 1990, *Chromosoma* 101: 206-213. 1991, *Cytologia* 56: 419-424. 1991, *Cytologia* 57: 51-57. 1992, *Nordic Journal of Botany* 13: 481-493. 1993, *Agriculture and Horticulture* 68: 515-523. 1993, *Chromosoma* 102: 428-432. 1993, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 60: 83-86. 1994, *Japanese Journal of Genetics* 70: 267-271. 1995, *Journal of Plant Research* 108: 209-216. 1995, *Acta Agronomica Sinica* 22(4): 500-507. 1996, *Acta Genetica Sinica* 23(4): 268-275. 1996, *Genes & Genetic Systems* 72: 303-309. 1997, *Taxon* 49(2): 251. 2000.

in English: Six-rowed barley, barley, common barley, cultivated barley

in French: orge

in Italian: orzo

Houzeaubambus Mattei = *Oxytenanthera* Munro

Bambusoideae, Bambusodae, Bambuseae, Bambusinae, type *Houzeaubambus borzii* (Mattei) Mattei, see *Tent. Fl. Abyss.* 2: 439. 1850, *Transactions of the Linnean Society of London* 26(1): 126-127. 1868, *Die Natürlichen Pflanzenfamilien* 2(2): 96. 1887 and *Lexicon* 509. 1903, *Die Natürlichen Pflanzenfamilien*, Nachtrag 3: 21. 1906, *Boll. Soc. Ort. Mutuo Soccorso*. Palermo 8(6): 84. 1910, *Taxon* 6(7): 206. 1957, *Kyoto University African Studies* 7: 37-129. 1972, *Kyoto University African Studies* 10: 143-212. 1976, *Indian Forester* 109: 306-308. 1983, *African Studies Monographs* 3: 109-130. 1983.

Hubbardia Bor

For the British botanist Charles Edward Hubbard, 1900-1980, gardener, authority on grasses, from 1920 Kew Gardens, 1930 collected plants in Australia, 1935 Fellow of the Linnean Society, 1956-1957 President Kew Guild, contributed to *Flora of Tropical Africa* (Gramineae). 1937, his writings include "Vasey-grass in Africa (*Paspalum larranagai* Arech.)." *Kew Bull.* 94-96. 1926, "Notes on African grasses: XV." *Bull. Misc. Inform.* 1934(3): 107-119. 1934, "Key to the genera of the Eragrosteae." *Hooker's Icon. Pl.*

34: 3-9. 1936, "*Eremochloa eriopoda* C.E. Hubbard. (Siam and Indo-China)." *Hook. Icon. Pl.* 34(4): pl. 3376. 1939, "Malayan Grasses." *Kew Bull. Misc. Inf.* (1), Art. VI: 24-25. 1941 and *Grasses. A guide to their structure, identification, uses, and distribution in the British Isles*. Third edn., revised by J.C.E. Hubbard. Bungay 1984, with R.E. Vaughan wrote *The Grasses of Mauritius and Rodriguez*. London 1940. See *Pacific Sci.* 23(1): 104. 1969; *Contr. Queensland Herb.* 4: 2. 1969; J.H. Barnhart, *Biographical notes upon botanists*. 2: 213. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 233. Boston, Mass. 1973; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 163. 1947; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 185. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 380. Philadelphia 1964; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 361. 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

One species, southern India, Sharavati River, Karnataka, Maharashtra. Panicoideae, Panicodae, Isachneae, or Hubbardieae, annual, slender, delicate, stoloniferous, herbaceous, flimsy, trailing, pendulous, rooting at the nodes, translucent leaves, auricles absent, ligule absent, leaf blades narrowly elliptic, plants bisexual, small inflorescence paniculate, slender axillary panicle, spikelets all alike, 2-flowered, the incomplete florets proximal to the female-fertile florets, the proximal incomplete florets 1, 2 glumes subequal or more or less equal and veined, lower glume and upper glume 5-7-nerved, lemmas membranous rounded on back, paleas absent, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, endangered grass species, moist places, wet soils, high humidity, type *Hubbardia heptaneuron* Bor, see *Kew Bulletin* 1950: 385-388. 1951, *Grasses of Burma, Ceylon, India and Pakistan ...* 572-573. 1960, *Kew Bulletin* 21: 169-174. 1967, Sandra S. Aliscioni, Liliana M. Giussani, Fernando O. Zuloaga and Elizabeth A. Kellogg, "A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae." *Am. J. Bot.* 90: 796-821. 2003.

Species

***H. heptaneuron* Bor**

India, Gersoppa waterfalls, Western Ghats, Karnataka. This species, of great botanical interest, reported as probably extinct after dam construction on the river and the drying of Jog Falls, recently rediscovered in Kolhapur district, see *Kew Bulletin* 1950: 385. 1951, M.P. Nayar & A.R.K. Sastry (eds.), *Red Data Book of Indian Plants*. vol. 1: 303. Calcutta, Botanical Survey of India 1987.

Hubbardochloa Auquier = Muhlenbergia Schreb.

For the British botanist Charles Edward Hubbard, 1900-1980.

One species, Africa, Burundi, Zambia, Rwanda. Chloridoideae, annual, herbaceous, branched, slender, auricles absent, ligule fringed or ciliate, plants bisexual, cleistogamous or chasmogamous, inflorescence paniculate, panicle open, spikelets solitary fusiform rounded, 2 glumes more or less equal, glumes 1-nerved and acute, lemma 1-nerved with a long flexuous terminal awn, palea and lodicules absent, 3 stamens, ovary glabrous, 2 stigmas, open habitats, savannah, slopes, stony places, type *Hubbardochloa gracilis* Auquier, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791 and *Ill. Fl. N. U.S.* (edition 2) 1: 184. 1913, J.H. Barnhart, *Biographical notes upon botanists*. 2: 213. 1965, *Bulletin du Jardin Botanique National de Belgique* 50(1-2): 241-242. 1980, *Flora Mesoamericana* 6: 276-286. 1994, *American Journal of Botany* 81: 622-629. 1994, *Madroño* 42(4): 427-449. 1995, *Sida* 17: 349-365. 1996, *Brittonia* 50(1): 23-50. 1998, P.M. Peterson, "Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostidae)." *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 143-173. 2001.

Species

H. gracilis Auquier

Africa. See *Bulletin du Jardin Botanique National de Belgique* 50(1-2): 242. 1980.

Humbertochloa A. Camus and Stapf

Named for the French botanist Henri Humbert, 1887-1967, botanical traveler, explorer of Madagascar, his writings include *Les composées de Madagascar*. Caen 1923, *La destruction d'une flore insulaire par le feu. Principaux aspects de la végétation à Madagascar*. [in *Mémoires de l'Académie Malgache*. fasc. 5] Tananarive 1927 and "François Gagnepain, in Memoriam." *Not. Syst.* 14(4): 221-229. 1952, editor and joint author of *Flore de Madagascar et des Comores*. 1936-1967, with F. Gagnepain wrote *Supplément à la Flore générale de l'Indo-Chine*. vol. 1: 1-1027, f. 1-131. Paris 1938-1951; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 218. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 186. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 729. Stuttgart 1993; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern*

Africa. 194. 1981; Laurence J. Dorr, *Plant Collectors in Madagascar and the Comoro Islands*. 214-218. 1997.

Two species, Madagascar, Tanzania, tropical East Africa. Bambusoideae, Oryzodae, Phyllorhachideae, perennial, cane- or bamboo-like, unarmed, persistent, woody, suffrutescent, leafy, branched, slender, auricles absent, ligule a very short membrane with ciliate fringe, leaves cordate, plants monoecious, inflorescence unisexual, with or without hidden cleistogenes, all the fertile spikelets unisexual, female spikelet 2-flowered with rachilla extension, 2 glumes very unequal or unequal, lower glume nerveless, upper glume 5-7-nerved, lower floret reduced to a lemma, lower lemma of female spikelet rounded, upper lemma awnless, palea keeled, lodicules 2, male florets 3-6 staminate, stamens absent or 3 to 6, ovary glabrous, 2 stigmas, in forest shade, forest floor, type *Humbertochloa bambusiuscula* A. Camus & Stapf, see *J. Bot.* 17: 353. 1879 and *Bulletin de la Société Botanique de France* 81: 467-472. 1934, *Hooker's Ic. Pl.* 34: t. 3386. 1939, *Botanical Magazine* (Tokyo) 69: 83-86. 1956, *Bulletin de la Société Botanique de France* 108: 158-163. 1961.

Species

H. bambusiuscula A. Camus & Stapf

Madagascar. Rhizomatous, inflorescence exserted, see *Bulletin de la Société Botanique de France* 81: 470. 1934.

H. greenwayi C.E. Hubbard (dedicated to the South African (b. Transvaal) botanist Percy (Peter) James Greenway, 1897-1980. See Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 295. 1994; F. Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*. 69-75. 1962; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 103. 1981; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 13. 1971)

Tanzania. See *Hooker's Icones Plantarum* 34: t. 3387. 1939.

Hyalopoa (Tzvelev) Tzvelev = Colpodium Trin.

From the Greek *hyalos* "glass" and *poa* "grass, pasture grass."

About 4-7 species, Eurasia, Caucasus, Turkey, northwest Himalaya, northeast Siberia. Pooideae, Podaceae, Aveneae, perennial, herbaceous, unbranched or branched, caespitose, plants bisexual, open inflorescence paniculate nodding, spikelets flattened, 2 glumes very unequal or more or less equal, lower glume 1-nerved, upper glume 1-3-nerved, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 white stigmas, moist areas, upland, species of open moist habitats, type *Hyalopoa pontica* (Balansa) Tzvelev, see *Fundamenta Agrostographiae* 119, t. 7.

1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 37, 58. 1821 and *Grasses of Burma* ... 1960, *Arkticheskaia Flora SSSR* [Flora of the Russian Arctic] 2: 172. Akademija nauk SSSR Leningrad 1964, *Bot. Zhurn. (Moscow & Leningrad)* 50(9): 1320. 1965, *Zlaki SSSR* 485. 1976, *Sosudistye Rasteniia SSSR* 363. 1981, *Flora of Turkey and the East Aegean Islands* 9: 486-501. 1985, *Nordic Journal of Botany* 14(6): 601-607. 1994.

Species

H. czirahica Sh. A. Guseinov

Caucasus. See *Bot. Zhurn. (Moscow & Leningrad)* 73(12): 1743. 1965.

H. ivanoviae (Malyshev) Czer. (*Colpodium ivanoviae* Malyshev; *Hyalopoa lanatiflora* subsp. *ivanoviae* (Malyshev) Tzvelev)

Russia. See *Novosti Sistematiki Vysshchikh Rastenii* 7: 295. 1970[1971].

H. lakia (Woronow) Tzvelev (*Colpodium lakium* Woronow)

Russia. See *Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. I, Fl. Sist. Vyssh. Rast.* 1: 214. 1933, *Novosti Sistematiki Vysshchikh Rastenii* 1966: 32. 1966.

H. lanatiflora (Roshev.) Tzvelev (*Colpodium lanatiflorum* (Roshevitz) Tzvelev; *Poa lanatiflora* Roshev.)

Russia. See *Flora Arctica URSS* 2: 172. 1964 [also *Arkticheskaia Flora SSSR* [Flora of the Russian Arctic] 2: 172. Akademija nauk SSSR Leningrad 1964], *Novosti Sist. Vyssh. Rast.* 1966: 32. 1966.

H. momica (Tzvelev) Czer. (*Colpodium lanatiflorum* subsp. *momicum* Tzvelev; *Hyalopoa lanatiflora* subsp. *momicum* (Tzvelev) Tzvelev)

Russia. See *Sosudistye Rasteniia SSSR* 363. 1981.

H. nutans (Stapf) Alexeev ex T.A. Cope (*Catabrosa nutans* Stapf; *Colpodium nutans* (Stapf) Bor; *Hyalopoa nutans* Tzvelev)

Pakistan. See *The Flora of British India* 7: 312. 1896 and *Novosti Sist. Vyssh. Rast.* 1966: 33. 1966, *Flora Iranica: Flora des Iranischen Hochlandes und der Umrahmenden Gebirge: Persien, Afghanistan, Teile von West-Pakistan, Nord-Iraq, Azerbaidjan, Turkmenistan.* 70: 54. Rechinger, Karl Heinz. Graz 1970, *Flora of Pakistan* 143: 423. 1982.

H. pontica (Balansa) Tzvelev (*Catabrosa pontica* Balansa; *Colpodium ponticum* (Balansa) Woronow; *Poa alboviolacea* Balansa; *Poa capillipes* Somm. & Lev.)

Eurasia, Caucasus. Shade tolerant, see *Bulletin de la Société Botanique de France* 21: 15. 1874, *Trudy Imperatorskago Saint Peterburgskago Botaniceskago Sada* [also *Acta Horti Petropolitani* 16: 45. 1900] 13(1): 52. 1893 and *Bot. Zhurn. (Moscow & Leningrad)* 50: 1320. 1965.

Hydrochloa Hartm. = *Glyceria* R. Br.

From the Greek *hydor* "water" and *chloe, chloa* "grass," the habitat.

Pooideae, Meliceae, type *Hydrochloa fluitans* (L.) Hartm., see *Species Plantarum* 1: 67. 1753, *Prodromus Florae Novae Hollandiae* 179. 1810, *Genera Graminum Scand.* 8. 1819, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 106. 1819, *Observations sur les Graminées de la Flore Belge* 111. 1824, *Flora Posoniensis* 119. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 367. 1833, *Floram Scanicam* 202. 1835, *Nomenclator Botanicus. Editio secunda* 2: 356. 1841, *Syn. Pl. Glum.* 1: 287, 317. 1854, *Bull. Soc. Roy. Bot. Belgique* 7: 67. 1868, *Gen. Pl.* 3(2): 1197. 1883 and *Aquatic and Wetland Plants of Southeastern United States Monocotyledons* 1-712. 1979, *Contr. U.S. Natl. Herb.* 48: 371-379, 402. 2003.

Hydrochloa P. Beauv. = *Luziola* Juss.

From the Greek *hydor* "water" and *chloe, chloa* "grass," referring to the habitat.

One species, southeast U.S. Bambusoideae, Oryzodae, Oryzeae, or Ehrhartoideae, Oryzeae, Luziolinae, perennial, aquatic, herbaceous, branched, slender, floating, trailing, auricles present, ligule an unfringed membrane, plants monoecious, panicles or racemes, male and female-fertile spikelets in different inflorescences, all the fertile spikelets unisexual, male spikelets without glumes, male florets 6 staminate, glumes absent, palea present, stamens 0, 2 stigmas, type *Hydrochloa caroliniensis* P. Beauv., see *Genera Plantarum* 33. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 637. 1791, Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées.* 135, 165, 182, pl. 3. f. 18, pl. 24, f. 4. Paris 1812, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 11. 1833 and *Manual of the Southeastern Flora* 1933, *Annals Missouri Botanical Garden* 52: 472-475. 1965, R.W. Long & O. Lakela, *A Flora of Tropical Florida* 1971, *Bulletin Torrey Botanical Club* 101(5): 244. 1974, R.K. Godfrey & J.W. Wooten, *Aquatic and Wetland Plants of Southeastern United States Monocotyledons* 1-712. 1979, *Flora Novo-Galiciana* 14: 1-436. 1983, *Flora Mesoamericana* 6: 222-223. 1994, *Contributions from the United States National Herbarium* 39: 69-71. 2000, Song Ge et al., "A phylogeny of the rice tribe Oryzeae (Poaceae) based on *matK* sequence data." *Am. J. Bot.* 89: 1967-1972. 2002.

SPECIES:

H. caroliniensis P. Beauv. (*Hydrochloa fluitans* (Michx.) Torr., nom. illeg., non *Hydrochloa fluitans* (L.) Hartm.; *Hydropyrum fluitans* (Michx.) Kunth; *Luziola caroliniana*

Trin. ex Steud.; *Luziola caroliniensis* (P. Beauv.) Raspail; *Luziola fluitans* (Michx.) Terrell & H. Rob.; *Zizania fluitans* Michx.; *Zizania natans* Bosc ex Trin.; *Zizania natans* Michx. ex P. Beauv.)

U.S. Stream banks, ponds, marshes, see *Flora Boreali-Americana* 1: 75. 1803, *Essai d'une Nouvelle Agrostographie* 135, 165, 182, pl. 3. f. 18, pl. 24, f. 4. 1812, *Annales des Sciences Naturelles (Paris)* 5: 304. 1825, John Torrey (1796-1873), *Compendium of the Flora of the Northern and Middle States* 354, 403. New York 1826, *Révision des Graminées* 1: 7. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 186. 1839 [1840 Feb], *Nomenclator Botanicus. Editio secunda* 2: 79. 1841 and *Contr. U.S. Natl. Herb.* 12: 156. 1908, *Bulletin of the Torrey Botanical Club* 101(5): 244. 1974, *Phytologia* 48(1): 77, 79. 1981, *Journal of the Arnold Arboretum* 69(3): 272. 1988.

Hydropoa (Dumort.) Dumort. = *Glyceria* R.
Br.

From the Greek *hydor* “water” and *poa* “grass, pasture grass.”

Pooideae, Meliceae, *Glyceria* sect. *Hydropoa* Dumort. (*Poa* sect. *Hydropoa* Dumort.), see *Prodromus Florae Novae Hollandiae* 179. 1810, *Observations sur les Graminées de la Flore Belgique* 110-111. 1824, *Bull. Soc. Roy. Bot. Belgique* 7: 67. 1868, *Gen. Pl.* 3(2): 1197. 1883 and *Aquatic and Wetland Plants of Southeastern United States Monocotyledons* 1-712. 1979, *Contr. U.S. Natl. Herb.* 48: 371-379, 402. 2003.

Hydropyrum Link = *Zizania* L.

From the Greek *hydor* “water” and *pyros* “grain, wheat.”

Ehrhartoideae, Oryzaceae, *Zizaniinae*, type *Hydropyrum esculentum* Link, see *Species Plantarum* 2: 991. 1753, *Fam. Pl.* 2: 37. 1763, John Mitchell, 1711-1768, *Dissertatio brevis de principiis botanicorum et zoologorum...* 32. Nürnberg 1769, Johann Heinrich Friedrich Link (1767-1851), *Enumeratio plantarum horti regii berolinensis altera*. 1: 252. Berolini [Berlin] 1827, *Handbuch zur Erkennung der nutzbarsten und am häufigsten vorkommenden Gewächse*. 1: 96. 1829, *Journal of the Linnean Society, Botany* 19: 54. 1881 and *American Midland Naturalist* 4: 214. 1915, *U.S.D.A Bull.* 772: 18. 1920, *Canada Department of Agriculture Publications [Publications, Department of Agriculture, Canada]* 1393: 1-84. Ottawa 1960, *Journal d'Agriculture Traditionnelle et de Botanique Appliquée [J.A.T.B.A.]* 25: 67-84 Paris 1978, *The Flora of Canada* 2: 93-545. 1978 [1979], *Econ. Botany* 36: 274-285. 1982,

Proceedings of the International Symposium on Botanical Gardens 593-605. Nanjing 1988, *Phytologia* 72: 6. 1992, *Sida* 17(3): 533-549. 1997, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, *Contributions from the United States National Herbarium* 39: 116-118. 2000.

Hydrothauma C.E. Hubb.

From the Greek *hydor* “water” and *thauma*, *thaumatos* “a wonder, marvel.”

One species, southern tropical Africa. Panicoideae, Panicodae, Paniceae, annual, aquatic, herbaceous, branched, floating, emergent, leaves pseudopetiolate, leaf blades linear with longitudinal lamellae, ligule an unfringed membrane, plants bisexual, short inflorescence racemose or paniculate, slender spiciform panicle, paired spikelets dorsally compressed, 2 glumes unequal or very unequal, upper glume gibbous 7- to 9-nerved, lower glume truncate nerveless, upper lemma without basal wings or scars, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, pools, ponds, shallow water, related to *Sacciolepis*, type *Hydrothauma manicatum* C.E. Hubb., see *Hooker's Icones Plantarum* 35: t. 3458. 1947.

Species

H. manicatum C.E. Hubb.

Zambia, Zaire. See *Hooker's Icones Plantarum* 35: t. 3458. 1947.

Hygrochloa Lazarides

From the Greek *hygros* “damp, wet” and *chloe*, *chloa* “grass,” aquatics.

Two species, North Australia. Panicoideae, Panicodae, Paniceae, annual or perennial, aquatic or semiaquatic, herbaceous, erect, submerged or not submerged, floating, decumbent, internodes hollow, auricles absent, ligule a fringe of hairs, plants monoecious, inflorescence spicate with racemes of female spikelets below and solitary male spikelets above, male florets 1-3 staminate, male and female-fertile spikelets on different branches of the same inflorescence, male spikelets with glumes, 2 glumes unequal or very unequal, lower glume 0-3-nerved, upper glume 5-7-nerved, palea awnless 1-nerved 2-keeled, 2 free and fleshy lodicules, stamens 0, ovary glabrous, 2 stigmas, see M. Lazarides, “*Hygrochloa*, a new genus of aquatic grasses from the Northern Territory.” *Brunonia*. 2: 85-91. 1979, R.D. Webster, *Austral. Paniceae (Poaceae)* 1-322. 1987.

Species

H. aquatica Lazarides

Northern Territory, Darwin and Gulf District. Annual or short-lived perennial, aquatic, floating or submerged culms, probably grazed by buffaloes, see *Brunonia* 2: 86-87. 1979.

H. cravenii Lazarides (for the Australian botanist Lindley Alan Craven, b. 1945, Research Botanist in the Australian National Herbarium, Centre for Plant Biodiversity Research, 1984 Degree of Master of Science, Macquarie University, Sydney)

Northern Territory, Darwin and Gulf District. See *Brunonia* 2: 89. 1979.

Hygrorrhiza Benth. = *Hygroryza* Nees

From the Greek *hygros* “damp” and *rhiza* “a root,” see *J. Linn. Soc. Bot.* 19: 55. 1881.

Hygroryza Nees = *Potamochoa* Griff.

From the Greek *hygros* “damp, moist” and *oryza* “rice.”

One species, through Southeast Asia, India to Sri Lanka, including southern China. Bambusoideae, Oryzodae, Oryzeae, perennial, aquatic, floating on the surface of the water or creeping on wet ground, herbaceous, spongy, diffusely branched or unbranched, stoloniferous, glabrous, leafy, feathery adventitious roots arising from the nodes, auricles absent, leaf sheaths inflated and bladder-like, ligule an unfringed membrane, leaf blades broad and blunt, plants bisexual, open inflorescence, spikelets solitary, few-spikeleted panicle, base enclosed by uppermost leaf sheath, spikelets with 1 floret, spikelets with female-fertile florets only, long slender stipe derived from floret callus, glumes usually lacking, papery lemma lanceolate and strongly 5-veined, slender awn, palea acuminate, 2 free and membranous lodicules, stamens 6, ovary glabrous, 2 stigmas, forming floating masses, type *Hygroryza aristata* (Retzius) Nees ex Wright & Arn., see *Nomenclator Botanicus* (edition 2) 1: 783. 1841, *Edinburgh New Philosophical Journal* 15: 380. 1833, *Journal of the Asiatic Society of Bengal* 5: 571, t. 24. 1836, *J. Linn. Soc. Bot.* 19: 55. 1881 and *Cytologia* 56: 95-102. 1991, *Am. J. Bot.* 89: 1967-1972. 2002.

Species

H. aristata (Retzius) Nees ex Wright & Arn. (*Hygroryza aristata* (Retz.) Nees; *Leersia aristata* Roxb.; *Leersia aristata* (Retzius) Roxb.; *Pharus aristatus* Retz.; *Potamochoa aristata* (Retz.) Griff. ex Steud.; *Potamochoa retzii* Griff.; *Zizania aristata* (Retz.) Kunth; *Zizania retzii* Spreng.) (for the Swedish botanist Anders Jahan (Johan) Retzius, 1742-1821, naturalist, entomologist, professor of natural history at the University of Lund; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 146. 1965; T.W. Bosser, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 329. Boston,

Mass. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Vladislav Kruta, in *D.S.B.* 11: 379-381. 1981; Gerhard Rudolph, in *D.S.B.* 11: 381-383. 1981; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 229. Regione Siciliana, Palermo 1988; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14 Aufl. Stuttgart 1993; Stafleu and Cowan, *Taxonomic literature*. 4: 735-738. Utrecht 1983)

Asia, Taiwan, India, China. Perennial, aquatic, floating, glabrous, diffusely branched, creeping, spongy long stems, lower portions usually submerged, rooting at the nodes, leaf sheaths inflated, leaf blades elliptic, ligule membranous, inflorescence a panicle with whorled branches, narrow spikelets 1-flowered, glumes none, coriaceous lemma acuminate and long-awned, palea keeled, 6 stamens, shade species forming extensive floating mats, whole plant a good fodder relished by cattle and buffaloes, grains sweet and oleaginous eaten in times of scarcity, seeds cooling and astringent, weed in rice, growing in ponds and lakes, navigation canals, muddy areas, slow-moving streams, shallow water, marshes, rivers, wet ground, canals, irrigation canals, see *Observationes Botanicae* 5: 23. 1789, *Hortus Bengalensis, or a Catalogue ...* 26. 1814, *Systema Vegetabilium, editio decima sexta* 2: 136. 1825, *Révision des Graminées* 1: 8. 1829, *Edinburgh New Philosophical Journal* 15: 380. 1833, *Journal of the Asiatic Society of Bengal* 5: 571, t. 24. 1836, *Synopsis Plantarum Glumacearum* 1: 4. 1855 [1853] and *Handb. Fl. Ceylon* 5: 185. 1900, *Phil. J. Sci.* 7: 413-415. 1912, *Grasses of Ceylon* 39. 1956, *Grasses of Burma ...* 597. 1960.

in English: Bengal wild rice

in India: aranyadhaanya, aranyadhanya, aranyajali, deobhaatha, deobhata, devadhaana, erra changala gaddi, janglidal, jyarahu medhe, iyarahumedhe, kaadu bili sajjabu hullu, munidhaanya, neervallipullu, nirvallipullu, nivaara, nivara, nyare hullu, parsal, passahi, passai, passari, pastal, phasai, phutki, prosadhika, putidal, thili, thini, thrinadhaanya, thrinodbhava, tinni, uridhan, valli pullu, vallipullu, vanavrihi, vanti

in Sri Lanka: go jabba

in Thailand: puu chao loi thaa, pu chao loi tha, puchaoloitha, ya phong lom, yaa phong lom, ya-phonglom

in Vietnam: thia thia

Hylebates Chippindall

Greek *hyle* “a wood, woodland” and *bates* “one that treads or covers,” *baino* “to go, walk,” *hylobates* “one who haunts the woods.”

Two species, central Africa. Panicoideae, Panicodae, Paniceae, annual or perennial, herbaceous, decumbent, ligule a fringed membrane, plants bisexual, open inflorescence paniculate, capillary branchlets, spikelets flattened, upper floret acute, 2 glumes very unequal and very dissimilar, lower lemma briefly awned, palea present, 2 fleshy lodicules, 3 stamens, 2 stigmas, native pasture species, forest, shade species, riverine forest, woodland, resembles *Panicum*, type *Hylebates cordatus* Chippindall, see *Journal of South African Botany* 11: 127. 1945, *Flora of Tropical East Africa* 451-898. 1982.

Species

H. chlorochloe (K. Schum.) Napper (*Panicum chlorochloe* K. Schum.)

South Africa. Native pasture species, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 333. 1897 and *Kirkia* 3: 130. 1963.

H. cordatus Chippindall

South Africa. See *Journal of South African Botany* 11: 128. 1945.

Hymenachne P. Beauv.

From the Greek *hymen* “a membrane” and *achne* “chaff, glume, scale,” possibly alluding to membranous glumes in spikelet, to lemmas and paleas; see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 48, 165, t. 10, f. 8. Paris 1812.

About 5-10 species, tropical Asia and America, Australasia. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, aquatic, paludose, creeping or floating, sprawling, stoloniferous, herbaceous, spongy, leafy, succulent, thick, decumbent and rooting from nodes, auricles absent, ligule an unfringed membrane, leaves linear-lanceolate and cordate at base, plants bisexual, inflorescence an open or contracted panicle, panicle densely flowered with the spikelets arranged in unilateral racemes, bisexual spikelets narrowly lanceolate to acuminate, florets 2, lower floret sterile, upper floret bisexual, lacking bristles, 2 glumes very unequal, glumes separated by an internode, lower glume less than half the length of the spikelet and 3-nerved, upper glume and lower lemma membranous 5-nerved, lower lemma acuminate or shortly awned, upper lemma acute, lower palea and lower flower present or absent, upper antheridium membranous, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, fodders, native pasture species, occurs in swamps and wet places, marshy habitats, segregate from *Panicum*, resembling *Sacciolepis*, type *Hymenachne amplexicaulis* (Rudge) Nees (*Agrostis monostachya* Poir.), see *Species Plantarum* 1: 55. 1753, *Essai d'une Nouvelle Agrostographie* 48-49, 99, 165, t. 10, f. 8. 1812, *Nomenclator Botanicus* 1: 1702. Cassellius

[Kassel] [1871-] 1873-1874, *Die Natürlichen Pflanzenfamilien* 2(2): 35. 1887 and *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *Contr. U.S. Natl. Herb.* 24: 170. 1925, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, R.W. Pohl and N.R. Lersten, “Stem aerenchyma as a character separating *Hymenachne* and *Sacciolepis* (Gramineae: Panicoideae).” *Brittonia* 27(3): 223-227. 1975, *Darwiniana* 30(1-4): 87-94. 1990, *Flora Mesoamericana* 6: 326-327. 1994, Alan Graham, “Studies in Neotropical paleobotany. XIII. An Oligo-Miocene palynoflora from Simojovel (Chiapas, Mexico).” *Am. J. Bot.* 86: 17-31. 1999, *Am. J. Bot.* 88: 1993-2012. 2001, *American Journal of Botany* 90: 796-821. 2003 [A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae], *Contributions from the United States National Herbarium* 46: 252-253. 2003, *Ecological Management and Restoration* 5(2): 143-145. Aug 2004, *Journal of Applied Ecology* 41(4): 615-629. Aug 2004, *Ecological Management and Restoration* 5(3): 191-198. Dec 2004.

Species

H. acutigluma (Steudel) Gilliland (*Hymenachne amplexicaulis* sensu Backer; *Hymenachne myurus* sensu Burkill; *Hymenachne pseudo-interrupta* Müll. Hal.; *Hymenachne pseudointerrupta* C.H. Müller, also Müll. Hal.; *Panicum acutiglumum* Steud.)

Northern Australia, Malaysia. Perennial, stoloniferous, aquatic, erect, succulent, hollow or filled with a spongy pith, creeping, rooting at the nodes, often forming floating mats, leaves finely acuminate or elongate, thin membranous ligules, feathery rootlets, inflorescence a terminal spike-like panicle, narrow panicles erect and dense, lower glume acuminate and ovate, upper glume acuminate and linear-lanceolate, native pasture species, foliage used as fodder, very palatable, grazed by cattle and water buffaloes, very variable, sometimes a troublesome weed in irrigated rice fields, it is not drought-tolerant, survives floods well, grows in fresh water swamps, open swamps and ditches, wet habitats, slow streams and rivers, swamps and margins of swamps, shallow water, peat swamps, often confused with *Hymenachne amplexicaulis* (Rudge) Nees, see *Synopsis Plantarum Glumacearum* 1: 66. 1853, *Botanische Zeitung, Berlin* 19(45): 333. 1861 and *Grasses of Ceylon* 122. 1956, *Grasses of Burma ...* 313. 1960, *The Gardens' Bulletin Singapore* 20(4): 314. 1964, *Fl. Java* 3: 561. 1968.

in English: hymenachne, wick grass, dal grass

in Indonesia: blem bem, jujuket, rumput kumpai

in Malaysia: rumput kumpai

in the Philippines: lagtom

in Thailand: kam pai, kum pai, rim pat, ya plong, ya thot plong

in Vietnam: bâc nhon

H. amplexicaulis (Rudge) Nees (*Agrostis monostachya* Poir.; *Hymenachne acutigluma* (Steud.) Gilliland; *Hymenachne gouinii* E. Fourn.; *Hymenachne monostachya* (Poir.) P. Beauv.; *Hymenachne myosurus* (Rich.) Nees; *Hymenachne pseudo-interrupta* Müll. Hal.; *Hymenachne pseudo-interrupta* C.H. Müller, also Müll. Hal.; *Panicum acuminatum* Salzm. ex Döll, nom. illeg., non *Panicum acuminatum* Sw.; *Panicum acutiglumum* Steud.; *Panicum amplexicaule* Rudge; *Panicum amplexicaule* var. *deflexa* Döll; *Panicum amplexicaule* var. *erecta* Döll; *Panicum amplexifolium* Griseb. ex Mez, nom. illeg., non *Panicum amplexifolium* Hochst.; *Panicum grisebachianum* Mez; *Panicum hymenachne* Desv.; *Panicum myosurus* Rich.; *Panicum perdensum* Steud.; *Sporobolus villosus* Hochst. ex Döll, nom. illeg., non *Sporobolus villosus* (Rchb. ex Spreng.) Kunth)

Pantropical, South America, Mexico to Argentina. Perennial, aquatic or semiaquatic, emergent, forming colonies and floating mats, herbaceous, erect, decumbent, ascending, stoloniferous, creeping, coarse, rather stout and succulent, frequently rooted from the basal nodes, ligule membranous, leaf sheath overlapping and loose with hairy margins, leaf blade linear with a clasping base, narrow panicles or contracted spike-like inflorescence, lateral branches strongly ascending, spikelet acuminate and pedicellate, lower glumes rough, lemma with a short rough awn, lower lemma attenuate to subaristate, palea membranous, hay and silage, useful fodder for stock and buffaloes, pith used for making garlands, a harmful effect on the development of some larvae, floating islands in Amazon, grows in ponds and on marshy ground, in the stagnant pools, shallow water, in creeks, riverbanks, abandoned rice paddies, tropical wetlands, margins of streams and swampy places, inundated areas, see *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792, *Plantarum Guianae Rariorum Icones et Descriptiones* ... 1: 21, t. 27. 1805, *Encyclopédie Méthodique, Botanique* Suppl. 1: 256. 1810, *Essai d'une Nouvelle Agrostographie* 99. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 276. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 186. 1831, *Synopsis Plantarum Glumacearum* 1: 65-66. 1853, *Botanische Zeitung. Berlin* 19(45): 333. 1861, *Flora Brasiliensis* 2(2): 234. 1877, *Mexicanas Plantas* 2: 36. 1886 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 3. 1921, *Grasses of Ceylon* 122. 1956, *Grasses of Burma* ... 313. 1960, *The Gardens' Bulletin Singapore* 20(4): 314. 1964, *Flora Illustrada Catarinense* 1(Gram.): 443-906. 1982, *Darwiniana* 30(1-4): 87-94. 1990.

in English: bamboo grass, dal grass

in Spanish: carrizo chico

in Mexico: corcho, corcho bänälaj, grama de agua, zacatal

in Nicaragua: gamalote, gramalote

in India: bhat dal, dhamsiria, dhop dal, karanga dal, pokalia, taboo, tattu

in the Philippines: lagtom

in Thailand: yaa plong

H. donacifolia (Raddi) Chase (*Hymenachne amplexicaulis* (Rudge) Nees; *Hymenachne auriculata* (Willd. ex Spreng.) Chase; *Hymenachne cordata* (Döll) Kuhl.; *Hymenachne palustris* (Trin.) Chase; *Hymenachne patula* E. Fourn.; *Panicum auriculatum* Willd. ex Spreng.; *Panicum cordatum* Döll, nom. illeg., non *Panicum cordatum* Büse; *Panicum donacifolium* Raddi; *Panicum paludicola* Nees; *Panicum palustre* Trin.; *Panicum polystachyum* J. Presl, nom. illeg., non *Panicum polystachion* L.; *Sacciolepis donacifolia* (Raddi) Chase)

Brazil. Aquatic and semiaquatic, herbaceous, robust, emergent, floating, decumbent at the base, ascending, culm bases creeping and rooting at the nodes, forming large and dense colonies or stands, membranous ligules, inflorescence an open and contracted panicle with the spikelets arranged in unilateral racemes, nodding inflorescence loosely contracted with branches divergent, panicle oblong, upper glume and lower lemma 5-nerved, short lower glume 3-nerved, lower lemma acuminate, lower palea reduced or absent, upper antherium membranous, growing in ponds and marshy areas, shallow water, small streams, mud banks, creeks, riverbanks and river margins, floodplains, abandoned cultivations, pools, margins of streams and swampy places, inundated areas, see *Plantarum Guianae Rariorum Icones et Descriptiones* ... 1: 21, t. 27. 1805, *Agrostografia Brasiliensis* 44. 1823, *Systema Vegetabilium, editio decima sexta* 1: 322. 1824, *De Graminibus Paniceis* 181. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 179, 276. 1829, *Reliquiae Haenkeanae* 1(4-5): 312. 1830, *Flora Brasiliensis* 2(3): 239. 1880, *Mexicanas Plantas* 2: 37. 1886 and *Proceedings of the Biological Society of Washington* 21: 5. 1908, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922, *Journal of the Washington Academy of Sciences* 13(9): 177. 1923, *Contribuciones Ocasionales del Museo de Historia Natural del Colegio "De La Salle"* 8: 158. 1946, *Darwiniana* 30(1-4): 87-94. 1990.

in Brazil: capim

H. grumosa (Nees) Zuloaga (*Panicum grumosum* Nees; *Panicum knuthii* Herter; *Panicum pavonii* Mez; *Panicum pycnanthum* Steud.; *Panicum rivulare* var. *grumosum* (Nees) Hack.; *Panicum schroederi* Herter) (for the Spanish botanist José Antonio Pavón y Jiménez, 1754-1844, traveler, explorer, between 1777-1788 he traveled with Hipolito Ruíz Lopez (1754-1815) and Joseph Dombey in Chile and Peru, his works include *Disertacion botanica sobre los generos Tovaria, Actinophyllum, Araucaria y Salmia*. [Madrid 1797], with H. Ruíz wrote *Flora peruviana, et chilensis prodromus*. Madrid 1794, *Systema vegetabilium florum*

peruviana et chilensis. [Madrid] 1798 and *Flora peruviana, et chilensis*. Madrid 1798-1802; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 57. 1965; Stafleu and Cowan, *Taxonomic literature*. 4: 117-118, 981-986. 1983; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 466. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Miguel Colmeiro y Penido (1816-1901), *La Botánica y los Botánicos de la Península Hispano-Lusitana*. Madrid 1858; Antonio José Cavanilles (1745-1804), *Monadelphiae classis dissertationes decem*. Matriti 1786-1787; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 173. London 1904; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; August Weberbauer, *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 2-4. Leipzig 1911; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 222. Oxford 1964; Blanche Elizabeth Edith Henrey (1906-1983), *British Botanical and Horticultural Literature before 1800*. Oxford 1975; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; R.E.G. Pichi Sermolli, "Le collezioni cedute da J. Pavon a F.B. Webb e conservate nell'Herbarium Webbianum." *Nuovo Giorn. Bot. Ital.* ser. 2. 56(4): 699-701. 1950 [1949]; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Paul A. Fryxell, "The genus *Pavonia* Cav. (Malvaceae: Malvaceae) in Australia." *Nuytsia*. 6(3): 305-308. 1988)

Paraguay, Uruguay. See *De Graminibus Paniceis* 213. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 182. 1829, *Synopsis Plantarum Glumacearum* 1: 70. 1853 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 343. 1909, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 5. 1921, *Revista Sudamericana de Botánica* 6(5-6): 137-138, f. 6, 7. 1940, *American Journal of Botany* 90: 817. 2003.

H. pernambucense (Spreng.) Zuloaga (*Agrostis pernambucensis* Spreng.; *Panicum excelsum* Nees; *Panicum pernambucense* (Spreng.) Mez ex Pilg.; *Panicum rivulare* Trin.; *Panicum urticans* L.B. Sm. & Wassh.)

Brazil. See *Systema Vegetabilium, editio decima sexta* 1: 258. 1825, *De Graminibus Paniceis* 213. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 180. 1829 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 15. 1940, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 246, f. 2 E-G. 1978.

Hymenothecium Lag. = *Aegopogon* Humb. & Bonpl. ex Willd.

From the Greek *hymen* "a membrane" and *theke* "a box, case, envelope," referring to the membranous glumes.

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Hymenothecium tenellum* (Cav. ex DC.) Lag., see *Species Plantarum. Editio quarta* 4(2): 899. 1805 [1806], *Genera et species plantarum* 4. 1816 and *Flora Mesoamericana* 6: 296-297. 1994, *Contributions from the United States National Herbarium* 41: 9-11, 129. 2001.

Hyparrhenia Andersson ex E. Fourn. = *Dybowskia* Stapf, *Hyparrhenia* E. Fourn.

From the Greek *hypo* "beneath, under, below" and *arren* "male," referring to the staminate spikelets at raceme bases; see Eugène Pierre Nicolas Fournier (1834-1884), *Mexicanas plantas*. 2: 51, 67. Paris 1886.

About 53-75 species, tropical Africa, Middle East, Mediterranean. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Anthistiriinae, annual or perennial, tall, usually caespitose, herbaceous, solid, coarse, vigorous, flimsy to stout, never aromatic, erect branched stems, rarely trailing, auricles absent, ligule an unfringed membrane, leaves linear and acuminate, plants bisexual with an intricately branched inflorescence, elaborate compound leafy panicles, compound inflorescence composed of paired racemes with a spatheole or spathe-like bract at the base, spikelets in pairs, spikelets of sexually distinct forms on the same plant, sessile spikelet dorsally compressed or subterete, pedicelled spikelet staminate or barren and usually a little longer than the sessile, the lower spikelet pairs homogamous, the upper pairs heterogamous, lower floret reduced to a membranous lemma, upper floret hermaphrodite, glumes equal lemma, glumes of fertile spikelet equal, first glume truncate or 2-toothed, second glume boat-shaped, first glume of sessile spikelet rounded and incurved, first lemma hyaline, second lemma with a geniculate hairy awn, palea present or absent, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, stigmas red, weed, cultivated fodder, native pasture species, more or less unpalatable, grazed when young, widely used for thatching, tropical savannah, dry areas, montane forests, along roadsides, open habitats, rainforest, a very difficult genus, many species difficult to distinguish, type *Hyparrhenia foliosa* (Kunth) Andersson ex E. Fourn., see *Species Plantarum* 2: 1045. 1753, *Mexicanas Plantas* 2: 51, 67. 1886, *Monographiae Phanerogamarum* 6: 617. 1889 and *Flora of Tropical Africa* 9: 382, 383. 1919, W.D. Clayton, "A revision of the genus *Hyparrhenia*." *Kew Bulletin, Additional Series* 2: 1-196. 1969, *Folia Primatologica* 21: 36-60. 1974, *Folia Primatologica* 25: 277-287. 1976, *Anais do*

XXXII Congresso Nacional de Botanica 44-57. 1981 [O genero *Hyparrhenia* (Gramineae) no Brasil.], *African Studies Monographs* 3: 109-130. 1983, *Folia Primatologica* 48: 78-120. 1987, *Flora Mesoamericana* 6: 393-394. 1994, *Flora of Ethiopia and Eritrea* 7: 333-353. 1995, *Global Ecology and Biogeography* 7(6): 441-455. Nov 1998, *Oryx* 33(2): 108-114. Apr 1999, Douglas O. Fuller, "Canopy phenology of some mopane and miombo woodlands in eastern Zambia." *Global Ecology and Biogeography* 8(3-4): 199-209. May 1999, *African Journal of Ecology* 37(2): 226-240. June 1999, *Functional Ecology* 13(6): 762-768. Dec 1999, Lucia G. Le Roux and Elizabeth A. Kellogg, "Floral development and the formation of unisexual spikelets in the Andropogoneae (Poaceae)." *Am. J. Bot.* 86: 354-366. 1999, *Austral. Ecology* 25(5): 507-522. Oct 2000, *African Journal of Ecology* 40(1): 1-9. Mar 2002 [Fire frequency and species associations in perennial grasslands of southwest Ethiopia], *Contributions from the United States National Herbarium* 46: 254-257. 2003, *Diversity & Distributions* 9(3): 221-235. May 2003 [Floristic variation, chorological types and diversity: do they correspond at broad and local scales?], Alexandre J.B. Santos et al., "High rates of net ecosystem carbon assimilation by *Brachiaria* pasture in the Brazilian Cerrado." *Global Change Biology* 10(5): 877-885. May 2004, *Functional Ecology* 18(4): 605-611. Aug 2004, M. Namaganda, S. Phillips and K.A. Lye, "The distribution of grass species in Uganda." *African Journal of Ecology* 42(s1): 48-50. Aug 2004, *Journal of Ecology* 93(2): 384-394. Apr 2005, *Ecological Management and Restoration* 6(1): 16-27. Apr 2005, Sue McIntyre and David Tongway, "Grassland structure in native pastures: links to soil surface condition." *Ecological Management and Restoration* 6(1): 43-50. Apr 2005, *Conservation Biology* 19(3): 707-713. June 2005, *European Journal of Soil Science* 56(3): 375-388. June 2005.

Species

H. sp.

Tropical Africa.

in English: spear grass

in Guinea-Bissau: nentamo, nhentam-o, nhentara-o

in Nigeria: azarà

in Senegal: bowal, fukabin, kali, kali ba, kali ni

H. anamesa Clayton (referring to this species being intermediate between *Hyparrhenia hirta* (L.) Stapf and *Hyparrhenia filipendula* (Hochst.) Stapf, from the Greek *ana* "up, back again, upward, like" and *mesos* "in the middle, middle")

Eastern Africa, South Africa, Sudan. Perennial, erect, tufted to densely tufted, rhizomatous, ligule a short membrane surrounded by hairs, leaf blade usually flattened, inflorescence a false panicle, spatheate racemes paired and awned, racemes 4-6-awned per pair, spikelets in pairs, 1 spikelet

sessile and awned, awn column pubescent, pedicellate spikelets usually awnless, more or less unpalatable, palatable when young, hard and fibrous when mature, tussocky, a source of thatching, growing in open habitats, montane forests, dry areas, open grassland, pasture, woodland, along roadsides, steep slopes, see *Kew Bulletin, Additional Series* 2: 38, 85. 1969, *Kew Bulletin* 30: 512. 1975, *Bothalia* 18: 111-114, 119-122. 1988, *Bothalia* 24: 241-246. 1994.

in English: bundle thatching grass

in southern Africa: gerftamboekiegras (referring to Tambuki or Amathembu tribe), leqokwana; sesigo (Tswana)

H. anthistirioides (Hochst. ex A. Rich.) Stapf (*Andropogon anthistirioides* Hochst. ex A. Rich.; *Anthistiria pseudocymbaria* Steud.; *Anthistiria quinqueplex* Hochst. ex Steud.; *Hyparrhenia anthistirioides* (Hochst. ex A. Rich.) Andersson ex Stapf; *Hyparrhenia pseudocymbaria* (Hochst. ex A. Rich.) Stapf; *Hyparrhenia quinqueplex* (Hochst. ex Steud.) Andersson; *Hyparrhenia ruprechtii* E. Fourn.; *Sorghum anthistirioides* (Hochst. ex A. Rich.) Kuntze)

East Africa, Ethiopia, Sudan, Tanzania. Annual, variable, solitary or tufted, geniculate or ascending, slender to robust, sometimes rooting at the lower nodes, false panicle, racemes 3-5-awned per pair, raceme-bases subequal and flattened, spatheoles or spathe-like bracts lanceolate, homogamous spikelet at the base of the lower raceme, sessile spikelet usually glabrous, long dark awns, useful for erosion control, weed, growing in rocky places, dry slopes, sorghum fields, open weedy places, hillsides, see *Tentamen Florae Abyssinicae ...* 2: 463. 1850, *Synopsis Plantarum Glumacearum* 1: 399-400. 1854, *Beitrag zur Flora Aethiopiens ...* 300. Berlin 1867, *Revisio Generum Plantarum* 2: 791. 1891 and *Flora of Tropical Africa* 9: 329-331. 1919.

in tropical Africa: katengo, okatengo, okate

H. arrhenobasis (Hochst. ex Steud.) Stapf (*Andropogon arrhenobasis* Hochst. ex Steud.; *Andropogon papillipes* var. *major* Hochst. ex Steud.; *Heteropogon arrhenobasis* (Hochst. ex Steud.) Andersson; *Sorghum arrhenobasis* (Hochst. ex Steud.) Kuntze)

Ethiopia. Perennial, tufted, racemes compact 7-several-awned per pair, peduncles arching and bearded with yellow hairs, homogamous spikelets at the base of both racemes, margins of homogamous spikelets pectinate, callus of sessile spikelet acute, awn hairy, grassland, stony hillsides, highlands, uplands, confused with *Hyparrhenia diplandra*, see *Tentamen Florae Abyssinicae ...* 2: 460. 1850, *Synopsis Plantarum Glumacearum* 1: 385. 1854, *Beitrag zur Flora Aethiopiens ...* 310. 1867, *Revisio Generum Plantarum* 2: 791. 1891 and *Flora of Tropical Africa* 9(2): 348-350. 1919.

H. baddadae Chiov.

East Africa, Somalia. See *Flora Somalia* 2: 440, f. 243. 1932.

H. barteri (Hack.) Stapf (*Andropogon barteri* Hack.; *Sorghum barteri* (Hack.) Kuntze) (after the English plant

collector Charles Barter (d. 1859 in West Africa, North Nigeria, Rabba), Kew gardener, 1857 botanist on William Balfour Baikie's Niger Expedition, author of *The Dorp and the Veld; or, Six Months in Natal*. London 1852. See Samuel Crowther [Missionary Bishop of the Niger Territory] and John Christopher Taylor, *Niger Expedition of 1857-1859*. 1859; Sir John Hawley Glover, *The Voyage of the Day-spring: being the journal of ... Sir J.H. Glover ... together with some account of the expedition up to the Niger River in 1857*, by Archibald Charles Gardiner Hastings. London 1926; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 6, 8. Utrecht 1971; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 50. London 1994; J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. Boston 1965)

Tropical Africa, Angola, Zaire, Tanzania. Annual, used for weaving, found in wooded savannah, sandy loam, old farmland, shallow soil, roadsides, poor soil, see *Flora* 68(7): 124. 1885, *Revisio Generum Plantarum* 2: 791. 1891 and *Flora of Tropical Africa* 9: 321-322. 1919.

in Nigeria: zama

H. bracteata (Humb. & Bonpl. ex Willd.) Stapf (*Andropogon bracteatus* Humb. & Bonpl. ex Willd.; *Andropogon lindenii* Steud.; *Andropogon nlemfuensis* Vanderyst; *Andropogon pilosovaginus* De Wild.; *Andropogon setifer* Pilg.; *Andropogon trachypus* Trin.; *Anthistiria andropogonoides* Steud.; *Anthistiria foliosa* Kunth; *Anthistiria humboldtii* Nees; *Anthistiria pilosa* J. Presl; *Anthistiria reflexa* Kunth; *Cymbopogon bracteatus* (Humb. & Bonpl. ex Willd.) Hitchc.; *Cymbopogon foliosus* (Kunth) Roem. & Schult.; *Cymbopogon humboldtii* Spreng.; *Cymbopogon pilosovaginus* De Wild.; *Cymbopogon reflexus* Roem. & Schult.; *Cymbopogon setifer* (Pilg.) Pilg.; *Hyparrhenia contracta* Robyns; *Hyparrhenia foliosa* (Kunth) Andersson ex E. Fourn.; *Sorghum bracteatum* (Humb. & Bonpl. ex Willd.) Kuntze; *Themeda foliosa* (Kunth) Balansa) (named after the Luxemburg botanist Jean Jules Linden, 1817-1898, botanical explorer, traveler in America, 1852-1861 Director of the Jardin Royal de Zoologie et d'Horticulture at Bruxelles, plant dealer, co-editor with Jules Émile Planchon (1823-1888), G.A. Lueddemann (1821-1884) and Heinrich Gustav Reichenbach (1824-1889) of *Pescatorea*. Iconographie des Orchidées. Bruxelles [1854-] 1860, his writings include *Hortus lindenianus*. Bruxelles 1859-1860 and *Catalogue des plantes exotiques*, nouvelles et rares. Bruxelles 1855 etc. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 385. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 200. Oxford 1964; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*.

Philadelphia 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. 213-215. Paris 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 268. 1973; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; Frederico Carlos Hoehne, M. Kuhlmann and Oswaldo Handro, *O jardim botânico de São Paulo*. 1941; Ignatz Urban, editor, *Symbolae Antillanae*. 3: 76-78. Berlin 1902; J. Lindley, *Orchideae lindenianae*. London 1846; Graham Yearsley, "Jean Linden - Père des Orchidées (1817-1898)." in *The Orchid Review*. 107(1228): 231-235. 1999)

Tropical Africa and America, tropical and temperate Asia. Perennial, montane to submontane, herbaceous, erect, densely tufted, culms yellowish, spikelets glabrous, useful grass, pasture, grazing for cattle, found in wet savannahs, seasonally wet grassland, wet or moist meadows, on sandy and peaty soils, open areas, open grassland, sour dambos, in dry areas of meadows, wet patches, damp places, see *Species Plantarum* 4: 914. 1806, *Plantarum Minus Cognitarum Pugillus* 2: 15. 1815, *Nova Genera et Species Plantarum* 1: 191-192. 1815 [1816], *Systema Vegetabilium* 2: 834-835. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 369. 1829, *Reliquiae Haenkeanae* 1(4-5): 348. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 280. 1832, *Synopsis Plantarum Glumacearum* 1: 389, 402. 1854, *Mexicanas Plantas* 2: 67. 1886, *Journal of Botany, British and Foreign* 4: 116. London 1890, *Revisio Generum Plantarum* 2: 791. 1891 and *Wissenschaftliche Ergebnisse der Deutschen Zentral-Afrika-Expedition 1907-1908, Botanik* 2: 44. 1910, *Contributions from the United States National Herbarium* 17(3): 209. Smithsonian Institution. Washington, D.C. 1913, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 54: 287. 1917, *Bulletin agricole du Congo Belge* 9: 242. Bruxelles 1918, *Flora of Tropical Africa* 9(2): 360-361. 1919, *Bulletin du Jardin Botanique de l'État* 6: 17. Bruxelles 1919, *Flore Agrostologique du Congo Belge* 1: 189. 1929.

H. claytonii S.M. Phillips

Ethiopia. Perennial, slender, erect, stiff, glaucous, tomentose and knotty at the base, densely tufted, spikelet villous, racemes 4-awned per pair, raceme-bases subequal, grassland, grassy slopes, see *Kew Bulletin* 49(3): 540, f. 2. 1994.

H. coleotricha (Steud.) Andersson ex W.D. Clayton (*Andropogon anthistirioides* var. *procera* Chiov.; *Andropogon coleotrichus* Steud.; *Andropogon comosus* Hochst. ex A. Rich., nom. illeg., non *Andropogon comosus* Spreng.; *Hyparrhenia comosa* (Kuntze) Andersson ex Stapf; *Sorghum comosum* Kuntze)

Arabia, Yemen. Annual, tufted, vigorous, ascending or decumbent, bright brown rounded ligule with purple collar, panicle loose with raceme pairs, white-bearded peduncle, raceme pairs with 6-8 awns, long raceme-base appendages, sessile spikelet usually pubescent, pedicelled spikelet villous terminating in a bristle, found in damp places, seasonally damp gullies, see *Tentamen Florae Abyssinicae* ... 2: 461, 463. 1850, *Synopsis Plantarum Glumacearum* 1: 386. 1854, *Revisio Generum Plantarum* 2: 790. 1891 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 289. 1908, *Flora of Tropical Africa* 9(2): 358, 360-361. 1919, *Kew Bulletin, Additional Series* 2: 136-137. 1969.

H. collina (Pilg.) Stapf (*Andropogon collinus* Pilg.; *Andropogon scabrimarginatus* De Wild.; *Cymbopogon collinus* Pilg.; *Cymbopogon scabrimarginatus* De Wild.; *Hyparrhenia scabrimarginata* (De Wild.) Robyns)

Eastern Africa, Sudan, Tanzania. Perennial, wiry, tufted to loosely tufted, erect or geniculately ascending, shortly rhizomatous, slender and lax culms, stilt roots lacking, raceme pairs with 5-8 awns, dark purple spikelets, pedicellate spikelets villous, thatching grass, good grazing for all stock, common in damp soils, dry savannah, grassland, grassy hillsides, inflorescence resembling *Hyparrhenia tamba*, see *Wissenschaftliche Ergebnisse der Deutschen Zentral-Afrika-Expedition 1907-1908, Botanik* 2: 43. 1910, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 54: 287. 1917, *Flora of Tropical Africa* 9(2): 337-338. 1919, *Bulletin du Jardin Botanique de l'État* 6: 20. 1919, *Flore Agrostologique du Congo Belge* 1: 184. 1929.

in English: elephant grass

in South Africa: olifantsgras

H. confinis (Hochst. ex A. Rich.) Stapf (*Andropogon confinis* Hochst. ex A. Rich.; *Andropogon confinis* Hochst.; *Hyparrhenia confinis* (Hochst.) Andersson ex Stapf; *Sorghum confine* (Hochst.) Kuntze)

Africa, Ethiopia, Sudan. Annual, see *Tentamen Florae Abyssinicae* ... 2: 461. 1850, *Monographiae Phanerogamarum* 6: 641-642. 1889, *Revisio Generum Plantarum* 2: 791. 1891 and *Flora of Tropical Africa* 9(2): 353-355. 1919, *Kew Bulletin, Additional Series* 2: 137-140. 1969, *Kew Bulletin* 30: 515. 1975.

H. confinis (Hochst. ex A. Rich.) Stapf var. **confinis**

Africa. Annual, racemes 2-awned per pair.

H. confinis (Hochst. ex A. Rich.) Stapf var. **nudiglumis** (Hack.) W.D. Clayton (*Andropogon confinis* var. *nudiglumis* Hack.; *Hyparrhenia petiolata* Stapf)

Sudan. Raceme-bases with an elongate appendage, see *Monographiae Phanerogamarum* 6: 641. 1889 and *Flora of Tropical Africa* 9(2): 352-353. 1919, *Kew Bulletin, Additional Series* 2: 137-140. 1969.

H. confinis (Hochst. ex A. Rich.) Stapf var. **pellita** (Hack.) Stapf (*Andropogon confinis* var. *pellitus* Hack.)

Africa. Pedicel and lower glume of the sessile spikelet densely villous silky, see *Monographiae Phanerogamarum* 6: 642. 1889.

H. cyanescens (Stapf) Stapf (*Andropogon cyanescens* (Stapf) A. Chev.; *Andropogon hirtus* Degen ex Lojac., nom. illeg., non *Andropogon hirtus* L.; *Cymbopogon cyanescens* Stapf)

Africa, Benin. Perennial, robust, used for thatching, low grazing value, on moist soils, alluvial, see *Journal de Botanique (Morot), sér. 2* 2: 209. 1909, *Flora Sicula* (Lojacono) 3: 272. 1909, *Sudania* 1: 35. 1911, *Flora of Tropical Africa* 9(2): 351-352. 1919.

in Nigeria: fafa, jimbi, jimpi, timpi, wafa

in Yoruba: fafa, wafa

H. cymbaria (L.) Stapf (*Andropogon cymbarius* L.; *Andropogon cymbarius* var. *lepidus* (Nees) Stapf; *Andropogon intonsus* Nees; *Andropogon lepidus* Nees; *Andropogon lepidus* var. *intonsus* (Nees) Hack.; *Anthistiria cymbaria* (L.) Roxb.; *Anthistiria latifolia* Andersson; *Cymbopogon cymbarius* (L.) Thomson; *Cymbopogon elegans* Spreng.; *Cymbopogon lepidus* (Nees) Chiov.; *Hyparrhenia lepida* (Nees) Cufod.; *Sorghum cymbarium* (L.) Kuntze; *Sorghum lepidum* (Nees) Kuntze) (from the Greek *kymbe* "boat")

Tropical Africa, Madagascar. Perennial, montane, tufted, large, robust to weak stemmed, coarse, spreading, rambling, straggling, drooping, often rooting at the lower nodes, erect, young stems slender, rhizomatous with slender rhizomes, leaf sheath round, ligule membranous, much branched inflorescence, racemes 0-6-awned per pair, bracts at raceme bases reddish or brown and concave, raceme-bases very short and flattened, spikelets in pairs, 1 spikelet sessile and with a curved awn, spatheoles ovate, very short broad callus, pedicellate spikelets more or less glabrous to pubescent, thatching grass, hay, more or less unpalatable when young, useful for erosion control, common in high rainfall regions, forest margins, on wet savannahs, riverbanks, bushland, open habitats or shady places near streams, open hillsides, along roadsides and trails, tall grassland, see *Mantissa Plantarum* 2: 303. 1771, *Hortus Bengalensis, or a Catalogue* ... 6. 1814, *Plantarum Minus Cognitarum Pugillus* 2: 14. 1815, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 113-114. 1841, John Hanning Speke (1827-1864), *Journal of the Discovery of the Source of the Nile* 652. Edinburgh and London 1863, *Naturwissenschaftliche Reise nach Mossambique* ... 2: 562. 1864, *Monographiae Phanerogamarum* 6: 625. 1889, *Revisio Generum Plantarum* 2: 791-792. 1891, *Flora Capensis* 7: 361. 1898 and *Philippine Journal of Science* 7: 413-415. Manila 1912, *Flora of Tropical Africa* 9(2): 332-334. 1919, *Bulletin du Jardin Botanique National de Belgique* 40: 1406. 1970.

in English: boat thatching grass

in Cameroon: abebe, gamba, huddo

in Madagascar: vero

in South Africa: bootjietamboekiegras (Afrikaans)

in West Africa: abebe, gamba, huddo

H. dichroa (Steud.) Stapf (*Andropogon bicolor* Nees, nom. illeg., non *Andropogon bicolor* (L.) Roxb.; *Andropogon dichroos* Steud.; *Andropogon luembensis* De Wild.; *Cymbopogon luembensis* De Wild.; *Hyparrhenia fastigiata* Robyns; *Hyparrhenia luembensis* (De Wild.) Robyns; *Sorghum bicolor* (Nees) Kuntze, nom. illeg., non *Sorghum bicolor* (L.) Moench)

Southern tropical Africa, Sudan, Zaire, Tanzania. Perennial, tall, tufted, stout, robust, strong, leaf blades rigid, rhizomatous, panicle branched, racemes paired supported by a lanceolate spathe, each pair of racemes with 6-10 awns, spatheoles narrowly lanceolate, spikelets in pairs, 1 spikelet sessile, unpalatable when hard and fibrous, useful as thatching grass, fences, common in moist sites, savannah, disturbed areas, weedy places, along roadsides, woodland, see *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 113. 1841, *Synopsis Plantarum Glumacearum* 1: 389. 1854, *Revisio Generum Plantarum* 2: 790. 1891 and *Bulletin du Jardin Botanique de l'État* 6: 14. 1919, *Flora of Tropical Africa* 9(2): 302-303. 1919, *Flore Agrostologique du Congo Belge et du Ruanda-Urundi* 1: 164, 183. Gomaere, Bruxelles 1929.

in English: red thatching grass, millet

in Tanzania: Ipepete/Amapepete

in South Africa: rooitamboekiegras

H. diplandra (Hack.) Stapf (*Andropogon diplandrus* Hack.; *Andropogon eberhardtii* (A. Camus) Merr.; *Andropogon kapandensis* De Wild.; *Andropogon obscurus* K. Schum.; *Andropogon osikensis* Franch.; *Andropogon pachyneurus* Franch.; *Andropogon phoenix* (Rendle) K. Schum.; *Andropogon vulgaris* Vanderyst; *Andropogon vulgaris* var. *glaucus* Vanderyst; *Andropogon vulgaris* var. *major* Vanderyst; *Cymbopogon diplandrus* (Hack.) De Wild.; *Cymbopogon eberhardtii* A. Camus; *Cymbopogon kapandensis* De Wild.; *Cymbopogon phoenix* Rendle; *Hyparrhenia diplandra* var. *major* Vanderyst; *Hyparrhenia eberhardtii* (A. Camus) Hitchc.; *Hyparrhenia pachystachya* Stapf; *Hyparrhenia takaensis* Vanderyst; *Sorghum diplandrum* (Hack.) Kuntze) (named for the French botanist Philippe Albert Eberhardt, 1874-1942, professor of botany at Besançon, botanical collector in Vietnam, 1905-1908 Bhutan and Indo-China, see Ethelyn (Daliaette) Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Frans A. Stafleu and Erik A. Menega, *Taxonomic literature. Supplement VI*. 247-248. 1997) (French Congo, Osika, Bateke regions)

Tropical Africa, Angola, Zaire, Tanzania, Ivory Coast, China, Indonesia. Perennial, robust, coarse, densely tufted, erect, nodes pubescent or glabrous, narrow panicle, spatheoles narrowly lanceolate, racemes 4-8-awned per pair, raceme-bases flattened, 1-2 pairs of homogamous spikelets at the base of each raceme, homogamous spikelets scabrid on the margin, weed, a social plant, good forage when young, variable habitats, montane to submontane, wet savannah, wooded savannah, deciduous bushland, sandy soil, sunny places, edge of floodplain, damp places, see *Flora* 68(7): 123. 1885, *Revisio Generum Plantarum* 2: 791. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 332, 333. Autun, France 1895 [or 1893], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 330. 1897, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 156. 1899 and *Just's botanischer Jahresbericht*. 27(1): 454. 1901, *Bulletin agricole du Congo Belge* 9: 243. 1918, *Flora of Tropical Africa* 9(2): 368-371. 1919, *Bulletin du Muséum National d'Histoire Naturelle* 25(2): 133-134. Paris 1919, *Bulletin du Jardin Botanique de l'État* 6: 11, 13. Bruxelles 1919, *Bulletin agricole du Congo Belge* 11: 145. 1920, *Bulletin de la Société Botanique de Belgique* 55: 45. 1923, *Lingnan Science Journal* 5(1-2): 27. Canton 1927 [or 1928], *Lingnan Science Journal* 7: 247-248. 1929 [1931], *Functional Ecology* 13(6): 762-768. Dec 1999, Jacques Durand, Lisa Garnier, Isabelle Dajoz, Sylvain Mousset and Michel Veuille, "Gene Flow in a facultative apomictic Poacea, the savannah grass *Hyparrhenia diplandra*." *Genetics* 156(2): 823-831. 2000, Lisa K.M. Garnier and Isabelle Dajoz, "The influence of fire on the demography of a dominant grass species of West African savannahs, *Hyparrhenia diplandra*." *Journal of Ecology* 89(2): 200-208. Apr 2001, Lisa K.M. Garnier, Jacques Durand and Isabelle Dajoz, "Limited seed dispersal and microspatial population structure of an agamospermous grass of West African savannahs, *Hyparrhenia diplandra* (Poaceae)." *Am. J. Bot.* 89: 1785-1791. 2002, *Functional Ecology* 18(4): 605-611. Aug 2004 [Grass populations control nitrification in savannah soils].

in Cameroon: jemuwel fulako, yemuwe fulako, yemuwel gorko

in Nigeria: kibiiyar, kibiiyar daaji, myel, tsiikar daaji

in Sierra Leone: nyandabinye

in Tropical Africa: dilangala, jemuwel fulako, katengo, mosake, musoke, okatengo, okate, osóke, sokia, yemuwe fulako, yemuwel gorko

H. dregeana (Nees) Stent (*Andropogon acutus* Stapf; *Andropogon dregeanus* Nees; *Andropogon pilosissimus* Hack.; *Cymbopogon micraterus* Pilg.; *Hyparrhenia aucta* (Stapf) Stapf ex Stent; *Hyparrhenia brachychaete* Peter; *Hyparrhenia dregeana* (Nees) Stapf ex Stent; *Hyparrhenia dregeana* (Nees) Stapf; *Hyparrhenia elongata* Stapf; *Hyparrhenia micratera* (Pilg.) Pilger ex Peter; *Hyparrhenia*

phyllopora Stapf; *Hyparrhenia pilosissima* (Hack.) J.G. Anderson; *Hyparrhenia subaristata* Peter) (for the German plant collector Jean François (Johann Franz) Drège, 1794-1881 (Altona), botanical explorer, traveler, arrived at the Cape in 1826, his writings include *Zwei pflanzengeografische Dokumente*. Leipzig [1843-1844], *Catalogus plantarum exsiccatarum Africae australioris, quas emturis offert*. 1837-1840 and also: *Linnaea*. 19: 583-680. 1847 and 20: 183-258. 1847, with the Prussian botanist Ernst Heinrich Friedrich Meyer (1791-1858) wrote *Commentariorum de plantis Africae australioris*. Leipzig and Königsberg 1835 [1836, 1838], he was the brother of Carl Friedrich Drège (1791-1867); see George Arnott Walker Arnott (1799-1868), "Notes on some South African plants." *Hook., J.Bot.* 3: 147-156. 1841; J.H. Barnhart, *Biographical notes upon botanists*. 1: 471. 1965; Peter MacOwan, "Personalities of botanical collectors at the Cape." *Trans. S. Afr. Philos. Soc.* 4(1): xlix-l. 1884-1886; J.H. Verduyn den Boer, *Botanists at the Cape*. 55-58. Cape Town and Stellenbosch 1929; Gilbert Westacott Reynolds, *The Aloes of South Africa*. 58, 60. Rotterdam 1982; John Hutchinson (1884-1972), *A Botanist in Southern Africa*. 642. London 1946; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 704. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 107. 1972; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 704. Ansbach 1852; Gordon Douglas Rowley, *A History of Succulent Plants*. California 1997; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981)

Africa, Kenya, South Africa, Tanzania, Uganda, Lesotho, Yemen. Perennial, robust, vigorous, erect, densely caespitose, ligule membranous, basal sheaths hairy, leaves hard and stalky, inflorescence a false panicle of spatheate raceme pairs, villous racemes exerted from the long spatheoles, 9-25 awns per raceme-pair, sessile spikelets hairy, pedicellate spikelets villous and mucous, more or less unpalatable or palatable for a short while, thatching grass mainly used for the inner layer of the roof, growing in stony hillsides, grassy field borders, road verges, dry soils, streamsides, vlei edges, grassland, savannah, in high rainfall areas, see *Florae Africae Australioris Illustrationes Monographicae* 112. 1841, *Monographiae Phanerogamarum* 6: 690. 1889, *Flora Capensis* 7: 357. 1889 and *Flora of Tropical Africa* 9(2): 343-344, 346-347. 1919, *Bothalia* 1: 249. Pretoria 1923, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(96): 596. 1929, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 375-376, 379. 1936, *Bothalia* 9: 130. 1966, *Kew Bull., Add. Ser.* 2: 124. 1969.

in English: Drege's deckgrass, Tambuki grass, blue thatchgrass, hairy blue thatching grass, giant thatchgrass

in South Africa: rooigras, tamboekiegras, reuse tamboekiegras, qoqwa, leqokwa

H. exarmata (Stapf) Stapf (*Andropogon rufus* var. *exarmatus* (Stapf) Stapf ex A. Chev.; *Cymbopogon exarmatus* Stapf)

Tropical Africa. Upper lemma awnless, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 492. 1833 and *Journal de Botanique (Morot)*, ser. 2 2: 210. 1909, *Sudania* 1: 180. 1911, *Flora of Tropical Africa* 9(2): 308-309. 1919.

H. familiaris (Steud.) Stapf (*Andropogon familiaris* Steud.; *Andropogon familiaris* var. *levervilleensis* Vanderyst; *Andropogon kiwuensis* Pilg.; *Andropogon lugugaensis* var. *levervilleensis* Vanderyst; *Anthistiria balansae* C. Crevost & C. Lemaire; *Cymbopogon effusus* (Balansa) A. Camus; *Cymbopogon familiaris* (Steud.) De Wild.; *Hyparrhenia effusa* (Balansa) A. Camus; *Sorghum familiare* (Steud.) Kuntze; *Themeda effusa* Balansa) (dedicated to the French botanist Benedict Balansa, 1825-1891, explorer and botanical collector in Asia Minor, North Africa, Indo-China and Paraguay. See J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 1: 110. 1965; Gaston Astre, *La vie de Benjamin Balansa, botaniste explorateur*. Toulouse 1947; Ernest Saint-Charles Cosson (1819-1889), *Compendium florae atlanticae*. Paris 1881-1887; Carlo Luigi Spegazzini (1858-1926), *Fungi guaranitici pugillus i-ii*. Buenos Aires 1883-1888 and *Fungi guaranitici nonnulli novi v. critici*. Buenos Aires 1891; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 22. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 124-125. Oxford 1964; Clyde F. Reed, *Bibliography to Floras of Southeast Asia*. 1969)

Tropical Africa, Gabon. Caespitose, simple, slender to robust, wet savannah, see *Synopsis Plantarum Glumacearum* 1: 385. 1854, *Monographiae Phanerogamarum* 6: 411. 1889, *Journal de Botanique (Morot)* 4: 115. 1890, *Revisio Generum Plantarum* 2: 791. 1891, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1898 and *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 196. 1916, *Bulletin agricole du Congo Belge* 9: 239, 241. 1918, *Bulletin du Muséum d'Histoire Naturelle* 24: 536. Paris 1918, *Flora of Tropical Africa* 9(2): 325-326. 1919, *Bulletin du Jardin Botanique de l'État* 6: 12. 1919, *Flore Agrostologique du Congo Belge* 1: 176. 1929, *Bulletin du Muséum d'Histoire Naturelle* 3: 760. 1931, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 113. 1960, *Journal of the Arnold Arboretum* 64(2): 217, f. 11C-D, 32-33. 1983.

in West Africa: soso

H. figariana (Chiov.) W.D. Clayton (*Andropogon figarianus* Chiov.; *Andropogon filipendulus* Hochst.; *Andropogon filipendulus* var. *calvescens* Hack.; *Cymbopogon figarianus* Chiov.; *Hyparrhenia barteri* var. *calvescens* (Hack.) Stapf) (named for the Italian botanist Antonio Figari Bey, 1804–1870, plant collector in Egypt, Ethiopia, Italy, Sudan, with Giuseppe De Notaris (1805–1877) wrote *Agrostographiae Aegyptiacae Fragmenta* ... Torino 1851; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 540. 1965; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 125. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. 163. Paris 1845)

Tropical Africa. Annual, erect, grazed by cattle, used for thatching, growing in deciduous bush, wasteland, along roadsides, see *Flora* 29: 115. 1846, *Monographiae Phanerogamarum* 6: 635. 1889 and *Bollettino della Società Botanica Italiana* 1917: 59. 1917, *Flora of Tropical Africa* 9(2): 321–322. 1919, *Kew Bulletin, Additional Series* 2: 94. 1969.

H. filipendula (Hochst.) Stapf (*Andropogon filipendulinus* Hochst. ex Steud.; *Andropogon filipendulus* Hochst.; *Andropogon filipendulus* var. *thwaitesii* Hack. ex Trimen; *Andropogon kimuingensis* Vanderyst; *Anthistiria fasciculata* Thwaites; *Cymbopogon filipendulus* (Hochst.) Rendle; *Cymbopogon filipendulus* var. *angolensis* Rendle; *Sorghum filipendulum* (Hochst.) Kuntze)

Tropical Africa, Madagascar, Southeast Asia, from Sri Lanka to Australia, Indonesia. Perennial, caespitose, slender, robust, erect, tall, short scaly rhizomes, false panicle narrow with slender branches, spatheoles linear or filiform often reddish, racemes paired with a pair of similar sterile spikelets at the base of lower raceme and 2 pairs at base of upper, at maturity the raceme forms a distinctive L-shaped unit, lower raceme nearly sessile, upper raceme with a long filiform base, pedicellate spikelets male, racemes 2- to 4-awned per pair, pungent callus, awn column hirsute, useful grass, the whole plant eaten by baboons, commonly used for thatching, fodder, forage, more or less unpalatable, palatability falls toward maturity, low nutritive value, a source of paper pulp, growing in clumps, common in woodland, savannah, weedy places, sandy soil, wooded savannah, well-drained grassland and open woodland, *Brachystegia* woodlands (miombo), see *Flora* 29: 115. 1846, *Synopsis Plantarum Glumacearum* 1: 389. 1854, *Enumeratio Plantarum Zeylaniae* 366. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6: 635. 1889, *Revisio Generum Plantarum* 2: 791. 1891, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853–61* 2(1): 157. 1899 and *Handb. Fl. Ceylon* 5: 245. 1900, *Flora of Tropical Africa* 9(2): 322–325. 1919, *Handb. Fl. Ceylon* 6: 335. 1931, *Bulletin agricole du Congo Belge* 11: 144. 1920, *Symb. Sin.* 7(5): 1314. 1936, *Grasses of Ceylon* 195. 1956, *Grasses of Burma* ... 167. 1960.

in English: blue grass, fine thatching grass, Tambookie, Tambookie grass, Tambuki grass, thatching grass

in Burundi: Umukenke (Kirundi)

in Malawi: nyumbu, kanyumbu, lipe, kanyece, kanyungu-nyungu

in Nigeria: tsiikà, wadeho

in southern Africa: rooigras, fyntamboekiegras, blougras, dekgras; isibusana (Sotho)

H. filipendula (Hochst.) Stapf var. **filipendula**

Tropical Africa, Madagascar, Southeast Asia. Perennial, rhizomatous, tufted, many slender branches, glabrous spikelets, the 2 racemes form an L-shaped unit, pedicellate spikelets awned, 2 pairs of homogamous spikelets at the base of upper raceme, drooping peduncles, thatching grass, grows in woodlands, open habitats, along roadsides, open veld, higher rainfall areas, edge of riverine forests, see *Flora of Tropical Africa* 9(2): 322–325. 1919, *Bothalia* 24: 241–246. 1994.

in English: three o'clock thatching grass

H. filipendula (Hochst.) Stapf var. **pilosa** (Hochst.) Stapf (*Andropogon filipendulus* f. *bispiculatus* Hack.; *Andropogon filipendulus* var. *lachnatherus* (Benth.) Hack.; *Andropogon filipendulus* var. *pilosus* Hochst. ex Hack.; *Andropogon filipendulus* var. *thwaitesii* Hack., nom. illeg., non *Andropogon filipendulus* var. *thwaitesii* Hack. ex Trimen; *Andropogon finitimus* var. *rectirameus* Hack.; *Andropogon lachnatherus* Benth.; *Anthistiria fasciculata* Thwaites; *Cymbopogon filipendulus* var. *thwaitesii* (Hack.) Hand.-Mazz.; *Hyparrhenia filipendula* var. *pilosa* (Hochst. ex Hack.) Stapf; *Hyparrhenia piovanii* Chiov.)

Tropical Africa, Southeast Asia, Australia. Perennial, tufted, rhizomatous, leaf sheath round, ligule a chartaceous membrane, hairy spikelets, paired racemes, each pair with 2–4 awns, the 2 racemes form an L-shaped unit, at the base of upper raceme 2 pairs of homogamous spikelets, sessile spikelets with a long awn, pedicellate spikelets with a short straight awn, thatching grass, more or less palatable, unpalatable when hard and woody, found in disturbed places, wooded savannah, *Brachystegia* woodland, higher rainfall areas, riverbanks, near vleis, bushveld, along roadsides, open veld, near rivers, see *Flora* 29: 115. 1846, *Enumeratio Plantarum Zeylaniae* 366. 1864, *Flora Australiensis: A Description* ... 7: 534. 1878, *Boletim da Sociedade Broteriana* 3: 137. 1885, *Monographiae Phanerogamarum* 6: 635. 1889 and *Philippine Journal of Science* 1 (Suppl.): 267. 1906, *Flora of Tropical Africa* 9(2): 322–325. 1919, *Symbolae Sinicae* 7(5): 1314. 1936, *Atti della Reale Accademia d'Italia. Memorie della classe di scienze fisiche, matematiche e naturali* 11(2): 63. Roma 1950, *Bothalia* 24: 241–246. 1994.

in English: fine thatching grass

in southern Africa: fyntamboekiegras

H. finitima (Hochst.) Stapf (*Andropogon finitimus* Hochst. ex A. Rich.; *Cymbopogon finitimus* (Hochst. ex A. Rich.) Thomson; *Cymbopogon finitimus* (Hochst. ex A. Rich.) Rendle, nom. illeg., non *Cymbopogon finitimus* (Hochst. ex A. Rich.) Thomson; *Hyparrhenia finitima* (Hochst.) Andersson; *Hyparrhenia finitima* (Hochst. ex A. Rich.) Stapf; *Hyparrhenia finitima* (Hochst. ex A. Rich.) Andersson ex Stapf; *Hyparrhenia hirta* var. *garambensis* Troupin; *Hyparrhenia rhodesica* Stent & Rattray; *Sorghum finitimum* (Hochst. ex A. Rich.) Kuntze)

Southern tropical Africa, Uganda, Kenya, Tanzania, Zaire. Perennial, tufted, rhizomatous, robust, sometimes with stilt roots, panicle much branched, raceme pairs with 2-6 awns, raceme bases unequal, spikelets glabrous to shortly hispidulous, thin pungent callus, pedicelled spikelets bristly, useful thatching grass, found in stony places, farm fallows, rocky sites, disturbed areas, deciduous bushland, roadsides, waste places, wooded grassland, see *Tentamen Florae Abyssinicae* ... 2: 465. 1850, *Journal of the Discovery of the Source of the Nile* 652. 1863, *Revisio Generum Plantarum* 2: 791. 1891, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 157. 1899 and *Flora of Tropical Africa* 9(2): 299-300. 1919, *Proceedings of the Rhodesia Scientific Association* 32: 14. Bulawayo, Rhodesia 1933, *Exploration du Parc National de la Garamba* 1: 47, f. 3. 1956.

H. formosa Stapf (*Andropogon formosus* Klotzsch ex Hack.)

East Africa, Malawi, Arabia, Yemen. Perennial, rare, robust, panicle narrow rather dense, raceme pairs with 6-8 awns, raceme-bases subequal, broad rounded callus, found in montane grassland, see *Monographiae Phanerogamarum* 6: 623. 1889 and *Flora of Tropical Africa* 9(2): 340-341. 1919.

H. gazensis (Rendle) Stapf (*Andropogon gazensis* (Rendle) Torre & Harms ex Eyles; *Cymbopogon gazensis* Rendle; *Hyparrhenia snowdenii* C.E. Hubb.) (after the British (b. Silverdale, Staffs) botanist Joseph Davenport Snowden, 1886-1973, Kew gardener, economic botanist, traveler and plant collector (Uganda), wrote *The Cultivated Races of Sorghum*. London 1936; see T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 375. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 641-642. London 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Southern tropical Africa, Malawi. Perennial, tufted, glaucous, rhizomatous, slender, raceme pairs with 4-5 awns, callus cuneate, common on poor soils, ruderal, along roadsides, broad-leaved deciduous woodland, savannah, see *Journal of the Linnean Society, Botany* 40: 226. 1911,

Transactions of the Royal Society of South Africa 5: 295. Cape Town 1916, *Flora of Tropical Africa* 9(2): 301-302. 1919, *Bulletin of Miscellaneous Information Kew* 1928(1): 38-39. 1928.

in southern Africa: polgras; benzwa (Tswana)

H. glabriuscula (A. Rich.) Stapf (*Andropogon glabriusculus* Hochst. ex A. Rich.; *Hyparrhenia amaena* Jacq.-Fél.; *Sorghum glabriusculum* (Hochst. ex A. Rich.) Kuntze)

West Africa, Benin. Perennial, densely tufted, slender, erect, stiff, robust, unbranched, leaf blades narrowly linear and nonaromatic, loosely imbricate glabrous sessile spikelets, short broad exerted callus, with medicinal properties, growing in seasonally flooded areas, swampy soils, river floodplains, see *Tentamen Florae Abyssinicae* ... 2: 468. 1850, *Revisio Generum Plantarum* 2: 791. 1891 and *Flora of Tropical Africa* 9(2): 372-373. 1919, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 1(1-4): 46, t. 6. [J.A.T.B.A.] Paris 1954.

in Guinea: onydi

in Senegal: gindyi gumbara, ondji

in Upper Volta: bukkaho

H. hirta (L.) Stapf (*Andropogon ambiguus* Gennari ex Barbey, nom. illeg., non *Andropogon ambiguus* Michx.; *Andropogon collinus* Lojac.; *Andropogon collinus* Pilg., nom. illeg., non *Andropogon collinus* Lojac.; *Andropogon giganteus* Ten.; *Andropogon giganteus* (Chiov.) Eyles; *Andropogon giganteus* Fenzl ex Steud., nom. illeg., non *Andropogon giganteus* Ten.; *Andropogon giganteus* Hochst., nom. illeg., non *Andropogon giganteus* Ten.; *Andropogon hirsutus* var. *pubescens* (Vis.) Husn., nom. illeg., non *Andropogon hirtus* var. *pubescens* (Andersson) Vis.; *Andropogon hirtum* L.; *Andropogon hirtus* (L.) Thomson, nom. illeg., non *Andropogon hirtus* L.; *Andropogon hirtus* L.; *Andropogon hirtus* var. *glabriglumis* Oppenh.; *Andropogon hirtus* var. *glaucus* Nabelek, nom. illeg., non *Andropogon hirtus* var. *glaucus* Schrad.; *Andropogon hirtus* var. *glaucus* Schrad.; *Andropogon hirtus* var. *longearistatus* Willk. ex Willk. & Lange; *Andropogon hirtus* var. *podotrichus* (Hochst.) Hack.; *Andropogon hirtus* var. *pubescens* (Andersson) Vis.; *Andropogon modicus* De Wild.; *Andropogon pilosus* Dufour ex Roem. & Schult., nom. illeg., non *Andropogon pilosus* Klein ex Willd.; *Andropogon podotrichus* Hochst.; *Andropogon pubescens* Vis., nom. illeg., non *Andropogon pubescens* Aiton; *Andropogon sinaicus* Delile; *Andropogon transvaalensis* Stapf; *Cymbopogon giganteus* Chiov.; *Cymbopogon hirtus* (L.) Thomson; *Cymbopogon hirtus* subsp. *villosum* (Pignatti) Pignatti; *Cymbopogon modicus* De Willd.; *Cymbopogon pubescens* (Andersson) Fritsch; *Cymbopogon transvaalensis* (Stapf) Stapf ex Burtt Davy; *Heteropogon hirtus* (L.) Andersson ex Schweinf.; *Heteropogon pubescens* Andersson; *Hyparrhenia hirta* f. *brachyphylla* Paunero; *Hyparrhenia hirta* f. *podotricha* (Hochst.) Maire & Weiller; *Hyparrhenia hirta* f. *pubescens*

(Andersson) Maire & Weiller; *Hyparrhenia hirta* subsp. *pubescens* (Andersson) Paunero; *Hyparrhenia hirta* subsp. *villosa* Pignatti; *Hyparrhenia hirta* var. *longearistata* (Willk. ex Willk. & Lange) Rothm. & Silva; *Hyparrhenia hirta* var. *podotricha* (Hochst.) Pic. Sermolli; *Hyparrhenia hirta* var. *pubescens* (Vis.) N.D. Simpson; *Hyparrhenia hirta* var. *pubescens* (Andersson) Rawi; *Hyparrhenia hirta* var. *villosa* Paunero; *Hyparrhenia modica* (De Wild.) Robyns; *Hyparrhenia podotricha* (Hochst.) Andersson; *Hyparrhenia pubescens* (Andersson) Chiov.; *Hyparrhenia pubescens* (Andersson) R. Malagarr.; *Hyparrhenia sinaica* (Delile) Llauro ex G. Lopez Gonzales; *Sorghum hirtum* (L.) Kuntze; *Trachypogon hirtus* (L.) Nees)

Kenya, South Africa, Algeria, Mediterranean, Asia temperate and tropical, India, Pakistan. Perennial, variable, erect or ascending, densely tufted, often branching from the lower nodes, sometimes rhizomatous or shortly rhizomatous, wiry, robust, slender, with dense basal tussock, leaf blade expanded, leaf sheath keeled, ligule a dark membrane short and stiff, leaves narrow pointed and glaucous, inflorescence a panicle with conspicuous spathes, panicle loose and elongated, spathe-like bracts, spatheoles glabrous and reddish, white or gray spike-like racemes erect or nodding, racemes paired with a pair of sterile spikelets at the base of the lower racemes, each pair of racemes with 8-16 awns, sessile spikelet villous, pedicellate spikelets male and more or less hairy to white-villous, readily grazed by all stock, valuable fodder grass, not very palatable except for the young growth, forage, stems eaten by baboons, a valuable crop, naturalized, useful thatching grass, used to weave large baskets, grain baskets and courtyard screens, extremely drought-tolerant and persistent, sensitive to frost, stands heavy grazing, flavonoids in *Hyparrhenia hirta* are associated with anti-oxidant and anti-inflammatory activities of the plant, weed species, potentially a very serious roadside and bushland weed, a pioneer grass, grown for erosion control and to revegetate eroded slopes, establishes on hard stony soils, well drained stony soils, common near rivers, in the shade of trees and bushes, bare and sandy soils, open grassland, montane grassland, desert and xeric shrublands, deciduous bushland, dry woodland, dry rocky hillsides, stony hillsides, disturbed areas, rocky places and rocky slopes, stony slopes, roadsides, on clays and sandstone, uncultivated lands, dry open places, see *Species Plantarum* 2: 1046. 1753, *Systema Vegetabilium* 2: 819. 1817, *Flora* 12(Erganz. 1): 3. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 346. 1829, *Flora Napolitana* 5: 285. 1835-1836[-1838], *Annales des Sciences Naturelles; Botanique, sér. 2*, 7: 285. 1836 [or 1837], *Linnaea* 12(4): 475. Berlin 1838, *Schimperi iter Abyssinicum. Sectio secunda* 1056. 1842, *Flora* 27: 242. 1844, *Synopsis Plantarum Glumacearum* 1: 386. 1854, *Prodromus Florae Hispanicae* 1: 47. 1861, *Journal of the Discovery of the Source of the Nile* 652. 1863, *Beitrag zur Flora Aethiopiens ...* 300, 310 [notes]. 1867, *Flora*

Dalmatica (suppl.) 150. 1872, William Barbey (1842-1914), *Florae Sardoae Compendium* 190. Lausanne 1884 [1885], *Boletim da Sociedade Broteriana* 3: 137. 1885, *Fl. Libya* 145: 310. 1889, *Revisio Generum Plantarum* 2: 792. 1891, *Flora Capensis* 7: 363. 1898, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 16. 1896 and *Flora Sicula* (Lojacono) 3: 272. 1909, *Excursion-sflora für Österreich*, edition 2, 47. 1909, *Wissenschaftliche Ergebnisse der Deutschen Zentral-Afrika-Expedition 1907-1908*, *Botanik* 2: 43. 1910, *Annals of the Transvaal Museum* 3: 122. 1912, *Transactions of the Royal Society of South Africa* 5: 296. 1916, *Flora of Tropical Africa* 9(2): 315-318. 1919, *Bulletin du Jardin Botanique de l'État* 6: 16. 1919, *Plantae Novae vel Minus Notae e regione Aethiopica* 20. 1928 [1911-1951, also *Plantae Novae vel Minus Notae ex Aethiopia*, series published in different journals], *Flore Agrostologique du Congo Belge* 1: 172. 1929, *Bulletin de la Société Botanique de Genève* 22: 145. 1931, *Agronomia Lusitana* 1: 240. 1939, *Atti della Reale Accademia d'Italia. Memorie della classe di scienze fisiche, matematiche e naturali* 11(2): 63. 1940, *Missione di Studio al Lago Tana*. vol. 7: Ricerche Botaniche. Parte I. 174. Accademia Nazionale dei Lincei. Roma 1951, *Flore de l'Afrique du Nord* 1: 291. 1952, *Exploration du Parc National de la Garamba* 1: 47, f. 3. 1956, *Anales del Instituto Botánico A. J. Cavanilles* 15: 430. Madrid 1957, *Archivio Botanico e Biogeografico Italiano* 34: 3. [Modena Università, Istituto botanico] Forli 1958, *Department of Agriculture Iraq: Bulletin* 14: 209. 1964, *Giornale Botanico Italiano* 111(1-2): 60. Firenze 1977, *Acta Phytotaxonomica Barcinonensia* 18: 10. 1976[1977], *Anales del Jardín Botánico de Madrid* 45: 273. 1988, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Bothalia* 18: 111-114. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Anales del Jardín Botánico de Madrid* 51(2): 313. 1993[1994], *Bothalia* 24: 241-246. 1994, *Flora Mediterranea* 7: 198-204. 1997.

in English: blue grass, common thatching grass, common thatchgrass, thatch grass, tambookie grass, beard grass, coolatai grass

in French: barbon hérissé, barbon

in Spain: cerrillo, triquera borde, fenàs, fenàs de cuca, fenal

in Mexico: jaragua gris

in Morocco: tajjet, tajjit, gousmir, guzmir, barbon hérissé, l-hamra, l-labda

in Somalia: deilah, deilan, hadaf

in South Africa: blougras, boesmangras, bosluisgras, dekgras, rauhes deckgras, dektamboekiegras, soetgras, steekgras, vaalgras; intunga (Zulu); mofula-tsephe, mofulatshepe, mohlomo (Sotho)

in Tanzania: Muhwa Kinyaturu

in Tunisia: bourkiba

H. involucrata Stapf (*Anthistiria barteri* Munro ex Oliver; *Hyparrhenia notolosa* Stapf)

Tropical Africa. Annual, robust, useful thatching grass, used to weave large baskets, on dry soils, savannah, shallow ground, see *Transactions of the Linnean Society of London* 29: 176. 1875 and *Flora of Tropical Africa* 9: 376-378, 383. 1919, *Kew Bulletin, Additional Series* 2: 158-161. 1969.

in Ghana: shumray

in Nigeria: fetinari, fono, iganapa, kakario, kyara

H. involucrata Stapf var. *breviseta* Clayton

Africa, Ghana. Found in woodland, shallow soil, wooded savannah.

H. involucrata Stapf var. *involucrata*

Africa, Benin. Annual, see *Flora of Tropical Africa* 9: 376-378, 383. 1919.

H. mobukensis (Chiov.) Chiov. (*Andropogon mobukensis* Chiov.; *Andropogon scaettai* Robyns; *Hyparrhenia absimilis* Pilg.; *Hypogynium absimile* (Pilg.) Roberty)

East Africa, Malawi. Perennial, wiry, trailing, slender, scandent, scrambling, branching, thin, leaf blades linear-lanceolate, solitary racemes or paired, upper lemma glabrous, glabrous awns, montane grassland, scrub, see *Flora Brasiliensis seu Enumeratio Plantarum* 364. 1829 and *Annali di Botanica* 6: 147. 1907, *Nuovo Giornale Botanico Italiano, new series* 26: 74. 1919, *Bulletin du Jardin Botanique de l'État* 8: 223. 1930, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14: 102. 1938, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 189. 1960.

H. mutica Clayton

Africa, Benin, Liberia, Uganda. Tufted, robust, stout, tall, large, upper lemma awnless, see *Kew Bulletin, Additional Series* 2: 161-163. 1969.

H. multiplex (Hochst. ex A. Rich.) Anderss. ex Stapf (*Andropogon multiplex* (Hochst. ex A. Rich.) Hack.; *Anthistiria multiplex* Hochst. ex A. Rich.; *Hyparrhenia multiplex* var. *leiopoda* Stapf; *Sorghum multiplex* (Hochst. ex A. Rich.) Kuntze)

Africa. Annual, slender, small, tufted, racemes compact 3-11-awned per pair, raceme-bases narrowly oblong usually yellow hispid, raceme-pairs with stout hairy awns, homogenous spikelets glabrous on the back, lower glume of the sessile spikelet with a median longitudinal depression, see *Tentamen Florae Abyssinicae ...* 2: 449. 1850, *Monographiae Phanerogamarum* 6: 631. 1889, *Revisio Generum Plantarum* 2: 792. 1891 and *Flora of Tropical Africa* 9(2): 374-376. 1919, *Kew Bulletin, Additional Series* 2: 152-154. 1969.

H. neglecta S.M. Phillips

Africa. Annual, slender, leaf blades glabrous, ligule truncate, loose panicle, spatheoles narrowly lanceolate, peduncle beard yellow, racemes 4-awned per pair, raceme-bases subequal, sessile spikelet glabrous and ribbed, pedicelled spikelets glabrous acuminate, see *Kew Bulletin* 49(3): 537, f. 1. 1994.

H. newtonii (Hack.) Stapf (*Andropogon bisulcatus* Chiov.; *Andropogon lecomtei* Franch.; *Andropogon newtonii* Hack.; *Andropogon nlemfuensis* var. *villosus* Vanderyst; *Cymbopogon lecomtei* (Franch.) Rendle; *Hyparrhenia bisulcata* Chiov.; *Hyparrhenia cirrosula* Stapf; *Hyparrhenia cirrulosula* Stapf; *Hyparrhenia lecomtei* (Franch.) Stapf; *Hyparrhenia lecomtei* var. *bisulcata* (Chiov.) Robyns; *Hyparrhenia squarrulosa* Peter; *Hyparrhenia stolzii* Stapf; *Sorghum newtonii* (Hack.) Kuntze)

Tropical Africa. Perennial, erect, tufted to densely tufted, submontane to montane, provides thatching material, useful grazing grass, growing in dry areas, grassland, savannah, stony hillsides, see *Boletim da Sociedade Broteriana* 3: 137. 1885, *Revisio Generum Plantarum* 2: 792. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 329. 1895 and *Journal of the Linnean Society, Botany* 40: 227. 1911, *Flora of Tropical Africa* 9(2): 363-366. 1919, *Nuovo Giornale Botanico Italiano*, n.s., 26: 60. 1919, *Bull. Agric. Congo Belge* 11: 145. 1920, *Bulletin de la Société Botanique de Belgique* 55: 44. 1923, *Flore Agrostologique du Congo Belge* 1: 192. 1929, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 375. 1936.

in Nigeria: jemuwel debbo, yemuwel debbo

H. newtonii (Hack.) Stapf var. *macra* Stapf

Tropical Africa, South Africa. Perennial, tufted, rhizomatous, basal sheaths usually tomentose or glabrous, raceme bases hairy, raceme pairs with 2-4 awns, sessile spikelet with hairy lower glume, callus pungent, grass used for thatching, found in stony hillsides, grassland, savannah, see *Flora of Tropical Africa* 9(2): 363-366. 1919, *Kew Bull., Add. Ser.* 2: 150. 1969.

in English: thatching grass

H. newtonii (Hack.) Stapf var. *newtonii*

Tropical Africa, Madagascar, Southeast Asia. Perennial, tufted, rhizomatous, basal sheaths usually tomentose or glabrous, raceme pairs with 2-4 awns, raceme bases hairy, sessile spikelet with glabrous lower glume, callus pungent, thatching grass, found in stony hillsides, grassland, savannah, see *Flora of Tropical Africa* 9(2): 363-364. 1919.

in English: bearded thatching grass

H. nyassae (Rendle) Stapf (*Andropogon chrysargyreus* (Stapf) Stapf ex A. Chev.; *Andropogon lasiobasis* Pilg.; *Andropogon lugugaensis* Vanderyst; *Andropogon nyassae* Rendle; *Andropogon rufus* var. *auricomus* Pilg.; *Andropogon vanderystii* De Wild.; *Cymbopogon chrysargyreus* Stapf; *Cymbopogon nyassae* (Rendle) Pilg.; *Cymbopogon*

schmidianus (A. Camus) A. Camus ex M. Schmid; *Cymbopogon solutus* f. *trichophyllus* Stapf; *Cymbopogon vanderystii* De Wild.; *Hyparrhenia chrysargyrea* (Stapf) Stapf; *Hyparrhenia schmidiana* A. Camus; *Hyparrhenia vanderystii* (De Wild.) Vanderyst; *Hyparrhenia vulpina* Stapf (to honor the Belgian botanist Hyacinthe Julien Robert Vanderyst, 1860-1934, missionary in the Congo, agronomist, traveler and plant collector, among his works are *Prodrome des maladies cryptogamiques belges*. Bruxelles 1904-1905 and *Jardin agrostologique de Kisanti*. Bruxelles 1928; see Stafleu and Cowan, *Taxonomic literature*. 6: 662-663. Utrecht 1986)

Tropical Africa, Benin, Malawi, Tanzania, Southeast Asia. Perennial, tufted, upright, rhizomatous, basal sheaths hairy, ligule membranous with a ciliate margin, inflorescence densely golden-pubescent, raceme pairs with 6-14-18 awns, spikelets arranged in pairs and 1-flowered, callus linear, when young browsed by stock, thatching grass, grain eaten, moist places in open veld, swamp edges, moist meadow, damp sites, along roadsides, savannah, wooded savannah, broad-leaved deciduous woodland, sandy loam, see *Journal of Botany, British and Foreign* 31: 358. London 1893 and *Journal de Botanique (Morot) sér. 2, 2*: 213. 1909, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30: 268. 1901, *Sudania* 1: 77. 1911, *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 197, t. 14, f. 1. 1916 [1915], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 54: 287. 1917, *Bulletin agricole du Congo Belge* 9: 241. 1918, *Bulletin du Jardin Botanique de l'État* 6: 24. 1919, *Flora of Tropical Africa* 9(2): 310-314. 1919, *Bulletin agricole du Congo Belge* 11: 144. 1920, *Journal d'Agriculture Tropicale* 2: 201. 1955, M. Schmid, *Flore Agrostologique de l'Indochine* 229. 1958, *Kew Bull., Add. Ser. 2*: 1-196. 1969, *Blumea* 45(2): 456. 2000.

in English: bronze awned thatching grass, bush thatching grass

in Malawi: kanyumbu, nuymbu, chatungwa, chisamphe, kamphe, kamphi

in South Africa: bronsaartamboekiegras

H. papillipes (Hochst. ex A. Rich.) Stapf (*Andropogon papillipes* Hochst. ex A. Rich.; *Cymbopogon papillipes* (Hochst. ex A. Rich.) Chiov.; *Cymbopogon papillipes* (Hochst. ex A. Rich.) Pilg., nom. illeg., non *Cymbopogon papillipes* (Hochst. ex A. Rich.) Chiov.; *Hyparrhenia lintonii* Stapf; *Hyparrhenia papillipes* (Hochst. ex A. Rich.) Andersson ex Stapf; *Sorghum papillipes* (Hochst. ex A. Rich.) Kuntze)

Africa, Ethiopia, Uganda, Tanzania, East Africa, Yemen. Perennial, tussocky, wiry, numerous fine stems, erect and loosely ascending, slender, scrambling, very leafy, shortly rhizomatous, loose panicles, spatheoles linear-lanceolate,

peduncle long-exserted near the tip, raceme pairs with 7-9-19 awns, spikelets densely villous, narrowly cuneate acute callus, lower raceme-base with 1 pair of homogamous spikelets, well grazed when young, occurs on black clay seasonally waterlogged, open woodland, open stony places, see *Tentamen Florae Abyssinicae ... 2*: 460. 1850, *Revisio Generum Plantarum* 2: 792. 1891 and *Flora of Tropical Africa* 9(2): 347-348, 350-351. 1919, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(96): 597. 1929, *Kew Bull., Add. Ser. 2*: 121. 1969.

H. pilgeriana C.E. Hubb. (also *pilgerana*) (*Cymbopogon stolzii* Pilg.; *Hyparrhenia claessensii* Robyns) (dedicated to the German botanist Robert Knuds Friedrich Pilger, 1876-1953, traveler, botanical explorer, plant collector in Brazil (Matto Grosso), Director at Botanical Garden Berlin-Dahlem, his works include "Gramineae novae, a cl. K. Skottsberg in Patagonia australi et in Fuegia collectae." *Repert. Spec. Nov. Regni Veg.* 12: 304-308. 1913 and "Sobra algunas gramíneas de América del Sur." *Revista Argent. Agron.* 11(4): 257-264. 1944. See L.R. Parodi, "Robert Pilger." *Revista Argent. Agron.* 20(2): 107-114. 1953; H. Melchior, "Zum Gedächtnis von Robert Pilger." *Bot. Jahrb. Syst.* 76(3): 385-409. 1954; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; E.D. Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 151. 1937; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 310. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 327. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; August Weberbauer, *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 39. Leipzig 1911)

Tropical eastern Africa, South Africa. Perennial, tufted, slender, weak-stemmed, wiry, straggling, rambling, trailing, lax and leaning on other grasses, rhizomatous, panicle loose and open, long arching peduncles yellow-bearded, racemes exserted, raceme pairs with 4-8 awns, raceme-bases flattened, lower spathe boat-shaped, lower raceme-base with 1 pair of homogamous spikelets, pedicellate spikelets glabrous, glossy sessile spikelets, callus oblong, useful for erosion control, found in seasonal swamps, hill slope, along trails and roadsides, see *Mexicanas Plantas* 2: 51, 67. 1886 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 54: 286. 1917, *Bulletin of Miscellaneous Information Kew* 1928(1): 39-40. 1928, *Flore Agrostologique du Congo Belge* 1: 180. 1929, *Kew Bull., Add. Ser. 2*: 38. 1969, *Bothalia* 24: 241-246. 1994.

in English: thatching grass

H. pilosissima (Hack.) J.G. Anderson (*Andropogon pilosissimus* Hack.; *Hyparrhenia dregeana* (Nees) Stapf ex Stent) South Africa. Used for making grain baskets and courtyard screens, see *Monographiae Phanerogamarum* 6: 690. 1889 and *Bothalia* 1: 249. 1923, *Bothalia* 9: 130. 1966.

in South Africa, Lesotho: qokoa

H. poecilotricha (Hack.) Stapf (*Andropogon buchananii* Stapf; *Andropogon pleiarthron* Stapf; *Andropogon poecilotricha* Hack.; *Andropogon poecilotrichus* Hack.; *Cymbopogon pleiarthron* (Stapf) Stapf ex Burt Davy; *Hyparrhenia buchani* (Stapf) Stent; *Hyparrhenia buchani* (Stapf) Stapf ex Stent; *Hyparrhenia familiaris* var. *pilosa* Robyns; *Sorghum poecilotrichum* (Hack.) Kuntze)

Eastern tropical Africa, South Africa. Perennial, variable, tufted, leaf blades rigid, basal leaf sheaths glabrous, rhizomatous, panicle lax and open, callus pungent or acute, raceme pairs with 4-7 awns, long upper raceme base with 2 pairs of homogamous spikelets, useful fodder grass, habitat late successional, bushveld, savannah, wooded grassland, deciduous bushland, see *Boletim da Sociedade Broteriana* 3: 138. 1885, *Revisio Generum Plantarum* 2: 792. 1891, *Flora Capensis* 7: 362, 364. 1898 and *Annals of the Transvaal Museum* 3: 121. 1912, *Flora of Tropical Africa* 9(2): 309-310. 1919, *Bothalia* 1: 249. 1924, *Flore Agrostologique du Congo Belge* 1: 176. 1929.

in Uganda: lojokopolon

H. quarrei Robyns (*Hyparrhenia hirta* (L.) Stapf) (named for Paul Quarre, b. 1904, botanical collector in Zaire and tropical Africa)

Tropical and South Africa. Perennial, tufted, robust, montane, tussocky, basal leaf sheaths pubescent, shortly rhizomatous, narrow panicle, raceme pairs with 6-10 awns, racemes deflexed when old, spatheoles lanceolate, spikelets pubescent to villous, used for thatching, grazed by domestic stock, found in floodplains, disturbed sites, clearings, roadsides, forest margins, grassy banks, field borders, wooded savannah, deciduous bushland, see *Flore Agrostologique du Congo Belge* 1: 171. 1929.

in English: thatching grass

H. rudis Stapf (*Andropogon rudis* Nees ex Steud.; *Arthraxon rudis* (Nees ex Steud.) Hochst.; *Hyparrhenia acutispathacea* (De Wild.) Robyns var. *pilosa* Bamps)

Central Africa, Madagascar, Zaire. Perennial, very robust, coarse, thick, rhizomatous, tufted, with stilt roots, culms exposed at base, leaf blades scabrid, loosely arranged raceme pairs with 4-8 awns, callus cuneate narrowly obtuse to subacute, pedicellate spikelets villous, long stout awns, browsed while it is still young, growing in moist soils, upland grassland, deciduous bushland, savannah grassland, see *Flora of Tropical Africa* 9(2): 344-346. 1919, *Bulletin du Jardin Botanique de l'État* 25: 392. 1955, *Kew Bulletin, Additional Series* 2: 1-196. 1969.

H. Orufa (Nees) Stapf (*Andropogon altissimus* Hochst., nom. illeg., non *Andropogon altissimus* (Poir.) Raspail; *Andropogon bouangensis* Franch.; *Andropogon fulvicomus* Hochst. ex A. Rich.; *Andropogon fulvicomus* Hochst.; *Andropogon fulvicomus* var. *qpproximatus* Hochst.; *Andropogon hirtus* Degen ex Lojac., nom. illeg., non *Andropogon hirtus* L.; *Andropogon rufus* (Nees) Kunth; *Andropogon rufus* var. *fulvicomus* (Hochst. ex A. Rich.) Hack.; *Andropogon rufus* var. *glabrescens* Chiov.; *Andropogon xanthoblepharis* Trin.; *Andropogon yinduensis* Vanderyst; *Cymbopogon rufus* (Nees) Rendle; *Cymbopogon rufus* var. *fulvicomus* (Hochst. ex A. Rich.) Rendle; *Cymbopogon rufus* var. *major* Rendle; *Hyparrhenia altissima* Stapf; *Hyparrhenia fulvicoma* (Hochst. ex A. Rich.) Andersson; *Hyparrhenia hirta* var. *brachypola* Chiov.; *Hyparrhenia parvispiculata* Bamps; *Hyparrhenia rufa* var. *fulvicoma* (Hochst. ex A. Rich.) Chiov.; *Hyparrhenia rufa* var. *major* (Rendle) Stapf; *Hyparrhenia vulpina* subsp. *longipes* A. Camus; *Sorghum rufum* (Nees) Kuntze; *Trachypogon runus* Nees)

Tropical Africa and America. Perennial or rarely annual, erect, herbaceous, very variable, rather coarse, tall, robust, densely tufted, unbranched, reedlike, tussocky or clumped, rhizomatous, leaf blade expanded and finely pointed, leaf sheaths rounded and sparsely long-pilose, ligule firmly membranous and brownish, inflorescence a panicle contracted or slightly open, spatheoles linear-lanceolate, spike-like racemes enclosed by a large spathe, spikelets with reddish brown hairs, bracts at raceme bases green and narrowly lanceolate, 7-14-17 awns per raceme, short obtuse callus, flexuous pedicels, awns dark red and twisted, sessile spikelet bisexual and awned, pedicelled spikelet male or sterile and awnless, not very palatable, leaves and stems eaten by baboons, palatable before the formation of tussocks, cultivated and naturalized, medicinal, good fodder when cut back or kept low by grazing, useful pulp for paper, used in Africa as a coarse thatching grass, aggressive weed species, invasive, it stands waterlogging and temporary flooding, does not persist under continuous close grazing, susceptible to frost, common on disturbed areas, omiramba, rivers, vleis, wooded grassland, on dry ground, lawn, trampled soil, along roadsides and in roadbeds, cultivated fields, dry to mesic roadsides, at the edge of floodplain, deciduous bushland, disturbed moist places, wet savannahs, among rocks and under trees, seasonally flooded grassland and open woodland, in shade and in sun, near trainage ditches, shrubby areas, along trail, on termite mounds, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 345. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 281. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 492. 1833, *Flora* 24: 277. 1841, *Schimperi iter Abyssinicum. Sectio secunda* no. 928, 1118. 1842, *Tentamen Florae Abyssinicae ...* 2: 463.

1850, *Beitrag zur Flora Aethiopiens* ... 310. 1867, *Boletim da Sociedade Broteriana* 5: 213. 1887, *Revisio Generum Plantarum* 2: 792. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 333. 1895 [or 1893], *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 155. 1899 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 288. 1908, *Flora Sicula* (Lojacono) 3: 272. 1909, *Bulletin agricole du Congo Belge* 9: 243. 1918, *Flora of Tropical Africa* 9(2): 304-308. 1919, *Nuovo Giornale Botanico Italiano* 26: 74. 1919, *Atti della Reale Accademia d'Italia. Memorie della classe di scienze fisiche, matematiche e naturali* 11(2): 63. 1940, *Bulletin du Jardin Botanique de l'État* 25: 391. 1955, *Bulletin de la Société Botanique de France* 107: 207. 1960, *Kew Bulletin, Additional Series* 2: 66. 1969, *Ciencia e Cultura (São Paulo)* 29: 1032-1034. 1977, *Austrobaileya* 3: 86. 1989, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Ruizia; Monografías del Jardín Botánico* 13: 1-480. 1993.

in English: thatching grass, giant thatching grass, yellow spike thatching grass, jaragua grass, jaragua

in Arabic: nal al'afin

in Thailand: yaa saeng kham, ya saneg kham

in Spanish: yaragua, puntero, jaragua, faragua

in Brazil: capim jaguaré, capim vermelho, sapé gigante

in Colombia: faragua, puntero, yaraguá, yaraguá del Brasil

in Mexico: bermejo, pasto yaraguá, zacate jaragua

in Panama: faragua

in Paraguay: faragua, puntero, yaraguá, yaraguá del Brasil

in Puerto Rico: faragua, puntero, yaraguá, yaraguá del Brasil

in Angola: musoke, soko

in Gambia: khalan-soghgo-na, khalan-sogo-na, nyantang furo, tikole

in Ghana: zankalago

in Guinea: fougouli

in Madagascar: boka andatsika

in Malawi: nyumba ya nantchengwa, nuymbu, chipepati, cipeta, mpsyipe, kanyumbu, gogolo

in Nigeria: alolo, eji, duul, fono, gamare, ijinga i pupu, jinfi, kalawal, kinditilo, kyara na fadama, lemno, nal al'afin, nyanyanga, sobarla, wodeho, yamàà

in Senegal: bin blé

in Sierra Leone: tikolo-yo

in southern Africa: geelaartamboekiegras, braunes deckgras

in Upper Volta: uoh, who

in Yoruba: alolo

H. rufa (Nees) Stapf subsp. *altissima* (Stapf) B.K. Simon (*Hyparrhenia altissima* Stapf)

Africa. Annual or perennial, erect, reddish spatheoles, racemes paired with a pair of sterile spikelets at the base of the lower racemes, sessile spikelets hairy, pedicellate spikelets hairy, a roadside weed, see *Flora of Tropical Africa* 9(2): 304-308. 1919, *Austrobaileya* 3: 86. 1989.

H. rufa (Nees) Stapf var. *rufa*

Tropical Africa. Perennial or annual, very variable, rhizomatous, sessile spikelets yellowish to reddish, lax or contracted panicle, 7-14 awns per raceme pairs, glossy lower glume, used in Africa as a coarse thatching grass, pasture, palatable when young, found in disturbed moist places, wooded savannah, along roadsides, wet meadows, sandy clearings, edge of floodplain, along riverbanks, sandy loam, see *Flora of Tropical Africa* 9(2): 304-308. 1919.

in English: thatching grass, giant thatching grass

in South Africa: geelaartamboekiegras

H. schimperi (Hochst. ex A. Rich.) Andersson ex Stapf (*Andropogon schimperi* Hochst. ex A. Rich.; *Andropogon schimperi* var. *longicuspis* Hochst.; *Cymbopogon schimperi* (Hochst. ex A. Rich.) Rendle; *Hyparrhenia viridescens* Robyns; *Sorghum schimperi* (Hochst. ex A. Rich.) Kuntze)

Tropical Africa, Madagascar. Perennial, erect, slender to robust, coarse, thick, tufted, leaf blades scabrid, shortly rhizomatous, stilt roots, panicle contracted, spatheoles narrowly lanceolate, 5-9 awns per raceme pairs, raceme-base tip with a scarious lobe, pedicellate spikelets glabrous to pilose, thatching grass, used for making fences, found in swampy areas, savannah, moist places, see *Schimperi iter Abyssinicum. Sectio secunda* 1052. 1842, *Tentamen Florae Abyssinicae* ... 2: 466. 1850, *Mexicanas Plantas* 2: 51, 67. 1886, *Revisio Generum Plantarum* 2: 792. 1891, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 155. 1899 and *Flora of Tropical Africa* 9(2): 341-343. 1919, *Flore Agrostologique du Congo Belge* 1: 182. 1929, *Kew Bull., Add. Ser.* 2: 38. 1969.

in English: thatching grass

H. smithiana (Hook.f.) Stapf (*Andropogon smithianus* Hook.f.; *Sorghum smithianum* (Hook.f.) Kuntze)

Tropical Africa. Perennial, tufted, dangling spikelets, feathery inflorescence branched, see *Journal of the Proceedings of the Linnean Society* 7: 232. 1864, *Revisio Generum Plantarum* 2: 792. 1891 and *Flora of Tropical Africa* 9(2): 314-315. 1919, *Opera Botanica* 121: 159-172. 1993.

in Nigeria: geena saabal, geene saabal

in Sierra Leone: fualobi, lofu-na

in Upper Volta: jantaaje, yantaare

H. smithiana (Hook.f.) Stapf var. *major* Clayton

Africa, Benin, Ghana. Good thatching grass, see *Kew Bulletin, Additional Series* 2: 57. 1969.

H. subplumosa Stapf

Tropical Africa, Nigeria, Tanzania, Benin. Perennial, useful, robust, coarse, brittle, hard pointed flower spikes, thatching grass, palatable only when young, savannah woodland, see *Flora of Tropical Africa* 9(2): 366-368. 1919, *Kew Bulletin, Additional Series* 2: 164-167. 1969.

in Niger: féhindé, korkondi

in Nigeria: buta, butar kurege, celbi, celbol, cika daafi, cika daajii, cika dawà, garlabbe, geena saabal, kibiar daajii, lalemo, mokoro, selbo, tsiikar-daajii, tsiikar-dawà, tumaa da goobaraa, wodeho

in Sierra Leone: banbira, fualobi, gbokilobon, khalansogona, kobonkolo, lofu-na, ngale, nyanda binye, pankasaxi, tikolo-yo

in Upper Volta: bukkaho, jantaaje, lassa, yantaare

H. tamba (Steud.) Stapf (*Andropogon lepidus* Nees var. *tamba* (Hochst. ex Steud.) Hack.; *Andropogon tamba* Hochst. ex Steud.; *Cymbopogon tamba* (Hochst. ex Steud.) Rendle; *Hyparrhenia glauca* Stent; *Hyparrhenia tamba* (Hochst. ex Steud.) Andersson ex Stapf)

Tropical Africa, Ethiopia. Perennial, erect, densely tufted, thick, rhizomatous, robust, stout, sometimes with small stilt roots at the lower nodes, basal leaf sheaths hairy to silky pubescent, ligule membranous, racemes 5-8 awns per pair, spathe at raceme bases, spikelets dark purplish, sessile spikelet with a curved awn, pedicellate spikelets awnless or mucronate, low grazing value, too hard to be palatable, thatching grass, found along roadsides and streamsides, vleis, in grassland, moist soils, bushveld areas, grassy slopes, very close to *Hyparrhenia schimperii*, see *Flora of Africa Australioris Illustrationes Monographicae* 1: 113. 1841, *Synopsis Plantarum Glumacearum* 1: 385. 1854, *Monographiae Phanerogamarum* 6: 625. 1889 and *Journal of the Linnean Society, Botany* 40: 227. 1911, *Flora of Tropical Africa* 9(2): 336-337. 1919, *Bothalia* 1: 251. 1923.

in English: blue thatching grass

in South Africa: bloutamboekiegras

H. tuberculata W.D. Clayton

Ethiopia. Perennial, caespitose, slender, rhizomatous, inflorescence paniculate of 2-4 nodding raceme pairs, racemes 8-11-awned per pair, raceme-bases oblong hispid with golden bristles, homogamous spikelets tuberculate-hispid on the back, spikelets sessile and pedicelled, leaves and grains eaten by baboons, upland grassland, among rocks, dry grasslands, highlands, closely related to *Hyparrhenia arrhenobasis* (Hochst. ex Steud.) Stapf, see *Kew Bulletin, Additional Series* 2: 155-156. 1969.

H. umbrosa (Hochst.) Andersson ex W.D. Clayton (*Andropogon lepidus* Nees subvar. *umbrosus* (Hochst.) Hack.; *Andropogon umbrosus* Hochst.; *Cymbopogon umbrosus* (Hochst.) Pilg.)

Tropical Africa. Perennial, slender, robust, stout, montane, rambling, rhizomatous with a slender rhizome, with small stilt roots at the lower nodes, paired racemes with 4-6 awns, oblong to rounded callus, pedicellate spikelets villous, grazed by all stock when still young, used for thatching, found along roadsides, old cultivations, grass savannah, see *Flora of Africa Australioris Illustrationes Monographicae* 1: 113. 1841, *Schimperi iter Abyssinicum. Sectio secunda* no. 1116. 1842, *Monographiae Phanerogamarum* 6: 625. 1889 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(96): 598. 1929, *Kew Bulletin, Additional Series* 2: 127. 1969.

in Nigeria: sambawal, shambawal

H. variabilis Stapf (*Andropogon acutispathaceus* De Wild.; *Cymbopogon acutispathaceus* De Wild.; *Hyparrhenia acutispathacea* (De Wild.) Robyns; *Hyparrhenia iringensis* Pilg.; *Hyparrhenia spectabilis* Stapf)

Tropical eastern Africa, South Africa, Transvaal, Yemen. Perennial, decumbent, rhizomatous, robust, with small stilt roots at the lower nodes, long narrow dense panicle much branched, 2-5 awns per raceme pair, raceme-bases very short and flattened, spatheoles deeply concave and boat-shaped, sessile spikelets pubescent, callus cuneate, pedicellate spikelets glabrous and awned, pith eaten by chimpanzees, found in open swampy areas, tall grassland, see *Flora of Tropical Africa* 9(2): 334-336, 338-340. 1919, *Bulletin du Jardin Botanique de l'État* 6: 7. 1919, *Flore Agrostologique du Congo Belge* 1: 181. 1929, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14: 101. 1938, *Kew Bulletin, Additional Series* 2: 113. 1969, *Kew Bulletin* 30: 517. 1975, *Bothalia* 24: 241-246. 1994.

in tropical Africa: katengo, kimbulu, okatengo, okate

H. violascens (Stapf) W.D. Clayton (*Hyparrhenia soluta* var. *violascens* Stapf)

Tropical Africa. Annual, erect, good fodder when young, used for thatching and matting, old cultivations, along roadsides, see *Flora of Tropical Africa* 9(2): 319, 334-336, 338-340. 1919, *Kew Bulletin, Additional Series* 2: 88. 1969.

in Nigeria: eeruwe, gajiri, jimfa jimfa, jimfi, jimfihu

H. welwitschii (Rendle) Stapf (*Andropogon chrysopogon* Welw. ex Rendle; *Andropogon welwitschii* (Rendle) K. Schum.; *Cymbopogon welwitschii* Rendle; *Hyparrhenia gracilescens* Stapf)

Africa, Benin, Angola. Annual, coarse, tufted, awns twisted when dry, browsed when young, used for thatching, sandy soils, savannah woodland, damp soil, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 157. 1899 and *Just's Botanischer Jahresbericht*. 27(1): 454. 1901, *Flora of Tropical Africa* 9(2): 356-358. 1919.

in Guinea: Kassa, Kpala, Gbali

in Sierra Leone: bintanana, buitanana, funfurekhame-na, gbokilobon, kimbigira-na

Hyperthelia W.D. Clayton

From the Greek *hyper* “above, over” and *thela* “nipple” or *thelys, theleia, thelia* “female.”

About 6-7 species, tropical Africa. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Anthistiriinae, annual or perennial, caespitose, tall, herbaceous, branched or unbranched, leaf blades linear, auricles absent, culm sheaths persistent, ligule an unfringed membrane, plants bisexual, paired racemes subtended by spatheoles, large compound panicle, raceme-pairs 2-awned, very long raceme-base appendages, pedicellate spikelets male, 1 pair of spikelets at the base of the lower raceme, male spikelets with 2 florets, 2 glumes subequal or more or less equal, lower glume of sessile spikelet with a median groove, lower floret reduced to an empty lemma, palea present or absent, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas dark to reddish, species of open habitats, savannah, grasslands, disturbed areas, uncultivated lands, bushveld, on sandy soils, sometimes referred to *Hyparrhenia* Andersson ex Fourn., type *Hyperthelia dissoluta* (Nees ex Steud.) Clayton, see *Kew Bulletin* 20: 438, 441. 1966, *Kew Bulletin, Additional Series* 2: 173-174. 1969, *Flora Mesoamericana* 6: 394. 1994, *African Journal of Ecology* 37(2): 202-210. June 1999, *Contributions from the United States National Herbarium* 46: 257. 2003, *Journal of Applied Ecology* 40(3): 430-444. June 2003, *Journal of Biogeography* 31(1): 5-18. Jan 2004, *African Journal of Ecology* 42(4): 328-337. Dec 2004.

SPECIES:

H. colobantha Clayton (from the Greek *kolobos* “stunted, mutilated” and *anthos* “flower”)

Africa. Upper raceme abortive, see *Kew Bulletin* 20: 439. 1966.

H. cornucopiae (Hack.) Clayton (*Andropogon cornucopiae* Hack.)

Africa, Central African Republic. Woodland, wooded savannah, sandy loam, see *Flora* 68(7): 126. 1885 and *Kew Bulletin* 20: 446. 1966.

H. dissoluta (Nees ex Steudel) Clayton (*Andropogon antherioides* Rupr.; *Andropogon anthistirioides* Rupr.; *Andropogon arundinaceus* Scop., nom. illeg., non *Andropogon arundinaceus* Bergius; *Andropogon dissoluta* Nees ex Steud.; *Andropogon luteolus* Vanderyst; *Andropogon macrolepis* Hack.; *Andropogon ruprechtii* Hack.; *Anthistiria dissoluta* Steud.; *Anthistiria dissoluta* Nees ex Steud.; *Cymbopogon ruprechtii* (Hack.) Rendle; *Cymbopogon ruprechtii* (Hack.) Hitchc., nom. illeg., non *Cymbopogon ruprechtii* (Hack.) Rendle; *Hyparrhenia dissoluta* (Nees) C.E. Hubb.; *Hyparrhenia dissoluta* (Steud.) C.E. Hubb.; *Hyparrhenia dissoluta* (Steud.) C.E. Hubb.; *Hyparrhenia macrolepis* (Hack.) Stapf; *Hyparrhenia ruprechtii* (Hack.)

E. Fourn.; *Hyparrhenia ruprechtii* E. Fourn.; *Hyperthelia dissoluta* (Nees ex Steud.) Clayton; *Hyperthelia dissoluta* (Nees) Clayton; *Hyperthelia macrolepis* (Hack.) Clayton; *Sorghum ruprechtii* (Hack.) Kuntze) (for the Austrian botanist Franz Josef Ruprecht, 1814-1870, physician; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 192. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; Stafleu and Cowan, *Taxonomic literature*. 4: 993-997. 1983; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 342. 1972; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 240. Palermo 1988)

Tropical and South Africa, Madagascar. Perennial, tufted, robust, montane, erect, usually unbranched, leaf blades smooth to scabrid, ligule a membrane, panicle narrow and stiff, paired racemes each with a spathe and 2 yellow awns, spikelets in pairs pungently bristled, pedicellate spikelet with a straight awn, sessile spikelet with a twisted awn, lower glume of sessile spikelets narrowly grooved, useful grass, fiber for matting or thatching, used for reed-work, naturalized, palatable when young, grazed in the very early stage of growth, common in disturbed areas, deciduous bushland, grassland, waysides, uncultivated lands, pastures, on sandy soils, woodland, savannah, veld, field margins, along roadsides, see *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 243, 245. 1842, *Synopsis Plantarum Glumacearum* 1: 400. 1854, *Flora* 68(7): 125-126. 1885, *Mexicanas Plantas* 2: 67. 1886, *Revisio Generum Plantarum* 2: 792. 1891, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 160. 1899 and *Contributions from the United States National Herbarium* 17(3): 209. 1913, *Bulletin agricole du Congo Belge* 9: 241. 1918, *Flora of Tropical Africa* 9(2): 328-329. 1919, *Flora of West Tropical Africa* 2: 591. 1936, *Kew Bulletin* 20: 441, 445. 1966, *Cuscatlania* 1(6): 1-29. 1991, *Bothalia* 24: 241-246. 1994, *Flora Mesoamericana* 6: 394. 1994.

in English: thatching grass, yellow thatching grass, yellow hard grass

in Malawi: chipepati, cilela, kampiti, kanyumbu, mpsyipe, nyumba ya nantchengwa

in Mali: neanso, ntaso, yé-yalé

in Niger: aelogi, girojé, jan bako, jirbijé, k'yara, korkondi, kutumbalé, saari, sel-selnde, selseldé, sombré, talogit, tchiobbé, tsara

in Nigeria: caràà vyep, cingaaji, cobe, gamba, ggyaara, ijinga i myian, kalawal, ko, kyaara, kyaaraà, kyaarar bishaara, sege, wudeho

in Senegal: cicca, dazo, fodod, khat, mbombod, sel a baré, yegalé

in South Africa: bootjietamboekiegras, geeltamboekiegras, dekgras, geeldekras, rooigras, tamboekiegras

in tropical Africa: katengo, okatengo, okate

in Upper Volta: bodooko, boduko, gonyamba

in Yoruba: sege

H. edulis (C.E. Hubb.) Clayton (*Hyparrhenia edulis* C.E. Hubb.)

Africa, Sudan. Harvested for grains, see *Hooker's Icones Plantarum* 35: t. 3495. 1951, *Kew Bulletin* 20: 447. 1966.

H. kottoensis Desc.

Africa. See *Bulletin de la Société Botanique de France, Lettres Botanique* 134(2): 203. 1987.

H. macrolepis (Hack.) Clayton (*Andropogon macrolepis* Hack.; *Anthistiria dissoluta* Nees ex Steud.; *Hyparrhenia macrolepis* (Hack.) Stapf; *Hyperthelia dissoluta* (Nees ex Steud.) Clayton)

Africa. See *Synopsis Plantarum Glumacearum* 1: 400. 1854, *Flora* 68(7): 125. 1885 and *Flora of Tropical Africa* 9(2): 328-329. 1919, *Kew Bulletin* 20: 441, 445. 1966, *Bothalia* 24: 241-246. 1994.

H. polychaeta Clayton

Africa. See *Kew Bulletin* 20: 441. 1966.

Hypogynium Nees = *Andropogon* L.

From the Greek *hypo* "beneath, underneath" and *gyne* "female."

About 2 species, tropical America and Africa. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial, herbaceous, unarmed, densely caespitose, erect, auricles absent, leaf sheaths glabrous, plants monoecious, inflorescence paniculate, male florets 3 staminate, all the fertile spikelets unisexual, 2 glumes more or less equal, lower glume 2-keeled, upper glume 1- to 3-nerved, palea present or absent, 2 fleshy lodicules, stamens 0, ovary glabrous, 2 stigmas, open habitats, savannah, marshy areas, often referred to *Andropogon* L., type *Hypogynium spathiflorum* Nees, see *Species Plantarum* 2: 1045-1046. 1753, *Flora Brasiliensis seu Enumeratio Plantarum* 364, 366. 1829 and *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Flora Mesoamericana* 6: 390. 1994, *Taxon* 44: 611-612. 1995, *Fontqueria* 46: [i-ii], 1-259. 1997, *Contributions from the United States National Herbarium* 46: 20-64, 257. 2003.

Species

H. virgatum (Desv. ex Ham.) Dandy (*Anatherum inerme* (Steud.) Griseb.; *Anatherum spathiflorum* (Nees) Griseb.;

Anatherum virgatum (Desv. ex Ham.) Desv.; *Andropogon spathiflorus* (Nees) Kunth; *Andropogon virgatus* Desv. ex Ham.; *Hypogynium spathiflorum* Nees)

Venezuela, West Indies. Perennial, erect, see *Prodromus Plantarum Indiae Occidentalis* 9. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 364, 366. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 175. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 496. 1833, *Synopsis Plantarum Glumacearum* 1: 390. 1854, *Catalogus plantarum cubensium ...* 236. 1866 and *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Hickenia* 1: 73-78. 1977, *Brittonia* 38(4): 411-414. 1986.

Hypseochloa C.E. Hubb.

From the Greek *hypsos*, *hypseos* "height, sublimity" and *chloa* "grass."

2 species, tropical West Africa, mountains. Pooideae, Poodae, Aveneae, annual, slender, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, cleistogamous or chasmogamous, open inflorescence paniculate, spikelets with minute rachilla extension, 2 glumes equal 3-5-nerved, lemma margins inrolled and clasping palea keels, dorsal geniculate awn, palea 2-keeled 2-nerved, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, species of open habitats, grassland, type *Hypseochloa cameroonensis* C.E. Hubb., see *Bulletin of Miscellaneous Information Kew* 1936(5): 300, f. 1. 1936.

Species

H. cameroonensis C.E. Hubb.

Southern Nigeria. See *Bulletin of Miscellaneous Information Kew* 1936(5): 300, f. 1. 1936, *Flora of West Tropical Africa* 2: 499, 530. 1936.

H. matengoensis C.E. Hubb.

Africa, Tanzania. See *Kew Bulletin* 36(1): 62. 1981.

Hypudaerus A. Braun = *Anthephora* Schreb.

Panicoideae, Paniceae, Cenchrinae, see *Beschreibung der Gräser* 2: 105, t. 44. Leipzig 1769-1810, *Flora* 24: 275. 1841, *Florae Africae Australioris Illustrationes Monographicae* 1: 74. 1841, *Flora* 27: 249-250. 1844, *Tentamen Florae Abyssinicae ...* 2: 389. 1850, *Die Pflanzenwelt Ost-Afrikas* 50: 99. 1895 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 70. 1911, *Transactions of the Royal Society of South Africa* 20: 189-200. 1932, *Contributions from the United States National Herbarium* 46: 67-68, 257. 2003.

Hystericina Steud. = *Ancistragrostis* S.T. Blake, *Echinopogon* P. Beauv.

Pooideae, Poodae, Aveneae, type *Hystericina alopecuroides* Steud., see *Essai d'une Nouvelle Agrostographie* 42-43, 148, 161. 1812, *Synopsis Plantarum Glumacearum* 1: 35, 37. 1855 [1853] and *Hooker's Icones Plantarum* 33: tab 3261. 1935, *Blumea*, Supplement 3: 56-62. 1946.

Hystringium Steud. = *Tribolium* Desv.

Danthonioideae, Danthoneiae, or Arundinoideae, Danthoneiae, see *Prodromus Plantarum Capensium*, ... 19. 1794, *Mantissa* 2: 351. 1824, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168, t. 7, f. 2. 1831, *Révision des Graminées* 2: 555, t. 192. 1832, *Nomenclator Botanicus. Editio secunda* 2: 11. 1841 and *Blumea* 4(3): 502. 1941, *Journal of South African Botany* 8(4): 272. 1942, *Kew Bulletin* 40(4): 798. 1985, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 119(4): 445-507. 1997, *Contributions from the United States National Herbarium* 46: 622. 2003

Hystrix Moench = *Asperella* Humb., *Elymus* L.

From the Greek *hystrix*, *hystrichos* "porcupine, bristles," referring to the awns.

About 9 species, temperate Asia, North America, New Zealand. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, herbaceous, tufted, auricles present, leaf blades flexible and broadly linear, ligule an unfringed membrane, plants bisexual, inflorescence spicate, spikelets solitary to paired, 1- to 4-flowered, 2 or 1 glumes per spikelet, glumes reduced or usually suppressed, lemmas rounded on back and awned, lemma tapering into long awns nongeniculate, palea present, free and ciliate lodicules, 3 stamens, ovary hairy, 2 stigmas, shade species, woods and thickets, open habitats, woodland, meadows, often referred and closely related to *Elymus* L., type *Hystrix patula* Moench, see *Species Plantarum* 1: 83. 1753, *Botanisches Magazin (Römer & Usteri)* 7: 5. 1790, *Methodus Plantas Horti Botanici et agri marburgensis, a staminum situ describendi* ... 294-295. Marburgi Cattorum [Marburg] 1794 and *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, C. Baden, S. Frederiksen and O. Seberg, "A taxonomic revision of the genus *Hystrix* Moench (Triticeae, Poaceae)." *Nord. J. Bot.* 17(5): 449-467. 1997, Clair L. Kucera, *The Grasses of Missouri* University of Missouri Press, Columbia 1998, *Nordic Journal of Botany* 18(1): 89-94. 1998, Zhou Yong-Hong, Zheng You-Liang, Yang Jun-Liang and Yen Chi, "Relationships among species of *Hystrix* Moench and *Elymus* L. assessed by

RAPDs." *Genetic Resources and Crop Evolution* 47(2): 191-196. Apr 2000, *Contributions from the United States National Herbarium* 48: 279-307. 2003.

Species

H. coreana (Honda) Ohwi (*Asperella coreana* (Honda) Nevski; *Elymus coreanus* Honda)

Asia. See *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 17. 1930, *Flora URSS* 2: 693. 1934, *Journal of Japanese Botany* 12(9): 653. 1936.

H. gracilis (Hook.f.) Kuntze (*Gymnostichum gracile* Hook.f.)

Asia. Leaf blades slender and flaccid, spikelets solitary, see *Flora of New Zealand* 1: 312, t. 70. 1853, *Revisio Generum Plantarum* 2: 778. 1891 and *New Zealand J. Bot.* 32: 146. 1994.

H. laevis (Petrie) Allan (*Asprella laevis* Petrie)

Asia. Leaf blades slender and flaccid, spikelets solitary, see *Transactions and Proceedings of the New Zealand Institute* 27: 406. 1895 and *New Zealand Department of Scientific and Industrial Research Bulletin* 49: 88. 1936, *New Zealand J. Bot.* 32: 147. 1994.

H. patula Moench (*Asperella echidnea* Raf.; *Asperella hystrix* (L.) Humb.; *Asperella hystrix* var. *bigeloviana* Fernald; *Asperella hystrix* var. *hystrix*; *Asprella americana* Nutt.; *Asprella angustifolia* Nutt.; *Asprella hystrix* (L.) Willd.; *Asprella major* Fresen. ex Steud.; *Elymus hystrix* L.; *Elymus hystrix* var. *bigelovianus* (Fernald) Mohlenbr.; *Elymus hystrix* L. var. *hystrix*; *Elymus pseudohystrix* Schult.; *Gymnostichum hystrix* (L.) Schreb.; *Gymnostichum patulum* (Moench) Lunell; *Hordeum hystrix* (L.) Schenck, nom. illeg., non *Hordeum hystrix* Roth; *Hystrix elymoides* Mack. & Bush; *Hystrix hystrix* (L.) Millsp.; *Hystrix patula* var. *bigeloviana* (Fernald) Deam; *Zeocriton hystrix* (L.) P. Beauv.)

Northern America, eastern U.S. Perennial, rhizomatous, slender, simple, sheaths glabrous or scabrous, leaf blades tapering to both ends, ligule membranous, plants bisexual, nodding inflorescence, loosely flowered terminal spike, spikelets mostly in pairs on very short pedicels, glumes reduced to short or minute awns, lemmas acuminate and lanceolate, useful for erosion control, found in moist or rocky woods, in woods and thickets, see *Species Plantarum* 1: 560. 1753, *Botanisches Magazin (Römer & Usteri)* 7: 5. 1790, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 132. 1809, *Beschreibung der Gräser* 2: 127, t. 47. 1810, *Essai d'une Nouvelle Agrostographie* 115, 182. 1812, *American Monthly Magazine and Critical Review* 4: 190. 1819, *Mantissa* 2: 427. 1824, *Transactions of the American Philosophical Society, new series*, 5: 151. 1835, *Nomenclator Botanicus. Editio secunda* 1: 152. 1840, *Bulletin, West Virginia Agricultural Experiment Station* 24(2): 474. 1892 and *Man. Fl. Jackson County* 39. 1902, *Botanisch Jaarboek*

-
- 40: 109. 1907, *Contr. U.S. Natl. Herb.* 12: 124. 1908, *American Midland Naturalist* 4: 228. 1915, *Rhodora* 24: 230. 1922, *Indiana Department of Conservation, Publication* 82: 117. 1929, *Phytologia* 4(1): 21. 1952, *Illustrated Flora of Illinois* 206. 1972, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991, *Plant Systematics and Evolution* 185: 35-53. 1993, *Plant Systematics and Evolution* 191: 199-201. 1994, *Nordic Journal of Botany* 17(5): 449-467. 1997.
- in English: eastern bottle-brush, bottlebrush grass

I

Ichnanthus P. Beauv. = *Ischnanthus* Roemer & Schultes, *Navicularia* Raddi, *Yakirra* Lazarides & R.D. Webster

From the Greek *ichnos* “a track, footprint, footstep” and *anthos* “flower,” possibly referring to the appendages of the upper floret; see A.M.F.J. Palisot de Beauvois, *Essai d'une Nouvelle Agrostographie*. 56, t. 12, f. 1. 1812.

Some 33-40 species, New World tropics, pantropical. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, annual or perennial, habit variable, sprawling, creeping, caespitose, leafy and herbaceous, mostly stoloniferous, culms often decumbent and rooting from lower nodes, culm nodes hairy or glabrous, culm internodes solid or hollow, the shoots not aromatic, auricles absent or present, leaves lanceolate or linear or short broadly ovate, ligule a fringed or ciliolate membrane, leaf sheaths usually auriculate, plants bisexual, open or contracted inflorescence paniculate and terminal, spikelets solitary or in pairs, laterally compressed spikelets, 2 florets, lower floret male, upper floret bisexual, two glumes keeled and membranous, lower glume 3- to 7-nerved, upper glume 5- to 9-nerved, upper lemma with flat or inrolled margins, callus of upper floret with firm or delicate wings adnate to the base of lemma, palea present, 2 free and fleshy small lodicules broadly cuneate, 3 stamens, ovary glabrous, 2 stigmas red to dark, shade species, grassland, disturbed places, forest shade, forest margin, rain forest, closely related to *Panicum*, type *Ichnanthus panicoides* P. Beauv., see *Species Plantarum* 1: 55. 1753, *Essai d'une Nouvelle Agrostographie* 56, 57, t. 12, f. 1. 1812, *Systema Vegetabilium* 2: 28, 497. 1817, *Agrostografia Brasiliensis* 38, 40, t. 1, f. 5. 1823, *De Graminibus Paniceis* 52, 159. 1826, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 195, 320. 1834 and *J. Wash. Acad. Sci.* 13(9): 174. 1923, *Nat. Pflanzenfam.* (edition 2) 14e: 30. 1940, *Brittonia* 23(3): 293-324. 1971, *Systematic Botany* 7(1): 85-115. 1982 [Revision of *Ichnanthus* sect. *Ichnanthus* (Gramineae, Panicoideae).], *Brunonia* 7: 292. 1984, S.A. Renvoize, *The Grasses of Bahia* 114-125. 1984, *Systematic Botany* 12(2): 187-216. 1987, *Museu Paraense Emílio Goeldi, Ser. Guias* 9(2): 279-293. 1993, *Flora Mesoamericana* 6: 300-302. 1994, *Flora Fanerogamica do Estado de São Paulo* 1: i-xxv,

1-292. 2001, *Am. J. Bot.* 88: 1993-2012. 2001, *Contributions from the United States National Herbarium* 46: 257-270, 276, 297-298. 2003, *Am. J. Bot.* 90: 796-821. 2003, *Botanical Journal of the Linnean Society* 141(3): 395-398. Mar 2003.

Species

I. annuus Killeen & Kirpes

Brazil. See *Novon* 1(4): 179, f. 3. 1991.

I. bambusiflorus (Trin.) Döll (*Ichnanthus damazianus* Hack.; *Oplismenus penicillatus* (Nees) Kunth; *Panicum bambusiflorum* Trin.; *Panicum penicillatum* Nees; *Panicum penicillatum* Willd. ex Nees, nom. illeg., non *Panicum penicillatum* Nees ex Trin.) (named for Leonidas Botelho Damazio, 1854-1922, botanical collector in Brazil)

Brazil. Perennial, robust, herbaceous, scandent, trailing upward, leaf sheaths more or less glabrous to hispid, stiff leaf blades cordate and lanceolate acuminate, panicle ovate with spreading or ascending branches, spikelets congested and ovate, lower glume acuminate to aristate, upper glume ovate, lower lemma ovate, upper lemma with 2 scars at the base, in shade of bush and small trees, gallery forest shade, see *De Graminibus Paniceis* 188. 1826, *Révision des Graminées* 1: 45. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 145, 242. 1829, *Flora Brasiliensis* 2(2): 288. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 12(333-335): 385. 1913.

I. breviscrobis Döll (*Ichnanthus rondonii* Kuhlm.; *Panicum breviscrobis* (Döll) Pilg.; *Panicum magnum* Hitchc.) (Latin *scrobis* or *scrobs* “a ditch, trench,” *scrobiculus* “a little ditch”)

Brazil. Perennial, herbaceous, suffrutescent, rhizomatous, robust, tough, scandent, clambering, sprawling, scrambling, prostrate, ligule membranous, leaf blades lanceolate acuminate, panicle linear-oblong, spikelets ovate pubescent, lower glume ovate acute, upper lemma without wings, found along edge of forest, riverbanks, forest openings, see *Species Plantarum* 1: 55, 58. 1753, *Flora of the British West Indian Islands* 551. 1864, *Flora Brasiliensis* 2(2): 294. 1877 and *Contributions from the United States National Herbarium* 15: 13-16. 1910, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 66-67, t. 6. Rio de Janeiro 1922, *Contributions from the United States National Herbarium* 22(6): 489, f.

84. 1922, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 242. 1931, F.C. Hoehne (1882-1959), J.G. Kuhlmann (1882-1958) et al., *Indice bibliográfico e numérico das plantas colhidas pela Comissão Rondon*. São Paulo 1951, *Syst. Bot.* 12: 190. 1987, *Bonplandia* 9: 35. 1996.

in Colombia: subia

I. calvescens (Nees ex Trin.) Döll (*Ichnanthus acuminatus* Swallen; *Ichnanthus amplus* Swallen; *Ichnanthus calvescens* var. *pilosus* Döll; *Ichnanthus calvescens* var. *scabrius* Döll; *Ichnanthus chaseae* Swallen; *Ichnanthus hispidus* Swallen; *Ichnanthus ichnodes* (Griseb.) Hitchc. & Chase; *Ichnanthus indutus* Swallen; *Ichnanthus pallidus* Swallen; *Ichnanthus vestitus* Swallen; *Panicum calvescens* Nees ex Trin.; *Panicum calvescens* Nees; *Panicum ichnodes* Griseb.)

South America, Brazil. Perennial or annual, herbaceous, tall, tufted, large, erect or scrambling, sprawling, arching, rooting at the nodes, clumped, leaf blades lanceolate to ovate-lanceolate, leaves glabrous or hairy, panicle much branched with spreading branches, spikelets ovate, lower glume ovate, upper lemma winged, growing along streams and rivers, riverbanks, wooded slopes, scrub savannah, forest, rocky soils, similar to *Panicum hebotos* Trin., see *Species Plantarum* 1: 55, 58. 1753, *De Graminibus Paniceis* 193. 1826, *Flora of the British West Indian Islands* 551. 1864, *Fl. Bras.* 2(2): 285-287. 1877 and *Contr. U.S. Natl. Herb.* 15: 13-16. 1910, *Contributions from the United States National Herbarium* 18(7): 335. 1917, *Contributions from the United States National Herbarium* 29(6): 271-272. 1948 [1949], *Fieldiana, Botany* 28(1): 28. 1951, *Memoirs of the New York Botanical Garden* 9(3): 265. 1957, *Phytologia* 11(2): 74-78. 1964, *Syst. Bot.* 7(1): 109, 111. 1982.

I. calvescens (Nees ex Trin.) Döll var. ***calvescens***

Brazil. Leaf blades hispid subcordate, grassland, open places.

I. calvescens (Nees ex Trin.) Döll var. ***scabrius*** Döll (*Ichnanthus auriculatus* Swallen; *Ichnanthus calvescens* var. *glabrescens* Döll; *Ichnanthus ichnodes* (Griseb.) Hitchc. & Chase; *Ichnanthus luetzelburgii* Mez; *Ichnanthus pallidus* Swallen; *Ichnanthus silvestris* Swallen; *Ichnanthus trinitensis* Mez; *Ichnanthus verticillatus* Mez; *Ichnanthus vestitus* Swallen; *Panicum ichnodes* Griseb.)

Brazil. Leaf blades attenuate glabrous to hirsute, grassland, forest shade, see *Flora of the British West Indian Islands* 551. 1864, *Flora Brasiliensis* 2(2): 286. 1877 and *Contributions from the United States National Herbarium* 18(7): 335. 1917, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 126, 130. 1918, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(125): 9. 1921, *Phytologia* 11(2): 75, 77-79. 1964, *Syst. Bot.* 7: 111. 1982.

I. camporum Swallen (*Panicum procurrens* var. *solutum* Döll)

Brazil. Delicate, weak, fragile, clambering, found in sandy soil, see *De Graminibus Paniceis* 183. 1826, *Flora Brasiliensis* 2(2): 272. 1877 and *Phytologia* 11(3): 149. 1964, *Novon* 1(4): 177-184. 1991.

I. dasycoleus Tutin (*Ichnanthus villosus* Swallen) (from the Greek *dasys* "thick, shaggy, hairy" and *koleos* "a sheath")

British Guiana, Brazil, Venezuela. Perennial or annual, herbaceous, tufted, terrestrial, creeping, hirsute, leaf sheaths woolly, pubescent leaf blades lanceolate tapering at the base, panicle ovate with spreading branches, spikelets elliptic-oblong, lower glume ovate acute or acuminate, upper glume and lower lemma ovate, upper lemma with membranous wings, found in damp areas, forest, savannah, sandy places, along rivers, see *Species Plantarum* 1: 55, 58. 1753 and *Contr. U.S. Natl. Herb.* 15: 13-16. 1910, *Journal of Botany, British and Foreign* 72(864): 337, f. 8a. 1934, *Journal of the Washington Academy of Sciences* 28(1): 10-11. 1938, *Fieldiana, Botany* 24(2): 38-331. 1955.

I. drepanophyllus Mez (*Ichnanthus riedelii* (Trin.) Döll; *Panicum riedelii* Trin.)

Brazil. Annual, erect, tufted or shortly stoloniferous, foliage basal, leaf sheaths hirsute, leaf blades lanceolate pseudo-petiolate, leaves glabrous and scabrous, panicle narrowly oblong sparsely branched, branches appressed to the axis, spikelets lanceolate, lower glume narrowly ovate acute, upper glume ovate, lower lemma ovate, upper lemma winged, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 327. 1834, *Flora Brasiliensis* 2(2): 277. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 131. 1918.

I. ephemerolepharis G.A. Black & Fróes ex G.A. Black & Pires (*Ichnanthus angustus* Swallen; *Ichnanthus longifolius* Swallen; *Ichnanthus neblinaensis* Swallen; *Ichnanthus serratus* Swallen; *Ichnanthus tectus* Swallen) (from the Greek *ephemeros* "temporary," *epi* "upon, over," *hemera* "day," and *blepharis* "eyelash," *blepharon* "an eyelid")

Brazil, Venezuela. Perennial, blunt lower glume, upper lemma with membranous wings, growing along stream, in sandy places, gravel bar, rocky slopes, riverbeds, stream bank, see *Boletim Técnico do Instituto Agrônomo do Norte* 15: 5. 1948, *Fieldiana, Botany* 28(1): 29-30. 1951, *Memoirs of the New York Botanical Garden* 9(3): 265-266, f. 7. 1957, *Phytologia* 14(2): 84. 1966.

I. glaber (Raddi) Hitchc. (*Echinolaena navicularis* (Nees) Kunth; *Ichnanthus cynotis* (Trin.) Döll; *Ichnanthus glaber* Link ex Steud.; *Ichnanthus glaberrimus* Swallen; *Ichnanthus longispiculus* Swallen; *Navicularia glabra* Raddi; *Panicum glaberrimum* Steudel; *Panicum naviculare* Nees)

(possibly from the Greek *kynos*, *kyon* “a dog” and *ous*, *otos* “an ear”)

Brazil. Forest, see *Agrostografia Brasiliensis* 39. 1823, *Fl. Bras. Enum. Pl.* 2: 136. 1829, *Révision des Graminées* 1: 54. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 325. 1834, *Synopsis Plantarum Glumacearum* 1: 94. 1854, *Flora Brasiliensis* 2(2): 284. 1877 and *Contributions from the United States National Herbarium* 22: 10. 1920, *Phytologia* 11(3): 147-148. 1964, *Syst. Bot.* 7: 112. 1982.

I. grandifolius (Döll) Zuloaga & Soderstr. (*Ichnanthus nervosus* Swallen; *Ichnanthus umbraphilus* Renvoize; *Panicum grandifolium* Döll)

Brazil. See *Flora Brasiliensis* 2(2): 195. 1877 and *Phytologia* 11(3): 147. 1964, *Kew Bulletin* 39(1): 180. 1984, *Smithsonian Contributions to Botany* 59: 31. 1985.

I. hirtus (Raddi) Chase (*Echinolaena loliacea* (Bert.) Kunth; *Ichnanthus candicans* (Nees) Döll; *Ichnanthus candicans* var. *candicans*; *Ichnanthus candicans* var. *genuinus* Döll; *Ichnanthus planotis* var. *glaber* Döll; *Ichnanthus planotis* (Trin.) Döll; *Ichnanthus planotis* var. *pilosus* Döll; *Ichnanthus planotis* var. *planotis*; *Navicularia hirta* Raddi; *Panicum bertolonianum* Schult.; *Panicum candicans* Nees; *Panicum loliaceum* Bert., nom. illeg., non *Panicum loliaceum* Lam.; *Panicum planotis* Trin.)

Brazil. Perennial, tufted, leaf blades narrowly lanceolate subcordate at the base, panicle ovate sparsely branched, spikelets elliptic-oblong pilose, lower glume ovate, upper lemma with membranous wings, clearings, forest shade, sandy soils, see *Opuscoli Scientifci* 3: 408. 1819, *Agrostografia Brasiliensis* 39. 1823, *Mantissa* 2: 240. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 133. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 172. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 322. 1834, *Flora Brasiliensis* 2(2): 279-280, 291-292. 1877 and *Journal of the Washington Academy of Sciences* 13(9): 175. 1923, *Syst. Bot.* 7: 103. 1982, *Darwiniana* 26: 7-14. 1985.

I. hoffmannseggii (Roem. & Schult.) Döll (*Ichnanthus piresii* G.A. Black; *Panicum eriophorum* Link ex Nees; *Panicum hoffmannseggii* Roem. & Schult.; *Panicum villosum* Hoffmanns. ex Roem. & Schult., nom. illeg., non *Panicum villosum* Lam.) (dedicated to the Brazilian botanist João Murça Pires, 1916-1994, Center for Tropical Research, Brazilian Institute for Agricultural Research, Belém, collected extensively in Amazonas and Paras, Brazil, with Ghilleen T. Prance wrote “The vegetation types of the Brazilian Amazon.” in G.T. Prance and Thomas E. Lovejoy, editors. *Key Environments: Amazonia*. Pergamon Press,

Oxford 1985, with Ricardo de S. Seco e Joaquim Ivanir Gomes wrote *Taxonomia e Fitogeografia das Espécies de Seringueira*. Embrapa Amazônia Oriental 2002; see *Taxon* 44: 653-655. 1995) (named for the German botanist Johann Centurius Graf von Hoffmannsegg, 1766-1849, entomologist, ornithologist, traveler, with Heinrich Friedrich Link (1767-1851) wrote *Flore portugaise*. Berlin 1813-1820. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 189. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 178. 1972; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Brazil, French Guiana. Annual, savannah, forest, see *Systema Vegetabilium* 2: 450. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 148. 1829, *Flora Brasiliensis* 2(2): 287. 1877 and *Boletim Técnico do Instituto Agrônomo do Norte* 20: 31, t. 4. 1950, *Systematic Botany* 7(1): 85-115. 1982, *Acta Amazonica* 14(1/2): 95-99, f. 1. 1984 [1986].

I. inconstans (Trin. ex Nees) Döll (*Ichnanthus congestus* Swallen; *Ichnanthus inconstans* var. *dumetorum* (Trin.) Döll; *Ichnanthus inconstans* var. *inconstans*; *Ichnanthus inconstans* var. *montanus* (Trin.) Döll; *Ichnanthus lasiochlamys* Mez; *Ichnanthus mexicanus* E. Fourn. ex Hemsl.; *Ichnanthus mexicanus* E. Fourn.; *Ichnanthus montanus* (Trin.) Mez; *Ichnanthus peruvianus* Mez; *Ichnanthus polycladus* Mez; *Ichnanthus pubescens* Swallen; *Ichnanthus reclinator* Swallen; *Ichnanthus reclinatus* Swallen; *Ichnanthus sericans* Hack.; *Ichnanthus subinclusus* Swallen; *Ichnanthus velutinus* Ekman; *Panicum inconstans* Trin. ex Nees; *Panicum inconstans* var. *dumetorum* Trin.; *Panicum inconstans* var. *inconstans*; *Panicum inconstans* var. *montana* Trin.)

Brazil, Argentina, Peru. Perennial, woody or wiry, terrestrial, herbaceous, erect, arching, prostrate, decumbent, reclining, leaning, branching, knotty rootstock, rhizomatous, leaf sheaths hirsute, velvety pubescent leaf blades lanceolate and acuminate, panicle ovate or oblong, spikelets shortly pedicellate and narrowly ovate, lower glume ovate cuspidate to aristate, upper glume and lower lemma ovate, upper lemma with wings, growing in clumps, damp sandy soil, among rocks, margin of forest, savannah, cerrado, see *Species Plantarum* 1: 333. 1753, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 132. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 323. 1834, *Flora of the British West Indian Islands* 551. 1864, *Flora Brasiliensis* 2(2): 284-285. 1877, *Biologia Centrali-Americana; ... Botany ...* 3: 500. 1885, *Mexicanas Plantas* 2: 34. 1886 and *Österreichische Botanische*

Zeitschrift 51: 458. 1901, *Contributions from the United States National Herbarium* 15: 16. 1910, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13: 31, t. 2, f. 2. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 127-130. 1918, *Phytologia* 11(3): 145-146, 148, 150. 1964, *Blumea* 32: 174. 1987.

I. lanceolatus Scribn. & J.G. Sm. (*Panicum lindenii* E. Fourn., nom. illeg., non *Panicum lindenii* Griseb.)

Belize, Guatemala, Honduras, Mexico. Perennial, herbaceous, erect, creeping, prostrate, stoloniferous, forage, abandoned fields, forest, riverbanks, forest edge, along roadsides, see *Mexicanas Plantas* 2: 29. 1886, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 36-37, t. 5. 1897 and *Syst. Bot.* 12: 193. 1987.

in Mexico: k'an-chim, xhanchim, x-k'anchim

I. lancifolius Mez (*Ichnanthus weberbaueri* Mez)

Brazil. Perennial, rhizomatous, erect, foliage mainly basal, leaf blades lanceolate and pseudopetiolate, panicle ovate, spikelets paired oblong or narrowly oblong, lower glume narrowly oblong, upper lemma with wings, see *Repertorium Specierum Novarum Regni Vegetabilis* 15: 126-127. 1918.

I. lancifolius Mez var. ***lancifolius***

Southern America.

I. lancifolius Mez var. ***weberbaueri*** (Mez) Stieber (*Ichnanthus duidensis* Swallen; *Ichnanthus weberbaueri* Mez)

Southern America. Perennial, rhizomatous, found in forest, see *Repertorium Specierum Novarum Regni Vegetabilis* 15: 126-127. 1918, *Fieldiana, Botany* 28(1): 28. 1951, *Systematic Botany* 7(1): 106. 1982.

I. leiocarpus (Spreng.) Kunth (*Ichnanthus fastigiatus* Brongn.; *Ichnanthus leiocarpus* var. *glabrescens* Döll; *Ichnanthus leiocarpus* var. *leiocarpus*; *Ichnanthus martianus* (Nees) Döll; *Navicularia lanata* Raddi; *Panicum leiocarpon* Spreng.; *Panicum martianum* Nees; *Panicum maximilianii* Schrad. ex Schult.; *Panicum maximilianii* var. *glabrescens* Döll)

Brazil, Venezuela, Trinidad, the Caribbean, Guyana. Perennial, erect, rambling, rhizomatous, herbaceous, creeping, leaf sheaths villous, leaf blades lanceolate shortly pseudopetiolate, large panicle much branched, spikelets elliptic-ovate on long pedicels, lower glume ovate, upper glume and lower lemma ovate, upper lemma with wings, upper lemma 2-winged at the base, in shade of forest, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 1: 243. 1820, *Agrostografia Brasiliensis* 40, t. 1, f. 5. 1823, *Mantissa* 2: 255. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 138. 1829, *Révision des Graminées* 2: 507. 1831, *Voyage autour du Monde* 10: 118. 1832, *Flora Brasiliensis* 2(2): 222, 280, 282. 1877 and *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 23-24. 1997.

I. leptophyllus Döll

Brazil. See *Flora Brasiliensis* 2(2): 287. 1877 and *Syst. Bot.* 7: 96. 1982.

I. longiglumis Mez

Brazil. Weak culms, growing in stony places, among rocks, see *Repertorium Specierum Novarum Regni Vegetabilis* 15: 131. 1918, *Syst. Bot.* 7: 95. 1982.

I. mayarensis (C. Wright) Hitchc. (*Ichnanthus conjunctus* Hitchc. & Ekman; *Ichnanthus cordatus* Ekman; *Ichnanthus pilosomarginatus* Catasús; *Ichnanthus wrightii* Hitchc.; *Panicum mayarense* C. Wright)

Cuba. See *Anales de la Academia de Ciencias Medicas Habana* 8: 206. 1871, *Fl. Cub.* 197. 1873 and *Contr. U.S. Natl. Herb.* 12(6): 228-229. 1909, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 18, t. 2, f. 1, t. 6, f. 11. 1911, *Manual of the Grasses of the West Indies* 297, f. 287. 1936, *Acta Botanica Cubana* 4: 9. 1980.

I. minarum (Nees) Döll (*Echinolaena minarum* (Nees) Pilg.; *Ichnanthus lilloi* Hack.; *Ichnanthus riparius* Swallen; *Oplismenus minarum* Nees; *Oplismenus secundus* J. Presl; *Panicum minarum* (Nees) Steud.; *Panicum sandiense* Mez; *Panicum secundum* (J. Presl) Steud., nom. illeg., non *Panicum secundum* Trin.)

Brazil, Peru, Bolivia. Annual or short-lived perennial, ascending, branching, rooting at the lower nodes, scrambling, leaf blades narrowly ovate shortly pseudopetiolate, inflorescence of 1-sided spiciform branches, spikelets ovate-lanceolate, lower glume ovate acuminate or tapering to a short awn, upper glume ovate acuminate or mucronulate, upper lemma and palea winged or with two small flaps at the base, disturbed open places, valleys, edge of forests, shaded areas, poor soils, see *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 75. 1813, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 268-269. 1829, *Reliquiae Haenkeanae* 1(4-5): 322. 1830, *Nomenclator Botanicus. Editio secunda* 2: 259, 263. 1841, *Flora Brasiliensis* 2(2): 294. 1877 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 288. 1914, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 5. 1921, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 246. 1931, *Phytologia* 11(3): 150. 1964, *Darwiniana* 35(1-4): 29-36. 1998.

I. mollis Ekman

Brazil. Herbaceous, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 20, t. 2, f. 2, t. 6, f. 10. 1911.

I. nemoralis (Schrad.) Hitchc. & Chase (*Ichnanthus almadensis* (Nees ex Trin.) Kunth; *Ichnanthus almadensis* var. *almadensis*; *Ichnanthus almadensis* var. *lanceolatus* Döll; *Ichnanthus almadensis* var. *ovato-lanceolatus* Döll; *Ichnanthus almadensis* var. *subovatus* Döll; *Ichnanthus*

lagotis (Trin.) Swallen; *Ichnanthus martianus* (Nees) Döll; *Ichnanthus nemoralis* (Schrad. ex ex Roem. & Schult.) Hitchc. & Chase; *Ichnanthus petiolatus* (Nees) Döll; *Ichnanthus petiolatus* var. *lanceolatus* Döll; *Ichnanthus petiolatus* var. *petiolatus*; *Ichnanthus riedelii* (Trin.) Döll; *Panicum almadense* Nees ex Trin.; *Panicum lagotis* Trin.; *Panicum martianum* Nees; *Panicum nemorale* Schrad.; *Panicum petiolatum* Nees; *Panicum riedelii* Trin.; *Panicum subpetiolatum* Steud.)

Central America, Brazil. Erect, creeping, erect, scrambling, more or less decumbent and rooting at the nodes, herbaceous, caespitose, clumped, terrestrial, leaf sheaths glabrous to silky pilose, leaf blades narrowly ovate pseudopetiolate, terminal inflorescence, panicle ovate sparsely branched, spikelets shortly pedicellate, lower glume ovate acute, upper glume and lower lemma ovate, upper lemma with membranous wings, found along riverbanks, moist places, forest, shade, roadsides, disturbed areas, see *Species Plantarum* 1: 55. 1753, *Essai d'une Nouvelle Agrostographie* 56, 57, t. 12, f. 11. 1812, *Mantissa* 2: 255. 1824, *De Graminibus Paniceis* 186. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 138, 140. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 320, 326-327. 1834, *Synopsis Plantarum Glumacearum* 1: 70. 1853, *Flora Brasiliensis* 2(2): 277-280, 283. 1877, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 135. 1833 and *Contributions from the United States National Herbarium* 18(7): 334. 1917, *Journal of the Washington Academy of Sciences* 28(1): 10. 1938.

I. nemorosus (Sw.) Döll (*Arthrostylidium venezuelae* (Steud.) McClure; *Chusquea venezuelae* Steud.; *Echinolaena nemorosa* (Sw.) Kunth; *Echinolaena polystachya* Kunth; *Ichnanthus brevivaginatus* Swallen; *Ichnanthus colonarius* K.E. Rogers *Ichnanthus gracilis* Swallen; *Ichnanthus nemorosus* var. *nemorosus*; *Ichnanthus nubigenus* Swallen; *Ichnanthus nubilis* Chase; *Ichnanthus pallens* (Sw.) Munro ex Benth.; *Ichnanthus scaberrimus* Swallen; *Ichnanthus tenuifolius* K.E. Rogers; *Ichnanthus venturii* K.E. Rogers; *Milium nemorosum* (Sw.) Moench; *Panicum nemorosum* Sw.; *Panicum nemorosum* Trin.; *Panicum nemorosum* var. *nemorosum*; *Pseudechinolaena polystachya* (Kunth) Stapf) (after Santiago Venturi, fl. 1910, botanical collector in Argentina)

Central and southern America, Brazil, the Caribbean. Herbaceous, terrestrial, riparian, branched, decumbent, creeping, scrambling, scandent to subscaudent, spreading, rooting at the lower nodes, inflorescence paniculate purple to reddish to green, forming colonies or mats, shade or partial shade, in forest, moist places, trail, limestone, open areas, along streams and riverbanks, woody sites, stony or rocky places, roadside, see *Species Plantarum* 1: 55, 58. 1753, *Nova Genera et Species Plantarum seu Prodrum*

22-23. 1788, *Supplementum ad Methodum Plantarum a staminum situ describendi* 67. Marburgi Cattorum [Marburg] 1802, *Nova Genera et Species Plantarum* 1: 119. 1815 [1816], *De Graminibus Paniceis* 51, 125, 266. 1826, *Révision des Graminées* 1: 54. 1829, *Flora Rossica* 4(14): 469. 1853, *Synopsis Plantarum Glumacearum* 1: 337. 1854, *Flora Hongkongensis* 414. 1861, *Flora of the British West Indian Islands* 551. 1864, *Fl. Bras.* 2(2): 289. 1877 and *Contr. U.S. Natl. Herb.* 15: 13-16. 1910, *Flora of Tropical Africa* 9: 495. 1919, *Bulletin of Miscellaneous Information Kew* 1923(9): 315. 1923, *Journal of the Washington Academy of Sciences* 32(6): 172. 1942, *Contributions from the United States National Herbarium* 29(9): 424-425. 1950, *Journal of the Washington Academy of Sciences* 42: 124, f. 3. 1952, *Phytologia* 4(7): 425-426. 1953, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Flora of the Galápagos Islands* 823-892. 1971, *Phytologia* 22(2): 98, 100, 103. 1971, *Phytologia* 24(5): 417. 1972, *Darwiniana* 18: 199. 1973, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Darwiniana* 23: 189-221. 1981, *Flora Novogaliciana* 14: 1-436. 1983, *Syst. Bot.* 12: 210. 1987, *Darwiniana* 30(1-4): 87-94. 1990.

I. pallens (Swartz) Munro ex Bentham (*Eriochloa pulchella* (Raddi) Kunth; *Ichnanthus areolatus* K.E. Rogers; *Ichnanthus axillaris* (Nees) Hitchc. & Chase; *Ichnanthus brevivaginatus* Swallen; *Ichnanthus candicans* var. *glabratus* Döll; *Ichnanthus confertus* K.E. Rogers; *Ichnanthus hitchcockii* K.E. Rogers; *Ichnanthus latifolius* K.E. Rogers; *Ichnanthus mexicanus* E. Fourn.; *Ichnanthus pallens* f. *monstrosa* Donn. Sm.; *Ichnanthus pallens* f. *monstrosus* (E. Fourn.) Beetle; *Ichnanthus pallens* var. *majus* (Nees) Stieber; *Ichnanthus papillatus* K.E. Rogers; *Ichnanthus parodii* K.E. Rogers; *Ichnanthus scaberrimus* Swallen; *Ichnanthus tipuaniensis* K.E. Rogers; *Ichnanthus vicinus* (Bailey) Merrill; *Panicum agrostideum* Salzm. ex Steud.; *Panicum axillare* Nees; *Panicum hemignostum* Steud.; *Panicum pallens* Sw.; *Panicum pallens* var. *angustifolium* Rupr.; *Panicum pallens* var. *majus* Nees; *Panicum pallens* var. *swartzii* Nees; *Panicum pulchellum* Raddi; *Panicum schlechtendalii* E. Fourn.; *Panicum schlechtendalii* var. *monstrosum* E. Fourn.; *Panicum vicinum* Bailey) (after the German botanist Diederich Franz Leonhard von Schlechtendal, 1794-1866, plant collector, traveler, 1819 M.D. Berlin, close friend and traveling companion of A. von Chamisso, 1833-1866 professor of botany and Director of the Botanical Garden of Halle University, from 1826 to 1866 editor of *Linnaea*, from 1843 to 1866 coeditor with Hugo von Mohl (1805-1872) of the *Botanische Zeitung*, among his many works are *Flora berolinensis*. Berolini [Berlin] 1823-1824 and *Florae insulae Sti. Thomae Indiae occidentalis*. 1828-1831; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 228. 1965; I.H. Vegter, *Index Herbariorum*. Part II (6), *Collectors S. Regnum Vegetabile* vol. 114. 1986; Stafleu and Cowan,

Taxonomic literature. 5: 190-204. 1985; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 353. 1972; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 249. Regione Siciliana, Palermo 1988; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 468. 1973; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 679-681. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; G. Schmid, *Goethe und die Naturwissenschaften*. Halle 1940; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942; Giulio Giorello & Agnese Grieco, a cura di, *Goethe scienziato*. Einaudi Editore, Torino 1998; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

Central America, West Indies to Argentina. Perennial or annual, montane, herbaceous, slender, ascending, scrambling, trailing, rooting at lower nodes, much-branched, small plant with leaves lanceolate and acuminate, leaf blades scabrid, terminal inflorescence, panicle ovate, spikelets narrowly ovate, lower glume ovate and acuminate, upper lemma and palea coriaceous, fodder, readily browsed by cattle, medium grazing value, in open ground, partial shade, open riverbanks, stream banks, forest shade, damp thickets, weedy places, edge of forest, disturbed sites, lower montane forest, along roadsides, resembling *Ichnanthus tenuis*, see *Species Plantarum* 1: 55, 58. 1753, *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Agrostografia Brasiliensis sive enumeratio plantarum ad familias naturales graminum et ciperoidarum spectantium, quas in Brasilia...* 42. Lucca [1823], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 137, 141. 1829, *Révision des Graminées* 1: 30. 1829, *Nomenclator Botanicus*, edition 2, 2: 252. 1840, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 8. 1842, *Synopsis Plantarum Glumacearum* 1: 77. 1853, *Flora Hongkongensis* 414. 1861, *Flora Brasiliensis* 2(2): 291-292. 1877, *Mexicanas Plantas* 2: 30-31, 34. 1886 and *Enumeratio Plantarum Guatemalensium ...* 7: 58. 1905, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Contributions from the United States National Herbarium* 18(7): 334. 1917, *Contributions from the United States National Herbarium* 29(9): 424. 1950, *Phytologia* 4(7): 425. 1953, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Phytologia* 22(2): 99, 101. 1971, *Phytologia* 24(5): 407, 411, 414. 1972, *Phytologia* 26(2): 59, 65. 1973, *Phytologia* 37(4): 317-407. 1977, *Phytologia* 54(1): 2.

1983, *Systematic Botany* 12(2): 187-216. 1987, *Darwiniana* 30(1-4): 87-94. 1990, *Darwiniana* 35(1-4): 29-36. 1998.

in Mexico: pasto

in Japan: Taiwan-sasa-kibi

in Sierra Leone: aje, kalexone

I. pallens (Swartz) Munro ex Bentham var. ***majus*** (Nees) Stieber (*Ichnanthus bacularius* Swallen; *Ichnanthus bradei* K.E. Rogers; *Ichnanthus brevipaniculatus* K.E. Rogers; *Ichnanthus candicans* f. *grandiflora* Döll; *Ichnanthus candicans* var. *glabratus* Döll; *Ichnanthus glaziovii* K.E. Rogers; *Ichnanthus nemorosus* var. *swartzii* K.E. Rogers; *Ichnanthus swallenii* K.E. Rogers; *Ichnanthus tonkinensis* K.E. Rogers; *Ichnanthus vicinus* (F.M. Bailey) Merr.; *Panicum nitens* Merr., nom. illeg., non *Panicum nitens* (Rendle) K. Schum.; *Panicum pallens* var. *majus* Nees; *Panicum paludicola* Miq., nom. illeg., non *Panicum paludicola* Nees; *Panicum vicinum* F.M. Bailey)

Brazil. Leaning, rain forest, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 137-138. 1829, *Flora van Nederlandsch Indië* 3: 454. 1857, *Flora Brasiliensis* 2(2): 292. 1877, *A Synopsis of the Queensland Flora* 3: 82. 1890 and *Publications of the Bureau of Science Government Laboratories* 17: 8-9. 1904, *Philippine Journal of Science* 20(4): 367-368. 1922, *An Enumeration of Philippine Flowering Plants* 1(1): 70. 1922[1923] *Phytologia* 11(3): 151. 1964, *Bulletin of the Torrey Botanical Club* 95(5): 423-424. 1968, *Phytologia* 22(2): 100. 1971, *Phytologia* 24(5): 409-410, 413. 1972, *Phytologia* 26(2): 64. 1973, *Systematic Botany* 12(2): 207. 1987.

I. pallens (Swartz) Munro ex Bentham var. ***pallens***

Brazil.

I. panicoides P. Beauv. (*Olyra latifolia* L.; *Olyra ovata* Desv. ex Ham.; *Panicum ichnanthum* Nees)

Venezuela, Bolivia, Brazil. Perennial, herbaceous, erect, caespitose, terrestrial, leaf blades ovate-lanceolate and pseudopetiolate, stiff and leathery leaves, terminal inflorescence, panicle ovate to oblong with rigid branches, spikelets ovate-lanceolate paired, lower glume narrowly ovate, upper lemma winged with apex pubescent, plumose stigma, along trails, forest floor, shady places, wet areas, see *Species Plantarum* 1: 55, 58. 1753, *Systema Naturae, Editio Decima* 1261. 1759, *Essai d'une Nouvelle Agrostographie* 56, 57, t. 12, f. 1. 1812, *Prodromus Plantarum Indiae Occidentalis* 7. 1825, *Annales des Sciences Naturelles, Botanique* 5: 449. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 149. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 195, 320. 1834 and *Contr. U.S. Natl. Herb.* 12: 124, 132. 1908, *Systematic Botany* 7(1): 103. 1982, *Darwiniana* 26: 7-14. 1985, *Darwiniana* 29: 41-45. 1989.

I. procurrens (Nees ex Trin.) Swallen (*Caperonia palustris* (L.) A. St.-Hil. (Euphorbiaceae); *Echinolaena procurrens* (Nees ex Trin.) Kunth; *Ichnanthus polythyrsum* (Nees ex Steud.) K.E. Rogers; *Ichnanthus procurrens* (Nees ex Trin.) Stieber; *Ichnanthus procurrens* var. *subaequiglume* (Hack.) Killeen & Kirpes; *Panicum polythyrsum* Nees ex Steud.; *Panicum procurrens* Nees ex Trin.; *Panicum procurrens* subvar. *glabratum* Döll; *Panicum procurrens* subvar. *villosum* Döll; *Panicum procurrens* var. *genuinum* Döll; *Panicum procurrens* var. *solutum* Döll; *Panicum procurrens* var. *subaequiglume* Hack.; *Panicum procurrens* var. *subaequiglume* (Hack.) Killeen & Kirpes)

Central Brazil to northern Argentina, Venezuela, Paraguay, Bolivia. Short-lived perennial or annual, herbaceous, hispid, caespitose, rhizomatous, wiry culms, decumbent, erect or suberect, knotty base, rooting at the nodes, leaf blades linear to lanceolate, panicle ovate or oblong, spikelets ovate-oblong pilose, lower glume ovate acuminate, upper lemma wingless, in dry places, grassland, wet areas, savannah, see *Species Plantarum* 1: 55, 58. 1753, *Species Plantarum* 2: 1004. 1753, *De Graminibus Paniceis* 183. 1826, *Histoire des plantes les plus remarquables du Brésil et du Paraguay* ... 245. Paris 1824[1826], *Révision des Graminées* 1: 54. 1829, *Synopsis Plantarum Glumacearum* 1: 93. 1854, *Flora Brasiliensis* 2(2): 272. 1877 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 30. 1933, *Phytologia* 11(3): 149. 1964, *Phytologia* 22: 104. 1971, *Darwiniana* 11(1-3): 3-44. 1979, *Flora Illustrada Catarinense* 1(Gram.): 443-906. 1982, *Systematic Botany* 12(2): 197. 1987, *Novon* 1(4): 182. 1991, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

I. procurrens (Nees ex Trin.) Swallen var. ***procurrens*** America.

I. procurrens (Nees ex Trin.) Swallen var. ***subaequiglume*** (Hack.) Killeen & Kirpes (*Panicum procurrens* var. *subaequiglume* Hack.)

South America. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 30. 1933, *Novon* 1(4): 182. 1991.

I. riedelii (Trin.) Döll (*Ichnanthus affinis* Döll; *Ichnanthus drepanophyllus* Mez; *Ichnanthus nemoralis* (Schrad.) Hitchc. & Chase; *Ichnanthus weberbaueri* Mez; *Panicum nemorale* Schrad.; *Panicum riedelii* Trin.)

Brazil. See *Mantissa* 2: 255. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 327. 1834, *Flora Brasiliensis* 2(2): 277. 1877 and *Contributions from the United States National Herbarium* 18(7): 334. 1917, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 127, 131. 1918.

I. ruprechtii Döll (*Ichnanthus amplifolius* Swallen; *Ichnanthus bolivianus* K.E. Rogers; *Ichnanthus brasiliensis* K.E. Rogers; *Ichnanthus candicans* (Nees) Döll; *Ichnanthus*

candicans var. *velutinus* Döll; *Ichnanthus candicans* var. *villosus* Döll; *Ichnanthus exilis* K.E. Rogers; *Ichnanthus goiasensis* Swallen; *Ichnanthus itacolumensis* K.E. Rogers; *Ichnanthus parodii* K.E. Rogers; *Ichnanthus ramosissimus* K.E. Rogers; *Ichnanthus ruprechtii* var. *genuinus* Döll; *Ichnanthus ruprechtii* var. *glabratus* Döll; *Ichnanthus ruprechtii* var. *ruprechtii*; *Ichnanthus ruprechtii* var. *tomentellus* Döll; *Ichnanthus tarijanius* K.E. Rogers; *Ichnanthus umbraphilus* Renvoize; *Ichnanthus venturii* K.E. Rogers)

Venezuela to northern Argentina. Perennial, herbaceous, erect, caespitose, scandent to semiscandent, clambering, prostrate, creeping, robust, ligule pubescent or glabrous, leaf blades ovate to lanceolate and acute, panicle oblong, spikelets elliptic acuminate scabrous or pubescent, lower glume attenuate, upper lemma without wings, growing along streams, wood, shade or partial shade, swampy places, slope, forest, openings, roadsides, see *Species Plantarum* 1: 55, 58. 1753, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Flora Brasiliensis* 2(2): 291-294. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Los Angeles County Museum Contributions in Science* 22: 4, 8, f. 2, 3. 1958, *Phytologia* 22(2): 97-98, 101-103. 1971, *Phytologia* 24(5): 414, 416. 1972, *Phytologia* 26(2): 58. 1973, *Kew Bulletin* 39(1): 180. 1984, *Syst. Bot.* 12: 195-196. 1987.

I. tarijanius K.E. Rogers (*Ichnanthus ruprechtii* Döll)

Southern America, Bolivia, Argentina. See *Species Plantarum* 1: 55, 58. 1753, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Flora Brasiliensis* 2(2): 291-294. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Los Angeles County Museum Contributions in Science* 22: 4, 8, f. 2, 3. 1958, *Phytologia* 22(2): 97-98, 101-103. 1971, *Phytologia* 24(5): 414, 416. 1972, *Phytologia* 26(2): 58. 1973, *Darwiniana* 23: 189-221. 1981, *Kew Bulletin* 39(1): 180. 1984, *Syst. Bot.* 12: 195-196. 1987, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

I. tarumanensis G.A. Black & Fróes (*Ichnanthus firmus* Swallen)

Amazonas, Brazil. See *Boletim Técnico do Instituto Agrônomo do Norte* 20: 33, t. 2. 1950, *Phytologia* 11(3): 145. 1964, *Systematic Botany* 7(1): 85-115. 1982.

I. tectus Swallen (*Ichnanthus ephemerolepharis* G.A. Black & Fróes ex G.A. Black & Pires)

Venezuela. Savannah, see *Boletim Técnico do Instituto Agrônomo do Norte* 15: 5. 1948, *Fieldiana, Botany* 28(1): 29-30. 1951, *Memoirs of the New York Botanical Garden* 9(3): 237-278. 1957, *Phytologia* 14(2): 84. 1966, *Systematic Botany* 7(1): 85-115. 1982.

I. tenuis (J. Presl & C. Presl) Hitchc. & Chase (*Ichnanthus alsinoides* (Griseb.) Munro ex Hemsl.; *Ichnanthus angustifolius* Swallen; *Ichnanthus attenuatus* K.E. Rogers;

Ichnanthus breviacuminatus K.E. Rogers; *Ichnanthus brevipaniculatus* K.E. Rogers; *Ichnanthus candicans* var. *pilosus* Döll; *Ichnanthus candicans* var. *virescens* Döll; *Ichnanthus papillatus* K.E. Rogers; *Ichnanthus parodii* K.E. Rogers; *Ichnanthus parodii* var. *villosissimus* K.E. Rogers; *Ichnanthus petraeus* K.E. Rogers; *Ichnanthus pilosus* K.E. Rogers; *Ichnanthus polythyrsus* (Nees ex Steud.) K.E. Rogers; *Ichnanthus sabulosus* K.E. Rogers; *Ichnanthus subpellucidus* (Steud.) K.E. Rogers; *Ichnanthus sucrensii* K.E. Rogers; *Ichnanthus tamayonis* Chase; *Ichnanthus tenuis* (Presl) Hitchc. & Chase; *Ichnanthus tipuaniensis* K.E. Rogers; *Oplismenus tenuis* Presl; *Oplismenus tenuis* J. Presl & C. Presl; *Panicum acutiflorum* Steud., nom. illeg., non *Panicum acutiflorum* Poir.; *Panicum agrostoides* Salzm. ex Steud., nom. illeg., non *Panicum agrostoides* Spreng.; *Panicum alsinoides* Griseb.; *Panicum exile* Steud.; *Panicum maynense* Trin.; *Panicum polythyrsus* Nees ex Steud.; *Panicum subaristulatum* Steud.; *Panicum subpellucidum* Steud.)

Mexico, West Indies, Venezuela, Brazil, Panama. Annual, decumbent, trailing, scandent to loosely scandent, rooting at the lower nodes, sprawling, creeping, terrestrial, herbaceous, leaf blades pilose narrowly ovate, panicle ovate, spikelets acuminate, lower glume ovate and acuminate, upper lemma with short scars at the base, common in disturbed places, woods, moist forest, riverbanks, openings, shade of shrubs and trees, rocky sites, cliffs, depressions, along trails, sandy soils, primary forest, see *Reliquiae Haenkeanae* 1(4-5): 319. 1830, *Linnaea* 10(3): 298. 1836, *Nomenclator Botanicus. Editio secunda* 2: 256. 1841, *Synopsis Plantarum Glumacearum* 1: 77, 79, 93. 1854 [1853], *Flora of the British West Indian Islands* 550. 1864, *Flora Brasiliensis* 2(2): 292-293. 1877, *Biologia Centrali-Americana*; ... *Botany* ... 3(19): 500. 1885 and *Contributions from the United States National Herbarium* 18(7): 334. 1917, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 132. 1918, *Journal of the Washington Academy of Sciences* 21(1): 16. 1931, *Journal of the Washington Academy of Sciences* 42: 122, f. 2. 1952, "Gramineae. In: B. Maguire, The botany of the Guayana Highland — Part VIII" *Memoirs of the New York Botanical Garden* 18(2): 11-22. 1969, *Phytologia* 22(2): 101, 104-105. 1971, *Phytologia* 24(5): 408, 410, 415. 1972, *Phytologia* 26(2): 57, 59-61, 63, 65. 1973, *Ceiba* 19(1): 1-118. 1975, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Listados Florísticos de México* 2: 1-100. 1983, D.E. Breedlove, *Listados Florísticos de México* 4: i-v, 1-246. 1986, *Syst. Bot.* 12: 199. 1987, *Darwiniana* 30(1-4): 87-94. 1990, *Flora Mesoamericana* 6: 300-302. 1994, G. Castillo-Campos and M.E. Medina, "La Vegetación de la Sierra de Tantima-Otontepec, Veracruz, México." *La Ciencia y el Hombre* 24: 4567. 1996.

in Spanish: zacate manteca de cusuco

I. umbraphilus Renvoize (*Ichnanthus grandifolius* (Döll) Zuloaga & Soderstr.; *Ichnanthus ruprechtii* Döll; *Panicum grandifolium* Döll)

Brazil. Perennial, pubescent base, leaf blades oblong-lanceolate and acuminate, leaf sheaths pilose, ligule densely villous, rhizomatous, spikelets oblong arranged in long- and short-pedicelled pairs, lower glume broadly ovate, upper lemma without appendages at the base, coastal rain forest, see *Flora Brasiliensis* 2(2): 195, 293. 1877 and *Kew Bulletin* 39(1): 180. 1984, *Smithsonian Contributions to Botany* 59: 31. 1985, *Syst. Bot.* 12: 195. 1987.

I. vicinus (F.M. Bailey) Merr. (*Ichnanthus pallens* sensu Hook.f., non (Swartz) Munro ex Bentham; *Ichnanthus pallens* var. *majus* (Nees) Stieber; *Panicum nitens* Merr., nom. illeg., non *Panicum nitens* (Rendle) K. Schum.; *Panicum pallens* var. *majus* Nees; *Panicum vicinum* F.M. Bailey)

Tropics, Southeast Asia, India, Australia, Polynesia. Perennial, weak, slender, flaccid, scrambling, pubescent to hirsute, decumbent, creeping to long creeping, rooting at the nodes, loosely branched, leaf blades acuminate, leaf sheaths pubescent or glabrous, paniculate inflorescence contracted and dense, spikelets gaping at maturity, upper floret obtuse, glumes membranous, palea acute and 2-keeled, forage, palatable to cattle and readily eaten, growing in forest, montane, open habitats, damp sites, clearings, shade or partial shade, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 137. 1829, *A Synopsis of the Queensland Flora* 3: 82. 1890, *Fl. Br. India* 7: 60. 1896 and *Handb. Fl. Ceylon* 5: 161. 1900, *Publications of the Bureau of Science Government Laboratories* 17: 8-9. 1904, *Philippine Journal of Science* 20(4): 367-368. 1922, *An Enumeration of Philippine Flowering Plants* 1(1): 70. 1922[1923], *Handb. Fl. Ceylon* 6: 325. 1931, *Grasses of Ceylon* 119. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 127. 1959, *Australian Journal of Botany* 7(3): 328-346. 1959, *Grasses of Burma* ... 314. 1960, *Systematic Botany* 12(2): 207. 1987.

I. zehntneri Mez (for Léo Zehntner, botanical collector in Brazil, 1905-1911 Director of the Escola Agrícola da Bahia or Escola Média-Teórico-Prática de Agricultura da Bahia; see *The Cactaceae; descriptions and illustrations of plants of the cactus family* 3: 218-220, pl. 24, f. 4. 1922 and 4: 252. 1923)

Brazil. Perennial, erect, shortly rhizomatous, leaf blades narrowly lanceolate tapering at the base and pungent, stiff leaves acuminate, panicle oblong with branches spreading or ascending, spikelets ovate very short pedicellate, lower glume ovate, upper glume and lower lemma ovate, upper lemma with membranous wings, similar to *Ichnanthus ephemerolepharis* G.A. Black & Fróes ex G.A. Black & Pires, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(124): 9. 1921, *Mem. New York Bot. Gard.* 65: 282. 1991.

Imperata Cirillo = *Syllepis* Fourn.

After the Italian apothecary Ferrante Imperato, 1550-1625, botanist, author of *Dell'istoria naturale libri XXVIII*. Editor Francesco Imperato. Costantino Vitale, Napoli 1599; the French Nicholas (Nicolas) Claude Fabry (Fabri) de Peiresc (1580-1637) visited him in 1601; see Domenico Maria Leone Cirillo (1739-1799), *Plantarum rariorum regni neapolitani*. Fasciculus primus [secundus] cum tabulis aenis. 26, t. 11. Napoli 1788-1792; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 129. Palermo 1988; [Librairie Paul Jammes - Paris], Cabinets de Curiosités. Collections. Collectionneurs. [Item no. 171: Ferrante Imperato, Bois original ayant servi à l'impression du frontispice de son livre *Dell'Historia naturale libri XXVIII*. 1599. 278 x 398 mm.] 1998; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 118. 1989; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 473. 1852.

About 8-10 species, throughout tropics and subtropics, warm temperate regions. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial, herbaceous, unbranched, erect, cylindrical, strongly rhizomatous with spreading subterranean rhizomes, internodes solid, leaf sheaths rounded, ligule a fringed or ciliate membrane, auricles absent, leaf blades linear, leaves tough and pointed to acuminate, plants bisexual, silvery silky and contracted spike-like cylindrical panicle, very short racemes with tough rachis, sessile and pedicellate spikelets alike, racemes concealed, spikelets hidden by the long silky hairs of the inflorescence, 2 florets, lower floret sterile or reduced to the hyaline lemma, upper floret perfect, two membranous glumes more or less equal and more or less silky pilose, lower glume 5- to 7-nerved, upper glume 3- to 5-nerved, lemmas reduced sometimes absent, upper lemma entire and awnless, callus hairs white, finely toothed palea hyaline and nerveless, lodicules absent, 1-2 stamens, ovary glabrous, 2 stigmas plumose, fluffy inflorescence, bad and troublesome weed species, among the world's worst weeds, suggested for reclamation, thatching, hat-making, papermaking, grow on poor soils, open areas, clearings, ditchbanks, open sandy habitats, high-rainfall areas, marshes, in wetlands or nonwetlands, coastal sand, abandoned pasture, eroded land, wasteland, weedy places, damp places, drylands, fallow fields, rainforest, grasslands, pampas, related and allied to *Miscanthus* Andersson, hybridize with *Saccharum* L., type *Imperata arundinacea* Cirillo, see *Species Plantarum* 1: 54. 1753, *Plantarum Rariorum Regni Neapolitani* 2: 26-27, t. 11. 1792, *Syn. Pl.* 1: 103. 1805, *Mexicanas Plantas* 2: 52. 1886 and *Contr. U.S. Natl. Herb.* 28(1): 9. 1929, *Journal of Zoology, London* 149: 344-364. 1966, *Kyoto University African Studies* 10: 143-212. 1976, *Flora Patagónica* 3: 1-583.

1978, C. Marticorena & M. Quezada, "Catálogo de la Flora Vascular de Chile." *Gayana, Botánica* 42: 1-157. 1985, *Flora Mesoamericana* 6: 379-380. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, "Catálogo de la familia Poaceae en la República Argentina." *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994, *Contributions from the United States National Herbarium* 46: 270-273, 610-611. 2003, Megan E. Griffiths and Colin M. Orians, "Responses of common and successional heathland species to manipulated salt spray and water availability." *Am. J. Bot.* 90: 1720-1728. 2003, *Journal of Applied Ecology* 42(1): 160-170. Feb 2005, *Restoration Ecology* 13(1): 49-60. Mar 2005, *New Phytologist* 165(3): 959-962. Mar 2005, *Agricultural Economics* 32(2): 141-150. Mar 2005, *Plant Breeding* 124(2): 147-153. Apr 2005, *Journal of Biogeography* 32(4): 719-735. Apr 2005, *Ecological Management and Restoration* 6(1): 43-50. Apr 2005.

Species

I. brasiliensis Trin. (*Erianthus asper* Nees; *Imperata arundinacea* var. *americana* Andersson; *Imperata brasiliensis* var. *mexicana* Rupr.; *Imperata caudata* Cirillo ex Chapm.; *Imperata caudata* Cirillo, nom. illeg., non *Imperata caudata* (G. Mey.) Trin.; *Imperata sape* (A. St.-Hil.) Andersson; *Paspalum lenticulare* Kunth; *Saccharum sape* A. St.-Hil.; *Syllepis ruprechtii* E. Fourn.)

Brazil, Mexico to Argentina, Venezuela, Bolivia, U.S. Erect, emergent, semiaquatic or aquatic, strongly rhizomatous, spike-like plumose panicle, noxious weed growing in large colonies or floating mats, potential seed contaminant, pasture, forage, rhizomes diuretic, common in damp ground, burned areas, roadsides, near shallow water, along rivers and streams, see *Plantarum Rariorum Regni Neapolitani* 2: 27, t. 11. 1792, *Nova Genera et Species Plantarum* 1: 92. 1815 [1816], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 331. 1832, *Voyage dans le district des diamans et sur le littoral du Brésil ...* 1: 368. Paris 1833, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 245. 1842, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 12: 160 [159]. Stockholm 1855, *Flora of the Southern United States* 668. 1883, *Mexicanas Plantas* 2: 52. 1886 and *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in English: Brazilian satin tail

in Bolivia: cola de ardilla, paja sujo, sarr, sujo

in Brazil: agreste, capim agreste, capim massapê, capim sapê, jucapê, massapê, sapê

in Mexico: isho-juki, zacate clavo, zacate cortado, zacate de cortado

I. brevifolia Vasey (*Imperata arundinacea* subsp. *hookeri* Rupr. ex Andersson; *Imperata hookeri* (Rupr. ex Andersson) Rupr. ex Hack.; *Saccharum mexicanum* Brouss. ex Horn)

Northern America, Mexico, U.S., California. Perennial, coarse, erect, leafy, rhizomatous with creeping and scaly rhizomes, ligule membranous, sheaths open and glabrous, silky white flower inflorescences, panicles terminal, glumes unequal, forage, cultivated as ornamental, noxious weed, can be invasive on moist soils and along the banks of irrigation ditches and canals, occurs in wetlands or nonwetlands, arid and semiarid regions, rarely invades dry areas, see *Plantarum Rariorum Regni Neapolitani* 2: 27, t. 11. 1792, *Hortus Regius Botanicus Hafniensis* 1: 75. 1813, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 160. 1855, *Bulletin of the Torrey Botanical Club* 13(2): 26. 1886, *Monographiae Phanerogamarum* 6: 97. 1889 and *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Flora Novo-Galiciana* 14: 200. 1983.

in English: satin tail, satintail, California satin tail, cogon grass, congo-grass

I. cheesemanii Hack.

New Zealand. Rhizomatous, clumped, leaf sheaths glabrous, ligule ciliate or ciliolate, leaf blade linear, panicle narrow-lanceolate, spikelets densely hairy, lemmas and palea denticulate, one stamen, stigmas purple, forming mat, see *Transactions and Proceedings of the New Zealand Institute* 35: 378-379. 1903.

I. condensata Steud. (*Imperata arundinacea* var. *condensata* (Steud.) Hack.; *Imperata cylindrica* var. *condensata* (Steud.) Hack. ex Stuck.; *Imperata cylindrica* var. *condensata* (Steud.) Hack.)

Chile, Bolivia. Perennial, erect, rhizomatous, linear leaves, dense inflorescence paniculate, silky white flower inflorescences, noxious weed growing in large colonies or floating mats, see *Plantarum Rariorum Regni Neapolitani* 2: 27, t. 11. 1792, *Nomenclator Botanicus* edition 3, 3: 10. 1797, *Synopsis Plantarum Glumacearum* 1(6): 431. 1855 [1854], *Monographiae Phanerogamarum* 6: 94. 1889 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2], Botany* 8(1,5,1): 161. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 9. 1911, N.B. De la Barra, *Reconstrucción y Evolución del Paisaje Vegetal Autóctono de la Zona Urbana y Peri-Urbana de la Ciudad de Cochabamba* i-v, 1-174. 1997.

I. conferta (Presl) Ohwi (*Imperata exaltata* (Roxb.) Brongn.; *Imperata exaltata* subsp. *merrillii* Hack.; *Imperata exaltata* var. *genuina* Hack.; *Imperata ramosa* Andersson; *Saccharum confertum* J. Presl)

Asia. Perennial, erect, strongly rhizomatous, leaves radical, culm with glabrous nodes, noxious pest, in open areas, disturbed places, lowlands, see *Reliquiae Haenkeanae* 1(4-5): 346. 1830, *Voyage autour du Monde* 2(2): 101. 1829 [1831], *Öfversigt af Förhandlingar: Kongl. Svenska*

Vetenskaps-Akademien 12: 158. 1855, *Monographiae Phanerogamarum* 6: 98. 1889 and *Philippine Journal of Science* 1: 264. 1906, *Botanical Magazine* (Tokyo) 55: 549. 1941, *Micronesica* 18(2): 45-102. 1982.

in New Guinea: tuo

I. contracta (Kunth) A.S. Hitchc. (*Anatherum berterioanum* Spreng. ex Schult.; *Anatherum berterianum* Spreng. ex Schult.; *Anatherum caudatum* (G. Mey.) Schult.; *Anatherum portoricense* Spreng.; *Imperata caudata* (G. Mey.) Trin.; *Imperata contracta* (Kunth) Kuhlm., nom. illeg., non *Imperata contracta* (Kunth) Hitchc.; *Imperata exaltata* (Roxb.) Brongn.; *Imperata exaltata* var. *caudata* (G. Mey.) Hack.; *Imperata flexuosa* Swallen; *Imperata longifolia* Pilg.; *Saccharum caudatum* G. Mey.; *Saccharum contractum* Kunth; *Saccharum cylindricum* var. *contractum* (Kunth) Roberty; *Saccharum cylindricum* var. *longifolium* (Pilg.) Roberty; *Saccharum dubium* Kunth)

West Indies to Brazil, Bolivia. Erect, herbaceous, rhizomatous, leaf blades linear acuminate, white spike-like panicle, single stamen, forage, rhizomes diuretic, forming large colonies, common in damp places on sandy soils, seasonally inundated savannah, wet soils, along roadsides, see *Nova Genera et Species Plantarum* 1: 182-183. 1815 [1816], *Primitiae Florae Essequiboensis* ... 68. Gottingae 1818, *Mantissa* 2: 443, 445. 1824, *Systema Vegetabilium, editio decima sexta* 1: 290. 1825, *Voyage autour du Monde* 2(2): 101. 1829 [1831], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 331. 1832, *Monographiae Phanerogamarum* 6: 99. 1889, *Annual Report of the Missouri Botanical Garden* 4: 146. 1893 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 136. 1901, *Comissão de Linhas Telegráficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 375. 1960, *Phytologia* 14(2): 87. 1966.

in Brazil: sapê

in Venezuela: paja pelúa

in Bolivia: sujo

in Mexico: lishiquini-sacat, zacate amarillo, zacate clavo, zacate colorado

I. cylindrica (L.) P. Beauv. (*Calamagrostis lagurus* (L.) Koeler; *Imperata allang* Jungh.; *Imperata angolensis* Fritsch; *Imperata arundinacea* Cirillo; *Imperata arundinacea* subvar. *europaea* (Andersson) Hack.; *Imperata arundinacea* subvar. *glabrescens* (Büse) Hack.; *Imperata arundinacea* subvar. *thunbergii* (Retz.) Hack.; *Imperata arundinacea* var. *africana* Andersson; *Imperata arundinacea* var. *europaea* Andersson; *Imperata arundinacea* var. *glabrescens* Büse; *Imperata arundinacea* var. *indica* Andersson; *Imperata arundinacea* var. *koenigii* (Retz.)

Benth.; *Imperata arundinacea* var. *latifolia* Hook.f.; *Imperata arundinacea* var. *pedicellata* (Steud.) Debeaux; *Imperata arundinacea* var. *thunbergii* (Retz.) Stapf; *Imperata cylindrica* (L.) Rausch.; *Imperata cylindrica* f. *pallida* Honda; *Imperata cylindrica* subsp. *cylindrica*; *Imperata cylindrica* subsp. *koenigii* (Retz.) Masam. & Yanagita; *Imperata cylindrica* var. *africana* (Andersson) C.E. Hubb.; *Imperata cylindrica* var. *genuina* A. Camus; *Imperata cylindrica* var. *koenigii* (Retz.) Perkins; *Imperata cylindrica* var. *koenigii* (Retz.) Benth. ex Pilg.; *Imperata cylindrica* var. *latifolia* (Hook.f.) C.E. Hubb.; *Imperata cylindrica* var. *major* (Nees) C.E. Hubb.; *Imperata cylindrica* var. *thunbergii* (Retz.) T. Durand & Schinz; *Imperata koenigii* (Retz.) P. Beauv.; *Imperata koenigii* (Retz.) P. Beauv. var. *major* Nees; *Imperata laguroides* (Pourret) Roux; *Imperata latifolia* (Hook.f.) L. Liou; *Imperata pedicellata* Steud.; *Imperata sieberi* Opiz; *Imperata thunbergii* P. Beauv.; *Lagurus cylindricus* L.; *Saccharum cylindricum* (L.) Lam.; *Saccharum cylindricum* var. *europaeum* Pers.; *Saccharum europaeum* Pers.; *Saccharum koenigii* Retz.; *Saccharum laguroides* Pourret; *Saccharum sisca* Cav.; *Saccharum thunbergii* Retz.)

Tropics and subtropics. Perennial, yellowish-green and reddish, sweet-smelling, clumped or densely tufted, spreading, strongly rhizomatous with branched and tough rhizomes, fire-resistant rhizomes, roots fibrous, stems wiry and erect, slender, culm bases and rhizomes deeply buried, leaf sheaths round and smooth to pilose, ligule a membrane glabrous or minutely ciliate, extreme point and the margins of the leaves are sharp, stiff leaves linear and acuminate, mature leaves with rough edges, leaf margins scabrous and embedded with silica crystals, culm nodes pubescent, spike-like panicles silver-white and erect, spikelets lanceolate and acute, spikelets enveloped by long white silky hairs, more or less equal glumes membranous and lanceolate, lower lemma hairy and sterile, upper lemma hairy, stigmas purple, spreads readily by rhizomes and seed, highly variable habits, bad weed species, can invade and overtake disturbed ecosystems, potential seed contaminant, noxious and very aggressive weed difficult to eradicate, useful for reclamation and erosion control, appears as the first coloniser after fire, ground cover, mulching, thatching, hat-making, fuel, papermaking, ornamental and attractive grass, cultivated, used for the sacrificial thread of the Hindu, in Lesotho rhizomes are eaten raw by herders and are used as a remedy for chest colds in children, the ash of the plant is used as a salt substitute, root astringent and antifebrile, rootbark is febrifuge, fodder, little forage value, very low grazing value, not palatable or palatable to few animals, palatable if cut frequently, only the young shoots eaten by stock, rhizomes eaten by pigs, dense and spreading patches a refuge for reptiles and small animals, extremely drought resistant, cannot stand continuous flooding, the young ear taste sweet when chewed, fluff from the flower heads a substitute for

cotton-wool in treating sores, grows on poor soils poorly drained, disturbed areas, damp soils, eroded land, vleis, seasonally wet places, open sandy habitats, high-rainfall areas, riverbanks, fynbos, coastal sand, savannah, in open grassland, abandoned pasture, lower montane forest, wasteland, subhumid and humid grassland, open woodland, see *Systema Naturae*, edition 2 2: 878. 1759, *Encyclopédie Méthodique, Botanique* 1: 594. 1783, *Mémoires de l'Académie des Sciences, Inscriptions et Belles-Lettres de Toulouse* 3: 326. 1788, *Observationes Botanicae* 5: 16-17. 1789, *Plantarum Rariorum Regni Neapolitani* 2: 27, t. 11. 1792, *Icones et Descriptiones Plantarum, quae aut sponte ...* 3: 47, pl. 292. 1794, *Nomenclator Botanicus* edition 3, 3: 10. 1797, *Descriptio Graminum in Gallia et Germania* 112. 1802, *Syn. Pl.* 1: 103. 1805, *Essai d'une Nouvelle Agrostographie* 8, 165, 177, t. 5, f. 1. 1812, *Naturalien-tausch von Philipp Maximilian Opiz ...* 10: 190. Prag 25 Mar 1825, *Tijdschrift voor Natuurlijke Geschiedenis en Physiologie* 7: 295. 1840, *Florae Africae Australioris Illustrationes Monographicae* 90. 1841, *Flora* 29: 22. 1846, *Plantae Junghuhnianae* 3: 366. 1854, *Synopsis Plantarum Glumacearum* 1(6): 431. 1855 [1854], *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 159-160. 1855, *Flora Hongkongensis* 419. 1861, *Enum. Pl. Zeyl.* 369. 1864, *Monographiae Phanerogamarum* 6: 94-95. 1889, *Conspectus Florae Africae* 5: 693. 1894, *The Flora of British India* 7: 106. 1896, *Flora Capensis* 7:320. 1898 and *Handb. Fl. Ceylon* 5: 200. 1900, *Bulletin de l'Herbier Boissier*, sér. 2, 1(11): 1096. 1901, *Fragmenta Florae Philippinae* 137. 1904, *Bulletin de la Société Botanique de France* 53: 32. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 9. 1911, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 374. 1930, *Handb. Fl. Ceylon* 6: 329. 1931, *The Grasses of Mauritius and Rodriguez* 96. 1940, *Acta Phytotaxonomica et Geobotanica* 11: 147. 1942, *Joint Publication of the Imperial Agricultural Bureaux* 7: 10, t. 3, f. 2. 1944, *Grasses of Ceylon* 165. 1956, *Naturalia monepeliensia. Série botanique.* 9: 177. 1958, *Grasses of Burma ...* 169. 1960, *Zlaki SSSR* 691. 1976, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Annali di Botanica* 45: 75-102. 1987, *Journal of Cytology and Genetics* 25: 104-143. 1990, Tominaga T.H. Kobayashi K. Ueki, "Clonal variation in salt tolerance of *Imperata cylindrica* (L.) Beauv. var. *koenigii* (Retz.) & Schinz." *Journal of Japanese Grassland Science* 37: 69-75. 1991, *Vascular Plants of the Hengduan Mountains* 2: 2299. 1994, Nicholas B. Peet, Andrew R. Watkinson, Diana J. Bell and Uday. R. Sharma, "The conservation management of *Imperata cylindrica* grassland in Nepal with fire and cutting: an experimental approach." *Journal of Applied Ecology* vol. 36, issue 3: 374-387. June 1999, Sharon E. King and James B. Grace, "The effects of gap size and disturbance type on invasion of wet pine savannah by cogongrass, *Imperata cylindrica* (Poaceae)." *Am. J. Bot.* 87: 1279-1286. 2000, D. Chikoye and F. Ekeleme, "Weed

flora and soil seedbanks in fields dominated by *Imperata cylindrica* in the moist savannah of West Africa.” *Weed Research* 41(6): 475-490. Dec 2001, *Journal of Applied Ecology* 42(1): 160-170. Feb 2005, *Plant Breeding* 124(1): 96-98. Feb 2005, *New Phytologist* 165(3): 781-789, 953-958, 959-962. Mar 2005, *Agricultural Economics* 32(2): 141-150, Mar 2005. *Restoration* 13(1): 49-60, Mar 2005. *Plant Breeding* 124(2): 147-153, Apr 2005. *Ecological Management and Restoration* 6(1): 43-50, Apr 2005.

in English: woolly grass, cogon grass, cogon, cogongrass, thatch grass, lalong grass, lalang grass, alang-alang, cranberry grass, lalang, lallang, blady grass, Japanese blood grass, Congo grass, Red Baron blood grass, bedding grass, cotton-wool grass, cotton grass, ramsammy grass, river farm grass, silky grass, sharp grass, spear grass, silver spike, silver spike grass, sword grass, kunai grass, satin tail

in French: chiendent, herbe à paille, herbe à paillettes, paille, impérate, imperata, herbe baïonnette

in Arabic: halfa, halfâ, halfa mt'a kufra, halfe, deil el-qott, silla, bodweya, berdi, helein, heish, bou dweys, deis, silt, sebet

in Benin: ebé, abossou, yagassou, mouchernoutou, dinkakata, igan

in Cameroon: sosongo

in Congo: ondongo

in East Africa: bibimbet, ebiat, ebuyat, ekebabe, lalang, lusanke, luswi (Digo), mtimbi, ol'ungu

in Gambia: so, solingo

in Ghana: henyu, neè, nei, tomene

in Guinea-Bissau: ochete, pessete, soap, sodjo, tchumba, tumbunsuma

in Guinea: aleréré, solonyi, wa-tyagaf, wa-tyagaff

in Ivory Coast: aagni, lolehun, lolle, mangoti, nsé, wo-wo
in Liberia: dah

in Mali: dolé, gombi, solé, soyo, so'yo

in Malawi: namsongole

in Morocco: silet, silt, l-halfa, diel-el-far, alfa, gousmir, ïbestaû, taicest, tibesteû, tebanawut, uhri

in Niger: tofa

in Nigeria: aatsupa, achala, achalà, acharà, akata, asai, ata, ekan, ekyé, epe, fura, gasa kigere, ihila, isa, iwo, katsupa, soo'o, soyoji, soyore, tofofa, toohaa, zakaran tofofa, zarenshi

in Sahara (Tassili): ébastaw

in Senegal: badied, bodé, dol, dolè, falint, hada, idiol, madiel, sodo, solim, solimo

in Sierra Leone: alath, awoaralal, awoararal, bola, dokin domai, leti, lolin, pobege, pobeje, povege, pulmasa,

solondo, suane, sukinyi, sule-na, sulunyi, sununwuri, surenyi, taga, tele, tere, yobainyi

in southern Africa: beddinggras, donsgras, lalanggras, palinggras, silweraargras, sygras, qheme; mohlorumo, mohlabalerumo (Sotho); umthente (Zulu)

in Tanzania: masengesela

in Upper Volta: dolinji, fofo, gay, lollé, pulundi

in Yoruba: eesa, ekan, isa

in Tibetan: rtsva-ram-pa, se'u, sor-ba

in Bhutan: becho, siru, khar, teo posem

in Burma: kyet-mei

in Cambodia: sbeou, sbö'w, smao kantuy ses

in China: bai mao gen, mao ya ken, pai mao, ssu mao (= floss grass)

in Japan: chigaya, fushige chigaya, tsubana

in India: balbajamu, barhis, barhisan, barhissu, batta, bhara-vai, bharwi, chero, chitra, dab, dabh, darbha, darbha gaddi, darbhad, darbhapullu, dharba gaddi, dharbai pul, dharbai pullu, dhub, gondi, inankapillu, khair, khans, kusa, lotan, modavagaddi, nanal, nanalle pullu, neeru hatthi hullu, ooloo, padiali, phulya, pottar, sanna dabbai hullu, sanna darbhe hullu, sil, sir sil, sirhu, siru, tharabai pul, ullu, ulu, usirh, varli pillu, vidulam, vidulum

in Indonesia: alang-alang, ilalang, kambengan, llalang

in Laos: hnha:z kh'a

in Malaysia: alang-alang, lalang

in Okinawa: makaya

in Papua New Guinea: kunai, riek

in the Philippines: buchid, bulum, gaon, gocon, gogon, goon, ilib, kogon, pan-au, panau, parang, parrang

in Sri Lanka: iluk

in Thailand: alang alang, koe hee, koe hi, koehi, la lang, laa laang, laalaang, la lae, laa lae, lalang, yaa khaa, ya kha
in Vietnam: co tranh, co'tranh, bach mao can, tranh

I. cylindrica (L.) P. Beauv. var. ***africana*** (Andersson) C.E. Hubb. (*Imperata arundinacea* var. *africana* Andersson; *Imperata cylindrica* (L.) P. Beauv.; *Imperata cylindrica* (L.) Raeusch.; *Lagurus cylindricus* L.)

Africa, Nigeria. Perennial, spreading, rhizomatous, erect, light green, leaf blades strongly ribbed, ligule membranous, plants bisexual, inflorescence a silky spike-like panicle, spikelets all alike borne in pairs, 1-flowered, 2 glumes, very tiny palea, lodicules absent or present, 2 or 3 stamens, feathery purple stigmas, raw rhizomes eaten by local people, shoots and rhizomes eaten by baboons, a serious noxious weed of cultivated ground, see *Systema Naturae*, edition 2 2: 878. 1759, *Nomenclator Botanicus* edition 3, 3: 10. 1797, *Essai d'une Nouvelle Agrostographie* 8, 165, 177, t. 5, f. 1. 1812, *Öfversigt af Förhandlingar: Kongl.*

Svenska Vetenskaps-Akademien 12: 159. 1855 and *Joint Publication of the Imperial Agricultural Bureaux* 7: 10, t. 3, f. 2. 1944.

I. cylindrica (L.) P. Beauv. var. ***major*** (Nees) C.E. Hubb. (*Imperata allang* Jungh.; *Imperata arundinacea* var. *pedicellata* (Steud.) Debeaux; *Imperata cylindrica* (L.) P. Beauv.; *Imperata cylindrica* (L.) Raeusch.; *Imperata cylindrica* subvar. *koenigii* (Retz.) T. Durand & Schinz; *Imperata filifolia* Nees ex Steud.; *Imperata koenigii* (Retz.) P. Beauv.; *Imperata koenigii* var. *major* Nees; *Imperata pedicellata* Steud.; *Saccharum diandrum* K.D. Koenig ex Retz.; *Saccharum koenigii* Retz.)

Palaeotropics. Loosely or densely tufted, rhizomatous with tough and scaly rhizomes, forming colonies, leaf sheath fibrous when old, ligule ciliate, panicle densely spiciform, 2 stamens, anthers yellowish to orange, stigmas purple or reddish, diuretic and hemostatic action, rhizoma used in edema and jaundice, see *Observationes Botanicae* 5: 16. 1789, *Plantarum Rariorum Regni Neapolitani* 2: 27, t. 11. 1792, *Nomenclator Botanicus* edition 3, 3: 10. 1797, *Essai d'une Nouvelle Agrostographie* 8, 165, 177, t. 5, f. 1. 1812, *Tijdschrift voor Natuurlijke Geschiedenis en Physiologie* 7: 295. 1840, *Florae Africae Australioris Illustrationes Monographicae* 90. 1841, *Flora* 29: 22. 1846, *Synopsis Plantarum Glumacearum* 1: 405. 1854[1855], *Flora Hongkongensis* 419. 1861, *Conspectus Florae Africae* 5: 694. 1894 and *Fragmenta Florae Philippinae* 137. 1904, *The Grasses of Mauritius and Rodriguez* 96. 1940, *Zlaki SSSR* 691. 1976.

in English: bladey grass, alang-alang, cranberry grass, lalang, lallang, blady grass

in China: bai mao gen, pai mao ken

in East Africa: bibimbet, ebiat, ebuyat, ekebabe, lalang

in Indonesia: alang-alang, Ilalang

in Malaysia: lalang

I. cylindrica (L.) P. Beauv. var. ***thunbergii*** (Retz.) T. Durand & Schinz (*Saccharum thunbergii* Retz.)

Tropical Africa. Densely caespitose, simple, erect, short membranous ligule, noxious weed, see *Observationes Botanicae* 5: 17. 1789, *Systema Vegetabilium* 2: 289. 1817, *Monographiae Phanerogamarum* 6: 94. 1889, *Conspectus Florae Africae* 5: 693. 1894, *Flora Capensis* 7:320. 1898.

in Angola: mbamba, munangu, senu, sonhi, tembe

I. exaltata (Roxb.) Brongn. (*Saccharum exaltatum* Roxb.)

Asia. Medicinal, see *Primitiae Florae Essequiboensis* ... 68. 1818, *Flora Indica; or Descriptions* ... 1: 249. 1820, *Voyage autour du Monde* 2(2): 101. 1829 [1831], *Monographiae Phanerogamarum* 6: 98-99. 1889 and *Philippine Journal of Science* 1: 264. 1906.

in the Philippines: gocon, gogon, goon, ilib, kogon, kogon laké, pandang lubuk, paraugtau

I. minutiflora Hack.

Patagonia, Bolivia, Amazonia. Erect, tufted, leaf blades linear acuminate, panicle linear, plumose inflorescence terminal, single stamen, a medicinal plant, growing in moist places, see *Monographiae Phanerogamarum* 6: 100. 1889 and *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994.

in Bolivia: Dersibunare (Chimane), Guasi (Chácobo), Nudillo (Santa Cruz), Sarr (Chiquitano), Sujo, Sujubache (Tacana), Yachitari (Cavineño), Yobokaä (Esse Ejja), Gramalote (Castellano)

I. parodii Acevedo

Chile. See *Bol. Soc. Argent. Bot.* 12: 358. 1968.

I. tenuis Hack. (*Imperata exaltata* var. *angustifolia* Hack.; *Imperata minutiflora* Hack.)

Bolivia, Paraguay, Brazil. Perennial, erect, herbaceous, tufted, rhizomatous, leaf blades linear pungent, panicle narrowly oblong, roadside grass, moist areas, see *Monographiae Phanerogamarum* 6: 99-100. 1889 and *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

Imperatia Post & O. Kuntze = Imperatia Moench (Caryophyllaceae)

Orthographic variant of *Imperata* Cirillo.

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, see *Methodus Plantas Horti Botanici et agri marburgensis, a staminum situ describendi* ... 294-295. Marburgi Catalogum [Marburg] 1794 and *Contributions from the United States National Herbarium* 46: 270-273. 2003.

Indocalamus Nakai = Ferrocalamus J.R. Xue & Keng f., Gelidocalamus T.H. Wen

From Latin *Indus* "Indian" and *calamus* "a reed, cane."

About 6-10/35 species, tropical Asia, southern China, Japan, Sri Lanka. Bambusoideae, Bambusodae, Bambuseae, Arundinariinae, perennial, woody, shrubby, slender, one branch at each node, flowering culms leafy, rhizomes leptomorph, culm sheaths persistent, nodes of young culms with long hairs, terminal panicle, 3 stamens, 2 stigmas, forming thickets and large clusters, open habitats, wet sites, woodland, alpine regions, type *Indocalamus sinicus* (Hance) Nakai, see *Flora Boreali-Americana* 1: 73. 1803 and *Journal of the Arnold Arboretum* 6(3): 148. 1925, *Taxon* 6(7): 203. 1957, *Acta Phytotaxonomica Sinica* 18(1): 24-25. 1980, *Journal of Bamboo Research* 1: 3, 21, 137. 1982

[1981], *Acta Phytotaxonomica Sinica* 23(6): 460, 462. 1985, T.R. Soderstrom and R.P. Ellis, "The woody bamboos (Poaceae: Bambuseae) of Sri Lanka: a morphological-anatomical study." *Smithsonian Contributions to Botany* 72: 1-75. 1988, C.S. Chao and S.A. Renvoize, "A revision of the species described under *Arundinaria* (Gramineae) in south-east Asia and Africa." *Kew Bulletin* 44(2): 349-367. 1989, *J. Nanjing Univ. Nat. Sci.* 26(2): 282-290. 1990, *Bambou*, Association Européenne du Bambou, EBS Section France 7: 22. 1990, *Flora Reipublicae Popularis Sinicae* 9(1): 1-761. 1996, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. The *Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 63-64. 2000, *Ecological Research* 16(3): 509-517. Sep 2001.

Species

I. sp.

in China: ruozhu shu

in Japan: indokaramusu zoku, ohoba-yadake Zoku

I. auriculatus (H.R. Zhao & Y.L. Yang) Y.L. Yang & H.R. Zhao (*Indocalamus auriculatus* (H.R. Zhao & Y.L. Yang) Y.L. Yang; *Indocalamus hispidus* var. *auriculatus* H.R. Zhao and Y.L. Yang)

China, Sichuan. Green, pruinose, yellowish brown silky, culm sheath dark green, sheath auricles falciform, sheath ligule weak, sheath blade erect, see *Acta Phytotaxonomica Sinica* 23(6): 460-462. 1985, *Journal Nanjing University. Natural Sciences Edition* 26(2): 282. 1990.

I. barbatus McClure

China, Guangxi. Solid or nearly solid, densely silky, sheath persistent shorter than internode, sheath auricle well developed, sheath ligule short, sheath blade ovate lanceolate, culm used for handicrafts, leaves used for making hats, see *Sunyatsenia* 6(1): 32-35. 1941, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

I. bashanensis (C.D. Chu & C.S. Chao) H.R. Zhao & Y.L. Yang (*Sasa bashanensis* C.D. Chu & C.S. Chao)

China, Sichuan, Shaanxi. Mountains, hardy, pruinose, short silky pubescence, sheath persistent, no sheath auricles and cilia, sheath ligule nearly truncate, sheath blade narrow lanceolate, one branch on each node, leaves elliptic to lanceolate, see *Acta Phytotaxonomica Sinica* 18(1): 30, f. 3. 1980, *Bamboo Research* 1: 14. 1981, *Acta Phytotaxonomica Sinica* 23(6): 465. 1985.

I. chishuiensis Y.L. Yang & Hsueh (also J.R. Xue)

China. Slope, hills, see *Acta Phytotaxonomica Sinica* 31(1): 68-69, f. 1. 1993.

I. confertus C.H. Hu

China. Mountains, see *Journal of Bamboo Research* 15(1): 1-2, f. 1. 1996.

I. cordatus T.H. Wen & H.Y. Zou

China. See *Journal of Bamboo Research* 10(1): 18, f. 3. 1991.

I. dayongensis W.T. Lin

China. See *Journal of Bamboo Research* 13(4): 3, f. 2. 1993.

I. decorus Q.H. Dai

China. See *Acta Phytotaxonomica Sinica* 20(4): 494-495, f. 1. 1982.

I. emeiensis C.D. Chu & C.S. Chao (*Arundinaria emeiensis* (C.D. Chu & C.S. Chao) Demoly; *Indocalamus omeiensis* C.D. Chu & C.S. Chao)

China, Sichuan. Hardy, silky when young, internodes reddish pubescent, sheath persistent, sheath auricles developed, sheath blade lanceolate to broadly lanceolate, leaves linear to lanceolate, see *Acta Phytotaxonomica Sinica* 18(1): 25-26, f. 1. 1980, *Bambou*, Association Européenne du Bambou, EBS Section France 29: 13. 1998.

I. floribundus (Thwaites) Nakai (*Arundinaria floribunda* Thwaites; *Sinarundinaria floribunda* (Thwaites) C.S. Chao & Renvoize)

Sri Lanka. Erect, shrubby, nodes swollen, internodes hairy, leaves lanceolate with an acuminate tip, glandular short petiole, leaf sheath striate and hairy, auricles short and with bristles on the margin, short ligule fimbriate, mountains, often excluded from *Indocalamus*, see *Enumeratio Plantarum Zeylaniae* 375. 1864 and *Journal Arnold Arboretum* 6: 148. 1925, *Smithsonian Contrib. Botany* no. 72: 14, f. 9-11. 1988, *Kew Bulletin* 44(2): 356. 1989.

I. guangdongensis H.R. Zhao & Y.L. Yang

China, Guangdong, Guizhou. Pruinoso, hairy, sheath persistent shorter than internode, sheath auricles small and falciform, sheath ligule truncate, sheath blade ovate lanceolate, leaves ovate lanceolate glabrous, cultivated, see *Acta Phytotaxonomica Sinica* 23(6): 462, f. 2, 1-4. 1985.

I. guangdongensis H.R. Zhao & Y.L. Yang var. *mollis* H.R. Zhao & Y.L. Yang

China. See *Acta Phytotaxonomica Sinica* 23(6): 462-463. 1985.

I. herklotsii McClure

China, Guangdong, Hong Kong, Guangxi, Hunan. Almost solid, sheath shedding late shorter than internode, sheath auricles small or absent, sheath ligule nearly truncate, sheath blade erect ovate lanceolate, leaves oblong-lanceolate glabrous, cultivated, used for making handicrafts, mat, cap, see *Lingnan Univ. Sci. Bull.* no. 9: 22. 1940, *Hong Kong Bamb.* 65. 1985.

I. hirsutissimus Z.P. Wang & P.X. Zhang

China, Guizhou. Densely silky and white pubescent, nodes strongly convex, sheath coriaceous, sheath auricle curved upward, sheath ligule truncate or arcuate, sheath blade

lanceolate, one branch on each node, leaves pubescent beneath, see *Journal of Bamboo Research* 4(1): 44, f. 1. 1985.

I. hirsutissimus Z.P. Wang & P.X. Zhang var. *glabrifolius* Z.P. Wang & N.X. Ma

China. Glabrous leaf blades, see *J. Bamb. Res.* 4(1): 45-46. 1985.

I. hirtivaginatus H.R. Zhao & Y.L. Yang

China, Jiangxi. White and short pubescence or glabrous, sheath longer than internode, no sheath auricles or indistinct, sheath ligule minutely pubescent, sheath blade erect linear-lanceolate, leaf blade lanceolate, see *Acta Phytotaxonomica Sinica* 23(6): 463-464, f. 2, 5-7. 1985.

I. hispidus H.R. Zhao & Y.L. Yang

China. See *Acta Phytotaxonomica Sinica* 23(6): 460-461, f. 1. 1985, *Journal Nanjing University. Natural Sciences Edition* 26(2): 282. 1990, *J. Bamb. Res.* 11(3): 54. 1992.

I. hispidus H.R. Zhao & Y.L. Yang f. *levis* T.P. Yi

China, Sichuan. Green, pruinose, sheath coriaceous shorter than internode, sheath ligule truncate glabrous, sheath blade ovate lanceolate or lanceolate, leaves ovate, see *Acta Phytotaxonomica Sinica* 23(6): 460-462, f. 1. 1985, *Journal of Bamboo Research* 11(3): 54. 1992.

I. hunanensis B.M. Yang

China, Hunan. Hardy, yellowish green, slender longitudinal stripes, sheath persistent hard and fragile, sheath ligule tiny, sheath blade linear-lanceolate erect, leaves ovate-lanceolate glabrous both sides, see *Acta Phytotaxonomica Sinica* 19(2): 259-260, f. 1. 1981.

I. inaequilaterus W.T. Lin & Z.M. Wu

China. Hardy, see *Acta Phytotaxonomica Sinica* 26(2): 147-148, f. 2. 1988.

I. lacunosus Wen

China, Fujian. Sheath greenish yellow tough and pliable, sheath auricles and cilia absent, sheath ligule truncate, sheath blade persistent lanceolate, leaves pubescent beneath, used for making handicrafts and for wrapping rice food, cultivated, see *Journal of Bamboo Research* 2(1): 70, f. 21. 1983.

I. latifolius (Keng) McClure (*Arundinaria latifolia* Keng; *Indocalamus lacunosus* T.H. Wen; *Indocalamus migoi* (Nakai ex Migo) Keng f.; *Sasamorpha chinensis* Nakai; *Sasamorpha latifolia* (Keng) Nakai; *Sasamorpha migoi* Nakai ex Migo)

China, Hunan, Zhejiang, Anhui. Hardy, sparsely hairy, sheath persistent shorter than internode, no sheath auricles, sheath ligule truncate, sheath blade lanceolate erect, leaves pubescent beneath, used for making handicrafts and for wrapping rice food, cultivated, slopes and forests, see *Sinensia* 6(2): 147, 153, f. 1. 1935, *Journal of the Shanghai Science Institute* 4(7): 163. 1939, *Sunyatsenia* 6(1): 37.

1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 152. 1957, *Journal of Bamboo Research* 2(1): 70, f. 21. 1983, *Journal of Zhejiang Forestry College* 8(1): 127-130. 1991, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

I. longiauritus Hand.-Mazz. (*Arundinaria longiaurita* (Hand.-Mazz.) Hand.-Mazz.; *Arundinaria longiaurita* (Hand.-Mazz.) Demoly, nom. illeg., non *Arundinaria longiaurita* (Hand.-Mazz.) Hand.-Mazz.)

China, Henan, Hunan, Sichuan, Guizhou. Glabrous or shortly silky, node flat, sheath auricles developed and fal-ciform, sheath ligule truncate or slightly curved, sheath blade erect ovate, leaves ciliate beneath, used for making handicrafts and for wrapping rice food, cultivated, forest, shrubs, woods, shade or partial shade, see *Kaiserliche Akademie der Wissenschaften in Wien. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger.* 62: 254. 1926, *Symbolae Sinicae* 7(5): 1271-1272. 1936, *Fieldiana, Botany* 24(2): 38-331. 1955, *Hong Kong Bamboos* 66. 1985, *Bambou, EBS Section France* 7: 22. 1990, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: long-ear cane

I. longiauritus Hand.-Mazz. var. *hengshanensis* H.R. Zhao & Y.L. Yang

China, Hunan. Sheath auricle semifalciform, see *Kaiserliche Akademie der Wissenschaften in Wien. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger.* 62: 254. 1926, *Acta Phytotaxonomica Sinica* 23(6): 465. 1985.

I. longiauritus Hand.-Mazz. var. *semifalcatus* H.R. Zhao & Y.L. Yang

China, Luo, Sichuan. Sheath auricle semifalciform, see *Kaiserliche Akademie der Wissenschaften in Wien. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger.* 62: 254. 1926, *Acta Phytotaxonomica Sinica* 23(6): 464. 1985.

I. longiauritus Hand.-Mazz. var. *yi yangensis* H.R. Zhao & Y.L. Yang

China. Leaves pubescent, see *Kaiserliche Akademie der Wissenschaften in Wien. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger.* 62: 254. 1926, *Acta Phytotaxonomica Sinica* 23(6): 464. 1985.

I. migoi (Nakai) P.C. Keng (*Arundinaria latifolia* Keng; *Indocalamus latifolius* (Keng) McClure; *Indocalamus migoi* (Nakai ex Migo) Keng f.; *Sasamorpha migoi* Nakai; *Sasamorpha migoi* Nakai ex Migo)

China. Forest shade, see *Sinensia* 6: 147, 153, f. 1. 1935, *Journal of the Shanghai Science Institute* 4(7): 163. 1939, *Sunyatsenia* 6(1): 37. 1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 152. 1957, *Journal of Nanjing University, Natural Sciences* 23(3): 453-462. 1987, *Journal of Zhejiang Forestry College* 8(1): 127-130. 1991, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

I. pedalis (Keng) P.C. Keng (*Arundinaria pedalis* Keng)

China. Rocky places, see *Journal of the Washington Academy of Sciences* 36(3): 76-86, f. 1-3. 1946, *Technical Bulletin of the National Forestry Research Bureau* 8: 12. 1948.

I. petelotii (A. Camus) Ohrnb. (*Arundinaria petelotii* A. Camus; *Sinarundinaria petelotii* (A. Camus) T.Q. Nguyen Vietnam. See *Notulae Systematicae* 14(3-4): 213-214, 252-253. 1951 [1952-1953], *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 225. 1990.

I. pseudosinicus McClure

China, Hainan. Internodes of branches slender, sheath glabrous, leaves elliptic-lanceolate, similar to *Indocalamus sinica* (Hance) Nakai, see *Sunyatsenia* 6(1): 37-41, pl. 8. 1941.

I. pseudosinicus McClure var. *densinervillus* H.R. Zhao & Y.L. Yang

China. Small to tiny leaves, see *Sunyatsenia* 6(1): 37-41, pl. 8. 1941, *Acta Phytotaxonomica Sinica* 23(6): 464. 1985.

I. pumilus Q.H. Dai & C.F. Huang

China. Cultivated, see *Acta Phytotaxonomica Sinica* 24(5): 394-395, f. 2. 1986.

I. quadratus H.R. Zhao & Y.L. Yang

China, Hunan, Dongan. Densely hairy and powdery, sheath persistent, sheath auricles falciform, wavy cilia, sheath ligule truncate to convex dark purple, sheath blade linear triangular, 6-7 leaves on each twig, leaves ovate lanceolate, see *Acta Phytotaxonomica Sinica* 20(2): 216-217, f. 1. 1982.

I. sinicus (Hance) Nakai (*Arundinaria longiramea* Munro; *Arundinaria sinica* Hance; *Arundinaria wightii* Nees ex Benth.; *Arundinaria wightii* Nees)

China, Guangdong. One branch on each node of the culm or no branches at all, 5-9 leaves on each twig, 3-4 flowers on each spikelet, ornamental, cultivated, similar to *Indocalamus latifolius* (Keng) McClure, see *Flora Hongkongensis* 434. London 1861, *Annales des Sciences Naturelles, Botanique* 18: 235. 1862, *Transactions of the Linnean Society of London* 26(1): 19. 1868 and *Journal Arnold Arboretum* 6(3): 148. 1925, *Hong Kong Bamboos* 67. 1985, *Journal of Nanjing University, Natural Sciences* 26(2): 286. 1990.

I. solidus C.D. Chu & C.S. Chao (*Bonia saxatilis* (L.C. Chia, H.L. Fung & Y.L. Yang) N.H. Xia; *Bonia saxatilis* var. *solida* (C.D. Chu & C.S. Chao) D.Z. Li; *Bonia solida* (C.D. Chu & C.S. Chao) N.H. Xia; *Monocladus saxatilis* var. *solidus* (C.D. Chu & C.S. Chao) L.C. Chia, H.L. Fung & Y.L. Yang; *Monocladus solidus* (C.D. Chu & C.S. Chao) L.C. Chia)

China. See *Acta Phytotaxonomica Sinica* 18(1): 26, f. 2. 1980, *Acta Phytotaxonomica Sinica* 26(3): 215. 1988, *Kew Bulletin* 51(3): 567-568. 1996, *Flora Reipublicae Popularis Sinicae* 9(1): 40, 42. 1996, *Acta Botanica Yunnanica* 22(1): 44. 2000.

I. suichuanensis Yi & Y.H. Guo

China. See *Journal of Bamboo Research* 14(1): 14-17, f. 1. 1995.

I. tessellatus (Munro) Keng f. (*Arundinaria ragamowski* Pfitzer, also spelled *ragamowskii*; *Arundinaria razumovskiy* G.S. Thomas; *Arundinaria tessellata* (Nees) Munro; *Arundinaria tessellata* Munro; *Arundinaria tessellata* (Munro) Bean, nom. illeg.; *Arundo ragamowski* Lambert ex Wheeler; *Arundo ragamowski* Lambert ex Camus; *Arundo ragamowski* Wheeler; *Bambusa reticulata* var. *macrophylla* Ruprecht ex Munro; *Bambusa tessellata* Munro; *Indocalamus tessellatus* Keng f.; *Nastus tessellatus* Nees; *Pseudosasa tessellata* (Munro) Hatusima; *Sasa ragamowskii* A.H. Lawson; *Sasa tessellata* (Munro) Makino & Shibata; *Sasa tessellata* var. *ragamowskii* hort. ex P. Vilmorin; *Sasamorpha tessellata* (Munro) Koidz.; *Thamnocalamus tessellatus* (Nees) Soderstr. & R.P. Ellis)

China, Anhui, Hunan, Fujian. Perennial, small to dwarf, arching stems, thick-walled, culm sheath persistent yellowish brown longer than internode, sheath ligule arcuate, sheath blade narrow-lanceolate, large leaves oblong-lanceolate to ovate, bud canal shallow, dried leaves used for packing tea and for wrapping rice food, ornamental, hardy, leaves used to wrap *chimaki* (a glutinous rice ball), see *Bambuseae* 58. 1839, *Flora Africae Australioris Illustrationes Monographicae* 463. 1841, *Transactions of the Linnean Society of London* 26(1): 31, 110-111. 1868, *Gardener's Chronicle & Agricultural Gazette* 6: 847. 1876, *Gard. Chron.* ser. 3, 15: 238, 368. 1894 and *Botanical Magazine* (Tokyo) 15: 27. 1901, *Mitteilungen der Deutschen Dendrologischen Gesellschaft* 1902: 96. 1902, *Bulletin de la Société Dendrologique de France* 12: 85. 1909, *Les Bambusées* 25. 1913, *Acta Phytotaxonomica et Geobotanica* 10(1): 75-76. 1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 152. 1957, *J. Roy. Hort. Soc. London* 82: 249. 1957, *Acta Phytotaxonomica Sinica* 6(4): 355-360, pl. 56-57. 1957, *J. Geobot.* 15: 86. 1967, *Bamb. Gard. Guide* 112. 1968, *Woody Pl. Jap.* 632. 1976, *Bothalia* 14(1): 54. 1982, *Taxon* 49(2): 238. 2000.

in Japan: ohoba-ya-dake

I. tongchunensis K.F. Huang & Z.L. Dai

China, Fujian. Internode cylindrical, glossy, yellow, pruinose, culm sheath persistent, no sheath auricles and cilia, sheath ligule truncate or arcuate, sheath blade longer than the sheath and long lanceolate, 1 branch on each node of upper culm, 3-7 leaves on each twig, leaves ovate or ovate-lanceolate, in broad-leaved forests, see *Wuyi Science Journal* 6: 293-295. 1986.

I. victorialis P.C. Keng (*Arundinaria victorialis* (Keng f.) Demoly; *Bashania victorialis* (P.C. Keng) T.P. Yi; *Pseudosasa victorialis* (P.C. Keng) Yi)

China, Sichuan. Sheath persistent shorter than internode, sheath ligule truncate, sheath blade slender and long, one branch on each node or 3-4, 1-4 leaves on each branch, leaves lanceolate, see *Technical Bulletin of the National Forestry Research Bureau, Nanking, China* 8: 12. 1948, *Acta Phytotaxonomica Sinica* 1(1): 121, f. 7. 1951, *Journal of Bamboo Research* 12(2): 53-54. 1993, *Journal of Bamboo Research* 15(3): 6. 1996, *Bambou*, EBS Section France 29: 13. 1998.

I. vulgatus W.T. Lin & X.B. Ye (*Arundinaria vulgata* (W.T. Lin & X.B. Ye) W.T. Lin; *Pseudosasa vulgata* (W.T. Lin & X.B. Ye) W.T. Lin)

China. See *Acta Phytotaxonomica Sinica* 26(3): 233, f. 13. 1988, *Bulletin of Botanical Research* 12(4): 354-355. 1992, *Journal South China Agricultural University* 15(2): 79. 1994.

I. wilsonii (Rendle) C.S. Chao & C.D. Chu (also spelled ***wilsoni***) (*Arundinaria wilsonii* Rendle; *Indocalamus nubigenus* (Keng f.) T.P. Yi ex H.R. Zhao & Y.L. Yang; *Indocalamus shimenensis* B.M. Yang; *Indocalamus wilsonii* (Rendle) C.S. Chao & C.D. Chu; *Sasa nubigena* Keng f.; *Sasamorpha nubigena* (P.C. Keng) P.C. Keng; *Sinarundinaria wilsonii* (Rendle) Keng ex Keng f.; *Sinarundinaria wilsoni* (Rendle) P.C. Keng; *Yushania wilsonii* (Rendle) J.J.N. Campbell) (dedicated to the American (b. England, Chipping Campden, Gloucestershire) botanist Ernest Henry Wilson, 1876-1930 (d. near Worcester, Massachusetts, in a motor accident), traveler and plant collector, Kew gardener, to China in 1907-1908 and 1910 on behalf of the Arnold Arboretum; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 503. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 438. 1972; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 378. Cape Town 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 437. 1973; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Charles Lyte, *The Plant Hunters*. London 1983; H.R. Fletcher, *Story of the Royal Horticultural Society, 1804-1968*. Oxford 1969; Ernest Nelses and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 367-368. [1931]; J. Ewan, editor, *A Short History of Botany in the United States*. 16. New York and London 1969; E.H.M. Cox, *Plant-hunting in China: A History of Botanical Exploration in China and the Tibetan Marches*. London 1945; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. London 1969; M. Hadfield et al., *British Gardeners: A*

Biographical Dictionary. London 1980; Charles Sprague Sargent, editor, *Plantae Wilsonianae*. ["the greatest of all plant hunters"] Dioscorides Press, Portland, Oregon 1988; Roy W. Briggs, *A life of Ernest Wilson*. HMSO, London 1993; Creina Glegg, "Chinese Wilson, Plant Hunter." *Hortus*. 39: 31-47. 1996; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 746. London 1994)

China, Hubei. Mountains, smooth and glabrous, white pubescent, sheath thick, no sheath auricles, sheath ligule short, sheath blade tiny long ovate lanceolate, 3-5 leaves on each twig, leaves elliptic-lanceolate sparsely hairy beneath, see *Journal of the Linnean Society, Botany* 36(254): 437-438. 1904, *Technical Bulletin of the National Forestry Research Bureau* 8: 14. 1948, *Acta Phytotaxonomica Sinica* 6(4): 357, pl. 56. 1957, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 152. 1957, *Iconographia Cormophytorum Sinicorum* 27. 1976, *J. Nanjing Techn. Coll. For. Prod.* 1981(3): 43. 1981, *Acta Phytotaxonomica Sinica* 23(6): 465. 1985, *Natural Science Journal of Hunan Normal University* 12(4): 334, 338. 1989.

I. wuxiensis Yi

China, Sichuan. Mountains, silky, not pruinose, sheath persistent shorter than internode, sheath auricle falciform deciduous, sheath ligule truncate or slightly concave, sheath blade linear-lanceolate, one branch on each node, leaves lanceolate, see *Bulletin of Botanical Research* 5(4): 129-131, f. 6. 1985.

I. youxiuensis Yi

China. Mountains, see *Journal of Bamboo Research* 11(3): 53-54, f. 2. 1992.

Indochloa Bor = *Euclasta* Franch.

From Latin *Indus* "Indian" and Greek *chloa* "grass."

Panicoideae, Andropogoneae, Sorghinae, type *Indochloa clarkei* (Hack.) Bor, see *Österreichische Botanische Zeitschrift* 41: 49. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 335-336, t. 8. 1895 and *The Botany of Bihar and Orissa* pt. 5: 1040. 1924, *Kew Bulletin* 9: 75-76. 1954, *Fieldiana, Botany* 24(2): i-ix, 1-390. 1955, *Flowering Plants of Jamaica* 1-848. 1972, *Kew Bulletin* 35(3): 704. 1980, *Flora Mesoamericana* 6: 386. 1994, *Fontqueria* 46: [i-ii], 1-259. 1997, *Contributions from the United States National Herbarium* 46: 241. 2003.

Indopoa Bor

From India and Greek *poa* "grass, fodder."

One species, India. Chloridoideae, Eragrostideae, annual, herbaceous, unbranched, auricles absent, ligule an unfringed membrane, leaf blades linear, plants bisexual,

inflorescence spicate, 4-6 female-fertile florets, spikelets solitary and flattened, 2 glumes subequal to very unequal, lemma bearing a geniculate awn with twisted column, palea awnless, 2 free lodicules, 3 stamens, ovary glabrous with apical appendage, 2 stigmas, caryopsis needle-like, rocky places, type *Indopoa paupercula* (Stapf) Bor, see E. Blatter and C. McCann, *The Bombay Grasses*. Scientific Monograph no. 5. The Imperial Council of Agricultural Research. Dehli 1935 (Reprinted 1984 by Bishen Singh Mahender Pal Singh, Dehradun, India), *Kew Bulletin* 13: 225. 1958, *Grasses of Burma, Ceylon, India and Pakistan* 520, 522-523. 1960, *Journal of Economic and Taxonomic Botany* 22(2): 491-494. 1998.

Species

I. paupercula (Stapf) Bor (*Tripogon pauperculus* Stapf)

India, Western Ghats. Glumes 1-nerved, see *Icones Plantarum* 25(t): 2442. 1896 and *Sci. Monogr. Imp. Council. Agric. Research* 5(266). 1935 [also *The Bombay Grasses* 266. 1935], *Kew Bulletin* 1958: 225. 1958.

Indoryza Henry & Roy = *Porteresia*
Tateoka, *Sclerophyllum* Griff.

Oryza from India.

Bambusoideae, Oryzodae, Oryzeae, see *Notulae ad Plantas Asiaticas* 3: 8. Calcutta 1851 and *American Journal of Botany* 51: 539-543. 1964, *Bulletin of the National Science Museum* 8: 406. Tokyo 1965, *Bulletin of the Botanical Survey of India* 8: 42-44. 1966, *Bulletin of the Botanical Survey of India* 10: 274. 1969, *Bulletin of the Torrey Botanical Club* 101: 244. 1974.

Indosasa McClure

From India plus the name *Sasa*.

Species 12-27, Laos, China and Vietnam. Bambusoideae, Bambusodae, Bambuseae, Shibataeinae, perennial, persistent, monopodial, shrubby and woody, leafy, each node with a bud, 3 branches at each node, nodes 2-ridged, rhizomes leptomorph, plants bisexual, pseudospikelets or single spikelets in loose fascicles, 2 glumes, lemma coriaceous, 3 lodicules membranous, 6 stamens, 3 stigmas, mountain, in forest, broad-leaved forest, along roadsides, sunny slopes, low hills, shade and partial shade, evergreen broad-leaved forest, type *Indosasa crassiflora* McClure, see *Lingnan University Science Bulletin* 9: 28-29. 1940, *Acta Phytotaxonomica Sinica* 21: 60-75. 1983, *Kew Bulletin* 44(2): 349-367. 1989, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, Z.-L. Li, *The Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. *The Bamboos* 5: 61-81. 1997, *Ecological Research* 16(3): 509-517. Sep 2001.

Species

I. acutiligulata Z.P. Wang & G.H. Ye (*Indosasa shibataeoides* McClure)

China. See *Lingnan University Science Bulletin* 9: 32. 1940, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 100, f. 7. 1981, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

I. angustata McClure

China, Guangxi, Vietnam. Young culm more or less pubescent, sheath auricles vestigial or undeveloped, sheath ligule densely pubescent, sheath blade lanceolate and scabrous, used for frame, growing in broad-leaved forests, see *Journal of the Arnold Arboretum* 23(1): 93. 1942.

I. angustifolia W.T. Lin

China. See *Acta Phytotaxonomica Sinica* 26(3): 225-226, f. 3. 1988.

I. bacquangensis Nguyen

Vietnam. See *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 878. 1991.

I. breviligulata W.T. Lin & Z.M. Wu

China. See *Journal of Bamboo Research* 11(1): 33. 1992.

I. crassiflora McClure (*Indosasa gibbosa* (McClure) McClure; *Indosasa gibbosa* McClure; *Sinobambusa gibbosa* McClure)

China, Guangxi, Vietnam. Culm more or less pruinose, glabrous, wall thick to solid, sheath swollen, auricles absent, ligule truncate, sheath blade narrowly lanceolate to triangular, see *Lingnan University Science Bulletin* 9: 29, 58. 1940, *Journal of the Arnold Arboretum* 23(1): 93. 1942.

I. glabrata C.D. Chu & C.S. Chao

China, Guangxi. Glabrous, pruinose, culm sheath shedding late, sheath ligule arcuate, sheath blade narrowly lanceolate to triangular, edible shoot, used for fencing, see *Acta Phytotaxonomica Sinica* 21(1): 64, f. 1. 1983.

I. glabrata C.D. Chu & C.S. Chao var. *albo-hispidula* (Q.H. Dai & C.F. Huang) C.S. Chao & C.D. Chu (also spelled *albohispidula*) (*Indosasa albo-hispidula* Q.H. Dai & C.F. Huang)

China, Guangxi. Young culms densely covered with white tomentum, sheath shorter than internode, sheath auricles undeveloped, sheath blade lanceolate, used for fencing and for papermaking, see *Acta Phytotaxonomica Sinica* 21(1): 64, f. 1. 1983, *Journal of Bamboo Research* 3(1): 47, f. 1. 1984, *Flora Reipublicae Popularis Sinicae* 9(1): 212. 1996.

I. hispida McClure

China, Guangdong, Yunnan, Vietnam. Young culms densely covered with white or yellowish tomentum, tough sheath shedding late, sheath blade lanceolate, sheath auricles developed, sheath ligule ciliate, see *Lingnan University Science Bulletin* 9: 31. 1940.

I. ingens Hsueh (also J.R. Xue) & Yi

China, Yunnan. Green to purplish green, minutely tomentose, culm sheath caducous and coriaceous, no sheath auricles, sheath ligule more or less truncate, used as fence and frame, see *Acta Botanica Yunnanica* 5(1): 39-41, f. 1. 1983.

I. laotica (A. Camus) C.S. Chao & Renvoize (*Arundinaria laotica* A. Camus)

Laos. See *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 3(8): 760. 1931, *Kew Bulletin* 44: 365. 1989.

I. levigata Z.P. Wang & G.H. Ye (*Indosasa shibataeoides* McClure)

China, Hunan. Young culms pruinose, sheath papery and pruinose, no sheath auricles, sheath ligule arcuate and ciliate, sheath blade ovate to lanceolate, one leaf on each twig, leaf blades elliptic to lanceolate to long-elliptic, see *Lingnan University Science Bulletin* 9: 32. 1940, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 99-100, f. 6, 7. 1981, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

I. lipoensis C.D. Chu & K.M. Lan

China, Lipo, Guizhou. Young culms minutely pubescent and not pruinose, three branches on each node, culm sheath deciduous, sheath auricles coarsely hairy and ciliate, sheath ligule arched and shortly ciliate, sheath blade lanceolate to triangular, 2-4 leaves on each twig, see *Bamboo Res.* 1982(1): 3, f. 3. 1982.

I. longispicata W.H. Hsiung & C.S. Chao

China, Guangxi. Young culms minutely pubescent, basal internodes pruinose, sheath auricles small and shortly ciliate, sheath ligule very short and ciliate, used for making frames, growing in evergreen broad-leaved forest, mountains, see *Acta Phytotaxonomica Sinica* 21(1): 71-73, f. 5. 1983.

I. lunata W.T. Lin

China. See *Acta Phytotaxonomica Sinica* 26(3): 226-227, f. 4. 1988.

I. macula W.T. Lin & Z.M. Wu

China. See *Acta Phytotaxonomica Sinica* 26(3): 227-228, f. 5. 1988.

I. parvifolia C.S. Chao & Q.H. Dai

China, south Guangxi. Young culms shortly pubescent, below joint a pruinose ring, culm sheath orange to reddish and shorter than internode, sheath auricles sickle-shaped, sheath ligule very short and ciliate, used for fencing, see *Acta Phytotaxonomica Sinica* 21(1): 67-69, f. 3. 1983.

I. patens C.D. Chu & C.S. Chao

China, north Guangxi. Young culms purplish and densely pubescent, sheath shorter than internode and orange-reddish, sheath auricles wrinkled, sheath ligule ciliate and more or less truncate, edible shoots, construction materials,

fencing, growing in evergreen broad-leaved forest, low mountains, hills, see *Acta Phytotaxonomica Sinica* 21(1): 73, f. 6. 1983.

I. pusilloaurita W.T. Lin

China. See *Bulletin of Botanical Research* 12(4): 351, f. 2. 1992.

I. shibataeoides McClure (*Indosasa acutiligulata* Z.P. Wang & G.H. Ye; *Indosasa levigata* Z.P. Wang & G.H. Ye; *Indosasa tinctilimba* McClure)

China, Guangdong. Small to dwarf, young culms pruinose, internodes irregularly asymmetric or zigzag, three branches per node, sheath caducous, sheath blade triangular to broadly lanceolate, sheath ligule truncate, sheath auricle thinly ciliate, usually 1-2 leaves on each twig, ornamental, cultivated, see *Lingnan University Science Bulletin* 9: 32-33. 1940, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 99-100, f. 6, 7. 1981, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

I. singulispicula Wen

China. See *Journal of Bamboo Research* 7(1): 29-30, f. 4. 1988.

I. sinica C.D. Chu & C.S. Chao

China, Guangxi, Yunnan, south Guizhou. Young culms pruinose and coarse, pruinose ring below joint, sheath coriaceous, sheath blade triangular lanceolate, sheath auricles small and minutely pubescent, sheath ligule ciliate and arcuate, used for construction material, fences, growing in evergreen broad-leaved forest, low mountains, low altitudes, edge of forest, hills, see *Acta Phytotaxonomica Sinica* 21(1): 65-67, f. 2. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

I. sondongensis Nguyen

Vietnam. See *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 877. 1991.

I. spongiosa C.S. Chao & B.M. Yang

China. Young culms pruinose above and below joint, nodes swollen, papery to tough sheath caducous and shorter than internode, sheath blade lanceolate, sheath auricle absent, sheath ligule short and villous, 3-5 leaves on each branch, leaf blades lanceolate or ovate-lanceolate, ornamental, used for weaving, see *Bamboo Res.* 1982(1): 14, f. 1. 1982.

I. suavis W.T. Lin & Z.J. Feng

China. See *Acta Phytotaxonomica Sinica* 30(6): 557-558, f. 1, 1-4. 1992.

I. tinctilimba McClure (*Echinochloa crusgalli* var. *siberiana* (Asch. & Schweinf.) Chevalier; *Indosasa shibataeoides* McClure; *Panicum crusgalli* var. *siberiana* Asch. & Schweinf.; *Panicum sieberianum* (Asch. & Schweinf.) Asch. & Schweinf.; *Panicum sieberianum* (Asch. & Schweinf.) Sickenb.)

China. See *Species Plantarum* 1: 56. 1753, *Illustration de la Flore d'Égypte* 3: 189 et Suppl. 777. 1887 and *Mémoires de l'Institut Égyptien* 4: 300. 1901, *Revue de Botanique Appliquée et d'Agriculture Coloniale* 13: 902. 1933, *Lingnan University Science Bulletin* 9: 32-33. 1940, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 99-100, f. 6, 7. 1981, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

I. triangulata J.R. Xue & T.P. Yi (*Arundinaria triangulata* (J.R. Xue & T.P. Yi) C.S. Chao & G.Y. Yang)

China. See *Acta Botanica Yunnanica* 5(1): 41-42, f. 2. 1983, *Journal of Bamboo Research* 13(1): 16. 1994.

I. wuningensis T.H. Wen & H.Y. Zou

China. See *Journal of Bamboo Research* 10(1): 20. 1991.

Ioackima Tenore = *Beckmannia* Host

Pooideae, Poaceae, Alopecurinae, see *Icones et Descriptiones Graminum Austriacorum* 3: 5. 1805, *Cat. Pl. Hort. Neap.* 53. 1813 and *Index Kewensis* suppl. 12: 74. 1959, *Webbia* 49(2): 265-329. 1995, *Contributions from the United States National Herbarium* 48: 140-141, 402. 2003.

Ipnum Phil. = *Leptochloa* P. Beauv.

Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, type *Ipnum mendocinum* Phil., see *Genera Plantarum* 23. 1776, *Essai d'une Nouvelle Agrostographie* 71, 80, 161. 1812, *Anales de la Universidad de Chile* 36: 211. 1870, *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 15: 521. 1897 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2], Botany* 8(1,5,1): 214-215. 1904, *Ill. Fl. North. U.S. Canada*, edition 2, 229. 1919, *Botanisches Archiv* 5(3-4): 192. 1924, *Contributions from the United States National Herbarium* 24(6): 180. 1925, S.T. Blake, "*Plinthanthesis* and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae)." *Contributions from the Queensland Herbarium* 14: 3. 1972, *Brittonia* 31: 399-404. 1979, *Kew Bulletin* 37: 133-162. 1982, *Flora Mesoamericana* 6: 260-261. 1994, N. Snow, "Nomenclatural changes in *Leptochloa* P. Beauv. sensu lato (Poaceae, Chloridoideae)." *Novon* 8: 78. 1998, *Contributions from the United States National Herbarium* 41: 129, 130-137. 2001.

Irulia Bedd. = *Ochlandra* Thwaites

Bambusoideae, Bambuseae, Melocanninae, see George Henry Kendrick Thwaites (1812-1882) and Joseph Dalton Hooker (1817-1911), *Enumeratio plantarum zeylanicae: an enumeration of Ceylon plants.* 376. London [1858-] 1864, *Transactions of the Linnean Society of London* 26: 144. 1868, *The Flora Sylvatica for Southern India* 239, t. 234.

1873, *Annals of the Royal Botanic Garden, Calcutta.* 7: 125. 1896 and *Bull. de la Société Linnéenne de Lyon* 9: 185-188. 1945, *Rheedea* 5(1): 63-89. 1995, *Contributions from the United States National Herbarium* 39: 64, 81-82. 2000.

Isachna Post & O. Kuntze

Orthographic variant of *Isachne* R. Br.

Isachne R. Br.

From the Greek *isos* "equal, similar" and *achne* "chaff, glume, scale," referring to the lemmas and glumes, or to two equal florets; see Robert Brown, *Prodrum florae Novae Hollandiae.* 196. London 1810.

About 50(-60)/(80-)100-110 species, tropical and subtropical and warm regions, mostly in Asia and tropical Africa. Panicoideae, Panicodae, Isachneae, annual or perennial, often aquatic or semiaquatic, caespitose, herbaceous, erect or decumbent and ascending, sometimes scandent, often geniculate at base, rhizomatous or stoloniferous, creeping and branched rhizomes, nodes glabrous or tuberculate, culm internodes hollow, ligule a ciliate rim, leaves linear to linear-lanceolate, plants bisexual, inflorescence a loose and open panicle, spikelets not subtended by bristles, spikelets deciduous and solitary on slender pedicels, with hermaphrodite florets or without hermaphrodite florets, 2 fertile disarticulating florets, florets similar or dissimilar in shape, upper floret crustaceous and perfect or female, lower floret male and herbaceous, two glumes more or less equal and awnless, lower glume 3- to 9-nerved, upper glume 5- to 9-nerved, lemmas similar or dissimilar, lower lemma variable, upper lemma indurated and rounded to broadly elliptic, palea awnless, 2 lodicules fleshy and glabrous, 3 stamens, ovary glabrous, 2 stigmas, small grain dorsally compressed, weed species mostly hygrophilous, food plant, native pasture species, mostly in marshy ground and wet situations, lower and upper montane forest, rainforest, shady places, forest shade, a difficult genus, type *Isachne australis* R. Br., see *Species Plantarum* 1: 55. 1753, *Prodrum Florae Novae Hollandiae* 196. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 195, 328. 1834, *J. Linn. Soc. Bot.* 19: 30. 1881 and *Fl. Trop. Afr.* 9: 13. 1917, *Hook. Ic. Pl.* 35: t. 3432. 1943, *Bot. Jahrb.* 75: 551-569. 1952, *Reinwardtia* 2: 279-292. 1953, *Fieldiana, Botany* 24(2): 38-331. 1955, *Nat. Pflanzenfam.* (edition 2) 14d: 167, 2. 1956, *Botanical Magazine* (Tokyo) 70: 119-120. 1957, *Grasses of Burma ...* 576-582. 1960, *Blumea* 26(2): 128. 1980, *Fascicles of Flora of India* 14: 1-42. 1984, *Journal Cytol. Genet.* 20: 205-206. 1985, *Genera Graminum* 309-310. 1986, *Kew Bulletin* 42: 927-928. 1987, *Flora*

Mesoamericana 6: 376-377. 1994, *Flora of Ethiopia and Eritrea* 7: 283. 1995, *Plant Pathology* 47(3): 348-354. June 1998, Sandra S. Aliscioni, Liliana M. Giussani, Fernando O. Zuloaga and Elizabeth A. Kellogg, "A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae." *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 273-274. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003 [Morphological variations of lobate phytoliths from grasses in China and the southeastern United States], *Ecological Research* 18(3): 257-266. May 2003, E.A.P. Iskandar & J.F. Veldkamp, "A revision of Malesian *Isachne* sect. *Isachne* (Gramineae, Panicoideae, Isachneae)." *Reinwardtia* 12(2): 159-179. 2004, *Restoration Ecology* 12(3): 456-463. Sep 2004 [Spatial and temporal dynamics of a restored population of *Oryza rufipogon* in Huli Marsh, South China].

Species

I. adstans (Steud.) Miq. (*Panicum adstans* Steud.)

Malaya/Malaysia. See *Synopsis Plantarum Glumacearum* 1: 94. 1854, *Flora van Nederlandsch Indië* 3: 461. 1855.

I. albens Trinius (*Isachne buettneri* Hack.; *Isachne griffithii* Munro; *Isachne latifolia* Munro; *Panicum albens* (Trin.) Trin. ex Steud.)

India, Indonesia, Nepal. Perennial, slender to stout, tufted, erect or decumbent, ascending or scrambling, branched, clump forming, leaf sheaths glabrous, leaves oblong to lanceolate and hispid, panicle effuse densely flowered, spikelets persistent and oblong to obovoid, lower floret crustaceous, native pasture species, readily eaten by cattle, growing in water, wet places, see *Species Graminum* 1828-1836, *Nomenclator Botanicus. Editio secunda* 2: 252. 1841, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 69. 1889, *The Flora of British India* 7: 23. 1896 and *Journal of the Straits Branch of the Royal Asiatic Society* 44: 206. 1905, *Philippine Journal of Science* 1(Suppl.): 350. 1906, *Botanical Magazine* 56: 5. 1942, *Reinwardtia* 2(2): 280. 1953, *Acta Phytotaxonomica Sinica* 10(1): 11. 1965, *Taxon* 22: 117. 1973, *Cytologia* 40: 453-462. 1975, *Journal of Cytology and Genetics* 20: 205-206. 1985.

I. albens Trinius var. ***elatuscula*** (Ohwi) Jansen (*Isachne elatuscula* Ohwi)

Asia. See *Botanical Magazine* 56: 5. 1942, *Reinwardtia* 2(2): 280. 1953.

I. albens Trinius var. ***glandulifera*** Keng f. (*Isachne albens* Trin.)

Asia. See *Acta Phytotaxonomica Sinica* 10(1): 11. 1965.

I. albens Trinius var. ***hirsuta*** Hook.f. (*Isachne hirsuta* (Hook.f.) Keng f.)

Asia. See *The Flora of British India* 7: 23. 1896 and *Acta Phytotaxonomica Sinica* 10(1): 11. 1965.

I. albens Trinius var. ***magna*** (Merr.) Jansen (*Isachne beneckeii* var. *magna* Merr.; *Isachne magna* (Merr.) Merr.)

Asia. See *Philippine Journal of Science* 1(Suppl.): 350. 1906, *Philippine Journal of Science* 5: 327. 1910, *Reinwardtia* 2(2): 280. 1953.

I. albens Trinius var. ***sylvestris*** (Ridl.) Jansen (*Isachne sylvestris* Ridl.)

Asia. See *Journal of the Straits Branch of the Royal Asiatic Society* 44: 206. 1905, *Reinwardtia* 2(2): 279-280. 1953.

I. albomarginata Jansen

Asia, Mount Kinabalu, Borneo. Perennial, see *Reinwardtia* 2(2): 279. 1953.

I. albomarginata Jansen var. ***hirsuta*** Jansen

Asia, Borneo. Perennial, see *Reinwardtia* 2(2): 279. 1953.

I. angladei C. Fischer

South India, Tamil Nadu. Indeterminate species, perennial, wiry, woody, bamboo-like, climbing or spreading, branched, leaf sheaths very loose and glabrous, leaf blades linear, panicle with erect-spreading branches, spikelets obovoid, glumes cuspidate and longer than the spikelets, see *Kew Bulletin* 1932: 323. 1932.

I. angusta Nash (*Isachne angusta* Nees ex Steud.)

Mauritius, Madagascar. See *Synopsis Plantarum Glumacearum* 1: 96. 1854 and *Bulletin of Miscellaneous Information Kew* 1920: 28. 1920.

I. angustifolia Nash

Central America, the Caribbean. Decumbent, herbaceous, densely clumped, see *Bulletin of the Torrey Botanical Club* 30(7): 377. 1903.

in Spanish: yerba-de-alambre

I. arfakensis Ohwi

Western New Guinea. Marshy places, open areas, see *Botanical Magazine* (Tokyo) 56: 4. 1942.

I. arundinacea (Sw.) Griseb. (*Dichantherium viscidellum* (Scribn.) Gould; *Isachne glaucescens* (Kunth) Pittier; *Isachne panicea* Trin.; *Panicum arundinaceum* Sw.; *Panicum glaucescens* Kunth)

Southern America, Bolivia, Peru, Jamaica, Mexico, Ecuador, Brazil. Perennial, herbaceous, tall, long-stemmed, bamboo-like, coarse, scandent, clambering, trailing or dangling, hanging down, weakly scrambling, vinelike with pendent branches, leaf blades narrowly lanceolate acuminate or attenuate, inflorescence light green, dense inflorescence, exerted pyramidal panicle, spikelets orbicular or oblong, lemma elliptic, grains green to purplish dark, weedy, open areas, roadbank, forest edge, similar to *Isachne ligulata*, see *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Nova Genera et Species Plantarum* 1: 104. 1815

[1816], *De Graminibus Paniceis* 253. 1826, *Flora of the British West Indian Islands* 553. 1864 and *Circular, Division of Agrostology, United States Department of Agriculture* 19: 2. 1900, *Bol. Tecn. Ministerio de Agricultura y cria* 1: 49. Caracas 1937, *Brittonia* 32: 357. 1980.

in Spanish: zacate

I. beneckeii Hackel (*Isachne beneckeii* var. *depauperata* Hack. ex Merr.; *Isachne depauperata* (Hack. ex Merr.) Merr.; *Isachne pauciflora* Hack.; *Isachne pauciflora* var. *depauperata* (Hack. ex Merr.) Jansen)

Southeast Asia, Java. See *Österreichische Botanische Zeitschrift* 51: 459. 1901, *Philippine Journal of Science* 1(Suppl. 5): 350. 1906, *Philippine Bur. Gov. Lab. Bull.* 35: 80. 1906, *Philippine Journal of Science* 5: 327. 1910, *An Enumeration of Philippine Flowering Plants* 1: 58. 1922, *Reinwardtia* 2(2): 288. 1953.

I. bicolor Naik & B.W. Patunkar

India, Maharashtra. Perennial, ascending, stiff, creeping, rhizomatous, hirsute leaf blades linear-lanceolate to ovate-lanceolate, panicle few-flowered, long exserted peduncle, dark purple spikelets, florets rounded on back, panicle branches and pedicels glandular, in open moist grassland, see *Bull. Bot. Survey India* 15: 157-158. 1973.

I. borii Hemadri (for the Irish (b. at Tramore, Co. Waterford) botanist Norman Loftus Bor, 1893-1972 (London), agrostologist, plant collector, 1921-1948 Indian Forest Service, Forest Botanist of the Forest Research Institute (Dehra Dun), 1945 President of the Indian Botanical Society, 1948-1959 Assistant Director Kew, 1931 Fellow of the Linnean Society, author of *Manual of Indian Forest Botany*. Oxford University Press, London 1953, with Mukat Behari Raizada wrote *Some Beautiful Indian Climbers and Shrubs*. Bombay Natural History Society - Oxford University Press, Bombay 1982, contrib. to *Indian Forester*. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 220. 1965; C.E. Hubbard, "Norman Loftus Bor (1893-1972)." in *Kew Bulletin*. 30(1): 1-4. 1975; Carolyn M.K. Pope, "A bibliography of the work of Dr. N.L. Bor." in *Kew Bulletin*. 30(1): 4-10. 1975).

India, Maharashtra. Rare species, annual, erect, slender, hirsute leaf blades linear and flat, loose panicle with capillary branches, pedicels glandular, spikelets globose, florets callus with a tuft of long white silky hairs, glumes subequal, grows in moist places, see *Indian Forester* 97(4): 223-225, pl. 1, figs. 1-8. 1971.

I. bourneorum Fischer

India, Tamil Nadu, Kerala. Perennial, erect or ascending, branched, leaf blades linear-lanceolate, rhizomatous, inflorescence a lax panicle with stiff branches, spikelets obovoid, glumes cuspidate-acuminate, florets dissimilar, see *Grasses of Burma ...* 579. 1960.

I. buettneri Hack. (*Isachne albens* Trin.; *Isachne bomoensis* Vanderyst; *Isachne brixhii* Vanderyst; *Isachne minutula*

Benth.; *Isachne mortehani* Vanderyst; *Isachne pynaertii* Vanderyst) (named for the German botanist and ornithologist Oscar Alexander Richard Büttner, 1858-1927, traveler, botanical collector, 1884-1886 in North Angola and Zaïre, 1890-1892 in Togo; see Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19: 861-863. 1965; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 15. 1971; J.H. Barnhart, *Biographical notes upon botanists*. Boston 1965; Frank Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*, (A.E.T.F.A.T.). 69-75. Lisbon 1962)

Tropical Africa. Perennial, hard, scrambling, herbaceous, sap from the stem, forest glades, submontane, flooded places, see *Species Graminum* 1828-1836, *Nomenclator Botanicus. Editio secunda* 2: 252. 1841, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 69. 1889, *The Flora of British India* 7: 23. 1896 and *Journal of the Straits Branch of the Royal Asiatic Society* 44: 206. 1905, *Philippine Journal of Science* 1(Suppl.): 350. 1906, *Bulletin agricole du Congo Belge* 16: 688-689. 1925, *Botanical Magazine* 56: 5. 1942, *Reinwardtia* 2(2): 280. 1953, *Acta Phytotaxonomica Sinica* 10(1): 11. 1965.

in Sierra Leone: kegbil, kemegbir, muli, muri, ndewe, sankabesukwi, sunkabesukwi

I. caillei A. Chev. (for the French explorer Octave Caille, botanist, plant collector; see J.H. Barnhart, *Biographical notes upon botanists*. Boston 1965; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 16. 1971)

French Guinea. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 14: 41. 1934.

I. clarkei Hook.f. (after Charles Baron Clarke, 1832-1906 (Kew, Surrey), mathematician, worked on Indian botany, specialist on Cyperaceae, 1869-1871 Superintendent Calcutta Botanical Gardens, his writings include *Compositae indica*. London [1876] and *A Review of the Ferns of Northern India*. London 1880; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 352. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 146. Oxford 1964; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1904; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 242-244. [1931]; Isaac Henry Burkill, *Chapters on the History of Botany in India*. 144-146. Delhi 1965)

Sikkim, Meghalaya, Nagaland. Annual, erect, weak, slender, more or less delicate, hirsute foliage, leaf blades elliptic

or lanceolate, ligule fringed, panicle effuse with spreading branches, spikelets globose, glumes sparsely hairy, found in marshy places, see *The Flora of British India* 7: 24. 1896 and *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 579. 1960, *Taxon* 24: 512. 1975, *Cytologia* 40: 453-462. 1975.

I. clementis Merr. (for the Reverend Joseph Clemens, (born Cornwall) 1862-1932 (d. New Guinea), Chaplain in U.S. Army (but retired around 1925), with his wife Mary Knapp Clemens (née Strong) collected orchids on Mount Kinabalu and plants in the Philippines, his writings include "The cleft mountain." *Brit. N. Born. Herald.* vol. L, 14: 143-144. 1932, "Mount Kinabalu: a naturalist's description." *Brit. N. Born. Herald.* vol. LI, 1: 7. 1933 and "Mount Kinabalu: the roaring falls of Pinokok." *Brit. N. Born. Herald.* vol. LI, no. 23. 1933. See Jeffrey J. Wood, Reed S. Beaman and John H. Beaman, *The Plants of Mount Kinabalu: Orchids*. Royal Botanic Gardens, Kew 1993; Oakes Ames and Charles Schweinfurth, *The Orchids of Mount Kinabalu*, British North Borneo. Merrymount Press, Boston 1920; A.M. Carter, "The itinerary of Mary Strong Clemens in Queensland, Australia." *Contr. Univ. Michigan Herb.* 15: 163-169. 1982; B.J. Conn, "Mary Strong Clemens: a botanical collector in New Guinea (1935-1941)." in P.S. Short, edition. *History of Systematic Botany in Australasia*. Australia Systematic Botany Society Inc. 217-229. 1990; R.F. Langdon, "The remarkable Mrs Clemens." in D.J. Carr and S.G.M. Carr, eds., *People and Plants in Australia*. 374-383. Academic Press 1981; W.B. Turrill, "J. Clemens." XXXI-Miscell. Notes. *Kew Bull.* 1936: 287-289. 1936; Datin Margaret Luping, Chin Wen and E. Richard Dingley, eds., *Kinabalu - Summit of Borneo*. The Sabah Society, Kota Kinabalu, Sabah, Malaysia 1978; Edwin Bingham Copeland (1873-1964), *Philippine Ferns Collected by R.S. Williams, and Sarawak Ferns Collected by J. and M.S. Clemens*. The New York Botanical Garden. New York, N.Y. 1931 (see also in *Brittonia*. 1(2): 67-70 and 71-78. 1931)

Asia, Mount Kinabalu. Perennial, decumbent, rhizomatous, rooting at the nodes, see *Journal of the Straits Branch of the Royal Asiatic Society* 76: 76. 1917.

I. clementis Merr. var. ***vulcanica*** (Merr.) Jansen (*Isachne vulcanica* Merr.)

Asia. See *Journal of the Straits Branch of the Royal Asiatic Society* 76: 76. 1917, *Philippine Journal of Science* 14: 169. 1919, *Reinwardtia* 2(2): 282. 1953.

I. cochinchinensis Balansa

Asia, Vietnam. See *Journal de Botanique (Morot)* 4: 137. 1890.

I. conferta Merr.

Asia, Philippines. Riverbanks, see *Philippine Journal of Science* 9: 261. 1914.

I. confusa Ohwi (*Isachne rigida* Hook.f.)

India, Sumatra, Indonesia. Perennial, ascending, slender, stiff foliage, very short hispid leaf sheaths, ligule absent, small leaf blades ovate and ciliate, narrow panicle few-flowered with branches spreading at maturity, pedicels glandular, minute spikelets, sandy soil, white sand, see *The Flora of British India* 7: 24. 1896 and *Bulletin of the Tokyo Science Museum* 18: 14. 1947.

in Thailand: ya khai hao

I. confusa Ohwi var. ***purpurascens*** (Glassman) Fosberg & Sachet (*Isachne purpurascens* Glassman)

Pacific Ocean. See *Bulletin of the Tokyo Science Museum* 18: 14. 1947, *Bernice P. Bishop Museum Bulletin* 209: 130, f. 20-21. 1952, *Micronesica* 18(2): 53. 1982 [1984].

I. debilis Rendle

Taiwan. Wetland, see *Journal of the Linnean Society, Botany* 36(253): 322. 1904, *Philippine Journal of Science* 1(Suppl.): 268. 1906.

I. debilis Rendle var. ***incrassata*** Hack. (*Isachne incrassata* (Hack.) Merr.)

The Philippines. Wetland, see *Journal of the Linnean Society, Botany* 36(253): 322. 1904, *Philippine Journal of Science* 1(Suppl.): 268. 1906, *Philippine Journal of Science* 5: 168. 1910.

I. deccanensis Bor

South India, Nilgiri, Tamil Nadu. Indeterminate species, perennial, ascending, densely tufted, slender, branched, wiry rhizomes, linear leaf blades stiff and softly scabrid, panicle open or compact with flexuous branches, spikelets obovoid, related to *Isachne himalaica*, see *Kew Bulletin* 1949: 95. 1949, *Grasses of Burma ...* 579. 1960.

I. diabolica Ohwi

Sumatra. See *Bulletin of the Tokyo Science Museum* 18: 14. 1947.

I. dimyloides Bor

India, Sikkim. Rare species, annual, ascending, leaf blades lanceolate acute, narrow panicle few-flowered with ascending branches, spikelets globose, glumes subequal, florets compressed, see *Kew Bulletin* 1949: 96. 1949, *Grasses of Burma ...* 580. 1960.

I. dispar Trin. (*Isachne lutaria* Santos; *Isachne meneritana* var. *dispar* (Trin.) F.N. Williams; *Isachne miliacea* var. *dispar* (Trin.) Hack.; *Isachne nodibarbatata* (Hochst. ex Steud.) Henrard; *Panicum dispar* (Trin.) Trin.; *Panicum dispar* (Trin.) Steud., nom. illeg., non *Panicum dispar* (Trin.) Trin.; *Panicum nodibarbatum* Hochst. ex Steud.; *Panicum violaceum* Klein ex Thiele, nom. illeg., non *Panicum violaceum* Lam.)

Asia, Nepal. Paddy fields, edge of cultivated fields, flooded places, see *Species Graminum* 1828-1836, *Linnaea* 9(3): 307. 1834, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques*,

Physiques et Naturelles. Seconde Partie: Sciences Naturelles 1: 331. 1834, *Synopsis Plantarum Glumacearum* 1: 95-96. 1854 and *Botanisk Tidsskrift* 24: 96. 1901, *Bulletin de l'Herbier Boissier, sér. 2*, 4: 222. 1904, *Flora of the Presidency of Madras* 10: 1797. 1934, *Blumea* 3(3): 464. 1940, *Journal of the Washington Academy of Sciences* 33: 140. f.3. 1943.

I. disperma (Lam.) Döll (*Ichnanthus dispermus* (Lam.) E. Fourn.; *Isachne dubia* Kunth; *Panicum confertum* Desv. ex Poir.; *Panicum dispermum* Lam.; *Panicum glaucescens* Willd. ex Döll; *Panicum multinerve* Desv. ex Poir.)

West Indies, the Caribbean. Wet places, riverbanks, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 279. 1816, *Révision des Graminées* 1: 42. 1829, *Flora Brasiliensis* 2(2): 274-275. 1877, *Mexicanas Plantas* 2: 35. 1886 and *Flora of the Netherlands Antilles* 1: 121-203. 1963.

I. distichophylla Munro ex Hillebr. (*Isachne distichophylla* Munro; *Panicum wiliwilinuiense* St. John)

U.S., Hawaii. Ground cover, forest, see *Journal of Botany, British and Foreign* 7: 178. 1869, *Flora of the Hawaiian Islands* 504. 1888.

in English: ridgetop blood grass

in Hawaii: 'ohe

I. eberhardtii A. Camus

Asia, Vietnam. See *Bulletin du Muséum National d'Histoire Naturelle* 25: 671. 1919.

I. elatior Hook.f. (*Isachne kunthiana* var. *elatior* (Hook.f.) Alston)

India. See *The Flora of British India* 7: 22. 1896 and *Handb. Fl. Ceylon* 6: 316. 1931.

I. elegans Dalz. (*Isachne elegans* C. Cordem., nom. illeg., non *Isachne elegans* Dalzell; *Isachne elegans* Dalzell ex Hook.f., nom. illeg., non *Isachne elegans* Dalzell)

India, Maharashtra, Western Ghats. Rare species, annual, densely tufted, erect, fibrous roots, leaf blades linear, densely flowered panicle loose to compact, spikelets globose, glumes glabrous or silky, lemmas pubescent, riverbanks, margins of streams and swamps, wet places, see *The Bombay Flora ...* 291. 1861, *Flore de l'Île de la Réunion* 115. 1895, *The Flora of British India* 7: 23. 1896 and *Ann. Arid Zone* 5: 49-62. 1962, *Bull. Bot. Survey India* 6: 237-266. 1964.

in India: deonda, doonda, dunda

I. fauriei Ohwi

Taiwan. See *Botanical Magazine (Tokyo)* 45(536): 386. 1931.

I. fischeri Bor

India, Kerala. Rare species, annual, erect or ascending, low growing, hirsute leaf blades lanceolate or elliptic, lax inflorescence racemose few-flowered, spikelets obovoid-oblong, glumes cuspidate-acuminate, lower lemma elliptic and papery, upper lemma ovate-elliptic and coriaceous, grassy slopes, moist ground, see *Kew Bulletin* 1949: 69. 1949.

I. glaucescens (Kunth) Pittier (*Panicum glaucescens* Kunth)

Venezuela. See *Nova Genera et Species Plantarum* 1: 104. 1815 [1816] and *Boletín técnico. Ministerio de agricultura y cria* 1: 49. 1937.

I. glaziouii Hack. (*Isachne glaziouii* Hack. ex Potztl)

Brazil. Tough rambling culms, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 555, 568. 1952.

I. globosa (Thunberg) Kuntze (*Agrostis globosa* (Thunb.) Poir.; *Eriochloa globosa* (Thunb.) Kunth; *Isachne australis* R. Br.; *Isachne dispar* Trinius; *Isachne globosa* var. *brevispicula* Ohwi; *Isachne miliacea* Roth; *Milium globosum* Thunb.; *Panicum gonatodes* Steud.)

South Australia, Queensland, New South Wales, Victoria, New Zealand and India, Indonesia, Sri Lanka to Japan. Annual or short-lived perennial, polymorphic, aquatic or semiaquatic, emergent, rapidly growing, stems smooth and hairless, decumbent at base and rooting, slender and graceful, branching near base, nodes glabrous, creeping rhizome, ligule a rim of cilia, leaf sheaths folded around culm, leaves linear-lanceolate and hispid or slightly rough, inflorescence terminal and much branched, purplish spikelets ovoid to globose, lower floret herbaceous male or bisexual, upper floret crustaceous female or bisexual, subequal glumes ovate and convex, lower lemma elliptic and smooth, upper lemma ovate-elliptic and coriaceous, a good fodder, highly palatable, green manure, food plant, tender tops eaten in Java, seed eaten by birds, weed species in rice fields, waterlogging tolerance high, drought tolerance low, forming loose erect or sprawling clumps, grows in and beside fresh water, ditches, lake margins, coastal plain, wetlands, seepages, wet soils, margins of swamps and streams, marshy habitats, wet places and swamps, margins of ponds and dams, see *Flora Japonica, ...* 49. 1784, *Prodromus Florae Novae Hollandiae* 1: 196. 1810, *Encyclopédie Méthodique, Botanique Suppl.* 1: 257. 1810, *Species Graminum* 1: pl. 86. 1827 [1828], *Révision des Graminées* 1: 30. 1829, *Enum. Pl. Zeyl.* 361. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 104. 1885, *Revisio Generum Plantarum* 1(2): 778. 1891, *Fl. Br. Ind.* 7: 25. 1896 and *Handb. Fl. Ceylon* 5: 128. 1900, *Acta Phytotaxonomica et Geobotanica* 11(1): 54. 1942, *Grasses of Ceylon* 109. 1956, *Curr. Sci.* 28: 78-79. 1959, *Grasses of Burma ...* 580, 582. 1960, *Canadian J. Botany* 52: 1075-1090. 1974, *Micronesica* 18(2): 45-102. 1982.

in English: swamp millet, marsh millet, globose twinball grass

in India: mez

in Japan: chigo-zasa, chigozaza

in Sarawak: kerapok

in Sri Lanka: bata della

in Thailand: ya pha rai, ya fa rai

I. globosa (Thunberg) Kuntze var. ***ciliaris*** Ohwi

Pacific Ocean. See *Revisio Generum Plantarum* 1(2): 778. 1891 and *Botanical Magazine* (Tokyo) 55: 540. 1941.

I. globosa (Thunberg) Kuntze var. ***compacta*** W.Z. Fang & S.L. Chen

Asia. See *Revisio Generum Plantarum* 1(2): 778. 1891 and *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1988-1989: 2. 1990.

I. globosa (Thunberg) Kuntze var. ***daviumbuense*** Jansen
Papua New Guinea, Lake Daviumbu. See *Reinwardtia* 2(2): 282. 1953.

I. globosa (Thunberg) Kuntze var. ***effusa*** (Trimen ex Hook.f.) Senaratna (*Isachne australis* var. *effusa* Trimen ex Hook.f.)

Asia. See *Revisio Generum Plantarum* 1(2): 778. 1891, *The Flora of British India* 7: 25. 1896 and *Peradeniya Manual* 109. 1956 [also *Grasses of Ceylon*].

I. globosa (Thunberg) Kuntze var. ***obscura*** (Büse) Henrard (*Isachne miliacea* var. *obscura* Büse)

Asia. See *Plantae Junghuhnianae* 3: 378. 1854 and *Blumea* 3: 465. 1940.

I. goiasensis Renvoize

Brazil. See *Kew Bulletin* 42: 928. 1987.

I. gracilis C.E. Hubb.

India, Karnataka, Madhya Pradesh. Indeterminate species, annual, very weak, delicate, erect, decumbent, acute leaf blades very thin and soft, panicle open with glandular branches and pedicels, spikelets globose, glumes hirsute on the back, florets dissimilar, deep shade or partial, rocky places, moist sites, see *Bulletin of Miscellaneous Information Kew* 1927: 77. 1927.

I. guangxiensis W.Z. Fang

China. See *Acta Phytotaxonomica Sinica* 22(4): 306-307, f. 1. 1984.

I. guineensis Stapf & C.E. Hubbard

French Guinea. Vulnerable species, along stream, in or near water, see *Kew Bulletin* 1933: 302. 1933.

I. hackelii Lindm. (*Briza hackelii* (Lindm.) Ekman; *Briza poimorpha* (J. Presl) Henrard; *Microbriza poimorpha* (J. Presl) Parodi ex Nicora & Rúgolo; *Panicum poaemorphum* J. Presl; *Poidium poimorphum* (J. Presl) Matthei)

Brazil. See *Reliquiae Haenkeanae* 1(4-5): 310. 1830 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 11, t. 5. 1900, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 61. 1913, *Mededeelingen van's Rijks-Herbarium* 40: 73. 1921, *Willdenowia* Beiheft 8: 1-168. 1975, *Darwiniana* 23(1): 295. 1981.

I. hansenii Bor

Southeast Asia, Thailand. See *Dansk Bot. Arkiv* 23: 470. 1968.

I. himalaica Hook.f.

India. Perennial, solitary or loosely tufted, erect or ascending, rhizomatous, acuminate leaf blades glabrous or scabrid, panicle effuse with flexuous branches, pedicels glandular, lower floret crustaceous, wet places, damp places along riverbanks and streams, see *The Flora of British India* 7: 23. 1896 and *Brittonia* 5: 453. 1945, *Taxon* 23: 807-808. 1974, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

I. hirsuta (Hook.f.) Keng f. (*Isachne albens* Trinius var. *hirsuta* Hook.f.)

Asia, India. Perennial, ascending, leaf sheaths densely hirsute and ciliate, panicle branches pyramidal, spikelets oblong or ovoid, glumes pilose on back, see *The Flora of British India* 7: 23. 1896 and *Acta Phytotaxonomica Sinica* 10(1): 11. 1965.

I. incrassata (Hack.) Merr. (*Isachne debilis* var. *incrassata* Hack.)

The Philippines. See *Philippine Journal of Science* 1(Suppl.): 268. 1906, *Philippine Journal of Science* 5: 168. 1910.

I. kidumaensis Vanderyst

Africa. See *Bulletin agricole du Congo Belge* 9: 247. 1918, *Bulletin agricole du Congo Belge* 16: 689. 1925.

I. kinabaluensis Merr.

Asia, Mount Kinabalu. Perennial, densely tufted, erect, ascending, variable, stiff leaf blades lanceolate, leaf sheaths overlapping and hirsute, panicle compound with spreading and flexuous branches, pedicels glandular, see *The Flora of British India* 7: 24. 1896[1897] and *Journal of the Straits Branch of the Royal Asiatic Society* 76: 71, 77. 1917, *Reinwardtia* 2: 283. 1953, *Bull. Bot. Survey India* 21: 180-182. 1979.

I. kiyalaensis Robyns (*Panicum kiyalaense* Vanderyst)

Africa, Benin. Herbaceous, weak, slender, ascending, found in marshy places, forest shade, see *Bulletin agricole du Congo Belge* 10: 246. 1919, *Bulletin du Jardin Botanique de l'État* 9(3): 199. 1932.

in Nigeria: ilulo kele

in Sierra Leone: muli, nyawule, peni-pa-pagbil, suewn

I. kunthiana (Wight & Arn. ex Steud.) Miq. (*Isachne elatior* Hook.f.; *Isachne kunthiana* (Wight & Arn. ex Steud.)

Nees ex Steud.; *Isachne kunthiana* (Wight & Arn. ex Steud.) Thwaites, nom. illeg., non *Isachne kunthiana* (Wight & Arn. ex Steud.) Miq.; *Isachne metzii* (Hochst. ex Steud.) Henrard; *Isachne neesiana* Arn. ex Steud.; *Panicum cuspidiglume* Steud.; *Panicum kunthianum* Wight & Arn. ex Steud.; *Panicum metzii* Hochst. ex Steud.; *Panicum neesiana* Arn. ex Steud.)

Taiwan, Indonesia, Sri Lanka, India to southeast Asia. Perennial or annual, erect to decumbent, ascending, creeping, rooting at the lower nodes, densely tufted or matted, sometimes rhizomatous, branched, leaf sheaths hirsute and rounded, ligule none or present, leaf blades ovate to elliptic or lanceolate, lax panicle, spikelets obovoid-elliptic, lower floret perfect, upper floret pistillate, glumes cuspidate-acuminate, upper glume similar to the lower, stigmas purple, near water, along streams, open places, see *Synopsis Plantarum Glumacearum* 1: 95-96. 1854, *Flora van Nederlandsch Indië* 3: 460. 1857, *Enumeratio Plantarum Zeylanicae* 362. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 104. 1885, *Fl. Br. Ind.* 7: 22. 1896 and *Handb. Fl. Ceylon* 5: 127. 1900, *Journal of the Straits Branch of the Royal Asiatic Society* 82, 203. 1920, *Handb. Fl. Ceylon* 6: 316. 1931, *Flora of the Presidency of Madras* 10: 1796. 1934, *Blumea* 3(3): 467. 1940, *Grasses of Ceylon* 108. 1956, *Grasses of Burma* ... 581. 1960, *Journal of Japanese Botany* 37(8): 236. 1962, *Canadian J. Botany* 52: 1075-1090. 1974, *Taxon* 24: 367. 1975, *Grasses of Japan and its Neighboring Regions* 511. 1987.

I. kunthiana (Wight & Arn. ex Steud.) Miq. subsp. ***nudiglumis*** (Hack.) T. Koyama (*Isachne myosotis* var. *nudiglumis* Hack.)

Asia. Based on quantitative characters, see *Flora van Nederlandsch Indië* 3: 460. 1857 and *Journal of Japanese Botany* 37(8): 236. 1962, *Grasses of Japan and its Neighboring Regions* 511. 1987.

I. kunthiana (Wight & Arn. ex Steud.) Miq. var. ***elatiior*** (Hook.f.) Alston (*Isachne elatiior* Hook.f.)

Asia, India. Based on quantitative characters, see *The Flora of British India* 7: 22. 1896 and *Handb. Fl. Ceylon* 6: 316. 1931, *Grasses of Ceylon* 108. 1956, *Grasses of Burma* ... 581. 1960.

I. kunthiana (Wight & Arn. ex Steud.) Miq. var. ***eligulata*** Davidse

Sri Lanka. Ligule absent, found in montane habitats, see *Flora van Nederlandsch Indië* 3: 460. 1857 and *Revised Handbook to the Flora of Ceylon* 8: 268-269. 1994.

I. kunthiana (Wight & Arn. ex Steud.) Miq. var. ***kunthiana***

Sri Lanka. Creeping, rooting at the nodes, ligule present, see *Flora van Nederlandsch Indië* 3: 460. 1857 and *Revised Handbook to the Flora of Ceylon* 8: 269-270. 1994.

I. kunthiana (Wight & Arn. ex Steud.) Miq. var. ***latifolia*** Hook.f.

Asia, India. See *The Flora of British India* 7: 22. 1896.

I. kunthiana (Wight & Arn. ex Steud.) Miq. var. ***srilankensis*** Davidse

Sri Lanka. Creeping, rooting at the nodes, ligule absent, found in montane habitats, see *Flora van Nederlandsch Indië* 3: 460. 1857 and *Revised Handbook to the Flora of Ceylon* 8: 270-271. 1994.

I. laevis Boivin ex A. Camus

La Réunion. See *Bulletin de la Société Botanique de France* 73: 917. 1927.

I. langkawiensis Jansen (Langkawi Island)

Malaysia. Rare species, limestone, see *Reinwardtia* 2(2): 284. 1953.

I. leersioides Griseb.

Cuba. See *Memoirs of the American Academy of Arts and Sciences, new series* 8: 533. 1862.

I. ligulata Swallen (*Isachne rigens* (Sw.) Trin.)

Colombia, Venezuela, Peru. Perennial, herbaceous, stiff, smooth, terrestrial, scrambling, ligules ciliate, rigid leaf blades linear-lanceolate, lower floret indurate, upper floret glabrous, forest edge, similar to *Isachne arundinacea* (Sw.) Griseb., see *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *De Graminibus Paniceis* 252. 1826 and *Caldasia* 2(8): 301-306. 1943.

I. lisboae Hook.f.

India, Karnataka, Maharashtra. Annual, prostrate or ascending, creeping, leaf sheaths very loose, soft leaf blades lanceolate, long wiry roots, lax panicle few-flowered, spikelets globose, glumes densely setose on back, lemmas hemispherical, indeterminate species, erect and leafless when in water, near marshy places, see *The Flora of British India* 7: 22. 1896 and *The Bombay Grasses* 5: 187, t. 120. 1935.

I. longifolia C. Cordem.

La Réunion. See *Flore de l'Île de la Réunion* 115. 1895.

I. mauritiana Kunth (*Isachne aethiopica* Stapf & C.E. Hubb.)

Mauritius, Tanzania, Madagascar. Perennial, rambling, geniculately ascending, prostrate base, rooting at the nodes, leaf blades linear-lanceolate to lanceolate, inflorescence loose and open, panicle broadly ovate, spikelets obovoid on long pedicels, florets bisexual, along roadsides and trails, rain forest, swampy areas, wet forest, see *Révision des Graminées* 1: 243, t. 33. 1830, *Journal of the Linnean Society, Botany* 29: 65. 1891 and *Bulletin of Miscellaneous Information Kew* 1933: 300. 1933, *Bulletin of Miscellaneous Information Kew* 1939: 654. 1939.

I. meeboldii C. Fisch. (after the German botanist Alfred Karl Meebold, 1863-1952, traveler and botanical collector, from 1928 to 1938 traveled widely in Australia, South Africa and southwest. U.S., novelist and essayist, poet, his

works include *Indien*. München 1908 [1907]; see I.H. Vetter, *Index Herbariorum*. Part II (4), *Collectors M. Regnum Vegetabile* vol. 93. 1976; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 249. Cape Town 1981)

India, Karnataka. Rare species, perennial, erect, leaf blades linear, leaf sheaths tapering at apex, fibrous roots, panicle compact and densely flowered with pedicels and branches glandular, spikelets globose, florets slightly exerted, see *Bulletin of Miscellaneous Information Kew* 1932: 323. 1932.

I. micrantha Merr. (*Isachne myosotis* var. *micrantha* (Merr.) Jansen)

The Philippines. See *Philippine Journal of Science* 5: 168. 1910, *Reinwardtia* 2(2): 286. 1953.

I. miliacea Roth ex Roemer & Schultes (*Isachne geniculata* Griff.; *Isachne miliacea* Roth, nom. illeg., non *Isachne miliacea* Roth ex Roem. & Schult.; *Isachne stigmatisa* Griff.)

Southeast Asia. Perennial, delicate, decumbent, low, weak, erect or ascending, creeping, rooting from the lower nodes, leaf blades lanceolate, lax panicle with flexuous branches, spikelets obovoid, a good fodder eaten, confused with *Isachne pulchella*, related to *Isachne globosa*, see *Syst. Veg.* 2: 476. 1817, *Novae Plantarum Species* 58. 1821, *Mant.* 2: 266. 1824, *Species Graminum* 1: t. 86. 1828, *Icon. Pl. Asiat.* 3: pl. 148. f. 2. 1851, *Notulae ad Plantas Asiaticas* 3: 41-42. 1851, *Plantae Junghuhnianae* 3: 379. 1854 and *Botanisk Tidsskrift* 24: 96. 1901, *Transactions of the Linnean Society of London, Botany* 9: 247. 1916, *Fl. Assam* 5: 197. 1940, *Blumea* 3: 465, 467. 1940, *Reinwardtia* 2(2): 285. 1953, *Taxon* 24: 367. 1975, *Cytologia* 41: 621-637. 1976, *Taxon* 26: 268. 1977, *Micronesica* 18(2): 45-102. 1982.

in English: isachne

I. miliacea Roth ex Roemer & Schultes var. *minutula* (Gaudich.) Fosberg & Sacht (*Isachne minutula* Benth.; *Panicum minutulum* Gaudich.)

Micronesia. See *Voyage autour du Monde* 410. 1829 and *Micronesica* 18(2): 55. 1982[1984].

I. miliacea Roth ex Roemer & Schultes var. *obscura* Büse (*Isachne globosa* var. *obscura* (Büse) Henrard)

Micronesia. See *Plantae Junghuhnianae* 3: 378. 1854 and *Blumea* 3: 465. 1940.

I. minutula (Gaudich.) Kunth (*Isachne buettneri* Hack.; *Isachne minutula* Benth.; *Panicum minutulum* Gaudich.)

Pacific. See *Révision des Graminées* 1: Suppl. 1829, *Voyage autour du Monde* 410. 1829, *Révision des Graminées* 2: 407. pl. 117. 1831, *Plantae Junghuhnianae* 3: 379. 1854, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 69. 1889 and *Blumea* 3: 465. 1940, *Micronesica* 18(2): 55. 1982[1984].

I. multiflora (Thwaites) Ferguson (*Isachne australis* var. *multiflora* Thwaites; *Isachne multiflora* (Thwaites) Trimen, nom. illeg., non *Isachne multiflora* (Thwaites) Ferguson)

Sri Lanka. Perennial, erect, hollow, leaf sheaths rounded, leaf blades linear and acuminate, panicle with ascending branches, upper floret pistillate, lower floret perfect, glumes ovate and obtuse, in marshy areas, see *Enumeratio Plantarum Zeylaniae* 361. 1864, *J. Roy. Asiat. Soc., Ceylon Branch* 6: 69. 1880, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 104. 1885 and *Handb. Fl. Ceylon* 5: 127. 1900, *Grasses of Ceylon ...* 582. 1960.

I. myosotis Nees (*Panicum myosotis* (Nees) Steud.)

Indonesia, Southeast Asia, the Philippines. See *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 98. 1850, *Synopsis Plantarum Glumacearum* 1: 96. 1854, *Bulletin de l'Herbier Boissier &*: 721. 1899 and *Philippine Journal of Science* 5: 168. 1910, *Botanical Magazine* (Tokyo) 38(447): 58. 1924, *Reinwardtia* 2(2): 286. 1953.

I. mysorensis Sundararaghavan

India, Karnataka. Rare species, annual, weak, delicate, erect, softly hirsute leaf blades ovate to ovate-elliptic, leaf sheaths hirsute, loose panicle, globose spikelets, glumes hispid to hirsute on back, lemmas concave and coriaceous, in moist areas, rocky crevices, see *Indian Forester* 97(6): 304-307, pl. 1. 1971.

I. nipponensis Ohwi

Korea, Southeast Asia, Taiwan, China. Understory species, see *Botanical Magazine* 38(447): 58. 1924, *Acta Phytotaxonomica et Geobotanica* 4(1): 30-31. 1935, *Flora of Japan supplement* 933. 1936.

I. nipponensis Ohwi var. *kiangsiensis* Keng f.

Southeast Asia. See *Acta Phytotaxonomica et Geobotanica* 4(1): 30-31. 1935, *Acta Phytotaxonomica Sinica* 10(1): 21. 1965.

I. nipponensis Ohwi var. *minor* (Honda) Nemoto (*Isachne myosotis* var. *minor* Honda)

Southeast Asia. See *Botanical Magazine* 38(447): 58. 1924, *Acta Phytotaxonomica et Geobotanica* 4(1): 30-31. 1935, *Flora of Japan supplement* 933. 1936, *Acta Phytotaxonomica Sinica* 10(1): 21. 1965.

I. oreades (Domin) Bor (*Panicum aequiglume* Hook.f., nom. illeg., non *Panicum aequiglume* Hack. & Arechav.; *Panicum oreades* Domin)

India, Tamil Nadu. Rare species, perennial, ascending, leaf blades lanceolate and hirsute, panicle effuse with spreading branches, spikelets acute or obovoid, florets included, glumes acute-obtuse and smooth, allied to *Isachne globosa*, see *The Flora of British India* 7: 44. 1896 and *Bibliotheca Botanica* 85: 297. 1915, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 582. 1960.

I. pallens Hillebr.

U.S., Hawaii. Woods, see *Flora of the Hawaiian Islands* 504. 1888.

in English: Kauai blood grass

I. pangrangensis Zollinger & Moritzi (also spelled *pangerangensis*) (*Isachne firmula* Büse; *Isachne pangerangensis* Zoll. & Moritzi; *Panicum rhabdinum* Steud.; *Panicum rhignon* Steud.) (named after Gunung Gede-Pangrango, near Bogor, West Java, Indonesia) (from the Greek *rhabdos* “a rod, stick, a magic wand”; Greek *rhigoo* “to be rigid, to be cold,” *rhigos* “cold, frost”)

Southeast Asia, Indonesia. Tiny highland grass, found in meadow and grassland areas, subalpine, see *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844* 102. 1845-1846, *Plantae Junghuhnianae* 3: 288, 379. 1854, *Synopsis Plantarum Glumacearum* 1: 95-96. 1854 and *Philippine Journal of Science* 3: 167. 1908, *Blumea* 3: 471. 1940, *Blumea* 4(3): 530. 1941, *Reinwardtia* 2(2): 288, f. 9b. 1953.

I. polygonoides (Lam.) Döll (*Isachne trachyspermum* (Nees) Nees; *Isachne trachyspermum* (Nees) Balansa, nom. illeg., non *Isachne trachyspermum* (Nees) Nees; *Panicum parviflorum* R. Br.; *Panicum polygonoides* Lam.; *Panicum polygonoides* Müll. Hal., nom. illeg., non *Panicum polygonoides* Lam.; *Panicum trachyspermum* Nees)

Venezuela, Bolivia, Peru, Costa Rica, Mexico, Guatemala, Brazil. Annual, aquatic or semiaquatic, emergent, decumbent, ascending, prostrate, forming colonies, leaf blades narrowly ovate, light green inflorescence, ovate panicle with right-angled or reflexed stiff branches, spikelets orbicular, lower lemma elliptic and membranous, upper lemma coriaceous, encountered in wetlands, inundated fields, marshy places, swampy grassland, in or near water, shallow water, riverbanks, stream margin, see *Encyclopédie Méthodique, Botanique* 4: 742. 1798, *Prodromus Florae Novae Hollandiae* 192. 1810, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 212. 1829, Berthold Carl Seemann (1825-1871), “Abstract of a journal kept during the voyage of *H.M.S. Herald*.” Hook., *J. Bot. Kew Gdn. Misc.* 4: 18-26, 82-92, 212-217, 238-242. 1852, *The Botany of the Voyage of H.M.S. Herald, under the Command of Captain Henry Kellett, R.N., C.B., during the Years 1845-1851*. Published under the authority of the Lords Commissioners of the Admiralty by Berthold Seemann ... naturalist of the expedition. 224. London 1852-1857 [Gramineae by William Munro and Nees], *Botanische Zeitung, Berlin* 19(44): 323. 1861, *Flora Brasiliensis* 2(2): 273. 1877, *Journal de Botanique (Morot)* 4: 137. 1890 and *Monogr. Digitalia* 523. 1950, *Fieldiana, Botany* 24(2): 38-331. 1955, *Ceiba* 19(1): 1-118. 1975, *Willdenowia* 11(2): 333-341. 1981, *Flora Mesoamericana* 6: 376-377. 1994, M.J. Balick, M.H. Nee & D.E. Atha, “Checklist of the vascular plants of Belize” *Memoirs of the New York Botanical Garden* 85: i-ix, 1-246. 2000.

I. puberula Bor

Thailand. Indeterminate species, see *Dansk Botanisk Arkiv* 23: 147. 1965.

I. pubescens Swallen

Guatemala. Sprawling, scandent, trailing, edge of forest, clearings, wet places, rocky riverbanks, roadbanks, along roadsides, see *Contributions from the United States National Herbarium* 29(9): 426. 1950.

I. pulchella Roth ex Roemer & Schultes (*Isachne pulchella* Roth, nom. illeg., non *Isachne pulchella* Roth ex Roem. & Schult.; *Sphaerocaryum pulchellum* (Roth ex Roem. & Schult.) Merr.; *Sphaerocaryum pulchellum* A. Camus, nom. illeg., non *Sphaerocaryum pulchellum* (Roth ex Roem. & Schult.) Merr.; *Studelella pulchella* (Roth ex Roem. & Schult.) Honda)

Tropical Asia, Southeast Asia, Australia. Annual, aquatic, ascending, slender, branched, stoloniferous, often glandular, leaf blades ovate-lanceolate and hirsute, narrow and purplish panicle with spreading branches, spikelets globose, glumes unequal and glabrous, found in creek, confused with *Isachne miliacea*, see *Systema Vegetabilium* 2: 476. 1817, *Mant.* 2: 265. 1824 and *Philippine Journal of Science* 11: 52. 1916, *Flore Générale de l'Indo-Chine* 7: 514. 1923, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(2): 259. 1930, *Kew Bulletin* 321-322. 1952, *Fl. Malaya* 3: 120. 1971.

I. pygmaea Griseb.

Jamaica, the Caribbean. Rare species, see *Flora of the British West Indian Islands* 553. 1864 and A.S. Hitchcock, *Manual of the Grasses of the West Indies* 1936, C.D. Adams, *Flowering Plants of Jamaica* 1972.

I. pynaertii Vanderyst (*Isachne buettneri* Hack.)

Africa. See *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 69. 1889 and *La Compagnie du Kasai*, à l'Exposition de Tervuren en 1910. Bruxelles 1910, M.W. Hilton-Simpson, *Land and Peoples of the Kasai*. Being a narrative of a two years' journey among the cannibals of the Equatorial Forest and other savage tribes of the south-western Congo. London 1911, E. Torday and T.A. Joyce, *Notes ethnographiques sur les Populations habitant les Bassins du Kasai et du Kwango Oriental*. Bruxelles 1922, *Bulletin agricole du Congo Belge* 16: 688. 1925.

I. refracta Hook.f.

Africa, Cameroon. See *Journal of the Linnean Society, Botany* 1: 227. 1864.

I. rigens (Sw.) Trin. (*Isachne ligulata* Swallen; *Panicum rigens* Sw.; *Panicum rigens* Mez, nom. illeg., non *Panicum rigens* Sw.; *Panicum rigens* Salzm. ex Steud., nom. illeg., non *Panicum rigens* Sw.)

Central and South America. Caespitose, montane to alpine, herbaceous, erect, decumbent, scrambling, trailing, sprawling, scandent, rooting at the nodes, forming colonies or large stands, growing in open areas, along roadsides, roadbanks, subpáramos, slope, primary forest, see *Nova Genera et Species Plantarum seu Prodrum* 23. 1788, *De Graminibus Paniceis* 252. 1826, *Synopsis Plantarum Glumacearum* 1: 76. 1854 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 141. 1904, James Francis Macbride (1892-1976), "Gramineae. Flora of Peru" *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Caldasia* 2(8): 305. 1943, *Fieldiana, Botany* 24(2): 38-331. 1955, *Flowering Plants of Jamaica* 1972.

I. rigida Nees ex Miq. (*Isachne rigida* Hook.f.)

Dutch Indies. See *Flora van Nederlandsch Indië* 3: 461. 1857, *The Flora of British India* 7: 24. 1896.

in Thailand: yaa phak kai, ya phak khai, ya phak kai

I. rigidifolia (Poir.) Urb. (*Agrostis rigidifolia* Poir.; *Ichnanthus trinii* (Kunth) Pilg.; *Milium rigidifolium* (Poir.) Roem. & Schult.; *Panicum rigidifolium* (Poir.) Kunth; *Panicum rigidifolium* Trin., nom. illeg., non *Panicum rigidifolium* (Poir.) Kunth; *Panicum trinii* Kunth)

West Indies, the Caribbean. Climbing, see *Encyclopédie Méthodique, Botanique* Suppl. 1: 257. 1810, *Systema Vegetabilium* 2: 319. 1817, *Révision des Graminées* 1: 37. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 88. 1833 and *Symbolae Antillarum* 4: 85. 1903, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 245. 1931, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979.

in Martinique: petit calumet

I. salzmännii (Trin. ex Steud.) Renvoize (*Isachne ventricosa* (Lam.) Döll; *Panicum brizoides* Salzm. ex Döll; *Panicum salzmännii* Trin. ex Steud.; *Panicum ventricosum* Lam.)

South America. Annual, decumbent, rooting at the lower nodes, leaf blades linear-lanceolate acute, panicle oblong with branches flexuous and ascending, spikelets orbicular, lower floret male, upper floret female, in wet places, see *Encyclopédie Méthodique, Botanique* 1: 173. 1791, *Synopsis Plantarum Glumacearum* 1: 95. 1854, *Flora Brasiliensis* 2(2): 274, pl. 35. 1877 and *Kew Bulletin* 39(1): 184. 1984, *The Grasses of Bahia* 99. 1984.

I. sapini Vanderyst (*Panicum sapini* (Vanderyst) Robyns)

Africa. Marshy places, see *Bulletin agricole du Congo Belge* 16: 688. 1925, *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 34. 1932.

I. scabrosa Hook.f.

India, Khasi Hills. Perennial, erect or suberect, rambling, geniculate, leaf sheaths loose and hirsute, leaf blades linear-lanceolate and acuminate, leaves rigid and very scabrous, panicle compound and effuse with pyramidal branches, spikelets globose and deciduous, grows in shady places, along riverbanks and streams, see *Enum. Fl. Pl. Nepal* 1: 136. 1978.

I. schmidtii Hack.

Thailand. Along streams and riverbanks, see *Botanisk Tidsskrift* 24: 99. 1901.

I. semitalis Ridl.

Malay Peninsula. See *The Flora of the Malay Peninsula* 5: 237. 1925.

I. setosa C.E.C. Fisch. (*Isachne setosa* Hook.f.)

India, Karnataka, Tamil Nadu, Western Ghats, Kerala. Rare species, annual, low, slender, erect, fibrous roots, leaf sheaths hirsute, leaf blades ovate to ovate-elliptic, narrow panicle with stiff branches, spikelets obovoid-elliptic, glumes caudate-acuminate, upper glume longer than the floret, montane grasslands, bogs, related to *Isachne bourneorum*, see *Kew Bulletin* 1932: 247. 1932.

I. sikkimensis Bor

India, Sikkim. Annual, weak, erect, decumbent, leaf sheaths glabrous or sparsely hirsute, softly hairy leaf blades elliptic or linear-lanceolate, panicle effuse with flexuous branches, pedicels without glandular bands, spikelets smooth and elliptic, florets included, lemmas concave, see *Taxon* 21: 340-341. 1972, *Kew Bulletin* 115. 1949, *Cytologia* 40: 453-462. 1975, *Enum. Fl. Pl. Nepal* 1: 136. 1978.

I. smitinandiana A. Camus (named after the botanist Tem Smitinand, 1920-1995, orchid taxonomist, plant collector with M. Raymond and also with Hermann Otto Sleumer (1906-1993) and B. Hansen, Director of the Royal Thailand Department of Forestry, wrote *Thai Plant Names*. Royal Forest Department. Bangkok 1980, coauthor with Gunnar Seidenfaden of *The Orchids of Thailand*. 1959-1965; see I.H. Vegter, *Index Herbariorum*. Part II (6), *Collectors S. Regnum Vegetabile* vol. 114. 1986)

Southeast Asia, Thailand. Wet places, rocky sites, see *Notulae Systematicae. Herbarium du Museum de Paris* 14: 256. 1952.

in Thailand: yaa naai tem, ya nai tem

I. swaminathanii Ved Prakash & S.K. Jain

India, Maharashtra. Perennial, erect, decumbent, robust, stiff, leaf blades linear-lanceolate to broadly-lanceolate, effuse panicle pyramidal with flexuous branches, spikelets globose, glumes glabrous or setose, grows in damp and shady places, sand, rocky areas, see *Proceedings of the Indian Academy of Sciences. Plant Sciences* 92(1): 19-22. 1983.

I. veldkampii Bhatt & Nagendran

India, Maharashtra. Annual, very low, erect, leaf sheaths and blades glabrous, leaf blades ovate, panicle branches glandular, spikelets globose, glumes minutely hairy, coriaceous lemmas elliptic and concave with woolly hairs at the base, see *Curr. Sci.* 52: 258-259. 1983.

I. walkeri (Arn. ex Steud.) Wight & Arn. ex Thw. (*Isachne nilagirica* Hochst.; *Isachne walkeri* (Arn. ex Steud.) Wight & Arn. ex Hook.f.; *Panicum walkeri* Arn. ex Steudel)

Southern India, Sri Lanka. Perennial, creeping, stout, erect or ascending, decumbent, robust, tangled, rooting at the nodes, leaf sheaths rounded and more or less hirsute to ciliate, leaf blades acuminate and linear-lanceolate to linear, long slender roots, panicle very lax with spreading pyramidal branches, few-flowered, ovoid spikelets glabrous to pubescent, lower floret perfect, upper floret perfect or rudimentary, glumes glabrous or sparsely hairy on back, stigmas purple, found in open areas, montane forests, underwood, openings, along trails, shade or partial shade, slopes, see *Synopsis Plantarum Glumacearum* 1: 97. 1854, *Enum. Pl. Zeyl.* 361. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 104. 1885, *The Flora of British India* 7: 26. 1896 and *Handb. Fl. Ceylon* 5: 129. 1900, *Grasses of Ceylon* 110. 1956, *Grasses of Burma ...* 582. 1960.

Isalus J. Phipps = *Tristachya* Nees

About three species, Madagascar. Panicoideae, Panicodae, Arundinelleae, perennial, herbaceous, unbranched, caespitose, leafy, auricles absent, ligule fringed or ciliate, plants bisexual, open inflorescence paniculate, spikelets in triplets, two subequal glumes 3-nerved, palea present, 3 stamens, ovary hairy, 2 stigmas, sometimes referred to *Tristachya*, type *Isalus humbertii* (A. Camus) J.B. Phipps, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829 and *N. Amer. Fl.* 17(8): 578. 1939, *Kirkia* 5: 229-234, 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Kew Bulletin* 26(1): 111-123. 1971, *Flora Mesoamericana* 6: 378. 1994, *Contributions from the United States National Herbarium* 46: 627-628. 2003.

Species

I. betsileensis (A. Camus) J.B. Phipps (*Danthoniopsis betsileensis* (A. Camus) A. Camus; *Tristachya betsileensis* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 104: 160. 1957, *Bulletin de la Société Botanique de France* 105: 246. 1958, *Kirkia* 5(2): 233. 1966, *Kew Bulletin* 26(1): 111-123. 1971.

I. humbertii (A. Camus) J.B. Phipps (*Danthoniopsis humbertii* (A. Camus) Conert; *Tristachya humbertii* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 73: 401. 1926, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 324. 1957, *Kirkia* 5(2): 233. 1966, *Kew Bulletin* 26(1): 111-123. 1971.

I. isalensis (A. Camus) J.B. Phipps (*Danthoniopsis isalensis* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 105: 245. 1958, *Kirkia* 5(2): 233. 1966, *Kew Bulletin* 26(1): 111-123. 1971.

Ischaemopogon Griseb. = *Ischaemum* L.

Greek *ischaimos* “staunching blood, styptic” and *pogon* “beard,” Theophrastus (*HP.* 9.15.3) applied *ischaimos* to a plant used as a styptic, a species of *Andropogon*.

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Ischaeminae, type *Ischaemopogon latifolius* (Spreng.) Griseb., see *Species Plantarum* 2: 1049. 1753, *Flora of the British West Indian Islands* 560. 1864 and *N. Amer. Fl.* 17: 94. 1909, *Flora Mesoamericana* 6: 386-387. 1994, *Contributions from the United States National Herbarium* 46: 275-276. 2003.

Ischaemum L. = *Argopogon* Mimeur, *Colladoa* Cav., *Digastrum* (Hack.) A. Camus, *Ischaemopogon* Griseb., *Ischoemum* J. St.-Hil., *Meoschium* P. Beauv., *Schoenanthus* Adans.

From the Latin *ischaemon* for a kind of styptic herb (Plinius), Greek *ischo*, *ischein* “to restrain, hold, check” and *haima* “blood,” *ischaimos* “staunching blood, styptic,” the seeds of some species were used to stop bleeding; see Carl Linnaeus, *Species Plantarum*. 1049. 1753 and *Genera Plantarum*. Edition 5. 469. 1754.

Some 60-65/73 species, tropics and subtropics, mostly in Asia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Ischaeminae, perennial or sometimes annual, herbaceous, erect or scrambling, sprawling, sometimes decumbent, rhizomatous or stoloniferous, branched or unbranched, internodes solid or hollow, auricles present or absent, ligule membranous, leaf sheaths keeled, leaf blades linear or linear-lanceolate, leaves apex acuminate, plants bisexual, inflorescence terminal and axillary, appressed spike-like racemes paired or occasionally digitate, on the back of the raceme a prominent rachis segment, spikelets paired and dissimilar, pedicelled spikelet variable, sessile spikelets dorsally flattened, rachis joints thickened, 2 florets, lower floret usually staminate or sterile, upper floret perfect or pistillate, glumes subequal, lower glume 7- to 11-nerved and often

furrowed, upper glume 5- to 11-nerved, upper lemma nearly always awned, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, weed species, native pasture species, sometimes causes milk taint, grows in seasonally wet or waterlogged areas, near water, savannah, rainforest, damp places, marshy areas and stream banks, coastal sand, coastal dunes, sandy soils, poor soils, shady places or open habitats, many species with taxonomic status questionable, genus difficult to distinguish from *Andropogon*, type *Ischaemum muticum* L., see *Species Plantarum* edition 1, 2: 1049. 1753, *Familles des Plantes* 2: 38, 602. 1763, *Essai d'une Nouvelle Agrostographie* 111, 167. 1812, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 37, t. 460. 1799, *Flora of the British West Indian Islands* 560. 1864, *Monographiae Phanerogamarum* 6: 200-253. 1889 and *N. Amer. Fl.* 17: 94. 1909, *Bulletin du Muséum d'Histoire Naturelle* 27: 372. 1921, *Revue internationale de botanique appliquée et d'agriculture tropicale* 31: 211, 213. 1951, *Grasses of Burma ...* 171-186. 1960, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Bothalia* 21(2): 163-170. 1991, *Flora Mesoamericana* 6: 386-387. 1994, *Plant, Cell and Environment* 25(4): 557-566. Apr 2002, *Functional Ecology* 14(3): 388-396. June 2000, Lilliana M. Giussani, J. Hugo Cota-Sánchez, Fernando O. Zuloaga and Elizabeth A. Kellogg, "A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis." *Am. J. Bot.* 88: 1993-2012. 2001, *Global Change Biology* 7(6): 693-707. Aug 2001, *Global Change Biology* 7(7): 747-754. Oct 2001, *Global Change Biology* 8(11): 1118-1129. Nov 2002, *Contributions from the United States National Herbarium* 46: 275-276, 287. 2003, *Weed Biology and Management* 3(1): 8-14. Mar 2003, *Plant, Cell and Environment* 26(8): 1297-1306. Aug 2003, *New Phytologist* 160(2): 319-327. Nov 2003, *Weed Research* 44(5): 355-365. Oct 2004.

Species

I. abrahamii Ravi, Mohanan & Rajesh (dedicated to Dr. A. Abraham, the founder-Director of the Tropical Botanic Garden and Research Institute (TBGRI) in Palode near Thiruvananthapuram in Kerala)

India, Kerala. Perennial, nonaquatic, tufted, robust, erect to decumbent, rooting at the lower nodes, long and silvery-hairy racemes, grows in wet areas, margin of water channels, allied to *Ischaemum elimalayanum* Sreek. et al., see N. Ravi, N. Mohanan, T. Shaju, M.S. Kiran Raj and R. Rajesh, "Three more new species of *Ischaemum* L. (Poaceae) from Kerala, India." in *Bot. Bull. Acad. Sin.* 42: 223-230. 2001.

I. afrum (J.F. Gmelin) Dandy (*Andropogon afer* J.F. Gmel.; *Andropogon brachyatherus* Hochst.; *Andropogon pilosus* Klein ex Willd.; *Ischaemum brachyatherum* (Hochst.) Fenzl ex Hack.; *Ischaemum glaucostachyum* Stapf; *Ischaemum pilosum* (Klein ex Willd.) Wight)

Tropical Africa, Kalahari, India. Perennial, wiry, glaucous, drooping, densely tufted, erect, clump forming, with a scaly and strong rhizome, sheath glabrous and round, ligule a membrane hairy or glabrous, inflorescence terminal, slender and subdigitate racemes rarely solitary, spikelets paired, pedicellate spikelet usually sterile and awnless or rarely awned, sessile spikelet lanceolate, short and bent awn on each spikelet, glumes hairy, lower glume of sessile spikelets concave and 2-keeled, lower lemma enclosing a male floret, cultivated or naturalized, succulent, a serious weed, grass for hay-making, gives a very rough hay, fodder, useful grazing especially when green before flowering, moderately relished by cattle, edible grain, ruderal, used as thatching material for huts and houses, growing in heavy black turf, clay soil, black soil, dry bushland, cultivated ground, near water, drained plains, rocky riverbanks, savannah, grassland, crevices, slopes, see *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 166. 1791 and *Flora Capensis* 7: 328. 1898 and *The Flowering Plants of the Anglo-Egyptian Sudan* 3: 476. f. 120. 1956.

in English: turf grass

in India: ghod kunda, kanigyanhullu, khavo, khund, kunda, nuth

in Nigeria: dadeppure, kaashin beeraa

in South Africa: baangras, lidjiesrooigras, turfgras, tweevingergras

in Sudan: boos, ankoog

I. albobillosum B.K. Simon

Australia, Western Australia. See *Austrobaileya* 3(1): 86-88, f. 3. 1989.

I. amethystinum Lebrun (*Ischaemum hirsutum* Peter, nom. illeg., non *Ischaemum hirsutum* Spreng.)

Africa. Perennial, erect, stout, large, coarse, clumped, basal sheaths tomentose, leaf blades linear, stout inflorescence racemose, stiff subdigitate racemes, sessile spikelet with a bearded callus, lower glume lanceolate-oblong keeled winged, upper glume obtuse, pedicelled spikelet dorsally flattened and unawned, wooded grassland, see *Repertorium Specierum Novarum Regni Vegetabilis* 40(1): 356, Anh. 115, f. 74. 1936, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 13: 44. 1966.

I. antheophoroides (Steud.) Miq. (also spelled *antephoroides*) (*Andropogon antheophoroides* (Steud.) Steud.; *Ischaemum antheophoroides* var. *eriostachyum* (Hack.) Honda; *Ischaemum eriostachyum* Hack.; *Rottboellia antheophoroides* Steud.)

Temperate Asia, Korea, China, Japan. Coastal dune plant, shallow distribution of the root system, in Japan distribution restricted within inland sites where drought conditions are milder than in seaward sites, see *Flora* 29: 22. 1846, *Synopsis Plantarum Glumacearum* 1: 375. 1854, *Annales Museum Botanicum Lugduno-Batavi* 3: 193. 1867, *Prolusio*

florae japonicae 357. 1867 and *Botanical Magazine* (Tokyo) 33: 3. 1919, *Botanical Magazine* (Tokyo) 41: 378. 1927, *Botanical Magazine* (Tokyo) 46: 373. 1932, *Journal of the Washington Academy of Sciences* 45(7): 215. 1955.

in Japan: kekamonohashi

I. anthephoroides (Steud.) Miq. var. ***subnudum*** Honda

Japan. See *Botanical Magazine* (Tokyo) 46: 373. 1932.

I. arenosum Sohns

Venezuela. Along rivers and streams, sandy places, moist sand, see *Memoirs of the New York Botanical Garden* 9(3): 404, f. 75. 1957.

I. aristatum L. (*Andropogon crassipes* Steud.; *Andropogon imberbis* Steud.; *Ischaemum aristatum* Rangacharyar [also Kadambi Rangachari or Rai Bahadur K. Ranga Achariyar], nom. illeg., non *Ischaemum aristatum* L.; *Ischaemum aristatum* Thunb., nom. illeg., non *Ischaemum aristatum* L.; *Ischaemum aristatum* Willd., nom. illeg., non *Ischaemum aristatum* L.; *Ischaemum crassipes* (Steud.) Thell.; *Ischaemum crassipes* f. *aristatum* (Nakai) Ohwi; *Ischaemum crassipes* var. *aristatum* Nakai; *Ischaemum goebelii* Hack.)

Temperate Asia, Korea, China, Japan. Perennial, erect, smooth, dense-mat-forming, glabrous nodes, leaf sheath usually shorter than the internode, ligule membranous, leaf blade linear-lanceolate and usually smooth, paired racemes with a triangular rachis, spikelets paired and more or less hairy, unlobed lower glume, sessile spikelets awned, eaten by cattle but their milk has undesirable odour, forms good pasture if well grazed, grows in seasonally wet or waterlogged areas, open marshy places, see *Species Plantarum* 2: 1049. 1753, *Observationes Botanicae* 6: 35 (or 25). 1791, *Prodromus Plantarum Capensium*, ... 21. 1794, *Species Plantarum. Editio quarta* 4: 939. 1806, *Révision des Graminées* 1: 168. 1829, *Voyage autour du Monde* 2: 69, t. 12. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 295. 1832, *The Botany of Captain Beechey's Voyage* 246. 1838, *Gramineae* 65-66. 1841, *Synopsis Plantarum Glumacearum* 1: 375-376. 1854, *Monographiae Phanerogamarum* 6: 203-205, 227. 1889, *The Flora of British India* 7: 126-127. 1896 and *Österreichische Botanische Zeitschrift* 51(5): 149. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 171. 1914, *A Contribution to the Phytogeography and Flora of the Arfak Mountains* 89. 1917, *Bulletin du Muséum National d'Histoire Naturelle* 25: 498. 1919, Kadambi Rangachari (1868-1934), *A Handbook of some South Indian Grasses* 151. Chennai 1921, *Flore Générale de l'Indo-Chine* 7: 265. 1922, *Botanical Magazine* (Tokyo) 37: 121. 1923, *Handboek voor de Flora van Java* 2: 61. 1928, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 355. 1930, *Flora of the Presidency of Madras* 10: 1719, 1722. 1934, *Indian Forest*

Records. Botany 1: 98. 1938, *Botanical Magazine* (Tokyo) 55: 11. 1942, *Reinwardtia* 2: 382. 1953, *Boissiera*. 9: 334, 336. 1960, *Journal of Japanese Botany* 37(8): 239. 1962, *Journal of Nanjing Technological College of Forest Products* 3: 9. 1981, *Grasses of Japan and its Neighboring Regions* 512. 1987.

in English: batiki bluegrass, toco grass

in French: herbe d'argent

in Japan: kamonohashi

in India: bangadi, bara, bherda, chenkodi padappan pullu, duikani ronda, erruthota gaddi, gondi, guhera, kanden, kander, mobbu ganjalu garikai hullu, paba, pandam kuththi, piyana koru gadi, putena, suhaga, toriya gadi

in Thailand: yaa haang khaang, yaa yon huu, yaa waai

I. aristatum L. var. ***glaucum*** (Honda) T. Koyama (*Ischaemum aristatum* subsp. *glaucum* (Honda) T. Koyama; *Ischaemum aristatum* var. *glaucum* (Honda) T. Koyama; *Ischaemum crassipes* var. *glaucum* Honda; *Ischaemum crassipes* var. *pilipes* H.R. Zhao)

Asia, Japan. Sea shore, see *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 10(251-253): 289. 1912, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 355. 1930, *Journal of Japanese Botany* 37(8): 239. 1962, *Acta Botanica Yunnanica* 5(4): 343-344. 1983, *Grasses of Japan and its Neighboring Regions* 512. 1987.

I. aristatum L. var. ***lodiculare*** (Nees) E.G. Camus & A. Camus (*Ischaemum aristatum* var. *lodiculare* (Nees) Hack.; *Meoschium lodiculare* Nees)

Asia. See *The Botany of Captain Beechey's Voyage* 246. 1838, *Monographiae Phanerogamarum* 6: 205. 1889 and *Flore Générale de l'Indo-Chine* 7: 265. 1922.

I. aureum (Hook. & Arn.) Hack. (*Spodiopogon aureum* Hook. & Arn.)

China. See *The Botany of Captain Beechey's Voyage* 273-274. 1838, *Monographiae Phanerogamarum* 6: 224. 1889.

I. australe R. Br. (*Andropogon cryptatherus* Steud.)

Asia tropical, Australia, New South Wales, Queensland, Western Australia, Northern Territory. Perennial, caespitose, rhizomatous, sheath glabrous, ligule hairy, lower glume 2-keeled and narrowly winged on the keels, upper glume keeled, lower lemma male, upper lemma female or bisexual, high-yielding, young growth and shoots from rhizomes eaten, coarse and unpalatable with age, sandy soils, poor soils, swamps, wetlands, near the coast, see *Prodromus Florae Novae Hollandiae* 205. 1810, *Synopsis Plantarum Glumacearum* 1: 376. 1854.

I. australe R. Br. var. ***arundinaceum*** (F. Muell. ex Benth.) B.K. Simon (*Ischaemum arundinaceum* F. Muell. ex Benth.; *Ischaemum barbatum* var. *arundinaceum* (F. Muell. ex Benth.) Jansen)

Australia. See *Flora Australiensis: A Description ...* 7: 519. 1878 and *Reinwardtia* 2(2): 295. 1953, *Austrobaileya* 2(1): 21. 1984.

I. australe R. Br. var. *australe*

Indonesia, Asia tropical, Australia, New South Wales, Queensland, Western Australia, Northern Territory. Leaves glabrous.

I. australe R. Br. var. *semivestitum* Domin (*Ischaemum australe* R. Br.)

Australia. See *Prodromus Florae Novae Hollandiae* 205. 1810 and *Bibliotheca Botanica* 85(2): 259. 1915.

I. australe R. Br. var. *villosum* (R. Br.) Hack. (*Andropogon villiferus* Steud.; *Ischaemum australe* var. *villosum* (R. Br.) Benth.; *Ischaemum villosum* R. Br.)

New South Wales, Queensland, Northern Territory. Leaves hairy, see *Prodromus Florae Novae Hollandiae* 205. 1810, *Synopsis Plantarum Glumacearum* 1: 376. 1854, *Flora Australiensis: A Description ...* 7: 520. 1878.

I. barbatum Retz. (*Andropogon aristatus* var. *barbata* (Retz.) Schum. & Laut.; *Andropogon meyenianus* (Nees) Steud.; *Ischaemum aristatum* sensu Hack., non L.; *Ischaemum aristatum* subsp. *barbatum* (Retz.) Hack.; *Ischaemum aristatum* var. *lanuginosum* A. Camus; *Ischaemum aristatum* var. *mangaluricum* Hack.; *Ischaemum aristatum* var. *imbricatum* Hack.; *Ischaemum aristatum* var. *fallax* Hack.; *Ischaemum aristatum* var. *meyenianum* (Nees) Hack.; *Ischaemum aristatum* var. *meyenianum* (Nees) A. Camus, nom. illeg., non *Ischaemum aristatum* var. *meyenianum* (Nees) Hack.; *Ischaemum arundinaceum* F. Muell. ex Benth.; *Ischaemum barbatum* Miq.; *Ischaemum barbatum* var. *gibbum* (Trin.) Ohwi; *Ischaemum barbatum* var. *hainanense* Keng & H.R. Zhao; *Ischaemum barbatum* var. *scabridulum* Keng & H.R. Zhao; *Ischaemum geniculatum* Roxb.; *Ischaemum gibbum* Trin.; *Ischaemum goebelii* Hack.; *Ischaemum imbricatum* (Hack.) Stapf ex Ridl.; *Ischaemum imbricatum* var. *pubescens* Keng & H.R. Zhao; *Ischaemum lanuginosum* (A. Camus) Keng & H.R. Zhao; *Ischaemum lanuginosum* var. *enodulosum* Keng & H.R. Zhao; *Ischaemum lanuginosum* var. *erianthum* Keng & H.R. Zhao; *Ischaemum mangaluricum* (Hack.) Stapf ex C.E.C. Fisch.; *Ischaemum nodulosum* Honda; *Ischaemum nodulosum* var. *glabriflorum* Keng & H.R. Zhao; *Ischaemum rugosum* Salisb.; *Ischaemum rugosum* var. *humidum* Keng & H.R. Zhao; *Ischaemum sinense* Keng & H.R. Zhao; *Ischaemum tientaiense* Keng & H.R. Zhao; *Meoschium meyenianum* (Nees)

Tropical and subtropical Asia, Sumatra, China. Perennial, very variable in all its parts, caespitose, erect or ascending, decumbent at the base, sprawling, often rooting at the lower nodes, often branched at the base, auricles ciliate, leaf blades linear to linear-lanceolate, leaf sheaths glabrous to densely villous, inflorescence appressed, racemes two, lower floret staminate, upper floret perfect, found in

secondary forest, lawns, disturbed areas, pastures, lowlands, ponds, grassy stream banks, see *Species Plantarum* 2: 1049. 1753, *Observationes Botanicae* 6: 35. 1791, *Icones Stirpium Rariorum* 1, t. 1. 1791, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 585. 1811, *Hortus Bengalensis, or a catalogue ...* 8. 1814, *Flora Indica; or Descriptions ...* 1: 324. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 295. 1832, *The Botany of Captain Beechey's Voyage* 246. 1838, *Gramineae* 65-66. 1841, *Hortus Suburbanus Calcuttensis* 706. 1845, *Synopsis Plantarum Glumacearum* 1: 375-376. 1854, *Enum. Pl. Zeyl.* 364. 1864, *Annales Museum Botanicum Lugduno-Batavi* 3: 193. 1867, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6: 203-205. 1889 and *Handb. Fl. Ceylon* 5: 211-212. 1900, *Österreichische Botanische Zeitschrift* 51(5): 149. 1901, *Die Flora der deutschen Schutzgebiete in der Südsee* 173. 1901, *A Contribution to the Phytogeography and Flora of the Arfak Mountains* 89. 1917, *Bulletin du Muséum National d'Histoire Naturelle* 25: 498. 1919, *Flore Générale de l'Indo-Chine* 7: 265. 1922, *The Flora of the Malay Peninsula* 5: 200. 1925, *Flora of the Presidency of Madras* 10: 1723. 1934, *Acta Phytotaxonomica et Geobotanica* 11: 175. 1942, *Botanical Magazine* (Tokyo) 55: 11. 1942, *Reinwardtia* 2(2): 293-295. 1953, *Grasses of Ceylon* 174. 1956, *Grasses of Burma ...* 179, 182. 1960, *Dansk Botanisk Arkiv* 20(2): 174. 1962, *Kew Bulletin* 15: 411. 1962, *Acta Botanica Yunnanica* 5(4): 346, 348-353, f. 3, 4. 1983, *Taxon* 34: 159-164. 1985.

in Thailand: ya daeng, yaa haang khaang, ya hang khang, yaa yon huu, ya yon hu, ya wai, yaa waai, ya wai daeng

I. barbatum Retz. var. *arundinaceum* (F. Muell. ex Benth.) Jansen (*Ischaemum arundinaceum* F. Muell. ex Benth.; *Ischaemum australe* var. *arundinaceum* (F. Muell. ex Benth.) B.K. Simon)

Australasia, Southeast Asia, China. See *Reinwardtia* 2(2): 295. 1953, *Austrobaileya* 2(1): 21. 1984.

I. byrone (Trin.) A.S. Hitchc. (*Andropogon byronis* (Trin.) Steud.; *Spodiopogon byronis* Trin.) (see John Byron (1723-1786), *A Journal of a Voyage Round the World in ... Dolphin*. London 1767; H. Carrington, editor, *The Discovery of Tahiti: A Journal of the Second Voyage of HMS Dolphin under the command of Captain Wallis RN*. London 1948, R.E. Gallagher, editor, *Byron's Journal of his Circumnavigation 1764-1766*. Cambridge 1964; John Dunmore, *Who's Who in Pacific Navigation*. 48-50. Honolulu 1991; John Hawkesworth (ca. 1715-1773), *An Account of the Voyages ... by Commander Byron, Captain Wallis, Captain Carteret and Captain Cook*. London 1773; H. Wallis, editor, *Carteret's Voyage Round the World 1766-1769*. Cambridge 1965; [John Barrow], *A Description of Pitcairn's Island and Its Inhabitants, with an Authentic Account of the Mutiny of*

the Ship Bounty and of the Subsequent Fortunes of the Mutineers. J. & J. Harper, New York 1833)

Eastern Polynesia, Pacific, Fiji, Society Islands, Tonga, American Samoa, Hawaii. Perennial, littoral, erect to ascending, leaf blades linear, leaves glabrous, membranous ligule ovate to truncate, spikes paired and bearded with yellowish hairs, inflorescence erect to ascending, spikelets paired one sessile and one pedicellate, bent awn, vulnerable and endangered species, plant at risk, grows on rocky shores, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 301. 1832, *Synopsis Plantarum Glumacearum* 1: 398. 1854 and *Memoirs of the Bernice P. Bishop Museum*... 8(3): 213, f. 109. 1922.

in English: Hilo ischaemum, Hilo muraina grass

I. ciliare Retzius (*Ischaemum aristatum* auct.; *Ischaemum ciliare* subvar. *villosum* (Nees) Hack.; *Ischaemum indicum* auct.; *Ischaemum indicum* (Houtt.) Merr.; *Phleum indicum* Houtt.; *Spodiopogon villosus* Nees)

Southeast Asia, China, India. Perennial, very variable, spreading, tufted, erect or geniculate, often branching, stoloniferous, rooting at the nodes, leaf sheaths inflated, ligule membranous, leaf blade narrowly lanceolate tapering to a fine point, inflorescence well exerted, two terminal racemes, spikelets paired and bisexual, lower glume winged at apex with 2 large obtuse lobes, upper lemma deeply notched, awn twisted and bent below the middle, ornamental, naturalized, invader, weed, turf, palatable, animal food, useful forage, well grazed, ground cover grass, lawn, erosion control and soil binder, can persist under heavy grazing, found in open or disturbed habitats, on wet ground, waterlogged or moist areas, wet tropics, plantation crops, seasonally dry monsoonal areas, see *Natuurlijke Historie* 13: 198, t. 90, f. 2. 1782, *Observationes Botanicae* 6: 36 (or 26). 1791, *The Botany of Capt. Beechey's Voyage*; comprising an account of the Plants collected by Messrs. Lay and Collie ... during the voyage to the Pacific and Bering's Strait, performed in H.M.S. *Blossom* ... 1825-1828. 242. London [1830-] 1841, *Synopsis Plantarum Glumacearum* 1: 372. 1854, *Flora Australiensis: A Description* ... 7: 520. 1878, *Monographiae Phanerogamarum* 6: 225-227. 1889 and *Botanical Magazine* (Tokyo) 38: 55. 1924, *Journal of the Arnold Arboretum* 19(4): 320. 1938, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 180. 1960, *Fieldiana: Botany, New Series* 4: 1-608. 1980.

in English: batiki-bluegrass, smut grass

in India: bara toriya-gadi, guhera, kala, paba, piyana-koru-gadi

in Indonesia: blembem, rumput padang

in Malaysia: rumput gerek telinga

in Thailand: ya wai, ya yonhu

I. commutatum Hack. (*Ischaemum semisagittatum* sensu Thw., non Roxb.)

Sri Lanka, India. Perennial, branched, villous to pubescent, caespitose, erect or decumbent, sprawling, rooting at the lower nodes, leaf sheaths densely villous, ligule rounded-truncate, leaf blades lanceolate to linear, racemes appressed, spikelets awned, lower floret staminate or rarely perfect, upper floret perfect, pedicellate spikelets sometimes reduced to glumes, found in secondary forest, lawns, disturbed areas, pastures, lowlands, ponds, grassy stream banks, see *Flora Indica; or Descriptions* ... 1: 322. 1820, *Enum. Pl. Zeyl.* 365. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6: 209. 1889 and *Handb. Fl. Ceylon* 5: 214. 1900, *Grasses of Ceylon* 175. 1956, *Grasses of Burma* ... 178. 1960, *Taxon* 34: 159-164. 1985.

I. dalzellii Stapf ex Bor (*Ischaemum conjugatum* sensu Hook.f., non Roxb.; *Ischaemum semisagittatum* sensu Hook.f., non Roxb.) (for the Scottish botanist Nicholas (Nicol) Alexander Dalzell, 1817-1878 (d. Edinburgh), for-ester, Bombay 1841-1870, plant collector in India, with Alexander Gibson (1800-1867) wrote *The Bombay Flora*. Bombay 1861; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 414. 1965; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Robert Wight (1796-1872), *Icones plantarum Indiae orientalis, or Figures of Indian Plants*. Chennai [1838-] 1840-1853)

Sri Lanka, India. Annual, prostrate, branched, rooting at the lower nodes, leaf sheaths glabrous, ligule adnate to the auricles, leaf blades lanceolate to linear, racemes two, lower floret staminate, upper floret perfect, see *Enum. Pl. Zeyl.* 365. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885 and *Handb. Fl. Ceylon* 5: 213. 1900, *Kew Bulletin* 1951[no. 3]: 448. 1951, *Grasses of Ceylon* 175. 1956, *Grasses of Burma* ... 178. 1960.

I. decumbens Benth.

North Australia. See *Flora Australiensis: A Description* ... 7: 521. 1878.

I. elimalayanum Sreek. & al.

India, Kerala. See N. Ravi, N. Mohanan, T. Shaju, M.S. Kiran Raj and R. Rajesh, "Three more new species of *Ischaemum* L. (Poaceae) from Kerala, India." *Bot. Bull. Acad. Sin.* 42: 223-230. 2001.

I. fasciculatum Brongn. (*Ischaemum arcuatum* (Nees) Stapf; *Ischaemum fasciculatum* Rottler ex Hook.f.; *Spodiopogon arcuatus* Nees)

Tropical Africa, Southeast Asia. Perennial, reedlike, green to reddish-tinged, strongly rhizomatous, straggling, ascending, often prostrate at the base, leaf sheath round, ligule membranous, leaf blades densely hairy to glabrous, inflorescences mostly terminal, racemes arranged digitately or semidigitately on the primary axis, spikelets paired, lower

glume of sessile spikelets convex or flat, winged keels, pedicelled spikelet laterally compressed and awned, weed, ruderal, found in wet areas, light shade, on heavy clay soils, vleis, riverbanks, damp stream banks, often growing in water, see *Voyage autour du Monde* 2(2): 73. 1831, *Flora Africae Australioris Illustrationes Monographicae* 97. 1841, *Monographiae Phanerogamarum* 6: 235. 1889, *The Flora of British India* 7: 127. 1896 and *Flora of Tropical Africa* 9: 33. 1917.

in English: border grass, red vlei grass

in southern Africa: rooivleigras; shangwe (Venda)

I. fischeri Ravi & Kiran Raj (after C.E.C. Fischer who published *Ischaemum rangacharianum* C.E.C. Fischer)

India, Kerala. Perennial, creeping, rooting at the lower nodes, extensive mat-forming, similar to *Ischaemum rangacharianum* C.E.C. Fischer, see N. Ravi, N. Mohanan, T. Shaju, M.S. Kiran Raj and R. Rajesh, "Three new species of *Ischaemum* L. (Poaceae) from Kerala, India." in *Rheedea*. 8(2): 149-158. 1998, N. Ravi, N. Mohanan, T. Shaju, M.S. Kiran Raj and R. Rajesh, "Three more new species of *Ischaemum* L. (Poaceae) from Kerala, India." in *Bot. Bull. Acad. Sin.* 42: 223-230. 2001.

I. foliosum Hack. (*Ischaemum foliosum* Hack. var. *leiophyllum* Hack. ex Ridley)

Pacific. Open places, coastal, see *Monographiae Phanerogamarum* 6: 222. 1889 and *Journal of the Straits Branch of the Royal Asiatic Society* 45: 243. 1906.

I. fragile R. Br. (*Andropogon fragilis* R. Br.; *Andropogon infirmus* Steud.; *Digastrium fragile* (R. Br.) A. Camus)

Australia. See *Prodromus Florae Novae Hollandiae* 1: 202, 205. 1810, *Synopsis Plantarum Glumacearum* 1: 369. 1854 and *Bulletin du Muséum d'Histoire Naturelle* 27: 372. 1921, *Bulletin de la Société Botanique de France* 70: 850. 1923.

I. gibbum Trin. (*Andropogon gibbus* (Trin.) Steud.; *Ischaemum aristatum* var. *gibbum* (Trin.) Hack.; *Ischaemum barbatum* var. *gibbum* (Trin.) Jansen; *Ischaemum barbatum* var. *gibbum* (Trin.) Ohwi)

The Philippines. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 295. 1832, *Synopsis Plantarum Glumacearum* 1: 376. 1854, *Monographiae Phanerogamarum* 6: 204. 1889 and *Acta Phytotaxonomica et Geobotanica* 11: 175. 1942, *Reinwardtia* 2(2): 294. 1953.

I. glaucescens Merr.

The Philippines. Indeterminate species, see *Philippine Journal of Science* 9: 263. 1914.

I. goebelii Hack. (*Andropogon imberbis* Steud.; *Ischaemum aristatum* L.; *Ischaemum aristatum* var. *imbricatum* Hack.; *Ischaemum barbatum* Retz.; *Ischaemum crassipes* f. *aristatum* (Nakai) Ohwi; *Ischaemum crassipes* var.

aristatum Nakai; *Ischaemum cylindricum* Keng & H.R. Zhao; *Ischaemum imbricatum* (Hack.) Stapf ex Ridl.; *Ischaemum yunnanense* Keng & H.R. Zhao; *Meoschium imbricatum* Munro ex Hack.) (after the German botanist Karl Immanuel Eberhard Goebel, 1855-1932, morphologist, traveler in Asia, Southern America, Australia and New Zealand, author of *Organographie der Pflanzen ...* Jena 1898-1901; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 58. 1965)

Sri Lanka. See *Species Plantarum* 2: 1049. 1753, *Synopsis Plantarum Glumacearum* 1: 375. 1854, *Monographiae Phanerogamarum* 6: 203. 1889 and *Österreichische Botanische Zeitschrift* 51(5): 149. 1901, *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 10(251-253): 289. 1912, *Botanical Magazine* (Tokyo) 37: 121. 1923, *The Flora of the Malay Peninsula* 5: 200. 1925, *Acta Phytotaxonomica et Geobotanica* 11: 173. 1942, *Acta Botanica Yunnanica* 5(4): 346-348, 353-354, f. 2, 5. 1983.

I. guianense Kunth ex Hack. (*Andropogon guianensis* Kunth ex Steud., nom. illeg., non *Andropogon guineensis* Schumach.; *Ischaemum aristatum* subvar. *guianense* (Kunth) Roberty; *Ischaemum guianense* Kunth; *Ischaemum guianense* var. *schomburgkii* Hack.)

South America. Perennial, herbaceous, terrestrial, caespitose, clumped, erect, prostrate to semiprostrate, base decumbent, branched, trailing, rooting at the lower nodes, ligules ciliate, leaves hispid, forming thickets, inflorescence terminal, racemes divergent, pedicelled spikelet male, slopes, hills, wet places, sand, savannah, related to *Ischaemum latifolium*, see *Révision des Graminées* 1: 168. 1829, *Synopsis Plantarum Glumacearum* 1: 382. 1854, *Monographiae Phanerogamarum* 6: 235-236. 1889 and *Boissiera*. 9: 334. 1960.

I. hansenii Bor (possibly dedicated to the Danish B. Hansen, in Thailand, botanical collector with Hermann Otto Sleumer (1906-1993) and Tem Smitinand (1920-1995), see Tem Smitinand, *Thai Plant Names*. Royal Forest Department. Bangkok 1980; I.H. Vegter, *Index Herbariorum*. Part II (6), *Collectors S. Regnum Vegetabile* vol. 114. 1986; *Blumea* 30: 221. 1985; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Thailand, Asia. Indeterminate species, see *Dansk Botanisk Arkiv* 23: 470. 1968.

I. impressum Hack.

Asia. See *Monographiae Phanerogamarum* 6: 210. 1889 and A.K. Goel and B.P. Uniyal, "On the occurrence of a few grasses in Pakistan and Nepal (*Ischaemum impressum*, *Ischnochloa falconeri*, *Microstegium vimineum*, *Puccinellia tenuiflora*)." *Journal of Economic and Taxonomic Botany* 4(3): 43. 1983.

I. indicum (Houtt.) Merrill (*Andropogon patentivillosus* Steud.; *Ischaemum ciliare* Retz.; *Ischaemum ciliare* subvar.

villosum (Nees) Hack.; *Ischaemum indicum* subvar. *villosum* (Nees) Bor; *Ischaemum indicum* var. *breviaristatum* H.R. Zhao; *Ischaemum indicum* var. *guangdongense* H.R. Zhao; *Phleum indicum* Houtt.; *Polytrias indica* (Houtt.) Veldkamp; *Spodiopogon obliquivalvis* var. *villosis* Benth.; *Spodiopogon villosus* Nees)

Tropics, Malaya, Japan, India. Perennial or annual, weak, erect or decumbent, hollow, substoloniferous, rooting freely at the lowermost nodes, dense-mat-forming, much-branched, leaf sheaths tight and hairy to fringed, ligules membranous, inflorescence well exerted, erect flowering stems, divergent racemes, spikelets paired, one sessile and one stalked, spikelets alternately on one side of a triangular rachis, lower glume usually glabrous and wrinkled, keel of the upper glume winged above the middle, lemmas membranous, upper lemma notched, browsed, reported a tendency to taint milk, tolerates temporary flooding, poor drought tolerance, some tolerance to salinity, grows on open ground and banks, wet and marshy places, wet pastures, seasonally wet or waterlogged areas, along roadsides, clay soils, black soils, see *Natuurlijke Historie* 13: 198, t. 90, f. 2. 1782, *Observationes Botanicae* 6: 36 (or 26). 1791, *The Botany of Captain Beechey's Voyage* 242. 1838, *Gramineae* 53. 1841, *Synopsis Plantarum Glumacearum* 1: 373, 377. 1854, *Flora Hongkongensis* 426. 1861, *Monographiae Phanerogamarum* 6: 226-227. 1889 and *Botanical Magazine* (Tokyo) 38: 55. 1924, *Journal of the Arnold Arboretum* 19: 320. 1938, *Grasses of Burma ...* 180. 1960, *Acta Botanica Yunnanica* 3: 12. 1981, *Acta Botanica Yunnanica* 5(4): 345-346. 1983, *Blumea* 36(1): 180-181. 1991.

in English: Batiki bluegrass, Batiki grass, toto grass, hay grass

in Costa Rica: ratana

in India: mobbu ganjala garike hullu

I. indicum (Houtt.) Merrill subvar. ***malacophyllum*** (Hochst. ex Steud.) Bor (*Andropogon malacophyllum* Hochst. ex Steud.; *Ischaemum ciliare* subvar. *malacophyllum* (Hochst. ex Steud.) Hack.; *Spodiopogon obliquivalvis* Nees)

India. See *Gramineae* 53. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 185. 1843, *Synopsis Plantarum Glumacearum* 1: 372. 1854, *Monographiae Phanerogamarum* 6: 226. 1889 and *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 180. 1960.

I. indicum (Houtt.) Merrill subvar. ***scrobiculatum*** (Hack.) Bor (*Andropogon bifidus* Steud.; *Andropogon macraei* Steud.; *Andropogon simillimus* Steud.; *Ischaemum ciliare* subvar. *scrobiculatum* Hack.; *Ischaemum ciliare* var. *scrobiculatum* (Hack.) Honda; *Ischaemum indicum* (Houtt.) Merrill subvar. *scrobiculatum* (Nees ex Steud.) Bor; *Ischaemum scrobiculatum* Wight & Arn. ex Steud.; *Spodiopogon*

scrobiculatus Nees ex Steud.; *Spodiopogon zeylanicus* Nees ex Steud.)

India. Sessile spikelet lower glume wrinkled, see *Synopsis Plantarum Glumacearum* 1: 373, 377. 1854, *Monographiae Phanerogamarum* 6: 226. 1889 and *Botanical Magazine* (Tokyo) 38: 55. 1924, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 180. 1960.

I. indicum (Houtt.) Merrill subvar. ***villosum*** (Nees) Bor (*Andropogon patentivillosus* Steud.; *Ischaemum ciliare* subvar. *villosum* (Nees) Hack.; *Spodiopogon obliquivalvis* var. *villosis* Benth.; *Spodiopogon villosus* Nees)

India. See *The Botany of Captain Beechey's Voyage* 242. 1838, *Synopsis Plantarum Glumacearum* 1: 373. 1854, *Flora Hongkongensis* 426. 1861, *Monographiae Phanerogamarum* 6: 227. 1889 and *Grasses of Burma, Ceylon, India and Pakistan* 180. 1960.

I. indicum (Houtt.) Merrill var. ***indicum*** (*Andropogon athenos* Steud.; *Andropogon malacophyllum* Hochst. ex Steud.; *Ischaemum aristatum* auctt. non L.; *Ischaemum ciliare* Retz.; *Ischaemum ciliare* subvar. *proropens* Hack.; *Ischaemum indicum* subvar. *malacophyllum* (Hochst. ex Steud.) Bor; *Ischaemum indicum* subvar. *scrobiculatum* (Hack.) Bor; *Ischaemum indicum* subvar. *villosum* (Nees) Bor; *Ischaemum tenellum* Roxb.; *Phleum indicum* Houtt.; *Spodiopogon scrobiculatus* Nees ex Steud.)

Old World tropics. Perennial, caespitose, creeping, erect, geniculate or decumbent, rooting at the lower nodes, sheaths glabrous to villous, ligule usually glabrous, leaf blades linear to linear-lanceolate, leaves tip acuminate, inflorescence racemose appressed to spreading, spikelets sessile and pedicellate, lower floret staminate, upper floret perfect, sessile spikelet lower glume usually glabrous, growing in colonies, along roadsides, ditches, riverbanks, lawns, ponds, see *Natuurlijke Historie* 13: 198, t. 90, f. 2. 1782, *Observationes Botanicae* 6: 36 (or 26). 1791, *Flora Indica; or Descriptions ...* 1: 324. 1820, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 53. 1843 [1841], *The Botany of Captain Beechey's Voyage* 242. 1838, *Synopsis Plantarum Glumacearum* 1: 372-373, 376. 1854, *Enum. Pl. Zeyl.* 365. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6: 226. 1889 and *Handb. Fl. Ceylon* 5: 216. 1900, *Grasses of Ceylon* 176. 1956, *Grasses of Burma ...* 180. 1960, *Journal of the Arnold Arboretum* 19(4): 320. 1938.

in Sri Lanka: rat tana

I. indicum (Houtt.) Merrill var. ***longipilum*** (Hack.) Bor (*Ischaemum ciliare* var. *longipilum* Hack.; *Ischaemum longipilum* (Hack.) Alston)

Sri Lanka, Burma/Myanmar. Perennial, densely caespitose, erect, weak, rooting at the lower nodes, trailing, stoloniferous, leaf blades linear to linear-lanceolate, sheaths glabrous to villous, ligule usually glabrous, inflorescence racemose appressed to spreading, spikelets sessile and pedi-

cellate, lower floret staminate, upper floret perfect, sessile spikelet lower glume usually pubescent, growing in colonies, grassland, along roadsides, ditches, riverbanks, lawns, ponds, see *Monographiae Phanerogamarum* 6: 227. 1889 and *Handb. Fl. Ceylon* 5: 217. 1900, *Annals of the Royal Botanic Gardens. Peradeniya* 11: 210. 1929, *Grasses of Burma ...* 180-181. 1960.

I. indicum (Houtt.) Merrill var. ***wallichii*** (Hack.) Bor (*Ischaemum aristatum* var. *wallichii* (Hack.) Bor; *Ischaemum ciliare* var. *wallichii* Hack.)

India. See *Monographiae Phanerogamarum* 6: 227. 1889 and *Indian Forest Records. Botany* 1: 98. 1938, *Grasses of Burma ...* 180-181. 1960.

I. kingii Hook.f.

India, Rajasthan. Indeterminate species, see *The Flora of British India* 7: 129. 1896 and *Grasses of Burma ...* 182. 1960.

I. lanuginosum (A. Camus) Keng ex H.R. Zhao (*Ischaemum aristatum* var. *lanuginosum* A. Camus)

China. See *Bulletin du Muséum National d'Histoire Naturelle* 25: 498. 1919, *Acta Botanica Yunnanica* 3: 16. 1981, *Acta Botanica Yunnanica* 5(4): 348-349. 1983.

I. latifolium (Spreng.) Kunth (*Andropogon condensatus* Kunth; *Andropogon latifolius* Spreng.; *Ischaemopogon latifolius* (Spreng.) Griseb.; *Ischaemum latifolium* (Steud.) Miq.; *Ischaemum latifolium* subsp. *hirtivaginum* A.S. Hitchc.; *Ischaemum latifolium* var. *minus* E. Fourn.; *Ischaemum latifolium* var. *oligostachyum* Hack.; *Phacelurus latifolius* (Steud.) Ohwi; *Phacelurus latifolius* (Steud.) Keng, nom. illeg., non *Phacelurus latifolius* (Steud.) Ohwi; *Pseudophacelurus latifolius* (Steud.) A. Camus; *Rottboellia latifolia* Steud.; *Schizachyrium condensatum* (Kunth) Nees; *Spodiopogon latifolius* (Spreng.) Nees)

South America, Brazil, Mexico, Venezuela. Perennial, herbaceous, robust, sprawling, rhizomatous, scrambling, purplish, smooth, branching, erect, ascending, arching, floating mats, scandent, rachis internodes densely bearded only at the base, growing near water, along roadsides and drainage, along river shore, on hummocks, open areas, sandy places, marshes and margin of marsh, trails, rocky riverbanks, tropical forests, inundated areas, floodplains, savannah, brush, wet places, see *Nova Genera et Species Plantarum* 1: 188. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 286. 1825, *Révision des Graminées* 168. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 333, 360. 1829, *Flora* 29: 21. 1846, *Flora of the British West Indian Islands* 560. 1864, *Annales Museum Botanicum Lugduno-Batavi* 2: 291. 1866, *Mexicanas Plantas* 2: 55. 1886, *Monographiae Phanerogamarum* 6: 238. 1889 and *Bulletin du Muséum National d'Histoire Naturelle* 27(5): 371. 1921, *Contributions from the United States National Herbarium* 24(8): 506. 1927, *Acta Phytotaxonomica et Geobotanica* 4(2): 59.

1935, *Sinensia* 10: 305, 308. 1939, *Kew Bulletin* 39(1): 169-178. 1984.

in Mexico: cola de venado, zacate de sabana

in Peru: saák, saákich (Jivaro Mayna)

I. longisetum Merr.

Tropical southeastern Asia, the Philippines. See *Philippine Journal of Science* 9: 52. 1914.

I. longisetum Merr. var. ***raulersoniae*** Fosberg & Sacht (named for Dr. Lynn Raulerson, b. 1937, botanist, Ph.D. University of Georgia, collections manager University of Guam Herbarium, with Agnes F. Rinehart wrote *Vegetation of American Memorial Park, Saipan, Mariana Islands*. December 1989, *Trees and Shrubs of the Northern Mariana Islands*. Coastal Resources Management, CNMI. Saipan 1991 and *Ferns and Orchids of the Mariana Islands*. American Orchid Society 1992)

Pacific. See *Philippine Journal of Science* 9: 52. 1914, *Micronesica* 18(2): 62. 1984.

I. magnum Rendle

Tropical southeastern Asia, Thailand, Malaysia, Myanmar (Burma), Borneo, Indonesia. Perennial with a very strong root system, very robust and stout culms, open-tussock, erect, ligule prominent, leaf blade large, leaves lanceolate-acuminate, inflorescence well exerted, two terminal and 1-sided racemes closely appressed, each raceme with spikelets arranged in pairs, spikelets unawned and sessile, quite palatable until maturity, young growth readily eaten by cattle and goats, it will stand heavy grazing and slashing, moderately tolerant of drought, highly tolerant of flooding and waterlogged conditions, occurs in open spaces and in shade, heavy clays, sandy soils, harsh habitats, see *Journal of Botany, British and Foreign* 32: 102. 1894.

in Indonesia: rumput padang, rumput melayu

in Malaysia: rumput melayu, rumput tembaga kasar

I. mangaluricum (Hack.) Stapf ex C.E.C. Fisch. (*Ischaemum aristatum* L.; *Ischaemum aristatum* var. *fallax* Hack.; *Ischaemum aristatum* var. *mangaluricum* Hack.; *Ischaemum aristatum* var. *mangaluricum* Hook.f., nom. illeg., non *Ischaemum aristatum* var. *mangaluricum* Hack.; *Ischaemum geniculatum* Hochst., nom. illeg., non *Ischaemum geniculatum* Roxb.)

India. See *Species Plantarum* 2: 1049. 1753, *Monographiae Phanerogamarum* 6: 204. 1889, *The Flora of British India* 7: 126. 1896 and *Flora of the Presidency of Madras* 10: 1723. 1934, *Grasses of Burma ...* 182. 1960, *Taxon* 34: 159-164. 1985.

I. minus J. Presl (*Andropogon minor* (J. Presl) Steud.; *Andropogon urvilleanus* Steud.; *Ischaemum aristatum* subvar. *urvilleanum* (Kunth ex Brongn.) Roberty; *Ischaemum urvilleanum* Kunth ex Duperry; *Ischaemum urvilleanum*

Kunth; *Ischaemum urvilleanum* Kunth ex Brongn.; *Paspalum axicilium* Steud.)

The Philippines, tropical Asia, Brazil and Uruguay. Naturalized, forest, restinga forest, on sandy soil, see *Révision des Graminées* 1: 167. 1829, *Reliquiae Haenkeanae* 1(4-5): 329. 1830, *Voyage autour du Monde* 2: 69, t. 12. 1831, *Synopsis Plantarum Glumacearum* 1: 20, 376-377. 1854 [or 1853, 1854] and *Boissiera*. 9: 336. 1960.

I. molle Hook.f.

India, tropical Asia, Pakistan. Ascending to erect, a terminal pair of spicate racemes, spikelets sessile or subsessile, glumes nearly equal, lower glumes pubescent, upper lemma membranous and awned, awn twisted, see *The Flora of British India* 7: 128. 1896.

I. muticum L. (*Anatherum muticum* (L.) P. Beauv.; *Andropogon muticus* (L.) Steud., nom. illeg., non *Andropogon muticus* L.; *Andropogon polymorphus* Steud.; *Andropogon relictus* (J. Presl) Steud.; *Andropogon repens* (Roxb.) Steud.; *Ischaemum glabratum* J. Presl; *Ischaemum repens* Roxb.)

Temperate and tropical Asia, China, Japan, India, Indonesia, the Philippines, Sri Lanka, Australia. Perennial, much-branched, creeping, spreading, rooting at the nodes, ascending, leafy, stoloniferous, sometimes scrambling among bushes, overlapping leaf sheaths, ligule shortly ciliate, leaves cordate at the base, inflorescence terminal, two spikes or appressed racemes, spikelets in pairs, sessile spikelet glabrous, pedicelled spikelet hairy, upper lemma awnless or short-awned, leaves applied as poultice in headache, useful grass used as animal food, fodder, palatable and nutritious, weed, erosion control, useful sand binder, tolerates flooding and short dry periods, sandy places, edges of secondary forest, drainage canals, ditches, seashore, open or disturbed habitats, sandy shores and beaches, see *Species Plantarum* 2: 1049. 1753, *Essai d'une Nouvelle Agrostographie* 128, 150. 1812, *Flora Indica*; or *Descriptions ...* 1: 325. 1820, *Reliquiae Haenkeanae* 1(4-5): 328. 1830, *Synopsis Plantarum Glumacearum* 1: 374-375, 377. 1854, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885 and *Handb. Fl. Ceylon* 5: 215. 1900, *Grasses of Ceylon* 176. 1956, *Grasses of Burma ...* 183. 1960, *Regnum Veg.* 127: 57. 1993.

in English: drought grass, seashore centipede grass

in Indonesia: rumput kemarau, rumput kerupet, sukut resap

in Malaysia: rumput kemarau, rumput tembaga jantan

in Sri Lanka: bada mal tana

in Thailand: yaa waai, yaa wai thaam, ya wai tham, ya-waitham

in Vietnam: môm trui

I. muticum L. var. ***aristuliferum*** Fosberg & Sachet

Pacific Islands. See *Species Plantarum* 2: 1049. 1753 and *Micronesica* 18(2): 64. 1982 [1984].

I. muticum L. var. ***muticum***

Southeast Asia to China, Sri Lanka, southern India, Taiwan, Pacific Islands, Australia. Perennial, branched, erect, strongly rhizomatous, sheaths glabrous, ligule minutely ciliate, leaf blades linear lanceolate to lanceolate, appressed racemes, sessile spikelets with lower floret staminate and upper floret perfect, pedicellate spikelets with lower floret staminate to sterile and upper floret perfect to sterile, pedicellate spikelets rudimentary or developed, useful for erosion control, sandy places, seashore, sandy shores, beaches, see *Species Plantarum* 2: 1049. 1753, *Essai d'une Nouvelle Agrostographie* 128, 150. 1812, *Flora Indica*; or *Descriptions ...* 1: 325. 1820, *Reliquiae Haenkeanae* 1(4-5): 328. 1830, *Synopsis Plantarum Glumacearum* 1: 374-375, 377. 1854, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885 and *Handb. Fl. Ceylon* 5: 215. 1900, *Grasses of Ceylon* 176. 1956, *Grasses of Burma ...* 183. 1960, *Regnum Veg.* 127: 57. 1993.

in Sri Lanka: bada mal tana

I. muticum L. var. ***srilankense*** Davidse

Sri Lanka. Perennial, prostrate, sheaths glabrous, appressed racemes, pedicellate spikelets with lower floret staminate and upper floret perfect, sessile spikelets with lower floret staminate and upper floret perfect, articulate pedicellate spikelets rudimentary or developed, mat-forming, sandy places, seashore, sandy shores, beaches, see *Species Plantarum* 2: 1049. 1753, *Essai d'une Nouvelle Agrostographie* 128, 150. 1812, *Flora Indica*; or *Descriptions ...* 1: 325. 1820, *Reliquiae Haenkeanae* 1(4-5): 328. 1830, *Synopsis Plantarum Glumacearum* 1: 374-375, 377. 1854, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885 and *Handb. Fl. Ceylon* 5: 215. 1900, *Grasses of Ceylon* 176. 1956, *Grasses of Burma ...* 183. 1960, *Regnum Veg.* 127: 57. 1993, *Revised Handbook to the Flora of Ceylon* 8: 286-287. 1994.

I. pilosum (Klein ex Willd.) Wight (*Andropogon pilifer* Steud.; *Andropogon pilosus* Klein ex Willd.; *Andropogon pilosus* Dufour ex Roem. & Schult., nom. illeg., non *Andropogon pilosus* Klein ex Willd.; *Andropogon pilosus* Sieber ex Kunth, nom. illeg., non *Andropogon pilosus* Klein ex Willd.; *Spodiopogon pilosus* Nees ex Steud.)

India. Fodder, best fed before flowering, suitable for hay and silage, see *Species Plantarum. Editio quarta* 4: 920. 1806, *Systema Vegetabilium* 2: 819. 1817, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 514. 1833, *Madras Journal of Literature and Science* 138. 1835, *Synopsis Plantarum Glumacearum* 1: 373. 1854.

in India: dungri kunda, kangyaan hullu, kanigyan hulla, kari, kunda, kundara gaddi, kundara gaddi hullu, kundara nattu, nuth, pharari, urranki

I. polystachyum J. Presl (*Andropogon bourouensis* Steud.; *Andropogon chordatus* (Trin.) Steud.; *Andropogon marianae* Steud.; *Andropogon medius* (Brongn.) Steud.; *Andropogon paniceus* Steud.; *Ischaemum chordatum* (Trin.) Hack. ex Warb.; *Ischaemum digitatum* Brongn.; *Ischaemum digitatum* var. *polystachyum* (J. Presl) Hack.; *Ischaemum intermedium* Brongn.; *Ischaemum polystachyum* var. *chordatum* (Trin.) Fosberg & Sachet; *Ischaemum polystachyum* var. *intermedium* (Brongn.) Fosberg & Sachet; *Ischaemum timorense* var. *chordatum* (Trin.) Hack.; *Spodiopogon chordatum* Trin.)

Tropical and Southeast Asia, Malaysia, the Philippines, Indonesia. Perennial, sprawling, long decumbent culms finally ascending, branched inflorescence, racemes spreading, twisted geniculate awn, aggressive and invasive grass, occurs in roadsides and grasslands, lowlands, in disturbed areas, see *Reliquiae Haenkeanae* 1(4-5): 328. 1830, *Voyage autour du Monde* 2(2): 70, 73, t. 13. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 302. 1832, *Synopsis Plantarum Glumacearum* 1: 375, 382, 398. 1854, *Monographiae Phanerogamarum* 6: 233. 1889, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 13: 260. 1890 and *Micronesica* 18(2): 66-67. 1982[1984].

in English: paddle grass

I. polystachyum Presl var. *hillii* Fosberg & Sachet (P.J.R. Hill)

Caroline Islands. See *Reliquiae Haenkeanae* 1(4-5): 328. 1830 and *Micronesica* 18(2): 66-67. 1982[1984].

I. polystachyum Presl var. ***polystachyum*** (*Ischaemum digitatum* var. *polystachyum* (J. Presl) Hack.)

Guam. Endangered species, see *Reliquiae Haenkeanae* 1(4-5): 328. 1830, *Monographiae Phanerogamarum* 6: 233. 1889.

I. raizadae Hemadri & Billore

India, Maharashtra. Rare and threatened species, annual, erect, leaf blades linear-lanceolate, inflorescence of two racemes, sessile spikelet lanceolate, grows on rocks, along streams, rocky crevices, near water, similar to *Ischaemum kingii* Hook.f. and *Ischaemum diplopogon* Hook.f., see *Indian Forester* 96(4): 318-321. 1970, M.P. Nayar & A.R.K. Sastry (eds.) *Red Data Book of Indian Plants*. vol. 2: 189. Calcutta, Botanical Survey of India 1988.

I. rangacharianum C.E.C. Fischer (*Ischaemum aristatum* Rang., nom. illeg., non *Ischaemum aristatum* L.) (Ranga Acharyar)

India. Annual, erect, low fodder value, see Kadambi Rangachari, *A Handbook of Some South Indian Grasses* 151.

Chennai 1921, C.E.C. Fischer, "New little known plants from south India: II." *Kew Bulletin* 1933: 352-353. 1933, N. Ravi, N. Mohanan, T. Shaju, M.S. Kiran Raj and R. Rajesh, "Three more new species of *Ischaemum* L. (Poaceae) from Kerala, India." in *Bot. Bull. Acad. Sin.* 42: 223-230. 2001.

in India: chenkode pullu

I. rivale Hack. (*Ischaemum pilosum* Nees ex Trimen, nom. nud., non (Klein) Hackel; *Spodiopogon rivalis* (Hack.) Thwaites ex Ferguson)

Sri Lanka. Perennial, much-branched, ligule very short, leaf sheaths glabrous with margins ciliate, leaf blades linear-lanceolate, 2-4 racemes, sessile spikelets with lower floret staminate or sterile and upper floret perfect or pistillate, pedicellate spikelets with lower floret staminate or sterile and upper floret pistillate, see *Species Plantarum* 2: 1049. 1753, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6: 228. 1889 and *Handb. Fl. Ceylon* 5: 217. 1900, *Grasses of Ceylon* 176. 1956, *Grasses of Burma ...* 184. 1960.

I. rugosum Salisb. (*Andropogon arnottianus* (Nees) Steud.; *Andropogon griffithsiae* (Nees ex Steud.) Steud.; *Andropogon rugosus* Steud.; *Andropogon segetum* (Trin.) Steud.; *Andropogon tong-dong* Steud.; *Colladoa distachya* Cav., also spelled *distachia*; *Ischaemum colladoa* Spreng.; *Ischaemum rugosum* Gaertn., nom. illeg., non *Ischaemum rugosum* Salisb.; *Ischaemum rugosum* var. *distachyum* (Cav.) Merr.; *Ischaemum rugosum* var. *segetum* (Trin.) Hack.; *Ischaemum segetum* Trin.; *Meoschium arnottianum* Nees, *Meoschium griffithii* Nees & Arn.; *Meoschium griffithsiae* Nees ex Steud.; *Meoschium royleanum* Nees ex Steud.; *Meoschium rugosum* (Salisb.) Nees; *Meoschium rugosum* Wall.; *Meoschium wightianum* Nees)

Tropical and temperate Asia. Annual or perennial, herbaceous, very variable, straggling, erect or strongly geniculate at the base, ascending, decumbent and rooting at the lower nodes, emergent, robustly tufted, often strongly branched at the base, purplish, leafy, bearded nodes, ligule glabrous or ciliolate, leaf sheath densely hairy and long-auricled, hairy leaves oblong to lanceolate, sheaths loose and rather inflated, inflorescence terminal and well exerted, racemes paired arising from the top of the culms, sessile spikelet 2-flowered, lower floret staminate, upper floret perfect, lower glume of sessile spikelet strongly transversely ribbed and hard, slender and twisted awn, pedicellate spikelets usually developed often rudimentary, its roots sometimes aerial, sometimes the grain is used as food, native pasture species, valued for grazing, animal food, good forage and fodder, eaten by cattle and horses when young and fresh, also used as hay, invasive plant, potential seed contaminant, naturalized, in Malaysia infests rubber and vegetables, bad and noxious weed of ricefields and irrigation ditches, young

plants very similar in appearance to rice, growing in water, moist and wet habitats, low-lying black soil, in open and wet grasslands, tank margins, in damp places along stream banks and marshy areas, in roadside ditch, roadside gravel, edge of road, drainage ditches, at field edge, areas permanently flooded with water, see *Icones Stirpium Rariorum* 1, pl. 1. 1791, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 37. t. 460. 1799, *Supplementum Carpologicae* 3: 1, t. 1. 1805, *Systema Vegetabilium, editio decima sexta* 1: 298. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 294. 1832, *Annals and Magazine of Natural History* 1: 284. 1838, *Gramineae* 66-68. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 198-200. 1843, *Synopsis Plantarum Glumacearum* 1: 375-376. 1854, *Enum. Pl. Zeyl.* 364. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6(1): 208. 1889 and *Handb. Fl. Ceylon* 5: 212. 1900, *Philippine Journal of Science* 1(Suppl.): 330. 1906, *Grasses of Ceylon* 175. 1956, *Grasses of Burma ...* 184. 1960, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Flora Novo-Galiciana* 14: 1-436. 1983, *Acta Botanica Yun-nanica* 5(4): 349-350. 1983, C.H. Dodson, A.H. Gentry & F.M. Valverde, "La Flora de Jauneche: Los Ríos, Ecuador." *Flóruilas de las Zonas de Vida del Ecuador* 1-512. 1985, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 21: 152-154. 1986.

in English: ribbed muraina grass, murain grass, muraina grass, saramatta grass, saramollagrass, wrinkled duck-beak, wrinkle duck-beak, wrinkled grass

in Spanish: caminadora, triguillo

in Sierra Leone: fofu-bakai-le, fovo, sanla-yoge

in Burma: ka-gyi-the-myet

in Cambodia: smao srau

in India: amarkarh, badaul, bar, bardi, bhador, bher, dhanua, jalgundya, jara, joya jha, kadukkaen hullu, kadukkan pullu, kadukken pillu, karkel, lag, maggru gadi, marainda, maror, marudi, mehat, moraro, munmuna, murchi, murdi, toli, tori, tudi, tudi jara

in Indonesia: jukut randan, rumput melay, rumput randan, sukut blambem

in Malaysia: rumput colok cinia, rumput ekor chawi, rumput mele

in the Philippines: daua, gulong lapas, gulonglapas, tinitrigo

in Sri Lanka: kudukedu, kodukai

in Thailand: ka du ai nu, ka dueai nu, ka duei nuu, yaa daeng, ya daeng, ya kruduk kai, yaa kraduuk kai, yaa nok see chom phuu, ya nok si chomphu, ya-noksichomphu, ya phraek daeng, yaa phraek daeng

in Vietnam: môm u

Local names: tho muraina, co muraina, yerba popa

I. rugosum Salisb. var. ***rugosum***

Tropical and temperate Asia. See *Icones Stirpium Rariorum* 1, t. 1. 1791.

I. rugosum Salisb. var. ***segetum*** (Trin.) Hack. (*Ischaemum segetum* Trin.)

Tropical and temperate Asia, Australia. See *Icones Stirpium Rariorum* 1, t. 1. 1791, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 294. 1832, *Monographiae Phanerogamarum* 6(1): 208. 1889.

I. santapau Bor

Tropical Asia, India, Maharashtra, Gujarat. Indeterminate species, see *Journal of the Bombay Natural History Society* 49: 167. 1950, M.P. Nayar & A.R.K. Sastry (eds.) *Red Data Book of Indian Plants*. vol. 2. Calcutta, Botanical Survey of India 1988.

I. semisagittatum Roxb. (*Andropogon cordatifolius* Steud.; *Andropogon semisagittatus* (Roxb.) Steud.; *Ischaemum conjugatum* Roxb.; *Ischaemum semisagittatum* sensu Thw., non Roxb.; *Meoschium semisagittatum* (Roxb.) Schult.; *Spodiopogon conjugatus* (Roxb.) Voigt; *Spodiopogon semisagittatus* (Roxb.) Voigt)

Sri Lanka, India. A good fodder, see *Hortus Bengalensis, or a catalogue ...* 8. 1814, *Flora Indica; or Descriptions ...* 1: 322-323. 1820, *Mantissa* 2: 435. 1824, *Hortus Suburbanus Calcuttensis* 706. 1845, *Synopsis Plantarum Glumacearum* 1: 376. 1854, *Enum. Pl. Zeyl.* 365. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6: 209. 1889 and *Handb. Fl. Ceylon* 5: 214. 1900, *Grasses of Ceylon* 175. 1956, *Grasses of Burma ...* 178. 1960, *Taxon* 34: 159-164. 1985.

in India: ber, dalage, kari, sajkadi

I. semisagittatum Roxb. var. ***dasyanthum*** Hack.

Asia. See *Monographiae Phanerogamarum* 6: 209. 1889.

I. timorensis Kunth (*Andropogon asthenos* Steud.; *Andropogon blumii* Nees ex Steud.; *Andropogon timorensis* (Kunth) Steud.; *Ischaemum indicum* (Houtt.) Merr.; *Ischaemum tenellum* Roxb.; *Phleum indicum* Houtt.; *Spodiopogon blumii* Nees ex Steud.)

Tropical and temperate Asia, India, Sri Lanka. Perennial or annual, often aromatic, much-branched, slender, herbaceous, hollow, glabrous, erect, decumbent, straggling, scrambling, spreading, creeping, slanting, stoloniferous to substoloniferous, shallow rooted, sometimes rooting at the lower nodes, ligule a short fringed membrane, leaf sheaths hairy and fringed, blade stiff, inflorescence well exerted composed of 2-3 racemes, axillary and terminal flowering shoots, 2 flowers, spikelets paired alternate on one side of the rachis, lower floret male, upper floret bisexual, keel of

the upper glume not winged, palea hyaline, useful forage grass for cattle, fodder readily eaten by animals, well grazed by horses and sheep, used as pasture grass in more humid areas, invasive, noxious weed species aggressive and difficult to eradicate, naturalized, useful for erosion control, common in open grassy places, terraces, at forest edge, ditches, tea plantations, cleared forests, along roadsides, forest margins, moist areas, in fields along road, in pastures, bare or disturbed areas, similar to *Ischaemum aristatum* L., see *Species Plantarum* 2: 1049. 1753, *Natuurlijke Historie* 13: 198, t. 90, f. 2. 1782, *Exposition des Familles Naturelles* 1: 78. 1805, *Flora Indica; or Descriptions ...* 1: 324. 1820, *Révision des Graminées* 369, t. 98. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 302. 1832, *Synopsis Plantarum Glumacearum* 1: 373, 376. 1854, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6(1): 231. 1889 and *Handb. Fl. Ceylon* 5: 218. 1900, *N. Amer. Fl.* 17: 94. 1909, *Flora of the Presidency of Madras* 10: 1722. 1934, *Journal of the Arnold Arboretum* 19(4): 320. 1938, *Grasses of Ceylon* 176. 1956, *Grasses of Burma ...* 185. 1960.

in English: centipede grass, lucuntu grass, waindoi grass, waidoi grass, stalkleaf murainagrass

in Costa Rica: ratana

in India: nilamunga hullu

in Indonesia: jukut jampang manggung, rumput apet, rumput sarang buaya

in Malaysia: rumput sarang buaya

in Sri Lanka: rila rat tana

in Vietnam: môm timor

I. timorensis Kunth var. ***zeylanicum*** Hack. (*Ischaemum timorensis* var. *petiolatum* Hack. ex Trimen; *Ischaemum zeylanicum* Bor; *Spodiopogon obliquivalvis* sensu Thw., pro parte, non Nees)

Southern India, Sri Lanka. Perennial, herbaceous, sprawling, branched, usually decumbent, rooting at the lower nodes, ligule membranous, leaf blades lanceolate to elliptic-lanceolate, racemes two, lower florets staminate, upper florets perfect, in moist habitats, see *Révision des Graminées* 369, t. 98. 1830, *Enum. Pl. Zeyl.* 365. 1864, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 107. 1885, *Monographiae Phanerogamarum* 6(1): 230. 1889 and *Grasses of Burma, Ceylon, India and Pakistan* 186. 1960.

I. triticeum R. Br. (*Andropogon triticiformis* Steud.)

Tropical southeastern Asia, Papua New Guinea, Australia, New South Wales, Queensland. Perennial, decumbent trailing, rooting and branching at the nodes, sheath glabrous, ligule hairy, racemes exserted, lower glume smooth and winged on the keels, upper glume keeled, lower lemma

male, pedicellate spikelets with both florets male, running cover plant, sand binder, coastal sand dunes, see *Prodromus Florae Novae Hollandiae* 205. 1810, *Synopsis Plantarum Glumacearum* 1: 376. 1854.

I. tropicum B.K. Simon

Australia, Northern Territory. See *Austrobaileya* 3(1): 88, f. 4. 1989.

I. tumidum Stapf ex Bor

Tropical Asia, India. Erosion control, see *Kew Bulletin* 1951: 450. 1952.

I. vembanadense Patil & D'Cruz

India, Kerala. Aquatic habit, see *Journal of the Bombay Natural History Society* 70(2): 324. 1973[1974], N. Ravi, N. Mohanan, T. Shaju, M.S. Kiran Raj and R. Rajesh, "Three more new species of *Ischaemum* L. (Poaceae) from Kerala, India." in *Bot. Bull. Acad. Sin.* 42: 223-230. 2001.

I. wayanadense Ravi, Mohanan & Shaju (Kerala, Wayanad District)

India, Kerala. Perennial, nonaquatic, tufted, reddish, creeping and spreading culms, rooting at the lower nodes, sessile spikelets with entire upper lemma, grows in wet areas, paddy field, margin of water channels, along roadsides, cultivated fields, allied to *Ischaemum vembanadense* Patil & D'Cruz, see N. Ravi, N. Mohanan, T. Shaju, M.S. Kiran Raj and R. Rajesh, "Three more new species of *Ischaemum* L. (Poaceae) from Kerala, India." in *Bot. Bull. Acad. Sin.* 42: 223-230. 2001.

Ischnanthus Roemer & Schultes =
Ichnanthus P. Beauv., *Ischnanthus* (Engler)
Tiegh. (Loranthaceae)

From the Greek *ischnos* "thin, slender" and *anthos* "a flower," Greek *ichnos* "a track, footprint, footstep."

Panicoideae, Paniceae, Paspalinae, see *Species Plantarum* 1: 55. 1753, *Essai d'une Nouvelle Agrostographie* 56, 57, t. 12, f. 1. 1812, *Systema Vegetabilium* 2: 28, 497. 1817, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 195, 320. 1834, *Bulletin de la Société Botanique de France* 42: 260. 1895 and *Contributions from the United States National Herbarium* 46: 257-270, 276. 2003.

Ischnochloa Hook.f. = Microstegium Nees,
Pogonatherum P. Beauv.

From the Greek *ischnos* "thin, slender" and *chloe, chloa* "grass."

One species, Asia, Himalayas. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae,

Andropogoneae, Saccharinae, annual, herbaceous, small, short, delicate, leaf blades elliptic, ligule a fringed membrane, plants bisexual, inflorescence racemose, terminal raceme, spikelets in pairs compressed dorsiventrally, two glumes more or less equal, lower glume 2-keeled with ciliate keels, upper glume 3-nerved, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, sometimes referred to *Microstegium*, type *Ischnochloa falconeri* Hook.f., see *Essai d'une Nouvelle Agrostographie* 56, 176, pl. 11, f. 7. 1812, *A Natural System of Botany* 2nd edition 447. 1836, *Hooker's Icones Plantarum* 25: t. 2466. 1896 and *Kew Bulletin* 35(4): 816. 1981, A.K. Goel and B.P. Niyal, "On the occurrence of a few grasses in Pakistan and Nepal (*Ischaemum impressum*, *Ischnochloa falconeri*, *Microstegium vimineum*, *Puccinellia tenuiflora*)." *Journal of Economic and Taxonomic Botany* 4(3): 43. 1983, *Contributions from the United States National Herbarium* 46: 276, 292, 540-541. 2003.

Species

I. monostachya L. Liou

Asia.

Ischnurus Balf.f. = *Lepturus* R. Br.

From the Greek *ischnos* "thin, slender" and *oura* "a tail."

One species, Socotra. Chloridoideae, Leptureae, annual, herbaceous, small, tufted, ligule a fringed membrane, plants bisexual, inflorescence spicate nondigitate, spikelets solitary, one glume per spikelet, upper glume obtuse, palea present, 2 stigmas, sometimes referred to *Lepturus*, type *Ischnurus pulchellus* Balf.f., see *Prodromus Florae Novae Hollandiae* 207. 1810, *Proceedings of the Royal Society of Edinburgh* 12: 98. 1883.

Species

I. pulchellus Balf.f. (*Lepturus pulchellus* (Balf.f.) Clayton)

Africa. See *Proceedings of the Royal Society of Edinburgh* 12: 98. 1883 and *Kew Bulletin* 37(3): 420. 1982.

Ischurochloa Büse = *Bambusa* Schreber

From the Greek *ischyros* "strong" and *chloe*, *chloa* "grass," some suggest from *ischoureo* "suffer from retention of urine."

Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, type *Ischurochloa spinosa* (Roxb. ex Buch.-Ham.) Büse, see *Genera Plantarum* 1: 236. 1789, *Species Plantarum. Editio quarta* 2: 245. 1799, *Plantae Junghuhnianae* 3: 389-390. 1854 and *Blumea*, Suppl. 3: 106. 1946, *Taxon* 6(7): 203. 1957, *Contributions from the United States National Herbarium* 39: 29-35. 2000.

Iseilema Andersson

From the Greek *isos* "equal" and *eilema* "a veil, covering, involucre," alluding to the four involucral spikelets; see Nils Johann Andersson (1821-1880), in *Nova Acta Regiae Societatis Scientiarum Upsaliensis* Ser. 3, 2: 250. Uppsala 1856.

About 20 species, Southeast Asia, India to Australia, Indomalayan region. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, tufted, slender, erect, branched, often wiry, shoots aromatic, auricles absent, leaf blades narrow and linear, ligule a very short membrane fringed or ciliate fringed, leaves and spathes often with conspicuous glands, plants bisexual, inflorescence a leafy false open panicle, each racemes with boat-shaped spatheoles at base, spikelets dissimilar, racemes with one sessile female spikelet and two male spikelets surrounded by four sterile spikelets, the sessile and homogamous spikelets fused at their base into a single unit, female spikelet sessile awned, lower floret reduced to a lemma, upper floret perfect, two glumes more or less equal, lower glume 8- to 10-nerved, upper glume 3-nerved, pedicellate spikelets staminate or barren, palea usually absent, 2 fleshy lodicules, 1-3 stamens, ovary glabrous, 2 stigmas, fruit compressed, weed species, native pasture species, quick-growing forage grass, highly palatable and nutritious fodder for short periods, attractive, useful for soil erosion control, growing on relatively fertile cracking clay soils, in natural grassland dominated by Mitchell grass (*Astrebla* spp.), tropical savannah, heavy soils, open habitats, open grassland, in Australia often associated with *Astrebla* F. Muell. ex Benth., resembling *Apluda*, type *Iseilema prostratum* (L.) Andersson, see *Nova Acta Regiae Societatis Scientiarum Upsaliensis* Ser. 3, 2: 250-251. 1856 and *Nature* 255: 220-221. 1975, *Australian Journal of Entomology* 38(3): 204-218. Aug 1999, *Austral. Ecology* 27(3): 284-290. June 2002, *Weed Biology and Management* 4(2): 86-94. June 2004, *Journal of Phytopathology* 153(1): 1-4. Jan 2005.

Species

I. anthephoroides Hack.

India, Madhya Pradesh, Asia tropical. Annual, good fodder, should be fed green before flowering or in the flowering stage, see *Monographiae Phanerogamarum* 6: 683. 1889.

in India: bhathi, bhuri, chengalli gaddi, fudali, fudali bhati, gadru, garar musyal, jejjegyaan hullu, jejjegyan hullu, jejjegyanhullu, masuri, musar, mushel, tambad gota, thenggaai nari pul

I. calvum C.E. Hubb.

Australia. See *Hooker's Icones Plantarum* 33: t. 3286. 1935.

I. ciliatum C.E. Hubb.

Australia. See *Hooker's Icones Plantarum* 33: t. 3286. 1935.

I. convexum C.E. Hubb.

Australia. See *Hooker's Icones Plantarum* 33: t. 3286. 1935.

I. dolichotrichum C.E. Hubb. (Greek *dolichos* "long" and *thrix*, *trichos* "hair")

Australia, Queensland, Northern Territory. Annual, dwarf, aromatic, leaves and the acutely keeled spathes with conspicuous glands, outer spikelets with white silky hairs at the base, female spikelet sessile and lanceolate, see *Hooker's Icones Plantarum* 33: t. 3285. 1935.

in English: long-stemmed Flinders grass

I. eremaicum S.T. Blake (from the Greek *eremos* "lonely, solitary, desert, lone," *eremia* "desert," referring to the habitat)

South Australia, Queensland, Northern Territory, Western Australia. Annual, dwarf, erect, nonaromatic, leaves lanceolate and flat, racemes more or less exserted from the sheaths, the four involucrel spikelets each with two glumes, outer spikelets with white silky hairs at the base, female spikelet sessile and lanceolate, arid regions, useful for soil erosion control, see *Proceedings of the Royal Society of Queensland* 49: 83. 1938.

in English: Flinders grass

I. fragile S.T. Blake

Australia, Northern Territory. See *Proceedings of the Royal Society of Queensland* 49: 85. 1938.

I. holmesii S.T. Blake

Australia. See *Papers from the Department of Botany, University of Queensland* 2(3): 59. 1944.

I. laxum Hack. ex Duthie (*Iseilema laxum* Hack., nom. illeg., non *Iseilema laxum* Hack. ex Duthie)

Asia tropical, India, Tamil Nadu, Uttar Pradesh, Maharashtra, Andhra Pradesh, Gujarat, Kerala, Madhya Pradesh, Sri Lanka. Perennial and variable, weak, straggling, erect, ascending, tufted, leafy, simple or branched or sparingly branched, very slender, stout and hard rootstock sometimes shortly creeping, wiry root fibers, leaf blades flat, short ligule truncate and ciliate, leaves linear and soft, inflorescence a long and narrow linear false panicle, involucrel spikelets whorled, bisexual spikelets narrowly lanceolate, homogamous spikelets all pedicelled and staminate, pedicelled spikelet staminate, boat-shaped bracts, spatheoles without tubercles, useful grass, sweet scented when fresh, cut for fodder, forage, very palatable to cattle but not to sheep, used mainly for pasture but also for both hay and silage, much eaten by buffaloes, best before flowering, useful for erosion control, common in on seasonally waterlogged soils, swamps, low lying lands, heavy soils, black soils, canals, riverbanks, trenches, see *The Fodder Grasses of Northern India* 43. 1888, *Monographiae Phanerogamarum* 6: 682. 1889 and *Handb. Fl. Ceylon* 5: 251. 1900,

Grasses of Ceylon 199. 1956, *Grasses of Burma* ... 188. 1960.

in English: musal grass

in India: bharwan, botri jara, change, champ, chhat, dangers, dangeers, erra chengali gaddi, fuli, gandhi, gandi, gandwel, ghorayal, gonda, gondal, karar gandhel dungarko, katri, luinji, machaori, machauri, machi malwa, machuri, malwajari, masan, masel, masuri, moshi, musal, musar, musel, mushan, mushel, musial, musrut, pandasual, shata, tambit, tambrut, tenganaari pullu, thambur, thenga nari pillu, thengina naaru hullu, tikha lodan, tollu hanchi hullu

I. macratherum Domin (Greek *makros* "large, long" and *ather* "an awn, stalk, barb, bristle, chaff, spine, prickle")

Queensland, Northern Territory, Western Australia. Annual, dwarf, densely tufted, branched, erect to spreading at the base, stems reddish and glabrous, young shoots aromatic, leaves glandular near the margins and reddish, dense panicles with acutely keeled spathe, female spikelets awned, the raceme remains wrapped in its spatheole, useful for erosion control, generally not grazed when young, allied to *Iseilema vaginiflorum* Domin, usually on cracking clay soils and medium-textured red earths, palatable to stock when sufficient bulk has grown, see *Genera Graminum* 360-361. 1986.

in English: bull Flinders grass

I. membranaceum (Lindley) Domin (*Anthistiria membranacea* Lindley; *Iseilema actinostachys* Domin; *Iseilema mitchellii* Andersson)

Australia, South Australia, Queensland, Northern Territory, Western Australia, New South Wales. Annual, ephemeral, variable, dwarf, quick growing, tufted, glabrous, leafy, erect and branched, sometimes aromatic, stems greenish and sometimes reddish, leaf blades usually flat, ligule short and membranous, very small racemes very shortly bearded and exserted from the strongly keeled and papery spathes, the four involucrel spikelets sterile or male, female spikelet sessile and lanceolate, pedicellate spikelets male or sterile, grain borne among the small leaves, very palatable when young, high forage value, excellent and nutritious hay, spreads rapidly by seed, will tolerate temporary flooding, it does not stand heavy stocking, grows on heavy cracking clays, dry parts, gray clays, open grassland, see Sir Thomas Livingstone Mitchell (1792-1855), *Journal of an Expedition into the Interior of Tropical Australia, in Search of a Route from Sydney to the Gulf of Carpentaria* ... 88. London 1848 and *Bibliotheca Botanica* 85: 280. 1915.

in English: small Flinders grass, Flinders grass, Landsborough grass (named for the English (b. Ayrshire) plant collector William Landsborough, 1825-1886 (d. Caloundra, Queensland), farmer, Queensland explorer, sent plants to F. Mueller, son of Rev. David Landsborough (1779-1854, d. Ayrshire), wrote *Journal of Landsborough's Expedition from Carpentaria, in Search of Burke and Wills*. With a map

showing his route. Melbourne 1862 and *Landsborough's Exploration of Australia*. From Carpentaria to Melbourne, with special reference to the settlement of available country. Edited by James Stuart Laurie ..., with a *Systematic Arrangement of Carpentarian Plants*, by F. Mueller. London [1866]; see Tom Bergin, *In the Steps of Burke & Wills*. Sydney 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 411-412. London 1994; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. 234-239. Hordern House, Sydney 1987)

I. prostratum (L.) Andersson (*Andropogon prostratus* L.; *Anthistiria prostrata* (L.) Willd.; *Anthistiria wightii* Nees ex Steud.; *Cymbopogon glandulosus* Spreng.; *Iseilema wightii* (Nees ex Steud.) Andersson)

India, Asia tropical, Sri Lanka. Perennial, tufted, straggling, often quite prostrate, thin, variable, leaf blades flat, linear false panicle spreading, homogamous spikelets all pedicelled and staminate, pedicelled spikelet staminate, smooth spatheoles tuberculate on the midnerve, clusters of spikelets usually exerted from the bracts, good fodder, best before flowering, useful grass, hay and silage, young plants with an unpleasant odour or sweet scented, found on heavy and light soils, low lying, black soil, swampy ground, sandy flats, see *Mantissa Plantarum* 2: 304. 1771, *Species Plantarum* 4: 901. 1806, *Plantarum Minus Cognitarum Pugillus* 2: 14. 1815, *Synopsis Plantarum Glumacearum* 1: 400. 1854, *Nova Acta Regiae Societatis Scientiarum Upsaliensis* Ser. 3, 2: 251. Uppsala 1856, *The Fodder Grasses of Northern India* 43. 1888, *Monographiae Phanerogamarum* 6: 682. 1889 and *Handb. Fl. Ceylon* 5: 251. 1900, *Grasses of Ceylon* 199. 1956, *Grasses of Burma* ... 188. 1960, *Journal of Cytology and Genetics* 20: 205-206. 1985.

in English: achi grass

in India: achi, buri, chhoti garpa, gandel, gandeli, gandheli, gandhi, ganni, gauni, ghania, ghod, ghor masan, ghora musan, gondral, mabil, mahals, moshi, musan, mushaa, mushad, musel, mussan, pulsu malwa gadi, sona, tambit, tambrut, ukri, yerra kala kasuvu

I. siamense C.E. Hubb.

Southeast Asia. See *Bulletin of Miscellaneous Information Kew* 1927: 80. 1927.

in Thailand: yaa phraek naa, ya phraek na, yaa takka taen, ya takka taen, ya takkataen

I. thorelii A. Camus

Southeast Asia. See *Bulletin du Muséum d'Histoire Naturelle* 24: 540. 1918.

in Thailand: yaa plong haang, ya plong hang

I. trichopus (Benth.) C.E. Hubb. (*Anthistiria membranacea* var. *trichopus* Benth.)

Australia. See *Flora Australiensis: A Description* ... 7: 544. 1878 and *Hooker's Icones Plantarum* 33: t. 3286. 1935.

I. vaginiflorum Domin (sheathed flowers, Latin *vagina*, *ae* "sheath, scabbard, the covering, husk")

Australia, Queensland. Annual, caespitose, coarse, branched, leafy, reddish or purple at the base, erect and spreading from the base, erect and geniculate at the base, leaves linear and more or less reddish, racemes enclosed by spathes and spatheoles, sterile involucre spikelets each with one glume, fertile sessile spikelet female and awned, pedicellate spikelets male or sterile, spatheole strongly indurated, seeds heavily, not aromatic or rarely, native pasture species, very palatable, grazed, palatable green or dry, not always palatable when coarse and dry, high forage value, makes excellent nutritious hay if cut early, an increaser species, useful for rangeland revegetation, allied to *Iseilema macratherum* Domin, similar to *Iseilema membranaceum* (Lindley) Domin, grows on heavy soils, semiarid and arid regions, red earths and cracking clay soils, open grassland, after heavy rains, see *Bibliotheca Botanica* 85: 281, t. 12, f. 2, t. 13, f. 1. 1915.

in English: red Flinders grass, red gulf grass, barcoo grass, Flinders grass

I. windersii C.E. Hubb. (after M. Winders, original collector)

Queensland, Northern Territory, Western Australia. Annual, dwarf, aromatic, erect to spreading, spathes glandular on keel, racemes exerted, female spikelet awned, dry tropical and subtropical regions, see *Hooker's Icones Plantarum* 33: t. 3284. 1935.

in English: scented Flinders grass

Ixalum Forst.f.

Ixalos, *ixalon*, epith. of the ibex, or bounding, springing, Greek *ixale* "goat's skin," see *Florulae Insularum Australium Prodrum* 92. 1786.

Ixophorus Schtdl. = Ixophorus Nash, Setaria P. Beauv.

From the Greek *ixos* "mistletoe, bird-lime" and *phoros* "bearing, carrying," referring to the single, sticky bristle.

About 1-3 species, Mexico. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Setariinae, annual or perennial, herbaceous, unbranched, caespitose, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence spicate and open, spikelets borne singly and subtended by solitary bristles, second floret female-only, hermaphrodite florets absent, spikelets solitary, two glumes herbaceous very unequal, lower glume 3-nerved, upper glume 11-nerved, lemmas mucronate, lower lemma cartilaginous, palea winged keels clasping edge of upper floret, 2 free and fleshy lodicules, stamens 0, ovary glabrous, 2 red stigmas,

species of open habitats, weedy places, type *Ixophorus unisetus* (J. Presl) Schltldl., see *Species Plantarum* 1: 55. 1753, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 237. 1829, *Reliquiae Haenkeanae* 1(4-5): 319. 1830, *Synopsis Plantarum Glumacearum* 1: 49. 1855 [1853], *Linnaea* 31(4): 420-422, 747. 1861-1863, *An Illustrated Flora of the Northern United States* 1: 125. 1896 and *Beiträge zur Biologie der Pflanzen* 10(1): 42. Breslau 1909, *Contr. U.S. Natl. Herb.* 22(3): 156. 1920, *Flora Mesoamericana* 6: 363-364. 1994, *Contributions from the United States National Herbarium* 46: 276-277. 2003, *Weed Research* 43(1): 68-75. Feb 2003.

Species

I. unisetus (J. Presl) Schltldl. (*Chamaeraphis unisetata* (J. Presl) Kuntze; *Ixophorus palmeri* (Vasey) Beetle; *Ixophorus pringlei* Scribn.; *Ixophorus pringlei* var. *minor* Scribn.; *Ixophorus pringlei* var. *pringlei*; *Panicum cirrhosum* (E. Fourn.) Scribn. & Merr.; *Panicum palmeri* Vasey; *Panicum pringlei* Vasey; *Panicum schiedeanum* Trin. ex Beal; *Panicum schiedeanum* Mez, nom. illeg., non *Panicum schiedeanum* Trin. ex Beal; *Panicum schiedeanum* Trin. ex Steud., nom. illeg., non *Panicum schiedeanum* Trin. ex Beal; *Panicum unisetum* (J. Presl) Trin.; *Setaria cirrosa* E. Fourn., also spelled *cirrhosa*; *Setaria unisetata* (J. Presl) E. Fourn. ex Hemsl.; *Urochloa unisetata* J. Presl)

Northern and southern America. Perennial or annual, dark bristles, forage, useful for erosion control, muddy places, along riverbanks, open areas, wet ground, see *Reliquiae Haenkeanae* 1(4-5): 319. 1830, *Mémoires de l'Académie*

Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 3,1(2-3): 217, in nota. 1834, *Nomenclator Botanicus. Editio secunda* 2: 263. 1841, *Linnaea* 31: 420-422. 1861-1863, *Biologia Centrali-Americana; ... Botany ...* 3(19): 504, 506. 1885, *Mexicanas Plantas* 2: 43. 1886, *Revisio Generum Plantarum* 2: 770. 1891, *Contributions from the United States National Herbarium* 1(8): 281. 1893, *Contributions from the United States National Herbarium* 1: 363. 1895, *Grasses of North America for Farmers and Students* 2: 119. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 6-7, t. 2. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 40. 1900, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4. 1921, *Phytologia* 54(1): 3. 1983, *Fl. Novo-Galiciana* 14: 201. 1983, *Ann. Missouri Bot. Gard.* 79: 798. 1992, *Monocotiledóneas Mexicanas: una Sinopsis Florística* 10: 112. 2000.

in English: Central America grass, Mexican grass

in Colombia: hático

in El Salvador: mesmeto, zacate blanco, zacate de coche de costa, zacate de conejo, zacate hondureño, zacate mesmético

in Honduras: zacate blanco

in Mexico: hierba blanca de Honduras, Honduras, pitillo, zacate blanco

in Nicaragua: zacate chompipe

J

Jacquesfelia J. Phipps = *Danthoniopsis* Stapf

For the French botanist Henri Jacques-Félix, born 1907, explorer, plant collector in West Africa (Guinea and Ivory Coast), from 1930 to 1966 Services Agronomiques d'Outre-Mer, his writings include *La vie et la mort du Lac Tchad*. Rapports avec l'agriculture et l'élevage. [France. Ministère des Colonies. Direction de l'Agriculture, de l'Élevage et des Forêts. Bulletin agronomique. no. 3] Nogent-sur-Marne 1947 and *Géographie des dénudations et dégradations du sol au Cameroun. Conditions physiques et humaines*. [Ministère de la France d'Outre-Mer. Direction de l'Agriculture, etc. Section Technique d'Agriculture Tropicale. Bulletin scientifique. no. 3] Nogent-sur-Marne 1950; see Auguste Jean Baptiste Chevalier (1873-1956), *Flore vivante de l'Afrique Occidentale Française ... Les Polygalées* en collaboration avec M. H. Jacques-Félix. 1: xxvii-xxx. Paris 1938; F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 41. 1971.

Arundinelleae, type *Jacquesfelia dinteri* (Pilg.) J.B. Phipps, see *Hooker's Icones Plantarum* 31: t. 3075. 1916, *Kirkia* 4: 115. 1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

Jansenella Bor

After the Dutch botanist Pieter Jansen, 1882-1955, agrostologist, worked on Malesian grasses; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 246. 1965; T.W. Bosser, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 195. 1972.

One species, India, Chennai, Assam, Sri Lanka. Panicoideae, Panicodae, Arundinelleae, annual, herbaceous, unbranched, not aromatic, weak, rooting at the lower nodes, leaf blades lanceolate, ligule short unfringed membrane, plants bisexual, inflorescence paniculate and contracted, small compact panicles, spikelets flattened and mostly paired, 2 florets, lower floret neuter, upper floret perfect with a twisted and geniculate awn, 2 glumes unequal to very unequal acuminate or awn-tipped, lower glume 3-nerved, upper glume 5-nerved, lemma of lower floret glabrous, lemma of upper floret ciliate bilobed, palea keels winged or palea wingless, 2 free lodicules, 3 stamens, ovary

glabrous, 2 stigmas, moist places, swamps, hills, related to *Arundinella* and *Danthoniopsis*, type *Jansenella griffithiana* (Müll. Stuttg.) Bor, see *Kew Bulletin* 10: 96. 1955, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 226-354, f. 18. 1957, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

Species

J. griffithiana (Müll. Stuttg.) Bor (*Arundinella avenacea* Thwaites; *Arundinella avenacea* Munro ex Thwaites; *Arundinella campbelliana* Lisboa; *Arundinella griffithiana* (Müll. Stuttg.) Bor; *Danthonia griffithiana* Müll. Stuttg.; *Danthoniopsis griffithiana* (Müll. Stuttg.) Bor)

India, Bombay; Sri Lanka. Annual, decumbent or stoloniferous, ligule shortly membranous or absent, leaf blades thin, panicle compact and densely flowered, glumes glabrous or hirsute, upper lemma hairy, marshy meadows, see *Botanische Zeitung. Berlin* 14(20): 347. 1856, *Enum Pl. Zeyl.* 362. 1864, *Journal of the Bombay Natural History Society* 5: 346. 1890 and *Indian Forest Records* 1: 73. 1938, *Flora of Assam* 5: 187. 1940, *Kew Bulletin* 10: 98. 1955, *Grasses of Ceylon* 101. 1956, *Grasses of Burma ...* 426. 1960.

Jarava Ruiz & Pavon = *Achnatherum* P. Beauv., *Stipa* L.

About 10-59 species, South America. Stipoideae, Stipeae, or Pooideae, Stipeae, Stipinae, perennial, caespitose, herbaceous, unbranched, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate and contracted, spikelets ovate, female-fertile floret terminal, 2 glumes very unequal to more or less equal, upper glume 1-nerved, plumose awns, lemmas fusiform, palea present, 3 stamens, wind dispersion, species of open habitats, used for thatching in the Andes, usually referred to *Achnatherum* and *Stipa*, type *Jarava ichu* Ruiz & Pav., see *Species Plantarum* 1: 78. 1753, *Flora Peruviana, et Chilensis Prodrumus* 2. Madrid 1794, *Flora Peruviana, et Chilensis* 1: 5, t. 6, f. b. Madrid 1798-1802, *Essai d'une Nouvelle Agrostographie* 19-20, 146, pl. 6, f. 7. 1812, *Species Graminum Stipaceorum* 42. 1842, *Flora Chilena* 6: 275, 278, 280. 1854 and *Anales del Museo Nacional de Montevideo* 4(22): III, IV, 38, 45, 98. 1901, *Contr. U.S. Natl. Herb.* 24(6-7): 181,

216. 1925, O.R. Matthei, "Estudio crítico de las gramíneas del género *Stipa* en Chile." *Gayana, Botánica* 13: 1-137.
 1965, J.A. Caro and E. Sánchez, "Las especies de *Stipa* (Gramineae) del subgenero *Jarava*." *Kurtziana* 7: 61-116.
 1973, K.A. Robson and J. Maze, "A comparison of rare and common grasses of the Stipeae. I. Greenhouse studies of growth and variation in 4 species from parapatric populations." *International Journal of Plant Sciences* 156(4): 530-541.
 1995, P.F. Rojas, "New species and new combinations for the tribe *Stipeae* (Poaceae) in Bolivia." *Gayana, Botánica* 54(2): 163-182.
 1997[1998] Khidir W. Hilu and Lawrence A. Alice, "Evolutionary implications of *matK* indels in Poaceae." *Am. J. Bot.* 86: 1735-1741.
 1999, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, "Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B." *Am. J. Bot.* 87: 96-107.
 2000, P. Peñailillo, "El género *Jarava* Ruiz & Pav. (Stipeae-Poaceae): delimitación y nuevas combinaciones." *Gayana, Botánica* 59(1): 27-34.
 2002, J. Valdés-Reyna & M.E. Barkworth, "Poaceae II. Pooideae: Tribu Stipeae." *Flora de Veracruz* 127: 1-28.
 2002, *Contributions from the United States National Herbarium* 48: 15-18, 402-409, 617-650.
 2003, *Botanical Journal of the Linnean Society* 144(4): 483-495.
 Apr 2004, Satya Maliakal-Witt, Eric S. Menges and J.S. Denslow, "Microhabitat distribution of two Florida scrub endemic plants in comparison to their habitat-generalist congeners." *Am. J. Bot.* 92: 411-421. 2005.

Species

J. academica (Hicken) Peñailillo (*Stipa academica* Hicken; *Stipa brachychaeta* Godr.; *Stipa brachychaeta* f. *minor* Speg.; *Stipa cordobensis* Mez)

Argentina, Brazil, Uruguay. See *Mémoires de la Section des Sciences; Académie des Sciences et Lettres de Montpellier* 1: 450. 1853 and *Anales del Museo Nacional de Montevideo* 4(2): 113. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 208. 1921, *Darwiniana* 1: 167. 1924, *Contributions from the United States National Herbarium* 48: 403. 2003.

J. ambigua (Speg.) Peñailillo (*Stipa ambigua* Speg.; *Stipa dusenii* Hitchc.)

Argentina. See *Revista Argent. Bot.* 1(1): 27. 1925, *Contr. U.S. Natl. Herb.* 24(7): 271. 1925, *Gayana, Bot.* 59(1): 30. 2002.

J. ameghinoi (Speg.) Peñailillo (*Stipa ameghinoi* Speg.)

Argentina. See *Anales Mus. Nac. Montevideo* 4(2): 163-165, f. 50. 1901, *Gayana, Bot.* 59(1): 30. 2002, *Contr. U.S. Natl. Herb.* 48: 403. 2003.

J. ameghinoi (Speg.) Peñailillo var. ***ameghinoi***

Argentina.

J. ameghinoi (Speg.) Peñailillo var. ***digona*** (Parodi) Peñailillo (*Stipa ameghinoi* var. *digona* Parodi)

Argentina. See *Revista Argentina de Agronomía* 27(3-4): 80, f. 2. 1960.

J. ameghinoi (Speg.) Peñailillo var. ***precordillerana*** (F.A. Roig) Peñailillo (*Stipa ameghinoi* var. *precordillerana* F.A. Roig)

Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 12(1): 79, 80-81, t. 1. 1965.

J. annua (Mez) Peñailillo (*Stipa annua* Mez)

Peru. See *Repert. Spec. Nov. Regni Veg.* 17(13-18): 204. 1921, *Gayana, Bot.* 59(1): 30. 2002.

J. arenicola (F.A. Roig) Peñailillo (*Stipa arenicola* F.A. Roig)

Argentina. See *Hickenia* 2(55): 257, f. 1. 1998, *Contr. U.S. Natl. Herb.* 48: 403. 2003.

J. atacamensis (Parodi) Peñailillo (*Stipa atacamensis* Parodi)

Chile. See *Revista Argent. Agron.* 27(3-4): 85, f. 3. 1960 [1961], *Gayana, Bot.* 59(1): 30. 2002.

J. barrancaensis (F.A. Roig) Peñailillo (*Nassella barrancaensis* (F.A. Roig) Barkworth; *Stipa barrancaensis* F.A. Roig)

Argentina. Stipinae, see *Revista Fac. Ci. Agrar. Univ. Nac. Cuyo* 11(1-2): 46, t. 9, 26c. 1964 [1966], *Taxon* 39(4): 609. 1990, *Gayana, Bot.* 59(1): 30. 2002.

J. brachychaeta (Godr.) Peñailillo (*Achnatherum brachychaetum* (Godr.) Barkworth; *Nassella brachychaeta* (Godr.) Barkworth; *Stipa brachychaeta* Godr.; *Stipa brachychaeta* Godr. f. *brachychaeta*; *Stipa brachychaeta* var. *minor* Speg.; *Stipa eminens* f. *viridis* Kuntze; *Stipa lorentziana* Griseb.)

Argentina. Stipinae, see *Mém. Sect. Sci. Acad. Sci. Montpellier* 1: 450. 1853, *Symb. Fl. Argent.* 298-299. 1879, *Revis. Gen. Pl.* 3(2): 371. 1898 and *Revista Argent. Bot.* 1: 29. 1925, *Taxon* 39(4): 609. 1990, *Phytologia* 74(1): 6. 1993, *Gayana, Bot.* 59(1): 30. 2002.

J. braun-blanquetii (F.A. Roig) Peñailillo (*Stipa braun-blanquetii* F.A. Roig)

Argentina. Stipinae, see *Phytocoenologia* 2(1-2): 19, f. 1. 1975, *Contr. U.S. Natl. Herb.* 48: 403. 2003.

J. brevipes (E. Desv.) Peñailillo (*Stipa brevipes* E. Desv.; *Stipa hirtiflora* Hack.)

Chile. See *Fl. Chil.* 6: 282. 1854 and *Ark. Bot.* 7: 5, t. 3, f. 7, t. 7, f. 4-5. 1908, *Gayana, Bot.* 59(1): 30. 2002.

J. breviseta (Caro & E.A. Sánchez) Peñailillo (*Stipa breviseta* Caro & E.A. Sánchez)

Argentina. See *Kurtziana* 7: 100, t. 7. 1973, *Gayana, Bot.* 59(1): 30. 2002.

J. castellanosii (F.A. Roig) Peñailillo (*Stipa castellanosii* F.A. Roig)

Argentina. See *Revista Fac. Ci. Agrar. Univ. Nac. Cuyo* 12: 82, t. 2. 1965, *Contr. U.S. Natl. Herb.* 48: 404. 2003.

J. caudata (Trin.) Peñailillo (*Achnatherum caudatum* (Trin.) S.W.L. Jacobs & J. Everett; *Jarava bertrandii* (Phil.) Peñailillo; *Stipa amphicarpa* Phil.; *Stipa bertrandii* Phil.; *Stipa caudata* Trin.; *Stipa litoralis* Phil.)

Chile. Stipinae, see *Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 6, Sci. Math.* 1(1): 75. 1830, *Linnaea* 33(3-4): 283. 1864, *Anales Mus. Nac. Santiago de Chile* 1892: 11, Lam. 3 f. 2. 1892, *Anales Univ. Chile* 93: 717. 1896 and *Telopea* 6(4): 582. 1996, *Gayana, Bot.* 59(1): 30-31. 2002.

J. chrysophylla (E. Desv.) Peñailillo (*Stipa chrysophylla* E. Desv.; *Stipa chrysophylla* var. *major* E. Desv.; *Stipa chrysophylla* var. *minor* E. Desv.; *Stipa humilis* f. *chrysophylla* (E. Desv.) Kuntze; *Stipa kurtzii* Mez; *Stipa speciosa* subsp. *chrysophylla* (E. Desv.) Dusén; *Stipa speciosa* var. *andina* Hauman; *Stipa speciosa* var. *gymnostachya* Hauman) (named for F. Kurtz)

Chile. See *Fl. Chil.* 6: 278, t. 76, f. 2. 1854, *Revis. Gen. Pl.* 3(3): 371. 1898 and *Rep. Princeton Univ. Exp. Patagonia, Botany, Suppl.* 8(3): 30-31. 1914 [1915], *Anales Soc. Ci. Argent.* 86: 240, f. 5. 1918, *Repert. Spec. Nov. Regni Veg.* 17(13-18): 204. 1921, *Gayana, Bot.* 59(1): 31. 2002.

J. chrysophylla (E. Desv.) Peñailillo f. *minuta* (F.A. Roig) Peñailillo (*Stipa chrysophylla* f. *minuta* F.A. Roig)

Chile. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 66, t. 25b. 1964 [1966].

J. chrysophylla (E. Desv.) Peñailillo f. *modica* (F.A. Roig) Peñailillo (*Stipa chrysophylla* f. *modica* F.A. Roig)

Chile. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 66-67. 1964 [1966].

J. chrysophylla (E. Desv.) Peñailillo var. *chrysophylla*

Chile.

J. chrysophylla (E. Desv.) Peñailillo var. *cordilleranum* (Parodi) Peñailillo (*Stipa chrysophylla* var. *cordillerarum* Parodi)

Chile. See *Revista Argentina de Agronomía* 27(3-4): 99. 1960, *Gayana, Botánica* 59(1): 31. 2002.

J. chrysophylla (E. Desv.) Peñailillo var. *crispula* (Kuntze) Peñailillo (*Stipa humilis* f. *crispula* Kuntze)

Chile. See *Revisio Generum Plantarum* 3(3): 371. 1898.

J. chubutensis (Speg.) Peñailillo (*Stipa chubutensis* Speg.; *Stipa dasycnemis* Speg.)

Argentina. See *Anales Mus. Nac. Montevideo* 4(2): 49-51, f. 7. 1901, *Revista Argent. Bot.* 1: 21. 1925, *Gayana, Bot.* 59(1): 31. 2002.

J. chubutensis (Speg.) Peñailillo var. *chubutensis*

Argentina.

J. chubutensis (Speg.) Peñailillo var. *hirsutissima* (F.A. Roig) Peñailillo (*Stipa chubutensis* var. *hirsutissima* F.A. Roig)

Argentina. See *Boletín de la Sociedad Argentina de Botánica* 14(4): 316, f. 3. 1972.

J. durifolia (Parodi ex Torres) Peñailillo (*Stipa durifolia* Parodi ex Torres)

Argentina. See *Comis. Invest. Ci. [Buenos Aires]* 13: 54, f. 1, B, b. 1997, *Contr. U.S. Natl. Herb.* 48: 404. 2003.

J. frigida (Phil.) F. Rojas (*Stipa brevifolia* Phil.; *Stipa frigida* Phil.; *Stipa frigida* Phil. var. *frigida*)

Argentina, Chile, Bolivia. Perennial, leaf blades filiform, glumes lanceolate acuminate, semidesert, mountains, see *Florula Atacamensis seu Enumeratio ...* 54. 1860, *Anales Univ. Chile* 93: 724. 1896 and *Gayana, Botánica* 54(2): 173. 1997 [1998].

J. frigida (Phil.) F. Rojas var. *frigida*

Chile.

J. frigida (Phil.) F. Rojas var. *parvispicula* (Parodi) Peñailillo (*Stipa frigida* var. *parvispicula* Parodi)

Chile. See *Revista Argentina de Agronomía* 27(3-4): 91, f. 4, E, e. 1960.

J. hieronymusii (Pilg.) Peñailillo (*Stipa hieronymusii* Pilg.) (after the German botanist Georg (Jorge) Hans Emmo (Emo) Wolfgang Hieronymus, 1846-1921, plant collector, 1874-1883 Córdoba (Argentina), from 1892 at Berlin-Dahlem, editor of *Hedwigia*, author of "Sertum patagonicum ó determinaciones y descripciones de plantas fanerógamas y criptógamas vasculares recogidas por el Dr. Carlos Berg en las costas de Patagonia." *Bol. Acad. Nac. Ci.* 3: 327-385. 1879, *Revista del sistema natural de los vegetales arreglada segun los conocimientos modernos, y acompañadas de breves características de la grupos y clases ... Córdoba 1877, Observaciones sobre in vegetación de la provincia de Tucumán.* [Edición revisada y acompañada de notas críticas por Hans Seckt.] [Tucumán] Universidad nacional de Tucumán, Facultad de filosofía y letras, Instituto de estudios geográficos [1945], "Sertum sanjuaninum ó determinaciones y descripciones de plantas fanerógamas y criptógamas vasculares recolectadas por el Dr. D. Saile Echegaray en la provincia San Juan." *Bol. Acad. Nac. Ci.* 4: 1-73. 1881, *Icones et descriptiones plantarum, quae sponte in Republica Argentina crescunt.* Breslau 1885, *Ueber Rafflesia schadenbergiana (Göppert): ein Beitrag zur Kenntniss der Cytinaceen.* Breslau: [s.n.], 1885. See J.H. Barnhart, *Biographical notes upon botanists.* 2: 172. 1965; Ignatz Urban, editor, *Symbolae Antillanae.* 3(3): 524-527. Berlin 1903; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 174. 1972; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 150-151. 1947; Staffeu and Cowan, *Taxonomic literature.* 2: 193-194. 1979)

Argentina. See *Bot. Jahrb. Syst.* 56(Beibl. 123): 24. 1920, *Gayana, Bot.* 59(1): 31. 2002.

J. humilis (Cav.) Peñailillo (*Stipa humilis* Cav.; *Stipa humilis* Cav. f. *humilis*; *Stipa humilis* f. *major* Speg.; *Stipa humilis* f. *minor* Speg.; *Stipa humilis* var. *genuina* Kuntze; *Stipa humilis* Cav. var. *humilis*; *Stipa humilis* var. *intermedia* Kuntze)

Chile. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 41, t. 466, f. 1. 1799, *Revis. Gen. Pl.* 3: 371. 1898 and *Anales Mus. Nac. Montevideo* 4(2): 53. 1901, *Gayana, Botánica* 59(1): 31. 2002.

J. humilis (Cav.) Peñailillo var. ***decrescens*** (Kuntze) Peñailillo (*Stipa humilis* var. *decrescens* Kuntze)

Chile. See *Revisio Generum Plantarum* 3(3): 371. 1898.

J. humilis (Cav.) Peñailillo var. ***humilis***

Chile.

J. humilis (Cav.) Peñailillo var. ***ruiziana*** (Parodi) Peñailillo (*Stipa humilis* var. *ruiziana* Parodi)

Chile. See *Revista Argentina de Agronomía* 27(3-4): 104. 1960.

J. hypsophila (Speg.) Peñailillo (*Stipa hypsophila* Speg.)

Argentina. See *Revista Argent. Bot.* 1(1): 33. 1925, *Gayana, Bot.* 59(1): 31. 2002.

J. hystricina (Speg.) Peñailillo (*Stipa hystricina* Speg.)

Argentina. See *Anales del Museo Nacional de Montevideo* 4(2): 115-116, f. 30. 1901, *Contributions from the United States National Herbarium* 48: 405. 2003.

J. ibarii (Phil.) Peñailillo (*Stipa ibarii* Phil.; *Stipa ibarii* f. *ibarii*) (named for the botanist Henricus Ibar, plant collector in Chile)

Chile. See *Anales de la Universidad de Chile* 93: 716. 1896 and *Gayana, Botánica* 59(1): 31. 2002.

J. ibarii (Phil.) Peñailillo f. ***ibarii***

Chile.

J. ibarii (Phil.) Peñailillo f. ***pallescens*** (Parodi) Peñailillo (*Jarava ibarii* (Phil.) Peñailillo; *Stipa ibarii* f. *pallescens* Parodi)

Chile. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 55-57, t. 11. 1964 and *Gayana, Botánica* 59(1): 31. 2002, *Contributions from the United States National Herbarium* 48: 405. 2003.

J. ibarii (Phil.) Peñailillo var. ***anomala*** (Parodi) Peñailillo (*Jarava ibarii* (Phil.) Peñailillo; *Stipa ibarii* var. *anomala* Parodi)

Chile. See *Anales de la Universidad de Chile* 93: 716. 1896 and *Revista Argentina de Agronomía* 27(3-4): 89. 1960, *Gayana, Botánica* 59(1): 31. 2002, *Contributions from the United States National Herbarium* 48: 405. 2003.

J. ibarii (Phil.) Peñailillo var. ***ibarii***

Chile.

J. ichu Ruiz & Pav. (*Jarava arundinacea* Willd. ex Steud.; *Jarava eriostachya* (Kunth) Peñailillo; *Jarava pseudoichu* (Caro) F. Rojas; *Jarava usitata* Pers.; *Stipa eriostachya* Kunth; *Stipa gynerioides* Phil.; *Stipa ichu* (Ruiz & Pav.) Kunth; *Stipa ichu* f. *ichu*; *Stipa ichu* f. *interrupta* Hack.; *Stipa ichu* var. *gynerioides* (Phil.) Hack.; *Stipa ichu* var. *ichu*; *Stipa jarava* P. Beauv.; *Stipa liebmännii* E. Fourn. ex Hemsl.; *Stipa liebmännii* E. Fourn.)

Mexico, Argentina, Venezuela, Peru, Bolivia. Bunchgrass, clumped, caespitose, fodder, used for making baskets, growing in sandy soils, slopes, rocky places, see *Species Plantarum* 1: 78. 1753, *Flora Peruviana* 1: 5, t. 6, f. b. 1798, *Syn. Pl.* 1: 6. 1805, *Essai d'une Nouvelle Agrostographie* 18, 19, 179, t. 6, f. 3. 1812, *Nova Genera et Species Plantarum (quarto edition)* 1: 127, t. 41. 1815 [1816], *Révision des Graminées* 1: 60. 1829, *Nomenclator Botanicus. Editio secunda* 1: 797. 1840, *Anales de la Universidad de Chile* 36: 203. 1870, *Biología Centrali-Americana*; ... *Botany* ... 3: 537. 1885, *Mexicanas Plantas* 2: 76. 1886 and *Anales del Museo Nacional de Buenos Aires* 11: 98. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 76. 1911, *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Kurtzi-ana* 3: 103-107, f. 21. 1966, *Gayana, Botánica* 54(2): 173. 1997 [1998], *Gayana, Botánica* 59(1): 31. 2002.

in English: needle grass

in Latin America: ichu

in Colombia: iche, ichu

in Mexico: sumic-ichu, yuracichu, zacate

in Peru: ichu, paja i'chsu

J. illimanica (Hack.) F. Rojas (*Stipa illimanica* Hack.)

Bolivia. Subwoody, branched, leaf blades convolute acuminate, lax panicle narrowly oblong sparsely branched, glumes lanceolate acuminate, callus acute, sandy places, see *Species Plantarum* 1: 78. 1753 and *Repertorium Specierum Novarum Regni Vegetabilis* 11: 22. 1912, *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Gayana, Botánica* 54(2): 173. 1997 [1998].

J. juncooides (Speg.) Peñailillo (*Stipa flexibarbata* Mez; *Stipa juncooides* Speg.; *Stipa megapotamia* var. *juncooides* (Speg.) Speg.; *Stipa megapotamia* var. *typica* Speg.)

Argentina. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 77. 1830, *Contribucion al estudio de la flora de la Sierra ...* 68. 1896 and *Anales del Museo Nacional de Montevideo* 4(2): 128. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 208. 1921, *Gayana, Bot.* 59(1): 31. 2002.

J. leptostachya (Griseb.) F. Rojas (*Danthonia nardoides* Phil.; *Jarava ichu* Ruiz & Pav.; *Stipa andina* F.A. Roig;

Stipa capilliset Hitchc.; *Stipa ichu* (Ruiz & Pav.) Kunth; *Stipa leptostachya* Griseb.; *Stipa leptostachya* var. *capilliset* (Hitchc.) Parodi; *Stipa leptostachya* var. *leptostachya*; *Stipa nardoides* (Phil.) Hack. ex Hitchc.)

Argentina. Perennial bunchgrass, caespitose, ascending, coarse, densely clumped, leaves basal, found along roadsides, see *Species Plantarum* 1: 78. 1753, *Flora Peruviana* 1: 5, t. 6, f. b. 1798, *Révision des Graminées* 1: 60. 1829, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 299. 1879, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 84. 1891 and *Contributions from the United States National Herbarium* 24(7): 216, 271. 1925, *Revista Argentina de Agronomía* 17: 198. 1950, *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 12(1): 84, 85-87, t. 3. 1967, *Gayana, Bot.* 54(2): 173. 1997 [1998].

J. macbridei (Hitchc.) Peñailillo (*Stipa macbridei* Hitchc.)

Peru. Rocky slopes, see *Proceedings of the Biological Society of Washington* 36: 197. 1923, *Gayana, Bot.* 59(1): 31. 2002.

J. maeviae (F.A. Roig) Peñailillo (*Stipa maeviae* F.A. Roig)

Argentina. See *Boletín de la Sociedad Argentina de Botánica* 14(4): 314, f. 2. 1972, *Gayana, Bot.* 59(1): 31. 2002.

J. malalhuensis (F.A. Roig) Peñailillo (*Stipa malalhuensis* F.A. Roig)

Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 60-62, t. 13, 25d. 1964 [1966], *Gayana, Bot.* 59(1): 31. 2002.

J. mattheii F. Rojas (*Achnatherum mattheii* F. Rojas ex Renvoize)

Argentina, Bolivia. Caespitose, leaf blades filiform and pungent, contracted panicles, subequal glumes acuminate and lanceolate, in rocky places, see *Gayana, Bot.* 54(2): 174-175, f. 1. 1997 [1998], *Gramíneas de Bolivia* 85. 1998.

J. media (Speg.) Peñailillo (*Stipa media* (Speg.) Caro; *Stipa plumosa* var. *media* Speg.)

Argentina. See *Anales del Museo Nacional de Montevideo* 4(2): 40, f. 2a-c. 1901, *Kurtziana* 3: 25. 1966, *Contributions from the United States National Herbarium* 48: 406. 2003.

J. megapotamica (Spreng.) Peñailillo (*Aristida megapotamica* Spreng.; *Nassella megapotamia* (Spreng. ex Trin.) Barkworth; *Stipa filifolia* Nees; *Stipa megapotamia* Spreng. ex Trin.)

Brazil. See *Systema Vegetabilium, editio decima sexta* 4: 31. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 379. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 77. 1830 and *Taxon* 39(4): 610-611. 1990, *Gayana, Bot.* 59(1): 31-32. 2002.

J. milleana (Hitchc.) Peñailillo (*Stipa chlorostachya* Sodiro; *Stipa chlorostachya* var. *dumetorum* Sodiro; *Stipa chlorostachya* var. *latifolia* Sodiro; *Stipa milleana* Hitchc.)

Ecuador. Dry areas, see *Species Plantarum* 1: 78. 1753, *Flora Peruviana, et Chilensis Prodrumus* 2. 1794, *Flora Peruviana* 1: 5, t. 6, f. b. 1798, *Species Graminum Stipaceorum* 42. 1842 and *Anales del Museo Nacional de Montevideo* 4(22): IV, 98. 1901, *Contributions from the United States National Herbarium* 24(7): 269. 1925, *Revista del Colegio Nacional Vicente Rocafuerte* 11(38): 43 [reprint 12, 17]. 1929, *Gayana, Bot.* 59(1): 32. 2002.

J. nana (Speg.) Peñailillo (*Stipa nana* Speg.)

Argentina. See *Revista Argentina de Botánica* 1: 23. 1925, *Gayana, Bot.* 59(1): 32. 2002.

J. neaei (Nees ex Steud.) Peñailillo (*Stipa bella* Phil.; *Stipa neaei* Nees ex Steud.; *Stipa pulchella* Munro ex Ball)

Argentina. See *Synopsis Plantarum Glumacearum* 1: 126. 1854, *Anales de la Universidad de Chile* 26: 203. 1870, *Journal of the Linnean Society, Botany* 21: 237. 1884 and *Gayana, Bot.* 59(1): 32. 2002.

J. nicorae (F.A. Roig) Peñailillo (*Stipa nicorae* F.A. Roig)

Argentina. See *Giornale Botanico Italiano* 121(1-2): 41, f. 1. 1987, *Gayana, Bot.* 59(1): 32. 2002.

J. pachypus (Pilg.) Peñailillo (*Stipa disticha* Hitchc.; *Stipa pachypus* Pilg.)

Peru. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 25. 1920, *Contributions from the United States National Herbarium* 24(7): 288. 1925, *Gayana, Bot.* 59(1): 32. 2002.

J. parodiana (F.A. Roig) Peñailillo (*Stipa parodiana* F.A. Roig)

Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 44-46, t. 8, 26b. 1964 [1966], *Gayana, Bot.* 59(1): 32. 2002.

J. patagonica (Speg.) Peñailillo (*Stipa patagonica* Speg.)

Argentina. See *Revista de la Facultad de Agronomía y Veterinaria* 3: 581. 1897 and *Gayana, Botánica* 59(1): 32. 2002.

J. plumosa (Spreng.) S.W.L. Jacobs & J. Everett (*Achnatherum papposum* Barkworth, nom. illeg.; *Achnatherum papposum* (Nees) Barkworth; *Arundo plumosa* (Spreng.) Schult.; *Calamagrostis plumosa* Spreng.; *Stipa delilei* Steud.; *Stipa papposa* Nees, nom. illeg.; *Stipa papposa* Delile, nom. illeg., non *Stipa papposa* Nees; *Stipa tenuiflora* Phil.) (after the French botanist Alire Delile (Raffeneau-Delile), 1778-1850 (Montpellier), physician, with Napoléon to Egypt, traveler in North Carolina, 1819-1850 professor of botany at Montpellier, his writings include *Nouveaux Cristaux parmi les grains de pollen* du etc. Montpellier [1836], *Centurie de plantes d'Afrique du voyage à Méroé, recueillies par M. Cailliaud*. Paris 1826, *Notice sur un*

voyage horticole et botanique en Belgique et en Hollande. Montpellier 1838, *Description de l'Égypte. Histoire naturelle*. Tom. second. Paris 1812, *Dissertation sur les effets d'un poison de Java, appelé Upas tieuté, et sur la Noix vomique, la Fève de St. Ignace, le Strychnos potatorum, et la Pomme de Vontac*, qui sont du même genre de plantes que l'Upas tieuté. Paris 1809 and *Flore de l'Arabie pétrée*. Plantes recueillies par M. Léon de Laborde, nommées, classées, et décrites par M. Delile. Paris 1830. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 438. Boston 1965; Léon de Laborde et Linant, *Voyage de l'Arabie pétrée*. Paris 1830 [-1833]; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 98. 1972; Friedrich Wilhelm Heinrich Alexander von Humboldt (1769-1859) and Aimé Jacques Alexandre Bonpland (1773-1858), *Plantae aequinoctiales*. 1808; Jean Motte, in *D.S.B.* 4: 21-22. 1981; Lucia Sala Simion, "1798, campagna scientifica d'Egitto." *Corriere della Sera*. 12 Aprile 1998; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 224. Regione Siciliana, Palermo 1988)

Argentina, Uruguay, Chile. Useful for erosion control, see *Systema Vegetabilium, editio decima sexta* 1: 253. 1825 [1824], *Mantissa* 3: 604. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 377. 1829, *Ind. Sem. Hort. Monsp.* 7. 1849, *Synopsis Plantarum Glumacearum* 1: 126. 1854, *Linnaea* 33(3-4): 281. 1864 and *Phytologia* 74(1): 11. 1993, *Acta Botanica Malacitana* 21: 125-189. 1996, S.W.L. Jacobs & J. Everett, "Jarava plumosa (Gramineae), a new combination for the species formerly known as *Stipa papposa*." *Telopea* 7(3): 301-302. 1997.

J. plumosula (Nees ex Steud.) F. Rojas (*Stipa plumosa* Trin.; *Stipa plumosa* var. *micrura* Speg.; *Stipa plumosa* var. *plumosa*; *Stipa plumosula* Nees ex Steud.)

Chile. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 37. 1836, *Synopsis Plantarum Glumacearum* 1: 127. 1854 and *Anales del Museo Nacional de Montevideo* 4(2): 40. 1901, *Gayana, Bot.* 54(2): 173. 1997 [1998].

J. pogonathera (E. Desv.) Peñailillo (*Stipa buchtienii* Hack.; *Stipa pogonathera* E. Desv.; *Stipa uspallatensis* Hack., nom. illeg., non *Stipa uspallatensis* Speg.)

Chile. See *Flora Chilena* 6: 277. 1854 and *Österreichische Botanische Zeitschrift* 54: 289, 382. 1904, *Gayana, Bot.* 59(1): 32. 2002.

J. polyclada (Hack.) Peñailillo (*Stipa polyclada* Hack.)

Argentina. See *Anales del Museo Nacional de Buenos Aires* 14: 80-81, t. 2, f. a-e. 1911, *Contr. U.S. Natl. Herb.* 24(7): 285. 1925, *Gayana, Bot.* 59(1): 32. 2002.

J. pseudoichu (Caro) F. Rojas (*Stipa ichu* (Ruiz & Pav.) Kunth; *Stipa pseudoichu* Caro)

Argentina, Bolivia. Forming small clumps, see *Flora Peruviiana* 1: 5, t. 6, f. b. 1798, *Révision des Graminées* 1: 60. 1829 and *Kurtziana* 3: 103-107, f. 21. 1966, *Gayana, Botánica* 54(2): 173. 1997 [1998].

J. psylantha (Speg.) Peñailillo (*Stipa argentea* Hitchc.; *Stipa dasyantha* Speg.; *Stipa psylantha* Speg.)

Argentina. Open areas, see *Revista Argentina de Botánica* 1: 16, 21. 1925, *Contributions from the United States National Herbarium* 24(7): 273. 1925, *Gayana, Bot.* 59(1): 32. 2002.

J. pungens (Nees & Meyen) Matthei (*Stipa ichu* var. *pungens* (Nees & Meyen) Kuntze; *Stipa ichu* var. *pungens* (Nees & Meyen) Pilg., nom. illeg., non *Stipa ichu* var. *pungens* (Nees & Meyen) Kuntze; *Stipa pungens* Nees & Meyen; *Stipa pungens* Meyen)

Peru. See *Révision des Graminées* 1: 60. 1829, *Reise um die Erde* 1: 484. Berlin 1834, *Gramineae* 19. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 151. 1843, *Revisio Generum Plantarum* 3(3): 372. 1898 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 778. 1933, *Gayana, Bot.* 54(2): 190-191. 1997 [1998].

J. pungionata (Caro & E.A. Sánchez) Matthei (*Stipa pungionata* Caro & E.A. Sánchez)

Argentina. See *Kurtziana* 7: 109, f. 9. 1973, *Gayana, Bot.* 54(2): 191. 1997 [1998].

J. ruiz-lealii (F.A. Roig) Peñailillo (*Stipa ruiz-lealii* F.A. Roig)

Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 42, t. 5, 25c. 1964 [1966], *Gayana, Bot.* 59(1): 32. 2002.

J. scabrifolia (Torres) Peñailillo (*Stipa scabrifolia* Torres)

Argentina. See *Comisión de Investigaciones Científicas* 13: 61, f. 1, A, a. 1997, *Contributions from the United States National Herbarium* 48: 407. 2003.

J. scirpea (Speg.) Peñailillo (*Stipa axilliflora* Parodi; *Stipa scirpea* Speg.)

Argentina. See *Anales del Museo Nacional de Montevideo* 4(2): 137-139, f. 40. 1901, *Revista. Fac. Ci. Agrar. [Univ. Cuyo]* 11(1-2):103, t. 24. 1964, *Gayana, Botánica* 59(1): 32. 2002.

J. semperiana (F.A. Roig) Peñailillo (*Stipa semperiana* F.A. Roig)

Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 37t. 6, 25d. 1964 [1966], *Gayana, Bot.* 59(1): 32-33. 2002.

J. sorianoi (Parodi) Peñailillo (*Stipa sorianoi* Parodi)

Argentina. See *Revista Argentina de Agronomía* 27(3-4): 94, f. 5, B, b-e. 1960, *Gayana, Bot.* 59(1): 32. 2002.

J. speciosa (Trin. & Rupr.) Peñailillo (*Achnatherum speciosum* (Trin. & Rupr.) Barkworth; *Stipa californica* Vasey ex S. Watson; *Stipa humilis* var. *jonesiana* Kuntze; *Stipa humilis* var. *speciosa* (Trin. & Rupr.) Kuntze; *Stipa speciosa* Trin. & Rupr.; *Stipa speciosa* f. *minor* Speg.; *Stipa speciosa* f. *speciosa*; *Stipa speciosa* var. *minor* Vasey; *Stipa speciosa* var. *speciosa*; *Stipa tehuelches* Speg.)

Chile. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 41, t. 466, f. 1. 1799, *Species Graminum Stipaceorum* 45. 1842, *Proceedings of the American Academy of Arts and Sciences* 24: 80. 1889, *Contributions from the United States National Herbarium* 3(1): 52. 1892, *Revisio Generum Plantarum* 3(2): 371. 1898 and *Anales del Museo Nacional de Montevideo* 4(2): 58, f. 10c-d. 1901, *Revista Argentina de Botánica* 1: 24. 1925, *Contr. U.S. Natl. Herb.* 24(7): 222. 1925, *Phytologia* 74(1): 13. 1993, *Gayana, Bot.* 59(1): 32. 2002.

J. speciosa (Trin. & Rupr.) Peñailillo f. *abscondita* (F.A. Roig) Peñailillo (*Stipa speciosa* f. *abscondita* F.A. Roig)

Chile, Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 36-37. 1964 [1966], *Gayana, Botánica* 59(1): 32. 2002, *Contributions from the United States National Herbarium* 48: 407. 2003.

J. speciosa (Trin. & Rupr.) Peñailillo f. *horrida* (F.A. Roig) Peñailillo (*Stipa speciosa* f. *horrida* F.A. Roig)

Chile, Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 36, t. 25a. 1964 [1966], *Gayana, Botánica* 59(1): 32. 2002, *Contributions from the United States National Herbarium* 48: 408. 2003.

J. speciosa (Trin. & Rupr.) Peñailillo f. *speciosa*

Chile, Argentina.

J. speciosa (Trin. & Rupr.) Peñailillo var. *atuelensis* (F.A. Roig) Peñailillo (*Stipa speciosa* f. *atuelensis* F.A. Roig; *Stipa speciosa* var. *atuelensis* F.A. Roig)

Chile, Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 12(1): 91-94, lamina 6. 1-9. 1965, *Deserta* 2: 113. 1971, *Gayana, Botánica* 59(1): 32. 2002, *Contributions from the United States National Herbarium* 48: 407. 2003.

J. speciosa (Trin. & Rupr.) Peñailillo var. *breviglumis* (Parodi) Peñailillo (*Stipa speciosa* var. *breviglumis* Parodi)

Argentina. See *Revista Argentina de Agronomía* 27(3-4): 74, f. 1, B, b, i. 1960, *Gayana, Botánica* 59(1): 32. 2002, *Contributions from the United States National Herbarium* 48: 407. 2003.

J. speciosa (Trin. & Rupr.) Peñailillo var. *ciliata* (F.A. Roig) Peñailillo (*Stipa speciosa* var. *ciliata* F.A. Roig)

Chile, Argentina. See *Giornale Botanico Italiano* 121(1-2): 43, f. 2. 1987, *Gayana, Botánica* 59(1): 32. 2002, *Contri-*

butions from the United States National Herbarium 48: 407-408. 2003.

J. speciosa (Trin. & Rupr.) Peñailillo var. *major* (Speg.) Peñailillo (*Stipa speciosa* f. *major* Speg.; *Stipa speciosa* var. *major* (Speg.) Parodi; *Stipa speciosa* var. *rhomalea* F.A. Roig)

Argentina. See *Species Graminum Stipaceorum* 45. 1842 and *Anales del Museo Nacional de Montevideo* 4(2): 58, f. 10a-b. 1901, *Revista Argentina de Agronomía* 27(3-4): 75, f. 1, C, c. 1960, *Deserta* 2: 110, t.2. 1971, *Gayana, Botánica* 59(1): 32. 2002, *Contributions from the United States National Herbarium* 48: 408. 2003.

J. speciosa (Trin. & Rupr.) Peñailillo var. *manqueclensis* (F.A. Roig) Peñailillo (*Stipa speciosa* var. *manqueclensis* F.A. Roig)

Chile, Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 12: 89, t. 5. 1965, *Gayana, Botánica* 59(1): 32. 2002, *Contributions from the United States National Herbarium* 48: 408. 2003.

J. speciosa (Trin. & Rupr.) Peñailillo var. *media* (Torres) Peñailillo (*Stipa speciosa* var. *media* Torres)

Argentina. See *Comisión de Investigaciones Científicas* 12: 44, t.1, C, c; t. 4d. 1993, *Gayana, Botánica* 59(1): 32. 2002, *Contributions from the United States National Herbarium* 48: 408. 2003.

J. speciosa (Trin. & Rupr.) Peñailillo var. *parva* (F.A. Roig) Peñailillo (*Stipa speciosa* var. *parva* F.A. Roig)

Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 33-35. 1964 [1966], *Gayana, Botánica* 59(1): 32. 2002, *Contributions from the United States National Herbarium* 48: 408. 2003.

J. speciosa (Trin. & Rupr.) Peñailillo var. *speciosa*

Chile, Argentina.

J. subaristata (Matthei) Matthei (*Stipa leptostachya* var. *subaristata* Matthei; *Stipa subaristata* (Matthei) Caro & E.A. Sánchez)

Chile. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 299. 1879 and *Gayana, Botánica* 13: 120. 1965, *Kurtziana* 7: 96. 1973, *Gayana, Bot.* 54(2): 192. 1997 [1998].

J. subnitida (Roseng. & B.R. Arrill.) Peñailillo (*Nassella subnitida* (Roseng. & B.R. Arrill.) Barkworth; *Stipa subnitida* Roseng. & B.R. Arrill.)

Uruguay. See *Boletín de la Facultad de Agronomía de Universidad de la Republica, Montevideo* 72: 25, t. 6-7. 1964, *Taxon* 39(4): 612. 1990, *Gayana, Bot.* 59(1): 32. 2002.

J. subplumosa (Hicken ex F.A. Roig) Peñailillo (*Stipa subplumosa* Hicken ex F.A. Roig)

Argentina. See *Boletín de la Sociedad Argentina de Botánica* 14(4): 311, f. 1. 1972, *Gayana, Bot.* 59(1): 32. 2002

J. tortuosa (E. Desv.) Peñailillo (*Stipa tortuosa* E. Desv.) Chile. See *Flora Chilena* 6: 281. 1854 and *Gayana, Bot.* 59(1): 32. 2002.

J. vaginata (Phil.) F. Rojas (*Stipa cacheutensis* Speg.; *Stipa formosa* Phil.; *Stipa vaginata* Phil.; *Stipa vaginata* f. *vaginata*; *Stipa vaginata* var. *vaginata*)

Chile, Argentina. See *Linnaea* 33(3-4): 281. 1864, *Anales de la Universidad de Chile* 93: 723. 1896 and *Revista Argentina de Botánica* 1: 19. 1925, *Gayana, Bot.* 54(2): 173. 1997 [1998].

J. vaginata (Phil.) F. Rojas f. *contracta* (F.A. Roig) Peñailillo (*Stipa vaginata* f. *contracta* F.A. Roig)

Argentina. See *Linnaea* 33(3-4): 281. 1864 and *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 53, t. 10 & 25f. 1964 [1966], *Gayana, Botánica* 54(2): 173. 1997 [1998], *Contributions from the United States National Herbarium* 48: 408. 2003.

J. vaginata (Phil.) F. Rojas f. *immersa* (F.A. Roig) Peñailillo (*Stipa vaginata* f. *immersa* F.A. Roig)

Argentina. See *Linnaea* 33(3-4): 281. 1864 and *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 53-54, t. 10 & 25e. 1964 [1966], *Gayana, Botánica* 54(2): 173. 1997 [1998], *Contributions from the United States National Herbarium* 48: 408-409. 2003.

J. vaginata (Phil.) F. Rojas f. *laevis* (F.A. Roig) Peñailillo (*Stipa vaginata* f. *laevis* F.A. Roig)

Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 52, t. 10 & 25g. 1964 [1966], *Gayana, Botánica* 54(2): 173. 1997 [1998], *Contributions from the United States National Herbarium* 48: 409. 2003.

J. vaginata (Phil.) F. Rojas f. *rigida* (F.A. Roig) Peñailillo (*Stipa vaginata* f. *rigida* F.A. Roig)

Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 54-55. 1964 [1966], *Gayana, Botánica* 54(2): 173. 1997 [1998], *Contributions from the United States National Herbarium* 48: 409. 2003.

J. vaginata (Phil.) F. Rojas f. *vaginata*

Argentina.

J. vaginata (Phil.) F. Rojas var. *argyroidea* (F.A. Roig) Peñailillo (*Stipa vaginata* var. *argyroidea* F.A. Roig)

Argentina. See *Linnaea* 33(3-4): 281. 1864 and *Deserta* 2: 107, t. 1. 1971, *Gayana, Botánica* 54(2): 173. 1997 [1998], *Contributions from the United States National Herbarium* 48: 408. 2003.

J. vaginata (Phil.) F. Rojas var. *dilatata* (F.A. Roig) Peñailillo (*Stipa vaginata* var. *dilatata* F.A. Roig)

Argentina. See *Linnaea* 33(3-4): 281. 1864 and *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional*

de Cuyo] 11(1-2): 54. 1964 [1966], *Gayana, Botánica* 54(2): 173. 1997 [1998], *Contributions from the United States National Herbarium* 48: 408. 2003.

J. vaginata (Phil.) F. Rojas var. *vaginata*

Argentina.

J. vatroensis (F.A. Roig) Peñailillo (*Stipa vatroensis* F.A. Roig)

Argentina. See *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 40-42, t. 7, 26a. 1964 [1966], *Gayana, Bot.* 59(1): 32-33. 2002.

Jardinea Steudel = *Phacelurus* Griseb., *Rhytachne* Desv. ex Ham.

Dedicated to the French botanist Désiré Édélestan (Édélestan) Stanislas Aimé Jardin, 1822-1896 (Brest), traveler, 1845-1848 plant collector in West Africa (from Senegal to Gabon, etc.), Inspector General of the French Navy, among his writings are *Une fête chez les Noukahiviens*. Extrait d'Un Voyage en Océanie. Rochefort-sur-mer, Paris 1881, *Le Cafétier et le Café. Monographie historique, scientifique et commerciale de cette rubiacée*. Suivie d'un index bibliographique. Paris 1895, "Herborisations sur la côte occidentale d'Afrique ... 1845-1848." in *Nouvelles Annales de la Marine et des Colonies*. Paris 1850-1851 and *Aperçu sur la flore du Gabon*. Paris 1891; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 247. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 461. Boston, Mass. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ignatz Urban, editor, *Symbolae Antillanae*. 3: 67. Berlin 1902; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 166-167. 1947; J. Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 182. Paris 1882; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 42. 1971.

About 3 species, tropical Africa. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, caespitose, robust, coarse, tough, culm leaves, auricles absent, leaf blades linear, ligule a fringed membrane, plants bisexual, inflorescence spicate or paniculate, spikelets paired, mixed in the same inflorescence male and female-fertile spikelets, male spikelets with glumes, 2 glumes very unequal or subequal, lower glume 4-6-nerved, upper glume 3-nerved, palea keel-less 2-nerved or nerveless, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, rain-forest, savannah, type *Jardinea gabonensis* Steud., see *Supplementum Plantarum* 13, 114. 1781 [1782], *Prodromus Plantarum Indiae Occidentalis* xiv, 11, 12. 1825, *Spicilegium florae rumelicae et bithynicae* ... 2: 423-424. 1846

[1844], *Synopsis Plantarum Glumacearum* 1: 360. 1854 [1855], *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887 and *Bulletin agricole du Congo Belge* 11: 140. 1920, *Bulletin de la Société Botanique de Belgique* 55: 31. 1922, W.D. Clayton, "The genus *Rhytachne* (Gramineae)." *Kew Bulletin* 32(4): 767-771. 1978.

Species

J. congoensis Franch. ex Hack. (*Rytachne congoensis* Hack.)

Tropical Africa. See *Contributions a la flore du Congo Francais* 13. 1896.

J. gabonensis Steud. (*Elionurus gabonensis* (Steud.) Robertry; *Phacelurus congoensis* (Hack.) Van der Zon; *Phacelurus gabonensis* (Steud.) Clayton; *Rhytachne congoensis* Hack.; *Rhytachne gabonensis* (Steud.) Hack.; *Rottboellia gabonensis* (Steud.) Robertry; *Rytachne gabonensis* (Steud.) Hack.)

Africa. Tufted, herbaceous, leaves rough to scabrid, along roadsides, savannah, see *Synopsis Plantarum Glumacearum* 1: 360. 1854, *Monographiae Phanerogamarum* 6: 276-277. 1889 and *Petite Flore de l'Ouest-Africain* 409. 1954, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 70. 1960, *Kew Bulletin* 32(3-4): 665-672, 767-771. 1978, *Kew Bulletin* 35(4): 817. 1981, *Wageningen Agricultural University Papers* 92-1(2): 521 557. 1992.

J. kibambeensis Vanderyst

Tropical Africa. See *Bulletin de la Société Botanique de Belgique* 55: 31. 1922.

Joachima Tenore = Beckmannia Host

Pooideae, Poaeae, Alopecurinae, type *Joachima phalaroides* Ten., see *Icones et Descriptiones Graminum Austriacorum* 3: 5. 1805, *Flora Napolitana* 1: ix, 16. 1811, *Cat. Pl. Hort. Neap.* 53. 1813 and *Index Kewensis* suppl. 12: 74. 1959, *Contributions from the United States National Herbarium* 48: 140-141, 409. 2003.

Joannegria Chiov. = *Lintonia* Stapf, *Negria* Chiov., *Negria* F. Muell. (Gesneriaceae)

For the Italian botanist Giovanni Negri, 1877-1960, professor of botany, from 1925 to 1949 Director of the Orto Botanico at Firenze, his works include *Erbario figurato*. Milano 1904 and *Atlante dei principali funghi commestibili e velenosi*. Torino 1908; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 542. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 283. Boston, Mass. 1972.

Cynodonteae, type *Negria melicoides* Chiov., see *Fragmenta Phytographiae Australiae* 7: 151. 1871 and *Hooker's Icones Plantarum* 30: t. 2944, 2949. 1911, *Annali di Botanica* 10(3): 410-411. 1912, *Annali di Botanica* 11: 1. 1913.

Jouvea E. Fourn. = *Rhachidospermum* Vasey

For the French botanist Joseph Duval-Jouve, 1810-1883; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 488. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 110. 1972.

About 2 species, Central America and Mexico, Pacific coast. Chloridoideae, Cynodonteae, Monanthochloinae, perennial bunchgrass, herbaceous, low, thorny to spinescent, erect, decumbent, ascending, caespitose, stoloniferous, creeping, trailing, rhizomatous, auricles absent, ligule a dense line of hairs, leaf blades linear and pungent, leaves distichously arranged, plants dioecious, male and female inflorescences very different, a panicle exerted or fully included, male inflorescence an exerted raceme, pistillate spikelets in clusters, male spikelets sessile, female inflorescence a single spikelet subtended by a prophyll and embraced by an upper leaf-sheath, female spikelet thorn-like, sponge-like rachilla, 2-8 florets, glumes absent, lemma tubular, small palea enclosed by lemma, lodicules absent, stamens 3, ovary glabrous, stigmas 2, male inflorescence an exerted raceme, invasive, weed, on coastal sand dunes, beach sand, open habitats, sandy places, related to *Monanthochloe*, type *Jouvea straminea* E. Fourn., see *Bulletin de la Société Botanique de Belgique* 15(3): 475-476. 1876, *Botanical Gazette* 15: 106, 110, t. 12. 1890 and *Bulletin Torrey Botanical Club* 66: 315-325. 1939 [The morphology and phylogenetic position of the genus *Jouvea* (Gramineae)], *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 168. 1956, *Ceiba* 19(1): 1-118. 1975, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Flora Novo-Galiciana* 14: 1-436. 1983, *Memoir San Diego Society of Natural History* 16: 1-66. 1989, *Flora Mesoamericana* 6: 258-259. 1994, *Contributions from the United States National Herbarium* 41: 129, 192. 2001, *Flora of Ecuador* 68: 13-14. 2001.

Species

J. pilosa (Presl) Scribner (*Brizopyrum pilosum* J. Presl; *Poa preslii* Kunth; *Rhachidospermum mexicanum* Vasey)

Mexico, Central America, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama. Ascending, decumbent, trailing, rooting at the nodes, strongly rhizomatous, leaves rigid, clumped, forming mats or dense turfs, sandy places, beach sand, mangrove areas, dunes, see *Reliquiae Haenkeanae* 1(4-5): 280. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 326. 1833, *Botanical Gazette* 15(5): 106, 110, t. 12. 1890, *Bulletin of*

the *Torrey Botanical Club* 23: 143. 1896 and *Brittonia* 23(3): 293-324. 1971.

in El Salvador: abrojo

J. straminea E. Fourn.

Mexico to north Ecuador. Perennial, wiry, glabrous, sometimes stoloniferous, creeping, spreading, clumped, forming small tussocks and mats, ligule a rim of short hairs, leaf blades with spiny margins, inflorescence slender to wiry, female flowering structure curved and needle-like, forage, sandy plains, seasonally inundated areas, muddy flats, beach sand, dunes, see *Bulletin de la Société Botanique de Belgique* 15(3): 475-476. 1876 and *Phytologia* 37(4): 317-407. 1977, *Cuscatlania* 1(6): 1-29. 1991.

Joycea H.P. Linder = *Chionochloa* Zotov, *Danthonia* sensu lato, *Notodanthonia* Zotov, *Rytidosperma* Steud.

Named for the Australian botanist Dr. Joyce Winifred Vickery M.B.E. (1908-29 May 1979), agrostologist from Sydney, scientist, botanical collector, at the National Herbarium of New South Wales, Royal Botanic Gardens, assistant botanist in 1936, she was the first woman to be appointed as a scientific professional officer in the NSW Public Service, a member of the Linnean Society since 1930, her research was almost entirely on the family Poaceae; see Alison Holland, "Joyce Vickery (1908-1979) botanist," in Heather Radi (editor), *200 Australian Women: A Redress Anthology*, Women's Redress Press Inc, Sydney 1988, Claire Hooker, "Joyce Winifred Vickery: Taxonomic Botanist," *Australasian Science*, vol. 21, no. 7, p. 46. 2000, Claire Hooker, "Joyce Winifred Vickery (1908-1979), Botanist and Conservationist," in John Ritchie and Diane Langmore (eds.), *Australian Dictionary of Biography*, vol. 16, pp. 452-453. Melbourne University Press, Melbourne, 2002, A.E. Orchard, *A History of Systematic Botany in Australia*, in *Flora of Australia* vol. 1, 2nd edition, ABRS. 1999.

A genus of 3 species, Australia. Arundinoideae, Dantho-
nieae, or Danthonioideae, Dantho-
nieae, perennial, cae-
spitose, rhizomatous, unbranched or branched, leaves
mainly basal, auricles absent, flowering culms leafless,
ligule fringed or ciliate, plants bisexual, open inflorescence
paniculate, solitary spikelets, 2 subequal glumes 1-7-
nerved, incomplete florets distal, lemmas bilobed, palea
present, 2 ciliate and fleshy lodicules, 3 stamens, ovary
glabrous, 2 red stigmas, shade or partial shade, open habi-
tats, temperate grassland, often in *Danthonia*, closely
related to *Austrodanthonia* and *Notodanthonia*, type *Joycea*
pallida (R. Br.) H.P. Linder, see *Flore Française ...*
Troisième Édition 3: 32. 1805, *Prodromus Florae Novae*
Hollandiae 177. 1810, *Systema Vegetabilium* 2: 690. 1817,
Synopsis Plantarum Glumacearum 1: 425. 1854 and *Con-*
tributions from the New South Wales National Herbarium

2(3): 249-325. 1956, *New Zealand Journal of Botany* 1: 87,
104, 122. 1963, S.T. Blake, "*Plinthanthesis* and *Danthonia*
and a review of the Australian species of *Leptochloa*
(Gramineae)." *Contributions from the Queensland Herbar-*
ium 14: 3. 1972, *Taxon* 29: 293-298. 1980, *Telopea* 6(4):
611-612, 615-617. 1996, H.P. Linder, "Nomenclatural cor-
rections in the *Rytidosperma* complex (Danthonieae,
Poaceae)." *Telopea* 7(3): 269-274. 1997, Trevor Meers and
Robyn Adams, "The impact of grazing by Eastern Gray
kangaroos (*Macropus giganteus*) on vegetation recovery
after fire at Reef Hills Regional Park, Victoria." *Ecological*
Management and Restoration 4(2): 126-132. Aug 2003,
Flora of Australia vol. 44B, Poaceae 3: 39-41. 2005.

Species

J. clelandii (Vickery) Linder (*Danthonia clelandii* Vickery;
Notodanthonia clelandii (Vickery) Veldkamp; *Ryti-*
dosperma clelandii (Vickery) Connor & Edgar)

South Australia. Loosely caespitose, without rhizomes,
inflorescence broadly paniculate, spikelets with 4-6 florets,
in light shade, see *Contributions from the New South Wales*
National Herbarium 1(5): 297. 1950, *Contributions from*
the New South Wales National Herbarium 2(3): 275. 1956,
New Zealand Journal of Botany 17(3): 332. 1979, *Taxon*
29: 296. 1980, *Telopea* 6(4): 612. 1996.

in English: wallaby grass

J. lepidopoda (N.G. Walsh) H.P. Linder (*Danthonia lepi-*
dopoda N.G. Walsh)

Australia, Victoria. Spreading, loosely caespitose, rhizoma-
tous, see *Muelleria* 7(3): 384. 1991, *Telopea* 6(4): 612.
1996.

in English: wallaby grass

J. pallida (R. Br.) H.P. Linder (*Avena brownii* (R. Br.)
Spreng.; *Avena pallida* Thunb.; *Chionochloa pallida* (R.
Br.) S.W.L. Jacobs; *Danthonia pallida* R. Br.; *Danthonia*
pallida (Thunb.) Roem. & Schult., nom. illeg., non *Dan-*
thonia pallida R. Br.; *Danthonia pallida* Petrie, nom. illeg.,
non *Danthonia pallida* R. Br.; *Danthonia penicillata* var.
pallida (R. Br.) F. Muell. ex Maiden & Betche; *Danthonia*
penicillata var. *pallida* (R.Br.) Rodway; *Notodanthonia pal-*
lida (R. Br.) Veldkamp)

Australia, ACT, New South Wales, Victoria. Caespitose,
herbaceous, robust, tussocky, without rhizomes, inflores-
cences paniculate, spikelets with 3-6 bisexual florets, poor
acid soil, woodlands and forests, understorey, alpine
regions, see *Prodromus Plantarum Capensium*, ... 22. 1794,
Prodromus Florae Novae Hollandiae 177. 1810, *Systema*
Vegetabilium 2: 657. 1817, *Systema Vegetabilium*, editio
decima sexta 1: 336. 1825 and *The Tasmanian Flora*: 267.
1903, *A Census of New South Wales Plants* 29. 1916, *Con-*
tributions from the New South Wales National Herbarium

2(3): 272-275. 1956, *Taxon* 29: 297. 1980, *Taxon* 31: 742.
1982, *Telopea* 6(4): 611. 1996.

in English: silvertop wallaby grass, red anther wallaby
grass

K

Kampmannia Steud.

Name of uncertain application, see *Synopsis Plantarum Glumacearum* 1: 34-35. 1855 [1853] and *Genera Graminum* 376. 1986, *Flora of New Zealand* 5: 614. 2000.

Species

K. zeylandica Steud.

New Zealand.

Kampochloa W.D. Clayton = Ctenium Panzer

One species, Angola and Zambia. Chloridoideae, Cynodonteae, perennial, herbaceous, unarmed, densely tufted, unbranched, leaves mainly basal, auricles absent, plants bisexual, single raceme shortly pedicellate, male or sterile floret dorsally awned, 2 glumes unequal or very unequal, upper glume with an oblique dorsal awn, 1-4 vestigial lemmas long-awned, glumes and fertile lemma like *Ctenium*, fertile floret without sterile lemmas below it, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, rocky places, type *Kampochloa brachyphylla* Clayton, see *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 38, 61. München 1813, *Denkschriften der Bayer[ischen]. Botanischen Gesellschaft in Regensburg* 4: 311, t. 13, f. 1-2. 1813 [1814] and *North American Flora* 17(8): 579-638. 1939, *Kew Bulletin* 21: 103. 1967, *Flora Mesoamericana* 6: 290-291. 1994.

Species

K. brachyphylla Clayton

Africa. See *Kew Bulletin* 21: 103. 1967.

Kaokochloa De Winter

From the Kaokoveld, southwest Africa, and *chloe*, *chloa* "grass."

One species, southern Africa. Chloridoideae, Pappophoreae, annual, glandular, herbaceous, branched, geniculate or prostrate at base, rooting at the nodes, auricles absent, ligule a fringe of hairs, plants bisexual, inflorescence paniculate open to contracted, spikelets disarticulating between the glumes, 2 subequal glumes 9-11-nerved, lemmas cori-

aceous with 2 lateral nerves, large awns and smaller awns, palea present, 2 free and fleshy lodicules, ovary glabrous, 3 stamens, yellow anthers, 2 stigmas, in semidesert, hill-sides, flats, type *Kaokochloa nigrirostris* De Winter, see *Bothalia* 7: 479. 1961, *Kew Bulletin* 40: 737-744. 1985, Khidir W. Hilu and Lawrence A. Alice, "Evolutionary implications of *matK* indels in Poaceae." *Am. J. Bot.* 86: 1735-1741. 1999.

Species

K. nigrirostris De Winter

Namibia. Annual, tufted to loosely tufted, decumbent, lemmas curled inward at base of the awns, awns glabrous and purplish, growing in sandy or gravelly soils, see *Bothalia* 7: 480. 1961.

Karoochloa Conert & Türpe = Danthonia DC. s.l., Rytidosperma Steudel

Grass, *chloa*, from the Karoo.

About 4 species, southern Africa. Arundinoideae, Dantho- nieae (Arundineae), or Danthonioideae, Dantho- nieae, annual or perennial, herbaceous, unbranched, unarmed, stoloniferous, tufted, auricles absent, leaf sheaths hairy, ligule a fringe of hairs, plants bisexual, contracted inflores- cence paniculate, spikelets solitary, 2 glumes subequal or more or less equal, lower glume 3- to 5-nerved, upper glume 3- to 7-nerved, lemmas fringed with white hairs, palea present, 2 lodicules free and ciliate, 3 stamens, ovary gla- brous, 2 stigmas, species of open habitats, among rocks, grassland, sometimes included in *Rytidosperma* Steud., placed by some authors in *Danthonia* sensu lato, type *Kar- roochloa curva* (Nees) Conert & Türpe, see *Flore Française ... Troisième Édition* 3: 32. 1805, *Prodromus Florae Novae Hollandiae* 177. 1810, *Systema Vegetabilium* 2: 690. 1817, *Synopsis Plantarum Glumacearum* 1: 425. 1854 and *Con- tributions from the New South Wales National Herbarium* 2(3): 249-325. 1956, *New Zealand Journal of Botany* 1: 87, 104, 122. 1963, *Senckenbergiana Biologica* 50: 290, 295. 1969, *Taxon* 29: 293-298. 1980, H.P. Linder and G.A. Ver- boom, "Generic limits in the *Rytidosperma* (Dantho- nieae, Poaceae) complex." *Telopea* 6(4): 611-612. 1996, *Contri- butions from the United States National Herbarium* 46: 277. 2003.

Species

K. curva (Nees) Conert & Türpe (*Danthonia bachmannii* Hack.; *Danthonia curva* Nees; *Danthonia curva* var. *elongata* Stapf) (after the German naturalist and medical practitioner Franz (Frans) Ewald Bachmann, 1856- ca.1916, collector in Pondoland and Cape; see J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; Evelyn Mary (Eve) Palmer (1918-1998) & Norah Pitman, *Trees of Southern Africa*. 1: 611. Cape Town 1972; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 84. Cape Town 1981; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement I: A-Ba*. 232-235. Königstein 1992; J.H. Barnhart, *Biographical notes upon botanists*. 1: 98. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 19. 1972).

South Africa. Perennial or annual, tufted, stoloniferous, leaf sheaths glabrous, lemmas pubescent, lemma lobes with short bristles, palea pubescent, pasture, weed, useful for erosion control, usually in damp or shady habitats, along roadsides, see *Florae Africae Australioris Illustrationes Monographicae* 328. 1841, *Bulletin de l'Herbier Boissier* 3(8): 385. 1895, *Flora Capensis* 7: 532. 1899 and *Senckenbergiana Biologica* 50: 295, 298. 1969.

K. purpurea (L.f.) Conert & Türpe (*Avena purpurea* L.f.; *Danthonia purpurea* (L.f.) P. Beauv. ex Roem. & Schult.; *Danthonia purpurea* (L.f.) P. Beauv.; *Danthonia purpurea* P. Beauv. ex Roem. & Schult.; *Danthonia purpurea* var. *setosa* Nees ex Drège; *Danthonia setosa* Nees).

South Africa. Perennial, tufted, tussocks forming, shortly rhizomatous, leaf sheaths hispid, leaves pubescent and curved, spikelets on slender pedicels, glumes purple, lemma pilose and tomentose, central awn geniculate, palea pubescent, pasture, found in mountain, grassland, along roadsides, see *Supplementum Plantarum* 112. 1781, *Sp. Pl.* (edition 4): 450. 1797, *Systema Vegetabilium* 2: 690. 1817, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 325. 1841, *Linnaea* 20: 254. 1847 and *Senckenbergiana Biologica* 50: 303. 1969.

K. schismoides (Stapf ex Conert) Conert & Türpe (*Danthonia curva* Nees; *Danthonia schismoides* Stapf ex Conert)

South Africa. Annual, tufted, prostrate, leaf sheaths glabrous, lemmas pubescent or glabrous, palea pubescent, growing in dry mountainous areas, see *Florae Africae Australioris Illustrationes Monographicae* 328. 1841 and *Senckenbergiana Biologica* 46: 180. 1965, *Senckenbergiana Biologica* 50: 298-299. 1969, *Bothalia* 18: 119-122. 1988.

K. tenella (Nees) Conert & Türpe (*Danthonia tenella* Nees; *Karoochloa schismoides* (Stapf ex Conert) Conert & Türpe)

South Africa. Annual, tufted, leaf sheaths hispid, glumes purplish, central awn geniculate, palea glabrous, common in sandy soils, disturbed areas, see *Florae Africae Australioris Illustrationes Monographicae* 324, 328. 1841 and *Senckenbergiana Biologica* 50: 298-299, 308. 1969, *Bothalia* 18: 111-114. 1988.

Kengia Packer = *Cleistogenes* Keng,

Diplachne P. Beauv., *Jarrilla* Rusby

(Caricaceae), *Jarrilla* I.M. Johnst.

(Caricaceae), *Moliniopsis* Gand., *Moliniopsis*

Hayata, *Orinus* Hitchcock

About 10-18 species, temperate Eurasia, China, Turkey. Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, perennial, herbaceous, leaf blades linear, ligule fringed and more or less membranous, plants bisexual, inflorescence spicate or paniculate, lax racemes, 2 glumes more or less equal or unequal, lower glume 1- to 5-nerved, upper glume 1- to 7-nerved, cleistogamous spikelets concealed within the upper leaf-sheaths, 5- to 7-nerved lemmas, palea present, lodicules absent, 3 stamens, open habitats, dry open places, related to *Leptochloa*, sometimes referred to *Diplachne*, type *Kengia serotina* (L.) Packer, see *Essai d'une Nouvelle Agrostographie* 80-81, 160, pl. 16, f. 9. 1812, *A Manual of the Botany of the Northern United States* 588. 1848, *Flora Europae* 25: 354. 1891 and *Torreyia* 21: 47. 1921, *Contributions from the Gray Herbarium of Harvard University* 70: 78. 1924, *Botanical Magazine* (Tokyo) 39: 258. 1925, *J. Wash. Acad. Sci.* 23: 136. 1933, *Sinensia* 5(1-2): 147-157. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 78(2): 208-245. 1959 [Beiträge zur Monographie der Gattungen *Cleistogenes* und *Neyraudia*], *Botaniska Notiser* 113(3): 289-294. 1960, *Kew Bulletin* 35: 701. 1980, *Taxon* 43: 123. 1994, *Bull. Bot. Res.* 15, 4: 433-436. 1995, *Taxon* 49: 239-260. 2000, Chen Liang, D.L. Michalk and G.D. Millar, "The ecology and growth patterns of *Cleistogenes* species in degraded grasslands of eastern Inner Mongolia, China" *Journal of Applied Ecology* 39(4): 584. August 2002, *Acta Bot. Sinica* 46(1): 35-45. 2004, Yu, H. & Zhao, N.-X., "Synopsis of Chinese *Kengia* (Poaceae)." *Ann. Bot. Fennici* 42: 47-55. 2005, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

K. andropogonoides (Honda) Packer (*Cleistogenes andropogonoides* Honda)

China. See *Report of the First Scientific Expedition to Manchoukou* 4: 98. 1936, *Botaniska Notiser* 113(3): 292. 1960.

K. caespitosa (Keng) Packer (*Cleistogenes caespitosa* Keng)

China. See *Sinensia* 5(1-2): 154-155, f. 4. 1934, *Botaniska Notiser* 113(3): 292. 1960.

K. caespitosa (Keng) Packer var. *caespitosa*

China.

K. caespitosa (Keng) Packer var. *ramosa* (F.Z. Li & C.K. Ni) H. Yu & N.X. Zhao

China.

K. chinensis (Maxim.) Packer (*Cleistogenes chinensis* (Maxim.) Keng; *Diplachne serotina* var. *chinensis* Maxim.)

China. See *Bulletin de la Société Impériale des Naturalistes de Moscou* 54: 70. 1879 and *Sinensia* 5(1-2): 152. 1934, *Botaniska Notiser* 113(3): 291. 1960.

K. festucacea (Honda) Packer (*Cleistogenes festucacea* Honda)

China. See *Report of the First Scientific Expedition to Manchoukou* 4: 98. 1936, *Botaniska Notiser* 113(3): 292. 1960.

K. gatacrei (Stapf) Cope (*Cleistogenes gatacrei* (Stapf) Bor; *Diplachne gatacrei* Stapf)

Pakistan. Lemmas glabrous on margins, see *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 487. 1960, *Kew Bulletin* 35(3): 701. 1980.

K. gracilis (Keng ex Keng f. & L. Liou) Packer (*Cleistogenes gracilis* Keng ex Keng f. & L. Liou)

China. See *Botaniska Notiser* 113(3): 293. 1960, *Acta Botanica Sinica* 9(1): 69. 1960.

K. hackelii (Honda) Packer (*Cleistogenes hackelii* (Honda) Keng, nom. illeg., non *Cleistogenes hackelii* (Honda) Honda; *Cleistogenes serotina* var. *aristata* (Hack.) Keng; *Diplachne hackelii* Honda; *Diplachne serotina* var. *aristata* Hack.)

China. See *Bulletin de l'Herbier Boissier* 7(9): 704. 1899 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 112-113. 1930, *Sinensia* 5(1-2): 149-151. 1934, *Sinensia* 11: 409. 1940, *Botaniska Notiser* 113(3): 291. 1960.

K. hackelii (Honda) Packer var. *brachyphylla* (Ohwi) H. Yu & N.X. Zhao

China.

K. hackelii (Honda) Packer var. *hackelii*

China.

K. hackelii (Honda) Packer var. *nakaii* (Keng) H. Yu & N.X. Zhao (*Kengia hackelii* subsp. *nakaii* (Keng ex Ohwi) T. Koyama; *Kengia hackelii* var. *nakaii* (Keng ex Ohwi) S.L. Chen)

China. See *Botanical Magazine* 55: 309. 1941, *Grasses of Japan and its Neighboring Regions* 513. 1987.

K. hancei (Keng) Packer (*Cleistogenes hancei* (Hance) Keng; *Cleistogenes serotina* var. *sinensis* (Hance) Keng; *Diplachne sinensis* Hance)

China. See *Journal of Botany, British and Foreign* 8(88): 76-77. 1870 and *Sinensia* 5(1-2): 150-152. 1934, *Sinensia* 11: 408. 1940, *Botaniska Notiser* 113(3): 292. 1960.

K. hancei (Keng) Packer var. *hancei*

China.

K. hancei (Keng) Packer var. *jeholensis* (Kitag.) H. Yu & N.X. Zhao

China.

K. kitagawai (Honda) Packer (*Cleistogenes kitagawae* Honda; *Kengia kitagawae* (Honda) Packer)

China. See *Report of the First Scientific Expedition to Manchoukou* 4: 99. 1936, *Botaniska Notiser* 113(3): 292. 1960.

K. kitagawai (Honda) Packer var. *foliosa* (Keng) H. Yu & N.X. Zhao

China.

K. kitagawai (Honda) Packer var. *kitagawai*

China.

K. kokonorica (K.S. Hao) Packer (*Cleistogenes kokonorica* K.S. Hao)

China. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 68(5): 582. 1938, *Botaniska Notiser* 113(3): 293. 1960.

K. longiflora (Keng ex Keng f. & L. Liou) Packer (*Cleistogenes longiflora* Keng; *Kengia longiflora* (Keng) Packer)

China. See *Botaniska Notiser* 113(3): 293. 1960, *Acta Botanica Sinica* 9(1): 69. 1960.

K. mucronata (Keng ex Keng f. & L. Liou) Packer (*Cleistogenes mucronata* Keng ex Keng f. & L. Liou)

China. See *Botaniska Notiser* 113(3): 293. 1960, *Acta Botanica Sinica* 9(1): 70. 1960.

K. polyphylla (Keng ex Keng f. & L. Liou) Packer (*Cleistogenes polyphylla* Keng ex Keng f. & L. Liou)

China. See *Botaniska Notiser* 113(3): 293. 1960, *Acta Botanica Sinica* 9(1): 69. 1960.

K. ramiflora (Keng & C.P. Wang) H. Yu & N.X. Zhao (*Cleistogenes ramiflora* Keng f. & C.P. Wang; *Kengia ramiflora* (Keng f. & C.P. Wang) S.L. Chen)

China. See *Bulletin of Botanical Research* 6(1): 175-176, pl. 1. 1986.

K. ramiflora (Keng & C.P. Wang) H. Yu & N.X. Zhao var. *ramiflora*

China.

K. ramiflora (Keng & C.P. Wang) H. Yu & N.X. Zhao var. *tianmushanensis* (F.Z. Li & C.K. Ni) H. Yu & N.X. Zhao

China.

K. serotina (L.) Packer (*Agrostis serotina* (L.) L.; *Bromus strictus* Scop.; *Cleistogenes serotina* (L.) Keng; *Diplachne patula* St.-Lag.; *Diplachne serotina* (L.) Link; *Diplachne*

serotina var. *clandestina* Bal.; *Festuca serotina* L.; *Melica nodosa* Piller & Mitterp.; *Molinia serotina* (L.) Mert. & Koch; *Schedonorus serotinus* (L.) P. Beauv.; *Schenodorus serotinus* (L.) P. Beauv.; *Schenodorus serotinus* (L.) Roem. & Schult.)

Turkey, Aegean Islands, Albania, Armenia. See *Systema Naturae, Editio Decima*, 2: 876. 1759, *Mantissa Plantarum* 30. 1767, *Flora Carniolica, Editio Secunda* 1: 79. 1772, Mathias Piller (1733-1788), *Iter per Poseganam Sclavoniae [Slavoniae] provinciam ... Budae [Budapest]* 143. 1783, *Essai d'une Nouvelle Agrostographie* 177. 1812, *Systema Vegetabilium* 2: 702-703, 708. 1817, *Deutschlands Flora* 1: 585. 1823, *Hortus Regius Botanicus Berolinensis* 1: 155. 1827, *Bulletin de la Société Botanique de France* 21: 14. 1874 and *Sinensia* 5(1-2): 149-150, f. 1. 1934, *Botaniska Notiser* 113: 291. 1960, *Taxon* 49(2): 251. 2000.

K. serotina (L.) Packer var. *serotina*

China.

K. serotina (L.) Packer var. *vivipara* (Honda) H. Yu & N.X. Zhao

China.

K. songorica (Roshev.) Packer (*Cleistogenes chinensis* (Maxim.) Keng; *Cleistogenes mutica* Keng; *Cleistogenes songorica* (Roshev.) Ohwi; *Cleistogenes thoroldii* (Stapf ex Hemsl.) Roshev.; *Diplachne serotina* var. *chinensis* Maxim.; *Diplachne songorica* Roshev.; *Diplachne thoroldii* Stapf ex Hemsl.; *Kengia mutica* (Keng) Packer; *Kengia squarrosa* (Trin. ex Ledeb.) Packer; *Molinia squarrosa* Trin. ex Ledeb.)

Asia, Europe. See *Bulletin de la Société Impériale des Naturalistes de Moscou* 54: 70. 1879, *Journal of the Linnean Society, Botany* 30(206): 121. 1894 and *Fl. URSS* 2: 311, 752, pl. 23. 1934, *Sinensia* 5(1-2): 152. 1934, *Journal of the Washington Academy of Sciences* 28: 299. 1938, *Journal of Japanese Botany* 18(9): 540. 1942, *Flora Kirgizskoi SSR* 2: 107. 1950, *Fl. Kazakhst.* 1: 208. 1956, *Botaniska Notiser* 113: 292-293. 1960.

K. squarrosa (Trin.) Packer (*Cleistogenes songorica* (Roshev.) Ohwi; *Cleistogenes squarrosa* (Trin.) Keng; *Cleistogenes squarrosa* (Trin. ex Ledeb.) Keng; *Diplachne squarrosa* (Trin. ex Ledeb.) Richter; *Kengia squarrosa* (Trin. ex Ledeb.) Packer; *Molinia squarrosa* Trin.; *Molinia squarrosa* Trin. ex Ledeb.)

Russia, Mongolia. Inflorescence a simple raceme, see *Flora Altaica* 1: 105-106. 1829, *Plantae Europaeae* 1: 72. 1890 and *Sinensia* 5(1-2): 156, f. 5. 1934, *Flora URSS* 2: 752, pl. 23: 15. 1934, *Journal of Japanese Botany* 18(9): 540. 1942, *Botaniska Notiser* 113: 292. 1960, Y.Z. Gao, S.P. Wang, X.G. Han, B.D. Patton and P.E. Nyren, "Competition between *Artemisia frigida* and *Cleistogenes squarrosa* under different clipping intensities in replacement series

mixtures at different nitrogen levels." *Grass and Forage Science* 60(2): 119-127. June 2005.

K. squarrosa (Trin.) Packer var. *longe-aristata* (Rendle) Packer

China.

K. squarrosa (Trin.) Packer var. *squarrosa*

China.

K. striata (Honda) Packer (*Cleistogenes striata* Honda)

China. See *Report of the First Scientific Expedition to Manchoukou* 4: 100. 1936, *Botaniska Notiser* 113(3): 292. 1960.

K. thoroldii (Stapf & Hemsl.) H. Yu & N.X. Zhao (*Cleistogenes thoroldii* (Stapf ex Hemsl.) Roshev.; *Diplachne thoroldii* Stapf & Hemsl.)

China. See *Journal of the Linnean Society, Botany* 30(206): 121. 1894 and *Flora Kirgizskoi SSR* 2: 107. 1950.

Kengyilia C. Yen & J.-L. Yang = *Agropyron* Gaertn., *Elymus* L., *Elytrigia* Desv., *Roegneria* C. Koch

Dedicated to Yi-Li Keng, 1897-1975, his writings include "The genus *Chikusichloa* of Japan and China." *J. Wash. Acad. Sci.* 21: 526-530. 1931, "Asiatic species of *Arundinella*." *Sci. Rep. Nat. Cent. Univ. Nanking. Ser. B, Biology.* 2: 1-68, f. 1-32. 1936, "Two new generic names and one new species of Chinese bamboos." *Sunyatsenia.* 4: 146-153. 1940 and "Two new genera of grasses from China." *J. Wash. Acad. Sci.* 48(4): 115-118. 1958.

About 16-20 species, China, west China, Gobi Desert. Pooideae, Triticodae, Triticeae, perennial, herbaceous, unarmed, densely caespitose, erect, shortly rhizomatous, ligule an unfringed membrane, leaf blades linear, plants bisexual, inflorescence spicate, two unequal glumes 3- to 5-nerved, palea present, open habitats, dry areas, stony places, type *Kengyilia gobicola* C. Yen & J.L. Yang, see K.B. Jensen, "Cytology and taxonomy of *Elymus kengii*, *E. grandiglumis*, *E. alatavicus*, and *E. batalinii* (Poaceae: Triticeae)." *Genome* 33: 668-673. 1990, C. Yen & J.L. Yang, "*Kengyilia gobicola*, a new taxon from west China." *Canadian Journal of Botany* 68: 1894-1897. 1990, B.R. Baum, C. Yen & J.L. Yang, "*Kengyilia habahenensis* (Poaceae: Triticeae) - a new species from the Altai mountains, China." *Pl. Syst. Evol.* 174: 103-108. 1991, J.L. Yang, C. Yen and B.R. Baum, "*Kengyilia*: synopsis and key to species." *Hereditas* 116(1-2): 25-28. 1992, *Guihaia* 14(2): 163-169. 1994, B.R. Baum, J.L. Yang & C. Yen, "Taxonomic separation of *Kengyilia* (Poaceae: Triticeae) in relation to nearest related *Roegneria*, *Elymus*, and *Agropyron*, based on some morphological characters." *Pl. Syst. Evol.* 194: 123-132. 1995, L.B. Cai & D.F. Cui, "New taxa of the genus *Kengyilia* from China." *Bull. Bot. Res.* 15: 422-427. 1995, K.B. Jensen, "Genome analysis of Eurasian *Elymus thoroldianus*,

E. melantherus, and *E. kokonoricus* (Triticeae: Poaceae).” *International Journal of Plant Sciences* 157(1): 136-141. 1996, Chi Yen and Jun-Liang Yang, “New Taxa, New Combinations, and Observations in *Kengyilia* (Poaceae: Triticeae).” *Novon* 8: 94-100. 1998, *Acta Phytotaxonomica Sinica* 37(2): 117-124. 1999.

Species

K. alaica (Drobow) J.L. Yang, Yen & Baum (*Agropyron alaicum* Drobow; *Elymus batalinii* subsp. *alaica* (Drobow) Á. Löve; *Elytrigia alaica* (Drobow) Nevski; *Elytrigia batalinii* subsp. *alaica* (Drobow) Tzvelev)

China. See *Novosti Sist. Vyss. Rast.* 10: 28. 1973, *Feddes Repertorium* 95(7-8): 473. 1984, *Canadian Journal of Botany* 71(2): 343. 1993.

K. alata (Drobow) J.L. Yang, Yen & Baum (*Agropyron alata* Drobow; *Elymus alata* (Drobow) Á. Löve; *Elytrigia alata* (Drobow) Nevski; *Kengyilia alata* (Drobow) S.L. Chen)

China. See *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 43. 1925, *Acta Nanking Univ. (Biol.)* 1: 83. 1963, *Feddes Repertorium* 95(7-8): 473. 1983, *Genome* 33: 668-673. 1990, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 3. 1991 [1992], *Canadian Journal of Botany* 71(2): 343. 1993.

K. alata (Drobow) J.L. Yang, Yen & Baum var. ***longiglumis*** (Keng & S.L. Chen) Yen, J.L. Yang & Baum (*Elymus longiglumis* (Keng & S.L. Chen) S.L. Chen; *Kengyilia longiglumis* (Keng & S.L. Chen) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia longiglumis* (Keng & S.L. Chen) S.L. Chen, nom. illeg., non *Kengyilia longiglumis* (Keng & S.L. Chen) J.L. Yang, C. Yen & B.R. Baum; *Roegneria longiglumis* Keng & S.L. Chen)

China. Hairy, leaf sheaths pubescent to hairy, dry areas, slopes, see *Journal Nanjing University. Natural Sciences Edition* 3(1): 83. 1963 [also *Acta Nanking Univ. (Biol.)* 1: 83. 1963], *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1987: 9. 1987[1988], *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991 [1992], *Hereditas; genetiskt arkiv.* 116(1-2): 27. 1992, *Canadian Journal of Botany* 71(2): 343. 1993, *Bulletin of Botanical Research* 14(2): 142. 1994, *Novon* 8(1): 94, f. 1A. 1998.

K. batalinii (Krasnov) J.L. Yang, Yen & Baum (*Agropyron batalinii* (Krasn.) Roshev.; *Agropyron batalini* (Krasn.) Roshevitz ex Fedtsch.; *Elymus batalinii* (Krasn.) Á. Löve; *Elytrigia batalinii* (Krasn.) Nevski; *Kengyilia batalinii* (Krasn.) S.L. Chen; *Triticum batalinii* Krasn.)

China, Russia. See *Feddes Repertorium* 95(7-8): 473. 1984, *Genome* 33: 668-673. 1990, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 3. 1991 [1992], *Canadian Journal of Botany* 71(2): 343. 1993, *Plant Systematics and Evolution* 191: 199-201. 1994.

K. batalinii (Krasnov) J.L. Yang, Yen & Baum var. ***nana*** (J.L. Yang, Yen & Baum) Yen, J.L. Yang & Baum (*Kengyilia nana* J.L. Yang, C. Yen & B.R. Baum)

China. See *Canadian Journal of Botany* 71(2): 341, f. 3. 1993, *Novon* 8(1): 95. 1998.

K. batalinii (Krasnov) J.L. Yang, Yen & Baum var. ***villosissima*** Roshevitz ex Yen, J.L. Yang & Baum

China, Pamir, Turkestan. See *Canadian Journal of Botany* 71(2): 343. 1993, *Novon* 8(1): 94-95, f. 2. 1998.

K. carinata (Ovczinnikov & Sidorenko) Yen, J.L. Yang & Baum (*Agropyron alaicum* Drobow; *Agropyron carinatum* (Ovczinnikov & Sidorenko) Melderis; *Elytrigia alaica* (Drobow) Nevski; *Roegneria carinata* Ovcz. & Sidorenko) Turkestan, Russia. See *Novon* 8(1): 95-96, f. 3. 1998.

K. eremopyroides Nevski ex Yen, J.L. Yang & Baum

China. Perennial, densely caespitose, erect, shortly rhizomatous, spikes erect, see *Novon* 8(1): 96, f. 4. 1998.

K. gobicola **C. Yen and J.L. Yang**

West China. See *Canadian Journal of Botany* 68: 1897. 1990, *Hereditas; genetiskt arkiv.* (Beijing) 116: 127-132. 1992.

K. habahenensis B.R. Baum, C. Yen and J.L. Yang

China. See *Plant Systematics and Evolution* 174(1-2): 103, 106. 1991.

K. kryloviana (Schischkin) Yen, J.L. Yang & Baum (*Agropyron krylovianum* Schischkin ex Krylov; *Agropyron krylovianum* Schischkin; *Elytrigia kryloviana* (Schischkin ex Krylov) Nevski; *Elytrigia kryloviana* (Schischkin) Nevski) Russia, Siberia. Stony slopes, see *Novon* 8(1): 100. 1998.

K. melanthera (Keng) J.L. Yang, C. Yen & B.R. Baum (*Agropyron melantherum* Keng; *Elymus melantherus* (Keng) Á. Löve; *Kengyilia melanthera* (Keng) S.L. Chen, nom. illeg., non *Kengyilia melanthera* (Keng) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia thoroldiana* var. *melanthera* (Keng) L.B. Cai; *Roegneria melanthera* (Keng) Keng ex Keng & S.L. Chen; *Roegneria melanthera* (Keng) Keng)

China. See *Sunyatsenia* 6(1): 62-63. 1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 187. 1957, *Journal Nanjing University. Natural Sciences Edition* 3: 78. 1963, *Feddes Repertorium* 95(7-8): 455. 1984, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991 [1992], *Hereditas; genetiskt arkiv.* 116(1-2): 27-28. 1992, *Bulletin of Botanical Research* 14(2): 141. 1994, *Guihaia* 14(2): 163-169. 1994, *International Journal of Plant Sciences* 157(1): 136-141. 1996, *Acta Phytotaxonomica Sinica* 37(5): 463. 1999.

K. melanthera (Keng) J.L. Yang, C. Yen & B.R. Baum var. ***tahopaica*** (Keng ex Keng & S.L. Chen) S.L. Chen (*Kengyilia hirsuta* var. *tahopaica* (Keng ex Keng & S.L. Chen) L.B. Cai; *Kengyilia melanthera* var. *tahopaica* (Keng) S.L.

Chen; *Roegneria melanthera* var. *tahopaica* Keng ex Keng & S.L. Chen; *Roegneria melanthera* var. *tahopaica* Keng)

China. See *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 188. 1957, *Journal Nanjing University. Natural Sciences Edition* 1: 78. 1963, *Hereditas; genetiskt arkiv*. 116(1-2): 28. 1992, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1992, *Bull. Bot. Res. NE Forestry Inst.* 14(2): 141. 1994 [also *Bulletin of Botanical Research*, or *Bulletin of Botanical Research, Harbin*, or *Bulletin of Botanical Laboratory of North-Eastern Forestry Institute, Harbin*], *Novon* 7(3): 229. 1997, *Acta Phytotaxonomica Sinica* 37(5): 466. 1999.

K. pulcherrima (Grossheim) Yen, J.L. Yang & Baum (*Agropyron ambigens* (Haussknecht) Roshevitz; *Agropyron intermedium* var. *ambigens* Haussknecht; *Agropyron popovii* Drobow; *Agropyron pulcherrimum* Grossh.; *Elymus hispidus* subsp. *pulcherrimus* (Grossh.) Melderis; *Elytrigia intermedia* subsp. *pulcherrima* (Grossh.) Tzvelev; *Elytrigia pulcherrima* (Grossh.) Nevski; *Trichopyrum intermedium* subsp. *pulcherrimum* (Grossh.) Á. Löve)

China. Upper margins of the palea with large triangular appendages on both sides, see *Consp. Fl. Graec.* 3: 437. 1904, *Tiflis Bot. Sada* [Moniteur du Jardin Botanique de Tiflis] 13-14: 42. 1919, *Feddes Rep.* 21: 44. 1925, *Fl. Turkm.* 1: 191. 1932, *Novosti Sist. Vyss. Rast.* 10: 31. 1973, *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 78. 1984, *Taxon* 35(1): 198. 1986, *Veröffentlichungen der Geobotanischen Institutes der ETH, Stiftung Rübel, Zürich* 87: 49. 1986, *Novon* 8(1): 100. 1998.

K. thoroldiana (Oliv.) J.L. Yang, C.Yen & B.R. Baum (*Agropyron thoroldianum* Oliv.; *Elymus thoroldianus* (Oliv.) G. Singh; *Kengyilia thoroldiana* (Oliv.) S.L. Chen, nom. illeg., non *Kengyilia thoroldiana* (Oliv.) J.L. Yang, C. Yen & B.R. Baum; *Roegneria thoroldiana* (Oliv.) Keng ex Keng & S.L. Chen; *Roegneria thoroldiana* (Oliv.) Keng)

China. See *Hooker's Icones Plantarum* 23(3): pl. 2262. 1893 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 188. 1957, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 696. 1960, *Journal Nanjing University. Natural Sciences Edition* 3: 79. 1963, *Taxon* 32(4): 640. 1983, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991 [1992], *Hereditas; genetiskt arkiv*. 116(1-2): 27. 1992, *Bulletin of Botanical Research* 14(2): 141. 1994, *International Journal of Plant Sciences* 157(1): 136-141. 1996.

K. thoroldiana (Oliv.) J.L. Yang, C.Yen & B.R. Baum var. ***laxiuscula*** (Melderis) S.L. Chen (*Agropyron thoroldianum* var. *laxiusculum* Melderis; *Kengyilia thoroldiana* var. *laxiuscula* (Melderis) S.L. Chen)

China. See *Grasses of Burma, Ceylon, India and Pakistan* 696. 1960, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991, *Hereditas; genetiskt arkiv*. 116(1-2): 27. 1992, *Novon* 7(3): 229. 1997.

K. thoroldiana (Oliv.) J.L. Yang, C.Yen & B.R. Baum var. ***melanthera*** (Keng) L.B. Cai (*Agropyron melantherum* Keng; *Elymus melantherus* (Keng) Á. Löve; *Kengyilia melanthera* (Keng) J.L. Yang, C. Yen & B.R. Baum; *Kengyilia melanthera* (Keng) S.L. Chen, nom. illeg., non *Kengyilia melanthera* (Keng) J.L. Yang, C. Yen & B.R. Baum; *Roegneria melanthera* (Keng) Keng ex Keng & S.L. Chen; *Roegneria melanthera* (Keng) Keng)

China. See *Sunyatsenia* 6(1): 62-63. 1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 187. 1957, *Journal Nanjing University. Natural Sciences Edition* 3: 78. 1963, *Feddes Repertorium* 95(7-8): 455. 1984, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1991: 4. 1991 [1992], *Hereditas; genetiskt arkiv*. 116(1-2): 27-28. 1992, *Bulletin of Botanical Research* 14(2): 141. 1994, *Guihaia* 14(2): 163-169. 1994, *International Journal of Plant Sciences* 157(1): 136-141. 1996, *Acta Phytotaxonomica Sinica* 37(5): 463. 1999.

Keniochloa Meld. = *Agrostis* L., *Colpodium* Trin.

Kenya, Mt. Kenya and Greek *chloe*, *chloa* "grass."

Poeae, type *Keniochloa chionogeiton* (Pilg.) Melderis, see *Species Plantarum* 1: 61-63. 1753, *Fundamenta Agrostographiae* 119, t. 7. 1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 37, 58. 1821 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 510. 1926, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(Anhang 1): 87, f. 2. 1930, *Svensk Botanisk Tidskrift* 50(4): 538, 540, 542, f. 1,1-2, 2. 1956, *Fl. Fenn.* 5: 29. 1971, *Novosti Sist. Vyss. Rast.* 17: 7. 1980, *Taxon* 41: 556. 1992, O. Hedberg & I. Hedberg, "The genus *Colpodium* (Gramineae) in Africa." *Nordic Journal of Botany* 14(6): 601-607. 1994, *Taxon* 44: 611-612. 1995.

Kerinozoma Steud. = *Xerochloa* R. Br.

Greek *kerinos* "wax-colored, yellow like wax" and *zoma* "a belt."

Panicoideae, Panicoideae, Paniceae, type *Kerinozoma suraboja* Steud., see *Prodromus Florae Novae Hollandiae* 196. 1810, *Synopsis Plantarum Glumacearum* 1: 358. 1854 [1855] and *Bulletin of the Tokyo Science Museum* 18: 4. 1947.

Kerriochloa C.E. Hubbard

Dedicated to the Northern Irish physician Arthur Francis George Kerr, 1877-1942 (d. Hayes, Kent), botanist, 1923 Fellow of the Linnean Society, from 1902 to 1920 medical officer in Siam, from 1920 government botanist, plant collector, his writings include "A Siamese mountain Flora." *Geograph. Jour. London*. 1911: 202-203, "Meteorological observations made in Chiangmai, 1910-1914." *Jour. Siam Soc.* 17: 21-34. 1923, "Carl Roebelen." *Journal of the Siam Society. Natural History Supplement*. [= *Jour. Siam Soc. Nat. Hist. Suppl.*] [Obituary of this orchid hunter of Siam] 7(2): 132-134. 1927, "Fruit and seeds in the drift on Kaw Tao." *Jour. Siam Soc. Nat. Hist. Suppl.* 8: 103-117. 1930, "Poisoning by Pak wan (*Meliantha suavis*) in Siam." *Trans. Roy. Soc. Trop. Med. Hyg.* 25: 141-143. 1931, "Notes on introduced plants in Siam." *Jour. Siam Soc. Nat. Hist. Suppl.* 8(3): 197-212. 1931, "Additional notes on introduced plants." *Jour. Siam Soc. Nat. Hist. Suppl.* 8(4): 334-335. 1932 and "Early botanists in Thailand." *Jour. Thailand Res. Soc., Nat. Hist. Suppl.* [31 individuals, their travels and works; plate is portrait of Kerr] 12(1): 1-27, 1 plate. 1939, coauthor and editor of William Grant Craib's *Florae Siamensis Enumeratio*. A list of the plants known from Siam with records of their occurrence. Siam Society, Bangkok Times Press, Bangkok 1931.

One species, Asia, Thailand. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial, slender, herbaceous, decumbent, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence terminal and sometimes also axillary, racemes with several sessile spikelets laterally compressed, 2 glumes subequal, lower glume of sessile spikelet not grooved, upper glume awned, palea present, 2 free lodicules 2-dentate, 3 stamens, ovary glabrous, 2 stigmas, pedicelled spikelet lanceolate and much reduced, open habitats, related to *Ischaemum*, type *Kerriochloa siamensis* C.E. Hubb., see *Hooker's Icones Plantarum* 35: t. 3494. 1951.

Species

K. siamensis C.E. Hubb. (*Ischaemum siamense* (C.E. Hubb.) Roberty)

Asia. See *Hooker's Icones Plantarum* 35: t. 3494. 1951, *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 29: 189. 1957, *Boissiera*. 9: 345. 1960.

Kielboul Adans. = *Aristida* L.

Arundinoideae, Aristideae, or Aristidoideae, Aristideae, see *Species Plantarum* 1: 82. 1753, *Familles des Plantes* 2: 31, 539. 1763 and *Meded. Rijks.-Herb.* 54: 9. 1926, *Kurtziana* 1: 123-206. 1961, *Flora Mesoamericana* 6: 253-257. 1994, *Flora del Valle de Tehuacán-Cuicatlán* 3: 1-35. 1994, *Flora of Ethiopia and Eritrea* 7: 76-85. 1995, *Annals of the*

Missouri Botanical Garden 82: 593-595. 1995, *Candollea* 53(2): 466-470. 1998, *Bot. Rev.* 64: 1-85. 1998, *Boletim do Instituto de Botânica (São Paulo)* 12: 113-179. 1999, *Acta Botánica Mexicana* 63: 1-45. 2003, *Contributions from the United States National Herbarium* 46: 69-104, 277. 2003.

Kiharapyrum Á. Löve = *Aegilops* L.

Pooideae, Triticoideae, Triticeae, Triticinae, recognized as segregate of *Aegilops*, type *Kiharapyrum umbellulatum* (Zhuk.) Á. Löve, see *Species Plantarum* 2: 1050-1051. 1753 and *Feddes Repert.* 91: 225-228. 1980, *Biologisches Zentralblatt* 101(2): 207. 1982, *Feddes Repertorium* 95(7-8): 495. 1984, *Taxon* 41: 555-556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 20-23, 409. 2003.

Species

K. umbellulatum (Zhuk.) Á. Löve (*Aegilops umbellulata* Zhuk.; *Kiharapyrum umbellulata* (Zhuk.) Á. Löve; *Triticum umbellulatum* (Zhuk.) Bowden)

Greece, Turkey. Related to wheat, see *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 55: 216, t. 15. 1929, *Canadian Journal of Botany* 37: 666. 1959, *Feddes Repert.* 91: 236. 1980, *Biologisches Zentralblatt* 101(2): 207. 1982, *Feddes Repertorium* 95(7-8): 495. 1984, *Agric. Univ. Wageningen Pap.* 94-7: 374-380. 1994.

Kinabaluchloa K.M. Wong

After Mt. Kinabalu, highest peak in Malaysia.

A genus of 2 known species, Peninsular Malaysia, Sabah, Sarawak, Brunei and Malaysian Borneo. Bambuseae, Bambusinae, sympodial, erect to suberect, leaning, scrambling, drooping, never climbing, open tufted, very long single internodes, nodes prominent, sheath blade narrowly lanceolate to linear, 9-17 leaves on each branch, pseudospikelets subtended by a large conspicuous bract, 2-3 small empty bracts, 1-2 perfect flowers and a vestigial terminal flower, 1 empty glume, 2-3 bracts subtending prophyllate buds, 3 lodicules, 6 stamens, 3 stigmas plumose, highland bamboos, culm internodes used for making musical instruments (*sompoton* and *engkrui*) and blowpipes, found in lower montane and upper forests, type *Kinabaluchloa wrayi* (Stapf) K.M. Wong, see Datin Margaret Luping, Chin Wen and E. Richard Dingley, editors, *Kinabalu - Summit of Borneo*. The Sabah Society, Kota Kinabalu, Sabah, Malaysia 1978, *Kew Bulletin* 48(3): 517-532. 1993, *PROSEA* 7: 151. 1995, K.M. Wong, *Bamboo - The Amazing Grass*. A guide to the diversity and study of bamboos in Southeast

Asia. International Plant Genetic Resources Institute (IPGRI) and University of Malaya 2004.

Species

K. nebulosa K.M. Wong

Peninsular Malaysia. Erect, open, scrambling, tufted, thin-walled, culm sheaths black hairy, inflorescence on a leafy branch, montane forest, see *Kew Bulletin* 48(3): 526, f. 5. 1993.

in English: Brunei thin-walled bamboo, Sabah scrambling bamboo, Sarawak thin-walled bamboo

K. wrayi (Stapf) K.M. Wong (*Bambusa wrayi* Stapf) (named for L. Wray, 1853-1942)

Peninsular Malaysia. Densely tufted, erect, drooping or leaning, thin-walled, nodes prominent, inflorescence on leafless branch, clustered pseudospikelets at each node, long slender internodes used to make blowpipes, montane forest, see *Bulletin of Miscellaneous Information Kew* 1893: 14. 1893, *Annals of the Royal Botanic Garden, Calcutta*. 7: 49, pl. 46. 1896 and *Gard. Bull. Sing.* 16: 73. 1958, *Kew Bulletin* 48(3): 524, f. 4. 1993.

in English: Malaysian thin-walled bamboo

in Malaysia: buloh bersumpitan, buloh sewor, buluh sumpitan.

Klemachloa R. Parker = *Dendrocalamus* Nees

From the Greek *klema*, *klematos* "a shoot, twig" and *chloe*, *chloa* "grass."

Monotypic genus, Burma/Myanmar. Bambusoideae, Bambusoideae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, perennial, woody bamboos, found in forest, type *Klemachloa detinens* R. Parker, see *Linnaea* 9(4): 476-477. 1835 and *Indian Forester* 58: 7. 1932, *Journal of South China Agricultural University* 10(2): 40-47. 1989 [The genus *Dendrocalamus* Nees and its neighboring two new genera from China], *Journal of Bamboo Research* 8(1): 25-43, f. 6-10 and 8(4): 30-36. 1989, *Bamboo Research in Asia* 1990(1): 3. 1990, *Bamb. Res.* 42: 5-6. 1990, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. The *Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 54-55. 2000.

Species

K. detinens R.N. Parker (*Dendrocalamus detinens* (R. Parker) H.B. Naithani & Bennet)

Burma. See *Indian Forester* 58: 7. 1932, *Indian Forester* 117(1): 68. 1991.

Knappia J.E. Smith = *Mibora* Adans.

Named in honor of the British botanist John Leonard Knapp, 1767-1845 (Alveston, Glos), soldier, corresponded with J.E. Smith, 1796 Fellow of the Linnean Society, among his works are *Arthur, or the Pastor of the Village*. A poem. London 1818, *Gramina britannica*. London 1804 and *The Journal of a Naturalist*. London 1829. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 301. 1965; T.W. Borsert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 214. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; James Sowerby and J.E. Smith, *English Botany, or Coloured Figures of British Plants*. London 1790-1814.

Pooideae, Poeae, Miliinae, see *Familles des Plantes* 2: 495. 1763, *English Botany* 16: 1127. 1803, *Flora Britannica* 3: 1387. 1804, *Observations sur les Plantes des Environs d'Angers* 45. 1818, *Fundamenta Agrostographiae* 114, t. 8, f. 4. 1820, *Species Graminum* 1: t. 17. 1824 and *Contributions from the United States National Herbarium* 48: 409, 450. 2003.

Koeleria Persoon = *Aegialina* Schult., *Aegialina* Schult. & Schult.f., *Aegialitis* Trin., *Airochloa* Link, *Avellinia* Parl., *Brachystylus* Dulac, *Ktenosachne* Steud., *Leptophyllochloa* C.E. Calderón ex Nicora, *Lophochloa* Rchb., *Parafestuca* E.B. Alexeev, *Parodiochloa* A.M. Molina, *Parodiochloa* C.E. Hubb., *Poarion* Rchb., *Raimundochloa* A.M. Molina, *Rostraria* Trinius, *Trisetaria* Forssk., *Trisetum* Pers., *Wilhelmsia* Koch, *Wilhelmsia* Rchb. (Caryophyllaceae)

Genus dedicated to the German botanist Georg Ludwig (Georgius Ludovicus) Koeler, 1765-1807, physician, pharmacologist, author of G.L. Koeleri ... *Descriptio Graminum in Gallia et Germania tam sponte nascentium quam humana industria copiosus provenientium*. Francofurti ad Moenum 1802. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 308. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Christiaan Hendrik Persoon, *Synopsis plantarum*. 1: 97. 1805; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 735. Stuttgart 1993; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 488. Ansbach 1852.

About 35-60 species, north and south temperate regions throughout the world. Pooideae, Poodae, Avenae, or Pooideae, Poeae, Aveninae, annual or perennial, herbaceous, usually tufted, erect or ascending, sometimes geniculate at

base, rarely shortly rhizomatous, glabrous nodes, internodes hollow, auricles absent, ligule membranous and short, sheaths margins free, basal sheaths sometimes swollen into bulbs, leaf blades flat or inrolled, leaves basal, plants bisexual, inflorescence a spike or a dense and ovoid panicle, spikelets compressed laterally, flowers bisexual, 2 glumes unequal, lower glume narrow 1- to 3-nerved, upper glume acute or acuminate 3- to 5-nerved, lemma acute and sometimes short-awned or awnless or mucronate, palea 2-keeled and 2-toothed, 2 lodicules free and membranous, 3 stamens, anthers yellow, ovary glabrous and without apical appendage, 2 stigmas, glabrous fruit small and slightly compressed laterally, weed species, native pasture species, some taxa are good livestock forage, important components of prairies, rainforest, in dry grassland and rocky places, pampas, open habitats, species closely intergrading, there is considerable taxonomic confusion concerning this genus, intergeneric hybrids with *Trisetum* Pers., taxonomic situation around *Koeleria* and *Trisetum* Pers. confused and unsatisfactory, extreme variations within the species, type *Koeleria gracilis* Pers., see *Species Plantarum* 1: 67. 1753, *Flora Aegyptiaco-Arabica* LX, 27, 60. 1775, *Synopsis Plantarum* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 88, 153, t. 18, f. 1. 1812, *Fundamenta Agrostographiae* 127, 149, t. 9, 13. 1820, *Mantissa* 2: 13, 222. 1824, *Hortus Regius Botanicus Berolinensis* 1: 126-127. 1827, *Conspectus regni vegetabilis per gradus naturalis evoluti. Tentamen ... pars prima*. 51, 206. Lipsiae 1828[1829], *Flora Germanica Excursoria* 42. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 65. 1830, *Plantae Novae* 59. Parisiis 1842, *Linnaea* 21(4): 400. 1848, *Flora Chilena* 6: 352. 1854, *Synopsis Plantarum Glumacearum* 1: 150. 1854 [1855], *Flore du Département des Hautes-Pyrénées* 85. 1867, *Die Natürlichen Pflanzenfamilien* 2(2): 70. 1887 and K. Domin, "Monographie der gattung *Koeleria*." *Bibliotheca Botanica* 65: 1-354. 1907, *U.S. Dept. Agric. Bull.* 772: 107-109. 1920, *Taxon* 9(4): 110. 1960, *Grasses of Burma, Ceylon, India and Pakistan* 443-444. 1960, *British Antarctic Survey Scientific Reports* 60: 1-202, 1-6 pls. 1968, *Flora Patagónica* 3: 69-70. 1978, *Bulletin of the British Museum (Natural History), Botany* 8: 395-396. 1981, *Parodiana* 4(1): 110-120, f. 1-2. 1986, *Parodiana* 4(2): 402. 1986, *Taxon* 36: 75. 1987, *Boletín de la Sociedad Argentina de Botánica* 26(3-4): 221-230. 1990, *Ruizia; Monografías del Jardín Botánico* 13: 1-480. 1993, Arnow, Lois A., "*Koeleria macrantha* and *K. pyramidata* (Poaceae): Nomenclatural problems and biological distinctions." in *Syst. Bot.* 19: 6-20. 1994, *Flora of Ethiopia and Eritrea* 7: 38. 1995, G.W.T. Wilson and D.C. Hartnett, "Effects of mycorrhizae on plant growth and dynamics in experimental tall grass prairie microcosms." *Am. J. Bot.* 84: 478. 1997, Gail W.T. Wilson and David C. Hartnett, "Interspecific variation in plant responses to mycorrhizal colonization in tallgrass prairie." *Am. J. Bot.* 85: 1732-1738. 1998,

New Zealand Journal of Botany 37: 51-61. 1999, *Contributions from the United States National Herbarium* 48: 20, 97, 145, 419, 421, 431, 476-477, 579, 581, 601, 604, 659-676, 694. 2003, *Ecology Letters* 8(2): 209-217, Feb 2005, *Botanical Journal of the Linnean Society* 147(4): 501-508. Apr 2005, *Entomologia Experimentalis et Applicata* 115(3): 427-433. June 2005, *Journal of Ecology* 93(3): 576-583. June 2005.

Species

K. alpicola Gren. & Godr.

Europe. See *Fl. France* 3: 527. 1856.

K. altaica (Domin) Krylov (*Koeleria eriostachya* var. *altaica* Domin)

Europe, Siberia, Eurasia. Found in mountain slopes, subalpine mountain meadow, on rocky benches, desert steppe, sandy soils, see *Bibliotheca Botanica* 65: 163. 1907, *Fl. Sibir. Occ.* 2: 261. 1928.

K. argentea Griseb. (*Trisetum litwinowii* subsp. *argentea* (Griseb.) Tzvelev)

Europe, Asia. Perennial, dry soils, see *Bibliotheca Botanica* 14(65): 115. 1907, *Novosti Sist. Vyss. Rast.* 7: 65. 1970 [1971].

K. asiatica Domin (*Koeleria cairnesiana* Hultén; *Koeleria ledebourii* Domin; *Koeleria mariae* V. Vassil.) (after the German botanist Carl (Karl) Friedrich (Carolus Fridericus) von Ledebour, 1785-1851, professor of botany, botanical collector, traveler with Carl Anton Meyer (1795-1855) and Alexander A. von Bunge (1803-1890), author of *Flora altaica*. Berolini [Berlin] 1829-1833 and *Flora rossica*. Stuttgartiae 1842-53. See Johann Anton Weinmann (1782-1858), *Der botanische Garten der Kaiserlichen Universität zu Dorpat im Jahre 1810*. Dorpat 1810; J.H. Barnhart, *Biographical notes upon botanists*. 2: 358. 1965; H.N. Cloukie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 198. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 741. Stuttgart 1993; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 151. Regione Siciliana, Palermo 1988; Stafleu and Cowan, *Taxonomic literature*. 2: 805-808. 1979)

Europe, Siberia, Russia, Ural Mountains. Caespitose, lacking rhizomes, culms densely and finely pubescent, panicle interrupted at the base, 2-3 florets, glumes purple and membranous, lemmas pubescent to tomentose and purple to almost black, predominantly arctic, grows in dry tundra, see

Bulletin de l'Herbier Boissier, sér. 2, 5(10): 947. 1905, *Acta Universitatis Lundensis* 38(1): 190, f. 1b, 2g. 1942.

in English: oriental koeler's grass

K. asiatica Domin subsp. **atroviolacea** (Domin) Tzvelev (*Koeleria alpina* Steud.; *Koeleria atroviolacea* Domin; *Koeleria cairnesiana* Hultén)

Siberia, Russia. Open mountain meadows, dark brown soil, see *Novosti Sist. Vyss. Rast.* 7: 65, 70. 1970 [1971].

K. bergii Hieron. (*Koeleria kurtzii* Hack. ex Kurtz; *Koeleria permollis* Nees ex Steud.; *Koeleria permollis* Döll, nom. illeg., non *Koeleria permollis* Nees ex Steud.)

Europe, Spain, Argentina. Shortly awned, see *Synopsis Plantarum Glumacearum* 1: 293. 1854, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 3: 376. 1881, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 16: 261. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 2: 91. 1906, *Bibliotheca Botanica* 65: 122-123. 1907, *Bol. Soc. Argent. Bot.* 27: 65. 1991.

K. berythea Boiss. & Blanche (*Lophochloa berythea* (Boiss. & Blanche) Bor; *Rostraria berythea* (Boiss. & Blanche) Holub)

Europe, Spain. See *Diagnoses plantarum orientalium novarum, ser. 1*, 3(4): 135. 1859 and *Bibliotheca Botanica* 65: 271. 1907, *Taxon* 16: 68. 1967, *Folia Geobotanica et Phytotaxonomica* 9(3): 271. 1974.

K. boliviensis (Domin) A.M. Molina (*Koeleria boliviensis* (Domin) Domin; *Koeleria gracilis* subsp. *boliviensis* (Domin) Domin; *Koeleria gracilis* var. *boliviensis* Domin) South America. Perennial, caespitose, leaf blades acute, spikelets 2-flowered, glumes lanceolate obtuse, lemmas lanceolate 2-dentate, rocky slopes, see *Syn. Pl.* 1: 97. 1805 and *Repertorium Specierum Novarum Regni Vegetabilis* 2: 93-94. 1906, *Bibliotheca Botanica* 65: 175, 237. 1907, *Parodi-ana* 8(1): 61. 1993.

K. brevis Steven (*Koeleria dengenii* Domin; *Koeleria lobata* (M. Bieb.) Roem. & Schult.; *Koeleria splendens* var. *degenii* (Domin) Stojan. & Stef.)

Europe, Turkey.

in English: blue hairgrass

K. calderonii A.M. Molina

South America. See *Boletín de la Sociedad Argentina de Botánica* 26(3-4): 223, f. 2. 1990, *Parodi-ana* 8(1): 40-67. 1993.

K. capensis Nees (*Aira capensis* Steud., nom. illeg., non *Aira capensis* L.f.; *Airochloa uniflora* Hochst.; *Koeleria capensis* (Steud.) Nees; *Koeleria convoluta* Steud.; *Koeleria convoluta* Hochst. ex Steud.; *Koeleria convoluta* var. *densiflora* Domin; *Koeleria cristata* (L.) Pers. var. *brevifolia* (Nees) C.E. Hubb.; *Koeleria cristata* (L.) Pers. var. *convoluta* (Steud.) C.E. Hubb.; *Koeleria cristata* var. *cristata*; *Koeleria cristata* auct. non (L.) Pers. var. *cristata*; *Koeleria*

gracilis var. *convoluta* (Steud.) Hedberg; *Koeleria pyramidata* var. *brevifolia* (Nees) Cufod.; *Koeleria pyramidata* var. *convoluta* (Steud.) Cufod.)

South Africa. Perennial, caespitose or densely tufted, wiry, erect, fibrous roots, ligule a short membrane, leaf blade rolled and wiry or thread-like, short leaves mostly basal, dense and compact spike-like inflorescence sometimes open, spikelets awnless, glumes unequal, lemmas more or less hyaline, forming clumps or small dense tussocks, pasture, good fodder for stock and wild game, palatable, common in dry to wet areas, rocky hillsides, near streams, mountainous areas, montane grassland, shrubland, steep slopes, among rocks, see *Flora* 12: 486. 1829, *Linnaea* 7(3): 321. 1832, *Synopsis Plantarum Glumacearum* 1: 293. 1854, *Flora* 38: 330. 1855 and *Bibliotheca Botanica* 14: 111. 1907, *Bulletin of Miscellaneous Information Kew* 1936: 500. 1936, *Bothalia* 18: 114-119. 1988, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Opera Botanica* 121: 159-172. 1993, *Bothalia* 26(1): 53-61. 1996.

in English: crested koeleria, koeleria, koeleria grass, prairie June grass, Junegrass

in southern Africa: koeleria polgras, polgras, winterpolgras, strandgras; boshwane, boshwane (Sotho)

K. caucasica Trin. ex Domin (*Koeleria albovii* Domin; *Koeleria caucasica* (Domin) B. Fedtsch.; *Koeleria ledebourii* Domin)

Russia. Perennial bunchgrass, see *Bibliotheca Botanica* 14(65): 161. 1907, *Not. Syst. Georg. Inst. Bot. Tbilissi* 40: 68-72. 1984, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 13-14. 1997.

K. caudata (Link) Steud. (*Airochloa caudata* Link; *Dactylis caudata* Brot.; *Koeleria caudata* (Brot.) Mutel; *Koeleria caudata* var. *algeriensis* Domin; *Koeleria crassipes* Lange)

Europe, Algeria, Spain, Morocco. Useful for erosion control, see *Flora Lusitanica* 1: 100. 1804, *Flore Francaise* 4: 84, t. 84, f. 602. 1837, *Linnaea* 17(4): 405. 1844, *Synopsis Plantarum Glumacearum* 1: 293. 1854 and *Anales del Instituto Botánico A. J. Cavanilles* 36: 308. 1979[1980], *Taxon* 34: 346-351. 1985, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991.

K. cheesemanii (Hack.) Petrie (*Koeleria novozelandica* var. *pubiculmis* Domin; *Trisetum cheesemanii* Hack.) (after the New Zealand (born at Hull, Yorks) botanist Thomas Frederic (Frederick) Cheeseman, 1846-1923 (Auckland, New Zealand), explorer, botanical collector, from 1854 to New Zealand, 1873 Fellow of the Linnean Society, Curator of the Auckland Museum, in May 1923 he was awarded the Linnean Gold Medal by the Linnean Society of London, he is best known for his *Manual of the New Zealand Flora*. Wellington 1906, his works include "Notice of the Discovery of a Species of Burmanniaceae, a Family new to the New Zealand Flora." *T.N.Z.I.* 41: 140-143. 1909, "On the

systematic botany of the Islands to the south of New Zealand." *Subantarctic Islands of New Zealand*. 2: 389-471. 1909 and "The Vascular Flora of the Macquarie Island." *Sci. Rep. Aust. antarct. Exped. 1911-1914*. Ser. C, 7, part 3, 1-63. 1919, with William Botting Hemsley (1843-1924) wrote *Illustrations of the New Zealand Flora*. [The plates drawn by Miss Matilda Smith, 1854-1926] Wellington 1914. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 338. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Glenn, *The Botanical Explorers of New Zealand*. Wellington 1950; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; O.E. Schulz, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem*. 10: 551. 1929)

New Zealand. Caespitose to densely caespitose, montane, occasionally rhizomatous, villous or pubescent, stiff hard leaves, very dense oblong panicle, glumes subequal, lemma acute to acuminate entire or mucronate or shortly awned, awn apical or subapical, found on rocky exposed ground at high altitudes, often confused with *Trisetum cheesemanii* Hack., see *Transactions and Proceedings of the New Zealand Institute* 35: 281. 1903, *Bibliotheca Botanica* 65: 116-117. 1907, *Transactions and Proceedings of the New Zealand Institute* 48: 192. 1916, *New Zealand Journal of Botany* 37: 55. 1999.

K. convoluta Hochst. ex Steud. (*Koeleria capensis* Nees; *Koeleria convoluta* Steud.; *Koeleria cristata* (L.) Pers. var. *convoluta* (Steud.) C.E. Hubb.; *Koeleria gracilis* var. *convoluta* (Steud.) Hedberg; *Koeleria pyramidata* var. *convoluta* (Steud.) Cufod.)

Europe, Africa. See *Flora* 12: 486. 1829, *Linnaea* 7(3): 321. 1832, *Synopsis Plantarum Glumacearum* 1: 293. 1854, *Flora* 38: 330. 1855 and *Bibliotheca Botanica* 14: 111, t. 1, f. 16, t. 6, f. 3-9. 1907, *Bulletin of Miscellaneous Information Kew* 1936: 500. 1936, *Symbolae Botanicae Upsaliensis* 15: 36. 1957.

K. crassipes Lange (*Koeleria caudata* auct., non (Link) Steud.; *Koeleria caudata* subsp. *crassipes* (Lange) Rivas Mart.)

Europe. See *Österreichische Botanische Zeitschrift* 27(4): 123. 1877 and *Anales del Instituto Botánico A. J. Cavanilles* 36: 308. 1979[1980], *Herbarium Universitatis Hispanensis Flora Selecta* 1: 44. 1982.

K. cristata Pers. (*Achaeta geniculata* E. Fourn.; *Aira cristata* L.; *Aira gracilis* (Pers.) Trin.; *Aira macrantha* Ledeb.; *Airochloa cristata* (L.) Link; *Airochloa gracilis* (Pers.) Link; *Brachystylus cristatus* (L.) Dulac; *Dactylis cristata* (L.) M. Bieb.; *Festuca cristata* (L.) Vill., nom. illeg., non *Festuca cristata* L.; *Koeleria arkansana* Nutt. ex Scribn.; *Koeleria cristata* (L.) Bertol., nom. illeg., non *Koeleria cristata* Pers.; *Koeleria cristata* (L.) Pers.; *Koeleria cristata*

var. *gracilis* (Pers.) A. Gray, nom. illeg., non *Koeleria cristata* var. *gracilis* W.D.J. Koch; *Koeleria cristata* var. *longifolia* Vasey ex Burt Davy; *Koeleria cristata* var. *major* Vasey; *Koeleria cristata* var. *nuttallii* Alph. Wood, also spelled *nuttalii*; *Koeleria cristata* var. *pinetorum* Abrams; *Koeleria cristata* var. *pubescens* Vasey ex Burt Davy, nom. illeg., non *Koeleria cristata* var. *pubescens* Mutel; *Koeleria elegantula* Domin; *Koeleria gracilis* Pers.; *Koeleria gracilis* var. *dasyclada* Domin; *Koeleria idahoensis* Domin; *Koeleria idahoensis* var. *pseudocristatoides* Domin; *Koeleria latifrons* (Domin) Rydb.; *Koeleria macrantha* (Ledeb.) Schult.; *Koeleria macrura* Domin; *Koeleria macrura* f. *biflora* Domin; *Koeleria macrura* f. *quadriflora* Domin; *Koeleria macrura* f. *triflora* Domin; *Koeleria nitida* Nutt.; *Koeleria nitida* subvar. *multiflora* Domin; *Koeleria nitida* subvar. *transiens* Domin; *Koeleria nitida* subvar. *vestita* Domin; *Koeleria nitida* var. *arkansana* Scribn.; *Koeleria nitida* var. *breviculmis* Domin; *Koeleria nitida* var. *californica* (Domin) Domin; *Koeleria nitida* var. *caudata* Domin; *Koeleria nitida* var. *latifrons* Domin; *Koeleria nitida* var. *laxa* Domin; *Koeleria nitida* var. *missouriana* Domin; *Koeleria nitida* var. *munita* Domin; *Koeleria nitida* var. *sublanuginosa* Domin; *Koeleria nitida* var. *subrepens* Domin; *Koeleria polyantha* var. *californica* Domin; *Koeleria pseudocristata* Domin; *Koeleria pseudocristata* f. *densevestita* Domin; *Koeleria pseudocristata* f. *laxa* Domin; *Koeleria pseudocristata* var. *californica* Domin; *Koeleria pseudocristata* var. *longifolia* Domin; *Koeleria pseudocristata* var. *oregona* Domin; *Koeleria pseudocristata* var. *pseudonitida* Domin; *Koeleria pyramidata* (Lam.) P. Beauv.; *Koeleria robinsoniana* Domin; *Koeleria robinsoniana* var. *australis* Domin; *Poa cristata* (L.) L.; *Poa nitida* Lam.; *Rostraria cristata* (L.) Tzvelev)

Europe temperate. Tillering stem, forage, good fodder, found in stony ground, stony slopes, see *Species Plantarum* 1: 63, 76. 1753, *Systema Naturae, edition 12* 94. 1757, *Histoire des Plantes de Dauphiné* 1: 250. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 182-183. 1791, *Der Botanische Garten der Universität zu Halle, Erster Nachtrag* 1: 10. 1801, *Synopsis Plantarum* 1: 97. 1805, *Flora Taurico-Caucasica* 1: 67. 1808, *Essai d'une Nouvelle Agrostographie* 84, 166, 175. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg (Sér. 7)* 5: 515. 1815, *The Genera of North American Plants* 1: 74. 1818, *Amoenitates Italicae* 67. 1819, *Fundamenta Agrostographiae* 144. 1820, *Mantissa* 2: 345. 1824, *Hortus Regius Botanicus Berolinensis* 1: 127. 1827, *Hortus Regius Botanicus Berolinensis* 2: 276. 1833, *Chloris Hanoverana* 625. 1836, *Synopsis Florae Germanicae et Helveticae* 790. 1837, *A Class-book of Botany* 613. 1847, *A Manual of the Botany of the Northern United States* 591. 1848, *Flora Rossica* 4(13): 402. 1852, *Synopsis Plantarum Glumacearum* 1: 293. 1854, *Flore du Département des Hautes-Pyrénées* 85. 1867, *Abhandlungen der Königlichen*

Gesellschaft der Wissenschaften zu Göttingen 19: 251. 1874, *Transactions of the Kansas Academy of Science* 9: 118. 1885, *Mexicanas Plantas* 2: 109. 1886, *Catalogue of Canadian Plants* 2(4): 218. 1888 and *A Flora of Western Middle California* 61-62. 1901, *Sitzungsberichte der Königlichen Böhmisches Gesellschaft der Wissenschaften, Mathematisch-Naturwissenschaftliche Classe* 58: 45. 1902, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 9: 42, 80. 1903, *Flora of Los Angeles and Vicinity* 46. Stanford University, California 1904, *Bibliotheca Botanica* 65: 130, 172-173, 175, 211, 223-224, 226, 233-239, t. 14, f. 6-9. 1907, *Brittonia* 1(2): 84. 1931, *Report of the First Scientific Expedition to Manchoukou* 4(2): 8, f. 1. 1935, *Bulletin of Miscellaneous Information Kew* 1936: 500. 1936, *Botanicheskie Materialy Gerbariia Instituta Botaniki Akademii Nauk Kazakhskoj SSR* 2: 10. 1964, *Novosti Sist. Vyss. Rast.* 7: 47, 71. 1970 [1971], *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 121-122. 1971[1972], *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Canadian Journal of Botany* 56(2): 193. 1978, *Neo-Lineamenta Florae Manshuricae* 95. 1979, *Phytologia* 49(1): 39. 1981, *Informatore Botanico Italiano* 14: 221-225. 1982, *Phytologia* 52(1): 14. 1982, *Phytologia* 54(1): 3. 1983, *Bot. Zhurn.* 71: 1426-1427. 1986, *Illustrierte Flora von Mittel-Europa, edition 3* 1(3: Lief. 4): 267. 1987, *Flora Reipublicae Popularis Sinicae* 9(3): 132-134, pl. 32, f. 9-11. 1987, *Bot. Zhurn.* 76: 476-479. 1991, *Bot. Zhurn.* 79(7): 134-135. 1994, *Grassland of China* 1995(1): 16-20. 1995, *Taxon* 49(2): 244. 2000.

in English: crested hair grass

in Mexico: zacate de cresta

K. embergeri Quezel (for the French botanist Marie Louis Emberger, 1897-1969, professor and director of the Institut de Botanique, University of Montpellier (France), plant collector. See J. Lanjou and F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. Regnum Vegetabile vol. 9. 1957; Louis Emberger, *Les arbres du Maroc* et comment les reconnaître. Paris 1938 and *Recherches sur l'origine et l'évolution des plastides chez les ptéridophytes*. Paris 1921; Louis Emberger and René Maire, *Catalogue des plantes du Maroc, spermatophytes et ptéridophytes*. 1941)

Morocco. Rare species, see *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 44: 257. 1954.

K. eriostachya Pancic (*Koeleria pyramidata* (Lam.) P. Beauv. subsp. *eriostachya* (Pancic) Schinz & R. Keller)

Europe. See *Bibliotheca Botanica* 65: 161. 1907, *Fitologija* 39: 72-77. 1991.

K. fueguina C.E. Calderón ex Nicora (*Koeleria fueguina* C.E. Calderón; *Trisetum toluicense* var. *tomentosum* E. Desv.; *Trisetum tomentosum* (E. Desv.) Nicora)

South America. Damp habitats, bogs, see *Révision des Graminées* 1: 101, t. 60. 1829, *Flora Chilena* 6: 345. 1854 and *Flora Patagónica* 3: 63, 246. 1978.

K. glauca DC. (*Aira glauca* Spreng.; *Koeleria cristata* var. *glauca* (Spreng.) G. Mey.; *Koeleria glauca* (Spreng.) DC.; *Koeleria glauca* (Schkuhr) DC.; *Koeleria macrantha* subsp. *glauca* (Spreng.) P.D. Sell; *Poa glauca* Schkuhr, nom. illeg., non *Poa glauca* Vahl)

Europe, Russia, Mongolia. Perennial bunchgrass, densely tufted, rather short-lived, rhizomatous, compact, silver-blue to green-bluish foliage, silver-green flower spikes, attractive, ornamental, very drought resistant, found in sandy soil, wet meadow area, rocky hillside, gravelly soil, see *Cat. Hort. Wittenberg* 49. 1799, *Der Botanische Garten der Universität zu Halle, Erster Nachtrag* 1: 10. 1801, *Fl. Germ.* 1: 256. 1806, *Catalogus plantarum horti botanici monspeliensis* 116. 1813, *Chloris Hanoverana* 625. 1836 and *Bibliotheca Botanica* 65: 65. 1907, *Novosti Sist. Vyss. Rast.* 7: 73. 1970 [1971], *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 32: 59-65. 1985, *Bot. Zhurn.* 76: 1331-1332. 1991, *Bot. Zhurn.* 78(4): 36-47. 1993, *Fragmenta Floristica et Geobotanica* Suppl. 2(1): 251-278. 1993, *Flora of Great Britain and Ireland* 5: 363. 1996.

in English: large blue hairgrass, glaucous hairgrass

K. grandis Besser ex Gorski (*Koeleria polonica* Domin)

Europe, Lithuania, Russia. See *Bot. Zhurn.* 76: 1174-1178. 1991, *Fragmenta Floristica et Geobotanica* Suppl. 2(1): 251-278. 1993.

K. grossheimiana (Tzvelev) Galushko (*Koeleria luerssenii* subsp. *grossheimiana* Tzvelev)

Russia. Bunchgrass, see *Novosti Sist. Vyss. Rast.* 7: 69. 1970 [1971] and 13: 254. 1976.

K. hirsuta Gaudin (*Trisetum hirsutum* (Gaudin) Schrad.)

Europe. See *Alpina* 3: 48. 1808, *Linnaea* 12(4): 443. 1838 and *Bibliotheca Botanica* 65: 73. 1907, *Annales Historico-Naturales Musei Nationalis Hungarici* 54: 205. 1962.

K. inaequaliglumis A.M. Molina

South America. See *Boletín de la Sociedad Argentina de Botánica* 26(3-4): 225, f. 3. 1990.

K. kurtzii Hack. ex Kurtz (*Koeleria argentina* Domin; *Koeleria bergii* Hieron.; *Koeleria bergii* var. *fallacina* Domin; *Koeleria gracilis* subsp. *pseudocristata* (Domin) Domin; *Koeleria gracilis* var. *andicola* (Domin) Domin; *Koeleria grisebachii* Domin; *Koeleria grisebachii* var. *catamarcensis* Domin; *Koeleria grisebachii* var. *riojensis* Domin; *Koeleria grisebachii* var. *typica* Domin; *Koeleria hieronymii* Domin; *Koeleria kurtzii* var. *mollis* Hack.; *Koeleria lilloi* Hack.; *Koeleria macrantha* (Ledeb.) Schult.; *Koeleria micrathera* Griseb.; *Koeleria niederleinii* Domin; *Koeleria niederleinii* var. *mutica* Domin; *Koeleria niederleinii* var. *niederleinii*; *Koeleria niederleinii* var. *pseudobergii* Domin; *Koeleria pseudocristata* var. *andicola* Domin; *Trisetum kurtzii* (Hack. ex Kurtz) Zotov; *Trisetum subaristatum* Desv.) (*Koeleria kurtzii* Hack. ex Kurtz dedicated to the

German botanist Friz Kurtz, 1854-1920, Argentina/Córdoba 1884-1915 professor of botany, explorer, botanical collector) (*Koeleria lilloi* Hack. named for the Argentine botanist Miguel Lillo, 1862-1931, author of "Catálogo de las Acanthaceas Argentinas." *Lilloa*. 1: 21-66. 1937; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 382. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Stafleu and Cowan, *Taxonomic literature*. 3: 18-19. Utrecht 1981)

(*Koeleria niederleinii* Domin after the German botanist Gustavo Niederlein, 1858-1924, traveler and plant collector, in Brazil and Argentina 1879-1886, among his publications are *Ressources végétales des Colonies françaises*. Paris 1902, *The Republic of Costa Rica*. Philadelphia 1905, *Herbario Bettfreund*. Enumeración sistemática de las plantas recogidas en Buenos Ayres y sus alrededores por el Señor Don Carlos Bettfreund. Buenos Ayres 1898, *Resultados botánicos de exploraciones hechas en Misiones*. Buenos Ayres 1890 and *Mis exploraciones en el territorio de Misiones*. Buenos Ayres 1891. See *Comisión científica de la Expedición al Rio negro, 1879*. *Botánica*, por P.G. Lorentz ... y G. Niederlein. 1881; J.H. Barnhart, *Biographical notes upon botanists*. 3: 4. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Paul Günther Lorentz, 1835-1881, and Gustavo Niederlein, *Enumeración sistemática de las plantas colectadas durante la expedición*. Informe oficial de la Comisión Científica agregada al Estado Mayor General de la expedición al Rio Negro (Patagonia), realizada en los meses de abril, mayo y junio de 1879, bajo las órdenes del Gral. Julio A. Roca. Buenos Aires. Entrega segunda. *Botánica*. 173-294. 1881).

South America, Argentina, Catamarca, La Rioja, Bolivia, Chile, Peru. Perennial bunchgrass, pilose, erect, pinkish to reddish inflorescence, panicle elliptic to cylindrical, spikelets 2-flowered laterally flattened, glumes membranous lanceolate, lemmas lanceolate acute or with subapical awn, see *Syn. Pl.* 1: 97. 1805, *Flora Chilena* 6: 353. 1854, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 3: 376. 1881, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 16: 261-262. 1899 [1900] and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 9: 42. 1903, *Repertorium Specierum Novarum Regni Vegetabilis* 2: 89, 91-94. 1906, *Bibliotheca Botanica* 65: 119, 174, 222, 225, t. 7. 1907, *Compte Rendu de l'Administration Municipale* 17: 296. 1914, *Transactions and Proceedings of the Royal Society of New Zealand* 73(3): 237. 1943, *Flora de la Provincia de Buenos Aires* 4(2): 1-

624. 1970, *Boletín de la Sociedad Argentina de Botánica* 27(1-2): 65-71. 1991, *Parodiana* 8(1): 61. 1993.

K. litvinowii Domin (*Koeleria hosseana* var. *tafelii* Domin; *Koeleria litvinowii* var. *tafelii* (Domin) P.C. Kuo & Z.L. Wu)

Europe. Shortly awned, see *Repertorium Specierum Novarum Regni Vegetabilis* 10(234-238): 54. 1911, *Flora Reipublicae Popolaris Sinicae* 9(3): 130, pl. 33, f. 4-6. 1987.

K. lobata (M. Bieb.) Roem. & Schult. (*Dactylis lobata* M. Bieb.; *Koeleria brevis* Steven; *Koeleria callieri* (Domin) Ujhelyi; *Koeleria crassa* Ujhelyi; *Koeleria cristata* f. *robusta* Pacz. ex Schmalh.; *Koeleria degenii* Domin; *Koeleria lobata* Trin. ex Steud., nom. illeg., non *Koeleria lobata* (M. Bieb.) Roem. & Schult.; *Koeleria robusta* (Pacz. ex Schmalh.) Janata; *Koeleria splendens* C. Presl; *Koeleria splendens* var. *callieri* Domin) (for the Hungarian botanist Arpád von Degen (de Degen), 1866-1934, author of *Flora vellebitica*. Budapest 1936-1938; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 434. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 97. 1972)

Europe, Morocco, Algeria. See *Cyperaceae et Gramineae Siculae* 34. 1820, *Nomenclator Botanicus. Editio secunda* 1: 849. 1840 and *Annales Historico-Naturales Musei Nationalis Hungarici* 56: 206. 1964, *Flora Europaea: Check-List & Chromosome Index* Cambridge University Press 1982.

K. luerssenii Domin (*Koeleria gracilis* subsp. *luerssenii* Domin; *Koeleria luerssenii* (Domin) Domin; *Koeleria monantha* Domin) (for the German botanist Christian Luerssen, 1843-1916, botanical collector, from 1869 to 1884 lecturer at Leipzig, succeeded Johann X. Robert Caspary (1818-1887) at Königsberg, 1888-1910 professor of botany at Königsberg, edited *Mittheilungen aus dem Gesamtgebiete der Botanik*, 1888-1910 edited *Bibliotheca botanica*, among his writings are *Filices graeffeanae*. [Collector: Eduard O. Graeffe, 1833-1916] Leipzig 1871, *Die Pflanzengruppe der Farne*. Berlin 1874, *Zur Flora von Queensland*. Verzeichniss der von Frau Amalie Dietrich in den Jahren 1863 bis 1873 an der Nordostküste von Neuholland gesammelten Pflanzen. [Collector: Amalie Dietrich, née Nelle, 1821-1891] [Hamburg] 1874-1875, *Handbuch der systematischen Botanik*. Leipzig 1879-1882 and *Die Pflanzen der Pharmacopoea germanica*. Leipzig 1883. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 410. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 195-196. 1947; E.D. Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 124-125. 1937; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Russia. Bunchgrass, see *Novosti Sist. Vyss. Rast.* 7: 69. 1970 [1971] and 13: 254. 1976, *Not. Syst. Georg. Inst. Bot. Tbilissi* 40: 68-72. 1984.

K. macrantha (Ledeb.) Schultes (*Achaeta geniculata* E. Fourn.; *Aira cristata* L.; *Aira gracilis* (Pers.) Trin.; *Aira macrantha* Ledeb.; *Airochloa cristata* (L.) Link; *Airochloa gracilis* (Pers.) Link; *Brachystylus cristatus* (L.) Dulac; *Dactylis cristata* (L.) M. Bieb.; *Festuca cristata* (L.) Vill.; *Koeleria albescens* auct.; *Koeleria albescens* DC. pro parte; *Koeleria alpigena* Domin; *Koeleria arkansana* Nutt. ex Scribn.; *Koeleria aschersoniana* Domin; *Koeleria britannica* (Domin) Druce; *Koeleria californica* (Domin) Beetle; *Koeleria caucasica* Domin; *Koeleria cristata* (L.) Pers.; *Koeleria cristata* Pers.; *Koeleria cristata* (L.) Pers. pro parte; *Koeleria cristata* subsp. *mongolica* (Domin) Tzvelev; *Koeleria cristata* subsp. *pseudocristata* (Domin) Domin; *Koeleria cristata* var. *elegantula* (Domin) Beetle; *Koeleria cristata* var. *elegantula* Beetle; *Koeleria cristata* var. *geniculata* (E. Fourn.) Beetle; *Koeleria cristata* var. *gracilis* (Pers.) A. Gray; *Koeleria cristata* var. *longifolia* Vasey ex Burt Davy; *Koeleria cristata* var. *macrantha* (Ledeb.) Griseb.; *Koeleria cristata* var. *major* Vasey; *Koeleria cristata* var. *nuttalii* Alph. Wood; *Koeleria cristata* var. *oregona* Domin; *Koeleria cristata* var. *pinetorum* Abrams; *Koeleria cristata* var. *pseudocristata* Domin; *Koeleria cristata* var. *pubescens* Vasey ex Burt Davy; *Koeleria csatoi* Ujhelyi; *Koeleria elegantula* Domin; *Koeleria fenziiana* Schur; *Koeleria gracilis* Pers.; *Koeleria gracilis* f. *colorata* Domin; *Koeleria gracilis* f. *congesta* Domin; *Koeleria gracilis* f. *densevestita* Domin; *Koeleria gracilis* f. *filifolia* Domin; *Koeleria gracilis* f. *glabra* Domin; *Koeleria gracilis* f. *laxa* Domin; *Koeleria gracilis* f. *pubescens* Domin; *Koeleria gracilis* f. *washingtonensis* Domin; *Koeleria gracilis* subsp. *idahoensis* Domin; *Koeleria gracilis* subsp. *macrura* Domin; *Koeleria gracilis* subsp. *nitida* (Nutt.) Domin; *Koeleria gracilis* subsp. *polyantha* Domin; *Koeleria gracilis* subsp. *pseudocristata* (Domin) Domin; *Koeleria gracilis* subvar. *columbiana* Domin; *Koeleria gracilis* subvar. *multiflora* Domin; *Koeleria gracilis* subvar. *oregana* Domin; *Koeleria gracilis* subvar. *pubiflora* Domin; *Koeleria gracilis* subvar. *superfusa* Domin; *Koeleria gracilis* subvar. *transiens* Domin; *Koeleria gracilis* subvar. *vestita* Domin; *Koeleria gracilis* var. *breviculmis* Domin; *Koeleria gracilis* var. *californica* (Domin) Domin; *Koeleria gracilis* var. *californiensis* Domin; *Koeleria gracilis* var. *caudata* Domin; *Koeleria gracilis* var. *dasyclada* Domin; *Koeleria gracilis* var. *latifrons* Domin; *Koeleria gracilis* var. *laxa* Domin; *Koeleria gracilis* var. *longifolia* Nutt. ex Domin; *Koeleria gracilis* var. *missouriana* Domin; *Koeleria gracilis* var. *mukdenensis* (Domin) Kitag.; *Koeleria gracilis* var. *munita* Domin; *Koeleria gracilis* var. *oregana* Domin; *Koeleria gracilis* var. *pseudocristatoides* Domin; *Koeleria gracilis* var. *pseudonitida* Domin; *Koeleria gracilis* var. *sublanuginosa* Domin; *Koeleria gracilis* var. *subrepens* Domin; *Koeleria idahoensis* Domin; *Koeleria idahoensis* var. *idahoensis*; *Koeleria idahoensis* var. *pseudocristatoides* Domin; *Koeleria jankae* Ujhelyi; *Koeleria javorkae* Ujhelyi; *Koeleria latifrons* (Domin) Rydb.; *Koeleria longifolia* Nutt. ex

Domin; *Koeleria macrura* Domin; *Koeleria macrura* f. *biflora* Domin; *Koeleria macrura* f. *macrura*; *Koeleria macrura* f. *quadriflora* Domin; *Koeleria macrura* f. *triflora* Domin; *Koeleria majoriflora* (Borbás) Borbás; *Koeleria mukdenensis* Domin; *Koeleria nitida* Nutt.; *Koeleria nitida* Domin; *Koeleria nitida* f. *colorata* Domin; *Koeleria nitida* f. *congesta* Domin; *Koeleria nitida* f. *filifolia* Domin; *Koeleria nitida* f. *pubescens* Domin; *Koeleria nitida* subvar. *pubiflora* Domin; *Koeleria nitida* subvar. *transiens* Domin; *Koeleria nitida* subvar. *vestita* Domin; *Koeleria nitida* var. *arkansana* Domin; *Koeleria nitida* var. *breviculmis* Domin; *Koeleria nitida* var. *californica* Domin; *Koeleria nitida* var. *caudata* Domin; *Koeleria nitida* var. *latifrons* Domin; *Koeleria nitida* var. *laxa* Domin; *Koeleria nitida* var. *missouriana* Domin; *Koeleria nitida* var. *sublanuginosa* Domin; *Koeleria nitida* var. *subrepens* Domin; *Koeleria nyaradyi* Ujhelyi; *Koeleria oregana* Nutt. ex Domin; *Koeleria poiformis* Domin; *Koeleria polyantha* var. *californica* Domin; *Koeleria pseudocristata* Domin; *Koeleria pseudocristata* f. *densevestita* Domin; *Koeleria pseudocristata* f. *laxa* Domin; *Koeleria pseudocristata* f. *pubescens* Domin; *Koeleria pseudocristata* var. *californica* Domin; *Koeleria pseudocristata* var. *longifolia* Domin; *Koeleria pseudocristata* var. *oregona* Domin; *Koeleria pseudocristata* var. *pseudocristata*; *Koeleria pseudocristata* var. *pseudonitida* Domin, nom. inval.; *Koeleria pyramidata* auct. amer.; *Koeleria robinsoniana* Domin; *Koeleria robinsoniana* var. *australis* Domin; *Koeleria robinsoniana* var. *robinsoniana*; *Koeleria schurii* Ujhelyi; *Koeleria sclerophylla* P.A.Smirn.; *Koeleria supra-arenaria* Domin; *Koeleria talievii* Lavrenko; *Koeleria tenuipes* (Schur) Ujhelyi; *Koeleria theodoriana* Klovov; *Koeleria tokiensis* subsp. *mongolica* Domin; *Koeleria transsilvanica* Schur; *Koeleria yukonensis* Hultén; *Poa cristata* (L.) L.; *Poa cristata* (L.) Willd.)

Europe, Eurasia. Perennial bunchgrass, highly variable, ornamental, small, short, erect, densely or loosely tufted, shallow-rooted, leaves mostly basal, sheaths open, ligule membranous and truncate, leaf blade flat or inrolled, long leaves, a compact and dense panicle, 2-4 florets, lemmas sometimes awned, polymorphic complex, native pasture species, weed, good food source, forage, palatable, grazed, level of palatability decreases during seed production, can recolonize areas that have been subjected to severe water stress, leaves drought resistant and persist under dry conditions, has the ability to revegetate areas of high soil disturbance, regeneration accomplished by seed, possesses the ability to germinate under periods of water stress, grows in montane woodland or grassland, meadow, upland and high-prairie systems, prairie and grassland, in semiarid to mesic conditions, rocky soils and high elevations, on dry prairies or in grassy woods, dry soils, sandy places, open woods, see *Species Plantarum* 1: 63, 76. 1753, *Systema Naturae*, edition 12 94. 1757, *Histoire des Plantes de Dauphiné* 1: 250. 1786, *Tableau Encyclopédique et Méthodique* ...

Botanique 1: 182-183. 1791, *Synopsis Plantarum* 1: 97. 1805, *Flora Taurico-Caucasica* 1: 67. 1808, *Essai d'une Nouvelle Agrostographie* 84, 166, 175. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg (Sér. 7)* 5: 515. 1815, *The Genera of North American Plants* 1: 74. 1818, *Fundamenta Agrostographiae* 144. 1820, *Mantissa* 2: 345. 1824, *Hortus Regius Botanicus Berolinensis* 1: 127. 1827, *Hortus Regius Botanicus Berolinensis* 2: 276. 1833, *A Class-book of Botany* 613. 1847, *A Manual of the Botany of the Northern United States* 591. 1848, *Flore du Département des Hautes-Pyrénées* 85. 1867, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 251. 1874, *Transactions of the Kansas Academy of Science* 9: 118. 1885, *Mexicanas Plantas* 2: 109. 1886, *Catalogue of Canadian Plants* 2(4): 218. 1888 and *A Flora of Western Middle California* 62. 1901, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 9: 42. 1903, *Flora of Los Angeles and Vicinity* 46. Stanford University, California 1904, *Bibliotheca Botanica* 65: 172-173, 175, 211, 223-224, 226, 233-239, t. 14, f. 6-9. 1907, *Brittonia* 1(2): 84. 1931, *Rhodora* 58: 93-96. 1956, *Novosti Sist. Vyss. Rast.* 7: 47. 1970 [1971], *Canadian Journal of Botany* 56(2): 193. 1978, *Flora Europaea: Check-list and Chromosome Index* Cambridge Univ. Press. 1982, *Fragmenta Floristica et Geobotanica* Suppl. 2(1): 251-278. 1993, *Systematic Botany* 19(1): 6-20. 1994, K.J. Milnes, W.J. Davies, J.S. Rodwell and B.J. Francis, "The responses of *Briza media* and *Koeleria macrantha* to drought and re-watering." *Functional Ecology* 12(4): 665-672. Aug 1998, *Taxon* 49(2): 244. 2000, J.M. Dixon, "*Koeleria macrantha* (Ledeb.) Schultes (*K. alpigena* Domin, *K. cristata* (L.) Pers. pro parte, *K. gracilis* Pers., *K. albescens* auct. non DC.)." *Journal of Ecology* 88(4): 709-726. Aug 2000, Jean M. Dixon and Helen Todd, "*Koeleria macrantha*: performance and distribution in relation to soil and plant calcium and magnesium." *New Phytologist* 152(1): 59-68. Oct 2001, *Journal of Ecology* 91(4): 532-540. Aug 2003.

in English: crested hair grass, June grass, prairie June grass, prairie Junegrass, prairie koeler's grass, mountain June grass

K. majorifolia Borb.

Europe, Hungary. Indeterminate species.

K. mendocinensis (Hauman) C.E. Calderón (*Koeleria grisebachii* var. *mendocinensis* Hauman)

South America. See *Anales de Sociedad Científica Argentina* 86: 235. 1918, *Flora Patagónica* 3: 64. 1978.

K. micrathera (E. Desv.) Griseb. (*Leptophyllochloa micrathera* (E. Desv.) C.E. Calderón; *Trisetum laxum* Phil.; *Trisetum micratherum* E. Desv.)

Argentina, Chile. Shortly awned, lemma 3-nerved, see *Flora Chilena* 6: 352. 1854, *Anales de la Universidad de Chile* 43: 568. 1873, *Symbolae ad Floram Argentinam* 292.

1879, *Abh. Königl. Ges. Wiss. Göttingen* 24: 292. 1879 and *Bibliotheca Botanica* 65: 125. 1907, *Flora Patagónica* 3: 69-70. 1978.

K. nitidula Velen.

Europe, Bulgaria. Perennial, small.

K. novozelandica Domin (*Koeleria gintlilii* Domin; *Koeleria novozelandica* var. *parvula* Domin; *Koeleria novozelandica* var. *typica* Domin; *Koeleria superba* Domin)

New Zealand. Perennial, alpine, variable, erect, tufted or rhizomatous, lax and slender, ligule membranous, narrow panicles spike-like, glumes subequal, lemma mucronate or awned, drained and well drained areas, stony places, see *Handbk. N.Z. Fl.* 334. 1864, *Indig. Grasses N.Z.* t. 38. 1879 and *Bibliotheca Botanica* 65: 116-118, 126. 1907, *Transactions and Proceedings of the New Zealand Institute* 48: 192. 1916, *N.Z. J. Agric. Res.* 3: 728-733. 1960, *New Zealand Journal of Botany* 37: 51-61. 1999.

K. pectinata (Lam.) Shinnars (*Koeleria tuberosa* Pers.; *Poa pectinata* Lam.)

Europe. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 182. 1791, *Syn. Pl.* 1: 97. 1805 and *Rhodora* 58: 93-96. 1956.

K. permollis Nees ex Steud. (*Koeleria bergii* Hieron.; *Koeleria bergii* var. *aristulata* Domin; *Koeleria bergii* var. *minor* Domin; *Koeleria bergii* var. *patagonica* Domin; *Koeleria bergii* var. *typica* Domin; *Koeleria permollis* Döll, nom. illeg., non *Koeleria permollis* Nees ex Steud.)

South America, Argentina, Bolivia, Peru, Uruguay. Perennial, erect, caespitose, herbaceous, shortly rhizomatous, flat leaf blades linear and acute, spikelets 2-3-flowered, glumes lanceolate with scabrous keels, lemmas lanceolate mucicous or mucronate, lower lemma glabrous, rocky places, see *Synopsis Plantarum Glumacearum* 1: 293. 1854, *Flora Brasiliensis* 2(3): 125. 1878, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 3: 376. 1881 [or 1879] and *Repertorium Specierum Novarum Regni Vegetabilis* 2: 91. 1906, *Bibliotheca Botanica* 65: 122-123. 1907, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Boletín de la Sociedad Argentina de Botánica* 27(1-2): 65-71. 1991, *Parodiana* 8(1): 57. 1993.

K. phleoides (Vill.) Pers. (*Festuca cristata* L.; *Festuca phleoides* Vill.; *Koeleria brachystachya* DC.; *Koeleria gerardii* (Vill.) Shinnars; *Lophochloa cristata* (L.) Hyl.; *Lophochloa phleoides* (Vill.) Rchb.; *Rostraria cristata* (L.) Tzvelev; *Trisetaria phleoides* (Vill.) Nevski; *Trisetum cristatum* (L.) Potztl; *Trisetum phleoides* (Vill.) Trin., nom. illeg., non *Trisetum phleoides* (d'Urv.) Kunth)

Africa, Asia and Europe. Annual, caespitose, fibrous roots, spike-like panicle cylindrical, lower lemmas villous, upper lemmas reduced, good fodder, see *Species Plantarum* 76. 1753, *Flora Delphinalis* 7. 1785 [1786], *Syn. Pl.* 1: 97.

1805, *Diagnoses plantarum orientalium novarum*, ser. 2, 4: 134. 1859, *Histoire des Plantes de Dauphiné* 1: 249. 1786, *Synopsis Plantarum* 1: 97. 1805, *Catalogus plantarum horti botanici monspeliensis* 120. 1813, *Flora Germanica Excursionaria* 42. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1: 65. 1830, *Flora Orientalis* 573. 1884 and *Bibliotheca Botanica* 65: 257, 268. 1906, *Bot. Not.* 1953: 355. 1953, *Rhodora* 58: 95. 1956, *Willdenowia* 5: 119. 1968, *Novosti Sist. Vyss. Rast.* 7: 47. 1970 [1971].

in English: Mediterranean hair grass

in French: fétuque crêtée

in Morocco: sibouss

K. praeandina A.M. Molina

South America, Argentina. See *Boletín de la Sociedad Argentina de Botánica* 26(3-4): 221, f. 1. 1990, *Parodiana* 81(1): 40-67. 1993.

K. pumila (Desf.) Domin (*Avena pumila* Desf.; *Lophochloa pumila* (Desf.) Bor)

Asia, Europe, North Africa. Annual, dry riverbeds, see *Flora Atlantica* 1: 103. 1798, *Révision des Graminées* 1: 102. 1829 and *Repertorium Specierum Novarum Regni Vegetabilis* 2: 31. 1906, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 93. 1942, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 445. 1960, *Novosti Sist. Vyss. Rast.* 7: 48. 1970 [1971], *Folia Geobotanica et Phytotaxonomica* 11(1): 83. 1976, *Lagascalia* 12: 290-292. 1984, *Bothalia* 18: 114-119. 1988, *Bothalia* 26(1): 53-61. 1996.

K. pyramidata (Lam.) P. Beauv. (*Achaeta geniculata* E. Fourn.; *Koeleria cristata* (L.) Pers. pro parte; *Koeleria cristata* Pers.; *Koeleria cristata* var. *elegantula* (Domin) Beetle; *Koeleria elegantula* Domin; *Koeleria genevensis* Domin; *Koeleria kernerii* Ujhelyi; *Koeleria lamarckii* Ujhelyi; *Koeleria macranthera* (Ledeb.) Spreng.; *Koeleria macrura* Domin; *Koeleria macrura* f. *biflora* Domin; *Koeleria macrura* f. *quadriflora* Domin; *Koeleria macrura* f. *triflora* Domin; *Koeleria mollis* W. Mann; *Koeleria montana* (Hausm.) Dalla Torre; *Koeleria tristis* Domin; *Poa pyramidata* Lam.)

Turkey, Europe. Perennial, tufted, small, erect, in small clumps, ligule short and truncate, no auricles, forage, very resistant to drought, found in very poor soils dry to very dry, sand, stony places, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 183. 1791, *Synopsis Plantarum* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 84, 166, 175. 1812, *Synopsis Plantarum Glumacearum* 1: 293. 1854, *Mexicanas Plantas* 2: 109. 1886 and *Bibliotheca Botanica* 65: 153, 172, 238-239, t. 14, f. 6-7. 1907, *Flora Europaea: Check-list and Chromosome Index* Cambridge Univ. Press. 1982, *Phytologia* 54(1): 3. 1983, *Taxon* 34: 727-730. 1985,

Systematic Botany 19(1): 6-20. 1994, *International Organization of Plant Biosystematists Newsletter* 24: 15-19. 1995.

in English: crested hair grass

in Mexico: zacate de cresta

K. rigoorum Edgar & Gibb

New Zealand. Loose and slender, erect and often geniculate at base, reddish, slender rhizomes, leaf sheaths ribbed, erect inflorescence paniculate, glumes subequal, lemma entire or mucronate or awned, awn apical to subapical, damp habitats, wet areas, see *New Zealand Journal of Botany* 37: 59-61, f. 5. 1999.

K. sclerophylla P.A. Smirn. (*Koeleria theodoriana* Klokoy; *Koeleria wolgensis* (P.A. Smirn.) P.A. Smirn.)

Europe, Russia, Eurasia. Indeterminate species, see *Feddes Repertorium* 30: 399-400. 1932.

K. setacea (Pers.) DC. (*Koeleria tuberosa* var. *setacea* Pers.)

Europe. See *Synopsis Plantarum* 1: 97. 1805, *Cat. Hort. Monsp.* 118. 1813.

K. vallesiana (Honck.) Gaudin (*Koeleria alpicola* Gren. & Godr.; *Koeleria andreanszkyi* Ujhelyi; *Koeleria epauneroi* Kerguélen; *Koeleria gandreanszkyi* Kerguélen, also spelled *gandreanszkyi*; *Koeleria linkii* Kunth; *Koeleria pauneroi* Ujhelyi; *Koeleria pectinata* (Lam.) Shinners; *Koeleria setacea* Pers.; *Koeleria setacea* (Pers.) DC.; *Koeleria vallesiana* (Honck.) Bertol.) (Valais, Switzerland)

Europe, Switzerland, Algeria, Morocco. Densely tufted, grayish green leaves, silvery-green or purplish flower spikes, a pioneer grass, useful for erosion control, found in steppic grasslands, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 182. 1791, *Alpina* 3: 47. 1808 and *Bibliotheca Botanica* 65: 85-86. 1907, *Rhodora* 58: 95. 1956, *Annales Historico-Naturales Musei Nationalis Hungarici* 55: 189, 193. 1963 [1964], *Boissiera*. 23: 72. 1974, *Lejeunia* 75: 203-204. 1975, *Flore Descriptive et Illustrée de la France (de la Corse et des Contrées Limitrophes)* 5: 545. 1979, *Taxon* 34: 346-351. 1985, *Proceedings of the Royal Society of London, Series B, Biological Sciences* 223: 459-473. 1985, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988.

in English: Somerset hair grass, Somerset grass

in Morocco: tagifuft, tilibit, amuman

K. vallesiana (Honck.) Gaudin subsp. *castellana* (Boiss. & Reut.) Domin (*Koeleria castellana* Boiss. & Reut.; *Koeleria vallesiana* subsp. *castellana* Domin; *Koeleria villosa* Boutigny, non Pers.)

Europe. See *Bibliotheca Botanica* 65: 86. 1907.

K. vallesiana (Honck.) Gaudin subsp. *vallesiana* (*Koeleria aurata* Bubani)

Europe, Spain.

K. vallesiana (Honck.) Gaudin var. *intermedia* (Timb.-Lagr.) Kupfer (*Koeleria setacea* var. *intermedia* Timb.-Lagr.)

Europe. See *Boissiera*. 23: 72. 1974.

K. ventanica A.M. Molina

South America. See *Boletín de la Sociedad Argentina de Botánica* 26(3-4): 228, f. 4. 1990.

K. vurilochensis C.E. Calderón ex Nicora

South America. See *Flora Patagónica* 3: 66. 1978.

K. vurilochensis C.E. Calderón ex Nicora var. *patagonica* (Domin) A.M. Molina (*Koeleria bergii* var. *patagonica* Domin)

South America. See *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 3: 376. 1879 and *Bibliotheca Botanica* 65: 123. 1907, *Parodiana* 8(1): 57. 1993.

K. vurilochensis C.E. Calderón ex Nicora var. *vurilochensis*

South America. See *Flora Patagónica* 3: 66. 1978.

Koordersiochloa Merr. = *Lycochloa*

Samuelsson, *Pseudostreptogyne* A. Camus, *Streblochaete* Hochst. ex Pilg.

For the Dutch botanist Sijfert Hendrik Koorders, 1863-1919, forester, at Bogor (Buitenzorg), in the Dutch East Indian Forest Service, author of *Zakflora voor Java*. Batavia en Noordwijk 1893, *Die Kultur des Sono-Kling-Baumes*. 1895, *Flora von Tjibodas*. Batavia 1918-1923 and *Die Piperaceae von Java*. Amsterdam 1908, husband of the German-born Dutch botanist Anna Koorders-Schumacher (1870-1934). See J.W. Ijzerman, *Dwars door Sumatra ... Beschreven door J.W. Ijzerman, ... S.H. Koorders, etc.* 1895; J.H. Barnhart, *Biographical notes upon botanists*. 2: 313. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 217. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 253. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 2: 645-648. 1979.

Pooideae, Poodae, Meliceae, perennial, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: (Beibl. 85) 61. 1906, *Philipp. J. Sci., Bot.* 12: 67. 1917, *Bulletin de la Société Botanique de France* 77: 476. 1930, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 25(8): 4. 1933.

Species

K. javanica Merr.

Indonesia. See *Philipp. J. Sci. Bot.* 12: 67. 1917.

Korycarpus Zea ex Lag. = *Corycarpus* Spreng., *Diarrhena* P. Beauv., *Korycarpus* Lag.

From the Greek *korys*, *korythos*, *korytha* "helmet" and *karpos* "fruit."

Pooideae, Diarrheneae, type *Korycarpus arundinaceus* Zea ex Lag., see *Essai d'une Nouvelle Agrostographie* 142, 160, 162, t. 25, f. 2. 1812, *Genera et species plantarum* 4, 34. 1816, *Systema Vegetabilium, editio decima sexta* 1: 123. 1824 and *Flora of the Prairies and Plains of Central North America* 114. 1932, E.D. Merrill, *Index rafinesquianus*. The plant names published by C.S. Rafinesque, etc. 75. Jamaica Plain, Massachusetts, U.S. 1949, *Bulletin of the Torrey Botanical Club* 118: 128-136. 1991 [A revision of *Diarrhena* (Poaceae) in the United States], *Contributions from the United States National Herbarium* 48: 238, 269, 419. 2003.

Kralikella Coss. & Durieu = *Tripogon* Roem. & Schult.

Chloridoideae, Cynodonteae, see *Systema Vegetabilium* 2: 34, 600. 1817, *Bulletin de la Société Dauphinoise pour l'échange des Plantes* 66. 1876 and *Contributions from the United States National Herbarium* 41: 130, 231. 2001.

Kralikia Cosson & Durieu = *Tripogon* Roem. & Schult.

After the French botanist Jean-Louis Kralik, 1813-1892, from 1855 to 1885 curator of the Cosson Herbarium, plant collector in Corsica and Algeria, with J. Billon [and Alphonse Maille, 1813-1865, posth.] published *Catalogue des Reliquiae Mailleanae*. Paris 1869. See Louis Félicien Joseph Caignart de Saulcy, *Voyage autour de la mer Morte et dans les terres bibliques, exécuté de décembre 1850 à avril 1851*. [with a *Catalogue des plantes observées en Syrie et en Palestine ...* par MM. de Saulcy et Michon. Rédigé par MM. E. Cosson et Kralik] Paris 1853; Ernest Saint-Charles Cosson (1819-1889), *Compendium florum atlanticae*. Paris 1881-1887 and *Répertoire alphabétique des principales localités mentionnées dans le Compendium et le Conspectus florum atlanticae ...* Par E. Cosson ... avec le concours de MM. L. Kralik, A. Letourneux, etc. 1882; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J.H. Barnhart, *Biographical notes upon botanists*. 2: 317. 1965; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*.

219. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 195. Oxford 1964.

Chloridoideae, Cynodonteae, type *Kralikia africana* Coss. & Durieu, see *Systema Vegetabilium* 2: 34, 600. 1817, *Bulletin de la Société Botanique de France* 14: 89. 1867 and *Contributions from the United States National Herbarium* 41: 130, 231. 2001.

Species

K. africana Cosson & Durand (*Arcangelina africana* (Cosson & Durand) Kuntze; *Kralikella africana* (Cosson & Durand) Coss. & Durieu; *Oropetium africanum* (Cosson & Durand) Chiov.; *Oropetium africanum* (Cosson & Durand) Pilg.)

Africa. See *Bulletin de la Société Botanique de France* 14: 89. 1867, *Revisio Generum Plantarum* 2: 759. 1891, *Bulletin de la Société Dauphinoise pour l'échange des Plantes* 66. 1876 and *Annuario del Reale Istituto Botanico di Roma* 8: 345. 1908, *Engler's botanische Jahrbucher* 74: 15. 1947.

Kralikiella Batt. & Trab. = *Kralikia* Coss. & Durieu, *Tripogon* Roem. & Schult.

The diminutive of the genus *Kralikia*.

Chloridoideae, Cynodonteae, see *Systema Vegetabilium* 2: 34, 600. 1817, *Fl. Alg. Monocot.* 245. 1895 and *Contributions from the United States National Herbarium* 41: 130, 231. 2001.

Kratzmannia Opiz = *Agropyron* Gaertn.

Pooideae, Triticeae, Hordeinae, see *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539-540. 1770, *Oekon.-Techn. Fl. Böhm.* 1: 398. 1836, *Seznam Rost. Kvet. Cesk.* 56. 1852 and *Ill. Fl. N.U.S.* edition 2. 1: 283. 1913, *Contributions from the United States National Herbarium* 48: 25-42, 419. 2003.

Krombholzia Rupr. ex Fournier = *Krombholzia* E. Fourn., *Zeugites* P. Browne

For the Bohemian botanist Julius Vincenz von Krombholz, 1782-1843 (d. Praha), physician, mycologist, M.D. Erfurt 1811, professor of theoretical surgery, his writings include *Anatomische Beschreibung eines sehr merkwürdigen Anencephalus*. Prague 1827, *Tafeln zu dem mykologischen Werke von K.* 1824, *Conspectus fungorum esculentorum*. Prag 1820, *Gerichtlich-medizinische Untersuchungen, nebst Gutachten*. Prag 1841 and *Naturgetreue Abbildungen und Beschreibungen der essbaren, schädlichen und verdächtigen Schwämme*. Prag 1831-1846. See [Gesellschaft Deutscher Naturforscher und Aertze], *Bericht über die [15th] Versammlung ... in Prag im Sept. 1837*, von Grafen K. Sternberg und Professor J.V. Edl. v. K. 1838; J.H. Barnhart, *Biographical notes upon botanists*. 2: 322. 1965; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 220. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845.

Centothecoideae, Centotheceae, or Panicoideae, Centotheceae, type *Krombholzia mexicana* Rupr. ex E. Fourn., see *The Civil and Natural History of Jamaica in Three Parts* 341. 1756, *Species Plantarum. Editio quarta* 4: 204. 1805, *Révision des Graminées* 2: 485, t. 157. 1831, *Bulletin de la Société Botanique de Belgique* 15(3): 464. 1876, *Biologia Centrali-Americana; ... Botany ...* 3(20): 577. 1885 and *Contributions from the United States National Herbarium* 17(3): 368. 1913, *Flora Novo-Galiciana* 14: 413. 1983, *Contributions from the United States National Herbarium* 46: 277, 639-641. 2003.

Ktenosachne Steud. = *Rostraria* Trin.

From the Greek *ktenos* "a comb, ribs, rake" and *achne* "chaff, glume."

Argentina, the Caribbean, Chile, Mexico, Peru, U.S., Uruguay. Pooideae, Poeae, Aveninae, type *Ktenosachne tenerrima* Steud., see *Fund. Agrost.* 149, t. 13. 1820, *Syn. Pl. Glumac.* 1: 150. 2-3 Mar 1854 [1855] and *Contributions from the United States National Herbarium* 48: 419, 604. 2003.

L

Lachnagrostis Trin. = *Agrostis* L.

Greek *lachne* “wool, woolly hair, downy” and *agrostis* “grass, weed, couch grass,” *Agrostis* L.

Pooideae, Poaceae, Agrostidinae, this genus is generally included within *Agrostis* L., type *Lachnagrostis filiformis* (G. Forst.) Trin., see *Species Plantarum* 1: 61-63. 1753, *Fundamenta Agrostographiae* 128, t. 10. 1820, *Flora Chilena* 6: 320. 1854 and *Records Dom. Mus.* 5(15): 142-143. 1965, *Fl. Fenn.* 5: 29. 1971, *Darwiniana* 24: 187-216. 1982, *Taxon* 41: 556. 1992, *New Zealand Journal of Botany* 33: 1-33. 1995 [New Zealand species of *Deyeuxia* P. Beauv. and *Lachnagrostis* Trin. (Gramineae: Aveneae)], *Taxon* 44: 611-612. 1995, *Telopea* 9(3): 439-448. 2001 [The genus *Lachnagrostis* (Gramineae) in Australia], *Contributions from the United States National Herbarium* 48: 419-420. 2003, *EPPO Bulletin* 34(2): 219-227. Aug 2004.

Species

L. ammobia Edgar

New Zealand. Perennial, coastal, slender to lax, tufted, leaf sheath ribbed, ligule acute, narrow leaves, loose panicle, lemma very densely hairy, awn more or less straight, sand dunes, damp sand, sandy habitats, see *New Zealand Journal of Botany* 33(1): 14-15, f. 3. 1995.

L. billardieri (R. Br.) Trin. (*Agrostis billardieri* R. Br.; *Agrostis diffusa* Banks & Sol. ex Hook.f.; *Agrostis labillardieri* Roem. & Schult.; *Agrostis solandri* F.Muell., p.p.; *Avena filiformis* Labill.; *Deyeuxia billardieri* (R. Br.) Kunth; *Calamagrostis aemula* var. *billardieri* (R. Br.) Maiden & Betche; *Calamagrostis billardierei* (R. Br.) Steud.; *Calamagrostis billardieri* (R.Br.) Steud.; *Deyeuxia billardierei* (R. Br.) Kunth; *Vilfa billardieri* (R.Br.) P. Beauv.) (named for the French explorer Jacques Julien Houtton de Labillardière, 1755-1834, botanist, traveler, from 1791-1795 on expedition to find the French navigator Jean François de Galaup de la Pérouse (1741-1788), among his works *Icones plantarum Syriae rariorum*. Lutetiae Parisiorum [Paris] 1791 [1791-1812], *Relation du voyage à la recherche de la Pérouse*. Paris [1800] and *Novae Hollandiae plantarum specimen*. Parisiis 1804-1806 [1807]. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 331. 1965; H.M. Cooper, *French Exploration in South Australia*. Adelaide 1952; John Dunmore, *French Explorers in the Pacific*. Oxford 1965-1969; N.J.B. Plomley, *The Baudin Expedition and the*

Tasmanian Aborigines. Hobart 1982; Numa Broc, *Dictionnaire illustré des explorateurs français du XIXe siècle*. Afrique. Paris 1988; Sir James Edward Smith, *A Specimen of the Botany of New Holland*. 1, t. 1. London 1793; Ida Lee, *Early Explorers in Australia*. From the log-books and journals, including the Diary of Allan Cunningham. London 1925; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987)

Australia, New Zealand. Annual or perennial, coastal, glabrous, erect or decumbent at base, stiff, tufted, culms included within uppermost leaf sheath, leaves nonauriculate, ligule membranous and hairy, leaf sheath chartaceous, basal leaf sheaths not keeled, leaf blade flat and linear to filiform or shortly acuminate, chasmogamous, whorled panicle capillary-branched, spikelets straw-colored or purplish or pale green, glumes scabrous on the keel, lemmas glabrous and awned, lemma smooth below, awn geniculate and exerted, callus shortly bearded, palea lanceolate and bifid, found on sandy soils, coastal cliffs, open habitats, sandy dunes, see *Prodromus Florae Novae Hollandiae* 171. 1810, *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *Fundamenta Agrostographiae* 128, t. 10. 1820, *Révision des Graminées* 1: 77. 1829, *Nomenclator Botanicus. Editio secunda* 1: 249. 1840, *Flora Tasmaniae* 2: 115. 1858 and *A Census of New South Wales Plants* 21. 1916, *Contr. New South Wales Herb.* 1: 101-119. 1941, *Muelleria* 7(2): 147, 149, f. 2b, 3. 1989, *New Zealand Journal of Botany* 33: 1-33. 1995, *Telopea* 9(3): 445. 2001.

in English: sand wind grass, coastal blown grass, blown grass, coast blown grass

L. elata Edgar

New Zealand. Perennial, slender to lax, tufted, more or less geniculate at base, ligule truncate to tapering, leaf sheath membranous to submembranous, very loose panicle, glumes more or less equal, lemma glabrous or hairy, awn present or rarely absent, awn straight or curved, awn length very variable, floodplains, see *New Zealand Journal of Botany* 33(1): 18, f. 5. 1995.

L. filiformis (Forst.f.) Trinius (*Agrostis avenacea* J.F. Gmelin; *Agrostis chamissonis* (Trin.) Trin.; *Agrostis debilis* Poir.; *Agrostis debilis* (Kunth) Spreng., nom. illeg., non *Agrostis debilis* Poir.; *Agrostis filiformis* (Forst.f.) Sprengel, nom. illeg., non *Agrostis filiformis* Vill.; *Agrostis forsteri* Roemer & Schultes; *Agrostis lasiantha* Phil.; *Agrostis leonii* Parodi;

Agrostis ligulata Steud.; *Agrostis retrofracta* Willd.; *Agrostis solandri* F. Muell.; *Avena filiformis* Forst.f.; *Avena retrofracta* Willd.; *Calamagrostis avenacea* (J.F. Gmelin) Bech., nom. illeg., non *Calamagrostis avenacea* (J.F. Gmel.) W.R.B. Oliv.; *Calamagrostis avenacea* (J.F. Gmelin) W.R.B. Oliv.; *Calamagrostis filiformis* (Forst.f.) Cockayne, nom. illeg., non *Calamagrostis filiformis* Griseb.; *Calamagrostis forsteri* Steud.; *Calamagrostis retrofracta* (Willd.) Link; *Calamagrostis willdenowii* (Trin.) Steud.; *Deyeuxia chamissonis* (Trin.) Kunth; *Deyeuxia filiformis* (Forst.f.) Petrie, nom. illeg., non *Deyeuxia filiformis* (Griseb.) Hook.f.; *Deyeuxia forsteri* Kunth, nom. illeg.; *Deyeuxia retrofracta* (Willd.) Kunth; *Lachnagrostis avenacea* (J.F. Gmelin) Veldkamp; *Lachnagrostis chamissonis* Trin.; *Lachnagrostis forsteri* (Roem. & Schult.) Trin.; *Lachnagrostis retrofracta* (Willd.) Trin.; *Lachnagrostis willdenowii* Trin.; *Vilfa debilis* (Poir.) P. Beauv.; *Vilfa retrofracta* (Poir.) P. Beauv.; *Vilfa retrofracta* (Willd.) P. Beauv.) (after the German (born in France, Marne) poet Ludolf Karl Adelbert von Chamisso [Louis Charles Adélaïde Chamisseau de Boncourt], 1781-1838 (d. Berlin), naturalist and botanist, traveler and explorer, plant collector, a member of the Berlin Academy of Sciences, companion to Diederich F.L. von Schlechtendal (1794-1866), from 1801 to 1806 served in Prussian army, from 1812 to 1815 studied at the University of Berlin, accompanied Otto Eustafevich von Kotzebue (Kotsebu) (1787-1846) on his expedition round the world (1815-1818, on board the ship *Riurik* or *Rurik*), from 1833 Curator of the Royal Botanical Gardens of Berlin, creator of *Peter Schlemihl, or the Man without a Shadow*, author of *De animalibus quibusdam e classe vermium Linnaeana* ... Fasciculus primus. *De Salpa*. Berolini 1819. See [A. von Chamisso], *Correspondance d'Adalbert de Chamisso*. [Edited by René Riegel] Paris 1934, and *Adalbert von Chamisso's Werke*. [Bd. 5 and 6 edited after the author's death by Julius Eduard Hitzig] Leipzig 1836-1839; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 115. 1981; Otto von Kotzebue, *Entdeckungs-Reise in die Süd-See und nach der Berings-Strasse zur Erforschung einer nordöstlichen Durchfahrt. Unternommen in ... 1815-1818 ... auf dem Schiffe Rurick*. Weimar 1821; J.H. Barnhart, *Biographical notes upon botanists*. 1: 330. 1965; Louis Joseph Yorik Choris (1795-1828), *Voyage pittoresque autour du Monde*. Accompagné de descriptions par M. le baron Cuvier, et M. A. de Chamisso. Paris 1822; Dorothea Rudnick, in *D.S.B.* 15: 81-83. 1981; Günther Schmid, *Chamisso als Naturforscher. Eine Bibliographie*. Leipzig 1942; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 70. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845)

Australia, New Zealand, New Guinea. Annual or short-lived perennial, open, tufted, erect or geniculate in lower part,

erect to spreading, slender to robust, glabrous, herbaceous, auricles absent, leaf sheath membranous, ligule rounded or tapered, basal leaf sheaths not keeled, fine green leaves linear and flat, ligule membranous, chasmogamous spikelets, inflorescence a large open delicate panicle sometimes drooping when young, panicle branches in distant whorls on the central axis, primary and secondary branches usually naked, usually greenish to purple spikelets, glumes subequal narrow and scabrous, lemma truncate and villous or hairy on the back, geniculate awn, callus shortly bearded, palea thin and membranous, very variable species naturalized elsewhere, weed, grazed when young, in New South Wales livestock poisonings associated with this grass, grows on moist soils, damp ground, on damp disturbed soils, grassland, in vernal pools, on dry bare soil, along a stream, riverbanks, riparian woodland, clearings, clayey soil, along roadsides, see *Florulae Insularum Australium Prodrum* 9. 1786, *Systema Naturae ... editio decima tertia, aucta, reformata* 2(1): 171. 1791, *Mantissa Prima Florae Halensis* 32. 1807, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 94. 1809, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 249. 1810, *Essai d'une Nouvelle Agrostographie* 16, 147-148, 181-182. 1812, *Nova Genera et Species Plantarum* 1: 128. 1815 [1816], *Systema Vegetabilium* 2: 359. 1817, *Fundamenta Agrostographiae* 128, t. 10. 1820, *De Graminibus unifloris et sesquifloris* 216-217. 1824, *Systema Vegetabilium, editio decima sexta* 1: 262. 1825, *Révision des Graminées* 1: 77. 1829, *Hortus Regius Botanicus Berolinensis* 2: 247. 1833, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 242. 1833, *Nomenclator Botanicus. Editio secunda* 1: 250. 1840, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 374. 1841, *Synopsis Plantarum Glumacearum* 1: 173, 192. 1854, *Linnaea* 29(1): 88-89. 1858, *Veg. Chatham Isl.* 60. 1864, *Indig. Grasses N.Z.* t. 21. 1879 and *Manual of the New Zealand Flora* 869. 1906, *New Zealand Department Lands Report Botanical Survey Tongariro National Park* 35. 1908, *The Subantarctic Islands of New Zealand* 2: 474. 1909, *Transactions and Proceedings of the New Zealand Institute* 99: 127. 1917, *Candollea* 7: 519. 1938, *Revista Argentina de Agronomía* 29(1-2): 19, f. 3. 1962 [1963], *Records of the Dominion Museum* 5: 142. 1965, *Darwiniana* 24: 187-216. 1982, *Palm. Hort. Franc.* 3: 71. 1991, *Blumea* 37(1): 230. 1992, *New Zealand J. Bot.* 33: 19-20. 1995.

in English: bent grass, avens bent grass, blown grass, common blown grass, New Zealand wind grass, bents, fairy grass, Pacific bent, Pacific bentgrass

in Hawaii: he'upuea

L. glabra (Petrie) Edgar (*Deyeuxia glabra* Petrie)

New Zealand. Perennial, coastal, loose, sprawling, stoloniferous, leaf sheath ribbed and membranous, ligule oblong,

soft leaves, inflorescence paniculate contracted and spreading, glumes equal to subequal, awn straight, sandy areas, floodplains, see *Transactions and Proceedings of the Royal Society of New Zealand* 46: 36. 1914, *New Zealand Journal of Botany* 33(1): 20-22. 1995.

L. leptostachys (Hook.f.) Zotov (*Agrostis leptostachys* Hook.f.; *Deyeuxia filiformis* var. *leptostachya* (Hook.f.) Zotov; *Deyeuxia forsteri* var. *micrathera* Hack.)

New Zealand. Tufted, coastal, erect, leaf sheath membranous, ligule oblong, delicate panicle very lax, glumes equal to subequal, awn straight or curved, stony areas, rocky places, grassland, see *Révision des Graminées* 1: 77. 1829, *Flora Antarctica* 1: 94. 1845 and *Manual of the New Zealand Flora* 869. 1906, *The Subantarctic Islands of New Zealand* 2: 474. 1909, *Transactions of the Royal Society of New Zealand* 73: 235. 1943, *Records of the Dominion Museum* 5: 143. 1965, *New Zealand J. Bot.* 33: 19-20, 23. 1995.

L. littoralis (Hack.) Edgar (*Deyeuxia forsteri* var. *littoralis* Hack.; *Lachnagrostis filiformis* var. *littoralis* (Hack.) Zotov)

New Zealand. Annual, coastal, tufted, ligule oblong, panicle more or less contracted and spreading, glumes smooth, rocky places, see *Fundamenta Agrostographiae* 128, t. 10. 1820, *Révision des Graminées* 1: 77. 1829 and *Manual of the New Zealand Flora* 869. 1906, *Bibliotheca Botanica* 85: 352. 1915, *Transactions of the Royal Society of New Zealand* 73: 235. 1943, *Records of the Dominion Museum* 5: 142-143. 1965, *New Zealand Journal of Botany* 33(1): 23-26, f. 9. 1995.

L. littoralis (Hack.) Edgar subsp. *littoralis*

New Zealand. Annual, coastal, panicle branches slender, glumes equal to subequal, awn geniculate and twisted near base, see *New Zealand DSIR Bull.* 219: 170. 1977, *New Zealand Journal of Botany* 33(1): 23-26. 1995.

L. littoralis (Hack.) Edgar subsp. *salaria* Edgar

New Zealand. Annual, coastal, coarse, stiff, tough, robust, leaf sheath membranous, glumes unequal to dissimilar, awn straight or curved, see *New Zealand Journal of Botany* 33(1): 23-26. 1995.

L. lyallii (Hook.f.) Zotov (*Agrostis lyallii* Hook.f.; *Deyeuxia filiformis* var. *lyallii* (Hook.f.) Petrie; *Deyeuxia filiformis* var. *lyallii* (Hook.f.) Zotov; *Deyeuxia forsteri* var. *lyallii* (Hook.f.) Hack.; *Deyeuxia forsteri* var. *semiglabra* Hack.; *Lachnagrostis filiformis* var. *semiglabra* (Hack.) Zotov) (named for the British (b. Kincardineshire) naturalist David Lyall, 1817-1895 (Cheltenham, Glos), British Columbia Boundary Commission, surgeon, explorer, plant collector, botanist, 1839-1842 on Ross's Antarctic Voyage, 1847 New Zealand, 1852 with Edward Belcher (1799-1877) in the Arctic (a search for the lost Franklin expedition), 1862 Fellow of the Linnean Society. See J.H. Barnhart, *Biographical notes upon botanists.* 2: 415. 1965; H.N. Clokie,

Account of the Herbaria of the Department of Botany in the University of Oxford. 204. Oxford 1964; R. Glenn, *The botanical explorers of New Zealand.* Wellington 1950; Captain Sir Edward Belcher, *The Last of the Arctic Voyages, Being a Narrative of the Expedition in HMS Assistance ... in Search of Sir John Franklin.* London 1855; G.A. Doumani, editor, *Antarctic Bibliography.* Washington, Library of Congress 1965-1979; John T. Walbran, *British Columbia Coast Names, 1592-1906.* To Which are Added a Few Names in Adjacent United States Territory, Their Origin and History. First Edition. Ottawa: Government Printing Bureau, 1909; John Norris, *Strangers Entertained: A History of the Ethnic Groups of British Columbia.* Vancouver: British Columbia Centennial '71 Committee, 1971; G.P.V. Akrigg & Helen B. Akrigg, *British Columbia Place Names.* Victoria: Sono Nis Press, 1986)

New Zealand. Perennial, stoloniferous, short, erect or geniculate at base, densely or loosely tufted, leaf sheath submembranous, flat or inrolled leaves, lax or contracted panicles, glumes subequal, awn geniculate, open habitats, grassland, see *Fundamenta Agrostographiae* 128, t. 10. 1820, *Révision des Graminées* 1: 77. 1829, *Flora Novae-Zelandiae* 1: 297. 1853 and *Manual of the New Zealand Flora* 869. 1906, *The Subantarctic Islands of New Zealand* 2: 474. 1909, *Transactions of the Royal Society of New Zealand* 73: 235. 1943, *Records of the Dominion Museum* 5: 142. 1965.

L. pilosa (Buchanan) Edgar (*Agrostis pilosa* A. Rich., nom. illeg., non *Agrostis pilosa* Retz.; *Agrostis pilosa* Lens & A. Rich., nom. illeg., non *Agrostis pilosa* Retz.; *Deyeuxia pilosa* Buchanan; *Lachnagrostis richardii* Zotov)

New Zealand. Perennial, tufted, robust, harsh, erect, ligule rounded, large panicles stiffly contracted and loose, clustered spikelets, glumes equal to subequal, coastal and inland, lowland to alpine, see *Voyage de découvertes de l'Astrolabe ... Part [1]: Essai d'une flore de la Nouvelle-Zélande* 134, t. 23. Paris 1832, *Indigenous Grasses of New Zealand* add. et corrig. 11. 1880 and *Manual of the New Zealand Flora* 869. 1906, *Bibliotheca Botanica* 85: 352. 1915, *Transactions of the Royal Society of New Zealand* 73: 235. 1943, *Records of the Dominion Museum* 5: 143. 1965, Stafleu & Cowan, *Taxonomic literature.* 1: 697. Utrecht 1976, *New Zealand Journal of Botany* 33(1): 27-28. 1995.

L. pilosa (Buchanan) Edgar subsp. *nubifera* Edgar

New Zealand. Perennial, coastal, hairy lemma, awn straight and short, found in damp areas, grassland, see *New Zealand Journal of Botany* 33(1): 28, f. 10. 1995.

L. pilosa (Buchanan) Edgar subsp. *pilosa* (*Deyeuxia pilosa* Buchanan)

New Zealand. Perennial, variable in size, robust, smooth to scabrid culms, wide flat leaves, awn geniculate, see *New Zealand Journal of Botany* 33(1): 27-28. 1995.

L. sodiroana (Hack.) Rúgolo & A.M. Molina (*Agrostis sodiroana* Hack.)

Ecuador. See *Österreichische Botanische Zeitschrift* 52(2): 61. 1902, *La Botánica en el Nuevo Milenio: Memorias del Tercer Congreso Ecuatoriano de Botánica* 26, f. 1. 2002.

L. striata (Colenso) Zotov (*Agrostis striata* Colenso; *Deyeuxia forsteri* var. *humilior* Hack.)

New Zealand. Perennial, low, erect or ascending, tufted, leaf sheath membranous, ligule oblong, panicle contracted and loose, glumes subequal, lemma densely hairy, awn straight, lowland to subalpine, see *Transactions and Proceedings of the New Zealand Institute* 21: 107. 1889 and *Manual of the New Zealand Flora* 869. 1906, *Bibliotheca Botanica* 85: 352. 1915, *Transactions of the Royal Society of New Zealand* 73: 235. 1943, *Records of the Dominion Museum* 5: 142. 1965.

L. tenuis (Cheeseman) Edgar (*Deyeuxia billardierei* var. *tenuis* Petrie ex Cheeseman; *Deyeuxia billardierei* var. *tenuis* Cheeseman; *Deyeuxia tenuis* (Cheeseman) Zotov; *Deyeuxia tenuis* (Petrie ex Cheeseman) Zotov; *Lachnagrostis tenuis* (Petrie ex Cheeseman) Edgar)

New Zealand. Tufted, coastal, robust, stiff, leaf sheath coriaceous, ligule truncate, leaves narrow and inrolled, panicle branches erect to spreading, glumes strongly keeled, central awn geniculate, slopes, salt marshes, see *Manual of the New Zealand Flora* 870. 1906, *Records of the Dominion Museum* 5: 139. 1965, *New Zealand Journal of Botany* 33(1): 30-32. 1995.

L. uda Edgar

New Zealand. Perennial, subalpine to alpine, loose, leaf sheath membranous, leaf blades flat or folded, panicle contracted and loose, glumes equal to subequal, mucronate or awned, short straight awn, damp habitat, boggy spots and boggy ground, see *New Zealand Journal of Botany* 33(1): 32, f. 11. 1995.

Lachnochloa Steudel

From the Greek *lachne* “wool, down” and *chloe*, *chloa* “grass.”

Oryzae, type *Lachnochloa pilosa* Steud., see *Synopsis Plantarum Glumacearum* 1: 5. 1855 [1853] and *Genera Graminum* 376. 1986.

Species

L. pilosa Steud.

West Africa. Type lost.

Lachryma-jobi Ortega = Coix L.

Job's tears, Latin *lachryma*, *lacrima* “a tear.”

Panicoideae, Andropogoneae, Coicinae, see *Species Plantarum* 2: 972. 1753, *Syst. Nat.* edition 10, 1261. 1759, *Tabulae Botanicae* 30 (“Lachryma-job”). 1773 and *Contributions from the United States National Herbarium* 46: 162-163, 277. 2003.

Lachrymaria Fabr. = Coix L., Lachrymaria Heist. ex Fabr.

Latin *lachryma*, *lacrima* “a tear,” referring to the fruit.

Panicoideae, Andropogoneae, Coicinae, see *Species Plantarum* 2: 972. 1753, *Syst. Nat.* edition 10, 1261. 1759, *Enumeratio Methodica Plantarum* 208. 1759 and *Contributions from the United States National Herbarium* 46: 162-163, 277. 2003.

Lacryma Medik. = Coix L.

From the Latin *lachryma*, *lacrima* “a tear.”

Panicoideae, Andropogoneae, Coicinae, see *Species Plantarum* 2: 972. 1753, *Syst. Nat.* edition 10, 1261. 1759, *Philosophische Botanik* 1: 177. Mannheim 1789 and *Contributions from the United States National Herbarium* 46: 162-163, 277. 2003.

Laertia Gromov = Laertia Gromov ex Trautv., Leersia Sw., Leersia Sol. ex Sw.

Ehrhartoideae, Oryzae, Oryzinae, see *Species Plantarum* 1: 55. 1753, *Nova Genera et Species Plantarum seu Prodrum* 21. 1788, *Genera Plantarum* 45. 1789, *Essai d'une nouvelle Agrostographie*. 2: 153, t. 4, f. 2. 1812 and *Rhodora* 5(52): 118. 1903, *Rhodora* 18(215): 239. 1916, *Rhodora* 30(353): 84. 1928, *Acta Botanica Cubana* 4: 1-11. 1980, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 63-67. 1986, *New Zealand Journal of Botany* 29: 117-129. 1991, *Webbia* 49(2): 265-329. 1995, *Contributions from the United States National Herbarium* 39: 64-67. 2000.

Lagurus L. = Avena Scop.

From the Greek *lagos* “a hare” and *oura* “a tail,” referring to the shape of the paniculate inflorescence; see Carl Linnaeus, *Species Plantarum*. 81. 1753 and *Genera Plantarum*. Edition 5. 34. 1754.

One species, Mediterranean. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Agrostidinae or Aveninae, annual, slender, elegant, tufted, erect or ascending, flexible, softly hairy to velvety, herbaceous, simple or branching at base, ligule obtuse to truncate, leaf blade flat, auricles absent, arching and downy leaves linear to narrowly lanceolate to

linear-lanceolate, plants bisexual, inflorescence softly hairy and fluffy of chasmogamous spikelets, dense spike-like panicle more or less ovoid to oblong-cylindric, spikelets overlapping and compressed laterally, 1 bisexual floret, 2 glumes more or less unequal and hairy or villous, lemma shorter than glumes and bifid at apex, lemma awned from dorsal surface, awn bent, palea 2-keeled or not keeled, 2 toothed and free lodicules, 3 stamens, ovary glabrous, 2 white stigmas, small fruit, weed species, ornamental, often grown for its 2-inch seed heads, grows on sands near the sea, in sand dunes, open habitats, maritime regions, disturbed places, type *Lagurus ovatus* L., see *Species Plantarum* 1: 81. 1753, *Introductio ad Historiam Naturalem* 74. Prague 1777 and *Nuovo Giornale Botanico Italiano* 49: 133-204. 1942, *Flora de la Provincia de Buenos Aires* 4(2): 35. 1970, *Willdenowia* 19: 405-412. 1990, *Global Ecology and Biogeography* 7(5): 367-378. Sep 1998, *Grasses: Systematics and Evolution* 61-74. 2000, *Molecular Phylogenetics and Evolution* 21(2): 198-217. 2001, *Contributions from the United States National Herbarium* 48: 420. 2003.

Species

L. ovatus L.

Mediterranean. Annual, tufted, erect or geniculate, velvety, leaf sheath round and membranous, ligule membranous and pubescent, leaf blade flat and softly pubescent, spike-like panicle dense and ovoid, very soft flower heads silky and bristly, 1 floret, glumes 1-nerved, lemma with 2 awn-tipped lateral teeth, anthers yellow, the dense seed heads resist shattering, low grazing value, dry-flower ornamental and attractive, naturalized elsewhere, weed species of disturbed areas, coastal dunes, sandy soils, maritime sands, along roadsides, in gardens, under trees and shrubs, see *Species Plantarum* 1: 81. 1753, *Introductio ad Historiam Naturalem* 74. Prague 1777, *Florae Siculae Synopsis* 1: 127. 1843 and *Beihefte zum Botanischen Centralblatt* 51(2): 294. 1934, *Nuovo Giornale Botanico Italiano* 47: 234. 1940, *Nuovo Giornale Botanico Italiano* 49: 185. 1942, *Colloques Phytosociologiques* 12: 81. 1983, *Lagascalia* 15: 119-124. 1988, *Bothalia* 18: 114-119. 1988, *Willdenowia* 19: 405, 407, f. 1A. 1990, *Anales del Jardín Botánico de Madrid* 47: 411-417. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *South African Journal of Botany* 61: 60-65. 1995, *Bothalia* 26(1): 63-67. 1996.

in English: bunny's tail, bunny tail grass, hare's foot, hare's tail grass, rabbit-tail grass, hare's tail, dwarf hare's tail, bouquet grass

in French: queue-de-lièvre

in Italian: coda di lepore

in Spanish: rabillo de conejo, lágrimas de la Virgen

in German: Hasenschwänzchen, Hasenschwanzgras, Samtgras, Südliches Hasenschwanzgras

in South Africa: haasstert, haasstertgras, klossiesgras, plu-isiesgras

L. ovatus L. subsp. *nanus* (Guss.) Messeri (*Lagurus ovatus* var. *globosus* Zohary; *Lagurus ovatus* var. *microcephalus* Sennen & Mauricio; *Lagurus ovatus* var. *nanus* Guss.)

Italy, Sicily. See *Florae Siculae Synopsis* 1: 127. 1843 and *Beihefte zum Botanischen Centralblatt* 51(2): 294. 1934, *Nuovo Giornale Botanico Italiano* 49: 185. 1942, *Willdenowia* 19: 405-412. 1990.

L. ovatus L. subsp. *vestitus* (Messeri) H. Scholz (*Lagurus nitens* Lojac.; *Lagurus ovatus* subsp. *vestitus* (Messeri) Brullo; *Lagurus ovatus* var. *vestitus* Messeri)

Italy, Sicily, Aegean Islands. See *Flora Sicula* (Lojacono) 3: 286. 1908-1909, *Nuovo Giornale Botanico Italiano* 47: 234. 1940, *Colloques Phytosociologiques* 12: 81. 1983, *Willdenowia* 19: 407. 1990.

Lamarckia Moench (original spelling

Lamarkia, non Lamarckia Olivi) =

Achyrodes Boehmer, *Chrysurus* Pers.,

Lamarckia Vahl (Solanaceae), *Lamarkia* G.

Don (Solanaceae), *Lamarkia* Medik.

(Malvaceae), *Lamarkia* Moench, *Lamarckia*

Moench mut. Koeler, *Lamarkia* Vahl

(Solanaceae), *Pterium* Desv., *Tinaea* Garzia

After the French (b. Picardy) biologist Jean Baptiste Antoine Pierre de Monnet (Monet) de Lamarck, 1744-1829 (d. Paris), a great naturalist, botanist, zoologist, palaeontologist, conchologist, from 1761 to 1768 in the French army, from 1778 to 1793 botanist at the Jardin des Plantes in Paris (Jardin du Roi), naturalist and a forerunner of Darwin's theory of evolution, from 1793 to 1829 professor of zoology at the Museum d'Histoire Naturelle in Paris, his writings include *Flore française* Paris 1778 and *Philosophie Zoologique*. [First edition, two volumes in one, 8 vo.] Paris 1822, contributor of the botanical part of the *Encyclopédie méthodique*. Paris, Liège 1783-1817, his works cover a broad spectrum of subjects, from botany to chemistry, meteorology, zoology and geology. See Leslie J. Burlingame, in *D.S.B.* 7: 584-594. 1981; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; Stafleu and Cowan, *Taxonomic literature*. 2: 730-734. 1979; G.C. Wittstein, *Etymologisch-botanisches Handwörterbuch*. 497. 1852; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 739. Stuttgart 1993; Bentley Glass et al., eds., *Forerunners of Darwin: 1745-1859*. Edited by ... O. Temkin, William Strauss, Jr. First Edition. John Hopkins Press, Baltimore 1959; W.M. Wheeler and T. Barbour, eds., *The Lamarck Manuscripts at Harvard*. Cambridge 1933; H.G. Cannon, *Lamarck and*

Modern Genetics. London 1959; R.W. Burkhardt, *The Spirit of System: Lamarck and Evolutionary Biology*. Cambridge Mass. 1977; Garrison and Morton, *Medical Bibliography*. 216. New York 1961; Miguel Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. 1858; Warren R. Dawson, *The Banks Letters*. London 1958; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. 5: 314-315. 1796-1800; C.P. Thunberg, *Voyages de C.P. Thunberg, au Japon, par le Cap de Bonne-Espérance, les Isles de la Sonde, etc.* Paris 1796; J.H. Barnhart, *Biographical notes upon botanists*. 2: 337. 1965; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; A. Lasègue, *Musée botanique de Benjamin Delessert*. 575. Paris 1845; Emil Bretschneider, *History of European Botanical Discoveries in China*. 1981; Denis I. Duveen, *Bibliotheca Alchemica et Chemica*. 334. London 1949; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 225. 1972; Mea Allan, *The Hookers of Kew*. London 1967; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 367. Dresden 1916; Conrad Moench, *Methodus plantarum horti botanici et agri Marburgensis*. 201. 1802; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 143-145. Regione Siciliana, Palermo 1988; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964.

One species, Mediterranean, Middle East. Pooideae, Poodae, Poeae, Dactylidinae, annual, tufted, erect or ascending or decumbent at the base, herbaceous, golden yellow often tinged purple when mature, glabrous, smooth, auricles absent, ligule acute and membranous, sheaths inflated or keeled, leaf blade flat and narrow, leaves linear and acute, hollow internodes, plants bisexual, panicle unilateral or a false spike, panicle secund and branched, branches short and erect, spikelets dimorphic, deciduous clusters of 3 fertile spikelets, the terminal spikelet of each fascicle fertile, fertile spikelets with 1 bisexual floret on a slender stipe and 1 rudimentary or vestigial floret on a long rachilla internode, 2 glumes subequal and short-awned, fertile lemma broader bearing a fine straight awn, sterile spikelets intermixed with the others, palea keels wingless, 2 lodicules membranous and glabrous, 3 stamens, ovary glabrous and elliptic, 2 white stigmas, fruit grooved and glabrous, sometimes a weedy species in disturbed ground, decorative attractive inflorescence, cultivated and naturalized elsewhere in the wild, dry places, open habitats, terrace walls, road verges, mountain gullies, type *Lamarckia aurea* (L.) Moench, see *Definitiones generum Plantarum ...* edition 3: 420. Lipsiae [Leipzig] 1760, *Methodus Plantarum Horti Botanici ...* 201. 1794, *Descriptio graminum in Gallia et*

Germania ... 376. Francofurti ad Moenum 1802, *Synopsis Plantarum* 1: 80. 1805, *Descr. Gram.* 376. 1812, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 75-76. Paris 1813, *Relazione Accademica dell'Accademia degli Zelanti di Aci-Reale di Scienze, Lettere ed Arti* 3-4: 24. Palermo 1838, *A General History of the Dichlamydeous Plants* 4: 400, 487. 1838, *Revisio Generum Plantarum* 2: 758. 1891 and *New Phytologist* 37: 113-127. 1938, *Flora Mesoamericana* 6: 229. 1994, *Contributions from the United States National Herbarium* 48: 19, 234, 420-421, 590, 654. 2003.

Species

L. aurea (L.) Moench (*Achyrodes aureum* (L.) Kuntze; *Chrysurus aureus* (L.) P. Beauv. ex Spreng.; *Chrysurus aureus* (L.) Besser; *Chrysurus cynosuroides* Pers.; *Cynosurus aureus* L.)

Mediterranean. Annual, slender, erect or decumbent at the base, tufted or loosely tufted, shining golden yellow, small, glabrous, flat leaf blade, leaf sheaths inflated or keeled, ligule an unfringed membrane, leaves often overtopping the inflorescence, silky and contracted inflorescence, panicle unilateral and ovate-oblong, spikelets of two kinds, spikelets heteromorphic forming clusters, fertile spikelets hidden, each fertile spikelet surrounded by several sterile spikelets, hermaphrodite florets 2 per spikelet, sterile spikelets awnless with 2-8 empty lemmas, fertile spikelet 1-flowered with straight awns, lemma pubescent near the tip, palea narrowly elliptic, anthers yellow, ovary glabrous, fodder plant, cultivated and ornamental, HCN-glucoside, rather weedy species of disturbed areas, often in sandy soils, cliff ledges, in nonwetlands, on open ground, rocky hillsides, stony places, see *Species Plantarum* 1: 73. 1753, *Methodus Plantarum Horti Botanici ...* 201. 1794, *Syn. Pl.* 1: 80. 1805, *Systema Vegetabilium, editio decima sexta* 1: 296. 1825, *Revisio Generum Plantarum* 2: 758. 1891 and *Taxon* 31(1): 70. 1982, *Taxon* 33: 126-134. 1984, *Fl. Cyprus* 2: 1727. 1985, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Taxon* 49(2): 249. 2000.

in English: golden top, goldentop grass, comb grass, feathery barley grass

in French: lamarckia doré

in Morocco: sibouss

Lamarckia Moench = *Lamarckia* Moench, *Lamarckia* Medik. (Malvaceae), *Lamarckia* G. Don (Solanaceae)

For the French biologist Jean Baptiste Antoine Pierre de Monnet de Lamarck, 1744-1829, naturalist, botanist, zoologist, palaeontologist, conchologist.

Pooideae, Poaeae, Dactylidinae, see *Methodus Plantas Horti Botanici* ... 201. 1794, *A General History of the Dichlamydeous Plants* 4: 400, 487. 1838 and *Contributions from the United States National Herbarium* 48: 420-421. 2003.

Lamprothyrus Pilger

From the Greek *lampros* "shining, bright, glossy" and *thyrus* "a panicle," referring to the inflorescence.

About 2-3 species, tropical South America, Bolivia to Argentina. Arundinoideae, Arundineae, or Danthonioideae, Danthoneae, perennial, herbaceous, caespitose, leaf sheaths open, ligule a fringe of hairs, narrow linear leaves, plants gynodioecious, open or contracted inflorescence paniculate plume-like, 4-10-12 florets and a rudiment, bisexual florets lacking, spikelets compressed, 2 glumes very unequal and often nerveless, 3 awns recurving, lemmas villous with well-developed awned lateral lobes, palea pilose, 2 lodicules hairy or glabrous, stamens absent, female spikelets with 3 minute staminodes, ovary glabrous, 2 stigmas, rocky places, along roads, shrubby slopes, hill slopes, dry areas, stream banks, type *Lamprothyrus hieronymi* (Kuntze) Pilg., see *Revisio Generum Plantarum* 3(3): 373. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37(Beibl. 85): 58. 1906, *Die Systematik und Anatomie der Arundineae* 130-131. 1961, *Kurtziana* 12-13: 119-132. 1979, *Revista de Ciencias (San Marcos)* 74: 48-57. 1986, *Fieldiana, Botany, New Series* 24: 1-126. 1990, *Annals of the Missouri Botanical Garden* 80(2): 512-517. 1993, *Contributions from the United States National Herbarium* 46: 277-278. 2003.

Species

L. hieronymi (Kuntze) Pilg. (*Danthonia hieronymi* (Kuntze) Hack.; *Danthonia hieronymi* var. *pyramidata* Pilg. ex Rojas; *Danthonia hieronymi* var. *tincta* Pilg. ex Rojas; *Lamprothyrus hieronymi* var. *hieronymi*; *Lamprothyrus hieronymi* var. *jujuyensis* (Kuntze) Pilg.; *Lamprothyrus hieronymi* var. *nervosus* Pilg.; *Lamprothyrus hieronymi* var. *pyramidatus* Pilg.; *Lamprothyrus hieronymi* var. *tinctus* Pilg.; *Lamprothyrus hieronymi* (Kuntze) Pilg.; *Lamprothyrus venturii* Conert; *Triraphis hieronymi* Kuntze; *Triraphis hieronymi* var. *jujuyensis* Kuntze)

Bolivia, Peru. A cyanogenetic grass, erect, forming clumps or small mats, acute leaf blades linear or filiform, lax panicle oblong, spikelets 4- to 12-flowered, used for building purposes, rocky places, stream embankment, dry areas, open hillsides, see *Revisio Generum Plantarum* 3: 374. 1893, *Revisio Generum Plantarum* 3(3): 373-374. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37(Beibl. 85): 58-59. 1906, *Anales del Museo Nacional de Buenos Aires* 13: 484. 1906, *Revista del Jardín Botánico y Museo de Historia Natural del Par-*

aguay 2: 168. 1930, *Die Systematik und Anatomie der Arundineae* 128, 130-131. 1961.

in Bolivia: paja

L. peruvianus Hitchc.

Peru, Ecuador, Bolivia. Perennial, dense, erect, robust, tussocky, leaves mostly basal, leaf sheaths open, ligule a dense rim of hairs, leaf blades linear filiform, inflorescence a narrow pyramidal panicle, spikelets linear 3- to 8-flowered, glumes lanceolate, slopes, along roadsides, shrubby areas, closely related to *Lamprothyrus hieronymi*, see *Proceedings of the Biological Society of Washington* 36: 195. 1923, *Nómina de las plantas recolectadas en el Valle de Cochabamba* 2: 17-86. 1966, *Annals of the Missouri Botanical Garden* 80(2): 512-517. 1993.

Langsdorffia Regel = *Eustachys* Desv., *Langsdorffia* Mart. (Balanophoraceae), *Langsdorffia* Raddi (Arecaceae), *Langsdorffia* (Sm.) Raf. (Solanaceae), *Langsdorffia* Leandro (Rutaceae), *Langsdorffia* C. Agardh (Balanophoraceae)

Named for the German surgeon Georg Heinrich von Langsdorff, 1774-1852, explorer, naturalist, 1803-1806 Krusenstern Expedition (Adam Johann von Krusenstern, 1770-1846), in Brazil, plant collector, with Friedrich Ernst Ludwig von Fischer (1782-1854) published *Plantes recueillies pendant le voyage des Russes autour du monde*. Tubingue 1810, *Bemerkungen auf einer Reise um die Welt in den Jahren 1803 bis 1807 ... Mit ... Kupfern*, etc. Frankfurt am Main 1812, *Bemerkungen über Brasilien*. Heidelberg 1821 and *Phantasmatum sive machinarum ad artis obstetriciae exercitia facientium vulgo Fantôme dictarum brevis historia*. Dissertatione inaugurali delineata, etc. Gottingae [1797]. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 343. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 227. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 197. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898] Leipzig 1981.

Chloridoideae, Cynodonteae, Chloridinae, type *Eustachys petraea* (Sw.) Desv., see *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188-189. 1810, *Journal von Brasilien, oder Vermischte Nachrichten aus Brasilien, auf Wissenschaftlichen Reisen Gesammelt* 2: 179, t. 5. 1818, *Memorie di Matematica e di Fisica della*

Società Italiana delle Scienze 18(2): 345. 1820, *Denkschriften der Königlichen Akademie der Wissenschaften zu Muenchen* 7: 229. 1821, *Conspectus Regni Vegetabilis* 4. 1828, *Flora Telluriana* 3: 74. 1836, *Index Seminum* (St. Petersburg) 26. 1863 and *Flora Mesoamericana* 6: 288-289. 1994, *Contributions from the United States National Herbarium* 41: 117-118, 130. 2001.

Lappago Schreber = *Tragus* Haller

From Latin *lappa*, *ae* “burdock,” *lappago* “a plant resembling a bur,” referring to the prickly flowers; see Manlio Cortelazzo & Paolo Zolli, *Dizionario etimologico della lingua italiana*. 3: 651. Zanichelli, Bologna 1983.

Chloridoideae, Cynodonteae, Zoysiinae, or Chloridoideae, Cynodonteae, Traginae, see *Species Plantarum* 2: 1049. 1753, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 203. 1768, *Flora Pedemontana* 2: 241. 1785, *Genera Filicum* 55. 1789, *Synopsis Plantarum Germaniae* 1: 440. 1792, *Hortus Bengalensis, or a Catalogue ...* 82. 1814, *Flora Indica; or Descriptions ...* 1: 284. 1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 3: 15. 1822, *Annales des Sciences Naturelles; Botanique, sér.* 3 19: 373. 1853, *Memorie della Reale Accademia delle Scienze di Torino* 387. 1854, *Synopsis Plantarum Glumacearum* 1: 112. 1854, *Anales de la Sociedad Científica Argentina* 16: 111. 1883, *The Flora of British India* 7: 97. 1896 and *Adv. Frontiers Pl. Sci.* 5: 159. 1963, *Contributions from the United States National Herbarium* 41: 130, 220-221. 2001.

Lappagopsis Steud. = *Axonopus* P. Beauv.

Resembling *Lappago* Schreb.

Panicoideae, Paniceae, Paspalinae, type *Lappagopsis bijuga* Steud., see *Essai d'une Nouvelle Agrostographie* 12, 154. 1812, *Synopsis Plantarum Glumacearum* 1: 112. 1855 [1854] and *Contr. U.S. Natl. Herb.* 12: 142. 1908, *Proceedings of the Biological Society of Washington* 24: 132, 135. 1911, *Advancing Frontiers of Plant Sciences* 5: 1-186. 1963, *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 26(98): 13-23. 2002, *Contributions from the United States National Herbarium* 46: 116-134, 278. 2003.

Lasiacis (Griseb.) A. Hitchc. = *Lasiacis* A. Hitchc., *Pseudolasiacis* A. Camus

From the Greek *lasios* “shaggy, woolly, hairy” and *ake*, *akis* “tip, thorn, a sharp point,” referring to the fruit, to the floret.

About 20 species, tropical and subtropical America. Panicoideae, Panicoideae, Paniceae, Panicinae, *Panicum* sect.

Lasiacis Griseb., perennial, rarely annual, persistent, herbaceous or woody, robust, hollow to solid, suffrutescent or subwoody, terrestrial, bushy, erect, bamboo-like, creeping, sprawling, clambering, straggling, arching, decumbent, climbing, more or less scandent, branched, leaf blades linear to elliptic usually lacking pseudopetioles, ligule membranous more or less fringed, rhizomatous, stoloniferous, plants bisexual, inflorescence paniculate open or contracted, panicle base included in the uppermost leaf sheath or exerted, 2-flowered, fruiting spikelets oblique to round subglobose black and shiny when mature, glumes and lower lemma oily when mature, 2 glumes very unequal, lower glume 5- to 13-nerved, upper glume 7- to 15-nerved, lemmas hairy, upper lemma with a shallow excavation, sometimes with a second sterile lemma, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, berry-fruited, forest, under trees, forest margins, disturbed forest, along paths, drainage ditches, see *Species Plantarum* 1: 55. 1753, *Systema Naturae, Editio Decima* 2: 871. 1759, *Flora of the British West Indian Islands* 551. 1864, *Gen. Pl.* 3(2): 1103. 1883 and *Contributions from the United States National Herbarium* 15: 16. 1910, *Contr. U.S. Natl. Herb.* 22: 13. 1920, *Bull. Mens. Soc. Linn. Lyon* 14: 72. 1945, *Fieldiana, Botany* 24(2): 38-331. 1955, *Annals of the Missouri Botanical Garden* 65: 637-637. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1133-1254. 1978, *Flora Mesoamericana* 6: 318-321. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996 [Poaceae - Flora of St. John, U.S. Virgin Islands], *Adansonia, Sér.* 3 21(2): 231-237. 1999, *Am. J. Bot.* 88: 1993-2012. 2001, *Contributions from the United States National Herbarium* 46: 278-283. 2003, *Am. J. Bot.* 90: 796-821. 2003.

Species

L. sp.

in Ecuador: carricillo trepador

in Mexico: carricillo, pacab, tzaicuó

L. anomala Hitchc. (*Panicum latifolium* var. *tomentellum* Döll)

Brazil, Venezuela, Trinidad. Perennial, caespitose, erect, decumbent, creeping, climbing, arching, clambering, often scrambling over other plants, bamboo-like or liana-like, more or less woody, leaf blades ovate to narrowly-elliptic, ligule membranous, panicle ovate or oblong sparsely branched with branches spreading to slightly reflexed, branches of inflorescence puberulent as well as scabrous, spikelets globose 3-flowered, spikelets with 2 glumes and 2 sterile lemmas subtending the fertile floret, forest margins, savannahs, riverbanks, on sandy soils, see *Flora Brasiliensis* 2(2): 207. 1877 and *Journal of the Washington Academy of Sciences* 9: 37. 1919, *Annals of the Missouri Botanical Garden* 65(4): 1162. 1978.

L. divaricata (L.) Hitchc. (*Lasiacis harrisii* Nash; *Lasiacis sloanei* (Griseb.) Hitchc.; *Panicum bambusoides* Desv. ex Ham.; *Panicum chauvinii* Steud.; *Panicum divaricatum* L.; *Panicum divaricatum* C. Presl ex Griseb., nom. illeg., non *Panicum divaricatum* L.; *Panicum divaricatum* Michx., nom. illeg., non *Panicum divaricatum* L.; *Panicum divaricatum* var. *glabrum* Kuntze; *Panicum divaricatum* var. *stenostachyum* Griseb.; *Panicum sloanei* Griseb.)

South America. Perennial, arching, bamboo-like, erect, trailing, decumbent, procumbent, leaning, scandent, hollow, leaf blades linear-lanceolate glabrous, panicle ovate or oblong with ascending branches, spikelets obovate, a second sterile lemma absent, fodder, handicrafts, medicinal value, roots boiled with *Chiococca alba* (L.) A.S. Hitchc. (Rubiaceae) to relieve kidney pain, found in woods, along roadsides, in moist thickets, bushy hillsides, see *Systema Naturae, Editio Decima* 2: 871. 1759, *Flora Boreali-Americana* 1: 50. 1803, *Prodromus Plantarum Indiae Occidentalis* 10. 1825, *Synopsis Plantarum Glumacearum* 1: 68. 1853, *Flora of the British West Indian Islands* 551. 1864, *Revisio Generum Plantarum* 2: 784. 1891 and *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Contributions from the United States National Herbarium* 15: 16. 1910, *Botanical Gazette* 51: 302. 1911, *Torreya* 13: 274. 1913, *Ann. Missouri Bot. Gard.* 65: 1164. 1978.

in Mexico: carricillo, carrizo, carrizo de ratón, ishcatichiya, mehensit, pichut, pitut, sit

in West Indies: small cane, wild cane

L. divaricata (L.) Hitchc. var. *austromericana* Davidse (*Lasiacis leptostachya* Hitchc.)

Colombia to northern Argentina, Brazil. Climbing, arching, leaning, bamboo-like, rooting at the lower nodes, leaf blades more or less glabrous to sparsely hairy, suffrutescent, common in rain forest, forest margin, along roadsides, see *Contributions from the United States National Herbarium* 15: 16. 1910, *Contributions from the United States National Herbarium* 22(1): 19, t. 16. 1920, *Annals of the Missouri Botanical Garden* 64(2): 374. 1977 [1978].

in Argentina: caña

L. divaricata (L.) Hitchc. var. *divaricata* (*Lasiacis harrisii* Nash; *Panicum bambusoides* Desv. ex Ham.; *Panicum chauvinii* Steud.; *Panicum divaricatum* L.; *Panicum divaricatum* C. Presl ex Griseb., nom. illeg., non *Panicum divaricatum* L.; *Panicum divaricatum* Michx., nom. illeg., non *Panicum divaricatum* L.; *Panicum divaricatum* var. *glabrum* Kuntze; *Panicum divaricatum* var. *stenostachyum* Griseb.)

South America. Leaning, arching, bamboo-like, scandent, found in open disturbed habitats, forest, grassy areas, shade or partial shade, see *Systema Naturae, Editio Decima* 2: 871. 1759, *Flora Boreali-Americana* 1: 50. 1803, *Prodromus Plantarum Indiae Occidentalis* 10. 1825, *Synopsis Plantarum Glumacearum* 1: 68. 1853, *Flora of the British West Indian Islands* 551. 1864, *Revisio Generum Plantarum*

2: 784. 1891 and *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Contributions from the United States National Herbarium* 15: 16. 1910, *Botanical Gazette* 51: 302. 1911, *Torreya* 13: 274. 1913, *Ann. Missouri Bot. Gard.* 65: 1164. 1978.

L. divaricata (L.) Hitchc. var. *leptostachya* (Hitchc.) Davidse (*Lasiacis leptostachya* Hitchc.)

Central America. Scrambling bamboo-like grass, scandent, arching, leaning, weak, pendent, found in forest, woods, see *Contributions from the United States National Herbarium* 15: 16. 1910, *Contributions from the United States National Herbarium* 22(1): 19, t. 16. 1920, *Annals of the Missouri Botanical Garden* 64(2): 375. 1977 [1978].

in Nicaragua: carrizo

L. grisebachii (Nash) Hitchc. (*Panicum grisebachii* Nash)

Belize, Nicaragua, Mexico. Trailing, shade, forest, woods, see *Bulletin of the Torrey Botanical Club* 35: 301. 1908, *Botanical Gazette* 51: 302. 1911.

L. grisebachii (Nash) Hitchc. var. *lindeliiana* Davidse

South America. See *Botanical Gazette* 51: 302. 1911, *Annals of the Missouri Botanical Garden* 64(2): 375. 1977 [1978].

L. ligulata Hitchc. & Chase (*Panicum divaricatum* Ekm.; *Panicum divaricatum* L.; *Panicum divaricatum* var. *puberulum* Griseb.; *Panicum divaricatum* var. *puberulum* Sodiro, nom. illeg., non *Panicum divaricatum* var. *puberulum* Griseb.; *Panicum fruticosum* Salzm. ex Steud.; *Panicum maculatum* var. *pilosum* E. Fourn.; *Panicum megacarpum* Steud. ex Lechler)

West Indies to Brazil, Bolivia. Perennial bunchgrass, caespitose, vinelike, erect, straggling, more or less clambering, spreading, climbing, leaning, scrambling, arching, robust, weak, hollow, ligule membranous puberulent, leaf sheaths deciduous puberulent or glabrous, leaf blades lanceolate acuminate, shortly rhizomatous, terminal inflorescence, ovate panicle, reflexed or spreading panicle branches, spikelets globose to obovate with 2 glumes and 1 sterile lemma subtending the fertile floret, lower glume acute, second sterile lemma absent, forming dense impenetrable colonies, disturbed habitats, forest margins, along streams, among shrubs, see *Species Plantarum* 1: 333. 1753, *Systema Naturae, Editio Decima* 2: 871. 1759, *Synopsis Plantarum Glumacearum* 1: 74. 1853, *Berberides Americae Australis* 56. 1857, *Flora of the British West Indian Islands* 551. 1864, *Genera Plantarum* 3: 875, 899. 1883, *Mexicanas Plantas* 2: 32. 1886, *Anales de la Universidad Central del Ecuador* 3(25): 478. 1889 and *Bulletin of the Torrey Botanical Club* 28: 555, 557. 1901, *Contributions from the United States National Herbarium* 15: 16. 1910, *Contributions from the United States National Herbarium* 18(7): 337. 1917, *Ann. Missouri Bot. Gard.* 65: 1179. 1978, *Blumea* 32: 174. 1987.

in Bolivia: tacuarilla

in Peru: nángkuchip

L. linearis Swallen

Central America, Guatemala. Creeping, scrambling, scandent, rooting at the lower nodes, growing in colonies, forest, see *Phytologia* 4(7): 427. 1953.

L. nigra Davidse (*Panicum divaricatum* var. *molle* Schltld. & Cham.)

South America. Perennial, bambusoid, caespitose, woody, erect, decumbent, ascending, scandent, scrambling, clambering, vining, climbing, pendent, arching, hanging over shrubs, hollow, branched at the nodes, narrowly lanceolate leaf blades asymmetrical at the base, leaf sheaths ciliate on the margins, inflorescence exerted from uppermost sheath, spikelets obovate with 2 glumes and 1 sterile lemma subtending the fertile floret, fruits black at maturity, fodder, in forest, along streams, understory, disturbed areas, slopes, among shrubs, see *Linnaea* 6(1): 33. 1831, *Flora of the British West Indian Islands* 551. 1864 and *Contributions from the United States National Herbarium* 15: 16. 1910, *Phytologia* 29(2): 152. 1974.

in Mexico: carricillo

L. oaxacensis (Steud.) Hitchc. (*Lasiacis rhizophora* (E. Fourn.) Hitchc.; *Panicum oaxacense* Steud.)

South America. Creeping, scandent, shade, secondary forest, forming colonies, see *Synopsis Plantarum Glumacearum* 1: 73. 1853, *Mexicanas Plantas* 2: 31. 1886 and *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Fieldiana: Botany, New Series* 4: 1-608. 1980.

L. oaxacensis (Steud.) Hitchc. var. ***maxonii*** (Swallen) Davidse (*Lasiacis maxonii* Swallen)

Central America. Scandent, shade, see *Flora of the British West Indian Islands* 551. 1864 and *Contributions from the United States National Herbarium* 15: 16. 1910, *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Annals of the Missouri Botanical Garden* 30(2): 231. 1943, *Annals of the Missouri Botanical Garden* 64(2): 375. 1977 [1978].

L. oaxacensis (Steud.) Hitchc. var. ***oaxacensis*** (*Panicum oaxacense* Steud.)

South America. Bamboo-like, ascending, rhizomatous, creeping, glossy inflorescence, open habitats, forest edge, forest floor, riverbanks, see *Synopsis Plantarum Glumacearum* 1: 73. 1853 and *Proceedings of the Biological Society of Washington* 24: 145. 1911.

L. procerrima (Hack.) Hitchc. (*Panicum procerrimum* Hack.; *Panicum scariosum* Trin. ex Steud.)

South America. Perennial or annual, coarse, subwoody, loosely tufted, erect, decumbent, slender, glabrous, branching, rooting at the nodes, glaucous, hanging over shrubs, straggling, trailing over vegetation, forming colonies, leaf sheaths more or less glabrous, ligules membranous, leaf blades lanceolate cordate, black inflorescences, forage, useful for erosion control, found along roadsides, in forest,

along riverbanks, disturbed areas, understory, clearings, secondary growth, forest edge, see *Nomenclator Botanicus. Editio secunda* 2: 263. 1841 and *Österreichische Botanische Zeitschrift* 51: 431. 1901, *Proceedings of the Biological Society of Washington* 24: 145. 1911.

in Colombia: cañuela trepadora

in El Salvador: carrizo de cohetera

in Mexico: carricillo, carricillo de la sierra

L. rhizophora (E. Fourn.) Hitchc. (*Panicum rhizophorum* E. Fourn.)

South America. Herbaceous, creeping, scandent, trailing, spreading, erect, rooting at the nodes, shade, secondary forest, forming colonies, grassy slopes, understory, clearings, secondary growth, forest edge, disturbed forest, see *Synopsis Plantarum Glumacearum* 1: 73. 1853, *Flora of the British West Indian Islands* 551. 1864, *Mexicanas Plantas* 2: 31. 1886 and *Contributions from the United States National Herbarium* 15: 16. 1910, *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Contr. U.S. Natl. Herb.* 17: 253. 1913, *Ann. Missouri Bot. Gard.* 65: 1201. 1978, *Fieldiana: Botany, New Series* 4: 1-608. 1980.

L. rugelii (Griseb.) Hitchc. (*Lasiacis lancifolia* Swallen; *Lasiacis papillosa* Swallen; *Panicum rugelii* Griseb.) (after the American (b. in Germany) botanist Ferdinand Ignatius Xavier Rugel, 1806-1879, surgeon, botanical explorer, pharmacist, plant collector (in Southwest States, Europe and Cuba); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 190. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 235. 1972; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 178. London 1904; Stafleu and Cowan, *Taxonomic literature*. 4: 979-980. [d. 1878] 1983)

Mexico, the Caribbean, Cuba. Vinelike, erect, arching, tough, climbing, along trails, forest, hills, shrub, slopes, see *Catalogus plantarum cubensium* ... 233. 1866 and *Contr. U.S. Natl. Herb.* 12: 183-258. 1909, *Botanical Gazette* 51: 302. 1911, *Publications of the Carnegie Institution of Washington* 436: 349. 1934.

L. rugelii (Griseb.) Hitchc. var. ***pohlii*** Davidse (*Panicum rugelii* Griseb.)

Central America. Climber, arching, erect or semierect, trailing, scandent, bushy, shade, along trails, secondary forest, forming colonies, grassy slopes, understory, clearings, secondary growth, forest edge, disturbed forest, see *Flora of the British West Indian Islands* 551. 1864, *Catalogus plantarum cubensium* ... 233. 1866 and *Contr. U.S. Natl. Herb.* 12: 183-258. 1909, *Contributions from the United States National Herbarium* 15: 16. 1910, *Botanical Gazette* 51: 302. 1911, *Annals of the Missouri Botanical Garden* 64(2): 375. 1977 [1978].

L. rugelii (Griseb.) Hitchc. var. **rugelii** (*Lasiacis divaricata* var. *divaricata*; *Lasiacis lancifolia* Swallen; *Lasiacis papillosa* Swallen; *Panicum rugelii* Griseb.)

South America, Belize. Bamboo-like, erect, arching, scandent, along trails, forest, hills, forest edge, shrub, slopes, low forest, understory, see *Catalogus plantarum cubensium* ... 233. 1866 and *Contr. U.S. Natl. Herb.* 12: 183-258. 1909, *Contributions from the United States National Herbarium* 15: 16. 1910, *Botanical Gazette* 51: 302. 1911, *Publications of the Carnegie Institution of Washington* 436: 349. 1934.

L. ruscifolia (Kunth) Hitchc. (*Lasiacis compacta* (Sw. ex Wikstr.) Hitchc.; *Lasiacis glabra* Swallen; *Lasiacis globosa* Hitchc.; *Lasiacis liebmannaiana* (E. Fourn.) Hitchc.; *Lasiacis ruscifolia* (Kunth) Hitchc. & Chase, nom. illeg., non *Lasiacis ruscifolia* (Kunth) Hitchc.; *Panicum compactum* Sw. ex Wikstr.; *Panicum liebmannianum* E. Fourn.; *Panicum liebmannianum* var. *depauperatum* E. Fourn.; *Panicum liebmannianum* var. *liebmannianum*; *Panicum ruscifolium* Kunth; *Panicum ruscifolium* var. *ruscifolium*)

South and Central America. Perennial, decumbent, vinelike, bamboo-like, creeping, erect and arching, hollow, leaf blades ovate to ovate-lanceolate, leaves glabrous or villous, terminal inflorescence paniculate, panicle rather dense, spikelets globose, forage, medicinal, handicrafts, disturbed forest, moist areas, shade, forest, clearings, understory, forest edge, over shrubs, see *Nova Genera et Species Plantarum* 1: 101-102. 1815 [1816], *Adnotationes Botanicae* 14. 1829, *Flora of the British West Indian Islands* 551. 1864, *Mexicanas Plantas* 2: 33. 1886 and *Contributions from the United States National Herbarium* 15: 16. 1910, *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Botanical Gazette* 51(4): 301. 1911, *Contributions from the United States National Herbarium* 18(7): 339. 1917, *Contributions from the United States National Herbarium* 17(3): 251. 1913, *Ceiba* 4(5): 287. 1955, *Ann. Missouri Bot. Gard.* 65: 1208. 1978.

in Mexico: carricillo, carrillo, kcuca, mehensit, otatillo, pacab, sit, thimaloon pakab, tsahib kw'a', tsakam pakanb, tsay' kw's, tseey, tseey kw'a pulik, tsooy kw'a, tzaicuo

L. ruscifolia (Kunth) Hitchc. var. **ruscifolia** (*Lasiacis compacta* (Sw. ex Wikstr.) Hitchc.; *Lasiacis glabra* Swallen; *Lasiacis liebmannaiana* (E. Fourn.) Hitchc.; *Panicum ruscifolium* Kunth)

South America. Bamboo-like, erect, arching, more or less prostrate to climbing, scandent, found in shady places, open areas, disturbed forest, understory, moist places, see *Nova Genera et Species Plantarum* 1: 101-102. 1815 [1816], *Adnotationes Botanicae* 14. 1829, *Mexicanas Plantas* 2: 33. 1886 and *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Botanical Gazette* 51(4): 301. 1911, *Contributions from the United States National Herbarium* 18(7): 339. 1917, *Contributions from the United States*

National Herbarium 17(3): 251. 1913, *Ceiba* 4(5): 287. 1955, *Ann. Missouri Bot. Gard.* 65: 1208. 1978.

L. ruscifolia (Kunth) Hitchc. var. **velutina** (Swallen) Davidse (*Lasiacis velutina* Swallen)

Honduras, Nicaragua. Erect and arching, branched, vinelike and bamboo-like, growing over shrubs, see *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Ceiba* 4(5): 288. 1955, *Annals of the Missouri Botanical Garden* 64(2): 375. 1977 [1978] *Ceiba* 42(1): 1-71. 2001[2002].

L. scabrior Hitchc. (*Lasiacis ruscifolia* (Kunth) Hitchc.)

South America. Bambusoid, shrubby, reedlike, erect, strong, large, hollow stem, scandent or semiscandent, climbing, arching, leaning, hanging, sprawling, spreading, lower nodes rooting, weedy species, forest, shade and partial shade, along trails, openings, clearings, floodplains, open areas, forest edge and near, disturbed forest, secondary forest, see *Nova Genera et Species Plantarum* 1: 101-102. 1815 [1816] and *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Proceedings of the Biological Society of Washington* 40: 85. 1927.

in Mexico: carrizo

in Peru: nángkuchip

L. sloanei (Griseb.) Hitchc. (*Ichnanthus lanceolatus* Scribn. & J.G. Sm.; *Lasiacis divaricata* (L.) Hitchc.; *Panicum divaricatum* C. Presl ex Griseb., nom. illeg., non *Panicum divaricatum* L.; *Panicum latifolium* Ham., nom. illeg., non *Panicum latifolium* L.; *Panicum sloanei* Griseb.)

South America, the Caribbean. Erect and arching, internodes hollow, bamboo-like, clumped, scandent, clambering, climbing, rooting at the nodes, leaf blades membrane-like, old fields, forest edge, shade, into shrubs and on trees, primary and secondary forest, along trails, see *Systema Naturae, Editio Decima* 2: 871. 1759, *Enumeratio Systematica Plantarum* 17. 1760, *Nova Genera et Species Plantarum (quarto edition)* 2(7): 197, t. 125. 1817 [1818], *Prodromus Plantarum Indiae Occidentalis* 10. 1825, *Flora of the British West Indian Islands* 551. 1864, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 36-37, t. 5. 1897 and *Contributions from the United States National Herbarium* 15: 16. 1910, *Botanical Gazette* 51: 302. 1911, *Syst. Bot.* 12: 193. 1987.

in Mexico: otate

L. sorghoidea (Desv. ex Ham.) Hitchc. & Chase (*Drake-Brockmania haareri* (Stapf & C.E. Hubb.) S.M. Phillips; *Heterocarpha haareri* Stapf & C.E. Hubb.; *Lasiacis acuminata* Swallen; *Lasiacis guaraniticum* (Speg.) Parodi; *Lasiacis maculata* (Aubl.) Urb.; *Lasiacis patentiflora* Hitchc. & Chase; *Lasiacis rhizophora* (E. Fourn.) Hitchc.; *Lasiacis scabrior* Hitchc.; *Lasiacis sorghoidea* (Desv.) Hitchc. & Chase; *Lasiacis sorghoidea* var. *patentiflora* (Hitchc. & Chase) Davidse; *Lasiacis sorghoidea* var. *sorghoidea*; *Lasiacis swartziana* (Hitchc.) Hitchc.; *Panicum agglutinans*

Kunth; *Panicum arborescens* Sieber ex Trin., nom. illeg., non *Panicum arborescens* L.; *Panicum divaricatum* Kunth ex Griseb., nom. illeg., non *Panicum divaricatum* L.; *Panicum divaricatum* var. *agglutinans* (Kunth) Hack. ex Sodiro; *Panicum divaricatum* var. *lanatum* Schldl. & Cham.; *Panicum divaricatum* var. *latifolium* Schldl. & Cham.; *Panicum divaricatum* var. *latifolium* E. Fourn., nom. illeg., non *Panicum divaricatum* var. *latifolium* Schldl. & Cham.; *Panicum fuscum* Sieber ex C. Presl, nom. illeg., non *Panicum fuscum* Sw.; *Panicum fuscum* Sieber ex Griseb., nom. illeg., non *Panicum fuscum* Sw.; *Panicum glutinosum* Lam.; *Panicum guaraniticum* Speg., also spelled *guarantiticum*; *Panicum lanatum* Sw., nom. illeg., non *Panicum lanatum* Rottb.; *Panicum lanatum* var. *sorghoideum* (Desv. ex Ham.) Griseb.; *Panicum maculatum* Aubl.; *Panicum maculatum* Reichb. ex Schldl. & Cham., nom. illeg., non *Panicum maculatum* Aubl.; *Panicum maculatum* var. *pilosum* E. Fourn.; *Panicum martinicense* Griseb.; *Panicum megacarpum* Steud. ex Griseb.; *Panicum orinocense* Willd. ex Spreng.; *Panicum praegnans* Steud.; *Panicum pregnans* Steud.; *Panicum sorghoideum* Desv. ex Ham.; *Panicum swartzianum* Hitchc.)

The Caribbean, Argentina, Mexico, Brazil. Perennial, caespitose, bamboo-like, vinelike, canelike, branched, rooting at the nodes, rhizomatous or stoloniferous, climbing, solitary or clumped, suffrutescent, scrambling, trailing, clambering, erect and arching down, scandent, sprawling, leaning, leaves narrowly lanceolate, open inflorescence paniculate, ovate to oblong panicle with ascending or spreading branches, spikelets subglobose with 2 glumes and 1 sterile lemma subtending the fertile floret, second sterile lemma absent, weedy grass, into shrubs and on trees, forest edge, primary woods, secondary forest, along streams, inundated plains, limestone, understory, see *Histoire des plantes de la Guiane Française* 1: 51. 1775, *Nova Genera et Species Plantarum seu Prodrum* 24. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 74, t. 43, f. 3. 1791, *Anales de Sociedad Científica Argentina* 16: 129. 1813, *Prodrum Plantarum Indiae Occidentalis* 10. 1825, *Systema Vegetabilium, editio decima sexta* 1: 316. 1825, *De Graminibus Paniceis* 208. 1826, *Linnaea* 6(1): 33. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 120. 1833, *Abhandlungen der Böhmisches Gesellschaft der Wissenschaften, nebst der Geschichte derselben* 3: 550. 1845, *Synopsis Plantarum Glumacearum* 1: 74. 1853 [1855], *Flora of the British West Indian Islands* 551-552. 1864, *Anales de Sociedad Científica Argentina* 16: 107. 1883, *Mexicanas Plantas* 2: 31-33. 1886, *Anales de la Universidad Central del Ecuador* 3(25): 478. 1889 and *Contributions from the United States National Herbarium* 12(3): 140. 1908, *Botanical Gazette* 51: 302. 1911, *Proceedings of the Biological Society of Washington* 24: 145.

1911, *Contributions from the United States National Herbarium* 18(7): 338. 1917, *Contr. U.S. Natl. Herb.* 22: 25-26. 1920, *Symbolae Antillarum* 8: 751. 1921, *Proceedings of the Biological Society of Washington* 40: 85. 1927, *Bulletin of Miscellaneous Information Kew* 1929: 263. 1929, *Notas del Museo de la Plata, Botánica* 8: 95. 1943, *Flora of Tropical East Africa Gramineae* 2: 184. 1974, *Annals of the Missouri Botanical Garden* 64(2): 375. 1977 [1978], *Ann. Missouri Bot. Gard.* 65: 1179, 1229. 1978, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979.

in Brazil: canna de passarinho

in Colombia: cola da caballo

in Mexico: otate

in Peru: nángkuchip

L. sorghoidea (Desv. ex Ham.) Hitchc. & Chase var. **sorghoidea** (*Lasiacis maculata* (Aubl.) Urb.; *Lasiacis sorghoidea* (Desv.) Hitchc. & Chase; *Lasiacis sorghoidea* (Desv. ex Ham.) Hitchc. & Chase; *Panicum lanatum* var. *sorghoideum* (Desv. ex Ham.) Griseb.; *Panicum maculatum* Aubl.; *Panicum martinicense* Griseb.; *Panicum sorghoideum* Desv. ex Ham.)

Mexico and West Indies, northern Argentina. Perennial, erect and arching, clambering, scandent, climbing into shrubs and small trees, leaning, leaf blades pubescent, panicle branches ascending to spreading, spikelets subglobose with 2 glumes and 1 sterile lemma subtending the fertile floret, forest margins, along streams, secondary forest, along the forest edge, see *Histoire des plantes de la Guiane Française* 1: 51. 1775, *Nova Genera et Species Plantarum seu Prodrum* 24. 1788, *Prodrum Plantarum Indiae Occidentalis* 10. 1825, *Flora of the British West Indian Islands* 551-552. 1864 and *Contributions from the United States National Herbarium* 18(7): 338. 1917, *Contr. U.S. Natl. Herb.* 22: 25-26. 1920, *Symbolae Antillarum* 8: 751. 1921.

L. standleyi Hitchc. (*Lasiacis longiligula* Swallen; *Lasiacis lucida* Swallen; *Lasiacis scabrior* Hitchc.)

South America. Erect, scandent, creeping, scrambling, stoloniferous, long decumbent, clambering, rooting at the nodes, forming colonies, riparian, moist forest, understory, primary forest, disturbed sites, see *Species Plantarum* 1: 55, 58. 1753, *Species Plantarum. Editio quarta* 4(2): 638, 800. 1805 [1806], *Mém. Acad. Roy. Sci. Hist. (Bruxelles)* 1804: 41. 1807, *Flora of the British West Indian Islands* 551. 1864 and *Contr. U.S. Natl. Herb.* 15: 13-16. 1910, *Proceedings of the Biological Society of Washington* 40: 85-86. 1927, *Annals of the Missouri Botanical Garden* 30(2): 231-232. 1943.

Lasiagrostis Link = *Achnatherum* P. Beauv.,
Macrochloa Kunth, *Stipa* L.

Greek *lasios* “shaggy, woolly” and *agrostis*, *agrostidos* “grass, weed, couch grass.”

Pooideae, Stipeae, Stipinae, *Stipa* sect. *Lasiagrostis* (Link) Hack., type *Lasiagrostis calamagrostis* (L.) Link, see *Species Plantarum* 1: 78. 1753, *Essai d'une Nouvelle Agrostographie* 19, 146, pl. 6, f. 7. 1812, *Hortus Regius Botanicus Berolinensis* 1: 99. 1827, *Révision des Graminées* 1: 58. 1829, *Species Graminum Stipaceorum* 87, 94. 1842 and *Contr. U.S. Natl. Herb.* 24(6-7): 181, 216. 1925, *Contributions from the United States National Herbarium* 48: 15-18, 421, 432, 617-650. 2003, Francisco M. Vázquez and Mary E. Barkworth, “Resurrection and emendation of *Macrochloa* (Gramineae: Stipeae).” *Botanical Journal of the Linnean Society* 144(4): 483-495. 2004.

Lasiochloa Kunth = *Tribolium* Desv.

From the Greek *lasios* “shaggy, woolly, velvety” and *chloa*, *chloa* “grass.”

Danthonioideae, Danthoniaeae, type *Lasiochloa longifolia* (Schrad.) Kunth, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168, t. 7, f. 2. 1831, *Révision des Graminées* 2: 556-557, t. 193. 1832 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 119(4): 445-507. 1997, *Contributions from the United States National Herbarium* 46: 283, 622. 2003.

Lasiolytrum Steud. = *Arthraxon* P. Beauv.,
Phalaris L.

Greek *lasios* “shaggy, woolly” and *elytron* “sheath, cover, scale, husk.”

Panicoideae, Andropogoneae, Andropogoninae, type *Lasiolytrum hispidum* (Thunb.) Steud., see *Species Plantarum* 1: 54-55. 1753, *Flora Japonica*, ... 44. 1784, A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 111, t. 11, f. 6. (Dec.) 1812, *Flora* 29: 18. 1846, *Mémoires de la Société des Sciences Naturelles de Cherbourg* 5: 299. 1857 and *Taxon* 41: 567. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 104-110, 283. 2003.

Lasiorrhachis (Hackel) Stapf = *Andropogon*
L., *Miscanthidium* Stapf, *Saccharum* L.,
Spodiopogon Trin.

From the Greek *lasios* “shaggy, woolly” and *rhachis* “rachis, axis, midrib of a leaf.”

One species, Madagascar. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, *Andropogon* subg. *Lasiorrhachis* Hack., perennial, herbaceous, unbranched, tufted, leaves basal, auricles absent, ligule an unfringed membrane, leaf blades linear to lanceolate, plants bisexual, hairy inflorescence paniculate, 2 glumes more or less equal, lower glume 2-keeled 6- to 9-nerved, upper glume 5- to 7-nerved, palea present, 2 free and fleshy lodicules, 3 stamens, ovary hairy, 2 stigmas, see *Species Plantarum* 1: 54. 1753, *Species Plantarum* 2: 1045-1046. 1753, *Fundamenta Agrostographiae* 192, t. 17. 1820, *Monographiae Phanerogamarum* 6: 471. 1889 and *Flora of Tropical Africa* 9: 89. 1917, *Hooker's Icones Plantarum* 32: t. 3124. 1927, *Adansonia* sér. 2, 8(4): 513-522. 1968, *Kew Bulletin* 27(3): 447-450. 1972, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Flora Mesoamericana* 6: 378-379. 1994, *Taxon* 44: 611-612. 1995, T.R. Hodkinson, M.W. Chase, M.D. Lledo, N. Salamin and S.A. Renvoize, “Phylogenetics of *Miscanthus*, *Saccharum* and related genera (Saccharinae, Andropogoneae, Poaceae) based on DNA sequences from ITS nuclear ribosomal DNA and plastid trnL intron and trnL-F intergenic spacers.” *Journal of Plant Research* 115: 381-392. 2002, *Contributions from the United States National Herbarium* 46: 20-64, 550-557, 607. 2003.

Species

L. perrieri (A. Camus) Bosser (*Erianthus perrieri* A. Camus)

Madagascar. See *Flora* 68(8): 141. 1885 and *Bulletin de la Société Botanique de France* 71: 1182. 1924, *Hooker's Icones Plantarum* 32: t. 3124. 1927, *Adansonia* n. s., 8: 515. 1968, *Kew Bulletin* 27: 449. 1972.

Lasiorrhachis (Hackel) Stapf

Orth. var. *Lasiorrhachis*, see *Hooker's Icones Plantarum* 32: t. 3124. 1927.

Lasiostega Benth. = *Bouteloua* Lag., *Buchloe*
Engelm.

From the Greek *lasios* “shaggy, woolly, velvety” and *stega*, *stegos* “roof, cover.”

Chloridoideae, Cynodonteae, Boutelouinae, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Gen. Sp. Nov.* 5. 1816, *Plantas Hartwegianas imprimis Mexicanas* 347. 1857, *Transactions of the Academy of Science of St. Louis* 1: 432. 1859 and *Contributions from the United States National Herbarium* 41: 20-33, 35, 130. 2001.

Lasiotrichos Lehm. = *Fingerhuthia* Nees,
Fingerhuthia Nees ex Lehm.

From the Greek *lasios* “shaggy, woolly, velvety” and *thrix*, *trichos* “hair.”

Chloridoideae, Cynodonteae, Uniolinae, see *Delectus Semeninum quae in Horto Hamburgensium Botanico* 1834: 7. 1834 and *Contributions from the United States National Herbarium* 41: 121, 130. 2001.

Lasiurus Boiss. = *Loxodera* Launert,
Rottboellia L.f.

Greek *lasios* “shaggy, woolly, velvety” and *oura* “a tail,” referring to the nature of the erect and hairy inflorescence.

About 1-3 species, tropical East Africa, Mali to India. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, caespitose, erect, woody or herbaceous, persistent, rhizomatous, silky cataphylls, auricles absent, ligule shortly ciliate, stiff leaf blades linear, plants bisexual, inflorescence a single raceme terminal and axillary, racemes silky-villous, spikelets in pairs or in triplets, lower floret male, 2 sessile and 1 pedicelled spikelet at each node or 1 sessile and 1 pedicelled, 2 glumes unequal and acuminate, lower glume subcoriaceous and 2-keeled or entire, upper lemma entire and awnless, lower floret male, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, native pasture species, useful fodder grass, moderate tolerance to salinity, open habitats, alluvial soils, sandy soils or light brown sandy soils, on dry sandy soils, desert and subdesert, arid zones and conditions, related to *Coelorachis* Brongn., type *Lasiurus hirsutus* (Forssk.) Boiss., see *Supplementum Plantarum* 13, 114. 1781 [1782], *Diagnoses plantarum orientalium novarum* ser. 2. 3(4): 145-146. 1859 and *Bulletin of Miscellaneous Information Kew* 1927: 264. 1927, *Kirkia* 3: 121. 1963, *Boletim da Sociedade Broteriana*, ser. 2 37: 80, 82. 1963, *Journ. Bombay Nat. Hist. Soc.* 60: 764. 1964, *Kew Bulletin* 35: 451-452. 1980.

Species

L. hirsutus (Forssk.) Boiss. (*Coelorachis hirsuta* (Forssk.) Brongn.; *Coelorachis hirsuta* (Forssk.) Brongn. ex B.D. Jacks., nom. illeg., non *Coelorachis hirsuta* (Forssk.) Brongn.; *Elionurus hirsutus* (Forssk.) Munro ex Benth.; *Ischaemum hirsutum* Nees ex Steud., nom. illeg., non *Ischaemum hirsutum* Spreng.; *Ischaemum mastrucatum* Trin.; *Rottboellia hirsuta* Vahl not Spreng. 1824; *Rottboellia hirsuta* (Forssk.) Vahl; *Saccharum aegyptiacum* var. *hirsutum* (Forssk.) Andersson; *Saccharum hirsutum* Forssk.; *Triticum aegilopoides* Forssk.)

North Africa, Arabia, India. Perennial, glaucous, tufted, erect, woody to subwoody at the base, wiry stems, inflorescences

racemose densely villous, spikelets often in threes, 2 sessile spikelets and 1 pedicelled, lower glume flat, nutritious fodder, good palatability, high grazing value, hay, good thatching grass, edible seed used in mixture with *bajra*, weaver’s brushes from the roots, drought-resistant, useful stabilizing sand dunes, in sandy deserts, in light soil, see *Flora Aegyptiaco-Arabica* 16. 1775, *Symbolae Botanicae*, ... 1: 2. 1790, *Voyage autour du Monde* 65. 1831, *Mémoires de l’Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(1): 298. 1832, *Synopsis Plantarum Glumacearum* 1: 361. 1854, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 12: 156. 1855, *Journal of the Linnean Society, Botany* 19: 68. 1881, *Index Kewensis* 1: 579. 1893.

in English: sewan grass, tabas grass

in Arabic: gerfis, gerfiz

in Mali: guerfis

in Morocco: mmu hamla

in Niger: amaesa, gerfis, gerfiz, oerhafnechku

in India: bhanjuri, gawan, sewan, shewar, shinwan, sin, siwan

in Pakistan: karera

L. scindicus Henrard (also spelled *sindicus*) (*Lasiurus hirsutus* auct., non *L. hirsutus* (Vahl) Boiss., nom. illeg.; *Rottboellia hirsuta* auct., non *Rottboellia hirsuta* Vahl, nom. illeg.; *Triticum aegilopoides* Forssk.)

Asia, India, Afghanistan, Arabia, Mali, Sudan, Somalia, Ethiopia. Perennial, often woody, stiff, tough, rhizomatous, erect or ascending, simple or much-branched, suffruticose, clump-forming, stout woody rhizome, silky cataphylls, ligule a fringe of hairs, stiff leaves flat or involute, inflorescence silky-villous to hirsute, racemes terminal and erect, rachis joints densely hirsute, glumes unequal and ciliate-hirsute, lower glume lanceolate and 2-toothed, valuable fodder, grazed by livestock, useful for erosion control, abundant on sand and stony steppe, dry open plains, on rocky ground, sandy soils, shallow silty-sandy soils, desert and subdesert, gravelly soils, see *Flora Aegyptiaco-Arabica* 26. 1775 and *Blumea* 4(3): 514. 1941, *Kew Bull.* 35: 451-452. 1980, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Annali di Botanica* 45: 75-102. 1987, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in Arabic: qamh staejri, thamam, da’ah, du’avy, hadid

in Somalia: sephar, sefar, doongara, dunghara, dungar, dungara

Latipes Kunth = *Leptothrium* Kunth

From the Latin *latipes*, *edis* “broad-footed, with a broad stalk.”

Chloridoideae, Cynodonteae, Zoysiinae, type *Latipes senegalensis* Kunth, see *Révision des Graminées* 1: 53, 156, 261. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 171. 1833, *Synopsis Plantarum Glumacearum* 1: 112. 1854 and *Plantae Novae vel Minus Notae ex Aethiopia* 22. 1928, *Kew Bulletin* 27(1): 151. 1972, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Webbia* 56(1): 175-179. 2001, *Contributions from the United States National Herbarium* 41: 130, 137. 2001.

Lechlera Steud. = *Calamagrostis* Adans.,
Lechlera Griseb. (Iridaceae), *Relchela* Steud.,
Solenomelus Miers (Iridaceae)

Dedicated to the German botanist Wilibald (Willibaldus) Lechler, 1814-1856, naturalist, pharmacist, explorer, 1850-1855 Chile, author of *Berberides Americae australis*. [Edited by G. Zeller] Stuttgartiae 1857. See H. Gunckel, "Breves anotaciones sobre el botánico Willibald Lechler y un comentario sobre algunas Ciperáceas Lechlerianas." *Revista Univ.* (Santiago) 33(1): 13-26. 1948; August Weberbauer, *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 15. Leipzig 1911; J.H. Barnhart, *Biographical notes upon botanists*. 2: 357. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; Friedrich Anton Wilhelm Miquel, 1811-1871, "Species aliquot novas valdivianas, a Domino W. Lechler collectas." *Linnaea*. 25: 650-654. 1853; Georg Heinrich Mettenius (1823-1866), *Filices Lechlerianae Chilenses ac Peruanae* cura Rudolf Friedrich Hohenacker editae. Leipzig 1856-59.

Pooideae, Poaeae, Aveninae, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Proc. Linn. Soc. London* 1: 122. 1842, *Synopsis Plantarum Glumacearum* 1: 101. 1854, *Berberides Americae Australis* 53. 1857 and *Die Naturl. Pflanzenfam.* edition 2 15a: 483. 1930, *Contributions from the United States National Herbarium* 48: 191-227, 421, 602. 2003.

Lecomtella A. Camus

After the French botanist Paul Henri Lecomte, 1856-1934, naturalist, zoologist, traveler, plant collector, from 1906 Director of the Laboratoire de Phanérogamie of the Muséum d'Histoire Naturelle, among his numerous writings are *Les Arbres à Gutta-percha*. Paris 1899, *Le coton*. Paris 1900, *Le Vanillier*. Avec la collaboration de M.C. Chalot. Paris 1901, "Voyage botanique en Extrême-Orient." *Bull. Soc. Hist. Nat.* 25: 269-302. 1912, *Lauracées de Chine et d'Indo-Chine*. Paris 1913, "Voyage botanique en

Extrême-Orient." *Bull. Soc. Hist. Nat.* 26: 213-251. 1913, "Le genre Korthalsella et la tribu des Bifariées de van Tieghem." *Bull. Mus. Hist. Nat.* (Paris) 22: 260-267. 1916, *Atlas de bois de l'Indochine*. Paris [1919], *Les bois de l'Indochine*. Paris 1925 and "Botanique et Colonies." *Rev. Sci.* (Revue Rose). 21: 652-654. 1931, editor of *Flore générale de l'Indo-Chine*. Paris 1907-1950, founder and editor of *Notulae systematicae*. Paris 1909-1934. See A. Lacroix, *Notice historique sur quatre botanistes*, etc. [On P.H. Lecomte, etc.] Paris 1938; J.H. Barnhart, *Biographical notes upon botanists*. 2: 358. 1965; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. 149. 1899; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 187. 1947; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Stafleu & Cowan, *Taxonomic literature*. 2: 782-803. 1979.

One species, Madagascar. Panicoideae, Panicodae, Paniceae (Boivinelleae), perennial, unarmed, bamboo-like, herbaceous, branched, auricles absent, leaf blades acuminate to lanceolate, ligule a fringe of hairs, plants bisexual, contracted inflorescence paniculate, male and female-fertile spikelets in different parts of the same inflorescence branch, several male spikelets below and a bisexual spikelet at tip, lower floret male, upper floret of the hermaphrodite spikelet female-only, male spikelets florets with membranous lemmas, male florets 3-staminate, 2 glumes more or less equal or unequal, palea 2-keeled, 2 free and fleshy lodicules, ovary glabrous, 2 slender stigmas, forest edge, type *Lecomtella madagascariensis* A. Camus, see *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 181: 174-177, 567-568. 1925.

Species

L. madagascariensis A. Camus

Madagascar. Inflorescence a contracted panicle, lower glume 3-nerved, upper glume 7-nerved, forest margins, see *Compt. Rend. Hebd. Séances Acad. Sci.* 181: 567. 1925.

Leersia Swartz = *Aplexia* Raf., *Asperella* Juss., *Asprella* Schreb., *Blepharochloa* Endl., *Ehrhartia* Weber, *Ehrhartia* F.H. Wigg., *Endodia* Raf., *Homalocenchrus* Miég., *Laertia* Gromov, *Leersia* Sol., *Leersia* Sol. ex Sw., *Pseudoryza* Griff., *Turraya* Wall.

Named after the German botanist Johann Georg Daniel Leers, 1727-1774, apothecary, author of *Flora herborenensis*. (Vita J.D.L. scripta ab Henricus Paulus Leers.) *Herbornae*

Nassoviorum [Herborn, Nassau] 1775. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 361. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Olof Peter Swartz (1760-1818), *Nova genera et species plantarum seu Prodrromus descriptionum vegetabilium maximam partem incognitorum*. 1, 21. Stockholm, Uppsala & Åbo 1788.

About 15-18 species, throughout the tropics, warm temperate and subtropical regions. Bambusoideae, Oryzodae, Oryzeae, Oryzinae, or Ehrhartoideae, Oryzeae, Oryzinae, perennial or rarely annual, weak and slender, aquatic or semiaquatic, herbaceous, loosely tufted, upright to decumbent, rooting at the lower nodes, rhizomatous with slender creeping rhizomes, stoloniferous or caespitose, nodes hairy or glabrous, internodes solid or hollow, stems often have small white stiff bristles on the swollen nodes, no auricles, leaf sheaths scabrous, ligules truncate and membranous to rather firm, leaf blades linear and narrow, absence of pseudopetioles, plants bisexual, pale green inflorescence paniculate and open, panicles well exerted, spikelets with bisexual floret, acuminate perfect florets, solitary spikelets strongly compressed laterally and shortly pedicellate, spikelets overlapping on the branches, reduced floret absent, glumes reduced or absent, lemma keeled and nerved, sterile lemmas absent, awned or awnless, palea keeled, 2 lodicules free and fleshy, usually 6 or 1-2-3 stamens, ovary glabrous, 2 stigmas, grain reddish brown to brown and compressed, sometimes hidden cleistogenes in the leaf sheaths, moderately important food species, used as fodder, seeds are eaten by waterfowl, weeds or rice, shade species, growing in muddy or sandy stream banks and shores, riverbanks, woodland shade, marshland, in shallow water or swampy ground, rainforest, grasslands, pampas, open habitats, resembling *Luziola*, allied to *Oryza* L. and linked to *Chikusichloa* Koidzumi, type *Leersia oryzoides* (L.) Sw., see *Acta Helvetica, Physico-Mathematico-Anatomico-Botanico-Medica* 4: 307. 1760, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 201. 1768, *Primitiae Florae Holsaticae* 63-64. 1780, *Nova genera et species plantarum seu Prodrromus descriptionum vegetabilium maximam partem incognitorum*. 1, 21. 1788, *Genera Plantarum* 45. 1789, *Species Plantarum. Editio quarta* 1: 325. 1797, *Flora Boreali-Americana* 1: 39. 1803, *Dictionnaire des Sciences Naturelles* 3: 214. 1804 [1805], C.S. Rafinesque, *Neogenyton*, or Indication of Sixty-Six New Genera of Plants of North America. 4. 1825, *Genera Plantarum* 1352. 1840, *A Numerical List of Dried Specimens* no. 8637d. 1847, William Griffith (1810-1845), *Icones plantarum asiaticarum*. 3: t. 144. Calcutta 1847-1854, *Index Kewensis* 1: 312. 1895 and E.D. Merrill, *Index rafinesquianus*. 74, 75. 1949, E. Launert, "A survey of the genus *Leersia* in Africa." *Senckenbergiana Biologica* 46: 129-153. 1965, G.L. Pyrah, "Taxonomic and distributional studies in

Leersia (Gramineae)." *Iowa State Coll. J. Sci.* 44(2): 215-270. 1969, *Journal of the Arnold Arboretum* 69(3): 263. 1988, *Flora Mesoamericana* 6: 221-222. 1994, *Heredity* 80(4): 499-508. Apr 1998, *Am. J. Bot.* 86: 17-31. 1999, *Restoration Ecology* 7(1): 56-68. Mar 1999, *Contributions from the United States National Herbarium* 39: 11-12, 24-25, 35, 56, 57, 63, 64-67, 106, 116. 2000, *Journal of Phytopathology* 148(2): 95-99. Feb 2000, *Restoration Ecology* 8(3): 296-306. Sep 2000, *Am. J. Bot.* 88: 588-593. 2001, *Conservation Biology* 15(3): 675-684. June 2001, *Grass and Forage Science* 56(4): 344-351. Dec 2001, *Journal of Applied Entomology* 125(9-10): 493-500. Dec 2001, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang and De-Yuan Hong, "A phylogeny of the rice tribe Oryzeae (Poaceae) based on *matK* sequence data." *American Journal of Botany* 89: 1967-1972. 2002, *Journal of Applied Entomology* 126(1): 54-54. Feb 2002, *Weed Research* 42(2): 89-99. Apr 2002, *African Journal of Ecology* 40(2): 201-204. June 2002, *Journal of Animal Breeding and Genetics* 119(3): 141-153. June 2002, *Weed Biology and Management* 2(2): 65-72. June 2002 [Change in weed control studies of rice paddy fields in Korea], *Ecology Letters* 5(4): 590-596. July 2002, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Journal of Ecology* 91(2): 274-282. Apr 2003, Jessica E. Peterson & Andrew H. Baldwin, "Variation in wetland seed banks across a tidal freshwater landscape." *Am. J. Bot.* 91: 1251-1259. 2004, M. Namaganda, S. Phillips and K.A. Lye, "The distribution of grass species in Uganda." *African Journal of Ecology* 42(s1): 48-50. Aug 2004, *Conservation Biology* 18(4): 1132-1138. Aug 2004 [Effect of invasive plant species on temperate wetland plant diversity], *Restoration Ecology* 12(3): 456-463. Sep 2004, *Journal of Applied Ecology* 41(5): 888-896. Oct 2004, *Weed Biology and Management* 5(2): 62-68. June 2005 [Triticeae plants preferentially responded to S-1 — methylbenzyl-3-*p*-tolylurea in root growth and tetrazolium reduction assays].

Species

L. denudata Launert

North to tropical East Africa, western Transvaal. Perennial, rare, aquatic, tufted, slender, culm nodes velvety, lemma and palea finely ciliate, growing in swampy grasslands, vleis, wet meadows, seasonally flooded areas, see *Senckenbergiana Biologica* 46(2): 144, f. 23. 1965.

L. drepanothrix Stapf

Tropical Africa. Annual or perennial, loosely tufted, shortly rhizomatous, wet places, marshy areas, see *Journal de Botanique (Morot)* 19: 107. 1905.

L. friesii Meld.

Central and eastern tropical Africa. Perennial, rare, aquatic, spongy, robust, rhizomatous, creeping rhizome, culm nodes glabrous, growing in swampy grasslands, swamps, marshes,

vleis, seasonally flooded areas, see *Svensk Botanisk Tidsskrift* 40: 225. 1946.

L. hexandra Swartz (*Asprella australis* (R. Br.) Roem. & Schult.; *Asprella hexandra* (Sw.) P. Beauv.; *Asprella hexandra* (Sw.) Roem. & Schult.; *Asprella mexicana* (Kunth) Roem. & Schult.; *Homalocenchrus angustifolius* Kuntze; *Homalocenchrus gouinii* (E. Fourn.) Kuntze; *Homalocenchrus hexandrus* (Sw.) Kuntze; *Hygroryza ciliata* (Retz.) Nees ex Steud.; *Leersia abyssinica* Hochst. ex A. Rich.; *Leersia aegyptiaca* Fig. & De Not.; *Leersia angustifolia* Munro ex Prod.; *Leersia australis* R. Br.; *Leersia capensis* Müll. Hal.; *Leersia ciliaris* Griff.; *Leersia ciliata* (Retz.) Roxb.; *Leersia contracta* Nees; *Leersia dubia* F. Aresch.; *Leersia elongata* Willd. ex Trin.; *Leersia glaberrima* Trin.; *Leersia gouinii* E. Fourn.; *Leersia gracilis* Willd. ex Trin.; *Leersia griffithiana* Müll. Stuttg.; *Leersia hexandra* subsp. *grandiflora* (Döll) Roseng., B.R. Arrill. & Izag.; *Leersia luzonensis* J. Presl; *Leersia mauritiaca* Salzm. ex Trin.; *Leersia mexicana* Kunth; *Leersia parviflora* Desv.; *Leersia triniana* Siebold ex Trin.; *Oryza australis* A. Braun ex Schweinf.; *Oryza hexandra* (Sw.) Döll; *Oryza hexandra* var. *grandiflora* Döll; *Oryza hexandra* var. *hexandra*; *Oryza mexicana* (Kunth) Döll; *Pharus ciliatus* Retz.; *Pseudoryza ciliata* (Retz.) Griff.)

Pantropical. Perennial, herbaceous, aquatic or semiaquatic, ricelike, moisture loving, floating, wiry, scrambling, branched, creeping and ascending, decumbent and rooting from lower nodes, culm nodes hairy and velvety, rhizomatous with long branching creeping rhizomes, scabrous leaf sheaths terete and tightly wrapped around the stem, thin ligule membranous and truncate, leaf blades flat or involute, very rough leaves with sharp margins, open or slightly contracted panicle oblong and terminal, spikelets laterally compressed and more or less secund, pale green flushed with purple spikelets scabrid and with 1 bisexual floret, glumes reduced or absent, lemma nerved and keeled, keel of lemma spinously ciliate, palea nerved and keeled, lemma and palea keels stiffly ciliate, 6 stamens, a weed of rice paddy, invasive, may become a noxious weed in drainage channels, leaves together with sand used by women for cleaning calabashes, native pasture species, high in crude proteins and low in fiber, hay, palatable when young and green, valuable fodder, forage, grazed by horses, a favorite food of many water birds, generally grows on heavy-textured clay soils in swamps and valley bottoms, swampy ground, alluvial deposits, floodplains, in water along the edge of vleis, in running fresh water, in wetlands, in very damp ground, moist savannahs or inundated, paddy fields, in and around swamps and creeks, shallow dams, wet depressions, in shallow standing water, along shorelines and water courses, muddy or sandy stream banks and shores, dams and ditches in standing water, floating mats in water, irrigation channels, open meadows, permanently wet places, permanent swamps, drainage channels, see *Nova*

Genera et Species Plantarum seu Prodrum 1, 21. 1788, *Observationes Botanicae* 5: 23. 1789, *Nova Genera et Species Plantarum seu Prodrum* 210. 1810 *Essai d'une nouvelle Agrostographie*. 2: 153, 182. 1812, *Nova Genera et Species Plantarum* 1: 195. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 267-268. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 516. 1829, *Reliquiae Haenkeanae* 1(4-5): 207. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 165. 1831, *Flora Indica; or, Descriptions of Indian Plants* 2: 207. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 172-173. 1839 [1840], *Nomenclator Botanicus. Editio secunda* 1: 783. 1841, *Tentamen florae abyssinicae*. [Collectors: R. Quartin-Dillon and A. Petit] 356. Parisiis [1847-1851], *Notulae ad Plantas Asiaticas* 3: 2. 1851, *Agrostographiae Aegyptiacae Fragmenta* 317. 1853, *Icones plantarum asiaticarum*. 3: t. 144, f. 1. Calcutta 1847-1854, *Botanische Zeitung. Berlin* 14(20): 345. 1856, *Beitrag zur Flora Aethiopiens ...* 300. 1867, *Flora Brasiliensis* 2(2): 10-11. 1871, *Mexicanas Plantas* 2: 2. 1886, *Revisio Generum Plantarum* 2: 777. 1891 and *Handb. Fl. Ceylon* 5: 184. 1900, *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *Plantae sub itinere navis bellicae Eugeniae anno 1852 a N. J. Andersson circa Guayaquil collectae* 115. 1910, *Repert. Spec. Nov. Regni Veg.* 10: 299-303. 1910-1912, *Botanisches Archiv* 1: 217. 1922, *Grasses of Ceylon* 38. 1956, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Grasses of Burma ...* 599. 1960, *Flora Illustrada de Entre Ríos (Argentina)* 2: 1-551. 1969, *Gramíneas Uruguayas* 279, f. 114. 1970, *Brittonia* 23(3): 293-324. 1971, *Phytologia* 37(4): 317-407. 1977, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Cuscatlania* 1(6): 1-29. 1991, H.I. Oka, "Ecology of wild rice planted in Taiwan. IV. Interactions between perennial and annual types of wild rice and *Leersia hexandra* in mixed planting." in *J. Agric. & Forestry*. 43(3): 55-56, Publ. by Nail. Chung Hsing Univ. Taichung. Taiwan. ROC 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Contributions from the United States National Herbarium* 39: 64-67. 2000, S.P. Miller and R.R. Sharitz, "Manipulation of flooding and arbuscular mycorrhiza formation influences growth and nutrition of two semiaquatic grass species." *Functional Ecology* 14(6): 738-748. Dec 2000.

in English: Southern cut grass, cut grass, swamp cut grass, water cut grass, club head cut grass, bareet grass, rasp grass, rice grass, wild rice grass, swamp rice grass, white grass

in French: herbe rasoir

in Ecuador: paja de tierra

in Mexico: lambedor, pelillo

in East Africa: anang'a

in Guinea-Bissau: n fendè, olaquikom, sineo, uacundè, unfendè

in Nigeria: abeko, madariki, yaudeho

in Senegal: kameteo, mutut

in southern Africa: kweekgras, moerasgras, moerashaakblaar, waterkweek, wilderysgras; mohlakamane-a-manyenyane, mohlakana (Sotho)

in Yoruba: abeko, abeiko

in Japan: Taiwan-ashi-kaki

in India: arail, arali, jangli dal, jangli dhan, kaadu akki hullu, kaadu sajjabu hullu, kadu bili sajjabu hullu, neer valli pullu, nir valli pullu

in the Philippines: barit, buñgalon, zacate

in Sri Lanka: vel

in Thailand: yaa khom baang, ya khom bang, ya sai, yaa saai, yaa sai

L. japonica (Makino ex Honda) Honda (*Homalocenchrus japonicus* Honda; *Leersia japonica* Makino; *Leersia sinensis* K.S. Hao)

Asia, Japan. See *Botanical Magazine* (Tokyo) 6: 48. 1892 and *Botanical Magazine* (Tokyo) 39: 37. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 7. 1930, *Repertorium Specierum Novarum Regni Vegetabilis* 42(1071-1080): 83-84. 1937, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1990: 28-32. 1990.

in Japan: ashi-kaki

L. lenticularis Michx. (*Asprella lenticularis* (Michx.) P. Beauv.; *Asprella lenticularis* (Michx.) Roem. & Schult., nom. illeg., non *Asprella lenticularis* (Michx.) P. Beauv.; *Endodia lenticularis* Raf. ex B.D. Jacks.; *Homalocenchrus lenticularis* (Michx.) Kuntze; *Zizania lenticularis* (Michx.) Steud.; *Zizania lenticularis* (Michx.) P. Beauv.; *Zizania lenticularis* Michx. ex P. Beauv.)

U.S., Wisconsin, Illinois. Perennial, rhizomatous, spreading, base long decumbent, linear leaves, inflorescence paniculate, large and rounded spikelets, lemma ciliate on keel and margins, leaf edges may cut flesh, distributed on borders of sloughs and bayous, floodplain forest, flatwoods, wetland, marshes and edge of marsh, swamp, border of lake, woods, see *Flora Boreali-Americana* 1: 39. 1803, *Essai d'une nouvelle Agrostographie*. 2: 153, 182. 1812, *Systema Vegetabilium* 2: 267. 1817, *Nomenclator Botanicus* 1: 898. 1821, *Revisio Generum Plantarum* 1: 777. 1891, *Index Kewensis* 1: 840. 1893.

in English: catchfly grass

L. ligularis Trin. (*Homalocenchrus ligularis* (Trin.) Kuntze; *Leersia distichophylla* Balansa & Poit.; *Leersia grandiflora* (Döll) Prod.; *Leersia grandiflora* (Döll) Hitchc., nom. illeg., non *Leersia grandiflora* (Döll) Prod.; *Leersia ligularis* var.

breviligulata (Prod.) Pyrah; *Leersia ligularis* var. *glabriflora* Pyrah; *Leersia ligularis* var. *grandiflora* (Döll) Pyrah; *Oryza monandra* (Sw.) Döll var. *grandiflora* Döll)

Argentina, Venezuela, Mexico, Colombia, Paraguay. Perennial, terrestrial, erect, tufted, weak, slender, herbaceous, unbranched, leaf blades linear, smooth inflorescence ovate open with spreading filiform branches, spikelets clustered near the apex, flowers pale green with dark green stripes, 2 stamens, fruit brown, weedy, found along trails, forest edge, montane forests, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 168. 1839 [1840], *Flora Brasiliensis* 2(2): 9. 1871, *Bulletin de la Société d'Histoire Naturelle de Toulouse* 12: 221, t. 1, f. 2. 1878, *Revisio Generum Plantarum* 2: 777. 1891 and *Botanisches Archiv* 1: 219. 1922, *Proceedings of the Biological Society of Washington* 40: 83. 1927.

L. ligularis Trin. var. *breviligulata* (Prod.) Pyrah (*Leersia ligularis* Trin.; *Leersia ligularis* Trin. f. *breviligulata* Prod.)

Guatemala, Mexico, Belize. Aquatic, floating, rooting at the nodes, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 168. 1839 [1840] and *Botanisches Archiv* 1: 218. 1922, *Iowa State College Journal of Science* 44(2): 235. 1969.

in Mexico: arrocillo cimarron

L. ligularis Trin. var. *glabriflora* Pyrah (*Leersia ligularis* Trin.)

Colombia, Honduras, Venezuela. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 168. 1839 [1840] and *Iowa State College Journal of Science* 44(2): 238. 1969.

L. ligularis Trin. var. *grandiflora* (Döll) Pyrah (*Homalocenchrus grandiflorus* (Döll) Hitchc.; *Leersia debilis* Balansa & Poit.; *Leersia grandiflora* (Döll) Prod.; *Leersia grandiflora* (Döll) Hitchc., nom. illeg., non *Leersia grandiflora* (Döll) Prod.; *Leersia hexandra* subsp. *grandiflora* (Döll) Roseng., B.R. Arrill. & Izag.; *Leersia ligularis* Trin.; *Leersia monandra* Ekman, nom. illeg., non *Leersia monandra* Sw.; *Oryza hexandra* var. *grandiflora* Döll; *Oryza monandra* var. *grandiflora* Döll)

Central America to northern Argentina. Herbaceous, erect, along streams, forest understory, marshy areas, see *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 168. 1839 [1840], *Flora Brasiliensis* 2(2): 9. 1871, *Bulletin de la Société d'Histoire Naturelle de Toulouse* 12:

220-221, t. 1, f. 1, 2. 1878, *Revisio Generum Plantarum* 2: 777. 1891 and *Contributions from the United States National Herbarium* 17(3): 273. 1913, *Botanisches Archiv* 1: 219. 1922, *Proceedings of the Biological Society of Washington* 40: 83. 1927, *Iowa State College Journal of Science* 44(2): 236. 1969, *Gramíneas Uruguayas* 279, f. 114. 1970, *Darwiniana* 30(1-4): 87-94. 1990.

L. ligularis Trin. var. **ligularis** (*Homalocenchrus ligularis* (Trin.) Kuntze; *Leersia ligularis* Trin.)

Mexico. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 168. 1839 [1840], *Revisio Generum Plantarum* 2: 777. 1891.

L. monandra Sw. (*Asprella monandra* (Sw.) P. Beauv.; *Asprella monandra* (Sw.) Roem. & Schult.; *Homalocenchrus monandrus* (Sw.) Kuntze; *Leersia aspera* Nees ex Trin.; *Leersia monandra* Ekman, nom. illeg., non *Leersia monandra* Sw.; *Oryza monandra* (Sw.) Döll; *Oryza monandra* var. *monandra*; *Paspalum cubense* Spreng.)

North America, Mexico, Brazil, the Caribbean, U.S. Bunchgrass, sprawling, small light green clumps, forage, found in open areas, open woods, shady places, see *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Essai d'une Nouvelle Agrostographie* 2: 153. 1812, *Systema Vegetabilium* 2: 267. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 3: 12. 1822, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 168. 1839 [1840], *Flora Brasiliensis* 2(2): 9. 1871, *Revisio Generum Plantarum* 2: 777. 1891.

in English: bunch cut grass, canyon grass, cedar white grass
in Mexico: arrocillo cimarrón

L. nematostachya Launert (*Oryza angustifolia* C.E. Hubb.)

Africa, Angola, Zambia. Awned, see *Hooker's Icones Plantarum* 35: t. 3492. 1951, *Senckenbergiana Biologica* 46(2): 136, t. 17, f. 3-5, f. 22. Frankfurt a. M. 1965.

L. oryzoides (L.) Swartz (*Asperella oryzoides* (L.) Lam.; *Asprella oryzoides* (L.) Lam.; *Asprella oryzoides* (L.) P. Beauv., nom. illeg., non *Asprella oryzoides* (L.) Lam.; *Asprella oryzoides* Schreb.; *Ehrhartia clandestina* F.H. Wigg.; *Homalocenchrus oryzoides* (L.) Pollich, nom. illeg., non *Homalocenchrus oryzoides* (L.) Haller; *Homalocenchrus oryzoides* (L.) Haller; *Laertia oryzoides* Gromov ex Trautv.; *Leersia asperrima* Willd. ex Trin.; *Leersia hexandra* auct., non Sw.; *Leersia oryzoides* f. *clandestina* Eames; *Leersia oryzoides* (L.) Sw. f. *glabra* A.A. Eaton; *Leersia oryzoides* (L.) Sw. f. *inclusa* (Weisbord ex Baen.) Dörf.; *Leersia oryzoides* (L.) Sw. f. *inclusa* (Weisbord ex Baen.) Fogg, nom. illeg., non *Leersia oryzoides* f. *inclusa* (Weisbord ex Baen.) Dörf.; *Oriza oryzoides* Dalla Torre &

Sarnth.; *Oryza clandestina* (F.H. Wigg.) A. Braun: *Oryza clandestina* f. *clandestina*; *Oryza clandestina* f. *inclusa* Weisbord ex Baen.; *Oryza clandestina* f. *patens* Weisbord ex Baen.; *Oryza oryzoides* (L.) Brand & W.D.J. Koch; *Oryza oryzoides* (L.) Dalla Torre & Sarnth., nom. illeg., non *Oryza oryzoides* (L.) Brand & W.D.J. Koch; *Phalaris oryzoides* L.)

Northern America, Europe. Perennial, emergent aquatic, herbaceous, loosely tufted, slender to stout, rhizomatous with slender rhizomes, branching, ascending to erect, decumbent and sprawling, rooting at the nodes, stem with grasping spicules, sheath scabrous and rounded, ligule truncate and chartaceous, leaf blade scabrous to spiny, rough and saw-toothed leaf edges, cleistogamous or chasmogamous, panicle enclosed at base by uppermost leaf sheaths, lax pyramid-like panicle with many greenish white spikelets oblong and 1-flowered, glumes reduced or absent, lemmas papillose all over and ciliate on the keel, palea nerved, reddish brown to reddish grains, seeds with short hairs along the edges, rough leaf blades can easily cut or tear flesh if grabbed quickly or without caution, weed species, in Britain is classified as endangered species, drought- and flood-tolerant, excellent for erosion control along fast water courses and streams, found growing in moist or saturated soils, low wet areas, muddy or sandy stream banks and shores, in wetlands, bogs, marshes and lake fringes, marshy soils and areas, around ponds and lakes, wet meadows, swales, sedge meadow, ditches, swamps, sloughs, seeps and springs, roadside ditches, wet shores, flatwoods, prairie, flooded margin of peat bogs, see *Species Plantarum* 1: 55. 1753, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 201. 1768, *Historia Plantarum in Palatinatu Electoralis* 1: 52. 1776, *Primitiae Florae Holsaticae* 64. 1780, *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Genera Plantarum* 45. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 167. 1791, *Species Plantarum. Editio quarta* 1: 325. 1797, *Essai d'une nouvelle Agrostographie*. 2: 153, t. 4, f. 2. 1812, *Encyclopédie Méthodique, Botanique, Suppl.* 3: 328. 1813, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 171. 1839 [1840], *Flora der Provinz Brandenburg* 799. 1864, *Trudy Imp. Saint Pétersbourg. Bot. Sada* 9: 354. 1884, *Deutsche Botanische Monatsschrift* 15(1): 19. 1897, *Botanical Magazine* 11: 443. 1897 and *Rhodora* 5(52): 118. 1903, *Synopsis der Deutschen und Schweizer Flora* 3: 2704. 1905, *Flora der gefürsteten Grafschaft Tirol* 6: 142. 1906, *Contr. U.S. Natl. Herb.* 12: 115. 1908, *Herbarium Normale* 55-56: 164. 1915, *Rhodora* 18(215): 239. 1916, *Rhodora* 30(353): 84. 1928, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 8. 1930, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 123. 1971[1972], *Acta Botanica Cubana* 4: 1-11. 1980, *Acta Facultatis Rerum*

Naturalium Universitatis Comenianae, Botanica 33: 63-67. 1986, *Grasses of Japan and its Neighboring Regions* 514. 1987, *New Zealand Journal of Botany* 29: 117-129. 1991, *Webbia* 49(2): 265-329. 1995, Jessica E. Peterson and Andrew H. Baldwin, "Variation in wetland seed banks across a tidal freshwater landscape." *American Journal of Botany* 91: 1251-1259. 2004.

in English: rice cutgrass, cut grass

in French: léersia faux-riz, léersie faux-riz

in Spanish: hierba peluda

in Mexico: arrozillo áspero

in Italian: riso selvatico

in Finnish: Hukkariisi

in Swedish: Vildris

L. oryzoides (L.) Swartz var. ***japonica*** Hack. (*Homalocenchrus oryzoides* var. *japonicus* Honda; *Leersia hackelii* Keng; *Leersia oryzoides* f. *latifolia* (Honda) Ohwi; *Leersia oryzoides* subsp. *japonica* (Hack.) T. Koyama; *Leersia oryzoides* var. *latifolia* Honda; *Leersia sayanuka* Ohwi; *Leersia sayanuka* var. *latifolia* (Honda) Ohwi)

Asia, Japan. See *Botanical Magazine* (Tokyo) 11: 443. 1897, *Bulletin de l'Herbier Boissier* 7(9): 645. 1899 and *Botanical Magazine* (Tokyo) 39: 35. 1925, *Acta Phytotaxonomica et Geobotanica* 7: 36-37. 1938, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 8. 1930, *Sinensia* 11: 412. 1940, *Grasses of Japan and its Neighboring Regions* 514. 1987.

L. oryzoides (L.) Swartz var. ***oryzoides*** (*Leersia oryzoides* (L.) Sw.; *Leersia oryzoides* f. *oryzoides*)

U.S., Canada, Bolivia. Perennial, ponds, see *Nova Genera et Species Plantarum seu Prodromus* 21. 1788 and *Contributions from the United States National Herbarium* 39: 64-67. 2000.

L. perrieri (A. Camus) Launert (*Oryza perrieri* A. Camus) (after the French botanist Joseph Marie Henri Alfred Perrier de la Bâthie, 1873-1958 (Paris), from 1896 to 1933 in Madagascar)

Madagascar. Awed, rare endemic species, closely related to *Leersia tisserantii* (A. Chev.) Launert and *Leersia hexandra* Swartz, see *Bulletin de la Société Botanique de France* 73(7-8): 690. 1926, *Senckenbergiana Biologica* 46(2): 137. 1965, *Japanese Journal of Genetics* 70: 47-55. 1995.

L. stipitata Bor

Thailand. Endangered species, awed, see *Dansk Botanisk Arkiv* 23: 147. Copenhagen 1965.

L. tisserantii (A. Chev.) Launert (*Oryza tisserantii* A. Chev.) (for the French botanist Charles Tisserant, 1886-1962, traveler, explorer and plant collector (Angola, Equatorial Africa, Central African Republic, Mozambique); see

I.H. Vegter, *Index Herbariorum*. Part II (7), *Collectors T-Z*. Regnum Vegetabile vol. 117)

Central and eastern Africa, Cameroon. Perennial or annual, rare, aquatic, delicate, rhizomatous, tufted, not spongy, culm nodes hairy, leaf blades scabrous, awed, rare endemic, forming dense colonies, usually growing in deep water at river edges, closely related to *Leersia perrieri* (A. Camus) Launert and *Leersia virginica* Willd., see *Revue internationale de botanique appliquée et d'agriculture tropicale* 12: 1024. Paris 1932, *Senckenbergiana Biologica* 46(2): 137. 1965, *Japanese Journal of Genetics* 70: 47-55. 1995.

L. virginica Willd. (*Aplexia virgata* Raf. ex B.D. Jacks.; *Aplexia virginica* Raf. ex B.D. Jacks.; *Asprella imbricata* (Poir.) Roem. & Schult.; *Asprella ovata* (Poir.) Roem. & Schult.; *Asprella virginica* (Willd.) P. Beauv.; *Asprella virginica* (Willd.) Roem. & Schult., nom. illeg., non *Asprella virginica* (Willd.) P. Beauv.; *Homalocenchrus virginicus* (Willd.) Britton; *Homalocenchrus ovata* (Poir.) Kuntze; *Leersia imbricata* Poir.; *Leersia oryzoides* var. *virginica* (Willd.) Poir.; *Leersia ovata* Poir.; *Leersia virgata* Raf.; *Leersia virginica* var. *brasiliensis* Ekman; *Leersia virginica* var. *ovata* (Poiret) Fernald)

Eastern U.S., Wisconsin, Illinois, southern Brazil. Perennial, herbaceous, erect to decumbent, creeping, trailing, sprawling, rhizomatous with very slender rhizomes, branching from upper nodes, rooting at nodes, linear leaves, saw-toothed leaf edges, inflorescence paniculate and sparsely branched, tiny spikelets, lemma sparsely pilose throughout and glabrous to ciliate on the keel and margins, seeds with short hairs along the edges, found in colonies, growing in moist or saturated soils, open areas, sandy moist alluvial soil, sandy alluvium along rivers, deep loam soil, drainage areas, wet depression, along large and periodically flooding rivers, floodplain forest, wetland, marsh, swamp, seep and spring, flatwoods, ravines, valleys, moist woods, woodland patches, along wooded stream banks, borders of swamps, bayous and rivers, shaded riverbanks, damp thickets, closely related to *Leersia oryzoides* (L.) Swartz, see *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Species Plantarum. Editio quarta* 1: 325. 1797, *Essai d'une Nouvelle Agrostographie* 2: 153. 1812, *Encyclopédie Méthodique, Botanique*, Suppl. 3: 328-329. 1813, *Systema Vegetabilium* 2: 266-268. 1817, *Bulletin Botanique [Genève]* 1: 222. 1830, *Transactions of the New York Academy of Sciences* 9: 14. 1889, *Revisio Generum Plantarum* 2: 777. 1891, *Index Kewensis* 1: 162. 1893 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 37. Stockholm 1913, *Rhodora* 38(455): 386. 1936, *Annals of the Missouri Botanical Garden* 74: 432-433. 1987.

in English: Virginia cut grass, cutgrass, white grass, white cut grass

L. virginica Willd. var. *ovata* (Poir.) Fernald (*Asprella ovata* (Poir.) Roem. & Schult.; *Homalocenchrus ovata* (Poir.) Kuntze; *Leersia ovata* Poir.)

North America, U.S., Canada. See *Species Plantarum. Editio quarta* 1: 325. 1797, *Encyclopédie Méthodique, Botanique*, Suppl. 3: 328-329. 1813, *Systema Vegetabilium* 2: 267. 1817, *Revisio Generum Plantarum* 2: 777. 1891 and *Rhodora* 38(455): 386. 1936.

L. virginica Willd. var. *virginica*

North America, U.S., Canada, Brazil. See *Species Plantarum. Editio quarta* 1: 325. 1797.

Leiopoa Ohwi = *Festuca* L., *Leucopoa* Griseb.

From the Greek *leios* “smooth, beardless” and *poa* “grass.”

Pooideae, Poeae, Loliinae, type *Leiopoa nuda* (Hack.) Ohwi, see *Species Plantarum* 1: 73-74. 1753, *Flora Rossica* 4(13): 383, 388. 1852 and *Feddes Repertorium* 2(18): 70-71. 1906, *Botanical Magazine* 24: 112. 1910, *Ill. Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Acta Phytotaxonomica et Geobotanica* 1: 66-67. 1932, *Acta Phytotaxonomica et Geobotanica* 4: 33. 1935, *Watsonia* 16: 300. 1987, *Grasses of Japan and its Neighboring Regions* 508. 1987, *American Journal of Botany* 82(10): 1287-1299. 1995, *Contributions from the United States National Herbarium* 48: 312-368, 422. 2003.

Leleba Nakai = *Bambusa* Schreb.

Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, type *Leleba floribunda* (Büse) Nakai, usually in *Bambusa*, see Georg Eberhard Rumphius (Rumpf, Rumph) (1628-1702), *Herbarium Amboinense* 4: 5, pl. 1. 1743, *Genera Plantarum* 1: 236. 1789, *Species Plantarum. Editio quarta* 2: 245. 1799, *Syst. Veg.* 7, 2: 1345. 1830, *Catal. Plantarum in Horto Botanico Bogoriensi* 20. 1866, *J. Asiat. Soc. Bengal* n.s. 39, 2: 87. 1870 and [Rumphius], *Rumphius Gedenkboek* 1702-1902. Haarlem, Koloniaal Museum 1902, *Journal of Japanese Botany* 9: 9-10, t. 1. 1933, *Fl. Sylv. Kor.* 20: 13. 1933, G. Ballintijn, *Rumphius, de blinde ziener van Ambon*. Utrecht 1944, *Blumea*, Suppl. 3: 106. 1946, *Taxon* 6(7): 204. 1957, *Clav. Gen. Spec. Gram. Sin.* 156. 1957, *Fl. Ill. Pl. Prim. Sin. Gram.* 53. 1959, *Kew Bulletin* 21: 269. 1967, *Contributions from the United States National Herbarium* 39: 29-35. 2000.

Species

L. dolichomerithalla (Hayata) Nakai (*Bambusa albo-lineata* (McClure) L.C. Chia; *Bambusa dolichomerithalla* Hayata; *Bambusa multiplex* var. *multiplex*; *Bambusa textilis* var. *albo-lineata* McClure)

Asia, China, Japan, Taiwan. Growing along streams, see *Icones plantarum formosananarum nec non et contributiones ad floram formosanam*. 6: 146-148, f. 55. 1916, *Journal of Japanese Botany* 9(1): 16. 1933, *Fl. Taiwan* 5: 751, pl. 1054. 1978, *Guihaia* 8(2): 121-122, 124. 1988.

in English: blow-pipe bamboo

in Japan: hifuki-dake

Lenormandia Steudel = *Chrysopogon* Trin., *Mandelorna* Steudel, *Vetiveria* Bory

For the French botanist Sébastien-René Lenormand, 1796-1871, botanical collector for his herbarium. See A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; J.H. Barnhart, *Biographical notes upon botanists*. 2: 369. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 234. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 462. 1973; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 198. Oxford 1964; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916.

Panicoideae, Andropogoneae, Sorghinae, see *Species Plantarum* 2: 1045. 1753, *Flora Cochinchinensis* 538, 552. 1790, *Pl. Pugill.* 2: 10. 1815, *Fundamenta Agrostographiae* 187-188. 1820, *Bull. Sci. Soc. Philom. Paris* 1822: 43. 1822, *Flora* 33: 229. 1850, *Synopsis Plantarum Glumacearum* 1: 359. 1854 [1855], *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *American Midland Naturalist* 4: 212. 1915, *Bulletin de l'Institut Française d'Afrique Noire* 22: 106. 1960, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 291. 1960, J.F. Veldkamp, “A revision of *Chrysopogon* Trin. including *Vetiveria* Bory (Poaceae) in Thailand and Malesia with notes on some other species from Africa and Australia.” in *Austrobaileya* 5: 503-533. 1999, *Contributions from the United States National Herbarium* 46: 159-161, 283, 285, 634-635. 2003.

Lepargochloa Launert = *Loxodera* Launert, *Rhytachne* Desv. ex Ham.

Greek *lepos* “bark, husk, scale,” *lepargos* “with white coat or feathers or skin” and *chloa* “grass.”

One species, tropical southern Africa. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, herbaceous, unbranched, decumbent, auricles absent, leaf blades linear, ligule an unfringed membrane, plants bisexual, inflorescence nondigitate, spikelets in pairs, 2 glumes

subequal, lower glume 7-nerved, upper glume 3-nerved, palea 2-nerved 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, sometimes referred to *Loxodera*, type *Lepargochloa rhytachnoides* Launert, see *Prodromus Plantarum Indiae Occidentalis* xiv, 11-12. 1825 and *Boletim da Sociedade Broteriana, ser. 2* 37: 80, 82-83. 1963, *Boletim da Sociedade Broteriana, ser. 2* 40: 65, f. 1, t. 1. 1966, *Kew Bulletin* 23: 295. 1969, *Kew Bulletin* 32(4): 767-771. 1978.

Species

L. rhytachnoides Launert (*Loxodera rhytachnoides* (Launert) Clayton)

Africa, Angola. See *Boletim da Sociedade Broteriana, ser. 2* 37: 83. 1963, *Kew Bulletin* 32(3): 580. 1978.

Lepeocercis Trin. = *Dichanthium* Willemet

From the Greek *lepos* “bark, husk, scale” and *kerkis* “a measuring rod, shuttle.”

Panicoideae, Andropogoneae, Sorghinae, type *Lepeocercis serrata* (Retz.) Trin., see *Species Plantarum* 2: 1045. 1753, *Mantissa Plantarum* 2: 301-302. 1771, *Flora Aegyptiaco-Arabica* 173. 1775, *Observationes Botanicae* 5: 21. 1789, *Annalen der Botanik. editor Usteri* 18: 11. 1796, *Fundamenta Agrostographiae* 203, t. 18. 1820, *Révision des Graminées* 1: 365, t. 96. 1830, *Edinburgh New Philosophical Journal* 18: 184-185. 1835, *Florae Africae Australioris Illustrationes Monographicae* 98. 1841, *Plantae Javanicae Rariores* 52. 1848, *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *Contributions from the United States National Herbarium* 46: 192-193, 283. 2003.

Lepideilema Trin. = *Streptochaeta* Schrader ex Nees

From the Greek *lepis*, *lepidos* “a scale, bract, husk” and *eilema* “a veil, covering, involucre, coil.”

Anomochlooideae, Streptochaeteae, type *Lepideilema lancifolium* Trin., see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 536-537. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 1(1): 93. 1830 and *Contributions from the United States National Herbarium* 39: 113-114. 2000.

Lepidopironia A. Rich. = *Chloris* Sw., *Tetrapogon* Desf.

From the Greek *lepis*, *lepidos* “scale” and *pyros* “grain, wheat.”

Chloridoideae, Cynodonteae, type *Lepidopironia cenchri-formis* A. Rich., see *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Flora Atlantica* 2: 388, 389, t. 255. 1799 [1800], *Tentamen Florae Abyssinicae ...* 2: 422, 442, t. 101. 1847 [1848, 1851], *Beitrag zur Flora Aethiopiens ...* 310. 1867, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1070. 1893 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 101. 1956, *Kew Bulletin* 16: 250. 1962, *Flora of Ethiopia and Eritrea* 7: 159-163. 1995.

Lepidurus Janchen = *Aegilops* L., *Parapholis* C.E. Hubb.

From the Greek *lepis*, *lepidos* “scale” and *oura* “tail.”

Pooideae, Poaeae, Ammochloinae, type *Lepidurus incurvus* (L.) Janch., see *Species Plantarum* 2: 1050-1051. 1753 and *Wiener Botanische Zeitschrift* 93: 85. 1944, *Blumea, Supplement* 3: 14. 1946, *Feddes Repert.* 91: 225-228. 1980, *Taxon* 41: 555-556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 421, 477. 2003.

Lepitoma Steud. = *Pleuropogon* R. Br.

From the Greek *lepis* “scale” and *tome*, *tomos*, *temno* “division, section, to slice.”

Pooideae, Meliceae, type *Lepitoma brevifolia* Torr. ex Steud., see *Chloris Melvilliana* 31. 1823, *Nomenclator Botanicus. Editio secunda* 2: 29, 355. 1841 and *Contributions from the United States National Herbarium* 48: 421, 504-505. 2003.

Lepiurus Dumort. = *Lepturus* R. Br.

From the Greek *lepis* “scale” and *oura* “tail.”

Chloridoideae, Leptureae, see *Species Plantarum* 2: 1490. 1763, *Prodromus Florae Novae Hollandiae* 207. 1810, *Observations sur les Graminées de la Flore Belgique* 90, 140, 146. 1824.

Leptagrostis C.E. Hubb.

From the Greek *leptos* “slender, thin” and *agrostis*, *agrostidos* “grass, weed, couch grass.”

One species, Old World tropics, Ethiopia. Arundineae, perennial, herbaceous, unarmed, unbranched, caespitose, auricles absent, leaf blades linear, ligule a fringe of hairs, plants bisexual, contracted inflorescence paniculate, panicle narrowly elliptic-oblong with short ascending branches, spikelets 1-flowered, 2 glumes unequal and acuminate, lower glume 1-nerved, upper glume 3-nerved, callus

long-bearded to woolly, lemma membranous with a short awn, palea 2-nerved, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, related to *Crinipes*, type *Leptagrostis schimperiana* (Hochst.) C.E. Hubb., see *Bulletin of Miscellaneous Information Kew* 1937: 63. 1937, *Kew Bull.* 1939: 645. 1940, S. Phillips, *Flora of Ethiopia and Eritrea* 7: 67. 1995.

Species

L. schimperiana (Hochst.) C.E. Hubb. (*Calamagrostis schimperiana* Hochst.)

Africa, Ethiopia. Perennial, tufted, erect, leaf blades finely acuminate, leaf sheaths bearded, ligule ciliate, rare, see *Flora* 38: 202. 1855 and *Bulletin of Miscellaneous Information Kew* 1937: 63. 1937.

Leptaspis R. Br. = *Scrotochloa* Judz.

Greek *leptos* "slender" and *aspis* "a shield," the fruit is enclosed in the enlarged glume, referring to the lemma shell-shaped of the female spikelet.

Five species, Old World tropics. Bambusoideae, Oryzodae, Phareae, or Pharoideae, Phareae, type *Leptaspis banksii* R. Br., perennial, herbaceous, caespitose, rhizomatous, leafy, clumped, decumbent, sprawling, spreading, rooting at the nodes, thick roots, auricles absent, ligule a short fringed membrane, leaf sheaths compressed, leaf blades not sagittate, plants monoecious, spikelets with 1 floret, inflorescence paniculate and open, panicle on a long peduncle, spikelets paired, staminate spikelets small and pedicelled, pistillate spikelets large and sessile, 2 or often 3 glumes, lemma asymmetrical, female lemma closed and inflated, male florets 6 staminate, palea present, lodicules present, stamens absent, ovary glabrous, 3 stigmas, fruits stiffly pubescent, forest shade, partial shade, rainforest, type *Leptaspis banksii* R. Br., see Robert Brown, *Prodromus Florae Novae Hollandiae* 211. London 1810, *Synopsis Plantarum Glumacearum* 1: 8, 416. 1854, *Enumeratio Plantarum Zeylanicae* 5: 357. 1864, *Bulletin de la Société Botanique de France* 19: 326. 1872, *Boletim da Sociedade Broteriana* 5: 211, t. G, f. A. 1887, *Fl. Cap.* 7: 319. 1898 and *Bot. Arch.* 1: 212. 1922, *Bulletin du Muséum National d'Histoire Naturelle* 30: 513. 1924, *Bulletin of Miscellaneous Information Kew* 1927: 40, 78. 1927, *Botanical Magazine* (Tokyo) 56: 3. 1942, *Reinwardtia* 2: 305. 1953, *Taiwania* 16(2): 214. 1971, *Phytologia* 56: 299-304. 1984, *Smithsonian Contributions to Botany* 65: 1-27. 1987 [The Phareae and Streptogyneae (Poaceae) of Sri Lanka: a morphological-anatomical study], *Flora of Australia* 43: 84, 86, 93. 2002, Fabian A. Michelangeli, Jerrold I. Davis and Dennis Wm. Stevenson, "Phylogenetic relationships among Poaceae and related families as inferred from morphology, inversions in the plastid genome, and sequence data from the mitochondrial and plastid genomes. *Am. J. Bot.* 90: 93-

106. 2003, *African Journal of Ecology* vol. 42, issue s1: 48-50. Aug 2004.

Species

L. banksii R. Br.

Australia. See *Prodromus Florae Novae Hollandiae* 211. 1810.

L. tararaensis Jansen (*Scrotochloa tararaensis* (Jansen) Judz.)

Papua New Guinea. See *Reinwardtia* 2(2): 304. 1953, *Phytologia* 56(4): 300. 1984.

L. urceolata (Roxb.) R. Br. (*Leptaspis manillensis* Steud.; *Leptaspis zeylanica* Nees ex Steud.; *Pharus urceolatus* Roxb.; *Scrotochloa urceolata* (Roxb.) Judz.)

Malaysia, the Philippines, West Africa, Pacific. Perennial, erect, broad elliptic leaves tapering at both ends, pseudopetioles glabrous, slender panicles in whorls, sticky utricles covered with hooked hairs, pistillate florets oblong, growing in rocky dry areas in forest, hills, lowlands, forest floor, understory, see *Flora Indica; or, Descriptions of Indian Plants* 3: 611-612. 1832, *Plantae Javanicae Rariores* 1: 23, t. 6. 1838, *Synopsis Plantarum Glumacearum* 1: 8. 1855 [1853] and *Phytologia* 56(4): 300. 1984.

in English: shield grass

in the Philippines: alaplal, baliotus, budhak-budhak, handalokot, madlong, rokok-dokot, salingdaget, talingagito

in Thailand: nieo maa, niao ma, lek nok khum, nok khum

in New Guinea: shakhuau

Malayan names: rumput babi, getah puyoh, sayong tikus, tampok gelang, tampok relang

L. zeylanica Nees ex Steud. (*Leptaspis cochleata* Thwaites; *Leptaspis comorensis* A. Camus; *Leptaspis conchifera* Hack.)

Tropical Africa, Asia, Sri Lanka. Herbaceous, rhizomatous, erect, ascending, sprawling, spreading, creeping, rooting at the lower nodes, leaf blades asymmetrical, shallow rhizome, stiff inflorescence paniculate, panicle ovate with branches in whorls of 2-3, terrestrial, tillering, leaves lanceolate, pseudopetioles densely pubescent, pistillate florets sub-round, 6 stamens, inflated fruits, growing in forest, undergrowth, forest shade, see *Synopsis Plantarum Glumacearum* 1: 8. 1853, *Enumeratio Plantarum Zeylanicae* 5: 357. 1864, *Boletim da Sociedade Broteriana* 5: 211, t. G, f. A. 1887 and *Handb. Fl. Ceylon* 5: 191. 1900, *Bulletin du Muséum National d'Histoire Naturelle* 30: 513. 1924, *Grasses of Ceylon* 22. 1956, *Grasses of Burma* ... 617. 1960.

in Liberia: pini gon

in Madagascar: tsingolovolo

in Sierra Leone: esuta, hongu

in Zaire: sasani

Leptatherum Nees = *Microstegium* Nees,
Pollinia Trin.

From the Greek *leptos* “slender” and *ather* “stalk, barb, spine, chaff, prickle, awn.”

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, type *Leptatherum royleanum* Nees, see *Plantarum Minus Cognitarum Pugillus* 2: 10. 1815, *Fundamenta Agrostographiae* 188. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(4): 304. 1832, *A Natural System of Botany* 447. 1836, *Proceedings of the Linnean Society of London* 1: 92. 1841, *Enumeratio Plantarum in Japonia Sponte Crescentium ...* 2: 190, 609. 1877, *Gen. Pl.* 3(2): 1127. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 24. 1887 and *Flore Agrostologique du Congo Belge* 89. 1929, *Novosti Sist. Vyss. Rast.* 1966: 15. 1966, *Contributions from the United States National Herbarium* 46: 283, 292, 541-542. 2003.

Leptocanna L.C. Chia & H.L. Fung =
Leptocanna (N.H. Xia) Chia & Fung,
Schizostachyum Nees

From the Greek *leptos* “slender” and *kanna* “reed, cane.”

Monotypic, China, southern Yunnan. Bambusoideae, Bambuseae, Melocanninae, culms caespitose, rhizomes short and stout, apex pendulous or climbing, branches spreading horizontally, sheaths deciduous, auricles glabrous, leaves lanceolate or oblong-lanceolate, spikelets fusiform, montane forest, hills, evergreen hardwood forests, type *Leptocanna chinensis* (Rendle) L.C. Chia & H.L. Fung, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829 and *Acta Phytotaxonomica Sinica* 19(2): 212-214, pl. 7. 1981, *Journal of Tropical and Subtropical Botany* 1(1): 5. 1993, *Contributions from the United States National Herbarium* 39: 112. 2000.

Species

L. chinensis (Rendle) L.C. Chia & H.L. Fung (*Schizostachyum chinense* Rendle)

China. Fresh sheath purplish red then turning straw colored, sheath blade broad-linear, used in weaving, ornamental, see *Journal of the Linnean Society, Botany* 36: 448. 1904, *Acta Phytotaxonomica Sinica* 19(2): 213-214, pl. 7. 1981.

Leptocarydion Hochst. ex Stapf =
Leptocarydion Stapf

From the Greek *leptos* “delicate, thin, slender, small” and *karydion* “small nut,” the diminutive of *karyon* “nut.”

One species, eastern and southern Africa. Chloridoideae, Eragrostideae, annual, herbaceous, unarmed, loosely or densely tufted, decumbent, sometimes rooting at the nodes, internodes solid, auricles absent, ligule a short fringed membrane, plants bisexual, inflorescence feathery and contracted with numerous long slender crowded racemes, spikelets solitary and lanceolate, 2 glumes unequal, lower glume shorter than the lowest lemma, lemmas long-awned and keeled, palea keels wingless, 2 free and fleshy lodicules, 2 stamens, ovary glabrous, dark stigmas, ornamental, growing in clumps, desert, savannah, dry open places, woodland, dry areas, closely related to *Leptochloa* P. Beauv. and *Trichoneura* Andersson, see *Flora Capensis* 7: 316. 1898.

Species

L. vulpiastrum (De Not.) Stapf (*Diplachne alopecuroides* (Steud.) Eyles; *Diplachne vulpiastrum* (De Not.) Schweinf.; *Leptocarydion alopecuroides* (Steud.) Stapf; *Rhabdochloa vulpiastrum* De Not.; *Triodia vulpiastrum* (De Not.) K. Schum.; *Uralepis alopecuroides* Steud.)

Tropical Africa. Annual, tufted, erect or ascending, geniculate, ligule a short membrane, leaf blades lanceolate to ovate to lanceolate-oblong, inflorescence densely spiciform, narrow silky feathery panicle, spikelets several-flowered, lower glume finely acute, upper glume acute or obtuse, lemmas narrowly oblong, straight awn, weed, pasture, fodder, growing on sandy soil, dry open places, rocky hillsides, riverine woodland, mopane veld, open bushland, wooded grassland, sometimes in the shade, see *Die Pflanzenwelt Ost-Afrikas* C: 113. 1895 and *Flora Capensis* 7: 648. 1900, *Transactions of the Royal Society of South Africa* 5: 307. 1916.

in English: spade grass

in Tanzania: uhighii, uhighii

Leptocercus Raf. = *Lepturus* R. Br.

Greek *leptos* “delicate, thin, slender” and *kerkos* “a tail.”

Chloridoideae, Leptureae, see *Prodromus Florae Novae Hollandiae* 207. 1810, C.S. Rafinesque, *American Monthly Magazine and Critical Review* 4: 190. 1819.

Leptocereus Raf. = *Leptocereus* (A. Berger)
Britton & Rose (Cactaceae), *Lepturus* R. Br.

Chloridoideae, Leptureae, see C.S. Rafinesque, *Jour. Phys. Chim. Hist. Nat.* 89: 262. 1819 and *Annual Report of the Missouri Botanical Garden* 16: 79. 1905, *Contributions from the United States National Herbarium* 12(10): 433. 1909.

Leptochloa P. Beauv. = *Anoplia* Steud., *Baldomiria* Herter, *Diachroa* Nutt., *Diacisperma* Kuntze, *Diplachne* P. Beauv., *Disakisperma* Steud., *Ipnium* Phil., *Kengia* Paker, *Leptostachys* Meyer, *Oxydenia* Nutt., *Rabdochloa* P. Beauv.

From the Greek *leptos* “slender” and *chloe*, *chloa* “grass,” referring to the inflorescences.

About (3-)27/50 species, tropics and subtropics. Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, annual or perennial bunchgrass, woody or herbaceous, coarse, erect, rhizomatous or stoloniferous, caespitose or decumbent, glabrous nodes, auricles absent, ligule membranous and more or less ciliate to fringed, sheath margins smooth, leaf blades flat or involute, leaves linear or linear-lanceolate, plants bisexual, inflorescence a panicle exerted, lax and hispid slender racemes on a central axis, few to many spiciform racemes often whorled, spikelets solitary closely imbricate and flattened or subterete, florets bisexual 1 to several, much of the inflorescence often enclosed by leaf sheaths, spikelets not borne in leaf sheaths axils, uppermost floret awnless or shortly awn-tipped, 2 more or less equal glumes awnless, lemmas awnless or shortly awned, entire or incised lemmas nerved and sometimes mucronate, palea 2-nerved and 2-keeled, 2 truncate lodicules free and fleshy, stamens 2-3, ovary glabrous without the apical appendage, 2 short plumose stigmas, cleistogamous spikelets present or absent, shade species, some fodders, weed, native pasture species, common in dry and swampy soils, open habitats, disturbed places, woodland and grassland, savannah, rainforest, pampas, a variable genus, a difficult genus with serious taxonomic problems, *Diplachne* was previously included in *Leptochloa*, type *Leptochloa virgata* (L.) P. Beauv., see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie* 71, 80-81, 84, 160-161, 176, pl. 15-17, f. 1, 3, 9. 1812, *The Genera of North American Plants* 1: 76. 1818, *Primitiae Florae Essequiboensis* ... 73-74. 1818, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *A Manual of the Botany of the Northern United States* 588. 1848, *Synopsis Plantarum Glumacearum* 1: 210, 287. 1854 [1855], *Anales de la Universidad de Chile* 36: 211. 1870, *Nomencl. Bot.* 2: 554. 1873 and *Lexikon Generum Phanerogamarum* 169. 1903, *Ill. Fl. North. U.S. Canada*, edition 2, 229. 1919, *Contributions from the United States National Herbarium* 24(6): 180, 187. 1925, *Revista Sudamericana de Botánica* 6(5-6): 145, f. 10. 1940, *Botaniska Notiser* 113: 291. 1960, *Kariba Studies*, vol. II. Manchester University Press, Manchester 1962, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Primates* 10: 103-148. 1969, *Zambian Papers* 5. Manchester University Press, Manchester 1971, *Blumea* 19: 61-64. 1971, S.T. Blake, “*Plinthanthesis* and *Danthonia* and a

review of the Australian species of *Leptochloa* (Gramineae).” *Contributions from the Queensland Herbarium* 14: 3. 1972, *Brittonia* 31: 399-404. 1979, *Brunonia* 3(2): 247-269. 1980 [The genus *Leptochloa* Beauv. (Poaceae, Eragrostideae) in Australia and Papua New Guinea.], *Kew Bulletin* 37: 133-162. 1982, *Los Generos de Gramineas de America Austral.* 1987, *Folia Primatologica* 48: 78-120. 1987, *Taxon* 42: 413-417. 1993, *American Journal of Botany* 81: 622-629. 1994, *Taxon* 43: 123. 1994, *Flora Mesoamericana* 6: 260-261. 1994, *Darwiniana* 33(1-4): 233-256. 1995 [Los géneros *Diplachne* y *Leptochloa* (Gramineae, Eragrostaceae) de la Argentina y países limítrofes.], H.P. Linder & G.A. Verboom, “Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex.” *Telopea* 6(4): 597-627. 1996, H.P. Linder, “Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae).” *Telopea* 7(3): 269-274. 1997, *Austrobaileya* 5: 137-143. 1997, Steven E. Smith, “Variation in response to defoliation between populations of *Bouteloua curtipendula* var. *caespitosa* (Poaceae) with different livestock grazing histories.” *Am. J. Bot.* 85: 1266-1272. 1998, N. Snow, “Nomenclatural changes in *Leptochloa* P. Beauv. sensu lato (Poaceae, Chloridoideae).” *Novon* 8: 77-80. 1998, *Plant, Cell and Environment* 21(8): 765-774. Aug 1998, *Austrobaileya* 5: 299-305. 1999, *Novon* 10: 238-241. 2000, *Molecular Microbiology* 38(2): 276-288. Oct 2000, *Contributions from the United States National Herbarium* 41: 16, 18, 66, 68-70, 129, 130-137, 177, 191. 2001, *Syst. Bot.* 26: 386-405. 2001, *Weed Biology and Management* 1(4): 239-241. Dec 2001, *Flora of Australia* 43: 111, 267. 2002, *Restoration Ecology* 10(1): 138-145. Mar 2002, *Journal of Applied Ecology* 39(3): 402-415. June 2002, *Weed Biology and Management* 2(4): 209-212. Dec 2002, Amanda L. Ingram and Jeff J. Doyle, “The origin and evolution of *Eragrostis tef* (Poaceae) and related polyploids: evidence from nuclear *waxy* and plastid *rps16*.” *Am. J. Bot.* 90: 116-122. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Australian Journal of Entomology* 42(1): 51-78. Mar 2003, *Weed Research* 43(2): 103-107. Apr 2003, *Plant, Cell and Environment* 26(12): 1963-1972. Dec 2003, *Functional Ecology* 17(6): 747-753. Dec 2003, *Weed Biology and Management* 3(4): 197-203. Dec 2003, *Weed Biology and Management* 4(3): 154-167. Sep 2004, *Weed Research* 44(6): 483-486, 487-488. Dec 2004, *Weed Biology and Management* 4(4): 177-186, 206-212. Dec 2004, *Flora of Australia* 44B: 439-452. 2005, *New Phytologist* 165(1): 157-169. Jan 2005, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

L. anoplia Nees (*Anoplia mexicana* Nees ex Steud.; *Chloris anoplia* (Nees) E. Fourn. ex Hemsl.) (from the Greek *anoplos* “without the *hoplon* or large shield, unarmed”)

Mexico. See *Linnaea* 19(6): 691. 1847, *Synopsis Plantarum Glumacearum* 1: 210. 1854, *Biologia Centrali-Americana*; ... *Botany* ... 3(19): 558. 1885.

L. aquatica Scribn. & Merr.

Mexico. In shallow water, see *Bulletin, Division of Agronomy United States Department of Agriculture* 24: 26. 1901.

L. barbata(Desv.) Parodi ex Nicora (*Eleusine barbata* Desv.; *Leptochloa barbata* Desv. ex Killeen)

Brazil. See *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 208. 1831 and *Annals of the Missouri Botanical Garden* 77(1): 164. 1990, *Hickenia* 2(19): 91. 1993.

L. caudata (K. Schum.) N.W. Snow (*Diplachne caudata* K. Schum.)

Africa. See *Die Pflanzenwelt Ost-Afrikas* C: 113. 1895 and *Novon* 8(1): 77. 1998.

L. chinensis (L.) Nees (*Poa chinensis* L.; *Poa malabarica* Retz., nom. illeg., non *Poa malabarica* L.)

Tropical Asia, China, Vietnam, India, Sri Lanka, Thailand. Annual or perennial, herbaceous and very leafy, aquatic or semiaquatic, stout to slender, branched, smooth, tufted, erect or ascending, creeping, erect or geniculate, decumbent and rooting from nodes, leaf sheaths loose and smooth, leaves oblong and acute or finely pointed, ligule membranous with fine hairs, inflorescence of numerous slender and flexuous racemes, large open panicle of racemes arranged in whorls, stalked spikelets, loosely imbricate florets, glumes unequal and strongly keeled, lower glume hairy, lemma ovate and hairy, palea with inrolled margins, red plumose stigmas, grain rugulose and compressed, good hay, highly palatable, native pasture species, a good fodder for the cattle, grains used in times of scarcity, noxious weed species of waste fields and paddy fields, a major weed of rice cultivation in the Mekong Delta, growing in heavy wet soil, lowland areas, irrigation channels, open waste places, plains, marshy areas, swampy places, open habitats, heavy or light soils, related to *Leptochloa panicea* (Retz.) Ohwi and very similar to *Leptochloa coerulescens*, see *Species Plantarum* 1: 69. 1753, *Observationes Botanicae* 5: 19. 1798, *Sylloge Plantarum Novarum* 1: 4. 1824 [1822], *Enum. Pl. Zeyl.* 5: 371. 1864 and *Handb. Fl. Ceylon* 5: 283. 1900, *Handb. Fl. Ceylon* 6: 338. 1931, *Grasses of Ceylon* 85. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma* ... 516. 1960, *Brunonia* 3(2): 247-269. 1980, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Investigatio et Studium Naturae* 12: 48-65. 1992, S. Benvenuti, G. Dinelli and A. Bonetti, "Germination ecology of *Leptochloa chinensis*: a new weed in the Italian rice agro-environment." *Weed Research* vol. 44, issue 2: 87-96. Apr 2004.

in English: Asian sprangletop, red sprangletop, Chinese sprangletop

in India: aeri pul, chanhel, chipa chima gadi, cheepura gaddi, cheepuru gaddi, jhira, kadu sanna karisajjai hullu, lohiya, phulkia, thodeluthoka gaddi

in Indonesia: bebontengan, jangkiri, timunan

in the Philippines: karukauáyan, kurukawayan, palay-maya

in Thailand: yaa dok khaao, ya dok khao, ya-dokkhaao, ya met nga, yaa met nga, ya-metnga, yaa yaang khong, ya yang khong, yaa yon huu, ya yon hu, ya-yonhu

in Vietnam: cò duói phung

L. chinensis (L.) Nees var. ***aristata*** Büse ex Miq.

China. See *Sylloge Plantarum Novarum* 1: 4. 1824, *Plantae Junghuhnianae* 3: 352. 1854 and *Rheedea* 4: 90. 1994.

L. chloridiformis (Hack.) Parodi (*Baldomiria chloridiformis* (Hack. ex Stuck.) Herter; *Baldomiria chloridiformis* (Hack.) Herter; *Diplachne chloridiformis* Hack.)

South America. Perennial, caespitose, shortly rhizomatous, branching mainly from the axillar buds of the innovation zone, see *Anales del Museo Nacional de Buenos Aires* 13: 498. 1906, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 4: 184, f. 5-6. 1918, *Revista Sudamericana de Botánica* 6(5-6): 145, f. 10. 1940.

in English: Argentina sprangletop, Argentine sprangletop

L. ciliolata (Jedwabn.) S.T. Blake (*Eragrostis ciliolata* Jedwabn.; *Eragrostis imbecilla* Benth., nom. illeg., non *Eragrostis imbecilla* Steud.; *Leptochloa debilis* Stapf ex C.E. Hubb.; *Leptochloa decipiens* subsp. *asthenes* (Roem. & Schult.) N. Snow)

New South Wales, Queensland. Perennial, tufted, erect, branched, leaf sheaths villous to pilose, ligule membranous, blade flat or rolled, nodding inflorescence, racemes on a primary axis, 2-5 florets, glumes with a scabrous keel, palea hairy and 2-keeled, grain trigonous, grows in moist places, rocky sites, see *Systema Vegetabilium* 2: 574. 1817, *Flora Australiensis: A Description* ... 7: 643. 1878 and *Agricultural Gazette of New South Wales* 20: 307. 1909, *Botanisches Archiv* 5(3-4): 192. 1924, *Bulletin of Miscellaneous Information Kew* 1941: 26. 1941, *Contributions from the Queensland Herbarium* 14: 6. 1972, *Brunonia* 3: 262. 1980, *Novon* 8(1): 77. 1998.

in English: slender cane grass

L. coerulescens Steud. (*Leptochloa caerulescens* Steud.)

Senegal, Central African Republic. Annual or short-lived perennial, erect or decumbent, rooting at the lower nodes, stoloniferous, semiaquatic, racemes numerous, spikelets 3- to 6-flowered, pioneer, useful for erosion control, browsed by fishes, a weed of irrigation, wet sites, in muddy places, sandy riverbanks, swamps, creeks, beach sand, in shallow water, see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, *Synopsis Plantarum Glumacearum* 1: 209. 1854 and *Acta Bot. Neerl.* 15: 157. 1966, *Wageningen Agric. Univ. Pap.* 92(1): 106. 1992.

in Niger: baergu, burgu, êsêm

in Nigeria: kupuruku, lale shamawa

in Sierra Leone: sufe

L. decipiens (R. Br.) Stapf ex Maiden (*Diplachne peacockii* Maiden & Betche; *Eragrostis decipiens* (R. Br.) Steud.; *Eragrostis imbecilla* Steud.; *Eragrostis imbecilla* Benth., nom. illeg., non *Eragrostis imbecilla* Steud.; *Leptochloa asthenes* (Roem. & Schult.) C.E. Hubb.; *Leptochloa debilis* Stapf ex C.E. Hubb.; *Leptochloa decipiens* (R. Br.) Druce, nom. illeg., non *Leptochloa decipiens* (R. Br.) Stapf ex Maiden; *Leptochloa peacockii* (Maiden & Betche) Domin; *Poa asthenes* Roem. & Schult.; *Poa decipiens* R. Br.; *Poa imbecilla* R. Br., nom. illeg., non *Poa imbecilla* Sol. ex Spreng.) (the name of the species from the Latin *decipio*, *cepi*, *ceptum*, *ere* (*de e capio*) “to deceive, to trick”)

New South Wales, Queensland. Perennial, erect, tufted, tussock-forming, herbaceous, hollow to wiry, ligule membranous, blade flat and rolled, racemes on a primary axis, 2-6 florets, glumes with a scabrous keel, upper glume obtuse, palea silky, grain dorsally compressed, fodder plant, on floodplains, shade or partial shade, see *Prodromus Florae Novae Hollandiae* 181. 1810, *Systema Vegetabilium* 2: 574. 1817, *Synopsis Plantarum Glumacearum* 1: 279. 1854, *Flora Australiensis: A Description ...* 7: 643. 1878 and *Agricultural Gazette of New South Wales* 15: 925. 1904, *Agricultural Gazette of New South Wales* 20: 307. 1909, *Bibliotheca Botanica* 85: 379. 1915, *Report. Botanical Exchange Club. London.* 1916: 632. 1917, *Bulletin of Miscellaneous Information Kew* 1941: 26. 1941, *Contr. Queensland Herb.* 14: 6. 1972, *Brunonia* 3: 263. 1980, *Novon* 8(1): 77. 1998.

in English: slender cane grass

L. decipiens (R. Br.) Stapf ex Maiden subsp. **asthenes** (Roemer & Schultes) N. Snow (*Eragrostis ciliolata* Jedwabn.; *Eragrostis imbecilla* Steud.; *Eragrostis imbecilla* Benth., nom. illeg., non *Eragrostis imbecilla* Steud.; *Leptochloa asthenes* (Roem. & Schult.) C.E. Hubb.; *Leptochloa ciliolata* (Jedwabn.) S. T. Blake; *Poa asthenes* Roem. & Schult.; *Poa imbecilla* R. Br., nom. illeg., non *Poa imbecilla* Sol. ex Spreng.)

Australasia, New South Wales, Queensland. Perennial, young shoots extravaginal, see *Prodromus Florae Novae Hollandiae* 181. 1810, *Systema Vegetabilium* 2: 574. 1817, *Synopsis Plantarum Glumacearum* 1: 279. 1854, *Flora Australiensis: A Description ...* 7: 643. 1878 and *Agricultural Gazette of New South Wales* 20: 307. 1909, *Botanisches Archiv* 5(3-4): 192. 1924, *Bulletin of Miscellaneous Information Kew* 1941: 26. 1941, *Contributions from the Queensland Herbarium* 14: 6. 1972, *Brunonia* 3: 262. 1980, *Novon* 8(1): 77. 1998.

L. decipiens (R. Br.) Stapf ex Maiden subsp. **decipiens** (*Poa decipiens* R. Br.)

Australasia, New South Wales, Queensland. Young shoots extravaginal, see *Agricultural Gazette of New South Wales* 20: 307. 1909.

L. decipiens (R. Br.) Stapf ex Maiden subsp. **peacockii** (Maiden & Betche) N. Snow (*Diplachne peacockii* Maiden & Betche; *Leptochloa peacockii* (Maiden & Betche) Domin)

Australasia, New South Wales, Queensland. Perennial, young shoots extravaginal or intravaginal, tufted or tussock-forming, ligule truncate and erose, blade flat, racemes 1-sided on a central axis, spikelets overlapping, 4-6 florets, glumes keeled, palea 2-keeled and silky, grows in floodplains, occasional flooding, see *Agricultural Gazette of New South Wales* 15: 925. 1904, *Agricultural Gazette of New South Wales* 20: 307. 1909, *Bibliotheca Botanica* 85: 379. 1915, *Brunonia* 3: 263. 1980, *Novon* 8(1): 77. 1998.

L. digitata (R. Br.) Domin (*Cynodon polystachya* R. Br.; *Eleusine digitata* (R. Br.) Spreng.; *Eleusine polystachya* (R. Br.) F. Muell.; *Leptochloa subdigitata* Trin.; *Leptochloa subdigitata* Trin. ex Steud.; *Poa digitata* R. Br.; *Rhabdochloa subdigitata* (Trin. ex Steud.) Kuntze)

Western Australia, South Australia, Queensland, New South Wales, Northern Territory. Perennial, erect, wiry, stout and woody, canelike, vigorous, sparse foliage, semiaquatic, densely clumped, often or sometimes rhizomatous, ligule a membranous ciliate rim, leaf blades narrow and channelled, racemes 1-sided and subdigitate, spikelets oblong-lanceolate and overlapping, 3-8 florets, glumes acute and keeled, lemma ovate-oblong and sometimes more or less mucronate at the summit, palea 2-keeled, bearded short callus, large clumps harbour feral pigs, useful for soil erosion control, low forage value, culms used as thatching for rural outbuildings, found in moist places and semiarid, swamps and water courses, irrigation areas, low-lying areas, along creek banks, similar to and confused with *Eleusine indica* (L.) Gaertner, see *Prodromus Florae Novae Hollandiae* 182, 187. 1810, *Systema Vegetabilium, editio decima sexta* 4: Cur. Post. 36. 1827, *Nomenclator Botanicus. Editio secunda* 2(2): 30. 1841, *Fragmenta Phytographiae Australiae* 1: 216. 1889, *Revisio Generum Plantarum* 2: 788. 1891 and *Bibliotheca Botanica* 85: 379. 1915, *Brunonia* 3(2): 247-269. 1980.

in English: umbrella cane grass, whorled cane grass

L. divaricatissima S.T. Blake

New South Wales, Queensland. Perennial, ligule membranous, blade flat and rolled, large panicle, 1-sided racemes stiff and spreading or divaricate, oblong spikelets, 3-6 florets, glumes very unequal with scabrous keel, palea ciliate and 2-keeled, floodplains or occasional flooding, see *Contributions from the Queensland Herbarium* 14: 8, f. 5. 1972.

in English: spreading sprangletop

L. dubia (Kunth) Nees (*Chloris dubia* Kunth; *Cynodon fascicularis* (Lam.) Raspail; *Diachroa procumbens* (Muhl.) Nutt.; *Diplachne dubia* (Kunth) Scribn.; *Diplachne dubia* var. *aristata* Vasey; *Diplachne dubia* var. *dubia*; *Diplachne dubia* var. *humboldtiana* Kuntze; *Diplachne dubia* var. *kurtziana* Kuntze; *Diplachne dubia* var. *pringleana* Kuntze; *Diplachne maritima* E.P. Bicknell; *Diplachne mendocina* (Phil.) Kurtz; *Diplachne mendocina* (Phil.) Macloskie, nom. illeg., non *Diplachne mendocina* (Phil.) Kurtz; *Diplachne patens* (J. Presl) E. Desv.; *Diplachne patens* E. Fourn. ex Hemsl.; *Diplachne patens* E. Fourn., nom. illeg., non *Diplachne patens* (J. Presl) E. Desv.; *Diplachne pringlei* Vasey ex Beal; *Diplachne procumbens* (Muhl.) Nash, nom. illeg., non *Diplachne procumbens* Arechav.; *Diplachne tracyi* Vasey; *Disakisperma mexicana* Steud.; *Eragrostis mendocina* (Phil.) Jedwabn.; *Festuca fascicularis* Lam.; *Festuca obtusiflora* Willd. ex Spreng.; *Festuca polystachya* Michx.; *Festuca procumbens* Muhl.; *Festuca prostrata* Muhl. ex Scribn. & Merr.; *Festuca prostrata* Muhl.; *Festuca texana* Steud.; *Ipnum mendocinum* Phil.; *Leptochloa digitatiformis* Beetle; *Leptochloa dubia* subsp. *dubia*; *Leptochloa dubia* subsp. *patens* (J. Presl) Covas & Steibel; *Leptochloa dubia* var. *humboldtiana* (Kuntze) Beetle; *Leptochloa dubia* var. *pringleana* (Kuntze) Scribn. & Merr.; *Leptochloa fascicularis* var. *maritima* (E.P. Bicknell) Gleason; *Leptochloa obtusiflora* Trin. ex Steud.; *Leptochloa patens* (J. Presl) Kunth; *Leptochloa polystachya* (Michx.) Kunth; *Leptochloa pringlei* Vasey ex Beal; *Leptochloa tracyi* (Vasey) Beal; *Leptostachys dubia* (Kunth) Mey.; *Leptostachys dubia* Mey.; *Molinia retusa* Griseb. ex E. Fourn.; *Rabdochloa dubia* (Kunth) Kuntze ex Stuck.; *Schismus patens* J. Presl; *Sieglingia dubia* (Kunth) Kuntze ex Stuck.; *Uralepis brevicauspida* Buckley; *Uralepis composita* Buckley)

North and South America, Mexico to Argentina. Annual to short-lived perennial or biennial bunchgrass, wiry, erect, coarse, few-stemmed, caespitose, flat sheaths, ligule a membranous ciliate rim, leaves scabrous or slightly rough, leaf blades flat or folded, inflorescence with a sprangled appearance, racemes spreading or ascending on a central axis, 8- to 10-flowered, spikelets overlapping on short pedicels and densely packed, axillary cleistogenes, racemes of cleistogamous spikelets often found in the axils of lower sheaths, glumes subequal, upper lemmas keeled, palea ciliate and 2-keeled, seeds rough, extremely drought-tolerant, ornamental, cultivated, fodder and forage, nutritious, moderately palatable to very palatable, useful for erosion control, common in rocky hills and canyons, roadbanks, in rocky sites as well as rocky soils, on rocky slopes, on open upland sites, dry hills and valleys, sandy soils, along washes and canyons in desert scrub and desert grassland, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 189. 1791, *Flora Boreali-Americana* 1: 66. 1803, *Nova Genera et Species Plantarum* 1: 169. 1815 [1816], *Descriptio ube-*

rior Graminum 160. 1817, *Primitiae Florae Essequeboensis ...* 74. 1818, *Sylloge Plantarum Novarum* 1: 4. 1824, *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *Systema Vegetabilium, editio decima sexta* 1: 356. 1825, *Révision des Graminées* 1: 91. 1829, *Reliquiae Haenkeanae* 1(4-5): 269. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 271. 1833, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *Nomenclator Botanicus. Editio secunda* 2: 30. 1841, *A Manual of the Botany of the Northern United States* 588. 1848, *Flora Chilena* 6: 371. 1854, *Synopsis Plantarum Glumacearum* 1: 287, 310. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 93-95. 1862, *Anales de la Universidad de Chile* 36: 211. 1870, *Bulletin of the Torrey Botanical Club* 10(1): 30. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 570. 1885, *Mexicanas Plantas* 2: 147-148. 1886, *Bulletin of the Torrey Botanical Club* 15: 40. 1888, *Proceedings of the California Academy of Sciences, Series 2*, 2: 213. 1889, *Grasses of North America for Farmers and Students* 2: 436. 1896, *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 15: 521. 1897, *Revisio Generum Plantarum* 3(2): 349. 1898 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 5. 1900, *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 27. 1901, *Manual of the Flora of the Northern States and Canada* 128. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 121, 128. 1904, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2], Botany* 8(1,5,1): 214-215. 1904, *Bulletin of the Torrey Botanical Club* 35(4): 195. 1908, *Botanisches Archiv* 5(3-4): 192. 1924, *Man. Grass. U.S.* 877. 1935, *Phytologia* 4(1): 21. 1952, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Apuntes para la Flora de La Pampa* 61: 243. 1981, *Phytologia* 52(1): 14. 1982, *Phytologia* 54(1): 4. 1983, *Taxon* 33: 126-134. 1984, *Darwiniana* 33(1-4): 233-256. 1995.

in English: green sprangletop, Texas crowfoot

in Mexico: desparramado dubiano, zacate gigante

in Spanish: zacate gigante, gigante

L. eleusine (Nees) Cope & N. Snow (*Diplachne eleusine* Nees; *Triodia eleusine* (Nees) T. Durand & Schinz; *Uralepis eleusine* (Nees) Steud.)

South Africa. Perennial, tufted, shortly rhizomatous, culms geniculate and ascending, ligule membranous with a hairy margin, spikes arranged irregularly on the primary axis, spikelets overlapping, lemma obtuse to notched, a shade species, growing under trees, on stony slopes, rocky slopes, on sandy soils, on peat soil, see *Flora Africae Australioris Illustrationes Monographicae* 255. 1841, *Synopsis Plantarum Glumacearum* 1: 248. 1855, *Conspectus Florae Africae* 5: 877. 1894 and *Novon* 8(1): 78. 1998.

in English: large scale grass

in Southern Africa: langbeensklubgras

L. fascicularis (Lam.) A. Gray (*Cynodon fascicularis* (Lam.) Raspail; *Diachroa procumbens* (Muhl.) Nutt.; *Diplachne acuminata* Nash; *Diplachne fascicularis* (Lam.) P. Beauv.; *Diplachne fascicularis* P. Beauv.; *Diplachne maritima* Bicknell; *Diplachne patens* E. Fourn., nom. illeg., non *Diplachne patens* (J. Presl) E. Desv.; *Diplachne procumbens* (Muhl.) Nash, nom. illeg., non *Diplachne procumbens* Arechav.; *Diplachne tracyi* Vasey; *Festuca aquatica* Bosc ex Roem. & Schult.; *Festuca clandestina* Muhl.; *Festuca fascicularis* Lam.; *Festuca fusca* L.; *Festuca polystachya* Michx.; *Festuca procumbens* Muhl.; *Festuca prostrata* Muhl.; *Festuca prostrata* Muhl. ex Scribn. & Merr.; *Festuca texana* Steud.; *Festuca thouini* Steud.; *Leptochloa acuminata* (Nash) Mohlenbr.; *Leptochloa fascicularis* Griseb. ex Benth.; *Leptochloa fascicularis* var. *acuminata* (Nash) Gleason; *Leptochloa fascicularis* var. *maritima* (Bicknell) Gleason; *Leptochloa fusca* (L.) Kunth; *Leptochloa fusca* subsp. *fascicularis* (Lam.) N. Snow; *Leptochloa polystachya* (Michx.) Kunth; *Leptochloa tracyi* (Vasey) Beal; *Tridens veralensis* Catasús; *Tridens virens* Nees; *Uralepis composita* Buckley; *Uralepis virens* (Nees) Kunth; *Uralepis composita* Buckley)

U.S., Paraguay. Annual, tufted, bluish green, coarse, succulent, erect, sometimes prostrate, densely branched from near the base, sheaths glabrous and often purplish, ligule elongate and often lacerate, no auricles, blades flat to involute, panicle branches basally included in the sheath, nearly smooth panicle branches, spikelets 4-10-flowered, awned lemmas, grain brown, forage, tolerant of saline habitats, common in salt marshes, wetlands, in water at edge of clay quarry, roadside swales, shores, stream banks, alkaline flats and ditches, in irrigated crops, seacoasts, places of temporarily standing water, reservoirs, brackish water along lakes and rivers, see *Systema Naturae, Editio Decima* 2: 876. 1759, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 189. 1791, *Flora Boreali-Americana* 1: 66. 1803, *Essai d'une Nouvelle Agrostographie* 81, 160, pl. 16 f. 9. 1812, *Descriptio uberior Graminum* 160, 162. 1817, *Systema Vegetabilium* 2: 615. 1817, *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *Révision des Graminées* 1: 91. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 476. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 319. 1833, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *A Manual of the Botany of the Northern United States* 588. 1848, *Synopsis Plantarum Glumacearum* 1: 310-311. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 94-95. 1862, *Journal of the Linnean Society, Botany* 19: 108. 1881, *Mexicanas Plantas* 2: 148. 1886, *Bulletin of the Torrey Botanical Club* 15: 40. 1888, *Grasses of North America for Farmers and Students* 2: 436. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 5. 1900, *Manual of the Flora of the Northern States*

and Canada 128. 1901, *Bulletin of the Torrey Botanical Club* 35(4): 195. 1908, *Phytologia* 4(1): 21. 1952, *Illustrated Flora of Illinois* 293. 1973, *Acta Botanica Cubana* 4: 4. 1980, *Novon* 8(1): 78. 1998.

in English: loose-flowered sprangletop, bearded sprangletop, sprangletop, salt meadowgrass, salt sprangletop, salt-pond grass

in Mexico: cabezuela de primavera, tapete panizo, zacate anual gigante, zacate gigante anual

L. filiformis (Pers.) P. Beauv. (*Aira panicea* Willd. ex Steud.; *Chloris mucronata* Michx.; *Eleusine elongata* Willd. ex Steud.; *Eleusine filiformis* Pers.; *Eleusine mucronata* Michx.; *Eleusine mucronata* (Michx.) Hornem., nom. illeg., non *Eleusine mucronata* Michx.; *Eleusine mucronata* Stokes, nom. illeg., non *Eleusine mucronata* Michx.; *Eleusine sparsa* Muhl.; *Eleusine stricta* Willd. ex Steud., nom. illeg., non *Eleusine stricta* Roxb.; *Festuca filiformis* Lam., nom. illeg., non *Festuca filiformis* Pourret; *Leptochloa attenuata* (Nutt.) Steud.; *Leptochloa brachiata* Steud.; *Leptochloa filiformis* (Lam.) P. Beauv.; *Leptochloa filiformis* f. *attenuata* (Nutt.) F.C. Gates; *Leptochloa filiformis* var. *attenuata* (Nutt.) Steyerl. & Kucera; *Leptochloa filiformis* var. *pulchella* (Scribn.) Beetle; *Leptochloa mucronata* (Michx.) Kunth; *Leptochloa mucronata* var. *pulchella* Scribn.; *Leptochloa panicea* (Retz.) Ohwi; *Leptochloa panicea* subsp. *brachiata* (Steud.) N. Snow; *Leptochloa panicea* subsp. *mucronata* (Michx.) Nowack; *Leptochloa paniculata* E. Fourn.; *Leptochloa pellucidula* Steud.; *Leptochloa pilosa* Scribn.; *Leptostachys filiformis* (Lam.) G. Mey.; *Oxydenia attenuata* Nutt.; *Oxydenia filiformis* Nutt. ex B.D. Jacks.; *Poa panicea* Retz.; *Rabdochloa mucronata* (Michx.) P. Beauv.)

South America. Annual, erect and solitary, tufted, slender, branched below, often bent, leaf sheaths cylindrical and hirsute or hispid, ligule a dense fringe of hairs, leaves linear and scabrous on the margins, inflorescence delicately branched, spikes very slender and ascending, slender and well developed central rachis, very narrow and flexuous ascending lateral branches, spikelets laterally compressed, glumes acuminate and awnless, lemmas often hairy on the nerves, forage, weed of gardens, waste places, open areas, seasonal creeks, sandy soil, shallow soil, gravelly sites, disturbed areas, cultivated soils, along roadsides, floodplains, see *Observationes Botanicae* 3: 11. 1783, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 191. 1791, *Flora Boreali-Americana* 1: 59, 65. 1803, *Syn. Pl.* 1: 87. 1805, *Essai d'une Nouvelle Agrostographie* 71, 84, 158, 163, 166, 176. 1812, *A Botanical Materia Medica* 1: 150. 1812, *Descriptio uberior Graminum* 135. 1817, *The Genera of North American Plants* 1: 76. 1818, *Primitiae Florae Essequiboensis ...* 74. 1818, *Hortus Regius Botanicus Hafniensis* 116. 1819, *Révision des Graminées* 1: 91. 1829, *Reliquiae Haenkeanae* 1: 288. 1830, *Nomenclator Botanicus* edition 2 1: 45, 549. 1840, *Synopsis Plantarum*

Glumacearum 1: 209. 1854, *Flora Brasiliensis* 2(3): 93. 1878, *Bulletin de la Société Botanique de France* 27: 296. 1880, *Bulletin of the Torrey Botanical Club* 9: 147. 1882, *Index Kewensis* 2: 392. 1894 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 9. 1901, *Annotated List of the Plants of Kansas* 391: 130. 1940, *Botanical Magazine* (Tokyo) 55(655): 311. 1941, *Rhodora* 63(745): 26. 1961, *Grass. Missouri* 138. 1961, *Flora of the Galápagos Islands* 823-892. 1971, *Journal of Cytology and Genetics* 7-8: 161-164. 1973, *Phytologia* 49(1): 40. 1981, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Taxon* 42: 413-417. 1993, *Rheedea* 5(1): 93. 1995, *Novon* 8(1): 79. 1998.

in English: spangle top

in India: lohiya

in Spanish: paja de tierra

in the Caribbean: zèb fin, herbe fine

in Ecuador: nudillo

in Mexico: cola de zorra, puh-suuk, scoco-sacat, zacate gigante, zacate salado

L. fusca (L.) Kunth (*Centotheca malabarica* (L.) Merr.; *Digitaria malabarica* (L.) Roem. & Schult.; *Diplachne alba* Hochst.; *Diplachne fascicularis* (Lam.) P. Beauv.; *Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult.; *Diplachne fusca* (L.) P. Beauv. ex Stapf, nom. illeg., non *Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult.; *Diplachne fusca* (L.) P. Beauv. ex Stuck., nom. illeg., non *Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult.; *Diplachne fusca* var. *alba* (Steud.) Chiov.; *Diplachne malabarica* (L.) Merr.; *Diplachne patens* E. Fourn. ex Hemsl.; *Diplachne patens* E. Fourn.; *Diplachne reptatrix* (L.) Druce; *Diplachne uninervia* (J. Presl) Parodi; *Eragrostis procera* (Roxb.) Steud.; *Festuca fascicularis* Lam.; *Festuca fusca* L.; *Festuca reptatrix* L.; *Hemigymnia malabarica* (L.) Henrard; *Leptochloa contracta* (Retz.) Blatt. & McCann; *Leptochloa fascicularis* (Lam.) A. Gray; *Leptochloa fascicularis* var. *acuminata* (Nash) Gleason; *Leptochloa malabarica* (L.) Veldkamp; *Leptochloa uninervia* (J. Presl) Hitchc. & Chase; *Megastachya uninervia* J. Presl; *Ottochloa malabarica* (L.) Dandy; *Panicum malabaricum* (L.) Merr.; *Poa ambigua* Elliott; *Poa contracta* Retz.; *Poa malabarica* L.; *Poa procera* Roxb.; *Tridens indicus* Nees ex Wight; *Triodia ambigua* R. Br.; *Triodia ambigua* (Elliott) Benth. ex Vasey, nom. illeg., non *Triodia ambigua* R. Br.; *Uralepis alba* Steud.; *Uralepis fusca* (L.) Steud.)

Cosmopolitan, tropics and subtropics. Annual or perennial or biennial, polymorphic, rapid growing, aquatic or semi-aquatic, leafy, more or less tufted to densely tufted, tussocky, strongly developed fibrous roots, rhizomatous, stoloniferous, geniculate and ascending but mostly erect,

rooting and branching from the lower nodes, ligule membrane-like, leaves linear, inflorescences often completely exerted, racemes numerous, spikelets not overlapping, lemma rounded on the back and tipped with a short mucro, caryopsis dorsally compressed, weed, pasture, highly palatable, grazed by stock and game, low fodder value, salt-tolerant, useful for erosion control, competes for nutrients and space, found in saline land, lake margins, shallow water, wet sites, marshy ground, seasonally flooded depressions and swamps on sandy or clayey soil, margins of pools and streams, in vleis and brackish soils, on the fringe of waterholes and streams and in gilgais, shallow depressions on scalded surfaces and clay pans, similar to *Diplachne caudata*, see *Species Plantarum* 69. 1753, *Fl. Palaest.* 13. 1756, *Systema Naturae, Editio Decima* 2: 876. 1759, *Species Plantarum, Editio Secunda* 1: 108. 1762, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 189. 1791, *Essai d'une Nouvelle Agrostographie* 80-81, 160, 163, t. 16, f. 9. 1812, *Systema Vegetabilium, editio decima sexta* 2: 474, 615. 1817, *Flora Somala* 1: 337. 1829, *Révision des Graminées* 1: 91. 1829, *Reliquiae Haenkeanae* 1(4-5): 283. 1830, *A Manual of the Botany of the Northern United States* 588. 1848, *Synopsis Plantarum Glumacearum* 1: 247-248. 1854 and *Flora Capensis* 7: 591. 1900, *Manual of the Flora of the Northern States and Canada* 128. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 128. 1904, *Philippine Journal of Science* 1(Suppl.): 385. 1906, *Philippine Journal of Science* 4: 248. 1909, *Contributions from the United States National Herbarium* 18(7): 383. 1917, *Revista del Centro de Estudiantes de Agronomía y Veterinaria. Buenos Aires* 18: 147. 1925, *A Botanical Arrangement of British Plants (edition 2)* 129. 1928, *Mededeelingen van's Rijks-Herbarium* 61: 12. 1930, *Journal of Botany, British and Foreign* 69(2): 55. 1931, *Bulletin of the Torrey Botanical Club* 60: 635. 1933, *Phytologia* 4(1): 21. 1952, *Blumea* 19(1): 64. 1971, *Fl. Trop. E. Afr., Gram.* (2): 281. 1974, *Darwiniana* 33(1-4): 233-256. 1995, *Novon* 8: 79. 1998, *Taxon* 49(2): 250. 2000.

in English: Malabar sprangletop, kallar grass, swamp grass, Lake Chisi grass

in Senegal: ndibis, uk

in South Africa: kuilgras

L. fusca (L.) Kunth subsp. **fascicularis** (Lam.) N. Snow (*Cynodon fascicularis* (Lam.) Raspail; *Diachroa procumbens* (Muhl.) Nutt.; *Diplachne acuminata* Nash; *Diplachne aquatica* Bosc ex Roem. & Schult.; *Diplachne fascicularis* (Lam.) P. Beauv.; *Diplachne maritima* E.P. Bicknell; *Diplachne patens* E. Fourn. ex Hemsl.; *Diplachne patens* E. Fourn., nom. illeg., non *Diplachne patens* (J. Presl) E. Desv.; *Diplachne procumbens* (Muhl.) Nash, nom. illeg., non *Diplachne procumbens* Arechav.; *Diplachne tracyi* Vasey; *Festuca aquatica* Bosc ex Roem. & Schult.; *Festuca clandestina* Muhl.; *Festuca fascicularis* Lam.; *Festuca polystachya* Michx.; *Festuca procumbens* Muhl.; *Festuca*

prostrata Muhl. ex Scribn. & Merr.; *Festuca texana* Steud.; *Festuca thouini* Steud.; *Leptochloa acuminata* (Nash) Mohlenbrock; *Leptochloa fascicularis* (Lam.) A. Gray; *Leptochloa fascicularis* (Lam.) A. Gray var. *acuminata* (Nash) Gleason; *Leptochloa fascicularis* var. *fascicularis*; *Leptochloa fascicularis* var. *maritima* (Bicknell) Gleason; *Leptochloa maritima* Barkworth & al.; *Leptochloa polystachya* (Michx.) Kunth; *Leptochloa tracyi* (Vasey) Beal; *Tridens veralensis* Cat. Guerra; *Tridens virens* Nees; *Uralepis composita* Buckley; *Uralepis virens* (Nees) Kunth; *Uralopsis composita* Buckley)

North and South America, U.S., Mexico, Brazil, Paraguay. Annual, tufted, erect, weed species, along railroad ways, roadsides, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 189. 1791, *Flora Boreali-Americana* 1: 66. 1803, *Essai d'une Nouvelle Agrostographie* 81, 160, t. 16, f. 9. 1812, *Systema Vegetabilium* 2: 615. 1817, *Descriptio uberior Graminum* 160, 162. 1817, *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *Révision des Graminées* 1: 91. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 476. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 319. 1833, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *A Manual of the Botany of the Northern United States* 588. 1848, *Synopsis Plantarum Glumacearum* 1: 310-311. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 94-95. 1862, *Biologia Centrali-Americana; ... Botany ...* 3: 570. 1885, *Mexicanas Plantas* 2: 148. 1886, *Bulletin of the Torrey Botanical Club* 15: 40. 1888, *Grasses of North America for Farmers and Students* 2: 436. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 5. 1900, *Manual of the Flora of the Northern States and Canada* 128. 1901, *Bulletin of the Torrey Botanical Club* 35(4): 195. 1908, *Phytologia* 4(1): 21. 1952, *Illustrated Flora of Illinois* 293. 1973, *Acta Botanica Cubana* 4: 4. 1980, *Novon* 8(1): 78. 1998, *Flora of North America North of Mexico* 25: 742. 2003.

in English: bearded sprangle top, bearded sprangletop, sprangletop, salt meadowgrass, salt sprangletop

in Spanish: zacate

L. fusca (L.) Kunth subsp. *fusca* (*Diplachne fusca* (L.) P. Beauv. ex Roem. & Schult.; *Diplachne malabarica* (L.) Merr.; *Festuca fusca* L.; *Leptochloa malabarica* (L.) Veldkamp; *Poa malabarica* L.)

South Africa, India, Sri Lanka, Thailand, Australia, China, Japan, Laos, Taiwan. Perennial, tufted, weed, tolerant to alkalinesoil, palatable to livestock, found in black clay, see *Révision des Graminées* 1: 91. 1829.

in English: beetle grass, brown beetle grass, littoral sprangletop, swamp grass

L. fusca (L.) Kunth subsp. *muelleri* (Benth.) N. Snow (*Diplachne muelleri* Benth.; *Leptochloa muelleri* (Benth.) Stace)

Asia, Australia. Perennial, see *Révision des Graminées* 1: 91. 1829, *Flora Australiensis: A Description ...* 7: 619. 1878 and *Watsonia* 18(4): 413. 1991, *Novon* 8(1): 78. 1998.

L. fusca (L.) Kunth subsp. *uninervia* (J. Presl) N. Snow (*Atropis carinata* Griseb.; *Brizopyrum uninervium* (J. Presl) E. Fourn.; *Diplachne carinata* (Griseb.) Hack.; *Diplachne imbricata* (Thurb.) Scribn.; *Diplachne procumbens* Arechav.; *Diplachne tarapacana* Phil.; *Diplachne uninervia* (J. Presl) Parodi; *Diplachne uninervia* f. *abbreviata* Parodi; *Diplachne uninervia* f. *uninervia*; *Diplachne uninervia* var. *procumbens* (Arechav.) Parodi; *Diplachne uninervia* var. *uninervia*; *Eragrostis uninervia* (J. Presl) Steud.; *Leptochloa carinata* Hack.; *Leptochloa imbricata* Thurb.; *Leptochloa uninervia* (J. Presl) A.S. Hitchc. & Chase; *Leptochloa virletii* E. Fourn. ex Hemsl.; *Leptochloa virletii* E. Fourn.; *Megastachya uninervia* J. Presl; *Poa uninervia* (J. Presl) Kunth; *Puccinellia carinata* (Griseb.) Ponert; *Rabdochloa imbricata* (Thurb.) Kuntze; *Rhabdochloa imbricata* (Thurb.) Kuntze; *Tridens duartei* Cat. Guerra; *Tridens verticillatus* Meyen; *Uralepis anderssonii* F. Aresch.; *Uralepis verticillata* (Nees & Meyen) Steud.; *Uralopsis verticillata* (Nees & Meyen) Steud.) (N.J. Andersson)

North and South America. Annual or perennial, rather variable, tufted, erect, smooth, simple, forming dense stands and small tussocks, lower sheaths keeled, ligule membranous, smooth sheaths, fibrous roots, elongate leaves narrow at base, inflorescence a pyramidal panicle with branches erect-divergent, 3-9 florets, glumes unequal, lemmas awnless, 2 lodicules glabrous, 3 stamens, often a weed, wet habitats, marshes and saltwater marshes, in salt meadows, tropical lowland, in muddy depressions, disturbed areas, moist sandy soils, in shallow standing water, below dam, pond or lake beds, see *Révision des Graminées* 1: 91. 1829, *Reliquiae Haenkeanae* 1(4-5): 283. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 344. 1833, *Reise um die Erde* 1: 408. 1834, *Gramineae* 27. 1841, *Synopsis Plantarum Glumacearum* 1: 248, 278. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 291. 1879, *Geological Survey of California, Botany* 2: 293. 1880, *Bulletin of the Torrey Botanical Club* 10(1): 30. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 566. 1885, *Mexicanas Plantas* 2: 121, 147. 1886, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 88. 1891, *Revisio Generum Plantarum* 2: 788. 1891, *Anales del Museo Nacional de Montevideo* 1: 414. 1894 and *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 16: 253. 1900, *Plantae sub itinere navis bellicae Eugeniae anno 1852 a N. J. Andersson circa Guayaquil* 119. 1910, *Contributions from the United States National Herbarium* 18(7): 383. 1917, *Revista del Centro de Estudiantes de Agronomía y Veterinaria. Buenos Aires* 18: 147. 1925, *Feddes Repertorium* 84(9-10): 739. 1974, *Acta Botanica Cubana* 4: 3. 1980, *Novon* 8(1): 79. 1998.

in English: Mexican sprangletop

L. ginae Maire

Morocco. Rare species, see *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 28: 384. 1937.

L. ligulata Lazarides

Australia. Perennial, tufted, erect, herbaceous, hollow, see *Brunonia* 3: 259. 1980.

L. longa Griseb. (*Rhabdochloa longa* (Griseb.) Kuntze)

West Indies, Trinidad. See *Flora of the British West Indian Islands* 538. 1864, *Revisio Generum Plantarum* 2: 788. 1891.

L. monticola Chase (*Diplachne monticola* (Chase) McNeill)

West Indies, Haiti. See *Journal of the Washington Academy of Sciences* 17: 73, f. 2. 1927.

L. mucronata (Michx.) Kunth (*Aira panicea* Willd. ex Steud.; *Eleusine elongata* Willd. ex Steud.; *Eleusine filiformis* Pers.; *Eleusine mucronata* Michx.; *Eleusine sparsa* Muhl.; *Eleusine stricta* Willd. ex Steud., nom. illeg., non *Eleusine stricta* Roxb.; *Festuca filiformis* Lam., nom. illeg., non *Festuca filiformis* Pourret; *Leptochloa attenuata* (Nutt.) Steud.; *Leptochloa brachiata* Steud.; *Leptochloa filiformis* (Lam.) P. Beauv.; *Leptochloa filiformis* (Pers.) P. Beauv.; *Leptochloa filiformis* f. *attenuata* (Nutt.) F.C. Gates; *Leptochloa filiformis* var. *attenuata* (Nutt.) Steyerf. & Kucera; *Leptochloa filiformis* var. *humilior* J. Presl; *Leptochloa filiformis* var. *pulchella* (Scribn.) Beetle; *Leptochloa mucronata* var. *pulchella* Scribn.; *Leptochloa panicea* subsp. *brachiata* (Steud.) N.W. Snow; *Leptochloa panicea* subsp. *mucronata* (Michx.) Nowack; *Leptochloa paniculata* E. Fourn.; *Leptochloa pellucida* Steud.; *Leptochloa pilosa* Scribn.; *Leptostachys filiformis* (Lam.) G. Mey.; *Oxydenia attenuata* Nutt.; *Oxydenia filiformis* Nutt. ex B.D. Jacks.; *Rabdochloa mucronata* (Michx.) P. Beauv.)

North America, Argentina. Annual, herbaceous, leaf blades linear acuminate, inflorescence oblong, spikelets oblong 2- to 4-flowered, glumes subequal, lemmas acute or obtuse, disturbed places, see *Histoire et mémoires de l'Académie Royale des Sciences* 3: 319. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 191. 1791, *Flora Boreali-Americana* 1: 65. 1803, *Syn. Pl.* 1: 87. 1805, *Essai d'une Nouvelle Agrostographie* 71: 163,166. 1812, *Révision des Graminées* 1: 91. 1829, *Synopsis Plantarum Glumacearum* 1: 209. 1854 and *Botanical Magazine* 55(655): 311. 1941, *Journal of Cytology and Genetics* 7-8: 161-164. 1973, *Bull. Soc. Bot. France* 125: 117. 1978, *Phytologia* 49(1): 40. 1981, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Bot. J. Linn. Soc.* 106: 374. 1991, *Taxon* 42: 413-417. 1993, *Rheedea* 5(1): 93. 1995, *Novon* 8(1): 79. 1998.

L. nealleyi Vasey (*Leptochloa stricta* E. Fourn. ex Hemsl., nom. illeg., non *Leptochloa stricta* Trin. ex Steud.; *Leptochloa stricta* E. Fourn.) (after G.C. Nealley)

North America, U.S., Texas, Mexico. Annual, erect, simple, glabrous, leaves glabrous, hairy ligule, several racemes, glumes subequal, forage, common in open areas, see *Bulletin of the Torrey Botanical Club* 12: 7. 1885, *Biologia Centrali-Americana; ... Botany ...* 3: 566. 1885, *Mexicanas Plantas* 2: 147. 1886.

in English: Nealley's sprangletop, Nealley sprangletop

L. neesii (Thwaites) Benth. (*Cynodon neesii* Thwaites; *Cynodon polystachya* R. Br., also spelled *polystachyus*; *Eleusine polystachya* (R. Br.) F. Muell.; *Leptochloa brownii* C.E. Hubb.; *Leptochloa polystachya* (R. Br.) Benth., nom. illeg., non *Leptochloa polystachya* (Michx.) Kunth; *Rhabdochloa polystachya* (R. Br.) Kuntze)

India, Indonesia, Sri Lanka, Australia. Annual or short-lived perennial or biennial, stout, robust, prostrate, branched, rooting at the nodes, tufted, tussocky, many-noded, leaf blades linear-lanceolate and finely pointed, ligule membranous, leaf sheaths papery, lower sheaths distinctly keeled, leaves viscid, panicle loose to dense and shortly exerted, spikelets usually 1-flowered, glumes membranous, grain not grooved, a weed of flood-irrigated crops, low forage value, grass readily eaten by cattle, found in dry and arid zones, disturbed wet ground, wet places, marshy areas, drainage ditches, swamps, seasonally flooded depressions, rice fields, see *Prodromus Florae Novae Hollandiae* 187. 1810, *Enumeratio Plantarum Zeylaniae* 371. 1864, *Flora Australiensis: A Description ...* 7: 617. 1878, *Journal of the Linnean Society, Botany* 19: 108. 1881, *Fragmenta Phytographiae Australiae* 1: 216. 1889, *Revisio Generum Plantarum* 2: 788. 1891 and *Kew Bulletin* 1941: 26. 1941, *Grasses of Ceylon* 84. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1969.

L. obtusiflora Hochst. (*Eleusine obtusiflora* (Hochst.) Blatt.; *Leptochloa obtusiflora* Trin. ex Steud.)

Tropical Africa, Tanzania, Angola, Uganda, Sudan. Perennial, tufted, vigorous, slender, glaucous, branching culms, variable, erect, ascending, scrambling, straggling, leaf blades linear, panicle with many erect spikes or slender flexuous ascending racemes, spikelets narrowly oblong 6- to 14-flowered, glumes subequal, lemma keeled and shortly hairy, florets not bearded from the callus, quite palatable, well grazed, often a weed of disturbed ground, shows no toxicity, useful for erosion control, can be used for reseeding denuded land in not very dry areas, excellent drought tolerance, growing in dry bush, deciduous bushland, on shallow stony soil, in open thicket and grassland, on sandy and clay soils, loams and alluvial soils, loose sandy loams, red clays, see *Nomenclator Botanicus. Editio secunda* 2: 30. 1841, *Flora* 38: 203. 1855 and *Records of the Botanical Survey of India* 8: 505. 1936.

in Somalia: hubnali, luguli, anadug

L. panicea (Retz.) Ohwi (*Aira filiformis* J. König ex Roxb.; *Eleusine filiformis* Pers.; *Festuca filiformis* Lam., nom. illeg., non *Festuca filiformis* Pourret; *Leptochloa brachiata* Steud.; *Leptochloa filiformis* (Lam.) P. Beauv.; *Leptochloa filiformis* (Pers.) P. Beauv.; *Leptochloa paniculata* E. Fourn.; *Leptochloa polystachya* Benth. sensu Burkill; *Poa panicea* Retz.)

Tropical Africa, tropical Asia, China and Japan. Annual or short-lived perennial, green, smooth, tufted, slender, ascending, simple or branched, ligule ciliate, leaves linear and shortly acuminate, panicle main branches loose, spiciform racemes, spikelets 2- to 5-flowered, glumes subequal linear-lanceolate, lemmas hairy on the back and 2-toothed, palea membranous, grain wrinkled, weed species naturalized in tropics, good fodder grass eaten by cattle when young, native pasture species, grains eaten by baboons, shade, found in low sandy soil, dry sandy soils, along rivers, roadsides, wet or damp sites, in or near water, mudflats, grassland, bush, inundated areas, evergreen scrubs, riverbanks, related to *Leptochloa chinensis* (L.) Nees, very similar to *Leptochloa filiformis* (Pers.) P. Beauv., see *Observationes Botanicae* 3: 11. 1783, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 191. 1791, *Syn. Pl.* 1: 87. 1805, *Essai d'une Nouvelle Agrostographie* 71, 163, 166. 1812, *Flora Indica; or Descriptions ...* 1: 328. 1820, *Synopsis Plantarum Glumacearum* 1: 209. 1854, *Bulletin de la Société Botanique de France* 27: 296. 1880, *Fl. Br. Ind.* 7: 298. 1896 and *Handb. Fl. Ceylon* 5: 283. 1900, *Botanical Magazine* (Tokyo) 55(655): 311. 1941, *Grasses of Ceylon* 85. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 517. 1960, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Taxon* 42: 413-417. 1993.

in English: sprangle top, mucronate sprangletop

in Japan: ito-aze-gaya

in Thailand: yaa nok, ya nok

L. panicea (Retz.) Ohwi subsp. *brachiata* (Steud.) N. Snow (*Aira panicea* Willd. ex Steud.; *Eleusine elongata* Willd. ex Steud.; *Eleusine filiformis* Pers.; *Eleusine mucronata* Michx.; *Eleusine sparsa* Muhl.; *Eleusine stricta* Willd. ex Steud., nom. illeg., non *Eleusine stricta* Roxb.; *Festuca filiformis* Lam., nom. illeg., non *Festuca filiformis* Pourret; *Leptochloa attenuata* (Nutt.) Steud.; *Leptochloa brachiata* Steud.; *Leptochloa filiformis* (Pers.) P. Beauv.; *Leptochloa filiformis* (Lam.) P. Beauv.; *Leptochloa filiformis* f. *attenuata* (Nutt.) F.C. Gates; *Leptochloa filiformis* var. *filiformis*; *Leptochloa filiformis* var. *humilior* J. Presl; *Leptochloa filiformis* var. *pulchella* (Scribn.) Beetle; *Leptochloa mucronata* auct.; *Leptochloa mucronata* (Michx.) Kunth; *Leptochloa mucronata* var. *pulchella* Scribn.; *Leptochloa*

panicea (Retz.) Ohwi; *Leptochloa paniculata* E. Fourn.; *Leptochloa pellucidula* Steud.; *Leptochloa pilosa* Scribn.; *Leptostachys filiformis* (Lam.) G. Mey.; *Oxydenia attenuata* Nutt.; *Oxydenia filiformis* Nutt. ex B.D. Jacks.; *Rabdochloa mucronata* (Michx.) P. Beauv.)

South and North America, Brazil and Argentina. Annual, tufted, spreading, erect, weak, glabrous, shiny, herbaceous, hollow, branched from base and from lower nodes, forming small tussocks, sheaths hairy to hispid, ligule a ciliate membrane, leaf blades attenuate from ovate base, open panicle lanceolate with numerous branches erect-spreading, lanceolate to ovate spikelets, spikelets in 2 rows on 1 side of spicate branches, 2-4 florets, glumes subequal lanceolate and finely pointed at apex, lemma broadly ovate, palea ovate, 2 lodicules, 3 stamens, weed species, common on rocky slopes and along sandy washes in desert scrub and desert grassland, gardens, tropical lowland, sandy riverbanks, roadsides, citrus orchards, dry slopes, ditchbanks, sorghum and alfalfa fields, in plowed fields, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 191. 1791, *Flora Boreali-Americana* 1: 65. 1803, *Syn. Pl.* 1: 87. 1805, *Essai d'une Nouvelle Agrostographie* 71, 161, 163, 166. 1812, *Descriptio uberior Graminum* 135. 1817, *Primitiae Florae Essequeboensis ...* 74. 1818, *Révision des Graminées* 1: 91. 1829, *Reliquiae Haenkeanae* 1: 288. 1830, *Nomenclator Botanicus. Editio secunda* 1: 549. 1840, *Synopsis Plantarum Glumacearum* 1: 209. 1854, *Bulletin de la Société Botanique de France* 27: 296. 1880, *Bulletin of the Torrey Botanical Club* 9: 147. 1882, *Index Kewensis* 2: 392. 1894 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 9. 1901, *Ill. Fl. North. U.S. Canada* edition 2, 229. 1919, *Contr. U.S. Natl.* 24(6): 180. 1925, *Botanical Magazine* (Tokyo) 55(655): 311. 1941, *Phytologia* 49(1): 40. 1981, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Taxon* 42: 413-417. 1993, *Novon* 8(1): 79. 1998.

in English: mucronate sprangletop, red sprangletop, sprangletop

in Nicaragua: zacate de llano

in Spanish: zacate salado, zacate cola de zorra, zacate lien-drilla, pasto morado, pasto moro, desparramo rojo, cola de zorra, pajilla, paja morada, paja de burro, paja mona, plu-milla

L. panicea (Retz.) Ohwi subsp. *mucronata* (Michx.) Nowack (*Chloris mucronata* Michx.; *Eleusine elongata* Willd. ex Steud.; *Eleusine mucronata* Michx.; *Eleusine mucronata* (Michx.) Hornem., nom. illeg., non *Eleusine mucronata* Michx.; *Eleusine mucronata* Stokes, nom. illeg., non *Eleusine mucronata* Michx.; *Leptochloa attenuata* (Nutt.) Steud.; *Leptochloa filiformis* (Lam.) P. Beauv.; *Leptochloa filiformis* (Pers.) P. Beauv.; *Leptochloa filiformis* f.

attenuata (Nutt.) F.C. Gates; *Leptochloa filiformis* var. *attenuata* (Nutt.) Steyermark & Kucera; *Leptochloa filiformis* var. *pulchella* (Scribn.) Beetle; *Leptochloa mucronata* (Michx.) Kunth; *Leptochloa mucronata* var. *mucronata*; *Leptochloa mucronata* var. *multiflora* Eggers; *Leptochloa mucronata* var. *pulchella* Scribn.; *Leptochloa panicea* subsp. *mucronata* Nowack; *Oxydenia attenuata* Nutt.; *Rabdochloa mucronata* (Michx.) P. Beauv.)

North America, U.S. Annual, solitary, spikelets mauve, aristate glumes, common in gardens, in open and gravelly site at roadsides, disturbed areas, mudflats, alluvial banks, fields, on sandy shores, floodplains and valleys of the rivers, in low damp sites along roadbed, see *Flora Boreali-Americana* 1: 59, 65. 1803, *A Botanical Materia Medica* 1: 150. 1812, *Essai d'une Nouvelle Agrostographie* 71, 84, 158, 161, 163, 166, 176. 1812, *The Genera of North American Plants* 1: 76. 1818, *Hortus Regius Botanicus Hafniensis* 116. 1819, *Révision des Graminées* 1: 91. 1829, *Nomenclator Botanicus. Editio secunda* 1: 549. 1840, *Synopsis Plantarum Glumacearum* 1: 209. 1854, *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* III. 8: 151. 1876, *Bulletin of the Torrey Botanical Club* 9: 147. 1882 and *Annotated List of the Plants of Kansas* 391: 130. 1940, *Botanical Magazine* (Tokyo) 55(655): 311. 1941, *Rhodora* 63(745): 26. 1961, *Grass. Missouri* 138. 1961, *Phytologia* 49(1): 40. 1981, *Rheedeia* 4(2): 88. 1994, *Rheedeia* 5(1): 93. 1995.

in English: sprangletop, mucronate sprangletop, red sprangletop, slendergrass

L. panicea (Retz.) Ohwi subsp. ***panicea***

Tropical Africa, South Africa, China, India, Sri Lanka, Vietnam, Indonesia. Naturalized in neotropics, see *Botanical Magazine* (Tokyo) 55(655): 311. 1941.

L. panicoides (J. Presl) A.S. Hitchc. (*Diplachne halei* Nash; *Diplachne panicoides* (J. Presl) McNeill; *Diplachne scabra* (Nees) Nicora; *Eragrostis panicoides* (J. Presl) Steud.; *Leptochloa floribunda* Döll; *Leptochloa halei* (Nash) Scribn. & Merr.; *Leptochloa scabra* Nees; *Megastachya panicoides* J. Presl)

North America, U.S., South America. Annual, emergent, herbaceous, erect or decumbent, branching culms, glabrous, leaves glabrous, ligule glabrous, compact panicle, glumes subequal, awnless lemmas, forage, troublesome weed in water-seeded rice, found in wetlands, shallow canals, marshes and wet habitats, moist open sandy areas, see *Agrostografia Brasiliensis* 2: 435. 1829, *Reliquiae Haenkeanae* 1(4-5): 283. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 343. 1833, *Synopsis Plantarum Glumacearum* 1: 278. 1854, *Flora Brasiliensis* 2(3): 89, t. 26. 1878, *New York Botanical Garden* 1(4): 292-293. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 27. 1901, *American Journal of*

Botany 21(3): 137. 1934, *Brittonia* 31(3): 402. 1979, *Hickenia* 2(19): 91. 1993, *Darwiniana* 33(1-4): 233-256. 1995. in English: Amazon sprangletop, salt meadow grass in Mexico: zacate

L. peacockii (Maiden & Betche) Domin (*Diplachne peacockii* Maiden & Betche; *Leptochloa decipiens* (R. Br.) Stapf ex Maiden; *Leptochloa decipiens* (R. Br.) Druce, nom. illeg., non *Leptochloa decipiens* (R. Br.) Stapf ex Maiden; *Leptochloa decipiens* subsp. *peacockii* (Maiden & Betche) N. Snow; *Poa decipiens* R. Br.)

New South Wales, Queensland. Perennial, tufted or tussock-forming, ligule truncate and erose, blade flat, racemes 1-sided on a central axis, spikelets overlapping, 4-6 florets, glumes keeled, palea 2-keeled and silky, grows in floodplains, rocky places on gravelly sites, occasional flooding, see *Prodromus Florae Novae Hollandiae* 181. 1810 and *Agricultural Gazette of New South Wales* 15: 925. 1904, *Agricultural Gazette of New South Wales* 20: 307. 1909, *Bibliotheca Botanica* 85: 379. 1915, *Report. Botanical Exchange Club. London* 1916: 632. 1917, *Contributions from the Queensland Herbarium* 14: 1-19. 1972, *Brunonia* 3: 263. 1980, *Novon* 8(1): 78. 1998.

L. procera Nees

Brazil. Perennial, see *Sylloge Plantarum Novarum* 1: 2. 1824, *Voyage autour du Monde* Phan. (8): 48. 1831.

L. rupestris C.E. Hubb.

Somalia, Ethiopia, Yemen, Kenya. Perennial, slender, thin, wiry, branched, erect, scandent, weakly ascending, spreading, straggling, slender rhizomes, divergent or reflexing leaf blades narrowly lanceolate acute, inflorescence narrowly elliptic or narrowly oblong, racemes ascending, spikelets 1-flowered, glumes subequal, lemma keeled and hairy, rocky hillisides, slopes, mountains, rocky places and rough scrub, near water and by irrigation ditches, in areas of good rainfall, see *Kew Bulletin* 1941: 195. 1941.

L. scabra Nees (*Diplachne scabra* (Nees) Nicora; *Leptochloa langloisii* Vasey; *Leptochloa liebmannii* E. Fourn. ex Hemsl.; *Leptochloa liebmannii* E. Fourn.; *Leptochloa uninervia* (J. Presl) Hitchc. & Chase; *Megastachya uninervia* J. Presl) (after the French-born American botanist Auguste Barthélemy Langlois, 1832-1900, clergyman, 1855 United States (Louisiana), wrote *Catalogue provisoire de plantes phanérogames et cryptogames de la Basse-Louisiane*. Pointe-à-la-Hâche [1887]. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 343. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 227. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 256. 1973; J.W.

Harshberger, *The Botanists of Philadelphia and Their Work*. 266. Philadelphia 1899)

North and South America, Mexico, Bolivia, Brazil, Paraguay. Annual, herbaceous, robust, usually erect, caespitose, branched from the lower nodes, glabrous, clumped, terrestrial or semiaquatic, leaf blades linear acuminate long-attenuate, leaf sheaths flattened and keeled, leaves scabrous, ligule a short ciliate membrane, long and narrow inflorescence somewhat nodding, spikelets oblong laterally compressed, 3- to 6-flowered, glumes unequal, first glume acute, second glume ovate-lanceolate, lemmas keeled ovate-lanceolate with margins ciliolate, 2 lodicules, 3 stamens, a weed of rice, common in open gravelly sites, tropical lowland, sandy soil, disturbed forest, along edge of river, roadsides, moist open ground, see *Agrostografia Brasiliensis* 2: 435. 1829, *Reliquiae Haenkeanae* 1(4-5): 283. 1830, *Bulletin of the Torrey Botanical Club* 12: 7. 1885, *Biologia Centrali-Americana*; ... *Botany* ... 3: 565. 1885, *Mexicanas Plantas* 2: 147. 1886 and *Contributions from the United States National Herbarium* 18(7): 383. 1917, *Hickenia* 2(19): 91. 1993.

in English: rough sprangletop

L. simoniana N. Snow

Australia. Annual, tufted, erect, herbaceous, hollow, see *Novon* 10: 238. 2000.

L. southwoodii N. Snow & B.K. Simon

Australia. Annual, tufted, ascending to erect, herbaceous, hollow, similar to *Leptochloa ligulata* and *Leptochloa simoniana*, see *Austrobaileya* 5: 138. 1997.

L. uniflora Hochst. ex A. Rich. (*Agrostis montana* Rottler ex Hook.f., nom. illeg., non *Agrostis montana* Krock., neque R. Br.; *Craspedorhachis uniflora* (Hochst. ex A. Rich.) Chippind.; *Cynodon gracilis* Nees ex Steud.; *Leptochloa gracilis* Wight ex Steud., nom. illeg., non *Leptochloa gracilis* Nees; *Rhabdochloa uniflora* (Hochst. ex A. Rich.) Kuntze)

Tropical Africa, Ethiopia, Ghana, Nigeria, Yemen, southern India, Sri Lanka. Annual or short-lived perennial, rare, simple or sparsely branched, slender, tufted, erect, geniculately ascending, spreading by runners rooting at the nodes, leaf sheaths membranous, ligule membranous, leaf blades lanceolate to oblong to lanceolate-oblong, inflorescence spicate spirally arranged, loose panicle, spiciform racemes slender and flaccid, very slender lateral spikes, spikelets in 2 overlapping rows, 1-flowered bisexual, 2 glumes equal and strongly keeled, 3 stamens, grain smooth, grazed by game, succulent, palatable, grain used by local people, a weed of cultivation, found in bushveld, damp sandy soils, under trees, cultivated farm land, wooded grassland, deciduous bush, rocky soil, shallow soil, shade or dense shade, hilly slopes, see *Tentamen Florae Abyssinicae* ... 2: 409. 1850, *Synopsis Plantarum Glumacearum* 1: 213. 1854, *Enum. Pl. Zeyl.* 5: 371. 1864, *Revisio Generum Plantarum*

2: 788. 1891, *The Flora of British India* 7: 298. 1896 and *Handb. Fl. Ceylon* 5: 282. 1900, *Grasses and Pastures of South Africa* 205, f. 182. 1955, *Grasses of Ceylon* 84. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma* ... 517. 1960.

in Nigeria: ele ododo, eya

L. uninervia (J. Presl) A.S. Hitchc. & Chase (*Atropis carinata* Griseb.; *Brizopyrum uninervium* (J. Presl) E. Fourn.; *Diplachne carinata* (Griseb.) Hack.; *Diplachne imbricata* (Thurb.) Scribn.; *Diplachne tarapacana* Phil.; *Diplachne uninervia* (J. Presl) Parodi; *Diplachne verticillata* Nees & Meyen; *Eragrostis uninervia* (J. Presl) Steud.; *Festuca fusca* L.; *Festuca glycerioides* Steud. ex Lechler; *Leptochloa fusca* (L.) Kunth; *Leptochloa fusca* subsp. *uninervia* (J. Presl) N. Snow; *Leptochloa imbricata* Thurb.; *Leptochloa scabra* Nees; *Leptochloa uninervia* (J. Presl) Hitchc. & Chase; *Leptochloa virletii* E. Fourn.; *Megastachya uninervia* J. Presl; *Poa uninervia* (J. Presl) Kunth; *Puccinellia carinata* (Griseb.) Ponert; *Rabdochloa imbricata* (Thurb.) Kuntze; *Rhabdochloa imbricata* (Thurb.) Kuntze; *Tridens duartei* Catasús; *Uralespis anderssonii* F. Aresch.; *Uralespis verticillata* (Nees & Meyen) Steud.; *Uralespis verticillata* (Nees & Meyen) Steud.)

North and South America, Mexico, U.S. Annual or perennial, tufted, erect, smooth, simple or branched, more or less glabrous, fibrous roots, smooth sheaths, thin elongate leaves, ligule glabrous a papery-like membrane, spikelets narrowly oblong 5- to 10-flowered, lemmas awnless, grains yellow to pale red, fodder, troublesome weed species, may infest rice fields, common in wet habitats, marshes, moist savannahs, disturbed areas, below dam, moist sandy soils, in shallow standing water, pond or lake beds, herbaceous riparian habitat, see *Systema Naturae, Editio Decima* 2: 876. 1759, *Agrostografia Brasiliensis* 2: 435. 1829, *Révision des Graminées* 1: 91. 1829, *Reliquiae Haenkeanae* 1(4-5): 283. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 344. 1833, *Gramineae* 27. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 159-160. 1843, *Synopsis Plantarum Glumacearum* 1: 248, 278. 1854, *Berberides Americae Australis* 56. 1857, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 291. 1879, *Geological Survey of California, Botany* 2: 293. 1880, *Bulletin of the Torrey Botanical Club* 10(1): 30. 1883, *Mexicanas Plantas* 2: 121, 147. 1886, *Verzeichniss der von Friedrich Philipp auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 88. 1891, *Revisio Generum Plantarum* 2: 788. 1891 and *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 16: 253. 1900, *Plantae sub itinere navis bellicae Eugeniae anno 1852 a N. J. Andersson circa Guayaquil* 119. 1910, *Contributions from the United States National Herbarium* 18(7): 383. 1917, *Revista del Centro de Estudiantes de Agronomía y Veterinaria. Buenos Aires* 18: 147. 1925, *Feddes Repertorium*

84(9-10): 739. 1974, *Acta Botanica Cubana* 4: 3. 1980, *Flora Novo-Galiciana* 14: 1-436. 1983, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Novon* 8(1): 79. 1998, *Flora of Ecuador* 68: 15-22. 2001.

in English: Mexican sprangletop, giant rye grass, dense-flowered sprangletop

in Mexico: zacate

in Spanish: triguillo, plumilla, pajilla, rabo de zorro, zacate cola de zorra

L. virgata (L.) P. Beauv. (*Chloris digitaria* Kunth; *Chloris gracilis* Kunth, nom. illeg., non *Chloris gracilis* P. Durand; *Chloris poiformis* Kunth; *Cynodon domingense* (Jacq.) Raspail; *Cynodon virgatus* (L.) Raspail; *Cynosurus domingensis* Jacq.; *Cynosurus domingensis* Sw.; *Cynosurus virgatus* L.; *Diplachne domingensis* (Jacq.) Chapm.; *Eleusine digitata* Willd. ex Steud.; *Eleusine domingensis* (Jacq.) Pers.; *Eleusine gracilis* (Kunth) Spreng.; *Eleusine unioloides* Willd. ex Steud.; *Eleusine virgata* (L.) Pers.; *Festuca domingensis* (Jacq.) Lam.; *Festuca virgata* (L.) Lam.; *Leptochloa barbata* Desv. ex Killeen; *Leptochloa digitaria* (Kunth) Nees; *Leptochloa domingensis* (Jacq.) Trin.; *Leptochloa gracilis* Nees; *Leptochloa mutica* Steud.; *Leptochloa perennis* Hack.; *Leptochloa villosa* Ekman; *Leptochloa virgata* Pers.; *Leptochloa virgata* var. *aristata* E. Fourn.; *Leptochloa virgata* var. *domingensis* (Jacq.) Link ex Griseb.; *Leptochloa virgata* var. *gracilis* (Nees) Link; *Leptochloa virgata* var. *intermedia* E. Fourn.; *Leptochloa virgata* var. *mutica* (Steud.) Döll; *Leptostachys digitaria* G. Mey.; *Leptostachys domingensis* (Jacq.) G. Mey.; *Leptostachys virgata* (L.) Mey.; *Oxydenia virgata* Nutt. ex B.D. Jacks.; *Rabdochloa domingensis* (Jacq.) P. Beauv.)

Southern U.S. to Argentina, Mexico, Brazil, Paraguay. Perennial or annual, usually erect, procumbent at base, branched or unbranched, glabrous, caespitose, knotty base, forming small clumps, sheaths glabrous, ligule a very short ciliolate membrane, leaf blades linear long-attenuate, open inflorescence with a well-developed central rachis, nodding panicle, ascending lateral branches narrow and spaced, 2-8 florets and a terminal rudiment, spikelets laterally compressed, lemma ovate mucronate or awned, 2 stamens, weed species, may infest rice fields, growing on wet sandy soils, mud, disturbed areas, open ground, savannah, edge of river, cultivations, grasslands, tropical lowland, dry slopes, see *Systema Naturae, Editio Decima* 876. 1759, *Nicolai Josephi Jacquin Miscellanea austriaca ...* 2: 363. 1781, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 189. 1791, *Syn. Pl.* 1: 87. 1805, *Essai d'une Nouvelle Agrostographie* 84, 161, 176, t. 17, f. 3. 1812, *Nova Genera et Species Plantarum* 1: 168-169. 1815 [1816], *Primitiae Florae Essequiboensis ...* 74. 1818, *Fundamenta Agrostographiae* 133. 1820, *Sylloge Plantarum Novarum* 1: 4. 1824, *Systema Vegetabilium, editio decima sexta* 1: 350. 1825, *Annales des Sciences Naturelles, Botanique* 5: 302. 1825,

Flora Brasiliensis seu Enumeratio Plantarum 2: 433. 1829, *Nomenclator Botanicus. Editio secunda* 549. 1840, *Synopsis Plantarum Glumacearum* 1: 208. 1854, *Flora of the British West Indian Islands* 538. 1864, *Flora Brasiliensis* 2(3): 91. 1878, *Mexicanas Plantas* 2: 146. 1886, *Index Kewensis* 2: 392. 1894, *Flora of the Southern United States* 609. 1897 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 14(6): 33. 1900, *Informe Anual de la Estación Central Agronómica de Cuba* 1: 411. 1906, *Contr. U.S. Natl. Herb.* 12: 122. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 345. 1909, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 31, t. 3, f. 3, t. 6, f. 16. 1911, *Annals of the Missouri Botanical Garden* 77(1): 164. 1990.

in English: tropical sprangletop, tropic sprangletop, sprangletop, Judd's grass

in French: herbe aux chevaux

in Mexico: stumti-sacat

L. virgata (L.) P. Beauv. var. **puberula** Hack.

Paraguay. See *Nicolai Josephi Jacquin Miscellanea austriaca ...* 2: 363. 1781, *Essai d'une Nouvelle Agrostographie* 161. 1812 and *Trabajos del Museo de Farmacología de la Facultad de Ciencias Médicas de Buenos Aires* 21: 34. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 345. 1909

L. virgata (L.) P. Beauv. var. **virgata** (*Cynosurus domingensis* Jacq.; *Leptochloa domingensis* (Jacq.) Trin.; *Leptochloa villosa* Ekman; *Leptochloa virgata* f. *nana* Lindm.; *Leptochloa virgata* var. *domingensis* (Jacq.) Link ex Griseb.)

South America, U.S. See *Nicolai Josephi Jacquin Miscellanea austriaca ...* 2: 363. 1781, *Essai d'une Nouvelle Agrostographie* 161. 1812, *Fundamenta Agrostographiae* 133. 1820, *Flora of the British West Indian Islands* 538. 1864 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 14(6): 33. 1900, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 31, t. 3, f. 3, t. 6, f. 16. 1911.

L. viscida (Scribner) Beal (*Diplachne viscida* Scribn.)

North America, U.S., Arizona. Annual, sheaths auricles present, see *Bulletin of the Torrey Botanical Club* 10(1): 30. 1883, *Grasses of North America for Farmers and Students* 2: 434. 1896 and *Monocotiledóneas Mexicanas: una Sinopsis Florística Poaceae*. 2000.

in English: sticky sprangle top, sprangletop

in Spanish: zacate salado pagajoso

Leptochloopsis H.O. Yates = *Leptochloopsis* Yates, *Uniola* L.

Resembling the related genus *Leptochloa*.

Two species, America, Puerto Rico. Chloridoideae, Cynodonteae, Uniolinae, perennial, unarmed, herbaceous, caespitose, plants bisexual, inflorescence spicate, spikelets imbricate and flattened, 2 glumes unequal or subequal, palea awnless, free and fleshy lodicules, 3 stamens, 2 stigmas, dry slopes, grassy roadsides, open habitats, type *Leptochloopsis virgata* (Poir.) H.O. Yates, see *Species Plantarum* 1: 71. 1753 and *Ill. Fl. N. U.S.* (edition 2) 1: 248. 1913, *The Southwestern Naturalist* 11(3): 382, 384, 389. 1966, *Contributions from the United States National Herbarium* 41: 137, 232-234. 2001.

Species

L. condensata (Hitchc.) H.O. Yates (*Uniola condensata* Hitchc.)

South and Central America. See *Contributions from the United States National Herbarium* 24(8): 345. 1927, *The Southwestern Naturalist* 11(3): 389. 1966.

L. virgata (Poir.) H.O. Yates (*Eleusine procera* Spreng. ex Steud.; *Poa virgata* Poir.; *Uniola racemiflora* Trin.; *Uniola sparta* Trin.; *Uniola virgata* (Poir.) Griseb.)

U.S., the Caribbean, Jamaica. Perennial, see *Encyclopédie Méthodique, Botanique* 5: 78. 1804, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 55. 1836, *Linnaea* 10(3): 307. 1836, *Nomenclator Botanicus. Editio secunda* 1: 549. 1840, *Flora of the British West Indian Islands* 531. 1864 and *The Southwestern Naturalist* 11(3): 384. 1966.

in English: limestone grass

Leptochloris Kuntze = *Trichloris* E. Fourn. ex Benth.

From the Greek *leptos* “slender” and the genus *Chloris* Swartz.

Chloridoideae, Cynodonteae, Chloridinae, see *Nova Genera et Species Plantarum seu Prodrromus* 1, 25. 1788, *Variedades de Ciencias, Literatura y Artes* 2(4): 143. 1805, *Journal of the Linnean Society, Botany* 19: 102. 1881, *Mexicanas Plantas* 2: 142. 1886, *Die Natürlichen Pflanzenfamilien* 2(2): 59. 1887, *Revisio Generum Plantarum* 2: 771. 1891 and *Division of Botany, Circular (United States Department of Agriculture)* 32: 7. 1901, *U.S. Dept. Agric. Bull.* 772: 190. 1920, Adolf Pascher (1881-1945), *Die Süßwasser-Flora Deutschlands, Österreichs und der Schweiz* 4: 88, 103. 1927, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Flora Mesoamericana* 6: 287-289. 1994, *Flora of Ecuador* 68: 105-106. 2001, *Contributions from the United States National Herbarium* 41: 39-52, 222-223. 2001.

Leptocoryphium Nees = *Anthaenantia* P. Beauv., *Anthenantia* P. Beauv.

From the Greek *leptos* “slender” and *koryphe* “a summit, hilltop.”

One species, South and Central America, West Indies, the Caribbean. Panicoideae, Panicodae, Paniceae, Paspalinae, perennial, herbaceous, unbranched, bulbous, erect, tufted, leaves basal, auricles absent, ligule a fringed membrane, leaf blades linear or filiform, plants bisexual, open inflorescence paniculate, erect panicle with short branches filiform, spikelets lanceolate and villous, 2-flowered, 1 glume per spikelet, lower glume absent, lemma margins gaping, upper lemma hyaline at the tip, palea 2-nerved, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 reddish stigmas, open habitats, open grassland, savannah and burned savannah, damp places, type *Leptocoryphium lanatum* (Kunth) Nees, see *Essai d'une Nouvelle Agrostographie* 48, 151, t. 10, f. 7. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 83-85. 1829, *Révision des Graminées* 1: 28. 1829, *Synopsis Plantarum Glumacearum* 1: 34. 1855 [1853], *Botanische Zeitung. Berlin* 19(43): 314. 1861, *Anales de Sociedad Científica Argentina* 16: 102. 1883 and *N. Amer. Fl.* 17: 146. 1912, *Blumea* 21(1): 49. 1973, *Flora Novogaliciana* 14: 218-220, f. 15. 1983, *Flora Mesoamericana* 6: 371. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Acta Botánica Mexicana* 51: 62. 2000, *Contributions from the United States National Herbarium* 46: 65-66. 2003.

Species

L. lanatum (Kunth) Nees (*Anthaenantia lanata* (Kunth) Benth.; *Anthaenantia lanata* var. *mollis* (Nees) Arechav.; *Anthaenantia lanatum* (Kunth) Benth.; *Anthenantia lanata* (Kunth) Benth.; *Leptocoryphium lanatum* var. *genuinum* Döll; *Leptocoryphium lanatum* var. *molle* (Nees) Döll; *Leptocoryphium molle* Nees; *Milium juncooides* Speng.; *Milium molle* (Nees) Kunth; *Milium lanatum* (Kunth) Roem. & Schult.; *Panicum fusciflorum* Steud.; *Paspalum lanatum* Kunth)

Mexico to Argentina. Perennial, caespitose, erect, tuberous, spikelets pedicellate and flattened, upper glume lanceolate, lower lemma lanceolate, palea keel-less, medicinal, damp places, open savannah, see *Nova Genera et Species Plantarum* 1: 94, t. 29. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 322. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 84. 1829, *Révision des Graminées* 1: 28. 1829, *Synopsis Plantarum Glumacearum* 1: 93. 1854, *Flora Brasiliensis* 2(2): 121. 1877, *Journal of the Linnean Society, Botany* 19: 39. 1881, *Anales de Sociedad Científica Argentina* 16: 105 (or 126). 1883, *Anales del Museo Nacional de Montevideo* 1: 96. 1894.

in Nicaragua: walang

Leptoloma Chase = *Digitaria* Haller

Greek *leptos* “slender, thin, narrow” and *loma* “border,” referring to the margins of the lemma.

One or 0 species, North America. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Digitariinae, perennial, herbaceous, rhizomatous, caespitose, knotty base, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets pedicellate, 1 glume per spikelet or, palea 2-nerved, 2 lodicules, 3 stamens, ovary glabrous, 2 stigmas, grassland, sometimes referred to *Digitaria*, type *Leptoloma cognata* (also spelled *cognatum*) (Schult.) Chase, see *Species Plantarum* 1: 55. 1753, *Enumeratio Methodica Plantarum* 207. 1759, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Mantissa* 2: 235. 1824, *De Graminibus Paniceis* 48, 76. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 20, 85, 87. 1829, *A Manual of the Botany of the Northern United States* 611. 1848, *Flora Australiensis: A Description ...* 7: 464. 1878 and *Flora Pyrenaea ...* 4: 256. 1901, *Proceedings of the Biological Society of Washington* 19(34): 191-192. 1906, *Notulae Systematicae. Herbarium du Museum de Paris* 2: 216. 1912, *Contributions from the Texas Research Foundation, Botanical Studies* 1(1): 1. 1950, *The Southwestern Naturalist* 15(3): 391. 1971, *Contributions from the United States National Herbarium* 46: 193-213, 284. 2003.

Leptophyllochloa C.E. Calderón = *Koeleria* Pers.

From the Greek *leptophyllos* “with thin leaves” and *chloe*, *chloa* “grass.”

One species, Argentina, Chile. Pooideae, Poaceae, Aveninae, type *Leptophyllochloa micrathera* (E. Desv.) C.E. Calderón, see *Syn. Pl.* 1: 97. 1805, *Flora Chilena* 6: 352. 1854 and *Flora Patagónica* 3: 69-70. 1978, *Contributions from the United States National Herbarium* 48: 409-419, 421. 2003.

Species

L. micrathera (E. Desv.) C.E. Calderón (*Koeleria cristata* Pers.; *Koeleria micrathera* (E. Desv.) Griseb.; *Koeleria philippiana* E. Desv.; *Leptophyllochloa micrathera* (E. Desv.) C.E. Calderón ex Nicora; *Trisetum aereanthum* Phil.; *Trisetum araeanthum* Phil.; *Trisetum brachyatherum* Phil.; *Trisetum depauperatum* Phil.; *Trisetum laxiflorum* Phil.; *Trisetum laxum* Phil.; *Trisetum micratherum* E. Desv.; *Trisetum nemorosum* Phil.)

South America. Shortly awned, lemma 3-nerved, see *Flora Chilena* 6: 352-353. 1854, *Linnaea* 33(3-4): 291. 1864,

Anales de la Universidad de Chile 43: 566-568. 1873, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 251. 1874, *Symbolae ad Floram Argentinam. Zweite ...* 292. 1879 [also in *Abh. Königl. Ges. Wiss. Göttingen Phys. Cl.* 24(1): 1-345. 1879], *Anales de la Universidad de Chile* 94: 26, 28. 1896 and *Bibl. Bot.* 65: 125. 1907, *Flora Patagónica* 3: 70. 1978, *Parodiana* 5(2): 341-345. 1989.

Leptopogon Roberty = *Andropogon* L.

From the Greek *leptos* “thin, slender, small” and *pogon* “beard.”

Panicoideae, Andropogoneae, Andropogoninae, see *Species Plantarum* 2: 1045-1046. 1753 and *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 193. 1960, *Fl. Trop. E. Afr. Gramineae* 770. 1982, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 46: 20-64, 284. 2003.

Leptopyrum Raf. = *Leptopyrum* Rchb. (Ranunculaceae)

Greek *leptos* and *pyros* “wheat.”

Pooideae, see C.S. Rafinesque, *Medical Repository* 5: 351. 1808, *Flora Germanica Excursoria* 747. 1832, *Genera Graminum* 376. 1986.

Leptosaccharum (Hackel) A. Camus = *Eriochrysis* P. Beauv.

From the Greek *leptos* “thin, slender, small” plus *Saccharum* L.

One species, Paraguay, Brazil. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, *Saccharum* subg. *Leptosaccharum* Hack., perennial, herbaceous, unbranched, caespitose, leaves basal, auricles absent, ligule fringed, plants bisexual, contracted inflorescence paniculate, spikelets solitary and hairy, 1 glume per spikelet, palea nerveless, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, see *Species Plantarum* 1: 54. 1753, *Essai d'une Nouvelle Agrostographie* 8, t. 4, f. 11. 1812, *Die Natürlichen Pflanzenfamilien* 2(2): 24. 1887, *Monographiae Phanerogamarum* 6: 29. 1889 and *Bulletin de la Société Botanique de France* 70: 736. 1923, *Bulletin of the Botanical Society of Bengal* 8: 143-148. 1954, *Flora Illustrata Catarinense* 1(Gram.): 443-906. 1982, *Contributions from the United States National Herbarium* 46: 239-240, 284. 2003.

Species

L. filiforme (Hack.) A. Camus (*Eriochrysis filiformis* (Hack.) Filg.; *Saccharum filiforme* Hack.)

South America, Paraguay. Upper glume 3-nerved, palea keels lacking, see *Monographiae Phanerogamarum* 6: 29. 1889 and *Bulletin de la Société Botanique de France* 70: 737. 1923, *Novon* 7(3): 231, f. 1. 1997.

Leptostachys G. Meyer = *Leptochloa* P. Beauv.

From the Greek *leptos* “thin, slender” and *stachys* “a spike.”

Chloridoideae, Cynodonteae, type *Leptostachys virgata* (L.) G. Mey., see *Systema Naturae, Editio Decima* 876. 1759, *Essai d'une nouvelle Agrostographie* 71, 80-81, 84, 160-161, 176, pl. 15-17, f. 1, 3, 9. 1812, *The Genera of North American Plants* 1: 76. 1818, *Primitiae Florae Essequiboensis* ... 73-74. 1818, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *A Manual of the Botany of the Northern United States* 588. 1848, *Synopsis Plantarum Glumacearum* 1: 210, 287. 1854 [1855], *Anales de la Universidad de Chile* 36: 211. 1870, *Nomencl. Bot.* 2: 554. 1873 and *Lexikon Generum Phanerogamarum* 169. 1903, *Ill. Fl. North. U.S. Canada*, edition 2, 229. 1919, *Contributions from the United States National Herbarium* 24(6): 180, 187. 1925, *Revista Sudamericana de Botánica* 6(5-6): 145, f. 10. 1940, *Botaniska Notiser* 113: 291. 1960, *Flora of the Netherlands Antilles* 1: 121-203. 1963, S.T. Blake, “*Plinthanthesis* and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae).” *Contributions from the Queensland Herbarium* 14: 3. 1972, *Brittonia* 31: 399-404. 1979, *Kew Bulletin* 37: 133-162. 1982, *Los Generos de Gramineas de America Austral.* 1987, *American Journal of Botany* 81: 622-629. 1994, *Taxon* 43: 123. 1994, H.P. Linder & G.A. Verboom, “Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex.” *Telopea* 6(4): 597-627. 1996, H.P. Linder, “Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae).” *Telopea* 7(3): 269-274. 1997, N. Snow, “Nomenclatural changes in *Leptochloa* P. Beauv. sensu lato (Poaceae, Chloridoideae).” *Novon* 8: 78. 1998, *Contributions from the United States National Herbarium* 41: 130-137. 2001.

Leptothrium Kunth = *Isorchilus* R. Br. (Orchidaceae) *Latipes* Kunth, *Leptothrium* Kunth (Orchidaceae)

From the Greek *leptothrios*, *leptothrion* “with thin, fine leaves,” *thrion* “fig-leaf, leaf, petal.”

About 1-2 species, Senegal, Pakistan, the Caribbean. Chloridoideae, Cynodonteae, Zoysiinae, perennial, stemmy,

fibrous, spreading at base, herbaceous, branched, unarmed, caespitose, auricles absent, ligule a fringe of hairs, plants bisexual, inflorescence a false spike or an open false raceme, peduncle bearing a pair of spikelets, elongated false racemes, warty spikelets, florets curved downward, peduncles cuneate and ciliate with hooked hairs on the margins, 2 glumes unequal to very unequal and longer than the floret, lower glume modified and recurved, upper glume flattened and enfolding the floret, lemma 1-nerved and acute, palea reduced, 2 free and fleshy or membranous lodicules, stamens 3, ovary glabrous, 2 stigmas, grains consumed as food, fodder, palatable, food for camels, native pasture species, colonizer of bare ground, open areas, arid soils, arid climates, open well-drained habitats, on sandy desert soils, coastal dunes, stabilized dunes, open seashore, open bush and grassland, dry bushland, type *Leptothrium rigidum* Kunth, see *Hortus Kewensis; or, a Catalogue ... The Second Edition* 5: 209. 1813, *Nova Genera et Species Plantarum* 1: 340. 1815 [1816], *Révision des Graminées* 1: 53, 156, 261. 1829 and *Plantae Novae vel Minus Notae ex Aethiopia* 22. 1928, *Webbia* 56(1): 175-179. 2001, *Contributions from the United States National Herbarium* 41: 130, 137. 2001.

Species***L. rigidum* Kunth**

South America, the Caribbean. Perennial, spikelets solitary, lower glume flattened and recurving, sandy dunes, see *Révision des Graminées* 1: 53, 156, 261. 1829.

***L. senegalense* (Kunth) W.D. Clayton (also spelled *senegalensis*) (*Lappago latipes* Steud.; *Latipes inermis* Chiov.; *Latipes senegalensis* Kunth)**

Tropical Africa, Somalia, south-western Asia, Pakistan. Perennial bunchgrass, short-lived, densely tufted, mat-forming, slender, fibrous, erect, wiry, ligule a ring of hairs, leaves flat and narrow, inflorescence linear, spikelets paired and awnless, lower glume a flat recurved tail, glumes more or less prickly, asymmetric spikelet and glumes, seeds eaten by humans, excellent drought tolerance, valuable forage, palatable, cultivated fodder, native pasture species, used for reseeding denuded ground, on open sandy areas, open bushland, sand dunes, sandy desert soil, bare ground, arid soils, coastal dunes, stony plains, sandy thickets, orange soil, red or orange sand, see *Révision des Graminées* 1: 53, 261. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 171. 1833, *Synopsis Plantarum Glumacearum* 1: 112. 1854 and *Plantae Novae vel Minus Notae ex Aethiopia* 22. 1928, *Kew Bulletin* 27(1): 151. 1972, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Webbia* 56(1): 175-179. 2001.

in English: hook grass

in Arabic: askanit, tigurit

in Mali: ainguiem, askanit, firri

in Mauritania: tigurit, tугurit, tougourit

in Niger: mâ-tittin

in Somalia: rarmay, chediore, chebiore

Leptothrix (Dumort.) Dumort. =
Hordelymus (Jess.) Jess. ex Harz, *Hordelymus*
(Jessen) Jessen in Harz, *Hordelymus* (Jessen)
Jessen, *Hordelymus* (Jessen) Harz

From the Greek *leptos* "fine, small, thin" and *thrix, trichos* "hair," *leptothrix* "with fine hair."

Elymus sect. *Leptothrix* Dumort., type *Elymus europaeus* L., see *Species Plantarum* 1: 84. 1753, *Systema Naturae*, edition 12 2: 101. 1767, *Beschreibung der Gräser* 2: 15, t. 24, f. 1. 1772, *Observations sur les Graminées de la Flore Belgique* 92. 1823 [1824], *Deutschlands Gräser und Getreidearten ...* 202. Leipzig 1863, *Bulletin de la Société Botanique de Belgique* 7: 66. 1868, *Landwirthschaftliche Samenkunde* 2: 1147. 1885 and *Taxon* 49(2): 250. 2000.

Lepturella Stapf = *Oropetium* Trin.

The diminutive of the genus *Lepturus*.

One species, West tropical Africa. Chloridoideae, Eragrostideae, annual, herbaceous, unarmed, caespitose, dwarf, short, branched, small, auricles absent, ligule membranous, plants bisexual, inflorescence spicate, 1 or 2 glumes per spikelet, lower glume 0-nerved, upper glume 1-nerved, palea 2-nerved 2-keeled, 2 free lodicules, 3 stamens, ovary glabrous, 2 dark stigmas, open habitats, see *Fundamenta Agrostographiae* 98, t. 3. 1820 and *Bulletin de la Société Botanique de France: Mémoires* 8(d): 222. 1912, *Hooker's Icones Plantarum* 34: t. 3341. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 14. 1945.

Species

L. aristata Stapf (*Oropetium aristatum* (Stapf) Pilg.)

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 14. 1947.

Lepturidium Hitchc. & Ekman =
Brachyachne (Benth. & Hook.f.) Stapf

Referring to the genus *Lepturus*.

One species, Cuba. Chloridoideae, Cynodonteae, perennial, rare, unbranched, slender, herbaceous, wiry, decumbent, caespitose, auricles absent, hairy leaf sheaths overlapping, ligule fringed, plants presumably dioecious, inflorescence racemose, raceme single, appressed and solitary spikelets overlapping, spikelets laterally compressed 2-flowered, glumes narrow subequal, lower glume keeled, upper glume rounded enclosing florets, male spikelets with 2 glumes,

lemma 2-denticulate mucronulate, open areas, white sand, salty flats, sometimes referred to *Brachyachne*, type *Lepturidium insulare* Hitchc. & Ekman, see *Genera Plantarum* 3: 1164. 1883 and *Hooker's Icones Plantarum* 31: t. 3099. 1922, *Manual of the Grasses of the West Indies* 111. 1936, L. Catus Guerra "Las gramíneas (Poaceae) de Cuba, I." *Fontqueria* 46: 1-259. 1997, *Contributions from the United States National Herbarium* 41: 137. 2001.

Species

L. insulare Hitchc. & Ekman

The Caribbean. Saline flats, see *Manual of the Grasses of the West Indies* 111, f. 71. 1936.

Lepturopetium Morat

Related grass genera *Lepturus* and *Oropetium*.

Two species, Pacific, Polynesia, New Caledonia. Chloridoideae, perennial, herbaceous, unarmed, branched, decumbent, wiry, slender, auricles absent, linear leaves, ligule a fringed membrane, plants bisexual, inflorescence spicate, 1-3 racemes digitate, spikelets solitary and sessile with 1 fertile floret and a lanceolate sterile lemma, spikelets laterally compressed and partly sunk, 2 glumes unequal and dissimilar, upper glume 5-7-nerved, fertile lemma keeled and awned, palea 2-nerved 2-keeled, lodicules present, 3 stamens, ovary glabrous, 2 stigmas, open areas, coastal, similar to *Lepturus*, related to *Austrochloris*, type *Lepturopetium kuniense* Morat, see *Fundamenta Agrostographiae* 98, t. 3. 1820 and *Bulletin de la Société Botanique de France: Mémoires* 8(d): 222. 1912, *Hooker's Icones Plantarum* 34: t. 3341. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 14. 1945, *Adansonia: recueil périodique d'observations botanique, n.s.* 20(4): 377-378, t. 1. 1981, *Micronesica* 18(2): 45-102. 1982 [1984].

Species

L. kuniense Morat

Pacific. Single spike, see *Adansonia* 20(4): 378, t. 1. 1981.

L. marshallense Fosberg & Sacht

Marshall Islands. See *Micronesica* 18(2): 72. 1982 [1984].

Lepturopsis Steudel = *Rhytachne* Desv. ex Ham., *Rhytachne* Desv.

Resembling *Lepturus* R. Br.

Panicoideae, Andropogoneae, Rottboelliinae, type *Lepturopsis triaristata* Steud., see *Prodromus Plantarum Indiae Occidentalis* xiv, 11-12. 1825, *Synopsis Plantarum Glumacearum* 1: 357-358. 1854 and *Flora of Tropical Africa* 9: 85. 1917, *Bulletin de l'Institut Française d'Afrique Noire*

22: 108. 1960, *Boissiera* 9: 71. 1960, *Kew Bulletin* 32(4): 767-771. 1978, *Contributions from the United States National Herbarium* 46: 284, 545-546. 2003.

Lepturus R. Br. = *Ischnurus* Balf.f., *Lepiurus* Dumort., *Leptocercus* Raf., *Monerma* P. Beauv., *Parapholis* C.E. Hubb.

Slender-tailed, from the Greek *leptos* "slender" and *oura* "tail," referring to the slender inflorescences or to the linear lanceolate glume; see Robert Brown, *Prodromus florum Novae Hollandiae*. 207. London 1810.

A genus of about 8-14 species, Old World tropics, shores of Indian and Pacific Oceans. Chloridoideae, Leptureae, or Cynodonteae, perennial or annual, herbaceous, tufted, decumbent, forming mats, often stoloniferous, internodes solid, auricles absent, ligule very short unfringed membrane or membranous with a ciliate margin, leaf blades flat or enfolded, leaves finely acute to pungent, plants bisexual, inflorescence a single spike or a single cylindrical bilateral raceme, spike terminal on culms, spikelets deeply embedded within racemes, spikelets solitary inserted in cavities along the rachis, floret perfect 1 rarely 2, terminal spikelet falling with the uppermost lateral spikelet, glumes very unequal 1 per spikelet or 2, upper glume appressed to the axis and covering the embedded spikelet, lower glume usually lacking or reduced to a scale, lemmas awnless and membranous, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, sandbinder, open habitats, coastal, sandy beaches, seashores, resembling *Hainardia*, related to *Oropetium* and *Lepturopetium*, type *Lepturus repens* (G. Forst.) R. Br., see *Florulae Insularum Australium Prodromus* 9. Goettingen 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 204. 1791, *Species Plantarum. Editio quarta* 1: 464. 1797, *Prodromus Florae Novae Hollandiae* 207. 1810, *Essai d'une Nouvelle Agrostographie* 116-117, 168, 177, t. 20, f. 10. 1812, *The Genera of North American Plants* 1: 81. 1818, *American Monthly Magazine and Critical Review* 4: 190. 1819, *Fundamenta Agrostographiae* 98, 123, 131, t. 3, 8. 1820, *Observations sur les Graminées de la Flore Belgique* 90, 140, 146. Jul-Sep 1824, *Révision des Graminées* 1: 151. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 463. 1833, *Miscellanea Botanica* 1: 10, t. 1, f. 3-4. 1842, *Flora Rossica* 4(13): 325. 1852, *Diagnoses plantarum orientaliarum novarum* 2(13): 71. 1854, *Synopsis Plantarum Glumacearum* 1: 357. 1854, *Flora* 38: 332. 1855, *Proceedings of the American Academy of Arts and Sciences* 7: 401. 1868, *Proceedings of the Royal Society of Edinburgh* 12: 98. 1883, *Flora Orientalis* 5: 685. 1884, *Die Natürlichen Pflanzenfamilien* 2(2): 78. 1887 and *List of British Plants* 85. 1908, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 60: 191. 1910, *Bulletin de la Société Botanique de France: Mémoires* 8(d):

222. 1912, *Ann. Soc. Linn. Lyon* 69: 87-88. 1923, *Bibliotheca Botanica* 85: 412. 1915, *Consp. Gram. Turkest.* 81. 1923, *Papers of the Michigan Academy of Science, Arts and Letters* 1: 89. 1923, *Contr. U.S. Natl. Herb.* 24: 201. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 11. 1930, *Icones Plantarum* 33(t): 3233. 1934, *Hooker's Icones Plantarum* 34: t. 3341. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 14. 1945, *Blumea, Supplement* 3: 14. 1946, *Bulletin de la Société Botanique de France* 93: 86-87. 1946, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 76: 251-257, 268-269. 1954, *Occasional Papers of the Bernice Pauahi Bishop Museum* 21: 285-294. 1955, *Bulletin de la Société Botanique de France* 102: 120-122. 1955, *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 29: 275. 1957, *Evolution* 13: 418-420. 1959, H. Runemark, "A revision of *Parapholis* and *Monerma* (Gramineae) in the Mediterranean." in *Bot. Not.* 115: 1-17. 1962, *Flora of Tropical East Africa. Gramineae, Part 2*: 389. 1974, *Adansonia: recueil périodique d'observations botanique, n.s.* 20(4): 377-378, t. 1. 1981, *Kew Bulletin* 37(3): 417-420. 1982, *Micronesica* 18(2): 45-102. 1982 [1984], *Kew Bulletin* 47(4): 655-664. 1992, *Fl. Kimberley Region* 1186, 1188. 1992, *Nord. J. Bot.* 13: 489. 1993, *Feddes Repert.* 106: 169-171. 1995, *Harvard Pap. Bot.* 8: 63-66. 1996, *Fl. Males. Bull.* 12: 233. 1999, *Grasses: Systematics and Evolution*: 173-179, 180-183. 2000, *Blumea* 47: 385-389. 2002, *Contributions from the United States National Herbarium* 46: 284. 2003, *Contributions from the United States National Herbarium* 48: 421-422, 453, 477. 2003, *Flora of Australia* 44B: 418-422. 2005, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

L. anadabolavensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 102: 122. 1955.

L. calcareus Cope

Socotra. See *Kew Bulletin* 47(4): 655. 1992.

L. cinereus Burcham

Solomon Islands. See *Contributions from the United States National Herbarium* 30: 424. 1948.

L. copeanus B.K. Simon

Australia. Annual, see *Fl. Australia* 44B: 460. 2005.

L. gasparricensis Fosberg

Marshall Islands. See *Occasional Papers of the Bernice Pauahi Bishop Museum* 21(14): 293. 1955.

L. geminatus C.E. Hubb.

Australia, Queensland. Rare, perennial, short spikes, spikelets opposite, 1 bisexual floret, upper glume acuminate, sand dunes.

L. hildebrandtii I. Hansen & Potztl

Pacific. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 76: 269. 1954.

L. minutus B.K. Simon

Australia. Annual, small, decumbent, see *Flora of Australia* 44B: 461. 2005.

L. pilgerianus I. Hansen & Potztl

Asia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 76: 268. 1954.

L. pulchellus (Balf.f.) Clayton (*Ischnurus pulchellus* Balf.f.)

Africa. See *Proceedings of the Royal Society of Edinburgh* 12: 98. 1883 and *Kew Bulletin* 37(3): 420. 1982.

L. radicans (Steud.) A. Camus (*Monerma radicans* (Steud.) Hack.; *Ophiuros radicans* Steud.)

Tropical East Africa, Madagascar. Annual or short-lived perennial, branched to strongly branched, thin, tough, stoloniferous, smooth, creeping, prostrate, decumbent, erect, mat-forming, leaf blades linear-lanceolate to long-acuminate, leaf sheaths papery and glabrous, auricles glabrous, leaves finely pointed, spikes usually shortly exserted, spikelets lanceolate, usually 1-flowered, lower glume absent, upper glume acuminate to caudate, a good lawn grass, a weed of lawns and orchards, disturbed roadsides, sands, grassland near the sea, light shade, see *Synopsis Plantarum Glumacearum* 1: 430. 1855, *Monographiae Phanerogamarum* 6: 320. 1889 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 69: 87. 1923, *Grasses of Ceylon* 62, pl. 7. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 585. 1960.

L. repens (G. Forst.) R. Br. (*Lepturus aciculatus* Steud.; *Lepturus repens* R. Br.; *Monerma repens* (G. Forst.) P. Beauv.; *Rottboellia repens* G. Forst.)

Eastern Africa, Southeast Asia, Sri Lanka, northern Australia, Polynesia. Perennial beach grass, quite variable, strongly branched, smooth, tufted, prostrate or decumbent, creeping, sprawling, spreading, running, stoloniferous with branched stolons, frequently rooting at the nodes, mat-forming, auricles glabrous, leaf sheaths glossy and loose, ligule tiny and membranous with a fringe of hairs, leaf blades lanceolate and stiff, leaves finely pointed, slender terminal spikes narrow and cylindrical, spikes prominently exserted, spikelets often 2-flowered, spikelets solitary embedded in cavities, lower glume absent, upper glume awned and linear-lanceolate, lemma and palea hyaline, useful for erosion control, coastal sandbinder, usually found in salt-spray zone, seashores, coral sands, sand dunes, rocky and sandy shores, limestone rocks, along roadsides, savannahs, see *Florulae Insularum Australium Prodrromus* 9. Goettingen 1786, *Prodromus Florae Novae Hollandiae* 207. 1810, *Essai d'une Nouvelle Agrostographie* 117, 168, 177. 1812 and *Handb. Fl. Ceylon* 5: 307. 1900, *Grasses of Ceylon* 62.

1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 25. 1959, *Grasses of Burma ...* 585. 1960, Naomi Kingston, Steve Waldren & Una Bradley, "The phytogeographical affinities of the Pitcairn Islands: a model for south-eastern Polynesia?" *Journal of Biogeography* 30(9): 1311-1328. Sep 2003.

in English: creeping lawngrass, creeping sand grass, beach grass, bunch grass, Pacific Island thintail

in Guam: lasaga

L. repens (G. Forst.) R. Br. var. **cinereus** (Burcham) Fosberg (*Lepturus cinereus* Burcham)

New Zealand, islands of the Pacific Ocean. Semiprostrate, creeping, perennial, rigid, rooting at the nodes, distally ascending, ligule membranous and minutely ciliate, leaf sheath coriaceous, leaf blades linear-lanceolate, spike narrow-cylindrical, single floret, spikelets embedded in cavity of the rachis, glumes lanceolate and coriaceous, lower glume absent or present on uppermost spikelet, lodicules oblong, near upper tide limit, coral ledge, see *Prodromus Florae Novae Hollandiae* 207. 1810 and *Contributions from the United States National Herbarium* 30: 424. 1948, *Occasional Papers of the Bernice Pauahi Bishop Museum* 15(3): 292. 1955, *N.Z. DSIR Bull.* 219: 171. 1977, *New Zealand Journal of Botany* 34: 447-461. 1996.

L. repens (G. Forst.) R. Br. var. **pubescens** Nowack

New Guinea. Densely pubescent, upper glumes acuminate, found on sandy beaches.

L. repens (G. Forst.) R. Br. var. **repens**

East Africa. Perennial, glabrous, mat-forming, tough, harsh, creeping to erect, rudiment of lower glume, upper glumes 7- to 11-nerved acuminate to long caudate, lemmas sometimes awn-tipped, useful sandbinder, on sandy and rocky seashores.

L. stoddartii Fosberg

Australia. See *Brittonia* 40(1): 53, f. 1. 1988, *Flora of Australia* 44B: 421. 2005.

L. xerophilus Domin

Australia. Perennial, rare, see *Biblioth. Bot.* 20(85): 412. 1915.

Lepyroxis Fourn. = *Muhlenbergia* Schreb., *Polypogon* Desf.

Greek *lepyron* "rind, husk, shell."

Chloridoideae, Cynodonteae, Muhlenbergiinae, see *Mantissa Plantarum* 1: 31. 1767, *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Flora Atlantica* 1: 66-67. 1798 [1800], *De Graminibus unifloris et sesquifloris* 189, 190, 297, t. 5, f. 8. Petropoli 1824, *Mexicanas Plantas* 2: 92. 1886 and *Index Kewensis* 1: 244. 1906, *Ill. Fl. N. U.S.* (edition 2) 1: 184.

1913, *Contributions from the United States National Herbarium* 41: 138, 143-173, 191. 2001.

Lerchenfeldia Schur = *Avenella* (Bluff & Fingerh.) Drejer, *Avenella* Parl., *Deschampsia* P. Beauv.

Named for Josef Radnitzky von Lerchenfeld, 1753-1812.

Pooideae, Poaeae, Agrostidinae, or Pooideae, Poaeae, Airinae, type *Lerchenfeldia flexuosa* (L.) Schur, see *Species Plantarum* 1: 65. 1753, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *A Manual of the Botany of the Northern United States* 605. 1848, *Synopsis Plantarum Glumacearum* 1: 424. 1854, *Enumeratio Plantarum Transsilvaniae* 753. 1866 and *Novosti Sist. Vyss. Rast.* 7: 44, 54. 1970[1971], *Turun yliopiston julkaisuja - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332. 1991, *Flora Mediterranea* 1: 229-236. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *International Organization of Plant Biosystematists Newsletter* 24: 15-19. 1995, *Watsonia* 21: 365-368. 1997, *Contributions from the United States National Herbarium* 48: 139, 245-256, 422. 2003.

Species

L. flexuosa (L.) Schur (*Aira flexuosa* L.; *Avenella flexuosa* (L.) Drejer; *Avenella flexuosa* subsp. *montana* Á. Löve & D. Löve; *Deschampsia flexuosa* (L.) Nees; *Deschampsia flexuosa* (L.) Trin.; *Deschampsia montana* G. Don f.)

Eurasia. See *Species Plantarum* 1: 65. 1753, *Loudon's Hortus Britannicus: A Catalogue ...* 28. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 4,2(1): 9. 1836, S.T.N. Drejer (1813-1842), *Flora Excursoria Hafniensis* 32. Hafniae 1838, *Genera Plantarum Florae Germanicae* 2(1): t. 43. 1843, *Enumeratio Plantarum Transsilvaniae* 753. 1866 and *Acta Horti Gothoburgensis* 20(4): 120, 128. 1956.

L. flexuosa (L.) Schur subsp. *flexuosa* Tzvelev

Russia. See *Enumeratio Plantarum Transsilvaniae* 753. 1866.

L. flexuosa (L.) Schur subsp. *montana* Tzvelev

Russia. See *Enumeratio Plantarum Transsilvaniae* 753. 1866 and *Novosti Sist. Vyss. Rast.* 7: 44, 54. 1970[1971].

L. foliosa (Hack.) Tzvelev (*Deschampsia foliosa* Hack.)

See *Catalogue Raisonné des Graminées du Portugal* 33. 1880 and *Novosti Sist. Vyss. Rast.* 7: 44. 1971[1972].

L. montana (Steud.) Tzvelev (*Aira vestita* Steud.; *Lerchenfeldia montana* A.P. Khokhr.)

Russia. See *Synopsis Plantarum Glumacearum* 1: 424. 1854 and *Novosti Sist. Vyss. Rast.* 7: 44, 54. 1970[1971].

Lesourdia E. Fourn. = *Scleropogon* Phil.

Chloridoideae, Cynodonteae, see *Anales de la Universidad de Chile* 36: 205-206. 1870, *Bulletin de la Société Botanique de France* 27: 102, t. 3-4, f. 12. 1880, *Proceedings of the American Academy of Arts and Sciences* 18: 181. 1883 and *Fl. Novo-Galiciana* 14: 354. 1983, *Contributions from the United States National Herbarium* 41: 138, 194. 2001.

Leucophrys Rendle = *Brachiaria* (Trin.) Griseb.

From the Greek *leukophrys* "white-browed," *ophrys* "brow, eyebrow."

One species, tropical and southern Africa, Namibia, South-west Africa. Panicoideae, Panicodae, Paniceae, type *Leucophrys mesocoma* (Nees) Rendle, perennial, stiff, much-branched, geniculate, woody, bushy, persistent, nodes swollen, auricles absent, leaves needle-like to spiny, leaf sheaths open, ligule a fringe of hairs, plants bisexual, contracted inflorescence paniculate, spikelets pedicellate paired or solitary, proximal incomplete florets male, 2 glumes pilose to villous, hairs in the middle of the upper glume, palea 2-nerved 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, palatable, pasture, utilized by animals when young, open habitats, desert or semidesert, sandy stream beds, dry water courses, sometimes referred to *Brachiaria* sensu lato, sometimes included in *Brachiaria*, type *Leucophrys mesocoma* (Nees) Rendle, see *De Graminibus Paniceis* 51, 125, 266. 1826, *Flora Rossica* 4(14): 469. 1853, L.K.G. Pfeiffer (1805-1877), *Nomenclator Botanicus* 1: 453. Cassellis [Kassel] 1872, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2: 171, 193-194. 1899 and *Flora of Tropical Africa* 9: 504. 1919, *Bulletin of Miscellaneous Information Kew* 1923(9): 315. 1923, *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Mitteilungen der Botanischen Staatssammlung München* 8: 147-163. 1970, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Bothalia* 18: 119-122. 1988.

Species

L. mesocoma (Nees) Rendle (*Brachiaria mesocoma* (Nees) A. Camus; *Panicum mesocomum* Nees)

South Africa, Angola. Perennial, coarse, tufted, geniculate, profusely branched from the swollen nodes, shrub-like, woody, brittle, leaf blades expanded or rolled, glaucous to blue-green, leaves stiff and brittle, ligule a fringe of short silky hairs, leaf sheaths papery and densely glandular,

contracted and interrupted panicle, spikelets hairy, lower glume 3-nerved, upper glume 5- to 7-nerved, upper glume and lemma of lower floret hairy or fringed, palea indurated, palatable, in sandy riverbeds, see *Florae Africae Australioris Illustrationes Monographicae* 34. 1841, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 194. 1899 and *Bulletin de la Société Botanique de France* 77: 640. 1930.

in South Africa: withaargras, weißbärgengras

Leucopoa Griseb. = *Festuca* L.,
Hesperochloa (Piper) Rydb., *Leiopoa* Ohwi,
Wasatchia M.E. Jones

From the Greek *leukos* “white” and *poa* “grass,” referring to the appearance of the grass.

About 1-6 species, northern America, Asia, Himalayas. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, perennial, herbaceous, tufted, rhizomatous, auricles absent, ligule an unfringed membrane, narrow leaves, plants bisexual, inflorescence a panicle open or contracted, spikelets pedicellate, 2 glumes unequal, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, often referred to *Festuca*, type *Leucopoa sibirica* Griseb. (*Leucopoa sibirica* (Turcz. & Trin.) Griseb. ex Ledeb.), nom. illeg. superfl. for *Poa albida* Turcz. & Trin., see *Species Plantarum* 1: 73-74. 1753, *Flora Rossica* 4(13): 383, 388. 1852, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 387. 1871, *Bulletin Colorado State University Experiment Station* 12: 36. 1890 and *Feddes Repertorium* 2(18): 70-71. 1906, *Contributions from the United States National Herbarium* 10: 10. 1906, *Botanical Magazine* 24: 112. 1910, *Contributions to Western Botany* 14: 16. 1912, *Bulletin of the Torrey Botanical Club* 39: 106. 1912, *Ill. Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Acta Phytotaxonomica et Geobotanica* 1: 66-67. 1932, *Acta Phytotaxonomica et Geobotanica* 4: 33. 1935, *Bot. Zhurn.* 1253. 1971, *Watsonia* 16: 300. 1987, *Grasses of Japan and its Neighboring Regions* 508. 1987, *Canadian Journal of Botany* 70: 2415-2429. 1992, *American Journal of Botany* 82(10): 1287-1299. 1995, *Grasses: Systematics and Evolution* 61-74. 2000, *Systematic Botany* 27(2): 241-251. 2002, *Contributions from the United States National Herbarium* 48: 383, 421, 422, 694. 2003, *Journal of Biogeography* 30(5): 649-685. May 2003.

Species

L. kingii (S. Watson) W.A. Weber (*Festuca confinis* Vasey; *Festuca confinis* subsp. *confinis*; *Festuca kingii* (S. Watson) Cassidy; *Festuca kingii* (S. Watson) Scribn.; *Festuca kingii* var. *kingii*; *Festuca watsonii* Nash; *Hesperochloa kingii* (S. Watson) Rydb.; *Hesperochloa kingii* var. *kingii*; *Poa kingii* S. Watson; *Wasatchia kingii* (S. Watson) M.E. Jones)

U.S., Nevada. Perennial, glumes keeled, lower glume 1-nerved, upper glume 3-nerved, ovary without the appendage, see *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 387. 1871, *Bulletin of the Torrey Botanical Club* 11: 126. 1884, *Bulletin Colorado State University Experiment Station* 12: 36. 1890, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 36. 1897 and *A Manual of the Botany of the Northern United States* 148. 1901, *Bulletin of the Torrey Botanical Club* 39(3): 106. 1912, *Ill. Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Contributions to Western Botany* 14: 16. 1912, *University of Colorado Studies: Series in Biology* 23: 2. 1966, *Watsonia* 16: 300. 1987.

in English: spike fescue

x *Leymopyron* Tzvelev

Agropyron x *Leymus*.

See *Flora Regionis Boreali-Orientalis Territoriae Europaeae URSS* 1: 121. 1974 [*Fl. Sev.-Vost. Eur. Ch. SSSR.*], *Genera Graminum* 375. 1986.

x *Leymostachys* Tzvelev

Leymus x *Psathyrostachys*.

See *Novosti Sist. Vyssh. Rast.* 10: 59. 1973, *Genera Graminum* 375. 1986.

x *Leymotrigia* Tzvelev

Elytrigia x *Leymus*.

See *Flora Arctica URSS* 2: 250. 1964 [*Arkt. Fl. SSSR.*], *Genera Graminum* 375. 1986.

Leymus Hochst. = *Aneurolepidium* Nevski, *Anisopyrum* (Griseb.) Gren. & Duval, *Eremium* Seberg & Linde-Laursen, *Malacurus* Nevski, *Triticum* L.

An anagram of *Elymus* L.

About 30-40 species, Northern Hemisphere temperate, central Asia and North America, Argentina. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, herbaceous, usually glaucous, harsh, unbranched, rhizomatous, turf-forming, auricles present or absent, ligule an unfringed membrane, sheath margins free, leaves pungent and stiff, plants bisexual, inflorescence spicate linear, spikelets 4- or 5-flowered, spikelets paired or in triplets, glumes 2 acute to shortly awned, lemma acute to shortly awned, palea 2-nerved 2-keeled, ciliate lodicules present, 3 stamens, long anthers, ovary hairy, stigmas white, some

useful sand-binders, found in steppes, open habitats, often saline, alkaline or dunes, coastal sand dunes, often littoral or halophytic, type *Leymus arenarius* (L.) Hochst., see *Species Plantarum* 1: 85. 1753, *Reliquiae Haenkeanae* 1(4-5): 265. 1830, *Flora* 31: 118. 1848, *Flora Rossica* 4(13): 343. 1852 and *Nom. Prop. Int. Bot. Congr. Cambridge* (England) 1930: 121. 1929, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 20. 1930, *Acta Inst. Bot. Acad. Sci. URSS*, Ser. I, 1: 14, in obs., 27. 1933, *Flora URSS* 2: 229, 708. 1934, *Novosti Sist. Vyss. Rast.* 6: 21. 1970, *Novosti Sist. Vyss. Rast.* 9: 62. 1972, M.E. Barkworth & R.J. Atkins, "Leymus Hochst. (Gramineae: Triticeae) in North America: taxonomy and distribution." *American Journal of Botany* 71: 609-625. 1984, *Systematic Botany* 9: 279-294. 1984, *Grassland of China* 2: 44-47. 1993, *Plant Systematics and Evolution* 189: 217-231. 1994 [Relationships between species of *Leymus*, *Psathyrostachys* and *Hordeum* (Poaceae, Triticeae) inferred from Southern hybridization of genomic and cloned DNA probes.], *Annals of Botany* 73: 195-203. 1994, *Plant Systematics and Evolution* 197: 225-231. 1995, *Systematic Botany* 21(1): 10-11, f. 4. 1996, Kesara Anamthawat-Jónsson et al., "Molecular variation in *Leymus* species and populations." *Molecular Ecology* 8(2): 309-315. Feb 1999, *Am. J. Bot.* 86: 703-710. 1999, *Am. J. Bot.* 87: 903-907. 2000, Kesara Anamthawat-Jónsson, "Genetic and genomic relationships in *Leymus* Hochst." *Hereditas* 135(2-3): 247-253. Dec 2001, Kesara Anamthawat-Jónsson & Sigrídur K. Bödvarsdóttir, "Genomic and genetic relationships among species of *Leymus* (Poaceae: Triticeae) inferred from 18S-26S ribosomal genes." *Am. J. Bot.* 88: 553-559. 2001, *Am. J. Bot.* 89: 623-631, 1289-1294. 2002, *Contributions from the United States National Herbarium* 48: 110, 310, 422-425, 676-684. 2003, *Am. J. Bot.* 90: 1416-1424. 2003, *Am. J. Bot.* 91: 1022-1035. 2004, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, "The evolution of nuclear genome structure in seed plants." *Am. J. Bot.* 91: 1709-1725. 2004, *Am. J. Bot.* 91: 1789-1801. 2004, *New Phytologist* 161(2): 585-594. Feb 2004, *Journal of Applied Ecology* 41(2): 344-354. Apr 2004, *Grass and Forage Science* 59(4): 412-414. Dec 2004, *Journal of Ecology* 92(6): 1001-1010. Dec 2004, *Functional Ecology* 18(6): 851-860. Dec 2004, *New Phytologist* 165(2): 391-410. Feb 2005, *Grassland Science* 51(1): 33-40. Mar 2005, *Journal of Ecology* 93(2): 441-470. Apr 2005, *Grass and Forage Science* 60(2): 119-127. June 2005.

Species

L. aemulans (Nevski) Tzvelev (*Agropyron aemulans* (Nevski) N.M. Kusn.; *Aneurolepidium aemulans* Nevski; *Elymus aemulans* (Nevski) Nikif.)

Asia. See *Fl. Kazakhst.* 1: 300. 1956, *Hereditas* 121(2): 191-195. Nov 1994.

L. ajanensis (V.N. Vassil.) Tzvelev (*Asperella ajanensis* V.N. Vassil.; *Elymus ajanensis* Roshev. ex Vorosch.; *Elymus*

interior Hultén; *Elymus mollis* subsp. *interior* (Hultén) Bowden; *Leymus interior* (Hultén) Tzvelev; *Leymotrix ajanensis* (V.N. Vassil.) Kharkev. & Prob.; *Leymus mollis* subsp. *interior* (Hultén) Á. Löve & D. Löve; *Leymus mollis* subsp. *interior* (Hultén) Á. Löve)

Asia, Siberia, Russia. See *Flora of Alaska and Neighboring Territories: A Manual of the Vascular Plants* 270. 1942, *Canadian Journal of Botany* 35: 972. 1957, *Flora Arctica URSS* 2: 253. 1964, *Novosti Sist. Vyss. Rast.* 9: 59. 1972, *Botaniska Notiser* 128(4): 503. 1975 [1976], *Bot. Zhurn. (Moscow & Leningrad)* 68(10): 1408. 1983, *Feddes Repertorium* 95(7-8): 477. 1984, *Bot. Zhurn. (Moscow & Leningrad)* 70(1): 126-128. 1985.

L. akmolinensis (Drob.) Tzvelev (*Aneurolepidium akmolinense* (Drob.) Nevski; *Elymus akmolinensis* Drobow; *Leymus paboanus* subsp. *akmolinensis* (Drob.) Tzvelev; *Leymus paboanus* subsp. *korshinskyi* (Korsh.) Tzvelev)

Asia, Russia. Perennial, rhizomatous, more or less caespitose, stiff leaves, useful for erosion control, see *Flora URSS* 2: 708. 1934, *Novosti Sist. Vyss. Rast.* 8: 65-66. 1971, *Grassland of China* 2: 44-47. 1993.

L. alaicus (Korsh.) Tzvelev (*Aneurolepidium alaicum* (Korsh.) Nevski; *Aneurolepidium ugamicum* (Drobow) Nevski; *Elymus alaicus* Korsh.; *Elymus angustiformis* Drob.; *Elymus ugamicus* Drobow; *Leymus angustiformis* (Drob.) Tzvelev; *Leymus ugamicus* (Drobow) Tzvelev)

Asia temperate. Glumes large, lemmas awn-tipped, found in dry hillsides among shrubs, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4(4): 77, 102. 1896 and *Flora URSS* 2: 704. 1934, *Flora Uzbekistanica* 1: 304, 540. 1941, *Novosti Sist. Vyss. Rast.* 10: 50. 1973, *Claves Plantarum Xinjiangensium* 1: 184. 1982.

L. alaicus (Korsh.) Tzvelev subsp. *alaicus* (*Elymus alaicus* Korsh.; *Elymus ugamicus* Drobow)

Asia temperate.

L. alaicus (Korsh.) Tzvelev subsp. *karataviensis* (Roshev.) Tzvelev (*Aneurolepidium karataviense* (Roshev.) Nevski; *Elymus karataviensis* Roshev.; *Leymus karataviensis* (Roshev.) Tzvelev)

Asia temperate. Useful for erosion control, see *Flora URSS* 2: 705. 1934, *Novosti Sist. Vyss. Rast.* 10: 50. 1973, *Grassland of China* 2: 44-47. 1993.

L. alaicus (Korsh.) Tzvelev subsp. *petraeus* (Nevski) Tzvelev (*Aneurolepidium petraeum* Nevski; *Leymus petraeus* (Nevski) Tzvelev)

Russia. See *Novosti Sist. Vyss. Rast.* 10: 50. 1973, *Claves Plantarum Xinjiangensium* 1: 184. 1982.

L. ambiguus (Vasey & Scribn.) D.R. Dewey (*Elymus ambiguus* Vasey & Scribn.; *Elymus ambiguus* var. *ambiguus*; *Elymus villiflorus* Rydb.; *Leymus innovatus* (Beal) Pilger

subsp. *ambiguus* (Vasey & Scribn.) Á. Löve; *Elymus villiflorus* Rydb.)

U.S., Colorado. Perennial, on rocky areas, see *Contributions from the United States National Herbarium* 1(8): 280. 1893 and *Bulletin of the Torrey Botanical Club* 32(11): 609-610. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 6. 1947, *Taxon* 29(1): 168. 1980, *Taxon* 29(1): 168. 1982, *Brittonia* 35: 32. 1983, *American Journal of Botany* 71: 609-625. 1984, *Systematic Botany* 9: 279-294. 1984.

in English: Colorado wildrye

L. angustus (Trin.) Pilg. (*Aneurolepidium angustum* (Trin.) Nevski; *Elymus angustus* Trin.; *Triticum angustum* (Trin.) F. Herm.)

Asia, China, Mongolia, Russia. Perennial, erect, blue to glaucous, strongly rhizomatous, more or less short rhizomes, robust, arched inflorescences, spikes slender and narrow, lemmas pubescent, forage, native pasture, grazed, used for brooms and paper, growing in mountains, dry hillsides, desert flat, low mountains, along railroad tracks, sandy riversides, wet sites, near rivers, low drainage areas, silty clay soils, saline sites, floodplains, steppe and mountain steppe, slopes, irrigation ditches, low places, salt marshes and sandy soils, sandy banks, along dry waterways, along roadsides, salty drainage ditches, salt lakes, dry sandy areas, poorly drained areas, wet saline, heavy soils, heavily grazed areas, meadows, cultivated lands, dry water-drainage areas, see *Flora Altaica* 1: 119. 1829 and *Flora URSS* 2: 700. 1934, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 42. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74(1): 8. 1947.

in English: Altai wildrye

L. angustus (Trin.) Pilg. subsp. *macroantherus* D.F. Cui

Asia, China. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74(1): 8. 1947, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Annals of Botany* 73: 195-203, 471-479. 1994, *Grassland of China* 1995(1): 16-20. 1995, *Bulletin of Botanical Research* 18(2): 148, f. 3. 1998.

L. arenarius (L.) Hochst. (*Elymus arenarius* L.; *Elymus glaucus* Regel; *Triticum arenarium* (L.) F. Herm.)

Eurasia. Perennial, blue to glaucous, tall, stout, rather coarse, erect or spreading, strongly rhizomatous, sod-forming, short ligule truncate, rigid leaves flat or involute during drought, compact spikes, spikelets paired at rachis nodes, glumes equal and finely hairy, fodder, useful sand-binders and for dune and shoreline stabilization, suitable for erosion control, naturalized elsewhere, cultivated in Japan for ropes, mats and paper, growing in rocky seashore, coastal sand dunes, calcareous places, seashore dunes, on gravels, see *Species Plantarum* 1: 83. 1753, *Neue Entdeckungen im*

ganzen Umfang der Pflanzenkunde 2: 72. 1821, *Flora* 31: 118. 1848 and *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 43. 1936, *Bot. Zhurn. (Moscow & Leningrad)* 51: 1107. 1966, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Watsonia* 18: 415-417. 1991, *Annals of Botany* 73: 195-203, 471-479. 1994, *Watsonia* 21: 365-368. 1997, S. Greipsson and H. El-Mayas, "Arbuscular mycorrhizae of *Leymus arenarius* on coastal sands and reclamation sites in Iceland and response to inoculation." *Restoration Ecology* vol. 8, issue 2: 144-150. June 2000.

in English: lyme grass, sea lyme grass, rancheria grass, beach wildrye, European dune grass

L. chinensis (Trin.) Tzvelev (*Agropyron chinense* (Trin.) Ohwi; *Agropyron pseudoagropyrum* (Trin. ex Griseb.) Franch.; *Agropyron pseudoagropyrum* (Trin. ex Griseb.) P. Candargy; *Agropyron turuchanense* Reverd.; *Agropyron uninerve* P. Candargy; *Agropyrum chinense* (Trin.) Ohwi; *Agropyrum pseudoagropyrum* (Trin. ex Griseb.) Franch.; *Aneurolepidium chinense* (Trin.) Kitag.; *Aneurolepidium pseudoagropyrum* (Trin. ex Griseb.) Nevski; *Elymus chinensis* (Trin.) Keng; *Elymus chinensis* (Trin.) T. Koyama, nom. illeg., non *Elymus chinensis* (Trin.) Keng; *Elymus macrourus* subsp. *turuchanensis* (Reverd.) Tzvelev; *Elymus pseudoagropyrum* (Trin. ex Griseb.) Turcz.; *Elymus pseudoagropyrum* (Trin. ex Griseb.) Trin. ex Turcz.; *Elymus turuchanensis* (Reverd.) Czer.; *Leymus pseudoagropyrum* (Trin. ex Griseb.) Tzvelev; *Roegneria turuchanensis* (Reverd.) Nevski; *Triticum chinense* Trin.; *Triticum pseudoagropyrum* Trin. ex Griseb.)

Asia, China, Mongolia, Russia. Perennial, robust, stout, rhizomatous, dense inflorescence, slender and narrow spikes, single spikelets, fodder, growing along roadsides, alluvial soils, disturbed agricultural areas, sandy loams, rocky soils, grass steppe, desert steppe, stabilized sand dunes, coarse gravelly sites, see *Enumeratio Plantarum, quas in China Boreali* 72. 1833, *Flora Rossica* 4(13): 343. 1852, *Bulletin de la Société Impériale des Naturalistes de Moscou* 1: 63. 1856, *Plantae Davidianae ex Sinarum Imperio* 340. 1884, *Nouvelles archives du muséum d'histoire naturelle sér. 2* 7: 150. 1884 and *Archives de Biologie Végétale Pure et Appliquée* 1: 23, 43. 1901, *Flora URSS* 2: 626, 710. 1934, *Acta Phytotaxonomica et Geobotanica* 6(3): 150. 1937, *Report of the Institute of Scientific Research, Manchoukuo* 2: 50, 281. 1938, *Sunyatsenia* 6(1): 66. 1941, *Novosti Sist. Vyss. Rast.* 8: 63. 1971, *Grassland of China* 1: 63-65. 1984, *Grassland of China* 5: 57. 1986, *Grasses of Japan and its Neighboring Regions* 504. 1987, *Acta Phytotaxonomica Sinica* 30(4): 342-345. 1992, *Annals of Botany* 73: 471-479. 1994, *Systematic Botany* 21(2): 3-15. 1996, *Global Ecology and Biogeography* vol. 12, issue 3: 249-259. May 2003 [Climate-driven changes in shoot

density and shoot biomass in *Leymus chinensis* (Poaceae) on the North-east China Transect (NECT)], *Diversity & Distributions* vol. 10, issue 1: 65-73. Jan 2004 [Morphological responses of *Leymus chinensis* (Poaceae) to the large-scale climatic gradient along the North-east China Transect (NECT)], W.D. Zhang, S.Y. Chen, G.S. Liu and C.C. Jan, "Seed-set and pollen-stigma compatibility in *Leymus chinensis*." *Grass and Forage Science* 59(2): 180-185. June 2004, *Grass and Forage Science* 59(2): 191-195. June 2004 [Responses of *Leymus chinensis* (Poaceae) to long-term grazing disturbance in the Songnen grasslands of northeastern China.], *Journal of Agronomy and Crop Science* 191(1): 27-34. Feb 2005, Zhen-Zhu Xu and Guang-Sheng Zhou, "Effects of water stress and nocturnal temperature on carbon allocation in the perennial grass, *Leymus chinensis*." *Physiologia Plantarum* 123(3): 272-280. Mar 2005.

L. cinereus (Scribn. & Merr.) Á. Löve (*Aneurolepidium piperi* (Bowden) B.R. Baum; *Elymus cinereus* Scribn. & Merr.; *Elymus cinereus* var. *cinereus*; *Elymus cinereus* var. *pubens* (Piper) C.L. Hitchc.; *Elymus condensatus* f. *pubens* (Piper) H. St. John; *Elymus condensatus* var. *pubens* Piper; *Elymus piperi* Bowden)

Northern America, Canada, U.S. Perennial, robust, stout, erect, forming large clumps, leaf blades firm and flat, leaf sheaths smooth to densely hairy, fruiting stems stiff and hollow, inflorescence a wheat-like spike, spikelets in clusters of 3 to 5 per node, 2-6 florets per spikelet, forage, barrier, revegetation, stems used to imbricate split cedar-root baskets, found along roadsides, waste places, dry plains, riverbanks, gulleys, moist or dry slopes, sandy or gravelly soil, see *Reliquiae Haenkeanae* 1(4-5): 265. 1830, *Erythea* 7: 101. 1899 and *Bulletin of the Torrey Botanical Club* 29(7): 467. 1902, *Flora of Southeastern Washington and Adjacent Idaho* 42. 1937, *Canadian Journal of Botany* 42: 592. 1964, *Vascular Plants of the Pacific Northwest* 1: 561. 1969, *Canadian Journal of Botany* 57(8): 947. 1979, *Taxon* 29(1): 168. 1980, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Grassland of China* 2: 44-47. 1993, *Annals of Botany* 73: 471-479. 1994.

in English: basin wildrye, Great Basin wildrye, ryegrass, giant wild rye

L. condensatus (J. Presl) Á. Löve (*Aneurolepidium condensatum* (J. Presl) Nevski; *Elymus condensatus* J. Presl)

Northern America, U.S., Mexico. Perennial, forage, see *Reliquiae Haenkeanae* 1(4-5): 265. 1830 and *Taxon* 29(1): 168. 1980, *Annals of Botany* 73: 471-479. 1994.

in English: giant wildrye, giant ryegrass

L. divaricatus (Drobow) Tzvelev (*Aneurolepidium divaricatum* (Drobow) Nevski; *Aneurolepidium regelii* (Roshev.) Nevski; *Elymus divaricatus* Drobow; *Elymus regelii* Roshev.; *Leymus regelii* (Roshev.) Tzvelev)

Asia temperate. Fodder, see *Repertorium Specierum Novarum Regni Vegetabilis* 21: 45. 1925, *Flora URSS* 2: 709. 1934, *Novosti Sist. Vyss. Rast.* 9: 63. 1972.

L. erianthus (Phil.) Dubcovsky (*Elymus barbatus* Kurtz; *Elymus erianthus* Phil.; *Elymus erianthus* var. *aristatus* Hicken; *Elymus erianthus* var. *erianthus*; *Elymus erianthus* var. *spgazzinii* Hauman; *Elymus spgazzinii* Kurtz; *Eremium erianthum* (Phil.) Seberg & Linde-Laursen)

Argentina. Useful for erosion control, see *Anales del Museo Nacional de Chile. Primera Sección — Zoología* 13, t. 3, f. 2. 1892, *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 15: 506, 522. 1897 and *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 16: 259. 1900, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 2: 8. 1915, *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 410. 1917, *Genome* 35: 881-885. 1992, *Plant Systematics and Evolution* 191: 199-201. 1994, *Systematic Botany* 21: 3-15. 1996, *Genome* 40(4): 518. 1997.

L. fasciculatus (Roshev.) Tzvelev (*Aneurolepidium fasciculatum* (Roshev.) Nevski; *Elymus fasciculatus* Roshev.; *Leymus divaricatus* subsp. *fasciculatus* (Roshev.) Tzvelev) Eurasia. See *Flora URSS* 2: 709. 1934, *Novosti Sist. Vyss. Rast.* 9: 63. 1972.

L. flavescens (Scribn. & J. G. Sm.) Pilg. (*Elymus arenicola* Scribn. & J. G. Sm., also spelled *arenicolus*; *Elymus flavescens* Scribn. & J. G. Sm.; *Leymus arenicola* (Scribn. & J.G. Sm.) Pilger)

North America, U.S. Perennial, growing in the sand dunes, see *Bulletin, Division of Agrostology United States Department of Agriculture* 8: 8, f. 1. 1897, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 7. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 6. 1947.

in English: yellow wildrye

L. flexilis (Nevski) Tzvelev (*Aneurolepidium flexile* Nevski; *Elymus flexilis* (Nevski) N.M. Kusn.)

Asia.

L. innovatus (Beal) Pilger (*Elymus brownii* Scribn. & J.G. Smith; *Elymus innovatus* Beal; *Elymus innovatus* f. *glabratus* (Bowden) B. Boivin; *Elymus innovatus* f. *innovatus*; *Elymus innovatus* f. *laxatus* Lepage; *Elymus innovatus* subsp. *innovatus*; *Elymus innovatus* subsp. *velutinus* Bowden; *Elymus innovatus* var. *glabratus* Bowden; *Elymus innovatus* var. *innovatus*; *Elymus innovatus* var. *velutinus* Bowden; *Elymus innovatus* var. *velutinus* (Bowden) Hultén ex R.L. Taylor & MacBryde; *Elymus mollis* R. Br., nom. illeg., non *Elymus mollis* Trin.; *Leymus velutinus* (Bowden) Á. Löve & D. Löve)

Northern America, Canada, U.S., California. Perennial, erect, tufted, with creeping rhizomes, deep and spreading roots, coarse foliage, ligule short and truncate, leaves

blue-green to yellow-green upon maturity, inflorescence a terminal spike dense and purple in color, 2 spikelets at each node, each spikelet 3- to 5-flowered, purple or gray glumes narrow and hairy, lemmas hairy with short awns, low germination, hard to grow from seed, found in alpine and subalpine regions, sandy to gravelly soils, along roadsides and river drainage, grows in dense stands, hybridizes with some species of *Agropyron* Gaertner to produce sterile hybrids, see *Botanical Appendix to Captain Franklin's Narrative* 732. 1823, *Contributions from the United States National Herbarium* 1(8): 280. 1893, *Grasses of North America for Farmers and Students* 2: 650. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 8: 7, t. 4. 1897 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 6. 1947, *Nature Canada* 79: 178. 1952, *Canadian Journal of Botany* 37: 1146. 1959, *Canadian Journal of Botany* 42: 597. 1964, *Botaniska Notiser* 128(4): 503. 1975 [1976], *Canadian Journal of Botany* 56(2): 192. 1978, *Taxon* 29(1): 168. 1980, *Provancheria* 12: 102. 1981.

in English: hairy wildrye, fuzzy spiked wildrye, downy lyme grass, downy ryegrass, boreal wildrye

L. karelinii (Turcz.) Tzvelev (*Aneurolepidium karelinii* (Turcz.) Nevski; *Elymus angustiformis* Pavlov; *Elymus karelinii* Turcz.; *Elymus kirghisorum* Drob.; *Elymus kugalsensis* Nikitin; *Elymus kuznetzovii* (Pavlov) Pavl.; *Elymus turgaicus* Roshev.; *Leymus karelinii* (Turcz.) Chohanov; *Leymus kugalsensis* (Nikitina) Tzvelev; *Leymus kuznetzovii* (Pavl.) Tzvelev)

Russia, Asia temperate. Perennial, natural pasture, useful for erosion control, found in disturbed sites, along roadsides and river drainage, rocky areas, sandy soils, see *Bulletin de la Société Impériale des Naturalistes de Moscou* 29(1): 64. 1865 and *Flora Kirgizskoi SSR* 2: 218. 1950, *Flora Kazakhstana* 1: 322. 1956, *Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS* 20: 429. 1960, *Novosti Sist. Vyss. Rast.* 9: 59. 1972, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Annals of Botany* 73: 471-479. 1994.

L. karelinii (Turcz.) Tzvelev var. **kirghisorum** (Drob.) Tzvelev (*Elymus kirghisorum* Drob.)

Asia temperate. See *Novosti Sist. Vyss. Rast.* 10: 49. 1973.

L. mollis (Trin.) Pilger (*Elymus ampliculmis* Prov.; *Elymus arenarius* L.; *Elymus arenarius* f. *compositus* Abrom.; *Elymus arenarius* L. subsp. *mollis* (Trin.) Hultén; *Elymus arenarius* var. *compositus* (Abrom.) H. St. John; *Elymus arenarius* var. *mollis* (Trin.) Koidz.; *Elymus arenarius* var. *scabrinervis* (Bowden) Boivin; *Elymus arenarius* var. *simulans* (Bowden) B. Boivin; *Elymus arenarius* var. *villosissimus* (Scribn.) Polunin; *Elymus arenarius* var. *villosus* E. Mey.; *Elymus capitatus* Scribn.; *Elymus dives* J. Presl; *Elymus mollis* Trin.; *Elymus mollis* f. *moniliformis* Lepage; *Elymus mollis* f. *scabrinervis* Bowden; *Elymus mollis* f. *simulans* Bowden; *Leymus arenarius* (L.) Hochst.; *Leymus*

arenarius subsp. *mollis* (Trin.) Tzvelev; *Leymus mollis* (Trin.) Hara; *Triticum molle* (Trin.) F. Herm.)

Northern America, Canada, U.S., Asia, China, Japan. Perennial, adapted to coastal areas, not caespitose, does not form dense stands, littoral, erect, hairy, strongly rhizomatous, sheaths glabrous, ligule a fringed hairy membrane, flowering culm nodes rooting at the lower nodes, inflorescence compact and densely spicate, spikelets sessile, hairs on the margins of the lemmas, anthers on long filaments, leaves used for weaving basket handles and packstraps, a sand binder grass, useful for erosion control and revegetation, growing on dunes and sandy places near seashore or high tide line, upper tide flats, sandy beaches, sandy areas, beach dunes, lakeshores, in disturbed gravel, around the margins of ponds, see *Species Plantarum* 1: 83. 1753, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 72. 1821, *De Plantis Labradoricis Libri Tres* 20. Lipsiae 1830, *Reliquiae Haenkeanae* 1(4-5): 265. 1830, *Flora* 31: 118. 1848, *The Flora of Canada* 2: 706. 1862, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 55-56, t. 14. 1898 and *Journal of the College of Science, Imperial University of Tokyo* 27: 24. 1910, *Rhodora* 17: 102. 1915, *Kongliga Svenska Vetenskapsakademiens Handlingar* III 5: 153. 1927, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 43. 1936, *Botanical Magazine* (Tokyo) 52: 232. 1938, *Flora of Alaska and Neighboring Territories; A Manual of the Vascular Plants* 270. 1942, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74(1): 6. 1947, *Le Naturaliste Canadien* 82: 189-193. 1955, *Canadian Journal of Botany* 35: 969-970, 980-981. 1957, *Bot. Zhurn. (Moscow & Leningrad)* 51: 1107. 1966, *Le Naturaliste Canadien* 94: 524. 1967, *Botaniska Notiser* 128(4): 503. 1975 [1976], *Feddes Repertorium* 95(7-8): 477. 1984, *Annals of Botany* 73: 195-203, 471-479. 1994, Éric Imbert & Gilles Houle, "Ecophysiological differences among *Leymus mollis* populations across a subarctic dune system caused by environmental, not genetic, factors." *New Phytologist* vol. 147, issue 3: 601-608. Sep 2000, Jean-Michel Gagné and Gilles Houle, "Factors responsible for *Honckenya peploides* (Caryophyllaceae) and *Leymus mollis* (Poaceae) spatial segregation on subarctic coastal dunes." *Am. J. Bot.* 89: 479-485. 2002.

in English: sea lyme grass, American dune grass

L. mollis (Trin.) Pilger subsp. **mollis** (*Elymus arenarius* f. *compositus* Abrom.; *Elymus arenarius* subsp. *mollis* (Trin.) Hultén; *Elymus arenarius* var. *compositus* (Abrom.) H. St. John; *Elymus arenarius* var. *mollis* (Trin.) Koidz.; *Elymus arenarius* var. *scabrinervis* (Bowden) Boivin; *Elymus arenarius* var. *simulans* (Bowden) B. Boivin; *Elymus arenarius* var. *villosus* E. Mey.; *Elymus capitatus* Scribn.; *Elymus mollis* Trin.; *Elymus mollis* f. *mollis*; *Elymus mollis* f. *moniliformis* Lepage; *Elymus mollis* f. *scabrinervis* Bowden; *Elymus mollis* f. *simulans* Bowden; *Elymus mollis*

var. *mollis*; *Leymus arenarius* (L.) Hochst. subsp. *mollis* (Trin.) Tzvelev)

Northern America, Canada, Canadian Arctic Archipelago. Perennial, see *Species Plantarum* 1: 83. 1753, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 72. 1821, *Flora* 31: 118. 1848, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 55-56, t. 14. 1898 and *Journal of the College of Science, Imperial University of Tokyo* 27: 24. 1910, *Rhodora* 17: 102. 1915, *Kongliga Svenska Vetenskapsakademiens Handlingar* III 5: 153. 1927, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74(1): 6. 1947, *Le Naturaliste Canadien* 82: 189-193. 1955, *Canadian Journal of Botany* 35: 969-970, 980-981. 1957, *Bot. Zhurn. (Moscow & Leningrad)* 51: 1107. 1966, *Le Naturaliste Canadien* 94: 524. 1967.

in English: American dune grass

L. mollis (Trin.) Pilger subsp. **villosissimus** (Scribner) Á. Löve & D. Löve (*Elymus arenarius* var. *brevispicus* (Scribn. & J.G. Sm.) B. Boivin; *Elymus arenarius* L. subsp. *villosissimus* (Scribn.) Hultén; *Elymus arenarius* L. var. *villosissimus* (Scribn.) Polunin; *Elymus arenarius* var. *villosissimus* (Scribn.) Hultén; *Elymus mollis* subsp. *villosissimus* (Scribn.) A. Löve; *Elymus mollis* var. *brevispicus* Scribn. & J.G. Sm.; *Elymus villosissimus* Scribn.; *Leymus mollis* subsp. *villosissimus* (Scribn.) Á. Löve; *Leymus villosissimus* (Scribn.) Tzvelev)

Northern America, U.S. Perennial, see *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 56. 1898, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 236, f. 622. 1899 and *Bulletin of the National Museum of Canada* 92(Biol. Ser. 24): 96. 1940, *Botaniska Notiser* 1950: 33. 1950, *Le Naturaliste Canadien* 94: 524. 1967, *Arkiv för Botanik, Andra Serien* 7(1): 22. 1968, *Botaniska Notiser* 128(4): 503. 1975 [1976], *Taxon* 29(1): 168. 1980, *Annals of Botany* 73: 195-203, 471-479. 1994.

in English: American dune grass

L. multicaulis (Kar. & Kir.) Tzvelev (*Aneurolepidium multicaule* (Kar. & Kir.) Nevski; *Elymus aralensis* Regel; *Elymus multicaulis* Kar. & Kir.; *Triticum aralense* (Regel) F. Herm.)

China, Russia, Eurasia. Fodder, useful for erosion control, see *Bulletin de la Société Impériale des Naturalistes de Moscou* 868. 1841 and *Flora URSS* 2: 708. 1934, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 41. 1936, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Plant Systematics and Evolution* 194/197: 83-91, 225-231. 1995.

L. multicaulis (Kar. & Kir.) Tzvelev subsp. **petraeus** (Nevski) N.R. Cui (*Aneurolepidium petraeum* Nevski; *Elymus petraeus* (Nevski) Pavl.; *Leymus alaicus* subsp.

petraeus (Nevski) Tzvelev; *Leymus petraeus* (Nevski) Tzvelev)

China, Russia, Eurasia. See *Flora Kazakhstana* 1: 325. 1956, *Novosti Sist. Vyss. Rast.* 10: 50. 1973, *Claves Plantarum Xinjiangensium* 1: 184. 1982.

L. paboanus (Claus) Pilger (*Aneurolepidium paboanum* (Claus) Nevski; *Elymus dasystachys* var. *salsuginosus* Griseb.; *Elymus paboanus* Claus; *Elymus salsuginosus* (Griseb.) Turcz. ex Steud.)

China, Russia, Mongolia. Perennial, useful for erosion control, found in sandy soils, coarse sandy brown soil, salty sand, riverbanks, mountain steppe, coarse soil, desert steppe, desert and semidesert, coarse gravels, open grassland, low mountain slope, see *Beiträge zur Pflanzenkunde des Russischen Reiches* 8: 170. 1851, *Flora Rossica* 4(13): 133. 1852 and *Flora URSS* 2: 707. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74(1): 6. 1947, *Novosti Sist. Vyss. Rast.* 8: 65-66. 1971, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Annals of Botany* 73: 195-203, 471-479. 1994.

L. paboanus (Claus) Pilger var. **viviparus** L.B. Cai

China. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74(1): 6. 1949, *Acta Phytotaxonomica Sinica* 39(1): 77, pl. 1, f. 10-13. 2001.

L. pacificus (Gould) D.R. Dewey (*Agropyron arenicola* Burt-Davy; *Elymus pacificus* Gould; *Elymus triticoides* Buckl. var. *pacificus* (Gould) Bowden; *Leymus arenicola* (Scribn. & J.G. Sm.) Pilger)

North America, U.S. Perennial, see *Circular, Division of Agrostology, United States Department of Agriculture* 9: 7. 1899 and *A Flora of Western Middle California* 76. 1901, *Madroño* 9(4): 127. 1947, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 6. 1947, *Brittonia* 35: 32. 1983.

in English: Pacific wildrye

L. petraeus (Nevski) Tzvelev (*Aneurolepidium petraeum* Nevski; *Elymus petraeus* (Nevski) Pavl.; *Leymus alaicus* subsp. *petraeus* (Nevski) Tzvelev; *Leymus multicaulis* subsp. *petraeus* (Nevski) N.R. Cui)

Russia. See *Flora Kazakhstana* 1: 325. 1956, *Novosti Sist. Vyss. Rast.* 10: 50. 1973, *Claves Plantarum Xinjiangensium* 1: 184. 1982.

L. pseudoracemosus C. Yen & J.L. Yang

China. See *Acta Botanica Yunnanica* 5(3): 275-276, f. 1. 1983.

L. racemosus (Lam.) Tzvelev (*Elymus arenarius* subsp. *sabulosus* (M. Bieb.) Beldie; *Elymus arenarius* var. *giganteus* (Vahl) Schmalh. ex Krylov.; *Elymus arenarius* var. *sabulosus* (M. Bieb.) Schmalh.; *Elymus attenuatus* (Griseb.) K. Richt.; *Elymus attenuatus* Á. Löve, nom. illeg., non *Elymus attenuatus* (Griseb.) K. Richt.; *Elymus giganteus*

Vahl; *Elymus giganteus* f. *attenuatus* Griseb.; *Elymus giganteus* f. *crassinervius* Karav. & Kir.; *Elymus giganteus* var. *sabulosus* (M. Bieb.) Hack.; *Elymus macrostachys* Spreng.; *Elymus racemosus* Lam.; *Elymus racemosus* var. *sabulosus* (M. Bieb.) Bowden; *Elymus sabulosus* M. Bieb.; *Leymus giganteus* (Vahl) Pilg.; *Leymus racemosus* subsp. *sabulosus* (M. Bieb.) Tzvelev; *Leymus sabulosus* (M. Bieb.) Tzvelev; *Triticum sabulosum* (M. Bieb.) F. Herm.)

Armenia, China, Turkey, Eurasia. Perennial, robust, stout, strongly rhizomatous, ligule minutely ciliate, leaves blue to glaucous, inflorescence stiff and erect, spikelets in threes to fives at rachis nodes, glumes glabrous and equal, moderately salt-tolerant, on sandy soils, dry land, sand dunes, desert, foreshore, seaside beach sand, wasteland, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 207. 1792, *Symbolae Botanicae, ...* 3: 10. 1794, *Journal für die Botanik* 2: 196. 1800, *Flora Taurico-Caucasica* 1: 81. 1808, *Bulletin de la Société Impériale des Naturalistes de Moscou* 868. 1841, *Flora Rossica* 4(13): 332. 1852, *Botanisches Centralblatt* 36: 156. 1888, *Plantae Europaeae* 1: 132. Leipzig 1890 [vol. 2: *Europaeae*] and *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 1903: 178. 1903, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 43. 1936, *Canadian Journal of Botany* 35: 959, 978. 1957, *Novosti Sist. Vyss. Rast.* 8: 65. 1971, *Flora Republicii Socialiste Romania* 12: 579. 1972, *Feddes Repertorium* 95(7-8): 473. 1984, *Journal of Nanjing Agricultural University* 1: 10-14. 1986, *Hereditas (Beijing)* 12: 12-14. 1990, *Genome* 35: 881-885. 1992, *Plant Systematics and Evolution* 197: 225-231. 1995, *Hereditas* vol. 134, issue 1: 79-84. Mar 2001.

in English: mammoth wild rye, Siberian lyme grass

L. racemosus (Lam.) Tzvelev subsp. ***klokoviï*** Tzvelev

Europe. See *Novosti Sist. Vyss. Rast.* 8: 65. 1971.

L. racemosus (Lam.) Tzvelev subsp. ***racemosus*** (*Elymus racemosus* Lam.; *Elymus giganteus* Vahl; *Leymus giganteus* (Vahl) Pilg.)

Europe, Asia, Eurasia. Perennial, useful for erosion control, found along sandy riverbeds, stabilized sand dunes, sandy soils, see *Annals of Botany* 73: 195-203, 471-479. 1994.

in English: mammoth wild rye

L. racemosus (Lam.) Tzvelev subsp. ***sabulosus*** (M. Bieb.) Tzvelev (*Elymus arenarius* var. *sabulosus* (M. Bieb.) Schmalh.; *Elymus sabulosus* M. Bieb.; *Leymus sabulosus* (M. Bieb.) Tzvelev)

Europe. Perennial, useful for erosion control, seashore dunes, see *Flora Taurico-Caucasica* 1: 81. 1808 and *Novosti Sist. Vyss. Rast.* 8: 65. 1971, *Annals of Botany* 73: 195-203, 471-479. 1994.

L. ramosus (Trin.) Tzvelev (*Agropyron ramosum* (Trin.) K. Richter; *Aneurolepidium ramosum* (Trin.) Nevski; *Elymus*

ramosus (Trin.) Filatova, nom. illeg.; *Elymus trinii* Melderis; *Triticum ramosum* Trin.)

Eurasia, Siberia. Annual, short, vigorous, strongly rhizomatous, spikelets single, fodder, useful for erosion control, growing along roadsides, swamps, low wet areas, sandy riversides, see *Flora Altaica* 1: 114-115. 1829, *Plantae Europaeae* 1: 126. 1890 and *Flora URSS* 2: 710. 1934, *Flora Iranica: Flora des Iranischen Hochlandes und der Umrahmenden Gebirge: Persien, Afghanistan, Teile von West-Pakistan, Nord-Iraq* 70: 225. 1970.

L. salinus (M.E. Jones) Á. Löve (*Elymus ambiguus* var. *salinus* (M.E. Jones) C.L. Hitchc.; *Elymus salinus* M.E. Jones)

Northern America, U.S. Perennial, sandy flats, see *Proceedings of the California Academy of Sciences, Series 2*, 5: 725. 1895 and *Vascular Plants of the Pacific Northwest* 1: 558. 1969, *Taxon* 29(1): 168. 1980], *Systematic Botany* 9: 279-294. 1984, *Grassland of China* 2: 44-47. 1993.

in English: wild rye grass, saline wildrye

L. salinus (M.E. Jones) Á. Löve subsp. ***mojavensis*** Barkworth & Atkins

Northern America, U.S., Mojave Desert. Perennial, see *Taxon* 29(1): 168. 1980, *American Journal of Botany* 71(5): 621. 1984.

in English: Mojave wildrye

L. salinus (M.E. Jones) Á. Löve subsp. ***salinus*** (*Elymus ambiguus* Vasey & Scribn. var. *salinus* (M.E. Jones) C.L. Hitchc.; *Elymus ambiguus* var. *salmonis* C.L. Hitchc.; *Elymus ambiguus* var. *strigosus* (Rydb.) A.S. Hitchc.; *Elymus salinus* M.E. Jones; *Elymus strigosus* Rydb.; *Leymus ambiguus* (Vasey & Scribner) D.R. Dewey; *Leymus salinus* subsp. *salmonis* (C.L. Hitchc.) R.J. Atkins)

Northern America, U.S. Perennial, on sandy soils, see *Contributions from the United States National Herbarium* 1(8): 280. 1893 and *Bulletin of the Torrey Botanical Club* 32(11): 609. 1905, *American Journal of Botany* 21(3): 133. 1934, *Vascular Plants of the Pacific Northwest* 1: 558. 1969, *Taxon* 29(1): 168. 1980, *Great Basin Naturalist* 43(4): 569. 1983 [1984], *Systematic Botany* 9: 279-294. 1984.

in English: saline wildrye

L. salinus (M.E. Jones) Á. Löve subsp. ***salmonis*** (C.L. Hitchc.) R.J. Atkins (*Elymus ambiguus* Vasey & Scribn. var. *salmonis* C.L. Hitchc.; *Leymus salinus* subsp. *salinus*)

Northern America, U.S. Perennial, see *Vascular Plants of the Pacific Northwest* 1: 558. 1969, *Taxon* 29(1): 168. 1980, *Great Basin Naturalist* 43(4): 569. 1983 [1984], *Systematic Botany* 9: 279-294. 1984.

in English: saline wildrye

L. secalinus (Georgi) Tzvelev (*Agropyron chinense* (Trin.) Ohwi; *Agropyron chino-rossicum* Ohwi; *Agropyron littorale* Dumort.; *Agropyron repens* var. *littorale* (Host) Fiori;

Aneurolepidium dasystachys (Trin.) Nevski; *Aneurolepidium secalinum* (Georgi) Kitag.; *Elymus dasystachys* Trin.; *Elymus dasystachys* f. *littoralis* Griseb.; *Elymus dasystachys* var. *littoralis* (Pall.) Griseb.; *Elymus glaucus* Regel; *Elymus littoralis* (Griseb.) Turcz. ex Steud.; *Elymus secalinus* (Georgi) Bobrov; *Elytrigia littoralis* (Dumort.) Hyl.; *Leymus dasystachys* (Trin.) Pilg.; *Leymus littoralis* (Griseb.) Peshkova; *Leymus secalinus* (Georgi) Tzvelev; *Triticum dasystachyum* (Trin.) F. Herm., nom. illeg., non *Triticum dasystachyum* (Hook.) A. Gray; *Triticum litorale* Pall.; *Triticum litorale* Host, nom. illeg., non *Triticum litorale* Pall.; *Triticum secalinum* Georgi)

China, Mongolia, Siberia, India. Perennial, glabrous, strongly rhizomatous, leaves blue, slender spikes purplish to brown, weed species, good for soil stabilization, growing along irrigation ditches, disturbed sites, sandy soils, steep slopes, along roadsides, abandoned irrigated fields, see Johann Gottlieb Georgi (1729-1802), *Bemerkungen einer Reise im Russischen Reich im Jahre 1772* 1: 198. St. Petersburg 1775, *Gram. Austr.* 4: 5, t. 9. 1809, *Observations sur les Graminées de la Flore Belgique* 97. 1823 [1824], *Flora Altaica* 1: 120-121. 1829, *Enumeratio Plantarum, quas in China Boreali* 72. 1833, *Flora Rossica* 4(13): 333. 1852 and *Nuova Flora Analitica d'Italia* 1: 157. 1923, *Flora URSS* 2: 706. 1934, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 42. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 150. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 100. 1941, *Uppsala Universitets Arsskrift* 7: 36. 1945, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74(1): 6. 1947, *Journal of Japanese Botany* 40(5): 136-137. 1965, *Herbarium Centrale USSR* 98. 1968, *Taxon* 19: 524, 534. 1970, *Novosti Sist. Vyss. Rast.* 10: 333-336. 1973, *Novosti Sist. Vyss. Rast.* 24: 23. 1987, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 110: 7-15. 1988, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Annals of Botany* 73: 471-479. 1994, *Plant Systematics and Evolution* 194: 83-91. 1995, *Plant Systematics and Evolution* 197: 225-231. 1995.

L. secalinus (Georgi) Tzvelev subsp. **ovatus** (Trin.) Tzvelev (*Elymus ovatus* Trin.; *Leymus ovatus* (Trin.) Tzvelev)

China, Mongolia, Siberia. Perennial, found in dry streams and riverbeds, salty places, gravelly sandy loam soils, marshes and wet meadows.

L. secalinus (Georgi) Tzvelev subsp. **secalinus** (*Clinelymus sibiricus* (L.) Nevski; *Elymus dasystachys* Trin.; *Elymus dasystachys* Ledeb.; *Elymus secalinus* (Georgi) Bobrov; *Elymus sibiricus* L.; *Hordeum sibiricum* (L.) Schenck; *Triticum arktasianum* F. Herm.; *Triticum dasystachyum* (Trin.) F. Herm., nom. illeg., non *Triticum dasystachyum* (Hook.) A. Gray; *Triticum secalinum* Georgi)

China, Mongolia, Siberia, India, Pakistan. Perennial, useful for erosion control, desert steppe, very gravelly soils, rocky

places, brown sandy soils, see *Species Plantarum* 1: 83. 1753, *Flora Altaica* 1: 120-121. 1829 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40(1): 109. 1907, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 40, 42. 1936.

L. secalinus (Georgi) Tzvelev var. **laxinodis** L.B. Cai

China. Along riverbanks, see *Bull. Bot. Res., Harbin* 17(1): 32, f. 2, 9-14. 1997.

L. secalinus (Georgi) Tzvelev var. **tenuis** L.B. Cai

China. Along riverbanks and streams, see *Acta Phytotaxonomica Sinica* 33(5): 496. 1995.

L. simplex (Scribn. & T.A. Williams) D.R. Dewey (*Elymus simplex* Scribn. & T.A. Williams; *Elymus simplex* var. *luxurians* Scribn. & Williams; *Elymus triticoides* Buckl. subsp. *simplex* (Scribn. & Williams) Á. Löve; *Elymus triticoides* Buckl. var. *simplex* (Scribn. & Williams) A.S. Hitchc.; *Leymus simplex* var. *luxurians* (Scribn. & Williams) Beetle; *Leymus triticoides* subsp. *simplex* (Scribner & Williams) Á. Löve)

North America, U.S. Perennial, along riverbanks, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 99. 1862, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 57-58, t. 17. 1898 and *American Journal of Botany* 21(3): 132. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 6. 1947, *Taxon* 29(1): 168. 1980, *Brittonia* 35: 32. 1983, *Phytologia* 55(3): 212. 1984.

in English: alkali wildrye

L. tianschanicus (Drobow) Tzvelev (*Aneurolepidium baldshuanicum* (Roshev.) Nevski; *Elymus baldshuanicus* Roshev.; *Elymus tianschanicus* Drobow; *Leymus baldshuanicus* (Roshev.) Tzvelev)

China, Eurasia. Found along roadsides, stony desert slopes, see *Key Pl. Envir. Tashkent* 44. 1923, *Flora URSS* 2: 703. 1934, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Annals of Botany* 73: 471-479. 1994, *Plant Systematics and Evolution* 197: 225-231. 1995.

L. triticoides (Buckley) Pilger (*Agropyron elymoides* P. Candargy, nom. illeg., non *Agropyron elymoides* Hack.; *Elymus acicularis* Suksd.; *Elymus condensatus* var. *triticoides* (Buckley) Thurb.; *Elymus orcuttianus* Vasey; *Elymus simplex* var. *luxurians* Scribner & Williams; *Elymus triticoides* Buckley; *Elymus triticoides* subsp. *multiflorus* Gould; *Elymus triticoides* subsp. *triticoides*; *Elymus triticoides* Buckley var. *pubescens* A.S. Hitchc.; *Elymus triticoides* var. *triticoides*; *Leymus multiflorus* (Gould) Á. Löve; *Leymus multiflorus* (Gould) Barkworth & R.J. Atkins; *Leymus x multiflorus* (Gould) Barkworth & R.J. Atkins; *Leymus simplex* var. *luxurians* (Scribner & Williams) Beetle; *Leymus triticoides* subsp. *multiflorus* (Gould) Á. Löve)

Northern America, Mexico, U.S., California. Perennial, vigorous, bright green deciduous foliage, grows fast, aggressive plant, useful for erosion control and for stabilizing stream banks, revegetation, forage, used in basketry, tolerates heavy clay soils, partial shade, along streams, rich soil, poor drainage and seasonal floodings, under trees, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 99. 1862, *Geological Survey of California, Botany* 2: 326. 1880, *Botanical Gazette* 10: 258. 1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 58. 1898 and *Archives de Biologie Végétale Pure et Appliquée* 1: 57. 1901, *A Flora of California* 1: 186. 1912, *Werdenda* 1(2): 3. 1923, *Madroño* 8(2): 46-47. 1945, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 6. 1947, *Taxon* 29(1): 168. 1980, *Brittonia* 35: 32. 1983, *American Journal of Botany* 71(5): 619. 1984, *Phytologia* 55(3): 212. 1984, *Feddes Repertorium* 95: 482. 1984.

in English: alkali rye grass, beardless wildrye, creeping wildrye, alkali rye

in South Africa: kruipwildrog, wildekoring

L. x multiflorus (Gould) Barkworth & R.J. Atkins (*Elymus triticoides* Buckley subsp. *multiflorus* Gould; *Leymus multiflorus* (Gould) Á. Löve; *Leymus multiflorus* (Gould) Barkworth & R.J. Atkins; *Leymus triticoides* (Buckley) Pilg.; *Leymus triticoides* (Buckl.) Pilger subsp. *multiflorus* (Gould) Á. Löve)

Northern America, U.S., Mexico. Perennial, in partial shade, under trees, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 99. 1862 and *Madroño* 8(2): 46-47. 1945, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 6. 1947, *Taxon* 29(1): 168. 1980, *American Journal of Botany* 71(5): 619. 1984, *Feddes Repertorium* 95: 482. 1984.

L. x vancouverensis (Vasey) Pilg. (*Elymus vancouverensis* Vasey; *Elymus x vancouverensis* nm. *californicus* Bowden; *Elymus x vancouverensis* nm. *crescentianus* Bowden; *Elymus x vancouverensis* Vasey (pro sp.); *Elymus x vancouverensis* nm. x *vancouverensis*; *Leymus vancouverensis* (Vasey) Pilg.; *Leymus x vancouverensis* var. *crescentianus* Bowden; *Leymus x vancouverensis* var. *vancouverensis*) (nm. = nothomorph, a term used in taxonomy to designate different hybrid forms derived from the same parent species, ranking essentially as a variety)

Northern America, Canada, U.S. Beaches, see *Bulletin of the Torrey Botanical Club* 15: 48, 218. 1888 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 6. 1947, *Canadian Journal of Botany* 35: 975-976. 1957.

Libertia Lejeune = *Bromus* L., *Libertia* Dumort. (Liliaceae), *Libertia* Spreng. (Iridaceae, Iridoideae, Sisyrinchieae), *Tekel* Adans. (Iridaceae)

Named for the Belgian (by birth) botanist Marie-Anne Libert, 1782-1865, botanical collector, author of *Mémoires sur des cryptogames observées aux environs de Malmédy*. Paris 1826 and *Plantae cryptogamicae* quas in Arduenna collegit M.A. Libert, ... fasciculus primus [- quartus]. Leodii [Liège, Luik] 1830-1837. See Editor Morren, *Marie-Anne Libert de Malmédy, sa vie et ses oeuvres*. Gand 1868; J.H. Barnhart, *Biographical notes upon botanists*. 2: 378. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 237. 1972.

Pooideae, Bromeae, type *Libertia arduennensis* Lej., see *Species Plantarum* 1: 76. 1753, *Familles des Plantes* 2: 497. 1763, *Commentationes Botanicae* 9. 1822, *Revue de la Flore des Environs de Spa* 22. 1824, *Systema Vegetabilium, editio decima sexta* 1: 127, 168. 1824 [1825], *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 12: 755, 757. 1825, *Hort. brit.* edition 2: 498. 1830, *Edinburgh New Philos. J.* 15: 383. 1833, *Linnaea* 19: 382. 1846 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Bot. Jahrb. Syst.* 102: 447. 1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *New Zealand J. Bot.* 40: 437-456. 2002, *Contributions from the United States National Herbarium* 48: 154-191, 425. 2003.

Libyella Pamp. = *Mibora* Adans., *Sphenopus* Trin.

Dedicated to Libya, in North Africa.

One species, Libya. Pooideae, Poodae, Aveneae, annual, herbaceous, low, tufted, leaves basal, auricles absent, ligule a fringed membrane, plants bisexual with hidden cleistogones in the leaf sheaths, inflorescence spicate, short racemes sparse, spikelets solitary, lowest spikelet female and hidden in the uppermost leaf sheath, 1 or 2 small glumes per spikelets, single female spikelet with 2 glumes (according to Watson and Dallwitz) or glumes absent from female spikelet (according to *Genera Graminum*), palea 2-nerved 2-keeled, 2 free and membranous lodicules or absent, 3 stamens, ovary glabrous, 2 stigmas, coastal, sandy places, see *Familles des Plantes* 2: 495. 1763, *Observations sur les Plantes des Environs d'Angers* 45. 1818, *Fundamenta Agrostographiae* 135. 1820 and *Boll. Soc. Bot. Ital.* 1925: 151. 1925, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 220. 1941, *Contributions from the United States National Herbarium* 48: 450-451. 2003.

Species

L. cyrenaica (E.A. Durand & Barratte) Pamp. (*Poa cyrenaica* E.A. Durand & Barratte)

North Africa, Mediterranean. Tiny, spikelets 1-flowered, glumes 0- to 1-nerved, see *Florae Libyae Prodrromus* 268. 1910, *Bollettino della Società Botanica Italiana* 151. 1925.

Limnas Trin. = *Greenia* Nutt., *Greenia* S. Wallman (Liliaceae), *Sclerachne* Torr. ex Trin.

From the Greek *limnas*, *limnados*, *limnaios* “of the marsh, stagnant,” *limne* “a marsh.”

Two species, Russia, Siberia, Central Asia. Pooideae, Poodae, Aveneae, perennial, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, panicle dense to contracted, spikelets pedicellate and laterally compressed, 2 subequal glumes 3-nerved, lemma with geniculate dorsal awn, palea nerved, 2 free and membranous lodicules, 2-3 stamens, ovary glabrous, 2 stigmas, stony places, slopes, open habitats, woods, related to *Alopecurus*, type *Limnas stelleri* Trin., see *De Fructibus et Seminibus Plantarum* 2: 188. Apr-Mai 1791, *Fundamenta Agrostographiae* 116, t. 6. 1820, *Transactions of the American Philosophical Society, new series*, 5: 142. 1835, *Plantae Javanicae Rariores* 15, t. 4. 1838, *Nomenclator Botanicus. Editio secunda* 2: 45. 1841, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 273, 275. 1841, *Synopsis Plantarum Glumacearum* 1: 421. 1854 and *Bot. Zhurn.* 72(3): 391. 1987.

Species

L. malyshevii O.D. Nikif.

Russia. See *Bot. Zhurn.* 72(3): 391. 1987.

L. stelleri Trin.

Siberia. See *Fundamenta Agrostographiae* 116, t. 6. 1820.

Limnetis Rich. = *Spartina* Schreb.

Latin *limnestis*, *limnetis* for a plant called also *Centaurea major*, Greek *limnetis*, *limnatis*, *limnetes* “living in marshes.”

Chloridoideae, Cynodonteae, or Chloridoideae, Zoysieae, Sporoboloniae, see *Species Plantarum* 1: 71. 1753, *Genera Plantarum* 43. 1789, *Flora Boreali-Americana* 1: 64. 1803, *Syn. Pl.* 1: 72. 1805, *Catalecta Botanica* 3: 10. 1806, *A Sketch of the Botany of South-Carolina and Georgia* 1: 95, t. 4, f. 2. 1816, *A Manual of Botany for the Northern States* 14. 1817, *Descriptio uberior Graminum* 55. 1817, *The Genera of North American Plants* 1: 38. 1818, *Boston J. Nat.*

Hist. 1: 136. 1835, *A Manual of Botany* 301. 1840 and *Rhodora* 49(580): 114. 1947, *Iowa State College Journal of Science* 30(4): 471-574. 1956, *Contributions from the United States National Herbarium* 41: 138, 195-200. 2001.

Limnodea L.H. Dewey = *Greenia* Nutt., *Greenia* S. Wallman (Liliaceae), *Limnodea* Dewey ex Coult., *Sclerachne* Torr. ex Trin., *Thurberia* Benth., *Thurberia* A. Gray (Malvaceae)

From the Greek *limnodes* “marshy,” or derived from the genus *Limnas* Trin.

One species, southern U.S., Mexico. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, annual or perennial, herbaceous, caespitose, branched, auricles absent, leaf blades flat, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets pedicellate, 2 subequal glumes 3-nerved, lemma keeled and awned, palea 2-nerved, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, prairies, plains, resembling *Cinna*, type *Limnodea arkansana* (Nutt.) L.H. Dewey, see *De Fructibus et Seminibus Plantarum* 2: 188. Apr-Mai 1791, *Fundamenta Agrostographiae* 116, t. 6. 1820, *Transactions of the American Philosophical Society, new series*, 5: 142. 1835, *Plantae Javanicae Rariores* 15, t. 4. 1838, *Nomenclator Botanicus. Editio secunda* 2: 45. 1841, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 273, 275. 1841, *Synopsis Plantarum Glumacearum* 1: 421. 1854, *Memoirs of the American Academy of Arts and Science, new series* 5: 308. 1854, *Journal of the Linnean Society, Botany* 19: 58. 1881, *Contributions from the United States National Herbarium* 2(3): 518. 1894 and *Bot. Zhurn.* 72(3): 391. 1987, *Sida* 19(1): 195-200. 2000 [*Cinna* and *Limnodea* (Poaceae): not congeneric], *Ecology Letters* 5(5): 676-684. Sep 2002, *Global Change Biology* 8(11): 1118-1129. Nov 2002, *Contributions from the United States National Herbarium* 48: 381, 426, 608, 654. 2003.

Species

L. arkansana (Nutt.) L.H. Dewey (*Cinna arkansana* (Nutt.) G.C. Tucker; *Greenia arkansana* Nutt.; *Limnas arkansana* (Nutt.) Trin. ex Steud.; *Limnas pilosa* (Trin.) Steud.; *Limnodea arkansana* var. *arkansana*; *Limnodea arkansana* var. *pilosa* (Trin.) Scribn.; *Muhlenbergia hirtula* Steud.; *Sclerachne arkansana* (Nutt.) Torr. ex Trin.; *Sclerachne pilosa* Trin.; *Stipa demissa* Steud.; *Thurberia arkansana* (Nutt.) Benth. ex Vasey; *Thurberia pilosa* (Trin.) Vasey)

U.S., Arkansas. Lax panicle, glumes coriaceous and acute, lemma 2-dentate, palea keels wanting, grassy plains, see *Fundamenta Agrostographiae* 116, t. 6. 1820, *Transactions*

of the American Philosophical Society, new series, 5: 142. 1835, *Nomenclator Botanicus. Editio secunda* 2: 45. 1841, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 274-275. 1841, *Synopsis Plantarum Glumacearum* 1: 130, 180, 421. 1854, *Department of Agriculture. Special Report* 63: 16. 1883, *Contr. U.S. Natl. Herb.* 2(3): 518. 1894 and *Bulletin, Division of Agrostology United States Department of Agriculture* 7(edition 3): 139. 1900, *Harvard Papers in Botany* 1(9): 62. 1996.

in English: Ozark grass

Limnopoia C.E. Hubb.

From the Greek *limne* "pool of standing water, marsh" and *poa* "grass."

One species, Asia, India. Panicoideae, Panicodae, Isachneae, annual or perennial, aquatic, trailing, creeping, herbaceous, glaucous, branched, very slender, auricles absent, leaf sheath inflated, ligule a fringe of hairs, small leaf blades, plants bisexual, inflorescence a single raceme unilateral and contracted, spikelets mostly paired, without hermaphrodite florets, 2 florets dissimilar, the upper floret in each spikelet female, the lower floret male, sessile spikelets embedded, 2 glumes more or less equal, lemmas obtuse, lower lemma membranous and narrowly ovate, upper lemma cartilaginous and elliptic, lower palea oblong 2-keeled 2-nerved, 2 free and fleshy lodicules, 0 or 3 stamens in the lower floret, ovary glabrous, 2 red stigmas, tangled stems, forming floating mats, found in waterlogged marshy areas, type *Limnopoia meeboldii* (C.E.C. Fisch.) C.E. Hubb., see *Hooker's Icones Plantarum* 35: t. 3432. 1943, *Grasses of Burma ...* 583. 1960.

Species

L. meeboldii (C.E.C. Fisch.) C.E. Hubb. (*Coelachne meeboldii* C.E.C. Fisch.) (after the German botanist Alfred Karl Meebold, 1863-1952, traveler and botanical collector, from 1928 to 1938 traveled widely in Australia, South Africa and southwest U.S., novelist and essayist, poet, his works include *Indien*. München 1908 [1907]; see I.H. Vegter, *Index Herbariorum*. Part II (4), *Collectors M. Regnum Vegetabile* vol. 93. 1976; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 249. Cape Town 1981)

Southern India. Delicate, weak, elongate, nodes glabrous, leaf sheaths very short, leaf blades linear-lanceolate and acute-acuminate, spike-like raceme single, spikelets obovoid-oblong, lower glume oblong-lanceolate 3-nerved, upper glume obovate 3- to 5-nerved, lower lemma 7-nerved, 3 stamens, floating on the surface of water, vulnerable and probably a very rare species, see *Kew Bulletin* 1934: 169. 1934, *Hooker's Icon. Pl.* 35: t. 3432. 1943.

Lindbergella Bor = Lindbergia Bor

For the Finnish botanist Harald Lindberg, 1871-1963, from 1910 at the Helsinki Botanical Museum, traveler, author of *Enumeratio plantarum in Fennoscandia orientali sponte et subsoponte nascentium*. Helsinki [1901], son of the bryologist and professor of botany at Helsingfors University Sextus Otto Lindberg (1835-1889). See J.H. Barnhart, *Biographical notes upon botanists*. 2: 383. 1965; Stafleu and Cowan, *Taxonomic literature*. 3: 29-38. Utrecht 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 238. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 268. 1973; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 743. Stuttgart 1993.

One species, Cyprus. Pooideae, Poodae, Poeae, annual, herbaceous, auricles absent, narrow leaf blades, ligule an unfringed membrane, inflorescence paniculate and open, panicle branches whorled, spikelets several-flowered, 2 glumes very unequal to subequal, lemmas appressed pubescent and mucronate, palea 2-nerved 2-keeled, 2 joined or free lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, slopes, rocky places, confused with *Eragrostis*, related to *Eremopoa*, see *Årsbok-vousikirja. Societas Scientiarum Fennica ...* 20(7): 5. Helsinki 1942, *Acta Soc. Sci. Fenn.* n. s. B, 2(7): 8. 1946, *Svensk Botanisk Tidskrift* 62: 467. 1968, *Svensk Botanisk Tidskrift* 63: 368. 1969, *Acta Botanica Yunnanica* 3(4): 399, f. 7, 13-20. 1981.

Species

L. sintenisii (H. Lindb.) Bor (*Lindbergia sintenisii* (H. Lindb.) Bor; *Poa sintenisii* H. Lindb.)

Cyprus. Panicle branches and pedicels slender and flexuous, glumes 3- to 5-nerved, lemmas coriaceous and keeled, see *Flora of Cyprus* 63: 368. 1969.

Lindbergia Bor = Lindbergella Bor

For the Finnish botanist Harald Lindberg, 1871-1963, see J.H. Barnhart, *Biographical notes upon botanists*. 2: 383. 1965.

Pooideae, Poodae, Poeae, see *Årsbok-vousikirja. Societas Scientiarum Fennica ...* 20(7): 5. Helsinki 1942, *Acta Soc. Sci. Fenn.* n. s. B, 2(7): 8. 1946, *Svensk Botanisk Tidskrift* 62: 467. 1968, *Svensk Botanisk Tidskrift* 63: 368. 1969, *Acta Botanica Yunnanica* 3(4): 399, f. 7, 13-20. 1981.

Lingnania McClure = Bambusa Schreb.

Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, often in *Bambusa*, type

Lingnania chungii (McClure) McClure, see *Genera Plantarum* 1: 236. 1789, *Species Plantarum. Editio quarta* 2: 245. 1799, *Revisio Generum Plantarum* 2: 760. 1891 and *Lingnan Science Journal* 15(4): 639-643, f. 1, pl. 28, 29. 1936, *Lingnan University Science Bulletin* 9: 35. 1940, *Journal of the Arnold Arboretum* 23(1): 101. 1942, *Acta Phytotaxonomica Sinica* 18(2): 214. 1980, *Journal of Bamboo Research* 1(1): 34. 1982, *Acta Phytotaxonomica Sinica* 24(5): 395. 1986, *Journal of Bamboo Research* 5(2): 41, f. 1. 1986, *Journal of Tropical and Subtropical Botany* 1(1): 8. 1993, Li, Z.-L., "The Flora of China Bambusoideae project - problems and current understanding of bamboo taxonomy in China." *The Flora of China* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 29-35, 68. 2000.

Linkagrostis Rom. García, Blanca & C. Morales = *Agrostis* L.

Referred to *Agrostis* L. and after the German (b. Hildesheim) botanist Johann Heinrich Friedrich Link, 1767-1851 (d. Berlin), M.D. Göttingen 1789, nature philosopher, zoologist, 1811-1815 Director of the Botanical Garden at Breslau, 1815-1851 professor of botany at Berlin, his writings include *Florae goettingensis specimen*. [Goettingen] [1789] and *Icones selectae anatomico-botanicae*. Berlin 1839-1842. See H.A.M. Snelders, in *D.S.B.* 8: 373-374. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 2: 388. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 239. 1972; Miguel Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. Madrid 1858; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. 5: 328. London 1796-1800; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; Antonio José Cavanilles, *Icones et Descriptiones Plantarum*. 4: 61. 1798; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; Stafleu & Cowan, *Taxonomic literature*. 3: 65-70. Utrecht 1981.

One species, northeast Africa, Iberian Peninsula. Pooideae, Poodae, Poeae, Aveneae, perennial, stoloniferous, herbaceous, unbranched, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate and contracted, spikelets pedicellate, 2 subequal glumes 1-nerved, lemmas leathery awnless to mucronate, palea short to very reduced, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade species, damp places, sometimes referred

to *Agrostis*, type *Linkagrostis juressi* (Link) Romero Garcia, Blanca & Morales, see *Candollea* 42(1): 379-388. 1987.

Species

L. juressi (Link) Romero Garcia, Blanca & Morales (*Agrostis juressi* Link)

Africa, Mediterranean. See *Journal für die Botanik* 2: 312. 1799 and *Candollea* 42(1): 383. 1987.

Linosparton Adans. = *Lygeum* L., *Lygeum* Loeffl. ex L.

Greek *linon* "a net" and *sparton* "a rope, bond."

Lygeae, see *Genera Plantarum edition 5* 27, [522]. 1754, *Familles des Plantes* 2: 34, 571. 1763.

Lintonia Stapf = *Joannegria* Chiov., *Negria* Chiov.

After A. Linton, plant collector in East Africa, see Hepper & F. Neate, *Plant Collectors in West Africa*. 50. Utrecht 1971.

Two species, tropical eastern and southeastern Africa. Chloridoideae, Cynodonteae, perennial, unarmed, herbaceous, branched, tufted, sometimes rhizomatous, auricles absent, ligule a short membrane with a ciliate margin, leaf blades acuminate, plants bisexual, digitate or nondigitate inflorescence, tough unilateral racemes, spikelets ovoid and solitary, 2-4 fertile florets followed by sterile florets, floret cluster rounded at base, 2 glumes very unequal, body of lemma 5- to 11-nerved, lemmas awned and hairy to pubescent, fertile lemmas membranous, short subapical awn, palea keels wingless, 2 free and fleshy lodicules, stamens 3, ovary glabrous, 2 stigmas, red sandy soil, shade species or species of open habitats, shade of bushes, dry savannahs, seasonally flooded places or wet areas, heavy soils, *Acacia-Commiphora* bushland, type *Lintonia nutans* Stapf, see *Hooker's Icones Plantarum* 30: t. 2944, 2949. 1911, *Annali di Botanica* 10(3): 410-411. 1912, *Annali di Botanica* 11: 1. 1913.

Species

L. brizoides (Chiov.) C.E. Hubb. (*Joannegria brizoides* Chiov.)

Tropical Africa. Perennial, rare, stoloniferous, tussock-forming, leaf blades densely pilose, inflorescence racemose, loosely ascending racemes, spikelets subglobose to broadly elliptic, 4-7 florets, lower glume broadly lanceolate and acute, upper glume broadly ovate subacute to emarginate, lemmas ovate deeply concave, stout subapical awn, see *Flora of Tropical Africa* 10: 149. 1937.

L. nutans Stapf (*Joannegria melicoides* (Chiov.) Chiov.; *Lintonia nutans* var. *melicoides* (Chiov.) Chiov.; *Negria melicoides* Chiov.)

Eastern and southeastern Africa, Kenya. Perennial, tufted, shortly stoloniferous, tussock, leaf blades glabrous, digitate or subdigitate racemes, spikelets wedge-shaped, 4-10 florets, glumes 1-nerved, lower glume narrowly lanceolate and acuminate, upper glume oblong and obtuse, lemmas elliptic to obovate and villous, lemma bilobed, awn scabrid, found in vleis, grassland, *Acacia* bushland, abandoned fields, black clay, see *Hooker's Icones Plantarum* 30: t. 2949. 1911, *Annali di Botanica* 10(3): 411. 1912, *Annuario del Reale Istituto Botanico di Roma* 11: 231. 1913.

Lithachne P. Beauv. = *Lithacne* Poir.

Greek *lithos* "a stone" and *achne* "husk, glume," referring to the nature of the glumes.

Four species, tropical South America, Central America, Mexico to Argentina, West Indies. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, caespitose, unarmed, woody or herbaceous, unbranched, broad-leaved, auricles present or absent, drooping leaves, leaf blades asymmetric and truncate-based, plants monoecious, without hermaphrodite florets, all the fertile spikelets unisexual, inflorescence terminal and axillary, a terminal male panicle, a single female spikelet, asymmetric fertile florets apically truncate, 2 glumes papery more or less equal, female lemma laterally compressed, palea present, 3 lodicules, stamens absent, ovary glabrous, 2 stigmas plumose, male spikelets on filiform pedicels, forest shade, forest understory, moist forest, above streams, fields, related to *Olyra*, type *Lithachne axillaris* P. Beauv., see *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 135, 166, 168, t. 24, f. 2. Paris 1812, *Dict. Sci. Nat.* 27: 60. 1823 and *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *Brittonia* 32(4): 495-501. 1980, *Brittonia* 32(4): 495-501. 1981 [A new species of *Lithachne* (Poaceae: Bambusoideae) and remarks on its sleep movements], *Revista de Biología Tropical* 40: 47-72. 1992 [Morphology, anatomy and cytology of the genus *Lithachne* (Poaceae: Bambusoideae)], *Flora Mesoamericana* 6: 215-216. 1994, *Fontqueria* 46: [i-ii], 1-259. 1997, *American Bamboos* 280-282. 1999, *Contributions from the United States National Herbarium* 39: 68. 2000.

Species

L. horizontalis Chase

Brazil. Stoloniferous, herbaceous, more or less scandent, see *Journal of the Washington Academy of Sciences* 25(4): 189, f. 1. 1935.

L. humilis Soderstr.

Honduras. Riverbanks, along streams, forest shade, among rocks, see *Brittonia* 32(4): 496, f. 1, 2a-c. 1980.

L. pauciflorus (Sw.) P. Beauv. (also *pauciflora*) (*Lithachne axillaris* P. Beauv.; *Olyra axillaris* Lam.; *Olyra pauciflora* Sw.; *Olyra pauciflora* var. *atrocarpa* Kuntze; *Olyra pauciflora* var. *leucocarpa* Kuntze; *Stipa pauciflora* (Sw.) Raspail)

Tropical South America. Caespitose, forming clumps, leaf blades lanceolate to ovate and acuminate at the apex, upper sheaths overlapping, ligules membranous, inflorescences contracted, male spikelets linear-lanceolate attenuate, dry to wet forests, riverbanks, along streams, forest, understory, see *Nova Genera et Species Plantarum seu Prodrromus* 21. 1788, *Encyclopédie Méthodique, Botanique* 4: 547. 1797, *Essai d'une nouvelle Agrostographie* 135, 166, 168, t. 24, f. 2. Paris 1812, *Annales des Sciences Naturelles* I 5: 449. 1825 and *Phytologia* 37(4): 317-407. 1977, *Hickenia* 1: 73-78. 1977, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: i-xi, 1-1286. 1993.

L. pinetii (C. Wright ex Griseb.) Chase (*Olyra pineti* C. Wright ex Griseb.)

The Caribbean, Cuba. Moist sites, see *Memoirs of the American Academy of Arts and Sciences, new series* 8: 532. 1862[1863] and *Proceedings of the Biological Society of Washington* 21: 182. 1908.

Lithagrostis Gaertner = *Coix* L.

From the Greek *lithos* "a stone" and *agrostis*, *agrostidos* "grass, weed, couch grass," referring to the seeds.

Panicoideae, Andropogoneae, Coicinae, see *Species Plantarum* 2: 972. 1753, *Syst. Nat.* edition 10, 1261. May-June 1759, *De Fructibus et Seminibus Plantarum* 1: 7. 1788 and *Contributions from the United States National Herbarium* 46: 162-163, 284. 2003.

Littledalea Hemsley

For St. George R. Littledale, c. 1851-1931, traveler, 1893-1895 East Turkestan and Tibet (in company with Mrs. Littledale), botanical and zoological collector in Tibet, author of "A Journey across Central Asia." in *Geograph. Journ.* III: 446-475. 1894 and "A Journey across Tibet from North to South and West of Ladak." in *Geograph. Journ.* VII: 453-483. 1896. See Thyselton Dyer, *Kew Bulletin* 1896: 99-100; W.B. Hemsley, *Kew Bulletin* 1896: 207-216; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898] Leipzig 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 432. London 1994.

About 3 species, central Asia, western China. Pooideae, Poodae (or Tritricodae), Poeae, or Bromaeae, perennial, herbaceous, rhizomatous, margins of leaf sheaths overlapping, auricles absent, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, panicle loosely contracted, spikelets cuneate to oblong and pedicellate, 2 membranous glumes subequal to very unequal, lower glume 1- to 3-nerved, upper glume 5- to 7-nerved, large awnless lemmas, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, open areas, stony places, hillsides, slopes, see *Hooker's Icones Plantarum* 25: t. 2472. 1896.

Species

L. alaica (Korsh.) Petrov & Kom. (*Bromus alaicus* Korsh.)

Russia. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4(4): 101. 1896 and *Flora URSS* 2: 553. 1934.

L. racemosa Keng

China. See *Contributions from the Biological Laboratory of the Chinese Association for the Advancement of Science. Section Botany.* 9(2): 136, f. 15. 1934 [also *Contributions from the Biological Laboratory of the Science Society of China: Botanical Series*].

L. tibetica Hemsl.

China, Tibet. See *Hooker's Icones Plantarum* 25(3): t. 2472. 1896, *Bull. Misc. Inform. Kew* 1896(119): 215. 1896 and *Claves Generum et Specierum Graminearum Primarium Sinicarum Appendice Nomenclatione Systematica* 173. 1957.

Lodicularia P. Beauv. = *Hemarthria* R. Br.

Latin *lodícula*, *ae* “a small coverlet, blanket, hypogynous scale,” dim. of *lodix*, *icis* “coverlet, counterpane.”

Panicoideae, Andropogoneae, Rottboelliinae, type *Lodicularia fasciculata* (Lam.) P. Beauv., see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 204. 1791, *Essai d'une Nouvelle Agrostographie* 108, 166, 176, t. 21, f. 6. 1812, *Ann. Sci. Nat. (Paris)* 5: 307. 1825, *Révis. Gramin.* 1: 153. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(1): 248. 1832, *Reise um die Erde* 2: 71. 1834, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 128. 1841, *Synopsis Plantarum Glumacearum* 1: 358. 1854 and *Contr. Biol. Lab. Chin. Assoc. Advancem. Sci.* 10: 202. 1936, *Claves Gen. Sp. Gram. Prim. Sinic.* 240. 1957, *Fl. Tsinling*, 1(1): 188. 1976, *Blumea* 45: 443-475. 2000 [Revision of *Hemarthria* (Gramineae-Andropogoneae-Rottboelliinae)], *Contributions from the United States National Herbarium* 46: 247-248, 284. 2003.

Lojaconoa Gand. = *Festuca* L., *Lojaconoa* E. G. Bobrov (Fabaceae, alt. Leguminosae)

Dedicated to the Italian botanist Michele Lojacono Pojero, 1853-1919, “assistente provvisorio nel Regio Orto Botanico di Palermo,” a disciple of Agostino Todaro (1818-1892), his writings include *Le isole Eolie*. Palermo 1878, *Monografia dei trifogli di Sicilia*. Palermo 1878, “Revisione dei trifogli dell'America settentrionale.” *Nuovo Giorn. Bot. Ital.* 15: 113-198. 1883, “Clavis specierum *Trifoliorum*.” *Nuovo Giorn. Bot. Ital.* 15: 225-278. 1883 and “Sulla *Chorisia speciosa* S. Hil., a Palermo.” *Boll. Soc. Mutuo Soccorso*. 9: 13-15. 1911. See T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 242. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flow-ering Plants of Mexico*. Philadelphia 1964.

Pooideae, Poeae, Loliinae, type *Lojaconoa caerulescens* (Desf.) Gand., see *Species Plantarum* 1: 73-74. 1753, *Flora Americae Septentrionalis*; or, ... 2: 478. 1814, *Flora Europaea* 25: 341. 1891 and *Ill. Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Bot. Zhurn. (Moscow & Leningrad)* 52: 1598. 3-30 Nov 1967, *Watsonia* 16: 300. 1987, *Contributions from the United States National Herbarium* 48: 312-368. 2003.

Lolium Krecz. & Bobrov

Referring to *Lolium*.

One species, central Asia, eastern Mediterranean. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, annual, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, raceme unilateral or spike, spikelets several-flowered, 2 glumes subequal or unequal, upper glume 3-nerved, lemmas coriaceous and shortly awned, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, in dry places, open areas, type *Lolium orientale* (Boiss.) Krecz. & Bobrov, see *Monographia Festucarum Europaeorum* 154. 1882 and *Izv. Imp. Bot. Sada Petra Velikago* 14(Suppl. 2): 87. 1915, *Fl. URSS* 2: 531, 544, 766. 1934, *Bulletin de la Société Impériale des Naturalistes de Moscou* 47: 80. 1938, *K. Danske Vid. Selsk., Biol. Skrift.* 14(4): 67. 1965, *Bot. J. Linn. Soc.* 76: 348. 1978.

Species

L. subulatum (Sol. ex P. Russell) Eig (*Agropyron subulatum* (Banks & Sol.) Roem. & Schult.; *Agropyron subulatum* (Sol. ex P. Russell) Roem. & Schult.; *Festuca orientalis* (Boiss.) Fedtsch., nom. illeg., non *Festuca orientalis* Kern (1938); *Festuca orientalis* Kern, nom. illeg., non *Festuca orientalis* (Hack.) V. Krecz. & Bobrov (1934); *Festuca orientalis* (Hack.) V. Krecz. & Bobrov; *Lolium orientale*

(Boiss.) Krecz. & Bobrov; *Nardurus orientalis* Boiss.; *Nardurus subulatus* (Banks & Sol.) Bor; *Nardurus subulatus* (Sol. ex P. Russell) Bor; *Triticum subulatum* Banks & Sol.; *Triticum subulatum* Sol. ex P. Russell)

Eurasia. Glumes subequal, lemmas rounded 5-nerved, useful for erosion control, see Alexander Russell (ca. 1715-1768), *The Natural History of Aleppo* 2: 244. London 1794 [edition 2, in two volumes, revised, enlarged, and illustrated with notes, by Patrick Russell (1727-1805)], *Systema Vegetabilium* 2: 761. 1817, *Diagn. Pl. Orient.* ser. 1, 7: 127. 1846 and *Journal of Botany, British and Foreign* 75: 185-186, 189. 1937.

Lolium L. = *Arthrochortus* Lowe, *Craepalia* Schrank, *Crypturus* Link

From the Latin name for a troublesome weed or a darnel, *lolium*, *ii* (Plinius, Vergilius, T. Maccius Plautus, Ovidius); *lolium* denotes not edible food, from Akkadian *la*, Hebrew *lo* “of negation, not, no, without” and *lehem* “food, grain, bread,” Akkadian *lewi*, *lemu*, *le’emu* “to take food,” see Carl Linnaeus, *Species Plantarum*. 83. 1753 and *Genera Plantarum*. Edition 5. 36. 1754; Giovanni Semerano, *Dizionario della lingua Latina e di voci moderne*. 2(2): 459. Firenze 1994.

About 8 species, Europe, temperate Eurasia, North Africa, exact native range obscure. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, annual or perennial, herbaceous, variable habit, erect, tufted or caespitose, stoloniferous or rhizomatous or decumbent, more or less decumbent to erect, rhizomes spreading, culm nodes glabrous, culm internodes hollow, unbranched above, auricles present, ligule membranous, leaves linear, plants bisexual, inflorescence a terminal spike simple or single, solitary spikelets sessile and in two-ranked heads or distichous, florets perfect, upper floret reduced, spikelets compressed laterally, disarticulation above glumes and between florets, glumes 1 per spikelet or 2, lower glumes reduced or absent, upper glume exerted and stiff, lemmas acute and dorsally convex or rounded on the back, lemma membranous to coriaceous, awn subterminal or absent, hairy callus absent, callus short, palea 2-keeled, lodicules present, 3 stamens, ovary glabrous, white plumose stigmas, pasture grasses, open habitats, valuable fodder and lawn grasses, used as seed mixtures for roadside restoration, the annual species are troublesome invasive weeds of cereal crops, some species is considered toxic to livestock, this is a difficult genus, all species of *Lolium* are more or less interfertile and intergrading, several intergeneric hybrids within the genus, many species hybridizes freely, hybridization occurs with *Festuca* L., type *Lolium perenne* L., see *Species Plantarum* 1: 83. 1753, Franz von Paula von Schrank (1747-1835), *Baiersche Flora* 1: 102, 382. 1789, *Essai d'une Nouvelle Agrostographie* 99, 162,

177. 1812, *Observations sur les Graminées de la Flore Belgique* 97, 98, 99. 1823 [1824], *Linnaea* 17(4): 386-387. 1844, *Hooker's Journal of Botany and Kew Garden Miscellany* 8: 301. 1856, *Flore de France ... Prospectus* 3: 612. 1856 and *Grasses of Ceylon* 45. 1956, *Techn. Bull. U.S.D.A.* (or *U.S. Dept. Agric. Tech. Bull.*, or *Technical Bulletin, United States Department of Agriculture*) 1392: 1-65. 1968, *Dominguezia* 1: 1-23. 1978, *Novon* 3(3): 239-243. 1993, *Fragmenta Floristica et Geobotanica* 41(2): 521-536. 1996, *Botanical Journal of the Linnean Society* 141(2): 177-181. Feb 2003, *Contributions from the United States National Herbarium* 48: 121, 239, 241, 426-431. 2003, Elizabeth A. Kellogg & Jeffrey L. Bennetzen, “The evolution of nuclear genome structure in seed plants.” *Am. J. Bot.* 91: 1709-1725. 2004, *Annals of Applied Biology*.

144(1): 53-63. Feb 2004, *Grass and Forage Science* 59(1): 8-14. Mar 2004 [impact of seeding rate on annual ryegrass performance], *Journal of Agronomy and Crop Science* 190(2): 130-137. Apr 2004 [Management of Italian and Perennial Ryegrasses for Seed and Forage Production in Crop Rotations.], *Weed Research* 44(2): 78-86. Apr 2004 [Variation in allelopathic activity over 100 years of barley selection and breeding], *The Plant Journal* 38(3): 421-431. May 2004 [Oxidative burst and expression of *germin/oxo* genes during wounding of ryegrass leaf blades: comparison with senescence of leaf sheaths.], *Botanical Journal of the Linnean Society* 145(3): 257-294. July 2004, *Global Change Biology* 10(8): 1377-1388. Aug 2004, *Plant Breeding* 123(4): 395-397. Aug 2004, *Weed Research* 44(6): 453-459. Dec 2004.

Species

L. canadense Michx. ex Roem. & Schult. (*Lolium canadense* Michx. ex Brouss.; *Lolium canadense* Bernh. ex Rouville; *Melica altissima* Walter, nom. illeg., non *Melica altissima* L.)

Europe, America. See *Flora Caroliniana, secundum ...* 78. 1788, *Elenchus Plantarum Horti Botanici Monspelienensis* 35. 1805, *Systema Vegetabilium* 2: 893. 1817, Paul Gervais de Rouville (1823-1907), *Monographie du genre Lolium* 27. Montpellier 1853.

L. canariense Steud.

Africa, Spain, Canary Islands. Annual, useful for erosion control, see *Synopsis Plantarum Glumacearum* 1: 340. 1854 and *Techn. Bull. U.S.D.A.* 1392: 30. 1968.

in Spanish: jollo canario

L. loliaceum (Bory & Chaub.) Hand.-Mazz. (*Lolium perenne* subsp. *rigidum* (Gaudin) Á. Löve & D. Löve; *Lolium perenne* var. *rigidum* (Gaudin) Coss. & Durieu; *Lolium rigidum* Gaudin; *Lolium rigidum* subsp. *lepturoides* (Boiss.) Sennen & Mauricio; *Lolium rigidum* Gaudin var. *rottboellioides* Heldr. ex Boiss.; *Lolium subulatum* Vis.; *Rottboellia loliacea* Bory & Chaub.)

Mediterranean region. Annual, caespitose, erect or decumbent, unbranched, internodes hollow, leaves auriculate, ligule membranous and truncate, leaf blades acute to obtuse, a green to purple cylindrical spike erect or curved, spikelets never exceeding the glume, glumes 1 per spikelet, the terminal spikelet with 2 glumes, lemma unawned or awned or mucronate, palea narrowly elliptic to narrowly obovate, anthers yellow, ovary glabrous, fruit compressed and elliptical, weed species of roadsides and crops, waste places, occurs in open habitats, maritime coasts and habitats, sandy areas, often maritime-arenicolous, often confused with maritime forms of *Lolium rigidum* Gaudin, see *Agrostologia Helvetica, definitionem* ... 1: 334-335. 1811, *Expédition scientifique de Morée*. Section des sciences physiques. Tome III. - 2e partie. Botanique. 3: 46. 1832, *Flora Dalmatica* 1d: 90, t. 3. 1842, *Diagnoses plantarum orientalium novarum, ser. 1, 2* (fasc. 13): 67. 1853, *Exploration Scientifique de l'Algérie* 2: 194. 1855 and *Annalen des K. K. Naturhistorischen Hofmuseums* 28: 32. 1914, *Catalogo de la flora del Rif oriental* ... 135. 1933, *Folia Geobotanica et Phytotaxonomica* 10(3): 273. 1975, *Lagascalia* 12: 286-290. 1984, *Annali di Botanica* 45: 75-102. 1987, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Bothalia* 18: 114-119. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Fitologija* 39: 72-77. 1991, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Bothalia* 27: 75-82. 1997.

in English: rigid ryegrass, annual ryegrass, Wimmera ryegrass, stiff ryegrass

L. lowei Menezes

Portugal, Madeira, Spain, Canary Islands. Vulnerable species.

L. multiflorum Lam. (*Lolium aristatum* Lag.; *Lolium gaudinii* Parl., nom. inval.; *Lolium italicum* A. Braun; *Lolium italicum* var. *italicum*; *Lolium italicum* var. *muticum* Döll; *Lolium multiflorum* f. *microstachyum* Uechtr.; *Lolium multiflorum* subsp. *italicum* (A. Braun) Schinz & R. Keller; *Lolium multiflorum* var. *diminutum* Mutel; *Lolium multiflorum* var. *italicum* (A. Braun) Beck; *Lolium multiflorum* var. *multiflorum*; *Lolium multiflorum* var. *muticum* DC.; *Lolium perenne* L.; *Lolium perenne* subsp. *multiflorum* (Lam.) Husnot; *Lolium perenne* var. *aristatum* Willd.; *Lolium perenne* var. *italicum* (A. Braun) Parnell; *Lolium perenne* var. *multiflorum* (Lam.) Parnell; *Lolium perenne* var. *multiflorum* (Lam.) Coss. & Durieu; *Lolium scabrum* J. Presl; *Lolium siculum* Parl.; *Lolium temulentum* var. *multiflorum* (Lam.) Kuntze)

Mediterranean, Europe, exact native range obscure. Annual or biennial to short-living perennial, herbaceous, loosely tufted, often branched, slender to very robust and rather stout, erect or spreading or decumbent, dark green, dark swollen joints, leaves auriculate with curved auricles, sheaths of the lower leaves purple-red to pink, upper sheath

sometimes scabrid, ligule quite short and membranous, leaf blades acute and shiny, green spike-like inflorescence, spikes erect or curved, spikelets (6-)10- to 14-flowered (up to 20-25) applied on the axis by one of their sides, florets not turgid at maturity, glumes 1 per spikelet, the terminal spikelet with 2 glumes, glumes lanceolate or narrowly oblong and shorter than spikelet, lemmas usually awned or unawned, awn straight, palea 2-keeled with keels winged, anthers yellow or purple, ovary glabrous, ornamental grass widely naturalized in temperate regions, a successful invader of post-agricultural succession in the Inland Pampa grasslands in Argentina, cultivated and occasionally escaped, soil improver, quick ground cover, hay, useful for fodder and for erosion control, palatable and highly nutritious, a valuable pasture grass, dry or very wet soils are not suitable, sensitive to summer drought, requires mild or warm climates, shade intolerant, very sensitive to winter cold and winter flooding, if well established can survive short periods of flooding, weed species of roadsides and waste places, disturbed sites, open habitats, fields, pastures and gardens, along edge of road, hybridizes freely with *Lolium perenne* L. and *Lolium rigidum* Gaudin, hybridizes very rarely with *Festuca pratensis* Huds. and *Festuca arundinacea* Schreb., some authors consider Italian ryegrass to be a variety or subspecies of the very closely related *Lolium perenne* L., see *Species Plantarum* 1: 83. 1753, *Flore Françoise* 3: 621. 1779, *Species Plantarum. Editio quarta* 1: 642. 1797, *Flore Française ... Troisième Édition* 5: 286. 1815, *Genera et species plantarum* 5. 1816, *Reliquiae Haenkeanae* 1(4-5): 267. 1830, *Flora* 17(1): 241, 259. 1834, *Révision des Graminées* 2: 665, t. 220. 1834, *Fl. Franc.* 4: 139. 1839, *The Grasses of Scotland* 1(1): 142, t. 65. 1842, *The Grasses of Britain* 302, t. 140. 1845, *Fl. Ital.* 1: 532. 1848, *Exploration Scientifique de l'Algérie* 2: 194. 1855, *Flora Brasiliensis* 2(3): 237. 1880, *Jahresbericht der Schlesischen Gesellschaft für Vaterländische Cultur* 1876: 334. 1880, *Compendio della Flora Italiana* 799. 1884, *Flora von Nieder-Österreich* 1: 112. 1890, *Revisio Generum Plantarum* 2: 779. 1891, *Flore de l'Algérie* 1: 238. 1895, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 85. 1899 and *Wissenschaftliche Mitteilungen des Bosnisch-Herzegowinischen Landesmuseums: Heft C: Naturwissenschaft* 9: 459. 1904, *Flora der Schweiz (edition 2)* 1: 65. 1905, Carl Joseph Schröter (1855-1939), *Lebensgeschichte der Blütenpflanzen Mitteleuropas 1904-1942, Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 99. 1942, *Grasses of Ceylon* 47. 1956, *Grasses of Burma* ... 545. 1960, *Techn. Bull. U.S.D.A.* 1392: 7, 10, 14, 49-50. 1968, *Flora Republicii Socialiste Romania* 12: 575. 1972, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Turun yliopiston julkaisuja - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Lagascalia* 12: 286-290. 1984, *Crop Science*

(Madison) 25: 757-761. 1985, *Chromosoma* 93: 413-419. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Annali di Botanica* 45: 75-102. 1987, *Citologija i Genetika* 22: 28-31. 1988, *Bothalia* 18: 114-119. 1988, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1671-1673. 1989, *Anales del Jardín Botánico de Madrid* 47: 411-417. 1990, *Journal of the Indian Botanical Society* 69: 447-451. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Flora Mediterranea* 1: 229-236. 1991, *Fitologija* 39: 72-77. 1991, *Journal of Shanghai Agricultural College* 9(4): 253-259. 1991, *Bot. J. Linn. Soc.* 108: 399-408. 1992, *Plant Systematics and Evolution* 188: 125-138. 1993, *New Phytologist* 128: 339-345. 1994, *Scientia Agricultura Sinica* 27(5): 69-76. 1994, *Chromosoma* 104: 164-168. 1995, *Genet. Res. Crop Evol.* 44: 479-487. 1997, *Bothalia* 27: 75-82. 1997, *Austral. Ecology* 30(1): 49-57. Feb 2005 [Fungal endophyte infection changes growth attributes in *Lolium multiflorum* Lam].

in English: Australian ryegrass, ryegrass, Italian ryegrass, short rotation ryegrass, annual ryegrass, darnel, Westerwolds ryegrass (from Westerwolde area, Netherlands)

in French: ivraie, zizanie

in Arabic: haschîsch el farras, haschîsh el farras, samma

in Morocco: zwân, zuwân, gesmatâ, gousmir, l-medhun, mahadoun, sîkrân, sîkrâ, saylam

in South Africa: Australiese drabok, drabok, Italiaanse raaigras, raaigras

in Japan: nezumi-mugi

in Mexico: ballico anual, ballico italiano, pasto italiano

L. perenne L. (*Lolium boucheanum* Kunth; *Lolium brasilianum* Nees; *Lolium canadense* Bernh. ex Rouville; *Lolium cristatum* L. ex Nyman; *Lolium latum* Roth ex Steud.; *Lolium marschallii* Steven; *Lolium montevidense* Rouville; *Lolium multiflorum* Lam.; *Lolium multiflorum* var. *ramosum* Guss.; *Lolium perenne* f. *prostratum* Pic. Serm.; *Lolium perenne* subsp. *multiflorum* (Lam.) Husnot; *Lolium perenne* subsp. *perenne*; *Lolium perenne* subvar. *tenuë* (L.) Pérez Lara; *Lolium perenne* var. *aristatum* Willd.; *Lolium perenne* var. *brasilianum* (Nees) Kuntze; *Lolium perenne* var. *compressum* Sibth.; *Lolium perenne* var. *cristatum* Pers.; *Lolium perenne* var. *italicum* (A. Braun) Parnell; *Lolium perenne* var. *marschallii* (Steven) Trautv.; *Lolium perenne* var. *multiflorum* (Lam.) Parnell; *Lolium perenne* var. *multiflorum* (Lam.) Coss. & Durieu; *Lolium perenne* var. *pacyi* Sturtev.; *Lolium perenne* var. *perenne*; *Lolium perenne* var. *tenuë* (L.) Huds.; *Lolium tenuë* L.) (for the German explorer Friedrich August Marschall von Bieberstein, 1768-1826, author of *Flora taurico-caucasica*. Charkouiae [Charkow] 1808-1819, *Beschreibung der Länder zwischen den Flüssen Terek und Kur am Caspischen Meere*. Frankfurt am Main 1800 and *Centuria plantarum rariorum Rossiae meridionalis praesertim Tauriae et Caucasi iconibus descriptionibusque*

illustrata. Charkoviae 1810. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 450. 1965; Stafleu and Cowan, *Taxonomic literature*. 3: 305-306. 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 207. Oxford 1964; Warren R. Dawson, *The Banks Letters*. London 1958; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Europe, Egypt to Morocco. Perennial, annual or short-lived perennial, herbaceous, easily established, robust, erect or spreading or decumbent, loosely to densely tufted, dark green to yellowish green to straw-colored, often purplish at the base, roots are densely fasciculate, slender and long thin culms, sparsely leafy, auricles present or absent and often tapering to a narrow point, very fast leaf turnover leaf sheath a round structure, sheaths of the inferior leaves red to purple red to pinkish, ligule short and greenish to transparent, leaf blades acute and shiny, stout flower head, flattened terminal spike green or purple, spikes erect or curved, spikelets applied on the axis by one of their sides, chasmogamous spikelets, florets without awns, glumes 1 per spikelet, the terminal spikelet with 2 glumes, upper glume lanceolate or narrowly oblong and shorter than spikelet, lemmas awnless or minutely awned, palea acute and 2-keeled with scabrous keels, ovary apex glabrous, fruit dorsiventrally compressed, variable species cultivated and frequently escaped, sown for pastures, cultivated fodder, provides good forage and hay, the plant tillers freely, nutritious and palatable, infusion of plant drunk for stopping diarrhoea, older plants can become tough and unpalatable, lawns and playing fields, soil improver, used for stabilization of soils, useful for erosion control, sensitive to intense frost and to high temperatures, very sensitive to winter flooding and to drought, dry or wet soils are not suitable, susceptible to rust, a very variable species widely naturalized in temperate regions, typical of oceanic and mild climates, often found in rainy climates, quite sensitive to shade, tolerates heavy grazing, weed species of waste places and roadsides, ditches, open habitats, fields and field borders, on disturbed sites, pastures, tracks, lawns, river flats, riverbanks, sand dunes, hybridizes with *Festuca pratensis* Huds. and more rarely with *Festuca arundinacea* Schreb., hybridizes with *Lolium multiflorum* Lam., the entire plant is considered toxic, contains loliolide and several alkaloids, can cause rye-grass staggers in stock, see *Species Plantarum* 1: 83. 1753, *Species Plantarum, Editio Secunda* 122. 1762, *Flora Anglica, Editio Altera* 1: 55. 1778, *Flore Française* 3: 621. 1779, *Flora Oxoniensis* 50. 1794, *Flore des Environs de Paris* 62. 1799, *Enumeratio Plantarum in Partibus Saellandiae Septentrionalis et Orientalis* 1: 36. Hafniae 1801, *Syn. Pl.* 1: 110. 1805,

- Agrostologia Helvetica, definitionem ...* 1: 334-335. 1811, *A Natural Arrangement of British Plants* 2: 93. 1821, *Nomenclator Botanicus* 492. 1821, *Flora Helvetica* 1: 352. 1828, *Flora Brasiliensis seu Enumeratio Plantarum* 443. 1829, *Révis. gramin.* 3: 665, t. 220. 1834, *Flora* 17(1): 241. 1834, *The Grasses of Scotland* 1(1): 142, t. 65. 1842, *Synopsis der Deutschen und Schweizer Flora* 2: 956. 1844 [1846], *The Grasses of Britain* 302, t. 140. 1845, *Fl. ital.* 1: 532. 1848, *Prodromus Florae Batavae* 1: 329. 1850, *Monographie du genre Lolium* 18, 27, 33. 1853, *Exploration Scientifique de l'Algérie* 2: 194. 1855, *Flora des Grossherzogthums Baden* 116. 1855 [1857], *Bulletin de la Société Impériale des Naturalistes de Moscou* 30: 103. 1857, *Botanische Zeitung. Berlin* 21, App. 1: 8. 1863, *Journal of Botany, British and Foreign* 1: 8. 1863, *Enumeratio Plantarum Transsilvaniae* 812. 1866, *Acta Horti Petrop.* 1: 24. 1871, *Österreichische Botanische Zeitschrift* 27(4): 124. 1877, *Flora der Uckermark* 351. 1880, *Compendio della Flora Italiana* 799. 1884, *New York Botanical Garden Annual Report* 1882(1): 77. 1883, *Anales de la Sociedad Española de Historia Natural* 15: 427. 1886, *Flora von Nieder-Österreich* 1: 112. 1890, *Revisio Generum Plantarum* 2: 779. 1891, *Flore de l'Algérie* 1: 238. 1895, *Revisio Generum Plantarum* 3(2): 355. 1898, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 85. 1899 and *Synopsis der mitteleuropäischen Flora* 2: 754-755. 1902, *Anales del Museo Nacional de Buenos Aires* 21: 174. 1911, *Nederlandsch Kruidkundig Archief. Verslangenen Mededelingen der Nederlandsche Botanische Vereeniging* 1912: 92. 1912, *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten. Beihefte* 3, 30: 316. 1913, *Hartmans Handbok i Skandinavien Flora* 1: 243-244. 1926, *Webbia* 6: 73. 1948, *Flora Neerlandica* 1: 108. 1951, *Grasses of Ceylon* 47. 1956, *Grasses of Burma ...* 545. 1960, *Techn. Bull. U.S.D.A.* 1392: 7, 9-10, 46-47. 1968, *Folia Geobotanica et Phytotaxonomica* 10(3): 273. 1975, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Crop Science (Madison)* 25: 757-761. 1985, *Chromosoma* 93: 413-419. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Annali di Botanica* 45: 75-102. 1987, *Citologija i Genetika* 22: 28-31. 1988, *Bothalia* 18: 114-119. 1988, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1671-1673. 1989, *Anales del Jardín Botánico de Madrid* 47: 411-417. 1990, *Journal of the Indian Botanical Society* 69: 447-451. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Flora Mediterranea* 1: 229-236. 1991, *Journal of Shanghai Agricultural College* 9(4): 253-259. 1991, *Fitologija* 39: 72-77. 1991, *Bot. J. Linn. Soc.* 108: 399-408. 1992, *Plant Systematics and Evolution* 188: 125-138. 1993, *New Phytologist* 128: 339-345. 1994, *Scientia Agricultura Sinica* 27(5): 69-76. 1994, *Chromosoma* 104: 164-168. 1995, G.P. Cheplick, "Effects of endophytic fungi on the phenotypic plasticity of *Lolium perenne* (Poaceae)." *Am. J. Bot.* 84: 34. 1997, *Genet. Res. Crop Evol.* 44: 479-487. 1997, *Bothalia* 27: 75-82. 1997, G.P. Cheplick, "Genotypic variation in the regrowth of *Lolium perenne* following clipping: effects of nutrients and endophytic fungi." *Functional Ecology* 12(2): 176-184. Apr 1998, Gregory P. Cheplick, "Recovery from drought stress in *Lolium perenne* (Poaceae): are fungal endophytes detrimental?" *Am. J. Bot.* 91: 1960-1968. 2004.
- in English: English ryegrass, perennial ryegrass, perennial rye grass, ryegrass, lyme grass, strand wheat, terrell grass, red darnel, lawn grass, ray grass
- in French: ivraie vivace
- in Arabic: djelif, gazon, gazoun, hashish el-faras, nusay, qallab, sammah, zuwan
- in Morocco: hasísat el-farás, l-medhun, zwân, zuwân
- in South Africa: meerjarige raaigras, meerjarige roggras, raaigras, roggras, rygras
- in Japan: hoso-mugi
- in Mexico: ballico perenne, pasto inglés
- L. perenne** L. subsp. **perenne** (*Lolium multiflorum* Lam. var. *ramosum* Guss. ex Arcang.; *Lolium perenne* var. *crisatum* Pers. ex B.D. Jackson)
- North America. Herbaceous, forage, on damp soil, along roadsides, open dry areas, see *Species Plantarum* 1: 83. 1753, *Flore Française* 3: 621. 1779, *Syn. Pl.* 1: 110. 1805, *Compendio della Flora Italiana* 799. 1884.
- in English: ryegrass
- in Ecuador: reigras
- L. persicum** Boiss. & Hohen. (*Lolium dorei* Boivin; *Lolium dorei* var. *dorei*; *Lolium dorei* var. *laeve* Boivin; *Lolium dorei* var. *laevis* B. Boivin; *Lolium rigidum* var. *duthiei* Hack.)
- Eurasia, Asia, Iran. Annual, noxious weed, naturalized elsewhere, see *Diagnoses plantarum Orientalium Novarum* ser. 1, 13: 66. 1854, *The Flora of British India* 7: 364. 1896 and *Le Naturaliste Canadien* 94: 525-526. 1967 (*Nature Canada* 94: 525. 1967), *Techn. Bull. U.S.D.A.* 1392: 41. 1968.
- in English: Persian ryegrass, Persian darnel
- L. remotum** Schrank (*Lolium linicola* Sonder; *Lolium linicola* var. *aristatum* Döll; *Lolium perenne* subsp. *remotum* (Schrank) Á. Löve & D. Löve; *Lolium remotum* f. *asperum* (Roth) Anghel & Beldie; *Lolium remotum* var. *aristatum* (Döll) Asch.; *Lolium temulentum* subsp. *remotum* (Schrank) Á. Löve & D. Löve)
- Eastern Mediterranean, Europe. Annual, leaf blade long-narrowed, florets turgid at maturity, glumes lanceolate about the same length as or longer than the spikelets, lemmas awned elliptic to ovate, weed of flax crops, useful for

erosion control, see *Species Plantarum* 1: 83. 1753, *Baierische Flora* 1: 382. 1789, *Fl. Baden* 1: 113. 1855, *Index Seminum [Berlin]* 4: 4. 1857, *Fl. Brandenburg* 1(2): 876. 1864 and *Techn. Bull. U.S.D.A.* 1392: 38, 58. 1968, *Flora Republicii Socialiste Romania* 12: 572. 1972, *Folia Geobotanica et Phytotaxonomica* 10(3): 273. 1975, *Fragmenta Floristica et Geobotanica* 27: 581-590. 1981, *Fitologija* 39: 72-77. 1991.

L. rigidum Gaudin (*Lolium loliaceum* (Bory & Chaub.) Hand.-Mazz.; *Lolium multiflorum* var. *rigidum* (Gaud.) Trab.; *Lolium parabolicae* Sennen ex Samp.; *Lolium perenne* subsp. *rigidum* (Gaudin) Á. & D. Löve; *Lolium perenne* var. *rigidum* (Gaudin) Coss. & Durieu; *Lolium rigidum* subsp. *lepturoides* (Boiss.) Sennen & Mauricio; *Lolium strictum* C. Presl; *Lolium subulatum* Vis.; *Lolium subulatum* sensu J. Black)

Southern Europe, Mediterranean, Middle East to western India. Annual, tufted, stiff, erect or geniculate, sometimes rooting from the lower nodes, base often reddish, branched, shoots curving upward, culm ensheathed by upper leaves, auricles very short or absent, leaf sheaths usually reddish purple and ribbed, ligule membranous and obtuse to truncate, leaf blades acute and shiny, straight inflorescence spike green to purple, spikelets distichous and glabrous, spikelets 2- to 11-flowered, lowest floret lanceolate and usually awnless, glumes lanceolate or narrowly oblong and about the same length as the spikelets, glumes 1 per spikelet, 2 glumes on terminal spikelet, lemmas obtuse to acute, lemmas occasionally awned or unawned, membranous palea narrowly elliptic to narrowly obovate, palea keels scabrid, ovary glabrous, elliptical fruit, pollen can cause allergies and severe respiratory conditions, variable species naturalized elsewhere, cultivated widely in Australia as a pasture grass, annual pasture grass and high forage productivity, weed species of many cereal crops, common on heavy cracking soil, fields, bank of irrigation ditch, disturbed soils, sandy areas, cliffs, roadsides, waste places and sandy wasteland, rocky hillsides, in water and on stream edges, hybridizes with *Lolium perenne* L. and *Lolium multiflorum* Lam., maritime forms often confused with *Lolium loliaceum* (Bory & Chaub.) Hand.-Mazz., see *Agrostologia Helvetica, definitionem* ... 1: 334-335. 1811, *Cyperaceae et Gramineae Siculae* 49. 1820, *Expédition scientifique de Morée*. Section des sciences physiques. Tome III. - 2e partie. *Botanique*. 3: 46, t. 3, f. 2. 1832, *Flora Dalmatica* 1d: 90, t. 3. 1842, *Exploration Scientifique de l'Algérie* 2: 194. 1855, *Diagnoses plantarum orientalium novarum, ser. 2*, 3(4): 144. 1859, *Flora Orientalis* 5: 680. 1884, *Flore de l'Algérie* 1: 238. 1895, *The Flora of British India* 7: 364. 1896 and *Anales del Museo Nacional de Buenos Aires* 13: 530. 1906, *Prodrome de la Flore Corse* 1: 180. 1910, *Annalen des K. K. Naturhistorischen Hofmuseums* 28: 32. 1914, *Flora Kavkaz* 2, 1: 319. 1939, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 99. 1942,

Grasses of Ceylon 46-47. 1956, *Grasses of Burma* ... 546. 1960, *Techn. Bull. U.S.D.A.* 1392: 15, 23. 1968, *Folia Geobotanica et Phytotaxonomica* 10(3): 273. 1975, *Lagascalia* 12: 286-290. 1984, *Flora Palaestina* 4: 397, 232. 1986, *Annali di Botanica* 45: 75-102. 1987, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Bothalia* 18: 114-119. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Fitologija* 39: 72-77. 1991, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Bothalia* 27: 75-82. 1997, J.M. Blanco-Moreno, L. Chamorro, R. M. Masalles, J. Recasens and F.X. Sans, "Spatial distribution of *Lolium rigidum* seedlings following seed dispersal by combine harvesters." *Weed Research* 44(5): 375-387. Oct 2004.

in English: darnel, Swiss ryegrass, stiff darnel, annual ryegrass, Wimmera ryegrass, rigid ryegrass

in Morocco: zwân, zuwân, gesmatâ, l-medhun, sîkrân, sîkrâ, saylam

in South Africa: Switserse raaigras

L. rigidum Gaudin subsp. *lepturoides* (Boiss.) Sennen & Mauricio (*Lolium crassiculme* Rech.f.; *Lolium lepturoides* Boiss.; *Lolium loliaceum* (Bory & Chaub.) Hand.-Mazz.; *Lolium rigidum* var. *rottblollioides* Heldr. ex Boiss.; *Lolium rigidum* var. *rottblollioides* Heldr. ex Boiss.; *Lolium subulatum* Vis.; *Rottboellia loliacea* Bory & Chaub.)

Europe, Sicily, Israel, Portugal. Rocky dry areas, along roadsides, see *Expédition scientifique de Morée*. Section des sciences physiques. Tome III. - 2e partie. *Botanique*. 3: 46. 1832, *Flora Dalmatica* 1d: 90, t. 3. 1842, *Diagnoses plantarum orientalium novarum, ser. 1*, 2 (fasc. 13): 67. 1853, *Flora Orientalis* 5: 680. 1884 and *Annalen des K. K. Naturhistorischen Hofmuseums* 28: 32. 1914, *Catalogo de la flora del Rif oriental* ... 135. 1933, *Techn. Bull. U.S.D.A.* 1392: 23, 54. 1968, *Annali di Botanica* 45: 75-102. 1987.

L. rigidum Gaudin subsp. *rigidum* (*Lolium parabolicae* Sennen ex Samp.; *Lolium rigidum* var. *rigidum*; *Lolium strictum* C. Presl)

Europe. See *Agrostologia Helvetica, definitionem* ... 1: 334. 1811 and *Techn. Bull. U.S.D.A.* 1392: 20. 1968.

L. subulatum Vis. (*Lolium rigidum* subsp. *lepturoides* (Boiss.) Sennen & Mauricio)

Europe, Israel, Syria. Annual, see *Flora Dalmatica* 1d: 90, t. 3. 1842, *Diagnoses plantarum orientalium novarum, ser. 1*, 2 (fasc. 13): 67. 1853 and *Catalogo de la flora del Rif oriental* ... 135. 1933, *Techn. Bull. U.S.D.A.* 1392: 26. 1968.

L. temulentum L. (*Bromus temulentus* (L.) Bernh.; *Craepalia temulenta* (L.) Schrank; *Lolium arvense* With.; *Lolium giganteum* Roem. & Schult.; *Lolium maximum* Willd.; *Lolium speciosum* Stev. ex M. Bieb.; *Lolium temulentum* f. *arvense* (With.) Junge; *Lolium temulentum* subsp. *arvense* (With.) Tzvelev, nom. illeg., non *Lolium temulentum* var. *arvense* Lilj.; *Lolium temulentum* subsp. *speciosum* (Stev.

ex M. Bieb.) Arcang.; *Lolium temulentum* var. *arvense* Lilj.; *Lolium temulentum* var. *arvense* (With.) Bab., nom. illeg., non *Lolium temulentum* var. *arvense* Lilj.; *Lolium temulentum* var. *leptochaeton* A. Braun; *Lolium temulentum* var. *macrochaeton* A. Braun; *Lolium temulentum* var. *speciosum* (Stev. ex M. Bieb.) Koch)

Europe, Mediterranean, Egypt, Tunisia to Morocco. Annual, solitary or not densely tufted, herbaceous, robust, stiff, scabrous or glabrous, stout, erect or geniculate or subprostrate, branched or unbranched, often rooting from the lower nodes, auricles present and clawlike or absent, sheaths glabrous to scaberulous, ligule membranous and obtuse to truncate, leaf blade flat and ribbed, green flattened terminal single erect spike, florets turgid at maturity, florets awned or awnless, glume lanceolate and usually equalling spikelet, glumes 1 per spikelet, 2 equal glumes on terminal spikelet, upper glume rigid, lemmas acute and swollen at maturity, awn subterminal straight or curved or hooked, palea acute with scabrous keels, anthers yellow, ovary glabrous, fruit swollen at maturity, troublesome weed species widely naturalized, medicinal value, the grains and probably the entire plant as well are poisonous, occurs in waste places and ballast, in cultivated or fallow lands, wheat fields, disturbed areas, paddocks, gardens, along roadsides, see *Species Plantarum* 1: 83. 1753, *Flore Française* 3: 621. 1779, *Baiersche Flora* 1: 382. 1789, *An Arrangement of British Plants, Third Edition* 1796, *Species Plantarum. Editio quarta* 1: 462. 1797, Johann Jakob Bernhardt (1774-1850), *Systematisches Verzeichnis der Pflanzen ...* 47. Erfurt 1800, *Flora Taurico-Caucasica* 1: 80. 1808, *Svensk Flora* 3: 80. 1816, *Systema Vegetabilium* 2: 750. 1817, *Flora* 17: 252. 1834, *Manual of British Botany* 377. 1843, *Synopsis Florae Germanicae et Helveticae (edition 2)* 957. 1843, *Compendio della Flora Italiana* 799. 1884, *Revisio Generum Plantarum* 2: 779. 1891 and *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten. Beihefte* 3(30): 314. 1913, *Grasses of Ceylon* 46. 1956, *Grasses of Burma ...* 546. 1960, *Techn. Bull. U.S.D.A.* 1392: 35, 38. 1968, *Novosti Sist. Vyss. Rast.* 8: 75. 1971, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 119. 1971[1972], *Folia Geobotanica et Phytotaxonomica* 10(3): 273. 1975, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Chromosoma* 93: 413-419. 1986, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Cytologia* 56: 437-452. 1991, *Bot. J. Linn. Soc.* 108: 408. 1992, *South African Journal of Botany* 61: 60-65. 1995, *Chromosoma* 104: 164-168. 1995, *Bothalia* 27: 75-82. 1997, Takayuki Senda and Tohru Tominaga, "Inheritance mode of the awnlessness of darnel (*Lolium temulentum* L.)." *Weed Biology and Management* 3(1): 46-48. Mar 2003, Takayuki Senda and Tohru Tominaga, "Genetic diversity of darnel (*Lolium temulentum* L.) in Malo, Ethiopia depends on traditional farming systems." *Economic Botany*

58(4): 568-577. 2004, T. Senda, N. Kubo, M. Hirai and T. Tominaga, "Development of microsatellite markers and their effectiveness in *Lolium temulentum*." *Weed Research* 44(2): 136-141. Apr 2004, Tohru Tominaga and Takeshi Fujimoto, "Awn of darnel (*Lolium temulentum* L.) as an anthropogenic dispersal organ: A case study in Malo, southwestern Ethiopia." *Weed Biology and Management* 4(4): 218-221. Dec 2004, T. Senda, M. Saito, T. Ohsako and T. Tominaga, "Analysis of *Lolium temulentum* geographical differentiation by microsatellite and AFLP markers." *Weed Research* 45(1): 18-26. Feb 2005.

in English: darnel, bearded darnel, poison darnel, poison grass, bearded ryegrass, darnel ryegrass, poison ray grass, dragge, drawke, drake, drunk, sturdy ryle, Virginian oat, cheat

in Spanish: borrachuelo, cizaña, joyo, rabillo

in Arabic: samma, aqoullab, zawan, zuwan, shaylam, suwal, sikra, danaqah

in Morocco: zwân, zuwân, gesmatâ, l-medhun, sîkrân, sîkrâ, saylam, shaylam, laichour

in Colombia: ballico

in Peru: ballico, cerisuelo, sirisuela

in South Africa: drabok raaigras, dronkgras, drabok

in India: machni, mochni, mostaki

L. temulentum L. forma **arvense** (With.) Junge (*Lolium arvense* With.; *Lolium temulentum* subsp. *arvense* (With.) Tzvelev; *Lolium temulentum* var. *arvense* (With.) Bab., nom. illeg., non *Lolium temulentum* var. *arvense* Lilj.; *Lolium temulentum* var. *leptochaeton* A. Braun; *Lolium temulentum* var. *muticum* Noulet)

Europe. See *Species Plantarum* 1: 83. 1753, *Svensk Flora* 3: 80. 1816, *Systema Vegetabilium* 2: 750. 1817, *Flora* 17: 252. 1834, *Manual of British Botany* 377. 1843 and *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten*. 30 (Beih. 3): 314. 1913, *Techn. Bull. U.S.D.A.* 1392: 35, 38, 55-56. 1968, *Novosti Sist. Vyss. Rast.* 8: 75. 1971, *Bot. J. Linn. Soc.* 108: 408. 1992.

L. temulentum L. forma **temulentum** (*Lolium temulentum* var. *macrochaeton* A. Braun)

Europe. Unbranched, lemma awned, weed, found on sandy roadsides, see *Species Plantarum* 1: 83. 1753, *Flora* 17: 252. 1834 and *Techn. Bull. U.S.D.A.* 1392: 35, 38. 1968, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 1-191. 1987.

L. temulentum L. var. **arvense** Lilj. (*Lolium arvense* With.; *Lolium temulentum* subsp. *arvense* (With.) Tzvelev; *Lolium temulentum* var. *arvense* (With.) Bab., nom. illeg., non *Lolium temulentum* var. *arvense* Lilj.; *Lolium temulentum* var. *leptochaeton* A. Braun; *Lolium temulentum* var. *muticum* Noulet)

Europe. Branched, 3-7 florets per spikelet, lemma muticous, weed, see *Species Plantarum* 1: 83. 1753, *Svensk Flora* 3: 80. 1816, *Systema Vegetabilium* 2: 750. 1817, *Flora* 17: 252. 1834, *Manual of British Botany* 377. 1843 and *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten*. 30 (Beih. 3): 314. 1913, *Techn. Bull. U.S.D.A.* 1392: 35, 38, 55-56. 1968, *Novosti Sist. Vyss. Rast.* 8: 75. 1971, *Bot. J. Linn. Soc.* 108: 408. 1992.

L. temulentum L. var. **temulentum** (*Craepalia temulenta* (L.) Schrank; *Lolium temulentum* var. *macrochaeton* A. Braun)

Europe. See *Species Plantarum* 1: 83. 1753, *Baiersche Flora* 1: 382. 1789, *Flora* 17: 252. 1834.

L. x hubbardii Jansen & Wacht. ex B.K. Simon (*Lolium x hubbardii* Jansen & Wacht.; *Lolium multiflorum* Lam. x *Lolium rigidum* Gaudin)

Australia, Europe. See *Flora Neerlandica* 1(2): 110. 1951, *Austrobaileya* 2(1): 21. 1984.

L. x hybridum Hausskn. (*Lolium boucheanum* Kunth; *Lolium x boucheanum* auct.; *Lolium multiflorum* Lam. x *Lolium perenne* L.; *Lolium perenne* subsp. *boucheanum* (Kunth) Rouy)

Europe. Useful for erosion control, fodder, forage, see *Révision des Graminées* 2: 665, t. 220. 1834, *Mittheilungen der Thüringischen Botanischen Vereins* 5: 32. 1887, *Flora von Nieder-Österreich* 1: 112. 1890 and *Flore de France* 14: 307. 1913, *Techn. Bull. U.S.D.A.* 1392: 30. 1968.

in English: hybrid ryegrass, intermediate ryegrass

Lombardochloa Roseng. & B.R. Arrill. = *Briza* L., *Poidium* Nees

Dedicated to Professor Atilio Lombardo, 1902-1984, agronomist, scientist, devoted to taxonomy, 1940-1973 Director of the Montevideo Botanical Museum, Uruguay, author of "Noticia de la vegetación de la costa oriental del río Uruguay en los departamentos de Paysandú, Salto y Artigas." *Comunicaciones Botánicas del Museo de Historia Natural de Montevideo* 1 (4). 1943, "Flora del Río Uruguay." *Revista del Instituto Nacional de Investigaciones Geográficas I* Montevideo, Universidad de La República. 1959, *Contribución al mejor conocimiento de las plantas indígenas*. Almanaque del Banco de Seguros del Estado 1959, 1960, 1964, 1966-67, 1968, 1970-71. Montevideo, BSE, *Flora arbórea y arborescente del Uruguay*. Montevideo, Concejo Departamental de Montevideo, Dirección de Paseos Públicos. 1964, *Plantas medicinales de la flora indígena*. Almanaque del Banco de Seguros del Estado 1968, 1970-71, 1972, 1973-74, 1975-76, 1977, 1979, 1981, 1985. Montevideo, BSE, "Arboles y arbustos." Montevideo, *Nuestra tierra* (27). 1969, *Organografías de nuestras plantas, monografías*. Almanaque del Banco de Seguros del Estado

1973-74, 1975-76, 1979. Montevideo, BSE, *Los árboles cultivados en los paseos públicos*. Montevideo, IMM. 1979, *Los arbustos y arbustillos de los paseos públicos*. Montevideo, IMM. 1979, *Las palmas de nuestra flora*. Almanaque del Banco de Seguros del Estado. Montevideo. 1980, *Organografía de nuestras plantas, monografías*. Almanaque del Banco de Seguros del Estado. Montevideo. 1980, *Plantas medicinales de la flora indígena*. Almanaque del Banco de Seguros del Estado. Montevideo. 1981, *Plantas medicinales de la flora indígena*. Almanaque del Banco de Seguros del Estado. Montevideo. 1985.

One species, South America. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Brizinae, perennial, herbaceous, tufted, auricles absent, old sheaths fibrous, ligule an unfringed membrane, plants bisexual, cleistogamous or chasmogamous, inflorescence paniculate, 2 glumes more or less equal, near the base of each wing of the lemma a translucent region, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 or 1 stamens, ovary glabrous, 2 stigmas, sometimes referred to *Briza*, type *Lombardochloa rufa* (J. Presl) Roseng. & B.R. Arrill., see *Species Plantarum* 1: 70. 1753, *Reliquiae Haenkeanae* 1(4-5): 282. 1830, *An Introduction to the Natural System of Botany* 450. 1836, *Synopsis Plantarum Glumacearum* 1: 288. 1854 and *Ill. Fl. N. U.S.* edition 2. 1913, *Anales de la Facultad de Química de Montevideo* 9: 260. 1979 [1982], *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 22. 1987, *Contributions from the United States National Herbarium* 48: 146-151, 431, 582-583. 2003.

Species

L. rufa (J. Presl) Roseng. & B.R. Arrill. (*Briza rufa* (J. Presl) Steud.; *Chascolytrum rufum* J. Presl; *Poidium rufum* (J. Presl) Matthei)

Uruguay. Perennial, glumes 3-nerved, see *Reliquiae Haenkeanae* 1(4-5): 282. 1830, *Nomenclator Botanicus. Editio secunda* 1: 225. 1840 and *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 105: 30. 1968, *Willdenowia* 8: 98. 1975, *Anales de la Facultad de Química de Montevideo* 9: 260. 1979[1982].

Lophacme Stapf = *Chloris* Sw., *Enteropogon* Nees

From the Greek *lophos* "a crest" and *akme* "the top, summit."

About two species, southern tropical Africa. Chloridoideae, Cynodonteae, or Eragrostideae, perennial, tufted, herbaceous, unbranched, unarmed, leaves mainly basal, auricles absent, ligule a fringed or unfringed membrane, plants bisexual, spike-like digitate or subdigitate racemes, spikelets solitary and lax, 1-3 fertile florets with 1-5 sterile florets, spikelets sometimes subtended by very minute and hairy

scales, 2 linear glumes unequal, lemmas keeled long awned, palea keels wingless, 2 free and toothed lodicules, 3 stamens, ovary glabrous, 2 dark stigmas, damp places, savannah, open grassland or streamsides, shade or open habitats, related to *Trichoneura*, similar to *Ectrosia* and *Chloris*, type *Lophacme digitata* Stapf, see *Genera et species plantarum* 5. 1816, *Systema Vegetabilium* 2: 607. 1817, *Intr. Nat. Syst. Bot.* 448. 1836, *Flora Capensis* 7(2): 316. 1898 and *Flora Capensis* 7(4): 647-648. 1900, *Annuario del Reale Istituto Botanico di Roma* 8: 350. 1908, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 197. 1957, *Australian Journal of Botany, Supplementary Series* 5: 31. 1972, *Kew Bulletin* 38(1): 61-62. 1983, *Journal of Cytology and Genetics* 20: 205-206. 1985.

Species

L. digitata Stapf

South Africa. Perennial, slender, tufted, rhizomatous, basal sheaths fibrous, awn longer than the floret, ligule a fringed membrane, open habitats, open highveld sourveld, see *Flora Capensis* 7(4): 647-648. 1900.

L. parva Renvoize & Clayton

Zambia. Perennial, shade species, ligule an unfringed truncate membrane, see *Kew Bulletin* 38(1): 61, f. 1. 1983.

Lophatherum Brongn. = *Acroelytrum* Steud., *Allelothea* Steud.

From the Greek *lophos* "a crest" and *ather* "stalk, barb, spine," the awns are crested, referring to sterile lemmas.

Two species, tropical Asia, Indomalayan region. Centothecoideae, Centothecaceae, perennial, tufted or caespitose, erect, herbaceous, sometimes roots modified into fusiform tubers, culm internodes solid or hollow, ligule membranous and ciliolate, leaf blades linear-lanceolate to lanceolate to ovate-lanceolate, leaf sheaths truncate, leaves glabrous or hairy, false petioles, plants bisexual, inflorescence of loose or dense racemes unilateral, spikelets short-pedicelled falling entire, hermaphrodite florets, 1 proximal perfect floret, 2-(-9)-13 distal barren florets, 2 muticous glumes subequal, lower glume 5-nerved, upper glume 7-nerved, sterile lemmas several, awns of the sterile lemmas hooked at maturity, palea 2-nerved, 2 free and fleshy lodicules, 2-3 stamens, shade, moist regions, along rivers, type *Lophatherum gracile* Brongn., see *Voy. Coquille, Bot. Phanérogamie [Voyage autour du Monde]* 49-50, t. 8. 1831 [1829], *Flora* 29: 20. 1846, *Synopsis Plantarum Glumacearum* 1: 117, 300, 428. 1854 and *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1988-1989: 14-20. 1988-1989, *Investigatio et Studium Naturae* 12: 48-65. 1992, *Clinical & Experimental Allergy* 28(3): 306-314. Mar 1998, Adrian Y.P. Fung et al., "A controlled trial of traditional Chinese herbal medicine

in Chinese patients with recalcitrant atopic dermatitis." *International Journal of Dermatology* 38(5): 387-392. May 1999, N.C. Armstrong and E. Ernst, "The treatment of eczema with Chinese herbs: a systematic review of randomized clinical trials." *British Journal of Clinical Pharmacology* 48(2): 262-264. Aug 1999, John Koo and Rishi Desai, "Traditional Chinese medicine in dermatology." *Dermatologic Therapy* 16(2): 98-105. June 2003, Suzan Artik and Thomas Ruzicka, "Complementary therapy for atopic eczema and other allergic skin diseases." *Dermatologic Therapy* 16(2): 150-163. June 2003, *Weed Biology and Management* 4(4): 218-221. Dec 2004.

Species

L. gracile Brongn. (*Acroelytrum japonicum* Steud.; *Allelothea urvillei* Steud.; *Lophatherum annulatum* Franch. & Sav.; *Lophatherum dubium* Steud.; *Lophatherum elatum* Zoll. & Moritz; *Lophatherum geminatum* Baker; *Lophatherum gracile* var. *annulatum* (Franch. & Sav.) Hack.; *Lophatherum gracile* var. *elatum* Hackel; *Lophatherum gracile* var. *elatum* (Zoll. & Moritz) Hack.; *Lophatherum gracile* var. *pilosulum* (Steud.) Hack.; *Lophatherum gracile* var. *zeylanicum* (Hook.f.) A. Camus; *Lophatherum humile* Miq.; *Lophatherum japonicum* Steud.; *Lophatherum lehmannii* Nees ex Steud.; *Lophatherum multiflorum* Steud.; *Lophatherum pilosulum* Steud.; *Lophatherum zeylanicum* Hook.f.)

South India, China and Japan, Sri Lanka, New Guinea, Australia. Perennial with root tubers, tufted, ascending to erect, shortly rhizomatous, leaf sheaths shiny and many-nerved, ligule minute, usually glabrous leaf blades narrow lanceolate and acute, inflorescence a spike-like panicle, spikelet on a short stalk, fertile floret 1, 2-13 sterile florets in an apical tuft, glumes boat-shaped and muticous, lemma with a short terminal barbed awn, palea narrow, stamens 2, a good fodder plant, foliage eaten by animals, leaves used in Chinese medicine, juice from the root used to add flavour to rice wine, a grass of the forest and shady places, see *Voy. Coquille, Bot. Phan.* 49-50, t. 8. 1831 [alt. *Voyage autour du Monde* 2(2): 49-50, t. 8. 1831], *Flora* 29: 20-21. 1846, *Systematisches Verzeichniss der im Indischen Archipel* 102. 1845-1846, *Synopsis Plantarum Glumacearum* 1: 300, 428. 1854, *Annales Museum Botanicum Lugduno-Batavi* 2: 282. 1866, *Enumeratio Plantarum in Japonia Sponte Crescentium ...* 2(1): 180. 1877, *Journal of the Linnean Society, Botany* 20: 300. 1883, *Bulletin de l'Herbier Boissier* 7(9): 707-708, 737. 1899 and *Handb. Fl. Ceylon* 5: 302-303. 1900, *Bulletin du Muséum d'Histoire Naturelle* 25: 495-496. 1919, *Grasses of Ceylon* 33. 1956, *Grasses of Burma ...* 460. 1960, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1988-1989: 14-20. 1988-1989, *Investigatio et Studium Naturae* 12: 48-65. 1992.

in English: common lophatherum, sasagrass

in Japan: sasa-kusi

in China: dan zhu ye, tan chu yeh, tan chu, tan chu yé

in Thailand: ai lek mai phai, phai pen lek, yaa khui mai phai, ya khui mai phai, ya phai

Malayan names: rumput jarang-jarang, rumput kelurat, rumput kelorak, rumput kerurat, rumput ubi buloh

L. sinense Rendle

China. See *Journal of the Linnean Society, Botany* 36(254): 421. 1904.

Lophochlaena Nees = Pleuropogon R. Br.

From the Greek *lophos* “a crest” and *chlaena*, *chlaenion* “cloak.”

Pooideae, Meliceae, type *Lophochlaena californica* Nees, see *Chloris Melvilliana* 31. 1823, *Annals of Natural History* 1: 283. 1838, *Proceedings of the American Academy of Arts and Sciences* 8: 409. 1872, *The Grasses of the United States* 40. 1883 and *Journal of the Washington Academy of Sciences* 28(2): 52, f. 1. 1938, *American Journal of Botany* 28: 360. 1941, *Taxon* 27(4): 375. 1978, *Madroño* 33(2): 146. 1986, *Novon* 4(1): 17. 1994, *Contributions from the United States National Herbarium* 48: 431, 504-505. 2003.

Lophochloa Rchb. = Aegialina Schult. & Schult.f., Aegialitis Trin., Rostraria Trin.

From the Greek *lophos* “a crest, tuft” and *chloe*, *chloa* “grass,” possibly referring to the appearance of *Lophochloa cristata* (L.) Hylander.

About 60-100 species, cosmopolitan, north and south temperate. Pooideae, Poodae, Poeae, Aveneae, or Aveninae, annual or perennial, glabrous or pubescent, herbaceous, ligule an unfringed membrane, leaves flat, a narrow or open panicle compact or loose, spikelets compressed laterally, persistent glumes subequal and keeled, lowest lemmas sessile, awns present or absent, palea present, 2 lodicules membranous and ciliate or glabrous, ovary glabrous, intergrading, usually found in open habitats, meadows, upland grasslands, slopes, mountain slopes, weedy places, sometimes or often included in *Koeleria* Pers. and *Rostraria* Trinius, type *Lophochloa phleoides* (Vill.) Rchb., see *Syn. Pl.* 1: 97. 1805, *Fundamenta Agrostographiae* 127, 149, t. 9, 13. 1820, *Mant.* 2: 13, 222. 1824, *Flora Germanica Excursoria* 42. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 65. 1830, *Gen. Pl.* 3(2): 1184. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 70. 1887 and *Zlaki SSSR* 267. 1976, *Bot. J. Linn. Soc.* 76(4): 322. 1978, *Contributions from the United States National Herbarium* 48: 20, 431, 604. 2003.

Species

L. cristata (L.) Hylander (*Aira cristata* L.; *Airochloa cristata* (L.) Link; *Brachystylus cristatus* (L.) Dulac; *Dactylis cristata* (L.) M. Bieb.; *Festuca cristata* L.; *Festuca cristata* (L.) Vill., nom. illeg., non *Festuca cristata* L.; *Festuca phleoides* Villars; *Koeleria phleoides* (Vill.) Pers.; *Lophochloa phleoides* (Villars) Rchb.; *Poa cristata* (L.) L.; *Poa cristata* (L.) Willd.; *Rostraria cristata* (L.) Tzvelev; *Trisetaria phleoides* (Vill.) Nevski; *Trisetum phleoides* (Vill.) Trin., nom. illeg., non *Trisetum phleoides* (d'Urv.) Kunth)

Mediterranean. Annual, ascending, loosely tufted, dense panicle spike-like, first glume 1-nerved and sparsely hairy, lemmas with a straight awn, weed of disturbed places, moist or stony areas, see *Species Plantarum* 1: 76. 1753, *Systema Naturae, edition 12* 94. 1757, *Flora Delphinalis* 7. 1785 [1786], *Syst. Pl. Eur.* 1: 7. 1785 [June 1786], *Histoire des Plantes de Dauphiné* 1: 250. 1786, *Species Plantarum. Editio quarta* 1: 402. 1797, *Syn. Pl.* 1: 97. 1805, *Flora Taurico-Caucasica* 1: 67. 1808, *Hortus Regius Botanicus Berolinensis* 1: 127. 1827, *Flora Germanica Excursoria* 42. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1: 65. 1830, *Flore du Département des Hautes-Pyrénées* 85. 1867 and *Bot. Not.* 1953: 355. 1953, *Nordisk Kärlväxtflora* 1: 283. 1953, *Novosti Sist. Vyss. Rast.* 7: 47. 1970 [1971], *Publications from the Cairo University Herbarium* 5: 54-55. 1972[1974], *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Fitologija* 39: 72-77. 1991, *South African Journal of Botany* 61: 60-65. 1995, *Bothalia* 26(1): 53-61. 1996, *Taxon* 49(2): 244. 2000.

in English: annual cat's tail, bristly koeler's grass, annual koeleria, annual junegrass, crested polgrass

L. pumila (Desf.) Bor (*Avena pumila* Desf.; *Koeleria pumila* (Desf.) Domin; *Koeleria sinaica* Boiss.; *Rostraria pumila* (Desf.) Holub, nom. illeg., non *Rostraria pumila* (Desf.) Tzvelev; *Trisetaria pumila* (Desf.) Maire; *Trisetum pumilum* (Desf.) Kunth)

Mediterranean, Asia. Annual, small, tufted, ascending, fasciated, glabrous, smooth, spike-like panicles ovate-oblong and dense, glumes subequal and densely pubescent, first glume 3-nerved and densely hairy, lemmas 2-toothed with a slender awn, lowest lemma with a straight awn, weed of disturbed places, dry riverbeds, moist or stony areas, see *Flora Atlantica* 1: 103. 1798, *Révision des Graminées* 1: 102. 1829, *Flora Orientalis* 5: 573. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis* 2: 31. 1906, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 93. 1942, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 445. 1960, *Novosti Sist. Vyss. Rast.* 7: 48. 1970 [1971], *Publications from the Cairo University Herbarium* 5: 54. 1972[1974], *Folia Geobotanica et*

Phytotaxonomica 11(1): 83. 1976, *Lagascalia* 12: 290-292. 1984, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Bothalia* 18: 114-119. 1988, *Taeckholmia* 11: 53. 1988, *Bothalia* 26(1): 53-61. 1996, *Bot. J. Linn Soc.* 141: 130. 2003.

in English: tiny bristle-grass

in French: avoine naine

in Morocco: bou-sibouss

Lopholepis Decne. = *Holboellia* Hook.,
Holboellia Wall., *Lopholepis* (J. Sm.) J. Sm.
(Grammitidaceae)

From the Greek *lophos* "a crest" and *lepis* "scale," referring to the nature of the florets, to the keeled glumes.

One species, Asia, Sri Lanka, India. Chloridoideae, Cynodonteae, annual, unarmed, tufted, herbaceous, unbranched or sparsely branched, auricles absent, leaf blades small and cordate at the base, ligule an unfringed narrow membrane, plants bisexual, inflorescence a simple cylindrical false spike or raceme, tiny solitary spikelets resembling the head of a bird, floret 1 perfect, 2 coriaceous glumes more or less equal, lower glume keel crested by a wing bearing spiny hairs, upper glume cymbiform and keeled, palea 2-keeled, lodicules absent, ovary glabrous, 2 stigmas, sand binder and stabilizer, open habitats, sandy places, dry and arid zones, disturbed areas, type *Lopholepis ornithocephala* (Hook.) Steud., see *Species Plantarum* 2: 1083. 1753, *Plantes recueillies pendant le voyage des Russes autour du monde* 8, t. 7. 1810, *Tentamen Florae Napalensis Illustratae* 23. Calcutta and Serampore 1824-1826, *Botanical Miscellany* 2: 144. 1831, *Archives du Muséum d'Histoire Naturelle* 1: 147. 1839, *Genera Filicum* t. 51. 1840, *Journal of Botany, being a Second Series of the Botanical Miscellany* 4: 56. 1842, *The Botany of the Voyage of H.M.S. Herald* 229. 1854, *Ferns British & Foreign* 85. 1866.

Species

L. ornithocephala (Hook.) Steud. (*Holboellia ornithocephala* Hook.)

Southern India, Sri Lanka. Annual, slender, smooth, erect or ascending, leaf blades lanceolate and acuminate to long-pointed, leaf sheaths membranous, panicle linear-oblong and exserted, glumes cuspidate, see *Botanical Miscellany* 2: 144. 1831, *Archives du Muséum d'Histoire Naturelle* 1: 147. 1839, *Synopsis Plantarum Glumacearum* 1: 112. 1854 and *Handb. Fl. Ceylon* 5: 189. 1900, *Grasses of Ceylon* 103. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 682, f. 80. 1960.

Lophopogon Hackel = *Apocopsis* Nees,
Germainia Balansa & Poitr., *Sclerandrium*
Stapf & C.E. Hubb.

Bearded florets, from the Greek *lophos* "a crest, tuft" and *pogon* "beard."

About 2-3 species, India. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, small, herbaceous, low, tufted, simple or branched, plants bisexual, contracted and digitate inflorescence, 2 short racemes appressed and headlike, spikelets imbricate and paired, fertile spikelets more or less laterally compressed, lower sessile spikelets male only, pedicellate spikelets awned, 2 glumes truncate and unequal, lower glume of fertile spikelet shorter than upper, upper lemma bilobed and awned, lodicules absent, 2 stamens, open areas, related to *Polytrias*, type *Lophopogon tridentatus* (Roxb.) Hack., see *Proceedings of the Linnean Society of London* 1: 93-94. 1841, *Bulletin de la Société d'Histoire Naturelle de Toulouse* 7: 344, f. 1-9. 1873, *Flora Australiensis: A Description ...* 7: 518. 1878, *Die Natürlichen Pflanzenfamilien* 2(2): 26. 1887, *Monographiae Phanerogamarum* 6: 254-255. 1889, *Journal de Botanique (Morot)* 4: 83. 1890 and *Bulletin du Muséum d'Histoire Naturelle* 25: 285. 1919, *Icones Plantarum* 33: t. 3262. 1935, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 124. 1940, *Thai Forest Bulletin. Botany* 6: 35, 46. 1972.

Species

L. duthiei Stapf ex Bor

India. See *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 689. 1960.

L. kingii Hook.f.

India. See *The Flora of British India* 7: 149. 1896.

L. tridentatus (Roxb.) Hack. (*Andropogon tridentatus* Roxb.; *Apocopsis tridentata* Benth.; *Saccharum tridentatum* (Roxb.) Spreng.)

India. Useful fodder grass, best before flowering, see *Flora Indica; or Descriptions ...* 1: 261. 1820, *Systema Vegetabilium, editio decima sexta* 1: 283. 1825, *Journal of the Linnean Society, Botany* 19: 67. 1881, *Monographiae Phanerogamarum* 6: 254. 1889.

Lophopyrum Á. Löve = *Elymus* L., *Elytrigia*
Desv., *Psammopyrum* Á. Löve, *Thinopyrum* Á.
Löve, *Trichopyrum* Á. Löve

From the Greek *lophos* "a crest, tuft" and *pyros* "wheat."

About 10-11 species, Mediterranean, Eurasia, Iran, Caucasus. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, stout, herbaceous, simple, glabrous, tufted, ligule an unfringed membrane, plants bisexual,

inflorescence spicate, spikelets solitary and sessile, 2 subequal glumes 3- to 9-nerved, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, open areas, coastal, sandy dunes and beaches, sometimes referred to and included in *Elytrigia* Desv. and *Elymus* L., many species have been moved to *Thinopyrum* Á. Löve, type *Lophopyrum elongatum* (Host) Á. Löve, see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Observations sur les Graminées de la Flore Belgique* 95. 1823 [1824], *Index Kewensis* 1: 836. 1893 and *American Midland Naturalist* 4: 227. 1915, *Prop. Brit. Bot.* 121. 1929, *Flora Uzbekistanica* 1: 281, 300, 539-540. 1941, *Bot. Not.* 1953: 58. 1953, *N.Z. J. Sci. Tech.* 35B: 315-343. 1954, *Evolution* 10: 415-420. 1956, *T.R.S.N.Z.* 84: 757. 1957, *New Zealand J. Sci.* 5: 95-119. 1962, *Canadian Journal of Botany* 42: 554. 1964, *Canadian Journal of Botany* 45: 721. 1967, *Taxon* 29(2-3): 351. 1980, *New Zealand Journal of Botany* 20: 169-186. 1982, *Gene Manipulation in Plant Improvement* 274. 1984, *Feddes Repertorium* 95(7-8): 489. 1984, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 87: 49-50. 1986, *Genome* 29: 150-155, 537-553. 1987, *Genome* 30: 903-914. 1988, *Agron. Abstr.* 1989: 102. 1989, *Taxon* 41: 562-563. 1992, *Nordic J. Bot.* 12: 155-169. 1992, *Theor. Appl. Gen.* 86: 288-294. 1993, *Pl. Syst. Evol.* 185: 33-53. 1993, *Genome* 36: 102-111, 147-151, 641-651. 1993, *Pl. Syst. Evol.* 186: 193-212. 1993, *New Zealand Journal of Botany* 32: 125-154. 1994, *Taxon* 44: 611-612. 1995, *Genome* 39: 1093-1101. 1996, M.E. Barkworth, "Taxonomic and nomenclatural comments on the Triticeae in North America." *Phytologia* 83(4): 302-311. 1997, *Plant, Cell and Environment* 24(6): 585-596. June 2001, *Contributions from the United States National Herbarium* 48: 653-654. 2003, *Plant, Cell and Environment* 26(1): 17-36. Jan 2003, *Hereditas* 141(1): 15-18. July 2004.

Species

L. caespitosum (C. Koch) Á. Löve (*Agropyron caespitosum* C. Koch)

Mediterranean. See *Linnaea* 21(4): 424. 1848 and *Feddes Repertorium* 95(7-8): 489. 1984.

L. corsicum (Hack.) Á. Löve (*Agropyron caespitosum* var. *corsicum* Hack.; *Agropyron corsicum* (Hack.) Cif. & Giacom.; *Agropyron corsicum* (Hack.) Rouy; *Agropyron elongatum* var. *corsicum* (Hack.) Fiori; *Elymus corsicus* (Hack.) Kerguélen; *Elymus nodosus* subsp. *corsicus* (Hack.) Melderis; *Elytrigia corsica* (Hack.) Holub)

Mediterranean. See *Prodrome de la Flore Corse* 1: 187. 1910, *Nuova Flora Analitica d'Italia* 1: 157. 1923, *Nomencl. Fl. Ital.* 1: 47. 1950, *Folia Geobotanica et Phytotaxonomica* 12(4): 426. 1977, *Botanical Journal of the Linnean Society* 76(4): 377. 1978, *Lejeunia* 110: 57. 1983, *Feddes Repertorium* 95(7-8): 489. 1984.

L. curvifolium (Lange) Á. Löve (*Agropyron curvifolium* Lange; *Elymus curvifolius* (Lange) Melderis; *Elytrigia curvifolia* (Lange) Holub; *Thinopyrum curvifolium* (Lange) D.R. Dewey)

Mediterranean. See *Naturhist. For. Kjenhavn. Vid. Medd.* II 55. 1860 and *Folia Geobotanica et Phytotaxonomica* 12(4): 426. 1977, *Botanical Journal of the Linnean Society* 76(4): 377. 1978, *Feddes Repertorium* 95(7-8): 488. 1984, *Gene Manipulation in Plant Improvement* 274. 1984, *Genome* 29: 150-155, 537-553. 1987, *Genome* 36: 102-111, 147-151, 641-651. 1993, *South African Journal of Botany* 54: 541-550. 1988.

L. elongatum (Host) Á. Löve (*Agropyron elongatum* (Host) P. Beauv.; *Elymus elongatus* (Host) Greuter; *Elymus elongatus* (Host) Runemark; *Elytrigia elongata* (Host) Nevski; *Thinopyrum elongatum* (Host) D.R. Dewey; *Triticum elongatum* Host)

Mediterranean. See *Icones et Descriptiones Graminum Austriacorum* 2: 18, t. 23. 1802, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812 and *Hereditas; genetiskt arkiv.* 70(2): 156. 1972, *Annales Musei Goulandris* 1: 73. 1973, *Taxon* 29(2/3): 351. 1980, *Gene Manipulation in Plant Improvement* 274. 1984, *Biologisches Zentralblatt* 105: 361-368. 1986, *Genome* 30: 903-914. 1988, *South African Journal of Botany* 54: 541-550. 1988, *Genome* 36: 102-111, 641-651. 1993, *Plant Systematics and Evolution* 197: 225-231. 1995, S.R. Tabaei-Aghdaei, P. Harrison and R.S. Pearce, "Expression of dehydration-stress-related genes in the crowns of wheatgrass species [*Lophopyrum elongatum* (Host) A. Löve and *Agropyron desertorum* (Fisch. ex Link.) Schult.] having contrasting acclimation to salt, cold and drought." *Plant, Cell and Environment* 23(6): 561-571. June 2000, M.P. McDonald, N.W. Galwey, P. Ellneskog-Staam and T.D. Colmer, "Evaluation of *Lophopyrum elongatum* as a source of genetic diversity to increase the waterlogging tolerance of hexaploid wheat (*Triticum aestivum*)." *New Phytologist* 151(2): 369-380. Aug 2001, P. Monneveux, M.P. Reynolds, J. González Aguilar and R.P. Singh, "Effects of the 7DL.7Ag translocation from *Lophopyrum elongatum* on wheat yield and related morphophysiological traits under different environments." *Plant Breeding* 122(5): 379-384. Oct 2003.

L. flaccidifolium (Boiss. & Heldr.) Á. Löve (*Agropyron elongatum* var. *flaccidifolium* (Boiss. & Heldr.) Boiss.; *Agropyron flaccidifolium* (Boiss. & Heldr.) P. Candargy; *Agropyron scirpeum* var. *flaccidifolium* Boiss. & Heldr.; *Agropyrum flaccidifolium* (Boiss. & Heldr.) P. Candargy; *Elymus elongatus* subsp. *flaccidifolius* (Boiss. & Heldr.) Runemark; *Elymus flaccidifolius* (Boiss. & Heldr.) Melderis; *Elytrigia flaccidifolia* (Boiss. & Heldr.) Holub; *Thinopyrum flaccidifolium* (Boiss. & Heldr.) M. Moustakas)

Mediterranean. See *Diagnoses plantarum orientalium novarum, ser. 2, 3(4)*: 142. 1859, *Flora Orientalis* 5: 666.

1884 and *Archives de Biologie Végétale Pure et Appliquée* 1: 51. 1901, *Hereditas; genetiskt arkiv.* 70(2): 156. 1972, *Folia Geobotanica et Phytotaxonomica* 9(3): 207. 1974, *Botanical Journal of the Linnean Society* 76(4): 377. 1978, *Feddes Repertorium* 95(7-8): 489. 1984, *Plant Systematics and Evolution* 161(3-4): 150. 1988[1989].

L. haifense (Melderis) Á. Löve (*Agropyron haifense* (Melderis) Bor; *Elymus elongatus* subsp. *haifensis* (Melderis) Runemark; *Elytrigia elongata* var. *haifensis* Melderis)

Mediterranean. See *Arkiv for Botanik* 2: 304. 1952, *Hereditas; genetiskt arkiv.* 70(2): 156. 1972, *Feddes Repertorium* 95(7-8): 488. 1984, *Flora of Cyprus* 2: 1818, 1897. 1985.

L. nodosum (Nevski) Á. Löve (*Agropyron nodosum* (Stev. ex Bieb.) Nevski; *Agropyron repens* var. *nodosum* (Stev. ex Bieb.) Fedtsch.; *Agropyrum nodosum* (Stev. ex Bieb.) Nevski; *Elymus nodosus* (Nevski) Melderis; *Elytrigia caespitosa* subsp. *nodosa* (Nevski) Tzvelev; *Elytrigia nodosa* (Stev. ex Bieb.) Nevski; *Elytrigia nodosa* (Nevski) Nevski; *Triticum nodosum* Stev. ex Bieb.)

Mediterranean. See *Flora URSS* 2: 646. 1934, *Novosti Sist. Vyss. Rast.* 10: 30. 1973, *Botanical Journal of the Linnean Society* 76(4): 376. 1978, *Feddes Repertorium* 95(7-8): 490. 1984, *Genome* 36: 102-111. 1993.

L. ponticum (Podp.) Á. Löve (*Elymus elongatus* subsp. *ponticus* (Podp.) Melderis; *Elymus elongatus* var. *ponticus* (Podp.) Dorn; *Elytrigia elongata* (Host) Nevski; *Elytrigia elongata* subsp. *pontica* (Podp.) Gamisans; *Elytrigia pontica* (Podp.) Holub; *Thinopyrum ponticum* (Podp.) Barkworth & D.R. Dewey; *Thinopyrum ponticum* (Podp.) Z.-W. Liu & R.R.-C. Wang, nom. illeg., non *Thinopyrum ponticum* (Podp.) Barkworth & D.R. Dewey; *Triticum elongatum* Host; *Triticum ponticum* Podp.)

Mediterranean. See *Icones et Descriptiones Graminum Austriacorum* 2: 18, t. 23. 1802 and *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 52: 681. 1902, *Hereditas; genetiskt arkiv.* 70(2): 156. 1972, *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973, *Botanical Journal of the Linnean Society* 76(4): 377. 1978, *Feddes Repertorium* 95(7-8): 489. 1984, *American Journal of Botany* 72(5): 772. 1985, *Genome* 30: 361-365. 1988, *Vascular Plants of Wyoming* 298. 1988, *Genome* 33: 283-293. 1990, *Botanical Journal of the Linnean Society* 112: 149-157. 1993, *Genome* 36: 648. 1993, *Botanical Journal of the Linnean Society* 117: 159-168. 1995.

L. scirpeum (C. Presl) Á. Löve (*Agropyron elongatum* var. *scirpeum* (C. Presl) Fiori; *Agropyron scirpeum* C. Presl; *Elytrigia scirpea* (C. Presl) Holub; *Thinopyrum scirpeum* (C. Presl) D.R. Dewey)

Mediterranean. See *Cyperaceae et Gramineae Siciliae* 49. 1820 and *Flora Analytica d'Italia* 1: 106. 1908, *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973, *Feddes Repertorium* 95(7-8): 489. 1984, *Gene Manipulation in Plant Improvement* 275. 1984, *Genome* 29: 537-553. 1987, *South*

African Journal of Botany 54: 541-550. 1988, *Genome* 36: 641-651. 1993.

L. sinuatum (Nevski) Á. Löve (*Agropyron sinuatum* Nevski; *Elymus nodosus* subsp. *sinuatus* (Nevski) Melderis; *Elytrigia caespitosa* subsp. *sinuata* (Nevski) Tzvelev)

Mediterranean, Russia. See *Flora URSS* 2: 639. 1934, *Novosti Sist. Vyss. Rast.* 10: 30. 1973, *Feddes Repertorium* 95(7-8): 490. 1984, *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 80. 1984.

L. turcicum (P.E. McGuire) P.E. McGuire ex Á. Löve (*Elymus elongatus* subsp. *turcicum* (P.E. McGuire) Melderis; *Elytrigia pontica* subsp. *turcica* (P.E. McGuire) Jarvie & Barkworth; *Elytrigia turcica* P.E. McGuire)

Mediterranean, Europe. See *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973, *Folia Geobotanica et Phytotaxonomica* 18(1): 108, t. 7. 1983, *Feddes Repertorium* 95(7-8): 489. 1984, *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 81. 1984, *Nordic Journal of Botany* 12(2): 162. 1992.

in Turkey: puta otu

Lorenzochloa J.R. Reeder & C.G. Reeder = *Ortachne* Nees ex Steud., *Parodiella* Reeder & C. Reeder, *Parodiella* Speg.

After the Argentine botanist Lorenzo Raimundo Parodi, 1895-1966, agrostologist, professor of botany in Argentina, 1934-1962 editor and director of the *Revista Argentina de Agronomía*, his writings include "Nota sobre las especies de *Briza* de la flora argentina." *Revista Fac. Agron. Veterin.* 3: 113-138. 1920, "Los arrocés de la flora argentina." *Physis* (Buenos Aires). 11: 238-252. 1933, "Resumen bibliográfico. Looser, Gualterio. Las Proteáceas chilenas." *Revista Argent. Agron.* 1(2): 151-153. 1934, "Albert Spear Hitchcock." *Revista Argent. Agron.* 3(2): 113-119. 1936, "El origen geográfico de algunas gramíneas coleccionadas por don Luis Née en su viaje alrededor del mundo." *Revista Argent. Agron.* 14(1): 61-69. 1947, "Robert Pilger." *Revista Argent. Agron.* 20(2): 107-114. 1953 and "Thaddeus Peregrinus Haenke a dos siglos de su nacimiento." *Anales Acad. Nac. Ci. Exact. Buenos Aires.* 17: 9-28. 1964, with J. Camara wrote "El mango, cereal extinguido en cultivo, sobrevive en estado salvaje." *Ci. & Invest.* 20(12): 543-549. 1964. See Arturo E. Burkart (1906-1975), "Bibliografía del botánico argentino Lorenzo R. Parodi (1895-1966)." *Bol. Soc. Argent. Bot.* 12: 7-16. 1968; H. Augustín Garaventa (1911-1981), "El botánico argentino Lorenzo R. Parodi." *Revista Univ. (Santiago)* 52: 167-175. 1967 [1968]; J.H. Barnhart, *Biographical notes upon botanists.* 3: 51. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 301. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the

New York Botanical Garden. 321. 1973; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

One species, Peru, Argentina, Venezuela, Andes, Colombia. Pooideae, Stipoideae, Stipeae, or Pooideae, Stipeae, Stipinae, perennial, densely tufted or caespitose, leaves mainly basal, auricles absent, rigid pungent leaf blades, ligule an unfringed membrane, plants bisexual, open and narrow inflorescence paniculate, spikelets pedicellate, 2 glumes more or less equal to subequal, palea 2-keeled, 3 lodicules, 3 stamens, ovary glabrous, 2 stigmas, páramos, sometimes included in *Ortachne*, type *Lorenzochloa erectifolia* (Swallen) J. Reeder & C. Reeder, see *Synopsis Plantarum Glumacearum* 1: 121. 1854, *Anales de Sociedad Científica Argentina* 9: 178. 1880 and *Boletín de la Sociedad Argentina de Botánica* 12: 279-280, f. 1A-B, D-F, 3. 1968, *Boletín de la Sociedad Argentina de Botánica* 11(4): 239. 1969, *Ruizia; Monografías del Jardín Botánico* 13: 1-480. 1993, *Flora Mesoamericana* 6: 244-245. 1994, *Contributions from the United States National Herbarium* 48: 431, 468-469, 477. 2003.

Species

L. erectifolia (Swallen) Reeder & C. Reeder (*Muhlenbergia erectifolia* Swallen; *Ortachne erectifolia* (Swallen) Clayton; *Parodiella erectifolia* (Swallen) Reeder & C. Reeder)

Argentina, Venezuela. Glumes 3-nerved, see *Journal of the Washington Academy of Sciences* 21(1): 15. 1931, *Boletín de la Sociedad Argentina de Botánica* 12(279): 279-280, f. 1A-B, D-F, 3. 1968, *Boletín de la Sociedad Argentina de Botánica* 11(4): 239. 1969, *Kew Bulletin* 40(4): 729. 1985.

Loretia Duval-Jouve = *Vulpia* Gmelin

For the French botanist Henri Loret, 1811-1888, from 1860 Montpellier, with Auguste Barrandon (1814-1897) wrote *Flore de Montpellier*. Montpellier 1876. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 403. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913)*. Dresden 1916.

Pooideae, Poeae, Loliinae, type *Loretia geniculata* (L.) Duval-Jouve, see *Species Plantarum* 1: 73. 1753, *Systema Naturae*, edition 12 2: 97. 1767, *Anales de Ciencias Naturales* 6(16): 150. 1803, *Flora Badensis Alsatica* 1: 8. 1805, *Hortus Regius Botanicus Berolinensis* 1: 148. 1827, *Genera Plantarum* 101. 1836, *Linnaea* 21(4): 422. 1848, *Synopsis Plantarum Glumacearum* 1: 318. 1854, *Revue des Sciences Naturelles* II. 2: 36, 38, 42. 1880, *Flora Orientalis* 5: 630. 1884, *Die Natürlichen Pflanzenfamilien* 2(2): 75. 1887 and

Botaniska Notiser 130: 173-187. 1977, *Nordic Journal of Botany* 1(1): 17-26. 1981, *Taxon* 33: 351-354. 1984, *Bot. J. Linn. Soc.* 91: 443. 1985, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, *Contributions from the United States National Herbarium* 48: 431, 690-694. 2003.

Loudetia Hochst. ex A. Braun = *Tristachya* Nees

Perhaps the genus was named for one Loudet, German dentist.

Panicoideae, Arundinelleae, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829, *Flora* 24(2): 713. 1841 and *N. Amer. Fl.* 17(8): 578. 14 July 1939, *Fieldiana, Botany* 24(2): 1-390. 1955, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

Loudetia Hochst. ex Steud. = *Loudetia* Hochst. ex A. Braun, *Loudetia* Steud., *Trichopteryx* Nees

Perhaps the genus was named for one Loudet, German dentist.

About 26-34 species, tropical and southern Africa, Madagascar and South America. Panicoideae, Panicodae, Arundinelleae, perennial or rarely annual, herbaceous, slender, robust, erect, caespitose, auricles absent, ligule fringed, plants bisexual, open or contracted inflorescence paniculate, spikelets lanceolate solitary or paired, 2 florets, awned or awnless, 2 glumes very unequal, lower glume shorter than the female-fertile lemma, lower lemma 3-nerved, upper lemma pilose with 2 short acute lobes, usually deciduous awn geniculate with a twisted column, palea 2-nerved 2-keeled, 2 lodicules free and fleshy, 2 or rarely 3 stamens, ovary glabrous without the apical appendage, brown to dark stigmas, bottlebrush appearance of the inflorescence, growing in open habitats, on dry soils, savannah woodland, deciduous bushland, poor shallow soils, humid places, hillsides, swampy areas, type *Loudetia elegans* Hochst., see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829, *An Introduction to the Natural System of Botany* 449. 1836, *Flora* 24(2): 713. 1841, *Index Sem. Hort. Genuens.* 24. 1852, *Synopsis Plantarum Glumacearum* 1: 238. 1854 and *Bulletin of Miscellaneous Information Kew* 1934: 428-429, 431. 1934, *Bulletin of Miscellaneous Information Kew* 1936(5): 320-322, 324. 1936, *N. Amer. Fl.* 17(8): 578. 14 July 1939, *Fieldiana, Botany* 24(2): 1-390. 1955, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 226-354, f. 18. 1957, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Taxon* 27(2-3): 301. 1978, *Flora of Ethiopia and Eritrea* 286-289. 1995, *Functional*

Ecology 13(6): 762-768. Dec 1999, *African Journal of Ecology* 38(2): 102-107. June 2000, *Journal of Ecology* 89(2): 200-208. Apr 2001, *Contributions from the United States National Herbarium* 46: 285, 623. 2003, *African Journal of Ecology* 42(s1): 6-13. Aug 2004.

Species

L. acuminata (Stapf) C.E. Hubb. (*Trichopteryx acuminata* Stapf)

Africa. Unpalatable, see *Bulletin of Miscellaneous Information Kew* 1897: 297. 1897 and *Bulletin of Miscellaneous Information Kew* 1934: 429. 1934.

L. angolensis C.E. Hubb.

Africa. See *Bulletin of Miscellaneous Information Kew* 1934: 426. 1934.

L. annua (Stapf) C.E. Hubbard (*Trichopteryx annua* Stapf; *Trichopteryx thorbeckii* Pilg.)

Tropical Africa. Annual, erect, browsed by cattle when young, see *Bulletin of Miscellaneous Information Kew* 1897: 298. 1897 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 415. 1914, *Bulletin of Miscellaneous Information Kew* 1934: 429. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 226-354, f. 18. 1957, *Gram. Cameroun* 2: 369. 1992.

in Gambia: kereng fenio

in Guinea-Bissau: ovil

in Nigeria: bindin kuregée, bundin kuregée, cammeya, gwodnu susi, gwodnu susi, nione sule, tsigiàà, tsiigàà, tsikàà, wutsiyar gwankii, wuziyar gwanki, wutsiyar kuréégée, wutsiyar zoomoo, wutsiyar zumu

in Senegal: è vèt éma, evet ema

L. annua (Stapf) C.E. Hubbard var. *thorbeckii* (Pilg.) Jacq.-Fél.

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 415. 1914, *Adansonia*, sér. 2, 12: 234. 1972.

L. arundinacea (Hochst. ex A. Rich.) Steud. (*Trichopteryx arundinacea* (Hochst. ex A. Rich.) Hack.; *Trichopteryx nigritiana* Stapf; *Trichopteryx simplex* Rendle; *Trichopteryx verticillata* De Wild.; *Tristachya arundinacea* Hochst. ex A. Rich.)

Senegal, Angola, Mozambique. Perennial, robust, tufted, tussock, erect, nodes silky, leaf blades linear, open panicle with whorled branches, spikelets loosely paired, lower lemma male glabrous, upper lemma pubescent acutely 2-dentate, upper floret callus truncate or emarginate, awn weakly geniculate with loosely twisted column, 2 stamens, browsed by cattle when young, used for thatching, savannah, dry and poor soils, swamps, grassland, open woodland, bushland, rocky places, see *Tentamen Florae Abyssinicae*

... 2: 417. 1850, *Synopsis Plantarum Glumacearum* 1: 238. 1854, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 129. 1891 [1892], *Bulletin of Miscellaneous Information Kew* 1897: 297. 1897 and *Annales de la Société Scientifique de Bruxelles* 29: 160. 1920.

in Nigeria: ajo, ata, tsintsiyar duutsee

in Senegal: paldinagh

in Sierra Leone: cili, ewabe, fiila, filesaxe, kawalan, kewelin, ke bonkolo, nepelabana, niaboli, putaka, segera, sera, seran, silangina

L. arundinacea (Hochst. ex A. Rich.) Steud. var. *tricantha* C.E. Hubb. ex Hutch. (*Colpodium tibeticum* Bor; *Paracolpodium tibeticum* (Bor) E.B. Alexeev; *Trichopteryx arundinacea* var. *tricantha* Peter; *Trichopteryx convoluta* De Wild.; *Trichopteryx dobbelaerei* De Wild.; *Trichopteryx elegans* var. *hensii* De Wild.; *Trichopteryx grisea* K. Schum.)

Tropical Africa. Glumes tuberculate-setose, see *Synopsis Plantarum Glumacearum* 1: 238. 1854 and *Annales de la Société Scientifique de Bruxelles* 29: 147, 152. 1920, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 96. 1930, *Flora of West Tropical Africa* 2: 544. 1936, *Die Pflanzenwelt Ost-Afrikas* C: 109. 1936, *Kew Bulletin* 8(2): 270. 1953, *Novosti Sistematiki Vysshikh Rastenii [New Delhi]* 18: 95. 1981.

L. bidentata Berhaut

Africa. See *Mémoires de la Société Botanique de France* 1953-54: 11. 1954.

L. camerunensis (Stapf) C.E. Hubb. (*Trichopteryx camerunensis* Stapf)

Africa. See *Bulletin of Miscellaneous Information Kew* 1897: 296. 1897 and *Bulletin of Miscellaneous Information Kew* 1934: 431. 1934.

L. cerata (Stapf) C.E. Hubb. (*Trichopteryx cerata* Stapf)

Africa. See *Kew Bulletin* 1934: 429. 1934.

L. coarctata (A. Camus) C.E. Hubbard (*Tristachya coarctata* A. Camus; *Tristachya triticoides* A. Camus & C.E. Hubb. ex Chev.)

Tropical Africa. Perennial, densely tufted, fodder, inundated soil, poor drained places, moist meadows, sandy loam, see *Bulletin of Miscellaneous Information Kew* 1934: 428. 1934, *Bulletin de la Société Botanique de France* 80: 774. 1934, *Revue internationale de botanique appliquée et d'agriculture tropicale* 1934: 43. 1934.

in Guinea: kuligi, kuliji, laque dawa

in Guinea-Bissau: udo banoro, udo bunoro

L. crassipes C.E. Hubb.

Africa. See *Kew Bulletin* 1934: 430. 1934.

L. cuanzensis Lubke & Phipps

Angola. Rocky slopes, see *Boletim da Sociedade Brotariana*, ser. 2 41: 195. 1967.

L. demeusii (De Wild.) C.E. Hubb. (*Trichopteryx demeusei* De Wild., also spelled *demeusii*; *Trichopteryx lembeaensis* Vanderyst)

Africa. See *Annales de la Société Scientifique de Bruxelles* 39: 149. 1920, *Bulletin agricole du Congo Belge* 13: 341. 1922, *Bulletin of Miscellaneous Information Kew* 1934: 429. 1934.

L. densispica (Rendle) C.E. Hubb. (*Trichopteryx densispica* Rendle)

South Africa, Angola, Guinea. Perennial, tufted, dense spike-like inflorescence, lower glume obtuse and tubercled, upper glume and lower lemma glabrous, found in open habitats, open grassland, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 214. 1899 and *Bulletin of Miscellaneous Information Kew* 1934: 428. 1934.

L. echinulata C.E. Hubb.

Africa. See *Kew Bulletin* 1949: 354. 1949.

L. esculenta C.E. Hubb. (*Tristachya esculenta* (C.E. Hubb.) Conert)

Sudan. Grain crop species, edible grains, see *Kew Bulletin* 1949: 352. 1949, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 300. 1957.

L. filifolia Schweick.

South Africa, Madagascar. Perennial, branched, tufted, wiry, slender, thin, glumes shortly awned or not, in mountainous slopes, rocky sites, cliffs, crevices, stony places, see *Bulletin of Miscellaneous Information Kew* 1935: 207. 1935.

L. flammida (Trin.) C.E. Hubbard (*Arundinella flammida* Trin.; *Loudetia phragmitoides* (Peter) C.E. Hubb.; *Trichopteryx flammida* (Trin.) Benth.; *Trichopteryx flammida* T. Durand & Schinz; *Trichopteryx phragmitoides* Peter)

Bolivia, Brazil, Paraguay. Perennial, tussocky, clumped, erect, caespitose, nodes bearded, leaf blades linear with tapering base, leaves tough and acuminate, drooping feathery inflorescence, dense panicle narrowly oblong, spikelets solitary or loosely clustered, lower floret male, glumes subequal and persistent, upper lemma 2-dentate with a geniculate awn, 2 stamens, damp or marshy ground, open areas, wet sand, edge of stream, see *Species Graminum* 1828-1836, *Journal of the Linnean Society, Botany* 19: 59, 98. 1881 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): Anhang 96. 1930, *Bulletin of Miscellaneous Information Kew* 1934: 428. 1934, *Bulletin of Miscellaneous Information Kew* 1936: 321. 1936, *Arnaldoa* 8(1): 45-48. 2001[2002].

L. flavida (Stapf) C.E. Hubb. (*Trichopteryx flavida* Stapf; *Trichopteryx glabra* Hack.)

East tropical Africa, Ghana, Transvaal. Perennial, variable, tufted, coarse, erect, leafy, compact, swollen at the base, leaf blades narrowly linear, basal leaf sheaths woolly, panicle branches and axis glabrous or pubescent, spikelets borne singly or in pairs, glumes glabrous shortly awned or sharply tipped, upper lemma with clavate hairs, lower lemma acute, awn flexuous, 3 stamens, grazed, found in rocky soils, slopes, deciduous bushland, woodland, shallow rocky soil, vleis, grassland, vlei margins, open savannah woodland, related to *Loudetia pennata*, see *Bulletin of Miscellaneous Information Kew* 1897: 298. 1897 and *Bulletin de l'Herbier Boissier, sér. 2, 1*: 770. 1901, *Bulletin of Miscellaneous Information Kew* 1934: 429. 1934.

in English: pointed russet grass

in Upper Volta: fegjirdi, gommessa hogo

L. gossweileri C.E. Hubb.

Tropical Africa. See *Bulletin of Miscellaneous Information Kew* 1934: 428. 1934.

L. grisea (K. Schum.) Pilg. (*Trichopteryx grisea* K. Schum.)

Tropical Africa. See *Die Pflanzenwelt Ost-Afrikas* C: 109. 1936, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14: 94. 1938.

L. hordeiformis (Stapf) C.E. Hubbard (*Arundinella hordeiformis* (Stapf) Roberty; *Trichopteryx hordeiformis* Stapf)

Tropical Africa. Annual, inflorescence bottlebrush-like, fodder, browsed when young, useful for erosion control, stabilization of dunes, highly adapted to colonize shifting sand, widely planted to repair or stabilize dune areas, found in disturbed areas, sandy soil, shifting dunes, see *Bulletin of Miscellaneous Information Kew* 1897: 297. 1897 and *Bulletin of Miscellaneous Information Kew* 1934: 431. 1934, *Petite Flore de l'Ouest-Africain* 392. 1954, *Bulletin de l'Institut Française d'Afrique Noire* 17: 56. 1955.

in Gambia: kereng fenio, kereng fenjo, kereng penio

in Niger: butal-idjiré, fono dibba, fulafula, kokorga-lani, taelaewlaew, tchitchyia

in Nigeria: bindin kureegéé, bundin kureegéé, cammeya, gwodnu susi, tsiigàà, tsiikàà, wutsiyar gwankii, wutsiyar kureegéé, wutsiyar zoomoo

in Senegal: las a tat, lasatat

in Upper Volta: plumga

L. jaegeriana A. Camus (named for the French botanist Paul Jaeger, b. 1905, traveler, professor of Botany, Faculty of Pharmacy, Strasburg, botanical collector, author of "Espèces végétales de l'étage altitudinal des monts Loma (Sierra Leone)." *Bulletin de l'IFAN* 27A: 34-120. 1965 and "Le recensement des plantes vasculaires et les originalités du peuplement végétal des monts Loma en Sierra Leone (Afrique Occidentale)." *Bothalia* 14: 539-542. 1983; see

J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. Boston 1965; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 41. 1971; F. Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*, (A.E.T.F.A.T.). 69-75. Lisbon 1962; P. Jaeger and M. Lamotte, "Les richesses floristiques et faunistiques des monts Loma (Sierra Leone)." *Bulletin de l'IFAN* 28A: 1149-1190. 1966; P. Jaeger, N. Halle and J.G. Adam, "Contribution à l'étude des Orchidées des Monts Loma (Sierra Leone)." *Adansonia* 8: 265-310. 1968; P. Jaeger and J.G. Adam, "Les forêts de l'étage culminant du Nimba Libérien." *Adansonia* 15: 177-188. 1975)

Tropical Africa, Sierra Leone. See *Journal d'Agriculture Tropicale et de Botanique Appliquée* 1(5-6): 212, f. 1-8. 1954.

L. kagerensis (K. Schum.) C.E. Hubbard ex Hutch. (*Trichopteryx kagerensis* K. Schum.; *Trichopteryx kapiriensis* De Wild; *Trichopteryx reflexa* Pilg.; *Trichopteryx simplex* var. *crinata* Rendle; *Trichopteryx spiranthera* K. Schum.; *Tristachya kagerensis* (K. Schum.) A. Chev.)

Tanzania. Perennial, tufted, wiry, slender, glaucous, erect or ascending, basal leaf sheaths silky, leaf blades linear, panicle elliptic-oblong with ascending branches, spikelets setose, upper lemma emarginate, 2 stamens, grazed by cattle, fodder, used for thatching, growing in open grassland, poor soil, rocky hillsides, shallow soil, floodplains, closely related to *Loudetia simplex*, see *Die Pflanzenwelt Ost-Afrikas* C: 109. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 214. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 52. 1902, *Annales de la Société Scientifique de Bruxelles* 39: 155. 1920, *Revue internationale de botanique appliquée et d'agriculture tropicale* 14: 23. 1934, *Flora of West Tropical Africa* 2: 544. 1936, *Fl. Trop. Afr.* 10: 28. 1937.

L. lanata (Stent & Rattray) C.E. Hubb. (*Trichopteryx lanata* Stent & Rattray)

Zimbabwe, Angola, Zambia, South Africa. Perennial, caespitose, velvety to woolly, leaf sheaths velvety, leaves hard and thick, open panicle, glumes obtuse, usually in sandveld, edge of vleis, see *Proceedings of the Rhodesia Scientific Association* 32: 39. 1933, *Bulletin of Miscellaneous Information Kew* 1934: 429. 1934.

in English: woolly russet grass

L. migiurtina (Chiov.) C.E. Hubb. (*Trichopteryx migiurtina* Chiov.)

Ethiopia, Somalia. Perennial, tufted, panicle loosely contracted and lanceolate, very slender and flexuous awn, see *Plantae Novae vel Minus Notae e regione Aethiopica* 30. 1928 [1911-1951, also *Plantae Novae vel Minus Notae ex Aethiopia*, series published in different journals], *Kew Bulletin* 1934: 429. 1934.

L. pedicellata (Stent) Chippind. (*Tristachya pedicellata* Stent).

South Africa. Perennial, tufted, ligule fringed, spikelets in triads, lower glume ovate, lower lemma 7-nerved, pasture, thatching grass, see *Bothalia* 1: 178. 1923, *The Grasses and Pastures of South Africa* 280. 1955.

L. pennata (Chiov.) C.E. Hubb. (*Trichopteryx pennata* Chiov.)

Ethiopia, Somalia. Perennial, tufted, densely setose, panicle branches hirsute, very slender and flexuous awn, in sandy places, see *Annuario del Reale Istituto Botanico di Roma* 7: 69, t. 6. 1897 and *Nuovo Giornale Botanico Italiano*, n.s., 26: 79. 1919, *Plantae Novae vel Minus Notae e regione Aethiopica* 30. 1928 [1911-1951, also *Plantae Novae vel Minus Notae ex Aethiopia*, series published in different journals], *Kew Bulletin* 1934: 428-429. 1934 [also *Bulletin of Miscellaneous Information Kew* 1934: 428. 1934], *Atti della reale accademia d'Italia. Memorie della classe di scienze fisiche, matematiche e naturali* 11(2): 64. 1940.

L. phragmitoides Hochst.

Tropical Africa, Gabon, Malawi. Robust, tall, loose inflorescence paniculate plume-like, along roadsides.

L. phragmitoides (Peter) C.E. Hubbard (*Arundinella flammida* Trin.; *Loudetia flammida* (Trin.) C.E. Hubb.; *Trichopteryx phragmitoides* Peter)

Tropical Africa. Perennial, canelike, densely tufted, tall, tussock, stout, pithy, robust, hollow, leaf sheaths and ligules pubescent, feathery and soft inflorescence, spikelets loosely paired, lower glume lanceolate, lower lemma glabrous, upper lemma hirsute, awn not deciduous with a short column, ornamental, found in marshy places, swamps, moist bottomlands, open savannah, wet savannah, see *Species Graminum* 1828-1836 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): Anhang 96. 1930, *Bulletin of Miscellaneous Information Kew* 1934: 428. 1934, *Bulletin of Miscellaneous Information Kew* 1936: 321. 1936, J. Okot-Okumu, "Primary production and decomposition of *Loudetia phragmitoides* (A. Peter) in the littoral wetland of a small satellite lake (L. Nabugabo, Uganda)." *African Journal of Ecology* 42(s1): 108-113. Aug 2004.

in English: erapo grass

in Guinea-Bissau: balabaque, sulunhantamo

in Nigeria: erapo, tsintsiyar maza

L. ramosa (Stapf) C.E. Hubb. (*Danthoniopsis ramosa* (Stapf) Clayton; *Pleioneura ramosa* (Stapf) J.B. Phipps; *Rattraya ramosa* (Stapf) Butzin; *Trichopteryx ramosa* Stapf)

Africa. See *Bulletin of Miscellaneous Information Kew* 1897: 298. 1897 and *Bulletin of Miscellaneous Information Kew* 1936(5): 321, 324. 1936, *Kew Bulletin* 21(1): 123. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Boletim da*

Sociedade Broteriana, ser. 2 46: 419. 1972[1973], *Taxon* 27(2-3): 301. 1978.

L. simplex (Nees) C.E. Hubb. (*Arundinella simplex* (Nees) Roberty; *Loudetia elegans* Hochst.; *Trichopteryx elegans* Hack.; *Trichopteryx elegans* var. *subulifolia* Franch.; *Trichopteryx gracilis* Peter; *Trichopteryx incompta* Franch.; *Trichopteryx nigritiana* Stapf; *Trichopteryx simplex* Rendle; *Trichopteryx simplex* var. *gracilis* Rendle; *Tristachya simplex* (Nees))

Tropical Africa, South Africa, Kalahari. Perennial, very variable, compact, unbranched, tufted to loosely tufted to densely tufted, nodes with ring of hairs, leaf blade variable, lowest leaf sheaths densely hairy at the base and splitting into fibers, ligule an inconspicuous ring of short hairs, leaves hairy or glabrous, a contracted or open and loose panicle with whorled branches, spikelets solitary or in pairs, glabrous awn, glumes unequal and truncate, lower glume obtuse, upper lemma bifid, 2 stamens, weed species, thatching grass, low palatability or unpalatable when mature and dry, grazed when young, useful for erosion control, not very tolerant of drought, common on red clay soil, edges of vleis, deciduous bushland, on seasonally flooded grasslands, stony slopes, red earth, open grassland, sands plain, poor veld, hillsides and rocky hillsides, poor shallow sandy soils, wet sands, in shade of trees, poorly drained sandy soils, on riverine plains, see *Florae Africae Australioris Illustrationes Monographicae* 269. 1841, *Flora* 1841: 713. 1841, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 373. 1895, *Bulletin of Miscellaneous Information Kew* 1897: 297. 1897, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 214. 1899 and Alfred Barton Rendle (1865-1938) et al., "Catalogue of the Plants collected by Mr. and Mrs. P.A. Talbot in the Oban District of South Nigeria." *British Museum Trustees, Natural History*. London 1913, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 95. 1930, *Bulletin of Miscellaneous Information Kew* 1934: 431. 1934, *Petite Flore de l'Ouest-Africain* 392. 1954, *Bulletin de l'Institut Française d'Afrique Noire* 17: 56. 1955, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 260. 1957.

in English: russet grass, common russet grass, besem grass

in Angola: lukomba

in Nigeria: burde, kalde, sufuwel, tsintsiyar duutsee, yawrondu

in Senegal: paldinagh

in southern Africa: besemgras, stingelgras; tshula (Venda)

in Tanzania: luyange

in Upper Volta: domsawo, domshao, pisiirdi, pisiirgol, pitiirdi

L. stipoides (Hack.) Conert (*Arundinella stipoides* Hack.; *Trichopteryx stipoides* (Hack.) Hackel ex Elliott)

Tropical Africa, Madagascar. See *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung I* 89: 123. 1884, *Journal of the Linnean Society, Botany* 29: 65. 1891 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 256. 1957.

L. togoensis (Pilg.) C.E. Hubbard (*Arundinella togoensis* (Pilg.) Roberty; *Trichopteryx crinita* Stapf; *Trichopteryx figarii* Chiov.; *Trichopteryx togoensis* Pilg.)

Tropical Africa, Togo. Annual, tufted, spikelets in triplets, lower lemma 5-nerved, palea lacking, low grazing value, browsed when young, used to make brooms and hats, found in wooded savannah, sandy loam, around seasonal ponds, dry places, shallow soil, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 128. 1904, *Journal de Botanique (Morot)* 19: 106. 1905, *Bollettino della Società Botanica Italiana* 1917: 69. 1917, *Bulletin of Miscellaneous Information Kew* 1934: 431. 1934, *Petite Flore de l'Ouest-Africain* 392. 1954, *Bulletin de l'Institut Française d'Afrique Noire* 17: 56. 1955.

in Arabic: kaya, nyamaya

in Mali: firala nkasan, gombi sogo, ngasan seladé, nkasan, selberé

in Niger: binya nabitji, fôno sunfey, kokorga-bundi, milmlilo'n dutshi, taelaewlaew

in Nigeria: kaya, kela tselim, nyamaya, tsintsiyaa, tsintsiyaa

in Senegal: firgala ukasa, firghala ukasa

in Togo: sangombe

in Upper Volta: balanplè, celbi, kiu guma, samsogo, selbo, sutu, zaié

L. vanderystii (De Wild.) C.E. Hubb. (*Trichopteryx anthoxanthoides* Stapf ex Vand.; *Trichopteryx ganaense* Vanderyst; *Trichopteryx vanderystii* De Wild.; *Tristachya anthoxanthoides* Stapf ex Vanderyst)

Tropical Africa. See *Annales de la Société Scientifique de Bruxelles* 29: 160. 1920, *Bulletin agricole du Congo Belge* 11: 113. 1920, *Bulletin of Miscellaneous Information Kew* 1934: 428. 1934.

Loudetiopsis Conert = *Diandrostachya* (C.E. Hubb.) Jacq.-Fél., *Dilophotriche* (C.E. Hubb.) Jacq.-Fél.

Resembling *Loudetia*.

About 10-11/13 species, tropical West Africa, South America. Panicoideae, Panicodae, Arundinelleae, perennial or rarely annual, herbaceous or with woody reedlike culms, large, unarmed, erect, unbranched, ligule fringed, plants bisexual, open or contracted inflorescence paniculate, spikelets in triplets, peduncle often hooked, 2 glumes very

unequal, lower glume 3-5-nerved, upper glume 3-nerved, lower lemma 3-nerved, upper lemma 2-dentate glabrous to pubescent, female-fertile lemma longer than the lower glume, palea 2-nerved 2-keeled, 2 free and fleshy lodicules, 2 stamens, ovary glabrous, 2 red stigmas, suitable for thatching, open areas, savannah, woodland, damp or swampy areas, rocky places, bare ground, related to *Loudetia*, type *Loudetiopsis ambiens* (K. Schum.) Conert, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458, 460. 1829 and *Bulletin of Miscellaneous Information Kew* 1934: 431. 1934, *Bulletin of Miscellaneous Information Kew* 1936(5): 320, 321, 322. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 226-354, f. 18. 1957, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 407-408. 1960, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Contributions from the United States National Herbarium* 46: 177, 285. 2003.

Species

L. ambiens (K. Schum.) Conert (*Loudetia ambiens* (K. Schum.) C.E. Hubb.; *Trichopteryx ambiens* K. Schum.)

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 335. 1897 and *Bulletin of Miscellaneous Information Kew* 1934: 431. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 281. 1957.

L. baldwinii (C.E. Hubb.) J.B. Phipps (*Loudetia baldwinii* C.E. Hubb.) (dedicated to John Thomas Baldwin, Jr., 1910-1974, botanical collector in Guinea, Liberia, Mexico, Amazonas, Venezuela, Brazil, collected plant specimens for the United States National Herbarium)

Tropical Africa, Liberia. Lower lemma 5- to 7-nerved, 3 stamens, see *Kew Bulletin* 1949: 356. 1949, *Kirkia* 5(2): 249. 1966.

L. capillipes (C.E. Hubb.) Conert (*Loudetia capillipes* C.E. Hubb.)

Tropical Africa. See *Bulletin of Miscellaneous Information Kew* 1934: 432. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 284. 1957.

L. chevalieri (Stapf) Conert (*Diandrostachya chevalieri* (Stapf) Jacq.-Fél.; *Tristachya chevalieri* Stapf)

Tropical Africa. See *Bulletin de la Société Botanique de France* 8: 219. 1912, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 290. 1957, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1960.

L. chrysothrix (Nees) Conert (*Diandrostachya chrysothrix* (Nees) Jacq.-Fél.; *Tristachya chrysothrix* Nees; *Tristachya chrysothrix* f. *chrysothrix*; *Tristachya chrysothrix* f. *pallida* Hack.)

South America, Africa. Perennial, tufted, tussocky, leaf blades filiform or linear, inflorescence terminal and unbranched, peduncle with subapical hook, lower glume narrowly ovate, upper glume lanceolate, 2 stamens, rocky places, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 460. 1829 and *Bulletin de l'Herbier Boissier, sér. 2, 4(3)*: 278. 1904, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1906, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 285. 1957.

in Bolivia: pasto

L. falcipes (C.E. Hubb.) J.B. Phipps (*Loudetia falcipes* C.E. Hubb.)

Tropical Africa. Lower lemma 5- to 7-nerved, 3 stamens, see *Kew Bulletin* 1957: 61. 1957, *Kirkia* 5(2): 249. 1966.

L. fulva (C.E. Hubb.) Conert (*Diandrostachya fulva* (C.E. Hubb.) Jacq.-Fél.; *Tristachya fulva* C.E. Hubb.)

Tropical Africa. See *Bulletin of Miscellaneous Information Kew* 1934: 434. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 287. 1957, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1960.

L. glabrata (K. Schum.) Conert (*Loudetia glabrata* (K. Schum.) C.E. Hubb.; *Trichopteryx glabrata* K. Schum.)

Tropical Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24: 336. 1897 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 287. 1957.

L. glabrinodis (C.E. Hubb.) Conert (*Diandrostachya glabrinodis* (C.E. Hubb.) J.B. Phipps; *Tristachya glabrinodis* C.E. Hubb.)

Tropical Africa. See *Kew Bulletin* 1949: 358. 1949, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 288. 1957, *Boletim da Sociedade Broteriana, ser. 2* 41: 202. 1967.

L. kerstingii (Pilg.) Conert (*Trichopteryx kerstingii* Pilg.; *Tristachya kerstingii* (Pilg.) C.E. Hubb.) (dedicated to the German traveler Otto Kersting, b. 1863 (Riga), explorer, plant collector in West Africa, 1897-1909 Togo Rep. (formerly French Togoland). See F. Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*, (A.E.T.F.A.T.). 69-75. Lisbon 1962; J.H. Barnhart, *Biographical notes upon botanists*. Boston 1965; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19: 861-863. 1965; F.N. Hepper & F. Neate, *Plant Collectors in West Africa*. 44. 1971)

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 128. 1934, *Bulletin of Miscellaneous Information Kew* 1934: 435. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 289. 1957.

L. occidentalis (Jacq.-Fél.) Clayton (*Dilophotriche occidentalis* Jacq.-Fél.)

Tropical Africa. See *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1960, *Kew Bulletin* 21(1): 123. 1967.

L. pobeguini (Jacq.-Fél.) W.D. Clayton (*Dilophotriche pobeguini* Jacq.-Fél.)

Tropical Africa. Annual, tufted, growing in moist places, see *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1960, *Kew Bulletin* 21(1): 123. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

in Guinea-Bissau: udubunoro

L. purpurea (C.E. Hubb.) Conert (*Danthoniopsis purpurea* (C.E. Hubb.) Jacq.-Fél.; *Tristachya purpurea* C.E. Hubb.)

Tropical Africa. See *Bulletin of Miscellaneous Information Kew* 1935(5): 308. 1935, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 424. 1950, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 292. 1957.

L. scaettae (A. Camus) Clayton (*Diandrostachya scaettae* (A. Camus) J.B. Phipps; *Tristachya scaettae* A. Camus)

Tropical Africa. See *Bulletin de la Société Botanique de France* 85: 556. 1939, *Kew Bulletin* 21(1): 123. 1967, *Boletim da Sociedade Broteriana, ser. 2* 41: 202. 1967.

L. ternata (Stapf) Conert (*Loudebia ternata* (Stapf) C.E. Hubb.; *Trichopteryx ternata* Stapf)

Tropical Africa. See *Journal de Botanique (Morot)* 19: 106. 1905, *Bulletin of Miscellaneous Information Kew* 1934: 431. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 282. 1957, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1960.

L. thoroldii (C.E. Hubb.) J.B. Phipps (*Loudebia thoroldii* C.E. Hubb.)

Tropical Africa. See *Kew Bulletin* 1957: 62. 1957, *Kirkia* 5(2): 249. 1966.

L. trigemia (C.E. Hubb.) Conert (*Loudebia trigemia* C.E. Hubb.)

Tropical Africa. Lower lemma 5- to 7-nerved, 3 stamens, see *Bulletin of Miscellaneous Information Kew* 1934: 432. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 283. 1957.

L. tristachyoides (Trin.) Conert (*Arundinella tristachyoides* (Trin.) Roberty; *Danthoniopsis tristachyoides* (Trin.) Jacq.-Fél.; *Danthoniopsis tuberculata* (Stapf) Jacq.-Fél.; *Dilophotriche tristachyoides* (Trin.) Jacq.-Fél.; *Panicum*

tristachyoides Trin.; *Tristachya microstachya* Nees ex Steud.; *Tristachya tristachyoides* (Trin.) C.E. Hubb.; *Tristachya tuberculata* Stapf)

Tropical Africa. Perennial, tufted, low grazing value, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 106. 1836, *Synopsis Plantarum Glumacearum* 1: 238. 1854, *Bulletin of Miscellaneous Information Kew* 1897: 294. 1897 and *Contr. U.S. Natl. Herb.* 24 (8): 423. 1927, *Bull. Misc. Inform. Kew* 1935: 309. 1935, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 423, 424. 1950, *Petite Flore de l'Ouest-Africain* 392. 1954, *Bulletin de l'Institut Française d'Afrique Noire* 17: 56. 1955, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 291. 1957, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 7: 408. 1960.

in Guinea: alafasyen, wodion

in Guinea-Bissau: udu-bunoro, udubunoro

in Sierra Leone: fainyinyogi, foni, keep, kulebinyi

L. villosipes (C.E. Hubb.) Conert (*Loudebia villosipes* C.E. Hubb.)

Tropical Africa. See *Kew Bulletin* 1949: 355. 1949, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 283. 1957.

Louiella C.E. Hubb. & J. Léonard

One species, tropical Africa, Sudan. Panicoideae, Panicodae, Paniceae, perennial, aquatic, floating or decumbent, erect or decumbent, herbaceous, branched, rhizomatous, culm internodes spongy, auricles absent, ligule a very short fringed membrane, plants bisexual, inflorescence racemose, open panicle, spikelets pedicellate paired or appressed, 2 glumes very unequal, short lower glume nerveless and truncate, upper glume 5- to 7-nerved and long acuminate, lower lemma caudate-acuminate, palea 2-nerved, 2 free and fleshy lodicules, stamens 3, ovary glabrous, 2 stigmas, found in seasonal ponds, bogs and muds, along floodplains, stagnant mires type *Louiella fluitans* C.E. Hubb. & J. Léonard, see *Bulletin du Jardin Botanique de l'État* 22: 316-317. 1952.

Species

L. fluitans C.E. Hubb. & J. Léonard

Central African Republic, Zaire. Perennial, palea keel-less, forming dense and huge floating mats.

Loxodera Launert = Lepargochloa Launert, Plagiarthron Duv.

From the Greek *loxos* "oblique, twisted, crooked."

About three-five species, Angola, tropical southern Africa. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, herbaceous, simple, tufted, auricles absent, ligule membrane-like, plants bisexual, inflorescence a single terminal stout raceme, spikelets paired, pedicellate spikelets awnless and sometimes much reduced, lower floret male, callus bearded, 2 glumes subequal, lower glume 7-9-nerved, upper glume 3-nerved, palea awnless 2-nerved, 2 fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, savannah, sandy riverbeds, damp areas, riverbanks, drainage ditches, related to *Urelytrum*, type *Loxodera rigidiuscula* Launert, see *Bulletin de la Société Botanique de Belgique* 90: 187. 1958, *Boletim da Sociedade Broteriana, ser. 2* 37: 80-83. 1963, *Senckenbergiana Biologica* 46: 121-122. 1965, *Boletim da Sociedade Broteriana, ser. 2* 41: 58, t. 1. 1967, *Kew Bulletin* 23: 295. 1969, *Kirkia* 8: 8. 1971, *Kew Bulletin* 32: 580, 767-771. 1978.

Species

L. bovonei (Chiov.) Launert (*Loxodera rigidiuscula* Launert; *Rhytachne bovonei* (Chiov.) Chiov.; *Rhytachne pilosa* Ballard & C.E. Hubb.; *Rottboellia bovonei* Chiov.)

Africa. See *Annali di Botanica* 13: 36. 1914, *Nuovo Giornale Botanico Italiano, new series* 26: 73. 1919, *Bulletin of Miscellaneous Information Kew* 1934: 108. 1934, *Boletim da Sociedade Broteriana, ser. 2* 37: 81. 1963, *Senckenbergiana Biologica* 46(2): 122. 1965.

L. caespitosa (C.E. Hubb.) Clayton (*Loxodera caespitosa* (C.E. Hubb.) Simon; *Phacelurus caespitosus* C.E. Hubb.)

Tropical Africa, Tanzania. Tufted, herbaceous, see *Bulletin of Miscellaneous Information Kew* 1928(1): 35-36. 1928, *Kirkia* 8: 8. 1971, *Kew Bulletin* 32(3): 580. 1978.

L. epectinata (Napper) Launert (*Lasiurus epectinatus* Napper)

Africa. See *Boletim da Sociedade Broteriana, ser. 2* 37: 82. 1963, *Kirkia* 3: 121. 1963.

L. ledermannii (Pilg.) Clayton ex Launert (*Elionurus ledermannii* Pilg.; *Lasiurus maitlandii* Stapf & C.E. Hubb.; *Loxodera ledermannii* (Pilg.) Clayton, nom. illeg., non *Loxodera ledermannii* (Pilg.) Clayton ex Launert; *Rottboellia maitlandii* (Stapf & C.E. Hubb.) Pilg.) (after the Swiss horticulturist Carl Ludwig Ledermann, 1875-1958, traveler, explorer, collected in West Cameroon (Kamerun, Cameroun), wrote "Eine botanische Wanderung nach Deutsch-Adamaua." *Mitteil. Deutsch. Schutzge.* 25: 20-55. 1912; see F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 48-49. 1971; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 1-110. Paris 1968; Frank Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*, (A.E.T.F.A.T.). 69-75. Lisbon 1962; F.N. Hepper, "C. Ledermann's botanical collecting localities in Kamerun

(Cameroun) 1908-1909." *Kew Bulletin*. 29(2): 365-381. 1974)

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 45: 207. 1910, *Bulletin of Miscellaneous Information Kew* 1927: 264. 1927, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 139. 1940, *Senckenbergiana Biologica* 46(2): 121. 1965, *Kew Bulletin* 20: 258. 1966.

L. strigosa (Gledhill) Clayton (*Urelytrum strigosum* Gledhill)

Guinea, Sierra Leone. Pedicelled spikelet shortly awned, savannah, slopes, see R. Schnell, "Végétation et flore de la région montagneuse du Nimba." *Mém. l'IFAN* 22: 1-604. 1952, *Boletim da Sociedade Broteriana, ser. 2* 41: 58, t. 1. 1967, N.H.A. Cole, *The Vegetation of Sierra Leone*. Njala University College Press. 1968, *Kew Bulletin* 23: 295. 1969, J.K. Morton, "Phytogeography of the West African mountains." in D.H. Valentine, editor. *Taxonomy, Phytogeography and Evolution*. 221-236. Academic Press, London, United Kingdom. 1972, J.K. Morton, "Montane Vegetation." in *Plant Ecology in West Africa*, G.W. Lawson (editor), 247-271. John Wiley and Sons Ltd., United Kingdom. 1986.

Loydia Delile = *Lloydia* Reichenb.

(Liliaceae), *Lloydia* Salisb. ex Reichenb.

(Liliaceae), *Lloydia* Delile, *Pennisetum* Rich.

For the Welsh (b. Cardiganshire, Wales) antiquary Edward Lloyd (Lluyd, Llhwyd, Lhuyd, Lhwyd, Llwyd) (Eduardus Luidius), 1660-1709 (d. Oxford), botanist, philologist, geologist, traveler, pioneer of modern researches into the Celtic languages, 1682 admitted into Jesus college at Oxford, studied natural history under Robert Plot (1640-1696), assistant to Martin Lister, 1690-1709 Keeper of the Ashmolean Museum (first Keeper was Robert Plot, in 1683), 1708 Fellow of the Royal Society, among his writings are *Archaeologia Britannica*. Oxford 1707, *E. Luidii ... de fluviorum, montium, urbium*, etc., in *Britannia nominibus adversaria posthuma*. 1719 and *E. Luidii ... Lithophylacii Britannici ichnographia*. Londini 1699, he made numerous contributions to the *Philosophical Transactions of the Royal Society*. See R.W.T. Gunther, comp. and edit., *Life and Letters of Edward Lhwyd*. Oxford 1945; Johann Heinrich Linck, *De stellis marinis liber singularis ... Accedunt E. Luidii, de Reaumur, et D. Kade hujus argumenti opuscula*. Lipsiae 1733; Robert Morison, *Plantarum historiae universalis oxoniensis*. Oxford 1699; R. Pulteney, *Historical and Biographical Sketches of the Progress of Botany in England*. 2: 110-116. London 1790; [John Ray], *The Correspondence of J. Ray*. Edited by E. Lankester. 482-484. London 1848; J.M. Edmonds, *D.S.B.* (or *Dictionary of Scientific Biography*. Editor in Chief Charles Coulston Gillispie.) 8: 307-308. New York 1981; Ray Desmond, *Dictionary of British*

& *Irish Botanists and Horticulturists*. 428. London 1994; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 199. Oxford 1964; Dawson Turner, *Extracts from the Literary and Scientific Correspondence of R. Richardson, of Bierly, Yorkshire: Illustrative of the State and Progress of Botany* [Edited by D. Turner. - Extracted from the memoir of the Richardson family, by Mrs. D. Richardson] Yarmouth 1835; James Britten, *The Sloane Herbarium ... revised and edited by J.E. Dandy*. London 1958; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980.

Panicoideae, Paniceae, Cenchrinae, type *Loydia peregrina* Delile, see *Syn. Pl.* 1: 72. 1805, *Flora Germanica Excursionaria* 102. 1830, *Ind. Sem. Horti. Monsp.* [3]. 1844 and *Contr. U.S. Natl. Herb.* 22: 210. 1921, *Bot. Zhurn.* 74: 1059-1061. 1989, *Flora Mesoamericana* 6: 371-374. 1994, *Flora of Ethiopia and Eritrea* 7: 259-275. 1995, *Contributions from the United States National Herbarium* 46: 527-536. 2003.

Loxostachys Peter = *Cyrtococcum* Stapf,
Pseudechinolaena Stapf

From the Greek *loxos* "oblique, twisted, crooked" and *stachys* "a spike." Panicoideae, Paniceae, Panicinae, see *Agrostografia Brasiliensis* 41. 1823, *Fl. Brit. India* 7: 28, 58. 1896 and *Flora of Tropical Africa* 9: 15, 494-495, 746. 1917-1919, *Repertorium Specierum Novarum Regni Vegetabilis, Beih.* 40(1): 203-204, Anh. 55. 1930, *Fieldiana, Botany* 24(2): 38-331. 1955, *Flora of Tropical East Africa* 451-898. 1982.

Lucaea Kunth = *Arthraxon* P. Beauv.,
Pleuroplitis Trin.

After the German botanist August Friedrich Theodor Lucaea, 1800-1848, pharmacist, botanical collector, editor of *Berlinisches Jahrbuch für die Pharmacie*, etc. Berlin 1818, etc.; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 407. 1965.

Panicoideae, Andropogoneae, Andropogoninae, type *Lucaea gracilis* Kunth, see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 111, t. 11, f. 6. (Dec.) 1812, *Fundamenta Agrostographiae* 174-175, t. 16. 1820, *Révision des Graminées* 2: 489, t. 159. 1831, *Edinburgh New Philosophical Journal* 18: 181. 1835, *Tentamen Florae Abyssinicae ...* 2: 447. 1850, *Beiträge zur Flora der Cap Verdischen Inseln* 152. 1852, *Plantae Junghuhnianae* 3-4: 366, 467. 1854-1855, *Synopsis Plantarum Glumacearum* 1: 413-414. 1854 [1855], *Bulletin de l'Académie Impériale des Sciences de Saint Pétersbourg*, sér. 3, 10: 369, 375. 1866 and *Contributions from the United States National Herbarium* 46: 104-110, 285, 539-540. 2003.

Ludolfia Willd. = *Arundinaria* Michaux,
Bambusa Schreb., *Ludolfia* Adans. (Aizoaceae)

Presumably after the German botanist Michael Matthias Ludolff, 1705-1756, physician, professor in Berlin, author of *Dissertatio ... de vomitu*. Lugduni Batavorum 1721 and *Resp. Dissertatio de artuum amputatione rite administranda*. Praes. S.P. Hilschero. Jenae [1718].

Bambusoideae, Bambuseae, Arundinariinae, type *Ludolfia macrosperma* (Michx.) Willd., see *Familles des Plantes* 2: 244. 1763, *Flora Caroliniana, secundum ...* 81. 1788, *Flora Boreali-Americana* 1: 73-74. 1803, *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der gesammten Naturkunde* 2: 320. Berlin 1808, *Essai d'une Nouvelle Agrostographie* 144, 152. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 523, 525. 1829, *Species Plantarum. Editio sexta* 2: 24-25. 1833, *Transactions of the Linnean Society of London* 26(1): 89. 1868 and *Philippine Journal of Science* 7(4): 230. 1912, *Kew Bulletin* 11(2): 207, 211. 1956, *Taxon* 6(7): 204. 1957, *Castanea* 62: 8-21. 1997, *Contributions from the United States National Herbarium* 39: 18-24. 2000.

Ludolphia Willd. = *Arundinaria* Michaux,
Ludolfia Willd.

Bambusoideae, Bambuseae, Arundinariinae, see *Familles des Plantes* 2: 244. 1763, *Flora Boreali-Americana* 1: 73-74. 1803, *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der gesammten Naturkunde* 2: 320. Berlin 1808 and *Taxon* 6(7): 204. 1957, *Contributions from the United States National Herbarium* 39: 18-24. 2000.

Luziola Juss. = *Arrozia* Schrad. ex Kunth,
Arrozia Kunth, *Caryochloa* Trin., *Hydrochloa*
P. Beauv., *Luciola* Sm. (Juncaceae), *Luzula*
DC. (Juncaceae)

From *Luzula* DC.

Species 11, tropical South America, Venezuela, southern Brazil, southern U.S. to Argentina. Ehrhartoideae, Oryzeae, Luziolinae or Bambusoideae, Oryzodae, Oryzeae, perennial or annual, herbaceous, unarmed, low growing, leafy, branched, stoloniferous, decumbent, ligule an unfringed membrane, plants monoecious, panicle unisexual, terete spikelets solitary and pedicellate, the staminate and pistillate spikelets in separate panicles or on the same inflorescence, male spikelet terminal, female spikelet axillary, all the fertile spikelets unisexual, female spikelet lemma awnless, male spikelet lemma membranous, male spikelet 1-floreted and 6-18 staminate, glumes absent, no stamens, ovary glabrous, 2 stigmas, swamps and lakes, in shallow

water, type *Luziola peruviana* Juss. ex J.F. Gmel., see *Genera Plantarum* 33. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 637. 1791, *Flore Française ... Troisième Édition* 3: 158, 161. 1805, Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 135, 165, 182, pl. 3. f. 18, pl. 24, f. 4. Paris 1812, *English Flora* 2: 177. 1824, *De Graminibus Paniceis* 54, 248. 1826, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 11. 1833, *Die Natürlichen Pflanzenfamilien* 2(2): 40. 1887 and J.R. Swallen, "The grass genus *Luziola*." *Annals Missouri Botanical Garden* 52(3): 472-475. 1965, *Bulletin Torrey Botanical Club* 101(5): 244. 1974, *Flora Mesoamericana* 6: 222-223. 1994, E.E. Terrell & M.R. Duvall, "*Luziola*. In *Catalogue of New World Grasses (Poaceae): I. Subfamilies Anomochlooideae, Bambusoideae, Ehrhartoideae, and Pharoideae*." *Contributions from the United States National Herbarium* 39: 69-71. 2000, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang and De-Yuan Hong, "A phylogeny of the rice tribe Oryzaceae (Poaceae) based on *matK* sequence data." *Am. J. Bot.* 89: 1967-1972. 2002.

Species

L. bahiensis (Steud.) Hitchc. (*Caryochloa bahiensis* Steud.; *Luziola alabamensis* Chapm.; *Luziola bahiensis* var. *alabamensis* (Chapm.) Prod.; *Luziola bahiensis* var. *bahiensis*; *Luziola contracta* Hack.; *Luziola longivalvula* Döll; *Luziola pusilla* S. Moore; *Luziola striata* Balansa & Poit.)

Brazil, southern U.S. to Argentina. Perennial, aquatic, emergent, erect, slender, floating, caespitose, densely clumped, leaves basal, forming colonies, stoloniferous and rhizomatous, deeply-rooted, leaf blades stiffly erect or ascending, female panicle ovate, male inflorescence solitary terminal, moist places, small ponds, swamps, riverbanks and streamlets, shallow water, standing water, shade, savannah, wet soil, marsh, savannah marsh, see *Synopsis Plantarum Glumacearum* 1: 5. 1853 [1855], *Flora of the Southern United States* 584. 1860, *Flora Brasiliensis* 2(2): 17. 1871, *Bulletin de la Société d'Histoire Naturelle de Toulouse* 12: 231, t. 4, f. 2. 1878, *Transactions of the Linnean Society of London* 4: 507, t. 37, f. 1-8. 1895 and *Österreichische Botanische Zeitschrift* 52: 8. 1902, *Contributions from the U.S. National Herbarium* 12(6): 234. 1909, *Botanisches Archiv* 1: 242. 1922, *Grasses of Bahia* 46. 1984, *Sida* 15(4): 619-622. 1993.

L. brasiliensis Moric. (*Luziola doelliana* Prod.; *Luziola peruviana* Juss. ex J.F. Gmel.; *Luziola pittieri* Lucas) (after the German botanist Johann Christoph Döll, 1808-1885, librarian; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 461. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 104. Boston, Mass. 1972; Stafleu and Cowan, *Taxonomic literature*. 1: 665-666. Utrecht 1976)

Venezuela, Brazil. Perennial, erect, leaves basal, leaf blades sharply acute, male panicle terminal, female panicle axillary, female spikelets round, swampy areas, see *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 637. 1791, *Nov. Gen. Sp.* 1: 199. 1816, *Syst. Veg.* 1: 250. 1825, *Plantes nouvelles d'Amérique*. 94, t. 60. Genève 1840 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 12, t. 8A. 1900, *Botanisches Archiv* 1: 240. 1922, *Journal of the Washington Academy of Sciences* 32(6): 159, f. 3. 1942, *Sida* 15(4): 619-622. 1993.

L. brasiliensis (Trin.) Pilg. (*Arrozia micrantha* Schrad. ex Kunth; *Caryochloa brasiliensis* Trin.; *Luziola brasiliensis* (Trin.) Swallen; *Luziola micrantha* (Schrad. ex Kunth) Benth.)

Brazil. See *De Graminibus Paniceis* 248. 1826, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 11. 1833, *Journal of the Linnean Society, Botany* 19(115, 116): 55. 1881 and *Die Natürlichen Pflanzenfamilien* (edition 2) 14d: 157. 1956, *Annals Missouri Botanical Garden* 52: 473. 1965.

L. caespitosa Swallen

Brazil. Perennial, caespitose, erect to ascending, leaves mostly basal, leaf sheaths compressed, leaf blades linear, panicles bisexual terminal, male spikelets oblong, female spikelets round, wet soil, swampy ground, see *Annals of the Missouri Botanical Garden* 52(3): 473. 1965.

L. divergens Swallen

Brazil. See *Annals of the Missouri Botanical Garden* 52(3): 475. 1965.

L. fluitans (Michx.) Terrell & H. Rob. (*Hydrochloa carolinensis* P. Beauv.; *Hydrochloa caroliniensis* var. *caroliniensis*; *Hydrochloa fluitans* (Michx.) Torr., nom. illeg., non *Hydrochloa fluitans* (L.) Hartm.; *Hydropyrum fluitans* (Michx.) Kunth; *Luziola caroliniana* Trin. ex Steud.; *Luziola caroliniensis* (P. Beauv.) Raspail; *Zizania fluitans* Michx.)

U.S., Mexico, Guatemala. Aquatic, emergent, floating, forming large colonies, marshes, streams, lakes, see *Flora Boreali-Americana* 1: 75. 1803, *Essai d'une nouvelle Agrostographie* 135, 165, 182. 1812, *Annales des Sciences Naturelles (Paris)* 5: 304. 1825, *Compendium of the Flora of the Northern and Middle States* 354, 403. New York 1826, *Révision des Graminées* 1: 7. 1829, *Nomenclator Botanicus. Editio secunda* 2: 79. 1841 and *Contributions from the U.S. National Herbarium* 12: 156. 1908, *Bulletin of the Torrey Botanical Club* 101(5): 244. 1974.

L. fluitans (Michx.) Terrell & H. Rob. var. *fluitans* (*Festuca capillaris* Lilj.; *Hydrochloa capillaris* (Lilj.) Hartm.)

U.S., Mexico. See *Utkast til en Svensk Flora* 48. 1798, *Genera Graminum* 8. 1819 and *Bulletin of the Torrey Botanical Club* 101(5): 244. 1974.

L. fluitans (Michx.) Terrell & H. Rob. var. *oconnorii* (R. Guzmán) G.C. Tucker (*Hydrochloa caroliniensis* var. *oconnori* R. Guzmán)

Mexico. See *Essai d'une Nouvelle Agrostographie* 135, 165, 182, pl. 3. f. 18, pl. 24, f. 4. 1812 and *Bulletin of the Torrey Botanical Club* 101(5): 244. 1974, *Phytologia* 48(1): 77, 79. 1981, *Journal of the Arnold Arboretum* 69(3): 272. 1988.

L. fragilis Swallen

Venezuela, Bolivia, southern Brazil. Decumbent, aquatic, submerged and emergent, floating, rooted at the nodes, leaf blades linear acute, female panicle reduced, male and female spikelets in separate panicles on the same plant, forming colonies, shallow water, lakes and streams, drainage ditches, see *Annals of the Missouri Botanical Garden* 52(3): 474. 1965, *Brittonia* 23(3): 293-324. 1971.

L. gracillima Prod.

Mexico, Paraguay, Argentina. Perennial, emergent, male flowers terminal, shallow water, pools, see *Botanisches Archiv* 1: 241. 1922.

L. peruviana Juss. ex J.F. Gmelin (*Luziola bahiensis* (Steud.) Hitchc.; *Luziola brasiliana* Moric.; *Luziola doelliana* Prod.; *Luziola leiocarpa* Lindm.; *Luziola mexicana* Kunth; *Milium natans* Spreng.)

South America, the Caribbean, U.S. Perennial, herbaceous, decumbent, ascending, floating, aquatic, slender, rooting at the nodes, leaves basal, leaf blades linear acuminate, emergent, panicles unisexual, male panicle terminal sparsely branched, female panicle axillary, swampy areas, streams, moist forest, along the edge of pond, shallow water, ditches, standing water, see *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 637. 1791, *Nova Genera et Species Plantarum* 1: 199. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 250. 1825, *Plantes nouvelles d'Amérique*. 94, t. 60. Genève 1840, *Synopsis Plantarum Glumacearum* 1: 5. 1855 [1853] and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 12, t. 8A. 1900, *Contributions from the United States National Herbarium* 12(6): 234. 1909, *Botanisches Archiv* 1: 240. 1922, *Journal of the Washington Academy of Sciences* 32(6): 159, f. 3. 1942, *Flora de la Provincia de Buenos Aires* 4(2): 35, 85-101. 1970, *Sida* 15(4): 619-622. 1993.

L. spruceana Benth. ex Döll (*Luziola spiriformis* Andersson ex Balansa & Poit.; *Luziola subintegra* Swallen) (dedicated to the English (b. Ganthorpe, near Malton) botanist Richard Spruce, 1817-1893 (Yorkshire, Coneysthorpe, Castle Howard, near Malton), naturalist, traveler, cartographer, botanical explorer, plant collector, bryologist, from June 1849 to 1864 in South America (Venezuela, Brazil, Peru, Ecuador, Bolivia, on the Amazon and Andes), collected cinchona plants and seeds, his writings include "Palmae amazonicae." *J. Linn. Soc., Bot.* 11(50-51): 65-183. 1869 and *Hepaticae of the Amazon and of the Andes of Peru and*

Ecuador. London [1884-]1885; see R.G.C. Desmond, in *D.S.B.* 12: 594. 1981; Alfred Russell Wallace, editor, *Notes of a Botanist on the Amazon & Andes ... during the Years 1849-1864* by Richard Spruce. London 1908; Stafleu & Cowan, *Taxonomic literature*. 5: 816-820. 1985; J.H. Barnhart, *Biographical notes upon botanists*. 3: 312. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 379. 1972; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 184. London 1904; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 247. Oxford 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 381. 1973; Charles Lyte, *The Plant Hunters*. London 1983; Henri Pittier, *Manual de las Plantas Usuales de Venezuela y su Suplemento*. Caracas 1978; August Weberbauer (1871-1948), *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 14-15. Leipzig 1911; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 647-648. London 1994)

Paraguay, Venezuela, Suriname, Brazil, the Caribbean, Honduras. Perennial, aquatic, floating, spreading, emergent, stoloniferous, forming mat or colonies, lake, streams, ponds, shallow water, see *Flora Brasiliensis* 2(2): 18-19. 1871, *Bulletin de la Société d'Histoire Naturelle de Toulouse* 12: 232, t. 5. 1878 and *Annals of the Missouri Botanical Garden* 30(2): 165. 1943, *Cuscutlania* 1(6): 1-29. 1991, *Contributions from the United States National Herbarium* 39: 69-71. 2000.

L. subintegra Swallen (*Luziola spruceana* Benth. ex Döll)

South America, the Caribbean. Perennial, robust, herbaceous, aquatic, emergent, stoloniferous, spreading, creeping, floating, leaf blades linear attenuate scabrous acuminate, inflorescence pistillate axillary, forming dense floating mats, in coastal areas, ponds, ditches, canals, see *Flora Brasiliensis* 2(2): 18-19. 1871 and *Contributions from the United States National Herbarium* 22: 463. 1922, *Fl. Suriname* 1(1): 310. 1943, *Annals of the Missouri Botanical Garden* 30(2): 165. 1943, *Fl. Guy. Franç.* 1: 100. 1955, *Cuscutlania* 1(6): 1-29. 1991.

Lycochloa Samuelson = *Koordersiochloa* Merr., *Pseudostreptogyne* A. Camus, *Streblochaete* Hochst. ex Pilg.

From the Greek *lykos* "a wolf" and *chloe*, *chloa* "a grass."

One species, Lebanon, Syria. Pooideae, Poodae, Meliceae, perennial, rhizomatous, herbaceous, auricles absent, ligule

an unfringed membrane, connate sheath margins, plants bisexual, inflorescence racemose, lax single raceme, solitary spikelets shortly pedicelled and distant, 2 florets, rachilla tough, 2 glumes unequal, upper glume 5-nerved, distal florets clustered, lemmas coriaceous, awn dorsal, palea 2-nerved, 2 fleshy lodicules joined, rocky places, related to *Schizachne*, type *Lycochloa avenacea* Samuelsson, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: (Beibl. 85) 61. 1906, *Philipp. J. Sci., Bot.* 12: 67. 1917, *Bulletin de la Société Botanique de France* 77: 476. 1930, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 25(8): 4. 1933.

Species

L. avenacea Samuelsson

Syria. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 25(8): 4. 1933.

Lycurus Kunth = *Muhlenbergia* Schreb.,
Pereilema J. Presl, *Pleopogon* Kunth

Greek *lykos* “a wolf” and *oura* “a tail,” an allusion to the inflorescence.

About three species, southwestern and southeastern U.S. to Argentina, Ecuador. Chloridoideae, Cynodonteae, Eragrostidae, Muhlenbergiinae, perennial, low, herbaceous, erect, caespitose, internodes solid, auricles absent, sheaths ciliate, ligule membranous, leaves narrow and not pungent, plants bisexual, inflorescence a narrow spiciform panicle exerted, axillary inflorescences present, clusters of paired spikelets, 1 floret per spikelet, spikelets laterally compressed and lightly keeled, upper spikelet long pedicellate and perfect, lower spikelet staminate, 2 glumes subequal or unequal, lower glume 2-awned and 2- to 3-nerved, upper glume with 1 awn, lemma 3-nerved with a slender terminal awn, palea hairy awnless, lodicules truncate, 3 stamens, ovary glabrous, 2 stigmas, native pasture species, open areas, rocky places, plains, rocky hills, allied to *Muhlenbergia* Schreb., type *Lycurus phleoides* Kunth, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Nova Genera et Species Plantarum* 1: 141, 142, pl. 45. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 4(2): 32. 1827, *Reliquiae Haenkeanae* 1(4-5): 233, t. 37, f. a-f. 1830, *J. Acad. Nat. Sci. Philadelphia*, ser. 2, 1: 189. Aug 1848, *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 25. 1848, August Heinrich Rudolph Grisebach (1814-1879), *Plantae lorentzianae*. 207-208. Göttingen 1874, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 255-256. 1874, *Mexicanas Plantas* 2: 85. 1886, *Grasses of North America for Farmers and Students* 2: 271. 1896, *Revisio Generum Plantarum* 3(3): 350. 1898 and *Ill. Fl. N. U.S.* (edition 2) 1: 184. 1913, *U.S.D.A. Bull.* 772: 139. 1920,

Repertorium Specierum Novarum Regni Vegetabilis 17: 212. 1921, *Taxon* 31: 9-36. 1982, *Phytologia* 57(4): 283-291. 1985, *Parodiana* 4(2): 267-310. 1986, *Flora Mesoamericana* 6: 286. 1994, *American Journal of Botany* 81: 622-629. 1994, *Bothalia* 24: 241-246. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Grasses: Systematics and Evolution* 195-212. 2000, *Contributions from the United States National Herbarium* 41: 138-139, 181-182. 2001, Esteban H. Muldavin, Paul Neville and Glenn Harper, “Indices of grassland biodiversity in the Chihuahuan desert ecoregion derived from remote sensing.” *Conservation Biology* 15(4): 844-855. Aug 2001.

Species

L. phalaroides Kunth (*Lycurus brevifolius* Scribn. ex Beal; *Lycurus phleoides* Kunth; *Lycurus phleoides* var. *brevifolius* Scribn. ex Beal; *Muhlenbergia lycuroides* Vasey ex Beal)

U.S. to Argentina, Mexico. Perennial, caespitose, erect or decumbent, knotty base, ligule membranous, leaf blades flat or folded, narrow inflorescence, spikelets usually paired and shortly awned, first spikelet rudimental, glumes subequal lanceolate, 2 lodicules, 3 stamens, dry disturbed grassland, see *Nova Genera et Species Plantarum* 1: 142, pl. 45. 1815 [1816], *Grasses of North America for Farmers and Students* 2: 239, 271. 1896 and *Phytologia* 57(4): 288. 1985.

L. phleoides Kunth (*Lycurus phalaroides* Kunth; *Lycurus phleoides* var. *glaucifolius* Beal; *Lycurus phleoides* var. *phleoides*; *Pleopogon setosum* Nutt.)

South America. Perennial, herbaceous, caespitose, erect, decumbent at base, aromatic, forming small clumps, inflorescence terminal and erect, fodder, growing in open areas, see *Nova Genera et Species Plantarum* 1: 142, pl. 45. 1815 [1816], *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 25. 1848, *J. Acad. Nat. Sci. Philadelphia*, ser. 2, 1: 189. Aug 1848, *Grasses of North America for Farmers and Students* 2: 239, 271. 1896 and *Contr. U.S. Natl. Herb.* 17(3): 305. 1913.

in English: wolf tail

in Mexico: cola de rata, zacate lobero

L. setosus (Nutt.) C. Reeder (*Lycurus alopecurus* Griseb.; *Lycurus phleoides* var. *glaucifolius* Beal; *Pleopogon setosum* Nutt.)

U.S., Mexico. Perennial, herbaceous, caespitose, along roadsides, see *Nova Genera et Species Plantarum* 1: 142, pl. 45. 1815 [1816], *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 25. 1848, *J. Acad. Nat. Sci. Philadelphia*, ser. 2, 1: 189. Aug 1848, *Pl. Lorentz.* 207-208. 1874, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 255-256. 1874, *Grasses of North America for Farmers and Students* 2: 271. 1896 and *Ill. Fl. N. U.S.* (edition 2) 1: 184. 1913, *Phytologia* 57(4): 287. 1985, *Madroño* 44(4): 334-346. 1997.

Lygeum Loeffl. ex L. = *Linosparton* Adans.,
Lygeum L., *Spartum* P. Beauv.

Greek *lygion* “switch,” *lygizo* “to bend,” the plants are very flexible, fibers used for mats, sails and ropes; Latin and Greek *ampelodesmos*, ancient name for *Lygeum spartum*, used in Sicily for tying up vines (Plinius).

One species, Mediterranean region, southeast Spain, Libya, Algeria. Stipoideae, Lygeae, perennial, herbaceous, wiry, junciform, tufted, coarse, branched, rhizomatous with scaly rhizomes, ligule an unfringed membrane, auricles absent, wiry leaf blades, plants bisexual, single spikelet enclosed by a spatheole, large spikelets 2- to 3-flowered, glumes lacking, lemmas villous and coriaceous, palea awnless, lodicules absent, 3 stamens, ovary glabrous, 1 stigma, spikelets with female-fertile florets only, useful for erosion control, used for paper and making rope, food plant for *Melanargia occitanica*, growing in dry open places, dry salt marshes,

salt steppes, sandy soils, type *Lygeum spartum* L., see *Genera Plantarum* edition 5: 27, 522. 1754, *Familles des Plantes* 2: 34, 571. Paris 1763, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 178. Paris 1812, *Conspectus Regnum Vegetabilis...* 55. 1828, *Prodromus Florae Hispanicae* 1: 33. 1861, *Österreichische Botanische Zeitschrift* 31: 45. 1881 and *Revista Argentina de Agronomía* 28: 81-99. 1961.

Species

L. spartum Loeffl. ex L. (*Lygeum spartum* L.)

Mediterranean. Perennial, herbaceous, much used for papermaking, see *Fl. Pakistan* 143: 39. 1982.

in English: esparto grass

in French: sparte du Sud

in Spain: esparto, espart, espart bord, espart albardi

in Malta: halfa

in Morocco: sennâq, sennâg, sennâga, tasennâgt, l-halfa, talâmt, tirawt, âmenzal, gousmir, guzmir, sparte

M

Maclurochloa K.M. Wong

After the taxonomist Floyd Alonzo McClure, 1897-1970, American bamboo specialist.

A monotypic genus endemic to Peninsular Malaysia. Bambusinae, scrambling, clambering bamboo, trailing over the ground or entangled with the vegetation, lower montane forests, type *Maclurochloa montana* (Ridley) K.M. Wong, see *Kew Bulletin* 48(3): 528, f. 6. 1993, *Plant Resources of Southeast Asia* 7: 17, 34. 1995.

Species

M. montana (Ridl.) K.M. Wong (*Bambusa klossii* Ridl.; *Bambusa montana* (Ridl.) Holttum; *Bambusa pauciflora* Ridl.; *Dinochloa montana* Ridl.)

Peninsular Malaysia. Mountain forest, see *Journal of the Straits Branch of the Royal Asiatic Society* 44: 210. 1905, *The Flora of the Malay Peninsula* 5: 259. 1925, *Kew Bulletin* 11: 206. 1956, *Gard. Bull. Sing.* 16: 76, 77, 79, f. 21. 1958, *Kew Bulletin* 48(3): 528, f. 6. 1993.

Local name: buluh padi

in Thailand: phai lueai, phai luei

Maclurolyra C. Calderón and Söderstrom

After the taxonomist Floyd Alonzo McClure, 1897-1970, American bamboo specialist, economic botanist, 1919-1940 in China, from 1941 at the Smithsonian Institution, Washington, D.C., author of *Bamboos of the Genus Phyllostachys*. U.S. Department of Agriculture Handbook. no. 114. U.S.D.A. Washington D.C. 1957 and *The Bamboos*. Smithsonian Institution Press 1993; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 420. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 259. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Stafleu & Cowan, *Taxonomic literature*. 3: 215. Utrecht 1981; Floyd Alonzo McClure, *Chinese Handmade Paper*, edited by Elaine Koretsky, Bird & Bull Press 1986; *Hand Papermaking* 2(1). Summer 1987.

One species, Panama, Colombia. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial,

unarmed, herbaceous, simple, tufted, flowering culms leafy, rhizomes pachymorph, basal culm internode not swollen, thick ligule, leaves mainly basal, plants monoecious, inflorescence a raceme-like panicle hidden within the uppermost sheaths, male and female-fertile spikelets mixed in the inflorescence, all the fertile spikelets unisexual, female spikelet lanceolate with herbaceous glumes, male spikelets without glumes and florets with 3 fertile stamens or 6-staminate, lemma 7-nerved, palea present, 3-4 lodicules, stamens 0, ovary glabrous, 2 stigmas, forest, along trail, resembling *Rehia*, type *Maclurolyra tecta* C.E. Calderón & Soderstr., see Cleofé E. Calderón & Thomas R. Soderstrom, "Morphological and Anatomical Considerations of the Grass Subfamily Bambusoideae Based on the New Genus *Maclurolyra*." *Smithsonian Contributions to Botany* 11: 1-55. 1973, *Smithsonian Contributions to Botany* 44: 1-27. 1980, *Brittonia* 34: 25-29. 1982, *Flora Mesoamericana* 6: 212. 1994, *American Bamboos* 282-284. 1999, *Contributions from the United States National Herbarium* 39: 71. 2000.

Species

M. tecta C.E. Calderón & Soderstr.

Panama, Colombia. Male inflorescence above, female inflorescence below, leaf anatomy bambusoid, forest edge, see *Smithsonian Contributions to Botany* 11: 6. 1973.

Macroblepharus Philippi = Eragrostis Wolf

From the Greek *makros* "long, large" and *blepharon* an "eyelid," *blepharis* "eyelash."

Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eragrostidinae, type *Macroblepharus contractus* Phil., see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, *Linnaea* 29(1): 100-101. 1858 and *Acta Bot. Neerl.* 15: 157. 1966, *Contributions from the United States National Herbarium* 41: 81-115, 139. 2001.

Macrobriza (Tzvelev) Tzvelev

From the Greek *makros* "long, large" plus *Briza* L.

Pooideae, Poeae, Brizinae, *Briza* sect. *Macrobriza* Tzvelev, type *Briza maxima* L., see *Species Plantarum* 1: 70. 1753

and *Novosti Sist. Vyss. Rast.* 21. 1970, *Bot. Zhurn. (Moscow & Leningrad)* 78(10): 91. 1993, *Contributions from the United States National Herbarium* 48: 146-151. 2003.

Macrochaeta Steudel = *Pennisetum* Rich.,
Sericura Hassk.

From the Greek *makros* “long” and *chaite* “bristle, long hair.”

Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Cenchrinae, see *Synopsis Plantarum* 1: 72. 1805, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1036-1037. 1809, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Flora* 25(Beibl. 2): 2. 1842, *Systematisches Verzeichniss der im Indischen Archipel* 60. 1854, *Memorie della Reale Accademia delle Scienze di Torino*, ser. 2 14: 374-375. 1854, *Flora Brasiliensis* 2(2): 305, 308. 1877 and *Contr. U.S. Natl. Herb.* 22: 210-211. 1921, *Flora of Tropical Africa* 9: 956-957, 962, 966. 1934, *Amer. J. Bot.* 64: 161-176. 1977, *Econ. Bot.* 31: 163-174. 1977, *Flora Mesoamericana* 6: 371-374. 1994, *Contributions from the United States National Herbarium* 46: 527-536, 569. 2003.

Macrochloa Kunth = *Stipa* L.

From the Greek *makros* “long” and *chloe, chloa* “a grass.”

About 2-3 species, America, U.S. Pooideae, Stipeae, Stipinae, type *Macrochloa tenacissima* (L.) Kunth, see *Species Plantarum* 1: 78. 1753, *Centuria I. Plantarum* ... 6. 1755, *Révision des Graminées* 1: 58-59. 1829, *Species Graminum Stipaceorum* 94. 1842, *Synopsis Plantarum Glumacearum* 1: 132. 1854 and *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Gayana, Botánica* 13: 1-137. 1965 [Estudio crítico de las gramíneas del género *Stipa* en Chile], *Acta Botanica Malacitana* 21: 161, 163. 1996, *Contributions from the United States National Herbarium* 48: 432. 2003, F.M. Vázquez & Mary E. Barkworth, “Resurrection and emendation of *Macrochloa* (Gramineae: Stipeae).” *Botanical Journal of the Linnean Society* 144(4): 483-495. Apr 2004.

Species

M. gigantea (Link) Hack. (*Celtica gigantea* F.M. Vázquez & M.E. Barkworth; *Lasiagrostis gigantea* (Link) Trin. & Rupr.; *Macrochloa arenaria* (Brot.) Kunth; *Stipa arenaria* Brot.; *Stipa gigantea* Link)

Europe, Portugal. See *Journal für die Botanik* 2: 313. 1799, *Flora Lusitanica* 1: 86. 1804, *Révision des Graminées* 1: 59. 1829, *Species Graminum Stipaceorum* 96. 1842, *Catalogue Raisonné des Graminées du Portugal* 16. 1880 and *Boletim da Sociedade Broteriana*, ser. 2 64: 35-74. 1991.

M. tenacissima (L.) Kunth (*Lasiagrostis tenacissima* (L.) Trin. & Rupr.; *Stipa tenacissima* L.)

Europe, Spain. See *Amoen. Acad.* 4: 266. 1759, *Révision des Graminées* 1: 58. 1829, *Species Graminum Stipaceorum* 94. 1842 and *Annali di Botanica* 45: 75-102. 1987.

Macronax Raf. = *Arundinaria* Michx.

Bambusoideae, Bambuseae, Arundinariinae, see *Flora Boreali-Americana* 1: 73-74. 1803, *Syn. Pl.* 1: 101-102. 1805, *Medical Repository* ser. 2, 5: 353. 1808, *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der gesammten Naturkunde.* 2: 230, 320. Berlin 1808, *Catalogue du Jardin ... Razoumoffsky ... à Gorenki ...* 6. 1812, *Systema Vegetabilium* 2: 55, 846. 1817, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, f. 43-50. 1878 and *Synopsis der mitteleuropäischen Flora* 2, 1: 772. 1902, *Journal of the Arnold Arboretum* 6(3): 145-153. 1925, *Acta Phytotax. Geobot.* 10(4): 264. 1941, *Journal of Japanese Botany* 18(7): 350, 364. 1942, E.D. Merrill, *Index rafinesquianus*. 76. 1949, *Taxon* 6(7): 207. 1957, *Smithsonian Contrib. Bot.* 9: 21-40, f. 7-18. 1973, *Acta Phytotaxonomica et Geobotanica* 30(4-6): 145. 1979, *Ann. Bot.* 48: 407-410. 1981, *Journal of Bamboo Research* 1(2): 38, 42, 171, 175. 1982, *Journal Nanjing University. Natural Sciences Edition* 1982: 95. 1982, *Journal of Bamboo Research* 2: 20. 1983, *Journal of Bamboo Research* 3(2): 23, 25, t. 1. 1984, W.D. Clayton & S.A. Renvoize “Genera graminum.” *Kew Bulletin, Additional Series* 13: 45. 1986, *Smithsonian Contr. Botany* 72: 1-75. 1988, *Kew Bulletin* 44: 351. 1989, *Journal of Bamboo Research* 10(3): 28-30. 1991, *J. Bamb. Res.* 12(4): 1-6. 1993, *J. Bamb. Res.* 13(1): 1-23. 1994, *Contributions from the United States National Herbarium* 39: 18-24. 2000.

Macrostachya A. Rich. = *Enteropogon* Nees

From the Greek *makros* “long” and *stachys* “a spike.”

Chloridoideae, Cynodonteae, Chloridinae, see *An Introduction to the Natural System of Botany* second edition. 448. 1836, *Tentamen Florae Abyssinicae* ... 2: 408. 1850, *Journal of the Linnean Society, Botany* 19: 101. 1881 and *Contributions from the United States National Herbarium* 41: 78-79, 139. 2001.

Maillea Parlatore = *Phleum* L.

For the French botanist Alphonse Maille, 1813-1865, botanical collector in Syria; see J.H. Barnhart, *Biographical notes upon botanists.* 2: 437. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 206. Oxford 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; Jean-Louis Kralik & J. Billon, *Catalogue des Reliquiae Mailleanae.* Paris

1869; F.N. Hepper & F. Neate, *Plant Collectors in West Africa*. 53. Utrecht 1971; C.H. Steinberg, *Webbia* 32(1): 31. 1977.

One species, Greece, Mediterranean region. Pooideae, Poeae, Alopecurinae or Pooideae, Poodae, Aveneae, annual, herbaceous, auricles absent, leaf sheaths inflated, leaf blades narrowly linear, ligule an unfringed membrane, plants bisexual, contracted inflorescence paniculate, 2 glumes subequal keeled and winged, palea 1-nerved, 0 lodicules, 2 stamens, ovary glabrous, 2 stigmas, sometimes referred to *Phleum*, see Filippo Parlatore, *Plantae novae vel minus notae opusculis diversis...* 31. Parisii 1842 and *Acta agriculturae scandinavica* 1(1): 1-138. 1975, *Journal of the Linnean Society, Botany* 76(4): 337-340. 1978, *Flora Mesoamericana* 6: 242. 1994, *Plant Systematics and Evolution* 203: 11-25. 1996, *Willdenowia* 29(11-12): 45-49. 1999, *Contributions from the United States National Herbarium* 48: 432, 491-494. 2003.

Species

M. urvillei Parl.

Mediterranean islands. Glumes 1-nerved, palea keel-less.

Maizilla Schltldl. = *Paspalanthium* Desv.,
Paspalum L.

Maize, *Zea mays*.

Panicoideae, Paniceae, Paspalinae, type *Maizilla stolonifera* (Bosc) Schltldl., see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Transactions of the Linnean Society of London* 2: 83, t. 16. 1794, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 163. 1831, *Botanische Zeitung, Berlin* 8: 601, 605. 1850 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 46: 285, 441, 443-527. 2003.

Malacurus Nevski = *Elymus* L., *Leymus* Hochst.

From the Greek *malakos* "soft" and *oura* "tail."

One species, Central Asia, Turkestan. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, herbaceous, tufted or caespitose, auricles present, ligule an unfringed membrane, plants bisexual, inflorescence spicate, spikelets paired, 2 reduced glumes subequal or unequal, palea 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, sometimes referred to *Leymus*, type *Malacurus lanatus* (Korsh.) Nevski, see *Species Plantarum* 1: 83. 1753, *Flora* 31: 118. 1848, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg: VIIIe Série: Classe Physico-Mathématique* 4(4): 102. 1896 and Thomas Archibald Sprague (1877-1958) et

al., *Nomenclature Proposal by British Botanists* 121. London 1929, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 20. 1930, *Acta Univ. As. Med. Ser.* 8, 17, 38. 1934, *Canad. J. Bot.* 42: 554. 1964, *Novosti Sist. Vyssh. Rast.* 6: 21. 1970, *Systematic Botany* 9: 279-294. 1984, *Taxon* 41: 562-563. 1992, *Annals of Botany* 73: 195-203. 1994, *Taxon* 44: 611-612. 1995.

Species

M. lanatus (Korsh.) Nevski

Eurasia. Glumes 1-nerved.

x Maltea B. Boivin = x *Pucciphippsia* Tzvelev

Phippsia x *Puccinellia*.

See *Le Naturaliste Canadien* 94: 526. 1967, *Novosti Sist. Vyssh. Rast.* 8: 76. 1971, *Genera Graminum* 375. 1986, *Contributions from the United States National Herbarium* 48: 432, 601. 2003.

Maltebrunia Kunth = *Oryza* L., *Potamophila* R. Br., *Prospytochloa* Schweick.

About 3-5 species, Africa, Madagascar, Tanzania, Gabon. Bambusoideae, Oryzodae, Oryzeae, perennial, erect, leaf blades lanceolate to narrowly ovate and usually pseudopetiolate, ligule an unfringed membrane, stoloniferous, plants bisexual, open inflorescence paniculate, spikelets bisexual flattened, 1 fertile floret above 2 sterile lemmas, glumes absent or vestigial, fertile lemma awnless, sterile lemmas subulate, palea nerved and keeled, 2 free lodicules, 6 stamens usually, ovary glabrous, 2 plumose stigmas, in forest, rain forest, type *Maltebrunia leersioides* Kunth, see *Species Plantarum* 1: 333. 1753, *Prodromus Florae Novae Hollandiae* 211. 1810, *Révision des Graminées* 1: 6. 1829, *Journal of the Linnean Society, Botany* 18: 14-134. 1881 and *Bulletin de l'Herbier Boissier, sér. 2*, 1(6): 555. 1901, *Der Züchter. Zeitschrift für theoretische und angewandte Genetik* 31(4): 193-195. 1961, C.E. Hubbard, *Hooker's Icones Plantarum* 36: t. 3595. 1962, *Blumea* 32: 174. 1987, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang, & De-Yuan Hong, "A Phylogeny of the Rice Tribe Oryzeae (Poaceae) based on *MatK* Sequence Data." *American Journal of Botany* 89(12): 1967-1972. 2002.

Species

M. leersioides Kunth (*Oryza leersioides* (Kunth) Steud.; *Potamophila leersioides* (Kunth) Benth.)

Tropical and southern Africa. See *Révision des Graminées* 1: 183, t. 3. 1830, *Synopsis Plantarum Glumacearum* 1: 3. 1855 [1853], *Journal of the Linnean Society, Botany* 18: 55. 1881.

M. letestui (Koechlin) Koechlin (*Maltebrunia gabonensis* C.E. Hubb.; *Maltebrunia le-testui* (Koechlin) Koechlin; *Maltebrunia letestui* (Koechlin) F.T. Hubb.; *Potamophila letestui* Koechlin) (dedicated to the French (b. Caen) colonial administrator (*Administrateur des Colonies*) Georges Marie Patrice Charles Le Testu, 1877-1967 (d. Caen), traveler, explorer, plant collector in West Africa, 1900-1902 Dahomey, 1904-1906 Mozambique, 1907-1934 Gabon and Ubangi-Shari, 1935 Botanic Garden at Caen; see Auguste Jean Baptiste Chevalier (1873-1956), *Flore vivante de l'Afrique Occidentale Française*. 1: xxvii-xxx. Paris 1938; N. Hallé, in *Adansonia*. sér. 2, 7: 263-273. 1967; F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 50. 1971; H. Lecomte, *Les Bois de la Forêt d'Analamazaotra*. Madagascar 1922; François Pellegrin (1881-1965), *La Flore du Mayombe* d'après les Récoltes de M. Georges Le Testu. [in *Mémoires de la Société Linnéenne de Normandie*. XXVI volume. Two parts.] Caen 1924-1928)

Gabon. See *Bulletin de la Société Botanique de France* 108: 243. 1961, *Flore du Gabon* 5: 243. 1962, *Hooker's Icones Plantarum* 36: t. 3595. 1962.

M. prehensilis Nees (*Oryza prehensilis* (Nees) Steud.; *Potamophila prehensilis* (Nees) Benth.; *Prosphytochloa prehensilis* (Nees) Schweick.)

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 194. 1841, *Synopsis Plantarum Glumacearum* 1: 3. 1855 [1853], *Genera Plantarum* 3: 1116. 1883 and *Der Züchter. Zeitschrift für theoretische und angewandte Genetik* 31(4): 194-195. 1961, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

M. schliebenii (Pilg.) C.E. Hubb. (*Potamophila schliebenii* Pilg.) (after the German (b. Saxony) botanist Hans-Joachim Eberhardt Schlieben, 1902-1975 (d. Essen, Germany), plant collector (in Tanzania), photographer and writer; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 229. 1965; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 316. Cape Town 1981; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." in *Webbia*. 19: 861-863. 1965)

Africa. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 652. 1932, *Hooker's Icones Plantarum* 36: t. 3595. 1962.

Malya Opiz = *Ventenata* Koeler

Dedicated to the Bohemian-Austrian botanist Joseph Karl (Carl) Maly, 1797-1866, physician, M.D. Prague 1823, his works include *Enumeratio plantarum phanerogamicarum imperii austriaci universi*. Vindobonae [Wien] 1848 and

Oekonomisch-technische Pflanzenkunde, etc. Wien 1864. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 441. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 251. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970.

Pooideae, Poaceae, Agrostidinae, see *Fl. Herborn*. 41. 1775, *Descriptio Graminum in Gallia et Germania* 272. 1802 and *Contributions from the United States National Herbarium* 48: 432, 688. 2003.

Mandelorna Steud. = *Chrysopogon* Trin., *Lenormandia* Steudel, *Vetiveria* Bory

An anagram of *Lenormandia* Steud., dedicated to the French botanist Sébastien-René Lenormand, 1796-1871, botanical collector for his herbarium; see A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; J.H. Barnhart, *Biographical notes upon botanists*. 2: 369. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 234. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 462. 1973; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 198. Oxford 1964.

Panicoideae, Andropogoneae, Sorghinae, type *Mandelorna insignis* Steud., see *Species Plantarum* 2: 1045. 1753, *Flora Cochinchinensis* 538, 552. 1790, *Plantarum Minus Cognitarum Pugillus* 2: 10. 1815, *Fundamenta Agrostographiae* 187-188. 1820, *Bull. Sci. Soc. Philom. Paris* 1822: 43. 1822, *Flora* 33: 229. 1850, *Synopsis Plantarum Glumacearum* 1: 359. 20-21 July 1854 [1855], *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *American Midland Naturalist* 4: 212. 1915, *Bulletin de l'Institut Française d'Afrique Noire* 22: 106. 1960, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 291. 1960, J.F. Veldkamp, "A revision of *Chrysopogon* Trin. including *Vetiveria* Bory (Poaceae) in Thailand and Malesia with notes on some other species from Africa and Australia." *Austrobaileya* 5: 503-533. 1999, *Contributions from the United States National Herbarium* 46: 159-161. 2003.

Manisuris L. = *Coelorachis* Brongn.,
Hackelochloa Kuntze, *Hemarthria* R. Br.,
Mnesithea Kunth, *Peltophorus* Desv.,
Phacelurus Griseb., *Rottboellia* L.f.

Greek *manos* “loose, sparse, flaccid, rare” and *oura* “a tail,” referring to the appearance of the spikes, resembling a string of minute beads.

One to several species, Asia, India, Tropics. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, herbaceous, branched, plants bisexual, inflorescence spicate or racemose, male and female-fertile spikelets mixed in the inflorescence, sessile spikelet awnless, lower floret barren, rachis segments extremely slender with a cupule-like structure formed by a sterile pedicel positioned along 1 margin of the internode, 2 glumes, lower glume keeled, lemmas 0- 2-nerved, palea and lodicules present, 3 stamens, inflorescence disarticulating into floral units consisting of a sessile spikelets, pedicellate spikelet and internode, open habitats, dry areas, grassy prairies, often included in *Mnesithea* Kunth, type *Manisuris myuros* L., see C. Linnaeus, *Mantissa Plantarum*. 2: 164, 300. 1771, *Supplementum Plantarum* 13, 114. 1781 [1782] *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Prodromus Florae Novae Hollandiae* 207. 1810, *Révision des Graminées* 1: 153-154. 1829, *Voyage autour du Monde* 2: 64, f. 14. 1829 [1831], *Spicilegium florae rumelicæ et bithynicæ ...* 2: 423-424. 1846 [1844], *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887, *Revisio Generum Plantarum* 2: 776. 1891, *The Flora of British India* 7: 152. 1896 and *Bull. Misc. Inform. Kew* 355. 1933, *Flora de la Provincia de Buenos Aires* 4(2): 35. 1970, *Hickenia* 1: 73-78. 1977, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Blumea* 31(2): 281-307. 1986, *Cytologia* 51: 43-50. 1986, *Bothalia* 18: 119-122. 1988, *Science and Culture* 54: 335. 1988, *Darwiniana* 30(1-4): 87-94. 1990, *Flora of the Guianas. Series A, Phanerogams* 8: 143-146. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Journal of Cytology and Genetics* 29(2): 125-131. 1994, *Flora Mesoamericana* 6: 396-397. 1994, *Journal of Applied Ecology* 37(6): 971-985. Dec 2000, *Contributions from the United States National Herbarium* 46: 161-162, 246, 247-248, 285-286, 295-296, 527, 546-548. 2003.

Species

M. altissima (Poir.) Hitchc. (*Hemarthria altissima* (Poir.) Stapf & C.E. Hubb.; *Hemarthria fasciculata* (Lam.) Kunth; *Manisuris fasciculata* (Lam.) Hitchc.; *Rottboellia altissima* Poir.; *Rottboellia compressa* var. *fasciculata* (Lam.) Hack.; *Rottboellia fasciculata* Lam.)

U.S., Texas. See *Supplementum Plantarum* 114. 1781 [1782], *Voyage en Barbarie* 2: 105. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 204. 1791, *Révision des Graminées* 1: 153. 1829, *Monographiae Phanerogamarum*

6: 286. 1889 and *American Journal of Botany* 2: 299. 1915, *Journal of the Washington Academy of Sciences* 24(7): 292. 1934, *Bulletin of Miscellaneous Information Kew* 1934(3): 109. 1934.

M. cylindrica (Michx.) Kuntze (*Coelorachis cylindrica* (Michx.) Nash; *Ischaemum scariosum* Walter; *Manisuris campestris* (Nutt.) Hitchc.; *Mnesithea cylindrica* (Michx.) de Koning & Sosef; *Rottboellia campestris* Nutt.; *Rottboellia cylindrica* (Michx.) Torr., nom. illeg., non *Rottboellia cylindrica* Willd.; *Tripsacum cylindricum* Michx.)

U.S., Florida. See *Flora Caroliniana, secundum ...* 249. 1788, *Flora Boreali-Americana* 1: 60. 1803, *Transactions of the American Philosophical Society, new series*, 5: 151. 1835, *Pacific Railroad Reports* 4: 149. 1857, *Revisio Generum Plantarum* 2: 779. 1891 and *North American Flora* 17(1): 85. 1909, *Manual of the Southeastern Flora* 41. 1933, *Blumea* 31(2): 290. 1986.

in English: pitted jointgrass

M. forficulata C.E.C. Fisch. (*Glyphochloa forficulata* (C.E.C. Fisch.) Clayton)

India. See *Bulletin of Miscellaneous Information Kew* 1933: 353. 1933, *Kew Bulletin* 35(4): 815. 1981.

M. granularis (L.) Sw. (*Cenchrus granularis* L.; *Hackelochloa granularis* O. Kuntze; *Manisuris granularis* (L.) L.f.; *Manisuris granularis* L.; *Mnesithea granularis* (L.) de Koning & Sosef; *Ryttilix granularis* Skeels)

Tropics, the Philippines. Perennial, erect, much-branched, hairy, leaves margins ciliate, slender spikes, spikelets in pairs, 2 equal glumes green, grazed and stacked, not much relished by cattle, sometimes considered to be a good fodder, found in disturbed soil, open waste places, old fields, clearings, see *Mantissa Plantarum* 2: 575. 1771, *Nova Graminum Genera* 40, t. 1, f. 4-7. 1779, *Amoenitates Academicæ ...* 10: 40. 1779, *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Revisio Generum Plantarum* 2: 776. 1891 and *Blumea* 31(2): 295. 1986.

in India: agi-mali-gadi, dhaturu ghas, kangni, ratop

in the Philippines: gingetkaran

in Thailand: yaa kha naeng

M. impressa (Griseb.) Kuntze (*Coelorachis impressa* (Griseb.) Nash; *Manisuris leonina* Hitchc. & Chase; *Mnesithea impressa* (Griseb.) de Koning & Sosef; *Rottboellia impressa* Griseb.)

The Caribbean, Cuba. See *Catalogus plantarum cubensium ...* 235. 1866, *Revisio Generum Plantarum* 2: 780. 1891 and *North American Flora* 17(1): 85. 1909, *Contributions from the United States National Herbarium* 18(7): 275. 1917, *Blumea* 31(2): 291. 1986.

M. leonina Hitchc. & Chase (*Coelorachis impressa* (Griseb.) Nash; *Manisuris impressa* (Griseb.) Kuntze;

Mnesithea impressa (Griseb.) de Koning & Sosef; *Rottboellia impressa* Griseb.) (named for the collector, Fr. León)

Cuba. Found in pine woods, see *Catalogus plantarum cubensium* ... 235. 1866, *Revisio Generum Plantarum* 2: 780. 1891 and *North American Flora* 17(1): 85. 1909, *Contributions from the United States National Herbarium* 18(7): 275. 1917, *Blumea* 31(2): 291. 1986.

M. myuros L. (*Peltophorus myurus* (L.) Desv.; *Peltophorus myurus* (L.) P. Beauv., nom. illeg., non *Peltophorus myurus* (L.) Desv.; *Rottboellia myuros* (L.) Benth.)

India. Good fodder grass, see *Mantissa Plantarum* 300. 1767, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 119, 167, t. 21, f. 11. 1812 and *Cytologia* 51: 43-50. 1986, *Science and Culture* 54: 335. 1988, *Journal of Cytology and Genetics* 29(2): 125-131. 1994, *Taxon* 49(2): 252. 2000.

in India: nalla panuku, nallapanuku, waritsira pillu, waritsira pullu

M. selloana (Hack.) Kuntze (*Coelorachis selloana* (Hack.) Camus; *Coelorhachis selloana* (Hack.) A. Camus; *Mnesithea selloana* (Hack.) de Koning & Sosef; *Rottboellia selloana* Hack.)

Brazil. See *Flora Brasiliensis* 2(4): 312. 1883, *Revisio Generum Plantarum* 2: 780. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 197. 1922, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 447-508. 1969, *Blumea* 31(2): 292. 1986, *Darwiniana* 30(1-4): 87-94. 1990.

M. striata (Nees ex Steud.) Kuntze (*Coelorachis striata* (Nees ex Steud.) A. Camus; *Mnesithea striata* (Nees ex Steud.) de Koning & Sosef; *Rottboellia striata* Nees ex Steud.)

America. See *Synopsis Plantarum Glumacearum* 1: 361. 1854, *Revisio Generum Plantarum* 1(2): 780. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 197. 1922, *Blumea* 31(2): 292. 1986.

Mapira Adans. = *Olyra* L.

A vernacular name.

Bambusoideae, Olyreae, Olyrinae, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Familles des Plantes* 2: 39, 574. 1763 and *Smithsonian Contributions to Botany* 69: 1-79. 1989, *Systematic Botany* 17(1): 25-28. 1992, *Flora Mesoamericana* 6: 210-212. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Contributions from the United States National Herbarium* 39: 82-88. 2000.

Massia Balansa = *Eriachne* R. Br.

Arundinoideae (or Panicoideae), Eriachneae, type *Massia trisetata* (Nees ex Steud.) Balansa, see *Prodromus florae Novae Hollandiae*. 183. 1810, *Essai d'une Nouvelle Agrostographie* 72-73, 146. 1812, *Anales de la Universidad de Chile* 36: 207-208. 1870, *Journal de Botanique (Morot)* 4(8): 165. 1890 and *Acta Phytotaxonomica et Geobotanica* 11: 183. 1942, *Bulletin of the Torrey Botanical Club* 88: 11-20. 1961, M.H.J. van Eck-Boorsboom, "A revision of *Eriachne* R. Br. (Gramineae) in Asia and Malesia." *Blumea* 26: 127-138. 1980, M. Lazarides, "The genus *Eriachne* (Eriachneae, Poaceae)." *Australian Systematic Botany* 8(3): 355-452. 1995.

Species

M. trisetata (Nees ex Steud.) Balansa (*Eriachne trisetata* Nees ex Steud.; *Megalachne zeylandica* Thwaites, also spelled *zeylanica*)

Sri Lanka, India, Southeast Asia, Australia, Northern Territory, Queensland, Western Australia. Perennial, tussock-forming, erect and simple, smooth, leaf sheaths bearded at mouth, leaves curly when dry, loose inflorescence, drooping panicle, floret shorter than the glumes, each floret with an apically-awned lemma and 2-awned palea, glumes subequal, awns of the palea slightly shorter than the awn of the lemma, weed, see *Synopsis Plantarum Glumacearum* 1: 237. 1854, *Enumeratio Plantarum Zeylanicae* 5: 372, 444. London Dec. 1864, *Journal de Botanique (Morot)* 4(8): 165. 1890 and *Handb. Fl. Ceylon* 5: 266. 1900, *Grasses of Ceylon* 52. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 23. 1959.

in Sri Lanka: pini tuttiri, pinituttiri, pinitutturu

Matrella Pers. = *Zoysia* Willd.

Chloridoideae, Cynodonteae, Zoysiinae, type *Matrella juncea* Pers., see *Mantissa Plantarum* 2: 185. 1771, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 440-441. 1801, *Syn. Pl.* 1: 73. 1805 and *Philippine Journal of Science (ser. C)* 7(4): 230. 1912, *Blumea* 26(1): 169-175. 1980, *Contributions from the United States National Herbarium* 41: 139, 240. 2001.

Matudacalamus Maekawa = *Aulonemia* Goudot

For the Mexican botanist Eizi Matuda, 1894-1978, from Japan to Mexico 1922, 1950-1978 University of Mexico, among his many writings are "El género *Datura* en México." *Bol. Soc. Bot. Méx.* 14: 1-13. 1952, *Las Commelinaceas del Estado de México*. Toluca 1956 and *Las Ciperaceas del Estado de México*. Toluca 1959. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 463. 1965; T.W. Bossert, *Biographical dictionary of botanists repre-*

sented in the Hunt Institute portrait collection. 258. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983.

Bambusoideae, Bambuseae, Arthrostylidiinae, type *Matudacalamus laxus* F. Maek., see *Annales des Sciences Naturelles; Botanique, sér. 3* 5: 75-76. 1846 and *Journal of Japanese Botany* 36(10): 343, 345. 1961, *Smithsonian Contributions to Botany* 9: 58. 1973, *Annals of the Missouri Botanical Garden* 72(4): 864-873. 1985, *Brittonia* 40: 22-31. 1988, *Annals of the Missouri Botanical Garden* 77(2): 353-358. 1990, *Novon* 1(2): 76-87. 1991, *Novon* 2(2): 81-110. 1992, *Flora Mesoamericana* 6: 198-199. 1994, *Brittonia* 49(4): 503-507. 1997, *Contributions from the United States National Herbarium* 39: 25-29. 2000.

Mays Mill. = *Zea* L.

From the Mexican vernacular name for maize.

Panicoideae, Andropogoneae, Tripsacinae, see *Species Plantarum* 2: 971-972. 1753, *The Gardeners Dictionary ... Abridged ... fourth edition* 1754, *De Fructibus et Seminibus Plantarum*1: 6, t. 1, f. 9. 1788, *Enumeratio Stirpium Transsilvaniae* 3: 281. 1816 and *Contributions from the United States National Herbarium* 46: 286, 635-639. 2003.

Mayzea Raf. = *Zea* L.

For *Zea* L.

Panicoideae, Andropogoneae, Tripsacinae, see *Species Plantarum* 2: 971-972. 1753, *The Gardeners Dictionary ... Abridged ... fourth edition* 1754, *De Fructibus et Seminibus Plantarum* 1: 6, t. 1, f. 9. 1788, *Enumeratio Stirpium Transsilvaniae* 3: 281. 1816, C.S. Rafinesque, *Medical Flora* 2: 241. 1830, *Flora Telluriana* 1: 85, 86. 1836 [1837], *Sylva Telluriana*. 1: 17. 1838 and E.D. Merrill, *Index rafinesquianus* 76. 1949, *Contributions from the United States National Herbarium* 46: 286, 635-639. 2003.

Medusather P. Candargy = *Cuviera* Koeler, *Hordelymus* (Jess.) Jess. ex Harz, *Hordelymus* (Jessen) Jessen in Harz, *Hordelymus* (Jessen) Harz

From *Medusa* and *ather* "an awn."

Pooideae, Triticoideae, Triticeae, *Elymus* sect. *Medusather* Griseb., see *Descriptio Graminum in Gallia et Germania* 328 [382]. 1802, *Deutschlands Gräser und Getreidearten* ... 202. Leipzig 1863, *Landwirtschaftliche Samenkunde* 2: 1147. 1885 and *Archives de Biologie Végétale Pure et Appliquée* 1: 18, 38. 1901, *Taxon* 49(2): 250. 2000.

Megalachne Steud. = *Pantathera* Phil.

Greek *megas*, *megale* "big, large" and *achne* "husk, glume."

Two species, Chile, Juan Fernandez Islands. Pooideae, Poodae, Poeae or Pooideae, Stipeae, Duthieinae, perennial, herbaceous, caespitose, auricles absent, leaf sheaths glabrous, ligule an unfringed membrane, plants bisexual, open panicle, spikelets several-flowered and long awned, floret callus bearded, 2 glumes herbaceous and aristulate to long awned, lemma coriaceous and keeled, long flexuous terminal awn, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2-3 stigmas, rocky areas, slopes, related to *Festuca* L., type *Megalachne berteroniana* Steud., see *Synopsis Plantarum Glumacearum* 1: 237. 1854, *Botanische Zeitung. Berlin* 14(37): 649. 1856, *Enumeratio Plantarum Zeylaniae* 372. 1864 and *Boletín de la Sociedad de Biología de Concepción* 48: 165-172. 1974, *Willdenowia* 8(2): 386-387. 1978, *Contributions from the United States National Herbarium* 48: 432, 476. 2003.

Species

M. berteroniana Steud. (*Bromus fernandezianus* (Phil.) Skottsb.; *Bromus megalachne* Pilg.; *Pantathera avenacea* Hemsl.; *Pantathera fernandeziana* Phil.)

Juan Fernandez Islands. See *Synopsis Plantarum Glumacearum* 1: 237. 1854, *Botanische Zeitung. Berlin* 14(37): 649. 1856, *Report on the Scientific Results of the Voyage of H.M.S. Challenger* 1(3): 61. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis* 16: 386. 1920, *The Natural History of Juan Fernandez and Easter Island* 2: 102, f. 1i. 1922, *Gayana, Bot.* 43: 95. 1986.

M. masafuerana (Skottsb. & Pilg.) Matthei (*Bromus masafueranus* Skottsb. & Pilg.; *Megalachne masafuerana* (Skottsb. & Pilg.) H. Scholz)

See *Repertorium Specierum Novarum Regni Vegetabilis* 16: 385. 1920, *Boletín de la Sociedad de Biología de Concepción* 48: 171, f. 1a, c-e. 1974, *Willdenowia* 8(2): 386. 1978.

Megaloprotachne C.E. Hubb.

Greek *megas*, *megale* "big," *protos* "first" and *achne* "husk, glume."

About 1-2 species, southern tropical and South Africa. Panicoideae, Panicodae, Paniceae, annual, herbaceous, tufted, erect or decumbent, sometimes rooting at the lower nodes,

auricles absent, ligule a fringed membrane, plants bisexual, inflorescence subdigitate or digitate, spike-like racemes or narrow panicle, racemes not deciduous, spikelets paired, lower floret male, upper floret acuminate, 2 glumes more or less equal, lower glume glabrous as long as spikelet, upper glume densely hairy and 3-nerved, palea keels wingless, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, confused with *Digitaria*, type *Megaloprotachne albescens* C.E. Hubb., shade or open areas, sandy soils, mopane savannah, see *Bulletin of Miscellaneous Information Kew* 1929: 320-322. 1929.

Species

M. albescens C.E. Hubb.

South Africa. Annual, erect or decumbent, lower leaf sheaths woolly, in sandveld, see *Bulletin of Miscellaneous Information Kew* 1929: 321-322. 1929.

M. glabrescens Roiv.

South Africa, South America. Annual, erect or decumbent, leaf sheaths glabrous, in sandveld, see *Relatório Anual do Departamento de Botânica do Estado São Paulo* 11(1): 40. 1974.

Megastachya P. Beauv. = *Eragrostis* Wolf, *Leptochloa* P. Beauv.

Greek *megas* “big, large” and *stachys* “spike,” referring to the very large spikes.

About 1-2 species, southern tropical Africa. Centothecoideae, Centothecoaceae, annual or short-lived perennial, herbaceous, branched, erect or decumbent, sometimes stoloniferous, secondary shoots from the rooting nodes, leaf blades narrowly lanceolate, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence with capillary branchlets, open panicle, spikelets 8- 20-flowered on slender pedicles, 2 unequal glumes 3-4-nerved, lemmas mucronate, palea keels ciliolate, stamens 2 or 3, ovary glabrous, 2 stigmas, in cultivated areas, in forest, along trail, shade species, rainforest, on sandy soils, damp and wet sites, in swampy forests, type *Megastachya mucronata* (Poir.) P. Beauv., see *Species Plantarum* 68. 1753, *Systema Naturae, Editio Decima* 875. 1759, *Genera Plantarum* 23. 1776, *Flora Caroliniana, secundum...* 80. 1788, *Methodus Plantas Horti Botanici ...* 185. 1794, *Flora Boreali-Americana* 1: 69-70, t. 11. 1803, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, *Enumeratio Plantarum Horti Botanici Berolinensis ...* 1: 108. 1809, *Essai d'une Nouvelle Agrostographie* 15, 71, 74, 167, 173-175, f. 5. 1812, *Mantissa* 2: 327. 1824, *Reliquiae Haenkeanae* 1(4-5): 284. 1830, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 384. 1841, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 101-102. 1850, *Synopsis Plantarum Glumacearum* 1: 269, 272. 1854, *Fl.*

Austral. 7: 642, 645. 1878, *Journal of the Linnean Society, Botany* 19: 117. 1881, *Gen. Pl.* 3(2): 1187. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 572. 1885, *Mexicanas Plantas* 2: 119. 1886 and *Ill. Fl. North. U.S. Canada*, edition 2, 229. 1919, *Contr. U.S. Natl.* 24(6): 180. 1925, *Acta Bot. Neerl.* 15: 157. 1966, *Flora of Ethiopia and Eritrea* 7: 63. 1995.

Species

M. mucronata (Poir.) P. Beauv. (*Centotheca madagascariensis* (Lam.) Hack.; *Centotheca mucronata* (Poir.) Kuntze; *Eragrostis madagascariensis* (Lam.) Steud.; *Megastachya madagascariensis* (Lam.) Chase; *Poa madagascariensis* Lam.; *Poa mucronata* Poir.)

Tropical Africa, South Africa, Gabon. Annual or weak perennial, decumbent, tufted, rooting at the lower nodes, sometimes stoloniferous, leaves broadly lanceolate, open panicle oblong with ascending and spreading branches, spikelets narrowly oblong 8-10-flowered, evergreen forest, forest shade or in partial shade, woodland, swampy places, see *Encyclopédie Méthodique, Botanique* 5: 91. 1804, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Essai d'une Nouvelle Agrostographie* 74, 167. 1812, *Synopsis Plantarum Glumacearum* 1: 269, 272. 1854, *Journal of the Linnean Society, Botany* 29: 66. 1891, *Revisio Generum Plantarum* 2: 765. 1891 and *Bulletin of Miscellaneous Information Kew* 1929: 320-322. 1929, *Arquivos do Instituto de Biologia Vegetal* 1: 235. 1935.

in Nigeria: ilulu okhankwo, oke ako ozo

Megathyrsus (Pilger) B.K. Simon & S.W.L. Jacobs

Two species. Panicoideae, Paniceae, Melinidinae, *Panicum* subg. *Megathyrsus* Pilg., see *North Amer. Fl.* 3(2): 200, 203. 1915, *Fl. Trop. Afr.* 9(4): 639, 642. 1920, *Notizbl. Bot. Gart. Berlin-Dahlem* 104: 242. 1931, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Austrobaileya* 6(3): 571-574. 2003 [*Megathyrsus*, a new generic name for *Panicum* subgenus *Megathyrsus*], *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 629-634. 2003.

Species

M. maximus (Jacq.) B.K. Simon & S.W.L. Jacobs (*Panicum maximum* Jacq.; *Urochloa maxima* (Jacq.) R.D. Webster)

Lesser Antilles. See *Icones Plantarum Rariorum* 1: 2, t. 13. 1781 and *Darwiniana* 22: 24. 1979, *Austral. Paniceae* 241. 1987, Renata Reinheimer, Raúl Pozner, & Abelardo C. Veggetti, “Inflorescence, spikelet, and floral development in *Panicum maximum* and *Urochloa plantaginea* (Poaceae).” *Am. J. Bot.* 92: 565-575. 2005.

M. maximus (Jacq.) B.K. Simon & S.W.L. Jacobs var. *coloratus* (C.T. White) B.K. Simon & S.W.L. Jacobs (*Panicum maximum* var. *coloratum* C.T. White)

Australia. Cultivated, see *Queensland Agricultural Journal* 49: 112. 1938.

M. maximus (Jacq.) B.K. Simon & S.W.L. Jacobs var. *pubiglumis* (K. Schum.) B.K. Simon & S.W.L. Jacobs (*Panicum maximum* var. *pubiglume* K. Schum.; *Panicum maximum* var. *pubiglume* K. Schum. ex Peter; *Panicum maximum* var. *trichoglume* Robyns; *Urochloa maxima* var. *trichoglume* (Robyns) R.D. Webster)

Africa, Tanzania, Zaire. See *Die Pflanzenwelt Ost-Afrikas* B(2/3): 85. 1895 and *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 1(6): 31. 1932, *Austral. Paniceae* 242. 1987, *Blumea* 41: 197. 1996.

M. infestus (Peters) B.K. Simon & S.W.L. Jacobs (*Panicum infestum* Andersson; *Panicum infestum* Andersson ex Peters; *Panicum infestum* Peters)

Mozambique. See *Naturwissenschaftliche Reise nach Mosambique ...* 2: 546. 1865 [or 1864], *Abhandlungen der Königlich Akademie der Wissenschaften in Berlin* 1894: 14, 35. 1894 and *Repertorium Specierum Novarum Regni Vegetabilis* 40: 192 & Anhang, 42. 1930, *Flora Somala* 2: 446-447, f. 244. 1932, *Flora of Tropical East Africa. Gramineae* 3: 472. 1982, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 11(4): 443. 1989[1990].

Melanocenchris Nees = *Gracilea* J. König ex Hook.f., *Ptiloneilema* Steud., *Roylea* Nees ex Steud.

Black millet, from the Greek *melas*, *melanos* “black” and *kenchros* “millet”; or referring to the appearance of the racemes.

About 3 species, tropical Africa, India, and Sri Lanka. Chloridoideae, Cynodonteae, annual or perennial, herbaceous, ascending, tufted, compact at the base, internodes hollow, glandular, leaves sometimes mainly radical or basal, auricles absent, ligule a fringe of hairs, leaf sheaths coriaceous, plants bisexual, inflorescence a false spike or a simple or racemose panicle, racemes cuneate terminated by a forked bristle, spikelets 2-flowered in disarticulating clusters, fertile spikelets dorsally flattened, upper floret male and staminate, lower floret perfect, sometimes present a third floret neuter or much reduced, 2 glumes hairy hirsute and persistent, lower glume 1-nerved, upper glume 3-nerved, lemmas shortly 3-awned and hairy, palea 2-awned, 2 minute lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, open habitats, saline flats, hillsides, dry plains, arid zones, sandy pans, woodlands, type *Melanocenchris royleana*

Nees, see *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 4: 218. 1803, John Lindley (1799-1865), Editor, *The botanical register* [or *Edwards's botanical register*]. 33 volumes. London, 1815-1847, *Museum Senckenbergianum* 2: 142. 1837, *Proceedings of the Linnean Society of London* 1: 94-95. 1841, *Nomenclator Botanicus. Editio secunda* 2: 475. 1841, *Illustrationes Plantarum Orientalium* auctoribus Comite Jaubert et Eduardo Spach ... 4: 36-38, pl. 326. Parisii 1850-1853, *Synopsis Plantarum Glumacearum* 1: 201. 1854, *Flora* 38: 273. 1855, *Revisio Generum Plantarum* 1(2): 780. 1891, *The Flora of British India* 7: 283. 1896 and *Flora of the Presidency of Madras* 10: 1831. 1934, *Kew Bulletin* 1935: 148. 1935, *Flora of Ethiopia and Eritrea* 7: 176-178. 1995.

Species

M. abyssinica (R. Br. ex Fresen.) Hochst. (*Eutriana abyssinica* R. Br.; *Eutriana abyssinica* R. Br. ex Fresen.; *Gracilea royleana* Hook.f.; *Gracilea royleana* var. *plumosa* (Jaub. & Spach) Hook.f.; *Melanocenchris plumosa* Jaub. & Spach; *Pennisetum plumosum* Hochst. & Steud.; *Ptiloneilema plumosum* Steud.)

Northeastern Africa, Arabia, northwestern India. Perennial or annual, small or very small, delicate, xerophytic desert grass, low to dwarf, solitary or densely tufted, slender, leaves filiform, burrlike deciduous racemes, little clusters of hairy spikelets, glumes densely ciliate below, eaten by cattle when young, on gravelly soils, dry plains, stony hillsides, dry and barren soil, see *Museum Senckenbergianum* 2: 142. 1837, *Illustrationes Plantarum Orientalium* 4: 37. 1850-1853, *Synopsis Plantarum Glumacearum* 1: 102, 201. 1854, *Flora* 38: 274. 1855, *The Flora of British India* 7: 284. 1896.

in India: mahtar mulmul, patdu, swill bhuski

M. jacquemontii Jaub. & Spach (*Gracilea royleana* Hook.f.; *Melanocenchris royleana* Nees)

India, Asia. Annual, spikelets in separate clusters, glumes hairy and awned, grazed by cattle when young, elegant, found in sandy or stony ground, see *Proceedings of the Linnean Society of London* 1: 94. 1841, *Illustrationes Plantarum Orientalium* 4: 36, pl. 325. 1850-1853, *The Flora of British India* 7: 284. 1896.

in India: bedari, dongri, guli, landgeyakussal, phulsi

M. monoica (König ex Rottler) C.E.C. Fisch. (*Gracilea nutans* Hook.f.; *Melanocenchris monoica* (Rottler) C.E.C. Fisch.; *Melanocenchris monoica* Kuntze; *Melanocenchris perrotetii* Jaub. & Spach; *Melanocenchris rothiana* Nees; *Pommereulla monoica* Rottler)

Southern India, Sri Lanka. Perennial, erect to ascending, glabrous, compact, leaf blades lanceolate and acute, hairy ligule, leaf sheaths pilose and imbricate, spiciform racemes, cluster of spikelets, 3 florets, glumes subequal and densely ciliate, lower lemma entire, relished by cattle, see *Nova*

Graminum Genera 31. 1780 [21 Dec 1779], *Der Gesellschaft naturforschender Freunde zu Berlin, neue Schriften* 4: 218. 1803, *Novae Plantarum Species* 33. 1821, *Proceedings of the Linnean Society of London* 1: 94, 95. 1841, *Nomenclator Botanicus. Editio secunda* 2: 379. 1841, *Illustrationes Plantarum Orientalium* 4: 38, pl. 326. 1850-1853, *Revisio Generum Plantarum* 1(2): 780. 1891, *The Flora of British India* 7: 283, 300. 1896 and *Handb. Fl. Ceylon* 5: 284, 286. 1900, *Flora of the Presidency of Madras* 10: 1831. 1934, *Kew Bulletin* 1935: 148. 1935, *Grasses of Ceylon* 87, 92. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 123. 1959, *Grasses of Burma ...* 473, 620, f. 74. 1960.

in India: achanthalagaddi, erupe nalagaddi

Melica L. = *Beckeria* Bernh., *Bromelica* (Thurber) Farw., *Claudia* Opiz, *Dalucum* Adans., *Verinea* Merino

From the Greek name *melike* (*meli* “honey”) for a grass, or from Latin *herba(m) medica(m)* “grass from Media,” *melicus, a, um* “Median”; or from Latin *melica, ae* for a kind of vessel (Marcus Terentius Varro). See C. Abegg-Mengold, *Die Bezeichnungsgeschichte von Mais, Kartoffel und Ananas in Italienischen*. Bern 1979; Carl Linnaeus, *Species Plantarum*. 66. 1753 and *Genera Plantarum*. 5th edition. 76. 1754; Manlio Cortelazzo & Paolo Zolli, *Dizionario etimologico della lingua italiana*. 3: 738. Zanichelli, Bologna 1983.

About 70-80 species, temperate regions. Pooideae, Poodae, Meliceae, perennial, herbaceous, unbranched, erect or not, scandent or not scandent, stems flimsy to stout, tufted, clumped, rhizomatous, rhizomes creeping, usually tuberos, internodes hollow, auricles present or absent, sheath margins joined, ligule membranous fringed or unfringed, leaf blades linear and arching, plants bisexual, cleistogamous or chasmogamous, inflorescence open or contracted, a single raceme or panicle, fertile florets 1-3, upper floret sterile, clavate pedicelled mass of sterile florets, 2 papery glumes unequal to subequal, lower glume 1-7-nerved, upper glume 3-7-nerved, lemma not flabellate, palea 2-nerved 2-keeled, 2 lodicule joined and fleshy, 3 stamens, ovary glabrous without the apical appendage, 2 stigmas, ornamental and very variable, toxic for cattle and horses when grazed in large amounts, shade species, dry stony slopes, species of open habitats, type *Melica nutans* L., see *Species Plantarum* 1: 66. 1753, *Familles des Plantes* 2: 34, 548. 1763, *Mantissa Plantarum* 31. 1767, *Systematisches Verzeichnis* 20, 40. 1800, *Observations sur les Graminées de la Flore Belgique* 109. 1823, *Observations sur les Graminées de la Flore Belgique* 109. 1823 [1824], *Lotos* 3: 67. Prague 1853, *Matériaux pour la Flore Atlantique* 1. [Caen] 1860, *Flora der Provinz Brandenburg* 1: 838. 1864, *Proceedings of the American Academy of Arts and Sciences*

8: 409. 1872, *Flora Brasiliensis* 2(3A): 1-160, t. 1-43. 1878, *Geological Survey of California, Botany* 2: 304. 1880, *Anales de la Sociedad Española de Historia Natural* 28(Mem.): 8. 1899 and *Gray's Manual of Botany* (7th edition) 152. 1908, *Rhodora* 21: 77. 1919, *U.S.D.A. Bull.* 772: 69, 71. 1920, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Botanical Magazine* (Tokyo) 41: 388, 416. 1927, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 106, 129. 1928, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 95. 1930, *Madroño* 8(1): 1-26. 1945, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Grasses of Burma, Ceylon, India and Pakistan* 589-592. 1960, *Gramineas Uruguayas* 123-134. 1970, *Feddes Repertorium* 81(1-5): 131-145. 1970, *Feddes Repertorium* 81(10): 657-686. 1971, *Feddes Repertorium* 84(7-8): 533-568. 1973, *Novosti Sist. Vyss. Rast.* 10: 84. 1973, *Iheringia, Série Botânica* 21: 53-70. Porto Alegre, Brazil 1975, *Phytologia* 37(4): 317-407. 1977, *Flora Patagónica* 3: 1-583. 1978, *Opera Lilloana* 29: 1-15. 1980, *Boletín del Museo Nacional de Historia Natural* 40: 41-89. 1983-1984, *Kew Bulletin, Additional Series* 13: 113-114. 1986 [W.D. Clayton and S.A. Renvoize, *Genera Graminum*], *Acta Phytotaxonomica Sinica* 30(2): 169. 1992, *Taxon* 41: 566. 1992, *Bot. Zhurn. (Moscow & Leningrad)* 78(10): 92. 1993, *Taxon* 44: 611-612. 1995, *Restoration Ecology* 5(3): 214-228. Sep 1997, *Journal of Ecology* 86(3): 429-438. June 1998, *Diversity & Distributions* 5(1-2): 3-13. Jan 1999, *Identificación de Especies Vegetales en Chuquisaca – Teoría, Práctica y Resultados* 1-129. 2000, *Contributions from the United States National Herbarium* 48: 140, 151-152, 237, 244, 432-450, 688. 2003, *Botanical Journal of the Linnean Society* 141(4): 447-463. Apr 2003, *Conservation Biology* 17(3): 837-845. June 2003, W. Hempel, “Die infragenerische Gliederung der Gattung *Melica* L.” *Hausknechtia* 10: 169-198. 2004, *Oikos* vol. 107, issue 3: 505-518. Dec 2004, *Global Ecology and Biogeography* vol. 14, issue 3: 263-270. May 2005, *Journal of Biogeography* 32(7): 1161-1186. July 2005.

Species

M. altissima L. (*Melica altissima* Walter, nom. illeg., non *Melica altissima* L.)

Central and eastern Europe. Perennial, coarse, scabrous, leafy, rhizomes creeping, panicle erect and dense, spikelets inflated, occurs on slope near woods, in brush thicket, see *Species Plantarum* 1: 66-67. 1753, *Flora Caroliniana, secundum ...* 78. 1788 and *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 119. 1971[1972], *Taxon* 49(2): 252. 2000.

in English: Siberian melic

M. andina Hauman (*Melica chilensis* J. Presl)

South America. See *Reliquiae Haenkeanae* 1(4-5): 270. 1830 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 403. 1917, *Repertorium Specierum*

Novarum Regni Vegetabilis 25(7-13): 136. 1928, *Bol. Mus. Nac. Hist. Nat. Chile* 40: 73-74. 1983-1984.

M. argentata E. Desv. (*Melica ampla* Phil.; *Melica argentata* var. *argentata*; *Melica argentata* var. *breviglumis* Papp; *Melica glabra* Steud., nom. illeg., non *Melica glabra* Michx.; *Melica nitida* Phil.; *Melica tortuosa* Phil.; *Melica violacea* var. *argentata* Papp)

Chile. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 472. 1799, *Flora Chilena* 6: 374. 1854, *Synopsis Plantarum Glumacearum* 1: 290. 1854, *Linnaea* 33(3-4): 292. 1864, *Anales de la Universidad de Chile* 94: 160-161. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 120, 123. 1928.

M. argyrea Hack. (*Melica argyrea* f. *pilosa* (Papp) W. Hempel; *Melica argyrea* var. *argyrea*; *Melica argyrea* var. *pilosa* Papp; *Melica papilionacea* var. *laxiflora* Kuntze)

South America, Argentina. Perennial, low forage value, see *Revisio Generum Plantarum* 3(3): 356. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 134. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 108. 1928, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Feddes Repertorium* 84(7-8): 553. 1973, *Hickenia* 1: 73-78. 1977.

M. aristata Thurb. ex Bolander (*Bromelica aristata* (Thurb. ex Bol.) Farw.; *Melica aristata* Bolander)

North America, U.S., California. Lemmas straight awned from below tip, found in open woods, loose soil, along roadsides, see *Proceedings of the California Academy of Sciences* 4: 103. 1870 and *Rhodora* 21: 77. 1919.

in English: awned melic

M. arziencoii Valls & Barcellos

Brazil. See *Bonplandia (Corrientes)* 3(9): 111. 1973.

M. aurantiaca Desr. (*Melica aurantiaca* Desr. ex Lam.; *Melica aurantiaca* var. *mucronata* Papp; *Melica aurantiaca* var. *rigida* (Cav.) Papp; *Melica aurantiaca* var. *tandilensis* Kuntze; *Melica brasiliiana* Ard.; *Melica brasiliiana* var. *aurantiaca* (Desr. ex Lam.) W. Hempel; *Melica brasiliiana* var. *aurantiaca* (Desr.) W. Hempel; *Melica mucronata* (Papp) Herter; *Melica rigida* Cav.; *Melica tandilensis* (Kuntze) Herter)

South America. Perennial, low forage value, on sandy soils, see Petri Arduini ... *Animadversionum botanicarum specimen*. Patavii 1759, Petri Harduini veronensis horti publici patavini custodis *animadversionum botanicarum specimen alterum*. Venetia 1764, *Encyclopédie Méthodique, Botanique* 4: 70. 1797, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 47, pl. 473, f. 1. 1799, *Revisio Generum Plantarum* 3(2): 356. 1898 and *Arkiv for Botanik* 11(4): 44, t. 1, f. 1. 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 128. 1928, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(94): 352. 1928,

Revista Sudamericana de Botánica 6(5-6): 144. 1940, *Feddes Repertorium* 84(7-8): 554. 1973.

in Uruguay: pasto bandera

M. bauhinii All. (*Dalucum bauhinii* (All.) Bubani; *Melica litoralis* Phil., nom. illeg., non *Melica littoralis* (Gouan) Raspail; *Melica litoralis* var. *litoralis*) (after the two Swiss brothers Bauhin, Caspar (Casper, Gaspard) (1560-1624, Basel) and Jean Johannes (1541-1613, Montbéliard, Württemberg-Montbéliard), herbalists and botanists. Caspar B., professor of anatomy and botany at Basel University, was the first to establish a scientific system of nomenclature, distinguished between genus and species, among his writings are *Pinax theatri botanici ... sive index* in Theophrasti, Dioscoridis, Plinii et botanicorum qui à saeculo scripserunt opera plantarum etc. Basiliae Helvet. 1623, *De dolore colico*. Basel 1581, *Institutiones anatomicae corporis virilis et muliebris historiam exhibentes*. Lyons 1604, *De remedium formulis Graecis, Arabibus & Latinis usitatis ... Iuniorum medicorum usum editi*. Frankfurt 1619 and *Vivae imagines partium corporis humani*. [4th first edition. under this title] Basel 1620, Caspar Bauhin was a pupil of the great Fabricius ab Aquapendente (or Girolamo Fabrizzi, Geronimo Fabrizio, Girolamo Fabrici) (1533-1619) at Padua (like Harvey and Johann Schultes, 1595-1645). Jean J. B. studied at Montpellier under Rondelet and at Zürich under Gesner, collaborated with Jacques Daleschamps at Lyon, traveler, physician to Duke Frederick of Württemberg, his works include *De Plantis à divinis sanctis ve nomen habentibus ... Additae sunt Conradi Gesneri ... Epistolae hactenus non editae, à Casparo Bauhinus, etc.* Basiliae 1591, *Histoire notable de la rage des loups*. Montbéliard 1591, *De auxiliis adversus pestem*. Montbéliard 1607 and *Historia novi et admirabilis fontis*. Montisbeligardi [Montbéliard or Mümpelgard, E. France] 1598, he was co-author (with Johann Heinrich Cherler, ca. 1570-ca.1610, & Dominique Chabrey, 1610-1669) of *Historia Plantarum universalis*. Ebroduni [Yverdon] 1650-1651. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 140 and 141. 1965; Ludovic Légré, *La Botanique en Provence au XVIe siècle. Les deux Bauhin*. Marseille 1904; Johann Schultes (Scultetus) (1595-1645), *Cheiroplotheke [graecae] seu ... armamentarium chirurgicum*. [S.was, with Fabry von Hilden, the leading German surgeon of his era] [Folio, first edition] Ulmae Suevorum 1655; M. Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 34-35. Palermo 1988; Gweneth Whitteridge, in *D.S.B.* 1: 522-525. 1981; Charles Webster, in *D.S.B.* 1: 525-527. 1981; Blanche Henrey, *No Ordinary Gardener — Thomas Knowlton, 1691-1781*. Edited by A.O. Chater. British Museum (Natural History). London 1986)

Europe, South America. See *Flora Monspeliaca* 470. Lyon 1765, *Auctuarium ad Floram Pedemontanam cum notis et emendationibus*. Torino 1789, *Annales des Sciences Naturelles (Paris)* 5: 443. 1825, *Anales de la Universidad*

de Chile 48: 572. 1873 and *Flora Pyrenaea* ... 4: 351. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 119. 1928, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(94): 353, f. 4. 1928.

M. bonariensis Parodi (*Melica papilionacea* var. *violacea* Hieron.)

Argentina. See *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 3: 375. 1881 and *Darwiniana* 9: 358. 1951, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970.

M. brasiliana Ard. (*Melica aurantiaca* Desr.; *Melica aurantiaca* Desr. f. *pallida* Papp; *Melica aurantiaca* Desr. f. *violacea* Hack. ex Papp; *Melica aurantiaca* Desr. ex Lam.; *Melica aurantiaca* var. *aurantiaca*; *Melica aurantiaca* var. *mucronata* Papp; *Melica aurantiaca* var. *rigida* (Cav.) Papp; *Melica aurantiaca* var. *tandilensis* Kuntze; *Melica brasiliana* f. *tandilensis* (Kuntze) W. Hempel; *Melica brasiliana* var. *aurantiaca* (Desr. ex Lam.) W. Hempel; *Melica mucronata* (Papp) Herter; *Melica papilionacea* L.; *Melica rigida* Cav.)

South America, southern Brazil to Argentina. Perennial, spikelets obovate, palea back smooth or papillate, low forage value, useful for erosion control, grows on sandy soil, fields, see Petri Arduini ... *Animadversionum botanicarum specimen*. Patavii 1759, Petri Harduini veronensis horti publici patavini custodis *animadversionum botanicarum specimen alterum*. Venetia 1764, *Mantissa Plantarum* 31. 1767, *Encyclopédie Méthodique, Botanique* 4: 70. 1797, *Icones et Descriptiones Plantarum, quae aut sponte* ... 5: 47, pl. 473, f. 1. 1799, *Revisio Generum Plantarum* 3(2): 356. 1898 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 125, 127. 1928, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(94): 352. 1928, *Revista Sudamericana de Botánica* 6: 144. 1940, *Feddes Repertorium* 84(7-8): 554. 1973.

in Uruguay: pasto bandera

M. brevicoronata Roseng., B.R. Arrill. & Izag.

Uruguay. Perennial, erect, ascending, lax open panicle, low forage value, rocky places, see *Gramíneas Uruguayas* 125, 129, 130, f. 47. 1970.

M. bulbosa Geyer ex Porter & J.M. Coult. (*Bromelica bulbosa* (Geyer ex Porter & Coult.) W.A. Weber; *Melica bella* Piper; *Melica bella* subsp. *intonsa* Piper; *Melica bulbosa* Geyer ex Thurb., nom. illeg., non *Melica bulbosa* Geyer ex Porter & Coult.; *Melica bulbosa* var. *bulbosa*; *Melica bulbosa* var. *caespitosa* Cronquist; *Melica bulbosa* var. *inflata* (Bol.) Boyle; *Melica bulbosa* var. *intonsa* (Piper) M. Peck; *Melica bulbosa* var. *typica* Cronquist; *Melica inflata* (Bol.) Vasey; *Melica poaeoides* var. *inflata* Bol.)

Northern America, Canada, U.S. Perennial, forage, open areas, rocky slopes, rocky ravines, see *Journal of the Academy of Natural Sciences of Philadelphia* 1: 188. 1848,

Proceedings of the California Academy of Sciences 4: 101. 1870, *Synopsis of the Flora of Colorado* 149. 1874, *Geological Survey of California, Botany* 2: 304. 1880, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 45, t. 1, f. 11-13. 1886, *Contributions from the United States National Herbarium* 1(8): 269. 1893 and *Circ. Div. Agrostol. U.S.D.A.* 27: 10. 1900, *Contributions from the United States National Herbarium* 11: 128. 1906, *A Manual of the Higher Plants of Oregon* ... 100. 1941, *Madroño* 7(3): 77. 1943, *Madroño* 8(1): 19. 1945, *Phytologia* 43(1): 106. 1979, *Phytologia* 55(1): 8-9. 1984.

in English: oniongrass, bulbous oniongrass

M. californica Scribner (*Melica bulbosa* Geyer ex Thurb., nom. illeg., non *Melica bulbosa* Geyer ex Porter & Coult.; *Melica longiligula* Scribn. & Kearney)

Northern America, U.S. Perennial, clump forming, found in open areas, rocky slopes, rocky ravines, dry bare soil, dry red rocky soil, along roadsides, see *Pacific Railroad Reports* 4: 145. 1857, *Geological Survey of California, Botany* 2: 304. 1880, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 46, t. 1, f. 6. 1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 225, f. 521. 1899.

in English: California melic, California melicgrass

M. californica Scribner var. *californica*

Northern America, U.S. Perennial, see *Pacific Railroad Reports* 4: 145. 1857, *Geological Survey of California, Botany* 2: 304. 1880, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 46, t. 1, f. 6. 1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 225, f. 521. 1899.

in English: California melic, California melicgrass

M. californica Scribner var. *nevadensis* Boyle

Northern America, U.S. Perennial, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 46, t. 1, f. 6. 1885 and *Madroño* 8(1): 17. 1945.

in English: California melic, California melicgrass

M. canescens (Regel) Lavrenko (*Melica canescens* (Regel) Lavrenko ex Nevski; *Melica cupani* var. *canescens* Regel; *Melica jacquemontii* subsp. *canescens* (Regel) Bor)

Europe, Russia.

M. cepacea (Phil.) Scribn. (*Bromelica cepacea* (Phil.) Nicora; *Festuca cepacea* Phil.)

South America. See *Linnaea* 33(3-4): 297. 1864 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 8. 1901, *Darwiniana* 18(1-2): 270, f. 3. 1973.

M. chilensis J. Presl (*Melica adhaerens* Hack.; *Melica adhaerens* var. *adhaerens*; *Melica adhaerens* var. *tenuis* (Papp) Papp; *Melica andina* Hauman; *Melica andina* var. *andina*; *Melica andina* var. *laxissima* Papp; *Melica andina*

var. *trinervis* Papp; *Melica mandonii* Papp; *Melica pilgeriana* Papp; *Melica popoviciana* Papp; *Melica weberbaueri* var. *tenuis* Papp) (for the French traveler Gilbert Mandon, 1799-1866, plant collector in Bolivia; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 442. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 3: 273. Utrecht 1981; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Franz Georg Philipp Buchenau, 1831-1906, "Ueber die von Mandon in Bolivia gesammelten Juncaceen und einige andere südamerikanische Pflanzen dieser familie." *Abh. Naturwiss. Vereine Bremen*. 4: 119-139. 1875)

Chile, Peru, Argentina. Caespitose, tough, branched, leaf blades linear acuminate, panicle narrowly ovate or oblong, spikelets compressed dorsiventrally, 2 glumes equal lanceolate acute, lemmas glabrous, lower lemma fertile oblong acute, palea oblong, light shade, stony ground, see *Reliquiae Haenkeanae* 1(4-5): 270. 1830 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 158. 1908, *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 403. 1917, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 8: 453. 1923, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10: 355-356, 412, f. 5. 1928, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 136, 143. 1928, *Bol. Mus. Nac. Hist. Nat. Chile* 40: 73-74. 1983-1984.

M. ciliata L. (*Arundo ciliata* (L.) Clairv.; *Beckeria ciliata* (L.) Bernh. ex B.D. Jacks.; *Beckeria montana* Bernh.; *Claudia ciliata* (L.) Opiz; *Dalucum ciliatum* (L.) Bubani; *Melica chrysolepis* Klokov; *Melica ciliata* f. *flavescens* (Schur) Papp & Beldie; *Melica ciliata* var. *chrysolepis* (Klokov) Tzvelev; *Melica ciliata* var. *flavescens* Schur; *Melica flavescens* (Schur) Simonk.; *Melica glauca* F. Schultz; *Melica simulans* Klokov; *Verinea pterostachys* Merino)

Armenia, Iran, Turkey, Europe. Densely tufted, stems erect and flimsy, slender, green to glaucous, panicles nodding, seed heads feather-like, useful for erosion control, common in meadows, stony areas, dry to very dry steep rocky sites, see *Species Plantarum* 1: 66. 1753, *Systematisches Verzeichnis* 40. 1800, *Lotos* 3: 67. 1853, *Diagnoses plantarum orientalium novarum* 2(13): 53. 1854, *Flora* 45: 462. 1862, *Enumeratio Plantarum Transsylvanicae* 577, 764. 1866, *Index Kewensis* 1: 282. 1893, *Anales de la Sociedad Española de Historia Natural* 28: 9. 1899 and *Flora Pyrenaea* ... 4: 350. 1901, *Bot. Zhurn. SSSR* 4(1-2): 93. 1947, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 119. 1971[1972], *Flora Republicii Socialiste Romania* 12: 243. 1972, *Zlaki SSSR* 554. 1976, *Lagascalia* 12: 286-290. 1984, *Candollea* 41: 431-439. 1986, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübél* 57: 182-192. 1991, *Flora Mediterranea* 1: 229-236.

1991, *Flora Mediterranea* 5: 340-345. 1995, *Taxon* 49(2): 252. 2000.

in English: silky-spike melic

in French: mélisque ciliée

in Morocco: sebt-diel-dib

M. ciliata L. subsp. **ciliata** (*Melica ciliata* subsp. *glauca* (F.W. Schultz) P. Fourn.; *Melica ciliata* subsp. *nebrodensis* (Parl.) P. Fourn.; *Melica flavescens* (Schur) Simonk.; *Melica glauca* F.W. Schultz; *Melica nebrodensis* Parl.; *Melica simulans* Klokov)

Europe. Useful for erosion control.

in Turkey: arpa, yabani arpa

M. ciliata L. subsp. **magnolii** (Gren. & Godr.) Husn. (*Melica magnolii* Gren. & Godr.)

Europe, Turkey, Spain. Useful for erosion control.

M. ciliata L. subsp. **monticola** (Prokudin) Tzvelev (*Melica monticola* Prokudin)

Europe, south Ukraine.

M. ciliata L. subsp. **taurica** (K.Koch) Tzvelev (*Melica taurica* K. Koch)

Europe, Greece, Turkey.

M. commersonii Nees ex Steud. (*Melica commutata* Steud.; *Melica violacea* var. *commersonii* (Nees ex Steud.) Papp; *Melica violacea* var. *commutata* (Steud.) Papp; *Melica violacea* var. *pallida* E. Desv.)

Chile. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 472. 1799, *Synopsis Plantarum Glumacearum* 1: 290. 1854, *Flora Chilena* 6: 377-378. 1854 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 123. 1928.

M. cupani Guss. (after the Italian monk Francesco Cupani, 1657-1710/1711, botanist, a pupil of Silvio Boccone, in Misilmeri (near Palermo) founded the Botanic Garden of Giuseppe del Bosco principe della Cattolica, his works include *Hortus Catholicus*, seu Ill. et Excell. Principis Catholicae ducis Misilmeris, comitis Vicaris, baronis Prizi, nec non magni baronis Siculianae. Neapoli 1696, *Supplementum alterum ad Hortum Catholicum*. Panormi 1697, *Catalogus plantarum sicularum noviter adinventarum*. Panormi [Palermo] 1692, *Syllabus plantarum Siciliae nuper detectarum*. Panormi 1694 and *Pamphyton siculum, sive historia naturalis de animalibus, stirpibus, fossilibus*, etc. Panormi 1713).

Morocco, Europe, Italy, Sicily. Perennial, glabrous, bluish to glaucous foliage, found on dry sterile areas, rocky slopes, dry stony soils, see *Supplementum ad Florae Siculae Prodromum* 17. Neapoli 1832-1834, *Diagnoses plantarum orientalium novarum, ser. 1*, 7: 124-125. 1846, *Diagnoses plantarum orientalium novarum, ser. 1*, 13: 54-55. 1853, *Flora Orientalis* 5: 590-591. 1884 and *Flora of Turkey and the East Aegean Islands* 9: 535. 1985, *Anales del Jardín*

Botánico de Madrid 42: 221-225. 1985, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988.

M. decipiens Caro (*Melica violacea* f. *mucronata* Papp; *Melica violacea* var. *glabrior* Papp)

South America. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 472. 1799 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 123. 1928, *Kurtziana* 5: 288. 1969.

M. decumbens Thunb. (*Danthonia decumbens* (L.) DC.; *Festuca decumbens* L.; *Melica caffrorum* var. *decumbens* (Thunb.) Nees; *Melica decumbens* (L.) Weber; *Melica decumbens* Papp, nom. illeg., non *Melica decumbens* (L.) Weber; *Melica lilloi* Bech.; *Melica neesii* Stapf)

South Africa. Perennial, erect, tufted to densely tufted to creeping, usually simple or unbranched, ligule membranous and toothed, leaf blade very rough to scabrid, hairy unilateral raceme, glumes papery and smooth, back of the lemmas hairy, palatable, very low grazing value, toxic when grazed in large amounts, ornamental, useful for erosion control, found in rocky sites, among boulders, hillsides, grassland, mountain sides, on slopes, between rocks, along roadsides, in the shade of trees and shrubs, see *Species Plantarum* 1: 75. 1753, *Spicilegium Florae Goettingensis* 3. 1778, *Prodromus Plantarum Capensium* 21. 1794, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 418. 1841, *Revisio Generum Plantarum* 3(3): 356. 1898 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 139, t. 7. 1928, *Candollea* 7: 520. 1938, *Jahrbücher des Nassauischen Vereins für Naturkunde* 100(1): 54-72. 1969.

in English: stagger grass, staggers grass

in southern Africa: dronkgras

M. eligulata Boiss.

Iran.

M. eremophila Torres (*Melica monantha* Roseng., B.R. Arrill. & Izag.)

Uruguay, Argentina. Perennial, erect, shortly rhizomatous, leaf blades linear glabrous distichous rigid pungent, oblong panicle contracted, spikelets compressed dorsiventrally, 2 glumes unequal, lower glume obovate with membranous margins, upper glume cuneate-obtuse coriaceous, fertile lemma elliptic, low forage value, useful for erosion control, dry areas, stony places, similar to *Melica violacea* and *Melica brasiliana*, see *Flora de la Provincia de Buenos Aires* 4(2): 308. 1970, *Gramíneas Uruguayas* 129, 132, f. 48. 1970.

M. frutescens Scribn.

U.S., California. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 45, t. 1, f. 15, 16. 1885 and *Taxon* 33: 126-134. 1984.

M. fugax Bol. (*Melica fugax* subsp. *fugax*; *Melica fugax* subsp. *madophylla* Piper; *Melica fugax* var. *fugax*; *Melica fugax* var. *inexpansa* Suksd.; *Melica fugax* var. *macbridei* (Rowland ex A. Nelson) Beetle; *Melica macbridei* Rowland ex A. Nelson)

U.S., California. Dry areas, hillsides, slopes, open forest, see *Proceedings of the California Academy of Sciences* 4: 104. 1870, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 45, t. 1, f. 15, 16. 1885 and *Contributions from the United States National Herbarium* 11: 128. 1906, *Botanical Gazette* 54(5): 404-405. 1912, *Werdenda* 1(2): 1. 1923, *Leaflets of Western Botany* 4(12): 286-287. 1946, *Taxon* 33: 126-134. 1984.

M. geyeri Munro (*Bromelica geyeri* (Munro) Farw.; *Bromelica geyeri* var. *howellii* (Scribn.) Farw.; *Bromus muticus* Nutt. ex A. Gray; *Glyceria bulbosa* Buckley; *Melica bromoides* Bol. ex A. Gray; *Melica bromoides* A. Gray; *Melica bromoides* var. *bromoides*; *Melica bromoides* var. *howellii* Scribn.; *Melica pammelii* Scribn.; *Melica poaeoides* Bol. ex Scribn.; *Melica poaeoides* var. *bromoides* Bol.; *Melica poaeoides* var. *bromoides* Bol.; *Melica subulata* var. *pammelii* (Scribn.) C.L. Hitchc.) (named for the German botanist Carl [Charles] Andreas Geyer, 1809-1853, botanical collector in the United States 1842-1844 with Nicolle's expedition; see Alphonse Louis Pierre Pyramus de Candolle, 1806-1893, *La phytographie* ou l'art de décrire les végétaux considérés sous différents points de vue. 415. Paris 1880; *Report Intended to Illustrate a Map of the Hydrographical Basin of the Upper Mississippi River*, made by I.N. Nicolle ... Washington 1843 [*Catalogue of Plants Collected by Mr. Charles Geyer...*, by Professor John Torrey]; J.H. Barnhart, *Biographical notes upon botanists*. 2: 43. 1965; Joseph William Blankinship (1862-1938), "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904)

U.S., California. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 95, 335. 1862, *Proceedings of the California Academy of Sciences* 4: 103. 1870, *Proceedings of the American Academy of Arts and Sciences* 8: 409. 1872, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 47. 1885, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 47. 1886, *Proceedings of the Davenport Academy of Natural Sciences* 7: 240. 1899 and *Rhodora* 21: 78. 1919, *Vascular Plants of the Pacific Northwest* 1: 619. 1969.

M. geyeri Munro var. *aristulata* J.T. Howell

U.S., California. See *Proceedings of the California Academy of Sciences* 4: 103. 1870 and *Leaflets of Western Botany* 4: 245. 1946.

M. geyeri Munro var. *geyeri*

U.S., California. See *Proceedings of the California Academy of Sciences* 4: 103. 1870.

M. glabrescens (Torres) Torres (*Melica violacea* var. *glabrescens* Torres)

Argentina. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 472. 1799 and *Flora de la Provincia de Buenos Aires* 4(2): 316. 1970, *Opera Lilloana* 29: 61. 1980.

M. harfordii Bol. (*Bromelica harfordii* (Bol.) Farw.; *Bromelica harfordii* var. *minor* (Vasey) Farw.; *Melica harfordii* subsp. *harfordii*; *Melica harfordii* subsp. *tenuior* Piper; *Melica harfordii* var. *harfordii*; *Melica harfordii* var. *minor* Vasey; *Melica harfordii* var. *tenuis* Suksd.; *Melica harfordii* var. *viridifolia* Suksd.)

U.S., California. Lemmas straight awned from below tip, shade species, rocky soil, dry areas, disturbed soil, see *Proceedings of the California Academy of Sciences* 4: 102. 1870, *Bulletin of the Torrey Botanical Club* 15: 48. 1888 and *Contributions from the United States National Herbarium* 11: 127. 1906, *Rhodora* 21: 78. 1919, *Werdenda* 1(3-4): 17. 1927.

in English: Harford's melic

M. hitchcockii B. Boivin (named for Charles Leo Hitchcock, 1902-1986, author of *A Revision of the Drabas of Western North America*. Seattle, University of Washington, 1941, he published a monograph on North American *Lathyrus* in 1952, with Bassett Maguire (1904-1991) wrote *A Revision of the North American Species of Silene*. Seattle, University of Washington, 1947, with Arthur Cronquist (1919-1992) wrote *Flora of the Pacific Northwest: An Illustrated Manual*, ill. by Jeanne R. Janish. Seattle, University of Washington, 1976, with others the 5-volume *Vascular Plants of the Pacific Northwest*. See J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 2: 182. Boston 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 177. Boston, Mass. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 372. 1964; *Madroño* 19: 32. 1967 and 387-390. 1970; *Taxon* 19: 131-132. 1970 and 23: 207. 1974)

Canada. Forest, see *Phytologia* 43(1): 105. 1979.

M. hohenackeri Boiss. (*Melica cupani* var. *hohenackeri* (Boiss.) Boiss.; *Melica jacquemontii* subsp. *hohenackeri* (Boiss.) Bor; *Melica persica* var. *caspica* Griseb.)

Iran, Eurasia. See *Révision des Graminées* 1: 351. 1830, *Flora Rossica* 4(13): 398. 1852, *Diagnoses plantarum orientaliarum novarum, ser. 1*, 13: 54. 1853, *Flora Orientalis* 5: 590. 1884 and *Journal of Cytology and Genetics* 21: 155. 1986.

M. hunzikeri Nicora

Argentina. See *Kurtziana* 27(2): 361-363, f. 1. 1999.

M. hyalina Döll (*Melica aurantiaca* var. *montevidensis* Papp; *Melica brasiliensis* f. *truncata* (Papp) W. Hempel; *Melica hyalina* f. *hyalina*; *Melica hyalina* f. *violacea* Papp; *Melica hyalina* var. *hyalina*; *Melica hyalina* var. *truncata*

Papp; *Melica montevidensis* (Papp) Herter; *Melica papilionacea* var. *hyalina* (Döll) Hack. ex Kneuck.)

Southern America, Argentina, southern Brazil, Uruguay. Perennial, spikelets obovate, low forage value, useful for erosion control, found in disturbed places, see *Encyclopédie Méthodique, Botanique* 4: 70. 1795, *Encyclopédie Méthodique, Botanique* 4: 70. 1797, *Flora Brasiliensis* 2(3): 127, pl. 38. 1878 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 8: 96. 1902, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(94): 352. 1928, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 124-125. 1928, *Revista Sudamericana de Botánica* 6(5-6): 144. 1940, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Feddes Repertorium* 84(7-8): 554. 1973, *Iheringia, Série Botânica* 21: 53-70. 1975, *Hatschbach's Paraná Grasses* 1-76. 1988, *Iheringia, Série Botânica* 38: 21-42. 1988.

in Uruguay: pasto bandera

M. imperfecta Trin. (*Melica colpodoides* Nees; *Melica imperfecta* var. *flexuosa* Bol.; *Melica imperfecta* var. *imperfecta*; *Melica imperfecta* var. *minor* Scribn.; *Melica imperfecta* var. *pubens* Scribn.; *Melica imperfecta* var. *refracta* Thurb.; *Melica panicoides* Nutt.; *Melica parishii* Vasey ex Beal; *Melica poaeoides* Nutt.) (after Samuel Bonsall Parish, 1838-1928)

Northern America, Mexico. Perennial, forage, along roadsides, rocky places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 59. 1836, *Annals of Natural History* 1: 283. 1838, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 188. 1848, *Synopsis Plantarum Glumacearum* 1: 291. 1854, *Proceedings of the California Academy of Sciences* 1: 101. 1870, *Geological Survey of California, Botany* 2: 303. 1880, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 42-43. 1885, *Grasses of North America for Farmers and Students* 2: 500. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 30: 8. 1901, *Phytologia* 37(4): 317-407. 1977.

in English: California melic, smallflower melicgrass, smallflowered melicgrass

M. jacquemontii Decne. (*Melica breviflora* Boiss.; *Melica brevifolia* Stapf; *Melica jacquemontii* Decne. ex Jacquem.; *Melica jacquemontii* Jaub. & Spach; *Melica persica* subsp. *jacquemontii* (Decne. ex Jacquem.) P.H. Davis) (after the French naturalist Victor V. Jacquemont, 1801-1832 (Bombay, India), explorer, plant collector, botanist, traveler in the West Indies and India, made collections for the Royal Museum of Paris, friend of Stendhal, author of *Voyage dans l'Inde* par V.J., pendant les années 1828 à 1832. [Botanical authors: Joseph Decaisne (1807-1882) & Jacques Cambessèdes, 1799-1863] Paris [1835-] 1841-1844, a member

of the Légion-d'Honneur. See *Correspondance de Victor Jacquemont avec sa famille et plusieurs de ses amis, pendant son voyage dans l'Inde (1828-1832)*. Deuxième édition. Paris 1835; David Stacton, *A Ride on a Tiger: The Curious Travels of Victor Jacquemont*. London 1954; Pierre Maes, *Un ami de Stendhal, Victor Jacquemont*. Paris 1934; J.H. Barnhart, *Biographical notes upon botanists*. 2: 241. 1965)

Iran, Turkmenistan. Good forage grass, eaten by sheep, see *Voyage dans l'Inde* 4: 174. pl. 175. 1844, *Diagnoses plantarum orientalium novarum* ser. I, 7: 124. 1846, *Illustrationes Plantarum Orientalium* 4: 60. 1851 and *Flora of Turkey and the East Aegean Islands* 9: 534. 1985.

M. jacquemontii Decne. subsp. **hohenackeri** (Boiss.) Bor (*Melica hohenackeri* Boiss.; *Melica persica* var. *caspiaca* Griseb.)

Iran. Glaucous, erect, shortly rhizomatous, leaves narrow and involute, growing on rocky slopes, see *Flora Rossica* 4(13): 398. 1852, *Diagnoses plantarum orientalium novarum, ser. 1*, 13: 54. 1853, *Flora Orientalis* 5: 590. 1884 and *Fl. iranica* 70: 258. 1970, *Journal of Cytology and Genetics* 21: 155. 1986.

M. lilloi Bech. (*Melica decumbens* Papp, nom. illeg., non *Melica decumbens* (L.) Weber; *Melica laxiflora* f. *macrior* Hack.)

Southern America, Argentina. See *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 297. 1914, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 139, t. 7. 1928, *Candollea* 7: 520. 1938, *Opera Lilloana* 29: 1-115. 1980.

M. longiflora Steud. (*Melica berteroaana* Phil.; *Melica berteroaana* f. *berteroaana*; *Melica berteroaana* f. *violacea* Papp; *Melica berteroaana* var. *berteroaana*; *Melica berteroaana* var. *exaltata* (Phil.) Papp; *Melica berteroaana* var. *pilosula* Papp; *Melica berteroaana* var. *puberula* Papp; *Melica berteroaana* var. *typica* Papp; *Melica exaltata* Phil.; *Melica flava* Nees ex Steud.; *Melica flava* var. *flava*; *Melica flava* var. *violacea* Papp; *Melica hirta* Phil.; *Melica laxiflora* E. Desv. ex Muñoz-Schick; *Melica laxiflora* f. *hirta* (Phil.) W. Hempel; *Melica laxiflora* var. *glabra* Papp; *Melica laxiflora* var. *hirsuta* E. Desv.; *Melica laxiflora* var. *hirta* (Phil.) Papp; *Melica laxiflora* var. *longiflora* (Steud.) Papp; *Melica laxiflora* var. *pilosula* Papp)

Chile. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 48, t. 473, f. 2. 1799, *Synopsis Plantarum Glumacearum* 1: 290. 1854, *Flora Chilena* 6: 376. 1854, *Linnaea* 33(3-4): 292. 1864, *Anales de la Universidad de Chile* 43: 571. 1873, *Anales de la Universidad de Chile* 94: 159. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 114-117. 1928, *Feddes Repertorium* 84(7-8): 554. 1973, *Boletín del Museo Nacional de Historia Natural* 40: 60, 63. 1984.

M. macra Nees (*Melica macra* var. *macra*; *Melica macra* var. *pilosa* Papp; *Melica macrantha* (Vasey) Beal)

Southern America, Argentina, Uruguay. Perennial, weed, foul-smelling, useful for erosion control, found in sandy soils, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 486. 1829, *Bulletin of the Torrey Botanical Club* 15: 11. 1888, *Bulletin of the Torrey Botanical Club* 17: 153. 1890 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 152. 1928, *Opera Lilloana* 29: 24. 1980.

in Uruguay: pasto serrucho

M. micrantha Boiss. & Hohen. (*Melica ciliata* L. subsp. *micrantha* (Boiss. & Hohen.) Soják; *Melica ciliata* subsp. *taurica* (C. Koch) Tzvelev; *Melica ciliata* var. *micrantha* (Boiss. & Hohen.) Boiss.; *Melica taurica* K. Koch)

Northern America, U.S. See *Species Plantarum* 1: 66. 1753, *Linnaea* 21: 395. 1848, *Diagnoses plantarum orientalium novarum* 2(13): 53. 1854.

M. minuta L.

Morocco, Mediterranean. Perennial, ligule lacerate, leaf blade convolute, glumes unequal, lemmas covered with tiny prickly teeth, see *Mantissa Plantarum* 32. 1767 and *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *New Zealand Journal of Botany* 29: 101-116. 1991, *Anales del Jardín Botánico de Madrid* 51(2): 280. 1994.

M. minuta L. var. **cyrenaica** Maire & Weiller

Mediterranean. See Emile Jahandiez (1876-1938), René Charles Joseph Ernest Maire (1878-1949) et al., *Catalogue des plantes du Maroc* (Spermatophytes et Ptéridophytes). 4 vols. Alger 1931-1941.

M. minuta L. var. **saxatilis** (Sibth. & Sm.) Coss. (*Melica saxatilis* Sibth. & Sm.)

Europe, Greece. See *Mantissa Plantarum* 32. 1767, *Flora Graeca* 1: 51. 1806, *Notes sur Quelques Plantes Critiques, Rares, ou Nouvelles, ...* 11. 1848.

M. mollis Phil.

Chile. See *Anales de la Universidad de Chile* 94: 161. 1896.

M. montezumae Piper (*Melica alba* Hitchc.) (possibly remembering the last Aztec Emperor Montezuma II, 1466-1520, warrior, legislator)

Mexico. Shade, forage, see *Proceedings of the Biological Society of Washington* 18: 144. 1905, *Contributions from the United States National Herbarium* 17(3): 367. 1913, *Sida* 15: 151-152. 1992.

in Mexico: papelillo dulce

M. mutica Walter (*Melica diffusa* Pursh; *Melica glabra* Michx.; *Melica muhlenbergiana* Schult.; *Melica mutica* f. *diffusa* (Pursh) Fernald; *Melica mutica* f. *mutica*; *Melica mutica* var. *diffusa* (A. Gray) A. Gray; *Melica mutica* var. *glabra* (Michx.) A. Gray; *Melica racemosa* Muhl., nom. illeg., non *Melica racemosa* Thunb.; *Melica rariflora* Schreb.; *Melica speciosa* Muhl.)

Northern America, U.S. Shortly rhizomatous, sheaths glabrous to pilose, lemmas glabrous to scabrous, unawned, grows in moist or dry areas in open woods and thickets, in sandy swamps, woods, see *Flora Caroliniana, secundum* ... 78. 1788, *Flora Boreali-Americana* 1: 62. 1803, *Beschreibung der Gräser* 2: 157. 1810, *Flora Americae Septentrionalis; or,...* 1: 77-78. 1814, *Descriptio uberior Graminum* 87-88. 1817, *Mantissa* 2: 294. 1824, *A Manual of Botany of the Northern United States (5th edition)* 626. 1867, *Synopsis of the Flora of Colorado* 149. 1874 and *Rhodora* 41(490): 501. 1939.

in English: 2-flower melic

M. nitens (Scribn.) Nutt. ex Piper (*Melica diffusa* var. *nitens* Scribn.; *Melica nitens* Nutt. ex Scribn.; *Melica nitens* (Nutt.) Nutt. ex Piper; *Melica scabra* Nutt., nom. illeg., non *Melica scabra* Kunth)

Northern America. Perennial, reddish at the base, caespitose or single culms, shortly rhizomatous, forage, shady places, rocky soil, woods, on slopes, moist shady woods, prairies, wet margins of springs, well drained soil, riverbanks, see *Flora Americae Septentrionalis; or,...* 1: 77. 1814, *Transactions of the American Philosophical Society, new series*, 5: 148. 1835, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 44. 1885 and *Bulletin of the Torrey Botanical Club* 32(7): 387. 1905.

in Mexico: papelillo brillante

M. nutans L. (*Dalucum nutans* (L.) Bubani; *Poa nutans* (L.) Clairv., nom. illeg., non *Poa nutans* Retz.)

North and southwest Asia, Europe. Clumped or solitary, stems slender, loose and nodding panicles, see *Species Plantarum* 66. 1753, Fridrich Hindrich Wiggers [Wichers] (1746-1811), *Primitiae Florae Holsaticae* 7. Kiliae [Kiel] [1780], *Manuel d'Herborisation en Suisse et en Valais* 21. 1811 and *Flora Pyrenaea* ... 4: 352. 1901, *Flora Republicii Socialiste Romania* 12: 248. 1972, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Turun yliopiston julkaisuja - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Bot. Zhurn. (Kiev)* 68(10): 1412. 1983, *Fontqueria* 3: 11-12. 1983, *Zapovedniki Belorussii. Issledovaniya*. 11: 62-69. 1987, *Fitologija* 39: 72-77. 1991, *Taxon* 41: 566. 1992, *Watsonia* 20: 63-66. 1994.

in English: mountain melic, nodding mellic, onion grass, melic grass

M. nutans L. subsp. **grandiflora** (Koidz.) T. Koyama (*Melica grandiflora* Koidz.)

Japan. See *Species Plantarum* 66. 1753 and *Botanical Magazine* (Tokyo) 39: 17. 1925, *Grasses of Japan and its Neighboring Regions* 515. 1987.

M. parodiana Torres

Argentina. Perennial, rhizomatous, low forage value, see *Boletín de la Sociedad Argentina de Botánica* 12: 202. 1968.

M. patagonica Parodi (*Melica stuckertii* var. *tenuis* Papp)

Argentina. See *Anales del Museo Nacional de Buenos Aires* 11: 135. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 112. 1928, *Darwiniana* 9: 361. 1951, *Flora Patagónica* 3: 1-583. 1978.

M. paulsenii Phil. (*Melica litoralis* var. *paulsenii* (Phil.) Papp; *Melica litoralis* var. *werdermannii* Papp) (for the Danish botanist Ove Vilhelm Paulsen, 1874-1947, explorer, traveler, naturalist, in the Danish West Indies, professor of botany, his works include *Plankton and other Biological Investigations in the Sea around the Faeroes in 1913*. Copenhagen 1918, *The Second Danish Pamir Expedition conducted by O. Olufsen ... Studies in the Vegetation of Pamir*. Copenhagen 1920, *The Peridiniales of the Danish Waters*. Copenhagen 1907, with C.H. Ostenfeld wrote "A list of flowering plants from inner Asia, collected by Dr. Sven Hedin, determined by various authors and compiled by C.H. Ostenfeld and O. Paulsen." in Sven Hedin, *Southern Tibet: Discoveries in Former Times Compared with My Own Researches 1906-1908*. 1922. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 57. 1965; C.F.A. Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. 130. 1969)

Chile. See *Anales de la Universidad de Chile* 48: 572. 1873, *Anales de la Universidad de Chile* 94: 159. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 119. 1928, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(94): 353, f. 4. 1928.

M. persica Kunth (*Melica cupani* var. *pannosa* (Boiss.) Boiss.; *Melica cupani* var. *vestita* (Boiss.) A. Regel; *Melica cupani* var. *vestita* (Boiss.) Boiss., nom. illeg., non *Melica cupani* var. *vestita* (Boiss.) A. Regel; *Melica kotschyi* Hochst. ex Steud.; *Melica lanata* Hochst. ex Steud.; *Melica pannosa* Boiss.; *Melica vestita* Boiss.)

Iran. Perennial, densely tufted, short, erect, green, pubescent leaf sheaths, leaves glaucous and pubescent, ornamental, growing on dry rocky slopes, on rocky mountainous area, near streams, see *Révision des Graminées* 1: 351. 1830, *Diagnoses plantarum orientalium novarum, ser. I*, 7: 125. 1846, *Flora Rossica* 4(13): 398. 1852, *Diagnoses plantarum orientalium novarum, ser. I*, 13: 55. 1853, *Synopsis Plantarum Glumacearum* 1: 289. 1854, *Flora Orientalis* 5: 590-591. 1884 and *Bulletin du Museum de Georgie* 1: 1. 1922, *Novosti Sist. Vyss. Rast.* 10: 85. 1973, *Flora of Turkey and the East Aegean Islands* 9: 534-535. 1985, *Anales del Jardín Botánico de Madrid* 42: 221-225. 1985, *Journal of Cytology and Genetics* 21: 155. 1986, *Travaux de l'Institut*

Scientifique, Université Mohammed V. Série Botanique 35: 1-168. 1988.

M. persica Kunth subsp. *canescens* (Regel) P.H. Davis
Europe. See *Flora of Turkey and the East Aegean Islands* 9: 534. 1985.

M. persica Kunth subsp. *cupani* (Guss.) P.H. Davis
Europe. See *Flora of Turkey and the East Aegean Islands* 9: 535. 1985, *Journal of Cytology and Genetics* 21: 155. 1986, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988.

M. persica Kunth subsp. *inaequiglumis* (Boiss.) Bor (*Melica inaequiglumis* Boiss.)

Iran, Iraq, Russia. Perennial, vigorous, useful for erosion control, growing on dry rocky slopes, on rocky mountainous area, abandoned lands, see *Diagnoses plantarum orientaliolum novarum, ser. I*, 1(fasc. 7): 124. 1846.

M. picta K. Koch

Europe. See *Flora Republicii Socialiste Romania* 12: 248, 789. 1972.

M. poecilantha E. Desv. (*Melica poecilantha* var. *poecilantha*; *Melica poecilantha* var. *umbrosa* E. Desv.) (from the Greek *poikilos* "spotted, many-colored" and *anthos* "flower")

Chile. See *Flora Chilena* 6: 379-380. 1854.

M. porteri Scribn. (*Melica mutica* var. *parviflora* Porter; *Melica parviflora* (Porter) Scribn.) (for the American botanist Thomas Conrad Porter, 1822-1901, clergyman, professor of botany and zoology, his works include *Die Verfasser des Heidelberger Katechismus*. 1863 and *Flora of Pennsylvania*. Edited with the addition of analytical keys by John Kunkel Small (1869-1938). Boston 1903, (with John Merle Coulter, 1851-1928) wrote *Synopsis of the Flora of Colorado*. Washington 1874; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 101. 1965)

Northern America, U.S. Perennial, forage, see *Synopsis of the Flora of Colorado* 149. 1874, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 44, t. 1, f. 17-18. 1885, *Memoirs of the Torrey Botanical Club* 5: 50. 1894.

in English: Porter's melic, Porter's melicgrass

M. porteri Scribn. var. *laxa* Boyle

Northern America, U.S. Perennial, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 44, t. 1, f. 17-18. 1885 and *Madroño* 8(1): 25. 1945.

in English: Porter's melic, Porter's melicgrass

M. porteri Scribn. var. *porteri*

Northern America, U.S. Perennial, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 44, t. 1, f. 17-18. 1885.

in English: Porter's melic, Porter's melicgrass

M. racemosa Thunb. (*Melica bolusii* Stapf; *Melica brevifolia* Stapf; *Melica decumbens* sensu Gordon-Gray, non Thunb.; *Melica decumbens* var. *racemosa* (Thunb.) Kuntze; *Melica ovalis* Nees; *Melica pumila* Stapf; *Melica racemosa* Muhl., nom. illeg., non *Melica racemosa* Thunb.) (for the South African botanist Harry Bolus, 1834-1911 (Surrey), banker, plant collector in South Africa, 1850 to Cape, Fellow of the Linnean Society 1873, in 1902 founded the Chair of Botany at South African College, wrote *Icones orchidearum Austro-Africanarum extra-tropicarum*. London 1893-1913 and *The Orchids of the Cape Peninsula*. Cape Town 1888, with D. Barclay (paintings) and E.J. Steer (photos) wrote *A Book of the South African Flowers*. Capetown, Wijnberg, Johannesburg 1925. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 214. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 44. 1972; Merle A. Reinikka, *A History of the Orchid*. Timber Press 1996; Ernest Nelmes & William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 270-272. [1931]; John Hutchinson, *A Botanist in Southern Africa*. 645. London 1946; W.J. Lütjeharms, *Tribute to Harriet Margaret Louisa Bolus*. Cape Town 1970; Alain White (1880-1951) & Boyd Lincoln Sloane (1886-1955), *The Stapelieae*. Pasadena 1937; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 97-99. Cape Town 1981; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. London 1918)

South Africa. Perennial, tufted, erect, branched or unbranched, scabrous, rhizomatous, ligule membranous, leaf blade often scabrid, narrow inflorescence, back of the lemmas glabrous, lemma margins hairy, found in rocky sites, dune forests, on slopes, mountain slopes, steep hills, along roadsides, densely wooded areas, light shade, grassland, see *Prodromus Plantarum Capensium* 21. 1794, *Catalogus Plantarum Americae Septentrionalis* 11. 1813, *Descriptio uberior Graminum* 88. 1817, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 417. 1841, *Revisio Generum Plantarum* 3(3): 356. 1898 and *Bothalia* 18: 114-119. 1988.

in English: staggersgrass, melic grass, fluffy grass

in Southern Africa: dronkgras, flossiegras, Kaapse dronkgras, haakgras; ntlo-ea-motintinyane, ntlo-ea-motintinyane-e-nyenyane (Sotho)

M. radula Franch. (*Melica scabrosa* var. *radula* (Franch.) Papp.)

China, Mongolia, Asia. See *Plantae Davidianae ex Sinarum Imperio* 1: 336. Paris 1884.

M. rigida Cav. (*Melica aurantiaca* Desr. ex Lam.; *Melica aurantiaca* f. *pallida* Papp; *Melica aurantiaca* var. *rigida* (Cav.) Papp; *Melica brasiliiana* Ard.; *Melica brasiliiana* var. *aurantiaca* (Desr. ex Lam.) W. Hempel; *Melica papilionacea* L.; *Melica rigida* Wibel, nom. illeg., non *Melica rigida* Cav.)

Southern America, Uruguay, Argentina. Useful for erosion control, common on fertile sandy soil, see Petri Arduini ... *Animadversionum botanicarum* specimen. Patavii 1759, Petri Harduini veronensis horti publici patavini custodis *animadversionum botanicarum specimen alterum*. Venetia 1764, *Mantissa Plantarum* 31. 1767, *Encyclopédie Méthodique, Botanique* 4: 70. 1795, *Encyclopédie Méthodique, Botanique* 4: 70. 1797, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 47, pl. 473, f. 1. 1799, *Primitiae Florae Werthemensis* 117. Ienae 1799 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(94): 352. 1928, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 128. 1928, *Feddes Repertorium* 84(7-8): 554. 1973, *Opera Lilloana* 29: 43. 1980.

M. riograndensis Longhi-Wagner & Valls

Brazil. See *Revista Brasileira de Biologia* 37(3): 573-575, f. 1. 1977, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 1-191. 1987.

M. sarmentosa Nees (*Melica sarmentosa* var. *glabrior* Döll; *Melica sarmentosa* var. *pilosula* Döll; *Melica sarmentosa* var. *typica* Papp)

Southern America, Uruguay, southern Brazil to Argentina, Paraguay. Perennial, scrambling, flexuous, branched, leaf blades linear, leaf-tips tapering, dense or lax pyramidal panicle, 2 glumes lanceolate ovate to oblong and acute, lemmas glabrous, palea back scabrous, low forage value, useful for erosion control, growing in forest shade, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 485. 1829, *Flora Brasiliensis* 2(3): 127. 1878 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 44. 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 148. 1928, *Opera Lilloana* 29: 20. 1980.

M. sarmentosa Nees subsp. *cymbaria* Ekman

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 485. 1829 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 44. Stockholm 1912.

M. sarmentosa Nees var. *monticola* Torres

South America, Argentina. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 485. 1829 and *Opera Lilloana* 29: 21, f. 3. 1980.

M. sarmentosa Nees var. *pilosula* Döll (*Melica sarmentosa* var. *typica* Papp)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 485. 1829, *Flora Brasiliensis* 2(3): 127. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 148. 1928.

M. sarmentosa Nees var. *sarmentosa* (*Melica sarmentosa* subsp. *sarmentosa*)

South America. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 485. 1829.

M. saxatilis Sibth. & Sm. (*Melica minuta* L. var. *saxatilis* (Sibth. & Sm.) Coss.)

Greece. See *Mantissa Plantarum* 32. 1767, *Florae Graeca* 1: 51. 1806, *Notes sur Quelques Plantes Critiques, Rares, ou Nouvelles, ...* 11. 1848.

M. scabra Kunth (*Melica cajamarcensis* Pilg.; *Melica cajamarcensis* f. *cajamarcensis*; *Melica cajamarcensis* f. *densa* Papp; *Melica majuscula* Pilg.; *Melica majuscula* var. *glabra* Papp; *Melica majuscula* var. *majuscula*; *Melica nitens* (Nutt.) Nutt. ex Piper; *Melica pallida* Kunth; *Melica pyrifer* Hack.; *Melica scabra* Nutt., nom. illeg., non *Melica scabra* Kunth; *Melica scabra* f. *pubescens* (Papp) W. Hempel; *Melica scabra* f. *scabra*; *Melica scabra* var. *glabra* Papp; *Melica scabra* var. *pubescens* Papp; *Melica scabra* var. *scabra*; *Melica scabra* var. *typica* Papp; *Melica scabrata* Scribn.; *Melica weberbaueri* Pilg.; *Melica weberbaueri* var. *decolorata* Pilg.; *Melica weberbaueri* var. *pilosula* Papp; *Melica weberbaueri* var. *typica* Papp; *Melica weberbaueri* var. *violascens* Pilg.; *Melica weberbaueri* var. *weberbaueri*)

Ecuador, Peru. Perennial, tufted, erect, shortly rhizomatous, leaves scabrous, ligule margins lacinate, leaf blades acuminate linear, inflorescence paniculate with nodding spikelets, lax panicle oblong or ovate, spikelets compressed dorsiventrally, 2 glumes lanceolate membranous, oblong panicle scabrous, shade, moist woods, brush, stony slopes, see *Nova Genera et Species Plantarum* 1: 164. 1815 [1816], *Transactions of the American Philosophical Society, new series*, 5: 148. 1835 and Charles Vancouver Piper (1867-1926), *The Flora of the Palouse Region* 25. Pullman, Washington 1901 [junior author Rolla Kent Beattie, 1875-1960], *Österreichische Botanische Zeitschrift* 52: 307. 1902, *Bulletin of the Torrey Botanical Club* 32(7): 387. 1905, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 8(76): 453-454. 1923, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 132-133, 135, 145. 1928, *Feddes Repertorium* 84(7-8): 556. 1973.

M. scabrosa Trin.

China. See *Enumeratio Plantarum, quas in China Boreali* 72. 1833, Adrien René Franchet (1834-1900), *Plantae Davidianae ex Sinarum Imperio* 1: 336. Paris 1884.

M. scabrosa Trin. var. *radula* (Franch.) Papp.

China. See *Plantae Davidianae ex Sinarum Imperio* 1: 336. Paris 1884.

M. smithii (Porter ex A. Gray) Vasey (*Avena smithii* Porter ex A. Gray; *Bromelica smithii* (Porter ex A. Gray) Farw.; *Melica retrofracta* Suksd.; *Schizachne smithii* (Porter ex A. Gray) Wiegand ex Muenscher) (named for the American engineer Charles Eastwick Smith, 1820-1900, amateur botanist and plant collector, see T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 372. Boston, Mass. 1972; S. Lenley et al., *Catalog of the manuscript and archival*

collections and index to the correspondence of John Torrey. Library of the New York Botanical Garden. 378. 1973; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. Philadelphia 1899)

Northern America. Perennial, lemmas straight awned from below tip, woods, damp places, see *A Manual of Botany of the Northern United States (5th edition)* 640. 1867, *Bull. Torrey Bot. Club* 15: 294. 1888 and *Deutsche Botanische Monatsschrift* 19: 92. 1901, *Rhodora* 21: 77. 1919, Walter Leopold Conrad Muenschler (1891-1963), *The Flora of Whatcom County*, State of Washington. Vascular Plants 66. Ithaca 1941.

M. spartinooides L.B. Sm.

Brazil. See *Phytologia* 22(2): 89, f. 12-13. 1971.

M. spectabilis Scribn. (*Bromelica spectabilis* (Scribn.) W.A. Weber; *Melica bulbosa* Geyer ex Porter & Coult. var. *spectabilis* (Scribn.) Boivin; *Melica scabrata* Scribn.)

Northern America. Perennial, mountains, rocky places, low meadows, bottom land, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 45, t. 1, f. 11-13. 1885 [1886] and *The Flora of the Palouse Region* 25. 1901, *Phytologia* 43(1): 106. 1979, *Phytologia* 55(1): 9. 1984.

in English: purple oniongrass

M. stricta Bol. (*Melica stricta* var. *albicaulis* Boyle)

Northern America, U.S. Found in dry ground, under trees, see *Proceedings of the California Academy of Sciences* 3: 4. 1863 and *Madroño* 8(1): 24. 1945.

M. stricta Bol. var. *albicaulis* Boyle

U.S., California. See *Proceedings of the California Academy of Sciences* 3: 4. 1863 and *Madroño* 8(1): 24. 1945.

M. stricta Bol. var. *stricta*

U.S., California. See *Proceedings of the California Academy of Sciences* 3: 4. 1863.

M. stuckertii Hack. (*Melica cordobensis* Hack.; *Melica stuckertii* f. *stuckertii*; *Melica stuckertii* var. *cordobensis* (Hack.) Hack.; *Melica stuckertii* var. *stuckertii*)

Argentina. See *Anales del Museo Nacional de Buenos Aires* 11: 135. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 507. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 140. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 112. 1928.

M. subulata (Griseb.) Scribn. (*Bromelica subulata* (Griseb.) Farw.; *Bromus subulatus* Griseb.; *Festuca acerosa* Trin. ex A. Gray, nom. illeg., non *Festuca acerosa* K. Koch; *Melica acuminata* Bol.; *Melica poaeoides* var. *acuminata* Bol.)

Northern America, Pacific northwest, Canada, U.S. Perennial, forage, see *Flora Rossica* 4(13): 358. 1852, *Proceedings of the California Academy of Sciences* 4: 104. 1870, *Proceedings of the American Academy of Arts and Sciences* 8: 410. 1872, *Proceedings of the Academy of Natural*

Sciences of Philadelphia 37: 47. 1886 and *Rhodora* 21: 78. 1919, *Sida* 12: 409-417. 1987.

in English: Alaska oniongrass

M. subulata (Griseb.) Scribn. var. *pammelii* (Scribn.) C.L. Hitchc. (*Melica pammelii* Scribn.) (dedicated to the American botanist Louis Hermann Pammel, 1862-1931, professor of botany, plant collector; see J.H. Barnhart (1871-1949), *Biographical notes upon botanists* 3: 45. Boston 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 299. Boston, Mass. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 321. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Stafleu and Cowan, *Taxonomic literature*. 4: 36-38. Utrecht 1983; *Proc. Iowa Acad. Sci.* 10: 57-68. 1903, and *ibid.* 20: 133-149. Map. 1913; Paul F. Shope, "History of mycological collectors in Colorado." *Mycologia* 21: 292-296. 1929; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Edward H. Graham, "Botanical studies in the Uinta Basin of Utah and Colorado." *Annals of Carnegie Mus. Pittsburgh* 26: 8-24. 1937; Edith M. Allison, "Bibliography and history of Colorado botany." *Univ. Colorado Studies* 6: 51-76. 1908)

Northern America, U.S. Perennial, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 37: 47. 1886, *Proceedings of the Davenport Academy of Natural Sciences* 7: 240. 1899 and *Vascular Plants of the Pacific Northwest* 1: 619. 1969.

in English: Alaska oniongrass

M. subulata (Griseb.) Scribn. var. *subulata*

Northern America, U.S. Perennial, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 37: 47. 1886 [or 1885] and *Vascular Plants of the Pacific Northwest* 1: 1-914. 1969.

in English: Alaska oniongrass

M. taurica K. Koch (*Melica ciliata* subsp. *taurica* (K. Koch) Tzvelev; *Melica micrantha* Boiss. & Hohen.)

Europe, Russia. Perennial, found on rocky slopes, see *Linnaea* 21: 395. 1848, *Diagnoses plantarum orientalium novarum* 2(13): 53. 1854.

M. tenuis Hack. & Arech.

Southern Brazil to northern Argentina, Uruguay. Perennial, spikelets narrowly obovate, low forage value, stony places, see *Anales del Museo Nacional de Montevideo* 1(5): 450, t. 57. 1896.

M. torreyana Scribn. (*Melica imperfecta* var. *sesquiflora* Torr. ex Scribn.)

U.S., California. Open habitats, dry rocky soil, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 1885: 43. 1885.

in English: Torrey's melica

M. transsilvanica Schur (*Melica ciliata* subsp. *transsilvanica* (Schur) Celak.)

Europe, Russia, Turkey. Perennial, rhizomatous, poisonous grass, occurs on high steppe grassland, open meadow area, clearings and around edges of the woods, shallow rocky soil, calcareous soil, see *Verh. Mitth. Siebenbürg. Vereins Naturwiss. Hermannstadt* 4: 86. 1853 or *Sert. Fl. Transsilv.* 4: 86. 1853, *Enum. Pl. Transs.* 764. 1866 and *Fragmenta Floristica et Geobotanica* 17: 251-256. 1971, *Novosti Sist. Vyss. Rast.* 10: 85. 1973, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991, *Grassland of China* 1995(1): 16-20. 1995, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 13-14. 1997.

M. turczaninowiana Ohwi (*Melica gmelinii* Turcz. ex Trin., nom. illeg., non Roth) (for the Russian botanist Porphir Kiril Nicolai Stepanowitsch Turczaninow, 1796-1863 (or 1864), traveler, botanical explorer, administrator; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 408. 1965; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China.* [Reprint of the original edition 1898] Leipzig 1981; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 257. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* Philadelphia 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert.* 1845; Stafleu & Cowan, *Taxonomic literature.* 6: 537-541. 1986; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. Stuttgart 1993; N. Hall, *Botanists of the Eucalypts.* Melbourne 1978 and Supplement 1980)

China, Mongolia. Perennial, on shallow soil, meadows, dark brown soil, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 368. 1830 and *Acta Phytotaxonomica et Geobotanica* 1(2): 142-143. 1932.

M. uniflora Retz.

Southwest Asia, Europe. Loosely tufted, lax panicles, see *Biologie-Ecologie Méditerranéenne* 10: 273-289. 1987, *Fitologija* 41: 70-75. 1991, *Boletim da Sociedade Brotteriana, ser. 2* 64: 35-74. 1991, *Fitologija* 39: 72-77. 1991, *Flora Mediterranea* 5: 340-345. 1995, *Watsonia* 21: 365-368. 1997.

in English: wood melic, wood melick

M. violacea Cav. (*Melica alata* Nees ex Steud.; *Melica alata* var. *alata*; *Melica alata* var. *filiculmis* (E. Desv.) Papp; *Melica alata* var. *mollis* Papp; *Melica filiculmis* E. Desv.; *Melica laxiflora* Cav.; *Melica laxiflora* f. *laxiflora*; *Melica laxiflora* var. *laxiflora*; *Melica laxiflora* var. *typica* Papp; *Melica papilionacea* L.; *Melica papilionacea* var. *violacea* Hieron.; *Melica valdivinia* Phil.; *Melica violacea* f. *mollis* (Papp) W. Hempel; *Melica violacea* var. *violacea*)

Southern America, Bolivia, Chile. Palea back scabrous, see *Mantissa Plantarum* 31. 1767, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 48, pl. 472-473, f. 2. 1799, *Synopsis Plantarum Glumacearum* 1: 290. 1854, *Flora Chilena* 6: 378. 1854, *Anales de la Universidad de Chile* 48: 572. 1873, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 3: 375. 1881 and *Repertorium Specierum Novarum Regni Vegetabilis* 25(7-13): 111, 116, 122-123. 1928, R.C. Foster, "A catalogue of the ferns and flowering plants of Bolivia." *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Flora de la Provincia de Buenos Aires* 4(2): 316. 1970, *Feddes Repertorium* 84(7-8): 557. 1973.

M. virgata Turcz. ex Trin.

Asia, Mongolia. On mountain steppe, rocky slopes, rocky soil, sandy soils, sandy and gravelly soil, meadow along a stream, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 369. 1830.

Melinis P. Beauv. = *Mildbraediochloa* Butzin, *Monachyron* Parl., *Monachyron* Parl. ex Hook., *Rhynchelytrum* Nees, *Suardia* Schrank, *Tricholaena* Schrad. ex Schult. & Schult.f., *Tristegis* Nees

From the Greek *meline* "millet, Italian millet, *Panicum miliaceum*" (Herodotus) or a kind of *Setaria*; Latin *milium*, *ii* "millet" (Vergilius, Plinius and Marcus Terentius Varro); see Ambroise Marie François Joseph Palisot de Beauvois, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées.* 54, t. 11, f. 4. Paris 1812.

About 11/(20-)22 species, tropical or subtropical, Mediterranean area, from Africa to India. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Melinideae, annual or perennial, aromatic, viscidly pubescent, herbaceous, sprawling, stoloniferous or tufted, culms ascending to decumbent at base and rooting from lower nodes, nodes hairy, solid to hollow internodes, auricles absent, ligule a line of hairs, leaves narrow and linear-lanceolate, plants bisexual, inflorescence a dense panicle with slender branches, 2 florets, lower floret sterile or male, upper floret bisexual, solitary spikelets pedicellate with an awned sterile lemma below the unawned fertile floret, 1 or 2 unequal

glumes, lower glume tiny or scale-like, upper glume often awned and 5- to 7-nerved, lemmas unequal, upper lemma glabrous and laterally compressed, palea present or absent, 2 fleshy or membranous lodicules, 3 stamens, ovary glabrous, stigmas 2, leaves and grains eaten by baboons, useful for erosion control, cultivated fodder, native pasture species, weed, shade species, open habitats, savannah, rainforest, woodland, sandy areas, grassland, disturbed ground, sometimes confused with *Rhynchelytrum* Nees, type *Melinis minutiflora* P. Beauv., see *Species Plantarum* 1: 55. 1753, *Essai d'une Nouvelle Agrostographie* 54, t. 11, f. 4. 1812, Franz von Paula von Schrank (1747-1835), *Plantae rariores horti academici monacensis* 58. Monachii [München] 1820 [1819], *Horae Physicae Berolinenses* 47, 54. Bonnæ [Bonn] 1820, *Mantissa* 2: 8, 163. 1824, *Stazioni Sperimentali Agrarie Italiane* 378, 446. Torino 1836, *An Introduction to the Natural System of Botany* 2nd edition, 447. 1836, *Niger Flora* 190. 1849, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853], *Gen. S. Afr. Pl.* 2nd edition: 428. 1869 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Willdenowia* 6: 285-289. 1971, *Folia Primatologica* 21: 36-60. 1974, *Bibliotheca Botanica* 138: 1-149. 1988 [Revision der Melinideae Hitchcock (Poaceae, Panicoideae)], *Flora Mesoamericana* 6: 365. 1994, *Flora of Ethiopia and Eritrea* 7: 185-189. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Contributions from the United States National Herbarium* 46: 287, 297, 545. 2003, *Geophysical Journal International* vol. 160, issue 2: 581-591. Feb 2005, *Restoration Ecology* 13(2): 380-389. June 2005, *Conservation Biology* 19(3): 707-713. June 2005.

Species

M. sp.

in English: molasses grass

M. ambigua Hack. (*Melinis diminuta* Mez; *Melinis goetzenii* Mez; *Melinis hirsuta* Mez; *Melinis inamoena* Pilg.; *Melinis longicauda* (Mez) Mez ex Stapf & C.E. Hubb.; *Melinis mollis* Stapf & C.E. Hubb.; *Melinis pallida* Stapf & C.E. Hubb.; *Panicum longicaudum* Mez; *Rhynchelytrum bequaertii* Robyns; *Rhynchelytrum longicaudum* (Mez) Chiov.; *Rhynchelytrum schantzii* Stapf & C.E. Hubb.)

East Africa, Ethiopia. Perennial, very variable, caespitose or rarely tufted, erect or ascending, geniculate, panicle narrowly ovate, spikelets narrowly ovate, lower floret male or sterile, lower glume ovate, upper glume 7-nerved, palea often absent, savannah, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 133. 1904, *Nuovo Giornale Botanico Italiano* 26: 78. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 198, 200-201. 1921, *Bulletin of Miscellaneous Information Kew* 1926: 440, 442. 1926, *Flora of Tropical Africa* 9: 892, 919. 1930, *Bulletin du Jardin Botanique de l'État* 9: 193, t. 3. 1932, *Notizblatt des*

Botanischen Gartens und Museums zu Berlin-Dahlem 13: 262. 1936, *Biblioth. Bot.* 138: 90. 1988.

M. ambigua Hack. subsp. ***ambigua*** (*Melinis diminuta* Mez; *Melinis eylesii* Stapf & C.E. Hubb.; *Melinis hirsuta* Mez; *Melinis inamoena* Pilg.; *Melinis intermedia* Stapf & C.E. Hubb.; *Melinis minutiflora* f. *aristata* Chiov.; *Melinis mollis* Stapf & C.E. Hubb.; *Melinis pallida* Stapf & C.E. Hubb.)

Tanzania, Zimbabwe. See *Essai d'une Nouvelle Agrostographie* 54, t. 11, f. 4. 1812 and *Nuovo Giornale Botanico Italiano* 26: 78. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 198, 200-201. 1921, *Bulletin of Miscellaneous Information Kew* 1926: 440-441. 1926, *Flora of Tropical Africa* 9: 922. 1930, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 13: 262. 1936, *Biblioth. Bot.* 138: 90. 1988.

M. ambigua Hack. subsp. ***longicauda*** (Mez) Zizka (*Melinis goetzenii* Mez; *Melinis longicauda* (Mez) Mez ex Stapf & C.E. Hubb.; *Panicum longicaudum* Mez; *Rhynchelytrum bequaertii* Robyns; *Rhynchelytrum longicaudum* (Mez) Chiov.; *Rhynchelytrum schantzii* Stapf & C.E. Hubb.)

Tanzania to Zimbabwe, Mozambique. Perennial, very variable, caespitose or rarely tufted, erect or ascending, geniculate, panicle narrowly ovate, spikelets narrowly ovate, lower glume ovate, upper glume 7-nerved, lower floret male or sterile, lower palea present, savannah, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 133. 1904, *Nuovo Giornale Botanico Italiano* 26: 78. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 198, 200-201. 1921, *Flora of Tropical Africa* 9: 892, 919. 1930, *Bulletin du Jardin Botanique de l'État* 9: 193, t. 3. 1932, *Bibliotheca Botanica* 138: 90. 1988.

M. drakensbergensis (C.E. Hubb. & Schweick.) Clayton (*Rhynchelytrum drakensbergense* C.E. Hubb. & Schweick.)

South Africa, Transvaal. Indeterminate species, mountains, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2(1): 200. 1899 and *Bulletin of Miscellaneous Information Kew* 1936(5): 323-324. 1936, *Kew Bulletin* 33(1): 22. 1978.

M. effusa (Rendle) Stapf (*Melinis effusa* Stapf; *Melinis minutiflora* var. *effusa* Rendle)

Tropical Africa. Perennial, straggling, tufted, ascending, rarely erect, leaf blades often tomentose, panicle ovate to narrowly ovate, spikelets narrowly ovate, lower floret sterile, montane, grassland, disturbed places, open habitats, hillsides, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2(1): 200. 1899 and *Bulletin of Miscellaneous Information Kew* 1922: 310. 1922, *Bulletin of Miscellaneous Information Kew* 1926: 444. 1926, *Flora of Tropical Africa* 509. 1982, *Bibliotheca Botanica* 138: 97. 1988.

in Nigeria: wutsiyar kurege, wutsiyar kureje

M. kallimorpha (Clayton) Zizka (*Rhynchelytrum kallimorphon* Clayton)

East Africa, Zambia, Tanzania, Angola, Kalahari. Annual, tufted, rhizomatous, upper glume and lower lemma awned, shade species, growing in sandy areas, woodland, edge of plain, understory, see *Kew Bulletin* 33(1): 22. 1978, *Bibliotheca Botanica* 138: 64. 1988.

M. longiseta (A. Rich.) Zizka (*Panicum macrotrichum* Steud.; *Rhynchelytrum longisetum* (A. Rich.) Stapf & C.E. Hubb.; *Saccharum longisetum* (A. Rich.) Walp.; *Tricholaena longiseta* A. Rich.)

Tanzania, Mozambique, Nigeria, Namibia, South Africa. Perennial, erect, tufted to loosely caespitose, erect or geniculately ascending, panicle narrowly oblong to linear, spikelets ovate, lower floret male, lower glume ovate, upper glume densely hairy on the keel, lower lemma glabrous on the keel, lower palea keels scaberulous, open woodland, sandy soils, see *Encyclopédie Méthodique. Botanique ... Supplément* 4: 275. 1816, *Tentamen Florae Abyssinicae ...* 2: 446. 1850, *Annales Botanicae Systematicae* 3: 793. 1852, *Synopsis Plantarum Glumacearum* 1: 92. 1854, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2(1): 198. 1899 and *Kew Bulletin* 1925: 364. 1925, *Flora of Tropical Africa* 9: 902-904. 1930, *Bibliotheca Botanica* 138: 73, 75, 76. 1988.

M. longiseta (A. Rich.) Zizka subsp. ***bellespicata*** (Rendle) Zizka (*Melinis chaetophora* Mez; *Melinis secunda* Mez; *Rhynchelytrum bellespicatum* (Rendle) Stapf & C.E. Hubb.; *Tricholaena bellespicata* Rendle)

Southern and South Africa, Angola, Nigeria, Cameroon. Perennial, tufted, leaves hairy or glabrous, upper glume awned, lower lemma awned, open habitats, sunny places, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2(1): 196. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 196. 1921, *Flora of Tropical Africa* 9: 900. 1930, *Bibliotheca Botanica* 138: 78. 1988.

M. longiseta (A. Rich.) Zizka subsp. ***longiseta*** (*Panicum macrotrichum* Steud.; *Rhynchelytrum longisetum* (A. Rich.) Stapf & C.E. Hubb.; *Rhynchelytrum minutiflorum* (Rendle) Stapf & C.E. Hubb.; *Rhynchelytrum minutiflorum* var. *melinoides* (Stent) Stapf & C.E. Hubb.; *Saccharum longisetum* (A. Rich.) Walp.; *Tricholaena longiseta* A. Rich.; *Tricholaena melinoides* Stent; *Tricholaena minutiflora* Rendle)

East Africa, Angola, Sudan. Perennial, erect, tufted, leaves hairy, upper glume awned, lower lemma awned, in sandy areas, open habitats, open woodland, see *Tentamen Florae Abyssinicae ...* 2: 446. 1850, *Annales Botanicae Systematicae* 3: 793. 1852, *Synopsis Plantarum Glumacearum* 1: 92. 1854, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-1861* 2(1): 198. 1899 and *Kew Bulletin* 1925: 364. 1925, *Flora of Tropical Africa* 9: 902-904. 1930, *Bibliotheca Botanica* 138: 73, 75-76. 1988.

M. macrochaeta Stapf & C.E. Hubbard

Tropical Africa, South Africa. Annual or short-lived perennial, not aromatic or aromatic, somewhat sticky, tufted, geniculately ascending to erect, reddish, stilt roots from lower nodes, soft leaves, panicle ovate to narrowly ovate, glabrous pedicels, spikelets narrowly oblong, lower floret sterile, upper glume 7-nerved and not awned, lower glume scaly, lower lemma 3-5-nerved, low grazing value, usually in grassland, sandy or loamy soils, rocky places, wooded savannah, see *Bulletin of Miscellaneous Information Kew* 1926: 443. 1926.

in English: lion's tail

in Nigeria: uringe, wutsiar zaki, wutsiyar kurege, wutsiyar kureje, wutsiyar zakee

M. minutiflora P. Beauv. (*Agrostis glutinosa* Fisch. ex Nees; *Agrostis glutinosa* Fisch. ex Schrank; *Agrostis polygona* Salzm. ex Steud.; *Melinis maitlandii* Stapf & C.E. Hubb.; *Melinis maitlandii* f. *mutica* (Chiov.) Robyns; *Melinis minutiflora* f. *inermis* (Döll) Stapf & C.E. Hubb.; *Melinis minutiflora* f. *mutica* Chiov.; *Melinis minutiflora* var. *glutinosa* (Nees) Kuntze; *Melinis minutiflora* var. *inermis* (Döll) Rendle; *Melinis minutiflora* var. *inodora* Kuntze; *Melinis minutiflora* var. *mutica* Hack.; *Melinis minutiflora* var. *pilosa* Stapf; *Melinis minutiflora* var. *setigera* Clayton; *Melinis purpurea* Stapf & C.E. Hubb.; *Melinis tenuinervis* Stapf; *Melinis tenuinervis* f. *mutica* Stapf & C.E. Hubb. ex Peter; *Melinis tenuinervis* var. *parvispicula* C.E. Hubb. ex Peter; *Muhlenbergia brasiliensis* Steud.; *Muhlenbergia brasiliensis* Steud.; *Panicum melinis* Trin.; *Panicum melinis* var. *inermis* Döll; *Panicum minutiflorum* (P. Beauv.) Raspail; *Suardia picta* Schrank; *Tristegis glutinosa* Nees)

Tropics. Perennial with hairy stems, very variable, tufted, strongly aromatic and viscid-glandular throughout, molasses-scented, branching and spreading, quick growing and vigorous, rather coarse, basally prostrate, decumbent to suberect, geniculately ascending and rooting at lower nodes, stoloniferous, forming loose and large tussocks, leaf blades linear-lanceolate, sheaths often hairy to pilose, ligule a ciliate rim, leaves minutely to densely hairy and sticky when fresh, narrow but loose purplish to pink-mauve open inflorescence, 2 florets, lower floret male, upper floret fertile, glumes and lower lemma glabrous, upper glume 2-lobed and prominently 7-nerved, sterile lemma 2-lobed and awned, bisexual lemma awnless, sometimes aggressive habit, herbage suitable for pasture improvement, cultivated and naturalized throughout tropics, excellent fodder plant, cultivated for forage, very palatable to stock, valuable grass for cattle once they become used to the smell, excellent for grazing, roots used as a purgative, weed grass naturalized throughout tropics, contains a strong scented volatile oil foul or sweet smelling, insect-repellent, anti-tick deterrent properties, diuretic, antidiarrhetic, not tolerant of heavy grazing and waterlogging, fire-sensitive, resistant to

drought, useful for erosion control and for soil conservation, pioneer grass, ruderal, usually occurs in warm coastal areas, open ground, hillsides, wasteland, open disturbed places, woodland, riverine forests, savannah, in both moist and dry areas, clearings, dry thickets, in shady places and rocky slopes in sub humid and humid climates, on steep slopes with poor soils, on well drained sites, sandy soil, on rocky ground, roadbanks, grasslands, old pasture, see *Essai d'une Nouvelle Agrostographie* 54, t. 11, f. 4. 1812, *Plantae rariorum horti academici monacensis* t. 58. 1820, *Horae Physicae Berolinenses* 29, 47, 54, t. 7. 1820, *Annales des Sciences Naturelles (Paris)* 5: 299. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 291. 1834, *Synopsis Plantarum Glumacearum* 1: 177-178. 1854, *Flora Brasiliensis* 2(2): 242. 1877, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftliche Classe* 89: 126. 1884, *Revisio Generum Plantarum* 3(3): 356. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 200. 1899, *Flora Capensis* 7: 447. 1899 and *Nuovo Giornale Botanico Italiano* 26: 78-79. 1919, *Bulletin of Miscellaneous Information Kew* 1922: 929. 1922, *Bulletin of Miscellaneous Information Kew* 1926: 444-445. 1926, *Flora of Tropical Africa* 9: 932. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 157. 1930, *Bulletin du Jardin Botanique de l'État* 9(3): 197. 1932, *E. Afr. Agric. Journ.* 26: 49. 1960, *Kew Bulletin* 21: 113. 1967, *Biblioth. Bot.* 138: 97, 103. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, William A. Hoffmann et al., "Impact of the invasive alien grass *Melinis minutiflora* at the savannah-forest ecotone in the Brazilian Cerrado." *Diversity & Distributions* 10(2): 99-103. Mar 2004.

in English: melinis, Brazilian stink grass, stink grass, whyne grass, Wynne grass, efwatakala grass, gordura grass, honey grass, fat grass, molasses grass

in French: herbe à miel

in Spanish: chopin, calingüero, yerba de gordura, yerba melao, pasto de gordura

in Brazil: capim gordo, capim gordura, capim catinguento, capim melado

in Colombia: gordura, hierba del melado, melado, pasto gordura, yaraguá Uribe

in Mexico: calingüero, candigüero, catingueiro, gordura, pasto gordura, zacate gordura

in Venezuela: sebo de Flandes, yaraguá melado

in Angola: capim melado, evantonkala, lekamboma

in East Africa: futaute (Shambaa)

in Ghana: aketibua, akutuakuru

in Nigeria: ori

in Sierra Leone: fokole, minan sa bine

in South Africa: heuninggras, melassegras, stinkgras

in Tanzania: ikinyamavuta

in Yoruba: ori

in the Philippines: gordura

in Thailand: ya yang

in Tonga: puakatau

M. nerviglumis (Franch.) Zizka (*Melinis bachmannii* Mez; *Melinis muenzneri* Mez; *Melinis nyassana* Mez; *Melinis setifolia* (Stapf) Hack.; *Melinis villosipes* Mez; *Panicum busseanum* Mez; *Panicum elongatum* Mez, nom. illeg., non *Panicum elongatum* Pursh; *Panicum gracillimum* Mez, nom. illeg., non *Panicum gracillimum* Scribn.; *Rhynchelytrum filifolium* (Franch.) Stapf & C.E. Hubb.; *Rhynchelytrum nerviglume* (Franch.) Chiov.; *Rhynchelytrum nyassanum* (Mez) Stapf & C.E. Hubb.; *Rhynchelytrum ramosum* Stapf & C.E. Hubb.; *Rhynchelytrum rhodesianum* (Rendle) Stapf & C.E. Hubb.; *Rhynchelytrum setifolium* (Stapf) Chiov.; *Rhynchelytrum stuposum* Stapf & C.E. Hubb.; *Tricholaena busseana* (Mez) Peter; *Tricholaena chevalieri* A. Camus; *Tricholaena congoensis* Franch.; *Tricholaena filifolia* Franch.; *Tricholaena nerviglumis* Franch.; *Tricholaena rhodesiana* Rendle; *Tricholaena rhodesiana* var. *glabrescens* Rendle; *Tricholaena rosea* subvar. *nsoaensis* Vanderyst; *Tricholaena rosea* var. *van-heei* Vanderyst; *Tricholaena setifolia* Stapf)

Madagascar, Africa Sub Saharan South Africa. Perennial, small to dwarf, densely tufted, erect, unbranched, sparse foliage, nodes conspicuously bearded, inconspicuous ligule rimlike, basal sheaths strongly overlapping and hairy at the base, blue-green blades rolled and expanded, leaves hard and stringy, inflorescence a narrow or open panicle, spikelets with long hairs pink sometimes cream to purplish, ornamental, moderately palatable to relatively unpalatable, useful for erosion control, in South Africa traditional healers use it to chase away ominous clouds, found in disturbed veld, open veld, undisturbed open grassland, stony slopes, sandy to sandy loam soils, on very shallow and poor soil, clayey soils, bushveld, in rocky areas, see *Species Plantarum* 2: 1045-1046. 1753, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 355-357. 1895, *Flora Capensis* 7: 442. 1899 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 131-132. 1904, *Annali di Botanica* 8: 310. 1911, *Journal of the Linnean Society, Botany* 40: 232-233. 1911, *Giornale Botanico Italiano* n.s. 26: 78. 1919, *Bulletin du Muséum d'Histoire Naturelle* 25: 202. 1919, *Bulletin agricole du Congo Belge* 11: 107, 108. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 198-199. 1921, *Flora of Tropical Africa* 9: 892, 895-897. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 259. 1931, *Fl. Trop. E. Afr. Gramineae* 770. 1982,

Bibliotheca Botanica 138: 111. 1988, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995.

in English: red top, bristle-leaved red top

in South Africa: blinkblaarblinkgras, steekblaarblinkgras, fluweelgras, rooitop, lechocho, boleya

M. repens (Willd.) Zizka (*Erianthus repens* (Willd.) P. Beauv.; *Melinis repens* subsp. *repens*; *Melinis rosea* (Nees) Hack.; *Monachyron roseum* (Nees) Parl.; *Monachyron tonsum* (Nees) Parl.; *Panicum braunii* Steud.; *Panicum braunii* Mez, nom. illeg., non *Panicum braunii* Steud.; *Panicum roseum* (Nees) Steud., nom. illeg., non *Panicum roseum* Willd. ex Spreng.; *Panicum roseum* f. *hirtum* Kuntze; *Panicum sphacelatum* (Benth.) Steud., nom. illeg., non *Panicum sphacelatum* Schumach.; *Panicum teneriffae* (L.f.) Spreng. var. *rosea* (Nees) F.M. Bailey; *Panicum tonsum* (Nees) Steud.; *Rhynchelytrum dregeanum* Nees; *Rhynchelytrum dregeanum* var. *annuum* Chiov.; *Rhynchelytrum dregeanum* var. *intermedium* Chiov.; *Rhynchelytrum repens* (Willd.) C.E. Hubbard; *Rhynchelytrum repens* var. *roseum* (Nees) Chiov.; *Rhynchelytrum roseum* (Nees) Stapf & C.E. Hubb. ex Bews; *Rhynchelytrum roseum* (Nees) Stapf & C.E. Hubb.; *Rhynchelytrum tonsum* (Nees) Lanza & Mattei; *Saccharum repens* Willd.; *Saccharum sphacelatum* (Benth.) Walp.; *Tricholaena dregeana* (Nees) T. Durand & Schinz; *Tricholaena repens* var. *rosea* (Nees) Alberts.; *Tricholaena fragilis* A. Braun; *Tricholaena repens* (Willd.) A.S. Hitchc.; *Tricholaena rosea* Nees; *Tricholaena sphacelata* Benth.; *Tricholaena tonsa* Nees; *Tricholaena tonsa* var. *submutica* Schweinfurth)

Tropical and South Africa, Benin, Tanzania, Mozambique, Malawi, Namibia, Uganda, Zimbabwe, Saudi Arabia, Yemen, India. Annual or perennial bunchgrass, very variable, rapidly growing, weak, short-lived, tufted to loosely tufted, more or less leafy, ascending or erect, geniculate at base, white hairs on nodes, ligule a fringe of short hairs, blade flat or folded, sheaths often slightly pubescent, reddish pink or white hairy open panicle ovate to oblong, spikelets ovate, seed heads cottony or silky, lower floret male, upper floret bisexual, glumes and lower lemma silky, upper glume 2-lobed and sometimes awned, lemmas 2-toothed, male lemma sometimes awned, bisexual lemma awnless and shiny, palea of lower floret ciliate on the keels, grain light brown, heavy-seeding, weed on arable land, fodder, hay, palatable but of low grazing value, cultivated fine ornamental grass widely naturalized elsewhere, pasture grass, drought-hardy, suitable for erosion control and to revegetate abandoned cultivated lands, grows along roadsides and rail verges, old farmland, in open grassland or stony ridges, arid places, poor or exhausted soils, shallow rocky soil, on sand, in rock quarry, on gravelly soil, uncultivated lands, waste places and dry disturbed sites, fallows, confused with *Tricholaena teneriffae*, see *Species Plantarum*. *Editio quarta* 1: 322. 1797, *Essai d'une Nouvelle*

Agrostographie 14, 162, 177. 1812, *Systema Vegetabilium, editio decima sexta* 1: 315. 1825, *Cat. Sem. Hort. Vratisl.* 1835, *An Introduction to the Natural System of Botany* 2nd edition, 447. 1836, *Linnaea* 11(Litt.-Ber.): 129. 1837, *Flora* 24: 275. 1841, *Niger Flora* 559. 1849, *Flora italiana, ossia descrizione delle piante ...* 1: 131. 1850, *Annales Botanicae Systematicae* 3: 793. 1852, *Synopsis Plantarum Glumacearum* 1: 92-93. 1854, *Queensland Grasses* 22. 1888, *Conspectus Florae Africae* 5: 769. 1894, *Bulletin de l'Herbier Boissier* 2: App. 2: 96. 1894, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Annuario del Reale Istituto Botanico di Roma* 8(3): 309-310. 1908, *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 49. 1910, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 5. 1921, *The World's Grasses* 223. 1929, *Flora of Tropical Africa* 9: 880. 1930, *Bulletin of Miscellaneous Information Kew* 1934(3): 110. 1934, *Manual of the Grasses of the West Indies* 331. 1936, *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 275. 1939, *Bulletin of the Imperial Bureau of Pastures and Forage Crops* 37: 10. 1947, *Cytologia* 19: 97-103. 1954, *Journal of Cytology and Genetics* 15: 51-57. 1980, *New Zealand Journal of Botany* 25: 346. 1987, *Bothalia* 18: 111-114. 1988, *Biblioth. Bot.* 138: 55. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Blumea* 41: 199. 1996.

in English: Natal grass, Natal red top, red top, red Natal grass, Holme's grass, blanketgrass, ruby grass

in French: herbe du Natal, herbe rose

in Spanish: pasto natal, yerba rosada

in Cameroon: ajarja

in Nigeria: aboni, abopi, bulule, eeran eye, funfun, gaw-daho, gulbin birai, ilosu, kelabul, mai farin kai, sokodaya, sokodayà, tsaraho

in South Africa: Natal blinkgras

in Brazil: capim gordura

in Thailand: ya dok chompu, ya dok chomphu, ya dok daeng

M. repens (Willd.) Zizka subsp. **grandiflora** (Hochst.) Zizka (*Ehrharta uniglumis* Fenzl ex Steud.; *Melinis affinis* Mez; *Melinis barbeyana* Mez; *Melinis bertlingii* Mez; *Melinis brevipila* (Hack.) Hack.; *Melinis ejubata* Mez; *Melinis grandiflora* (Hochst. ex A. Rich.) Hack.; *Melinis microstachya* (Balf.f.) Hack.; *Melinis mutica* Mez; *Melinis otaviensis* Mez; *Melinis pulchra* Mez; *Melinis rangei* Mez; *Melinis seineri* Mez; *Melinis villosa* (Parl.) Hack.; *Melinis wightii* (Nees) Hack.; *Monachyron grandiflorum* (Hochst. ex A. Rich.) Martelli; *Monachyron villosum* Parl.; *Panicum grandiflorum* (Hochst. ex A. Rich.) Baron; *Panicum insigne* Steud.; *Panicum megalanthum* Steud.; *Panicum setinsigne* Mez; *Rhynchelytrum brevipilum* (Hack.) Chiov.; *Rhynchelytrum costatum* Stapf & C.E. Hubb.; *Rhynchelytrum*

grandiflorum Hochst.; *Rhynchelytrum microstachyum* Balf.f.; *Rhynchelytrum microstachyum* var. *albicomum* Balf.f.; *Rhynchelytrum suberostratum* Stapf & C.E. Hubb.; *Rhynchelytrum villosum* (Parl.) Chiov.; *Rhynchelytrum wightii* Duthie; *Saccharum grandiflorum* (Hochst. ex A. Rich.) Walp.; *Tricholaena brevipila* Hack.; *Tricholaena grandiflora* Hochst. ex A. Rich.; *Tricholaena grandiflora* var. *glabrescens* Rendle; *Tricholaena microstachya* (Balf.f.) Durand & Schinz; *Tricholaena microstachya* var. *albicomum* (Balf.f.) Durand & Schinz; *Tricholaena monachyron* Oliv.; *Tricholaena rosea* var. *setosa* Peters; *Tricholaena ruficomma* (Hochst. ex Steud.) Hack.; *Tricholaena uniglumis* Durand & Schinz; *Tricholaena villosa* (Parl.) Durand & Schinz; *Tricholaena wightii* Arnold & Nees; *Tricholaena wightii* Arnold ex Nees; *Tricholaena wightii* Nees ex Lisboa; *Tricholaena wightii* Nees ex Steud.)

Africa, India. Annual, tufted, stoloniferous, spikelets usually glabrous, upper glume and lower lemma gibbous and beaked, common in sunny places, arid sites, dry areas, sandy soils, rocky hillsides, grassland and savannah woodland, see *Stazioni Sperimentali Agrarie Italiane* 378, 446. 1836, *An Introduction to the Natural System of Botany*, 2nd edition, 447. 1836, *Linnaea* 16(2): 218. 1842, *Flora* 27: 249. 1844, *Niger Flora* 191. 1849, *Tentamen Florae Abyssinicae* ... 2: 445. 1850, *Annales Botanicae Systematicae* 3: 792. 1852, *Synopsis Plantarum Glumacearum* 1: 92, 93, 119. 1854, *Naturwissenschaftliche Reise nach Mossambique* ... 2: 561. 1864, *Proc. Bot. Soc. Edinburgh* 12: 97, 411. 1884, Ugolino Martelli (1860-1934), *Florula Bogosensis*. Enumerazione delle piante dei Bogos [Ethiopia] raccolte dal Dott. O. Beccari [1843-1920] nell'anno 1870 ... Firenze 1886, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 143. 1888, *Fodd. Grasses N. India* 21. 1888, *Journal of the Bombay Natural History Society* 5: 347. 1890, *Conspectus Florae Africae* 5: 770-771. 1894, *Hooker's Icones Plantarum* 24: t. 2374. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 196. 1899 and *Österreichische Botanische Zeitschrift* 51: 454, 464. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 133. 1904, *Revue Madagascar* 8: 836. 1906, *Annuario del Reale Istituto Botanico di Roma* 8: 310. 1907, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 195-197. 1921, *Flora of Tropical Africa* 9: 874, 879. 1930, *Bibliotheca Botanica* 138: 55, 60. 1988.

in East Africa: *duramo* (in Somalia)

M. repens (Willd.) Zizka subsp. ***maroccana*** (Maire & G. Samuelson) Zizka (*Tricholaena maroccana* Maire & G. Samuelson)

North Africa. See *Bull. Soc. Hist. Nat. Afr. Nord.* 29: 454. 1938, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 29A(11): 4. 1939, *Bibliotheca Botanica* 138: 55, 62. 1988.

M. repens (Willd.) Zizka subsp. ***nigricans*** (Mez) Zizka (*Melinis nigricans* Mez; *Rhynchelytrum nigricans* (Mez) Stapf & C.E. Hubb.)

Angola. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 198. 1921, *Flora of Tropical Africa* 9: 887. 1930, *Bibliotheca Botanica* 138: 64. 1988.

M. repens (Willd.) Zizka subsp. ***repens*** (*Erianthus repens* (Willd.) P. Beauv.; *Melinis argentea* Mez; *Melinis brachyrhynchus* Mez; *Melinis congesta* Mez; *Melinis nitens* Mez; *Melinis paupera* Mez; *Melinis repens* (Willd.) Zizka; *Melinis rosea* (Nees) Hack.; *Melinis stolzii* Mez; *Melinis ugandensis* Mez; *Monachyron roseum* (Nees) Parl.; *Monachyron tonsium* (Nees) Parl.; *Panicum braunii* Steud.; *Panicum braunii* Mez, nom. illeg., non *Panicum braunii* Steud.; *Panicum roseum* (Nees) Steud., nom. illeg., non *Panicum roseum* Willd. ex Spreng.; *Panicum roseum* f. *hirtum* Kuntze; *Panicum sphacelatum* (Benth.) Steud., nom. illeg., non *Panicum sphacelatum* Schumach.; *Panicum teneriffae* var. *rosea* (Nees) F.M. Bailey; *Panicum tonsium* (Nees) Steud.; *Rhynchelytrum dregeanum* Nees; *Rhynchelytrum gossweileri* Stapf & C.E. Hubb.; *Rhynchelytrum repens* (Willd.) C.E. Hubbard; *Rhynchelytrum repens* var. *roseum* (Nees) Chiov.; *Rhynchelytrum roseum* (Nees) Stapf & C.E. Hubb.; *Rhynchelytrum roseum* (Nees) Stapf & C.E. Hubb. ex Bews; *Rhynchelytrum stolzii* (Mez) Stapf & C.E. Hubb.; *Rhynchelytrum tonsium* (Nees) Lanza & Mattei; *Saccharum repens* Willd.; *Saccharum sphacelatum* (Benth.) Walp.; *Tricholaena dregeana* (Nees) T. Durand & Schinz; *Tricholaena fragilis* A. Braun; *Tricholaena grandiflora* var. *collina* Rendle; *Tricholaena repens* (Willd.) Hitchc.; *Tricholaena repens* var. *rosea* (Nees) Alberts.; *Tricholaena rosea* Nees; *Tricholaena rosea* var. *ruderalis* Vanderyst; *Tricholaena rosea* var. *sphacelata* A. Chev.; *Tricholaena sphacelata* Benth.; *Tricholaena tonsa* Nees; *Tricholaena tonsa* var. *submutica* Schweinfurth)

Tropical Africa, South Africa. Annual or perennial, ruderal, very variable, tufted, often rooting from the lower nodes, ligule hairy, open panicle, reddish hairy spikelets, upper glume and lower lemma gibbous and shortly awned, fairly palatable, low grazing value, ornamental, forming extensive stands, useful for erosion control, common on disturbed ground, open grassland, stony ridges, uncultivated lands, cultivation, forest margin, rocky hillsides, along roadsides, see *Species Plantarum. Editio quarta* 1: 322. 1797, *Essai d'une Nouvelle Agrostographie* 14, 54, 162, 177, t. 11, f. 4. 1812, *Cat. Sem. Hort. Vratisl.* 1835, *An Introduction to the Natural System of Botany*, 2nd edition, 447. 1836, *Linnaea* 11(Litt.-Ber.): 129. 1837, *Flora* 24: 275. 1841, *Niger Flora* 559. 1849, *Flora italiana, ossia descrizione delle piante* ... 1: 131. 1850, *Annales Botanicae Systematicae* 3: 793. 1852, *Synopsis Plantarum Glumacearum* 1: 92-93. 1854, *Queensland Grasses* 22. 1888, *Conspectus Florae Africae* 5: 769. 1894, *Bulletin de l'Herbier Boissier* 2: App.

2: 96. 1894, *Revisio Generum Plantarum* 3(3): 363. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 195. 1899 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 49. 1910, *Flore de l'Afrique Centrale Française, Énumération des Plantes Récoltées* 1: 366. 1913, *Bulletin agricole du Congo Belge* 11: 107, 108. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 5. 1921, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 197-200. 1921, *The World's Grasses* 223. 1929, *Flora of Tropical Africa* 9: 880, 885, 891. 1930, *Bulletin of Miscellaneous Information Kew* 1934(3): 110. 1934, *Manual of the Grasses of the West Indies* 331. 1936, *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 275. 1939, *Bulletin of the Imperial Bureau of Pastures and Forage Crops* 37: 10. 1947, *Cytologia* 19: 97-103. 1954, *Journal of Cytology and Genetics* 15: 51-57. 1980, *New Zealand Journal of Botany* 25: 346. 1987, *Bothalia* 18: 111-114. 1988, *Biblioth. Bot.* 138: 55. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Blumea* 41: 199. 1996.

in English: Natal grass, Natal red top

M. scabrida (K. Schum.) Hack. (*Rhynchelytrum scabridum* (K. Schum.) Chiov.; *Tricholaena scabrida* K. Schum.)

East Africa. Perennial, loosely tufted, upper glume awned, upper lemma awned, found in open habitats, open hillsides, see *Die Pflanzenwelt Ost-Afrikas* 104. 1895 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Annuario del Reale Istituto Botanico di Roma* 8: 310. 1908, *Flora of Tropical East Africa* 451-898. 1982, *Biblioth. Bot.* 138: 80. 1988.

M. subglabra Mez (*Melinis denudata* Mez; *Melinis merkeri* Mez; *Rhynchelytrum denudatum* (Mez) Stapf & C.E. Hubb.; *Rhynchelytrum eyesii* Stapf & C.E. Hubb.; *Rhynchelytrum merkeri* (Mez) Stapf & C.E. Hubb.; *Rhynchelytrum subglabrum* (Mez) Stapf & C.E. Hubb.) (the specific name after the German plant collector Moritz Merker, d. 1908; see I.H. Vegeter, *Index Herbariorum*. Part II (4), *Collectors M.* Regnum Vegetabile vol. 93. 1976)

East Africa, Malawi, Angola, Tanzania. Perennial, tufted, rhizomatous, thick rhizome, upper glume and lower lemma awned, found in shady areas, wet soil, near water, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 199-200. 1921, *Flora of Tropical Africa* 9: 886, 887, 889. 1930, *Biblioth. Bot.* 138: 67, 80. 1988.

M. tenuissima Stapf (*Melinis gracilis* Pilg.; *Melinis tenuissima* var. *abyssinica* Stapf)

Tropical Africa, Malawi. Perennial or annual, tufted, thin, slender, scrambling, leaf blades tapering to a point, sheaths rolled and hairy, ligule a ring of short hairs, auricles present, open and loose inflorescence, delicate ovate panicle,

spikelets 1-flowered and bisexual, lower floret sterile, smooth pedicels, 2 glumes, lower glume a minute scale, upper glume 5-nerved and minutely rough, white awn, very tiny lodicules, 3 stamens, feathery stigmas, found near water and riverbanks, bush, woodland, among tall grasses or shrubs, grassland, open ground, disturbed sites, arable grassland, see *Hooker's Icones Plantarum* 27: t. 2660. 1900, F.R. Rudolf Schlechter (1872-1925), *Kolonial-Wirtschaftliches Komitee. Westafrikanische Kautschuk-Expedition ... 1899/1900 ...* 268. Berlin 1900.

Melinum Link = *Melinum* Medik.

(Lamiaceae), *Zizania* L.

From the Greek *meline* "millet, Italian millet, *Panicum miliaceum*" (Herodotus) or a kind of *Setaria*; Latin *milium*, *ii* "millet" (Vergilius, Plinius and Marcus Terentius Varro), or from Greek *melinos* "yellowish."

Ehrhartoideae, Oryzeae, Zizaniinae, type *Melinum palustre* (L.) Link, see *Species Plantarum* 2: 991. 1753, *Mantissa Plantarum* 295. 1771, *Staatswirtsch. Vorlesungen der Churpfälzischen Phys.-ökon. Ges.* 1: 200. Mannheim 1791, Johann Heinrich Friedrich Link (1767-1851), *Handbuch zur Erkennung der nutzbarsten und am häufigsten vorkommenden Gewächse* 1: 96. 1829 and *Phytologia* 72: 6. 1992, *Sida* 17(3): 533-549. 1997, *Contributions from the United States National Herbarium* 39: 116-118. 2000.

Melocalamus Benth.

From the Greek *melon* "an apple" and *kalamos* "reed."

About 1-9 species, southern China, eastern Himalayas, Vietnam, northern Thailand, Assam to Bangladesh. Bambusoideae, Bambusoideae, Bambuseae, Bambusinae, perennial, sympodial, manifold branching, unarmed, climber, scrambling, scandent, arching, spreading, shrubby, leafy, woody, tufted to densely tufted, joint swollen, culm often zigzag, sheath persistent and hard to coriaceous, culm sheath white powdery when young, sheath blade broadly triangular, rhizomes pachymorph, leaves large, leaf auricles distinct, narrow ligule, leaf blades pseudopetiolate, plants bisexual, cluster of pseudospikelets at each node of a branch, spikelets 2-flowered, 2 glumes more or less equal, paleas 2-keeled, 3 lodicules, 6 stamens, ovary glabrous, 2-3 stigmas, fruit globose edible, fleshy pericarp, forest, lowland, evergreen forest, clearings, resembling *Dinochloa*, type *Melocalamus compactiflorus* (Kurz) Benth. & Hook.f., see *J. Linn. Soc. Bot. London* 19: 134. 1881, *Genera Plantarum* 3: 1095, 1212. 1883 and *Kew Bulletin* 1936: 251-254. 1936, *Acta Phytotax. Sin.* 30(2): 163-168. 1992, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. *The Bamboos* 5: 61-81. 1997.

Species

M. arrectus T.P. Yi (*Dinochloa bambusoides* Q.H. Dai)

China. Scandent or slanting, solid at the base, hollow the upper part, one side of branch with longitudinal grooves, young culm with whitish pubescence, a ring of thick white powder below each joint, sheath coriaceous shedding late, sheath auricles inconspicuous to indistinct, sheath ligule arcuate, sheath blade erect and triangular to ovate-triangular, used in weaving, see *Bamboo Species & Cultivation in Guangxi*. p. 9, f. 7. 1987, *Acta Botanica Yunnanica* 10(4): 440-441, f. 3. 1988, *Fl. Reipubl. Pop. Sin.* 9(1): 37. 1996.

M. compactiflorus (Kurz) Benth. & Hook.f. (*Dinochloa compactiflora* (Kurz) McClure; *Melocalamus compactiflorus* (Kurz) Bentham; *Pseudostachyum compactiflorum* Kurz; *Pseudostachyum glomeriflorum* Kurz)

Thailand, Myanmar, India, Bangladesh, China, Vietnam. Scrambling, evergreen, scandent, spreading, arching, climbing over tall trees, culms asymmetric and zigzag, densely tufted, arborescent, sheath hard and fragile, sheath auricles developed, sheath ligule almost truncate, large inflorescence on a leafless branch, interrupted panicle, clusters of pseudospikelets, 2 fertile florets and 1 empty terminal, 2 glumes 2-toothed, 3 lodicules long-ciliate, 6 stamens free, ovary glabrous, 2-3 stigmas plumose, used for making baskets, secondary forest, see *Journal of the Asiatic Society of Bengal* 42: 252. 1873, *Genera Plantarum* 3: 1212. 1883 and *Kew Bulletin* 1936: 253. 1936[1937].

in Bangladesh: lota bans

in India: bethus bans, kalibans, latha, lota, lotabans

in Thailand: bo, bu, buh, lai khrua, lai mong, phai hang chang, phai haang chaang, sai tan, sai tang, sai wan, waa boh, wa bo

in Vietnam: ca truc, tre lim

M. compactiflorus (Kurz) Benth. & Hook.f. var. **fimbriatus** (J.R. Xue & C.M. Hui) D.Z. Li & Z.H. Guo

China. Sheath hard and fragile, see *Acta Phytotaxonomica Sinica* 30(2): 167-168, f. 1, 5-9. 1992, *Acta Botanica Yunnanica* 23(2): 178, pl. 1. 2001.

M. elevatissimus Hsueh [also Xue] & T.P. Yi (*Dinochloa elevatissima* (J.R. Xue & T.P. Yi) Bennet)

China, Tibet. Scandent or slanting, pruinose below each joint, sheath coriaceous shedding late, sheath auricles lacking, sheath blade concave and pubescent, large leaves oblong-lanceolate and chartaceous, used in weaving, growing in hardwood forests, see *Journal of Bamboo Research* 2(1): 28-30, f. 1. 1983, *Van Vigyan* 27(2): 121. 1989 [Dehra Dun, India, Society of Indian Foresters].

M. fimbriatus Hsueh & C.M. Hui (*Melocalamus fimbriatus* J.R. Xue & C.M. Hui)

China. Scandent, nodes convex, manifold branching on each node, culm sheath caducous and coriaceous, sheath

auricles indistinct, sheath ligule distinct, sheath blade ovate lanceolate, 8-10 leaves on each twig, leaf auricle lacking, shoots edible, see *Acta Phytotaxonomica Sinica* 30(2): 167-168, f. 1, 5-9. 1992.

M. gracilis R.B. Majumdar (*Dinochloa elevatissima* (R.B. Majumdar) Bennet)

India. Auricles deciduous and nonfalcate, see *Fl. Ind. Enumerat.-Monocot.* 278. 1989, *Monogr. Bamboo* 82. 1993.

M. gracilis W.T. Lin

China. See *Journal South China Agricultural University* 14(3): 110-111, f. 1. 1993.

M. indicus R.B. Majumdar (*Dinochloa indica* (R.B. Majumdar) Bennet; *Melocalamus compactiflorus* K.C. Malick)

India, Assam, Manipur. Arching over the trees and hanging downward, evergreen, scandent, nodes with woody rings, culm sheaths deciduous, leaves twisted at the apex, spikelets 2-flowered, lower floret sterile and upper hermaphrodite, 2 glumes, lemmas ciliate on the margins, short paleas, 3 lodicules ciliate, 6 stamens, see *Bulletin of the Botanical Survey of India* 25(1-4): 236. 1983[1985], *Van Vigyan* 27(2): 121. 1989.

M. mastersii (Munro) R.B. Majumdar (*Arundarbor mastersii* (Munro) Kuntze; *Bambusa mastersii* Munro; *Dinochloa mastersii* (Munro) Majumdar)

India. Arching, scandent, see *Transactions of the Linnean Society of London* 26(1): 113. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Fl. Ind. Enumerat.-Monocot.* 278. 1989, *Monogr. Bamboo* 82. 1993.

M. ningmingensis Ohrnb. (*Melocalamus gracilis* W.T. Lin)

China. See *Journal South China Agricultural University* 14(3): 110-111, f. 1. 1993.

M. scandens Hsueh & C.M. Hui

Tropical south Asia, China. Scandent, manifold branching on node, culm sheath coriaceous and falling late, large sheath blade erect and ovate-lanceolate, 4-10 leaves lanceolate on each twig, used for weaving, mountains, valleys, see *Acta Phytotaxonomica Sinica* 30(2): 163, 166-167, f. 1, 1-4. 1992.

Melocanna Trin. = Beesha Kunth

From the Greek *melon* "an apple" and *kanna* "a reed, cane," referring to the fruit, a berry the size of an avocado.

About 1-3 species, tropical and subtropical, Asia, Indo-Malaysia, eastern India to Myanmar, Bangladesh. Bambusoideae, Bambusodae, Bambuseae, Melocanninae, perennial, woody, sympodial, arborescent, branched, unarmed, erect or nodding, shrubby or treelike, persistent, well-spaced, clumps open to very open, singly, thick-walled at the base, internodes white-waxy below the node, rhizomes

pachymorph, the flowering culms leafy, culms woody and persistent, many branches, leaves broad, auricles present or absent, culm sheaths often persistent and leathery, plants bisexual, flowering iterant, inflorescence paniculate, a single perfect flower, pseudospikelets secundly arranged, each pseudospikelet embraced by a spathe-like bract, 2 to 4 empty glumes awnless and pointed, lemma pungent, palea rounded and unkeeled, lodicules present, stamens 6 or 5-7, ovary appendage hollow, 3 feathery stigmas or 2-4, fruit pyriform with fleshy pericarp, planted species, charcoal of high absorbing power prepared from the plants, the culms contain abundant amounts of a secretion commonly known as *tabasheer* and used in medicine, type *Melocanna bambusoides* Trin., see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde 1820-1822, Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Clav. Agrostogr. Antiq.* 105, 397. 1822, *Allgemeine Naturgeschichte* 3(1): 422. 1841, *Deutsch. Fl.* 6: 6. 1846, *Synopsis Plantarum Glumacearum* 1: 332. 1854, *Flora van Nederlandsch Indië* 3: 418. 1855, *Catalogus plantarum quae in Horto botanico bogoriensi ...* 20. 1866, *Transactions of the Linnean Society of London* 26(1): 133-134. 1868, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 39(2): 89, t. 6, f. 1, 2, 29. 1870, *Forest Flora of British Burma* 2: 564. 1877, *Journal Linn. Soc., Bot.* 19: 31. 1881 and *Transactions of the Linnean Society* 6: 401-425. 1904, *Fieldiana, Botany* 24(2): 38-331. 1955, *Kew Bulletin* 2: 206. 1956, *Agriculture Handbook* 193: i-iii, 1-74. 1961, *Journal of the Bombay Natural History Society* 59: 696-697. 1962, *Bot. Zhurn.* 50: 1288-1304. 1965, *Bot. Zhurn.* 53: 1688-1703. 1968, *Ann. Bogor.* 5: 109-115. 1970, *Bulletin of the Botanical Survey of India* 22(1-4): 176. 1980, *Fl. Ind. Enumerat.-Monocot.* 281. 1989, *Indian Forester* 117(1): 68. 1991, *Flora Reipublicae Popularis Sinicae* 9(1): i-xxvi, 1-761. 1996, *Bamboos of the World* 324-325. 1999, *Contributions from the United States National Herbarium* 39: 71. 2000.

Species

M. arundina Parkinson (*Melocanna humilis* Kurz)

India, Assam, Myanmar. Evergreen, tufted, dark green, hollow, nodes thickened, very short culm sheaths rounded and inflated, leaves lanceolate to linear-lanceolate and obtuse at the base, leaf sheaths glabrous with long deciduous bristles at the mouth, culms used for fencing and construction purposes, see *Indian Forester* 61: 326. 1935.

M. baccifera (Roxb.) Kurz (*Bambusa baccifera* Roxb.; *Bee-sha baccifera* Kunth ex B.D. Jacks.; *Beesha baccifera* (Roxburgh) Kunth; *Beesha rheedii* Kunth; *Melocanna baccifera* (Roxb.) Kurz ex Skeels; *Melocanna baccifera* (Roxb.) Kurtz ex Skeels; *Melocanna bambusoides* Trinius; *Nastus baccifer* Roxb. ex Raspail; *Nastus baccifera* (Roxb.) Roxb. ex Raspail; *Ochlandra rheedii* (Kunth) Benth. & Hook.f. & Gamble)

Bangladesh, Myanmar, northeastern India, Sikkim. Evergreen, sympodial, culms erect and straight, strong, smooth, pendulous tips, nodes inconspicuous and not swollen, white ring below the nodes, branching from midculm upward, vigorously rhizomatous, elongated slender rhizome necks, internodes hollow, culm sheath deciduous or persistent, sheath auricles indistinct, sheath ligule very short, leaf sheaths glabrous, leaves long lanceolate or oblong lanceolate, along one side of the axis groups of pseudospikelets, 1 fertile floret and 1 abortive, 2-4 glumes shortly mucronate, ovary ovoid, recurved stigmas, large fruit berry-like, fruit shapes variable, fruits easily germinating often while still on the plant, widely cultivated in many Asian countries, flowers gregariously, aggressive and fast growing, forming diffuse and open clumps, eradication very difficult, durable culms for mat-making and construction, for making floats, baskets, very good pulp for paper, edible young shoots, edible fruits as famine food, grows on well watered and drained sandy clay loam, fertile loam, moist areas, dry sandy slopes, lower hill forests, sandy soils, alluvial soil, see Hendrik Adriaan van Rheede tot Draakestein (1637-1691), *Hortus Indicus Malabaricus*. [commentariis illustravit Johannes Commelinus] Amstelodami [Amsterdam] 1678-1703, *Hort. Bengal.* 25. 1814, *Plants of the Coast of Coromandel* 3: 37-38, t. 243. 1819, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 43. 1821, *Syn. Pl.* 1: 253. 1822, *Annales des Sciences Naturelles (Paris)* série I 5: 442. 1825, *Révision des Graminées* 1: 141. 1829, *Enum. Pl.* 2: 434. 1833, *Preliminary Report on the Forest and other Vegetation of Pegu* Appendix B: 94. 1875, *Index Kewensis* 1: 283. 1893, *Annals of the Royal Botanic Garden, Calcutta* 7: 121. 1896 and *Transactions of the Linnean Society, London* 6: 401-425. 1904, *The Indian Forester* 74: 122-130. 1948, *The Indian Forester* 114: 576-583, 637-649. 1988, *Edinburgh J. Bot.* 51: 27. 1994, *Botanical Journal of the Linnean Society* 143: 287-291. 2003.

in English: Terai bamboo, berry bamboo, muli bamboo, muli

in Bangladesh: muli, paiyya

in Bhutan: philim bans

in India: artem, arten, bajail, bish, mao, mau, mautak, metunga, moubi, muli, nali, tarai, turiah, wati, watrai, watri

in Myanmar: kayinwa, tabinwa

M. humilis Kurz (*Arundarbor cratium* Rumph. ex Trin.; *Arundarbor cratium* Rumph.; *Arundo fax* Lour.; *Bambusa fax* (Lour.) Poir.; *Bambusa humilis* Rchb. ex Rupr.; *Bambusa surinamensis* Rupr.; *Beesha fax* (Lour.) Schult.f.; *Bee-sha humilis* Kunth; *Melocanna arundina* C.E. Parkinson; *Melocanna humilis* Roep. ex Trin.)

India. See *Flora Cochinchinensis* 1: 58. 1790, *Encyclopédie Méthodique. Botanique ... Supplément* 8: 704. 1808, *Clav.*

Agrostogr. Antiq. 105. 1822, *Systema Vegetabilium* 7: 1336. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 434. 1833, *Bambuseae* 49-50, t. 11, f. 49. 1839, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 42(2): 251. 1873, *Forest Flora of British Burma* 2: 569. 1877 and *Indian Forester* 61: 326. 1935.

in Thailand: fai kriap, o lo, phai kriap

Menstruocalamus Yi = *Monstruocalamus* Yi, *Sinobambusa* Makino ex Nakai, *Yuezhuea* Yi

A monotypic genus, China. Bambuseae, Arundinariinae, or Bambusoideae, Bambuseae, Shibataeinae, long internodes, 3-11 branches at each node, raceme or panicle terminal, 3 stamens, 2 stigmas, ornamental, hedges, type *Menstruocalamus sichuanensis* (T.P. Yi) T.P. Yi, see *Journal of the Arnold Arboretum* 6(3): 152. 1925, *Taxon* 6(7): 209. 1957, *Agriculture Handbook* 193: i-iii, 1-74. 1961, *Kew Bulletin* 44(2): 349-367. 1989, *Journal of Bamboo Research* 11(1): 38, 40, 41, f. 1. 1992, *A Compendium of Chinese Bamboo* 221. 1994, *Flora Reipublicae Popularis Sinicae* 9(1): i-xxvi, 1-761. 1996.

Species

M. sichuanensis (Yi) Yi (*Chimonobambusa sichuanensis* (Yi) Wen; *Sinobambusa sichuanensis* Yi; *Yuezhuea sichuanensis* (Yi) Yi)

China, Sichuan. Sympodial, sheath shedding late or persistent, purplish green, no sheath auricles, sheath ligule truncate, sheath blade linear-lanceolate, 3 or more branches on each node, leaves slender lanceolate, ornamental, grown as living fence, see *Bulletin of Botanical Research, Harbin* 2(4): 105-107, f. 4. 1982, *J. Bamboo Res.* 6(3): 33. 1987, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *J. Bamboo Res.* 11(1): 40-41, f. 1. 1992, *Compend. Chin. Bamboo* 221. 1994.

in China: yueyue-zhu shu, yueyue-zhu, yue yue zhu

Meoschium P. Beauv. = *Ischaemum* L.

Probably an anagram of *Ischoemum*.

Panicoideae, Andropogoneae, Ischaeminae, type *Meoschium aristatum* P. Beauv., see *Species Plantarum* 2: 1049. 1753, *Icones Stirpium Rariorum* 1, t. 1. 1791, *Exposition des Familles Naturelles* 1: 78. 1805, *Essai d'une Nouvelle Agrostographie* 111, 167. 1812, *Flora Indica; or Descriptions ...* 1: 322. 1820, *Novae Plantarum Species* 62. 1821, *Mantissa* 2: 435. 1824, *Annals and Magazine of Natural History* 1: 284. 1838, *The Botany of Captain Beechey's Voyage* 246. 1838, *Gramineae* 65-68. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 198-200. 1843, *Synopsis Plantarum Glumacearum* 1:

375. 1854, *Monographiae Phanerogamarum* 6: 203. 1889 and *N. Amer. Fl.* 17: 94. 1909, *Regnum Veg.* 127: 57. 1993.

Merathrepta Raf. = *Danthonia* DC.

Danthonioideae, Danthonieae, see *Fl. Franç.* 3: 32. 1805, *The Genera of North American Plants* 1: 71. 1818, Constantine Samuel Rafinesque (1783-1840), *Seringe Bull. Bot.* 1: 221. 1830, *Proceedings of the California Academy of Sciences* 2: 182. 1863, *Annual Report of the New York State Museum* 22(87): 55. 1869, *Geological Survey of California, Botany* 2: 294. 1880, *Bulletin of the Torrey Botanical Club* 10: 52. 1883, *Index Kewensis* 2: 211. 1894, *Botanical Gazette* 21: 133. 1896, *Erythea* 7: 103. 1899 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 5-7. 1901, *Contributions from the United States National Herbarium* 11: 122-123. 1906, *Muhlenbergia; A Journal of Botany* 5: 120. 1909, *Botanischer Jahresbericht* 37: 128. 1911, J.W. Vickery, "A revision of the Australian species of *Danthonia*." in *Contributions from the New South Wales National Herbarium*. 2(3): 249-325 (268). 1956, *Flora Mesoamericana* 6: 250-251. 1994, *Sendtnera* 3: 11-93. 1996, *Contributions from the United States National Herbarium* 46: 170-177, 288. 2003.

Meringurus Murb.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see *Acta Universitatis Lundensis* 36(1): 27. 1900, *Genera Graminum* 376. 1986.

Merisachne Steud. = *Triplasis* P. Beauv.

Greek *meris, meros* "part, portion, share" and *achne* "husk, glume."

Chloridoideae, Cynodonteae, type *Merisachne drummondii* Steud., see *Flora Caroliniana, secundum ...* 78. 1788, *Prodromus Florae Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 81, pl. 16, f. 10. 1812, *A Manual of the Botany of the Northern United States* 589. 1848, *Synopsis Plantarum Glumacearum* 1: 117. 1854 [1855], *Flora of the Southern United States* 560. 1860, *Die Natürlichen Pflanzenfamilien* 2(2): 68. 1887 and *Contributions from the United States National Herbarium* 41: 141, 230-231. 2001.

Merostachys Sprengel = *Brasilocalamus* Nakai, *Merostachys* Nakai (Crassulaceae)

Greek *meris, meros* "part, portion, share" and *stachys* "spike."

About 40-46 species, Argentina to Guatemala, mainly Brazil. Bambusoideae, Bambusodae, Bambuseae, Arthrostylidiinae, perennial, erect, scrambler, scandent or not in upper portion, clambering, more or less arching, persistent, branched, leafy, unarmed, sympodial, tree or shrub, woody, clump forming, at each node multiple branches from flat triangular plate, blade of culm-sheath constricted at base, ligule an unfringed membrane, plants bisexual, inflorescence spatheate, dense unilateral raceme or a single spike, spikelets single or in triplets and sessile or subsessile, bracts at the base of the lowest spikelets, 2 or 1 glumes per spikelet, lemma and palea tough, 3 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas hispid to plumose, found in forest, rain forest, coastal forest, forest shade, forest slopes, sandy soil, closely related to *Rhipidocladum*, type *Merostachys speciosa* Spreng., see *Systema Vegetabilium* 1: 132, 249, f. 37b-n. 1824 and *Journal of Japanese Botany* 9(1): 10. 1933, *Botanical Magazine* (Tokyo) 49: 74. 1935, *Fieldiana, Botany* 24(2): 38-331. 1955, *Flora Illustrada Catarinense* 1(Gram.-Supl.): 1-78. 1967, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Novon* 8(4): 408-428. 1988, *Novon* 2(2): 81-110. 1992 [New taxa and nomenclatural combinations of Mesoamerican grasses (Poaceae)], *Flora Mesoamericana* 6: 201-202. 1994, *Novon* 7(3): 285-307. 1997 [Twelve new species of *Merostachys* (Poaceae: Bambusoideae: Bambuseae) from Brazil], Emmet J. Judziewicz et al., *American Bamboos*. 181-185. Smithsonian Institution Press, Washington and London 1999, *Contributions from the United States National Herbarium* 39: 71-75. 2000.

Species

M. sp.

in Brazil: taquara

M. abadiana Send.

Brazil, Itatinga, Abadia. See *Novon* 5(1): 77, f. 1. 1995.

M. annulifera Send.

Brazil. Erect, robust, solid, clambering over other plants, densely clumped, much-branched, thick- or thin-walled, pubescent below the nodes, culm leaves caducous, foliage blades pendent, see *Novon* 7(3): 286, f. 1. 1997.

M. argentea Send.

Brazil. Leafy, forest slopes, see *Novon* 7(3): 287, f. 2. 1997.

M. argyronema Lindm.

Brazil. See *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 22, t. 15. 1900, *Fieldiana, Botany* 24(2): 38-331. 1955, *Smithsonian Contributions to Botany* 9: 1-148. 1973.

M. bifurcata Send.

Brazil. Erect, climbing, thin- or thick-walled, branched, clumped, shady forest, see *Novon* 7(3): 290, f. 3. 1997.

M. bradei Pilg. (*Merostachys pluriflora* Munro ex E.G. Camus) (named for German-born botanist Alexander Curt Brade, 1881-1971, botanical collector in Brazil and Costa Rica. See "Relatório da excursão à Serra da Bocaina, no Estado de São Paulo, realizada pelo naturalista A.C. Brade, de 18 de Abril a 24 de Maio de 1951." *Rodriguésia* xxvi. Rio de Janeiro 1951; "Especies novas de plantas do Estado do Rio de Janeiro." *Arch. Mus. Nac.* xxxiv. Rio de Janeiro 1932; "Excursão à Serra do Caparaó." *Rodriguésia* vi, xv. Rio de Janeiro 1942; "Relatório de uma excursão ao município de Passa Quatro, Estado de Minas Gerais." *Rodriguesia* 22-23. Rio de Janeiro 1948-1949; "A Flora do Parque Nacional de Itatiaia." *Bol. Parq. Nac. Itatiaia* no. 5, 1956; P.G. Windisch, "On the itineraries of Alfred and Alexander Curt Brade in Costa Rica." *Amer. Fern J.* 90: 108-109. 2000; J.H. Barnhart, *Biographical notes upon botanists*. 1: 237. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 49. 1972; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 701. Stuttgart 1993; "Contribuição ao conhecimento das espécies brasileiras do gênero *Schizaea*, com especial referência às espécies do Brasil austral." *Bradea* 1: 285-295. 1972; *Bol. Mus. Bot. Munic.* 17: 1-2. 1974; *Bradea* 1: 468-469. 1974; *Brittonia* 29: 197. 1977; *Bradea* 2: 318. 1979; *Bradea* 5: 69. 1988; *Bradleya* 13: 61. 1995; *Novon* 8: 296. 1998)

Brazil. See *Les Bambusées* 1: 77. 1913, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(91): 114. 1927, *Fl. Illustr. Catarin.* 1(GRAM-Supl.): 68. 1967.

M. brevigluma Send.

Brazil. See *Kew Bulletin* 56(3): 629-630, f. 2. 2001.

M. brevispica Munro

Peru. See *Transactions of the Linnean Society of London* 26(1): 49. 1868 and *Contributions from the U.S. National Herbarium* 24(8): 291-556. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Ruizia* 13: 1-480. 1993.

M. burchellii Munro (*Merostachys burchellii* Dutra; *Merostachys clausenii* var. *mollior* Döll)

Brazil. See *Transactions of the Linnean Society of London* 26(1): 48, 51. 1868, *Flora Brasiliensis* 2(3): 214. 1880 and *Revista Sudamericana de Botánica* 5: 151. 1938.

M. burmanii Send. (named for Alasdair Graham Burman, b. 1942, plant collector in Brazil with T.S. Filgueiras, see *Kew Bulletin* 35: 297. 1980)

Brazil. See *Novon* 2(2): 111-113. 1992 [*Merostachys burmanii* (Poaceae: Bambusoideae: Bambuseae), a new species from Brazil].

M. calderoniana Send.

Brazil. Sandy soil, see *Novon* 7(3): 290, f. 4. 1997.

M. caucaiana Send.

Brazil, Cotia, Caucaia. See *Novon* 5(1): 80, f. 2. 1995.

M. ciliata McClure & L.B. Sm.

Brazil. See *Flora Illustrada Catarinense* 1(Gram.-Supl.): 71, t. 21d-h. 1967, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Flora Illustrada Catarinense* 1(Gram.): 1-435. 1981.

M. clausenii Munro (also spelled *clausenii*) (*Merostachys clausenii* Munro var. *mollior* Döll)

Brazil. Erect, arching, leafy, open forest, see *Transactions of the Linnean Society of London* 26(1): 48. 1868, *Flora Brasiliensis* 2(3B): 161-242, t. 44-58. 1880 and *Smithsonian Contributions to Botany* 9: 1-148. 1973.

M. clausenii Munro var. *clausenii*

Brazil. See *Transactions of the Linnean Society of London* 26(1): 48. 1868.

M. clausenii Munro var. *mollior* Döll (*Merostachys burchellii* Munro)

Brazil. See *Transactions of the Linnean Society of London* 26(1): 51. 1868, *Flora Brasiliensis* 2(3): 214. 1880.

M. exserta Munro

Brazil. See *Bambusées* 1: 74, t. 44A. 1913.

M. filgueirasii Send. (named for Tarciso S. Filgueiras, b. 1950, agrostologist, plant collector in Brazil)

Brazil. See *Novon* 5(1): 80, f. 3. 1995.

M. fimbriata Send.

Brazil. See *Novon* 7(3): 302, f. 11. 1997.

M. fischeriana Rupr. ex Döll

Brazil. Clambering, leaf sheaths fimbriate, leaf blades narrowly ovate to lanceolate oblong, stout spikelets lanceolate glabrous 2-ranked, lower glume ovate acuminate, upper glume ovate oblong mucronate, lemma ovate acute, forest, woodland, see *Flora Brasiliensis* 2(3): 215. 1880.

M. fistulosa Döll

Brazil. See *Flora Brasiliensis* 2(3): 209, t. 55. 1880.

M. glauca McClure & L.B. Sm.

Brazil. See *Flora Illustrada Catarinense* 1(Gram.-Supl.): 74-75, t. 12, f. n. 1967.

M. kleinii Send. (in honor of the Brazilian botanist Roberto Miquel (Miguel) Klein, born 1926, ecologist, his writings include "Árvores nativas da floresta subtropical do Alto Uruguai." *Sellowia*. 24(24): 9-62. Itajaí 1972, "Árvores nativas da Ilha de Santa Catarina." *Insula*, Boletim do Centro de Pesquisas e Estudos Botânicos. 3: 3-93, out. Florianópolis 1969, "Árvores nativas indicadas para o reflorestamento no sul do Brasil." *Sellowia*. 18: 29-40. Itajaí 1966, "Contribuição à identificação de árvores nativas nas

florestas no sul do Brasil." *Silvicultura em São Paulo*. 16A pt. 1: 421-440. São Paulo 1982, "Ecologia da flora e vegetação do Vale do Itajaí." *Sellowia*. 31(31): 1-164, dez. Itajaí 1979 and "Observações e considerações sobre a vegetação do Planalto Nordeste Catarinense." *Sellowia*. 15(15): 39-56, dez. Itajaí 1963)

Brazil. See *Novon* 5(1): 84, f. 5. 1995.

M. kunthii Rupr. (*Merostachys speciosa* Spreng.) (after the German botanist Karl (Carl) Sigismund Kunth, 1788-1850, studied botany under Willdenow at University of Berlin, acquainted with Alexander von Humboldt (1769-1859), from 1829 professor of botany at the University of Berlin and head of Berlin Botanical Garden, among his many works are *Flora berolinensis*. Berolini [Berlin] 1813, *Révision des graminées*. [Illustrated by Eulalie Delile] Paris 1829-1834 and *Synopsis plantarum*. Parisii 1822-1825 [1826]. See Ludolf K. Adelbert von Chamisso, *Annotationes quaedam ad floram berolinensem C.S. Kunthii*. [Berlin] 1815; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; J.H. Barnhart, *Biographical notes upon botanists*. 2: 327. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 223. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Mea Allan, *The Hookers of Kew*. 68. London 1967; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 181. 1947; F.A. Stafleu, in *D.S.B.* 15: 267-268. 1981)

Brazil. See *Systema Vegetabilium* 2: 249, f. 37b-n. 1825, *Révision des Graminées* 1: 139. 1829, *Bambuseae* 37, t. 10, f. 30. 1839.

M. lanata Send.

Brazil. Sandy places, forest, see *Novon* 7(3): 292, f. 5. 1997.

M. latifolia R.W. Pohl (*Bambusa vulgaris* Schrad. ex J.C. Wendl.; *Chusquea simpliciflora* Munro; *Guadua amplexifolia* J. Presl)

Guatemala, Nicaragua, Honduras. Herbaceous, erect or scandent, branched at the nodes, clumped, shady forest, understory, dense woods, see *Collectio Plantarum* 2: 26, t. 47. 1808, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Synopsis Plantarum* 1: 254. 1822, *Reliquiae Haenkeanae* 1(4-5): 256. 1830, *Systema Vegetabilium* 7(2): 1348. 1830, *Transactions of the Linnean Society of London* 26(1): 54, t. 2. 1868, *Revisio Generum Plantarum* 2: 760. 1891 and *Syst. Bot. Monogr.* 27: 89. 1989, *Journal of Zhejiang Forestry College* 8(1): 127-130. 1991, *Revista Biologia Trop.* 39: 121. 1991[1992], *Novon* 2(2): 88, f. 3. 1992.

in Nicaragua: carriso, carrizo

M. leptophylla Send.

Brazil. Erect, scandent, arching, densely clumped, much branched at the nodes, shady forest, see *Novon* 7(3): 295, f. 6. 1997.

M. magellanica Send. (after the Brazilian botanist José Carlos Reis de Magalhães, plant collector)

Brazil. See *Novon* 5(1): 86, f. 6. 1995.

M. magnispicula Send.

Brazil. See *Novon* 7(3): 296, f. 7. 1997.

M. maguireorum McClure (after the American botanist Bassett Maguire, 1904-1991, explorer, plant collector, from 1943 New York Botanical Garden, among his writings are "Guttiferae." in R.E. Schultes, "Plantae Austro-Americanae VII." *Bot. Mus. Leaflet* 15(2): 55-69. 1951, "Guttiferae." in B. Maguire, J.J. Wurdack and collaborators, "The Botany of the Guayana Highland-part IV(2)." *Mem. New York Bot. Gard.* 10(4): 21-32. 1961, "Rapateaceae." in B. Maguire, J.J. Wurdack and collaborators, "The Botany of the Guayana Highland-part VI." *Mem. New York Bot. Gard.* 12(3): 69-102. 1965 and "Notes on the Clusiaceae — chiefly of Panama. III." *Phytologia* 39(2): 65-77. 1978, with Y.-C. Hung wrote "Styracaceae." in B. Maguire, J.J. Wurdack, & collaborators, "The Botany of the Guayana Highland-part X." *Mem. New York Bot. Gard.* 29: 204-223. 1978, with R.E. Weaver, Jr., wrote "The neotropical genus *Tachia* (Gentianaceae)." *J. Arnold Arbor.* 56(1): 103-125. 1975, with J.A. Steyermark & D.G. Frodin wrote "Araliaceae." in B. Maguire, J.J. Wurdack, & collaborators, "The Botany of the Guayana Highland — part XII." *Mem. New York Bot. Gard.* 38: 46-84. 1984; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 436. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 249. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 279. 1973; J. Ewan, editor, *A Short History of Botany in the United States*. 22. 1969; Laurence J. Dorr, "In Memoriam. John J. Wurdack, 1921-1998." in *Plant Science Bulletin*. 44(2): 41. Summer 1998)

Venezuela. Clumped, shady forest, rainforest, see *Memoirs of the New York Botanical Garden* 10(5): 5. 1964.

M. medullosa Send.

Brazil. Arching, robust, clumped, solid, thick-walled, forest, slopes, see *Novon* 7(3): 298, f. 8. 1997.

M. multiramea Hack. (*Merostachys anomala* Dutra; *Merostachys clausenii* var. *mollior* Döll)

Brazil. See *Transactions of the Linnean Society of London* 26(1): 48. 1868, *Flora Brasiliensis* 2(3): 214. 1880 and *Repertorium Specierum Novarum Regni Vegetabilis* 7(149-151): 326. 1909, *Revista Sudamericana de Botánica* 5(5-6): 151, f. 3. 1938, *Edinburgh Journal of Botany* 48: 73-80. 1991, *Novon* 5(1): 76-96. 1995 [*Merostachys multiramea* (Poaceae: Bambusoideae: Bambuseae) and similar species from Brazil].

M. neesii Rupr. (*Merostachys speciosa* sensu Nees, non sensu Spreng.)

Brazil. See *Bambuseae* 37, t. 10, f. 31. 1839.

M. pauciflora Swallen (*Merostachys petiolata* Döll)

Belize. See *Flora Brasiliensis* 2(3): 216. 1880 and *American Midland Naturalist* 29(2): 469, f. 1. 1943, *Smithsonian Contributions to Botany* 9: 1-148. 1973.

M. petiolata Döll (*Merostachys pauciflora* Swallen)

Brazil. See *Flora Brasiliensis* 2(3): 216. 1880 and *American Midland Naturalist* 29(2): 469, f. 1. 1943, *Smithsonian Contributions to Botany* 9: 1-148. 1973.

M. pilifera Send.

Brazil. See *Novon* 5(1): 90, f. 8. 1995.

M. pluriflora Munro ex E.G. Camus (*Bambusa pubescens* Döll, nom. illeg., non *Bambusa pubescens* Carrière; *Brasilocalamus pubescens* Nakai; *Merostachys bradei* Pilg.)

Brazil. Spikelets of 2-10 fertile florets, see *Flora Brasiliensis* 2(3): 189, t. 51. 1880 and *Bambusées* 1: 77. 1913, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(91): 114. 1927, *Journal of Japanese Botany* 9(1): 10. 1933, *Fl. Illustr. Catarin.* 1(Gram.-Supl.): 68. 1967, *Smithsonian Contributions to Botany* 9: 1-148. 1973.

M. polyantha McClure

Brazil. Spikelets of 2-10 fertile florets, see *Smithsonian Contributions to Botany* 9: 91. 1973.

M. procerrima Send.

Brazil. Erect, arching, hanging, clumped, thin-walled, slender, climbing, leaning, forest, primary forest, shade, see *Novon* 7(3): 300, f. 9. 1997.

M. ramosissima Send.

Brazil. Erect, arching, clumped, forest, primary forest, shade, see *Novon* 7(3): 300, f. 10. 1997.

M. retrorsa McClure

Venezuela. See *Memoirs of the New York Botanical Garden* 10(5): 6. 1964.

M. riedeliana Rupr. ex Döll (for the German traveler Ludwig Riedel, 1790-1861, plant collector in Brazil; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 156. Boston 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 233. Oxford 1964; Stafleu and Cowan, *Taxonomic literature*. 4: 789-790. 1983)

Brazil. Forest, see *Flora Brasiliensis* 2(3): 213. 1880.

M. rondoniensis Send.

Brazil, Manaus, Rondonia. Thin-walled, forest, secondary forest, see *Novon* 7(3): 305, f. 12. 1997.

M. scandens Send.

Brazil. See *Novon* 5(1): 92, f. 9. 1995.

M. sellovii Munro

Paraguay. See *Transactions of the Linnean Society of London* 26(1): 51. 1868.

M. skvortzovii Send. (for Boris Vasilijevic Skvortzov, 1896-1980, diatomist, botanical collector in Manchuria; see A. Economou-Amilli (editor) *Proceedings of the 16th International Diatom Symposium*. University of Athens, Greece 2000; D.M. Williams and G. Reid, "A bibliography of the botanical work of Boris V. Skvortzov (1896-1980) with commentary on the publications concerning diatoms (Bacillariophyta)." *Bulletin of the Natural History Museum (Botany)* 31: 89-106. 2001; D.M. Williams and G. Reid, *The Phycologist* 58 (supplement): 10. 2001)

Brazil. See *Novon* 5(1): 94, f. 10. 1995.

M. sparsiflora Rupr.

Brazil. Leaf blades narrowly ovate to lanceolate and acuminate, spikelets slender lanceolate in 2 ranks, lower glume narrowly ovate acute to acuminate, upper glume narrowly ovate acuminate, lemma narrowly ovate acute, forest, see *Bambuseae* 37, t. 10, f. 32. 1839.

M. speciosa Spreng.

Brazil. See *Systema Vegetabilium, editio decima sexta* 2: 132, 249, f. 37b-n. 1825 [1824] and *Kew Bulletin* 56(3): 627-638. 2001 [*Merostachys* Spreng. (Poaceae, Bambusoideae, Bambuseae): a new species from Brazil and critical notes on "group *speciosa*"].

M. ternata Nees

Eastern Brazil. Erect, arching, leaning, scandent, clambering, leaf blades ovate to narrowly ovate asymmetric and acuminate, leaf sheaths strongly fimbriate, spikelets stout densely packed, lower glume ovate acuminate, upper glume ovate-oblong mucronate, lemma lanceolate acute, forest and disturbed forest, along roadsides, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 529. 1829.

M. vestita McClure & L.B. Sm.

Brazil. See *Flora Illustrada Catarinense* 1(Gram.-Supl.): 72-73, t. 12, f. i-j. 1967.

Merxmüllera Conert

After the German botanist Hermann Merxmüller, 1920-1988, among his writings are "Compositen-Studien I." *Mitt. Bot. Staatssamml. München* 1: 33-46. 1950 and *Prodromus einer Flora von Südwestafrika*. 1966-1972, with Wolfgang Engelhardt wrote [Was lebt in Tümpel, Bach und Weiher?] *The Young Specialist Looks at Pond-life*, etc. [Translated by Heather J. Fisher ... Edited and adapted by Roderick C. Fisher.] London 1964, with A. Schreiber & Peter Frederick Yeo wrote "Aster L." in *Flora Europaea*. 4: 112-116. 1976; see Gustav Hegi, [*Alpenflora*.] *Flora alpina*, etc. [Translated from the German edition revised by H. Merxmüller.]

Milano 1953; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 251. Cape Town 1981.

About 15-16 species, South and southwest Africa. Arundinoideae, Arundineae, Danthonieae, perennial, armed or unarmed, tuberous or not, tufted, herbaceous, unbranched, auricles absent, the sheaths form a bulbous structure below the soil surface, ligule a fringe of hairs, leaf blades usually pungent, plants bisexual, inflorescence racemose or paniculate, 2 subequal glumes 1-5-nerved, female-fertile lemmas awned, awn twisted, palea notched, 2 lodicules free and membranous. 3 stamens, ovary glabrous, 2 plumose stigmas, species of open habitats, often in mountains, slopes, sometimes included in *Rytidosperma* Steud. and *Danthonia* s.l., type *Merxmüllera davyi* (C.E. Hubb.) Conert, see *Senckenbergiana Biologica* 51(1-2): 129-133. 1970, *Senckenbergiana Biologica* 56(1-3): 145-152. 1975.

Species***M.* sp.**

in South Africa, Lesotho: moseha

M. ambalavaoensis (A. Camus) Conert (*Danthonia ambalavaoensis* A. Camus)

Africa. See *Bulletin de la Société Botanique de France* 107: 210. 1960, *Senckenbergiana Biologica* 51(1-2): 132. 1970.

M. arundinacea (Bergius) Conert (*Andropogon arundinaceus* Bergius; *Andropogon arundinaceus* (Roxb.) Voigt, nom. illeg., non *Andropogon arundinaceus* Bergius; *Andropogon arundinaceus* Heyne ex Hook.f., nom. illeg., non *Andropogon arundinaceus* Bergius; *Andropogon arundinaceus* Scop., nom. illeg., non *Andropogon arundinaceus* Bergius; *Andropogon arundinaceus* Willd., nom. illeg., non *Andropogon arundinaceus* Bergius; *Andropogon bergii* Roem. & Schult.; *Anthistiria arundinacea* Roxb.; *Avena elephantina* Thunb.; *Danthonia arundinacea* (Bergius) Schweick.; *Danthonia elephantina* (Thunb.) Nees)

South Africa. Perennial bunchgrass, tufted to densely tufted, tussocky, tall, reedlike, panicle contracted, glumes pubescent, lemma lobe bristly, lemma back hairy, on mountains, see *Descriptiones Plantarum ex Capite Bonae Spei, ...* 356. 1767, *Flora Carniolica, Editio Secunda* 274. 1772, *Prodromus Plantarum Capensium, ...* 23. 1794, *Species Plantarum* 4: 906. 1806, *Systema Vegetabilium* 2: 813. 1817, *Florae Africae Australioris Illustrationes Monographicae* 334. 1841, *Hort. Calcutt.* 706. 1845, *The Flora of British India* 7: 243. 1896 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(122): 197-198. 1938, *Senckenbergiana Biologica* 51: 132. 1970.

M. aureocephala (J.G. Anderson) Conert (*Danthonia aureocephala* J.G. Anderson)

South Africa. Perennial, tufted, panicle contracted, glumes golden-brown, lemma backs hairy, alpine grass, in

mountains, grassy slopes, see *Bothalia* 8: 170. 1964, *Senckenbergiana Biologica* 51: 132. 1970.

M. cincta (Nees) Conert (*Danthonia cincta* Nees)

South Africa. Perennial, tufted, reedlike, panicle dense and contracted, glumes 1-nerved, found in damp areas, sandy habitats, moist places, stream banks, mountain slopes, see *Florae Africae Australioris Illustrationes Monographicae* 332. 1841 and *Senckenbergiana Biologica* 51: 132. 1970.

M. cincta (Nees) Conert subsp. ***sericea*** N.P. Nigel

South Africa. Perennial, tussocky, sandy soil, see *Senckenbergiana Biologica* 51: 132. 1970, *South African Journal of Botany* 65(1): 105. 1999.

M. davyi (C.E. Hubb.) Conert (*Danthonia davyi* C.E. Hubb.) (after the British botanist Joseph Burt Davy (1870-1940), agrostologist, farmer, student of the flora of California, founder of the Pretoria National Herbarium, traveler, 1903 a Fellow of the Linnean Society, he wrote *A Manual of the Flowering Plants and Ferns of the Transvaal with Swaziland, South Africa*. London (Longmans, Green & Co.) 1926-1932, "The vernacular and botanical names of some South African plants." *Transv. Agric. J.* 2: 298-313. 1904, *Check-Lists of the Forest Trees and Shrubs of the British Empire*. Oxford 1935, and *The Classification of Tropical Woody Vegetation-Types*. Oxford 1935; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 122. London 1994; Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement III*. 271-274. 1995; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; Alain Campbell White & Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937; J.H. Barnhart, *Biographical notes upon botanists*. 1: 427. Boston 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964)

South Africa, Transvaal, Malawi. Perennial, wiry, tufted, tussocky, tough, forming large clumps, feathery, drooping leaves, dense panicle, glumes nerved, lemma lobes adnate to the central awn, used for making brushes, found in mountainous areas, open stream banks, rocky places, slopes, see *Flore Française ... Troisième Édition* 3: 32. 1805, *Systema Vegetabilium* 2: 690. 1817 and *Bulletin of Miscellaneous Information Kew* 1936: 501. 1936, *Kew Bulletin*, 1939: 645. 1940, *Senckenbergiana Biologica* 51: 132. 1970.

M. decora (Nees) Conert (*Danthonia decora* Nees; *Danthonia zeyheriana* Steud.; *Danthonia zeyheriana* var. *trichostachya* Stapf; *Danthonia zeyheriana* var. *zeyheriana* C.E. Hubb.)

South Africa. Perennial, tufted, culm bases bulbous and buried, old leaf sheaths persistent and woolly, panicle contracted, lemma backs hairy, growing in sandy soils, mountain slopes, see *Florae Africae Australioris Illustrationes Monographicae* 332. 1841, *Synopsis Plantarum Glumacearum* 1: 244. 1854, *Flora Capensis* 7: 522. 1899 and

Mitteilungen der Botanischen Staatssammlung München 10: 299-308. 1971.

M. disticha (Nees) Conert (*Danthonia disticha* Nees; *Rytidosperma disticha* (Nees) Cope; *Rytidosperma distichum* (Nees) Cope)

South Africa. Perennial bunchgrass, densely tufted, densely clumped, erect, unbranched, tough, wiry, mat-forming, ligule a ring of short hairs, leaf blades with sharp edges, leaves tough and filiform, leaf sheath usually glabrous, inflorescence a flattened spike or spike-like panicle, two rows of flattened spikelets, lemmas fringed along the margin, central awn geniculate, weed, unpalatable, very low grazing value, adapted to a wide range of habitats, coastal regions, montane bogs, deep soils, near streams, veld, marshes, slopes, open grassland, see *Florae Africae Australioris Illustrationes Monographicae* 335. 1841 and *Senckenbergiana Biologica* 51: 132. 1970, *Fl. Zambesiaca* 10(2): 9. 1999.

in English: wiry danthonia, mountain wire grass, copper wire grass

in South Africa: koperdraaddanthonia, koperdraadgras, bergkoperdraad, moseha, suurpol

M. drakensbergensis (Schweick.) Conert (also spelled *drakensbergensis*) (*Danthonia drakensbergensis* Schweick.)

South Africa, Natal Drakensberg. Perennial, tufted to densely tufted, clump forming, leaf blade very stiff and tightly folded, old leaf blades break off and two segments curl backwards, ligule an inconspicuous short membrane, panicle loosely contracted and interrupted, the very hard leaves are not grazed at all, used for making brooms and hats, handicrafts, ropes and mats, usually in stream banks, deep soil, seeps, high mountain grassveld, see *Senckenbergiana Biologica* 51: 132. 1970.

in English: broom grass

in South Africa: besemgras, molala-hlolo, moseha, mosea, moswa, mosua

M. dura (Stapf) Conert (*Danthonia brachyacme* Pilg.; *Danthonia dura* Stapf)

South Africa. Perennial bunchgrass, shortly rhizomatous, plant base not bulbous, panicle loosely contracted and nodding, lemma back glabrous, usually in sandy or stony soils, arid areas, see *Flora Capensis* 7: 527. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 44: 114. 1909, *Senckenbergiana Biologica* 51: 132. 1970, *Bothalia* 18: 111-114. 1988.

M. guillarmodiae Conert (*Merxmuellera guillarmodiae* Conert) (named for Amy Frances May Gordon Jacot Guillarmod (née Hean), 1911-1992, see Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 200. Cape Town 1981)

South Africa, Lesotho. Perennial, tufted, lemma pubescent, rocky areas, grassland, moist habitats, see *Senckenbergiana Biologica* 56: 145. 1975.

M. lupulina (Thunb.) Conert (*Avena lupulina* Thunb.; *Danthonia coronata* Trin.; *Danthonia lupulina* (Thunb.) P. Beauv. ex Roem. & Schult.)

South Africa. Perennial, tufted, culm bases bulbous and buried, leaf sheaths persistent and woolly, panicle contracted, found in sandy mountain slopes, see *Prodromus Plantarum Capensium*,... 23. 1794, *Systema Vegetabilium* 2: 690. 1817, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 70. 1830 and *Mitteilungen der Botanischen Staatssammlung München* 10: 306. 1971.

M. macowanii (Stapf) Conert (*Danthonia macowanii* Stapf) (after the British (b. Hull, Yorks) botanist Peter MacOwan, 1830-1909 (Uitenhage, C.P., S. Africa), professor of chemistry, Director of the Botanical Garden at Capetown 1881-1892, 1885 Fellow of the Linnean Society, Government Botanist 1892-1905, Secretary of the South Africa Botanical Exchange Society, among his writings are "Personalia of botanical collectors at the Cape." *Trans. S. Afr. Philos. Soc.* 4(1): xxx-liii. 1884-1886, "Notulae capenses." *J. Linn. Soc. Bot.* 10: 480-482. 1869, *Catalogue of South African Plants*. Grahamstown 1866, "New Cape plants." *J. Linn. Soc. Bot.* 25: 385-394. 1889, *The Collecting and Preserving of Botanical Specimens*. [Cape Town 1893] and *Report Upon the Botanic Gardens Government Herbarium, Cape Town, for the Year 1891*. Capetown 1892, with Harry Bolus wrote "Catalogue of printed books and papers relating to South Africa. Part I, Botany." in *Trans. S. Afr. Philos. Soc.* 2(3): 111-187. 1880-1881, "Novitates capenses: description of new plants from the Cape of Good Hope." *J. Linn. Soc. Bot.* 18: 390-397. 1881 and *The Olive at the Cape*. Wynberg 1897. See J.H. Verduyn den Boer, *Botanists at the Cape*. Cape Town and Stellenbosch 1929; Mia C. Karsten, *The Old Company's Garden at the Cape and Its Superintendents: Involving an Historical Account of Early Cape Botany*. Cape Town 1951; Gilbert Westacott Reynolds (1895-1967), *The Aloes of South Africa*. 57, 58, 65. Balkema, Rotterdam 1982; John Hutchinson (1844-1972), *A Botanist in Southern Africa*. 643-644. London 1946; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 240-242. Cape Town 1981; J.H. Barnhart, *Biographical notes upon botanists*. 2: 432. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 248. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 205. 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 278. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933;

A. White & B.L. Sloane, *The Stapelieae*. Pasadena 1937; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970).

South Africa. Perennial, tufted, erect, forming dense clumps, sheaths persistent, ligule a fringe of hairs, leaves tightly folded with age, inflorescence a long loosely contracted interrupted panicle, spikelets on short branches, lemma lobes adnate to central awn, the dried folded stiff leaves used for making food and grain baskets, beer strainers, hats and mats, hard leaves unpalatable, found in marshy areas, stream banks, alpine and subalpine regions, in mountain grassveld, pools, see *Flora Capensis* 7: 527. 1899 and *Senckenbergiana Biologica* 51: 132. 1970.

in South Africa: moseha

M. papposa (Nees) Conert (*Danthonia papposa* Nees)

South Africa. Perennial, rare, tufted, very long tufts of hairs on the lemmas, lemma hairy and pubescent, central awn geniculate, see *Florae Africae Australioris Illustrationes Monographicae* 333. 1841 and *Senckenbergiana Biologica* 51: 133. 1970.

M. rangei (Pilg.) Conert (*Danthonia rangei* Pilg.)

South Africa. Perennial, tufted, upper nodes black or dark, basal sheaths persistent, leaf blades cylindrical, panicle contracted, central awn geniculate, pasture, on dry sandy areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43: 386. 1909, *Senckenbergiana Biologica* 51: 133. 1970, *Bothalia* 18: 119-122. 1988, Melvin R. Duvall, Jeffrey D. Noll, & Alexandra H. Minn, "Phylogenetics of Paniceae (Poaceae)." *Am. J. Bot.* 88: 1988-1992. 2001.

M. rufa (Nees) Conert (*Avena lanata* Schrad., nom. illeg., non *Avena lanata* (L.) Koeler; *Danthonia lanata* (Schrad.) Schrad.; *Danthonia lanata* var. *lanata*; *Danthonia lanata* var. *major* Nees; *Danthonia macrocephala* Stapf; *Danthonia rufa* Nees)

South Africa. Perennial, tufted, base bulbous and buried, leaf sheaths persistent and woolly, panicle globose, spikelets densely clustered, central awn geniculate, on sandy soils, mountain slopes, burned veld, see *Göttingische gelehrte Anzeigen (unter der Aufsicht der Königl. Gesellschaft der Wissenschaften)* 3: 2075. 1821, *Mantissa* 2: 386. 1824, *Florae Africae Australioris Illustrationes Monographicae* 329-330. 1841, *Flora Capensis* 7: 522. 1899 and *Mitteilungen der Botanischen Staatssammlung München* 10: 306. 1971.

M. setacea N.P. Barker

South Africa. See *Bothalia* 21(1): 27, f. 1. 1991.

M. stereophylla (J.G. Anderson) Conert (*Danthonia stereophylla* J.G. Anderson)

South Africa. Perennial, tufted or densely tufted, ligule a short membrane, leaf blade tightly folded, very stiff leaves rigid and erect, contracted and shortly branched panicle, lemma backs glabrous, central awn geniculate and twisted, not grazed, common in alpine grasslands, see *Bothalia* 7: 419. 1960, *Senckenbergiana Biologica* 51: 133. 1970.

in South Africa: lesuwane

M. stricta (Schr.) Conert (*Avena hexandra* Steud.; *Chaetobromus fascicularis* Nees; *Chaetobromus strictus* (Schr.) Nees; *Danthonia fascicularis* (Nees) Steud.; *Danthonia stricta* Schrad.; *Pentameris stricta* (Schr.) Nees)

Lesotho, South Africa. Perennial bunchgrass, tufted to densely caespitose, erect, panicle loosely contracted and interrupted, lemma lobes bristly, useful for erosion control, found in a variety of habitats, rocky places, see *Mantissa* 2: 383. 1824, *Flora* 12(31): 486. 1829, *Linnaea* 7(3): 313. 1832, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 341-342. 1841, *Synopsis Plantarum Glumacearum* 1: 243. 1854 and *Senckenbergiana Biologica* 51: 129. 1970.

M. tsaratananensis (A. Camus) Conert (*Danthonia tsaratananensis* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 74: 692. 1927, *Senckenbergiana Biologica* 51: 133. 1970.

Mesosetum Steud. = *Bifaria* (Hack.) Kuntze, *Peniculus* Swallen

From the Greek *mesos* “in the middle, middle” and the Latin *saeta* (*seta*), *ae* “a bristle, hair.”

About 30-35 species, Mexico to Brazil, Central America, tropical South America. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, annual or perennial, herbaceous, tufted, stoloniferous, auricles absent, ligule fringed, plants bisexual, inflorescence of a solitary raceme slender and 1-sided, spikelets solitary arranged in 2 rows and often hairy along the nerves, lower floret male or sterile, upper floret hermaphrodite, 2 glumes unequal, lower glume awnless or awned, upper glume 3- 7-nerved, upper lemma acute to mucronate, palea 2-nerved, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, savannah, type *Mesosetum cayennense* Steud., see *Synopsis Plantarum Glumacearum* 1: 118. 1855 [1854], *Österreichische Botanische Zeitschrift* 47: 75. 1897, *Revisio Generum Plantarum* 3[3]: 359. 1898 and *Proceedings of the Biological Society of Washington* 24: 121, 123. 1911, *American Journal of Botany* 19: 581. 1932, *Brittonia* 2(4): 363-392. 1937 [The grass genus *Mesosetum*], *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 70. 1940, *Acta Amazonica* 19: 47-114. 1989[1990] [Revisão de *Mesosetum* Steudel (Gramineae):

Paniceae)], *Flora Mesoamericana* 6: 355. 1994, *Contributions from the United States National Herbarium* 46: 135, 288-292, 527. 2003.

Species

M. agropyroides Mez

Brazil, Bolivia. Perennial, caespitose, erect, leaf blades linear to linear-lanceolate pubescent, rigid racemes, spikelets villous, elliptic-lanceolate, lower glume acute, lower and upper glumes 5-nerved, lower lemma 5-nerved with a palea, moist savannahs, similar to *Mesosetum gibbosum* Renvoise & Filg. and *Mesosetum penicillatum* Mez, see *Repertorium Specierum Novarum Regni Vegetabilis* 15: 125. 1918.

M. alatum Filg. (*Mesosetum agropyroides* Mez)

Brazil. See *Repertorium Specierum Novarum Regni Vegetabilis* 15: 125. 1918, *Brittonia* 39(2): 306. 1987.

M. annuum Swallen (*Mesosetum multicaule* Swallen)

Brazil. Rocky places, wet sites, slopes, open areas, see *Brittonia* 2(4): 377-379. 1937.

M. ansatum (Trin.) Kuhl. (*Panicum ansatum* Trin.; *Panicum ansatum* var. *linearifolium* S. Moore; *Thrasya ansata* (Trin.) Pilg.)

Brazil. Rhachis winged, see *Species Graminum* 1828-1836, *Transactions of the Linnean Society of London, Botany* ser. 2, 4: 505. 1895 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 42-43, 90. 1922, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 69. 1940, *Acta Botanica Venezuelica* 14(4): 7-93. 1985[1987].

M. arenarium Swallen (*Mesosetum aequiglume* Swallen; *Mesosetum ansatum* (Trin.) Kuhl.)

Brazil. Sandy places, slopes, gravelly, see *Species Graminum* 1828-1836 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 42-43, 90. 1922, *Brittonia* 2(4): 380-382. 1937.

M. bifarium (Hack.) Chase (*Bifaria bifaria* (Hack.) Kuntze; *Bifaria caudiculata* (Hack.) Kuntze; *Mesosetum caudiculatum* (Hack.) Swallen; *Panicum bifarium* Hack.; *Panicum caudiculatum* Hack.)

Brazil. Lower glume awned, see *Österreichische Botanische Zeitschrift* 47: 76. 1897, *Revisio Generum Plantarum* 3(2): 359. 1898 and *Proceedings of the Biological Society of Washington* 24: 123. 1911, *Brittonia* 2(4): 369-370. 1937.

M. blakei Swallen (*Mesosetum tabascoense* Beetle) (to honor the American botanist Sidney Fay Blake, 1892-1959, bibliographer, traveler, correspondent of Degener and Fogg, among his writings are *New Plants from Guatemala and Honduras*. Washington 1922, *Native Names and Uses of Some Plants of Eastern Guatemala and Honduras*. Washington 1922 and *New Plants from Oaxaca*. Cambridge, Mass. 1918, with Alice Cary Atwood (1876-1947) wrote *Geographical Guide to Floras of the World*. Washington

1942; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 196. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 40. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 33. 1973; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; Frans A. Stafleu & Erik A. Menega, *Taxonomic literature. Supplement II*. 190-195. Königstein 1993; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Carol Green Wilson, *Alice Eastwood's Wonderland: The Adventures of a Botanist*. California Academy of Sciences, San Francisco 1955; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Guatemala, Mexico, Nicaragua. Perennial, erect, stoloniferous, medicinal, open areas, plains, see *Brittonia* 2(4): 390-391. 1937, *Phytologia* 35(3): 222. 1977.

in Nicaragua: walang

M. cayennense Steud. (*Mesosetum rottboellioides* (Kunth) Hitchc.; *Panicum rottboellioides* Kunth)

Guatemala, Brazil, Nicaragua. Perennial, tufted, erect, leaf blades linear, ligule ciliate, spikelets oblong-lanceolate sparsely pilose, lower glume blunt or emarginate, sandy places, similar to *Mesosetum rottboellioides* (Kunth) Hitchc., see *Nova Genera et Species Plantarum* 1: 96, t. 32. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 118. 1855 [1854] and *Contributions from the United States National Herbarium* 12(6): 211. 1909.

M. chaseae Luces (*Mesosetum cardonum* Luces; *Mesosetum cayennense* Steud.; *Mesosetum stoloniferum* Swallen)

Venezuela, Brazil. Rocky soil, slopes, see *Synopsis Plantarum Glumacearum* 1: 118. 1855 [1854] and *Journal of the Washington Academy of Sciences* 32(6): 160, f. 5. 1942, *Contributions from the United States National Herbarium* 29(9): 412. 1950, *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 19-20, f. 12. 1953.

M. chlorostachyum (Döll) Chase (*Mesosetum chaseae* Luces; *Mesosetum chlorostachyum* (Döll) Kuhlm., nom. illeg., non *Mesosetum chlorostachyum* (Döll) Chase; *Panicum chlorostachyum* Döll)

Brazil. Perennial or annual, tufted, see *Flora Brasiliensis* 2(2): 173, t. 28a. 1877 and *Proceedings of the Biological Society of Washington* 24: 122. 1911, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 42-43, 90. 1922, *Journal of the Washington Academy of Sciences* 32(6): 160, f. 5. 1942, *Acta Amaz.* 19: 77. 1989.

M. comatum Swallen

Argentina. See *Journal of the Washington Academy of Sciences* 30(5): 215. 1940.

M. compressum Swallen (*Mesosetum chlorostachyum* (Döll) Chase)

Brazil. See *Flora Brasiliensis* 2(2): 173, t. 28a. 1877 and *Proceedings of the Biological Society of Washington* 24: 122. 1911, *Brittonia* 2(4): 367-369, f. 1. 1937.

M. elytrochaetum (Hack.) Swallen (*Bifaria elytrochaeta* (Hack.) Kuntze; *Mesosetum compressum* Swallen; *Panicum elytrochaetum* Hack.)

Brazil. See *Flora Brasiliensis* 2(2): 173, t. 28a. 1877, *Österreichische Botanische Zeitschrift* 47: 77. 1897, *Revisio Generum Plantarum* 3(2): 359. 1898 and *Proceedings of the Biological Society of Washington* 24: 122. 1911, *Brittonia* 2(4): 367-370, f. 1. 1937.

M. exaratum (Trin.) Chase (*Mesosetum elytrochaetum* (Hack.) Swallen; *Mesosetum exaratum* (Trin.) Kuhlm., nom. illeg., non *Mesosetum exaratum* (Trin.) Chase; *Panicum exaratum* Trin.)

Brazil. See *De Graminibus Paniceis* 160. 1826, *Flora Brasiliensis* 2(2): 173, t. 28a. 1877, *Österreichische Botanische Zeitschrift* 47: 77. 1897, *Revisio Generum Plantarum* 3(2): 359. 1898 and *Proceedings of the Biological Society of Washington* 24: 121-122. 1911, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 42-43, 90. 1922, *Brittonia* 2(4): 367-370, f. 1. 1937, *Acta Amazonica* 19: 47-114. 1989[1990].

M. ferrugineum (Trin.) Chase (*Mesosetum eriochrysoides* (Nees) Kuhlm.; *Mesosetum exaratum* (Trin.) Chase; *Mesosetum tenue* Renvoize & Filg.; *Panicum eriochrysoides* Nees; *Panicum ferrugineum* Trin.)

Central and southern Brazil. Perennial, slender, shortly rhizomatous, leaf sheaths densely packed, leaf blades linear or linear-lanceolate pilose pungent, spikelets densely hairy ferruginous, upper glume acute or acuminate, upper lemma and palea lanceolate, cerrado, see *De Graminibus Paniceis* 159-160. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 103. 1829 and *Proceedings of the Biological Society of Washington* 24: 121-122. 1911, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 42, 90. 1922, *Kew Bulletin* 39(1): 180. 1984.

in Brazil: grama

M. filifolium F.T. Hubb. (*Mesosetum angustifolium* (Swallen) Swallen; *Peniculus angustifolius* Swallen)

British Honduras, Venezuela. Erect, clumped, savannah, slopes, dry rocky slopes, grassland, sandy places, open areas, see *Synopsis Plantarum Glumacearum* 1: 118. 1855 [1854] and *Proceedings of the American Academy of Arts and Sciences* 49(8): 494. 1913, *American Journal of Botany*

19(7): 581, f. 1. 1932, *Journal of the Washington Academy of Sciences* 23(10): 460. 1933.

M. gibbosum Renvoize & Filg. (*Mesosetum ferrugineum* (Trin.) Chase)

Brazil. Perennial, knotty base, rhizomatous, leaf blades linear pungent, spikelets densely pilose, upper glume ovate, cerrado, see *De Graminibus Paniceis* 159. 1826 and *Proceedings of the Biological Society of Washington* 24: 122. 1911, *Kew Bulletin* 39(1): 181. 1984.

M. loliiforme (Hochst. ex Steud.) Chase (*Mesosetum acuminatum* Swallen; *Mesosetum altum* Swallen; *Mesosetum curtifolium* Swallen; *Mesosetum elongatum* Mez; *Mesosetum gibbosum* Renvoize & Filg.; *Mesosetum latifolium* Swallen; *Mesosetum loliiforme* (Steud.) Chase; *Mesosetum longifolium* Swallen; *Mesosetum molle* Swallen; *Mesosetum pubescens* Swallen; *Mesosetum sclerochloa* (Trin.) Hitchc.; *Mesosetum tenuifolium* Swallen; *Panicum loliiforme* Hochst. ex Steud.)

West Indies to Brazil, Venezuela. Perennial or short-lived perennial, prostrate, decumbent at base, sparsely or strongly stoloniferous or tufted, stolons absent or present, leaf blades linear to linear-lanceolate, leaves pilose or velvety pubescent, inflorescence a solitary 1-sided spike, slender spikes, spikelets ovate-lanceolate, lower glume keeled, upper glume triangular, lower lemma pubescent, upper lemma and palea glabrous, common in sandy soils, cerrado, savannah, gravel, wet sandy bank, grassland, open chapada, see *Species Graminum* 1828-1836, *Synopsis Plantarum Glumacearum* 1: 56, 118. 1853 [1855 or 1854] and *Contributions from the United States National Herbarium* 12(6): 212. 1909, *Botanical Gazette* 51: 302. 1911, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 9. 1921, *Brittonia* 2(4): 382-388. 1937, *Kew Bulletin* 39(1): 181. 1984.

M. longiaristatum Filg. (*Mesosetum loliiforme* (Hochst. ex Steud.) Chase)

Brazil. See *Synopsis Plantarum Glumacearum* 1: 56. 1853 and *Botanical Gazette* 51: 302. 1911, *Brittonia* 39(2): 308. 1987.

M. pappophorum (Nees) Kuhl. (*Mesosetum longiaristatum* Filg.; *Panicum pappophorum* Nees; *Panicum pappophorum* var. *tenerius* Döll)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 104. 1829, *Flora Brasiliensis* 2(2): 175. 1877 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922, *Brittonia* 39: 308. 1987, *Acta Amaz.* 19: 99. 1989.

M. penicillatum Mez (*Mesosetum elegans* Swallen; *Mesosetum pappophorum* (Nees) Kuhl.; *Panicum pappophorum* Nees; *Panicum pappophorum* var. *rigidus* Döll)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 104. 1829, *Flora Brasiliensis* 2(2): 175. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 124. 1918, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922, *Brittonia* 2(4): 375-376. 1937.

M. pittieri Hitchc.

Panama. See *Proceedings of the Biological Society of Washington* 40: 85. 1927, *Brittonia* 23(3): 293-324. 1971, *Ceiba* 19(1): 1-118. 1975, *Phytologia* 37(4): 317-407. 1977, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Flora Mesoamericana* 6: 355. 1994, *Las Gramíneas de México* 4: 1-342. 1995.

M. rottboellioides (Kunth) Hitchc. (*Mesosetum cayennense* Steud.; *Mesosetum discolor* Mez; *Mesosetum penicillatum* Mez; *Mesosetum rottboellioides* (Kunth) Kuhl., nom. illeg., non *Mesosetum rottboellioides* (Kunth) Hitchc.; *Panicum lolium* Nees; *Panicum rottboellioides* Kunth)

Venezuela, Ecuador, Peru, Bolivia, Brazil. Perennial, slender, herbaceous, leaf blades linear acuminate, shortly rhizomatous, spikelets lanceolate, lower glume acute, upper glume ovate acuminate, sandy areas, open grassland, along streamlets, savannah, drainage channels, see *Nova Genera et Species Plantarum* 1: 96, t. 32. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 102. 1829, *Synopsis Plantarum Glumacearum* 1: 118. 1855 [1854] and *Contributions from the United States National Herbarium* 12(6): 211. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 124. 1918, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 8. 1921, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927.

M. sclerochloa (Trin.) Hitchc. (*Mesosetum sclerochloa* (Trin.) Kuhl., nom. illeg., non *Mesosetum sclerochloa* (Trin.) Hitchc.; *Panicum sclerochloa* Trin.)

Brazil. See *Species Graminum* 1828-1836 and *Contributions from the United States National Herbarium* 12(6): 212. 1909, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922.

M. stoloniferum Swallen (*Mesosetum chaseae* Luces)

Guatemala. Erect, long stolons absent or present, stoloniferous, see *Journal of the Washington Academy of Sciences* 32(6): 160, f. 5. 1942, *Contributions from the United States National Herbarium* 29(9): 412. 1950.

M. wrightii Hitchc.

Cuba, the Caribbean. See *Contributions from the United States National Herbarium* 12(6): 211. 1909.

Metasasa W.T. Lin = *Acidosasa* C.D. Chu & C.S. Chao ex Keng f.

From the Greek *meta* "change, sharing, next to" plus *Sasa* Makino & Shib.

Monotypic or two species, China, Guangdong, Xinhui Xian. Bambusoideae, Bambusodae, Bambuseae, Arundinariinae, perennial, monopodial, unarmed, two branches at each node, culms woody and persistent, rhizomes leptomorph, flowering culms leafy, cylindrical, internodes cylindrical, auricles inconspicuous, culm sheaths deciduous, ligule present, plants bisexual, open inflorescence paniculate, spikelets solitary, 2 very unequal glumes, palea present, 3 free and membranous lodicules, 6 stamens, 2 or 3 stigmas, type *Metasasa carinata* W.T. Lin, see *Journal of Bamboo Research* 1(2): 31. 1982, *Acta Phytotaxonomica Sinica* 26(2): 144-146, f. 1. 1988, Chao Chi-Son & S. A. Renvoize, "A revision of the species described under *Arundinaria* (Gramineae) in southeast Asia and Africa." *Kew Bulletin* 44(2): 349-367. 1989, *Act. Phyt. Sin.* 29(6): 520, f. 1. 1991, *Taxon* 46(1): 106. 1997.

Species

M. albofarinosa W.T. Lin (*Acidosasa nanunica* (McClure) C.S. Chao & G.Y. Yang; *Indocalamus nanunicus* McClure; *Metasasa albo-farinosa* W.T. Lin)

China, Guangdong. Cylindrical culm, one side of branch flat, finely pubescent, no sheath auricles and cilia, sheath ligule short and small, sheath blade erect, 2 branches on each node, 2-4 leaves on each twig, leaves lanceolate to ovate lanceolate, see *Lingnan University Science Bulletin* 9: 25. 1940, *Guihaia* 10(1): 19-20, f. 4. 1990, *Acta Phytotaxonomica Sinica* 39(1): 39. 2001.

M. carinata W.T. Lin (*Acidosasa nanunica* (McClure) C.S. Chao & G.Y. Yang; *Arundinaria nanunica* (McClure) C.D. Chu & C.S. Chao; *Indocalamus nanunicus* McClure; *Pseudosasa nanunica* (McClure) Z.P. Wang & G.H. Ye)

China, Guangdong. Type species, culm sheath caducous, sheath auricles and cilia inconspicuous, sheath blade small lanceolate, 2 branches at each node erect or spreading, 4-5 leaves on each twig, see *Lingnan University Science Bulletin* 9: 25. 1940, *Journal of Nanjing Technological College of Forest Products* 1980(3): 26. 1980, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 97. 1981, *Acta Phytotaxonomica Sinica* 26(2): 145-146, f. 1. 1988, *Acta Phytotax. Sin.* 39(1): 39. 2001.

Metcalfia Conert = *Danthoniastrum* (J. Holub) Holub

After the British botanist Charles Russell Metcalfe, 1904-1991, plant anatomist, traveler, botanical explorer, plant collector in W. Cameroon (1937 with Hutchinson), Keeper

of the Jodrell Laboratory at Royal Botanic Gardens, Kew, his writings include "The wood structure of *Fokienia hodginsii* and certain related Coniferae." *Kew Bull.* 420-425. 1931, "The structure and botanical identity of some scented woods from the East." *Kew Bull. Misc. Inf.* 1933(1): 3-15, pl. 1-4. 1933, "The structure of some sandalwoods and their substitutes and of some other little known scented woods." *Bull. Misc. Inform.* 4: 165-195. 1935, "Some thoughts on the structure of bamboo leaves." *Bot. Mag.* (Tokyo) 69: 391-400. 1956 and *Anatomy of the Monocotyledons. Gramineae.* London 1960, with Laurence Chalk (1896-1979) wrote *Anatomy of the Dicotyledons.* London 1950 [with the assistance of Mary Margaret Chattaway (born 1899), Frederick Reginald Richardson (born 1915), C.L. Hare, & E.M. Slat-ter]. See J.H. Barnhart, *Biographical notes upon botanists.* 2: 480. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 265. 1972; J. Ewan, editor, *A Short History of Botany in the United States.* 52. New York and London 1969; F.N. Hepper & F. Neate, *Plant Collectors in West Africa.* 55. 1971; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 211. 1947; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* Philadelphia 1964.

One or two species, Mexico, Balkans, Caucasus. Pooideae, Poodae, Aveneae, or Stipoideae, Stipeae, or Arundinoideae, Danthoneae, or Pooideae, Stipeae, Duthieinae, perennial, herbaceous, tufted, auricles present, ligule unfringed, plants bisexual, inflorescence paniculate, narrow panicle, spikelets paired and several-flowered, 2 subequal or unequal glumes 7-9-nerved, lemmas awned and thinly coriaceous, palea 2-nerved 2-keeled, 3 free and membranous lodicules, 2 stamens, ovary hairy, 2 plumose stigmas, open areas, stony hills, sometimes confused with *Danthonia* and *Helictotrichon*, type *Metcalfia mexicana* (Scribn.) Conert, taxonomic confusion, see *Willdenowia* 2(3): 417-419. 1960, *Botanical Magazine* 77(909): 69-72. 1964, *Willdenowia* 4: 399. 1968, *Folia Geobotanica et Phytotaxonomica* 5: 435. 1970, *Kew Bulletin* 40(4): 727-729. 1984 [1985], *Contributions from the United States National Herbarium* 48: 450. 2003.

Species

M. compacta (Boiss. & Heldr.) Clayton (*Arrhenatherum compactum* (Boiss. & Heldr.) Potztal; *Avena compacta* Boiss. & Heldr.; *Avenastrum compactum* (Boiss. & Heldr.) Halácsy; *Danthonia compacta* (Boiss. & Heldr.) Grossh.; *Danthonia compacta* Boiss. & Heldr.; *Danthoniastrum compactum* (Boiss. & Heldr.) Holub; *Helictotrichon compactum* (Boiss. & Heldr.) Henrard)

Europe, Greece. See *Diagnoses plantarum orientalium novarum* 1(7): 122-123. 1846 and *Conspectus Florae Graecae* 3: 370. 1904, *Flora Kavkaz* (2nd edition) 1: 217. 1939, *Blumea* 3(3): 430. 1940, *Willdenowia* 4: 399. 1968, *Folia*

Geobotanica et Phytotaxonomica 5: 436. 1970, *Kew Bulletin* 40(4): 728. 1985, *Fitologija* 39: 72-77. 1991.

M. mexicana (Scribn.) Conert (*Danthonia mexicana* Scribn.)

Mexico. Fodder, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 301, t. 13, f. 7, 7a-7d. 1891 and *Willdenowia* 2: 417. 1960.

in Mexico: zacate avenaceo, zacate mexicano avenaceo.

Mezochloa Butzin = *Alloteropsis* J. Presl

After the German botanist Carl Christian Mez, 1866-1944, professor of botany at Breslau, from 1899 to 1910 professor of botany at Halle, from 1910 to 1935 Director of the Königsberg Botanical Garden, contributor to C.F.P. von Martius *Flora Brasiliensis* (Bromeliaceae), contributor to Engler *Das Pflanzenreich* (Bromeliaceae, Myrsinaceae, Theophrastaceae, etc.), founder and editor of *Botanisches Archiv*. Königsberg 1922-1938, among his writings are *Lauraceae americanae*. Berlin 1889, "Spicilegium Laureanum." *Arbeiten Königl. Bot. Gart. Breslau*. 1(1): 71-166. 1892, "Bromeliaceae." *Monogr. Phan.* 9: 1-990. 1896, "Novae species Panicearum. *Notizbl. Bot. Gart. Berlin-Dahlem*. 7: 45-78. 1917, "Additamenta monographica 1919. I. Bromeliaceae." *Repert. Spec. Nov. Regni Veg.* 16: 2-10. 1919, "Gramineae novae vel minus cognitae. IV. Stipeae cont." *Repert. Spec. Nov. Regni Veg.* 17: 204-214. 1921 and "Stylagrostis, novum graminearum genus." *Bot. Arch.* 1: 20. 1922. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 484. 1965; Hermann Hager, *Das Mikroskop und seine Anwendung*. Berlin 1908; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; E.D. Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 135. 1937 and *Contr. U.S. Natl. Herb.* 30: 212. 1947; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 266. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 291. 1973; August Weberbauer (1871-1948), *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 33. Leipzig 1911; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Panicoideae, Paniceae, Paspalinae, type *Mezochloa aubertii* (Mez) Butzin, see *Reliquiae Haenkeanae* 1(4-5): 343-344, t. 47. 1830, *Niger Flora* 558. 1849 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 134. 1904, *Flora of Tropical Africa* 9: 486. 1919, *Willdenowia* 4: 209, 211. 1966, *Contributions from the United States National Herbarium* 46: 16. 2003.

Mibora Adans. = *Chamagrostis* Borkh., *Knappia* Sm., *Libyella* Pamp., *Micagrostis* Juss., *Rothia* Borkh., *Sturmia* Hoppe

Two species, western Europe, Mediterranean, Eurasia. Pooideae, Poeae, Milliinae, or Pooideae, Poodae, Aveneae, annual, herbaceous, dwarf, tufted, leaves basal, auricles absent, narrow leaf blades, ligule an unfringed membrane, plants bisexual, inflorescence a unilateral raceme, spikelets shortly pedicellate solitary and flattened, 2 glumes membranous and obtuse, lemma rounded and obtuse, palea 2-nerved, 0-2 lodicules, 3 stamens, ovary glabrous, 2 stigmas pubescent, type *Mibora minima* (L.) Desv., open areas, sandy soils, damp places, see *Familles des Plantes* 2: 495. 1763, Moriz Balthasar Borkhausen (1760-1806), *Tentamen dispositionis plantarum Germaniae seminiferarum ...* 43. Darmstadt 1792, August Wilhelm Eberhard Christoph Wibel (1775-1813), *Primitiae Florae Werthemensis* 126. Ienae [Jena] 1799, *English Botany* 16: 1127. 1803, *Essai d'une Nouvelle Agrostographie* 167, pl. 8, f. 4. 1812, *Observations sur les Plantes des Environs d'Angers* 45. 1818, *Fundamenta Agrostographiae* 135. 1820, *Dictionnaire des Sciences Naturelles [Second édition]* 31: 17. 1824, *Syn. Mitteleur. Fl.* 2, 1: 118. 1899 and *Boll. Soc. Bot. Ital.* 1925: 151. 1925, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 220. 1941, *Preslia* 46(2): 168. 1974, *Taxon* 49(2): 243. 2000, *Contributions from the United States National Herbarium* 48: 232-233, 409, 450-451, 604, 651. 2003.

Species

M. maroccana (Maire) Maire (*Libyella maroccana* Maire)

North Africa. See *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 220. 1941.

M. minima (L.) Desv. (*Agrostis minima* L.; *Chamagrostis minima* Borkhausen; *Chamagrostis littorea* Samp.; *Chamagrostis minima* (L.) Berkhout ex Wibel; *Chamagrostis verna* (P. Beauv.) Sloboda; *Knappia agrostidea* Sm.; *Knappia verna* Trin.; *Knappia vernalis* Trin.; *Mibora verna* (Persoon) P. Beauv.; *Mibora verna* P. Beauv.; *Sturmia minima* Hoppe; *Sturmia minima* (L.) Hoppe; *Sturmia verna* Pers.)

Mediterranean. Annual, tufted, filiform and erect, leaf sheath flattened, ligule membranous, see *Species Plantarum* 63. 1753, *Primitiae Florae Werthemensis* 126. 1799, *Flora Britannica* 3: 1387. 1804, *Syn. Pl.* 1: 76. 1805, *Essai d'une Nouvelle Agrostographie* 167, pl. 8, f. 4. 1812, *Observations sur les Plantes des Environs d'Angers* 45. 1818, *Fundamenta Agrostographiae* 114, t. 8, f. 4. 1820, *Species Graminum* 1: t. 17. 1824 and *Annuario da Academia Polytechnica do Porto* 14: 145. 1921, *Preslia* 46(2): 168. 1974, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990.

in English: early sand-grass, sand bent

in French: mibora printanière, poil de chat, famine

Micagrostis Juss. = *Mibora* Adans.

Latin *mica* "grain, a little bit" plus *agrostis*.

Pooideae, Poaeae, Miliinae, see *Familles des Plantes* 2: 495. 1763, *Observations sur les Plantes des Environs d'Angers* 45. 1818, *Dictionnaire des Sciences Naturelles [Second édition]* 31: 17. 1824 and *Contributions from the United States National Herbarium* 48: 450-451. 2003.

Michelaria Dumort. = *Bromus* L.

Pooideae, Bromeae, type *Michelaria bromoidea* (Lej.) Dumort., see *Species Plantarum* 1: 76. 1753, *Observations sur les Graminées de la Flore Belgique* 77. 1823 [1824], *Annales des Sciences Naturelles (Paris)* 5: 439, 459, t. 10, f. 1. 1825, *Bull. Soc. Roy. Bot. Belg.* 2: 319. 1863, *Bulletin de la Société Botanique de Belgique* 6: 399. 1867, *Bulletin de la Société Botanique de Belgique* 7: 60. 1868, *Consp. Fl. Eur.* 824. 1882, *Plantae Europaeae* 1: 117. 1890 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Synopsis der mitteleuropäischen Flora* 2: 602. 1901, *List of British Plants*, 2nd edition 133. 1928, *Brittonia* 7: 421. 1952, *Bull. Soc. Roy. Bot. Belgique*, 7(1): 59-60. 1968, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 102: 447. 1981, *Taxon* 41: 559. 1992, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 22: 151. 1993, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191, 451. 2003.

Micraira F. Muell.

From the Greek *mikros* "small" and the genus *Aira* L., a small *Aira*.

A genus of 16 species, Australia, Western Australia, Northern Territory. Arundinoideae, Micraireae, or Danthonioideae, perennial, much-branched, herbaceous, mosslike, small, low, minute, densely packed and mat-forming, short internodes, auricles absent, leaf blades very small and very narrow, leaf sheaths completely covering the culms, spiral phyllotaxys, plants bisexual, open or contracted inflorescence spicate or paniculate or racemose, 2 glumes more or less equal, lemma muticous or mucronate, palea 2-keeled and many nerved or nerveless, lodicules absent, 2 stamens, ovary glabrous, 2 stigmas, these plants revive after dehydration, type *Micraira subulifolia* F. Muell., see Sir Ferdinand Jacob Heinrich von Mueller (1825-1896), *Fragmenta Phytographiae Australiae* 5: 208. 1866 and C.E. Hubbard, "Gramineae Australienses: III." *Kew Bull. Misc. Inf.* no. 3, 25-31. 1941, W.D. Clayton, "Studies in the Gramineae: XIII." *Kew Bulletin* 21(1): 99-110. 1967, D.F. Gaff and P.K. Latz, "The occurrence of resurrection plants in the Australian flora." *Aust. J. Bot.* 26: 485-492. 1978, M. Lazarides,

"*Micraira* F. Muell. (Poaceae, Micrairoideae)." *Brunonia* 2: 67-84. 1979, M. Lazarides, "New taxa of tropical Australian grasses (Poaceae)." *Nuytsia* 5(2): 290-296. 1984[1985], *New Phytologist* 156(3): 327-349. Dec 2002, *Flora of Australia* vol. 44B, Poaceae 3: 119-131. 2005.

Species***M. adamsii*** Lazarides

Australia. See *Brunonia* 2: 71. 1979.

M. brevis M.D. Barrett & R.L. Barrett

Western Australia.

M. compacta Lazarides

Australia. See *Brunonia* 2: 75. 1979.

M. dentata Lazarides

Australia. See *Brunonia* 2: 76. 1979.

M. dunlopü Lazarides (named after Clyde R. Dunlop, born in Brisbane on 26 Jan 1946, Conservation Commission of the Northern Territory, Darwin, DNA, see C.R. Dunlop & D.M.J.S. Bowman, *Atlas of the Vascular Plant Genera of the Northern Territory*. Aust. Flora & Fauna Series No. 6. Austral. Govt. Publ. Service, Canberra 1986; C.R. Dunlop, *Checklist of Vascular Plants of the Northern Territory*. Conserv. Comm. of N.T., Darwin 1990; G.L. Leach, C.R. Dunlop, M.J. Barritt, P.K. Latz, & N. Sammy, "Northern Territory plant species of conservation significance." *Conservation Commission of the Northern Territory, Northern Territory Botanical Bulletin* 13:1-65. 1992; G.J. Leach & C.R. Dunlop, *The Vegetation and Floristics of Kali Kuning River, Wetar Island, Indonesia*. 1994; C.R. Dunlop, G.L. Leach, & I.D. Cowie, *Flora of the Darwin Region*. vol. 2. Conservation Commission of the Northern Territory, Darwin 1995; C.R. Dunlop et al., *Checklist of Vascular Plants of the Northern Territory, Australia*. Conserv. Comm. of N.T., Darwin 1995)

Australia. Perennial, see *Nuytsia* 5(2): 291. 1984.

M. inserta Lazarides

Australia. Perennial, see *Nuytsia* 5(2): 292. 1984.

M. lazaridis L.G. Clark, J.F. Wendel & L.A. Craven

Western Australia.

M. multinervia Lazarides

Australia. Perennial, compact, vigorous, lemma many-nerved, see *Nuytsia* 5(2): 293. 1984.

M. pungens Lazarides

Australia. See *Brunonia* 2: 77. 1979.

M. spiciforma Lazarides

Australia. See *Nuytsia* 5(2): 294-295. 1984.

M. spinifera Lazarides

Australia. See *Brunonia* 2: 78. 1979.

M. subspicata Lazarides

Australia. See *Brunonia* 2: 79. 1979.

M. subulifolia F. Muell.

Australia, Queensland. See *Fragmenta Phytographiae Australiae* 5: 208. 1867 and *Proc. Roy. Soc. Queensl.* 74: 46. 1964.

M. tenuis Lazarides

Australia. See *Brunonia* 2: 81. 1979.

M. viscidula Lazarides

Australia. Perennial, viscid, glandular, see *Nuytsia* 5(2): 295-296. 1984.

in English: mountain couch

Microbambus K. Schumann = *Guaduelia* Franch., *Microbambusa* Franch.

From the Greek *mikros* "small" plus *bambos*, *bambusa*, etc.

Guaduelleae, type *Microbambus macrostachys* K. Schum., see *Genera Plantarum* 1: 236. 1789, *Bulletin Mensuel de la Société Linnéenne de Paris* 1: 676. 1887, *Die Natürlichen Pflanzenfamilien* 2(2): 95. 1887, *J. Bot. Paris* 3: 305. 1889, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 336, t. 4. 1897, *Bulletin Mensuel de la Société Linnéenne de Paris (sér. 2)* 3: 18. 1898 and *Wissenschaftlichen Ergebnisse der zweiten deutschen Zentral-Afrika-Expedition*, *Botanik* 2: 93. 1922, *Kew Bulletin* 16: 247-250. 1962, *Wageningen Agricultural University Papers* 92, 1(2): 1-557. 1992.

Microbriza Parodi ex Nicora & Rúgolo = *Briza* L., *Monostemon* Henr., *Poidium* Nees

From the Greek *mikros* "small" plus *Briza* L.

Two species, South America, Brazil to Argentina. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Brizinae, perennial, herbaceous, tufted, auricles absent, leaf sheaths fibrous when old or dead, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, panicle compact, clusters of 2-3-flowered spikelets ovate to rounded, 2 glumes more or less equal, lower glume 3-nerved, lemmas broadly ovate and coriaceous, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 1 stamen, ovary glabrous, 2 stigmas, exposed-cleistogamous or chasmogamous, in marshy soils, moist places, confused with *Isachne* R. Br., type *Microbriza poimorpha* (J. Presl) Parodi ex Nicora & Rúgolo, see *Species Plantarum* 1: 70. 1753, *An Introduction to the Natural System of Botany* 450. 1836, *Synopsis Plantarum Glumacearum* 1: 288. 1854 and *Mededeelingen van's Rijks-Herbarium Leiden* 40: 72. 1921, *Willdenowia. Beihefte* 8: 1-168. 1975, *Darwiniana* 23(1): 279-309. 1981, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 1-191. 1987, *Cladistics* 14: 287-

296. 1998, *Contributions from the United States National Herbarium* 48: 146-151, 451, 453, 582-583. 2003.

Species

M. brachychaete (Ekman) Parodi ex Nicora & Rúgolo (*Briza brachychaete* Ekman; *Poidium brachychaetum* (Ekman) Matthei)

Southern America. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 60, t. 4, f. 3. 1913, *Willdenowia. Beihefte* 8: 107. 1975, *Darwiniana* 23(1): 296. 1981.

M. poimorpha (Presl) Parodi ex Nicora & Rúgolo (*Briza hackelii* (Lindm.) Ekman; *Briza poaemorpha* (J. Presl) Henrard; *Briza poimorpha* (J. Presl) Henrard; *Isachne hackelii* Lindm.; *Isachne poaemorpha* (J. Presl) Mez ex Ekman; *Microbriza poaemorpha* (J. Presl) Parodi ex Nicora & Rúgolo; *Microbriza poimorpha* (J. Presl) Nicora & Rúgolo; *Monostemon tuberculatus* Balansa ex Henrard; *Panicum poaemorphum* J. Presl; *Poidium poaemorphum* (J. Presl) Matthei; *Poidium poimorphum* (J. Presl) Matthei)

South America. See *Reliquiae Haenkeanae* 1(4-5): 310. 1830 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 11, t. 5. 1900, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 61. 1913, *Mededeelingen van's Rijks-Herbarium* 40: 73. 1921, *Willdenowia. Beihefte* 8: 108. 1975, *Darwiniana* 23(1): 295. 1981.

Microcalamus Franchet = *Microcalamus* Gamble, *Neomicrocalamus* P.C. Keng

From the Greek *mikros* "small" and *kalamos* "reed," like a bamboo.

About 1-4 species, Cameroon, Gabon, Equatorial Guinea, Congo, tropical West Africa. Panicoideae, Panicodae, Paniceae, perennial, herbaceous, creeping, rhizomatous, stoloniferous, auricles absent, leaf blades lanceolate to ovate, ligule membranous more or less fringed to lacinate, plants bisexual, open or often contracted inflorescence paniculate, spikelets pedicellate laterally compressed, 2 glumes unequal to very unequal, upper lemma exerted lanceolate acute with a green crest, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade, rain-forest, forest, forest floor, forest shade, type *Microcalamus barbinodis* Franch., see *Journal de Botanique (Morot)* 3(17): 282, f. B. 1889, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 59(2): 207, pl. 7. 1890 and *Wageningen Agricultural University Papers* 92, 1(2): 1-557. 1992.

Species

M. barbinodis Franch. (*Microcalamus aspidistrula* Stapf; *Microcalamus glaber* Stapf)

Tropical Africa. Rhizomatous, see *Journal de Botanique (Morot)* 3(17): 282, f. B. 1889 and *Hooker's Icones Plantarum* t. 3070, f. . 1916, *Flora of Tropical Africa* 9: 493-494. 1919.

M. convallarioides Stapf

Africa, Gabon. See *Hooker's Icones Plantarum* t. 3070. 1916.

Microcalamus Gamble = *Microcalamus* Franch., *Neomicrocalamus* P.C. Keng, *Racemobambos* Holttum, *Thamnocalamus* Munro

Greek *mikros* and *kalamos* "reed."

Asia, India, Vietnam, China, Bhutan. Bambuseae, Racemobambosinae, type *Microcalamus prainii* Gamble, see *Flora Boreali-Americana* 1: 73. 1803, *Transactions of the Linnean Society of London* 26(1): 33, 34, 157. 1868, *Gen. Pl.* 3(2): 1208. 1883, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 2: 93. 1887, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 59(2): 207, pl. 7. 1890, *Annals of the Royal Botanic Garden, Calcutta.* 7: 21-22, pl. 19. 1896 and *Les Bambusées* 54. 1913, *The Gardens' Bulletin Singapore* 15: 268, 272. 1956 [also *Gardens' Bulletin, Straits Settlements*], *Phytomorphology* 1: 88 (1956, *Journal of Bamboo Research* 2(1): 38. 1983, *Journal of Bamboo Research* 2(2): 10. 1983, *Journal of Bamboo Research* 5(2): 13. 1986, *Kew Bulletin* 44(2): 349-367. 1989.

Microchlaena Spreng. = *Ehrharta* Thunb., *Microchlaena* Kuntze, *Microchlaena* Wallich ex R. Wight & Arnott (Sterculiaceae), *Microchlaena* Ching (Dryopteridaceae), *Microchlaena* R. Br., *Microchlaena* Endl. (Sterculiaceae)

Greek *mikros* "small" and *chlaena* "cloak."

Ehrhartoideae, Ehrharteae, see *Kongl. Vetenskaps Akademiens Handlingar* 40: 217, pl. 8. 1779, *Prodromus Florae Novae Hollandiae* 210. 1810, *A Numerical List of Dried Specimens* no. 1173. 1829, *Genera Plantarum* 1: 114. 1830, *Prodromus Florae Peninsulae Indiae Orientalis* 1: 71. 1834, *Icones Plantarum Indiae Orientalis* t. 882. 1840, *Genera Plantarum* 1004. 1840, *Nomenclator Botanicus. Editio secunda* 2: 783. 1841, *Bulletin de l'Herbier Boissier* 6(12): 965-966. 1898 and *Bulletin of the Fan Memorial Institute of Biology* 8(5): 322-327, pl. 6, f. 1. 1938, *Acta Phytotaxonomica Sinica* 9(1): 99. 1964.

Microchloa R. Br. = *Micropogon* Pfeiffer, *Rendlia* Chiov.

From the Greek *mikros* "small" and *chloe, chloa* "a grass," an allusion to the small size of the plant; see Robert Brown, *Prodromus Florae Novae Hollandiae*. 208. London 1810.

About 4-6 species, tropics and subtropics. Chloridoideae, Cynodonteae, Chloridineae, annual or perennial, unbranched, low, slender and wiry, delicate, mat-forming, usually decumbent, tufted, internodes solid, auricles absent, ligule fringed, leaves narrow linear and stiff, plants bisexual, inflorescence a slender single spike or solitary very slender racemes often curved or curling, 1 floret, 2-rowed spikelets solitary and sessile, semiterete rachis, 2 glumes subequal or more or less equal enclosing the florets, lower glume keeled, upper glume flat and rounded, lemma concealed, 3-nerved lemma keeled and shorter than the glumes, palea winged, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, steppes, bare open places, rainforest, hard soils, dry savannah, shallow soil, related to *Harpochloa* and *Ctenium*, type *Microchloa setacea* (Roxb.) R. Br., see *Plants of the Coast of Coromandel* 2: 17, t. 132. 1798, *Prodromus Florae Novae Hollandiae* 187, 208. 1810, *A Numerical List of Dried Specimens* 3807. 1831, *Nomenclator botanicus* 2: 310. 1847, *Fragmenta Phytographiae Australiae* 8: 113. 1873, *Revisio Generum Plantarum* 2: 764. 1891, *Transactions of the Linnean Society of London, Botany* 4: 57, t. 10, f. 7-12. 1894, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 219. 1899 and *Flora Capensis* 7: 637. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 10: 119. 1911, *Annali di Botanica* 13: 53. 1914, *Hooker's Icones Plantarum* 31: t. 3099. 1922, *Kew Bulletin* 1933: 502-503. 1933 [also *Bulletin of Miscellaneous Information Kew*], *Proceedings of the Rhodesia Scientific Association* 32: 59. 1933, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 82, 84. 1956, *Kew Bulletin* 16: 471-476. 1963, E. Launert, "A taxonomic revision of the genus *Microchloa* R. Br. (Gramineae, Chloridoideae, Chloridineae)." *Senckenbergiana Biologica* 47(4): 291-301. Frankfurt a. M. 1966, *Flora Mesoamericana* 6: 291. 1994, *Global Ecology and Biogeography* 7(6): 441-455. Nov 1998, *Contributions from the United States National Herbarium* 41: 141, 192. 2001, *New Phytologist* 156(3): 327-349. Dec 2002, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

M. caffra Nees (*Microchloa kunthii* Desv.)

South Africa, Lesotho, Tanzania, Zambia. Perennial bunchgrass, short, thin, wiry, unbranched, erect, densely tufted, forming small to tiny clumps, dense basal leaf cover, leaf sheaths rounded, basal sheaths break up into fine fibers when old, leaf blade wiry and narrow, ligule an inconspicuous

fringe of short hairs, leaves needle-like generally folded or rolled, very narrow unilateral or solitary spike often slightly curved, spikelets all borne on one side, strongly keeled glumes, low mass-yield, very low grazing value, palatable to relatively palatable, a pioneer grass useful for erosion control, suitable for stabilization of bare shallow soils, found in shallow soils, low lying areas, hard dry soil, in open sandy areas, shallow soils on rocky outcrops, moist soil, grassland, woodland, in disturbed and overgrazed areas, stony soils, rocky sites, slopes, sometimes near vleis, very similar to *Microchloa kunthii*, see *Prodromus Florae Novae Hollandiae* 208. 1810, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 179. 1831, *Florae Africae Australioris Illustrationes Monographicae* 246. 1841 and *Bothalia* 24(1): 92-96. 1994.

in English: pincushion grass, sickle grass

in South Africa: elsgras, gewöhnliches sichelgras

M. indica (L.f.) P. Beauv. (*Microchloa indica* (L.f.) Hack.; *Microchloa indica* (L.f.) Kuntze, nom. illeg., non *Microchloa indica* (L.f.) P. Beauv.; *Microchloa indica* var. *gracilis* Rendle; *Microchloa kunthii* Desv.; *Microchloa setacea* (Roxb.) R. Br.; *Nardus indica* L.f.; *Rottboellia setacea* Roxb.)

Tropics and subtropics. Annual, tufted or loosely tufted or solitary, delicate, small, very slender, erect or sometimes decumbent, weakly ascending, straggling, leaf sheaths keeled and not fibrous, leaf blades flat or folded tapering to a point, roots short and fibrous, solitary inflorescence curved when old, spikelets narrowly ovate or elliptic, shade species, grazed by all stock, shallow soils, damp sandy soil, roadsides, bushland, gravel, bare soil, swampy areas, overgrazed places, grassland, along roadsides, see *Supplementum Plantarum* 105. 1782, *Plants of the Coast of Coromandel* 2: 17, t. 132. 1798, *Prodromus Florae Novae Hollandiae* 208. 1810, *Essai d'une Nouvelle Agrostographie* (Atlas) 13, t. 20, f. 8. 1812, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 179. 1831, *Revisio Generum Plantarum* 3(2): 356. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 219. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 7(152-156): 373. 1909, *Senckenbergiana Biologica* 47(4): 291-301. 1966, *Flora Illustrata Catarinense* 1(Gram.): 1-435. 1981, *Flora Reipublicae Popularis Sinicae* 10(1): 88, pl. 27, f. 6-7. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in Mali: dugu konsina, fukobi, kulumbi, narkatabeli

in Nigeria: wicco falandu, wicco jalandu

in Senegal: fulabin

in Somalia: arfo, harfo, harpho

in Upper Volta: hondo korlangal, kollaade, kollaangal, mbugaga, sutuhanga

in Bolivia: pajita

in India: kunda punookoo, navilu bannada hullu, panshiru

M. indica (L.f.) P. Beauv. var. *indica*

Bolivia, Brazil, Chile, Paraguay, Uruguay.

M. indica (L.f.) P. Beauv. var. *tenuis* Hack. & Stuck.

Argentina. See *Anales Museo Nacional de Historia Natural de Buenos Aires* 21: 113. 1911.

M. kunthii Desv. (*Microchloa abyssinica* Hochst. ex A. Rich.; *Microchloa abyssinica* Hochst.; *Microchloa elongata* R. Br.; *Microchloa indica* (L.f.) P. Beauv.; *Microchloa indica* var. *kunthii* (Desv.) B.S. Sun & Z.H. Hu; *Paspalum tenuissimum* M.E. Jones)

Tropics. Perennial, small to low, slender, densely tufted, tussocks, erect, wiry, sometimes compact mat-forming, leaves mostly basal, leaf blades wiry filiform, a dense mass of fibers surrounding the base, basal sheaths break up into fine fibers when old, ligule an inconspicuous ring of short hairs, inflorescence very narrow, solitary racemes curved when old, glumes equal and lanceolate, lemma ovate with margins densely ciliate, palea keels ciliate, 3 stamens, fodder, palatability unknown, low grazing value, grazed by domestic stock, found in shallow soil, montane grassland at high altitudes, stony hillsides, bushland, rocky or stony outcrops, rocky slopes, disturbed grassland, disturbed ground, gravelly soil, waterlogged places, well drained slopes, scrubland, open areas, open sandy patches, along trails and roadsides, among rocks, see *Supplementum Plantarum* 105. 1782, *Essai d'une Nouvelle Agrostographie* (Atlas) 13, t. 20, f. 8. 1812, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 179. 1831, *Numerical List of Dried Specimens* 3807. 1831, *Flora* 24(Intell.): 19. 1841, *Tentamen Florae Abyssinicae ...* 2: 404. 1850, *Transactions of the Linnean Society of London, Botany* 4: 36. 1894 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62, Beibl. 141: 48, 61. 1928, *Contributions to Western Botany* 18: 24. 1935, *Senckenbergiana Biologica* 47(4): 291-301. 1966, *Flora Illustrata Catarinense* 1(Gram.): 1-435. 1981, *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Flora Reipublicae Popularis Sinicae* 10(1): 88, pl. 27, f. 6-7. 1990.

in English: pincushion grass

in Mexico: pasto

in Nigeria: wicco sondu

in Somalia: agar

in South Africa: elsgras

Microlaena R. Br. = *Ehrharta* Thunb.,
Microchlaena Kuntze, *Microchlaena* Wallich
 ex R. Wight & Arnott (Sterculiaceae),
Microchlaena Ching (Dryopteridaceae),
Microlaena Endl. (Sterculiaceae)

From the Greek *mikros* “small” and *chlaena*, *chlaenion* “cloak,” referring to the outer glumes, to the spikelets with minute glumes; see Robert Brown, *Prodromus florae Novae Hollandiae*. 210. London 1810.

About 5-10 species, Southeast Asia, the Philippines, Australia, New Zealand, Oceania. Bambusoideae, Oryzodae, Ehrharteae, or Ehrhartoideae, Ehrharteae, perennial, slender, wiry, stoloniferous and caespitose, scrambling, herbaceous or woody and persistent, branching at nodes, culm nodes glabrous, culm internodes hollow, auricles present or absent, ligule a membrane fringed or unfringed, leaves linear to linear-lanceolate, when present the hidden cleistogenes in the leaf sheaths, plants bisexual, inflorescence open, a single raceme or a narrow panicle, spikelets solitary and 3-flowered, spikelets with 1 bisexual flower, the 2 lower florets sterile and reduced to lemmas, 2 glumes very small to very minute, sterile lemmas awned and scabrous, fertile lemma acuminate but awnless, palea nerved or nerveless, 2 lodicules free and membranous, 1-2-4-6 stamens, ovary glabrous, 2 stigmas plumose and white, fruit compressed, shade species, open habitats, lawn grasses, they can invade large areas, sometimes referred to and included in *Ehrharta* Thunb., type *Microlaena stipoides* (Labill.) R. Br., see *Kongl. Vetenskaps Academiens Handlingar* 40: 217, pl. 8. 1779, *Prodromus Florae Novae Hollandiae* 210. 1810, *A Numerical List of Dried Specimens* no. 1173. 1829, *Genera Plantarum* 1: 114. 1830, *Prodromus Florae Peninsulae Indiae Orientalis* 1: 71. 1834, *Icones Plantarum Indiae Orientalis* t. 882. 1840, *Genera Plantarum* 1004. 1840, *Nomenclator Botanicus. Editio secunda* 2: 783. 1841, *Flora Novae-Zelandiae* 1: 288, t. 65a. 1853, *Flora Tasmaniae* 2: 205, t. 155A. 1860, *Fragmenta Phytographiae Australiae* 7: 89. 1870, *Transactions and Proceedings of the New Zealand Institute* 12: 356, t. 10. 1880, *Transactions and Proceedings of the New Zealand Institute* 21: 105. 1889, *Bulletin de l'Herbier Boissier* 6(12): 965-966. 1898, *Bulletin of Miscellaneous Information Kew* 1899: 114. 1899 and *The Subantarctic Islands of New Zealand* 2: 472. 1909, *Transactions and Proceedings of the New Zealand Institute* 43: 253. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 292. 1921, *Bulletin of the Fan Memorial Institute of Biology* 8(5): 322-327, pl. 6, f. 1. 1938, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 235. 1943, *Bulletin of the Tokyo Science Museum* 18: 10. 1947, *Acta Phytotaxonomica Sinica* 9(1): 99. 1964, *Blumea* 28: 181-194. 1982, *New Zealand J. Bot.* 36: 565-586. 1998, *Flora of New Zealand* 5: 44-52. 2000, *Contributions from the United States National Herbarium*

39: 56. 2000, *Ecological Management and Restoration* 2(3): 167-178. Dec 2001, *Ecological Management and Restoration* 3(1): 15-27. Apr 2002, *Biological Journal of the Linnean Society* 76(2): v-xii. June 2002, *Ecological Management and Restoration* vol. 3, issue 3: 205-210. Dec 2002, *Austral. Ecology* vol. 29, issue 3: 320-331. June 2004, *Ecological Management and Restoration* vol. 5, issue 2: 134-136. Aug 2004, Ralph Woodford, “Dorrobbee Grass’: Relic of the past or icon of the future?” *Ecological Management and Restoration* vol. 6, issue 1: 68-69. Apr 2005, *Ecological Management and Restoration* vol. 6, issue 1: 73-75. Apr 2005.

Species

M. avenacea (Raoul) Hook.f. (*Diplax avenacea* Raoul; *Ehrharta diplax* F. Muell.; *Ehrharta diplax* var. *diplax*; *Microlaena avenacea* var. *avenacea*)

New Zealand. Perennial, usually caespitose, blue green tussock, shortly rhizomatous, sometimes stolons rooting at nodes, leaf sheath smooth or scabrid, ligule membranous, wide sword-like drooping leaves, arching flower stems, inflorescence paniculate, glumes unequal, palea membranous, 1-2 stamens, groundcover plant, fast growing, high waterlogging tolerance, high wind tolerance, in New Zealand host of the toxic *Claviceps purpurea* (Fr.) Tulasne, occurs on stream banks, seepages, shade, see *Annales des Sciences Naturelles; Botanique, sér. 3* 2: 116. 1844, *Handbook of the New Zealand Flora* 320. 1864, *Fragmenta Phytographiae Australiae* 7: 90. 1870 and *Blumea* 28: 181-194. 1982.

in English: bush rice grass

M. carsei Cheeseman (*Microlaena avenacea* var. *carsei* (Cheeseman) Zotov) (named for Harry Carse, 1857-1930, botanical collector in New Zealand, the Herbarium near Christchurch is named after him; see E.J. Godley, “Biographical notes (29) Harry Carse (1857-1930).” *Newsletter / New Zealand Botanical Society* 51: 13-16. 1998)

New Zealand. Perennial, shortly rhizomatous, elongate slender internodes, leaf sheath glabrous, ligule triangular, shortly branched inflorescence, slender panicle, numerous solitary spikelets, glumes unequal, palea membranous, 2 stamens, open areas, forest, see *Handbook of the New Zealand Flora* 320. 1864 and *Transactions and Proceedings of the New Zealand Institute* 47: 47. 1915, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 235. 1943, *New Zealand J. Bot.* 36: 578-579. 1998.

M. ciliatitertex Ohwi

Asia, Indonesia. See *Bulletin of the Tokyo Science Museum* 18: 10. 1947.

M. polynoda (Hook.f.) Hook.f. (*Diplax polynoda* Hook.f.; *Ehrharta multinoda* F. Muell.; *Microlaena ramosissima* Colenso)

New Zealand. Perennial, chasmogamous and cleistogamous, scrambling, many noded, rhizomatous, reedlike or bambusiform, cataphylls, ligule ciliate, leaf sheath keeled, short inflorescence, glumes unequal, stamens 4, sometimes confused with *Anemanthele lessoniana* (Steud.) Veldkamp, see *Flora Novae-Zelandiae* 290. 1853, *Handbook of the New Zealand Flora* 320. 1864, *Fragmenta Phytographiae Australiae* 7: 90. 1870, *Transactions and Proceedings of the New Zealand Institute* 21: 105. 1889 and *New Zealand J. Bot.* 36: 580-582. 1998.

M. stipoides (Labill.) R. Br. (*Ehrharta stipoides* Labill.)

Indonesia, Australia, Southeast Asia. Perennial, small, slender, prostrate, tufted, contracted or spreading short rhizomes, stems arching, sheaths with silky auricles, ligule membranous, leaves hairy with apex finely pointed, a narrow drooping panicle or a raceme, spikelets pedicellate and solitary, florets 3, glumes minute, sterile lemmas rough and long awned, fertile lemma awnless and pointed, palea nerved, usually 4 stamens, seed head curving and narrow, produces both chasmogamous and cleistogamous spikelets, cleistogenes occur in *Ehrharta stipoides* Labill., dense cover plant with invasive tendency, provides fodder, will produce a large bulk of green feed, browning off if not watered but will reshoot from small rhizomes at a hint of rain, responsive to added nitrogen, lawn grass, ornamental, pasture and turf, recommended for lawns on semishaded sites under trees, sand dune restoration, extremely valuable during dry periods, high wind and salt wind tolerance, high drought tolerance, low soil fertility high tolerance, tolerant of heavy grazing and acid soils, commonly found in woodland on sandstone and clay soils, disturbed sites, shaded or semishaded sites, semishade in forests, along streams, high fertility, grazed situations, see *Novae Hollandiae Plantarum Specimen* 1: 91, t. 118. 1805 [1804], *Prodromus Florae Novae Hollandiae* 210. 1810 and *New Zealand J. of Botany* 15: 531-534. 1977, *Diversity* 16: 51-52. 2000.

in English: weeping grass, meadow rice grass, weeping rice grass, slender rice grass, microlaena

M. stipoides (Labill.) R. Br. var. ***breviseta*** Vickery (*Ehrharta stipoides* Labill. var. *breviseta* (Vickery) L.P.M. Willemse)

Queensland, New South Wales. Bushy, spikelets purplish, shade species, tolerates sunny sites, see *Telopea* 1(1): 43. 1975, *Blumea* 28(1): 193. 1982.

M. stipoides (Labill.) R. Br. var. ***micrantha*** Domin

Australia, Queensland. See *Prodromus Florae Novae Hollandiae* 210. 1810.

M. stipoides (Labill.) R. Br. var. ***stipoides***

Australia, New South Wales, Malesia, Pacific Islands. Perennial, rhizomatous, extravaginal branching, multinoded stems, small auricles, ligule ciliate, spikelets green, shade

species, damp places, see *Prodromus Florae Novae Hollandiae* 210. 1810.

M. tasmanica (Hook.f.) Hook.f. ex Benth. (*Diplax tasmanica* Hook.f.)

Tasmania. Perennial, tufted or short creeping rhizome, slender stems, leaves flat with apex pointed, erect panicles loose and narrow or pyramidal, small spikelets on slender stalks, erosion control, see *Flora Tasmaniae* 2: 105, t. 155. 1858, *Flora Australiensis: A Description ...* 7: 552-553. 1878 and *Blumea* 28(1): 193. 1982.

M. tasmanica (Hook.f.) Hook.f. ex Benth. var. ***subalpina*** F. Muell. ex Benth. (*Ehrharta tasmanica* var. *subalpina* (F. Muell. ex Benth.) L.P.M. Willemse)

Tasmania. See *Flora Australiensis: A Description ...* 7: 552-553. 1878 and *Blumea* 28(1): 193. 1982.

M. tasmanica (Hook.f.) Hook.f. ex Benth. var. ***tasmanica***
Tasmania.

Micropogon Pfeiff. = *Microchloa* R. Br.

From the Greek *mikros* "small" and *pogon* "a beard."

Chloridoideae, Cynodonteae, Chloridinae, see *Prodromus Florae Novae Hollandiae* 208. 1810, *Nomenclator botanicus* 2: 310. 1847 and *Senckenbergiana Biologica* 47(4): 291-301. 1966, *Contributions from the United States National Herbarium* 41: 141. 2001.

Micropyropsis Romero Zarco & Cabezudo = *Micropyrum* (Gaudin) Link

Resembling the related genus *Micropyrum*.

One species, Spain. Pooideae, Poodae, Poeae, perennial, herbaceous, tuberous, basal internode cormlike, ligule an unfringed membrane, plants bisexual, inflorescence a bilateral raceme, 2 glumes very unequal, lower glume 1-nerved, upper glume 3-nerved, lemma with slender subterminal awn, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, damp ground, damp sandy places, similar to *Micropyrum* (Gaudin) Link, type *Micropyropsis tuberosa* Romero Zarco, see *Lagascalia* 11(1): 95. 1983, *Anales del Jardín Botánico de Madrid* 45: 273. 1988.

Species

M. tuberosa Romero Zarco

Spain.

Micropyrum (Gaudin) Link

From the Greek *mikros* "small" and *pyros* "wheat."

About 3 species, Mediterranean. Pooideae, Poodae, Poeae, *Triticum* sect. *Micropyrum* Gaudin, annual, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence racemose or paniculate, raceme bilateral, spikelets several-flowered in 2 opposite rows, awns present or absent, 2 subequal glumes obtuse to acute, lower glume 1-3-nerved, upper glume 3-5-nerved, lemmas coriaceous obtuse to emarginate, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary glabrous without the apical appendage, 2 stigmas, open habitats, dry places, type *Micropyrum tenellum* (L.) Link, see *Flora Helvetica* 1: 366. 1828, *Atti Riunione Sci. Ital.* 481. 1841, *Linnaea* 17(4): 397. 1844 and *Syn. Mitteleur. Fl.* 2(1): 537. 1900, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 28: 386. 1937, *Engler's Botanische Jahrbucher* 74: 576. 1949, *Fl. Afrique N.* 3: 211. 1955, *Botanical Journal of the Linnean Society* 76: 350. 1978, *Nordic Journal of Botany* 1(1): 17-26. 1981, *Lagascalia* 11(1): 95. 1983, *Anales del Jardín Botánico de Madrid* 45: 273. 1988.

Species

M. patens (Brot.) Rothm. ex Pilg. (*Brachypodium patens* (Brot.) Nyman; *Catapodium patens* (Brot.) Rothmaler & P. Silva; *Micropyrum albaredae* Paunero; *Micropyrum tenellum* subsp. *patens* (Brot.) Rivas Mart.; *Nardurus patens* (Brot.) Hack.; *Triticum patens* Brot.)

Central and southwestern Europe, Spain, Portugal. Useful for erosion control, see *Fl. Lusit.* 1: 120. 1804, *Sylloge Florae Europaeae* 425. 1854-55 and *Agronomia Lusitana* 1: 248. 1939, *Engler's Botanische Jahrbucher* 74: 567, 576. 1949, *Lagascalia* 15(Extra): 117. 1988, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991.

M. tenellum (L.) Link (*Brachypodium poa* P. Beauv. ex Roem. & Schult.; *Brachypodium tenellum* (L.) P. Beauv.; *Brachypodium tenellum* (L.) Roem. & Schult.; *Catapodium halleri* (Viv.) Rchb.; *Catapodium tenellum* (L.) Trab.; *Catapodium tenellum* (L.) Batt. & Trab.; *Festuca festucoides* (Bertol.) Bech.; *Festuca lachenalii* (C.C. Gmel.) Spenn.; *Festuca lachenalii* Spenn.; *Nardurus halleri* (Viv.) Fiori; *Nardurus lachenalii* (C.C. Gmel.) Godr.; *Nardurus poa* (DC.) Boiss.; *Nardurus poa* (P. Beauv. ex Roem. & Schult.) Boiss.; *Nardurus tenellus* (L.) Duval-Jouve, nom. illeg., non *Nardurus tenellus* Reichb. ex Godron; *Nardurus tenellus* (Koch) Arcang.; *Prosphysis tenella* (Reichb. ex Godron) Dulac; *Triticum tenellum* L.)

Europe. Erect, rigid, pioneer, useful for erosion control, see *Systema Naturae, Editio Decima* 2: 880. 1759, *Essai d'une Nouvelle Agrostographie* 101, 155, 181. 1812, *Systema Vegetabilium* 2: 745-746. 1817, *Hortus Regius Botanicus Bero-linensis* 1: 44, 280. 1827, *Flora Friburgensis* 3: 1050. 1829, *Voyage botanique dans le midi de l'Espagne* 2: 667. 1844, *Linnaea* 17(4): 398. 1844, *Fl. Algérie* 1(2): 232. 1895 and *Berichte der Schweizerischen Botanischen Gesellschaft* 38:

153. 1929, *Taxon* 33: 351-354. 1984, *Bot. J. Linn. Soc.* 91: 439. 1985, *Anales del Jardín Botánico de Madrid* 42: 221-225. 1985, *Société pour l'Echange des Plantes Vasculaires de l'Europe et du Bassin Méditerranéen: Bulletin* 21: 68. 1986, *Anales de Biología, Facultad de Biología, Universidad de Murcia* 13: 26. 1987, *Lagascalia* 15(Extra): 117. 1988, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Lagascalia* 20(1): 161-166. 1997. in French: catapode des graviers

Microstegium Nees = *Coelarthron* Hook.f., *Ephobopogon* Steud., *Ischnochloa* Hook.f., *Leptatherum* Nees, *Nemastachys* Steud., *Pollinia* Trin., *Pollinia* Spreng., *Psilopogon* Hochst.

From the Greek *mikros* "small, tiny" and *stegē*, *stegos* "roof, cover," referring to small lemmas and to small spikes.

About 15 species, Asia tropical and subtropical. Panicoideae, Andropogonodae, Andropogoneae, Andropogoni-nae, or Panicoideae, Andropogoneae, Saccharinae, annual or perennial, variable, herbaceous, creeping or rambling, tufted or sprawling, decumbent, more or less branched and rooting from lower nodes, internodes solid, sheaths terete, auricles absent, leaves narrow-elliptic or lanceolate and often with a short false petiole, ligule short and membranous, plants bisexual, inflorescence terminal, digitate or solitary racemes bearing pairs of sessile and pedicellate spikelets, spikelets 2-flowered and similar, lower floret very variable, lower floret male or sterile (when present) or reduced to a single scale, upper floret perfect, 2 glumes more or less equal to subequal, lower glume with a median concavity, upper glume mucronate or shortly awned, tiny cordate lemmas, upper lemma linear to cordate, lemma of lower floret awnless, palea present or absent, 2 lodicules free and fleshy, stamens 3 or rarely 2, ovary glabrous, 2 stigmas, invasive weed species, shady places, related to *Eulalia*, type *Microstegium willdenovianum* Nees ex Lindl., see *Species Plantarum* 2: 1045. 1753, *Essai d'une Nouvelle Agrostographie* 56, 176, pl. 11, f. 7. 1812, *Plantarum Minus Cognitarum Pugillus* 2: 10. 1815, *Fundamenta Agrostographiae* 188. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(4): 304. 1832, *A Natural System of Botany* 2nd edition 447. 1836, *Nomenclator Botanicus. Editio secunda* 1: 556. 1840, *Proceedings of the Linnean Society of London* 1: 92. 1841, *Flora* 29: 117. 1846, *Synopsis Plantarum Glumacearum* 1: 357, 396. 1854, *Genera Plantarum* 3(2): 1127. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 24. 1887, *Hooker's Icones Plantarum* 25: t. 2466. 1896, *The Flora of British India* 7: 163-164. 1896 and

Icones plantarum formosanarum nec non et contributiones ad floram formosanam. 7: 74-75, f. 43. 1918, *Annales de la Société Linnéenne de Lyon*, sér. 2 68: 201. 1922 [1921], *Bulletin of Miscellaneous Information Kew* 1927: 79. 1927, *Sinensia* 3(3): 91-92. 1932, *The Families of Flowering Plants. II. Monocotyledons* 2: 227, f. 40. 1934, *Blumea* 3(3): 453. 1940, *Botanical Magazine* (Tokyo) 56(691): 16. 1942, *The Grasses of Burma* 2, 62. 1945, Boissiera. *Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 396. 1950, *Kew Bulletin* 7(2): 209-223. 1952, *Bulletin du Jardin Botanique de l'État* 25: 240. 1955, *Novosti Sist. Vyss. Rast.* 1966: 15. 1966, *Kew Bulletin* 35(4): 816. 1981, *Journal of the Bombay Natural History Society* 79(3): 652. 1983, A.K. Goel and B.P. Uniyal, "On the occurrence of a few grasses in Pakistan and Nepal (*Ischaemum impressum*, *Ischnochloa falconeri*, *Microstegium vimineum*, *Puccinellia tenuiflora*)." *Journal of Economic and Taxonomic Botany* 4(3): 43. 1983, *The Plant Journal* 14(5): 565-572. June 1998 [C4-type gene expression is not directly dependent on Kranz anatomy in an amphibious sedge *Eleocharis vivipara* Link.], *Restoration Ecology* 8(3): 296-306. Sep 2000, *Am. J. Bot.* 88: 1993-2012. 2001, *Ecography* 25(2): 215-223. Apr 2002, *Restoration Ecology* 10(4): 703-713. Dec 2002, *Contributions from the United States National Herbarium* 46: 161, 230, 276, 283, 292, 298, 541-542, 543. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *New Phytologist* 161(3): 827-835. 891-894, Mar 2004, *Diversity & Distributions* vol. 10, issue 3: 167-178. May 2004, *Diversity & Distributions* 10(5-6): 367-369. Sep 2004, *Journal of Ecology* 93(1): 202-213. Feb 2005.

Species

M. biaristatum (Steud.) Keng (*Andropogon biaristatus* Steud.; *Microstegium ciliatum* (Trinius) A. Camus)

China. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(3): 306. 1832, *Synopsis Plantarum Glumacearum* 1: 379. 1854 and *Annales de la Société Linnéenne de Lyon*, sér. 2 68: 201. 1922 [1921], *Sinensia* 3: 92. 1932.

M. boreale Ohwi (*Microstegium japonicum* var. *boreale* (Ohwi) Ohwi; *Microstegium nudum* var. *boreale* (Ohwi) Ohwi)

Japan. See *Journal of Japanese Botany* 12: 653. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 151. 1937, *Flora of Japan* 157. 1953.

M. ciliatum (Trinius) A. Camus (*Andropogon biaristatus* Steud.; *Avena sterilis* f. *subulifera* Thell.; *Avena sterilis* var. *subulifera* (Thell.) Tzvelev; *Eulalia ciliata* (Trin.) Kuntze; *Eulalia monantha* (Nees ex Steud.) Kuntze; *Microstegium biaristatum* (Steud.) Keng; *Microstegium ciliatum* subsp. *integrum* (Ohwi) T. Koyama; *Microstegium ciliatum* var.

formosanum (Hack.) Honda; *Microstegium ciliatum* var. *integrum* Ohwi; *Microstegium ciliatum* var. *laxum* (Nees ex Steud.) Reeder; *Microstegium ciliatum* var. *wallichianum* (Nees ex Steud.) Honda; *Microstegium formosanum* (Hack.) A. Camus; *Microstegium formosanum* A. Camus; *Microstegium integrum* Ohwi; *Microstegium monanthum* (Nees ex Steud.) A. Camus; *Pollinia ciliata* Trin.; *Pollinia ciliata* var. *laxa* (Nees ex Steud.) Hack.; *Pollinia ciliata* var. *seminuda* Hack.; *Pollinia formosana* (Hack.) Hayata; *Pollinia lancea* Nees ex Steud.; *Pollinia laxa* Nees ex Steud.; *Pollinia monantha* Nees ex Steud.; *Pollinia monantha* var. *formosana* Hack.; *Pollinia wallichiana* Nees ex Steud.)

Asia, temperate and tropical, India to China, the Philippines, Sri Lanka. Annual or perennial, very variable, wiry, coarse, much-branched, decumbent at the base then erect, straggling, scrambling, rambling, trailing, creeping, rooting at the lower nodes, auricles absent, ligule membranous and glabrous, sessile leaves elliptic and acuminate to finely pointed, inflorescence of many slender flexuous racemes subdigitately arranged, 2-22 subdigitate racemes, spikelets paired on a jointed rachis, shortly awned, upper glume flattened and keeled to strongly keeled, lower floret absent or reduced to a scale, upper lemma cordate, palatable, good quality forage, grass eaten by cattle and buffaloes, it does not tolerate frequent grazing, growing in shade, wet forest, disturbed and cultivated sites, rubber plantations, rainforest, grassy banks, open places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(3): 306. 1832, *Synopsis Plantarum Glumacearum* 1: 379, 410. 1854 [1855], *Monographiae Phanerogamarum* 6: 176. 1889, *Revisio Generum Plantarum* 2: 775. 1891 and *Handb. Fl. Ceylon* 5: 205. 1900, *Bulletin de l'Herbier Boissier*, sér. 2, 4(6): 527. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 13(350): 53. 1913, *Icones plantarum formosanarum nec non et contributiones ad floram formosanam*. 7: 99. 1918, *Annales de la Société Linnéenne de Lyon*, sér. 2 68: 200-201. 1922 [1921], *The Flora of the Malay Peninsula* 5: 198. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 404-405. 1930, *Sinensia* 3: 92. 1932, *Botanical Magazine* (Tokyo) 56: 10. 1942, *Acta Phytotaxonomica et Geobotanica* 11(3): 157. 1942, *Journal of the Arnold Arboretum* 29: 338. 1948, *Grasses of Ceylon* 170. 1956, *Grasses of Burma ...* 193. 1960, *Flora of Java* vol. 3: 589-590. 1969, *Zlaki SSSR* 239. 1976, *Grasses of Japan and its Neighboring Regions* 516. 1987, *Plant Resources of Southeast Asia* (PROSEA). (Pl Res SEAs) 4: 165. 1992.

in English: ciliate sasagrass

in Japan: ô-sasa-gaya (= large *Microstegium japonicum*)

in India: kharika, sau

in Indonesia: banyonan tembaga, jukut canklor

in Laos: hnhaaz nhung

in the Philippines: bariri magwakat
in Thailand: ya kom ka

M. eucnemis (Nees ex Steud.) A. Camus (*Andropogon brandisii* (Hook.f.) Hack.; *Coelarthron brandisii* Hook.f.; *Eulalia eucnemis* (Nees ex Steud.) Kuntze; *Microstegium brandisii* (Hook.f.) D. Rhind; *Pollinia eucnemis* Nees ex Steud.) (dedicated to the German botanist Sir Dietrich Brandis, 1824-1907, forester, 1864-1883 Inspector-General of Forests in India, 1860 F.L.S., 1870 F.R.S., joint author with Fridolin Carl Leopold Spenner (1798-1841), Alois (Aloys) Putterlick (1810-1845), Stephan Friedrich Ladislaus Endlicher (1804-1849), Carl Wilhelm Bischof (born 1825), Johann Xaver Robert Caspary (1818-1887), Adalbert Carl Friedrich Hellwig Conrad Schnizlein (1814-1868) and Theodor Friedrich Ludwig Nees von Esenbeck (1787-1837) of *Genera Plantarum Florae Germanicae* iconibus et descriptionibus illustrata ... Bonn[1833-] 1835-1860; see John Hendley Barnhart, *Biographical notes upon botanists*. 1: 241. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 50. 1972; Isaac Henry Burkill, *Chapters on the History of Botany in India*. 158-167. Delhi 1965; Robert Wight (1796-1872), *Icones plantarum Indiae orientalis, or Figures of Indian Plants*. Madras [1838-] 1840-1853; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. 17-18. Royal Botanic Gardens, Kew, London 1906; F.B. Manson and Henry Haselfoot Haines, *Tables for Use with Brandis' Hypsometer for Measuring the Height of Trees*. Calcutta 1892; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 96. 1994; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993).

Tropical Asia, India. See *Synopsis Plantarum Glumacearum* 1: 410. 1854, *Revisio Generum Plantarum* 1(2): 775. 1891, *The Flora of British India* 7: 164. 1896 and *Die Natürlichen Pflanzenfamilien* 2(2): Nachtr. 2: 4. 1900, *Annales de la Société Linnéenne de Lyon, sér.* 2 68: 200-201. 1922 [1921], *The Grasses of Burma* 2, 62. 1945.

M. falconeri (Hook.f.) Clayton (*Ischnochloa falconeri* Hook.f.; *Pogonatherum falconeri* (Hook.f.) Roberty)

Asia, Himalaya. Raceme with tough rhachis, see *Hooker's Icones Plantarum* 25: t. 2466. 1896, *The Flora of British India* 7: 148. 1896 and *Boissiera*. 396. 1950, *Kew Bulletin* 35(4): 813-818. 1981.

M. fauriei (Hayata) Honda (*Pollinia fauriei* Hayata)

Japan. See *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 7: 73-74, f. 40, 41.

1918, *Journal of the Faculty of Science University of Tokyo, Sect. 3, Bot.* 410. 1930, *Grasses of Japan and its Neighboring Regions* 516. 1987.

M. geniculatum (Hayata) Honda (*Microstegium fauriei* subsp. *geniculatum* (Hayata) T. Koyama; *Pollinia geniculata* Hayata)

Asia. Perennial, tufted, erect or decumbent, rhizomatous, found in open areas, see *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 7: 73, f. 40. 1918, *Journal of the Faculty of Science University of Tokyo, Sect. 3, Bot.* 410. 1930, *Grasses of Japan and its Neighboring Regions* 516. 1987.

M. japonicum (Miq.) Koidz. (*Eulalia nuda* (Trin.) Kuntze; *Leptatherum japonicum* Franch. & Sav.; *Microstegium nudum* subsp. *japonicum* (Miq.) Tzvelev; *Pollinia japonica* Miq.; *Pollinia nuda* Trin.)

Japan. Raceme with tough rhachis, two stamens, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 307. 1832, *Enumeratio Plantarum in Japonia Sponte Crescentium* ... 2: 190, 609. 1877, *Annales Museum Botanicum Lugduno-Batavi* 2: 290. 1886, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 7: 76-77, f. 45. 1918, *Botanical Magazine* (Tokyo) 43: 394. 1929, *Journal of the Faculty of Science University of Tokyo, Sect. 3, Bot.* 407. 1930, *Journal of Japanese Botany* 12: 653. 1936, *Acta Phytotaxonomica et Geobotanica* 11: 156. 1942, *Flora of Japan* 157. 1953, *Grasses of Japan and its Neighboring Regions* 516. 1987.

M. montanum (Nees ex Steud.) Henrard (*Pollinia montana* Nees ex Steud.)

Asia, Java. Inflorescence composed of 5-12 subdigitate racemes, see *Synopsis Plantarum Glumacearum* 1: 410. 1854 and *Blumea* 3(3): 455. 1940, *Reinwardtia* 2(2): 306. 1953.

M. nudum (Trin.) A. Camus (*Eulalia nuda* (Trin.) Kuntze; *Leptatherum japonicum* Franch. & Sav.; *Leptatherum royleanum* Nees; *Microstegium capense* (Hochst.) A. Camus; *Microstegium japonicum* (Miq.) Koidz.; *Microstegium mayebaratum* Honda; *Microstegium nudum* subsp. *japonicum* (Miq.) Tzvelev; *Pollinia japonica* Miq.; *Pollinia nuda* Trin.; *Psilopogon capensis* Hochst.)

Tropical Africa, India, Japan, Australia, Southeast Asia, the Philippines. Annual or perennial, decumbent, slender and straggling, creeping, rambling, branched, rooting at the lower nodes, leaves lanceolate and acuminate, digitate or subdigitate slender racemes, spikelets paired and similar, lower glume 2-toothed or obtuse, upper glume acute, lower lemma absent or tiny, palea absent or minute, stamens 2, used as fodder, growing in shady areas, grassy places, forest, stream banks, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences*

Mathématiques, Physiques et Naturelles 2(3): 307. 1832, *Proceedings of the Linnean Society of London* 1: 92. 1841, *Flora* 29: 117. 1846, *Enumeratio Plantarum in Japonia Sponte Crescentium ...* 2: 190, 609. 1877, *Annales Museum Botanicum Lugduno-Batavi* 2: 290. 1886, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Annales de la la Société Linnéenne de Lyon, sér. 2* 68: 200-201. 1922 [1921], *Botanical Magazine* (Tokyo) 43: 394. 1929, *Journal of the Faculty of Science University of Tokyo, Sect. 3, Bot.* 407. 1930, *Journal of Japanese Botany* 12: 653. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 151. 1937, *Grasses of Burma ...* 194. 1960, *Zlaki SSSR* 695. 1976.

in Japan: miyama-sasa-gaya

M. nudum (Trin.) A. Camus var. *shimidzui* Honda (*Microstegium japonicum* f. *shimidzui* (Honda) Ohwi)

Japan. See *Journal of the Faculty of Science University of Tokyo, Sect. 3, Bot.* 407. 1930, *Acta Phytotaxonomica et Geobotanica* 11: 156. 1942.

M. petiolare (Trin.) Bor (*Andropogon petiolaris* (Trin.) Steud.; *Ischaemum petiolare* (Trin.) Hack.; *Pollinia lehmannii* Nees & Arn.; *Pollinia lehmannii* Arn. & Nees ex Nees; *Spodiopogon lehmannii* (Nees & Arn.) Griseb.; *Spodiopogon petiolaris* Trin.)

Tropical Asia. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 301, 307. 1832, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19(Suppl. 1): 186. 1843, *Synopsis Plantarum Glumacearum* 1: 398. 1854, *Nachrichten von der Königlich-Gesellschaft der Wissenschaften und von der Georg-Augusts-Universität* 91. 1868, *Monographiae Phanerogamarum* 6: 238. 1889 and *Indian Forest Records. Botany* 1(3): 87. 1938.

M. rufispicum (Steud.) A. Camus (*Andropogon rufispicus* Steud.)

Asia. Inflorescence composed of 2-5 subdigitate racemes, see *Synopsis Plantarum Glumacearum* 1: 379. 1854 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 200. 1921 [1922].

M. somai (Hayata) Ohwi (*Microstegium japonicum* subsp. *somai* (Hayata) T. Koyama; *Pollinia somai* Hayata; *Polliniopsis somai* Hayata)

Japan. See *Icones plantarum formosanmarum nec non et contributiones ad floram formosanam.* 7: 76-77, f. 45. 1918, *Botanical Magazine* 43: 394. 1929, *Acta Phytotaxonomica et Geobotanica* 11(3): 155. 1942, *Grasses of Japan and its Neighboring Regions* 516. 1987.

M. spectabile (Trinius) A. Camus (*Eulalia spectabilis* (Trin.) Kuntze; *Microstegium spectabile* (Trin.) Hosok., nom. illeg., non *Microstegium spectabile* (Trin.) A. Camus; *Pollinia spectabile* Trin.; *Pollinia spectabilis* Trin.)

The Philippines, Asia temperate and tropical. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(3): 305. 1832, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Annales de la la Société Linnéenne de Lyon, sér. 2* 68: 200-201. 1922 [1921], *Journal of the Society of Tropical Agriculture* 7: 310. 1935.

M. spectabile (Trinius) A. Camus f. *cryptochaetum* Ohwi Japan. See *Annales de la la Société Linnéenne de Lyon, sér. 2* 68: 200-201. 1922 [1921], *Botanical Magazine* (Tokyo) 55: 550. 1941.

M. stapfii (Hook.f.) A. Camus (*Pollinia stapfii* Hook.f.)

Asia. See *The Flora of British India* 7: 115. 1896 and *Annales de la la Société Linnéenne de Lyon, sér. 2* 68: 200-201. 1922 [1921].

M. steenisii Jansen (for the Dutch botanist Cornelis Gijsbert Gerrit Jan van Steenis, 1901-1986, traveler and plant collector, from 1927 to 1946 botanist Buitenzorg (Bogor), professor of tropical botany, from 1962 to 1972 Director of the Leyden Rijksherbarium, editor and joint author of *Flora Malesiana*, from 1931 to 1950 editor of the *Bulletin du Jardin Botanique de Buitenzorg* (with Dirk Fok van Slooten, 1891-1953, & Marinus Anton Donk, 1908-1972), 1961-1971 editor of *Blumea*, among his most valuable writings are *Malayan Bignoniaceae*. Arnhem 1927 and *The Styracaceae of Netherlands India*. Buitenzorg (Archipel Drukkerij) 1932; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 320. 1965; Maria Johann van Steenis-Kruseman, *Malaysian Plant Collectors and Collections*. in *Flora Malesiana*. 1(1): 1-639; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 381. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 383. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Indonesia. See *Reinwardtia* 2(2): 306, f. 12. 1953.

M. tenue (Trin.) Hosok. (*Eulalia tenuis* (Trin.) Kuntze; *Microstegium tenue* (Trin.) Jansen, nom. illeg., non *Microstegium tenue* (Trin.) Hosok.; *Pollinia tenuis* Trin.)

Taiwan, the Philippines. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 306. 1832, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Transactions of the Natural History Society of Taiwan* 28: 150. 1938, *Reinwardtia* 2(2): 307. 1953.

M. vagans (Nees ex Steud.) A. Camus (*Epebopogon gratus* Nees & Meyen ex Steud.; *Eulalia vagans* (Nees ex

Steud.) Kuntze; *Microstegium cantonense* (Rendle) A. Camus; *Microstegium gratum* (Hack.) A. Camus; *Microstegium montanum* (Nees ex Steud.) Henrard; *Microstegium montanum* (Nees) Henrard; *Microstegium vagans* (Nees ex Steud.) Hand.-Mazz., nom. illeg., non *Microstegium vagans* (Nees ex Steud.) A. Camus; *Pollinia cantonensis* Rendle; *Pollinia grata* Hack.; *Pollinia montana* Nees ex Steud.; *Pollinia vagans* Nees ex Steud.)

Asia, China. Good fodder, 5-12 racemes, see *Nomenclator Botanicus. Editio secunda* 1: 556. 1840, *Synopsis Plantarum Glumacearum* 1: 410. 1854, *Monographiae Phanerogamarum* 6: 173, 175. 1889, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Journal of the Linnean Society, Botany* 36(253): 354. 1904, *Annales de la Société Linnéenne de Lyon, sér. 2* 68: 200-201. 1922 [1921], *Symbolae Sinicae* 7(5): 1309. 1936, *Blumea* 3(3): 455. 1940, *Dansk Botanisk Arkiv* 20(2): 174. 1962.

M. vimineum (Trin.) A. Camus (*Andropogon vimineum* Trin.; *Andropogon vimineus* Trin.; *Eulalia viminea* (Trin.) Kuntze; *Eulalia viminea* (Trin.) Kuntze var. *imberbis* (Nees ex Steud.) Kuntze; *Eulalia viminea* var. *variabilis* Kuntze; *Microstegium aristulatum* Robyns & Tournay; *Microstegium imberbe* (Nees ex Steud.) Tzvelev; *Microstegium vimineum* var. *imberbe* (Nees) Honda; *Microstegium vimineum* var. *imberbe* (Nees ex Steud.) Honda; *Microstegium vimineum* var. *willdenowianum* (Nees ex Lindl.) A. Camus; *Microstegium vimineum* var. *willdenowianum* (Nees ex Lindl.) Sur, nom. illeg., non *Microstegium vimineum* var. *willdenowianum* (Nees ex Lindl.) A. Camus; *Microstegium willdenovianum* Nees ex Lindl.; *Pollinia imberbis* Nees ex Steudel; *Pollinia imberbis* Nees ex Steudel var. *genuina* Hack.; *Pollinia imberbis* Nees ex Steudel var. *willdenoviana* (Nees ex Lindl.) Hack.; *Pollinia viminea* (Trin.) Merr.; *Pollinia willdenoviana* (Nees ex Lindl.) Benth.)

Asia, temperate and tropical, China, India, Japan. Annual or perennial, slender, branched, decumbent, sprawling habit, growing in colonies, forming dense monotypic stands, rooting from lower nodes, nodes and internodes smooth and hairless, ligule membranous and often ciliate, leaves elliptic and acuminate, terminal racemes solitary or in a set of 2 or 3, spikelets terminal or arising from leaf axils, 1 spikelet sessile and the other pedicellate, cleistogamous and chasmogamous conditions, ellipsoid fruit yellowish to reddish, reproduction from seed, shade tolerant or shade adapted, damp places, moist woodlands, wet meadow, thickets, roadside ditches, lawns, in open to shady locations, disturbed shaded areas, disturbed understory habitats, mesic understory habitats, along stream banks, river bluffs, floodplains, aggressive weed species, a pest, adapted to low light conditions, potential seed contaminant, invasive, naturalized, similar to *Arthraxon hispidus* (Thunb.) Makino, may be confused with *Leersia virginica* Willd. or *Polygonum persicaria* L. (Polygonaceae), see *Species*

Plantarum 1: 361. 1753, *Flora Japonica*, ... 44. 1784, *Species Plantarum. Editio quarta* 1: 325. 1797, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(3): 268. 1832, *A Natural System of Botany* 2nd edition 447. 1836, *Synopsis Plantarum Glumacearum* 1: 410. 1855 [1854], *Enumeratio Plantarum in Japonia Sponte Crescentium ...* 2(1): 190. 1877, *Journal of the Linnean Society, Botany* 19(115-116): 67. 1881, *Monographiae Phanerogamarum* 6: 178. 1889, *Revisio Generum Plantarum* 2: 775. 1891 and *Botanical Magazine* (Tokyo) 26(307): 214. 1912, *Annales de la Société Linnéenne de Lyon, sér. 2* 68: 200-201. 1922 [1921], *An Enumeration of Philippine Flowering Plants* 1: 35. 1922, *Flore Générale de l'Indo-Chine* 7: 260. 1922, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 408-409. 1930, *Acta Phytotaxonomica et Geobotanica* 11: 156. 1942, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 696. 1960, *Journal of Japanese Botany* 46(3): 65. 1971, H.L. Fairbrothers & J.R. Gray, "Microstegium vimineum (Trin.) A. Camus (Gramineae) in the United States." *Bulletin of the Torrey Botanical Club*. 99: 97-100. 1972, *Zlaki SSSR* 695. 1976, *Turun yliopiston julkaisu — Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Journal of Economic and Taxonomic Botany* 6(1): 175. 1985, *Annals of the Missouri Botanical Garden* 74: 432-433. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 75: 279-282. 1990, *Nordic J. Bot.* 14: 24. 1994, *Castanea* 60: 270-275. 1995, J.G. Ehrenfeld, "A rhizomatous, perennial form of *Microstegium vimineum* (Trin.) A. Camus in New Jersey." *The Journal of the Torrey Botanical Society*. 126 (4): 352-358. 1999.

in English: Nepalese browntop, Nepal grass, Nepal microstegium, Japanese stilt grass, Asian stilt grass, Japanese grass, Vietnamese stilt grass, Chinese packing grass, annual jewgrass, basketgrass, Mary's grass, Eulalia

M. yunnanense R.J. Yang

China. See *Acta Phytotaxonomica Sinica* 22(3): 221-223, f. 1. 1984.

Microthureia Thouars

Greek *mikros* "small, tiny" plus *Thuarea* Pers.

Panicoideae, Panicoideae, Paniceae, see *Synopsis Plantarum* 1: 110. 1805, *Genera Nova Madagascariensis* 3. 1806.

Miegia Pers. = *Arundinaria* Michx., *Miegia* Schreb. (Cyperaceae)

Bambusoideae, Bambuseae, Arundinariinae, type *Miegia macrosperma* (Michx.) Pers., see *Histoire des plantes de la Guiane Française* 1: 45, pl. 16. 1775, *Flora Caroliniana*,

secundum ... 81. 1788, *Genera Plantarum* 786. 1791, *Species Plantarum. Editio quarta* 1(1): 311-312. 1798, *Flora Boreali-Americana*. 1: 73-74. Paris 1803, *Synopsis Plantarum* 1: 101, 102. Paris et Tubingae 1805, *Catalogus Plantarum Americae Septentrionalis* 14. 1813, *The Genera of North American Plants*, and catalogue of the species, to the year 1817. 1: 39. Philadelphia 1818, *Western Review and Miscellaneous Magazine* 1: 93. Lexington, Kentucky 1819, *First Catalogues and Circulars of the Botanical Garden of Transylvania University* 14. 1824, *Transactions of the American Philosophical Society, new series*, 5: 149. 1837, *Bambuseae* 22, t. 2, f. 1. 1839, *Transactions of the Linnean Society of London* 26(1): 15. 1868 and *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Kew Bulletin* 44(2): 349-367. 1989, *Castanea* 62: 8-21. 1997, *Contributions from the United States National Herbarium* 39: 18-24. 2000.

Mildbraediochloa Butzin = Melinis P.

Beauv.

After the German botanist Gottfried Wilhelm Johannes Mildbraed, 1879-1954, traveler and explorer, plant collector, 1908 Duke of Mecklenbur's first expedition to Cameroon and 1910-1911 second expedition from Congo to Lake Chad (also Cameroon and Fernando Po), 1913 Keeper of Berlin Bot. Mus., 1928 Likomba, among his writings are "Plantae Tessmannianae Peruvianae II." *Notizbl. Bot. Gart. Berlin-Dahlem*. 9(84): 260-268. 1925, "Plantae Tessmannianae Peruvianae III." *Notizbl. Bot. Gart. Berlin-Dahlem*. 9(89): 964-997. 1926, "Acanthaceae novae." *Notizbl. Bot. Gart. Berlin-Dahlem*. 11(101): 63-71. 1930 and "Beiträge zur Flora von Deutsch-Südwestafrika." *Notizbl. Bot. Gart. Berlin*. 15: 448-471, 633-634. 1940, 15: 757-761. 1942, with Franz Otto Koch wrote *Die Banane ihre Kultur und Verbreitung*. Berlin 1926. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 489. Boston 1965; F.N. Hepper & F. Neate, *Plant Collectors in West Africa*. 56. 1971; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; René Letouzey (1918-1989), "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 1-110. Paris 1968; Jan Czekanowski, *Ethnographisch-Antropologischer Atlas: Zwischenseen Bantu-Pygmaen und Pygmoiden-Urwaldstämme*. Leipzig 1911; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 267. 1972; Adolf Friedrich Georg Ernst Albert Eduard, Duke of Mecklenburg (b. 1882), *Wissenschaftliche Ergebnisse der Deutschen Zentralafrika-Expedition 1907-1908*, unter Führung Adolf Friedrichs ... Band ii. *Botanik*. Leipzig 1914 and *From the Congo to the Niger and the Nile. An Account of the German Central African Expedition of 1910-1911*. Duckworth 1913; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." in

Webbia. 19(2): 862. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

One species, tropical Africa. Panicoideae, Paniceae, Melinidinae, or Panicoideae, Panicodae, Paniceae, perennial, herbaceous, plants bisexual, contracted paniculate inflorescence, pedicellate spikelets, 2 glumes unequal, upper glume membranous and awned, upper lemma laterally compressed and awned, 2 stigmas, type *Mildbraediochloa reynaudioides* (C.E. Hubb. ex Mildbr.) Butzin, rainforest, see *Willdenowia* 6(2): 288. 1971, *Bibliotheca Botanica* 138: 1-149. 1988.

Species

M. reynaudioides (C.E. Hubb. ex Mildbr.) Butzin (*Melinis reynaudioides* (C.E. Hubb. ex Mildbr.) Zizka; *Rhynchelytrum reynaudioides* (C.E. Hubb. ex Mildbr.) C.E. Hubb. ex Mildbr.)

Africa. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 13: 697. 1937, *Kew Bull.* 1939: 649. 1940.

Miliarium Moench = Milium L.

Latin *miliaris*, *a*, *um* or *milliarius* "belonging to millet."

Pooideae, Poaceae, Miliinae, see *Species Plantarum* 1: 61. 1753, *Familles des Plantes* 2: 34. 1763, *Methodus Plantas Horti Botanici* ... 204. 1794 and *Contributions from the United States National Herbarium* 46: 292-294. 2003, *Contributions from the United States National Herbarium* 48: 451-452. 2003.

Miliastrum Fabr. = Setaria P. Beauv.

Resembling *milium*.

Panicoideae, Paniceae, Setariinae, see *Species Plantarum* 1: 55, 61. 1753, *Enumeratio Methodica Plantarum* 206. 1759, *Familles des Plantes* 2: 34. 1763, *Methodus Plantas Horti Botanici* ... 204. 1794, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 237. 1829, *Synopsis Plantarum Glumacearum* 1: 49. 1855 [1853] and *Contr. U.S. Natl. Herb.* 22(3): 156. 1920, J.F. Veldkamp, "Miscellaneous notes on southeast Asian Gramineae: 9. *Setaria* and *Paspalidium*." *Blumea* 39: 373-384. 1994, R.D. Webster, "Nomenclatural changes in *Setaria* and *Paspalidium* (Poaceae: Paniceae)." *Sida* 16: 439-446. 1995, *Contributions from the United States National Herbarium* 46: 441-442. 2003.

Milium Adans. = Panicum L.

Latin *milium*, *ii* "millet."

Panicoideae, Paniceae, Panicinae, see *Species Plantarum* 1: 61. 1753, *Familles des Plantes* 2: 34. 1763, *Methodus Plantas Horti Botanic ...* 204. 1794 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Contributions from the United States National Herbarium* 46: 292-294. 2003, *Contributions from the United States National Herbarium* 48: 451-452. 2003.

Miliium L. = *Miliarium* Moench, *Miliium* Adans.

Latin *miliium*, ii “millet,” Greek *meline*; see Carl Linnaeus, *Species Plantarum*. 61. 1753 and *Genera Plantarum*. 5th edition. 30. 1754; S. Battaglia, *Grande dizionario della lingua italiana*. X: 383. Torino 1978; H. Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 386. 1996.

About 3-6 species, north temperate, Eurasia, North America. Pooideae, Poodae, Aveneae, or Stipeae, or Pooideae, Poeae, Miliinae, annual or perennial, erect, herbaceous, stems in loose tussocks or loosely tufted, stoloniferous or caespitose, culm internodes hollow, auricles absent, ligule an unfringed membrane, leaf blades flat and linear to undulate, plants bisexual, inflorescence paniculate, panicles loose or contracted, spikelets 1-flowered, floret dorsally compressed, spikelets with female-fertile florets only, glumes 2 more or less equal awnless, lemmas rounded and awnless, palea present, 2 free and membranous lodicules, stamens 3, ovary glabrous, 2 stigmas, ornamental, food source for game birds, ground cover, open habitats, woodlands, shade species, type *Miliium effusum* L., see *Species Plantarum* 1: 61. 1753, *Familles des Plantes* 2: 34. 1763, *Methodus Plantas Horti Botanic ...* 204. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 20. Londini [London] 1796, *Flora Atlantica* 1: 66, t. 12. 1798, *Annales des Sciences Naturelles (Paris)* 5: 301. 1825, *Spicilegium florae rumelicæ et bithynicæ ...* 2: 471. 1843 [1844], *Fragmentos de Algunas Plantas Filipinas* 24. 1851, *Department of Agriculture. Botanical Division. Bulletin* 8: 32. 1889 and *Ill. Fl. N.U.S.* 2nd edition. 1: 173. 1913, *American Midland Naturalist* 4: 213. 1915, *Bot. Zhurn.* 60: 393-394. 1975, *Harvard Papers in Botany* 1(9): 11-90. 1996, *Journal of Ecology* 86(3): 429-438. June 1998, *Grasses: Systematics and Evolution* 61-74. 2000, *New Phytologist* 149(2): 165-165. Feb 2001, *New Phytologist* 150(3): 641-651. June 2001, *Botanical Journal of the Linnean Society* 138(1): 117-122. Jan 2002, *Ecology Letters* 5(3): 420-426. May 2002, *Hereditas* 137(1): 16-19. Oct 2002, *Contributions from the United States National Herbarium* 46: 292-294. 2003, *Contributions from the United States National Herbarium* 48: 451-452. 2003, *Ecological Entomology* 28(2): 219-227. Apr 2003, *Am. J. Bot.* 91: 1709-1725. 2004.

Species

M. effusum L. (*Agrostis effusa* (L.) Lam.; *Decandolia effusa* (L.) Bastard; *Melica effusa* (L.) Salisb.; *Miliarium effusum* (L.) Moench; *Miliium confertum* L.; *Miliium effusum* Lour., nom. illeg., non *Miliium effusum* L.; *Miliium effusum* subsp. *alpicola* Chrtk; *Miliium effusum* subsp. *confertum* (L.) K. Richt.; *Miliium effusum* subsp. *schmidtianum* (C. Koch) Tzvelev; *Miliium effusum* var. *alpicola* (Chrtk) Soó; *Miliium effusum* var. *cisatlanticum* Fernald; *Miliium effusum* var. *elatius* Koch; *Miliium effusum* var. *latifrons* Podp.; *Miliium effusum* var. *schmidtianum* (C. Koch) Griseb.; *Miliium effusum* var. *subacaule* Jans & Wacht.; *Miliium effusum* var. *variegatum* Ducommun; *Miliium schmidtianum* Koch; *Miliium transsilvanicum* Schur; *Paspalum effusum* (L.) Raspail)

North America, Eurasia. Ornamental, perennial, loosely tufted, erect or geniculate at base, leaf sheath glabrous, ligule glabrous, leaf blades glabrous and undulate, nodding panicles very lax with filiform branches spreading to deflexed, spikelets awnless, glumes membranous, grass relished by cattle, seeds eaten by game birds, gravelly soil, see *Species Plantarum* 1: 61. 1753, *Encyclopédie Méthodique, Botanique* 1: 59. 1783, *Flora Cochinchinensis* 49. 1790, *Methodus Plantas Horti Botanic ...* 204. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 20. Londini [London] 1796, *Essai sur la Flore du Département de Maine et Loire* 28. 1808, *Annales des Sciences Naturelles (Paris)* 5: 301. 1825, *Synopsis Florae Germanicæ et Helveticæ* 786. 1837, *Norsk Flora* 157. 1842, *Linnaea* 21(4): 438. 1848, *Flora Rossica* 4(13): 445. 1852, *Enumeratio Plantarum Transsilvaniae* 741. 1866, *Taschenbuch für den Schweizerschen Botaniker* 855. 1869, *Plantae Europaeae* 1: 34. 1890, *Nuovo Giornale Botanico Italiano, new series* 4: 209. 1897 and *Acta Hort. Petrop.* 16: 4. 1900, *Nederlandsch Kruidkundig Archief. Verslangen en Mededelingen der Nederlandsche Botanische Vereeniging* 44: 234, f. 4. 1934, *Rhodora* 52: 218. 1950, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 123. 1971[1972], *Flora Republicii Socialiste Romania* 12: 185. 1972, *Zlaki SSSR* 294. 1976, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Zapovedniki Belorussii Issledovaniia* 11: 62-69. 1987, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 34: 27-32. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1185, 1783-1786. 1990, *Fitologija* 39: 72-77. 1991, *Genome* 34: 868-878. 1991, *Flora Mediterranea* 1: 229-236. 1991, *Genome* 35: 1050-1053. 1992, *Regnum Veg.* 127: 66. 1993, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, S. Jonasson & B. Widerberg, “The resource balance of *Miliium effusum* with emphasis on environmental resource supply.” *Oecologia* 76: 11. 1988, *Taxon* 49(2): 252. 2000.

in English: millet grass, wood millet

M. effusum L. var. *cisatlanticum* Fernald

Canada, Newfoundland. See *Species Plantarum* 1: 61. 1753 and *Rhodora* 52: 218. 1950.

M. effusum L. var. *effusum*

Eurasia. See *Species Plantarum* 1: 61. 1753.

M. vernale M. Bieb. (*Agrostis vernalis* (M. Bieb.) Poir.; *Milium montianum* Parl.; *Milium scabrum* Rich.; *Milium vernale* H. Hall, nom. illeg., non *Milium vernale* M. Bieb.; *Milium vernale* Kunth, nom. illeg., non *Milium vernale* M. Bieb.)

Asia, Europe. Noxious weed species, invasive, see *Flora Taurico-Caucasica* 1: 53. 1808, *Encyclopédie Méthodique, Botanique Suppl.* 1: 259. 1810, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 66. 1833, *Flora italiana, ossia descrizione delle piante ...* 1: 156. 1848, *Exploration Scientifique de l'Algérie* 2: 72. 1854 [1855], *Plantae Europaeae* 1: 34. 1890 and *Beihefte zum Botanischen Centralblatt* 31: 267. 1914, *Nuova Flora Anal. D'Italia* 1: 87. 1923, *Arkiv Bot., Stockh., Andra ser.* 2: 291. 1952, *Zlaci SSSR* 296. 1976, *Novosti Sist. Vyss. Rast.* 14: 7, 9-10. 1977, *Genome* 34: 868-878. 1991, *Fitologija* 39: 72-77. 1991, *Chromosoma* 101: 420-424. 1992, *Bot. Zhurn. (Moscow & Leningrad)* 78(10): 89. 1993.

in English: vernal millet grass

M. vernale M. Bieb. subsp. *montianum* (Parl.) Jahand. & Maire (*Milium montianum* Parl.)

North Africa, Morocco. See *Flora italiana, ossia descrizione delle piante ...* 1: 156. 1848, *Exploration Scientifique de l'Algérie* 2: 72. 1854[1855] and *Cat. Pl. Maroc* 1: 36. 1931, *Catalogue des Plantes du Maroc* 4: 928. 1941, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, S.T. Bennett, A.Y. Kenton, & M.D. Bennett, "Genomic *in situ* hybridization reveals the allopolyploid nature of *Milium montianum* (Gramineae)." *Chromosoma* 101: 420-424. 1992.

M. vernale M. Bieb. subsp. *vernale*

Europe. See *Flora Mediterranea* 5: 331-334. 1995.

Miphragtes Nieuwl. = *Phragmites* Adans.

An anagram of the generic name *Phragmites*.

Arundinoideae, Arundineae, see *Species Plantarum* 1: 81. 1753, *Familles des Plantes* 2: 34, 559. 1763, *Archiv für die Botanik* 1(3): 37. 1798, *Systema Vegetabilium* 2: 29, 501. 1817, *Cyperaceae et Gramineae Siculae...* Pragae 1820, *Synopsis Plantarum Glumacearum* 1: 197. 1855 [1854], *Journal of the Linnean Society Bot.* 19: 112. 1881 and *American Midland Naturalist* 3: 332. 1914, E. Yacovleff & F.L. Herrera, "El mundo vegetal de los antiguos peruanos." *Revista del Museo Nacional.* 3: 241-322 and 4: 20-102. Lima 1934-1935, *Die Systematik und Anatomie der Arundineae* 1-208. 1961, *Kew Bulletin* 21: 113-117. 1967, *Animal Behaviour Monographs* 1(3): 161-311. 1968, *Taxon* 17:

168-169. 1968, H.I. Aston, *Aquatic Plants of Australia* 207-210. 1973, *Kyoto University African Studies* 10: 143-212. 1976, *African Studies Monographs* 3: 109-130. 1983, C.R. Peters, "African wild plants with rootstocks reported to be eaten raw: the Mocoyletons, part I." *Mitteilungen aus dem Institut für Allgemeine Botanik Hamburg* 23: 935-952. 1990, *Contributions from the United States National Herbarium* 46: 294, 537-539. 2003.

Miquelia Arnott & Nees = *Garnotia* Brongn., *Miquelia* Blume (Gesneriaceae), *Miquelia* Meissn. (Icacinaceae)

For the Dutch (b. in Germany) botanist Friedrich Anton Wilhelm Miquel, 1811-1871 (d. Utrecht), M.D. Groningen 1833, professor of botany, Director of the Rotterdam Botanical Garden, Director of the Amsterdam Botanical Garden, among his very numerous and valuable writings are "Species aliquot novas valdivianas, a Domino W. Lechler collectas." *Linnaea.* 25: 650-654. 1853 and "Animadversiones in Piperaceas Herbarii Hookeriani." *London J. Bot.* 4: 410-470. 1845. See Frans A. Stafleu & Richard S. Cowan, *Taxonomic literature.* 3: 508-520. 1981; F.A. Stafleu, in *Wentia.* 16: 1-95. 1966; Frans A. Stafleu, in *D.S.B.* 9: 417. 1981; J.H. Barnhart, *Biographical notes upon botanists.* 2: 495. 1965; E.D. Merrill, *Bernice P. Bishop Mus. Bull.* 144: 136-137. 1937; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 268. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* Philadelphia 1964; A. Lasègue, *Musée botanique de Benjamin Delessert.* Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1917-1933; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. Stuttgart 1993; Leonard Huxley, *Life and Letters of Sir J.D. Hooker.* London 1918.

Arundinelleae, type *Miquelia courtallensis* Arn. & Nees, see *Voyage autour du Monde* 2: 132, 133, t. 21. 1832 [1829], *Plantarum vascularium genera secundum ordines ...* 1: 152. Lipsiae [Leipzig] 1838, *Bulletin des Sciences Physiques et Naturelles en Neerlande* 1: 94. 1838, *Gramineae* 45-48. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 177-180. 1843, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19(Suppl. 1): 46. 1846 and *University of California Publications in Botany* 15: 172. 1929, *Edinburgh Journal of Botany* 47(3): 353. 1990.

Miscanthidium Stapf = *Miscanthus* Andersson

Referring to the genus *Miscanthus*.

About 6-7/10 species, tropical and southern Africa. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial, herbaceous, erect, rhizomatous, ligule an unfringed membrane, plants bisexual, spicate or paniculate inflorescence, spikelets paired, 2 glumes more or less equal or subequal, lower glume 2-keeled, upper glume 1-3-nerved, palea present, 2 free and fleshy lodicules, 3 stamens, 2 stigmas, sometimes referred to *Miscanthus*, hybrids with *Saccharum*, type *Miscanthidium teretifolium* (Stapf) Stapf, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 165-166. 1855, *Primitiae Florae Amurensis* 331. 1859, *Monographiae Phanerogamarum* 6: 121. 1889, *Die Pflanzenwelt Ost-Afrikas* 5(50): 96. 1895 and *Contributions from the United States National Herbarium* 9: 399. 1905, *Flora of Tropical Africa* 9: 89-90. 1917, *Flore Générale de l'Indo-Chine* 7: 243. 1922, *Bulletin de la Société Botanique de France* 71: 1182. 1924, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 113. 1940, William Julius Eggeling (b. 1909), *An Annotated List of the Grasses of the Uganda Protectorate* 44. 1944, *Journal of Japanese Botany* 25(1-2): 7. 1950, *Bulletin de la Société Botanique de France* 106: 338-339. 1959, *Kirkia* 3: 120. 1963, *J. Jap. Bot.* 39: 196-204, 257-265, 289-298. 1964, *African Journal of Ecology* 40(1): 42-52. Mar 2002, *Contributions from the United States National Herbarium* 46: 294-295. 2003, *Conservation Biology* 17(2): 500-511. Apr 2003, *African Journal of Ecology* 42(s1): 51-56. Aug 2004, J. Okot-Okumu, "Primary production and decomposition of *Loudetia phragmitoides* (A. Peter) in the littoral wetland of a small satellite lake (L. Nabugabo, Uganda)." *African Journal of Ecology* 42(s1): 108-113. Aug 2004.

Species

M. capense (Nees) Stapf (*Erianthus capensis* Nees; *Miscanthus capensis* (Nees) Andersson; *Saccharum capense* (Nees) Steud.)

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 93. 1841, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 165. 1855, *Synopsis Plantarum Glumacearum* 1: 408. 1855, *Flora Capensis* 7: 323. 1898 and *Flora of Tropical Africa* 9: 91. 1917, *An Introduction to the Study of the South African Grasses* ... 218. 1931, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

M. erectum Stent & C.E. Hubb.

Africa. See *Bulletin of Miscellaneous Information Kew* 1928(1): 36-37, f. A-H. 1928.

M. fuscescens Pilg. (*Sorghastrum fuscescens* (Pilg.) Clayton)

Tanzania. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 806. 1933, *Kew Bulletin* 30(3): 509. 1975.

M. junceum (Stapf) Stapf (*Erianthus junceus* Stapf; *Miscanthus junceus* (Stapf) Pilg.;

South Africa. See *Flora Capensis* 7: 324. 1898 and *Hooker's Icones Plantarum* 31: t. 3084. 1922, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 113. 1940, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

M. sorghum (Nees) Stapf (*Erianthus sorghum* Nees; *Miscanthidium sorghum* (Nees) E. Phillips, nom. illeg., non *Miscanthidium sorghum* (Nees) Stapf; *Miscanthus sorghum* (Nees) Pilg.; *Saccharum sorghum* (Nees) Steud.)

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 92. 1841, *Synopsis Plantarum Glumacearum* 1: 408. 1855 and *Flora of Tropical Africa* 9: 91. 1917, *An Introduction to the Study of the South African Grasses* ... 219. 1931, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 113. 1940.

M. teretifolium (Stapf) Stapf (*Erianthus teretifolius* Stapf; *Miscanthus junceus* (Stapf) Pilg.; *Miscanthus sorghum* (Nees) Pilg.; *Miscanthus teretifolius* (Stapf) Pilg.)

South Africa. Riverbanks, streamlets, see *Florae Africae Australioris Illustrationes Monographicae* 92. 1841, *Flora Capensis* 7: 324. 1898 and *Flora of Tropical Africa* 9: 89. 1906, *Journal of the Linnean Society, Botany* 37: 478. 1906, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 113. 1940.

M. violaceum (K. Schum.) Robyns (*Erianthus violaceus* K. Schum.; *Miscanthus violaceus* (K. Schum) Pilg.)

Tropical Africa. See *Die Pflanzenwelt Ost-Afrikas* 5(50): 96. 1895 and *Flore Agrostologique du Congo Belge* 82. 1929, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 113. 1940, M. Behangana & J. Arusi, "The distribution and diversity of amphibian fauna of Lake Nabugabo and surrounding areas." *African Journal of Ecology* 42(s1): 6-13. Aug 2004.

Miscanthus Andersson = *Miscanthidium* Stapf, *Sclerostachya* (Andersson ex Hack.) A. Camus, *Triarrhena* (Maxim.) Nakai, *Xiphagrostis* Coville

Stalked spikelets, from the Greek *mischos* "stalk, pedicel" and *anthos* "flower," referring to the pedicellate spikelets; in form *miskos* "shell, husk."

About 17-20 species, mainly Southeast Asia, Old World tropics, Africa. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial with invasive tendencies, strong and robust, tall, clump-forming, rhizomatous or tufted, stems reedlike or canelike, nodes solid and erect, internodes solid, auricles absent, leaf sheath loose, leaves narrow and with rough edges, ligule membrane-like and fringed or densely

ciliate, plants bisexual, inflorescence subdigitate or paniculate and terminal, tough raceme rachis, arching and pubescent racemes bearing many small spikelets, spikelets bisexual and paired, pedicellate spikelets, 2-flowered, upper floret hermaphrodite, lower floret sterile, 2 glumes almost membranous to papery and more or less equal, lower glume convex or keeled, upper lemma entire or bidentate, callus with long fine hairs, a spreading involucreal beard from the callus, palea awnless and nerveless, 2 lodicules free and fleshy or 0, 2-3 stamens, ovary glabrous, 2 stigmas, ornamental, cultivated for the spectacular flower heads and foliage, one of the most economical renewable energy crops, lawn specimens, weed species, biofuel and power source, energy and fiber production, construction material, fiberboards, thatching, wind filters, screening, horse and animal bedding, some species useful for making paper, tolerate sea sprays and strong winds, usually extremely hardy, growing in streamsides, open places, hillsides, ponds and streams, marshes and moist soils, meadows, forest margins, related to *Saccharum*, *Miscanthidium*, and *Sclerostachya*, intergeneric hybrids with *Saccharum* L., type *Miscanthus capensis* (Nees) Andersson, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 165-166. 1855, *Primitiae Florae Amurensis* 331. 1859, *Monographiae Phanerogamarum* 6: 121. 1889, *Die Pflanzenwelt Ost-Afrikas* 5(50): 96. 1895 and *Contributions from the United States National Herbarium* 9: 399. 1905, *Flora of Tropical Africa* 9: 89-90. 1917, *U.S. Dept. Agric. Bull.* 772: 254. 1920, *Flore Générale de l'Indo-Chine* 7: 243. 1922, *Bulletin de la Société Botanique de France* 71: 1182. 1924, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 113. 1940, William Julius Eggeling, *An Annotated List of the Grasses of the Uganda Protectorate* 44. 1944, *Journal of Japanese Botany* 25(1-2): 7. 1950, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 233. 1957, *Bulletin de la Société Botanique de France* 106: 338-339. 1959, *Bull. Fac. Agric. Mie Univ.* 25: 1-24. 1962, *Kirkia* 3: 120. 1963, *J. Jap. Bot.* 39: 196-204, 257-265, 289-298. 1964, *Botaniska Notiser* 119(2): 209-212. 1966, Hayashi I. & M. Numata, "Viable buried-seed population in the *Miscanthus*-and *Zoysia*-type grasslands in Japan." *Japanese Journal of Ecology* 20: 243. 1971, S. Beuch, B. Boelcke, & L. Belau, "Effect of the organic residues of *Miscanthus x giganteus* on the soil organic matter level of arable soils." *Journal of Agronomy and Crop Science* 184(2): 111-120. Apr 2000, Hodkinson T.R., Chase M.W., Lledo M.D., Salamin N., & S.A. Renvoize, "Phylogenetics of *Miscanthus*, *Saccharum* and related genera (Saccharinae, Andropogoneae, Poaceae) based on DNA sequences from ITS nuclear ribosomal DNA and plastid trnL intron and trnL-F intergenic spacers." *Journal of Plant Research* 115: 381-392. 2002, J.C Clifton-Brown, I. Lewandowski, F. Bangerth, & M.B. Jones, "Comparative responses to water stress in stay-green, rapid- and slow-senescing genotypes of the biomass crop, *Miscanthus*."

New Phytologist 154(2): 335-345. May 2002, Trevor R. Hodkinson, Mark W. Chase, Chigusa Takahashi, Ilia J. Leitch, Michael D. Bennett, & S.A. Renvoize, "The use of DNA sequencing (ITS and *trnL-F*), AFLP, and fluorescent *in situ* hybridization to study allopolyploid *Miscanthus* (Poaceae)." *Am. J. Bot.* 89: 279-286. 2002, *Contributions from the United States National Herbarium* 46: 294-295. 2003, John C. Clifton-Brown, Paul F. Stampfl, & Michael B. Jones, "*Miscanthus* biomass production for energy in Europe and its potential contribution to decreasing fossil fuel carbon emissions." *Global Change Biology* 10(4): 509-518. Apr 2004, *Entomological Science* 8(1): 41-64. Mar 2005, *Restoration Ecology* 13(1): 49-60. Mar 2005, *Plant Species Biology* 20(1): 23-32. Apr 2005, *Animal Science Journal* vol. 76, issue 2: 171-177. Apr 2005.

Species

M. boninensis Nakai ex Honda

Asia, Japan. See *Botanical Magazine* (Tokyo) 42: 130. 1928.

M. capensis (Nees) Andersson (*Erianthus capensis* Nees; *Miscanthidium capense* (Nees) Stapf; *Miscanthidium capense* var. *capense*; *Miscanthidium capense* var. *villosum* (Stapf) E. Phillips; *Miscanthidium erectum* Stent & C.E. Hubb.; *Miscanthidium sorghum* (Nees) Stapf; *Miscanthus sorghum* (Nees) Pilg.; *Saccharum capense* (Nees) Steud.)

South Africa. Perennial, variable, tufted, robust, leaf blades expanded, ligule an unfringed membrane, sheath fibrous when old, inflorescence a large narrow panicle, raw rhizomes chewed by children, ornamental, large and coarse leaves are not grazed, useful thatching grass, occurs in temporarily to seasonally wet areas, riverbanks, along stream banks, forest margins, see *Florae Africae Australioris Illustrationes Monographicae* 93. 1841, *Synopsis Plantarum Glumacearum* 1: 408. 1855, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 165. 1855 and *Flora of Tropical Africa* 9: 91. 1917, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

in English: East-coast broomgrass, dabagrass

in South Africa: ruigtegras, lesene, mothala, ooskus-ruigtegras.

M. changii Y.N. Lee

S. Korea, Japan. Rare species, see *Journal of Japanese Botany* 39: 115. 1964.

M. chejuensis Y.N. Lee

S. Korea. Rare species, see *Korean Journal of Botany* 17(2): 85. 1974.

M. ecklonii (Nees) Mabb. (*Erianthus ecklonii* Nees; *Miscanthidium capensis* Nees; *Saccharum ecklonii* (Nees) Steud.)

South Africa. Thatch and brooms, see *Cat. Sem. Hort. Vratisl.* 1835, *Ann. Sci. Nat.* II, 6: 103. 1836, *Synopsis*

Plantarum Glumacearum 1: 408. 1855 and *Taxon* 33(3): 442. 1984.

M. floridulus (Labill.) Warb. ex K. Schum. & Lauterb. (*Erianthus floridulus* (Labill.) Schult.; *Eulalia japonica* Trin.; *Miscanthus formosanus* A. Camus; *Miscanthus japonicus* Andersson; *Miscanthus japonicus* (Trin.) Andersson; *Miscanthus ryukyensis* Honda; *Saccharum floridulum* Labill.; *Xiphagrostis floridula* (Labill.) Coville)

Southeast Asia, Asia temperate and tropical, Taiwan, Pacific Islands, Ryūkyū Island. Perennial clump grass, deep green, tall, robust and huge, tufted, stout and hollow reedlike culms, rhizomes short and thick, leaf sheath hairy at the base, leaves elongate and drooping, scabrid-toothed leaf margins, pyramidal and erect terminal panicles, slender racemes branched at base, paired spikelets lanceolate and acute, feathery flower clusters mature from a light reddish tan to silver, lower glume lanceolate, glumes herbaceous, lemmas lanceolate and hyaline, palea hyaline, stems used to make torches, noxious weed species, aggressive and invasive pest, potential seed contaminant, ornamental, fluffy silver plumes, cultivated, used for biomass energy production, can be used in seaside gardens, tolerates salty and coastal conditions, tolerates wind and salt spray, hardness is questionable, unopened flower spikes edible, closely related to *Miscanthus sacchariflorus* (Maxim.) Benth., grows on moist soils in meadows, open places, see *Sertum Austro-Caledonicum* Pars prior 13, t. 18. Parisii 1824, *Mantissa* 3(Add. 1): 563. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 333. 1832, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 166. 1855 [1856] and *Die Flora der deutschen Schutzgebiete in der Südsee* 166. 1901, *Contributions from the United States National Herbarium* 9: 399, pl. 69. 1905, *Bulletin du Muséum d'Histoire Naturelle* 25: 670. 1919, *Bulletin du Muséum National d'Histoire Naturelle* 30: 514. 1924, *Botanical Magazine* 51: 58. 1937 [1936].

in English: Pacific island silver grass, Japanese silver grass, Chinese silver grass, giant Chinese silver grass, Chinese fairy grass, eulalia, miscanthus, giant miscanthus, giant eulalia grass, Amur silver grass, swordgrass, sawgrass, reed grass

in French: miscanthus du Japon

in Japan: tokiwa-susuki (= evergreen *Miscanthus*)

in Pacific: kaho

M. floridulus (Labill.) Warb. ex K. Schum. & Lauterb. var. **malayanus** Y.N. Lee

Asia. Perennial, large, stout and hollow reedlike culms, inflorescence a pyramidal and erect terminal panicle, see *J. Jap. Bot.* 39: 120. 1964.

M. intermedius (Honda) Honda (*Miscanthus longiberbis* var. *intermedius* Honda; *Miscanthus oligostachyus* subsp. *intermedius* (Honda) T. Koyama; *Miscanthus tinctorius* var. *intermedius* (Honda) Ohwi)

Asia, Japan. See *Botanical Magazine* (Tokyo) 47: 296. 1933, *Icones Plantarum Asiaticarum* 1: 64. pl. 29. 1936, *Acta Phytotaxonomica et Geobotanica* 11: 150. 1942, *Grasses of Japan and its Neighboring Regions* 517. 1987.

M. junceus (Stapf) Pilger (*Erianthus junceus* Stapf; *Erianthus teretifolius* Stapf; *Miscanthidium junceus* Stapf; *Miscanthidium teretifolium* (Stapf) Stapf; *Miscanthus teretifolius* (Stapf) Pilg.)

Africa, South Africa, Botswana, Okavango Delta. Perennial, tufted, leaf blades terete, noninvasive species, generally occurs on cut banks of channels, perennial swamps, channel margins, riverbanks and vleis, see *Flora Capensis* 7: 324. 1898 and *Flora of Tropical Africa* 9: 89. 1906, *Journal of the Linnean Society, Botany* 37: 478. 1906, *Hooker's Icones Plantarum* 31: t. 3084. 1922, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 113. 1940, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

M. matsudae Honda

Taiwan. See *Botanical Magazine* (Tokyo) 37: 114. 1923, *Botanical Magazine* (Tokyo) 42: 130. 1928.

M. matsumurae Hack.

Japan. See *Bulletin of Miscellaneous Information Kew* 1898: 227. 1898, *Bulletin de l'Herbier Boissier* 7(9): 640. 1899 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(6): 532. 1904, *Botanical Magazine* (Tokyo) 30: 12. 1916, *Journal of the Washington Academy of Sciences* 45(7): 215. 1955, *Grasses of Japan and its Neighboring Regions* 517. 1987.

M. nepalensis (Trinius) Hackel (*Diandranthus nepalensis* (Trin.) L. Liou; *Erianthus nepalensis* (Trin.) Steud.; *Eulalia nepalensis* Trin.)

India, Sikkim, Asia temperate and tropical, Bhutan, Nepal. Perennial, stout and silky, shining bronze inflorescences nodding and plumose, leaves more or less glabrous, ornamental, invasive, moist places, shade, waste areas, roadsides, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 333. 1832, *Nomenclator Botanicus. Editio secunda* 1: 567. 1840, *Monographiae Phanerogamarum* 6: 104. 1889 and *Flora Xizangica* 5: 313, f. 174. 1987.

in English: Himalayan fairy grass, Nepal silver grass

M. nudipes (Grisebach) Hackel (*Diandranthus nudipes* (Griseb.) L. Liou; *Erianthus nudipes* Griseb.)

India, Sikkim. Silky, inflorescences nodding and plumose, leaves more or less pilose, wet places, see *Nachrichten von der Königlichen Gesellschaft der Wissenschaften und von der Georg-Augusts-Universität* 1868: 92. 1868, *Monographiae Phanerogamarum* 6: 109. 1889 and *Bulletin*

du Muséum d'Histoire Naturelle 25: 670. 1919, *Kew Bulletin* 8: 273-274. 1953, *Pl. Taxonomic Soc. Korea, Seoul* 1972: 18. 1972, *Flora Xizangica* 5: 312, f. 143. 1987.

M. oligostachyus Stapf (*Miscanthus matsumurae* Hack.)

Asia, Japan. Dense clump forming, bamboo-like leaves, silver flowers, see *Bulletin of Miscellaneous Information Kew* 1898: 227. 1898 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(6): 532. 1904, *Botanical Magazine* 47: 296. 1933, *Journal of Japanese Botany* 19: 226. 1943, *Grasses of Japan and its Neighboring Regions* 517. 1987.

in English: small Japanese silver grass

M. sacchariflorus (Maxim.) Benth. (*Imperata saccharifera* Andersson; *Imperata saccharifera* Andersson ex Benth.; *Imperata sacchariflora* Maxim.; *Miscanthus saccharifer* Benth.; *Miscanthus sacchariflorus* (Maxim.) Hack.; *Tiarrrhena sacchariflora* (Maxim.) Nakai; *Triarrhena sacchariflora* (Maxim.) Nakai)

Asia temperate, China, Japan. Perennial, rhizomatous with long invasive rhizomes, creeping, stiff leaves linear and acute, green or reddish finely hairy panicles, flimsy racemes, silky and narrow spikelets, ornamental, weed, wind hardy, useful for edges of ponds and streams, occurs on flood plains and riverbanks in meadows, maritime exposure, along roadsides, roadside ditch, closely related to *Miscanthus floridulus* (Labill.) Warb. ex K. Schum. & Lauterb., see *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 9: 331. 1859, *Journal of the Linnean Society, Botany* 19: 65. 1881, *Die Natürlichen Pflanzenfamilien* 2: 23. 1887, *Monographia Andropogonearum* 102. 1889 and *Journal of Japanese Botany* 25(1-2): 7. 1950, *Bull. Fac. Agric. Mie University* 17: 57, 59. 1958, *Pl. Taxonomic Soc. Korea, Seoul* 1972: 17-18. 1972, *Journal of Huazhong Agricultural University* (Suppl.): 56-60. 1989.

in English: Amur silver grass, silver plume grass, silver banner grass, Chinese silver grass

M. sinensis Andersson (*Erianthus japonicus* (Trin.) P. Beauv.; *Eulalia japonica* Trin.; *Eulalia japonica* var. *gracillima* (Hitc.) Grier; *Miscanthus japonicus* (Trin.) Andersson; *Miscanthus matsudae* Honda; *Miscanthus matsudae* var. *glabrescens* Honda; *Miscanthus sinensis* f. *glaber* Honda; *Miscanthus sinensis* f. *gracillimus* (Hitc.) Ohwi; *Miscanthus sinensis* f. *sinensis*; *Miscanthus sinensis* f. *variegatus* (Beal) Beetle; *Miscanthus sinensis* f. *zebrinus* (Beal) Beetle; *Miscanthus sinensis* var. *gracillimus* A.S. Hitchc.; *Miscanthus sinensis* var. *variegatus* Beal; *Miscanthus sinensis* var. *zebrinus* Beal; *Ripidium japonicum* (Trin.) Trin.; *Saccharum japonicum* Thunb., nom. illeg., non *Saccharum japonicum* Houtt.; *Xiphagrostis japonica* (Thunb.) Coville; *Xiphagrostis japonicus* (Trin.) Coville)

Eastern Asia, Asia temperate and tropical. Perennial with a clump forming habit, erect and rigid, shortly rhizomatous, tufted, tough, robust, not stoloniferous, large and impenetrably

dense clumps, ligule a short ciliate rim or long-ciliate, blue green erect or arching leaves acute and linear, leaf sheaths stiff and papery, brown or reddish purple branching panicles, numerous silky spreading racemes, spikelets lanceolate and paired, cultivated and naturalized, quite drought-tolerant, extremely hardy, biofuel, potential biomass for energy generation, useful for making paper, grown as an ornamental, many cultivars, immature flower spikes edible, the plant diuretic and refrigerant, usually occurs in wetlands, grassy places, moist meadows on slopes in lowland and mountains, occasionally found in nonwetlands, see *Transactions of the Linnean Society of London, Botany* 2: 328. 1794, *Essai d'une Nouvelle Agrostographie* 14, 162, 177. 1812, *Fundamenta Agrostographiae* 169. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 333. 1832, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 12: 136, 166-167. 1856 [or 1855], *Grasses of North America for Farmers and Students* 2: 25. 1896, *Bulletin de l'Herbier Boissier* 7(9): 639. 1899 and *Cyclopedia of American Horticulture* 1021, f. 1408. 1901, *Bulletin de l'Herbier Boissier, sér. 2*, 4(6): 526, 531-532. 1904, *Journal of the Linnean Society, Botany* 36: 348. 1904, *Index plantarum japonicarum sive enumeratio plantarum ...* 2: 66. 1905, *Contributions from the United States National Herbarium* 9: 400. 1905, *Botanical Magazine* (Tokyo) 27: 254. 1913, *Botanical Magazine* (Tokyo) 31: 13, 16-17. 1917, *Catalogus Seminum et Spororum in Horto Botanico Universitatis Imperialis Tokyoensis per annos 1915 et 1916 ... Imperialis Tokyoensis* 1918: 4. 1918, *An Enumeration of Plants Hitherto Known From Corea* 47. 1922, *Botanical Magazine* 37: 114. 1923, *Botanical Magazine* 42: 130-131, 179. 1928, *American Midland Naturalist* 11: 331. 1929, *Journal of the Faculty of Science: University of Tokyo, Section 3, Botany* 3: 384. 1930, *Botanical Magazine* (Tokyo) 51: 58. 1936, *Botanical Magazine* (Tokyo) 52: 284. 1938, *Acta Phytotaxonomica et Geobotanica* 11: 149-150. 1942, *Journal of the Washington Academy of Sciences* 45(7): 215. 1955, *Zlaci SSSR* 693. 1976, *Phytologia* 38(3): 175. 1978, *Flora Illustrata Catarinense* 1(Gram.): 909-1407. 1982, *Grasses of Japan and its Neighboring Regions* 518. 1987, *Bot. Zhurn.* 74: 1675-1678. 1989, K.K. Petersen, P. Hagberg, K. Kristiansen, "In vitro chromosome doubling of *Miscanthus sinensis*." *Plant Breeding* 121(5): 445-450. Oct 2002, Yu-Chung Chiang, Barbara A. Schaal, Chang-Hung Chou, Shong Huang, & Tzen-Yuh Chiang, "Contrasting selection modes at the *Adh1* locus in outcrossing *Miscanthus sinensis* vs. inbreeding *Miscanthus condensatus* (Poaceae)." *Am. J. Bot.* 90: 561-570. 2003, Wen-Luan Wu, Barbara A. Schaal, Chung-Yu Hwang, Ming-Der Hwang, Yu-Chung Chiang, & Tzen-Yuh Chiang, "Characterization and adaptive evolution of alpha-tubulin genes in the *Miscanthus sinensis* complex (Poaceae)." *Am. J. Bot.* 90: 1513-1521. 2003, *Ecological Research* 18(1): 41-51. Jan 2003, *Plant Breeding* 122(2):

141-145. Apr 2003, *Ecological Research* 19(5): 511-520. Sep 2004.

in English: silver grass, Japanese plume grass, Japanese silver grass, miscanthus, eulalia, Chinese silver grass, Chinese fairy grass, zebra grass, maiden grass

in Danish: japansk græs, Elefantgræs

in Japan: susuki

in China: mang jing, mang

in Vietnam: say

M. sinensis Anderss. subsp. **purpurascens** (Andersson) Tzvelev (*Miscanthus purpurascens* Andersson; *Miscanthus sinensis* var. *purpurascens* (Anderss.) Rendle; *Miscanthus sinensis* var. *purpurascens* (Andersson) Matsum.)

Asia temperate, China, Japan, Russia. Ornamental, dark green and reddish leaf blades, flowers silvery white, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 136, 166-167. 1856 [or 1855] and *Journal of the Linnean Society, Botany* 36: 348. 1904, *Zlaki SSSR* 693. 1976.

in English: purple silver grass, flame grass

M. sinensis Anderss. subsp. **sinensis**

Asia temperate, China, Japan, Russia. Ornamental, naturalized.

in English: Japanese silver grass, eulalia

M. sinensis Anderss. var. **condensatus** (Hack.) Makino (*Miscanthus condensatus* Hack.; *Miscanthus sinensis* subsp. *condensatus* (Hack.) T. Koyama; *Xiphagrostis condensatus* (Hack.) W. Wight)

Asia, Japan. A compact plant, bold leaves, red flowers, see *Bulletin de l'Herbier Boissier* 7(9): 639. 1899 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 137: 17. 1909, *Botanical Magazine (Tokyo)* 27: 254. 1913, *Grasses of Japan and its Neighboring Regions* 518. 1987, Yu-Chung Chiang, Barbara A. Schaal, Chang-Hung Chou, Shong Huang, & Tzen-Yuh Chiang, "Contrasting selection modes at the *Adh1* locus in outcrossing *Miscanthus sinensis* vs. inbreeding *Miscanthus condensatus* (Poaceae)." *Am. J. Bot.* 90: 561-570. 2003.

M. sinensis Anderss. var. **formosanus** Hack.

Asia, Taiwan. See *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 136. 1856 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(6): 526. 1904.

M. sinensis Anderss. var. **sinensis**

Australia. Leaves green.

M. sinensis Anderss. var. **variegatus** Beal (*Miscanthus sinensis* f. *variegatus* (Beal) Beetle)

Australia. Leaves green and white or cream-white longitudinally striped, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 136. 1856, *Grasses of*

North America for Farmers and Students 2: 25. 1896 and *Phytologia* 38(3): 175. 1978.

in English: variegated Japanese silver grass

M. sinensis Anderss. var. **zebrinus** Beal (*Miscanthus sinensis* f. *variegatus* (Beal) Beetle; *Miscanthus sinensis* f. *zebrinus* (Beal) Beetle; *Miscanthus zebrinus* (Beal) Nak. ex Matsum.)

Australia. Erect, horizontal banding, leaves green and white to yellowish transversely striped, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 136. 1856, *Grasses of North America for Farmers and Students* 2: 25. 1896 and *Phytologia* 38(3): 175. 1978.

in English: zebra grass

M. szechuanensis Keng ex S.L. Zhong (*Diandranthus szechuanensis* (Keng ex S.L. Zhong) L. Liou; *Diandranthus yunnanensis* (A. Camus) L. Liou)

Asia, China. See *Bulletin du Muséum d'Histoire Naturelle* 25: 670. 1919, *Claves Generum et Specierum Graminearum Primarium Sinicarum Appendice Nomenclatione Systematica* 233. 1957, *J. SouthW. Agricultural University* 1982(4): 80. 1982, *Vascular Plants of the Hengduan Mountains* 2: 2297. 1994, *Flora Reipublicae Popularis Sinicae* 10(2): 14. 1997.

M. taylorii Bor (*Miscanthus nudipes* subsp. *taylorii* (Bor) Y.N. Lee)

Tibet. See *Monographiae Phanerogamarum* 6: 109. 1889 and *Kew Bulletin* 8: 273. 1953, *Pl. Taxonomic Soc. Korea, Seoul* 1972: 18. 1972.

M. tinctorius (Steudel) Hackel (*Miscanthus sieboldii* Honda; *Saccharum tinctorium* Steud.)

Japan. Perennial, tufted, leaves broad-linear, inflorescence erect, exerted corymbs, spikelets acute and tufted-pubescent, glumes coriaceous and brown, see *Synopsis Plantarum Glumacearum* 1: 469. 1855, *Monographiae Phanerogamarum* 6: 103. 1889 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 390. 1930, *Botanical Magazine* 47: 296. 1933, *Acta Phytotaxonomica et Geobotanica* 11: 150. 1942.

M. transmorrisonensis Hayata

Taiwan. Evergreen and fast growing clumping grass, narrow green leaves, golden and sparsely branched panicles, silky arching spikes, delicate and showy flowers, ornamental, drought resistant, can handle sandy or heavy soils, tolerates partial shade or sun, excellent for erosion control, similar to *Miscanthus floridulus* (Labill.) Warb., see *Journal of the College of Science, Imperial University of Tokyo* 30(1): 404-405. 1911.

in English: evergreen miscanthus, Taiwanese miscanthus, Formosa miscanthus, evergreen maiden grass

M. violaceus (K. Schum.) Pilger (*Erianthus flavescens* K. Schum.; *Erianthus violaceus* K. Schum.; *Erianthus*

violascens K. Schum.; *Miscanthidium violaceum* (K. Schum.) Robyns)

Africa, Uganda, Zaire. See *Die Pflanzenwelt Ost-Afrikas* 5(50): 96. 1895 and *Flore Agrostologique du Congo Belge* 82. 1929, *Die Natürlichen Pflanzenfamilien* 2nd edition 14e: 113. 1940.

in Tanzania: eishanga, ishanga

M. wardii Bor (*Miscanthus nudipes* subsp. *wardii* (Bor) Y.N. Lee) (for the British (b. Manchester) plant collector Francis (Frank) Kingdon Ward, 1885-1958 (d. London), 1907 Shanghai, 1909-1956 collected in China, Burma, Tibet, and Thailand, 1920 Fellow of the Linnean Society, son of Harry Marshall Ward (1854-1906, d. Devon); see T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 212. 1972; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; Charles Lyte, *The Plant Hunters*. 151-165. London 1983; E.H.M. Cox, *Plant-hunting in China: A History of Botanical Exploration in China and the Tibetan Marches*. 180-191. 1945; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 251. 1973; Alice Margaret Coats, *The Quest for Plants. A History of the Horticultural Explorers*. 128-131. 1969; H.R. Fletcher & W.H. Brown, *Royal Botanic Garden Edinburgh, 1670-1970*. 245. Edinburgh 1970; Richard Eyde & Keith Ferguson, "The Little Dogwood of Frank Kingdon Ward." *Curtis's Botanical Magazine*. 6(2): 74-83. May 1989; H.R. Fletcher, *Story of the Royal Horticultural Society, 1804-1968*. Oxford 1969; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J.H. Barnhart, *Biographical notes upon botanists*. 3: 458. 1965)

Tibet. Riverbeds, see *Monographiae Phanerogamarum* 6: 109. 1889 and *Kew Bulletin* 8: 274. 1953, *Pl. Taxonomic Soc. Korea, Seoul* 1972: 18. 1972.

M. yunnanensis (A. Camus) Keng (*Diandranthus yunnanensis* (A. Camus) L. Liou; *Miscanthus nudipes* subsp. *yunnanensis* A. Camus)

Asia, China. See *Bulletin du Muséum d'Histoire Naturelle* 25: 670. 1919, *Sinensia* 10: 290. 1939, *Flora Reipublicae Popularis Sinicae* 10(2): 14. 1997.

Mitwabochloa J.B. Phipps = *Mitwabachloa*
J.B. Phipps, *Piptostachya* (C. E. Hubbard)
Phipps, *Zonotriche* (C.E. Hubb.) J.B. Phipps

Tropical Africa, Congo-Kinshasa, Mitwaba, Plateau des Kibara. Panicoideae, Panicodae, Arundinelleae, type *Mitwabochloa brunnea* Phipps, savannah, see *Kirkia* 5: 235-258. 1966, *Boletim da Sociedade Broteriana, ser. 2* 41: 199. 1967, *Kew Bulletin* 21(1): 119-124. 1967.

Mnesithea Kunth = *Coelorachis* Brongn.,
Diperium Desv., *Dipterum* Desv.,
Hackelochloa Kuntze, *Heteropholis* C.E.
Hubb., *Peltophorus* Desv., *Ratzeburgia* Kunth,
Rytilyx Raf. ex Hitchc., *Thyridostachyum* Nees

Possibly named after Mnesitheus Atheniensis medicus (IV a.C.), see Bertier, J., *Mnésithée et Dieuchès*, Leiden 1972, he was a doctor and herbalist from Athens; according to other authors the generic name from the Greek *mnesis* "memory, remembrance," *mnemon* "mindful, remembering," *mnaomai* "to think on, to remember," referring to an aspect of another genus.

About 1-20 species, Indomalaysia, Afghanistan to Thailand, India, Sri Lanka, Southeast Asia, Indonesia. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, leafy, rather slender, herbaceous, caespitose, culm internodes solid, auricles absent, ligule an unfringed membrane, leaves linear, plants bisexual, inflorescence terminal and axillary of single cylindrical raceme pedunculated, strap-like pedicel, racemes linear bearing pairs of sessile and unawned spikelets, pedicelled spikelet vestigial or absent, spikelets all on the same side, sessile spikelet 2-flowered, upper floret perfect, lower floret barren, 2 glumes more or less equal, lower glume wingless, upper glume 3-nerved, palea awnless, lodicules present, 3 stamens, ovary glabrous, 2 stigmas, used for fodder or for thatching, damp grassland, marshy places, type *Mnesithea laevis* (Retz.) Kunth, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Révision des Graminées* 1: 153-154. 1829, *Rel. Haenk.* 1: 329. 1830, *Voyage autour du Monde* 2: 64, f. 14. 1829 [1831], *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 180, t. 9, f. 3. 1831, *Révision des Graminées* 2: 487, t. 158. 1831, *A Natural System of Botany* 2nd edition: 379. 1836, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887, *Revisio Generum Plantarum* 2: 776. 1891 and *United States Department of Agriculture: Bulletin* 772: 278. 1920, *Hooker's Icones Plantarum* 36: t. 3548. 1956, *Blumea* 31: 281-307. 1986, *Austrobaileya* 3(1): 79-99. 1989, T.J. Killeen, "The grasses of Chiquitania, Santa Cruz, Bolivia." *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Flora of the Guianas. Series A, Phanerogams* 8: 143-146. 1990, *Flora Mesoamericana* 6: 396-397. 1994, *Austral. Ecology* 24(1): 80-89. Feb 1999, *Contributions from the United States National Herbarium* 46: 161-162, 214, 246, 295-296, 527, 543, 550, 616. 2003.

Species

M. annua (Lazarides) de Koning & Sosef (*Heteropholis annua* Lazarides)

Australia. See *Nuytsia* 5(2): 288, f. 1c-d, 7f. 1984[1985], *Blumea* 31(2): 295. 1986.

M. aurita (Steud.) de Koning & Sosef (*Coelorachis aurita* (Steud.) A. Camus; *Coelorachis aurita* (Steud.) Henrard, nom. illeg., non *Coelorachis aurita* (Steud.) A. Camus; *Coelorachis aurita* (Steud.) A. Camus; *Ischaemum auritum* Nees ex Steud.; *Manisuris aurita* (Steud.) Kuntze; *Manisuris aurita* (Steud.) Hitchc. & Chase, nom. illeg., non *Manisuris aurita* (Steud.) Kuntze; *Manisuris aurita* (Steud.) Kuhlm., nom. illeg., non *Manisuris aurita* (Steud.) Kuntze; *Rottboellia aurita* Steud.)

Asia. Marshy places, wet areas, savannah, see *Synopsis Plantarum Glumacearum* 1: 361. 1854, *Revisio Generum Plantarum* 3(3): 356. 1898 and *Contributions from the United States National Herbarium* 18(7): 276. 1917, *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 197. 1922, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922, *Blumea* 4(3): 515. 1941, *Blumea* 31(2): 290. 1986.

M. balansae (Hack.) de Koning & Sosef (*Coelorachis balansae* (Hack.) A. Camus; *Coelorachis balansae* (Hack.) Henrard, nom. illeg., non *Coelorachis balansae* (Hack.) A. Camus; *Coelorachis balansae* (Hack.) A. Camus; *Manisuris balansae* (Hack.) Parodi; *Rottboellia balansae* Hack.)

Asia, South America. Perennial, wet soil, see *Flora Brasiliensis* 2(4): 312. 1883 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 197. 1922, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 15. 1928, *Blumea* 4(3): 515. 1941, *Blumea* 31(2): 290. 1986.

M. cylindrica (Michx.) de Koning & Sosef (*Coelorachis cylindrica* (Michx.) Nash; *Ischaemum scariosum* Walter; *Manisuris campestris* (Nutt.) Hitchc.; *Manisuris cylindrica* (Michx.) Kuntze; *Rottboellia campestris* Nutt.; *Rottboellia cylindrica* (Michx.) Torr., nom. illeg., non *Rottboellia cylindrica* Willd.; *Tripsacum cylindricum* Michx.)

America. See *Flora Caroliniana, secundum ...* 249. 1788, *Flora Boreali-Americana* 1: 60. 1803, *Transactions of the American Philosophical Society, new series*, 5: 151. 1835, *Rep. Explor. Railroad Pacif. Ocean* 4: 159. 1856 [1857], *Revisio Generum Plantarum* 2: 779. 1891 and *North American Flora* 17(1): 85. 1909, *Manual of the Southeastern Flora* 41. 1933, *Blumea* 31(2): 290. 1986.

M. formosa (R. Br) de Koning & Sosef (*Rottboellia formosa* R. Br.; *Rottboellia formosa* f. *glabra* Domin; *Rottboellia formosa* var. *pilosissima* Domin)

Australia. A decreaser species, low forage value, moderate palatability, susceptible to heavy grazing, see *Prodromus Florae Novae Hollandiae* 1: 206. 1810 and *Bibliotheca Botanica* 85(2): 261. 1915, *Blumea* 31(2): 288. 1986, *Austrobaileya* 3(1): 79-99. 1989, *Flora of Australia* vol. 43, Poaceae 1: 234. 2002.

M. glandulosa (Trin.) de Koning & Sosef (*Coelorachis glandulosa* (Trin.) Stapf ex Ridl.; *Manisuris glandulosa* (Trin.) Kuntze; *Rottboellia glandulosa* Trin.)

Asia. Perennial, erect, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 250. 1832, *Revisio Generum Plantarum* 2: 780. 1891 and *The Flora of the Malay Peninsula* 5: 204. 1925, *Blumea* 31: 290. 1986.

M. granularis (L.) de Koning & Sosef (*Cenchrus granularis* L.; *Hackelochloa granularis* (L.) Kuntze; *Manisuris granularis* (L.) Sw.; *Rottboellia granularis* (L.) Roberty; *Rytilyx granularis* (L.) Skeels; *Tripsacum granulare* (L.) Raspail)

Asia, India. See *Mantissa Plantarum* 2: 575. 1771, *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Annales des Sciences Naturelles, Botanique* 5: 306. 1825, *Revisio Generum Plantarum* 2: 776. 1891 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 282: 20. 1913, *Boissiera*. 9: 79. 1960, *Cytologia* 51: 43-50. 1986, *Blumea* 31(2): 295. 1986, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in Thailand: yaa kha naeng

M. impressa (Griseb.) de Koning & Sosef (*Coelorachis impressa* (Griseb.) Nash; *Manisuris impressa* (Griseb.) Kuntze; *Rottboellia impressa* Griseb.)

Asia. See *Catalogus plantarum cubensium ...* 235. 1866, *Revisio Generum Plantarum* 2: 780. 1891 and *North American Flora* 17(1): 85. 1909, *Blumea* 31(2): 291. 1986.

M. laevis (Retzius) Kunth (*Diperium cylindricum* Desv.; *Hemarthria perforata* (Roxb.) Kunth; *Ophiuros laevis* (Retz.) Benth.; *Ophiuros perforatus* (Roxb.) Trin.; *Rottboellia laevis* Retz.; *Rottboellia perforata* Roxb.; *Thyridostachyum laeve* (Retz.) Nees)

India, Sri Lanka, Thailand, Indonesia, Afghanistan. Perennial, slender, erect, not branched or sparingly branched, shortly rhizomatous, leaf blades flat and acute, inflorescence racemose terminal or axillary, pedicelled spikelet absent, no value at all as fodder or good fodder only in some areas, eaten when young and green, sometimes used for thatching, found in marshy areas, damp places, grassland, see *Observationes Botanicae* 3: 11. 1783, *Plants of the Coast of Coromandel* 2: 43, t. 182. 1798, *Révision des Graminées* 1: 153-154. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 180, t. 9, f. 3. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(1): 246. 1832, *An Introduction to the Natural System of Botany* (2nd edition) 379. 1836, *Journal of the Linnean Society, Botany* 19: 69. 1881 and *Handb. Fl. Ceylon* 5: 210. 1900, *Reinwardtia* 2(2): 308. 1953, *Grasses of Ceylon* 181. 1956, *Grasses of Burma ...* 197. 1960, *Cytologia* 51: 43-50. 1986.

in India: gandel, kolupugaddi, kurki, lahu, lawhali, panookoo, panuku, penuku, sarwara, satgathia, satgatua, sontar, sontia, sunku dabbai hullu

M. laevis (Retzius) Kunth var. ***chenii*** (C.C. Hsu) de Koning & Sosef (*Heteropholis cochinchinensis* var. *chenii* (C.C. Hsu) Sosef & de Koning; *Thaumastochloa chenii* C.C. Hsu)

Asia, Taiwan. See *Révision des Graminées* 1: 154. 1829 and *Taiwania* 16(2): 216, 335, f. 2. 1971, *Kew Bulletin* 35(4): 816. 1981, *The Gardens' Bulletin Singapore* 36(1): 149-150, pl. 3, f. b. 1983, *Blumea* 31(2): 286. 1986.

M. laevis (Retzius) Kunth var. ***cochinchinensis*** (Lour.) de Koning & Sosef (*Heteropholis cochinchinensis* (Lour.) Clayton; *Heteropholis cochinchinensis* var. *cochinchinensis*; *Ophiuros cochinchinensis* (Lour.) Merr.; *Ophiurus cochinchinensis* (Lour.) Merr.; *Phleum cochinchinense* Lour.)

Asia. See *Flora Cochinchinensis* 48. 1790, *Révision des Graminées* 1: 154. 1829 and *Transactions of the American Philosophical Society*, n. s., 24(2): 39, 72. 1935, *Kew Bulletin* 35(4): 816. 1981, *Blumea* 31(2): 286. 1986.

M. laevispica (Keng) de Koning & Sosef (*Rottboellia laevispica* Keng)

Asia, China. See *Journal of the Washington Academy of Sciences* 21(8): 157-159, f. 2. 1931, *Blumea* 31(2): 291. 1986.

M. mollicoma (Hance) A. Camus (*Coelorachis mollicoma* (Hance) Bor; *Rottboellia mollicoma* Hance)

Asia. See *Journal of Botany, British and Foreign* 9(101): 134. 1871 and *Bulletin du Muséum National d'Histoire Naturelle* 25(1): 57-58. 1919, *Dansk Botanisk Arkiv* 20: 168. 1962.

M. parodiana (Henrard) de Koning & Sosef (*Coelorachis parodiana* Henrard; *Rottboellia parodiana* (Henrard) Burkart)

America, Argentina. See *Blumea* 4(3): 515. 1941, *Boletín de la Sociedad Argentina de Botánica* 12: 296. 1968, *Blumea* 31(2): 291. 1986.

M. pilosa B.K. Simon

Australia. See *Austrobaileya* 3(1): 90, f. 5-6. 1989.

M. ramosa (E. Fourn.) de Koning & Sosef (*Apogonia ramosa* E. Fourn.; *Coelorachis ramosa* (E. Fourn.) Nash; *Manisuris ramosa* (E. Fourn.) Hitchc.; *Rottboellia aurita* subsp. *stigmosa* Hack.; *Rottboellia ramosa* (E. Fourn.) Benth. ex Hemsl., nom. illeg., non *Rottboellia ramosa* Cav.)

America, Mexico. Good forage, see *Biologia Centrali-Americana; ...Botany ...3*: 521. 1885, *Mexicanas Plantas* 2: 63. 1886, *Monographiae Phanerogamarum* 6: 311. 1889 and *North American Flora* 17(1): 86. 1909, *Proceedings of the Biological Society of Washington* 40: 88. 1927, *Blumea* 31(2): 291. 1986.

M. rottboellioides (R. Br.) de Koning & Sosef (*Andropogon rottboellioides* (R. Br.) Steud.; *Coelorachis rottboellioides* (R. Br.) A. Camus; *Coelorachis rottboellioides* (R. Br.) Henrard, nom. illeg., non *Coelorachis rottboellioides* (R. Br.) A. Camus; *Coelorachis rottboellioides* (R. Br.) Ohwi, nom. illeg., non *Coelorachis rottboellioides* (R. Br.) A. Camus; *Coelorachis rottboellioides* (R. Br.) Stapf ex C.E. Hubb., nom. illeg., non *Coelorachis rottboellioides* (R. Br.) A. Camus; *Ischaemum rottboellioides* R. Br.; *Rottboellia ophiuroides* var. *commutata* Hack.; *Rottboellia rottboellioides* (R. Br.) Druce; *Rottboellia rottboellioides* (R. Br.) Reeder, nom. illeg., non *Rottboellia rottboellioides* (R. Br.) Druce)

Australia. See *Prodromus Florae Novae Hollandiae* 1: 205. 1810, *Synopsis Plantarum Glumacearum* 1: 382. 1854, *Flora Australiensis: A Description ...* 7: 514. 1878, *Monographiae Phanerogamarum* 6: 304. 1889 and *Botanical Exchange Club of the British Isles. Report* 1916: 644. 1917, *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 197. 1921 [1922], *Blumea* 4(3): 519. 1941, *Bulletin of Miscellaneous Information Kew* 1941: 25. 1941, *Bulletin of the Tokyo Science Museum* 18: 2. 1947, *Journal of the Arnold Arboretum* 29(4): 354. 1948, *Blumea* 31(2): 291. 1986.

M. rugosa (Nutt.) de Koning & Sosef (*Coelorachis corrugata* (Baldwin) A. Camus; *Coelorachis rugosa* (Nutt.) Nash; *Hemarthria rugosa* (Nutt.) Kunth; *Manisuris chapmanii* (Hack.) Nash; *Manisuris corrugata* (Baldwin) Kuntze; *Manisuris rugosa* (Nutt.) Kuntze; *Manisuris rugosa* var. *chapmanii* (Hack.) Scribn.; *Rottboellia corrugata* Baldwin; *Rottboellia rugosa* Nutt.; *Rottboellia rugosa* var. *chapmanii* Hack.) (for the American botanist and physician Alvan [Alvin] Wentworth Chapman, 1809-1899, a friend of Asa Gray (1810-1888), botanical collector in U.S., Florida and Georgia, 1830 graduated at Amherst, until 1836 studied medicine at Savannah and Washington, Georgia, and at Quincy, Florida, practiced at Quincy and in Jackson county, Florida, in 1846 removed to Apalachicola, where he was collector of internal revenue in 1865-1866, and collector of customs from 1866 till 1869, he is the author of *Flora of the Southern United States* New York, 1860 [the ferns by Daniel Cady Eaton, 1834-1895]. See Alphonse Louis Pierre Pyramus de Candolle, 1806-1893, *La phytographie ou l'art de décrire les végétaux considérés sous différents points de vue*. 403. Paris 1880; Ignatz Urban (1848-1931), editor, *Symbolae Antillanae*. 3(1): 30-31. Berlin 1902; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 69. Edinburgh 1970; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 145. Oxford 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; J.H. Barnhart, *Biographical notes upon botanists*. 1: 332. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 70. 1972; Ida Kaplan Langman, *A Selected*

Guide to the Literature on the Flowering Plants of Mexico. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. Stuttgart 1993; Howard Atwood Kelly & Walter Lincoln Burrage, *Dictionary of American Medical Biography*. Lives of eminent physicians of the United States and Canada, from the earliest times. New York 1928; Joseph Ewan, in *D.S.B.* 3: 196-197. 1981; J. Ewan, editor, *A Short History of Botany in the United States*. 44, 163. New York and London 1969; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 139. London 1904)

America, U.S. See *The Genera of North American Plants* 1: 84. 1818, *American Journal of Science* 1: 355. 1819, *Révision des Graminées* 1: 153. 1829, *Monographiae Phanerogamarum* 6: 308. 1889, *Revisio Generum Plantarum* 2: 779-780. 1891, *Memoirs of the Torrey Botanical Club* 5: 28. 1894 and *Flora of the Southeastern United States ...* 56. 1903, *North American Flora* 17(1): 86. 1909, *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 197. 1922, *Blumea* 31(2): 291. 1986, *Blumea* 45: 443-475. 2000.

M. selloana (Hack.) de Koning & Sosef (*Coelorachis selloana* (Hack.) Camus; *Coelorachis selloana* (Hack.) Henrard, nom. illeg., non *Coelorachis selloana* (Hack.) Camus; *Coelorachis selloana* (Hack.) A. Camus; *Manisuris selloana* (Hack.) Kuntze; *Rottboellia selloana* Hack.)

America, Brazil. See *Flora Brasiliensis* 2(4): 312. 1883, *Revisio Generum Plantarum* 2: 780. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 197. 1922, *Blumea* 4(3): 515. 1941, *Blumea* 31(2): 292. 1986, *Darwiniana* 30(1-4): 87-94. 1990.

M. subgibbosa (Winkl. ex Hack.) de Koning & Sosef (*Rhytachne rottboellioides* Desv. ex Ham.; *Rhytachne subgibbosa* (Winkl. ex Hack.) Clayton; *Rottboellia loricata* subsp. *glaberrima* Hack.; *Rottboellia loricata* subsp. *subgibbosa* Winkl. ex Hack.)

America, Brazil. See *Prodromus Plantarum Indiae Occidentalis* 12. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 250. 1832, *Flora Brasiliensis* 2(3): 311, t. 71, f. 2. 1883 and *Kew Bulletin* 20: 261. 1966, *Blumea* 31(2): 292. 1986.

M. tessellata (Steud.) de Koning & Sosef (*Coelorachis tessellata* (Steud.) Nash; *Manisuris corrugata* (Baldwin) Kuntze; *Manisuris corrugata* var. *areolata* (Hack.) C. Mohr; *Manisuris tessellata* (Steud.) Scribn.; *Manisuris tessellata* var. *areolata* (Hack.) Scribn.; *Rottboellia corrugata* var. *areolata* Hack.; *Rottboellia tessellata* Steud.)

America. See *Synopsis Plantarum Glumacearum* 1: 362. 1854, *Monographiae Phanerogamarum* 6: 309. 1889, *Revisio Generum Plantarum* 2: 779. 1891, *Bulletin of the Torrey*

Botanical Club 24: 21. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 20: 20, f. 9. 1900, *North American Flora* 17(1): 86. 1909, *Bulletin, Division of Agrostology United States Department of Agriculture* 17(ed 2): 9. 1909, *Blumea* 31(2): 293. 1986.

M. tuberculosa (Nash) de Koning & Sosef (*Coelorachis tuberculosa* (Nash) Nash; *Manisuris tuberculosa* Nash; *Rottboellia tuberculosa* (Nash) Hitchc.)

America. See *Bulletin of the New York Botanical Garden* 1(5): 430-431. 1900, *North American Flora* 17(1): 86. 1909, *Proceedings of the Biological Society of Washington* 41: 163. 1928, *Blumea* 31(2): 293. 1986.

Mniochloa Chase

From the Greek *mnion* "moss, seaweed" and *chloe*, *chloa* "grass," referring to the habit, to the appearance.

One or two species, Cuba, the Caribbean. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, straggling, unarmed, herbaceous, delicate, erect, weak, slender, tuberous, caespitose, low growing, unbranched, flowering culms leafless, rhizomes pachymorph, ligule an unfringed or fringed membrane, leaf blades lanceolate to ovate, plants monoecious, inflorescence spicate, sexes on separate racemes of a pair, male and female-fertile spikelets on different branches of the same inflorescence, female spikelet narrowly elliptic, 2 glumes herbaceous more or less equal, male spikelets without glumes, male florets 1-3 staminate, lemma cartilaginous, female lemma awnless, palea awnless, lodicules present, stamens 0, shady places, rocky areas, type *Mniochloa pulchella* (Griseb.) Chase, see *Proceedings of the Biological Society of Washington* 21: 185-186, t. 4. 1908, *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *Manual of the Grasses of the West Indies* 1-439. 1936, *Brittonia* 37: 22-35. 1985, *Annals of the Missouri Botanical Garden* 80(4): 846-861. 1993 [Endemic herbaceous bamboo genera of Cuba (Poaceae: Bambusoideae: Olyreae)], *Fontqueria* 46: [i-ii], 1-259. 1997, *Contributions from the United States National Herbarium* 39: 76. 2000.

Species

M. pulchella (Griseb.) Chase (*Digitaria pulchella* Griseb.; *Panicum strephiodoides* Hack.; *Strephium pulchellum* (Griseb.) C. Wright)

The Caribbean. Small, tufted to trailing, leaf blades acute and tapering, see *Catalogus plantarum cubensium ...* 231. 1866, *Annales de la Academia de Ciencias Médicas, Fisicas y Naturales de la Habana* 8: 202. 1871 and *Österreichische Botanische Zeitschrift* 51: 291. 1901, *American Bamboos* 285-287. 1999.

Moenchia Wender. ex Steud. = *Moenchia* Medik. (Liliaceae), *Moenchia* A.W. Roth (Brassicaceae), *Moenchia* Ehrhart (Caryophyllaceae), *Paspalum* L.

Named after the German (b. Kassel) botanist Conrad Moench, 1744-1805 (d. Marburg), pharmacist, chemist, M.D. Marburg 1781, in 1781 professor of botany at Collegium Medicum Carolinianum at Kessel, founder of the Marburg Botanic Garden, an opponent of Linnaeus, a follower of Friedrich Kasimir Medikus (1736-1808), his works include *Enumeratio plantarum indigenarum Hassiae*. Cassellis [Kassel] 1777, *Methodus plantas horti botanici et agri Marburgensis a staminum situ describendi*. Marburgi Catorum [Marburg] 1794-1802, *Systematische Lehre von denen gebräuchlichsten einfachen und zusammengesetzten Arzneymitteln*. Marburg 1795, *Einleitung zur Pflanzenkunde*. Marburg 1798 and *Verzeichniss ausländischer Bäume und Stauden*. Frankfurt & Leipzig 1785; see William T. Stearn, in *D.S.B.* 9: 434. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 2: 500. 1965; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 194. Regione Siciliana, Palermo 1988; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 752. Stuttgart 1993; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964.

Panicoideae, Paniceae, Paspalinae, see *Species Plantarum* 1: 128. 1753, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Neues Magazin für Aerzte*. 5: 203. Leipzig 1783 [see also J.F. Ehrhart, *Beiträge zur Naturkunde*. Hannover und Osnabrück 1787-1792, the articles in the *Beiträge* were previously published in various journals, e.g. *Neues Magazin für Aerzte*. Editor E.G. Baldinger. Leipzig 1779-1800], *Tentamen Florae Germanicae* 1: 273. Lipsiae [Leipzig] 1788, *Historia et Commentationes Academiae Electoralis Scientiarum et Elegantiorum Literarum Theodoro-Palatinae* 6(Phys): 493. 1790, *Oekonomisch-Technische Flora der Wetterau* 1: 219. 1799, *De Graminibus Paniceis* 245. 1826, *Species Graminum* 1828-1836, *Révision des Graminées* 2: 237, t. 30. 1830, *Nomenclator Botanicus. Editio secunda* 2: 153. 1841, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 265. 1857 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contr. U.S. Natl. Herb.* 28: 236. 1929, *Brittonia* 23(3): 293-324. 1971, *Flora Mesoamericana* 6: 335-352. 1994, *Contributions from the United States National Herbarium* 46: 296, 443-527. 2003.

Molineria Parlatores = *Molineria* Colla (Amaryllidaceae, alt. Hypoxidaceae), *Molineriella* Rouy, *Periballia* Trin.

After the Italian botanist Ignazio Bernardo Molineri, 1741-1818; see Luigi (Aloysius) Colla (1766-1848), *Illustrationes et icones rariorum Stirpium* quae in ejus horto Ripulis florebant, Anno 1824 (-28), addita ad *Hortum Ripulensem*. Append. [Turin 1827-1831]; O. Mattiolo, *Cronistoria dell'Orto Botanico della Regia Università di Torino*. in *Studi sulla vegetazione nel Piemonte* pubblicati a ricordo del II Centenario della fondazione dell'Orto Botanico della R. Università di Torino. Torino 1929.

Aveneae, type *Molineriella minuta* (L.) Rouy, see *Flora Cochinchinensis* 1: 199. 1790, *Flora Lusitanica* 1: 90. 1804, *Hortus Kewensis; or, a Catalogue ... The Second Edition* 2: 253. 1811, *Fundamenta Agrostographiae* 133. 1820, *Mem. Reale Accad. Sci. Torino* 31: 331. 1826, *Flora italiana, ossia descrizione delle piante ...* 1: 236. 1850, *Annales Museum Botanicum Lugduno-Batavi* 4: 177. 1869, *Journal of the Linnean Society, Botany* 17(99): 121. 1878, *Catalogue Raisonné des Graminées du Portugal* 17. 1880 and *Flora Sicula* 3: 294. 1908-1909, *Flore de France* 14: 102. 1913, *Anales del Instituto Botánico A. J. Cavanilles* 21: 345. 1963, *Novon* 6(2): 222. 1996.

Molineriella Rouy = *Molineria* Parl., *Periballia* Trin.

After the Italian botanist Ignazio Bernardo Molineri, 1741-1818. See Luigi (Aloysius) Colla (1766-1848), *Illustrationes et icones rariorum Stirpium* quae in ejus horto Ripulis florebant, Anno 1824 (-28), addita ad *Hortum Ripulensem*. Append. [Turin 1827-1831]; O. Mattiolo, *Cronistoria dell'Orto Botanico della Regia Università di Torino*, in *Studi sulla vegetazione nel Piemonte* pubblicati a ricordo del II Centenario della fondazione dell'Orto Botanico della R. Università di Torino. Torino 1929.

Aveneae, type *Molineriella minuta* (L.) Rouy, see *Fundamenta Agrostographiae* 133. 1820, *Flora italiana, ossia descrizione delle piante ...* 1: 236. 1850 and *Flore de France* 14: 102. 1913, *Anales del Jardín Botánico de Madrid* 38(1): 184. 1981, *Lagascalía* 15: 119-124. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66, 153-205. 1990, *Fitologija* 39: 72-77. 1991.

Species

M. laevis (Brot.) Rouy (*Aira elegans* Willd. ex Gaudin; *Aira laevis* Brot.; *Aira pulchella* Willd.; *Airella elegans* (Willd. ex Gaudin) Dumort.; *Airopsis laevis* (Brot.) P. Fourn.; *Avena elegans* (Willd. ex Gaudin) Asch.; *Deschampsia pulchella* (Willd.) Trin.; *Molineria laevis* (Brot.) Hack.)

Europe. See *Flora Lusitanica* 1: 90. 1804, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 101. 1809, *Agrostologia Helvetica, definitionem* ... 1: 130, 355. 1811, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 7. 1836, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 3-4: 79. 1861-1862, *Bulletin de la Société Botanique de Belgique* 7: 68. 1868, *Catalogue Raisonné des Graminées du Portugal* 17. 1880 and *Flore de France* 14: 103. 1913.

M. minuta (L.) Rouy (*Aira minuta* L.; *Periballia minuta* (L.) Asch. & Graebn.)

Mediterranean. See *Species Plantarum* 1: 64. 1753 and *Flore de France* 14: 102. 1913.

in English: small hairgrass

Molinia Schrank = *Amblytes* Dulac,
Enodium Gaud., *Enodium* Pers. ex Gaudin,
Moliniopsis Hayata

Dedicated to the Chilean (b. Guaraculen, Talca) botanist Giovanni Ignazio (Juan Ignacio, Juan Ignatius) Molina, 1737-1829 (d. Bologna, Italy), Jesuit priest, missionary, plant collector, 1768 to Italy, professor of natural sciences, his writings include *Compendio della storia del regno del Chile*. Bologna 1776, *Saggio sulla storia naturale del Chili*. Bologna 1782, *Saggio sulla storia civile del Chili*. Bologna 1787 and *Memorie di storia naturale* lette in Bologna. Bologna 1821. See H. Gunckel, "Don Juan Ignacio Molina. Su vida, sus obras y su importancia científica." *Revista Univ.* 14(1-2): 195-216, 14(3-4): 320-341. [Santiago] 1929 and *Bibliografía Moliniana*. Santiago 1980; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 753. Stuttgart 1993; Miguel Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. 1858; J.H. Barnhart, *Biographical notes upon botanists*. 2: 503. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 271. 1972; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; L. Polgar, *Bibliography of the History of the Society of Jesus*. Rome 1967; Francisco Guerra, in *D.S.B.* 9: 458. 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933.

About 2-5 species, temperate Eurasia, western Europe to western Siberia, east Asia, China. Arundinoideae, Arundineae, or Danthonieae, perennial, variable to very variable in habit, herbaceous, coarse, erect, tufted, clump forming, more or less creeping, lowest internodes short and swollen, cushion of spiky leaf sheaths rounded on the back, leaves mostly basal or in the lower part of the culm, auricles absent,

ligule fringed or ciliate, plants bisexual, open or contracted inflorescence paniculate, florets 2-several, spikelets glabrous and tapering to a point, between the florets elongated rachilla internodes, 2 glumes unequal or more or less equal, glumes shorter than lowest lemma, lower glume 1-3-nerved, upper glume 1-5-nerved, linear to lanceolate lemmas with entire tips, palea 2-nerved, 2 fleshy lodicules joined or free, 3 stamens, ovary glabrous, 2 stigmas, basal culm internodes storage organs, species of open habitats or in shade, wet areas, heaths, moorland, moist grassland, related to *Hakonechloa*, confused with *Eragrostis* and *Festuca*, type *Molinia varia* Schrank, see *Baiersche Flora* 1: 100, 334, 336. München 1789, *Agrostologia Helvetica, definitionem* ... 1: 145. 1811, *Handbok i Skandnaviens Flora, Fjerde Upplagan* 32. 1843, *Flore du Département des Hautes-Pyrénées* 80. 1867, *Reisen im Amur-Lande* 201, 244, t. 8, f. 15-21. 1868, *Bulletin de l'Herbier Boissier* 7(9): 704. 1899 and *Botanical Magazine* 29: 312. 1915, *U.S. Dept. Agric. Bull.* 772: 50. 1920, *Botanical Magazine* (Tokyo) 39: 258. 1925, *Botanical Magazine* (Tokyo) 41: 14. 1927, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 439-440. 1930, *Journal of Japanese Botany* 10: 693. 1934, *Sinensia* 5: 147. 1934, *Botanical Magazine* (Tokyo) 50: 669. 1936, *Sinensia* 11: 409. 1940, *Botaniska Notiser* 113: 291. 1960, *Fragmenta Floristica et Geobotanica* 21: 21-50. 1975, *Zlaci SSSR* 557. 1976, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 51-55. 1986, *Symbolae Botanicae Upsaliensis* 27(2): 139-145. 1986 [1987], *Bot. Zhurn.* 74: 1675-1678. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66, 153-205. 1990, *Taxon* 43: 123. 1994, *Watsonia* 21: 365-368. 1997, *Am. J. Bot.* 87: 96-107. 2000, Jonathan H. Titus & Jan Leps, "The response of arbuscular mycorrhizae to fertilization, mowing, and removal of dominant species in a diverse oligotrophic wet meadow." *Am. J. Bot.* 87: 392-401. 2000, *Contributions from the United States National Herbarium* 46: 17, 230, 296. 2003, *Conservation Biology* 19(3): 929-938. June 2005.

Species

M. arundinacea Schrank (*Molinia caerulea* proles. *arundinacea* (Schrank) Rouy; *Molinia caerulea* subsp. *arundinacea* (Schrank) K. Richt.; *Molinia caerulea* subsp. *arundinacea* (Schrank) Paul ex Grabherr; *Molinia caerulea* var. *arundinacea* (Schrank) Asch.; *Molinia caerulea* var. *arundinacea* (Schrank) Vis.; *Molinia caerulea* var. *arundinacea* Peterm.; *Molinia varia* var. *arundinacea* (Schrank) Beck)

Europe. Robust, coarse, tussocky, clump forming, ornamental, see *Baiersche Flora* 1: 336. 1789, *Methodus Plantarum Horti Botanici* ... 183. 1794, *Flora Dalmatica* 3: 343. 1852, *Flora der Provinz Brandenburg* 1: 837. 1864, *Plantae Europaeae* 1: 72. 1890, *Annalen des K. K. Naturhistorischen Hofmuseums* 5: 563. 1890 and *Flore de France* 14: 199.

1913, *Österreichische Botanische Zeitschrift* 90: 58. 1940, *Symbolae Botanicae Upsaliensis* 27(2): 141. 1986 [1987].

in English: tall moorgrass

in German: Pfeifergras

M. caerulea (L.) Moench (*Aira caerulea* L.; *Amblytes caerulea* (L.) Dulac; *Cynodon caeruleus* (L.) Raspail; *Enodium caeruleum* (L.) Gaudin; *Festuca caerulea* (L.) Lam. ex DC.; *Hydrochloa caerulea* (L.) C. Hartm.; *Melica caerulea* L.; *Molinia coerulea* (L.) Moench; *Poa caerulea* (L.) Bernh.)

Eurasia, Europe, and north Asia. Perennial bunchgrass, very variable, tufted, tussocky, compact, tough, erect, swollen culm bases, leaf blades basal narrowly linear, ligule densely fringed, erect panicles loose and flexuous, floret callus glabrous, glumes persistent, purple stigmas, on damp moorland, see *Species Plantarum* 63. 1753, *Mantissa Plantarum* 2: 235. 1771, *Methodus Plantas Horti Botanici ...* 183. 1794, *Systematisches Verzeichnis* 43. 1800, *Flore Française ... Troisième Édition* 3: 46. 1805, *Agrostologia Helvetica, definitionem ...* 1: 145. 1811, *Genera Graminum* 8. 1819, *A Natural Arrangement of British Plants* 2: 110. 1821, *Flora Berolinensis* 1: 77. 1823, *Observations sur les Graminées de la Flore Belgique* 108. 1823, Carl [Karl] Christian Gmelin (1762-1837), *Flora Badensis Alsatica et confinium regionum cis et transrhenana plantarum a lacu bodamico ...* Karlsruhe 1805-1826, Clemens Maria Friedrich von Boenninghausen (1785-1864), *Prodromus Florae Monasteriensis Westphalorum ... Phanerogamia* 28. Münster 1824, *Revue de la Flore des Environs de Spa* 16. 1824, *Annales des Sciences Naturelles, Botanique* 5: 302. 1825, *Compendium Florae Germaniae* 1st edition 1: 119. 1825, *Flora Friburgensis* 1: 121. 1825, *Flora Austriaca* 1: 118. 1827, *Flore Générale des Environs de Paris* 2(1): 183. 1827, *Hortus Regius Botanicus Berolinensis* 1: 197. 1827, *Flora Helvetica* 1: 216. 1828, *Flora Germanica Excursoria* 44. 1830, *Flora von Württemberg* 68. 1834, *A Synopsis of the British Flora, 2nd edition* 1: 307. 1835, *Chloris Hanoverana* 626. 1836, *Linnaea* 12: 454. 1838, *Flora de la Sarthe* 319. 1838, *Flora Marchica* 75. 1841, *Botanisches Centralblatt* 243. 1842, *Manual of British Botany* 366. 1843, *Flora* 27: 235. 1844, *Enum. Pl. Christiania* 71. 1844, *The Grasses of Britain* 230, pl. 103. 1845, *Bot. Exc. Leipzig* 553. 1846, *Botanisches Centralblatt für Deutschland* 1846: 243. 1846, *Norges Flora* 1: 140. Oslo 1861, *Flore du Département des Hautes-Pyrénées* 80. 1867, *Nouveaux Matériaux pour la Flore Atlantique* 388. [Caen] 1874, *Bull. Soc. Linn. Normandie, sér. 3* 8: 152. 1884, *Flore d'Alger ... Monocot., 72*. 1884, *The Illustrated Dictionary of Gardening ...* 2: 376. 1885, *Haandbog i den Danske Flora (4th edition)* 69. 1886, *Annalen des K. K. Naturhistorischen Hofmuseums* 5: 563. 1890, *Kritische Flora der Provinz Schleswig-Holstein. Teil 2. Kritische Aufzählung* 2: 257. 1890, *Flora von Nieder-Österreich* 93. 1890, *Botanisches Centralblatt* 45: 236-237. 1891, *Flore de l'Algérie* 196. 1895 and *Bulletin de la Société Botanique de France* 47:

214. 1900, *Synopsis der mitteleuropäischen Flora* 2: 337-338. 1900, *Flore de France* 14: 199. 1913, *Sched. Fl. Rhaet. Exs.* 7: 184. 1924, *Preslia* 13-15: 39. 1935, *Berichte der Bayerischen Botanischen Gesellschaft zur Erforschung der Heimischen Flora* 22: 17. 1937, *Österreichische Botanische Zeitschrift* 90: 58. 1940, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 94. 1942, *Mitteilung der Thüringischen Botanischen Gesellschaft* 1(1): 87. 1949, *Grasses: A Guide to Their Structure, Identification, Uses, and Distribution in the British Isles* 325. 1954, *Die Systematik und Anatomie der Arundineae* 175. 1961, *Flora Republicii Socialiste Romania* 12: 353. 1972, *Phytologia* 38(3): 175. 1978, *Journal of Applied Ecology* 36(5): 719-733. Oct 1999, *Grass and Forage Science* 55(2): 181-191. June 2000 [Control of *Molinia caerulea* on moorland], K. Taylor, A.P. Rowland, & H.E Jones, "Molinia caerulea (L.) Moench." *Journal of Ecology* 89(1): 126-144. Feb 2001, *Environmental Microbiology* 4(8): 477-481. Aug 2002, *New Phytologist* 157(2): 339-347. Feb 2003, *Journal of Ecology* 91(3): 357-370. June 2003, *Journal of Applied Ecology* 41(1): 139-150. Feb 2004, R.H. Marrs, J.D.P. Phillips, P.A. Todd, J. Ghorbani, & M.G. Le Duc, "Control of *Molinia caerulea* on upland moors." *Journal of Applied Ecology* vol. 41, issue 2: 398-411. Apr 2004.

in English: moor grass

in French: molinie bleu

in Morocco: zertzîgâ, la petite bleu

M. caerulea (L.) Moench subsp. ***arundinacea*** (Schrank) K. Richter (*Molinia caerulea* proles. *arundinacea* (Schrank) Rouy; *Molinia caerulea* subsp. *arundinacea* (Schrank) K. Richt.; *Molinia caerulea* subsp. *arundinacea* (Schrank) Paul ex Grabherr; *Molinia caerulea* subsp. *arundinacea* (Schrank) H.K.G. Paul; *Molinia caerulea* var. *arundinacea* (Schrank) Asch.; *Molinia caerulea* var. *arundinacea* Peterm.; *Molinia caerulea* var. *arundinacea* (Schrank) Vis.; *Molinia litoralis* Host; *Molinia varia* var. *arundinacea* (Schrank) Beck)

Europe. See *Baiersche Flora* 1: 336. 1789, *Methodus Plantas Horti Botanici ...* 183. 1794, *Flora Dalmatica* 3: 343. 1852, *Flora der Provinz Brandenburg* 1: 837. 1864, *Plantae Europaeae* 1: 72. 1890, *Annalen des K. K. Naturhistorischen Hofmuseums* 5: 563. 1890 and *Flore de France* 14: 199. 1913, *Österreichische Botanische Zeitschrift* 90: 58. 1940, *Symbolae Botanicae Upsaliensis* 27(2): 141. 1986 [1987].

M. caerulea (L.) Moench subsp. ***caerulea***

Europe.

M. caerulea (L.) Moench var. ***lightfootii*** Harz (possibly named to commemorate the British botanist Reverend John Lightfoot, 1735-1788 (Middx), conchologist, lichenologist, traveled with T. Pennant, 1781 Fellow of the Royal Society, one of the original fellows of the Linnean Society of London 1788, author of *Flora scotica*. 2 vols. London 1777. See Thomas Pennant (1726-1798), *A Tour in Scotland and*

Voyage to the Hebrides. London 1774-76; Peter Calvert, *A Catalogue of the Libraries of Peter Calvert ... of the Rev. Thomas Bagshaw, and also of the Rev. J. Lightfoot*. [1789]; [Margaret Cavendish Bentinck, Duchess of Portland], *Catalogue of the Portland Museum*, lately the property of the Duchess Dowager of Portland ... which will be sold by auction ... on Monday the 24th of April, 1786, etc. (By J. Lightfoot) [1786]; H.R. Fletcher & W.H. Brown, *Royal Botanic Garden Edinburgh, 1670-1970*. Edinburgh 1970; Warren R. Dawson, *The Banks Letters, a Calendar of the Manuscript Correspondence of Sir Joseph Banks*. 540-541. London 1958; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Lady Pleasance Smith, edited, *Memoir and Correspondence of ... Sir J.E. Smith*. London 1832; J.H. Barnhart, *Biographical notes upon botanists*. 2: 381. Boston 1965; *John Lightfoot: His Work and Travels* by Jean K. Bowden. Kew: Bentham-Moxon Trust and Pittsburgh: Carnegie Mellon University 1989; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Peter Simon Pallas, *A Naturalist in Russia. Letters from Peter Simon Pallas to Thomas Pennant*. Edited by Carol Urness. [1967]; Blanche Elizabeth Edith Henrey, *British Botanical and Horticultural Literature before 1800*. Oxford 1975; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; Blanche Henrey, *No ordinary gardener – Thomas Knowlton, 1691-1781*. Edited by A.O. Chater. British Museum (Natural History). London 1986; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 428. London 1994)

Europe. See *Methodus Plantas Horti Botanici ...* 183. 1794, *Botanisches Centralblatt* 45: 236. 1891.

M. japonica Hackel (*Molinia hui* Pilger; *Moliniopsis hui* (Pilger) Keng; *Moliniopsis japonica* (Hack.) Hayata)

South Korea, Japan, China, Russia. Perennial, erect to stiffly erect, shortly rhizomatous, leaf sheaths pilose, open inflorescence paniculate with spaced florets, uppermost floret reduced, glumes much shorter than lowest lemma, lower glume ovate, see *Bulletin de l'Herbier Boissier* 7(9): 704. 1899 and *Botanical Magazine* (Tokyo) 29: 312. 1915, *Science [Sci. Soc. China]* 7: 607. 1922, *Botanical Magazine* (Tokyo) 39: 258. 1925, *Botanical Magazine* (Tokyo) 41: 14. 1927, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 439-440. 1930, *Sinensia* 11: 409. 1940, *Bot. Zhurn.* 74: 1675-1678. 1989.

M. litoralis Host (*Molinia altissima* Link; *Molinia caerulea* subsp. *altissima* (Link) Domin; *Molinia caerulea* subsp. *arundinacea* (Schrank) Paul; *Molinia caerulea* subsp. *arundinacea* (Schrank) Paul ex Grabherr; *Molinia caerulea* proles. *litoralis* (Host) Rouy; *Molinia caerulea* subsp. *litoralis* (Host) Paul; *Molinia caerulea* var. *litoralis* (Host) Reichenb. ex Blytt)

Russia, Turkey, Europe. See *Baiersche Flora* 1: 336. 1789, *Methodus Plantas Horti Botanici ...* 183. 1794, *Flora Austriaca* 1: 118. 1827, *Linnaea* 12: 454. 1838, *Enum. Pl. Christiania* 71. 1844, *Norges Flora* 1: 140. Oslo 1861 and *Synopsis der mitteleuropäischen Flora* 2: 338. 1900, *Flore de France* 14: 199. 1913, *Sched. Fl. Rhaet. Exs.* 7: 184. 1924, *Österreichische Botanische Zeitschrift* 90: 58. 1940, *Flora Republicii Socialiste Romania* 12: 353. 1972, *Symbologiae Botanicae Upsaliensis* 27: 139-145. 1986.

Moliniopsis Gand. = *Cleistogenes* Keng, *Kengia* Packer

Resembling the genus *Molinia* Schrank.

Eragrostideae, see *Baiersche Flora* 1: 336. 1789, *Reisen im Amur-Lande* 201, 244, t. 8, f. 15-21. 1868, *Bulletin de l'Herbier Boissier* 7(9): 704. 1899 and *Botanical Magazine* 29: 312. 1915, *Botanical Magazine* (Tokyo) 39: 258. 1925, *Botanical Magazine* (Tokyo) 41: 14. 1927, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 439-440. 1930, *Journal of Japanese Botany* 10: 693. 1934, *Sinensia* 5: 147. 1934, *Botanical Magazine* (Tokyo) 50: 669. 1936, *Sinensia* 11: 409. 1940, *Botaniska Notiser* 113: 291. 1960, *Bot. Zhurn.* 74: 1675-1678. 1989, *Taxon* 43: 123. 1994.

Moliniopsis Hayata

Resembling *Molinia* Schrank.

Arundinoideae, Arundineae, or Danthonieae, type *Moliniopsis japonica* (Hack.) Hayata, see *Baiersche Flora* 1: 336. 1789, *Reisen im Amur-Lande* 201, 244, t. 8, f. 15-21. 1868, *Bulletin de l'Herbier Boissier* 7(9): 704. 1899 and *Botanical Magazine* 29: 312. 1915, *Botanical Magazine* (Tokyo) 39: 258. 1925, *Botanical Magazine* (Tokyo) 41: 14. 1927, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 439-440. 1930, *Journal of Japanese Botany* 10: 693. 1934, *Sinensia* 5: 147. 1934, *Botanical Magazine* (Tokyo) 50: 669. 1936, *Sinensia* 11: 409. 1940, *Botaniska Notiser* 113: 291. 1960, *Bot. Zhurn.* 74: 1675-1678. 1989, *Taxon* 43: 123. 1994, *Contributions from the United States National Herbarium* 46: 296. 2003.

Monachather Steudel

Alluding to the solitary spike, from the Greek *monachos* "solitary, monk," *monos* "solitary" and *ather* "an awn."

A monotypic genus, Australia. Arundinoideae, Arundineae, or Danthonioideae, Danthonieae, perennial, caespitose, herbaceous, base almost bulbous or tuberous and woolly, unbranched, nodes glabrous, no auricles, leaf blade flat or grooved, ligule an unfringed membrane-like, bisexual spikelets with 3-8 crowded hermaphrodite florets, 2 glumes

more or less equal and acute, lemma deeply 2-lobed, palea 2-nerved 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, small fruit longitudinally grooved, ornamental when in dense stands, most common on sandy red earths and clayey sands, arid grassland, open habitats, sometimes treated as a synonym for *Danthonia* DC., sometimes referred to *Danthonia* s.l., type *Monachather paradoxa* Steud., see E.G. von Steudel, *Synopsis Plantarum Glumacearum* 1(3): 247. 1854, *Fl. Austral.* 7: 590, 592. 1878 and J.W. Vickery, "A revision of the Australian species of *Danthonia*." *Contributions from the New South Wales National Herbarium* 2(3): 249-325 (268). 1956, *Contributions from the Queensland Herbarium* 14: 1-19. 1972, *Flora of Australia* 44: 21. 2005.

Species

M. paradoxus Steudel (also spelled *paradoxa*) (*Danthonia bipartita* F. Muell.)

New South Wales, Northern Territory, Queensland, South Australia, Victoria, Western Australia. Perennial, caespitose, rhizomatous, tufted or tussock grass, leafy, slender, the base of the plant more or less swollen, nodes geniculate, ligule membranous, lower leaf sheaths very woolly, bright green leaf blades, flat leaves striate and grooved, plants bisexual, racemes or raceme-like panicles, greenish inflorescence few spikeleted, spikelets on short pedicels and sparse, florets crowded, lower glume 13-19-nerved, upper glume 11-13-nerved, lemma deeply bifid, lemmas densely hairy with a bent and twisted central awn, lemma subglobose or broadly turbinate, callus bearded or hairy, native pasture species, palatable and nutritious, readily grazed, very hardy, fire tolerant, drought-resistant, suitable for dry situations, grows in arid grasslands and dry places, indicator of good range condition, see *Synopsis Plantarum Glumacearum* 1: 247. 1854, *Fragmenta Phytographiae Australiae* 1: 160. 1859.

in Australia: bandicoot grass, mulga oats, broad-leaved wanderrie grass

Monachne P. Beauv. = *Eriochloa* Kunth, *Panicum* L.

Greek *monos* "solitary, one" and *achne* "husk, glume."

Panicoideae, Paniceae, Panicinae, type *Monachne racemosa* P. Beauv., see *Species Plantarum* 1: 55. 1753, *Systema Naturae, Editio Decima* 872. 1759, Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 48-49, 151, 168, t. 10, figs. 7, 9, 10. Paris 1812, *Nova Genera et Species Plantarum* 1: 94-95, t. 30. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 102-103. 1816, *Systema Vegetabilium* 2: 468.

1817, *Systema Vegetabilium, editio decima sexta* 1: 313. 1825 [1824], *Mantissa* 2: 258. 1824, *Annales des Sciences Naturelles, Botanique* I 5: 299. 1825, *Annales des Sciences d'Observation* 1: 448. 1829, *Révision des Graminées* 1: 35. 1829, *Révision des Graminées* 2: 403, t. 115. 1831, *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna* 2: 596, t. 41, f. 1. 1850 and *Bulletin of the Torrey Botanical Club* 30(7): 374. 1903, *Symbolae Antillarum* 4: 85. 1903, *Contributions from the United States National Herbarium* 12(6): 208. 1909, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *N. Amer. Fl.* 17: 157. 1912, *Revista Sudamericana de Botánica* 9: 118. 1953, *Contributions from the United States National Herbarium* 46: 233-239, 296-297, 306-441. 2003.

Monachyron Parl. = *Melinis* P. Beauv., *Monachyron* Parl. ex Hook., *Rhynchelytrum* Nees

From the Greek *monos* "solitary, one" and *achyron* "chaff, husk."

Panicoideae, Paniceae, Melinidinae, type *Monachyron villosum* Parl., see *Essai d'une Nouvelle Agrostographie* 54, t. 11, f. 4. 1812, *Systema Vegetabilium* 2: 457. 1817, *A Natural System of Botany*, 2nd edition, 378, 446-447. 1836, *Linnaea* 11(Litt.-Ber.): 129. 1837, *Niger Flora* 190-191. 1849, *Flora italiana, ossia descrizione delle piante ...* 1: 131. 1850, *Tentamen Florae Abyssinicae ...* 2: 445. 1850, *Conspectus Florae Africae* 5: 771. 1894 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Annuario del Reale Istituto Botanico di Roma* 8: 310. 1907, *Flora of Tropical East Africa* 451-898. 1982, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992, *Contributions from the United States National Herbarium* 46: 287, 297, 545. 2003.

Monandraira E. Desv. = *Deschampsia* P. Beauv.

From the Greek *monos* "single, one," *aner, andros* "stamen" plus the genus *Aira* L.

Pooideae, Poeae, Agrostidinae, see *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Révision des Graminées* 2: 457, t. 142. 1831, *A Manual of the Botany of the Northern United States* 605. 1848, *Flora Chilena* 6: 341-343, t. 79, f. 1. 1854, *Anales de la Universidad de Chile* 43: 565. 1873 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 56: 175. 1916, *Darwiniana* 8: 454, 467. 1949, *Contributions from the United States National Herbarium* 48: 245-256, 453. 2003.

Monanthochloe Engelm. = *Halochloa* Griseb., *Halochloa* Kütz. (Algae), *Monanthochloë* Engelm., *Solenophyllum* Baillon

Greek *monos* “only, one,” *anthos* “flower” and *chloe*, *chloa* “grass,” referring to the unisexual flowers.

About 2-3 species, southern U.S., Mexico, Cuba, the Caribbean, Argentina. Chloridoideae, Cynodonteae, Monanthochloinae, perennial, wiry, herbaceous, decumbent, erect, stoloniferous, rhizomatous, mat-forming to shrubby, auricles absent, ligule a ciliate rim or membrane, sheaths not ciliate, leaves short and distichous, leaf blades pungent, plants dioecious, partially included inflorescence, single spikelet embraced and partially concealed by upper leaf sheaths, female spikelet subterete, male florets 3 staminate, glumes absent, lemma nerved and acute, palea margins overlapping and enfolding caryopsis, palea keels winged, lodicules absent, 0 stamens, 3 staminodes, ovary glabrous, 2 stigmas, growing in seashores and inland salt pans, alkaline places, moist sandy saline soil, gypsum, open habitats, wetland, closely related to *Distichlis* Raf., type *Monanthochloe littoralis* Engelm., see *Botanische Zeitung*. Berlin 1: 55. 1843, *Transactions of the Academy of Science of St. Louis* 1: 436-437, pl. 13-14. 1859, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 285. 1879, *Histoire des Plantes* 12: 235. 1893 and *Gram. Bonar.* 4th edition: 28. 1946, *Physis* 20(59): 1-3. 1954, *Recent Advances in Botany* 1: 133-145. 1961, *Gram. Afr. Trop.* 1: 94. 1962, *Madroño* 18: 33-39. 1965, *Kurtziana* 5: 369-391. 1969, *Willdenowia* 5: 472. 1969, *Taxon* 33: 126-134. 1984, *Flora Mesoamericana* 6: 258. 1994, *Contributions from the United States National Herbarium* 41: 127, 142, 195. 2001.

Species

M. acerosa (Griseb.) Engelm. (*Halochloa acerosa* Griseb.)

South central Argentina. See *Anales del Museo Nacional de Buenos Aires* 7: 194. 1879, *Symbolae ad Floram Argentinam*. Zweite ... 285. 1879.

M. littoralis Engelm.

Mexico and Cuba, southern U.S., California, Point Conception to Mexican border. Perennial marsh grass, creeping and wiry stems, somewhat prostrate, clusters of short and curved leaves, tolerates no drainage and seasonal flooding, common in salt marshes, coastal, host species for *Cordylanthus maritimus* Nutt. ex Benth. subsp. *maritimus*, see *Prodromus Systematis Naturalis Regni Vegetabilis* 10: 598. 1846, *Transactions of the Academy of Science of St. Louis* 1: 437, pl. 13-14. 1859 and Gregory B. Noe & Joy B. Zedler, “Differential effects of four abiotic factors on the germination of salt marsh annuals.” *Am. J. Bot.* 87: 1679-1692. 2000.

in English: shore grass

Monathera Raf. = *Ctenium* Panz., *Monocera* Elliott

From the Greek *monos* “only, one” and *ather* “stalk, barb, awn.”

Chloridoideae, Cynodonteae, see *Ideen zu einer künftigen Revision der Gattungen der Gräser* 38, 61. München 1813, *Denkschriften der Bayer[ischen]. Botanischen Gesellschaft in Regensburg* 4: 311, t. 13, f. 1-2. 1813 [1814] [preprinted from *Denkschr. k. Akad. Wiss. München*], *A Sketch of the Botany of South-Carolina and Georgia* 1: 176. 1816, C.S. Rafinesque, *American Monthly Magazine and Critical Review* 4: 190. 1819, *Jour. Phys. Chim. Hist. Nat.* 89: 262. 1819 and *North American Flora* 17(8): 579-638. 1939, *Contributions from the United States National Herbarium* 41: 57-58, 142. 2001.

Monelytrum Hackel = *Monelytrum* Hackel ex Schinz

From the Greek *monos* “one, single” and *elytron* “sheath, cover, scale, husk.”

Two species, southwest Africa, Angola. Chloridoideae, Cynodonteae, annual or perennial, herbaceous, unarmed, stoloniferous, tufted, decumbent, blue-green, usually unbranched, auricles absent, leaf sheaths rounded, ligule a fringed membrane, plants bisexual, bristly inflorescence spicate, cylindrical false raceme, sterile spikelets terminal and awnlike, glumes 1 per spikelet or 2 and very unequal, upper glume dorsally compressed and awned, lemmas shortly awned or mucronate, palea 2-nerved 2-keeled, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 reddish stigmas, open habitats, sandy soils, rocky places, stony soils, slopes, hillsides, seasonally moist areas, type *Monelytrum luederitzianum* Hack., see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 140. 1888 and *Bulletin of Miscellaneous Information Kew* 1934: 197. 1934.

Species

M. annuum Gooss. (*Monelytrum luederitzianum* Hack.)

Africa. See *Bulletin of Miscellaneous Information Kew* 1934: 197. 1934.

M. luederitzianum Hack. ex Schinz (also spelled *lüderitzianum*) (*Monelytrum annuum* Gooss.; *Monelytrum luederitzianum* Hack.) (after the German merchant and botanical collector August Lüderitz (1838-1922) and his brother Franz Adolph Eduard Lüderitz (1834-1886), one of the chief protagonists of the German colonial politics, perished in Namibia; see Hubert Henoeh, *Adolph Lüderitz. Eine*

biographische Skizze, etc. [1910] [Koloniale Abhandlungen. Hft. 25.]; Wilhelm Schuessler, *Adolf Lüderitz. Ein deutscher Kampf um Südafrika 1883-1886*. Geschichte des ersten Kolonialpioniers im Zeitalter Bismarcks. Bremen [1936]; *Die Erschliessung von Deutsch-Südwest-Afrika durch Adolf Lüderitz*. Oldenburg 1945; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 233. Cape Town 1981).

Namibia, Angola, South Africa. Perennial or annual, tufted, erect, mostly unbranched, sometimes stoloniferous to strongly stoloniferous, leaf sheaths of basal leaves flattened, ligule a dense fringe of short hairs, leaf blades expanded, leaves margins with stiff and slightly spiny hairs, inflorescence a single false spike, spikelets arranged in groups and falling in clusters, 1 bisexual floret, lower glume 0-nerved, upper glume 5- 7-nerved, upper glume and lemmas awned, pioneer grass, ground cover, stony soils, pans, disturbed areas, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 140. 1888 and *Bulletin of Miscellaneous Information Kew* 1934: 197. 1934.

in English: Lüderitz grass

in South Africa: Lüderitzgras

Monerma P. Beauv. = *Hainardia* Greuter,
Lepturus R. Br., *Rottboellia* L.f.

From the Greek *monos* “alone, solitary” and *herma*, *hermatos* “support, prop,” *moneres* “solitary,” referring to the single and outer glume.

Eragrostideae, Leptureae, types *Monerma repens* (G. Forst.) P. Beauv. or *Monerma monandra* P. Beauv., see *Species Plantarum* 53. 1753, *Supplementum Plantarum* 13, 114. 1781 [1782], *Species Plantarum. Editio quarta* 1: 464. 1797, *Anales de Ciencias Naturales* 3: 11. 1801, *Prodromus Florae Novae Hollandiae* 207. 1810, *Essai d'une Nouvelle Agrostographie* ou nouveaux genres des Graminées. 116-117, 168, 176-177, t. 20, f. 10. 1812, *Systema Vegetabilium* 2: 799-800. 1817, *Mantissa* 2: 441. 1824, *Annales des Sciences Naturelles (Paris)* 5: 304. 1825, *Voyage autour du Monde exécuté pendant les Années 1836 et 1837 sur la Corvette la Bonite ... Botanique* 412. 1826, *Nomenclator Botanicus. Editio secunda* 156. 1841, *Exploration Scientifique de l'Algérie* 2: 214. 1855, *Synopsis Plantarum Glumacearum* 1: 430. 1855, *Monographiae Phanerogamarum* 6: 320. 1889, *Index Kewensis* 2: 256. 1894 and *Contr. U.S. Natl. Herb.* 24: 201. 1925, H. Runemark, “A revision of *Parapholis* and *Monerma* (Gramineae) in the Mediterranean.” in *Bot. Not.* 115: 1-17. 1962, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 13: 178. 1967, *Gayana, Botánica* 42: 1-157. 1985, *Kew Bulletin, Additional Series* 13: 111, 229. 1986, *New Zealand Journal of*

Botany 29: 101-116. 1991, *Feddes Repert.* 106: 169-171. 1995, *Harvard Pap. Bot.* 8: 63-65. 1996, *Contributions from the United States National Herbarium* 46: 284, 546-548. 2003

Monilia Gray

An anagram of the generic name *Molinia* Schrank, or from the Latin *monile*, *monilis* “a necklace, collar,” pl. *monilia*, see *Baiersche Flora* 1: 100, 334. 1789, *A Natural Arrangement of British Plants ...* 2: 110. London 1821 and *U.S. Dept. Agric. Bull.* 772: 50. 1920.

Monium Stapf = *Anadelphia* Hackel

From the Greek *monios* “solitary, savage,” *monia* “solitude, celibacy.”

About 7 species, tropical West Africa, Guinea. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, *Anadelphia* sect. *Monium* (Stapf) Clayton, annual or perennial, tufted, herbaceous, sheaths nerved, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, spikelets paired, shorter spikelets hermaphrodite, pedicelled spikelet often very reduced, 2 glumes subequal, lower glume 5- 7-nerved, upper glume 3-nerved, palea absent or present, 2 fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, rainforest, sometimes included in *Anadelphia*, type *Monium macrochaetum* Stapf, see *Species Plantarum* 2: 1045. 1753, *Essai d'une Nouvelle Agrostographie* 132-133, 160. 1812, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 240-241. 1885, *Die Natürlichen Pflanzenfamilien* 2(2): 27. 1887 and *Journal de Botanique (Morot)* 19: 100. 1905, *Flora of Tropical Africa* 9: 399-400. 1919, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 172. 1950, H. Jacques-Félix, “Les Graminées (Poaceae) d'Afrique tropicale. I. Généralités, classification, description des genres.” *Bull. Sci. Inst. des Recherches Agronomiques tropicales* 8. I.R.A.T. Paris 1962, *Kew Bulletin* 20: 275-285. 1966.

Species

M. congestum Jacq.-Fél.

Africa. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 184. 1950.

M. funereum Jacq.-Fél. (*Anadelphia funerea* (Jacq.-Fél.) Clayton)

Africa. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 186. 1950, *Kew Bulletin* 20: 281. 1966.

M. macrochaetum Stapf (*Anadelphia macrochaeta* (Stapf) Clayton; *Hypogynium macrochaetum* (Stapf) Robery)

Africa. See *Flora of Tropical Africa* 9: 400. 1919, *Boissiera*. 9: 185. 1960, *Kew Bulletin* 20: 281. 1966.

M. monianthum Jacq.-Fél.

Africa. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 184. 1950.

M. rufum Jacq.-Fél.

Africa. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 182. 1950.

M. trepidarium (Stapf) Jacq.-Fél. (*Andropogon trepidarius* Stapf)

Africa. See *Journal de Botanique (Morot)* 19: 100. 1905, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 182. 1950.

M. trichaetum Reznik (*Anadelphia trichaeta* (Reznik) Clayton, nom. illeg., non *Monium trichaetum* Reznik; *Hypogynium trichaetum* (Reznik) Roberty; *Pobeguinea trichaeta* (Reznik) Jacq.-Fél.)

Africa, Guinea. See *Bulletin du Muséum d'Histoire Naturelle*, sér. 2, 4: 1046. 1932, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 174. 1950, *Boissiera*. 9: 183. 1960, *Kew Bulletin* 20: 281. 1966.

Monocera Elliott = *Ctenium* Panz., *Monathera* Raf., *Monocera* W. Jack (Elaeocarpaceae), *Monoceras* auct. ex Steudel (Elaeocarpaceae)

Greek *monos* “alone, lonely, one” and *keras* “a horn,” referring to the spike.

Chloridoideae, Cynodonteae, type *Monocera aromatica* (Walter) Elliott, see *Species Plantarum* 1: 515. 1753, *Flora Caroliniana, secundum ...* 249. 1788, *Ideen zu einer künftigen Revision der Gattungen der Gräser* 38, 61. München 1813, *Denkschriften der Bayer[ischen]. Botanischen Gesellschaft in Regensburg* 4: 311, t. 13, f. 1-2. 1813 [1814] [preprinted from *Denkschr. k. Akad. Wiss. München*], *A Sketch of the Botany of South Carolina and Georgia* 1(2): 176. 1816, C.S. Rafinesque, *American Monthly Magazine and Critical Review* 4: 190. 1819, *Jour. Phys. Chim. Hist. Nat.* 89: 262. 1819, *Malayan Miscell.* 1(5): 42-43. 1820, *Nomenclator Botanicus. Editio secunda* 2: 159. 1841, *Forest Flora of British Burma* 1: 164. 1877 and *North American Flora* 17(8): 579-638. 1939, *Contributions from the United States National Herbarium* 41: 57-58, 142. 2001.

Monochaete Döll = *Doelochloa* Kuntze, *Gymnopogon* P. Beauv.

From the Greek *monos* “alone, lonely, one” and *chaite* “bristle, long hair.”

Chloridoideae, Cynodonteae, *Gymnopogon* sect. *Monochaete* (Döll) Pilg., type *Monochaete fastigiata* (Nees) Döll, see *Essai d'une Nouvelle Agrostographie* 41, 164. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 430. 1829, *Flora Brasiliensis* 2(3): 78-79. 1878, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888, *Revisio Generum Plantarum* 2: 773. 1891 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 94. 1956, *Brittonia* 23(3): 293-324. 1971, *Contributions from the United States National Herbarium* 41: 73, 124-127, 142. 2001.

Monocladus L.C. Chia, H.L. Fung & Y.L. Yang = *Bonia* Balansa, *Gaoligongshania* D.Z. Li, J.R. Xue & N.H. Xia

From the Greek *monos* “alone, single” and *klados* “a branch.”

About 1-4-6 or 0 species, southern China, Guangdong, Guangxi, Hainan, Indochina. Bambusoideae, Bambusodae, Bambuseae, perennial, sympodial, solid undershrub, caespitose, culms apex pendulous or subscaudent, branched, 1 branch at each node, rhizomes stout and short, flowering culms leafy, sheath persistent and coriaceous, large dark purple auricles, ligule short, rhizomes pachymorph, plants bisexual, pseudospikelets fascicled, 2 glumes, palea present, 3 free and glabrous lodicules, 6 stamens, ovary glabrous, 3 stigmas, plants used to make paper, living fences and hedge, often considered a synonym of *Bonia*, type *Monocladus saxatilis* L.C. Chia, H.L. Fung & Y.L. Yang, see *Journal de Botanique (Morot)* 4: 29. 1890 and *Bamb.* 136. 1913, *Symbolae Sinicae* 7(5): 1270-1271. 1936, Emil Bretschneider, *History of European Botanical Discoveries in China*. 911-912. Leipzig 1981, L.C. Chia, H.L. Fung, & Y.L. Yang, “*Monocladus*, genus novum bambusoidearum (Poaceae).” *Acta Phytotaxonomica Sinica* 26(3): 211-216, f. 1. 1988, *Acta Phytotaxonomica Sinica* 33(6): 598, 600-601, f. 1. 1995, N.H. Xia “A study of *Bonia* (Gramineae: Bambusoideae).” *Kew Bulletin* 51(3): 565-569. 1996, D.Z. Li & J.R. Xue, “The diversity and conservation of bamboos in Yunnan, China.” *The Bamboos* 6: 83-94. 1997.

Species

M. amplexicaulis L.C. Chia, H.L. Fung & Y.L. Yang (*Bonia amplexicaulis* (L.C. Chia, H.L. Fung & Y.L. Yang) N.H. Xia)

China. Margin of ligule glabrous, culms farinose, young culm with waxy white powder, sheath shortly tomentose, sheath auricles broadly sickle-like often bending outward, sheath ligule with entire margins, sheath blade cordate or narrowly cordate, leaf sheath hairy, leaf auricles broadly ovate and slanting upward, leaves shortly pubescent

beneath, planted as hedge, used in papermaking, weaving, see *Acta Phytotaxonomica Sinica* 26(3): 215-216, f. 2: 1-3. 1988, *Kew Bulletin* 51(3): 568. 1996.

M. laevigatus L.C. Chia, H.L. Fung, & Y.L. Yang (*Bonia levigata* (L.C. Chia, H.L. Fung, & Y.L. Yang) N.H. Xia; *Monocladus levigatus* L.C. Chia, H.L. Fung, & Y.L. Yang)

China. Smooth, glabrous, sheath shortly pubescent, margin of ligule glabrous, sheath ligule entire, sheath ovate-lanceolate and rounded at base, sheath auricle sickle-shaped, forage, papermaking, growing in montane areas, see *Acta Phytotaxonomica Sinica* 26(3): 216, f. 2, 4-5. 1988, *Kew Bulletin* 51(3): 568. 1996.

M. megalothyrsus (Hand.-Mazz.) T.P. Yi (*Arundinaria megalothyrsa* Hand.-Mazz.; *Gaoligongshania megalothyrsa* (Hand.-Mazz.) D.Z. Li, J.R. Xue, & N.H. Xia; *Indocalamus megalothyrsa* (Hand.-Mazz.) C.S. Chao & C.D. Chu; *Yushania megalothyrsa* (Hand.-Mazz.) T.H. Wen)

China. See *Symbolae Sinicae* 7(5): 1270-1271. 1936, *J. Nanjing Techn. Forest Prod.* 1981(3): 33-44, f. 1-6. 1981 [also *Journal of Nanjing Technological College of Forest Products*], *Journal of Bamboo Research* 6(3): 34. 1987, *Journal of Bamboo Research* 12(2): 54. 1993.

in China: gongshanzhu shu

M. parviflosculus W.T. Lin

China. See *Journal of Bamboo Research* 12(3): 3-4, f. 3. 1993.

M. saxatilis L.C. Chia, H.L. Fung, & Y.L. Yang (*Bonia saxatilis* (L.C. Chia, H.L. Fung, & Y.L. Yang) N.H. Xia)

China, Guanxi, Guangdong. Type species, culms covered with white wax when young, sheaths velutinous, sheath auricle sickle-shaped and often curved outward, sheath blade lanceolate erect or extending outside, leaf auricle almost sickle-like often curved outward, fodder, used in papermaking and for making bamboo hats, see *Acta Phytotaxonomica Sinica* 26(3): 213-215, f. 1. 1988, *Kew Bulletin* 51(3): 567. 1996.

M. saxatilis L.C. Chia, H.L. Fung, & Y.L. Yang var. **solidus** (C.D. Chu & C.S. Chao) L.C. Chia, H.L. Fung, & Y.L. Yang (*Bonia saxatilis* var. *solida* (C.D. Chu & C.S. Chao) D.Z. Li; *Bonia solida* (C.D. Chu & C.S. Chao) N.H. Xia; *Indocalamus solidus* C.D. Chu & C.S. Chao; *Monocladus solidus* (C.D. Chu & C.S. Chao) L.C. Chia)

China, Guanxi. Culm arcuate or arching in the upper portion, 1 flat branch, somewhat pruinose below joints, sheath persistent, sheath auricles distinct or developed and embracing the culm, sheath blade narrowly lanceolate to triangularly lanceolate and not embracing the culm, leaves narrowly lanceolate and glabrous beneath, leaf sheath pruinose and glabrous, leaf auricles developed and ciliate, leaf ligule very short and shortly ciliate, used in papermaking, found growing in limestone hills, see *Acta Phytotaxonomica Sinica* 18(1): 26, f. 2. 1980, *Acta Phytotaxonomica Sinica*

26(3): 215. 1988, *Kew Bulletin* 51(3): 567-568. 1996, *Flora Reipublicae Popularis Sinicae* 9(1): 40, 42. 1996, *Acta Botanica Yunnanica* 22(1): 44. 2000.

M. solidus (C.D. Chu & C.S. Chao) L.C. Chia (*Bonia saxatilis* var. *solida* (C.D. Chu & C.S. Chao) D.Z. Li; *Bonia solida* (C.D. Chu & C.S. Chao) N.H. Xia; *Indocalamus solidus* C.D. Chu & C.S. Chao; *Monocladus saxatilis* var. *solidus* (C.D. Chu & C.S. Chao) L.C. Chia, H.L. Fung & Y.L. Yang)

China. Margin of ligule ciliate, sheaths glabrous, see *Acta Phytotaxonomica Sinica* 18(1): 26, f. 2. 1980, *Acta Phytotaxonomica Sinica* 26(3): 215. 1988, *Kew Bulletin* 51(3): 567-568. 1996, *Flora Reipublicae Popularis Sinicae* 9(1): 40, 42. 1996, *Acta Botanica Yunnanica* 22(1): 44. 2000.

Monocymbium Stapf

From the Greek *monos* "single" and *kymbe* "boat," *kymbos* "cavity," alluding to the solitary racemes, to the shape of the spathe of the racemes.

About 3-4 species, tropical and southern Africa, Sudan, Angola, Sierra Leone. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial, densely caespitose, clumps forming, leafy, herbaceous, wiry, tough when old, auricles absent, ligule membranous and unfringed, leaf blades linear to lanceolate, plants bisexual, inflorescence paniculate, solitary racemes sheathed by a papery spathe and grouped into a compound panicle, spatheoles cymbiform, spikelets in pairs, sessile spikelets dorsally compressed and bisexual, pedicellate spikelets male and awnless, 2 glumes more or less equal, lower glume keeled, upper glume awned, upper lemma bilobed with glabrous awn, palea absent, 2 free and fleshy lodicules, stamens 3, ovary glabrous, stigmas 2, weed species, good fodder when still young, species of open habitats, in sour grassland, savannah, moist soils, grassy hillsides, rain forest, related to *Anadelphia*, type *Monocymbium ceresiiforme* (Nees) Stapf, see *Flora of Tropical Africa* 9: 386-387. 1919, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

Species

M. ceresiiforme (Nees) Stapf (*Andropogon ceresiiformis* Nees; *Hypogynium ceresiiforme* (Nees) Roberty)

Tropical Africa, Gabon. Perennial, very variable, loosely or densely tufted, tussocky, erect or ascending, decumbent, slender, delicate, wiry, leafy and weak, dwarf or short, occasionally or sometimes rhizomatous, leaf blade flattened, leaf sheath smooth, ligule shortly membranous, open inflorescence paniculate, compound panicle linear and open, solitary spatheate racemes, several racemes sheathed by a chartaceous spathe, ovate reddish spatheoles, softly hairy elliptic spikelets, 1 spikelet sessile and with a twisted awn,

1 spikelet pedicellate and awnless, weed species, ornamental, thatching grass, low grazing value, good fodder while young, decreasing palatability with age, usually in sour grassland, veld, savannah, acid soils, sandy soils, gravel, slopes, hillsides, moist soil or wet places, woodland, see *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 109. 1841 and *Flora of Tropical Africa* 9: 386-387. 1919, *Boissiera*. 9: 192. 1960.

in English: oatgrass, wild oat grass, wild oats, boat grass
in Cameroon: shamanho

in Nigeria: baayam maarayaa, baayan maarayaa, garbazam, jan yamaa, jan yaro, jaan baujee, karereyo, yamaa, yissowi, yuus

in Senegal: garlaban, khat lek, matifalbene

in Southern Africa: hawergras, wildehawergras, bootjiegras, meseletso, mobeseletso; tshinwamulwadze (Venda)

in Upper Volta: jantaaje, jantaare, yantaare

M. deightonii C.E. Hubb. (after the British mycologist Frederick Claude Deighton, 1903-1992, botanist in Sierra Leone and Gold Coast, author of *Diseases of Cultivated and Other Economic Plants in Sierra Leone*. Government of Sierra Leone [Freetown] 1956 and "Vernacular Botanical Vocabulary for Sierra Leone," Crown Agents for Oversea Governments and Administrations on behalf of the Government of Sierra Leone [London, U.K.] 1957; see J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 1: 435. Boston 1965)

Africa, Sierra Leone. See *Kew Bulletin* 1949: 347. 1949.

M. lanceolatum C.E. Hubb. ex Hutch. & Dalziel

Africa, Sierra Leone. See *Bulletin of Miscellaneous Information Kew* 1936(5): 313. 1936.

M. nimbanum Jacq.-Fél.

Tropical Africa. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 176. 1950.

Monodia S.W.L. Jacobs

From the Greek *monos* (alone, single) and *odous* (tooth), referring to the single lemma awn.

One species, tropical Australia, Western Australia. Chloridoideae, Triodieae, perennial, strongly xeromorphic habit, tufted, erect, auricles absent, leaf blades flat or folded, ligule a fringe of hairs, leaves hard and pungent, plants bisexual, contracted inflorescence paniculate or spicate, spikelets shortly pedicellate and 1-flowered, upper floret not stipitate, 2 subequal glumes 3-11-nerved, 3-9-nerved lemmas, awn more or less circular to wavy, palea keels wingless, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, coastal grasslands, stony places, sandstone, resembling *Stipa* and *Triodia*, type *Monodia stipoides* S.W.L. Jacobs, see *Kew Bulletin* 40(3): 659-661. 1985,

S.W.L. Jacobs, "*Spinifex (Triodia, Plectrachne, Symplectrodia and Monodia: Poaceae) in Australia*," in *Desertified Grasslands: Their Biology and Management*. (Ed: G.P. Chapman) Academic Press, London, 47-62. 1992.

Species

M. stipoides S.W.L. Jacobs

Northern Western Australia. hummock-forming, ligule a line of hairs, leaf blades pungent, single floret per spikelet, glumes acute awnless, lemma with a single long awn, see *Kew Bulletin* 40(3): 659. 1985.

Monopogon Presl = *Tristachya* Nees

From the Greek *monos* "one, single" and *pogon* "beard."

Panicoideae, Arundinelleae, type *Monopogon avenaceus* J. Presl, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829, *Reliquiae Haenkeanae* 1(4-5): 324, t. 44. 1830 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 23. 1901, *N. Amer. Flora* 17(8): 578. 1939, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Contributions from the United States National Herbarium* 46: 297, 627-628. 2003.

Monospatha W.T. Lin = *Sinarundinaria*

Nakai

Bambusoideae, Bambuseae, Arundinariinae, type *Monospatha triloba* W.T. Lin, see *Journal of Japanese Botany* 11(1): 1. 1935, *Acta Phytotaxonomica Sinica* 27(3): 228, f. 1, 1-4. 1989, *Journal of Bamboo Research* 13(4): 1-3, f. 1. 1994, *Journal of South China Agricultural University* 16(3): 49. 1995, *Contributions from the United States National Herbarium* 39: 112-113. 2000.

Monostachya Merr. = *Notodanthonia* Zotov, *Rytidosperma* Steud.

From the Greek *monos* "one, single" and *stachys* "spike," 1-spiked.

About 4 species, the Philippines, Papua New Guinea. Danthonioideae, Danthonieae, or Arundineae, perennial, herbaceous, montane, low, leaves mainly basal, mat-forming, ligule fringed, plants bisexual, terminal spikelet perfect, 2 subequal glumes 3-nerved, palea 2-nerved, fleshy lodicules present, 3 stamens, ovary glabrous, 2 stigmas, often referred to *Rytidosperma* and *Danthonia* sensu lato, type *Monostachya centrolepidoides* Merr., see *Synopsis Plantarum Glumacearum* 1: 425. 1854, *Transactions of the Royal Society of Victoria* 1(2): 38 [39]. 1889 and *Philippine Journal of Science* 5: 330-331. 1910, *New Zealand Journal*

of Botany 1: 104, 122. 1963, S.T. Blake, “*Plinthanthesis* and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae).” *Contributions from the Queensland Herbarium* 14: 3. 1972, *Taxon* 29: 293-298. 1980, *Taxon* 31: 737-743. 1982, H.P. Linder & G.A. Verboom, “Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex.” *Telopea* 6(4): 597-627. 1996, *Sendtnera* 3: 11-93. 1996, H.P. Linder, “Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae).” *Telopea* 7(3): 269-274. 1997.

Species

M. craigii (Veldkamp) S.W.L. Jacobs (*Danthonia craigii* Veldkamp; *Notodanthonia craigii* (Veldkamp) Veldkamp; *Rytidosperma craigii* (Veldkamp) H.P. Linder)

New Guinea. See *The Alpine Flora of New Guinea* 2: 1172, f. 378. 1979, *Taxon* 29: 298. 1980, *Taxon* 31(4): 739. 1982, *Telopea* 6(4): 613. 1996.

M. montis-wilhelmi (Veldkamp & Fortuin) S.W.L. Jacobs (*Danthonia montis-wilhelmi* Veldkamp & Fortuin; *Notodanthonia montis-wilhelmi* (Veldkamp & Fortuin) Veldkamp; *Rytidosperma montis-wilhelmii* (Veldkamp & Fortuin) H.P. Linder)

New Guinea, Chimbu, Wilhelm Mt. See *The Alpine Flora of New Guinea* 2: 1171. 1979, *Taxon* 29: 298. 1980, *Taxon* 31(4): 739. 1982, *Telopea* 6(4): 614. 1996.

M. nardifolia (Veldkamp) S.W.L. Jacobs (*Danthonia nardifolia* Veldkamp; *Notodanthonia nardifolia* (Veldkamp) Veldkamp; *Rytidosperma nardifolia* (Veldkamp) H.P. Linder)

New Guinea. See *The Alpine Flora of New Guinea* 2: 1174. 1979, *Taxon* 29: 298. 1980, *Taxon* 31(4): 739. 1982, *Telopea* 6(4): 614. 1996.

M. oreoboloides (F. Muell.) Hitchc. (*Danthonia oreoboloides* (F. Muell.) Stapf; *Festuca oreoboloides* F. Muell.; *Notodanthonia oreoboloides* (F. Muell.) Veldkamp; *Rytidosperma oreoboloides* (F. Muell.) H.P. Linder)

Australia. See *Transactions of the Royal Society of Victoria* 1(2): 38 [39]. 1889, *Hooker's Icones Plantarum* 27(1): t. 2606. 1899 and *Brittonia* 2(2): 107. 1936, *Taxon* 29: 298. 1980, *Telopea* 6(4): 614. 1996.

Monostemon Henrard = *Briza* L.,
Microbriza Parodi ex Nicora & Rúgolo,
Poidium Nees

From the Greek *monos* “one, single” and *stemon* “stamen.”

Pooideae, Poaceae, Brizinae, see *Species Plantarum* 1: 70. 1753, *Reliquiae Haenkeanae* 1(4-5): 310. 1830, *An Introduction to the Natural System of Botany* 450. 1836, *Synopsis Plantarum Glumacearum* 1: 288. 1854 and *Mededeelingen van's Rijks-Herbarium* 40: 72-73. 1921, *Willdenowia*

Beiheft 8: 1-168. 1975, *Darwiniana* 23(1): 292, 295. 1981, *Contributions from the United States National Herbarium* 48: 146-151, 451, 453, 582-583. 2003.

Monroa Torrey = *Munroa* Torrey

Orth. var.

Chloridoideae, Cynodonteae, Munroinae, see *Rep. Explor. Railroad Pacif. Ocean* 4: 158. 1856 [1857] and *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 34: 171-193. 1934, *Notas del Museo de la Plata, Botánica* 2: 4. 1937, *American Journal of Botany* 48: 565-573. 1961, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 52(3-4): 229-252. 1978, *Kew Bulletin* 37: 133-162. 1982, *Sida* 14: 531-549. 1991, *American Journal of Botany* 81: 622-629. 1994, *Contributions from the United States National Herbarium* 41: 174. 2001.

Moorea Lemaire = *Cortaderia* Stapf,
Moorea Rolfe (Orchidaceae)

To commemorate the Scottish botanist David Moore (Muir, until 1828), 1808-1879 (Glasnevin, Dublin), botanical collector, from 1829 to 1834 at Trinity College Garden, in 1861 a Fellow of the Linnean Society, from 1838 to 1879 Curator of Glasnevin Garden (3 km northwest of the centre of the city of Dublin), brother of Charles Moore (1820-1905) and father of Sir Frederick Moore (1857-1949), among his works are *Guide to the Royal Botanic Gardens, Glasnevin*. [Revised and enlarged by Professor William Ramsay McNab, 1844-1889, Scottish botanist.] Dublin 1885 and *The Mosses of Ireland*. Dublin 1873, with the British botanist and entomologist Alexander Goodman More (1830-1895) wrote *Contributions towards a Cybele Hibernica*, being outlines of the geographical distribution of plants in Ireland. Dublin and London 1866. See N. Colgan & Reginald William Scully (1858-1935), *Contributions towards a Cybele Hibernica*. 2nd edition. Dublin 1898; J.H. Barnhart, *Biographical notes upon botanists*. 2: 508. 1965; E. Charles Nelson, “National Botanic Gardens, Glasnevin, Retrospect and Prospect.” *Curtis's Botanical Magazine* 12(4): 181-185. Nov 1995; E. Charles Nelson & E.M. McCracken, *The Brightest Jewel: A History of the National Botanic Gardens, Glasnevin, Dublin*. Kilkenny 1987; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 272. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 214. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 169. London 1904; Ernest Nelses & William Cuthbertson, *Curtis's Botanical*

Magazine Dedications, 1827-1927. 183-184. [1931]; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 496-497. 1994; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970.

Danthonioideae, Danthonieae, type *Moorea argentea* (Nees) Lem., see *Saggio sulla Storia Naturale del Chili ...* 154-155. Bologna 1782, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 462. 1829, *Gramineae* 21. 1841, *L'Illustration horticole* 2 (Misc.): 14-15. 1855, *Gardener's chronicle, ser. 3* 8: 7. 1890, *Gardener's Chronicle, ser. 3* 22(570-571): 378, 396. 1897 and *Synopsis der mitteleuropäischen Flora* 2(1): 325. 1900, *Gardener's Chronicle, ser. 3* 34: 400. 1903, *Contributions from the United States National Herbarium* 46: 163-166, 297. 2003.

Moorochloa Veldkamp

Panicoideae, see *Flora Graeca* 1(2): 44, t. 59. 1808 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 70. 1917, *Bulletin of Miscellaneous Information Kew* 1936(5): 323. 1936, *Reinwardtia* 12(2): 138-139. 2004.

Mosdenia Stent

Dedicated to Mr. E.A. Galpin's farm Mosdene, near Naboomspruit, Transvaal.

One species, South Africa. Chloridoideae, Cynodonteae, perennial, herbaceous, unbranched, long stoloniferous, cataphylls, leaves basal, auricles absent, ligule an unfringed to lacinate membrane, plants bisexual, inflorescence a single spike, spikelets single and with female-fertile florets only, female-fertile floret terminal on the rachilla, 2 glumes membranous and subequal, upper glume 1-nerved, lemmas carinate, palea 2-nerved 2-keeled, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, species of open habitats, bushveld, dry savannah, granite, on sandy soil, savannah, type *Mosdenia waterbergensis* Stent, see *Bothalia* 1: 170. 1922 [1923].

Species

M. leptostachys (Ficalho & Hiern) Clayton (*Mosdenia phleoides* (Hackel) Stent; *Perotis phleoides* Hackel; *Sporobolus leptostachys* Ficalho & Hiern)

South Africa. Perennial, creeping, inflorescence densely spike-like, solitary spikelets awnless arranged in whorls or spirals, 1 bisexual floret, glumes glabrous 1-nerved, see *Kew Bulletin* 25(2): 250. 1971.

Moulinsia Raf. = *Aristida* L., *Moulinsia* Cambess. (Sapindaceae), *Moulinsia* Blume (Sapindaceae)

Arundinoideae, Aristideae, or Aristidoideae, Aristideae, type *Aristida lanosa* Muhl. ex Elliott (syn. *Moulinsia lanosa* Raf. ex B.D. Jacks.), see *Species Plantarum* 1: 82. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 143. 1816, *Mémoires du Muséum d'Histoire Naturelle* 18: 27, t. 2. 1829, Constantine Samuel Rafinesque (1783-1840), *Seringe Bull. Bot.* 1: 221. 1830, *Florae Senegambiae Tentamen* 118, t. 28. Paris, London 1830-1833 [23 June 1831], *Rumphia* 3: 119. 1848 [1849] and *Mededeelingen van's Rijks-Herbarium* 54: 9. 1926, Elmer D. Merrill, *Index rafinesquianus*. 76. 1949, *Flora of Ethiopia and Eritrea* 7: 76-85. 1995, *Acta Botánica Mexicana* 63: 1-45. 2003, *Contributions from the United States National Herbarium* 46: 69-104, 297. 2003.

Moya Acosta-Solís = *Chusquea* Kunth, *Moya* Griseb. (Celastraceae)

Bambusoideae, Bambuseae, Chusqueinae, see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Synopsis Plantarum* 1: 254. 1822, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 111, t. 1, f. 3. 1874, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 84. 1879 and *Mededeelingen van's Rijks-Herbarium* 29: 1. 1916, *Die Natürlichen Pflanzenfamilien* 147(20b): 405. 1942, *Contr. Inst. Ecuatoriano Ci. Nat.* 71: 39, 43. 1969.

Muantijamvella J.B. Phipps = *Tristachya* Nees

Africa, South Africa, Angola.

Panicoideae, Arundinelleae, type *Muantijamvella huillensis* (Rendle) J.B. Phipps, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829, *Reliquiae Haenkeanae* 1(4-5): 324, t. 44. 1830, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 217. 1899 and *Bulletin, Division of Agronomy United States Department of Agriculture* 24: 23. 1901, *N. Amer. Flora* 17(8): 578. 14 July 1939, *Kirkia* 4: 106. 1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Kew Bulletin* 26(1): 111-123. 1971, *Flora Mesoamericana* 6: 378. 1994, *Contributions from the United States National Herbarium* 46: 627-628. 2003.

Muehlenbergia Hedwig

Orthographic variant of *Muhlenbergia* Schreber, see *Genera Plantarum*. 40. 1806.

Muhlenbergia Schreber = *Acroxis* Steud.,
Anthipsimus Raf., *Bealia* Scribn., *Calycodon*
 Nutt., *Chaboissaea* Fourn., *Clomena* P. Beauv.,
Crypsinna Fourn., *Dactylogramma* Link,
Dilepyrum Michaux, *Diplachyrium* Nees,
Epicampes Presl, *Hubbardochoa* Auquier,
Lepyroxis Fourn., *Lycurus* Kunth,
Podosaemum Kunth, *Podosemum* Desv.,
Sericrostis Raf., *Tosagris* P. Beauv.,
Trichochloa DC., *Trichochloa* P. Beauv.,
Vaseya Thurber

For the American Rev. Gotthilf Heinrich (Henry) Ernest (Ernst) Muhlenberg (Mühlenberg), 1753-1815 (Lancaster), Lutheran minister, amateur botanist, among his works are *Catalogus plantarum Americae septentrionalis*. Lancaster 1813 and *Descriptio uberior graminum et plantarum calamariarum Americae septentrionalis indigenarum et cicurum*. Philadelphia 1817; see John Christopher Schwab, *The Descendants of Henry Melchior Muhlenberg*. [New Haven, Conn. 1911]; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 755. Stuttgart 1993; William Jay Youmans, editor, *Pioneers of Science in America*. New York 1896; J.H. Barnhart, *Biographical notes upon botanists*. 2: 523. 1965; Jeanette E. Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808 - 1841*. Harvard University Press 1967; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 276. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. 319. Paris 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 301. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. 92-97. 1899; William Darlington, *Memorials of John Bartram and Humphry Marshall*. 466-474. Philadelphia 1849; Israel Smith Clare, *A brief history of Lancaster County*. Argus 1892; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; William Darlington, *Reliquiae Baldwinianae*. Philadelphia 1843.

About 150-160 species, mainly in Central and North America, subtropical and warm temperate, southern U.S. to Andes, south Asia, Himalayas to Japan. Chloridoideae, Cynodonteae, Muhlenbergiinae, annual or perennial, very variable, herbaceous, caespitose or not, erect, decumbent and rooting from nodes, rhizomatous, mat-forming, branched above or unbranched, nodes glabrous, internodes

solid or hollow, auricles present or absent, ligule a membrane ciliate or not, leaves flat and narrow, plants bisexual, inflorescence exerted or partially included in upper sheath, dense and flexuous panicles, cleistogamous spikelets present or absent, spikelets solitary and not subtended by sterile bristles, floret 1 bisexual, 2 subequal glumes 0-3-nerved, spikelets disarticulating above the glumes, chartaceous or membranous lemmas with 3 usually prominent nerves, lemma entire or emarginate usually with a terminal awn, palea glabrous or hairy usually subequal to lemma, 0-2 free and fleshy lodicules, 2-3 stamens, ovary glabrous, 2 reddish stigmas, weed species, native pasture species, fodders, roots used for brooms, habitat variable, arid and semi-arid regions, dry open grassland, allied to *Sporobolus* R. Br., type *Muhlenbergia schreberi* J.F. Gmel., see *Genera Plantarum* 1: 44-45. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Flora Boreali-Americana* 1: 40, 54. 1803, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 187-190. 1810, *Essai d'une Nouvelle Agrostographie* 28-29, t. 8, f. 2, 3. 1812, *Catalogus plantarum horti botanici monspeliensis* 151. 1813, *Mémoires du Muséum d'Histoire Naturelle* 2: 72. 1815, *Nova Genera et Species Plantarum* 1: 141-142, pl. 45. 1815 [1816], *Syst. Veg.* 2: 18. 383. 1817, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 105. 1819, *Fundamenta Agrostographiae* 117. 1820, *De Graminibus unifloris et sesquifloris* 191, 193. Petropoli 1824, *Neogenyton* 4. 1825, *Flora* 11: 301. 1828, *Reliquiae Haenkeanae* 1: 207-356. 1830, *Hortus Regius Botanicus Berolinensis* 2: 248. 1833, *Nomenclator Botanicus. Editio secunda* 1: 22. 1840, *Nom. Bot.* 2nd edition, 2: 568. 1841, *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 23. 1848, *J. Acad. Nat. Sci. Philadelphia*, ser. 2, 1: 186. Aug, 1848, *A Manual of the Botany of the Northern United States* 546. 1848, *Proceedings of the Academy of Natural Sciences of Philadelphia* 15: 78-79. 1863, *Nom. Bot.* 2: 1142. 1874, *Mexicanas Plantas* 2: 90. 92, 112, t. 1. 1886, *Die Natürlichen Pflanzenfamilien* 2(2): 97. 1887, *The True Grasses* 103-104, f. 45a. 1890 and *American Midland Naturalist* 6: 20. 1919, *U.S.D.A. Bull.* 772: 139. 1920, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 203-214. 1921, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 207. 1928, *North American Flora* 17: 431-476. 1935, *J. Wash. Acad. Sci.* 43: 405-407. 1953, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 69-71. 1956, T.R. Soderstrom, "Taxonomic study of subgenus *Podosemum* and section *Epicampes* of *Muhlenbergia* (Gramineae)." *Contributions from the U.S. National Herbarium* 34(4): 75-189. 1967, *American Midland Naturalist* 82: 512-542. 1969, Brent Berlin, Dennis E. Breedlove and Peter H. Raven, *Principles of Tzeltal Plant Classification: An Introduction to the Botanical Ethnography of a Mayan-Speaking People of Highland Chiapas*. New York 1974, *Bulletin du Jardin Botanique National de Belgique* 50(1-2): 241-242. 1980, *Sida* 11: 282-285. 1986, *Biochemical*

Systematics and Ecology 15: 647-652. 1987, *Sida* 12(2): 347-359. 1987, *Madroño* 35: 320-324. 1988, *Nordic Journal of Botany* 8: 575-583. 1989, *Madroño* 36: 260-265. 1989, *Biochemical Systematics and Ecology* 19: 665-672. 1991, *Sida* 14: 531-549. 1991, *Systematic Botany Monographs* 31: 1-109. 1991, *Canadian Journal of Botany* 71: 816-826. 1993, Dennis E. Breedlove & Robert M. Laughlin, *The Flowering of Man. A Tzotzil Botany of Zinacantán*. Smithsonian Contributions to Anthropology. No. 35. Washington 1993, *Flora Mesoamericana* 6: 276-286. 1994, *American Journal of Botany* 81: 622-629. 1994, *Madroño* 42(4): 427-449. 1995, *Sida* 17: 349-365. 1996, *Brittonia* 50(1): 23-50. 1998, P.M. Peterson, "Systematics of the Muhlenbergiinae (Chloridoideae: Eragrostideae)." *Grasses: Systematics and Evolution* 195-212. 2000, *Journal of Ecology* 88(4): 551-560. Aug 2000, *Conservation Biology* 15(1): 98-110. Feb 2001, *Austral. Ecology* 26(2): 205-212, Apr 2001, *Flora of Ecuador* 68: 72-87. 2001, *Contributions from the United States National Herbarium* 41: 143-173. 2001, *Global Change Biology* 8(3): 247-264. Mar 2002, *Grass and Forage Science* 57(2): 171-183. June 2002, *Oikos* 98(2): 284-298. Aug 2002, *Journal of Applied Ecology* 40(1): 101-110. Feb 2003, *Restoration Ecology* 11(1): 91-102, Mar 2003, *Global Ecology and Biogeography* 12(5): 361-371. Sep 2003, *New Phytologist* 160(1): 239-253. Oct 2003, *Oikos* 104(1): 5-14. Jan 2004, *Restoration Ecology* 12(1): 52-62. Mar 2004, *Zoological Journal of the Linnean Society* 140(3): 353-381. Mar 2004, *Journal of Ecology* 92(3): 409-421. June 2004, *Plant, Cell and Environment* 27(7): 907-916. July 2004 [Low-temperature photosynthetic performance of a C4 grass and a co-occurring C3 grass native to high latitudes.], *Plant, Cell and Environment* 27(11): 1424-1435. Nov 2004 [Dynamic photo-inhibition and carbon gain in a C4 and a C3 grass native to high latitudes.], Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu, & Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005, *Oikos* 110(1): 67-80. July 2005.

Species

M. agascalientensis Y. Herrera & De la Cerda-Lemus

Mexico. See *Novon* 5(3): 278-280, f. 1. 1995.

M. alamosae Vasey

Mexico. Loosely clumped, see *Botanical Gazette* 16(5): 146. 1891.

M. andina (Nutt.) Hitchc. (*Calamagrostis andina* Nutt.; *Muhlenbergia andina* (Nutt.) Kunth; *Muhlenbergia comata* (Thurb.) Thurb. ex Benth.; *Vaseya comata* Thurb.)

U.S., South America. See *Journal of the Academy of Natural Sciences of Philadelphia* 1: 187. 1848, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1863: 79. 1863, *Journal of the Linnean Society, Botany* 19: 83. 1881

and *United States Department of Agriculture: Bulletin* 772: 145. 1920, *Vascular Plants of the Pacific Northwest* 1: 1-914. 1969.

in English: foxtail muhly

M. angustata (J. Presl) Kunth (*Cinna phleoides* (Kunth) Kunth; *Cinna stricta* (Kunth) Kunth; *Crypsis phleoides* Kunth; *Crypsinna stricta* (Kunth) E. Fourn.; *Crypsis stricta* Kunth; *Epicampes coerulea* Griseb.; *Epicampes coerulea* var. *submutica* Hack.; *Epicampes kunthiana* Griseb.; *Epicampes phleoides* (Kunth) Griseb.; *Muhlenbergia coerulea* (Griseb.) Mez; *Podosemum angustatum* J. Presl)

Colombia to Argentina, Ecuador. Perennial bunchgrass, densely caespitose, erect, rigid, stiff, coarse, tussock, leaf sheaths glabrous at base and scabrid upward, lower sheaths often fibrous when old, leaf blades linear and long-attenuate, dense inflorescence spike-like with hispid branches, spikelets linear lanceolate slightly compressed, glumes subequal, lemma awned or awnless, 2 lodicules linear, 2-3 stamens, rocky places, dry páramos, hybrids with *Muhlenbergia rigida* (Kunth) Trin., see *Nova Genera et Species Plantarum* 1: 140. 1815 [1816], *Révision des Graminées* 1: 67. 1829, *Reliquiae Haenkeanae* 1(4-5): 229. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 202. 1833, *Pl. Lorentz.* 208. 1874, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 256. 1874, *Mexicanas Plantas* 2: 90. 1886 and *Anales del Museo Nacional de Buenos Aires* 13: 471. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 213. 1921.

M. annua (Vasey) Swallen (*Muehlenbergia annua* (Vasey) Swallen; *Sporobolus annuus* Vasey)

Mexico. Annual, see *Bulletin of the Torrey Botanical Club* 14: 9. 1887 and *Contributions from the United States National Herbarium* 29(4): 204. 1947, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. appressa C.O. Goodd.

U.S., Arizona. See *Journal of the Washington Academy of Sciences* 31(12): 504. 1941.

M. arenacea (Buckley) Hitchc. (*Sporobolus arenaceus* Buckley; *Sporobolus asperifolius* var. *brevifolius* Vasey; *Sporobolus auriculatus* Vasey)

U.S. Texas, New Mexico, Mexico. Rhizomatous, spreading, found in sandy soils, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 89. 1862, *Contributions from the United States National Herbarium* 1(2): 56. 1890, *Contributions from the United States National Herbarium* 3(1): 64. 1892 and *Proceedings of the Biological Society of Washington* 41: 161. 1928, *Manual Grass. U.S.* 886. 1935.

M. arenicola Buckley (*Podosemum arenicola* (Buckley) Bush)

U.S., Texas. Tufted, dry and arid places, pasture, rocky soil, see *Proceedings of the Academy of Natural Sciences of*

Philadelphia 14: 91. 1862 and *American Midland Naturalist* 7(2): 40. 1921, *Manual Grass. U.S.* 886. 1935.

M. argentea Vasey (*Epicampes argentea* (Vasey) M.E. Jones; *Muhlenbergia argentea* Vasey ex S. Watson)

Mexico. Lemma lobed, see *Bulletin of the Torrey Botanical Club* 13(12): 232. 1886, *Proceedings of the American Academy of Arts and Sciences* 21: 443. 1886 and *Brittonia* 50(1): 23-50. 1998.

M. arizonica Scribner

U.S., Arizona, Mexico. See *Bulletin of the Torrey Botanical Club* 15(1): 8, pl. A, f. 1-6. 1888.

M. arsenei A. Hitchc. (for the French clergyman and botanist Gustave [Gerfroy] Arsène, 1867-1938, traveler, botanical collector in Mexico and New Mexico; see Joseph Ewan, *Rocky Mountain Naturalists*. 152. The University of Denver Press 1950; P.C. Standley, *Science* 65: 130-133. 1927; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; J.H. Barnhart, *Biographical notes upon botanists*. 1: 259. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 10. 1973; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 55. Edinburgh 1970; A.S. Hitchcock & A. Chase, *Manual Grass. U.S.* 984. 1951; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983; Francis Whittier Pennell, 1886-1952, "The *Scrophulariaceae* of temperate eastern North America." *Acad. Nat. Sci., Phila., Mono.* 1: 1-650. 1935)

U.S., Texas, New Mexico, Mexico.

in English: tough muhly

M. articulata Scribner (*Muhlenbergia elongata* Scribn. ex Beal)

Mexico. Rocky places, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 298, f. 1. 1891, *Grasses of North America for Farmers and Students* 2: 251. 1896 and *Contr. U.S. Natl. Herb.* 17: 302. 1913.

M. asperifolia (Nees & Meyen ex Trin.) L. Parodi (*Agrostis distichophylla* Phil., nom. illeg., non *Agrostis distichophylla* Roem. & Schult.; *Agrostis eremophila* Speg.; *Muhlenbergia asperifolia* (Nees & Meyen) L. Parodi; *Muhlenbergia asperifolia* (Nees & Meyen ex Trin.) Matthei, nom. illeg., non *Muhlenbergia asperifolia* (Nees & Meyen ex Trin.) Parodi; *Sporobolus asperifolius* (Nees & Meyen ex Trin.) Nees & Meyen; *Sporobolus asperifolius* var. *major* Vasey; *Sporobolus copiapinus* Phil.; *Sporobolus deserticolus* Phil.;

Sporobolus distichophyllus Phil.; *Sporobolus mendocinus* E. Méndez; *Sporobolus sarmentosus* Griseb.; *Vilfa asperifolia* Nees & Meyen ex Trin.; *Vilfa asperifolia* Meyen, nom. illeg., non *Vilfa asperifolia* Nees & Meyen ex Trin.)

Western and central North America, U.S., South America, Mexico, British Columbia. Perennial, erect or ascending, leaves distichous, leaf blades pungent, rhizomatous to strongly rhizomatous, occasionally stoloniferous, panicle ovate, occasionally 1- 3-flowered, glumes lanceolate acute, lemmas acute or mucronate, found in dry soils, damp sands, marshy areas, along irrigation ditches, along the banks of streams, see Franz Julius Ferdinand Meyen (1804-1840), *Reise um die Erde* 1: 408. 1834, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 95. 1840, *Gramineae* 9-10. 1841 [also *Novorum Actorum Academia Caesareae Leopoldinae-Carolinae Germanicae Naturae Curiosorum* Sup. 1: 9. 1841], *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 141-142. 1843, Rudolph Amandus (Rodolfo, Rudolf Amando) Philippi (1808-1904), *Florula Atacamensis seu enumeratio plantarum ...* 54. Halis Saxonum [Halle] 1860, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 295. 1879, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 82. 1891, *Contributions from the United States National Herbarium* 3(1): 64. 1892, *Anales de la Universidad de Chile* 94: 6-7. 1896 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 190. 1902, *Revista de la Facultad de Agronomía y Veterinaria* (Buenos Aires) 6: 117. 1928, *Gayana, Botánica* 41(1-2): 55. 1984, *Boletín de la Sociedad Argentina de Botánica* 30(1-2): 13-15, f. 1. 1994, Kevin P. Fort & James H. Richards, "Does seed dispersal limit initiation of primary succession in desert playas?" *Am. J. Bot.* 85: 1722-1731. 1998.

in English: scratch grass

M. atacamensis Parodi (*Chaboissaea atacamensis* (Parodi) P.M. Peterson & Annable)

Argentina, Bolivia. Annual, weak, erect or decumbent, leaf blades flat and scabrous, narrow panicles, spikelets erect 1-2-flowered, glumes subequal acute, lemmas lanceolate and pubescent, paleas narrowly lanceolate, moist ground, see *Mexicanas Plantas* 2: 112. 1886 and *Revista Argentina de Agronomía* 15: 248, 250. 1948, *Madroño* 39(1): 8-30. 1992.

M. aurea Swallen

Guatemala. See *Contributions from the United States National Herbarium* 29(9): 411. 1950.

M. brandegeei C. Reeder

Mexico, Baja California. See *Madroño* 13(8): 248-251, f. 1. 1956.

M. breviaristata (Hack.) Parodi (*Muhlenbergia phragmitoides* Griseb.; *Muhlenbergia phragmitoides* var. *breviaristata* Hack.)

Argentina. See *Abhandlungen der Königl. Gesellschaft der Wissenschaften zu Göttingen* 19: 255. 1874 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 291-292. 1914, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 219. 1928.

M. breviculmis Swallen (*Muhlenbergia ligularis* (Hack.) Hitchc.; *Sporobolus ligularis* Hack.)

Guatemala. See *Österreichische Botanische Zeitschrift* 52(2): 57. 1902, *Contributions from the United States National Herbarium* 24(8): 388. 1927, *Contributions from the United States National Herbarium* 29(9): 408. 1950.

M. brevifolia Scribner ex Beal (*Agrostis brevifolia* Nutt.; *Muhlenbergia brevifolia* (Nutt.) M.E. Jones, nom. illeg., non *Muhlenbergia brevifolia* Scribn. ex Beal)

Mexico. See *The Genera of North American Plants* 1: 44. 1818, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 103. 1840, *Grasses of North America for Farmers and Students* 2: 254, 255. 1896 and *Contributions to Western Botany* 14: 12. 1912.

M. breviligula Hitchc.

Guatemala, Mexico. Rocky places, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791 and *North American Flora* 17(6): 458. 1935.

M. brevis C.O. Godding (*Lycurus schaffneri* (E. Fourn.) Mez; *Muhlenbergia breviseta* Griseb. ex E. Fourn.; *Muhlenbergia schaffneri* E. Fourn.; *Muhlenbergia schaffneri* var. *longiseta* Scribn.)

U.S., New Mexico. Annual, paired spikelets, see *Mexicanas Plantas* 2: 83, 85. 1886, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 297-298. 1891 and *Contr. U.S. Natl. Herb.* 17(3): 294. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 212. 1921, *Journal of the Washington Academy of Sciences* 31(12): 505. 1941, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. breviseta Griseb. ex E. Fourn.

Mexico. See *Mexicanas Plantas* 2: 83, 85. 1886, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 297-298. 1891 and *Contr. U.S. Natl. Herb.* 17(3): 294. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 212. 1921, *N. Am. Fl.* 17(6): 464. 1935, *Journal of the Washington Academy of Sciences* 31(12): 505. 1941.

M. brevivaginata Swallen

Mexico. See *Boletín de la Sociedad Botánica de México* 23: 30, f. 3. 1958 [1959].

M. bushii R.W. Pohl (*Muhlenbergia brachyphylla* (Nees) B.D. Jacks.; *Muhlenbergia brachyphylla* Bush, nom. illeg., non *Muhlenbergia brachyphylla* (Nees) B.D. Jacks.; *Muhlenbergia brachyphylla* f. *aristata* E.J. Palmer & Steyererm.; *Podosemum brachyphyllum* Nees)

U.S., Missouri. Branched, rhizomatous, spreading, sprawling, growing in colonies, dry slopes, wooded areas, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Linnaea* 19(6): 690. 1847, *Index Kewensis* 2: 269. 1894 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *American Midland Naturalist* 6: 41. 1919, *Brittonia* 10(3): 110-111. 1958, *American Midland Naturalist* 82: 534. 1969.

M. californica Vasey (*Muhlenbergia californica* (Vasey) Abrams, nom. illeg., non *Muhlenbergia californica* Vasey; *Muhlenbergia glomerata* var. *brevifolia* Vasey; *Muhlenbergia parishii* Vasey; *Muhlenbergia racemosa* var. *brevifolia* (Vasey) Beal; *Muhlenbergia sylvatica* var. *californica* Vasey)

Southern California. Mountains and valleys, see *North American Gramineae and Cyperaceae* 1: 13. 1834, *Botanical Gazette* 7(8-9): 92-93. 1882, *Bulletin of the Torrey Botanical Club* 13: 53. 1886, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Grasses of North America for Farmers and Students* 2: 253. 1896 and *Flora of Los Angeles and Vicinity* 32. 1904.

in English: California muhly

M. capillaris (Lam.) Trin. (*Agrostis rubicunda* Bosc ex DC.; *Agrostis sericea* (Michx.) Elliott; *Agrostis setosa* Willd. ex Trin.; *Muhlenbergia caespitosa* Chapm.; *Muhlenbergia capillaris* var. *filipes* (M.A. Curtis) Chapm. ex Beal; *Muhlenbergia expansa* (DC) Trin.; *Muhlenbergia filipes* M.A. Curtis; *Muhlenbergia polypogon* (DC.) Kunth; *Muhlenbergia sericea* (Michx.) P.M. Peterson; *Muhlenbergia trichodes* Steud.; *Podosaemum agrostoides* (P. Beauv.) P. Beauv.; *Podosaemum capillare* (Lam.) Desv.; *Podosemum agrostoides* P. Beauv.; *Podosemum agrostoides* (P. Beauv.) P. Beauv. ex Spreng.; *Podosemum capillare* (Lam.) Desv.; *Podosemum filipes* (M.A. Curtis) Bush; *Podosemum purpureum* (P. Beauv.) P. Beauv.; *Polypogon sericeus* (Michx.) Spreng.; *Stipa capillaris* Lam.; *Stipa cericea* Michx. ex Raf.; *Stipa diffusa* Walter; *Stipa expansa* Poir.; *Stipa sericea* Michx.; *Tosagris agrostidea* P. Beauv.; *Trichochloa capillaris* (Lam.) DC.; *Trichochloa expansa* DC.; *Trichochloa expansa* (Poir.) DC.; *Trichochloa polypogon* DC.; *Trichochloa purpurea* P. Beauv.)

Southeastern U.S., Mexico, Guatemala. Perennial, grows in clumps, linear leaves flat or rolled inward, loose panicles, spikelets lanceolate, dunes, dry woods, savannah, sandy soil, see *Flora Caroliniana, secundum ...* 78. 1788, *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Tableau Encyclopédique et*

Méthodique ... Botanique 1: 158. 1791, *Flora Boreali-Americana* 1: 54. 1803, *Encyclopédie Méthodique, Botanique* 7: 453. 1806, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 29, 176, 179, t. 8, f. 2, 3. 1812, *Catalogus plantarum horti botanici monspeliensis* 151-152. 1813, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 135. 1816, *De Graminibus unifloris et sesquifloris* 191-192, 296, t. 5, f. 15. 1824, *Systema Vegetabilium, editio decima sexta* 1: 243. 1825, *Neogenyton* 4. 1825, *De Graminibus Panicis* 26. 1826, *Révision des Graminées* 1: 64. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 300. 1841, *American Journal of Science and Arts* 44: 83. 1843, *Synopsis Plantarum Glumacearum* 1: 177. 1854, *Botanical Gazette* 3(3): 18. 1878, *Contributions from the United States National Herbarium* 3(1): 66. 1892, *Grasses of North America for Farmers and Students* 2: 256. 1896 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *American Midland Naturalist* 7(2): 29. 1921, *Sida* 13(3): 303-314. 1989, *Contributions from the United States National Herbarium* 41: 167. 2001.

in English: purple muhly

M. capillipes (M.E. Jones) P.M. Peterson & Annable (*Sporobolus capillipes* M.E. Jones; *Sporobolus capillipes* var. *delicatus* M.E. Jones)

U.S., Mexico. See *Contributions to Western Botany* 14: 9-10. 1912, *Systematic Botany Monographs* 31: 27. 1991.

M. caxamarcensis Laegaard & Sánchez Vega

Peru, Cajamarca. Chloridoideae, Cynodonteae, Muhlenbergiinae, see *Nordic Journal of Botany* 10: 437. 1990.

M. ciliata (Kunth) Trin. (*Agrostis brachyphylla* (Nees) Steud.; *Agrostis ciliata* Willd. ex Steud.; *Muhlenbergia adpersa* Trin.; *Muhlenbergia brachyphylla* (Nees) B.D. Jacks.; *Muhlenbergia ciliata* (Kunth) Kunth, nom. illeg., non *Muhlenbergia ciliata* (Kunth) Trin.; *Podosaemum ciliatum* Kunth; *Podosaemum brachyphyllum* Nees; *Podosaemum ciliatum* Kunth; *Polypogon brachyphyllus* (Nees) E. Fourn. ex Hemsl.; *Polypogon ciliatus* (Kunth) Spreng.; *Trichochloa ciliata* (Kunth) Roem. & Schult.)

Honduras, Mexico to Peru. Annual, delicate, erect, branched from base and lower nodes, internodes hollow, leaf sheaths hirsute or glabrous, ligule a finely lacinated membrane, leaf blades linear attenuate hirsute, narrow panicle, spikelets fusiform, glumes unequal, lemma awned and ciliate on marginal nerves, awn apical straight to slightly flexuous, palea hispid, 2 lodicules, 3 stamens, fodder, rocky places, dry regions, slopes, disturbed ground, along roads, grassland, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Nova Genera et Species Plantarum* 1: 128-129. 1815 [1816], *Systema Vegetabilium* 2: 386. 1817, *De Graminibus*

unifloris et sesquifloris 193, t. 5, f. 16. 1824, *Systema Vegetabilium, editio decima sexta* 1: 243. 1825, *Révision des Graminées* 1: 63. 1829, *Nomenclator Botanicus* 2nd edition 1: 39. 1840, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 291. 1841, *Linnaea* 19(6): 690. 1847, *Synopsis Plantarum Glumacearum* 1: 175. 1854, *Biologia Centrali-Americana; ... Botany ...* 3(19): 552. 1885, *Index Kewensis* 2: 269. 1894 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

in Mexico: zacatón

M. cleefii Laegaard (for the Dutch botanist Antoine M. Cleef, b. 1951, University of Amsterdam, Hugo de Vries-Laboratorium, a member of the Colombian Academy of Sciences, collector in French Guyana and Amazonia, 1970-1972 made hepatic collections in Colombian páramos; see A.M. Cleef, "The vegetation of the páramos of the Colombian cordillera Oriental." *Dissertationes Botanicae*. 61: 321 pp. J. Cramer, Vaduz 1981; Salamanca-V., S., A.M. Cleef & J.O. Rangel, *The Páramo Vegetation*. In: Salamanca-V., S. *The Páramo Vegetation and Its Dynamics in Time Volcanic Massif Ruiz-Tolima* (cordillera Central Colombia). Ph.D. Thesis, University of Amsterdam, 122 pp. Amsterdam 1991; Antoine M. Cleef, Jaime Cavelier, *Tropical Alpine Environments: Plant Form and Function*. edited by P.W. Rundel, A.P. Smith, & F.C. Meinzer, Cambridge University Press 1994; S.R. Gradstein (editor), *Studies on Colombian Cryptogams I-X*. Institute of Systematic Botany, University of Utrecht 1982; S.R. Gradstein, *Studies on Colombian Cryptogams XI-XX*. Institute of Systematic Botany, University of Utrecht 1983; S.R. Gradstein (editor), *Studies on Colombian Cryptogams XXI-XL*. Institute of Systematic Botany, University of Utrecht 1990; S.R. Gradstein, M. H. Fulford & A.M. Cleef, "Oil body structure and ecological distribution of selected species of tropical Andean Jungermanniales." *Proc. Kon. Ned. Acad. Wetensch.* ser. C, 80: 377-420. 1977; S.R. Gradstein & W.H.A. Hekking, "A catalogue of the Hepaticae of Colombia." *J. Hattori Bot. Lab.* 45: 93-144. 1979)

Colombia. Small grass with very slender rhizomes, inflorescence of 2-5 spikelets purplish, lemma long-attenuate and hooked, páramos, páramo swamps, marshy places, see *Phytologia* 31: 324-325. 1975, *Phytologia* 32: 312-314. 1975, *Phytologia* 38: 12. 1977, *Brittonia* 30: 43. 1978, *Phytologia* 47: 122-123. 1980, *Caldasia* 13: 691. 1983, *Anales Jard. Bot. Madrid* 51: 76. 1993, *Revista Acad. Colomb. Ci. Exact.* 19: 253. 1994, *Caldasia* 17(82-85): 409-411, f. 1. 1995, *Novon* 5: 384. 1995, *Revista Acad. Colomb. Ci. Exact.* 23(88): 332. 1999.

M. crispiseta Hitchc.

Mexico. Annual, see *North American Flora* 17(6): 440. 1935, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. cualensis Y. Herrera & P.M. Peterson

Mexico. See *Novon* 2(2): 114, f. 1. 1992.

M. curtifolia Scribner (*Muhlenbergia curtifolia* subsp. *curtifolia*; *Muhlenbergia curtifolia* subsp. *griffithsii* Scribn.) (for David Griffiths, 1867-1935)

U.S., Utah, Arizona, Nevada. See *Bulletin of the Torrey Botanical Club* 38: 328. 1911.

M. curviaristata (Ohwi) Ohwi (*Muhlenbergia ramosa* auct.; *Muhlenbergia ramosa* var. *curviaristata* Ohwi; *Muhlenbergia tenuiflora* (Willd.) Britton, Sterns & Poggenb.; *Muhlenbergia tenuiflora* (Michx.) Britton, Sterns & Poggenb. subsp. *curviaristata* (Ohwi) T. Koyama & Kawano)

North America, Asia. See *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888 and *Acta Phytotaxonomica et Geobotanica* 6(4): 292. 1937, *Botanical Magazine* (Tokyo) 55: 397. 1941, *Canadian Journal of Botany* 42: 868. 1964, *Grasses: Systematics and Evolution* 195-212. 2000.

M. cuspidata (Torrey ex Hook.) Rydb. (*Agrostis brevifolia* Nutt.; *Muhlenbergia brevifolia* (Nutt.) M.E. Jones, nom. illeg., non *Muhlenbergia brevifolia* Scribn. ex Beal; *Sporobolus brevifolius* (Nutt.) Nash, nom. illeg., non *Sporobolus brevifolius* Nees; *Sporobolus brevifolius* (Nutt.) Scribn., nom. illeg., non *Sporobolus brevifolius* Nees; *Sporobolus cuspidatus* (Torr. ex Hook.) Alph. Wood; *Sporobolus gracilis* (Trin.) Merr.; *Vilfa cuspidata* Torr. ex Hook.; *Vilfa gracilis* Trin., nom. illeg., non *Vilfa gracilis* Trin.)

U.S., Canada. Growing in colonies, prairie, see *The Genera of North American Plants* 1: 44. 1818, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 74. 1840, *Flora Boreali-Americana* 2: 238-239. 1840, *The American Botanist and Florist* 2: 385. 1871, *Memoirs of the Torrey Botanical Club* 5: 39. 1894 and *Brittonia* 105. 1901, *Rhodora* 4(39): 48. 1902, *Bulletin of the Torrey Botanical Club* 32(11): 599. 1905, *Contributions to Western Botany* 14: 12. 1912.

M. depauperata Scribner (*Lycurus schaffneri* (E. Fourn.) Mez; *Muhlenbergia schaffneri* E. Fourn.; *Muhlenbergia schaffneri* E. Fourn. ex Hemsl.; *Muhlenbergia schaffneri* var. *schaffneri*)

U.S., Arizona. Annual, paired spikelets, fodder, see *Botanical Gazette* 9(12): 187, f. 1-2. 1884, *Biologia Centrali-Americana*; ... *Botany* ... 3: 542. 1885, *Mexicanas Plantas* 2: 85. 1886 and *Contr. U.S. Natl. Herb.* 17(3): 294. 1913,

Repertorium Specierum Novarum Regni Vegetabilis 17: 212. 1921, *Fl. Novo-Galiciana* 14: 236. 1983, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

in Mexico: zacatón

M. distans Swallen

Mexico. Bunchgrass, fodder, see *North American Flora* 17(6): 461. 1935.

in Mexico: zacatón

M. distichophylla (J. Presl) Kunth (*Epicampes distichophylla* Vasey; *Epicampes stricta* var. *distichophylla* (J. Presl) M.E. Jones; *Muhlenbergia angustifolia* Swallen; *Muhlenbergia distichophylla* B.D. Jacks., nom. illeg., non *Muhlenbergia distichophylla* (J. Presl) Kunth; *Muhlenbergia vaseyana* Scribn.; *Podosaemum distichophyllum* J. Presl; *Podosemum distichophyllum* J. Presl)

North America, Mexico. Fodder, see *Reliquiae Haenkeanae* 1(4-5): 231. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 202. 1833, *A Descriptive Catalogue of the Grasses of the United States* 45. 1885, *Index Kewensis* 269. 1894, *Catálogo de Plantas Mexicanas* 393. 1897, *Annual Report of the Missouri Botanical Garden* 10: 52. 1899 and *Contributions to Western Botany* 14: 6. 1912, *North American Flora* 17(6): 457. 1935, *Contributions from the United States National Herbarium* 34(4): 75-189. 1967.

in Mexico: cola de zorra, zacatón

M. diversiglumis Trinius (*Brachyelytrum pringlei* Vasey ex Beal; *Muhlenbergia trinii* Fourn.; *Muhlenbergia trinii* E. Fourn. ex Hemsl.)

Mexico, Venezuela, Peru. Annual, sprawling, erect, rooting and branching from procumbent lower parts, internodes hollow, ligule membranous, leaf blade linear attenuate, narrow unilateral panicle with branches hooked at base, paired spikelets, first glume occasionally lacking in some spikelets, lemma awned lanceolate, 2 lodicules, 3 stamens, dry areas, disturbed ground, banks, rocks, wet places, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 298. 1841, *Biologia Centrali-Americana*; ... *Botany* ... 3(19): 543. 1885, *Mexicanas Plantas* 2: 84. 1886, *Grasses of North America for Farmers and Students* 2: 266. 1896 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991, *Flora of Ecuador* 68: 83-84. 2001.

M. dubia E. Fourn. (*Crypsinna breviglumis* M.E. Jones; *Crypsinna setiglumis* M.E. Jones; *Muhlenbergia acuminata* Vasey; *Muhlenbergia densiflora* Scribn. & Merr.; *Muhlenbergia dubia* E. Fourn., nom. illeg., non *Muhlenbergia dubia* E. Fourn.; *Muhlenbergia firma* Beal; *Sporobolus*

inflatus Vasey & L.H. Dewey ex Beal; *Sporobolus ligulatus* Vasey & Dewey)

Mexico, U.S., Texas. Densely caespitose, forming large clumps, fodder, growing on dry rocky areas, see *Biologia Centrali-Americana*; ... *Botany* ... 3(29): 540. 1885, *Botanical Gazette* 11(12): 337-338. 1886, *Mexicanas Plantas* 2: 82. 1886, *Contributions from the United States National Herbarium* 1(8): 268. 1893, *Grasses of North America for Farmers and Students* 2: 243, 289. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 18, f. 4. 1901, *Contributions to Western Botany* 14: 8. 1912, *Man. Grass. U.S.* 900. 1950, *Great Basin Naturalist* 50: 75. 1990.

in Mexico: liendrilla del pinar, zacate

M. dumosa Scribner ex Vasey (*Muhlenbergia dumosa* var. *minor* Scribn. ex Beal)

Mexico, Arizona, Texas. Forage, medicinal, see *Contributions from the United States National Herbarium* 3(1): 71. 1892, *Grasses of North America for Farmers and Students* 2: 261. 1896 and *Fl. Novo-Gal.* 14: 239. 1983.

in Mexico: liendrilla abierta, ototillo

M. durangensis Y. Herrera

Mexico. See *Phytologia* 63(6): 457. 1987.

M. elongata Scribner ex Beal (*Muhlenbergia articulata* Scribn.; *Muhlenbergia elongata* Scribn. ex S. Watson; *Muhlenbergia xerophila* C.O. Goodd.)

Mexico, Arizona. See *Proceedings of the American Academy of Arts and Sciences* 21: 443. 1886, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 298, f. 1. 1891, *Grasses of North America for Farmers and Students* 2: 251. 1896 and *Contr. U.S. Natl. Herb.* 17: 302. 1913, *Journal of the Washington Academy of Sciences* 30: 19. 1940.

M. eludens C. Reeder

Mexico. Annual, see *Journal of the Washington Academy of Sciences* 39(11): 365-366, f. 1B. 1949, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. emersleyi Vasey (*Epicampes distichophylla* Vasey; *Epicampes emersleyi* (Vasey) Hitchc.; *Epicampes subpatens* Hitchc.; *Muhlenbergia gooddingii* Soderstr.; *Muhlenbergia vaseyana* Scribn.) (for J.D. Emersley)

U.S., Arizona. Perennial, tufted, caespitose, pyramidal panicle, fodder, cultivated, ornamental, low forage value, found in dry places, river beds, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *A Descriptive Catalogue of the Grasses of the United States* 45. 1885, *Contributions from the United States National Herbarium* 3(1): 66. 1892, *Annual Report of the Missouri Botanical Garden* 10: 52. 1899 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *United States Department*

of Agriculture: Bulletin 772: 144-145. 1920, *Contributions from the United States National Herbarium* 34(4): 115. 1967, Steven E. Smith, "Variation in response to defoliation between populations of *Bouteloua curtipendula* var. *caespitosa* (Poaceae) with different livestock grazing histories." *American Journal of Botany* 85: 1266-1272. 1998.

in Mexico: cola de ratón, cola de zorra, zacate cambray, zacate de toro

M. eriophylla Swallen

Mexico. See *Contributions from the United States National Herbarium* 29(9): 409. 1950.

M. expansa (Poir.) Trin. (*Agrostis arachnoides* Poir.; *Agrostis expansa* Poir. ex Steud.; *Agrostis longiflora* Willd. ex Steud.; *Agrostis rubicunda* Bosc ex DC.; *Agrostis trichopodes* Elliott; *Cinna arachnoidea* (Poir.) Kunth; *Cinna arachnoidea* Kunth; *Muhlenbergia arachnoidea* Trin. ex Kunth; *Muhlenbergia capillaris* var. *trichopodes* (Elliott) Vasey; *Muhlenbergia caespitosa* Chapm.; *Muhlenbergia expansa* (DC) Trin.; *Muhlenbergia trichopodes* (Elliott) Chapm.; *Podosemum purpureum* (P. Beauv.) P. Beauv.; *Podosemum trichopodes* (Elliott) Bush; *Stipa expansa* Poir.; *Trichochloa expansa* (Poir.) DC.; *Trichochloa expansa* DC.; *Trichochloa purpurea* P. Beauv.; *Vilfa arachnoidea* (Poir.) P. Beauv.)

U.S. See *Encyclopédie Méthodique, Botanique* 7: 453. 1806, *Encyclopédie Méthodique, Botanique Suppl.* 1: 249. 1810, *Essai d'une Nouvelle Agrostographie* 29, 147, 176, 179, 181, t. 8, f. 2. 1812, *Catalogus plantarum horti botanici monspeliensis* 151. 1813, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 135, pl. 8, f. 1. 1816, *De Graminibus unifloris et sesquifloris* 193. 1824, *De Graminibus Paniceis* 26. 1826, *Révision des Graminées* 1: 67. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 207. 1833, *Nomenclator Botanicus. Editio secunda* 1: 40-41. 1840, *Flora of the Southern United States* 553. 1860, *Botanical Gazette* 3(3): 18. 1878, *Contributions from the United States National Herbarium* 3(1): 66. 1892 and *American Midland Naturalist* 7: 30. 1921.

M. fastigiata (J. Presl) Henrard (*Sporobolus fastigiatus* J. Presl; *Vilfa fastigiata* Meyen)

Peru, Ecuador, Argentina. Perennial, low, tufted, ascending, leaf blades falcate and densely folded, ligule broadly rounded, rhizomes tough and scaly, small dense inflorescence, spikelets glabrous, glumes ovate acute, lemma shortly awned, growing in colonies, dry open páramos, sandy soils, see *Reliquiae Haenkeanae* 1(4-5): 241. 1830, *Reise um die Erde* 1: 484. 1834 and *Mededeelingen van's Rijks-Herbarium* 40: 59. 1921.

M. filiculmis Vasey (*Muhlenbergia filiculmis* M.E. Jones, nom. illeg., non *Muhlenbergia filiculmis* Vasey)

U.S., Colorado, New Mexico. Sandy soil, see *Contributions from the United States National Herbarium* 1(8): 267. 1893

and *Contributions to Western Botany* 14: 12. 1912, [Lieutenant Amiel Weeks Whipple, 1816-1863, Commander, Pacific Railroad Expedition of 1853-1854] *A Pathfinder in the Southwest: The Itinerary of Lieutenant Amiel Weeks Whipple* (during his explorations for a railway route from Port Smith to Los Angeles in the years 1853 & 1854). Edited and annotated by Grant Foreman. [American Exploration and Travel. vol. 6.] University of Oklahoma Press 1941, Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950.

M. filiformis (Thurber ex S. Watson) Rydb. (*Muhlenbergia aristulata* Rydb.; *Muhlenbergia filiformis* (Thurb.) Rydb.; *Muhlenbergia filiformis* var. *fortis* E.H. Kelso; *Muhlenbergia idahoensis* H. St. John; *Muhlenbergia simplex* (Scribn.) Rydb., nom. illeg., non *Muhlenbergia simplex* (Spreng.) Kunth; *Sporobolus aristatus* Rydb.; *Sporobolus depauperatus* var. *filiformis* Beal; *Sporobolus filiformis* (Thurb. ex S. Watson) Rydb.; *Sporobolus gracillimus* (Thurb. ex S. Watson) Vasey; *Sporobolus simplex* Scribn.; *Sporobolus simplex* var. *thermale* Merr.; *Vilfa depauperata* var. *filiformis* Thurb. ex S. Watson; *Vilfa gracillima* Thurb. ex S. Watson)

U.S., California. Annual, meadows, damp soil, along roadsides, see *Flora Boreali-Americana* 2: 257, pl. 236. 1840, *United States Geological Exploration [sic] of the Fortieth Parallel*. Botany 376. 1871, *Geological Survey of California*, Botany 2: 268. 1880, *Bulletin of the Torrey Botanical Club* 9: 103. 1882, *A Descriptive Catalogue of the Grasses of the United States* 44. 1885, *Contributions from the United States National Herbarium* 3(3): 189. 1895, *Grasses of North America for Farmers and Students* 2: 296. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 48-49, f. 6. 1898 and *Bulletin of the Torrey Botanical Club* 28(5): 266. 1901, *Rhodora* 4(39): 48. 1902, *Bulletin of the Torrey Botanical Club* 32(11): 600. 1905, *Rhodora* 38(452): 298. 1936, *Flora of Southeastern Washington and Adjacent Idaho* 50. 1937, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

in English: pull-up muhly

M. flabellata Mez

Costa Rica, Panama. Páramos, montane, rocky soil, tufted, see *Repertorium Specierum Novarum Regni Vegetabilis* 17: 213. 1921.

M. flavida Vasey

Mexico. See *Contributions from the United States National Herbarium* 1(8): 282. 1893, *Grasses of North America for Farmers and Students* 2: 263. 1896 and *Contributions from the United States National Herbarium* 17(3): 290. 1913.

M. flaviseta Scribner

Mexico. See *U.S. Department of Agriculture. Division of Botany. Bulletin* 8: 11, t. 7. 1897.

M. flexuosa Hitchc.

Peru. See *Contributions from the United States National Herbarium* 24(8): 388. 1927.

M. fragilis Swallen

U.S., Texas. Annual, rocky soil, see *Contributions from the United States National Herbarium* 29(4): 206. 1947, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

in English: delicate muhly

M. frondosa (Poir.) Fernald (*Agrostis frondosa* Poir.; *Agrostis lateriflora* Michx.; *Calamagrostis compressa* Döll; *Cinna lateriflora* (Michx.) Kunth; *Cinna lateriflora* Kunth; *Muehlenbergia frondosa* (Poir.) Fernald; *Muhlenbergia brachyphylla* f. *aristata* E.J. Palmer & Steyerl.; *Muhlenbergia commutata* (Scribn.) Bush; *Muhlenbergia frondosa* f. *commutata* (Scribn.) Fernald; *Muhlenbergia lateriflora* Trin. ex Kunth; *Muhlenbergia mexicana* f. *commutata* (Scribn.) Wiegand; *Muhlenbergia mexicana* subsp. *commutata* Scribn.; *Muhlenbergia mexicana* var. *commutata* (Scribn.) Farw.; *Vilfa lateriflora* (Michx.) P. Beauv., also *laterifolia*)

U.S. Decumbent, rhizomatous, riverbanks, understory, sandy places, floodplains, alluvium, see *Flora Boreali-Americana* 1: 53. 1803, *Encyclopédie Méthodique, Botanique* Suppl. 1: 252. 1810, *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *De Graminibus unifloris et sesquifloris* 189, 190, 297, t. 5, f. 8. 1824, *Révision des Graminées* 1: 67. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 207. 1833, *Flora Brasiliensis* 2(3): 56. 1878 and *Rhodora* 9(98): 18-19. 1907, *Report of the Michigan Academy of Science, Arts and Letters* 17: 181. 1916, *American Midland Naturalist* 6: 41, 61. 1919, *Rhodora* 26(301): 1. 1924, *Manual Grasses U.S.* 890. 1935, *Rhodora* 45(534): 235. 1943, *Brittonia* 10(3): 110-111. 1958.

M. frondosa (Poir.) Fernald f. ***commutata*** (Scribner) Fernald (*Muhlenbergia commutata* (Scribn.) Bush; *Muhlenbergia frondosa* f. *commutata* (Scribn.) Fernald; *Muhlenbergia mexicana* f. *commutata* (Scribn.) Wiegand; *Muhlenbergia mexicana* subsp. *commutata* Scribn.; *Muhlenbergia mexicana* var. *commutata* (Scribn.) Farw.)

U.S., Missouri. Erect, see *Gram. Unifl. Sesquifl.* 189, 190, 297, t. 5, f. 8. 1824 and *Rhodora* 9(98): 18-19. 1907, *Report of the Michigan Academy of Science, Arts and Letters* 17: 181. 1916, *American Midland Naturalist* 6: 61. 1919, *Rhodora* 26(301): 1. 1924, *Manual Grasses U.S.* 890. 1935, *Rhodora* 45(534): 235. 1943.

M. frondosa (Poir.) Fernald f. ***frondosa*** (*Muhlenbergia diffusa* var. *attenuata* (Scribn.) Farw.; *Muhlenbergia sylvatica* f. *attenuata* (Scribn.) E.J. Palmer & Steyerl.; *Muhlenbergia umbrosa* f. *attenuata* (Scribn.) Deam; *Muhlenbergia umbrosa* subsp. *attenuata* Scribn.)

U.S. See *North American Gramineae and Cyperaceae* 1: 13. 1834 and *Rhodora* 9(98): 21. 1907, *Indiana Department of Conservation, Publication* 82: 171. 1929, *Annals of the Missouri Botanical Garden* 22: 467. 1935, *Papers of the Michigan Academy of Science, Arts and Letters* 23: 125. 1938, *Rhodora* 45(534): 235. 1943.

M. frondosa (Poir.) Fernald subsp. **ramosa** (Hack. ex Matsum.) T. Koyama & Kawano (*Muhlenbergia japonica* var. *ramosa* Hack. ex Matsum.)

Japan. See *Synopsis Plantarum Glumacearum* 1: 422. 1854, *Botanical Magazine* (Tokyo) 11: 444. 1897 and *Rhodora* 45(534): 235. 1943, *Canadian Journal of Botany* 42: 868. 1964.

M. gigantea (E. Fourn.) Hitchc. (*Epicampes bourgeaei* (E. Fourn.) M.E. Jones; *Epicampes bourgeaei* E. Fourn.; *Epicampes bourgeaei* var. *mutica* E. Fourn.; *Epicampes ehrenbergii* Mez; *Epicampes expansa* E. Fourn.; *Epicampes expansa* E. Fourn. ex Hemsl.; *Epicampes gigantea* E. Fourn.; *Epicampes gigantea* E. Fourn. ex Hemsl.; *Epicampes laxiuscula* E. Fourn. ex Hemsl.; *Epicampes laxiuscula* E. Fourn.; *Muehlenbergia gigantea* (E. Fourn.) Hitchc.; *Muhlenbergia alta* Hitchc.; *Muhlenbergia bourgeaei* E. Fourn.; *Muhlenbergia magna* Hitchc.; *Sporobolus complanatus* Scribn. ex Beal) (dedicated to the German merchant Carl August Ehrenberg, 1801-1849, botanical collector in the West Indies and Mexico; brother of the German biologist Christian Gottfried Ehrenberg, 1795-1876, naturalist. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 498-499. 1965; Alphonse Louis Pierre Pyramus de Candolle, 1806-1893, *La phytographie ou l'art de décrire les végétaux considérés sous différents points de vue*. 410. Paris 1880; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 113. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Ilse Jahn, in *D.S.B.* 4: 288-292. 1981; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Fritz Kummel, "The life and accomplishments of Carl August Ehrenberg, 1801-1849." *J. Cac. & Succ. Soc. Amer.* 52: 141-144. 1980; Ignatz Urban (1848-1931), editor, *Symbolae Antillanae*. 1: 151. 1898 and 3: 44. Berlin 1902; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 263, 275, 286, 343. Dresden 1916; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906)

North America, Mexico. Clumped, growing in large colonies, forest, deciduous forest, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Biologia Centrali-Americana; ... Botany ...* 3: 548-549. 1885, *Mexicanas Plantas* 2: 86, 88. 1886,

Grasses of North America for Farmers and Students 2: 310. 1896 and *Contributions to Western Botany* 14: 7. 1912, *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 212. 1921, *North American Flora* 17(6): 460-461. 1935, Brent Berlin, Dennis E. Breedlove, & Peter H. Raven, *Principles of Tzeltal Plant Classification: An Introduction to the Botanical Ethnography of a Mayan-Speaking People of Highland Chiapas*. New York 1974, *Syst. Bot. Monogr.* 31: 73. 1991, Dennis E. Breedlove & Robert M. Laughlin, *The Flowering of Man: A Tzotzil Botany of Zinacantan*. Smithsonian Contributions to Anthropology. No. 35. Washington 1993.

in Mexico: sibal zak, sibal grass

M. glabrifloris Scribner

U.S., Texas. Rhizomatous, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Rhodora* 9(98): 22-23. 1907.

M. glauca (Nees) B.D. Jacks. (*Agrostis glauca* (Nees) Steud., nom. illeg., non *Agrostis glauca* Muhl.; *Muhlenbergia glauca* (Nees) Mez, nom. illeg., non *Muhlenbergia glauca* (Nees) B.D. Jacks.; *Muhlenbergia huachucana* Vasey; *Muhlenbergia lemmonii* Scribn.; *Podosemum glaucum* Nees)

Mexico, U.S., Arizona, Texas. See *Linnaea* 19(6): 689. 1847, *Synopsis Plantarum Glumacearum* 1: 175. 1854, *Contributions from the United States National Herbarium* 1(2): 56. 1890, *Contributions from the United States National Herbarium* 3(1): 69. 1892, *Index Kewensis* 2: 269. 1895 and *Repertorium Specierum Novarum Regni Vegetabilis* 17: 214. 1921, *North American Flora* 17(6): 449. 1935.

M. glomerata (Willd.) Trin. (*Agrostis festucoides* Muhl. ex Roem. & Schult.; *Agrostis setosa* Spreng. ex Trin.; *Agrostis setosa* Muhl.; *Agrostis setosa* (Kunth) Sprengel; *Alopecurus glomeratus* (Willd.) Poir.; *Cinna glomerata* (Willd.) Link, nom. illeg., non *Cinna glomerata* Walter; *Dactyloctenium cinnooides* Link; *Muhlenbergia calycina* (Trin.) Trin.; *Muhlenbergia glomerata* var. *cinnooides* (Link) F.J. Herm.; *Muhlenbergia glomerata* var. *glomerata*; *Muhlenbergia racemosa* subsp. *violacea* Scribn.; *Muhlenbergia racemosa* var. *cinnooides* (Link) B. Boivin; *Muhlenbergia setosa* (Biehler) Trin. ex B.D. Jacks., nom. illeg., non *Muhlenbergia setosa* (Kunth) Trin.; *Muhlenbergia setosa* var. *cinnooides* (Link) Fernald; *Podosemum glomeratum* (Willd.) Link; *Polypogon glomeratus* Willd.; *Polypogon setosus* Biehler; *Trichochloa calycina* Trin.; *Trichochloa glomerata* (Willd.) Trin.)

North America. See *Plantarum Novarum ex Herbario Sprengelii Centarium* 7. 1807, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 87. 1809, *Catalogus Plantarum Americae Septentrionalis* 10. 1813, *Systema Vegetabilium* 1: 326. 1817, *Encyclopédie Méthodique, Botanique Suppl.* 5: 495. 1817, *Fundamenta Agrostographiae* 117. 1820,

Gram. Unifl. Sesquifl. 191, 193, 296-297, t. 5, f. 10, 11, 22. 1824, *Hortus Regius Botanicus Berolinensis* 1: 84. 1827, *Hortus Regius Botanicus Berolinensis* 2: 237, 248. 1833, *Botanical Gazette* 7(8-9): 92. 1882, *A Descriptive Catalogue of the Grasses of the United States* 40. 1885, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Index Kewensis* 2: 269. 1894, *Grasses of North America for Farmers and Students* 2: 253. 1896 and *Rhodora* 9(98): 22. 1907, *Rhodora* 45(534): 238, pl. 757, map 2. 1943, *Rhodora* 48: 64. 1946, *Le Naturaliste Canadien* 94: 526. 1967.

M. grandis Vasey (*Epicampes bourgeaei* var. *grandis* (Vasey) M.E. Jones; *Epicampes grandis* (Vasey) Beal)

North America, Mexico. Forage, see *Contributions from the United States National Herbarium* 1(8): 283. 1893, *Grasses of North America for Farmers and Students* 2: 309. 1896 and *Contributions to Western Botany* 14: 7. 1912, *Contr. U.S. Natl. Herb.* 17(3): 301. 1913, *Contr. U.S. Natl. Herb.* 34: 161. 1967

M. gypsophila Reeder & C. Reeder

Mexico. Along roadsides, depression, see *Madroño* 18(6): 186-190, f. 1 A1-H1. 1966.

M. hakonensis (Hack. ex Matsum.) Makino (*Muhlenbergia japonica* var. *hakonensis* Hack. ex Matsum.; *Muhlenbergia japonica* var. *hakonensis* Hack.)

Japan. See *Synopsis Plantarum Glumacearum* 1: 422. 1854, *Botanical Magazine* (Tokyo) 11: 444. 1897, *Bulletin de l'Herbier Boissier* 7(9): 647. 1899 and *Journal of Japanese Botany* 1(4): 13. 1917, *Bulletin of the National Science Museum, Series B, Botany* 15: 111-114. 1989.

M. hintonii Swallen

Mexico. Meadow, see *Contributions from the United States National Herbarium* 29(9): 409. 1950.

M. holwayorum Hitchc. (*Muhlenbergia rigida* (Kunth) Kunth)

Bolivia. Perennial, caespitose, erect, rigid pungent leaf blades, spikelets scabrous, glumes lanceolate acute, lemmas aristulate, stony slopes, see *Nova Genera et Species Plantarum* 1: 129. 1815 [1816], *Révision des Graminées* 1: 63. 1829 and *Contributions from the United States National Herbarium* 24(8): 389. 1927.

M. implicata (Kunth) Trin. (*Agrostis implicata* (Kunth) Spreng.; *Muhlenbergia erecta* J. Presl, nom. illeg., non *Muhlenbergia erecta* Schreb.; *Muhlenbergia implicata* (Kunth) Kunth, nom. illeg., non *Muhlenbergia implicata* (Kunth) Trin.; *Podosemum implicatum* Kunth; *Trichochloa implicata* (Kunth) Roem. & Schult.)

Mexico, Honduras, Venezuela. Annual, fodder, in grassland, along roadsides, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Nova Genera et Species Plantarum* 1: 127-128. 1815

[1816], *Systema Vegetabilium* 2: 385. 1817, *De Graminibus unifloris et sesquifloris* 193, t. 5, f. 26. Petropoli 1824, *Systema Vegetabilium, editio decima sexta* 1: 262. 1825, *Révision des Graminées* 1: 63. 1829, *Reliquiae Haenkeanae* 1(4-5): 231. 1830 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Brittonia* 23(3): 293-324. 1971, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991. in Mexico: zacate

M. inaequalis Soderstr.

Venezuela. See *Contributions from the United States National Herbarium* 34(4): 142. 1967.

M. iridifolia Soderstr.

Mexico. See *Contributions from the United States National Herbarium* 34(4): 145. 1967.

M. jaime-hintonii P.M. Peterson & Valdés-Reyna (Jaime Hinton is the son of George Boole Hinton (1882-1943) and the father of George Sebastian Hinton; uses Jaime rather than James. See Charles Glass, "The *Geohintonia* circus." in *Cactus and Succulent Journal*. vol. 69. 1: 3-7. 1997; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. Regnum Vegetabile vol. 9. 1957; Rogers McVaugh, "Botanical exploration in Nueva Galicia from 1790 to the present time." *Contr. Univ. Mich. Herb.* 9(3): 205-357. 1972; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 344. London 1994; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. [b. 1883] 1983; J. Hinton and J. Rzedowski, "George B. Hinton, collector of plants in southwestern Mexico." *J. Arnold Arb.* 53: 141-181. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964)

Mexico. See *Sida* 18(3): 686, f. 1. 1999

M. jaliscana Swallen

Mexico. See *Boletín de la Sociedad Botánica de México* 23: 32-35, f. 5. 1958 [1959].

M. japonica Steudel

Japan. See *Synopsis Plantarum Glumacearum* 1: 422. 1854, *Botanical Magazine* (Tokyo) 11: 444. 1897, *Bulletin de l'Herbier Boissier* 7(9): 647. 1899 and *Journal of Japanese Botany* 1(4): 13. 1917, *Rhodora* 45(534): 235. 1943, *Canadian Journal of Botany* 42: 868. 1964, *Bulletin of the National Science Museum, Series B, Botany* 15: 111-114. 1989.

M. jonesii (Vasey) Hitchc. (*Sporobolus jonesii* Vasey) (for the American plant collector Marcus Eugene Jones, 1852-1934, botanist, explorer, mining engineer, Latinist, botanized in Texas and Colorado, collected widely in the Intermountain West. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 262. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 246. 1973; E.M. Tucker,

Catalogue of the library of the Arnold Arboretum of Harvard University. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 277, 361. 1916; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950)

U.S., California. Wet soil, moist places, see *Botanical Gazette* 6: 297. 1881 and *A Flora of California* 1: 111. 1912.

M. laxa Hitchc.

Mexico. See *North American Flora* 17(6): 445. 1935.

M. lehmanniana Henrard (*Muhlenbergia attenuata* Swallen; *Muhlenbergia multinodis* Aspl.)

Colombia, Panama, Costa Rica to Ecuador. Perennial, caespitose, erect, branching only from the base, clumped, tussocky, leaf sheaths open and basally keeled, delicate membranous ligule acute, leaf blades linear tapering to a long narrow point, short ascending rhizomes covered by old sheaths, inflorescence a narrow panicle, spikelets fusiform and awned, glumes lanceolate, lemma awned, awn subapical, 2 very small lodicules, 3 stamens, along roadsides, dry grassy slopes, see *Mededeelingen van's Rijks-Herbarium* 40: 59. 1921, *Botaniska Notiser* 1939: 796, f. 1. 1939, *Annals of the Missouri Botanical Garden* 30(2): 138. 1943.

M. ligularis (Hack.) Hitchc. (*Muhlenbergia breviculmis* Swallen; *Muhlenbergia calcicola* Swallen; *Muhlenbergia minuscula* H. Scholz; *Muhlenbergia vaginata* Swallen; *Sporobolus ligularis* Hack.; *Sporobolus ligularis* Hack. ex Sodiro)

Ecuador, Guatemala, Colombia, Peru, Bolivia. Annual or perennial, variable, erect or ascending, loosely tufted, delicate, prostrate, weak, scrambling, forming large colonies, leaf sheaths open and slightly inflated, ligule rounded, leaf blades linear, inflorescence variable, lax panicle with branches distally floriferous, spikelets oblong-lanceolate, glumes subequal, lemma ovate-lanceolate, 2 lodicules, 3 stamens, open areas, floodplains, moist places, disturbed ground, páramos, see *Anales de la Universidad Central del Ecuador* 3(25): 480. 1889 and *Österreichische Botanische Zeitschrift* 52(2): 57. 1902, *Contributions from the United States National Herbarium* 24(8): 388. 1927, *Contributions from the United States National Herbarium* 29(9): 406-408. 1950, *Willdenowia* 14: 393. 1984, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. lindheimeri Hitchc. (*Epicampes gracilis* Trin.)

U.S., Texas, Mexico. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde*

Partie: Sciences Naturelles 6,4(3-4): 271. 1841 and *Journal of the Washington Academy of Sciences* 24(7): 291. 1934.

M. longiglumis Vasey

Mexico. See *Proceedings of the American Academy of Arts and Sciences* 22: 461. 1887, *Contributions from the United States National Herbarium* 1(8): 283. 1893 and *Contr. U.S. Natl. Herb.* 17(3): 301. 1913, *Contr. U.S. Natl. Herb.* 34(4): 166. 1967.

M. longiligula Hitchc. (*Epicampes anomala* Scribn. ex Beal; *Epicampes distichophylla* var. *mutica* Scribn. ex Beal; *Epicampes ligulata* Scribn. ex Vasey; *Epicampes stricta* var. *mutica* (Scribn. ex Beal) M.E. Jones; *Melica anomala* Scribn. ex Beal)

Mexico, U.S., Arizona. Fodder, see *A Descriptive Catalogue of the Grasses of the United States* 45. 1885, *Contributions from the United States National Herbarium* 3(1): 58. 1892, *Grasses of North America for Farmers and Students* 2: 308, 311. 1896 and *Contributions to Western Botany* 14: 6. 1912, *American Journal of Botany* 21(3): 136. 1934.

in Mexico: liendrilla lengualarga, liendrilla ligulada

M. lucida Swallen

Mexico. Lemma lobed, see *Journal of the Washington Academy of Sciences* 26(5): 208. 1936.

M. macroura (Kunth) A. Hitchc. (*Cinna macroura* (Kunth) Kunth; *Cinna setifolia* (J. Presl) Kunth; *Crypsinna macroura* (Kunth) E. Fourn.; *Crypsinna setifolia* (J. Presl) E. Fourn.; *Crypsis macroura* Kunth; *Crypsis setifolia* J. Presl; *Epicampes macroura* (Kunth) Benth.; *Muehlenbergia macroura* (Kunth) Hitchc.; *Phleum macrourum* (Kunth) Willd. ex Steud.)

Mexico, Guatemala. Clumped, fodder, medicinal, handicrafts, used for the manufacture of velvet brushes and clothes brushes, see *Nova Genera et Species Plantarum* 1: 140-141. 1815 [1816], *Révision des Graminées* 1: 67. 1829, *Reliquiae Haenkeanae* 1(4-5): 245. 1830, *Révision des Graminées* Suppl. xvi. 1830, *Nomenclator Botanicus. Editio secunda* 1: 365. 1840, *Journal of the Linnean Society, Botany* 19: 87. 1881, *Mexicanas Plantas* 2: 90. 1886 and *North American Flora* 17(6): 468. 1935.

in English: broom root

in Mexico: coba chita, eb, goba chita, gubaya, malinali, malinalli, raiz de zacaton, soromuta, surumuta, zacate de carbonero, zacate de escoba, zacate malinali, zacatón, zacaton

M. majalcensis P.M. Peterson

Mexico. See *Systematic Botany* 14(3): 316-318, f. 1. 1989.

M. maxima Laegaard & Sánchez Vega

Peru. Chloridoideae, Cynodonteae, Muhlenbergiinae, bunchgrass, see *Nordic Journal of Botany* 10: 439. 1990.

M. mexicana (L.) Trin. (*Agrostis cinna* Retz., nom. illeg., non *Agrostis cinna* Retz.; *Agrostis mexicana* L.; *Agrostis tenacissima* L.f.; *Cinna arundinacea* Retz. ex Steud., nom. illeg., non *Cinna arundinacea* L.; *Cinna mexicana* (L.) P. Beauv.; *Cinna mexicana* (L.) Link, nom. illeg., non *Cinna mexicana* (L.) P. Beauv.; *Lepyroxis canadensis* P. Beauv. ex B.D. Jacks.; *Muhlenbergia mexicana* f. *mexicana*; *Muhlenbergia mexicana* var. *purpurea* Alph. Wood; *Muhlenbergia polystachya* Mack. & Bush; *Podosaemum mexicanum* (L.) Link; *Podosemum mexicanum* (L.) Link; *Polypogon canadensis* E. Fourn.; *Sporobolus tenacissimus* (L.f.) J. Presl; *Sporobolus tenacissimus* (L.f.) P. Beauv.; *Trichochloa mexicana* (L.) Trin.; *Vilfa mexicana* (L.) P. Beauv.; *Vilfa tenacissima* (L.f.) Kunth)

U.S., Mexico, Venezuela. Open areas, woods, woodland, rocky places, growing in large colonies, see *Mantissa Plantarum* 1: 31. 1767, *Supplementum Plantarum* 107. 1781, *Observationes Botanicae* 6: 12. 1791, *Essai d'une Nouvelle Agrostographie* 16, 26, 32, 148, 158, 181. 1812, *Nova Genera et Species Plantarum* 1: 138. 1815 [1816], *Fundamenta Agrostographiae* 117. 1820, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 70. 1821, *De Graminibus unifloris et sesquifloris* 189, 190, 297, t. 5, f. 8. 1824, *Hortus Regius Botanicus Berolinensis* 1: 84. 1827, *Reliquiae Haenkeanae* 1(4-5): 242. 1830, *Nomenclator Botanicus. Editio secunda* 1: 365. 1840, *Report Intended to Illustrate a Map of the Hydrographical Basin of the Upper Mississippi River*, made by I.N. Nicolle ... 164. Washington 1843 [*Catalogue of Plants Collected by Mr. Charles Geyer...*, by Professor John Torrey], *The American Botanist and Florist* pt. 2: 386. 1871, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 378. 1871, *Mexicanas Plantas* 2: 92. 1886 and *Transactions of the Academy of Science of St. Louis* 12(7): 79-80, pl. 12. 1902, *Index Kewensis* 1: 244. 1906, *Rhodora* 9(98): 18-19. 1907, *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Report of the Michigan Academy of Science, Arts and Letters* 17: 181. 1916, *Rhodora* 26(301): 1. 1924, *Manual Grasses U.S.* 890. 1935, *Rhodora* 45(534): 236. 1943.

M. mexicana (L.) Trin. var. *filiformis* (Torr.) Scribn. (*Agrostis foliosa* hort. ex Roem. & Schult.; *Agrostis lateriflora* var. *filiformis* Torr.; *Muhlenbergia ambigua* Torrey; *Muhlenbergia ambigua* var. *ambigua*; *Muhlenbergia ambigua* var. *filiformis* (Torr.) Farw.; *Muhlenbergia foliosa* (hort. ex Roem. & Schult.) Trin.; *Muhlenbergia foliosa* f. *ambigua* (Torr.) Wiegand; *Muhlenbergia foliosa* subsp. *ambigua* (Torr.) Scribn.; *Muhlenbergia foliosa* subsp. *setiglumis* (S. Watson) Scribn.; *Muhlenbergia mexicana* f. *ambigua* (Torr.) Fernald; *Muhlenbergia mexicana* f. *setiglumis* (S. Watson) Fernald; *Muhlenbergia mexicana* var. *filiformis* Vasey; *Muhlenbergia setiglumis* (S. Watson) A. Nelson & J.F. Macbr.; *Muhlenbergia sylvatica* var. *setiglumis* S. Watson; *Podosemum foliosum* (hort. ex Roem. & Schult.) Link)

Mexico, U.S. Stony places, see *Flora Boreali-Americana* 1: 53. 1803, *Systema Vegetabilium* 2: 373. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 86. 1823, *De Graminibus unifloris et sesquifloris* 189, 190, 297, t. 5, f. 8. 1824, *Hortus Regius Botanicus Berolinensis* 1: 83. 1827, *North American Gramineae and Cyperaceae* 1: 13. 1834, *Report Intended to Illustrate a Map of the Hydrographical Basin of the Upper Mississippi River, Made by I.N. Nicolle ...* 164. Washington 1843, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 378. 1871, *The Grasses of the United States* 23. 1883, *Memoirs of the Torrey Botanical Club* 5: 36. 1894 and *Rhodora* 9(98): 20. 1907, *Botanical Gazette* 61(1): 30. 1916, *Report of the Michigan Academy of Science, Arts and Letters* 20: 168. 1919, *Rhodora* 26(301): 1. 1924, *Rhodora* 45(534): 236. 1943.

M. mexicana (L.) Trin. var. *mexicana* (*Agrostis mexicana* L.)

Mexico. See *Mantissa Plantarum* 1: 31. 1767, *De Graminibus unifloris et sesquifloris* 189, 190, 297, t. 5, f. 8. 1824.

M. michisensis Y. Herrera & P.M. Peterson

Mexico, Durango, Súchil, San Juan de Michis. See *Novon* 2(2): 117, f. 2. 1992.

M. microsperma (DC.) Kunth (*Agrostis debilis* (Kunth) Spreng., nom. illeg., non *Agrostis debilis* Poir.; *Agrostis microcarpa* hort. ex Steud.; *Agrostis microsperma* Lag.; *Agrostis setosa* (Kunth) Spreng.; *Muhlenbergia calycina* (Trin.) Trin.; *Muhlenbergia debilis* (Kunth) Kunth; *Muhlenbergia debilis* (Kunth) Trin.; *Muhlenbergia fasciculata* Trin.; *Muhlenbergia microsperma* (DC.) Trin.; *Muhlenbergia purpurea* Nutt.; *Muhlenbergia ramosissima* Vasey ex S. Watson; *Muhlenbergia ramosissima* Vasey; *Muhlenbergia setosa* (Kunth) Kunth, nom. illeg., non *Muhlenbergia setosa* (Kunth) Trin.; *Muhlenbergia setosa* (Kunth) Trin.; *Podosemum debile* Kunth; *Podosemum setosum* Kunth; *Trichochloa calycina* Trin.; *Trichochloa debilis* (Kunth) Roem. & Schult.; *Trichochloa microsperma* DC.; *Trichochloa setosa* (Kunth) Roem. & Schult.)

Southwest U.S., Mexico to Bolivia, Ecuador. Annual, slender, erect to ascending, scrambling, branching from base and lower nodes, leaf sheaths glabrous to scabrid, ligule membranous, leaf blades linear long-attenuate, cleistogenes enclosed in lower sheaths, inflorescence a panicle diffuse narrowly pyramidal, spikelets fusiform and awned, glumes unequal, lemma awned not ciliate, 3 stamens, fodder, close to *Muhlenbergia tenella* (Kunth) Trin. and *Muhlenbergia tenuissima* (Presl) Kunth, see *Catalogus plantarum horti botanici monspeliensis* 151. 1813, *Nova Genera et Species Plantarum* 1: 128. 1815 [1816], *Genera et species plantarum* 2. 1816, *Systema Vegetabilium* 2: 385-386. 1817, *Fundamenta Agrostographiae* 117. 1820, *De Graminibus unifloris et sesquifloris* 192, 193, 296, t. 5, f. 11, 18, 21, 22. 1824, *Systema Vegetabilium, editio decima sexta* 1: 262.

1825, *Révision des Graminées* 1: 63-64. 1829, *Nomenclator Botanicus* 2nd edition 1: 41. 1840, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 186. 1848, *Proceedings of the American Academy of Arts and Sciences* 21: 443. 1886, *Bulletin of the Torrey Botanical Club* 13(12): 231. 1886 and *N. Amer. Fl.* 27: 441. 1935, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991,

in English: littleseed muhly

in Mexico: zacatón

M. minutissima (Steud.) Swallen (*Agrostis minutissima* Steud.; *Milium microspermum* Lag.; *Muehlenbergia confusa* (E. Fourn.) Swallen; *Muehlenbergia minutissima* (Steud.) Swallen; *Muhlenbergia confusa* (E. Fourn.) Swallen; *Muhlenbergia texana* Buckley; *Panicum microspermum* (Lag.) E. Fourn.; *Podosemum texanum* (Buckley) Bush; *Sporobolus confusus* (E. Fourn.) Vasey; *Sporobolus microspermus* (Lag.) Hitchc.; *Sporobolus minutissimus* (Steud.) Hitchc.; *Vilfa confusa* E. Fourn.)

U.S., New Mexico, Texas, Mexico. Annual, see *Genera et species plantarum* 2. 1816, *Synopsis Plantarum Glumacearum* 1: 171. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 91. 1862, *Mexicanas Plantas* 2: 101, 492. 1886, *Bulletin of the Torrey Botanical Club* 15: 293. 1888 and *American Midland Naturalist* 7(2): 41. 1921, *Proceedings of the Biological Society of Washington* 41: 161. 1928, *Journal of the Washington Academy of Sciences* 23(10): 453. 1933, *Contributions from the United States National Herbarium* 29(4): 207. 1947, *Phytologia* 37(4): 317-407. 1977, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991, *Sida* 15: 590. 1993, Heike Vibrans, "Epianthropochory in Mexican weed communities." *Am. J. Bot.* 86: 476-481. 1999.

M. monandra Alegría & Rúgolo

Peru. Annual, caespitose, decumbent or geniculate-ascending, glabrous or scabrid, branched from the base, spike-like inflorescence terminal, spikelets 1-flowered, cleistogamous florets, glumes membranous lanceolate equal or subequal, glumes longer than anthoecium, stamen 1, see *Darwiniana* 39(1-2): 19-28. 2001.

M. montana (Nutt.) A. Hitchc. (*Calycodon montanum* Nutt.; *Muhlenbergia enervis* (Scribn. ex Beal) Hitchc.; *Muhlenbergia gracilis* var. *breviaristata* Vasey; *Muhlenbergia gracilis* var. *enervis* Scribn. ex Beal; *Muhlenbergia gracilis* var. *major* Vasey; *Muhlenbergia montana* (Kunth) A. Hitchc.; *Muhlenbergia subalpina* Vasey; *Muhlenbergia trifida* Hack.)

U.S., Colorado, Arizona, Mexico. Caespitose, native pasture species, forage, dry areas, see *De Graminibus unifloris et sesquifloris* 193, t. 5a, f. 6. 1824, *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 23. 1848, *J. Acad. Nat. Sci. Philadelphia*, ser. 2, 1: 186. Aug. 1848, Joseph Trimble Rothrock (1839-1922), *Catalogue of Plants* 54. Washington 1874, *Report upon United States Geo-*

graphical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany 6: 284. 1878 [1879], George Vasey (1822-1893), *A Descriptive Catalogue of the Grasses of the United States* 40. Washington 1885, *Grasses of North America for Farmers and Students* 2: 242. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 8: 518. 1910, *Contributions from the United States National Herbarium* 17(3): 302. 1913, *United States Department of Agriculture: Bulletin* 772: 145, 147. 1920, J.A. Quinn & R.V. Miller, "A biotic selection study utilizing *Muhlenbergia montana*." *Bulletin of the Torrey Botanical Club* 94: 423-432. 1967, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991, *Phytologia* 79(1): 25-27. 1995, *Brittonia* 50(1): 23-50. 1998, Christine V. Hawkes & Brenda B. Casper, "Lateral root function and root overlap among mycorrhizal and non-mycorrhizal herbs in a Florida shrubland, measured using rubidium as a nutrient analog." *Am. J. Bot.* 89: 1289-1294. 2002.

in English: mountain muhly

in Mexico: zacatón

M. mucronata (Kunth) Trin. (*Agrostis mucronata* (Kunth) Spreng.; *Agrostis mucronata* J. Presl, nom. illeg., non *Agrostis mucronata* (Kunth) Spreng.; *Muhlenbergia laxiflora* Scribn.; *Muhlenbergia rigida* (Kunth) Kunth; *Muhlenbergia rigida* (Kunth) Trin.; *Podosemum mucronatum* Kunth; *Podosemum rigidum* Kunth; *Trichochloa mucronata* (Kunth) Roem. & Schult.)

Peru, Mexico, Baja California. See *Nova Genera et Species Plantarum* 1: 129-130. 1815 [1816], *Systema Vegetabilium* 2: 387. 1817, *De Graminibus unifloris et sesquifloris* 194, t. 5, f. 23. 1824, *Systema Vegetabilium, editio decima sexta* 1: 262. 1825, *Révision des Graminées* 1: 63. 1829, *Reliquiae Haenkeanae* 1(4-5): 238. 1830, *Zoe* 4(4): 389. San Francisco 1894 and *Contr. U.S. Natl. Herb.* 17: 298. 1913.

M. mutica (Rupr. ex E. Fourn.) Hitchc. (*Epicampes mutica* Rupr. ex E. Fourn.; *Epicampes mutica* Rupr.; *Muehlenbergia mutica* (Rupr. ex E. Fourn.) Hitchc.)

Mexico. See *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 230. 1842, *Mexicanas Plantas* 2: 87. 1886 and *North American Flora* 17: 459. 1935, *Contributions from the United States National Herbarium* 34(4): 75-189. 1967.

M. nigra Hitchc.

Mexico, Guatemala. Montane, growing in colonies, see *North American Flora* 17(6): 468. 1935.

M. orophila Swallen (*Muhlenbergia matudae* Sohns)

Mexico, Guatemala. Alpine meadow, montane, see *Contributions from the United States National Herbarium* 29(9): 408. 1950, *Journal of the Washington Academy of Sciences* 46(12): 382, f. 32-38. 1956.

M. palmeri Vasey (*Muhlenbergia dubioides* C.O. Goodd.; *Muhlenbergia palmeri* Vasey ex S. Watson)

Mexico, U.S., Arizona. Forage, see *Bulletin of the Torrey Botanical Club* 13(12): 231. 1886, *Proceedings of the American Academy of Arts and Sciences* 21: 443. 1886 and *Journal of the Washington Academy of Sciences* 30: 20. 1940.

M. palmirensis Grignon and Laegaard

Ecuador, Arenales de Palmira. Perennial, loosely tufted, erect or slightly arching, branched from below, leaves basal, leaf blades linear-falcate with blunt tip, leaf sheaths keeled and furrowed, ligule membranous acute, sometimes shortly rhizomatous, inflorescence a narrow unilateral panicle, branches floriferous from base, spikelets laterally compressed, glumes acuminate, lemma 1-nerved, 1-2 stamens, montane, alpine, dry sandy plains, dunes, grass-steppe area, drifting dune sand, see *Nordic Journal of Botany* 9(1): 47, f. 1-2. 1989.

M. pauciflora Buckley (*Muhlenbergia neomexicana* Vasey; *Muhlenbergia pringlei* (Scribn.) Scribn.; *Muhlenbergia sylvatica* var. *pringlei* Scribn.)

U.S., Texas, New Mexico, Arizona. Native pasture species, forage, see *North American Gramineae and Cyperaceae* 1: 13. 1834, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 91. 1862, *Bulletin of the Torrey Botanical Club* 9: 89. 1882, *Botanical Gazette* 11(12): 337. 1886, *Contributions from the United States National Herbarium* 3(1): 71. 1892 and *Manual Grasses U.S.* 891. 1935.

in English: few-flowered muhly

in Mexico: liendrilla de Nuevo México

M. pectinata C.O. Goodd.

Mexico. Annual, see *Journal of the Washington Academy of Sciences* 31(12): 505-506. 1941, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. peruviana (P. Beauv.) Steud. (*Agrostis delicatula* Steud. ex Lechler; *Agrostis peruviana* (P. Beauv.) Spreng.; *Clomena peruviana* P. Beauv.; *Clomena peruviana* var. *peruviana*; *Clomena peruviana* var. *pulvinata* Nees; *Epicampes bourgeaei* E. Fourn. ex Hemsl.; *Epicampes bourgeaei* (E. Fourn.) M.E. Jones; *Epicampes bourgeaei* E. Fourn.; *Epicampes bourgeaei* var. *bourgeaei*; *Epicampes clomena* M.E. Jones; *Muhlenbergia bourgeaei* E. Fourn. ex Hemsl.; *Muhlenbergia bourgeaei* E. Fourn.; *Muhlenbergia clomena* Kunth; *Muhlenbergia herzogiana* Henrard; *Muhlenbergia nana* Benth.; *Muhlenbergia peruviana* f. *peruviana*; *Muhlenbergia peruviana* f. *versicolor* Kuntze; *Muhlenbergia peruviana* f. *viridis* Kuntze; *Muhlenbergia peruviana* var. *breviaristata* Hack. ex Buchtien; *Muhlenbergia peruviana* var. *elatior* Kuntze; *Muhlenbergia peruviana* var. *peruviana*; *Muhlenbergia peruviana* var. *pulvinata* (Nees) Nees & Mey. ex Kuntze; *Muhlenbergia peruviana* var. *subcaespitosa* Kuntze; *Muhlenbergia pulcherrima* Scribn. ex

Beal; *Muhlenbergia pusilla* Steud.; *Sporobolus complanatus* Scribn. ex Beal) (for the German botanist Theodor Carl (Karl) Julius Herzog, 1880-1961, bryologist, plant collector in Sri Lanka and Bolivia (flora of the Bolivian Andes), professor of botany, his writings include "Siphonogamae novae Bolivenses in itinere per Boliviam orientalem ab auctore lectae." *Repert. Spec. Nov. Regni Veg.* 7: 49-69. 1909, "Die von Dr. Th. Herzog auf seiner zweiten Reisen durch Bolivien in den Jahren 1910 und 1911 gesammelten Pflanzen. Teil II." *Meded. Rijks-Herb.* 27: 1-90. 1915, "Die von Dr. Th. Herzog auf seiner zweiten Reisen durch Bolivien in den Jahren 1910 und 1911 gesammelten Pflanzen. Teil III." *Meded. Rijks-Herb.* 29: 1-94. 1916, *Die Pflanzenwelt der bolivischen Anden und ihres östlichen Vorlandes*. Leipzig 1923, "Studien über kritische und neue Lejeuneaceae der Indomalaya." *Svensk Bot. Tidskr.* 42: 230-241. 1948 and "Hepaticae ecuadorienses a cl. d.re Gunnar Harling annis 1946-1947 lectae." *Svensk Bot. Tidskr.* 46: 62-108. 1952, with R. Pilger wrote "Rhamnaceae." in "Die von Dr. Th. Herzog auf seiner zweiten Reisen durch Bolivien in den Jahren 1910 und 1911 gesammelten Pflanzen." *Meded. Rijks-Herb.* 1921. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 167. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 173. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 222. 1973; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 149. 1947; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 367. Philadelphia 1964; Stafleu & Cowan, *Taxonomic literature*. 2: 178-181. 1979; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; *Revue Bryol. Lichénol.* 30: 155-162. 1961; *Ber. Bayer. Bot. Ges.* 35: 73-84. 1962)

U.S. to Argentina. Annual, tufted, small, glaucous, erect, branching only at base, leaves mainly basal, leaf sheaths somewhat inflated, ligule membranous, leaf blades linear, inflorescence an open panicle ovate with scabrid branches, spikelets pedicels hispid, glumes unequal, second glume 3-nerved and 3-lobed, lemma awned and ovate, awn subapical flexuous, 2 lodicules, 3 stamens, purplish, montane, disturbed soils, pasture, open areas, trail, slopes, gravel, along roadsides, dry and arid soil, outwash, riverbanks, open sandy gravelly ground, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Essai d'une Nouvelle Agrostographie* 28, t. 7, f. 10, t. 3, f. 20. 1812, *Systema Vegetabilium, editio decima sexta* 1: 262. 1825, *Révision des Graminées* 1: 64. 1829, *Nomenclator Botanicus. Editio secunda* 1: 41. 1840, *Gramineae* 12-13. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 144-145. 1843,

Plantas Hartwegianas imprimis Mexicanas 262. 1846, *Synopsis Plantarum Glumacearum* 1: 177. 1854, *Berberides Americae Australis* 56. 1857, *Biologia Centrali-Americana; ... Botany ...* 3: 539, 548. 1885, *Mexicanas Plantas* 2: 86, 88. 1886, *Die Natürlichen Pflanzenfamilien* 2(2): 97. 1887, *Grasses of North America for Farmers and Students* 2: 240, 310. 1896, *Revisio Generum Plantarum* 3(3): 357. 1898 and *Contributions to Western Botany* 14: 7. 1912, *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Contribuciones a la Flora de Bolivia* 1: 72. 1920, *Mededeelingen van's Rijks-Herbarium* 40: 58. 1921, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 69-70. 1956, *Systematic Botany Monographs* 31: 1-109. 1991.

M. pilosa P.M. Peterson, Wipff & S.D. Jones

Mexico. See *Madroño* 39(2): 151. 1992.

M. plumbea (Trin.) Hitchc. (*Sporobolus plumbeus* (Trin.) Hemsl.; *Sporobolus poaeoides* Hack.; *Vilfa plumbea* Trin.)

South America, U.S. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 98. 1840, *Biologia Centrali-Americana; ... Botany ...* 3(19): 546-547. 1885 and *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 167. 1911, *Contributions from the United States National Herbarium* 17(3): 296. 1913.

M. polycaulis Scribner

Mexico. Forage, see *Bulletin of the Torrey Botanical Club* 38: 327. 1911.

M. porteri Scribner ex Beal (*Muhlenbergia texana* Thurb. ex Porter & J.M. Coult., nom. illeg., non *Muhlenbergia texana* Buckley; *Podosemum porteri* (Scribn. ex Beal) Bush)

U.S. Perennial, base pubescent, rooting at the nodes, open panicle branched, forming clumps, good forage, palatable, found along roadsides, see *Synopsis of the Flora of Colorado* 144. 1874, *Grasses of North America for Farmers and Students* 2: 259. 1896 and *American Midland Naturalist* 7(2): 36. 1921.

in Mexico: liendrilla amacollada, pasto aparejo, pasto matorralero, telaraña, zacate aparejo, zacate araña

M. pubescens (Kunth) Hitchc. (*Agrostis lanata* Kunth; *Agrostis pubens* Willd. ex Steud.; *Agrostis pubescens* Kunth; *Cinna lanata* (Kunth) Kunth; *Cinna pubescens* (Kunth) Kunth; *Epicampes lanata* (Kunth) J. Presl ex Kunth; *Epicampes pubescens* (Kunth) J. Presl ex Kunth; *Epicampes pubescens* (Kunth) M.E. Jones; *Muehlenbergia lanata* (Kunth) Hitchc.; *Muehlenbergia pubescens* (Kunth) Hitchc.; *Muhlenbergia lanata* (Kunth) Hitchc.)

Mexico. Fodder, see *Nova Genera et Species Plantarum* 1: 136. 1815 [1816], *Révision des Graminées* 1: 67. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1:

209. 1833 and *Contributions to Western Botany* 14: 7. 1912, *North American Flora* 17(6): 459-460. 1935.

in Mexico: zacate lanudo

M. pubigluma Swallen

Mexico. See *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Proceedings of the Biological Society of Washington* 56: 78. 1943.

M. pungens Thurb. ex A. Gray (*Podosemum pungens* (Thurb. ex A. Gray) Bush)

U.S., Colorado. Perennial, creeping, rhizomatous, handicrafts, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 1863: 78. 1864 and *American Midland Naturalist* 7(2): 32. 1921.

M. purpusii Mez

Mexico. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 214. 1921.

M. quadridentata (Kunth) Trin. (*Agrostis caespitosa* Willd. ex Steud.; *Agrostis gracilis* Willd. ex Steud., nom. illeg., non *Agrostis gracilis* Salisb.; *Agrostis nutans* Spreng., nom. illeg., non *Agrostis nutans* Poir.; *Agrostis quadridentata* (Kunth) Spreng.; *Muhlenbergia anomala* E. Fourn.; *Muhlenbergia gracilis* Trin.; *Muhlenbergia gracilis* (Kunth) Trin.; *Muhlenbergia gracilis* (Kunth) Kunth, nom. illeg., non *Muhlenbergia gracilis* (Kunth) Trin.; *Muhlenbergia quadridentata* (Kunth) Kunth, nom. illeg., non *Muhlenbergia quadridentata* (Kunth) Trin.; *Muhlenbergia virescens* subsp. *quadridentata* (Kunth) Y. Herrera; *Podosaemum quadridentatum* Kunth; *Podosemum gracile* Kunt; *Podosemum quadridentatum* Kunth; *Trichochloa gracilis* (Kunth) Roem. & Schult.; *Trichochloa quadridentata* (Kunth) Roem. & Schult.)

U.S., Mexico. Open disturbed areas, handicrafts, forage, see *Nova Genera et Species Plantarum* 1: 130-132. 1815 [1816], *Systema Vegetabilium* 2: 388-389. 1817, *De Graminibus unifloris et sesquifloris* 193, 194, t. 5a, 5b, f. 6, 14. 1824, *Systema Vegetabilium, editio decima sexta* 1: 263. 1825, *Révision des Graminées* 1: 64. 1829, *Nomenclator Botanicus* 2nd edition 1: 39-40. 1840, *Mexicanas Plantas* 2: 82. 1886 and *Fl. Novo-Gal.* 14: 253. 1983, *American Journal of Botany* 81(8): 1043. 1994, *Phytologia* 79(1): 25-27. 1995.

in Mexico: casaraca, coba-gui, coba-quij, cobaqui, gobaqui, gui-goba, popote cambray, qui-coba, qui-goba, zacate aparejo, zacate liso, zacatón liso

M. racemosa (Michx.) Britton, Sterns & Poggenb. (*Agrostis racemosa* Michx.; *Cinna racemosa* (Michx.) Kunth; *Muhlenbergia glomerata* var. *ramosa* Vasey; *Muhlenbergia racemosa* var. *ramosa* (Vasey) Vasey ex Beal; *Polypogon racemosus* (Michx.) Nutt.; *Vilfa racemosa* (Michx.) P. Beauv.)

North America, U.S. Forming colonies, floodplains, inundated or moist areas, alluvial soil, marshes, above streams, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Flora Boreali-Americana* 1: 53. 1803, *Essai d'une Nouvelle Agrostographie* 16, 148, 182. 1812, *The Genera of North American Plants* 1: 51. 1818, *Révision des Graminées* 1: 67. 1829, *Hortus Regius Botanicus Berolinensis* 2: 248. 1833, *Botanical Gazette* 7(8-9): 92. 1882, *A Descriptive Catalogue of the Grasses of the United States* 40. 1885, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Grasses of North America for Farmers and Students* 2: 253. 1896 and *Rhodora* 9(98): 22. 1907, *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Le Naturaliste Canadien* 94: 526. 1967.

M. ramulosa (Kunth) Swallen (*Agrostis ramulosa* (Kunth) Roem. & Schult.; *Muehlenbergia ramulosa* (Kunth) Swallen; *Muhlenbergia wolfii* (Vasey) Rydb.; *Sporobolus racemosus* Vasey; *Sporobolus ramulosus* (Kunth) Kunth; *Sporobolus wolfii* Vasey; *Vilfa minima* Vasey; *Vilfa ramulosa* Kunth) (for John Wolf, 1820-1897, botanical collector in Colorado (U.S. Geological Survey under G. M. Wheeler, 1873) and Illinois)

U.S., Mexico. Annual, see *Nova Genera et Species Plantarum* 1: 137. 1815 [1816], *Systema Vegetabilium* 2: 361. 1817, *Révision des Graminées* 1: 68. 1829, *U.S. Department of Agriculture: Circular Month. Rep.* Feb./Mar. 1874: 155. 1874, *Bulletin of the Torrey Botanical Club* 10: 52. 1883, *Bulletin of the Torrey Botanical Club* 14: 9. 1887 and *Bulletin of the Torrey Botanical Club* 32(11): 600. 1905, *Contributions from the United States National Herbarium* 29(4): 205 [or 204]. 1947, *Brittonia* 23(3): 293-324. 1971, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. reederorum Soderstr. (dedicated to John Raymond Reeder and Charlotte G. Reeder)

Mexico. See *Contributions from the United States National Herbarium* 34(4): 123. 1967.

M. repens (Presl) Hitchc. (*Muhlenbergia abata* I.M. Johnst.; *Muhlenbergia subtilis* Nees; *Sporobolus repens* J. Presl; *Vilfa repens* (J. Presl) Trin.) (from the Greek *abatos* "inaccessible")

North and South America, Mexico, U.S., New Mexico. Fodder, see *Reliquiae Haenkeanae* 1(4-5): 241. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 102. 1840, *Linnaea* 19(6): 689. 1847 and *A Flora of California* 1: 111. 1912.

in Mexico: liendrilla, liendrilla aparejo, liendrillo aparejo, salado

M. reverchonii Vasey & Scribn. (*Podosemum reverchonii* (Vasey & Scribn.) Bush)

U.S., Texas. Caespitose, found along roadsides, rocky places, see *Contributions from the United States National Herbarium* 3(1): 66. 1892 and *American Midland Naturalist* 7(2): 38. 1921.

M. richardsonis (Trin.) Rydb. (*Muhlenbergia aspericaulis* Nees ex Trin.; *Muhlenbergia brevifolia* var. *richardsonis* (Trin.) M.E. Jones; *Muhlenbergia squarrosa* (Trin.) Rydb.; *Sporobolus aspericaulis* Scribn.; *Sporobolus depauperatus* (Torr. ex Hook.) Scribn.; *Sporobolus richardsonis* (Trin.) Merr.; *Vilfa depauperata* Torr.; *Vilfa depauperata* Torr. ex Hook.; *Vilfa richardsonis* Trin.; *Vilfa squarrosa* Trin.) (named for the British Arctic explorer Dr. John Richardson, 1787-1865, M.D. Edinburgh 1816, surgeon and naturalist to Sir John Franklin's North Polar expeditions 1819-1822 and 1825-1827, F.R.S. 1825, F.L.S. 1825, on search expedition for the rear admiral Franklin 1847-1849, knighted 1846. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 152. 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 262, 581. London 1994; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. 92. Royal Botanic Gardens, Kew, London 1906; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 331. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 232. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 638. Stuttgart 1993; Mea Allan, *The Hookers of Kew*. 83, 97-98, 172. London 1967; Roderic Owen, *The Fate of Franklin*. London 1978; Henry Duff Traill, *The Life of Sir John Franklin, R.N.* London 1896; Sir Albert Hastings Markham, *Life of Sir John Franklin and the North-West Passage*. London 1891; G.F. Lamb, *Franklin. Happy Voyager: Being the Life and Death of Sir John Franklin*. London 1956; Sir Edward Augustus Inglefield, *A Summer Search for Sir John Franklin ... With Short Notices ... by Dr. S. on the Meteorology and Geology*. London 1853; P.L. Simmonds, *Sir John Franklin and the Arctic Regions: Showing ... more detailed notices of the recent expeditions in search of the missing vessels under Capt. Sir John Franklin*. London 1851; Elisha Kent Kane, *The U. S. Grinnell Expedition in Search of Sir John Franklin*. N.Y. 1854; Elisha Kent Kane, *Arctic Explorations in Search of Sir John Franklin*. London 1882; Sydney A. Spence, *Antarctic Miscellany: Books, Periodicals and Maps Relating to the Discovery and Exploration of Antarctica*. London 1980; Sir Francis Leopold Mac Clintock (M'Clintock), *The Voyage of the "Fox" in the Arctic Seas*. London 1859 and *A Narrative of the Discovery of the Fate of Sir John Franklin and His*

Companions. Boston 1860; Sten Nadolny, *Die Entdeckung der Langsamkeit*. München 1983 [*The Discovery of Slowness*, English Translation by Ralph Freedman]; G.A. Doumani, editor, *Antarctic Bibliography*. [12 vols., quarto] Washington, Library of Congress 1965-1979)

Northwest America. Sandy places, dry soil, gravel, forage, see *Flora Boreali-Americana* 2: 257, pl. 236. 1840 [based on collections made by J. Richardson, T. Drummond and D. Douglas], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 100, 103. 1840, *Bulletin of the Torrey Botanical Club* 9: 103. 1882, *Botanical Gazette* 21: 15. 1896 and *Rhodora* 4(39): 46. 1902, *Bulletin of the Torrey Botanical Club* 32(11): 600. 1905, *Bulletin of the Torrey Botanical Club* 36: 531. 1909, *Contributions to Western Botany* 14: 12. 1912, *Man. Grasses U.S.* 988. 1951.

in English: mat muhly

M. rigens (Benth.) A.S. Hitchc. (*Cinna macroura* Thurb.; *Cinna macroura* (Kunth) Kunth; *Cinna macroura* Kunth; *Crypsinna rigens* (Benth.) M.E. Jones; *Epicampes leptoura* Piper; *Epicampes rigens* Benth.; *Muehlenbergia leptoura* (Piper) Hitchc.; *Muehlenbergia rigens* (Benth.) Hitchc.; *Muhlenbergia leptoura* (Piper) Hitchc.; *Muhlenbergia marshii* I.M. Johnst.; *Muhlenbergia mundula* I.M. Johnst.; *Vilfa rigens* Thurb. ex S. Watson, nom. illeg., non *Vilfa rigens* Trin.) (for Ernest George Marsh Jr., collected 1934-1940 in Mexico and U.S.; see Thomas R. Soderstrom & John H. Beaman, "The genus *Bromus* (Gramineae) in Mexico and Central America." *Publ. Mus. Mich. State Univ., Biol. Ser.* 3(5): 465-520. 1968; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

U.S., California, Mexico. Perennial bunchgrass, caespitose, clumped, slender, forage, flower stalks used for coiled basketry, found in dry or damp places, grassland, riparian, meadow, see *Geological Survey of California, Botany* 2: 276. 1880, *Journal of the Linnean Society, Botany* 19: 88. 1881 and *Proceedings of the Biological Society of Washington* 18: 143. 1905, *Contributions to Western Botany* 14: 8. 1912, *Journal of the Washington Academy of Sciences* 23(10): 453. 1933, *North American Flora* 17: 468. 1935, *Journal of the Arnold Arboretum* 24(4): 392-393. 1943, M. Kat Anderson, "The ethnobotany of deergrass, *Muhlenbergia rigens* (Poaceae): its uses and fire management by California Indian tribes." *Economic Botany*. 50(4): 409-422. 1996.

in English: deer grass

in Mexico: liendrilla de venado

M. rigida (Kunth) Kunth (*Agrostis colorata* Willd. ex Steud.; *Agrostis glabrata* (Kunth) Spreng.; *Agrostis nutans*

Spreng., nom. illeg., non *Agrostis nutans* Poir.; *Agrostis quitensis* Spreng.; *Agrostis rigida* (Kunth) Spreng.; *Muhlenbergia affinis* Trin.; *Muhlenbergia berlandieri* Trin.; *Muhlenbergia elegans* (Kunth) Trin.; *Muhlenbergia elegans* var. *atroviolacea* Kuntze; *Muhlenbergia elegans* var. *subviridis* Kuntze; *Muhlenbergia glabrata* (Kunth) Trin.; *Muhlenbergia glabrata* (Kunth) Kunth; *Muhlenbergia holwayorum* Hitchc.; *Muhlenbergia laxiflora* Scribn.; *Muhlenbergia metcalfei* M.E. Jones; *Muhlenbergia mucronata* (Kunth) Trin.; *Muhlenbergia phragmitoides* Griseb.; *Muhlenbergia phragmitoides* var. *phragmitoides*; *Muhlenbergia rigida* (Kunth) Trin.; *Podosemum affine* (Trin.) Bush; *Podosemum elegans* Kunth; *Podosemum glabratum* Kunth; *Podosemum mucronatum* Kunth; *Podosemum rigidum* Kunth; *Trichochloa elegans* (Kunth) Roem. & Schult.; *Trichochloa glabrata* (Kunth) Roem. & Schult.; *Trichochloa mucronata* (Kunth) Roem. & Schult.; *Trichochloa rigida* (Kunth) Roem. & Schult.) (for the Belgian explorer Jean Louis Berlandier, 1805-1851, botanical collector and explorer in North America and Mexico, drowned while crossing a tributary of the Rio Grande on horseback at Matamoros, Mexico; see H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 131. Oxford 1964; J.H. Barnhart, *Biographical notes upon botanists*. 1: 171. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 131-132. Philadelphia 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. 207. 1845; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Samuel Wood Geiser, *Naturalists of the Frontier*. 30-54. Dallas 1948; J. Ewan, editor, *A Short History of Botany in the United States*. 45. 1969) (for Mary M. Holway and the American banker Edward Willet Dorland Holway, 1853-1923, mycologist, collected in South America 1919-1920 and 1921-1922; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 197. Boston 1965; Rogers McVaugh, "Botanical exploration in Nueva Galicia from 1790 to the present time." *Contr. Univ. Mich. Herb.* 9(3): 205-357. 1972; F.K. Butters, "Edward W.D. Holway (with portrait)." *Botanical Gazette* 77: 115-116. 1924; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 181. 1972; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; Joseph Ewan, *Rocky Mountain Naturalists*. 232. The University of Denver Press 1950; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. 232. Philadelphia 1899; H. Palmer, *Edward W.D. Holway, A Pioneer of the Canadian Alps*. Minneapolis 1931; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983) (named for Orrick Baylor Metcalfe, 1879-1936, made botanical collections in New Mexico)

Mexico to Argentina. Perennial bunchgrass, coarse, densely caespitose, erect, branched below, leaf sheaths slightly scabrid, ligule rounded, leaf blades linear long-attenuate, rhizomatous, inflorescence a narrow panicle lanceolate with delicate branches, spikelets linear-lanceolate, glumes shorter than spikelets, lemma awned, awn flexuous, palea lanceolate acute, 2 lodicules, 3 stamens, forming dense clumps more or less large to small, fodder, handicrafts, slopes, dry places, roadbanks, rocky places, gravel, hybrids with *Muhlenbergia angustata* (Presl) Kunth, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Nova Genera et Species Plantarum* 1: 129-130. 1815 [1816], *Systema Vegetabilium* 2: 386-387. 1817, *De Graminibus unifloris et sesquifloris* 194, t. 5, f. 19, 20, 23. 1824, *Systema Vegetabilium, editio decima sexta* 1: 262-263. 1825, *Révision des Graminées* 1: 63. 1829, *Reliquiae Haenkeanae* 1(4-5): 238. 1830, *Nomenclator Botanicus* 2nd edition 1: 40. 1840, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 299, 301. 1841, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 255. 1874, *Zoe* 4(4): 389. San Francisco 1894, *Revisio Generum Plantarum* 3(3): 357. 1898 and *Contributions to Western Botany* 14: 12. 1912, *Contr. U.S. Natl. Herb.* 17: 298. 1913, *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *American Midland Naturalist* 7(2): 40. 1921, *Contributions from the United States National Herbarium* 24(8): 389. 1927.

in Mexico: grama, liendrilla lisa, liendrilla morada

M. robusta (E. Fourn.) Hitchc. (*Epicampes berlandieri* E. Fourn. ex Hemsl.; *Epicampes berlandieri* E. Fourn.; *Epicampes macrotis* Piper; *Epicampes minutiflora* Mez; *Epicampes robusta* E. Fourn.; *Epicampes robusta* E. Fourn. ex Hemsl.; *Epicampes stricta* J. Presl; *Muehlenbergia fournieriana* Hitchc.; *Muehlenbergia macrotis* (Piper) Hitchc.; *Muehlenbergia robusta* (E. Fourn.) Hitchc.; *Muhlenbergia fournieriana* Hitchc.; *Muhlenbergia macrotis* (Piper) Hitchc.; *Muhlenbergia meziana* Hitchc.; *Muhlenbergia presliana* Hitchc.)

North America, Mexico, Guatemala. Caespitose, coarse, tough, robust, stiff, fodder, handicrafts, forming clumps, rocky places, along roadsides, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Reliquiae Haenkeanae* 1(4-5): 235, t. 39. 1830, *Biologia Centrali-Americana; ... Botany ...* 3: 548, 550. 1885, *Mexicanas Plantas* 2: 89. 1886 and *Proceedings of the Biological Society of Washington* 18: 144. 1905, *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 212. 1921, *Journal of the Washington Academy of Sciences* 23(10): 453. 1933, *North American Flora* 17(6): 461-463. 1935.

in Mexico: esparto, zacate, zacate de escobillas, zacate fino

M. schmitzii Hack. (*Muhlenbergia diehlii* M.E. Jones) (named for I.E. Diehl, correspondent of Marcus Eugene Jones (1852-1934), botanical collector in New Mexico and Mexico)

Mexico. Annual, see *Annalen des K. K. Naturhistorischen Hofmuseums* 17: 255. 1902, *Contributions to Western Botany* 14: 13. 1912, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. schreberi J.F. Gmelin (*Agrostis apetala* Bosc ex Trin.; *Agrostis oligantha* Roem. & Schult.; *Agrostis pauciflora* Pursh, nom. illeg., non *Agrostis pauciflora* Schrad.; *Anthipsimus gonopodus* Raf.; *Cynodon diffusus* (Willd.) Raspail; *Dilepyrum diffusum* P. Beauv.; *Dilepyrum minutiflorum* Michx.; *Muhlenbergia botteri* E. Fourn.; *Muhlenbergia diffusa* Schreber, nom. illeg., non *Muhlenbergia diffusa* Willd.; *Muhlenbergia diffusa* Willd.; *Muhlenbergia diffusa* Muhl.; *Muhlenbergia minutiflora* (Michx.) Hitchc.; *Muhlenbergia palustris* Scribn.; *Muhlenbergia schreberi* subsp. *palustris* (Scribn.) Scribn.; *Muhlenbergia schreberi* subsp. *schreberi*; *Muhlenbergia schreberi* var. *palustris* (Scribn.) Scribn. ex B.L. Rob.; *Muhlenbergia tenuiflora* (Willd.) Britton, Sterns & Poggenb.; *Polypogon pauciflorus* Spreng.) (named after the German botanist and zoologist Johann Christian Daniel von Schreber, 1739-1810, correspondent of Linnaeus, author of *De Phasco observationes, quibus hoc genus muscorum vindicatur atque illustratur ... Cum tabulis aeri incis. Lipsiae 1770* and *Theses medicae, quas ... praeside ... Carolo Linnaeo ... publico submittet examini Jo. Christ. Dan. Schreber ... ad diem xiv junii anni mdccclx ... Upsaliae 1760*; see Michel Adanson (1727-1806), *A Voyage to Senegal, the Isle of Gorée, and the River Gambia*. London. 1759 (1st edition in English), or *Nachricht von seiner Reise nach Senegal; übersetzt von Schreber*. Leipzig 1773; Ernst Wilhelm Martius (1756-1849), *Erinnerungen aus meinem 90jährigen Leben*. Leipzig 1847; J.H. Barnhart, *Biographical notes upon botanists*. 3: 240. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 355. 1972; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. 1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 777. Stuttgart 1993; William Darlington (1782-1863), *Reliquiae Baldwinianae*. Philadelphia 1843 and *Memorials of John Bartram and Humphry Marshall*. 1849; Frans Antonie Stafleu (1921-1997), *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 251. Palermo 1988).

U.S., Carolina, Virginia, Mexico. Weed species, caespitose, first glume often rudimentary or lacking, swampy ground,

marshy places, lawn, ponds, wet depressions, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Transactions of the American Philosophical Society* 3: 160. 1793, *Species Plantarum. Editio quarta* 1: 320. 1797, *Flora Boreali-Americana* 1: 40. 1803, *Beschreibung der Gräser* 2: t. 51. 1810, *Essai d'une Nouvelle Agrostographie* 160. 1812, *Flora Americae Septentrionalis; or, ...* 1: 63. 1814, *Systema Vegetabilium* 2: 372. 1817, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 105. 1819, *Systema Vegetabilium, editio decima sexta* 1: 243. 1825, *Annales des Sciences Naturelles; Botanique, sér. 5, 5*: 303. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 287. 1841, *Mexicanas Plantas* 2: 85. 1886, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Memoirs of the Torrey Botanical Club* 5: 37. 1894, *Transactions of the Kansas Academy of Science* 14: 140. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 47. 1898 and *Rhodora* 9(98): 17. 1907, *Rhodora* 10(112): 65. 1908, *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Rhodora* 63(745): 25. 1961.

in English: nimblewell

M. scoparia Vasey (*Muhlenbergia carinata* Mez)

Mexico. Brooms, forage, see *Contributions from the United States National Herbarium* 1(8): 283. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 17: 213. 1921, *N. Amer. Fl.* 17(6): 457. 1935, *Contr. U.S. Natl. Herb.* 34(4): 144. 1967.

M. seatonii Scribner (for the American botanist Henry Eliason Seaton, 1869-1893, botanical collector in Mexico and U.S.; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 254. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* 690. University of Pennsylvania Press, Philadelphia 1964; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs.* VI. 1983)

Mexico. See *Proceedings of the American Academy of Arts and Sciences* 28: 122. 1893.

M. sericea (Michx.) P.M. Peterson (*Agrostis sericea* (Michx.) Elliott; *Muhlenbergia capillaris* var. *filipes* (M.A. Curtis) Chapm. ex Beal; *Muhlenbergia filipes* M.A. Curtis; *Podosemum filipes* (M.A. Curtis) Bush; *Polypogon sericeus* (Michx.) Spreng.; *Stipa sericea* Michx.)

North America, U.S. Sandy soils, see *Flora Boreali-Americana* 1: 54. 1803, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 135. 1816, *De Gram. Unifl. Sesquifl.* 191-192, 296, t. 5, f. 15. 1824, *Systema Vegetabilium, editio decima sexta* 1: 243. 1825, *American Journal of Science and Arts* 44: 83. 1843, *Grasses of North America for Farmers and Students* 2: 256. 1896 and *American Midland*

Naturalist 7(2): 29. 1921, *Contributions from the United States National Herbarium* 41: 167. 2001.

M. setarioides E. Fourn. (*Muhlenbergia polypogonoides* Hack.; *Muhlenbergia setarioides* E. Fourn. ex Hemsl.; *Muhlenbergia sylvatica* var. *setarioides* (E. Fourn.) Beal)

Mexico. See *North American Gramineae and Cyperaceae* 1: 13. 1834, *Biologia Centrali-Americana; ... Botany ...* 3: 542. 1885, *Mexicanas Plantas* 2: 84. 1886, *Grasses of North America for Farmers and Students* 2: 249. 1896 and *Annalen des K. K. Naturhistorischen Hofmuseums* 17: 255. 1902, *Brittonia* 23(3): 293-324. 1971.

M. setifolia Vasey

U.S., Texas. Forage, see *Botanical Gazette* 7(8-9): 92. 1882.

M. sinuosa Swallen (*Sporobolus confusus* var. *aberrans* M.E. Jones)

Mexico, U.S., New Mexico. Annual, see *Bulletin of the Torrey Botanical Club* 15: 293. 1888 and *Contributions to Western Botany* 14: 10. 1912, *Contributions from the United States National Herbarium* 29(4): 204. 1947, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. sobolifera (Muhl. ex Willd.) Trin. (*Achnatherum soboliferum* (Muhl. ex Willd.) P. Beauv.; *Agrostis sobolifera* Muhl. ex Willd.; *Cinna sobolifera* (Muhl. ex Willd.) Link; *Muhlenbergia sobolifera* f. *sobolifera*; *Muhlenbergia sobolifera* f. *setigera* (Scribn.) Deam; *Muhlenbergia sobolifera* subsp. *setigera* Scribn.; *Muhlenbergia sobolifera* subsp. *sobolifera*; *Muhlenbergia sobolifera* var. *setigera* (Scribn.) Hitchc. & Chase; *Muhlenbergia sobolifera* var. *sobolifera*; *Podosemum soboliferum* (Muhl. ex Willd.) Link; *Trichochloa sobolifera* (Muhl. ex Willd.) Trin.) (from the Latin *sobolifer*, *sobolifera*, -um, having creeping rooting stems, *suboles*, is "a sprout, shoot, off-shoot, twig, spray")

North America, U.S. Perennial, rhizomatous, spreading, loosely or densely clumped, forming colonies, rocky slopes, dry wooded hillsides, secondary deciduous forest, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 95. 1809, *Essai d'une Nouvelle Agrostographie* 20, 146, 148. 1812, *Fundamenta Agrostographiae* 117. 1820, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 71. 1821, *De Gram. Unifl. Sesquifl.* 189, 297, t. 5, f. 4. 1824, *Hortus Regius Botanicus Berolinensis* 1: 83. 1827 and *Rhodora* 9(98): 18. 1907, *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Indiana Department of Conservation, Publication* 82: 163. 1929, *Manual of the Grasses of the United States* (2nd edition, revised by A. Chase) 906. 1950 [1951].

M. speciosa Vasey (*Bealia speciosa* (Vasey) Beal; *Epicampes speciosa* (Vasey) M.E. Jones; *Muhlenbergia speciosa* Vasey ex S. Watson)

Mexico. Forage, see *Bulletin of the Torrey Botanical Club* 13(12): 231. 1886, *Proceedings of the American Academy of Arts and Sciences* 21: 443. 1886, *Grasses of North America for Farmers and Students* 2: 268. 1896 and *Contributions to Western Botany* 14: 7. 1912.

M. spiciformis Trin. (*Muhlenbergia acutifolia* E. Fourn. ex Hemsl.; *Muhlenbergia acutifolia* E. Fourn.; *Muhlenbergia parviglumis* Vasey)

Mexico. Fodder, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 288. 1841, *Biologia Centrali-Americana*; ... *Botany* ... 3: 538. 1885, *Mexicanas Plantas* 2: 86. 1886, *Contributions from the United States National Herbarium* 3(1): 71. 1892.

in Mexico: zacatón

M. straminea Hitchc. (*Muhlenbergia virescens* (Kunth) Trin.; *Muhlenbergia virescens* (Kunth) Kunth, nom. illeg., non *Muhlenbergia virescens* (Kunth) Trin.; *Podosemum virescens* Kunth; *Trichochloa virescens* (Kunth) Roem. & Schult.)

Mexico. See *Nova Genera et Species Plantarum* 1: 132. 1815 [1816], *Systema Vegetabilium* 2: 389. 1817, *De Gram. Unifl. Sesquifl.* 193, t. 5a, f. 7. 1824, *Révision des Graminées* 1: 64. 1829 and *Contributions from the United States National Herbarium* 17(3): 302. 1913, *Phytologia* 78(6): 417-427. 1995, *Phytologia* 79(1): 25-27. 1995.

M. stricta (J. Presl) Kunth (*Muhlenbergia elata* Vasey; *Muhlenbergia longifolia* Vasey; *Podosemum strictum* J. Presl)

Mexico. Forage, see *Reliquiae Haenkeanae* 1(4-5): 230. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 202. 1833, *Contributions from the United States National Herbarium* 1(8): 282-283. 1893.

in Mexico: atacua, zacatón fino

M. strictior Scribner ex Beal (*Muhlenbergia madrensis* M.E. Jones)

Mexico, Sierra Madre. Annual, meadows, see *Grasses of North America for Farmers and Students* 2: 263. 1896 and *Contributions to Western Botany* 14: 12. 1912, *Contributions from the United States National Herbarium* 17(3): 290. 1913, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. subaristata Swallen

Mexico. See *Journal of the Washington Academy of Sciences* 26(5): 208. 1936.

M. sylvatica (Torr.) Torr. ex A. Gray (*Agrostis diffusa* Muhl., nom. illeg., non *Agrostis diffusa* Host; *Agrostis sylvatica* Torr., nom. illeg., non *Agrostis sylvatica* Huds.; *Muhlenbergia diffusa* Farw., nom. illeg., non *Muhlenbergia diffusa* Willd.; *Muhlenbergia sylvatica* f. *attenuata* (Scribn.) E.J.

Palmer & Steyerl.; *Muhlenbergia sylvatica* f. *sylvatica*; *Muhlenbergia sylvatica* var. *gracilis* Scribn.; *Muhlenbergia sylvatica* var. *robusta* Fernald; *Muhlenbergia sylvatica* var. *sylvatica*; *Muhlenbergia umbrosa* Scribn.; *Muhlenbergia umbrosa* subsp. *attenuata* Scribn.)

U.S. Rhizomatous, caespitose, spreading, forming colonies, along stream and riverbanks, gravel, moist places, alluvial sandy soil, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Descriptio uberior Graminum* 64. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 87. 1823, *North American Gramineae and Cyperaceae* 1: 13. 1834, *United States Geological Expolration [sic] of the Fortieth Parallel. Botany* 378. 1871, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi — Botany* 6: 284-285. 1878 [1879], *Botanical Gazette* 7(8-9): 93. 1882, *Bulletin of the Torrey Botanical Club* 9: 89. 1882, *Transactions of the Kansas Academy of Science* 9: 116. 1885, *Mexicanas Plantas* 2: 84. 1886, *Contributions from the United States National Herbarium* 3(1): 71. 1892, *Grasses of North America for Farmers and Students* 2: 249. 1896 and *Flora of Los Angeles and Vicinity* 32. 1904, *Rhodora* 9(98): 20-21. 1907, *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Report of the Michigan Academy of Science, Arts and Letters* 20: 168. 1919, *Annals of the Missouri Botanical Garden* 22: 467. 1935, *N. Amer. Fl.* 17: 474. 1935, *Rhodora* 45(534): 326. 1943, *Great Basin Naturalist* 50: 75. 1990.

M. tenella (Kunth) Trin. (*Arundo tenella* Spreng., nom. illeg., non *Arundo tenella* Schrad.; *Agrostis tenella* Willd.; *Muhlenbergia ciliata* (Kunth) Trin.; *Muhlenbergia exilis* E. Fourn.; *Muhlenbergia sprengelii* Trin.; *Podosemum tenellum* Kunth; *Polypogon gracilis* Spreng.; *Polypogon tenellus* (Kunth) Spreng., nom. illeg., non *Polypogon tenellus* R. Br.; *Trichochloa tenella* (Kunth) Roem. & Schult.)

Guatemala, Honduras, Mexico, Nicaragua. Annual, forming clumps, first glume lanceolate apiculate, second glume with broadly ovate base, lemma nerves hispid, fodder, rocky places, banks, steep riverbanks, drainage ditches, close to *Muhlenbergia microsperma* (DC.) Kunth, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *A Voyage to Terra Australis* 2: 582. 1814, *Plantarum Minus Cognitarum Pugillus* 2: 6. 1815, *Nova Genera et Species Plantarum* 1: 128-129. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 385. 1817, *De Graminibus unifloris et sesquifloris* 189, 192-193, 297, t. 5, f. 5, 16, 17. Petropoli 1824, *Systema Vegetabilium, editio decima sexta* 1: 243. 1825, *Systema Vegetabilium, editio decima sexta* 5: 558 (index). 1828, *Mexicanas Plantas* 2: 84. 1886, *Bulletin of the Torrey Botanical Club* 22: 7. 1895 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *Brittonia* 23(3): 293-324. 1971, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

in Mexico: zacatón

M. tenuiflora (Michx.) Britton, Sterns & Poggenb. (*Agrostis quitensis* Willd. ex Steud.; *Agrostis tenuiflora* Willd.; *Apera tenuiflora* (Willd.) P. Beauv.; *Calamagrostis quitensis* Kunth; *Cinna tenuiflora* (Willd.) Link; *Muhlenbergia calamagrostidea* Kunth; *Muhlenbergia quitensis* (Kunth) Hitchc.; *Muhlenbergia tenuiflora* subsp. *tenuiflora*; *Muhlenbergia tenuiflora* subsp. *variabilis* Scribn.; *Muhlenbergia tenuiflora* var. *tenuiflora*; *Muhlenbergia tenuiflora* var. *variabilis* (Scribn.) R.W. Pohl; *Muhlenbergia willdenowii* Trin.; *Podosemum tenuiflorum* (Willd.) Link; *Trichochloa longiseta* Trin.; *Trichochloa tenuiflora* (Willd.) Sweet)

North America, U.S. Rhizomatous, spreading, forming colonies, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Species Plantarum. Editio quarta* 1: 364. 1797, *Essai d'une Nouvelle Agrostographie* 142, 151. 1812, *Nova Genera et Species Plantarum* 1: 133-134. 1815 [1816], *Fundamenta Agrostographiae* 117. 1820, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 71. 1821, *De Graminibus unifloris et sesquifloris* 188, 189, 297, t. 5, f. 3. 1824, *Hortus Britannicus* (1st edition) 443. 1826, *Hortus Regius Botanicus Berolinensis* 1: 82. 1827, *Révision des Graminées* 1: 63. 1829, *Nomenclator Botanicus Hortensis* 2nd edition 1: 42. 1840, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Memoirs of the Torrey Botanical Club* 5: 37. 1894 and *Rhodora* 9(98): 18. 1907, *Contributions from the United States National Herbarium* 17(3): 292. 1913, *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *American Midland Naturalist* 82(2): 538. 1969.

M. tenuiflora (Michx.) Britton, Sterns & Poggenb. subsp. **curviaristata** (Ohwi) T. Koyama & Kawano (*Muhlenbergia curviaristata* (Ohwi) Ohwi; *Muhlenbergia ramosa* var. *curviaristata* Ohwi; *Muhlenbergia tenuiflora* (Willd.) Britton, Sterns & Poggenb.)

North America. See *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888 and *Acta Phytotaxonomica et Geobotanica* 6(4): 292. 1937, *Botanical Magazine* (Tokyo) 55: 397. 1941, *Canadian Journal of Botany* 42: 868. 1964, *Grasses: Systematics and Evolution* 195-212. 2000.

M. tenuifolia (Kunth) Kunth (*Agrostis hackeliana* Sodiro; *Agrostis quitensis* Willd. ex Steud.; *Agrostis quitensis* Hack. ex Sodiro; *Agrostis quitensis* Spreng.; *Agrostis tenella* Willd. ex Steud.; *Arundo quitensis* Spreng.; *Arundo quitensis* (Kunth) Poir., nom. illeg., non *Arundo quitensis* Spreng.; *Arundo tenuifolia* (Kunth) Poir.; *Calamagrostis mexicana* Kunth; *Calamagrostis quitensis* Kunth; *Calamagrostis tenuifolia* Kunth; *Muhlenbergia calamagrostidea* Kunth; *Muhlenbergia longiseta* Benth.; *Muhlenbergia monticola*

Buckley; *Muhlenbergia quitensis* (Kunth) Hitchc.; *Muhlenbergia sylvatica* var. *flexuosa* Vasey; *Muhlenbergia tenuifolia* Willd.; *Muhlenbergia tenuifolia* (Kunth) Trin.; *Muhlenbergia trichodes* Steud.; *Podosemum tenuifolium* (Kunth) Nees ex Nees & Schauer)

South America, U.S., Mexico, Ecuador. Annual, caespitose, fodder, rocky soil, see *Plantarum Minus Cognitarum Pugillus* 2: 6. 1815, *Nova Genera et Species Plantarum* 1: 133-134. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 704. 1816, *De Graminibus unifloris et sesquifloris* 193, 277. 1824, *Systema Vegetabilium, editio decima sexta* 1: 262. 1825, *Nova Genera et Species Plantarum* 7: 488. 1825, *Révision des Graminées* 1(4): 63. 1829, *North American Gramineae and Cyperaceae* 1: 13. 1834, *Plantas Hartwegianas imprimis Mexicanas* 28. 1840, *Nomenclator Botanicus*, 2nd edition, 1: 42. 1840, *Linnaea* 19(6): 690. 1847, *Synopsis Plantarum Glumacearum* 1: 177. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 91. 1862, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 284-285. 1878 [1879], *Anales de la Universidad Central del Ecuador* 3(25): 480. 1889 and *Contributions from the United States National Herbarium* 17(3): 292. 1913, *N. Amer. Fl.* 17: 474. 1935, *Madroño* 35(4): 320-324. 1988, *Great Basin Naturalist* 50: 75. 1990, *Systematic Botany Monographs* 31: 1-109. 1991, *Sida* 15: 591. 1993.

in Mexico: zacate espinilla

M. tenuissima (J. Presl) Kunth (*Muhlenbergia nebulosa* Scribn. ex Beal; *Podosemum tenuissimum* J. Presl)

Mexico, Peru. Annual, both glumes lanceolate and apiculate, forage, wet places, moist banks, close to *Muhlenbergia microsperma* (DC.) Kunth, see *Reliquiae Haenkeanae* 1(4-5): 230. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 198. 1833, *Grasses of North America for Farmers and Students* 2: 247. 1896 and *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

M. texana Buckley (*Agrostis barbata* Buckley ex A. Gray, nom. illeg., non *Agrostis barbata* Pers.; *Muhlenbergia buckleyana* Scribn.; *Muhlenbergia minutissima* (Steud.) Swallen; *Muhlenbergia texana* Thurb. ex Porter & J.M. Coulter, nom. illeg., non *Muhlenbergia texana* Buckley; *Podosemum texanum* (Buckley) Bush)

U.S., Texas. Annual, see *Genera et species plantarum* 2. 1816, *Synopsis Plantarum Glumacearum* 1: 171. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 91, 334. 1862, *Synopsis of the Flora of Colorado* 144. 1874, *Mexicanas Plantas* 2: 101, 492. 1886, *Bulletin of the Torrey Botanical Club* 15: 293. 1888, *Contributions from the United States National Herbarium* 1(2): 56. 1890 and *American Midland Naturalist* 7(2): 41. 1921, *Proceedings of the Biological Society of Washington* 41: 161. 1928,

Journal of the Washington Academy of Sciences 23(10): 453. 1933, *Contributions from the United States National Herbarium* 29(4): 207. 1947, *Phytologia* 37(4): 317-407. 1977, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991, *Sida* 15: 590. 1993.

M. thurberi (Scribner) Rydb. (*Muhlenbergia filiculmis* M.E. Jones, nom. illeg., non *Muhlenbergia filiculmis* Vasey; *Sporobolus filiculmis* Vasey ex Beal, nom. illeg., non *Sporobolus filiculmis* L.H. Dewey; *Sporobolus filiculmis* Vasey; *Sporobolus thurberi* Scribn.; *Vilfa filiculmis* Thurb. ex Scribn., nom. illeg., non *Vilfa filiculmis* Thurb. ex Vasey; *Vilfa filiculmis* Thurb. ex Vasey)

North America, U.S., New Mexico. See *A Descriptive Catalogue of the Grasses of the United States* 44. 1885, *Grasses of North America for Farmers and Students* 2: 288. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 48, f. 5. 1898 and *Bulletin of the Torrey Botanical Club* 32(11): 601. 1905, *Contributions to Western Botany* 14: 12. 1912.

M. torreyana (Schult.) Hitchc. (*Agrostis compressa* Torr., nom. illeg., non *Agrostis compressa* Willd.; *Agrostis torreyana* Schult.; *Colpodium compressum* Trin.; *Muehlenbergia torreyana* (Schult.) Hitchc.; *Sporobolus compressus* (Torr.) Kunth; *Sporobolus torreyanus* (Schult.) Nash; *Vilfa compressa* Trin., nom. illeg., non *Vilfa compressa* (Willd.) P. Beauv.)

North America, U.S., New Mexico. Swamps, see John Torrey (1796-1873), *A Catalogue of Plants ... of the City of New York* 91. Albany 1819, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 58. 1821, *Mantissa* 2: 203. 1824, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 217. 1833 and *A Manual of the Botany of the Northern United States* 107. 1901, *American Journal of Botany* 21(3): 136. 1934.

M. torreyi (Kunth) Hitchc. ex Bush (*Agrostis caespitosa* Torr., nom. illeg., non *Agrostis caespitosa* (L.) Salisb.; *Agrostis torreyi* Kunth; *Muhlenbergia gracillima* Torr.; *Muhlenbergia nardifolia* Griseb.; *Podosemum gracillimum* (Torr.) Bush)

North America, U.S., Texas. Prairies, forage, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Annals of the Lyceum of Natural History of New York* 1(1): 152-153. 1824, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 226. 1833, *Pacif. Railr. Rep.* 4: 155. 1857, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 294. 1879 and *Ill. Fl. N. U.S.* (2nd edition) 1: 184. 1913, *American Midland Naturalist* 6: 84. 1919, *American Midland Naturalist* 7(2): 33. 1921.

M. uniflora (Muhl.) Fernald (*Agrostis serotina* Torr., nom. illeg., non *Agrostis serotina* (L.) L.; *Agrostis serotina* Nutt.; *Muhlenbergia uniflora* var. *terrae-novae* Fernald; *Muhlenbergia uniflora* var. *uniflora*; *Poa modesta* Tuck.; *Poa stricta*

var. *uniflora* Muhl. ex Scribn. & Merr.; *Poa uniflora* Muhl.; *Sporobolus serotinus* A. Gray; *Sporobolus uniflorus* (Muhl.) Scribn. & Merr.; *Sporobolous uniflorus* Muhl.; *Vilfa serotina* Trin.; *Vilfa serotina* Torr. ex A. Gray, nom. illeg., non *Vilfa serotina* Trin.; *Vilfa tenera* Trin.)

U.S., Canada. Spikelets occasionally 2- or 3-flowered, moist riverbanks, ponds, see *Descriptio uberior Graminum* 151. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 88. 1823, *Species Graminum* 3: t. 251. 1829-1830, *North American Gramineae and Cyperaceae* 1: 2. 1834, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 87. 1840, *American Journal of Science* 45(1): 45. 1843, *A Manual of the Botany of the Northern United States* 577. 1848 and *Bulletin, Division of Agrostology United States Department of Agriculture* 27: 5. 1900, *Rhodora* 29(337): 10-12. 1927.

M. utilis (Torr.) Hitchc. (*Agrostis brevifolia* Nutt.; *Muehlenbergia utilis* (Torr.) Hitchc.; *Sporobolus sacatilla* Griseb. ex E. Fourn.; *Sporobolus utilis* (Torr.) Scribn.; *Vilfa sacatilla* Griseb. ex Fourn.; *Vilfa sacatilla* E. Fourn.; *Vilfa utilis* Torr.)

North America, U.S., Texas, California, Mexico. Rhizomatous, forage, stony ground, see *The Genera of North American Plants* 1: 44. 1818, *Pacif. Railr. Rep.* 5(2): 365. 1858, *Mexicanas Plantas* 2: 101. 1886, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 171, f. 467. 1899 and *Journal of the Washington Academy of Sciences* 23(10): 453. 1933.

in Mexico: salado

M. vaginata Swallen

Mexico, Guatemala. Annual or perennial, rooting at the nodes, spreading, fodder, meadows, see *Anales de la Universidad Central del Ecuador* 3(25): 480. 1889 and *Österreichische Botanische Zeitschrift* 52(2): 57. 1902, *Contributions from the United States National Herbarium* 24(8): 388. 1927, *Contributions from the United States National Herbarium* 29(9): 406-408. 1950, *Willdenowia* 14: 393. 1984, *Madroño* 35(4): 320-324. 1988, *Systematic Botany Monographs* 31: 1-109. 1991.

in Mexico: zacatón

M. venezuelae Luces

Venezuela. Páramos, see *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 14-15, f. 9. 1953.

M. versicolor Swallen (*Muhlenbergia distichophylla* var. *mutica* Scribn. ex Urbina)

Guatemala, Mexico. Perennial, clumped, caespitose, fodder, see *Catálogo de Plantas Mexicanas* 393. 1897 and *Contributions from the United States National Herbarium* 29(9): 412. 1950.

in Mexico: zacatón

M. villiflora Hitchc. (*Vilfa pubescens* E. Fourn.)

North America, Mexico. Forage, see *Mexicanas Plantas* 2: 102. 1886 and *North American Flora* 17(6): 470. 1935.

in Mexico: liendrilla salina

M. villiflora Hitchc. var. *villiflora*

North America, Mexico. See *North American Flora* 17(6): 470. 1935.

M. villiflora Hitchc. var. *villosa* (Swallen) Morden (*Muhlenbergia villosa* Swallen)

North America, Mexico, U.S., Texas. See *North American Flora* 17(6): 470. 1935, *Journal of the Washington Academy of Sciences* 31(8): 350, f. 2. 1941, *Phytologia* 79(1): 29. 1995.

M. virescens (Kunth) Trin. (*Muhlenbergia curvula* Swallen; *Muhlenbergia straminea* Hitchc.; *Muhlenbergia virescens* (Kunth) Kunth, nom. illeg., non *Muhlenbergia virescens* (Kunth) Trin.; *Muhlenbergia virescens* subsp. *virescens*; *Podosemum virescens* Kunth; *Trichochloa virescens* (Kunth) Roem. & Schult.)

Mexico. See *Nova Genera et Species Plantarum* 1: 130-132. 1815 [1816], *Systema Vegetabilium* 2: 389. 1817, *De Gram. Unifl. Sesquifl.* 193, t. 5a, f. 7. 1824, *Révision des Graminées* 1: 64. 1829 and *Contributions from the United States National Herbarium* 17(3): 302. 1913, *Contributions from the United States National Herbarium* 29(9): 410. 1950, *American Journal of Botany* 81(8): 1043. 1994, *Phytologia* 78(6): 417-427. 1995, *Phytologia* 79(1): 25-27. 1995, *Brittonia* 50(1): 23-50. 1998.

M. virletii (E. Fourn.) Soderstr. (*Epicampes virletii* E. Fourn.) (for the French scientist M. Virlet d'Aoust, botanical collector in Mexico and the U.S.; see Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 828, 1011. 1964; George Neville Jones, *An Annotated Bibliography of Mexican Ferns*. Urbana & London, Univ. Illinois Press 1966; *Bull. Soc. Bot. de France* 10: 120. 1863)

Mexico. See *Mexicanas Plantas* 2: 88. 1886 and *Contributions from the United States National Herbarium* 34(4): 157. 1967.

M. watsoniana Hitchc. (*Muhlenbergia scabra* (Kunth) Trin. & Rupr.; *Muhlenbergia scabra* S. Watson, nom. illeg., non *Muhlenbergia scabra* (Kunth) Trin. & Rupr.; *Streptachne scabra* Kunth) (dedicated to the American botanist Sereno Watson, 1826-1892, physician, traveler, explorer, botanical collector in North America, 1869 member of the Geological Exploration of the 40th Parallel under Clarence King, 1869 at Yale, 1870-1874 at Harvard, 1874-1888 Assistant at the Gray Herbarium and 1888-1892 Curator, in 1889 elected to the National Academy of Sciences, assisted William Whitman Bailey in botanical collections, his most significant works are *Botany of California*. Cambridge, Mass. 1876, 1880 and *Bibliographical Index to North American*

Botany ... Part I, Polypetalae. Washington, D.C. 1878. See *United States Geological Exploration [sic] of the Fortieth Parallel*. Botany. by Sereno Watson. Washington 1871 and *List of Plants Collected in Nevada and Utah 1867-1869*. Sereno Watson, collector. [Washington, D.C. 1871]; Joseph Ewan, *Rocky Mountain Naturalists*. 332-333. The University of Denver Press 1950; Joseph William Blankinship (1862-1938), "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904; M.E. Jones, *Contr. West. Bot.* 18: 139-140. 1935; Charles Vancouver Piper, "Flora of Washington." *Contr. U.S. Nat. Herb.* vol. 11. 1906; J. Ewan, editor, *A Short History of Botany in the United States*. 92, 110. New York and London 1969; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 517, 797. Stuttgart 1993; Elizabeth Noble Shor, in *D.S.B.* 14: 192-193. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 465. 1965; William H. Brewer, *Biographical Memoirs*. National Academy of Sciences. 5: 267-290. 1903; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 427. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 792-793. University of Pennsylvania Press, Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 429, 471. Library of the New York Botanical Garden. 1973; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913)*. Dresden 1916; Samuel Wood Geiser, *Naturalists of the Frontier*. 221-222, 224. Dallas 1948)

Mexico. See *Nova Genera et Species Plantarum* 1: 124, t. 40. 1815 [1816], *Species Graminum Stipaceorum* 183. 1842, *Proceedings of the American Academy of Arts and Sciences* 18: 174. 1883 and *North American Flora* 17(6): 471. 1935.

M. wrightii Vasey ex J.M. Coult. (*Muhlenbergia coloradensis* Mez; *Muhlenbergia wrightii* var. *annulata* Vasey)

U.S., Colorado, New Mexico. Forage, see *Manual of the Botany ... of the Rocky Mountain Region* . . . 409. 1885, *A Descriptive Catalogue of the Grasses of the United States* 41. 1885 and *Repertorium Specierum Novarum Regni Vegetabilis* 17: 213. 1921.

M. x curtisetosa (Scribner) Bush (pro sp.) (*Melica x curtisetosa* (Scribn.) R.W. Pohl; *Muhlenbergia curtisetosa* (Scribn.) Bush; *Muhlenbergia schreberi* subsp. *curtisetosa* Scribn.; *Muhlenbergia schreberi* var. *curtisetosa* (Scribn.) Steyererm. & C.L. Kucera)

North America, U.S. Hybrid, see *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791 and *Rhodora* 9(98): 17. 1907, *American Midland Naturalist* 6: 35. 1919,

Rhodora 63(745): 25. 1961, *American Midland Naturalist* 82: 528. 1969.

M. x involuta Swallen (pro sp.)

North America, U.S., Texas. See *American Journal of Botany* 19(5): 436, f. 2. 1932, *Manual of the Vascular Plants of Texas* 232. 1970.

M. xanthodas Soderstr.

Mexico. See *Contributions from the United States National Herbarium* 34(4): 173. 1967.

Munroa Torrey = *Hemimunroa* Parodi,
Hemimunroa (Parodi) Parodi, *Monroa* Torrey,
Munroa Hack.

Named for Sir William Munro, 1818-1880 (Somerset), British botanist, plant collector, agrostologist, 1834-1838 India, 1847 Kashmir, 1870-1875 Barbados, in 1840 a Fellow of the Linnean Society, wrote "A monograph of the Bambusaceae, including descriptions of all the species." *Trans. Linn. Soc. London*. 26: 1-157. 1868. See T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 278. 1972; E. Bretschneider, *History of European Botanical Discoveries in China*. 1981; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 216. Oxford 1964; Warren R. Dawson, *The Banks Letters, a Calendar of the Manuscript Correspondence of Sir Joseph Banks*. London 1958; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; R. Zander, F. Encke, G. Buchheim, & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Mea Allan, *The Hookers of Kew*. London 1967; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. 199. London 1918; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Ralph Randles Stewart, *An Annotated Catalogue of the Vascular Plants of West Pakistan and Kashmir*. Karachi 1972; Ignatz Urban, editor, *Symbolae Antillanae*. 3: 91. Berlin 1902; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970.

Some 5 species, western U.S., Canada to Mexico, Central Andes, Peru to Argentina. Chloridoideae, Cynodonteae, Munroinae, annual, herbaceous, decumbent, low, prostrate, spreading, sometimes rooting at the nodes, mat-forming, branched, long stolons, leaves in fascicles and mostly basal, auricles absent, ligule a line of hairs, leaf blades pungent, plants bisexual or gynomonoecious, inflorescence a panicle, spikelets sessile and clustered, glumes unequal and present or absent or 2 or 1, second glume awnless, lemmas emarginate or bilobed and mucronate or awned, palea glabrous, lodicules absent or present, 2-3 stamens, 2-3 stigmas, in dry areas, sandy dunes, open habitats, dry plains, related to *Erioneuron* and *Dasyochloa*, type *Munroa squarrosa*

(Nutt.) Torr., see *Rep. Explor. Railroad Pacif. Ocean* 4: 158. 1856 [1857], *Die Natürlichen Pflanzenfamilien* 2(2): 65. 1887, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 8: 90. 1891, *Rev. Mus. La Plata* 5: 303. 1893, *Revisio Generum Plantarum* 3(3): 357. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 772: 78. 1920, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 34: 171-193. 1934, *American Journal of Botany* 48: 565-573. 1961, *Journal of the Colorado-Wyoming Academy of Science* 7(4): 29. 1973, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 52(3-4): 229-252. 1978 [El género *Munroa* (Poaceae): sinopsis morfológica y taxonómica], *Kew Bulletin* 37: 133-162. 1982, *Darwiniana* 25: 43-57. 1984, *Sida* 14: 531-549. 1991, *American Journal of Botany* 81: 622-629. 1994, *Contributions from the United States National Herbarium* 41: 127, 174. 2001, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu, & Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

M. andina Phil. (*Hemimunroa andina* (Phil.) Parodi; *Hemimunroa andina* var. *brevisetata* (Hack.) Parodi; *Munroa andina* var. *andina*; *Munroa andina* var. *brevisetata* Hack.; *Munroa multiflora* Phil.)

South America, Chile. Small, low, gynomonoecious, spikelets 5-8-flowered subsessile, glumes unequal, lower glume acute, upper glume rounded or mucronate, palea truncate, see *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 8: 90. 1891 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 294. 1914.

M. argentina Griseb.

Argentina, Bolivia. Small, leaf blades pungent, basal spikelet 2-flowered, distal spikelet 3-flowered, glumes pungent, lemma fimbriate, palea truncate, dry arid sites, see *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 300. 1879 and *Revista Mus. La Plata* 34: 187. 1934.

M. decumbens Phil.

South America, Chile, Bolivia. Small, gynomonoecious, spikelets 6-10-flowered, lower spikelets 2-glumed, terminal spikelet with lower glume reduced or absent, glumes unequal, lemmas 3-lobed, sandy soils, see *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 8: 90. 1891.

M. mendocina Phil.

Argentina. See *Anales de la Universidad de Chile* 36: 210. 1870.

M. squarrosa (Nutt.) Torrey (*Crypsis squarrosa* Nutt.; *Munroa squarrosa* var. *floccuosa* Vasey ex Beal; *Munroa squarrosa* var. *squarrosa*)

North America, U.S. Branched, slender stolons, glumes unequal to subequal, found in dry open areas, sandy soils, see *The Genera of North American Plants* 1: 49. 1818, *Pacif. Railr. Rep.* 4(5,4): 158. 1857, *Grasses of North America for Farmers and Students* 2: 456. 1896.

in English: false buffalo grass

Mustelia Cav. ex Steud. = *Chusquea* Kunth, *Mustelia* Steud., *Mustelia* Spreng. (Asteraceae, alt. Compositae)

Latin *mustela* “a weasel.”

Bambusoideae, Bambuseae, Chusqueinae, see *Der Botanische Garten der Universität zu Halle, Erster Nachtrag* 28. 1801, *Transactions of the Linnean Society of London* 6: 152. 24-27 May 1802, *Species Plantarum. Editio quarta* 3: 1775. 1804, *Synopsis Plantarum* 1: 254. 1822, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Nomenclator Botanicus. Editio secunda* 2: 168. 1841 and *Annals of the Missouri Botanical Garden* 82: 581-592. 1995, *Contributions from the United States National Herbarium* 39: 36-52. 2000.

Mygalurus Link = *Vulpia* Gmelin

Greek *mygale* “shrew-mouse, field-mouse” and *oura* “a tail,” Latin *mygale, es* “a small species of mouse.”

Pooideae, Poeae, Loliinae, type *Mygalurus caudatus* Link, see *Species Plantarum* 1: 73. 1753, Carl [Karl] Christian Gmelin (1762-1837), *Flora Badensis Alsatica* et confinium regionum cis et transrhena plantae a lacu bodamico ... Karlsruhe 1805-1826, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 92. 1821, *Genera Plantarum* 101. 1836, *Die Natürlichen Pflanzenfamilien* 2(2): 75. 1887 and *Contr. U.S. Natl. Herb.* 10: 3. 1906, *Botaniska Notiser* 130: 173-187. 1977, *Nordic Journal of Botany* 1(1): 17-26. 1981, *Contributions from the United States National Herbarium* 48: 454, 690-694. 2003.

Myriachaeta Moritzi = *Thysanolaena* Nees

From the Greek *myria* “many” and *chaite* “bristle, long hair.”

Panicoideae, Thysanolaeneae, type *Myriachaeta arundinacea* Zoll. & Moritzi, see *Edinburgh New Philosophical Journal* 18: 180. 1835, *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844* 101. 1846, *Synopsis Plantarum Glumacearum* 1: 404. 1855 [1854] and *Blumea*

35(2): 451. 1991, *Contributions from the United States National Herbarium* 46: 297, 617. 2003.

Myriocladus Swallen

From the Greek *myrios* “many, myriad, numberless” and *kladion* “a branchlet, a small branch,” *klados* “a branch.”

About 12-20 species, Venezuela, Brazil, Guyana. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Arthrostylidiinae, perennial, sympodial, unicaspitate, unarmed, canelike or tree, woody and persistent, more or less simple, hollow or solid, flowering culms leafy, culm sheaths persistent and thickened, thickets forming, rhizomes pachymorph, leaf blades leathery, leaves imbricate above an elongated internode, terminal unilateral racemes along a central axis, spikelets sessile or pedicelled, spikelets with 2 fertile and 1 sterile florets, 2-3 glumes, palea nerved, 3 membranous lodicules, 3 stamens, stigmas 2, on sandstone, woodlands, savannah hills, along streams and stream banks, type *Myriocladus virgatus* Swallen, see J.A. Steyermark & collaborators, “Botanical Exploration in Venezuela.” in *Fieldiana, Bot.* 1951-1952, *Fieldiana, Botany* 28(1): 34, f. 4. 1951, *Taxon* 6: 205. 1957, *Memoirs of the New York Botanical Garden* 9: 237-249. 1957, *Memoirs of the New York Botanical Garden* 18(2): 11-22. 1969, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Novon* 1(2): 76-87. 1991, *Brittonia* 50(1): 430-446. 1998 [A revision of *Myriocladus* (Poaceae: Bambusoideae: Bambuseae)], *American Bamboos* 186-189. 1999, *Contributions from the United States National Herbarium* 39: 76-78. 2000.

Species

M. cardonae Swallen (named for the Catalan explorer Félix Cardona Puig, 1903-1982, geographer, botanical collector in Brazil and Venezuela, the most important twentieth century traveler and explorer in the Venezuelan Guiana, in 1927, with Juan Mundo and his son, explored the slopes of the Auyantepui for over 3 months, he was the first European to see what we know today as Angel Falls, the world's highest waterfall. See Pere (Pedro) Grases, “*Fèlix Cardona i Puig. Mite i realitat al cor d'Amèrica del Sud (Assaig d'interpretació personal)*.” Caracas: Terra Ferma, Patronat de Cultura del Centre Català de Caracas. Ajuntament de Malgrat, Generalitat de Catalunya, Institut Català de Cooperació Iberoamericana, Institut Municipal d'Història de l'Ajuntament de Barcelona. L'Hospitalet de Llobregat, 1983; Eduardo Röhl, *Historia de las ciencias geográficas de Venezuela (1498-1948)*. Caracas, Edición de Héctor Pérez Marchelli, 1990; Francisco Escamilla Vera, *Geografía de Venezuela* 9. Caracas, Oxford University Press 1998)

Venezuela. See *Fieldiana, Botany* 28(1): 35. 1951, *Memoirs of the New York Botanical Garden* 9(3): 237-278. 1957,

Smithsonian Contributions to Botany 9: 1-148. 1973, *Smithsonian Contr. Bot.* 56: 28. 1984, *Brittonia* 50(1): 430-446. 1998.

M. churunensis Swallen

Venezuela, Río Churún. Erect, forming small colonies, see *Memoirs of the New York Botanical Garden* 9(3): 237-278. 1957, *Acta Botanica Venezuelica* 2(5-8): 132. 1967.

M. distantiflorus Swallen (*Myriocladus confertus* Swallen; *Myriocladus purpureus* Swallen; *Myriocladus variabilis* Swallen; *Myriocladus wurdackii* Swallen) (dedicated to the American botanist John Julius Wurdack, 1921-1998, plant collector; see Julien Alfred Steyermark (1909-1988), "New Species of Rubiaceae from Peru collected by John Wurdack." *Bol. Soc. Venez. Ci. Nat.* 25: 232-244. 1964; J.A. Steyermark & collaborators, "Botanical Exploration in Venezuela." in *Fieldiana, Bot.* 1951-1952; Bassett Maguire (1904-1991), "Guttiferae." in B. Maguire, J.J. Wurdack, & collaborators, "The Botany of the Guayana Highland — part IV(2)." *Memoirs of the New York Botanical Garden* 10(4): 21-32. 1961, "Rapateaceae." in B. Maguire, J.J. Wurdack, & collaborators, "The Botany of the Guayana Highland-part VI." *Mem. New York Bot. Gard.* 12(3): 69-102. 1965; Bassett Maguire & Y.-C. Hung, "Styracaceae." in B. Maguire, J.J. Wurdack and collaborators, "The Botany of the Guayana Highland — part X." *Mem. New York Bot. Gard.* 29: 204-223. 1978; Bassett Maguire, J.A. Steyermark & D.G. Frodin, "Araliaceae." in B. Maguire, J.J. Wurdack, & collaborators, "The Botany of the Guayana Highland — part XII." *Mem. New York Bot. Gard.* 38: 46-84. 1984; Lois Brako & James Lee Zarucchi, *Catalogue of the Flowering Plants and Gymnosperms of Peru*. 1249-1250. Missouri Botanical Garden, St. Louis, Missouri 1993; Laurence J. Dorr, "In Memoriam. John J. Wurdack, 1921-1998." in *Plant Science Bulletin*. 44(2): 41. Summer 1998)

Venezuela. Erect, forming colonies, moist ground, see *Memoirs of the New York Botanical Garden* 9(3): 248, f. 4c-f, I, and 396-398. 1957.

M. exsertus Swallen (*Myriocladus simplex* Swallen)

Venezuela. Savannah, along stream banks, see *Memoirs of the New York Botanical Garden* 9(3): 242, f. 3c. 1957.

M. grandifolius Swallen (*Myriocladus paraquensis* Swallen)

Venezuela, Amazonas, Cerro Sipapo, Paráque. Savannah, along stream banks, open forest, forest, see *Fieldiana, Botany* 28(1): 34, f. 4. 1951, *Taxon* 6: 205. 1957, *Memoirs of the New York Botanical Garden* 9(3): 245-246, f. 3h-j. 1957.

M. involutus Judz. & Davidse

Venezuela. See *Novon* 1(2): 83, f. 4. 1991.

M. longiramosus Swallen (*Myriocladus affinis* Swallen; *Myriocladus paruensis* Swallen)

Venezuela, Amazonas, Serrania Parú, Río Parú. Borders of woodlands, see *Memoirs of the New York Botanical Garden* 9(3): 243-244, f. 3e-g. 1957.

M. neblinaensis Swallen

Venezuela, Amazonas, Río Yatua, Cerro de Neblina. Savannah, see *Memoirs of the New York Botanical Garden* 9(3): 240, f. 1. 1957.

M. paludicolus Swallen (*Myriocladus paludicola* Swallen)

Venezuela. Erect, see *Memoirs of the New York Botanical Garden* 9(3): 246, 248, f. 4b. 1957.

M. simplex Swallen

Venezuela. Savannah, along stream banks, see *Memoirs of the New York Botanical Garden* 9(3): 242, f. 2. 1957.

M. steyermarkii Swallen (*Myriocladus gracilis* Swallen)

Venezuela. Short wiry culms, solitary raceme of 3-5 spikelets borne laterally, see *Memoirs of the New York Botanical Garden* 9(3): 247, f. 3a and 393, 395, f. 74. 1957.

M. virgatus Swallen (*Myriocladus maguirei* Swallen)

Venezuela. Erect, savannah, see *Fieldiana, Botany* 28(1): 34, f. 4. 1951, *Memoirs of the New York Botanical Garden* 9(3): 239, f. 3b. 1957.

**Myriostachya (Benth.) Hook.f. =
Myriostachya J.D. Hook.**

From the Greek *myrios* "many, numberless, a great many, countless" and *stachys* "spike," alluding to the spikes.

One species, south India to Indochina, Indonesia. Chloridoideae, Eragrostideae, *Eragrostis* sect. *Myriostachya* Benth., perennial, robust, herbaceous, unarmed, simple or sparsely branched, rhizomatous, rhizomes pachymorph, semiaquatic, often floating, leaves mainly basal, auricles absent, ligule a fringed and narrow membrane, leaf blades long acuminate and finely pointed, plants bisexual, inflorescence spicate and paniculate, long and narrow panicle, racemes deciduous, spikelets solitary closely imbricate, florets perfect, 2 awned glumes more or less unequal or subequal, lemmas coriaceous acuminate, palea 2-nerved 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, found in brackish water, river margins, banks of tidal rivers, see *Journal of the Linnean Society, Botany* 19: 117. 1881, *The Flora of British India* 7: 327. 1897.

Species

M. wightiana (Nees ex Steud.) Hook.f. (*Dinebra verticillata* Wight ex Steud.; *Eragrostis wightiana* (Nees ex Steud.) Benth.; *Leptochloa wightiana* Nees ex Steud.; *Myriostachya longispicula* (Hook.f.) Senaratna; *Myriostachya wightiana* var. *longispicula* Hook.f.)

Sri Lanka, India, Thailand, Malay Peninsula. Perennial, tussocky, compressed, ligule a line of hairs, floating rhizomes, coriaceous blades, leaf sheaths coriaceous, cylindrical panicle, numerous racemes, spikelets pedicellate, acuminate glumes linear-lanceolate tapering to a long subulate awn, lemmas keeled glabrous, marshy places, see

Synopsis Plantarum Glumacearum 1: 209, 216. 1854, *Icones Plantarum* 14: t. 1381. 1882, *The Flora of British India* 7: 327. 1896 and *Grasses of Ceylon* [also *Peradeniya Manual*] 8: 66. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 518. 1960.

N

Nabelekia Roshevitz = *Anatherum* P. Beauv., *Anatherum* Nábelek, *Festuca* L.

For Frantisek Nábelek, 1884-1965, Moravian professor of botany, author of *Iter-turcico-persicum*. Bruno 1923-1929. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 534. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 280. 1972; Stafleu & Cowan, *Taxonomic literature*. 3: 678-679. 1981.

Panicoideae, Andropogoneae, Andropogoninae or Pooideae, Poeae, Loliinae, type *Nabelekia tauricola* (Nábelek) Roshev., see *Species Plantarum* 1: 73-76. 1753, *Essai d'une Nouvelle Agrostographie* 128, 150. 1812 and *Ill. Fl. U.S. Canad.* edition 2, 1: 269. 1913, *Watsonia* 16: 300. 1987, *Contributions from the United States National Herbarium* 46: 19-20. 2003, *Contributions from the United States National Herbarium* 48: 312-368. 2003.

Narduretia Villar = *Vulpia* Gmelin

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, type *Narduretia delicatula* (Lag.) Villar (also *deliculata*), see *Flora Atlantica* 1: 88, t. 12. 1798, *Flora Badensis Alsatica* 1: 8. 1805, *Varietades de Ciencias, Literatura y Artes* 4(19): 39. 1805, *Compendium Florae Germaniae. Editio altera* 1: 193. 1836, *Genera Plantarum* 101. 1836, *Synopsis Florae Germanicae et Helveticae* 809. 1837, *Index Sem. Hort. Genuensis* 26. 1847, *Prodromus Florae Hispanicae* 1: 90. 1861 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 16: 100-102. 1925, *Botaniska Notiser* 130(2): 186. 1977, *Nordic Journal of Botany* 1(1): 20, 24. 1981, *Watsonia* 16: 300. 1987, *Flora Mesoamericana* 6: 228. 1994, *Bothalia* 27: 75-82. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Bothalia* 29(2): 335-341. 1999, *Systematic Botany* 27(2): 241-251. 2002, *Contributions from the United States National Herbarium* 48: 690-694. 2003.

Narduroides Rouy

Resembling *Nardurus*.

One species, Mediterranean. Pooideae, Poodae, Poeae, annual, herbaceous, erect, slender, rigid, stiff, auricles absent, linear leaves, ligule an unfringed membrane, plants

bisexual, rigid unilateral inflorescence spicate or racemose, spikelets solitary and appressed, spikelets sessile and more or less sunken in 2 opposite rows, 2 glumes subequal and side-by-side, lemmas coriaceous, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, adapted to saline soils, type *Narduroides salzmannii* (Boiss.) Rouy, see *Flore de France* 14: 301. 1913.

Species

N. salzmannii (Boiss.) Rouy (*Catapodium salzmannii* (Boiss.) Boiss.; *Festuca salzmannii* (Boiss.) Boiss. ex Coss.; *Nardurus salzmannii* Boiss.)

Mediterranean. Hainardieae, raceme unilateral, spikelets 4- to 6-flowered, dry places, see *Voyage botanique dans le midi de l'Espagne* 2: 667. 1844 and *Taxon* 33: 351-354. 1984, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989.

Nardurus (Bluff, Nees & Schauer) Rchb. = *Vulpia* C.C. Gmelin

From the Greek *nardos* "spikenard, a fragrant shrub."

Pooideae, Poodae, Poeae, or Pooideae, Poeae Loliinae, *Brachypodium* sect. *Nardurus* Bluff, Nees & Schauer, see *Species Plantarum* 1: 73. 1753, *Flora Badensis Alsatica* 1: 8. 1805, *Essai d'une Nouvelle Agrostographie* 101, 155, 180. 1812, *Systema Vegetabilium* 2: 745. 1817, *Observations sur les Graminées de la Flore Belgique* 99, 100. 1824, *Compendium Florae Germaniae. Editio altera* 1: 193. 1836, *Genera Plantarum* 101. 1836, *Synopsis Florae Germanicae et Helveticae* 809. 1837, *Prodromus Florae Hispanicae* 1: 90. 1861, *Die Natürlichen Pflanzenfamilien* 2(2): 75. 1887 and *Synopsis der mitteleuropäischen Flora* 2(1): 539. 1900, *Flore de l'Afrique du Nord* 3: 215. 1955, *Botanical Journal of the Linnean Society* 76(4): 350. 1978, *Nordic Journal of Botany* 1(1): 24. 1981, *Contributions from the United States National Herbarium* 48: 454, 690-694. 2003.

Nardus L. = *Natschia* Bubani

Greek *nardos* "spikenard," Latin *nardus*, *i* and *nardum* "nard," Hebrew *nerd*, Akkadian *nadû* "to pour, to let water flow, to scatter"; see Carl Linnaeus, *Species Plantarum*. 53. 1753 and *Genera Plantarum*. Edition 5. 27. 1754.

One species, Europe; western Asia; Caucasus. Stipoideae or Arundinoideae, Nardeae, or Pooideae, Nardeae, perennial, stiff, tough, robust, stout, dense, wiry, tufted, internodes hollow, leaves mainly basal, auricles absent, ligule an unfringed membrane, filiform leaf blades, plants bisexual, inflorescence a single unilateral spike or raceme very slender, spikelets solitary and dorsally compressed, spikelets 1-flowered without rachilla extension, 1-2 glumes persistent and tiny or weakly developed, lower glume reduced to a rim, upper glume usually suppressed or severely reduced, lemma strongly 2-keeled, palea nerved, lodicules absent, 3 stamens, ovary glabrous, 1 stigma, species of open habitats, moorland, swamps, pastures, swampy pasture, damp areas, moist ground, type *Nardus stricta* L., see *Species Plantarum* 1: 53. 1753, *Species Plantarum, Editio Secunda* 78. 1762, *Hortus Regius Monspeliensis* 33. 1762, *Supplementum Plantarum* 105. 1781 [1782], *Tableau Encyclopédique et Méthodique ... Botanique* 1: 152. 1791, *Synopsis Florae Germanicae et Helveticae*. 830. *Francofurti ad Moenum* 1836-37, *Deutsch. Fl.* 6: 4. 1846 and *Flora Pyrenaea per ordine naturales gradatim digesta* 4: 405. Milano 1901, *Madroño* 17(3): 91-92. 1963, *Turun yliopiston julkaisu* — *Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Brenesia* 19-20: 617-618. 1982, *Iowa State Journal of Research* 58(2): 191-194. 1983, *Bot. J. Linn. Soc.* 91: 441. 1985, *Bot. Zhurn.* 72: 1069-1074. 1987, *Travaux de l'Institut Scientifique, Université Mohamed V. Série Botanique* 35: 1-168. 1988, *Fitologija* 39: 72-77. 1991, *Flora Mesoamericana* 6: 250. 1994, *Grass and Forage Science* vol. 53, issue 3: 260-269. Sep 1998, *Taxon* 48(1): 155-156. 1999, *Am. J. Bot.* 87: 96-107. 2000, *Taxon* 49(2): 252. 2000, *Taxon* 49(4): 802. 2000, Adriana L. Carnelli, Marco Madella, Jean-Paul Theurillat & Brigitta Ammann, "Aluminum in the opal silica reticulate of phytoliths: a new tool in palaeoecological studies." *Am. J. Bot.* 89: 346-351. 2002, *Contributions from the United States National Herbarium* 48: 454-455, 467. 2003, *Am. J. Bot.* 91: 1709-1725. 2004, *Environmental Microbiology* 7(6): 780-788. June 2005.

Species

N. stricta L. (*Nardus glabriculumis* Sakalo; *Nardus stricta* var. *glabriculumis* (Sakalo) Tzvelev)

Eurasia. Perennial, tufted, slender, erect, shortly creeping rhizome, leaf sheath coriaceous, leaf blade pungent and hard, spikelets 1-flowered, glumes much reduced, lemma with a weak central nerve, palea membranous, no lodicules, very unpalatable, invasive grass, noxious weed naturalized elsewhere, see *Species Plantarum*. 1: 53. 1753 and *Regnum Veg.* 127: 69. 1993, A.C. Cook, D.T. Tissue, S.W. Roberts & W.C. Oechel, "Effects of long-term elevated [CO₂] from natural CO₂ springs on *Nardus stricta*: photosynthesis, biochemistry, growth and phenology." *Plant, Cell and*

Environment 21(4): 417-425. Apr 1998, *Journal of Ecology* 87(2): 330-340. Mar 1999, *Grass and Forage Science* 54(3): 195-207. Sep 1999, *New Phytologist* 152(2): 355-363. Nov 2001, *Functional Ecology* 16(5): 664-670. Oct 2002, *Environmental Microbiology* 6(10): 1070-1080. Oct 2004.

in English: mat grass, nard grass, moor matgrass

in India: sama

Narenga Bor = *Saccharum* L.

Two species, Indochina, Malaysia, Southeast Asia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial, herbaceous, robust, stout, tough, solid internodes, stoloniferous, ligule an unfringed membrane, plants bisexual, dense and woolly inflorescence paniculate with paired spikelets, spikelets sessile and pedicellate, two glumes subequal, lodicules present, 3 stamens, ovary glabrous, sometimes referred to *Saccharum* L., intergeneric hybrids with *Saccharum* L. and *Sclerostachya* (Hackel) A. Camus, type *Narenga porphyrocoma* (Hance ex Trimen) Bor, see *Species Plantarum* 1: 54. 1753 and *Fl. Assam* 5: 315. 1940, *Indian Forester* 66: 267. 1940, *Contributions from the United States National Herbarium* 46: 297, 550-557. 2003.

Species

N. fallax (Balansa) Bor (*Erianthus chrysothrix* Hack.; *Erianthus fallax* (Balansa) Ohwi; *Erianthus fallax* (Balansa) Jansen, nom. illeg., non *Erianthus fallax* (Balansa) Ohwi; *Erianthus longifolius* (Munro ex Benth.) A. Camus; *Eriochrysis longifolia* Munro; *Saccharum fallax* Balansa; *Saccharum longifolium* Munro ex Benth.)

India. See *Journal of the Linnean Society, Botany* 19(115-116): 66. 1881, *Journal de Botanique (Morot)* 4(4): 80-81. 1890, *Österreichische Botanische Zeitschrift* 41: 6. 1891 and *Flore Générale de l'Indo-Chine* 7: 246. 1922, *Bulletin of the Tokyo Science Museum* 18: 2. 1947, *Kew Bulletin* 1948: 162. 1948, *Reinwardtia* 2(2): 275. 1953.

N. fallax (Balansa) Bor var. *aristata* (Balansa) L. Liou (*Saccharum fallax* var. *aristatum* Balansa)

Northeastern India, China, Vietnam. See *Journal de Botanique (Morot)* 4: 81. 1890 and *Flora Reipublicae Popularis Sinicae* 10(2): 37. 1997.

N. fallax (Balansa) Bor var. *fallax* (*Erianthus chrysothrix* Hack.; *Erianthus fallax* (Balansa) Ohwi; *Erianthus fallax* (Balansa) Jansen, nom. illeg., non *Erianthus fallax* (Balansa) Ohwi; *Erianthus longifolius* (Munro ex Benth.) A. Camus; *Eriochrysis longifolia* Munro; *Saccharum fallax* Balansa; *Saccharum longifolium* Munro ex Benth.)

China. See *Journal of the Linnean Society, Botany* 19 (115-116): 66. 1881, *Journal de Botanique (Morot)* 4(4): 80-81. 1890, *Österreichische Botanische Zeitschrift* 41: 6. 1891 and *Flore Générale de l'Indo-Chine* 7: 246. 1922, *Bulletin*

of the Tokyo Science Museum 18: 2. 1947, *Kew Bulletin* 1948: 162. 1948, *Reinwardtia* 2(2): 275. 1953.

N. porphyrocoma (Hance ex Trimen) Bor (*Eriochrysis narenga* Nees ex Steud.; *Eriochrysis porphyrocoma* Hance ex Trimen; *Saccharum narenga* (Nees ex Steud.) Hack.; *Saccharum porphyrocoma* (Hance ex Trimen) Hack.; *Saccharum porphyrocoma* var. *hasianum* Hack.)

India. Young leaves browsed by cattle, culms used for thatching and screens, a good soil binder useful for erosion control, see *Synopsis Plantarum Glumacearum* 1: 411. 1855 [1854], *Journal of Botany, British and Foreign* 14(166): 294. 1876, *Monographiae Phanerogamarum* 6: 119-120. 1889 and *Indian Forester* 56: 267, 316. 1940, *Caryologia* 37: 351-357. 1984.

in India: barota, bata, ganeria, kanwal, ronsa, tanwar

in Thailand: khaem pom

Nassella Desvaux = *Nassella* (Trin.) E. Desv.

From the Latin *nassa*, *ae* “a fish basket,” “a basket for catching fish.”

About 15-116 species, mostly South America, Bolivia, northern Chile, northwestern Argentina, Andes. Stipoideae, Stipeae, or Pooideae, Stipeae, Stipinae, *Urachne* subg. *Nassella* Trin., perennial, rarely annual, caespitose, herbaceous, branched sometimes, internodes hollow, auricles absent, sheaths open, ligule membranous and truncate, blade acuminate, leaves valvate or flat, plants bisexual, inflorescence a contracted or open panicle with asymmetric laterally compressed florets, spikelet with a single gibbous to fusiform floret, 2 glumes nerved and lanceolate, lemma often with a corona or crown, lemma strongly convolute and coriaceous, lemma margins enclosing palea, awn readily deciduous and twisted or geniculate, callus short and blunt to long and sharp, palea hyaline and usually nerveless, 2 lodicules membranous and glabrous, 1-3 stamens, ovary glabrous, 2 stigmas, weed species, species of open habitats, pampas, some species have caused poisoning to mammals, closely related to *Hesperostipa* and *Piptochaetium* and *Achnatherum*, formerly included within and sometimes referred to the genus *Stipa* L., an Andean segregate of *Stipa*, type *Nassella pungens* E. Desvaux, see *Species Plantarum* 1: 78. 1753, *Fundamenta Agrostographiae* 109. 1820, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 375. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1: 73. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 122, 123. 1834, *Gram. Stipac.* 20. 1842, Claude Gay (1800-1873), *Historia física y política de Chile ... Botánica [Flora chilena]* 6: 263, 265, 268, 283, t. 75, f. 1. Paris 1845-1852

[1854] and *Anales del Museo Nacional de Montevideo* 4: IV, 58, 137. 1901, *Revista Argentina de Botánica* 1: 13, 14, 34, 36, 40, 44. 1925, *Special Paper(s): Geological Society of America* 41: 67. 1942, *Darwiniana* 7: 14, 369-394. 1947, *Nuovo Giornale Botanico Italiano, n.s.* 58: 483-485, f. 7. 1951, *Kurtziana* 3: 82. 1966, *Kansas Geological Survey Bulletin* 218: 1-68. 1979, *Gayana, Botánica* 47(1-2): 9-35. Santiago 1990, *Taxon* 39(4): 597-614. 1990 [*Nassella* (Gramineae, Stipeae): revised interpretation and nomenclatural changes], *Flora Mesoamericana* 6: 243-244. 1994, *Gayana, Botánica* 54(2): 163-182. 1997, *Novon* 8(1): 23-30. 1998, *Gayana, Botánica* 55(2): 85-88. 1998, Mary E. Barkworth & María Amelia Torres, “Distribution and diagnostic characters of *Nassella* (Poaceae: Stipeae).” in *Taxon* 50: 439-468. 2001, *Flora de Veracruz* 127: 1-28. 2002, *Flora of Australia* 43: 90, 176. 2002, *Contr. U.S. Natl. Herb.* 48: 455-467, 649. 2003, *Ecology Letters* 8(2): 209-217. Feb 2005, *Restoration Ecology* 13(1): 61-73. Mar 2005, *Ecological Management and Restoration* vol. 6, issue 1: 34-42. Apr 2005.

Species

N. airoides (E. Ekman) Barkworth (*Stipa airoides* E. Ekman)

Argentina. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 31, t. 4, f. 2. 1912, *Taxon* 39(4): 609. 1990.

N. ancoraimensis F. Rojas (Bolivia, La Paz, Prov. Omasuyos, Ancoraimes, Cerro del Calvario)

Bolivia, Peru. See *Gayana, Botánica* 54(2): 165-166, f. 4. 1997.

N. arcaensis (Speg.) Torres (*Stipa arcaensis* Speg.; *Stipa paniculata* Hitchc.)

Argentina, Cuesta de Las Arcas. See *Anales del Museo de Historia Natural de Montevideo* 4: 131-132, f. 37. 1901, *Contributions from the United States National Herbarium* 24(7): 286. 1925, *Comisión de Investigaciones Científicas* 13: 13. Buenos Aires 1997.

N. arcuata (R.E. Fries) Torres (*Stipa arcuata* R.E. Fries)

Argentina, Bolivia. Perennial, leaf blades linear acuminate, oblong panicle, glumes lanceolate glabrous acuminate, pungent callus, see *Nova Acta Regiae Societatis Scientiarum Upsaliensis, ser. 4*, 1: 172. 1905, *Comisión de Investigaciones Científicas* 13: 13, f. 2A, a. 1997.

N. arechavaletae (Speg.) Barkworth (*Stipa arechavaletae* Speg.)

Uruguay. See *Anales del Museo Nacional de Montevideo* 4(2): 85-87, f. 19. 1901, *Taxon* 39(4): 609. 1990.

N. argentinensis (Speg.) Peñailillo (*Stipa argentinensis* Speg.; *Stipa neesiana* Trin. & Rupr. var. *virescens* Hack.)

Argentina. See *Species Graminum Stipaceorum* 27-28. 1842 and *Anales del Museo Nacional de Buenos Aires* 11:

100. 1904, *Revista Argentina de Botánica* 1: 45. 1925, *Kurtziana* 3: 30. 1966, *Gayana, Botánica* 55(2): 86. 1998 [1999].

N. asplundii Hitchc. (*Piptatherum obtusum* Nees & Meyen; *Stipa obtusa* (Nees & Meyen) Hitchc.) (for the Swedish botanist Eric (Erik) Asplund, 1888-1974, plant collector in Cuba and South America, his writings include *Contributions to the Flora of the Bolivian Andes*. Stockholm 1926 and "Eine neue Balanophoraceen — Gattung aus Bolivien." *Svensk Bot. Tidskr.* 22(1-2): 261-277. 1928; see Frans A. Stafleu & Erik A. Mennega, *Taxonomic literature. Supplement I: A-Ba*. 198. Königstein 1992)

South America, Bolivia, Peru. Perennial, herbaceous, caespitose, bunchgrass, erect or geniculate, leaves mainly basal, auricles hairy, ligule truncate, lax inflorescence reddish to purplish, glumes lanceolate subequal acuminate, pastures, puna, see *Gramineae* 18-19. 1841 and *Contributions from the United States National Herbarium* 24(7): 284. 1925, *Contributions from the United States National Herbarium* 24(8): 394. 1927.

N. ayacuchensis (Tovar) Barkworth (*Stipa ayacuchensis* Tovar) (Peru, Huamanga, Ayacucho)

South America, Peru. See *Opuscula Botánica Pharmaciae Complutensis* [now *Rivasgodaya*] 4: 85. 1988 [Universidad Complutense de Madrid], *Taxon* 39(4): 609. 1990.

N. brachychaetoides (Speg.) Barkworth (*Stipa brachychaetoides* Speg.)

Argentina. Dunes, see *Revista Argentina de Botánica* 1(1): 29. 1925, *Taxon* 39(4): 609. 1990.

N. brachyphylla (Hitchc.) Barkworth (*Nassella curviseta* (Hitchc.) Barkworth; *Nassella holwayii* (Hitchc.) Barkworth; *Nassella inconspicua* (J. Presl) Barkworth; *Stipa brachyphylla* Hitchc.; *Stipa curviseta* Hitchc.; *Stipa depauperata* Pilg. var. *glabrata* Pilg.; *Stipa holwayii* Hitchc.; *Stipa inconspicua* J. Presl)

Ecuador, Peru, Bolivia. Perennial, low, caespitose, herbaceous, alpine, tussocky, forming small clumps, short ligule, linear leaves fine and round in section, narrow inflorescence, reddish to purple glumes lanceolate, long and bent awns, growing on sandy soils, puna, slopes, grassy areas, volcanic soil, see *Reliquiae Haenkeanae* 1(4-5): 227. 1830 and *Contributions from the United States National Herbarium* 24(7): 275, 282, 287. 1925, *Taxon* 39(4): 609-610. 1990.

N. brasiliensis (A. Zanín & Longhi-Wagner) Peñailillo (*Stipa brasiliensis* A. Zanín & Longhi-Wagner)

South America. See *Bradea, Boletim do Herbarium Bradeanum* 5(33): 342-343, f. 1. 1990, *Gayana, Botánica* 55(2): 86. 1998 [1999].

N. burkartii (Torres) Barkworth & Torres (*Stipa burkartii* Torres) (named for the Argentine botanist Arturo E. Burkart (1906-1975), agronomist, author of "Bibliografía del

botánico argentino Lorenzo R. Parodi (1895-1966)." *Bol. Soc. Argent. Bot.* 12: 7-16. 1968; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 284. 1965)

Argentina. See *Comisión de Investigaciones Científicas* 12: 17, f. 2, C, c, f. 4,b. 1993, *Taxon* 50(2): 453. 2001.

N. cabreræ Torres (also spelled *cabrerai*) (dedicated to the Argentine botanist Angel Lulio Cabrera, 1908-1999, professor emeritus of systematic botany, National University of La Plata, Director, Botanical Institute, San Isidro, Argentina, author of "El Aster *Haplopappus* y las especies vecinas que crecen en los alrededores de Buenos Aires." *Revista Chilena de Historia Natural* 1929, "Apuntes sobre la vegetación de las dunas de Juancho." *Notas del Museo de La Plata, La Plata* (Buenos Aires), 1936; son of the zoologist Angel Cabrera, 1879-1960; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 295. 1965)

South America, Argentina. See *Comisión de Investigaciones Científicas* 13: 14-15, f. 1, I, i. 1997.

N. caespitosa Griseb. (*Nassella caespitosa* var. *caespitosa*; *Nassella inconspicua* (J. Presl) Barkworth; *Oryzopsis caespitosa* (Griseb.) Ball; *Oryzopsis caespitosa* var. *caespitosa*; *Stipa caespitosa* (Griseb.) Speg.; *Stipa caespitosa* var. *subtypica* Speg.; *Stipa caespitosa* var. *typica* Speg.; *Stipa inconspicua* J. Presl; *Stipa plagiostephana* Speg.; *Stipa violacea* Hitchc.)

Argentina. See *Reliquiae Haenkeanae* 1(4-5): 227. 1830, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 258. 1874, *Journal of the Linnean Society, Botany* 22: 58. 1885 and *Anales del Museo Nacional de Montevideo* 4(2): 117-120, f. 31a-c, d-f. 1901, *Report. Botanical Exchange Club. London*. 1914: 28. 1915, *Contributions from the United States National Herbarium* 24(7): 282. 1925, *Revista Argentina de Botánica* 1: 36. 1925, *Taxon* 39(4): 610. 1990.

N. carettei (Hauman) Torres (*Stipa carettei* Hauman) (for Eduardo Carette, botanical collector in Argentina with the Belgian botanist Lucien Leon Hauman-Merck (1880-1965) and Carlos Bruch)

South America, Argentina. See *Anales del Museo Nacional de Buenos Aires* 29: 399, f. 2. 1917, *Comisión de Investigaciones Científicas* 13: 16. 1997.

N. catamarcensis Torres

South America, Argentina, Catamarca. See *Comisión de Investigaciones Científicas* 13: 17, f. 2, I, i. 1997.

N. cernua (Stebbins & Á. Löve) Barkworth (*Stipa cernua* Stebbins & Löve; *Stipa pulchra* var. *cernua* (Stebbins & Löve) Beetle; *Stipa pulchra* var. *cernua* (Stebbins & Löve) Beetle & Tofsrud)

North America, U.S., California. Perennial, tufted, in rather large clumps, basal leaves numerous and very narrow, blue-green waxy coating, open panicle with slender branches, spikelets densely bearded at the base, long and needle-like

awns can injure cattle, noxious weed, occurs under dry conditions, chaparral, slope habitats, see *American Journal of Botany* 2: 301. 1915, *Madroño* 6(4): 137-141, f. 1, pl. 13, f. 1, 3. 1941, *Leaflets of Western Botany* 5(2): 35. 1947, *Taxon* 39(4): 609. 1990.

in English: nodding needle grass, nodding tussock grass, nodding stipa, foothill needle grass, needle grass

N. chaparensis F. Rojas

South America, Bolivia, Cochabamba, Chaparé. Caespitose, leaf blades linear, oblong panicle, glumes subequal oblong-lanceolate acuminate, see *Gayana, Botánica* 54(2): 167-168, f. 6. 1997.

N. charruana (Arechav.) Barkworth (*Stipa charruana* Arechav.; *Stipa longicylindrica* Kuntze)

Argentina, Uruguay. See *Anales del Museo Nacional de Buenos Aires* 4: 181, f. 3. 1895, *Revisio Generum Plantarum* 3(2): 372. 1898 and *Taxon* 39(4): 609. 1990.

N. chilensis (Trin.) E. Desv. (*Caryochloa chilensis* Spreng.; *Caryochloa chilensis* Spreng. ex Trin.; *Nassella chilensis* var. *chilensis*; *Nassella floribunda* Phil.; *Nassella landbeckii* Phil.; *Nassella landbeckii* var. *eremophila* Phil.; *Nassella landbeckii* var. *landbeckii*; *Nassella laxiflora* Phil.; *Nassella major* (Trin. & Rupr.) E. Desv.; *Nassella meyeniana* (Trin. & Rupr.) Parodi; *Nassella obscura* Phil.; *Nassella planifolia* Phil.; *Nassella ramosa* (Nees) E. Desv.; *Nassella ramosa* E. Desv.; *Nassella sadae* Phil.; *Piptatherum laeve* Meyen; *Piptatherum lindleyanum* Nees; *Piptatherum ramosum* Nees, pro parte; *Urachne aemulans* Steud. ex Lechler; *Urachne chilensis* Trin.; *Urachne gigantea* Steudel; *Urachne major* Trin. & Rupr.; *Urachne meyeniana* Trin. & Rupr.; *Urachne ramosa* Steudel; *Urachne ramosa* Steud. & Hochst.) (for Luis Christian Ludwig Landbeck, 1807-1890, plant collector in Chile; see *Sendtnera* 4: 47. 1997)

Southern America, Chile, Andes. Often branched from the upper nodes, sheaths glabrous or pubescent, ligule short and pilose, leaf blade strongly convolute and stiff, glumes subequal and veined, callus obtuse, lemma smooth and shiny, awn caducous, palea glabrous and reduced, found in ballast, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 123. 1834, *Gramineae* 16-17. 1841, *Nom. Bot.* edition 2, 2: 731. 1841, *Species Graminum Stipaceorum* 20-21. 1842, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 1: 148-149. Breslau et Bonn 1843, *Synopsis Plantarum Glumacearum* 1: 123. 1854, *Flora Chilena* 6: 265-266. 1854, *Linnaea* 33(3-4): 277, 279. 1864 [1865], *Anales de la Universidad de Chile* 43: 558. 1873, *Anales de la Universidad de Chile* 93: 727, 729. 1896 and *Darwiniana* 7(3): 379, f. 5. Buenos Aires 1947, *Flora Patagónica* 8(3): 289-333. 1978, *Gayana, Bot.* 47(1-2): 18-19, 22. 1990.

in English: Chilean tussock grass

N. clarazii (Ball) Barkworth (*Stipa clarazii* Ball; *Stipa clarazii* var. *bulbosa* Speg.; *Stipa clarazii* var. *clarazii*; *Stipa longiglumis* Phil.; *Stipa quadrifaria* Kuntze) (dedicated to Georges Claraz, 1832-1930, plant collector in Argentina)

South America, Argentina. See *Linnaea* 33(3-4): 286. 1864, *Journal of the Linnean Society, Botany* 21: 237. 1884, *Revisio Generum Plantarum* 3(3): 369, 372. 1898 and *Anales del Museo Nacional de Montevideo* 4(2): 73. 1901, *Taxon* 39(4): 609. 1990.

N. coquimbensis (Matthei) Peñailillo (*Stipa coquimbensis* Matthei)

Chile, Región de Coquimbo. Perennial, vulnerable species, see *Gayana, Botánica* 13: 35. 1965, *Gayana, Botánica* 55(2): 86. 1998 [1999].

N. cordobensis (Speg.) Barkworth (*Stipa cordobensis* Speg.; *Stipa cordobensis* var. *tuberculata* F.A. Roig; *Stipa papillosa* (Hack.) Hitchc.; *Stipa tenuis* var. *papillosa* Hack.)

South America. See *Anales de la Universidad de Chile* 36: 204. 1870 and *Anales del Museo Nacional de Montevideo* 4(2): 141-143, f. 42. 1901, *Anales del Museo Nacional de Buenos Aires* 14: 83. 1911, *Contributions from the United States National Herbarium* 24(7): 277. 1925, *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 83-84, t. 18. Mendoza 1964 [1966], *Taxon* 39(4): 609. 1990, *Comisión de Investigaciones Científicas* 13: 18. 1997.

N. crassiflora (Roseng. & B.R. Arrill.) Barkworth (*Nassella meyeniana* (Trin. & Rupr.) Parodi; *Stipa crassiflora* Roseng. & B.R. Arrill.)

South America. See *Species Graminum Stipaceorum* 20. 1842 and *Darwiniana* 7(3): 379, f. 5. 1947, *Boletín de la Facultad de Agronomía de Universidad de la Republica, Montevideo* 72: 30, t. 8. 1964, *Taxon* 39(4): 609. 1990.

N. curamalalensis (Speg.) Barkworth (*Stipa curamalalensis* Speg.; *Stipa tenuissima* var. *curamalalensis* (Speg.) Hack.)

South America, Uruguay, Curamalál. See *Anales del Museo Nacional de Montevideo* 4(2): 160-162, f. 49. 1901, *Anales del Museo Nacional de Buenos Aires* 21: 83. 1911, *Taxon* 39(4): 609. 1990.

N. curviseta (Hitchc.) Barkworth (*Nassella brachyphylla* (Hitchc.) Barkworth; *Stipa curviseta* Hitchc.)

South America. Perennial, caespitose, erect, basal sheath pubescent, convolute leaf blades acuminate, ovate panicle with flexuous branches, glumes lanceolate acuminate, pungent callus, hairy 2-geniculate awn, see *Contributions from the United States National Herbarium* 24(7): 275, 282. 1925, *Taxon* 39(4): 609. 1990.

N. dasycarpa (Hitchc.) Torres (*Stipa dasycarpa* Hitchc.; *Stipa trollii* Pilg.) (named for the German botanist Karl [Carl] Troll, 1899-1975, geographer, traveler, botanical collector in Bolivia, Colombia, Eritrea, India, Mexico, collector

of tropical Andean mosses, younger brother of Wilhelm Troll (1897-1978); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 402. 1965; T.W. Bossert, compilation, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 407. Boston, Mass. 1972)

South America, Argentina. See *Contributions from the United States National Herbarium* 24(7): 281. 1925, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(108): 777. 1933, *Comisión de Investigaciones Científicas* 13: 19. 1997.

N. depauperata (Pilg.) Barkworth (*Nassella inconspicua* (J. Presl) Barkworth; *Nassella mexicana* (Hitcch.) R.W. Pohl; *Stipa depauperata* Pilg.; *Stipa depauperata* var. *glabrata* Pilg.; *Stipa depauperata* var. *humilis* Pilg.; *Stipa leptothera* Speg. var. *atroviolacea* Hack.)

South America, Peru. Herbaceous, fine leaves, narrow inflorescence, long awns, purple glumes, found along roadsides, disturbed sites, grassy areas, páramos, see *Reliquiae Haenkeanae* 1(4-5): 227. 1830 and *Anales del Museo Nacional de Montevideo* 4: 133, f. 8. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 6: 154. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56 (Beibl. 123): 23. 1920, Volkmar Vareschi (1906-1991), *Flora de Los Páramos de Venezuela*. Universidad de Los Andes. Merida — Venezuela 1970, *Taxon* 39(4): 609-610. 1990, Karl Weidmann, *Páramos venezolanos*. Caracas 1991.

N. depauperata (Pilg.) Barkworth var. *depauperata* (*Stipa depauperata* var. *depauperata*; *Stipa depauperata* var. *humilis* Pilg.; *Stipa leptothera* var. *atroviolacea* Hack.)

South America, Peru. See *Anales del Museo Nacional de Montevideo* 4(2): 133-135, f. 8. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 6: 154. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 23. 1920, *Taxon* 39(4): 609-610. 1990.

N. depauperata (Pilg.) Barkworth var. *glabrata* (Pilg.) Torres (*Stipa depauperata* var. *glabrata* Pilg.)

South America, Peru. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 23. 1920, *Taxon* 39(4): 609-610. 1990, *Comisión de Investigaciones Científicas* 13: 20. 1997.

N. duriuscula (Phil.) Barkworth (*Nassella duriuscula* (Phil.); *Stipa barbinodis* Phil.; *Stipa duriuscula* Phil.)

South America. See *Linnaea* 33(3-4): 282. 1864, *Anales de la Universidad de Chile* 93: 721. 1896 and *Taxon* 39(4): 610. 1990.

N. elata (Speg.) Torres (*Nassella elata* (Speg.); *Stipa caespitosa* var. *elata* Speg.)

South America, Argentina. See *Anales del Museo Nacional de Montevideo* 4(2): 117, 119, f. 31g-i. 1901, *Comisión de Investigaciones Científicas* 13: 20. 1997.

N. entrerriensis (Burkart) Peñailillo (*Stipa entrerriensis* Burkart)

South America. See *Boletín de la Sociedad Argentina de Botánica* 12: 285, f. 1. 1968, *Gayana, Botánica* 55(2): 86. 1998 [1999].

N. exserta Phil. (*Nassella gigantea* (Steud.) Muñoz-Schick; *Nassella melanocarpa* Phil.; *Urachne aemulans* Steud. ex Lechler; *Urachne gigantea* Steud.; *Urachne melanocarpa* Phil.)

South America. Perennial, glabrous, rhizomatous, leaves acuminate to acute, see *Synopsis Plantarum Glumacearum* 1: 123. 1854, *Berberides Americae Australis* 52. 1857, *Linnaea* 33(3-4): 278. 1864, *Anales de la Universidad de Chile* 43: 558. 1873 and *Gayana, Botánica* 47(1-2): 23. 1990.

N. fabrisii Torres (for Humberto Antonio Fabris, 1924-1976, botanist and collector in Argentina; see *Bol. Soc. Arg. Bot.* 15: 332. 1974; A.L. Cabrera & H.A. Fabris, *Hickenia* 1(31): 164. 1978; H.A. Fabris et al., *Hickenia* 1(41): 223. 1980)

South America, Argentina. See *Comisión de Investigaciones Científicas* 13: 20, f. 2, H, h. 1997.

N. famatinensis Torres

South America, Argentina, Sierra de Famatina. See *Comisión de Investigaciones Científicas* 13: 21, f. 1, H. 1997.

N. filiculmis (Delile) Barkworth (*Stipa cerasiensis* Kuntze; *Stipa filiculmis* Delile; *Stipa filiculmis* var. *major* Speg.; *Stipa filiculmis* var. *minor* Speg.; *Stipa leucogluma* Steud.; *Stipa trichocaulos* Phil.)

Southern America, Argentina, Ceres. See *Annales des Sciences Naturelles; Botanique, sér. 3* 12: 367. 1849, *Synopsis Plantarum Glumacearum* 1: 420. 1854, *Anales de la Universidad de Chile* 93: 718. 1896, *Revisio Generum Plantarum* 3(3): 369, 371. 1898 and *Anales del Museo Nacional de Montevideo* 4(22): 146. 1901, *Taxon* 39(4): 610. 1990.

N. formicarum (Delile) Barkworth (*Stipa formicarum* Delile)

North America, Europe. See *Annales des Sciences Naturelles; Botanique, sér. 3* 12: 327. 1849 and *Taxon* 39(4): 610. 1990.

in English: tropical tussock grass

N. gibba (Phil.) M. Muñoz-Schick (*Nassella exserta* Phil. var. *asperata* Parodi; *Piptochaetium gibbum* Phil.)

South America. See *Linnaea* 33(3-4): 278. 1864, *Anales de la Universidad de Chile* 93: 731. 1896 and *Darwiniana* 7(3): 390, f. 8B, B(1). 1947, *Gayana, Botánica* 47(1-2): 26. 1990.

N. gigantea (Steud.) M. Muñoz-Schick (*Nassella aemulans* Phil.; *Nassella exserta* Phil.; *Nassella exserta* var. *exserta*; *Nassella fuscescens* Phil.; *Nassella gigantea* (Steud.) Muñoz; *Nassella melanocarpa* Phil.; *Nassella pugae* Phil.;

Urachne aemulans Steud. ex Lechler; *Urachne gigantea* Steud.; *Urachne melanocarpa* Phil.) (Frid. or Fed. Puga)

South America, Argentina. Caespitose, weedy, see *Synopsis Plantarum Glumacearum* 1: 123. 1854, *Berberides Americae Australis* 52. 1857, *Linnaea* 33(3-4): 278. 1864, *Anales de la Universidad de Chile* 43: 558. 1873, *Anales de la Universidad de Chile* 93: 728-729. 1896 and *Gayana, Botánica* 47(1-2): 23. 1990.

N. glabripoda Torres

South America, Argentina. See *Comisión de Investigaciones Científicas* 13: 22, f. 1, F. 1997.

N. glabripoda Torres var. *glabripoda*

Argentina. See *Comisión de Investigaciones Científicas* 13: 22, f. 1, F. 1997.

N. glabripoda Torres var. *planifolia* Torres

Argentina. See *Comisión de Investigaciones Científicas* 13: 22-23. 1997.

N. hirtifolia (Hitchc.) Barkworth (*Stipa hirtifolia* A.S. Hitchc.)

Chile. Perennial, vulnerable species, see *Contributions from the United States National Herbarium* 24(7): 285. 1925, *Taxon* 39(4): 610. 1990.

N. holwayii (Hitchc.) Barkworth (*Nassella brachyphylla* Phil.; *Nassella brachyphylla* (Hitchc.) Barkworth; *Stipa holwayii* Hitchc.) (for Edward Willet Dorland Holway, 1853-1923, and Mary M. Holway)

South America, Bolivia. Perennial, caespitose, erect, leaf blades smooth acuminate, lax panicle narrowly oblong to ovate with ascending branches, glumes lanceolate acuminate, bearded callus pungent, sandy places, puna, rocky soils, see *Contributions from the United States National Herbarium* 24(7): 275, 287. 1925, *Taxon* 39(4): 609-610. 1990.

N. huallancaensis (Tovar) Barkworth (*Stipa huallancaensis* Tovar)

South America, Peru, Huayanca. See *Publicaciones del Museo de Historia Natural "Javier Prado." Serie B. Botánica* 33: 11. 1985, *Taxon* 39(4): 610. 1990.

N. hunzikeri (Caro) Barkworth (*Stipa hunzikeri* Caro) (for Armando T. Hunziker, 1919-2001, central Argentine flora, Instituto Multidisciplinario de Biología Vegetal (Universidad Nacional de Córdoba), Solanaceae, Amaryllidaceae, Amaranthus, Cactaceae, with Antonio Krapovickas (b. 1921), P. Maldonado, D.R. Hunziker, Rosa Subils (b. 1929); brother of Juan Héctor Hunziker (1925-2003). See *Hickenia* 1(12): 71. 1977; *Bol. Soc. Argent. Bot.* 20: 271-272. 1982, *Lorentzia* 7: 17. 1993; *Darwiniana* 39(3-4): 355. 2001; *Taxon* 51: 393. 2002; Armando T. Hunziker, *Catálogo de los tipos "Grisebachianos" conservados en Córdoba*. Córdoba 1960)

South America, Argentina. See *Kurtziana* 3: 75-79, f. 14. 1966, *Taxon* 39(4): 610. 1990.

N. hyalina (Nees) Barkworth (*Stipa hyalina* Nees)

South America. Perennial, caespitose, sheath ribbed, ligule membranous and truncate, blade ribbed, panicle exserted, spikelets gaping, glumes unequal, lemma scabrous, corona with spines, callus curved and silky, awn twice-bent, a weed of disturbed areas, see *Taxon* 39(4): 610. 1990.

N. ibarrensensis (Kunth) Laegaard (*Nassella ibarrensensis* (Kunth) Peñailillo; *Stipa ibarrensensis* Kunth; *Stipa patulifolia* Pilg.)

South America, Ecuador, Ibarra. See *Nova Genera et Species Plantarum* 1: 125. 1815 [1816] and *Novon* 8(1): 30. 1989, *Gayana, Botánica* 55(2): 86. 1998 [1999].

N. inconspicua (J. Presl) Barkworth (*Nassella caespitosa* Griseb.; *Nassella depauperata* (Pilg.) Barkworth; *Stipa caespitosa* var. *lilloi* Hack.; *Stipa caespitosa* var. *subelata* Speng.; *Stipa inconspicua* J. Presl; *Stipa sodiroana* Hack.; *Urachne haenkeana* Trin. & Rupr.; *Urachne inconspicua* Trin. & Rupr.)

South America. Perennial bunchgrass, erect, herbaceous, caespitose, forming clumps or small clumps, foliage erect, ligule small to minute, short leaves pointed, inflorescence erect to spreading, oblong panicle, spikelets purplish, glumes acute lanceolate or acuminate, hairy awns, growing in grassland, heavily grazed areas, see *Reliquiae Haenkeanae* 1(4-5): 227. 1830, *Species Graminum Stipaceorum* 20. 1842 and *Anales del Museo Nacional de Montevideo* 4(2): 117, 120, f. 31. 1901, *Anales del Museo Nacional de Buenos Aires* 21: 72. 1911, *Taxon* 39(4): 609-610. 1990.

N. johnstonii Parodi (*Nassella pungens* E. Desv.) (for the American botanist Ivan Murray Johnston, 1898-1960, in Chile 1925-1926, professor of botany at Harvard 1938-1960, specialist on Boraginaceae, his writings include "Expedition of the California Academy of Sciences to the Gulf of California in 1921. The botany (the vascular plants)." *Proc. Calif. Acad. Sci.* Ser. 4, 12: 951-1218. 1924, "The botanical activities of Thomas Bridges." *Contr. Gray Herb.* 81: 98-106. 1928, "Papers on the flora of northern Chile. 1. The coastal flora of the departments of Chañaral and Taltal; 2. The flora of the Nitrate Coast; 3. Undescribed species from the cordilleras of Atacama." *Contr. Gray Herb.* 85: 1-172. 1929 and "A study of Nolanaceae." *Proc. Amer. Acad. Arts.* 71(1): 1-87. [Philadelphia 1936]. See J.H. Barnhart, *Biographical notes upon botanists.* 2: 259. 1965; Richard A. Howard, "Ivan Murray Johnston, 1898-1960." *J. Arnold Arb.* 42: 1-9. 1961; J. Ewan, editor, *A Short History of Botany in the United States.* 43, 122. New York and London 1969; E.D. Merrill, "A botanical bibliography of the islands of the Pacific." *Contr. U.S. Natl. Herb.* 30(1): 167. 1947; Erwin G. Gude, *California Place Names: The Origin and Etymology of Current Geographical Names.* University of California Press, Berkeley 1974 [1949]; T.W.

Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 199. 1972; I.K. Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

South America, Peru, Chile, Atacama. See *Flora Chilena* 6: 268, t. 75, f. 1. 1854 and *Darwiniana* 7(3): 373. 1947.

N. juergensii (Hack.) Barkworth (*Stipa juergensii* Hack.; *Stipa jurgensii* Hack.) (for C. Jürgens, collected 1906-1921, Brazil)

South America. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 314. 1909, *Repert. Spec. Nov. Regni Beih.* 35: 103. 1925, *Taxon* 39(4): 610. 1990.

N. juncea Phil. (*Nassella chilensis* var. *juncea* (Phil.) M. Muñoz-Schick)

South America, Chile. See *Linnaea* 33(3-4): 277. 1864 and *Gayana, Bot.* 47: 22. 1990.

N. karstenii (Hitc.) Peñailillo (*Stipa karstenii* Hitc.) (for the German botanist Gustav Karl Wilhelm Hermann Karsten, 1817-1908, traveled in Colombia, Ecuador, Mexico, Venezuela, author of *Florae Columbiae ... Berolini 1858[1859]-1869, Plantae Columbiana. Fasciculus primus*. Halis Saxonum [Halle] 1857 [reprinted, *Linnaea* 28: 241-256. 1856 and 257-282, 387-462. 1857]. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 272. 1965; R. Tryon, *Taxon* 12: 103-105. 1963; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 382. Cambridge, Mass. 1917-1933; *Brittonia* 49: 32. 1997; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; *La phytographie ou l'art de décrire les végétaux considérés sous différents points de vue*. Paris 1880; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Colombia. See *Contributions from the United States National Herbarium* 24(7): 274. 1925, *Gayana, Botánica* 55(2): 86. 1998 [1999].

N. lachnophylla (Trin.) Barkworth (*Stipa cumingiana* Trin.; *Stipa cumingiana* var. *cumingiana*; *Stipa cumingiana* var. *lachnophylla* (Trin.) Trin. & Rupr.; *Stipa hirta* Phil.; *Stipa lachnophylla* Trin.; *Stipa laxa* E. Desv.; *Stipa leiocarpa* Nees ex Steud.) (after Hugh Cuming, 1791-1865 (d. London), British traveler and plant collector in South America, Fellow of the Linnean Society 1832, shell collector; see A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris

1845; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 183-184. London 1994; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997)

Chile. Perennial, vulnerable species, see *Species Graminum Stipaceorum* 29. 1842, *Flora Chilena* 6: 283. 1854, *Synopsis Plantarum Glumacearum* 1: 124. 1854, *Linnaea* 33(3-4): 283. 1864 and *Taxon* 39(4): 610. 1990.

N. laevissima (Phil.) Barkworth (*Nassella longearistata* Phil.; *Piptochaetium collinum* Phil.; *Piptochaetium laevissimum* Phil.; *Stipa breviculmis* Hitc.; *Stipa laevissima* (Phil.) Speg.; *Stipa lahittei* Parodi)

Chile. Perennial, vulnerable species, see *Linnaea* 33(3-4): 280. 1864, *Anales de la Universidad de Chile* 93: 728, 733. 1896 and *Anales del Museo Nacional de Montevideo* 4: 6. 1901, *Contributions from the United States National Herbarium* 24(7): 284. 1925, *Notas del Museo de la Plata, Botánica* 3: 28, f. 3. 1938, *Physis* (Buenos Aires) 15: 305. 1939, *Taxon* 39(4): 610. 1990.

N. lepida (A. Hitchc.) Barkworth (*Stipa eminens* subsp. *andersonii* (Vasey) E. Murray; *Stipa eminens* var. *andersonii* Vasey; *Stipa hassei* Vasey; *Stipa lepida* A.S. Hitchc.; *Stipa lepida* var. *andersonii* (Vasey) A.S. Hitchc.; *Stipa lepida* var. *lepida*) (after the American (but German-born) botanist Hermann Edward Hasse, 1836-1915, physician, bryologist, mycologist and plant collector; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 137. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 216. 1973; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969)

North America, California. Perennial, fodder, occurs under dry conditions, chaparral, slope habitats, open hillsides, dry ridges, see *Contributions from the United States National Herbarium* 3(1): 54. 1892, *Contributions from the United States National Herbarium* 1(8): 267. 1893 and *American Journal of Botany* 2: 302-303. 1915, *Kalmia* 12: 25. 1982, *Taxon* 39(4): 610. 1990.

in English: foothill needle grass, small-flower tussock grass, foothill stipa, small-flowered needle grass

in Mexico: pasto

N. leptocoronata (Roseng. & B.R. Arrill.) Barkworth (*Stipa leptocoronata* Roseng. & B.R. Arrill.)

South America. See *Boletín de la Facultad de Agronomía de Universidad de la Republica, Montevideo* 72: 16, t. 2-3. 1964, *Taxon* 39(4): 610. 1990.

N. leptothera (Speg.) Torres (*Stipa leptothera* Speg.)

South America, Argentina, Alpine mountains; see *Anales del Museo Nacional de Montevideo* 4: 133, f. 8. 1901, *Comisión de Investigaciones Científicas* 13: 25, f. 2, C, c. 1997.

N. leucotricha (Trin. & Rupr.) R.W. Pohl (*Stipa ciliata* Scheele; *Stipa leucotricha* Trin. & Rupr.)

North America, U.S., Mexico. Sheaths usually hispid, cleistogenes frequently present in the lower sheaths, ligule truncate, blade flat to convolute, panicle open, glumes subequal, callus sharp, lemma constricted below the crown, awn twice-geniculate, a dominant species, provides good forage, grows mostly in open grasslands, in woodlands, similar to *Nassella pulchra* (A.S. Hitchc.)

Barkworth, in northern Mexico intergrades with *Nassella mucronata* Kunth, see *Species Graminum Stipaceorum* 54. 1842, *Linnaea* 22(3): 342. 1849 and *Taxon* 39(4): 610. 1990.

in English: Texas tussock grass, Texas winter grass, Texas needle grass, Texas nassella, spear grass

in Mexico: flechilla bulbosa

N. ligularis (Griseb.) Barkworth & Torres (*Stipa ligularis* (Griseb.) Speg.; *Stipa neesiana* var. *ligularis* Griseb.)

South America. See *Species Graminum Stipaceorum* 27-28. 1842, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 298. 1879 and *Anales del Museo Nacional de Montevideo* 4(2): 91-93, f. 21. 1901, *Contr. U.S. Natl. Herb.* 24(7): 277. 1925, *Kurtziana* 2: 110. 1965, *Taxon* 50(2): 456. 2001.

N. linearifolia (E. Fourn.) R.W. Pohl (*Milium inconspicuum* Griseb. ex E. Fourn.; *Oryzopsis florulenta* Pilg.; *Stipa florulenta* (Pilg.) Parodi; *Stipa florentula* (Pilg.) Parodi; *Stipa linearifolia* E. Fourn.; *Stipa linearifolia* E. Fourn. ex Hemsl.)

Costa Rica, Guatemala, Bolivia. Perennial, erect, branched, leaf blades linear, ligule hyaline, glumes subequal ovate-lanceolate acuminate reddish to purplish, forming dense clumps, fodder, palatable, see *Mexicanas Plantas* 2: 73-74. 1886 and *Revista del Museo de La Plata* (secc. Bot.) 6: 228, 307. 1944, *Fieldiana, Botany, New Series* 4: 336. 1980.

in Mexico: pasto

N. longicoronata (Roseng. & B.R. Arrill.) Barkworth (*Stipa longicoronata* Roseng. & B.R. Arrill.)

South America. See *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 72: 20, t. 4-5. 1964, *Taxon* 39(4): 610. 1990.

N. longiglumis (Phil.) Barkworth (*Nassella clarazii* (Ball) Barkworth; *Stipa clarazii* Ball; *Stipa longiglumis* Phil.; *Stipa quadrifaria* Kuntze)

Chile. Perennial, see *Linnaea* 33(3-4): 286. 1864, *Journal of the Linnean Society, Botany* 21: 237. 1884, *Revisio Generum Plantarum* 3(3): 369, 372. 1898 and *Taxon* 39(4): 609-610. 1990.

N. macrathera (Phil.) Barkworth (*Stipa macrathera* Phil.)

Chile. Perennial, see *Anales de la Universidad de Chile* 93: 720. 1896 and *Taxon* 39(4): 610. 1990.

N. major (Trin. & Rupr.) Desv. (*Nassella chilensis* (Trin.) E. Desv.; *Nassella major* (Trin.) E. Desv.; *Urachne chilensis* Trin.; *Urachne major* Trin. & Rupr.)

South America, Peru, Chile, Atacama. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 123. 1834, *Species Graminum Stipaceorum* 20-21. 1842, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 1: 148. Breslau et Bonn 1843, *Synopsis Plantarum Glumacearum* 1: 123. 1854, *Flora Chilena* 6: 265-266. 1854, *Linnaea* 33(3-4): 277, 279. 1864, *Anales de la Universidad de Chile* 43: 558. 1873, *Anales de la Universidad de Chile* 93: 727, 729. 1896 and *Darwiniana* 7(3): 379, f. 5. Buenos Aires 1947, *Gayana, Bot.* 47: 18-19. 1990.

N. manicata (E. Desv.) Barkworth (*Stipa manicata* E. Desv.)

South America, Argentina, Uruguay. Glabrous, ligule truncate, blade flat to convolute, panicle open, callus sharp, lemma constricted below the crown, white crown ciliate, awn twice-geniculate, resembles *Nassella leucotricha* (Trin. & Rupr.) R.W. Pohl, and *Nassella pulchra* (A.S. Hitchc.) Barkworth, sometimes misidentified as *Nassella formicarum* (Delile) Barkworth, see *Flora Chilena* 6: 288. 1854 and *Taxon* 39(4): 610. 1990.

N. megapotamia (Spreng. ex Trin.) Barkworth (also *megapotamica*) (*Stipa latifolia* Hack. & Arechav., nom. illeg., non *Stipa latifolia* (L.) Raspail; *Stipa latissimifolia* Kuntze; *Stipa manicata* var. *latifolia* (Hack. & Arechav.) Speg.; *Stipa manicata* var. *latifolia* Speg.; *Stipa manicata* var. *media* Speg.; *Stipa megapotamia* Spreng. ex Trin.; *Stipa megapotamica* Trin. & Rupr.; *Stipa quinquenervis* Hack.)

South America. Perennial, caespitose, ligule truncate and membranous, blade ribbed, panicle exerted and contracted, glumes subequal and nerved, lemma scabrous, corona with spines, callus densely silky, awn twice bent, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 77. 1830, *Species Graminum Stipaceorum* 38. 1842, *Anales del Museo Nacional de Montevideo* 4: 183, f. 4. 1895, *Revisio Generum Plantarum* 3(3): 369. 1898 and *Anales del Museo Nacional de Montevideo* 4(2): 77-78. 1901, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 73. 1915, *Taxon* 39(4): 610-611. 1990.

N. melanosperma (J. Presl) Barkworth (*Nassella bonariensis* (Henrard & Parodi) Barkworth; *Stipa bonariensis* Henrard & Parodi; *Stipa melanosperma* J. Presl; *Stipa melanosperma* var. *erythrina* Hack.; *Stipa melanosperma* var. *melanosperma*)

South America. See *Reliquiae Haenkeanae* 1(4-5): 226. 1830 and *Repertorium Specierum Novarum Regni Vegetabilis*

6(21-26): 345. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 23: 178. 1926, *Taxon* 39(4): 609, 611. 1990.

N. mexicana (Hitchc.) R.W. Pohl (*Piptochaetium mexicanum* (Hitchc.) Beetle; *Stipa depauperata* Pilg.; *Stipa mexicana* Hitchc.)

South America. Perennial bunchgrass, alpine, weak, tufted, growing in grass clumps, small bunches, foliage soft and spreading, narrow leaves, long narrow to spreading inflorescence, chasmogamous and cleistogamous spikelets, glumes acuminate purple or reddish, very long awns, meadow grass, growing on mountains, on dry slopes, mountain meadows, grassland, roadbanks, heavily grazed areas, among rocks, see *Contributions from the United States National Herbarium* 24(7): 247, t. 52, f. 5-6. 1925, *Phytologia* 54(1): 4. New York 1983, *Taxon* 39(4): 611. 1990.

N. meyeniana (Trin. & Rupr.) Parodi (*Nassella corniculata* Hack.; *Nassella pubiflora* (Trin. & Rupr.) E. Desv.; *Piptatherum laeve* Meyen; *Piptatherum ramosum* Nees; *Piptochaetium laeve* Pilg.; *Stipa laevis* (Trin. & Rupr.) Parodi; *Urachne laevis* Trin. & Rupr.; *Urachne meyeniana* Trin. & Rupr.) (dedicated to the German (Baltic German, Prussian, b. Tilsit) botanist Franz Julius Ferdinand Meyen, 1804-1840 (d. Berlin), physician, M.D. Berlin 1826, traveler, professor of botany at the University of Berlin, ship's physician, his writings include *Reise um die Erde ausgeführt auf dem Königlich Preussischen Seehandlungs-Schiffe Prinzess Louise, commandirt von Capitain W. Wendt, in den Jahren 1830, 1831 und 1832 ... Erster Theil. Historischer Bericht. 1834, Zweiter Theil ... 1835 and Grundriss der Pflanzengeographie. Berlin 1836; see Hans Querner, in D.S.B. 9: 344-345. 1981; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J.H. Barnhart, *Biographical notes upon botanists*. 2: 482. 1965; J. Ewan, editor, *A Short History of Botany in the United States*. 116. New York and London 1969; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 265. 1972; E. Bretschneider, *History of European Botanical Discoveries in China*. 1981; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30: 211. 1947; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 168. London 1904; August Weberbauer, *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 9-10. Leipzig 1911; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 186-187. Palermo 1988; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants**

of Mexico. Philadelphia 1964; Günther Schmid, *Chamisso als Naturforscher. Eine Bibliographie*. Leipzig 1942)

South America, Bolivia, Ecuador, Peru. Perennial, rhizomatous, erect, forming small or large clumps, leaf blades linear, drooping to lax inflorescence paniculate, contracted panicle with short branches, glumes subequal oblong-lanceolate acuminate, alpine, growing in mountain, roadside ditch, bank of arroyo, volcanic soil, see *Species Graminum Stipaceorum* 20-21. 1842, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 1: 148. 1843 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 155. 1908, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 229, 305. 1944, *Darwiniana* 7(3): 379, f. 5. 1947.

N. meyeri Torres (for Teodoro Meyer, b. 1910, Herbarium in San Miguel de Tucumán, Argentina, botanical collector in Argentina, Bolivia, Brazil, Paraguay, with H.O. Sleumer (1906-1993); see T. Meyer, "Arboles indigenas de frutos comestibles del noreste argentino." *Lilloa* 3: 233-242. 1938; *Bot. Jahrb. Syst.* 77: 117. 1956; *Fl. Patagonica* 10: 677. 1978)

South America, Argentina. See *Comisión de Investigaciones Cientificas* 13: 26, f. 2, E, e. 1997.

N. mucronata (Kunth) R.W. Pohl (*Stipa chapulcensis* E. Fourn.; *Stipa grisebachii* E. Fourn.; *Stipa grisebachii* E. Fourn. ex Hemsl.; *Stipa mucronata* Kunth; *Stipa setigera* J. Presl; *Stipa trochlearis* Nees & Meyen)

South America, Ecuador, Peru, Chile, Atacama. Perennial bunchgrass, loosely caespitose, erect, alpine, subshrubby, basal leaves, leaf blades pointed, inflorescence red purple, lax oblong panicle, glumes lanceolate acuminate, fodder, on hillsides, pastures, steep slopes, disturbed areas, stony places, on disturbed roadsides, see *Nova Genera et Species Plantarum* 1: 125-126. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 226. 1830, *Nova Acta Physico-medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum Exhibentia Ephemerides sive Observationes Historias et Experimenta* 19 (Suppl. 1): 19. 1841, *Mexicanas Plantas* 2: 74. 1886 and *Contr. U.S. Natl. Herb.* 24(7): 223. 1925, *Taxon* 39(4): 611. 1990.

in Mexico: flechilla puntiaguda, pasto

N. nardoides (Phil.) Barkworth (*Danthonia nardoides* Phil.; *Stipa calchaquia* Speg.; *Stipa nardoides* (Phil.) Hack. ex Hitchc.)

Bolivia, Argentina, Peru, Chile, Atacama. Perennial, basal sheaths hairy, leaf blades acicular rigid, oblong panicle, glumes lanceolate acuminate, sandy soils, stony places, puna, see *Anales del Museo Nacional de Montevideo* 4(2): 107, f. 27. 1901, *Contributions from the United States National Herbarium* 24(7): 271. 1925, *Taxon* 39(4): 611. 1990.

N. neesiana (Trin. & Rupr.) Barkworth (*Stipa contracta* Phil.; *Stipa eminens* Nees, nom. illeg., non *Stipa eminens* Cav.; *Stipa fernandeziana* Phil., nom. illeg., non *Stipa fernandeziana* (Trin. & Rupr.) Steud.; *Stipa hispidula* Phil.; *Stipa longiflora* Steudel; *Stipa neesiana* Trin. & Rupr.; *Stipa neesiana* f. *contorta* Hack.; *Stipa neesiana* f. *depauperata* Hack.; *Stipa neesiana* var. *chilensis* Trin. & Rupr.; *Stipa neesiana* var. *fernandeziana* Trin. & Rupr.; *Stipa neesiana* var. *glabrata* Arechav.; *Stipa neesiana* var. *hirsuta* Arechav.; *Stipa neesiana* var. *hispidula* (Speg.) Hackel; *Stipa neesiana* var. *longiaristata* Arechav.; *Stipa neesiana* var. *neesiana*; *Stipa neesiana* var. *sublaevis* (Speg.) Speg. ex Caro; *Stipa neesiana* var. *sublaevis* (Speg.) Speg.; *Stipa neesiana* var. *virescens* Hackel; *Stipa setigera* forma *glabrata* (Arechav.) Speg.; *Stipa setigera* forma *hispidula* Speg.; *Stipa setigera* var. *glabrata* Arechav. ex Speg.; *Stipa setigera* var. *glabrata* (Arechav.) Speg.; *Stipa setigera* var. *hispidula* Speg.; *Stipa skottsbergii* Pilger; *Stipa sublaevis* Speg.; *Stipa trachysperma* Phil.; *Urachne longiflora* Steud.) (Juan Fernández Island, Chile, see C. Marticorena, T.F. Stuessy and C.M. Baeza, "Catalogue of the vascular flora of the Robinson Crusoe or Juan Fernández Islands, Chile." *Gayana Bot.* 55(2): 187-211. 1998) (for the Swedish botanist Carl Johan Fredrik Skottsberg, 1880-1963, author of "Die Flora der Desventuradas-Inseln (San Felix und San Ambrosio) nach den Sammlungen F. Johows und mit Einfügung seiner hinterlassenen Schriften herausgegeben und ergänzt von C. Skottsberg." *Göteborgs Kungl. Vetensk.-Viterh.-Samh. Handl.*, ser. 5, B, 5(6): 1-88. 1937, "Pehr Kalm." *Kunliga Svenska vetenskapsakademiens levnadsteckningar.* 139: 221-503. 1951. See Robert Knuds Friedrich Pilger, 1876-1953, "Gramineae novae, a cl. K. Skottsberg in Patagonia australi et in Fuegia collectae." *Repert. Spec. Nov. Regni Veg.* 12: 304-308. 1913)

South America. Perennial, caespitose, tussocky, forming clumps, sheaths glabrous to slightly hispid, leaves hairless or sparsely hairy, smooth ligule with long trichomes or tufts of hairs, blade flat to convolute or somewhat inrolled, loose panicle erect to nodding, cleistogamous spikelets often present in the basal sheaths, purplish glumes linear-lanceolate and hyaline, callus sharp, awn twice-geniculate, raised crown between the awn and the seed, seeds have very sharp points that have been reported to penetrate and damage the skin and eyes of livestock, tolerates drought and heavy grazing, regarded as a serious emerging weed, a prolific seeder, seeds remain viable for many years, it is very invasive and forms dense stands in pastures, bushland and roadsides, see *Reliquiae Haenkeanae* 1(4-5): 226. 1830, *Nomenclator Botanicus. Editio secunda* 2: 731. 1841, *Species Graminum Stipaceorum* 27-28. 1842, *Synopsis Plantarum Glumacearum* 1: 124. 1854, *Linnaea* 33(3-4): 284-285. 1864, *Anales de la Universidad de Chile* 43: 560. 1873, *Anales del Museo Nacional de Montevideo* 1: 254. 1894, *Anales de la Universidad de Chile* 93: 719. 1896, *Anales*

del Museo Nacional de Montevideo 1: 314. 1896 and *Anales del Museo Nacional de Montevideo* 4(2): 82, f. a-c., 97. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 100. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 78. 1911, *Revista Argentina de Botánica* 1(1): 45. 1925, *Bol. Fac. Agron. Montevideo* 72: 12. 1964, *Kurtziana* 3: 30. 1966, *Taxon* 39(4): 611. 1990.

in English: Uruguayan tussock grass, Chilean needle grass

N. neesiana (Trin. & Rupr.) Barkworth var. *neesiana*

South America. Perennial, erect, strongly caespitose, tussocky, leaf sheath pubescent, ligule ciliate to ciliolate, open panicle with drooping branches, glumes unequal, corona/crown with spines, awn geniculate, column twisted and hairy, palea membranous, 2 lodicules, cleistogamous and chasmogamous flowers, noxious weed, found along roadsides, pastures, see *Taxon* 39(4): 611. 1990.

N. nidulans (Mez) Barkworth (*Stipa nidulans* Mez)

South America. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 205. 1921, *Taxon* 39(4): 611. 1990.

N. niduloides (Caro) Barkworth (*Stipa niduloides* Caro)

South America. See *Kurtziana* 3: 86-90, f. 17. 1966, *Taxon* 39(4): 611. 1990.

N. novarae Torres (also spelled *novari*) (for the Ingeniero Agrónomo, Lázaro Juan Novara, b. 1944, botanist in Argentina, Herbario Universidad de Salta (Buenos Aires), Facultad de Ciencias Agronómicas (Universidad Nacional de Córdoba), worked with Gloria Estela Barboza, M. Matesevach, Franco Ezequiel Chiarini, S. Bruno, author of "Catálogo de la flora de la Puna en el noroeste argentino." *Aportes Bot. Salta.* Ser. Misceláneas 2 (1): 1-56. 2003. See *Kurtziana* 29(1): 89-90. 2001; *Bonplandia* (Corrientes) 7: 13. 1993)

South America, Argentina. See *Comisión de Investigaciones Científicas* 13: 29-30, f. 2, D, d. 1997.

N. nubicola (Speg.) Torres (*Stipa nubicola* Speg.)

South America, Argentina. See *Anales del Museo Nacional de Montevideo* 4: 129, f. 36. 1901, *Comisión de Investigaciones Científicas* 13: 30, f. 2, B, b. 1997.

N. nutans (Hack.) Barkworth (*Stipa nutans* Hack.; *Stipa nutans* var. *nutans*)

South America. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 315. 1909, *Taxon* 39(4): 611. 1990.

N. pampagrlandensis (Speg.) Barkworth (*Stipa pampagrlandensis* Speg.)

Bolivia, Argentina. Caespitose, erect, leaf blades acuminate, oblong panicle lax to contracted, glumes subequal oblong acuminate, see *Anales del Museo Nacional de Montevideo* 4: 158, f. 48a-c. 1901, *Taxon* 39(4): 611. 1990, *Comisión de Investigaciones Científicas* 13: 31. 1997.

N. pampeana (Speg.) Barkworth (*Stipa pampeana* Speg.)

South America. See *Taxon* 39(4): 611. 1990.

N. paramilloensis (Speg.) Torres (*Stipa gilliesii* Hitchc.; *Stipa paramilloensis* Speg.; *Stipa perrigida* Speg.) (for the Scottish physician John Gillies, 1792-1834 (d. Edinburgh), botanist, naval surgeon, M.D. 1817, 1820-1828 in Argentina, plant collector in South America, correspondent of John Miers (1789-1879) and William Jameson (1796-1873). See J.H. Barnhart, *Biographical notes upon botanists*. 2: 50. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. 486. Paris 1845; John Miers, *Travels in Chile and la Plata*. 1: 226. London 1826; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 171. Oxford 1964; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

South America, Argentina, Paramillo de Uspallata. See *Anales del Museo Nacional de Montevideo* 4: 139, f. 41. 1901, *Contributions from the United States National Herbarium* 24(7): 278. 1925, *Revista Argentina de Botánica* 1(1): 41. 1925, *Comisión de Investigaciones Científicas* 13: 31. 1997.

N. parodii (Matthei) Barkworth (*Stipa parodii* Matthei)

South America, Argentina. See *Gayana, Botánica* 13: 89. 1965, *Taxon* 39(4): 611. 1990.

N. parva Torres

South America, Argentina. See *Comisión de Investigaciones Científicas* 13: 32, f. 1, E, e. 1997.

N. pauciciliata (Roseng. & Izag.) Barkworth (*Stipa megapotamia* Spreng. ex Trin.; *Stipa megapotamia* var. *pauciciliata* Roseng. & Izag.; *Stipa megapotamica* var. *pauciciliata* Roseng. & Izag.; *Stipa pauciciliata* (Roseng. & Izag.) Roseng., B.R. Arrill. & Izag.)

South America. Useful for erosion control, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 77. 1830 and *Boletín de la Sociedad Argentina de Botánica* 9: 288, 290, f. 17-20, t. 1, f. 5-6. 1961, *Gramíneas Uruguayas* 80, f. 23. 1970, *Taxon* 39(4): 611. 1990.

N. pfisteri (Matthei) Barkworth (*Stipa pfisteri* Matthei) (for C. Pfister, collector in Chile, Región de Tarapacá, Región de Coquimbo, Región del Libertador Bernardo O'Higgins. See B. Messerli, M. Grosjean, Th. Hofer, L. Núñez, C. Pfister, "From nature-dominated to human-dominated environmental changes." *Quaternary Science Reviews* 19(1-5): 459-479. 2000; B. Messerli, M. Grosjean, Th. Hofer, L. Núñez, C. Pfister, "From nature-dominated to human-dominated environmental changes." in E. Ehlers and T. Kraft (editors) *Understanding the Earth System: Compartments, Processes and Interactions*. Chapter 13, 195-205. 2001)

South America. See *Gayana, Botánica* 13: 89. 1965, *Taxon* 39(4): 611. 1990, *Gayana, Botánica* vol. 59(1): 1-6. 2002.

N. philippii (Steud.) Barkworth (*Stipa bavioensis* Speg.; *Stipa bavioensis* var. *bavioensis*; *Stipa bavioensis* var. *minor* Speg.; *Stipa lenta* Hitchc.; *Stipa philippii* Steud.) (named for the German botanist Rudolph Amandus (Rodolfo, Rudolf Amando) Philippi, 1808-1904, traveler, botanical explorer and plant collector, studied in Berlin, in 1851 emigrated to Chile, Director of the Museo nacional de Chile (in Santiago), from 1853 to 1874 professor of botany and zoology at Santiago, 1853-1854 expedition Atacama desert, 1892-1904 founder and editor of the *Anales del Museo nacional* (Chile), his writings include "Observaciones sobre la flora de Juan Fernández." *Anales Univ. Chile*. 13: 157-169. 1856, *Florula atacamensis*. Halis Saxonum [Halle] 1860, "*Sertum mendocinum*. Catálogo de las plantas recojidas cerca de Mendoza ... por don Wenceslao Diaz en los años de 1860 i 1861." *Anales Univ. Chile*. 21: 389-407. 1862, "Comentario sobre las plantas chilenas descritas por el abate D. Juan Ignacio Molina." *Anales Univ. Chile*. 22: 699-741. 1863 and *Plantas nuevas Chilenas*. Santiago de Chile 1892-1896. See C. Muñoz Pizarro, *Las especies de plantas descritas por R.A. Philippi en el siglo xix. Estudio crítico ...* Ediciones de la Universidad de Chile 1960; Charles J. Édouard Morren, *Correspondance botanique*. Liège 1874 and 1884; D.B. Arana, *El doctor don Rodolfo Amando Philippi*. Santiago de Chile 1904; P. Fürstenberg, *Dr. Rudolph Amandus Philippi. Sein Leben und seine Werke*. Santiago de Chile 1906; B. Gotschlich, *Biografía del Dr. Rodolfo Amando Philippi (1808-1904)*. Santiago de Chile 1906; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; E.D. Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 150. 1937; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 241. 1947; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 309. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 326. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 173. London 1904)

South America, Chile. See *Synopsis Plantarum Glumacearum* 1: 125. 1854 and *Anales del Museo Nacional de Montevideo* 4(2): 122, f. 83. 1901, *Contributions from the United States National Herbarium* 24(7): 274. 1925, *Revista Argentina de Botánica* 1: 40. 1925, *Taxon* 39(4): 611. 1990.

N. pittieri (Hitchc.) Peñailillo (*Stipa pittieri* Hitchc.) (after the Swiss-born American botanist Henri (Henry) François Pittier (Pitter de Fábrega), 1857-1950, bryologist, plant collector, traveler, botanical explorer, an authority on the flora

of Tropical America, 1882-1887 Switzerland (Lausanne), Costa Rica 1887, sent plants to Th. Durand, from 1905 with USDA (Colombia, Venezuela and Central America), 1913 Venezuela (first botanical exploration), his writings include *Manual de las Plantas Usuales de Venezuela y su Suplemento*. Caracas 1971, "Flora venezolana: plantas medicinales." *Memor. 4º Congreso Ven. de Med.* 2: 167-172. 1925, *Leguminosas de Venezuela. I. Papilionáceas*. Venezuela 1944, *Clave analítica de las familias de plantas superiores de la América Tropical*. Caracas 1937, "Existe la tagua o marfil vegetal en Venezuela?" *Bol. Com. e Industr.* Año I, no. 4, 103-104. 1920, "La caoba venezolana." *Bol. Com. e Industr.* 18: 582-593. 1921 and "Exploraciones, botánicas y otras, en la cuenca de Maracaibo." *Bol. Com. e Industr.* Año IV, no. 39-40. Caracas 1923, with Tobías Lasser, Ludwig Schnee et al. wrote *Catálogo de la flora venezolana*. Caracas 1945-1947; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 90. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 312. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 328. 1973; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 175. London 1904; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 585-586. Philadelphia 1964; Irving William Knobloch, compilation, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

Southern America, Colombia. See *Contributions from the United States National Herbarium* 24(7): 289. 1925, *Gayana, Botánica* 55(2): 86. 1998 [1999].

N. planaltina (A. Zanín & Longhi-Wagner) Peñailillo (*Stipa planaltina* A. Zanín & Longhi-Wagner)

South America. See *Bradea, Boletim do Herbarium Bradeanum* 5(33): 344-345, f. 4. 1990, *Gayana, Botánica* 55(2): 87. 1998 [1999].

N. poeppigiana (Trin. & Rupr.) Barkworth (*Nassella amethystina* (Steud.) Barkworth; *Stipa amethystina* Steud.; *Stipa araucana* Phil.; *Stipa curicoana* Phil.; *Stipa julietii* Phil.; *Stipa latifolia* var. *grandiflora* Hack.; *Stipa manicata* var. *typica* Speg.; *Stipa megapotamia* var. *latiflora* Roseng. & Izag.; *Stipa megapotamica* var. *latiflora* Roseng. & Izag.; *Stipa montana* Phil.; *Stipa poeppigiana* Trin. & Rupr.; *Stipa pratensis* Phil.) (for the German botanist Eduard Friedrich Poeppig, 1798-1868, explorer, naturalist, traveler, zoologist, in Latin America (Cuba, Chile 1826-1829, Peru and Brazil), plant collector, his writings include *Reise in Chile, Peru*. Leipzig [1834-]1835-1836 and "Schreiben des jetzt in Chile reisenden Hrn. Dr. Pöppig. Hütte am Rio Colorado in den Anden Chile's. Decbr. 24. 1827." *Not. Natur-Heilk.* 23(18): 273-282, 23(19): 289-293. 1829. See G. Looser, "El

naturalista Poeppig." *Revista Univ.* (Santiago) 15(3): 180-188. 1930; I. Urban, "Biographische Skizzen. IV. 5. Eduard Poeppig (1798-1868)." *Bot. Jahrb. Syst.* 21(4), Beibl. 53: 1-27. 1896; Stafleu & Cowan, *Taxonomic literature*. 4: 310-312. 1983; J.H. Barnhart, *Biographical notes upon botanists*. 3: 94. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 313. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 226. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Mary Gunn & Leslie Edward W. Codd, *Botanical Exploration of Southern Africa*. 283. Cape Town 1981; Frederico Carlos Hoehne, M. Kuhlmann & Oswaldo Handro, *O jardim botânico de São Paulo*. 1941; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 174. London 1904; August Weberbauer, *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 7-8, 35. Leipzig 1911; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964)

South America, Argentina, Chile. See *Species Graminum Stipaceorum* 29. 1842, *Synopsis Plantarum Glumacearum* 1: 124. 1854, *Linnaea* 33(3-4): 284. 1864, *Anales de la Universidad de Chile* 93: 717, 719, 723, 726. 1896, and *Anales del Museo Nacional de Montevideo* 4(2): 76. 1901, *Anales del Museo Nacional de Buenos Aires* 21: 76. 1911, *Boletín de la Sociedad Argentina de Botánica* 9: 288, f. 14-16, t. 1, f. 7-8. 1961, *Taxon* 39(4): 609, 611. 1990.

N. pseudopampagrandensis (Caro) Barkworth (*Stipa pseudopampagrandensis* Caro)

South America. See *Kurtziana* 3: 71-75, f. 13. Córdoba, Argentina 1966, *Taxon* 39(4): 611. 1990.

N. psittacorum (Speg.) Peñailillo (*Stipa psittacorum* Speg.)

South America. See *Anales del Museo Nacional de Montevideo* 4(19): 165. 1901, *Gayana, Botánica* 55(2): 87. 1998 [1999].

N. pubiflora (Trin. & Rupr.) E. Desv. (*Calamagrostis anomala* Steud. ex Lechler; *Nassella caespitosa* var. *peruviana* (Ball) Hack. ex Druce; *Nassella corniculata* Hack.; *Nassella deltoidea* Hack.; *Nassella flaccidula* Hack.; *Nassella flaccidula* var. *flaccidula*; *Nassella flaccidula* var. *humilior* Hack.; *Nassella trachyphylla* Henrard; *Nassella trichophylla* Henrard; *Oryzopsis caespitosa* var. *peruviana* Ball; *Oryzopsis pubiflora* (Trin. & Rupr.) Scribn., nom. illeg., non *Oryzopsis pubiflora* Hack.; *Piptochaetium laeve* Pilg.; *Stipa airoides* Mez, nom. illeg., non *Stipa airoides* Ekman; *Stipa meziana* Hicken; *Stipa pflanzii* Mez; *Stipa pubiflora* (Trin. & Rupr.) M. Muñoz-Schick; *Urachne laevis* Trin. &

Rupr.; *Urachne meyeniana* Trin. & Rupr.; *Urachne pubiflora* Trin. & Rupr.) (for Karl Pflanz, 1872-1925, bryophytes, lichens, Bolivia and Puerto Rico, see *Die Bärlappgewächse* 94. 1939)

Chile, Argentina, Ecuador, Peru, Bolivia. Perennial, caespitose, weak, erect, decumbent, rhizomatous, herbaceous, bunchgrass, forming small clumps, leaf blades linear acuminate, inflorescence purple pink to reddish, lax panicle narrowly oblong with short branches, glumes subequal acuminate, dense ground cover, grazed, found in sheltered arroyo, slopes, mountain, open areas, moist places, along roadsides, see *Species Graminum Stipaceorum* 20-21. 1842, *Flora Chilena* 6: 264. 1854, *Berberides Americae Australis* 56. 1857, *Journal of the Linnean Society, Botany* 22: 58. 1885, *Proceedings of the American Academy of Arts and Sciences* 28: 122. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 155. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 11: 23. 1912, *Report. Botanical Exchange Club. London*. 1914: 28. 1915, *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 206. 1921, *Darwiniana* 1: 67. 1924, *Gayana, Botánica* 47(1-2): 29. 1990.

N. pubiflora (Trin. & Rupr.) E. Desv. var. *humilior* (Hack.) Torres (*Nassella flaccidula* var. *humilior* Hack.)

South America. See *Repertorium Specierum Novarum Regni Vegetabilis* 6: 155. 1908, *Comisión de Investigaciones Científicas* 13: 33. 1997.

N. pubiflora (Trin. & Rupr.) E. Desv. var. *levipoda* Torres Argentina. See *Comisión de Investigaciones Científicas* 13: 33. 1997.

N. pubiflora (Trin. & Rupr.) E. Desv. var. *pubiflora* (*Nassella flaccidula* Hack.; *Nassella flaccidula* var. *flaccidula*; *Oryzopsis pubiflora* (Trin. & Rupr.) Scribn., nom. illeg., non *Oryzopsis pubiflora* Hack.; *Stipa pubiflora* (Trin. & Rupr.) M. Muñoz-Schick; *Urachne pubiflora* Trin. & Rupr.)

Argentina, Bolivia, Peru. See *Species Graminum Stipaceorum* 21. 1842, *Flora Chilena* 6: 264. 1854, *Proceedings of the American Academy of Arts and Sciences* 28: 122. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 155. 1908, *Gayana, Botánica* 47(1-2): 29. 1990.

N. pulchra (A.S. Hitchc.) Barkworth (*Stipa pulchra* A.S. Hitchc.)

Northern America, U.S., California, Mexico. Perennial bunchgrass, nodes pubescent, ligule truncate to rounded, blade flat to convolute, tough basal leaves, purplish panicle open, callus sharp, crown conspicuous, glumes distinctly purplish, awn twice-geniculate, the seed resembles a needle and thread, forage, revegetator, occurs under dry conditions, grasslands, chaparral, slope habitats, in moderately disturbed areas, on dry gravelly soils, see *American Journal of Botany* 2: 301. 1915, *Taxon* 39(4): 611. 1990, Knapp E.E. & K.J. Rice, "Comparison of isozymes and quantitative

traits for evaluating patterns of genetic variation in purple needlegrass (*Nassella pulchra*)." *Conservation Biology* 12: 1031-1041. 1998, Doria R. Gordon & Kevin J. Rice, "Competitive suppression of *Quercus douglasii* (Fagaceae) seedling emergence and growth." *Am. J. Bot.* 87: 986-994. 2000, Arlee M. Montalvo & Norman C. Ellstrand, "Nonlocal transplantation and outbreeding depression in the subshrub *Lotus scoparius* (Fabaceae)." *Am. J. Bot.* 88: 258-269. 2001, S.R. Larson et al., "Mode of reproduction and amplified fragment length polymorphism variation in purple needlegrass (*Nassella pulchra*): utilization of natural germplasm sources." *Molecular Ecology* 10(5): 1165-1177. May 2001, Andrew R. Dyer, "Burning and Grazing Management in a California Grassland: Growth, Mortality, and Recruitment of *Nassella pulchra*." *Restoration Ecology* 11(3): 291-296. Sep 2003, Alisa P. Ramakrishnan, Susan E. Meyer, Jennifer Waters, Mikel R. Stevens, Craig E. Coleman & Daniel J. Fairbanks, "Correlation between molecular markers and adaptively significant genetic variation in *Bromus tectorum* (Poaceae), an inbreeding annual grass." *Am. J. Bot.* 91: 797-803. 2004, *Restoration Ecology* 12(1): 63-69. Mar 2004.

in English: purple needle grass, purple nassella, purple nodding tussock grass, purple stipa, purple tussock grass

N. punensis Torres

South America, Argentina. See *Comisión de Investigaciones Científicas* 13: 34, f. 1, D, d. 1997.

N. pungens Desv. (*Nassella humilis* Phil.; *Nassella johnstonii* Parodi) (for the American botanist Ivan Murray Johnston, 1898-1960, in Chile 1925-1926, professor of botany at Harvard 1938-1960, author of "Papers on the flora of northern Chile. 1. The coastal flora of the departments of Chañaral and Taltal; 2. The flora of the Nitrate Coast; 3. Undescribed species from the cordilleras of Atacama." *Contr. Gray Herb.* 85: 1-172. 1929; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 259. Boston 1965)

South America, Peru, Chile, Atacama. See *Flora Chilena* 6: 268, t. 75, f. 1. 1854, *Linnaea* 33(3-4): 278. 1865 and *Darwiniana* 7(3): 373. 1947, *Gayana, Bot.* 47: 16. 1990.

N. quinqueciliata (Roseng. & Izag.) Barkworth & Torres (*Stipa nutans* var. *quinqueciliata* Roseng. & Izag.; *Stipa quinqueciliata* (Roseng. & Izag.) Zanin Buri & Izag.)

Uruguay. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 315. 1909, *Boletín de la Sociedad Argentina de Botánica* 9: 285, f. 1, t. 1, f. 1-2. 1961, *Bradea, Boletim do Herbarium Bradeanum* 6(23): 206. 1993, *Taxon* 50(2): 458. 2001.

N. ragonesei Torres (for the Argentine botanist Arturo Enrique Ragonese, b. 1909, botanical collector, author of "Plantas tóxicas para el ganado. En la región central Argentina." Buenos Aires, *Revista de la Facultad de Agronomía de La Plata*, 1956. See A.E. Ragonese & G. Covas, "El nombre botánico del "Yatay Poñi"." *Physis* 7(3): 228-230.

1940; A.E. Ragonese & R. Martínez Crovetto, "Plantas indígenas de la Argentina, con frutos o semillas comestibles." *Revista Invest. Agric.* 1(3): 147-216. 1947; A.E. Ragonese & B.C. Piccinini, "Límite entre el Monte y el Semidesierto Patagónico en las Provincias de Río Negro y Neuquén." *Bol. Soc. Argentina. Bot.* 11 (4): 299-302. 1969; A.E. Ragonese & J.C. Castiglioni, "La vegetación del parque chaqueño." *Bol. Soc. Argent. Bot.* 11: 133-160. 1970; A.E. Ragonese & Victor Milano, *Enciclopedia Argentina de Agricultura y Jardinería. Vegetales y substancias tóxicas de la flora Argentina*. Buenos Aires, Acme 1984; *Darwiniana* 37(3-4): 351. 1999; *Darwiniana* 16: 801. 1971; *Darwiniana* 24: 25. 1982)

South America, Argentina. See *Comisión de Investigaciones Científicas* 13: 35, f. 2, G, g. 1997.

N. rhizomata (A. Zanín & Longhi-Wagner) Peñailillo (*Stipa rhizomata* A. Zanín & Longhi-Wagner)

South America. See *Bradea, Boletim do Herbarium Bradeanum* 5(33): 345-346, f. 3. 1990, *Gayana, Botánica* 55(2): 87. 1998 [1999].

N. rosengurtii (Chase) Barkworth (*Stipa rosengurtii* Chase) (after the botanist Bernardo Rosengurt, 1916-1985, with Blanca R. Arrillaga and Primavera Izaguirre wrote *Gramíneas uruguayas*. Montevideo 1970)

South America, Uruguay. Found in moist meadow, see *Journal of the Washington Academy of Sciences* 33(10): 316. 1943, *Revista Fac. Agron. Montevideo* 47: 1-168. 1960, *Bol. Fac. Agron. Montevideo* 105: 1-35 1968, *Taxon* 39(4): 611. 1990.

N. rupestris (Phil.) Torres (*Stipa rupestris* Phil.)

South America, Argentina. See *Anal. Mus. Nac. Chile* 2nd Sect. Bot.8: 81. 1891 and *Comisión de Investigaciones Científicas* 13: 36. 1997.

N. sanluisensis (Speg.) Barkworth (*Stipa debilis* Mez; *Stipa debilis* var. *debilis*; *Stipa debilis* var. *papillosa* Caro; *Stipa sanluisensis* Speg.; *Stipa sanluisensis* var. *longispicula* Caro; *Stipa sanluisensis* var. *sanluisensis*)

South America, Argentina, San Luis. In dry areas, sandy places, see *Anales del Museo Nacional de Montevideo* 4: 156, f. 47. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 209. 1921, *Kurtziana* 3: 61-62, 70-71. 1966, *Taxon* 39(4): 611. 1990.

N. sellowiana (Nees ex Trin. & Rupr.) Peñailillo (*Stipa eminens* var. *sellowiana* (Nees ex Trin. & Rupr.) Kuntze; *Stipa molfinoi* Speg.; *Stipa sellowiana* Nees ex Trin. & Rupr.) (after the German gardener Friedrich Sellow (Sello), 1789-1831 (d. by drowning), botanical explorer, naturalist, plant collector in Brazil and Uruguay, in Brazil with the German botanist Maximilian Alexander Philipp zu Wied-Neuwied (1782-1867); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 259. 1965; W.G. Herter & S.J. Rambo, "Nas pegadas dos naturalistas Sellow e

Saint-Hilaire." *Revista Sudamericana de Botánica*. 10, 3: 61-98. 1953)

South America, Brazil, Argentina. See *Species Graminum Stipaceorum* 38. 1842, *Revisio Generum Plantarum* 3(3): 371. 1898 and *Revista Argentina de Botánica* 1: 30. 1925, *Gayana, Botánica* 55(2): 87. 1998 [1999].

N. smithii (Hitchc.) Barkworth (*Stipa nutans* var. *quinqueciliata* Roseng. & Izag.; *Stipa smithii* Hitchc.) (for the plant collector Albert Charles Smith, b. 1906, with the American botanist Ellsworth Paine Killip, 1890-1968, wrote "The genus *Viburnum* in northwestern South America, with key to species." *Torrey Bot. Club*. July 1929; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 289. 1965; Joseph Ewan, editor, *A Short History of Botany in the United States*. 1969)

South America, Peru. Growing in open areas, open hillsides, see *Journal of the Washington Academy of Sciences* 20(15): 382. 1930, *Boletín de la Sociedad Argentina de Botánica* 9: 285, f. 1, t. 1, f. 1-2. 1961, *Taxon* 39(4): 612. 1990.

N. soukupii (Tovar) Barkworth (*Stipa soukupii* Tovar)

South America, Peru. See Jaroslav J. Soukup (1902-1989), S.D.B., *Vocabulario de los nombres vulgares de la flora peruana*. Editorial Salesiana. Lima 1970, *Opuscula Botanica Pharmaciae Complutensis* 4: 90. 1988, *Taxon* 39(4): 612. 1990.

N. spegazzinii (Arechav.) Barkworth (*Stipa spegazzinii* Arechav.; *Stipa uruguaycola* Speg.) (for the Argentine (born in Italy) botanist Carlo (Carlos) Luigi Spegazzini, 1858-1926, naturalist, traveler, professor of botany, botanical explorer, plant collector, mycologist, his writings include "Costumbres de los habitantes de la Tierra de Fuego." *Anales Soc. cient. argent.* Buenos Aires 1882, *Fungi guaranitici pugillus i-ii*. Buenos Aires 1883-1888, "Costumbres de los Patagones." *Anales Soc. cient. argent.* 17: 221-240. Buenos Aires 1884, "Apuntes filológicos sobre las lenguas de la Tierra de Fuego." *Anales Soc. cient. argent.* 18: 131-144. Buenos Aires 1884 and *Fungi guaranitici nonnulli novi v. critici*. Buenos Aires 1891. See John M. Cooper, *Analytical and Critical Bibliography of the Tribes of Tierra del Fuego and Adjacent Territory*. [Smithsonian Institution - Bureau of American Ethnology - Bulletin 63.] Washington 1917; Bartolomé Mitre, *Catálogo razonado de la sección lenguas americanas*. Buenos Aires 1909-1911; Roberto Dabbene, "Viaje á la Tierra del Fuego y á la isla de los Estados." in *Bol. Inst. geogr. argent.* 21: 3-78. Buenos Aires; Giacomo Bove, "Viaggio alla Patagonia ed alla Terra del Fuoco." in *Nuova antologia di scienze, lettere ed arti*. LXVI, seconda ser. XXXVI: 733-801. Roma 1882; Roberto Dabbene, "Los indígenas de la Tierra del Fuego." in *Bol. Inst. geogr. argent.* 25(5-6): 163-226 and 25(7-8): 247-300. Buenos Aires 1911; J.H. Barnhart, *Biographical notes upon botanists*. 3: 308. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait*

collection. 378. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Stafleu & Cowan, *Taxonomic literature*. 5: 776-785. 1985; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

South America, Uruguay, Paraguay. Sandy areas, see *Anales del Museo Nacional de Montevideo* 4(1): 68, f. a-c. 1903, *Revista Argentina de Botánica* 1: 43. 1925, *Taxon* 39(4): 612. 1990.

N. stuckertii (Hack.) Barkworth (*Stipa stuckertii* Hack.) (for the Swiss (b. Basel) botanist Theodor (Teodoro) Juan Vicente Stuckert, 1852-1932, pharmacist, in Argentina (Córdoba), see J.H. Barnhart, *Biographical notes upon botanists*. 3: 342. 1965)

South America, Argentina. See *Anales del Museo Nacional de Buenos Aires* 21: 81, t. 3, f. A, B, C, a-f. 1911, *Taxon* 39(4): 612. 1990.

N. subnitida (Roseng. & B.R. Arrill.) Barkworth (*Jarava subnitida* (Roseng. & B.R. Arrill.) Peñailillo; *Stipa subnitida* Roseng. & B.R. Arrill.)

South America. See *Boletín de la Facultad de Agronomía de Universidad de la Republica, Montevideo* 72: 25, t. 6-7. 1964, *Taxon* 39(4): 612. 1990, *Gayana, Botánica* 59(1): 32. 2002.

N. tenuiculmis (Hack.) Peñailillo (*Stipa tenuiculmis* Hack.)
South America. See *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 75. 1915, *Gayana, Botánica* 55(2): 87. 1998 [1999].

N. tenuis (Phil.) Barkworth (*Stipa argentina* Speg.; *Stipa puelches* Speg.; *Stipa tenuis* Phil.; *Stipa tenuis* var. *argentina* (Speg.) Speg.)

South America, Argentina. Useful for erosion control, growing on sandy areas, dry places, see *Anales de la Universidad de Chile* 36: 204. 1870, *Contribucion al estudio de la flora de la Sierra ...* 67. 1896 and *Anales del Museo Nacional de Montevideo* 4(2): 81. 1901, *Revista Argentina de Botánica* 1: 47. 1925, *Taxon* 39(4): 612. 1990.

N. tenuissima (Trin.) Barkworth (*Stipa cirrosa* E. Fourn.; *Stipa cirrosa* E. Fourn. ex Hemsl.; *Stipa geniculata* Phil.; *Stipa mendocina* Phil.; *Stipa oreophila* Speg.; *Stipa subulata* E. Fourn.; *Stipa subulata* E. Fourn. ex Hemsl.; *Stipa tenuissima* Trin.; *Stipa tenuissima* var. *oreophila* (Speg.) Speg.; *Stipa tenuissima* var. *planicola* Speg.)

North America, U.S., Mexico, Argentina. Perennial bunchgrass, erect, tufted, fountain-like clumped, slender and wiry culms, pubescent below the lower nodes, ligule acute, hair-like foliage, bright green blade usually rolled and stiff, very open inflorescence, a silvery soft nodding panicle loosely contracted, glumes subequal, callus blunt, awn almost

central, long showy awns, 2 lodicules, chasmogamous and cleistogamous flowers, fodder, an attractive and ornamental species with invasive tendency, highly drought resistant, cold hardy, can be used in erosion control, usually propagated from seed, tendency to self sow abundantly, occurs naturally on rocky slopes, dry open woods and dry prairies, in open exposed grasslands, see *Anales de la Universidad de Chile* 27: 339. 1865, *Anales de la Universidad de Chile* 36: 204. 1870, *Mexicanas Plantas* 2: 75. 1886 and *Anales del Museo Nacional de Montevideo* 4: 155. 1901, *Taxon* 39(4): 612. 1990, *Phytologia* 74: 17. 1993, *Auck. Bot. Soc. J.* 51: 31-33. 1996.

in English: Mexican feather grass, Mexican needle grass, white tussock, fine stem tussock grass, wiry spear grass, wiry needle grass, fine-leaves nassella, Texas needle grass
in Mexico: pasto

in South Africa: katdoogras, saagtandpolgras, witgras, witpolgras

N. torquata (Speg.) Barkworth (*Stipa torquata* Speg.)

South America, Uruguay, Argentina, Estación Tornquiát, Sierra Ventana. See *Anales del Museo Nacional de Montevideo* 4(2): 88-89, f. 20. 1901, *Taxon* 39(4): 612. 1990.

N. trachyphylla Henrard (*Nassella pubiflora* (Trin. & Rupr.) E. Desv.; *Nassella trichophylla* Henrard)

Bolivia. Caespitose, weak, leaf blades filiform and pubescent, glumes lanceolate subequal acute, see *Species Graminum Stipaceorum* 21. 1842, *Flora Chilena* 6: 264. 1854 and *Mededeelingen van's Rijks-Herbarium* 40: 57. 1921.

N. trichotoma (Nees) Hack. ex Arechav. (*Agrostis trichotoma* Nees ex Trin.; *Oryzopsis trichotoma* (Nees) Druce; *Piptatherum macrantherum* Nees ex Steud. ex B.D. Jacks.; *Piptochaetium trichotomum* (Nees) Griseb.; *Stipa macrathera* Speg., nom. illeg., non *Stipa macrathera* Phil.; *Stipa trichotoma* Nees; *Urachne macrathera* Nees ex Steud.; *Urachne trichotoma* (Nees) Trin.)

South America. Perennial, vigorous, erect, caespitose, forming dense tussock, diffusely fibrous root system, sheaths open, whitish ligule membranous and rounded at the tip, blade rolled and very stiff, leaves green and rough, drooping inflorescence, purplish at flowering and golden brown at maturity, lax panicle multibranching, seed head breaks off whole, floret asymmetric or gibbous, glumes lanceolate and swollen around floret at base, callus acute and bearded, lemma strongly tuberculate, awn eccentric arising from one side, awn straight to twice-geniculate, palea nerveless, 2 lodicules, yellowish seed, chasmogamous and cleistogamous flowers, seeds may remain dormant for several years, a noxious weed extremely invasive and competitive, naturalized elsewhere, if left uncontrolled it can form complete ground cover overtaking all other vegetation, useful for erosion control, can rapidly colonise weak pastures, reproduction by seeds only, primary natural method of dis-

persal is by wind, unpalatable, indigestible to stock, tuft of basal hair and the awn of the seed allows it to catch on the fleece of sheep, tolerant of flood and drought, rarely found in swampy or heavily timbered areas, common in open scrub and open forest lands, mountain grasslands, disturbed places, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 375. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 124. 1834, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 338. 1841, *Synopsis Plantarum Glumacearum* 1: 123. 1853, *Symbolae ad Floram Argentinam. Zweite ...* 297. 1879, *Index Kewensis* 2(3): 543. 1894, *Anales del Museo Nacional de Montevideo* 1: 276. 1896 and *Anales del Museo Nacional de Montevideo* 4: 97. 1901, *Report. Botanical Exchange Club. London.* 2: 420. 1910.

in English: Australian serrated tussock, serrated tussock, serrated tussock grass, nassella tussock, nassella tussock grass, New Zealand tussock grass, Yass River tussock, tumbleweed

in Argentina: paja voladora

in South Africa: nassella-polgras, Nu Zeelandse polgras, saagtand polgras

N. tucumana (Parodi) Torres (*Nassella asperifolia* F. Rojas; *Stipa tucumana* Parodi)

South America, Argentina. Caespitose, leaf blades linear rigid, oblong panicle lax to dense, glumes subequal oblong acuminate, see *Revista Argentina de Agronomía* 15(1): 57, f. 2. 1948, *Comisión de Investigaciones Científicas* 13: 38, f. 1, G, g. 1997, *Gayana, Botánica* 54(2): 166-167, f. 5. 1997.

N. uspallatensis (Speg.) Torres (*Stipa uspallatensis* Speg.)

South America, Argentina. See *Anales del Museo Nacional de Montevideo* 4(2): 120-122, f. 32. 1901, *Comisión de Investigaciones Científicas* 13: 38. 1997.

N. vallsii (A. Zanín & Longhi-Wagner) Peñailillo (*Stipa vallsii* A. Zanín & Longhi-Wagner) (named for the Brazilian botanist José Francisco Montenegro Valls, b. 1945, agronomist. See *Bradea* 5: 345. 1990; *Iheringia* 42: 5-6. 1992; *Candollea* 48:18. 1993; *Bonplandia* (Corrientes) 8(1-4): 63, 71, 127, 131. 1994; *Bradea* 6: 332. 1995; *Bonplandia* (Corrientes) 11(1-4): 127. 2001)

South America, Brazil. See *Bradea, Boletim do Herbarium Bradeanum* 5(33): 346-347, f. 2. 1990, *Gayana, Botánica* 55(2): 87. 1998 [1999].

N. Vargasii (Tovar) Peñailillo (*Stipa Vargasii* Tovar) (for J. César Vargas Calderón, 1907-1960, collector of tropical Andean mosses. See *Diez Anos al Servicio de la Botánica en la Universidad del Cuzco: Homenaje a la Universidad*

Nacional del Cuzco en su 250 Aniversario, Noviembre de 1946, Cuzco, Peru; C. Vargas, "Orchids of Machupicchu (Peru)," in: *American Orchid Society Bull.* 34(11): 960-963 [English] 964-966 [Spanish]. Nov. 1965; *Rhodora* 72: 121. 1970; C. Vargas, *La flora del departamento de Madre de Dios (Perú)*. Lima 1974)

Southern America, Peru. See *Phytologia* 47(6): 445, f. c-d. 1981, *Gayana, Botánica* 55(2): 87. 1998 [1999].

N. ventanicola (Cabrera & Torres) Barkworth (*Nassella wurdackii* (Tovar) Barkworth; *Stipa ventanicola* Cabrera & Torres)

South America. See *Boletín de la Sociedad Argentina de Botánica* 12: 140. 1968, *Phytologia* 47(6): 445, f. a-b. 1981, *Taxon* 39(4): 612. 1990.

N. viridula (Trin.) Barkworth (*Stipa nuttalliana* Steudel; *Stipa parviflora* Nutt. ex Steud., nom. illeg., non *Stipa parviflora* Desf.; *Stipa parviflora* Nutt., nom. illeg., non *Stipa parviflora* Desf.; *Stipa sparta* [Trin. misapplied by] Hooker; *Stipa viridula* Trin.)

North America, U.S., Canada. Perennial bunchgrass, tufted, long-lived, deep fibrous root system, culms pubescent beneath the lower node, ligule truncate to rounded, leaves flat and involute, columnar-shaped panicle loosely contracted, spikelets narrow and loose, callus sharp, awns bent twice, awns do not trouble livestock, a pioneer grass, a weak tolerance to shade, a good drought tolerance, moderately tolerant of flooding, reproduces from seed and through tillering, useful for erosion control and for surface mine reclamation, revegetation, fodder, good forage, moderately to highly palatable, highly nutritious, used for hay and pasture production, seeds eaten by small mammals and songbirds, occasionally hybridizes with *Achnatherum hymenoides* (Roemer & Schultes) Barkworth (*Stipa sensu lato*), generally found in semiarid and continental climates, frequently on sandy soils, found on foothills, open hillsides and parks, in mountain meadows, canyons, open woodlands, in grasslands and open woods, see *The Genera of North American Plants* 1: 59. 1818, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 39. 1836, *Nomenclator Botanicus. Editio secunda* 2: 643. 1841 and *Taxon* 39(4): 612. 1990.

in English: green tussock grass, feather bunchgrass, green stipa grass, green nassella, green panic grass, green spear grass, green needlegrass

N. wurdackii (Tovar) Barkworth (*Nassella mexicana* (Hitchc.) R.W. Pohl; *Nassella ventanicola* (Cabrera & Torres) Barkworth; *Stipa wurdackii* Tovar) (for the American botanist John Julius Wurdack, 1921-1998, plant collector; see Lois Brako and James Lee Zarucchi, *Catalogue of the Flowering Plants and Gymnosperms of Peru*. 1249-1250. Missouri Botanical Garden, St. Louis, Missouri 1993;

Laurence J. Dorr, "In Memoriam. John J. Wurdack, 1921-1998." in *Plant Science Bulletin*. 44(2): 41. Summer 1998) South America, Peru. See *Boletín de la Sociedad Argentina de Botánica* 12: 140. 1968, *Phytologia* 47(6): 445, f. a-b. 1981, *Taxon* 39(4): 612. 1990.

N. yaviensis Torres

South America, Argentina, Yaví, Abra de Yaví. See *Comisión de Investigaciones Científicas* 13: 39, f. 2, F, f. 1997.

Nastus Jussieu = *Chloothamnus* Büse,
Oreiostachys Gamble, *Stemmatospermum* P.
Beauv.

From the Greek *nastos*, *naston* "close-pressed, firm," *nastos* is the Greek name for a kind of reed, referring to the stem, treelike.

About 7-24 species, from Madagascar to the Solomon Islands, Reunion Island, Sumatra, Papua New Guinea, Indonesia. Bambusoideae, Bambusodae, Bambuseae, Bambusiinae, Hickeliinae, perennial, unarmed, sympodial, slender, erect, scrambling, scandent, climbing, woody, many branches at each node, treelike, persistent, internodes usually hollow, rhizomes pachymorph, ligule fringed or unfringed, plants bisexual, inflorescence semelauctant or determinate, open or contracted panicle or a raceme borne on a leafy branch, spikelets with one fertile floret and a rachilla extension, glumes 3-5/4-6 or several lemma membranous, palea present, 3 free and membranous lodicules, 6 stamens, ovary narrowly cylindrical and hairy, 3 stigmas, usually shoots are not eaten because of the bitter taste, culms used to make flutes and arrow heads, forming extensive and dense thickets, montane forest, mixed lower montane rainforest, alpine grasslands, mossy forest, disturbed forest areas, alluvial forest, uplands, type *Nastus borbonicus* J.F. Gmelin, see *Genera Plantarum* 34. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 580. 1791, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 144, 145, t. 25, f. 5. Paris 1812, *Nov. Gen. Sp.* 1: 201. 1816, *Systema Vegetabilium* 2: 113. 1825, *Annales des Sciences Naturelles (Paris)* 5: 442, 458, t. 8, f. 1. 1825, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 211. 1831, *Bambuseae* 42, t. 17. 1839, *Plantae Junghuhnianae* 3: 386. 1854 and *Verhandeligen der Koninklijke Nederlandsche Akademie van Wetenschappen: Afdeeling Natuurkunde: Tweede Sectie* 10: 685. 1908, A. Camus, "Le genre *Nastus* Juss." *Bulletin de la Société Botanique de France* 72: 22-27. 1925, *Blumea* 2(2): 60-73. 1936, *Mémoires de l'Institut Scientifique de Madagascar, Série B, Biologie Végétale* 6: 1-272. 1955, R.E. Holttum, "The bamboo-genera *Nastus* and *Chloothamnus*." *Kew Bulletin* 10: 591-594. 1956 [1955], *Taxon* 6(7): 202, 205. 1957, R.E. Holttum, "The bamboos of New Guinea." *Kew Bulletin*

21(2): 263-292. 1967, W.C. Lin, "The species and distribution of bamboos in the Republic of Malagasy (Madagascar), East Africa." *Special Bulletin of Taiwan Forestry Research Institute no. 4*. 1967, *European Journal of Soil Science* Mar 2005 [Mineralogical control of organic carbon dynamics in a volcanic ash soil on La Réunion.].

Species

N. amazonicus Huber

Brazil. See *Bulletin de l'Herbier Boissier, sér. 2*, 6(4): 276. 1906.

N. ambrensis A. Camus

Madagascar, Forêt d'Ambre. See *Notulae Systematicae. Herbier du Museum de Paris* 14: 214. 1951[1952].

N. aristatus A. Camus

Madagascar. Climbing, clambering, thin, wiry, weedy, forest edge, see *Bulletin de la Société Botanique de France* 72: 26-27. 1925, W.C. Lin, "The species and distribution of bamboos in the Republic of Malagasy (Madagascar), East Africa." *Special Bulletin of Taiwan Forestry Research Institute* 4: 22, 33. 1967.

N. borbonicus J.F. Gmelin (*Bambusa alpina* Bory; *Bambusa arundinacea* Humb. & Bonpl.; *Bambusa arundinacea* Bonpl.; *Bambusa paniculata* Willd. ex Steud.; *Nastus paniculatus* Smith; *Stemmatospermum verticillatum* P. Beauv.)

Reunion. See *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 580. 1791, *Voyage dans les Quatre Principales Îles des Mers d'Afrique* 1: 310. 1804, *Plantae Aequinoctiales* 1: 65. 1808, *Essai d'une Nouvelle Agrostographie* 145, t. 25, f. 5. 1812, *The Cyclopaedia; or, Universal Dictionary of Arts, ...* 24: no. 4. 1819, *Nomenclator Botanicus. Editio secunda* 1: 183. 1840, *Journal of the Linnean Society, Botany* 20: 302. 1883 and *Taxon* 6(7): 205. 1957.

N. decaryanus A. Camus (for M. Raymond Decary, c. 1890-1973, plant collector in Madagascar, he collected about 19,000 specimens of vascular plants, fungi and bryophytes, see Raymond Decary and Ravoanarivo, "La médication antirabique chez les Antandroy." in *Bull. Acad. Malg.* 9: 17. 1926; Werner Rauh, *Succulent and Xerophytic Plants of Madagascar*. Strawberry Press, Mill Valley, California 1995-1998; Gordon Douglas Rowley, *A History of Succulent Plants*. California 1997)

Madagascar. See *Bulletin de la Société Botanique de France* 94: 42. 1947.

N. elatoides Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

N. elatus Holttum

Papua New Guinea. Erect, large, shoots edible even when raw, used for buildings, musical instruments, found in the highlands, see *Kew Bulletin* 21(2): 291, f. 5. 1967.

in Papua New Guinea: mengagi, mingal

N. elegantissimus (Hasskarl) Holttum (*Bambusa elegantissima* Hassk.; *Beesha elegantissima* (Hassk.) Kurz ex Munro; *Chloothamnus chilianthus* Büse; *Chloothamnus chilianthus* var. *subscabra* Büse; *Chloothamnus elegantissima* (Hassk.) Henrard; *Melocanna elegantissima* Kurz ex Teijsm. & Binn.; *Ochlandra elegantissima* (Hassk.) E.G. Camus; *Oreostachys elegantissima* (Hasskarl) Valetton ex Backer; *Oreostachys pullei* Gamble; *Schizostachyum chilianthum* (Büse) Kurz; *Schizostachyum elegantissimum* Kurz; *Schizostachyum elegantissimum* (Hassk.) Kurz) (after the Dutch botanist August Adriaan Pulle, 1878-1955, plant taxonomist, botanical explorer and plant collector in Suriname and New Guinea, 1914-1949 professor of systematic botany at the University of Utrecht, from 1932 to 1955 editor of the *Flora of Suriname* (Netherlands, Guyana). Amsterdam 1932 etc. [*Gramineae*, by J.T. Henrard & Gerda Jane Hillegonda Amshoff, 1913-1985], among his numerous publications are *An Enumeration of the Vascular Plants Known from Surinam*. Leiden 1906, *Naar het sneeuwgebergte van Nieuw-Guinea met de derde Nederlandsche expeditie*. Amsterdam [1914] and *Compendium van de terminologie, nomenclatuur en systematiek der zaadplanten*. Utrecht 1938. See André Joseph Guillaume Henri Kostermans (born 1907), *Studies in South American Malpighiaceae, Lauraceae and Hernandiaceae, especially of Surinam*. Amsterdam 1936; Stafleu & Cowan, *Taxonomic literature*. 4: 425-442. 1983; J.H. Barnhart, *Biographical notes upon botanists*. 3: 115. 1965; Friedrich Richard Rudolf Schlechter (1872-1925) in *Botanische Jahrbücher*. 52: 164. 1914; T.W. Bossert, compilation, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 319. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 598. University of Pennsylvania Press, Philadelphia 1964)

Indonesia, West Java. Climbing, used for framing and fencing, see *Cat. Pl. Hort. Bot. Bogor*. 295. 1844, *Plantae Javanicae Rariores* 42. 1848, *Plantae Junghuhnianae* 3: 386. 1854, *Pl. Ind. Batav. Orient.* 2: 114. 1857, *Fl. Nederl. Ind.* 3, 4: 751. 1859, *Cat. Pl. Hort. Bot. Bogor*. 20. 1866, *Transactions of the Linnean Society of London* 26(1): 146. 1868, *Journal of the Asiatic Society of Bengal* 39(2): 88, 90. 1870 and *Verhandelingen der Koninklijke Nederlandsche Akademie van Wetenschappen: Afdeling Natuurkunde: Tweede Sectie* 10: 685. 1908 and 11: 127-129. 1908-1909, *Les Bambusées* 184. 1913, *Handb. Fl. Java* 2: 288. 1928, *Blumea* 2(2): 68-70, 72, f. 1-2. 1936, *Kew Bulletin* 10: 593. 1955, *Fl. Java* 3: 628. 1968.

in Indonesia: awi eul-eul

N. elongatus A. Camus

Madagascar. Scrambling, see *Bulletin de la Société Botanique de France* 72: 23-24. 1925, *Special Bulletin of Taiwan Forestry Research Institute* 4: 22, 33. 1967.

N. emirnensis (Baker) A. Camus (*Nastus borbonicus* var. *emirnensis* Baker)

Madagascar, Province of Emirna. Mountains, forest, see *Journal of the Linnean Society, Botany* 20: 302. 1883 and *Bulletin de la Société Botanique de France* 72: 24. 1925.

N. glaucus Widjaja

Indonesia. See *Reinwardtia* 11(2): 57-152. 1997.

N. holttumianus Bor

Indonesia. Scrambling, climbing, see *Österreichische Botanische Zeitschrift* 120(1-2): 90. 1972.

N. hooglandii Holttum (from the Dutch botanist Ruurd [aka Ru] Dirk Hoogland, 1922-1994 (died in Paris, France, on 18 November), Ph.D. in 1952 for a revision of *Dillenia*, 1952 joined CSIRO Division of Land Research and Regional Survey, from 1968 until 1979 he was a research fellow with the Taxonomy Unit in the Australian National University's Research School of Biological Sciences (Australian Capital Territory), collector in Papua New Guinea, Australia, Norfolk and Lord Howe Islands, author of *Family Names in Current Use for Vascular Plants, Bryophytes, and Fungi*. *Regnum Vegetabile* 126, 1993, worked with Alexander Geoffrey Floyd, H.C. Hayes, John Spencer Womersley (1920-1985), Paul J. Darbyshire, Lindley Alan Craven (b. 1945), Royal Pullen (b. 1925), Richard Schodde (b. 1936), John Turner, C.N. Smithers; see A.E. Orchard, "A History of Systematic Botany in Australia." in *Flora of Australia* vol.1, 2nd edition, ABRIS. 1999)

Papua New Guinea. Small contracted panicle subtended by a well-developed sheath, see *Kew Bulletin* 21: 287, f. 4. 1967, *Candollea* 55(2): 285. 2000, *Gard. Bull. Singapore* 53(1 & 2): 178. 2001.

N. humbertianus A. Camus (for Henri Humbert (1887-1967), author and editor of *Flore de Madagascar et des Comores*. 1936-1967)

Madagascar. See *Bulletin de la Société Botanique de France* 84: 286. 1937, *Special Bulletin of Taiwan Forestry Research Institute* 4: 22, 33. 1967.

N. lokohoensis A. Camus

Madagascar, Lokoho. See *Mém. Inst. Sci. Madagascar, Sér. B, Biol. Vég.* 6: 251, 1955, *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 29: 274. 1957, *Special Bull. of Taiwan For. Res. Inst.* 4: 22, 33. 1967.

N. longispicula Holttum

Papua New Guinea. See *Kew Bulletin* 21: 287. 1967.

N. madagascariensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 72: 24-25. 1925, *Bull. Mus. Nat. Hist. Nat. Paris* II. 6: 98. 1934.

N. manongarivensis A. Camus

Madagascar, Manongarivo. See *Bulletin de la Société Botanique de France* 72: 25. 1925.

N. obtusus Holttum

Papua New Guinea, Solomon Islands. Erect, scrambling, climbing, leaning, see *Kew Bulletin* 10: 594. 1956, *Kew Bulletin* 21: 288. 1967.

N. perrieri A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 72: 26. 1925, *Special Bulletin of Taiwan Forestry Research Institute* 4: 22, 33, f. 23. 1967.

N. productus (Pilger) Holttum (*Chusquea quila* Kunth; *Oreiostrachys producta* Pilg.)

Indonesia, Papua New Guinea. Scrambling, see *Révision des Graminées* 1: 329, t. 77. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62: 460. 1929, *Blumea* 2(2): 71. 1936, *Kew Bulletin* 10: 594. 1956, *Kew Bulletin* 21: 289. 1967, *Alpine Fl. New Guinea* 2: 1216, f. 391, pl. 112. 1979.

N. reholtumianus S. Soenarko (for the English botanist Richard Eric Holttum, 1895-1990)

Indonesia. See *Gardens' Bulletin, Straits Settlements* 30: 17. 1977.

N. rudimentifer Holttum

Indonesia, Papua New Guinea. Erect, scandent, see *Kew Bulletin* 21: 288. 1967.

N. schlechteri (Pilger) Holttum (*Chloothamnus schlechteri* (Pilg.) Henrard; *Oreiostrachys schlechteri* Pilg.) (after the German (b. Berlin) botanist Friedrich Richard Rudolf Schlechter, 1872-1925 (d. Berlin), traveler, plant collector in Africa and orchidologist, student of Engler, assistant to Harry Bolus (1834-1911), 1899-1900 leader of the German West Africa Rubber Expedition, 1906 Borneo and Sumatra, 1921-1925 Curator at Berlin-Dahlem, a specialist of Asclepiadaceae and succulents, his writings include *Die Orchideen; ihre Beschreibung, Kultur und Züchtung*. Berlin 1914-1915, *Beiträge zur Kenntniss südafrikanischer Asclepiadaceen*. Bot. Jahrb. 1894-1895 and *Die Guttapercha- und Kautschuk-Expedition*. Berlin 1911, brother of Max Schlechter (1874-1960, d. Cape Town) who collected with him in South Africa (1896-1897); see Ludwig E. Theodor Loesener, *Notizbl. Bot. Gart. Berl.* 9: 912-948. 1926; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19: 861-863. 1965; René Letouzey (1918-1989), "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 1-110. Paris 1968; J.H. Barnhart, *Biographical notes upon botanists*. 3:

228. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 353. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 681. Philadelphia 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 313-315. A.A. Balkema Cape Town 1981; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 267. 1947 and *Bernice P. Bishop Mus. Bull.* 144: 164. 1937; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 72. 1971; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; John Peter Jessop (b. 1939), "Itinerary of Rudolf Schlechter's collecting trips in Southern Africa." *J. S. Afr. Bot.* 30(3): 129-146. 1964; Stafleu & Cowan, *Taxonomic literature*. 5: 205-213. 1985; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 775. 1993; A. White & B.L. Sloane, *The Stapelieae*. Pasadena 1937; Merle A. Reinikka, *A History of the Orchid*. Timber Press 1996; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 & Supplement 1980)

Papua New Guinea. Erect, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52(1-2): 174. 1914, *Blumea* 2: 71, 72. 1936, *Kew Bulletin* 10: 594. 1956, *Kew Bulletin* 21: 287. 1967.

N. schmutzii S. Dransfield (for Fr. E. Schmutz S.V.D., b. 1932, botanical collector in Indonesia)

Indonesia. Climbing, scrambling, see *Reinwardtia* 9(4): 388, f. 2. 1980.

N. tsaratananensis A. Camus

Madagascar, Mount Tsaratanana. Climbing, leaning, see *Bulletin de la Société Botanique de France* 72: 26. 1925.

Nastus Lunell = *Cenchrus* L.

From the Greek *nastos, naston* "close-pressed, firm," *nastos* is the Greek name for a kind of reed, referring to the stem, treelike.

Panicoideae, Paniceae, Cenchrinae, see *Species Plantarum* 2: 1049-1050. 1753, *Flora Caroliniana, secundum ...* 79. 1788 and *Ill. Fl. N.U.S.* edition 2. 1: 166. 1913, *American Midland Naturalist* 4: 214. 1915, *Contributions from the United States National Herbarium* 46: 144-150, 297. 2003.

Natschia Bubani = *Nardus* L.

Pooideae, Nardeae, see *Species Plantarum* 1: 53. 1753 and *Flora Pyrenaea ...* 4: 405. 1901, *American Midland Naturalist* 2: 36-54. 1911, *Brenesia* 19-20. 617-618. 1982,

Contributions from the United States National Herbarium 48: 454-455, 467. 2003.

Navicularia Raddi = *Ichnanthus* P. Beauv.,
Navicularia Fabr. (Lamiaceae, alt. Labiatae)

Latin *navicula* “a small vessel,” *navicularius*, a “belonging to a small ship or boat.”

Panicoideae, Paniceae, Paspalinae, type *Navicularia lanata* Raddi, see *Species Plantarum* 1: 55. 1753, *Enumeratio Methodica Plantarum* 48. 1759, *Essai d'une Nouvelle Agrostographie* 56, 57, t. 12, f. 1. 1812, *Agrostografía Brasiliensis* 38-40, t. 1, f. 5. 1823, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 136. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 195, 320. 1834 and *J. Wash. Acad. Sci.* 13(9): 174. 1923, *Mus. Paraense Emílio Goeldi, Ser. Guias* 9(2): 279-293. 1993, *Contributions from the United States National Herbarium* 46: 257-270, 298-298. 2003.

Nazia Adans. = *Tragus* Haller

Chloridoideae, Cynodonteae, Zoysiinae, or Chloridoideae, Cynodonteae, Traginae, type *Nazia racemosa* (L.) Kuntze, see *Species Plantarum* 2: 1049. 1753, *Familles des Plantes* 2: 31, 582. 1763, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 203. 1768, *Flora Pedemontana* 2: 241. 1785, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 3: 15. 1822, *Mantissa* 2: 205. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 286. 1829, *Revisio Generum Plantarum* 2: 780. 1891, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 12. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* (edition 1) 28, f. 324. 1899 and *Anales del Museo Nacional de Buenos Aires* 11: 58. 1904, *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *Kew Bulletin* 36(1): 55-61. 1981, *Contributions from the United States National Herbarium* 41: 175, 220-221. 2001.

Neeragrostis Bush = *Eragrostis* Wolf

One or two species, northern and Central America, Mexico. Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eragrostidinae, annual, herbaceous, creeping, decumbent, rooting at the nodes, mat-forming, pubescent or villous, stoloniferous, auricles absent, sheaths glandular, ligule a line of hairs, leaf blades triangular, plants dioecious, inflorescence a panicle exerted or partially included in upper sheath, hermaphrodite florets absent, dimorphic spikelets, 2 glumes unequal, second glume awnless, lemma

entire and awned or mucronate, palea vestigial in female spikelets, 2 free and fleshy lodicules truncate, male florets 3-staminate, ovary glabrous, 2 stigmas, open areas, sandy soil, riverbanks, clearings, related to *Distichlis* and *Monanthochloe*, sometimes referred to *Eragrostis*, type *Neeragrostis weigeltiana* Bush, see *Genera Plantarum* 23. 1776, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 185. 1791, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809 and *Transactions of the Academy of Science of St. Louis* 13: 175-178, 180. 1903, *Rhodora* 28: 113-115. 1926, *Rev. Argentina de Agronomía* 29: 1-11. 1962, *Acta Bot. Neerl.* 15: 157. 1966, *Iowa State Journal of Research* 51(3): 323-325. 1977, *Rhodora* 80: 390-403. 1980, *Monocotiledóneas Mexicanas: una Sinopsis Florística* 10: 7-236. 2000, *Contributions from the United States National Herbarium* 41: 81-115, 175. 2001.

Species

N. contrerasii (R.W. Pohl) P.M. Peterson (*Eragrostis contrerasii* R.W. Pohl; *Eragrostis hypnoides* (Lam.) Britton, Sterns & Poggenb.) (named for Elias Contreras, 1961-1972 collected in Belize, Guatemala, Mexico, worked with Cyrus Longworth Lundell; see *Rhodora* 77: 105-140. 1975, *Wrightia* 5: 84. 1975, *Wrightia* 6: 42. 1979, *Ann. Missouri Bot. Gard.* 80: 240. 1993, *Ann. Missouri Bot. Gard.* 84: 731. 1997)

Mexico. Annual, creeping, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 185. 1791, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888 and Ralph L. Roys, “The Ethnobotany of the Maya.” *Middle American Research Series*. New Orleans 1931, *Iowa State Journal of Research* 51(3): 323, f. 1. 1977, *Smithsonian Contributions to Botany* 87: 35. 1997.

N. reptans (Michx.) Nicora (*Eragrostis capitata* (Nutt.) Nash; *Eragrostis reptans* (Michx.) Nees; *Eragrostis reptans* (Michx.) J. Presl, nom. illeg., non *Eragrostis reptans* (Michx.) Nees; *Eragrostis weigeltiana* Bush; *Megastachya fasciculata* E. Fourn.; *Megastachya reptans* (Michx.) P. Beauv.; *Neeragrostis weigeltiana* Bush; *Poa capitata* Nutt.; *Poa dioica* Michx. ex Poir.; *Poa hypnoides* Lam.; *Poa reptans* Michx.; *Poa weigeltiana* Rchb. ex Trin.) (for the German botanist Christoph Weigelt, d. 1828, physician, plant collector (Suriname); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 471. 1965; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845)

America. Creeping, see *Flora Boreali-Americana* 1: 69-70, t. 11. 1803, *Essai d'une Nouvelle Agrostographie* 74, 167, 175. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 514. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 410. 1830, *Reliquiae Haenkeanae* 1(4-5): 275. 1830, *Transactions of the American Philosophical Society*, new series, 5: 146.

1835, *Mexicanas Plantas* 2: 120. 1886 and *Manual of the Flora of the Northern States and Canada* 1042. 1901, *Transactions of the Academy of Science of St. Louis* 13(7): 178, 180. 1903, *Revista Argentina de Agronomía* 29: 5. 1963.

Neesiochloa Pilger

For the German (b. near Erbach, Hesse) botanist Christian Gottfried (Daniel) Nees von Esenbeck, 1776-1858 (d. Breslau, Wroclaw), physician, 1800 medical doctor Giessen, editor of Robert Brown, *Vermischte botanische Schriften*. Nürnberg 1825-1835, from 1818 to 1858 President of the Deutschen Akademie der Naturforscher *Leopoldina*, professor of botany, botanical collector, among his works are *Handbuch der Botanik*. Nürnberg 1820-1821, *Hornsuchia*, novum plantarum brasiliensium genus. Ratisbonae [Regensburg] [1882], *Systema laurinarum*. Berolini [Berlin] 1836 and *Genera et species Asterearum*. Vratislaviae [Breslau] 1832, brother of the German botanist Theodor Friedrich Ludwig Nees von Esenbeck (1787-1837); see J.H. Barnhart, *Biographical notes upon botanists*. 2: 542. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 283. 1972; Johannes Proskauer, in *D.S.B.* 10: 11-14. 1981; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 464. 1973; Ethelyn (Daliaette) Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; E.D. Merrill, *Contr. U.S. Natl. Herb.* 30: 227. 1947; Stafleu & Cowan, *Taxonomic literature*. 3: 705-712. 1981; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. London 1918.

One species, northeast Brazil. Chloridoideae, Cynodonteae, annual, herbaceous, unarmed, erect, caespitose, auricles absent, ligule membranous with ciliate fringe, leaf blades linear with hispid margins, plants bisexual, open inflorescence with long pedicels, an open panicle very sparsely branched or an open raceme, solitary spikelets round to orbicular, 2 glumes ovate more or less equal, second glume awned, lemma emarginate and shortly awned, palea keels ciliate, lodicules acute to acuminate, 3 stamens, ovary glabrous, 2 reddish stigmas, in open disturbed places, damp ground, poor soil, type *Neesiochloa barbata* (Nees) Pilg., see *Agrostologia Brasiliensis* 2: 477. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 208.

1831, *Enumeratio Plantarum* 1833 and *Contributions from the United States National Herbarium* 41: 175. 2001.

Species

N. barbata (Nees) Pilger (*Briza barbata* (Nees) Trin.; *Calotheca barbata* Nees; *Chascolytrum barbatum* (Nees) Kunth; *Eleusine barbata* Desv.; *Leptochloa barbata* (Desv.) Parodi ex Nicora)

South America. Slender, leaf blades acuminate pilose hispid, inflorescence oblong, spikelets 7- to 10-flowered, glumes subequal glabrous, lowest lemma awned, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 477. 1829 [also *Agrostologia Brasiliensis* 2: 477. 1829], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 363. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 373. 1833 and *Hickenia* 2(19): 91. 1993.

Negria Chiov. = *Lintonia* Stapf, *Negria* F. Muell. (Gesneriaceae)

For the Italian botanist Giovanni Negri, 1877-1960, professor of botany, from 1925 to 1949 Director of the Istituto Botanico and Orto Botanico at Firenze, collector in East Africa, Ethiopia, Somalia, his works include *Erbario figurato*. Milano 1904, Etiopia. *Appunti di una escursione botanica nell'Etiopia meridionale ...* (Marzo-Agosto 1909). Roma 1913 and *Atlante dei principali funghi commestibili e velenosi*. Torino 1908; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 542. 1965; E. Schmid, *Webbia* 25(1): 47-51. 1970; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 283. 1972; P. Luzzi, "L'Orto Botanico Giardino dei Semplici." in *Museo Nazionale di Storia Naturale a Firenze: ipotesi di insediamento*. Alinea Editrice, Firenze 1987; Guido Moggi, "Il Museo Botanico ed il Giardino dei Semplici dell'Università di Firenze." *Boll. Soc. It. Iris*. 26-39. 1975.

Cynodonteae, type *Negria melicoides* Chiov., see *Fragmenta Phytographiae Australiae* 7: 151. 1871 and *Hooker's Icones Plantarum* 30: t. 2944, 2949. 1911, *Annali di Botanica* 10(3): 410-411. 1912, *Annuario del Reale Istituto Botanico di Roma* 11: 231. 1913.

Nemastachys Steud. = *Microstegium* Nees

From the Greek *nema* "thread" and *stachys* "a spike."

Panicoideae, Andropogoneae, Saccharinae, type *Nemastachys taitensis* Steud., see *A Natural System of Botany* 2nd edition 447. 1836, *Synopsis Plantarum Glumacearum* 1: 357. 1854 and *Kew Bulletin* 7(2): 209-223. 1952,

Contributions from the United States National Herbarium 46: 292, 298. 2003.

Nematopoa C.E. Hubb.

From the Greek *nema*, *nematos* “thread” and *poa* “grass, pasture grass,” referring to the capillary branchlets of the inflorescence, to the filiform inflorescence branches.

One species, tropical southern Africa. Arundinoideae, Danthonieae, perennial, herbaceous, densely to loosely tufted, leaf blades filiform flexuous, auricles absent, ligule fringed or ciliate, plants bisexual, inflorescence paniculate, spikelets pedicellate and flattened, 2 unequal glumes more or less nerved, lemmas membranous 2-dentate with a long flexuous central awn, palea present, 2 minute fleshy lodicules, 3 stamens, ovary glabrous, 2 reddish stigmas, moist places, damp ground, type *Nematopoa longipes* (Stapf & C.E. Hubb.) C.E. Hubb., see *Kew Bulletin* 12: 51. 1957.

Species

N. longipes (Stapf & C.E. Hubb.) C.E. Hubb. (*Crinipes longipes* (Stapf & C.E. Hubb.) C.E. Hubb.; *Triraphis longipes* Stapf & C.E. Hubb.)

South Africa. See *Kew Bulletin* 1935: 306. 1935, *Kew Bull.* 12: 52. 1957.

Neoaulacolepis Rauschert = *Aniselytron* Merrill, *Aulacolepis* Ettingsh. (Pinaceae), *Aulacolepis* Hack., *Calamagrostis* Adans.

Greek *neos* “new” and the genus *Aulacolepis* Hackel, Greek *aulax*, *aulakos* “a furrow” and *lepis* “a scale.”

Aveneae, type *Neoaulacolepis treutleri* (Kuntze) Rauschert, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Revisio Generum Plantarum* 2: 780. 1891, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung I* 102: 135, 147. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 3(42-43): 241-242. 1906, *Philippine Journal of Science* 5(4): 328-330. 1910, *Taxon* 31(3): 561. 1982, *The Gardens' Bulletin Singapore* 37(2): 213-223. 1984 [1985], *Illustrated Guide of the Genus Astragalus in Iran* 738. 1989.

Neobambus Keng ex Keng f. = *Neobambus* Keng f., *Sinobambusa* Nakai, *Sinobambusa* Makino ex Nakai

From the Greek *neos* “new” plus *bambus*, *bambusa*.

Bambusoideae, Bambuseae, Shibataeinae, type *Neobambus dolichanthus* (Keng) Keng ex Keng f., see *Journal of the Arnold Arboretum* 6(3): 152. 1925, *Sinensia* 7(3): 418, f. 6. 1936, *Technical Bulletin of the National Forestry Research Bureau (China)* 8: 15. 1948, *Taxon* 6(7): 209. 1957, *Journal*

of Bamboo Res. 1: 140-164. 1982, *Kew Bulletin* 44(2): 349-367. 1989, *Contributions from the United States National Herbarium* 39: 79, 113. 2000.

Neobouteloua Gould

After the Spanish botanist Estéban Boutelou y Soldevilla, 1776-1813 (Madrid), professor in Madrid; see Yahya Ibn Muhammad called Ibn Al-'Auwán, *Libro de Agricultura ... Arreglo hecho ... por D. C. Boutelou, precedido de una introducción de D. E. Boutelou* etc. 1878; Miguel Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. Madrid 1858; *Genera et Species Plantarum*. 1816.

One species, Argentina and Chile. Chloridoideae, Cynodonteae, perennial, herbaceous, unarmed, decumbent, rhizomatous, auricles absent, narrow leaf blades, ligule fringed, plants bisexual, open inflorescence, racemes closely spaced, spikelets flattened or compressed laterally, 1 fertile floret and a cluster of 2-4 rudiments, 2 glumes unequal, lemma keeled and 3-awned, palea present, 2 tiny and free lodicules, 3 stamens, ovary glabrous, 2 reddish stigmas, open areas, plains, prairies, hillsides, slopes, dry habitats, pampas, a segregate from *Chondrosium*, type *Neobouteloua lophostachya* (Griseb.) Gould, see *Boletín de la Sociedad Argentina de Botánica* 12: 106-108, f. 1-2. 1968, *Contributions from the United States National Herbarium* 41: 175. 2001.

Species

N. lophostachya (Griseb.) Gould (*Bouteloua lophostachya* Griseb.; *Bouteloua lophostachya* Griseb.; *Bouteloua nana* Griseb.)

Argentina. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 302-303. 1879 and *Boletín de la Sociedad Argentina de Botánica* 12: 108, f. 1-2. 1968.

Neohouzeaua A. Camus = *Schizostachyum* Nees

Named for Jean Houzeau de Lehaie, 1867-1959, explorer, botanical collector, author of *Le bambou, son Étude, sa culture, son emploi*. Mons 1906, “La culture des bambous dans le Sud-Ouest de la France.” *Bull. Soc. Dendr. Fr.* 14: 233-266. 1909.

About 2-7 species, Southeast Asia, Vietnam, China, Bhutan, Bangladesh to Thailand, Burma (Myanmar), India. Bambusoideae Bambusodae, Bambuseae, Melocanninae, perennial, sympodial, bushy or shrubby, slender, woody, scandent, persistent, branched, one or more branches at each node, main branch usually growing separately, rhizomes pachymorph, leaves with transverse veinlets, plants bisexual, inflorescence paniculate, 2 or 3 slender pseudospikelets

at each node, palea absent, 6 stamens monadelphous, ovary with stiff apical appendage, 3 stigmas, wild or cultivated, lowlands, in evergreen forest, type *Neohouzeaua mekongensis* A. Camus, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829 and *Bulletin du Muséum National d'Histoire Naturelle* 28(1): 100. 1922, *Taxon* 6(7): 206. 1957, *Agriculture Handbook* 193: 1-74. 1961, *Contributions from the United States National Herbarium* 39: 112. 2000.

Species

N. coradata T.H. Wen & Q.H. Dai (*Schizostachyum coradatum* (T.H. Wen & Dai) N.H. Xia)

China. Scandent, manifold branching, branches clustered or verticillate, young culm green, sheath auricles ovate to broadly elliptic, sheath ligule broadly arcuate with a ciliate margin, sheath blade ovate to ovate-lanceolate and erect, leaves oblong-lanceolate, cultivated, edible shoots, used for weaving, binding material, see *Journal of Bamboo Research* 10(1): 12, f. 1. 1991, *Journal of Tropical and Subtropical Botany* 1(1): 5. 1993.

N. dulloa (Gamble) A. Camus (also *dullooa*) (*Schizostachyum dulloa* (Gamble) Majumdar; *Teinostachyum dullooa* Gamble)

Vietnam, Bhutan, India, Bangladesh. Erect, leaning, slender, thin-walled, open tufted, nodes more or less swollen, many branches at each node, culm sheath glabrous, sheath blade narrowly lanceolate and tapering, inflorescence on leafy branch, wild and cultivated, used for buildings purposes and basketry, light constructions and mats, poles and umbrellas, culms used as floats, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 101, pl. 89. 1896 and *Bulletin du Muséum National d'Histoire Naturelle* 28(1): 101. 1922, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 281. Calcutta 1989.

in Bangladesh: dolu

in India: dolu, dongla, dullooa, puksalu, ruathla, wadru

in Thailand: mai hia

in Vietnam: cai noa, kei noua

N. helferi (Munro) Gamble (*Arundarbor helferi* (Munro) Kuntze; *Bambusa helferi* Munro; *Pseudostachyum helferi* (Munro) Kurz; *Schizostachyum helferi* (Munro) R.B. Majumdar; *Teinostachyum helferi* (Munro) Gamble) (for Johann Wilhelm Helfer, 1810-1840, born Prague and died Andaman Islands, explorer, botanist, collector in India and Burma, Andaman Islands and Tenasserim; see Mathilde Pauline Nostitz, *Johann Wilhelm Helfer's Reisen in Vorderasien und Indien*. Leipzig 1873, 1877 and *Travels of a Doctor and Madame Helfer in Syria, Mesopotamia, Burmah and Other Lands ...* Rendered into English by Mrs. G. Sturge. [With a preface by F. von Hochstetter] 2 vols. London 1878)

Myanmar, India. Straggling, scrambling, climbing, culms used for basketry, see *Transactions of the Linnean Society of London* 26(1): 114, 142, t. 3. 1868, *Journal of the Asiatic society of Bengal. Part 2. Natural History* 42(2): 253. 1873, *Revisio Generum Plantarum* 2: 761. 1891, *Annals of the Royal Botanic Garden, Calcutta*. 7: 102, pl. 90. 1896 and *Bulletin of Miscellaneous Information Kew* 1923: 91. 1923, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* 281. Calcutta 1989.

in Thailand: hia khrua, mai hia, so khae ya, tho ha kai, thoi ha kai

N. mekongensis A. Camus

Laos. See *Bulletin du Muséum National d'Histoire Naturelle* 28(1): 101, f. 10-15. 1922.

in Thailand: mai lot, phai ka saen dam, phai lot

N. puberula (McClure) Wen (*Dinochloa puberula* McClure)

China. Scandent, see *Lingnan University Science Bulletin* 9: 19. 1940, *Journal of Bamboo Research* 10(1): 14. 1991.

N. stricta R.N. Parker (*Schizostachyum strictum* (R. Parker) H.B. Naithani & Bennet)

Myanmar (Burma). Erect, see *Indian Forester* 58: 97. 1928, *Indian Forester* 117(1): 68. 1991.

in Thailand: ta pat wa

N. tavoyana Gamble

Burma. Erect, see *Bulletin of Miscellaneous Information Kew* 1923: 91-92. 1923.

Neohusnotia A. Camus = *Acroceras* Stapf, *Panicum* L.

For the French botanist Pierre Tranquille Husnot, 1840-1929, bryologist, agrostologist, botanical collector, traveler, his works include *Catalogue des cryptogames recueillis aux Antilles françaises en 1868*. Caen 1870, *Flore analytique et descriptive des mousses du Nord-Ouest*. Cahan (Orne) [Caen] [1873] and *Muscologia gallica*. Cahan [Caen] 1884-1894, editor of the *Revue bryologique*. vols. 1-53. 1874-1926. See Ernest Roussel, *Énumération des champignons récoltés par M. T. Husnot aux Antilles françaises en 1868*. [Extrait du Bulletin de la Société Linnéenne de Normandie, etc.] Caen 1870; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 187. 1972; J.H. Barnhart, *Biographical notes upon botanists*. 2: 222. 1965; Auguste Jean Baptiste Chevalier (1873-1956) et al., *Travaux bryologiques dédiés à la mémoire de Pierre-Tranquille Husnot*. Paris 1942; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 188. Oxford 1964; Ignatz Urban, editor, *Symbolae Antillanae*. 3: 65. Berlin 1902; S. Lenley et al., *Catalog of the manuscript and archival collections*

and index to the correspondence of John Torrey. Library of the New York Botanical Garden. 234. Boston, Mass. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933.

Panicoideae, Paniceae, Panicinae, type *Neohusnotia tonkinensis* (Balansa) A. Camus, see *Species Plantarum* 1: 55, 58. 1753, *Journal de Botanique (Morot)* 4(7): 140. 1890 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Flora of Tropical Africa* 9: 621-622, 624-625. 1920, *Bulletin du Muséum National d'Histoire Naturelle* 26(7): 664. 1921, *Journal of the Faculty of Science: University of Tokyo, Sect. 3 Botany* 9: 94. 1965, *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 17(2): 297-314. 2001, *Contributions from the United States National Herbarium* 46: 13-14, 298, 306-441. 2003.

Neoleleba Widjaja

The generic name from *Leleba*, used by Rumphius in 1743.

Five species, Indonesia. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, sympodial, thin, erect, scrambling, branching only in the upper part, pseudospikelets compressed or flat, lodicules absent, elongated and hairy ovary, type *Neoleleba atra* (Lindl.) Widjaja, see *Genera Plantarum* 1: 236. 1789, *Syst. Veg.* 7, 2: 1345. 1830 and *Reinwardtia* 11(2): 57-152. 1997.

Species

N. amahussana (Lindl.) Widjaja (*Arundarbor amahussana* (Lindl.) Kuntze; *Bambusa amahussana* Lindl.; *Bambusa atra* var. *amahussana* (Lindl.) Merr.)

Indonesia. See *The Penny Cyclopaedia* of the Society for the Diffusion of Useful Knowledge. C. Knight, 3: 357. London 1833-1843, *Journal of the Asiatic Society of Bengal* 39(2): 86. 1870, *Revisio Generum Plantarum* 2: 761. 1891 and E.D. Merrill (1876-1956), *An interpretation of Rumphius's Herbarium Amboinense*. Manila 1917 [Work begun by Charles Budd Robinson, 1871-1913], *Reinwardtia* 11(2): 112-113. 1997.

N. atra (Lindl.) Widjaja (*Arundarbor atra* (Lindl.) Kuntze; *Bambusa atra* Lindl.)

Indonesia. See *Species Plantarum. Editio quarta* 2: 245. 1799, *Systema Vegetabilium* 7(2): 1345-1346. 1830, *Transactions of the Linnean Society of London* 26(1): 118-119. 1868, *Journal of the Asiatic Society of Bengal* 39(2): 86. 1870, *Revisio Generum Plantarum* 2: 761. 1891 and *Die Flora der deutschen Schutzgebiete in der Südsee* 186-188. 1900, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 175. 1914, *Kew Bulletin* 21: 268-271. 1967, *Reinwardtia* 11(2): 114. 1997.

N. glabra Widjaja

Indonesia. See *Reinwardtia* 11(2): 116-118. 1997.

N. hirsuta (Holtum) Widjaja (*Bambusa hirsuta* Holtum) Indonesia, New Guinea. Inflorescences terminating leafy branches, see *Kew Bulletin* 21: 271. 1967, *Reinwardtia* 11(2): 118. 1997.

N. inaurita Widjaja

Indonesia. See *Reinwardtia* 11(2): 119. 1997.

Neomicrocalamus Keng f. = *Racemobambos* Holtum

Greek *neos* plus the generic name *Microcalamus*.

About 7 species, subtropical forest, Bhutan, India, China, Vietnam. Bambuseae, *Racemobambosinae*, sympodial, pluricaespitose, slender, scandent or semiscandent, culms hollow or solid, culm wall thick, manifold branching, internodes more or less smooth, rhizomes pachymorph, sheath thin with acute top, culm sheaths tough and more or less smooth, leaf sheaths glabrous, auricles absent, leaves small, flowering semelauctant, inflorescence an apical or axial panicle, 1-2 glumes, 6 stamens, one stigma, dense foliage, forest, shade, near rivers or streams, type *Neomicrocalamus prainii* (Gamble) Keng f., see *J. Bot. (Morot)* 3(17): 282, f. B. 1889, *J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist.* 59(2): 207. 1890 and *The Gardens' Bulletin Singapore* 15: 268, 272. 1956, *Phytomorphology* 1: 88. 1956, *Journal of Bamboo Research* 2(2): 10. 1983, Chao Chi-Son & S.A. Renvoize, "A revision of the species described under *Arundinaria* (Gramineae) in southeast Asia and Africa." *Kew Bulletin* 44(2): 349-367. 1989, S. Dransfield, "A new species of *Racemobambos* (Gramineae: Bambusoideae) from Sulawesi with notes on generic delimitation." *Kew Bulletin* 47(4): 707-711. 1992, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992, *Edinburgh Journal of Botany* 51(3): 324. 1994, C.M.A. Stapleton, D.Z. Li & N. Jia-Ron, "A new combination in *Cephalostachyum* with notes on names in *Neomicrocalamus* (Gramineae-Bambusoideae)." *Kew Bulletin* 52(3): 699-702. 1997.

Species

N. andropogonifolius (Griff.) Stapleton (*Bambusa andropogonifolia* Griff.; *Neomicrocalamus ringshu* Stapleton)

Bhutan. Pluricaespitose, dense, culms smooth and hollow, semiscandent, culm sheaths tough and smooth, leaf sheaths glabrous, auricles absent, wild, see *Itinerary Notes of Plants Collected in the Khasyah and Bootan Mountains* 2: 124. 1848 and *Edinburgh Journal of Botany* 51(3): 325-326. 1994.

Local names: langma, ula, ringshu

N. clarkei (Gamble ex Brandis) R.B. Majumdar (*Arundinaria clarkei* Gamble ex Brandis)

India. Shrubby, solid, leaves oblong-lanceolate with a thick ciliate petiole, see *Indian Trees* 666. 1906, *Flora Indicae*

Enumeratio: Monocotyledonae, Bambusoideae Botanical Survey of India, Flora of India, series 4, 279. Calcutta 1989, *Edinburgh Journal of Botany* 51(3): 325. 1994.

N. dongvanensis T.Q. Nguyen

Vietnam. See *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 877. 1991.

N. microphyllus (J.R. Xue and T.P. Yi) Keng f. & T.P. Yi (*Drepanostachyum microphyllum* (J.R. Xue & T.P. Yi) Keng f. ex Yi; *Neomicrocalamus microphyllus* J.R. Xue & T.P. Yi; *Racemobambos microphylla* (J.R. Xue & T.P. Yi) Keng f. & T.H. Wen; *Sinocalamus microphyllus* J.R. Xue & T.P. Yi)

China, Tibet. Slanting the top of the culm, glabrous, glossy, green or greenish, not pruinose, sheath persistent, sheath auricles lacking, sheath ligule tiny and convex, sheath blade erect and long slender, leaves lanceolate, in evergreen hardwood forests, riverbanks, see *Journal of the Yunnan Forestry College* 1: 71-73, f. 2. 1982, *Journal of Bamboo Research* 2(1): 35, t. 5. 1983, *Journal of Bamboo Research* 2(2): 14. 1983, *Journal of Bamboo Research* 5(2): 13. 1986, *Journal of Bamboo Research* 12(4): 46. 1993.

N. prainii (Gamble) P.C. Keng (*Arundinaria prainii* (Gamble) Gamble; *Microcalamus prainii* Gamble; *Racemobambos prainii* (Gamble) Keng f. & T.H. Wen; *Thamnocalamus prainii* (Gamble) E.G. Camus (named for the British botanist Sir David Prain, 1857-1944 (Surrey), professor of botany at Calcutta, 1884-1887 Indian Medical Service, Royal Botanical Garden at Calcutta 1887-1905, Fellow of the Linnean Society 1888 (President 1916-1919), from 1905 to 1922 Director of Kew, 1905 Fellow of the Royal Society, 1907-1920 editor of *Curtis's Botanical Magazine*. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 106. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 316. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 594. Philadelphia 1964; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 334-335. 1973; Mea Allan, *The Hookers of Kew*. London 1967; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; F.D. Drewitt, *The Romance of the Apothecaries' Garden at Chelsea*. London 1924; H.R. Fletcher, *Story of the Royal Horticultural Society, 1804-1968*. Oxford 1969; H.R. Fletcher and W.H. Brown, *Royal Botanic Garden Edinburgh, 1670-1970*. 5-10. Edinburgh 1970; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 174. London 1904; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications,*

1827-1927. 291-292. [1931]; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918)

India, Meghalaya, China Tibet. Climbing, slender, scandent, small, curving, wiry, thin, smooth, many branches clustered, wall thick to solid, joint swollen, thin sheaths with sharp tips, low and short sheath ligule circular, sheath blade acicular, variable leaves oblong to lanceolate, inflorescence terminal or axillary, spikelets 3- to 6-flowered, uppermost floret imperfect, 2-3 glumes, lemmas falcate, paleas falcate and 2-keeled, 3 lodicules, 6 stamens, 3 plumose stigmas, see *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 59(2): 207, pl. 7. 1890, *Annals of the Royal Botanic Garden, Calcutta*. 7: 21-22, pl. 19. 1896 and *Les Bambusées* 54. 1913, *Journal of Bamboo Research* 2(2): 10. 1983, *Journal of Bamboo Research* 5(2): 13, 26. 1986, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* 279. Calcutta 1989, *Kew Bulletin* 47(4): 707-711. 1992, *Edinburgh Journal of Botany* 51(3): 326. 1994.

in India: kevva, sampit, uppit, usepeit

N. setigerus (Gamble) J.R. Xue and T.P. Yi (*Ochlandra setigera* Gamble)

China. See *Annals of the Royal Botanic Garden, Calcutta*. 7: 128, t. 115. 1896 and *Flora Xizangica* 5: 50. 1987.

N. yunnanensis (Wen) Ohrnb. (*Racemobambos yunnanensis* Wen)

China. Scandent, see *Journal of Bamboo Research* 5(2): 11. 1986.

Neomolinia Honda & Sakis. = *Diarrhena* P. Beauv., *Neomolinia* Honda

Dedicated to the Chilean (b. Guaraculen, Talca) botanist Giovanni Ignazio (Juan Ignacio, Juan Ignatius) Molina, 1737-1829 (d. Bologna, Italy), Jesuit priest, missionary, plant collector, 1768 to Italy, professor of natural sciences, his writings include *Compendio della storia del regno del Chili*. Bologna 1776, *Saggio sulla storia naturale del Chili*. Bologna 1782, *Saggio sulla storia civile del Chili*. Bologna 1787 and *Memorie di storia naturale* lette in Bologna. Bologna 1821. See H. Gunckel, "Don Juan Ignacio Molina. Su vida, sus obras y su importancia científica." *Revista Univ.* 14(1-2): 195-216, 14(3-4): 320-341. [Santiago] 1929 and *Bibliografía Moliniana*. Santiago 1980; J.H. Barnhart, *Biographical notes upon botanists*. 2: 503. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 271. 1972; L. Polgar, *Bibliography of the History of the Society of Jesus*. Rome 1967; Francisco Guerra, in *D.S.B.* 9: 458. 1981.

Pooideae, Diarrheneae, *Diarrhena* sect. *Neomolinia* (Honda) Tzvelev, type *Neomolinia faurei* (Hack.) Honda,

see *Essai d'une Nouvelle Agrostographie* 142, 160, 162, t. 25, f. 2. 1812, *Genera et species plantarum*, quae aut novae sunt aut nondum recte cognoscuntur... 34. Matriti [Madrid] 1816, Constantine Samuel Rafinesque, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts*. 89: 104. (Aug.) 1819, Kurt Polycarp Joachim Sprengel (1766-1833), *Systema Vegetabilium* Editio decima sexta 1: 123. Gottingae 1825, *Enumeratio plantarum in Japonia sponte crescentium*. 2: 178, 603. Paris [1873-] 1875-1879 and *Bulletin de l'Herbier Boissier*, sér. 2, 3(6): 504. 1903, *Journal of the Faculty of Science: University of Tokyo, Sect. 3, Botany* 3(1): 110. 1930, *Botanical Magazine* (Tokyo) 46: 2. 1932, *Acta Phytotaxonomica et Geobotanica* 10: 134. 1941, E.D. Merrill, *Index rafinesquianus*. The plant names published by C.S. Rafinesque, etc. 75. 1949, *Bulletin of the National Science Museum* 31: 140. 1952, *Man. Grasses Korea* 260. 1955, *Journal of the Washington Academy of Sciences* 45(7): 215. 1955, *Novosti Sist. Vyss. Rast.* 29. 1968, *Taxon* 29: 652-653. 1980, *Journal of the Arnold Arboretum* 66: 188. 1985, *Bot. Zhurn.* 74: 1675-1678. 1989, *Bulletin of the Torrey Botanical Club* 118: 128-136. 1991, *Contributions from the United States National Herbarium* 48: 269. 2003.

Neosasamorpha Tatew. = *Sasa* Makino & Shibata

From the Greek *neos* "new" plus *Sasa* and Greek *morphe* "a form, shape."

Bambusoideae, Bambuseae, Arundinariinae, type *Neosasamorpha asagishiana* (Makino & S. Uchida ex Nakai) Tatew., see *Botanical Magazine* (Tokyo) 15(168): 18, 25, 27. 1901, *Acta Phytotax. & Geobot. Kyoto* 9: 159, 227. 1940, M. Tatewaki, "Hokkaido sasarui no bunrui [Classification of genus *Sasa* in Hokkaido.]" *Hokkaido Ringyô-kaihô* 38(1): 4-9, 38(2): 1-9, 38(3): 1-8, 38(4): 1-10, 38(6): 1-11, 38(8): 1-13. 1940, *Bibliography of Cultivated Trees and Shrubs* hardy in the cooler temperate of the northern hemisphere ... 635. Jamaica Plains, Massachusetts [The Arnold Arboretum of Harvard University] 1949, *Taxon* 6(7): 206, 208. 1957, *Taxon* 27: 424. 1978, *J. Jap. Bot.* 64(2): 42. 1989, *Taxon* 45: 543. 1996, *Taxon* 48: 377. 1999, *Taxon* 49(2): 235-238. 2000, *Contributions from the United States National Herbarium* 39: 111-112. 2000.

Neoschischkinia Tzvelev = *Agrostis* L.

For the Russian botanist Boris Konstantinovich Schischkin [also Shishkin, Siskin], 1886-1963, traveler, botanical explorer, professor of botany, worked with Alexander Alfonsovich Grossheim (1888-1948), Sergei Vassilievich [Vasilievich] Juzepczuk (1893-1959), Leonid Efimovic Rodin (b. 1907) & L.F. Pravdin. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 228. 1965; T.W. Bossert,

Biographical dictionary of botanists represented in the Hunt Institute portrait collection. 353. 1972; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Pooideae, Poae, Agrostidinae, type *Neoschischkinia elegans* Tzvelev, see *Species Plantarum* 1: 61-63. 1753, *Diagnoses Plantarum Novarum Hispanicarum* 27. 1842 and *Bot. Zhurn.* (Moscow and Leningrad) 53: 309. 1968, *Fl. Fenn.* 5: 29. 1971, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89, 467. 2003.

Neosinocalamus Keng f. = *Bambusa* Schreb., *Dendrocalamus* Nees

From the Greek *neos* plus *Sinocalamus*.

Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, culm often arcuate and drooping, sympodial, manifold branching, culm wall thin, sheath hard but fragile, leaf auricles absent, inflorescence a pseudopanicule, 6 stamens, 2-3 stigmas, type *Neosinocalamus affinis* (Rendle) Keng f., see *Genera Plantarum* 1: 236. 1789, *Species Plantarum. Editio quarta* 2: 245. 1799, *Linnaea* 9(4): 476-477. 1835 and *Indian Forester* 58: 7. 1932, *Lingnan University Science Bulletin* 9: 66-67. 1940, *Acta Phytotaxonomica Sinica* 18: 211-216. 1980, *Journal of Bamboo Research* 2(2): 12, 148. 1983, *Kew Bulletin, Additional Series* 13: 54-55. 1986, *Journal of Bamboo Research* 7(4): 9, 13. 1988, *Journal of South China Agricultural University* 10(2): 43, 45-46. 1989, Z.L. Li, *The Flora of China Bambusoideae project, problems and current understanding of bamboo taxonomy in China. The Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 29-35, 54-55, 79. 2000.

Neostapfia Burt Davy = *Davyella* Hackel, *Stapfia* Chodat (Algae), *Stapfia* Burt Davy

After the Austrian botanist Otto Stapf, 1857-1933, traveler, 1900-1922 Keeper of the Herbarium of the Royal Botanic Gardens, Kew, 1922-1933 editor of the *Botanical Magazine*, among his numerous and valuable publications are *On the Flora of Mount Kinabalu in North Borneo*. London 1894 and *The Aconites of India*. Calcutta 1905; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 317. 1965; Mia (Maria) Caroline Karsten, *The Old Company's Garden at the Cape and its Superintendents*. Cape Town 1951; James Edgar Dandy (1903-1976), in *The Journal of Botany*. 69: 54. (Feb.) 1931; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 380. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and*

archival collections and index to the correspondence of John Torrey. Library of the New York Botanical Garden. 382. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; Stafleu & Cowan, *Taxonomic literature*. 5: 839-843. 1985; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Emil Bretschneider, *History of European Botanical Discoveries in China*. [Reprint of the original edition, St. Petersburg 1898] Leipzig 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 650. London 1994.

One species, U.S., California. Chloridoideae, Orcuttieae, or Chloridoideae, Cynodonteae, Orcuttiinae, annual, herbaceous, unarmed, aromatic, erect to ascending, decumbent, auricles absent, ligule absent, plants bisexual, inflorescence a single raceme, a spike-like panicle, glumes absent, lemma membranous and whorled, palea present, 2 tiny lodicules, 3 stamens, ovary glabrous, 2 stigmas, found in seasonally inundated areas, vernal pools, type *Neostapfia colusana* (Burt Davy) Burt Davy, see *Reise um die Erde* 2: 14. 1834, *Bulletin de l'Herbier Boissier* 5: 947. 1897, *Erythea, a Journal of Botany, West American and General*. 6(11): 109. Berkeley, California 1898, *Erythea* 7: 43. 1899, *Österreichische Botanische Zeitschrift* 49: 134. 1899 and B. Crampton, "The grass genera *Orcuttia* and *Neostapfia*: a study in habitat and morphological specialization." *Madroño* 15: 97-110. 1959, J.R. Reeder, "The tribe Orcuttieae and the subtribes of Pappophoreae (Gramineae)." *Madroño* 18: 20-28. 1965, J.R. Reeder, "Systematics of the tribe Orcuttieae (Gramineae) and the description of a new segregate genus, *Tuctoria*." *American Journal of Botany* 69(7): 1082-1095. 1982, *Kew Bulletin* 40: 737-744. 1985, *Contributions from the United States National Herbarium* 41: 66, 175, 219. 2001, *Plant, Cell and Environment* vol. 27, issue 5: 627-639. May 2004.

Species

N. colusana Davy (*Anthochloa colusana* (Burt Davy) Scribn.; *Davyella colusana* (Burt Davy) Hack.; *Neostapfia colusana* (Burt Davy) Burt Davy; *Stapfia colusana* Burt Davy)

Southwestern U.S., California, Colusa County. Threatened grass, annual, ascending, decumbent base, leaves overlapping, panicles cylindrical, spikelets sessile, glumes wanting, lemma flabellate, viscid, aromatic, see *Erythea* 6(11): 110, pl. 3. 1898, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 221, f. 517. 1899, *Österreichische Botanische Zeitschrift* 49: 134. 1899, *Erythea* 7: 43. 1899.

in English: Colusa grass

Neostapfiella A. Camus

The diminutive of *Neostapfia*.

Three species, Madagascar. Chloridoideae, Cynodonteae, annual, herbaceous, stoloniferous, leaves mainly basal, leaf sheaths compressed, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence spicate, 1-4 racemes digitate, solitary spikelets with 1 or 2 female fertile florets, 2 glumes membranous acute, lemma keeled and not winged with a long subapical awn, palea present, savannah, similar to *Chloris*, type *Neostapfiella perrieri* A. Camus, see *Bulletin Mensuel de la Société Linnéenne de Lyon* 5: 4, 6. 1926, A. Camus, "Le genre *Neostapfiella* A. Camus." *Notulae Systematicae. Herbarium du Museum de Paris* 11: 189-192. 1944.

Species

N. chloridiantha A. Camus

Madagascar. Callus oblong, see *Bulletin Mensuel de la Société Linnéenne de Lyon* 5: 4. 1926.

N. humbertiana A. Camus

Madagascar. See *Notulae Systematicae. Herbarium du Museum de Paris* 11: 191. 1944.

N. perrieri A. Camus

Madagascar. Callus linear and pungent, see *Bulletin Mensuel de la Société Linnéenne de Lyon* 5: 6. 1926.

Nephelochloa Boiss.

From the Greek *nephele* "a cloud" and *chloe*, *chloa* "grass," Latin *nephela*, *nefela* "a kind of thin cake," in Greek legend Nephele was the wife of Atamas and mother of Phrixus and Helle; Pseudo Apuleius Barbarus in his *Herbarium* applied Latin *nephelion* to a plant called also *personata* (Latin *personata*, *ae*, is a kind of large burdock (Plinius), said to be synonymous with *persolata* or *persollata*, the brown mullein).

One species, western Asia. Pooideae, Poodae, Aveneae, annual, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate with lowest whorl of branches sterile, pedicellate and flattened spikelets several-flowered, two glumes unequal, lemmas membranous shortly awned, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas, dry habitats, related to *Eremopoa*, type *Nephelochloa orientalis* Boiss., see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 373. 1830, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 2: 526. 1835, *Enumeratio Plantarum Novarum* 1: 1. 1841, *Diagnoses plantarum orientalium novarum* ser. 1. 1(5): 72. 1844, *Flora*

Rossica 4(13): 366-367. 1852 and R.R. Mill, "Eremopoa, Nephelochloa, Catabrosella, Colpodium, Hyalopoa, Catabrosa, Paracolpodium." in P.H. Davis (editor), *Flora of Turkey and the East Aegean Islands* 9: 486-501. 1985.

Species

N. orientalis Boiss.

Eurasia. See *Diagnoses plantarum orientalium novarum* ser. 1. 1(5): 72. 1844.

Nestlera Steud. = Bouteloua Lag., Nestlera Spreng. (Asteraceae)

For the Alsatian botanist Chrétien Géofroy (Christian Gottfried) Nestler, 1778-1832, professor of botany and pharmacy, author of *Index Plantarum quae in Horto Academ. Argentiniensi* anno 1817 viguerunt. Argentorati [Strasbourg], studied with L.C. Richard, worked with Jean Baptiste Mougeot (1776-1858). See J.H. Barnhart, *Biographical notes upon botanists*. 2: 545. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 539. University of Pennsylvania Press, Philadelphia 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. 289. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 514. 1917-1933; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 114. Edinburgh 1970; Stafleu & Cowan, *Taxonomic literature*. 3: 728-729. 1981.

Chloridoideae, Cynodonteae, Boutelouinae, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Gen. Sp. Nov.* 5. 1816, *Anleitung zur Kenntniss der Gewächse* 2(2): 568, 911. 1818, *Nomenclator Botanicus. Editio secunda* 2: 192. 1841, *Bulletin of Miscellaneous Information Kew* 1895: 25. 1895 and *Contributions from the United States National Herbarium* 41: 20-33, 175. 2001.

Neurachne R. Br.

From the Greek *neuron* "nerve" and *achne* "husk, glume," referring to the many-nerved glumes.

About 6 species, Australia. Panicoideae, Panicodae, Neurachneae, perennial, densely tufted, herbaceous, erect, more or less branching, shortly rhizomatous, shortly spreading or creeping horizontal rhizomes, extravaginal shoots, auricles absent, ligule fringed, leaves mostly basal and linear, hairy or glabrous nodes and solid internodes, plants bisexual, spike-like raceme or single spike, spikelets solitary and bearded at the base, hermaphrodite and sterile spikelets on the same plant, 2 florets, lower floret male or sterile, upper floret bisexual, 2 large tough glumes subequal and longer

than the florets, lower glume 3- to 7-nerved, upper glume 7- to 13-nerved, fertile lemma membranous to hyaline with ciliate margins, callus hairs white, palea 2-nerved, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2-3 stigmas, stock fodder, weed species, semisarid and arid regions, open habitats, white sands, deep red sandy soils, Mallee heath, sandstone, light woodland, Mulga scrub, type *Neurachne alopecuroidea* R. Br., see Robert Brown, *Prodromus florae Novae Hollandiae*. 196. London 1810 and *Contributions from the Queensland Herbarium* 13: 3, 4. 1972, *Australian Journal of Botany* 33: 317-336. 1985, *Kew Bulletin, Additional Series* 13: 267, 377. 1986, *Austral. Ecology* 25(1): 48-57. Feb 2000, *Am. J. Bot.* 88: 1993-2012. 2001 [A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C₄ photosynthesis.], *Austral. Ecology* 27(1): 85-93. Feb 2002, *Am. J. Bot.* 90: 796-821. 2003 [A molecular phylogeny of Panicum (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae.], *New Phytologist* 161(2): 341-370. Feb 2004 [The evolution of C₄ photosynthesis.], *Journal of Biogeography* 31(5): 787-805. May 2004.

Species

N. alopecuroidea R. Br. (also *alopecuroides*) (*Panicum alopecuroides* (R. Br.) Spreng., nom. illeg., non *Panicum alopecuroides* L.) (as the genus *Alopecurus* L.)

Victoria, South Australia, Western Australia. Perennial, tufting, short spreading rhizomes, leaves mostly basal and bluish gray, inflorescence a silvery single spike-like raceme oblong or ovoid-oblong, reduced basal spikelets, spikelets bearded at the base, glumes acuminate, fertile lemma glabrous or silky-ciliate on the margin, white sands, ornamental and decorative in flower, grows everywhere, see *Prodromus Florae Novae Hollandiae* 196. 1810, *Systema Vegetabilium, editio decima sexta* 1: 309. 1825.

in English: foxtail mulga-grass, wallaby grass

N. lanigera S.T. Blake

South Australia, Western Australia. Woolly at the base, leaves mostly basal, densely woolly or hairy leaf-sheaths, green racemes, spikelets bearded at the base, glumes acuminate and pubescent or villous, fertile lemma shortly ciliate on the upper margins, very similar and closely allied to *Neurachne alopecuroidea* R. Br., see *Contributions from the Queensland Herbarium* 13: 10. 1972.

N. minor S.T. Blake

Western Australia. Hairy interior of the leaf-sheaths, closely allied and similar to *Neurachne alopecuroidea* R. Br., see *Contributions from the Queensland Herbarium* 13: 12. 1972.

N. munroi (F. Muell.) F. Muell. (*Panicum munroi* F. Muell.) (after James Munro, M.L.A. for North Melbourne from 1874, Premier of Victoria 1890-1892)

Queensland, Victoria, Northern Territory, New South Wales, South Australia, Western Australia. Perennial, stiff, erect, tufting, short creeping rhizomes, stems slender with hairy nodes, leaves mainly basal and prickly pointed, inflorescence a single silky spike or raceme narrowly oblong, hairy spikelets, susceptible to overgrazing, stony soils, stony ground, deep red sands, palatable to stock.

in English: slender-headed mulga-grass, window mulga-grass, mulga grass

N. queenslandica S.T. Blake

Queensland. Stems silky-hairy below the racemes, spikelets in groups, proximal male-only floret, closely allied to *Neurachne munroi* (F. Muell.) F. Muell., see *Contributions from the Queensland Herbarium* 13: 16. 1972.

N. tenuifolia S.T. Blake

Queensland, Northern Territory. Forming tussocks, stems with glabrous nodes, leaves strongly inrolled and very slender, similar to *Neurachne munroi* (F. Muell.) F. Muell., rare species, see *Contributions from the Queensland Herbarium* 13: 18. 1972.

Neurolepis Meissn. = *Planotia* Munro,
Platonia Kunth

From the Greek *neuron* “nerve” and *lepis*, *lepidos* “scale.”

About 9/21-22 species, Trinidad, and Venezuela, Guayana Highland, Colombia, Ecuador, Peru, High Andean forest. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Chusqueinae, perennial, sympodial, erect, reedlike to grass-like, herbaceous to woody to subwoody, simple, internodes solid, forming large clumps, unarmed, rhizomes pachymorph, leaves erect and very large, leaf blades linear and leathery, ligule a fringed membrane, blades continuous with the sheaths, plants bisexual, large terminal panicle, flowering culms leafy, 2 glumes more or less equal, lemma 3- to 7-nerved, palea 2-nerved, 3 free and membranous lodicules, 3-6 stamens, ovary glabrous, 2 stigmas, in open places, meadows, forests, montane forest, cloud forest, swampy meadow, shrubby open vegetation, low brush, slopes, forest margins, rocky slopes, along streams and riverbanks, cliffs, woods, páramos, paramillo, cool moist habitats, cool forest, related to *Chusquea* Kunth and *Arthrostylidium*, see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Révision des Graminées* 1: 139. 1829, *Révision des Graminées* 1: 327, t. 76. 1830, *Linnaea* 9(4): 486. 1835, Carl Friedrich Meisner (Meissner) (1800-1874), *Plantarum vascularium genera*. 1: 426 and 2: 325. Lipsiae 1836-1843, *Transactions of the Linnean Society of London* 26(1): 61, 70, 71, 72. 1868 and *Die Natürlichen Pflanzenfamilien* Nachtrag (zum 3 Teil)1: 21. 1906, *Contributions from the U.S. National Herbarium* 24(8): 291-556. 1927, *Memoirs of the New York Botanical*

Garden 9(3): 237-278. 1957, *Memoirs of the New York Botanical Garden* 18(2): 11-22. 1969, F.A. McClure, “Genera of bamboos native to the New World (Gramineae: Bambusoideae.)” *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Ruizia* 13: 1-480. 1993, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: i-xl, 1-1286. 1993, P.M. Jørgensen & C. Ulloa U., “Seed plants of the high Andes of Ecuador — A checklist.” *AAU Reports* 34: 1-443. 1994, *Flora Mesoamericana* 6: 202. 1994, G. Davidse & L.G. Clark, “Two new species of *Neurolepis* (Poaceae: Bambuseae) from Colombia.” *Novon* 6(2): 150-156. 1996, L.G. Clark, “Six new species of *Neurolepis* (Poaceae: Bambusoideae: Bambuseae) from Ecuador and Peru.” *Novon* 6(4): 335-350. 1996, *American Bamboos* 223-229. 1999, Jørgensen & León, “Catalogue of the Vascular Plants of Ecuador.” *Monogr. Syst. Bot. Miss. Bot. Garden* 75. 1999, *Contributions from the United States National Herbarium* 39: 79-81, 105-106. 2000.

Species

N. acuminatissima (Munro) Pilg. (*Chusquea aristata* Munro; *Neurolepis aristata* (Munro) Hitchc.; *Planotia acuminatissima* Munro)

Venezuela. See *Transactions of the Linnean Society of London* 26(1): 61, 72. 1868 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906, *Contributions from the U.S. National Herbarium* 24(8): 313. 1927, *Bamboo Sci. Cult.* 17(1): 60. 2003.

N. angusta Swallen (*Neurolepis densiflora* Swallen)

Venezuela, Colombia. See *Memoirs of the New York Botanical Garden* 9(3): 249, 399. 1957.

N. aperta (Munro) Pilg. (*Neurolepis ingens* (Pilg.) Pilg.; *Planotia aperta* Munro; *Planotia ingens* Pilg.)

Colombia, Ecuador. Coarse, see *Transactions of the Linnean Society of London* 26(1): 73. 1868, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 721. 1898 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906.

in Colombia: cañuela, chusque de páramo, chusquea de páramo, pañuela

N. aristata (Munro) Hitchc. (*Chusquea aristata* Munro; *Neurolepis acuminatissima* (Munro) Pilg.; *Neurolepis stuebelii* (Pilg.) Pilg.; *Neurolepis tessellata* (Pilg.) Pilg.; *Neurolepis weberbaueri* Pilg.; *Planotia acuminatissima* Munro; *Planotia stuebelii* Pilg.; *Planotia tessellata* Munro, also spelled *tessellata*)

Colombia, Ecuador, Peru. Erect, shrubby, canelike, dense stands, leaves stiff, inflorescences erect, see *Transactions of the Linnean Society of London* 26(1): 61, 72. 1868, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 720. 1898 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906, *Repertorium Specierum*

Novarum Regni Vegetabilis 17(19-30): 446. 1921, *Contributions from the U.S. National Herbarium* 24(8): 313. 1927, *Bamboo Sci. Cult.* 17(1): 60. 2003.

N. asymmetrica L.G. Clark (*Neurolepis aristata* (Munro) Hitchc.)

Ecuador, Bolivia. Densely tufted, shrubby, forming clumps, see *Plantarum vascularium genera secundum ordines ...* 1: 426. 1843, *Transactions of the Linnean Society of London* 26(1): 61. 1868 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906, *Contributions from the United States National Herbarium* 24(8): 313. 1927, *Novon* 6(4): 336, f. 1 A-C. 1996.

N. diversiglumis Soderstr.

Amazonas, Venezuela, Brazil. See *Memoirs of the New York Botanical Garden* 18(2): 16-18, 20, f. 2-3. 1969.

N. elata (Kunth) Pilg. (*Chusquea elata* (Kunth) Nees; *Neurolepis nobilis* (Munro) Pilg.; *Planotia elata* (Kunth) Munro; *Planotia nobilis* Munro; *Platonia elata* Kunth)

Colombia, Ecuador. See *Révision des Graminées* 1: 327, t. 76. 1830, *Transactions of the Linnean Society of London* 26(1): 71, 72. 1868 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906.

in Ecuador: bretaña

N. fimbriligulata L.G. Clark (*Chusquea aristata* Munro; *Neurolepis aristata* (Munro) Hitchc.)

Ecuador, Peru. Shrubby, see *Plantarum vascularium genera secundum ordines ...* 1: 426. 1843, *Transactions of the Linnean Society of London* 26(1): 61. 1868 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906, *Contributions from the United States National Herbarium* 24(8): 313. 1927, *Novon* 6(4): 336, 338, f. 1 A-C, 2. 1996.

N. fimbriligulata L.G. Clark subsp. ***fimbriligulata***

Ecuador. See *Novon* 6(4): 338, f. 2. 1996.

N. fimbriligulata L.G. Clark subsp. ***peruviana*** L.G. Clark
Peru, Amazonas. See *Novon* 6(4): 338, 342, f. 2, 2 G. 1996.

N. glomerata Swallen (*Neurolepis densiflora* Swallen; *Neurolepis nigra* Swallen)

Venezuela. Inflorescences erect, see *Memoirs of the New York Botanical Garden* 9(3): 399-400. 1957.

N. laegaardii L.G. Clark (*Neurolepis aristata* (Munro) Hitchc.) (named for the Danish botanist Simon Laegaard, Department of Systematic Botany, Institute of Biological Sciences, Aarhus University, Denmark, botanical collector in Ecuador, worked with Lynn G. Clark, M.J. Stern, S.A. Renvoize, Kjeld A. Holmen. See *Syst. Bot.* 15: 632. 1990; *Brittonia* 48: 256. 1996; *Aliso* 15: 10, 24. 1996 [24 June 1997]; *Novon* 6: 423. 1996)

Ecuador, northern Andes. Erect, see *Plantarum vascularium genera secundum ordines ...* 1: 426. 1843, *Transactions of the Linnean Society of London* 26(1): 61. 1868 and *Die*

Natürlichen Pflanzenfamilien 1: 21. 1906, *Contributions from the United States National Herbarium* 24(8): 313. 1927, *Novon* 6(4): 336, 338, 342, f. 1 A-C, 2, 3 A-D. 1996.

N. mollis Swallen

Colombia, Venezuela. Caespitose, clumped, rhizomes pachymorph, see *Journal of the Washington Academy of Sciences* 21(1): 14. 1931.

N. nana L.G. Clark

Ecuador. See *Plantarum vascularium genera secundum ordines ...* 1: 426. 1843, *Transactions of the Linnean Society of London* 26(1): 61. 1868 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906, *Contributions from the United States National Herbarium* 24(8): 313. 1927, *Novon* 6(4): 336, 338, 342, 344, f. 1 A-C, 2, 3 A-D, 4. 1996.

N. nobilis (Munro) Pilg. (*Neurolepis elata* (Kunth) Pilg.; *Planotia nobilis* Munro; *Platonia elata* Kunth)

Colombia, Ecuador. Páramos, see *Révision des Graminées* 1: 327, t. 76. 1830, *Transactions of the Linnean Society of London* 26(1): 72. 1868 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906.

in Colombia: sorbitana

N. petiolata Davidse and L.G. Clark

Colombia. Clump forming, found along riverbanks, see *Novon* 6(2): 153, f. 4. 1996.

N. pittieri McClure

Costa Rica, Brazil, Venezuela, Panama. Caespitose, erect leaves, growing in clumps, see *Plantarum vascularium genera secundum ordines ...* 1: 426. 1843 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906, *Journal of the Washington Academy of Sciences* 32(6): 181, f. 8. 1942.

in Venezuela: cogollo

N. rigida L.G. Clark (*Chusquea aristata* Munro; *Neurolepis aristata* (Munro) Hitchc.)

Ecuador. Shrubby, see *Transactions of the Linnean Society of London* 26(1): 61. 1868 and *Contributions from the United States National Herbarium* 24(8): 313. 1927, *Novon* 6(4): 347, f. 1 D-H. 1996.

in Ecuador: nagrán

N. silverstonei Davidse and L.G. Clark (named for Philip [Felipe] Arthur Silverstone-Sopkin, b. 1939, botanical collector in Colombia, collector of tropical Andean mosses and orchids, worked with Jorge Eduardo Ramos-Pérez, A.H. Gentry, A. Henao, A. Duque, H. Bayona, R.T. González, L.H. Ramos, N. Paz, Roger Eriksson, William Gerald D'Arcy, D. Garcés, I. Cabrera. See P.A. Silverstone-Sopkin & J.E. Ramos-Pérez, "Floristic exploration and phytogeography of the Cerro del Torrá, Chocó, Colombia." pages 169-186. in S.P. Churchill, H. Balslev, E. Forero and J.L. Luteyn (editors), *Biodiversity and Conservation of Neotropical Montane Forests*. New York Botanical Garden, Bronx. 1995; *Phytologia* 71: 104. 1991; *Caldasia* 17: 3. 1992;

Novon 6: 150. 1996; *Orquideologia* 20: 225. 1996; *Monogr. Syst. Bot. Missouri Bot. Gard.* 64: 108. 1997; *Novon* 7: 194. 1997; *Icon. Orchid.* fasc. 3(2): t. 383. 1999; *Orquideologia* 21(2): 127. 1999; *Icon. Orchid.* 4(3): t. 491. 2001; *Novon* 11(4): 463. 2001; *Orquideologia* 22(1): 45. 2001)

Colombia. Reddish inflorescence, see *Novon* 6(2): 150, f. 1-3. 1996.

N. stuebelii (Pilg.) Pilg. (*Chusquea aristata* Munro; *Neurolepis aristata* (Munro) Hitchc.; *Planotia stuebelii* Pilg.) (for the German plant collector Moritz Alphons Stübel, 1835-1904, explorer and geologist, naturalist, traveler (Egypt, South and Central America, Europe, Ecuador, Peru, Colombia), made volcanological studies, his writings include *Die Vulkanberge von Ecuador* ... Berlin 1897 and *Die Vulkanberge von Colombia* ... Dresden 1906; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 343. 1965; August Weberbauer (1871-1948), *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. Leipzig 1911; Georg Hans Emmo (Emo) Wolfgang Hieronymus, 1846-1921, "Plantae Stuebelianae novae quae descripsit adjuvantibus aliis auctoribus." *Bot. Jahrb. Syst.* 21: 306-378. 1895-1896)

Colombia, Peru, Ecuador. Annual or perennial bunchgrass, stiff, coarse, erect foliage, erect inflorescences, forming clumps, see *Transactions of the Linnean Society of London* 26(1): 61. 1868, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 720. 1898 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906, *Contributions from the United States National Herbarium* 24(8): 313. 1927.

N. tessellata (Pilg.) Pilg. (also spelled *tessellata*) (*Chusquea aristata* Munro; *Neurolepis aristata* (Munro) Hitchc.; *Planotia tessellata* Pilg.)

Colombia. See *Transactions of the Linnean Society of London* 26(1): 61. 1868, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 720. 1898 and *Die Natürlichen Pflanzenfamilien* Nachtrag (zum 3 Teil) 1: 21. 1906, *Contributions from the United States National Herbarium* 24(8): 313. 1927.

N. villosa L.G. Clark

Ecuador. Erect, simple, rigid, see *Plantarum vascularium genera secundum ordines* ... 1: 426. 1843 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906, *Novon* 6(4): 349, f. 3 E-G. 1996.

N. virgata (Griseb.) Pilg. (*Planotia virgata* (Griseb.) Munro; *Platonia virgata* Griseb.)

The Caribbean. See *Flora of the British West Indian Islands*. 530. London [1859-]1864, *Transactions of the Linnean Society of London* 26(1): 71. 1868 and *Die Natürlichen Pflanzenfamilien* Nachtrag (zum 3 Teil) 1: 21. 1906.

N. weberbaueri Pilg. (*Chusquea aristata* Munro; *Neurolepis aristata* (Munro) Hitchc.)

Peru, Ecuador. See *Plantarum vascularium genera secundum ordines* ... 1: 426. 1843, *Transactions of the Linnean Society of London* 26(1): 61. 1868 and *Die Natürlichen Pflanzenfamilien* 1: 21. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 446. 1921, *Contributions from the United States National Herbarium* 24(8): 313. 1927.

Neuropoa Clayton = *Poa* L.

From the Greek *neura*, *neuron* "nerve" and *poa* "grass, pasture grass."

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Poinae, type *Neuropoa fax* (Willis & Court) Clayton, see *Species Plantarum* 1: 67-68. 1753, *Fragmenta Phytographiae Australiae* 8: 170. 1873 and *Ill. Fl. U.S. Canada* edition 2, 1: 252. 1913, *Muelleria* 1: 45. 1955, J.W. Vickery, *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970, W.D. Clayton, *Kew Bulletin* 40(4): 727-729. 1984 [1985], *Blumea* 38: 421. 1994, *Flora of Ethiopia and Eritrea* 7: 19-23. 1995, *Australian Journal of Botany* 43: 577-599. 1995, *Novon* 8(2): 187-188, 193. 1998, *Willdenowia* 28: 172. 1998, A.A. Beetle et al., *Las Gramíneas de México* 5: 1-466. 1999, *Taxon* 49(2): 254. 2000, *Ber. Institut für Landschafts- und Pflanzenökologie Univ. Hohenheim* 16: 58-59. Stuttgart 2003, *Flora Reipublicae Popularis Sinicae* 9(2): 178-179, 198, 210. 2003, *Contributions from the United States National Herbarium* 48: 505-580. 2003.

Nevroctola Raf. = *Uniola* L.

Greek *neuron* "nerve."

Chloridoideae, Cynodonteae, Uniolinae, or Chloridoideae, Eragrostideae, Uniolinae, see *Species Plantarum* 1: 71. 1753, C.S. Rafinesque, *Neogenyton, or Indication of Sixty-Six New Genera of Plants of North America*. 4. 1825, *Seringe Bull. Bot.* 1: 221. 1830, *Index Kewensis* 2: 311. 1894 and *Ill. Fl. U.S. Canada* edition 2, 1: 248. 1913, E.D. Merrill, *Index rafinesquianus*. 76. 1949, *Contributions from the United States National Herbarium* 41: 175, 232-233. 2001.

Nevroloma Raf. = *Glyceria* R. Br., *Nevroloma* Spreng. (Brassicaceae)

From the Greek *neuron* "nerve" and *loma* "border, margin, fringe, edge."

Pooideae, Meliceae, type *Nevroloma canadensis* (Michx.) Raf., see *Flora Boreali-Americana* 1: 71. 1803, *Prodromus Florae Novae Hollandiae* 1: 179. 1810, *Systema Vegetabilium, editio decima sexta* 2: 888. 1825, C.S. Rafinesque, *Journal de Physique, de Chimie, d'Histoire Naturelle et des*

Arts 89: 106. 1819 and E.D. Merrill, *Index rafinesquianus*. 76. 1949, *Contributions from the United States National Herbarium* 48: 371-379, 467. 2003.

Nevskiella Krecz. & Vved. = *Bromus* L.

Named for Sergei Arsenjevic Nevski, 1908-1938, author of "Bromeae tribus Graminearum naturalis." *Trudy Sredne-Aziatsk. Gosud. Univ. Ser. 8b, Bot. 17*: 14-15. 1934, "Beiträge zur Flora des Kuhitang-Tau und seiner Vorgebirge. Resumé." *Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyss. Rast. 4*: 199-346. 1937 and "Beiträge zur Kenntnis der Wildwachsenden Gersten in Zusammenhang mit der Frage über den Ursprung von *Hordeum vulgare* L. und *Hordeum distichum* L. (Versuch einer Monographie der Gattung *Hordeum* L.)" *Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyss. Rast. 5*: 64-255. 1941.

Pooideae, Bromeae, type *Nevskiella gracillima* (Bunge) Krecz. & Vved., see *Species Plantarum* 1: 76. 1753, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 8: 527. 1851 and *U.S.D.A. Div. Agrostol. Bull. 23*: 1-66. 1900, *Trudy Sredne-Aziatsk. Gosud. Univ. Ser. 8b, Bot. 17*: 14-15, 22. 1934, *Brittonia* 7: 421. 1952, *Bot. Jahrb. Syst.* 102: 447. 1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191, 467. 2003.

Neyraudia Hook.f. = *Neraudia* Gaudich. (Urticaceae)

The anagram of *Reynaudia* Kunth, named for A.A. Reynaud, b. 1804, botanical collector in Burma, Cape see 1829 Collection Blossenville/Reynaud, *Expédition de la Gabarre La Chevrette*, Indian Ocean, 1827-1828.

Some 2-6 species, Old World tropics. Chloridoideae, Cynodonteae, perennial, erect, unarmed, branched, woody, stout and reedlike, persistent, loosely or densely tufted, shortly rhizomatous, rhizomes pachymorph, culms filled with pith, culm internodes solid, ligule a line of hairs, auricles absent, leaves linear with a filiform apex, plants bisexual, inflorescence a large open nodding and plumose panicle, spikelets 4- to 8-flowered and gaping at maturity, the florets all bisexual or the lowest sterile, 2 glumes unequal, second glume awnless, lemmas cleft with a recurved awn, palea glabrous, 2 lodicules acute to acuminate, 3 stamens, ovary glabrous, 2 stigmas, found in woodland, along streams, on riverbanks, clearings, very similar to and confused with *Arundo* L. and *Phragmites* Adans., type *Neyraudia madagascariensis* (Kunth) Hook.f., see *Species Graminum* 1: t. 87. 1827, *Révision des Graminées* 2: 273, t. 48. 1830, *Journal of the Linnean Society, Botany* 19: 112. 1881, *The Flora of British India* 7: 305. 1896 and *American Midland Naturalist* 3: 332.

1914, *Fl. Trop. Afr.* 9: 22. 1917, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 309. 1938, *Bulletin de la Société Botanique de France* 103: 272. 1956, H.J. Conert, "Beiträge zur Monographie der Gattungen *Cleistogenes* und *Neyraudia*." *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 78(2): 208-245. 1959, *Acta Bot. Sin.* 9: 67. 1960, *Bulletin Torrey Botanical Club* 88: 148. 1961, *Kew Bulletin* 21: 113-117. 1967, *Taxon* 17: 168-169. 1968, *Kew Bulletin* 37: 133-162. 1982, *Blumea* 37(1): 227-237. 1992, *Journal of Biogeography* 27(5): 1049-1064. Sep 2000, *Contributions from the United States National Herbarium* 41: 176. 2001, *Restoration Ecology* 13(1): 49-60. Mar 2005, *Botanical Journal of the Linnean Society* vol. 148, issue 1: 57-72. May 2005.

Species

N. arundinacea (L.) Henr. (*Aristida arundinacea* L.; *Arundo madagascariensis* Kunth; *Neyraudia madagascariensis* (Kunth) Hook.f.; *Triraphis madagascariensis* (Kunth) Hook.f. ex Prain)

Tropical Africa, Asia tropical. Forming large clumps, low fodder value, only young shoots eaten by animals, see *Mantissa Plantarum* (altera) 2: 186. 1771, *Révision des Graminées* 2: 273, t. 48. 1830, *Plantae Junghuhnianae* 3: 343. 1854 and *Bengal Plants* 1219. 1903, *Mededeelingen van's Rijks-Herbarium* 58: 8. 1929, *Blumea* 3: 439. 1940, *Journal of Cytology and Genetics* 21: 152-154. 1986.

in India: bansi, bichhroo, naltura

N. curvipes Ohwi

Asia, Borneo. Perennial, reedlike, feathery panicles, see *Bulletin of the Tokyo Science Museum* 18: 9. 1947.

N. madagascariensis (Kunth) Hook.f. (*Arundo boivinii* Steud.; *Arundo henslowiana* Nees; *Arundo madagascariensis* Kunth; *Arundo thouarii* (P. Beauv.) T. Durand & Schinz (also *thouarsii*); *Donax thouarii* P. Beauv. (also *thouarsii*); *Neyraudia madagascariensis* var. *genuina* A. Camus; *Neyraudia thouarsii* Pilger ex Peter; *Triraphis madagascariensis* (Kunth) Hook.f. ex Prain) (after the British clergyman Rev. John Stevens Henslow, 1796-1861 (Hitcham, Suffolk), botanist, mineralogist, plant geographer, 1818 fellow of the Linnean Society, 1819 member of the Geological Society of London, founder of the Cambridge Philosophical Society, 1822 professor of mineralogy at Cambridge, 1824 ordained, 1825-1861 professor of botany at Cambridge, 1832/1833 Vicar of Cholsey (Berkshire), 1837 Rector of Hitcham (Suffolk), among his publications are *Suggestions towards an Enquiry into the Present Condition of the Labouring Population of Suffolk*. Hadleigh 1844, *An Account of the Roman Antiquities Found at Rougham, near Bury St. Edmund's* on the fifteenth of September, 1843. Bury [1843], *Roman-British remains. On the Materials of Two Sepulchral Vessels Found at Warden, Co. Beds.* Cam-

bridge 1846, *The Principles of Descriptive and Physiological Botany*. London 1835, *A Dictionary of English and Latin Terms*, used in botanical descriptions. [Issued, in parts, with Maund's *Botanic Garden*, vol. 10-13], *A Dictionary of Botanical Terms*. London s.d. and *A Catalogue of British Plants*. Cambridge 1829, he was co-author with Edmund Skepper (1825-1867) of *Flora of Suffolk*. London and Bury St. Edmund's [1860], 1837-1846 co-editor with Benjamin Maund (1790-1863) of *The Botanist*. London, correspondent of Hooker, Bentham, Darwin and Berkeley, among his students were Charles Darwin and Richard Thomas Lowe (1802-1874), his daughter Frances Harriet (1825-1874) was the first wife of J.D. Hooker. See L. Jenyns, *Memoir of the Rev. John Stevens Henslow*. London 1862; R.T. Gunther, *Early Science in Cambridge*. Oxford 1937; Elisabeth Leedham-Green, *A Concise History of the University of Cambridge*. Cambridge, University Press 1996; J.H. Barnhart, *Biographical notes upon botanists*. 2: 161. 1965; N. Barlow, editor, *Darwin and Henslow, the Growth of an Idea: Letters 1831-1860*. London 1967; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 181. Oxford 1964; Mea Allan, *The Hookers of Kew*. London 1967; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. London 1918; Francis Wall Oliver, editor, *Makers of British Botany*. 151-163. Cambridge 1913; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. London 1994; Karl Ludwig von Blume, *Museum Botanicum Lugduno-Batavum*. 1: 242. 1851; M.V. Mathew, in *D.S.B.* 6: 288-289. 1981; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 172. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 221. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Asia, India. See *Révision des Graminées* 2: 273. 1830, *The Botany of Captain Beechey's Voyage* 248. 1838, *Synopsis Plantarum Glumacearum* 1: 423. 1854, *Plantae Jung-huhnianae* 3: 343. 1854, *Conspectus Florae Africae* 5: 875. 1894, *The Flora of British India* 7: 305. 1896 and *Bengal Plants* 1219. 1903, *Flore Générale de l'Indo-Chine* 7: 549. 1923, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 309. 1938.

N. mezii (Janowski) Veldkamp (*Neyraudia acarifera* (Trin.) Conert; *Panicum acariferum* Trin.; *Thysanolaena mezii* Janowski)

Asia, China. See *Species Graminum* 1: t. 87. 1827 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(477-480): 86. 1921, *Botanische Jahrbücher für Systematik,*

Pflanzengeschichte und Pflanzengeographie 78(2): 240-244. 1959, *Blumea* 37(1): 231. 1992.

N. montana Keng

Asia. See *Sinensia* 6(2): 151, 156. 1935.

N. reynaudiana (Kunth) Keng ex Hitchc. (*Arundo reynaudiana* Kunth; *Arundo zollingeri* Büse; *Neyraudia arundinacea* var. *zollingeri* (Büse) Henrard; *Neyraudia madagascariensis* var. *zollingeri* (Büse) Hook.f.; *Phragmites zollingeri* Steud.; *Triodia grandiflora* Vasey)

East Himalayas. Perennial, tall, leafy, erect, often densely tufted, stem filled with a soft pith, leaf sheaths smooth, leaf blade linear and smooth, ligule with white hairs, large terminal panicle finely branched and silvery, 2 empty glumes and an empty lemma at the base of the spikelet, lower and upper glumes narrow, lemmas awned and silvery hairy with long ciliate margins, paleas narrowly lanceolate, common on roadsides, open places, grasslands, see *Révision des Graminées* 2: 275, t. 49. 1830, *Plantae Jung-huhnianae* 3: 343. 1854, *Synopsis Plantarum Glumacearum* 1(3): 196. 1855 [1854], *Contributions from the United States National Herbarium* 1(2): 59. 1890, *Revisio Generum Plantarum* 2: 789. 1891, *Contributions from the United States National Herbarium* 2(3): 538. 1894, *The Flora of British India* 7: 305. 1896, *Grasses of North America for Farmers and Students* 2: 471. 1896 and *New Mexico Agricultural Experiment Station: Bulletin* 81: 129. 1912, *Mededeelingen van's Rijks-Herbarium* 58: 8. 1929, *American Journal of Botany* 21(3): 131. 1934, *Blumea* 3: 439. 1940, *American Journal of Botany* 48(7): 572. 1961, *Brittonia* 26(1): 60. 1974, *Phytologia* 27(6): 442-443. 1974.

in English: Burma reed

in Thailand: fong, lao, phong

Nicoraella Torres = *Anatherostipa* (Hack. ex Kuntze) Peñailillo

Pooideae, Stipeae, Stipinae, type *Nicoraella bomanii* (Hauman) Torres, see *Species Plantarum* 1: 78. 1753, Ernst Gottlieb von Steudel (1783-1856), *Synopsis plantarum glumacearum*. 1: 121. Stuttgartiae 1854, *Revisio Generum Plantarum* 3(2): 372. 1898 and *Anales del Museo Nacional de Montevideo* 4: III, 36. 1901, *Bulletin of Miscellaneous Information Kew* 1923(8): 301-303. 1923, *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Blumea, Supplement* 3: 63. 1946, *Revista Argentina de Agronomía* 17(3): 201. 1950, *Gayana, Botánica* 13: 1-137. 1965, *Boletín de la Sociedad Argentina de Botánica* 12: 268-283. 1968, *Boletín de la Sociedad Argentina de Botánica* 11(4): 239. 1969, *Kew Bulletin* 40(4): 727-729. 1984[1985], Patricio Peñailillo B., "Anatherostipa, un nuevo género de Poaceae (Stipeae) / Anatherostipa, a new genus of Poaceae (Stipeae)." *Gayana, Botánica* 53(2): 277-284. 1996, A.M. Torres, "Nicoraella (Gramineae) un nuevo genero para America del Sur."

Comisión de Investigaciones Científicas 13: 69-77. 1997, *Gayana, Botánica* 54(2): 163-182. 1997, *Contributions from the United States National Herbarium* 48: 109-110, 467. 2003.

Nipponobambusa Muroi = *Sasa* Makino and Shibata

From Japan and *Bambusa*.

Bambusoideae, Bambuseae, Arundinariinae, type *Nipponobambusa sawadai* (Makino) Muroi (also *sawadae*), see *Bulletin de l'Herbier Boissier* 7(9): 716. 1899 and *Botanical Magazine* (Tokyo) 15(168): 18, 25, 27. 1901, *Journal of Japanese Botany* 3(1): 4. 1926, *Journal of Japanese Botany* 5(5): 21. 1928, *Journal of Japanese Botany* 6: 15. 1929, *Journal of the Faculty of Science, Hokkaido University, series 5, Botany* 26: 180. 1931, *Journal of Japanese Botany* 10(9): 576-577. 1934, *Acta Phytotax. & Geobot. Kyoto* 9: 159, 227. 1940, M. Tatewaki, "Hokkaido sasarui no bunrui [Classification of genus *Sasa* in Hokkaido]" *Hokkaido Ringyô-kaihô* 38(1): 4-9, 38(2): 1-9, 38(3): 1-8, 38(4): 1-10, 38(6): 1-11, 38(8): 1-13. 1940, H. Muroi, "*Nipponobambusa* Muroi, a new genus of the Bambusaceae." in *Hyogo-ken Chuto-kyoiku Hakubutsugaku Zasshi (Hyogo Prefecture Journal, Second edition, Natural History)* 6: 88-90. 1940, *Amatores Herbarii* 10: 212. 1942, *Botanical Magazine* (Tokyo) 56: 508. 1942, *Bibliography of Cultivated Trees and Shrubs* hardy in the cooler temperate of the northern hemisphere ... 635. Jamaica Plains, Massachusetts [The Arnold Arboretum of Harvard University] 1949, *Japanese Bamboos (Take to Sasa)* (edition 2) 331. 1956, *Taxon* 6(7): 206, 208. 1957, *Taxon* 27: 424. 1978, *J. Jap. Bot.* 64(2): 42. 1989, *Taxon* 45: 543-544. 1996, *Taxon* 48: 359-360, 377. 1999, *Taxon* 49(2): 235-238, 545-546. 2000, *Contributions from the United States National Herbarium* 39: 81, 111-112. 2000.

Nipponocalamus Nakai = *Arundinaria* Michaux, *Pleioblastus* Nakai

From Japan and Greek *kalamos* "reed."

Bambusoideae, Bambuseae, Arundinariinae, *Pleioblastus* subg. *Nipponocalamus* (Nakai) Murata, type *Nipponocalamus simonii* (Carrière) Nakai, see *Flora Boreali-Americana* 1: 73-74. 1803 and *Journal of the Arnold Arboretum* 6(3): 145. 1925, *Journal of Japanese Botany* 18(7): 350, 355, 364. 1942, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Acta Phytotaxonomica et Geobotanica* 30(4-6): 145. 1979, *Kew Bulletin* 44(2): 349-367. 1989, *Castanea* 62: 8-21. 1997, *Contributions from the United States National Herbarium* 39: 18-24, 81, 106, 111-112. 2000.

Nivieria Seringe = *Triticum* L.

Probably from *niveus* "snowy, snow," referring to the habit.

Pooideae, Triticeae, Triticinae, type *Nivieria monococcum* (L.) Ser., see *Species Plantarum* 1: 85-87. 1753, *Annales des Sciences Physiques et Naturelles, d'Agriculture et de l'Industrie, Publiées par la Société Royale d'Agriculture, etc., de Lyon*. 5: 103-196, pl. 2-10. 1842 [*Descriptions et figures des céréales européennes*] and *Taxon* 35: 144-149. 1986, *Wageningen Agricultural University Papers* 94-7: 1-512. 1994, *Contributions from the United States National Herbarium* 48: 468, 676-684. 2003.

Normanboria Butzin = *Acrachne* Wight & Arn. ex Chiov., *Arthrochloa* J.W. Lorch, *Arthrochloa* R. Br.

For the Irish (b. at Tramore, County. Waterford) botanist Norman Loftus Bor, 1893-1972 (London), agrostologist, plant collector, 1921-1948 Indian Forest Service, Forest Botanist of the Forest Research Institute (Dehra Dun), 1945 President of the Indian Botanical Society, 1948-1959 Assistant Director Kew, 1931 fellow of the Linnean Society, author of *Manual of Indian Forest Botany*. Oxford University Press, London 1953 and *The Grasses of Burma, Ceylon, India and Pakistan*. 1960, with Mukat Behari Raizada wrote *Some Beautiful Indian Climbers and Shrubs*. Bombay Natural History Society - Oxford University Press, Bombay 1982, contributed to *Indian Forester*. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 220. 1965; C.E. Hubbard, "Norman Loftus Bor (1893-1972):" in *Kew Bulletin*. 30(1): 1-4. 1975; Carolyn M.K. Pope, "A bibliography of the work of Dr. N.L. Bor." in *Kew Bulletin*. 30(1): 4-10. 1975; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 86. 1994.

Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eleusininae, see *Annuario del Reale Istituto Botanico di Roma* 8(3): 361-362. 1908, *Blumea, Supplement* 3: 44. 1946, *Journal of the Indian Botanical Society* 39(3): 490, f. 1-5. 1960, *Taxon* 27(2-3): 301. 1978, *Kew Bulletin* 37(1): 158-159. 1982, *Journal of Cytology and Genetics* 25: 322-323. 1990, *Edinburgh J. Bot.* 57(2): 282. 2000.

Nothoholcus Nash = *Holcus* L.

From the Greek *nothos* "false, bastard" and the genus *Holcus* L.

Pooideae, Poaeae, Holcinae, type *Nothoholcus lanatus* (L.) Nash, see *Species Plantarum* 2: 1047-1048. 1753 and *An Illustrated Flora of the Northern United States* 1: 109, 214. 1913, *Contributions from the United States National Herbarium* 48: 387-388, 468. 2003.

Notholcus Nash ex Hitchc. = *Notholcus*
Hitchc.

From the Greek *nothos* “false, bastard” and the genus *Holcus* L., orth. var. *Nothoholcus* Nash.

Pooideae, Poaeae, Holcinae, see *Species Plantarum* 2: 1047-1048. 1753, *Systema Naturae, Editio Decima* 2: 1305. 1759 and *A Flora of California* 1: 126. 1912, *An Illustrated Flora of the Northern United States* 1: 109, 214. 1913, *American Journal of Botany* 2: 304. 1915, *Contributions from the United States National Herbarium* 48: 387-388, 468. 2003.

Notochloë Domin (also spelled Notochloe)

From the Greek *notos* “south” and *chloe, chloa* “grass,” a southern grass.

One species, southeastern Australia, Blue Mountains district. Arundinoideae, or Danthonioideae, Danthonieae, perennial, caespitose, erect, herbaceous, unbranched, auricles absent, ciliate ligule, leaves mainly basal, blade flat or inrolled, plants bisexual, inflorescences shortly paniculate, a short lax panicle with 5-10 green spikelets, 8-14 bisexual florets, spikelets pedicellate, 2 glumes very unequal glabrous and awnless, lemmas toothed or 3-lobed, palea 2-toothed and 2-keeled, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, in moist shady areas, sandstones, swamps, similar to *Triodia* and *Plinthanthesis*, type *Notochloe microdon* (Benth.) Domin, see Karel Domin, *Repertorium Specierum Novarum Regni Vegetabilis* 10: 117. 1911, *Flora of Australia* vol. 44 B, Poaceae 3: 34. 2005.

Species

N. microdon (Benth.) Domin (*Triraphis microdon* Benth.)

New South Wales. Perennial, tufted, rhizomatous, leaf sheath enclosing the culm, ligule a ciliate rim, blade flat and ribbed, culm nodes exposed, glumes very unequal and 2-toothed, lemma tip tridentate, palea with scabrous and wingless keels, upland swamps, rare and threatened species, see *Flora Australiensis: A Description ...* 7: 605. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 10: 117. 1911, J.D. Briggs & J.H. Leigh, *Rare or Threatened Australian Plants*. Melbourne, Australia: CSIRO Publications. 1996.

Notodanthonia Zotov = *Rytidosperma* Steud.

From the Greek *notos* “south” and the genus *Danthonia* DC.

About 5 species, northern and eastern Australia, New Zealand. Danthonioideae, Danthonieae, perennial, herbaceous, tufted, flowering culms leafless, simple, leaves basal, auricles absent, ligule fringed, leaf blades linear to linear-lanceolate, plants bisexual, open inflorescence paniculate, spikelets solitary and pedicellate, 2 glumes more or less

equal, palea present, 2 free and ciliate lodicules, 3 stamens, 2 stigmas, shade or light shade, wet habitats, very similar to *Austrodanthonia*, sometimes referred to *Danthonia s.l.*, type *Notodanthonia unarede* (Raoul) Zotov, see *Journal of Botany, British and Foreign* 2: 416. 1843, *Synopsis Plantarum Glumacearum* 1: 425. 1854 and Victor Dmitrievich Zotov (1908-1977), *New Zealand Journal of Botany*. 1: 104, 107, 108, 110-114, 116-119, 122, 123. 1963, S.T. Blake, “*Plinthanthesis* and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae).” *Contributions from the Queensland Herbarium* 14: 3. 1972, H.P. Linder & G.A. Verboom, “Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex.” *Telopea* 6(4): 597-627. 1996, C.M. Baeza P., “Los géneros *Danthonia* DC. y *Rytidosperma* Steud. (Poaceae) en América — Una revisión.” *Sendtnera* 3: 11-93. 1996, H.P. Linder, “Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae).” *Telopea* 7(3): 269-274. 1997, *Flora of Australia* vol. 43, Poaceae 1: 164, 171, 214, 222, 246, 270, 309. 2002, *Ecological Management and Restoration* vol. 4, iss. 2: 133-139. Aug 2003, *Flora of Australia* vol. 44 B, Poaceae 3: 41-45. 2005.

Species

N. gracilis (Hook.f.) Zotov (*Danthonia gracilis* Hook.f.; *Danthonia semiannularis* var. *gracilis* (Hook.f.) Hook.f.; *Rytidosperma gracile* (Hook.f.) Connor & Edgar; *Thonandia gracilis* (Hook.f.) H.P. Linder)

New Zealand, New South Wales, Tasmania. Loosely caespitose, innovation buds extravaginal, leaf sheaths long-hairy, very close to *Notodanthonia semiannularis* (Labill.) Zotov, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Novae-Zelandiae* 1: 303, t. 69 B. 1853, *Handbook of the New Zealand Flora* 333. 1864 and *New Zealand Journal of Botany* 1: 78-136. 1963, *New Zealand Journal of Botany* 17(3): 330. 1979, *Telopea* 6(4): 612. 1996.

N. longifolia (R. Br.) Veldkamp (*Avena longifolia* (R. Br.) Spreng.; *Danthonia longifolia* R. Br.; *Danthonia penicillata* var. *longifolia* (R. Br.) F. Muell. ex Maiden & Betche; *Rytidosperma longifolium* (R. Br.) Connor & Edgar; *Thonandia longifolia* (R. Br.) H.P. Linder)

Australia, from Queensland to South Australia. Caespitose, innovation buds intravaginal, leaf sheaths glabrous, inflorescence paniculate, very close to *Notodanthonia semiannularis* (Labill.) Zotov, see *Taxon* 29: 296. 1980.

N. semiannularis (Labill.) Zotov (*Arundo semiannularis* Labill.; *Danthonia penicillata* var. *semiannularis* (Labill.) Maiden & Betche; *Danthonia penicillata* var. *semiannularis* (Labill.) Rodway; *Danthonia semiannularis* (Labill.) R. Br.; *Rytidosperma semiannulare* (Labill.) Connor & Edgar)

New South Wales, South Australia, Tasmania, Victoria. Caespitose, innovation buds intravaginal, leaves basal, see *Novae Hollandiae Plantarum Specimen* 1: 26, t. 33. 1804,

Prodromus Florae Novae Hollandiae 177. 1810 and *Tasmanian Fl.* 267. 1903, *A Census of New South Wales Plants* 22. 1916, *New Zealand Journal of Botany* 1: 116. 1963, *New Zealand J. Bot.* 17: 332. 1979.

in English: Tasmanian wallaby grass

Notonema Raf. = *Agrostis* L.

Greek *notos* “south, back” and *nema* “thread.”

Pooideae, Poaeae, Agrostidinae, type *Agrostis arachnoides* Elliott (nom. illeg. hom. for *Agrostis elliottiana* Schult.), see *Species Plantarum* 1: 61-63. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 134. 1816, *Mant.* 2: 202. 1824, C.S. Rafinesque, *Neogenyton, or Indication of Sixty-Six New Genera of Plants of North America*. 4. 1825, *Bulletin Botanique [Genève]* 1: 220. 1830 [also *Seringe Bull. Bot.* 1: 220. 1830], *Index Kewensis* 2: 319. 1894 and E.D. Merrill, *Index rafinesquianus*. 76. 1949, *Symbolae Botanicae Upsaliensis* 17(1): 1-112. 1960, *Fl. Fenn.* 5: 29. 1971, *Gayana, Botánica* 47: 3-7. 1990, *Parodiana* 7(1-2): 179-255. 1992, *Taxon* 41: 556. 1992, *Parodiana* 8(2): 129-151. 1993, *Taxon* 44: 611-612. 1995, *Gayana, Botánica* 54(2): 91-156. 1997, *Contributions from the United States National Herbarium* 48: 42-89, 468. 2003.

Nowodworskya Presl = *Polypogon* Desf.

After Johann Nowodworsky, d. 1811, professor of botany.

Pooideae, Poaeae, Agrostidinae, *Polypogon* sect. *Nowodworskya* (J. Presl) Tzvelev, type *Nowodworskya agrostoides* J. Presl, see *Flora Aegyptiaco-Arabica* 17. 1775, *Prospectus de l'Histoire des Plantes de Dauphiné* 16. 1779, *Flora Atlantica* 1: 66-67. 1798 [1800], *Reliquiae Haenkeanae* 1: 351, t. 80. 1830, *Synopsis Plantarum Glumacearum* 1: 184. 1854, *Anales de la Universidad de Chile* 43: 562. 1873, Friedrich [Federico] Richard Adalbert Johow (1859-1933), *Estudios sobre la flora de las Islas de Juan Fernandez ...* 136. Santiago de Chile 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 16: 387. 1920, C. Skottsberg, “Die Flora der Desventuradas-Inseln (San Felix und San Ambrosio) nach den Sammlungen F. Johows und mit Einfügung seiner hinterlassenen Schriften herausgegeben und ergänzt von C. Skottsberg.” *Göteborgs Kungl. Vetensk.-Vitterh.-Samh. Handl.*, ser. 5, B, 5(6): 1-88. 1937, *Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast.* 3: 143. and 4: 339. 1937, *Symbolae Botanicae Upsaliensis* 17(1): 1-112. 1960, C. Muñoz, “Recuerdos del Profesor Federico Adalberto Johow 1859-1933.” *Mus. Nac. Hist. Nat., Ser. Educ.* no. 10. 1974, *Contributions from the United States National Herbarium* 48: 468, 583-588. 2003.

O

Ochlandra Thwaites = *Beesha* Munro, *Beesha* Kunth, *Irulia* Bedd.

From the Greek *ochlos* “crowd, mass” and *aner, andros* “man, stamen, male.”

About 7-9/12 species, southern and southwestern India, Kerala, Tamil Nadu, Karnataka; Sri Lanka; Madagascar. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Melocanninae, perennial, woody, sympodial, erect, shrubby, caespitose, culms more or less closely spaced, unarmed, reedlike, persistent, gregarious, small, thin-walled, flowering culms leafy, rhizomes pachymorph, ligule a short unfringed membrane, leaf blades erect or reflexed, plants bisexual, spikelets narrowly conical and 1-flowered, bracts subtending primary pseudo-spikelets, 2-5 or few to several glumes subequal, transitional glumes, palea rounded, 1-15 free and membranous lodicules, 15-120 stamens, long ovary appendage, 3-8 stigmas, fruit with fleshy pericarp, used for basketry and mat-making, leaves used for thatching, usually forming dense and impenetrable thickets, wet lowlands, dry forests, undergrowth, rainforest, in forest, hillsides, lower montane areas, along streams and riverbanks, evergreen and semievergreen forests, type *Ochlandra stridula* Moon ex Thwaites, see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, George Henry Kendrick Thwaites (1812-1882) and Joseph Dalton Hooker (1817-1911) [Collaborator: William Ferguson, 1820-1887], *Enumeratio plantarum zeylaniae: An Enumeration of Ceylon Plants*. 5: 376. London [1858-] 1864, *Transactions of the Linnean Society of London* 26: 144. 1868, *The Flora Sylvatica for Southern India* 239, t. 234. Madras [1869-1874], *Annals of the Royal Botanic Garden, Calcutta*. 7: 125. 1896 and *Bull. de la Société Linnéenne de Lyon* 9: 185-188. 1945, *Taxon* 6(7): 201. 1957, *Agriculture Handbook* 193: i-iii, 1-74. 1961, *Smithson. Contr. Bot.* 72: 66. 1988, *Rheedea* 4(1): 25, f. 1. 1994, M. Kumar, “A re-investigation on the taxonomy of the genus *Ochlandra* Thw. (Poaceae-Bambusoideae.)” *Rheedea* 5(1): 63-89. 1995, *Flora Reipublicae Popularis Sinicae* 9(1): 1-761. 1996, *Contributions from the United States National Herbarium* 39: 35, 64, 81-82. 2000, *Botanical Journal of the Linnean Society* 138(1): 1-7. Jan 2002, *New Phytologist* 162(1): 25-44. Apr 2004, *Forest Pathology* 34(5): 329-333. Oct 2004.

Species

O. beddomei Gamble (for the British botanist Richard Henry Beddome, 1830-1911, colonial army officer, 1848 entered Indian Army, 1860-1882 head of the Forestry Department South India, interested in Indian ferns, 1882 F.L.S., botanical collector in India and Sri Lanka, dedicated the genera *Beddomea* Hook.f. (Meliaceae) and *Beddomiella* Dixon (a bryophyte). See Charles J. Édouard Morren, *Correspondance botanique*. Liège 1874 and 1884; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 70. 1917-1933; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; J.H. Barnhart, *Biographical notes upon botanists*. 1: 152. Boston 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 122. 1964; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 701. Stuttgart 1993; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 60. London 1994)

India, Kerala. Erect, arching, shrubby, gregarious, reedlike, thin walled, nodes solitary, culm sheaths persistent, leaves oblong-lanceolate, short inflorescence, spicate panicle terminal, few spikelets in short bracteate verticils, glumes hirsute and long-mucronate, lemmas glabrous and mucronate, paleas membranous, 5 lodicules unequal, several stamens, ovary glabrous, 5-6 plumose stigmas, culms used for making baskets and mats, raw material for pulp, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 124. 1896 and *Rheedea* 4(1): 25, f. 1. 1994, *Rheedea* 5(1): 66, f. 1. 1995.

O. capitata (Kunth) Camus (*Bambusa capitata* (Kunth) Willd. ex Ruprecht; *Beesha capitata* (Kunth) Munro; *Cathariostachys capitata* (Kunth) S. Dransf.; *Nastus capitatus* Kunth)

Madagascar. See *Révision des Graminées* 1: 325, t. 75. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3(1): 626-627. 1835, *Transactions of the Linnean Society of London* 26(1): 145. 1868 and *Les Bambusées* 183. 1913, *Mémoires de l'Institut Scientifique de Madagascar*,

Série B, Biologie Végétale 6: 1-272. 1955, *Kew Bulletin* 53(2): 378, 391. 1998.

O. ebracteata Raizada and Chatterji

India, Kerala. Erect, shrubby, arborescent, reedlike, tufted, clumped, smooth, gregarious, leaves narrow to broadly oblong-lanceolate, clusters of crowded sessile spikelets, 2-3 glumes minute, 3-5 lemmas, paleas many-nerved, 3 lodicules variable, stamens monadelphous, ovary small and compressed, 7-9 twisted stigmas, used in paper industry and for making baskets, a powder from the dried seeds used as cattle feed, found along streams, see *Indian Forester* 89: 362. 1963, *Rheedea* 5(1): 68, f. 2. 1995.

in India: valleeta, valleta

O. perrieri A. Camus (*Valiha perrieri* (A. Camus) S. Dransf.)

Madagascar. See *Bulletin de la Société Botanique de France* 82: 310. 1935, W.C. Lin, "The species and distribution of bamboos in the Republic of Malagasy (Madagascar), East Africa." *Special Bulletin of Taiwan Forestry Research Institute no. 4*: 24, 34. 1967, *Kew Bulletin* 53(2): 388. 1998.

O. scriptoria (Dennst.) Fisch. (*Bambusa scriptoria* Dennst.; *Beesha rheedii* Kunth; *Beesha rheedii* Munro; *Bheesa rheedii* Kunth; *Melocanna rheedii* Steudel; *Ochlandra rheedii* (Kunth) Benth. and Hook.f. ex Gamble; *Ochlandra scriptoria* Fischer) (for the Dutch botanist Hendrik (Henricum, Henricus, Henric) Adriaan (Adrien) van Rheedee (Reede) tot Draakestein (Draakensteen, Drakestein, Drakenstein) (Rheedius a Drackenstein), 1637-1691, colonial administrator, with the Dutch East India Company, 1669-1676 Malabar, from 1684 India, among his works the famous *Hortus indicus malabaricus*. Amstelodami 1678[-1703]; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 149. 1965; R. Pulteney, *Historical and Biographical Sketches of the Progress of Botany in England*. London 1790; T.W. Bossert, compilation, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 330. Boston, Mass. 1972; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Stafleu and Cowan, *Taxonomic literature*. 4: 750-753. Utrecht 1983; Johannes Heniger, *Hendrik Adriaan van Reede tot Drakenstein (1636-1691) and Hortus Malabaricus*. A contribution to the history of Dutch colonial botany. Rotterdam 1986; Justus Carl Hasskarl (1811-1894), *Horti malabarici Rheedeani clavis locupletissima*. Dresden 1867; Lewis Weston Dillwyn (1778-1855), *A Review of the References to the Hortus malabaricus of Henry van Rheedee van Draakenstein*. Swansea 1839; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di*

Palermo. 230. Regione Siciliana, Palermo 1988; John Landwehr, *VOC: A Bibliography of Publications Relating to the Dutch East India Company, 1602-1800*. Editor Peter van der Krogt. HES Publisher, Utrecht 1991; G.C. Wittstein, *Etymologisch-botanisches Handwörterbuch*. 759. Ansbach 1852; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; Pieter Honig and Frans Verdoorn, *Science and Scientists in the Netherlands Indies*. Board for the Netherlands Indies, Suriname and Curaçao, New York City 1945)

India, Kerala, Karnataka. Shrubby, gregarious, erect, smooth, leaves linear-lanceolate, culm sheaths with 2 small falcate long-ciliate auricles fringed with deciduous bristles, inflorescence terminal or axillary on leafy branchlets, 2-3 glumes mucronate, paleas mucronate, many glabrous lodicules, 15-18 or more stamens, ovary oblong, 3 plumose stigmas, flowers sporadically each year, suitable for pulp and paper industry, used for making mats and baskets, useful for erosion control and as a soil binder, small culms for making flutes, planted along margins of ponds, on the riverbanks, see August Wilhelm Dennstedt (1776-1826), *Schlüssel zum Hortus indicus malabaricus*, ... 31. Weimar 1818, *Révision des Graminées* 1: 141. 1829, *Enum. Pl.* 2: 434. 1833, *Synopsis Plantarum Glumacearum* 1: 332. 1854, *Transactions of the Linnean Society of London* 26(1): 144. 1868, *Annals of the Royal Botanic Garden, Calcutta*. 7: 121, 122. 1896 and *Flora of the Presidency of Madras* 10: 1863. 1934, *Kew Bull.* 149. 1935, *Taxon* 6(7): 201. 1957, *Rheedea* 5(1): 70, f. 3. 1995.

in India: ammei, ammei ottal, amnei, beesha, bheesa, chithu, hode, huda, kolanji, mai-eetta, nanyura, ottal, vaate, vanta nalagi

O. setigera Gamble (*Neomicrocalamus setigerus* (Gamble) J.R. Xue & T.P. Yi)

India, Tamil Nadu. Smooth, erect, straggling, small, reed-like, tufted, thick, naked below, much branched above, nodes swollen, internodes whitish below the nodes, culm sheaths persistent and papery, leaves oblong-lanceolate acuminate and rounded at the base into a petiole, leaf sheaths with short decurrent auricles fringed with long stiff bristles, leaves used as fodder, culms used for basket and mat making, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 128, t. 115. 1896 [*The Bambuseae of British India*, in *Annals of the Royal Botanic Garden, Calcutta*, vol. 7. 1896], *The Flora of British India* 7: 420. 1896, *Bamb. Brit. Ind.* 128, t. 115. 1896 and *Flora Xizangica* 5: 50. 1987, *Rheedea* 4(1): 25, f. 2. 1994, *Rheedea* 5(1): 72, f. 4. 1995.

O. sivagiriana (Gamble) E.G. Camus (*Ochlandra rheedii* var. *sivagiriana* Gamble; *Ochlandra scriptoria* var. *sivagiriana* (Gamble) Fischer) (found in Sivagiri)

India, Tamil Nadu, Kerala. Straggling, reedlike, gregarious, shrubby, erect, leaves attenuate at the base into a short

petiole, 6 lodicules, 27-32 or 50-60 stamens, 5 plumose stigmas, culms used for fencing, similar to *Ochlandra scriptoria* (Dennst.) Fischer, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 122. 1896 and *Les Bambusées* 181. 1913, *Flora of the Presidency of Madras* 10: 1863. London 1934, *Rheedea* 5(1): 74, f. 5. 1995

O. stridula Moon ex Thwaites (*Bambusa stridula* Moon; *Beesha stridula* Munro; *Beesha stridula* (Moon ex Thwaites) Munro; *Ochlandra stridula* var. *maculata* (Trimen) Gamble; *Teinostachyum maculatum* Trimen)

Sri Lanka. Arching, uniaespitose, soft, rhizomes pachymorph, densely clumped, inner and outer ligule hard, leaf sheath hard and thick, pseudospikelets, spikelets ovate, 3 transitional glumes mucronate and many-nerved, lodicules whorled, ovary glabrous, see *A Catalogue of the Indigenous and Exotic Plants Growing in Ceylon* 26. 1840, *Enumeratio Plantarum Zeylaniae* 5: 376. 1864, *Transactions of the Linnean Society of London* 26(1): 145. 1868, *Journal of Botany, British and Foreign* 23: 273. 1885, *Annals of the Royal Botanic Garden, Calcutta*. 7(1): 123, 124, pl. 109. 1896 and *Handb. Fl. Ceylon* 5: 318. 1900, *Grasses of Ceylon* 24. 1956, *Smithsonian Contributions to Botany* 72: 1-75. 1988, *Rheedea* 5(1): 76, 78, f. 6. 1995.

in Sri Lanka: bata

O. stridula Moon ex Thw. var. *maculata* (Trimen) Gamble (*Ochlandra maculata* (Trimen) Trimen; *Teinostachyum maculatum* Trimen)

Sri Lanka. See *Journal of Botany, British and Foreign* 23: 273. 1885, *Annals of the Royal Botanic Garden, Calcutta*. 7(1): 124. 1896 and *Smithsonian Contributions to Botany* 72: 67, 71. 1988.

O. talbotii Brandis (also *talboti*) (*Ochlandra rheedii* var. *sivagiriana* sensu Talbot, not Gamble) (named for the Irish botanist William Alexander Talbot, 1847-1917, in the Indian Forest Service, 1884 F.L.S., 1901-1909 Bombay conservator of Forests, from 1911 in Switzerland, author of Systematic list of the trees, shrubs and woody climbers of the Bombay Presidency ... Bombay 1894 [edition 2, 1902; edition 3, reprint, *The Trees, Shrubs and Woody Climbers of the Bombay Presidency* ... Poona 1949]. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 357. 1965; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 678. Cambridge, Mass. 1917-1933; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 670-671. London 1994)

India, Karnataka. Arborescent, graceful, erect and arching, scandent, slender, reedlike, drooping at the top, growing in dense clumps, nodes swollen, culm sheaths smooth and ciliate on the margins, leaves pointed and cordate or

subacute at the base, leaf sheaths smooth and bearded with long stiff bristles, inflorescence erect and terminal, 3-6 glumes hairy and mucronate, lemmas acute, 6-7 lodicules, 25-40 exerted stamens, 5 plumose stigmas, used for basket and mat making, found growing in the rain forests, along riverbanks and nallahs, see *Indian Trees* 684. 1906, *Rheedea* 5(1): 72, f. 4. 1995.

O. travancorica (Bedd.) Benth. ex Gamble (*Beesha travancorica* Bedd.; *Bheesa travancorica* Bedd.; *Melocanna travancorica* Muell.; *Ochlandra travancorica* (Bedd.) Benth.; *Ochlandra travancorica* Benth.)

India. Arborescent or shrubby, erect, reedlike, gregarious, nodes swollen, thin walls, culm sheaths wrinkled, inflorescence subverticillate, spicate panicle, large fertile spikelets, usually 3 glumes, three lodicules lanceolate unequal, up to 120 stamens monadelphous, ovary narrow, 5-6 plumose stigmas, used for *hookah* pipes and as a fuel, raw material mainly for paper manufacture, leaves used for thatching, small culms for making flutes, fodder for horses during scarcity, leaves eaten by elephants, useful for erosion control and as a soil binder, planted along margins of ponds, moist areas, rich loamy soil, banks of streams, lower slopes, undergrowth in evergreen and semievergreen forests, see Sir Ferdinand Jacob Heinrich von Mueller (1825-1896), *Select Plants* (exclusive of timber trees) readily eligible for Victorian industrial culture, with indication of their native countries and some of their uses. Melbourne 1872, *Flora Sylvatica for Southern India* 239, t. 234. 1873, William Robert Guilfoyle (1840-1912), *Fibres from Plants, Indigenous and Introduced, Eligible for Industrial Culture and Experiment in Victoria*. [Department of Agriculture, Victoria] Melbourne 1894, *Annals of the Royal Botanic Garden, Calcutta*. 7: 125, 126. 1896 and *Rheedea* 4(1): 28, f. 3. 1994, *Rheedea* 5(1): 82, 85, f. 8, 9. 1995.

in English: reed bamboo, elephant bamboo, elephant grass.

in India: eera kalli, eera katti, eerakalli, eeral, eetta, erakatti, eral, etta, garte, hodake, ila kalli, iral, irttal, irttagalli, irul, ita-kalli, kaairttal, kagamungil, kar-eetta, kar-etta, nanal, odai, ote, othe, vei

O. travancorica Benth. var. *hirsuta* Gamble

India. Arborescent or shrubby, erect, reedlike, gregarious, leaf sheaths hairy, 3 lodicules, up to 120 stamens, ovary narrow, 5 plumose stigmas, raw material for paper manufacture, along stream banks, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 125, 126. 1896.

O. wightii (Munro) Fischer (*Bambusa wightii* Munro; *Ochlandra brandisii* Gamble; *Teinostachyum wightii* (Munro) Beddome; *Teinostachyum wightii* Beddome) (for the British (b. East Lothian) botanist Robert Wight, 1796-1872 (d. Berks), East India Company, surgeon, traveler, plant collector; see Nathaniel Wallich (1786-1854), *Plantae Asiaticae Rariores*. London 1830-1832; J.H. Barnhart, *Biographical notes upon botanists*. 3: 493. 1965; T.W. Bossert,

Biographical dictionary of botanists represented in the Hunt Institute portrait collection. 435. 1972; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens.* Royal Botanic Gardens, Kew, London 1906; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 1973; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927.* 143-144. [1931]; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 265. Oxford 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert.* 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. Stuttgart 1993; M. Archer, *Natural History Drawings in the India Office Library.* London 1962; Isaac Henry Burkill, *Chapters on the History of Botany in India.* Delhi 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists.* London 1994; R. Desmond, *The European Discovery of the Indian Flora.* Oxford 1992; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913.* London 1914; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker.* London 1918; Alain White and Boyd Lincoln Sloane, *The Stapelieae.* Pasadena 1937; Merle A. Reinikka, *A History of the Orchid.* Timber Press 1996)

India, Kerala, Tamil Nadu. Erect, shrubby, tufted, gregarious, reedlike, thin walls, leaves acuminate with a short petiole wrinkled beneath, inflorescence verticillate, glumes up to 4, lemmas membranous, one lodicule, stamens up to 60 monadelphous, ovary glabrous, 5 plumose stigmas, suitable for paper pulp, used for basket and mat making, leaves used as fodder, see *Transactions of the Linnean Society of London* 26(1): 111. 1868, *Flora Sylvatica for Southern India* 233. 1873, *Annals of the Royal Botanic Garden, Calcutta.* 7: 126. 1896 and *Flora of the Presidency of Madras* 10: 1864. 1934, *Kew Bulletin* 149. 1935 [also *Bulletin of Miscellaneous Information Kew* 1935: 149. 1935], *Rheedea* 5(1): 88, f. 10. 1995.

in India: ira-calli, irakalli, ira-kalli

Ochlopoa (Asch. & Graebn.) H. Scholz = Poa L.

From the Greek *ochlos* "crowd, mass."

Pooideae, Poeae, Poinae, *Poa* sect. *Ochlopoa* Asch. & Graebn., type *Ochlopoa annua* (L.) H. Scholz, see *Species Plantarum* 1: 67-68. 1753, *Nova Genera et Species Plantarum* 1: 158. 1815 [1816] and *Synopsis der mitteleuropäischen Flora* 2: 387. 1900, *Svensk Botanisk Tidskrift* 32: 296. 1938, *Bot. Not.* 1953(3): 354. 1953, *Fl. Afrique Nord* 3: 78.

1955, *Preslia* 34: 65. 1962, *Willdenowia* 28: 172. 1998, *Ber. Institut für Landschafts- und Pflanzenökologie Univ. Hohenheim* 16: 58-59. Stuttgart 2003, *Contributions from the United States National Herbarium* 48: 468, 505-580. 2003.

Ochthochloa Edgew.

From the Greek *ochthos* "hill, tubercle, bank" and *chloe*, *chloa* "grass."

One species, northeast Africa, Arabia, Ethiopia, Somalia, Sind. Chloridoideae, Eragrostideae, perennial, herbaceous, branched, unarmed, tuberous, sprawling, stoloniferous, tufted, auricles absent, ligule a fringed membrane, leaves stiff and pungent, plants bisexual, inflorescence spicate and digitate, spikelets solitary strongly laterally compressed, 2 very unequal glumes awned or awnless and shorter than the lemmas, upper glume keeled, lower glume exceeding the lowest lemma, lemmas keeled acute or shortly awn-tipped, palea keels ciliate, ovary glabrous, 2 stigmas, probably a very good fodder for cattle, species of open habitats, desert to semidesert, hillsides, sand dunes, a segregate from *Brachychloa* S.M. Phillips, type *Ochthochloa compressa* (Forssk.) Hilu, see *Journal of the Asiatic Society of Bengal* 11: 26-27. 1842 and *Kew Bulletin* 36(3): 560. 1981 and 37: 158. 1982, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

Species

O. compressa (Forssk.) Hilu (*Eleusine arabica* Hochst. ex Steud.; *Eleusine caespitosa* A. Rich.; *Eleusine compressa* (Forssk.) Asch. & Schweinf. ex C. Chr.; *Eleusine flagellifera* Nees; *Ochthochloa dactyloides* Edgew.; *Panicum compressum* Forssk.)

Africa, Arabia, Ethiopia. Perennial, wiry, hard, much-branched, stoloniferous, prostrate or ascending, creeping, bulblike rooting nodes, ligule a short membrane with a long ciliate fringe, leaves flat or slightly inrolled, inflorescence of secund digitate racemes, spikelets disarticulating above glumes, lemmas entire and mucronate, palea present, ovary glabrous, useful for forage and hay, very good fodder both for horses and cattle, suitable for erosion control, saline soil, sandy beaches, sandy soils, plains, see *Flora Aegyptiaco-Arabica* 18. 1775, *Linnaea* 16(2): 220. 1842, *Journal of the Asiatic Society of Bengal* 11: 27. 1842, *Tentamen Florae Abyssinicae ...* 2: 412. 1850, *Synopsis Plantarum Glumacearum* 1: 211. 1854 and *Dansk Botanisk Arkiv* 4(3): 12. 1922, *Kew Bulletin* 36(3): 560. 1981, *Journal of Cytology and Genetics* 21: 152-154. 1986.

in India: bharu, chembri, chemri, chhembar, chhimbar, chhimber, chubrei, dubra, ganth dob, ganthia, ganthil, ghan-til, ghatil, ghurdub, kharimbar

in Somalia: hari hari

Odontelytrum Hackel

From the Greek *odous*, *odontos* “tooth” and *elytron* “sheath, cover, scale, husk.”

One species, Ethiopia, Yemen, eastern and northeastern Africa. Panicoideae, Panicoideae, Paniceae, perennial, herbaceous, unarmed, aquatic, floating, smooth, spongy, branched, long stoloniferous, prostrate, trailing, auricles absent, sheaths inflated, ligule a membrane fringed or unfringed, leaves flat, plants bisexual, inflorescence a cylindrical raceme or a false spike, spikelets solitary and sessile, single spikelet subtended by a lobed scale, inflorescence enveloped by the uppermost leaf sheath, 1 or 2 very unequal glumes per spikelet, palea present, lodicules absent, 3 stamens, 1 or 2 long-exserted stigmas, open habitats, in water, ponds, stagnant or running water, in muddy margins of pools, wadis, type *Odontelytrum abyssinicum* Hack., see *Österreichische Botanische Zeitschrift* 48: 86. 1898 and *Flora of Tropical East Africa* 451-898. 1982.

Species

O. abyssinicum Hack.

Eastern Africa. Perennial, rare, decumbent, aquatic, soft, spongy, rooting at the nodes, often forming floating mats, ligule a very short membrane, inflorescence racemose of a solitary terminal spike-like raceme partially enclosed by the uppermost leaf sheath, spikelets narrowly lanceolate and dorsally compressed, lobed herbaceous scale or involucre, lower glume absent or minute, upper lemma narrowly obtuse, lakes, flooded grassland, abundant around pools and headwaters.

Odysea Stapf

The genus was named after Odysseus, in Greek legend, son of Laertes and Anticleia, husband of Penelope, daughter of Icarus, and father by her of Telemachus; in Latin Ulysses or Ulixes; possibly referring to the travels of this plant through taxonomic classifications and nine different genera.

Two species, Africa, Ethiopia, Yemen, Transvaal, Namibia. Chloridoideae, Eragrostideae, Eleusininae, perennial, xerophytic, creeping, herbaceous, armed, glaucous, profusely branched, long rhizomatous, flowering culms leafy, young shoots covered with hard scale leaves, leaf sheaths densely imbricate, ligule a fringe of hairs, salty leaves, woody leaf blades rigid and pungent, leaves distichous and nonauriculate, plants bisexual, contracted globose inflorescence, short crowded racemes, spikelets solitary and pedicellate, two glumes unequal or very unequal, lemmas mucronate and scarious, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, older leaves hard and prickly, sand binder, species of open habitats, desert soils,

savannah, coastal sand dunes, saline soils, sometimes under *Diplachne* P. Beauv., related to *Leptochloa* P. Beauv., type *Odysea paucinervis* (Nees) Stapf, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43(1): 94. 1909, *Hooker's Icones Plantarum* 31: t. 3100. 1922, *Flore des Spermatophytes du Parc National Albert* 3: 166. 1955.

Species

O. mucronata (Forssk.) Stapf (*Aeluropus mucronatus* (Forssk.) Asch.; *Aeluropus pungens* (Vahl) Boiss., nom. illeg., non *Aeluropus pungens* (M. Bieb.) Koch; *Eragrostis pungens* Schweinf.; *Festuca mucronata* Forssk.; *Festuca pungens* Vahl)

Arabia, Red Sea coasts, Yemen. Perennial, spiny, much-branched, woody, stiff, rounded, bush-forming or colonies, spreading, rhizomatous, ligule a fringe of hairs, very stiff leaves inrolled and pungent, dense headlike inflorescence of crowded racemes, glumes more or less equal or unequal, lemmas silky villous on nerves and mucronate, forming prickly bushes, abundant on sand dunes near the sea, see *Flora Aegyptiaco-Arabica* 22. 1775, *Symbolae Botanicae*, ... 1: 10, t. 2. 1790, *Beitrag zur Flora Aethiopiens* ... 297, 310. 1867, *Flora Orientalis* 5: 595. 1884 and *Hooker's Icones Plantarum* 31: t. 3100. 1922.

in Arabic: schocham, schoncham, shawkham

in Somalia: guban gub, gubangub, afrug

O. paucinervis (Nees) Stapf (*Dactylis paucinervis* Nees; *Diplachne cinerea* Hack.; *Diplachne paucinervis* (Nees) Stapf ex Rendle)

Tropical Africa, Namibia, Tanzania. Perennial, glaucous, halophytic, erect or geniculate, branched at the base, rigid, woody at the base, deeply rhizomatous with very long rhizomes, stoloniferous, low mat-forming, spiny shoots at the nodes, leaf blades slightly rolled, leaf sheaths rounded, leaves stiff and pungent, ligule membranous with a margin of hairs, inflorescence a short dense ovoid head, panicle dense and compact, spikelets flattened, lemmas with a short awn, pasture, little grazing value, eaten only when young, useful for erosion control, sand binder, usually found in brackish or saline soils, coastal dunes, savannah, near rivers, on sandy alkaline soils, see *Florae Africae Australioris Illustrationes Monographicae* 429. 1841, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 403. 1889, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2: 227. 1899 and *Hooker's Icones Plantarum* 31: t. 3100. 1922.

in English: prickly brack grass

in South Africa: brakkweek, steekgras, steekriet

in German: brackquecke

Oedipachne Link = *Eriochloa* Kunth

From the Greek *oidipous* “the swollen-footed,” *oideo* and *pous*, and *achne* “chaff, glume.”

Panicoideae, Paniceae, Melinidinae, see *Systema Naturae*, *Editio Decima* 872. 1759, *Hortus Regius Botanicus Bero-linensis* 1: 51. 1827 and *Kurtziana* 2: 95-106. 1965, *Contributions from the United States National Herbarium* 46: 233-239, 298. 2003.

Oedogocalamus Z.P. Wang & G.H. Ye ex Wen
= *Oligostachyum* Z.P. Wang & G.H. Ye

From the Greek *oideo*, *oidao* “swell, become swollen,” *oidema*, *oidematos* “swelling, tumour” and *kalamos* “reed.”

Bambuseae, Arundinariinae, see T.H. Wen, “New Taxa of Bambusoideae in China.” *Journal of Bamboo Research* 3(2): 23-47, f. 1-10. 1984, *Contributions from the United States National Herbarium* 39: 18-24. 2000.

Oedogonatus Z.P. Wang & G.H. Ye ex Wen
= *Oligostachyum* Z.P. Wang & G.H. Ye

From the Greek *oideo*, *oidao* “swell, become swollen,” *oidema*, *oidematos* “swelling, tumour.”

Bambuseae, Arundinariinae, see T.H. Wen, “New Taxa of Bambusoideae in China.” *Journal of Bamboo Research* 3(2): 23-47, f. 1-10. 1984, *Contributions from the United States National Herbarium* 39: 18-24. 2000.

Oligostachyum Z.P. Wang & G.H. Ye =
Arundinaria Michx., *Clavinodum* Wen,
Oedogocalamus Z.P. Wang & G.H. Ye ex Wen,
Oedogonatus Z.P. Wang & G.H. Ye ex Wen

From the Greek *oligos* “few, little” and *stachys* “a spike,” few spikelets on the rachis.

A genus of 14-18 species, China. Bambusoideae, Bambuseae, Arundinariinae, rhizomes monopodial or sympodial, culms erect, 3 branches at each node, sheath caducous and coriaceous or chartaceous, sheath auricles present or absent, leaves bandlike lanceolate, inflorescences racemose, 3 stamens, 3 stigmas, type *Oligostachyum sulcatum* Z.P. Wang & G.H. Ye, see *Flora Boreali-Americana* 1: 73-74. 1803 and *J. Nanjing Univ. Nat. Sci.* 1: 95-101. 1982, T.H. Wen, “New Taxa of Bambusoideae in China.” *Journal of Bamboo Research* 3(2): 23-47, f. 1-10. 1984, *J. Nanjing Univ. Nat. Sci.* 24(1): 163-166. 1988, *Kew Bulletin* 44(2): 349-367. 1989, *Contributions from the United States National Herbarium* 39: 18-24. 2000.

Species

O. bilobum W.T. Lin & Z.J. Feng

China. See *Journal of Bamboo Research* 13(2): 23-25, f. 7. 1994.

O. fujianense Z.P. Wang & G.H. Ye (*Oligostachyum scabriflorum* var. *scabriflorum*)

China. See *J. Bamboo Res.* 1(2): 144, 154, f. 9. 1982, *Journal Nanjing University. Natural Sciences Edition* 1: 97-98, 101, f. 1. 1982

O. glabrescens (Wen) P.C. Keng & Z.P. Wang (*Sinobambusa glabrescens* Wen)

China, Fujian. Young culm pruinose, three branches on each node, sheath auricles absent or weak, sheath ligule arcuate shortly pubescent, sheath blade narrow, leaves lanceolate finely pubescent beneath, see *Journal of Bamboo Research* 1(2): 20, 144, 154, f. 9. 1982, *J. Nanjing Univ. Nat. Sci.* 24(1): 163-166. 1988, *Journal Nanjing University. Natural Sciences Edition* 26(3): 488. 1990.

O. gracilipes (McClure) G.H. Ye & Z.P. Wang (*Arundinaria gracilipes* (McClure) C.D. Chu & C.S. Chao; *Semiarundinaria gracilipes* McClure)

China, Hainan. Internode swollen, purple, young culm white pubescent, sheath shedding late, cilia absent, ligule top truncate, sheath blade erect linear-lanceolate, leaves ovate-lanceolate, see *Lingnan University Science Bulletin* 9: 47. 1940, *Journal of Nanjing Technological College of Forest Products* 1980(3): 26. 1980, *Journal Nanjing University. Natural Sciences Edition* 26(3): 488. 1990, *J. Bamboo Res.* 13(1): 9. 1994.

O. hupehense (J.L. Lu) Z.P. Wang & G.H. Ye (*Arundinaria hupehensis* (J.L. Lu) C.S. Chao & G.Y. Yang; *Oligostachyum hupehensis* (J.L. Lu) Z.P. Wang & G.H. Ye; *Pleioblastus hupehensis* J.L. Lu)

China, Hubei. Young culm purplish green, 3 branches at each node, a pruinose ring below the node, green tough sheath shorter than internode, sheath auricles and cilia absent, sheath ligule arcuate, leaves lanceolate, see *J. Henan Agric. Coll.* 1981(2): 73, f. 5. 1981, *Journal Nanjing University. Natural Sciences Edition* 24(1): 164. 1988, *Journal of Bamboo Research* 13(1): 8. 1994.

O. lanceolatum G.H. Ye & Z.P. Wang

China, Zhejiang. Young culm purplish green, 3 branches at each node, sheath caducous dark green, sheath ligule purple with wavy margin, sheath blade lanceolate dark green, 2-3 leaves on each twig, leaves oblong-lanceolate to lanceolate, see *Journal Nanjing University. Natural Sciences Edition* 24(1): 163, f. 1. 1988.

O. lubricum (Wen) P.C. Keng (*Arundinaria lubrica* (Wen) C.S. Chao & G.Y. Yang; *Semiarundinaria lubrica* Wen)

China, Zhejiang, Jiangxi, Fujian. Young culm glabrous, not pruinose, internode semicylindrical to flat, sheath green, 3

branches on each node, sheath auricles purple ovate, sheath ligule purple, sheath blade green broad-lanceolate, 3-4 leaves on each twig, leaves lanceolate, edible shoot, see *Journal of Bamboo Research* 2(1): 64, f. 17. 1983, *Journal Nanjing University. Natural Sciences Edition* 22(3): 415. 1986, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *J. Bamboo Res.* 13(1): 14. 1994.

O. nuspiculum (McClure) Z.P. Wang & G.H. Ye (*Arundinaria lima* (McClure) C.D. Chu & C.S. Chao; *Arundinaria nuspicula* (McClure) C.D. Chu & C.S. Chao; *Semiarundinaria lima* McClure; *Semiarundinaria nuspicula* McClure)

China, Hainan. Nodding spikelets, joint swollen, internode cylindrical, slender branches, see *Lingnan University Science Bulletin* 9: 50. 1940, *Acta Phytotaxonomica Sinica* 18(1): 25, 29. 1980, *Journal Nanjing University. Natural Sciences Edition* 1: 95-101. 1982.

O. oedogonatum (Z.P. Wang & G.H. Ye) Q.F. Zheng & K.F. Huang (*Arundinaria oedogonata* (Z.P. Wang & G.H. Ye) H.Y. Zou; *Clavinodum oedogonatum* (Z.P. Wang & G.H. Ye) T.H. Wen; *Pleioblastus oedogonatus* Z.P. Wang & G.H. Ye)

China, Fujian, Jiangxi. Grayish green to dark green pruinose, culm joint swollen, 3-5 or more branches on each node, sheath coriaceous to papery, small auricles falciform and deciduous, sheath ligule arching, sheath blade lanceolate, cultivated, ornamental, see *Journal Nanjing University. Natural Sciences Edition* 1: 91-108, f. 1-7. 1981, *Wuyi Science Journal* 2: 93. 1982 [also *Wuyi shan keji tongxun*], *Journal of Bamboo Research* 3(2): 25, f. 1. 1984, *Journal of Bamboo Research* 13(1): 11. 1994.

in China: zhongjie zhu

O. paniculatum G.H. Ye & Z.P. Wang

China. See *Journal Nanjing University. Natural Sciences Edition* 26(3): 485. 1990

O. puberulum (Wen) G.H. Ye & Z.P. Wang (*Sinobambusa puberula* Wen)

China, Guangxi. Internode silky with longitudinal stripes, 3-5 branches on each node, 2-3 leaves on each twig, small tough lanceolate leaves pubescent beneath, see *Journal of Bamboo Research* 2(1): 58, f. 11. 1983, *Journal Nanjing University. Natural Sciences Edition* 26(3): 486. 1990.

O. pulchellum (Wen) G.H. Ye & Z.P. Wang (*Sinobambusa pulchella* Wen)

China, Guangdong. Young culm pubescent with longitudinal veins, usually three branches on each node, sheath auricles spreading and ciliate, sheath ligule truncate glabrous, sheath blade narrow-lanceolate and deciduous, 2-4 leaves on each twig, leaves broadly lanceolate finely pubescent beneath, see *Journal of Bamboo Research* 1(2): 16, 150, f. 6. 1982, *Journal Nanjing University. Natural Sciences Edition* 26(3): 486. 1990.

O. scabriflorum (McClure) Z.P. Wang & G.H. Ye (*Arundinaria maculosa* C.D. Chu & C.S. Chao; *Arundinaria scabriflora* (McClure) C.D. Chu & C.S. Chao; *Semiarundinaria scabriflora* McClure)

China, Guangxi, Guangdong, Fujian. Young culm dark green with small purple spots, 3 branches on each node, glabrous, sheath greenish, no sheath auricles and cilia, sheath blade green or greenish, leaves narrow-lanceolate, cultivated, see *Lingnan University Science Bulletin* 9: 52. 1940, *Journal of Nanjing Technological College of Forest Products* 1980(3): 26. 1980, *Acta Phytotaxonomica Sinica* 18(1): 29. 1980, *Journal of Bamboo Research* 1: 30. 1981, *Journal of Nanjing Technological College of Forest Products* 1981(3): 34, f. 2. 1981, *Journal Nanjing University. Natural Sciences Edition* 1: 98, f. 1. 1982, *Journal of Bamboo Research* 13(1): 7. 1994.

in China: beiyan zhu

O. scabriflorum (McClure) Z.P. Wang & G.H. Ye var. ***breviligulatum*** Z.P. Wang & G.H. Ye (*Arundinaria maculosa* C.D. Chu & C.S. Chao; *Arundinaria maculosa* var. *breviligulata* (Z.P. Wang & G.H. Ye) C.S. Chao & G.Y. Yang)

China, Guangdong. Sheath ligule short arcuate or truncate, leaf ligule pubescent, see *Journal of Nanjing Technological College of Forest Products* 1981(3): 34, f. 2. 1981, *Journal Nanjing University. Natural Sciences Edition* 24(1): 164. 1988, *Journal of Bamboo Research* 13(1): 10. 1994.

O. scabriflorum (McClure) Z.P. Wang & G.H. Ye var. ***scabriflorum*** (*Arundinaria maculata* Z.D. Zhu & C.S. Chao, nom. illeg., non *Arundinaria maculata* Hack.; *Arundinaria scabriflora* (McClure) C.D. Chu & C.S. Chao; *Oligostachyum fujianense* Z.P. Wang & G.H. Ye; *Semiarundinaria scabriflora* McClure)

China. See *Lingnan University Science Bulletin* 9: 52. 1940, *Acta Phytotaxonomica Sinica* 18(1): 29. 1980, *Journal of Nanjing Technological College of Forest Products* 1981(3): 33, f. 1. 1981, *Journal Nanjing University. Natural Sciences Edition* 1: 97-98, f. 1. 1982.

O. scopulum (McClure) Z.P. Wang & G.H. Ye (*Arundinaria scopula* (McClure) C.D. Chu & C.S. Chao; *Semiarundinaria scopula* McClure) (a little broom, from the Latin *scopa*, ae "twigs, shoots, a broom, thin branches," referring to the exerted palea)

China. Ciliate palea, found along riverbanks and streams, see *Lingnan University Science Bulletin* 9: 53. 1940, *Journal of Nanjing Technological College of Forest Products* 1980(3): 26. 1980, *Journal Nanjing University. Natural Sciences Edition* 1: 98. 1982.

O. shiuyingianum (L.C. Chia & But) G.H. Ye & Z.P. Wang (*Arundinaria shiuyingiana* Chia & But)

China, Hong Kong. Young culm purplish, back of sheath glabrous or sparsely silky, tiny sheath auricles elliptic to

oblong, sheath ligule truncate, sheath blade erect ovate lanceolate to lanceolate, leaves linear-lanceolate, ornamental, see *Kew Bulletin* 37(4): 591, f. 1. 1983, *Hong Kong Bamboos* 27. 1985, *Journal of Nanjing University, Natural Sciences Edition* 26(3): 486. 1990.

in China: shiu-ying zhu

O. spongiosum (C.D. Chu & C.S. Chao) G.H. Ye & Z.P. Wang (*Arundinaria spongiosa* C.D. Chu & C.S. Chao; *Clavinodum globinodum* (C.H. Hu) P.C. Keng; *Clavinodum globinodum* (C.H. Hu) Keng f. & T.H. Wen; *Pleioblastus altiligulatus* var. *spongiosus* B.M. Yang; *Pleioblastus globinodus* C.H. Hu; *Sinobambusa dushanensis* (C.D. Chu & J.Q. Zhang) T.H. Wen)

China, Guangxi. Young culm pruinose, 3 branches on each node, culm sheath reddish orange and silky, sheath auricles and cilia undeveloped, sheath ligule very short, sheath blade narrow-lanceolate or broadly lanceolate, used for handicrafts, see *Journal of Nanjing Technological College of Forest Products* 1980(3): 26. 1980, *Journal of Nanjing Technological College of Forest Products* 1981(3): 33, f. 1. 1981, *Bamboo Research in Asia* 1982(1): 1, t. 1. 1982, *Journal of Nanjing University, Natural Sciences Edition* 1982(3): 733-738. 1982, *Acta Phytotaxonomica Sinica* 21(4): 407, f. 3. 1983, *Journal of Bamboo Research* 3(2): 26. 1984, *Journal of the Henan Science and Technology University* 1(1): 113. 1985, *Journal of Bamboo Research* 6(3): 29-34, f. 1-2. 1987, *Journal of Bamboo Research* 13(1): 8. 1994, *Flora Reipublicae Popularis Sinicae* 9(1): 575-576. 1996.

in China: qiujie zhongjie zhu

O. sulcatum Z.P. Wang & G.H. Ye (*Arundinaria sulcata* (Z.P. Wang & G.H. Ye) C.S. Chao & G.Y. Yang; *Sinobambusa parvifolia* T.H. Wen & S.Y. Chen)

China. Type species, culms glabrous, vagina coriaceous and densely strigose, see *Journal Nanjing University, Natural Sciences Edition* 1982(1): 95-101, f. 1-2. 1982, *Journal of Bamboo Research* 6(3): 31, t. 2. 1987, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Journal of Zhejiang Forestry College* 8(1): 127-130. 1991, *Journal of Bamboo Research* 13(1): 10. 1994, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

O. wuyishanicum S.S. You & K.F. Huang (*Arundinaria wuyishanica* (S.S. You & K.F. Huang) C.S. Chao & G.Y. Yang)

China. See *Journal of Bamboo Research* 11(4): 8-9, f. 1. 1992, *Journal of Bamboo Research* 13(1): 11. 1994.

O. xiaohuangku Y. Zhang & X.L. Ding

China. See *Journal of Bamboo Research* 15(3): 18, 22. 1996.

Olmeca Soderstr.

The Olmec people lived in hot, humid lowlands along the Gulf Coast in what is now southern Veracruz and Tabasco states in southern Mexico; the Olmec domain extends from the Tuxtlas mountains in the west to the lowlands of the Chontalpa in the east; the first elaborate pre-Columbian culture of Mesoamerica.

Two species, Mexico. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Guaduiniae, perennial, erect and lax, sympodial, rhizomatous, unarmed, tree-like or arborescent, persistent, solid, thick-walled, woody, unicaspitose, stems solitary, branched, culms sheaths often with irritating hairs, elongated neck, rhizomes pachymorph, flowering culms leafy, plants bisexual, inflorescence a panicle, spikelets pedicellate, 2 glumes unequal, palea present, 3 free and membranous lodicules, 3 stamens, ovary glabrous, 2-3 stigmas, fleshy fruits, tropical rain forest, understory, wet slopes, evergreen forest, along roadsides, primary forest, related to *Aulonemia* Goudot, type *Olmeca reflexa* Soderstr., see T.R. Soderstrom, "Olmeca, a new genus of Mexican bamboos with fleshy fruits." *American Journal of Botany* 68(10): 1361-1373. 1981, T.R. Soderstrom, "Validation of the generic name *Olmeca* and its two species (Poaceae: Bambusoideae)." *Phytologia* 51(2): 161. 1982, Carmen Aguilera, *Flora y fauna Mexicana. Mitología y tradiciones*. 137-138. Editorial Everest Mexicana México s.d.[1985], X. Londoño and P.M. Peterson, "*Guadua sarcocarpa* (Poaceae: Bambuseae), a new species of Amazonian bamboo with fleshy fruits." *Systematic Botany* 16(4): 630-638, f. 1-3. 1991, *Flora Mesoamericana* 6: 196-197. 1994, *American Bamboos* 247-250. 1999, *Contributions from the United States National Herbarium* 39: 82. 2000.

Species

O. recta Soderstr.

Mexico. Erect below and lax above, rhizome pachymorph, see *American Journal of Botany* 68(10): 1365. 1981, *Phytologia* 51(2): 161. 1982.

O. reflexa Soderstr.

Mexico. Erect and lax, rhizome pachymorph, primary forest, montane rain forest, see *American Journal of Botany* 68(10): 1369. 1981, *Phytologia* 51(2): 161. 1982.

Olyra L. = *Lepturopsis* Steud., *Mapira* Adans.

From the Greek *olyra* "rice wheat," Theophrastus (*HP*. 8.9.2) and Dioscorides, Latin *olyra*, *ae* applied by Plinius to a kind of grain, called also *arinca*, which resembles spelt.

About 22-24 species, tropical America, Africa. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, woody to subwoody, some species completely herbaceous, slender, erect, branched, persistent,

caespitose, twining, scrambling, climbing, clambering, more or less scandent, leaning, creeping rootstock, leaf blades lanceolate with short pseudopetiole, leaves on the main stem as well as branches, ligule membrane-like fringed or unfringed, auricles present or absent, plants monoecious, open or contracted inflorescence paniculate with separate male and female spikelets, female spikelets terminal, male spikelets basal and usually shorter than the females, fertile spikelets unisexual, floret indurated, two glumes very unequal, male spikelets without glumes, palea present, 3 free and membranous lodicules, no stamens, ovary glabrous, 2 stigmas, shade species, in forest, wet tropical forests, lowland forests, rain forest, pathsides, swamp forest, upland forest, forest margins, moist forest, formerly related to *Panicum*, type *Olyra latifolia* L., see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Familles des Plantes* 2: 39, 574. 1763, *Essai d'une Nouvelle Agrostographie* 135, 166, 168, t. 24, f. 2. 1812, *Conspectus Regni Vegetabilis* 50. 1828, *Flora Brasiliensis* 2(2): 315, 327, 328. 1877 and *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Blumea, Supplement* 3: 62. 1946, *American Journal of Botany* 70(5, part 2): 129-130. 1983, *African Studies Monographs* 3: 109-130. 1983, *Brittonia* 37: 22-35. 1985, *Revista de Ciencias (San Marcos)* 74: 48-57. 1986, T.R. Soderstrom and F.O. Zuloaga, "A revision of the genus *Olyra* and the new segregate genus *Parodiolyra* (Poaceae: Bambusoideae: Olyreae)." *Smithsonian Contributions to Botany* 69: 1-79. 1989, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, E.J. Judziewicz and F.O. Zuloaga, "*Olyra davidseana* (Poaceae: Bambusoideae: Olyreae), a new species from Brazil." *Systematic Botany* 17(1): 25-28. 1992, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992, *Ruizia* 13: 1-480. 1993, *Novon* 3(3): 306-307, f. 1. 1993, *Flora Mesoamericana* 6: 210-212. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *American Bamboos* 287-293. 1999, *Contributions from the United States National Herbarium* 39: 68, 71, 82-88. 2000, *African Journal of Ecology* vol. 42, issue s1: 48-50. Aug 2004.

Species

O. sp.

in Ecuador: gramalote

in Peru: "insun chëxëti ro"

O. amapana Soderstr. & Zuloaga

Brazil, Amapá. Moist forests, see *Smithsonian Contributions to Botany* 69: 5, f. 1-2, 15. 1989.

O. buchtienii Hackel

Bolivia. See *Repertorium Specierum Novarum Regni Vegetabilis* 11: 20. 1912, *Contributions from the U.S. National Herbarium* 24(8): 291-556. 1927, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Smithsonian Contributions to Botany* 69: 8. 1989.

O. caudata Trinius (*Olyra dimidiata* Hochst. ex Steud.; *Olyra pittieri* Hack.; *Olyra speciosa* Mez)

South America. Perennial, rhizomatous, inflorescence erect, growing in clumps, in forests, undergrowth, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Linnaea* 10(3): 292. 1836, *Synopsis Plantarum Glumacearum* 1: 36. 1853 and *Österreichische Botanische Zeitschrift* 51: 461. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 7. 1921, *Smithsonian Contributions to Botany* 69: 10. 1989.

in Peru: shashap

O. ciliatifolia Raddi (*Olyra cuneatifolia* Desv.)

South America, Guyana to Argentina. Disturbed areas, see *Agrostografia Brasiliensis sive enumeratio plantarum ad familias naturales graminum et ciperoidarum spectantium, quas in Brasilia ...* 19. Lucca [1823], *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 210. 1831, *Flora Brasiliensis* 2(2B): 34-342, t. 12-49. 1877 and *Smithsonian Contributions to Botany* 69: 12. 1989, *Edinburgh Journal of Botany* 48: 73-80. 1991.

in Spanish: taquarilla

O. davidseana Judz. & Zuloaga (dedicated to Gerrit Davidge)

Brazil. In lowland forests, moist sites, see *Systematic Botany* 17(1): 25, 27, f. 1. 1992.

O. ecaudata Döll

Central and South America. Wet places, in forests, see *Flora Brasiliensis* 2(2): 326. 1877 and *Smithsonian Contributions to Botany* 69: 14, f. 8a-b. 1989.

O. fasciculata Trinius (*Olyra heliconia* Lindman)

Argentina, Peru, Panama, Bolivia and southern Brazil. Forests, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 113. 1834 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 11, t. 6. 1900, *Smithsonian Contributions to Botany* 69: 17, f. 8c, g. 1989, *Annals of the Missouri Botanical Garden* 77(1): 165. 1990.

in Peru: pinguil shucush

in Spanish: taquarilla, tacuarilla

O. filiformis Trin.

Brazil. Annual or perennial, forests, edges of forests, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 115. 1834 and *Smithsonian Contributions to Botany* 69: 19, f. 17a-b. 1989.

O. glaberrima Raddi (*Olyra corcovadensis* Wawra; *Olyra glaberrima* var. *glaberrima*; *Olyra obliqua* Desv.; *Olyra semiovata* Trin.; *Olyra semiovata* var. *pubescens* Hack.;

Olyra semiovata var. *pubiflora* Hack.; *Olyra semiovata* var. *semiovata*; *Olyra yucatana* Chase)

South America, Guatemala, Belize, Mexico, eastern Brazil. Moist forests, see *Agrostografia Brasiliensis* sive enumeratio plantarum ad familias naturales graminum et ciperoidarum spectantium, quas in Brasilia ... 19. Lucca [1823], *De Graminibus Paniceis* ... 249. Petropoli 1826, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 210. 1831, Heinrich Ritter Wawra von Fernsee (Ritter von Fernsee) (1831-1887), *Botanische Ergebnisse der Reise seiner Majestät des Kaisers von Mexico Maximilian I. nach Brasilien* (1859-1860). 180, t. 95. Wien 1866 and *Bulletin de l'Herbier Boissier* 4(3): 276. 1904, *Proceedings of the Biological Society of Washington* 21: 178. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 8(157-159): 46. 1910, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 28. 1912, *Smithsonian Contributions to Botany* 69: 20, f. 30e-f. 1989.

O. holttumiana Soderstr. & Zuloaga (after the British botanist Richard Eric Holttum, 1895-1990, traveler and botanical explorer; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 197. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 180. 1972; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 351. London 1994) Panama. Arching, see *Kew Bulletin* 41(3): 722. 1986.

O. humilis Nees (*Olyra glaberrima* var. *humilis* (Nees) Mez; *Olyra glaberrima* var. *humilis* (Nees) Mez ex Ekman; *Olyra humilis* var. *angustifolia* Döll; *Olyra humilis* var. *humilis*; *Olyra humilis* var. *latifolia* Döll; *Olyra semiovata* var. *humilis* (Nees) Hack.)

South America, Brazil to northern Argentina. See *Agrostografia Brasiliensis* 19. 1823, *De Graminibus Paniceis* 249. 1826, *Agrostologia Brasiliensis* 2: 304. 1829 (or *Flora Brasiliensis seu Enumeratio Plantarum in Brasilia* ... Stuttgartiae et Tubingae 1829-1833), *Fl. Bras.* 2(2): 321. 1877 and *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79(1): 76. 1908, Richard von Wettstein and Victor Schiffner, *Ergebnisse der botanischen Expedition der kaiserlichen Akademie der Wissenschaften nach Südbrasilien 1901*. 3 volumes. Vienna, Alfred Hölder 1908-1931, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 28. 1912, *Smithsonian Contributions to Botany* 69: 24. 1989.

in Brazil: bambu-fraço

O. juruana Mez

Brazil, Peru. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7(63): 45. 1917, *Smithsonian Contributions to Botany* 69: 26. 1989.

O. latifolia L. (*Olyra arundinacea* Kunth; *Olyra brasiliensis* Desv.; *Olyra brevifolia* Schumach.; *Olyra cordifolia*

Kunth; *Olyra cordifolia* var. *cordifolia*; *Olyra cordifolia* var. *scabriuscula* Döll; *Olyra latifolia* var. *arundinacea* (Kunth) Griseb.; *Olyra latifolia* var. *glabriuscula* Döll; *Olyra latifolia* var. *latifolia*; *Olyra latifolia* var. *pubescens* (Raddi) Döll; *Olyra latifolia* var. *scabriuscula* Döll; *Olyra latifolia* var. *vestita* Henrard; *Olyra media* Desv.; *Olyra paniculata* Sw.; *Olyra pubescens* Raddi; *Olyra pubescens* var. *glabra* Raddi ex Nees; *Olyra scabra* Nees; *Olyra surinamensis* Hochst. ex Steud.; *Stipa latifolia* (L.) Raspail)

Tropical America, Africa, Madagascar. Perennial, canelike, thin, herbaceous or woody, erect or more or less scandent, decumbent, straggling, leaning, scrambler, clambering, shortly rhizomatous, leaves lanceolate, inflorescence paniculate to narrowly paniculate, rather compact panicle, female spikelets on stout pedicels, shedding the spikelet entire, white grain, weedy species, medicinal value, grains and pith eaten by chimpanzees, common in forests, path sides, shade, gallery forest, wet areas, forest margins, clearings, forest edge, along trails, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Nova Genera et Species Plantarum seu Prodrum* ... 21. 1788, *Nov. Gen. Sp.* 1: 197-198. 1816, *Agrostografia Brasiliensis* 18. 1823, *Annales des Sciences Naturelles, Botanique* 5: 449. 1825, *Beskrivelse af Guineiske Planter som ere fundne af Danske Botanikere isaer af Etatsraad Thonning*. 402. [Copenhagen 1828-29], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 306, 307. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 210. 1831, *Synopsis Plantarum Glumacearum* 1: 36. 1853, *Flora of the British West Indian Islands*. 535. London [1859-]1864, *Fl. Bras.* 2(2): 316-317. 1877 and *Contr. U.S. Natl. Herb.* 12: 124, 132. 1908, *Flora of Suriname* 1(1): 321. 1943, *Brittonia* 23(3): 293-324. 1971, *Darwiniana* 26: 7-14. 1985, *Darwiniana* 29: 41-45. 1989, *Smithsonian Contributions to Botany* 69: 27, 29. 1989.

in Ecuador: gramalote.

in Mexico: carrizo, carrizo verde

in Nicaragua: sagádi, walang

in Peru: carrizo, carricillo

in Ghana: adodubedsi, doroben, ododoben, ododobeng, odoroben

in Guinea-Bissau: quefe sufo, quene sufo, sulu quemon

in Ivory Coast: donienié, doniénié, dorobene, dorobéné, droubani, drubani, fefé, fimou, fimu, poé, zanfé

in Liberia: pinni

in Nigeria: ami, ami milo, ami olo, amj, amy

in Senegal: fu renum, ka tira, kisan diabudiof

in Sierra Leone: bongi, efeta, esulerokant, esuto, felife, ffelife, fonio, onfine, fufine, kasota, kasta, kokiale, koli koli, kotopi, kotopo, kotopoi, kotopovo, ntote, pobi, pongi, povi, povi hina, povo hina, sanbala, suliai, tamadikhe khonbei na, tute

in Upper Volta: donienié, doniénié, dorobene, dorobéné, droubani, drubani, fefé, fimou, fimu, poé, zanfé

in Yoruba: ofa etu, fodun, eto igbo pe laye

O. latispicula Soderstr. & Zuloaga

Brazil. Shortly rhizomatous, lowland forest, moist forest, see *Smithsonian Contributions to Botany* 69: 35, f. 11, 17c, 18-20. 1989.

O. longifolia Kunth (*Olyra kegelii* Mez; *Olyra longifolia* var. *grandifolia* Döll; *Olyra longifolia* var. *longifolia*; *Olyra longifolia* var. *parvifolia* Döll; *Olyra surinamensis* Hochst. ex Steudel) (dedicated to the German gardener Hermann Aribert Heinrich Kegel, 1819-1856, from 1844 to 1846 plant collector in Suriname. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 277. 1965; August Adriaan Pulle (1878-1955), *An Enumeration of the Vascular Plants Known from Surinam*. Leiden 1906)

Brazil, Colombia, Bolivia. In rainforests, swampy places, see *Nova Genera et Species Plantarum* 1: 198. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 36. 1855 [1853], *Flora Brasiliensis* 2(2): 325. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 6. 1921.

in Brazil: taboquinha

O. loretensis Mez

Brazil, Peru, Colombia. Shade, rainforest, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7(63): 47. 1917, *Smithsonian Contributions to Botany* 69: 43, f. 24. 1989.

O. maranonensis Swallen

Peru, Amazonas, Río Marañón. Rainforest, see *Phytologia* 14(2): 86. 1966.

O. micrantha Kunth (*Olyra d'urvillei* Döll; *Olyra hirsuta* Trin.; *Olyra hirsuta* var. *densior* Trinius ex Nees; *Olyra micrantha* f. *latifolia* Döll; *Olyra micrantha* var. *decalvata* Döll; *Olyra micrantha* var. *dioica* Döll, also spelled *dioeca*; *Olyra micrantha* var. *lanceolata* Döll; *Olyra micrantha* var. *micrantha*; *Olyra micrantha* var. *subvelutina* Döll; *Olyra scrobiculata* Schrad. ex Nees, also spelled *scorbiculata*; *Olyra urvillei* Steud.; *Olyra ventricosa* Nees; *Parodiolyra micrantha* (Kunth) Davidse & Zuloaga) (for the French traveler and explorer Jules Sébastien César Dumont d'Urville, 1790-1842, plant collector, a member of the Linnean Society and the Société de Géographie, he took part in the voyage of the *Coquille* (commanded by L.I. Duperrey), from 1825 commander of the *Astrolabe* (former *Coquille*); see J.H. Barnhart, *Biographical notes upon botanists*. 1: 480. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 109. Boston, Mass. 1972; R. Glenn, *The Botanical Explorers of New Zealand*. Wellington 1950; John Dunmore, *Who's Who in Pacific Navigation*. University of Hawaii Press, Honolulu 1991)

South America, Venezuela to Paraguay, Brazil. Climbing, weedy species, in moist places, lowlands, swamps, see *Nova Genera et Species Plantarum* 1: 199. 1815 [1816], *De Graminibus Paniceis ...* 250. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 303. 1829, *Synopsis Plantarum Glumacearum* 1: 36. 1853, *Flora Brasiliensis* 2(2): 323-324. 1877 and *Novon* 9(4): 590. 1999.

O. obliquifolia Steud.

Suriname, Brazil. See *Synopsis Plantarum Glumacearum* 1: 36. 1853 and *Smithsonian Contributions to Botany* 69: 52, f. 30a-b. 1989.

O. retrorsa Soderstr. & Zuloaga

Brazil. See *Smithsonian Contributions to Botany* 69: 54, f. 11, 31-32. 1989.

O. standleyi Hitchc. (named for Paul Carpenter Standley, 1884-1963)

Venezuela, Costa Rica, Panama. Arching, in moist forest, cloud forest, see *Proceedings of the Biological Society of Washington* 40: 86. 1927.

O. tamanquareana Soderstr. & Zuloaga

Amazonas, Brazil, Tamanquare Isl. Strongly rhizomatous, in clumps, growing in dense forest, see *Smithsonian Contributions to Botany* 69: 58, f. 11, 35. 1989.

O. taquara Swallen

Brazil. Swamp forest, see *Phytologia* 14(2): 86, f. 37. 1966.

O. wurdackii Swallen (after John J. Wurdack)

Venezuela, Brazil. See *Phytologia* 14(2): 85. 1966.

Omeiocalamus Keng f. = *Arundinaria* Michx.

From Mount Omei, Emei Shan (*mei* “devil” and *shan* “mount”), Sichuan (Szechwan) province, Central China and *kalamos* “reed.”

Bambusoideae, Bambuseae, Arundinariinae, type *Omeiocalamus fangianus* (A. Camus) Keng f., see *Flora Boreali-Americana* 1: 73-74. 1803 and *Journal of Bamboo Research* 2(1): 20. 1983, *Kew Bulletin* 44(2): 349-367. 1989, *Castanea* 62: 8-21. 1997, Z.-L. Li, “The Flora of China Bambusoideae project, problems and current understanding of bamboo taxonomy in China.” *The Bamboos* 5: 61-81. 1997.

Onoea Franch. & Sav. = *Diarrhena* P. Beauv.

Greek *onos* “a vessel”

Pooideae, Diarrheneae, see *Essai d'une Nouvelle Agrostographie* 142, 160, 162, t. 25, f. 2. 1812, *Genera et species plantarum*, quae aut novae sunt aut nondum recte cognoscuntur ... 34. Matriti [Madrid] 1816, Constantine Samuel

Rafinesque, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts*. 89: 104. (Aug) 1819, Kurt Polycarp Joachim Sprengel (1766-1833), *Systema Vegetabilium* Editio decima sexta 1: 123. Gottingae 1825, *Enumeratio plantarum in Japonia sponte crescentium*. 2(1): 178. Paris [1873-] 1875-1879 and *J. Fac. Sci. Tokyo Bot.* 3: 110. 1930, *Acta Phytotaxonomica et Geobotanica* 10: 134. 1941, E.D. Merrill, *Index rafinesquianus*. The plant names published by C.S. Rafinesque, etc. 75. 1949, *Taxon* 29: 652-653. 1980, *Journal of the Arnold Arboretum* 66: 188. 1985, *Bulletin of the Torrey Botanical Club* 118: 128-136. 1991, *Contributions from the United States National Herbarium* 48: 269. 2003.

Ophiochloa Filgueiras, Davidse & Zuloaga

From the Greek *ophis* "a snake, serpent" and *chloe*, *chloa* "grass," serpentine endemic grass.

One species, Brazil. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, herbaceous, erect, densely tufted, stiff, auricles absent, ligule a fringe of hairs, plants bisexual, inflorescence spicate or racemose, erect or drooping raceme, spikelets imbricate and sessile, 1 glume per spikelet, lower glume lacking, lower lemma narrow and ciliate, palea present, 2 free and fleshy lodicules, 2-3 stamens, ovary glabrous, 2 stigmas, type *Ophiochloa hydrolithica* Filg., Davidse & Zuloaga, see *Novon* 3(4): 360-366. 1993 [*Ophiochloa*, a new endemic serpentine grass genus (Poaceae: Paniceae) from the Brazilian cerrado vegetation], *Contributions from the United States National Herbarium* 46: 298. 2003.

Species

O. hydrolithica Filg., Davidse & Zuloaga

Brazil.

Ophismenus Poir.

See also *Oplismenus* P. Beauv., see *Encyclopédie Méthodique, Botanique*, Suppl. 4: 271. 1816.

Ophiurinella Desv. = *Stenotaphrum* Trin.

The diminutive of the genus *Ophiuros*.

Panicoideae, Paniceae, Setariinae, or Panicoideae, Panicodae, Paniceae, type *Ophiurinella micrantha* Desv., see *Fundamenta Agrostographiae* 175-176. 1820, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 179, t. 8, f. 4. 1831 and Jonathan Deininger Sauer (b. 1918), "Revision of *Stenotaphrum* (Gramineae: Paniceae) with attention to its historical geography." *Brittonia* 24(2): 202-222. 1972, *Flora of Tropical East Africa* 451-898. 1982, *Crop Science (Florida)* 22: 469-473. 1982, *Flora*

Mesoamericana 6: 364. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Contributions from the United States National Herbarium* 46: 608-609. 2003.

Ophiuros Gaertner f. = *Ophiurus* Gaertn., *Ophiurus* R. Br., *Rottboellia* L.f.

From the Greek *ophis* "a snake, serpent" and *oura* "tail," referring to the spikes; see Joseph Gaertner (1732-1791), *De fructibus et seminibus plantarum*. Stuttgart, Tübingen 1788.

About 4 species, northeastern tropical Africa, southern China, Australia. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, annual or perennial, base of the culm often swollen and bulbous, branched, caespitose, forming clumps, auricles absent, ligule a fringed membrane, leaves flat, plants bisexual, inflorescence spatheate of single fragile cylindrical pedunculated racemes, racemes symmetrical linear bearing single and sessile spikelets in 2 rows, pedicellate spikelet absent, spikelets with 2 florets, the lower floret male and the upper bisexual, the longer spikelets sterile and reduced to the adnate pedicel, 2 glumes more or less equal, lower glume oblong coriaceous and more or less winged, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, fodder, damp places, open plains, wet grassland, savannah, related to *Heteropholis*, type *Ophiuros corymbosus* (L.f.) C.F. Gaertn., see *Supplementum Plantarum* 13, 114. 1781 [1782], *Supplementum Carpologicae* 1(1): 3, t. 181, f. 3. 1805, *Prodromus Florae Novae Hollandiae* 1: 206. 1810, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887 and *Blumea* 45(2): 443-475. 2000.

Species

O. exaltatus (L.) O. Kuntze (*Aegilops exaltata* L.; *Hemarthria coromandelina* Steud.; *Ophiuros corymbosa* C.F. Gaertn.; *Ophiuros corymbosus* (L.f.) C.F. Gaertn.; *Ophiurus corymbosus* (L.f.) C.F. Gaertn.; *Ophiurus exaltatus* (L.) Kuntze; *Rottboellia cochinchinensis* (Lour.) Clayton; *Rottboellia corymbosa* L.f.; *Rottboellia exaltata* (L.) L.f.; *Stegosia cochinchinensis* Lour.)

Sri Lanka, India, China, Australia. Perennial, erect, leaf blades linear, leaf sheaths short and smooth, fodder grass, eaten by cattle when young and green, used for thatching, see *Mantissa Plantarum* 575. 1771, *Nova Graminum Genera* 22. 1779, *Supplementum Plantarum* 114. 1781, *Flora Cochinchinensis* 51. 1790, *Synopsis Plantarum Glumacearum* 1: 358. 1854, *Revisio Generum Plantarum* 2: 780. 1891 and *Kew Bulletin* 35(4): 817. 1981, *Blumea* 45(2): 469. 2000.

in India: bara swati, barsali, bhursali, chotoe, gunit, hutia, kinangu pillu, konda panuku, pedda panookoo, pedda panuku, pedda panuku gaddi, sontha, sonthe, sothu alagu pillu

in the Philippines: girum, talangiu

in Thailand: yaa khayong, ya khayong, yaa ko, ya ko, ya prong khai, yaa prong khaai

O. megaphyllus Stapf ex Haines

India, Darjeeling. Leafy, stout, swollen at the base, leaves oblong with ciliate margins, racemes curved, eaten by cattle when young and green, used for thatching, marshy places, see *The Botany of Bihar and Orissa* 5: 1058. 1921-1925.

in Thailand: yaa khaao phot, ya khaao phot phi

O. papillosus Hochst. (*Ophiuros aethiopicus* Rupr. ex Steud.)

East Sudan, Ethiopia. Annual, erect, much-branched, robust, stout, leaf blades and sheaths coarsely hispid, inflorescence paniculate, a compound panicle, racemes cylindrical and straight, lower glume of sessile spikelet grooved and pitted, fodder, a troublesome weed, see *Flora* 27(16): 248. 1844, *Synopsis Plantarum Glumacearum* 1: 360. 1854.

Ophiurus R. Br.

Orthographic variant of *Ophiuros* Gaertner; see Robert Brown, *Prodromus florum Novae Hollandiae*. 206. London 1810.

Opizia Presl = *Bouteloua* Lag., *Casiostega* Galeotti

Dedicated to Philipp (Filip, Philip) Maximilian Opiz, 1787-1858, Czech botanist. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 31. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 294. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 219. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 3: 839-841. 1981; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

One species, North America, southern Mexico, Cuba, the Caribbean. Chloridoideae, Cynodonteae, Boutelouinae, perennial, herbaceous, stoloniferous, auricles absent, leaf blades acuminate, ligule a membrane-like, plants dioecious, inflorescence spicate, raceme rachis persistent, spikelets deciduous and subtended by solitary bristles, one-floreted, without hermaphrodite florets, male spikelets with glumes, 2 glumes very unequal, palea present, 2 free and fleshy lodicules, no stamens, ovary glabrous, 2 stigmas, open habitats, shallow soils, dry hillsides, type *Opizia stolonifera* J. Presl, see *Varietades de Ciencias, Literatura y Artes*

2(4,21): 134, 141. 1805, *Gen. Sp. Nov.* 5. 1816, *Reliquiae Haenkeanae* 1(4-5): 293, t. 41, f. 1-11. 1830, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9: 232. 1842, *Botanical Gazette* 21: 137. 1896, *Circular, Division of Agrostology, United States Department of Agriculture* 15: 6-7. 1899 and *Genera Graminum* 249. 1986 *Flora Mesoamericana* 6: 295-296. 1994, *Contributions from the United States National Herbarium* 41: 20-33, 38, 176. 2001.

Species

O. stolonifera J. Presl (*Bouteloua dimorpha* Columbus)

Mexico. Perennial, sward-forming, ligule membranous, female inflorescence of racemes enclosed by uppermost leaf-sheath, fodder, ornamental, see *Reliquiae Haenkeanae* 1(4-5): 293, t. 41, f. 1-11. 1830 and *Aliso* 18(1): 63. 1999. in Mexico: hayal-suuk, pasto de conejo, sabana

Oplismenopsis Parodi

Resembling the genus *Oplismenus*.

One species, southern America. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, aquatic, herbaceous, spongy, rhizomatous, auricles absent, leaf blades cordate, ligule a fringed membrane, plants bisexual, open inflorescence spicate or paniculate, loose racemes, spikelets pedicellate, two glumes unequal, lower lemma acuminate to shortly awned, upper lemma awnless, palea present 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, pampas, coastal woodlands, in water, similar to *Echinochloa*, type *Oplismenopsis najada* (Hack. & Arechav.) Parodi, see *Histoire des plantes de la Guiane Française* 1: 83-84, t. 32. 1775 and *Notas del Museo de la Plata, Botánica* 2: 2, 4, f. 1. 1937, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Contributions from the United States National Herbarium* 46: 298-299. 2003.

Species

O. najada (Hack. & Arechav.) Parodi (*Echinochloa najada* (Hack. & Arechav.) Parodi; *Panicum amadryadum* Arechav. ex Hicken; *Panicum najadum* Hack. & Arechav.)

Argentina, Uruguay. Floating, leaf blades lanceolate to narrowly ovate, open racemes, spikelets borne singly, lower glume awned, upper lemma coriaceous, see *Anales del Museo Nacional de Montevideo* 1: 125, t. 7bis, 8. 1894 and *Chloris Platensis Argentina* 30. 1910, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 75. 1925, *Notas del Museo de la Plata, Botánica* 2(Bot. 11): 4, f. 1. 1937, Aliscioni et al., "A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae." *Am. J. Bot.* 90: 796-821. 2003.

Oplismenus P. Beauv. = *Hekaterosachne* Steud., *Hippagrostis* Kuntze, *Hoplismenus* Hassk., *Orthopogon* R. Br.

From the Greek *hoplismos*, *hoplisis* “a weapon, equipment for war, arming,” referring to the awned spikelets; see Ambroise Palisot de Beauvois (1752-1820), *Flore d'Oware et de Benin en Afrique*. 2: 14. Paris 1810.

About 5-10 species, mostly tropics and subtropics. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Panicinae, or Setariinae, annual or perennial, herbaceous, weak, branched, trailing, creeping, stoloniferous, decumbent and rooting from nodes, stems leafy and flimsy, mat-forming, hairy nodes, solid or hollow internodes, auricles absent, ligule a membranous hairy rim, short leaves broadly lanceolate or linear to ovate, plants bisexual, inflorescence terminal with several spicate and short racemes, solitary or paired spikelets lanceolate and secund, florets 2, upper floret bisexual, lower floret sterile or male and often reduced to a lemma, two glumes membranous more or less equal and awned, first glume tapering to a long awn, awn attached to the two lower glumes, sterile lemma longer than the glume, upper lemma mucronate or shortly awned, awns often sticky, palea present, 2 fleshy lodicules, stamens 3, ovary glabrous, 2 stigmas, fruit slightly grooved and compressed, some species with sticky or viscid secretion on the awns, native pasture species, bird food, ornamental grass, weed species, usually found in cool shady forests, primary and secondary montane rain forest and cloud forest, grasslands, pampas, type *Oplismenus africanus* P. Beauv., see *Species Plantarum* 1: 55. 1753, *Observationes Botanicae* 3: 10. 1783, *Flore d'Oware* 2: 14, 15, t. 68, f. 1. 1810, *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 169. 1812, *Fundamenta Agrostographiae* 181. 1820, *Cat. Hort. Bogor.* 16. 1844, *Tentamen Florae Abyssinicae ...* 2: 377. 1850, *Synopsis Plantarum Glumacearum* 1: 46, 118. 1854 [1855], *Flora Brasiliensis* 2(2): 144. 1877, *Indig. Grasses N.Z.* t. 11. 1878, *Revisio Generum Plantarum* 2: 776. 1891 and *Contr. U.S. Natl. Herb.* 22(3): 123. 1920, *U.S. Dept. Agric. Bull.* 772: 238. 1920, *Fieldiana, Botany* 24(2): 38-331. 1955, *Kew Bulletin* 33: 147-157. 1978, U. Scholz, “Monographie der Gattung *Oplismenus*.” *Phanerogamarum Monographiae* 13: 1-213. 1981, *Micronesica* 18: 45-102. 1982, *Flora Mesoamericana* 6: 299-300. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *New Zealand Journal of Botany* 34: 447-462. 1996, *Ecological Management and Restoration* 1(1): 10-20. Apr 2000, Melvin R. Duvall, Jeffrey D. Noll and Alexandra H. Minn, “Phylogenetics of Paniceae (Poaceae).” *Am. J. Bot.* 88: 1988-1992. 2001, *Am. J. Bot.* 88: 1993-2012. 2001, *Weed Biology and Management* 1(3): 157-163. Sep 2001, *Ecological Management and Restoration* 3(1): 15-27. Apr 2002, *Journal of Biogeography* 29(5-6): 767-787. May 2002, *Contributions from the United States*

National Herbarium 46: 250, 299-303, 304. 2003, *Am. J. Bot.* 90: 796-821. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Weed Research* 43(1): 68-75. Feb 2003, *Molecular Ecology* 13(5): 1025-1034. May 2004, *African Journal of Ecology* vol. 42(s1): 48-50. Aug 2004, *Weed Biology and Management* 4(4): 218-221. Dec 2004, *Ecological Management and Restoration* 6(1): 68-69. Apr 2005, *Austral. Ecology* 30(3): 250-260. May 2005.

Species

O. aemulus (R. Br.) Roemer & Schultes (*Orthopogon aemulus* R. Br.)

New Guinea, Australia, Queensland, New South Wales, Victoria. Perennial, weak, smooth, scrambling or trailing, rooting at the nodes, ligule membranous and ciliate, dark green and wavy leaves, sparsely branched erect panicles racemose, spikelets crowded, glumes awned and nerved, slender flexuous awn, fodder grass, browsed by native animals and stock, ornamental, ground cover, sometimes forming mats, suggested for reclamation, grows along the streams, moist gullies, in shaded forests, in and around dams, in moist shady areas, rainforest, includes *Oplismenus aemulus* (R. Br.) Roemer & Schultes var. *lasiorhachis* Domin, see *Prodromus Florae Novae Hollandiae* 194. 1810, *Systema Vegetabilium* 2: 487. 1817 and *Bibliotheca Botanica* 85: 328-329. 1915, *Phanerogamarum Monographiae* 13: 1-213. 1981.

in English: Australian basketgrass, basket grass, creeping shade grass, creeping beard-grass, wavy beard-grass

O. burmannii (Retz.) P. Beauv. (also *burmanni* or *burmannii*) (*Oplismenus affinis* J. Presl, nom. illeg., non *Oplismenus affinis* Schult.; *Oplismenus affinis* Schult.; *Oplismenus affinis* var. *humboldtianus* Scholz; *Oplismenus africanus* P. Beauv.; *Oplismenus albus* (Poir.) Roem. & Schult.; *Oplismenus bromoides* (Lam.) P. Beauv.; *Oplismenus burmannii* f. *cristata* (J. Presl) Hier. ex Peter; *Oplismenus burmannii* var. *multisetus* (Hochst. ex A. Rich.) U. Scholz; *Oplismenus burmannii* var. *nudicaulis* (Vasey) McVaugh; *Oplismenus cristatus* J. Presl; *Oplismenus hirtellus* (L.) P. Beauv.; *Oplismenus hirtellus* subsp. *japonicus* (Steud.) U. Scholz; *Oplismenus humboldtianus* Nees; *Oplismenus humboldtianus* var. *nudicaulis* Vasey; *Oplismenus indicus* Duthie; *Oplismenus japonicus* (Steud.) Honda; *Oplismenus multisetus* Hochst. ex A. Rich.; *Oplismenus preslii* Kunth; *Oplismenus undulatifolius* (Ard.) P. Beauv.; *Oplismenus undulatifolius* var. *japonicus* (Steud.) Koidz.; *Orthopogon africanus* (P. Beauv.) Sweet; *Orthopogon albus* (Poir.) Nees ex Steud.; *Orthopogon burmannii* (Retz.) Trin.; *Panicum africanum* (P. Beauv.) Poir.; *Panicum album* Poir.; *Panicum bromoides* Lam.; *Panicum burmannii* Retz.; *Panicum cristatum* (J. Presl) Steud.; *Panicum hirtellum* Burm., nom. illeg., non *Panicum hirtellum* L.; *Panicum japonicum* Steud.; *Panicum multisetum* Hochst. ex A. Rich.; *Panicum multisetum* (Hochst. ex A. Rich.) Steud.; *Panicum*

schultesii Steud.) (the Dutch botanist and physician Johannes (Jan) Burman, 1707-1779, professor of botany at Amsterdam, studied medicine at Leyden under professor Herman Boerhaave (1668-1739), close friend and correspondent of Linnaeus, prepared the index to Rheede's *Hortus Indicus Malabaricus*, he is best known for *Thesaurus zeylanicus*. Amsterdam 1737, *Rariorum africanarum plantarum*. Amsterdam 1738-1739 and *Flora malabarica, sive index in omnes tomos horti malabarici*, etc. Amsterdam 1769, he was the father of Nicolaas Laurens Burman (1733-1793); see C.P. Thunberg, *Voyages au Japon, par le Cap de Bonne-Espérance, les Isles de la Sonde*, etc. Paris 1796; John Hutchinson, *A Botanist in Southern Africa*. 562. London 1946; Alain Campbell White and Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937; Peter MacOwan, "Personalia of botanical collectors at the Cape." *Trans. S. Afr. Philos. Soc.* 4(1): xxxiii. 1884-1886; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 60. 1972; Carl Linnaeus, *Species Plantarum*. 287. 1753 and *Genera Plantarum*. Edition 5. 139. 1754; Menno Hertzberger, *Short-Title Catalogue of Books Written and Edited by Herman Boerhaave*. Amsterdam 1927; Theo J. Stomps, *Plantengids voor den Hortus Botanicus te Amsterdam*. Amsterdam 1939; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; J.H. Barnhart, *Biographical notes upon botanists*. 1: 286. 1965; D.O. Wijnands, E.J.A. Zevenhuizen and J. Heniger, *Een sieraad voor de stad. De Amsterdamse Hortus Botanicus 1638-1993*. Amsterdam 1994; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 56. Soprintendenza per i Beni Culturali e Ambientali. Sezione per i Beni Bibliografici. Regione Siciliana, Palermo 1988; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Mia C. Karsten, *The Old Company's Garden at the Cape and its Superintendents: Involving an Historical Account of Early Cape Botany*. Cape Town 1951; Gilbert Westacott Reynolds, *The Aloes of South Africa*. Balkema, Rotterdam 1982)

Tropics, Africa, Asia, America, Paleotropics. Annual or perennial, creeping, trailing, weak, prostrate or procumbent, ascending from a long decumbent and rambling rooting base, more or less glabrous, leafy and slender, simple or more often branched upward, rooting from the lower nodes, hairy internodes, leaf blades sparsely hispid, ligule truncate, leaf sheaths densely pubescent, leaves lanceolate and acuminate to narrowly ovate, inflorescence very narrowly paniculate, 1-sided spike-like racemes, erect or spreading bristled racemes clustered, spikelets paired on unequal stalks, small hairy spikelets oblong-lanceolate, greenish flowers, lower floret reduced to lemma, 2 glumes hairy, awns of glumes very slender and scabrid, 3 stamens, anthers

yellow to reddish, stigmas white, forming open clumps and patches in understory, more or less grazed, forage, pasture grass, relished by cattle when young and green, good hay, used by indigenous people to treat pregnancy, weed at edge of road near pasture, grassland borders, fields and groves, moist places, beach sand, along roadsides, in partial shade and open shade of secondary forest, under the shade of trees and bamboos, clearings in secondary forest, swampy places, see *Flora Indica ... nec non Prodromus Florae Capensis* 24, t. 12, f. 1. 1768, *Observationes Botanicae* 3: 10. 1783, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170. 1791, *Flore d'Oware* 2: 15, t. 68, f. 1. 1810, *Essai d'une Nouvelle Agrostographie* 54, 168-171. 1812, *Encyclopédie Méthodique, Botanique Suppl.* 4: 274-275. 1816, *Systema Vegetabilium* 2: 890. 1817, *Fundamenta Agrostographiae* 181. 1820, *Mantissa* 2: 273. 1824, *Hortus Britannicus* 448. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 264. 1829, *Reliquiae Haenkeanae* 1(4-5): 323. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 141. 1833, *Nomenclator Botanicus. Editio secunda* 2: 263. 1841, *Flora* 24: 18. 1846, *Tentamen Florae Abyssinicae ...* 2: 377. 1850, *Synopsis Plantarum Glumacearum* 1: 44, 46. 1853 [1854], *Contributions from the United States National Herbarium* 1(8): 363. 1893 and *Handb. Fl. Ceylon* 5: 169. 1900, *Contr. U.S. Natl. Herb.* 22: 125. 1920, *Botanical Magazine* 38: 189. 1924, *Botanical Magazine* 39: 302. 1925, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1,A): 222. 1938, *Grasses of Ceylon* 129. 1956, *Grasses of Burma ...* 317. 1960, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Phanerogamarum Monographiae* 13: 55, 70, 118, 133. 1981, *Flora Novo-Galiciana* 14: 274. 1983, *Journal of Cytology and Genetics* 20: 205-206. 1985.

in India: bans pati, bawanta, bidari hullu, chimakal gadi, chusa, ghor chubba, kadak, kauguria, kudak, mungil pillu, mungil pullu, nini, utaniya, venupathrika, wataniya, yerva, yerwa

in Mexico: hayal-sitsuuk (Yucatán), pasto, tupiki (Purépecha Indians, Sierra Purépecha, Michoacán), uitsaku (Purépecha Indians), zacate cadillo

in Ghana: bogyamono

in Guinea-Bissau: bondimo, bondium, queuel

in Ivory Coast: babri, bika hakosiré, bika kosiré, bika ople, feyan, gbekaople

in Nigeria: ite oka, odo olili

in Senegal: amhay

in Sierra Leone: kafulu, karin, sunyugi, yoavi, yoyavi

O. burmannii (Retz.) P. Beauv. var. *burmannii* (*Hippagrostis undulatifolia* Kuntze; *Oplismenus affinis* J. Presl, nom. illeg., non *Oplismenus affinis* Schult.; *Oplismenus affinis* var. *humboldtianus* U. Scholz; *Oplismenus bromoides* (Lam.) P. Beauv.; *Oplismenus burmannii* (Retz.) P. Beauv.;

Oplismenus humboldtianus Nees; *Oplismenus humboldtianus* var. *muticus* E. Fourn.; *Oplismenus preslii* Kunth; *Orthopogon bromoides* Loudon; *Orthopogon burmannii* (Retz.) R. Br.; *Orthopogon burmannii* (Retz.) Trin.; *Orthopogon burmannii* var. *glabrescens* Büse; *Panicum bromoides* Lam.; *Panicum burmannii* Retz.; *Panicum lappaceum* Willd. ex Spreng.)

Tropical America. See *Observationes Botanicae* 3: 10. 1783, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170. 1791, *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 169. 1812, *Fundamenta Agrostographiae* 181. 1820, *Systema Vegetabilium, editio decima sexta* 1: 306. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 264. 1829, *Loudon's Hortus Britannicus. A catalogue ...* 25. 1830, *Reliquiae Haenkeanae* 1(4-5): 323. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 141. 1833, *Flora van Nederland-sch Indië* 110. 1857, *Mexicanas Plantas* 2: 37. 1886, *Revisio Generum Plantarum* 777. 1891 and *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Phanerogamarum Monographiae* 13: 55, 59. 1981, *Journal of Cytology and Genetics* 20: 205-206. 1985.

O. burmannii (Retz.) P. Beauv. var. **nudicaulis** (Vasey) McVaugh (*Oplismenus affinis* Schultes; *Oplismenus affinis* var. *affinis*; *Oplismenus affinis* var. *humboldtianus* U. Scholz; *Oplismenus burmannii* f. *cristata* (J. Presl) Hier. ex Peter; *Oplismenus cristatus* J. Presl; *Oplismenus humboldtianus* var. *muticus* E. Fourn.; *Oplismenus humboldtianus* Nees var. *nudicaulis* Vasey; *Oplismenus mollissimus* Hochst. ex Steud.; *Panicum cristatum* (J. Presl) Steud.; *Panicum francoi* Steud.; *Panicum sanctae-marthae* Steud.; *Panicum schultesii* Steud.)

Tropical America, Costa Rica, Guatemala, Honduras. Weed, herbaceous, decumbent, forming mats, growing in deep shade or in partly shaded areas, pasture, edge of road, rock, under forest, plantations, on creek banks, see *Mantissa* 2: 273. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 264. 1829, *Reliquiae Haenkeanae* 1(4-5): 323. 1830, *Nomenclator Botanicus. Editio secunda* 2: 263. 1841, *Synopsis Plantarum Glumacearum* 1: 44-46. 1853 [1854], *Mexicanas Plantas* 2: 37. 1886, *Contributions from the United States National Herbarium* 1(8): 363. 1893 and *Contr. U.S. Natl. Herb.* 22: 125. 1920, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1,A): 222. 1938, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Flora Novo-Galiciana* 14: 274. 1983, *Journal of Cytology and Genetics* 20: 205-206. 1985.

O. compositus (L.) P. Beauv. (*Andropogon undatus* Jacq.; *Echinochloa lanceolata* (Retz.) P. Beauv.; *Hippagrostis composita* (L.) Kuntze; *Oplismenus africanus* J.M. Wood, nom. illeg., non *Oplismenus africanus* P. Beauv.; *Oplismenus compositus* f. *vittatus* (L.H. Bailey) Beetle; *Oplismenus compositus* var. *compositus*; *Oplismenus compositus* var. *rariflorus* (J. Presl) U. Scholz; *Oplismenus compositus*

var. *vittatus* L.H. Bailey; *Oplismenus decompositus* Nees; *Oplismenus elatius* (L.f.) P. Beauv.; *Oplismenus hirtellus* (L.) P. Beauv.; *Oplismenus hirtiflorus* C. Presl; *Oplismenus jacquini* Kunth; *Oplismenus lanceolatus* (Retz.) Kunth; *Oplismenus latifolius* Haenke ex Steud.; *Oplismenus liebmanni* E. Fourn.; *Oplismenus pratensis* (Spreng.) Schult.; *Oplismenus rariflorus* J. Presl; *Oplismenus thiebautii* E. Fourn.; *Orthopogon compositus* (L.) R. Br.; *Orthopogon junghuhnii* Nees; *Orthopogon longeracemosum* (Steud.) Miq.; *Orthopogon pratensis* Spreng.; *Orthopogon remotus* Trin.; *Orthopogon sylvaticus* (Lam.) Miq.; *Panicum aristatum* Retz.; *Panicum aristatum* Cav. ex Willk. & Lange, nom. illeg., non *Panicum aristatum* Retz.; *Panicum aristatum* Raspail, nom. illeg., non *Panicum aristatum* Retz.; *Panicum bidentatum* Steud.; *Panicum bidentulum* Steud.; *Panicum certificandum* Steud.; *Panicum compositum* L.; *Panicum elatius* L.f.; *Panicum hirtellum* L.; *Panicum lanceolatum* Retz.; *Panicum longeracemosum* Steud.; *Panicum parciflorum* Steud.; *Panicum peninsulanum* Steud.; *Panicum sylvaticum* Lam.; *Panicum undatum* (Jacq.) Steud.; *Pollinia undata* (Jacq.) Spreng.) (for the French naval officer Lt. Charles Thiébaud, 1837-1884, traveler, collector of algae; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 372. 1965)

Pantropical, Australia, Southeast Asia, China, India, Indonesia, Japan, Taiwan, Malaysia, Sri Lanka, tropical Africa, Pacific, Mexico, Guatemala, Venezuela. Perennial, slender, procumbent and erect, straggling, erect and branching from a decumbent base, creeping, stoloniferous, long trailing, robust, more or less puberulent, many noded, often rooting at lowermost nodes, internodes glabrous or hairy, ligule a ciliate membrane hairy on the upper surface, leaf sheath minutely hairy to densely pubescent, leaves narrow-elliptic to ovate and covered with minute stiff hairs, ascending inflorescence racemose and developed, spikelets secund, purplish spikelets in fascicles and sometimes hairy, glumes subequal and awned, purple awn on the lower glume, upper lemma smooth and shiny, sticky seeds, native pasture species, excellent fodder or fodder of no value, eaten or grazed or rejected, invasive species, potential seed contaminant, in New Caledonia the presence of the sticky seeds of this species indicate a bad time for fishing, resembles *Oplismenus hirtellus* (L.) P. Beauv., weed, open areas, forest, in disturbed areas, plantations in or near the forest, taro plantation, scrub, in the fringes of gardens, lowlands, on moist soil in shady places, shaded woodland, in shady places under trees, gully, see *Species Plantarum* 1: 57. 1753, *Systema Naturae, Editio Decima* 870. 1759, *Supplementum Plantarum* 107. 1781, *Observationes Botanicae* 4: 17. 1786, *Collectanea* 3: 237. 1789, *Observationes Botanicae* 5: 17. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170. 1791, *Encyclopédie Méthodique, Botanique* 4: 743. 1798, *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 53-54, 161, 168-170.

1812, *Plantarum Minus Cognitarum Pugillus* 2: 12. 1815, *Fundamenta Agrostographiae* 181. 1820, *Mantissa* 2: 597. 1824, *Systema Vegetabilium, editio decima sexta* 1: 306. 1824, *Annales des Sciences Naturelles, Botanique* 5: 299. 1825, *Révision des Graminées* 1: 44-45. 1829, *Reliquiae Haenkeanae* 1(4-5): 320. 1830, *Prodromus Florae Norfolkicae* 19. 1833, *Nomenclator Botanicus. Editio secunda* 2: 220, 264. 1841, *Synopsis Plantarum Glumacearum* 1: 44-45. 1853, *Flora van Nederlandsch Indië* 3: 443-444. 1857 [1855, 1859] *Prodromus Florae Hispanicae* 1: 57. 1861, *Mexicanas Plantas* 2: 38-39. 1886, *Queensland Grasses* 19. 1888, *T.N.Z.I.* 20: 151-181. 1888, *Revisio Generum Plantarum* 2: 777. 1891 and *Handb. Fl. Ceylon* 5: 168. 1900, *Anales del Museo Nacional de Buenos Aires* 11: 438. 1906, *Natal Plants* t. 165. 1908, *Botanical Magazine* 38: 191. 1915, *Repertorium Specierum Novarum Regni Vegetabilis* 20(577-580): 360-361. 1924, *Manual of Cultivated Plants* 109. 1925, *Bernice P. Bishop Museum Bulletin* 84: 68. 1931, *Acta Phytotaxonomica et Geobotanica* 11(1): 35. 1942, *Flora of Japan* 149. 1953, *Grasses of Ceylon* 129. 1956, *Grasses of Burma ...* 317. 1960, *Flora Hainanica* 4: 540. 1977, *N.Z. DSIR Bull.* 219: 172. 1977, *Phytologia* 38(3): 175. 1978, *Phanerogamarum Monographiae* 13: 86-87, 96, 99. 1981, *Acta Phytotaxonomica Sinica* 22(6): 470. 1984, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Grasses of Japan and its Neighboring Regions* 519. 1987, *New Zealand Journal of Botany* 25: 343-353. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: running mountain grass, bamboo-leaf grass

in Mexico: pasto

in New Caledonia: buburupoto (buburu = grass, poto = generic name for some species of Damselfishes), basahwa

in India: basahwa, kodi juttu gaddi, kodijuttu gaddi, koli juttu gaddi, kozhi arugampul, kozhi pul, shora, thurdia

in the Philippines Islands: balibatong, balibis, balisibis, banig-usa, kauakauayan, kawakawayan, huphuplit, litlitum, malakauayan, marikauayan, yamong-yamong, yamog-yamog, bailituganalu

in Thailand: yaa khai maeng daa, ya khai maeng da, ya kho, yaa kho, ya kraduk kai, yaa kraduk kai, yaa kraduuk kai, ya niao ma, yaa nieo maa

O. hirtellus (L.) P. Beauv. (*Echinochloa cubensis* (Spreng.) Schult.; *Oplismenus africanus* P. Beauv.; *Oplismenus barbifultus* Hochst.; *Oplismenus brasiliensis* Raddi; *Oplismenus chondrosioides* E. Fourn.; *Oplismenus compositus* (L.) P. Beauv.; *Oplismenus cubensis* (Spreng.) Kunth; *Oplismenus hirtellus* subsp. *fasciculatus* U. Scholz; *Oplismenus hirtellus* subsp. *setarius* (Lam.) Mez ex Ekman; *Oplismenus imbecillis* (R. Br.) Roemer & Schultes; *Oplismenus loliaceus* (Lam.) Kunth; *Oplismenus loliaceus* (Lam.) P. Beauv.; *Oplismenus setarius* (Lam.) Roem. & Schult.; *Oplismenus undulatifolius* (Ard.) P. Beauv.; *Oplismenus undulatifolius* (Ard.) Roem. & Schult., nom. illeg.,

non *Oplismenus undulatifolius* (Ard.) P. Beauv.; *Oplismenus velutinus* (G. Mey.) Schult.; *Orthopogon africanus* (P. Beauv.) Sweet; *Orthopogon cubensis* Spreng.; *Orthopogon hirtellum* (L.) Nutt.; *Orthopogon hirtellus* Nutt.; *Orthopogon loliaceus* (Lam.) Spreng.; *Orthopogon velutinus* (G. Mey.) Spreng.; *Panicum africanum* (P. Beauv.) Poir.; *Panicum cubense* (Spreng.) Steud.; *Panicum hirtellum* L.; *Panicum incanum* Schumacher.; *Panicum loliaceum* Lam.; *Panicum pseudundulatifolium* Jard.; *Panicum raddianum* Steud.; *Panicum setarium* Lam.; *Panicum undulatifolium* Ard.; *Panicum velutinum* G. Mey.) (*hirtellus*, from Latin *hirtus* "hairy")

Tropical Africa, Benin, Gabon, Swaziland, South Africa, Pacific, tropical America, Ecuador, Costa Rica, U.S., Florida, Hawaii. Perennial, variable, extremely polymorphic, very slender, flimsy, usually smooth, low, prostrate or procumbent and erect, trailing and scrambling, creeping, sometimes climbing, rooting at the nodes, internodes glabrous, sheaths glabrous with short hairs on the margin, ligule fringed and membranous, leaf blades with margins undulate, short leaves narrow-lanceolate and acuminate, racemes elongate densely arranged, spikelets glabrous and lanceolate, lower floret sterile, upper floret bisexual, lower glume awned, upper glume short-awned, small smooth grains, low grazing value, ornamental foliage, invasive species, a turf weed problem, a common weed in fields and in the St. Augustine grass lawns, coffee plantations, ground cover, occurs naturally in moist places and wet shady areas, in forest shade, wetlands, swamps, along streams, low hammocks, lowland tropical rainforest, disturbed forest, lower montane forest, subcanopy and forest margins, poor soils, silty clay loam soils, plantations in or near the forest, old clearings in forest, clearings in primary forest, open woods, rich woods, disturbed weedy forest, secondary forests, may be confused with *Oplismenus undulatifolius*, see *Species Plantarum* 1: 57. 1753, *Systema Naturae, Editio Decima* 870. 1759, *Animadversionum botanicarum specimen alterum* 14, t. 4. 1764, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170. 1791, *Flore d'Oware* 2: 15, t. 68, f. 1. 1810, *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 168-171. 1812, *Encyclopédie Méthodique, Botanique Suppl.* 4: 275. 1816, *The Genera of North American Plants* 1: 55. 1818, *Primitiae Florae Essequeboensis ...* 51. 1818, *Agrostografia Brasiliensis* 40. 1823, *Mantissa* 2: 271. 1824, *Beskrielse af Guineiske planter* 60. 1827, *Hortus Britannicus* 448. 1827, *Mantissa* 3(Add. 1): 596. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 80. 1828, *Révision des Graminées* 1: 45. 1829, *Nomenclator Botanicus. Editio secunda* 2: 255. 1841, *Flora* 1(7): 114. 1846, *Synopsis Plantarum Glumacearum* 1: 45. 1853 [1854], *Mexicanas Plantas* 2: 39. 1886, *T.N.Z.I.* 20: 151-181. 1888 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 26. 1912, *Contr. U.S. Natl. Herb.* 22: 123. 1920,

Repertorium Specierum Novarum Regni Vegetabilis 20(577-580): 360. 1924, *Botanical Magazine* 41: 377. 1927, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 274. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1,A): 219-220. 1938, *Brittonia* 23(3): 293-324. 1971, *N.Z. DSIR Bull.* 219: 172. 1977, *Phanerogamarum Monographiae* 13: 104, 111, 113, 118, 127, 132-133, 137-138, 145, 147, f. 29, 31. 1981, *Micronesica* 18(2): 78-79. 1982 [1984], *Darwiniana* 30(1-4): 87-94. 1990, *Memoirs of the New York Botanical Garden* 85: i-ix, 1-246. 2000.

in English: basket grass, long-leaf basket grass, bristle basket grass, ribbon grass, woods grass, creeping beard-grass

in French: oplismène, herbe à panier

in Hawaii: honohono kukui, honohono, honohono maoli

in Ghana: bogyamono

in Nigeria: ite oka, ka fulu, ka rin, noppidombe, ntufiak

in Sierra Leone: bukenge, sumyigi, sunyugi, yoavi, yoyavi

in South Africa: bosgras

in Mexico: cadillo, taham-otel

O. hirtellus (L.) P. Beauv. subsp. **hirtellus** (*Echinochloa cubensis* (Spreng.) Schult.; *Hippagrostis loliacea* (Lam.) Kuntze; *Oplismenus burmanni* auct. non (Retz.) P. Beauv.; *Oplismenus chondrosioides* E. Fourn.; *Oplismenus compositus* var. *loliaceus* (Lam.) Hack.; *Oplismenus compositus* var. *setarius* (Lam.) F.M. Bailey; *Oplismenus cubensis* (Spreng.) Kunth; *Oplismenus depauperatus* E. Fourn.; *Oplismenus foliaceus* P. Beauv.; *Oplismenus hirtellus* f. *hirtellus*; *Oplismenus hirtellus* subsp. *loliaceus* (Lam.) Mez ex Peter; *Oplismenus hirtellus* subsp. *setarius* (Lam.) Mez ex Ekman; *Oplismenus hirtellus* var. *hirtellus*; *Oplismenus loliaceus* (Lam.) P. Beauv.; *Oplismenus oahuensis* Nees & Meyen ex Steud.; *Oplismenus setarius* (Lam.) Roemer & J.A. Schultes; *Oplismenus velutinus* (G. Mey.) Schult.; *Orthopogon cubensis* Spreng.; *Orthopogon hirtellum* (L.) Nutt.; *Orthopogon hirtellus* (L.) R. Br.; *Orthopogon hirtellus* Nutt.; *Orthopogon loliaceus* (Lam.) Spreng.; *Orthopogon velutinus* (G. Mey.) Spreng.; *Panicum cubense* (Spreng.) Steud.; *Panicum foliaceum* (P. Beauv.) Steud.; *Panicum hirtellum* L.; *Panicum hirtellum* Bartram, nom. illeg., non *Panicum hirtellum* L.; *Panicum oahuense* Steud.; *Panicum loliaceum* Lam.; *Panicum loliaceum* Bert., nom. illeg., non *Panicum loliaceum* Lam.; *Panicum raddianum* Steud.; *Panicum setarium* Lam.; *Panicum velutinum* G. Mey.)

Tropical Africa, Pacific, tropical America, U.S. Herbaceous, leaf blades ovate-lanceolate, upper glumes awned, leaning or decumbent and upright, creeping, scrambling, sprawling, growing in small clumps, shaded slopes, in primary forest, along trails, in shady forest edge, understory, rocks, coastal forest, gravels, river beds, stream side, see *Systema Naturae, Editio Decima* 870. 1759, *Tableau Encyclopédique et*

Méthodique ... Botanique 1: 170. 1791, *Travels Through North and South Carolina* 430. 1791, *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 168, 170. 1812, *Primitiae Florae Essequiboensis ...* 51. 1818, *The Genera of North American Plants* 1: 55. 1818, *Opuscoli Scientifici* 3: 408. 1819, *Agrostografia Brasiliensis* 40. 1823, *Mantissa* 2: 271. 1824, *Mantissa* 3(Add. 1): 596. 1827, *Révision des Graminées* 1: 45. 1829, *Nomenclator Botanicus. Editio secunda* 2: 220, 255-256. 1841, *Synopsis Plantarum Glumacearum* 1: 45. 1853, *Mexicanas Plantas* 2: 38-39. 1886, *Revisio Generum Plantarum* 777. 1891 and *Anales del Museo Nacional de Buenos Aires* 11: 438. 1906, *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Contr. U.S. Natl. Herb.* 22: 123. 1920, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1,A): 219. 1938, *Phanerogamarum Monographiae* 13: 104, 118. 1981.

O. hirtellus (L.) P. Beauv. subsp. **imbecillis** (R. Br.) U. Scholz (*Oplismenus hirtellus* f. *imbecillis* (R. Br.) Scholz; *Oplismenus hirtellus* var. *imbecillis* (R. Br.) Fosberg & Sacht; *Oplismenus imbecillis* (R. Br.) Roemer & Schultes; *Orthopogon imbecillis* R. Br.; *Panicum imbecille* (R. Br.) Trin.) (Latin *imbecillus, a, um*, also *imbecillis, e* "weak, feeble, the least nourishing, very easy of digestion")

Northern Territory, Queensland, New South Wales, Victoria, New Guinea. Perennial, much branched, weak, scrambling or trailing, rooting at the nodes, forming sparse to dense mats, ligule membranous at the base, leaves green and hairy, erect panicles with spikelets attached to the stem, awn of lower glume wavy and slender, upper glume obtuse and usually awnless or with very short awn, lower lemma embracing the fertile floret, palea reduced or absent, upper lemma lanceolate, ornamental grass, browsed by native animals, ground cover, grows in shady moist areas, coastal scrub, second growth bush, in shady forest, open forest and forest clearings, rainforest, moist gullies on coarse sandy soil, near and along the streams, see *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 168, 170. 1812, *Systema Vegetabilium* 2: 487. 1817, *Species Graminum* 2: t. 191. 1829 and *Botanical Magazine* (Tokyo) 38: 190. 1924, *Phanerogamarum Monographiae* 13: 127, f. 31. 1981, *Micronesica* 18(2): 78. 1982 [1984], *Fl. Australia* 49: 480. 1994.

in English: creeping beard-grass, basket grass, slender panic grass

O. hirtellus (L.) P. Beauv. subsp. **setarius** (Lam.) Mez ex Ekman (*Hippagrostis setaria* (Lam.) Kuntze; *Oplismenus compositus* var. *setarius* (Lam.) F.M. Bailey; *Oplismenus hirtellus* subsp. *fasciculatus* U. Scholz; *Oplismenus parvifolius* (Nutt.) Kunth; *Oplismenus setarius* (Lam.) Roem. & Schult.; *Oplismenus velutinus* (G. Mey.) Schult.; *Orthopogon hirtellum* (L.) Nutt.; *Orthopogon hirtellus* Eaton and Wright; *Orthopogon parvifolium* Nutt.; *Orthopogon setarius* (Lam.) Spreng.; *Orthopogon velutinus* (G. Mey.) Spreng.; *Panicum compositum* var. *fimbriusculum* Döll;

Panicum hirtellum L.; *Panicum nuttallianum* Steud.; *Panicum setarium* Lam.; *Panicum velutinum* G. Mey.; *Setaria hirtella* Schult.)

Tropics. See *Systema Naturae, Editio Decima* 870. 1759, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170. 1791, *Essai d'une Nouvelle Agrostographie* 54, 168, 169, 170. 1812, *Systema Vegetabilium* 2: 481. 1817, *Primitiae Florae Essequeboensis ...* 51. 1818, *The Genera of North American Plants* 1: 55. 1818, *Mantissa* 2: 271, 276. 1824, *Systema Vegetabilium, editio decima sexta* 1: 306, 307. 1825, *Révision des Graminées* 1: 45. 1829, *A Manual of Botany* 336. 1840, *Nomenclator Botanicus. Editio secunda* 2: 260. 1841, *Flora Brasiliensis* 2(2): 147. 1877, *Queensland Grasses* 19. 1888, *Revisio Generum Plantarum* 2: 777. 1891 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 26. 1912, *Phanerogamarum Monographiae* 13: 118, f. 29. 1981.

O. hirtellus (L.) P. Beauv. subsp. ***undulatifolius*** (Ard.) U. Scholz (*Oplismenus coreanus* Nakai; *Oplismenus undulatifolius* (Arduino) P. Beauv.; *Oplismenus undulatifolius* (Ard.) Roem. & Schult., nom. illeg., non *Oplismenus undulatifolius* (Ard.) P. Beauv.; *Orthopogon bolosii* Vayr.; *Orthopogon undulatifolius* (Ard.) Spreng.; *Orthopogon undulatus* Link; *Panicum undulatifolium* Ard.)

Tropics. See *Animadversionum botanicarum specimen alterum* 14, t. 4. 1764, *Essai d'une Nouvelle Agrostographie* 54, 168, 170, 171. 1812, *Systema Vegetabilium. Editio decima quinta* 2: 482. 1817, *Systema Vegetabilium, editio decima sexta* 1: 306. 1824[1825], *Hortus Regius Botanicus Berolinensis* 1: 202. 1827 and *Cavanillesia* 4: 61. 1931, *Bulletin of the National Science Museum* 31: 140. 1952, *Phanerogamarum Monographiae* 13: 147. 1981, *Castanea* 64(2): 201-202. 1999 [*Oplismenus hirtellus* subspecies *undulatifolius*, a new record for North America].

O. setarius (Lam.) Roem. & Schult. (*Hippagrostis setaria* (Lam.) Kuntze; *Oplismenus compositus* var. *setarius* (Lam.) F.M. Bailey; *Oplismenus hirtellus* (L.) P. Beauv.; *Oplismenus hirtellus* subsp. *setarius* (Lam.) Mez ex Ekman; *Oplismenus parvifolius* (Nutt.) Kunth; *Oplismenus velutinus* (G. Mey.) Schult.; *Orthopogon hirtellus* Eaton & J. Wright; *Orthopogon parvifolium* Nutt.; *Orthopogon setarius* (Lam.) Spreng.; *Orthopogon velutinus* (G. Mey.) Spreng.; *Panicum nuttallianum* Steud.; *Panicum setarium* Lam.; *Panicum velutinum* G. Mey.; *Setaria hirtella* Schult.)

U.S., Florida. Small creeping perennial, upright, caespitose, rooting at the nodes, creeping stems interweave and cover the ground, leaf blades lanceolate to ovate, sheaths shorter than the internodes, forage, grows in moist woods, wetlands, xeric forest, shady environment, sand hammock, sometimes a synonym of *Oplismenus hirtellus* (L.) P. Beauv., see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170. 1791, *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 168-

170. 1812, *Systema Vegetabilium* 2: 481. 1817, *Primitiae Florae Essequeboensis ...* 51. 1818, *Mantissa* 2: 271, 276. 1824, *Systema Vegetabilium, editio decima sexta* 1: 307. 1825, *Révision des Graminées* 1: 45. 1829, *A Manual of Botany* 336. 1840, *Nomenclator Botanicus. Editio secunda* 2: 260. 1841, *Queensland Grasses* 19. 1888, *Revisio Generum Plantarum* 2: 777. 1891, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 13(2): 259. 1891 and *The Queensland Flora* 6: 1838. 1902, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 26. 1912, *Bernice P. Bishop Museum Bulletin* 84: 68. 1931, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979, *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Memoirs of the New York Botanical Garden* 85: i-ix, 1-246. 2000.

in English: short-leaf basket grass, basket grass, woods grass, running mountain grass

in Mexico: pasto sombra, zacate barbón

O. thwaitesii Hook.f.

Sri Lanka. Annual, trailing, rooting at the lower nodes, leaf sheaths pubescent, leaf blades villous to hirsute, erect inflorescence, see *Handb. Fl. Ceylon* 5: 169. 1900, *Grasses of Ceylon* 129. 1956, *Grasses of Burma ...* 318. 1960.

O. undulatifolius (Arduino) P. Beauv. (*Oplismenus africanus* var. *capensis* (Hochst.) Stapf; *Oplismenus africanus* var. *simplex* (K. Schum. ex Engl.) Stapf; *Oplismenus capensis* Hochst.; *Oplismenus hirtellus* (L.) P. Beauv.; *Oplismenus hirtellus* subsp. *capensis* (Hochst.) Mez ex U. Scholz; *Oplismenus hirtellus* subsp. *undulatifolius* (Ard.) U. Scholz; *Oplismenus simplex* K. Schum. ex Engl.; *Oplismenus undulatifolius* (Ard.) Roem. & Schult., nom. illeg., non *Oplismenus undulatifolius* (Ard.) P. Beauv.; *Orthopogon undulatifolius* (Ard.) Spreng.; *Panicum hirtellum* L.; *Panicum kraussii* Steud.; *Panicum undulatifolium* Ard.)

Tropics and subtropics, Africa, China, Taiwan, India, Indonesia, Southeast Asia, Australia. Perennial or annual, simple or branched below, prostrate, trailing, ascending from a long rambling base, often rooting at the nodes, loose sheaths, ligule membranous and truncate, small ovate and undulate leaves, racemes contracted, spikelets clumped or arranged in fascicles, one fertile floret, glumes with sticky awns, one sterile lemma, weed species, eaten by goats and sheep, grows near and along the streams, in moist and shady places, in forest shade, on sandy soil, mountain habitats, woodlands, very similar to *Oplismenus compositus* (L.) P. Beauv., see *Systema Naturae, Editio Decima* 870. 1759, *Animadversionum botanicarum specimen alterum* 14, t. 4. 1764, *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 168, 170-171. 1812, *Systema Vegetabilium. Editio decima quinta* 2: 482. 1817, *Systema Vegetabilium, editio decima sexta* 1: 306.

1824 [1825], *Flora* 1(7): 114. 1846, *Synopsis Plantarum Glumacearum* 1: 45. 1853 [1854], *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften (zu Berlin)* 1: 48. 1894, *Flora Capensis* 7: 417. 1899 and *Bibliotheca Botanica* 85: 329. 1915, *Botanical Magazine* (Tokyo) 39: 302. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 274. 1930, *Botanical Magazine* (Tokyo) 55: 546. 1941, *Manual of the Korean Grasses* 30. 1966, *Phanerogamarum Monographiae* 13: 113, 147. 1981, *Acta Phytotaxonomica Sinica* 22(6): 471. 1984, *Journal of Economic and Taxonomic Botany* 22(2): 491-494. 1998.

in French: oplismène à feuilles ondulées

in Italian: miglio ondulato

in Japan: kechijimizasa

O. undulatifolius (Ard.) P. Beauv. var. ***mollis*** Domin (*Oplismenus hirtellus* f. *imbecillis* (R. Br.) Scholz)

New Guinea, Australia, Queensland, New South Wales. Perennial, weak, trailing or scrambling, much-branched, rooting at the nodes, grayish green leaves densely hairy, ligule membranous at the base, panicles erect, spikelets in small clusters or fascicles, straight and rigid awns on glumes, lower lemma embracing the fertile floret, grows in shady coastal forests, littoral rainforest, suggested for reclamation, see *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 168, 170. 1812 and *Bibliotheca Botanica* 85: 329. 1915, *Phanerogamarum Monographiae* 13: 127. 1981.

in English: soft beard-grass

Orcuttia Vasey

Dedicated to the American (California) botanist Charles Russell Orcutt, 1864-1929, plant collector and naturalist, 1882-1886 Baja California, editor of *The West American Scientist*. vols. 1-21. 1881-1919, he is best known for his *Flora of Southern and Lower California*. San Diego 1885, *Botany of Southern California*. San Diego 1901 and *American Plants*. San Diego 1907-1912. See H. Du Shane, *The Baja California Travels of Charles Russel Orcutt*. Los Angeles 1971; G.P. Trujillo, *Bibliografía de Baja California*. Tijuana 1967; Ira L. Wiggins, *Flora of Baja California*. 42. Stanford, California 1980; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 172. London 1904; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 295. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 318. 1973; E.M. Tucker,

Catalogue of the library of the Arnold Arboretum of Harvard University. 1917-1933.

Five species, U.S., California, Mexico. Chloridoideae, Orcuttieae, or Chloridoideae, Cynodonteae, Orcuttiinae, annual, herbaceous, aquatic, floating, unbranched, aromatic, auricles absent, ligule absent, plants bisexual, inflorescence a spike or raceme, spikelets laterally flattened, distichous spikelets, 2 glumes more or less equal, many-nerved glumes more or less toothed and papery, lemma acuminate lobed, palea present, lodicules absent, 3 stamens, 2 stigmas, growing in seasonally inundated areas, type *Orcuttia californica* Vasey, see *Bulletin of the Torrey Botanical Club* 13: 219, pl. 60. 1886, *Erythea, a Journal of Botany, West American and General* 6: 109. Berkeley, California 1898 and 7: 43. 1899, *Österreichische Botanische Zeitschrift* 49: 134. 1899 and *Bulletin of the Torrey Botanical Club* 68: 149-156. 1941, *Madroño* 15: 97-110. 1959, *A California Flora 1959, Madroño* 18: 20. 1965, *American Journal of Botany* 69: 1082-1095. 1982, F.T. Griggs and S.K.Jain, "Conservation of vernal pool plants in California, II. Population biology of a rare and unique grass genus *Orcuttia*." *Biological Conservation* 27: 171-193. 1983, *Kew Bulletin* 40: 737-744. 1985, *American Journal of Botany* 85: 1704-1709. 1998, J.E. Keeley, "Photosynthetic pathway diversity in a seasonal pool community." *Functional Ecology* 13(1): 106-118. Feb 1999, *Contributions from the United States National Herbarium* 41: 176-177. 2001.

Species

O. californica Vasey (*Orcuttia californica* var. *californica*; *Orcuttia californica* var. *inaequalis* (Hoover) Hoover; *Orcuttia californica* var. *viscida* Hoover; *Orcuttia inaequalis* Hoover; *Orcuttia viscida* (Hoover) Reeder)

California, U.S., Mexico. See *Bulletin of the Torrey Botanical Club* 13: 219, pl. 60. 1886 and *Madroño* 3: 229. 1936, *Bulletin of the Torrey Botanical Club* 68(3): 154-155. 1941, *Phytologia* 47(3): 221. 1980.

O. inaequalis Hoover (*Orcuttia californica* Vasey; *Orcuttia californica* var. *inaequalis* (Hoover) Hoover)

U.S. See *Bulletin of the Torrey Botanical Club* 13: 219, pl. 60. 1886 and *Madroño* 3: 229. 1936, *Bulletin of the Torrey Botanical Club* 68(3): 154-155. 1941, *Manual of the Grasses of the United States* (edition 2, revised by A. Chase) 1951, *American Journal of Botany* 69(7): 1082-1095. 1982, *The Jepson Manual: Higher Plants of California* 1993.

in English: San Joaquin Valley Orcutt grass

O. pilosa Hoover

U.S. Endangered species, rare, see *Bulletin of the Torrey Botanical Club* 68(3): 155-156. 1941.

in English: hairy Orcutt grass

O. tenuis A. Hitchc.

U.S. In open sandy soil, see *American Journal of Botany* 21(3): 131. 1934.

in English: slender Orcutt grass

O. viscida (Hoover) Reeder (*Orcuttia californica* var. *viscida* Hoover)

U.S. See *Bulletin of the Torrey Botanical Club* 13: 219, pl. 60. 1886 and *Bulletin of the Torrey Botanical Club* 68(3): 155. 1941, *Phytologia* 47(3): 221. 1980, *American Journal of Botany* 69(7): 1082-1095. 1982.

in English: Sacramento Orcutt grass

Oreostachys Gamble = *Nastus* Juss.

From the Greek *oreios* “from the mountains” and *stachys* “spike.”

Bambusoideae, Bambusodae, Bambuseae, Bambusinae, Hickeliinae, type *Oreostachys pullei* Gamble, see *Genera Plantarum* 34. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 580. 1791 and *Verhandelingen der Koninklijke Nederlandsche Akademie van Wetenschappen: Afdeling Natuurkunde: Tweede Sectie* 10: 685. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 174. 1914, *Bulletin du Muséum National d'Histoire Naturelle* 25(2): 672. 1919, *Journal of the Arnold Arboretum* 6(3): 152. 1925, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62: 460. 1929, *Blumea* 2: 71. 1936, *Kew Bulletin* 10: 594. 1956.

Oreobambos K. Schumann = *Oreobambos* K. Schumann

From the Greek *oros* “mountain” plus *Bambos*.

One species, Uganda to Zimbabwe, tropical East Africa. Bambusoideae, Bambusodae, Bambuseae, Bambusinae, perennial, in dense clumps, woody, arborescent, arching, spreading, drooping, unarmed, persistent, flowering culms leafy, sympodial, rhizomes pachymorph, plants bisexual, inflorescence cupuliform of pseudospikelets, involucre-like bracts surrounding the spikelets, 2 flowers, glume 1 per spikelet, lemmas more or less equal, palea keeled, lodicules absent, 6 stamens, ovary hairy, 1 stigma, flowering culms leafy, forest, along the streams, in the shade of trees, clearings in evergreen forest, type *Oreobambos buchwaldii* K. Schum., see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 1: 178. 1896 and *Fl. Trop. E. Afr. Gram.* 1: 13, f. 4. 1970.

Species

O. buchwaldii K. Schum. (for the German botanist Johannes Buchwald, 1869-1927, collector in Tanzania, with A. Engler in East Africa, worked with Karl Otto Robert

Peter Paul Graebner (1871-1933). See J.H. Barnhart, *Biographical notes upon botanists*. 1: 275. 1965; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916)

Africa, Burundi, Malawi. Soft hollow bamboo, weak, smooth, shiny, forming clumps, sheaths finely hairy, leaves lanceolate to oblong, flowers bisexual, bracts forming loose cup-shaped heads, 6 stamens, ovary with silky hairs at the apex, stems used for pig fences and for making baskets, in open habitats, along rivers, swamp forest, evergreen rain-forest, on rocky slopes, along mountain streams, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 1: 178. 1896.

in English: large green bamboo, Buchwa bamboo (Mount Buchwa in Zimbabwe)

in Malawi: liulawe, tolanje

Oreocalamus Keng = *Chimonobambusa* Makino

From the Greek *oros* “mountain” and *kalamos* “a reed, cane.”

Bambusoideae, Bambuseae, Arundinariinae, Shibataeinae, or Bambusoideae, Bambuseae, Arundinariinae, type *Oreocalamus szechuanensis* (Rendle) Keng, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 130, t. 119. 1896 and *Botanical Magazine* (Tokyo) 28(329): 153. 1914, *Plantae Wilsonianae* 2(1): 64. 1914, *Sunyatsenia* 4(3-4): 146-151, t. 37. Canton 1940, *Technical Bulletin of the National Forestry Research Bureau* 8: 15. 1948, *Taxon* 6(7): 201-202. 1957, *Acta Botanica Yunnanica* 2(1): 91-92, 96-99, pl. 3, 4. 1980, *Acta Phytotaxonomica Sinica* 21(1): 96-99, pl. 2. 1983, *Acta Botanica Yunnanica* 5(1): 42-44, 45-46, pl. 3, 4. 1983, *Kew Bulletin, Additional Series* 13: 48. 1986, *Journal of Bamboo Research* 5(2): 22. 1986, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1986, *Kew Bulletin* 44(2): 349-367. 1989, *Contributions from the United States National Herbarium* 39: 36, 89. 2000.

Oreochloa Link

From the Greek *oros* “mountain” and *chloe, chloa* “grass.”

Four species, southern Europe. Pooideae, Poodae, Seslerieae, perennial, herbaceous, rhizomatous, caespitose, auricles absent, leaf sheaths with joined margins, ligule an unfringed membrane, plants bisexual, contracted inflorescence paniculate, raceme unilateral, spikelets imbricate and 3- to 7-flowered, 2 glumes very unequal or subequal, lemmas membranous and keeled, palea present, lodicules present, 3 stamens, ovary glabrous, 2 stigmas, open habitats, montane, rocky places, sometimes referred to *Sesleria*, type

Oreochloa disticha (Wulfen) Link, see Petri Arduini ... *Animadversionum botanicarum* specimen. Patavii 1759, *Flora Carniolica* 189. 1760, Petri Harduini veronensis horti publici patavini custodis *animadversionum botanicarum specimen alterum*. Venetia 1764, *Hortus Regius Botanicus Berolinensis* 1: 44. 1827 and *Ind. Nom. Genericorum* 3: 1607. 1979.

Species

O. blanka Deyl (*Oreochloa disticha* subsp. *blanka* (Deyl) Kupfer)

Central Europe. See *Opera Botanica Cechica* 3: 244. 1946, *Boissiera*. 23: 54. 1974.

O. disticha (Wulfen) Link (*Poa disticha* Wulfen; *Sesleria disticha* (Wulfen) Pers.)

Europe. See *Nicolai Josephi Jacquin Miscellanea austriaca* ... 2: 74. 1781 and *Boissiera*. 23: 54. 1974.

O. pedemontana Reut. (*Sesleria pedemontana* (Reut.) Steud.)

See *Flora Novae-Zelandiae* 126. 1852, *Synopsis Plantarum Glumacearum* 1: 296. 1854.

O. seslerioides (All.) K. Richt. (*Poa seslerioides* All., also spelled *sesleroides*)

Europe. See *Flora Pedemontana* 2: 246. 1785.

Oreopoa Gand. = *Poa* L.

From the Greek *oros* "mountain" and *poa* "grass, pasture grass."

Pooideae, Poeae, Poinae, type *Poa alpina* L., see *Species Plantarum* 1: 67-68. 1753, *Flora Europaea* 26: 186. 1891 and *Ill. Fl. U.S. Canada* edition 2, 1: 252. 1913, *Contributions from the United States National Herbarium* 48: 468, 505-580. 2003.

Orinus Hitchc.

From the Greek *oros* "mountain" alluding to the habitat, or Greek *orino* "move, excite."

About 2-4 species, China, Kashmir, Nepal, western Himalayas. Chloridoideae, perennial, herbaceous, unarmed, rhizomatous, tufted, rhizomes pachymorph, widely spreading scaly rhizomes, auricles absent, ligule membranous, leaves pungent, plants bisexual, without hidden cleistogenes, inflorescence spicate and nondigitate, racemes erect or ascending on a central axis, spikelets solitary and shortly pedicellate, 2 glumes subequal, upper glume 3-nerved, lemmas keeled hairy acute to mucronate, palea keels pilose, 3 stamens, 2 stigmas, useful stabilizers of dunes, sand-binding grasses, open habitats, montane, desert sand dunes, shifting sands, at high altitude, slopes, related to *Kengia*,

type *Orinus arenicola* Hitchc., see *Journal of the Washington Academy of Sciences* 23: 136. 1933, *Kew Bulletin* 1951: 454. 1952, *Claves Generum et Specierum Graminearum Primarium Sinicarum Appendice Nomenclatione Systematica* 176. 1957.

Species

O. anomala Keng ex Keng f. & L. Liou (*Orinus anomala* Keng)

China. Culms loosely tufted, erect, leaf blades stiff, ligule erose, linear panicle, see *Claves Generum et Specierum Graminearum Primarium Sinicarum Appendice Nomenclatione Systematica* 176. 1957, *Acta Botanica Sinica* 9: 68. 1960.

in China: ji zhua cao

O. kokonorica (K.S. Hao) Keng (*Cleistogenes kokonorica* Hao; *Diplachne kokonorica* (Hao) Conert; *Kengia kokonorica* (Hao) Packer)

China. Erect, more or less smooth, leaf sheaths glabrous, ligule lacerate, leaf blades stiff, narrow panicle, glumes lanceolate, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 68(5): 582. 1938, *Claves Generum et Specierum Graminearum Primarium Sinicarum Appendice Nomenclatione Systematica* 176. 1957, *Fl. Ill. Pl. Prim. Sin. Gramin.* 284. f. 230. 1959, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 78(2): 230. 1959, *Botaniska Notiser* 113: 293. 1960.

in China: qing hai gu sha cao

O. thoroldii (Stapf ex Hemsley) Bor (*Cleistogenes thoroldii* (Stapf ex Hemsley) Roshev.; *Diplachne thoroldii* Stapf ex Hemsley; *Orinus arenicola* Hitchcock) (for the British explorer William Grant Thorold, surgeon Captain of the Indian Medical Service, 1891-1892 botanical collector in Tibet with Capt. Hamilton Bower. See Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. 807. [Reprint of the original edition 1898] Leipzig 1981; H. Bower, *Geogr. Journal* 1: 385-408. 1893; W.B. Hemsley, "On two small collections of dried plants from Tibet." *Linn. Soc. Journal* 30: 101-140. 1894; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 90, 684. London 1994)

China. Erect, slender, roots woolly, leaf sheaths hirsute, ligule lacerate, see *Journal of the Linnean Society, Botany* 30(206): 121. 1894 and *Journal of the Washington Academy of Sciences* 23: 136. 1933, *Kew Bulletin* 1951: 454. 1952, *Fl. Kazakhst.* 1: 208. 1956.

in China: gu shao cao

O. tibeticus N.X. Zhao

Asia. Erect, densely pilose, leaf sheaths pilose, ligule lacerate, see *Acta Botanica Yunnanica* 16(3): 228, f. 1. 1994. in China: xi zang gu sha cao

Oriza J. St.-Hil. = *Leersia* Sw., *Oryza* L.

Bambusoideae, Oryzodae, Oryzeae, Oryzinae, or Ehrhar-toideae, Oryzeae, Oryzinae, see *Species Plantarum* 1: 55. 1753, *Nova Genera et Species Plantarum seu Prodrum* 21. 1788, *Exposition des Familles Naturelles* 1: 87. 1805 and Ludwig von Sarnthein (1861-1914) & Karl Wilhelm von Dalla Torre von Thurnberg-Sternhoff (1850-1928), *Flora der gefürsteten Grafschaft Tirol ...* 6: 142. Innsbruck 1900-1913, *Acta Botanica Cubana* 4: 1-11. 1980, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 63-67. 1986, *Contributions from the United States National Herbarium* 39: 64-67, 89-92. 2000.

Ornithocephalochloa Kurz = *Thuarea* Pers.

From the Greek *ornis*, *ornithos* “a bird,” *kephale* “head” and *chloe*, *chloa* “grass, young grass.”

Paniceae, type *Ornithocephalochloa arenicola* Kurz, see *Syn. Pl.* 1: 110. 1805, *Journal of Botany, British and Foreign* 18: 332, t. 171, f. 1-18. 1875.

Ornithospermum Dumoulin = *Echinochloa*

P. Beauv.

From the Greek *ornis*, *ornithos* “a bird” and *sperma* “seed.”

Panicoideae, Paniceae, Panicinae, see *Species Plantarum* 1: 55. 1753, *Fl. Bourg.* 1: 495. 1782, *Essai d'une Nouvelle Agrostographie* 53, 161, 169, t. 11, f. 2. 1812, *Observations sur les Graminées de la Flore Belgique* 137-138. 1823 [1824], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 255. 1829, *A Manual of the Botany of the Northern United States* 614. 1848 and *Contributions from the United States National Herbarium* 46: 215-224, 303. 2003.

Oropetium Trin. = *Chaetostichium* C.E.

Hubb., *Kralikella* Coss. & Dur., *Lepturella* Stapf

Possibly from the Greek *oros* “mountain” and *pedion* “a plain, flat, open country, a field.”

About 3-6 species, Africa to India. Chloridoideae, Eragrostideae, perennial, rarely annual, variable, low to dwarf, small to tiny, herbaceous, unarmed, tufted, erect, compressed culms, leaves nonauriculate, leaf blades filiform, ligule a membrane ciliolate or unfringed, plants bisexual, inflorescence a single straight to curved spike or raceme, spikelets solitary and distichous embedded in the axis, floret 1 bisexual, 2 or 1 glumes persistent per spikelet, lower glume absent or small, upper glume concealing the floret, lemma emarginate to bidentate, palea narrow, 2 free and fleshy minute lodicules or absent, 3 stamens, ovary

glabrous, 2 dark stigmas, in open habitats, arid regions, bare ground, eroded places, mountains, shallow soil, rocky sites, outwash from the rocky hills, sometimes referred to *Tri-pogon* Roem. & Schult., type *Oropetium thomaeum* (L.f.) Trin., see *Fundamenta Agrostographiae* 98. 1820 and *Bulletin de la Société Botanique de France: Mémoires* 8(d): 222. 1912, *Hooker's Icones Plantarum* 34: t. 3341. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 14. 1945, *Kew Bulletin* 30: 467-470. 1975, *New Phytologist* 154(1): 15-28. Apr 2002, *New Phytologist* 156(3): 327-349. Dec 2002, *New Phytologist* 165(2): 391-410. Feb 2005, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005 [Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications].

Species

O. aristatum (Stapf) Pilger (*Lepturella aristata* Stapf)

Tropical Africa. Perennial bunchgrass, appressed culms, lemma awned, low grazing value, in rocky places, crevices, shallow soil, see *Bulletin de la Société Botanique de France: Mémoires* 8: 222. 1912, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 14. 1947.

in Mali: dedu na, dedu ia, dedu ya

O. capense Stapf (*Lepturella capensis* (Stapf) Stapf; *Oropetium erythraeum* Chiov.)

Eastern tropical Africa, southern Africa, Somalia, Ethiopia. Perennial, low to dwarf, densely tufted, leaves usually pilose, solitary spike or raceme straight or curved, spikelets more or less deeply embedded, upper glume acute, low grazing value, eaten by sheep, found in open habitats, arid places, deciduous bushland, slopes, on steep mountain side, disturbed veld, shallow soil, rocky or gravelly sites, see *Flora Capensis* 7: 742. 1900, *Annuario del Reale Istituto Botanico di Roma* 2: 366. 1905, *Bulletin de la Société Botanique de France* 58(8): 223. 1912, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 90. 1942, *Willdenowia* 14(1): 160. 1984.

in English: dwarf grass

n Mali: dedu na, dedu ia, dedu ya

in Somalia: nilo kois

in South Africa: haasgras

O. hesperidum Maire (*Oropetium capense* var. *hesperidum* (Maire) H. Scholz & P. König)

Morocco. See *Flora Capensis* 7: 742. 1900, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 90. 1942, *Willdenowia* 14(1): 160. 1984.

O. minimum (Hochst.) Pilg. (*Chaetostichium majusculum* C.E. Hubb.; *Chaetostichium minimum* (Hochst.) C.E. Hubb.; *Chaetostichium minimum* var. *macrochaetum* Chiov., also spelled *macrochaetum*; *Chaetostichium minimum* var.

microchaetum Chiov.; *Lepturus minimus* Hochst.; *Oropetium majusculum* (C.E. Hubb.) Cufod.)

Tropical Africa, Arabia, Somalia. Perennial, densely tufted, dwarf, leaves densely pilose, curved inflorescence coiled or rarely straight, spikelets superficially embedded, upper glume acuminate or awned, lemma mucronate, growing in rocky areas, grassy plains, shallow depressions, dry sandy soils, open rocky ground, see *Flora* 38: 332. 1855 and *Hooker's Icones Plantarum* 34: t. 3341. 1937, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 14. 1947, *Webbia* 8: 107-108. 1951, *Kew Bulletin* 1957: 60. 1957, *Bulletin du Jardin Botanique National de Belgique* 38: 1285. 1968, *Kew Bulletin* 50: 601-604. 1995.

in Somalia: harfo

O. thomaeum (L.f.) Trin. (*Nardus thomaea* L.f.; *Rottboellia thomaea* (L.f.) J. König; *Rottboellia thomaea* (L.f.) Willd.) (India, Madras, St. Thomé)

Tropical Africa, India, Kenya, Ethiopia, Somalia, Sri Lanka, Indochina, Burma. Perennial or annual, dwarf, densely tufted, strongly branched, leaf sheaths nerved, inflorescence straight or curved, spikelets distichous and deeply embedded, upper glume acute, lower glume obtuse, slopes, in shallow soil, granitic areas, dry and arid zones, see *Supplementum Plantarum* 105. 1781, *Der Naturforscher* 23. 1788, *Species Plantarum. Editio quarta* 1: 464. 1797, *Fundamenta Agrostographiae* 98, t. 3. 1820, *Enum. Pl. Zeyl.* 5: 363. 1864 and *Handb. Fl. Ceylon* 5: 271. 1900, *Grasses of Ceylon* 91. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 474. 1960, *Kew Bulletin* 50: 601-604. 1995.

in India: kuravan thodu pul

Orostachys Steudel = Hordelymus (Jess.)

Jess. ex Harz, *Hordelymus* (Jessen) Jessen in Harz, *Hordelymus* (Jessen) Harz, *Orostachys* Fisch. (Crassulaceae)

Greek *oros* “mountain” and *stachys* “a spike.”

Pooideae, Triticeae, Triticeae, see *Mémoires de la Société Impériale des Naturalistes de Moscou* 2: 270. 1809, *Nomenclator Botanicus. Editio secunda* 2: 233. 1841, *Deutschlands Gräser und Getreidearten...* 202. Leipzig 1863, *Landwirtschaftliche Samenkunde* 2: 1147. Berlin 1885.

Orrhopygium Á. Löve = Aegilops L.

From the Greek *orropygion*, *orsopygion*, *orthopygion* “rump of birds, tail, rump of any animal,” *orros* “rump, end of the *os sacrum*,” Latin *orrrhopygium* (a false read. for *orthopygium*), *orthopygium* “the rump and tail feathers of birds.”

Pooideae, Triticeae, Triticeae, type *Orrhopygium caudatum* (L.) Á. Löve, see *Species Plantarum* 1: 85. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Flore de France* 3: 601. 1856 and *Feddes Repert.* 91: 225-228. 1980, *Biologisches Zentralblatt* 101(2): 206. 1982, *Taxon* 41: 555-556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 20-23, 468. 2003.

Ortachne Nees ex Steudel = Anatherostipa (Hack. ex Kuntze) Peñailillo, *Lorenzochloa* J.R. Reeder & C. Reeder, *Ortachne* Steudel, *Orthachne* Hughes, *Parodiella* J. & C. Reeder, *Parodiella* Speg. (Fungi), *Stipa* L.

About 2-3 species, Patagonia, Antarctic, Peru, Andes. Pooideae, Stipeae, Stipinae, or Stipoideae, Stipeae, perennial bunchgrass, tufted to densely caespitose, herbaceous, short, unbranched, leaf blades filiform and rather spiny-tipped, leaves erect and rigid, plants bisexual, open inflorescence, a narrow few-flowered panicle, 1-flowered spikelets, 2 glumes awnless, glumes and lemma membranous, glumes shorter than floret, awn persistent, large lemma gradually narrowing to thick stiff awn, palea membranous, lodicules present, 3 stamens, open habitats, hilltops, páramos, montane woodland, among rocks, steep slopes, related to *Stipa*, type *Ortachne retorta* Nees ex Steud., see *Species Plantarum* 1: 78. 1753, Ernst Gottlieb von Steudel (1783-1856), *Synopsis plantarum glumacearum.* 1: 121. Stuttgartiae 1854, *Anales de Sociedad Científica Argentina* 9: 178. 1880, *Journal of the Linnean Society, Botany* 19: 81. 1881 and *Anales del Museo Nacional de Montevideo* 4(22): IV, 135. 1901, *Bulletin of Miscellaneous Information Kew* 1923(8): 301-303. 1923, *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Gayana, Botánica* 13: 1-137. 1965, *Boletín de la Sociedad Argentina de Botánica* 12: 268-283. 1968, *Boletín de la Sociedad Argentina de Botánica* 11(4): 239. 1969, *Kew Bulletin* 40(4): 727-729. 1984[1985], *Flora Mesoamericana* 6: 244-245. 1994, *Gayana, Botánica* 53(2): 277-284. 1996, *Contributions from the United States National Herbarium* 48: 109-110, 431, 468-469, 477. 2003.

Species

O. breviseta Hitchc. (*Stipa breviseta* (Hitchc.) Martic. & Quezada, nom. illeg., non *Stipa breviseta* Caro & E.A. Sánchez; *Stipa yatesensis* Martic. & Quezada)

Chile. See *Journal of the Washington Academy of Sciences* 17: 141. 1927, *Gayana, Botánica* 42(1-2): 152. 1985, *Gayana, Botánica* 43(1-4): 149. 1986.

O. erectifolia (Swallen) W.D. Clayton (*Lorenzochloa erectifolia* (Swallen) Reeder & C. Reeder; *Muhlenbergia erectifolia* Swallen; *Parodiella erectifolia* (Swallen) Reeder & C. Reeder)

South America, Colombia, Ecuador. Caespitose, foliage erect, densely clumped, páramos, see *Journal of the Washington Academy of Sciences* 21(1): 15. 1931, *Boletín de la Sociedad Argentina de Botánica* 12(279): 279-280, f. 1A-B, D-F, 3. 1968, *Boletín de la Sociedad Argentina de Botánica* 11(4): 239. 1969, *Kew Bulletin* 40(4): 729. 1985.

O. rariflora (Hook.f.) Hughes (*Muhlenbergia rariflora* Hook.f.; *Ortachne retorta* Steud.; *Ortachne retorta* Nees ex Steud.; *Stipa rariflora* (Hook.f.) Benth.; *Stipa retorta* (Nees ex Steud.) Mez, nom. illeg., non *Stipa retorta* Cav.)

South America, Falkland Islands. See *Flora Antarctica* 2: 371. 1846, *Synopsis Plantarum Glumacearum* 1: 121. 1854, *Journal of the Linnean Society, Botany* 19: 81. 1881 and *Repertorium Specierum Novarum Regni Vegetabilis* 17: 208. 1921, *Bulletin of Miscellaneous Information Kew* 1923: 301. 1923.

Orthachne Hughes = *Ortachne* Nees ex Steud.

Orthachne var.

Pooideae, Stipeae, Stipinae, see *Bulletin of Miscellaneous Information Kew* 1923(8): 301-303. 1923, *Contributions from the United States National Herbarium* 48: 468-469. 2003.

Orthoclada P. Beauv.

With straight shoots, from the Greek *orthos* “upright, straight” and *klados* “branch.”

About 2 species, tropical Africa, Zambia, Tanzania, Zaire, Amazon, tropical South America, southern Mexico, West Indies. Centothecoideae, Centothecaeae, or Bambusoideae, Oryzodae, Centothecaeae, or Panicoideae, Centothecaeae, perennial, herbaceous, unarmed, tufted, coarse, rhizomatous, branched only at base, erect or sometimes decumbent, rooting at the lower nodes, flowering culms leafy, auricles present, large leaf blades narrowly elliptic with well developed pseudopetioles, ligule a ciliolate membrane-like, plants bisexual, inflorescence spicate or paniculate and not sticky, large loose panicle with long and very fine branches, spikelets solitary and pedicellate, 1- to 4-flowered and all florets bisexual, upper floret disarticulating below lemma, two glumes unequal to very unequal, lemmas acuminate or with an awn tip, palea present, 2 free and fleshy lodicules, 2-3 stamens, ovary glabrous, 2 stigmas, resembling *Pharus*, shade, evergreen or semideciduous forest, along streams and rivers, forest floor, hills, in moist tropical lowland, type *Orthoclada rariflora* (Lam.) P. Beauv., see *Encyclopédie Méthodique, Botanique* 4: 746. 1798, *Essai d'une Nouvelle*

Agrostographie 69-70, 168, 170, t. 14, f. 9. 1812 and *Fl. Malay Pen.* 3: 122. 1907, W.C. Burger, (editor), *Flora Costaricensis*. [R.W. Pohl, Family 15. Gramineae] *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Taxon* 30: 615. 1981, *Flora Mesoamericana* 6: 248. 1994, *Contributions from the United States National Herbarium* 46: 303-304. 2003.

Species

O. africana C.E. Hubb.

Zambia, Zimbabwe. See *Hooker's Icones Plantarum* 35: t. 3419. 1940.

O. laxa (Rich.) P. Beauv. (*Aira laxa* Rich.; *Orthoclada laxa* P. Beauv.; *Orthoclada rariflora* (Lam.) P. Beauv.; *Orthoclada rariflora* var. *lanceolata* Döll; *Orthoclada rariflora* var. *rariflora*; *Orthoclada rariflora* var. *sesquiflora* Döll; *Orthoclada rariflora* var. *sesquitertia* Döll; *Panicum rariflorum* Lam., nom. illeg. superfl.; *Panicum rariflorum* (J.C. Mikan ex Trin.) Makino & Nemoto, nom. illeg., non *Panicum rariflorum* Lam.; *Panicum rariflorum* J. Presl ex Steud., nom. illeg., non *Panicum rariflorum* Lam.; *Poa rariflora* (Lam.) Roem. & Schult.; *Poa subumbellata* Roem. & Schult.; *Setaria rariflora* J.C. Mikan ex Trin.)

French Guiana, Venezuela, Costa Rica, Brazil. Perennial, erect, hollow, terete, caespitose, branched only at base, more or less decumbent, geniculate or creeping, rooting at the lower nodes, leaf sheaths open, leaf blades acuminate, terminal open ovate panicle, spikelets lanceolate and laterally flattened, glumes lanceolate, two stamens, sometimes weedy, forming colonies, riverbanks, along streams and rivers, clearings, open areas, see *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792, *Encyclopédie Méthodique, Botanique* 4: 746. 1798, *Essai d'une Nouvelle Agrostographie* 70, 149, 168, 170, t. 14, f. 9. 1812, *Systema Vegetabilium* 2: 570. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 78. 1821, *Synopsis Plantarum Glumacearum* 1: 51. 1853, *Flora Brasiliensis* 2(3): 118, f. 35. 1878 and *Flora of Japan* 1475. 1925, *Brittonia* 23(3): 293-324. 1971.

in Mexico: cadillo

Orthopogon R. Br. = *Oplismenus* P. Beauv.

From the Greek *orthos* “upright” and *pogon* “a beard.”

Panicoideae, Paniceae, Panicinae, type *Orthopogon compositus* (L.) R. Br., see Robert Brown (1773-1858), *Prodromus florae Novae Hollandiae et Insulae van-Diemen*. 194. London 1810, *Flore d'Oware* 2: 14-15, t. 68, f. 1. 1807 [1810] and *U.S. Dept. Agric. Bull.* 772: 238. 1920, *Contr. U.S. Natl. Herb.* 22: 123. 1920, *Contributions from the United States National Herbarium* 46: 299-303, 304. 2003.

Orthoraphium Nees = *Stipa* L.

From the Greek *orthos* “upright” and *rhaphis*, *rhaphidos*, *raphis* “a needle, raphe.”

Pooideae, Stipeae, Stipinae, type *Orthoraphium roylei* Nees (*Stipa orthoraphium* Steudel), see *Species Plantarum* 1: 78. 1753, *Proceedings of the Linnean Society of London* 1: 94. 1848, *Grasses of North-Western India* 27. 1883 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(486-491): 207. 1921, *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Sinensia* 4(11): 322-324, f. 2. 1934, *Journal of Japanese Botany* 17(7): 404. 1941, *Flora of Japan* 101. 1953, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 214. 1957, *Flora Tsinlingensis* 1(1): 150. 1976, *Grasses of Japan and its Neighboring Regions* 519. 1987, *Contributions from the United States National Herbarium* 48: 617-650. 2003.

x *Oryticum* C.P. Wang & S.H. Tang

Oryza x *Triticum*, China, *Oryticum oryzoides* C.P. Wang & S.H. Tang [*Oryza sativa* x *Triticum aestivum*], see *Acta Phytotaxonomica Sinica* 20(2): 179-181, pl. 1. 1982, *Genera Graminum* 375. 1986.

Oryza L. = *Leersia* Sol. ex Sw., *Oriza* J. St.-Hil., *Orysa* Desv., *Padia* Moritzzi

From the Latin and Greek *oryza* “rice,” Arabic *eruz*, Tamil *arisi* or *erisi*, Malayalam *ari*; see Carl Linnaeus, *Species Plantarum*. 333. 1753 and *Genera Plantarum*. Edition 5. 155. 1754; P. Sella, *Glossario latino emiliano*. Città del Vaticano 1937; Salvatore Battaglia, *Grande dizionario della lingua italiana*. Torino 1961-1989 etc.; Helmut Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 444-445. Basel 1996; Manlio Cortelazzo & Paolo Zolli, *Dizionario etimologico della lingua italiana*. 4: 1091. Bologna 1985; Ernest Weekley, *An Etymological Dictionary of Modern English*. 2: 1236. New York 1967.

About 18-22/25-28 species, tropics and subtropics. Bambusoideae, Oryzodae, Oryzeae, Oryzinae, or Ehrhartoideae, Oryzeae, Oryzinae, annual or perennial, tufted, aquatic or semiaquatic, flimsy to robust, shortly rhizomatous, herbaceous, unbranched or branched, erect or decumbent and rooting from lower nodes, culms internodes hollow, ligule membranous, auricles present and hairy, blade flat with smooth or scabrid margins, leaves linear to linear-lanceolate, plants bisexual, inflorescence an open and drooping panicle, spikelets usually solitary and strongly laterally compressed, spikelets pedicelled, 3 florets, 2 florets reduced to sterile lemmas, 1 fertile floret, two glumes present to absent, sterile lemmas leathery, fertile coriaceous uppermost lemma keeled and awned or awnless, palea nerved

and keeled, 2 lodicules membranous, stamens 6, ovary glabrous, 2 stigmas, African and Asian rices are principally carbohydrate sources, nomenclature of wild rices has been very confused, because of the complicated variation of inter- and intraspecies there has so far been much confusion in taxonomy and nomenclature, these are basically aquatic plants but some species grows on the slope of mountains with no standing water, weedy rice is a troublesome weed widespread all over the world — in partial or full shade, full sun, open and often flooded areas, rainforests, pampas, grasslands, humid forests, open swamps, hybridizes with *Triticum* L., resembling *Leersia*, type *Oryza sativa* L., see Carl Linnaeus, *Species Plantarum* 1: 333. 1753, *Genera Plantarum*. Edition 5. 155. 1754, *Nova Genera et Species Plantarum seu Prodrum* 1, 21. 1788, *Exposition des Familles Naturelles* 1: 87. 1805, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 76, 77. 1813, *Révision des Graminées* 1: 6. 1829, H.G.L. Reichenbach (1793-1879), *Repertorium herbarii sive nomenclator generum plantarum systematicus, synonymicus et alphabeticus* ... 36. Dresden und Leipzig 1841 [also *Der deutsche Botaniker* ... Erster Band. *Das Herbarienbuch*.], *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844* 103. 1845, *J. Linn. Soc. Bot.* 19: 54. 1881, *Histoire des Plantes* 12: 165, 166, 291. 1893, *The Flora of British India* 7: 93. 1896 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52(1-2): 168. 1914, *Bibliotheca Botanica* 85(1): 333. 1915, *Gen. Grasses U.S.* 18. 1920, *J. Fac. Sci. Univ. Tokyo* 3: 303. 1930, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 151. 1956, *Botanical Magazine (Tokyo)* 76: 165-173. 1963, *American Journal of Botany* 51: 539-543. 1964, *Indian Journal of Genetics and Plant Breeding* 25(2): 17, 174, 175. 1965, *Bol. Soc. Arg. Bot.* 12: 57-97. 1968, *Bulletin of the Torrey Botanical Club* 101: 244. 1974, *Euphytica* 25: 425-441. 1976, *Acta Phytotax. Sin.* 20: 179. 1982, *Genet. Sel. Evol.* 17: 89-114. 1985, *Revista de Ciencias (San Marcos)* 74: 48-57. 1986, *Folia Primatologica* 48: 78-120. 1987, *Blumea* 32: 157-193. 1987, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992, *Ruizia* 13: 1-480. 1993, *Flora Mesoamericana* 6: 220-221. 1994, S.S. Whang, K. Kim and W.M. Hess, “Variation of silica bodies in leaf epidermal long cells within and among seventeen species of *Oryza* (Poaceae).” *Am. J. Bot.* 85: 461. 1998, *Contributions from the United States National Herbarium* 39: 89-92. 2000, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang and De-Yuan Hong, “A phylogeny of the rice tribe Oryzeae (Poaceae) based on *matK* sequence data.” *American Journal of Botany* 89: 1967-1972. 2002, Douglas E. Soltis and Pamela S. Soltis, “*Amborella* not a “basal angiosperm”? Not so fast.” *Am. J. Bot.* 91: 997-1001. 2004, Joey Shaw, Edgar B. Lickey, John T. Beck, Susan B. Farmer, Wusheng Liu, Jerney Miller, Kunsiri C. Siripun, Charles T. Winder, Edward E. Schilling

and Randall L. Small, "The tortoise and the hare II: relative utility of 21 noncoding chloroplast DNA sequences for phylogenetic analysis." *Am. J. Bot.* 92: 142-166. 2005, *Weed Biology and Management* 5(2): 46-52, 62-68, 69-76. June 2005, *The Plant Journal* 42(5): 641-651, 772-780. June 2005, *The Plant Journal* 42(6): 798-809, 832-843, 901-911. June 2005, *New Phytologist* 166(3): 907-915, 917-932. June 2005, *Journal of Agronomy and Crop Science* 191(3): 172-184, 185-194. June 2005, *Allergy* 60(6): 808-814. June 2005, *Weed Research* 45(3): 220-227. June 2005, *Molecular Microbiology* 56(6): 1675-1688. June 2005, *Insect Molecular Biology* 14(3): 245-253. June 2005.

Species

O. sp.

in Cameroon: lese, nkwenndak

in Dahomey: kun, moli, molikun, molu

in Ghana: animi, ara, ka mu, ka mumu, arii, ki mimi, iraa

in Guinea: kini, malo, molo, mumu, pendekio, sobo, suma, sumu

in Ivory Coast: saka

in Mali: ara

in Niger: mo

in Nigeria: aas di kinong, arusu, bisika, boo ba, boo kem bana, eewe wwele, eleshe, elese, eresi, erosi, gappa, icikapa, iimelè, iiwelè, irais, isangkapa, isingkafa, itsikapa, kanasaara, lallaki, maroori, marowi, mualari, mwalari, nggibyen, nung maari, nzang, ocikapa, orosi, shangawa, shankava, shinkapa, singkafa, wwele

in Senegal: diuna

in India: dhanga, nel, nellu, padi, radjanna

in Iran: birinj, virinzi

in Iraq: birinj

in Sanskrit: vriki

O. alta Swallen (*Oryza latifolia* Desv.; *Oryza latifolia* var. *grandispiculis* A. Chev.)

South America, Brazil, Paraguay. Perennial or annual, aquatic or semiaquatic, erect, broad leaves, panicles open, large to small grain and wide leaf width, may form floating mats, found in savannah, in wet places, along the streams, rivers, lake edges, canals in deep waters, sometimes in woodlands, close to *Oryza latifolia* Desv., see *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 77. 1813 and *Revue internationale de botanique appliquée et d'agriculture tropicale* 12: 1027. 1932, *Publications of the Carnegie Institution of Washington* 461: 156, t. 1-2. 1936, *Brittonia* 23(3): 293-324. 1971, *Darwiniana* 30(1-4): 87-94. 1990, *Japanese Journal of Genetics* 70: 47-55. 1995.

O. australiensis Domin

Northern Australia. A weakly perennial species, erect, tufted, rhizomatous, strap-shaped leaves gray-green or dark green, nodes glabrous, panicles open with axis scabrous, spikelets pear-shaped, pedicel hairy, soft and wispy awns, grains eaten, fodder plant, grows in open habitats, found in undulating plains of *Eucalyptus* and *Leptochloa* or box woodland, in wet places, swamps or adjacent to swamps, edges of freshwater lagoons, seasonally dry pools, seasonally wet depression, alluvial streams, seasonal/intermittent freshwater ponds/marshes, sometimes grown by Aborigines, see *Bibliotheca Botanica* 85(1): 333. 1915.

in English: native rice

O. barthii A. Chev. (*Oryza breviligulata* A. Chev. & Roehr.; *Oryza glaberrima* subsp. *barthii* (A. Chev.) de Wet; *Oryza longistaminata* A. Chev. & Roehr.; *Oryza perennis* Moench; *Oryza perennis* subsp. *barthii* A. Chev.; *Oryza stapfii* Roshev.) (dedicated to the German traveler and explorer Heinrich Barth, 1821-1865, studied archeology, history, geography and law at the University of Berlin, 1844 graduated, 1849 British expedition to Bornu from Tripoli across the Sahara, appointed professor of geography at Berlin University and president of the Geographical Society, he published his discoveries in the five volume *Travels and Discoveries in North and Central Africa; Being a Journal of an Expedition Undertaken under the Auspices of H.B.M.'s Government in the Years 1849-1855*. London 1857-1858; met the German explorer and plant collector Eduard Vogel (1829-1856). See August Heinrich Petermann, 1822-1878, geographer, traveler, his writings include *African Discovery*. London 1854, *The Search for Franklin*. London 1852 and *An Account of the Progress of the Expedition to Central Africa ...* under Messrs. Richardson, Barth, Overweg and Vogel, in the years 1850, 1851, 1852 and 1853. London 1854; E. Weller, *Leben und Wirken August Petermanns*. Leipzig 1914; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 8, 83. Utrecht 1971; J.H. Barnhart, *Biographical notes upon botanists*. Boston 1965; William Allen (1793-1864) and Thomas Richard Heywood Thomson, *A Narrative of the Expedition ... to the River Niger, in 1841*. London 1848; J.F. Schön & S. Crowther, *Journals of the Expedition up the Niger in 1841*. London 1848; Joseph Vallot (1854-1925), "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 168-238. Paris 1882; R.W.J. Keay, "Botanical Collectors in West Africa prior to 1860." in *Comptes Rendus A.E.T.F.A.T.* 55-68. Lisbon 1962; *Bonplandia* 3: 265-270. 1855; *Bonplandia* 10: 353. 1862)

Tropical Africa, Nigeria, West Africa, Parc national de Waza, Yaéré floodplains, Yaoundé. Annual wild floating rice species, robust, rare, erect to semierect or decumbent, long-stemmed, rooting at the lower nodes, short ligule rounded or truncate, compact to open panicles rarely having secondary branching, spikelets large, long and strong scabrid awns, sterile lemmas lanceolate, panicles shattering very early,

starchy roots, among the worst weed in West Africa and Sahel, wild ancestor species of *Oryza glaberrima* Steud., seeds eaten by humans, these plants are harvested by the people as food, spontaneously growing in a deep-water area in African savannah, forming weedy hybrids with cultivated rice, good grazing for all stock when young or before flowering, found in mopane or savannah woodlands, ponds, in deep or shallow water, seasonally flooded lands, rivers, streams, swamps, stagnant water and slowly flowing water or pools, depressions, see *Methodus Plantarum Horti Botanici* ... 197. 1797, *Synopsis Plantarum Glumacearum* 1: 3. 1855 [1853] and *Bulletin du Muséum National d'Histoire Naturelle* 16(7): 405-406. 1911, *Comptes Rendus de l'Académie des Sciences, Série 2, Méc. Phys. Chim. Sci., Univers. Sci. Terre* 159: 561. 1914, *Kulturpflanze* 29: 198. 1981, *Blumea* 32: 19. 1987.

in English: wild rice, self-sown rice, Mandinka rice

in French: riz de marais, riz sauvage

in Angola: ombundu, arroz bravo

in Gambia: kamame mano, mani bano

in Guinea: awinekar, bambinekar, djina suma, fara loli, ko malo, kudyo, kuma malo, malo bano, malo mana, malo sina, maro guelode, maro ladde, malo pam'beleya, malu wunn, ndjangante, undjangante

in Guinea-Bissau: amano mane, aroz de ganga, arroz de ganga, cumaro maro, marocumarè, marokumarè, ntanse, ntante, untante

in Mali: kumo ara pilu

in Niger: alhama gaduye, babo, bawuri, gandi mô, genji mo, rûz, shinkaâ, tafaghat

in Nigeria: fergami, lallakii, nanare, shangawa, shinkaafar gyado, shinkaafar kwaadii, shinkaafar muuguu dawa, shinkaafar muuguu ndawa, shinkaafar rishi

in Nigeria: Shinkafar gyado

in Senegal: khuma malo, malo mpit, malo tid, malon senar, malon senjor, malon syenor

in Sierra Leone: antektek, apelapakrifi, funyana koe, kpe-kpengei, malumba navileya, ngafamba, payaryar, punga, sambane, sambane pindiki, tetege, tetek le

in Upper Volta: maaro fetu, maaro poli

O. brachyantha A. Chev. & Roehr.

Africa, Guinea, Sudan. Annual or short-lived perennial, aquatic, very slender culms and seeds, found in ponds, in shallow water, seasonally flooded lands, rivers, streams, swamps, stagnant water and slowly flowing water or pools, depressions.

in Senegal: malo sina

O. eichingeri A. Peter (*Oryza collina* (Trimen) S.D. Sharma & Shastry; *Oryza latifolia* var. *collina* (Trimen) Hook.f.; *Oryza sativa* var. *collina* Trimen)

Central Africa Republic, Côte d'Ivoire/Ivory Coast, Democratic Republic of Congo, Kenya, Rwanda, Tanzania, Uganda, Sri Lanka. Perennial wild rice, sometimes aquatic, short, hard and slender culms, erect, glabrous ligule, with or without rhizomes, panicles open to intermediately open to contracted, chlorophyllous veins across the length of the immature spikelets, grazed by wild animals, seeds eaten by birds, related to *Oryza officinalis* Wall. ex Watt, grown in the areas from shaded to half shaded, in seasonally wet situations, forest undergrowth, in undisturbed forests, gallery or evergreen forests, or forest margins, grows in damp or flooded sites such as pools, water holds, marshy places, pools in forests, streams or riverbanks and beds, in ditches, in sandy or gray loamy clay soils, confused with *Oryza rhizomatis* Vaughan, see *Journal of Botany, British and Foreign* 27: 169. 1889, *The Flora of British India* 7: 92. 1896 and *Indian Journal of Genetics and Plant Breeding* 25: 168. 1965, *Fl. Trop. East. Africa, Gramineae* 1: 31. 1970, *J. Linn. Soc., Bot.* 103: 160. 1990, *Acta Genetica Sinica* 24(5): 424-431. 1997.

O. glaberrima Steud. (*Oryza barthii* A. Chev. subsp. *glaberrima*)

West Africa, Nigeria, Sierra Leone. Annual, highly variable species, stout, mostly glabrous, dryland types and floating types, weak stalks, often rooted at the nodes, more or less branched or simple culms, reddish appearance, short and round ligules, compact panicles, flowers self-fertilizing, spikelets awnless, white grain and usually red husks, edible grain, sweet taste, keeps well after cooking, competes better with weeds, its grains tend to split, removing the husk is laborious, high nutritional quality, a carbohydrate source, baby foods, rice beer, gruel made from the seeds, Mandingo and Susu people use rice flour and honey to make a sweet-tasting bread, genetic interaction between African rice's wild and cultivated races, root eaten raw for diarrhoea, usually found in swampy and wet sites, see *Synopsis Plantarum Glumacearum* 1: 3. 1855 [1853] and *Bulletin du Muséum National d'Histoire Naturelle* 16(7): 405-406. 1911, *Revue internationale de botanique appliquée et d'agriculture tropicale* 26: 58. 1946, *Kulturpflanze* 29: 198. 1981, *Japan. J. Genet.* 60: 225-234. 1985, Khidir W. Hilu and Lioudmila V. Sharova, "Evolutionary implications of substitution patterns in prolamin genes of *Oryza glaberrima* (African rice, Poaceae) and related species." *Am. J. Bot.* 89: 211-219. 2002.

in English: African rice, Fula rice, glaberrima rice, red rice
in French: riz africain, riz de Casamance, riz de Baga, riz pluvial africain, vieux riz, riz flottant

in Cameroon: erisi (Banyong)

in Gambia: deberro, faton ndure, Fula mano, hombo fingo, keberro, keberro tima, mama saguia, mamading saguia, marboe saguia, ndure sanneh, nduree sanneh, sanun dingo, sona sanneh, tunkung gunakon, yakka, yakka ba

in Guinea: Baga-malé, djina suma, djina suna, gete, malé, riz de Baga

in Mali: ara geu, issa-mo (river rice), mou-bér (great rice), simoba

in Nigeria: babu rashi, betso, biya gero, buza (names for a special beer made from rice and honey), dan ciso, dan kashin shanu, dan mai zudan, dan tako, dan tanko, jan irin gari, osikapa obara obara, shinkaafaa sheefe, shinkaafaar biyau, shinkaafaa, tamba, tanko

in Senegal: diuna, malu

in Sierra Leone: apala, bomboto male, eko, epaser, gobe, kebele, koe, kokovaiye, Kono, kore, koro, kpakpati, kwe, mala, malai, male, malla, malo, malu, mande, mantalei, maro, marrai, maru, mba, mbei, njangei, nio, pa, paga, pakalaba, patimi, payaka, pele, res, sanganye, suma, yake

O. glumaepatula (also spelled ***glumipatula***) Steud. (*Oryza cubensis* Ekman ex Gotoh & Okura; *Oryza paraguayensis* Wedd. ex E. Fourn.; *Oryza perennis* Moench, nom. dub. var. *cubensis* Sampath, nom. nud.; *Oryza perennis* var. *glumipatula* (Steud.) C. Chev.; *Oryza rufipogon* Griff.)

Tropical regions of Central and South America. Perennial, tufted, scrambling, brittle culm near the base, diploid wild-rice species, vegetatively propagating, rapid and vigorous development of adventitious roots and shoots from each node, the life cycle of this species dependent on the water level variation, a potential use for restoration, sometimes included in *Oryza rufipogon* Griff., a floating meadow, distributed in wet areas and marshlands, in swamps and marshes, in open ditches and pools, beside rivers, near to cultivated rice fields, usually with deep water, in open habitats, see *Methodus Plantas Horti Botanici* ... 197. 1797, *Notulae ad Plantas Asiaticas* 3: 5, t. [Ic, t. Asiat.] 144, f. 2. 1851, *Synopsis Plantarum Glumacearum* 1: 3. 1855 [1853] and *Revue internationale de botanique appliquée et d'agriculture tropicale* 12: 1028. 1932, *J. Soc. Trop. Agric. Taihoku Univ.* 5: 363 f. 1. 1933, *Indian J. Genet. Pl. Breed.* 25(20): 157-167. 1965.

O. grandiglumis (Döll) Prod. (*Oryza latifolia* var. *grandiglumis* (Döll) A. Chev.; *Oryza sativa* var. *grandiglumis* Döll)

Brazil, Bolivia, Colombia, Peru. Perennial, aquatic or semi-aquatic, emergent, submerged or half-submerged, floating, tall, broad leaves membranous, pubescent ligule, inflorescence spicate, panicles open and lax, glumes are as long as lemmas and paleas, sterile lemma the same length as fertile lemma and palea, forage, found in savannah or woodland, wetlands, grows in water at river edges or wet places having clay and alluvial soils, small pools, in open and shaded habitats, formerly inundated ground, see *Species Plantarum* 1: 333. 1753, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 77. 1813, *Flora Brasiliensis* 2(2): 8. 1871 and *Botanisches Archiv* 1: 233. 1922, *Revue internationale de botanique appliquée et*

d'agriculture tropicale 12: 1207. Paris 1932, *Blumea* 32: 174. 1987.

in Brazil: arroz do brejo

in Peru: arrocillo

O. granulata Nees & Arn. ex G. Watt (*Oryza granulata* Nees & Arn. ex Hook.f., nom. illeg., non *Oryza granulata* Nees & Arn. ex G. Watt; *Oryza granulata* Nees & Arn. ex Steud.; *Oryza meyeriana* (Zoll. & Moritzi) Baillon subsp. *granulata* Nees & Arnott ex Watt; *Oryza meyeriana* subsp. *granulata* (Nees & Arn. ex G. Watt) Tateoka; *Oryza meyeriana* var. *granulata* Nees & Arnott ex Watt; *Oryza meyeriana* var. *granulata* (Nees & Arn. ex G. Watt) Duistermaat)

Tropical Asia, mountains, Southeast Asia. Perennial, short, loosely tufted or stoloniferous, stiffly erect to ascending, nodes glabrous, leaf blade lanceolate, ligule membranous collar-shaped, shortly rhizomatous, compact panicles usually without secondary branching, fertile spikelets always awnless, sterile lemmas subulate, fertile lemma awnless, variations about the seeds, weedy rice is a troublesome weed widespread all over the world, can give severe infestation in Vietnam and other Southeast Asian countries, found in deciduous forest, shady place under trees, dry woods, bamboo thickets, hilly places, on limestone hills or mountains, in damp places beside streams, waterfalls, near water holes, or seasonally dry, sloping land, moist deciduous forests, rarely on grass slopes, not found in standing water and usually grows in complete or partial shade, see *Synopsis Plantarum Glumacearum* 1: 3. 1853 [1854], *Dictionary of the Economic Products of India* 5: 500. 1891, *Histoire des Plantes* 12: 166. 1893, *The Flora of British India* 7: 93. 1896 and *Handb. Fl. Ceylon* 5: 183. 1900, *Grasses of Ceylon* 37. 1956, *Grasses of Burma* ... 604. 1960, *Botanical Magazine* (Tokyo) 75: 460. 1962, *Blumea* 32: 185. 1987.

in English: jungle oryza

in Indonesia: rumput lorodan, lorodan pari

in Thailand: khaao nok, khao-nok

in Vietnam: [us]a con cong

O. jeyporensis Govindaswami & Krishnam.

India, Orissa. Indeterminate species, endemic rice of wetlands of Eastern Ghats, see *Science and Culture* 24: 236. 1958.

O. latifolia Desv. (*Oryza alta* Swallen; *Oryza latifolia* Desv. var. *grandispiculis* A. Chev.; *Oryza latifolia* Humb. & Bonpl.; *Oryza latifolia* var. *latifolia*; *Oryza platyphylla* Schult. & Schult.f.; *Oryza sativa* var. *latifolia* (Desv.) Döll)

Central and South America, southern Mexico to northern Argentina. Perennial or annual, short to tall, leaf sheaths green, broad leaves, ligules with purple lines, ligule of lower leaves obtuse, panicles open, awned or awnless, spikelets deciduous, lemma and palea black, seed coat dark to brown to reddish, forms a related group with *Oryza alta* Swallen

and *Oryza grandiglumis* (Döll) Prod., forage, found in low forest, rainforest, secondary growth forest, in open or semi-open habitats, fringe of cultivated land, open woodland, pasture, cultivated fields, open swamps, wet places, hill slopes, high ridges, coastal belts, savannah, forest margin, in or near water, edges of lakes, streams, riverbanks or pool edges, on rocks, alluvium, sandy seashore, moist clay, rarely salts flats or near hot sulfur springs, see *Species Plantarum* 1: 333. 1753, *Methodus Plantas Horti Botanici ...* 197. 1797, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 77. 1813, *Systema Vegetabilium* 7(2): 1364. 1830, *Reliquiae Haenkeanae* 1(4-5): 208. 1830, *Flora Brasiliensis* 2(2): 7. 1871, *Journal of Botany, British and Foreign* 27: 169. 1889, *The Flora of British India* 7: 92. 1896 and *Bulletin du Muséum d'Histoire Naturelle* 27: 456, f. 41, t. 18. 1921, *Revue internationale de botanique appliquée et d'agriculture tropicale* 12: 1027. 1932, *Publications of the Carnegie Institution of Washington* 461: 156, t. 1-2. 1936, *Istituto Botanico della R. Università R. Laboratorio Crittogamico Pavia, Atti* 7(1): 15. 1946, *Brittonia* 23(3): 293-324. 1971, *Darwiniana* 30(1-4): 87-94. 1990, *Blumea* 37(1): 232. 1992, *Japanese Journal of Genetics* 70: 47-55. 1995.

in English: broad-leaf rice, broadleaf rice

in Colombia: arrocillo

in Thailand: yaa lamaan

O. longiglumis Jansen

Asia tropical, Indonesia, Papua New Guinea. Perennial, tufted, erect to semierect, not stoloniferous, ligule collar-shaped, leaf sheath tight, nodes glabrous, leaf blade linear, panicles intermediately open, spikelet horizontally inserted on the pedicel, sterile lemmas narrow and flexuous, fertile lemma awned, found in forest areas, grows on low-lying seasonally wet areas such as swamps, water holes of stream beds, usually grow as scattered plants in full to partial shaded conditions, in organic loamy soils, see *Reinwardtia* 2(2): 312, f. 13b. 1953.

O. longistaminata A. Chev. & Roehr. (*Oryza barthii* A. Chev.; *Oryza perennis* Moench; *Oryza perennis* subsp. *barthii* A. Chev.)

Tropical Africa, South Africa, Madagascar, Namibia. Perennial, terrestrial, soft, spongy, robust, thick, long rhizomatous with an extensive creeping rhizome system, stems elongating to keep pace with the rising flood, often decumbent and rooting from the lower nodes, long ligule acute pointed, panicle compact with branches ascending, scabrous deciduous oblong spikelets, sterile lemmas lanceolate, rigid awn, the grains readily shattering, forms weedy hybrids with cultivated rice, high grazing value, fodder, forage when young, seeds eaten, tendency of self-incompatibility and a high outcrossing rate, a noxious weed well adapted to the aquatic environment, very competitive with rice, among the worst weeds in West Africa and Sahel, thatching grass,

common in swamps and floodplains, streams, rivers, deep water, flooded grasslands, seasonal ponds, inundated meadows, shallow ponds, riverbanks, see *Methodus Plantas Horti Botanici ...* 197. 1797, *Synopsis Plantarum Glumacearum* 1: 3. 1855 [1853] and *Bulletin du Muséum National d'Histoire Naturelle* 16(7): 405-406. 1911, *Comptes Rendus de l'Académie des Sciences, Série 2, Méc. Phys. Chim. Sci., Univers. Sci. Terre* 159: 561. 1914, *Kulturpflanze* 29: 198. 1981, *Blumea* 32: 19. 1987.

in English: perennial wild rice, wild rice, long-staminate rice, African rice, red rice

in Ivory Coast: bangé saga, kolkodo

in Mali: bahure, bahuré, bulguré, fenl, ko malo, kuma malo, maro laddé, maro vendu, ndiga, phenl

in Nigeria: bau, bawu, karagala, karala, lallaki, naanaare, nanare, shinkaafar gyado, shinkaafar kwadi, shinkaafar mugun dawa, shinkaafar rishi, shinkaafar watsu, shinkafar watsu

in Senegal: bahuré, bahureè, bulguré, ko malo, kuma malo, maro laddé, mmaro laddé, maro vendu, ndomgoduane, sakuru malo, tiep walo

in Sierra Leone: a tetchek, antetchek, an tetchek, an tek tek, an tektek, an tetek, antektek, pakinkin, payariare, teteki

in Togo: bugau

in Upper Volta: burgu, hudendia

O. manilensis Merr. (*Oryza minuta* Presl; *Oryza minuta* var. *minuta*)

The Philippines, Luzon. See *Reliquiae Haenkeanae* 1(4-5): 208. 1830 and *Philippine Journal of Science* 3: 219. 1908.

O. meridionalis Ng (*Oryza perennis* Moench)

Northern Australia, Queensland, Western Australia. Annual or perennial, not stoloniferous, sometimes forming small tufts, erect to geniculate, leaf sheath tight and inflated, nodes glabrous, leaf blade linear, fertile lemma awned, weed of wet areas, produce large numbers of seeds under a range of inundation regimes, floodplains, wetlands, see *Botanical Journal of the Linnean Society* 82(4): 328. 1981.

O. meyeriana (Zoll. & Moritzi) Baill. (*Padia meyeriana* Zoll. & Moritzi)

Asia, Indonesia, the Philippines. Perennial, loosely tufted or stoloniferous, erect to ascending, ligule collar-shaped, nodes glabrous, leaf blade ovate-lanceolate to linear, fertile lemma awnless, eaten by cattle, grains good flavouring, see *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844* 103. 1846, *Dictionary of the Economic Products of India* 5: 500. 1891, *Histoire des Plantes* 12: 166. 1893 and *Botanisches Archiv* 1: 234. 1922, *Botanical Magazine (Tokyo)* 75: 460. 1962, *Blumea* 32: 185. 1987.

in Indonesia: hehawa, padi-padian

in the Philippines: paray-agway

O. meyeriana (Zoll. & Moritzi) Baill. var. *indandamanica* (J.L. Ellis) Veldkamp (*Oryza indandamanica* J.L. Ellis)

Asia. See *Histoire des Plantes* 12: 166. 1894 and *Bulletin of the Botanical Survey of India* 27: 29, f. 1-7. 1985 [1987], *Blumea* 36(1): 179. 1991.

O. meyeriana (Zoll. & Moritzi) Baill. var. *meyeriana*

Asia. Perennial, erect to ascending, loosely tufted or stoloniferous, rooting at the lower nodes, see *Histoire des Plantes* 12: 166. 1894.

O. minuta J. Presl (*Oryza manilensis* Merr.; *Oryza officinalis* Wall. ex G. Watt; *Oryza officinalis* Wall.)

Southeast Asia, Asia tropical. Perennial, tufted, stoloniferous, erect, scrambling, rhizomes creeping, culms decumbent and rooting from lower nodes, leaf sheath tight and inflated, ligule glabrous or hairy, nodes glabrous, leaf blade linear, panicles open with spreading branches, basal panicle branches usually not whorled, fertile lemma awned or awnless, probable progenitor of rice, found beside streams and riverbanks in lowland areas, near running fresh water, stream side, in fertile alluvial clay or loamy soils, old rubber plantations, usually in partial shade but also found in full shade of sago swamps, see *Reliquiae Haenkeanae* 1(4-5): 208. 1830, *A Numerical List of Dried Specimens* no. 8635. 1848, *Dictionary of the Economic Products of India* 5: 500. 1891 and *Philippine Journal of Science* 3: 219. 1908, *Chin. J. Rice Sci.* 10(3): 138-142. 1996, *Journal of Cytology and Genetics* 31(2): 195-198. 1996.

in Indonesia: padi monyet, paparean, suklet paren

in Malaysia: padi burung

in the Philippines: palay- maya, bayli-gadja, palai-palai

in Vietnam: l[us]a ma

O. minuta J. Presl var. *minuta* (*Oryza manilensis* Merrill)

Asia. See *Reliquiae Haenkeanae* 1(4-5): 208. 1830 and *Philippine Journal of Science* 3: 219. 1908.

O. minuta J. Presl var. *silvatica* (Camus) Veldkamp (*Oryza latifolia* var. *silvatica* Camus; *Oryza officinalis* Wall. ex G. Watt; *Oryza officinalis* Wall.)

Asia. See *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 77. 1813, *Reliquiae Haenkeanae* 1(4-5): 208. 1830, *A Numerical List of Dried Specimens* no. 8635. 1848, *Dictionary of the Economic Products of India* 5: 500. 1891 and *Bulletin du Muséum d'Histoire Naturelle* 27: 456, f. 41, t. 18. 1921, *Blumea* 37(1): 232. 1992, *Chin. J. Rice Sci.* 10(3): 138-142. 1996, *Journal of Cytology and Genetics* 31(2): 195-198. 1996.

in Thailand: ya la man

O. neocaledonica Morat

New Caledonia. Perennial and highly endangered species, loosely tufted, short, narrowly lanceolate and dark green leaves, open panicles, hooked hairs on the surfaces of

lemma and palea, awnless, shade species, found in sclerophyllous forest, in temporarily flooded black clay soils on schists, understory, see *Bulletin du Muséum National d'Histoire Naturelle, Série 4 Miscellanea* 16(1). 1994.

O. nivara S.D. Sharma & Shastry (*Oryza sativa* f. *spontanea* Roshev., nom. illeg.)

South and Southeast Asia, tropical Asia. Annual, short to intermediate height, not stoloniferous, semierect to decumbent, nodes glabrous, panicles usually compact, spikelets large, fertile lemma strongly awned, caryopsis deciduous at maturity, a wild relative of rice, forms weedy hybrids with cultivated rice, valuable as food supplement (in India and Sri Lanka), discovered to be the only known source of resistance for the grassy stunt virus (GSV) biotype one, usually found in swampy areas, seasonal swamp, at edge of pond and tanks, beside streams, in ditches, in or around rice fields, grows in shallow water, in seasonally dry and open habitats, dry ponds, similar to *Oryza sativa* L., see *Indian Journal of Genetics and Plant Breeding* 25: 161. 1965.

O. officinalis Wallich ex G. Watt (*Oryza minuta* J. Presl; *Oryza minuta* var. *sylvatica* (Camus) Veldkamp; *Oryza officinalis* Wall.)

Tropical Asia, Southeast Asia. Annual or perennial, tufted, stoloniferous, erect to semierect, leaf sheath tight and inflated, ligule collar-shaped, nodes glabrous, leaf blade linear, panicle whorled at base, fertile lemma awned or awnless, weed, eaten by cattle, can give severe infestation in Vietnam and other Southeast Asian countries, used medicinally (China), is a kind of holy plant and is protected within sanctuaries of Buddhist temples, grown spontaneously, from half shaded area in a forest margin to a disturbed sunny area, see *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 77. 1813, *Reliquiae Haenkeanae* 1(4-5): 208. 1830, *A Numerical List of Dried Specimens* no. 8635. 1848, *Dictionary of the Economic Products of India* 5: 500. 1891 and *Bulletin du Muséum d'Histoire Naturelle* 27: 456, f. 41, t. 18. 1921, *Botanical Magazine* (Tokyo) 75: 422. 1962, *Blumea* 37(1): 232. 1992, *Chin. J. Rice Sci.* 10(3): 138-142. 1996, *Journal of Cytology and Genetics* 31(2): 195-198. 1996.

O. punctata Kotschy ex Steud.

Tropical Africa, Madagascar, Asia. Perennial or annual, terrestrial or aquatic, stout, spongy, hollow, erect of two morphological types, diploid and tetraploid, soft and split ligules, panicles open, basal panicle branches widely spreading, seeds eaten as a famine-food, grains dehulled and boiled with water or milk, noxious weed, grains and stems eaten by baboons, common in open and disturbed areas, in a half shaded stable area, in open or semiopen habitats, forest margins, grassland and thickets, floodplain pans, degraded mopane scrub, open bush or shifting cultivation fields and rice fields, in swampy areas, wet places,

swampy streams, around water holes and pools, in shallow water, on riverbanks that flood to 1-m depth, see *Synopsis Plantarum Glumacearum* 1: 3. 1855 [1853] and *Feddes Repertorium* 104: 215-226. 1993, *Japanese Journal of Genetics* 70: 47-55. 1995.

in English: red rice

in Tanzania: Mpunga-pori

in Arabic: Ruz al wadi

O. rehderiana Chun (after the German botanist Alfred Rehder, 1863-1949, gardener, dendrologist and professor of dendrology, his writings include *Bibliography of Cultivated Trees and Shrubs Hardy in the Cooler Temperature Regions of the Northern Hemisphere*. Jamaica Plain, Massachusetts 1949 and *The Bradley Bibliography*. 1911-1918, founder and editor of the *Journal of the Arnold Arboretum* 1919-1940. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 138. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 328. 1972; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; H.R. Fletcher, *Story of the Royal Horticultural Society, 1804-1968*. Oxford 1969; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 618. University of Pennsylvania Press, Philadelphia 1964; J. Ewan, editor, *A Short History of Botany in the United States*. 136. 1969; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 341. 1973)

China. Rare species

O. rhizomatis Vaughan

Sri Lanka. Perennial, erect, rhizomatous, panicles open without whorled basal panicle branches, spikelets inserted near the base of lowest panicle branches, often awnless, closely related to *Oryza officinalis* Wallich ex Watt, grows in swampy or periodically flooded areas, usually in full sun or partial shade, this species has been found in an open grasslands, found in tropical forest, open and tall scrub with grassy openings, see *Journal of Botany, British and Foreign* 27: 169. 1889, *The Flora of British India* 7: 92. 1896 and *Indian Journal of Genetics and Plant Breeding* 25: 168. 1965, *Fl. Trop. East. Africa, Gramineae* 1: 31. 1970, *International Rice Research News Letter* 14(4): 5. 1989, *J. Linn. Soc., Bot.* 103: 160. 1990 [also *Botanical Journal of the Linnean Society* 103: 160, f. 1. 1990], *Acta Genetica Sinica* 24(5): 424-431. 1997.

O. ridleyi Hook.f.

Tropical Asia, Southeast Asia. Perennial, tufted, erect to semierect, stoloniferous, leaf sheath tight, auricles often

present, ligule glabrous, nodes glabrous, leaf blade linear, panicles open, fertile lemma awned, papery lemma and palea, sterile lemmas narrow and flexuous, commonly in full shade, found in old secondary and evergreen or dipterocarp forests, shaded forest floors, flooded rainforests, old and abandoned rubber plantations, dense thicket or less commonly open spaces, grows in marshes or riverbanks near streams, see *The Flora of British India* 7: 93. 1896.

in Malaysia: paroi tasur

in Thailand: yaa khaao thaam, ya khao tham, ya-khaotham

in Vietnam: l[us]a r[uwf]ng

O. rufipogon Griffith (*Oryza cubensis* Ekman ex Gotoh & Okura; *Oryza fatua* J. König ex Trin.; *Oryza fatua* var. *longearistata* Ridl.; *Oryza glumipatula* Steud.; *Oryza paraguayensis* Franch.; *Oryza paraguayensis* Wedd. ex E. Fourn.; *Oryza perennis* Moench; *Oryza perennis* var. *glumipatula* (Steud.) Chev.; *Oryza perennis* var. *paraguayensis* A. Chev., also *paragayensis*; *Oryza rubribarbis* (Desv.) Steud.; *Oryza sativa* L.; *Oryza sativa* f. *spontanea* Roshev.; *Oryza sativa* subsp. *rufipogon* (Griff.) de Wet; *Oryza sativa* var. *abuensis* G. Watt; *Oryza sativa* var. *bengalensis* G. Watt; *Oryza sativa* var. *coarctata* G. Watt; *Oryza sativa* var. *fatua* Prain; *Oryza sativa* var. *paraguayensis* Franch.; *Oryza sativa* var. *paraguayensis* Parodi, nom. illeg., non *Oryza sativa* var. *paraguayensis* Körn.; *Oryza sativa* var. *paraguayensis* Franch., nom. illeg., non *Oryza sativa* var. *paraguayensis* Körn.; *Oryza sativa* var. *rubribarbis* Desv.; *Oryza sativa* var. *rufipogon* (Griff.) G. Watt.; *Oryza sativa* var. *savannae* Körn.; *Oryza sativa* var. *sundensis* Körn.)

Temperate and tropical Asia, Southeast Asia. Annual or perennial, variable, tufted or stoloniferous, upright, decumbent, scrambling, nodes glabrous, with adventitious roots, often rhizomatous, roots fibrous, plant height variable depending on the depth of water, lower stems floating and rooting at the nodes, extravaginal branching at higher nodes, open leaf sheaths tight and inflated, acute to acuminate ligule membranous, coarse foliage, floating or emergent leaves, auricles present or absent, open panicles long with loosely ascending branches, glumes reduced to minute ridges on the stalk, 3 florets, the lower 2 sterile and glume-like, the upper 1 fertile, awn of fertile lemma very variable, lemma and palea black to dark, anthers yellow or brown, stigma purple, grains red-brown, husk reddish to rust color, grain eaten in times of famine in India and Brazil, reproduces by seed and vegetatively from rhizomes, probable progenitor of cultivated rice, a noxious weed, invasive, forms weedy hybrids with cultivated rice, red rice is the most common weedy biotype of the cultivated rice (*Oryza sativa* var. *sylvatica*) in all rice growing areas with temperate climate, can give severe infestation in Vietnam and other Southeast Asian countries, rich in ecological and geographical variations, grazed by cattle and buffaloes, rejected by cattle because of its hard foliage, found in swamps and

marshes, in open ditches, swampy grassland, ponds, along riverbanks, at the edges of lakes, and in or at the margins of rice fields, in deep water areas, shallow waters, riverine floodplains, lake edge, seasonal/intermittent freshwater ponds or marshes, standing or slow-running water, see *Species Plantarum* 1: 333. 1753, *Methodus Plantas Horti Botanici ...* 197. 1797, *Journal de Botanique, rédigé par une société de botanistes* 1: 76. 1813, *Nomenclator Botanicus* 577. 1821, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 177. 1839 [Feb 1840], *Notulae ad Plantas Asiaticas* 3: 5, t. 144, f. 2. Calcutta 1851, *Synopsis Plantarum Glumacearum* 1: 3. 1855 [1853], *Compt. Rend. Cong. Int. Bot. & Hort. Paris* 1878: 233. 1880, *Handbuch des Getreidebaus* 1: 233, 236 and 2: 939 [H. Werner, *Die Sorten und der Anbau des Getreides*]. Bonn 1885, *Dictionary of the Economic Products of India* 5: 500, 504-505. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 365. 1893, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 365. 1895 and *The Flora of the Malay Peninsula* 5: 252. 1925, *Revue internationale de botanique appliquée et d'agriculture tropicale* 12: 1208, t. 6. 1932, *Journal of the Society of Tropical Agriculture* 5: 363, f. 1. 1933 [also *J. Soc. Trop. Agric. Taihoku Univ.*], *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 11: 244. 1933, *Indian J. Genet. Pl. Breed.* 25(20): 157-167. 1965, *Kulturpflanze* 29: 188. 1981, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Blumea* 32: 19, 174. 1987, *Acta Botanica Sinica* 35(1): 844-848. 1993, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, Zhong-wen Xie, Yan-qin Lu, Song Ge, De-yuan Hong and Fa-zen Li, "Clonality in wild rice (*Oryza rufipogon*, Poaceae) and its implications for conservation management." *Am. J. Bot.* 88: 1058-1064. 2001, Gui-hua Liu, Jin Zhou, De-si Huang and Wei Li, "Spatial and temporal dynamics of a restored population of *Oryza rufipogon* in Huli Marsh, South China." *Restoration Ecology* 12(3): 456-463. Sep 2004.

in English: wild rice, brown-beard rice, wild red rice, perennial wild rice, red rice, common wild rice

in Spanish: arroz rojo

in India: jhara, karga, nirvari, nivaru, uri

in Indonesia: padi burung, paparean, waiwi

in Malaysia: padi hantu

in Thailand: ya khao phi

in Vietnam: l[us]a hoang

O. sativa L. (*Oryza elongata* (Desv.) Steud.; *Oryza glutinosa* Lour.; *Oryza plena* (Prain) Chowdhury; *Oryza rubri-barbis* (Desv.) Steud.; *Oryza sativa* cv. *italica* Alef.; *Oryza sativa* subsp. *indica* Kato; *Oryza sativa* var. *affinis* Körn.; *Oryza sativa* var. *elongata* Desv.; *Oryza sativa* var. *erythroceros* Körn.; *Oryza sativa* var. *flavoacies* Kara-Murza ex Zhuk.; *Oryza sativa* var. *melanacra* Körn.; *Oryza sativa* var.

plena Prain; *Oryza sativa* var. *rubri-barbis* Desv.; *Oryza sativa* var. *savannae* Körn.; *Oryza sativa* var. *suberythroceros* Kanevsk; *Oryza sativa* var. *vulgaris* Körn.; *Oryza sativa* var. *zeravschanica* Brches ex Katzaroff)

Southeast Asia or Ethiopia. Annual or perennial, numerous cultivars, many varieties are differentiated, tufted, semi-aquatic, stout, upright and arching, unbranched, extensive root system, leaf sheath ribbed and smooth, leaf blades linear, long and pointed ligules, hairy auricles membranous and curved, leaves in two ranks, panicle more or less exerted or partially included in upper leaf sheath, loose terminal panicle arching and open, spikelets large and persistent, 3 florets, lowest 2 florets sterile, uppermost floret female, each flower is surrounded by a lemma and palea at the base of which are two small glumes, glumes scale-like, sterile lemmas awnless, fertile lemma awned and nerved, awn terminal and straight, palea keeled, one of the world's two major human food crops, grain crop, cattle food, hay for animal feeding, rice straw is retained for feeding draught animals, rice bran is fed to domestic animals, beverage base, cereal, oil/fat, starch, fodder, fiber for papermaking, hay fairly palatable, noxious weed, potential seed contaminant, excess feeding of rice straw leads to toxicity because of high oxalates, little drought tolerance, rice has the capacity to neutralize the soil on which it is growing, stem borers affect the stalk, army worms and grasshoppers cause major leaf damage, found along drains and channels, in areas seasonally wet, in standing water, in wetlands, swampy areas, moist deciduous forests, see *Species Plantarum* 1: 333. 1753, *Flora Cochinchinensis* 1: 215. 1790, *Journal de Botanique, rédigé par une société de botanistes* [Edited by Desvaux] 1: 76. Paris 1813, *Nomenclator Botanicus* 577. 1821, *Flora de Filipinas* edition 1. 273-275. 1837, *Notulae ad Plantas Asiaticas* 3: 5, t. 144, f. 2. 1851, *Landwirtschaftliche Flora* 318, 319. 1866, *Flora Brasiliensis* 2(2): 7-8. 1871, *Handbuch des Getreidebaus* 1: 94, 233, 236 and 2: 938, 940, 942-949. [a second volume, by H. Werner, *Die Sorten und der Anbau des Getreides*] 1885, *Journal of Botany, British and Foreign* 27: 169. 1889, *Dictionary of the Economic Products of India* 5: 504-505. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 365. 1893, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 365. 1895, *The Flora of British India* 7: 92. 1896 and *Botanisches Archiv* 1: 233. 1922, *Revue internationale de botanique appliquée et d'agriculture tropicale* 12: 1207. 1932, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 11: 244. 1933, *Blumea, Supplement* 3 (Henard Jubilee Volume): 53. 1946, *Indian Forester* 75: 497. 1952, *Indian Journal of Genetics and Plant Breeding* 25: 168. 1965, Rolinson A.E., "Rates of cell division in the vegetative shoot apex of rice (*Oryza sativa* L)." *Annals of Botany* 40: 939. 1976, *Kulturpflanze* 29: 188. 1981, *Acta Genetica Sinica* 11: 207-210. 1984, *Journal of Wuhan Botanical Research* 3(4): 413-417, 418. 1985, *Kromosomo* 43-44: 1398-1404. 1986,

Blumea 32: 174. 1987, *Proceedings of the Indian Science Congress Association* 74(3, VI): 100-103. 1987, *Proceedings of the Indian Science Congress Association* 75(3-X): 49. 1988, *Aspects of Plant Sciences* 10: 113-119. 1989, Jones T.J. & T.L. Rost, "The developmental anatomy and ultrastructure of somatic embryos from rice (*Oryza sativa* L.) scutellum epithelial cells." *Botanical Gazette* 150: 41. 1989, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 55: 193-202. 1989, Hiratsuka J.H. et al., "The complete sequence of the rice (*Oryza sativa*) chloroplast genome: intermolecular recombination between distinct tRNA genes accounts for a major plastid DNA inversion during the evolution of the cereals." *Molecular General Genetics* 217: 185-194. 1989, *Acta Genetica Sinica* 17: 1-5. 1990, *Japanese Journal of Genetics* 66: 305-312. 1991, *Cytologia* 56: 319-325. 1991, *Cytologia* 57: 265-266. 1992, *Plant Systematics and Evolution* 188: 125-138. 1993, *J. Southw. Agric. Univ.* 16(4): 387-389. 1994, *Chin. J. Rice Sci.* 10(3): 138-142. 1996, M.P. Staves, R. Wayne & A.C. Leopold, "The effect of the external medium on the gravitropic curvature of rice (*Oryza sativa*, Poaceae) roots." *Am. J. Bot.* 84: 1522. 1997, Notsu Y.S. et al., "The complete sequence of the rice (*Oryza sativa* L.) mitochondrial genome: frequent DNA sequence acquisition and loss during the evolution of flowering plants." *Molecular Genetics and Genomics* 268: 434. 2002, Kazunori Tamai & Jian Feng Ma, "Characterization of silicon uptake by rice roots." *New Phytologist* 158(3): 431-436. June 2003, John S. Sperry & Uwe G. Hacke, "Analysis of circular bordered pit function I. Angiosperm vessels with homogenous pit membranes." *Am. J. Bot.* 91: 369-385. 2004, Elizabeth A. Kellogg & Jeffrey L. Bennetzen, "The evolution of nuclear genome structure in seed plants." *Am. J. Bot.* 91: 1709-1725. 2004.

in English: rice (husked seed), rice plant, wild rice, cultivated rice, domestic rice, paddy (unhusked), padi, Asiatic rice, Asian rice

in Italian: riso

in French: riz, riz asiatique

in Australia: anboa, kwangan, jikan, mokomurdo (all Aboriginals names)

in Spanish: arroz

in Colombia: arroz

in Mexico: arroz, arus, hierba del ratón, jotei, jxooba-negati-xtilla, mey-pu, mmey-pu, xica-coosooto, xoba nagati xtilla, xooba-ne-gati-xtilla, xoopa nagati castilla

in Nicaragua: rais, ri

in Bhutan: bara, chhum

in Burma: sabar-bin

in Cambodia: srö:w

in China: jing mi, tao, tu, hsien, gu ya, dao ya, ku ya, tao ya, keng, keng mi, Nuo Dao Gen Xu (= the root and rhizomes of rice), nuo tao ken su, yi tang, i tang, chiao i

in India: akki (grain), ari, arishi, arisi, arshi, arruz, arz, baranj, battha, bhat (boiled), bhatta (paddy), bhattada-hullu (straw), biranj, biyam, biyyam, biyyamu, bras, chaaval, chal, chan, chanval, chanvol, chaul, chaval, chavel, chawal, cheni, choka, chokha, dangar, dangara, dein, deodhan, dhaanyamu, dhan, dhanya, dhanyamu, errajilama vadlu, garri, hal, horo, ketan, ketanshali, mattakaaralu, nellu (paddy), nevaridhaanyamu, newaree, nivara, paral (straw), pari (paddy), pendha (straw), pulut, pusnee, saala, sal, san, saryun (straw), shaali, shali (with husk), shalian, syali, tai, tandul, tandula, tandulam, tani, thaandula, thandula, thomul, uri dhan, urlu, urz, vadlu, vari, varidhanyamu, vrihi, vudlu, yerra rajanaalu

in Indonesia: padi, pare, pari

in Japan: ine (= rice plant), kome (= rice grain), gohan (= cooked rice)

in Laos: khao

in Malaysia: paddy, padi

in Okinawa: mai

in Papua New Guinea: rais

in the Philippine Islands: ammai, humay, pagai, pagay, pagei, palai, palay, pale, parai, paroy, pai

in South Laos: (people Nya Hön) cäh duan (= holiday rice), cäh maat (= everyday rice), cäh mûön (= late rice), cäh ngiau, cäh ddak dông, cäh gye' (= early rice), cäh gleet, cäh roh (= washed rice), cäh hlak (= Alak rice), cäh dang (= bitter rice), cäh da'ôôn, cäh kuan dean, cäh llông lang (= rice tree lang), cäh dum (= red rice), cäh boh (= salted rice)

in Sri Lanka: wi, uru wi

in Thailand: bue thuu, bue thu, khao chao, khao khai maeng daa, khao kho raeng, khao nieo, khao nieo pua, khao nueng, khao, khao chao, khao khai maeng da, khao kho raeng, khao niao, khao niao pua, khao nueng

in Tibetan: bras

in Vietnam: lua te, lua, srau

in Gambia: mano, tubal mano

in Ghana: azan, emo, emu, imul, miirin, moli, molu, mori, muie, mumuna, omo, sinkafa, sunkafa

in Guinea: dishi, disii, dixi, dixio, dixo, halemoni, kini, malé, malo, malu, malu bandyul, malu i banax, malu i seget, malu syisyet, meleke, mereke, merke, merkeni, mumu, selegbo, selemonu, suma

in Ivory Coast: bla, di, gbla, ko, kobo, koo, kowe, sàà, saka, sakà, sika, sukàa, sukè

in Liberia: bu, kolo

in Malawi: mpunga; (for uncooked rice) cikatu, cigodo, gamba, unyu, mangungu, mankhunkhu

in Mali: malo

in Morocco: rûz, rawz, mârô, maru

in Niger: chengawâ, mo, mô, moa, riz, shinkafâ, tafaghat, tchiakaka

in Nigeria: among, betso, burungo, buza, chenkafo, chingapa, cinkafa, cun bikwook, edesi, egi nas, elisi, esmalle, fergamyè, gume, hoyyanga, hyinkapa, iresi, ize, kukus, maaroori, morori, nsikapa, ochikapa, osikapa, pergami, pirgami, rauno, resi, shansheeraa, shefè, shewi, shinkaafaa, shinkaafàà, sikafa, sinkafa, sinkapa, tsingaapa, tsinggapa, yokofa

in Senegal: diuna, emano, malo, malon, malon bandiyul, malon bandyul, tiep

in Sierra Leone: apela, eko, fara kore, gbilema kore, jonge, kayaka, kharima male, kharima malle, kokovaya, kore, kwe, male, mali, malla, malo, malu, maro, maru, mba, mba gale, mba wui, mbei, meri male, meri malle, paga, pagalaba, pakalaba, pelé, pele, res, suma

in Tanzania: mshele

in Togo: imogule, mau, mi, miirbe, miri, ungau

in Upper Volta: amui, amwi, maan, maaro, mui, muuli, mwi

in Yoruba: resi, iresi

O. schlechteri Pilger

Papua New Guinea, Indonesia. Perennial, tufted, erect, stoloniferous, short, small-sized grass, leaf sheath tight, leaf blade linear, short narrow leaves with pubescent auricles and short ligule, nodes hairy, panicles short and open, with two glumes at the base of the spikelet, fertile lemma awnless, found in undisturbed forests, on land slips, loose rocks, beside rivers in humid conditions, grows in shade or partial sun, this species is the closest to the genus *Leersia* Sw., see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52(1-2): 168. 1914.

Oryzidium C.E. Hubb. & Schweick.

Referring to the generic name *Oryza* L.

Monotypic, southern tropical Africa. Panicoideae, Panicoideae, Paniceae, perennial, spongy, herbaceous, floating and submerged, unarmed, branched, long stoloniferous, culm sheaths persistent, internodes spongy, auricles absent, ligule a fringe of hairs, plants bisexual, inflorescence paniculate with lanceolate spikelets, lower floret male, upper floret female, spikelets solitary and pedicellate, two glumes unequal, lower glume an ovate scale, upper glume with a long straight stiff awn, lemmas mucronate, palea present, 2 lodicules free and fleshy, no stamens, ovary glabrous, 2 stigmas, open habitats, in permanent water, type *Oryzidium barnardii* C.E. Hubb. & Schweick., see *Bulletin of Miscellaneous Information Kew* 1936(5): 326, 328, f. 2. 1936.

Species

O. barnardii C.E. Hubb. & Schweick. (for the British marine biologist Keppel Harcourt Barnard, 1887-1964,

ichthyologist and invertebrate specialist, studied botany and zoology at Cambridge 1905-1908, F.L.S. 1921, botanical collector in South Africa and Mozambique, 1946-1956 Director of the South African Museum. See Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 89. 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 46. London 1994; *Proc. Linn. Soc.* 177: 117-119. 1966; R.F.H. Summers, *A History of the South African Museum, 1825-1975*. Cape Town 1975)

Zimbabwe, Zambia to southwest Africa. Perennial, rooting and branching at the lower nodes, leaf sheaths papery, lower glume small and obtuse, upper glume awned, lower lemma acuminate, floating species, in vleis, see *Bulletin of Miscellaneous Information Kew* 1936(5): 328, f. 2. 1936.

Oryzopsis Michaux = *Dilepyrum* Raf.,
Eriocoma Nutt., *Fendleria* Steud., *Piptatherum*
P. Beauv., *Urachne* Trin.

Greek *oryza* "rice" and *opsis* "appearance"; see André Michaux (1746-1803), *Flora Boreali-Americana*. 1: 51. Paris 1803.

Some 4-35 species, northern hemisphere, Middle East, temperate and subtropics. Stipoideae, Stipeae or Pooideae, Stipeae, Stipinae or Arundinoideae, Stipeae, perennial, tufted, clumped, unbranched above, nodes glabrous, culm leaves present, culm internodes solid or hollow, leaf blades flat or rolled, auricles absent, ligule membranous, plants bisexual, cleistogamous or chasmogamous, open inflorescence paniculate, spikelets 1-flowered, dorsally compressed floret, 2 glumes unequal or subequal, lemma more or less coriaceous, awn deciduous and not twisted, palea coriaceous and 2-nerved, 2-3 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, woodland, dry mountain slopes, sometimes in *Piptatherum* and *Achnatherum*, type *Oryzopsis asperifolia* Michx., see *Flora Boreali-Americana* 1: 51, t. 9. 1803, *Medical Repository*, ser. 2, 5: 353. 1808, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 17, 18, 173. Paris 1812, *The Genera of North American Plants, and Catalogue of the Species, to the Year 1817*. 1: 40. Philadelphia 1818, Carl Bernhard von Trinius (1778-1844), *Fundamenta Agrostographiae* 109, 110. Vienna 1820, *Species Graminum Stipaceorum* 9, 16, 19. 1842, *Synopsis Plantarum Glumacearum* 1: 419-420. 1854, *Proceedings of the California Academy of Sciences* 4: 168. 1872, *Contributions from the United States National Herbarium* 1(8): 267. 1893, *Anales del Museo Nacional de Buenos Aires* 4: 179, f. 2. 1895 and *Anales del Museo Nacional de Montevideo* 4(2): 4-6, 10-12, f. 2a-c, 4. 1901, *Journal of the Linnean Society, Botany* 36(254): 382. 1904, *Contributions from the United States National Herbarium* 11: 109. 1906, *Bulletin of the Torrey Botanical Club* 39(3): 102. 1912, *U.S. Dept. Agric. Bull.* 772: 156, 158. 1920, *Bot. Gaz.*

107: 1-32. 1945, E.D. Merrill, *Index rafinesquianus* 75. 1949, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 211. 1957, *Notes Roy. Bot. Gard. Edinburgh* 33: 341-408. 1975, *Flora Tsinlingensis* 1(1): 145. 1976, *Acta Phytotaxonomica Sinica* 19(4): 354, 435. 1981, *Grasses of Uttar Pradesh* 64. 1994, *Vascular Plants of the Hengduan Mountains* 2: 2257. 1994, *Grasses: Systematics and Evolution* 75-82. 2000 [Relationships within the stipoid grasses (Gramineae)], Matthew A. Gitzendanner and Pamela S. Soltis, "Patterns of genetic variation in rare and widespread plant congeners." *Am. J. Bot.* 87: 783-792. 2000, *Conservation Biology* 15(4): 844-855. Aug 2001, *Restoration Ecology* 10(1): 27-36. Mar 2002, *Grass and Forage Science* 57(4): 395-400. Dec 2002, *Contributions from the United States National Herbarium* 48: 15-18, 271, 312, 469-473, 494-495, 684-687. 2003, *Conservation Biology* 17(6): 1681-1693, 1703-1711. Dec 2003, *Botanical Journal of the Linnean Society* vol. 144, issue 4: 483-495. Apr 2004, *Journal of Biogeography* vol. 32, issue 1: 85-98. Jan 2005, *Journal of Biogeography* 32(6): 1085-1106. June 2005.

Species

O. asperifolia Michx. (*Oryzopsis aspera* Michx. ex Muhl.; *Oryzopsis leucosperma* Link ex Walp.; *Oryzopsis mutica* Link; *Urachne asperifolia* (Michx.) Trin.; *Urachne leucosperma* Link; *Urachne mutica* (Link) Steud.)

Northern America, Canada, U.S. See *Flora Boreali-Americana* 1: 51, t. 9. 1803, *Catalogus Plantarum Americae Septentrionalis* 11. 1813, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 41. 1821, *De Graminibus unifloris et sesquifloris* 166. Petropoli 1824, *Hortus Regius Botanicus Berolinensis* 1: 94. 1827, *Nomenclator Botanicus. Editio secunda* 2: 731. 1841, *Annals of Botany. Oxford* 3: 728. 1853.

in English: roughleaf ricegrass

O. canadensis (Poir.) Torr. (*Oryzopsis juncea* Britton, Sterns & Poggenb.; *Oryzopsis macounii* (Scribn.) Beal; *Piptatherum canadense* (Poir.) Dorn; *Stipa canadensis* Poir.; *Stipa juncea* Michx., nom. illeg., non *Stipa juncea* L.; *Stipa macounii* Scribn.; *Urachne canadensis* (Poir.) Torr.) (dedicated to the Irish-born Canadian botanist and ornithologist John Macoun, 1831-1920, author of *Catalogue of Canadian Plants* ... 1883-1902; he was the father of the Canadian botanist and geologist James Melville Macoun (1862-1920), author of *Contributions to Canadian Botany* ... 1894-1906. See *Mycotaxon* 19: 231. 1971; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913)*. Dresden 1916; R. Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 460. 1994; Joseph Ewan, *Rocky Mountain Naturalists*. 257-258. [John Macoun, b. 1832] The University of Denver Press 1950; Stafleu and Cowan, *Taxonomic literature*. 3: 232-234. 1981; T.W. Bossert, compil.,

Biographical dictionary of botanists represented in the Hunt Institute portrait collection. 248. 1972; J.H. Barnhart, *Biographical notes upon botanists*. 2: 432. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1: 451. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 277-278. 1973; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. Oxford 1964; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 107. Edinburgh 1970)

Northern America, Canada, U.S. Awn persistent geniculate and twisted, see *Flora Boreali-Americana* 1: 54. 1803, *Encyclopédie Méthodique, Botanique* 7: 452. 1806, *North American Gramineae and Cyperaceae* 2: 114. 1835, *Fl. New York* 2: 433. 1843, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Catalogue of Canadian Plants* 2(5): 390. 1890, *Grasses of North America for Farmers and Students* 2: 229. 1896 and *Contr. U.S. Natl. Herb.* 12: 150. 1908, *Vascular Plants of Wyoming* (edition 3) 377. 2001.

O. exigua Thurb. (*Piptatherum exiguum* (Thurb.) Dorn)

North America, U.S., Canada. Awn persistent geniculate and twisted, see Charles Wilkes (1798-1877), *Narrative of the United States Exploring Expedition*. During the years ... Philadelphia 1845 *United States Exploring Expedition* 17: 481. 1874, *Contributions from the United States National Herbarium* 1(8): 267. Washington, D.C. 1893 and *Contributions to Western Botany* 14: 11. San Francisco 1912, D.C. Haskell, *The United States Exploring Expedition 1838-1842 and Its Publications 1844-1874*. New York 1942, D.B. Tyler, *The Wilkes Expedition: The First United States Exploring Expedition (1838-1842)*. Philadelphia 1968, G.A. Doumani, editor, *Antarctic Bibliography*. Washington, Library of Congress 1965-1979, *Canadian Journal of Botany* 49(9): 1568. 1971, *Phytologia* 74(1): 7. 1993, *Vascular Plants of Wyoming* (edition 3) 377. 2001.

O. hendersonii Vasey (*Achnatherum hendersonii* (Vasey) Barkworth; *Oryzopsis exigua* var. *hendersonii* (Vasey) M.E. Jones; *Stipa hendersonii* (Vasey) Mehlenb.)

U.S. Rare bunchgrass, often in *Achnatherum*, see *United States Exploring Expedition* 17: 481. 1874, *Contributions from the United States National Herbarium* 1(8): 267. 1893 and *Contributions to Western Botany* 14: 11. 1912, *Canadian Journal of Botany* 49(9): 1568. 1971, *Phytologia* 74(1): 7. 1993, G.L. Rapson and J. Maze, "Variation and integration in the rare grass *Achnatherum* (*Oryzopsis*) *hendersonii*: phenotypic comparison with parapatric common congeners." *Canadian Journal of Botany* 72: 693-700. 1994.

O. holciformis (M. Bieb.) Hack. (*Agrostis holciformis* M. Bieb.; *Milium holciforme* (M. Bieb.) Spreng.; *Oryzopsis holciformis* (M. Bieb.) Richter; *Piptatherum holciforme* (M. Bieb.) Roem. & Schult.)

East Mediterranean, central Asia. Perennial, tufted, erect, coarse, flat leaves, ligule membranous, open or contracted panicle, spikelets awned, awn quickly deciduous, glumes equal and acuminate, lemma pubescent and shorter than the glumes, black grains, animal food, forage, found in loamy soils, dry mountain slopes, cliffs, rocky slopes and ungrazed fields, dry hillside, disturbed habitats, forested slopes, see *Flora Taurico-Caucasica* 1: 54. 1808, *Systema Vegetabilium* 2: 328. 1817, *Systema Vegetabilium, editio decima sexta* 1: 251. 1825, *Species Graminum Stipaceorum* 15. 1842, *Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse, Denkschriften* 50(2): 8. 1885, *Mittheilungen der Thüringischen Botanischen Vereins* N.F. 13 & 14: 42. 1899 and *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 55: 164. 1903, *Conspectus Florae Graecae* 3: 354. 1904, *Notes from the Royal Botanic Garden, Edinburgh* 33(3): 372. 1975, *Plant Taxonomy, Phytogeography and Related Subjects: The Davis & Hedge Festschrift* by P.H. Davis, Ian Charleson Hedge, Kit Tan (editor), R.R. Mill (editor), Thomas S. Elias (editor). 117. Edinburgh University Press. 1989, *Conspectus Florae Orientalis* 6: 186. 1991, *Kew Bulletin* 47(4): 655. 1992.

in English: ricegrass

O. holciformis (M. Bieb.) Hack. subsp. ***abyssinica*** (Freitag) D. Heller (*Oryzopsis paradoxa* sensu Chiov., non (L.) Nutt.; *Piptatherum holciforme* subsp. *abyssinicum* Freitag)

Ethiopia, Eritrea, Yemen. Evergreen forests, rocky places, see *Plant Taxonomy, Phytogeography and Related Subjects: The Davis & Hedge Festschrift* 117. 1989, *Conspectus Florae Orientalis* 6: 186. 1991.

O. hymenoides (Roemer & Schultes) Ricker (*Achnatherum hymenoides* (Roem. & Schult.) Barkworth; *Eriocoma cuspidata* Nutt.; *Eriocoma hymenoides* (Roem. & Schult.) Rydb.; *Eriocoma membranacea* (Pursh) Beal; *Eriocoma membranacea* Steud.; *Fendleria rynchelytroides* Steud.; *Milium cuspidatum* (Nutt.) Spreng.; *Oryzopsis cuspidata* (Nutt.) Benth. ex Vasey; *Oryzopsis hendersonii* Vasey; *Oryzopsis membranacea* (Pursh) Vasey; *Stipa hymenoides* Roem. & Schult.; *Stipa membranacea* Pursh, nom. illeg., non *Stipa membranacea* L.; *Urachne lanata* Trin.; *Urachne lanata* Trin. & Rupr.)

America, U.S., New Mexico. Callus acute, good forage, sandy soil, see *Flora Americae Septentrionalis; or, ...* 2: 728. 1814, *Systema Vegetabilium* 2: 339. 1817, *The Genera of North American Plants* 1: 40. 1818, *Systema Vegetabilium, editio decima sexta* 1: 251. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et*

Naturelles. Seconde Partie: Sciences Naturelles 3,1(2-3): 126. 1834, *Nomenclator Botanicus. Editio secunda* 1: 586. 1840, *Synopsis Plantarum Glumacearum* 1: 420. 1854, *The Grasses of the United States* 23. 1883, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): 10, t. 10. 1891, *Contributions from the United States National Herbarium* 1(8): 267. 1893, *Grasses of North America for Farmers and Students* 2: 232. 1896 and *Contributions from the United States National Herbarium* 11: 109. 1906, *Bulletin of the Torrey Botanical Club* 39(3): 102. 1912, *Botanical Gazette* 107: 24. 1945, *Rhodora* 59: 276, t. 1230. 1957, M.J. Trlica & A.B. Orodho, "Effects of protection from grazing on morphological and chemical characteristics of Indian ricegrass, *Oryzopsis hymenoides*." *Oikos* 56: 299-308. 1989, *Phytologia* 74(1): 7-8. 1993, Al-Agely, A.K. and F.B. Reeves, "Inland sand dune mycorrhizae: Effects of soil depth, moisture, and pH on colonization of *Oryzopsis hymenoides*." *Mycologia* 87: 54-60. 1995.

in English: silkgrass, Indian millet, Indian ricegrass

in Mexico: arroz indio

O. miliacea (L.) Benth. & Hook. ex Asch. & Schweinf. (*Achnatherum miliaceum* (L.) P. Beauv.; *Agrostis miliacea* L.; *Milium multiflorum* Cav.; *Milium thomasi* Duby; *Nassella multiflora* (Cav.) Druce; *Oryzopsis miliacea* (L.) Asch. & Schweinf.; *Oryzopsis multiflora* (Cav.) Druce; *Oryzopsis thomasi* (Duby) Pinto da Silva; *Piptatherum miliaceum* (L.) Coss.; *Piptatherum multiflorum* (Cav.) P. Beauv.; *Piptatherum thomasi* (Duby) Kunth; *Stipa miliacea* (L.) Hoover; *Urachne miliacea* (L.) K. Koch) (named for Philip/Philippe Tomas, d. 1831, botanical collector in Europe, Corsica and Alps)

Mediterranean. Lemma 3-nerved, see *Species Plantarum* 1: 61. 1753, *Descripción de las Plantas* 36. 1802, *Essai d'une Nouvelle Agrostographie* 18, 20, 146, 148, 168, 173. 1812, *Aug. Pyrami de Candolle Botanicon Gallicum ...* Editio secunda. Ex herbariis et schedis Candollianis propriisque digestum a J.É. Duby. 1: 505. Paris 1828, *Révision des Graminées* 3: Suppl.: XIV. 1834, *Linnaea* 21(4): 439. 1848, *Notes sur Quelques Plantes Critiques, Rares, ou Nouvelles, ...* 129. 1851, *Mémoires de l'Institute d'Égypte* 2: 169. 1887 and *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegovina* 9: 426. Vienna 1904, *Botanical Exchange Club and Society of the British Isles* 3(1912): 180. 1913, *Annali di Botanica* 12: 94. 1913, *Flora Analitica d'Italia* 87. 1923, *A Botanical Arrangement of British Plants* (edition 2) 125. 1928, *Flore de l'Afrique du Nord* 2: 83. 1953, *Leaflets of Western Botany* 10(16): 340. 1966, *Telopea* 2: 17-23. 1980, *Annali di Botanica* 45: 75-102. 1987, *New Zealand Journal of Botany* 27: 569-582. 1989, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Bocconeia, Monographiae Herbarii Mediterranei Panormitani* 1: 303-364. 1991, *Flora Mediterranea* 7: 240-246. 1997, *Novon* 12(4): 487. 2002.

in English: smilo grass, smilo rice grass

in French: petit millet

in Morocco: gousmir

in South Africa: managras, smilo rys gras, wilderys

O. obtusa Stapf (*Piptatherum obtusum* (Stapf) Roshev., nom. illeg., non *Piptatherum obtusum* Nees & Meyen)

Asia, China. See *Hooker's Icones Plantarum* 24(4): t. 2393. 1895.

in Japan: ine-gaya

O. pubiflora Hack. (*Oryzopsis pubiflora* (Trin. & Rupr.) Scribn., nom. illeg., non *Oryzopsis pubiflora* Hack.; *Piptatherum pubiflorum* (Hack.) Roshev.)

Eurasia. See *Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse, Denkschriften* 50(2): 8. 1885, *Proceedings of the American Academy of Arts and Sciences* 28: 122. 1893.

O. pungens (Torr.) Hitchc. (*Milium pungens* Torr.; *Oryzopsis parviflora* Nutt.; *Panicum firmum* Kunth; *Panicum firmum* F. Aesch., nom. illeg., non *Panicum firmum* Kunth; *Piptatherum pungens* (Torr.) Dorn; *Urachne brevicaudata* Trin.; *Urachne canadensis* Torr. & A. Gray ex Trin. & Rupr.)

North America, U.S., Ecuador. See *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 102. 1821, *Journal of the Academy of Natural Sciences of Philadelphia* 3: 125. 1823, *Révision des Graminées* 1: 37. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 127. 1834, *Species Graminum Stipaceorum* 17. 1842, Nils Johann Andersson (Anderson) (1821-1880), *Om Galapagos-öarnes Vegetation*. Lund 1854, N.J. Andersson, *En Verldsomsegling Skildrad I Bref*. [First edition, the first account of the first Swedish circumnavigation in the *Eugenie*, 1851-1852] Stockholm 1854 and *Contributions from the United States National Herbarium* 12(3): 151. 1908, Fredric Wilhelm Christian Areschoug (1830-1908), *Plantae subitinere navis bellicae Eugeniae anno 1852 a N. J. Andersson ca. Guayaquil collectae* 116. 1910, J.H. Barnhart, *Biographical notes upon botanists*. 1: 58. 1965, *Vascular Plants of Wyoming* (edition 3) 377. 2001.

O. racemosa (Sm.) Ricker ex Hitchc. (*Milium racemosum* Sm.; *Oryzopsis melanocarpa* Muhl.; *Piptatherum nigrum* Torr.; *Piptatherum racemosum* (Sm.) Eaton; *Piptatherum racemosum* (Sm.) Barkworth, nom. illeg., non *Piptatherum racemosum* (Sm.) Eaton; *Urachne melanosperma* Link; *Urachne racemosa* (Sm.) Trin.)

North America, U.S. See *The Cyclopaedia; or, Universal Dictionary of Arts, ...* 23: *Milium* no. 15. 1813, *Descriptio uberior Graminum* 79. 1817, *A Flora of the Northern and*

Middle Sections of the United States 1: 79. 1823, *De Graminibus unifloris et sesquifloris* 174. 1824, *Hortus Regius Botanicus Berolinensis* 1: 94. 1827, *Manual of Botany for North America. Fifth edition* 351. 1829 and *Rhodora* 8(95): 210. 1906, *Phytologia* 74(1): 19. 1993.

O. rigida (R. Lesson ex A. Rich.) Zotov (*Agrostis lessoniana* Steud.; *Anemanthele lessoniana* (Steud.) Veldkamp; *Dichelachne rigida* Steud.; *Oryzopsis rigida* (Steud.) Zotov)

New Zealand. See *Nomenclator Botanicus. Editio secunda* 1: 41. 1840, *Synopsis Plantarum Glumacearum* 1: 120. 1854 and *Transactions of the Royal Society of New Zealand, Botany* 73: 235. 1943, *Acta Botanica Neerlandica* 34: 108. 1985, *New Zealand Journal of Botany* 27: 569-582. 1989, *Flora of New Zealand* 5: 67. 2000.

Osterdamia Neck. ex Kuntze = Osterdamia Kuntze, Zoysia Willd.

Chloridoideae, Cynodonteae, Zoysiinae, type *Osterdamia matrella* (L.) Kuntze, see *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 440-441. 1801, *Revisio Generum Plantarum* 2: 781. 1891 and *Contributions from the United States National Herbarium* 41: 177, 240. 2001.

Otachyrium Nees

From the Greek *ous*, *otos* "an ear" and *achyron* "chaff, husk."

About 7-8 species, tropical South America, Amazon, West Indies. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, annual or perennial, herbaceous, erect, sometimes geniculate, rhizomatous, tufted, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence spicate or paniculate, open or contracted panicle, spikelets paired and pedicellate, florets hermaphrodite present or absent, two short glumes subequal, upper glume much shorter than spikelet, lower lemma 3-nerved, upper lemma coriaceous to papery, palea thickened, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, open habitats, rocky areas, marshy places, wet ground, inundated plains, savannah, grasslands, sandy areas, difficult to distinguish from *Panicum*, type *Otachyrium junceum* Nees, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 271-272. 1829 and T. Sendulsky and T.R. Soderstrom, "Revision of the South American genus *Otachyrium* (Poaceae: Panicoideae)." *Smithsonian Contributions to Botany* 57: 1-24. 1984, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Contributions from the United States National Herbarium* 46: 305. 2003, *Am. J. Bot.* 90: 796-821. 2003.

Species***O. aquaticum*** Send. & Soderstr.

Brazil. Perennial, erect, tufted or shortly rhizomatous, leaf blades ascending acute, panicle oblong sparsely branched, spikelets congested ovate or ovate-oblong, lower glume ovate 1-nerved, upper glume ovate 3-nerved, lower lemma ovate-oblong 3-nerved, upper lemma smooth, resembles *Otachyrium pterygodium*, see *Smithsonian Contributions to Botany* 57: 4, f. 1. 1984.

O. boliviensis Renvoise

Bolivia. Perennial, tufted, erect, hispid, spongy, nodes bearded, leaf blades linear and cordate at base, oblong panicle, spikelets ovate, unequal glumes, in moist sites, see *Gramíneas de Bolivia* 415. 1998.

O. grandiflorum Send. & Soderstr.

Amazonas, Brazil, Venezuela. See *Smithsonian Contributions to Botany* 57: 7, f. 2. 1984.

O. piligerum Send. & Soderstr.

Brazil. Perennial, lemma sulcate, see *Smithsonian Contributions to Botany* 57: 9, f. 3. 1984.

O. pterygodium (Trin.) Pilg. (*Otachyrium junceum* Nees; *Panicum cayennense* Lam.; *Panicum neurophyllum* Spruce ex Döll; *Panicum pterigodium* Trin.; *Panicum pterygodium* Trin.; *Pterigodium junceum* Nees ex Martius, Orchidaceae)

South America. Perennial, leaf blades flat, lower palea keels ciliate, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *De Graminibus Paniceis* 227-228. 1826, *Dictionnaire des Sciences Naturelles* 44: 6. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 271. 1829, *Flora Brasiliensis* 2(2): 254. 1877 and *Contr. U.S. Natl. Herb.* 15: 70. 1910, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 239. 1931.

O. seminudum Hack. ex Send. & Soderstr. (*Panicum versicolor* Döll)

Brazil. Caespitose, see *Flora Brasiliensis* 2(2): 254. 1877 and *Smithsonian Contributions to Botany* 57: 14, f. 5. 1984.

O. succisum (Swallen) Send. & Soderstr. (*Digitaria gracilis* Guss.; *Otachyrium inaequale* Pilg.; *Panicum gracile* Leconte, nom. illeg., non *Panicum gracile* R. Br.; *Panicum gracile* (Guss.) Nyman, nom. illeg., non *Panicum gracile* R. Br.; *Panicum inaequale* F. Muell.; *Panicum inaequale* Pilg., nom. illeg., non *Panicum inaequale* F. Muell.; *Panicum nitidum* var. *gracile* Fourn.; *Panicum succisum* Swallen; *Setaria inaequalis* (F. Muell.) R.D. Webster)

South America. Terrestrial, scabrous to hirsute leaves, inflorescence terminal, lemma sulcate, see Carl Fredrik Nyman (1820-1893), *Sylloge florae Europaeae ... Supplementum ...* 70. 1865, *Fragmenta Phytographiae Australiae* 8: 189. 1874, *Mexicanas Plantas* 2: 21. 1886 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 133. 1901, *Notizblatt des Botanischen*

Gartens und Museums zu Berlin-Dahlem 11(104): 239. 1931, *Brittonia* 7: 391. 1952, *Smithsonian Contributions to Botany* 57: 17, f. 6. 1984, *Sida* 16(3): 443. 1995.

O. versicolor (Döll) Henrard (*Chaetochloa versicolor* E.P. Bicknell; *Otachyrium truncatum* Pilg.; *Panicum truncatum* Nees, nom. illeg., non *Panicum truncatum* Trin.; *Panicum versicolor* Döll; *Panicum versicolor* (E.P. Bicknell) Nieuwl., nom. illeg., non *Panicum versicolor* Döll)

Bolivia and Paraguay, Venezuela, Brazil. Perennial, caespitose, erect, hard, nodes glabrous or pubescent, strong, rhizomatous with a knotty rhizome, leaf blades erect, panicles ovate to oblong, ovate spikelets, glumes subequal, forming clumps, damp ground, grassy roadsides, savannah, sandy places, along marshy areas, marshy grassland, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 215. 1829, *Flora Brasiliensis* 2(2): 254. 1877, *Bulletin of the Torrey Botanical Club* 25(2): 105, pl. 329. 1898 and *American Midland Naturalist* 2: 64. 1911, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 239. 1931, *Blumea* 4(3): 511. 1941, *Gramíneas de Bolivia* 413. 1998.

Oatea (McClure & E.W. Smith) C.E.**Calderón & Soderstrom = *Sinarundinaria*****Nakai**

From the Mexican vernacular name *otate*; in some areas *otate* is applied to the types of cane or bamboo with solid stalks, see Louise C. Schoenhals, *A Spanish-English Glossary of Mexican Flora and Fauna*. 80. Hidalgo, México 1988.

Two-three species, Mexico and Central America. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Guaduinae, *Yushania* subg. *Oatea* McClure & E.W. Sm., perennial, solid, slender, erect to leaning, arching or weeping, clumped, woody and persistent, walls thick, unarmed, rhizomes pachymorph, flowering culms leafy, culm internodes hollow, culm leaves sheaths persistent or deciduous, plants bisexual, open inflorescence paniculate, pedicellate spikelets, 2-7 female fertile florets and 1 rudimentary floret, 2 short-awned glumes very unequal to more or less equal, lemmas carinate, palea present, 3 lodicules free and membranous, 3 stamens, ovary glabrous, 2 plumose stigmas, humid tropical forests, deciduous or subdeciduous forest, along riverbanks, stream beds, damp ground, hillsides, trails, mountain slopes, sometimes referred to *Sinarundinaria* Nakai, type *Oatea acuminata* (Munro) C.E. Calderón & Soderstr., see *Journal of Japanese Botany* 11(1): 1. 1935, *Acta Phytotaxonomica Sinica* 6(4): 355-356. 1957, F.A. McClure, "Genera of bamboos native to the New World (Gramineae: Bambusoideae)." *Smithsonian Contributions to Botany* 9: 1-148. 1973, C.E. Calderón and T.R. Soderstrom, "The genera of Bambusoideae (Poaceae) of the American continent: keys and comments." *Smithsonian*

Contributions to Botany 44: 1-27. 1980, *Flora Novo-Galiciana* 14: 1-436. 1983, Rafael Guzmán M., M. del C. Anaya C. and F.J. Santana M., "El género *Otatea* (Bambusoideae), en Mexico y Centroamerica." *Bolet. del Instituto de Botánica Universidad de Guadalajara* 5(10): 1-20. 1984, *Kew Bulletin* 44(2): 349-367. 1989, *Cuscatlania* 1(6): 1-29. 1991, *Flora Mesoamericana* 6: 196. 1994, A. Reyes-García and M. Sousa S., "Depresión central de Chiapas. La Selva baja caducifolia." *Listados Florísticos de México* 17: 1-41. 1997, *Novon* 8(4): 408-428. 1998, *American Bamboos* 250-253. 1999, *Contributions from the United States National Herbarium* 39: 92. 2000.

Species

O. spp.

in Mexico: gui yaa, qui yaa

O. acuminata (Munro) Calderón & Soderstrom (*Arthrostylidium longifolium* (E. Fourn.) E.G. Camus, nom. illeg., non *Arthrostylidium longiflorum* Munro; *Arundinaria acuminata* Munro; *Arundinaria longifolia* E. Fourn.; *Otatea aztecorum* (McClure & E.W. Sm.) C.E. Calderón & Soderstrom; *Yushania acuminata* (Munro) McClure; *Yushania aztecorum* McClure & E.W. Sm.)

Mexico, Honduras, Costa Rica. Perennial, erect, arching, clumped, shrubby, cultivated, forming colonies, used for handicrafts, very ornamental, see *Transactions of the Linnean Society of London* 26(1): 25. 1868, *Mexicanas Plantas* 2: 131. 1886 and *Les Bambusées* 68, pl. 22, f. A. 1913, *Smithsonian Contributions to Botany* 9: 66, 116, 119, f. 46, 47A-M. 1973, *Smithsonian Contributions to Botany* 44: 21. 1980, *Flora Novo-Galiciana* 14: 280-282, f. 17. 1983, *Boletín del Instituto de Botánica Universidad de Guadalajara* 5(10): 8. 1984, *Flora del Valle de Tehuacán-Cuicatlán* 3: 1-35. 1994.

in English: Mexican weeping bamboo

in Colombia: caña brava

in Mexico: carrizo, oate, oate dulce

O. acuminata (Munro) Calderón & Soderstrom subsp. *acuminata*

Mexico. See *Smithsonian Contributions to Botany* 44: 21. 1980.

O. acuminata (Munro) Calderón & Soderstrom subsp. *aztecorum* (McClure & E.W. Sm.) R. Guzmán, Anaya & Santana (*Otatea acuminata* (Munro) C.E. Calderón & Soderstr.; *Otatea aztecorum* (McClure & E.W. Sm.) C.E. Calderón & Soderstrom; *Yushania aztecorum* McClure & E.W. Sm.)

Mexico. Sometimes cultivated, used for handicrafts, see *Smithsonian Contributions to Botany* 9: 116, 119, f. 46, 47A-M. 1973, *Smithsonian Contributions to Botany* 44: 21. 1980, *Bolet. del Instituto de Botánica Universidad de Guadalajara* 5(10): 8. 1984.

in Mexico: oate, oate dulce.

O. fimbriata Soderstr. (*Otatea fimbriata* Soderstr. ex McVaugh)

Colombia, Mexico, Honduras. Erect, smooth, slender, waxy, used for brooms, ornamental, see *Flora Novo-Galiciana* 14: 280-282, f. 17. 1983.

in Colombia: caña brava

in Mexico: carrizo, mutu, oate, oate de hoja ancha

Ottochloa Dandy = *Hemigymnia* Griff.
(Boraginaceae), *Hemigymnia* Stapf

Named for the Austrian botanist Otto Stapf, 1857-1933, traveler, from 1882 to 1889 assistant with Kerner von Marilaun in Wien, 1900-1922 keeper of the Herbarium of the Royal Botanic Gardens, Kew, 1908-1916 botanical secretary of the Linnean Society, 1922-1933 editor of the *Botanical Magazine*, contributor to Daniel Oliver (1830-1916), *Flora of Tropical Africa* (Apocynaceae, Verbenaceae, Myristicaceae, Gramineae, etc.), contributor to Harvey and Sonder, *Flora Capensis* (Apocynaceae, Laurineae, Proteaceae, etc.), contributed to Hooker's *Icones Plantarum*, among his numerous and valuable publications are *On the Flora of Mount Kinabalu in North Borneo*. London 1894 and *The Aconites of India*. Calcutta 1905; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 317. 1965; Mia C. Karsten, *The Old Company's Garden at the Cape and Its Superintendents*. Cape Town 1951; James Edgar Dandy (1903-1976), in *The Journal of Botany*. 69: 54. (Feb.) 1931; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 380. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 382. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; Stafleu and Cowan, *Taxonomic literature*. 5: 839-843. Utrecht 1985; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition, St. Petersburg 1898] Leipzig 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 650. London 1994.

About 4-6 species, Old World tropical regions. Panicoideae, Panicoideae, Paniceae, perennial, herbaceous, rambling, tufted or stoloniferous, slender scrambling decumbent culms rooting at the base, glabrous nodes, leaf sheaths rounded, ligule very short and membranous or absent, leaf

blades linear to lanceolate, plants bisexual, inflorescence paniculate with branches and pedicels filiform, few-flowered panicle, racemes along a central axis, slender unilateral rachis, solitary spikelets or paired or in clusters, spikelets more or less glabrous and strongly compressed, 2 florets, spikelets awnless, lower floret neuter or staminate and reduced to the lemma, upper floret bisexual, glumes equal to more or less equal, upper glume shorter than spikelet, lower lemma depressed on the back, upper lemma leathery and mucronulate, palea present, 2 free lodicules fleshy and glabrous, 3 stamens, ovary glabrous, 2 reddish stigmas, fruit small and compressed, weed species, in moist shaded sites, rainforest, ponds, shady places near water, damp places, meadows, swampy areas, type *Ottochloa nodosa* (Kunth) Dandy, see *Species Plantarum* 69. 1753, *Calcutta Journal of Natural History and Miscellany of the Arts and Sciences in India* 3: 363. 1842, *Contributions à la flore du Congo Français* 38. 1896 and *Flora of Tropical Africa* 9: 741. 1920, *The Flora of the Malay Peninsula* 5: 228. 1925, *Journal of Botany, British and Foreign* 69(2): 54-55. 1931, *Blumea* 4: 530-531. 1941, *Reinwardtia* 2(2): 313, f. 14. 1953, M. Lazarides, "The genus *Ottochloa* Dandy (Gramineae) in Australia and its relationship to *Ichnanthus oblongus* Hughes." *Australian Journal of Botany* 7: 328-346. 1961, *Blumea* 21(1): 1-80. 1973, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992.

Species

O. fusca (Ridl.) Dandy (*Hemigymnia fusca* Ridl.; *Panicum creperum* Reeder)

Asia. See *The Flora of the Malay Peninsula* 5: 228. 1925, *Journal of Botany, British and Foreign* 69(2): 55. 1931, *Journal of the Arnold Arboretum* 29: 267. 1948.

O. gracillima C.E. Hubbard

Australia, Queensland, New South Wales. Perennial, slender and spreading, forming sprawling mats, long and slender culms rooting at the base, sheaths glabrous or hispid, dark green leaves linear-lanceolate, panicles sparsely branched, lower lemma sterile and without palea, bisexual upper lemma wrinkled and apiculate, grows near water, in moist shady sites, ponds, grazed by native marsupials, see *Bulletin of Miscellaneous Information Kew* 1934: 445. 1934.

in English: shade grass

O. grandiflora Jansen

West New Guinea. See *Reinwardtia* 2(2): 313, f. 14. 1953.

O. nodosa (Kunth) Dandy (*Digitaria divulsa* Mez; *Digitaria urochloides* Büse; *Hemigymnia arnottiana* (Nees ex Steud.) Stapf; *Hemigymnia multinodis* Stapf; *Ichnanthus oblongus* Hughes; *Ottochloa arnottiana* (Nees ex Steud.) Dandy; *Panicum aequabile* Domin; *Panicum arnottianum* Nees ex Steud.; *Panicum letouzeyi* Renvoize; *Panicum*

multinode J. Presl, nom. illeg., non *Panicum multinode* Lam.; *Panicum nodosum* Kunth; *Panicum urochloides* (Büse) Boerl.)

Southeast Asia, India, Indonesia, the Philippines, Sri Lanka, Thailand, Gabon, Congo, Zaire, China, Taiwan, Australia, Queensland. Perennial, slender, erect and decumbent, scandent, creeping at base, climbing over other shrubs and trees, rooting at basal nodes, ligule a row of hairs, leaf sheaths ciliate, inflorescence variable, panicles with stiffly spreading branches, lower branches often whorled, lower floret neuter, upper floret hermaphrodite, glumes shorter than the spikelets, economic plant, useful for erosion control, forage for cattle and sheep, grazed by sheep, moderately palatable, weed species abundant under coconut, rubber and oil-palm plantations, a troublesome weed if ungrazed, not tolerant of heavy grazing or cutting, found in forest, rice fields, rainforests, riverbanks, disturbed habitats, moist places, meadows, similar to *Ottochloa gracillima* C.E. Hubb., see *Reliquiae Haenkeanae* 1(4-5): 303. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 97. 1833, *Plantae Junghuhnianae* 3: 382. 1854, *Synopsis Plantarum Glumacearum* 1: 59. 1854, *Annales du Jardin Botanique de Buitenzorg* 8: 62. 1890, *Contributions à la flore du Congo Français* 38. 1896 and *Bibliotheca Botanica* 85: 297. 1915, *Flora of Tropical Africa* 9: 742. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 7. 1921, *Bulletin of Miscellaneous Information Kew* 1923(9): 328. 1923, *Journal of Botany, British and Foreign* 69(2): 55. 1931, *Monogr. Digitaria* 202. 1950, *Grasses of Ceylon* 119. 1956, *Grasses of Burma ...* 318. 1960, *Kew Bulletin* 34(3): 553. 1979 [1980].

in English: slender panic grass

in Indonesia: rumput pait, sukut pring-pringan

in Laos: chaax kh'aa

in Malaysia: rumput pait, rumput rawa, rumput sarang buaya

in the Philippines: banig-usa, bariri-magwakat, kauakauayan, kawakawayanan, kumut-usa

in Thailand: yaa khui phai khon, ya khui phai khon, ya-khui-phaikhon, ya laman, yaa lamaan

O. nodosa (Kunth) Dandy var. ***micrantha*** (Balansa ex A. Camus) S.M. Phillips & S.L. Chen (*Hemigymnia arnottiana* var. *micrantha* Balansa ex A. Camus; *Ottochloa nodosa* var. *micrantha* (Balansa) Keng f.; *Panicum nodosum* var. *micranthum* Balansa)

Asia, Vietnam. See *Journal de Botanique (Morot)* 4: 142. 1890 and *Flore Générale de l'Indo-Chine* 7: 455. 1922, *Journal of Botany, British and Foreign* 69(2): 55. 1931, *Iconographia Cormophytorum Sinicorum* 5: 160, f. 7150. 1976, *Novon* 13(4): 467-468. 2003.

Oxyanthe Steud. = *Oxyanthera* Brongn.
(Orchidaceae), *Phragmites* Adans.

From the Greek *oxys* “acid, sour, sharp” and *anthos* “flower.”

Arundinoideae, Arundineae, type *Oxyanthe japonica* (Steud.) Steud., see *Species Plantarum* 1: 81. 1753, *Familles des Plantes* 2: 34, 559. 1763, *Voyage autour du Monde* 2: 197. 1834, *Flora* 29: 20. 1846, *Flora Rossica* 4(13): 393. 1852, *Synopsis Plantarum Glumacearum* 1: 197. 1855 [1854] and *American Midland Naturalist* 3: 332. 1914, *Contributions from the United States National Herbarium* 46: 306, 537-539. 2003.

Oxychloris Lazarides

From the Greek *oxys* “sharp” and the genus *Chloris*, alluding to the long pungent callus.

One species, Australia. Chloridoideae, Cynodonteae, annual or short-lived perennial, tufted or caespitose, herbaceous, glabrous nodes, spongy internodes, no auricles, ligule a short fringed membrane, leaf sheath glabrous to pubescent, plants bisexual, inflorescence spicate and digitate, spikes digitate and more or less appressed or divergent, spikelets solitary, spikelets 3- to 8-flowered and disarticulating above the glumes, lowermost floret bisexual, sterile floret without paleas, two glumes very unequal and keeled, fertile lemma smaller than sterile lemmas, fertile lemma with a sharp-pointed base and a stout awn, lemmas dark brown when mature, hairy and pungent callus, palea present, lodicules absent, 3 stamens, ovary glabrous, 2 reddish stigmas, small trigonous fruit, growing on heavy soils under gidgee, in dry savannah, on red-earth soils under mulga, open habitats, disturbed areas, creek banks, along water courses, in saline areas, on low rocky hills, sometimes referred to *Chloris*, type *Oxychloris scariosa* (F. Muell.) Lazarides, see Michael Lazarides, “New taxa of tropical Australian grasses (Poaceae).” *Nuytsia* 5(2): 273-303. 1985.

Species

O. scariosa (F. Muell.) Lazarides (*Chloris scariosa* F. Muell.)

Western Australia, Queensland, Northern Territory, South Australia, New South Wales. Annual or short-lived perennial, densely tufted, erect, simple or branched, wiry, spikes erect to spreading, spikelets densely clustered and imbricate, 6 florets, fertile only lowest floret, lower glume elliptic to linear, upper glume narrow-oblongate and apex bifid, very broad fertile lemma with membranous winglike margins, in arid and lower rainfall areas, see *Fragmenta Phytographiae Australiae* 6: 85. 1867 and *Nuytsia* 5(2): 283. 1984 [1985].

in English: winged chloris, wing chloris

Oxydenia Nutt. = *Leptochloa* P. Beauv.

From the Greek *oxys* “sharp, sour” and *aden* “gland.”

Chloridoideae, Cynodonteae, type *Eleusine filiformis* Pers., see *Syn. Pl.* 1: 87. 1805, *Essai d'une Nouvelle Agrostographie* 71, 161. 1812, *The Genera of North American Plants* 1: 76. 1818, *Nomencl. Bot.* 2: 554. 1873, *Index Kewensis* 2: 392. 1894 and *Contributions from the United States National Herbarium* 41: 130-137, 177. 2001.

Oxyrhachis Pilger

From the Greek *oxys* “sharp” and *rhachis* “rachis, axis, midrib of a leaf.”

One species, tropical Africa, Madagascar. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, herbaceous, unbranched, caespitose, leaves mostly basal, auricles absent, ligule fringed, plants bisexual, inflorescence terminal, a single narrow spike or cylindrical raceme with rhachis fragile, spikelets solitary and awnless, sessile spikelets in 2 opposite rows, callus strongly oblique, lower floret barren, 2 glumes smooth more or less equal, lower glume coriaceous lanceolate wingless, upper glume 2-nerved, palea present or absent, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, open habitats, bogs, streamsides, marshy places, wet sites, related to *Ophiuros*, type *Oxyrhachis mildbraediana* Pilg., see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 655. 1932.

Species

O. gracillima (Baker) C.E. Hubb. (*Rottboellia gracillima* Baker)

Tropical Africa, Madagascar. Perennial, rare, densely tufted, leaves filiform, slender inflorescence, pedicellate spikelets absent, see *Journal of the Linnean Society, Botany* 22: 533. 1887 and *Hooker's Icones Plantarum* 35: t. 3454. 1947.

O. gracillima (Baker) C.E. Hubb. subsp. *occidentalis* Gledhill

Sierra Leone. See *Boletim da Sociedade Broteriana, ser. 2* 41: 61, t. 3. 1967.

Oxytenanthera Munro = *Houzeaubambus* Mattei, *Scirpobambus* Kuntze

From the Greek *oxytes* “sharpness, of acute angles, acidity,” *oxytenes* “pointed” and *anthera* “anther,” an allusion to the nature of the anthers.

About 1-2/16 species, tropical Africa, Transvaal, Asia. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, perennial, arborescent,

often climbing, erect and arching slightly near the tips, shrubby or small tree, leafy, woody and persistent, branched, unarmed, caespitose, forming dense clumps, rhizomes pachymorph, auricles absent, culm leaves deciduous, culm sheaths persistent, ligule an unfringed membrane, leaf blades linear-lanceolate to lanceolate, inflorescence a false spike, plants bisexual, flower heads conspicuously spherical, hermaphrodite and sterile spikelets on the same plant, spikelets 1- to 2-flowered, each spikelet cluster subtended by a papery sheath, spikelet deciduous with 1-4 glumes attached, 2 glumes very unequal or 1-3 lemmas pungent, palea present, lodicules absent, 6 stamens joined at the base, ovary glabrous with an apical appendage, 3 stigmas, fruit a caryopsis crowned with the persistent bases of the styles, stems used for light construction and fencing, basketry and poles, shade species, under trees, savannah woodland, river valleys, along streams and water courses, sometimes included in and referred to as *Dendrocalamus* Nees, type *Oxytenanthera abyssinica* (A. Rich.) Munro, see *Tent. Fl. Abyss.* 2: 439. 1850, *Transactions of the Linnean Society of London* 26(1): 126-127. 1868, *Die Natürlichen Pflanzenfamilien* 2(2): 96. 1887 and *Lexicon* 509. 1903, *Die Natürlichen Pflanzenfamilien*, Nachtrag 3: 21. 1906, *Boll. Soc. Ort. Mutuo Soccorso*. Palermo 8(6): 84. 1910, *Taxon* 6(7): 206. 1957, *Kyoto University African Studies* 7: 37-129. 1972, *Kyoto University African Studies* 10: 143-212. 1976, *Indian Forester* 109: 306-308. 1983, *African Studies Monographs* 3: 109-130. 1983.

Species

O. abyssinica (A. Rich.) Munro (*Bambusa abyssinica* A. Rich.; *Houzeaubambus borzii* (Mattei) Mattei; *Oxytenanthera borzii* Mattei) (after the Italian botanist Antonino Borzì, 1852-1921, professor of botany, 1883-1892 founder and Director of the New Botanical Garden of Messina, 1892-1921 Orto Botanico of Palermo, among his writings are "Per l'inaugurazione delle feste del primo Giubileo centennale del R. Orto Botanico di Palermo (12 maggio 1895)." Palermo 1895, "Le specie di *Ficus* viventi a piena area nel R. Orto Botanico di Palermo." *Boll. R. Orto Bot.* 1(3-4): 156-161. Palermo 1897, "Coltura delle piante da gomma elastica." *Boll. R. Orto Bot.* 4: 59-79. Palermo 1905, "Ulteriori esperienze sulla coltura dell'*Agave sisalana* in Sicilia." *Boll. R. Orto Bot.* 7(1-2-3): 17-28. Palermo 1908 and "Sulla coltura delle palme, particolarmente delle specie di *Washingtonia* a scopo industriale, in Sicilia." *Boll. R. Orto Bot. Giardino Colon.* 10(1-2-3): 102-107. Palermo 1911. See T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 46. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; J.H. Barnhart, *Biographical notes upon botanists*. 1: 224. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Tropical Africa. Perennial, tufted, unarmed, erect or ascending, leafy, woody, stout, thick-walled, strong, more or less hollow-stemmed, rhizomatous, clumps forming and impenetrable thickets, drooping culms, arching slightly near the tips, leaf sheaths overlapping, culm sheaths covered with dark brown bristly hairs, blades oblong and lanceolate very acutely acuminate, spikelets 1-2 flowered, upper flowers bisexual, lower flowers sterile, spikelets in dense globose axillary clusters, 2-4 glumes persistent and 1-4 deciduous with floret, lemmas pungent, stamens 6 monadelphous, ovary hairless, 3 hairy stigmas, flowering periodic, reproduces itself from seed, propagated by root division, ornamental, widely used for building purposes and basket works, roof rafters, walking sticks, spear shafts, hammock poles, canoe, arrows, implement handles, cattle fences, forage plant, seeds important food in times of famine, young shoots edible, leaf browsed by cattle, alcoholic drink obtained from the plant (*Ulanzi*, a fermented bamboo sap obtained by tapping young bamboo shoots during the rainy season), plants eaten by chimpanzees, found in the foothill forests, wooded hillsides, in damp places, gardens, along riverbanks, in dry forest, savannah, moist or dry conditions, termite mounds, see *Tentamen Florae Abyssinicae ...* 2: 439. 1850, *Transactions of the Linnean Society of London* 26(1): 126-127. 1868 and *Bot. Jahrb. Syst.* 39(3-4): 601. 1907, *Boll. Soc. Ort. Mutuo Soccorso*. Palermo 8(6): 84. 1910, *Boll. R. Orto Bot. Giardino Colon.* 8: 36. Palermo 1909, *Taxon* 6(7): 206. 1957.

in English: Bindura bamboo, Holy Venda bamboo, common bamboo, bamboo, West African bamboo, savannah bamboo

in French: bambou

in Arabic: gana

in Angola: ombungu, lumbungu

in Cameroon: lekwe, ndyung, nkà, shyu

in Dahomey: téma

in Ethiopia: shimel

in Gambia: bo, boho, bongo, kebe, kewal, wah

in Ghana: anohwere, gora, kremponyi, kyemponyi, mbaramboro, mpampro, mprampuro, nkampon, nkampro, nyoringa, pamplo, pamplo, pamploo, pampro, paplo, prampuru

in Guinea: ko tatami, tatami, wadiag, uryag

in Guinea-Bissau: bambu, bo, djama, djambarlam, djambatamo, djame, edjo, miu, najane, quebè, quenè, sougue, udjame

in Ivory Coast: kole

in Liberia: temui

in Malawi: lulasi, nsungwi, musyombe, mlazi, liulawe

in Mali: bo, dianacaré, koré

in Niger: kaala, kaalà

in Nigeria: achala oyibo, acharà oyibo, aco, aligua, apako, aparun, atang, balbal, bomoun, eman, gamaré, gana, gonrò, goora, goora di, halwa, kava, kawu, ketitahng, kewal, kewe, kida, mkpo àcharà, ocaco, ocyacyo, oholoibo, opa, oparun, otosi, oyo, pako, raas, syè, takarwà, takarwin

in Senegal: bo, bubul, fugi, giol, ingol, jol, keve, kewé, makatiè, okadjie, uhatyè, wa

in Sierra Leone: baran, bawai, bee, bo, boho, bomi, ka sul, ka thong, kanale, katon, ken, kenye, kewe, koai, pilanda, semi, sen, seni, senye, sii, simine, tatami, tatami na, thong, wusle

in southern Africa: mushenjerere, musengere (Shona), heilige Venda bamboes

in Sudan: gana

in Tanzania: mwanzi

in Upper Volta: baalé, buna, lebooji, mia, tanhuisi

in Yoruba: apako, pako, aparun, oparun, opa

in Zimbabwe: Bindura bamboo

O. aliena McClure

Asia, Hong Kong. See *Lingnan University Science Bulletin* 9: 39. 1940

O. parvifolia Brandis ex Gamble (*Gigantochloa parvifolia* (Brandis ex Gamble) T.Q. Nguyen; *Oxytenanthera parvifolia* Keng; *Pseudoxytenanthera parvifolia* (Brandis ex Gamble) T.Q. Nguyen)

Myanmar. Large bamboo, culm sheaths striate and rounded at the top, leaves linear-lanceolate with a short subulate twisted point, leaf sheaths hairy in the beginning, 2-3 empty glumes, 1-2 shortly plumose stigma, used for various purposes locally, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 72. 1896, *Fl. Brit. Ind.* 7: 402. 1896 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 158. 1957, *Bot. Zhurn.* (Moscow and Leningrad) 75(2): 224. 1990, *Bot. Zhurn.* (Moscow and Leningrad) 76(7): 993. 1991.

Local name: tseikdoo-mindoo

P

Pachea Steud. = *Crypsis* Aiton

Chloridoideae, Cynodonteae, Sporobolinae, see William Townsend Aiton (1766-1849), *Hortus Kewensis*. 1: 48. 1789, *Suppl. Pl. Pyr.* 8. 1818, *Ionios Anthologia* 2: 448. 1834, *Nom. Bot.* edition 2, 1: 449. 1840, *Nomenclator Botanicus. Editio secunda* 2: 280. 1841, *J. Linn. Soc. Bot.* 6: 54. 1862 and *Hooker's Icones Plantarum* 35(3): 1-11, plate 3457. 1947, *Fl. Afr. Nord* 2: 89. 1953, *Bull. Research Council of Israel* 11D: 91-126. 1962, *Systematic Botany* 4: 267-280. 1979, *Contributions from the United States National Herbarium* 41: 56-57. 2001.

Padia Moritzi = *Oryza* L.

Ehrhartoideae, Oryzeae, Oryzinae, *Oryza* sect. *Padia* (Moritzi) Baill., type *Padia meyeriana* Zoll. & Moritzi, see *Species Plantarum* 1: 333. 1753, Alexander Moritzi, 1806-1850, *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844 auf Java gesammelten Pflanzen*, etc. 103. Solothurn 1845-1846, *Histoire des Plantes* 12: 166. 1893 and *Blumea* 32: 174. 1987, *Contributions from the United States National Herbarium* 39: 89-92. 2000.

Pallasia Scopoli = *Crypsis* Aiton, *Pallasia* Klotzsch (Rubiaceae), *Pallasia* L'Hér. ex Aiton (Asteraceae), *Pallasia* L.f. (Polygonaceae), *Pallassia* Houtt. (Rutaceae)

Named for the German (b. Berlin) botanist Pyotr (Peter) Simon Pallas, 1741-1811 (d. Berlin), physician, explorer, naturalist, traveler, scientist, professor of natural history (St. Petersburg), his works include *Reise durch verschiedene Provinzen des russischen Reichs ...* St. Petersburg 1771-1776 and *A Naturalist in Russia: Letters from Peter Simon Pallas to Thomas Pennant*. Edited by Carol Urness. Minneapolis [1967], editor of *Neue Nordische Beiträge*. St. Petersburg & Leipzig 1781-1796. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 43. 1965; Norman Douglas, *Looking Back: An Autobiographical Excursion*. Chatto and Windus, London 1938; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 298. 1972; Jonas C. Dryander, *Catalogus bibliothecae*

historico-naturalis Josephi Banks. London 1800; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 220. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition, St. Petersburg 1898] Leipzig 1981; Blanche Elizabeth Edith Henrey, *British Botanical and Horticultural Literature before 1800*. Oxford 1975; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 172. 1904; Vasilij A. Esakov, in *Dictionary of Scientific Biography*. Editor in chief Charles Coulston Gillispie. 10: 283-285. New York 1981; Stafleu and Cowan, *Taxonomic literature*. 4: 20-27. 1983; Blanche Henrey, *No Ordinary Gardener — Thomas Knowlton, 1691-1781*. Edited by A.O. Chater. British Museum (Natural History). London 1986.

Chloridoideae, Cynodonteae, Sporobolinae, see *Natuurlijke Historie* 2(4): 382. 1775, *Introductio ad Historiam Naturalem* 72. 1777, *Supplementum Plantarum* 37, 252. 1782, *Hortus Kewensis; or, a Catalogue ...* 1: 48. 1789, *Hortus Kewensis; or, a Catalogue ...* 3: 498. 7 Aug-1 Oct 1789, *Suppl. Pl. Pyr.* 8. 1818, *Ionios Anthologia* 2: 448. 1834, *Nom. Bot.* edition 2, 1: 449. 1840, *Nomenclator Botanicus. Editio secunda* 2: 280. 1841, *Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königlich Preussischen Akademie der Wissenschaften zu Berlin* 1853: 498. post 15 1853, *J. Linn. Soc. Bot.* 6: 54. 1862 and *Hooker's Icones Plantarum* 35(3): 1-11, plate 3457. 1947, *Fl. Afr. Nord* 2: 89. 1953, *Bull. Research Council of Israel* 11D: 91-126. 1962, *Systematic Botany* 4: 267-280. 1979, *Contributions from the United States National Herbarium* 41: 56-57, 177. 2001.

Paneion Lunell = *Poa* L.

From the Greek *paneios*, *panikos*, *paneion*, *panikon* “panic,” *Paneion* “sanctuary of Pan,” *Paneia* “festival of Pan at Delos”; Latin *panion* for a plant, also called *satyrior*.

Pooideae, Poeae, Poinae, see *Species Plantarum* 1: 67-68. 1753 and *American Midland Naturalist* 4: 221. 1915,

Contributions from the United States National Herbarium 48: 473, 505-580. 2003.

Panicastralla Moench = *Echinaria* Desf.

Resembling *Panicum*.

Pooideae, Poodae, Seslerieae, see *Species Plantarum* 2: 1049. 1753, *Methodus Plantas Horti Botanici ...* 205-206. 1794, *Flora Atlantica* 2: 385. 1799.

Panicularia Fabr. = *Panicularia* Colla
(Pteridophyta, Dicksoniaceae), *Panicularia*
Heist. ex Fabr., *Poa* L.

From the Latin *panicula*, *panucula*, *panucla*, *paniculus* “a tuft, panicle.”

Pooideae, Poeae, Poinae, see *Species Plantarum* 1: 67-68. 1753, *Enumeratio Methodica Plantarum* 207. 1759, *Herbarium Pedemontanum* 6: 235. 1836 and *Contributions from the United States National Herbarium* 48: 473-476, 505-580. 2003.

Paniculum Arduino = *Panicum* L.

From the Latin *panicula*, *panucula*, *panucla*, *paniculus* “a tuft, panicle,” see Petri Arduini ... *Animadversionum botanicarum* specimen. Patavii 1759, Petri Arduini veronensis horti publici patavini custodis *animadversionum botanicarum specimen alterum*. Venetia 1764, *J. Bot.* 28: 293-295. 1890 and *Kew Bulletin* 1935: 90. 1935.

Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae Panicinae, see *Species Plantarum* 1: 55, 58. 1753 and *Contributions from the United States National Herbarium* 46: 306-441, 537. 2003.

Panicum L. = *Acostia* Swallen, *Chasea*
Nieuwl., *Coleataenia* Griseb., *Dicanthelium*
(A.S. Hitchc. & Chase) Gould, *Dichantherium*
(Hitchc. & Chase) Gould, *Dileucaden* (Raf.)
Steud., *Dileucaden* Raf., *Eatonia* Raf.,
Eriolytrum Kunth, *Milium* Adans., *Monachne*
P. Beauv., *Neohusnotia* A. Camus,
Phanopyrum (Raf.) Nash, *Phanopyrum* Raf.,
Polyneura Peter, *Psilochloa* Launert, *Setiacis*
S.L. Chen & Y.X. Jin, *Steinchisma* Raf.,
Talasium Spreng.

From a classical Latin name for millet, *panicum*, *i* (*panus*, *i* “the thread, a tumor, spike, panicle, an ear of millet,” Akkadian *panu* “to turn”), Italian panic grass, *Panicum*

italicum L. or *Setaria italica* (L.) Beauv.; see Carl Linnaeus, *Species Plantarum*. 55. 1753 and *Genera Plantarum*. edition 5. 29. 1754.

About 370-470/600 species pantropical, mostly tropical, subtropical and warm temperate regions. Panicoideae, Panicodae, Paniceae, Panicinae, annual or perennial, varied habit, woody and persistent or herbaceous, rhizomatous or stoloniferous, erect to decumbent, forming creeping mats or tussocks or aquatic clumps, hairy or glabrous nodes, solid or hollow internodes, sometimes lowest internodes thickened into a cormlike base, auricles present or absent, ligules membranous and ciliate, blade rolled in bud, leaves linear-lanceolate to linear-ovate to thread-like, plants bisexual, inflorescence paniculate to racemose with solitary or rarely paired spikelets falling entire at maturity, branched flower heads, awnless dorsally compressed spikelets, 2 florets, lower floret sterile or male, upper floret hermaphrodite, glumes unequal, lower glume minute and truncate to awned, upper glume as long as spikelet and rounded on the back, upper lemma stiff or hardened, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous and without the apical appendage, 2 stigmas reddish to red, many species grown as grain crop since prehistoric times, weed species, cultivate fodder, native pasture grasses, foliage palatable to stock and native animals, seeds eaten by seed-eating birds and small rodents, ornamental, myrmecophy, sand-binding, tops may accumulate sufficient nitrates to be harmful to browsers, leaves might cause photosensitization, growing in rainforest, forest and swamp, stream margins and stream banks, shores and disturbed habitats, roadsides and cropland, grassland, sand hills and claypans in semiarid regions, in shade and in open habitats, deserts, savannah, high variability of this genus, sometimes or often referred to *Urochloa* P. Beauv., *Dichantherium* (Hitchc. & Chase) Gould and *Brachiaria* (Trin.) Griseb., nomenclature of several species has been changed and is still changing, type *Panicum miliaceum* L., see *Species Plantarum* 1: 55, 58. 1753, *Familles des Plantes* 2: 34. 1763, *Flora Graeca* 1(2): 44, t. 59. 1808, *Prodromus Florae Novae Hollandiae* 190. 1810, *Essai d'une Nouvelle Agrostographie* 49, 168, t. 10, f. 10. 1812, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *De Graminibus Paniceis* 51, 53, 125, 266, 184. 1826, *Systema Vegetabilium, editio decima sexta* 4(2): 22, 30. 1827, *Révision des Graminées* 1: 219. 1829, *Bulletin Botanique [Genève]* 1: 220. 1830, *Nomenclator Botanicus. Editio secunda* 2: 252. 1841, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen Phys. Cl.* 24(1): 1-345. 1879 (also in A.H.R. Grisebach, *Symbolae ad Floram Argentinam. Zweite Bearbeitung argentinischer Pflanzen. Göttingen* 308. 1879) and *Österreichische Botanische Zeitschrift* 51: 369. 1901, *Flora of the Southeastern United States ...* 104-105, 1327. 1903, *Contributions from the United States National Herbarium* 15: 13-15, 20, 142. 1910, *American Midland Naturalist* 2:

64. 1911, Mary Agnes Chase, *Tropical North American Species of Panicum*. Washington [D.C.] 1915, *Fl. Trop. Afr.* 9: 638-650. 1920, *Bulletin du Muséum National d'Histoire Naturelle* 26(7): 664. 1921, *Feddes Rep. Beih.* 40, 1: Anh. 53. 1930 (also *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): Anh. 53. 1930), *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 203. 1930, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 243. 1930, *Man. Grasses U.S.* edition 2: 626-706. 1950, *Kariba Studies*, vol. II. Manchester University Press, Manchester 1962, *Journal of the Faculty of Science, University of Tokyo* 9: 43-143. 1965, *Animal Behaviour Monographs* 1(3): 161-311. 1968, *Primates* 10: 103-148. 1969, *Mitteilungen der Botanischen Staatssammlung München* 8: 156. 1970, *Folia Primatologica* 15: 1-35. 1971, *Zambian Papers* 5. Manchester University Press, Manchester 1971, *Econ. Bot.* 26: 13-20. 1972, *Brittonia* 26(1): 59. 1974, B.A. Gould & C.A. Clark, "Dichantherium (Poaceae) in the United States and Canada." *Ann. Missouri Bot. Gard.* 65(4): 1088-1132. 1978, *Willdenowia* 8: 511-515. 1979, *Brittonia* 32: 353-364. 1980, *Journal of Human Evolution* 10: 565-583. 1981, *J. Agr. Trop. Bot. Appl.* 30: 159-168. 1983, *African Studies Monographs* 3: 109-130. 1983, *Folia Primatologica* 48: 78-120. 1987, *Grass Systematics and Evolution* 287-306. 1987, *Flora of the Guianas. Series A, Phanerogams* 8: 370-436. 1990, *Darwiniana* 32: 43-109. 1992, *Flora Mesoamericana* 6: 302-318. 1994, *Flora of Ethiopia and Eritrea* 7: 196-209. 1995, *Blumea* 41: 181-216, 413-437. 1996, *Taxon* 45: 319-320. 1996, *Taxon* 47: 869. 1998, *Taxon* 48: 376. 1999, Melvin R. Duvall, Jeffrey D. Noll and Alexandra H. Minn, "Phylogenetics of Paniceae (Poaceae)." *Am. J. Bot.* 88: 1988-1992. 2001, *American Journal of Botany* 88: 1993-2012. 2001, *American Journal of Botany* 90: 796-821. 2003 [A molecular phylogeny of *Panicum* (Poaceae: Paniceae): test of monophyly and phylogenetic placement within the Panicoideae.], *Contributions from the United States National Herbarium* 46: 306-441. 2003, *Restoration Ecology* 13(2): 390-390, 413-424. June 2005, *Conservation Biology* 19(3): 646-652. June 2005, *Molecular Ecology* 14(7): 2097-2110. June 2005, *Journal of Agronomy and Crop Science* 191(3): 172-184. June 2005, *Journal of Ecology* 93(3): 512-520. June 2005, *European Journal of Soil Science* 56(3): 343-352. June 2005, *Austral. Ecology* vol. 30, issue 4: 445-464. June 2005, *Molecular Ecology* 14(8): 2511-2523. July 2005.

Species

P. sp.

in English: panic grass

in Mexico: camalote, zacate de loma

in Peru: canarana, penacho, shukushina, shukushkina, tabo-quinha, toro urcu

in Guinea-Bissau: bucansole, iufo iufo

in Niger: billéri, dil yarô, jéjéku, trilo, zozoz

in Senegal: baket, salguf

in Sierra Leone: apende, faditi, faliti, foni, funfuri, fure-funfuri, kegbel, muli, muri, ndewe, ndiwi, ngalei-hei, nyina-foni, peni fafagbi, penipagbel, sankabesukwi, sunyugi, yowo

in Yoruba: ite aparo, iteaparo, motisan, kereiyale, kase, esin, ketuketu igbo

P. abludens Roem. & Schult. (*Digitaria abludens* (Roem. & Schult.) Veldkamp; *Digitaria granularis* (Trin. Ex Spreng.) Henrard; *Paspalum granulare* Trin. ex Spreng.)

India. See *Systema Vegetabilium* 2: 457. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 47. 1821 and *Monograph of the Genus Digitaria* 302, f. 891. 1950, *Blumea* 21(1): 53-55, f. 11d, 12. 1973.

P. abscissum Swallen (*Panicum rigidulum* subsp. *abscissum* (Swallen) Freckmann & Lelong)

U.S., Florida, Everglades National Park. Vulnerable species, occurs in freshwater habitats, wet prairie, depression marshes, wet flatwoods, pine flatwoods, pinelands and wetlands, sandy soils and dry white sand, swales and seasonal ponds, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829 and *Journal of the Washington Academy of Sciences* 30(5): 215, f. 4. 1940, *Sida* 20(1): 172. 2002.

in English: cut-throat grass

P. acariferum Trin. (*Melica latifolia* Roxb. ex Hornem.; *Neyraudia acarifera* (Trin.) Conert; *Thysanolaena acarifera* (Trin.) Arn. & Nees; *Thysanolaena latifolia* (Roxb. ex Hornem.) Honda; *Thysanolaena maxima* (Roxb.) Kuntze)

Asia, India. See *Hortus Regius Botanicus Hafniensis Suppl.*: 117. 1819, *Flora Indica; or Descriptions ...* 1: 319-320. 1820, *Species Graminum* 1: t. 87. 1827, *Gramineae* 49-50. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 181-182. 1843, *Revisio Generum Plantarum* 2: 794. 1891 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 312-313. 1930, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 78(2): 240-244. 1959.

P. acicularifolium Renvoize & Zuloaga

Brazil. See *Kew Bulletin* 50(1): 163. 1995.

P. aculeatum Hitchc. & Chase (*Dichantherium scabriusculum* (Elliott) Gould & C.A. Clark; *Panicum scabriusculum* Elliott)

U.S. Growing in large clumps, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 121. 1816 and *Rhodora* 8(95): 209-210. 1906, *Annals of the Missouri Botanical Garden* 65(4): 1110. 1978 [1979], *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988.

P. acuminatifolium Robyns (*Brachiaria sadinii* Vanderyst; *Panicum sadinii* (Vanderyst) Renvoize)

Africa. Perennial, ascending, decumbent and rooting, forest shade, shady locations, see *Bull. Agric. Congo. Belge* 10: 244. 1919, *Bulletin Agricole du Congo Belge* 16: 665. 1925, *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 1(6): 27, t. 2A-F. 1932, *Kew Bulletin* 22: 485. 1968.

in Sierra Leone: esulerobat, genyenyi, joiki, joki, kalekame, kosulu kosin, pogina, soiwu, sunyugi, sut

P. acuminatum Swartz (*Dichantheium acuminatum* (Sw.) Gould & C.A. Clark; *Dichantheium acuminatum* (Sw.) Gould & C.A. Clark; *Dichantheium acuminatum* var. *acuminatum*; *Dichantheium lanuginosum* (Elliott) Gould; *Panicum acuminatum* Salzm. ex Döll, nom. illeg., non *Panicum acuminatum* Sw.; *Panicum acuminatum* var. *acuminatum*; *Panicum comophyllum* Nash; *Panicum dichotomum* var. *acuminatum* (Sw.) Griseb.; *Panicum dichotomum* var. *lanuginosum* (Elliott) Alph. Wood; *Panicum huachucae* Ashe; *Panicum lanuginosum* Elliott; *Panicum lanuginosum* J. Presl, nom. illeg., non *Panicum lanuginosum* Elliott; *Panicum lanuginosum* var. *huachucae* (Ashe) Hitchc.; *Panicum lanuginosum* var. *tennesseense* (Ashe) Gleason; *Panicum lindheimeri* var. *tennesseense* (Ashe) Farw.; *Panicum olivaceum* Hitchc. & Chase; *Panicum ornatum* Desv. ex Ham.; *Panicum pacificum* Hitchc. & Chase)

Cuba, Puerto Rico, Mexico, U.S., Missouri, California, Arkansas, Colombia, Venezuela. Perennial, erect, branched, hairy, low, decumbent, caespitose, shortly rhizomatous, ligules tufts of white hairs, leaves elongated, hairy spikelets, usually occurs in wetlands and along streams, moist open areas, wet meadows, rich soils, open fields, wet prairies, moist places in woods, along roadsides, see *Species Plantarum* 1: 58. 1753, *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Prodromus Plantarum Indiae Occidentalis* 11. 1825, *Reliquiae Haenkeanae* 1(4-5): 306. 1830, *A Class-book of Botany* 786. 1861, *Flora of the British West Indian Islands* 553. 1864, *Flora Brasiliensis* 2(2): 234. 1877, *Bulletin of the Torrey Botanical Club* 24: 41-42, 196-197. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 51-52. 1898 and *Bulletin of the Torrey Botanical Club* 30(7): 380. 1903, *Rhodora* 8(95): 208. 1906, *Contributions from the United States National Herbarium* 15: 225, 229, f. 234, 241. 1910, *American Midland Naturalist* 11(2): 45. 1928, *Phytologia* 4(1): 21. 1952, *Brittonia* 26(1): 60. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1121. 1978 [1979], *Phytologia* 48(2): 192-193. 1981, *Phytologia* 49(1): 40. 1981, *Brittonia* 36(3): 269-271. 1984, *Phytologia* 67(6): 451-452, 472. 1989, *Phytologia* 77(6): 458. 1994 [1995].

in English: Western panic grass, Pacific panic grass, Western witch grass, Western panicum, panic grass

P. acuminatum Sw. var. *acuminatum* (*Dichantheium acuminatum* (Sw.) Gould & C. Clark; *Dichantheium*

acuminatum var. *thurowii* (Scribn. & J.G. Sm.) Gould & C.A. Clark; *Dichantheium lanuginosum* (Elliott) Gould; *Panicum auburne* Ashe; *Panicum ciliosum* Nash; *Panicum comophyllum* Nash; *Panicum lanuginosum* Elliott; *Panicum lanuginosum* J. Presl, nom. illeg., non *Panicum lanuginosum* Elliott; *Panicum lindheimeri* var. *tennesseense* (Ashe) Farw.; *Panicum olivaceum* Hitchc. & Chase; *Panicum orangense* Ashe; *Panicum tennesseense* Ashe; *Panicum thurowii* Scribn. & J.G. Sm.)

Cuba, Puerto Rico, U.S., California, Missouri, Colombia, Venezuela. Annual or perennial, on dry sand or beaches, rich soils, usually occurs in wetlands, subalpine forests, old fields and thickets, under moist conditions in riparian habitats, chaparral, see *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Reliquiae Haenkeanae* 1(4-5): 306. 1830, *Bulletin of the Torrey Botanical Club* 24(4): 196-197. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 52, 113. 1898 and 1899, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 5. 1899, *Bulletin of the Torrey Botanical Club* 26(11): 568. 1899 and *North Carolina Agricultural Research Service: Bulletin* 175: 115. 1900, *Bulletin of the Torrey Botanical Club* 30(7): 380. 1903, *Contributions from the United States National Herbarium* 15: 220, 225, f. 234. 1910, *American Midland Naturalist* 11(2): 45. 1928, *Brittonia* 26(1): 60. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1125. 1978 [1979].

in English: Pacific panic grass, woolly panic grass, panic grass, Western panicum, thermal witchgrass, acuminate panic grass

P. acuminatum Sw. var. *fasciculatum* (Torrey) Beetle (*Panicum acuminatum* var. *fasciculatum* (Torr.) Lelong, nom. illeg., non *Panicum acuminatum* var. *fasciculatum* (Torr.) Beetle; *Panicum huachucae* Ashe; *Panicum huachucae* Ashe var. *fasciculatum* (Torrey) F.T. Hubbard; *Panicum implicatum* Scribner; *Panicum lanuginosum* Elliott var. *fasciculatum* (Torrey) Fernald; *Panicum lanuginosum* var. *implicatum* (Scribner) Fernald; *Panicum lanuginosum* var. *tennesseense* (Ashe) Gleason; *Panicum subvillosum* Ashe; *Panicum tennesseense* Ashe)

Northern America. Found in dry woodlands, dry or moist sterile soil in the open, see *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788 and *Phytologia* 49(1): 40. 1981, *Brittonia* 36(3): 269. 1984.

P. acuminatum Sw. var. *lindheimeri* (Nash) A.A. Beetle (*Dichantheium acuminatum* subsp. *lindheimeri* (Nash) Freckmann & Lelong; *Dichantheium acuminatum* var. *lindheimeri* (Nash) Gould & C.A. Clark; *Dichantheium lanuginosum* var. *lindheimeri* (Nash) Freckmann, nom. illeg., non *Dichantheium lanuginosum* var. *lindheimeri* (Nash) Harvill; *Dichantheium lindheimeri* (Nash) Gould; *Panicum acuminatum* var. *lindheimeri* (Nash) C.F. Reed,

nom. illeg., non *Panicum acuminatum* var. *lindheimeri* (Nash) Beetle; *Panicum acuminatum* var. *lindheimeri* (Nash) Lelong, nom. illeg., non *Panicum acuminatum* var. *lindheimeri* (Nash) Beetle; *Panicum funstonii* Scribn. & Merr.; *Panicum lanuginosum* Elliott var. *lindheimeri* (Nash) Fernald; *Panicum lanuginosum* var. *septentrionale* Fernald; *Panicum lindheimeri* Nash)

Northern America, U.S., California. Perennial, caespitose, found in dry woodlands, moist conditions, dry or moist sterile soil in the open, usually occurs in wetlands, riverbank, see *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Bulletin of the Torrey Botanical Club* 24(4): 196-197. 1897 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 4. 1901, *Rhodora* 36(423): 77. 1934, *Brittonia* 26(1): 60. 1974, *Phytologia* 39(4): 270. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1127. 1978 [1979], *Phytologia* 48(2): 193. 1981, *Brittonia* 36(3): 270. 1984, *Phytologia* 67(6): 452. 1989, *Sida* 20(1): 168. 2002.

in English: Lindheimer panic grass, Pacific panic grass

P. aegyptiacum Gouan (*Digitaria aegyptiaca* Willd.; *Panicum aegyptiacum* hort. ex Roemer & Schultes, nom. illeg., non *Panicum aegyptiacum* Gouan; *Panicum aegyptiacum* Retz., nom. illeg., non *Panicum aegyptiacum* Gouan; *Panicum aegyptiacum* var. *blepharanthum* (Hack. ex T. Durand & Schinz) Chiov.)

Egypt. See *Hortus Regius Monspeliensis* 35. 1762, *Observationes Botanicae* 3: 8. 1783, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 9. 1809, *Systema Vegetabilium* 2: 493. 1817 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 296. 1908.

P. aequabile Domin (*Ottochloa nodosa* (Kunth) Dandy)

Queensland. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 97. 1833 and *Bibliotheca Botanica* 85: 297. 1915, *Journal of Botany, British and Foreign* 69(2): 55. 1931, *Australian Journal of Botany* 7: 328-346. 1961.

P. aequiglume Hack. & Arechav. (*Digitaria aequiglumis* (Hack. & Arechav.) Parodi; *Panicum aequiglume* Hook.f., nom. illeg., non *Panicum aequiglume* Hack. & Arechav.; *Panicum debile* var. *aequiglume* (Hack. & Arechav.) Hack.; *Syntherisma aequiglumis* (Hack. & Arechav.) Hitchc.)

South America. See *Anales del Museo Nacional de Montevideo* 1: 113-114. 1894, *The Flora of British India* 7: 44. 1896 and *Anales del Museo Nacional de Buenos Aires* 11: 69. 1904, *Contributions from the United States National Herbarium* 12(6): 210. 1909, *Revista de la Facultad de Agronomia y Veterinaria* 4: 47. 1922.

P. aequinerve Nees (*Panicum perlaxum* Stapf)

South Africa, Uganda, Ethiopia, Madagascar, Malawi. Short-lived perennial or annual, variable, scrambling, lax,

straggly, decumbent, trailing, stems jointed, sometimes rooting at the lower nodes, panicle broadly ovate sparsely branched, spikelets pubescent and sharply acuminate, lower floret sterile, lower glume equaling spikelet, palea reduced, found in damp places, fields, forest margins, open grasslands, clay or sandy soil, similar to *Panicum hochstetteri*, see *Florae Africae Australioris Illustrationes Monographicae* 40. 1841, *Flora Capensis* 7: 400. 1899 and *Flora of Tropical East Africa* 451-898. 1982.

in English: forest panic

in South Africa: bosbuffelgras

P. afzelii Sw.

Tropical Africa, Sierra Leone. Slender, delicate, found in shallow soil, disturbed places, moist ground, see *Adnotationes Botanicae* 5. 1829.

in English: magbel's millet (*magbel* is a small black bird)

in Sierra Leone: funfuri, kaseth kagbel, nyina foni, nyina voni

P. alabamense Trin. ex Steud. (*Panicum alabamense* Ashe, nom. illeg., non *Panicum alabamense* Trin. ex Steud.; *Paspalum bifidum* (Bertol.) Nash)

U.S. See *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna* 2: 598, t. 41, f. 2, e-h. 1850, *Synopsis Plantarum Glumacearum* 1: 64. 1853, *Bulletin of the Torrey Botanical Club* 24(4): 192. 1897 and *North Carolina Agricultural Experiment Station Bulletin* 175: 116. 1900.

P. alatum F. Zuloaga & O. Morrone (*Panicum altum* Hitchc. & Chase; *Panicum hirticaule* var. *majus* Andersson; *Panicum hirticaule* var. *minus* Andersson; *Panicum lundellii* Swallen) (named for the American botanist Cyrus Longworth Lundell, 1907-1994, plant collector in Mexico, specialist on Celastraceae and Myrsinaceae, his writings include "Plantae Mayanae — IV. New species, nomenclatural changes, and new records for trees and shrubs of Mexico and Central America." *Wrightia*. 3(1): 1-20. 1961, "Studies of tropical American plants — V." *Wrightia*. 4(2): 79-96. 1968, "Studies of American plants — III." *Wrightia*. 4(5): 153-170. 1971 and "Studies of American plants — XIV." *Wrightia*. 5(9): 331-351. 1977. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 413. 1965; T.W. Bosser, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 245. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 272. 1973; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; M.N. Chaudhri, I.H. Vegter and C.M. De Wal, *Index Herbariorum*, Part II (3), *Collectors I-L*. Regnum Vegetabile vol. 86. 1972)

America, Mexico. Straggling, tangled, growing in large masses, in moist sandy soil, in wet alluvial lowland, see *Reliquiae Haenkeanae* 1(4-5): 308. 1830, *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 135. 1855 and *Contributions from the United States National Herbarium* 17(6): 488, f. 57. 1915, *Journal of the Washington Academy of Sciences* 28(1): 9-10. 1938, *Annals of the Missouri Botanical Garden* 83(2): 224-226, f. 15. 1996.

P. alatum F. Zuloaga & O. Morrone var. ***alatum*** (*Panicum capillare* var. *glabrum* Vasey)

America, Baja California. See *Proceedings of the California Academy of Sciences, Series 2*, 2: 211. 1889 and *Annals of the Missouri Botanical Garden* 83(2): 224-226, f. 15. 1996.

P. alatum F. Zuloaga & O. Morrone var. ***longiflorum*** F. Zuloaga & O. Morrone

America. See *Annals of the Missouri Botanical Garden* 83(2): 226. 1996.

P. alatum F. Zuloaga & O. Morrone var. ***minus*** (Andersson) F. Zuloaga & O. Morrone (*Panicum hirticaule* var. *majus* Andersson; *Panicum hirticaule* var. *minus* Andersson; *Panicum hirticaulon* var. *majus* Walp., nom. illeg., non *Panicum hirticaule* var. *majus* Andersson)

U.S., Arizona. Annual, simple or branched, hispid-hirsute to nearly glabrous, spikelets terminal, mature grains golden, growing on dry slopes, plains and sandy washes, see *Reliquiae Haenkeanae* 1(4-5): 308. 1830, *Annales Botanicæ Systematicæ* 6: 952. 1861, *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 135. 1855 and *Annals of the Missouri Botanical Garden* 83(2): 226-227. 1996.

P. altum Hitchc. & Chase (*Panicum alatum* Zuloaga & Morrone; *Panicum lundellii* Swallen; *Panicum vigoratum* Swallen)

Panama. Erect, straggling and tangled, moist sandy places, alluvium, lowland, savannah, see *Contributions from the United States National Herbarium* 17(6): 488, f. 57. 1915, *Journal of the Washington Academy of Sciences* 28(1): 9-10. 1938, *Memoirs of the New York Botanical Garden* 9(3): 257. 1957, *Annals of the Missouri Botanical Garden* 83(2): 224-226, f. 15. 1996.

P. amabile Balansa

Australia, Europe. See *Bulletin de la Société Botanique de France* 19: 324. 1872.

P. amaroides Scribn. & Merr.

U.S. See *Circular, Division of Agrostology, United States Department of Agriculture* 29: 5-7, f. 1. 1901.

P. amarulum Hitchc. & Chase (*Panicum amarum* Elliott; *Panicum amarum* subsp. *amarulum* (Hitchc. & Chase) Freckmann & Lelong; *Panicum amarum* var. *amarulum* (Hitchc. & Chase) P. Palmer)

U.S. Tufted, short rhizomes, sand hills on the seashore, ocean dunes, marshes and sand flats, see *Contributions from the United States National Herbarium* 15: 96, f. 87. 1910, *Brittonia* 27(2): 148-149. 1975, *Sida* 20(1): 171. 2002.

in English: silver beach grass

P. amarum Elliott (*Chasea amara* (Elliott) Nieuwl.; *Panicum amaroides* Scribn. & Merr.; *Panicum amarulum* Hitchc. & Chase; *Panicum amarum* var. *minor* Vasey & Scribn.)

Belize, Cuba, Bahamas, Mexico, Honduras, U.S., Texas, Florida. Perennial, robust, upright, roots at lower nodes, slightly rhizomatous, leafy, bluish green, clump-forming, very elongated leaves, upper leaf may extend above spikelets, spikelets ovoid in narrow panicles, seed head slender, many small ellipsoid seeds supported on short branches, grass barrier for wind erosion control, useful for stabilization of disturbed areas, cover for wildlife, economic plant, grows on beach sand on coastal sand dunes and other critical sites, sand hills on the seashore, backside of primary dune, on secondary dunes and sand flats, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 121. 1816, *Department of Agriculture. Botanical Division. Bulletin* 8: 38. 1889 and *Circular, Division of Agrostology, United States Department of Agriculture* 29: 5-7, f. 1. 1901, *Contributions from the United States National Herbarium* 15: 96, f. 87. 1910, *American Midland Naturalist* 2: 64. 1911, *Brittonia* 27(2): 148-149. 1975, *Sida* 20(1): 171. 2002.

in English: bitter panic grass, bitter panicum, short dune grass, coastal panic grass, running beach grass

P. amarum Elliott var. ***amarulum*** (Hitchc. & Chase) P.G. Palmer (*Panicum amarulum* A.S. Hitchc. & Chase; *Panicum amarum* subsp. *amarulum* (A.S. Hitchc. & Chase) Freckmann & Lelong)

Belize, Cuba, Bahamas, Mexico, Honduras, U.S., Texas, Florida. Perennial, more or less upright or slightly decumbent to suberect, vigorously rhizomatous, excellent for sand trapping, occurring on coastal dunes and sea beaches, useful for coastal dune erosion control and for stabilizing sand dunes, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 121. 1816 and *Contributions from the United States National Herbarium* 15: 96, f. 87. 1910, *Brittonia* 27(2): 149. 1975, *Sida* 20(1): 171. 2002.

in English: bitter panic grass, southern sea-beach panic-grass

P. amarum Elliott var. ***amarum*** *Chasea amara* (Elliott) Nieuwl.; *Panicum amaroides* Scribn. & Merr.; *Panicum amarum* var. *minor* Vasey & Scribn.)

Mexico, U.S., Texas, Florida, South Carolina. Perennial, on sandy coasts, useful for erosion control, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 121. 1816, *Department of Agriculture. Botanical Division. Bulletin* 8: 38. 1889 and *Circular, Division of Agrostology, United*

States Department of Agriculture 29: 5-7, f. 1. 1901, *American Midland Naturalist* 2: 64. 1911.

in English: bitter panic grass, bitter panicum, short dune grass, coastal panic grass, running beach grass

P. ambiguum Trinius (*Brachiaria ambigua* (Trin.) A. Camus; *Brachiaria paspaloides* (J. Presl) C.E. Hubb.; *Panicum ambiguum* (Guss.) Hausskn., nom. illeg., non *Panicum ambiguum* Trin.; *Panicum ambiguum* (Lam. & DC.) Le Turq.; *Panicum ambiguum* Lapeyr.; *Panicum ambiguum* Sanguin., nom. illeg., non *Panicum ambiguum* Trin.; *Panicum glumare* Trin.; *Urochloa ambigua* (Trin.) Pilg.; *Urochloa glumaris* (Trin.) Veldkamp; *Urochloa paspaloides* J. Presl)

Southeast Asia. See *Flore Française ... Troisième Édition* 3: 16. 1805, *De Graminibus Panicis* 143. 1826, *Florae Siculae Prodromus* 80. 1827, *Reliquiae Haenkeanae* 1(4-5): 318. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 243. 1834, *Atti dell'Accademia Pontificia delle Scienze de'Nuovi Lincei* 18: 219, t. 6, no. 1. 1865, *Österreichische Botanische Zeitschrift* 25: 345. 1875 and *Flore Générale de l'Indo-Chine* 7: 433. 1922, *Hooker's Icones Plantarum* 4: t. 3363. 1938, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 35. 1940, *Blumea* 41(2): 420. 1996.

P. anabaptistum Steud. (*Garnotia africana* Janowski)

Africa, Senegal. Perennial, robust, tough, tussock grass, leaf blades glabrous, leaves toxic to the skin, good fodder when young, used for broom and thatching, growing on floodplains, swamps, seasonally flooded grassland, see *Synopsis Plantarum Glumacearum* 1: 75. 1853 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(4-7): 86. 1921, *Kew Bulletin* 27: 515-562. 1972.

in Guinea: angai, angay, ayilutu

in Mali: iufane, paguiri mayo, suebee, yufane, yuphane

in Niger: bangu-subu, bari-gwshi, bufhirdi, diluyadi-bandi, gensi, ishibaen, ishiban, jensi, kinkia-ruwa

in Nigeria: burdi, buwirdi, tafartso, tsintsiiyaa, tsintsiiyar tafarstso

in Senegal: ailutu, guo, idadapen, idanapen, nga

in Upper Volta: si'uko, siiwuko

P. anceps Michx. (*Agrostis nutans* Poir.; *Panicum anceps* var. *anceps*; *Panicum anceps* var. *angustum* Vasey; *Panicum anceps* var. *densiflorum* Vasey; *Panicum anceps* var. *rhizomatum* (A.S. Hitchc. & Chase) Fern.; *Panicum nutans* (Poir.) Desv.; *Panicum rhizomatum* A.S. Hitchc. & Chase; *Panicum rigidulum* Bosc ex Nees; *Panicum rostratum* Muhl. ex Willd.; *Vilfa nutans* (Poir.) P. Beauv.)

U.S., Texas, Florida. Perennial, stout and scaly rootstock, sheaths slightly hairy, linear leaves hairy on upper part near

the base, curved spikelets, leaves might cause photosensitization, very palatable grass, useful for erosion control and revegetation, fair grazing for wildlife, good grazing for livestock, found in low open ground, in woodlands and roadside ditches, swampy meadows and sandy soils, in scrubby flatwoods, damp sterile soil, see *Flora Boreali-Americana* 1: 48. 1803, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1032. 1809, *Encyclopédie Méthodique, Botanique Suppl.* 1: 255. 1810, *Essai d'une Nouvelle Agrostographie* 16, 148, 181. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 197. 1831, *Flora of the Southern United States* 573. 1860, *Flora Brasiliensis* 2(2): 213. 1877, *Department of Agriculture. Botanical Division. Bulletin* 8: 37. 1889 and *Contributions from the United States National Herbarium* 15: 105, 109, f. 104. 1910, *Las Gramíneas de México* 5: 1-466. 1999, *Sida* 20(1): 171. 2002.

in English: beaked panicum, beaked panic grass

P. anceps Michx. subsp. *anceps*

U.S. See *Flora Boreali-Americana* 1: 48. 1803.

P. anceps Michx. subsp. *rhizomatum* (Hitchc. & Chase) Freckmann & Lelong (*Panicum anceps* var. *rhizomatum* (Hitchc. & Chase) Fernald; *Panicum rhizomatum* Hitchc. & Chase)

U.S. See *Flora Boreali-Americana* 1: 48. 1803 and *Contributions from the United States National Herbarium* 15: 109, f. 104. 1910, *Rhodora* 36(423): 73. 1934, *Sida* 20(1): 171. 2002.

P. andreanum Mez

Colombia, Venezuela. Perennial, lax panicles, pilose spikelets, similar to *Panicum stoloniferum*, see *Bot. Jahrb. Syst.* 56(Beibl. 125): 5. 1921, *Ann. Missouri Bot. Gard.* 75: 429. 1988.

P. animarum Renvoize

Brazil. Perennial, tufted, leaf sheaths pubescent or ciliate, leaf blades linear-lanceolate pungent, leaves glabrous or ciliate, panicle ovate or oblong and much-branched, spikelets ovate-oblong, awnless, lower glume ovate 1- to 3-nerved acute, upper glume 3- to 5-nerved acute, lower lemma 5-nerved, see *Kew Bulletin* 32(2): 423. 1978.

P. anthaenantia Kuntze (*Anthaenantia villosa* (Michx.) P. Beauv.)

America. See *Flora Boreali-Americana* 1: 43. 1803, *Essai d'une Nouvelle Agrostographie* 48, 151, t. 10, f. 7. 1812, *Revisio Generum Plantarum* 33: 361. 1898.

P. antidotale Retz. (*Panicum akoense* (Lam.) Hayata; *Panicum miliare* Lam.; *Panicum proliferum* Lam.; *Panicum subalbidum* Kunth; *Paspalum miliare* (Lam.) K. Schum. & Hollrung, nom. illeg., non *Paspalum miliare* Spreng.)

India. Perennial, very deeply rooted, tall, leafy, erect, pale green to bluish green, tufted and sod-forming, growing in large clumps, sprawling, creeping, weak or robust, coarse and vigorous, rhizomatous with short and thick rhizomes, sometimes swollen at the base, leaves bluish green and smooth, sheaths glabrous, ligules hairy, loose inflorescence erect to slightly drooping on the numerous branches, greenish yellow spikelets glabrous and acute, lower floret staminate or sterile, lower glume obtuse to acute, upper glume obtuse, lower lemma male and obtuse, smooth and shining upper lemma elliptic to ovate, cormlike structures absent, flowering stalks hard and woody, heavy-seeding, noxious weed species naturalized in paleotropics, invasive, an antidote for rabies, medicinal plant, smoke of the burning plant used to fumigate wounds, can be poisonous under certain conditions, in Chennai (Madras) used in throat affections, drought-tolerant and resistant to heavy grazing, economic plant, highly palatable and well-grazed, stems rapidly become hard and woody and should be grazed or cut before flowering, good grazing for wildlife and livestock, cultivated as a fodder species, good-quality hay, valuable forage producer, useful for erosion control and as a windbreak, grows in fields and wastelands, on irrigated or flooded areas, dry river beds, in moist soils, clay loam soils, dry land and irrigated pastures, in hedges and among field borders, on dry sandy silt loam and sand dunes, on both sandy and black cracking clay soils, in sandy open alluvium, see *Observationes Botanicae* 4: 17. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Tableau Encyclopédique et Méthodique ... Botanique* 4: 747. 1798, *Révision des Graminées* 2: 397, t. 112. 1831, *Enum. Pl. Zeyl.* 360. 1864 and *Handb. Fl. Ceylon* 5: 156. 1900, *Grasses of Ceylon* 116. 1956, *Grasses of Burma ...* 322. 1960, *Darwiniana* 23(1): 233-256. 1981, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Cytologia* 56: 437-452. 1991, *Biologia Plantarum* 36: 37-45. 1994, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Blumea* 41: 181-216. 1996, *Las Gramíneas de México* 5: 1-466. 1999.

in English: giant panic grass, giant panic, blue panic, blue panicum, blue panic grass, perennial Sudan grass

in India: badi bhurbhuri, bagad, ban kutki, bangagli, bansi, banwari, baragu, bari gagli, baru, barwari, bhadli, cheno, chin, dhusdo, dhusghas, dusto, gadro, garm, ghamor, ghamrur, ghamur, gharam, ghemor, ghirri, girni, girui, git, gomej ko kutki, gondula, gramna, gunara, gundhi, halvi vari, jamur, kuri, kutki, layo-gundli, male, mangrur, mijhri, nasiam pillu, nasiam pullu, nella shama, nellashamalu, peenasi hullu, pinisi pullu, pinisi pillu, saon, sava, save, shamai, shamukka, vara, vari gudhi, vari mahan, warai

in Sri Lanka: krumisastre, nasiam pul

in Thailand: ya plong nu

in Spanish: pánico azul

in French: panic bleu

in Mexico: panizo azul

P. aquarum Zuloaga & Morrone (*Panicum virgatum* var. *glabrum* Döll)

South America, Venezuela. See *Flora Brasiliensis* 2(2): 218. 1877 and *Novon* 1(4): 185, f. 1-2. 1991.

P. aquaticum Poir. (*Panicum aquaticum* Bosc ex Spreng., nom. illeg., non *Panicum aquaticum* Poir.; *Panicum aquaticum* Hochst. ex A. Rich., nom. illeg., non *Panicum aquaticum* Poir.; *Panicum aquaticum* Muhl., nom. illeg., non *Panicum aquaticum* Poir.; *Panicum dichotomiflorum* Michx.; *Panicum elephantipes* Nees, nom. illeg., non *Panicum elephantipes* Nees ex Trin.; *Panicum fluitans* Brickell ex Muhlenb.; *Panicum hydrophilum* Salzm. ex Steud.; *Panicum hydrophilum* Schult.; *Panicum hygrophilum* Salzm. ex Steud.; *Panicum proliferum* var. *strictum* Griseb.)

America, Costa Rica. Perennial, aquatic grass, tangled, rhizomatous, emergent, marsh, along roadsides, on sandy beach, see *Flora Boreali-Americana* 1: 48. 1803, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 281. 1816, *Descriptio uberior Graminum* 126. 1817, *Mantissa* 2: 237. 1824, *Systema Vegetabilium, editio decima sexta* 1: 319. 1825, *De Graminibus Paniceis* 236. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 165. 1829, *Nomenclator Botanicus. Editio secunda* 2: 257. 1841, *Tentamen Florae Abyssinicae ...* 2: 373. 1850, *Synopsis Plantarum Glumacearum* 1: 71. 1853, *Catalogus plantarum cubensium ...* 232. Lipsiae 1866 and *Rhodora* 68: 320. 1966, *Brittonia* 23(3): 293-324. 1971, *Novon* 2(2): 103. 1992.

in English: aquatic grass

in Spanish: yerba acuática

P. aquaticum Poir. var. **aquaticum**

South America. See *Encyclopédie Méthodique. Botanique ... Supplément* 4: 281. 1816.

P. aquaticum Poir. var. **cartagoense** Davidse

South America, Costa Rica. Perennial, open, tangled, found in marshy places, see *Novon* 2(2): 103. 1992.

P. arabicum Nees ex Steud. (*Echinochloa colona* var. *arabica* (Nees ex Steud.) Chev.; *Panicum desertorum* A. Rich.; *Paspalidium desertorum* (A. Rich.) Stapf)

Tropical Africa, Egypt. See *Hortus Regius Botanicus Berlinensis* 2: 209. 1833, *Nomenclator Botanicus. Editio secunda* 2: 252. 1841, *Tentamen Florae Abyssinicae ...* 2: 365. 1850, *Synopsis Plantarum Glumacearum* 1: 63. 1853 and *Flora of Tropical Africa* 9: 585. 1920.

P. arborescens L. (*Panicum arborescens* Lam., nom. illeg., non *Panicum arborescens* L.; *Panicum arborescens* Sieber ex Trin., nom. illeg., non *Panicum arborescens* L.; *Panicum arborescens* Willd., nom. illeg., non *Panicum arborescens* L.; *Panicum brevifolium* L.)

India. See *Species Plantarum* 1: 59. 1753, *Encyclopédie Méthodique, Botanique* 4: 749; t. 920. 1798, *Der Gesellschaft Naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der Gesammten Naturkunde* 2: 320. 1808, *De Graminibus Paniceis* 208. 1826 and *Blumea* 41: 189. 1996, *Taxon* 49(2): 253. 2000.

P. arbusculum Mez (*Panicum arbusculum* Sieber ex Griseb.)

South Africa. Perennial, tufted, shrubby, hard, woody, robust, glaucous, brittle, erect, generally geniculate at the basal nodes, shortly rhizomatous, branched from the lower nodes, glaucous, bulbous, nodes thickened and sometimes swollen, internodes glabrous, ligule a fringe of short hairs, leaf blades expanded and stiff, leaf sheaths rounded, strong rhizomes, open inflorescence, sparse and interrupted panicle, spikelets purplish, upper floret bisexual, lower glume ovate, lower floret male or sterile, palea present, pasture, useful for erosion control, effective in blocking water drainage, growing in stony places, mountainous areas, slopes, see *Flora of the British West Indian Islands* 553. 1864 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 187. 1921.

in South Africa: struikpanicum, strauch hirsegras

P. archboldii Hitchc. (*Panicum auritum* J. Presl ex Nees)

Papua New Guinea. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 176. 1829, *Rel. Haenk.* 1: 305. 1830 and *Brittonia* 2(2): 121. 1936.

P. arctum Swallen

Suriname. See *Bulletin of the Torrey Botanical Club* 75: 87. 1948.

P. arcuatum R. Br. (*Sacciolepis indica* (L.) Chase)

Australia. See *Prodromus Florae Novae Hollandiae* 189. 1810 and *Proceedings of the Biological Society of Washington* 21: 8. 1908.

P. arcurameum Stapf

Southern tropical Africa, Mozambique, Transvaal. Annual, tufted, erect or geniculate, inflorescence obovate with short rigid branches scabrous and prickly, spikelets spreading and distant, lower floret sterile with a reduced palea, in sandy places, disturbed areas, see *Flora of Tropical Africa* 9: 704. 1920.

P. arechavaletae Hicken

Southern America, Argentina. See *Chloris Platensis Argentina* 30. 1910.

P. arenarium Brot. (*Panicum arenarium* M. Bieb., nom. illeg., non *Panicum arenarium* Brot.; *Panicum repens* L.; *Panicum repens* var. *arenarium* (Brot.) Kuntze)

Europe. See *Species Plantarum, Editio Secunda* 1: 87. 1762, *Flora Lusitanica* 1: 82. 1804, *Flora Taurico-Caucasica* 1: 52. 1808, *Revisio Generum Plantarum* 3(3): 363.

1898 and *Contr. U.S. Natl. Herb.* 15: 85. 1910, *Blumea* 41: 202. 1996.

P. aridum Mez

Somalia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 139. 1904.

P. aristatum Retz. (*Oplismenus compositus* (L.) P. Beauv.; *Oplismenus compositus* var. *compositus*; *Panicum aristatum* Cav. ex Willk. & Lange, nom. illeg., non *Panicum aristatum* Retz.; *Panicum aristatum* Macfad., nom. illeg., non *Panicum aristatum* Retz.; *Panicum aristatum* Raspail, nom. illeg., non *Panicum aristatum* Retz.)

China. See *Species Plantarum* 1: 57. 1753, *Observationes Botanicae* 4: 17. 1786, *Essai d'une Nouvelle Agrostographie* 54, 169. 1812, *Annales des Sciences Naturelles, Botanique* 5: 299. 1825, *Botanical Miscellany* 2: 115. 1831, *Prodromus Florae Hispanicae* 1: 57. 1861 and *Phanerogamarum Monographiae* 13: 1-213. 1981.

P. aristellum Döll (*Panicum aristella* Döll)

Brazil. Perennial, erect, stout, glumes aristate, found growing in damp swampy places, see *Flora Brasiliensis* 2(2): 221. 1877.

P. arundinariae Trin. ex E. Fourn. (*Panicum arundinariae* Trin. ex Steud.; *Panicum breviramisum* Swallen; *Panicum conchatum* E. Fourn.; *Panicum virgultorum* Hack.)

Mexico. Along streams, riverbanks and streamlets, see *Nomenclator Botanicus. Editio secunda* 2: 253. 1841, *Mexicanas Plantas* 2: 25. 1886 and *Österreichische Botanische Zeitschrift* 51: 369. 1901, *Contr. U.S. Natl. Herb.* 15: 215. 1910, *Contributions from the United States National Herbarium* 29(9): 419. 1950, *Brittonia* 23(3): 293-324. 1971.

P. ashei T.G. Pearson ex Ashe (*Dichantherium commutatum* (Schult.) Gould; *Dichantherium commutatum* subsp. *ashei* (T.G. Pearson ex Ashe) Freckmann & Lelong; *Panicum commutatum* Schult.; *Panicum commutatum* var. *ashei* (T.G. Pearson ex Ashe) Fernald; *Panicum umbrosum* J. Le Conte ex Torr., nom. illeg., non *Panicum umbrosum* Retz.) (after the American botanist William Willard Ashe, 1872-1932, botanist and forester with US Forest Service; see Edith M. Allison, "Bibliography and History of Colorado Botany." *Univ. Colorado Studies*. 6: 51-76. 1908; J. Ewan, editor, *A Short History of Botany in the United States*. 1969; Joseph Ewan, *Rocky Mountain Naturalists*. 152. The University of Denver Press 1950)

U.S. See *Manual of Botany of the Northern States. Second Edition*. 342. 1818, *Mantissa* 2: 242. 1824, *Journal of the Elisha Mitchell Scientific Society* 15: 35. 1898 and *Contr. U.S. Natl. Herb.* 15: 310. 1910, *Rhodora* 36(423): 83. 1934, *Brittonia* 26(1): 59. 1974, *Sida* 20(1): 169. 2002.

P. assurgens Renvoize (*Dichantherium assurgens* (Renvoize) Zuloaga; *Panicum assurgens* H. St. John, nom. illeg., non *Panicum assurgens* Renvoize)

Brazil. Annual or perennial, slender, clambering, branched upward, nodes glabrous, leaf blades narrowly lanceolate, panicles ovate sparsely branched, spikelets elliptic-oblong, lower glume narrowly ovate, upper glume broadly ovate, lower lemma ovate, upper lemma smooth shiny, in scrub forest, similar to *Panicum pycnocladus*, see *Kew Bulletin* 37(2): 325, f. 3. 1982, *Phytologia* 63(5): 368. 1987, *American Journal of Botany* 90(5): 816. 2003.

P. atlanticum Nash (*Dichantheium acuminatum* var. *acuminatum*; *Dichantheium acuminatum* var. *villosum* (A. Gray) Gould & C.A. Clark; *Panicum ovale* var. *villosum* (A. Gray) Lelong; *Panicum villosissimum* Nash)

America. Swamp, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *North American Gramineae and Cyperaceae* 2: 111. 1835, *Bulletin of the Torrey Botanical Club* 23: 149. 1896, *Bulletin of the Torrey Botanical Club* 24(7): 346-347. 1897 and *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978 [1979], *Brittonia* 36(3): 262-273. 1984.

P. atrichum Steud.

Comore. See *Nomenclator Botanicus. Editio secunda* 2: 253. 1841, *Synopsis Plantarum Glumacearum* 1: 417. 1855.

P. atrofusum Hack. (*Digitaria atrofusca* (Hack.) A. Camus)

Madagascar. Marsh, see *Journal of the Linnean Society, Botany* 29: 63. 1891 and *Bulletin du Muséum d'Histoire Naturelle* 30: 106. 1924.

P. atrosanguineum Hochst. ex A. Rich. (*Panicum hydaspicum* Edgew.; *Panicum sociale* Stapf)

Tropical East Africa, Zimbabwe, South Africa, Ethiopia, Arabia, northwestern India. Annual, short, erect or ascending, slender, spreading, loosely tufted, leaf sheath pilose, leaves lanceolate and hispid, open and loose inflorescence with purple spikelets ovate-oblong, panicle ovate or oblong much-branched, inflorescences branches more or less scabrid and not whorled, lower glume broadly ovate and acuminate, upper lemma glossy, reduced palea, grains collected for food, a weed of cultivation, excellent fodder for cattle, found in wet places, open areas, field borders, in loose dry sand, deciduous woodland, disturbed areas, track sides, see *Tentamen Florae Abyssinicae ...* 2: 375. 1850, *Journal of the Linnean Society, Botany* 6: 207. 1862 and *Flora of Tropical Africa* 9: 701. 1920.

P. aubertii Mez (*Alloteropsis paniculata* (Benth.) Stapf; *Mezochloa aubertii* (Mez) Butzin; *Urochloa paniculata* Benth.) (after the French botanist Louis-Marie Aubert Aubert du Petit-Thouars, 1758-1831, traveler and plant collector, among his publications are *Mélanges de botanique et de voyages ...* Paris 1811, *Plantes des îles de l'Afrique australe ...* Paris [1804], *Genera nova madagascariensia*. [Paris 1806], *Histoire particulière des plantes orchidées ...* Paris 1822 and *Histoire des végétaux recueillis dans les*

îles australes d'Afrique ... Paris 1806 [-1808]; see Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 98. Palermo 1988; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 109. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Madagascar. See *Niger Flora* 558. 1849 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 134. 1904, *Flora of Tropical Africa* 9: 486. 1919, *Willdenowia* 4: 211. 1966.

P. aulaxanthus (Elliott) Kuntze (*Anthaenantia rufa* (Elliott) Schult.; *Aulaxanthus rufus* Elliott) (From the Greek *aulax*, *aulakos* "a furrow" and *anthos* "flower")

U.S. See *A Sketch of the Botany of South-Carolina and Georgia* 1: 103. 1816, *Mantissa* 2: 258. 1824, *Revisio Generum Plantarum* 3(2): 361. 1898.

P. aurelianum J. Hale (*Panicum reptans* L.; *Urochloa reptans* (L.) Stapf)

U.S., Louisiana. Damp soils, see *Systema Naturae, Editio Decima* 2: 870. 1759, *A Class-book of Botany* 787. 1861 and *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Flora of Tropical Africa* 9: 601. 1920, *Blumea* 41: 417. 1996.

P. auricomum Nees ex Trin.

Brazil. Caespitose, growing in clumps, inflorescence paniculate, see *De Graminibus Paniceis* 204. 1826.

P. auritum J. Presl ex Nees (*Hymenachne aurita* (J. Presl ex Nees) Balansa; *Hymenachne insulicola* (Steud.) L. Liou; *Hymenachne polymorpha* Balansa; *Panicum archboldii* Hitchc.; *Panicum auritum* Hassk., nom. illeg., non *Panicum auritum* J. Presl ex Nees; *Panicum auritum* Nees; *Panicum auritum* J. Presl, nom. illeg., non *Panicum auritum* J. Presl ex Nees; *Panicum auritum* var. *procerius* J. Presl; *Panicum auritum* var. *procerius* Nees; *Panicum balansae* Crevost & Lem.; *Panicum insulicola* Steud.; *Panicum insulicolum* Steud.; *Panicum javanum* Nees ex Büse; *Panicum javanum* var. *angustifolium* Büse; *Panicum polymorphum* (Balansa) A. Camus; *Panicum polymorphum* var. *micranthum* (Balansa) A. Camus; *Sacciolepis aurita* (J. Presl ex Nees) A. Camus; *Sacciolepis insulicola* (Steud.) Ohwi; *Sacciolepis polymorpha* (Balansa) A. Camus) (for Richard Archbold (he died on August 1, 1976), aviator, explorer, in 1941 founder of the Archbold Biological Station (P.O. Box 2057 Lake Placid, Florida 33862, U.S.), (24 June) 1937 he made first transcontinental flight from San Diego to New York City in a seaplane, built by Consair, in 17 hours, author of "Unknown New Guinea: Circumnavigating the World in a Flying Boat, American Scientists Discover a Valley of 60,000 People Never Before Seen by White Men." *National Geographic*. 315-344. Mar 1941, with Austin Loomer Rand wrote *New Guinea Expedition, Fly River Area, 1946-1937: Fly River Area, 1936-1937*. AMS Press. June 1975 and *Summary of the 1933-1934 Papuan Expedition*. New York

1935. Leonard John Brass (1900-1971) was the leader and official botanist of the Archbold Collecting Expeditions to tropical areas (Papua New Guinea, British Solomon Islands, etc.), he wrote "Summary of the fourth Archbold Expedition to New Guinea." in *Bulletin of the American Museum of Natural History*. vol. III. Article no. 2. New York 1953. See also J.S. Womersley, "Plant collecting for anthropologist geographers and ecologists in New Guinea." *Bot. Bull. New Guinea*. 2: 69. 1969; E.D. Merrill & L.M. Perry, "Plantae Papuanae Archboldianae, III." *Jour. Arnold Arb.* 21: 292-293. 1940; E.D. Merrill & M.L. Perry "Plantae Papuanae Archboldianae, XVI." *Jour. Arnold Arb.* 26: 229-266. 1945; C.G.G.J. van Steenis, editor, "Cyclopaedia of collectors." in *Flora Malesiana*. vol. 1 and 8 (pt. 1). 1950 and 1973; Elmer D. Merrill, *A Botanical Bibliography of the Islands of the Pacific*. 210. Washington 1947; William Wagner, *Reuben Fleet and the Story of Consolidated Aircraft*. Fallbrook, CA: Aero Press, 1976; Ray Wagner, *The Story of the PBY Catalina*. San Diego, CA: Flight Classics, 1972; Mary Taschner, "Boomerang Boom: San Diego 1941-1942." *Journal of San Diego History*. pp. 1-10. Winter 1982)

Southeast Asia, Brunei Darussalam, the Philippines, Vietnam. A good fodder grass, margins of stream and lake, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 176. 1829, *Reliquiae Haenkeanae* 1(4-5): 305. 1830, *Plantae Javanicae Rariores* 22. 1848, *Hooker's Journal of Botany and Kew Garden Miscellany* 97. 1850, *Synopsis Plantarum Glumacearum* 1: 78. 1854, *Plantae Junghuhnianae* 3-4: 376, 396. 1854-1855, *Journal de Botanique (Morot)* 4: 143-144. 1890 and *Notulae Systematicae. Herbarium du Museum de Paris* 2: 249-250. 1912, *Cat. Indochine* 1: 380. 1917, *Flore Générale de l'Indo-Chine* 7: 457, 459. 1922, *Brittonia* 2(2): 121. 1936, *Bulletin of the Tokyo Science Museum* 18: 3. 1947, *Flora Reipublicae Popularis Sinicae* 10(1): 298, pl. 92, f. 6-10. 1990, *Blumea* 41: 88, 187. 1996.

in Thailand: yaa kong khaen, ya kong khaen, ya plong, yaa plong, ya plong o, yaa plong o

P. australe Spreng. (*Digitaria parviflora* (R. Br.) Hughes; *Digitaria sanguinalis* var. *australis* (Spreng.) Merr., nom. illeg., non *Digitaria sanguinalis* var. *australis* Griseb.; *Isachne australis* R. Br.; *Panicum australe* (R. Br.) Raspail, nom. illeg., non *Panicum australe* Spreng.)

Australia. See *Prodromus Florae Novae Hollandiae* 192, 196. 1810, *Systema Vegetabilium, editio decima sexta* 1: 309. 1825, *Annales des Sciences Naturelles (Paris)* 5: 299. 1825 and *Flora of Manila* 78. 1912, *Bulletin of Miscellaneous Information Kew* 1923(9): 311. 1923.

P. australiense Domin (*Ichnanthus australiensis* (Domin) Hughes; *Panicum pauciflorum* var. *fastigiatum* Benth.; *Yakirra australiensis* (Domin) Lazarides & R.D. Webster)

Central Australia, Western Australia, Queensland, Northern Territory. Annual, much branched, forming green or purplish and compact tufts, culms bent at the nodes, leaves

green or purplish, panicles enclosed within the leaves, useful grass for food and grain, ground cover, arid areas, sand ridges, see *Flora Australiensis: A Description ...* 7: 483. 1878 and *Journal of the Linnean Society, Botany* 41: 271, t. 10, f. 7; t. 11, f. 8-12. 1912, *Bulletin of Miscellaneous Information Kew* 1923(9): 329. 1923, *Australian Journal of Botany* 7(3): 328-346. 1959, *Brunonia* 7(2): 293. 1985.

in English: bunch panic grass, Australian panic

P. aztecanum Zuloaga & Morrone

Mexico. See *Annals of the Missouri Botanical Garden* 83(2): 229-231, f. 17. 1996.

P. badium Scribn. & Merr. (*Digitaria badia* (Scribn. & Merr.) Fernald; *Syntherisma badia* (Scribn. & Merr.) Chase)

Mexico. See *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 12, f. 3. 1901, *Proceedings of the Biological Society of Washington* 19(34): 191. 1906, *Rhodora* 22: 104. 1920, *Flora Novo-Galicianae* 14: 1-436. 1983.

P. bahiense Renvoize

Brazil. Perennial, tufted, leaf sheaths densely hirsute, leaf blades narrowly lanceolate pungent, panicle oblong much branched with branches sparsely ciliate and ascending, spikelets oblong, lower glume ovate 3-nerved acute, upper glume 5-nerved acute, see *Kew Bulletin* 32(2): 423. 1978.

P. barbatulum P. Beauv. ex Roem. & Schult.

See *Systema Vegetabilium* 2: 447. 1817.

P. barbatum Lam. (*Chaetochloa barbata* (Lam.) Hitchc. & Chase; *Digitaria barbata* Willd.; *Panicum barbatum* (Willd.) Kunth, nom. illeg., non *Panicum barbatum* Lam.; *Panicum barbatum* J. Le Conte ex Torr., nom. illeg., non *Panicum barbatum* Lam.; *Panicum barbatum* Michx., nom. illeg., non *Panicum barbatum* Lam.; *Panicum barbatum* Roxb., nom. illeg., non *Panicum barbatum* Lam.; *Penisetum barbatum* Schult.; *Setaria barbata* (Lam.) Kunth)

Mauritius. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Flora Boreali-Americana* 1: 49-50. 1803, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 91. 1809, *Hortus Bengalensis, or a Catalogue ...* 7. 1814, *Manual of Botany of the Northern States. Second Edition*. 342. 1818, *Flora Indica; or Descriptions ...* 1: 285. 1820, *Mantissa* 2: 147. 1824, *Révision des Graminées* 1: 33, 47. 1829 and *Contributions from the United States National Herbarium* 18(7): 348. 1917, *Illinois Biological Monographs* 29: 1-132. 1962, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979.

P. bartlettii Swallen (after the American botanist Harley Harris Bartlett, 1886-1960, professor of botany, biologist, traveler and botanical explorer (Southeast Asia, Mexico, Central America and Argentina), plant collector; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 131. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 27. 1972;

Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 115. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 24. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983)

Guatemala. Long-decumbent, herbaceous, creeping, in semideciduous forest, open fields, swampy places, seasonal flooded areas, see *Publications of the Carnegie Institution of Washington* 436: 346. 1934.

P. bartowense Scribn. & Merr. (*Panicum dichotomiflorum* subsp. *bartowense* (Scribn. & Merr.) Freckmann & Lelong; *Panicum dichotomiflorum* var. *bartowense* (Scribn. & Merr.) Fernald)

Southern and northern America, Jamaica, U.S., Florida. Swamps, see *Flora Boreali-Americana* 1: 48. 1803 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 3. 1901, *Rhodora* 38(455): 387. 1936, *Sida* 20(1): 171. 2002.

P. basisetum Steud. (*Panicum basisetum* (Steudel) French., nom. illeg., non *Panicum basisetum* Steud.; *Setaria barbata* (Lam.) Kunth; *Setaria basiseta* (Steud.) T. Durand & Schinz)

Guinea, Africa. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Révision des Graminées* 1: 47. 1829, *Synopsis Plantarum Glumacearum* 1: 52. 1853, *Conspectus Florae Africae* 5: 772. 1894, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 353. 1895.

P. beccabunga Rendle (*Panicum parvifolium* Lam.)

Africa. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 179. 1899.

P. bechuanense Brem. & Oberm.

South Africa, Kalahari, Botswana. Perennial, tufted, erect or geniculate, nodes more or less glabrous, see *Annals of the Transvaal Museum* 16: 403. 1935.

P. beecheyi Hook. & Arn.

Cuba, Hawaii. Endangered species, see Sir William J. Hooker and G.A.W. Arnott, *The Botany of Capt. Beechey's Voyage*; comprising an account of the Plants collected by Messrs. Lay and Collie ... during the voyage to the Pacific and Bering's Strait, performed in H.M.S. *Blossom* ... 1825-1828. London [1830-] 1841.

in English: Beechey panic grass, rock panic grass

P. belmonte Renvoize (*Dichantherium aequivaginatium* (Swallen) Zuloaga; *Panicum aequivaginatium* Swallen; *Panicum appressifolium* Swallen; *Panicum thinophilum* Renvoize)

Brazil, Bahia, Belmonte. Annual or short-lived perennial, branched, geniculately ascending, often rooting at the lower nodes, leaf blades narrow lanceolate or linear-lanceolate, with slender rhizomes, panicles ovate much branched, spikelets elliptic oblong, glumes ovate, lower lemma ovate, in restinga, resembles *Panicum viscidellum*, see *Contributions from the United States National Herbarium* 29(6): 271. 1949, *Memoirs of the New York Botanical Garden* 9(3): 258. 1957, *Kew Bulletin* 37(2): 325, f. 4. 1982, *Kew Bulletin* 39(1): 180. 1984, *American Journal of Botany* 90(5): 816. 2003.

P. bergii Arechav. (*Panicum bergii* f. *convoluta* R.A. Palacios; *Panicum burkartii* Zuloaga; *Panicum pilcomayense* Hack.)

South America, Argentina, Uruguay, Brazil, Venezuela. Perennial, caespitose, glabrous to densely pilose, leaf blades linear acuminate, lax pyramidal panicle, spikelets ovate acute, lower glume ovate 3- to 5-nerved, upper glume 7- to 9-nerved, upper lemma elliptic, forming large clumps, occurs in areas where water accumulates, tropical and subtropical grasslands, savannahs and shrublands, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Anales del Museo Nacional de Montevideo* 1: 147. 1894 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 10, t. 4B. 1900, *Bulletin de l'Herbier Boissier, sér. 2, 7*: 449. 1907, *Contr. U.S. Natl. Herb.* 15: 70. 1910, *Mededeelingen van's Rijks-Herbarium* 40: 52. 1921, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 309. 1969, *Boletín de la Sociedad Argentina de Botánica* 17: 179, f. 1. 1976, *Hickenia* 1(27): 151. 1978, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* [Flora Ilustrada do Rio Grande do Sul 26: Gramineae] 59: 1-156. 2000.

in English: Berg's panic grass

in Spanish: paja voladora

P. bergii Arechav. var. ***bergii*** (*Panicum bergii* f. *convoluta* R.A. Palacios; *Panicum burkartii* Zuloaga; *Panicum pilcomayense* Hack.)

Argentina, Brazil, Guyana, Paraguay, U.S., Uruguay, Venezuela. See *Anales del Museo Nacional de Montevideo* 1: 147. 1894 and *Bulletin de l'Herbier Boissier, sér. 2, 7*: 449. 1907, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 309. 1969, *Boletín de la Sociedad Argentina de Botánica* 17: 179, f. 1. 1976.

P. bergii Arechav. var. ***pilosissimum*** Zuloaga

Argentina. See *Hickenia* 1(27): 151. 1978.

P. betafoense A. Camus (*Isachne perrieri* A. Camus; *Panicum betafoense* (A. Camus) A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 72: 306. 1925, *Mémoires de l'Institut Scientifique de Madagascar, Série B, Biologie Végétale* 1: 111. 1949, *Bulletin de la Société Botanique de France* 107: 210. 1960.

P. beyeri Hitchc. & Ekman

Cuba. Indeterminate species, see *Manual of the Grasses of the West Indies* 265, f. 225. 1936.

P. bicknellii Nash (*Dichantheium boreale* (Nash) Freckmann; *Panicum bicknellii* var. *bushii* (Nash) Farw.; *Panicum bushii* Nash)

U.S. Caespitose, dry ground, margins of woods, see *Bulletin of the Torrey Botanical Club* 22(10): 421-422. 1895, *Bulletin of the Torrey Botanical Club* 24(4): 193-194. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 31, 42. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 568. 1899 and *Papers of the Michigan Academy of Science, Arts and Letters* 1: 85. 1923, *Phytologia* 4(1): 21. 1952, *Phytologia* 39(4): 269. 1978.

P. biglandulare Scribn. & J.G. Sm.

Mexico. See *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 13, t. 4. 1897.

P. bisulcatum Thunb. (*Panicum acroanthum* Steud.; *Panicum bisulcatum* S.T. Blake, nom. illeg., non *Panicum bisulcatum* Thunb.; *Panicum coloratum* F. Muell., nom. illeg., non *Panicum coloratum* L.; *Panicum melananthum* F. Muell.)

Southeast Asia, China, India, Indonesia, Japan, Australia, Queensland, New South Wales, Victoria. Annual or biennial or short-lived perennial, glabrous, erect, forming spreading clumps and extensive colonies, culms floating in water or rooting at the nodes, sheath glabrous, ligule membranous and truncate, acuminate leaves green to yellowish green, panicles open, spikelets glabrous and pedicellate, lower glume broadly acute and triangular, lower lemma sterile and epaleate, upper lemma elliptic and disarticulating at maturity, black to purplish black seeds, economic plant, weed species, aquatic or semiaquatic grass, useful for erosion control, stabilizing stream banks and reduce the erosion of waterways, provide habitat for aquatic wildlife, grows in mud and stream banks, swamps, banks of dams and ponds, wet sandy banks, seasonally flooded ground, see *Nova Acta Regiae Societatis Scientiarum Upsaliensis* 7: 141. 1815, *Synopsis Plantarum Glumacearum* 1: 87. 1854, *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1854/1855: 47. 1855, *Fragmenta Phytographiae Australiae* 8: 192. 1874 and *Proceedings of the Royal Society of Queensland* 59: 158. 1948, *Blumea* 41: 188. 1996.

in English: black-seeded panic, Japanese panic grass, blackseed panic grass, blackseed panic

P. blackii Swallen (*Panicum micranthum* Kunth)

Brazil. See *Nova Genera et Species Plantarum* 1: 105. 1815 [1816] and *Phytologia* 14(2): 74. 1966.

P. bobarti Lam. (*Panicum capillare* L.)

U.S. See *Species Plantarum* 1: 58. 1753, *Encyclopédie Méthodique, Botanique* 4: 748. 1798 and *Contr. U.S. Natl. Herb.* 12: 118. 1908, *Acta Botanica Cubana* 4: 1-11. 1980, *Las Gramíneas de México* 5: 1-466. 1999.

P. bolbodes (Hochst. ex Steud.) Asch. & Schweinf. (*Helopus bolbodes* Hochst. ex Steud.; *Panicum bolbodes* (Hochst. ex Steud.) Chiov., nom. illeg., non *Panicum bolbodes* (Hochst. ex Steud.) Asch. & Schweinf.; *Panicum bulbodes* (Hochst. ex Steud.) Chiov.; *Panicum oligotrichum* Fig. & De Not.; *Urochloa bolbodes* (Hochst. ex Steud.) Stapf; *Urochloa oligotricha* (Fig. & De Not.) Henrard)

Ethiopia. See *Synopsis Plantarum Glumacearum* 1: 100. 1854, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 333. 1854, *Beitrag zur Flora Aethiopiens* ... 306. 1867 and *Annuario del Reale Istituto Botanico di Roma* 8: 35. 1903, *Flora of Tropical Africa* 9: 593. 1920, *Blumea* 4(3): 502. 1941, *The Australian Paniceae (Poaceae)* 1-322. 1987.

P. boliviense Hack. (*Panicum laxum* Sw.; *Panicum schiedeanum* Mez, nom. illeg., non *Panicum schiedeanum* Trin. ex Beal; *Panicum polygonatum* Schrad.; *Steinchisma laxa* (Sw.) Zuloaga)

South America. Near water's edge, bank of river, in forest, sandy banks, in standing water, see *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Mantissa* 2: 256. 1824 and *Repertorium Specierum Novarum Regni Vegetabilis* 11: 19. 1912, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4. 1921, *Ann. Missouri Bot. Gard.* 79: 798. 1992, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Memoirs of the New York Botanical Garden* 85: 1-ix, 1-246. 2000, *American Journal of Botany* 90: 817. 2003.

in English: Bolivian panic grass

P. bombycinum B.K. Simon

Australia. In open savannah woodland, on sandy soil, see *Austrobaileya* 3(4): 594, f. 4. 1992.

P. bongaense Pilg. (*Setaria bongaensis* (Pilg.) Mez)

Africa, Zaire, Angola. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 44. 1902, *Wissenschaftlichen Ergebnisse der zweiten deutschen Zentral-Afrika-Expedition, Botanik* 2: 20. 1922.

P. boreale Nash (*Dichantheium boreale* (Nash) Freckmann; *Panicum bicknellii* Nash; *Panicum bicknellii* Nash var. *bicknellii*; *Panicum bicknellii* var. *calliphyllum* (Ashe) Gleason; *Panicum calliphyllum* Ashe; *Panicum bicknellii* Nash var. *bushii* (Nash) Farw.; *Panicum boreale* Nash var. *michiganense* Farw.; *Panicum bushii* Nash)

Northern America. Leaf blades long and slender, open woods, shores and meadows, moist woods and fields, see *Bulletin of the Torrey Botanical Club* 22(10): 421-422. 1895, *Bulletin of the Torrey Botanical Club* 24(4): 193-194. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 31, 42. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 568. 1899 and *Papers of the Michigan Academy of Science, Arts and Letters* 1: 85. 1923, *Rhodora* 42(500): 306-307. 1940, *Phytologia* 4(1): 21. 1952, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978, *Phytologia* 39(4): 268-272. 1978.

in English: Northern panic grass

P. boscianum Spreng.

Origin unknown. See *Systema Vegetabilium, editio decima sexta* 1: 317. 1825.

P. boscii Poir. (*Dichantherium boscii* (Poir.) Gould & C.A. Clark; *Panicum boscii* var. *molle* (Vasey) Hitchcock & Chase; *Panicum boscii* var. *molle* (Vasey ex Ward) Hitchc. & Chase; *Panicum latifolium* var. *australe* Vasey; *Panicum porterianum* Nash; *Panicum waltheri* Poir., nom. illeg., non *Panicum walteri* Pursh) (after the French naturalist Louis Auguste (Augustin) Guillaume Bosc (*olim* Bosc d'Antic or Dantic), 1759-1828 (d. Paris), botanist, horticulturist, French Consul in Carolina 1798-1800, author of *Mémoire sur les différentes espèces de chênes qui croissent en France*. Paris (Baudouin) 1808, he also studied in Paris with Antoine Laurent de Jussieu (1748-1836); see J.H. Barnhart, *Biographical notes upon botanists*. 1: 225. 1965; Jean-François Leroy, in *D.S.B.* 2: 321-323. 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 46. 1972; Miguel Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. Madrid 1858; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

Eastern U.S. Perennial, tufted, dark green, ground cover species, forming small clumps, culms glabrous or hairy, hairy joints, wide leaves more or less glabrous to pubescent, leaf sheaths glabrous, spikelets green papillose to pubescent, ornamental grass, prefers on dry woods and moist woods, in shade near streams, hardwood, well drained shaded areas, see *Species Plantarum* 1: 58-59. 1753, *Encyclopédie Méthodique, Botanique* 4: 278, 282. 1816, *Bulletin of the United States National Museum* 22: 135. 1881, *Department of Agriculture. Botanical Division. Bulletin* 8: 34. 1889, *Bulletin of the Torrey Botanical Club* 22(10): 420. 1895 and *Rhodora* 10(112): 64. 1908, *Annals of the Missouri Botanical Garden* 65(4): 1101. 1978 [1979], *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988.

in English: panic grass, Bosc's panic grass

in French: panic de Bosc

P. brachiariiforme Steud. (*Chamaeraphis brachiariaeformis* (Steud.) Kuntze; *Echinochloa colona* (L.) Link; *Panicum colonum* L.; *Setaria brachiariiformis* (Steud.) T. Durand & Schinz)

West Africa. See *Systema Naturae, Editio Decima* 2: 870. 1759, *Hortus Regius Botanicus Berolinensis* 2: 209. 1833, *Synopsis Plantarum Glumacearum* 1: 54. 1853, *Revisio Generum Plantarum* 2: 771. 1891, *Conspectus Florae Africae* 5: 772. 1894.

P. brachyanthum Steud. (*Panicum sparsiflorum* Vasey, nom. illeg., non *Panicum sparsiflorum* Döll)

Northern America, U.S. In dry soil, see *Synopsis Plantarum Glumacearum* 1: 67. 1853, *Department of Agriculture. Botanical Division. Bulletin* 8: 36. 1889.

in English: prairie panic grass, pimple panicum

P. brachystachyum Trin. (*Echinolaena brachystachya* (Trin.) Kunth)

Brazil. See *De Graminibus Paniceis* 138. 1826, *Révision des Graminées* 1: 54. 1829.

P. bradypus Bory ex Durand & Schinz (*Zoysia pungens* var. *tenuifolia* Dur. & Schinz)

Africa. See *Conspectus Florae Africae* 5: 734. 1894.

P. brasiliense Spreng. (*Panicum parvifolium* Lam.)

Brazil. Annual, slender, erect, trailing, often rooting at the lower nodes, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Systema Vegetabilium, editio decima sexta* 1: 321. 1825.

P. bresolinii L.B. Sm. & Wassh.

Brazil. Rooting at the lower nodes, growing in swampy places, forest, pools of water, see *Bradea, Boletim do Herbarium Bradeanum* 2(35): 245, f. 2 A-D. 1978.

P. breve Hitchc. & Chase (*Dichantherium chamaelonche* (Trin.) Freckmann & Lelong; *Dichantherium chamaelonche* subsp. *breve* (Hitchc. & Chase) Freckmann & Lelong; *Dichantherium dichotomum* var. *breve* (Hitchc. & Chase) Gould & C.A. Clark; *Dichantherium ensifolium* var. *breve* (Hitchc. & Chase) B.F. Hansen & Wunderlin; *Panicum chamaelonche* var. *breve* (Hitchc. & Chase) Lelong; *Panicum ensifolium* var. *breve* (Hitchc. & Chase) Wipff & S.D. Jones)

U.S. See *A Sketch of the Botany of South-Carolina and Georgia* 1: 126. 1816, *De Graminibus Paniceis* 242. 1826 and *Contributions from the United States National Herbarium* 15: 271, f. 301. 1910, *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1120. 1978 [1979], *Brittonia* 36(3): 262-273. 1984, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988 [1989], *Phytologia* 77(6): 456-464. 1994 [1995], *Sida* 20(1): 168-169. 2002.

P. brevifolium L. (*Hymenachne amplexicaulis* (Rudge) Nees; *Isachne biflora* (Lam.) Kuntze; *Isachne biflora*

(Lam.) Cordem., nom. illeg., non *Isachne biflora* (Lam.) Kuntze; *Isachne tricarinata* Roth; *Panicum agrioides* Trin. ex Döll; *Panicum amplexicaule* Rudge; *Panicum arbore-scens* L.; *Panicum arboreescens* Lam., nom. illeg., non *Panicum arboreescens* L.; *Panicum arboreescens* Sieber ex Trin., nom. illeg., non *Panicum arboreescens* L.; *Panicum biflorum* Lam.; *Panicum brevifolium* (Link) Kunth, nom. illeg., non *Panicum brevifolium* L.; *Panicum brevifolium* Balb. ex Nees, nom. illeg., non *Panicum brevifolium* L.; *Panicum brevifolium* Jahn, nom. illeg., non *Panicum brevifolium* L.; *Panicum brevifolium* var. *hirtifolium* (Ridl.) Jansen; *Panicum dubium* Lam.; *Panicum gladiatum* Wawra; *Panicum guineense* Desv. ex Poir.; *Panicum hirtifolium* Ridl., nom. illeg., non *Panicum hirtifolium* Ridl.; *Panicum litigiosum* Steud.; *Panicum ovalifolium* Poir.; *Panicum plantagineum* Schumach., nom. illeg., non *Panicum plantagineum* Link; *Panicum subobliquum* Stapf; *Panicum tricarinatum* (Roth) Steud.; *Panicum trichoptimum* Steud.)

Tropical Africa, Southeast Asia. Annual or perennial, slender, herbaceous, creeping, terrestrial, rambling, often decumbent and rooting at the lower nodes, freely branching culms, scrambling over other vegetation, internodes longer than the sheaths, leaf sheath loose and covered with soft hairs, leaf blades ovate to ovate-lanceolate, inflorescence terminal, pyramidal panicle with spreading branches, spikelets gibbous usually pubescent and slender, lower floret usually staminate sometimes sterile, upper floret hermaphrodite, lower glume boat-shaped, lemma and palea hyaline and boat-shaped, economic plant, good fodder grass, forage, readily grazed, the roots are diuretic, weed of cultivated rice fields, growing in shady places or partly shaded areas, forest and forest edge, riverbanks, savannah, edge of clearings, swamp forest, in and beside standing water, woodland, see *Species Plantarum* 1: 59. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 174. 1791, *Encyclopédie Méthodique, Botanique* 4: 743, 749, t. 920. 1798, *Plantarum Guianae Rariorum Icones et Descriptiones ...* 1: 21, t. 27. Londini 1805[-1806], *Prodromus Florae Novae Hollandiae* 191. 1810, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 279. 1816, *Systema Vegetabilium* 2: 476. 1817, *Sylloge Plantarum Novarum* 1: 193. 1824, *De Graminibus Paniceis* 208. 1826, *Hortus Regius Botanicus Berolinensis* 1: 225. 1827, *Beskrivelse af Guineiske planter* 64. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 276. 1829, *Révision des Graminées* 1: 32. 1829, *Nomenclator Botanicus. Editio secunda* 2: 264. 1841, *Florae Africae Australioris Illustrationes Monographicae* 40. 1841, *Synopsis Plantarum Glumacearum* 1: 85, 89. 1854, *Österreichische Botanische Zeitschrift* 12: 170. 1862, *Enum. Pl. Zeyl.* 359. 1864, *Flora Brasiliensis* 2(2): 271. 1877, *Revisio Generum Plantarum* 1(2): 778. 1891, *Flore de l'Île de la Réunion* 115. 1895 and *Handb. Fl. Ceylon* 5: 149. 1900, *Bibliotheca Botanica* 85: 312. 1915, *Flora of Tropical Africa* 9: 723. 1920, *The Flora of the Malay Peninsula* 5:

228. 1925, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 188, 199 & Anhang, 49. 1930, *Handb. Fl. Ceylon* 6: 321. 1931, *Reinwardtia* 2: 315. 1953, *Grasses of Ceylon* 113. 1956, *Grasses of Burma ...* 324. 1960, *Novon* 1(1): 4. 1991, *Blumea* 41: 189. 1996, *Taxon* 49(2): 253. 2000.

in English: shortleaf panic grass, short-leaved panic

in Brazil: capim mimoso, capim chuvisco, taquari do mato, andacá, vindecaá

in Sierra Leone: deno yeno, fumfuri, kebil, kegbil, koibore, kolibore, kurudera fumfuri, kuseta kagbil, kusetha kagbil, muli, muri, nimbo, nyanbile, sanká besugi, yane

P. brevifolium L. var. *amaliae* Domin (named for the German botanist Amalia or Amelie Dietrich, 1822 [or 1821]-1891, née Nellen, botanical collector in Australia and Tonga Isl.; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 454. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 102. 1972; Dennis John Carr and S.G.M. Carr, eds., *People and Plants in Australia*. London 1981)

Queensland. See *Species Plantarum* 1: 59. 1753 and *Bibliotheca Botanica* 85: 312. 1915.

P. buchingeri E. Fourn. (*Chasea virgata* (L.) Nieuwl.; *Milium virgatum* (L.) Lunell; *Panicum buchingeri* E. Fourn. ex Hemsl.; *Panicum virgatum* L.)

Mexico. See *Species Plantarum* 1: 59. 1753, *Biologia Centrali-Americana; ... Botany ...* 3: 486. 1885, *Mexicanas Plantas* 2: 30. 1886 and *Contr. U.S. Natl. Herb.* 12: 118. 1908, *American Midland Naturalist* 2: 64. 1911, *American Midland Naturalist* 4: 212. 1915.

P. bulawayense Hack. (*Brachiaria bulawayensis* (Hack.) Henrard; *Urochloa oligotricha* (Fig. & De Not.) Henrard)

Africa, Zimbabwe. See *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 333. 1854 and *Proceedings of the Rhodesia Scientific Association* 7(2): 69. 1908, *Blumea* 3(3): 436. 1940, *Blumea* 4(3): 502. 1941, *Flora of Tropical East Africa* 451-898. 1982.

P. bulbodes (Hochst. ex Steud.) Chiov. (*Helopus bolbodes* Hochst. ex Steud.; *Panicum bolbodes* (Hochst. ex Steud.) Asch. & Schweinf.; *Panicum bolbodes* (Hochst. ex Steud.) Chiov., nom. illeg., non *Panicum bolbodes* (Hochst. ex Steud.) Asch. & Schweinf.; *Panicum oligotrichum* Fig. & De Not.; *Urochloa bolbodes* (Hochst. ex Steud.) Stapf; *Urochloa oligotricha* (Fig. & De Not.) Henrard)

Africa, Ethiopia. See *Synopsis Plantarum Glumacearum* 1: 100. 1854, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 333. 1854, *Beitrag zur Flora Aethiopiens ...* 306. 1867 and *Annuario del Reale Istituto Botanico di Roma* 8: 35. 1903, *Flora of Tropical Africa* 9: 593. 1920, *Blumea* 4(3): 502. 1941, *The Australian Paniceae (Poaceae)* 1-322. 1987.

P. bulbosum Kunth (*Panicum avenaceum* Kunth; *Panicum bulbosum* subsp. *sciaphilum* (Rupr. ex E. Fourn.) Hitchc.

& Chase; *Panicum bulbosum* subvar. *violaceum* E. Fourn.; *Panicum bulbosum* var. *avenaceum* (Kunth) Beal; *Panicum bulbosum* var. *minor* Vasey; *Panicum bulbosum* var. *sciaphilum* (Rupr. ex E. Fourn.) Hitchc. & Chase; *Panicum gongylodes* Jacq.; *Panicum maximum* var. *bulbosum* (Kunth) Vasey; *Panicum maximum* var. *gongylodes* (Jacq.) Döll; *Panicum nodosum* Willd. ex Steud.; *Panicum paucifolium* Swallen; *Panicum plenum* A.S. Hitchc. & Chase; *Panicum polygamum* var. *gongylodes* (Jacq.) E. Fourn.; *Panicum sciaphilum* Rupr. ex E. Fourn.; *Panicum sciaphilum* Rupr. ex Hemsl.; *Panicum sciaphilum* Rupr.)

Northern and Southern America, Mexico, U.S., Colombia. Perennial or annual, tufted, robust, herbaceous, clump-forming, sheath glabrous, ligule membranous, panicles long-exserted, spikelets obtuse and glabrous, lower glume obtuse, lower lemma male or sterile, fertile lemma rugulose and wrinkled, lowest internodes thickened into a cormlike base, drought-resistant, frost tender, cultivated economic plant, produces high yields of forage and hay, native pasture species, forage, in pine forest, see *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Eclogae Graminum Rariorum* 30, t. 21. 1814-1820, *Nova Genera et Species Plantarum (Quarto edition)* 1: 99. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 2: 260. 1841, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 240. 1842, *Flora Brasiliensis* 2(2): 203. 1877, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 295. 1878, *Biologia Centrali-Americana; ... Botany ...* 3: 496. 1885, *Mexicanas Plantas* 2: 19, 27-28. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 38. 1889, *Grasses of North America for Farmers and Students* 2: 132. 1896 and *Contributions from the United States National Herbarium* 15: 83, f. 73. 1910, *Contributions from the United States National Herbarium* 29(9): 417. 1950.

in English: bulbous panic, bulb panic grass, turnip grass, bulb panicum, Texas grass

in Mexico: pasto

in Spanish: maíz de cuervo

P. buncei F. Muell. ex Benth. (after Daniel Bunce, 1813-1872, first Curator Geelong Botanic Gardens, Australia; see Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987)

Queensland, New South Wales. Perennial, slender, tufted, sheath more or less glabrous, ligule membranous and ciliate, lanceolate panicle loose and often nodding, spikelets acute to acuminate, lower glume inflated and obtuse, upper glume acute, lower lemma usually sterile, upper lemma shining, fodder plants, in open woodland, nonaquatic grass, see *Flora Australiensis: A Description ...* 7: 487. 1878.

in English: Bunce's panic

P. burgu A. Chev. (*Echinochloa scabra* (Lam.) Roem. & Schult.; *Echinochloa stagnina* (Retz.) P. Beauv.; *Panicum burgu* var. *francheti* A. Chev.; *Panicum scabrum* subsp. *burgu* (A. Chev.) A. Chev.; *Panicum stagninum* var. *burgu* (A. Chev.) Chev.)

Sudan. See *Observationes Botanicae* 5: 17. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Essai d'une Nouvelle Agrostographie* 53, 161, 171. 1812, *Systema Vegetabilium* 2: 479. 1817, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 347. 1895 and *Compte Rendu de l'Association Française pour l'Avancement des Sciences* 29(2): 642, 652. 1901, *Exploration Botanique de l'Afrique Occidentale Française ...* 1: 730. 1920.

P. bushii Nash (*Dichantherium boreale* (Nash) Freckmann; *Panicum bicknellii* Nash; *Panicum bicknellii* var. *bushii* (Nash) Farw.; *Panicum boreale* Nash) (dedicated to the American botanist Benjamin Franklin Bush, 1858-1937, ornithologist, collected with C.S. Sargent (1841-1927), wrote *Flora of Jackson County*. First edition. Independence, Missouri 1882, "A New Genus of Grasses [*Neeragrostis*]" ... in *Transactions of the Academy of Science of St. Louis* 13(7): 175-183. 1903, "The genus *Othake* Raf." ... in *Transactions of the Academy of Science of St. Louis* 14(6): 171-180. 1904; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 290. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 172. University of Pennsylvania Press, Philadelphia 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933, R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993)

U.S. In dry ground, see *Bulletin of the Torrey Botanical Club* 22(10): 421-422. 1895, *Bulletin of the Torrey Botanical Club* 24(4): 193-194. 1897, *Bulletin of the Torrey Botanical Club* 26(11): 568. 1899 and *Papers of the Michigan Academy of Science, Arts and Letters* 1: 85. 1923, *Phytologia* 39(4): 269. 1978.

P. caaguazuense Henrard

Paraguay. Swamp, see *Mededeelingen van's Rijks-Herbarium* 47: 2. 1922.

P. calaccanzense Steud. (*Panicum reptans* L.; *Urochloa reptans* (L.) Stapf)

The Philippines. See *Systema Naturae, Editio Decima* 2: 870. 1759, *Synopsis Plantarum Glumacearum* 1: 65. 1853 [1854] and *Flora of Tropical Africa* 9: 601. 1920, *Blumea* 41(2): 413-437. 1996.

P. californicum Benth. (*Digitaria californica* (Benth.) Henrard; *Trichachne californica* (Benth.) Chase)

U.S. See *The Botany of the Voyage of H.M.S. Sulphur* 55. 1844 and *Journal of the Washington Academy of Sciences* 23(10): 455. 1933, *Blumea* 1(1): 99. 1934, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Flora de la Provincia*

de Buenos Aires 4(2): 473-487. 1970, *Darwiniana* 19: 65-166. 1974.

P. callosum Hochst. (*Panicum callosum* Hochst. ex A. Rich., nom. illeg., non *Panicum callosum* Hochst.; *Panicum nigerense* Hitchc.)

Ethiopia. Annual, coarse, erect, solitary or tufted, long leaves, large stiff panicle glabrous, pointed spikelets, long scabrid pedicels, tufts of swollen hairs at the base of the lemma, very similar to *Panicum olyroides*, closely related to *Panicum nigerense*, see *Tentamen Florae Abyssinicae* ... 2: 374. 1850 and *Proceedings of the Biological Society of Washington* 43: 90. 1930.

P. calocarpum R. Berhaut

Senegal. Rare species, see *Bull. Soc. Bot. France Mém.* 1953-54: 11. 1954.

P. calumet Brouss.

Europe. See *Elenchus Plantarum Horti Botanici Monspeliansis* 42. 1805.

P. calvum Stapf (*Panicum monticola* Hook.f.)

Tropical Africa. Perennial, decumbent at base, climbing on shrubs, rambling, trailing, straggling on shrubs, slender, panicle branches smooth, lanceolate lower glume, montane, fodder for stock, weed species, cultivated land, wastelands, forest shade, swampy areas, similar to *Panicum hochsteteri*, see *Species Plantarum* 1: 55, 58. 1753, *Journal of the Linnean Society, Botany* 7: 226. 1864 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Flora of Tropical Africa* 9: 723. 1920.

P. cambogiense Balansa (*Panicum caesium* Nees ex Hook.f., nom. illeg., non *Panicum caesium* Nees; *Panicum cruciabile* Chase; *Panicum reticulatum* Thwaites ex Trimen, nom. illeg., non *Panicum reticulatum* Torr.)

Asia. Annual, erect, robust, internodes hispid, nodes pubescent, sheaths rounded with ciliate margins, ligule a ciliate membrane, leaf blade hirsute and acuminate, panicle branches spreading, spikelets glabrous, lower glume ovate, lower floret sterile, see *Bot. Beechey Voy.* 235. 1836, *Hooker's J. Bot. Kew Gard. Misc.* 2: 97. 1850, *Exploration of the Red River of Louisiana* 299. 1853, *Journal of Botany, British and Foreign* 23: 271. 1885, *Journal de Botanique (Morot)* 4(7): 142. 1890, *The Flora of British India* 7: 48. 1896 and *Handb. Fl. Ceylon* 5: 151. 1900, *Journal of the Arnold Arboretum* 20: 309. 1939, *Grasses of Ceylon* 116. 1956, *Grasses of Burma* ... 325. 1960, *Blumea* 41: 195. 1996.

in Thailand: yaa dok khaao, ya dok khao, yaa kussa laa, yaa kussalaa, ya kutsala

P. campestre Nees ex Trin. (*Panicum campestre* Nees, nom. illeg., non *Panicum campestre* Nees ex Trin.; *Panicum rotundum* Hitchc. & Chase)

South America, Colombia, Brazil, U.S. Perennial, tufted, spreading, coarse, hispid or pilose, erect or ascending, decumbent at the base, stiff leaf blades linear acuminate, oblong compound inflorescence much branched with stiff branches spreading, panicles terminal and axillary, spikelets ovate, lower glume ovate acuminate, upper glume ovate acute or acuminate, lower lemma ovate, upper lemma ovate-oblong, savannahs, disturbed places, along roadsides, see *De Graminibus Paniceis* 197. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 197. 1829 and *Contributions from the United States National Herbarium* 15: 139, f. 134. 1910.

P. canaliculatum Nees ex Steud. (*Hemigymnia canaliculata* (Nees ex Steud.) Alston; *Holcolemma canaliculatum* (Nees ex Steud.) Stapf & C.E. Hubb.; *Panicum canaliculatum* Nees)

India. See *Catalogue of Indian Plants* no. 1624. 1833, *Synopsis Plantarum Glumacearum* 1: 55. 1854 and *Bulletin of Miscellaneous Information Kew* 1929: 246. 1929, *Suppl. Fl. Ceylon* 6: 324. 1931.

P. caparaoense Zuloaga & Morrone (*Dichantherium caparaoense* (Zuloaga & Morrone) Zuloaga)

Brazil. See *Annals of the Missouri Botanical Garden* 80(1): 153, f. 36. 1993, *American Journal of Botany* 90: 816. 2003.

P. capense Licht. ex Roem. & Schult. (*Melinis capense* (Licht. ex Roem. & Schult.) Hack.; *Monachyrion capense* (Licht. ex Roem. & Schult.) Parl.; *Panicum capense* (Licht. ex Roem. & Schult.) Spreng.; *Panicum capense* Mez, nom. illeg., non *Panicum capense* Licht. ex Roem. & Schult.; *Tricholaena capensis* (Licht. ex Roem. & Schult.) Nees; *Tricholaena capensis* subsp. *capensis*; *Xyochlaena capensis* (Licht. ex Roem. & Schult.) Stapf)

South Africa. See *Systema Vegetabilium* 2: 457. 1817, *Systema Vegetabilium, editio decima sexta* 1: 315. 1825, *Linnaea* 11(Litt.-Ber.): 130. 1837, *Flora italiana, ossia descrizione delle piante* ... 1: 131. 1850 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 186. 1921, *Hooker's Icones Plantarum* 31: t. 3098. 1922, *Biblioth. Bot.* 138: 46, 48. 1988.

P. capillaceum Lam. (*Panicum trichoides* Sw.)

South America. See *Nova Genera et Species Plantarum seu Prodrromus* 24. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Flora Brasiliensis* 2(2): 249. 1877 and *Contr. U.S. Natl. Herb.* 12: 140. 1908, *Darwiniana* 23(1): 233-256. 1981, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Las Gramíneas de México* 5: 1-466. 1999.

P. capillare L. (*Chasea capillaris* (L.) Nieuwl.; *Leptoloma barbipulvinata* (Nash) Smyth; *Leptoloma capillaris* (L.) Smyth; *Milium barbipulvinatum* (Nash) Lunell; *Milium capillare* (L.) Moench, nom. illeg., non *Milium capillare*)

Rottb.; *Millium capillare* (L.) Moench; *Panicum barbipulvinatum* Nash; *Panicum barbipulvinatum* var. *hirsutipes* Suksd.; *Panicum bobarti* Lam.; *Panicum capillare* Rol. ex Rottb., nom. illeg., non *Panicum capillare* L.; *Panicum capillare* subsp. *barbipulvinatum* (Nash) Tzvelev; *Panicum capillare* subsp. *capillare*; *Panicum capillare* var. *agreste* Gattinger; *Panicum capillare* var. *barbipulvinatum* (Nash) R.L. McGregor; *Panicum capillare* var. *brevifolium* Vasey ex Rydb. & Shear; *Panicum capillare* var. *capillare*; *Panicum capillare* var. *occidentale* Rydb.; *Panicum capillare* var. *vulgare* Scribn.; *Panicum elegantulum* Suksd., nom. illeg., non *Panicum elegantulum* Mez)

North America, U.S. Annual, hairy, hollow, slender and upright to spreading, clumped or tufted, slightly compressed, pubescent at the nodes, leaves linear to narrow-lanceolate and pubescent, sheaths hirsute to densely hispid, ligule a fringe of hairs, inflorescence often partially enclosed in the upper sheath, panicles green to purplish and open, spikelets stipitate and glabrous, one perfect floret, upper floret bisexual, first glume ovate, second glume acute or acuminate, lower lemma sterile and acuminate, upper lemma elliptic, very small grains, weedy species, fodder plant, little forage value, rarely grazed, infusion of the leaves used as an emetic, infusion of leaves used by runners to increase endurance, seeds ground and mixed with corn meal, grain cooked whole or ground into a powder and used as a flour, a food source for quail, potential seed contaminant, occurs in wetlands or nonwetlands, crops, prairie, savannah, dry rocky soil, moist soils or dry sandy soils, heavy soil, found on roadsides and in other disturbed places and habitats, gardens, pastures, orchards, cultivated fields and along railroad tracks, open sandy or stony soil, waste places and waste ground, sunny open habitats and alluvial soils, fields and thickets, especially in bottomlands, dark wet soil, see *Species Plantarum* 1: 58. 1753, *Acta Literaria Universitatis Hafniensis* 1: 271. Copenhagen 1778, *Methodus Plantas Horti Botanici ...* 203. 1794, *Encyclopédie Méthodique, Botanique* 4: 748. 1798, *A Flora of the Northern and Middle Sections of the United States* 149. 1824, *Reliquiae Haenkeanae* 1(4-5): 308. 1830, *Flora Brasiliensis* 2(2): 202. 1877, *The Tennessee Flora; With Special Reference to the Flora of Nashville* 94. 1887, *Proceedings of the California Academy of Sciences, Series 2*, 2: 211. 1889, *Contributions from the United States National Herbarium* 1(1): 28. 1890, *Annales du Jardin Botanique de Buitenzorg* 8: 60. 1890, *Bulletin of the Torrey Botanical Club* 20: 477. 1893, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7(1): 44. 1894 [also *Grasses Tennessee* 44. 1894], *Contributions from the United States National Herbarium* 3(3): 186. 1895, *Bulletin of the Torrey Botanical Club* 22: 241. 1895, *An Illustrated Flora of the Northern United States* 1: 123. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 21. 1897, *Synopsis der mitteleuropäischen Flora* 2: 72. 1898

and *Memoirs of the New York Botanical Garden* 1: 21. 1900, *Contr. U.S. Natl. Herb.* 12: 118. 1908, *Contributions from the United States National Herbarium* 15: 55, 57-58, 66-67, f. 48, 50. 1910, *Nuovo Giornale Botanico Italiano* 17: 45. 1910, *American Midland Naturalist* 2: 64. 1911, *Transactions of the Kansas Academy of Science* 25: 86. 1913, *American Midland Naturalist* 4: 212. 1915, *Werdenda* 1(3-4): 16-17. 1927, *Journal of the Washington Academy of Sciences* 14(14): 345, f. 1. 1934, *Madroño* 10(3): 94. 1949, *Novosti Sist. Nizsh. Rast.* 18. 1968, *Phytologia* 55(4): 256. 1984, *Sida* 20(1): 171. 2002.

in English: old witch grass, witch grass, ticklegrass, common witchgrass, common panic grass

P. capillare L. var. ***brevifolium*** Vasey ex Scribn. (*Panicum capillare* L.; *Panicum capillare* var. *occidentale* Rydb.)

North America. See *Species Plantarum* 1: 58. 1753, *Contributions from the United States National Herbarium* 3(3): 186. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 21. 1897.

P. capillare L. var. ***busei*** Boerl. (named for the Dutch botanist, Lodewijk Hendrik Buse [also Büse], 1819-1888, lawyer, botanical collector, author of *Gramineae exposuit* L.H. Buse [Feb 1854], [in F.W. Miquel, *Plantae junghuhnianae*] 1854; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 290. 1965; Charles J. Édouard Morren, *Correspondance botanique*. Liège 1874 and 1884; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; *Blumea* 25(1): 41-43, 83, 96. 1979; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916)

Bogor, Buitenzorg, Dutch East Indies, Indonesia. See *Species Plantarum* 1: 58. 1753, *Annales du Jardin Botanique de Buitenzorg* 8: 60. 1890.

P. capillare L. var. ***capillare*** (*Panicum capillare* L.; *Panicum capillare* var. *agreste* Gatt.)

Australia, Western Australia, Victoria. Hispid, grows in disturbed ground, see *Species Plantarum* 1: 58. 1753, *The Tennessee Flora; With Special Reference to the Flora of Nashville* 94. 1887.

in English: old witch grass, witch grass

P. capillare L. var. ***gracillimum*** Asch. & Graebn.

Europe. See *Species Plantarum* 1: 58. 1753, *Synopsis der mitteleuropäischen Flora* 2: 72. 1898.

P. capillare L. var. ***minus*** Döll (*Panicum capillare* var. *minus* Muhl. ex Nash, nom. illeg., non *Panicum capillare* var. *minus* Döll)

Brazil. See *Species Plantarum* 1: 58. 1753, *Flora Brasiliensis* 2(2): 202. 1877, *Bulletin of the Torrey Botanical Club* 22: 241. 1895.

P. capillare L. var. ***occidentale*** Rydb. (*Leptoloma barbipulvinata* (Nash) Smyth; *Milium barbipulvinatum* (Nash) Lunell; *Panicum barbipulvinatum* Nash; *Panicum barbipulvinatum* var. *hirsutipes* Suksd.; *Panicum capillare* L.; *Panicum capillare* var. *brevifolium* Vasey ex Scribn.; *Panicum elegantulum* Suksd., nom. illeg., non *Panicum elegantulum* Mez)

North America, U.S. Annual, leaves linear, long-exserted panicles, spikelets larger than species type, plant more or less hairy, leaves might cause photosensitization, grows in disturbed ground and along railroad tracks, wetlands and border of lakes, on sunny ground, waste and alluvial soil, see *Species Plantarum* 1: 58. 1753, *Contributions from the United States National Herbarium* 3(3): 186. 1895 and *Memoirs of the New York Botanical Garden* 1: 21. 1900, *Transactions of the Kansas Academy of Science* 25: 86. 1913, *American Midland Naturalist* 4: 212. 1915, *Wendenda*. Beiträge zur Pflanzenkunde. 1(3-4): 16-17. Bingen, Germany and Washington, D.C. 1927.

in English: witch grass

P. capillare L. var. ***purpurascens*** Drum. ex Aschers. & Graebn.

Europe. See *Species Plantarum* 1: 58. 1753, *Synopsis der mitteleuropäischen Flora* 2: 72. 1898.

P. capillare L. var. ***rigida*** Boerl.

Bogor, Buitenzorg, Dutch East Indies, Indonesia. See *Species Plantarum* 1: 58. 1753, *Annales du Jardin Botanique de Buitenzorg* 8: 60-61. 1890.

P. capillarioides Vasey

Northern America, U.S., Mexico. See *Contributions from the United States National Herbarium* 1(2): 54. 1890.

in English: slender panic grass, Southern witchgrass, slender panicgrass

P. carannasense Mez (*Panicum cyanescens* Nees ex Trin.; *Panicum cyanescens* Nees, nom. illeg., non *Panicum cyanescens* Nees ex Trin.)

Brazil. Perennial, rhizomatous, erect, wiry, see *De Graminibus Paniceis* 202. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 220. 1829 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 73. 1917.

P. caricoides Nees ex Trin. (*Panicum caricoides* var. *pilosum* Döll; *Panicum junciforme* Steud.; *Panicum stenodoides* F.T. Hubb.)

Brazil, French Guiana, British Honduras. Perennial, caespitose, weak, delicate, erect, pilose or glabrous, leaf blades linear or filiform attenuate, panicle terminal, 1-3 lax racemes, spikelets elliptic-obovate, lower glume ovate 3-5-nerved, upper glume 7- to 9-nerved, upper lemma acute, savannahs, see *De Graminibus Paniceis* 149. 1826, *Synopsis Plantarum Glumacearum* 1: 82. 1854, *Flora Brasiliensis*

2(2): 239. 1877 and *Proceedings of the American Academy of Arts and Sciences* 49(8): 497. 1913.

P. catangense Chiov. (*Axonopus ecklonii* (Nees) Stapf ex Chiov.; *Panicum ecklonii* Nees)

Africa. See *Florae Africae Australioris Illustrationes Monographicae* 43. 1841 and *Annali di Botanica* 13: 44, 47. 1914, *Kew Bulletin* 22: 482. 1968.

P. caucasicum Trin. (*Brachiaria eruciformis* (Sm.) Griseb.; *Panicum eruciforme* Sm.)

Eurasia. See *Flora Graeca* 1(2): 44, t. 59. 1808, *Species Graminum* 1828-1836, *Flora Rossica* 4(14): 469. 1853.

P. cauda-ratti Schumach. (*Panicum polystachion* L.; *Pennisetum cauda-ratti* (Schumach.) Franch.; *Pennisetum polystachion* (L.) Schult.; *Pennisetum polystachion* subsp. *polystachion*)

Tropical Africa, Guinea. See *Systema Naturae, Editio Decima* 870. 1759, *Mantissa* 2: 146. 1824, *Beskrivelse af Guineiske planter* 59. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 79. 1828, *Contributions à la flore du Congo Français* 52: 360. 1896 and *Botanical Journal of Scotland* 79: 51-64. 1979, *Flora of Tropical East Africa* 451-898. 1982.

P. caudiculatum Hack. (*Bifaria caudiculata* (Hack.) Kuntze; *Mesosetum caudiculatum* (Hack.) Swallen; *Mesosetum bifarium* (Hack.) Chase)

Brazil. See *Österreichische Botanische Zeitschrift* 47: 76. 1897, *Revisio Generum Plantarum* 3(2): 359. 1898 and *Proceedings of the Biological Society of Washington* 24: 123. 1911, *Brittonia* 2(4): 369-370. 1937, *Acta Amazonica* 19: 47-114. 1989 [1990].

P. caudiglume Hack. (*Panicum caudiglume* Stapf, nom. illeg., non *Panicum caudiglume* Hack.)

Southeast Asia. A pest, see *Österreichische Botanische Zeitschrift* 51: 428. 1901, *Flora of Tropical Africa* 9: 727. 1920.

in the Philippines: kumut-palaka

P. cayennense Lam. (*Otachyrium pterygodium* (Trin.) Pilg.; *Panicum bergii* Arechav.; *Panicum cajennense* Lam.; *Panicum cayennense* var. *curtatum* Döll; *Panicum cayennense* var. *patulum* Döll; *Panicum floribundum* Rich. ex Lam.; *Panicum pedunculare* Willd. ex Steud.; *Panicum rigiophyllum* Döll; *Panicum sessilicaule* Desv.; *Panicum pterygodium* Trin.)

French Guiana, Uruguay. Annual, hispid, erect or ascending, leaf blades linear acute, panicles terminal and axillary, spikelets obovate to orbicular and glabrous, lower glume ovate 5-nerved acute or acuminate separated by a short internode, upper glume ovate 7-nerved acute or acuminate, upper lemma elliptic, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Encyclopédie Méthodique, Botanique* 4: 742. 1798, *De Graminibus*

Paniceis 149, 227. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 197. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 199. 1831, *Synopsis Plantarum Glumacearum* 1: 77. 1853, *Flora Brasiliensis* 2(2): 220. 1877, *Anales del Museo Nacional de Montevideo* 1: 147. 1894 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 132. 1901, *Contr. U.S. Natl. Herb.* 15: 70. 1910, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 239. 1931, *Smithsonian Contributions to Botany* 57: 1-24. 1984.

P. cayoense Swallen

Belize, British Honduras. See *Contributions from the United States National Herbarium* 29(9): 418. 1950.

P. cenchroides Rich. (*Panicum cenchroides* Elliott, nom. illeg., non *Panicum cenchroides* Lam.; *Panicum cenchroides* Lam., nom. illeg., non *Panicum cenchroides* Rich.; *Pennisetum polystachion* (L.) Schult.; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken; *Pennisetum richardii* Kunth; *Pennisetum setosum* (Sw.) Rich.; *Setaria cenchroides* (Rich.) Roem. & Schult.)

South America, U.S. See *Systema Naturae, Editio Decima* 870. 1759, *Nova Genera et Species Plantarum seu Prodrromus* 26. 1788, *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792, *Tableau Encyclopédique et Méthodique ... Botanique* 4: 737. 1798, *Syn. Pl.* 1: 72. 1805, *A Sketch of the Botany of South-Carolina and Georgia* 1: 111. 1816, *Systema Vegetabilium, editio decima sexta* 2: 495. 1817, *Mantissa* 2: 146. 1824, *Révision des Graminées* 1: 49. 1829 and *Botanical Journal of the Linnean Society* 79(1): 63. 1979, *Botanical Journal of Scotland* 79: 51-64. 1979, *Lilloa* 36(1): 105-129. 1983, *Las Gramíneas de México* 5: 1-466. 1999.

P. cervicatum Chase (*Panicum olyroides* Kunth; *Panicum vinaceum* Swallen)

Brazil. Perennial or annual, tufted, tough, sub-shrubby, stiff leaf blades linear to narrowly lanceolate pungent, panicle ovate or oblong with stiff branches ascending or spreading, spikelets ovate-elliptic, lower glume ovate acuminate, upper glume ovate acuminate, lower lemma ovate acute, cerrado, sandy places, see *Essai d'une Nouvelle Agrostographie* 41, 164. 1812, *Nova Genera et Species Plantarum* 1: 102. 1815 [1816], *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888 and *Journal of the Washington Academy of Sciences* 32(6): 164, f. 10. 1942, *Fieldiana, Botany* 28(1): 27. 1951.

P. chacoense Parodi (*Panicum hirsutum* Sw.)

Argentina. See *Flora Indiae Occidentalis* 1: 173. 1797 and *Darwiniana* 15: 102, f. 8. 1969, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Annals of the Missouri Botanical Garden* 83(2): 200-280. 1996.

P. chapadense Swallen (*Panicum pirineosense* Swallen)

Brazil. Perennial, herbaceous, erect, cormlike base, leaf sheaths pubescent, lanceolate and velvety pubescent leaf blades with base cordate, leaves acuminate, panicle oblong with spikelets secund and shortly pedicelled, lower glume ovate 3-nerved, upper glume ovate 5-nerved, lower lemma ovate glandular, upper lemma and palea glabrous, awnless, open or shady places, sandy areas, rocky sites, secondary forest, see *Los Angeles County Museum Contributions in Science* 22: 8, f. 4. 1958, *Phytologia* 14(2): 78. 1966, *Annals of the Missouri Botanical Garden* 75(2): 420-455. 1988.

P. chasiae Roseng., B.R. Arrill. & Izag. (*Panicum chasiae* (M.K. Elias) Thomasson, J.R., nom. illeg., non *Panicum chasiae* Roseng., B.R. Arrill. & Izag.; *Setaria chasea* M.K. Elias)

Brazil, Uruguay. Erect, small inflorescences, see *Geological Society Special Publications* 41: 103, t. 16, f. 10-14. 1942, *Boletín de la Facultad de Agronomía de Universidad de la Republica, Montevideo* 103: 9, f. 2. 1968, *Kansas Geological Survey Bulletin* 218: 57. 1979.

P. chillagoanum B.K. Simon

Australia, Queensland, Cook Dist., Chillagoe. See *Austrobaileya* 3(4): 596, f. 5. 1992.

P. chloroleucum Griseb. (*Panicum jaboncillo* Hieron.; *Panicum urvilleanum* var. *chloroleucum* (Griseb.) Kuntze)

Argentina. Marsh, saline, see *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 262. 1874, August Heinrich Rudolph Grisebach (1814-1879), *Plantae lorentzianae*. Göttingen 1874, *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 41: 483. 1882, *Revisio Generum Plantarum* 3(3): 364. 1898.

P. chnoodes Trin. (*Panicum cowanii* Swallen; *Panicum curvifolium* Swallen; *Panicum inversum* Swallen; *Panicum kavanayense* Swallen; *Panicum loreum* var. *lanata* Trin.; *Panicum maguirei* Swallen; *Panicum pungens* Trin., nom. illeg., non *Panicum pungens* Poir.; *Panicum tatei* Swallen; *Panicum tropidoblephare* Tutin; *Panicum vannum* Swallen) (for the British-born American zoologist George Henry Hamilton Tate (1894-1935), 1922 Field Assistant American Museum of Natural History, plant collector in Venezuela, Bolivia, Brazil and Ecuador, Aug 1928-Apr 1929 Tyler-Duida Expedition of the American Museum of Natural History to Cerro Duida, author of *Mammals of Eastern Asia*. New York 1947, with Thomas D. Carter wrote *Mammals of the Pacific World*. 1945. See Douglas C. McMurtrie, *A Bibliography of Morristown Imprints 1798-1820*. [from the *Proceedings of the New Jersey Historical Society*, April 1936] Newark 1936; H.A. Gleason et collab., "Botanical Results of the Tyler-Duida Expedition (Venezuela)." *Bulletin of the Torrey Botanical Club* 58: 277-506. 1931; J.H. Barnhart, *Biographical notes upon botanists*. 3: 361. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 3: 304. Cambridge, Mass.

1917-1933; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 672. London 1994)

Brazil, Venezuela. Erect, bunchgrass, caespitose, clumped, blue glaucous, forming colonies, savannah and wet savannah, wet sand, moist places, sandy places, damp ground, slopes, see *De Graminibus Paniceis* 210-211. 1826, *Species Graminum* 3: t. 247. 1829-1830 and *Bulletin of the Torrey Botanical Club* 58: 316, f. 2. 1931, *Journal of Botany, British and Foreign* 72(864): 339, f. 9. 1934, *Memoirs of the New York Botanical Garden* 9(3): 261, 262, 264. 1957.

P. chondrachne Steud. (*Chaetochloa chondrachne* (Steud.) Honda; *Setaria chondrachne* (Steud.) Honda)

Asia. See *Synopsis Plantarum Glumacearum* 1: 51. 1853 and *Botanical Magazine* (Tokyo) 38: 193. 1924, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 234-235. 1930.

P. churunense Swallen (*Panicum eligulatum* N.E. Br.)

Venezuela, Río Churun. See *Transactions of the Linnean Society of London, Botany* 6(1): 73. 1901, *Acta Botánica Venezuelica* 2(5-8): 133. 1967, *Kew Bulletin* 39(1): 185-202. 1984.

P. cipoense Renvoize & Send.

Brazil. See *Kew Bulletin* 35(1): 229. 1980, *Darwiniana* 3(1-4): 53-60. 1995.

P. clandestinum L. (*Chasea clandestina* (L.) Nieuwl.; *Dichantheium clandestinum* (L.) Gould; *Milium clandestinum* (L.) Moench; *Panicum clandestinum* Wall. ex B.D. Jacks.; *Panicum clandestinum* var. *pedunculatum* (Torr.) Torr.; *Panicum decoloratum* Nash; *Panicum latifolium* var. *clandestinum* (L.) Pursh; *Panicum pedunculatum* Torr.)

Northern America, U.S. Perennial or annual, prostrate to erect, fibrous root system, nodes and internodes sometimes hairy, leaf sheaths covered with short stiff hairs, ligules membranous, wide leaves, bases of the leaf blades heart-shaped and completely surrounding the sheath, hairy spikelets, silvery flowers, can be a troublesome weed of pastures and hayfields, ornamental grass, occurs in mesic to dry woods, on thickets and fields, along streams, dry habitats, edge of field and wet prairies, shores and alluvial woods borders, sandy railroad bank, see *Species Plantarum* 1: 58-59. 1753, *Methodus Plantas Horti Botanici ...* 204. 1794, *Flora Americae Septentrionalis; or, ...* 1: 68. 1814, *A Flora of the Northern and Middle Sections of the United States* 141. 1824, *A Flora of the State of New York* 2: 426. Albany 1843, *Index Kewensis* 2: 411. 1894, *Bulletin of the Torrey Botanical Club* 26(11): 570. 1899 and *American Midland Naturalist* 2: 64. 1911, *Brittonia* 26(1): 59. 1974.

in English: deer tongue, deer tongue grass, tioga deer tongue grass, hidden panic grass

P. coccospermum Steud. (*Brachiaria coccosperma* (Steud.) Stapf ex Reeder; *Brachiaria kotschyana* (Hochst. ex Steud.) Stapf; *Brachiaria villosa* (Lam.) A. Camus; *Brachiaria*

villosa var. *villosa*; *Panicum villosum* Lam.; *Urochloa villosa* (Lam.) T.Q. Nguyen)

India. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Synopsis Plantarum Glumacearum* 1: 62. 1855 [1853] and *Flora of Tropical Africa* 9: 559. 1919, *Flore Générale de l'Indo-Chine* 7: 433. 1922, *Journal of the Arnold Arboretum* 29: 273. 1948, *Novosti Sist. Vyss. Rast.* 1966: 14. 1966, *Blumea* 41(2): 413-437. 1996.

P. cognatissimum Steud. (*Brachiaria ramosa* (L.) Stapf)

Africa. See *Mantissa Plantarum* 29. 1767, *Synopsis Plantarum Glumacearum* 1: 69. 1855 [1853 or 1854] and *Flora of Tropical Africa* 9: 542. 1919, *Flora of Tropical East Africa* 451-898. 1982.

P. collare Schumach.

Guinea. See *Beskrivelse af Guineiske planter* 60-61. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 80-81. 1828.

P. colonum L. (*Echinochloa colona* (L.) Link)

Tropical Africa. Annual, succulent, erect, decumbent, rooting from the lower nodes, leaves linear acuminate, panicle of several distant spikes, spikelets in four rows on one side of the spikes, a weed on cultivated ground, used for forage, eaten both before and after flowering, rich soil, see *Systema Naturae, Editio Decima* 2: 870. 1759, *Methodus Plantas Horti Botanici ...* 202. 1794, *Nova Genera et Species Plantarum* 1: 108. 1815 [1816], *Flora Indica; or Descriptions ...* 1: 307. 1820, *Observations sur les Graminées de la Flore Belgique* 138. 1823, *Florae Siculae Prodromus* 1: 62. Napoli 1827, *Species Graminum* 2: t. 162. 1829, *Reliquiae Haenkeanae* 1(4-5): 321. 1830, *Hortus Regius Botanicus Berolinensis* 2: 209. 1833, *Linnaea* 12(4): 429. 1838, *Nomenclator Botanicus. Editio secunda* 2: 258. 1841, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19(Suppl. 1): 139. 1843, *Flora Palermitana* 1: 119. 1845, *Tentamen Florae Abyssinicae ...* 2: 365. 1850, *Exploration Scientifique de l'Algérie* 2: 28. 1854, *Synopsis Plantarum Glumacearum* 1: 46, 54, 58, 63. 1855 [1853], *Naturwissenschaftliche Reise nach Mossambique ...* 2: 549. 1864, *Plantae Europaeae* 1: 26. 1890, *Revisio Generum Plantarum* 2: 771. 1891, *Conspicuum Florae Africae* 5: 743, 748, 772. 1894, *Contributions from the United States National Herbarium* 2(3): 502. 1894, *Anales del Museo Nacional de Montevideo* 1: 119. 1894, *Anales de la Universidad de Chile* 93: 714. 1896 and *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 71. 1911, *New Mexico Agricultural Experiment Station: Bulletin* 81: 45. 1912, *Report of the Michigan Academy of Science, Arts and Letters* 21: 350. 1920, *Rhodora* 23(267): 53. 1921, *Nuova Flora Analitica d'Italia* 1: 79. 1923, *Botanical Magazine* (Tokyo) 37: 122. 1923, *The Flora of the Malay Peninsula* 5: 223. 1925, *Flora of Japan* 1470. 1925, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 179, 132 &

Anhang, 33. 1930, *Rev. Appl. Biol.* 13: 901. 1933, *Botanical Magazine* 52: 231. 1938, *Mémoires de la Société Botanique de France* 1953-54: 9. 1954, *Exploration du Parc National de la Garamba* 4: 47. 1956, *Annalen des Naturhistorischen Museums in Wien* 69: 39. 1966, *Enumeratio Plantarum Aethiopiae Spermatophyta* 39(Suppl.): 1320. 1969, *Phytologia* 48(2): 189. 1981, *Fl. Trop. East Afr., Gramineae* (part 3). 1982.

in India: borur, chatta, chichohi, dhunia, gawa, gotbarta, jangli samak, jangli sawan, jangli sawank, jangli sawuk, jharai, jiria, kaadu haaraka hullu, karum pullu, karumpul, oothagaddi, othagaddi, oyia, pachushama, pacushama, pakud, pullam payiru, sama-ghas, samak, sanwak, sanwan, saonrel, saonria, sauri, sawa, sawak, sawan, sawank, saweli, sawuk, shama, shamak, sirmakar, sivaen, solni, todia, tor, varsanam pillu, varsanam pullu, woodoo gaddi, wundu

***P. coloratum* L.** (*Milium coloratum* (L.) Moench; *Panicum coloratum* Cav., nom. illeg., non *Panicum coloratum* L.; *Panicum coloratum* F. Muell., nom. illeg., non *Panicum coloratum* L.; *Panicum coloratum* Thouin ex Spreng., nom. illeg., non *Panicum coloratum* L.; *Panicum coloratum* Walter, nom. illeg., non *Panicum coloratum* L.; *Panicum coloratum* Kunth, nom. illeg., non *Panicum coloratum* L.; *Panicum coloratum* L. var. *makarikariense* Gooss.; *Panicum coloratum* L. var. *minus* Stapf ex Chiov.; *Panicum coloratum* L. var. *strictum* Rendle; *Panicum crassipes* Mez; *Panicum phragmitoides* Stapf; *Panicum subalbidum* Kunth; *Panicum subalbidum* var. *tuberculosum* Chiov.; *Panicum swynnertonii* Rendle; *Panicum virgatum* L.)

Tropical Africa, Kenya, Angola, Mozambique, Namibia, South Africa, Ethiopia, Uganda, Tanzania, Egypt, Arabia. Perennial or annual, very variable, polymorphic, branched, erect or rarely decumbent, erect or ascending, leafy, dark green, slender, bunchgrass or spreading, tufted, base knotty or slightly swollen, root fibrous, often shortly stoloniferous or shortly rhizomatous or rhizomes absent, leaf sheath glabrous or hirsute or pilose, ligule membranous to ciliate, glabrous or hairy leaves, inflorescence an open pyramidal panicle, ovate panicle open or contracted usually much branched with ascending branches not whorled, spikelets acute or acuminate or subacute, glumes unequal, lower glume acute and ovate or rounded and abruptly acuminate, lower lemma male, upper lemma oblong and subacute, anthers orange or reddish, seed subject to shattering, cultivated fodder, native pasture species, palatable, good grazing for all stock, used for hay, pasture and silage, grains edible, grains eaten by baboons, may cause photosensitization in goats and sheep, variability in several morphological characters, withstands considerable drought, suitable as a soil binder, grows on seasonally waterlogged black heavy clays, lawns, gardens, hedges, canal banks, on red and black clay soils, wooded meadows, damp meadows, moist heavy soils, on heavy soils with impeded drainage, well on sandy to clay soils, see *Species Plantarum* 1: 59. 1753, *Mantissa*

Plantarum 30. 1767, *Flora Caroliniana, secundum ...* 73. 1788, *Icones et Descriptiones Plantarum, quae aut sponte ...* 2: t. 110. 1793, *Methodus Plantas Horti Botanici ...* 203. 1794, *Systema Vegetabilium, editio decima sexta* 1: 317. 1825, *Révision des Graminées* 2: 397, t. 112. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 104. 1833, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 38. 1841, *Fragmenta Phytographiae Australiae* 8: 192. 1874, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 178. 1899 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 307. 1908, *Contr. U.S. Natl. Herb.* 12: 118. 1908, *Journal of the Linnean Society, Botany* 40: 230. 1911, *Resultati Scientifici della Missione Stefanini-Paoli nella Somalia Italiana* 1: 183. 1916, *Flora of Tropical Africa* 9: 677. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 187. 1921, *Bulletin of Miscellaneous Information Kew* 1934: 195. 1934, *E. Africa Agric. J.* 14: 4, 5, 8, 9. 1948, *Flora of Tropical East Africa* 451-898. 1982.

in English: blue panic grass, Kleingrass, Klein grass, Keria grass, colored Guinea grass, small buffalo grass, small panicum, small buffalo grass, white buffalo grass

in Spanish: pasto colorado

in Arabic: qosseiba

in Australia: Coolah grass

in Mexico: klein

***P. coloratum* L. var. *capense* Nees**

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 38. 1841.

***P. coloratum* L. var. *coloratum* (*Panicum coloratum* L. var. *makarikariense* Goossens; *Panicum swynnertonii* Rendle)**

Tropical and subtropical Africa. Perennial, highly variable, coarsely hispid or subglabrous, tufted, green or glaucous, hairy, erect or generally geniculate, sometimes decumbent, unbranched, leaf sheath hairy or glabrous, ligule a ring of short hairs, leaf blade expanded, leaves with large auricles at the base, shortly rhizomatous, sometimes stoloniferous, open interrupted panicle, branches of the inflorescence solitary or in pairs, spikelets awnless, cultivated, pasture, fodder and forage, valuable as grazing for large animals, very high grazing value, very drought-resistant and palatable, can withstand prolonged flooding, useful for revegetation, occurs in open habitats, damp sandy soils, omiramba, seasonally inundated marshes, open grasslands, drainage courses, bushveld, heavy and moist soil, around pans, sandy or clay soil, river beds, depressions, see *Mantissa Plantarum* 30. 1767.

in English: small buffalo grass, small panicum, klein grass, white buffalo grass, colored Guinea grass

in Spanish: pasto colorado

in Arabic: qosseiba

in South Africa: bamboeskweek, blousaadgras, buffelgras, kleinbuffelsgras, miergras, osgras, witbuffelgras, bont panicum, bunt hirsegras

in Sudan: gasaba

P. coloratum L. var. *glaucescens* Nees

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 1: 38. 1841.

P. coloratum L. var. *makarikariense* Goossens (*Panicum coloratum* L.; *Panicum makarikariense* (Gooss.) Van Rensb.) (Makarikari pan)

Africa, Botswana. Perennial, shortly rhizomatous, clumped, creeping, glabrous, robust, branching and erect, glaucous-bluish leaves, auricles absent, open nodding panicle, ovoid and gray-black grain, cultivated, very palatable, very drought-resistant or reasonably drought-resistant, can withstand prolonged flooding and waterlogged situations, forage, pasture species, gives a high mass yield, animal food, economic plant, grows on heavy black clay soils, in warm dry bushveld, somewhat saline areas, full sunlight, see *Mantissa Plantarum* 30. 1767 and *Bulletin of Miscellaneous Information Kew* 1934: 195. 1934, *E. Africa Agric. J.* 14: 4, 5, 8, 9. 1948.

in English: Makarikari grass, Makarikari panicum

P. coloratum L. var. *minus* Stapf ex Chiov. (*Panicum coloratum* L.)

Tropical East Africa, Somalia, Yemen. Perennial, erect, pilose or subglabrous, often branched from the base, short stolons, open panicle, short grassland, open areas, open bushland, sandy soils, along the margins of sandy water courses, see *Mantissa Plantarum* 30. 1767 and *Resultati Scientifici della Missione Stefanini-Paoli nella Somalia Italiana* 1: 183. 1916.

in Somalia: medu, gurgurro, agar, giallo, jalbo

P. columbianum Scribner (*Dichantherium acuminatum* subsp. *columbianum* (Scribn.) Freckmann & Lelong; *Dichantherium columbianum* (Scribn.) Freckmann; *Dichantherium portoricense* (Desv. ex Ham.) B.F. Hansen & Wunderlin; *Dichantherium sabulorum* (Lam.) Gould & C.A. Clark var. *thinium* (Hitchc. & Chase) Gould & C.A. Clark; *Panicum acuminatum* Sw. var. *columbianum* (Scribn.) Lelong; *Panicum columbianum* var. *oricola* (Hitchcock & Chase) Fernald; *Panicum columbianum* var. *thinium* Hitchcock & Chase; *Panicum heterophyllum* Bosc ex Nees, nom. illeg., non *Panicum heterophyllum* Spreng.; *Panicum heterophyllum* var. *thinium* (Hitchc. & Chase) F.T. Hubb.; *Panicum oricola* Hitchc. & Chase; *Panicum psammophilum* Nash, nom. illeg., non *Panicum psammophilum* Welw. ex Rendle; *Panicum sabulorum* Lam. var. *thinium* (Hitchc. & Chase) C.F. Reed; *Panicum tsugetorum* Nash; *Panicum unciphyllum* Trin. *thinium* Hitchc. & Chase)

U.S., District of Columbia. Perennial, caespitose, sandy open ground, thin woods, see *Nova Genera et Species*

Plantarum seu Prodromus 23. 1788, *Prodromus Plantarum Indiae Occidentalis* 11. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 227. 1829, *Bulletin, Division of Agrostology United States Department of Agriculture* 7: 78, f. 60. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 55. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 576. 1899 and *Rhodora* 8(95): 207-209. 1906, *Rhodora* 10(112): 64. 1908, *Rhodora* 36(423): 79. 1934, *Le Naturaliste Canadien* 94: 526. 1967, *Le Naturaliste Canadien* 103(6): 562. 1976, *Phytologia* 39(4): 270. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1112-1113, 1121. 1978 [1979], *Brittonia* 36(3): 270. 1984, *Annals of the Missouri Botanical Garden* 75: 1649. 1988 [1989], *Sida* 20(1): 167. 2002.

in English: hemlock panic grass, District of Columbia panic grass

P. comatum Hochst. ex A. Rich. (*Brachiararia comata* (Hochst. ex A. Rich.) Stapf; *Urochloa comata* (Hochst. ex A. Rich.) Sosef)

Africa, Ethiopia. See *Tentamen Florae Abyssinicae ...* 2: 376. 1850 and *Flora of Tropical Africa* 9: 561. 1919, *Flore du Gabon* 5 bis: 64. 1999.

P. commelinifolium Rudge (*Panicum commelinifolium* Ashe, nom. illeg., non *Panicum commelinifolium* Rudge; *Panicum nervosum* Lam.; *Panicum nervosum* Roxb., nom. illeg., non *Panicum nervosum* Lam.)

Guyana. See *Encyclopédie Méthodique, Botanique* 4: 747. 1798, *Plantarum Guianae Rariorum Icones et Descriptiones ...* 21, t. 28. 1805[-1806], *Flora Indica; or Descriptions ...* 1: 314. 1820, *Journal of the Elisha Mitchell Scientific Society* 15: 29. 1898.

P. commixtum Steud. (*Panicum distans* Trin.; *Setaria distans* (Trin.) Veldkamp)

Australia. See *Species Graminum* 2: t. 172. 1829, *Synopsis Plantarum Glumacearum* 1: 59. 1854 and *Proc. Royal Soc. Queensland* 84: 667. 1973, *Blumea* 39(1-2): 376. 1994, *Sida* 16(3): 439-446. 1995.

P. commonsianum Ashe (*Dichantherium acuminatum* var. *acuminatum*; *Dichantherium commonsianum* (Ashe) Freckmann; *Dichantherium ovale* var. *addisonii* (Nash) Gould & C.A. Clark; *Panicum columbianum* var. *commonsianum* (Ashe) Dore; *Panicum ovale* Elliott; *Panicum ovale* var. *pseudopubescens* (Nash) Lelong)

North America, U.S. Coastal, drifting sand, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Bulletin, Division of Agrostology United States Department of Agriculture* 7: 78, f. 60. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 55. 1898, *Bulletin of the Torrey Botanical Club* 25(2): 83-84. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 577. 1899 and *New Jersey State Mus. Annual Rep.* 1910: 205. 1911, *Rhodora* 37: 391. 1935, *American Midland Naturalist* 32: 170. 1944, *American Midland Naturalist* 38: 507, 582. 1947, *Phytologia* 39(4):

268-272. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1114-1115, 1121. 1978 [1979], *Brittonia* 36(3): 262-273. 1984.

P. commutatum Schultes (*Dichantheium albomaculatum* (Scribn.) Gould; *Dichantheium commutatum* (Schult.) Gould; *Dichantheium commutatum* var. *ashei* (T.G. Pearson ex Ashe) Mohlenbr.; *Dichantheium joori* (Vasey) Mohlenbr.; *Digitaria commutata* Schult.f.; *Panicum albomaculatum* Scribn.; *Panicum alsophilum* Swallen; *Panicum ashei* T.G. Pearson ex Ashe; *Panicum commelinifolium* Ashe, nom. illeg., non *Panicum commelinifolium* Rudge; *Panicum commutatum* (Schult.f.) Nees, nom. illeg., non *Panicum commutatum* Schult.; *Panicum commutatum* Schultes var. *ashei* (G. Pearson ex Ashe) Fernald; *Panicum commutatum* var. *joorii* (Vasey) Fernald; *Panicum commutatum* var. *latifolium* Scribn.; *Panicum commutatum* var. *minor* Vasey; *Panicum curranii* Ashe; *Panicum divergens* Kunth; *Panicum enslinii* Trin.; *Panicum joorii* Vasey; *Panicum leiophyllum* E. Fourn., nom. illeg., non *Panicum leiophyllum* Nees; *Panicum manatense* Nash; *Panicum mutabile* Scribn. & J.G. Sm. ex Nash; *Panicum nervosum* Muhl. ex Elliott, nom. illeg., non *Panicum nervosum* Lam.; *Panicum nitidum* var. *majus* Pursh; *Panicum polyneuron* Steud.; *Panicum subsimplex* Ashe)

Northern America, U.S. Caespitose, forage, dry rocky hills, oak woods, fields, in dry rocky woods, see *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 91. 1809, *Flora Americae Septentrionalis*; or, ... 1: 67. 1814, *Nova Genera et Species Plantarum* 1: 102. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1: 122. 1816, *Mantissa* 2: 242. 1824, *Linnaea* 7(3): 274. 1824, *De Graminibus Paniceis* 230. 1826, *Révision des Graminées* 1: 36. 1829, *Mantissa* 2: 262. 1832, *Florae Africae Australioris Illustrationes Monographicae* 26-27. 1841, *Plantae Novae vel Minus Notae* ... 39. 1842, *Synopsis Plantarum Glumacearum* 1: 91. 1854, *Mexicanas Plantas* 2: 20. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 31, 34. 1889, *Bulletin of the Torrey Botanical Club* 20: 476. 1893, *Conspectus Florae Africae* 5: 743-744. 1894, *Grasses of North America for Farmers and Students* 2: 141. 1896, *Bulletin of the Torrey Botanical Club* 24(1): 42. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 29, 35. 1898, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1899 and *Circular, Division of Agrostology, United States Department of Agriculture* 19: 2-3. 1900, *North Carolina Agricultural Experiment Station Bulletin* 175: 115. 1900, *Flora of the Southeastern United States* ... 103, 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 310. 1910, *Rhodora* 36(423): 83. 1934, *Rhodora* 39(466): 388. 1937, *Contributions from the United States National Herbarium* 29(9): 422. 1950, *Brittonia* 26(1): 59. 1974, *Brittonia* 32: 357. 1980, *Erigenia* 6: 26. 1985, *Sida* 20(1): 169. 2002.

in Mexico: panizo blanco

P. commutatum Schultes var. **argyrograptum** (Nees) Hack. ex T. Durand & Schinz (*Panicum argyrograptum* Nees)

Africa. See *Florae Africae Australioris Illustrationes Monographicae* 27. 1841, *Conspectus Florae Africae* 5: 743. 1894.

P. commutatum Schultes var. **ashei** (G. Pearson ex Ashe) Fernald (*Dichantheium commutatum* (Schult.) Gould; *Dichantheium commutatum* subsp. *ashei* (T.G. Pearson ex Ashe) Freckmann & Lelong; *Dichantheium commutatum* var. *ashei* (T.G. Pearson ex Ashe) Mohlenbr.; *Panicum ashei* T.G. Pearson ex Ashe; *Panicum commutatum* Schult.)

U.S. Caespitose, dry, open woods and openings, alluvial soils, rocky bottoms, see *Mantissa* 2: 242. 1824, *Journal of the Elisha Mitchell Scientific Society* 15: 35. 1898 and *Contr. U.S. Natl. Herb.* 15: 310 (1910, *Rhodora* 36(423): 83. 1934, *Brittonia* 26(1): 59. 1974, *Erigenia* 6: 26. 1985, *Sida* 20(1): 169. 2002.

P. commutatum Schultes var. **commutatum** (*Dichantheium commutatum* (Schult.) Gould; *Panicum divergens* Kunth)

U.S. Caespitose, in open woods, open sandy or rocky places, thickets and fields, see *Mantissa* 2: 242. 1824 and *Brittonia* 26(1): 59. 1974.

in English: changeable panic grass, variable panic grass

P. commutatum Schultes var. **fluviatile** Nees

Tropical Africa. See *Mantissa* 2: 242. 1824, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 26. 1841.

P. comophyllum Nash (*Dichantheium acuminatum* (Sw.) Gould & C.A. Clark; *Dichantheium acuminatum* var. *acuminatum*; *Panicum acuminatum* Sw.; *Panicum acuminatum* var. *acuminatum*)

Puerto Rico. In rich soil, see *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788 and *Bulletin of the Torrey Botanical Club* 30(7): 380. 1903, *Annals of the Missouri Botanical Garden* 65(4): 1121. 1978 [1979], *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988.

P. comorense Mez (*Brachiaria comorensis* (Mez) A. Camus; *Panicum microlemma* Pilg.)

Tropical Africa, Tanzania, Madagascar, Comore Isl. Annual, tufted, erect or decumbent, trailing, rooting at the lower nodes, leaf blades narrowly lanceolate acuminate, ligule triangular, inflorescence sparsely branched, spikelets oblong obtuse, upper glume 3-nerved, lower floret sterile, green spot at the tip of the female fertile lemma, palea absent, rare in South Africa, at the edge of woods, riverine forest, resembles *Panicum monticola*, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 185. 1922, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 707. 1942, *Revue internationale de botanique appliquée et d'agriculture tropicale* 27: 280. 1947, *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 29: 274-281. 1957.

P. conchatum E. Fourn. (*Panicum arundinariae* Trin. ex E. Fourn.)

Mexico. See *Biologia Centrali-Americana; ... Botany ...* 3: 487. 1885, *Mexicanas Plantas* 2: 25. 1886.

P. condensatum Bertol. (*Hymenachne condensata* (Bertol.) Chase; *Panicum auriculatum* var. *fasciculosum* Döll; *Panicum januarium* Mez; *Panicum pilosum* var. *subverticillatum* Döll)

Brazil. Branched, growing in marshy places, see *Nova Genera et Species Plantarum seu Prodromus* 22. 1788, *Opuscoli Scientifici* 3: 408. 1819, *Systema Vegetabilium, editio decima sexta* 1: 322. 1824, *Flora Brasiliensis* 2(2): 211, 238. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4. 1921, *Journal of the Washington Academy of Sciences* 13(9): 177. 1923.

P. congestum Renvoize (*Dichantheium congestum* (Renvoize) Zuloaga)

Brazil. Perennial, pubescent, caespitose, erect, slender, wiry, branched, leaf blades linear and pungent, panicle sparsely branched, spikelets elliptic-oblong, lower glume narrowly ovate 3-nerved, upper glume ovate 7-nerved, lower lemma ovate 7-nerved, upper lemma shiny, in cerrado, see *Kew Bulletin* 37(2): 329, f. 6A-B. 1982, *American Journal of Botany* 90(5): 816. 2003.

P. congoense Franch. (*Panicum mitophyllum* Pyr.)

Tropical Africa, Gabon. Perennial, densely tufted, found in marshy places, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 342. 1895 [1893] and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 50. 1902.

in Sierra Leone: penin bonle, peninbonle

P. cordatum Büse (*Hymenachne cordata* (Döll) Kuhlms.; *Panicum cordatum* Döll, nom. illeg., non *Panicum cordatum* Büse)

Asia, Indonesia. See *Plantae Junghuhnianae* 3: 376. 1854, *Plantae Indiae Batavae Orientalis* 2: 111. 1857, *Flora Brasiliensis* 2(3): 239. 1880 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 90. 1922, *J. Wash. Acad. Sci.* 13(9): 177. 1923, *Reinwardtia* 2(2): 316. 1953.

P. cordovense E. Fourn. (*Dichantheium cordovense* (E. Fourn.) Davidse; *Dichantheium cordovense* (Fourn.) Gould; *Ichnanthus apiculatus* Scribn.; *Panicum cordovense* E. Fourn. ex Hemsl.; *Panicum dusenii* Hack.; *Panicum expansum* E. Fourn.; *Panicum expansum* Trin. ex Steud.; *Panicum missionum* Ekman; *Panicum ovuliferum* Trin.)

South America, Mexico. Perennial, decumbent, creeping, clambering, rooting at the lower nodes, scandent, weedy, in forest, forest edge, along trails, roadsides, see *Species Plantarum* 1: 55, 58. 1753, *De Graminibus Panicis* 191. 1826, *Nomenclator Botanicus. Editio secunda* 2: 257. 1841, *Bio-*

logia Centrali-Americana; ... Botany ... 3: 497. 1885, *Mexicanas Plantas* 2: 26. 1886 and *Circular, Division of Agronomy, United States Department of Agriculture* 30: 1-2. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 8: 513. 1910, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 19, t. 3, f. 1. 1912, *Brittonia* 23(3): 293-324. 1971, *Novon* 2(2): 105. 1992.

P. costaricense Hack. (*Panicum haenkeanum* J. Presl)

Costa Rica. See *Reliquiae Haenkeanae* 1(4-5): 304. 1830 and *Österreichische Botanische Zeitschrift* 51: 428. 1901, *Contr. U.S. Natl. Herb.* 15: 134. 1910, W.C. Burger, (editor), *Flora Costaricensis. Family 15. Gramineae, Fieldiana: Botany, New Series* 4: 1-608. 1980, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

P. crateriferum Sohns

Mexico. Grassy slopes, see *Journal of the Washington Academy of Sciences* 46(12): 378, f. 10-22. 1956.

P. cubense (Spreng.) Steud. (*Oplismenus hirtellus* (L.) P. Beauv.; *Orthopogon cubensis* Spreng.; *Oplismenus hirtellus* subsp. *hirtellus*; *Panicum hirtellum* L.)

Cuba. See *Systema Naturae, Editio Decima* 870. 1759, *Essai d'une Nouvelle Agrostographie* 54, 168, 170. 1812, *Systema Vegetabilium, editio decima sexta* 1: 307. 1825, *Nomenclator Botanicus. Editio secunda* 2: 255. 1841.

P. cumbucana Renvoize (*Dichantheium cumbucana* (Renvoize) Zuloaga)

Brazil, Rio Cumbuca. Perennial or annual, loosely tufted, erect or decumbent, branched, nodes hairy, leaf sheaths pubescent, blades narrowly ovate, panicle ovate moderately branched, spikelets elliptic-oblong, awnless, lower glume ovate-oblong 1- to 3-nerved acute, upper glume ovate-oblong 7-nerved acute, lower lemma ovate 7-nerved, upper lemma smooth shiny, riverside, scrub, on damp sandy soil, see *Kew Bulletin* 37(2): 332, 7C-D. 1982, *American Journal of Botany* 90: 816. 2003.

P. cupressifolium A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 72: 372. 1925.

P. curranii Ashe (*Dichantheium commutatum* (Schult.) Gould; *Panicum commutatum* Schult.)

U.S. See *Mantissa* 2: 242. 1824, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1899 and *Brittonia* 26(1): 59. 1974.

P. curvatum L. (*Sacciolepis curvata* (L.) Chase)

India. See *Systema Naturae, ed 12* 2: 732. 1767, *Conspectus Florae Africae* 5: 745. 1894 and *Proceedings of the Biological Society of Washington* 21: 8. 1908.

P. curviflorum Hornem. (*Panicum neesianum* Wight & Arn. ex Steud.; *Panicum roxburghii* Spreng.; *Panicum tenellum*

Roxb., nom. illeg., non *Panicum tenellum* Lam.; *Panicum trypheron* Schult.)

Asia temperate and tropical, China, Cambodia, Myanmar, Sri Lanka, Taiwan, India, Indonesia, Vietnam, Thailand, Southeast Asia. Annual, stout or slender, tufted, leafy, rarely erect, often spreading and geniculate below, glabrous nodes rarely rooting, sheaths glabrous or hairy, short ligule fimbriate, leaves softly hairy and tapering to an acuminate tip, inflorescence a panicle erect or nodding, spikelets gaping, useful grass, fodder, grows on pasture land, cultivated fields, see *Hortus Regius Botanicus Hafniensis* Suppl.: 116. 1819, *Flora Indica*; or *Descriptions ...* 1: 309. 1820, *Mantissa* 2: 244. 1824, *Systema Vegetabilium, editio decima sexta* 1: 320. 1825, *Synopsis Plantarum Glumacearum* 1: 74. 1853 and *Blumea* 34: 77-85. 1989.

in India: mijhri

P. curviflorum Hornem. var. ***suishaense*** (Hayata) Veldkamp (*Panicum papuanum* Mez; *Panicum suishaense* Hayata; *Panicum trypheron* var. *suishaense* (Hayata) C.C. Hsu)

Asia. See *Mantissa* 2: 244. 1824 and *Icones plantarum formosananarum nec non et contributiones ad floram formosanam*. 7: 62-63, f. 33. 1918, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 12): 6. 1921, *Journal of Japanese Botany* 38(3): 84. 1963, *Blumea* 34(1): 81-82. 1989.

P. cyanescens Nees ex Trin. (*Panicum appressifolium* Swallen; *Panicum carannasense* Mez; *Panicum contractum* Mez, nom. illeg., non *Panicum contractum* Moon; *Panicum cyanescens* Nees, nom. illeg., non *Panicum cyanescens* Nees ex Trin.; *Panicum cyanescens* var. *contractum* Trin. ex Döll; *Panicum cyanescens* var. *lamarckianum* Döll; *Panicum cyanescens* var. *patens* Trin. ex Döll; *Panicum cyanescens* var. *pubescens* Trin. ex Döll; *Panicum cyanescens* var. *rigidiusculum* Döll; *Panicum cyanescens* var. *trachycarpon* Döll; *Panicum firmifolium* Trin. ex Nees; *Panicum hololeucum* Mez; *Panicum rectissimum* Mez; *Panicum savannarum* Soderstr.; *Panicum vinnulum* Swallen)

Venezuela to southern Brazil. Annual or perennial, rarely tufted, rather variable, wiry, erect or geniculately ascending, hispid or pilose, stiff leaf blades linear to narrowly lanceolate, rhizomatous, tangled inflorescences, panicles broadly ovate terminal and axillary with stiff and spreading branches, glabrous spikelets orbicular, awnless, lower glume ovate 3-nerved acute, upper glume 5-nerved, lower lemma 5-nerved, upper lemma shiny, found in damp places, savannah, open places, marshy areas, related to *Panicum savannarum* and *Panicum nervosum*, see *De Graminibus Paniceis* 202. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 220. 1829, *Flora Brasiliensis* 2(2): 263-264. 1877 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 72-73. 1917, *Memoirs of the New York Botanical Garden* 9(3): 258. 1957, *Memoirs of the New York*

Botanical Garden 12(3): 2. 1965, *Phytologia* 14(2): 69. 1966.

P. dactylon L. (*Capriola dactylon* (L.) Kuntze; *Capriola dactylon* (L.) Hitchc., nom. illeg., non *Capriola dactylon* (L.) Kuntze; *Cynodon dactylon* (L.) Pers.; *Cynosurus dactylon* (L.) Pers.; *Digitaria dactylon* (L.) Scop.; *Fibichia dactylon* (L.) Beck; *Milium dactylon* (L.) Moench; *Paspalum dactylon* (L.) Lam.)

Europe. See *Species Plantarum* 1: 58. 1753, *Flora Carniolica, Editio Secunda* 1: 52. 1772, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Methodus Plantas Horti Botanici ...* 67. 1802, *Synopsis Plantarum* 1: 85. 1805, *Revisio Generum Plantarum* 2: 764. 1891, *Annual Report of the Missouri Botanical Garden* 1893: 147. 1893 and *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegovina* 9: 436. 1904, *Kew Bulletin* 24: 185-189. 1970.

P. deamii Hitchc. & Chase (*Dichantheium acuminatum* (Sw.) Gould & C.A. Clark; *Dichantheium acuminatum* var. *acuminatum*; *Dichantheium consanguineum* (Kunth) Gould & C.A. Clark; *Panicum consanguineum* Kunth) (named after the American botanist Charles Clemon Deam, 1865-1953, a specialist of the flora of Indiana; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 429. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 96. 1972)

U.S. See *Indiana Department of Conservation, Publication* 82: 284, t. 75, f. 18. 1929, *Révision des Graminées* 1: 36. 1829 and *Annals of the Missouri Botanical Garden* 65(4): 1115, 1121. 1978 [1979].

P. deciduum Swallen

Amazonas, Venezuela. See *Memoirs of the New York Botanical Garden* 9(3): 257. 1957.

P. decipiens Nees ex Trin. (*Panicum decipiens* (F.W. Schultz) Krause, nom. illeg., non *Panicum decipiens* Nees ex Trin.; *Panicum decipiens* Nees, nom. illeg., non *Panicum decipiens* Nees ex Trin.; *Setaria decipiens* F.W. Schultz; *Panicum decipiens* var. *parviflorum* Döll; *Steinchisma decipiens* (Nees ex Trin.) W.V. Br.)

Southern America. Rhizomatous, much branched near base, panicles closed and very slender, occurs in wet roadside ditch, in water from slow spring, see *De Graminibus Paniceis* 227. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 193. 1829, *Flora Brasiliensis* 2(2): 237. 1877 and *Beihefte zum Botanischen Centralblatt* 29: 140. 1912, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 124. 1971[1972], *Memoirs of the Torrey Botanical Club* 23(3): 20. 1977.

in English: panic grass

P. decolorans Kunth (*Panicum parcum* Hitchc. & Chase) Mexico. Forage, see *Nova Genera et Species Plantarum* 1: 100. 1815 [1816] and *Contributions from the United States*

National Herbarium 15: 68, f. 53. 1910, *Phytologia* 54(1): 4. 1983.

in Mexico: pasto

P. decompositum R. Br. (*Panicum decompositum* Rendle, nom. illeg., non *Panicum decompositum* R. Br.; *Panicum proliferum* var. *decompositum* (R. Br.) Thell.) (Latin *decompositus, a, um* “much divided, more than once divided, divided twice,” *compono, posui, positum* “set together, to bring into union, to unite”)

Pacific Islands, Australia, South Australia, Western Australia, Queensland, New South Wales, Victoria, Northern Territory. Perennial or annual decreaser species, herbaceous culms, densely tufted and leafy, erect, more or less branched, large and stout tussocks, base hairy and thickened, hollow stem, sheaths usually glabrous or smooth, ligule membranous, flat leaves green to bluish green, panicles much branched with spreading and wavy branchlets, spikelets glabrous pale green to purplish and pedicellate, first glume hyaline and subtruncate, lower lemma sterile, fertile lemma smooth and shining, rather small grains cooked or ground into a powder and used as a flour, good palatable fodder for stock, shiny and dark seeds a food source for seed-eating birds and small rodents, occurs on the banks and floodouts of streams and in valley floors with alluvial soils, good soils, damp sandy soils, grassland and woodland, dry and moist conditions, floodplains, the seeds flow about on water, intolerant of and susceptible to heavy grazing, ornamental grass, useful for erosion control, see *Prodromus Florae Novae Hollandiae* 191. 1810, *Flora Indica; or Descriptions ...* 1: 310. 1820, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 105. 1885 and *Journal of the Linnean Society, Botany* 36(253): 330. 1904, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 52; 435. 1908, *Journal of the Linnean Society, Botany* 41: 269. 1912, *Queensland Agricultural Journal* 30: 314. 1913

in English: Australian millet, native millet, windmill grass, umbrella grass, tindil, papa grass

P. decompositum R. Br. var. ***acuminatissimum*** Domin

Australia. See *Journal of the Linnean Society, Botany* 41: 269. 1912.

P. decompositum R. Br. var. ***decompositum***

Australia.

P. decompositum R. Br. var. ***scaberrimum*** Domin (*Panicum decompositum* R. Br.)

Australia. See *Prodromus Florae Novae Hollandiae* 191. 1810 and *Journal of the Linnean Society, Botany* 41: 269-270. 1912.

P. decompositum R. Br. var. ***tenuior*** F.M. Bailey

Australia. See *Queensland Agricultural Journal* 30: 314. 1913.

P. decompositum R. Br. var. ***utile*** Domin

Australia. See *Journal of the Linnean Society, Botany* 41: 270. 1912.

P. delicatulum Fig. & De Not. (*Panicum caudiglume* Stapf; *Panicum figarianum* Chiov.; *Panicum lepidum* Hochst. ex Chiov.; *Panicum nyassense* Napper)

Sudan. Annual, delicate, slender, erect, leaf blades narrowly ovate, sharp-pointed spikelets, shade species, rocky banks, see *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 351. 1854 and *Österreichische Botanische Zeitschrift* 51: 428. 1901, *Annali di Botanica* 5: 61. 1906, *Bolletino della Società Botanica Italiana* 117: 59. 1917, *Flora of Tropical Africa* 9: 727. 1920, *Kirkia* 3: 130. 1963.

P. deminutivum Peck (*Dichantherium acuminatum* var. *longiligulatum* (Nash) Gould & C.A. Clark; *Dichantherium acuminatum* var. *wrightianum* (Scribn.) Gould & C.A. Clark; *Panicum wrightianum* Scribn.)

U.S. In moist open areas, forest, pine forests, see *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 44, f. 4. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 574. 1899 and *New York State Museum Bulletin* 10: 27. 1907, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1126-1127. 1978 [1979].

P. demissum Trin. (*Dichantherium sabulorum* var. *polycladum* (Ekman) Zuloaga; *Panicum polycladum* Ekman; *Panicum sabulorum* Lam.; *Panicum sabulorum* var. *polycladum* (Ekman) R.A. Palacios & Burkart; *Panicum sabulorum* var. *polycladum* (Ekman) R.A. Palacios)

Southern Brazil to Argentina, Chile. Perennial, erect, tufted, panicle branches not glandular, spikelets glabrous, see *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *Species Graminum* 3: t. 319. 1830 [1829], *Flora Brasiliensis* 2(2): 257. 1877 and *Contribuciones a la Flora de Bolivia* 1: 64. 1910, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 24, t. 3, f. 2. 1912, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 28. 1913, *Flora Illustrada de Entre Ríos (Argentina)* 2: 316. 1969, *Annals of the Missouri Botanical Garden* 65(4): 1112. 1978 [1979], *American Journal of Botany* 90: 817. 2003.

P. densepilosum Steud. (*Leptoloma miliacea* (L.) Smyth; *Panicum miliaceum* L.)

Japan. See *Species Plantarum* 1: 58. 1753, *Synopsis Plantarum Glumacearum* 1: 72. 1854 and *Transactions of the Kansas Academy of Science* 25: 86. 1913, *Fl. Libya* 145: 282. 1988.

P. depauperatum Muhlenberg (*Dichantherium depauperatum* (Muhl.) Gould; *Panicum depauperatum* Muhl. var. *depauperatum*; *Panicum depauperatum* var. *involutum* (Torrey) Alph. Wood; *Panicum depauperatum* var. *laxum* Vasey; *Panicum depauperatum* var. *psilophyllum* Fernald; *Panicum involutum* Torr.; *Panicum junceum* Trin.; *Panicum muhlenbergii* Spreng., nom. illeg., non *Panicum muhlenbergii*)

Schult.; *Panicum rectum* Roem. & Schult.; *Panicum sprengeii* Kunth; *Panicum strictum* Pursh, nom. illeg., non *Panicum strictum* R. Br.; *Panicum strictum* var. *psilophyllum* (Fernald) Farw.)

North America, U.S. Caespitose, dry or sandy soil, open woods, sterile land, see *Catalogus Plantarum Americae Septentrionalis* 9. 1813, *Flora Americae Septentrionalis*; or, ... 1: 69. 1814, *Descriptio uberior Graminum* 112. 1817, *Systema Vegetabilium* 2: 457. 1817, *A Flora of the Northern and Middle Sections of the United States* 144. 1823, *Systema Vegetabilium, editio decima sexta* 1: 314. 1825, *De Graminibus Paniceis* 220. 1826, *Révision des Graminées* 1: 39. 1829, *A Class-book of Botany* 786. 1861, *Department of Agriculture. Botanical Division. Bulletin* 8: 29. 1889, *Bulletin of the Torrey Botanical Club* 26(11): 575. 1899 and *Contr. U.S. Natl. Herb.* 15: 151. 1910, *Rhodora* 23(272): 193-194. 1921, *Papers of the Michigan Academy of Science, Arts and Letters* 26: 5. 1941, *Le Naturaliste Canadien* 94: 526. 1967, *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978.

in English: starved panic grass, poverty panic grass

P. deustum Thunb. (*Panicum arundinifolium* Schweinf.; *Panicum corymbiferum* Nees ex Steud.; *Panicum deustum* Brickell & Enslin ex Muhlenb., nom. illeg., non *Panicum deustum* Thunb.; *Panicum deustum* var. *eburneum* Chiov.; *Panicum deustum* var. *hirsutum* Peter; *Panicum leptocaulon* Trin.; *Panicum menyharthii* Hack.; *Panicum pubivaginatum* K. Schum.; *Panicum unguiculatum* Trin.) (Latin *deustus*, a, um “burned, scorched,” part. *deuro*, *urere*, *ussi*, *ustum* “to burn down, to destroy”) (named for the botanical collector Ladislav Menyharth, 1849-1897, see Hans Schinz, 1858-1941, *Plantae menyharthianae ein Beitrag zur Kenntniss der Flora des Unteren Sambesi* ... Wien 1905)

Tropical Africa, Ethiopia, Kenya, Uganda, Tanzania, Sudan, South Africa, Zambia, Mozambique. Perennial bunchgrass or annual, variable, reddish to purplish, stout, slender or robust, branched or unbranched, pubescent, tufted, shortly rhizomatous, sometimes rooting at lower nodes, leaf sheath round and hairy, ligule membrane-like, leaves with scabrid margin, open ovate panicle with solitary branching, spikelets oblong obtuse, lower floret male, glumes separated by a short internode, lower glume ovate, palatable and nutritious pasture grass, high grazing value, grains edible, grains eaten by baboons, useful for erosion control, found in disturbed sites, open areas, under trees, bushland, moist soils, sandy and alluvial soils, coastal forests, shady places, in rock quarry, rocky hillsides, loam or sandy soils, on waste grounds, riverbanks, rocky soil in woods, black basaltic soil, see *Prodromus Plantarum Capensium*, ... 19. 1794, *Descriptio uberior Graminum* 119. 1817, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 275. 1834, *Synopsis Plantarum Glumacearum* 1: 76. 1854,

Bulletin de l'Herbier Boissier 2: App. 2: 22. 1894, *Die Pflanzenwelt Ost-Afrikas* 5c: 102. 1895 and *Bulletin de l'Herbier Boissier, sér. 2, 1: 766*. 1901, *Annuario del Reale Istituto Botanico di Roma* 8: 306. 1903, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 196 & Anhang 42. 1930.

in English: buffalo grass, reed panicum, broadleaf panicum, broad-leaved panicum

in South Africa: buffelsgras, rietbuffelsgras, breëblaarwintergras, breëblaarbuffelsgras

P. dewinteri J.G. Anderson (after the South African botanist Bernard De Winter (b. 1924), plant collector in the regions of Namibia, from 1973 to 1989 Director of the Botanical Research Institute, served as President of the South African Association for the Advancement of Science, as well as the South African Association of Botanists and as Chairman of the Advisory Committee for Botanical Research in Agriculture, his writings include “A morphological, anatomical and cytological study of *Potamophila prehensilis* (Nees) Benth.” *Bothalia*. 6. 1951, “Plant life of the Namib Desert.” *S. Afr. Biol. Soc.* 3: 19-20. 1962 and “South African trees.” *S. Afr. For. J.* 88: 6-8. 1974, with M. De Winter and Donald Joseph Boomer Killick wrote *Sixty-Six Transvaal Trees*. Pretoria 1966 and *Know Your Trees: A Selection of Indigenous South African Trees*. Cape Town 1973, with J. Vahrmeijer wrote *The National List of Trees*. Pretoria 1972; see Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 130. Cape Town 1981)

South Africa. Perennial, shrubby, hard, tufted, erect, wiry, branched, sometimes rooting at lower nodes, inflorescence with solitary and sparsely branching, lower glume narrowly ovate, lower floret sterile, palea reduced, common in rocky sites and wooded rocky slopes, crevices, forest margins, see *Bothalia* 9: 341. 1967.

P. diagonale Nees (*Digitaria diagonalis* (Nees) Stapf; *Digitaria uniglumis* var. *major* Stapf)

South Africa. Prairies, see *Florae Africae Australioris Illustrationes Monographicae* 23. 1841, *Tentamen Florae Abyssinicae* ... 2: 370. 1850, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 117. 1891, *Conspectus Florae Africae* 5: 747. 1894, *Die Pflanzenwelt Ost-Afrikas* C: 100. 1895, *Flora Capensis* 7: 381. 1898 and *Plantae Thonnerianae congolenses*; ou, *Énumération des plantes récoltées en 1896 par M. Fr. Thonner dans le district des Bangalas*, par É. De Wildeman ... et Th. Durand ... Avec une introduction de M. Fr. Thonner. Bruxelles 1900 [Franz Thonner, 1863-1928], *Flora of Tropical Africa* 9: 476. 1919, *Flore des Spermatophytes du Parc National Albert* 3: 75. 1955[1956], *Exploration du Parc National de la Garamba* 4: 29. 1956.

P. dichotomiflorum Michx. (*Leptoloma dichotomiflora* Smyth; *Panicum ammophilum* Trin. ex Nees; *Panicum amplexens* Chapm.; *Panicum amplexens* (Stapf) Pilg.,

nom. illeg., non *Panicum amplexens* Chapm.; *Panicum aquaticum* Poir.; *Panicum aquaticum* var. *chloroticum* (Nees ex Trin.) R.C. Foster; *Panicum brachiatum* Bosc ex Spreng., nom. illeg., non *Panicum brachiatum* Poir.; *Panicum chloroticum* Nees ex Trin.; *Panicum chloroticum* var. *agreste* Nees ex Trin.; *Panicum chloroticum* var. *luxurians* Döll; *Panicum chloroticum* var. *pingue* Nees; *Panicum chloroticum* var. *sylvestre* Nees ex Trin.; *Panicum chloroticum* var. *sylvestre* Nees, nom. illeg., non *Panicum chloroticum* var. *sylvestre* Nees ex Trin.; *Panicum dichotomiflorum* subsp. *puritanorum* (Svenson) Freckmann & Lelong; *Panicum dichotomiflorum* var. *dichotomiflorum*; *Panicum dichotomiflorum* var. *geniculatum* (Alph. Wood) Fernald; *Panicum dichotomiflorum* var. *imperatorum* Fernald; *Panicum dichotomiflorum* var. *puritanorum* Svenson; *Panicum elliotii* Trin. ex Nees; *Panicum francavillanum* E. Fourn. ex Hemsl.; *Panicum francavillanum* E. Fourn.; *Panicum geniculatum* Muhl., nom. illeg., non *Panicum geniculatum* Poir.; *Panicum hygrophilum* Salzm. ex Steud.; *Panicum miliaceum* Walter, nom. illeg., non *Panicum miliaceum* L.; *Panicum multiflorum* Poir.; *Panicum proliferum* Lam.; *Panicum proliferum* var. *chloroticum* (Nees ex Trin.) Hack.; *Panicum proliferum* var. *geniculatum* Alph. Wood; *Panicum proliferum* var. *pilosum* Griseb.; *Panicum proliferum* var. *richardii* Döll; *Panicum proliferum* var. *strictum* Griseb.; *Panicum proliferum* var. *xanthochlorum* Hack. ex Bertoni; *Panicum retrofractum* Delile ex Desv.) (*Panicum proliferum* var. *richardii* Döll after the French botanist Louis Claude Marie Richard, 1754-1821, explorer and traveler, horticulturist, naturalist and zoologist, botanical and zoological collector, a pupil of Bernard de Jussieu (1699-1777), from 1781 to 1785 in French Guyana and the Antilles (sent by Louis XVI on the recommendation of the Academy of Sciences), in 1785 in Brazil, from 1795 to 1821 professor of botany in the school of medicine of Paris, edited the fourth edition of Jean Baptiste François Bulliard (1752-1793), *Dictionnaire élémentaire de botanique*. Paris an vii [1798], his works include *De Orchideis europaeis annotationes*. Parisiis 1817 and *De Musaceis*. Vratislaviae et Bonnae. 1831; see Antoine Laurent de Jussieu, Institut Royal de France. *Funérailles de M. Richard*. [Discourse pronounced by A.L.J.] [Paris 1821]; J.H. Barnhart, *Biographical notes upon botanists*. 3: 151. 1965; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14 Aufl. Stuttgart 1993; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 232. Palermo 1988; Stafleu and Cowan, *Taxonomic literature*. 4: 764-767. 1983; C.S. Kunth, in *Mémoires du Muséum d'Histoire Naturelle*. 4: 433, t. 20. 1815; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; Samuel J. Hough and Penelope R. Hough, *The Beinecke Lesser Antilles Collection at Hamilton College: A Catalogue of Books, Manuscripts, Prints, Maps, and Drawings*, 1521-1860. Gainesville

[1994]; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 331. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. 1845; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 625. 1964)

North America. Short-lived perennial or annual, many stemmed, flattened, clump forming, diffusely branched, tufted, often geniculate at base, almost prostrate and rooting at lower nodes, ascending or more or less erect, rhizomatous, youngest leaf rolled, leaf blade rough, leaf sheaths flattened and hispid, ligule a membranous densely ciliate rim, linear leaves, auricles absent, spikelets acute, lower floret sterile, upper floret bisexual, glumes very unequal, lower glume ovate 0- to 1-nerved acute or obtuse, upper glume lanceolate 7- to 9-nerved, upper lemma lanceolate acute, leaves might cause photosensitization, weed in rice fields, weed of crops, potential seed contaminant, grows in poorly drained soil and wetlands, in shallow water, in full sun, in fallow land, around lagunas in wet or damp ground, on dry bare mud, disturbed places and habitats, in low fields and waste ground, on good cultivated soils, in moist open areas and alluvial soils, damp or swampy places, gravel bars, open mudflat, sandy riverbanks, dry sandy and gravelly beach, roadside ditches and railroads, orchards, bottomland and mesic upland fields, naturalized elsewhere, related to *Panicum repens*, see *Flora Caroliniana, secundum ...* 72. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 4: 747. 1798, *Flora Boreali-Americana* 1: 48. 1803, *Catalogus Plantarum Americae Septentrionalis* 9. 1813, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 281-282. 1816, *Systema Vegetabilium, editio decima sexta* 1: 321. 1825, *De Graminibus Paniceis* 236. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 164, 170. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 200. 1831, *Synopsis Plantarum Glumacearum* 1: 71. 1853, *Catalogus plantarum cubensium ...* 232. 1866, *The American Botanist and Florist* 2: 392. 1871, *Flora Brasiliensis* 2(2): 198, 200. 1877, *Botanical Gazette* 3(3): 20. 1878, *Biologia Centrali-Americana; ... Botany ...* 3: 489. 1885, *Mexicanas Plantas* 2: 25. 1886 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 343. 1909, *Contr. U.S. Natl. Herb.* 15: 48 (1910), *Transactions of the Kansas Academy of Science* 25: 86. 1913, *Anales Científicos Paraguayos*, ser. 2, 150. 1918, *Flora of Tropical Africa* 9: 625. 1920, *Rhodora* 22(261): 154-155, f. 1-5. 1920, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 241. 1931, *Rhodora* 38(455): 387, pl. 441, f. 2. 1936, *Rhodora* 44(526): 380-381. 1942, *Rhodora* 68: 320. 1966, *Sida* 20(1): 171-172. 2002.

in English: fall panic grass, fall panicum, forked-flowered panic grass, spreading witchgrass, smooth witchgrass, blue-grass

in Spanish: zacate fuego

P. dichotomiflorum Michx. subsp. ***bartowense*** (Scribn. & Merr.) Freckmann & Lelong (*Panicum bartowense* Scribn. & Merr.; *Panicum dichotomiflorum* var. *bartowense* (Scribn. & Merr.) Fernald)

U.S. See *Flora Boreali-Americana* 1: 48. 1803 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 3. 1901, *Rhodora* 38(455): 387. 1936, *Sida* 20(1): 171. 2002.

P. dichotomiflorum Michx. var. ***dichotomiflorum*** (*Panicum dichotomiflorum* var. *geniculatum* (Wood) Fernald)

U.S. Annual, culms spreading and geniculate, inflated sheaths, uppermost panicles more or less included at base within the sheaths, leaves might cause photosensitization, distributed on low waste areas, ditches, open and alluvial soils, gravel bars and along railroads, moist soil, shores, roadsides and railroads, see *Flora Boreali-Americana* 1: 48. 1803.

in English: fall panicum

P. dichotomiflorum Michx. var. ***puritanorum*** Svens. (*Panicum dichotomiflorum* var. *imperatorum* Fern.)

U.S. Annual, culms mostly erect, linear leaves, on damp sands and ponds margins, see *Flora Boreali-Americana* 1: 48. 1803 and *Rhodora* 22(261): 154-155, f. 1-5. 1920, *Sida* 20(1): 171-172. 2002.

P. dichotomum L. (*Chasea dichotoma* (L.) Nieuwl.; *Dichantherium caeruleum* (Hack. ex Hitchc.) Correll; *Dichantherium dichotomum* (L.) Gould; *Dichantherium dichotomum* var. *dichotomum*; *Dichantherium microcarpon* (Muhl. ex Elliott) Mohlenbr.; *Dichantherium nitidum* (Lam.) Mohlenbr.; *Panicum angustifolium* J. Le Conte ex Torr., nom. illeg., non *Panicum angustifolium* Elliott; *Panicum barbulatum* Michx.; *Panicum caeruleum* Hack. ex Hitchc.; *Panicum dichotomum* Forssk., nom. illeg., non *Panicum dichotomum* L.; *Panicum dichotomum* var. *barbulatum* (Michx.) Alph. Wood; *Panicum dichotomum* var. *commune* S. Watson & J.M. Coult.; *Panicum dichotomum* var. *dichotomum*; *Panicum dichotomum* var. *divaricatum* Vasey; *Panicum dichotomum* var. *nitidum* (Lam.) Alph. Wood; *Panicum dichotomum* var. *nodiflorum* (Lam.) Griseb.; *Panicum dichotomum* var. *roanokense* (Ashe) Lelong; *Panicum dichotomum* var. *viride* Vasey; *Panicum dichotomum* var. *yadkinense* (Ashe) Lelong; *Panicum maculatum* Ashe, nom. illeg., non *Panicum maculatum* Aubl.; *Panicum microcarpon* Muhl. ex Elliott; *Panicum multirameum* Scribn.; *Panicum nitidum* Lam.; *Panicum nitidum* var. *barbulatum* (Michx.) Chapm.; *Panicum nitidum* var. *pauciflorum* Britton; *Panicum nitidum* var. *viride* (Vasey) Britton; *Panicum nodiflorum* Lam.; *Panicum pubescens* var. *barbulatum*

(Michx.) Britton; *Panicum ramulosum* var. *viride* (Vasey) Porter; *Panicum roanokense* Ashe; *Panicum subbarbulatum* Scribn. & Merr.; *Panicum tremulum* Spreng.; *Panicum yadkinense* Ashe)

Mexico, U.S., Venezuela, Cuba, Bahamas. Caespitose, found in dry thin woods, among shrubs, thickets and fields, woodland, in moist meadows, open areas, see *Species Plantarum* 1: 58. 1753, *Flora Aegyptiaco-Arabica* 20. 1775, *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *Flora Boreali-Americana* 1: 49. 1803, *A Sketch of the Botany of South-Carolina and Georgia* 1: 127. 1816, *Descriptio uberior Graminum* 118. 1817, *Manual of Botany of the Northern States. Second Edition.* 342. 1818, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 103. 1821, *A Flora of North America: Containing* 145. 1824, *De Graminibus Paniceis* 242. 1826, *North American Gramineae and Cyperaceae* 2: 111. 1835, *A Class-book of Botany* 786. 1861, *Flora of the British West Indian Islands* 553. 1864, *Catalogus plantarum cubensium ...* 234. 1866, *The American Botanist and Florist* pt. 2: 393. 1871, *Department of Agriculture. Botanical Division. Bulletin* 8: 30-31. 1889, *Transactions of the New York Academy of Sciences* 9(1-2): 14. 1889, *Catalogue of the Plants Found in New Jersey* 280. 1889, *A Manual of the Botany of the Northern United States* (edition 6) 633. 1890, *Bulletin of the Torrey Botanical Club* 20: 194. 1893, *Flora of the Southern United States* 586. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 44. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 569. 1899 and *Circular, Division of Agrostology, United States Department of Agriculture* 19: 2. 1900, *Journal of the Elisha Mitchell Scientific Society* 16: 85. 1900, *Circular, Division of Agrostology, United States Department of Agriculture* 29: 9. 1901, *Contr. U.S. Natl. Herb.* 12: 117. 1908, *Contributions from the United States National Herbarium* 12(6): 219. 1909, *Contr. U.S. Natl. Herb.* 15: 181, 185, 191. 1910, *American Midland Naturalist* 2: 64. 1911, *Brittonia* 26(1): 59. 1974, *Journal of the Arnold Arboretum* 60(1): 154. 1979, *Brittonia* 36(3): 265-266. 1984, *Erigenia* 6: 26. 1985, *Phytologia* 67(6): 452-453. 1989, *Annals of the Missouri Botanical Garden* 80(1): 157. 1993, *Phytologia* 77(6): 460. 1994 [1995].

in English: forking panic grass, forked panic grass

P. dichotomum L. var. ***dichotomum*** (*Chasea dichotoma* (L.) Nieuwl.; *Dichantherium dichotomum* (L.) Gould; *Dichantherium dichotomum* var. *dichotomum*; *Panicum barbulatum* Michx.; *Panicum dichotomum* L.; *Panicum dichotomum* var. *barbulatum* (Michaux) Wood; *Panicum dichotomum* var. *viride* Vasey; *Panicum nitidum* var. *viride* (Vasey) Britton; *Panicum ramulosum* var. *viride* (Vasey) Porter)

U.S. Caespitose, dry places, open woods, rocky areas, see *Species Plantarum* 1: 58. 1753, *Tableau Encyclopédique et*

Méthodique ... Botanique 1: 172. 1791, *Flora Boreali-Americana* 1: 49. 1803, *A Class-book of Botany* 786. 1861, *Department of Agriculture. Botanical Division. Bulletin* 8: 30. 1889, *Transactions of the New York Academy of Sciences* 9(1-2): 14. 1889, *Bulletin of the Torrey Botanical Club* 20: 194. 1893 and *Contr. U.S. Natl. Herb.* 12: 117. 1908, *Contr. U.S. Natl. Herb.* 15: 191. 1910, *American Midland Naturalist* 2: 64. 1911, *Brittonia* 26(1): 59. 1974.

in English: forking panic grass, forked panic grass

P. dichotomum L. var. **lucidum** (Ashe) Lelong (*Dichantheium dichotomum* (L.) Gould; *Dichantheium dichotomum* subsp. *lucidum* (Ashe) Freckmann & Lelong; *Dichantheium dichotomum* var. *dichotomum*; *Dichantheium lucidum* (Ashe) LeBlond; *Dichantheium sphagnicola* (Nash) LeBlond; *Panicum lucidum* Ashe; *Panicum lucidum* var. *lucidum*; *Panicum lucidum* var. *opacum* Fernald; *Panicum sphagnicola* Nash; *Panicum taxodiorum* Ashe)

U.S. Rocky soils, swamps, deep shady places, see *Species Plantarum* 1: 58. 1753, *Bulletin of the Torrey Botanical Club* 22(10): 422. 1895, *Journal of the Elisha Mitchell Scientific Society* 15: 47. 1898 and *Journal of the Elisha Mitchell Scientific Society* 16: 91. 1900, *Contr. U.S. Natl. Herb.* 15: 198. 1910, *Rhodora* 39(466): 386-387. 1937, *Brittonia* 26(1): 59. 1974, *Brittonia* 36(3): 265. 1984, *Sida* 19(4): 831-832, 834-835. 2001, *Sida* 20(1): 169. 2002.

in English: shining panic-grass

P. dichotomum L. var. **mattamuskeetense** (Ashe) Lelong (*Dichantheium annulum* (Ashe) LeBlond; *Dichantheium dichotomum* (L.) Gould; *Dichantheium dichotomum* subsp. *mattamuskeetense* (Ashe) Freckmann & Lelong; *Dichantheium mattamuskeetense* (Ashe) Mohlenbr.; *Dichantheium mattamuskeetense* (Ashe) LeBlond, nom. illeg., non *Dichantheium mattamuskeetense* (Ashe) Mohlenbr.; *Panicum annulum* Ashe; *Panicum annulum* Ashe var. *glabrescens* Gleason; *Panicum clutei* Nash; *Panicum mattamuskeetense* Ashe; *Panicum mattamuskeetense* Ashe var. *clutei* (Nash) Fernald; *Panicum mattamuskeetense* var. *mattamuskeetense*)

U.S., Lake Mattamuskeet, North Carolina. See *Species Plantarum* 1: 58. 1753, *Journal of the Elisha Mitchell Scientific Society* 15: 45, 58. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 569. 1899 and *Contr. U.S. Natl. Herb.* 15: 185-186. 1910, *Rhodora* 39(466): 386. 1937, *Brittonia* 26(1): 59. 1974, *Brittonia* 36(3): 265. 1984, *Erigenia* 6: 26. 1985, *Phytologia* 67(6): 452. 1989, *Sida* 19(4): 826-828, 832. 2001, *Sida* 20(1): 169. 2002.

P. dichotomum L. var. **unciphyllum** (Trin.) Wipff & S.D. Jones (*Dichantheium dichotomum* (L.) Gould var. *tenu* (Muhl.) Gould & C.A. Clark; *Dichantheium dichotomum* var. *unciphyllum* (Trin.) Davidse; *Dichantheium ensifolium* var. *unciphyllum* (Trin.) B.F. Hansen & Wunderlin; *Dichantheium tenue* (Muhl.) Freckmann & Lelong; *Panicum acuminatum* var. *unciphyllum* (Trin.) Lelong; *Panicum*

concinnius A.S. Hitchc. & Chase; *Panicum dichotomum* var. *tenu* (Muhl.) C.F. Reed; *Panicum dichotomum* var. *tenu* (Muhl.) Zuloaga & Morrone, nom. illeg., non *Panicum dichotomum* var. *tenu* (Muhl.) C.F. Reed; *Panicum gracilicaule* Nash, nom. illeg., non *Panicum gracilicaule* Rendle; *Panicum tenu* Muhl.; *Panicum unciphyllum* Trin.)

Mexico, U.S., Belize. In sandy soils, see *Species Plantarum* 1: 58. 1753, *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *Descriptio uberior Graminum* 118. 1817, *De Graminibus Paniceis* 242. 1826 and *Circ. Div. Agrostol. U.S.D.A.* 27: 4. 1900, *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1119. 1978 [1979], *Brittonia* 36(3): 269. 1984, *Annals of the Missouri Botanical Garden* 75: 1647. 1988 [1989], *Phytologia* 67(6): 453. 1989, *Novon* 2(2): 104. 1992, *Annals of the Missouri Botanical Garden* 80(1): 157. 1993, *Phytologia* 77(6): 460. 1994 [1995], *Sida* 20(1): 171. 2002.

P. difforme Roth (*Cyrtococcum trigonum* (Retz.) A. Camus; *Panicum trigonum* Retz.)

India. See *Observationes Botanicae* 3: 9. 1783, *Systema Vegetabilium* 2: 433. 1817 and *Bulletin du Muséum d'Histoire Naturelle* 27: 118. 1921.

P. diffusulum Salzm. ex Steud. (*Dichantheium sciurotis* (Trin.) Davidse; *Panicum rostellatum* Trin.; *Panicum sciurotis* Trin.)

Brazil. See *De Graminibus Paniceis* 228. 1826, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 288. 1834, *Synopsis Plantarum Glumacearum* 1: 89. 1854 and *Novon* 1(1): 1-5. 1991, *Novon* 2(2): 104. 1992, *Annals of the Missouri Botanical Garden* 80(1): 119-190. 1993.

P. diffusum Sw. (*Panicum caespitium* Lam.; *Panicum debile* Schult., nom. illeg., non *Panicum debile* Desf.; *Panicum diffusum* var. *debile* Nees; *Panicum diffusum* var. *genuinum* Döll)

Jamaica. See *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Mantissa* 2: 243. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 172. 1829, *Flora Brasiliensis* 2(2): 199. 1877.

in English: West Indian panic grass, spreading panicum

P. dinklagei Mez (for the German merchant and plant collector Max Julius Dinklage, 1864-1935, in West Africa (Liberia, from 1894 to 1922 ten visits), author of *Liberia in seiner Bedeutung für Deutschlands Handel und zukünftige Versorgung*. Hamburg 1918; see (obituary in) *Notizbl. Bot. Gart. Berl.* 12: 413-415. 1935; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 25. Utrecht 1971; F.N. Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore*

d'Afrique, (A.E.T.F.A.T.). 69-75. Lisbon 1962; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19: 861-863. 1965; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 1-110. Paris 1968; J.H. Barnhart, *Biographical notes upon botanists*. 1965)

Tropical Africa. Perennial, robust, canelike, scrambling. in Liberia: pini ti

in Sierra Leone: akolsaba, folimbe, fure fumfuri, furefumfuri, keyapa, muli, niekbeve, niekbewe, njekbewe, nyina foni, sukule voni, wete, yeno

P. discrepans Döll (*Panicum laxum* Sw.)

Brazil, French Guiana. Perennial, decumbent to prostrate, tufted, ligule membranous, open areas, savannah, near streams and along riverbanks, forest, see *Nova Genera et Species Plantarum seu Prodrum* 23. 1788, *Flora Brasiliensis* 2(2): 252. 1877.

P. doellii Mez (*Panicum hylaeicum* Mez)

South America. Perennial, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 75. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 6. 1921, *Flora Fanerogámica Argentina* 19(1): 11-6. 1995.

P. dorsense S.M, Phillips

Ethiopia. Annual, delicate, decumbent, slender, much-branched, rooting at the nodes, leaf blades lanceolate and cordate at base, panicle compact, spikelets elliptic on fine ascending branches, lower floret male, well-developed palea, forming mats, dry open banks, resembles *Panicum pusillum*, see *Kew Bulletin* 46(3): 535. 1991.

P. dregeanum Nees (*Panicum amethystinum* Franch.; *Panicum chilanthum* Stapf; *Panicum poecilanthum* Stapf)

Tropical Africa. Perennial, densely tufted, dense tussocky habit, bright green, erect, leaves mostly basal, basal sheaths downy to silky pubescent, ligule membranous, open or slightly contracted panicle, spikelets often purplish, lower lemma 5-nerved, attractive and ornamental, pasture, high grazing value, good forage, grazed when young, grows on red clay soil, marshes, grassland, moist soils, wet places, vleis, alluvial and sandy soils, hillsides, lowlands, savannah, seasonally damp soil.

in English: plum panicum

in South Africa: persbuffelsgras

P. dubium Lam. (*Panicum brevifolium* L.; *Panicum dubium* (Roem. & Schult.) Steud., nom. illeg., non *Panicum dubium* Lam.; *Panicum dubium* Sieber ex Steud.)

Mauritius. See *Species Plantarum* 1: 59. 1753, *Encyclopédie Méthodique, Botanique* 4: 743. 1798, *Systema Vegetabilium* 2: 479. 1817, *Nomenclator Botanicus. Editio secunda* 2: 256. 1841 and *Blumea* 41: 189. 1996.

P. durifolium Renvoize & Zuloaga

Brazil. See *Kew Bull.* 50(1): 162. 1995.

P. dusenii Hack. (*Dichantherium cordovense* (E. Fourn.) Davidse; *Panicum cordovense* E. Fourn.)

Brazil. Panicle branches appressed, spikelets acute and puberulous, see *Mexicanas Plantas* 2: 26. 1886 and *Reperitorium Specierum Novarum Regni Vegetabilis* 8: 513. 1910, *Flora Illustrada Catarinense* 1(Gram.) 443-906. 1982, *Darwiniana* 27(1-4): 403-429. 1986, *Novon* 2(2): 105. 1992.

P. earlei Nash (*Dichantherium acuminatum* var. *implicatum* (Scribn.) Gould & C.A. Clark; *Dichantherium ensifolium* var. *ensifolium*; *Panicum curtifolium* Nash; *Panicum ensifolium* var. *curtifolium* (Nash) Lelong) (named for Franklin Sumner Earle, 1856-1929, mycologist, botanical collector with Charles Fuller Baker (1872-1927) and Samuel Mills Tracy (1847-1920), see Joseph Ewan, *Rocky Mountain Naturalists*. 154-155, 200, 323-324. The University of Denver Press 1950)

U.S. See *A Sketch of the Botany of South-Carolina and Georgia* 1: 126. 1816, *An Illustrated Flora of the Northern United States* 3: 498, f. 267a. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 569, 571. 1899 and *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1126. 1978 [1979], *Brittonia* 36(3): 262-273. 1984.

P. eburneum Trin.

Nepal. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 268. 1834.

P. echinatum Willd. (*Echinochloa crusgalli* (L.) P. Beauv.; *Echinochloa crusgalli* var. *crusgalli*; *Panicum echinatum* Sieber, nom. illeg., non *Panicum echinatum* Willd.; *Panicum echinatum* Trin.; *Panicum echinatum* Willd. ex Döll)

South America. See *Species Plantarum* 1: 56. 1753, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1032. 1809, *Essai d'une Nouvelle Agrostographie* 1: 53, 161, 169, t. 11, f. 2. 1812, *De Graminibus Paniceis* 137. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 258. 1829, *Flora Brasiliensis* 2(2): 193. 1877.

P. ecklonii Nees (*Axonopus ecklonii* (Nees) Stapf ex Chiov.; *Panicum catangense* Chiov.)

West Africa, Zaire, South Africa, Tanzania. Perennial, bright green, tufted or densely caespitose, shortly rhizomatous, bulbous base, leaf blade flattened, sheaths silky, ligule an inconspicuous fringe of short hairs, soft leaves mostly basal and hairy, inflorescence an open panicle, purplish or reddish spikelets, lower floret sterile, palea absent, probably palatable, grazing value unknown, ornamental and attractive, found in mountainous regions, sandy soils, sandy rocky soil, in moist areas, grassland, along the edge of shallow pans, see *Florae Africae Australioris Illustrationes Monographicae* 43. 1841 and *Annali di Botanica* 13: 44, 47. 1914, *Kew Bulletin* 22: 482. 1968.

in Cameroon: bagiho, bajiho

P. effusum R. Br. (*Panicum convallium* F. Muell.; *Panicum viale* Chase) (Latin *effusus, a, um* “scattered, poored out, loosely spreading, loosened, straggling”)

Papua New Guinea, South Australia, Western Australia, Queensland, New South Wales, Victoria, Northern Territory. Perennial, densely hairy, tufted, forming tussocks, culms bent at the lower nodes, sheaths usually glabrous to villous, ligule a row of cilia, dark green densely hairy leaves, inflorescence open and stiff, panicle breaking off at maturity and wind-dispersed, green to purplish glabrous spikelets, palea of lower floret present, lower glume acute, lower lemma sterile and acuminate, fertile lemma smooth and shining, seeds shiny and dark brown, profusely seeding and rapidly growing, blocks irrigation channels and constitutes a fire hazard, good fodder for stock, leaves palatable, nonaquatic grass susceptible to close grazing, seeds a food source for seed-eating birds and small rodents, grassland and woodland, disturbed sites, may cause photosensitization in sheep, see *Prodromus Florae Novae Hollandiae* 1: 191. 1810, *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1854/1855: 46. 1855 and *Journal of the Arnold Arboretum* 20: 310. 1939, *Blumea* 41: 181-216. 1996.

in English: hairy panic, branched panic, hairy panic grass

P. effusum R. Br. var. **convallium** (F. Muell.) Benth.

Australia. See *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1854/1855: 46. 1855, *Flora Australiensis: A Description ...* 7: 488. 1878.

P. effusum R. Br. var. **hispidissimum** Domin

Australia. See *Bibliotheca Botanica* 85: 322. 1915.

P. effusum R. Br. var. **simile** (Domin) B.K. Simon (*Panicum bicolor* R. Br., nom. illeg., non *Panicum bicolor* Moench; *Panicum bisulcatum* S.T. Blake, nom. illeg., non *Panicum bisulcatum* Thunb.; *Panicum fulgidum* Hughes; *Panicum simile* Domin)

Australia. See *Prodromus Florae Novae Hollandiae* 191. 1810 and *Bibliotheca Botanica* 85: 322. 1915, *Bulletin of Miscellaneous Information Kew* 1923(9): 323. 1923, *Proceedings of the Royal Society of Queensland* 59: 158. 1948, *Austrobaileya* 2(1): 21-24. 1984.

P. effusum R. Br. var. **subleiophyllum** Domin

Australia. See *Bibliotheca Botanica* 85: 322. 1915.

P. eggersii Hack. (*Digitaria eggersii* (Hack.) Henrard; *Trichachne eggersii* (Hack.) Henrard; *Valota eggersii* (Hack.) Hitchc. & Chase) (dedicated to the Danish botanist Henrik Franz Alexander Baron von Eggers (1844-1903), soldier; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 498. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 113. Boston. Mass. 1972; Ida Kaplan

Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 259. Philadelphia 1964; Ignatz Urban, editor, *Symbolae Antillanae*. Berlin 1902; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; C.F.A. Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926)

Virgin Islands, Danish Antilles. See *Österreichische Botanische Zeitschrift* 51: 292. 1901, *Contributions from the United States National Herbarium* 18(7): 292. 1917, *Mededeelingen van's Rijks-Herbarium* 61: 10. 1930, *Blumea* 1(1): 97. 1934, *Flora of the Netherlands Antilles* 1: 121-203. 1963.

P. elatius L.f. (*Digitaria elatior* (L.f.) Willd.; *Oplismenus elatius* (L.f.) P. Beauv.; *Panicum elatius* Kunth, nom. illeg., non *Panicum elatius* L.f.)

Asia. See *Supplementum Plantarum* 107. 1781, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 91. 1809, *Essai d'une Nouvelle Agrostographie* 54. 1812, *Révision des Graminées* 1: 38. 1829.

P. elegans M.K. Elias (*Acroceras elegans* A. Camus; *Panicum elegans* Cordemoy; *Panicum elegans* Heuff.; *Panicum elegans* Wight & Arn. ex Steud.)

U.S. See *Nomenclator Botanicus. Editio secunda* 2: 256. 1841, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 1858: 223. 1858 and *Kansas University Science Bulletin* 33: 342, t. 28, f. 2a-c, 4. 1932, *Geological Society Special Publications* 41: 102, t. 16, f. 1-2. 1942, *Bulletin de la Société Botanique de France* 102: 121. 1955.

P. elephantipes Nees ex Trin. (*Digitaria megapotamica* Mez; *Panicum elephantipes* Nees, nom. illeg., non *Panicum elephantipes* Nees ex Trin.; *Panicum firmum* Kunth; *Panicum firmum* F. Aresch., nom. illeg., non *Panicum firmum* Kunth; *Panicum fistulosum* Hochst. ex Steud.; *Panicum sucosum* Hitchc. & Chase)

Southern America, West Indies, Argentina, Brazil. Perennial, aquatic, spongy, soft inflated stems, floating, rooting at the lower nodes, leaf blades linear finely acute, oblong panicle much branched, large acuminate spikelets lanceolate glabrous, lower glume ovate 0- to 3-nerved acute or obtuse, upper glume lanceolate 5- to 7-nerved, acuminate upper lemma lanceolate, weed species, useful grass, high-quality forage, adapted to humid soils, can be submerged under water for months at a time, found on sandy riverbank, on flooded savannah, may be confused with *Panicum dichotomiflorum*, see *De Graminibus Paniceis* 206. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 165. 1829, *Révision des Graminées* 1: 37. 1829, *Synopsis Plantarum Glumacearum* 1: 71. 1853 and *Plantae sub itinere navis bellicae Eugeniae anno 1852 a N. J. Andersson circa Guayaquil collectae* 116. 1910, *Contributions from the*

United States National Herbarium 17(6): 475, f. 30. 1915, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 7. 1921, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969, G.T. Prance, "Notes on the vegetation of Amazonia III. The terminology of Amazonian forest types subject to inundation." *Brittonia* 31: 26-38. 1979, *Darwiniana* 29: 289-370. 1989.

in English: elephant panic grass, elephant-size panic

in Spanish: camalote, canutillo

P. eligulatum N.E. Br. (*Panicum auyanense* Swallen; *Panicum churunense* Swallen; *Panicum cowanii* Swallen; *Panicum inversum* Swallen; *Panicum wurdackii* Swallen)

Venezuela, Bolívar, Auyan-tepuí. Savannah, see *Transactions of the Linnean Society of London, Botany* 6(1): 73. 1901, *Memoirs of the New York Botanical Garden* 9(3): 262-263, 401. 1957, *Acta Botanica Venezuelica* 2(5-8): 133. 1967.

P. ephemerooides Zuloaga & Morrone (*Panicum ephemerum* Zuloaga, Morrone & Valls, nom. illeg., non *Panicum ephemerum* Renvoize)

Brazil. See *Iheringia, Série Botânica* 42: 4, f. 1-8, 18-20, 24-25. 1992, *Annals of the Missouri Botanical Garden* 83(2): 239, f. 19. 1996.

P. ephemerum Renvoize (*Panicum ephemerum* Zuloaga, Morrone & Valls, nom. illeg., non *Panicum ephemerum* Renvoize)

Zambia. See *Kew Bulletin* 34(3): 551. 1979 [1980], *Iheringia, Série Botânica* 42: 4, f. 1-8, 18-20, 24-25. 1992, *Annals of the Missouri Botanical Garden* 83(2): 239, f. 19. 1996.

P. euprepes Renvoize (*Panicum venustum* Renvoize)

Brazil. See *Kew Bull.* 32(2): 422, 428. 1978, *Kew Bulletin* 39(1): 185-202. 1984, *Darwiniana* 3(1-4): 53-60. 1995.

P. exiguum Mez (*Panicum diffusum* var. *subcontractum* Döll)

Peru, Bolivia, Brazil. Annual, caespitose, small, delicate, low, branched, geniculate, ascending, leaf blades linear or lanceolate pilose acute, panicle ovate or oblong, spikelets glabrous ovate acute or acuminate, lower glume ovate 5-nerved, upper glume 7- to 9-nerved, upper lemma elliptic smooth, found in savannah, sandy soil, open sites, see *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Flora Brasiliensis* 2(2): 199. 1877 and *Bot. Jahrb. Syst.* 56(Beibl. 125): 3. 1921, *Annals of the Missouri Botanical Garden* 83(2): 200-280. 1996.

P. falcatum J.F. Gmel.

Guyana. See *Systema Naturae ... editio decima tertia, aucta, reformata* 163. 1791.

P. fauriei Hitchc.

Hawaii. See *Memoirs of the Bernice Pauahi Bishop Museum ...* 8(3): 182, f. 71. 1922, *Annals of the Missouri Botanical Garden* 77: 589. 1990.

in English: Faurie's panic grass

P. fauriei Hitchc. var. ***carteri*** (Hosaka) Davidse (*Panicum annuale* H. St. John; *Panicum carteri* Hosaka; *Panicum kukaiwaaense* H. St. John; *Panicum malikoense* H. St. John) (named for A.W. Carter, who introduced many pasture grasses and legumes into Hawai'i)

U.S., Hawaii, Mokoli'i Island, Kualoa Regional Park. Endangered species, annual, forming small clumps, culms freely branching and ascending from a decumbent base, base of young sheaths pinkish in color, ligule a densely ciliated membrane, leaf blades ascending or spreading, short-exserted panicle, spikelets pubescent, able to tolerate salt spray, see *Occasional Papers of the Bernice Pauahi Bishop Museum* 17: 67, f. 1. 1942, *Phytologia* 63(5): 368, 370-371. 1987, *Annals of the Missouri Botanical Garden* 77: 588-590. 1990.

in English: Faurie's panic grass, Carter's panic grass, Carter panic grass, panic grass

P. fauriei Hitchc. var. ***latius*** (St. John) Davidse (*Panicum ninoleense* H. St. John; *Panicum nubigenum* Kunth var. *latius* St. John)

America. See *Phytologia* 47(5): 376. 1981, *Phytologia* 63(5): 371. 1987, *Annals of the Missouri Botanical Garden* 77: 589. 1990.

P. fenestratum Hochst. ex A. Rich. (*Digitaria velutina* (Forssk.) P. Beauv.; *Panicum fenestratum* Hochst.; *Panicum sanguinale* var. *fenestratum* (Hochst. ex A. Rich.) Schweinf.)

Ethiopia. See *Species Plantarum* 1: 57. 1753, *Flora Aegyptiaco-Arabica* 17. 1775, *Essai d'une Nouvelle Agrostographie* 51, 173. 1812, *Tentamen Florae Abyssinicae ...* 2: 361. 1850, *Bulletin de l'Herbier Boissier* 2(Append. 2): 18. 1894 and *Monogr. Digitaria* 249. 1950.

P. fibrosum Hack. (*Digitaria fibrosa* (Hack.) Stapf)

China. See *Österreichische Botanische Zeitschrift* 51(9): 330. 1901, *Bulletin of Miscellaneous Information Kew* 1912(10): 428. 1912, *Monogr. Digitaria* 250. 1950.

P. flabellatum Steud. (*Chamaeraphis sulcata* (Raddi) Beal, nom. illeg., non *Chamaeraphis sulcata* (Aubl.) Kuntze; *Panicum flabellatum* E. Fourn., nom. illeg., non *Panicum flabellatum* Steud.; *Setaria megaphylla* (Steud.) T. Durand & Schinz; *Setaria poiretiana* (Schult.) Kunth; *Setaria sulcata* Raddi)

Brazil. See *Agrostografia Brasiliensis* 50. 1823, *Mantissa* 2: 229. 1824, *Révision des Graminées* 1: 47. 1829, *Synopsis Plantarum Glumacearum* 1: 53. 1853, *Bulletin de la Société Botanique de France* 27: 293. 1880, *Conspectus Florae Africae* 5: 773. 1894, *Grasses of North America for Farmers and Students* 2: 158. 1896.

P. flavescens Sw. (*Panicum fasciculatum* var. *flavescens* (Sw.) Döll; *Panicum flavescens* Sieber ex C. Presl; *Panicum flavescens* Moench, nom. illeg., non *Panicum flavescens*)

Sw.; *Urochloa fasciculata* (Sw.) R.D. Webster, nom. illeg., non *Urochloa fasciculata* Kunth; *Urochloa fusca* (Sw.) B.F. Hansen & Wunderlin)

West Indies, Jamaica. Common weed of tea, see *Nova Genera et Species Plantarum seu Prodrromus* 22-23. 1788, *Methodus Plantas Horti Botanici ...* 206. 1794, *Abhandlungen der Böhmisches Gesellschaft der Wissenschaften, nebst der Geschichte derselben* 3: 550. 1845, *Flora Brasiliensis* 2(2): 205. 1877 and *The Australian Paniceae (Poaceae)* 235. 1987, *Novon* 11(3): 368. 2001.

P. flexile (Gattinger) Scribn. (*Chasea flexilis* (Gatt.) Nieuwl.; *Panicum capillare* var. *flexile* Gattinger)

U.S., eastern and central North America. Annual with a fibrous bundle of roots, tuft-forming, slender, branching, ascending culms, sheaths usually pubescent, linear leaves, erect ascending much-branched panicle, glabrous narrowly lanceolate spikelets, single terminal fertile floret, fruits straw-colored, nonweedy, leaves might cause photosensitization, distributed on sandy soil or calcareous springy places, in wet or dry calcareous habitats, in moist or dry open woods, in open habitats, eroded and open slopes, sandy open woods and sandy plains, shores in calcareous areas, lakeshore grassland, disturbed roadsides, marshes and lakeshore beaches, usually sterile soils of rocky open ground, serpentine barrens, leached limestone, gravel bark and wet meadows, often confused with *Panicum capillare* L., see *The Tennessee Flora; With Special Reference to the Flora of Nashville* 94. 1887, *Bulletin of the Torrey Botanical Club* 20: 476. 1893 and *American Midland Naturalist* 2: 65. 1911.

in English: wiry panic grass, wiry witchgrass, stiff witchgrass

P. floribundum Willd. ex Spreng. (*Panicum floribundum* Rich. ex Lam.)

India. See *Encyclopédie Méthodique, Botanique* 4: 742. 1798, *Systema Vegetabilium, editio decima sexta* 1: 306. 1825.

P. fluitans Retz. (*Panicum fluitans* Brickell ex Muhlenb.; *Panicum geminatum* Forssk.; *Paspalidium geminatum* (Forssk.) Stapf; *Setaria geminata* (Forssk.) Veldkamp)

Africa. Perennial, floating, glabrous, rooting at the lower nodes, leaves elongate acuminate, lower sheaths inflated, spikes linear, spikelets imbricate, glumes membranous, lower floret reduced, a water grass, see *Flora Aegyptiaco-Arabica* 18. 1775, *Observationes Botanicae* 3: 8. 1783, *Descriptio uberior Graminum* 126. 1817 and *Flora of Tropical Africa* 9: 583. 1920, *Blumea* 39(1-2): 377. 1994.

in India: doosa, peti-nar

P. fluviicola Steud. (*Panicum aphanoneurum* Stapf; *Panicum graciliflorum* Rendle; *Panicum purpurascens* Mez, nom. illeg., non *Panicum purpurascens* Raddi; *Panicum radicosum* J. Presl; *Panicum radicosum* Mez, nom. illeg.,

non *Panicum radicosum* Mez; *Panicum rowlandii* Stapf; *Panicum sparmanni* Mez)

Tropical Africa, Mozambique, Gabon, Niger, Guinea, Tanzania. Perennial, reedlike, stout, tufted, erect to geniculate, basal leaf sheaths glabrous or hispid, spikelets green, glumes recurved and mucronate to acuminate, lower floret male, palea present, eaten by stock before flowering, grazed when young, grain used as a famine food, growing in swampy places, wet habitats, edge of floodplains, open habitats, riparian woodland, seasonally moist areas, seasonally flooded plains, sandy loam, sandy or heavy clays, sandy wash, see *Reliquiae Haenkeanae* 1(4-5): 297. 1830, *Synopsis Plantarum Glumacearum* 1: 89. 1854, *Flora van Nederlandsch Indië* 3: 437. 1857, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2: 281. 1899 and *Flora of Tropical Africa* 9: 687-688. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 188-189. 1921, *Flora of Tropical East Africa* 451-898. 1982.

in Ghana: mgannikago

in Mali: ghonya, gonya

in Nigeria: gogowu obo, pinkun

in Senegal: dundi, guo, lundi, ngan, oselleta, synk

P. foliolosum (Munro ex Hook.f.) Stieber (*Ichnanthus foliolosus* Munro ex Hook.f.; *Panicum foliolosum* Wall.; *Yakirra foliolosa* (Munro ex Hook.f.) Clayton)

India. See *A Numerical List of Dried Specimens* no. 8680. 1848, *The Flora of British India* 7: 61. 1896 and *Systematic Botany* 7: 85-115. 1982, *Kew Bulletin* 42(2): 403. 1987.

P. fontanale Swallen

Venezuela, Bolívar. Near waterfall, see *Phytologia* 14(2): 80. 1966.

P. fonticola Swallen

Amazonas, Venezuela. Near waterfall, see *Mem. New York Bot. Gard.* 9(3): 260. 1957.

P. francavillanum E. Fourn. (*Panicum dichotomiflorum* Michx.; *Panicum francavillanum* E. Fourn. ex Hemsl.)

Mexico. See *Flora Boreali-Americana* 1: 48. 1803, *Biologia Centrali-Americana; ... Botany ...* 3: 489. 1885, *Mexicanas Plantas* 2: 25. 1886.

P. frederici Rendle (*Panicum brazzavillense* Franch.)

Africa. Perennial, tufted, cattle fodder, in damp pastures, seasonally wet soil, swampy areas, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 341. 1895 [or 1893], *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 180-181. 1899.

in Nigeria: ramafada, ramapada, ramaphada

P. friesii Hack. ex R.E. Fr. (*Digitaria californica* (Benth.) Henrard; *Panicum californicum* Benth.; *Spartina densiflora* Brongn.; *Trichachne saccharatum* (Buckley) Nash)

Argentina. See *Voyage autour du Monde* 2(2): 14. 1829, *The Botany of the Voyage of H.M.S. Sulphur, under the Command of Captain Sir Edward Belcher ... during the Years 1836-1842*. London 1844[-1846], *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 2. 1866 and *Flora of the Southeastern United States* ... 83. 1903, *Nova Acta Regiae Societatis Scientiarum Upsaliensis, ser. 4*, 1: 170. 1905, *Blumea* 1(1): 99. 1934, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 351-366. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Darwiniana* 19: 65-166. 1974.

P. froesii Swallen (*Panicum polycomum* Trin.) (named for the Brazilian botanist Ricardo de Lemos Fróes, 1891-1960) Brazil, Venezuela. On sandy riverbanks, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 306. 1834 and *Phytologia* 14(2): 70. 1966, *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 17(2): 297-314. 2001.

P. frondescens Mey. (*Hymenachne frondescens* (G. Mey.) E. Fourn.; *Panicum ctenodes* var. *major* Trin.; *Panicum kegelii* Steud.; *Panicum stoloniferum* Poir.; *Panicum stoloniferum* var. *major* (Trin.) Kunth; *Panicum umbrosum* Salzm. ex Steud.)

Mexico to Argentina. Prostrate, spreading, herbaceous, rooting at the lower nodes, leaf blades narrowly ovate to narrowly lanceolate, inflorescence narrowly pyramidal, panicle glabrous, 1-sided racemes, spikelets acuminate but awnless, growing in sandy soil, forest shade, lowland, riverbanks and along streams, seasonal swamps, tropical wet forests, disturbed wood, see *Encyclopédie Méthodique. Botanique ... Supplément* 4: 274. 1816, *Primitiae Florae Essequiboensis* ... 56. 1818, *Species Graminum* 2: t. 171, f. A. 1829, *Révision des Graminées* 2: 389, t. 108. 1831, *Synopsis Plantarum Glumacearum* 1: 65. 1853 [1854], *Mexicanas Plantas* 2: 36. 1886 and *Annals of the Missouri Botanical Garden* 75(2): 420-455. 1988, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 59: 1-156. 2000, *Monocotiledóneas Mexicanas: una Sinopsis Florística* 10: 7-236. 2000, *Memoirs of the New York Botanical Garden* 85: i-ix, 1-246. 2000.

P. fugax J.F. Gmel.

Asia. See *Systema Naturae ... editio decima tertia, aucta, reformata* 1: 162. 1791.

P. fulgens Stapf (*Isachne nervata* Franch.; *Panicum nervatum* (Franch.) Stapf)

Guinea, Africa. See *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 340. 1895 and *Flora of Tropical Africa* 9: 668-669. 1920, *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 1: 41. 1932, *Flora of Tropical East Africa* 451-898. 1982.

P. fulgidum (R. Br.) Hughes (*Panicum bicolor* R. Br., nom. illeg., non *Panicum bicolor* Moench; *Panicum fulgidum* Hughes)

Warm regions. See *Methodus Plantas Horti Botanici* ... 206. 1794, *Prodromus Florae Novae Hollandiae* 191. 1810 and *Bibliotheca Botanica* 85: 322. 1915, *Bulletin of Miscellaneous Information Kew* 1923(9): 323. 1923, *Austrobaileya* 2(1): 21-24. 1984.

P. furvum Swallen (from the Latin *furvus, a, um* "dark, dusky, gloomy, swarthy, black," ... *furvum nigrum vel atrum* ...)

Guatemala. See *Contr. U.S. Natl. Herb.* 29(9): 416. 1950.

P. gabunense Hack. (*Acroceras gabunense* (Hack.) Clayton; *Commelinidium gabunense* (Hack.) Stapf; *Commelinidium mayumbense* (Franchet) Stapf)

Tropical Africa, Gabon. Dry riverbeds, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 70. 1889 and *Flora of Tropical Africa* 9: 627-628. 1920, *Kew Bulletin* 34(3): 557. 1979 [1980].

P. gardneri Thwaites (*Isachne gardneri* (Thwaites) Benth.)

Southern India, Sri Lanka. Perennial, erect to ascending, creeping, scrambling, decumbent, rooting at the nodes, branched, nodes glabrous, sheaths slightly keeled, auricle ciliate, ligule a ciliolate membrane, leaf blades lanceolate, panicle branches ascending or spreading, lower floret staminate or sterile, purple stigmas, see *Enumeratio Plantarum Zeylaniae* 359. 1864, *Genera Plantarum* 3: 1100. 1883 and *Handb. Fl. Ceylon* 5: 130. 1900, *Grasses of Ceylon* 118. 1956, *Grasses of Burma* 326. 1960.

P. gattingeri Nash (*Panicum capillare* L. var. *campestre* Gattinger; *Panicum capillare* var. *gattingeri* Nash; *Panicum capillare* var. *geniculatum* Scribn.; *Panicum philadelphicum* Bernh. ex Trin.; *Panicum philadelphicum* subsp. *gattingeri* (Nash) Freckmann & Lelong)

Canada, U.S. Annual, upright, stout, branched, usually rooting at the nodes, leaves elongated, sheaths with swollen-based hairs, terminal and axillary panicles, spikelets 1-flowered and glabrous, acute to lanceolate first glume, grains straw-colored and pointed at the tip, fibrous roots, leaves might cause photosensitization, potential seed contaminant, economic plant, grows in sandy areas and roadsides, shorelines, fields and wood borders, on open ground and waste places, alluvial valley soils and in dry rocky ground, gravel bars and borders of sloughs, see *Species Plantarum* 1: 58. 1753, *De Graminibus Paniceis* 216. 1826, *The Tennessee Flora; With Special Reference to the Flora of Nashville* 94. 1887, *Bulletin of the Torrey Botanical Club* 20: 477. 1893, *An Illustrated Flora of the Northern United States* 1: 123. 1896 and *Flora of the Southeastern United States* ... 92, 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 57. 1910, *Sida* 20(1): 172. 2002.

in English: Gattinger's panic grass, panic grass

P. geminatum Forssk. (*Digitaria appressa* (Lam.) Pers.; *Panicum appressum* (Lam.) Döll, nom. illeg., non *Panicum appressum* Forssk.; *Panicum beckmanniiforme* J.C. Mikan ex Trin.; *Panicum briziforme* J. Presl; *Panicum brizoides* Lam., nom. illeg., non *Panicum brizoides* L.; *Panicum fluitans* Retz.; *Panicum geminatum* Hochst., nom. illeg., non *Panicum geminatum* Forssk.; *Panicum geminatum* Schweinf.; *Panicum glomeratum* Buckley, nom. illeg., non *Panicum glomeratum* Moench; *Panicum paspaloides* Pers.; *Paspalidium geminatum* (Forssk.) Stapf; *Paspalidium geminatum* var. *geminatum*; *Paspalum adpressum* Pers. ex B.D. Jacks.; *Paspalum appressum* Lam.; *Setaria geminata* (Forssk.) Veldkamp)

Egypt, Africa. See *Flora Aegyptiaco-Arabica* 18. 1775, *Observationes Botanicae* 3: 8. 1783, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170, 176. 1791, *Syn. Pl.* 1: 81, 85. 1805, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 83. 1821, *Reliquiae Haenkeanae* 1(4-5): 302. 1830, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 3. 1866, *Flora Brasiliensis* 2(2): 184. 1877, *Bulletin de l'Herbier Boissier* 2(App. 2): 19. 1894 and *Flora of Tropical Africa* 9: 583. 1920, *Blumea* 39: 377. 1994.

P. geniculatum Poir. (*Chaetochloa geniculata* (Poir.) Millsp. & Chase; *Chaetochloa imberbis* var. *geniculata* (Poir.) Scribn. & Merr.; *Chamaeraphis glauca* var. *geniculata* (Poir.) Kuntze; *Echinochloa geniculata* (Poir.) Millsp.; *Panicum geniculatum* Lam.; *Panicum geniculatum* Muhl., nom. illeg., non *Panicum geniculatum* Poir.; *Panicum geniculatum* Nees & Schauer, nom. illeg., non *Panicum geniculatum* Poir.; *Panicum geniculatum* Willd., nom. illeg., non *Panicum geniculatum* Poir.; *Panicum geniculatum* (Thunb.) Thunb., nom. illeg., non *Panicum geniculatum* Poir.; *Panicum geniculatum* Forssk. ex Spreng., nom. illeg., non *Panicum geniculatum* Poir.; *Pennisetum geniculatum* (Poir.) Jacq.; *Setaria geniculata* (Poir.) P. Beauv.; *Setaria geniculata* (Willd.) P. Beauv.; *Setaria geniculata* P. Beauv.; *Setaria glauca* var. *geniculata* (Poir.) Urb.; *Setaria parviflora* (Poir.) Kerguelen)

Tropics. See *Prodromus Plantarum Capensium*, ... 24. 1794, *Encyclopédie Méthodique, Botanique* 4: 727 [737]. 1798, *Transactions of the American Philosophical Society* 4: 235. 1799, *Encyclopédie Méthodique, Botanique* 6: 52. 1804, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1031. 1809, *Essai d'une Nouvelle Agrostographie* 51, 169, 178. 1812, *Flora Capensis* 1: 388. 1813, *Catalogus Plantarum Americae Septentrionalis* 9. 1813, *Eclogae Graminum Rariorum* 1820, *Flora Capensis, Edidit et Praefatus est J.A. Schultes* 1: 103. 1823, *Systema Vegetabilium, editio decima sexta* 1: 309. 1825, *Linnaea* 19: 687. 1847, *Revisio Generum Plantarum* 2: 767. 1891, *Bulletin, Division of Agrostology United States Department of Agriculture* 4:

39. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 12. 1900, *Symbolae Antillarum* 4: 96. 1903, *Publications of the Field Columbian Museum, Botanical Series* 3: 37. 1903, *Lejeunia; Revue de Botanique. Nouvelle série* 120: 161. 1987.

in Mexico: zacate sedoso

P. genuflexum Stapf (*Panicum vagiflorum* Stapf)

East Africa, Zaire, Mozambique. Perennial, slender, tufted to loosely tufted, basal leaf sheaths glabrous, spikelets purplish, lower floret male, palea present, rare in South Africa, found in grassy clearings, on dry soils, sandy soils, marshy areas, see *Flora of Tropical Africa* 9: 683, 689. 1920.

P. ghiesbreghtii E. Fourn. (*Panicum ghiesbreghtii* E. Fourn. ex Hemsl.; *Panicum ghiesbreghtii* var. *ghiesbreghtii*; *Panicum guatemalense* Swallen; *Panicum hirtivaginum* Hitchc.) (for the Belgian zoologist Auguste (August) Boniface Ghiesbreght (1810-1893) (in Stafleu: 1808-1888), a patron of botany, 1835-1837 with Jean Jules Linden (1817-1898) and Nicolas Funck (1816-1896) to Brazil; see Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964)

Mexico, Colombia, Jamaica, Venezuela, Ecuador. Perennial, caespitose, erect, clumped, nodes and internodes villous, solitary spikelets green to red-purplish to dull purple, fodder, found in low semideciduous forest, along clearings, see *Biologia Centrali-Americana; ... Botany ...* 3: 489. 1885, *Mexicanas Plantas* 2: 29. 1886 and *Contributions from the United States National Herbarium* 12(6): 223. 1909, *Contr. U.S. Natl. Herb.* 15: 76. 1910, *Journal of the Washington Academy of Sciences* 23(10): 460. 1933.

in English: Ghiesbreght's panic grass, Ghiesbreght panicum
in Mexico: pasto

P. ghiesbreghtii E. Fourn. var. ***glabrium*** E. Fourn.

Mexico. See *Mexicanas Plantas* 2: 29. 1886.

P. gibbosum R. Br. (*Digitaria gibbosa* (R. Br.) P. Beauv.)

Australia. See *Prodromus Florae Novae Hollandiae* 193. 1810, *Essai d'une Nouvelle Agrostographie* 160. 1812 and *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Brunonia* 6(2): 131-216. 1983 [1984]

P. gilesii Benth. (*Brachiaria gilesii* (Benth.) Chase; *Urochloa gilesii* (Benth.) Hughes)

Australia. See *Flora Australiensis: A Description ...* 7: 477. 1878 and *Contributions from the United States National Herbarium* 22(1): 35. 1920, *Bulletin of Miscellaneous Information Kew* 1923(9): 319. 1923.

P. gilesii Benth. var. ***hispidissimum*** Domin

Queensland. See *Bibliotheca Botanica* 85: 304, f. 67. 1915.

P. gilvum Launert (*Panicum laevifolium* Hackel var. *contractum* Pilger) (Latin *gilvus, a, um* “dull yellow, pale yellow”)

Africa, Namibia. Annual, decumbent to erect, tufted, purple tinged, sheaths usually glabrous, ligule membranous to ciliate, inflorescence enclosed in the two uppermost leaves, spikelets ovate to elliptic and appressed to the branches, lower glume pointed and more or less nerveless, upper glume nerved, lower lemma sterile, upper lemma elliptic and shining, palea absent or reduced, weed species, suspected of photosensitizing sheep in Australia, New South Wales, usually found in moist habitats, sandy soils, vleis, margin of vleis, disturbed areas, seasonally flooded sites, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 448. 1940, *Mitteilungen der Botanischen Staatssammlung München* 8: 153, t. 1, f. 9. 1970.

P. glaberrimum Steud. (*Chasea virgata* (L.) Nieuwl.; *Milium virgatum* (L.) Lunell; *Panicum glaberrimum* Elliott ex Scribn. & Merr., nom. illeg., non *Panicum glaberrimum* Steud.; *Panicum virgatum* L.)

America. See *Species Plantarum* 1: 59. 1753, *Synopsis Plantarum Glumacearum* 1: 94. 1854 and *Bulletin, Division of Agrostology United States Department of Agriculture* 29: 3. 1901, *Contr. U.S. Natl. Herb.* 12: 118. 1908, *American Midland Naturalist* 2: 64. 1911, *American Midland Naturalist* 4: 212. 1915.

P. glabrescens Steud. (*Panicum subalbidum* Kunth)

Senegal. See *Révision des Graminées* 2: 397, t. 112. 1831, *Synopsis Plantarum Glumacearum* 1: 71. 1854.

P. glabrifolium Nash (*Dichantherium dichotomum* var. *glabrifolium* (Nash) Gould & C.A. Clark; *Dichantherium ensifolium* var. *ensifolium*; *Panicum chamaelonche* var. *chamaelonche*)

U.S. See *De Graminibus Paniceis* 242. 1826, *Bulletin of the Torrey Botanical Club* 24(4): 196. 1897 and *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978 [1979], *Brittonia* 36(3): 262-273. 1984, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988.

P. glabripes Döll (*Panicum glabripes* subsp. *glabripes*; *Panicum glabripes* subsp. *subjunceum* (Ekman) Roseng., B.R. Arrill. & Izag.; *Panicum junceum* var. *strictius* Döll; *Panicum subjunceum* Ekm.)

Southern Brazil to northern Argentina. Plant glabrous, more or less herbaceous, somewhat congested panicle, lower glume mucronate or acuminate, common in swampy places, very similar to *Panicum tricholaenoides*, see *De Graminibus Paniceis* 220. 1826, *Flora Brasiliensis* 2(2): 216. 1877 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 16, t. 5, f. 2, t. 6, f. 8. 1911, *Gramineas Uruguayas* 335, f. 142. 1970, *Boletim do Instituto de*

Biociências, Universidade Federal do Rio Grande do Sul 59: 1-156. 2000.

P. glanduliferum K. Schum. (605 species, 5 new genera, 168 new species and varieties, these the Madagascar plants collected by the German traveler Diedrich Christian Rutenberg (1851-1878, murdered) and described by Buchenau and other specialist authors. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 194. 1965; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916)

Madagascar. See *Abhandlungen herausgegeben vom Naturwissenschaftlichen Verein zu Bremen* 9: 401. 1887, Georg Philipp Franz Buchenau (1831-1906), *Reliquiae Rutenbergianae I-VIII ... Abhandlungen d. naturwissenschaftlichen Vereins zu Bremen ... 1880-1889*.

P. glandulopaniculatum Renvoize

Mozambique, Malawi, Zambia, Zimbabwe. Annual, trailing, often rooting at the leaves, leaves hard and thick, inflorescence branches glandular, glumes villous to pilose, lower floret male, palea present, upper lemma smooth, shade species, sandy soil, see *Kew Bulletin* 44(3): 544. 1989.

P. glaziovii Hack. (*Panicum compactiflorum* Renvoize)

Brazil. See *Österreichische Botanische Zeitschrift* 51: 373. 1901, *Kew Bulletin* 23(2): 424. 1978.

P. globoideum Domin (*Paspalidium globoideum* (Domin) Hughes; *Setaria globoidea* (Domin) R.D. Webster)

Australia. See *Repertorium Specierum Novarum Regni Vegetabilis* 10: 119. 1911, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Sida* 16: 443. 1995.

P. glumaepatulum Steud. (*Cynodon dactylon* (L.) Pers.; *Digitaria glumaepatula* (Steud.) Miq.)

Southeast Asia, the Philippines. Sand foreshore, see *Species Plantarum* 1: 58. 1753, *Syn. Pl.* 1: 85. 1805, *Synopsis Plantarum Glumacearum* 1: 41. 1855 [1853], *Flora van Nederlandsch Indië* 3: 439. 1857 and *Blumea* 21(1): 1-80. 1973.

P. glumare Trin. (*Urochloa glumaris* (Trin.) Veldkamp)

Indomalesia, Polynesia, New Caledonia. See *De Graminibus Paniceis* 143. 1826 and *Blumea* 41: 413-437. 1996.

P. glutinoscabrum Fernald (*Dichantherium acuminatum* var. *acuminatum*; *Panicum acuminatum* var. *fasciculatum* (Torr.) Lelong, nom. illeg., non *Panicum acuminatum* var. *fasciculatum* (Torr.) Beetle; *Panicum huachucae* var. *fasciculatum* (Torr.) F.T. Hubb.)

U.S. See *Species Plantarum* 1: 58. 1753, *A Flora of the Northern and Middle Sections of the United States* 145. 1824, *Journal of the Elisha Mitchell Scientific Society* 15: 51. 1898 and *Rhodora* 14(164): 171. 1912, *Rhodora* 49(581): 122, pl. 1059. 1947, *Annals of the Missouri Botanical Garden* 65(4): 1121. 1978 [1979], *Brittonia* 36(3): 269. 1984.

P. glutinosum Sw. (*Homolepis glutinosa* (Sw.) Zuloaga & Soderstr.; *Homolepis isocalycia* (G. Mey.) Chase; *Panicum divergens* Kunth; *Panicum glutinosum* C. Presl ex Griseb.; *Panicum glutinosum* Lam., nom. illeg., non *Panicum glutinosum* Sw.; *Panicum lindenii* Griseb.; *Panicum lindenii* E. Fourn., nom. illeg., non *Panicum lindenii* Griseb.; *Panicum obtusiflorum* A. Rich.)

Mexico and West Indies, northern Argentina. Perennial, tufted, erect, decumbent, creeping, branched, stoloniferous, leaf blades lanceolate cordate or attenuate, panicle orbicular, spikelets obovate glutinous or sticky, lower glume obovate 5-nerved, upper glume obovate 5- to 7-nerved, palea reduced, see *Nova Genera et Species Plantarum seu Prodrum* 24. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 74, t. 43, f. 3. 1791, *Nova Genera et Species Plantarum* 1: 102. 1815 [1816], *Primitiae Florae Essequiboensis* ... 59-60. 1818, *Histoire Physique, Politique et Naturelle de l'Île de Cuba ... Botanique*. — *Plantes Vasculaires* 3: 305. 1853, *Flora of the British West Indian Islands* 552. 1864, *Mexicanas Plantas* 2: 29. 1886, *Catalogus plantarum cubensium* ... 233. 1866 and *Proceedings of the Biological Society of Washington* 24: 147. 1911, *Smithsonian Contributions to Botany* 59: 19. 1985, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

in Brazil: canna de passarinho

in Colombia: cola da caballo, cola de caballo

P. goeldii Swallen (*Panicum rivale* Swallen)

Brazil. See *Bulletin of the Torrey Botanical Club* 75: 87. 1948, *Phytologia* 14(2): 72. 1966.

P. gouinü Fourn. (*Panicum gouinii* var. *pumilum* E. Fourn.; *Panicum halophilum* Nash; *Panicum repens* L.; *Panicum repens* var. *confertum* Vasey)

Brazil to northern Argentina. Lower glume acute, found in damp places, sandy beach, see *Species Plantarum, Editio Secunda* 1: 87. 1762, *Biologia Centrali-Americana; ... Botany* ... 3: 489. 1885, *Bulletin of the Torrey Botanical Club* 13(2): 25. 1886, *Mexicanas Plantas* 2: 28. 1886 and *Bulletin of the Torrey Botanical Club* 28: 87. 1901, *Contr. U.S. Natl. Herb.* 15: 85-86. 1910, *Blumea* 41: 202. 1996.

P. gracile R. Br. (*Panicum gracile* (Guss.) Nyman, nom. illeg., non *Panicum gracile* R. Br.; *Panicum gracile* Leconte, nom. illeg., non *Panicum gracile* R. Br.; *Panicum gracile* Nees ex Spreng., nom. illeg., non *Panicum gracile* R. Br.; *Panicum gracile* Willd. ex Spreng.; *Panicum gracilentum* Poir.; *Panicum gracilescens* Desv. ex Poir.; *Paspalidium gracile* (R. Br.) Hughes; *Setaria brownii* Desv.; *Setaria spartellum* (S.T. Blake) R.D. Webster)

Australia. See *Prodrum Florae Novae Hollandiae* 190. 1810, *Encyclopédie Méthodique, Botanique* 4: 276, 279. 1816, *Systema Vegetabilium, editio decima sexta* 1: 320. 1825, *Systema Vegetabilium, editio decima sexta* 4(2): 33. 1827, *Mémoires de la Société d'Agriculture, Sciences et*

Arts d'Angers 1: 187. 1831, *Syll. Suppl.* 70. 1865, *Mexicanas Plantas* 2: 21. 1886 and *Bulletin of Miscellaneous Information Kew* 1923(9): 318. 1923, *Proceedings of the Royal Society of Queensland* 62: 97. 1952, *Sida* 16(3): 445. 1995.

P. gracilicaule Rendle (*Panicum gracilicaule* Nash, nom. illeg., non *Panicum gracilicaule* Rendle; *Panicum membranaceum* Robyns; *Panicum pusillum* Hook.f.; *Panicum sublaetum* Stapf; *Panicum tambacoundense* Berhaut; *Panicum verruciferum* Mez)

Tropical Africa, Benin, Senegal. Annual, small, erect, slender, open panicles, sandy soils, roadbanks, weedy places, see *Journal of the Linnean Society, Botany* 7: 227. 1864, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 179, 181. 1899 and *Flora of the Southeastern United States* ... 98. 1903, *Flora of Tropical Africa* 9: 671. 1921, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 188. 1921, *Mémoires de la Société Botanique de France* 1953-54: 11. 1954.

in Senegal: eburey

P. grande A.S. Hitchcock & Chase (*Panicum grande* Peter, nom. illeg., non *Panicum grande* Hitchc. & Chase; *Panicum hirsutum* Sw.; *Panicum myrianthum* Mez, nom. illeg., non *Panicum myrianthum* Büse)

Panama, Colombian the Caribbean, Costa Rica, Bolivia, Venezuela. Semiaquatic or aquatic, floating, coarse, decumbent, leaves not plicate, sheaths spongy and alveolate, inflorescence spicate, invasive, found in wetlands and open marshy areas, channels, in the water of a swamp, along the margin of lakes or streams, edge of river, swamps and mangrove swamps, see *Contributions from the United States National Herbarium* 17(6): 529, f. 143. 1915, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 3. 1921, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* N.F. 13(2): 110. 1928.

in Venezuela: yajeyaje, sumaja

in Panama: yur gammu

P. granuliferum Kunth (*Panicum arctum* Swallen; *Panicum politii* Swallen; *Panicum spissifolium* Swallen; *Panicum subcordatum* Swallen, nom. illeg., non *Panicum subcordatum* Roth; *Panicum subinclusum* Swallen) (for Louis P. Politi, 1916-1972, horticulturist, plant collector in South America with B. Maguire, 1948-1949 Kunhardt Venezuelan Expedition; see *Smithsonian Contr. Bot.* 56: 54. 1984)

Amazonas, Venezuela. Erect and procumbent, decumbent, creeping, caespitose, glaucous, rooting at the nodes, loose inflorescence, savannah, white sand, ditches, along riverbanks, rocky places, seepage pools, shallow bogs, wet areas, see *Species Plantarum* 1: 55, 58. 1753, *Nova Genera et Species Plantarum* 1: 105. 1815 [1816], *Revisio Generum*

Plantarum 3(3): 361. 1898 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Bulletin of the Torrey Botanical Club* 75: 86-87. 1948, *Memoirs of the New York Botanical Garden* 9(3): 258, 260. 1957, *Phytologia* 14(2): 76. 1966.

P. griffonii Franch. (*Panicum hirsutulium* Rendle; *Panicum mixtum* Mez)

Zaire. Annual, erect to ascending, straggling, weak, grazed, on shallow soil, rocky places, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 342. 1895, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 330. 1897, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 176. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 147. 1904.

in Nigeria: geron tsuntsu, jeron tsuntsu

in Sierra Leone: timbe

P. grumosum Nees (*Hymenachne grumosa* (Nees) Zuloaga; *Panicum knuthii* Herter; *Panicum pavonii* Mez; *Panicum prionitis* Nees; *Panicum pycnanthum* Steud.; *Panicum rivulare* var. *grumosum* (Nees) Hack.; *Panicum schroederi* Herter)

Uruguay, Argentina, Brazil, Paraguay. Herbaceous, shrubby, lower floret male with a well-developed palea, food for wildlife, often in coastal regions, open marshes and freshwater marshes, often in the water, on wet shores, borders of lakes and ponds, in moist soil along river and lake banks, see *De Graminibus Paniceis* 213. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 162, 182. 1829, *Synopsis Plantarum Glumacearum* 1: 70. 1853 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 343. 1909, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 5. 1921, *Revista Sudamericana de Botánica* 6(5-6): 137-138, f. 6, 7. 1940, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969, *Iheringia, Série Botânica* 41: 101-139. 1991, *Annals of the Missouri Botanical Garden* 79(4): 770-818. 1992, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *American Journal of Botany* 90: 817. 2003.

P. guadaloupense Spreng. ex Steud. (*Brachiaria purpurascens* (Raddi) Henrard; *Panicum purpurascens* Raddi; *Urochloa mutica* (Forssk.) T.Q. Nguyen)

The Caribbean. See *Flora Aegyptiaco-Arabica* 20. 1775, *Agrostografia Brasiliensis* 47. 1823, *Nomenclator Botanicus. Editio secunda* 2: 257. 1841, *Synopsis Plantarum Glumacearum* 1: 61. 1853 and *Blumea* 3(3): 434. 1940, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Annals of the Missouri Botanical Garden* 79(4): 770-818. 1992.

in Nicaragua: sagádi pará

P. guatemalense Swallen

Guatemala. Mountains, see *J. Wash. Acad. Sci.* 23(10): 460. 1933.

P. gymnocarpon Elliott (*Panicum drummondii* Nees ex Steud.; *Panicum monachnoides* Desv.; *Phanopyrum gymnocarpon* (Elliott) Nash)

U.S. See *A Sketch of the Botany of South-Carolina and Georgia* 1: 117. 1816, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 190. 1831, *Synopsis Plantarum Glumacearum* 1: 63. 1854 and *Flora of the Southeastern United States ...* 104. 1903.

P. habrothrix Renvoize (from the Greek *habros* "delicate, graceful, beautiful, soft, pretty" and *thrix, trichos* "hair"; Akkadian *ebru, ibru*, Hebrew *haber*, Aramaic *habra* "favorite slave, friend"; Akkadian *habaru, kabaru* "to become fat, thick," *kabru* "fat")

Zambia. See *Kew Bulletin* 22: 486, f. 2. 1968.

P. haenkeanum J. Presl (*Panicum costaricense* Hack.)

Mexico, Bolivia, Panama, Costa Rica. Perennial or annual, pilose, delicate, weak, erect, trailing, sprawling, decumbent, rooting at the nodes, branched, leaf blades lanceolate attenuate or acuminate, panicle oblong or ovate, spikelets lanceolate, lower glume ovate 3-nerved attenuate, upper glume 5-nerved pubescent or glabrous, upper lemma shining, forest, shade or partial shade, semideciduous forest, forest margins, along edge of savannah, see *Species Plantarum* 1: 58. 1753, *Reliquiae Haenkeanae* 1(4-5): 304. 1830 and *Österreichische Botanische Zeitschrift* 51: 428. 1901, *Contr. U.S. Natl. Herb.* 15: 13-15, 20, 134, 142. 1910, *Brittonia* 23(3). 293-324. 1971, *Brittonia* 26(1): 59. 1974.

P. hallii Vasey (*Panicum virletii* E. Fourn.) (named for the American botanist Elihu Hall, 1822-1882, botanical explorer of the Rocky Mountains; see Joseph Ewan, *Rocky Mountain Naturalists*. 221-222, 223-224. The University of Denver Press 1950; Edith M. Allison, "Bibliography and History of Colorado Botany." *Univ. Colorado Studies*. 6: 51-76. 1908; F.A. Stafleu and R.S. Cowan, *Taxonomic literature*. 2: 17-18. Utrecht 1979; J.H. Barnhart, *Biographical notes upon botanists*. 2: 113. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 159. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 192. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Mexico, U.S., Arizona. Perennial bunchgrass of the desert grassland, erect and branched stems, light green to bluish green, tufted, rather small, leafy, leaves often clustered at the base of the plant, basal blades curly when dry, spikelets as small nutlets, seeds dark brown and shiny when ripe, highly palatable, forage value fair for wildlife and livestock, grows on dry prairies, dry hills, on sand or clay soils, rocky and gravelly hills and bottomlands, see *Bulletin of the Torrey Botanical Club* 11(6): 61. 1884, *Biologia Centrali-Americana; ... Botany ...* 3: 498. 1885, *Mexicanas Plantas*

2: 29. 1886 and *Annals of the Missouri Botanical Garden* 83(2): 200-280. 1996, *Monocotiledóneas Mexicanas: una Sinopsis Florística* 10: 7-236. 2000, *Sida* 20(1): 172. 2002.

in English: Hall's panic grass, Hall's panicum

in Mexico: panizo aserrín, panizo rizado

P. hallii Vasey var. ***filipes*** (Scribn.) Waller (*Panicum filipes* Scribn.; *Panicum hallii* subsp. *filipes* (Scribn.) Freckmann & Lelong)

Mexico, U.S., Texas. Forage, see *Bulletin of the Torrey Botanical Club* 11(6): 61. 1884, *Botanical Explorations in Southern Texas ...* 1: 13. 1895 and *The Southwestern Naturalist* 19(1): 105. 1974, *Sida* 20(1): 172. 2002.

in English: filly panic grass, filly panicum

in Mexico: panizo, panizo corcolito

P. hallii Vasey var. ***hallii*** (*Panicum lepidulum* A.S. Hitchc. & Chase; *Panicum virletii* E. Fourn. ex Hemsl.; *Panicum virletii* E. Fourn.)

America. Perennial, see *Bulletin of the Torrey Botanical Club* 11(6): 61. 1884, *Biologia Centrali-Americana; ... Botany ...* 3: 498. 1885, *Mexicanas Plantas* 2: 29. 1886.

in English: Hall's panicum

P. hamadense Mez (*Brachiaria lata* (Schumach.) C.E. Hubb.)

Ethiopia. See *Beskrivelse af Guineiske planter* 61-62. 1827 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 66. 1917, *Hooker's Icones Plantarum* 4(pl. 3363): 2. 1938.

P. hanningtonii Stapf (for the Rev. James Hannington, 1847-1885, plant collector in East Equatorial Africa)

Africa, Uganda. See *Flora of Tropical Africa* 9: 676. 1920.

P. haplocaulos Pilg.

Sudan. Annual, slender, erect, solitary or tufted, semi-aquatic, hollow stems, leaves glabrous, tardily deciduous fertile floret, lower palea absent, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 49. 1902.

P. harmandii (A. Camus) Stieber (*Ichnanthus harmandii* A. Camus) (after the French botanist Abbé Julien Herbert Auguste Jules Harmand, 1844-1915, lichenologist, author of *Lichens de France*. Catalogue systématique et descriptif. Epinal 1905-1913; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 128. 1965; Elmer Drew Merrill (1876-1956), *Contr. U.S. Natl. Herb.* 30(1): 143. 1947)

Europe. See *Notulae Systematicae. Herbarium du Museum de Paris* 3: 84. 1914, *Systematic Botany* 7: 85-115. 1982, *Blumea* 41: 207. 1996.

P. hasskarlii Steud. ex Zoll. (after the German botanist Justus Karl Hasskarl, 1811-1894, traveler (Java), author of *Horti malabarici Rheedeani clavis locupletissima*. Dresden 1867; see J.H. Barnhart, *Biographical notes upon botanists*.

2: 137. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 167. 197; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

India. See Lewis Weston Dillwyn (1778-1855), *A Review of the References to the Hortus Malabaricus of Henry van Rheede van Draakenstein*. Swansea 1839, *Systematisches Verzeichniss der im Indischen Archipel* 54. 1854.

P. havaiense Reichardt

U.S. See *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung 1* 76(1): 723. 1878.

P. havardii Vasey (*Panicum virgatum* L. var. *marcanthum* Vasey) (dedicated to the French-born American botanist Valery Havard, 1846-1927, surgeon and botanical collector in Texas and the Southwest; see Joseph Ewan, *Rocky Mountain Naturalists*. 224-225. The University of Denver Press 1950; J.H. Barnhart, *Biographical notes upon botanists*. 2: 140. Boston 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Joseph William Blankinship (1862-1938), "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904 [1905]; F.A. Stafleu and R.S. Cowan, *Taxonomic literature*. 2: 105. Utrecht 1979)

U.S., New Mexico. Perennial, rhizomatous, stems and leaves blue-green, seed heads long and open, fair for wildlife habitat, animal food, good for grazing, palatable when young, usually found in and around sand dune, grows on quartz sand dunes, on areas with active sand dune, in dry sands, on gentle to steep slopes, on deep sands, on flat ground, on loamy soils, on loamy sand or sandy loam, useful for erosion control, useful in the revegetation and stabilization of sandy soils, see *Species Plantarum* 1: 59. 1753, *Bulletin of the Torrey Botanical Club* 13(2): 26. 1886, *Bulletin of the Torrey Botanical Club* 14: 95. 1887.

in English: Havard's panic grass, Havard panicum

in Mexico: zacate de los médanos

P. hayatae Camus (*Panicum costatispiculum* Ohwi; *Panicum hayatae* (Honda) Makino & Nemoto, nom. illeg., non *Panicum hayatae* Camus; *Syntherisma hayatae* Honda)

Asia. See *Notulae Systematicae. Herbarium du Museum de Paris* 4: 46. 1923, *Botanical Magazine* 38: 128. 1924, *Flora*

Japonica 1472. 1925, *Bulletin of the Tokyo Science Museum* 18: 14. 1947, *Blumea* 41: 181-216. 1996.

P. hebotos Trin. (*Dichantherium hebotos* (Trin.) Zuloaga; *Panicum hebotos* var. *genuinum* Döll; *Panicum infusum* Swallen; *Panicum mirandum* Luces; *Panicum subtiliracemosum* Renvoize; *Panicum subtipaniculatum* Renvoize)

Bolivia, Brazil. Perennial, slender, delicate, erect to ascending, creeping, sprawling, loosely clumped, leaf blades narrowly lanceolate and pilose acute or acuminate, lax panicle oblong, spikelets oblong, lower glume ovate 1- to 3-nerved acute or acuminate, upper glume 5- to 7-nerved, upper lemma elliptic apiculate, similar to *Ichnanthus calvescens* (Nees ex Trin.) Döll, see *Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 301. 1834, *Flora Brasiliensis* 2(2): 252. 1877 and *Journal of the Washington Academy of Sciences* 32(6): 163, f. 8. 1942, *Phytologia* 14(2): 82. 1966, *Kew Bulletin* 42: 922. 1987, *Hatschbach's Paraná Grasses* 39. 1988, *Gramíneas de Bolivia* 374, 400-401. 1998, *American Journal of Botany* 90: 816. 2003.

P. heliophilum Chase ex Zuloaga & Morrone (*Dichantherium heliophilum* (Chase ex Zuloaga & Morrone) Zuloaga)

Brazil. Dry rocky places, see *Annals of the Missouri Botanical Garden* 78(1): 152-154, f. 1. 1991, *American Journal of Botany* 90: 816. 2003.

P. helleri Nash (*Dichantherium oligosanthos* (Schult.) Gould; *Dichantherium oligosanthos* subsp. *scribnerianum* (Nash) Freckmann & Lelong; *Dichantherium oligosanthos* var. *scribnerianum* (Nash) Gould; *Panicum oligosanthos* var. *helleri* (Nash) Fernald; *Panicum pernervosum* Nash)

U.S. See *Mantissa* 2: 256. 1824, *Bulletin of the Torrey Botanical Club* 22(10): 421. 1895, *Bulletin of the Torrey Botanical Club* 26(11): 572, 576. 1899 and *Rhodora* 36(423): 80. 1934, *Brittonia* 26(1): 60. 1974, *Sida* 20(1): 170. 2002.

P. helobium Mez ex Henrard (*Panicum cyanescens* var. *latifolium* Döll; *Panicum helobium* Mez ex Ekman; *Panicum schwackeanum* Mez)

Brazil to northern Argentina. Perennial, slender, decumbent, weak, scandent, creeping, rooting at the nodes, rooting and growing in water, leaf blades appressed or spreading, panicle broadly ovate to orbicular much branched and usually tangled, spikelets orbicular, lower glume broadly ovate 3-nerved, upper glume 5-nerved, lower lemma 5-nerved, upper lemma shiny, common in damp places, resembles *Panicum errabundum* Hitchc., see *De Graminibus Paniceis* 202. 1826, *Flora Brasiliensis* 2(2): 263. 1877 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 9: 23, t. 1, f. 6. 1912, *Mededeelingen van's Rijks-Herbarium* 40: 52. 1921, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Iheringia, Série Botânica* 41: 101-139. 1991.

P. hemignostum Steud. (*Ichnanthus pallens* (Sw.) Munro ex Benth.; *Ichnanthus pallens* var. *pallens*)

Paraguay. See *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Synopsis Plantarum Glumacearum* 1: 77. 1853, *Flora Hongkongensis* 414. 1861, *Systematic Botany* 12(2): 187-216. 1987.

P. hemitomon J.A. Schultes (*Brachiaria digitarioides* (Carpenter ex Curtis) Nash; *Hymenachne acutigluma* (Steud.) Gilliland; *Hymenachne hemitomon* (Schult.) C.C. Hsu; *Oplismenus colonus* var. *walteri* (Kunth) E. Fourn.; *Oplismenus walteri* Kunth; *Panicum acutiglumum* Steud.; *Panicum carinatum* Torr., nom. illeg., non *Panicum carinatum* J. Presl; *Panicum carolinianum* Spreng.; *Panicum curtisii* Chapm., nom. illeg., non *Panicum curtisii* Steud.; *Panicum digitarioides* Carp., nom. illeg., non *Panicum digitarioides* Raspail ex Kunth; *Panicum digitarioides* Carpenter ex Curtis, nom. illeg., non *Panicum digitarioides* Raspail ex Kunth; *Panicum dimidiatum* L.; *Panicum dimidiatum* Walter, nom. illeg., non *Panicum dimidiatum* L.; *Panicum walteri* Elliott, nom. illeg., non *Panicum walteri* Pursh; *Panicum walteri* Muhl., nom. illeg., non *Panicum walteri* Pursh; *Rottboellia dimidiata* (L.) L.f.; *Stenotaphrum dimidiatum* (L.) Brongn.)

Brazil, North America, U.S., Florida. Perennial, aquatic or subaquatic, vigorous, robust, narrow and hard stems, extensive creeping rhizomes, culms often produce roots at lower submersed nodes, sheaths loose, lower leaf sheaths overlapping, leaf blades flat or folded, spike-like inflorescence erect and narrow, spikelets nearly sessile, fertile stems with hairy sheaths, green flowers, lemmas nerved, grain smooth, sometimes a weed very aggressive, valuable prairie fodder, forage, provides food and protection for wildlife, good grazing for livestock, tough and less palatable at maturity, can form large stands in the water or even on dry banks, important as a soil binder, used for shoreline and stream bank erosion control, occurs on moist soil along rivers and ditches, in wettest seasonal ponds, drainage canals and wet disturbed sites, in coastal regions, open marshes and freshwater marshes, often in the water, on wet shores, swamps, borders of lakes and ponds, in moist soil along river and lake banks, see *Species Plantarum* 1: 57. 1753, *Supplementum Plantarum* 114. 1781, *Flora Caroliniana, secundum ...* 72. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 115. 1816, *Descriptio uberior Graminum* 108. 1817, *Mantissa* 2: 227. 1824, *Systema Vegetabilium, editio decima sexta* 1: 310. 1825, *Révision des Graminées* 1: 45. 1829, *Voyage autour du Monde* 2(2): 127. 1829[1832], *Boston J. Nat. Hist.* 1: 137. 1835, *American Journal of Science* (II) 7: 410. 1849, *Synopsis Plantarum Glumacearum* 1: 66, 75. 1853 [1854], *Flora of the Southern United States* 573. 1860, *Mexicanas Plantas* 2: 40. 1886 and *Manual of the Flora of the Northern States and Canada* 77. 1901, *The Gardens' Bulletin Singapore* 20(4): 314. 1964, *Journal of the Faculty of Science: University of Tokyo, Botany* 9(3):

90. 1965, *Acta Botanica Cubana* 4: 1-11. 1980, *Fl. Trop. East Africa, Gramineae* 3: 549. 1982, *Taxon* 49(2): 253. 2000.

in English: maidencane, pifine grass, maiden-cane, Simpson's grass

P. heterostachyum Hack. (*Panicum brevifolium* var. *heterostachyum* Peter; *Panicum hirtum* Lam.; *Setaria pumila* (Poir.) Roem. & Schult.)

Tropical Africa. Annual, loosely tufted to tufted, erect or decumbent, erect or ascending, weak, branched, fine thin leaves, dense panicle, inflorescence branches glandular, glumes pubescent, lower floret male, palea present, female-fertile lemma with warts or nodules, hairy fruits, rhizomes eaten by humans, usually growing in poor sandy soils, deciduous bushland, rocky hills, seasonally flooded pans, disturbed areas, wooded grassland, in shade, wooded savannah, see *Encyclopédie Méthodique, Botanique* 4: 741. 1798, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 273. 1816, *Systema Vegetabilium* 2: 891. 1817 and *Österreichische Botanische Zeitschrift* 51: 430. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 188, 199 et Anhang, 49. 1930.

P. hians Elliott (*Aira incompleta* Bosc ex Steud.; *Panicum exiguiflorum* Griseb.; *Panicum hians* Spruce ex Griseb., nom. illeg., non *Panicum hians* Elliott; *Panicum jejunum* Trin.; *Panicum megapotamicum* Spreng.; *Panicum milioides* Nees ex Trin.; *Panicum milioides* var. *filifolium* R.A. Palacios; *Panicum minutiflorum* A. Rich., nom. illeg., non *Panicum minutiflorum* (P. Beauv.) Raspail; *Panicum oblongiflorum* Desv.; *Panicum stenodes* Griseb.; *Steinchisma hians* (Elliott) Nash) (Latin *hians*, gaping)

North America, U.S., Florida. Perennial, caespitose, erect, sometimes decumbent or procumbent, inflorescence sparsely branched, spikelets oblong and appressed, lower floret male, palea tough, seeds inflated appearance and blunt at the tip, forage grass, grows in low roadside ditches and wet moist habitats, damp soils, in disturbed swales at edge of flatwoods, disturbed places around ponds and streams, in wetlands and swamps, in low and moist shaded sites, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 118. 1816, *De Graminibus Paniceis* 225. 1826, *Systema Vegetabilium, editio decima sexta* 4(2): 34. 1827, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 193. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 103. 1836, *Nomenclator Botanicus* edition 2 1: 45. 1840, *Historia Fisica Política y Natural de la Isla de Cuba, Botanica* 11: 305. 1850, *Flora of the British West Indian Islands* 548. 1864, *Catalogus plantarum cubensium ...* 234. 1866, *Flora Brasiliensis* 2(2): 240. 1877, *Proceedings of the Academy of Natural Sciences of Philadelphia*

43(2): 296, t. 13, f. 3, 3a-3d. 1891 and *Flora of the South-eastern United States ...* 105. 1903, *Flora of Tropical Africa* 9: 476. 1919, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 302. 1969, *Ann. Missouri Bot. Gard.* 85(4): 647. 1998.

in English: panic grass, gaping panicum

P. hillebrandianum Hitchc. (*Dichantheium hillebrandianum* (Hitchc.) C.A. Clark & Gould) (named in honor of the German physician Wilhelm B. Hillebrand, 1821-1886, botanist, traveler, from 1851 to 1871 lived in the Hawaiian islands, wrote a *Flora of the Hawaiian Islands*. Annotated and published after the author's death by William Francis Hillebrand [1853-1925]. London, New York & Heidelberg 1888, "The relation of forestry to agriculture." in *Hawaiian Pl. Rec.* 22: 174-200. 1920 and "Die Vegetationsformationen der Sandwich-Inseln." *Bot. Jahrb. Syst.* 9: 305-314. 1888. See W.T. Pope, "Dr. William Hillebrand, M.D. (1821-1886)." *Hawaiian Annual*. 1919: 53-60; J.H. Barnhart, *Biographical notes upon botanists.* 2: 177. 1965; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 19695; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 175. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 1973; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 223. Boston, Mass. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933)

U.S. See *Memoirs of the Bernice Pauahi Bishop Museum...* 8(3): 197, f. 87. 1922, *Brittonia* 30(1): 57. 1978.

P. hillebrandianum Hitchc. var. ***gracilis*** Skotts. (*Panicum gracilius* (Skotts.) H. St. John)

U.S., Hawaii. Wet places, boggy sites, see *Acta Horti Gothoburgensis* 15: 296, f. 118-124. 1944, *Phytologia* 36(5): 465. 1977.

P. hillmanii Chase (*Panicum capillare* subsp. *hillmanii* (Chase) Freckmann & Lelong)

U.S., New Mexico, Texas. Annual, usually occurs in non-wetlands, see *Species Plantarum* 1: 58. 1753 and *Journal of the Washington Academy of Sciences* 14(14): 345, f. 1. 1934, *Sida* 20(1): 161-174. 2002.

in English: Hillman's panic grass, Hillman panicum, witch grass

P. hippothrix K. Schum. ex Engl. (*Isachne obscurans* Woodrow; *Panicum obscurans* (Woodrow) Stapf ex Woodrow)

East Africa, Tanzania, Kenya. Annual, coarse, robust, stout, leaves linear, panicle ovate to oblong and often exserted from the uppermost sheath, spikelets ovate and acuminate, spikelets nongaping distributed on spreading or ascending branches, lower glume ovate and acuminate, upper lemma

glossy, grains cooked like rice, open habitats, thickets, see *Die Pflanzenwelt Ost-Afrikas* 5c: 103. 1895, *Gardener's chronicle, ser. 3* 23: 161. 1898 and *Journal of the Bombay Natural History Society* 13: 434. 1901, *Fl. Trop. Afr.* 9: 699. 1920.

in India: jangli kutki, tansawa

P. hirstii Swallen (*Dichantheium hirstii* (Swallen) Kartesz) (named for an amateur botanist named Frank Hirst)

U.S., Delaware, Georgia, New Jersey, North Carolina. Perennial, erect, purplish green smooth stems, stem leaves stiffly erect and green tinged with purple, ligule a band of dense hairs, inflorescence narrow and wandlike, endangered species, found in seasonally wet ponds and small ephemeral ponds, cypress savannahs and depression meadows, depression ponds and freshwater habitats, seasonally flooded woodland pond, see J.R. Swallen, "A new species of *Panicum* from New Jersey." *Rhodora*. 63(752): 235-236. 1961.

in English: Hirst's panic grass, Hirst panic grass

P. hirsutissimum Steud. (*Panicum maximum* Jacq.; *Panicum maximum* var. *hirsutissimum* (Steud.) Oliv.; *Urochloa maxima* (Jacq.) R.D. Webster)

Africa. See *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Collectanea* 1: 76. 1786, *Synopsis Plantarum Glumacearum* 1: 72. 1853, *Transactions of the Linnean Society of London* 29: 171. 1875 and *The Australian Paniceae (Poaceae)* 241. 1987.

P. hirsutulum Rendle (*Panicum griffonii* Franch.)

Africa. See *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 342. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 176. 1899.

P. hirsutum Sw. (*Panicum chacoense* Parodi; *Panicum elatum* Willd. ex Steud.; *Panicum hirsutum* (P. Beauv.) Raspail, nom. illeg., non *Panicum hirsutum* Sw.; *Panicum hirsutum* B. Heyne ex Wall., nom. illeg., non *Panicum hirsutum* Sw.; *Panicum hirsutum* J. König ex Roxb., nom. illeg., non *Panicum hirsutum* Sw.; *Panicum hirsutum* Lam., nom. illeg., non *Panicum hirsutum* Sw.; *Panicum hirsutum* Moon, nom. illeg., non *Panicum hirsutum* Sw.; *Panicum hirsutum* Vahl ex Griseb., nom. illeg., non *Panicum hirsutum* Sw.; *Panicum hirsutum* Willd. ex Spreng., nom. illeg., non *Panicum hirsutum* Sw.)

Venezuela, Argentina, Brazil, Guatemala, Mexico, U.S., Texas. Herbaceous, loose inflorescence, forming large clumps, borders of cultivated land, open sites, riverbanks, gravelly places, see *Flora Indiae Occidentalis* 1: 173. 1797, *Encyclopédie Méthodique, Botanique* 4: 741. 1798, *Essai d'une Nouvelle Agrostographie* 50, t. 10, f. 11. 1812, *Hortus Bengalensis, or a catalogue ...* 7. 1814, *Flora Indica; or Descriptions ...* 1: 303. 1820, *Systema Vegetabilium, editio decima sexta* 1: 317. 1824, *A Catalogue of the Indigenous and Exotic Plants Growing in Ceylon* 8. 1824, *Annales des Sciences Naturelles (Paris)* I 5: 299. 1825, *Nomenclator*

Botanicus. Editio secunda 2: 256. 1841, *A Numerical List of Dried Specimens* no. 8734B. 1848 [1849], *Flora of the British West Indian Islands* 548. 1864 and *Darwiniana* 15: 102, f. 8. 1969.

in English: hairy panic grass, hairy panicum

in Spanish: cortadera

P. hirtellum L. (*Oplismenus hirtellus* (L.) P. Beauv.; *Oplismenus hirtellus* subsp. *hirtellus*; *Orthopogon hirtellum* (L.) Nutt.; *Orthopogon hirtellus* Nutt.; *Orthopogon hirtellus* (L.) R. Br.; *Panicum hirtellum* Bartram, nom. illeg., non *Panicum hirtellum* L.; *Panicum hirtellum* Burm., nom. illeg., non *Panicum hirtellum* L.; *Panicum hirtellum* Walter, nom. illeg., non *Panicum hirtellum* L.)

America. See *Systema Naturae, Editio Decima* 870. 1759, *Flora Indica ... nec non Prodromus Florae Capensis* 24, t. 12, f. 1. 1768, *Flora Caroliniana, secundum ...* 72. 1788, *Travels Through North and South Carolina* 430. 1791, *Prodromus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 168, 170. 1812, *The Genera of North American Plants* 1: 55. 1818 and *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Contr. U.S. Natl. Herb.* 22: 138. 1920, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Phanerogamarum Monographiae* 13: 1-213. 1981.

P. hirticaule J. Presl (*Panicum caatingense* Renvoize; *Panicum capillare* var. *glabrum* Vasey; *Panicum capillare* L. var. *hirticaule* (J. Presl) Gould; *Panicum capillare* var. *miliaceum* Vasey; *Panicum flabellatum* E. Fourn., nom. illeg., non *Panicum flabellatum* Steud.; *Panicum hirticaule* var. *glabrescens* Andersson; *Panicum hirticaule* var. *majus* Andersson; *Panicum hirticaule* var. *miliaceum* (Vasey) Beetle; *Panicum hirticaule* var. *minus* Andersson; *Panicum pampinosum* Hitchc. & Chase; *Panicum polygamum* var. *hirticaule* (J. Presl) E. Fourn.; *Panicum sonorum* Beal)

Mexico, U.S., Texas, California, New Mexico, Costa Rica, Guatemala, Peru, Venezuela. Annual, herbaceous, branched, loose panicles, useful desert grass for cereal and forage, grains cooked or ground into a powder and used as a flour for making cakes and bread, occasional weed along roadside, savannah, sandy roadsides, see *Species Plantarum* 1: 58. 1753, *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Reliquiae Haenkeanae* 1(4-5): 308. 1830, *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 135. 1855, *Bulletin de la Société Botanique de France* 27: 293. 1880, *Mexicanas Plantas* 2: 28. 1886, *Proceedings of the California Academy of Sciences, Series 2*, 2: 211. 1889, *Contributions from the United States National Herbarium* 1(1): 28. 1890, *Grasses of North America for Farmers and Students* 2: 130. 1896 and *Contributions from the United States National Herbarium* 15: 66, f. 48. 1910, *Madroño* 10(3): 94. 1949, *Phytologia* 47(5): 381-383. 1981, *Kew Bulletin* 37(2): 325, f. 5. 1982, *Annals of the Missouri*

Botanical Garden 83(2): 224-227, 253-254. 1996, *Sida* 20(1): 172. 2002.

in English: Mexican panic grass, roughstalk witchgrass, witchgrass

in Mexico: panizo cauchín, uk me cha

P. hirticaule J. Presl var. ***hirticaule*** (*Panicum capillare* L. var. *hirticaule* (J. Presl) Gould; *Panicum capillare* var. *miliaceum* Vasey; *Panicum capillare* var. *pampinosum* (A.S. Hitchc. & Chase) Gould; *Panicum hirticaule* subsp. *sonorum* (Beal) Freckmann & Lelong; *Panicum hirticaule* var. *glabrescens* Andersson; *Panicum hirticaule* var. *miliaceum* (Vasey) Beetle; *Panicum hirticaule* var. *pampinosum* (A.S. Hitchc. & Chase) Beetle; *Panicum hirticaulon* var. *glabrescens* Walp., nom. illeg., non *Panicum hirticaule* var. *glabrescens* Andersson; *Panicum pampinosum* A.S. Hitchc. & Chase; *Panicum polygamum* var. *hirticaule* (J. Presl) E. Fourn.; *Panicum sonorum* Beal)

Mexico, U.S., Arizona, Venezuela, Costa Rica, Guatemala, Nicaragua, Peru, Honduras, Ecuador. Annual, fast-growing, seeds borne in loose heads, useful grass, cereal for human consumption, domesticated, thought to be extinct, birds love the tiny millet-like seed, grains used like millet cooked or ground into a powder and used as a flour for making cakes, common on rocky slopes and along washes, grows on poor arid soils, dry or moist soils, see *Species Plantarum* 1: 58. 1753, *Nova Genera et Species Plantarum seu Prodrum* 24. 1788, *Reliquiae Haenkeanae* 1(4-5): 308. 1830, *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 135. 1855, *Mexicanas Plantas* 2: 28. 1886, *Contributions from the United States National Herbarium* 1(1): 28. 1890, *Grasses of North America for Farmers and Students* 2: 130. 1896 and *Madroño* 10(3): 94. 1949, *Annales Botanicae Systematicae* 6: 952. 1961, *Phytologia* 47(5): 381-383. 1981, *Sida* 20(1): 172. 2002.

in English: Sonora panic, Sonoran panic grass, Mexican panic grass, panic grass, sowi millet, witchgrass, sauwi

in Spanish: chiri chiri, sauhui, triguillo, zacate de año, zacate peludo perdis

P. hirticaule J. Presl var. ***stramineum*** (A.S. Hitchc. & Chase) Beetle (*Panicum capillare* var. *stramineum* (A.S. Hitchc. & Chase) Gould; *Panicum hirticaule* subsp. *stramineum* (Hitchc. & Chase) Freckmann & Lelong; *Panicum stramineum* A.S. Hitchc. & Chase)

Northern America. See *Reliquiae Haenkeanae* 1(4-5): 308. 1830 and *Contributions from the United States National Herbarium* 15: 67, f. 50. 1910, *Phytologia* 47(5): 383. 1981, *Sida* 20(1): 172. 2002.

P. hirticaule J. Presl var. ***verrucosum*** F. Zuloaga & O. Morrone

Mexico, U.S., Arizona. See *Reliquiae Haenkeanae* 1(4-5): 308. 1830 and *Annals of the Missouri Botanical Garden* 83(2): 253-254. 1996.

in Mexico: zacahuastle

P. hirtum Lam. (*Panicum axipilium* Steud.; *Panicum brevifolium* Jahn; *Panicum heterostachyum* Hack.; *Panicum hirsutum* Sw.; *Panicum hirtum* Roth, nom. illeg., non *Panicum hirtum* Lam.; *Panicum hirtum* Willd. ex Kunth; *Setaria hirta* Kunth)

French Guiana, Cayenne. Annual, shade or partial shade, edge of forest, riverine forest, riverbanks, disturbed areas, seasonally flooded gallery forest, see *Species Plantarum* 1: 55, 58. 1753, *Flora Indiae Occidentalis* 1: 173. 1797, *Encyclopédie Méthodique, Botanique* 4: 741. 1798, *Flora Graeca* 1(2): 44, t. 59. 1808, *Prodromus Florae Novae Hollandiae* 190. 1810, *Novae Plantarum Species* 46. 1821, *Sylloge Plantarum Novarum* 1: 193. 1824, *De Graminibus Paniceis* 51, 125, 266. 1826, *Révision des Graminées* 1: 47. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 112. 1833, *Synopsis Plantarum Glumacearum* 1: 79. 1855 [1853] and *Österreichische Botanische Zeitschrift* 51: 430. 1901, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Taxon* 45: 319-320. 1996, *Blumea* 41: 416. 1996, *Taxon* 47: 869. 1998, *Taxon* 48: 376. 1999.

P. hispidifolium Swallen (*Panicum campestre* Nees ex Trin.; *Panicum cayennense* Lam.; *Panicum flabellatum* E. Fourn., nom. illeg., non *Panicum flabellatum* Steud.; *Panicum hispidum* Swallen, nom. illeg., non *Panicum hispidum* G. Forst.; *Panicum mucronulatum* Mez)

South America, Venezuela. Erect, along roadsides, savannah, open areas, ditches, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *De Graminibus Paniceis* 197. 1826, *Bulletin de la Société Botanique de France* 27: 293. 1880 and *Contr. U.S. Natl. Herb.* 15: 70. 1910, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 2. 1921, *Contributions from the United States National Herbarium* 29(6): 269-270. 1948 [1949], *Contr. U.S. Natl. Herb.* 29(9): 424. 1950.

P. hochstetteri Steud. (*Panicum cooperi* C.E. Hubb.; *Panicum hochstetteri* var. *glaberrimum* Chiov.; *Panicum hochstetteri* var. *gracilis* Chiov.; *Panicum hochstetteri* var. *trichanthum* Chiov.; *Panicum hochstetterianum* A. Rich.; *Panicum mokaense* Mez; *Panicum trichanthum* A. Rich., nom. illeg., non *Panicum trichanthum* Nees)

Warm regions, Africa, Ethiopia. Perennial, creeping, thin, weak, diffuse, slender, loosely tufted, scandent, wiry, leaf blades lanceolate, open panicle ovate, oblong striate spikelets prominently nerved, lower floret male, good useful fodder, along rivers and streams, savannah, seasonally flooded area, montane forest shade, closely related to *Panicum chionachne*, see *Tentamen Florae Abyssinicae ...* 2: 369, 375. 1850, *Synopsis Plantarum Glumacearum* 1: 90. 1854 and *Annali di Botanica* 5: 61. 1906, *Annuario del Reale Istituto Botanico di Roma* 8(3): 308. 1908, *Flora of Tropical Africa* 9: 595. 1920, *Botanische Jahrbücher für*

Systematik, Pflanzengeschichte und Pflanzengeographie 57: 189. 1921, *Bulletin of Miscellaneous Information Kew* 1928(4): 147. 1928, *Flora Somala* 2: 444. 1932.

in Cameroon: nikih

P. humbertii A. Camus (*Panicum humbertii* Robyns, nom. illeg., non *Panicum humbertii* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 72: 620. 1925, *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 61. 1932, *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 5: 336. 1933.

P. humidicolum Rendle (*Brachiaria dictyoneura* subsp. *humidicola* (Rendle) Cat. Guerra; *Brachiaria humidicola* (Rendle) Schweick.; *Urochloa dictyoneura* (Fig. & De Not.) Veldkamp; *Urochloa humidicola* (Rendle) Morrone & Zuloaga)

Africa. Along rivers and streams, damp places, meadow, wooded meadow, see *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 329, t. 8. 1854, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 169. 1899 and *Flora of Tropical Africa* 9: 512. 1919, *Bulletin of Miscellaneous Information Kew* 1936(5): 297. 1936, *Darwiniana* 31(1-4): 80. 1992, *Blumea* 41(2): 418. 1996, *Fontqueria* 55(4): 16. 2001.

P. humidorum Hook.f. (*Panicum humidorum* Buch.-Ham. ex Hook.f.; *Panicum humidorum* Buch.-Ham. ex Wall.; *Panicum humidorum* var. *perakense* Hook.f.; *Panicum ohwii* Beetle; *Panicum parvispiculum* Ohwi, nom. illeg., non *Panicum parvispiculum* Nash; *Panicum perakense* (Hook.f.) Merr.)

India, Southeast Asia. Perennial, erect, found in old cultivated fields, abandoned rice paddies, see *A Numerical List of Dried Specimens* no. 8721. 1848, *The Flora of British India* 7: 53-54. 1896 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 146-147. 1904, *Philippine Journal of Science* 11: 52. 1916, *Bulletin of the Tokyo Science Museum* 18: 15. 1947, *Leaflets of Western Botany* 6(8): 162. 1951, *Blumea* 41: 193-194. 1996.

P. humile Nees ex Steud. (*Panicum austro-asiaticum* Ohwi; *Panicum austroasiaticum* Ohwi; *Panicum humile* Nees; *Panicum humile* Nees ex Aitch.; *Panicum humile* Thunb. ex Trin.; *Panicum humile* Trin.; *Panicum vescum* R.R. Stewart; *Panicum walense* Mez)

Tropical Africa, Sri Lanka. Annual, slender, leaves lanceolate acuminate, panicle spreading, glumes acuminate, dense ground cover, grazed by all stock, a good fodder for cattle, grain eaten by humans, weed of cultivated land and rice fields, disturbed sites, shallow soil, wet ground, moist places, see *De Graminibus Paniceis* 164, 167. 1826, *Synopsis Plantarum Glumacearum* 1: 84. 1854, *Catalogue of the Plants of the Punjab and Sindh* 159. 1869 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und*

Pflanzengeographie 34(1): 146-147. 1904, *Acta Phytotaxonomica et Geobotanica* 11: 45. 1942, *Brittonia* 5: 452. 1945, *Blumea* 41: 193-194. 1996.

in India: katki, urdiya

in Nigeria: gidan durwa

in Senegal: muya muy

in Sierra Leone: ndiwi

P. hydaspicum Edgew. (*Panicum atosanguineum* Hochst. ex A. Rich.)

Asia, Africa. See *Tentamen Florae Abyssinicae ...* 2: 375. 1850, *Journal of the Linnean Society, Botany* 6: 207. 1862.

P. hygrocharis Steud. (*Panicum aquaticum* Poir.; *Panicum aquaticum* Hochst. ex A. Rich., nom. illeg., non *Panicum aquaticum* Poir.; *Panicum repens* L.; *Panicum repentellum* Napper)

Ethiopia, Sudan. Perennial, aquatic, tufted, spongy, stoloniferous, rooting at the nodes, ligule ciliate, leaf blades linear and soft, papery leaf sheaths loose with glabrous margins, sometimes forming floating mats, shallow water, marshland, irrigation channels, lake margins, resembles *Panicum repens*, see *Species Plantarum, Editio Secunda* 1: 87. 1762, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 281. 1816, *Tentamen Florae Abyssinicae ...* 2: 373. 1850, *Synopsis Plantarum Glumacearum* 1: 72. 1854 and *Contr. U.S. Natl. Herb.* 15: 85. 1910, *Kirkia* 3: 127. 1963, *Blumea* 41: 202. 1996.

P. hylaicum Mez (*Panicum boliviense* Hack.; *Panicum doellii* Mez; *Panicum guianense* Hitchc.; *Panicum laxum* var. *amplissimum* Hack.; *Panicum laxum* var. *pubescens* Döll; *Panicum minutiflorum* Döll, nom. illeg., non *Panicum minutiflorum* (P. Beauv.) Raspail; *Panicum potanium* var. *pubescens* Döll; *Panicum schaffneri* Mez, nom. illeg., non *Panicum schaffneri* (E. Fourn.) Kuntze; *Panicum schiedeanum* Mez, nom. illeg., non *Panicum schiedeanum* Trin. ex Beal) (for the German botanist Christian Julius Wilhelm Schiede, 1798-1836, physician, traveler, gardener, 1828-1836 plant collector and botanical explorer in Mexico, with A. de Chamisso wrote "Plantarum mexicanarum a cl. viris Schiede et Deppe collectarum recensio brevis." *Linnaea*. 1830-1831; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 224. 1965; Ludolf Karl Adelbert von Chamisso and D.F.L. von Schlechtendal, "De plantis in expeditione speculatoria Romanzoffiana observatis." *Linnaea*. 1: 1-73. 1826; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 239. Oxford 1964; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 678. 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

Venezuela to Argentina, Colombia, Brazil. Perennial, creeping, robust, herbaceous, geniculate, scandent, branched, leaf blades lanceolate coriaceous acute or acuminate, panicle oblong or pyramidal, spikelets oblong puberulous or glabrous, lower glume ovate 3-nerved, upper glume 3- to 5-nerved, upper lemma smooth, forming dense and large colonies, secondary forest, open riverbank, damp ground, along streams and streamlet, in or near the water, along riverbanks, in shade, shallow water, ditch, marshy sites, grassy roadside, see *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788, *Flora Brasiliensis* 2(2): 213-214, 253. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 343. 1909, *Contr. U.S. Natl. Herb.* 15: 115. 1910, *Repertorium Specierum Novarum Regni Vegetabilis* 11: 19. 1912, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 75. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4, 6. 1921, *Contributions from the United States National Herbarium* 22(6): 487, f. 83. 1922, *Ann. Missouri Bot. Gard.* 79: 796, 798. 1992.

P. hymenachne Desv. (*Hymenachne amplexicaulis* (Rudge) Nees)

See *Plantarum Guianae Rariorum Icones et Descriptiones* ... 1: 21, t. 27. 1805, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 276. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 186. 1831.

P. hymeniocuilum Nees (*Panicum djalonense* A. Chev.; *Panicum filiculme* Hack. ex Schinz; *Panicum hymeniocuilum* var. *glandulosum* Nees; *Panicum hymeniocuilum* var. *hymeniocuilum*; *Panicum kisantuense* Vanderyst ex Robyns; *Panicum schlechteri* Hack.; *Panicum snowdenii* C.E. Hubb.; *Sacciolepis semienensis* Chiov.) (for J.D. Snowden) (Zaire, Kisantu)

East Africa, Ethiopia, South Africa, Uganda, Guinea. Annual or short-lived perennial, aquatic or semiaquatic, weak, scrambling, slender, often rooting at the lower nodes, leaf blades narrowly lanceolate, inflorescence sparsely branched, panicle oblong to pyramidal, short racemes, spikelets purplish and oblong to narrowly elliptic-oblong, upper glume lanceolate-oblong, lower glume 0-1-nerved ovate to narrowly ovate, lower floret sterile or male, palea usually present, grows in or near water, in disturbed wet ground, in shade or not, under shade of trees and shrubs, perennial swamps, river margins, moist rich soils, seasonally inundated areas, see *Florae Africae Australioris Illustrationes Monographicae* 46-47. 1841, *Bulletin de l'Herbier Boissier* 3(8): 377. 1895, *Bulletin de l'Herbier Boissier* 7(1): 24. 1899 and *Bulletin of Miscellaneous Information Kew* 1928(4): 132-133. 1928, *Plantae Novae vel Minus Notae e regione Aethiopica* 25. 1928 [1911-1951, also *Plantae Novae vel Minus Notae ex Aethiopia*, series published in different journals], *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 1(6): 25, t. 1G-M. 1932, *Revue internationale de*

botanique appliquée et d'agriculture tropicale 14: 27. 1934, *Kew Bulletin* 22: 488. 1968.

P. ianthum Stapf (*Panicum brazzavillense* Franch.)

Tropical Africa. Perennial, tufted, cattle fodder, in damp places, seasonally wet soil, pastures, near water, swampy areas, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 341. 1895 [1893] and *Flora of Tropical Africa* 9: 663. 1920.

in Nigeria: ramafada, ramapada, ramaphada

P. ichunense Swallen

Venezuela, Bolívar, Salto Maria Espuma, Río Ichun, Sierra Ichun. See *Phytologia* 14(2): 77. 1966.

P. imbecille (R. Br.) Trin. (*Oplismenus hirtellus* f. *imbecillis* (R. Br.) Scholz; *Orthopogon imbecillis* R. Br.)

Australia. See *Prodrumus Florae Novae Hollandiae* 194. 1810, *Essai d'une Nouvelle Agrostographie* 54, 168, 170. 1812, *Species Graminum* 2: t. 191. 1829 and *Phanerogamarum Monographiae* 13: 1-213. 1981.

P. impeditum Launert

Namibia, South Africa. Annual, aquatic, tufted, erect to prostrate to geniculate, leaves densely papillate, spikelets appressed and crowded, lower floret sterile, palea absent or reduced, grows in or near water, around vleis, river margins, moist sandy soils, see *Mitteilungen der Botanischen Staatssammlung München* 8: 147-163. 1970.

P. inaequale F. Muell. (*Holcolemma dispar* Clayton; *Panicum inaequale* E. Fourn. ex Hemsl.; *Panicum inaequale* Pilg., nom. illeg., non *Panicum inaequale* F. Muell.; *Panicum inaequale* (Link) E. Fourn., nom. illeg., non *Panicum inaequale* F. Muell.; *Paspalidium inaequale* (F. Muell.) Hughes; *Setaria inaequalis* (F. Muell.) R.D. Webster)

Australia. See *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 103. 1821, *Fragmenta Phytographiae Australiae* 8: 189. 1874, *Biologia Centrali-Americana; ... Botany* ... 3: 490. 1885, *Mexicanas Plantas* 2: 17. 1886 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 133. 1901, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Kew Bulletin* 42(2): 401-403. 1987, *Sida* 16: 443. 1995.

P. inaequilatum Stapf & C.E. Hubb. (*Acroceras attenuatum* Renvoize)

Tropical Africa, Mozambique, Zimbabwe. A 3-nerved lower glume, found in grassland, on hillsides, in shade of bush and undergrowth, wet soil, see *Bulletin of Miscellaneous Information Kew* 1927: 267. 1927, *Kew Bulletin* 34(3): 556. 1979 [1980].

P. incanum Schumach. (*Oplismenus hirtellus* (L.) P. Beauv.)

Guinea, Ghana. See *Systema Naturae, Editio Decima* 870. 1759, *Essai d'une Nouvelle Agrostographie* 54, 168, 170. 1812, *Beskrivelse af Guineiske planter* 60. 1827, *Kongel.*

Danske Vidensk. Selsk. Naturvidensk. Math. Afh. 3: 80. 1828.

P. incomptum Fig. & De Not. (*Panicum incomptum* Trin.)

Southeast Asia, Brunei Darussalam. Perennial, much-branched, straggling, leaves linear-lanceolate, open globular panicle, spikelets ovoid, common in old clearings and wasteland, coffee and tea plantations, see *De Graminibus Paniceis* 200. 1826, *Memorie della Reale Accademia delle Scienze di Torino* II 14: 344. 1854, *Plantae Junghuhnianae* 3: 375. 1854.

in English: scandent panic

P. incomtum Trin.

The Philippines, Indonesia. Good fodder grass, roots chewed with betel nuts, see *De Graminibus Paniceis* 200. 1826, *Plantae Junghuhnianae* 3: 375. 1854.

in Thailand: yaa khai hao, ya khai hao

P. incumbens Swallen

Guatemala. Erect, sprawling, creeping, forest, shade to partial shade, cloud forest, see *Species Plantarum* 1: 55, 58. 1753 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Contr. U.S. Natl. Herb.* 29(9): 417. 1950.

P. infestum Andersson (*Panicum infestum* Andersson ex Peters; *Panicum infestum* Peters; *Panicum lasiocoleum* Schum. ex Engl.; *Panicum lasiocoleum* var. *calvescens* Peter; *Panicum pseudoinfestum* Chiov.; *Panicum sennii* Chiov.; *Urochloa maxima* subsp. *infesta* (Peters) H. Scholz) (after the Italian botanist Lorenzo Senni, 1879-1954, botanical explorer, traveler, forester, Console della milizia forestale; see A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937)

Tropical Africa, South Africa, Tanzania, Somalia. Perennial, hairy, densely tufted, erect, sometimes branched, shortly rhizomatous, tussock-forming, woody rootstock, leaf blades and leaf sheaths usually hirsute, leaves linear acuminate, panicle oblong, inflorescence secondary branches usually absent or very short, primary branches ascending, spikelets acute with a groove on the back, lower floret male, lower glume ovate, lower lemma with a longitudinal median groove, upper floret rugose, palea present, heavy seeder, forage grass, palatable and drought resistant, grains edible, grains eaten by baboons, often found on the edges of swamps, open bushland, grassland, rocky hillsides, clay or sandy soils, reddish brown soil site, seasonally damp areas, disturbed places, cultivated areas, see *Naturwissenschaftliche Reise nach Mossambique ...* 2: 546. 1865 [or 1864], *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 1894: 14, 35. 1894 and *Repertorium Specierum Novarum Regni Vegetabilis* 40: 192 & Anhang, 42. 1930, *Flora Somalia* 2: 446-447, f. 244. 1932, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 11(4): 443. 1989[1990], S.A. Andanje and W.K. Ottichilo, "Population

status and feeding habits of the translocated sub-population of Hunter's antelope or hirola (*Beatragus hunteri*), in Tsavo East National Park, Kenya." *African Journal of Ecology* 37(1): 38-48. Mar 1999, M.W. Tobler, R. Cochard and P.J. Edwards, "The impact of cattle ranching on large-scale vegetation patterns in a coastal savannah in Tanzania." *Journal of Applied Ecology* vol. 40, issue 3: 430-444. June 2003.

P. irregulare Swallen

Costa Rica. Riverbanks, stony places, see *J. Wash. Acad. Sci.* 30(5): 216. 1940.

P. jauanum Davidse

Venezuela, Bolívar, Meseta de Jaua, Cerro Jaua. Erect, see *Boletín de la Sociedad Venezolana de Ciencias Naturales* 32(132-133): 272. 1976.

P. kaalaense Hitchc.

Hawaii. See *Memoirs of the Bernice Pauahi Bishop Museum...* 8(3): 191, f. 80. 1922.

P. kalahareense Mez

Kalahari, Namibia, Zimbabwe, South Africa, Mozambique. Perennial, dense, hard, unbranched, stout, erect, robust, tufted to densely tufted, leaves mostly basal, shortly rhizomatous, ligule a ring of long hairs, leaf blades usually rolled or folded, leaf sheaths rounded and glabrous, basal sheaths hairy to villous, leaves hairy and stiff, inflorescence an open and interrupted panicle, lower glume ovate, lower floret male, palea present, seeds eaten, pasture, reasonably palatable when young, drought-resistant, growing in disturbed places, along roadsides, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 187. 1921, National Research Council, Board on Science and Technology for International Development, *Lost Crops of Africa, Vol I: Grains*. National Academy Press, Washington, D.C. 1996.

in English: Kalahari buffal grass

in South Africa: Kalaharibuffelsgras, sandveld hirsegas

P. kegelii Steud. (*Panicum frondescens* G. Mey.; *Panicum stoloniferum* Poir.; *Panicum stoloniferum* var. *major* (Trin.) Kunth) (dedicated to the German gardener Hermann Aribert Heinrich Kegel, 1819-1856, from 1844 to 1846 plant collector in Suriname. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 277. 1965; August Adriaan Pulle (1878-1955), *An Enumeration of the Vascular Plants Known from Surinam*. Leiden 1906)

Guatemala. See *Encyclopédie Méthodique. Botanique ... Supplément 4*: 274. 1816, *Primitiae Florae Essequiboensis ...* 56. 1818, *Species Graminum* 2: t. 171, f. A. 1829, *Révision des Graminées* 2: 389, t. 108. 1831, *Synopsis Plantarum Glumacearum* 1: 65. 1853 [or 1854] and *Fieldiana, Botany* 24(2): 38-331. 1955, *Phytologia* 37(4): 317-407. 1977, *Darwiniana* 23(1): 233-256. 1981, *Annals of the Missouri Botanical Garden* 75(2): 420-455. 1988.

P. kerrii C.E. Hubb.

Thailand. Tufted, open areas, marshy places, see *Bulletin of Miscellaneous Information Kew* 1927: 78. 1927.

in Thailand: thao ta wat, thao tawat

P. kiensieleense Vanderyst

Africa. See *Bulletin agricole du Congo Belge* 10: 246. 1919.

P. kochii Mez (*Panicum praetervisum* Domin; *Urochloa praetervisum* (Domin) Hughes)

Australia. See *Bibliotheca Botanica* 85: 309. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 60. 1917, *Bulletin of Miscellaneous Information Kew* 1923(9) 319. 1923.

P. konaense Whitney & Hosaka (*Panicum kokeense* H. St. John)

U.S., Hawaii. Lava flow, see *Occasional Papers of the Bernice Pauahi Bishop Museum* 12(5): 3, f. 1. 1938, *Phytologia* 67: 370. 1987.

in English: Kona panic grass

P. kuhlmannii Swallen (*Panicum micranthum* Kunth) (for the Brazilian botanist João Geraldo Kuhlmann, 1882-1958, plant collector; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 325. 1965)

Brazil. See *Nova Genera et Species Plantarum* 1: 105. 1815 [1816] and João Geraldo Kuhlmann, "As mais úteis plantas da rica flora brasileira - a ucuhuba e a andiroba." *Chacaras e Quintaes*. 33(5): 406-408. São Paulo 1926, *Phytologia* 14(2): 74. 1966.

P. l'herminieri Mez (*Ichnanthus pallens* var. *pallens*) (for Ferdinand L'Herminier, 1802-1866, botanist and physician (in Guadeloupe), son of the French plant collector Félix Louis L'Herminier (1779-1833); see Stafleu and Cowan, *Taxonomic literature*. 3: 4-5. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 2: 378. Boston 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

West Indies. See *Flora Hongkongensis* 414. 1861 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 6. 1921.

P. lachnanthum Hochst. (*Brachiaria lachnantha* (Hochst.) Stapf; *Panicum insulare* var. *lachnanthum* (Torr.) Kuntze; *Panicum lachnanthum* Torr., nom. illeg., non *Panicum lachnanthum* Hochst.)

Africa, Ethiopia. See *Flora* 38: 195. 1855, *Pacif. Railr. Rep.* 7(3): 21. 1855, *Revisio Generum Plantarum* 3(3): 361-362. 1898 and *Flora of Tropical Africa* 9: 536. 1919.

P. lachnophyllum Benth. (with woolly leaves, from the Greek *lachne* "wool, down" and *phyllon* "a leaf")

Queensland, New South Wales. Perennial, stoloniferous, almost wiry, slender and branched, forming spreading patches, decumbent and rooting at the nodes, dark green leaves, panicles narrow and contracted, green and shortly pedicellate spikelets, lower glume acute to obtuse, lower lemma sterile and epaleate, upper lemma smooth and slightly constricted at the base, rainforest, moist conditions, foliage browsed by marsupials, see *Flora Australiensis: A Description ...* 7: 486. 1878.

in Australia: woolly-leaved panic, don't panic

P. lachnophyllum Benth. var. ***tropicum*** Domin

Queensland. See *Bibliotheca Botanica* 85: 314, f. 71. 1915.

P. lacunarium F. Muell. (*Echinochloa crusgalli* var. *lacunaria* (F. Muell.) Hughes; *Echinochloa lacunaria* (F. Muell.) P.W. Michael & Vickery; *Panicum crusgalli* var. *lacunaria* (F. Muell.) F. Muell.)

Australia. See *Transactions and Proceedings of the Philosophical Institute of Victoria* 1854-1855: 47. 1855, *Fragmenta Phytographiae Australiae* 8: 198. 1874 and *Bulletin of Miscellaneous Information Kew* 1923(9): 320. 1923, *Telopea* 1(1): 44. 1975.

P. lacustre A.S. Hitchc. & Ekman

Cuba, U.S. Endangered species, found in freshwater marshes, in low areas, in wetlands, in water, see *Manual of the Grasses of the West Indies* 253, f. 205. 1936.

in English: panic grass

P. laetum Kunth (*Brachiaria laeta* (Mez ex A. Camus) A. Camus; *Panicum albidulum* Steud.; *Panicum laetum* Mez ex A. Camus, nom. illeg., non *Panicum laetum* Kunth; *Panicum sociale* Stapf)

West Africa. Annual, tufted, ascending or erect, fertile floret pale, lower palea subequalling lower lemma, grazed by stock, grain eaten in time of scarcity, seeds shattering, in wet places, damp soil, overgrazed pastures, see *Révision des Graminées* 2: 399, f. 113. 1831, *Synopsis Plantarum Glumacearum* 1: 69. 1853 and *Flora of Tropical Africa* 9: 701. 1920, *Bulletin de la Société Botanique de France* 82: 22. 1935.

in English: wild fonio, wild hungry rice, fonio of the birds

in French: fonio sauvage

in Mali: balbaldi, diadé, diadié, fardulo debbo, ichiban, jajié, paguiri, paguiri lendia, yague missi

in Niger: asghâl, askale, fonio (the seeds), ganki, gansi, gensi, gérgji, kbênô, nganchiri, sabeeri, tigshibêr

in Nigeria: bachakura, baina, bayaa sare, bayaa surèè, bundigi, bundiji, cun nnon, fuliyaho, garaji, jaatau, sa beri, sabe

in Senegal: diadié

in Upper Volta: pagguri, tinga ponoga

in West Africa: haze

P. laeve Lam. (*Panicum maximum* Jacq.; *Panicum maximum* var. *maximum*; *Urochloa maxima* (Jacq.) R.D. Webster)

West Indies, the Caribbean. See *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Collectanea* 1: 76. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791 and *The Australian Paniceae (Poaceae)* 241. 1987.

P. laevifolium Hack.

South Africa. Excellent hay, see *Bulletin de l'Herbier Boissier* 3(8): 378. 1895 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 448. 1940.

P. laevifolium Hack. var. ***amboense*** Hack.

South Africa, Namibia. See *Bulletin de l'Herbier Boissier* 3(8): 378. 1895 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 71. 1911.

P. laevinode Lindley (*Panicum whitei* J. Black)

Australia, South Australia, Western Australia, Queensland, New South Wales, Victoria, Northern Territory. Annual, erect, yellowish green, tufted, sheaths usually glabrous, ligule membranous and ciliate, panicle branches spreading at maturity, spikelets acuminate and glabrous, more or less nerveless lower glume truncate or pointed, upper glume nerved, lower lemma sterile, upper lemma broad-elliptic and smooth, on good soils, inland floodplains, may cause photosensitization in sheep, see *Three Expeditions into the Interior of Eastern Australia* 1: 325. 1938.

in English: pepper grass, pigeon grass

P. lagascae (Roem. & Schult.) Kuntze (*Paspalum lagascae* Roem. & Schult.; *Paspalum tenellum* Willd.) (named after the Spanish botanist Mariano Lagasca (La Gasca) y Segura, 1776-1839 (d. Barcelona), botanical collector, professor of botany, 1822 to England, 1831-1834 Jersey, 1834-1839 Spain, Director Madrid Botanical Garden, 1831 Fellow of the Linnean Society, among his writings are *Elenchus plantarum*, quae in horto regio botanico matritensi colebantur anno mdcccxv. Matriti [Madrid] 1816 and *Genera et species plantarum*, quae aut novae sunt aut nondum recte cognoscuntur. Madrid 1816, with J. Rodriguez wrote "Descripción de algunas plantas del Real Jardín Botánico de Madrid." *Anales Ci. Nat.* 4: 256-263. 1801. See Eduardo Reyes Prosper, *Dos noticias historicas del ... d. Antonio José Cavanilles y d. Mariano La Gasca y Segura*. Madrid 1912; J.H. Barnhart, *Biographical notes upon botanists*. 2: 334. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 196. Oxford 1964; Miguel Colmeiro, *La Botánica y los Botánicos de la Peninsula Hispano-Lusitana*. Madrid 1858; A. Lasègue, *Musée botanique de Benjamin Delessert*. 348. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the*

Arnold Arboretum of Harvard University. Cambridge, Mass. 1917-1933; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 143. Regione Siciliana, Palermo 1988)

South America. See *Systema Naturae, Editio Decima* 2: 855. 1759, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 89. 1809, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 190. 1810, *Systema Vegetabilium, editio decima sexta* 2: 317. 1817, *Revisio Generum Plantarum* 3(3): 362. 1898.

P. lagostachyum Renvoize & Zuloaga

Brazil. Perennial, caespitose, base pubescent, ligule ciliate, linear leaf blades pungent, panicle spike-like narrowly oblong or cylindrical, spikelets elliptic-oblong and pilose, awnless, lower glume 3-nerved, upper glume 5-nerved, lower lemma 5-nerved, upper lemma and palea stipitate, see *Kew Bulletin* 39(1): 191, f. 2C-D, t. A. 1984.

P. lanaiense Hitchc.

Hawaii. See *Memoirs of the Bernice Pauahi Bishop Museum...* 8(3): 189, f. 86. 1922.

P. laniflorum Nees (*Digitaria brownii* (Roem. & Schult.) Hughes)

Australia. See *Systema Vegetabilium* 2: 462. 1817, *London Journal of Botany* 2: 410. 1843 and *Bulletin of Miscellaneous Information Kew* 1923(9): 313. 1923, *Brunonia* 6(2): 131-216. 1983[1984].

P. lanipes Mez

Botswana, South Africa, Namibia. Perennial, glaucous, robust, erect to geniculate, densely tufted, unbranched or branched, short ligule membranous, leaf sheaths rounded and glabrous, basal leaf sheaths densely woolly, leaf blades linear with stiff hairs, inflorescence an open and interrupted panicle, lower floret male, palea present, useful grass, forage, pasture, valuable fodder, found in ephemeral wetlands and seasonally flooded grasslands, damp saline soils, sandy soils, dry river beds, vleis, mountain slopes, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 187. 1921.

in South Africa: wolvoet panicum, wollfuß hirsegas

P. larcomanum Hughes (Mt. Larcom)

Australia, Queensland. See *Bulletin of Miscellaneous Information Kew* 1923(9): 326. 1923.

P. lasianthum Trin. (*Panicum millegrana* Poir.; *Panicum rugulosum* var. *lasianthum* (Trin.) Hack.; *Panicum sellowii* Nees)

Brazil. See *Encyclopédie Méthodique. Botanique ... Supplément* 4: 278. 1816, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 153. 1829, *Species Graminum* 3: t. 245. 1829-1830 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 11. 1906.

P. laterale J. Presl ex Nees (*Olyra lateralis* (J. Presl ex Nees) Chase; *Panicum laterale* J. Presl, nom. illeg., non *Panicum laterale* J. Presl ex Nees; *Panicum laterale* Nees ex Döll, nom. illeg., non *Panicum laterale* J. Presl ex Nees; *Parodiolyra lateralis* (J. Presl ex Nees) Soderstr. & Zuloaga; *Raddiella esenbeckii* (Steud.) C.E. Calderón & Soderstr.)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 213. 1829, *Reliquiae Haenkeanae* 1(4-5): 305. 1830, *Synopsis Plantarum Glumacearum* 1: 90. 1854, *Flora Brasiliensis* 2(2): 329. 1877 and *Proceedings of the Biological Society of Washington* 21: 179. 1908, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Smithsonian Contributions to Botany* 44: 21. 1980, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Smithsonian Contributions to Botany* 69: 66. 1989.

P. laticomum Nees

Tropical East Africa, South Africa, Natal. Annual or perennial, slender, scrambling, trailing, straggling, decumbent to erect, decumbent or geniculately ascending, rooting at the nodes, leaves lanceolate and narrowed at the base, open inflorescence, panicle ovate finely branched, spikelet asymmetric narrowly ovate, lower floret sterile, glumes separated by a short internode, lower glume ovate, upper lemma granulose, palea reduced, found in sandy soils, forest and riverine forests, shady places, in forest patches, deep shade, wet areas, see *Florae Africae Australioris Illustrationes Monographicae* 43. 1841.

P. latifolium L. (*Dichantheium latifolium* (L.) Gould & C.A. Clark; *Dichantheium latifolium* (L.) Harvill; *Milium latifolium* (L.) Moench; *Panicum latifolium* Ham., nom. illeg., non *Panicum latifolium* L.; *Panicum latifolium* L.f., nom. illeg., non *Panicum latifolium* L.; *Panicum macrocarpon* J. Le Conte ex Torr.; *Panicum schenckii* Ashe, named for the German dendrologist Carl Alwin Schenck (1868-1955, d. Lindenfels, Germany), between 1895 and 1909 was Forester of George W. Vanderbilt's Biltmore Estate, between 1898 and 1913 founded Biltmore Forest School, the first forestry school in the U.S. (1913 Biltmore Forest School closed after graduating 400 students); botanists of the Biltmore Herbarium were the first to collect *Sagittaria secundifolia* Kral, Kral waterplantain, in 1899, from the Little River, DeKalb County, Alabama; see Conrad V. Morton and William L. Stern, "The United States National Herbarium." *Plant Science Bulletin*. vol. 12, no. 2. June 1966; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 679. Stuttgart 1993; C. Norquist, "Recovery plan for Mohr's Barbara's buttons, *Marshallia mohrii* Beadle & F.E. Boynton." United States Fish and Wildlife Service. Jackson, Mississippi 1991; R.D. Whetstone, C.L. Lawler, L.H. Hopkins, A.L. Martin and C.C. Dickson, "Kral's waterplantain, *Sagittaria secundifolia* Kral (Alismataceae), new to Georgia." *Castanea*. 52: 313-314. 1987; Chauncey Delos Beadle, 1866-1950, *Biltmore Herbarium*. Biltmore 1896; E.M.

Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 5: 130. 1985)

U.S. Perennial bunchgrass with distinct vernal and autumnal phases, erect, more or less glabrous, green fine leaves, green flowers, yellow grain, grass with distinct vernal and autumnal phases, medium drought tolerance, open habitats, thickets, often rocky woods, dry woods and dry sandy oak woods, oak savannahs and oak woodlands, old pasture along stream, wetlands and grassy woods, see *Species Plantarum* 1: 58-59. 1753, *Methodus Plantas Horti Botanici ...* 204. 1794, *Flora Americae Septentrionalis; or, ...* 1: 68. 1814, *Manual of Botany of the Northern States. Second Edition*. 341. 1818, *Prodromus Plantarum Indiae Occidentalis* 10. 1825, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 240. 1842, *Flora Brasiliensis* 2(2): 207. 1877, *Bulletin of the United States National Museum* 22: 135. 1881, *Mexicanas Plantas* 2: 32. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 34. 1889, *The Flora of British India* 7: 39. 1896 and *North Carolina Agricultural Experiment Station Bulletin* 175: 116. 1900, *Contr. U.S. Natl. Herb.* 12: 118. 1908, *Castanea* 42(2): 177. 1977, *Annals of the Missouri Botanical Garden* 65(4): 1101, 1162. 1978 [1979].

in English: broad-leaved panic grass, broad leaved panic, broad-leaf witchgrass, broadleaved panicum, panic grass, broadleaf rosette grass

in French: panic à feuilles larges

P. latissimum Mikan ex Trin. (*Panicum macrophyllum* Raddi)

Brazil. See *Neue Entdeck. Pflanzenk.* 2: 87. 1821, *Agrostografia Brasiliensis* 46. 1823 and *Annals of the Missouri Botanical Garden* 75(2): 420-455. 1988.

P. latzii R.D. Webster

Australia. See *The Australian Paniceae (Poaceae)* 132. 1987, *Flora of Australia* 43: 115. 2002.

P. laxiflorum Lam. (*Dichantheium laxiflorum* (Lam.) Gould; *Panicum aureum* Muhl. ex Scribn. & Merr., nom. illeg., non *Panicum aureum* (P. Beauv.) Trin.; *Panicum caricifolium* Scribn. ex Ashe; *Panicum dichotomum* var. *laxiflorum* (Lam.) Beal; *Panicum laxiflorum* var. *strictirameum* (Hitc. & Chase) Fernald; *Panicum laxiflorum* var. *strictirameum* (Hitc. & Chase) Beetle, nom. illeg., non *Panicum laxiflorum* var. *strictirameum* (Hitc. & Chase) Fernald; *Panicum pyriforme* Nash; *Panicum rariflorum* Rupr., nom. illeg., non *Panicum rariflorum* Lam.; *Panicum ruprechtii* E. Fourn., nom. illeg., non *Panicum ruprechtii* Fenzl; *Panicum xalapense* Kunth; *Panicum xalapense* subsp. *strictirameum* Hitc. & Chase;)

South America. Open places, damp sites, fodder, see *Species Plantarum* 1: 58. 1753, *Encyclopédie Méthodique, Botanique* 4: 748. 1798, *Nova Genera et Species Plantarum* 1:

103. 1815 [1816], *Bulletins de l'Académie Royale des Sciences, des Lettres et des Beaux Arts de Belgique, Classe des Sciences* 9(2): 240. 1842, *Mexicanas Plantas* 2: 21. 1886, *Contributions from the United States National Herbarium* 3(1): 30. 1892, *Bulletin of the Torrey Botanical Club* 20: 479. 1893, *Grasses of North America for Farmers and Students* 2: 139. 1896, *Flora of the Southern United States* 586. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 57. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 579. 1899 and U.S. Department of Agriculture: *Circular* 27: 4. 1900, *Contributions from the United States National Herbarium* 15: 161, 164, f. 148. 1910, *Rhodora* 36(423): 75. 1934, *Brittonia* 26(1): 60. 1974, *Phytologia* 48(2): 191. 1981.

in Mexico: pasto

P. laxum Sw. (*Agrostis nigrescens* Salzm. ex Steud.; *Panicum agrostidiforme* Lam.; *Panicum agrostis* Nees ex Döll; *Panicum boliviense* Hack.; *Panicum caroniense* Lucas; *Panicum diandrum* Kunth; *Panicum hondurensis* Swallen; *Panicum laxum* var. *pubescens* Döll; *Panicum laxum* var. *vestitum* L.B. Sm. & Wassh.; *Panicum leptomerum* J. Presl; *Panicum luticola* Hitchc.; *Panicum nigrescens* Salzm. ex Steud.; *Panicum pilosum* var. *epilosum* E. Fourn.; *Panicum polygonatum* Schrad.; *Panicum psilanthum* Steud.; *Panicum ramuliflorum* Hochst. ex Steud.; *Panicum tenuiculmum* G. Mey.; *Steinchisma laxa* (Sw.) Zuloaga; *Vilfa gavana* Steud. ex Lechler)

Central America to Argentina, Uruguay, Brazil, West Indies. Annual or short-lived perennial, tufted, geniculately ascending and often rooting at the lower nodes, no rhizomes, culms diverging from a common point, leaf blades linear to narrowly lanceolate and tapering at the base, inflorescence pyramidal, oblong panicles large and many to sparsely branched, ovate to oblong spikelets short and congested, awnless, lower glume broadly ovate 3-nerved, upper glume ovate 3-nerved, lower lemma ovate 3-nerved, upper lemma smooth, cattle fodder, weed to troublesome weed in rice fields, a good lawn grass, stand in small patches, open spaces, clumps on stream banks, gardens, in seasonal creeks, seasonally flooded land, on tidal flats, in low wet banks and wet roadside ditches, lake margins, grassland, swampy places, damp sandy soil, banks near water and shallow ditches, roadside next to spring seepage, may be confused with *Panicum polygonatum*, *Panicum decipiens* or *Panicum hians*, see *Nova Genera et Species Plantarum seu Prodrumus* 23. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Primitiae Florae Essequeboensis ...* 58. 1818, *Mantissa* 2: 256. 1824, *Reliquiae Haenkeanae* 1(4-5): 311. 1830, *Nomenclator Botanicus. Editio secunda* 1: 41. 1840, *Synopsis Plantarum Glumacearum* 1: 65-66. 1854 [or 1853], *Berberides Americae Australis* 56. Stuttgartiae 1857, *Catalogus plantarum cubensium ...* 233. 1866, *Flora Brasiliensis* 2(2): 213. 1877, *Mexicanas Plantas* 2: 24. 1886 and *Contr. U.S. Natl. Herb.*

12: 139. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 343. 1909, *Contr. U.S. Natl. Herb.* 15: 115. 1910, *Anales del Museo Nacional de Buenos Aires* 21: 39. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 11: 19. 1912, *Contributions from the United States National Herbarium* 22(6): 485, f. 82. 1922, *Fl. Surinam.* 1(1): 377. 1943, *Contributions from the United States National Herbarium* 29(6): 270. 1948 [1949], *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 26-27, f. 18. 1953, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 245. 1978, *Fl. Guianas Series A: Phanerogams* 397-398. 1990, *American Journal of Botany* 90: 817. 2003.

in English: lax panic grass

in Spanish: zacate amargo

in Argentina: pasto mijillo

in Ecuador: mijillo

in Mexico: zacate arroz

in Guinea: kenké sama

P. leandri Trin. (*Brachiaria plantaginea* (Link) Hitchc.; *Urochloa plantaginea* (Link) R.D. Webster)

Brazil. See *Hortus Regius Botanicus Berolinensis* 1: 206. 1827, *Species Graminum* 3: t. 335. 1835 [or 1836] and *Contributions from the United States National Herbarium* 12(6): 212. 1909, *Systematic Botany* 13(4): 607. 1988.

P. lepidotum Steud. (*Isachne lepidota* (Steud.) Walp.)

Asia, Japan. See *Flora* 29: 19. 1846, *Annales Botanicae Systematicae* 1: 924. 1848-49.

P. lepidulum Hitchc. & Chase (*Panicum hallii* Vasey)

Mexico. Along rivers and streams, see *Bulletin of the Torrey Botanical Club* 11(6): 61. 1884 and *Contr. U.S. Natl. Herb.* 15: 75, f. 64. 1910.

P. leptachne Döll (*Panicum pilosum* var. *angustiflorum* Döll; *Panicum pilosum* var. *polychaetum* Hack.)

Mexico to Brazil. Leaf blades lanceolate to narrowly lanceolate, inflorescence pilose, spikelets 1-sided, upper palea completely enclosed by the upper lemma, common in swampy places, resembles *Hymenachne donacifolia*, see *Nova Genera et Species Plantarum seu Prodrumus* 22. 1788, *Agrostografia Brasiliensis* 44. 1823, *Flora Brasiliensis* 2(2): 195, 211. 1877 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 9. 1906, *Journal of the Washington Academy of Sciences* 13(9): 177. 1923.

P. liebmannianum E. Fourn. (*Lasiacis ruscifolia* (Kunth) Hitchc.; *Panicum liebmannianum* E. Fourn.)

Mexico. See *Nova Genera et Species Plantarum* 1: 101-102. 1815 [1816], *Biologia Centrali-Americana; ... Botany ...* 3: 491. 1885, *Mexicanas Plantas* 2: 33. 1886 and *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Annals of the Missouri Botanical Garden* 65(4): 1133-1254. 1978[1979].

P. ligulare Nees ex Trin. (*Panicum ligulare* Nees, nom. illeg., non *Panicum ligulare* Nees ex Trin.)

Brazil. Perennial bunchgrass, robust, loose, erect, densely pilose or hispid, clumped, spreading, leaning, decumbent, caespitose, tough leaf blades linear acuminate, panicle obovate or oblong much branched with tough branches ascending, spikelets ovate-elliptic glabrous, lower glume ovate acuminate 7-nerved, upper glume ovate 7-nerved acuminate, upper lemma and palea with 2 flaplike basal appendage, on sandy soil, cerrado, very similar to *Panicum olyroides* Kunth, see *De Graminibus Paniceis* 206. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 196. 1829 and *Ann. Missouri Bot. Gard.* 74(3): 475. 1987.

P. lindenbergianum Nees (*Chaetochloa lindenbergiana* (Nees) Hitchc.; *Setaria lindenbergiana* (Nees) Stapf) (for the German botanist Johann Bernhard Wilhelm Lindenberg, 1781-1851, bryologist, author of *Monographie der Riccien*. [Bonn 1837] and *Synopsis hepaticarum europaeorum*. Bonnae 1829. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 385. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913)*. Dresden 1916; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 157. Regione Siciliana, Palermo 1988; G.C. Wittstein, *Etymologisch-botanisches Handwörterbuch*. 527. 1852)

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 47. 1841, *Flora Capensis* 7: 422. 1899 and U.S. Department of Agriculture. Bureau of Plant Industry. *Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction* 34: 16. 1915.

P. lindenbergianum Nees var. ***pallidum*** Nees

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 47. 1841.

P. lindheimeri Nash (*Dichantherium acuminatum* subsp. *lindheimeri* (Nash) Freckmann & Lelong; *Dichantherium acuminatum* var. *lindheimeri* (Nash) Gould & C.A. Clark; *Dichantherium lanuginosum* var. *lindheimeri* (Nash) Harvill; *Dichantherium lanuginosum* var. *lindheimeri* (Nash) Freckmann, nom. illeg., non *Dichantherium lanuginosum* var. *lindheimeri* (Nash) Harvill; *Dichantherium lindheimeri* (Nash) Gould; *Panicum acuminatum* var. *lindheimeri* (Nash) Beetle; *Panicum acuminatum* var. *lindheimeri* (Nash) C.F. Reed, nom. illeg., non *Panicum acuminatum* var. *lindheimeri* (Nash) Beetle; *Panicum acuminatum* var. *lindheimeri* (Nash) Lelong, nom. illeg., non *Panicum acuminatum* var. *lindheimeri* (Nash) Beetle; *Panicum funstonii* Scribn. & Merr.; *Panicum lanuginosum* var. *lindheimeri* (Nash) Fernald; *Panicum lindheimeri* var. *typicum* Fernald) (after Ferdinand Jacob Lindheimer, 1801-1879

(Texas, U.S.), German botanist, in 1834 United States, plant collector, he sent plants to A. Gray. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 386. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 239. 1972; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 219. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, California 1997; George Engelmann (1809-1884), Asa Gray and Joseph William Blankinship (1862-1938), *Plantae lindheimerianae*. Boston 1845-1850)

Northern America, U.S. Perennial, basal leaves different from culm leaves, dense panicle, riverbanks, see *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *A Flora of the Northern and Middle Sections of the United States* 145-146. 1824, *Bulletin of the Torrey Botanical Club* 24(4): 196-197. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 52, 59. 1898, *An Illustrated Flora of the Northern United States* 3: 498, f. 267a. 1898 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 4. 1901, *Rhodora* 23(274): 227-228. 1921 [1922], *American Midland Naturalist* 11(2): 45. 1928, *Rhodora* 36(423): 77. 1934, *Brittonia* 26(1): 60. 1974, *Castanea* 42(2): 177. 1977, *Phytologia* 39(4): 270. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1127. 1978 [1979], *Phytologia* 48(2): 193. 1981, *Brittonia* 36(3): 270. 1984, *Phytologia* 67(6): 452. 1989, *Sida* 20(1): 168. 2002.

P. lineale St. John

Hawaii. Endangered species, see *Phytologia* 63(5): 370. 1987.

in English: Kauai panic grass

P. lineare L. (*Digitaria linearis* (L.) Pers.; *Digitaria linearis* (Krock.) Waga ex Rostaf., nom. illeg., non *Digitaria linearis* (L.) Pers.; *Panicum lineare* Krock., nom. illeg., non *Panicum lineare* L.; *Syntherisma linearis* Nash)

India. See *Species Plantarum, Editio Secunda* 1: 85. 1762, *Flora Silesiaca* 1: 95. 1787, *Syn. Pl.* 1: 85. 1805, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 22: 99. 1872, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 39. 1894, *Bulletin of the Torrey Botanical Club* 22(10): 420. 1895, *Grasses of North America for Farmers and Students* 2: 111. 1896, *Synopsis der mitteleuropäischen Flora* 2: 67. 1899 and *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten. Beihefte* 30(1912): 136. 1913.

P. linearifolium Scribner (*Dichantherium linearifolium* (Scribn.) Gould; *Dichantherium linearifolium* (Scribn.) Gould var. *wernerii* (Scribn.) Mohlenbr.; *Panicum linearifolium* var. *linearifolium*; *Panicum linearifolium* var. *wernerii* (Scribner) Fernald; *Panicum strictum* Pursh var. *linearifolium* (Scribn.) Farw.; *Panicum wernerii* Scribner)

U.S. Perennial, tufted, densely pilose sheaths, ligule a ring of hairs, leaves along the stems, inflorescence a slender panicle, spikelets glabrous and strongly flattened, upper glume beakless, second lemma shiny and hardened, occurs in grasslands and open woods, among shrubs, hillsides, dry low forest, open habitats, oak savannahs and oak woodlands, dry soils and dry stony or sandy areas, light soils, slopes and rock crevice habitat, see *An Illustrated Flora of the Northern United States* 3: 500-501, f. 268A. 1898, U.S. Department of Agriculture. Division of Botany. Bulletin 11: 42, t. 1. 1898 and *Rhodora* 23(272): 194. 1921, *American Midland Naturalist* 11(2): 44. 1928, *Brittonia* 26(1): 60. 1974.

in English: slender-leaved panic grass, narrow-leaved panic grass, linear-leaved panic grass, linear-leaf panic grass, low white-haired panic grass, white-haired panic grass, panic grass, spring panic, slim-leaf witchgrass

P. lithophilum Swallen (*Panicum philadelphicum* Bernh. ex Trin.; *Panicum philadelphicum* subsp. *lithophilum* (Swallen) Freckmann & Lelong)

U.S., Alabama, Georgia, South Carolina, North Carolina. Vulnerable species, rocky places, slopes, see *De Graminibus Paniceis* 216. 1826 and *Proceedings of the Biological Society of Washington* 54: 43. 1941, *Annals of the Missouri Botanical Garden* 83(2): 200-280. 1996.

in English: Swallen's panic grass, flatrock panic grass

P. longipedicellatum Swallen

Brazil. See *Phytologia* 14(2): 79. 1966.

P. longissimum (Mez) Henrard (*Sacciolepis longissima* Mez)

Paraguay. Savannah, see *Repertorium Specierum Novarum Regni Vegetabilis* 15: 122. 1918, *Mededeelingen van's Rijks-Herbarium* 54: 380. 1927.

P. longum Hitchc. & Chase (*Panicum macranthum* Trin.; *Panicum munitum* Trin. ex Steud.; *Panicum pilosum* var. *macranthum* Scribn.; *Streptostachys macrantha* (Trin.) Zuloaga & Soderstr.)

Mexico. See *Nova Genera et Species Plantarum seu Prodrum* 22. 1788, *De Graminibus Paniceis* 209. 1826, *Nomenclator Botanicus. Editio secunda* 2: 260. 1841 and *Circular, Division of Agrostology, United States Department of Agriculture* 19: 1. 1900, *Contr. U.S. Natl. Herb.* 15: 111, f. 106. 1910, *Smithsonian Contributions to Botany* 59: 50. 1985.

P. loreum Trin. (*Panicum loreum* var. *angustifolium* Döll; *Panicum loreum* var. *latifolium* Döll; *Panicum sparsiflorum*

Döll; *Panicum sparsiflorum* Vasey, nom. illeg., non *Panicum sparsiflorum* Döll) (Latin *loreus, a, um* "of thongs, made of thongs," ... *ego vostra faciam latera lorea* ... "I will cut your hide into strips")

Brazil. See *De Graminibus Paniceis* 211. 1826, *Species Graminum* 3: t. 247. 1829-1830, *Flora Brasiliensis* 2(2): 243, 267. 1877, *Department of Agriculture. Botanical Division. Bulletin* 8: 36. 1889 and *Contr. U.S. Natl. Herb.* 15: 128. 1910.

P. lucidum Ashe (*Dichantherium dichotomum* (L.) Gould; *Dichantherium dichotomum* subsp. *lucidum* (Ashe) Freckmann & Lelong; *Dichantherium dichotomum* var. *dichotomum*; *Dichantherium lucidum* (Ashe) LeBlond; *Panicum dichotomum* var. *lucidum* (Ashe) Lelong; *Panicum taxodiorum* Ashe)

U.S. Shady places, swamps, see *Species Plantarum* 1: 58. 1753, *Journal of the Elisha Mitchell Scientific Society* 15: 47. 1898 and *Journal of the Elisha Mitchell Scientific Society* 16: 91. 1900, *Contr. U.S. Natl. Herb.* 15: 198. 1910, *Rhodora* 39(466): 386-387. 1937, *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978, *Brittonia* 36(3): 262-273. 1984, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988, *Sida* 19(4): 831-832. 2001, *Sida* 20(1): 169. 2002.

P. lutzii Swallen (*Panicum carautae* Renvoize) (for Adolpho Lutz, plant collector in Brazil)

Brazil. See *Memórias do Instituto Oswaldo Cruz* 63: 301. 1965, *Phytologia* 14: 80, 161. 1966, *Kew Bulletin* 32(2): 422. 1978.

P. luzonense Presl

Southeast Asia. Annual, weed, prickly hairy, hairs an irritant to humans, low forage value, tropical ricefields, see *Reliquiae Haenkeanae* 1(4-5): 208. 1830.

in Cambodia: smao ker bolok

in the Philippines: nikhnikan

in Thailand: yaa kaak oi, ya kak oi, yaa kusalaa, ya kutsala, ya plong khon, yaa plong khon

in Vietnam: co long

P. lycopodioides Bory ex Nees

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 236. 1829.

P. machrisiana Swallen

Brazil. See *Los Angeles County Museum Contributions in Science* 22: 10, f. 5. 1958.

P. macractinium Benth. (*Digitaria divaricatissima* (R. Br.) Hughes; *Digitaria macractinia* (Benth.) Hughes; *Leptoloma macractinia* (Benth.) Chase; *Panicum divaricatissimum* var. *macractinia* (Benth.) Domin)

Australia. See *Prodrum Florae Novae Hollandiae* 192. 1810, *Flora Australiensis: A Description* ... 7: 468. 1878

and *Proceedings of the Biological Society of Washington* 19(34): 192. 1906, *Bibliotheca Botanica* 85: 293. 1915, *Bulletin of Miscellaneous Information Kew* 1923(9): 314. 1923.

P. magnispicula Zuloaga, Morrone & Valls

Brazil. See *Iheringia, Série Botânica* 42: 5, f. 9-17, 21-23, 26-27. 1992.

P. marauense Renvoize & Zuloaga

Brazil, Bahia, Município de Maraú. See *Kew Bulletin* 39(1): 193, f. 3A-B. 1984.

P. massaiense Mez (*Panicum manicatum* Stapf)

Mozambique, Tanzania, Uganda, Malawi. Annual, flood-plains, flooded land, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 144. 1904, *Flora of Tropical Africa* 9: 693. 1920.

P. maximilianii Schrad. ex Schult. (*Ichnanthus leiocarpus* (Spreng.) Kunth)

Brazil. See *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 1: 243. 1820, *Mantissa* 2: 255. 1824, *Révision des Graminées* 2: 507. 1831, *Flora Brasiliensis* 2(2): 222. 1877 and *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 23-24. 1997.

P. maximum Jacq. (*Anthaenantia gigantea* (Kuntze) K. Schum.; *Hylebates chlorochloe* (K. Schum.) Napper; *Panicum chlorochloe* K. Schum.; *Panicum confine* Hochst. ex A. Rich.; *Panicum giganteum* Kuntze, nom. illeg., non *Panicum giganteum* Scheele; *Panicum giganteum* Mez, nom. illeg., non *Panicum giganteum* Scheele; *Panicum heynii* Roth ex Roem. & Schult.; *Panicum hirsutissimum* Steud.; *Panicum jumentorum* Pers.; *Panicum laeve* Lam.; *Panicum maximum* var. *altissimum* Kuntze; *Panicum maximum* var. *coloratum* C.T. White; *Panicum maximum* var. *commune* Nees; *Panicum maximum* var. *confine* Chiov.; *Panicum maximum* var. *congoensis* Vanderyst; *Panicum maximum* var. *glaucum* Nees; *Panicum maximum* var. *heterotrichum* Peter; *Panicum maximum* var. *hirsutissimum* (Steud.) Oliv.; *Panicum maximum* var. *hirsutum* Peter; *Panicum maximum* var. *laevis* Nees; *Panicum maximum* var. *pubiglume* K. Schum.; *Panicum maximum* var. *pubiglume* K. Schum. ex Peter; *Panicum maximum* var. *trichoglume* Robyns; *Panicum pamplemoussense* Steud.; *Panicum polygamum* Sw., nom. illeg., non *Panicum polygamum* Forssk.; *Panicum praelongum* Steud.; *Panicum praticola* Salzm. ex Döll; *Panicum scaberrimum* Lag.; *Panicum sparsum* Schumach.; *Panicum teff* Desv.; *Panicum tephrosanthum* Hack.; *Panicum trichocondylum* Steud.; *Panicum trichoglume* Engl.; *Urochloa maxima* (Jacq.) R.D. Webster) (*Panicum heynii* Roth ex Roem. & Schult. named after the German (Moravian) missionary Benjamin Heyne, 1770-1819 (Madras, India), physician, botanist, plant collector, from 1802 to 1808 Superintendent of the Bangalore Gardens, 1813 Fellow of the Linnean Society, wrote *Tracts, Historical and Statistical,*

on India, with journals of several tours through various parts of the Peninsula; also an account of Sumatra, in a series of letters. London 1814. See [Benjamin Heyne], *An Examination of So Much of the Tracts, Historical and Statistical, on India*, etc. by B.H. ... as relates to the accounts of Sumatra, with various notices on the subjects of *Cannibalism, Slavery*, etc. By an inhabitant of Fort Marlborough. London 1818; Albrecht Wilhelm Roth (1757-1834), *Novae plantarum species praesertim Indiae orientalis*. Ex collectione doct. Benj. Heynii. 292. Halberstadii 1821; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; M. Archer, *Natural History Drawings in the India Office Library*. 27-28, 79-80. London 1962; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. London 1994; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; Stafleu and Cowan, *Taxonomic literature*. 2: 188. 1979)

Tropical and southern Africa, Madagascar, Arabia. Perennial bunchgrass or annual, densely to loosely tufted, variable to extremely variable, vigorous, bearded at the nodes, erect and geniculate or geniculately ascending, stout, robust, culms rather coarse and somewhat glaucous, rooting at the nodes, deep and fibrous root system, rhizomatous with short stout rhizome, stems with urticating bristles, leaf sheaths hairy to glabrous, lower leaf sheaths bristly pubescent to long pilose, ligule membranous and sometimes with a fringe of hairs, leaves very acute and linear-lanceolate, open panicle inflorescence usually much branched with ascending to spreading branches, panicles erect or nodding, lower panicle branches whorled, pale green or tinged purple spikelets oblong to acute, lower floret staminate, glumes very dissimilar and hyaline, lower glume obtuse, lower lemma not grooved, upper lemma oblong to elliptic and rugulose or transversely wrinkled, palea present, 2 lodicules, 3 stamens, stigmas purplish, white-greenish grains dispersed by the wind, facultative apomict, introduced and widely naturalized in many tropical and subtropical areas of the world, stands up well under heavy grazing, agriculturally important species used primarily for pasture, especially palatable in the younger stages, nutritive value high when leafy and green, cultivated fodder, native pasture grass, horse fodder, seeds eaten by local people in time of scarcity, grains eaten by chimpanzees and baboons, medicinal, used for sweeping outside the houses and thatching, some drought-tolerant, it does not tolerate waterlogging, weed species forming dense monotypic stands, found along roadsides and disturbed areas, in coarse black volcanic soil, lawn in coarse sand, damp places, waste places near water tap, swampy ground, bushland, damp sand, under trees, in forest understory, open forests, in dry woodland forest, along rivers and riverbanks, in seasonally flooded meadows, rocky slopes, eroded slopes, grassland and open woodland and shady places,

- cultivated areas and margins of, in or near pastures, abandoned agricultural land, clearings, clearings in forest, see *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Collectanea* 1: 76. 1786, *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Syn. Pl.* 1: 83. 1805, *Eclogae Graminum Rariorum* 30, t. 21. 1814-1820, *Nova Genera et Species Plantarum (quarto edition)* 1: 99. 1815 [1816], *Elenchus Plantarum* 2. 1816, *Systema Vegetabilium* 2: 458. 1817, *Nov. Pl. Sp. Ind. Orient.* 49. 1821, *Beskrivelse af Guineiske planter* 64. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 84. 1828, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 201. 1831, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 36. 1841, *Tentamen Florae Abyssinicae ...* 2: 373. 1850, *Synopsis Plantarum Glumacearum* 1: 71-74. 1853 [or 1854], *Enum. Pl. Zeyl.* 361. 1864, *Transactions of the Linnean Society of London* 29: 171. 1875, *Flora Brasiliensis* 2(2): 203. 1877, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 295. 1878, *Die Pflanzenwelt Ost-Afrikas* B(2/3): 85. 1895, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 333. 1897, *Revisio Generum Plantarum* 3(3): 360, 362. 1898 and *Just's botanischer Jahresbericht*. 261: 329. 1900, *Handb. Fl. Ceylon* 5: 153. 1900, *Bulletin de l'Herbier Boissier, sér. 2*, 1: 766. 1901, *Annuario del Reale Istituto Botanico di Roma* 8(1): 33-34. 1903 [*Flora della Colonia Eritrea* 33. 1903], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 143. 1904, *Transactions of the Royal Society of South Africa* 5: 300. 1916, *Bulletin agricole du Congo Belge* 13: 335. 1922, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 185, 195 & Anhang, 42. 1930, *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 1(6): 31. 1932, *Queensland Agricultural Journal* 49: 112, t. 41, f. D1, 2. 1938, *Cytologia* 19: 97-103. 1954, *Grasses of Ceylon* 113. 1956, *Notulae Systematicae. Herbier du Museum de Paris* 15: 413. 1959, *Grasses of Burma ...* 327. 1960, *Kirkia* 3: 130. 1963, *Bull. Bot. Surv. India* 8: 287-295. 1966, *Brittonia* 23(3): 293-324. 1971, *Boletín de la Sociedad Argentina de Botánica* 16(4): 420-425. 1975, *Mém. ORSTOM* 75: 1-106. 1975, *Mém. ORSTOM* 77: 1-99. 1977, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979, *Flora of Tropical East Africa. Gramineae* 3: 472. 1982, *Journal of Cytology and Genetics* 18: 58-61. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Economic and Taxonomic Botany* 7(1): 106. 1985, *Journal of Cytology and Genetics* 21: 152-154. 1986, *The Australian Paniceae (Poaceae)* 241-242. 1987, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Cytologia* 55: 471-474. 1990, *Bothalia* 21(2): 163-170. 1991, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Biologia Plantarum* 36: 37-45. 1994, *Blumea* 41: 197. 1996, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 59: 1-156. 2000, *Flora Fanerogamica do Estado de São Paulo* 1: 1-292. 2001, Renata Reinheimer, Raúl Pozner and Abelardo C. Vegetti, "Inflorescence, spikelet, and floral development in *Panicum maximum* and *Urochloa plantaginea* (Poaceae)." *Am. J. Bot.* 92: 565-575. 2005.
- in English: barbe grass, colonial grass, rainbow grass, ubabe grass, bush buffalo grass, common buffalo grass, Guinea grass, purple top buffalo grass, Tanganyka grass, green panic grass
- in French: herbe de Guinée
- in Spanish: mijo de Guinea, pasto Guinea, pasto Guinea común, hierba Guinea común
- in Brazil: capim-colonião, coloniã, morubú
- in the Caribbean: zèb giné, zèb ginen, herbe de Guinée
- in Colombia: guinea, guinea pajarito, hierba india, india, pajarito, saboya
- in Cuba: matalote, melusa
- in Ecuador: zabolla, zacate de Guinea, pasto guinea
- in El Salvador: zacate barqueño, zacate de barco
- in Mexico: camalote, coloniao, guineo, hoja fina, panizo de guinea, pasto guineo, privilegio, rabo de mula, zacate guinea, zacate privilegio, zacatón
- in Nicaragua: sagádi Guinea, walang sikka
- in Peru: pasto de Guinea, pasto Guinea, yerba Abadía, zaina
- in Puerto Rico: gramalote, matalote, melusa
- in West Indies: guinea grass, z'herbe guinee
- in Angola: capim de guinémbulu ia-toto, oceka, ohota-hota
- in Cameroon: ekoro a bolo, makok, makoko
- in East Africa: achuku, odunyo
- in Ghana: go, kogbe, nkye kyer, nkyekyer, nto
- in Guinea: mengui serhé
- in Guinea-Bissau: siluntentamo
- in Madagascar: ahibe
- in Nigeria: agarama, ikin, ikpo mili, iran akun, nnyanyangà enang, oke achalà, oke acharà, pere osi, pere usi
- in Senegal: bu silita, busilitaa
- in Sierra Leone: ngalei hei
- in Somalia: baldoli, weineh, arabsa
- in southern Africa: blousaad, blousaadsoetgras, buffelsgras, gewone buffelsgras, bush buffel grass, brown top buffelgrass, purple top buffelgrass, soetgras, groot panicum, großes hirseggras; lehola, mofantsoe (Sotho); mphaga (Tswana); ubabe (Zulu); umhatji (Ndebele)
- in Yoruba: ikin, ikin iruke, iran akun, kooko, eru oparun

in India: gini ghaus, gini hullu, gini pullu, ginigawat, ginighas, ginio pullu, giniopillu, gudgi, guinea hullu, guinit

in Indonesia: rebha luh-buluhan, rumput banggala, suket londo

in Malaysia: rumput benggala, rumput kuda

in Thailand: suea klaek, ya kinni

in Vietnam: co'kê to

P. maximum Jacq. var. **coloratum** C.T. White (*Megathyrsus maximus* var. *coloratus* (C.T. White) B.K. Simon & S.W.L. Jacobs; *Urochloa maxima* (Jacq.) R.D. Webster)

Australia, Queensland. See *Queensland Agricultural Journal* 49: 112, t. 41. 1938, *The Australian Paniceae (Poaceae)* 241. 1987, *Austrobaileya* 6(3): 572-573. 2003.

P. maximum Jacq. var. **maximum** (*Panicum jumentorum* Pers.; *Panicum laeve* Lam.; *Panicum polygamum* Sw., nom. illeg., non *Panicum polygamum* Forssk.)

Africa. Glumes and sterile lemma glabrous, planted, cultivated as a pasture species, also on roadsides and disturbed areas, see *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Syn. Pl.* 1: 83. 1805, *Synopsis Plantarum Glumacearum* 1: 74. 1853 and *Darwiniana* 22(1-3): 3-44. 1979.

in English: Guinea grass

P. maximum Jacq. var. **trichoglume** A. Robyns (*Panicum maximum* Jacq.; *Panicum maximum* var. *pubiglume* K. Schum. ex Peter; *Panicum maximum* var. *pubiglume* K. Schum.; *Panicum maximum* var. *trichoglume* Eyles; *Urochloa maxima* (Jacq.) R.D. Webster; *Urochloa maxima* var. *trichoglumis* (Robyns) R.D. Webster)

Africa. Perennial bunchgrass, tufted, tussocky, strong, slender, ascending to erect, much-branched root system, very short rhizomes, ligule a ring of downy hairs, villous leaf sheaths chartaceous and ribbed, soft leaves, inflorescence a loose panicle very open and more or less erect, spikelets solitary or paired, lower floret male, upper floret bisexual, glumes finely hairy, upper glume and sterile lemma pubescent, cultivated and planted, fast growing, useful pasture grass, very palatable, high nutritive value even when mature, good to moderate drought resistance, ability to grow in shade, heavy-grazing tolerant, grows in disturbed ground, humid to subhumid subtropical climates, forest fringes, in wet coastal or tableland areas, on roadsides, often found under trees or shrubs, see *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Collectanea* 1: 76. 1786, *Die Pflanzenwelt Ost-Afrikas* B(2/3): 85. 1895 and *Transactions of the Royal Society of South Africa* 5: 300. 1916, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 185, 195. 1930, *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 1(6): 31. 1932,

The Australian Paniceae (Poaceae) 241-242. 1987, *Flora Mesoamericana* 6: 302-318. 1994, *Blumea* 41: 197. 1996.

in English: green panic, slender Guinea grass, fine-leaves guinea grass

P. megalanthum Steud. (*Melinis repens* subsp. *grandiflora* (Hochst.) Zizka; *Monachyron villosum* Parl.; *Rhynchelytrum villosum* (Parl.) Chiov.)

India. See *Flora* 27: 249. 1844, *Niger Flora* 191. 1849, *Synopsis Plantarum Glumacearum* 1: 93. 1854 and *Annuario del Reale Istituto Botanico di Roma* 8: 310. 1907, *Bibliotheca Botanica* 138: 60. 1988.

P. megiston Schult. (*Panicum altissimum* G. Mey., nom. illeg., non *Panicum altissimum* DC. ex Hornem.; *Panicum mertensii* Roth) (Greek *megistos* "very big, very large")

Brazil. Swampy places, in standing water, the roots are diuretic, see *Systema Vegetabilium* 2: 458. 1817, *Primitiae Florae Essequeboensis ...* 63. 1818, *Plant. Sp. Ind. Orient.* 48. 1821, *Mantissa* 2: 248. 1824 and *Plantae pilcomayenses a ... Theodore Rojas lectae*. 1: 30. 1909, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969.

in Brazil: capim gigante, capim açu, capim da praia açu, capim lixa, capim taboquinha

P. meridionale Ashe (*Dichantherium acuminatum* var. *acuminatum*; *Dichantherium acuminatum* var. *implicatum* (Scribn.) Gould & C.A. Clark; *Dichantherium meridionale* (Ashe) Freckmann; *Panicum acuminatum* var. *implicatum* (Scribn.) C.F. Reed, nom. illeg., non *Panicum acuminatum* var. *implicatum* (Scribn.) Beetle; *Panicum acuminatum* Sw. var. *unciphyllum* (Trin.) Lelong; *Panicum albemarlense* Ashe; *Panicum filiculme* Ashe, nom. illeg., non *Panicum filiculme* Hack. ex Schinz; *Panicum lanuginosum* subvar. *meridionale* (Ashe) Farw.; *Panicum leucothrix* Nash, sensu Gleason & Cronquist; *Panicum lindheimeri* subvar. *meridionale* (Ashe) Farw.; *Panicum meridionale* var. *albemarlense* (Ashe) Fernald; *Panicum microphyllum* Ashe; *Panicum unciphyllum* var. *meridionale* (Ashe) Scribn. & Merr.)

U.S. Perennial, open habitats, dry, open sandy woods, dry rocky woods, see *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *De Graminibus Paniceis* 242. 1826, *Bulletin of the Torrey Botanical Club* 24(4): 196-197. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 59, 61. 1898, *An Illustrated Flora of the Northern United States* 3: 498, f. 267a. 1898 and *Journal of the Elisha Mitchell Scientific Society* 16: 84. 1900, *Rhodora* 3(29): 123. 1901, *Contr. U.S. Natl. Herb.* 15: 210. 1910, *American Midland Naturalist* 11(2): 45. 1928, *Rhodora* 36(423): 76. 1934, *Papers of the Michigan Academy of Science, Arts and Letters* 26: 5. 1941, *Phytologia* 39(4): 270-271. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1126. 1978 [1979], *Brittonia* 32(3): 353-364. 1980, *Brittonia* 36(3): 262-273. 1984, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988, *Phytologia* 67(6): 452. 1989.

in English: mat panic grass, Southern hairy panic grass, matting rosette grass

P. merkeri Mez (*Panicum coloratum* var. *cuanzense* Rendle; *Panicum hispidissimum* Peter; *Panicum hispidissimum* var. *gracilius* Peter; *Panicum radula* Mez) (the specific name after the German plant collector Moritz Merker, d. 1908; see I.H. Vegter, *Index Herbariorum*. Part II (4), *Collectors M*. Regnum Vegetabile vol. 93. 1976)

Namibia, Angola, Tanzania. Perennial, hispid, robust, erect, stout, tufted, shortly rhizomatous, lower floret male, palea present, in damp sandy places, riverbanks, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 178. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 144. 1904, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 189. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 192 & Anhang, 39, t. 12, f. 1. 1930.

P. mertensii Roth (*Digitaria elatior* (L.f.) Willd.; *Panicum altissimum* G. Mey., nom. illeg., non *Panicum altissimum* DC. ex Hornem.; *Panicum elatius* Kunth, nom. illeg., non *Panicum elatius* L.f.; *Panicum equisetum* Nees ex Döll; *Panicum latifolium* var. *altissimum* Rupr.; *Panicum maximum* Jacq.; *Panicum megiston* f. *pauciflora* Hack.; *Panicum megiston* Schult.; *Panicum proximum* Steud.) (named for the German botanist Franz Karl (Carl) Mertens, 1764-1831, professor of botany at Bremen, with W.D.J. Koch (1771-1849) published edition 3 of Johann Christoph Röhlings (1757-1813), *Deutschlands Flora*. 1823, etc. See Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist: Explorations in America, 1808 - 1841*. Harvard University Press 1967; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 464. 1973; J.H. Barnhart, *Biographical notes upon botanists*. 2: 478. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 265. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 210. Oxford 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 750. Stuttgart 1993; Stafleu and Cowan, *Taxonomic literature*. 3: 430-431. 1981; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942)

Mexico to Paraguay. Perennial, aquatic, emergent, herbaceous, erect, robust, leaf blades linear lanceolate acuminate, large inflorescence openly paniculate, lax panicle oblong with branches whorled, spikelets elliptic to ellipsoid, awnless, lower glume ovate 3-nerved obtuse or acute, upper glume 7- to 9-nerved, upper lemma smooth shining, medicinal value, abortifacient, forage, found in swampy places,

inundated areas, in standing water, along flooded riverbank, may be confused with *Lasiacis procerrima* (Hack.) Hitchc., see *Supplementum Plantarum* 107. 1781, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 91. 1809, *Systema Vegetabilium* 2: 458. 1817, *Primitiae Florae Essequeboensis ...* 63. 1818, *Mantissa* 2: 248. 1824, *Révision des Graminées* 1: 38. 1829, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 240. 1842, *Synopsis Plantarum Glumacearum* 1: 64. 1853, *Flora Brasiliensis* 2(2): 206. 1877 and *Plantae pilcomayenses a ... Theodore Rojas lectae*. 1: 30. 1909, *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969.

in Nicaragua: walang

P. michauxii Poir. (*Eriochloa michauxii* (Poir.) Hitchc.; *Eriochloa michauxii* var. *michauxii*)

America. See *Encyclopédie Méthodique, Botanique Suppl.* 4: 278. 1816 and *Contributions from the United States National Herbarium* 12(3): 147. 1908, *Sida* 12(1): 165-207. 1987.

P. micranthum Kunth (*Panicum blackii* Swallen; *Panicum densifolium* Swallen; *Panicum kappleri* Steud.; *Panicum kuhlmannii* Swallen; *Panicum mauryi* Swallen; *Panicum micranthum* Salzm. ex Döll, nom. illeg., non *Panicum micranthum* Kunth; *Panicum micranthum* var. *hirtum* Maury; *Panicum supernum* Swallen; *Panicum trichoides* Sw.)

South America, Amazonas, Venezuela. Caespitose, growing in small or large bunches, in dry rocky open places, edge of river, sandy areas, river bed, inundated sites, gravel bar, dry savannah, see *Nova Genera et Species Plantarum seu Prodromus* 24. 1788, *Nova Genera et Species Plantarum* 1: 105. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 90. 1854, *Flora Brasiliensis* 2(2): 249. 1877, *Journal de Botanique (Morot)* 3: 162. 1889 and *Contr. U.S. Natl. Herb.* 12: 140. 1908, *Fieldiana, Botany* 28(1): 25-26. 1951, *Memoirs of the New York Botanical Garden* 9(3): 256. 1957, *Phytologia* 14(2): 74. 1966, *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 17(2): 297-314. 2001.

P. microbachne J. Presl (*Digitaria microbachne* (J. Presl) Henrard; *Digitaria pruriens* var. *microbachne* (J. Presl) Fosberg; *Digitaria setigera* Roth; *Panicum sanguinale* var. *microbachne* (J. Presl) Hack.; *Syntherisma microbachne* (J. Presl) Hitchc.)

The Philippines. See *Species Plantarum* 1: 57. 1753, *Systema Vegetabilium* 2: 474. 1817, *Reliquiae Haenkeanae* 1(4-5): 298. 1830, *Plantae Junghuhnianae* 3: 379. 1854, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 13(2): 259. 1890 and *Memoirs of the Bernice Pauahi Bishop Museum...* 8(3): 177. 1922, *Mededeelingen van's Rijks-Herbarium* 61: 13. 1930, *J. Arnold Arbor.* 29: 292. 1948, *Monogr. Digitaria* 450. 1950, *Phytologia* 5(7): 289. 1955, *Blumea* 21(1): 1-80. 1973,

Brunonia 6(2): 131-216. 1983 [1984], *Sida* 12(1): 209-222. 1987.

P. microcarpon Muhlenberg ex Elliott (*Dichantheium dichotomum* (L.) Gould; *Dichantheium dichotomum* subsp. *microcarpon* (Muhl. ex Elliott) Freckmann & Lelong; *Dichantheium dichotomum* var. *dichotomum*; *Dichantheium dichotomum* var. *ramulosum* (Torr.) LeBlond; *Dichantheium microcarpon* (Muhl. ex Elliott) Mohlenbr.; *Panicum dichotomum* L.; *Panicum dichotomum* var. *ramulosum* (Torr.) Lelong; *Panicum heterophyllum* Muhl.; *Panicum microcarpon* Muhl., nom. illeg., non *Panicum microcarpon* Muhl. ex Elliott; *Panicum nitidum* Lamarck var. *ramulosum* Torrey

U.S. Groundcover, riparian vegetation, woodlands, openings, ditches, open areas, shady places, see *Species Plantarum* 1: 58. 1753, *Transactions of the American Philosophical Society* 3: 160. 1793, *A Sketch of the Botany of South-Carolina and Georgia* 1: 125, 127. 1816, *Descriptio uberior Graminum* 111. 1817, *A Flora of the Northern and Middle Sections of the United States* 146. 1824, *The Grasses of the United States* 12. 1883, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 51, f. 54. 1894 and *Contr. U.S. Natl. Herb.* 12: 117. 1908, *Contr. U.S. Natl. Herb.* 15: 181, 255. 1910, *Manual of the Grasses of the United States (edition 2, revised by A. Chase)* 1951, *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978, *Brittonia* 32(3): 353-364. 1980, *Brittonia* 36(3): 262-273. 1984, *Erigenia* 6: 26. 1985, *Sida* 19(4): 830-831. 2001, *Sida* 20(1): 169. 2002.

in English: panic grass

P. milanjanum Rendle (*Digitaria milanjana* (Rendle) Stapf)

Africa, Malawi. See *Transactions of the Linnean Society of London, Botany* 4: 56. 1894 and *Flora of Tropical Africa* 9: 430. 1919.

P. miliaceum L. (*Leptoloma miliacea* (L.) Smyth; *Milium esculentum* Moench; *Milium paniceum* Mill.; *Panicum asperillum* Fischer ex Jacq.; *Panicum densepilosum* Steud.; *Panicum miliaceum* Blanco, nom. illeg., non *Panicum miliaceum* L.; *Panicum miliaceum* Walter, nom. illeg., non *Panicum miliaceum* L.; *Panicum miliaceum* var. *miliaceum*; *Panicum milium* Pers.)

China, Asia, Eurasia. Annual, grown as grain crop since prehistoric times, hairy, stout and robust, erect or decumbent at the base, tufted, caespitose, branching from the base, leaf sheaths open and densely covered with stiff hairs, collar lacks auricles, leaves very acute and linear to linear-lanceolate, ligule a fringe of dense hairs, leaf blades more or less pilose or densely hairy on both surfaces, internodes hollow and cylindrical, nodes hispid or puberulent, panicles open to contracted usually nodding or drooping, white or yellow to dark brown spikelets stipitate and ovate, upper floret bisexual, lower glume acuminate to acute and often

inflated, upper glume and lower lemma long-acute, lower floret sterile, reddish fertile lemma smooth and shining, smooth shiny oval seeds pointed at each end, noxious weed species, wild and cultivated, used as a demulcent in diarrhea, leaves might cause photosensitization in sheep, hay is coarse, a vigorous competitor with many row crops, commonly and widely cultivated fodder for cattle and horses, used for brewing, as feed grain in birdseed mixtures, food source for stock and aviary birds, used as food crop for game birds, pig food, in China and India used as a grain, husked grain boiled and cooked like rice, in China also used in pulp stock for papermaking, occasionally or usually escaped from cultivation, recorded instance of broom corn millet poisoning in New Zealand, found on disturbed sites and road verges, roadsides and waste places, gardens and railroads, see *Species Plantarum* 1: 58. 1753, *Flora Caroliniana, secundum ...* 72. 1788, *Methodus Plantas Horti Botanici ...* 203. 1794, *Syn. Pl.* 1: 83. 1805, *Cat. Hort. Gorenk.* edition 2. 3. 1812, *A Botanical Materia Medica* 1: 143. 1812, *Eclogae Graminum Rariorum* 46, t. 31. 1820, *Flora de Filipinas* 39. 1837, *Synopsis Plantarum Glumacearum* 1: 72. 1854 and *Handb. Fl. Ceylon* 5: 150. 1900, *Transactions of the Kansas Academy of Science* 25: 86. 1913, *Handb. Fl. Ceylon* 6: 321. 1931, *Botanical Magazine* 51: 153, f. 3. 1937, *Grasses of Ceylon* 115. 1956, *Grasses of Burma ...* 327. 1960, *Fragmenta Floristica et Geobotanica* 27: 581-590. 1981, *Flora Illustrata Catarinense* 1(Gram.): 443-906. 1982, *Fl. Libya* 145: 282. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Biologia Plantarum* 36: 37-45. 1994, *Cytologia* 60: 347-351. 1995, National Research Council, Board on Science and Technology for International Development, *Lost Crops of Africa, vol I: Grains*. National Academy Press, Washington, D.C. 1996, *Annals of the Missouri Botanical Garden* 83(2): 200-280. 1996, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 25-26. 1997.

in English: Indian buffalo grass, small millet, Russian millet, proso, proso millet, brown corn millet, broom corn, broom-corn millet, broomcorn millet, broom millet, common millet, hog millet, millet, millet panic, French panic, white French millet, French millet

in French: millet commun, panic faux-millet, mil d'Inde

in Arabic: dukhn

in Morocco: tafsût, jâwars, anili, illane

in Spanish: mijo, mijo común, mijo proso, mijo mayor, mijo de puerco, mijo de escoba, maíz pardo, mijo ruso, millo

in Colombia: mijo

in Mexico: mijo

in South Africa: kaffermanna, prosomanna

in Japan: kibi (= millet)

in Bhutan: chheyra

in China: shu mi, chi

in India: anne, anu, arzan, bansi, bansi phikar, barag, baragu, barigalu, bili baragu, cheena, cheeni, chehna, chena, chenak, cheno, chenwa, chhena, chin, china, chinan, chino, chinwa, chirwa, dhengali, dhengli, dudha vari, gadio, ghoti sava, kadaikanni, kadukanni, kari baragu, katakanai, kuree, kuri, mani varagu saamai, panivaragu, phikar rali, raal, rad, rali, ralle, saamai, salan, sava, save, sawan chaitwa, sawan jethwa, tsedze, uno, vara, varagalu, varagu, varaka, varankhi, varayi, vareeka, vari, variga, varo, vrihibheda, worga, zad

in Indonesia: sekoi sejati

in Pakistan: chenno

in the Philippines: kabug

in Sri Lanka: meneri, kadak kanai

in Tibetan: khre

in Vietnam: co ke, kee, cor kee

P. miliaceum L. subsp. **miliaceum** (*Panicum miliaceum* cv. *aureum* Alef.; *Panicum miliaceum* cv. *sanguineum* Alef.; *Panicum miliaceum* var. *flavum* Schur)

India. Economic plant, widely cultivated and naturalized, cereal, fodder, birdseed, see *Species Plantarum* 1: 58. 1753.

in English: broom corn millet, broom millet, common millet, hog millet, proso millet

in French: millet commun

in Spanish: mijo, mijo común, mijo proso, mijo mayor, mijo de puerco, mijo de escoba, maíz pardo, mijo ruso, millo

P. miliaceum L. subsp. **rudemale** (Kitagawa) Tzvelev

Asia temperate. Economic plant, widely naturalized, invasive, potential seed contaminant, noxious weed species, see *Species Plantarum* 1: 58. 1753 and *Botanical Magazine* 51: 153, f. 3. 1937.

in English: wild proso millet

P. milioides Nees ex Trin. (*Panicum hians* Elliott; *Panicum megapotamicum* Spreng.; *Panicum milioides* Nees, nom. illeg., non *Panicum milioides* Nees ex Trin.; *Steinchisma hians* (Elliott) Nash)

South America, Brazil, Argentina, Uruguay; U.S. Perennial, erect, many-stemmed, rhizomatous, small leaves, short and compact panicles, food for seed eater birds, found in fields and wet ditches, edge of abandoned fields, forest edge, lowland grasslands periodically flooded, sandy soils, native pastures, open areas, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 118. 1816, *De Graminibus Panicis* 225. 1826, *Systema Vegetabilium, editio decima sexta* 4(2): 34. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 175. 1829, *Flora Brasiliensis* 2(2): 241. 1877 and *Flora of the Southeastern United States* ... 105. 1903, *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 285. 1914, *Flora Illustrada de Entre Ríos (Argentina)*

6(2): 277-324. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Boletín de la Sociedad Argentina de Botánica* 16(4): 420-425. 1975, *Annals of the Missouri Botanical Garden* 85: 631-656. 1998.

in English: panic grass, millet

P. milleflorum Hitchc. & Chase (*Panicum distichum* var. *lanceifolium* Griseb.; *Panicum pilosum* Sw.; *Panicum pilosum* var. *lanceifolium* (Griseb.) R.W. Pohl)

Panama, Venezuela. Perennial, decumbent, geniculate, ascending, rooting at the lower nodes, leaf blades linear or linear-lanceolate cordate acuminate, oblong panicle, dense spikelets solitary or paired, spikelets elliptic-oblong obtuse glabrous, lower glume 1- to 3-nerved, upper glume 5-nerved, upper lemma elliptic smooth, growing in shallow water, swamps, resembles *Panicum pilosum*, see *Nova Genera et Species Plantarum seu Prodromus* 22. 1788, *Encyclopédie Méthodique, Botanique* 4: 731. 1798, *Flora of the British West Indian Islands* 548. 1864 and *Contr. U.S. Natl. Herb.* 15: 114. 1910, *Contributions from the United States National Herbarium* 17(6): 494, f. 70. 1915, *Fieldiana: Botany, New Series* 4: 381. 1980, *Flora Mesoamericana* 6: 302-318. 1994, *Memoirs of the New York Botanical Garden* 85: i-ix, 1-246. 2000.

P. millegrana Poir. (*Panicum beyrichii* Kunth; *Panicum dispersum* Trin., nom. illeg., non *Panicum dispersum* Lam.; *Panicum hirsutum* Lam., nom. illeg., non *Panicum hirsutum* Sw.; *Panicum hirsutum* var. *beta* Lam.; *Panicum lasianthum* Trin.; *Panicum multinodosum* Swallen; *Panicum patentissimum* Desv. ex Poir.; *Panicum patentissimum* Roem. & Schult., nom. illeg., non *Panicum patentissimum* Desv. ex Poir.; *Panicum pilosum* Rupr. ex Galeotti, nom. illeg., non *Panicum pilosum* Sw.; *Panicum probandum* Steud.; *Panicum puberulum* Trin., nom. illeg., non *Panicum puberulum* (Link) Kunth; *Panicum rugulosum* Trin.; *Panicum rugulosum* f. *effusum* Hack.; *Panicum rugulosum* var. *glabrescens* Döll; *Panicum rugulosum* var. *lasianthum* (Trin.) Hack.; *Panicum rugulosum* var. *subvelutinum* Döll; *Panicum sellowii* Nees; *Panicum sellowii* var. *longevaginatum* Rupr.; *Panicum sellowii* var. *longevaginatum* E. Fourn. ex Hemsl.; *Panicum sellowii* var. *longevaginatum* E. Fourn.; *Panicum sellowii* var. *subvelutinum* (Döll) Henrard; *Panicum subglobosum* Hack.) (the specific name means "with woolly flowers," from the Greek *lasios* and *anthos*)

Bolivia, Brazil, Mexico to Argentina, Uruguay, Paraguay. Perennial, erect, scrambling, branched, woody, branched, leaf sheaths hispid, leaf blades narrowly ovate or lanceolate tapering to a pointed tip, panicle ovate with branches spreading symmetrically, glabrous or hispid spikelets orbicular or obovate, lower glume lanceolate 1- to 3-nerved, upper glume broadly ovate 5-nerved, lower lemma broadly ovate 5-nerved, upper lemma and palea rugulose, found in shady or open places, open forest, see *Encyclopédie Méthodique, Botanique* 4: 741. 1798, *Encyclopédie*

Méthodique. Botanique ... Supplément 4: 278, 283. 1816, *Systema Vegetabilium* 2: 448. 1817, *De Graminibus Paniceis* 195. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 153. 1829, *Species Graminum* 3: t. 245. 1829-1830, *Révision des Graminées* 2: 231, t. 27. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 277, 282. 1834, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9: 239. 1842, *Synopsis Plantarum Glumacearum* 1: 76. 1855 [1853], *Flora Brasiliensis* 2(2): 259. 1877, *Biologia Centrali-Americana; ... Botany ...* 3: 495. 1885, *Mexicanas Plantas* 2: 21. 1886 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 274. 1904, *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 11. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 343. 1909, *Flora of Suriname* 1(1): 387. 1943, *Phytologia* 14(2): 83. 1966, *Phytologia* 37(4): 317-407. 1977, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Iheringia, Série Botânica* 41: 101-139. 1991.

P. minarum (Nees) Steud. (*Echinolaena minarum* (Nees) Pilg.; *Ichnanthus minarum* (Nees) Döll; *Oplismenus minarum* Nees)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 268. 1829, *Nomenclator Botanicus. Editio secunda* 2: 259. 1841, *Flora Brasiliensis* 2(2): 294. 1877 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 246. 1931, *Darwiniana* 23: 189-221. 1981.

P. mindanaense Merr. (*Panicum delicatum* Hughes)

Australia, Asia tropical, the Philippines. In dry open habitats, see *Philippine Journal of Science* 1(Suppl.): 360. 1906, *Bulletin of Miscellaneous Information Kew* 1923(9): 323. 1923, *Journal of the Arnold Arboretum* 29: 270. 1948.

P. minus Poir. (*Panicum minus* Nash; *Panicum minus* Stapf; *Panicum philadelphicum* Bernh. ex Trin.)

South Africa. See *De Graminibus Paniceis* 216. 1826, *Bulletin of the Torrey Botanical Club* 22(10): 421. 1895, *Flora Capensis* 7: 410-411. 1899 and *Transactions of the Royal Society of South Africa* 21: 76. 1932.

P. minus Poir. var. ***planifolium*** Stapf

South Africa. See *Flora Capensis* 7: 411. 1899.

P. missionum Ekman (*Panicum cordovense* E. Fourn.; *Panicum gracilipes* Hack.; *Panicum gracilipes* var. *pubiflorum* Hack.; *Panicum missionum* Mez, nom. illeg., non *Panicum missionum* Ekman; *Panicum stigmatosum* Trin.; *Panicum unilineatum* Mez)

Argentina. Bunchgrass, useful for erosion control, see *De Graminibus Paniceis* 194. 1826, *Mexicanas Plantas* 2: 26. 1886 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 19, t. 3, f. 1. 1912, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 71. 1915, *Notizblatt des Botanischen*

Gartens und Museums zu Berlin-Dahlem 7: 74. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Darwiniana* 27(1-4): 403-429. 1986.

P. mitchellii Benth.

Australia. See *Flora Australiensis: A Description ...* 7: 489. 1878.

P. moharicum (Körn. & Wern.) Krause

Europe. See *Beihefte zum Botanischen Centralblatt* 29: 142. 1912.

P. mohavense J. Reeder (Arizona, Mohave County)

U.S., Arizona, New Mexico. Very rare and endangered species, annual, small, erect, much branched at base, sheaths papillose-pilose, leaves more or less glabrous, ligules membranous and with short hairs, stigmas and anthers purple, low hills, depressions, see J.A. Reeder, "A new species of *Panicum* (Gramineae) from Arizona." *Phytologia* 71(4): 300-303. 1991.

in English: Mohave panicum, Mojave panicum

P. molinioides Trin. (*Panicum eitenii* Renvoize)

Brazil. Wet places, see *De Graminibus Paniceis* 238. 1826 and *Kew Bulletin* 32(2): 424. 1978.

P. monachne Trin. (*Melinis monachne* (Trin.) Pilg.; *Xyochlaena monachne* (Trin.) Stapf; *Tricholaena monachne* (Trin.) Stapf & C.E. Hubb.)

La Réunion. See *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 86. 1821 and *Österreichische Botanische Zeitschrift* 33: 51. 1902, *Hooker's Icones Plantarum* 31: t. 3098. 1922, *Flora of Tropical Africa* 9: 909. 1930, *Bibliotheca Botanica* 138: 1-149. 1988.

P. moninense (Rendle) Schum. (*Digitaria brazzae* (Franch.) Stapf; *Digitaria moninensis* Rendle)

Africa. See *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 354. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2: 164. 1899 and *Just's botanischer Jahresbericht*. 27: 457. 1901, *Flora of Tropical Africa* 9: 447. 1919.

P. monobotrys Trin. ex Steud. (*Paspalum pilosum* Lam.)

Brazil. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175. 1791, *Synopsis Plantarum Glumacearum* 1: 55. 1853, *Mexicanas Plantas* 2: 14. 1886 and *Contributions from the United States National Herbarium* 28(1): i-xvii, 1-310. 1929.

P. montanum Roxb. (*Hymenachne montana* Griseb.; *Neurachne montanum* Gaudich.; *Panicum courtallense* Nees & Wall. ex Steud.; *Panicum montanum* (Griseb.) Jackson ex Lillo, nom. illeg., non *Panicum montanum* Roxb.; *Panicum montanum* Gaudich., nom. illeg., non *Panicum montanum* Roxb.; *Panicum montanum* Poit. ex E. Fourn.; *Panicum montanum* Roxb.)

India. See *Hortus Bengalensis, or a Catalogue ...* 82. 1814, *Flora Indica; or Descriptions ...* 1: 315. 1820, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 411. Paris 1826 [-1830], *Synopsis Plantarum Glumacearum* 1: 83. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 307. 1874, *Mexicanas Plantas* 1: 30. 1886 and *Allg. Bot. Z.* 20: 164. 1914, *Flora de la Provincia de Tucumán, Gramíneas* 27. 1916.

in Thailand: yaa khai hao lang, yaa khai hao luang, yaa yung

P. montanum Roxb. var. ***merrillii*** Hack.

The Philippines. See *Flora Indica; or Descriptions ...* 1: 315. 1820.

P. montanum Roxb. var. ***pubescens*** (Büse) Jansen

Philippines. See *Flora Indica; or Descriptions ...* 1: 315. 1820, *Plantae Indiae Batavae Orientalis* 2: 111. 1857 and *Reinwardtia* 2(2): 316. 1953.

P. monticola Hook.f. (*Panicum mannii* Mez; *Panicum meyerianum* var. *umbratile* (Mez) Chiov.; *Panicum monticola* Hillebr., nom. illeg., non *Panicum monticulum* Hook.f.; *Panicum transvenulosum* Stapf; *Panicum umbratile* Mez) (for the German botanist Gustav Mann, 1836-1916, Kew gardener 1859, plant collector, botanical explorer, traveler, 1859-1862 on William Balfour Baikie's Niger Expedition, 1863 India and Assam, 1863-1891 Indian Forest Service, sent plants and seeds to Kew, with the German botanist Hermann Wendland (1825-1903) wrote "On the palms of Western Tropical Africa." *Trans. Linn. Soc.* 24: 421-439. (Nov.) 1864; see J.H. Barnhart, *Biographical notes upon botanists.* 2: 443. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 206. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1917-1933; F.N. Hepper and F. Neate, *Plant Collectors in West Africa.* 53. 1971; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun.* 7: 48. Paris 1968; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927.* 274-276. [1931]; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France.* 29: 184. Paris 1882; Ronald William John Keay, "Botanical Collectors in West Africa prior to 1860." in *Comptes Rendus A.E.T.F.A.T.* 55-68. Lisbon 1962; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium.* Edinburgh 1970; F. Nigel Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique,* (A.E.T.F.A.T.) 69-75. Lisbon 1962; Sir Clements Robert Markham (1830-1916), *Peruvian Bark: A Popular Account of the Introduction of Cinchona Cultivation into British India ...* London 1880; Claude Spencer et alii, "Survey of plants for

antimalarial activity." *Lloydia.* 10(3): 145-174. [referring to *Mannia africana* Hook] 1947)

Tropical Africa. Perennial, soft, weak, scrambler, rambling, climbing, trailing or decumbent, straggling, stoloniferous, rooting at the nodes, leaf blades lanceolate, leaf sheaths hairy along margin, panicle moderately branched, branches and pedicels scabrid, spikelets clustered along the panicle branches, lower floret sterile, very variable lower palea absent or vestigial or rudimentary, lower glume 0- to 1-nerved ovate, upper glume elliptic, rare in South Africa, shade species, swamps, see *Journal of the Linnean Society, Botany* 7: 226. 1864, *Flora of the Hawaiian Islands* 501. 1888 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 142-143. 1904, *Flora of Tropical Africa* 9: 660. 1920, *Webbia* 8: 77. 1951.

P. mucronatum Roth ex Roem. & Schult. (*Panicum mucronatum* B. Heyne ex Wall., nom. illeg., non *Panicum mucronatum* Roth ex Roem. & Schult.; *Panicum punctatum* Burm.f.; *Paspalidium mucronatum* (Roth ex Roem. & Schult.) Ohwi; *Paspalidium punctatum* (Burm.f.) A. Camus; *Setaria punctata* (Burm.f.) Veldkamp)

India. See *Flora Indica ... nec non Prodrum Flora Capensis* 26. 1768, *Systema Vegetabilium* 2: 425. 1817, *A Numerical List of Dried Specimens* no. 8717. 1848 and *Flore Générale de l'Indo-Chine* 7: 419. 1922, *Acta Phytotaxonomica et Geobotanica* 11: 33. 1942, *Blumea* 39(1-2): 373-384. 1994.

P. mucronulatum Mez (*Panicum virgatum* var. *pilosum* Döll)

Brazil. Perennial, tufted, leaf sheaths hispid, pilose leaf blades linear acute or acuminate, panicle obovate or oblong much branched, spikelets ovate acute or acuminate, lower glume broadly ovate 7-nerved and clasping the base of the spikelet, upper glume ovate acuminate, disturbed open places, see *Species Plantarum* 1: 59. 1753, *Flora Brasiliensis* 2(2): 218. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 2. 1921, *Annals of the Missouri Botanical Garden* 83(2): 200-280. 1996.

P. multibracteatum Hochst. ex Steud. (*Digitaria wallichiana* (Nees) Stapf; *Panicum multibrachiatum* Hochst. ex Steud.)

India. See *Synopsis Plantarum Glumacearum* 1: 41. 1853, *Synopsis Plantarum Glumacearum* 1: 74. 1854 and *Flora of Tropical Africa* 9: 436. 1919, *Blumea* 21(1): 1-80. 1973.

P. multirameum Scribn. (*Dichantheium dichotomum* (L.) Gould; *Dichantheium dichotomum* var. *dichotomum*; *Panicum dichotomum* L.; *Panicum nitidum* Lam.)

Guatemala, Mexico. Dry hills, see *Species Plantarum* 1: 58. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791 and *Circular, Division of Agrostology, United*

States Department of Agriculture 19: 2. 1900, *Contr. U.S. Natl. Herb.* 12: 117. 1908, *Contr. U.S. Natl. Herb.* 15: 185. 1910, *Brittonia* 26(1): 59. 1974, *Brittonia* 32(3): 353-364. 1980, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988.

P. mystasipum Zuloaga & Morrone (*Panicum mistasypus* Zuloaga & Morrone)

Brazil. See *Iheringia, Série Botânica* 42: 14, f. 1-4, 9-14. 1992.

P. najadum Hack. & Arechav. (*Echinochloa najada* (Hack. & Arechav.) Parodi; *Oplismenopsis najada* (Hack. & Arechav.) Parodi; *Oplismenus najada* (Hack. & Arechav.) Parodi)

South America. See *Anales del Museo Nacional de Montevideo* 1: 125, t. 7bis, 8. 1894 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 75. 1925, *Notas del Museo de la Plata, Botánica* 2(Bot. 11): 4, f. 1. 1937.

P. napaliense Davidse

South America.

in English: Napali panic grass

P. natalense Hochst. (*Panicum fulgens* auctt. non Stapf)

South Africa, Angola, Zimbabwe. Perennial, knotty base, densely tufted, simple or unbranched, generally shortly rhizomatous, leaves mostly basal, leaf sheath small, ligule inconspicuous, leaves glabrous and narrow to thread-like, hard wiry leaves, open to slightly contracted panicle, spikelets glabrous and rounded, lower floret sterile or male, lower floret palea membranous, weed species, useful for soil erosion control, low grazing value, unpalatable and seldom grazed by livestock and game, grows on open grassland, sandy loam, shallow soil in rocky areas, in open mountainous grassland in cool regions with a high rainfall, in well-drained sandy soils, on stony slopes, burned veld, in open sour grassland, see *Flora* 29: 113. 1846.

in English: Natal buffalo grass, Natal panic, Natal panicum

in South Africa: Natalbuffelsgras, suurbuffelsgras

P. nealleyi Vasey (*Dichantheium scabriusculum* (Elliott) Gould & C.A. Clark; *Panicum scabriusculum* Elliott)

U.S. See *A Sketch of the Botany of South-Carolina and Georgia* 1: 121, 123, t. 7(3). 1816, *Bulletin of the Torrey Botanical Club* 13(2): 25. 1886, *Grasses of North America for Farmers and Students* 2: 143. 1896 and *Annals of the Missouri Botanical Garden* 65(4): 1110. 1978 [1979], *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988.

P. nepalense Spreng.

Nepal. See *Systema Vegetabilium, editio decima sexta* 1: 321. 1825.

P. nephelophilum Gaud. (*Panicum havaiense* Reichardt; *Panicum kaalaense* Hitchc.) (Greek *nephele* "a cloud")

U.S., Hawaii. Tufted, see *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 411. Paris 1826 [-1830].

in Hawaii: konakona

P. nephelophilum Gaud. var. *levius* H. St. John

U.S., Hawaii. See *Phytologia* 63(5): 371. 1987.

P. nephelophilum Gaud. var. *rhyacophilum* Hillebr.

U.S., Hawaii. See *Flora of the Hawaiian Islands* 498. 1888.

P. nephelophilum Gaud. var. *tenuifolium* (Hook. & Arn.) Hillebr. (*Panicum tenuifolium* Hook. & Arn.)

U.S., Hawaii. See *The Botany of Captain Beechey's Voyage* 101. 1841, *Flora of the Hawaiian Islands* 497. 1888.

P. nephelophilum Gaud. var. *xerophilum* Hillebr. (*Panicum nephelophilum* Gaudich.; *Panicum xerophilum* (Hillebr.) Hitchc.)

U.S., Hawaii. Dry areas, see *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 411. Paris 1826 [-1830], *Flora of the Hawaiian Islands* 498. 1888 and *Memoirs of the Bernice Pauahi Bishop Museum...* 8(3): 193, f. 83. 1922.

P. nervatum (Franch.) Stapf (*Isachne nervata* Franch.; *Isachne wombaliensis* Vanderyst; *Panicum baumannii* K. Schum.; *Panicum fulgens* Stapf; *Panicum fulgens* var. *pubescens* Robyns; *Panicum globulosum* Mez; *Panicum lasiosoma* Peter; *Panicum plaginanthum* Stapf; *Panicum subrepandum* Rendle) (for the German administrator Ernst Baumann, b. 1893 (1895 or 1897?); see J. Lanjouw and F.A. Stafleu, *Index Herbariorum. Part II, Collectors A-D. Regnum Vegetabile* vol. 2. 1954; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 9. Utrecht 1971)

Tropical Africa. Perennial, caespitose, erect, stoloniferous, wiry, scrambling, more or less leafy, slender, clumped, knotty base, leaf blades linear-lanceolate acute to acuminate, panicle ovate-oblong with loosely ascending branches, glabrous or pubescent spikelets elliptic to orbicular, glumes obtuse to acute, lower glume oblong 3-nerved, upper glume broadly elliptic and deeply concave, lower lemma 5-nerved, upper floret verrucose, found in sandy areas, marshes, along roadsides, bush, wooded savannah, creeks, grassland, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 340. 1895, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 331. 1897, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 178. 1899 and *Flora of Tropical Africa* 9: 668-669, 671. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 188. 1921, *Bulletin agricole du Congo Belge* 16: 688. 1925, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 198 & Anhang, 45, t. 27, f. 1. 1930, *Mémoires de l'Institut Royal*

Colonial Belge; Section des Sciences Naturelles et Médicales 1: 41. 1932.

P. nervosum Lam. (*Digitaria nervosa* Roem. & Schult.; *Panicum commelinifolium* Rudge; *Panicum nervosum* Roxb., nom. illeg., non *Panicum nervosum* Lam.; *Panicum nervosum* Muhl. ex Elliott, nom. illeg., non *Panicum nervosum* Lam.; *Panicum nervosum* Rottler ex Willd., nom. illeg., non *Panicum nervosum* Lam.)

French Guiana. Erect, scandent, open habitats, savannah, wet savannah, see *Encyclopédie Méthodique, Botanique* 4: 747. 1798, *Der Gesellschaft naturforschender Freunde zu Berlin, neue Schriften* 4: 194. 1803, *Plantarum Guianae Rariorum Icones et Descriptiones* ... 21, t. 28. 1805, *Hortus Bengalensis, or a Catalogue* ... 8. 1814, *A Sketch of the Botany of South-Carolina and Georgia* 1: 122. 1816, *Systema Vegetabilium* 2: 473. 1817, *Flora Indica; or Descriptions* ... 1: 314. 1820.

P. nidulans Mez (*Brachiaria ramosa* (L.) Stapf)

Africa. See *Mantissa Plantarum* 29. 1767 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 136. 1904, *Flora of Tropical Africa* 9: 542, 544. 1919, *Bulletin of the Faculty of Science Egyptian University* 17: 432. 1941.

P. niihauense H. St. John (*Panicum pseudagrostis* Trin.)

U.S., Hawaii. Endangered species, see *Occasional Papers of the Bernice Pauahi Bishop Museum* 9(14): 5, t. 1. 1931.

in English: Niihau panic grass

in Hawaii: lau'ehu

P. nodatum Hitchc. & Chase (*Dichantherium nodatum* (Hitchc. & Chase) Gould)

U.S. See *Contributions from the United States National Herbarium* 15: 293, f. 331. 1910, *Brittonia* 26(1): 60. 1974.

P. notabile Hook.f. (*Echinochloa notabilis* (Hook.f.) Rhind; *Urochloa mosambicensis* (Hack.) Dandy)

Myanmar (Burma). See *Boletim da Sociedade Broteriana* 6: 140. 1888, *The Flora of British India* 7: 32. 1896 and *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Grass. Burma* 50. 1945.

P. notatum Retz. (*Panicum montanum* Roxb.; *Panicum montanum* (Griseb.) Jackson ex Lillo, nom. illeg., non *Panicum montanum* Roxb.; *Panicum montanum* Gaudich., nom. illeg., non *Panicum montanum* Roxb.; *Panicum repens* L.)

Southeast Asia, Thailand, India, Indonesia, China, the Philippines. Perennial, erect or scrambling, straggling, decumbent, hard, woody rootstock, base somewhat woody, often rooting from the lower nodes, branched with rigid branches, internodes much longer than the sheaths, ligule a ciliate or ciliolate membrane, rounded sheaths glabrous or hairy, broad leaf blades lanceolate and tapering to a sharp tip, inflorescence an erect lax panicle with widely spreading branches, spikelets distant and subacute, upper floret

hermaphrodite as long as the lower lemma, lower floret sterile, undergrowth vegetation of the natural mixed deciduous forest, hill forest, disturbed situations, shade to partial shade, see *Species Plantarum, Editio Secunda* 1: 87. 1762, *Observationes Botanicae* 4: 18. 1786, *Hortus Bengalensis, or a Catalogue* ... 82. 1814, *Flora Indica; or Descriptions* ... 1: 315. 1820, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne* ... *Botanique* 411. Paris 1826 [-1830], *Synopsis Plantarum Glumacearum* 1: 83. 1854, *Enum. Pl. Zeyl.* 360. 1864, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 307. 1874, *Mexicanas Plantas* 1: 30. 1886 and *Handb. Fl. Ceylon* 5: 155. 1900, *Contr. U.S. Natl. Herb.* 15: 85. 1910, *Allg. Bot. Z.* 20: 164. 1914, *Flora de la Provincia de Tucumán, Gramíneas* 27. 1916, *Grasses of Ceylon* 118. 1956, *Grasses of Burma* ... 329, 701. 1960, *Blumea* 41: 199, 202. 1996.

in English: vine panic grass

in India: salket

in Thailand: yaa khai hao lang, ya khai hao luang, yaa khai hao luang, ya yung, yaa yung

P. noterophilum Renvoize

Brazil. Perennial, erect, small, branching near the base, very slender rhizome, leaf blades acute or acuminate and often inrolled and subulate, panicle broadly ovate and moderately branched, spikelets orbicular, lower glume broadly ovate blunt, upper glume ovate, lower lemma 5-nerved, found in damp sandy soil, scrub, riverside, resembles *Panicum setifolium*, see *Kew Bulletin* 37(2): 329, f. 6 C-D. 1982.

P. novae-hollandiae (P. Beauv.) Desv. (*Panicum paractaenium* Kunth; *Paractaenium novae-hollandiae* P. Beauv.)

Australia. See *Essai d'une Nouvelle Agrostographie* 47, t. 10, f. 6. 1812, *Révision des Graminées* 1: 41. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 187. 1831 and *Kew Bulletin Misc. Inf.* 1923: 287, f. 1-6. 1923.

P. novemnerve Stapf

Southern tropical Africa. Annual, loosely tufted, erect or geniculate, unbranched or branched, usually hairy, leaf blade expanded with bulbous based hairs, ligule a short inconspicuous membrane, leaf sheaths rounded, inflorescence ovate to broadly ovate with spreading and scabrid branches, open panicle, inflorescence base usually enclosed by uppermost leaf, lower floret sterile, palea reduced or absent, upper floret dark, glumes nine-nerved, valuable forage, grains edible, growing in brackish soils, damp ground, moist areas, heavy soils, similar to *Panicum arcurameum* Stapf, see *Flora of Tropical Africa* 9: 702. 1920.

in English: blackseed panicum

in South Africa: swartsaad panicum, schwarzsaaat hirsegas

P. nubicum Fig. & De Not. (*Panicum nubicum* Steud.)

Sudan. See *Memorie della Reale Accademia delle Scienze di Torino* II 14: 352. 1853 [1854], *Synopsis Plantarum Glumacearum* 1: 88. 1854.

P. numaeense Balansa (*Ancistrachne numaeensis* (Balansa) S.T. Blake)

New Caledonia. See *Bulletin de la Société Botanique de France* 19: 325. 1872 and *Proceedings of the Royal Society of Queensland* 81: 1. 1969.

P. numidianum Lam. (*Brachiaria mutica* (Forssk.) Stapf; *Brachiaria numidiana* (Lam.) Henrard; *Panicum barbinode* Trin.; *Panicum equinum* Salzm. ex Steud.; *Panicum numidianum* Hack.; *Panicum numidianum* J. Presl, nom. illeg., non *Panicum numidianum* Lam.; *Panicum numidianum* Sieber ex Schult., nom. illeg., non *Panicum numidianum* Lam.; *Urochloa mutica* (Forssk.) T.Q. Nguyen)

South America. Useful grass, forage, see *Flora Aegyptiaco-Arabica* 20. 1775, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Cyperaceae et Gramineae Siculae* 19. 1820, *Mantissa* 2: 267. 1824, *Species Graminum* 1828-1836, *Synopsis Plantarum Glumacearum* 1: 67. 1854, *Bulletin de l'Herbier Boissier* 4(App. 3): 14. 1896 and *Flora of Tropical Africa* 9: 526. 1919, *Blumea* 3(3): 434. 1940, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Darwiniana* 31(1-4): 43-109. 1992, *Blumea* 41(2): 413-437. 1996.

P. nutabundum Zuloaga & Morrone

Brazil. See *Novon* 6(3): 312, f. 2, 4. 1996.

P. nyanzense K. Schum.

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 333. 1897 [1898].

P. nymphoides Renvoize

Africa, Malawi. Erect, small, delicate, short-lived, unbranched, high altitude, wet areas, see *Kew Bulletin* 44(3): 545. 1989.

P. oaxacense Steud. (*Lasiacis oaxacensis* (Steud.) Hitchc.; *Lasiacis oaxacensis* var. *oaxacensis*)

Mexico. See *Synopsis Plantarum Glumacearum* 1: 73. 1853 and *Proceedings of the Biological Society of Washington* 24: 145. 1911, *Annals of the Missouri Botanical Garden* 65(4): 1133-1254. 1978[1979], *Flora Novo-Galiciana* 14: 1-436. 1983.

P. obliquum Roth ex Roem. & Schult. (*Cyrtococcum patens* (L.) A. Camus; *Panicum obliquum* Zoll. ex Steud., nom. illeg., non *Panicum obliquum* Roth ex Roem. & Schult.)

India. See *Species Plantarum* 1: 58. 1753, *Systema Vegetabilium* 2: 433. 1817, *Nov. Plant. Sp. Ind. Orient.* 51. 1821, *Synopsis Plantarum Glumacearum* 1: 96. 1854 and *Bulletin du Muséum National d'Histoire Naturelle* 27(1): 118. 1921.

P. obscurans (Woodrow) Stapf ex Woodrow (*Isachne obscurans* Woodrow; *Panicum hippothrix* K. Schum. ex Engl.)

India. See *Die Pflanzenwelt Ost-Afrikas* 5c: 103. 1895, *Gardener's chronicle, ser. 3* 23: 161. 1898 and *Journal of the Bombay Natural History Society* 13: 434. 1901, *Fl. Trop. Afr.* 9: 699. 1920.

P. obseptum Trin. (from the Latin *obseptus*, a, um "impassable, inaccessible" part. from *obsaepio*, *psi*, *ptum* "to hedge, fence in, to enclose")

Queensland, New South Wales, Victoria. Perennial or biennial, low, decumbent, rooting at the nodes, sheaths usually glabrous, ligule membranous and ciliate, narrow panicles, spikelets acute and glabrous, lower glume usually nerveless, upper glume nerved and acute, lower lemma epaleate, upper lemma elliptic and striolate, aquatic or semiaquatic, reduce erosion of waterways, around streams and swamps, in floodways and in mud, seasonally flooded ground, see *De Graminibus Paniceis* 149. 1826.

in English: white water panic

P. obtectum J. Presl (*Panicum humboldtianum* (Fluegge) Kuntze; *Paspalum humboldtianum* Fluegge; *Tricholaena obtecta* (J. Presl) E. Fourn. ex Hemsl.; *Tricholaena obtecta* (J. Presl) E. Fourn.)

Mexico. See *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 67. 1810, *Reliquiae Haenkeanae* 1(4-5): 301. 1830, *Biologia Centrali-Americana; ... Botany ...* 3: 493. 1885, *Mexicanas Plantas* 2: 35. 1886, *Revisio Generum Plantarum* 3: 361. 1898.

P. obtusiflorum Hochst. ex A. Rich. (*Brachiaria obtusiflora* (Hochst. ex A. Rich.) Stapf; *Echinochloa rotundiflora* Clayton; *Panicum obtusiflorum* A. Rich., nom. illeg., non *Panicum obtusiflorum* Hochst. ex A. Rich.)

Ethiopia. See *Tentamen Florae Abyssinicae ...* 2: 367. 1850, *Histoire Physique, Politique et Naturelle de l'Île de Cuba ... Botanique. — Plantes Vasculaires* 3: 305. 1853 and *Flora of Tropical Africa* 9: 533. 1919, *Kew Bulletin* 34(3): 560. 1980.

P. obtusum Kunth (*Brachiaria obtusa* (Kunth) Nash; *Oplismenus obtusum* (Kunth) Smyth; *Panicum polygonoides* Müll. Hal., nom. illeg., non *Panicum polygonoides* Lam.; *Panicum repente* Buckley)

Mexico, U.S., Texas, New Mexico, Arizona. Perennial sodgrass, light bluish green, nodes of runners swollen and densely hairy, stems and leaves coarse, leaves flat to somewhat inrolled at the edges, inflorescence with branches closely appressed to the main stem, large and blunt seeds, useful grass, medicinal, livestock graze the foliage and inflorescence, provides fair forage for all grazing animals while green, stems and leaves lose much of their palatability on drying, coarse and unpalatable after maturity, excellent as an erosion control plant, medicinal value, usually grows

in swales and mudflats, along banks of streams or ditches, bottomland and highly productive soils, lowlands with fine-textured soils and along drainages that are irrigated at times by flood waters, see *Nova Genera et Species Plantarum* 1: 98-99. 1815 [1816], *Botanische Zeitung. Berlin* 19(44): 323. 1861, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 3. 1866, *Transactions of the Kansas Academy of Science* 16: 164. 1899 and *Manual of the Flora of the Northern States and Canada* 77. 1901, Laura F. Huenneke, John P. Anderson, Marta Remmenga and William H. Schlesinger, "Desertification alters patterns of above-ground net primary production in Chihuahuan ecosystems." *Global Change Biology* vol. 8, issue 3: 247-264. Mar 2002.

in English: blunt panic grass, panic grass, vine-mesquite, vine mesquite grass, grapevine-mesquite, wiregrass

in Mexico: panizo mezquite, purga de paridas, zacate correa, zacate de agua, zacate gramilla, zacate guía

P. obumbratum Stapf

South Africa. Perennial, rare, trailing, prostrate, rooting at the nodes, narrow inflorescence few-spikeleted, lower floret male, palea present, upper lemma rugose, in shady places, around streams, margins of forest, see *Flora Capensis* 7: 401. 1899.

P. occidentale Scribn. (*Chaetochloa occidentalis* Nash; *Dichantherium acuminatum* subsp. *fasciculatum* (Torr.) Freckmann & Lelong; *Dichantherium acuminatum* var. *acuminatum*; *Dichantherium acuminatum* var. *fasciculatum* (Torr.) Freckmann; *Panicum brodiei* H. St. John; *Panicum dichotomum* var. *pubescens* Munro; *Panicum occidentale* (Nash) Nieuwl., nom. illeg., non *Panicum occidentale* Scribn.)

Northern America. See *A Flora of the Northern and Middle Sections of the United States* 145. 1824, *Reliq. Haenk.* 1: 306. 1830, *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas adjectis nonnullis Grahamianis enumerat novasque describit). 341. London 1839-1857, *Annual Report of the Missouri Botanical Garden* 10: 48. 1899 and *Manual of the Flora of the Northern States and Canada* 90. 1901, *American Midland Naturalist* 2: 64. 1911, *Flora of Southeastern Washington and Adjacent Idaho* 51. 1937, *Annals of the Missouri Botanical Garden* 65(4): 1121. 1978 [1979], *Phytologia* 48(1): 108. 1981, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988, *Sida* 20(1): 167. 2002.

P. officinarum Maratti (*Panicum dactylon* L.)

Europe. See *Flora* 1: 50. 1822.

P. oliganthum Schltldl.

Venezuela. See *Linnaea* 26: 137. 1854.

P. oligoadenotrichum A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 108: 160. 1961.

P. oligosanthos Schultes (*Dichantherium oligosanthos* (Schult.) Gould; *Dichantherium oligosanthos* var. *oligosanthos*; *Panicum pauciflorum* Elliott, nom. illeg., non *Panicum pauciflorum* R. Br.; *Panicum scoparium* var. *angustifolium* Vasey; *Panicum scoparium* var. *pauciflorum* Scribn.)

Northern America, U.S. See *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *A Sketch of the Botany of South-Carolina and Georgia* 1: 120. 1816, *Mantissa* 2: 256. 1824, *Department of Agriculture. Botanical Division. Bulletin* 8: 32. 1889, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 48. 1894, *Bulletin of the Torrey Botanical Club* 22(10): 421. 1895, *Bulletin of the Torrey Botanical Club* 26(11): 572, 576. 1899 and *Rhodora* 36(423): 80. 1934, *Brittonia* 26(1): 60. 1974, *Phytologia* 39(4): 269. 1978, *Sida* 20(1): 170. 2002, *Flora of North America North of Mexico* 25: 746. 2003.

P. oligosanthos Schultes var. *oligosanthos* (*Dichantherium oligosanthos* (Schult.) Gould; *Dichantherium oligosanthos* var. *oligosanthos*; *Panicum oligosanthos* Schult.)

U.S. Short and broad leaves, no ligules, dry fields, open soil, see *Mantissa* 2: 256. 1824, *Synopsis Plantarum Glumacearum* 1: 97. 1854 and *Brittonia* 26(1): 60. 1974.

in English: few-flowered witchgrass

P. oligosanthos Schultes var. *scribnerianum* (Nash) Fernald (*Dichantherium oligosanthos* (Schult.) Gould var. *helleri* (Nash) Mohlenbr.; *Dichantherium oligosanthos* (Schult.) Gould var. *scribnerianum* (Nash) Gould; *Panicum helleri* Nash; *Panicum macrocarpon* Leconte ex Torr.; *Panicum macrocarpon* Torr., nom. illeg., non *Panicum macrocarpon* J. Le Conte ex Torr.; *Panicum oligosanthos* var. *scribnerianum* (Nash) Beetle, nom. illeg., non *Panicum oligosanthos* var. *scribnerianum* (Nash) Fernald; *Panicum oligosanthos* Schult. var. *helleri* (Nash) Fernald; *Panicum scoparium* S. Watson ex Nash, non Lam.; *Panicum scribnerianum* Nash) (named for Frank L. Scribner, 1851-1938, grass specialist in the U.S. Department of Agriculture)

U.S., California, Wisconsin. Annual or perennial, small bunchgrass, smooth or slightly hairy, erect or ascending, simple and branched, hairs at node, sheath covered with fine stiff hairs growing from small bulbs, ligule a very short fringe of hairs, leaves ascending, no auricles, short pyramidal panicle, hairy spikelets, seed head open, reddish purple stigmas, grain lined, fair grazing for wildlife and livestock, food for song birds, palatable and nutritious to livestock, occurring on dry open soil, in open prairies and disturbed ground, meadows and seeps, sandy flats, savannah, meadow habitats, see *A Flora of the Northern and Middle Sections of the United States* 143. 1823, *Mantissa* 2: 256. 1824, *Bulletin of the Torrey Botanical Club* 22(10): 421. 1895, *Bulletin of the Torrey Botanical Club* 26(11): 572. 1899 and *Rhodora* 36(423): 80. 1934, *Brittonia* 26(1): 60. 1974, *Phytologia* 48(2): 192. 1981.

in English: Scribner's rosette grass, Scribner dichantherium, Scribner's panic grass, Scribner panicum, few-flowered panic grass, few-flowered witchgrass, panic grass, rosette panic grass, small panic grass

in Mexico: zacate de hoja ancha

P. olivaceum Hitchc. & Chase (*Dichantherium acuminatum* (Sw.) Gould & C.A. Clark; *Dichantherium acuminatum* var. *acuminatum*; *Dichantherium acuminatum* var. *villosum* (A. Gray) Gould & C.A. Clark; *Panicum acuminatum* Sw.; *Panicum acuminatum* var. *acuminatum*)

U.S., British Honduras, Guatemala. See *Nova Genera et Species Plantarum seu Prodrum* 23. 1788, *North American Gramineae and Cyperaceae* 2: 111. 1835 and *Contributions from the United States National Herbarium* 15: 225, f. 234. 1910, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1124. 1978 [1979], *Phytologia* 48(1): 99-110. 1981, *Memoirs of the New York Botanical Garden* 85: i-ix, 1-246. 2000.

P. olyrachne Beurl. (*Homolepis isocalycia* (G. Mey.) Chase) (Greek *olyra* "rice-wheat," Theophrastus (*HP*. 8.9.2) and Dioscorides, Latin *olyra*, *ae* applied by Plinius to a kind of grain, called also *arinca*, which resembles spelt)

Central America. See *Primitiae Florae Essequiboensis ...* 59-60. 1818, *Kongliga Svenska Vetenskapsakademiens Handlingar* 40: 112-113. 1854 [1856] and *Proceedings of the Biological Society of Washington* 24: 147. 1911, *Smithsonian Contributions to Botany* 59: i-iii, 1-63. 1985.

P. olyroides Kunth (*Panicum funckianum* Steud.; *Panicum funkianum* Steud.; *Panicum proboscideum* Trin.)

Brazil, Venezuela to Argentina. Perennial, herbaceous, caespitose, erect, bulbous base, shortly rhizomatous, leaf blades linear, forming large and loose clumps, panicle terminal ovate much branched with stiff branches ascending, spikelets ovate to ovate-elliptic glabrous acuminate, lower glume ovate 7- to 9-nerved, upper glume 9- to 11-nerved, upper lemma oblong, found in open savannah, very similar to *Panicum ligulare* and *Panicum cervicatum*, see *Nova Genera et Species Plantarum* 1: 102. 1815 [1816], *De Graminibus Paniceis* 184. 1826, *Synopsis Plantarum Glumacearum* 1: 77. 1853, *Flora Brasiliensis* 2(2): 230. 1877 and *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

P. olyroides Kunth var. *denudatum* Döll

Southern America. See *Flora Brasiliensis* 2(2): 230. 1877.

P. olyroides Kunth var. *hirsutum* Henrard

South America, Paraguay. Herbaceous, see *Nova Genera et Species Plantarum* 1: 102. 1815 [1816] and *Mededeelingen van's Rijks-Herbarium* 40: 52. 1921.

P. olyroides Kunth var. *olyroides* (*Panicum funckianum* Steud.; *Panicum funkianum* Steud.; *Panicum olyroides* var. *fimbriatum* Döll; *Panicum proboscideum* Trin.)

South America. See *Nova Genera et Species Plantarum* 1: 102. 1815 [1816], *De Graminibus Paniceis* 184. 1826, *Synopsis Plantarum Glumacearum* 1: 77. 1853, *Flora Brasiliensis* 2(2): 230. 1877.

P. omega Renvoize

Tanzania. See *Kew Bulletin* 34(3): 551. 1979 [1980].

P. onslowense Ashe (*Dichantherium portoricense* (Desv. ex Ham.) B.F. Hansen & Wunderlin; *Dichantherium sabulorum* var. *patulum* (Scribn. & Merr.) Gould & C.A. Clark; *Panicum portoricense* var. *nashianum* (Scribn.) Lelong; *Panicum webberianum* Nash)

U.S., Onslow County, North Carolina. See *Prodrum Plantarum Indiae Occidentalis* 11. 1825, *Bulletin of the Torrey Botanical Club* 23: 149. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 7: 79, f. 61. 1897 and *Journal of the Elisha Mitchell Scientific Society* 16: 88. 1900, *Circular, Division of Agrostology, United States Department of Agriculture* 27: 9. 1900, *Annals of the Missouri Botanical Garden* 65(4): 1112-1113. 1978 [1979], *Brittonia* 36(3): 267. 1984, *Annals of the Missouri Botanical Garden* 75: 1649. 1988 [1989].

P. ooense H. St. John

Hawaii. See *Phytologia* 63(5): 371. 1987.

P. ophiticola Hitchc. & Ekman (*Paspalidium ophiticola* (Hitchc. & Ekman) Davidse & R.W. Pohl; *Setaria ophiticola* (Hitchc. & Ekman) León; *Setaria utowanaea* var. *ophiticola* (Hitchc. & Ekman) W.E. Fox)

Cuba. See *Manual of the Grasses of the West Indies* 293, f. 282. 1936, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14c: 72. 1940, *Flora de Cuba* 1: 163. 1946, *Illinois Biological Monographs* 29: 1-132. 1962, *Novon* 2(2): 106. 1992, *Sida* 18(4): 1037-1047. 1999.

P. orangense Ashe (*Dichantherium acuminatum* var. *acuminatum*; *Panicum acuminatum* var. *acuminatum*; *Panicum lanuginosum* Elliott)

U.S., North Carolina, Orange County. See *Nova Genera et Species Plantarum seu Prodrum* 23. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Journal of the Elisha Mitchell Scientific Society* 15: 113. 1899 and *Contr. U.S. Natl. Herb.* 15: 220. 1910, *Annals of the Missouri Botanical Garden* 65(4): 1121. 1978 [1979], *Brittonia* 36(3): 262-273. 1984.

P. orinocanum Luces

Amazonas, Colombia, Venezuela, Alto Orinoco. Erect bunchgrass, decumbent, scandent, ascending, savannah, white sandy sites, riverbanks, streamlets, open areas, open grassland, sand dunes, flooded places, see *Journal of the Washington Academy of Sciences* 32(6): 164, f. 9. 1942.

P. ovale Elliott (*Dichantherium ovale* (Elliott) Gould & C.A. Clark; *Dichantherium ovale* var. *ovale*; *Panicum acuminatum* var. *consanguineum* (Kunth) Wipff & S.D. Jones;

Panicum ciliferum Nash; *Panicum commonsianum* Ashe; *Panicum erythrocarpon* Ashe; *Panicum ovale* R. Br.; *Panicum ovale* var. *ovale*; *Panicum villosissimum* Nash; *Panicum villosissimum* var. *pseudopubescens* (Nash) Fernald

North America, U.S., Carolina, Georgia. Found in drifting sands along the coast, sand hills, swampy areas, along rivers, see *Nova Genera et Species Plantarum seu Prodrum* 23. 1788, *A Voyage to Abyssinia, and Travels into the ...* appendix: 62. 1814, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Révision des Graminées* 1: 36. 1829, *North American Gramineae and Cyperaceae* 2: 111. 1835, *Bulletin of the Torrey Botanical Club* 23: 149. 1896 and 24(4): 195-196. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 55. 1898, *Bulletin of the Torrey Botanical Club* 25(2): 83-84. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 577. 1899 and *Journal of the Elisha Mitchell Scientific Society* 16: 90. 1900, *Rhodora* 36(423): 79. 1934, *Annals of the Missouri Botanical Garden* 65(4): 1114. 1978 [1979], *Brittonia* 36(3): 262-273. 1984, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988, *Phytologia* 67(6): 452. 1989, *Phytologia* 77(6): 456-464. 1994 [1995].

P. ovale Elliott var. *pseudopubescens* (Nash) Lelong (*Dichantherium commonsianum* (Ashe) Freckmann; *Dichantherium ovale* var. *addisonii* (Nash) Gould & C.A. Clark; *Panicum addisonii* Nash; *Panicum alabamense* Ashe, nom. illeg., non *Panicum alabamense* Trin. ex Steud.; *Panicum columbianum* var. *commonsianum* (Ashe) Dore; *Panicum commonsianum* Ashe; *Panicum commonsianum* subsp. *addisonii* (Nash) W. Stone; *Panicum commonsianum* var. *addisonii* (Nash) Fernald; *Panicum commonsianum* var. *addisonii* (Nash) R.W. Pohl, nom. illeg., non *Panicum commonsianum* var. *addisonii* (Nash) Fernald; *Panicum commonsianum* Ashe var. *commonsianum*; *Panicum ovale* var. *addisonii* (Nash) C.F. Reed; *Panicum owenae* E.P. Bicknell; *Panicum pseudopubescens* Nash; *Panicum villosissimum* Nash var. *pseudopubescens* (Nash) Fernald; *Panicum wilmingtontense* Ashe)

U.S. Dry, sandy woods, excessively to poorly drained sand ridges, fluvial terraces and terrace escarpments, excessively to poorly drained upland terraces, depression margins and depressions, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Bulletin of the Torrey Botanical Club* 23: 149. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 7: 78, f. 60. 1897, *Bulletin of the Torrey Botanical Club* 25(2): 83-84. 1898, *Journal of the Elisha Mitchell Scientific Society* 15: 55. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 577. 1899 and *North Carolina Agricultural Experiment Station Bulletin* 175: 116. 1900, *Journal of the Elisha Mitchell Scientific Society* 16: 86. 1900, *Bulletin of the Torrey Botanical Club* 35(4): 185. 1908, *New Jersey State Mus. Annual Rep.* 1910: 205. 1911, *Rhodora* 36(423): 79. 1934, *Rhodora* 37: 391. 1935, *American Midland Naturalist* 38: 582. 1947,

Le Naturaliste Canadien 103(6): 562. 1976, *Phytologia* 39(4): 271. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1114-1115. 1978 [1979], *Brittonia* 36(3): 271. 1984, *Phytologia* 67(6): 452. 1989.

in English: Columbia panic grass

P. ovinum Scribn. & J.G. Sm. (*Dichantherium aciculare* (Desv. ex Poir.) Gould & C.A. Clark; *Dichantherium aciculare* var. *aciculare*; *Panicum aciculare* var. *ovinum* (Scribn. & J.G. Sm.) Beetle; *Panicum redivivum* Trin. ex Steud.)

U.S. See *Encyclopédie Méthodique. Botanique ... Supplément* 4: 274. July 1816, *Nomenclator Botanicus. Editio secunda* 2: 262. 1841, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 3. 1899 and *Annals of the Missouri Botanical Garden* 65(4): 1116. 1978 [1979], *Phytologia* 48(2): 192. 1981.

P. ovuliferum Trin. (*Dichantherium cordovense* (E. Fourn.) Davidse; *Panicum cordovense* E. Fourn.; *Panicum enneaneurum* Griseb.; *Panicum gladiatum* Wawra; *Panicum ovuliferum* var. *intermedium* L.B. Sm. & Wassh.; *Panicum ovuliferum* var. *ovuliferum*; *Panicum rhizogonum* Hack.)

Paraguay, Uruguay, Mexico and Central America, Bolivia, southern Brazil, northern Argentina. Perennial, delicate, creeping, branched, decumbent, leaning, herbaceous, rooting at the lower nodes, leaf sheaths pubescent, leaf blades lanceolate, lax terminal panicle ovate moderately branched, spikelets elliptic-oblong or oblong-ovate glabrous, lower glume oblong 3- to 5-nerved acute, upper glume 5- to 7-nerved, upper lemma elliptic smooth shining apiculate, open areas, forest shade, forest understory, see *De Graminibus Paniceis* 191. 1826, *Österreichische Botanische Zeitschrift* 12: 170. 1862, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 261-262. 1874, *Pl. Lorentz.* 213-214. 1874, *Mexicanas Plantas* 2: 26. 1886 and *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 73. 1915, *Boletín de la Sociedad Argentina de Botánica* 16(4): 420-425. 1975, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 245. 1978, *Darwiniana* 27: 403-429. 1986, *Novon* 2(2): 105. 1992, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

P. oxyanthum Steud. (*Panicum oxyanthum* Steud. ex T. Durand & Schinz, nom. illeg., non *Panicum oxyanthum* Steud.; *Reimarochloa acuta* (Fluegge) Hitchc.; *Reimarochloa brasiliensis* (Spreng.) Hitchc.)

Central America. See *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 217. 1810, *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* 45. [1818 or 1819], *Synopsis Plantarum Glumacearum* 1: 41. 1853, *Conspectus Florae Africae* 5: 740. 1894 and *Contributions from the United States National Herbarium* 12(6): 198. 1909.

P. ozogonum Steud.

Africa, Senegal. See *Synopsis Plantarum Glumacearum* 1: 68. 1854.

P. pabulare Aitch. & Hemsl. (*Digitaria nodosa* Parl.; *Paspalum sanguinale* var. *pabulare* (Aitch. & Hemsl.) Hook.f.)

Asia. Fodder grass, see *Plantae Novae vel Minus Notae* ... 39. 1842, *Journal of the Linnean Society, Botany* 19: 190. 1882, *The Flora of British India* 7: 15. 1896.

P. pachystachys Franch. & Sav. (*Chaetochloa viridis* var. *pachystachys* (Franch. & Sav.) Honda; *Setaria pachystachys* (Franch. & Sav.) Makino & Nemoto; *Setaria pachystachys* (Franch. & Sav.) Matsum.; *Setaria viridis* subsp. *pachystachys* (Franch. & Sav.) Masam. & Yanagita; *Setaria viridis* var. *pachystachys* (Franch. & Sav.) Makino & Nemoto; *Setaria viridis* var. *pachystachys* (Franch. & Sav.) Makino)

Asia, Japan. Wet sandy places, see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Enumeratio Plantarum in Japonia Sponte Crescentium* ... 2(1): 162. 1877, *Botanical Magazine* 11: 443. 1897 and *Botanical Magazine* 38(455): 198. 1924, *Flora of Japan* 1499. 1925, *Illustr. Fl. Nipp.* 838. 1940, *Transactions of the Natural History Society of Taiwan* 31: 327. 1941, *Fl. Sibir. (Poaceae)* 2: 241. 1990.

P. palackyanum A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 77(1930): 638. 1931.

P. paludicola Nees (*Hymenachne donacifolia* (Raddi) Chase; *Panicum donacifolia* Raddi; *Panicum donacifolium* Raddi; *Panicum palustre* Trin.)

Brazil. See *Agrostografia Brasiliensis* 44. 1823, *Flora Brasiliensis seu Enumeratio Plantarum* 179. 1829 and *Journal of the Washington Academy of Sciences* 13(9): 177. 1923.

P. paludosum Roxb. (*Panicum decompositum* var. *paludosum* (Roxb.) Trimen; *Panicum paludosum* Hochst. ex A. Rich., nom. illeg., non *Panicum paludosum* Roxb.; *Panicum proliferum* var. *paludosum* (Roxb.) Stapf; *Panicum repens* var. *paludosum* (Roxb.) Kuntze) (Latin *paludosus*, a, um "boggy, marshy")

Tropical and subtropical Asia, China, India, Indonesia, Sri Lanka, Thailand, Malaysia, Australia, Queensland, New South Wales, Northern Territory. Perennial, stoloniferous, usually aquatic, more or less erect, tufted, stout, not rhizomatous, decumbent at the base and rooting at the lower nodes, thick spongy culms often floating on water, sheath inflated, ligule membranous and cilia much longer than the membrane, bright green leaves acute and linear-lanceolate, filiform panicles branches ascending to widely divergent to spreading, green glabrous spikelets narrow and acute, lower glume truncate or pointed, fruiting glume smooth, lower floret sterile, upper floret dark brown at maturity, upper lemma striolate, aquatic or semiaquatic, forming floating clumps and colonies, may obstruct irrigation flows, succulent fodder for cattle and buffaloes, grains used for making

a cakelike preparation, sometimes considered a synonym for *Panicum repens* L., aquatic habitats, poor soils, wet places, swamps, damp mud, dams, ponds, in still water, in slowly flowing water, streams and sluggish streams, marshes, see *Tableau Encyclopédique et Méthodique ... Botanique* 4: 747. 1798, *Hortus Bengalensis, or a catalogue ...* 8. 1814, *Flora Indica; or Descriptions ...* 1: 310. 1820, *Tentamen Florae Abyssinicae ...* 2: 373. 1850, *A Systematic Catalogue of the Flowering Plants and Ferns in Ceylon* 105. 1885, *Revisio Generum Plantarum* 3(3): 363. 1898, *Flora Capensis* 7: 407. 1899 and *Handb. Fl. Ceylon* 5: 155. 1900, *Handb. Fl. Ceylon* 6: 321. 1931, *Grasses of Ceylon* 114. 1956, *Grasses of Burma ...* 329. 1960, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 25: 322-323. 1990.

in English: swamp panic, swamp panic grass, aquatic panic grass, marsh panic grass

in India: borati, boruti, kulus nar, soda

P. pammeli Ashe (*Dichantheium linearifolium* (Scribn.) Gould; *Panicum perlongum* Nash)

U.S. Open habitats, dry soil, prairies, see *An Illustrated Flora of the Northern United States* 3: 500, f. 268A. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 575. 1899 and *North Carolina Agricultural Experiment Station Bulletin* 175: 116. 1900, *Brittonia* 26(1): 60. 1974.

P. pampinosum Hitchc. & Chase (*Panicum capillare* var. *pampinosum* (Hitchc. & Chase) Gould; *Panicum hirticaule* J. Presl; *Panicum hirticaule* var. *pampinosum* (Hitchc. & Chase) Beetle)

U.S., Arizona. See *Species Plantarum* 1: 58. 1753, *Reliquiae Haenkeanae* 1(4-5): 308. 1830 and *Contributions from the United States National Herbarium* 15: 66, f. 48. 1910, *Madroño* 10(3): 94. 1949, *Phytologia* 47(5): 382-383. 1981.

P. pandum Swallen (*Panicum graniticum* Swallen)

Venezuela, British Guiana. Near water, see *Brittonia* 3(2): 150. 1939, *Phytologia* 14(2): 71. 1966.

P. pansum Rendle (*Panicum kerstingii* Mez)

Tropical Africa, Angola. Annual or perennial, tufted, slender to robust, branched, leaf sheaths and leaves hispid to pilose, leaf blades broadly linear acute, inflorescence open and delicate, panicle with many spreading branches and spikelets in contiguous pairs, spikelets narrowly ovate and shortly acuminate, lower glume ovate with a clasping base, upper glume narrowly ovate 7-nerved, lower lemma 7-nerved with a reduced palea, grazed when still young, grain eaten in time of scarcity, a weed of cultivation, found in waste and weedy places, open habitats, sandy areas, wooded grassland, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 177. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzen-*

geographie 34(1): 145. 1904, *Flora of Tropical East Africa* 451-898. 1982, A.P.M. van Zon, "Graminées du Cameroun." *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992.

in Mali: tobaku

in Nigeria: ilulo kputo, ilulo nkata, ilulo okele mgbada, ilulo okelemgbada, ilulo okili mbawisi, ilulo okilimbawisi

in Senegal: tobaku

P. pantrichum Hack. (*Dichantherium pantrichum* (Hack.) Davidse; *Panicum chiriquiense* Hitchc. & Chase; *Panicum protractum* Mez; *Panicum stigmatosum* var. *parviflorum* Döll; *Panicum warmingii* Mez)

Honduras, Ecuador, Andean region, Brazil, Paraguay. Annual, decumbent and rambling, creeping, unbranched, rooting at the lower nodes, leaf blades lanceolate finely pointed, panicle ovate sparsely branched, puberulous or glabrous spikelets elliptic-oblong or obovate-oblong, lower glume 3-nerved, upper glume 5-nerved, lower lemma 5-nerved, upper lemma and palea smooth, forest shade, forest edge, pasture, swamp, similar to *Panicum demissum*, see *De Graminibus Paniceis* 194. 1826, *Flora Brasiliensis* 2(2): 225. 1877 and *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 72. 1915, *Contributions from the United States National Herbarium* 17(6): 527, f. 138. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 77. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Novon* 2(2): 105. 1992.

P. paractaenoides Trin. (*Setaria paractaenoides* (Trin.) Urb.; *Setaria setosa* (Sw.) P. Beauv.; *Setaria setosa* var. *paractaenoides* (Trin.) Ekman; *Setaria setosa* var. *setosa*)

Central and South America. See *Nova Genera et Species Plantarum seu Prodrum* 22. 1788, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 219. 1834 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 98. 1917, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 22(9): 12. 1929, *Illinois Biological Monographs* 29: 1-132. 1962.

P. parcum Hitchc. & Chase (*Panicum decolorans* Kunth; *Panicum decolorans* var. *parcum* (Hitchc. & Chase) Beetle)

Mexico. Annual, weedy, along roadsides, savannah, see *Nova Genera et Species Plantarum* 1: 100. 1815 [1816] and *Contr. U.S. Natl. Herb.* 15: 68, f. 53. 1910, *Phytologia* 54(1): 4. 1983.

P. parviflorum R. Br. (*Digitaria parviflora* (R. Br.) Hughes; *Panicum parviflorum* Lam. ex Spreng., nom. illeg., non *Panicum parviflorum* R. Br.; *Paspalum parviflorum* (R. Br.) K. Schum. & Hollrung, nom. illeg., non *Paspalum parviflorum* Rhode ex Fluegge; *Syntherisma parviflora* (R. Br.) Newbold)

Australia. See *Prodromus Florae Novae Hollandiae* 192. 1810, *Systema Vegetabilium, editio decima sexta* 1: 321. 1825, *Flora Australiensis: A Description ...* 7: 471. 1878, *Die Flora von Kaiser Wilhelms Land* 21. 1889 and *Bulletin of Miscellaneous Information Kew* 1923(9): 311. 1923, *Torreyana* 24: 9. 1924, *Monogr. Digitaria* 523. 1950, *Blumea* 21(1): 1-80. 1973, *Brunonia* 6(2): 131-216. 1983 [1984].

P. parviflorum R. Br. var. ***verticillare*** Domin

Australia. See *Bibliotheca Botanica* 85: 296. 1915.

P. parvifolium Lam. (*Panicum ascendens* Willd. ex Spreng.; *Panicum beccabunga* Rendle; *Panicum brasiliense* Spreng.; *Panicum cyanescens* var. *stenophyllum* Döll; *Panicum eglri* Swallen; *Panicum kaletukense* Tutin; *Panicum obtusiglume* Hitchc.; *Panicum oplismenoides* Nash, nom. illeg., non *Panicum oplismenoides* Hack.; *Panicum parvifolium* var. *glabrum* Desv.; *Panicum parvifolium* var. *parvifolium*; *Panicum raripilum* Kunth) (Walter Alberto Egler, 1924-1961)

Central America and West Indies, northern Argentina, Madagascar, tropical Africa. Perennial or annual, aquatic, delicate, decumbent, scrambling, creeping, stoloniferous, rooting at lower nodes, growing in dense stand, nodes and internodes glabrous, pilose or pubescent leaf blades lanceolate acute, open inflorescence paniculate sparsely branched, panicle terminal or axillary ovate, spikelets elliptic ovate to orbicular prominently nerved, panicle branches without glands, lower glume ovate 3-nerved acute or obtuse, upper glume 5-nerved, lower floret usually male, upper lemma scabrous, palea present, a weed of rice cultivation, occurs on moist soil along rivers and ditches, in marshy areas in savannah, in water, along streams, in swamps, damp sand, rich sandy soils, savannah, tidal fringes, damp or marshy ground in open places, in shallow water about lake edge, seasonal ponds, may be confused with *Panicum helobium*, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Systema Vegetabilium, editio decima sexta* 1: 321. 1825, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 191. 1831, *Révision des Graminées* 2: 401, t. 114. 1831, *Flora Brasiliensis* 2(2): 263. 1877, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 179. 1899 and *Bulletin of the Torrey Botanical Club* 30(7): 381. 1903, *Contributions from the United States National Herbarium* 24(8): 464. 1927, *Journal of Botany, British and Foreign* 72(864): 340, f. 11. 1934, *Phytologia* 14(2): 69. 1966.

in English: small-flower panic grass, small-flowered panic grass

in Nigeria: ilulo agili nkitah, iluloagilinkita

in Sierra Leone: arumarapompo, bendewa, lomothenle, muli

P. parvifolium Lam. var. ***serpens*** (Kunth) Baker (*Panicum parvifolium* var. *serpens* Fiori, nom. illeg., non *Panicum parvifolium* var. *serpens* (Kunth) Baker)

Mauritius. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Révision des Graminées* 1: 3. 1829, *Flora of Mauritius and the Seychelles ...* 438. 1877, *Flora Analitica d'Italia* 1: 50. 1896

P. parviglume Hack.

Costa Rica. Erect, decumbent, shade or partial shade, forest, along trail, undergrowth, forest edge, see *Österreichische Botanische Zeitschrift* 51: 429. 1901, *Contr. U.S. Natl. Herb.* 15: 126. 1910, *Brittonia* 23(3): 293-324. 1971.

P. paucinode Stapf

Tropical Africa. Annual, robust, growing on shallow moist soil, disturbed areas, see *Flora of Tropical Africa* 9: 692. 1920.

in English: broom of the swamp

in Nigeria: tsintsiiyar fadama, wutsiyar boodarii

P. pearsonii L. Bolus (for the English (b. Lincolnshire) botanist Henry Harold Welch Pearson, 1870-1916 (d. Wynberg, Cape Town, South Africa), Cambridge Herbarium, professor of botany (South African College, Capetown), plant collector and botanical explorer, 1901 Fellow of the Linnean Society, 1916 Fellow of the Royal Society, founder and Hon. Director of the National Botanic Gardens (Kirstenbosch, South Africa), edited *The Annals of the Bolus Herbarium*, specialist on *Welwitschia*, his writings include "Percy Sladen Memorial Expedition in South-West Africa, 1908-1909." *Nature*. vol. LXXXI. 1909 and "Itinerary of the Percy Sladen Memorial Expedition to the Orange River, 1910-1911." *Ann. S. Afr. Mus.* vol. IX. 1912; see A.C. Seward, "H.H.W. Pearson, F.R.S., Sc.D. (Cambridge)." in *The Annals of the Bolus Herbarium*. vol. II, Part III: 131-147. July 1917; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 304. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 573. University of Pennsylvania Press, Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Mary Gunn and Leslie Edward W. Codd, *Botanical Exploration of Southern Africa*. 275-276. A.A. Balkema, Cape Town 1981; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. [1931]; A. White and B.L. Sloane, *The Stapeleae*. Pasadena 1937; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 542. London 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993)

South Africa, Central Karasberg. Woolly base, see *Annals of the Bolus Herbarium* 1: 107. 1915.

P. pedersenii Zuloaga (for Troels Myndel Pedersen, 1916-2000, botanical collector in Argentina, worked with John H. Wiersema, author of "Especies de plantas vasculares introducidas y naturalizadas en el noroeste correntino." *Anales de la Academia Nac. de Agronomía y Veterinaria* 49(1): 11-17. 1995. See *Adansonia*, sér. 3. 19: 217. 1997; *Darwiniana* 16: 702. 1971; *Darwiniana* 38(1-2): 58. 2000; *Bonplandia* (Corrientes) 10(1-4): 193-196. 2000; *Brittonia* 36: 221. 1984; I. Friis, "Troels Myndel Pedersen (1916-2000)." *Taxon* 49(3): 573-575. 2000; Antonio Krapovickas, "Semblanza del Dr. h. c. C. N. Troels Myndel Pedersen." *Anales de la Academia Nac. de Agronomía y Veterinaria* 54: 116-118. 2000)

Argentina. See *Hickenia* 1(27): 149. 1978.

P. peladoense Henr. (*Panicum bergii* Ekm, non Arech.; *Panicum bergii* Arechav.; *Panicum bergii* var. *leiophyllum* Hack. & Lindm.; *Panicum campestre* Nees, nom. illeg., non *Panicum campestre* Nees ex Trin.; *Panicum cayennense* Lam.; *Panicum cayennense* var. *campestris* (Nees) Pilg.; *Panicum quadriglume* (Döll) Hitchc.)

Brazil to northern Argentina. Perennial, erect, hirsute, decumbent, tufted, leaves mainly basal, leaf blades linear rigid finely acute pungent, lax terminal panicle oblong to ovate finely branched, spikelets ovate glabrous acute or acuminate, lower glume ovate 5-nerved, upper glume 7- to 9-nerved, upper lemma elliptic, forming small clumps, sandy ground, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 197. 1829, *Anales del Museo Nacional de Montevideo* 1: 147. 1894 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 10, t. 4B. 1900, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 132. 1901, *Blumea* 4(3): 504-505. 1941, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 59: 1-156. 2000, *Flora Fanerogamica do Estado de São Paulo* 1: i-xxv, 1-292. 2001.

P. pellitoides F. Br. & H. St. John

Hawaii. In dry pasture land, see *Occasional Papers of the Bernice Pauahi Bishop Museum* 10(12): 3, f. 1. 1934.

P. pellitum Trin. (*Panicum colliei* Endl.; *Panicum pellitoides* F. Br. & St. John)

U.S., Hawaii. See *De Graminibus Paniceis* 199. 1826, *Annalen des Wiener Museums der Naturgeschichte* 1: 157. 1836 and *Occasional Papers of the Bernice Pauahi Bishop Museum* 10(12): 3, f. 1. 1934, H. St. John, "Diagnoses of *Panicum* species (Gramineae). Hawaiian plant studies 149." *Phytologia*. 63: 368-395. 1987.

in English: Maui panic grass

in Hawaii: kai'oi'o

P. pellitum Trin. var. ***pseudagrostis*** (Trin.) Nees (*Panicum pseudagrostis* Trin.)

U.S. See *De Graminibus Paniceis* 197, 199. 1826, *Gramineae* 37. 1841.

P. pencanum Phil. (*Dichantheium sabulorum* (Lam.) Gould & C.A. Clark; *Dichantheium sabulorum* var. *polycladum* (Ekman) Zuloaga; *Panicum sabulorum* Lam.; *Panicum sabulorum* var. *polycladum* (Ekman) R.A. Palacios & Burkart; *Panicum sabulorum* var. *polycladum* (Ekman) R.A. Palacios)

Chile. Sandy areas, see *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *Anales de la Universidad de Chile* 93: 713. 1896 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 24, t. 3, f. 2. 1912, *Flora Illustrada de Entre Ríos (Argentina)* 2: 316. 1969, *Annals of the Missouri Botanical Garden* 65(4): 1112. 1978 [1979], *American Journal of Botany* 90: 817. 2003.

P. penicillatum Nees ex Trin. (*Oplismenus discolor* (Trin. ex Nees) Kunth; *Oplismenus penicillatus* (Nees) Kunth; *Panicum discolor* Trin. ex Nees, nom. illeg., non *Panicum discolor* Spreng.; *Panicum penicillatum* Nees, nom. illeg., non *Panicum penicillatum* Nees ex Trin.; *Panicum penicillatum* Willd. ex Nees, nom. illeg., non *Panicum penicillatum* Nees ex Trin.; *Panicum phragmites* Nees)

Brazil. See *De Graminibus Paniceis* 196. 1826, *Révision des Graminées* 1: 45. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 144-145. 1829, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19(Suppl. 1): 173. 1843 and *Darwiniana* 3(1-4): 53-60. 1995.

P. perakense (Hook.f.) Merr. (*Panicum humidorum* Buch.-Ham. ex Hook.f.; *Panicum humidorum* var. *perakense* Hook.f.)

The Philippines. See *The Flora of British India* 7: 53-54. 1896 and *Philippine Journal of Science* 11: 52. 1916, *Blumea* 41: 193. 1996.

P. pernambucense (Spreng.) Mez ex Pilg. (*Agrostis pernambucensis* Spreng.; *Hymenachne pernambucense* (Spreng.) Zuloaga; *Panicum excelsum* Nees; *Panicum rivulare* Trin.; *Panicum urticans* L.B. Sm. & Wassh.)

South America, Brazil, Argentina, Uruguay, Paraguay. Herbaceous, found in wet roadside ditches, see *Systema Vegetabilium, editio decima sexta* 1: 258. 1825, *De Graminibus Paniceis* 213. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 180. 1829 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 15. 1940, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 246, f. 2 E-G. 1978, *Iheringia, Série Botânica* 41: 101-139. 1991, *Ann. Missouri Bot. Gard.* 79: 770-818. 1992, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178.

1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *American Journal of Botany* 90: 817. 2003.

in Brazil: angolão

P. petersonii Hitchc. & Ekman

Cuba, the Caribbean. See *Man. Grasses W. Ind.* 263, f. 220. 1936.

P. petilum Swallen

Colombia. See *Phytologia* 14(2): 73. 1966.

P. petrense Swallen

Venezuela. See *Mem. New York Bot. Gard.* 9(3): 259. 1957.

P. phaeocarpum Nees

Africa. See *Florae Africae Australioris Illustrationes Monographicae* 22-23. 1841.

P. philadelphicum Bernh. ex Trinius (*Panicum capillare* var. *campestre* Gatt.; *Panicum capillare* var. *gattingeri* Nash; *Panicum capillare* var. *geniculatum* Scribn.; *Panicum capillare* var. *minimum* Engelm. ex Gatt.; *Panicum capillare* var. *minus* Muhl. ex Nash, nom. illeg., non *Panicum capillare* var. *minus* Döll; *Panicum capillare* var. *sylvaticum* Torr.; *Panicum gattingeri* Nash; *Panicum lithophilum* Swallen; *Panicum minimum* (Engelm. ex Gatt.) Scribn. & Merr.; *Panicum minus* Nash; *Panicum philadelphicum* Nees, nom. illeg., non *Panicum philadelphicum* Bernh. ex Trin.; *Panicum philadelphicum* subsp. *gattingeri* (Nash) Freckmann & Lelong; *Panicum philadelphicum* subsp. *lithophilum* (Swallen) Freckmann & Lelong; *Panicum philadelphicum* var. *philadelphicum*; *Panicum philadelphicum* var. *tuckermanii* (Fern.) Steyermark & Schmoll; *Panicum porphyrium* Trin. ex Nees; *Panicum soboliferum* Tuck. ex Scribn. & Merr.; *Panicum torreyi* E. Fourn. ex Hemsl.; *Panicum tuckermanii* Fern.)

U.S., Texas, Virginia. Annual, linear leaves, leaf sheaths pubescent, glabrous spikelets, acute first glume, leaves might cause photosensitization, usually distributed on sandy soil, rocky open ground or rocky open upland woods, on eroded slopes and gravel bars, on roadsides, shores and woods, dry woods, rocky slopes, see *Species Plantarum* 1: 58. 1753, *A Flora of the Northern and Middle Sections of the United States* 149. 1824, *De Graminibus Paniceis* 216. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 198. 1829, *Biologia Centrali-Americana; ... Botany ...* 3: 497. 1885, *The Tennessee Flora; With Special Reference to the Flora of Nashville* 94. 1887, *Bulletin of the Torrey Botanical Club* 20: 477. 1893, *Bulletin of the Torrey Botanical Club* 22: 241, 421. 1895, *An Illustrated Flora of the Northern United States* 1: 123. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 27: 4. 1900, *Rhodora* 3: 106. 1901, *Flora of the Southeastern United States ...* 92, 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 57-58. 1910, *Rhodora* 21(246): 112. 1919, *Rhodora* 41(483): 90. 1939, *Proceedings of the Biological Society of Washington* 54: 43. 1941, *Sida* 20(1): 172. 2002.

in English: Philadelphia panic grass, panic grass, Philadelphia witchgrass, wood witchgrass

P. phoiniados Naik & Patunkar (from the Greek *phoinix*, *phoinikos* “purple, red, crimson” and *klados* “branch”)

Sri Lanka, India. Perennial, erect, densely caespitose, tussocky, woody, nodes and internodes glabrous, unbranched or branching from the upper and middle nodes, shortly rhizomatous, leaf blades linear and erect, sheaths rounded and glabrous, ligule a ciliate membrane, panicle branches appressed or spreading, spikelets acuminate and purplish, lower floret sterile, lower glume cuspidate, stigmas purple, found along riverbanks, ponds, stream banks, related to *Panicum coloratum* L., see *Reinwardtia* 9(4): 403. 1980.

P. phragmites Nees (*Panicum penicillatum* Nees ex Trin.)

Brazil. Perennial, tufted, a weed of cultivation, disturbed forest, see *De Graminibus Paniceis* 196. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 144. 1829.

P. phragmitoides Stapf (*Panicum afrum* Mez; *Milium coloratum* (L.) Moench; *Panicum coloratum* L.; *Panicum klingii* Mez; *Panicum phragmitoides* var. *lasioneuron* Stapf; *Panicum trypheron* Schult.; *Panicum trypheron* var. *giganteum* Rendle)

Tropical Africa, Benin, Ivory Coast, Gabon. Perennial, robust, reedlike, culms used to make brooms and for thatching, savannah woodland, dry soils, see *Mantissa Plantarum* 30. 1767, *Methodus Plantas Horti Botanici ...* 203. 1794, *Mantissa* 2: 244. 1824, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 181. 1899 and *Sudania* 74,76. 1911-14, *Flora of Tropical Africa* 9: 677-678. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 188. 1921.

in Cameroon: geme salihò, ngyanle

in Nigeria: fuda tumbi, funda tumbi, hunda tumbi, korukoru siawa, tafartso, tsintsiyàà

P. piuiense Swallen (*Ichnanthus gardneri* Mez; *Panicum blepharophorum* Mez, nom. illeg., non *Panicum blepharophorum* J. Presl) (named for the English (b. Glasgow) botanist and explorer George Gardner, 1812-1849 (Sri Lanka), M.D. at Glasgow 1835, pupil of W.J. Hooker at Glasgow, traveler in Southern India and (from 1836 to 1841) Brazil, in 1842 Fellow of the Linnean Society, from September 1843 (on the recommendation of Sir William Hooker) Superintendent of the Peradeniya Botanic Garden in Sri Lanka, author of *Travels in the Interior of Brazil ... during the Years 1836-1841*. London 1846, he published various papers in the *London Journal of Botany* and in the *Calcutta Journal of Natural History* (on the plants of Ceylon and on the Podostemaceae of Southern India), in conjunction with Henry Barron Fielding (1805-1851) published *Sertum Plantarum*. London 1844, along with Sir James Emerson Tennent (1804-1869) visited Jaffna, Trincomalee and various other districts of Ceylon. See J.H. Barnhart, *Biographical*

notes upon botanists. 2: 29. Boston 1965; Sir James Emerson Tennent (1804-1889), *Ceylon, an Account of the Island ... with Notices of Its Natural History*. London 1859; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. London 1969; R. Desmond, *The European Discovery of the Indian Flora*. 163. Oxford 1992; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 169-170. Oxford 1964; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 270. London 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845)

Brazil. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 15: 132. 1918, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4. 1921, *Sellowia* 18: 110. 1966, *Annals of the Missouri Botanical Garden* 75(2): 420-455. 1988.

P. pilatum Swallen (*Dichantheium acuminatum* var. *longiligulatum* (Nash) Gould & C.A. Clark; *Panicum acuminatum* var. *longiligulatum* (Nash) Lelong)

Venezuela. Rocky places, see *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Bulletin of the Torrey Botanical Club* 26(11): 574. 1899 and *Fieldiana, Botany* 28(1): 26. 1951, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1127. 1978 [1979], *Brittonia* 36(3): 270. 1984.

P. pilgeri Mez (*Panicum pilgeri* Herter, nom. illeg., non *Panicum pilgeri* Mez; *Panicum pilgerianum* (Schweick.) Clayton)

Tropical Africa, Niger, Gabon. Caespitose, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 146. 1904, *Estudios Botánicos en la Región Uruguaya* 4: 29. 1931, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(122): 199-200. 1938, *Kew Bulletin* 42: 402. 1987.

P. pilgerianum (Schweick.) Clayton (*Acroceras pilgerianum* Schweick.; *Psilochloa pilgeriana* (Schweick.) Launert)

South Africa. Annual, aquatic, tufted, spikelets appressed to the branches, lower floret sterile or male, palea present, growing in vleis, clay soils, pans, riverbanks, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(122): 199-200. 1938, *Mitteilungen der Botanischen Staatssammlung München* 8: 156. 1970, *Kew Bulletin* 42: 402. 1987.

P. pilosissimum Roth ex Roem. & Schult. (*Panicum rudgei* Roem. & Schult.)

America, Guyana. See *Systema Vegetabilium, editio decima sexta* 2: 444, 458. 1817.

P. pilosum Sw. (*Panicum apiculatum* Salzm. ex Steud.; *Panicum coenosum* Döll; *Panicum densiflorum* Willd. ex Spreng.; *Panicum distans* Willd. ex Spreng.; *Panicum distichum* Lam.; *Panicum distichum* var. *lanceifolium* Griseb. ex Hitchc.; *Panicum distichum* var. *luxurians* G. Mey.; *Panicum distichum* var. *pilosum* (Sw.) Griseb.; *Panicum laxum* Sw.; *Panicum milleflorum* Hitchc. & Chase; *Panicum penisetum* Roth; *Panicum pilisparsum* G. Mey.; *Panicum pilosum* Muhl., nom. illeg., non *Panicum pilosum* Sw.; *Panicum pilosum* Rupr. ex Galeotti, nom. illeg., non *Panicum pilosum* Sw.; *Panicum pilosum* var. *distachyum* (Lam.) Kuntze; *Panicum pilosum* var. *lanceifolium* (Griseb.) R.W. Pohl; *Panicum pilosum* var. *latifolium* Döll; *Panicum pilosum* var. *pilosum*; *Panicum trichophorum* Schrad. ex Schult.; *Setaria disticha* (Lam.) Kunth; *Setaria meyeri* Kunth; *Setaria penisetum* (Roth) Roem. & Schult.; *Setaria pilosa* (Sw.) Kunth; *Setaria schraderi* Kunth)

Ecuador, Andean and Amazonian regions, Argentina, Mexico, Guatemala, Venezuela, Peru, Brazil, Bolivia, Paraguay. Perennial, herbaceous, stoloniferous, branched, erect, scandent, geniculately ascending or trailing, decumbent and rooting at the lower nodes, internodes glabrous, nodes hairy or glabrous, leaf blades linear-lanceolate to lanceolate, pilose panicles spreading or ascending, dense racemes, spikelets glabrous and secund, lower glume broadly ovate 3-nerved, upper glume 5-nerved, lower lemma 3-nerved, upper lemma smooth, green fruits, grain is husked by pounding and is eaten by the humans, sometimes boiled and eaten whole, rarely ground to flour, weed in roadside vegetation and in roadbed, along banks of streams, moist ground and open woods, in water of swamps, open or shady places, light soils, lowland tropical rainforest, open riverbank, wetlands, on poor soils with moderate rainfall, along river's edge, often on disturbed ground, gravelly banks, may be confused with *Panicum laxum*, see *Nova Genera et Species Plantarum seu Prodromus* 22, 23. 1788, *Encyclopédie Méthodique, Botanique* 4: 731. 1798, *Transactions of the American Philosophical Society* 4: 236. 1799, *Nova Genera et Species Plantarum* 1: 112. 1815 [1816], *Systema Vegetabilium* 2: 494. 1817, *Primitiae Florae Essequeboensis* ... 57. 1818, *Novae Plantarum Species* 55. 1821, *Mantissa* 2: 247, 256. 1824, *Systema Vegetabilium, editio decima sexta* 1: 305, 320. 1825, *Nova Acta Physico-medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum Exhibentia Ephemerides sive Observationes Historias et Experimenta* 12: 768. 1825, *Révision des Graminées* 1: 47. 1829, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9: 239. 1842, *Synopsis Plantarum Glumacearum* 1: 65. 1854, *Flora of the British West Indian Islands* 548. 1864, *Flora Brasiliensis* 2(2): 191, 211, 212, f. 30. 1877, *Mexicanas Plantas* 2: 24. 1886, *Revisio Generum Plantarum* 2: 785. 1891 and *Circular, Division of Agrostology, United States Department of Agriculture* 19: 1. 1900, *Ergebnisse der Botanischen Expedition nach*

Südbrasilien 1: 9. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 70. 1908, *Contributions from the United States National Herbarium* 17(6): 494, f. 70. 1915, *Manual of the Grasses of the West Indies* 267. 1936, *Fieldiana: Botany, New Series* 4: 381. 1980, *American Journal of Botany* 90: 817. 2003.

in India: bhadli

in Nicaragua: walang

P. pinetorum Swallen (*Dichantherium aciculare* (Desv. ex Poir.) Gould & C.A. Clark; *Dichantherium aciculare* subsp. *neuranthum* (Griseb.) Freckmann & Lelong; *Dichantherium aciculare* var. *aciculare*)

U.S. In open pine woods, see *Encyclopédie Méthodique. Botanique ... Supplément* 4: 274. July 1816, *Catalogus plantarum cubensium* ... 232. 1866 and *Proceedings of the Biological Society of Washington* 55: 93. 1942, *Annals of the Missouri Botanical Garden* 65(4): 1116. 1978 [1979], *Sida* 20(1): 167. 2002.

P. pinifolium Chiov. (*Panicum appletonii* Stapf)

Kenya, Somalia. Perennial bunchgrass, shrubby, tough, stout, robust, erect, straight, branched, tufted, rhizomes with short internodes, spreading with stolons rigid or very rigid, leaves distichous and stiff, panicle ovate, spikelets globose, lower glume ovate, upper lemma smooth, low palatability, on open sandy areas, coral cliffs, in shallow sand, sandy light orange soil, limestone, coastal grassland, plains grassland, bare sand, sandy stabilized dunes, see *Annali di Botanica* 5: 62. 1906, *Bulletin of Miscellaneous Information Kew* 6: 225. 1907.

P. plaginanthum Stapf (*Panicum nervatum* (Franch.) Stapf)

Tropical Africa. Perennial, caespitose, erect, stoloniferous, wiry, more or less leafy, clumped, found in sandy areas, marshes, along roadsides, bush, wooded savannah, creeks, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 340. 1895, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 331. 1897, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 178. 1899 and *Flora of Tropical Africa* 9: 668-669, 671. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 188. 1921, *Bulletin agricole du Congo Belge* 16: 688. 1925, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 198 & Anhang, 45, t. 27, f. 1. 1930, *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 1: 41. 1932.

P. plenum Hitchc. & Chase

U.S., New Mexico. Forage, see *Contr. U.S. Natl. Herb.* 15: 80, f. 69. 1910.

P. plicatile Hochst. (*Setaria megaphylla* (Steud.) T. Durand & Schinz; *Setaria plicatilis* (Hochst.) Hack. ex Engl.; *Setaria plicatilis* (Hochst.) Pilg.)

Ethiopia. See *Synopsis Plantarum Glumacearum* 1: 53. 1853, *Flora* 38: 198. 1855, *Abhandlungen der Königl. Akademie der Wissenschaften in Berlin* 2: 121. 1891, *Conceptus Florae Africae* 5: 773. 1894 and *Annali di Botanica* 8: 31. 1903, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(93): 270. 1928.

P. plicatulum Lam. (*Paspalum plicatulum* Michx.)

Warm regions. See *Flora Boreali-Americana* 1: 45. 1803, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Contributions from the United States National Herbarium* 28(1): i-xvii, 1-310. 1929, *Boletín de la Sociedad Argentina de Botánica* 16: 53-65. 1974, *Las Gramíneas de México* 5: 1-466. 1999.

P. plicatum Lam. (*Echinochloa pyramidalis* (Lam.) Hitchc. & Chase; *Panicum plicatum* Roxb., 1814 and 1820, nom. illeg., non *Panicum plicatum* Lam.; *Panicum plicatum* Willd., nom. illeg., non *Panicum plicatum* Lam.; *Setaria palmifolia* (J. König) Stapf; *Setaria plicata* (Lam.) T. Cooke)

Warm regions, India. See *Der Naturforscher* 23: 208. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1033. 1809, *Hortus Bengalensis, or a Catalogue ...* 8. 1814, *Flora Indica; or Descriptions ...* 1: 313-314. 1820, *Flora of the British West Indian Islands* 547. 1864, *Flora of Mauritius and the Seychelles ...* 436. 1877 and *The Flora of the Presidency of Bombay* 2: 919. 1908, *Journal of the Linnean Society, Botany* 42(285): 186. 1914, *Contributions from the United States National Herbarium* 18(7): 345. 1917, *Darwiniana* 37(1-2): 37-151. 1999.

P. poaeforme Poir. (*Panicum poaeforme* Willd. ex Spreng., nom. illeg., non *Panicum poaeforme* Poir.)

Asia, Africa. See *Encyclopédie Méthodique. Botanique ... Supplément* 4: 284. 1816, *Systema Vegetabilium, editio decima sexta* 1: 318. 1825.

P. poaeoides Stapf (*Panicum acutissima* Peter; *Panicum acutissimum* Peter; *Panicum graciliculme* Napper)

Tropical Africa. Perennial, tufted, ascending, hairy, slender, knotty rootstock, basal leaf sheaths glabrous, leaf blades linear and hirsute acuminate, dense and much-branched panicle many spiculate, small gaping spikelets, lower glume broadly ovate acute to cuspidate, upper glume ovate 7-nerved acuminate-cuspidate, lower lemma 7- to 9-nerved acute, wet grassland, seasonally wet places, see *Flora of Tropical Africa* 9: 681. 1920, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 188, 199, 48, Pl 13, f. 4. 1930, *Kirkia* 3: 127. 1963.

P. pole-evansii C.E. Hubb.

Tropical Africa, Zambia. Creeping, found in rocky places, see *Bulletin of Miscellaneous Information Kew* 1934: 113. 1934.

P. poliophyllum Renvoize & Zuloaga

Brazil. Erect, see *Kew Bull.* 39(1): 193. 1984.

P. polyanthes Schultes (*Dichantherium polyanthes* (Schult.) Mohlenbr.; *Dichantherium sphaerocarpon* var. *isophyllum* (Scribn.) Gould & C.A. Clark; *Dichantherium sphaerocarpon* var. *polyanthes* (Schult.) Gould; *Panicum firmandum* Steud.; *Panicum microcarpon* Muhl., nom. illeg., non *Panicum microcarpon* Muhl. ex Elliott; *Panicum microcarpon* var. *isophyllum* Scribn.; *Panicum multiflorum* Elliott, nom. illeg., non *Panicum multiflorum* Poir.; *Panicum sphaerocarpon* var. *isophyllum* (Scribn.) Angelo; *Panicum sphaerocarpon* var. *isophyllum* (Scribn.) Wipff & S.D. Jones, nom. illeg., non *Panicum sphaerocarpon* var. *isophyllum* (Scribn.) Angelo; *Panicum sphaerocarpon* var. *polyanthes* (Schult.) Sherif)

U.S. Perennial, tall, clumped, caespitose, very small spikelets, growing in wet soils, dry or damp, dry woods or moist woods, floodplains, drainage channels, wet meadows, open areas, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 122, 125. 1816, *Descriptio uberior Graminum* 111. 1817, *Mantissa* 2: 257. 1824, *Synopsis Plantarum Glumacearum* 1: 418. 1854 [or 1855], *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 51, f. 54. 1894 and *Contr. U.S. Natl. Herb.* 15: 255. 1910, *Brittonia* 26(1): 60. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1105. 1978 [1979], *Sida* 10(2): 191. 1983, *Erigenia* 6: 26. 1985, *Phytologia* 71(2): 85. 1991, *Phytologia* 77(6): 460. 1994.

in English: small-fruited panic grass, many-flowered panic grass

P. polycomum Trinius (*Panicum froesii* Swallen; *Panicum gracilissimum* Swallen; *Panicum obovatum* Döll; *Panicum perpusillum* Benoist, nom. illeg., non *Panicum perpusillum* Arn. ex Steud.; *Panicum siccaneum* Trin.; *Panicum tamayonis* Luces)

Amazonas, Venezuela, Brazil. Annual, tufted, slender, erect, delicate, ascending, leaf blades narrowly lanceolate acute appressed or ascending, panicle ovate sparsely branched with spreading branches, spikelets orbicular, lower glume ovate 0- to 3-nerved acute, upper glume ovate 5-nerved, lower lemma ovate 5-nerved, open habitats, sandy riverbanks, stream bank, wet savannah, moist places, white sand, riverbed, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 306. 1834, *Linnaea* 10(3): 298. 1836, *Flora Brasiliensis* 2(2): 256. 1877 and *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 22: 277. 1950, *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 24, 26, f. 17. 1953, *Memoirs of the New York Botanical Garden* 9(3): 259. 1957, *Phytologia* 14(2): 70. 1966.

P. polygamum Forssk. (*Pennisetum polygamum* (Forssk.) Chiov.; *Panicum polygamum* Sw., nom. illeg., non *Panicum polygamum* Forssk.)

America, Africa. Sandy places, open grassland, see *Flora Aegyptiaco-Arabica* 27. 1775, *Nova Genera et Species Plantarum seu Prodrromus* 24. 1788, *Eclogae Graminum Rariorum* 30, t. 21. 1814-1820, *Reliquiae Haenkeanae* 1(4-5): 308. 1830, *Mexicanas Plantas* 2: 28. 1886 and *Bollettino della Società Botanica Italiana* 1923: 113. 1923.

P. polygonatum Schrad. (*Panicum boliviense* Hack.; *Panicum bourgaei* E. Fourn.; *Panicum ecuadorensis* Mez; *Panicum hydrophilum* Trin. ex Nees; *Panicum laxum* Sw.; *Panicum pilosum* var. *polygonatum* (Schrad.) Döll; *Panicum polygonatum* Kunth, nom. illeg., non *Panicum polygonatum* Schrad.; *Panicum polygonatum* Sieber ex Griseb., nom. illeg., non *Panicum polygonatum* Schrad.; *Panicum potamicum* Steud.; *Panicum potanium* Trin.; *Panicum subpetiolatum* Hack. ex Bertoni; *Panicum subpetiolatum* Steud.; *Panicum trichogonum* Willd.; *Setaria polygonata* (Schrad.) Kunth; *Steinchisma laxa* (Sw.) Zuloaga)

Argentina, Peru, Mexico to Brazil, Paraguay, Costa Rica, Ecuador. Annual or short-lived perennial, herbaceous, upright, geniculately ascending, decumbent, rooting along horizontal stems, nodes bearded, leaf blades lanceolate acuminate, panicle oblong irregularly branched, ovate spikelets congested, lower glume ovate 1-3-nerved, upper glume 3-5-nerved, lower lemma 3-5-nerved, upper lemma ovate-elliptic smooth, weed in banana fields, grazed by sheep, growing with stems from runners under water below flowing streamlet, patches along roadside, in wetland, tropical rainforest, damp places in open or shade, sandy riverbanks, see *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *Mantissa* 2: 256. 1824, *De Graminibus Paniceis* 239. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 208. 1829, *Révision des Graminées* 1: 47. 1829, *Révision des Graminées* 2: 643, t. 209. 1834, *Nomenclator Botanicus. Editio secunda* 2: 264. 1841, *Synopsis Plantarum Glumacearum* 1: 70-71. 1854 [1853], *Flora of the British West Indian Islands* 548. 1864, *Flora Brasiliensis* 2(2): 211. 1877, *Biologia Centrali-Americana; ... Botany ...* 3: 486. 1885, *Mexicanas Plantas* 2: 25, 28. 1886 and *Repertorium Specierum Novarum Regni Vegetabilis* 11: 19. 1912, *Anales Científicos Paraguayos, ser. 2* No. 2. 151. 1918, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 3. 1921, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *American Journal of Botany* 90: 817. 2003.

in Portuguese: capim do brejo

P. polygonatum Schrad. var. *hirticaule* E. Fourn.

Mexico. See *Mantissa* 2: 256. 1824, *Mexicanas Plantas* 2: 25, 28. 1886.

P. porphyrrhizos Steud. (*Panicum praelongum* Mez, nom. illeg., non *Panicum praelongum* Steud.)

Tropical Africa. Annual or short-lived perennial, caespitose, robust, nonspongy culms, forming loose tussocks, tough, erect or ascending, leaf blades linear acute to acuminate,

open panicle with divaricate branches, spikelets lanceolate nerved acuminate to cuspidate, lower glume broadly ovate and sheathing, upper glume narrowly ovate 7-9-nerved, lower lemma 7-9-nerved, lower palea well-developed, good grazing for all stock, used as a broom, growing on moist soils, near water, swampy areas, ditches, along rivers, closely related to *Panicum coloratum* and *Panicum subalbidum*, see *Synopsis Plantarum Glumacearum* 1: 72. 1854 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 186. 1921.

in Ghana: sara, sisia

P. pradanum León (*Paspalidium pradanum* (León) Davidse & R.W. Pohl; *Setaria pradana* (León) León)

The Caribbean, Cuba. In open thickets, see *Manual of the Grasses of the West Indies* 294, f. 284. 1936, *Flora de Cuba* 1: 164. 1946, *Illinois Biological Monographs* 29: 1-132. 1962, *Novon* 2(2): 106. 1992, *Sida* 16(3): 439-446. 1995.

P. praealtum Afzel.

Tropical Africa, Sierra Leone. Perennial, robust, on sandy soil, savannah, see *Adnotationes Botanicae* 5. 1829.

in Guinea: ayilutu

in Sierra Leone: baiko, muli, pagwe, penipagbel

P. prionitis Nees (*Coleataenia gynerioides* Griseb.; *Panicum gynerioides* (Griseb.) Pilg.; *Panicum prionitis* subsp. *gynerioides* (Griseb.) Pilg.; *Panicum prionitis* subsp. *gynerioides* (Griseb.) Roseng., Arriaga & Izag.; *Panicum prionitis* var. *pallidum* Kuntze; *Panicum prionitis* var. *varium* Kuntze)

Argentina, Uruguay, Brazil, Paraguay. Perennial, solid, erect, coarse, tough, glumes acute, unpalatable, found in low areas in pastures, seasonally flooded areas, marshland and temporarily or permanently inundated meadows, coastal wetlands, freshwater or brackish coastal lagoons, swampy ground, similar to *Panicum grumosum* and *Panicum rivulare*, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 162. 1829, *Symbolae ad Floram Argentanam. Zweite* 308. 1879, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 243. 1931, *Gramíneas Uruguayas* 341, f. 143. 1970, *Darwiniana* 29: 289-370. 1989.

in English: panic grass

in Portuguese: capim Santa Fe

in Spanish: paja brava, paja de techar

P. psammophilum Welw. ex Rendle (*Brachiaria psammophila* (Welw. ex Rendle) Launert; *Leucophrys psammophila* (Welw. ex Rendle) Dandy; *Panicum psammophilum* Nash, nom. illeg., non *Panicum psammophilum* Welw. ex Rendle)

Tropical Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 171. 1899, *Bulletin of the Torrey Botanical Club* 26(11): 576. 1899 and

Journal of Botany, British and Foreign 69(2): 54. 1931, *Mitteilungen der Botanischen Staatssammlung München* 8: 147-163. 1970.

P. pseudagrostis Trin. (*Panicum pellitum* var. *pseudagrostis* (Trin.) Nees)

U.S., Hawaii. See *De Graminibus Paniceis* 197, 199. 1826, *Gramineae* 37. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 169. 1843.

P. pseudisachne Mez

Brazil. Perennial, erect to ascending, rooting at the nodes, slender knotty rhizome, cordate leaf blades lanceolate to narrowly lanceolate, leaves acute or acuminate, panicle ovate much branched with spreading branches, ovate-oblong or orbicular spikelets pubescent, awnless, lower glume ovate 3-nerved acute, upper glume ovate 5-nerved, lower lemma 5-nerved, found in grassland, deep sandy loam, resembles *Panicum cyanescens*, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 71. 1917.

P. psilanthum Steud. (*Panicum hylaeicum* Mez; *Panicum laxum* Sw.; *Panicum laxum* var. *laxum*; *Steinchisma laxa* (Sw.) Zuloaga)

Uruguay. See *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *Synopsis Plantarum Glumacearum* 1: 66. 1853 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 75. 1917, *American Journal of Botany* 90: 817. 2003.

P. psilocaulon Steud. (*Setaria parviflora* (Poir.) Kerguelén)

South America. See *Encyclopédie Méthodique, Botanique* 6: 52. 1804, *Synopsis Plantarum Glumacearum* 1: 50. 1853 and *Lejeunia*; *Revue de Botanique. Nouvelle série* 120: 161. 1987.

P. psilopodium Trin. (*Panicum flexuosum* Retz.; *Panicum sumatrense* Roth ex Roem. & Schult.; *Panicum sumatrense* subsp. *psilopodium* (Trin.) de Wet)

Tropical Asia, Taiwan, China, Indonesia, India, Nepal, Thailand, Sri Lanka, Southeast Asia. Annual, erect, simple or branched from the lower and middle nodes, usually leafy, often tufted, rarely rooting at the lower nodes, nodes and internodes glabrous, sheaths slipping from the culms, ligule a lacerate membranous ring or a ciliate membrane, leaf blades linear and tapering to a very sharp point, inflorescence not nodding, a panicle effuse with spreading branches, small deciduous spikelets readily disarticulating at maturity, lower floret sterile, upper floret elliptic and acute, purple stigmas, cultivated, grazed, a poor fodder, a rice-associated weed, open habitats, grasslands, in very poor soils, marshy areas, wet places, forest, sunny places, see *Observationes Botanicae* 3: 9. 1783, *Systema Vegetabilium* 2: 434. 1817, *De Graminibus Paniceis* 217. 1826, *Enum. Pl. Zeyl.* 360. 1864, *The Flora of British India* 7: 47. 1896 and *Handb. Fl. Ceylon* 6: 321. 1931, *Grasses of*

Ceylon 115. 1956, *Grasses of Burma* 329. 1960, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Journal of Cytology and Genetics* 22: 12-22. 1987, *Blumea* 34: 77-85. 1989, *Cytologia* 55: 315-319. 1990, *Blumea* 41: 206. 1996.

in India: jhonsi chikni, jonsee chiknee, kutki, mijhri

P. psilopodium Trin. var. ***coloratum*** Hook.f. (*Panicum sumatrense* Roth ex Roem. & Schult.)

India, Indonesia. Fodder, grains used in preparation of alcoholic beverage, see *Systema Vegetabilium* 2: 434. 1817, *The Flora of British India* 7: 47. 1896 and *Blumea* 34: 77-85. 1989.

in India: chire kutki, kadai kanai, kuree, kuri, pattupillu

P. psilopodium Trin. var. ***epaleatum*** Keng ex S.L. Chen, T.D. Zhuang & X.L. Yang (*Panicum psilopodium* var. *epaleatum* Keng)

Asia. See *De Graminibus Paniceis* 217. 1826 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 118, 220. 1957, *Bulletin of Botanical Research* 4(2): 124. 1984.

P. psilopodium Trin. var. ***psilopodium*** (*Panicum sumatrense* Roth ex Roem. & Schult.)

India, Asia. Fodder, grains used in preparation of alcoholic beverage, see *Systema Vegetabilium* 2: 434. 1817, *The Flora of British India* 7: 47. 1896 and *Blumea* 34: 77-85. 1989.

in India: bili saame hullu, chire kutki, kaadu kari saame hullu, kadai kanai, kodaikanai, kuree, kuri, pattu pullu, pattupillu, piva pullu

P. puberulum (Link) Kunth (*Digitaria puberula* Link; *Panicum puberulum* Trin., nom. illeg., non *Panicum puberulum* (Link) Kunth; *Reimaria puberula* (Link) Link; *Syntherisma puberula* (Link) Newbold)

Origin unknown. See *Flora Caroliniana, secundum ...* 76. 1788, *Hortus Regius Botanicus Berolinensis* 1: 223. 1827, *Révision des Graminées* 1: 32. 1829, *Hortus Regius Botanicus Berolinensis* 2: 203. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 277. 1834 and *Österreichische Botanische Zeitschrift* 51: 332. 1901 and *Torreyia* 24: 9. 1924.

P. pulchellum Raddi (*Eriochloa pulchella* (Raddi) Kunth; *Hymenachne leptostachya* (J. Presl) E. Fourn.; *Panicum bipustulatum* Schldl.; *Panicum bistipulatum* Schldl. ex Steud.; *Panicum leptostachyum* J. Presl)

The Caribbean, Brazil, Mexico, Bolivia. Annual or short-lived perennial, decumbent, herbaceous, creeping, delicate, rooting at the lower nodes, leaf blades lanceolate or ovate acute or acuminate, lax oblong panicle, spikelets lanceolate pubescent acuminate, lower glume ovate 1-3-nerved, upper glume 3-5-nerved, lower lemma 5-nerved glandular, upper lemma elliptic smooth, weed in roadside vegetation, open

areas, along river and stream, roadsides, riverbanks, see *Agrostografia Brasiliensis* 42. 1823, *Révision des Graminées* 1: 30. 1829, *Reliquiae Haenkeanae* 1(4-5): 311. 1830, *Linnaea* 26(2): 135. 1854, *Synopsis Plantarum Glumacearum* 1: 417. 1855, *Mexicanas Plantas* 2: 36. 1886.

P. pusillum Hook.f. (*Panicum tyllanthum* Hack. ex Engl.)

Ethiopia. Annual, decumbent, delicate, pilose, branched, leaf blades lanceolate and narrowed at base, panicle ovate few-spiculate with branches and pedicels divaricate, spikelets narrowly elliptic, lower glume lanceolate 3-nerved, upper glume narrowly ovate 7-nerved, lower floret sterile with a reduced palea, upper floret deciduous, forming loose mats, open or shade, grassland, among rocks, see *Journal of the Linnean Society, Botany* 7: 227. 1864, *Abhandlungen der Königlich Akademie der Wissenschaften in Berlin* 2: 118. 1891 and *Flora of Tropical East Africa* 451-898. 1982, *Opera Botanica* 121: 159-172. 1993.

P. pycnanthum Steud. (*Hymenachne grumosa* (Nees) Zuloaga; *Panicum grumosum* Nees; *Panicum rivulare* var. *grumosum* (Nees) Hack.)

South America. See *De Graminibus Paniceis* 213. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 182. 1829, *Synopsis Plantarum Glumacearum* 1: 70. 1853 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 343. 1909, *American Journal of Botany* 90: 817. 2003.

P. pygmaeum R. Br.

Queensland, New South Wales. Perennial, rather weak, slender and branched, decumbent, forming spreading patches, ligule a row of cilia, leaf blades soft, leaves dark green and linear-lanceolate to lanceolate, panicle branched, spikelets green solitary or paired, nerveless lower glume obtuse or truncate, upper glume nerved, lower lemma sterile and epaleate, upper lemma smooth and shining, seeds striate and shiny, shade species, fodder plants, foliage browsed by marsupials, moist areas, rainforest and margins, eucalypt forest, see *Prodromus Florae Novae Hollandiae* 191. 1810.

in English: dwarf panic, pigmy panic

P. pygmaeum R. Br. var. *glabrescens* Hack.

Australia. See *Prodromus Florae Novae Hollandiae* 191. 1810 and *Repertorium Specierum Novarum Regni Vegetabilis* 11: 18. 1912.

P. pyrularium Hitchc. & Chase (*Panicum quetameense* Mez)

Panama, Colombia. Annual, small, stoloniferous, found in moist places, riverbanks, shade to partial shade, see *Species Plantarum* 1: 58. 1753 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Contributions from the United States National Herbarium* 17(6): 508, f. 95. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 75. 1917.

P. quadrifarium Hochst. ex A. Rich. (*Echinochloa pyramidalis* (Lam.) Hitchc. & Chase; *Echinochloa quadrifaria* (Hochst. ex A. Rich.) Chiov.; *Panicum pyramidale* var.

quadrifarium (Hochst. ex A. Rich.) Chiov.; *Panicum quadrifarium* Hochst.)

Ethiopia. Swamp margins, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Flora* 24: 19. 1841, *Tentamen Florae Abyssinicae ...* 2: 367. 1850 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 298. 1908, *Contributions from the United States National Herbarium* 18(7): 345. 1917, *Malpighia* 34: 537. 1937.

P. quadriglume (Döll) Hitchc. (*Panicum bergii* f. *quadriglume* Henrard; *Panicum bergii* var. *quadriglume* Henrard; *Panicum cayennense* var. *quadriglume* Döll; *Panicum eccentricos* Hitchc. & Chase ex Rojas)

Argentina, Peru, Bolivia, Brazil, Paraguay. Perennial, caespitose, pilose, erect, leaf blades linear finely acute or acuminate, terminal panicle oblong-ovate with delicate branches, spikelets ovate glabrous, three-flowered spikelets, the upper flower is always perfect, the lower flower may be staminate or neutral, the medium one perfect, staminate or neutral, growing in grassland, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Flora Brasiliensis* 2(2): 220. 1877 and *Mededeelingen van's Rijks-Herbarium* 40: 52. 1921, *Contributions from the United States National Herbarium* 24(8): 460. 1927, *Revista del Jardín Botánico y Museo de Historia Natural del Paraguay* 2: 164. 1930.

P. queenslandicum Domin

Indonesia, Australia, Queensland, New South Wales. Perennial, erect, densely caespitose, forming dense tussocks, culms fibrous and smooth, sheaths usually glabrous, ligule a dense row of cilia, compound panicle much branched and stiffly spreading, branchlets in whorl, green-to-purplish spikelets paired and lanceolate, lower floret sterile, upper lemma smooth and shining, seeds dark and shiny, clay soils, in floodways, fruits and seeds blow in the wind, seeds a food source for seed-eating birds and small rodents, foliage eaten by stock and native animals, may cause photosensitization in sheep, see *Repertorium Specierum Novarum Regni Vegetabilis* 10: 58. 1911.

in Australia: Yadbila grass, Yabila grass, Coolibah grass, Coolabah grass

P. queenslandicum Domin var. *acuminatum* Vickery

New South Wales. Narrow spikelets, see *Repertorium Specierum Novarum Regni Vegetabilis* 10: 58. 1911, *Contributions from the New South Wales National Herbarium* 1: 334. 1950.

P. queenslandicum Domin var. *queenslandicum*

Queensland, New South Wales. See *Repertorium Specierum Novarum Regni Vegetabilis* 10: 58. 1911.

P. quinquangulare Ham. ex Wall.

Asia. See N. Wallich (1786-1854), *A Numerical List of Dried Specimens* no. 8725 B. London 1848[1849].

P. racemiferum Steud. (*Panicum racemiferum* Wawra, nom. illeg., non *Panicum racemiferum* Steud.)

Central America, Brazil. See *Synopsis Plantarum Glumacearum* 1: 64. 1855 [1853 or 1854], *Österreichische Botanische Zeitschrift* 12: 171. 1862.

P. racemosum (P. Beauv.) Spreng. (*Eriolytrum junceum* Desv. ex Kunth; *Monachne racemosum* P. Beauv.; *Panicum megastachyum* J. Presl, nom. illeg., non *Panicum megastachyum* Nees ex Trin.; *Panicum montevidense* Spreng. ex Döll; *Panicum preslii* Kunth; *Panicum racemosum* (P. Beauv.) Raspail, nom. illeg., non *Panicum racemosum* (P. Beauv.) Spreng.; *Panicum reptans* (Lam.) Kunth, nom. illeg., non *Panicum reptans* L.; *Saccharum reptans* Lam.; *Talassium montevidense* Spreng.; *Thalassium montevidense* Spreng.)

Argentina, Uruguay, Brazil. Perennial, tough, stout rhizomatous, vertical growth, leaf blades linear flexuous acuminate, contracted panicle sparsely branched, spikelets ovate densely pilose, lower glume 9-nerved acute, upper glume ovate 11-nerved acute, lower lemma ovate 9-nerved, weed, forming monospecific stands, on coastal sand dunes, mobile dunes, salt marsh and lagoons, woods, coastal wetlands, grassy marshes, beach strips and marine areas, useful for erosion control and dune-building, similar to *Panicum urvilleanum*, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 155. 1791, *Essai d'une Nouvelle Agrostographie* 168, t. 10, f. 10. 1812, *Systema Vegetabilium, editio decima sexta* 1: 313. 1825 [1824], *Annales des Sciences Naturelles, Botanique* I 5: 299. 1825, *Systema Vegetabilium, editio decima sexta* 4: 30. 1827, *Révision des Graminées* 1: 219, t. 21. 1830, *Reliquiae Haenkeanae* 1(4-5): 305. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 121. 1833, *Flora Brasiliensis* 2: 260. 1877 and *Contr. U.S. Natl. Herb.* 24: 465. 1927, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Gayana, Botánica* 44(1-4): 25-32. 1987.

in Spanish: pasto dibujante

in Argentina: tupe

in Brazil: capim-da-areia

P. raddianum Steud. (*Oplismenus hirtellus* subsp. *fasciculatus* U. Scholz; *Oplismenus hirtellus* subsp. *hirtellus*)

Africa. See *Essai d'une Nouvelle Agrostographie* 54, 168, 170. 1812, *Synopsis Plantarum Glumacearum* 1: 45. 1853 and *Phanerogamarum Monographiae* 13: 118, f. 29. 1981.

P. radiatus H. St. John

Pacific. See *Pacific Science* 13: 158. 1959.

P. radicans Retz. (*Cyrtococcum patens* (L.) A. Camus; *Cyrtococcum radicans* (Retz.) Stapf; *Panicum radicans* Llanos, nom. illeg., non *Panicum radicans* Retz.)

Warm regions, Asia, the Philippines. See *Species Plantarum* 1: 58. 1753, *Observationes Botanicae* 4: 18. 1786, *Fragmentos de Algunas Plantas Filipinas* 43. 1851 and *Bulletin*

du Muséum National d'Histoire Naturelle 27(1): 118. 1921, *Hooker's Icones Plantarum* 31(4): t. 3096, in nota p. 2. 1922, *Blumea* 41: 430. 1996.

P. radicans Retz. var. ***laxiflorae*** Boerl.

Asia. See *Annales du Jardin Botanique de Buitenzorg* 8: 62. 1890.

P. ramiparum Swallen (*Dichantheium umbonulatum* (Swallen) Davidse; *Panicum umbonulatum* Swallen)

Guatemala. Montane, upper slopes, see *Contributions from the United States National Herbarium* 29(9): 420, 423. 1950, *Novon* 2(2): 81-110. 1992, *Flora Mesoamericana* 6: 322-326. 1994.

P. ramosissimum Trin. (*Dichantheium sabulorum* var. *polycladum* (Ekman) Zuloaga; *Panicum ramosissimum* C. Cordem., nom. illeg., non *Panicum ramosissimum* Trin.; *Panicum ramosissimum* Larrañaga, nom. illeg., non *Panicum ramosissimum* Trin.; *Panicum sabulorum* var. *polycladum* (Ekman) R.A. Palacios)

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 312. 1834, *Flore de l'Île de la Réunion* 117. 1895 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 24, t. 3, f. 2. 1912, *Escritos de Don Damaso Antonio Larrañaga* 2: 29, 476. 1923, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 316. 1969, *Novon* 1(3): 111-118. 1991, *Annals of the Missouri Botanical Garden* 80(1): 119-190. 1993, *American Journal of Botany* 90: 817. 2003.

P. ramosius A.S. Hitchc.

U.S., Hawaii, Kentucky. Vulnerable species, see *Journal of Botany, British and Foreign* 71: 6. 1933.

in English: Lanai panic grass

P. recalvum (Nees) Kunth (*Digitaria laxa* (Rchb.) Parodi; *Reimaria laxa* Rchb.; *Trichachne recalva* Nees)

Brazil. See *Révision des Graminées* 1: 39. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 88, 98. 1829 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 18. 1928.

P. repandum Nees ex Trin. (*Panicum repandum* Nees, nom. illeg., non *Panicum repandum* Nees ex Trin.; *Thrasypopsis repanda* (Nees ex Trin.) Parodi)

Warm regions. See *Species Graminum* 2: t. 150. 1829 and *Boletín de la Sociedad Argentina de Botánica* 1(4): 297. 1946.

P. repens L. (*Panicum aquaticum* Hochst. ex A. Rich., nom. illeg., non *Panicum aquaticum* Poir.; *Panicum arenarium* Brot.; *Panicum arenarium* M. Bieb., nom. illeg., non *Panicum arenarium* Brot.; *Panicum chromatostigma* Pilg.; *Panicum convolutum* P. Beauv. ex Spreng.; *Panicum gouinii* E. Fourn.; *Panicum gouinii* var. *pumilum* E. Fourn.; *Panicum*

hygrocharis Steud.; *Panicum ischaemoides* Retz.; *Panicum leiogonum* Delile; *Panicum littorale* Mohr ex Vasey; *Panicum nitidum* Hack. & Arechav., nom. illeg., non *Panicum nitidum* Lam.; *Panicum notatum* Retz.)

Tropics, subtropics. Perennial sod-forming grass, long-lived, aquatic or subaquatic, submerged or partly submerged or floating in water, grayish green, rigid and upright stems, creeping and rooting freely, strongly long rhizomatous, robust and scaly rhizomes torpedo shaped, occasionally stoloniferous, dark nodes, leaf sheaths smooth but fringed with long hairs along the margin, ligule short and fringed with hairs, leaf blades narrow and linear, leaves distichous and usually pungent, blade surfaces often with a whitish waxy coating, inflorescence with branches open and stiffly ascending, spikelets stalked ovate-oblong to acuminate and white with yellow flower parts, upper floret stramineous at maturity, upper glume ovate, lower glume truncate and clasping, lower floret staminate, upper lemma elliptic and smooth to shiny, palea hyaline and well developed, anthers yellowish orange, stigmas purple, seeds smooth and mostly white to straw-colored, invasive grass, very aggressive, plant variable in size according to the habitat, noxious weed of deepwater rice in Asia and West Africa, often a troublesome weed in ditches and drains, potential seed contaminant, palatable pasture grass, high nutritive value, hay, good-to-poor forage grass, good fodder for all stock, tolerates flooding and drought, can stand partial shade, resistant to grazing and trampling, very useful for erosion control and as a sand binder, useful binder for canal banks, good grass for turfs and lawns, noxious weed species forming dense colonies dominant along a shoreline, widespread in marshy areas near fresh or salt water and on sandy soils, seasonal and permanent swamps, on saline sands, along shore of lakes, disturbed ground and wet soils, in moist to wet sandy or organic soils, ditches, in or near shallow waters, alluvial soils, in a poorly drained wet area, on moist coastal sandy soils and on heavy upland soils, in roadsides and wastelands, see *Species Plantarum, Editio Secunda* 1: 87. 1762, *Observationes Botanicae* 4: 17-18. 1786, *Flora Lusitanica* 1: 82. 1804, *Flora Taurico-Caucasica* 1: 52. 1808, *Flora Indica; or Descriptions ...* 1: 310. 1820, *Systema Vegetabilium, editio decima sexta* 1: 319. 1825, *Description de l'Égypte, ... Histoire Naturelle, Tome Second* 51. 1829, *Tentamen Florae Abyssinicae ...* 2: 373. 1850, *Synopsis Plantarum Glumacearum* 1: 72. 1854, *Enum. Pl. Zeyl.* 360. 1864, *Botanical Gazette* 4(1): 106. 1879, *Mexicanas Plantas* 2: 28. 1886, *Bulletin of the Torrey Botanical Club* 13(2): 25. 1886, *Anales del Museo Nacional de Montevideo* 1: 131. 1894, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Handb. Fl. Ceylon* 5: 154. 1900, *Mémoires de l'Institut Égyptien* 4: 301. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 48. 1902, *Contr. U.S. Natl. Herb.* 15: 85-86. 1910, *Handb. Fl. Ceylon* 6: 320. 1931, *Flore de l'Afrique du Nord:*

1: 316. 1952, *Grasses of Ceylon* 114. 1956, *Grasses of Burma ...* 330. 1960, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Cytologia* 60: 347-351. 1995, *Blumea* 41: 199, 202. 1996.

in English: torpedo grass, couch panicum, couch grass, Victoria grass, creeping panic grass, panic grass, creeping witchgrass, creeping panicum, quack grass, Wainaku grass, bullet grass

in French: millet rampant, panic rampant

in Spanish: canota

in Arabic: n'gîl, nesi, zommar

in Guinea-Bissau: otigna, uncanda

in Mali: bama subu, buga subu, farka teli

in Morocco: rjel l-gorab

in Niger: kargaeri, kashâ

in Nigeria: ekuro imado, epose

in Senegal: bama subu, e kena, ékenà, éselek

in Sierra Leone: angbalet, kawaya, ngnkakpo, piso, somesemese, sumfu, wasa, yolo, yowo

in South Africa: bamboesweek, grootblousaadgras, kruipgras, varkgras, kweekbuffelsgras

in Burma: myet-kha

in Cambodia: chhlong, smau phluk

in India: allapu kommu vella vanti gaddi, bamdu, berad, chota jolgantee, inchi pillu, injipillu, kari kaddi hullu, ladda gaddi, panidal, reda, shunti hullu, sonti hullu, sukkanaaru pullu, sunti hullu, thineipillu

in Indonesia: benda laut, ramput kumaranting, suket balungen

in Japan: hai-kibi (= creeping *Panicum*)

in Malaysia: kerunong padi, metubong, telur ikan

in Okinawa: najichu

in the Philippine Islands: kayana, luy-a-luy-a, luya-luyahan, maralaya

in Sri Lanka: etora, inji pul

in Thailand: khaem man, ya-chanakat, yaa channakaat, ya channakat, ya khaemman, yaa o noi, ya o noi, ya-onoi

in Vietnam: coì cu'a gà, co'ông

***P. repens* L. var. *arenarium* (Brot.) Kuntze**

Europe. See *Flora Lusitanica* 1: 82. 1804, *Revisio Generum Plantarum* 3(3): 363. 1898.

***P. repens* L. var. *crassicaule* Kuntze**

Africa. See *Revisio Generum Plantarum* 3(3): 363. 1898.

***P. repens* L. var. *elatum* Lojac.**

Europe. See *Flora Sicula* 3: 267. 1909.

P. repens L. var. ***glabrescens*** Batt. & Trab.

North Africa. See *Flore de l'Algérie* 133. 1895.

P. repens L. var. ***ischaemoides*** (Retz.) Boerl. (*Panicum ischaemoides* Retz.)

Asia. See *Observationes Botanicae* 4: 17. 1786, *Annales du Jardin Botanique de Buitenzorg* 8: 62. 1890.

P. repens L. var. ***leiogonum*** Delile ex Schweinf.

Egypt. See *Bulletin de l'Institut d'Égypte* II 8(1887): 329. 1888.

P. repente Buckley (*Panicum obtusum* Kunth)

U.S. See *Nova Genera et Species Plantarum* 1: 98-99. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 72. 1854, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 3. 1866 and *Kirkia* 3: 127. 1963.

P. repentellum Napper (*Panicum hygrocharis* Steud.)

East Africa, Malawi, Zaire, Zambia, Sudan, Ethiopia. Perennial or short-lived perennial, aquatic, erect or decumbent, rhizomatous and stoloniferous, fine slender leaves, lower glume ovate to broadly ovate, lower floret usually male, palea present, common around streams, vleis, lakes, on black soil, in water, see *Tentamen Florae Abyssinicae* ... 2: 373. 1850, *Synopsis Plantarum Glumacearum* 1: 72. 1854 and *Kirkia* 3: 127. 1963.

P. restingae Renvoize & Zuloaga

Brazil. Perennial, erect, base densely pilose, leaf sheaths densely pilose, ligule ciliate, leaf blades linear-lanceolate pungent, panicle spike-like, spikelets broadly oblong glabrous, lower glume 3-nerved, upper glume 5-nerved, lower lemma 5-nerved, upper lemma rostrate, see *Kew Bull.* 39(1): 191, f. 3C-D, 4B. 1984.

P. reverchonii Vasey (*Chaetochloa reverchonii* (Vasey) Smyth; *Setaria reverchonii* (Vasey) Pilg.)

U.S. See *Transactions of the Kansas Academy of Science* 25: 88. 1913 and *Department of Agriculture. Botanical Division. Bulletin* 8: 25. 1889 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940.

P. rhabdinum Steud. (*Isachne pangerangensis* var. *rhabdina* (Steud.) Henrard; *Isachne rhabdina* (Steud.) Henrard; *Isachne rhabdina* (Steud.) Ohwi, nom. illeg., non *Isachne rhabdina* (Steud.) Henrard; *Isachne rhabdina* var. *rhabdina* (Steud.) Henrard) (from the Greek *rhabdos* "a rod, stick, a magic wand")

Asia, Indonesia. See *Synopsis Plantarum Glumacearum* 1: 96. 1854 and *Blumea* 4(3): 530. 1941, *Bulletin of the Tokyo Science Museum* 18: 1. 1947.

P. rhigiophyllum Steud. (*Panicum rudgei* Roem. & Schult.) (Greek *rhigoo* "to be rigid, to be cold," *rhigos* "cold, frost" and *phyllon* "leaf")

Brazil. See *Systema Vegetabilium, editio decima sexta* 2: 444. 1817, *Synopsis Plantarum Glumacearum* 1: 76. 1853.

P. rhizogonum Hack.

Brazil to Argentina. Panicle branches spreading, spikelets obtuse and puberulous, common in forest shade, see *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 73. 1915.

P. richardi Asch. (*Panicum richardi* C. Cordem., nom. illeg., non *Panicum richardi* Asch.)

Africa, Ethiopia. See *Beitrag zur Flora Aethiopiens* ... 310 [or 306]. 1867, *Flore de l'Île de la Réunion* 118. 1895.

P. rigens Sw. (*Isachne rigens* (Sw.) Trin.; *Panicum rigens* Mez, nom. illeg., non *Panicum rigens* Sw.; *Panicum rigens* Salzm. ex Steud., nom. inval., non Swartz)

The Caribbean, Jamaica. See *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *De Graminibus Paniceis* 252. 1826, *Synopsis Plantarum Glumacearum* 1: 76. 1854 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 141. 1904.

P. rigidifolium (Poir.) Kunth (*Agrostis rigidifolia* Poir.; *Isachne rigidifolia* (Poir.) Urb.; *Panicum rigidifolium* Trin., nom. illeg., non *Panicum rigidifolium* (Poir.) Kunth)

South America, Brazil. See *Encyclopédie Méthodique, Botanique Suppl.* 1: 257. 1810 *Révision des Graminées* 1: 37. 1829, *Species Graminum* 2(18): t. 214. 1829 and *Symbolae Antillarum* 4: 85. 1903.

P. rigidulum Bosc ex Nees (*Panicum agrostoides* Spreng.; *Panicum agrostoides* Salzm. ex Steud., nom. illeg., non *Panicum agrostoides* Spreng.; *Panicum agrostoides* var. *condensum* (Nash) Fernald; *Panicum agrostoides* var. *ramosius* (C. Mohr) Fernald; *Panicum anceps* Michx.; *Panicum condensum* Nash; *Panicum rigidulum* Bosc ex Spreng.; *Panicum rigidulum* var. *condensum* (Nash) Mohlenbr.; *Panicum stipitatum* Nash)

U.S., Florida, Guatemala, Mexico. Perennial, tufted, erect and robust stems, smooth, leaf blades strongly ribbed and folded at base, sheaths loose, ligule minute or tiny, rigid and dark reddish inflorescence spike-like or open and ascending-spreading, very tiny straight spikelets lance shaped and stalked, growing in wet ditches, wet meadows, wet prairies, damp woods, in roadside ditches, along streams and around ponds and lakes, see *Transactions of the American Philosophical Society* 4: 236. 1799, *Flora Boreali-Americana* 1: 48. 1803, *Plantarum Minus Cognitarum Pugillus* 2: 4. 1815, *Systema Vegetabilium, editio decima sexta* 1: 320. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829, *Synopsis Plantarum Glumacearum* 1: 93. 1854 and *Contributions from the United States National Herbarium* 6: 357. 1901, *Bulletin, Division of Agrostology United States Department of Agriculture* 17(edition 2): 56. 1901, *Flora of the Southeastern United States* ... 93: 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 100.

1910, *Rhodora* 36(423): 74. 1934, *Rhodora* 38(455): 390. 1936, *Illustrations of Indian Botany* 71. 1973.

in English: red-top panic grass, redtop panicum

P. rigidulum Bosc ex Nees subsp. ***abscissum*** (Swallen) Freckmann & Lelong (*Panicum abscissum* Swallen)

America. Sandy places, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829 and *Journal of the Washington Academy of Sciences* 30(5): 215, f. 4. 1940, *Sida* 20(1): 172. 2002.

P. rigidulum Bosc ex Nees subsp. ***combsii*** (Scribn. & Ball) Freckmann & Lelong (*Panicum combsii* Scribn. & Ball; *Panicum longifolium* var. *combsii* (Scribn. & Ball) Fern.; *Panicum rigidulum* var. *combsii* (Scribn. & C.R. Ball) Lelong)

America. In damp places, see *A Flora of the Northern and Middle Sections of the United States* 1: 149. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 42, f. 16. 1901, *Rhodora* 36(423): 69. 1934, *Journal of the Washington Academy of Sciences* 30(5): 215, f. 4. 1940, *Brittonia* 36(3): 263. 1984, *Sida* 20(1): 172. 2002.

P. rigidulum Bosc ex Nees subsp. ***elongatum*** (Scribn.) Freckmann & Lelong (*Panicum agrostoides* var. *elongatum* (Pursh) Scribn.; *Panicum elongatum* Pursh, nom. illeg., non *Panicum elongatum* Salisb.; *Panicum rigidulum* var. *elongatum* (Pursh) Lelong; *Panicum rigidulum* var. *elongatum* (Scribn.) Lelong; *Panicum stipitatum* Nash)

America. Meadows, shores and swamps, see *Flora Americae Septentrionalis; or, ...* 1: 69. 1813 [1814], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 2: 42, t. 9, f. 34. 1894 and *Bulletin, Division of Agrostology United States Department of Agriculture* 17(edition 2): 56. 1901, *Contr. U.S. Natl. Herb.* 15: 104. 1910, *Brittonia* 36(3): 263. 1984, *Sida* 20(1): 172-173. 2002, *Flora of North America North of Mexico* 25: i-xxv, 1-783. 2003.

P. rigidulum Bosc ex Nees subsp. ***pubescens*** (Vasey) Freckmann & Lelong (*Panicum anceps* var. *pubescens* Vasey; *Panicum longifolium* Torrey; *Panicum longifolium* var. *pubescens* (Vasey) Fernald; *Panicum longifolium* var. *tusketense* Fern.)

America, U.S. Perennial, densely tufted, sheaths keeled and pubescent at junction with blade, grows in meadows and bogs, shores and swamps, see *A Flora of the Northern and Middle Sections of the United States* 1: 149. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829, *Department of Agriculture. Botanical Division. Bulletin* 8: 37. 1889 and *Rhodora* 36(423): 69. 1934, *Brittonia* 36(3): 263. 1984, *Sida* 20(1): 173. 2002.

in English: long-leaved panic grass

P. rigidulum Bosc ex Nees var. ***combsii*** (Scribn. & C.R. Ball) Lelong (*Panicum combsii* Scribn. & Ball; *Panicum longifolium* var. *combsii* (Scribn. & Ball) Fern.; *Panicum rigidulum* subsp. *combsii* (Scribn. & Ball) Freckmann & Lelong)

America. In damp places, see *A Flora of the Northern and Middle Sections of the United States* 1: 149. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 42, f. 16. 1901, *Rhodora* 36(423): 69. 1934, *Journal of the Washington Academy of Sciences* 30(5): 215, f. 4. 1940, *Brittonia* 36(3): 263. 1984, *Sida* 20(1): 172. 2002.

P. rigidulum Bosc ex Nees var. ***condensum*** (Nash) Mohlenbr. (*Agrostis purpurascens* Bertero ex Steud.; *Panicum agrostoides* var. *condensum* (Nash) Fernald; *Panicum condensum* Nash; *Panicum contractum* Trin. ex Steud.)

U.S., Florida. See *Transactions of the American Philosophical Society* 4: 236. 1799, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829, *Nomenclator Botanicus. Editio secunda* 1: 42. 1840, *Nomenclator Botanicus. Editio secunda* 2: 254. 1841 and *Flora of the Southeastern United States ...* 93: 1327. 1903, *Rhodora* 36(423): 74. 1934, *Illustrations of Indian Botany* 71. 1973.

P. rigidulum Bosc ex Nees var. ***elongatum*** (Scribn.) Lelong

U.S. See (*Panicum agrostoides* var. *elongatum* (Pursh) Scribn.; *Panicum elongatum* Pursh, nom. illeg., non *Panicum elongatum* Salisb.; *Panicum rigidulum* subsp. *elongatum* (Scribn.) Freckmann & Lelong *Panicum rigidulum* var. *elongatum* (Pursh) Lelong; *Panicum stipitatum* Nash)

America. Meadows, shores and swamps, see *Flora Americae Septentrionalis; or, ...* 1: 69. 1813 [1814], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 2: 42, t. 9, f. 34. 1894 and *Bulletin, Division of Agrostology United States Department of Agriculture* 17(edition 2): 56. 1901, *Contr. U.S. Natl. Herb.* 15: 104. 1910, *Brittonia* 36(3): 263. 1984, *Sida* 20(1): 172-173. 2002, *Flora of North America North of Mexico* 25: i-xxv, 1-783. 2003.

P. rigidulum Bosc ex Nees var. ***pubescens*** (Vasey) Lelong (*Panicum anceps* var. *pubescens* Vasey; *Panicum longifolium* Torrey; *Panicum longifolium* var. *pubescens* (Vasey) Fernald; *Panicum longifolium* var. *tusketense* Fern.; *Panicum rigidulum* subsp. *pubescens* (Vasey) Freckmann & Lelong)

America, U.S. Perennial, densely tufted, sheaths keeled and pubescent at junction with blade, grows in meadows and bogs, shores and swamps, see *A Flora of the Northern and Middle Sections of the United States* 1: 149. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829, *Department of Agriculture. Botanical Division. Bulletin* 8:

37. 1889 and *Rhodora* 36(423): 69. 1934, *Brittonia* 36(3): 263. 1984, *Sida* 20(1): 173. 2002.

P. rigidulum Bosc ex Nees var. ***rigidulum*** (*Agrostis polystachya* Bosc ex Steud.; *Panicum agrostoides* Muhl.; *Panicum agrostoides* Spreng.; *Panicum agrostoides* Salzm. ex Steud., nom. illeg., non *Panicum agrostoides* Spreng.; *Panicum agrostoides* Sprengel var. *agrostoides*; *Panicum agrostoides* var. *condensum* (Nash) Fern.; *Panicum agrostoides* var. *ramosius* (C. Mohr) Fern.; *Panicum anceps* Michx.; *Panicum condensum* Nash; *Panicum elongatum* var. *ramosius* C. Mohr; *Panicum rigidulum* Bosc ex Nees; *Panicum rigidulum* var. *condensum* (Nash) F. Seymour; *Panicum rigidulum* var. *condensum* (Nash) Mohlenbr.)

America, U.S. Perennial, strongly erect panicle branches, very tiny straight spikelets, leaves might cause photosensitization, meadows and shores, bottomland and mesic upland fields, see *Transactions of the American Philosophical Society* 4: 236. 1799, *Flora Boreali-Americana* 1: 48. 1803, *Plantarum Minus Cognitarum Pugillus* 2: 4. 1815, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829, *Nomenclator Botanicus* edition 2 1: 40. 1840, *Synopsis Plantarum Glumacearum* 1: 93. 1854 and *Contributions from the United States National Herbarium* 6: 357. 1901, *Flora of the Southeastern United States ...* 93: 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 100. 1910, *Rhodora* 36(423): 74. 1934, *Rhodora* 38(455): 390. 1936, *Illustrations of Indian Botany* 71. 1973.

in English: panic grass, Agrostis-like panic grass

P. rivae Chiov. (*Digitaria rivae* (Chiov.) Stapf)

Somalia. Desert grass, see *Annuario del Reale Istituto Botanico di Roma* 7: 62, t. 3, f. 2. 1897 and *Bulletin of Miscellaneous Information Kew* 1907: 213. 1907.

P. rivale Swallen (*Panicum angulosum* Swallen; *Panicum goeldii* Swallen)

Suriname, French Guiana, Cayenne. Sandy soil, rocky places, see *Bulletin of the Torrey Botanical Club* 75: 87. 1948, *Phytologia* 14(2): 72, 75. 1966.

P. rivulare Trin. (*Agrostis pernambucensis* Spreng.; *Hymenachne pernambucense* (Spreng.) Zuloaga; *Panicum excelsum* Nees; *Panicum pernambucense* (Spreng.) Mez ex Pilg.; *Panicum rivulare* Nees; *Panicum urticans* L.B. Sm. & Wassh.)

Brazil to Argentina. Perennial, tough, stout, robust, hollow culms, leaf sheaths glabrous, leaf blades linear and glabrous, leaves acuminate or pungent, panicle pyramidal or oblong, sessile or subsessile spikelets clustered or secund, lower glume broadly ovate 1- to 3-nerved, upper glume ovate 5-nerved, lower lemma 5-nerved and palea absent, upper lemma and palea coriaceous, found in swampy places, marshy places on riverbanks and pond margins, similar to *Panicum grumosum* and *Panicum prionitis*, see *Systema Vegetabilium, editio decima sexta* 1: 258. 1825,

De Graminibus Paniceis 213. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 180-182. 1829 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 343. 1909, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 15. 1940, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 246, f. 2 E-G. 1978, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 59: 1-156. 2000, *Flora Fanerogamica do Estado de São Paulo* 1: i-xxv, 1-292. 2001, *American Journal of Botany* 90: 817. 2003.

P. robustum B.K. Simon

Australia. See *Austrobaileya* 3(4): 598, f. 6. 1992.

P. rottleri Kunth (*Panicum rottleri* (Spreng.) Nees, nom. illeg., non *Panicum rottleri* Kunth; *Panicum rottleri* Sw., nom. illeg., non *Panicum rottleri* Sw.; *Setaria rottleri* Spreng.) (for the Alsatian-born Danish missionary Johan (John) Peter Rottler, 1749-1836 (d. Madras, India), traveler and botanist, orientalist, collector, from 1776 to 1806 at the Danish Mission at Tranquebar (Tamil Nadu, Coromandel coast, India), in 1788 in the Ganges region and in 1795 at Ceylon, wrote *A Dictionary of the Tamil and English Languages*. Madras 1834-1841, in 1828 translated *The Book of Common Prayer* in Tamil. See [Bible] [Tamil], *The Old Testament* [revised by C.G.E. Rhenius, with J.P. Rottler and others. 1827; J.H. Barnhart, *Biographical notes upon botanists*. 3: 183. 1965; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 301. A.A. Balkema Cape Town 1981; Martin H. Vahl (1749-1804), *M. Vahlia ... Enumeratio Plantarum*. 1: 87. Hauniae 1804; Bishop James M. Thoburn, *The Christian Conquest of India*. [Forward Mission Study Courses, edited under the auspices of the Young People's Missionary Movement.] Eaton & Mains, NY n.d.; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. Paris 1845; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Carl Frederik Albert Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926)

See *Systema Vegetabilium, editio decima sexta* 1: 304. 1825, *Révision des Graminées* 1: 33. 1829, *Adnotationes Botanicae* 7. 1829, *Florae Africae Australioris Illustrationes Monographicae* 53-34. 1841.

P. rottleri Kunth var. ***minor*** Nees

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 1: 53. 1841.

P. rubescens Larrañaga

America, Uruguay. See *Escritos de Don Damaso Antonio Larrañaga* 2: 29, 476. 1923.

P. rude Nees (*Panicum acuminatissimum* Nees ex Döll, nom. illeg., non *Panicum acuminatissimum* Nees ex Steud.; *Panicum albospiculatum* Swallen; *Panicum apricum* Swallen; *Panicum bambusifolium* Desv.; *Panicum kleinii* Swallen; *Panicum pompale* Swallen; *Panicum rude* Steud.; *Panicum secundum* Trin.; *Panicum secundum* var. *inaequiglume* Döll; *Panicum secundum* var. *subaequiglume* Döll; *Panicum semitectum* Swallen, nom. illeg., non *Panicum semitectum* Swallen)

Brazil. Perennial, erect, hollow culms, bases decumbent, in forest shade, along roadsides, woods, riverbanks, see *Nomenclator Botanicus* 1: 589, 772. 1821, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 158. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 187. 1831, *Species Graminum* 3: t. 324. 1829-1830, *Flora Brasiliensis* 2(2): 194. 1877 and *Sellowia* 18: 110-112. 1966, *Annals of the Missouri Botanical Garden* 75(2): 420-455. 1988, *Iheringia, Série Botânica* 41: 101-139. 1991, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 59: 1-156. 2000.

P. ruderale (Kitag.) Liou (*Panicum miliaceum* var. *ruderale* Kitag.)

Asia, China. See *Species Plantarum* 1: 58. 1753 and *Botanical Magazine* 51: 153, f. 3. 1937, *Claves Plantarum Xinjiangensium* 498. 1959.

P. rudgei Roem. & Schult. (*Panicum cayennense* var. *divaricatum* Döll; *Panicum dasytrichum* Spreng.; *Panicum pilosissimum* Roth ex Roem. & Schult.; *Panicum rhigiophyllum* Steud.; *Panicum rigens* Salzm. ex Steud., nom. illeg., non *Panicum rigens* Sw.; *Panicum rudgei* var. *brasiliense* Raddi; *Panicum scoparium* Rudge, nom. illeg., non *Panicum scoparium* Lam.) (for the English (b. Evesham, Wores) botanist Edward Rudge, 1763-1846 (d. Evesham), antiquary, 1802 Fellow of the Linnean Society, 1805 Fellow of the Royal Society, author of *Plantarum Guianae rariorum icones et descriptiones*. Londini 1805[-1806] and (presumably) of *Memoir* [of Anna Rudge], London [1836?], the botanist Samuel Rudge (1727-1817) was his uncle; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 188. Boston 1965; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 178. London 1904; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 598-599. 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Central and South America. Perennial, erect, ascending, decumbent, tufted, hispid, leaf blades linear rigid pungent, panicle terminal and axillary, spikelets ovate-elliptic glabrous or pilose acuminate, lower glume ovate 5-nerved acuminate, upper glume 7-nerved, upper lemma elliptic

smooth, forming small clumps, savannah, wet areas, sandy soil, along roadside, edge of stream, humid forest, see *Species Plantarum* 1: 55, 58. 1753, *Plantarum Guianae Rariorum Icones et Descriptiones* ... 1: 21, t. 29. 1805, *Systema Vegetabilium, editio decima sexta* 2: 444, 458. 1817, *Agrostografia Brasiliensis* 48. 1823, *Systema Vegetabilium, editio decima sexta* 1: 317. 1825, *Synopsis Plantarum Glumacearum* 1: 76. 1853 [1854], *Flora Brasiliensis* 2(2): 220. 1877 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Brittonia* 23(3): 293-324. 1971.

P. rupestre Trin. (*Panicum rupestre* var. *setifolium* Nees; *Panicum setifolium* Nees; *Panicum setifolium* Trin. ex Steud.)

Brazil. Perennial, rhizomatous, in wet sandy places, streamlets, see *De Graminibus Paniceis* 199. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 223. 1829, *Nomenclator Botanicus. Editio secunda* 2: 263. 1841.

P. ruspolii Chiov.

Africa. Perennial, ascending, branched, leaf blades linear pilose acuminate, forming loose tussocks, rhizomatous, panicle with distant primary branches ascending, spikelets gaping ovate nerved, glumes ovate with acuminate recurved tips, lower glume 5-nerved, upper glume 7- to 9-nerved, lower lemma 9-nerved acute to shortly acuminate with a well-developed palea, upper floret narrowly oblong, open woodland, bushland, on sandy soil, related to *Panicum anabaptistum*, see *Annuario del Reale Istituto Botanico di Roma* 7: 64, t. 4. 1897.

P. sabiense Renvoize

Africa, Rhodesia, Lower Sabi. See *Kew Bulletin* 34(3): 551-555. 1979 [1980].

P. sabulicola Nees (*Echinochloa crus-pavonis* (Kunth) Schult.; *Echinochloa crus-pavonis* var. *crus-pavonis*; *Echinochloa crusgalli* f. *sabulicola* (Nees) Farw.; *Echinochloa crusgalli* var. *crus-pavonis* (Kunth) Hitchc.; *Echinochloa crus-pavonis* (Kunth) Schult.; *Echinochloa cruspavonis* var. *cruspavonis*; *Echinochloa sabulicola* (Nees) Hitchc.; *Oplismenus sabulicolus* (Nees) Kunth; *Panicum crusgalli* var. *sabulicolum* (Nees) Döll; *Panicum crusgalli* var. *sabulicolum* (Nees) Trin.)

Brazil. See *Essai d'une Nouvelle Agrostographie* 1: 53, 161, 169, t. 11, f. 2. 1812, *Nova Genera et Species Plantarum* 1: 108. 1815 [1816], *Mantissa* 2: 269. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 258. 1829, *Species Graminum* 2: t. 163. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 145. 1833, *Flora Brasiliensis* 2(2): 142. 1877 and *Contributions from the United States National Herbarium* 17(3): 257. 1913, *Report of the Michigan Academy of Science, Arts and Letters* 21: 349. 1920, *Contributions from the United States National Herbarium* 22(3): 148. 1920, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *American Midland Naturalist* 87(1): 36-59. 1972, *Fl. Novo-Galic.* 14: 151. 1983.

P. sabulorum Lam. (*Dichantheium sabulorum* (Lam.) Gould & C.A. Clark; *Dichantheium sabulorum* var. *sabulorum*; *Panicum acutatatum* Steud.; *Panicum deltae* Parodi ex Burkart; *Panicum demissum* Trin.; *Panicum demissum* f. *decalvatum* (Döll) Ekman; *Panicum demissum* f. *villosum* (Döll) Ekman; *Panicum fultum* Hack.; *Panicum latiglume* Döll; *Panicum latiglume* var. *decalvatum* Döll; *Panicum latiglume* var. *villosum* Döll; *Panicum penganum* Phil.; *Panicum polycladum* Ekman; *Panicum sabulorum* var. *polycladum* (Ekman) R.A. Palacios)

Argentina, Uruguay, southern Brazil, Bolivia, Paraguay, Chile. Perennial, prostrate, geniculate, erect, delicate, branched, knotty base decumbent, shortly rhizomatous, rooting at the lower nodes, pilose or glabrous leaf blades lanceolate acute, ovate or oblong panicle terminal and axillary, prominently nerved spikelets ovate elliptic or obovate, lower glume ovate 1- to 5-nerved separated by a short internode, upper glume 7- to 9-nerved, upper lemma and palea smooth or scabrous, along roadsides, see *Encyclopédie Méthodique, Botanique* 4: 744. 1798, *Species Graminum* 3: t. 319. 1829-1830, *Synopsis Plantarum Glumacearum* 1: 86. 1854, *Flora Brasiliensis* 2(2): 257. 1877, *Anales de la Universidad de Chile* 93: 713. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 9. 1900, *Rhodora* 8(95): 209. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 342. 1909, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 24, t. 3, f. 2. 1912, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 28. 1913, *Boletín de la Sociedad Argentina de Botánica* 12: 291, f. 4-5. 1968, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969, *Annals of the Missouri Botanical Garden* 65(4): 1112. 1978 [1979], *Darwiniana* 29: 289-370. 1989, *Phytologia* 67(6): 452. 1989, *Novon* 1(3): 111-118. 1991, *Annals of the Missouri Botanical Garden* 80(1): 119-190. 1993, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 59: 1-156. 2000.

P. sabulorum Lam. var. ***polycladum*** (Ekman) R.A. Palacios (*Dichantheium sabulorum* (Lam.) Gould & C.A. Clark; *Panicum demissum* Trin.)

Argentina, Brazil, Bolivia, Paraguay, Chile. Perennial, see *Species Graminum* 1828-1836 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 24, t. 3, f. 2. 1912, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2a): 316. 1969, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978 [1979], *Annals of the Missouri Botanical Garden* 80(1): 119-190. 1993.

P. saccharatum Buckley (*Digitaria californica* (Benth.) Henrard; *Trichachne californica* (Benth.) Chase; *Trichachne saccharatum* (Buckley) Nash; *Tricholaena saccharata* (Buckley) Griseb.; *Valota saccharata* (Buckley) Chase) U.S. See *The Botany of the Voyage of H.M.S. Sulphur* 55. 1844, *Flora of the British West Indian Islands* 557. 1864,

A Preliminary Report on the Geological and Agricultural Survey of Texas App. 2. 1866 and *Flora of the Southeastern United States ...* 83. 1903, *Proceedings of the Biological Society of Washington* 19(34): 188. 1906, *Journal of the Washington Academy of Sciences* 23(10): 455. 1933, *Blumea* 1(1): 99. 1934.

P. saccolepoides Renvoize & Zuloaga

Brazil. Perennial, base pubescent, leaf sheaths carinate, ligule ciliate, leaf blades linear and pungent, panicle spike-like, pilose spikelets ovate-oblong, lower glume 3-nerved, upper glume 5-nerved, lower lemma 5-nerved, restinga, see *Kew Bulletin* 39(1): 191, f. 2A-B. 1984.

P. sarmentosum Roxb. (*Panicum sarmentosum* (Pers.) Raspail, nom. illeg., non *Panicum sarmentosum* Roxb.; *Panicum sarmentosum* Benth.)

Southeast Asia. Perennial, robust, stout, creeping or scrambling, strongly branched, rooting and branching from the nodes, weed species, in Malaya the roots chewed with betel nuts, wetlands, lowlands, see *Syn. Pl.* 1: 110. 1805, *Hortus Bengalensis, or a Catalogue ...* 8. 1814, *Flora Indica; or Descriptions ...* 1: 311. 1820, *Annales des Sciences Naturelles* 1. 5: 299. 1825.

in the Philippines: kanubsuban, kauakauya, kauayansauak, kauayan-kauyan

Malayan names: janggut ali, kelubong, tongkat ali

in Thailand: yaa farang, ya farang, yaa khai hao, ya khai hao, ya pharang

in Vietnam: co voi

P. sarmentosum Roxb. var. ***mekongense*** A. Camus

Asia, Laos.

P. sarmentosum Roxb. var. ***parvispiculatum*** Jansen

Asia. See *Reinwardtia* 2(2): 318. 1953.

P. sarmentosum Roxb. var. ***prenticeanum*** (F.M. Bailey) Domin

Australia. See *Flora Indica; or Descriptions ...* 1: 311. 1820, *A Synopsis of the Queensland Flora* Suppl. 3: 82. 1890 and *Bibliotheca Botanica* 85: 315, f. 72. 1915.

P. scaberrimum Lag. (*Urochloa maxima* (Jacq.) R.D. Webster)

South America, Mexico. See *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Genera et species plantarum* 2. 1816 (also *Elenchus Plantarum* 2. 1816) and *The Australian Paniceae (Poaceae)* 241. 1987.

P. scabridum Döll (*Alternanthera* Forssk., *Amaranthaceae*; *Eichhornia* Kunth, *Pontederiaceae*; *Leersia hexandra* Sw.; *Panicum manacalense* Swallen; *Panicum manacalensis* Swallen; *Panicum prieurii* Mez; *Phyllanthus stipulatus* (Raf.) G.L. Webster, *Euphorbiaceae*)

Amazonas, Brazil, Venezuela. Perennial, tufted, erect, decumbent, prostrate, branched, rooting at the nodes, leaf

blades linear acuminate, open pyramidal inflorescence, panicle narrowly ovate or oblong, spikelets ovate acute or apiculate, lower glume ovate rather inflated 3-nerved, upper glume 5-nerved, upper lemma ovate smooth, related to *Panicum laxum*, see *Flora Aegyptiaco-Arabica* 28. 1775, *Nova Genera et Species Plantarum seu Prodrromus* 21. 1788, *Sylva Telluriana* 91. 1838, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 4: 129. 1843, *Flora Brasiliensis* 2(2): 201. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 3. 1921, *Contributions from the Gray Herbarium of Harvard University* 176: 53. 1955, *Phytologia* 14: 77. 1966.

P. scabriusculum Elliott (*Dichantheium scabriusculum* (Elliott) Gould & C.A. Clark; *Panicum aculeatum* Hitchcock & Chase; *Panicum dichotomum* var. *elatum* Vasey; *Panicum eriophorum* Schult.; *Panicum lanuginosum* Bosc ex Spreng., nom. illeg., non *Panicum lanuginosum* Elliott; *Panicum nealleyi* Vasey; *Panicum recognitum* Fernald; *Panicum viscidum* var. *scabriusculum* (Elliott) Beal)

U.S., Florida. Stems erect or ascending, somewhat harsh, light green bands at each stem node, leaf blades tapering to rounded points, sheath margin hairy, ligule minute, spikelets stalked green to purple, grain smooth, might be found in a wet marshy area or in shallow water, in marshy substrates, wet woods, moist areas, depressions, shores of ponds, lakes and ditches, see *Species Plantarum* 1: 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1: 121, 123, t. 7(3). 1816, *Systema Vegetabilium, editio decima sexta* 1: 319. 1825, *Mantissa* 3(Add. 1): 591. 1827, *Bulletin of the Torrey Botanical Club* 13(2): 25. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 31. 1889, *Grasses of North America for Farmers and Students* 2: 143. 1896 and *North Carolina Agricultural Experiment Station Bulletin* 175: 115. 1900, *Contr. U.S. Natl. Herb.* 15: 298. 1910, *Phytologia* 4(1): 21. 1952, *Annals of the Missouri Botanical Garden* 65(4): 1110. 1978 [1979].

in English: woolly panicum, woolly panic grass, panic grass, sheathed panic grass

P. schaffneri (E. Fourn.) Kuntze (*Dimorphostachys schaffneri* E. Fourn.; *Panicum schaffneri* Griseb. ex E. Fourn.; *Panicum schaffneri* Hack.; *Panicum schaffneri* Mez, nom. illeg., non *Panicum schaffneri* (E. Fourn.) Kuntze; *Paspalum variabile* (E. Fourn.) Nash)

Mexico. See *Mexicanas Plantas* 2: 15-16. 1886, *Revisio Generum Plantarum* 3(3): 358. 1898 and *North American Flora* 17(2): 180. 1912, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4. 1921.

P. scheelei Steud. (*Chaetochloa scheelei* (Steud.) Hitchc.; *Setaria scheelei* (Steud.) Hitchc.) (named for the German botanist Georg Heinrich Adolf Scheele, 1808-1864, clergyman, contributed to the *Flora of Texas*; see J.H. Barnhart,

Biographical notes upon botanists. 3: 223. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 677. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906)

U.S. See *Synopsis Plantarum Glumacearum* 1: 51. 1853 and *Contributions from the United States National Herbarium* 22(3): 207. 1920, *Proceedings of the Biological Society of Washington* 41: 163. 1928, *Illinois Biological Monographs* 29: 1-132. 1962.

P. schenckii Hack. (*Panicum schenckii* Ashe; *Panicum spathellosum* Döll; *Panicum turfosum* Mez; *Steinchisma spathellosa* (Döll) Renvoize) (after the German botanist Johann Heinrich Rudolf Schenck, 1860-1927, see J.H. Barnhart, *Biographical notes upon botanists*. 3: 224. 1965)

South America, Brazil, Paraguay. See *Flora Brasiliensis* 2(2): 241. 1877 and *North Carolina Agricultural Experiment Station Bulletin* 175: 116. 1900, *Österreichische Botanische Zeitschrift* 51: 426. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Kew Bulletin* 42(4): 921. 1987.

P. schiedeanum Trin. ex Beal (*Ixophorus palmeri* (Vasey) Beetle; *Ixophorus unisetus* (J. Presl) Schldtl.; *Panicum palmeri* Vasey; *Panicum schiedeanum* Mez, nom. illeg., non *Panicum schiedeanum* Trin. ex Beal; *Panicum schiedeanum* Trin. ex Steud., nom. illeg., non *Panicum schiedeanum* Trin. ex Beal) (named for the American (b. Norfolk, England) botanist Edward Palmer, 1831-1911 (Washington, D.C.), ethnologist, to U.S. 1849, botanical and zoological collector, traveler, naturalist, physician, 1853-1855 La Plata Expedition, botanical explorer, described the ethnobotany and aboriginal medical practice of the American Southwest, his writings include "Food products of the North American Indians." *U.S. Dept. Agr. Rpt.* 1870: 404-428. 1871 and "Plants used by the Indians of the United States." *Amer. Nat.* 12: 593-606, 646-655. 1878. See Rogers McVaugh, *Edward Palmer, Plant Explorer of the American West*. University of Oklahoma Press, Norman 1956; Janice J. Beaty, *Plants on His Back: A Life of Edward Palmer, Adventurous Botanist and Collector*. Pantheon Books, New York 1964; Virgil J. Vogel, *American Indian Medicine*. University of Oklahoma Press 1977; Ella Dales Cantelow & Herbert Clair Cantelow, "Biographical notes on persons in whose honor Alice Eastwood named native plants." *Leaf. West. Bot.* 8(5): 83-101. 1957; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; J.H. Barnhart, *Biographical notes upon botanists*. 3: 44. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 298. 1972; S. Lenley et al., *Catalog of*

the manuscript and archival collections and index to the correspondence of John Torrey. Library of the New York Botanical Garden. 320. 1973; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 172. London 1904; Ira L. Wiggins, *Flora of Baja California*. 42. Stanford, California 1980; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 532. London 1994; Rogers McVaugh, in *D.S.B.* 10: 285-286. 1981)

Mexico. See *Reliquiae Haenkeanae* 1(4-5): 319. 1830, *Nomenclator Botanicus. Editio secunda* 2: 263. 1841, *Linnaea* 31: 747, 420-422. 1861-1863, *Contributions from the United States National Herbarium* 1(8): 281. 1893, *Grasses of North America for Farmers and Students* 2: 119. 1896 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4. 1921, *Fl. Novo-Galiciana* 14: 201. 1983, *Phytologia* 54(1): 3. 1983, *Ann. Missouri Bot. Gard.* 79: 798. 1992.

P. schinzii Hackel (*Panicum laevifolium* Hackel; *Panicum laevifolium* var. *contractum* Pilger; *Panicum laevifolium* var. *laevifolium*; *Panicum schinzii* Hack. ex Schinz) (species dedicated to the Swiss botanist and collector Hans Schinz, 1858-1941; see Albert Thellung (1881-1928), "Verzeichniss der Veröffentlichungen von Prof. Dr. Hans Schinz." *Beibl. Viertelj.-Schr. naturf. Ges. Zürich*. 15 (Jahrg. 73): 773-783. 1928, the bibliography of works and papers by Schinz; J.H. Barnhart, *Biographical notes upon botanists*. 3: 227. 1965; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 311-313. Cape Town 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 353. 1972; Elmer Drew Merrill, *Bernice P. Bishop Mus. Bull.* 144: 163. 1937)

Namibia, South Africa, Swaziland, Zimbabwe, Mozambique. Annual, tufted, glabrous, dark green, strong, erect to sprawling, ascending, often geniculate and branched, often rooting at the lower nodes, soft or thick fibrous stems, leaf sheath glabrous or sparsely hairy, ligule a membranous rim, open panicle compound and loose with slender branches, obtuse and oblong purplish to green spikelets, paired spikelets, staminate lower florets, glumes very unequal, first glume hyaline and subacute, lower lemma male, palea present, fertile lemma elliptic-oblong smooth and shining, palatable, pasture species, fodder plant, valuable grazing, naturalized elsewhere, a serious weed in cultivated lands, forming large patches, growing in disturbed places and mountain road, cultivated land, near streams, seepage areas, on waste grounds and unploughed lands, near water and where water collects, irrigated orchards, vlei areas or rivers, damp patches, on sandy or clayey soils, depressions, very similar to and confused with *Panicum whitei* J. Black and *Panicum dichotomiflorum* Michx., see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die*

angrenzenden Länder 30: 142. 1888 and *N.Z. J. Botany* 25: 343-353. 1987.

in English: swamp panicum, bluegrass, blue panic, buffalograss, landgrass, sweetgrass, sweet buffalo grass, sweet panic

in southern Africa: soet buffelsgras, buffelsgras, vleibuffelsgras, soetbuffelsgras, soetgras, landsbuffelsgras, blousaad, blousaadbuffelsgras, blousaadsoetgras, blousaadgras, oulandegrass, vlei-gras, old land grassvlei panicum; mofantsoe-o-moholo, mofantswe o moholo (Sotho)

P. schwackeanum Mez (*Isachne polygonoides* (Lam.) Döll; *Panicum cyanescens* var. *latifolium* Döll; *Panicum emergens* Döll, nom. illeg., non *Panicum emergens* Hochst.; *Panicum errabundum* Hitchc.; *Panicum helobium* Mez ex Ekman; *Panicum helobium* Mez ex Henrard; *Panicum semitectum* Swallen) (named for the German botanist Carl (Karl) August Wilhelm Schwacke, 1848-1904, naturalist, traveler, scientist, professor of botany, from 1872 in Brazil; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 248. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 357. 1972)

Brazil, French Guiana. Perennial, erect, emergent, decumbent, procumbent, low, semiaquatic, rooting at the lower nodes, leaf blades lanceolate glabrous acute, panicle ovate or orbicular, spikelets orbicular glabrous, lower glume ovate 3-nerved, upper glume 5-nerved, upper lemma scabrous, savannah, moist areas, ponds and bogs, margins of marshy places, shallow water, see *Encyclopédie Méthodique, Botanique* 4: 742. 1798, *De Graminibus Panicis* 202. 1826, *Flora Brasiliensis* 2(2): 263, 269, 273. 1877 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 9: 23, t. 1, f. 6. 1912, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Mededeelingen van's Rijks-Herbarium* 40: 52. 1921, *Contributions from the United States National Herbarium* 22(6): 494, f. 85. 1922, *Phytologia* 14(2): 68. 1966, *Brittonia* 23(3): 293-324. 1971.

P. sciaphilum Rupr. ex E. Fourn. (*Panicum bulbosum* Kunth; *Panicum bulbosum* subsp. *sciaphilum* (Rupr. ex E. Fourn.) Hitchc. & Chase; *Panicum bulbosum* var. *minor* Vasey; *Panicum sciaphilum* Rupr. ex Hemsl.; *Panicum sciaphilum* Rupr.)

Mexico. See *Nova Genera et Species Plantarum (quarto edition)* 1: 99. 1815 [1816], *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 240. 1842, *Biologia Centrali-Americana; ... Botany ...* 3: 496. 1885, *Mexicanas Plantas* 2: 19. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 38. 1889 and *Contributions from the United States National Herbarium* 15: 83, f. 73. 1910.

P. sciurotis Trin. (*Dichantherium sciurotis* (Trin.) Davidse; *Panicum cordifolium* Steud., nom. illeg., non *Panicum cordifolium* Desv.; *Panicum diffusulum* Salzm. ex Steud.; *Panicum rostellatum* Trin.; *Panicum sciurotis* var. *breviglume* Döll; *Panicum sciurotis* var. *molliusculum* Döll; *Panicum trichoptimum* Steud.)

Brazil and Guyana, Venezuela. Annual, decumbent, branched, rooting at the lower nodes, acuminate leaf blades narrowly ovate to ovate, panicle ovate or oblong densely branched with branches entangled, spikelets ovate-oblong not glutinous, lower glume 1-nerved, upper glume 7-nerved, upper lemma and palea apiculate, found in shady or open places, forest edge, riverbanks, among shrubs and trees, see *De Graminibus Paniceis* 228. 1826, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 288. 1834, *Synopsis Plantarum Glumacearum* 1: 85, 89. 1854, *Flora Brasiliensis* 2(2): 250-251. 1877 and *Novon* 1(1): 4. 1991, *Novon* 2(2): 104. 1992, *Ann. Missouri Bot. Gard.* 80: 171. 1993.

P. sciurotoides Zuloaga & Morrone (*Dichantherium sciurotoides* (Zuloaga & Morrone) Davidse)

South America. Annual, branched, geniculate and decumbent, pilose or hispid leaf blades ovate-lanceolate, panicle terminal ovate densely branched, glabrous or pubescent spikelets ovate-oblong, lower glume ovate 1- to 7-nerved acute and obtuse, upper glume 7- to 11-nerved, upper lemma elliptic apiculate smooth, sometimes referred to *Panicum sciurotis*, see *Novon* 1(1): 1, f. la-h. 1991, *Novon* 2(2): 104. 1992.

P. scoparioides Ashe (*Dichantherium acuminatum* var. *acuminatum*; *Dichantherium scoparioides* (Ashe) Mohlenbr.; *Panicum villosissimum* var. *scoparioides* (Ashe) Fernald)

U.S. Dry soils, see *Bulletin of the Torrey Botanical Club* 23: 149. 1896, *Journal of the Elisha Mitchell Scientific Society* 15: 53. 1898 and *Rhodora* 36(423): 79. 1934, *Annals of the Missouri Botanical Garden* 65(4): 1121. 1978 [1979], *Erigenia* 6: 26. 1985.

P. scoparium Lam. (*Chasea pubescens* (Lam.) Nieuwl.; *Dichantherium scoparium* (Lam.) Gould; *Panicum laxiflorum* var. *pubescens* (Lam.) Chapm., nom. illeg., non *Panicum laxiflorum* var. *pubescens* Vasey; *Panicum nitidum* var. *velutinum* Döll; *Panicum pubescens* Lam.; *Panicum scoparium* Rudge, nom. illeg., non *Panicum scoparium* Lam.; *Panicum scoparium* S. Watson ex Nash, nom. illeg., non *Panicum scoparium* Lam.; *Panicum scoparium* var. *genuinum* Scribn.; *Panicum viscidum* Elliott)

U.S. Caespitose, endangered, spreading, trailing, leaning, hairy nodes, leaf sheath hairy at the base, growing in open habitats, low ground, damp and moist soils, moist sand, seasonally flooded places, wetlands, dry to mesic sites,

grassland areas, open wet meadows, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Encyclopédie Méthodique, Botanique* 4: 744, 748. 1798, *Plantarum Guianae Rariorum Icones et Descriptiones ...* 1: 21, t. 29. 1805, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123, t. 7(3). 1816, *Flora Brasiliensis* 2(2): 247. 1877, *Department of Agriculture. Botanical Division. Bulletin* 8: 32. 1889, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 48. 1894, *Bulletin of the Torrey Botanical Club* 22: 421. 1895, *Flora of the Southern United States* 586. 1897 and *U.S.D.A. Div. Agrostol. Bull.* 24: 36. 1901, *Contr. U.S. Natl. Herb.* 15: 294. 1910, *American Midland Naturalist* 2: 64. 1911.

in English: velvet panic grass, velvety panic grass, broom panic grass, panic grass, panicum

P. scopuliferum Trin. (*Brachiaria serrata* (Thunb.) Stapf; *Holcus serratus* Thunb.)

Warm regions, Africa. See *Prodromus Plantarum Capensium, ...* 20. 1794, *Species Graminum* 2: t. 165. 1829 [or 1828] and *Flora of Tropical Africa* 9: 537. 1919.

P. secernendum Hochst. ex Mez (*Brachiaria comata* (Hochst. ex A. Rich.) Stapf; *Brachiaria secernenda* (Hochst. ex Mez) Henrard; *Panicum secernendum* Hochst. ex Pirota)

Africa. See *Tentamen Florae Abyssinicae ...* 2: 376. 1850, *Annuario del Reale Istituto Botanico di Roma* 6: 158. 1897 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 68. 1917, *Flora of Tropical Africa* 9: 561. 1919, *Blumea* 3(3): 432. 1940.

P. sellowii Nees (*Panicum beyrichii* Kunth; *Panicum lasianthum* Trin.; *Panicum millegrana* Poir.; *Panicum probandum* Steud.; *Panicum puberulum* Trin., nom. illeg., non *Panicum puberulum* (Link) Kunth; *Panicum rugulosum* var. *condensatum* Hack.; *Panicum rugulosum* var. *hirtiglume* Griseb.; *Panicum rugulosum* var. *lasianthum* (Trin.) Hack.; *Panicum rugulosum* var. *pubescens* Döll; *Panicum valenzuelanum* A. Rich.) (named for Don José Maria Valenzuela)

Argentina, Brazil, Bolivia, Paraguay. Perennial, caespitose, slender, erect or trailing, freely branched, decumbent and rooted at the base, internodes and nodes glabrous to hairy, leaf blades lanceolate acute or acuminate, panicle ovate sparsely branched, spikelets obovate congested, upper floret pitted, lower glume ovate, upper glume broadly ovate, lower lemma broadly ovate, upper lemma and palea rugulose, on grassy slopes, along road and fields, shady places, understory, see *Encyclopédie Méthodique. Botanique ... Supplément* 4: 278. 1816, *De Graminibus Paniceis* 195. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 153. 1829, *Species Graminum* 3: t. 245. 1829-1830, *Révision des Graminées* 2: 231, t. 27. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 277. 1834, *Bulletin de*

l'Académie Royale des Sciences et Belles-lettres de Bruxelles 9: 239. 1842, *Historia Fisica Política y Natural de la Isla de Cuba, Botanica* 11: 304. 1850, *Synopsis Plantarum Glumacearum* 1: 76. 1855 [1853], *Catalogus plantarum cubensium* ... 233. 1866, *Flora Brasiliensis* 2(2): 259. 1877, *Biologia Centrali-Americana; ... Botany* ... 3: 495. 1885, *Mexicanas Plantas* 2: 21. 1886 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 11. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 343. 1909, *Flora of Suriname* 1(1): 387. 1943, *Phytologia* 37(4): 317-407. 1977, *Flora Illustrada Catarinense* 1(Gram.): 443-906. 1982, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

P. semialatum R. Br. (*Alloteropsis semialata* (R. Br.) Hitchc.; *Alloteropsis semialata* var. *semialata*; *Axonopus semialatus* (R. Br.) Hook.f.; *Coridochloa semialata* (R. Br.) Nees ex Lindl.; *Coridochloa semialata* (R. Br.) Nees; *Oplismenus semialatus* (R. Br.) Desv.; *Panicum semialatum* Kunth ex Hayata, nom. illeg., non *Panicum semialatum* R. Br.; *Paspalum semialatum* (R. Br.) Eyles; *Urochloa semialata* (R. Br.) Kunth; *Urochloa semialata* (R. Br.) Desv., nom. illeg., non *Urochloa semialata* (R. Br.) Kunth)

Australia. See *Prodromus Florae Novae Hollandiae* 192. 1810, *Révision des Graminées* 1: 31. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 185. 1831, *Edinburgh New Philosophical Journal* 15: 381. 1833, *Delectus Seminum quae in Horto Hamburgensium Botanico* 1834: 8. 1834, *Journal of Botany, Being a Second Series of the Botanical Miscellany* 2: 97. 1850, *Conspectus Florae Africae* 5: 764. 1894, *The Flora of British India* 7: 64. 1896 and *Contributions from the United States National Herbarium* 12(6): 210. 1909, *Journal of the College of Science, Imperial University of Tokyo* 30. art. 1: 402. 1911, *Transactions of the Royal Society of South Africa* 5: 299. 1916.

P. semialatum R. Br. var. ***latifolium*** Maiden & Betche (*Panicum semialatum* var. *latifolium* Maiden)

Australia. See *Abstract of Proceedings of the Royal Society of New South Wales* 3: 288. 1910, *Proceedings of the Linnæan Society of New South Wales, ser. 2* 35: 797. 1911.

P. seminudum Domin

Australia, Papua New Guinea. See *Bibliotheca Botanica* 85: 320. 1915.

P. seminudum Domin var. ***cairnsianum*** Domin (*Panicum chillagoensis* Domin)

Australia. See *Bibliotheca Botanica* 85: 320, 324, f. 74. 1915, *Austrobaileya* 2(1): 21-24. 1984.

P. sericea (Honda) Makino & Nemoto (*Syntherisma sericea* Honda)

Asia, Japan. See *Botanical Magazine* 38: 127. 1924, *Flora of Japan* 1476. 1925.

P. serrarium Fig. & De Not.

Africa, Sudan. See *Memorie della Reale Accademia delle Scienze di Torino* 14: 347. 1854.

P. serratum R. Br.

Warm regions. *Panicum serratum* (Thunb.) Spreng. and *Holcus serratus* Thunb. synonyms of *Brachiaria serrata* (Thunb.) Stapf, see *Prodromus Plantarum Capensium*, ... 20. 1794, *Systema Vegetabilium, editio decima sexta* 1: 309. 1824 and *Flora of Tropical Africa* 9: 537. 1919.

P. siccanum Trin. (*Panicum polycomum* Trin.)

Brazil. In wet areas, river beds and riverbanks, sandy places, stream banks, wet savannah, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 306. 1834, *Linnaea* 10(3): 298. 1836.

P. simbense Mez (*Panicum trichocladum* Hack. ex K. Schum.)

Africa. See *Die Pflanzenwelt Ost-Afrikas* 5c: 103. 1895 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 186. 1921.

P. simile Domin (*Panicum effusum* var. *simile* (Domin) B.K. Simon)

Australia, New South Wales, Victoria, Queensland. Perennial, caespitose, tufted, nodes glabrous, spikelets glabrous pale to purple and often gaping, spikelets appear light straw colored on one side and dark purple on the other, lower glume acute, lower lemma sterile, upper lemma elliptic and shining, grains not black, fodder plants, poor soils, low nutrient soils, woodland, scrub, moist gullies and stream lines on coarse sandy soil, nonaquatic grass, vulnerable in Victoria, see *Bibliotheca Botanica* 85: 322. 1915, *Austrobaileya* 2(1): 22. 1984.

in English: two color panic, two-color panic grass, weeping meadow grass

P. sipapoense Swallen

Venezuela. See *Mem. New York Bot. Gard.* 9(3): 261. 1957.

P. sociale Stapf (*Panicum atrosanguineum* Hochst. ex A. Rich.; *Panicum laetum* Kunth)

Tropical Africa, Ethiopia, Sudan. In wet places, see *Révision des Graminées* 2: 399, f. 113. 1831, *Tentamen Florae Abyssinicae* ... 2: 375. 1850 and *Flora of Tropical Africa* 9: 701. 1920.

P. soderstromii Zuloaga & Send.

Brazil. See *Ann. Missouri Bot. Gard.* 75: 446, f. 13. 1988.

P. sonorum L. (*Panicum capillare* var. *miliaceum* (Vasey) Gould; *Panicum capillare* var. *miliaceum* Vasey; *Panicum hirticaule* J. Presl; *Panicum hirticaule* subsp. *sonorum* (Beal) Freckmann & Lelong; *Panicum hirticaule* var. *hirticaule*; *Panicum hirticaule* var. *miliaceum* (Vasey) Beetle)

Mexico, Sonora desert. Annual, fast-growing, seeds borne in loose heads, useful grass, cereal for human consumption, domesticated, thought to be extinct, birds love the tiny millet-like seed, grains used like millet, cooked or ground into a powder and used as a flour for making cakes, common on rocky slopes and along washes, grows on poor arid soils, dry or moist soils, see *Species Plantarum* 1: 58. 1753, *Reliquiae Haenkeanae* 1(4-5): 308. 1830, *Contributions from the United States National Herbarium* 1(1): 28. 1890, *Grasses of North America for Farmers and Students* 2: 130. 1896 and *Phytologia* 47(5): 381-382. 1981, Nabhan, G.P. and Felger, R.S., "Wild desert relatives of crops: their direct use as food." in Wickens, G., Goodin, J.R. and Field, D.V. (eds.), *Plants for Arid Land*. George Allen & Unwin, London, U.K. 1985, *Cuscatlania* 1(6): 1-29. 1991, Ganster, P. and Walter, H. (eds), *Environmental hazards and biore-source management in the United States-Mexico borderlands*. U.C.L.A. Latin American Center Publications, University California, Los Angeles 1991, *Sida* 20(1): 172. 2002.

in English: Sonora panic, Sonoran panic grass, Mexican panic grass, sauwi

in Mexico: sagüi, sagui, sauhui

in Spanish: arrocillo

P. spanianthum Steud.

America. See *Synopsis Plantarum Glumacearum* 1: 69. 1854.

P. sparsicomum Nees ex Steud. (*Agrostis zeylonica* Klein ex Steudel; *Cyrtococcum sparsicomum* (Nees ex Steud.) A. Camus)

Southern India, Sri Lanka. Annual or short-lived perennial, erect and ascending, branched, rooting at the lower nodes, internodes and nodes pubescent, leaf sheath rounded, ligule a ciliate membrane, leaf blades lanceolate or linear-lanceolate, panicle branches spreading, spikelets flattened and gibbous, lower floret sterile, upper glume usually shorter than the spikelet, shade to partial shade, in forest, along roadsides, see *Synopsis Plantarum Glumacearum* 1: 83. 1854 and *Bulletin du Muséum National d'Histoire Naturelle* 27: 118. 1921, *Handb. Fl. Ceylon* 6: 321. 1931, *Grasses of Ceylon* 121. 1956, *Grasses of Burma* ... 330. 1960.

P. spathellosum Döll

Brazil, Paraguay. Inflorescences composed of 2-flowered spikelets, each spikelet has a lower staminate flower and an upper pistillate, chasmogamous and protogynous flower.

P. speciosum Walter (*Panicum speciosum* Nees ex Trin., nom. illeg., non *Panicum speciosum* Walter; *Panicum speciosum* A. Braun)

U.S. See *Flora Caroliniana, secundum* ... 73. 1788, *De Graminibus Paniceis* 169. 1826.

P. speciosum Walter var. *laxum* Walp.

Brazil. See *Flora Caroliniana, secundum* ... 73. 1788, *Annals of Botany. Oxford* 6: 950. 1861.

P. speciosum Walter var. *martianum* Walp.

Brazil. See *Annals of Botany. Oxford* 6: 950. 1861.

P. speciosum Walter var. *poepigii* Walp.

Brazil. See *Flora Caroliniana, secundum* ... 73. 1788, *Annals of Botany. Oxford* 6: 950. 1861.

P. sphacelatum Schumach. (*Panicum sphacelatum* (Benth.) Steud., nom. illeg., non *Panicum sphacelatum* Schumach.; *Pennisetum sphacelatum* (Schumach.) T. Durand & Schinz; *Pennisetum sphacelatum* (Nees) T. Durand & Schinz; *Setaria sphacelata* (Schumach.) M.B. Moss ex Stapf & C.E. Hubb.; *Setaria sphacelata* Stapf & C.E. Hubb. ex Moss; *Setaria sphacelata* var. *sericea* (R.E. Massey ex Stapf) Clayton; *Tricholaena sphacelata* Benth.)

Guinea, Ghana. See *Beskrivelse af Guineiske planter* 58-59. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Aft.* 3: 78-79. 1828, *Niger Flora* 559. 1849, *Synopsis Plantarum Glumacearum* 1: 92. 1854, *Conspectus Florae Africae* 5: 784. 1894 and *Bulletin of Miscellaneous Information Kew* 1929(6): 195. 1929, *Flora of Tropical Africa* 9(5): 794-798. 1930, *Kew Bulletin* 33(3): 506. 1979.

P. sphaerocarpon Elliott (*Dichantheium sphaerocarpon* (Elliott) Gould; *Dichantheium sphaerocarpon* var. *floridanum* (Vasey) Davidse; *Dichantheium sphaerocarpon* var. *sphaerocarpon*; *Panicum auburne* Ashe; *Panicum dichotomum* var. *sphaerocarpon* (Elliott) Alph. Wood; *Panicum heterophyllum* Sw. ex Wikstr.; *Panicum inflatum* Scribn. & J.G. Sm.; *Panicum kalmii* Sw. ex Wikstr.; *Panicum microcarpon* var. *sphaerocarpon* (Elliott) Vasey; *Panicum nitidum* var. *crassifolium* A. Gray; *Panicum sphaerocarpon* subsp. *inflatum* (Scribn. & J.G. Sm.) Hitchc.; *Panicum sphaerocarpon* Salzm. ex Steud., nom. illeg., non *Panicum sphaerocarpon* Elliott; *Panicum vicarium* E. Fourn.) (for the Swedish botanist Pehr (Peter) Kalm, 1716-1779, traveler, 1748-1751 North America, his writings include *Beschreibung der Reise die er nach dem nördlichen Amerika ... unternommen hat. Eine Übersetzung*. [translated from the Swedish by Johann Philipp Murray and Johann Andrews Murray] Göttingen 1754-1764. See Carl Skottsberg, "Pehr Kalm." *Kungliga Svenska vetenskapsakademiens levnadsteckningar*. 139: 221-503. 1951; Ragnar Granit, in *D.S.B.* 7: 210-211. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 2: 268. Boston 1965; T.W. Bossert, comp., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 203. 1972; Joseph Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 732. 1993; G.C. Wittstein, *Etymologisch-botanisches Handwörterbuch*. 484. Ansbach 1852; Frans A.

Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971)

U.S. Perennial bunchgrass, caespitose, stiff, erect to spreading, leaf blades and stems not hairy, basal leaves differing from culm leaves, leaf sheath with ciliate margins, ligule ciliate, panicle with slender branches, spikelets ovoid, lower floret sterile, upper floret hermaphrodite, glumes very unequal, stigmas purple, medicinal value, sometimes used as abortifacient, found along streams and rivers, dry to mesic, seaside dunes, open areas, glades, beaches and dunes, woods, grasslands and prairies, dry fields, roadside, soil rocky and dry, damp ground, see *Species Plantarum* 1: 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1: 125, 127. 1816, *Mantissa* 2: 257. 1824, *Adnotationes Botanicae* 6. 1829, *North American Gramineae and Cyperaceae* 1: 30. 1834, *Synopsis Plantarum Glumacearum* 1: 51. 1853, *A Class-book of Botany* 786. 1861, *The Grasses of the United States* 12. 1883, *Mexicanas Plantas* 2: 20. 1886, *Department of Agriculture. Botanical Division. Bulletin* 8: 33. 1889, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 51, f. 54. 1894, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 5. 1899 and *North Carolina Agricultural Research Service: Bulletin* 175: 115. 1900, *Contributions from the United States National Herbarium* 15: 253, 256, f. 275. 1910, *Manual of the Grasses of the United States* 643, 913. 1935, *Brittonia* 26(1): 60. 1974, *Sida* 10(2): 191. 1983, *Phytologia* 71(2): 85. 1991, *Novon* 2(2): 104. 1992, *Phytologia* 77(6): 460. 1994, *Darwiniana* 37: 109. 1999.

in English: round-fruited panic grass, spherical-fruited panic grass, round-seed panic grass, spherical panic grass, panic grass

in Nicaragua: walang

P. spicatum (L.) Roxb. (*Aira spicata* L.; *Holcus spicatus* L.; *Panicum spicatum* (L.) Farw., nom. illeg., non *Panicum spicatum* (L.) Roxb.; *Pennisetum glaucum* (L.) R. Br.)

Asia, India. See *Species Plantarum* 1: 56, 63. 1753, *Systema Naturae, Editio Decima* 2: 1305. 1759, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Hortus Bengalensis, or a Catalogue ...* 7. 1814 and *Phil. J. Sci.* 7: 413-415. 1912, *Rhodora* 32: 262. 1930.

P. spongiosum Stapf

Tropical Africa. See *Flora of Tropical Africa* 9: 661. 1920.

P. sprengeianum Schult. (*Panicum heterophyllum* Spreng.; *Panicum heterophyllum* Muhl.; *Panicum heterophyllum* Sw. ex Wikstr.; *Panicum heterophyllum* Bosc ex Nees, nom. illeg., non *Panicum heterophyllum* Spreng.)

See *Transactions of the American Philosophical Society* 3: 160. 1793, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 3: 13. 1822, *Mantissa* 2: 234. 1824,

Adnotationes Botanicae 6. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 227. 1829.

P. spretum Schultes (*Dichantherium acuminatum* subsp. *spretum* (Schult.) Freckmann & Lelong; *Dichantherium acuminatum* var. *densiflorum* (E.L. Rand & Redfield) Gould & C.A. Clark; *Dichantherium lanuginosum* var. *spretum* (Schult.) Harvill; *Dichantherium spretum* (Schult.) Freckmann; *Panicum acuminatum* var. *densiflorum* (E.L. Rand & Redfield) Lelong; *Panicum eatoni* Nash; *Panicum nitidum* var. *densiflorum* E.L. Rand & Redfield; *Panicum nitidum* var. *octonodum* (J.G. Sm.) Scribn. & Merr.; *Panicum octonodum* J.G. Sm.; *Panicum paucipilum* Nash) (from the Latin *sperno, sprevi, spretum* "to sever, scorn, spurn")

U.S. Beaches and meadows, moist ground, shores, wetlands, coastal plain, lakeshores and stream sides, barrens, bogs and fens, see *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Mantissa* 2: 248. 1824, *Flora of Mount Desert Island, Maine* 174. 1894, *Bulletin of the Torrey Botanical Club* 25(2): 84-85. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 573. 1899, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 73. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 34. 1901, *Brittonia* 26(1): 60. 1974, *Castanea* 42(2): 177. 1977, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1127. 1978 [1979], *Phytologia* 48(1): 102. 1981, *Brittonia* 36(3): 270. 1984, *Sida* 20(1): 168. 2002.

in English: panic grass, sand panic grass, spurned panic grass, narrow-headed panic grass, Eaton's panic grass, acuminate dichantherium, panicum

P. stagnatile A.S. Hitchc. & Chase (*Panicum bernoullianum* Mez) (named for the Swiss naturalist Carl [Karl] Gustav Bernoulli, 1834-1878, physician, traveler and explorer, botanical collector, in Guatemala 1858-1878; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 171. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 78. Cambridge, Mass. 1917-1933; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916)

Panama, Costa Rica, Guatemala. Perennial, rhizomatous, herbaceous, culms decumbent and rooting at the lower nodes, found in water of swamp, marshy sites, disturbed places, see *Contributions from the United States National Herbarium* 17(6): 528, f. 141. 1915, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 3. 1921.

P. stapfianum Fourc. (*Panicum minus* Stapf, nom. illeg., non *Panicum minus* Nash)

Tropical Africa, Namibia, Botswana, South Africa. Perennial bunchgrass, erect, tufted, leaves mostly basal, unbranched, leaf blades expanded or rolled, ligule a fringe

of short hairs, leaf sheaths rounded, inflorescence a slightly contracted panicle, bright red to reddish seed heads, lower floret male, upper lemma yellowish and smooth, palea present, seeds more or less large to small, grazed pasture, palatable, useful for erosion control, found on gray heavy soil, semiarid grassland, sandy soil and shallow rocky soil, damp sandy soils, on disturbed site and on open grassland, confused with *Panicum coloratum* L., see *Flora Capensis* 7: 410. 1899 and *Transactions of the Royal Society of South Africa* 21: 76. 1932, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Bothalia* 18: 111-114. 1988.

in English: Stapf's buffalo grass

in South Africa: Stapf's buffelsgras, Stapf se buffelsgras, fettweide hirsegas

P. stellatum Larrañaga

Uruguay. See *Escritos de Don Damaso Antonio Larrañaga* 2: 28, 476. 1923.

P. stenanthum Steud.

Africa. See *Synopsis Plantarum Glumacearum* 1: 96. 1854.

P. stenocladium Trin. (*Panicum subulatum* Spreng.)

Brazil. See *Systema Vegetabilium, editio decima sexta* 1: 319. 1825, *De Graminibus Paniceis* 200. 1826.

P. stenodes Griseb. (*Panicum caricoides* Nees ex Trin.; *Panicum caricoides* var. *glabriusculum* Döll; *Panicum hians* Spruce ex Griseb., nom. illeg., non *Panicum hians* Elliott)

West Indies, Colombia, Guyana, Venezuela. Annual or perennial, caespitose, delicate, erect or geniculate, branched, ligule membranous, leaf blades linear or filiform attenuate, inflorescences terminal and axillary, small panicles lax with 1-5 short racemes, spikelets elliptic-oblong glabrous, lower glume ovate 1- to 3-nerved, upper glume 5- to 9-nerved, upper lemma elliptic smooth, flowers reduced, savannah seasonally flooded, in or near water, marshy areas, wet savannahs, sandy swamps, marshy savannah, see *De Graminibus Paniceis* 149. 1826, *Flora of the British West Indian Islands* 547-548. 1864, *Flora Brasiliensis* 2(2): 239. 1877.

in English: savannah panic grass

P. stevensianum A.S. Hitchc. & Chase

Cuba, Puerto Rico. Endangered species, densely ground cover, on wet sand, moist places, in or near shallow water, see *Contributions from the United States National Herbarium* 17(6): 498, f. 76. 1915.

in English: Steven's panic grass

P. steyermarkii Swallen

Venezuela. Along riverbanks, see *Mem. New York Bot. Gard.* 9(3): 402. 1957.

P. stigmatatum Mez (*Brachiaria stigmatata* (Mez) Stapf)

Tropical Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 140. 1904, *Flora of Tropical Africa* 9: 520. 1919.

P. stigmatosum Trin. (*Dichantherium stigmatosum* (Trin.) Zuloaga; *Panicum lanuginosum* J. Presl, nom. illeg., non *Panicum lanuginosum* Elliott; *Panicum missionum* Ekman; *Panicum missionum* Mez, nom. illeg., non *Panicum missionum* Ekman; *Panicum mollicomum* Kunth; *Panicum pycnocladus* Tutin)

Brazil, Paraguay, Uruguay, northern Argentina. Erect, tufted, often leaning on vegetation, panicle branches glandular, in open areas, forest margins, damp shady places, similar to *Panicum pycnocladus*, see *De Graminibus Paniceis* 194. 1826, *Reliquiae Haenkeanae* 1(4-5): 306. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 108. 1833, *Flora Brasiliensis* 2(2): 225. 1877 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 19, t. 3, f. 1. 1912, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 74. 1917, *Journal of Botany, British and Foreign* 72(864): 340, f. 10. 1934, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993, *American Journal of Botany* 90: 817. 2003.

P. stipatum J. Presl (*Digitaria horizontalis* Willd.)

Mexico, the Philippines. See *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 92. 1809, *Reliquiae Haenkeanae* 1(4-5): 297. 1830 and *Blumea* 21(1): 1-80. 1973.

P. stipiflorum Renvoize (*Dichantherium stipiflorum* (Renvoize) Zuloaga)

Brazil. Annual, herbaceous, prostrate, erect, ascending, nodes hairy to pilose, leaf sheaths pilose with ciliate margins, leaf blades narrowly ovate to linear, panicles ovate moderately branched, spikelets elliptic-oblong puberulous, lower glume broadly ovate membranous 1- to 3-nerved with a short swollen internode, upper glume ovate 7-nerved, lower lemma ovate 7-nerved, upper lemma and palea smooth, along roadsides, small streams and riverbanks, damp sand, damp ground, cerrado, see *Kew Bulletin* 37(2): 329, f. 7A-B. 1982, *American Journal of Botany* 90: 817. 2003.

P. stipitatum Nash (*Panicum agrostoides* var. *elongatum* Scribn.; *Panicum elongatum* Pursh, nom. illeg., non *Panicum elongatum* Salisb.; *Panicum rigidulum* Bosc ex Nees; *Panicum rigidulum* subsp. *elongatum* (Scribn.) Freckmann & Lelong; *Panicum rigidulum* Bosc ex Nees var. *elongatum* (Pursh) Lelong; *Panicum rigidulum* var. *elongatum* (Scribn.) Lelong)

U.S. Perennial, culms often purplish, found in wet moist habitat and moist soils, wetlands and coastal plain, endangered in Illinois, see *Flora Americae Septentrionalis; or, ...* 1: 69. 1813 [1814], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 163. 1829, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 2: 42, t. 9, f. 34. 1894 and *Bulletin, Division of Agrostology United States*

Department of Agriculture (edition 2) 17: 56. 1901, *Contr. U.S. Natl. Herb.* 15: 104. 1910, *Brittonia* 36(3): 263. 1984, *Sida* 20(1): 172-173. 2002.

in English: panic grass, tall flat panic grass

P. stoloniferum Poir. (*Hymenachne frondescens* (G. Mey.) E. Fourn.; *Oplismenus pseudoundulatifolius* (Roem. & Schult.) Kunth; *Panicum brachyclados* C. Rchb. ex Trin.; *Panicum ctenodes* Trin.; *Panicum ctenodes* var. *major* Trin.; *Panicum frondescens* G. Mey.; *Panicum kegelii* Steud.; *Panicum leprieurii* Steud.; *Panicum olyrifolium* Raddi; *Panicum pseudoundulatifolium* Roem. & Schult.; *Panicum stoloniferum* var. *frondosum* (G. Mey.) Kuntze; *Panicum stoloniferum* var. *major* (Trin.) Kunth; *Panicum stoloniferum* var. *minus* Trin. ex Döll; *Panicum stoloniferum* var. *stoloniferum*; *Panicum trichoclados* C. Rchb. ex Kunth; *Panicum umbrosum* Salzm. ex Döll, nom. illeg., non *Panicum umbrosum* Retz.; *Panicum umbrosum* Salzm. ex Steud.)

Mexico to Argentina, French Guiana, Cayenne. Perennial, aquatic or semiaquatic, erect, creeping, procumbent, decumbent, stoloniferous, rooting at the lower nodes, leaf blades lanceolate or ovate acuminate, panicle ovate to lanceolate, glabrous spikelets lanceolate acuminate, lower glume ovate 3-nerved, upper glume 5-nerved, upper lemma elliptic smooth, shade or partial shade, forage, along rivers and streams, similar to *Panicum andreanum* and *Panicum frondescens*, see *Species Plantarum* 1: 55, 58. 1753, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 274. 1816, *Systema Vegetabilium* 2: 437. 1817, *Primitiae Florae Essequiboensis* ... 56. 1818, *Agrostografia Brasiliensis* 43, t. 1, f. 6. 1823, *Révision des Graminées* 1: 44. 1829, *Species Graminum* 2: t. 171. 1829, *Révision des Graminées* 2: 389, t. 108. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 89. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 251. 1834, *Synopsis Plantarum Glumacearum* 1: 65. 1853 [1854], *Flora Brasiliensis* 2(2): 210. 1877, *Mexicanas Plantas* 2: 36. 1886, *Revisio Generum Plantarum* 3: 759. 1898 and *Contr. U.S. Natl. Herb.* 15: 13-15, 121. 1910.

P. stramineum A.S. Hitchc. & Chase (*Panicum caatingense* Renvoize; *Panicum capillare* var. *stramineum* (Hitchc. & Chase) Gould; *Panicum hirticaule* subsp. *stramineum* (Hitchc. & Chase) Freckmann & Lelong; *Panicum hirticaule* var. *stramineum* (Hitchc. & Chase) Beetle; *Tristachya avenacea* (J. Presl) Scribn. & Merr.)

Mexico, Brazil, Venezuela, U.S., Arizona, New Mexico, Argentina, Paraguay, Bolivia. Rare species, annual, herbaceous, erect or ascending, tufted, leaves hispid, leaf blades linear-lanceolate attenuate, panicles terminal or axillary ovate, spikelets ovate glabrous finely acute, lower glume ovate 5- to 7-nerved, upper glume 9- to 13-nerved, upper lemma elliptic smooth, found in moist areas, along

roadsides, see *Species Plantarum* 1: 58. 1753, *Reliquiae Haenkeanae* 1(4-5): 308, 324, t. 44. 1830 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 23. 1901, *Contributions from the United States National Herbarium* 15: 67, f. 50. 1910, *Madroño* 10(3): 94. 1949, *Phytologia* 47(5): 383. 1981, *Kew Bulletin* 37(2): 325, f. 5. 1982, *Sida* 20(1): 172. 2002.

P. strictissimum Afzelius ex Sw. (*Panicum strictissimum* Afzelius)

Tropical Africa. Perennial, erect or ascending, found in swamps, see *Adnotationes Botanicae* 4. 1829.

in Sierra Leone: potengu, yuwe

P. subalbidum Kunth (*Panicum antidotale* Retz.; *Panicum glabrescens* Steud.; *Panicum ingens* Peter; *Panicum kermesinum* Mez; *Panicum longijubatum* (Stapf) Stapf; *Panicum longiramum* Peter; *Panicum proliferum* var. *longijubatum* Stapf; *Panicum subalbidum* Hochst. ex T. Durand & Schinz, nom. illeg., non *Panicum subalbidum* Kunth)

Tropical Africa. Annual or short-lived perennial, variable, aquatic, spongy and succulent, hollow, slender to robust, stout, creeping, erect to decumbent, ascending, mat-forming, often stoloniferous, often rooting and branching at the lower nodes, leaf blades linear acute to acuminate, leaf sheaths loose, hairy ligule, leaves prickly and papillate, inflorescence an open panicle ovate or oblong moderately branched with ascending branches, spikelets lanceolate nerved acuminate to cuspidate and appressed to the branches, lower glume ovate to broadly ovate and clasping, upper glume narrowly ovate 7- to 11-nerved, lower floret sterile, upper lemma shiny, lower palea absent or reduced, noxious weed of cultivation, useful grass, highly palatable, grains eaten by humans, invasive, found on clay soil, wet locations, open water, disturbed areas, along rivers, swamps, riverbanks, see *Observationes Botanicae* 4: 17. 1786, *Révision des Graminées* 2: 397, t. 112. 1831, *Synopsis Plantarum Glumacearum* 1: 71. 1854, *Conspectus Florae Africae* 5: 740. 1894, *Flora Capensis* 7: 406. 1899 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 307. 1908, *Flora of Tropical Africa* 9: 718. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 189. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 192, 197 & Anhang, 40, 44, t. 24, f. 2, t. 29, f. 1. 1930.

in English: elbow buffalo grass

in Gambia: barto jargeba, barto kinto, kinti bora, kununding mano

in Guinea: diambe engela, enyamb engela

in Mali: gambéré, guimena, guimi, kidi, populdja, tietiesu

in Niger: aefir, aelantâk, bambu-subu, buviridi, dil yarô, dulyara, ishibaen, sasa, sesekua, tchintha-ruwa

in Nigeria: bordi, gora gora, gwes, haikin fadama, kaya, kollogi, macara, shinkafa berewa, tsintsiyyaa

in Senegal: diangh ambel, diimina, gambéré, guimena, guimi, kidi, mpal

in Sierra Leone: boroboro, foni

in South Africa: elumboogbuffelsgras

in Upper Volta: mofogo, pagga pucci, ponianga sugpio logho, ponjanga sugpio logo, rudu, tonso naba konjiudu

P. subfalcatum Döll (*Paspalum subfalcatum* (Döll) Tutin)

Brazil. See *Flora Brasiliensis* 2(2): 181. 1877 and *Journal of Botany, British and Foreign* 72: 338. 1934.

P. subflabellatum Stapf

Mozambique, Tanzania. Perennial, erect or decumbent, stoloniferous, tufted, sometimes rhizomatous, short rhizomes, lower leaf sheaths glabrous, leaves acuminate, spikelets spherical and purplish, lower glume ovate, lower floret male, palea present, growing in sand dunes, along coast, swampy areas, see *Flora of Tropical Africa* 9: 711. 1920.

P. subglabrum H. St. John

Hawaii. See *Phytologia* 63(5): 372. 1987.

P. sublaetum Stapf (*Panicum gracilicaule* Rendle)

Africa, Liberia. Sandy places, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 179, 181. 1899 and *Flora of Tropical Africa* 9: 671. 1920.

P. sublaeve Swallen (*Panicum dichotomiflorum* Michx.; *Panicum rigidum* Swallen, nom. illeg., non *Panicum rigidum* Balf.)

Mesoamerica, Panama, Mexico, Honduras. Endangered species, herbaceous, edge of marshes, see *Annals of the Missouri Botanical Garden* 30(2): 215. 1943, *Contributions from the United States National Herbarium* 29(9): 424. 1950.

in Spanish: zacate fuego

P. submontanum Hayata

Asia, Japan. See *Journal of the College of Science, Imperial University of Tokyo* 30(1): 402-403. 1911.

P. subpellucidum Steud. (*Ichnanthus subpellucidus* (Steud.) K.E. Rogers; *Ichnanthus tenuis* (J. Presl & C. Presl) Hitchc. & Chase)

Brazil. See *Reliquiae Haenkeanae* 1(4-5): 319. 1830, *Synopsis Plantarum Glumacearum* 1: 77. 1853 [1854] and *Contributions from the United States National Herbarium* 18(7): 334. 1917, *Phytologia* 22: 105. 1971, *Systematic Botany* 12: 199. 1987.

P. subtiliracemosum Renvoize (*Dichantherium hebotes* (Trin.) Zuloaga; *Panicum hebotes* Trin.)

Brazil. Leaf sheaths pubescent, spikelets glabrous, swampy places, see *Mémoires de l'Académie Impériale des Sciences*

de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 3,1(2-3): 301. 1834 and *Kew Bulletin* 42: 922. 1987, *American Journal of Botany* 90: 816. 2003.

P. subtipaniculatum Renvoize (*Dichantherium hebotes* (Trin.) Zuloaga; *Panicum hebotes* Trin.)

Brazil. Leaf sheaths pubescent, spikelets glabrous, swampy places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 301. 1834 and *Kew Bulletin* 42: 922. 1987, *Hatschbach's Paraná Grasses* 39. 1988, *American Journal of Botany* 90: 816. 2003.

P. subtiramulosum Renvoize & Zuloaga

Brazil. Caespitose, see *Kew Bull.* 39(1): 187, f. 1A-B, t. B. 1984.

P. subulatum Spreng. (*Aira distichophylla* Spreng.; *Panicum distichophyllum* (Spreng.) Nees, nom. illeg., non *Panicum distichophyllum* Trin.; *Panicum stenocladium* Trin.)

Brazil. Perennial, erect, slender, ascending, wiry, much branched upward with appressed branches, knotty rhizomatous base, leaf blades linear acute, panicle ovate sparsely branched, spikelets ovate-oblong glabrous, lower glume 3-nerved, upper glume 5-nerved, lower lemma 5-nerved, upper lemma and palea smooth, found in sandy places, wet areas, similar to *Panicum rupestre*, see *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* 46. 1819, *Systema Vegetabilium, editio decima sexta* 1: 319. 1825, *De Graminibus Paniceis* 200. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 234. 1829.

P. subvillosum Ashe (*Dichantherium aciculare* var. *aciculare*; *Dichantherium acuminatum* subsp. *fasciculatum* (Torr.) Freckmann & Lelong; *Dichantherium acuminatum* var. *acuminatum*; *Dichantherium acuminatum* var. *fasciculatum* (Torr.) Freckmann; *Panicum unciphyllum* f. *pilosum* Scribn. & Merr.)

U.S. See *A Flora of the Northern and Middle Sections of the United States* 145. 1824, *De Graminibus Paniceis* 242. 1826 and *Journal of the Elisha Mitchell Scientific Society* 16: 86. 1900, *Rhodora* 3(29): 124. 1901, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978 [1979], *Phytologia* 48(1): 108. 1981, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988, *Sida* 20(1): 167. 2002.

P. subxerophilum Domin (*Whalleya subxerophila* (Domin) Wills & J. Bruhl) (dry-loving, from the Greek *xeros* "dry" and *philos* "lover, loving")

Queensland, New South Wales. Perennial, rigid, wiry, caespitose, forming erect clumps, bright green leaves, sheath more or less scabrous, ligule asymmetric, panicles branched and spreading, green to dark purple spikelets, lower glume obtuse, lower lemma sterile sometimes 2-toothed at the apex, shining upper lemma elliptic and acute, floodways,

clay soils, dry country, hardy to dryness, foliage palatable to stock, seeds a food source for seed-eating birds and small rodents, see *Bibliotheca Botanica* 85: 316. 1915, *Australian Systematic Botany* 13: 465, f. 2d. 2000.

in Australia: Gilgai grass, cane panic grass

P. sumatrense Roth (*Panicum albidulum* Steud.; *Panicum attenuatum* Willd., nom. illeg., non *Panicum attenuatum* (Moench) Moench; *Panicum crispum* Llanos; *Panicum miliaceum* var. *attenuatum* (Moench) Willd.; *Panicum miliare* auct.; *Panicum psilopodium* Trin.; *Panicum psilopodium* var. *coloratum* Hook.f.; *Panicum psilopodium* var. *psilopodium*; *Panicum simplex* Rottler ex Trin.; *Panicum sumatrense* Roth ex Roem. and Schult.; *Panicum sumatrense* subsp. *psilopodium* (Trin.) de Wet)

Tropical Asia, Southeast Asia. Annual, very variable, erect or geniculate, strongly branched, internodes and nodes glabrous, decumbent and rooting at the lower nodes, ligule a ciliate membrane, leaf blades linear to linear-lanceolate, sheaths sometimes hairy and keeled, erect branched flowering culms, inflorescence often nodding, oblong open to contracted panicles, spikelets more or less persistent or disarticulating, lower floret sterile, lower glume orbicular and apiculate, seed brown and minute, occurs wild and as a weed, cultivated as a cereal, grain crop species, contains high amounts of iron and zinc, quick growing fodder, husked grain cooked and eaten like rice, grain sometimes ground into flour and made into bread, tolerates both drought and waterlogging, can be grown on very poor soils, semiarid tropics, dry zone, on light red soils, red sandy loam, mostly grown in marginal areas, related to *Panicum psilopodium* Trin., see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Methodus Plantas Horti Botanici ...* 204. 1794, *Syst. Veg.* 1: 348. 1798, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1033. 1809, *Systema Vegetabilium* 2: 434. 1817, *De Graminibus Paniceis* 216-217. 1826, *Fragmentos de Algunas Plantas Filipinas* 41. 1851, *Synopsis Plantarum Glumacearum* 1: 69. 1853, *The Flora of British India* 7: 47. 1896 and *Handb. Fl. Ceylon* 5: 150. 1900, *Handb. Fl. Ceylon* 6: 321. 1931, *Grasses of Ceylon* 116. 1956, *Grasses of Burma ...* 329, 701. 1960, J.W. Purseglove, *Tropical Crops: Monocotyledons*, vol. 1. London, Longman Group Ltd. 1972, *Journal d'Agriculture Traditionnelle et de Botanique Appliquée* 30: 159. 1983, N.D. Sharma and M.N. Khare, "Two new smut diseases of little millet (*Panicum sumatrense*) from India." *Acta-Bot-Indica*. 15(1): 143-144. June 1987, J.F. Veldkamp, A.W.M. Eijs et al., "*Panicum curviflorum* (formerly *Panicum trypheron*) and *Panicum sumatrense* (*Panicum miliare* auct.) (Gramineae) in Southeast Asia." *Blumea*. 34(1): 77-85. 1989, *Cytologia* 55: 315-319. 1990, *Blumea* 41: 206. 1996.

in English: little millet, blue panic, small millet, sama, Indian millet

in Spanish: mijo pequeño, mijo sumatrense

in India: bili saame, chamai, chamala hullu, gadro, ganga samulu, gondula, gundli, kungu, kuren pullu, kutki, nalla shaama, nalla shaamalu, nallachamalu, peru saamai, saamai, saamaaka, saavaa, sadan samai, saka, sama, samai, samalu, samo, sava, save, shaama pullu, shaamai, shaame, shama, shame, shavan, shyaamaaka, suniva, vari

in Sri Lanka: hin meneri, shamai

in Vietnam: k[ee] sumatra

P. sumatrense Roth subsp. *psilopodium* (Trin.) de Wet (*Panicum psilopodium* Trin.) (from the Greek *psilos* "bare, smooth" and *pous, podos* "a foot")

Asia. Wild, alleged progenitor of *Panicum sumatrense* Roth, see *De Graminibus Paniceis* 217. 1826 and *Journal d'Agriculture Traditionnelle et de Botanique Appliquée* 30: 159. 1983.

P. superatum Hack. (*Dichantheium superatum* (Hack.) Zuloaga)

Brazil. Perennial, erect, short knotty rhizomes, panicle branches appressed, found in damp open places, see *Österreichische Botanische Zeitschrift* 51: 427. 1901, *American Journal of Botany* 90: 817. 2003.

P. tabulatum Hack. (*Paspalidium tabulatum* (Hack.) C.E. Hubb.; *Setaria tabulata* (Hack.) R.D. Webster)

Australia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 234. 1885 and *Bulletin of Miscellaneous Information Kew* 1934: 448. 1934, *Sida* 16(3): 445. 1995.

P. tamaulipense Waller & Morden

Mexico. Rare species, see Waller, F.R. and C.W. Morden, "*Panicum tamaulipense* (Poaceae: Paniceae): a new species from Mexico." *Systematic Botany* 8: 221-222. 1983.

P. teff Desv. (*Panicum maximum* Jacq.)

Africa. See *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Collectanea* 1:76. 1786, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 201. 1831.

P. tenacissimum (Schrad. ex Schult.) Nees (*Setaria tenacissima* Schrad. ex Schult.)

Brazil. See *Mantissa* 2: 279. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 238. 1829.

P. tenellum Lam. (*Panicum drosocarpum* Stapf; *Panicum imbelles* Spreng.; *Panicum lindleyanum* Nees ex Steud.; *Panicum tenellum* Griff., nom. illeg., non *Panicum tenellum* Lam.; *Panicum tenellum* Roxb., nom. illeg., non *Panicum tenellum* Lam.)

Sierra Leone, Liberia. Pasture, cultivated land, sandy loam, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Hortus Bengalensis, or a Catalogue ...* 7. 1814, *Flora Indica; or Descriptions ...* 1: 309. 1820, *Systema Vegetabilium, editio decima sexta* 1: 321. 1824 [1825],

Synopsis Plantarum Glumacearum 1: 91. 1854, *Notulae ad Plantas Asiaticas* 4: 21. 1854 and *Journal de Botanique (Morot)* 19: 104. 1905.

P. teneriffae (L.f.) Spreng. (*Panicum teneriffae* R. Br. ex B.D. Jacks., nom. illeg., non *Panicum teneriffae* (L. f.) Spreng.; *Saccharum teneriffae* L.f.; *Tricholaena teneriffae* (L.f.) Link; *Tricholaena teneriffae* subsp. *teneriffae*)

Tropical Africa. Perennial, tufted, leaves glabrous, spikelets solitary, see *Supplementum Plantarum* 106. 1781, *Systema Vegetabilium, editio decima sexta* 1: 315. 1825, *Handbuch zur Erkennung der nutzbarsten und am häufigsten vorkommenden Gewächse* 1: 91. 1829, *Linnaea* 11(Litt.-Ber.): 129. 1837, *Queensland Grasses* 22. 1888, *Index Kewensis* 2(3): 419. 1894 and *Bibliotheca Botanica* 138: 1-149. 1988.

P. tenerum Beyr. ex Trin. (*Panicum anceps* var. *strictum* Chapm.)

U.S. Perennial, good wildlife value, useful forage, growing in swales and swamps, ditches, poorly to very poorly drained ground, depressions, open savannah, in wetlands, see *Flora Boreali-Americana* 1: 48. 1803, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 341. 1834, *Flora of the Southern United States* 573. 1860.

in English: Southeastern panic grass, bluejoint panicum, bluejoint panic grass

P. tenuiculmum G. Mey. (*Panicum laxum* Sw.; *Panicum laxum* var. *laxum*; *Steinchisma laxa* (Sw.) Zuloaga)

America, Guyana. See *Nova Genera et Species Plantarum seu Prodrromus* 23. 1788, *Primitiae Florae Essequiboensis* ... 58. 1818 and *American Journal of Botany* 90: 817. 2003.

P. tenuiflorum R. Br. (*Digitaria longiflora* (Retz.) Pers.; *Digitaria tenuiflora* (R. Br.) P. Beauv.; *Panicum tenuiflorum* Schrank)

Australia. See *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805, *Prodrromus Florae Novae Hollandiae* 193. 1810, *Essai d'une Nouvelle Agrostographie* 51, 160, 171. 1812, *Sylloge Plantarum Novarum* 1: 192. 1824.

P. tenuifolium Hook. & Arnott (*Panicum molokaiense* O. Deg. & Whitney; *Panicum nephelophilum* var. *rhyacophilum* Hillebr.; *Panicum nephelophilum* var. *tenuifolium* (Hook. & Arn.) Hillebr.)

U.S., Hawaii. Tussock-forming, subalpine grasslands, see *The Botany of Captain Beechey's Voyage* 101. 1841, *Flora of the Hawaiian Islands* 497. 1888.

in English: Parkland panic grass, torrid panic grass

in Hawaii: mountain pili

P. tepuianum Davidse & Zuloaga

Venezuela. Among streams and along riverbanks, see *Novon* 1(4): 191, f. 1-2. 1991.

P. teretifolium Hack.

Brazil. See *Oesterr. Bot. Z.* 51: 372. 1901.

P. tijucae Renvoize

Brazil. See *Kew Bulletin* 32(2): 422. 1978.

P. tomentosum Roxb. (*Setaria intermedia* Roem. & Schult.; *Setaria tomentosa* (Roxb.) Kunth)

Asia, India. Tufted, see *Hortus Bengalensis, or a catalogue ...* 7. 1814, *Systema Vegetabilium* 2: 489. 1817, *Flora Indica; or Descriptions ...* 1: 303. 1820, *Révision des Graminées* 1: 47. 1829.

P. torreyanum Wight & Arn. ex Steud.

Asia. See *Nomenclator Botanicus. Editio secunda* 2: 264. 1841.

P. torridum Gaud. (*Panicum havaiense* Reichardt; *Panicum nubigenum* Kunth)

U.S., Hawaii. Annual, low bunchgrass, erect or slightly bent at the base, rather robust, densely covered with long silky hairs, sometimes freely branching, leaves densely velvety and tapering to a sharp point, flowering heads rather dense and compact, inflorescence densely covered with long hairs, very small spikelets, stamens orange, propagation by seed, valuable as forage, grows in volcanic or clay soils or on cliffs in arid coastal areas, grassland, waste places, see *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 411. 1830.

in English: torrid panic grass

in Hawaii: kakonakona, hakonakona

P. trachycladus Schum.

Africa. See *Die Pflanzenwelt Ost-Afrikas* 5a: 108. 1895.

P. trachyrachis Benth. (*Panicum trachyrachis* Benth.)

Asia tropical, Indonesia, Australia, Papua New Guinea. See *Flora Australiensis: A Description ...* 7: 490. 1878 and *Blumea* 41: 207. 1996.

P. trachyrachis Benth. var. ***tenuior*** Benth. (*Panicum trachyrachis* Benth.)

Australia. See *Flora Australiensis: A Description ...* 7: 490. 1878 and *Blumea* 41: 207. 1996.

P. tremulosum Mez (*Dichantheium viscidellum* (Scribn.) Gould; *Panicum viscidellum* Scribn.)

Venezuela. Riverbeds, gravelly banks, see *Circular, Division of Agrostology, United States Department of Agriculture* 19: 2. 1900, *Contr. U.S. Natl. Herb.* 15: 296. 1910, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 76. 1917, *Brittonia* 32: 357. 1980.

P. tricarinatum (Roth) Steud. (*Isachne tricarinata* Roth; *Panicum brevifolium* L.)

Asia. See *Species Plantarum* 1: 59. 1753, *Systema Vegetabilium* 2: 476. 1817, *Nomenclator Botanicus. Editio secunda* 2: 264. 1841 and *Blumea* 41: 189. 1996.

P. trichanthum Nees (*Milium microspermum* Lag.; *Panicum guayaquilense* Steud.; *Panicum microspermum* (Lag.) E. Fourn.; *Panicum microspermum* E. Fourn. ex Hemsl.; *Panicum trichanthum* A. Rich., nom. illeg., non *Panicum trichanthum* Nees; *Panicum trichanthum* var. *modestum* Döll)

Brazil, Peru, Mexico, Argentina, Paraguay, Colombia, Belize. Annual, branching, scrambling, long-stemmed, climbing, trailing, pilose leaf blades linear-lanceolate acute, panicle broadly ovate much branched with spreading branches, spikelets ovate-oblong, lower glume a small scale, upper glume 7-nerved, lower lemma 3-nerved and its palea absent, upper lemma and palea smooth, green fruits, the rhizomes are aromatic, emollient and diuretic, sometimes used as excitant, weed, found in open and disturbed site at river's edges, damp places, roadsides, see *Genera et species plantarum* 2. 1816, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 210. 1829, *Tentamen Florae Abyssinicae ...* 2: 375. 1850, *Synopsis Plantarum Glumacearum* 1: 85. 1854, *Flora Brasiliensis* 2(2): 248. 1877, *Biologia Centrali-Americana; ... Botany ...* 3: 492. 1885, *Mexicanas Plantas* 2: 492. 1886 and *Contr. U.S. Natl. Herb.* 15: 131. 1910, *Brittonia* 23(3): 293-324. 1971, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in English: thicket panic grass

in Brazil: capim mimoso, andacaá, capim andacaá, capim vindecaá

P. trichidiachne Döll (*Panicum schaffneri* Hack.; *Panicum schiffneri* Hack.; *Panicum schmitzii* Hack.)

Brazil, Mexico, Colombia, Venezuela, Ecuador, Paraguay, Argentina. Perennial, herbaceous, caespitose, decumbent, main stems long and trailing, see *Flora Brasiliensis* 2(2): 339, pl. 49. 1877 and *Annalen des K. K. Naturhistorischen Hofmuseums* 17: 254. 1902, *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 11. 1906.

in English: Schiffner's panic grass

P. trichocladum Hackel ex K. Schum. (*Panicum protractum* Peter, nom. illeg., non *Panicum protractum* Mez; *Panicum simbense* Mez; *Panicum trichocladum* Hack. ex Engl.; *Panicum trichocladum* var. *parviflorum* Peter)

Tropical Africa, Malawi, Sudan, Uganda, Tanzania, Ethiopia. Perennial, herbaceous, creeping, rambling, decumbent, scrambling, slender, straggling, much-branched, leafy, short leaf blades narrowly lanceolate acuminate, stoloniferous, panicle ovate with very slender branches divaricate, spikelets spaced oblong hairy, lower glume ovate obtuse 0- to 1-nerved, upper glume 5-nerved apiculate, lower lemma 5- to 7-nerved with a well-developed palea, palatable to cattle and goats, young leaves suitable for calves, aggressive grass, forming colonies, a common weed of arable crops and wasteland, invasive, infesting coffee and sisal crops in East Africa, grows in bush and at forest edges, clearings,

edges of bush forest, on deep red loam soils, forest undergrowth and uncultivated land, see *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 119. 1891, *Die Pflanzenwelt Ost-Afrikas* 5c: 103. 1895 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 186. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 191, 196 & Anhang, 38, 42, t. 26, f. 1. 1930, T. Nishida & S. Uehara, "Kitongwe name of plants: a preliminary listing." *African Study Monographs*. 1: 109-131. 1981.

in English: donkey grass

in Tanzania: ikoka, lukoka

P. trichoides Sw. (*Panicum acutifolium* Willd. ex Spreng.; *Panicum capillaceum* Lam.; *Panicum capillaceum* var. *strictius* Döll; *Panicum micranthum* Kunth; *Panicum micranthum* Salzm. ex Döll, nom. illeg., non *Panicum micranthum* Kunth)

Bolivia, Peru, Mexico, Argentina, Paraguay, Guatemala, Belize. Terrestrial small weed species growing in rosettes, annual, branched, ascending or erect, prostrate, more or less decumbent at base, delicate, diffuse, very slender, leaf sheaths hairy and ciliate, ligule a short and ciliate membrane, leaves lanceolate to narrowly ovate and cordate at base, inflorescence openly paniculate and finely branched, primary branches in whorls, panicle pyramidal and erect, spikelets long-pedicellate and slightly hirsute, lower glume ovate 1-nerved, upper glume 3- to 5-nerved, lower lemma 3- to 5-nerved, upper lemma finely granulose, clumps on dry rocky road banks, moist places, along paths, in shade, open riverbanks, forest edge, beach, along streams, widely naturalized elsewhere in tropics, see *Nova Genera et Species Plantarum seu Prodrromus* 24. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *Nova Genera et Species Plantarum* 1: 105. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 320. 1825, *Flora Brasiliensis* 2(2): 249. 1877 and *Contr. U.S. Natl. Herb.* 12: 140. 1908.

in English: tickle grass, masher grass, tropical panic grass, panic grass, rice grass

in Spanish: pajilla

in the Caribbean: ti lavvvan, zèb fin, petite avoine, herbe fine

in Colombia: ilusión, paja churcada

in Mexico: k'u-uech, panizo, zacate carricillo, zacate ilusión

in Venezuela: huesillo, plumilla

P. tricholaenoides Steud. (*Panicum bambusoides* Speg. ex Arechav. [also spelled *bambusoides*], nom. illeg., non *Panicum bambusoides* Desv. ex Ham.; *Panicum junceum* Nees, nom. illeg., non *Panicum junceum* Trin.; *Panicum junceum* var. *strictius* Döll; *Panicum junceum* var. *subnutans* Döll;

Panicum pilgeri Herter, nom. illeg., non *Panicum pilgeri* Mez; *Panicum sempervirens* Kuntze)

Uruguay, Venezuela, Colombia, Bolivia, Brazil, Argentina. Perennial, erect, rigid, caespitose, robust, bamboo-like, subwoody, branched, glabrous, more or less strongly rhizomatous with knotty rhizomes, glaucous, leaf blades linear glabrous acuminate, pyramidal panicles lax much branched, spikelets elliptic-ovate glabrous, lower glume ovate 7-nerved acuminate, upper glume 7-nerved acuminate, upper lemma elliptic smooth, forming dense clumps, found in sandy places, ponds, shallow water, riverbanks, forest, resembles *Panicum glabripes*, see *De Graminibus Paniceis* 220. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 159. 1829, *Synopsis Plantarum Glumacearum* 1: 68. 1854 [1853], *Flora Brasiliensis* 2(2): 216. 1877, *Anales del Museo Nacional de Montevideo* 1: 128, t. 9-10. 1894, *Revisio Generum Plantarum* 3d(3): 364. 1898.

P. tricholaenoides Steud. var. ***flavomarginatum*** (Mez) Zuloaga (*Panicum flavomarginatum* Mez)

Paraguay. In forest, see *Synopsis Plantarum Glumacearum* 1: 68. 1854 [1853] and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 2. 1921, *Candollea* 46(2): 540. 1991.

P. tricholaenoides Steud. var. ***tricholaenoides***

Argentina, Bolivia, Brazil, Colombia, Paraguay, Uruguay, Venezuela. See *Synopsis Plantarum Glumacearum* 1: 68. 1854 [1853] and *Candollea* 46(2): 540. 1991.

P. trichonode Launert & Renvoize

Zambia. Perennial, usually densely tufted, erect or geniculate, culm nodes densely hairy, leaf surface papillate, inflorescence ascending, lower glume ovate, lower floret male, palea present, upper lemma shiny, thatching grass, found in seasonally flooded areas, sandy soil, black clays, vleis, pan edges, riverbanks, see *Prodromus einer Flora von Südwestafrika* 34(160): 226. 1970.

P. trigonum Retz. (*Cyrtococcum trigonum* (Retz.) A. Camus; *Panicum trigonum* Wight ex Steud., nom. illeg., non *Panicum trigonum* Retz.)

India. See *Observationes Botanicae* 3: 9. 1783, *Synopsis Plantarum Glumacearum* 1: 83. 1854 and *Bulletin du Muséum d'Histoire Naturelle* 27: 118. 1921.

P. trinchanthum Nees

South America, Paraguay.

P. trinii Kunth (*Ichnanthus trinii* (Kunth) Pilg.; *Panicum rigidifolium* Trin., nom. illeg., non *Panicum rigidifolium* (Poir.) Kunth; *Panicum trinii* Moritzi)

Brazil. Perennial, caespitose, lower leaf sheaths often pilose to villous, blades linear or linear-lanceolate and tapering to the base, leaves pungent and sparsely or densely pilose, narrow panicle spike-like, coriaceous spikelets ovate-oblong or oblong, lower glume 3-nerved separated by a

short internode, upper glume 5-nerved, upper lemma and palea stipitate, on secondary forest on sandy soil, see *Mantissa* 2: 279. 1824, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 88. 1833, *Systematisches Verzeichniss der im Indischen Archipel* 102. 1846 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 245. 1931, *Fieldiana, Botany* 24(2): i-ix, 1-390. 1955.

P. trochainii (A. Camus) A. Camus ex Stapf & C.E. Hubb. (*Isachne trochainii* A. Camus) (dedicated to the French botanist Jean Louis Trochain, 1903-1976, traveler, explorer, profesor of tropical botany, botanical collector in Africa; see F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 81. 1971)

Tropical Africa. Damp places, rice fields, see *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 5: 250. 1933, *Flora of Tropical Africa* 9: 1098. 1934.

P. truncatum Trin. (*Panicum truncatum* Nees; *Paspalidium geminatum* (Forssk.) Stapf)

Egypt. Riverbanks, see *Flora Aegyptiaco-Arabica* 18. 1775, *De Graminibus Paniceis* 130. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 215. 1829 and *Flora of Tropical Africa* 9: 583. 1920.

P. trypheron Schult. (*Panicum curviflorum* Hornem.; *Panicum phragmitoides* Stapf; *Panicum roxburghii* Spreng.; *Panicum tenellum* Roxb., nom. illeg., non *Panicum tenellum* Lam.) (from the Greek *trypheros*, on "delicate, tender, soft-fleshed, dainty")

Southeast Asia, Sri Lanka, India. Annual or short-lived perennial, erect or geniculate, internodes hollow, nodes and internodes glabrous, leaves mostly basal, leaf sheaths more or less keeled, ligule a ciliate membrane, leaf blades linear, leaves hirsute to pilose, panicle branches ascending to spreading, spikelets lanceolate-elliptic acuminate, upper floret shorter than the lower lemma, lower floret sterile, lower glume acuminate, eaten by cattle, grains used for making bread in times of scarcity, growing in damp places, depressions, ditches, plantations, along roadsides, see *Hortus Regius Botanicus Hafniensis* Suppl. Suppl.: 116. 1819, *Flora Indica; or Descriptions ...* 1: 309. 1820, *Mantissa* 2: 244. 1824, *Systema Vegetabilium, editio decima sexta* 1: 320. 1825, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 181. 1899 and *Icones plantarum formosandarum nec non et contributiones ad floram formosanam* 7: 62-63, f. 33. 1918, *Flora of Tropical Africa* 9: 677. 1920, *Journal of Japanese Botany* 38(3): 84. 1963, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Blumea* 34: 79. 1989, *Journal of Cytology and Genetics* 25: 322-323. 1990.

in India: adavi sathagaddi, bhatur, kaadu kari saame, kaadu kari saame hullu, kadukarai samai hullu, kempu sanna hanchi, mijhri, samai karunai, shamai karunai

in Sri Lanka: shamai karunai, wal meneri

P. tuberculatum J. Presl

The Philippines, Mexico. See *Reliquiae Haenkeanae* 1(4-5): 307. 1830 and *Contr. Natl. Herb. U.S.* 15: 141. 1910, *Blumea* 41: 208. 1996.

P. tuerckheimii Hack. (for the German plant collector Hans von Tuerckheim, 1853-1920, traveler, in Guatemala and Santo Domingo; see T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 408. Boston, Mass. 1972; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; John Donnell Smith (1829-1928), *Enumeratio plantarum guatemalensium imprimis a H. de Tuerckheim collectarum ... Oquawkae*, Illinois 1889-1907)

Guatemala. Clumped, along roadsides, see *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 12: 60. 1906.

P. turfosum Mez (*Panicum schenckii* Hack.; *Panicum spathellosum* Döll; *Steinchisma spathellosa* (Döll) Renvoize)

Paraguay. See *Flora Brasiliensis* 2(2): 241. 1877 and *Österreichische Botanische Zeitschrift* 51: 426. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Kew Bulletin* 42(4): 921. 1987, *Annals of the Missouri Botanical Garden* 85(4): 631-656. 1998.

P. turgidum Forssk. (*Panicum turgidum* Hochst. ex Steud., nom. illeg., non *Panicum turgidum* Forssk.)

Northern and northeastern Africa, Sahara, Chad, Pakistan. Perennial desert grass, erect or ascending, hard, coarse, woody, shrubby, suffrutescent, solid, many-noded, rooting and branching at the nodes, rootstock stout, stems bamboo-like and smooth, stiff pungent leaf blades linear-lanceolate, panicle terminal and subpyramidal with ascending and branches not whorled, ovoid spikelets solitary and erect often gaping at anthesis, glumes concave, upper lemma smooth, seed with convex and flat sides, the grain looks like millet, roots with a feltlike appearance, root fibers strong and woody, tanning agent, fodder plant, young leaves and shoots very palatable, eaten by camels and donkeys, grain eaten by the Tuareg people, ground into a flour and made into porridge, grain made into flour/meal or boiled, the stems used for thatch and mats, plants used as a vulnerary agent, powder from ground stems used for healing wounds, can withstand long periods of drought, resistant to saline soils, useful for erosion control and for binding sand, a valuable species for rehabilitation of desert ranges and for sand dune stabilization, usually found in depressions and river beds, deep sand dunes and sandy plains, seashores, in the arid sandy and rocky waste places, on the edges of wadis and in oases, along wadi systems, irrigated plains, coastal lowland and coastal sand dunes, see *Flora Aegyptiaco-Ara-*

bica 18. 1775, *Synopsis Plantarum Glumacearum* 1: 88. 1854 and J. Audru, G. Cesar, G. Forgiarini and J. Lebrun, *La Végétation et les Potentialités Pastorales de la République de Djibouti*. Institut d'Élevage et de Médecine Vétérinaire des Pays Tropicaux, Maisons-Alforts, France 1987, J. Harlan, "Wild grass seeds as food in the Sahara and sub-Saharan." *Sahara* 2: 69-74. 1989, S. Tilahun, S. Edwards and T.B.G. Egziabher, editors, *Important Bird Areas of Ethiopia*. Published by Ethiopian Wildlife and Natural History Society. Semayata Press. Addis Ababa, Ethiopia 1996.

in English: desert grass, desert panic grass, wild grain grass, afezu grass, basket grass, Sahara millet

in Arabic: abukar, afazu, afezou (grains), afezu, az, aze, bochar, bokkar, bou rekba, bu rekuba, dorran, goumshi, goushi, hade, markuba, markouba, morkba, mrekbba, mrokba, murkba, nnshe, sabat, safar, shush, taman, tamam, thaman, timam, tishilat, tuman, umm rekba, umn rekba

in Chad: wasarka

in Mali: afazo, afezu, afoajo, afodio, afodjo, burekuba, foyo, mrokba, ullul

in Mauritania: abukar, az, aze, markouba, morkba, morkeba, mrekbba, mrokba, oumn-rokba, murkba, nnshe, tishilat, umn rekba

in Morocco: ûmm-rekba, bû-rekba, mrokba, mmu rokba, tammâm, tmâm, tumâm, âfzû, âbûkar, âz, tisilat, tigusin, gusî, emselih

in Niger: afeza, afezu, afodio, afodjo, fadhik, foyo, gajalol, gumchi, markuba

in Sahara (Tassili): afazu

in Somalia: darif, dungara, dhu-ghasi

in Sudan: tumaan, tuman, taman

in Yemen: bukar

in India: munt, murut, murutagas, murutaghas

in Pakistan: dooth

P. tylandthum Hack. ex Engl. (*Panicum pusillum* Hook.f.)

Africa, Ethiopia. See *Journal of the Linnean Society, Botany* 7: 227. 1864, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 118. 1891.

P. uliginosum Roth ex Roem. & Schult. (*Panicum interruptum* Willd.; *Panicum uliginosum* Roxb., nom. illeg., non *Panicum uliginosum* Roth ex Roem. & Schult.; *Sacciolepis interrupta* (Willd.) Stapf)

India. Wet ground, rice fields, see *Species Plantarum. Editio quarta* 1: 341. 1797, *Hortus Bengalensis, or a Catalogue ...* 8. 1814, *Systema Vegetabilium* 2: 442. 1817, *Flora Indica; or Descriptions ...* 1: 310. 1820 and *Flora of Tropical Africa* 9: 761. 1920.

P. umbellatum Trin. (*Brachiaria umbellata* (Trin.) Clayton)

Mauritius. See *De Graminibus Paniceis* 238. 1826, *Synopsis Plantarum Glumacearum* 1: 419. 1854 and *Notulae Systematicae. Herbarium du Museum de Paris* 15: 414. 1959, *Kew Bulletin* 34(3): 559. 1980.

in Rodrigues Island: gazon chinois

P. uncinatum Raddi (*Loxostachys uncinata* (Raddi) Peter; *Pseudechinolaena polystachya* (Kunth) Stapf)

Brazil. See *Agrostografia Brasiliensis* 41. 1823 and *Flora of Tropical Africa* 9: 495. 1919, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 204. 1930.

P. urochloides (Büse) Boerl. (*Digitaria urochloides* Büse; *Ottochloa nodosa* (Kunth) Dandy; *Panicum nodosum* Kunth)

Asia. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 97. 1833, *Plantae Junghuhnianae* 3: 382. 1854, *Annales du Jardin Botanique de Buitenzorg* 8: 62. 1890 and *Journal of Botany, British and Foreign* 69(2): 55. 1931, *Blumea* 21(1): 1-80. 1973.

P. urvilleanum Kunth (*Monachne urvilleana* (Kunth) Herter; *Panicum megastachyum* J. Presl, nom. illeg., non *Panicum megastachyum* Nees ex Trin.; *Panicum patagonicum* Hieron.; *Panicum preslii* Kunth; *Panicum reversipilum* Steud.; *Panicum urvilleanum* f. *subpilosum* Kuntze; *Panicum urvilleanum* var. *longiglume* Scribn.; *Panicum urvilleanum* var. *versicolor* Kuntze; *Panicum urvillianum* Brongn.)

South America, Argentina, U.S., California. Perennial, stout, more or less hairy, edible seeds, grains used like millet cooked or ground into a powder and used as a flour, found in sandy places in deserts, dry or moist soils, semiarid pampas, see *Reliquiae Haenkeanae* 1(4-5): 305. 1830, *Révision des Graminées* 2: 403, t. 115. 1831, *Voyage autour du Monde* 2(2): 117, t. 9. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 121. 1833, *Synopsis Plantarum Glumacearum* 1: 76. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 262. 1874, *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 3: 377. 1881, *Revisio Generum Plantarum* 3(3): 364. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 17(edition 2): 49. 1901, *Contr. U.S. Natl. Herb.* 24: 465. 1927, *Revista Sudamericana de Botánica* 9: 118. 1953.

in English: desert panic grass, desert panicum

P. vacilans Steud.

The Philippines. See *Synopsis Plantarum Glumacearum* 1: 75. 1853.

P. vagiflorum Stapf (*Panicum genuflexum* Stapf)

Mozambique. On dry soils, see *Flora of Tropical Africa* 9: 683, 689. 1920.

P. vaginivicosum Renvoize & Zuloaga

Brazil. See *Kew Bull.* 50(1): 161. 1995.

P. valenzuelanum A. Rich. (*Panicum sellowii* Nees)

Cuba. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 153. 1829, *Historia Fisica Politica y Natural de la Isla de Cuba, Botanica* 11: 304. 1850.

P. validum Mez

Southern America, Argentina, Uruguay, Brazil. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4. 1921.

P. vannum Swallen (*Panicum chnoodes* Trin.)

Venezuela. See *De Graminibus Paniceis* 211. 1826 and *Memoirs of the New York Botanical Garden* 9(3): 261. 1957.

P. variegatum Veitch

New Caledonia. See *Gardener's Chronicle & Agricultural Gazette* 458. 1867.

P. vaseyanum Scribn. ex Beal

Mexico. Wet plains, good forage, see *Grasses of North America for Farmers and Students* 2: 140. 1896.

P. vatovae Chiov. ex Chiarugi

Africa. Perennial, slender, wiry, hard, ascending, fasciculate branched at the nodes, tough knotty rootstock, leaf sheaths imbricate, pubescent leaf blades linear-lanceolate acuminate divaricate or deflexed, panicle ovate sparsely branched, spikelets oblong pubescent striate to prominently nerved, lower glume lanceolate oblong 3- to 5-nerved, upper glume 7- to 9-nerved oblong, lower lemma 7-nerved with a well-developed palea, slopes, rocky places, closely related to *Panicum hochstetteri*, see *Webbia* 8: 74. 1951.

P. velutinsum Nees (*Panicum molle* Sw.; *Panicum velutinsum* Nees ex Trin., nom. illeg., non *Panicum velutinsum* Nees; *Urochloa mollis* (Sw.) Morrone & Zuloaga)

Brazil. See *Nova Genera et Species Plantarum seu Prodrromus* 22. 1788, *De Graminibus Paniceis* 144. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 121. 1829 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 11: 75. 1904, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Darwiniana* 33(1-4): 85. 1992.

P. venezuelae Hack. (*Brachiaria venezuelae* (Hack.) Henrard; *Panicum berteronianum* Mez, nom. illeg., non *Panicum berteronianum* (Schult.) Steud.; *Panicum ineptum* Hitchc. & Chase)

Venezuela, Guatemala, Brazil. Perennial, weak, loosely tufted, trailing, slender, lax, scrambling, wiry, erect, decumbent, straggling, often branching, hairy nodes, internodes hairy or glabrous, leaf blades lanceolate acute or acuminate, panicles terminal narrowly pyramidal sparsely branched, spikelets oblong paired, lower glume ovate 3-nerved, upper glume ovate-oblong 7-nerved, lower lemma oblong 5-nerved, upper lemma and palea shining, in shade, forest, see *Österreichische Botanische Zeitschrift* 51: 368. 1901, *Contributions from the United States National Herbarium* 17(6): 509, f. 98. 1915, *Botanische Jahrbücher für Systematik*,

Pflanzengeschichte und Pflanzengeographie 56(Beibl. 125): 5. 1921, *Blumea* 3(3): 435. 1940, *Annals of the Missouri Botanical Garden* 75(2): 420-455. 1988.

in English: Venezuelan panic grass

P. vernale Hitchc. & Chase (*Dichantherium dichotomum* var. *ensifolium* (Baldwin ex Elliott) Gould & C.A. Clark; *Dichantherium ensifolium* var. *ensifolium*; *Panicum ensifolium* var. *ensifolium*)

U.S. See *A Sketch of the Botany of South-Carolina and Georgia* 1: 126. 1816 and *Contributions from the United States National Herbarium* 15: 266, f. 293. 1910, *Brittonia* 26(1): 59. 1974, *Annals of the Missouri Botanical Garden* 65(4): 1119. 1978 [1979], *Brittonia* 36(3): 262-273. 1984.

P. verruciferum Mez (*Panicum gracilicaule* Rendle)

Tropical Africa. Sandy places, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 179, 181. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 188. 1921.

P. verrucosum Muhl. (*Panicum debile* Elliott, nom. illeg., non *Panicum debile* Desf.; *Panicum rugosum* Bosc ex Spreng.; *Panicum umbraculum* Bosc ex Spreng., also spelled *unbraculum*)

U.S., Texas. Annual, upright, slender, usually branched, sometimes rooting at the lower nodes, with fibrous roots, leaves elongated and flat, open panicles, spikelets one-flowered and ovoid, second glume warty, lemmas warty, smooth seed, along margins of seasonal ponds, sandy prairies, seasonally wet depression, wet woods and shores, moist soils, wetlands, flatwoods, an endangered species in Ohio, see *A Sketch of the Botany of South-Carolina and Georgia* 1: 129. 1816, *Descriptio uberior Graminum* 113. 1817, *Systema Vegetabilium, editio decima sexta* 1: 314. 1825.

in English: warty panic grass, warty panicum, fall panic grass

P. versicolor Döll (*Chaetochloa versicolor* E.P. Bicknell; *Otachyrium versicolor* (Döll) Henrard; *Panicum truncatum* Nees, nom. illeg., non *Panicum truncatum* Trin.; *Panicum versicolor* Hochst. ex Peter; *Panicum versicolor* (E.P. Bicknell) Nieuwl., nom. illeg., non *Panicum versicolor* Döll)

South America, Brazil, Colombia, Venezuela. Forage, savannah seasonally flooded and poorly drained, riverbanks, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 215. 1829, *Flora Brasiliensis* 2(2): 254. 1877, *Bulletin of the Torrey Botanical Club* 25(2): 105, pl. 329. 1898 and *American Midland Naturalist* 2: 64. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 201. 1930, *Blumea* 4(3): 511. 1941, Escobar, A. *Adaptación de las condiciones de inundación. Productividad y valor nutritivo de las gramíneas de la sabana inundable*. IX Jorn. Agron. Inst. Prod. Animal, Fagro, UCV. 1977: 110-111. 1977.

P. verticillatum L. (*Chaetochloa verticillata* (L.) Scribn.; *Chamaeraphis italica* var. *verticillata* (L.) Kuntze;

Chamaeraphis verticillata (L.) Porter; *Ixophorus verticillatus* (L.) Nash; *Panicum humile* Trin.; *Panicum humile* Thunb. ex Trin.; *Panicum verticillatum* Rottler ex Spreng.; *Panicum verticillatum* Ucria, nom. illeg., non *Panicum verticillatum* L.; *Pennisetum verticillatum* (L.) R. Br.; *Setaria adhaerens* (Forssk.) Chiov.; *Setaria adhaerens* subsp. *verticillata* (L.) Belo-Corr.; *Setaria adhaerens* var. *verticillata* (L.) Belo-Corr.; *Setaria verticillata* (L.) P. Beauv.; *Setariopsis verticillata* (L.) Samp.)

Europe. See *Species Plantarum, Editio Secunda* 1: 82. 1762, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Systema Vegetabilium, editio decima sexta* 1: 304. 1825, *De Graminibus Paniceis* 164, 167. 1826, *Synopsis Plantarum Glumacearum* 1: 52. 1853, *Enumeratio Plantarum Transsylvanicae* 723. 1866, *Flora Brasiliensis* 2(2): 172. 1877, *Mémoires de l'Institut Égyptien* 2: 161. 1887, *Revisio Generum Plantarum* 2: 767-768. 1891, *Bulletin of the Torrey Botanical Club* 20: 196. 1893, *Bulletin of the Torrey Botanical Club* 22(10): 422. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897, *Synopsis der mitteleuropäischen Flora* 2: 75. 1899 and *Herbário Português* 4. 1914, *Nuovo Giornale Botanico Italiano* 26: 77. 1919, *Revista Biol. (Lisbon)* 13: 117-143. 1986, *Fl. Libya* 145: 296. 1988, *Boletim da Sociedade Brotariana, ser. 2* 62: 289. 1989.

P. verticillatum L. var. **arenosum** (Schur) Asch. & Graebn. (*Setaria verticillata* var. *arenosa* Schur)

Europe. See *Enumeratio Plantarum Transsylvanicae* 723. 1866, *Synopsis der mitteleuropäischen Flora* 2: 75. 1899.

P. verticillatum L. var. **coloratum** A. Braun ex Asch. & Graebn. (*Setaria verticillata* var. *colorata* (A. Braun ex Asch. & Graebn.) Podp.)

Europe. See *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Enumeratio Plantarum Transsylvanicae* 723. 1866, *Synopsis der mitteleuropäischen Flora* 2: 75. 1899.

P. verticillatum L. var. **latifolium** (Freyn) Podp. (*Setaria verticillata* var. *latifolia* Freyn)

East and central Europe. See *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 27: 457. 1878.

P. verticillatum L. var. **longisetum** Asch. & Graebn. (*Setaria verticillata* var. *longiseta* (Asch. & Graebn.) Volkart ex Hegi, nom. illeg., non *Setaria verticillata* var. *longiseta* Ducommun)

Europe. See *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Synopsis der mitteleuropäischen Flora* 2: 75. 1899 and *Illustrierte Flora von Mittel-Europa* 1: 192. 1906.

P. verticillatum L. var. **minor** Thunb. (*Setaria viridis* subsp. *minor* (Thunb.) T. Koyama; *Setaria viridis* var. *minor* (Thunb.) Ohwi, nom. illeg., non *Setaria viridis* var. *minor* Beurl.)

Asia, Japan. See *Flora Japonica*, ... 46. 1784, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812 and *Acta Phytotaxonomica et Geobotanica* 11: 51. 1952, *Grasses of Japan and its Neighboring Regions* 529. 1987.

P. verticillatum L. var. *vulgare* Döll

Brazil. See *Flora Brasiliensis* 2(2): 172. 1877.

P. viale Chase (*Panicum effusum* R. Br.)

Papua New Guinea. See *Prodromus Florae Novae Hollandiae* 1: 191. 1810 and *Journal of the Arnold Arboretum* 20: 310. 1939, *Blumea* 41: 181-216. 1996.

P. vicarium E. Fourn. (*Dichantherium sphaerocarpon* (Elliott) Gould; *Dichantherium sphaerocarpon* var. *sphaerocarpon*; *Panicum sphaerocarpon* Elliott; *Panicum vicarium* E. Fourn. ex Hemsl.)

Mexico. See *A Sketch of the Botany of South-Carolina and Georgia* 1: 125. 1816, *Biologia Centrali-Americana*; ... *Botany* ... 3: 498. 1885, *Mexicanas Plantas* 2: 20. 1886 and *Brittonia* 26(1): 60. 1974.

P. viliforme Wood

U.S. Wetlands, wet meadows, see *A Class-book of Botany* 785. 1861.

P. villaricense Mez (*Homolepis villaricensis* (Mez) Zuloaga & Soderstr.)

Brazil, northern Argentina, Paraguay. Stoloniferous plant with glutinous spikelets, found in forest shade, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Smithsonian Contributions to Botany* 59: 29. 1985, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994, *Flora del Paraguay* 23: i-iv, 1-327. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

P. villiferum Nees

Mexico. See *Linnaea* 19(6): 687. 1847.

P. villosissimum Nash (*Dichantherium acuminatum* var. *acuminatum*; *Dichantherium acuminatum* var. *villosissimum* (Nash) Gould & C.A. Clark; *Dichantherium acuminatum* var. *villosum* (A. Gray) Gould & C.A. Clark; *Dichantherium lanuginosum* var. *villosissimum* (Nash) Gould; *Dichantherium ovale* subsp. *villosissimum* (Nash) Freckmann & Lelong; *Dichantherium villosissimum* (Nash) Gould; *Dichantherium villosissimum* (Nash) Freckmann; *Panicum acuminatum* var. *villosum* (A. Gray) Beetle; *Panicum atlanticum* Nash; *Panicum dichotomum* var. *villosum* (A. Gray) Vasey; *Panicum haemacarpum* Ashe; *Panicum lanuginosum* Ell. var. *praecocius* (A. Hitchc. & Chase) Dore; *Panicum nitidum* var. *pubescens* Scribn. ex Kearney; *Panicum nitidum* var. *villosum* A. Gray; *Panicum ovale* Elliott; *Panicum ovale* var. *villosum* (A. Gray) Lelong; *Panicum tectum* Willd. ex Spreng.; *Panicum xanthospermum* Scribn. & Mohr.)

North America, Ontario, U.S., Pennsylvania, Ohio, Illinois. Open habitats, hill prairies, swamp, open dune sand to open sandy spaces in early successional sand prairie, open woods, a rare species in Ohio, see *Species Plantarum* 1: 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1: 123. 1816, *Systema Vegetabilium, editio decima sexta* 1: 313. 1825, *North American Gramineae and Cyperaceae* 2: 111. 1835, *Department of Agriculture. Botanical Division. Bulletin* 8: 31. 1889, *Bulletin of the Torrey Botanical Club* 20: 479. 1893, *Bulletin of the Torrey Botanical Club* 23: 149. 1896, *Bulletin of the Torrey Botanical Club* 24(7): 346-347. 1897, *Journal of the Elisha Mitchell Scientific Society* 15: 53, 55. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 577. 1899 and *Contributions from the United States National Herbarium* 6: 348. 1901, *Rhodora* 36(423): 79. 1934, *Brittonia* 26(1): 60. 1974, *Phytologia* 39(4): 270. 1978, *Annals of the Missouri Botanical Garden* 65(4): 1114, 1121, 1124. 1978 [1979], *Phytologia* 48(2): 192. 1981, *Brittonia* 36(3): 272. 1984, *Sida* 20(1): 170. 2002, *Flora of North America North of Mexico* 25: 747. 2003.

in English: villous panic grass, woolly panic grass, panic grass, long-haired panic grass, white-haired panic grass, whitehair rosette grass

P. vimineum Schrad.

Brazil. See *Mantissa* 2: 255. 1824.

P. vinaceum Swallen (*Panicum cervicatum* Chase)

Venezuela. Sandy clay, see *Journal of the Washington Academy of Sciences* 32(6): 164, f. 10. 1942, *Fieldiana, Botany* 28(1): 27. 1951.

P. violaceum Lam. (*Panicum violaceum* A. Llanos; *Panicum violaceum* Klein ex Thiele, nom. illeg., non *Panicum violaceum* Lam.; *Panicum violaceum* Linn. ex Nieuwl., nom. illeg., non *Panicum violaceum* Lam.; *Panicum violaceum* Rottler ex Sw., nom. illeg., non *Panicum violaceum* Lam.; *Pennisetum glaucum* subsp. *violaceum* (Lam.) A. Rich.; *Pennisetum violaceum* (Lam.) Rich. ex Pers.; *Pennisetum violaceum* Trin., nom. illeg., non *Pennisetum violaceum* (Lam.) Rich. ex Pers.)

Senegal. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 169. 1791, *Syn. Pl.* 1: 72. 1805, *De Graminibus Paniceis* 67. 1826, *Adnotationes Botanicae* 7. 1829, *Linnaea* 9(3): 307. 1834, *Fragmentos de Algunas Plantas Filipinas* 42. 1851 and *American Midland Naturalist* 2: 64. 1911.

P. virescens Weigel (*Panicum virescens* Poir., nom. illeg., non *Panicum virescens* Weigel; *Panicum virescens* Salzm. ex Döll, nom. illeg., non *Panicum virescens* Weigel)

Warm regions. See *Observationes Botanicae* 20, t. 2, f. 2. 1772, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 278. 1816, *Flora Brasiliensis* 2(2): 157. 1877.

P. virgatum L. (*Chasea virgata* (L.) Nieuwl.; *Eatonia purpurascens* Raf.; *Ichnanthus glaber* Link ex Steud.; *Milium*

virgatum (L.) Lunell; *Milium virgatum* var. *elongatum* (Vasey) Lunell; *Panicum buchingeri* E. Fourn. ex Hemsl.; *Panicum buchingeri* E. Fourn.; *Panicum coloratum* L.; *Panicum coloratum* Walter, nom. illeg., non *Panicum coloratum* L.; *Panicum giganteum* Scheele; *Panicum glaberrimum* Steud.; *Panicum glaberrimum* Elliott ex Scribn. & Merr., nom. illeg., non *Panicum glaberrimum* Steud.; *Panicum havardii* Vasey; *Panicum ichnanthoides* E. Fourn.; *Panicum kunthii* E. Fourn., nom. illeg., non *Panicum kunthii* Steud.; *Panicum pruinatum* Bernh. ex Trin.; *Panicum virgatum* Krause, nom. illeg., non *Panicum virgatum* L.; *Panicum virgatum* Roxb. ex Steud., nom. illeg., non *Panicum virgatum* L.; *Panicum virgatum* subsp. *cubense* (Griseb.) Borhidi; *Panicum virgatum* var. *breviramosum* Nash; *Panicum virgatum* var. *confertum* Vasey; *Panicum virgatum* var. *cubense* Griseb.; *Panicum virgatum* var. *diffusum* Vasey; *Panicum virgatum* var. *elongatum* Vasey; *Panicum virgatum* var. *glaucephylla* Cassidy; *Panicum virgatum* var. *obtusum* Alph. Wood; *Panicum virgatum* var. *scorteum* Linder; *Panicum virgatum* var. *spissum* Linder; *Panicum virgatum* var. *thyrsiforme* Linder; *Panicum virgatum* var. *virgatum*)

Belize, Costa Rica, Guatemala, Central and North America, Canada, Mexico, U.S., Cape Cod National Seashore. Perennial or annual, spreading, caespitose, clumped, sod-forming, many cultivars, erect, tall, leafy, vigorous, medium to coarse stemmed, purple to glaucous green stems flimsy to robust, creeping rhizomes, sheaths often reddish or purplish at the base, green to bluish green and yellow leaves linear and flat, ligule a dense ring of hairs, panicles open with spreading and stiff branches, spikelets elliptic-ovate and swollen, the uppermost floret fertile and the lower floret sterile or staminate, upper glume longer than lower lemma, heavy seeder, vigorous root system, economic plant, medicinal value, leaves might cause photosensitization, native pasture species, forage, palatable to livestock, useful as hay or pasture, palatability declines rapidly at maturity, used for revegetation of disturbed areas and stabilization, potential seed contaminant, weed species, may naturalize but is not invasive, ornamental grass, can tolerate short periods of flooding, useful for erosion control and soil conservation in poorly drained or frequently flooded sites, wildlife food and cover, spring nesting cover for ground nesting birds and escape cover for wildlife, habitat for upland game birds and waterfowl, found in moist areas of good fertility, open sandy alluvium, moist seepage areas on cliffs, swamp, clay soil, sea coast, sandy or gravelly shores, along roadsides, stream banks and dams, dry soils and fields, open dry areas, old fields, low savannah, sand prairies and open woods, hill prairies, culms and seeds provide food for song birds, pheasants, ducks, geese and wild turkey, see *Species Plantarum* 1: 59. 1753, *Mantissa Plantarum* 30. 1767, *Flora Caroliniana, secundum* ... 73. 1788, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *De Graminibus Paniceis* 191. 1826, *Nomenclator Botanicus*.

Editio secunda 2: 262. 1841, *Linnaea* 22(3): 340. 1849, *Synopsis Plantarum Glumacearum* 1: 94. 1854, *Catalogus plantarum cubensium* ... 233. 1866, *The American Botanist and Florist* pt. 2: 392. 1871, *Biologia Centrali-Americana; ... Botany* ... 3: 486. 1885, *Bulletin of the Torrey Botanical Club* 13(2): 26. 1886, *Mexicanas Plantas* 2: 29-30. 1886, *Bulletin of the Torrey Botanical Club* 14: 95. 1887, *Bulletin Colorado Agricultural College, Colorado Experiment Station* 12: 29. 1890, *Bulletin of the Torrey Botanical Club* 23: 150. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 29: 3. 1901, *Contr. U.S. Natl. Herb.* 12: 118. 1908, *Contr. U.S. Natl. Herb.* 15: 88. 1910, *American Midland Naturalist* 2: 64. 1911, *Beihefte zum Botanischen Centralblatt* 32: 342. 1914, *American Midland Naturalist* 4: 212. 1915, *Rhodora* 24: 14-15. 1922, D.C. Hartnett, "Regulation of clonal growth and dynamics of *Panicum virgatum* in tallgrass prairie: effects of neighbor removal and nutrient addition." *American Journal of Botany* 80: 1114. 1993, McLaughlin, S., J. Bouton, D. Bransby, B. Conger, W. Ocumpaugh, D. Parrish, C. Taliaferro, K. Vogel and S. Wullschleger, "Developing switchgrass as a bioenergy crop." p. 282-299. in J. Janick (editor), *Perspectives on New Crops and New Uses*. ASHS Press, Alexandria, VA. 1999, *Journal of Biogeography* 32(2): 311-327. Feb 2005, Kensuke Kawamura et al., "Comparing MODIS vegetation indices with AVHRR NDVI for monitoring the forage quantity and quality in Inner Mongolia grassland, China." *Grassland Science* 51(1): 33-40. Mar 2005, Nobumasa Ichizen et al., "Impacts of switchgrass (*Panicum virgatum* L.) planting on soil erosion in the hills of the Loess Plateau in China." *Weed Biology and Management* 5(1): 31-34. Mar 2005, *Austral. Ecology* 30(2): 168-178. Apr 2005, *Journal of Biogeography* 32(4): 709-718. Apr 2005, *The Professional Geographer* 57(2): 185-197. May 2005, *Ecography* 28(3): 273-282. June 2005, *Grass and Forage Science* 60(2): 119-127. June 2005, *Journal of Biogeography* 32(6): 1043-1062, 1085-1106. June 2005.

in English: switch grass, prairie switchgrass, switchgrass, Blackwell switch grass, wand panic grass

in French: panic vierge, panic érigé, panic raide

in Mexico: itse' toom, pasto aguja, pasto varilla, zacate

P. virgatum L. var. ***virgatum*** (*Panicum virgatum* var. *cubense* Griseb.; *Panicum virgatum* var. *obtusum* Wood)

U.S. See *Species Plantarum* 1: 59. 1753.

P. voeltzkowii Mez (dedicated to the German zoologist Alfred Voeltzkow, 1860-1946, traveler in Madagascar and East Africa; see J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 3: 441. Boston 1965; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916)

Madagascar. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 187. 1921.

P. vollesenii Renvoize

Tanzania. See *Kew Bulletin* 35(1): 202. 1980.

P. volutans J.G. Anders.

South Africa. Perennial, loosely tufted, erect to decumbent, sometimes rooting from lower nodes, leaf blade hairy to hispid, large open panicle with spreading branches, spikelets veined and long-acuminate, the entire inflorescence breaks off at maturity, lower floret sterile, palea reduced, upper lemma conspicuously nerved, low grazing value, common in disturbed areas, cultivated lands, along roadsides, moist areas, areas of high moisture, see *Bothalia* 7: 420. 1960.

in English: rolling grass, tumbleweed

in South Africa: rolgras, waaigras

P. vulgare Thuill. (*Panicum vulgare* Wallr., nom. illeg., non *Panicum vulgare* Thuill.)

Europe. See *Flore des Environs de Paris* éd. 2 1: 29. 1799, *Linnaea* 14(6): 542. 1841.

P. waikoloaense H. St. John

Hawaii. See *Phytologia* 63(5): 372. 1987.

P. walense Mez (*Panicum austro-asiaticum* Ohwi; *Panicum humile* Nees; *Panicum humile* Nees ex Aitch.; *Panicum humile* Nees ex Steud.; *Panicum verticillatum* L.; *Panicum vescum* R.R. Stewart; *Panicum viride* L.)

Tropical Africa, China, India, Malaysia. Annual, slender, erect, branching from the base, internodes hollow, nodes and internodes glabrous, leaf sheath rounded, ligule a ciliate or ciliate membrane, leaf blades linear, panicle branches spreading, spikelets glabrous ovate-lanceolate, lower floret sterile, weedy species, dense ground cover, grazed by all stock, fodder for cattle, grain eaten by humans, weed of cultivated land and rice fields, disturbed sites, shallow soil, wet ground, moist places, wooded savannah, see *De Graminibus Paniceis* 164, 167. 1826, *Synopsis Plantarum Glumacearum* 1: 84. 1854, *Enum. Pl. Zeyl.* 360. 1864, *Catalogue of the Plants of the Punjab and Sindh* 159. 1869 and *Handb. Fl. Ceylon* 5: 152. 1900, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 146-147. 1904, *Acta Phytotaxonomica et Geobotanica* 11: 45. 1942, *Brittonia* 5: 452. 1945, *Grasses of Ceylon* 117. 1956, *Grasses of Burma* ... 324. 1960, *Kew Bulletin* 20: 464. 1966, *Blumea* 41: 193-194. 1996.

in Nigeria: gidan durwa

in Senegal: muya muy

in Sierra Leone: ndiwi

P. webberianum Nash (*Dichantherium portoricense* (Desv. ex Ham.) B.F. Hansen & Wunderlin; *Dichantherium portoricense* subsp. *patulum* (Scribn. & Merr.) Freckmann & Lelong; *Dichantherium sabulorum* var. *patulum* (Scribn. & Merr.) Gould & C.A. Clark; *Panicum onslowense* Ashe; *Panicum portoricense* Desv. ex Ham.; *Panicum portoricense*

var. *nashianum* (Scribn.) Lelong) (Onslow County, North Carolina)

U.S. See *Prodromus Plantarum Indiae Occidentalis* 11. 1825, *Bulletin of the Torrey Botanical Club* 23: 149. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 7: 79, f. 61. 1897 and *Journal of the Elisha Mitchell Scientific Society* 16: 88. 1900, *Circular, Division of Agrostology, United States Department of Agriculture* 27: 9. 1900, *Annals of the Missouri Botanical Garden* 65(4): 1088-1132. 1978, *Brittonia* 36(3): 267. 1984, *Annals of the Missouri Botanical Garden* 75: 1637-1657. 1988, *Sida* 20(1): 170-171. 2002.

P. wettsteinii Hack. (*Panicum rectissimum* Mez)

Brazil. Perennial, erect, slender rhizome, linear-lanceolate leaf blades ascending and pungent, panicle ovate with spreading branches, spikelets oblong, awnless, lower glume ovate 3-nerved acute, upper glume ovate 5-nerved, lower lemma 5-nerved, upper lemma and palea shiny, see *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 12. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 73. 1908, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 73. 1917.

P. whiteanum Domin (*Brachiaria whiteana* (Domin) C.E. Hubb.; *Urochloa whiteana* (Domin) R.D. Webster)

Australia. See *Bibliotheca Botanica* 85: 305. 1915, *Bulletin of Miscellaneous Information Kew* 1934: 446. 1934, *The Australian Paniceae (Poaceae)* 254. 1987.

P. whitei J.M. Black

Australia. Annual or perennial, leafy, growing rapidly, geniculate, erect, shiny, branched, usually slender, internodes grooved to shallowly grooved, panicle loose and compound with slender branches, spikelets paired and pedicellate, first glume hyaline and more or less truncate, second lemma fertile, hay and silage, palatable, palatability variable, more palatable when dry, a cause of photosensitization in sheep, tolerates shallow seasonal flooding, grows in moist areas, lightly-flooded plains, on red earth, on black or gray clays seasonally inundated, see *Transactions and Proceedings of the Royal Society of South Australia* 41: 632, t. 39. 1917.

in English: pepper grass, pigeon grass, sugar grass

P. wiehei Renvoize

Malawi. See *Kew Bulletin* 34(3): 554. 1979 [1980].

P. wrightianum Scribner (*Dichantherium acuminatum* var. *longiligulatum* (Nash) Gould & C.A. Clark; *Dichantherium acuminatum* var. *wrightianum* (Scribn.) Gould & C.A. Clark; *Dichantherium leucothrix* (Nash) Freckmann; *Dichantherium wrightianum* (Scribn.) Freckmann; *Panicum acuminatum* var. *longiligulatum* (Nash) Lelong; *Panicum acuminatum* var. *wrightianum* (Scribn.) C.F. Reed; *Panicum deminutivum* Peck; *Panicum minutulum* Desv., nom. illeg., non *Panicum minutulum* Gaudich.; *Panicum strictum* Bosc

ex Roem. & Schult., nom. illeg., non *Panicum strictum* R. Br.)

U.S., Atlantic Coastal Plain, Massachusetts, Maryland, Florida, Texas, Central America, West Indies, Cuba, Belize. Perennial, tufted, small, weak ascending or spreading stems, narrow sheathing leaves, sheaths shorter than internodes, ligule a tuft of hairs, spikelets elliptic or ovate and blunt, rare and endangered grass in Maryland, grows on pond shores, around pools in cypress swamps, open habitats, dry pond bottoms or bogs, coastal plain, poorly to very poorly drained hydric depressions, on sandy peaty shores, mineral soils, in intermittently flooded bays, in or around wet depressions, see *Nova Genera et Species Plantarum seu Prodrum* 23. 1788, *Systema Vegetabilium* 2: 447. 1817, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 191. 1831, *Bulletin of the Torrey Botanical Club* 24(1): 41-42. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 44, f. 4. 1898, *Bulletin of the Torrey Botanical Club* 26(11): 574. 1899 and *New York State Museum Bulletin* 10: 27. 1907, *Annals of the Missouri Botanical Garden* 65(4): 1121, 1126-1127. 1978 [1979], *Phytologia* 48(1): 101. 1981, *Brittonia* 36(3): 270. 1984, *Annals of the Missouri Botanical Garden* 80(1): 119-190. 1993, *Phytologia* 80: 284. 1996.

in English: Wright's witchgrass

P. wurdackii Swallen (*Panicum eligulatum* N.E. Br.)

Venezuela. Forest, see *Transactions of the Linnean Society of London, Botany* 6(1): 73. 1901, *Memoirs of the New York Botanical Garden* 9(3): 401. 1957.

P. xalapense Kunth (*Dichantherium laxiflorum* (Lam.) Gould; *Panicum caricifolium* Scribn. ex Ashe; *Panicum laxiflorum* Lam.; *Panicum pumilum* Bosc ex Nees, nom. illeg., non *Panicum pumilum* Poir.; *Panicum rariflorum* Rupr., nom. illeg., non *Panicum rariflorum* Lam.; *Panicum ruprechtii* E. Fourn., nom. illeg., non *Panicum ruprechtii* Fenzl; *Panicum xalapense* subsp. *strictirameum* Hitchc. & Chase)

Mexico. See *Species Plantarum* 1: 58. 1753, *Encyclopédie Méthodique, Botanique* 4: 748. 1798, *Nova Genera et Species Plantarum* 1: 103. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 228. 1829, *Bulletins de l'Académie Royale des Sciences, des Lettres et des Beaux Arts de Belgique, Classe des Sciences* 9(2): 240. 1842, *Mexicanas Plantas* 2: 21. 1886, *Grasses of North America for Farmers and Students* 2: 139. 1896, *Journal of the Elisha Mitchell Scientific Society* 15: 57. 1898 and *Contributions from the United States National Herbarium* 15: 161, f. 148. 1910, *Brittonia* 26(1): 60. 1974.

P. xantholeucum Hack. ex Schinz (*Brachiaria xantholeuca* (Hack. ex Schinz) Stapf; *Urochloa xantholeuca* (Hack. ex Schinz) H. Scholz)

Namibia. See *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30:

141. 1888 and *Flora of Tropical Africa* 9: 541. 1919, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 11(4): 443. 1989 [1990].

P. xanthophysum A. Gray (*Dichantherium xanthophysum* (A. Gray) Freckmann; *Panicum xanthophysum* f. *amplifolium* Scribn.)

North America, Ontario, U.S., Wisconsin, Pennsylvania. Rare, perennial, hairy nodes, leaf sheaths hairy, dry sandy soils, open habitats, open woods and clearings, endangered in Pennsylvania, see *North American Gramineae and Cyperaceae* 1: no. 28. 1834 and *Flora of Vermont (edition 3)* 14, 104. 1900, *Phytologia* 39(4): 271. 1978.

in English: slender panic grass, panic grass, slender rosette grass, yellow panic grass, yellow-bladdered panic grass

in French: panic jaunâtre

P. xerophilum (Hillebr.) A.S. Hitchc. (*Panicum heupueo* St. John; *Panicum nephelophilum* var. *xerophilum* Hillebr.)

U.S., Hawaii, Hawaii Volcanoes National Park. Rocky places, see *Flora of the Hawaiian Islands* 498. 1888 and *Memoirs of the Bernice Pauahi Bishop Museum...* 8(3): 193, f. 83. 1922, *Pacific Science* 13: 156. 1959.

in Hawaii: kakonakona, he'upueo

P. yadkinense Ashe (*Dichantherium dichotomum* (L.) Gould; *Dichantherium dichotomum* subsp. *yadkinense* (Ashe) Freckmann & Lelong; *Dichantherium dichotomum* var. *dichotomum*; *Dichantherium yadkinense* (Ashe) Mohlenbr.; *Panicum dichotomum* L.; *Panicum dichotomum* var. *yadkinense* (Ashe) Lelong; *Panicum dumus* Desv.; *Panicum maculatum* Ashe, nom. illeg., non *Panicum maculatum* Aubl.)

America. Perennial, herbaceous, caespitose, erect or geniculate at base, erect or leaning, sparsely branching, grazed, moist soils, bottomlands, swamps, woods, see *Species Plantarum* 1: 58. 1753, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 192. 1831, *Journal of the Elisha Mitchell Scientific Society* 15: 44. 1898 and *Journal of the Elisha Mitchell Scientific Society* 16: 85. 1900, *Contr. U.S. Natl. Herb.* 12: 117. 1908, *Contr. U.S. Natl. Herb.* 15: 195. 1915, *Brittonia* 26(1): 59. 1974, *Brittonia* 36(3): 266. 1984, *Erigenia* 6: 27. 1985, *Annals of the Missouri Botanical Garden* 75(4): 1637-1657. 1988, *Sida* 20(1): 170. 2002.

in English: spotted panic grass, Yadkin's panic grass

P. yavitaense Swallen

Venezuela. See *Phytologia* 14(2): 72. 1966.

P. zamba Vanderyst

Africa. See *Bulletin agricole du Congo Belge* 10: 248. 1919.

P. zelayense (Kunth) Steud. (*Echinochloa crusgalli* var. *zelayensis* (Kunth) Hitchc.; *Oplismenus zelayensis* Kunth)

Asia. See *Essai d'une Nouvelle Agrostographie* 1: 53, 161, 169, t. 11, f. 2. 1812, *Nova Genera et Species Plantarum*

1: 108. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 2: 265. 1841 and *Bulletin, Division of Agrostology United States Department of Agriculture* 772: 238. 1920, *Manual of the Grasses of the United States* 841. 1935.

P. zizanioides Kunth (*Acroceras oryzoides* Stapf; *Acroceras zizanioides* (Kunth) Dandy; *Echinochloa zizanioides* (Kunth) Roberty; *Panicum oryzoides* Sw., nom. illeg., non *Panicum oryzoides* Ard.; *Panicum pseudoryzoides* Steud.)

South America, Colombia. Good fodder, see *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Nova Genera et Species Plantarum* 1: 82. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 75. 1853, *Flora Brasiliensis* 2(2): 229. 1877 and *Flora of Tropical Africa* 9: 622. 1920, *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Fl. Ouest-Afr.* 398. 1954, *Bulletin de l'Institut Française d'Afrique Noire, Sér. A*, 17: 67. 1955, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 277-324. 1969.

in Brazil: capim arroz

in Colombia: nudillo

P. zollingeri Steud.

Asia, Indonesia. See *Synopsis Plantarum Glumacearum* 1: 96. 1854.

Pantathera Philippi = *Megalachne* Steud.

From the Greek *pas*, *pantos* “all, the whole” and *ather* “stalk, barb, awn.”

Pooideae, Stipeae, Duthieinae, type *Pantathera fernandeziana* Phil., see *Botanische Zeitung. Berlin* 14(37): 649. 1856, *Report on the Scientific Results of the Voyage of H.M.S. Challenger* 1(3): 61. 1884 and *Contributions from the United States National Herbarium* 48: 432, 476. 2003.

Pappagrostis Roshev. = *Stephanachne* Keng

Greek *pappos* “fluff, pappus, the woolly and hairy seed of certain plants” plus *agrostis*, *agrostidos* “grass, weed, couch grass.”

Pooideae, Poodae, Aveneae, type *Pappagrostis pappophorea* (Hack.) Roshev., see *Annuaire du Conservatoire et Jardin Botaniques de Genève* 7: 325. 1904, *Flora URSS* 2: 230, 749. 1934, *Contributions from the Biological Laboratory of the Science Society of China: Botanical Series* 9: 134. 1934.

Pappophorum Schreber = *Polyraphis* (Trin.) Lindley

From the Greek *pappos* “fluff, pappus, down, beard” and *phoros* “bearing, carrying,” *phero*, *phoreo* “to bear,” referring to the awns on the flowering glume or to the lemmas

with a pappus-like crown; see Johann Christian Daniel von Schreber (1739-1810), *Genera Plantarum*. 2: 787. 1791.

About 8-10 species, northern and southern America, U.S., Argentina. Chloridoideae, Pappophoreae, or Chloridoideae, Cynodonteae, perennial, herbaceous, caespitose, auricles absent, glabrous, hidden cleistogenes when present in the leaf sheaths, ligule a fringe of hairs, plants bisexual, cleistogamous or chasmogamous, inflorescence paniculate open or contracted, spikelets several-flowered sometimes with only one fertile floret, uppermost florets reduced, two glumes 1-nerved lanceolate more or less equal, lemmas coriaceous with several scaberulous awns, palea present, 2 free and glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas, alluvial soils, grassland, bushland, species not all readily distinguishable, type *Pappophorum alopecuroideum* Vahl, see *Genera Plantarum* 2: 787. 1791, *Symbolae Botanicae, ...* 3: 10, t. 51. 1794, *Essai d'une Nouvelle Agrostographie* 81, 161. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 91, 92. 1830, *Flora* 21: 25. 1838, *Nomenclator Botanicus. Editio secunda* 1: 213. 1840, *The Vegetable Kingdom* 115. 1846, *Die Natürlichen Pflanzenfamilien* 2(2): 64. 1887, *Revisio Generum Plantarum* 776. 1891 and *Kew Bulletin* 40: 737-744. 1985, *Darwiniana* 27: 65-87. 1986, J.R. Reeder et L.J. Toolin, “Notes on *Pappophorum* (Gramineae: Pappophoreae).” *Systematic Botany* 14(3): 349-358. 1989, *Flora Mesoamericana* 6: 257. 1994, N.B. de La Barra, *Reconstrucción y Evolución del Paisaje Vegetal Autóctono de la Zona Urbana y Peri-Urbana de la Ciudad de Cochabamba* 1997, *Functional Ecology* 12(4): 640-645. Aug 1998, Khidir W. Hilu and Lawrence A. Alice, “Evolutionary implications of *matK* indels in Poaceae.” *Am. J. Bot.* 86: 1735-1741. 1999, Luis Marone, Manuel E. Horno and Rafael González Del Solar, “Post-dispersal fate of seeds in the Monte desert of Argentina: patterns of germination in successive wet and dry years.” *Journal of Ecology* 88(6): 940-949. Dec 2000, *Austral. Ecology* vol. 26, issue 2: 142-149 Apr 2001, *Contributions from the United States National Herbarium* 41: 178-181, 191. 2001, *Austral. Ecology* 27(4): 416-421. June 2002, *Austral. Ecology* 29(5): 558-567. Oct 2004, *Austral. Ecology* 29(6): 661-666. Dec 2004.

Species

P. abyssinicum Hochst. (*Enneapogon abyssinicus* (Hochst.) Rendle; *Enneapogon cenchroides* (Licht.) C.E. Hubb.)

Africa. See *Systema Vegetabilium* 2: 616. 1817, *Flora* 38: 202. 1855, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 229. 1899 and *Bulletin of Miscellaneous Information Kew* 1934: 119. 1934.

P. bicolor E. Fourn. (*Pappophorum bicolor* E. Fourn. ex Hemsl.)

Northern America, U.S. Forage, along roadsides, see *Mexic. Pl.* 2: 133. 1886, *Biol. Cent.-Amer. Bot.* 3: 568. 1886 [1885].

in English: pink pappusgrass

in Mexico: barbón bicolor

P. caespitosum R. E. Fries

Argentina, Bolivia, Paraguay. Perennial bunchgrass, caespitose, glabrous, erect, leaf blades linear acuminate and rigid, compact inflorescence paniculate, panicle cylindrical, spikelets 2- to 4-flowered, lower lemma ciliate, see *Genera Plantarum* 2: 787. 1791, *Symbolae Botanicae*, ... 3: 10, t. 51. 1794 and *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 4, 1: 177, t. 9, f. 5-6. 1905.

P. commune F. Muell.

Australia. See *Fragm.* 8: 200. 1874.

P. hassleri Hack. (for the Swiss botanist Émile (Emilio) Hassler, 1861-1937, physician, botanical collector, traveler (Paraguay), plant collector with the Paraguayan botanist Teodor (Teodoro) Rojas, 1877-1954; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 137. Boston 1965)

Paraguay. See *Bull. Herb. Boissier*, sér. 2, 4(3): 280. 1904.

P. krapovickasii Roseng. (*Pappophorum pappiferum* (Lam.) Kuntze; *Pappophorum philippianum* Parodi) (dedicated to the botanist Antonio Krapovickas, born 1921, Instituto de Botánica del Nordeste, Corrientes, among his writings are "Las especies de *Sphaeralcea* de Argentina y Uruguay." *Lilloa*. 17: 179-222. 1949, "Notas sobre Malváceas." *Bol. Soc. Argent. Bot.* 4(3): 187-191. 1952, "Thomas H. Kearney (1874-1956)." *Bol. Soc. Argent. Bot.* 7(1): 50-52. 1957, "Notas sobre Malvaceae III." *Kurtziana*. 2: 113-126. 1965, "Malváceas nuevas sudamericanas." *Bonplandia* (Corrientes). 3(6): 63-72. 1970, "Notas sobre Malváceas, IV." *Bonplandia* (Corrientes). 5(27): 257-273. 1983 and "Malvaceae" in Correa, *Flora Patagónica*. 5: 126-153. 1988, with Paul Arnold Fryxell wrote "The Malvaceae published by Turczaninow." *Contr. Univ. Michigan Herbarium* 17: 173-182. 1990)

Paraguay, Argentina, Venezuela, Bolivia. Perennial, caespitose, leaf blades linear, panicle with branches short and appressed, spikelets 4- to 6-flowered, glumes lanceolate, lower lemma pubescent, savannahs, see *Genera Plantarum* 2: 787. 1791, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 155. 1791, *Symbolae Botanicae*, ... 3: 10, t. 51. 1794, *Revisio Generum Plantarum* 3(3): 365. 1898 and *Notas del Museo de la Plata, Botánica* 8(40): 79. 1943, *Comunicaciones Botánicas del Museo de Historia Natural de Montevideo* 5(58): 1-5. 1975.

P. mucronulatum Nees (*Pappophorum apertum* Munro ex Scribn.; *Pappophorum apertum* var. *vaginatatum* (Buckley) Scribn. ex L.H. Dewey; *Pappophorum pappiferum* (Lam.) Kuntze; *Pappophorum pappiferum* var. *mucronulatum* (Nees) Kuntze; *Pappophorum philippianum* Parodi;

Pappophorum subbulbosum Arechav.; *Pappophorum vaginatatum* Buckley)

South America. Erect, caespitose, herbaceous or subherbaceous, drooping, leaf blades flat or inrolled acuminate, panicle elongate with ascending or appressed primary branches, spikelets 3- to 4-flowered, lowest floret hermaphrodite, glumes lanceolate, lowest lemma 5-nerved ciliate on the keels, forage, along roadsides, open areas, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 155. 1791, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 412. 1829, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 1. 1866, *Anales de la Universidad de Chile* 36: 206. 1870, *Bulletin of the Torrey Botanical Club* 9: 148. 1882, *Contributions from the United States National Herbarium* 2(3): 535. 1894, *Anales del Museo Nacional de Montevideo* 1: 405, t. 48. 1896, *Revisio Generum Plantarum* 3(3): 365. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 123. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 495. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 123. 1911, *Notas del Museo de la Plata, Botánica* 8(40): 79. 1943.

in Ecuador: pajilla

P. pappiferum (Lam.) Kuntze (*Pappophorum alopecuroideum* Vahl; *Pappophorum alopecuroideum* var. *glabrum* Döll; *Pappophorum alopecuroideum* var. *pilosiusculum* Döll; *Pappophorum elongatum* Spreng.; *Pappophorum laguroideum* Schrad. ex Schult.; *Pappophorum macrostachyum* Schrad. ex Schult.; *Pappophorum mucronulatum* Nees; *Pappophorum pappiferum* var. *alopecuroides* (Vahl) Kuntze; *Pappophorum pappiferum* var. *laguroideum* (Schrad. ex Schult.) Kuntze; *Pappophorum polystachyum* Kunth; *Pappophorum saccharoides* Griseb.; *Saccharum alopecuroides* (L.) Nutt.; *Saccharum pappiferum* Lam.; *Thrasya trinitensis* Mez)

West Indies, Argentina, Ecuador, Mexico. Perennial bunchgrass, robust, erect, densely caespitose, leaf blades acuminate long-attenuate, inflorescence a narrow elongate oblong panicle with ascending or appressed primary branches, spikelets 3-flowered, lower floret fertile, upper florets rudimental, lanceolate glumes, lowest lemma 5-nerved and shortly ciliate, palea scabrid on keels, 2 bilobed lodicules, 3 stamens, usually growing in large clumps, herbaceous to subherbaceous, fodder, along roadsides, open slopes, dry grassland, disturbed ground, stony soils, see *Species Plantarum* 2: 1045. 1753, *Genera Plantarum* 2: 787. 1791, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 155. 1791, *Symbolae Botanicae*, ... 3: 10, t. 51. 1794, *The Genera of North American Plants* 1: 60. 1818, *Mantissa* 2: 342. 1824, *Systema Vegetabilium, editio decima sexta* 4(2): 34. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 412. 1829, *Révision des Graminées* 2: 435, t. 131. 1831, *Flora Brasiliensis* 2(3): 59. 1878, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 301. 1879, *Revisio Generum Plantarum* 3(3): 365-366.

1898 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 125. 1918, *Flora of the Netherlands Antilles* 1: 121-203. 1963.

in Bolivia: pasto

in Mexico: zacate

P. philippianum Parodi (*Pappophorum macrospermum* Roseng., B.R. Arrill. & Izag.; *Pappophorum mucronulatum* Nees; *Pappophorum mucronulatum* f. *intermedia* Hack.; *Pappophorum mucronulatum* var. *subsimplex* Hack.; *Pappophorum mucronulatum* var. *vaginatum* (Phil.) Hack.; *Pappophorum pappiferum* var. *mucronulatum* (Nees) Kuntze; *Pappophorum vaginatum* Phil., nom. illeg., non *Pappophorum vaginatum* Buckley; *Pappophorum vaginatum* Buckley)

Argentina, Uruguay, Bolivia, Chile, Mexico, Paraguay. Caespitose, leaf blades linear acuminate, spikelets 5-6-flowered, glumes lanceolate subequal, wooded savannah, sandy areas, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 412. 1829, *Anales de la Universidad de Chile* 36: 206. 1870, *Revisio Generum Plantarum* 3(3): 365. 1898 and *Anales del Museo Nacional de Buenos Aires* 13: 495. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 123. 1911, *Notas del Museo de la Plata, Botánica* 8(40): 79. 1943, *Gramíneas Uruguayas* 397, f. 178. 1970.

P. vaginatum Buckley (*Pappophorum apertum* Munro ex Scribn.; *Pappophorum apertum* var. *vaginatum* (Buckley) Scribn. ex L.H. Dewey; *Pappophorum caespitosum* R.E. Fr.; *Pappophorum mucronulatum* Nees; *Pappophorum subbulbosum* Arechav.; *Pappophorum vaginatum* Phil., nom. illeg., non *Pappophorum vaginatum* Buckley)

Northern and southern America, U.S., Mexico. Perennial, erect, geniculate, ligule pilose, panicle spike-like, 5-flowered spikelets, good forage for cattle and horses, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 412. 1829, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 1. 1866, *Anales de la Universidad de Chile* 36: 206. 1870, *Bulletin of the Torrey Botanical Club* 9: 148. 1882, *Contributions from the United States National Herbarium* 2(3): 535. 1894, *Anales del Museo Nacional de Montevideo* 1: 405, t. 48. 1896, *Revisio Generum Plantarum* 3(3): 365. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 123. 1904, *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 4, 1: 177, t. 9, f. 5-6. 1905, *Anales del Museo Nacional de Buenos Aires* 21: 123. 1911, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927.

in English: whiplash pappusgrass

in Mexico: cola de zorra, papo punteagudo

Parabambusa Widjaja

Similar to *Bambusa*.

One species, New Guinea. Sympodial bamboo, erect, loosely tufted, 6 stamens, 3 stigmas, type *Parabambusa kaini* Widjaja, see *Reinwardtia* 11(2): 121-122. 1997.

Species

P. kaini Widjaja

New Guinea.

Paracolpodium (Tzvelev) Tzvelev = *Colpodium* Trinius

From the Greek *para* "near, similar to, like, alongside" plus *Colpodium* Trin.

Poeae, type *Paracolpodium altaicum* (Trin.) Tzvelev, taxonomic confusion, often referred to *Colpodium*, see *Fundamenta Agrostographiae* 119, t. 7. 1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 37, 58. 1821 and *Flora URSS* 2: 436. 1934, *Bulletin de la Société Impériale des Naturalistes de Moscou* 43: 224. 1934, *Novosti Sistematiki Vysshchikh Rastenii* 1: 9. 1964, *Bot. Zhurn. (Moscow & Leningrad)* 50: 1320. 1965, *Not. Syst. Georg. Inst. Bot. Tbilissi* 40: 68-72. 1984, *Bot. Zhurn. SSSR* 70(12): 1698-1699. 1985, *Flora of Turkey and the East Aegean Islands* 9: 486-501. 1985, *Nordic Journal of Botany* 14(6): 601-607. 1994.

Species

P. altaicum (Trin.) Tzvelev (*Catabrosa altaica* (Trin.) Boiss., nom. illeg., non *Catabrosa altaica* (Trin.) Fries; *Colpodium altaicum* Trin.; *Paracolpodium altaicum* f. *viviparum* Krasnob.)

Eurasia. See *Flora Altaica* 1: 100-101. 1829, *Flora Orientalis* 579. 1884.

P. altaicum (Trin.) Tzvelev subsp. ***leucolepis*** (Nevski) Tzvelev (*Colpodium leucolepis* Nevski; *Colpodium villosum* Bor; *Paracolpodium leucolepis* (Nevski) Tzvelev)

Eurasia, Pamir. See *Bulletin de la Société Impériale des Naturalistes de Moscou* 43: 224. 1934, *Flora Iranica: Flora des Iranischen Hochlandes und der Umrahmenden Gebirge: Persien, Afghanistan, Teile von West-Pakistan, Nord-Iraq* 70: 57. 1970.

P. colchicum (Albov) Tzvelev (*Catabrosa caucasica* Albov; *Catabrosa colchica* Albov; *Colpodium caucasicum* (Albov) Woronow ex Grossh.; *Colpodium caucasicum* (Albov) Woronow; *Colpodium colchicum* (Albov) Woronow ex Grossh.)

Eurasia, Russia, Caucasus. See *Flora Kavkaza* 1: 111. 1928, *Not. Syst. Georg. Inst. Bot. Tbilissi* 40: 68-72. 1984.

P. tibeticum (Bor) E.B. Alexeev (*Colpodium tibeticum* Bor) Asia, China. See *Kew Bulletin* 8(2): 270. 1953.

P. wallichii (Hook.f. ex Stapf) E.B. Alexeev (*Catabrosa wallichii* Hook.f. ex Stapf; *Colpodium wallichii* (Hook.f. ex Stapf) Bor)

Asia, Sikkim, Nepal. See *The Flora of British India* 7: 312. 1896 and *Kew Bulletin* 8(2): 270. 1953.

Paractaenum P. Beauv. (also Paractenium)

= *Paractenium* P. Beauv., *Paractenium* Stapf, *Plagiosetum* Benth.

From the Greek *para* “near, similar to, like, alongside” and *ktenion* “a little comb,” probably referring to the bristly spikes, to the comblike racemes; see Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. Paris 1812.

About 1-2 species, northern and central Australia. Panicoideae, Panicoideae, Paniceae, annual, caespitose, tufted, sprawling, glabrous, herbaceous, branched, nodes glabrous, internodes solid, ligule short and densely ciliate, leaf blades flat and narrow, plants bisexual, several short racemes finally deflexing, spikelets solitary and shortly pedicellate, the lowest spikelet subtended by solitary bristles deciduous with the spikelets, 2 florets, lower floret sterile, upper floret bisexual, glumes very unequal, lower glume few-nerved, the second glume as long as the spikelet and many-nerved, lemmas unequal and yellow in fruit, upper lemma fertile and leathery, palea one, 2 fleshy lodicules, fruit small and dorsally compressed, grows on sandy soil, open habitats, sandy and maritime places, sometimes referred to *Plagiosetum* Benth., type *Paractaenum novae-hollandiae* P. Beauv., see *Essai d'une Nouvelle Agrostographie* 47, t. 10, f. 6. 1812, *Fragmenta Phytographiae Australiae* 3: 147. 1862, *Fragmenta Phytographiae Australiae* 8: 109, 147, 152. 1872-1874 and *Kew Bulletin Misc. Inf.* 1923: 287, f. 1-6. 1923, *The Australian Paniceae (Poaceae)* 147-148. 1987.

Species

P. novae-hollandiae P. Beauv. (*Panicum novae-hollandiae* (P. Beauv.) Desv.; *Panicum paractaenum* Kunth; *Panicum reversum* F. Muell.)

Queensland, Northern Territory, New South Wales, South Australia, Western Australia. Annual or short-lived perennial, tufted, glabrous, ligule membranous and with a ciliate rim, racemes finally reflexed, spikes more or less erect with rigid bristles, spikelets solitary and secund, the lowest spikelet subtended by a bristle, 2 florets, lower floret sterile, upper floret bisexual, lower glume obtuse, upper glume acute, sterile lemma similar to upper glume, second lemma membranous and acuminate, lacking bulk, low fodder value, not grazed, on sandy soils, see *Essai d'une Nouvelle Agrostographie* 47, t. 10, f. 6. 1812, *Révision des Graminées*

1: 41. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 187. 1831.

in English: barbed-wire grass, reverse grass, reflexed panic, reflexed panic grass, Wandie grass

P. novae-hollandiae P. Beauv. subsp. *reversum* (F. Muell.) R.D. Webster (*Panicum reversum* F. Muell.)

Australia.

P. novae-hollandiae P. Beauv. var. *novae-hollandiae*

Australia.

P. refractum (F. Muell.) R.D. Webster (*Panicum refractum* (F. Muell.) F. Muell.; *Pennisetum refractum* (F. Muell.) F. Muell.; *Setaria refracta* F. Muell.)

Australia. Short-lived, forage, low fodder value, an Aboriginal food plant, see *The Australian Paniceae (Poaceae)* 148. 1987.

Parafestuca Alexeev = Koeleria Pers.

From the Greek *para* “near” and the genus *Festuca* L.

One species, Madeira. Pooideae, Pooideae, Poaceae, Aveninae, perennial, herbaceous, densely tufted, usually unbranched, auricles absent, ligule membranous and unfringed, when old sheaths fibrous, leaf blades linear, plants bisexual, open or contracted inflorescence paniculate, spikelets pedicellate and flattened, two glumes unequal, coriaceous lemmas 3-nerved and boat-shaped, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, similar to *Austrofestuca* (Tzvelev) Alexeev, type *Parafestuca albida* (Lowe) E.B. Alexeev, see *Syn. Pl.* 1: 97. 1805 and *Contributions from the United States National Herbarium* 48: 409-419, 476-477. 2003.

Species

P. albida (Lowe) Alexeev (*Festuca albida* Lowe)

Madeira Islands. See *Transactions of the Cambridge Philological Society* 4: 10. 1831.

Parahyparrhenia A. Camus

From the Greek *para* “near, beside” and the genus *Hyparrhenia* Andersson ex Fourn.

About 5 species, Thailand, tropical Africa, Sudan, Central African Republic. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, herbaceous, ligule a membrane-like unfringed, plants bisexual, inflorescence spicate or paniculate, single raceme or paired, raceme-base without appendage, sessile spikelet subtended with callus acute to pungent, two glumes subequal or unequal, lower glume 2-keeled and often keeled, upper lemma, palea absent or present, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas, savannah, grasslands,

rocky places, close to *Diheteropogon* and *Elymandra*, type *Parahyparrhenia jaegeriana* A. Camus, see *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 22: 404. 1950, *Kew Bulletin* 20: 436. 1966, W.D. Clayton, "A revision of the genus *Hyparrhenia*." *Kew Bulletin, Additional Series* 2: 1-196. 1969, *Dansk Botanisk Arkiv* 27(1): 69. 1969, *Kew Bulletin* 35(4): 816-817. 1981, *Blumea* 48(3): 499. 2003.

Species

P. annua (Hack.) W.D. Clayton (*Andropogon annuus* Hack.; *Hyparrhenia djalonica* Jacq.-Fél.; *Hyparrhenia jaegeriana* (A. Camus) Roberty; *Hyparrhenia sulcata* Jacq.-Fél.)

Tropical Africa. Annual, loosely tufted, slender, reddish to scarlet anthers, in pools, grassland, rice fields, shallow water, see *Flora* 68(8): 137. 1885 and *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 22: 404. 1950, *Journal d'Agriculture Tropicale* 1(1-4): 51, 54, t. 8, 9. 1954, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 109. 1960, *Kew Bulletin* 22: 434. 1966.

P. bellariensis (Hack.) W.D. Clayton (*Andropogon bellariensis* Hack.; *Heteropogon bellariensis* (Hack.) C.E.C. Fisch.)

Tropical Africa. See *Flora* 68(7): 123. 1885 and *Flora of the Presidency of Madras* 10: 1744. 1934, *Kew Bulletin* 27(3): 448. 1972, *Bulletin of the Botanical Survey of India* 20(1-4): 149-150. 1978.

P. laegaardii Veldkamp

Thailand.

P. siamensis W.D. Clayton

Thailand.

P. tridentata W.D. Clayton

Thailand.

Paraneurachne S. T. Blake

From the Greek *para* "near, near to" and the related genus *Neurachne* R. Br.

One species, Australia. Panicoideae, Panicodae, Neurachneae, perennial, often stoloniferous, tufted or caespitose, sometimes decumbent, branched, ligule a fringe of hairs, auricles absent, narrow leaf blades linear to ovate, plants bisexual, inflorescence a single raceme spike-like, spikelets solitary and bearded at the base, callus hairs white, two glumes very dissimilar and longer than the florets, lower glume membranous and not bearded, coriaceous upper glume convex and densely bearded, lower lemma gibbous, upper lemma coriaceous with a membranous tip, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, sandy plains, dry grassland, open areas,

type *Paraneurachne muelleri* (Hack.) S.T. Blake, see Stanley Thatcher Blake (1910-1973), in *Contributions from the Queensland Herbarium*. 13: 20. 1972, *Australian Journal of Botany* 33: 317-336. 1985.

Species

P. muelleri (Hackel) S.T. Blake (*Neurachne clementii* Domin; *Neurachne muelleri* Hackel) (dedicated to Sir Ferdinand Jacob Heinrich von Mueller, 1825-1896, pharmacist, botanical explorer, plant collector, in 1847 to Australia, first Government botanist of Victoria, from 1857 to 1873 Director of the Melbourne Botanical Garden, in 1859 Fellow of the Linnean Society and in 1861 of the Royal Society of London, among his very numerous publications are *The Plants Indigenous to the Colony of Victoria*. Melbourne 1860-1865, *Fragmenta Phytographiae Australiae*. Melbourne 1858 to 1882, and *Key to the System of Victorian Plants*. Melbourne 1885-1888, contributed to George Bentham (1800-1884), *Flora Australiensis*. London 1863-1878. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 524. 1965; M. Willis, *By Their Fruits: A Life of Ferdinand von Mueller, Botanist and Explorer*. Sydney 1949; I.H. Venter, *Index Herbariorum*. Part II (7), *Collectors T-Z*. Regnum Vegetabile vol. 117. 1988)

South Australia, Western Australia, Northern Territory, Queensland. Tufted perennial, erect or stoloniferous, hairy base, leaves linear to ovate-linear, hairy racemes, purplish spikelets, lower floret male-only, upper floret hermaphrodite, fleshy lodicules, low fodder value, palatable when young, sandy plains, dry grassland, stony slopes, see *Contributions from the Queensland Herbarium* 13: 21. 1972.

in English: northern mulga-grass

Parapholis C.E. Hubbard = *Lepidurus* Janchen, *Lepturus* R. Br.

From the Greek *para* "near, beside, near to" and the closely related grass genus *Pholiurus* Trinius, *pholis*, *pholidos* "scale, horny scale," or referring to the two side-by-side glumes, to the collateral glumes; see Charles Edward Hubbard (1900-1980), in *Blumea*. Suppl. 3: 14. 1946.

About 4-6 species, Mediterranean to eastern Asia, India, western Europe. Pooideae, Poodae, Poeae, or Hainardieae, or Pooideae, Poeae, Ammochloinae, annual, tufted, slender, herbaceous, erect to more or less prostrate to decumbent, sometimes branched above the base, auricles present or absent, leaf sheath open, ligule an unfringed membrane, leaves linear flat to convolute, plants bisexual, inflorescence a terminal single cylindrical spike more or less curved and rigid, solitary spikelets compressed laterally and sessile, one floret, spikelets deeply embedded within racemes, spikelets falling off entire and disarticulating at the joints, two glumes side-by-side stiff and subequal, lemma hyaline shorter than

the glumes and awnless, palea 2-nerved, lodicules 2 free and membranous, 3 stamens, ovary glabrous, 2 stigmas, salt-tolerant, found in disturbed habitats near saline water, open habitats, sandy maritime soils, coastal salt marshes and areas of high salinity, resembles *Hainardia* Greuter, sometimes included in *Pholiurus* Trinius, type *Parapholis incurva* (L.) C.E. Hubb., see *Prodromus Florae Novae Hollandiae* 207. 1810 and *Wiener Botanische Zeitschrift* 93: 85. 1944, *Blumea*, Supplement 3: 14. 1946, *Grasses of Burma, Ceylon, India and Pakistan* 595. 1960, H. Rune-mark, "A revision of *Parapholis* and *Monerma* (Gramineae) in the Mediterranean." in *Bot. Not.* 115: 1-17. 1962, *Notes from the Royal Botanic Garden, Edinburgh* 25: 63. 1963, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Phytologia* 37(4): 317-407. 1977, *Kew Bulletin, Additional Series* 13: 111. 1986 [*Genera Graminum*], *Anales del Jardín Botánico de Madrid* 51(2): 280. 1994, *Las Gramíneas de México* 5: 1-466. 1999, *Contributions from the United States National Herbarium* 48: 421-422, 477. 2003, *Journal of Ecology* 93, issue 2: 279-290. Apr 2005.

Species

P. filiformis (Roth) C.E. Hubb. (*Lepiurus filiformis* (Roth) Dumort.; *Lepturus filiformis* (Roth) Trin.; *Pholiurus incurvus* subsp. *filiformis* (Roth) A. Camus; *Rottboellia filiformis* Roth)

Portugal. See *Fundamenta Agrostographiae* 123. 1820, *Observations sur les Graminées de la Flore Belgique* 140, 146. 1823 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 66: 265. 1921, *Annales de la Société Linnéenne de Lyon, sér. 2*, 69: 89. 1923, *Blumea* 3: 14. 1946.

P. gracilis Bor

India. See *Notes from the Royal Botanic Garden, Edinburgh* 25: 63. 1963.

P. incurva (L.) C.E. Hubb. (*Aegilops incurva* L.; *Aegilops incurvata* L.; *Agrostis incurvata* (L.) Scop.; *Lepidurus incurvus* (L.) Janch.; *Lepturus filiformis* var. *incurvatus* (L.) Hook.f.; *Lepturus incurvatus* Trin.; *Lepturus incurvatus* var. *longiflorus* Grossh.; *Lepturus incurvus* (L.) Druce; *Lepturus incurvus* subsp. *incurvatus* (L.) Briq.; *Ophiuros incurvatus* (L.) P. Beauv.; *Pholiurus incurvatus* Hitchc.; *Pholiurus incurvatus* (L.) Hitchc.; *Pholiurus incurvus* (L.) Schinz & Thell.; *Pholiurus incurvus* (L.) Hitchc.; *Rottboellia incurva* (L.) Roem. & Schult.; *Rottboellia incurvata* (L.) L.f.)

Mediterranean. Annual, halophytic, usually coastal, maritime-arenicolous, loosely to densely tufted, sometimes solitary, slender, herbaceous, prostrate, erect to decumbent, curved and ascending, glabrous, usually branching at any node, leaf sheath glabrous submembranous, auricles absent, ligule an unfringed membrane, upper sheath strongly inflated, leaves subulate, inflorescence generally curved and twisted, green or purplish spikes more or less strongly curved to sickle-shaped, 1 floret, spikelets embedded in

cavities, cleistogamous spikelets, glumes equal to subequal, side by side glumes lanceolate and acuminate, lemma keeled, palea acute and nerved, ovary glabrous, glabrous fruit grooved, weed, salt-tolerant fodder, cover plant, survives partial inundation, naturalized elsewhere, open habitats, saline estuaries, saline soils subject to flooding, above the high tide mark, mudflats, salt marshes and areas of high salinity, coastal sandy and rocky places, drained soils and dry stream bed, in wetlands and swamps, moist places, moist river bed, disturbed areas, along roadsides, reclamation areas, see *Species Plantarum* 2: 1051. 1753, *Species Plantarum* 2: 1490. 1763, *Flora Carniolica, Editio Secunda* 1: 62. 1772, *Supplementum Plantarum* 114. 1781, *Essai d'une Nouvelle Agrostographie* 116, 168, 176. 1812, *Systema Vegetabilium* 2: 799. 1817, *Fundamenta Agrostographiae* 123, t. 8. 1820, *The Student's Flora of the British Islands* 455. 1870 and *List of British Plants* 85. 1908, *Prodrome de la Flore Corse* 1: 183. 1910, *United States Department of Agriculture: Bulletin* 772: 106, f. 54. 1920, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 66: 265. 1921, *Wiener Botanische Zeitschrift* 93: 85. 1944, *Blumea* Suppl. 3: 14. 1946, *Zlaki SSSR* 529. 1976, *Flora Patagónica* 3: 404-405. 1978, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *New Zealand Journal of Botany* 29: 101-116. 1991, *Anales del Jardín Botánico de Madrid, Bothalia* 27: 75-82. 1997, Gregory B. Noe and Joy B. Zedler, "Differential effects of four abiotic factors on the germination of salt marsh annuals." *Am. J. Bot.* 87: 1679-1692. 2000.

in English: coast barb grass, curly ryegrass, sickle grass, sicklegrass, curved sickle grass, curved sicklegrass, curved sea hard grass

in French: pholiurus incurvé

in Morocco: bousibouss

P. marginata Runemark

Europe. See *Botaniska Notiser* 115: 8, 14. 1962.

P. strigosa (Dumort.) C.E. Hubb. (*Lepiurus strigosus* Dumort.; *Lepturus strigosus* Dumort.; *Parapholis strigosa* (Dumort.) Hyl., nom. illeg., non *Parapholis strigosa* (Dumort.) C.E. Hubb.) (Latin *strigosus* "covered with strigae, with stiff bristles")

Mediterranean region, Eurasia. Annual, coastal, tufted or solitary, slender, stiff, rigid, herbaceous, erect to ascending to decumbent, usually loosely branching at the lower nodes, auricles absent, ligule membranous and toothed, leaf blade flat to inrolled, basal leaf sheaths inflated, upper sheath not inflated, green single spike straight and not twisted with spikelets embedded in cavities on the rachis, 1 floret, spikelets generally cleistogamous, glumes equal to subequal, side by side glumes lanceolate and acuminate, lemma membranous, palea hyaline, ovary glabrous, fruit narrowly ovoid, weed, grows in disturbed areas and in saline areas, salt meadows, open habitats, mudflats, plants of moist soils and

wetlands, salt marshes, below the high-tide mark, see *Observations sur les Graminées de la Flore Belgique* 146. 1823 [1824] and *Blumea* 3: 14. 1946, *Watsonia* 20: 63-66. 1994, *Opera Botanica* 137: 1-42. 1999.

in English: hard grass, hairy sickle grass, strigose sickle grass, slender barb grass

in Danish: spidshale

Paratheria Griseb. = *Beckera* Fresen.,
Snowdenia C.E. Hubb.

From the Greek *para* “near, similar to” and *ather* “stalk, barb, awn.”

Two species, Africa, Madagascar, South America, Brazil. Panicoideae, Panicodae, Paniceae, Cenchrinae, perennial, herbaceous, aquatic, erect, ascending, geniculate, rooting at the nodes, forming mats, branched, auricles absent, ligule a very narrow fringed membrane, plants bisexual, inflorescence paniculate and contracted with bristle-less cleistogamous spikelets, lowermost spikelets enclosed within the uppermost leaf sheaths are cleistogamous, hidden cleistogenes in the upper sheaths, solitary spikelets subtended by solitary bristles, 2 tiny glumes subequal, palea present, 2 fleshy and free lodicules, 3 stamens, ovary glabrous, 2 white stigmas, open areas, in water along rivers and streams, on sandy riverbanks, lakes, swamps, type *Paratheria prostrata* Griseb., see *Species Plantarum* 1: 55. 1753, *Museum Senckenbergianum* 2: 132. 1837, *Catalogus plantarum cubensium* ... 236. 1866, *Flora Brasiliensis* 2(2): 150, t. 25. 1877 and *Bulletin of Miscellaneous Information Kew* 1929(1): 30-31. 1929, *Flora Mesoamericana* 6: 376. 1994, *Contributions from the United States National Herbarium* 46: 144, 441. 2003.

Species

P. glaberrima C.E. Hubbard

Tropical Africa, Sierra Leone. Perennial, prostrate, aquatic, mat-forming, useful for erosion control, see *Kew Bulletin* 4: 365. 1949.

P. prostrata Griseb. (*Chamaeraphis parvigluma* Munro ex C. Wright; *Ischaemum secundatum* Walter; *Panicum leptachyrium* Döll; *Stenotaphrum dimidiatum* var. *secundatum* (Walter) Domin; *Stenotaphrum secundatum* (Walter) Kuntze; *Stenotaphrum secundum* (Walter) Kuntze)

Tropical West Africa, Madagascar, Cuba. Perennial, loosely tufted, more or less erect, prostrate to decumbent, slender, trailing, culm nodes bearded, leaf blades glabrous or villous, inflorescence usually enclosed within the uppermost leaf sheath, spikelets hairy at base, glumes ovate obtuse, lemmas 7- to 9-nerved, found in and near water, wet soils, marshy areas, savannah, see *Flora Caroliniana, secundum* ... 249. 1788, *Voyage autour du Monde* 2(2): 127. 1829 [1833],

Catalogus plantarum cubensium ... 236. 1866, *Anales de la Academia de Ciencias Medicas* ... Habana 8: 208. 1871, *Revisio Generum Plantarum* 2: 794. 1891 and *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991.

Paractenium P. Beauv. = *Paractenium* P.
Beauv., *Paractenium* Stapf, *Plagiosetum* Benth.

From the Greek *para* “near, similar to, like, alongside” and *ktenion* “a little comb,” probably referring to the bristly spikes, to the comblike racemes; see Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. Paris 1812.

Panicoideae, Panicodae, Paniceae, type *Paractaenium novae-hollandiae* P. Beauv., see *Essai d'une Nouvelle Agrostographie* 47, t. 10, f. 6. 1812, *Révision des Graminées* 1: 41. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 187. 1831, *Fragmenta Phytographiae Australiae* 3: 147. 1862, *Fragmenta Phytographiae Australiae* 8: 152. 1874, *Hooker's Icones Plantarum* 13: 33, t. 1242. 1877 and *Kew Bulletin Misc. Inf.* 1923: 287, f. 1-6. 1923, *The Australian Paniceae (Poaceae)* 147-148. 1987.

Pariana Aublet = *Eremitis* Döll

A genus of about 30-39 species, Amazon, Costa Rica, tropical South America. Bambusoideae, Olyreae, Parianeae, Parianinae, or Bambusoideae, Oryzodae, Olyreae, perennial, unarmed, erect, herbaceous to woody, persistent, usually unbranched, decumbent floriferous culms, forming colonies, leaf sheaths auriculate, broad leaves with poorly developed pseudopetioles, auricles present, ligule membranous, plants monoecious, inflorescence spicate exerted from uppermost sheath, all the fertile spikelets unisexual, female spikelet sessile, floret covered by glumes of male spikelet, male florets 6-40 staminate, two glumes more or less equal, palea present, 3 free lodicules, 0 stamens, ovary glabrous, 2 stigmas, inflorescence coming from the ground, flowering shoot separate from leaves, found in shade of forest, disturbed areas, forest floor and understory, montane rainforests, edge of forest, slopes, stony areas, forest borders, in dense forest, damp shady places, in high open forest, moist lowland woods, along rivers, in open sandy forest, moist woodland trail, a difficult variable genus, type *Pariana campestris* Aubl., see J.B.C.F. Aublet, *Histoire des Plantes de la Guiane Française*. 876, t. 337. Paris 1775, *Flora Brasiliensis* 2(2): 338, pl. 48. 1877, *Die Natürlichen Pflanzenfamilien* 2(2): 88. 1887 and *The Families of Flowering Plants* II. Monocotyledons... 2: 219. London 1934, *Journal of the Linnean Society, Botany* 50: 337-362. 1936, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Biotropica* 3: 1-16. 1971, *AAU*

Reports 24: 1-241. 1990, *Flora of the Guianas. Series A, Phanerogams* 440-446. 1990, *Novon* 2(2): 81-110. 1992, *Ruizia* 13: 1-480. 1993, *Flora Mesoamericana* 6: 216-218. 1994, Victoria C. Hollowell, "Systematic relationships of *Pariana* and associated neotropical taxa." *The Bamboos* 4: 45-60. 1997, *American Bamboos* 294-299. 1999, *Contributions from the United States National Herbarium* 39: 93-97. 2000, Flora de Nicaragua in *Monographs in Systematic Botany from the Missouri Botanical Garden* 2001, Shoko Sakai, "Aristolochia spp. (Aristolochiaceae) pollinated by flies breeding on decomposing flowers in Panama." *Am. J. Bot.* 89: 527-534. 2002, John J. Skvarla, John R. Rowley, Victoria C. Hollowell and William F. Chissoe, "Annulus-pore relationship in Gramineae (Poaceae) pollen: the pore margin of *Pariana*." *Am. J. Bot.* 90: 924-930. 2003.

Species

P. argentea Hollowell & Davidse (*Pariana gracilis* Döll)

Panama. Perennial, clumped, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *Flora Brasiliensis* 2(2): 337. 1877 and *J. Linn. Bot., Bot.* 50(334): 359. 1936, *Novon* 2(2): 98. 1992.

P. aurita Swallen (*Pariana maynensis* Huber; *Pariana radiceflora* Sagot ex Döll)

Peru. Perennial, erect, forming large clumps, in forest, see *Flora Brasiliensis* 2(2): 336. 1877 and *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 526. 1906 [1900-1949, *Boletim do Museu Goeldi de Historia Natural e Ethnographia*; 1949-1956, *Boletim do Museu Paraense Emilio Goeldi*], *J. Linn. Soc., Bot.* 50(334): 352. 1936, *Journal of the Washington Academy of Sciences* 30(2): 73, f. 3. 1940, *Fl. Mesoamer.* 6: 217. 1994.

in Panama: kamu burwi

P. bicolor Tutin

Peru, Bolivia. Perennial, stoloniferous, open, tufted, nodes prominent, leaf blades oblong-lanceolate, spikelets staminate with glumes triangular acuminate and lemmas elliptic, medicinal, in forest, forest floor, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775 and *Journal of the Linnean Society, Botany* 50(334): 355, t. 9, f. 19. 1936, *Revista de Ciencias (San Marcos)* 74: 48-57. 1986.

P. campestris Aublet (*Pariana glauca* Nees; *Pariana glauca* var. *glauca*; *Pariana glauca* var. *scabra* (Nees) Döll; *Pariana inaequalis* Miq.; *Pariana lunata* Nees; *Pariana mollis* Nees; *Pariana scabra* Nees; *Pariana silvestris* Nees; *Pariana sylvestris* Nees)

Brazil, Suriname, Guyana, French Guiana. Sandy areas, forest floor, see J.B.C.F. Aublet, *Histoire des Plantes de la Guiane Française*. 876, t. 337. 1775 and *Flora Brasiliensis seu Enumeratio Plantarum* 2: 294-296. 1829, *Linnaea* 19(1): 127. 1847, *Fl. Bras.* 2(2): 333-334. 1877.

P. concinna Tutin

Amazonas, Brazil. Forest, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775 and *Journal of the Linnean Society, Botany* 50(334): 358, f. 23. 1936.

P. debilis Tutin (*Pariana radiceflora* Sagot ex Döll)

French Guiana, British Guiana. See *Flora Brasiliensis* 2(2): 336. 1877 and *Journal of the Linnean Society, Botany* 50(334): 352, 361, f. 27. 1936.

P. distans Swallen

Peru, Brazil. See *Journal of the Washington Academy of Sciences* 30(2): 73, f. 4. 1940.

P. ecuadorensis Pilg. (*Pariana radiceflora* Sagot ex Döll)

Ecuador. Forming colonies or clumps, forest floor, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *Flora Brasiliensis* 2(2): 336. 1877 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(124): 323. 1939.

P. gleasonii Hitchc. (*Pariana pulcherrima* Tutin; *Pariana radiceflora* Sagot ex Döll) (for the American botanist Henry Allan Gleason, 1882-1975, contributed to *The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada*. 1968, with Arthur Cronquist (1919-1992) wrote *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*. Princeton 1963 and *The Natural Geography of Plants*. New York 1964. See J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; J.H. Barnhart, *Biographical notes upon botanists*. 2: 54. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 181-182. 1973; August Adriaan Pulle (1878-1955), *Flora of Suriname* (vol. 3, pt. 1. Melastomataceae. by H.A. Gleason.). Amsterdam 1932; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 146. 1972)

British Guiana. Shade or partial shade, damp areas, along riverbanks, see *Flora Brasiliensis* 2(2): 336. 1877 and *Contributions from the U.S. National Herbarium* 22(6): 513. 1922, *Journal of the Linnean Society, Botany* 50(334): 359, t. 10, f. 25. 1936.

P. gracilis Döll

Peru, Brazil, Bolivia. Geniculate at the base, leaf blades lanceolate acuminate, delicate inflorescence spicate, staminate spikelets oblong with pubescent pedicels, glumes triangular coriaceous acuminate, acute or acuminate lemmas glabrous or sparsely pubescent, forming colonies or clumps, forest floor, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *Flora Brasiliensis* 2(2): 337. 1877 and *Journal of the Linnean Society, Botany* 50(334): 359. 1936.

P. imberbis Nees

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 297. 1829.

P. intermedia Döll

Brazil. See *Flora Brasiliensis* 2(2): 337, t. 47. 1877 and *Journal of the Linnean Society, Botany* 50(334): 337-362. 1936.

P. interrupta Tutin (*Pariana nivea* Huber ex Tutin)

Brazil, Colombia. See *Journal of the Linnean Society, Botany* 50(334): 348, f. 11. 1936.

P. lanceolata Trin.

Brazil. Erect, semierect, decumbent, robust, caespitose, leaf blades linear-lanceolate acuminate, inflorescence cylindrical, pedicels of male spikelets coriaceous forming a tubular structure, male spikelets in whorls of 5, glumes ovate coriaceous, 3 stamens, forest, forest floor, shade or partial shade, moist areas, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 107. 1834 and *Darwiniana* 29: 41-45. 1989.

P. ligulata Swallen

Brazil. See *Journal of the Washington Academy of Sciences* 30(2): 74, f. 5. 1940.

P. longiflora Tutin (*Pariana radiceflora* Sagot ex Döll)

British Guiana, Suriname. See *Flora Brasiliensis* 2(2): 336. 1877 and *Journal of the Linnean Society, Botany* 50(334): 354, f. 18. 1936.

Common names: asumatu pempe mã, tamakusi, kleine bambu

P. lunata Nees (*Pariana campestris* Aubl.; *Pariana lunata* Nees ex Trin.; *Pariana mollis* Nees)

Brazil, French Guiana. See *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *De Graminibus Paniceis* 76. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 295-296. 1829.

P. maynensis Huber (*Pariana acuminatissima* Huber; *Pariana aurita* Swallen; *Pariana radiceflora* Sagot ex Döll; *Pariana zingiberina* Rich. ex Döll)

Peru, Venezuela, Colombia, Brazil. Perennial, erect, forming large clumps, in forest, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *Flora Brasiliensis* 2(2): 336-337. 1877 and *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 526. 1906, *Journal of the Washington Academy of Sciences* 30(2): 73, f. 3. 1940, *Flora Mesoamericana* 6: 217. 1994.

P. modesta Swallen

Brazil. Open areas, forest, see *Journal of the Washington Academy of Sciences* 30(2): 77, f. 7. 1940.

P. nervata Swallen

Brazil. Forest, edge of forest, see *Journal of the Washington Academy of Sciences* 30(2): 71, f. 1. 1940.

P. obtusa Swallen (*Pariana radiceflora* Sagot ex Döll)

Amazonas, Venezuela. Leaf blades ovate-lanceolate, staminate spikelets with triangular glumes acuminate, lemmas glabrous acute, forest shade, see *Flora Brasiliensis* 2(2): 336. 1877 and *Memoirs of the New York Botanical Garden* 9(3): 237-278. 1957.

P. ovalifolia Swallen

Brazil. Forest, edge of forest, see *Journal of the Washington Academy of Sciences* 30(2): 72, f. 2. 1940.

P. pallida Swallen (*Pariana campestris* Aubl.; *Pariana radiceflora* Sagot ex Döll)

Amazonas, Venezuela. Perennial, rhizomatous, forest, evergreen forest, along riverbanks, moist areas, forest edge, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *Flora Brasiliensis* 2(2): 336. 1877 and *Memoirs of the New York Botanical Garden* 9(3): 268. 1957.

P. parvispica R.W. Pohl

Costa Rica. Perennial, growing in clumps, forest, primary forest, edge of forest, shade or partial shade, rain forest, swamps, see *Iowa State Journal of Research* 47(1): 73, f. 2. 1972.

P. pulcherrima Tutin (*Pariana gleasonii* Hitchc.; *Pariana radiceflora* Sagot ex Döll)

British Guiana. See Shade or partial shade, damp areas, along riverbanks, see *Flora Brasiliensis* 2(2): 336. 1877 and *Contributions from the U.S. National Herbarium* 22(6): 513. 1922, *Journal of the Linnean Society, Botany* 50(334): 359, t. 10, f. 25. 1936.

P. radiceflora Sagot ex Döll (*Pariana aurita* Swallen; *Pariana debilis* Tutin; *Pariana ecuadorensis* Pilg.; *Pariana gleasonii* Hitchc.; *Pariana longiflora* Tutin; *Pariana obtusa* Swallen; *Pariana pallida* Swallen; *Pariana pulcherrima* Tutin; *Pariana setosa* Swallen; *Pariana violascens* Swallen; *Pariana vulgaris* Tutin; *Pariana zingiberina* Rich. ex Döll)

Peru, Brazil, Bolivia, Venezuela, Colombia. Perennial, rhizomatous, medicinal, forest, moist lowland, dense forest, evergreen forest, shade or partial shade, along riverbanks, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *Flora Brasiliensis* 2(2): 336-337. 1877 and *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 526. 1906, *Contributions from the United States National Herbarium* 22(6): 513. 1922, *Journal of the Linnean Society, Botany* 50(334): 352-354, 359, 361, f. 17, 18, 25, 27. 1936, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(124): 323. 1939, *Journal of the Washington Academy of Sciences* 30(2): 73, f. 3. 1940, *Contributions from the United States National Herbarium*

29(6): 273. 1948 [1949], *Memoirs of the New York Botanical Garden* 9(3): 267-268. 1957, *Fl. Mesoamer.* 6: 217. 1994.

Common names: sanganga'si, ilupanga, 'ilu panga', shishi

P. setosa Swallen (*Pariana radiceflora* Sagot ex Döll)

Peru, Colombia, Ecuador. Perennial, medicinal, dense forest, evergreen forest, edge of forest, shade or partial shade, along riverbanks, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *Flora Brasiliensis* 2(2): 336. 1877 and *Contributions from the U.S. National Herbarium* 29(6): 273. 1949.

P. simulans Tutin (*Pariana violascens* Swallen)

Amazonas, Peru, Brazil, Ecuador, Venezuela, Colombia. Perennial, forming dense colonies, understory, forest, shade or partial shade, moist woodland, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *Flora Brasiliensis* 2(2): 336. 1877 and *Journal of the Linnean Society, Botany* 50(334): 357, t. 10, f. 22. 1936, *Memoirs of the New York Botanical Garden* 9(3): 267. 1957.

P. sociata Swallen

Brazil. Open areas, forest, secondary forest, see *Journal of the Washington Academy of Sciences* 30(2): 76, f. 6. 1940.

P. stenolemma Tutin

Peru, Brazil, Panama, Venezuela, Colombia. Erect, forest, shade or partial shade, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775 and *Journal of the Linnean Society, Botany* 50(334): 350, f. 14. 1936.

P. strigosa Swallen (*Pariana aurita* Swallen; *Pariana maynensis* Huber)

Panama. Perennial, low, forest, edge of forest, shade or partial shade, along riverbanks, see *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 526. 1906, *Journal of the Washington Academy of Sciences* 30(2): 73, f. 3. 1940, *Annals of the Missouri Botanical Garden* 30(2): 257. 1943, *Fl. Mesoamer.* 6: 217. 1994.

Common names: achu gai, achugai

P. swallenii R.C. Foster (*Pariana stenolemma* Tutin)

Bolivia, Colombia. Leaf blades ovate or ovate-lanceolate cuneate acuminate glabrous, pedicels of staminate spikelets ciliate at the base, staminate spikelets with triangular glumes acuminate, lemmas elliptic acute, forming clumps, shady moist places, forest, forest floor, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775 and *Journal of the Linnean Society, Botany* 50(334): 350, f. 14. 1936, *Rhodora* 68(774): 239. 1966.

P. tenuis Tutin

Peru, Panama, Amazonas, Brazil, Colombia. Moist places, rocky sites, see *Journal of the Linnean Society, Botany* 50(334): 348, f. 12. 1936.

P. trichosticha Tutin (*Pariana maynensis* Huber)

Peru, Brazil, Panama, Colombia. Shrubby, clustered, clumped, medicinal, forest, along riverbanks and streams, edge of forest, shade or partial shade, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775 and *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 526. 1906, *Journal of the Linnean Society, Botany* 50(334): 356, t. 9, f. 20. 1936, *Fl. Mesoamer.* 6: 217. 1994.

Local name: suru panga

P. ulei Pilger (*Pariana maynensis* Huber; *Pariana stenolemma* Tutin; *Pariana strigosa* Swallen) (for the German botanist Ernst Heinrich Georg Ule, 1854-1915, plant collector, bryophytes, fungi and lichens, spermatophytes, botanical explorer in Brazilian highlands and in Venezuela, from 1913 to 1914 assistant at the Botanical Museum Berlin; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 414. 1965; Stafleu and Cowan, *Taxonomic literature.* 6: 578-583. 1986; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. 792. 1993; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 410. Boston, Mass. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 258. Oxford 1964; G. Sayre, *Mem. New York Bot. Gard.* 19: 175-276. 1971; D.H. Pfister, *Mycotaxon* 23: 1-139. 1985)

Amazonas, Colombia, Brazil. Perennial, tufted, leaf blades lanceolate glabrous glaucous, pedicels of staminate spikelets bearded at the base, staminate spikelets with narrow triangular glumes acuminate or subulate, lemmas elliptic to narrow elliptic glabrous acuminate, in forest, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775 and *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 526. 1906, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 6(54): 112. 1914, *Journal of the Linnean Society, Botany* 50(334): 350, f. 14. 1936, *Annals of the Missouri Botanical Garden* 30(2): 257. 1943, *Fl. Mesoamer.* 6: 217. 1994.

P. velutina Swallen

Peru. See *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775 and *Journal of the Washington Academy of Sciences* 30(2): 78, f. 8. 1940.

Vernacular name: cariso

P. violascens Swallen (*Pariana radiceflora* Sagot ex Döll; *Pariana simulans* Tutin)

Amazonas, Venezuela, Colombia. Perennial, moist places, forest, woodland, along riverbanks and streams, see *Histoire des plantes de la Guiane Française* 2: 876, t. 337. 1775, *Flora Brasiliensis* 2(2): 336. 1877 and *Journal of the Linnean Society, Botany* 50(334): 357, t. 10, f. 22. 1936, *Memoirs of the New York Botanical Garden* 9(3): 267. 1957.

P. vulgaris Tutin (*Pariana paraensis* Huber ex Tutin; *Pariana radiceflora* Sagot ex Döll)

Peru, Brazil, British Guiana. See *Flora Brasiliensis* 2(2): 336. 1877 and *Journal of the Linnean Society, Botany* 50(334): 353, f. 17. 1936.

P. zingiberina Rich. ex Döll (*Pariana amomizans* Rich.; *Pariana angustifolia* Rich.; *Pariana maynensis* Huber; *Pariana radiceflora* Sagot ex Döll)

Peru, Brazil, Bolivia, Venezuela, French Guiana. Perennial, moist places, forest, shade or partial shade, see *Flora Brasiliensis* 2(2): 337. 1877 and *Boletim do Museu Paraense de Historia Natural e Ethnographia* 4: 526. 1906, *Fl. Mesoamer.* 6: 217. 1994.

Parodiella J.R. Reeder and C.G. Reeder = *Lorenzochloa* Reeder & C. Reeder, *Ortachne* Nees ex Steud., *Parodiella* Speg. (Fungi)

After the Argentine botanist Lorenzo Raimundo Parodi, 1895-1966.

Pooideae, Stipeae, Stipinae, type *Parodiella erectifolia* (Swallen) Reeder & C. Reeder, see *Synopsis Plantarum Glumacearum* 1: 121. 1854, *Anales de Sociedad Científica Argentina* 9: 178. 1880 and *Journal of the Washington Academy of Sciences* 21(1): 15. 1931, *Boletín de la Sociedad Argentina de Botánica* 12: 279-280, f. 1A-B, D-F, 3. 1968, *Boletín de la Sociedad Argentina de Botánica* 11(4): 239. 1969, *Flora Mesoamericana* 6: 244-245. 1994, *Contributions from the United States National Herbarium* 48: 431, 468-469, 477. 2003.

Parodiochloa C.E. Hubb. = *Poa* L.

After the Argentine botanist Lorenzo Raimundo Parodi, 1895-1966.

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Poinae, type *Parodiochloa flabellata* (Lam.) C.E. Hubb., see *Species Plantarum* 1: 67-68. 1753, *Encyclopédie Méthodique, Botanique* 2: 462. 1788 and *Bulletin of the British Museum (Natural History), Botany* 8: 395-396. 1981, *Contributions from the United States National Herbarium* 48: 477, 505-580. 2003.

Parodiochloa A.M. Molina = *Koeleria* Pers., *Raimundochloa* A.M. Molina, *Rostraria* Trin.

After the Argentine botanist Lorenzo Raimundo Parodi, 1895-1966.

Pooideae, Poeae, Aveninae, type *Parodiochloa trachyantha* (Phil.) A.M. Molina, see *Fundamenta Agrostographiae* 149, t. 13. 1820, *Mémoires de l'Académie Impériale des Sciences*

de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles 1(1): 65. 1830, *Florula Atacamensis seu Enumeratio ...* 55. 1860 and *Zlaki SSSR*, 267. 1976, *Parodiana* 4(1): 110-120, f. 1-2. 1986, *Parodiana* 4(2): 402. 1986, *Contributions from the United States National Herbarium* 48: 409-419, 477, 601, 604. 2003.

Parodiolyra Soderstr. & Zuloaga

After the Argentine botanist Lorenzo Raimundo Parodi, 1895-1966, agrostologist, professor of botany in Argentina, 1934-1962 editor and director of the *Revista Argentina de Agronomía*, his writings include "Nota sobre las especies de *Briza* de la flora argentina." *Revista Fac. Agron. Veterin.* 3: 113-138. 1920, "Los arrocés de la flora argentina." *Physis* (Buenos Aires). 11: 238-252. 1933, "Resumen bibliográfico. Looser, Gualterio. Las Proteáceas chilenas." *Revista Argent. Agron.* 1(2): 151-153. 1934, "Albert Spear Hitchcock." *Revista Argent. Agron.* 3(2): 113-119. 1936, "El origen geográfico de algunas gramíneas coleccionadas por don Luis Néé en su viaje alrededor del mundo." *Revista Argent. Agron.* 14(1): 61-69. 1947, "Robert Pilger." *Revista Argent. Agron.* 20(2): 107-114. 1953 and "Thaddeus Peregrinus Haenke a dos siglos de su nacimiento." *Anales Acad. Nac. Ci. Exact. Buenos Aires.* 17: 9-28. 1964, with J. Camara wrote "El mango, cereal extinguido en cultivo, sobrevive en estado salvaje." *Ci. & Invest.* 20(12): 543-549. 1964. See Arturo E. Burkart (1906-1975), "Bibliografía del botánico argentino Lorenzo R. Parodi (1895-1966)." *Bol. Soc. Argent. Bot.* 12: 7-16. 1968; H. Augustín Garaventa (1911-1981), "El botánico argentino Lorenzo R. Parodi." *Revista Univ. (Santiago)* 52: 167-175. 1967 [1968]; J.H. Barnhart, *Biographical notes upon botanists.* 3: 51. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 301. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 321. 1973; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. 760. Stuttgart 1993; Stafleu and Cowan, *Taxonomic literature.* 4: 76-77. 1983.

About 3-5 species, Costa Rica, Bolivia, Brazil. Bambusoideae, Olyreae, Olyrinae, perennial, more or less herbaceous to woody, bushy, tufted, erect, elongated, arching, scandent, decumbent, trailing, climbing to sub-climbing, clambering, scrambling, sprawling, lianoid, branched, nodes hairy to villous, shortly rhizomatous, auricles absent, flowering culms leafy, leaves membranous, leaf blades ovate to lanceolate, ligule a membrane-like more or less fringed to ciliate, plants monoecious, open panicle inflorescence, spikelets solitary and pedicellate, all the fertile spikelets unisexual, pistillate spikelets above and staminate spikelets

below, two glumes more or less equal to unequal, male florets 3-staminate, male spikelets glumeless, palea present, 3 free lodicules, stamens absent, ovary glabrous, 2 stigmas, forming colonies or extensive stands, ground cover, in secondary forest, on riverbanks, edge of forest, wet depressions, disturbed areas, open areas, savannah, sandy slopes, wet savannah, on white sand, ridges, shade or partial shade, type *Parodiolyra ramosissima* (Trin.) Soderstr. & Zuloaga, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759 and T.R. Soderstrom and F.O. Zuloaga, "A revision of the genus *Olyra* and the new segregate genus *Parodiolyra* (Poaceae: Bambusoideae: Olyreae)." *Smithsonian Contributions to Botany* 69: 1-79. 1989, *Annals of the Missouri Botanical Garden* 78: 928-941. 1991, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: i-xi, 1-1286. 1993, *Systematic Botany* 18(1): 80-99. 1993, *Ruizia* 13: 1-480. 1993, *Flora Mesoamericana* 6: 212. 1994, *American Bamboos* 299-301. 1999, *Hickenia* 3(16): 55-56. 2000, *Contributions from the United States National Herbarium* 39: 97. 2000.

Species

P. colombiensis Davidse & Zuloaga

Colombia. See *Novon* 9(4): 587, f. 1-2. 1999.

P. lateralis (J. Presl ex Nees) Soderstr. & Zuloaga (*Chusquea simpliciflora* Munro; *Ichnanthus nemorosus* (Sw.) Döll; *Olyra lateralis* (J. Presl ex Nees) Chase; *Olyra sarmentosa* Döll; *Panicum laterale* J. Presl, nom. illeg., non *Panicum laterale* J. Presl ex Nees; *Panicum laterale* J. Presl ex Nees; *Raddiella truncata* Swallen)

Amazonas. Brazil, Bolivia, Colombia, Venezuela. Perennial, erect or suberect, scandent, decumbent, trailing, climbing, much branched above, more or less woody to herbaceous, shrubby, leaf blades ovate-lanceolate apiculate, lax panicles pyramidal exserted, in dense woods, moist ground, see *Species Plantarum* 1: 67. 1753, *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Nova Genera et Species Plantarum seu Prodrum* 22. 1788, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 213. 1829, *Reliquiae Haenkeanae* 1(4-5): 305. 1830, *Flora of the British West Indian Islands* 551. 1864, *Transactions of the Linnean Society of London* 26(1): 54, t. 2. 1868, *Flora Brasiliensis* 2(2): 289, 319. 1877, *Atti della Reale Accademia dei Lincei, Memorie della Classe di Scienze, Fische, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881 and *Proceedings of the Biological Society of Washington* 21: 179. 1908, *Contributions from the United States National Herbarium* 15: 16. 1910, *Bulletin of the Torrey Botanical Club* 75(1): 89. 1948, *Brittonia* 23(3): 293-324. 1971, *Syst. Bot. Monogr.* 27: 89. 1989, *Smithsonian Contributions to Botany* 69: 66. 1989.

in Peru: carricito

P. luetzelburgii (Pilg.) Soderstr. & Zuloaga (*Ichnanthus panicoides* P. Beauv.; *Olyra luetzelburgii* Pilg.; *Olyra sarmentosa* Döll) (after the German botanist Philipp von Luetzelburg, 1880-1948, plant collector in northeastern Brazil and Amazonia, among his writings are *Mappas botanicos do Nordeste do Brasil* organizados por Philipp von Luetzelburg. Rio de Janeiro 1925, (his thesis) in *Flora* 100: 145-212. 1910 and *Estudo botânico do Nordeste*. Rio de Janeiro 1925-1926; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 410. 1965; Stafleu and Cowan, *Taxonomic literature*. 3: 190-191. Utrecht 1981)

Brazil, French Guiana, Venezuela. Perennial, erect, clambering, branched, forest, shade, savannah, along riverbanks, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Essai d'une Nouvelle Agrostographie* 56, 57, t. 12, f. 1. 1812, *Flora Brasiliensis* 2(2): 319. 1877 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(100): 1049. 1930, *Syst. Bot.* 7(1): 103. 1982, *Smithsonian Contributions to Botany* 69: 70. 1989.

P. micrantha (Kunth) Davidse & Zuloaga (*Olyra d'urvillei* Döll; *Olyra hirsuta* Trin.; *Olyra micrantha* Kunth; *Olyra micrantha* var. *decalvata* Döll; *Olyra micrantha* var. *dioeca* Döll, also spelled *dioica*; *Olyra micrantha* var. *micrantha*; *Olyra micrantha* var. *subvelutina* Döll; *Olyra scorbiculata* Schrad. ex Nees; *Olyra urvillei* Steud.; *Olyra ventricosa* Nees)

Venezuela. Perennial, robust, woody, erect, arching, prostrate, rooting at the nodes, sprawling, stout, hollow stem, branched with ascending branches, shortly rhizomatous, more or less shrubby, weedy, eaten by animals, forming colonies, growing in clumps, medicinal, forest, disturbed areas, forest edge, understory, moist shady places, along roadsides, full shade of forest, riverbanks, woodland, slopes, marshes, see *Nova Genera et Species Plantarum* 1: 199. 1815 [1816], *De Graminibus Paniceis* 250. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 303. 1829, *Synopsis Plantarum Glumacearum* 1: 36. 1855 [1853], *Flora Brasiliensis* 2(2): 323-324. 1877 and *Novon* 9(4): 590. 1999.

in Bolivia: bistó

in Spanish: carrizo, pitillo

P. ramosissima (Trin.) Soderstr. & Zuloaga (*Olyra blanchetii* Mez; *Olyra ramosissima* Trin.) (after the Swiss botanist Jacques Samuel Blanchet, 1807-1875, plant collector in Brazil; see H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 133. Oxford 1964; J.H. Barnhart, *Biographical notes upon botanists*. 1: 198. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 41. 1972)

Brazil. Perennial, erect, climbing, leaning, caespitose, branched, thick-rooted, rooting at the nodes, forest, open areas, full shade or partial shade, forest floor, woods, sandy

soil, along streams, edge of forest, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 116. 1834 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7(63): 46. 1917, *Smithsonian Contributions to Botany* 69: 73. 1989.

Parvotrisetum Chrtek = *Trisetaria* Forssk.

From the Latin *parvus* “small” plus the genus *Trisetum* Pers.

Aveneae, type *Parvotrisetum myrianthum* (Bertol.) Chrtek, see *Flora Aegyptiaco-Arabica* 60. 1775 and *Preslia* 37: 201. 1965, *Contributions from the United States National Herbarium* 48: 659. 2003.

Pascopyrum Á. Löve = *Elymus* L.

Pasture wheat, Latin *pasco, pavi, pastum* “to feed, pasture” and Greek *pyros* “grain, wheat.”

One species, U.S., Canada, Mexico. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, herbaceous, glaucous, unbranched, rhizomatous, auricle present, ligule an unfringed membrane, plants bisexual, inflorescence spicate, incomplete florets distal to the female-fertile florets, spikelets sessile, 2 glumes more or less equal or subequal, palea present, 3 stamens, ovary without the apical appendage, 2 stigmas, heavy ground, saline-alkaline soils, type *Pascopyrum smithii* (Rydb.) Á. Löve, see *Taxon* 29(1, 4): 168, 547. 1980, *Feddes Repert.* 95: 425-521. 1984, *Am. J. Bot.* 85: 1266-1272. 1998, *Contributions from the United States National Herbarium* 48: 279-307, 477-478. 2003, *Am. J. Bot.* 91: 1789-1801. 2004.

Species

P. smithii (Rydb.) Barkworth & D.R. Dewey (*Agropyron glaucum* var. *occidentale* Scribn.; *Agropyron molle* (Scribn. & J.G. Sm.) Rydb.; *Agropyron occidentale* (Scribn.) Scribn.; *Agropyron occidentale* var. *molle* (Scribn. & J.G. Sm.) Scribn.; *Agropyron occidentale* var. *occidentale*; *Agropyron occidentale* var. *palmeri* (Scribn. & J.G. Sm.) Scribn.; *Agropyron palmeri* (Scribn. & J.G. Sm.) Rydb.; *Agropyron smithii* Rydb.; *Agropyron smithii* f. *molle* (Scribn. & J. G. Sm.) J.M. Gillett; *Agropyron smithii* var. *molle* (Scribn. & J. G. Sm.) M.E. Jones; *Agropyron smithii* var. *palmeri* (Scribn. & J.G. Sm.) A. Heller; *Agropyron smithii* var. *smithii*; *Agropyron smithii* var. *typica* Waterf.; *Agropyron spicatum* (Pursh) Scribn. & J.G. Sm.; *Agropyron spicatum* var. *molle* Scribn. & J.G. Sm.; *Agropyron spicatum* var. *palmeri* Scribn. & J.G. Sm.; *Agropyron spicatum* var. *viride* Farw.; *Elymus smithii* (Rydb.) Gould; *Elytrigia smithii* (Rydb.) Á. Löve, *Elytrigia smithii* (Rydb.) Nevski; *Elytrigia smithii* var. *molle* (Scribn. & J.G. Sm.) Beetle; *Pascopyrum*

smithii (Rydb.) Á. Löve; *Zeia mollis* (Scribn. & J.G. Sm.) Lunell; *Zeia occidentalis* (Scribn.) Lunell; *Zeia smithii* Lunell)

Northern America, Mexico. Cultivated, useful for erosion control, good forage, fodder, see *Systema Vegetabilium* 2: 752. 1817, *Transactions of the Kansas Academy of Science* 9: 119. 1885, *Bulletin, Division of Agrostol. U.S.D.A.* 4: 33. 1897 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 9. 1900, *Catalogue of North American Plants North of Mexico (edition 2)* 3. 1900, *Memoirs of the New York Botanical Garden* 1: 64-65. 1900, *Bulletin Colorado State University Experiment Station* 100: 55. 1906, *Contributions to Western Botany* 14: 18. 1912, *American Midland Naturalist* 4: 226-227. 1915, *Report of the Michigan Academy of Science, Arts and Letters* 21: 356. 1920, *Madroño* 9: 125, 127. 1947, *Rhodora* 51(602): 21. 1949, *Botaniska Notiser* 1950: 31. 1950, *Canadian Journal of Botany* 38: 750. 1960, *Taxon* 29: 168, 547. 1980, *Great Basin Naturalist* 43: 569. 1983, *Brittonia* 35: 31. 1983, *Crop Sci. (Madison)* 23: 640-641. 1983, *Phytologia* 55(3): 211. 1984, *Feddes Repert.* 95: 484. 1984, *American Journal of Botany* 72(5): 769, 772. 1985, Polley, H.W., and J.K. Detling, “Herbivory tolerance of *Agropyron smithii* populations with different grazing histories.” *Oecologia* 77: 261-267. 1988, S.R. Larson, A.J. Palazzo and K.B. Jensen, “Identification of western wheatgrass cultivars and accessions by DNA fingerprinting and geographic provenance.” *Crop Science* 43: 394-401. 2003.

in English: western wheatgrass

Paspalanthium Desv. = *Paspalum* L.

The genus *Paspalum* L. and *anthos* “flower.”

Panicoideae, Paniceae, Paspalinae, type *Paspalanthium stoloniferum* (Bosc) Desv., see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Transactions of the Linnean Society of London* 2: 83, t. 16. 1794, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 163. 1831 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 46: 441, 443-527. 2003.

Paspalidium Stapf = *Setaria* P. Beauv.

Possibly a diminutive of the generic name *Paspalum* L.; see Sir David Prain (1857-1944), in *Flora of Tropical Africa*. 9: 15, 582-583. 1920.

About (20-)27/40 species, warm and tropical regions. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Setariinae, annual or perennial, habitat varied, tufted, thick, spongy, rhizomatous or caespitose, decumbent at base, sometimes adventitious roots at nodes, herbaceous, often

with branching stems, glabrous nodes and hollow internodes, ligule a line of hairs, blade folded in bud, leaves oblong and usually flat, plants bisexual, inflorescence of short spike-like racemes overlapping or distant along a central axis, racemes with imbricate spikelets, spikelets solitary or paired and deciduous at maturity, spikelets awnless plano-convex elliptic or lanceolate or ovate, 2 florets, terminal spikelet subtended by a bristle or a point, lower floret sterile or male, upper floret perfect, 2 glumes very unequal membranous to herbaceous, lower glume much shorter than the spikelet, upper fertile lemma acute or pointed but not mucronate, upper lemma covered with wrinkles, palea present or absent, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, ornamental, weed species, native pasture species, fodder plants, grazed, birdseed grass, shade species, moist or marshy habitats, often aquatic, swamps, edges of waterways, forests, dry slopes, clay and clay loam soils, rainforest, species very close and difficult to distinguish, sometimes or usually referred to *Setaria* P. Beauv., the genus can be confused with *Urochloa* or *Panicum*, type *Paspalidium geminatum* (Forssk.) Stapf, see *Species Plantarum* 1: 55. 1753, *Flora Aegyptiaco-Arabica* 18. 1775, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 237. 1829, *Synopsis Plantarum Glumacearum* 1: 49. 1855 [1853] and *Contributions from the United States National Herbarium* 15: 28, 30. 1910, *North American Flora* 3(2): 200, 202. 1915, *Flora of Tropical Africa* 9: 15, 582-583. 1920, *Contr. U.S. Natl. Herb.* 22(3): 156. 1920, *Bulletin of Miscellaneous Information Kew* 1923(9): 318. 1923, *Bulletin de la Société Botanique de France* 72: 706. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(2): 244-245. 1930, *Contributions from the New South Wales National Herbarium* 1(6): 331-332. 1950 [1951], *Acta Botanica Cubana* 4: 1-11. 1980, *Micronesica* 18(2): 45-102. 1982, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992, *Flora Mesoamericana* 6: 363. 1994, J.F. Veldkamp, "Miscellaneous notes on southeast Asian Gramineae: 9. *Setaria* and *Paspalidium*." *Blumea* 39: 373-384. 1994, R.D. Webster, "Nomenclatural changes in *Setaria* and *Paspalidium* (Poaceae: Paniceae)." *Sida* 16: 439-446. 1995, *Austral. Ecology* 25(1): 48-57. Feb 2000, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Contributions from the United States National Herbarium* 46: 441-442, 569-593. 2003, *Ecological Research* 18(1): 73-80. Jan 2003, *Austral. Ecology* 28(1): 14-22. Feb 2003, *Freshwater Biology* 48(11): 1993-2008. Nov 2003, *Freshwater Biology* vol. 49, issue 10: 1381-1390. Oct 2004, *Ecological Management and Restoration* 6(1): 43-50. Apr 2005.

Species

P. albovillosum S.T. Blake (*Paspalidium radiatum* Vickery var. *hirsutum* Vickery; *Setaria albovillosa* (S.T. Blake) R.D. Webster)

Australia, Queensland, New South Wales. Tufting perennial grass, more or less straight, yellowish green, forming erect tussocks, sheath more or less hirsute, ligule ciliate, hairy and slightly rough to hirsute leaves, purplish and broadly acute spikelets, lower glume obtuse to subacute, lemmas ovate to elliptic, lower lemma sterile, upper lemma acute and minutely apiculate, on poor soils, sandy loam, gravelly soils, forage, useful for soil conservation, see *Proceedings of the Royal Society of Queensland* 62: 96. 1952, *Sida* 16(3): 441. 1995.

in English: panic grass

P. aversum Vickery (*Setaria aversa* (Vickery) R.D. Webster) (bent back, from the Latin *aversum*, *i* "the hinder, the back part," *aversus*, *a*, *um* "turned off")

Australia, Queensland, New South Wales. Tufting perennial grass, dense rootstock, extravaginal shoots, culms weak, branched, more or less straight to decumbent and sometimes rooting at nodes, sheath glabrous, ligule ciliate, panicles very narrow, spikelets bent backwards, lower glume shortly acute and inflated at the base, lemmas acute, lower lemma sterile, upper lemma apiculate and striolate, in drainage ways, on moist loam, good soil, forage, useful for soil conservation and regeneration, see *Contributions from the New South Wales National Herbarium* 1(6): 331-332. 1950 [1951], *Sida* 16(3): 441. 1995.

in English: panic grass

P. basicladum Hughes (*Paspalidium gracile* sensu J. Black, partly, non (R. Br.) Hughes; *Setaria basiclada* (Hughes) R.D. Webster)

South Australia, Queensland, Western Australia, Northern Territory. Tufted annual grass, more or less scabrous, erect or ascending, panicle spike-like, spikelets glabrous and irregularly arranged on the raceme axes, second glume as long as the spikelets, see *Bulletin of Miscellaneous Information Kew* 1923(9): 318. 1923, *Sida* 6(3): 441. 1995.

P. breviflorum Vickery

Australia, Queensland, New South Wales. Perennial, slender, weak culms, sheath glabrous, ligule ciliate, spikelets more or less obtuse, lower glume subacute and inflated at the base, upper glume obtuse, lower lemma sterile, upper lemma gibbous and striolate, in woodland on good soil, see *Telopea* 1(1): 40. 1975.

P. caespitosum C.E. Hubb. (*Setaria brigalow* R.D. Webster)

Australia, Queensland. See *Bulletin of Miscellaneous Information Kew* 1934: 446. 1934, *Sida* 16(3): 441. 1995.

P. chapmanii (Vasey) R.W. Pohl (*Panicum chapmanii* Vasey; *Setaria chapmanii* (Vasey) Pilg.) (for Alvin Wentworth Chapman, 1809-1899)

Northern America, U.S., Mexico. Perennial bunchgrass, tufted, in marshy areas, along roadsides, open areas, sandy places, see *Bulletin of the Torrey Botanical Club* 11(6): 61.

1884 and *Contr. U.S. Natl. Herb.* 15: 24. 1910, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Novon* 2(2): 106. 1992.

P. clementii (Domin) C.E. Hubb. (*Panicum clementii* Domin; *Paspalidium gracile* sensu J. Black, partly, non (R. Br.) Hughes; *Setaria clementii* (Domin) R.D. Webster) (dedicated to E. Clement)

South Australia, Queensland, New South Wales, Western Australia, Northern Territory. Tufted annual or short-lived perennial, rare, slender, smooth, erect or ascending, sheath glabrous, ligule ciliate, panicle spike-like and exserted, spikelets irregularly arranged and sometimes subtended by a bristle, lower glume acute, upper glume usually acute, lower lemma sterile and epaleate, second lemma more or less shiny and convex on the back, palatable, grows in arid and semiarid places, see *Journal of the Linnean Society, Botany* 41: 272. 1912, *Bulletin of Miscellaneous Information Kew* 1934: 447. 1934, *Sida* 16(3): 442. 1995.

in English: Clement's paspalidium

P. constrictum (Domin) C.E. Hubb. (*Panicum constrictum* Domin; *Paspalidium gracile* (R. Br.) Hughes var. *rugosum* Hughes; *Setaria constricta* (Domin) R.D. Webster)

South Australia, Queensland, New South Wales, Victoria, Western Australia, Northern Territory. Tufting or tussock-forming perennial grass, slender, canelike and much branched, knotted rootstock, extravaginal shoots, culms and nodes hairy or pubescent, sheath more or less scabrous, ligule ciliate, leaves linear and rough, panicles spike-like much-branched and scabrous-pubescent, spikelets glabrous, lower glume shortly acuminate, upper glume very obtuse, lemmas acute and elliptic, lower lemma sterile, second lemma more or less rugulose and about as long as the spikelet, fertile lemma constricted above the base, grasslands and woodlands, alluvial soils, clay loams, red soils, sandy soils, arid regions and dry areas, *Eucalyptus camaldulensis* Dehnh. (River Red gum) and *Eucalyptus largiflorens* F. Muell. (River box) open forest, drought-tolerant and resistant, highly palatable, susceptible to preferential grazing, useful for soil erosion control, regenerates rapidly, see *Bibliotheca Botanica* 85: 302. 1915, *Bulletin of Miscellaneous Information Kew* 1934: 447. 1934, *Sida* 16(3): 442. 1995.

in English: knotty-butt paspalidium, box grass, slender grass, knotty-butt grass, slender panic

P. criniforme S.T. Blake (*Paspalidium gracile* (R. Br.) Hughes var. *debile* Vickery; *Setaria criniformis* (S.T. Blake) R.D. Webster) (Latin *crinis* "hair")

Queensland, New South Wales. Perennial, densely tufted, ascending to erect, forming erect and dense tussocks, culms slender and glabrous, ligule ciliate, leaves hairy and green, glabrous nodes, green spikelets lanceolate and constricted near the base, lower glume acute, upper glume elliptic and subacute, lemmas acute, lower lemma sterile and palea

minute or absent, upper lemma elliptic and apiculate, ornamental, growing in woodland, hardy to most frosts, open forest, hillsides, dry areas, see *Proceedings of the Royal Society of Queensland* 62: 98. 1952, *Sida* 16(3): 442. 1995.

P. desertorum (A. Rich.) Stapf (*Echinochloa colona* var. *arabica* (Nees ex Steud.) Chev.; *Panicum arabicum* Nees ex Steud.; *Panicum desertorum* A. Rich.)

Ethiopia, Kenya, Sudan, Arabian Peninsula. Perennial, tufted, knotty base, erect or geniculately ascending, sometimes decumbent, sometimes stoloniferous, spreading by rhizomes and hard stiff stolons, narrow flat leaves finely acuminate, racemes solitary rarely paired, spikelets elliptic ovate and contiguous, raceme rhachis triquetrous, lower glume obtuse, upper glume obtuse, upper lemma lanceolate, pasture grass, well grazed by cattle, excellent drought tolerance, prefers loams and alluvial silts, grows in the dry areas, dry open bushland, sandy fields, alluvial plains, seasonally floodplain, dry river beds, margins and banks around cultivation, seasonally flooded grassland, grassland plains, cultivated fields, see *Hortus Regius Botanicus Berlinensis* 2: 209. 1833, *Tentamen Florae Abyssinicae ...* 2: 365. 1850, *Synopsis Plantarum Glumacearum* 1: 63. 1855 [1853] and *Flora of Tropical Africa* 9: 585. 1920.

in Somalia: gargharo, gargaro

P. disjunctum S.T. Blake (*Panicum distans* Trin.; *Setaria distans* (Trin.) Veldkamp)

Australia, Queensland, New South Wales, Northern Territory. Tufted perennial grass, branched, sometimes rooting at the lower nodes, leaves green, green spikelets, lemmas elliptic and finally pointed, ornamental, useful for soil conservation and stabilization, sometimes confused with *Paspalidium breviflorum* Vickery, see *Species Graminum* 2: t. 172. 1829 and *Proceedings of the Royal Society of Queensland* 84(5): 65-66, t. 7, f. 5. 1973, *Blumea* 39(1-2): 376. 1994.

P. distans (Trin.) Hughes (*Panicum distans* Trin.; *Paspalidium radiatum* Vickery; *Setaria distans* (Trin.) Veldkamp)

New South Wales, Queensland. See *Species Graminum* 2: t. 172. 1829 and *Flora of Tropical Africa* 9: 582-583. 1920, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Contributions from the New South Wales National Herbarium* 1(6): 332-334. 1950 [1951], *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Proc. Royal Soc. Queensland* 84: 66-67. 1973, *Blumea* 39(1-2): 376. 1994.

P. flavidum (Retz.) A. Camus (*Panicum flavidum* Retz.; *Panicum floridum* Royle; *Panicum granulare* Lam.; *Setaria flavida* (Retz.) Veldkamp)

Tropical Asia, India. Perennial or annual, tufted, erect, ascending, rigid, slender, freely branching from the decumbent base, glaucous, leaves loosely or strongly distichous, sheaths usually glabrous, ligule minute fringed with hairs

or absent, leaf blades linear lanceolate acute, culm nodes glabrous, panicle of several erect distant branches, short racemes widely spaced and much shorter than the internodes, peduncle and rachis strongly grooved, widely spaced spikelets broadly ovate and swollen, outer glume very short and blunt, grain eaten in times of scarcity, excellent fodder grass, found in swampy places, on alluvial flats, moist situations, open wet areas, see *Observationes Botanicae* 4: 15. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170. 1791, *Species Graminum* 2: t. 172. 1829, *Illustrations of the Botany ... of the Himalayan Mountains ...* 420. 1840, *Bulletin of Miscellaneous Information*, Kew, no. 12. 1887, *The Flora of British India* 7: 29. 1896 and *Handb. Fl. Ceylon* 5: 133. 1900, *Flore Générale de l'Indo-Chine* 7: 419. 1922, *Grasses of Ceylon* 130. 1956, *Grasses of Burma ...* 333. 1960, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Journal of Cytology and Genetics* 25: 140-143, 147-148. 1990, *Blumea* 39(1-2): 376. 1994, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in India: akki hullu, arisi pullu, arisipillu, baunri, bharti, bilainangi, chapri, chichwi, dhanera, homa, jhinko samo, kangna, kura-tuka gadi, matamar, neetichama, oda, oodagaddi, paddatunga gadi, palon, sama jodi, sankha, sathiya, sitiya, udagaddi, woodoo gaddi

in Sri Lanka: arisi pul, ha tana

in Thailand: yaa nok seechom phuu

P. gausum S.T. Blake (*Setaria gausa* (S.T. Blake) R.D. Webster) (with a woolly nap)

Australia, Queensland, New South Wales. Perennial, culms wiry and rigid, knotted rhizomes, sheath glabrous, ligule ciliate, spikelets widely gaping, lower glume inflated at the base, lower lemma sterile, upper lemma broad-ovate and with a short beak, coastal, grows in woodland, sandy soils, see *Proceedings of the Royal Society of Queensland* 84(5): 68-69, t. 7, f. 6. 1973, *Sida* 16(3): 443. 1995.

P. geminatum (Forssk.) Stapf (*Digitaria affinis* Roem. & Schult.; *Digitaria appressa* (Lam.) Pers.; *Echinochloa geminata* (Forssk.) Roberty; *Panicum affine* (Roem. & Schult.) Nees, nom. illeg., non *Panicum affine* Poir.; *Panicum appressum* (Lam.) Döll, nom. illeg., non *Panicum appressum* Forssk.; *Panicum beckmanniiforme* J.C. Mikan ex Trin.; *Panicum briziforme* J. Presl; *Panicum carnosum* Salzm. ex Steud.; *Panicum emergens* Hochst.; *Panicum emergens* Döll, nom. illeg., non *Panicum emergens* Hochst.; *Panicum fluitans* Retz.; *Panicum geminatum* Forssk.; *Panicum glomeratum* Buckley, nom. illeg., non *Panicum glomeratum* Moench; *Panicum paludivagum* Hitchc. & Chase; *Panicum paspaloides* Pers.; *Panicum truncatum* Trin.; *Paspalidium geminatum* var. *geminatum*; *Paspalidium geminatum* var. *paludivagum* (Hitchc. & Chase) Gould; *Paspalidium paludivagum* (Hitchc. & Chase) Parodi; *Paspalidium paludivagum* (Hitchc. & Chase) Pilg., nom. illeg., non *Paspalidium paludivagum* (Hitchc. & Chase) Parodi;

Paspalidium paludivagum (Hitchc. & Chase) Herter, nom. illeg., non *Paspalidium paludivagum* (Hitchc. & Chase) Parodi; *Paspalidium paludivagum* (Hitchc. & Chase) Henrard, nom. illeg., non *Paspalidium paludivagum* (Hitchc. & Chase) Parodi; *Paspalidium pilgeri* Herter; *Paspalum adpressum* Pers. ex B.D. Jacks.; *Paspalum appressum* Lam.; *Setaria geminata* (Forssk.) Veldkamp; *Setaria geminata* var. *paludivaga* (Hitchc. & Chase) R.D. Webster

Pantropical. Perennial, aquatic, emergent, robust, coarse, tufted, clumped, prostrate and erect, rooting at the nodes in moist habitats, creeping, rhizomatous or stoloniferous, soft, spongy and inflated, rhizomes spongy and floating, sheaths smooth, ligule a finely ciliate rim, leaf blades acuminate, erect slender inflorescence, spikelets ovate slightly imbricate, axis of the inflorescence narrowly winged, racemes sessile 2-rowed, upper glume almost long as upper lemma, lower glume truncate, upper lemma granulose apiculate, usually not rooting at nodes in dry habitats, good forage, usually forming large stands, growing in water, irrigation canals, pans, wet soils, sandy soils, marshy soils and marshes, edge of rivers and lakes, stream sides, vleis, active dunes, places of temporary inundation, muddy soils, ditches, often floating in shallow water, see *Flora Aegyptiaco-Arabica* 18. 1775, *Observationes Botanicae* 3: 8. 1783, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Syn. Pl.* 1: 81, 85. 1805, *Systema Vegetabilium* 2: 470. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 83. 1821, *De Graminibus Paniceis* 130. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 113. 1829, *Reliquiae Haenkeanae* 1(4-5): 302. 1830, *Synopsis Plantarum Glumacearum* 1: 60. 1854, *Flora* 38: 196. 1855, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 3. 1866, *Flora Brasiliensis* 2(2): 184, 269. 1877 and *Handb. Fl. Ceylon* 5: 135. 1900, *Contributions from the United States National Herbarium* 15: 32-33, f. 13. 1910, *Flora of Tropical Africa* 9: 583. 1920, *Gramineas Bonaerenses, edition 3*, 89. 1939, *Blumea* 3(3): 434. 1940, *Revista Sudamericana de Botánica* 6(5-6): 138, f. 8. 1940, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 29. 1940, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afr. Noire sér. A*, 17: 64. 1955, *Grasses of Ceylon* 131. 1956, *Grasses of Burma ...* 333. 1960, *The Southwestern Naturalist* 15(3): 391. 1971, *Brittonia* 23(3): 293-324. 1971, *Flora of the Galápagos Islands* 823-892. 1971, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Blumea* 39(1-2): 377. 1994, *Sida* 16(3): 443. 1995.

in Arabic: niseila

in Mali: baugassongau, merberé

in Niger: hakori'n karé

in Nigeria: angarago, geron tsintsiiyàà, hakorin karéé, hakoorin karéé, makooin karéé, tumbin kuusùù

in Somalia: sabul, sabool

in Mexico: camalote, egiptiano

P. globoideum (Domin) Hughes (*Panicum globoideum* Domin; *Setaria globoidea* (Domin) R.D. Webster)

Australia, Queensland. Large ripe seeds readily eaten by birds, see *Repertorium Specierum Novarum Regni Vegetabilis* 10: 119. 1911, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Sida* 16: 443. 1995.

P. gracile (R. Br.) Hughes (*Digitaria gracilis* Guss.; *Panicum gracile* R. Br.; *Panicum gracile* (Guss.) Nyman, nom. illeg., non *Panicum gracile* R. Br.; *Panicum gracile* Leconte, nom. illeg., non *Panicum gracile* R. Br.; *Panicum inaequale* Pilg., nom. illeg., non *Panicum inaequale* F. Muell.; *Paspalidium spartellum* S.T. Blake; *Setaria brownii* Desv.; *Setaria spartellum* (S.T. Blake) R.D. Webster)

Australia. Hardy, readily grazed, see *Prodromus Florae Novae Hollandiae* 190. 1810, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 187. 1831, *Syll. Suppl.* 70. 1865, *Mexicanas Plantas* 2: 21. 1886 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 133. 1901, *Bulletin of Miscellaneous Information Kew* 1923(9): 318. 1923, *Proceedings of the Royal Society of Queensland* 62: 97. 1952, *Sida* 16(3): 445. 1995.

P. gracile (R. Br.) Hughes var. ***debile*** Vick. (*Paspalidium criniforme* S.T. Blake; *Setaria criniformis* (S.T. Blake) R.D. Webster)

Australia. See *Bulletin of Miscellaneous Information Kew* 1923(9): 318. 1923, *Contributions from the New South Wales National Herbarium* 1(6): 331. 1950 [1951], *Proceedings of the Royal Society of Queensland* 62: 98. 1952, *Sida* 16(3): 442. 1995.

P. gracile (R. Br.) Hughes var. ***gracile***

Australia.

P. gracile (R. Br.) Hughes var. ***rugosum*** Hughes

Australia. See *Bulletin of Miscellaneous Information Kew* 1923(9): 318. 1923.

P. grandispiculatum B.K. Simon (*Setaria grandispiculata* (B.K. Simon) R.D. Webster)

Queensland. Vulnerable species, see *Austrobaileya* 1(5): 465. 1982, *Sida* 16(3): 443. 1995.

P. inaequale (F. Muell.) Hughes (*Digitaria gracilis* Guss.; *Holcolemma dispar* Clayton; *Panicum gracile* (Guss.) Nyman, nom. illeg., non *Panicum gracile* R. Br.; *Panicum gracile* Leconte, nom. illeg., non *Panicum gracile* R. Br.; *Panicum inaequale* F. Muell.; *Panicum inaequale* Pilg., nom. illeg., non *Panicum inaequale* F. Muell.; *Setaria inaequalis* (F. Muell.) R.D. Webster)

Australia. See *Syll. Suppl.* 70. 1865, *Mexicanas Plantas* 2: 21. 1886, *Fragmenta Phytographiae Australiae* 8: 189. 1874 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte*

und Pflanzengeographie 30(1): 133. 1901, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Kew Bulletin* 42: 402. 1987, *Sida* 16(3): 443. 1995.

P. jubiflorum (Trin.) Hughes (*Panicum flavidum* var. *jubiflorum* (Trin.) Domin; *Panicum jubiflorum* Trin.; *Setaria jubiflora* (Trin.) R.D. Webster)

Australia. Semiaquatic, rhizomatous, nutritious fodder, often cultivated, stabilizes wet ground, responds to flooding, see *De Graminibus Paniceis* 130. 1826 and *Bibliotheca Botanica* 85: 300. 1915, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Sida* 16(3): 443. 1995.

P. obtusifolium (Delile) Simpson (*Digitaria obtusifolia* (Delile) Roem. & Schult.; *Panicum obtusifolium* Delile; *Panicum obtusifolium* var. *acutifolium* Coss. & T. Durand; *Paspalidium obtusifolium* (Delile) Henrard, nom. illeg., non *Paspalidium obtusifolium* (Delile) Simpson; *Paspalidium obtusifolium* (Delile) Maire, nom. illeg., non *Paspalidium obtusifolium* (Delile) Simpson; *Paspalidium obtusifolium* var. *acutifolium* (Coss. & T. Durand) Maire; *Paspalidium platyrrhachis* C.E. Hubb.)

Egypt, Africa, Algeria. Perennial, aquatic, often with culms floating, rhizomatous or stoloniferous, spongy floating rhizomes, culms prostrate and rooting at the nodes, leaf blades often notched at the apex, inflorescence winged, spikelets narrowly ovate, in very deep water, on marshy soils, ditches, drainage channels, flood channels, see *Description de l'Égypte, ... Histoire Naturelle, Tom. Second* 150, t. 5, f. 1. 1812, *Systema Vegetabilium* 2: 889. 1817, *Exploration Scientifique de l'Algérie* 2: 29. 1854 and *Bulletin of Miscellaneous Information Kew* 1934: 262. 1934, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 217. 1941, *Monograph of the Genus Digitaria* 507, 505-506. 1950, *Flore de l'Afrique du Nord*: 1: 309. 1952, *Bothalia* 18: 111-114. 1988, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

P. philippianum Parodi (*Paspalidium macrospermum* Roseng.)

Asia.

in English: Philippine water crown grass

P. punctatum (Burm.f.) Camus (*Panicum mucronatum* Roth ex Roem. & Schult.; *Panicum punctatum* Burm.f.; *Paspalum punctatum* (Burm.f.) Stapf ex Ridl., nom. illeg., non *Paspalum punctatum* (L.) Fluegge; *Setaria punctata* (Burm. f.) Veldkamp)

Southeast Asia. Perennial, coarse, erect, trailing, thick, spongy, lower leaf sheath often inflated, ligule hairy, spikelets glabrous, first glume short, second glume shorter than the lemma of the upper floret, weed, native pasture species, useful as fodder, along riverbanks, marshes, ponds, lakes, see *Flora Indica ... nec non Prodromus Florae Capensis* 26. 1768, *Systema Vegetabilium* 2: 425. 1817 and *Handb.*

Fl. Ceylon 5: 134. 1900, *Flore Générale de l'Indo-Chine* 7: 419. 1922, *The Flora of the Malay Peninsula* 5: 218. 1925, *Reinwardtia* 2(2): 319. 1953, *Grasses of Ceylon* 131. 1956, *Grasses of Burma ...* 333. 1960, *Fl. Trop. E. Afr., Gram.* 3: 551. 1982, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Blumea* 39(1-2): 381. 1994.

in the Philippines: baririan, lalabok

in Thailand: yaa duei, ya duei, ya plong bueng, yaa plong bueng, ya plong nu, yaa plong nuu

P. radiatum Vickery (*Panicum distans* Trin.; *Paspalidium distans* (Trin.) Hughes; *Setaria distans* (Trin.) Veldkamp) New South Wales, Queensland. See *Species Graminum* 2: t. 172. 1829 and *Flora of Tropical Africa* 9: 582-583. 1920, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Contributions from the New South Wales National Herbarium* 1(6): 332-334. 1950 [1951], *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Proc. Royal Soc. Queensland* 84: 66-67. 1973, *Blumea* 39(1-2): 376. 1994.

P. radiatum Vick. var. ***hirsutum*** Vick.

Australia. See *Contributions from the New South Wales National Herbarium* 1(6): 332-334. 1950 [1951].

P. radiatum Vick. var. ***radiatum***

Australia.

P. rarum (R. Br.) Hughes (*Panicum rarum* R. Br.; *Setaria rara* (R. Br.) R.D. Webster)

Western Australia, Queensland, New South Wales, Northern Territory. Annual, tufted, fast-growing, slender, branched and geniculate, sheath more or less smooth to scabrous, ligule ciliate, racemes with a solitary spikelet with a constriction from the base, each branch with a single spikelet, upper glume very narrow at the base, lower glume acute, lower lemma sterile and without a palea, upper lemma broadly acute, early maturing, arid areas, rocky soils, useful grass, fodder, highly palatable, readily grazed, see *Prodromus Florae Novae Hollandiae* 189. 1810 and *Bulletin of Miscellaneous Information Kew* 1923(9): 318. 1923, *Sida* 16(3): 444. 1995.

in English: rare paspalidium, rare panic

P. reflexum R.D. Webster (*Setaria reflexa* (R.D. Webster) R.D. Webster)

Northern Territory. See *The Australian Paniceae (Poaceae)* 166. 1987, *Sida* 16(3): 444. 1995.

P. retiglume (Domin) Hughes (*Panicum retiglume* Domin; *Setaria retiglumis* (Domin) R.D. Webster)

Australia. See *Repertorium Specierum Novarum Regni Vegetabilis* 10: 119. 1911, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Sida* 16(3): 444. 1995.

P. scabrifolium S.T. Blake (*Setaria scabrifolia* (S.T. Blake) R.D. Webster, nom. illeg., non *Setaria scabrifolia* (Nees) Kunth)

Queensland. Rare species, see *Proceedings of the Royal Society of Queensland* 84(5): 69-70, t. 7, f. 4. 1973, *Sida* 16(3): 444. 1995.

P. semitonsum (Benth.) Hughes (*Panicum semitonsum* F. Muell. ex Benth.; *Whiteochloa semitonsa* (F. Muell. ex Benth.) C.E. Hubb.)

Northern Australia. See *Flora Australiensis: A Description ...* 7: 483. 1878 and *Bulletin of Miscellaneous Information Kew* 1923(2): 317. 1923, *Proceedings of the Royal Society of Queensland* 62(12): 111. 1952, *Brunonia* 1: 69-93. 1978.

P. spartellum S.T. Blake (*Setaria spartellum* (S.T. Blake) R.D. Webster)

Australia. See *Proceedings of the Royal Society of Queensland* 62: 97. 1952, *Sida* 16(3): 445. 1995.

P. tabulatum (Hackel) C.E. Hubb. (*Panicum tabulatum* Hack.; *Setaria tabulata* (Hack.) R.D. Webster)

Australia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 234. 1885 and *Bulletin of Miscellaneous Information Kew* 1934: 448. 1934, *Sida* 16(3): 445. 1995.

P. tuyamae (Tuyama) Ohwi (*Panicum pacificum* Tuyama, nom. illeg., non *Panicum pacificum* Hitchc. & Chase)

Japan. See *Botanical Magazine* 51(604): 127-129, f. 40. 1937, *Acta Phytotaxonomica et Geobotanica* 11: 34. 1942.

P. udum S.T. Blake (*Setaria uda* (S.T. Blake) R.D. Webster) (Latin *udus, a, um* "wet, moist, humid, damp")

Queensland, Northern Territory. Rare and vulnerable species, see *Proceedings of the Royal Society of Queensland* 62: 98. 1952, *Sida* 16(3): 445. 1995.

P. utowanaenum (Scribn.) Davidse & R.W. Pohl (*Panicum utowanaeum* Scribn.; *Setaria utowanaea* (Scribn.) Pilg.)

Central America, Puerto Rico. See [Charles Frederick Millspaugh (1854-1923), *Plantae Utowanae*. Plants collected in Bermuda, Porto Rico, ... Yucatan... Dec. 1898 to Mar. 1899] *Publications of the Field Columbian Museum, Botanical Series* 2(1): 25, t. 57. 1900, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Novon* 2(2): 106. 1992.

Paspalum L. = *Anachyris* Nees, *Cerealia* Schldtl., *Ceresia* Pers., *Cleachne* Adans., *Cleachne* Roland ex Rottb., *Cymatochloa* Schldtl., *Dichromus* Schldtl., *Digitaria* Heist. ex Fabr., *Dimorphostachys* E. Fourn., *Maizilla*

Schldtl., *Moenchia* Wender. ex Steud.,
Paspalanthium Desv., *Reimaria* Humb. &
 Bonpl. ex Fluegge, *Sabsab* Adans., *Wirtgenia*
 Döll

From the Greek name *paspalos* for “a kind of millet”; see Carl Linnaeus, *Systema Naturae*. Edition 10. 846, 855, 1359. 1759.

About 250/320-330 species, tropical and warm regions, New World. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, rarely annual or mostly perennial, glabrous to pubescent, herbaceous, simple or branched, variable habit, clumping nature, flimsy to robust, tufted or spreading, caespitose or decumbent, rhizomes or stolons, internodes solid or hollow, nodes hairy or glabrous, stems flattened at base, ligule membranous, auricles absent, flat to folded leaves narrow-linear to lanceolate or ovate, plants bisexual, hidden cleistogenes present or absent, racemose inflorescence solitary, branched spikes, spikelets awnless and solitary or paired, plano-convex abaxial spikelets, spikelets being borne on one side of the finger-like branches of the seed head, florets arranged symmetrically along the raceme, 2 florets, lower flower sterile, upper flower bisexual, very unequal glumes present or absent, lower glume usually lacking or minute and inconspicuous, lower lemma flat or concave, upper lemma stiff to hardened, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous and without the apical appendage, stigmas red, small fruit compressed, weedy ground, ornamental, grazing and stacking high value, fodders, grains, lawn grasses, native pasture species, sand binders, erosion control, stabilizing salt marsh, livestock feed, *Paspalum* species are eaten by ducks, swans and other water birds, found in open habitats, wet places, forest margins, pampas, rainforest, grasslands, damp habitats, savannah, coastal sands, coastal and inland salt marshes, type *Paspalum dimidiatum* L., see *Systema Naturae Ed. Decima*. 2: 846, 855, 1359. 1759, *Enumeratio Methodica Plantarum* 207. 1759, *Familles des Plantes* 2: 31, 599. 1763, *Acta Literaria Universitatis Hafniensis* 1: 285. 1778, *Synopsis Plantarum* 1: 85. 1805, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 65, 213-214. 1810, *De Graminibus Paniceis* 49, 87. 1826, *Conspectus Regni Vegetabilis* 49. 1828, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 76. 1829, *Species Graminum* 3: t. 271. 1829-1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 163. 1831, *Nom. Bot.* edition 2, 2: 153. 1841, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 103. 1850, *Syn. Pl. Glum.* 1: 33. 1854, *Botanische Zeitung. Berlin* 8: 601, 605. 1850, *Botanische Zeitung. Berlin* 10: 17. 1852, *Botanische Zeitung. Berlin* 12: 817, 820-822. 1854, *Botanische Zeitung. Berlin* 19(44): 326. 1861, *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 80: 441. 1875, *Flora Brasiliensis* 2(2): 40, 44, 100, 113. 1877, *Genera Plantarum* 3:

1097-1098. 1883, *Mexicanas Plantas* 2: 14. 1886 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *U.S.D.A. Bull.* 772: 227. 1920, *Contributions from the United States National Herbarium* 24(8): 435. 1927, *Contributions from the United States National Herbarium* 28(1): i-xvii, 1-310. 1929, *Repertorium Specierum Novarum Regni Vegetabilis* 26(7-15): 229-230. 1929, *Nat. Pfl.-Fam.* edition 2, 14e: 58-67. 1940, *Journal of Zoology, London* 149: 344-364. 1966, *Econ. Bot.* 37: 159-163. 1983, *Journal of Cytology and Genetics* 18: 26-33, 60-61. 1983, *Blumea* 30: 279-318. 1985, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Flora of the Guianas. Series A, Phanerogams* 8: 453-515. 1990, *Ernstia* 1(4): 135. 1992, *Ernstia* 2(1-2): 22. 1992, *Novon* 4(1): 20. 1994, *Flora Mesoamericana* 6: 335-352. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Systematic Botany* 21: 321-347. 1996 [When genes tell different stories: The diploid genera of Triticeae (Gramineae)], *Systematic Biology* 45: 524-545. 1996, S.A. Renvoize, *Gramíneas de Bolivia* 443-489. 1998, *Ernstia* 8(4): 100. 1999, *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 18, 151, 166-167, 193-214, 285, 296, 441, 443-527, 543, 550, 635. 2003, *Systematic Botany Monographs* 71: 1-75. 2004, Lee et al., “Criteria for assessing salinity tolerance of the halophytic turfgrass seashore *Paspalum*.” *Crop Sci.* 45: 251-258. 2005, *Weed Biology and Management* vol. 5, issue 2: 69-76. June 2005, *Grass and Forage Science* vol. 60, issue 2: 186-199. June 2005.

Species

P. spp.

in Mexico: guixi yaci, quique piquiñi, quixi yaci, yaci, yaza
 in Niger: kachia

P. abbreviatum Trin. ex E. Fourn. (*Dimorphostachys langei* E. Fourn.; *Paspalum abbreviatum* Schldtl.; *Paspalum abbreviatum* Trin. ex Steud.; *Paspalum langei* (E. Fourn.) Nash)

Mexico. See *Nomenclator Botanicus. Editio secunda* 2: 270. 1841, *Linnaea* 26(3): 383. 1854, *Mexicanas Plantas* 2: 10, 14-15. 1886 and *North American Flora* 17(2): 179. 1912.

P. acuminatum Raddi (*Paspalum serratum* Hitchc. & Chase)

Brazil, Bolivia, Costa Rica, Mexico, Paraguay. Creeping, rachis winged, grows in wetland, seasonally flooded savannah, see *Agrostografia Brasiliensis* 25. 1823 and *Contributions from the United States National Herbarium* 18(7): 306. 1917.

in English: brook crown grass, brook paspalum

P. acutifolium León

Cuba. Indeterminate species, savannah, see *Memoirs of the Torrey Botanical Club* 16: 58. 1920.

P. acutum Chase

Panama. Stoloniferous, spreading, more or less succulent, found in dry fields, see *Journal of the Washington Academy of Sciences* 17: 146, f. 4. 1927.

P. adoperiens (E. Fourn.) Chase (*Dimorphostachys adoperiens* E. Fourn.; *Paspalum guatemalense* Bartlett; *Paspalum squamulatum* E. Fourn.)

Mexico, Nicaragua. Erect, decumbent, swampy areas, along roadsides, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mexicanas Plantas* 2: 11, 15. 1886 and *Proceedings of the American Academy of Arts and Sciences* 43(2): 49. 1907, *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 28(1): 102, 118, f. 55. 1929.

P. affine Steud. (*Paspalum affine* Bello, nom. illeg., non *Paspalum affine* Steud.)

Mexico. Erect, leaf sheath pungent, see *Synopsis Plantarum Glumacearum* 1: 24. 1855 [1853], *Anales de la Sociedad Española de Historia Natural* 12: 125. 1883.

P. alaini León

Cuba. See *Flora de Cuba* 1: 141. 1946.

P. albidulum Henrard

Suriname, Brazil. Perennial, caespitose, slender, leaves mostly basal, leaf blades linear, inflorescence cylindrical, loosely ascending racemes, solitary spikelets oblanceolate to narrowly elliptic in two rows, upper glume 5- to 7-nerved, lower lemma 3- to 5-nerved, upper floret elliptic, savannahs, related to *Paspalum ligulare*, see *Recueil Trav. Bot. Néerl.* 39: 143. 1942.

P. alcalinum Mez (*Panicum buckleyanum* Vasey; *Paspalum buckleyanum* Vasey; *Paspalum hartwegianum* E. Fourn.)

Mexico. Meadows, alkaline soils, see *Mexic. Pl.* 2: 12. 1886, *Bull. Torrey Bot. Club* 13: 167. 1886, *Contr. U.S. Natl. Herb.* 2(3): 499. 1894 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 75. 1917, *Journal of Cytology and Genetics* 18: 26-33. 1983.

P. alnum Chase (*Paspalum hexastachyum* Parodi; *Paspalum ovale* Nees ex Steud. var. *apiculatum* Hack.)

Argentina, South America. Caespitose, prostrate, found on fine sandy and silty clay loam, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Synopsis Plantarum Glumacearum* 1: 22. 1853 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 341. 1909, *Journal of the Washington Academy of Sciences* 23(3): 137, f. 1. 1933, *Notas del Museo de la Plata, Botánica* 3: 25, f. 2. 1938, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Ciencia e Cultura (São Paulo)* 39: 776. 1987, *Darwiniana* 30(1-4): 87-94. 1990, *Australian Journal of Botany* 42: 449-456. 1994, *Darwiniana* 35(1-4): 29-36. 1998.

in English: comb paspalum, comb's paspalum, comb's crown grass

P. alterniflorum A. Rich. (*Paspalum dolichophyllum* Hack.)

Cuba. See *Historia Fisica Politica y Natural de la Isla de Cuba, Botanica* 11: 299. 1850 and *Informe Anual de la Estación Central Agronomica de Cuba* 1: 409. 1906.

P. altsonii Chase (*Paspalum lucidulum* Swallen) (for Ralph Abbey Altson, botanical collector in Guyana)

British Guiana, Venezuela. Perennial or annual, variable, tufted, erect, rooting at the lower nodes, leaf sheaths glabrous, ligule membranous, leaf blades linear to linear-lanceolate, inflorescence terminal and axillary, solitary racemes arching, spikelets elliptic paired in two rows, wet sites, moist places, riverbeds, crevices, sandy soils, along riverbanks, related to *Paspalum nutans* and *Paspalum pilosum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Journal of the Washington Academy of Sciences* 27(4): 144. 1937, *Bulletin of the Torrey Botanical Club* 75: 84. 1948.

P. amazonicum Trin. (*Paspalum boscianum* Fluegge; *Paspalum melanospermum* Desv. ex Poir.; *Paspalum scrobiculatum* L.)

Brazil. See *Mantissa Plantarum* 29. 1767, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 170. 1810, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 315. 1816, *Linnaea* 10(3): 294. 1836.

P. ammodes Trin. (*Paspalum canum* Sohns; *Paspalum diamantinum* Swallen; *Paspalum sordidum* Hack.) (from the Greek *ammodes* "sandy, gravelly")

Brazil, Paraguay, Guyana. Perennial, herbaceous, caespitose, erect, nodes bearded, basal sheaths pubescent, leaves mostly basal, leaf blades linear pilose acute, hairy solitary spikelets ovate-elliptic to broadly lanceolate, upper glume and lower lemma pilose membranous, savannahs, dry savannahs, on white sand, gravelly, cerrado, closely related to *Paspalum guttatum* Trin. and *Paspalum sanguinolentum* Trin., similar to *Paspalum proximum*, see *De Graminibus Paniceis* 120. 1826 and *Österreichische Botanische Zeitschrift* 51: 197. 1901, *Memoirs of the New York Botanical Garden* 9(3): 256, f. 6. 1957, *Phytologia* 14(6): 368. 1967.

P. amphicarpum Ekman

Cuba, West Indies. Rhizanthogenes on short subterranean branches, very rare or presumably extinct species, growing near streams, in or near water, edge of pool, see *Contributions from the United States National Herbarium* 28(1): 161, f. 104. 1929.

P. anderssonii Mez (dedicated to the Swedish botanist Nils Johann Andersson (Anderson), 1821-1880, traveler, naturalist, author of *Om Galapagos-öarnes Vegetation*. Lund 1854, *Salices boreali-Americanae: A Synopsis of North American Willows*. Cambridge, New York 1858, *En Verldsomsegling Skildrad I Bref*. [First edition, the first account of the first Swedish circumnavigation in the *Eugenie*, 1851-

1852] Stockholm 1854 and *Monographia Salicium hucusque cognitarum*. Pars I. Stockholm 1867; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 58. 1965; Stafleu and Cowan, *Taxonomic literature*. 1: 45-48. Utrecht 1976; F.A. Stafleu and E.A. Mennega, *Taxonomic literature. Supplement I: A-Ba*. 115-118. Königstein 1992; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 11. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 88. 1964)

Peru. See *Repertorium Specierum Novarum Regni Vegetabilis* 15: 71. 1917.

P. apiculatum Döll

Amazonas, Brazil, Venezuela. Forest, along roadsides, edge of forest, see *Flora Brasiliensis* 2(2): 48. 1877.

P. approximatum Döll (*Paspalum angustifolium* Nees ex Trin., nom. illeg., non *Paspalum angustifolium* J. Le Conte; *Paspalum approximatum* var. *approximatum*; *Paspalum approximatum* var. *coarctum* Döll; *Paspalum filiforme* Sw.; *Paspalum filiforme* (L.) Fluegge, nom. illeg., non *Paspalum filiforme* Sw.; *Paspalum neesii* var. *undulatum* Döll; *Paspalum parinervium* Mez)

Brazil, Paraguay. Used to make halter, see *Species Plantarum* 1: 57. 1753, *Nova Genera et Species Plantarum seu Prodrromus* 22. 1788, *Graminum Monographiae ... Pars I. Paspalum*. Reimaria 139. 1810, *De Graminibus Paniceis* 99. 1826, *Flora Brasiliensis* 2(2): 82, 84. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921.

P. arcuatum Mez (*Axonopus arcuatus* (Mez) Dedecca; *Axonopus arcuatus* (Mez) G.A. Black)

Brazil. See *Repertorium Specierum Novarum Regni Vegetabilis* 15: 60. 1917, *Bragantia* 15: 288, 289. 1956, *Advancing Frontiers of Plant Sciences* 5: 1-186. 1963.

P. archavaletae Hack. ex Arechav. (*Paspalum exaltatum* J. Presl) (for the Spanish botanist José Arechavaleta y Balpardo, 1838-1912, pharmacist, in 1852 to Uruguay; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 72. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 14. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Uruguay, South America. Riverbanks, see *Reliquiae Haenkeanae* 1(4-5): 219. 1830, *Anales del Museo Nacional de Montevideo* 1: 75. 1894 and *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970.

P. arenarium Schrad. (*Paspalum simpsonii* Nash) (for Joseph Herman Simpson, 1841-1918, botanical collector in Florida 1889-1911)

Guyana, French Guiana, Brazil. Perennial, loosely tufted or shortly rhizomatous, geniculately ascending, foliage mostly basal, acute leaf blades lanceolate to filiform to linear-lanceolate, inflorescence terminal and axillary, racemes solitary arching, hairy spikelets paired obovate or circular, rachis not winged, upper glume obovate membranous, lower glume absent, lower lemma membranous, upper lemma and palea coriaceous, forest margins and clearings, open disturbed places, sandy places, dry sandy coastal savannahs, see *Mantissa* 2: 172. 1824, *Bulletin of the Torrey Botanical Club* 24(1): 39-40. 1897.

in English: tilly grass

P. arsenei Chase (for Brother G. Arsène, 1867-1938)

Mexico. See *Contributions from the United States National Herbarium* 28(1): 63, f. 31. 1929.

P. arundinaceum Poir. (*Paspalum arundinellum* Mez; *Paspalum elatum* Rich. ex Döll; *Paspalum longebrachiatum* Steud.; *Paspalum secans* Hitchc. & Chase)

South America, French Guiana. Perennial, caespitose, densely clumped, often geniculate, leaf sheaths glabrous, ligules stiff, leaf blades coarsely scabrid, ascending racemes loosely flowered, spikelets obovate paired in two rows in fascicles of four, lower glume absent or present, upper glume apiculate 3-nerved, lower lemma obtuse 3-nerved, upper floret narrowly obovate acute striate, see *Encyclopédie Méthodique. Botanique ... Supplément* 4: 310. 1816, *Synopsis Plantarum Glumacearum* 1: 60. 1853, *Flora Brasiliensis* 2(2): 78. 1877 and *Contributions from the United States National Herbarium* 18(7): 319. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921, *Contr. U.S. Natl. Herb.* 28: 206. 1929.

in English: thick ditch crown grass

P. arundinellum Mez (*Paspalum arundinaceum* Poir.)

Brazil. See *Encyclopédie Méthodique. Botanique ... Supplément* 4: 310. 1816 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921, *Contr. U.S. Natl. Herb.* 28: 206. 1929, *Darwiniana* 30(1-4): 87-94. 1990.

P. aspidiotes Trin. (*Paspalum erectifolium* Swallen; *Paspalum setiglume* Chase)

Brazil. Perennial, herbaceous, savannah, forest, shrubs, see *Species Graminum* 3: t. 269. 1829-1830 and *Brittonia* 3(2): 150, f. 1. 1939, *Fieldiana, Botany* 28(1): 22. 1951.

P. atabapense Davidse & Zuloaga

Amazonas, Venezuela,. Savannah, white sandy areas, see *Novon* 2(3): 193, f. 1. 1992.

P. atratum Swallen (*Panicum plicatulum* (Michx.) Kuntze; *Paspalum plicatulum* Michx.; *Paspalum plicatulum* var. *robustum* Hack.) (Latin *atratus*, a, um "blackened")

Brazil, Bolivia. Perennial, rhizomatous, erect or ascending, robust, very dense fibrous root system, linear leaf blades glabrous or pubescent, spikelets elliptic-oblong, upper glume and lower lemma membranous 5-nerved, good seed production, seeds drop easily upon maturation, suitable for seasonally waterlogged or wet soils, savannahs, riverbanks, see *Flora Boreali-Americana* 1: 45. 1803, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Bulletin de l'Herbier Boissier*, sér. 2, 4(3): 269. 1904, *Phytologia* 14: 378. 1966, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

in English: atra paspalum

in Spanish: pantanero

P. aureolatum Swallen (*Paspalum lanciflorum* Trin.)

Venezuela. See *Fieldiana, Botany* 28(1): 22, f. 1. 1951.

P. auriculatum Presl (*Paspalum lamprocaryon* K. Schum.; *Paspalum scrobiculatum* var. *auriculatum* (J. Presl) Merr.)

Tropical Africa, Southeast Asia, the Philippines, Indonesia. Perennial, tufted, stout, large, geniculate and rooting at lower nodes, good green forage, growing in marshy areas, damp sites, see *Reliquiae Haenkeanae* 1: 217. 1830, *Die Pflanzenwelt Ost-Afrikas* C: 100. 1895 and *Philippine Journal of Science* 1: Suppl. 345. 1906, *Flora of Tropical East Africa* 451-898. 1982, *Blumea* 30: 304. 1985.

in Cameroon: fafabo fafroko

in Sierra Leone: alekore, bingodi, kapie, nacawange, yani

P. azuayense Sohns

Ecuador, Azuay. See *Memoirs of the New York Botanical Garden* 9(2): 140, f. 1. 1955.

P. bakeri Hack. (*Paspalum glabrum* Poir.; *Paspalum glabrum* Cassidy, nom. illeg., non *Paspalum glabrum* Poir.; *Paspalum glabrum* Alph. Wood, nom. illeg., non *Paspalum glabrum* Poir.) (for Charles Fuller Baker, 1872-1927, collected in Brazil, Colombia, Malaysia, Nicaragua, Philippines, United States of America; see *Bull. Torrey Bot. Club* 26: 577. 1899; D.H. Pfister, *Mycotaxon* 23: 1-139. 1985; G. Sayre, *Mem. New York Bot. Gard.* 19: 175-276. 1971)

Cuba, the Caribbean. See *Encyclopédie Méthodique, Botanique* 5: 30. 1804, *The American Botanist and Florist* 2: 390. 1871, *Bulletin Colorado Agricultural College, Colorado Experiment Station* 12: 91. 1890 and *Informe Anual de la Estación Central Agronomica de Cuba* 1: 410. 1906.

in English: Baker's crown grass

P. barbinode Hack.

Brazil. See *Österreichische Botanische Zeitschrift* 51: 235. 1901.

P. barclayi Chase (for G.W. Barclay, 1835-1879 collected in Bolivia, Colombia, Costa Rica, Panama, Paraguay, U.S.; the British naval surgeon Richard Brinsley Hinds, ca. 1812-1847, from 1836 to 1842 attached as surgeon and naturalist

to HMS *Sulphur*. See George Bentham, 1800-1884, *The Botany of the Voyage of H.M.S. Sulphur, under the Command of Captain Sir Edward Belcher ... during the Years 1836-1842*. [Edited by R.B. Hinds] [The illustrations are lithographs of drawings by Miss S.A. Drake.] London 1844[-1846]; George Bentham, *The Zoology of the Voyage of H.M.S. Sulphur, under the Command of Captain Sir Edward Belcher ... during the Years 1836-1842*. (Shells, by R.B. Hinds.) [edited by R.B. Hinds] London 1843[-1845]; Edward Belcher (1799-1877), *Narrative of a Voyage Round the World Performed in HMS Ship "Sulphur" during the years 1836-1842*. London 1843; *Mem. New York Bot. Gard.* 74(3): 42. 1998)

Peru. See *Contributions from the United States National Herbarium* 24(8): 452. 1927.

P. batianoffii B.K. Simon

Australia. See *Austrobaileya* 3(4): 598, f. 7. 1992.

P. berterianum Balb. ex Colla (*Paspalum glaucifolium* Bertero ex Colla) (after the Italian botanist Carlo Giuseppe Bertero, 1789-1831, physician, traveler, botanical collector, plant collector in Chile)

South America. See *Herbarium Pedemontanum* 6: 129. 1836.

P. bertonii Hack. (*Paspalum niederleinii* Mez; *Paspalum potamophilum* Renvoize) (for the Italian-Swiss botanist Moisés de Santiago Bertoni [also Mosé Giacomo Bertoni], 1857-1929, scientist, 1884 emigrated to Argentina and 1887 to Paraguay, botanical collector in Argentina and Paraguay, he founded the Colonia Guillermo Tell on a 10,000 hectares big area of virgin forest inhabited by the Mbyá-Guaraní Indians, see *Plantae Bertonianae*. Asunción, Paraguay 1916; J.H. Barnhart, *Biographical notes upon botanists*. 1: 176. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 704. Stuttgart 1993; L. Ramella, Y. Ramella-Miquel. Serie especial n°2 *Bibliografía de Moisés Santiago Bertoni*. Conservatoire et Jardin botaniques de Genève, Missouri Botanical Garden. 1985)

Brazil, South America, Argentina, Paraguay. See *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 165. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 65. 1917, *Kew Bulletin* 42: 922. 1987, *Cytologia* 56: 223-228. 1991, *Darwiniana* 35(1-4): 29-36. 1998.

P. biaristatum Filgueiras & Davidse

Brazil. Awned, see *Novon* 4(1): 18-22. 1994.

P. bifarium Edgew. (*Digitaria longiflora* (Retz.) Pers.; *Paspalum longiflorum* Retz.)

Asia, India. See *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805, *Journal of the Asiatic Society of Bengal* 21: 157. 1852 and *Blumea* 21(1): 1-80. 1973.

P. bifidifolium Soderstr.

Central America, British Guiana. Perennial, tufted, rhizomatous, leaf blades linear-oblongate, two divergent racemes, spikelets elliptic-obovate solitary in two rows, upper glume and lower lemma 5-nerved, upper floret finely striate granular, on wet rocky places, related to *Paspalum pumilum* and *Paspalum minus*, see *Memoirs of the New York Botanical Garden* 12(3): 3. 1965.

P. bifidum (Bertol.) Nash (*Panicum alabamense* Trin. ex Steud.; *Panicum bifidum* Bertol.; *Panicum floridanum* Trin.; *Paspalum bifidum* var. *bifidum*; *Paspalum bifidum* var. *projectum* Fern.; *Paspalum interruptum* Alph. Wood; *Paspalum racemosum* Nutt.)

Northern America. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 248. 1834, *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna* 2: 598, t. 41, f. 2, e-h. 1850, *Synopsis Plantarum Glumacearum* 1: 64. 1853, *Flora of the Southern United States* 571. 1860, *A Class-book of Botany* 783. 1861, *Bulletin of the Torrey Botanical Club* 24(4): 192. 1897 and *Rhodora* 40(478): 388-389, t. 509. 1938.

in English: pitchfork crown grass, pitchfork paspalum

P. blepharophorum Roem. & Schult. (*Panicum humboldtianum* (Fluegge) Kuntze; *Paspalum humboldtianum* Fluegge)

Brazil. See *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 67. 1810, *Systema Vegetabilium, editio decima sexta* 2: 292. 1817, *Flora Brasiliensis* 2(2): 67. 1877, *Revisio Generum Plantarum* 3: 361. 1898 and *Annals of the Missouri Botanical Garden* 89(3): 386. 2002.

P. blodgettii Chapman (*Paspalum dissectum* Sw. ex Roem. & Schult., nom. illeg., non *Paspalum dissectum* (L.) L.; *Paspalum gracillimum* Nash; *Paspalum simpsonii* Nash; *Paspalum yucatanum* Chase) (for John Loomis Blodgett, 1809-1853, physician, collected 1838-1853 Florida, Key West; see R. Bruce Ledin, "John Loomis Blodgett (1809-1853)." *Tequesta*, Historical Museum of Southern Florida, Miami no. 13. 1953; C.S. Sargent, "John Loomis Blodgett." in *Silva of North America*, vol. 1, pp. 33-34. 1891)

Northern and southern America. Perennial or annual, erect, clumped, culms slightly compressed, weed, savannah, open grassland, along roadsides, see *Systema Vegetabilium* 2: 308. 1817, *Flora of the Southern United States* 571. 1860, *Bulletin of the Torrey Botanical Club* 24(1): 39-40. 1897 and *Flora of the Southeastern United States ...* 73. 1903, *Contributions from the United States National Herbarium* 28(1): 121, f. 71. 1929.

in English: Blodgett's crown grass

in Mexico: ek'chim

P. boivinii Steud. (*Paspalum nutans* Lam.)

Mauritius. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175. 1791, *Synopsis Plantarum Glumacearum* 1: 416. 1854.

P. bonplandianum Fluegge (*Paspalum pilgerianum* Chase; *Paspalum tuberosum* Mez) (for the French botanist Aimé Jacques Alexandre Bonpland, 1773-1858, traveler, explorer. See Friedrich Wilhelm Heinrich Alexander von Humboldt (1769-1859) and Aimé Jacques Alexandre Bonpland, *Plantae aequinoctiales*. 1808; Friedrich Wilhelm Heinrich Alexander von Humboldt, Aimé Jacques Alexandre Bonpland and Carl Sigismund Kunth (1788-1850), *Nova genera et species plantarum*. Lutetiae Parisorum [Paris] 1815-1825; Aimé J.A. Bonpland, *Description des plantes rares cultivées à Malmaison et à Navarre*. Paris [1812-] 1813-1817; J.H. Barnhart, *Biographical notes upon botanists*. 1: 218 and 2: 218. 1965; Kurt-R. Biermann, in *D.S.B.* 6: 549-555. 1981; Stafleu and Cowan, *Taxonomic literature*. 1: 274-276. 1976 and 2: 363-371. 1979; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 45, 186. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 148. 1964; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. 452-453. Paris 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 233. Boston, Mass. 1973; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Peru, Ecuador. Rhizomatous, stoloniferous, glaucous, medicinal, páramos, grasslands, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 71. 1810, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 17-18. 1899 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 29. 1917, *Contributions from the United States National Herbarium* 24(8): 445. 1927.

in Ecuador: grama

P. boscianum Fluegge (*Paspalum amazonicum* Trin.; *Paspalum brunneum* Bosc ex Fluegge; *Paspalum confertum* J. Le Conte; *Paspalum melanospermum* Desv. ex Poir.; *Paspalum purpurascens* Elliott; *Paspalum scrobiculatum* L.; *Paspalum virgatum* Walter, nom. illeg., non *Paspalum virgatum* L.; *Paspalum virgatum* var. *purpurascens* (Elliott) Alph. Wood) (after the French naturalist Louis Auguste (Augustin) Guillaume Bosc (olim Bosc d'Antic or Dantic), 1759-1828 (d. Paris), botanist, horticulturist, French Consul in Carolina 1798-1800, author of *Mémoire sur les différentes espèces de chênes qui croissent en France*. Paris (Baudouin) 1808, he also studied in Paris with Antoine Laurent de Jussieu (1748-1836); see J.H. Barnhart,

Biographical notes upon botanists. 1: 225. 1965; Jean-François Leroy, in *D.S.B.* 2: 321-323. 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 46. 1972; Miguel Colmeiro y Penido, *La Botánica y los Botánicos de la Península Hispano-Lusitana*. Madrid 1858; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

Southern U.S., Brazil, Argentina, Mexico. Annual or perennial, thick, terrestrial, coarse, caespitose, clumped, decumbent, rooting at the lower nodes, tillering, ligule membranous, flat blades wavy along the edges, whitish inflorescences, ascending or spreading racemes, densely packed spikelets broadly ovate solitary in two rows, upper glume 3-nerved, lower lemma 3-nerved, upper floret granular, light green fruits, a weed in rice fields, occurs in wetland, moist areas, along rivers and streams, inundated savannah, flooded depressions, see *Mantissa Plantarum* 29. 1767, *Flora Caroliniana, secundum ...* 75. 1788, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 170-171. 1810, *A Sketch of the Botany of South-Carolina and Georgia* 1: 108, t. 6, f. 3. 1816, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 315. 1816, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 285. 1820, *Linnaea* 10(3): 294. 1836, *A Class-book of Botany* 781. 1861.

in English: bull paspalum, bull crown grass

P. botteri (E. Fourn.) Chase (*Dimorphostachys botteri* E. Fourn.; *Dimorphostachys paspaloides* E. Fourn.; *Paspalum corypheum* Trin.; *Paspalum macrophyllum* var. *piliferum* E. Fourn.; *Paspalum paniculatum* L.; *Paspalum varians* A. Rich. ex E. Fourn.) (for Mateo Botteri, 1808-1877, with Adrian Luis Jean Sumichrast. See Ida K. Langman, "Apuntes Biográficos del Sr. Mateo Botteri." *Boletín de la Sociedad Botánica de México* no.14, 1952)

Northern America, Mexico, Honduras, Costa Rica. Forming clumps, fodder, along roadsides, dry soils, see *Systema Naturae, Editio Decima* 2: 855. 1759, *Nova Genera et Species Plantarum* 1: 92. 1815 [1816], *De Graminibus Paniceis* 114. 1826, *Mexicanas Plantas* 2: 11, 14. 1886 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Journal of the Washington Academy of Sciences* 13(20): 436. 1923, *Contributions from the United States National Herbarium* 28(1): 110. 1929, *Brittonia* 23(3): 293-324. 1971.

in Mexico: zacate

P. brachytrichum Hack.

Brazil. See *Österreichische Botanische Zeitschrift* 51: 234. 1901.

P. brasiliense (Spreng.) Hack. (*Axonopus brasiliensis* (Spreng.) Kuhlm.; *Eriochloa brasiliensis* Spreng.; *Paspalum brasiliense* Spreng. ex B.D. Jacks.)

Brazil. See *Systema Vegetabilium, editio decima sexta* 1: 249. 1825, *Index Kewensis* 3: 430. 1894 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 7. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 68. 1908, *Comissão de Linhas Telegraphicas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 47-48. 1922, *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales* 26(98): 13-23. 2002.

P. breve Chase

Cuba. See *Symbolae Antillarum* 7: 166. 1912.

P. brunneum Mez ex Ekman (*Paspalum brunneum* Bosc ex Fluegge; *Paspalum coryphaeum* Trin.; *Paspalum mezii-brunneum* (Mez) Herter)

South America, Brazil, Argentina. See *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 171. 1810, *De Graminibus Paniceis* 114. 1826 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 74. 1917, *Estudios Botánicos en la Región Uruguaya* 24: 259. 1956, *Index to Grass Species* 3: 10. 1962, *Mendeliana* 8: 53-63. 1987, *Darwiniana* 30(1-4): 87-94. 1990, *Australian Journal of Botany* 42: 449-456. 1994.

in Spanish: pasto

P. buchtienii Hack. (for the German botanist Otto Buchtien, 1859-1946, botanical explorer, a collector of Bolivian plants; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 275. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 57. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 140. Oxford 1964)

Bolivia, Andean region. Perennial, erect or ascending, culms profusely branching, leaf blades lanceolate shortly pseudopetiolate, rhizomes thin and arcuate, inflorescence with 2-6 branches, drooping racemes, spikelets lanceolate acuminate paired or solitary, upper glume membranous with ciliate margins, lower lemma 3-nerved, closely related to *Paspalum humboldtianum* Fluegge, see *Repertorium Specierum Novarum Regni Vegetabilis* 6: 153. 1908.

P. burchellii Munro ex Oliv. (*Paspalum burchellii* Munro ex Döll; *Paspalum modestum* Döll)

Brazil. See *Hooker's Icones Plantarum* 11: 80, t. 1100. 1871, *Flora Brasiliensis* 2(2): 42-43. 1877.

P. burmanii Filg., Morrone & Zuloaga (for Alasdair G. Burman, an expert on Brazilian grasses)

Central Brazil. Perennial, robust, erect, not branched, internodes hollow, leaves mostly basal, rhizomatous, leaf sheaths papillose-pilose, ligule membranous, leaf blades lanceolate, with strong woody rhizomes, inflorescences terminal, racemes ascending and diverging with winged rachis, spikelets paired densely imbricate and long-elliptic, lower glume absent, 3 stamens, stigma plumose, growing in large clumps, along the roadsides, tall woodland, related to

Paspalum humboldtianum, *Paspalum buchtienii* and *Paspalum phyllorachys*, see *Novon* 11(1): 36-39, f. 1. 2001.

P. cachimboense Davidse, Morrone & Zuloaga

Brazil, Matto Grosso, Serra do Cachimbo. Annual, geniculate, branched, ligule membranous, spikelets solitary and imbricate, lower glume absent, lower floret absent, palea present, 2 lodicules, 3 stamens, 2 stigmas feathery, related to *Paspalum lanciflorum*, open habitats, poor soil, rocky places, see E. Lleras & J.H. Kirkbride, Jr., "Alguns aspectos da vegetação da serra do Cachimbo." *Acta Amazon.* 8: 51-65. 1978, *Novon* 11(4): 389-391, f. 1. 2001.

P. caespitosum Fluegge (*Paspalum caespitosum* Hochst. ex Döll, nom. illeg., non *Paspalum caespitosum* Fluegge; *Paspalum caespitosum* Hochst. ex Steud., nom. illeg., non *Paspalum caespitosum* Fluegge; *Paspalum caespitosum* var. *longifolium* Vasey; *Paspalum dissectum* L.; *Paspalum gracile* Poir., nom. illeg., non *Paspalum gracile* Rudge; *Paspalum heterophyllum* Desv. ex Poir.; *Paspalum lineare* E. Fourn., nom. illeg., non *Paspalum lineare* Trin.; *Paspalum melanospermum* Desv.; *Paspalum molle* Poir.; *Paspalum plicatulum* Michx.; *Paspalum plicatulum* var. *microspermum* Döll; *Paspalum poiretii* Roemer & J.A. Schultes; *Paspalum sauetii* Chase)

U.S., Florida, Belize. Forest, semideciduous forest, along roadsides, clearings, see *Encyclopédie Méthodique, Botanique* 5: 34. 1804, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 161. 1810, *Encyclopédie Méthodique, Botanique* Suppl. 4: 313, 315. 1816, *Systema Vegetabilium* 2: 878. 1817, *Synopsis Plantarum Glumacearum* 1: 25. 1854, *Flora Brasiliensis* 2(2): 76, 79. 1877, *Bulletin of the Torrey Botanical Club* 13: 164. 1886, *Mexicanas Plantas* 2: 12. 1886 and *Contributions from the United States National Herbarium* 28(1): 147, f. 90. 1929.

in English: blue crown grass, blue paspalum

P. campinarum Filg. & Davidse

Amazonas, Brazil. Erect, see *Novon* 5(2): 146, f. 1. 1995.

P. canaliculatum Nees (*Axonopus canaliculatus* (Nees) Kuhl.; *Axonopus fastigiatus* (Nees ex Trin.) Kuhl.)

Brazil. See *De Graminibus Paniceis* 100. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 33. 1829 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 1922, *Advancing Frontiers of Plant Sciences* 5: 1-186. 1963.

P. candidum (Humb. & Bonpl. ex Fluegge) Kunth (*Paspalum candidum* Kunth: *Paspalum confertum* J. Le Conte; *Paspalum confertum* Willd. ex Steud.; *Paspalum depauperatum* J. Presl; *Paspalum lineispatha* Mez; *Paspalum mononeuron* Steud.; *Paspalum scabrum* Scribn.; *Paspalum sincoranum* Mez; *Paspalum uniseriatum* Steud. ex Lechler; *Reimaria candida* Humb. & Bonpl. ex Fluegge)

Brazil, Chile, Argentina, Mexico, Bolivia, Colombia, Peru. Annual, branched, decumbent, leaf blades lanceolate acute,

several racemes dense or lax, green inflorescences, spikelets oblong glabrous solitary with flat rachis winged, upper glume lacking, lower lemma membranous 3-nerved, grows in moist places at medium to high altitudes, occurs on clumps or patches along roadsides and on road banks, shady places, forest, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 214. 1810, *Mémoires du Muséum d'Histoire Naturelle* 2: 68. 1815, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 285. 1820, *Reliquiae Haenkeanae* 1(4-5): 215. 1830, *Nomenclator Botanicus. Editio secunda* 2: 270. 1841, *Synopsis Plantarum Glumacearum* 1: 24. 1855 [1853], *Berberides Americae Australis* 55. 1857, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 36, t. 3. 1897 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 27. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 9. 1921, *Contr. U.S. Natl. Herb.* 28: 36. 1929, *Brittonia* 23(3): 293-324. 1971, *Darwiniana* 35(1-4): 29-36. 1998.

in Spanish: terrecillo, matash, zacate de agua, nudillo

P. capillifolium Nash

Cuba. See *North American Flora* 17(2): 181. 1912.

P. cardesianum Rodr.-Rodr. & Camacho

Venezuela. See *Ernstia* 8: 9. 1998.

P. carinato-vaginatatum Mez (*Axonopus aureus* P. Beauv.; *Axonopus carinato-vaginatatus* (Mez) H. Scholz; *Axonopus exasperatus* (Nees ex Steud.) G.A. Black)

Brazil. Savannah, see *Essai d'une Nouvelle Agrostographie* 12. 1812, *Synopsis Plantarum Glumacearum* 1: 62. 1853 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 31. 1917, *Advancing Frontiers of Plant Sciences* 5: 168, f. 8d. 1963, *Willdenowia* 8(1): 95. 1977, *Fl. Guianas, Ser. A: Phan.* 8: 88. 1990.

P. carinatum Humb. & Bonpl. ex Fluegge (*Panicum carinatum* J. Presl; *Paspalum carinatum* (J. Presl) K. Schum.; *Paspalum carinatum* var. *kappleri* (Hochst. ex Steud.) Döll; *Paspalum kappleri* Hochst. ex Steud.)

Venezuela, Colombia, Suriname and Brazil, Guyana. Perennial, caespitose, densely tufted, erect, pilose, leaves mainly basal, leaf sheaths striate, ligules membranous, filiform or linear leaf blades flexuous acuminate, shortly rhizomatous, solitary racemes, spikelets densely hairy ovate-oblong on a winged rachis, upper glume ovate-oblong membranous 1-nerved obtuse, lower lemma oblong membranous pilose to ciliolate, lower palea absent, lemma and upper palea lanceolate ovate coriaceous, among rocks, savannahs, grassland, fields, similar to *Paspalum stellatum*, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 65. 1810, *Reliquiae Haenkeanae* 1(4-5): 309. 1830, *Synopsis Plantarum Glumacearum* 1: 21. 1855 [1853], *Flora Brasiliensis* 2(2): 96. 1877, *Die Flora von Kaiser Wilhelms Land* 21.

1889 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Phytologia* 14(6): 358. 1967.

P. cartilagineum Presl (*Paspalum orbiculare* var. *cartilagineum* (J. Presl) Summerh. & C.E. Hubb.; *Paspalum scrobiculatum* L.; *Paspalum scrobiculatum* var. *bispicatum* Hack.)

Warm regions, South America, the Philippines. Invasive weed species, see *Mantissa Plantarum* 29. 1767, *Reliquiae Haenkeanae* 1(4-5): 216. 1830 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 20: 146. 1914, *Bulletin of Miscellaneous Information Kew* 1930: 257. 1930, *Kew Bulletin* 30(1): 101-105. 1975, *Micronesica*; *Journal of the College of Guam*. 18(2): 81. Agana, Guam 1982, *Blumea* 30: 279-318. 1985.

P. centrale Chase

Central America. Coastal, meadow, open areas, hard dry soil, moist places, riverbanks, floodplains, see *Journal of the Washington Academy of Sciences* 17: 145, f. 2. 1927, *Brittonia* 23(3): 293-324. 1971.

P. ceresia (Kuntze) Chase (*Ceresia elegans* Pers.; *Ceresia membranacea* P. Beauv.; *Panicum ceresia* Kuntze; *Paspalum elegans* (Pers.) Roem. & Schult., nom. illeg., non *Paspalum elegans* Fluegge; *Paspalum elegans* Roem. & Schult.; *Paspalum membranaceum* Lam., nom. illeg., non *Paspalum membranaceum* Walter; *Paspalum membranaceum* var. *aequiglume* Döll; *Paspalum membranaceum* var. *inaequiglume* Döll; *Paspalum trachycoleon* Steud.)

Tropical America, Ecuador, Peru, Bolivia. Perennial, flimsy and ascending, tufted, open, base pubescent, leaf blades linear-lanceolate acuminate and glaucous, rhizomatous, racemes ascending, densely imbricate spikelets solitary and hairy, upper glume membranous 2-nerved with pubescent margins, lower lemma and upper glume equal, stony places, see *Flora Caroliniana, secundum ...* 75. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 177. 1791, *Synopsis Plantarum* 1: 85. 1805, *Essai d'une Nouvelle Agrostographie* 9: 171, t. 5, f. 4. 1812, *Systema Vegetabilium, editio decima sexta* 2: 290. 1817, *Synopsis Plantarum Glumacearum* 1: 28. 1855 [1853], *Flora Brasiliensis* 2(2): 94. 1877, *Revisio Generum Plantarum* 3(2): 360. 1898 and *Contributions from the United States National Herbarium* 24: 153. 1925, *Gramíneas de Bolivia* 449-453. 1998, *Annals of the Missouri Botanical Garden* 89(3): 363. 2002.

P. chacoense Parodi

Argentina. See *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 11: 132. 1932, *Botanical Gazette* 146(1): 124-129. 1985.

P. chaffanjonii Maury (for the French explorer Jean Chaffanjon, 1854-1913, traveler, archeologist, botanical collector in Venezuela and Indonesia, in 1886 and 1887 along the Orinoco with the painter Auguste Morisot. See *Smithsonian Contr. Bot.* 56: 29. 1984; Svetlana Gorshenina, "Premiers

pas des archéologues russes et français dans le Turkestan russe (1870-1890)." *Cahiers du Monde russe*, 40/3: 365-384. 1999; Álvaro A. García Castro, *Preliminary Study of the Auguste Morisot's Diary. 1886-1887: The Passionate Explorations of Two Frenchmen to the Orinoco River's Origins*. Cisneros Foundation-Editorial Planeta, 2002; *Le Tour du Monde*. Nouveau Journal des Voyages, publié sous la direction de Edouard Charton, et illustré par nos plus célèbres artistes. Tome 2. 1888. Paris, Hachette 1888 [*Voyage a Travers Les Llanos du Caura, par M. Jean Chaffanjon, chargé d'une mission Scientifique par le Ministre de l'instruction publique. 1885. Voyage aux Sources de l'orénoque, par M. Jean Chaffanjon, chargé d'une mission scientifique par le Ministre de l'instruction publique. 1886-1887*]; Svetlana Gorshenina, "Turkestanskaja epopeja Jana Chaffanjona." [Une épopée turquestanaise de Jean Chaffanjon], *Pravda Vostoka*, Tashkent, 21.10.1997; Arnaud Chaffanjon, *La grande aventure d'un français qui inspira Jules Verne: Jean Chaffanjon*. in *L'Orénoque aux deux visages*, éditions Scriptorplan, pages 7-49. Paris 1978; Jean Chaffanjon, *El Orinoco y el Caura: relacion de viajes realizados en 1886 y 1887 con 56 grabados y 2 mapas*. Organizacion Orinoco 1989)

Venezuela. See *Journal of Botany, British and Foreign* 3: 159. 1889.

P. chaseanum Parodi

Argentina. Perennial, caespitose, along roadsides, disturbed areas, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 11: 129. 1932.

P. ciliare (Retz.) DC. (*Digitaria ciliaris* (Retz.) Koeler; *Panicum ciliare* Retz.)

Europe. See *Observationes Botanicae* 4: 16. 1786, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Flore Française, Suppl.*, 5: 250. 1815 and *Blumea* 21(1): 1-80. 1973.

P. ciliatifolium Michx. (*Paspalum blepharophyllum* Nash; *Paspalum chapmanii* Nash; *Paspalum ciliatifolium* Trin., nom. illeg., non *Paspalum ciliatifolium* Michx.; *Paspalum ciliatifolium* var. *brevifolium* Vasey; *Paspalum debile* Muhl., nom. illeg., non *Paspalum debile* Michx.; *Paspalum eggertii* Nash; *Paspalum epile* Nash; *Paspalum latifolium* J. Le Conte; *Paspalum setaceum* Michx.; *Paspalum setaceum* var. *ciliatifolium* (Michx.) Vasey; *Paspalum spathaceum* Desv. ex Poir.)

America. Perennial, slender, open tufts, leaf blade strongly ciliate, sheath glabrous or pubescent, slender arching racemes, spikelets paired, lower glume a small flap or a minute rim, upper glume and sterile lemma similar, fertile floret smooth, pasture species, on sandy soils, riverbanks, occasionally in sand prairie and sand savannah, see *Flora Boreali-Americana* 1: 43-44. 1803, *Catalogus Plantarum*

Americae Septentrionalis 8. 1813, *Encyclopédie Méthodique, Botanique* Suppl. 4: 314. 1816, *A Sketch of the Botany of South-Carolina and Georgia* 1: 105. 1816, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 284. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* VI 3(2): 340. 1835, *Proceedings of the Academy of Natural Sciences of Philadelphia* 38: 285. 1886, *Contributions from the United States National Herbarium* 3(1): 17. 1892, *Flora of the Southern United States* 578. 1897, *Bulletin of the New York Botanical Garden* 1(4): 290-291. 1899 and *Bulletin of the New York Botanical Garden* 1(5): 434. 1900, *Manual of the Flora of the Northern States and Canada* 74-75. 1901, *Flora of the Southeastern United States ...* 71-72. 1903, *Contr. U.S. Natl. Herb.* 12(3): 145. 1908, *Rhodora* 36(421): 20. 1934, *Brittonia* 23(3): 293-324. 1971.

in English: one-spiked paspalum

P. cinerascens (Döll) A.G. Burm. & C.N. Bastos (*Panicum cinerascens* Döll; *Thrasya cinerascens* (Döll) Chase ex Judz.)

Brazil. Perennial bunchgrass, caespitose, see *Flora Brasiliensis* 2(2): 189. 1877 and *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 4(2): 241. 1988, *Fl. Guianas, Ser. A, Phanerogams*, 187. *Poaceae*: 631. 1990.

P. circulare Nash (*Paspalum laeve* Michx.; *Paspalum laeve* subsp. *circulare* (Nash) W. Stone; *Paspalum laeve* var. *circulare* (Nash) Fernald; *Paspalum praelongum* Nash)

North America, U.S. See *Flora Boreali-Americana* 1: 44. 1803 and *Manual of the Flora of the Northern States and Canada* 73. 1901, *Flora of the Southeastern United States ...* 74. 1903, *Annual Report of the New Jersey State Museum* 1910: 187. 1911, *Rhodora* 36: 22. 1934.

P. clandestinum Swallen

South America, Brazil. See *Phytologia* 14(6): 386. 1967.

P. claviferum C. Wright (*Paspalum falcula* Döll; *Paspalum horticola* Salzm. ex Döll; *Paspalum pittieri* Hack. ex Beal; *Paspalum pittieri* Hack., nom. illeg., non *Paspalum pittieri* Hack. ex Beal)

Mesoamerica, Cuba to Brazil. Annual, tufted, erect or ascending, slender, delicate, foliage mainly basal, leaf sheaths pilose and glabrous, ligules membranous, leaf blades linear pilose acuminate, inflorescence terminal and axillary, two divergent conjugate slender straight racemes, capitate spikelets obovate paired, upper glume membranous 3-nerved, lower lemma 1- to 3-nerved its palea absent, upper lemma and palea crustaceous papillate, weed, forage, along roadsides, sandy soil, rocky places, disturbed ground, grassland, wet places, savannah, similar to *Paspalum multicaule*, see *Anales de la Academia de Ciencias Medicas ...* 8: 203. 1871, *Flora Brasiliensis* 2(2): 60. 1877, *Grasses of*

North America for Farmers and Students 2: 88. 1896 and *Österreichische Botanische Zeitschrift* 51: 233. 1901, *Brittonia* 23(3): 293-324. 1971.

in English: hillside crown grass

P. cochinchinense (Lour.) Roem. & Schult. (*Heteropholis cochinchinensis* (Lour.) Clayton; *Phleum cochinchinense* Lour.)

Asia. See *Flora Cochinchinensis* 48. 1790, *Systema Vegetabilium* 2: 317. 1817 and *Kew Bulletin* 35(4): 816. 1981, *The Gardens' Bulletin Singapore* 36: 137-162. 1983.

P. collinum Chase (*Paspalum commune* Lillo)

Bolivia. Perennial, tufted, erect or ascending, leaf blades linear attenuate, spikelets elliptic-ovate pubescent, upper glume and lower lemma membranous 5-nerved, moist sites, grassy places, see *Flora de la Provincia de Tucumán, Gramíneas* 23. 1916, *Contributions from the United States National Herbarium* 24(8): 451. 1927, *Physis* (Buenos Aires) 9: 24. 1928.

P. coloratum Rich. ex Döll (*Paspalum scrobiculatum* L.)

South America, Brazil. See *Mantissa Plantarum* 29. 1767, *Flora Brasiliensis* 2(2): 78. 1877.

P. comans Trin. ex Döll (*Axonopus comans* (Trin. ex Döll) Kuhl.; *Axonopus comans* (Trin. ex Döll) Henrard, nom. illeg., non *Axonopus comans* (Trin. ex Döll) Kuhl.)

Brazil. See *Flora Brasiliensis* 2(2): 109. 1877 and *Mededeelingen van's Rijks-Herbarium* 47: 2. 1922, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 1922.

P. commersonii Lam. (*Paspalum borbonicum* Steud.; *Paspalum dissectum* Nees, nom. illeg., non *Paspalum dissectum* (L.) L.; *Paspalum jardinii* Steud.; *Paspalum mauritanicum* Nees ex Steud.; *Paspalum metzii* Steud.; *Paspalum scrobiculatum* var. *commersonii* (Lam.) Stapf; *Paspalum scrobiculatum* var. *jardinii* (Steud.) Franch.) (named after the French (b. Ain) physician Philibert Commerson, 1727-1773 (St.-Julien-de-Flacq, Île de France, now Mauritius), naturalist, botanist and traveler, explorer and circumnavigator, took a doctorate in medicine at Montpellier (1754), plant collector, established an herbarium, met Albrecht von Haller, visited Voltaire, from 1766-1769 with Louis-Antoine de Bougainville (1729-1811) on *La Boudeuse* and *L'Etoile*, from 1768 remained in Mauritius, 1770 visited Madagascar, 1771 Réunion. See Yves Laissus, "Catalogue des manuscrits de Philibert Commerson (1727-1773) conservés à la Bibliothèque centrale du Muséum nationale d'Histoire Naturelle (Paris)." in *Rev. Hist. Sci.* 31: 131-162. Paris 1978; Samuel Pasfield Oliver, *The Life of Philibert Commerson*. London 1909; Alfred Orian, *La vie et l'oeuvre de Philibert Commerson des Humbers*, le père de la botanique mauricienne et qui mourut à l'île Maurice le 13 mars 1773. Port Louis 1973; Paul Antoine Cap (1788-1871), *Philibert Commerson, Naturaliste, Voyageur*. Paris 1861;

Ferdinand Bernard de Montessus de Ballore (1851-), *Martyrologe et biographie de Commerson*. Chalon-sur-Saône 1889; Auguste Toussaint and H. Adolphe, *Bibliography of Mauritius, 1502-1954*. Port Louis 1956; Auguste Toussaint, editor, *Dictionnaire de biographie Mauricienne*. [Société de l'Histoire de l'Ile Maurice. Publication no. 2] [Port Louis] 1941-; L.A. de Bougainville, *Voyage autour du monde par la frégate du Roi "La Boudeuse" et la flute L'Etoile" en 1766-1769*. Paris 1771; H. Jacquier, "Jeanne Baret, la première femme autour du monde." *Bulletin de la Société des Études Océaniques* 12, 141: 150-156. 1962; E. Taillemite, *Bougainville et ses Compagnons autour du monde*. Paris 1977; J.R. Forster and J.G.A. Forster, *Characteres generum plantarum*. 43, t. 22. 1775; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; J. Lanjouw and F.A. Stafleu, *Index Herbariorum. Collectors A-D*. Utrecht 1954; J.H. Barnhart, *Biographical notes upon botanists*. 1: 371. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 81. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. 55-56, 565. Paris 1845; Yves Laissus, in *Dictionary of Scientific Biography*. Editor in Chief Charles Coulston Gillispie. 3: 365-366. New York 1981)

Africa, Mauritius. Perennial or annual, semiprostrate, tufted, ligules short membranous, leaves light green usually glabrous and slightly constricted at the base, inflorescence usually of flattened racemes arranged alternately, 1-flowered, spikelets awnless, 1 glume, yellow anthers, white stigmas, a good grazing grass, used as an antiseptic on wounds, see *Mantissa Plantarum* 29. 1767, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175, f. 43, f. 1. 1791, *Flora Africae Australioris Illustrationes Monographicae* I. Gramineae. 15. 1841, *Synopsis Plantarum Glumacearum* 1: 18, 21-22, 25, 27. 1855 [1853], *Plantae Indiae Batavae Orientalis* 2: 113. 1857, *Bul. Soc. Hist. Nat.* 8: 338. 1895 and *Flora of Tropical Africa* 9: 573. 1920, *Reinwardtia* 2(2): 319-320. 1953, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Cytologia* 52: 487-491. 1987.

in Rodrigues Island: herbe à épée

in East Africa: arombo, mbonda (Swahili)

P. commune Lillo (*Paspalum collinum* Chase; *Paspalum virgatum* f. *oligostachyum* Hack.)

South America Bolivia, Argentina. Moist sites, grassy places, see *Anales del Museo Nacional de Buenos Aires* 13: 247. 1906, *Flora de la Provincia de Tucumán, Gramíneas* 23. 1916, *Contributions from the United States National Herbarium* 24(8): 451. 1927, *Physis* (Buenos Aires) 9: 24. 1928, *Darwiniana* 35(1-4): 29-36. 1998.

P. commutatum Nees (*Paspalum scrobiculatum* L.)

Brazil. Erect, branched, spikelets broadly ovate, inundated sites, floodplains, grassy marsh, see *Mantissa Plantarum*

29. 1767, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 59. 1829.

P. compactum Roth ex Roem. & Schult. (*Digitaria compacta* (Roth ex Roem. & Schult.) A. Camus; *Digitaria compacta* (Roth ex Roem. & Schult.) Veldkamp; *Paspalum canarae* (Steud.) Veldkamp; *Paspalum compactum* var. *fimbriatum* Bor; *Paspalum costatum* Hochst.; *Paspalum imperfectum* Roxb. ex Kunth; *Paspalum miliaria* Müll. Hal.)

Asia. See *Systema Vegetabilium* 2: 316. 1817, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 58. 1833, *Synopsis Plantarum Glumacearum* 1: 58. 1853, *Botanische Zeitung. Berlin* 19(45): 332. 1861 and *Blumea* 21(1): 71-72. 1973, *Taxon* 34: 159-164. 1985.

P. compressicaule Raddi (*Panicum paniculatum* (L.) Kuntze; *Panicum paniculatum* (L.) Nash, nom. illeg., non *Panicum paniculatum* (L.) Kuntze; *Paspalum paniculatum* L.)

Brazil. See *Systema Naturae, Editio Decima* 855. 1759, *Agrostografia Brasiliensis* 29. 1823, *Revisio Generum Plantarum* 3: 363. 1898 and *Bulletin of the Torrey Botanical Club* 30(7): 381. 1903, *Contr. U.S. Natl. Herb.* 12(3): 116. 1908.

P. compressifolium Swallen (*Panicum plicatulum* (Michx.) Kuntze; *Paspalum lenticulare* Kunth; *Paspalum plicatulum* Michx.)

Brazil, Paraguay. Erect, ascending, stiff, wet places, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 45. 1803, *Nova Genera et Species Plantarum* 1: 92. 1815 [1816], *Revisio Generum Plantarum* 3(3): 363. 1898 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Phytologia* 14(6): 381. 1967, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Ciencia e Cultura (São Paulo)* 39: 776. 1987, *Darwiniana* 30(1-4): 87-94. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Annals of the Missouri Botanical Garden* 77(1): 181. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Darwiniana* 35(1-4): 29-36. 1998.

P. compressum Raf. (*Milium compressum* Sw.; *Paspalum compressum* P. Beauv. ex C.P. Cowan, nom. illeg., non *Paspalum compressum* Raf.; *Paspalum compressum* (Sw.) Nees, nom. illeg., non *Paspalum compressum* Raf.; *Paspalum compressum* (Sw.) Raspail, nom. illeg., non *Paspalum compressum* Raf.)

South America, Argentina. See *Nova Genera et Species Plantarum seu Prodrromus* 24. 1788, *Florula Ludoviciana, or, a flora of the state of ...* 15. 1817, *Annales des Sciences Naturelles (Paris)* 5: 301. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 23. 1829 and *Anales Científicos Paraguayos*, ser. 2, 2: 153. 1918, *Listados Florísticos de México* 1: 117. 1983.

P. compressum Raf. var. ***humile*** Nees

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 23. 1829.

P. concavum Renvoize (*Panicum glabrinode* Hack.; *Paspalum glabrinode* (Hack.) Morrone & Zuloaga)

Brazil. Caespitose, loosely tufted or stoloniferous, lower sheaths hispid, lower glume present, damp ground, see *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 284-285. 1914, *Kew Bulletin* 42: 921. 1987, *Darwiniana* 29(1-4): 262. 1989.

P. conduplicatum Canto-Dorow, Valls & Longhi-Wagner

Brazil. See *Bradea, Boletim do Herbarium Bradeanum* 6(40): 333, f. 6-10. 1995.

P. conjugatum P.J. Bergius (*Digitaria conjugata* (Roxb.) Schult.; *Panicum conjugatum* Roxb.; *Paspalum africanum* Poir.; *Paspalum bicrurum* Salzm. ex Döll; *Paspalum ciliatifolium* Trin., nom. illeg., non *Paspalum ciliatifolium* Michx.; *Paspalum ciliatum* Lam.; *Paspalum ciliatum* Kunth, nom. illeg., non *Paspalum ciliatum* Lam.; *Paspalum conjugatum* f. *tristachya* (Vanderz) Beetle; *Paspalum conjugatum* f. *tristachyum* (Vanderyst) Beetle; *Paspalum conjugatum* var. *conjugatum*; *Paspalum conjugatum* var. *parviflorum* Döll; *Paspalum conjugatum* var. *pubescens* Döll; *Paspalum conjugatum* var. *tristachya* Vanderz [or Vanderyst?]; *Paspalum conjugatum* var. *tristachyum* Vanderyst; *Paspalum hirsutum* Poir.; *Paspalum longissimum* Hochst. ex Steud.; *Paspalum paniculatum* L.; *Paspalum renggeri* Steud.; *Paspalum sieberianum* Steud.; *Paspalum tenue* Gaertn.; *Paspalum tenue* Kunth, nom. illeg., non *Paspalum tenue* Gaertn.; *Paspalum tenue* Darby, nom. illeg., non *Paspalum tenue* Gaertn.; *Paspalum tenue* Willd. ex Steud., nom. illeg., non *Paspalum tenue* Gaertn.)

Pantropical. Perennial or annual, erect or ascending flowering stems, vigorous, extensively creeping and rooting, ground cover, spreading by flattened runners, strongly stoloniferous with leafy stolons, nodes pubescent or pilose, ligule membranous, leaf sheaths hairy on the margins, sheaths keeled and strongly flattened, leaves very acute and oblong-lanceolate, long drooping spikes, inflorescence forked or T-shaped, sessile or subsessile racemes usually paired and divergent, hairy yellow green spikelets solitary and pedicellate, spikelets silky-hairy on the edges, upper glume ovate with hairy margins, lower glume absent, lower palea absent, 3 stamens, yellow anthers, stigmas white and feathery, fruit compressed, seeds tend to stick in the throats of livestock, grains eaten by baboons, of little forage value, economic plant, medicinal value, grass tea for fever and flu, not very palatable when mature, a common garden weed invasive species widely naturalized in tropics, aggressive and persistent, used as a lawn grass in some high-rainfall areas, potential seed contaminant, a weed in cultivated and disturbed ground, irrigation channels, in and around plantations, orchards and vineyards, common in fields, forest

clearings, old plantations sites, in natural pastures on moist heavy soils, rocky wasteland, grows on wet places and wet habitats, along rivers, clumps on bare roadside, gravel and rock, shade or partial shade, poor acid soils, forested areas, see *Systema Naturae, Editio Decima* 855. 1759, *Acta Helvetica, Physico-Mathematico-Anatomico-Botanico-Medica* 7: 129, t. 8. 1762 [1772], *De Fructibus et Seminibus Plantarum...* 2: 2, t. 80. 1791, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175. 1791, *Encyclopédie Méthodique, Botanique Suppl.* 4: 314. 1816, *Nova Genera et Species Plantarum (quarto edition)* 1: 87, t. 24. 1815 [1816], *Encyclopédie Méthodique. Botanique ... Supplément* 5: 28. 1817, *Flora Indica; or Descriptions ...* 1: 291. 1820, *Mantissa* 2: 262. 1824, *Révision des Graminées* 1: 26. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6, 3(2): 340. 1835, *Nomenclator Botanicus. Editio secunda* 2: 273. 1841, *Synopsis Plantarum Glumacearum* 1: 17, 19. 1855 [1853], *Botany of the Southern States* 576. 1857, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 262. 1857, *Flora Brasiliensis* 2(2): 55. 1877 and *Handb. Fl. Ceylon* 5: 122. 1900, *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Bulletin agricole du Congo Belge* 9: 245. 1918, *Contr. U.S. Natl. Herb.* 28: 162. 1929, *Grasses of Ceylon* 136. 1956, *Grasses of Burma ...* 336. 1960, *Brittonia* 23(3): 293-324. 1971, *Phytologia* 28(4): 318. 1974, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Blumea* 30: 290, 293. 1985, *Journal of Cytology and Genetics* 23: 61-67. 1988, *Darwiniana* 30(1-4): 87-94. 1990.

in English: sour paspalum, sour grass, sour crown grass, t grass, T-grass, ti grass, cow grass, buffalo grass, signal grass, yellow grass, Hilo grass, Johnston River grass, Thurston grass, carabao grass

in Spanish: cambute, pasto amargo, horquetilla, grama amarga

in the Caribbean: herbe à gazon, herbe à mouton, herbe à mouton femelle, herbe fine, herbe sure, herbe sure mâle, zèb fin, zèb gazon, zèb mouton, zèb mouton fimèl, zèb si, zèb si mal

in Mexico: grama de antena, papayote, pashma sacat, zacate grama

in the West Indies: bed-grass, cambute, kambut, loneshank grass

in Portuguese: capim gordo

in Hawaii: Hilo grass, mau'u Hilo

in Micronesia: rehnwai

in the Pacific: vailima, vaolima, vaolima matafao, vaolima papalagi, fetin wumwune, mauku taravao, mauku katini, mau'u Hilo, mosie vailima, mosiesie, moise vaolima, motie vaolima, muhsrasre, udel ra ngebei, rehn wai

in Indonesia: jampang pahit, klamaran, paitan, rumput belanda

in Malaysia: rumput ala negri, rumput kerbau

in Papua New Guinea: prumkau

in the Philippine Islands: bantotan, kalo-kawayan, kauad kauaran, kauat-kauat, kauatkauat, kulape, laau-laau, laua laua, sakate

in Thailand: yaa hep, ya hep, yaa nom non, ya-nomnon

in Vietnam: cò san cap

in Congo: likele, kedigui

in Ghana: asamo akwanta, nsohwea

in Ivory Coast: dianderika, kama

in Nigeria: duei, duwei berison lei, efok ngkuku, ikute ala, ojikpereeje

in Sierra Leone: alekore, balekore, kagbata, kalant, kapie, kayan, kharatu na, kpongo piando, wowegbine, yane, yani

P. consanguineum (Gaudich.) Kunth (*Digitaria consanguinea* Gaudich.; *Digitaria setigera* Roth)

America, Hawaii. See *Systema Vegetabilium* 2: 474. 1817, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 410. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 46. 1833 and *Blumea* 21(1): 1-80. 1973.

P. conspersum Schrad. ex Schult. (*Paspalum conspersum* Schrad.; *Paspalum latifolium* Spreng., nom. illeg., non *Paspalum latifolium* J. Le Conte; *Paspalum platyphyllum* Schult.; *Paspalum regnellii* Mez; *Paspalum virgatum* var. *conspersum* (Schrad. ex Schult.) Döll; *Paspalum virgatum* var. *conspersum* (Schrad.) Döll; *Paspalum wettsteinii* Hack.)

Mexico, Bolivia, Paraguay, Venezuela, Brazil, Argentina. Perennial, decumbent, tufted, rooting at the lower nodes, purplish, robust, ligule membranous ciliate, leaf blades linear acuminate with scabrous margins, inflorescence with 10-35 racemes scattered, spikelets ovate-elliptic pubescent paired rufous in two rows, upper glume and lower lemma membranous 5-nerved, upper lemma and palea papillose striate, useful for erosion control, common in riverbanks and swampy places, cerrado, savannah, lowland savannahs, disturbed places, related to *Paspalum arundinaceum* and *Paspalum millegrana*, see *Systema Naturae, Editio Decima* 2: 855. 1759, *Mantissa* 2: 174. 1824, *Systema Vegetabilium, editio decima sexta* 1: 248. 1825, *Mantissa* 2: 557. 1827, *Flora Brasiliensis* 2(2): 89. 1877 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 5. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 66. 1908, *Ark. Bot.* 11(4): 14. 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 75. 1917, *Hickenia* 1: 73-78. 1977, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Darwiniana* 30(1-4): 87-94. 1990.

P. contractum Pilg. (*Paspalum echinotrichum* Mez; *Paspalum lanciflorum* Trin.)

Colombia. In open savannah, depressions, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 709-710. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 9. 1921, *Flora of the Guianas, Ser. A*, 485. 1990.

P. convexum Humb. & Bonpl. ex Fluegge (*Paspalum ancyclocarpum* Nees ex Steud.; *Paspalum comosum* Fluegge ex Knuth; *Paspalum convexum* Willd. ex Döll, nom. illeg., non *Paspalum convexum* Humb. & Bonpl. ex Fluegge; *Paspalum encyclocarpum* Nees; *Paspalum hemicryptum* C. Wright; *Paspalum inops* var. *major* Vasey ex Beal; *Paspalum plicatulum* var. *subrotundum* Döll; *Paspalum villifolium* Steud.) (Latin *inops, opis* "weak, insignificant")

Cuba, Costa Rica, Mexico to Brazil. Perennial or annual, often decumbent and stoloniferous, herbaceous, densely tufted, spreading, clumped, ligule membranous, leaf sheaths loosely keeled, leaf blades linear attenuate, inflorescence pyramidal with ascending to spreading racemes, paired spikelets subglobose or broadly obovate, lower glume absent, upper glume membranous 5- to 7-nerved, lower lemma 5-nerved, flowers greenish with rust-colored stigmas, upper floret smooth shiny, common in disturbed ground, moist open places, along roadsides, roadside gravel, seasonally inundated areas, related to *Paspalum plicatulum*, see *Flora Boreali-Americana* 1: 45. 1803, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 175. 1810, *Synopsis Plantarum Glumacearum* 1: 20, 27. 1855 [1853], *Anales de la Academia de Ciencias Medicas ...* 8: 204. 1871, *Flora Brasiliensis* 2(2): 77, 79. 1877, *Contributions from the United States National Herbarium* 1(8): 281. 1893, *Grasses of North America for Farmers and Students* 2: 89. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 88(Beih.): 106. 1926, *Brittonia* 23(3): 293-324. 1971, *Taxon* 33: 126-134. 1984.

in English: Latin American crown grass, Mexican paspalum

P. corcovadense Raddi (*Paspalum acutissimum* Mez; *Paspalum lanceolatum* J.G. Mikan ex Trin.; *Paspalum laxum* var. *raddianum* Döll; *Paspalum plantagineum* Nees; *Paspalum umbratile* Chase)

Brazil. Perennial, spreading, caespitose or loosely tufted, erect, slender, dark conspicuous nodes, leaf sheaths glabrous with ciliolate margins, ligule membranous, acute or acuminate leaf blades narrowly lanceolate with scabrid margins, inflorescence of loosely flowered slender racemes, spikelets oblong or obovate paired loosely arranged in 4 ranks, upper glume membranous 5-nerved, lower lemma 7-nerved, upper lemma and palea coriaceous, shady places, forest shade, wet riverbanks, along path, along trails, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 48. 1821, *Agrostografia Brasiliensis* 27. 1823, *Flora*

Brasiliensis seu Enumeratio Plantarum 2: 69. 1829, *Flora Brasiliensis* 2(2): 86. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 76. 1917, *J. Wash. Acad. Sci.* 13(9): 173. 1923, *Contributions from the United States National Herbarium* 28(1): 132, f. 76. 1929, *Ceiba* 42(1): 1-71. 2001 [2002].

P. cordaense Swallen

Brazil. Along roadsides, see *Phytologia* 14(6): 374. 1967.

P. cordatum Hack.

Brazil. Spikelets solitary, wet savannah, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 9(15): 5. 1910.

P. corymbosum (Roxb.) Kunth (*Digitaria compacta* (Roth ex Roem. & Schult.) Veldkamp; *Panicum corymbosum* Roxb.; *Paspalum compactum* Roth ex Roem. & Schult.)

Asia. See *Systema Vegetabilium* 2: 316. 1817, *Flora Indica; or Descriptions ...* 1: 295. 1820, *Révision des Graminées* 1: 25. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 58. 1833, *Synopsis Plantarum Glumacearum* 1: 58. 1853, *Botanische Zeitung. Berlin* 19(45): 332. 1861 and *Blumea* 21(1): 71-72. 1973.

P. coryphaeum Trin. (*Dimorphostachys pedunculata* (Poir.) E. Fourn.; *Panicum decumbens* (Sw.) Roem. & Schult.; *Paspalum brunneum* Mez; *Paspalum chapadense* Swallen; *Paspalum corypheum* Trin.; *Paspalum decumbens* Sw.; *Paspalum familiare* Steud.; *Paspalum indutum* Luces; *Paspalum meziibrunneum* (Mez) Herter; *Paspalum micranthum* Döll, nom. illeg., non *Paspalum micranthum* Desv.; *Paspalum pedunculatum* Poir.; *Paspalum pruinatum* Trin.; *Paspalum vaginiflorum* Steud.; *Paspalum violascens* Mez)

South Mexico, Trinidad, Brazil, Belize. Perennial bunchgrass, variable, caespitose, large, tussocky, erect, glaucous, shortly rhizomatous, also stoloniferous, pubescent, dark nodes, leaf sheaths often glabrous, ligule membranous, leaf blades linear-lanceolate acuminate, inflorescence oblong-ovate of slender ascending racemes, paired spikelets elliptic to obovate, upper glume 3- to 5-nerved, lower lemma 3-nerved membranous, upper lemma and palea smooth shining, cattle forage, marsh, savannahs, roadside, along forest and forest margin, open areas, very similar to *Paspalum chapadense* and *Paspalum quadrifarium*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum seu Prodromus* 22. 1788, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 171. 1810, *Encyclopédie Méthodique, Botanique Suppl.* 4: 315. 1816, *Systema Vegetabilium, editio decima sexta* 2: 429. 1817, *De Graminibus Paniceis* 114. 1826, *Species Graminum* 1828-1836, *Synopsis Plantarum Glumacearum* 1: 19, 24-25. 1855 [1853], *Flora Brasiliensis* 2(2): 51. 1877, *Mexicanas Plantas* 2: 15. 1886 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 73-74. 1917, *Journal of the Washington Academy of Sciences* 32(6): 162, f. 6. 1942, *Estudios Botánicos*

en la Región Uruguaya 24: 259. 1956, *Ind. Grass Sp.* 3: 10. 1962, *Phytologia* 14(6): 363. 1967, *Darwiniana* 30(1-4): 87-94. 1990, *Darwiniana* 33(1-4): 53-60. 1995.

in English: emperor crown grass, corygrass

P. costaricense Mez (*Paspalum paniculatum* L.)

South and Central America. Herbaceous, rhizomatous, weed in cultivation, shady places, see *Systema Naturae, Editio Decima* 855. 1759, *Revisio Generum Plantarum* 3: 363. 1898 and *Publications of the Field Columbian Museum, Botanical Series* 2(1): 24. 1900, *Bulletin of the Torrey Botanical Club* 30(7): 381. 1903, *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 72. 1917, *Contr. U.S. Natl. Herb.* 28(1): 123. 1929, *Broteria* III, 2: 119. 1933, *Gramíneas Uruguayas* 373. 1970, *Brittonia* 23(3): 293-324. 1971, *Hickenia* 1: 73-78. 1977, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Darwiniana* 30(1-4): 87-94. 1990.

P. costellatum Swallen

Brazil. See *Phytologia* 14(6): 385. 1967.

P. crassum Chase (*Paspalum tumidum* Kuhlman)

Mexico. Prairies, see *Contributions from the United States National Herbarium* 17(3): 239. 1913, *Archivos do Jardim Botânico do Rio de Janeiro* 4: 349, t. 27. 1925.

P. crinitum Chase

Mexico. Alkaline areas, meadows, see *Contributions from the United States National Herbarium* 17(3): 239. 1913.

P. crispatum Hack.

Paraguay. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 370. 1909.

P. crispulum Swallen

Brazil. See *Phytologia* 14(6): 365. 1967.

P. cromyrorhizon Trin. ex Döll (*Paspalum notatum* var. *cromyrorhizon* (Trin. ex Döll) Herter; *Paspalum notatum* Fluegge; *Paspalum notatum* var. *eriorhizon* Griseb.)

Uruguay, Brazil, Argentina. Useful for erosion control, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 106. 1810, *Flora Brasiliensis* 2(2): 74. 1877, *Symbolae ad Floram Argentinam. Zweite ...* 305. 1879 and *Anales del Museo de Historia Natural de Montevideo* 3: 51. 1929, *Revista del Museo de La Plata, Nueva Serie, Botanica* 1(4): 211-251. 1937, *Hickenia* 1: 73-78. 1977, *Botanical Gazette* 145: 420-426. 1984, *Blumea* 30: 313. 1985, *Darwiniana* 30(1-4): 87-94. 1990, *Iheringia, Série Botânica* 47: 3-44. 1996.

P. crustarium Swallen

Brazil. Open areas, woods, see *Phytologia* 14(6): 380. 1967.

P. culiacanum Vasey

Mexico. Bunchgrass, see *Contributions from the United States National Herbarium* 1(8): 281. 1893.

P. cultratum (Trin.) A.G. Burm. (*Panicum cultratum* Trin.; *Thrasya cultrata* (Trin.) Nees)

Venezuela, Brazil. See *De Graminibus Paniceis* 126. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 95. 1829 and *Acta Botanica Venezuelica* 14(4): 90. 1985[1987].

P. curassavicum Chase

West Indies. See *Journal of the Washington Academy of Sciences* 33(10): 316. 1943.

P. cymbiforme E. Fourn.

Mexico. See *Mexicanas Plantas* 2: 5. 1886 and *Contr. U.S. Natl. Herb.* 28: 20. 1929.

P. dactylon (L.) Lam. (*Capriola dactylon* (L.) Kuntze; *Cynodon dactylon* (L.) Pers.; *Panicum dactylon* L.)

Asia. Sandy areas, shores, see *Species Plantarum* 1: 58. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Syn. Pl.* 1: 85. 1805, *Revisio Generum Plantarum* 2: 764. 1891.

P. dasyphyllum Elliott (*Paspalum ciliatifolium* var. *dasyphyllum* (Elliott) Chapm.; *Paspalum setaceum* var. *supinum* (Bosc ex Poir.) Trin.; *Paspalum supinum* Bosc ex Poir.)

U.S. See *Flora Boreali-Americana* 1: 43. 1803, *Encyclopédie Méthodique, Botanique* 5: 29. 1804, *A Sketch of the Botany of South-Carolina and Georgia* 1: 105. 1816, *Species Graminum* 2: t. 130. 1829, *The American Botanist and Florist* pt. 2: 390. 1871, *Flora of the Southern United States* 578. 1897.

P. dasyphyllum Elliott var. ***floridanum*** Wood

U.S. See *The American Botanist and Florist* pt. 2: 390. 1871.

P. dasyleurum Kunze ex Desv. (*Paspalum cumingii* Nees ex Steud.; *Paspalum pachyrrhizum* Steud.) (after Hugh Cuming, 1791-1865 (d. London), British traveler and plant collector (in South America), Fellow of the Linnean Society 1832, shell collector; see A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 183-184. London 1994; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997)

Chile. See *Synopsis Plantarum Glumacearum* 1: 23-24. 1855 [1853], *Flora Chilena* 6: 242. 1854 and *Taxon* 49: 561. 2000.

P. dasytrichium Dusen ex Swallen (also spelled ***dasytrichum***) (*Paspalum dasytrichium* var. *dasytrichium*; *Paspalum dasytrichium* var. *glabrum* L.B. Sm. & Wassh.)

Southern Brazil. Caespitose, lower sheaths densely pilose to villous, spikelets more or less elliptic, shady places, moist ground, rocky soils, see *Phytologia* 14(6): 363. 1967, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 247. 1978, *Novon* 5(2): 146-151. 1995.

P. debile Michx. (*Panicum debile* Desf.; *Paspalum debile* (Desf.) Poir., nom. illeg., non *Paspalum debile* Michx.;

Paspalum debile Muhl., nom. illeg., non *Paspalum debile* Michx.; *Paspalum dissectum* Walter, nom. illeg., non *Paspalum dissectum* (L.) L.; *Paspalum dubium* DC.; *Paspalum infirmum* Roem. & Schult.; *Paspalum setaceum* Michx.; *Paspalum setaceum* var. *setaceum*; *Paspalum villosissimum* Nash)

U.S. See *Flora Caroliniana, secundum ...* 75. 1788, *Flora Atlantica* 1: 59. 1798, *Flora Boreali-Americana* 1: 43-44. 1803, *Encyclopédie Méthodique, Botanique* 5: 34. 1804, *Catalogus plantarum horti botanici monspeliensis* 130. 1813, *Catalogus Plantarum Americae Septentrionalis* 8. 1813, *Systema Vegetabilium* 2: 307. 1817, *Bulletin of the Torrey Botanical Club* 24(1): 40. 1897 and *Contr. U.S. Natl. Herb.* 28: 78. 1929.

P. decumbens Sw. (*Dimorphostachys pedunculata* (Poir.) E. Fourn.; *Panicum decumbens* (Sw.) Roem. & Schult.; *Paspalum coryphaeum* Trin.; *Paspalum decumbens* (Sw.) Roem. & Schult.; *Paspalum decumbens* Rottb.; *Paspalum decumbens* Sagot ex Döll, nom. illeg., non *Paspalum decumbens* Sw.; *Paspalum pedunculatum* Poir.; *Paspalum vaginiflorum* Steud.)

Southern and Central America, Bolivia, Brazil. Annual or sometimes short-lived perennial, tufted, erect or geniculate ascending, sprawling, freely branching, nodes bearded, leaf sheaths keeled slightly inflated, leaf blades lanceolate pilose acute or acuminate with scabrous margins, ligules membranous, terminal or axillary inflorescences solitary or clustered, solitary arching racemes, spikelets orbicular or obovate compressed dorsiventrally paired, lower glume nerveless acute or acuminate, upper glume 3- to 5-nerved, lower lemma 3-nerved, upper lemma and palea crustaceous, fruits tan to cream, a weed in low sites near edge of river, cleared trail in partial shade, open disturbed places, used for establishing vegetative hedge, resembles *Paspalum petilum*, related to *Paspalum nutans*, see *Acta Literaria Universitatis Hafniensis* 1: 285. 1778, *Nova Genera et Species Plantarum seu Prodromus* 22. 1788, *Encyclopédie Méthodique, Botanique Suppl.* 4: 315. 1816, *Systema Vegetabilium, editio decima sexta* 2: 429. 1817, *De Graminibus Paniceis* 114. 1826, *Synopsis Plantarum Glumacearum* 1: 19. 1855 [1853], *Flora Brasiliensis* 2(2): 77. 1877, *Mexicanas Plantas* 2: 15. 1886 and *Brittonia* 23(3): 293-324. 1971.

in English: decumbent crown grass

P. dedeccae Quarin (*Paspalum doellii* Chase ex Filg.; *Paspalum neesii* var. *monachyrium* Döll) (named for D.M. Dedecca, author of "Studies on the California species of *Stipa* [Poaceae]." *Madroño* 12: 129-139. 1954, "Anatomia e desenvolvimento ontogenico de *Coffea arabica* L. var. *typica* Cramer." *Bragantia*, Campinas, 16: 315-366. 1957, "As espécies brasileiras do gênero *Axonopus* (Gramineae)." *Bragantia* 19: 251-296. 1956, "O problema das plantas toxicas." *Agron. Campinas* 8(3,4): 9-12. 1956)

Brazil, Argentina. See *Flora Brasiliensis* 2(2): 84. 1877 and *Bonplandia (Corrientes)* 3(14): 206. 1975, *Atas da Sociedade Botânica do Brasil, Secção Rio de Janeiro* 1(4): 13, f. 1-3. 1982, *Darwiniana* 30(1-4): 87-94. 1990, *Cytologia* 56: 223-228. 1991.

P. deightonii (C.E. Hubb.) Clayton (*Paspalum scrobiculatum* var. *deightonii* C.E. Hubb.)

Tropical Africa. Perennial, shade species, see *Mantissa Plantarum* 29. 1767 and *Bulletin of Miscellaneous Information Kew* 1928(1): 40-41. 1928, *Kew Bulletin* 30(1): 104. 1975.

P. delicatum Swallen (*Paspalum nudatum* Luces; *Paspalum pictum* Ekman)

Brazil, Colombia, Venezuela. Annual, creeping, sprawling, branching, delicate, slender, ligule membranous, leaf blades linear attenuate, inflorescence a solitary terminal arcuate raceme, lower glume absent, upper glume 3-nerved, lower lemma narrowly obovate 5-nerved, upper floret stramineous, floodplains, savannah, moist savannahs, wet places, related to *Paspalum nudatum* and *Paspalum pictum*, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 11, t. 6, f. 7. 1911, *Journal of the Washington Academy of Sciences* 32(6): 163, f. 7. 1942, *Contributions from the United States National Herbarium* 29(6): 268-269. 1948 [1949].

P. densiflorum Döll (*Paspalum umbrosum* Trin.)

South America, Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 153. 1834, *Flora Brasiliensis* 2(2): 52. 1877.

P. densum Poir. (*Paspalum densum* var. *ciliatum* Döll; *Paspalum densum* var. *elliptico-oblongum* Hack.; *Paspalum paniceum* Sm.)

The Caribbean, Puerto Rico, Jamaica, Brazil, Bolivia. Perennial bunchgrass, robust, large, caespitose, coarse, clumped, forming colonies, ligule membranous, distichous sheaths strongly overlapping and inflated, leaf blades linear acuminate folded with scabrous margins, dense narrowly pyramidal panicles with numerous ascending to spreading racemes appressed to the rachis, paired spikelets orbicular to orbicular-obovate compressed dorsiventrally, lower glume absent, upper glume and lower lemma membranous 3-nerved, upper floret round obtuse minutely striate, grassy roadsides, moist places, savannah, moist savannahs, marshes and swamps, drainage ditches, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Encyclopédie Méthodique, Botanique* 5: 32. 1804, *The Cyclopaedia; or, Universal Dictionary of Arts, Sciences, and Literature* by Abraham Rees, ... In thirty-nine volumes ... 26: no. 14. 1813, *Flora Brasiliensis* 2(2): 87. 1877 and *Enum. Vasc. Pl. Suriname* 48. 1906, *Contr. U.S. Natl. Herb.*

12: 116. 1908, *Anales del Museo Nacional de Buenos Aires* 21: 21. 1911.

in English: dense crown grass

P. dentatosulcatum Arechav. (*Anthraenantia lanata* (Kunth) Benth.; *Paspalum lanatum* Kunth)

South America, Uruguay. Moist ground, see *Nova Genera et Species Plantarum* 1: 94, t. 29. 1815 [1816], *Journal of the Linnean Society, Botany* 19: 39. 1881, *Anales del Museo Nacional de Montevideo* 1: 76. 1894.

P. denticulatum Trin. (*Paspalum denticulatum* var. *denticulatum*; *Paspalum hieronymii* Hack.; *Paspalum jujuyense* Zuloaga; *Paspalum lividum* Trin. ex Schldt.; *Paspalum proliferum* Arechav.) (after the German botanist Georg Hans Emmo (Emo) Wolfgang Hieronymus, 1846-1921, plant collector, from 1874 to 1883 at Córdoba (Argentina), from 1892 at Berlin-Dahlem, editor of *Hedwigia*, he is best known for "Beiträge zur Kenntnis der Centrolepidaceen." *Abh. Naturf. Ges.* 12: 115-222. Halle 1873, "Sertum patagonicum ó determinaciones y descripciones de plantas fanerógamas y criptógamas vasculares recogidas por el Dr. Carlos Berg en las costas de Patagonia." *Bol. Acad. Nac. Ci.* 3: 327-385. 1879, "Sertum sanjuaninum ó determinaciones y descripciones de plantas fanerógamas y criptógamas vasculares recolectadas por el Dr. D. Saile Echegaray en la provincia San Juan." *Bol. Acad. Nac. Ci.* 4: 1-73. 1881, *Icones et descriptiones plantarum, quae sponte in Republica Argentina crescunt*. Breslau 1885, "Plantae Stuebelianae novae quae descripsit adjuvantibus aliis auctoribus." *Bot. Jahrb. Syst.* 21: 306-378. 1895-1896, "Beiträge zur Kenntnis der Pteridophyten - Flora der Argentina und einiger angrenzender Teile von Uruguay, Paraguay und Bolivien." *Bot. Jahrb. Syst.* 22: 359-420. 1896, "Compositae, en Aloysius Sodiro, S.J.: *Plantae ecuadorenses*. II." *Bot. Jahrb. Syst.* 29: 1-85. 1900-1901, "Selaginellaceae." in J. Schmidt, editor, *Flora of Koh Chang*. Contributions to the Knowledge of the Vegetation in the Gulf of Siam. Part III. *Bot. Tidskr.* 24: 102-114. 1901, "Plantae Peruvianae a claro Constantino de Jelski collectae. Compositae." *Bot. Jahrb. Syst.* 36(5): 458-513. 1905 and "Selaginellaceae." in C.H. Ostenfeld, editor, *A List of Plants Collected in the Raheng District, Upper Siam* by Mr. E. Lindhard. *Bull. Herb. Boiss.* II, 5: 721-724. 1905. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 172. 1965; Ignatz Urban, editor, *Symbolae Antillanae*. 3(3): 524-527. Berlin 1903; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 174. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 150-151. 1947; Stafleu and Cowan, *Taxonomic literature*. 2: 193-194. 1979)

Argentina, Paraguay. Sandy places, see *De Graminibus Paniceis* 111. 1826, *Species Graminum* 2: t. 123. 1829, *Linnaea* 26(3): 383. 1854, *Anales del Museo Nacional de Montevideo* 1: 63. 1894 and *Österreichische Botanische Zeitschrift* 51: 198. 1901, *Contr. U.S. Natl. Herb.* 28: 57. 1929, *Boletín de la Sociedad Argentina de Botánica* 16(1-2): 65. 1974, *Cytologia* 56: 223-228. 1991, *Darwiniana* 35(1-4): 29-36. 1998.

P. devincenzii Poir. (*Paspalum durifolium* Mez)

Argentina, Uruguay. See *Repertorium Specierum Novarum Regni Vegetabilis* 15: 67. 1917, *Revista del Museo de La Plata* 1: 242. 1937.

P. diamantinum Swallen (*Paspalum ammodes* Trin.)

Brazil. White sand, gravel, see *De Graminibus Paniceis* 120. 1826 and *Phytologia* 14(6): 368. 1967.

P. difforme J. Le Conte (*Paspalum floridanum* Michx.)

North America, U.S. See *Flora Boreali-Americana* 1: 44. 1803, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 284. 1820 and *Contr. U.S. Natl. Herb.* 28: 190. 1929.

P. dilatatum Poir. (*Digitaria dilatata* (Poir.) H.J. Coste; *Panicum platense* (Spreng.) Kuntze; *Paspalum dilatatum* f. *paucispica* Hack.; *Paspalum dilatatum* var. *decumbens* Vasey; *Paspalum dilatatum* var. *sacchariferum* Arechav.; *Paspalum eriophorum* Schult.; *Paspalum eriophorum* Willd. ex Nees, nom. illeg., non *Paspalum eriophorum* Schult.; *Paspalum lanatum* Spreng., nom. illeg., non *Paspalum lanatum* Kunth; *Paspalum ovatum* Nees ex Trin.; *Paspalum ovatum* var. *grandiflorum* Nees; *Paspalum pedunculare* J. Presl; *Paspalum platense* Spreng.; *Paspalum selloi* Spreng. ex Nees; *Paspalum velutinum* Trin. ex Nees)

South America, Brazil to Argentina. Perennial bunchgrass, leafy, tall and vigorous, erect or ascending or widely spreading, often decumbent at base, rather coarse and deep rooted, strongly clumped or caespitose, forms thick clumps, densely and shortly knotted base, basal sheaths hairy or glabrous, ligule papery and asymmetric, leaves flat and linear, also rhizomatous, racemes on a central axis, nodding panicles, spikelets paired, green-yellowish spikelets elliptic to ovate with villous margins, upper glume pubescent and silky hairy, lower glume absent, upper glume and sterile lemma fringed, fertile floret papillose, lower palea absent, anthers purple, elliptic fruits reddish brown, seed covered with fine silky hairs, excellent pasture and hay, very palatable and nutritious in the preflowering stage, high grazing value, cultivated fodder, good grazing for livestock, an important food source in dairy pastures, shade species, widely introduced as a forage species and now naturalized in the wild, requires moist soil, hardy, economic plant, tolerates both waterlogging and drought, little tolerance to salinity, withstands heavy grazing and trampling, the seed heads parasitized by the ergot filamentous fungus *Claviceps paspali* Stevens & Hall can be toxic or poisonous to live-

stock, useful for erosion control, used to stabilize mine dumps in South Africa, a difficult plant to eradicate, may become a troublesome weed of lawns and disturbed places and habitats, South African traditional healers use this grass for gambling luck, grows most abundantly in bottomland pastures, vineyards, wasteland, consolidated sand dunes, in damp places, periodically flooded land, moist grasslands, disturbed areas, ditch banks, orchards, riverbanks, sandy loam, moist meadows and fields, marshes, in heavy moist fertile soils, vleis, along roadsides, irrigated lands, irrigation channels, orchards, perennial crops, gardens, cultivated lands, sugarcane, similar to *Paspalum urvillei* and *Paspalum pauciciliatum*, see *Encyclopédie Méthodique, Botanique* 5: 35. 1804, *Systema Vegetabilium, editio decima sexta* 1: 247. 1825, *De Graminibus Paniceis* 113. 1826, *Systema Vegetabilium, editio decima sexta* 4: Cur. Post 30. 1827, *Mantissa* 2: 560. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 43, 56. 1829, *Reliquiae Haenkeanae* 1(4-5): 217. 1830, *Flora Brasiliensis* 2(2): 64. 1877, *Bulletin of the Torrey Botanical Club* 13: 166. 1886, *Anales del Museo Nacional de Montevideo* 1: 90. 1894, *Revisio Generum Plantarum* 3(2): 363. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 60. 1904, *Flore de France* 3: 553. 1906, *Contr. U.S. Natl. Herb.* 28: 169. 1929, *Handb. Fl. Ceylon* 6: 315. 1931, *Grasses of Ceylon* 137. 1956, *Grasses of Burma ...* 338. 1960, *Boletín de la Facultad de Agronomía de Universidad de la Republica, Montevideo* 103: 7, f. 1. 1968, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Butlletí de la Institució Catalana d'Història Natural, Secció de Botànica* 51: 101-108. 1984, *Botanical Gazette* 146(1): 124-129. 1985, *Ciencia e Cultura (São Paulo)* 39: 708-709. 1987, *Journal of Cytology and Genetics* 23: 61-67. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Proc. N.Z. Grasslands Assoc.* 51: 47-50. 1990, *Darwiniana* 30(1-4): 87-94. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Botanical Gazette* 152(2): 219-223. 1991, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Proceedings of the Indian Science Congress Association* 84(3, iii): 91. 1997, *International Journal of Plant Sciences* 159(1): 153-159. 1998.

in English: Dallis grass, Dallisgrass, paspalum, paspalum grass, bastard millet grass, common paspalum, golden crown grass, hairy-flowered paspalum, large water grass, large waterseed paspalum, water grass, Australian grass

in French: millet bâtard, herbe de Dallis, herbe de miel

in Spanish: grama de agua, pasto dallis, dalis

in Argentina: pasto polaco

in Brazil: grama de sananduba, mium

in Colombia: gramalote, pasto dallis

in Cuba: caguazo

in Mexico: dallis, grama de agua, pasto dallis, pasto dulce, pasto miel

in Uruguay: gramilla de cuaresma, gramilla de hoja ancha
in Southern Africa: bankrotkweek, breësaadgras, breësaad-
vleigras, gewone paspalum, paspalatum gras, paspalum
gras, watergras, bohlwa; mupunganini (Tonga)

in Pacific: mosiesie

in Indonesia: rumput australi

in Japan: shima-suzume-no-hie (= island *Paspalum*)

in the Philippines: halanaw, lawa-lawa, sakata

in Thailand: ya-daenlit

in Vietnam: co' san dep

P. dilatatum Poiret subsp. ***dilatatum*** (*Digitaria dilatata* (Poir.) H.J. Coste; *Panicum platense* (Spreng.) Kuntze; *Paspalum dilatatum* f. *paucispica* Hack.; *Paspalum dilatatum* var. *decumbens* Vasey; *Paspalum dilatatum* var. *dilatatum*; *Paspalum dilatatum* var. *sacchariferum* Arechav.; *Paspalum eriophorum* Schult.; *Paspalum eriophorum* Willd. ex Nees, nom. illeg., non *Paspalum eriophorum* Schult.; *Paspalum lanatum* Spreng., nom. illeg., non *Paspalum lanatum* Kunth; *Paspalum ovatum* Nees ex Trin.; *Paspalum ovatum* Nees, nom. illeg., non *Paspalum ovatum* Nees ex Trin.; *Paspalum ovatum* var. *grandiflorum* Nees; *Paspalum ovatum* var. *ovatum*; *Paspalum pedunculare* J. Presl; *Paspalum platense* Spreng.; *Paspalum selloi* Spreng. ex Nees)

Argentina, Uruguay, Paraguay, Brazil, Bolivia. See *Encyclopédie Méthodique, Botanique* 5: 35. 1804, *Systema Vegetabilium, editio decima sexta* 1: 247. 1825, *De Graminibus Paniceis* 113. 1826, *Systema Vegetabilium, editio decima sexta* 4: Cur. Post 30. 1827, *Mantissa* 2: 560. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 43, 56. 1829, *Reliquiae Haenkeanae* 1(4-5): 217. 1830, *Bulletin of the Torrey Botanical Club* 13: 166. 1886, *Anales del Museo Nacional de Montevideo* 1: 90. 1894, *Revisio Generum Plantarum* 3(2): 363. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 60. 1904, *Flore de France* 3: 553. 1906, *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 103: 7, f. 1. 1968.

in English: Dallis grass

P. dilatatum Poiret subsp. ***flavescens*** Roseng., B.R. Arrill. & Izag.

Argentina, Uruguay. See *Encyclopédie Méthodique, Botanique* 5: 35. 1804 and *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 103: 7, f. 1. 1968.

P. dilatatum Poiret var. ***pauciciliatum*** Parodi (*Paspalum pauciciliatum* (Parodi) Herter)

Argentina, Uruguay, Brazil, Paraguay. See *Encyclopédie Méthodique, Botanique* 5: 35. 1804 and *Revista del Museo de La Plata* 1: 240. 1937, *Revista Sudamericana de Botánica* 6(5-6): 139. 1940.

in English: prostrate dallis grass

P. dispar Chase (*Paspalum dispar* var. *marahuacense* H. Rodr.)

Central America, the Caribbean. Hillsides, among shrubs, see *Contributions from the United States National Herbarium* 28(1): 96, f. 50. 1929, *Ernstia* 52: 1. 1989.

in English: mosquito crown grass

P. dissectum (L.) L. (*Dimorphostachys drummondii* E. Fourn.; *Panicum dissectum* L.; *Panicum dimidiatum* L.; *Paspalum dissectum* Nees, nom. illeg., non *Paspalum dissectum* (L.) L.; *Paspalum dissectum* Sw. ex Roem. & Schult., nom. illeg., non *Paspalum dissectum* (L.) L.; *Paspalum dissectum* Walter, nom. illeg., non *Paspalum dissectum* (L.) L.; *Paspalum drummondii* Müll. Hal.; *Paspalum drummondii* (E. Fourn.) Vasey, nom. illeg., non *Paspalum drummondii* Müll. Hal.; *Paspalum membranaceum* Walter; *Paspalum tectum* Steud.; *Paspalum vaginatum* Elliott, nom. illeg., non *Paspalum vaginatum* Sw.; *Paspalum walteri-anum* Schult.)

Cuba, U.S., Florida, Texas. Wetlands, moist soils, poor drainage, see *Species Plantarum* 57. 1753, *Systema Naturae, Editio Decima* 2: 855. 1759, *Species Plantarum, Editio Secunda* 1: 81. 1762, *Flora Caroliniana, secundum ...* 75. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 109. 1816, *Systema Vegetabilium* 2: 308. 1817, *Mantissa* 2: 166. 1824, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 15. 1841, *Synopsis Plantarum Glumacearum* 1: 29. 1855 [1853], *Botanische Zeitung. Berlin* 19(45): 332. 1861, *Mexicanas Plantas* 2: 15. 1886, *Contributions from the United States National Herbarium* 3(1): 18. 1892 and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

in English: mud bank crown grass, mud bank paspalum, bead grass

P. distachyon Poit. ex Trin. (*Paspalum distachyon* Salzm. ex Döll, nom. illeg., non *Paspalum distachyon* Poit. ex Trin.; *Paspalum distachyon* Willd. ex Döll)

Santo Domingo, the Caribbean. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 142. 1834, *Flora Brasiliensis* 2(2): 71, 73. 1877.

P. distichophyllum Kunth (*Panicum humboldtianum* (Fluegge) Kuntze; *Paspalum humboldtianum* Fluegge)

Colombia. See *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 67. 1810, *Nova Genera et Species Plantarum (quarto edition)* 1: 86. 1815 [1816], *Revisio Generum Plantarum* 3: 361. 1898.

P. distichum L. (*Anastrophus paspaloides* (Michx.) Nash; *Anastrophus paspaloides* (Scribner) Nash; *Critesion secalinum* (Schreb.) Á. Löve; *Digitaria disticha* (L.) Fiori & Paol.; *Digitaria foliosa* Lag.; *Digitaria paspalodes* Michx.; *Digitaria paspaloides* Michx.; *Digitaria tristachya* (J. Le

Conte) Schult.; *Dimorphostachys oaxacensis* (Steud.) E. Fourn. ex Hemsl.; *Hordeum secalinum* Schreb.; *Milium distichum* (L.) Muhl.; *Milium paspalodes* (Michx.) Elliott; *Panicum digitarioides* Raspail ex Kunth; *Panicum fernandezianum* Colla; *Panicum paspaliforme* J. Presl; *Panicum polyrrhizum* J. Presl; *Panicum schaffneri* Griseb. ex E. Fourn.; *Paspalum brachiatum* Trin. ex Nees; *Paspalum bracteatum* Dufour ex Kunth; *Paspalum chepica* Steud.; *Paspalum didactylum* Salzm. ex Steud.; *Paspalum digitaria* Poir.; *Paspalum digitaria* Müll. Hal., nom. illeg., non *Paspalum digitaria* Poir.; *Paspalum distichum* Houtt., nom. illeg., non *Paspalum distichum* L.; *Paspalum distichum* subsp. *paspalodes* (Michx.) Thell.; *Paspalum distichum* var. *anpinense* Hayata; *Paspalum distichum* var. *digitaria* (Poir.) Hack.; *Paspalum distichum* var. *indutum* Shinnery; *Paspalum distichum* var. *littorale* (R. Br.) F.M. Bailey; *Paspalum distichum* var. *longirepens* Domin; *Paspalum distichum* var. *microstachyum* Domin; *Paspalum distichum* var. *nanum* (Döll) Stapf; *Paspalum distichum* var. *tristachyum* (J. Le Conte) Alph. Wood; *Paspalum distichum* var. *vaginatum* (Sw.) Griseb.; *Paspalum elliotii* S. Watson; *Paspalum fernandezianum* Colla; *Paspalum foliosum* (Lag.) Kunth; *Paspalum gayanum* Desv.; *Paspalum inflatum* A. Rich.; *Paspalum kleinianum* J. Presl; *Paspalum littorale* R. Br.; *Paspalum michauxianum* Kunth; *Paspalum oaxacense* Steud.; *Paspalum paspalodes* (Michx.) Scribner; *Paspalum paspalodes* var. *paspalodes*; *Paspalum paspaloides* (Michx.) Scribn.; *Paspalum paucispicatum* Vasey; *Paspalum reimarioides* Chapm., nom. illeg., non *Paspalum reimarioides* Brongn.; *Paspalum reptans* Poir. ex Döll; *Paspalum schaffneri* Griseb. ex E. Fourn.; *Paspalum schaffneri* Griseb. ex Hemsl.; *Paspalum squamatum* Steud.; *Paspalum tristachyum* J. Le Conte; *Paspalum vaginatum* Swartz; *Paspalum vaginatum* Döll, nom. illeg., non *Paspalum vaginatum* Sw.; *Paspalum vaginatum* var. *longipes* Lange; *Paspalum vaginatum* var. *nanum* Döll; *Paspalum vaginatum* var. *pubescens* Döll; *Paspalum vaginatum* var. *reimarioides* (Chapm.) Chapm.; *Sanguinaria vaginata* (Sw.) Bubani (Latin *distichus* “consisting of two rows,” Greek *distichos* “in two rows, in two ranks”) (Chile, Juan Fernandez Islands) (J.G. Schaffner)

Cosmopolitan, tropics and subtropics. Perennial, water-loving, wiry, spreading by rhizomes and stolons, ascending, glabrous or sometimes pubescent, creeping stems rooting at the nodes, forming dense mats, leaves linear and flat, leaf sheaths pilose on the margins, ligule membranous and unfringed, spikes terminal, racemes shortly pedunculated, spikelets arranged in two rows, spikelets usually solitary and pedicellate, hairy spikelets ovate-oblong with glabrous margins, rachis not winged, lower glume wanting or minute and usually developed into a small triangular scale, upper glume 3-nerved minutely appressed-pubescent, lower lemma herbaceous 3-nerved, upper lemma and palea coriaceous apiculate, anthers oblong and purple, economic

plant, now widely distributed and naturalized in warm temperate regions and throughout the tropics, a common weed of wet places and cultivated land, a serious weed in irrigation channels, very difficult to eradicate, crop diseases and pest, harmful organism host, potential seed contaminant, useful for erosion control and stabilizing salt marsh, beach protection and coastal sand binder, a soil binder along streams, a very good lawn grass where only salty water is available, quite palatable, a good and important forage grass and a valuable duck food, good fodder grass, relished by water buffaloes, readily grazed by sheep, tolerant of waterlogged conditions and periodic flooding in salt swamps and by tidal waters, withstands heavy grazing, a littoral species growing in and near fresh water, found along fresh and brackish marshes, in saline soils and swamps, in wetlands and freshwater wetlands, vleis, salt seepage areas, wet grasslands, warm coasts and coastal salt marshes, wet places at low altitudes, freshwater-marsh habitats, paddy-fields and marshy meadows, ponds, canals and ditches, shorelines, beaches and dunes, in sand and mud near the seashore, along pan edges in muddy soil, closely resembling *Paspalum vaginatum* Sw., see *Systema Naturae, Editio Decima* 855. 1759, *Spicilegium Florae Lipsicae* 148. 1771, *Natuurlijke Historie* 13: 167, t. 89, f. 4. 1782, *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Flora Boreali-Americana* 1: 46. 1803, *Prodromus Florae Novae Hollandiae* 1: 188. 1810, *Genera et species plantarum* 4. 1816, *A Sketch of the Botany of South-Carolina and Georgia* 1: 104. 1816, *Encyclopédie Méthodique, Botanique Suppl.* 4: 316. 1816, *Descriptio uberior Graminum* 78. 1817, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 285. 1820, *Mantissa* 2: 261. 1824, *Révision des Graminées* 1: 25. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 62. 1829, *Reliquiae Haenkeanae* 1(4-5): 209, 296. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 53. 1833, *Memorie della Reale Accademia delle Scienze di Torino* 39: 27, t.59. 1836, *Historia Fisica Politica y Natural de la Isla de Cuba, Botanica* 11: 298. 1850, *Flora Chilena* 6: 240. 1854, *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 1854: 44. 1854, *Synopsis Plantarum Glumacearum* 1: 20, 21. 1855 [1853 or 1854], *Botanische Zeitung, Berlin* 19(44): 324. 1861, *A Class-book of Botany* 783. 1861, *Flora of the British West Indian Islands* 541. 1864, *Flora Brasiliensis* 2(2): 75. 1877, *Flora of the Southern United States* 665. 1883, *Biologia Centrali-Americana; ... Botany ...* 3(19): 482, 499. 1885, *Mexicanas Plantas* 2: 6. 1886, *Queensland Grasses* 23. 1888, *A Manual of the Botany of the Northern United States (edition 6)* 629. 1890, *Contributions from the United States National Herbarium* 1(8): 281. 1893, *Memoirs of the Torrey Botanical Club* 5(3): 29. 1894, *Iconographia Florae Italicae ...* 1: 16, f. 136. 1895, *Flora of the Southern United States* 577. 1897, *Flora Capensis* 7: 371. 1898 and *Flora Pyrenaea ...* 4: 258. 1901, *Manual of the Flora of the Northern States and Canada* 75. 1901,

Anales del Museo Nacional de Buenos Aires 13: 424. 1906, *Mémoires de la Société des Sciences Naturelles de Cherbourg* 38: 77. 1912, *Bibliotheca Botanica* 85: 289. 1915, *Icones plantarum formosananarum nec non et contributiones ad floram formosanam*. 7: 54-55, f. 27. 1918, *Rhodora* 56(662): 31. 1954, *Grasses of Burma ...* 338. 1960, Robert H. Chabreck, "The relation of cattle and cattle grazing to marsh wildlife and plants in Louisiana." *Proceedings, Annual Conference Southeastern Association of Game and Fish Commissioners*. 22: 55-58. 1968, *Taxon* 21: 546. 1972, *Taxon* 25: 513. 1976, *Taxon* 29(2-3): 350. 1980, *Taxon* 32: 281. 1983, *Journal of Cytology and Genetics* 18: 26-33, 60-61. 1983, *Blumea* 30: 279-318. 1985, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Proc. N.Z. Grasslands Assoc.* 51: 47-50. 1990.

in English: buffalo quick paspalum, couch paspalum, sea-shore paspalum, eternity grass, duvagrass, joint grass, salt jointgrass, jointed crown grass, ginger grass, watergrass, water couch grass, water couch, swamp couch, silt grass, knot grass, knotgrass, saltwater couch, saltwater couch grass, Ft. Thompson grass, Mercer grass, seaside millet, turf grass

in Spanish: grama colorada, grama bobo, grama de mar, grama salada, gramilla blanca, grama-de-Joanópolis

in Mexico: camalote, camalote saladillo, grama, grama dulce, grama salada, zacate grama

in Morocco: rjel-el-rhorab rhrir

in South Africa: bankrotkweek, buffelgras, buffelskweek paspalum, kweek paspalum, kweekpaspalum, bulkweek, kakiekweek, knopgras, militêrekweek, rooikweek, tweev-ingergras

in Sudan: um-shibaa

in Indonesia: asinan, lamhani, rumput italia

in Japan: Kishû-suzume-hie

in the Philippines: bakbaba, gagayut, malit-kalabaw

in Thailand: yaa sakaat nam khem, ya sakat nam khaem, ya sakat nam khem

in Vietnam: co' san dôï

P. distortum Chase

Jamaica, the Caribbean. Tussocky, see *Contributions from the United States National Herbarium* 28(1): 142, f. 85. 1929.

P. divergens Döll (*Paspalum distachyon* Salzm. ex Döll, nom. illeg., non *Paspalum distachyon* Poit. ex Trin.)

Brazil. Perennial, geniculately ascending, conspicuous dark nodes, leaf blades narrowly lanceolate acuminate, inflorescence of two subconjugate racemes, spikelets obovate paired, upper glume and lower lemma herbaceous 3-nerved, upper lemma and palea shiny, coastal, see *Flora Brasiliensis* 2(2): 71. 1877.

P. doellii Chase ex Filg. (*Paspalum dedeccae* Quarin; *Paspalum neesii* var. *monachyrium* Döll)

Brazil. See *Flora Brasiliensis* 2(2): 84. 1877 and *Bonplandia (Corrientes)* 3(14): 206. 1975, *Atas da Sociedade Botânica do Brasil, Secção Rio de Janeiro* 1(4): 13, f. 1-3. 1982, *Darwiniana* 30(1-4): 87-94. 1990, *Cytologia* 56: 223-228. 1991.

P. dubium DC. (*Paspalum debile* Michx.; *Paspalum setaceum* var. *setaceum*)

Origin unknown. See *Flora Boreali-Americana* 1: 44. 1803, *Catalogus plantarum horti botanici monspeliensis* 130. 1813.

P. durifolium Mez (*Paspalum devincenzii* Parodi)

Warm regions, Argentina, Paraguay. See *Repertorium Specierum Novarum Regni Vegetabilis* 15: 67. 1917, *Revista del Museo de La Plata* 1: 242. 1937, *Botanical Gazette* 146(1): 124-129. 1985, *Hereditas; genetiskt arkiv*. 121: 115-118. 1994.

P. eburneum Henrard (*Paspalum maculosum* Trin.)

Paraguay. See *De Graminibus Paniceis* 98. 1826 and *Blumea* 4(3): 512. 1941.

P. echinotrichum Mez (*Paspalum contractum* Pilg.; *Paspalum lanciflorum* Trin.)

Brazil. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 709-710. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 9. 1921, *Flora of the Guianas Ser. A*, 485. 1990.

P. edmondii León (Brother Edmond)

Cuba. Endangered species, savannah, see *Memoirs of the Torrey Botanical Club* 16: 58. 1920.

P. effusum (L.) Raspail (*Milium effusum* L.; *Paspalum effusum* Nees, nom. illeg., non *Paspalum effusum* (L.) Raspail)

Europe. See *Species Plantarum* 1: 61. 1753, *Encyclopédie Méthodique, Botanique* 1: 59. 1783, *Flora Cochinchinensis* 49. 1790, *Methodus Plantas Horti Botanici ...* 204. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 20. Londini [London] 1796, *Essai sur la Flore du Département de Maine et Loire* 28. 1808, *Annales des Sciences Naturelles (Paris)* 5: 301. 1825, *Synopsis Florae Germanicae et Helveticae* 786. 1837, *Norsk Flora* 157. 1842, *Linnaea* 21(4): 438. 1848, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 104. 1850, *Flora Rossica* 4(13): 445. 1852, *Enumeratio Plantarum Transsilvaniae* 741. 1866, *Taschenbuch für den Schweizerschen Botaniker* 855. 1869, *Plantae Europaeae* 1: 34. 1890, *Nuovo Giornale Botanico Italiano, new series* 4: 209. 1897 and *Acta Hort. Petrop.* 16: 4. 1900, *Nederlandsch Kruidkundig Archief. Verslangen en Mededelingen der Nederlandsche Botanische Vereeniging* 44: 234, f. 4. 1934, *Rhodora* 52: 218.

1950, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 123. 1971[1972], *Flora Republicii Socialiste Romania* 12: 185. 1972, *Zlaci SSSR* 294. 1976, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Zapovedniki Belorussii Issledovaniia* 11: 62-69. 1987, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 34: 27-32. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1185, 1783-1786. 1990, *Fitologija* 39: 72-77. 1991, *Genome* 34: 868-878. 1991, *Flora Mediterranea* 1: 229-236. 1991, *Genome* 35: 1050-1053. 1992, *Regnum Veg.* 127: 66. 1993, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Taxon* 49(2): 252. 2000.

P. eggertii Nash (*Paspalum ciliatifolium* Michx.; *Paspalum setaceum* var. *ciliatifolium* (Michx.) Vasey; *Paspalum setaceum* var. *stramineum* (Nash) D.J. Banks) (named for the German-American botanist Heinrich [Henry] Karl Daniel Eggert, 1841-1904, botanical collector in Germany and U.S. See see J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 1: 489. Boston 1965; Charles J. Édouard Morren, *Correspondance botanique*. Liège 1874 and 1884; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 225. 1917-1933; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916)

U.S. Sandy riverbanks, see *Flora Boreali-Americana* 1: 43-44. 1803, *Contributions from the United States National Herbarium* 3(1): 17. 1892 and *Bulletin of the New York Botanical Garden* 1(5): 434. 1900, *Manual of the Flora of the Northern States and Canada* 74. 1901, *Contr. U.S. Natl. Herb.* 12(3): 145. 1908, *Sida* 2(4): 276, f. 6. 1966.

P. ekmanianum Henrard (for the Swedish botanist Erik Leonard Ekman, 1883-1931)

Bolivia. Perennial, erect and arching, pilose to villous, shortly rhizomatous, leaf blades linear attenuate or acuminate, solitary raceme, spikelets obovate-oblong densely pilose, upper glume and lower lemma membranous 1- to 3-nerved, sandy soils, savannahs, open areas, see *Mededeelingen van 's Rijks-Herbarium* 40: 49. 1921.

P. elatum Rich. ex Döll (*Paspalum arundinaceum* Poir.; *Paspalum elatum* Hack. ex Sodiro)

French Guiana. See *Encyclopédie Méthodique. Botanique ... Supplément* 4: 310. 1816, *Flora Brasiliensis* 2(2): 78. 1877, *Anales de la Universidad Central del Ecuador* 3(25): 477. 1889.

P. elegantulum J. Presl (*Axonopus elegantulus* (J. Presl) Hitchc.)

Peru. Montane, see *Reliquiae Haenkeanae* 1(4-5): 211. 1830 and *Contributions from the United States National Herbarium* 24(8): 433. 1927.

P. ellipticum Döll (*Axonopus proximus* (Mez) Parodi; *Paspalum ciliocinctum* Mez; *Paspalum proximum* Mez)

Brazil. See *Flora Brasiliensis* 2(2): 71, pl. 15. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 66. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 10. 1921, *Boletim de Botânica, Departamento de Botânica. Instituto de Biociencias, Universidade de São Paulo* 8: 36. 1950.

P. elongatum Griseb. (*Panicum malacophyllum* (Trin.) Kuntze, nom. illeg., non *Panicum malacophyllum* Nash; *Panicum malacophyllum* var. *elongatum* (Griseb.) Kuntze; *Paspalum malacophyllum* Trin.; *Paspalum quadrifarium* var. *elongatum* (Griseb.) Hack.)

Paraguay, Argentina. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Species Graminum* 3: t. 271. 1829-1830, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 260-261. 1874, *Pl. Lorentz.* 212. 1874, *Revisio Generum Plantarum* 3(3): 362. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 63. 1904.

P. equitans Mez (*Paspalum fasciculatum* var. *paraguayense* Hack.; *Paspalum pruinatum* Hack.)

Paraguay. Perennial, wet ground, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 69. 1810 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 311, 370. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 69. 1917, *Botanical Gazette* 148(3): 386-391. 1987.

P. erectifolium Swallen (*Paspalum aspidiotes* Trin.; *Paspalum setiglume* Chase)

Venezuela. Perennial, caespitose, ascending racemes, spikelets broadly ovate strongly overlapping, dry savannah, see *Species Graminum* 3: t. 269. 1829-1830 and *Brittonia* 3(2): 150, f. 1. 1939, *Fieldiana, Botany* 28(1): 22. 1951.

P. erectum Chase

Mexico. See *Contributions from the United States National Herbarium* 28(1): 189, f. 115. 1929.

P. erianthoides Lindm. (*Paspalum dusenii* Hack.; *Paspalum erianthum* var. *strictum* Döll)

Brazil, Paraguay. Leaf blades filiform and glabrous, basal sheaths not fibrous, found in swampy places, see *De Graminibus Paniceis* 121. 1826, *Flora Brasiliensis* 2(2): 70. 1877 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 6-7, t. 10B. 1900, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 9(15): 3. 1910.

P. erianthum Nees ex Trin. (*Paspalum album* Swallen; *Paspalum erianthum* Nees, nom. illeg., non *Paspalum erianthum* Nees ex Trin.; *Paspalum formosulum* Swallen; *Paspalum haughtii* Swallen; *Paspalum intonsum* Swallen; *Paspalum involutum* Swallen; *Paspalum mollifolium* Swallen; *Paspalum rigens* Swallen; *Paspalum sanguinolentum* Swallen)

tum Trin.; *Paspalum sericatum* Swallen; *Paspalum trichoides* R. Guzmán)

Central America, Paraguay, Uruguay, Brazil, Bolivia. Perennial, erect, caespitose, base pubescent, nodes bearded, basal leaf sheaths fibrous, leaf blades linear densely pubescent or pilose attenuate, inflorescence with 3 or 6 or 14 racemes, spikelets lanceolate paired very pubescent to pilose with long silky hairs, upper glume 5-nerved, lower lemma acute 3- to 5-nerved, growing in small tufts, open bunches, in sand and gravel, savannahs, hillsides, llanos, white sand, on rocky open slope, on gravelly slopes, see *De Graminibus Panicis* 116, 121. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 38. 1829, *Flora Brasiliensis* 2(2): 70. 1877 and *Phytologia* 14(6): 367-372. 1967, *Phytologia* 51(7): 468. 1982, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

P. eucomum Nees ex Trin. (*Paspalum eucomum* Nees, nom. illeg., non *Paspalum eucomum* Nees ex Trin.; *Paspalum eucomum* var. *eucomum*; *Paspalum eucomum* var. *pilosior* Döll; *Paspalum splendens* Hack.)

Brazil. See *Species Graminum* 1: t. 110. 1828, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 37. 1829, *Flora Brasiliensis* 2(2): 65. 1877 and *Österreichische Botanische Zeitschrift* 51: 238. 1901, *Annals of the Missouri Botanical Garden* 89(3): 367. 2002.

P. exaltatum J. Presl (*Paspalum arechavaletae* Hack. ex Arechav.; *Paspalum haumanii* Parodi; *Paspalum haumanii* var. *macranthum* Parodi; *Paspalum haumanii* var. *pilosum* Parodi; *Paspalum meyerianum* Spreng.; *Paspalum multiflorum* Döll, nom. illeg., non *Paspalum multiflorum* Desv.; *Paspalum multiflorum* Desv.; *Paspalum quadrifarium* var. *elongatum* Hack.) (for the Belgian botanist Lucien Hauman, 1880-1965, studied under Leo (-Abram) Errera (1858-1905), from 1904 to 1926 Faculty of Agronomy in Buenos Aires (Argentina), 1928-1950 professor of botany at Bruxelles, author of *La végétation des hautes Cordillères de Mendoza*. Buenos Aires 1919, Buenos Aires 1917-1923 *Catalogue des phanérogames de l'Argentine* jointly written with G. Vanderveken and Luis H. Irigoyen; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 139. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Uruguay, southern Brazil to Argentina. Tufted, branched, racemes densely packed, spikelets acute, in wet places, marshy and swampy habitats, closely related to *Paspalum intermedium*, see *Systema Vegetabilium, editio decima sexta* 1: 248. 1825, *Reliquiae Haenkeanae* 1(4-5): 219. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 162. 1831, *Flora Brasiliensis* 2(2): 90. 1877, *Anales del Museo Nacional de Montevideo* 1: 75. 1894 and *Anales del Museo Nacional de Buenos Aires* 11: 63. 1904, *Comunicaciones del Museo Nacional de Historia Natural*

Bernardino Rivadavia 2(21): 217. 1925, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 1: 248. 1937.

P. expansum Döll (*Paspalum morulum* Swallen; *Paspalum swallenii* Chase ex Swallen)

Brazil. See *Flora Brasiliensis* 2(2): 81. 1877 and *Phytologia* 14(6): 389. 1967.

P. extenuatum Nees (*Axonopus capillaris* (Lam.) Chase; *Axonopus extenuatus* (Nees) Kuhlman.)

Brazil. To cure skin diseases, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 25. 1829 and *Proceedings of the Biological Society of Washington* 24: 133. 1911, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 1922, *Advancing Frontiers of Plant Sciences* 5: 1-186. 1963.

in Brazil: capim de sapo, capim mão de sapo

P. falcatum Nees ex Steud. (*Paspalum falcatum* subsp. *microcarpum* Ekman; *Paspalum leucotrichum* Steud.)

Southern Brazil to northern Argentina, Paraguay. Perennial, rhizomatous, erect, leaf blades stiffly ascending linear acuminate, inflorescence of scattered racemes, spikelets paired and oblong or obovate in 4 ranks, rachis ciliate on the margins, upper glume membranous 1- to 3-nerved, lower lemma membranous 3-nerved, upper lemma and palea crustaceous smooth, see *Synopsis Plantarum Glumacearum* 1: 16, 31. 1855 [1853] and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 16. 1912, *Revista del Museo de La Plata, Nueva Serie, Botanica* 1(4): 211-251. 1937, *The Grasses of Bahia* 225. 1984, *Darwiniana* 30(1-4): 87-94. 1990.

P. fasciculatum Willd. ex Fluegge (*Orthoclada laxa* (Rich.) P. Beauv.; *Paspalum delochei* Steud.; *Paspalum fasciculatum* Llanos, nom. illeg., non *Paspalum fasciculatum* Willd. ex Fluegge; *Paspalum fasciculatum* var. *glabratum* Döll; *Paspalum oriziformis* Steud.; *Paspalum vaginatum* var. *pleostachyum* Döll)

South and Central America, Mexico, Lesser Antilles. Perennial, caespitose, glabrous, decumbent, erect, stoloniferous, creeping, robust, tall, nodes prominent, ultimate portions usually floating, forming broad tufts, leaf blades lanceolate glabrous, leaf sheaths inflated at base, ligules membranous, inflorescence paniculate flabellate of ascending to spreading racemes, spikelets broadly lanceolate acuminate, upper glume 5- to 7-nerved, lower lemma 5-nerved, upper floret soft smooth, weed species, economic plant, forage, a natural pasture grass, cultivated for pasture and naturalized, common on riverbanks and in seasonally flooded areas, near streams in forest, roadside ditch, sandy beaches, lowland pasture, open places, moist areas, at edge of secondary forest near river, see *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 69. 1810, *Fragmentos de Alguas*

Plantas Filipinas 23. 1851, *Synopsis Plantarum Glumacearum* 1: 23, 27-28. 1855 [1853], *Flora Brasiliensis* 2(2): 75, 91. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 370. 1909, *Contr. U.S. Natl. Herb.* 28: 176. 1929, *Brittonia* 23(3): 293-324. 1971.

in English: bamboo grass, Venezuela grass, Mexican crown grass

in Spanish: gramalote blanco, chiguiera, gramalote, camalote, venezolana

in Mexico: camalote

P. fernandezianum Colla (*Paspalum distichum* L.; *Paspalum paspalodes* (Michx.) Scribn.)

Chile. See *Systema Naturae, Editio Decima* 855. 1759, *Flora Boreali-Americana* 1: 46. 1803, *Memorie della Reale Accademia delle Scienze di Torino* 39: 27, t. 59. 1836, *Memoirs of the Torrey Botanical Club* 5(3): 29. 1894 and *Taxon* 21: 546. 1972, *Taxon* 25: 513. 1976, *Taxon* 32: 281. 1983.

P. filgueirasii Morrone & Zuloaga

Brazil. See *Systematic Botany* 28(2): 309-312, f. 2, 3E-H. 2003.

P. filiculme Nees ex Miq. (*Digitaria filiculmis* (Nees ex Miq.) Ohwi; *Digitaria filiculmis* var. *intersita* (Nees ex Miq.) Ohwi; *Digitaria longiflora* (Retz.) Pers.; *Digitaria violascens* Link; *Paspalum filiculme* Nees ex Thwaites; *Paspalum longiflorum* Retz.)

Asia, Japan. See *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805, *Hortus Regius Botanicus Berolinensis* 1: 229. 1827, *Enumeratio Plantarum Zeylaniae* 358. 1864, *Prolusio florum japonicae* 2: 274. 1867 and *Acta Phytotaxonomica et Geobotanica* 11: 32. 1942.

P. filifolium Nees ex Steud. (*Paspalum tropicum* Döll)

Brazil. Spikelets glabrous, lower lemma smooth, growing in damp and swampy places, see *Synopsis Plantarum Glumacearum* 1: 22. 1855 [1853], *Flora Brasiliensis* 2(2): 83. 1877.

P. filiforme Sw. (*Panicum filiforme* L.; *Paspalum approximatum* Döll; *Paspalum filiforme* (L.) Fluegge, nom. illeg., non *Paspalum filiforme* Sw.; *Paspalum leptocaulon* Nash; *Paspalum lineare* Sw. ex Steud.; *Paspalum swartzianum* Fluegge)

The Caribbean, Jamaica. See *Species Plantarum* 1: 57. 1753, *Nova Genera et Species Plantarum seu Prodrum* 22. 1788, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 96, 139. 1810, *Nomenclator Botanicus. Editio secunda* 2: 272. 1841, *Flora Brasiliensis* 2(2): 82. 1877 and *North American Flora* 17(2): 181. 1912.

P. fimbriatum Kunth

Central America, West Indies, Brazil. Annual, loosely tufted, erect, leaves mostly basal, sheaths compressed and glabrous to bristly, leaf blades linear-lanceolate with

scabrous wavy margins, ligules membranous, inflorescence of loosely ascending racemes, paired spikelets orbicular dorsally flattened early deciduous, ribbon-like rachis, upper glume and lower lemma ovate 1- to 3-nerved apiculate broadly winged, upper lemma and palea smooth shiny, fruits minutely rough and pale, a prolific seeder, spring up immediately after rains, economic plant of some value as early forage grass, spikelets cling to clothing and fur, weed species on sunny and shady places, moist disturbed ground, disturbed coastal areas, lawns, along roadsides, open regions, grassy roadside, cultivated areas, see *Nova Genera et Species Plantarum* 1: 93-94, t. 28. 1815 [1816].

in English: Columbia grass, Colombia grass, gazon paspalum, winged paspalum, Panama paspalum, Panama crown grass, fimbriate paspalum

in Spanish: pata de conejo

P. flaccidum Nees (*Paspalum vesicum* Swallen)

Southern Brazil, Paraguay. Filiform leaf blades, spikelets glabrous, peaty soil, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 48-49. 1829 and *Phytologia* 14(6): 364. 1967.

P. flavum J. Presl (*Paspalum cristatum* Trin.; *Paspalum flavum* Desv., nom. illeg., non *Paspalum flavum* J. Presl; *Paspalum mollendense* Mez)

Chile. See *Reliquiae Haenkeanae* 1(4-5): 220. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 161. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 152. 1834 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 31. 1917, *Annals of the Missouri Botanical Garden* 82(1): 82-116. 1995.

P. flexile Mez (*Axonopus fissifolius* var. *fissifolius*; *Axonopus flexilis* (Mez) Henrard; *Axonopus purpusii* (Mez) Chase)

Brazil. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 9-10. 1921, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 1922, *Journal of the Washington Academy of Sciences* 17: 144. 1927, *Blumea* 4(3): 510. 1941.

P. floribundum Desv. (*Paspalum laxum* Lam.; *Paspalum laxum* A. Rich. ex Steud.)

The Caribbean, West Indies. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 162. 1831, *Synopsis Plantarum Glumacearum* 1: 17. 1853.

P. floridanum Michx. (*Paspalum difforme* Le Conte; *Paspalum floridanum* var. *glabratum* Engelm. ex Vasey; *Paspalum giganteum* Baldw. ex Vasey; *Paspalum glabratum* (Engelm. ex Vasey) C. Mohr; *Paspalum glabrum* Bosc ex Fluegge; *Paspalum laeve* var. *floridanum* (Michx.) Alph.

Wood; *Paspalum laevigatum* Bosc ex Poir.; *Paspalum longiciliatum* Nash; *Paspalum macrospermum* Fluegge)

U.S., Florida, Texas. Perennial, erect, whitish green, smooth, rhizomatous with thick rhizomes, forming sparse clumps, narrow and elongated leaves, greenish flowers, large paired spikelets, dark red grains eaten by waterfowl, ornamental, occurs in moist sandy soils in fields, roadside ditches, wet meadows and wet prairies, low ground and along streams and roads, around ponds and lakes, see *Flora Boreali-Americana* 1: 44. 1803, *Graminum Monographiae* ... Pars I. *Paspalum*. *Reimaria* 172. 1810, *Encyclopédie Méthodique, Botanique* Suppl. 4: 313. 1816, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 284-285. 1820, *A Class-book of Botany* 782. 1861, *Bulletin of the Torrey Botanical Club* 13: 166. 1886, *Bulletin of the Torrey Botanical Club* 24(1): 21. 1897 and *Bulletin of the New York Botanical Garden* 1(5): 435. 1900, *Contr. U.S. Natl. Herb.* 28: 190. 1929.

in English: Florida paspalum, Florida crown grass, smooth Florida paspalum, fall panic grass

P. floridanum Michx. var. ***floridanum***

U.S., Florida, Texas. Loosely caespitose, shortly rhizomatous, open areas, along roadsides, see *Flora Boreali-Americana* 1: 44. 1803.

P. floridanum Michx. var. ***glabratum*** Engelm. ex Vasey (*Paspalum altissimum* J. Le Conte; *Paspalum glabratum* (Engelm. ex Vasey) C. Mohr; *Paspalum laeve* var. *altissimum* (J. Le Conte) Alph. Wood)

Northern America, U.S., Florida, Texas. Rhizomatous, spreading, forming large stands, found in wet places, open areas, wet margin of fields, cultivated fields, see *Flora Boreali-Americana* 1: 44. 1803, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 285. 1820, *A Class-book of Botany* 782. 1861, *Bulletin of the Torrey Botanical Club* 13: 166. 1886, *Bulletin of the Torrey Botanical Club* 24(1): 21. 1897 and *Contr. U.S. Natl. Herb.* 28: 194. 1929.

P. fluctuans Larrañaga

South America. See *Escritos de Don Damaso Antonio Larrañaga* 2: 32, 476. 1923.

P. fluitans (Elliott) Kunth (*Ceresia fluitans* Elliott; *Cymatochloa fluitans* (Elliott) Schltdl.; *Paspalum frankii* Steud.; *Paspalum mucronatum* Muhl.; *Paspalum natans* J. Le Conte; *Paspalum repens* auct. non Berg.; *Paspalum repens* var. *fluitans* (Ell.) J. Wipff & S.D. Jones) (named for the German botanist Joseph C. Frank, 1782-1835, traveler and plant collector in the U.S.; see J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 2: 3. Boston 1965; Herminia Newman Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 167. Oxford 1964)

U.S. Perennial, much-branched, floating or creeping, smooth stems, roughened sheaths, leaves long-pointed and

rough, one flower per spikelet, rachis broader and wider than the spikelets, smooth and ovoid grains, occurs on sloughs, open moist sandy shore, wet areas, bayous and along streams, muddy riverbanks, rice fields, around lakes and ponds, river swamps, in standing water, alluvial soil, sandy soil, alluvial soil bordering pools of water, see *Acta Helvetica, Physico-Mathematico-Anatomico-Botanico-Medica* 7: 129, t. 7. 1762 [1772], *A Sketch of the Botany of South-Carolina and Georgia* 1: 109, t. 6, f. 4. 1816, *Descriptio uberior Graminum* 96. 1817, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 285. 1820, *Révision des Graminées* 1: 24. 1829, *Synopsis Plantarum Glumacearum* 1: 19. 1855 [1853], *Botanische Zeitung, Berlin* 12(47): 822. 1854 and *Annals of the Missouri Botanical Garden* 74: 432-433. 1987, *Phytologia* 77(6): 461. 1994, *Gram. Bolivia* 111. 1998.

in English: horse-tail crown grass, water paspalum

P. formosum Swallen (*Paspalum lenticulare* Kunth)

Brazil. Tufted, see *Nova Genera et Species Plantarum* 1: 92. 1815 [1816] and *Phytologia* 14(6): 379. 1967, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

P. forsterianum Fluegge

New Caledonia, Chile, Easter Island. See *Graminum Monographiae* ... Pars I. *Paspalum*. *Reimaria* 165. 1810 and *The Natural History of Juan Fernandez and Easter Island* 2(5): 61-84. 1922, *Gayana, Botánica* 42: 1-157. 1985.

P. galapageium Chase (*Paspalum canescens* Andersson, nom. illeg., non *Paspalum canescens* Nees ex Trin.)

Ecuador, Galápagos Islands. See *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 132. 1855 and *Proceedings of the California Academy of Sciences, Series 4*, 21(24): 297. 1935.

P. galapageium Chase var. ***galapageium*** (*Paspalum canescens* Andersson, nom. illeg., non *Paspalum canescens* Nees ex Trin.)

Ecuador. See *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 132. 1855 and *Proceedings of the California Academy of Sciences, Series 4*, 21(24): 297. 1935.

P. galapageium Chase var. ***minoratum*** Chase

Galápagos Islands. Indeterminate species, see *Proceedings of the California Academy of Sciences, Series 4*, 21(24): 297, 299. 1935, J.R. Reeder and C.G. Reeder, *Flora of the Galápagos Islands* 823-892. 1971.

P. gardnerianum Nees (*Paspalum decumbens* Sw.; *Paspalum gardnerianum* var. *gardnerianum*; *Paspalum gardnerianum* var. *oligostachyum* Döll; *Paspalum gardnerianum* var. *vestitum* Kuhl.) (named after the English botanist and explorer George Gardner, 1812-1849, see M.P. Nayar, *Meaning of Indian Flowering Plant Names*. 150. Dehra Dun 1985)

Brazil, Panama to Argentina, Venezuela. Perennial, tufted, erect, prostrate, delicate, slender, densely pilose to almost glabrous, leaves basal, stiff ligule membranous, leaf blades erect linear acuminate, knotty rhizomes pubescent, loosely ascending racemes, short pedicels pubescent, spikelets paired obovate-oblong subtended by an involucre of hairs from the pedicel, lacking upper glume or both glumes, lower glume 3-nerved, lower lemma membranous 1- to 3-nerved its palea absent, upper lemma and palea glabrous to papillose, savannah, open areas, marshy places, campos, seasonally flooded plains, cerrado, white sandy soil, woodland, grassland, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum seu Prodrumus* 22. 1788, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 103. 1850, *Flora Brasiliensis* 2(2): 42. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 49. 1922, *Contr. U.S. Natl. Herb.* 28: 230. 1929, *Brittonia* 23(3): 293-324. 1971.

P. gyanum E. Desv. (*Paspalum distichum* L.; *Paspalum distichum* var. *nanum* (Döll) Stapf; *Paspalum vaginatum* Sw.; *Paspalum vaginatum* var. *nanum* Döll)

Chile. See *Systema Naturae, Editio Decima* 855. 1759, *Nova Genera et Species Plantarum seu Prodrumus* 21. 1788, *Flora Chilena* 6: 240. 1854, *Flora Brasiliensis* 2(2): 75. 1877, *Flora Capensis* 7: 371. 1898 and *Contr. U.S. Natl. Herb.* 12: 136. 1908, *Taxon* 21: 546. 1972, *Taxon* 25: 513. 1976, *Taxon* 29(2-3): 350. 1980, *Taxon* 32: 281. 1983.

P. geminiflorum Steud. (*Paspalum plicatulum* Michx.; *Paspalum plicatulum* var. *leptogluma* Pilg.; *Paspalum plicatulum* var. *oligostachyum* Döll; *Paspalum reticulatum* Hack.)

Brazil, Bolivia, Colombia. Perennial, tomentose, erect, branched, shortly rhizomatous, knotty base, leaf blades linear attenuate acuminate, ligule membrane-like and ciliate, lax inflorescence, spikelets elliptic-oblong or obovate glabrous or pubescent, upper glume and lower lemma membranous 5-nerved, useful for erosion control, savannahs, fields, see *Flora Boreali-Americana* 1: 45. 1803, *Synopsis Plantarum Glumacearum* 1: 25. 1855 [1853], *Flora Brasiliensis* 2(2): 77. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 131. 1901, *Österreichische Botanische Zeitschrift* 51: 199. 1901.

P. gemmosum Chase ex Renvoize

Brazil. See *Kew Bulletin* 27(3): 454. 1972.

P. giganteum Baldwin ex Vasey (*Paspalum giganteum* Arechav., nom. illeg., non *Paspalum giganteum* Baldwin ex Vasey; *Paspalum giganteum* Kuntze; *Paspalum longicilium* Nash)

North America, U.S., Florida. Sandy soil, along streams, ditches, see *Bulletin of the Torrey Botanical Club* 13: 166.

1886, *Anales del Museo Nacional de Montevideo* 1: 62. 1894, *Revisio Generum Plantarum* 3: 360. 1898 and *Bulletin of the New York Botanical Garden* 1(5): 435. 1900, *Contr. U.S. Natl. Herb.* 28: 195. 1929.

P. glaberrimum Nash (*Paspalum lentiferum* Lam.)

U.S. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175. 1791 and *Flora of the Southeastern United States ...* 76. 1903.

P. glabrinode (Hack.) Morrone & Zuloaga (*Brachiaria glabrinodis* (Hack.) Henrard; *Panicum glabrinode* Hack.; *Panicum muticum* Forssk.; *Paspalum concavum* Renvoize; *Urochloa mutica* (Forssk.) T.Q. Nguyen)

Argentina. See *Flora Aegyptiaco-Arabica* 20. 1775 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 284-285. 1914, *Blumea* 3(3): 435. 1940, *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Kew Bulletin* 42: 921. 1987, *Darwiniana* 29(1-4): 262. 1989.

P. glaucescens Hack. (*Paspalum caperatum* Swallen; *Paspalum pannuceum* Swallen; *Paspalum paranaense* Swallen; *Paspalum vialae* Swallen; *Paspalum yaguaronense* Henr.)

Brazil, Paraguay. Perennial, erect, densely tufted, swamp, field, along roadsides, moist ground, see *Österreichische Botanische Zeitschrift* 51: 237. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 18: 238. 1922, *Phytologia* 14(6): 375, 381, 383. 1967.

P. glumaceum Clayton

Central African Republic. Perennial, loosely tufted, erect or geniculately ascending, shortly rhizomatous, leaf blades linear-lanceolate glabrous or pubescent, drooping leaves, inflorescence of ascending racemes, spikelets loosely imbricate with winged pedicels, lower glume usually absent, upper glume and lower lemma papery, upper lemma striate, damp shady places, riverine forest, related to *Paspalum lamprocaryon*, see *Kew Bulletin* 30(1): 104. 1975.

P. goyasense Davidse, Morrone & Zuloaga

Brazil. Perennial, caespitose, erect, simple, ligule membranous, leaves mostly basal, inflorescence terminal and hairy, two racemes alternate, spikelets elliptic, lower glume absent, lower flower absent, 3 stamens, stigmas feathery, poor sandy soil, related to *Paspalum carinatum* Humb. & Bonpl. ex Fluegge and *Paspalum guttatum* Trinius, see *Phytologia* 14(6): 376. 1967.

P. gracile Rudge (*Paspalum gracile* J. Le Conte, nom. illeg., non *Paspalum gracile* Rudge; *Paspalum gracile* Poir., nom. illeg., non *Paspalum gracile* Rudge; *Paspalum gracile* Schltld., nom. illeg., non *Paspalum gracile* Rudge; *Paspalum repens* P.J. Bergius)

South America. See *Acta Helvetica, Physico-Mathematico-Anatomico-Botanico-Medica* 7: 129, t. 7. 1762 [1772], *Plantarum Guianae Rariorum Icones et Descriptiones ...* 20, t. 26. 1805, *Encyclopédie Méthodique, Botanique* Suppl.

4: 313. 1816, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 285. 1820, *Linnaea* 26(2): 134. 1854 and *Fl. Guianas Series A: Phanerogams* 507. 1990, *Gram. Bolivia* 111. 1998.

P. gregoriense Mez (*Axonopus elegantulus* (J. Presl) Hitchc.; *Paspalum elegantulum* J. Presl)

Peru. See *Reliquiae Haenkeanae* 1(4-5): 211. 1830 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 10. 1921, *Contributions from the United States National Herbarium* 24(8): 433. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936.

P. griffithianum Harms

India. See *Botanische Zeitung, Berlin* 19(44): 325. 1861.

P. griseum Hack. ex Loefgr. (*Paspalum griseum* Hack. ex M.P. Corrêa; *Paspalum urvillei* Steud.)

Brazil. See *Synopsis Plantarum Glumacearum* 1: 24. 1855 [1853], *Commissão Geographica e Geologica de São Paulo: Boletim* 10: 37. 1895 and *Flora Brazil* 128. 1909.

P. guadaloupense Steud. (*Axonopus compressus* (Sw.) P. Beauv.; *Axonopus compressus* var. *compressus*)

Guadeloupe. See *Nova Genera et Species Plantarum seu Prodrum* 24. 1788, *Essai d'une Nouvelle Agrostographie* 12, 154. 1812, *Synopsis Plantarum Glumacearum* 1: 18. 1855 [1853].

P. guaraniticum Parodi (*Paspalum ionanthum* Chase; *Paspalum ionanthum* subsp. *guaraniticum* (Parodi) Roseng., B.R. Arrill. & Izag.)

Brazil, Argentina, Uruguay, Paraguay. Useful for erosion control, see *Notas del Museo de la Plata, Botánica* 2(13): 101. 1937, *Journal of the Washington Academy of Sciences* 27(4): 145. 1937, *Boletín de la Sociedad Argentina de Botánica* 12: 296. 1968, *Gramíneas Uruguayas* 369, f. 154. 1970, *Hickenia* 1: 73-78. 1977.

P. guaricense Swallen

Venezuela. Moist places, forest, in water, savannah, dry soil, ponds, see *Phytologia* 14(6): 378. 1967.

P. guenoarum Arechav. (*Paspalum guenoarum* var. *vestitum* Henrard; *Paspalum indutum* Swallen, nom. illeg., non *Paspalum indutum* Luces; *Paspalum kempffii* Killeen; *Paspalum macedoi* Swallen; *Paspalum plicatulum* Michx.; *Paspalum plicatulum* subsp. *guenoarum* (Arechav.) Roseng., B.R. Arrill. & Izag.; *Paspalum plicatulum* var. *guenoarum* (Arechav.) Roseng., B.R. Arrill. & Izag.; *Paspalum plicatulum* var. *robustum* Hack.; *Paspalum rhodopedum* L.B. Sm. & Wassh.; *Paspalum rojasii* Hack.) (dedicated to the Guenoas indians, Uruguay)

Brazil, Argentina, Bolivia, Uruguay, Paraguay. Perennial, caespitose, robust, erect, short stout rhizome, innovations extravaginal, sheaths slightly equitant, leaves mainly basal, leaf blades linear attenuate or acuminate, lax racemes,

spikelets plano-convex, glabrous or pilose, rachis not winged, lower glume absent or developed and 3-nerved, upper glume and lower lemma membranous 5- to 7-nerved, upper lemma dark brown, useful for erosion control, forage, very palatable and nutritious while growing, cultivated for beef and dairy production, wooded savannah, savannah wetland, semideciduous forest, in gravel soil, campo cerrado, campos, see *Flora Boreali-Americana* 1: 45. 1803, *Anales del Museo Nacional de Montevideo* 1: 50. 1894 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 269. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 369. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 18: 240. 1922, *Phytologia* 14: 373, 377. 1967, *Gramíneas Uruguayas* 373, f. 153. 1970, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 247. 1978, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Ciencia e Cultura (São Paulo)* 38: 941. 1986, *Ciencia e Cultura (São Paulo)* 39: 708-709, 776. 1987, *Annals of the Missouri Botanical Garden* 77(1): 179, f. 5. 1990, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in English: wintergreen paspalum, Ramirez grass

in Spanish: pasto rojo, pasto Ramirez

P. guenoarum Arechav. var. ***guenoarum*** (*Paspalum plicatulum* subsp. *guenoarum* (Arechav.) Roseng., B.R. Arrill. & Izag.; *Paspalum plicatulum* var. *robustum* Hassl.)

Brazil, Argentina, Uruguay, Paraguay. Clumps in cerrado, see *Flora Boreali-Americana* 1: 45. 1803, *Anales del Museo Nacional de Montevideo* 1: 50. 1894 and *Gramíneas Uruguayas* 373, f. 153. 1970, *Boletim do Herbarium Bradeanum* 2(35): 247. 1978.

P. guenoarum Arechav. var. ***rojasii*** (Hack.) Parodi (*Paspalum guenoarum* var. *rojasii* (Hack.) Parodi ex Burkart; *Paspalum guzmanii* Beetle; *Paspalum indutum* Swallen, nom. illeg., non *Paspalum indutum* Luces; *Paspalum plicatulum* var. *subpectinatum* Döll; *Paspalum rhodopedum* L.B. Sm. & Wassh.; *Paspalum rojasii* Hack.)

Argentina, Paraguay. Useful for erosion control, cultivated for beef and dairy production, see *Flora Brasiliensis* 2(2): 78. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 369. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 18: 240. 1922, *Phytologia* 14: 373. 1967, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 389. 1969, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 247. 1978, *Phytologia* 52(4): 16. 1982.

in English: Rojas grass

P. guttatum Trin.

Central and southern Brazil. Acuminate leaf blades filiform to linear, racemes paired, spikelets hairy, lower lemma pilose on the back, see *De Graminibus Paniceis* 91. 1826.

P. haenkeanum J. Presl (*Paspalum haenkeanum* Nees) (named for Thaddäus Peregrinus Xaverius Haenke, 1761-1816 or 1817) Pragae [Praha] 1827; see Lorenzo Raimundo

Parodi, 1895-1966, "Thaddeus Peregrinus Haenke a dos siglos de su nacimiento." *Anales Acad. Nat. Ci. Exact. Buenos Aires*. 17: 9-28. 1964; Hans Walter Lack and Victoria Ibáñez, "Recording color in late eighteenth century botanical drawings: Sydney Parkinson, Ferdinand Bauer and Thaddäus Haenke." *Curtis's Botanical Magazine*. vol. 14(2): 87-100. May 1997; John Dunmore, *Who's Who in Pacific Navigation*. 2, 170-171. Honolulu 1991; Alessandro (Alejandro) Malaspina (1754-1810, d. Pontremoli, Italy), *Viaje político-científico alrededor del mundo por las corbetas Descubierta y Atrevida al mando de los capitanes de navío D. Alejandro Malaspina y Don José de Bustamante y Guerra desde 1789 á 1794*. Publicado con una introducción por Don Pedro de Novo y Colson ... Segunda edición. Madrid 1885; Carlo Caselli, *Alessandro Malaspina e la sua spedizione scientifica intorno al mondo*, etc. [Lettere inedite di A. Malaspina a D. Paolo Greppi.] Alpes, Milano 1929; Emma Bona, *Alessandro Malaspina*. Sue navigazioni ed esplorazioni. Roma 1935; A. Giordano, "Alessandro Malaspina." in *Il vetro*. XVII. 1973; Alessandro D'Ancona, *Viaggiatori ed avventurieri*. Firenze, Sansoni [1911]; Frank Lamson-Scribner (Franklin Pierce Lamson), 1851-1938, "Notes on the grasses in the Bernhardt Herbarium, collected by Thaddeus Haenke, and described by J.S. Presl." *Annual Rep. Missouri Bot. Gard.* 10: 35-59. 1899

Peru. See *Reliquiae Haenkeanae* 1(4-5): 210. 1830, *Nova Acta Physico-medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum Exhibentia Ephemerides sive Observationes Historias et Experimenta* 19(Suppl. 1): 6. 1841, *Linnaea* 24(2): 236. 1851 and *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Ruizia*; *Monografías del Jardín Botánico* 13: 1-480. 1993.

P. hartwegianum E. Fourn. (*Paspalum alcalinum* Mez; *Paspalum buckleyanum* Vasey) (for the German botanist Karl (Carl) Theodore Hartweg, 1812-1871, botanical explorer and plant collector in North, Central and South America (between 1836-1843 and 1845-1847). See J.H. Barnhart, *Biographical notes upon botanists*. 2: 134. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 179. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. 207-209. Paris 1845; August Weberbauer (1871-1948), *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 11. Leipzig 1911; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; George Bentham, *Plantae Hartwegianae* (Plantae Hartwegianae imprimis Mexicanas adjectis nonnullis Grahamianis enumerat novasque describit). London 1839-1857. (Reprint, with new introduction by Rogers McVaugh.) 1970)

South America, Paraguay, Argentina, Mexico, U.S., Texas. Perennial desert grass, erect bunchgrass, stoloniferous, stems and leaves compressed, forage, naturalized, growing in poorly drained site, alkaline meadows, see *Mexicanas*

Plantas 2: 12. 1886, *Bulletin of the Torrey Botanical Club* 13: 167. 1886 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 75. 1917.

in English: Hartweg's crown grass, Hartweg paspalum

in Mexico: camalote lampiño

P. hatsbachii Zuloaga & Morrone (for Gert Hatschbach, botanical collector in Paraná, Brazil)

Brazil. See *Hickenia* 3(22): 77-79, f. 1. 2000.

P. haughtii Swallen (*Paspalum erianthum* Nees ex Trin.) (for O. Haught)

Colombia. Bunchgrass, open areas, llanos, see *De Graminibus Paniceis* 121. 1826 and *Phytologia* 14(6): 370. 1967.

P. haumanii Parodi (*Paspalum exaltatum* J. Presl; *Paspalum haumanii* var. *genuinum* Parodi; *Paspalum haumanii* var. *haumanii*; *Paspalum haumanii* var. *macranthum* Parodi; *Paspalum haumanii* var. *pilosum* Parodi; *Paspalum multiflorum* Döll, nom. illeg., non *Paspalum multiflorum* Desv.; *Paspalum multiflorum* f. *abbreviatum* Hack., also spelled *abbreviatum*)

Uruguay, Brazil, Argentina. Useful for erosion control, see *Reliquiae Haenkeanae* 1(4-5): 219. 1830, *Flora Brasiliensis* 2(2): 90. 1877 and *Anales del Museo Nacional de Buenos Aires* 21: 25. 1911, *Comunicaciones del Museo Nacional de Historia Natural Bernardino Rivadavia* 2(21): 217. 1925, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 1: 248. 1937.

P. haumanii Parodi var. *macranthum* Parodi (*Paspalum haumanii* Parodi)

Argentina, Uruguay. See *Comunicaciones del Museo Nacional de Historia Natural Bernardino Rivadavia* 2(21): 217. 1925, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 1: 248. 1937.

P. helleri Nash (*Paspalum laxum* Lam.)

Central America. Waste places, fields, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791 and *Bulletin of the Torrey Botanical Club* 30(7): 376. 1903.

P. heterotrichon Trin. (*Paspalum ceresioides* Carrillo; *Paspalum gracile* Schltldl., nom. illeg., non *Paspalum gracile* Rudge; *Paspalum heterotrichon* var. *paucispicatum* Hack.)

Peru, Brazil. Inflorescences villous, spikelets solitary, spikelets straight on the pedicels, rocky places, savannah, see *Species Graminum* 3: t. 285. 1829-1830, *Linnaea* 26(2): 134. 1854, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 1: 328. 1897 and *Revista de la Facultad de Ciencias, Universidad Nacional de San Antonio Abad del Cuzco. Cuzco-Peru* 2: 145. 1968.

P. hexastachyum Parodi (*Paspalum alnum* Chase)

Uruguay, Paraguay, Argentina, Brazil. Sandy soil, see *Journal of the Washington Academy of Sciences* 23(3): 137, f. 1. 1933, *Notas del Museo de la Plata, Botánica* 3: 25, f. 2.

1938, Quarin C. L. W. W. Hanna, "Effect of three ploidy levels on meiosis and mode of reproduction in *Paspalum hexastachyum*." *Crop Science* 20: 69-75. 1980.

P. hieronymii Hack. (*Paspalum denticulatum* Trin.; *Paspalum lividum* Trin. ex Schldl.)

Argentina. See *De Graminibus Paniceis* 111. 1826, *Linnaea* 26(3): 383. 1854 and *Österreichische Botanische Zeitschrift* 51: 198. 1901, *Contr. U.S. Natl. Herb.* 28: 57. 1929.

P. hintonii Chase

Mexico. Forage, see *Journal of the Washington Academy of Sciences* 27(4): 143. 1937.

P. hirtum Kunth (*Paspalum andreanum* Mez) (after the French botanist Édouard François André, 1840-1911, horticulturist and gardener, 1875-1876 traveler in South America (Northern Andes expedition), botanical explorer and collector, studied botany with Decaisne. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 59. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 11. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 88. 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement I: A-Ba*. 119-121. 1992; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 675. Stuttgart 1993; Charles J. Édouard Morren, *Correspondance botanique*. Liège 1874 and 1884; C.E. Chardon, *Caldasia* 4: 283-292. 1947; L.B. Smith, *Phytologia* 12: 401-413. 1965)

Colombia. Moist places, slopes, páramo, see *Nova Genera et Species Plantarum* 1: 89. 1815 [1816] and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 30. 1917, *Darwiniana* 33(1-4): 67-95. 1995.

P. hispidum Swallen (*Paspalum nelsonii* Chase) (for the American naturalist Edward William Nelson, 1855-1934, explorer of Alaska, on the Death Valley Expedition, 1890-1929 with the USDA, botanical collector, 1892-1906 in Mexico. See [edited by H.W. Henshaw] *Report upon Natural History Collections Made in Alaska between the years 1877 and 1881 by E.W. Nelson*. 1887; E.A. Goldman, "Edward William Nelson, naturalist, 1855-1934." *Auk* 52: 135-148. 1935; Ella Dales Cantelow & Herbert Clair Cantelow, "Biographical notes on persons in whose honor Alice Eastwood named native plants." *Leaf. West. Bot.* 8(5): 83-101. 1957; J.H. Barnhart, *Biographical notes upon botanists*. 2: 544. 1965; H. Robinson & R.D. Brettell, in *Phytologia*. 27(1): 54. 1973; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 68. Plainfield, N.J. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Joseph

Ewan, *Rocky Mountain Naturalists*. 271-272. The University of Denver Press 1950)

Guatemala. Along rivers, see *Contributions from the United States National Herbarium* 28(1): 203, f. 123. 1929, *Contributions from the United States National Herbarium* 29(9): 414. 1950.

in Mexico: pasto

P. hitchcockii Chase

Colombia. Perennial, stoloniferous and rhizomatous, shallow water, ponds, see *Contributions from the United States National Herbarium* 28(1): 160, f. 102. 1929.

P. holochrysum Henrard (*Axonopus aureus* P. Beauv.; *Axonopus holochrysum* (Trin.) Henrard; *Panicum holochrysum* Trin.; *Paspalum holochrysum* Trinius)

Asia. See *Essai d'une Nouvelle Agrostographie* 12. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 195. 1834 and *Blumea* 4: 509. 1941.

P. humboldtianum Fluegge (*Panicum humboldtianum* (Fluegge) Kuntze; *Panicum obtectum* J. Presl; *Paspalum blepharophorum* Roem. & Schult.; *Paspalum blepharophorum* var. *blepharophorum*; *Paspalum ciliatum* Kunth, nom. illeg., non *Paspalum ciliatum* Lam.; *Paspalum distichophyllum* Kunth; *Paspalum humboldtianum* subsp. *cymbiforme* (Fourn.) Guzmán & Santana; *Paspalum humboldtianum* var. *elegantissima* Beetle; *Paspalum humboldtianum* var. *humboldtianum*; *Paspalum humboldtianum* Fluegge var. *stuckertii* (Hack.) Hack.; *Paspalum soboliferum* Chase; *Paspalum stuckertii* Hack.; *Tricholaena obtecta* (J. Presl) E. Fourn. ex Hemsl.; *Tricholaena obtecta* (J. Presl) E. Fourn.) (for the German (b. Berlin) naturalist Friedrich Wilhelm Heinrich Alexander von Humboldt, 1769-1859 (d. Berlin), traveler, geographer, studied botany under Karl (Carl) Ludwig von Willdenow (1765-1812), 1799-1804 exploring South America (Venezuela, Cuba, Colombia, Peru, Ecuador, and Mexico) with Aimé Bonpland, in 1804 traveled to the United States and elected a member of the American Philosophical Society, acquainted with Simón Bolívar (1783-1830), 1807-1827 sent on a diplomatic mission to Paris, explored Siberia and Central Asia; see Friedrich Wilhelm Heinrich Alexander von Humboldt and Aimé Jacques Alexandre Bonpland, *Plantae aequinoctiales*. 1808; J.H. Barnhart, *Biographical notes upon botanists*. 2: 218. 1965; Kurt-R. Biermann, in *D.S.B.* 6: 549-555. 1981; Stafleu and Cowan, *Taxonomic literature*. 2: 363-371. 1979; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 186. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker,

Catalogue of the library of the Arnold Arboretum of Harvard University. 1917-1933; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. Oxford 1975; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 233. Boston, Mass. 1973; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Filippo (Philippus, Philippo) Parlato, 1816-1877, *Elogio di Alessandro Humboldt*. Firenze 1860; Eduard Georg Seler, 1849-1922, "The Mexican Picture Writings of Alexander von Humboldt." *Bureau of American Ethnology*. Bull. 28: 127-229. 1904; Carl (Karl) Traugott Beilschmied, 1793-1848, *Pflanzengeographie*, nach A. von Humboldt's Werke ueber die geographische Vertheilung der Gewächse, etc. Breslau 1831)

From Mexico to Bolivia and Argentina, along the Andes. Perennial, erect or ascending, decumbent, profusely or sparsely branching, rooting at the nodes, leaf blades lanceolate acuminate, rhizomatous, soft leaves, thin arcuate rhizomes, inflorescences with 2-6 branches, spikelets ovate-elliptic paired or solitary, upper glume membranous 3-nerved with ciliate margins, lower lemma glabrous 3-nerved, medicinal grass, fodder, aromatic, on rocky places, in grassland, roadside embankment, along roadsides, resembles *Paspalum buchtienii*, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 67. 1810, *Nova Genera et Species Plantarum (quarto edition)* 1: 86-87, t. 24. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 292. 1817, *Reliquiae Haenkeanae* 1(4-5): 301. 1830, *Biologia Centrali-Americana; ... Botany ...* 3: 493. 1885, *Mexicanas Plantas* 2: 35. 1886, *Revisio Generum Plantarum* 3: 361. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 63. 1904, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 12: 97. 1906, *Contributions from the United States National Herbarium* 24(8): 443. 1927, *Phytologia* 52(1): 15. 1982, *Darwiniana* 35(1-4): 29-36. 1998.

in Spanish: grama, zacate pata de iguana

in Mexico: zacate

P. humigenum Swallen (*Paspalum denticulatum* var. *ciliatum* Trin.; *Paspalum goeldii* Swallen; *Paspalum trichophyllum* Henrard)

Brazil. Perennial, erect, tufted, shortly rhizomatous, nodes glabrous, basal leaf sheaths glabrous, leaf blades linear attenuate or acuminate, spikelets elliptic-oblong or elliptic-obovate paired compressed dorsiventrally, flat ciliate rachis, upper glume and lower lemma membranous 3-nerved, upper lemma and palea coriaceous, savannah, open areas, marshy or damp ground, along streams, riverbanks, very similar to *Paspalum denticulatum* var. *denticulatum* and *Paspalum trinii*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *De Graminibus Paniceis* 111. 1826,

Species Graminum 2: t. 123. 1829 and *Blumea* 4(3): 513. 1941, *Phytologia* 14(6): 361-362. 1967, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

P. hyalinum Nees ex Trin. (*Paspalum abstrusum* Trin.; *Paspalum gossypinum* Mez, sometimes spelled as *gossipinum*; *Paspalum hyalinum* Nees, nom. illeg., non *Paspalum hyalinum* Nees ex Trin.; *Paspalum parviflorum* Rhode ex Fluegge; *Paspalum parviflorum* (R. Br.) K. Schum. & Hollrung, nom. illeg., non *Paspalum parviflorum* Rhode ex Fluegge; *Paspalum polychaetum* Mez)

Colombia, Venezuela to Paraguay, Bolivia, Brazil. Perennial, erect, lax, tufted, decumbent, rooting at the nodes, rhizomatous, leaves mostly basal, leaf blades linear acuminate, ligules membranous, glabrous solitary spikelets elliptic plano-convex, upper glume and lower lemma 2- to 3-nerved, upper floret smooth, growing in wet meadows, dry areas, alluvial soil, open ground, fields, open savannah, sandy soil, wet savannah, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 98. 1810, *De Graminibus Paniceis* 103. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 49. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 135. 1834, *Die Flora von Kaiser Wilhelms Land* 21. 1889 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 68. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921, *Ernstia* 10(3): 117-143. 2000.

P. hydrophilum (also **hydrophyllum**) Henrard (*Paspalum modestum* Mez; *Paspalum plicatulum* var. *multinode* Hack.; *Paspalum virgatum* var. *subplicatum* Hack.; *Paspalum wrightii* Hitchc. & Chase)

Argentina, Uruguay, Brazil, Paraguay. Stems hollow, rachis not winged, growing near streams or rivers, along stream banks, fresh water, swamps, see *Systema Naturae, Editio Decima* 2: 855. 1759, *Flora Boreali-Americana* 1: 45. 1803 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 342. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 68. 1917, *Contributions from the United States National Herbarium* 18(7): 310. 1917, *Mededeelingen van's Rijks-Herbarium* 45: 1. 1922, *Hickenia* 1: 73-78. 1977, *Ciencia e Cultura (São Paulo)* 39: 776. 1987, *Darwiniana* 30(1-4): 87-94. 1990, *Darwiniana* 35(1-4): 29-36. 1998, *Darwiniana* 37(3-4): 243-251. 1999.

in English: water paspalum, water-loving paspalum

P. imbricatum Filg.

Brazil. See *Bradea, Boletim do Herbarium Bradeanum* 3(21): 153, f. 2. 1981, *Edinburgh Journal of Botany* 48: 73-80. 1991, *Kew Bulletin* 50(2): 339-341. 1995, *Annals of the Missouri Botanical Garden* 89(3): 337-399. 2002.

P. inaequale Link (*Digitaria adscendens* (Kunth) Henrard; *Digitaria ciliaris* (Retz.) Koeler; *Digitaria inaequale* (Link)

Spreng.; *Panicum inaequale* (Link) E. Fourn., nom. illeg., non *Panicum inaequale* F. Muell.)

Asia, America. See *Observationes Botanicae* 4: 16. 1786, *Descriptio Graminum in Gallia et Germania* 27. 1802, *Nova Genera et Species Plantarum* 1: 97. 1815 [1816], *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 103. 1821, *Systema Vegetabilium, editio decima sexta* 1: 271. 1825, *Mexicanas Plantas* 2: 17. 1886 and *Blumea* 1(1): 92. 1934, *Monograph of the Genus Digitaria* 11, 125, 255, 431, 552, 679, 998-999. Leiden 1950, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Bulletin du Jardin Botanique National de Belgique* 39: Suppl. 1327. 1969, *Brittonia* 23(3): 293-324. 1971, *Flora of the Galápagos Islands* 823-892. 1971, *An Annotated Catalogue of the Vascular Plants of West Pakistan and Kashmir* 117. 1972, *Blumea* 21(1): 1-80. 1973, *Journal of Cytology and Genetics* 18: 58-59, 60-61. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Sida* 12(1): 209-222. 1987, *Contributions from the United States National Herbarium* 46: 193-213. 2003.

P. inaequiglume Parodi (*Paspalum usteri* Hack.)

Argentina. See *Repertorium Specierum Novarum Regni Vegetabilis* 5: 1. 1908, *Revista Argentina de Agronomía* 20(27): f. 1. 1953.

P. inaequivolve Raddi (*Panicum inaequivolve* (Raddi) Kuntze; *Paspalum glabriflorum* (Hack.) Herter; *Paspalum inaequivolve* var. *glabriflorum* Hack.; *Paspalum inaequivolve* var. *inaequivolve*)

Brazil, Argentina, Paraguay, Bolivia. Annual or perennial, small, branched, spreading, low-growing, rooting at the lower nodes, stoloniferous, leaf blades linear or lanceolate acute or attenuate, inflorescence terminal or axillary, short racemes, spikelets elliptic or obovate-elliptic sparsely pubescent or glabrous, upper glume obtuse or acute, lower lemma membranous 5-nerved, good forage value, forest shade, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Agrostografia Brasiliensis* 28. 1823, *Revisio Generum Plantarum* 3(3): 361. 1898 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Anales del Museo Nacional de Buenos Aires* 21: 23. 1911, *Revista Sudamericana de Botánica* 6(5-6): 138. 1940, *Darwiniana* 30(1-4): 87-94. 1990, *Cytologia* 56: 223-228. 1991, *Darwiniana* 35(1-4): 29-36. 1998.

P. inconstans Chase (*Paspalum decumbens* Sw.; *Paspalum lepidum* Chase)

Bolivia, Colombia, Ecuador. Perennial, prostrate and ascending, caespitose, nodes sparsely bearded or glabrous, basal leaf sheaths villous, leaf blades lanceolate or linear-lanceolate pubescent acute or attenuate, lax racemes, spikelets oblong or elliptic glabrous or sparsely pubescent, upper glume membranous 5-nerved glabrous or pubescent, lower lemma 5-nerved, open ground, along roadsides, campos, shady places, see *Species Plantarum* 1: 67. 1753, *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova*

Genera et Species Plantarum seu Prodrum 22. 1788, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 24(8): 446-447. 1927, *Brittonia* 23(3): 293-324. 1971.

P. indecorum Mez (*Paspalum stramineum* Ekman, nom. illeg., non *Paspalum stramineum* Nash)

Southern America, Uruguay, Brazil. Low growing, leaves pubescent on margins, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 12. 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 71. 1917, *Hickenia* 1: 73-78. 1977, *Darwiniana* 35(1-4): 29-36. 1998.

P. insulare Ekman ex Chase (*Paspalum insulare* Ekman)

Cuba. Endangered species, collected in moist areas, see *Contributions from the United States National Herbarium* 28(1): 145, f. 88. 1929.

P. intermedium Munro ex Morong & Britton (*Paspalum densum* var. *elliptico-oblongum* Hack.; *Paspalum intermedium* var. *goyensis* Burkart; *Paspalum plenum* Chase)

Brazil, Uruguay, Paraguay, Argentina. Perennial, erect bunchgrass, tall, leafy, caespitose or densely tufted, stout, robust, growing in large clumps, ligule a membranous rim, basal leaf sheaths imbricate compressed keeled with margins villous or glabrous, linear leaf blades coarse and rigid with pointed apex, erect dense inflorescence oblong or narrowly pyramidal with several crowded racemes, spikelets elliptic-orbicular glabrous paired acute or minutely beaked, ribbon-like ciliate rachis, upper glume and lower lemma membranous 1- to 3-nerved, upper lemma and palea papillose, forage, in low and moist areas, swampy ground, sandy soils, wet savannah, fields, marshy area, closely related to *Paspalum exaltatum*, *Paspalum quadrifarium*, *Paspalum haumanii* and confused with *Paspalum densum*, see *Annals of the New York Academy of Sciences* 7: 258. 1893 and *Anales del Museo Nacional de Buenos Aires* 21: 21. 1911, *Contributions from the United States National Herbarium* 28(1): 202, f. 122. 1929, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 402. 1969, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Australian Journal of Botany* 42: 449-456. 1994, *Darwiniana* 35(1-4): 29-36. 1998.

in English: intermediate crown grass

P. ionanthum Chase (*Paspalum erectum* Chase; *Paspalum guaraniticum* Parodi; *Paspalum guaraniticum* var. *crovettoi* Burkart; *Paspalum ionanthum* subsp. *guaraniticum* (Parodi) Roseng., B.R. Arrill. & Izag.; *Paspalum ionanthum* subsp. *ionanthum*) (for R. Martínez Crovetto, 1921-1988, author of "Análisis de la variación de algunos caracteres en dos especies de *Brachiaria* (Gramineae) de la flora argentina." *Boletín de la Sociedad Argentina de Botánica* 12(1-4): 243-252. 1968, "La etnobotánica de los grupos aborígenes del nordeste argentino." *Boletín de la Sociedad Argentina de*

Botánica 11(Suplemento): 211-215. 1970, "Etnografía del nordeste argentino." *Boletín de la Sociedad Argentina de Botánica* 11(Suplemento): 227-228. 1970, "Esquema Fito-geográfico de la Provincia de Misiones (República Argentina)." Tomo I, Nro.3, *Bonplandia* 1963, *Deportes y juegos de los indios Ona de Tierra del Fuego*. Bs. As. 1987, *Plantas utilizadas en medicina popular en el Noroeste de Corrientes - Tucumán, Argentina*, Min. Cult. y Educ. - Fundación Miguel Lillo, pp. 109-139. 1981, "La alimentación entre los indios guaraníes de Misiones." *Etnobotánica*, n°4. Febrero de 1968, "Los indios tobas y las plantas." *Actas y Memorias*. 37° Congreso Internacional de Americanistas. - R. Argentina 1966, "Estudios Etnobotánicos I. Nombres de plantas y su utilidad según los indios Tobas del E. Chaco." *Bonplandia* I: 279-333. Corrientes. 1964, A. Ragonese and R. Martínez Crovetto, "Plantas indígenas de la Argentina con frutas o semillas comestibles." *Rev. Inv. Agr.* I: 147-216. 1947)

South America, Brazil, Argentina, Paraguay. Perennial, erect bunchgrass with fine linear leaves, inflorescence with 2 racemes, spikelets more or less glabrous, yellow anthers, white stigmas, useful for erosion control, sandy soils, moist places, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 28(1): 189, f. 115. 1929, *Journal of the Washington Academy of Sciences* 27(4): 145. 1937, *Notas del Museo de la Plata, Botánica* 2(13): 101. 1937, *Boletín de la Sociedad Argentina de Botánica* 12: 296. 1968, *Botanical Gazette* 148(3): 386-391. 1987.

P. ionanthum Chase subsp. ***guaraniticum*** (Parodi) Roseng., B.R. Arrill. & Izag. (*Paspalum guaraniticum* Parodi)

Uruguay. Sandy soils, wet areas, see *Journal of the Washington Academy of Sciences* 27(4): 145. 1937, *Notas del Museo de la Plata, Botánica* 2(13): 101. 1937, *Gramíneas Uruguayas* 369, f. 154. 1970.

P. jaguaense León (*Paspalum vaginatum* Sw.)

Cuba. See *Nova Genera et Species Plantarum seu Prodrromus* 21. 1788 and *Contr. U.S. Natl. Herb.* 12: 136. 1908, *Flora de Cuba* 1: 139. 1946.

P. jaliscanum Chase (*Paspalum tonduzii* Mez)

Mexico. See *Contributions from the United States National Herbarium* 17(3): 240. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 72. 1917, *Contr. U.S. Natl. Herb.* 28: 115. 1929.

P. jesuiticum Parodi (*Paspalum perspicinervium* Renvoize)

Brazil. See *Darwiniana* 15: 104. 1969, *Kew Bulletin* 42: 922. 1987.

P. jimenezii Chase (for Otón Jiménez, b. 1895, botanical collector in Costa Rica, with Charles Herbert Lankester (1879-1969). See W.C. Burger, "Costa Rica, tropical

biology, and a visit with Otón Jiménez." *Field Museum of Natural History Bulletin* 59, no. 5: 20-21. 1988; P.E. Sánchez-Vindas & L.J. Poveda Alvarez, *Claves dendrológicas para la identificación de los principales árboles y palmas de la zona norte y atlántica de Costa Rica*. Overseas Development Administration, San José, Costa Rica. 144 pp. 1997)

Costa Rica. Species presumably extinct, collected along the margin of a river, see *Contributions from the United States National Herbarium* 28(1): 159, f. 101. 1929, *Brittonia* 23(3): 293-324. 1971.

P. jubatum Griseb. (*Digitaria jubata* (Griseb.) Henrard)

India. See *Nachr. Konigl. Ges. Wiss. Georg-Augusts-Univ.* 3: 84. 1868 and *Blumea* 1(1): 100. 1934.

P. juergensii (also ***jürgensii***) Hack. (*Paspalum agnesiae* L.B. Sm. & Wassh.; *Paspalum quitense* Mez)

Paraguay, Uruguay, Ecuador, Bolivia, Brazil. Perennial, upright bunchgrass, large size to small, leafy, nodes glabrous or pubescent, rhizomatous, leaf blades linear or lanceolate attenuate, lax racemes, spikelets obovate-oblong, upper glume membranous 3-nerved pubescent, lower lemma subglabrous, useful for erosion control, found in wet places, ruderal, along roadsides, marshes, swampy areas, see *Repertorium Specierum Novarum Regni Vegetabilis* 7: 312. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 70. 1917, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 246, f. 3. 1978, *Journal of Cytology and Genetics* 18: 26-33. 1983, *International Journal of Plant Sciences* 159(1): 153-159. 1998.

P. killipii (Hitchc.) Zuloaga & Soderstr. (*Panicum killipii* Hitchc.)

South America, Peru. Thickets, see *Journal of the Washington Academy of Sciences* 20(15): 383. 1930, *Smithsonian Contributions to Botany* 59: 40. 1985.

P. lachneum Nees ex Steud. (*Anthaenantiopsis racemosa* Renvoize; *Paspalum incomtum* Kunth ex Döll; *Paspalum lachneum* Trin. ex Döll, nom. illeg., non *Paspalum lachneum* Nees ex Steud.; *Paspalum obscurum* Nees ex Steud.; *Paspalum verrucosum* Hack.) (from the Greek *lachne* "wool, woolly hair, downy")

Brazil. Perennial, erect, leaf blades acuminate and flexuous, shortly rhizomatous, two rows racemes, common on sandy soil, campos, see *Synopsis Plantarum Glumacearum* 1: 26, 30. 1855 [1853], *Flora Brasiliensis* 2(2): 68, 77. 1877 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 270. 1904, *Kew Bulletin* 42(4): 924. 1987.

P. lacustre Chase ex Swallen

Bolivia, Brazil. Perennial or annual, aquatic, slender, decumbent, floating, rhizomatous, delicate, ligule membranous, leaf blades linear floating glabrous finely acute, loosely ascending to spreading racemes, spikelets ovate

glabrous acuminate solitary, upper glume and lower lemma membranous 5-nerved, upper lemma and palea striate, in or near water, streams and lakes, wet savannah, lowland rivers, closely related to *Paspalum acuminatum*, see *Phytologia* 14: 374. 1967.

P. laeve Michx. (*Paspalum alternans* Steud.; *Paspalum angustifolium* J. Le Conte; *Paspalum angustifolium* var. *tenue* Alph. Wood; *Paspalum australe* Nash; *Paspalum circulare* Nash; *Paspalum laeve* var. *angustifolium* (J. Le Conte) Vasey; *Paspalum laeve* var. *australe* (Nash) Nash ex Hitchc.; *Paspalum laeve* var. *brevifolium* Vasey; *Paspalum laeve* var. *circulare* (Nash) Stone; *Paspalum laeve* var. *circulare* (Nash) Fernald; *Paspalum laeve* var. *laeve*; *Paspalum laeve* var. *pilosum* Scribn.; *Paspalum laeve* var. *undulosum* (J. Le Conte) Alph. Wood; *Paspalum lecomteanum* Schult.; *Paspalum longipilum* Nash; *Paspalum plenipilum* Nash; *Paspalum punctulatum* Bertol.; *Paspalum tenue* Darby, nom. illeg., non *Paspalum tenue* Gaertn.; *Paspalum undulosum* J. Le Conte)

Northern America, U.S., Florida, Texas, Louisiana. Perennial, shortly rhizomatous, long narrow and linear leaves, smooth spikelets, yellow grains eaten by waterfowl, economic plant, weed species, troublesome weedy pest in turfgrass, potential seed contaminant, prefers moist sandy areas, ditches, mesic fields, thickets and disturbed sites, wet prairies and bayou borders, marshes and swamps, marshy ground at base of slopes, wetland, dense roadside thickets, old fields, open woods and meadows, around ponds and lakes, in roadside ditches, along roadsides and railroads, see *Flora Boreali-Americana* 1: 44. 1803, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 284-285. 1820, *Mantissa* 2: 168. 1824, *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna* 2: 599, t. 42, f. a-e. 1850, *Synopsis Plantarum Glumacearum* 1: 26. 1855 [1853], *Botany of the Southern States* 576. 1857, *A Class-book of Botany* 782. 1861, *The American Botanist and Florist* pt. 2: 390. 1871, *Bulletin of the Torrey Botanical Club* 13: 165. 1886, *Contributions from the United States National Herbarium* 3(1): 18. 1892, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 2: 34. 1894 and *Bulletin of the New York Botanical Garden* 1(5): 435-436. 1900, *Manual of the Flora of the Northern States and Canada* 73, 1039. 1901, *Rhodora* 8(95): 205. 1906, *Annual Report of the New Jersey State Museum* 1910: 187. 1911, *Rhodora* 36: 22. 1934.

in English: field paspalum, field crown grass, field beadgrass, bead grass, hairy field paspalum, roundseed paspalum, smooth lens grass, smooth knot grass, hairy lens grass, smooth paspalum, paspalum grass, fall panic grass in Colombia: pangola

P. laeve Michx. var. ***radicans*** Vasey ex Gatt.

U.S. See *The Tennessee Flora; With Special Reference to the Flora of Nashville* 92. 1887.

P. lamprocaryon K. Schum. (*Paspalum auriculatum* J. Presl; *Paspalum scrobiculatum* var. *lanceolatum* de Koning & Sosef)

Tanzania. Perennial, stout, spongy, leafy, spreading, decumbent, rooting at the lower nodes, papery overlapping sheaths, leaf blades linear-lanceolate with acute tip, spikelets closely imbricate in 2 rows, spikelets broadly elliptic, lower glume lacking, upper glume papery, upper lemma finely striate, swampy grassland, woodland, damp places, stream edges, closely related to *Paspalum scrobiculatum*, see *Mantissa Plantarum* 1: 29. 1767, *Reliquiae Haenkeanae* 1: 217. 1830, *Die Pflanzenwelt Ost-Afrikas* C: 100. 1895 and *Blumea* 30(2): 279-318. 1985.

P. lanatum Kunth (*Anthaenantia lanata* (Kunth) Benth.; *Anthenantia lanata* (Kunth) Benth.; *Leptocoryphium lanatum* (Kunth) Nees; *Milium lanatum* (Kunth) Roem. & Schult.; *Paspalum lanatum* Spreng., nom. illeg., non *Paspalum lanatum* Kunth)

Mexico. See *Nova Genera et Species Plantarum* 1: 94, t. 29. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 322. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 84. 1829, *Journal of the Linnean Society, Botany* 19: 39. 1881.

P. lanceolatum J.G. Mikan ex Trin. (*Paspalum corcovadense* Raddi)

Southern America. Acute spikelets, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 48. 1821, *Agrostografia Brasiliensis* 27. 1823 and *J. Wash. Acad. Sci.* 13(9): 173. 1923.

P. lanciflorum Trin. (*Paspalum aureolatum* Swallen; *Paspalum contractum* Pilg.; *Paspalum echinotrichum* Mez; *Paspalum piligerum* Swallen)

Amazonas, Colombia, Brazil, Venezuela. Perennial, caespitose, erect, simple, shortly rhizomatous, ligules membranous, ascending racemes, flat winged rachis, spikelets broadly lanceolate with rounded bases, upper glume 3-nerved, lower lemma 3-nerved narrowly lanceolate, upper floret narrowly lanceolate, slopes, hills, savannahs, rocky places, related to *Paspalum cachimboense*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Species Graminum* 1828-1836, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 709-710. 1898 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 9. 1921, *Fieldiana, Botany* 28(1): 22, f. 1, 2. 1951, *Flora of the Guianas* Ser. A, 485. 1990.

P. langei (Fourn.) Nash (*Dimorphostachys ciliifera* Nash; *Dimorphostachys drummondii* E. Fourn.; *Dimorphostachys langei* Fourn.; *Dimorphostachys langei* E. Fourn. ex Hemsl.; *Panicum senescens* Trin. ex Steud.; *Panicum squamatum* E. Fourn. ex Hemsl.; *Panicum squamatum* E. Fourn.; *Paspalum abbreviatum* Trin. ex E. Fourn.; *Paspalum*

abbreviatum Trin. ex Steud.; *Paspalum ciliiferum* (Nash) Hitchc.; *Paspalum drummondii* (E. Fourn.) Vasey, nom. illeg., non *Paspalum drummondii* Müll. Hal.; *Paspalum lineare* E. Fourn., nom. illeg., non *Paspalum lineare* Trin.; *Paspalum oricolum* Millsp. & Chase, also spelled *oricola*)

Northern America, U.S., Mesoamerica, South America. Perennial, decumbent, tufted, forage, growing in small clumps, low forest, open areas, open grassy areas, semi-shade, along roadsides, riverbanks, plantations, along clearings, along lakeshores, on limestone outcrops, semideciduous forest, along irrigation ditches, see *Nomenclator Botanicus. Editio secunda* 2: 263, 270. 1841, *Biologia Centrali-Americana*; ... *Botany* ... 3: 496, 499. 1885, *Mexicanas Plantas* 2: 10, 12, 14-15, 18. 1886, *Contributions from the United States National Herbarium* 3(1): 18. 1892 and *Publications of the Field Columbian Museum, Botanical Series* 3: 28, f. 28, 29. 1903, *Flora of the South-eastern United States* ... 78, 1327. 1903, *Contributions from the United States National Herbarium* 12(6): 201. 1909, *North American Flora* 17(2): 179. 1912, *Contr. U.S. Natl. Herb.* 28(1): 105. 1929.

in English: rusty-seed crown grass, rusty-seed paspalum

in Mexico: camalote moreno

P. latipes Swallen

Brazil. See *Phytologia* 14(6): 377. 1967.

P. laxiflorum Trin. (*Anastrophus laxiflorus* (Trin.) Nash; *Axonopus laxiflorus* (Trin.) Chase)

Brazil. Moist meadows, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 148. 1834 and *Proceedings of the Biological Society of Washington* 24: 133. 1911, *North American Flora* 17(2): 163. 1912.

P. laxum Lam. (*Paspalum bakeri* Hack.; *Paspalum floribundum* Desv.; *Paspalum glabrum* Poir.; *Paspalum glabrum* Alph. Wood, nom. illeg., non *Paspalum glabrum* Poir.; *Paspalum glabrum* Cassidy, nom. illeg., non *Paspalum glabrum* Poir.; *Paspalum helleri* Nash; *Paspalum ischnocaulon* Trin.; *Paspalum koleopodium* Steud.; *Paspalum laxum* A. Rich. ex Steud., nom. illeg., non *Paspalum laxum* Lam.; *Paspalum laxum* var. *lamarckianum* Döll; *Paspalum laxum* var. *laxum*; *Paspalum miliare* Spreng.; *Paspalum milioideum* Desv. ex Poir.; *Paspalum rhizomatosum* Steud.; *Paspalum richardii* Steud.; *Paspalum sinuosum* Desv.; *Paspalum tenacissimum* Mez) (named for A.A. Heller & E.G. Heller)

Southern and northern America, U.S., Florida. Perennial, caespitose, glabrous, dark purplish, tangled, coarse, in large clumps, fruiting culms erect, ligules membranous, leaf blades inrolled when dry, inflorescence short-peduncled of ascending racemes, spikelets paired in two rows, upper glume and lower lemma 3- to 5-nerved, upper floret

glabrous, medicinal value, growing in fields and waste places, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Encyclopédie Méthodique, Botanique* 5: 30. 1804, *Encyclopédie Méthodique, Botanique Suppl.* 4: 315. 1816, *Systema Vegetabilium, editio decima sexta* 1: 247. 1825, *Species Graminum* 2: t. 126. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 161-162. 1831, *Synopsis Plantarum Glumacearum* 1: 17-18. 1853 [1854 or 1855], *The American Botanist and Florist* 2: 390. 1871, *Flora Brasiliensis* 2(2): 86. 1877, *Bulletin Colorado Agricultural College, Colorado Experiment Station* 12: 91. 1890 and *Bulletin of the Torrey Botanical Club* 30(7): 376. 1903, *Informe Anual de la Estación Central Agronomica de Cuba* 1: 410. 1906, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921.

in English: coconut crown grass, coconut paspalum

in West Indies: chien-dent

P. ledermannii Mez (*Paspalum scrobiculatum* L.)

South Africa. Swampy places, marshes, see *Mantissa Plantarum* 29. 1767 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 65. 1917.

P. lehmannianum Pilg. (*Paspalum macrophyllum* Kunth)

Colombia. See *Nova Genera et Species Plantarum* 1: 92. 1815 [1816], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 709. 1898.

P. lenormandii Husn. (*Paspalum orbiculatum* Poir.)

West Indies. See *Encyclopédie Méthodique, Botanique* 5: 32. 1804, *Bulletin de la Société Linnéenne de Normandie, sér. 2* 5: 259. 1871.

P. lenticulare Kunth (*Paspalum atrocarpum* Steud.; *Paspalum compressifolium* Swallen; *Paspalum formosum* Swallen; *Paspalum humile* Steud.; *Paspalum paludosum* Swallen; *Paspalum plicatulum* Michx.; *Paspalum pontanalis* Swallen)

Venezuela, Bolivia. Perennial, erect, ascending, caespitose, rhizomatous, palatable, wet ground, savannah, open wet places, woods, wooded savannah, seasonally moist savannah, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 45. 1803, *Nova Genera et Species Plantarum* 1: 92. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 25. 1855 [1853], *Flora Brasiliensis* 2(2): 77. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Phytologia* 14(6): 376, 379, 381. 1967, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Ciencia e Cultura (São Paulo)* 39: 776. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 77(1): 181. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Darwiniana* 35(1-4): 29-36. 1998.

in Bolivia: camalote

P. lentiferum Lam. (*Paspalum amplum* Nash; *Paspalum curtisianum* Steud.; *Paspalum glaberrimum* Nash; *Paspalum kearneyi* Nash; *Paspalum lanuginosum* Bosc ex P. Beauv.; *Paspalum lanuginosum* Willd. ex Steud., nom. illeg., non *Paspalum lanuginosum* Nees; *Paspalum praecox* var. *curtisianum* (Steud.) Vasey; *Paspalum tardum* Nash) (for the American botanist Thomas Henry Kearney, 1874-1956, explorer, from 1894 to 1914 at USDA, his writings include "Notes on Grasses and Forage Plants of South-eastern States." in [United States of America - Department of Agriculture — Division of Agrostology.] *Bulletin*. no. 1. 1895, *Report on a Botanical Survey of the Dismal Swamp Region*. Washington 1901, "Plant life on saline soils." *J. Wash. Acad. Sci.* 8: 109-125. 1918, "Malvaceae: a new subtribe and genus, and new combinations." *Leaflet. Western Bot.* 5: 189-191. 1949, "The American genera of Malvaceae." *Amer. Midl. Naturalist.* 46(1): 93-131. 1951, "Wild and domesticated cotton plants of the world." *Leaflet. Western Bot.* 8: 103-109. 1957, "A tentative key to the South American species of *Hibiscus*." *Leaflet. Western Bot.* 8(7): 161-180. 1957, "A tentative key to the South American species of *Abutilon*." *Leaflet. Western Bot.* 8(9): 201-224. 1958, "A tentative key to the South American species of *Pavonia* Cav." *Leaflet. Western Bot.* 8(10): 225-246. 1958 and "A tentative key to the South American species of *Sida* L." *Leaflet. Western Bot.* 8: 249-270. 1958, with Robert Hibbs Peebles (1900-1955) wrote *Flowering Plants and Ferns of Arizona*. Washington 1942 and *Arizona Flora*. Second edition. Berkeley, CA 1951. See Thomas H. Kearney, Robert H. Peebles and collaborators, *Arizona Flora with Supplement* by John Thomas Howell, Elizabeth McClintock and collaborators. Univ. Calif. Press, Berkeley and Los Angeles, California 1960; J. Harry Lehr, *A Catalogue of the Flora of Arizona*. Phoenix Arizona 1978; Lloyd Herbert Shinnars (1918-1971), "Three New Varietal Names in *Sphaeralcea* (Malvaceae)." *Sida*. 1: 384-385. 1964; J.H. Barnhart, *Biographical notes upon botanists*. 2: 275. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 207. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 248. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. 101. 1969; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

U.S. See *Flora Caroliniana, secundum ...* 75. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175. 1791, *Essai d'une Nouvelle Agrostographie* 12. 1812, *Nomenclator Botanicus. Editio secunda* 2: 271. 1841, *Synopsis Plantarum Glumacearum* 1: 26. 1855 [1853], *Bulletin of the Torrey Botanical Club* 13: 165. 1886 and *Flora of the South-eastern United States ...* 77. 1903.

P. lentiginosum J. Presl (*Paspalum millegrana* Schrad.)

Mexico, Honduras, Guatemala. Clumped, forage, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 190. 1810, *Mantissa* 2: 175. 1824, *Reliquiae Haenkeanae* 1(4-5): 218. 1830, *Nomenclator Botanicus. Editio secunda* 2: 273. 1841, *Mexicanas Plantas* 2: 8. 1886, *Revisio Generum Plantarum* 3(2): 362. 1898 and *Bulletin of the Torrey Botanical Club* 30(7): 375. 1903, *North American Flora* 17(2): 190. 1912, *Darwiniana* 3(1-4): 53-60. 1995.

P. leptachne Chase

Mexico. Forage, see *Contributions from the United States National Herbarium* 28(1): 220, f. 132. 1929.

P. liebmanni E. Fourn. (*Paspalum tenellum* Willd.)

Mexico. See *Enumeratio Plantarum Horti Botanici Bero-linensis, ...* 89. 1809, *Mexicanas Plantas* 2: 11. 1886.

P. ligulare Nees (*Paspalum setaceum* var. *dispar* R. Guzmán)

South America, Brazil. Perennial, erect, ascending, tough, hard, caespitose, clumped, long ligules membranous, leaf blades linear scabrid tapering to a finely acuminate tip, slender racemes, spikelets obovate-oblong glabrous paired, upper glume 3-nerved, lower lemma 3-nerved, upper lemma and palea minutely granular, forage, growing in open field, damp open places, along rivers, in sandy loam, disturbed places, rocky crevices, along roadsides, very similar to *Paspalum pleostachyum*, see *Flora Boreali-Americana* 1: 43. 1803, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 60. 1829 and *Phytologia* 51(7): 469. 1982, *Darwiniana* 3(1-4): 53-60. 1995.

P. liloi Hack.

Brazil and Argentina. Basal sheaths glabrous, hairy solitary spikelets, growing along rocky riverbanks, see *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 282-283. 1914.

P. limbatum Henrard (*Panicum plicatulum* (Michx.) Kuntze; *Paspalum plicatulum* Michx.)

Paraguay. Moist meadows, see *Flora Boreali-Americana* 1: 45. 1803, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Blumea* 4(3): 511. 1941, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in Spanish: gramalote

P. lindenianum A. Rich. (*Paspalum longifolium* Steud., nom. illeg., non *Paspalum longifolium* Roxb.; *Paspalum megaphyllum* Steud.)

Cuba, the Caribbean. See *Historia Fisica Politica y Natural de la Isla de Cuba, Botanica* 11: 299. 1850, *Synopsis Plantarum Glumacearum* 1: 21, 464. 1855 [1853 or 1854].

P. lineare Trin. (*Panicum furcellatum* S. Moore; *Paspalum angustifolium* Nees, nom. illeg., non *Paspalum angustifolium* J. Le Conte; *Paspalum furcellatum* S. Moore; *Paspalum lineare* E. Fourn., nom. illeg., non *Paspalum*

lineare Trin.; *Paspalum lineare* Sw. ex Steud.; *Paspalum neesii* Kunth; *Paspalum neesii* var. *neesii*; *Paspalum tropicum* Döll)

Central Brazil, Paraguay, Mexico to Argentina. Perennial bunchgrass, erect, densely caespitose, leaves mainly basal, nodes bearded, leaf blades linear attenuate, ascending racemes, spikelets elliptic glabrous solitary in two rows, upper glume and lower lemma coriaceous 5-nerved, upper floret elliptic acute, moist places, forest shade, campos, grassland, similar to *Paspalum proximum*, see *De Graminibus Paniceis* 99. 1826, *Révision des Graminées* 1: 25. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 64. 1829, *Nomenclator Botanicus. Editio secunda* 2: 272. 1841, *Flora Brasiliensis* 2(2): 83. 1877, *Mexicanas Plantas* 2: 12. 1886, *Transactions of the Linnean Society of London, Botany* 4(3): 505, t. 34, f. 14-22. 1895 and *Contr. U.S. Natl. Herb.* 28: 71. 1929, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

P. lividum Trin. ex Schtdl. (*Paspalum denticulatum* Trin.; *Paspalum hieronymi* Hack.; *Paspalum proliferum* Arechav.) Mexico, Bolivia, Uruguay, U.S., Texas, Brazil, Argentina, Paraguay. Perennial, small, ground cover, erect with a creeping base, geniculate, spreading, shortly stoloniferous, fine and smooth stems, leaf blades linear acuminate, racemes parallel and close to the axis, spikelets purplish elliptic-obovate glabrous paired, upper glume and lower lemma membranous 3-nerved apiculate, fodder, fair grazing for wildlife and livestock, grows abundantly on poorly drained soils, saltwater marshes, fresh wetlands, along swales and the edge of rivers, wetlands and freshwater marshes, coastal wetlands, see *De Graminibus Paniceis* 111. 1826, *Linnaea* 26(3): 383. 1854, *Anales del Museo Nacional de Montevideo* 1: 63. 1894 and *Österreichische Botanische Zeitschrift* 51: 198. 1901, *Contr. U.S. Natl. Herb.* 28: 57. 1929, *Hickenia* 1: 73-78. 1977.

in English: pull-and-be-damned, longtom

in Mexico: camalote pálido, camalote pallido

P. loefgrenii Ekman (*Paspalum froesianum* Swallen) (named for the Brazilian (Swedish born) botanist (Johan) Albert (Constantin) Löfgren (Alberto Loefgren), 1854-1918, collected material of the type species, from 1898 to 1906 Director of the São Paulo Botanical Garden, his writings include "Ensaio para uma sinonimia dos nomes populares de plantas indígenas do estado de São Paulo." *B. da Comissão Geographica e Geologica do estado de São Paulo*. 10: 3-115. São Paulo 1894, *Manual das familias naturaes phanerogamas*. Rio de Janeiro 1917, *Notas botanicas (Ceará)*. Rio de Janeiro 1910 and "A lenha." *Boletim de Agricultura*. São Paulo 1913. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 395. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum*

of Harvard University. Cambridge, Mass. 1917-1933; Frederico Carlos Hoehne, M. Kuhlmann and Oswaldo Handro, *O jardim botânico de São Paulo*. 126. 1941; Johannes Eugenius Bülow Warming (1841-1924), *Lagoa Santa*. Copenhagen 1892; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, California 1997)

Brazil. Perennial bunchgrass, caespitose, sparsely to densely pubescent, basal leaf sheaths persistent and fibrous, ligule membranous, leaf blades tough linear or linear-lanceolate, leaves densely and softly hairy, inflorescence of slender ascending spreading racemes scattered on an axis, spikelets elliptic or narrowly obovate paired, lower glume a small ciliate scale, upper glume and lower lemma 5-nerved, upper lemma and palea granular, in dry open places, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 15, t. 3, f. 1, t. 6, f. 5. 1911, *Phytologia* 14(6): 387. 1967.

P. longebrachiatum Steud. (*Paspalum arundinaceum* Poir.)

French Guiana. See *Encyclopédie Méthodique. Botanique ... Supplément* 4: 310. 1816, *Synopsis Plantarum Glumacearum* 1: 60. 1853 and *Contr. U.S. Natl. Herb.* 28: 206. 1929.

P. longiaristatum Davidse & Filg. (*Paspalum longearistatum* Davidse & Filg.)

Brazil. Annual, upper glume and lower lemma aristate, moist ground, see *Novon* 3(2): 129-132, f. 1. 1993.

P. longicuspe Nash

Mexico. In water or shallow water, forage, see *North American Flora* 17(2): 172. 1912.

P. longiflorum Retz. (*Digitaria longiflora* (Retz.) Pers.; *Panicum longiflorum* (Retz.) J.G. Gmelin; *Panicum parvulum* Trin.; *Paspalum longiflorum* P. Beauv.; *Syntherisma longiflora* (Retz.) Skeels)

India. See *Observationes Botanicae* 4: 15. 1786, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 158. 1791, *Syn. Pl.* 85. 1805, *Flore d'Oware* 2: 46, t. 85, f. 2. 1807, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 205. 1834 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 261: 30. 1912, *Mono-graph of the Genus Digitaria* 410. 1950.

P. longifolium Roxb. (*Paspalum cognatum* Steud.; *Paspalum flexuosum* Klein ex J.S. Presl; *Paspalum houttuynii* Van Hall ex De Vriese; *Paspalum longifolium* Roxb.; *Paspalum longifolium* Steud., nom. illeg., non *Paspalum longifolium* Roxb.; *Paspalum longifolium* var. *hirsutum* Boerl.; *Paspalum longifolium* var. *trichocoleum* Hack.; *Paspalum orbiculare* G. Forst.; *Paspalum orbiculare* var. *otobedii* Fosberg & Sachet; *Paspalum platycolum* Ridl.; *Paspalum scrobiculatum* var. *longifolium* (Roxb.) Domin; *Paspalum scrobiculatum* var. *philippinense* Merr.;

Paspalum sumatrense Roth ex Roemer & Schultes) (for Demei Otobed, Director, Bureau of Natural Resources and Development, Ministry of Resources & Development, National Government, Palau, see D.O. Otobed, *Guide List of Plants of the Palau Islands*. Biology Laboratory, Entomology Section, Koror, Palau, Trust Territory of the Pacific Islands. 1971, F.R. Fosberg, Demei Otobed, M.H. Sachet, Royce L. Oliver Dulcie, A. Powell & Joan E. Canfield, *Vascular Plants of Palau with Vernacular Names*. Washington 1980, Cassell, Jodi, D.O. Otobed, and Haruo Adelbai, *Comprehensive Conservation Strategy for the Republic of Palau: A Review of the Palau Conservation Program and Recommendations for Additional Program Policies*. Palau: The Division of Conservation/Entomology of the Bureau of Resources and Development, Republic of Palau, 1992, Demei O. Otobed, *Republic of Palau: State of the Environment Report*. Apia [Western Samoa]: SPREP, 1994, Freifeld, Holly, and Demei O. Otobed, *A Preliminary Wildlife Management Plan for the Republic of Palau: Vertebrates*. Palau: Division of Conservation/Entomology, Bureau of Natural Resources and Development, Republic of Palau, January 1997, G.J. Wiles, J. Engbring, and D. Otobed, "Abundance, biology, and human exploitation of bats in the Palau Islands." *Journal of Zoology*, London, vol. 241, 203-227. 1997. The Republic of Palau is located at the extreme western edge of the Caroline Islands)

Tropical Australia, tropical Southeast Asia, Thailand, Nepal, Sri Lanka, the Philippines, China, Taiwan, India, Indonesia. Perennial, erect, variable, tufted, purple leaf sheath loose, leaf blade linear and longitudinally ribbed, lihulehyaline, panicle peduncle usually exserted, racemes spreading, 1-sided spikes, stalked spikelets overlapping and paired, lower glume ovate and boat shaped or absent, lemmas white and hairy, palea leathery, weed species, occurs on both marshy and dry ground, in wet ground, forest, see *Mantissa Plantarum* 29. 1767, *Florulae Insularum Australium Prodrum* 7. 1786, *Hortus Bengalensis, or a Catalogue ...* 7. 1814, *Systema Vegetabilium* 2: 316. 1817, *Flora Indica; or Descriptions ...* 1: 283-284. 1820, *Reliquiae Haenkeanae* 1: 215. 1820, *Synopsis Plantarum Glumacearum* 1: 21, 28. 1855 [1853], *Plantae Indiae Batavae Orientalis* 2: 113. 1857, *Annales du Jardin Botanique de Buitenzorg* 8: 49. 1890 and *Philippine Journal of Science* 1: 345. 1906, *Philippine Journal of Science* 3: 167. 1908, *Bibliotheca Botanica* 85: 288. 1915, *The Flora of the Malay Peninsula* 5: 217. 1925, *Handb. Fl. Ceylon* 6: 315. 1931, *Reinwardtia* 2(2): 321. 1953, *Grasses of Ceylon* 136. 1956, *Grasses of Burma ...* 339. 1960, *Micronesica* 18(2): 83. 1982 [1984], *Blumea* 30: 297, 299. 1985.

in English: longleaf paspalum

in the Philippines: tal-tal likod

in Thailand: yaa kap kae, ya kap kae, ya phraek hang chang, yaa phraek haang chaang, ya plong hin, yaa plong hin, yaa rang takka taen, ya rang takka taen, yaa waai, ya wai

P. longifolium Roxb. var. ***lorirachis*** Bor

Asia, India. See *Flora Indica; or Descriptions ...* 1: 283-284. 1820 and *Flora of Assam* 5: 253. 1940.

P. longipilum Nash (*Paspalum laeve* Michx.; *Paspalum laeve* Michx. var. *pilosum* Scribn.; *Paspalum plenipilum* Nash)

North America, U.S. See *Flora Boreali-Americana* 1: 44. 1803, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 2: 34. 1894 and *Bulletin of the New York Botanical Garden* 1(5): 435-436. 1900, *Manual of the Flora of the Northern States and Canada* 73. 1901, *Annals of the Missouri Botanical Garden* 74: 432-433. 1987.

P. longum Chase

Mexico. See *Proceedings of the California Academy of Sciences, Series 4*, 20: 52. 1931.

P. lucidulum Swallen (*Paspalum altsonii* Chase)

Suriname. Wet places, moist sandy areas, rocky slopes, see *Journal of the Washington Academy of Sciences* 27(4): 144. 1937, *Bulletin of the Torrey Botanical Club* 75: 84. 1948.

P. macedoi Swallen (*Paspalum guenoarum* Arechav.)

Brazil, Bolivia. Perennial, caespitose, stiff, erect, ascending, shortly rhizomatous, branched scaly rhizomes, erect foliage, leaf blades linear attenuate, spikelets obovate or elliptic paired, upper glume and lower lemma membranous villous or glabrous, palatable, found in seasonally humid savannah, wooded savannah, see *Anales del Museo Nacional de Montevideo* 1: 50. 1894 and *Phytologia* 14: 377. 1967, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

P. macranthecium Parodi (*Eriochloa castanea* Hack.; *Paspalum piresii* G.A. Black) (for João Murça Pires, b. 1916)

Paraguay. Annual, erect, deep sandy soil, woodland, see *Repertorium Specierum Novarum Regni Vegetabilis* 7: 370. 1909, *Notas del Museo de la Plata, Botánica* 8: 83, f. 2. 1943, *Boletim Técnico do Instituto Agrônomico do Norte* 20: 35. 1950.

P. macroblepharum Hack. (*Paspalum polyphyllum* Nees ex Trin.)

Brazil. See *De Graminibus Paniceis* 114. 1826 and *Österreichische Botanische Zeitschrift* 51: 196. 1901.

P. macrophyllum Kunth (*Paspalum lehmannianum* Pilg.)

Southern America, Paraguay. Small, erect to decumbent, some leaves with wavy margins, grows on moist and semi-arid habitats, see *Nova Genera et Species Plantarum* 1: 92. 1815 [1816], *Mexicanas Plantas* 2: 11. 1886, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 709. 1898.

in English: big-leaf crown grass

in Spanish: matojo de choroní

P. maculatum Nash (*Paspalum pictum* Ekman)

Costa Rica. Moist ground, along riverbanks, open savannah, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 11, t. 6, f. 7. 1911, *North American Flora* 17(2): 186. 1912.

P. maculosum Trin. (*Paspalum eburneum* Henrard; *Paspalum maculosum* var. *maculosum*; *Paspalum maculosum* var. *multinode* I.L. Barreto; *Paspalum notatum* var. *maculatum* Nees)

Brazil, Bolivia, Uruguay, Venezuela to Argentina, Guyana, Paraguay. Perennial, caespitose, shortly rhizomatous, erect, geniculate, tussocky, clumped, leaves mainly basal, ligules membranous densely ciliolate, leaf blades linear with scabrous margins, inflorescence of divergent racemes nearly conjugate, stout spikelets solitary glabrous elliptic-oblong or orbicular covered with numerous minute dark spots, upper glume and lower lemma 3-nerved, upper lemma finely granular-striate, useful for erosion control, grassland, dry lowland grasslands, marshy places, seasonally inundated areas, swampy areas, related to *Paspalum serpentinum*, see *Graminum Monographiae ... Pars I. Paspalum*. *Reimaria* 106. 1810, *De Graminibus Paniceis* 98. 1826, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 104. 1850, *Flora Brasiliensis* 2(2): 72. 1877 and *Blumea* 4(3): 512. 1941, *Revista Argentina de Agronomía* 24(3): 95. 1957, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Iheringia, Série Botânica* 47: 3-44. 1996.

P. madoreense Renvoize

Brazil. Perennial, rhizomatous, leaf blades linear folded acute, spikelets solitary obovate-oblong glabrous, upper glume and lower lemma membranous 3-nerved, cerrado, damp sandy soil, see *Kew Bulletin* 39(1): 179. 1984, S.A. Renvoize, *Grasses of Bahia* 209. 1984.

P. malacophyllum Trin. (*Anachyris paspaloides* Nees; *Anachyris setaria* E. Fourn.; *Panicum malacophyllum* (Trin.) Kuntze, nom. illeg., non *Panicum malacophyllum* Nash; *Panicum malacophyllum* var. *cordobense* Kuntze; *Panicum malacophyllum* var. *elongatum* (Griseb.) Kuntze; *Paspalum boliviense* Chase; *Paspalum eitenii* Swallen; *Paspalum elongatum* Griseb.; *Paspalum malacophyllum* f. *parviflorum* Hack.; *Paspalum malacophyllum* var. *ciliatum* Döll; *Paspalum malacophyllum* var. *genuinum* Döll; *Paspalum malacophyllum* var. *glabrescens* Döll; *Paspalum malacophyllum* var. *longipilum* Hack.; *Paspalum malacophyllum* var. *petiolatum* Döll; *Paspalum planiusculum* Swallen; *Paspalum quadrifarium* var. *elongatum* (Griseb.) Hack.; *Paspalum tenuifolium* Swallen; *Wirtgenia paspaloides* Nees ex Döll) (for the Brazilian botanists G. Eiten, b. 1923 and Liene de Jesus Teixeira Eiten, 1925-1979, botanical collectors, with Sidney Frederick Glassman, Robert Merrill King (1930-1969), Frank Almeda, W.D. Clayton; George Eiten spent more than 30 years studying the cerrado

vegetation, he is the author of *Habitat flora of Fazenda Campininha, São Paulo, Brazil. I – Introduction, Species of the “Cerrado,” Species of Open Wet Ground*. pp. 181-231 in: Simpósio sobre o cerrado. 1963, “The cerrado vegetation of Brazil.” *Bot. Rev.* 38: 201-341. 1972, *Classificação da vegetação no Brasil*. Brasília, CNPq 1983 and “Vegetação.” in: M.N. Pinto, editor, *Cerrado: caracterização, ocupação e perspectivas*. Editora Universidade de Brasília, Brasília, D.F. pp. 17-73. 1993. See *Phytologia* 32: 256-257, 334. 1975; *Phytologia* 46: 109-110. 1980; *Mem. New York Bot. Gard.* 35: 583. 1982; *Mem. New York Bot. Gard.* 65: 379. 1991; *Contr. Univ. Michigan Herb.* 19: 416. 1993; *Illinois Biol. Monogr.* 59: 65. 1999; Alberto Löfgren, “Ensaio para uma distribuição dos vegetaes nos diversos grupos florísticos.” Reimpressão fac-simile de: *Boletim da Comissão Geographica e Geologica de São Paulo* 11: 1-50. 1898, edition 2. pp. 23-72 in: George Eiten, *A vegetação do Estado de São Paulo*. São Paulo, Instituto de Botânica 1970)

Argentina, Colombia to Paraguay, Bolivia, Puerto Rico. Perennial, delicate or robust, erect bunchgrass, variable, leafy with broad leaf blades lanceolate or linear, leaves mostly basal, rhizomatous, inflorescences purple, oblong spikelets large and strongly ribbed, upper glume absent, lower lemma 3-nerved concave membranous, resistant to the disease ergot, growing in forest margins, on wet banks along ditch, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Species Graminum* 3: t. 271. 1836 [or 1829-1830? 1831?], *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 103. 1850, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 260-261. 1874, *Flora Brasiliensis* 2(2): 40-41. 1877, *Mexicanas Plantas* 2: 2. 1886, *Revisio Generum Plantarum* 3(3): 362. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 61, 63. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 341. 1909, *Anales del Museo Nacional de Buenos Aires* 21: 25. 1911, *Contributions from the United States National Herbarium* 24(8): 454. 1927, *Contr. U.S. Natl. Herb.* 28: 229. 1929, *Phytologia* 14(6): 384-385. 1967, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *International Journal of Plant Sciences* 159(1): 153-159. 1998, *Gramíneas de Bolivia* 454-455. 1998, *Darwiniana* 35(1-4): 29-36. 1998, *Candollea* 55: 125. 2000.

in English: ribbed crown grass, ribbed paspalum

P. malmeanum Ekman (for Gustaf Oskar Andersson Malme (né Andersson) (1864-1937), author of *Ex herbario Regneliano*. Stockholm 1898-1901 and “Die Compositen der zweiten Regnellschen Reise. III. Puente del Inca und Las Cuevas (Mendoza).” *Ark. Bot.* 24A(8): 58-66. 1932)

Brazil, Bolivia. Perennial, caespitose, erect, leaf blades linear acuminate, spikelets ovate-elliptic solitary in 2 rows, upper glume 5-nerved, lower lemma shortly hairy, cerrado, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien*

10(17): 12, t. 4, f. 3, t. 6, f. 6. 1911, *Gramíneas de Bolivia* 451. 1998.

P. manabiense Mez (*Paspalum racemosum* Lam.)

Ecuador. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 30. 1917.

P. mandiocanum Trin. (*Paspalum mandiocanum* var. *ellipticum* Döll; *Paspalum strictum* Spreng. ex Steud.)

Argentina, Uruguay, Brazil, Paraguay. Perennial, caespitose, stoloniferous, low-growing prostrate, decumbent, spreading, leaves glabrous or pubescent or densely pilose, spikelets paired, economic plant, useful for erosion control, permanent ground cover for soil protection, grows better in very low light in old orchards, found in forest margins, shade, along roadsides, see *De Graminibus Paniceis* 113. 1826, *Nomenclator Botanicus. Editio secunda* 2: 273. 1841, *Flora Brasiliensis* 2(2): 80. 1877 and *Anais do congresso da sociedade de botânica do Brasil* 15 134, f. 2. 1967, *Darwiniana* 30(1-4): 87-94. 1990.

P. mandiocanum Trin. var. ***mandiocanum*** (*Paspalum strictum* Spreng. ex Steud.)

Brazil. See *De Graminibus Paniceis* 113. 1826, *Nomenclator Botanicus. Editio secunda* 2: 273. 1841.

P. mandiocanum Trin. var. ***subaequiglume*** Barreto

Brazil, Argentina, Paraguay. Low-growing, leaves pubescent, see *Anais do congresso da sociedade de botânica do Brasil* 15 134, f. 2. 1967, *Darwiniana* 30(1-4): 87-94. 1990.

P. marginatum Trin. (*Axonopus longecilius* (Hack.) Parodi; *Axonopus marginatus* (Trin.) Chase; *Axonopus marginatus* (Trin.) Kuhl., nom. illeg., non *Axonopus marginatus* (Trin.) Chase; *Paspalum marginatum* Remy, nom. illeg., non *Paspalum marginatum* Trin.; *Paspalum marginatum* Spreng. ex Steud.)

Brazil. See *De Graminibus Paniceis* 90. 1826, *Nomenclator Botanicus. Editio secunda* 2: 272. 1841, *Annales des Sciences Naturelles; Botanique, sér. 3* 6: 348. 1846, *Flora Brasiliensis* 2(2): 110. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 370. 1909, *Contributions from the United States National Herbarium* 17(3): 226. 1913, *Indian Journal of Plant Sciences* 67(Bot. 11): 87. 1922, *Notas del Museo de la Plata, Botánica* 3(17): 22. 1938.

P. maritimum Trin. (*Paspalum abrahamii* Chase; *Paspalum densiflorum* auct.; *Paspalum hirtigluma* Steud.; *Paspalum wulschlaegelii* Mez)

Cuba, Colombia, Brazil. Perennial, caespitose, erect or decumbent, flexuous culms, dark conspicuous nodes, more or less strongly rhizomatous, long stoloniferous, rooting at the nodes, forming dense colonies or patches, leaf blades narrowly lanceolate, racemes scattered on a short axis, paired spikelets obovate or broadly elliptic-oblong, lower glume absent or sometimes present, upper glume obovate

3-nerved, lower lemma membranous 2-nerved, upper lemma and palea coriaceous, rather variable in habit, near the ocean, coastal plains, sand dunes, along roadsides, savannah, moist swales, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 148. 1834, *Synopsis Plantarum Glumacearum* 1: 18. 1855 [1853] and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 10. 1921, *Contributions from the United States National Herbarium* 22(6): 480, f. 81. 1922.

in English: coastal-sand crown grass

P. marmoratum Kuhl.

Brazil. Annual, tufted, leaf blades linear pilose acuminate, spikelets broadly ovate solitary alternate in two rows, upper glume 5-nerved, lower lemma 5-nerved, upper lemma marmorate, see *Archivos do Jardim Botânico do Rio de Janeiro* 4: 348, t. 26. 1925.

P. mathewsii Mez (*Axonopus mathewsii* (Mez) Hitchc.) (for the British gardener Andrew Mathews, d. 1841 (Chachapoyas, Peru), 1830-1841 plant collector in Chile and Peru. See A. Lasègue, *Musée botanique de Benjamin Delessert*. 255-257. Paris 1845; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 209. Oxford 1964; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. 373. London 1969)

Peru, Ecuador. See *Repertorium Specierum Novarum Regni Vegetabilis* 15: 62. 1917, *Contributions from the United States National Herbarium* 24(8): 432. 1927.

P. mayanum Chase

Mexico, Yucatan. Along trails, roadsides, see Luis de Molina y Neve, *Reglas de orthographia, diccionario, y arte del idioma othomi*. Mexico 1767, Antonio del Río, *Descriptions of the Ruins of an Ancient City, Discovered Near Palenque, in the Kingdom of Guatemala, in Spanish America*. London 1822, Faustino Chimalpopocatl Galicia, *Silabario de idioma mexicano*. Mexico. 1849, Faustino Chimalpopoca[tl Galicia], *Epítome ó modo fácil de aprender el idioma nahuatl ó lengua mexicana*. México. 1869 and Cyrus Thomas and John R. Swanton, *Indian Languages of Mexico and Central America and Their Geographical Distribution*. Washington DC 1911, Ralph L. Roys, "The Ethnobotany of the Maya." *Middle American Research Series*. New Orleans 1931, *Publications of the Carnegie Institution of Washington* 436: 342, f. 6. 1934, E.L. Hewett, *Ancient Life in Mexico and Central America*. Indianapolis 1936, Henry R. Wagner, *The Discovery of Yucatan by Francisco Hernandez de Cordoba*. Berkeley 1942, F. Peterson, *Ancient Mexico: An Introduction to the Pre-hispanic Cultures*. NY 1959, William R. Holland, *Medicina maya en los*

altos de Chiapas. México 1963, Sedley J. Mackie, editor, *An Account of the Conquest of Guatemala in 1524 by Pedro de Alvarado*. New York 1969, Wilbur J. Granberg, *People of the Maguay: The Otomi Indians of Mexico*. New York, Praeger 1970, Alicja Iwanska, *Purgatory and Utopia: a Mazahua Indian Village of Mexico*. Cambridge 1971, Muriel Porter Weaver, *The Aztec, Maya, and their Predecessors: Archaeology of Mesoamerica*. New York 1972, Brent Berlin, Dennis E. Breedlove and Peter H. Raven, *Principles of Tzeltal Plant Classification: An Introduction to the Botanical Ethnography of a Mayan-Speaking People of Highland Chiapas*. New York 1974, Alfredo Marín Barrera, Alfredo Barrera Vazquez & Rosa María López Franco, *Nomenclatura etnobotánica maya: una interpretación taxonómica*. Mexico, D.F. 1976, Victor Perera & Robert D. Bruce, *The Last Lords of Palenque: The Lacandon Mayas of the Mexican Rain Forest*. Boston, Toronto 1982, Janis B. Alcorn and Cándido Hernández V., "Plants of the Huastecan region with an analysis of their Huastec names." *Journal of Mayan Linguistics*. 4: 11-18. 1983, Fray Antonio Marjil de Jesus, Fray Lazaro de Mazariegos & Fray Blas Guillen, *A Spanish Manuscript Letter on the Lacandones in the Archives of the Indies at Seville*. [Translated and with notes by Alfred Marston Tozzer, 1876-1954]. Labyrinthos, Culver City, California 1984, Carmen Aguilera, *Flora y fauna Mexicana*. Mitología y tradiciones. 116-117. México s.d. [1985], Linda Schele and Mary Ellen Miller, *The Blood of Kings: Dynasty and Ritual in Maya Art*. Fort Worth, Texas 1986, Inga Clendinnen, *Ambivalent Conquests: Maya and Spaniard in Yucatan, 1517-1570*. Cambridge 1987, Maximino Martínez (1888-1964), *Catálogo de nombres vulgares y científicos de plantas mexicanas*. México 1987, Lourdes Arizpe et al., *Cultura y Cambio global: percepciones sociales sobre la deforestación en la selva Lacandona*. México, UNAM 1993, Ana María Huerta Jaramillo, *El jardín de Cal. Antonio de la Cal y Bracho, la botánica y las ciencias de la salud en Puebla, 1766-1833*. Puebla 1996.

P. megaphyllum Steud. (*Paspalum lindenianum* A. Rich.)

The Caribbean. See *Historia Física Política y Natural de la Isla de Cuba*, *Botanica* 11: 299. 1850, *Synopsis Plantarum Glumacearum* 1: 464. 1854.

P. melanospermum Desv. ex Poir. (*Paspalum amazonicum* Trin.; *Paspalum boscianum* Fluegge; *Paspalum caespitosum* Hochst. ex Steud., nom. illeg., non *Paspalum caespitosum* Fluegge; *Paspalum foveolatum* Steud.; *Paspalum humile* Steud.; *Paspalum olivaceum* Hitchc. & Chase; *Paspalum plicatulum* var. *microspermum* Döll)

Panama, Brazil, Bolivia, Lesser Antilles. Annual, erect or ascending, tufted, decumbent, sometimes rooting at the lower nodes, more or less long stoloniferous, ligules acute, leaf blades linear glabrous attenuate, lax racemes divergent on a slightly flexuous axis, spikelets obovate-orbicular glabrous or pubescent, upper glume 5-nerved, lower lemma 3-

to 5-nerved, upper lemma dark brown, forage, growing in clumps, weed, open areas, woods, disturbed ruderal areas, along roadsides, riverbanks, savannah, among rocks, sandy places, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 170. 1810, *Encyclopédie Méthodique. Botanique ... Supplément 4*: 315. 1816, *Linnaea* 10(3): 294. 1836, *Synopsis Plantarum Glumacearum* 1: 22, 25. 1854 [1855 or 1853], *Flora Brasiliensis* 2(2): 78. 1877 and *Contributions from the United States National Herbarium* 18(7): 310. 1917, *Contr. U.S. Natl. Herb.* 28(1): 225. 1929, *Flora of Puerto Rico and Adjacent Islands: A Systematic Synopsis* 1-342. 1982.

P. metzii Steud. (*Paspalum commersonii* Lam.; *Paspalum scrobiculatum* var. *bispicatum* Hack.)

India. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175, f. 43, f. 1. 1791, *Synopsis Plantarum Glumacearum* 1: 21-22. 1855 [1853] and *Blumea* 30(2): 279-318. 1985.

P. microstachyum J. Presl (*Paspalum cognatissimum* Steud.; *Paspalum effusum* Nees, nom. illeg., non *Paspalum effusum* (L.) Raspail; *Sporobolus virginicus* (L.) Kunth)

Northern and Central America, Mexico, Ecuador. Decumbent, caespitose, clumped, along roadsides, trail, muddy riverbanks, shade or partial shade, see *Species Plantarum* 1: 63. 1753, *Révision des Graminées* 1: 67. 1829, *Reliquiae Haenkeanae* 1(4-5): 215. 1830, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 104. 1850, *Synopsis Plantarum Glumacearum* 1: 18. 1855 [1853] and *Brittonia* 23(3): 293-324. 1971, *Australian Journal of Botany* 36: 23-39. 1988.

P. miliare Spreng. (*Paspalum laxum* Lam.; *Paspalum laxum* A. Rich. ex Steud.; *Paspalum miliare* (Lam.) K. Schum. & Hollrung, nom. illeg., non *Paspalum miliare* Spreng.; *Paspalum milioideum* Desv. ex Poir.)

South America. See *Mantissa Plantarum* 29. 1767, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Encyclopédie Méthodique, Botanique Suppl.* 4: 315. 1816, *Systema Vegetabilium, editio decima sexta* 1: 247. 1825, *Synopsis Plantarum Glumacearum* 1: 17. 1853, *Die Flora von Kaiser Wilhelms Land* 21. 1889 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 20: 146. 1914.

P. millegrana Schrad. ex Schult. (*Panicum lagascae* var. *schreberianum* (Fluegge) Kuntze; *Paspalum densum* sensu Ekm., non Poir.; *Paspalum karwinskyi* E. Fourn.; *Paspalum lentiginosum* J. Presl; *Paspalum millegrana* Schrad.; *Paspalum schreberianum* (Fluegge) Nash; *Paspalum underwoodii* Nash; *Paspalum virgatum* var. *schreberianum* Fluegge; *Paspalum vulnerans* Salzm. ex Steud.) (for the Bavarian naturalist Baron Wilhelm Friedrich Karwinski von Karwin, 1780-1855, field collector in Mexico; see Gordon Douglas Rowley, *A History of Succulent Plants*. 371. [b. 1799] Strawberry Press, Mill Valley, California 1997; Irving

William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Central America, West Indies to Brazil. Perennial, caespitose, robust, stout, erect, coarse, glaucous, often branched, ligules membranous, leaves with cutting scabrous margins, leaf blades linear glabrous acuminate, shortly rhizomatous, open inflorescence ovate or oblong, panicle pyramidal with densely packed racemes spreading at maturity, paired spikelets ovate to orbicular, flat ciliate rachis, lower glume absent or rudimentary, upper glume and lower lemma membranous 1- to 5-nerved, upper lemma and palea smooth and shiny to minutely granular-striate, troublesome weed species in hay and pastures, grows in moist habitats, along roadsides, disturbed ground, sandy places, moist savannahs, very closely related to *Paspalum conspersum* and *Paspalum densum*, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 190. 1810, *Mantissa* 2: 175. 1824, *Reliquiae Haenkeanae* 1(4-5): 218. 1830, *Nomenclator Botanicus. Editio secunda* 2: 273. 1841, *Mexicanas Plantas* 2: 8. 1886, *Revisio Generum Plantarum* 3(2): 362. 1898 and *Bulletin of the Torrey Botanical Club* 30(7): 375. 1903, *North American Flora* 17(2): 190. 1912, *Darwiniana* 3(1-4): 53-60. 1995.

in English: razor grass

in Spanish: paja brava, cortadera, yerba brava

P. minarum Hack.

Brazil. Perennial, tufted, slender, erect, linear leaf blades acuminate sparsely pilose, ligule villous, inflorescence racemose with solitary spikelets obovate-oblong and glabrous, upper glume and lower lemma 2-nerved, in damp sandy soil, see *Österreichische Botanische Zeitschrift* 51: 235. 1901, *Darwiniana* 3(1-4): 53-60. 1995.

P. minus E. Fourn. (*Paspalum barretoii* Canto-Dorow, Valls & Longhi-Wagner; *Paspalum notatum* var. *minus* (E. Fourn.) Guzmán & Santana; *Paspalum pumilum* Nees)

Central America, Bolivia, Brazil, Mexico, Paraguay. Perennial, small, erect or decumbent, prostrate, nodes conspicuous, leaves mainly basal, leaf sheaths keeled, leaf blades linear acute glabrous or with hispid margins, rhizomatous, spikelets ovate-elliptic glabrous solitary, rachis triquetrous, upper glume and lower lemma coriaceous or cartilaginous 3- to 5-nerved, grows in low moist area in a pasture, rocky places, edge of marsh, along roadsides, riverbanks, sandy soil, savannah, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 52. 1829, *Mexicanas Plantas* 2: 6. 1886 and *Contr. U.S. Natl. Herb.* 28: 67. 1929, *Phytologia* 14(6): 358. 1967, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Bradea, Boletim do Herbarium Bradeanum*

6(40): 331, f. 1-5. 1995, *Darwiniana* 3(1-4): 53-60. 1995, *Iheringia, Série Botânica* 47: 3-44. 1996.

in English: matted crown grass, mat paspalum, matted paspalum

P. minutiflorum Desv. (*Digitaria violascens* Link; *Panicum steudelianum* Domin; *Paspalum minutiflorum* Steud., nom. illeg., non *Paspalum minutiflorum* Desv.)

Brazil. Along roadsides, see *Hortus Regius Botanicus Berolinensis* 1: 229. 1827, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 161. 1831, *Synopsis Plantarum Glumacearum* 1: 17. 1855 [1853] and *Bibliotheca Botanica* 85: 296. 1915, *Brunonia* 6(2): 131-216. 1983 [1984].

P. modestum Mez (*Paspalum burchellii* Munro ex Döll; *Paspalum hydrophilum* Henrard; *Paspalum modestum* Döll)

South America. Adapted to humid soils, see *Hooker's Icones Plantarum* 11: 80, t. 1100. 1871, *Flora Brasiliensis* 2(2): 42-43. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 68. 1917, *Mededeelingen van's Rijks-Herbarium* 45: 1. 1922, *Bonplandia* 5: 235-242. 1983, *Darwiniana* 30(1-4): 87-94. 1990, *Flora of North America North of Mexico* 25: i-xxv, 1-783. 2003.

P. molle Poir. (*Paspalum caespitosum* Fluegge; *Paspalum molle* J. Presl, nom. illeg., non *Paspalum molle* Poir.; *Paspalum mollendense* Mez; *Paspalum portoricense* Nash; *Paspalum sciaphilum* Steud.; *Paspalum simile* Mez; *Paspalum umbrosum* Salzm. ex Steud.; *Syntherisma molle* (J. Presl) Scribn.)

Southern U.S. to Brazil. Perennial, caespitose or loosely tufted, slender, dark conspicuous nodes, leaf blades linear to linear-lanceolate tapering at the base, slender racemes scattered on an axis, spikelets elliptic paired and loosely arranged on the ribbon-like rachis, upper glume and lower lemma 3- to 5-nerved membranous, upper lemma and palea coriaceous smooth, forest shade, closely related to *Paspalum corcovadense*, see *Encyclopédie Méthodique, Botanique* 5: 34. 1804, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 161. 1810, *Reliquiae Haenkeanae* 1(4-5): 213. 1830, *Synopsis Plantarum Glumacearum* 1: 18-19. 1855 [1853 or 1854], *Annual Report of the Missouri Botanical Garden* 10: 50. 1899 and *Bulletin of the Torrey Botanical Club* 30(7): 377. 1903, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 31, 70. 1917.

in English: soft crown grass

P. mononeuron Steud. (*Paspalum candidum* (Humb. & Bonpl. ex Fluegge) Kunth; *Reimaria candida* Humb. & Bonpl. ex Fluegge)

Mexico. See *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 214. 1810, *Mémoires du Muséum d'Histoire Naturelle* 2: 68. 1815, *Synopsis Plantarum Glumacearum* 1: 24. 1855 [1853].

P. monostachyum Vasey (*Festuca ovina* var. *vulgaris* Staub, nom. illeg., non *Festuca ovina* var. *vulgaris* Wallr.;

Paspalum monostachyum Willd. ex Steud.; *Paspalum rectum* var. *longispicatum* Vasey; *Paspalum solitarium* Nash U.S., Florida. Littoral habitats, poorly to very poorly drained soils, freshwater marshes, wetlands, sandy beach dunes, coastal prairie, wet prairies, coastal grassland, useful high-quality forage, see *Nomenclator Botanicus. Editio secunda* 2: 272. 1841, *Flora of the Southern United States* 665. 1883, *Botanical Gazette* 9: 54, 55. 1884 and *Flora of the Southeastern United States ...* 77. 1903.

in English: gulf dune crown grass, gulf dune paspalum, single-spike paspalum

P. montanum Henrard (*Paspalum oligostachyum* Salzm. ex Steud.)

Suriname, Brazil. Rocky places, see *Synopsis Plantarum Glumacearum* 1: 23. 1855 [1853] and *Recueil des Travaux Botaniques Néerlandais* 39: 141. 1942.

P. montevidense Spreng. (*Panicum plicatulum* (Michx.) Kuntze; *Paspalum plicatulum* Michx.; *Paspalum plicatulum* subsp. *montevidense* (Spreng.) Roseng., B.R. Arrill. & Izag.)

South America, Uruguay. See *Flora Boreali-Americana* 1: 45. 1803, *Systema Vegetabilium, editio decima sexta* 1: 246. 1825, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Gramíneas Uruguayas* 373, f. 153. 1970, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970.

P. morichalense Davidse, Zuloaga & Morrone

Venezuela. Perennial, aquatic, erect, ascending, weak, prostrate, decumbent, creeping, procumbent, floating, rooting stems, leaf blades linear glabrous finely acute, spikelets elliptic compressed dorsiventrally glabrous solitary, upper glume and lower lemma 3- to 5-nerved, in water or shallow water, wet savannah, sandy soil, edge of lakes, standing water, muddy riverbanks, ponds, see *Novon* 5(3): 235-237, f. 1. 1995.

P. multicaule Poir. (*Axonopus fissifolius* (Raddi) Kuhl.; *Paspalum horticola* Salzm. ex Döll; *Paspalum horticola* var. *maritimum* Salzm. ex Döll; *Paspalum papillosum* Spreng.)

Mexico, Bolivia, Brazil, Venezuela, Cuba. Annual or perennial, densely tufted, slender, erect or ascending, decumbent, leaves mainly basal, branching at the lower nodes, ligules membranous ciliate, linear leaf blades erect acuminate pilose or glabrous, inflorescence of two conjugate divergent racemes, round solitary spikelets arranged alternately on the narrow rachis, upper glume and lower lemma membranous 1- to 3-nerved, upper lemma and palea crustaceous, weed, forage, growing in clumps, among rocks, campo, savannah, grassland, sandy soil, muddy places, disturbed ground, restinga, along roadsides, lowland savannahs, cerrado, open areas, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 309. 1816, *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* 47. Halae [Halle]

[1818 or 1819], *Agrostografia Brasiliensis* 26. 1823, *Flora Brasiliensis* 2(2): 54, 60. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Comissão de Linhas Telegraficas, Botanica* 67(Bot. 11): 87. 1922, *Brittonia* 23(3): 293-324. 1971, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in Mexico: zacate de llano

P. multinervium A.G. Burm. (*Thrasya reticulata* Swallen)

French Guiana, Brazil, Venezuela. Caespitose, erect, wet places, along rivers and streams, canals, ditches, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 29(6): 267-268. 1948 [1949], *Acta Botanica Venezuelica* 14(4): 90. 1985[1987].

P. multinodum B.K. Simon

Australia. See *Austrobaileya* 3(4): 600, f. 8. 1992.

P. mutabile Chase

Mexico. See *Contributions from the United States National Herbarium* 28(1): 61, f. 29. 1929.

P. nanum C. Wright ex Griseb. (*Paspalum caudicatum* C. Wright)

Cuba. Savannah, see *Catalogus plantarum cubensium ...* 230. 1866, *Anales de la Academia de Ciencias Medicas ...* 8: 205. 1871.

P. neesii Kunth (*Paspalum lineare* Trin.)

Brazil. See *De Graminibus Paniceis* 99. 1826, *Flora Brasiliensis* 2(2): 84. 1877 and *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Flora Fanerogamica do Estado de São Paulo* 1-292. 2001.

P. nelsonii Chase (for the American naturalist Edward William Nelson, 1855-1934, explorer, in Mexico and Guatemala, with Edward Alphonso Goldman (1873-1946), plant collector, from 1890 to 1929 with the USDA.

Mexico. Fodder, see *Contributions from the United States National Herbarium* 28(1): 203, f. 123. 1929.

in Mexico: pasto

P. nesiotis Chase

West Indies, the Caribbean. See *Contributions from the United States National Herbarium* 28(1): 117, f. 67. 1929.

P. nicorae Parodi (*Paspalum arenicolum* (Arechav.) Herter, nom. illeg., non *Paspalum arenicolum* Müll. Hal.; *Paspalum plicatulum* var. *arenarium* Arechav.)

Brazil, Argentina, Uruguay, Paraguay. Perennial, erect, rhizomatous with deep and vigorous rhizomes, prostrate sod forming, sheath usually glabrous, leaves erect blue-green, inflorescence gray-green, curving racemes erect or ascending, spikelets solitary oval to elliptical, lower glume absent, upper glume hairy on the back, sterile lemma glabrous and wrinkled, fertile floret punctulate-striolate, anthers yellow-white, stigmas white to purple, seed dark and glossy, eco-

onomic plant, pasture species, useful for erosion control, excellent for the stabilization of waterways, apparently drought-resistant, shade-tolerant, forage, not eaten readily by stock, grows in moist sandy soils of the littoral, see *Anales del Museo Nacional de Montevideo* 1: 58. 1894 and *Revista Sudamericana de Botánica* 6(5-6): 138. 1940, *Notas del Museo de la Plata, Botánica* 8(40): 82. 1943, *Journal of Cytology and Genetics* 18: 26-33. 1983.

in English: Brunswick grass

P. niquelandiae Filg.

Brazil, Goiás, Municipio de Niquelândia. Rocky places, see *Novon* 5(1): 30-33. 1995.

P. notatum Fluegge (*Paspalum candidum* (Humb. & Bonpl. ex Fluegge) Kunth; *Paspalum cromyrorhizon* Trin. ex Döll; *Paspalum distachyon* Willd. ex Döll, nom. illeg., non *Paspalum distachyon* Poit. ex Trin.; *Paspalum notatum* var. *cromyrorhizon* (Trin. ex Döll) Herter; *Paspalum notatum* var. *eriyorhizon* Griseb.; *Paspalum notatum* var. *latiflorum* Döll; *Paspalum notatum* var. *saurae* Parodi; *Paspalum notatum* var. *typicum* (Fluegge) Parodi; *Paspalum saltense* Arechav.; *Paspalum saurae* (Parodi) Parodi; *Paspalum taphrophyllum* Steud.; *Paspalum tephrophyllum* Steud.; *Paspalum uruguayense* Arechav.)

Central and southern America. Perennial bunchgrass, polymorphic, vigorous, coarse, erect, often decumbent, low-growing, creeping, forming dense turfs, rhizomatous, short and stout rhizomes and stolons, root system deep and extensive, persistent base of old sheaths, leaves pubescent, sheath glabrous or ciliate, ligule an inconspicuous membrane, inflorescence of 2 conjugate racemes ascending, ovate spikelets solitary smooth and glossy, lower floret reduced to an empty lemma, lower glume absent or minute, upper glume glabrous and wrinkled, fertile floret papillose-striate, multitude of tall fast-growing seed stalks, seeds yellowish green and oval, usually a prolific seed producer, propagation by seeds and woody runners, ornamental weed species highly invasive, does not grow well in shade, naturalized in the wild, potential seed contaminant, rapidly growing when established, quickly colonizes large areas, native pasture species, fair grazing for livestock, rather unpalatable to cattle, poor grazing for wildlife, economic plant, cultivated as lawn grass and fodder grass, once established can be grazed heavily, ground cover useful for erosion control, recommended for protection against erosion on sloping ground, often used to stabilize terraces, sometimes susceptible to paspalum ergot, excellent drought resistance, tolerant of flooding and salinity, best in poor conditions and in sandy soil, a weed of roadsides and lawns, found on coastal sands and other sandy soils, in areas with moderate to high rainfall and a short dry season, disturbed places, damp grassland, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 106, 214. 1810, *Mémoires du Muséum d'Histoire*

Naturelle 2: 68. 1815, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 104. 1850, *Synopsis Plantarum Glumacearum* 1: 19. 1855 [1853], *Flora Brasiliensis* 2(2): 73-74. 1877, *Symbolae ad Floram Argentinam. Zweite ...* 305. 1879, *Anales del Museo Nacional de Montevideo* 1: 53-54, t. 1. 1894 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Anales del Museo de Historia Natural de Montevideo* 3: 51. 1929, *Revista del Museo de La Plata, Nueva Serie, Botanica* 1(4): 211-251. 1937, *Revista Argentina de Agronomía* 15: 54-55. 1948, *Darwiniana* 15: 106. 1969, *Brittonia* 23(3): 293-324. 1971, *Bonplandia* 5: 235-242. 1983, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Botanical Gazette* 145: 420-426. 1984, *Blumea* 30: 313. 1985, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Darwiniana* 30(1-4): 87-94. 1990, *Revista Brasileira de Genética* 20(1): 29-34. 1997, *Darwiniana* 35(1-4): 29-36. 1998, Smith R. L. M. F. Grandó Y. Y. Li J. C. Seib R. G. Shatters, "Transformation of bahiagrass (*Paspalum notatum* Fluegge)." *Plant Cell Reports* 20: 1017-1021. 2002.

in English: Bahia grass, Bahia paspalum, bahiagrass, forquilha grass, notatum grass, Paraguay paspalum

in French: herbe de Bahia

in Spanish: cañamazo, tejona, grama dulce, pasto horqueta, gengibrillo, bahía

in Brazil: forquilha

in Colombia: pasto bahía

in El Salvador: grama

in Mexico: Bahía, pasto bahía

in South Africa: Bahia paspalum, Bahiagras

in Indonesia: rumput pencasilan

in Thailand: ya-bahia

in Vietnam: co san dáu

P. notatum Fluegge var. ***latiflorum*** Döll (*Paspalum notatum* Fluegge; *Paspalum notatum* var. *notatum*; *Paspalum saltense* Arechav.; *Paspalum uruguayense* Arechav.)

South America, Argentina, Brazil, Bolivia, Paraguay, Uruguay. Useful for erosion control, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 106. 1810, *Flora Brasiliensis* 2(2): 73. 1877, *Anales del Museo Nacional de Montevideo* 1: 53-54, t. 1. 1894 and *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Blumea* 30: 313. 1985, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994.

P. notatum Fluegge var. ***notatum*** (*Paspalum notatum* var. *latiflorum* Döll; *Paspalum saltense* Arechav.; *Paspalum tephrophyllum* Steud.; *Paspalum uruguayense* Arechav.)

South America. Forage, useful for erosion control, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 106. 1810, *Synopsis Plantarum Glumacearum* 1: 19. 1853, *Flora Brasiliensis* 2(2): 73. 1877, *Anales del Museo Nacional de Montevideo* 1: 53-54, t. 1. 1894 and *Flora de la*

Provincia de Buenos Aires 4(2): 1-624. 1970, *Blumea* 30: 313. 1985, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994.

in Mexico: pasto bahia, trencilla

P. notatum Fluegge var. *saurae* Parodi (*Paspalum notatum* Fluegge; *Paspalum saurae* (Parodi) Parodi)

South America, Argentina. Perennial, small plant, leaves narrow, inflorescence branched, spikelets small, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 106. 1810 and *Revista Argentina de Agronomía* 15: 55. 1948, *Darwiniana* 15: 106. 1969, *Iheringia, Série Botânica* 47: 3-44. 1996.

in Brazil: pensacola

P. nudatum Luces (*Paspalum delicatum* Swallen; *Paspalum longiligulatum* Renvoize)

Venezuela, Brazil. Perennial or annual, erect, caespitose, subaquatic, slender, glabrous, basal sheaths dense, nodes prominent, leaves mainly basal, ligules membranous, papery leaf sheaths keeled glabrous or sub-glabrous, leaf blades linear erect acute wiry, two divergent conjugate racemes, spikelets solitary orbicular-oblong in two rows, glumes lacking, lower lemma membranous oblong 5-nerved, upper lemma slightly beaked, wet meadows, wet savannahs, moist places, in shallow water, closely related to *Paspalum pictum* and *Paspalum delicatum*, see *Journal of the Washington Academy of Sciences* 32(6): 163, f. 7. 1942, *Contributions from the United States National Herbarium* 29(6): 268-269. 1948 [1949], *Kew Bulletin* 27(3): 454. 1972.

P. nummularium Chase ex Send. & A.G. Burm.

Brazil. See *Brittonia* 32(4): 487. 1980 [1981].

P. nutans Lam. (*Paspalum altsonii* Chase; *Paspalum boivini* Steud.; *Paspalum curvistachyum* Raddi; *Paspalum decumbens* Sw.; *Paspalum heteropodium* Steud.; *Paspalum lloydii* Nash; *Paspalum protensum* Trin.; *Paspalum singulare* Link; *Paspalum supinum* Sieber ex Steud., nom. illeg., non *Paspalum supinum* Bosc ex Poir.) (for the American botanist Francis E. Lloyd, 1868-1947, F.L.S. 1925, traveler, explorer, botanical collector, with Lucien Marcus Underwood (1853-1907) and Samuel Mills Tracy (1847-1920), on Carl Lumholtz Expedition through the Sierra Madres of Northern Mexico. See Carl Lumholtz (1851-1922), *New Trails in Mexico; An Account of One Year's Exploration in Northwestern Sonora, Mexico, and Southwestern Arizona 1909-10*. New York, [Charles Scribner's Sons] 1912, and *El Mexico desconocido; cinco años de exploracion entre las tribus de la Sierra Madre occidental, en la tierra caliente de Tepix y Jalisco...* Mexico 1970)

Central America to Brazil, Honduras. Perennial or annula herbaceous, erect, creeping, ascending, decumbent at base, rooting at the nodes, stoloniferous, leaf sheaths keeled, ligules membranous, linear leaf blades glabrous or sparsely

pilose, solitary arcuate often deflexed racemes, nearly glabrous spikelets obovate to slightly elliptic, lower glume usually absent, upper glume broadly ovate 5- to 7-nerved, flat lower lemma 3- to 5-nerved, upper lemma finely granular, weed in plantation, slopes, savannahs, open areas, disturbed areas, sandy soil, forest shade, riverbeds, forest margins, related to *Paspalum altsonii* and *Paspalum pilosum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum seu Prodromus* 22. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175. 1791, *Agrostografia Brasiliensis* 26. 1823, *De Graminibus Paniceis* 108. 1826, *Hortus Regius Botanicus Berolinensis* 1: 48. 1827, *Synopsis Plantarum Glumacearum* 1: 19, 416. 1854 [1853] and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *North American Flora* 17(2): 178. 1912, *J. Wash. Acad. Sci.* 13(9): 172. 1923, *Journal of the Washington Academy of Sciences* 27(4): 144. 1937, *Brittonia* 23(3): 293-324. 1971.

in Spanish: grama de conejo

P. oaxacense Steud. (*Dimorphostachys oaxacensis* (Steud.) E. Fourn. ex Hemsl.; *Paspalum distichum* L.)

Mexico. See *Systema Naturae, Editio Decima* 855. 1759, *Synopsis Plantarum Glumacearum* 1: 21. 1855 [1853], *Biologia Centrali-Americana; ... Botany ...* 3(19): 499. 1885 and *Taxon* 21: 546. 1972, *Taxon* 25: 513. 1976, *Taxon* 32: 281. 1983.

P. oligostachyum Salzm. ex Steud. (*Paspalum montanum* Henard; *Paspalum oligostachyum* var. *molle* Salzm. ex Döll; *Paspalum salzmannii* Döll)

Brazil, Venezuela, French Guiana, Trinidad. Perennial, erect, loosely tufted, slender, pilose or pubescent, caespitose, knotty base, leaf sheaths papillate, ligules membranous, softly pilose leaf blades narrowly lanceolate acute, open inflorescence, slender racemes loosely flowered and scattered on an axis, spikelets broadly obovate appressed paired, upper glume membranous 3- to 7-nerved, lower lemma 5- to 7-nerved, upper lemma and palea shiny, savannahs, forest, disturbed damp places, shade or partial shade, deciduous forest, see *Synopsis Plantarum Glumacearum* 1: 23. 1855 [1853], *Flora Brasiliensis* 2(2): 49, 76. 1877 and *Recueil des Travaux Botaniques Néerlandais* 39: 141. 1942.

P. orbiculare Forst.f. (*Paspalum longifolium* var. *pseudo-orbiculare* Jansen; *Paspalum scrobiculatum* L.; *Paspalum scrobiculatum* var. *orbiculare* (G. Forst.) Hack.)

Australia, Polynesia, New Guinea. Perennial, caespitose, bunchy, coarse, stout, very tough, glabrous, erect, knotted rootstock, tough root system, purplish cataphylls, leaves abruptly tapering to a sharp stiff point, leaf sheaths glabrous and compressed, leaf blades flat and smooth, ligule very short and with a few hairs, flowering stems naked below, inflorescence long exserted with spreading racemes, one-sided spikes, spikelets mostly solitary, lower glume absent, upper glume boat-shaped, fertile floret finely punctulate,

lower lemma oval, upper lemma brown, palea hard with a clasping margin, fruit compressed, used as fodder of little value, noxious weed, persistent, common in coastal districts, in woodland in higher rainfall areas, cultivated areas, in or near taro plantations, wet regions, in irrigation and drainage ditches, rocky slopes, in clearings and in fields, rangelands, along roadsides, heavy clay soil, in pastures, ditches and wasteland, see *Mantissa Plantarum* 29: 1767, *Florulae Insularum Australium Prodrromus* 7. Goettingen 1786, *Reliquiae Haenkeanae* 1(4-5): 216. 1830, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 233. 1885 and *Bulletin of Miscellaneous Information Kew* 1930: 257. 1930, *Reinwardtia* 2(2): 321. 1953, *Contrib. N.S.W. Natl. Herb. Flora Series* 19(1): 118-119. 1961, *Kew Bulletin* 30(1): 101-105. 1975, *Flora of Tropical East Africa* 451-898. 1982, *Micronesica* 18(2): 83. 1982 [1984], *Journal of Cytology and Genetics* 18: 26-33. 1983, *Blumea* 30(2): 279-318. 1985, *Cytologia* 52: 487-491. 1987, *Auck. Bot. Soc. J.* 53: 40-42. 1998.

in English: ditch millet, rice grass

in English: rice grass

in Micronesia: rehnta

in Thailand: yaa nom non, ya nom non

P. orbiculatum Poir. (*Paspalum geniculatum* Steud., nom. illeg., non *Paspalum geniculatum* Raf.; *Paspalum lenormandii* Husn.; *Paspalum orbiculatum* subsp. *potarense* Chase; *Paspalum orbiculatum* var. *lanuginosum* Henrard; *Paspalum pusillum* Vent. ex Fluegge; *Paspalum serpens* J. Presl ex Trin.; *Paspalum serpens* Nees, nom. illeg., non *Paspalum serpens* J. Presl ex Trin.)

Mexico, Bolivia, Paraguay, Cuba. Annual or perennial, variable, creeping, delicate, slender, decumbent, prostrate, branched, rooting at the lower nodes, stoloniferous and rhizomatous, leaf blades lanceolate glabrous acute, inflorescence of divergent slender racemes often arching, solitary spikelets orbicular compressed dorsiventrally, upper glume and lower lemma membranous 2- to 3-nerved, upper lemma and palea smooth, very attractive, forming low and tough turf, forming colonies, forage and lawn grass, sunny open places, damp or swampy open places, open muddy ground, wet ground, riverbeds, among rocks, see *Encyclopédie Méthodique, Botanique* 5: 32. 1804, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 100. 1810, *De Graminibus Paniceis* 102. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 50. 1829, *Synopsis Plantarum Glumacearum* 1: 18. 1855 [1853], *Bulletin de la Société Linnéenne de Normandie, sér. 2* 5: 259. 1871 and *Bulletin de la Société Botanique de Genève* 5: 304. 1913, *Contributions from the United States National Herbarium* 22: 478. 1922, *Recueil des Travaux Botaniques Néerlandais* 39: 145. 1942, *Brittonia* 23(3): 293-324. 1971.

in English: circular crown grass

in Mexico: grama

P. orbiculatum Poir. var. *lanuginosum* Henrard (*Paspalum orbiculatum* Poir.)

Mexico to Paraguay. Leaves linear, slender 1-sided terminal spikes, in disturbed areas, see *Encyclopédie Méthodique, Botanique* 5: 32. 1804 and *Recueil des Travaux Botaniques Néerlandais* 39: 145. 1942.

P. oteroi Swallen

Brazil. Perennial, prostrate, creeping, stoloniferous, forage, sandy soil, floodplains, high flooding area, see *Phytologia* 14(6): 383. 1967, *Ciencia e Cultura (São Paulo)* 39: 776. 1987.

in Brazil: grama tio-pedro

P. ovale Nees ex Steud. (*Paspalum ambustum* Swallen; *Paspalum epile* Nash; *Paspalum epile* Parodi; *Paspalum ovale* Nees; *Paspalum parodianum* Henrard; *Paspalum tropicum* Döll)

South America, Brazil, Argentina. Bunchgrass, leafy, selectively grazed, riverbanks, along streams, see *Synopsis Plantarum Glumacearum* 1: 22. 1853, *Flora Brasiliensis* 2(2): 83. 1877 and *Flora of the Southeastern United States ...* 72. 1903, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 341. 1909, *Phytologia* 8: 372, f. 1. 1926, *Blumea* 4(3): 511. 1941, *Phytologia* 14(6): 366. 1967.

P. pachyrrhizum Steud. (*Paspalum dasyleurum* Kunze ex Desv.)

South America. See *Synopsis Plantarum Glumacearum* 1: 23. 1853, *Flora Chilena* 6: 242. 1854 and *Taxon* 49: 561. 2000.

P. pallens Swallen (*Paspalum fessum* Swallen)

Brazil, Bolivia. Perennial, aquatic, weak, branched, rooting at the lower nodes, leaf blades linear attenuate, two conjugate racemes, spikelets oblong glabrous solitary in two rows, rachis triquetrous, upper glume and lower lemma membranous 5-nerved, sandy soil, along riverbanks, see *Phytologia* 14(6): 365-366. 1967, *Revista Brasileira de Botânica* 25(4): 371-389. 2002.

P. pallidum Kunth (*Paspalum pellitum* Willd. ex Steud., nom. illeg., non *Paspalum pellitum* Nees ex Trin.; *Paspalum pilgerianum* Chase)

Ecuador. Bunchgrass, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum* 1: 88. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 2: 272. 1841 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 24(8): 445. 1927, *Darwiniana* 33(1-4): 67-95. 1995.

P. palmeri Chase (*Paspalum setaceum* var. *pubiflorum* Vasey)

Mexico. See *Flora Boreali-Americana* 1: 43. 1803, *Contributions from the United States National Herbarium* 1(4): 114. 1891 and *Contributions from the United States National Herbarium* 28(1): 109, f. 59. 1929.

P. paludosum Swallen

Venezuela, Bolivia. Perennial, erect, ascending, caespitose, rhizomatous, palatable, wet ground, savannah, open wet places, woods, wooded savannah, seasonally moist savannah, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 45. 1803, *Nova Genera et Species Plantarum* 1: 92. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 25. 1855 [1853], *Flora Brasiliensis* 2(2): 77. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Phytologia* 14(6): 376, 379, 381. 1967, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Ciencia e Cultura (São Paulo)* 39: 776. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 77(1): 181. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Darwiniana* 35(1-4): 29-36. 1998.

in Bolivia: camalote

P. palustre Mez

Paraguay. Floating, see *Repertorium Specierum Novarum Regni Vegetabilis* 15: 69. 1917, *Cytologia* 56: 223-228. 1991.

P. paniceum Sm. (*Paspalum densum* Poir.)

The Caribbean, West Indies, Jamaica. See *Encyclopédie Méthodique, Botanique* 5: 32. 1804, *The Cyclopaedia; or, Universal Dictionary of Arts, Sciences, and Literature* by Abraham Rees, ... In thirty-nine volumes ... 26: no. 14. London 1813.

P. paniculatum L. (*Axonopus paniculatus* Mez ex Torrend; *Panicum paniculatum* (L.) Kuntze; *Panicum paniculatum* (L.) Nash, nom. illeg., non *Panicum paniculatum* (L.) Kuntze; *Paspalum affine* Bello, nom. illeg., non *Paspalum affine* Steud.; *Paspalum cognatissimum* Steud.; *Paspalum compressicaule* Raddi; *Paspalum cordovense* E. Fourn.; *Paspalum galmaria* F.M. Bailey; *Paspalum guineense* Steud.; *Paspalum hemisphericum* Poir.; *Paspalum multi-spica* Steud.; *Paspalum paniculatum* var. *minor* S. Moore; *Paspalum paniculatum* var. *minor* Scribn., nom. illeg., non *Paspalum paniculatum* var. *minor* S. Moore; *Paspalum paniculatum* var. *rigidum* Schltld. ex E. Fourn.; *Paspalum polystachium* Salzm. ex Steud.; *Paspalum strictum* Pers.; *Paspalum strictum* (Ait.) Brot., nom. illeg., non *Paspalum strictum* Pers.; *Paspalum supinum* Rupr. ex Galeotti, nom. illeg., non *Paspalum supinum* Bosc ex Poir.; *Paspalum umbrosum* Trin.)

Tropical America, tropical Africa, Polynesia, Australia, New Guinea. Perennial, robust, caespitose, coarsely clumped, erect to geniculately ascending, sometimes rooting from the lower nodes, dark nodes densely villous or more or less hairy, rhizomatous with rhizomes hirsute, leaf sheaths striate and hairy to very hispid, ligule membranous and ciliate, leaf blades linear-lanceolate hairy with scabrous margins, inflorescence terminal pyramidal, very slender

racemes erect and then spreading to drooping, spikelets paired ovate or obovate, winged rachis, flower bracts greenish brown, lower glume absent, upper glume and sterile lemma hairy membranous 1- to 3-nerved, upper lemma and palea crustaceous, economic plant, naturalized, native pasture species, weed, used as ground cover, common in moist disturbed areas, swamps, sandy soils, cultivated soils, along roadsides, waste places, forest shade, grasslands, dry fields, similar to *Paspalum umbrosum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Encyclopédie Méthodique, Botanique* 5: 31. 1804, *Syn. Pl.* 1: 86. 1805, *Phytographia Lusitaniae Selector* 13, t. 5. Lisboa 1816-1827, *Agrostografia Brasiliensis* 29. 1823, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 153. 1834, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9: 237. 1842, *Synopsis Plantarum Glumacearum* 1: 18. 1855 [1853 or 1854], *Flora Brasiliensis* 2(2): 56. 1877, *Anales de la Sociedad Española de Historia Natural* 12: 125. 1883, *Mexicanas Plantas* 2: 9. 1886, *Botany Bulletin, Department of Agriculture, Queensland* 9: 12. 1894, *Transactions of the Linnean Society of London, Botany* 4: 503. 1895, *Revisio Generum Plantarum* 3: 363. 1898 and *Publications of the Field Columbian Museum, Botanical Series* 2(1): 24. 1900, *Bulletin of the Torrey Botanical Club* 30(7): 381. 1903, *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Contr. U.S. Natl. Herb.* 28(1): 123. 1929, *Broteria* III, 2: 119. 1933, *Gramíneas Uruguayas* 373. 1970, *Brittonia* 23(3): 293-324. 1971, *Hickenia* 1: 73-78. 1977, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Darwiniana* 30(1-4): 87-94. 1990.

in English: Russell River grass, angel grass, galmarra grass, hairy grass

in Spanish: arrocillo, yerba peluda

in the Caribbean: zèb a chouval, herbe à cheval

in Mexico: camalote, guixi-be-taa, guixi betaa, huchum toom, quixi petaa, tule bromo, tule bronco

in Pacific: matie manutai, taravao 'uru'uru

P. paniculatum L. subsp. ***umbrosum*** (Trin.) Roseng., B.R. Arrill. & Izag. (*Paspalum umbrosum* Trin.)

South America, Brazil, Uruguay, Paraguay. Sandy pasture, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 153. 1834 and *Gramíneas Uruguayas* 373. 1970, *Darwiniana* 35(1-4): 29-36. 1998.

P. paradisiacum Steud. (*Paspalum dasyleurum* Kunze ex Desv.)

Chile, Valparaíso. See *Flora Chilena* 6: 242. 1854, *Synopsis Plantarum Glumacearum* 1: 23-24. 1855 [1853] and *Taxon* 49: 561. 2000.

P. parinervium Mez (*Paspalum angustifolium* Nees ex Trin., nom. illeg., non *Paspalum angustifolium* J. Le Conte; *Paspalum approximatum* Ekm., non Döll; *Paspalum approximatum* Döll; *Paspalum approximatum* var. *approximatum*; *Paspalum approximatum* var. *coarctum* Döll; *Paspalum neesii* var. *neesii*; *Paspalum neesii* var. *undulatum* Döll; *Paspalum parinervium* Mez)

Central and southern Brazil. Plant tufted, very shortly rhizomatous, spikelets glabrous, see *De Graminibus Paniceis* 99. 1826, *Flora Brasiliensis* 2(2): 82, 84. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Flora Fanerogamica do Estado de São Paulo* 1-292. 2001.

P. parodianum Henrard (*Paspalum ovale* Nees ex Steud.; *Paspalum tropicum* Döll)

South America. See *Synopsis Plantarum Glumacearum* 1: 22. 1853, *Flora Brasiliensis* 2(2): 83. 1877 and *Blumea* 4(3): 511. 1941.

P. parviflorum Rhode ex Fluegge (sometimes also Rohde ex Fluegge) (*Panicum parviflorum* R. Br.; *Paspalum abstrusum* Trin.; *Paspalum gossypinum* Mez; *Paspalum hyalinum* Nees ex Trin.; *Paspalum parviflorum* (R. Br.) K. Schum. & Hollrung, nom. illeg., non *Paspalum parviflorum* Rohde ex Fluegge; *Paspalum parviflorum* var. *humile* Nees ex Döll; *Paspalum polychaetum* Mez; *Paspalum vestitum* Steud.)

Panama, Brazil, Bolivia, U.S. Annual, clumped, delicate, densely tufted, villous or densely hairy, erect or ascending, branched, ligules membranous, leaf blades linear attenuate acuminate, 1-3 slender racemes spreading at maturity, spikelets obovate-oblong glabrous solitary viscid glandular in two rows, lower glume minute, upper glume and lower lemma 2-nerved, upper lemma and palea smooth shining, open places on sandy soils, savannah, dry lowland savannahs, moist places, disturbed ground, rocky soil, along roadsides, see *Prodromus Florae Novae Hollandiae* 192. 1810, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 98. 1810, *De Graminibus Paniceis* 103. 1826, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 135. 1834, *Synopsis Plantarum Glumacearum* 1: 17. 1853, *Flora Brasiliensis* 2(2): 45. 1877, *Die Flora von Kaiser Wilhelms Land* 21. 1889 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 68. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921, *Brittonia* 23(3): 293-324. 1971.

in English: small-seed crown grass, smallseed paspalum, small-flower crown grass

P. paschale Stapf (*Axonopus paschalis* (Stapf) Pilg.) (Easter Island, Latin *Pascha*, ae "the fest of the Passover, Easter")

Chile, Easter Island. See *Bulletin of Miscellaneous Information Kew* 1913: 117. 1913, *The Natural History of Juan Fernandez and Easter Island* 2: 63, t. 6, f. 2. 1922, *Advancing Frontiers of Plant Sciences* 5: 1-186. 1963.

P. paspalodes (Michx.) Scribn. (*Anastrophus paspaloides* (Michx.) Nash; *Digitaria disticha* (L.) Fiori & Paol.; *Digitaria paspaloides* Michx.; *Digitaria paspalodes* Michx.; *Milium paspalodes* (Michx.) Elliott; *Milium distichum* (L.) Muhl.; *Panicum paspaliforme* J. Presl; *Panicum polyrrhizum* J. Presl; *Paspalum chepica* Steud.; *Paspalum digitaria* Poir.; *Paspalum digitaria* Müll. Hal., nom. illeg., non *Paspalum digitaria* Poir.; *Paspalum distichum* L.; *Paspalum distichum* subsp. *paspalodes* (Michx.) Thell.; *Paspalum distichum* var. *digitaria* (Poir.) Hack.; *Paspalum elliottii* S. Watson; *Paspalum fernandezianum* Colla; *Paspalum michauxianum* Kunth; *Paspalum paspaloides* (Michx.) Scribn.; *Paspalum schaffneri* Griseb. ex E. Fourn.; *Paspalum vaginatum* var. *pubescens* Döll)

Africa, Arabia. Perennial, decumbent and erect, herbaceous, rooting at the basal nodes, rhizomatous and stoloniferous, rhizomes and stolons widely spreading, leaf blade linear and pointed, inflorescence a pair of spikes, ascending racemes, flattened rachis, spikelets acute to oblong-elliptic, upper glume pubescent, black stigmas, good pasturage, found in swamps and swampy ditches, in or near water, shallow water, rice fields, moist ground, canal banks, along streams, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Flora Boreali-Americana* 1: 46. 1803, *A Sketch of the Botany of South-Carolina and Georgia* 1: 104. 1816, *Encyclopédie Méthodique, Botanique Suppl.* 4: 316. 1816, *Descriptio uberior Graminum* 78. 1817, *Revision des Graminées* 1: 25. 1829, *Reliquiae Haenkeanae* 1(4-5): 296. 1830, *Memorie della Reale Accademia delle Scienze di Torino* 39: 27, t. 59. 1836, *Synopsis Plantarum Glumacearum* 1: 21. 1855 [1853], *Botanische Zeitung. Berlin* 19(44): 324. 1861, *Flora Brasiliensis* 2(2): 75. 1877, *Mexicanas Plantas* 2: 6. 1886, *Bulletin of the Torrey Botanical Club* 13: 163. 1886, *A Manual of the Botany of the Northern United States (edition 6)* 629. 1890, *Memoirs of the Torrey Botanical Club* 5(3): 29. 1894, *Iconographia Florae Italiae ...* 1: 16, f. 136. 1895 and *Manual of the Flora of the Northern States and Canada* 75. 1901, *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 42. 1901, *Anales del Museo Nacional de Buenos Aires* 13: 424. 1906, *Mémoires de la Société des Sciences Naturelles de Cherbourg* 38: 77. 1912, *Fieldiana, Botany* 24(2): 38-331. 1955, *Taxon* 21: 546. 1972, *Taxon* 25: 513. 1976, R.A. Howard (editor), *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979, *Taxon* 32: 281. 1983, *Butlletí de la Institució Catalana d'Història Natural, Secció de Botànica* 51: 101-108. 1984, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: knotgrass

in Arabic: moddeid

P. patulum Hornem. (*Digitaria parviflora* (R. Br.) Hughes; *Digitaria patula* (Hornem.) Henrard)

Asia. See *Prodromus Florae Novae Hollandiae* 192. 1810, *Hortus Regius Botanicus Hafniensis* 1: 78. 1813 and *Bulletin of Miscellaneous Information Kew* 1923(9): 311. 1923, *Blumea* 1(1): 101. 1934, *Blumea* 21(1): 1-80. 1973, *Brunonia* 6(2): 131-216. 1983 [1984].

P. pauciciliatum (Parodi) Herter (*Paspalum dilatatum* var. *pauciciliatum* Parodi)

South America. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Revista del Museo de La Plata* 1: 240. 1937, *Revista Sudamericana de Botánica* 6(5-6): 139. 1940, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Flora Illustrada Catarinense* 1(Gram.): 909-1407. 1982, *Darwiniana* 30(1-4): 87-94. 1990.

P. paucifolium Swallen

Tropical America, Brazil, Uruguay, Argentina. Small plant with pubescent spikelets, useful for erosion control, see *Phytologia* 14(6): 372. 1967.

P. paucispicatum Vasey (*Paspalum distichum* L.)

Northern America, Mexico. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Contributions from the United States National Herbarium* 1(8): 281. 1893 and *Taxon* 21: 546. 1972, *Taxon* 25: 513. 1976, *Flora Novogaliciana* 14: 1-436. 1983, *Taxon* 32: 281. 1983.

in English: Sonoran crown grass

P. peckii F.T. Hubb. (for the American botanist Morton Eaton Peck, 1871-1959, botanical explorer, traveler, plant collector in British Honduras and Oregon, author of *A Manual of the Higher Plants of Oregon*. Portland, Or., Binfords & Mort [1941], see J.H. Barnhart, *Biographical notes upon botanists*. 3: 62. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 304. 1972; Lincoln Constance (1909-2001), "Morton Eaton Peck (1871-1959)." *Taxon* 9: 165-167. 1960)

Belize. See *Proceedings of the American Academy of Arts and Sciences* 49(8): 495. 1913.

P. pectinatum Nees ex Trin. (*Anastrophus pectinatus* (Nees ex Trin.) Schltld. ex B.D. Jacks.; *Paspalum pectinatum* Nees, nom. illeg., non *Paspalum pectinatum* Nees ex Trin.)

Mexico, Bolivia, southern Brazil, Colombia, Venezuela. Perennial, erect, tufted, forming clumps, basal sheaths papery, rigid ligules membranous, leaf blades linear densely pubescent acute or attenuate, 2-3 racemes appressed to ascending, flattened and lanceolate spikelets solitary and strongly imbricate, upper glume present and winged, lower lemma 3-nerved obtuse, rocky places, dry savannahs, related to *Paspalum setiglume*, similar to *Paspalum cordatum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359.

1759, *Species Graminum* 1: t. 117. 1828, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 34. 1829, *Index Kewensis* 1: 118. 1893 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Annals of the Missouri Botanical Garden* 89(3): 337-399. 2002.

P. penicillatum Hook.f.

Ecuador, Peru, Colombia, Bolivia. Annual, erect, pro-cumbent, geniculate, ascending, branched, leaf blades lanceolate acute, several racemes lax or dense, spikelets elliptic-oblong glabrous solitary, upper glume membranous 3-nerved, lower lemma membranous 3-nerved, medicinal, forage, along roadsides, similar to *Paspalum prostratum*, see *Transactions of the Linnean Society of London* 20: 171. 1847 and *Bot. J. Linn. Soc.* 81: 96. 1980.

in Ecuador: grama, saraqihua

P. peregrinum A.G. Burm. & Filg. (*Dimorphostachys pilosa* (Lam.) E. Fourn.; *Paspalum pilosum* Lam.; *Thrasya villosa* Hitchc.)

Venezuela. Savannah, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175. 1791, *Mexicanas Plantas* 2: 14. 1886 and *Proceedings of the Biological Society of Washington* 40: 84. 1927, *Acta Botanica Venezuelica* 14(4): 91. 1985[1987], *Flora Mesoamericana* 6: 335-352. 1994.

P. perspinervium Renvoize (also spelled *perspicinervium*) (*Paspalum jesuiticum* Parodi)

Brazil. Spikelets paired ovate-elliptic, found in marshy ground, see *Darwiniana* 15: 104. 1969, *Kew Bulletin* 42: 922. 1987, S.A. Renvoize, *Hatschbach's Paraná Grasses* 46. 1988.

P. petilum Chase (*Orthoclada laxa* (Rich.) P. Beauv.; *Paspalum dispar* var. *marahuacense* H. Rodr.) (Latin *petilus, a, um* "thin, slender," *petilum tenue et exile...*)

British Guiana, Venezuela, Brazil. Perennial or annual, tufted, sprawling, rooting at the nodes, leaf sheaths fringed, ligules membranous acute, leaf blades linear to linear-lanceolate, solitary slightly arching raceme, spikelets elliptic to narrowly obovate, bearded lower glume, upper glume elliptic acute 3- to 5-nerved, lower lemma 3-nerved, related to *Paspalum decumbens*, rocky moist places, wet rocks, riverbanks, riverbeds, sandy soil, see *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792, *Essai d'une Nouvelle Agrostographie* 70, 149, 168. 1812 and *Contributions from the United States National Herbarium* 28(1): 96, f. 50. 1929, *Journal of the Washington Academy of Sciences* 27(4): 145. 1937, *Brittonia* 23(3): 293-324. 1971, *Ernstia* 52: 1. 1989.

P. petrense A.G. Burman

Brazil. Culms erect, racemes 3 to 5, spikelets obliquely set on the pedicels, upper lemma hairy at the tip, see *Kew Bulletin* 35(2): 297-298. 1980.

P. petrosum Swallen

Colombia. See *Phytologia* 14(6): 362. 1967.

P. phyllorhachis Hack.

Central Brazil. Rare species, bambusiform, leaning, woody, glabrous spikelets, see *Österreichische Botanische Zeitschrift* 51: 240. 1901.

P. pictum Ekman (*Paspalum delicatum* Swallen; *Paspalum maculatum* Nash)

Amazonas, Brazil, Venezuela, Costa Rica, Bolivia. Annual, branched, erect, delicate, tufted, glabrous, lower nodes rooting, ligule membranous acute, leaf blades linear or filiform acuminate, inflorescence exserted terminal and axillary, 1-5 racemes straight or arching, spikelets obovate glabrous paired crowded, lower glume absent, upper glume and lower lemma 3- to 5-nerved, upper lemma stramineous, along riverbanks, savannah, in or near water, in shallow water, closely related to *Paspalum delicatum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 11, t. 6, f. 7. 1911, *North American Flora* 17(2): 186. 1912, *Contributions from the United States National Herbarium* 29(6): 268-269. 1948 [1949].

P. pilgerianum Chase (*Cynodon dactylon* (L.) Pers.; *Paspalum bonplandianum* Fluegge var. *glabrescens* Pilg.)

South America, Ecuador. Soft leaves, compact inflorescence, medicinal, sandy areas, see *Species Plantarum* 1: 58. 1753, *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Syn. Pl.* 1: 85. 1805, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 71. 1810, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 17-18. 1899 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Ruizia; Monografías del Jardín Botánico* 13: 1-480. 1993. in Ecuador: grama

P. pilosum Lam. (*Dimorphostachys monostachya* (Kunth) E. Fourn. ex Hemsl.; *Dimorphostachys monostachya* (Kunth) E. Fourn., nom. illeg., non *Dimorphostachys monostachya* (Kunth) E. Fourn. ex Hemsl.; *Dimorphostachys pilosa* (Lam.) E. Fourn.; *Panicum monobotrys* Trin. ex Steud.; *Panicum monostachyum* Kunth; *Panicum monostachyum* Salzm. ex Steud., nom. illeg., non *Panicum monostachyum* Kunth; *Panicum monostachyum* var. *minus* Kunth ex Döll; *Panicum monostachyum* var. *robustius* Döll; *Paspalum monostachyum* Willd. ex Steud.; *Paspalum peregrinum* A.G. Burm. & Filg.; *Paspalum pilosum* Spreng. ex Steud., nom. illeg., non *Paspalum pilosum* Lam.; *Thrasya villosa* Hitchc.)

Tropical Central America, Brazil, Bolivia, Colombia. Perennial, shrubby, loosely tufted, ascending and geniculate, branching upward, ligule membranous, leaf blades linear acute pilose or villous, inflorescence terminal and axillary, solitary arching racemes, dimorphic spikelets ovate to

oblong glabrous paired, lower glume on the upper spikelet a nerveless scale or absent, lower lemma 5-nerved and its palea well-developed, upper lemma and palea coriaceous, weed of rice, common in disturbed places, campos, in open sandy areas, savannah, along riverbanks, cerrado, closely related to *Paspalum altsonii*, *Paspalum nutans* and *Paspalum unispicatum*, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175. 1791, *Nova Genera et Species Plantarum* 1: 96-97. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 2: 260, 272. 1841, *Synopsis Plantarum Glumacearum* 1: 55. 1853, *Flora Brasiliensis* 2(2): 182. 1877, *Biologia Centrali-Americana; ... Botany ...* 3: 499. 1885, *Mexicanas Plantas* 2: 14. 1886 and *Proceedings of the Biological Society of Washington* 40: 84. 1927, *Brittonia* 23(3): 293-324. 1971, *Acta Botanica Venezuelica* 14(4): 91. 1985[1987].

P. pisinnum Swallen (Latin *pisinnus*, a, um "small, little")

Brazil. See *Phytologia* 14(6): 360. 1967.

P. planifolium E. Fourn. (*Paspalum pubiflorum* Rupr. ex E. Fourn.)

Mexico. See *Mexicanas Plantas* 2: 10-11. 1886 and *Contr. U.S. Natl. Herb.* 28: 53. 1929.

in Mexico: zacate sautillo

P. planum Hack. (*Paspalum oryzoides* Mez)

Paraguay. Meadows, fields, moist places, see *Bulletin de l'Herbier Boissier, sér. 2, 7*: 448. 1907, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 74. 1917.

P. platense Spreng. (*Digitaria dilatata* (Poir.) H.J. Coste; *Panicum platense* (Spreng.) Kuntze; *Paspalum dilatatum* Poir.; *Paspalum dilatatum* subsp. *dilatatum*; *Paspalum dilatatum* var. *dilatatum*)

Uruguay. See *Encyclopédie Méthodique, Botanique* 5: 35. 1804, *Systema Vegetabilium, editio decima sexta* 1: 247. 1825, *Revisio Generum Plantarum* 3(2): 363. 1898 and *Flore de France* 3: 553. 1906.

P. platyaxis (Döll) Mez (*Paspalum virgatum* var. *glabriusculum* Döll; *Paspalum virgatum* var. *platyaxon* Döll; *Paspalum wrightii* Hitchc. & Chase)

Brazil. See *Systema Naturae, Editio Decima* 2: 855. 1759, *Flora Brasiliensis* 2(2): 89. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 73. 1917, *Contributions from the United States National Herbarium* 18(7): 310. 1917.

P. platyphyllum Schult. (*Brachiaria platyphylla* (Munro ex C. Wright) Nash; *Panicum platyphyllum* Munro ex C. Wright; *Paspalum conspersum* Schrad.; *Paspalum latifolium* Spreng., nom. illeg., non *Paspalum latifolium* J. Le Conte; *Paspalum platyphyllum* Griseb., nom. illeg., non *Paspalum platyphyllum* Schult.; *Paspalum virgatum* var. *conspersum* (Schrad.) Döll; *Urochloa platyphylla* (Munro ex C. Wright) R.D. Webster)

Paraguay. Erect bunchgrass, see *Systema Naturae, Editio Decima* 2: 855. 1759, *Mantissa* 2: 174. 1824, *Systema Vegetabilium, editio decima sexta* 1: 248. 1825, *Mantissa* 2: 557. 1827, *Catalogus plantarum cubensium ...* 8: 206. 1866, *Anales de la Academia de Ciencias Medicas ...* 8: 206. 1871, *Flora Brasiliensis* 2(2): 89. 1877 and *Flora of the Southeastern United States ...* 81: 1327. 1903, *Systematic Botany* 13(4): 606. 1988.

P. plenipilum Nash (*Paspalum longipilum* Nash)

U.S. See *Bulletin of the New York Botanical Garden* 1(5): 435-436. 1900, *Manual of the Flora of the Northern States and Canada* 73. 1901.

P. plenum Chase (*Paspalum intermedium* Munro ex Morong & Britton)

Mexico, Paraguay. Bunchgrass, erect, large, clumped, tussocky, scabrous, open habitats, swamps, seasonally inundated places, marshy areas, along canals, ditches, see *Annals of the New York Academy of Sciences* 7: 258. 1893 and *Anales del Museo Nacional de Buenos Aires* 21: 21. 1911, *Contributions from the United States National Herbarium* 28(1): 202, f. 122. 1929, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 402. 1969, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Australian Journal of Botany* 42: 449-456. 1994, *Darwiniana* 35(1-4): 29-36. 1998.

P. pleostachyum Döll (*Paspalum ambiguum* Salzm. ex Döll, nom. illeg., non *Paspalum ambiguum* Lam. & DC.; *Paspalum anemotum* Ridl.; *Paspalum phonoliticum* Ridl.; *Paspalum secans* Hitchc. & Chase)

Brazil, Cuba, Haiti. Perennial, caespitose, dark nodes conspicuous, glabrous to pilose leaf blades linear tough acuminate, slender racemes, spikelets obovate-oblong glabrous paired on the narrow triquetrous rachis, upper glume 3-nerved, lower lemma 3-nerved, upper lemma and palea minutely granular, coastal grassland, waste places, sea shores, see *Flora Brasiliensis* 2(2): 58. 1877, *Journal of the Linnean Society, Botany* 27: 68, t. 4. 1890 and *Contributions from the United States National Herbarium* 18(7): 319. 1917.

in English: tropical crown grass

P. plicatulum Michx. (*Panicum antillense* Husn.; *Panicum plicatulum* (Michx.) Kuntze; *Paspalum antillense* Husn.; *Paspalum atrocarpum* Steud.; *Paspalum caespitosum* Hochst. ex Döll, nom. illeg., non *Paspalum caespitosum* Fluegge; *Paspalum campestre* Schldl., nom. illeg., non *Paspalum campestre* Trin.; *Paspalum caperatum* Swallen; *Paspalum compressifolium* Swallen; *Paspalum decumbens* Sagot ex Döll, nom. illeg., non *Paspalum decumbens* Sw.; *Paspalum gracile* J. Le Conte, nom. illeg., non *Paspalum gracile* Rudge; *Paspalum lachneum* Trin. ex Döll, nom. illeg., non *Paspalum lachneum* Nees ex Steud.; *Paspalum lenticulare* Kunth; *Paspalum lenticulare* f. *intumescens* (Döll) Killeen; *Paspalum leptum* Schult.; *Paspalum*

limbatum Henrard; *Paspalum marginatum* Spreng. ex Steud.; *Paspalum montevidense* Spreng.; *Paspalum multiflorum* Desv.; *Paspalum oligostachyum* var. *pilosum* Salzm. ex Döll; *Paspalum orthos* Schult. ex Kunth; *Paspalum pauperulum* E. Fourn.; *Paspalum pauperulum* var. *altius* E. Fourn.; *Paspalum plicatulum* subsp. *montevidense* (Spreng.) Roseng., B.R. Arrill. & Izag.; *Paspalum plicatulum* subsp. *plicatulum*; *Paspalum plicatulum* var. *genuinum* Parodi; *Paspalum plicatulum* var. *glabrum* Arechav.; *Paspalum plicatulum* var. *intumescens* Döll; *Paspalum plicatulum* var. *longipilum* Hack.; *Paspalum plicatulum* var. *plicatulum*; *Paspalum plicatulum* var. *villosissimum* Pilg.; *Paspalum plicatum* Pers.; *Paspalum pubifolium* J. Presl; *Paspalum ramosum* Swallen; *Paspalum saxatile* Salzm. ex Döll; *Paspalum tenue* Kunth, nom. illeg., non *Paspalum tenue* Gaertn.; *Paspalum texanum* Swallen; *Paspalum undulatum* Poir.; *Paspalum virgatum* var. *undulatum* Alph. Wood)

Southern U.S. to Argentina, Mexico, Brazil, Uruguay, Paraguay. Perennial tussocky grass, glabrous or hairy, caespitose or loosely tufted, erect, decumbent, ascending at base, shortly rhizomatous, compressed culms and sheaths, coarse stems and leaves, weed species very leafy, leaf blades linear acuminate, ligule membranous acute, leaf sheaths glabrous and keeled, leaves folded at the base, inflorescence narrowly ovate of arcuate ascending to spreading racemes distichously disposed, spikelets paired and shining when ripe, lower glumes absent, upper glume membranous 5-nerved, sterile lemma 5-nerved coriaceous wrinkled, upper lemma and palea dark brown shiny, shining seeds dark brown, economic plant with a good drought tolerance, free from or very resistant to ergot, fair grazing for wildlife and livestock, fodder, a good forage grass, best grazed when leafy, mature growth unpalatable, potential seed contaminant, highly tolerant of waterlogging and flooding for short periods, adapted to marshy or aquatic habitats, grows in savannahs in moist sandy or clay soil, on poorly drained clay loams, wet ground, in bare gravelly soil at roadside, on soils of low fertility, campo, in coconut plantations, grassland, cerrado, open pastures, on deep sandy soils and infertile coastal soils which are flooded in the wet season and then dry out rapidly, disturbed ground, intergrades with *Paspalum glaucescens*, *Paspalum convexum* and *Paspalum guenoarum*, see *Flora Boreali-Americana* 1: 45. 1803, *Encyclopédie Méthodique, Botanique* 5: 29. 1804, *Nova Genera et Species Plantarum* 1: 92. 1815 [1816], *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 285. 1820, *Mantissa* 2: 173. 1824, *Systema Vegetabilium, editio decima sexta* 1: 246. 1825, *Révision des Graminées* 1: 26. 1829, *Reliquiae Haenkeanae* 1(4-5): 219. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 162. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 57. 1833, *Nomenclator Botanicus. Editio secunda* 2: 272. 1841, *Linnaea* 26(2):

131. 1854, *Synopsis Plantarum Glumacearum* 1: 25. 1855 [1853], *Bulletin de la Société Linnéenne de Normandie* sér. 2, 5: 260. 1871, *The American Botanist and Florist* pt. 2: 390. 1871, *Flora Brasiliensis* 2(2): 76-79. 1877, *Mexicanas Plantas* 2: 10. 1886, *Anales del Museo Nacional de Montevideo* 1: 50, 58. 1894, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 131. 1901, *Bulletin de l'Herbier Boissier*, sér. 2, 4(3): 269. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 342. 1909, *Contr. U.S. Natl. Herb.* 28(1): 225. 1929, *Revista del Museo de La Plata* 1: 231. 1937, *Blumea* 4(3): 511. 1941, *Proceedings of the Biological Society of Washington* 55: 94. 1942, *Phytologia* 14(6): 375, 380-381. 1967, *Gramíneas Uruguayas* 373, f. 153. 1970, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Ciencia e Cultura (São Paulo)* 39: 776. 1987, *Darwiniana* 30(1-4): 87-94. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Annals of the Missouri Botanical Garden* 77(1): 181. 1990, Harcombe P. A. G. N. Cameron E. G. Glumac, "Above ground net primary productivity in adjacent grassland and woodland on the coastal prairie of Texas." *Journal of Vegetation Science* 4: 521-530. 1993, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Darwiniana* 35(1-4): 29-36. 1998.

in English: brown-seed paspalum, brownseed paspalum, brown-seed crown grass, brown top paspalum, plaited paspalum, top paspalum

in Spanish: gamelotillo, hierba de cepa

in Brazil: capim colchao, coquerinho menbeca

in Mexico: camalote, camalotillo

in Santo Domingo: rocío de miel

in Venezuela: gamelotillo

in Thailand: ya-phlikhathium

P. plicatum Michx. var. ***arenarium*** Arechav. (*Paspalum nicorae* Parodi)

Uruguay. Sandy places, coastal, see *Anales del Museo Nacional de Montevideo* 1: 58. 1894 and *Notas del Museo de la Plata, Botánica* 8(40): 82. 1943.

P. plicatum Michx. var. ***cinereum*** Döll

Brazil. See *Flora Brasiliensis* 2(2): 77. 1877.

P. plicatum Michx. var. ***ellipticum*** Döll

Brazil. See *Flora Boreali-Americana* 1: 45. 1803, *Flora Brasiliensis* 2(2): 77. 1877.

P. plicatum Michx. var. ***glabrum*** Arechav. (*Paspalum plicatum* Michx.)

Uruguay. See *Flora Boreali-Americana* 1: 45. 1803, *Anales del Museo Nacional de Montevideo* 1: 58. 1894.

P. plicatum Michx. var. ***oblongum*** Döll

Brazil. See *Flora Brasiliensis* 2(2): 77. 1877.

P. plicatum Michx. var. ***oligostachyum*** Döll (*Paspalum geminiflorum* Steud.)

Brazil. See *Flora Boreali-Americana* 1: 45. 1803, *Synopsis Plantarum Glumacearum* 1: 25. 1855 [1853], *Flora Brasiliensis* 2(2): 77. 1877.

P. plicatum Michx. var. ***rigidum*** Döll

Brazil. See *Flora Boreali-Americana* 1: 45. 1803, *Flora Brasiliensis* 2(2): 77. 1877.

P. plicatum Michx. var. ***villosissimum*** Pilg. (*Paspalum plicatum* Michx.)

South America. See *Flora Boreali-Americana* 1: 45. 1803 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 131. 1901.

P. plowmanii Morrone & Zuloaga (for the American botanist Timothy Charles Plowman, 1944-1989, botanical collector in South and Central America, ethnobotanist and an authority on the ethnobotany of coca and the taxonomy of the genus *Erythroxylum*, 1988 Curator of the Field Museum, see Timothy Plowman, *Botanical Museum Leaflets*. Harvard University Press, Cambridge, MA, 1970-80)

Brazil. Sandy soil, see *Systematic Botany* 28(2): 307-309, f. 1, 3A-D. 2003.

P. plumosum Henrard (*Axonopus plumosus* (Henrard) Henrard; *Axonopus uninodis* (Hack.) G.A. Black; *Paspalum uninode* Hack.)

Paraguay. See *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 6. 1906, *Mededeelingen van's Rijks-Herbarium* 47: 1-2. 1922, *Advancing Frontiers of Plant Sciences* 5: 102. 1963.

P. poiretii Roem. & Schult. (*Paspalum caespitosum* Fluegge; *Paspalum sauetii* Chase)

The Caribbean. See *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 161. 1810, *Systema Vegetabilium* 2: 878. 1817 and *Contributions from the United States National Herbarium* 28(1): 147, f. 90. 1929.

P. polo F.M. Bailey (*Paspalum scrobiculatum* var. *bispicatum* Hack.)

Australia. See *Mantissa Plantarum* 29. 1767, *Queensland Agricultural Journal* 1: 234, f. 1. 1897 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 20: 146. 1914, *Blumea* 30(2): 279-318. 1985.

P. polychaetum Mez (*Paspalum hyalinum* Nees ex Trin.; *Paspalum parviflorum* Rohde ex Fluegge; *Paspalum parviflorum* (R. Br.) K. Schum. & Hollrung, nom. illeg., non *Paspalum parviflorum* Rohde ex Fluegge)

Guyana. Savannah, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 98. 1810, *Prodromus Florae Novae Hollandiae* 192. 1810, *De Graminibus Paniceis* 103. 1826, *Die Flora von Kaiser Wilhelms Land* 21. 1889 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und*

Pflanzengeographie 56(Beibl. 125): 11. 1921, *Ernstia* 10(3): 117-143. 2000.

P. polyphyllum Nees (*Paspalum bicilium* Mez; *Paspalum blepharophorum* Ekm., non Roem. & Schult.; *Paspalum blepharophorum* Roem. & Schult.; *Paspalum blepharophorum* var. *tenue* Döll; *Paspalum macroblepharum* Hack.; *Paspalum polyphyllum* Nees ex Trin.)

Uruguay, Argentina, Bolivia, Brazil, Paraguay. Perennial, erect, slender, stemmy, branched, delicate, leaf blades linear to linear-lanceolate acute or acuminate, knotty rhizomatous base, inflorescence pilose with long silky hairs, paired lanceolate spikelets on a flattened rachis, upper glume with unequal hairs, lower glume 5-nerved, lower lemma 5-nerved ciliolate toward the apex, upper lemma and palea lanceolate puberulous, useful for erosion control, growing in campos, campo cerrado, savannahs, shallow rocky soil, campo rupestre, similar to *Paspalum bicilium* and *Paspalum humboldtianum*, see *Systema Vegetabilium, editio decima sexta* 2: 292. 1817, *De Graminibus Paniceis* 114. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 41. 1829, *Flora Brasiliensis* 2(2): 67. 1877 and *Österreichische Botanische Zeitschrift* 51: 196. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 27. 1917, *Annals of the Missouri Botanical Garden* 89(3): 386. 2002.

in Chinese: duo ye que bai

P. pontanalis Swallen (*Paspalum lenticulare* Kunth)

Brazil. Perennial, erect, ascending, caespitose, rhizomatous, palatable, wet ground, savannah, open wet places, woods, wooded savannah, seasonally moist savannah, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 45. 1803, *Nova Genera et Species Plantarum* 1: 92. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 25. 1855 [1853], *Flora Brasiliensis* 2(2): 77. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Phytologia* 14(6): 376, 379, 381. 1967, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Ciencia e Cultura (São Paulo)* 39: 776. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 77(1): 181. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Darwiniana* 35(1-4): 29-36. 1998.

P. portoricense Nash (*Paspalum molle* Poir.)

The Caribbean, America. See *Encyclopédie Méthodique, Botanique* 5: 34. 1804 and *Bulletin of the Torrey Botanical Club* 30(7): 377. 1903.

P. potamophilum Renvoize (*Paspalum bertonii* Hack.)

Brazil. Tufted, villous to pilose spikelets, found along riverbanks, stony places, see *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 165. 1911, *Kew Bulletin* 42: 922. 1987.

P. praecox Walter (*Paspalum lentiferum* Lam.; *Paspalum praecox* var. *curtisanum* (Steud.) Vasey, also spelled *curtissianum*; *Paspalum praecox* var. *praecox*)

Northern America. Occurs in wetlands, see *Flora Caroliniana, secundum ...* 75. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175. 1791, *Synopsis Plantarum Glumacearum* 1: 26. 1855 [1853], *Bulletin of the Torrey Botanical Club* 13: 165. 1886.

in English: early crown grass, early paspalum

P. preslii Kunth (*Digitaria longiflora* (Retz.) Pers.; *Digitaria preslii* (Kunth) Henrard; *Paspalum longiflorum* Retz.)

Asia. See *Observationes Botanicae* 4: 15. 1786, *Syn. Pl.* 85. 1805, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 47. 1833 and *Monograph of the Genus Digitaria* 589-590, 503, 880. 1950.

P. procurrens Quarin

Argentina, Bolivia. Perennial, stoloniferous, leaf sheaths hairy, leaf blades narrowly lanceolate attenuate or acuminate, spikelets oblong boat-shaped glabrous paired, upper glume lacking, lower lemma 3-nerved, upper lemma 7-nerved, weed, cultivated fields, rocky places, sandy soil, see *Boletín de la Sociedad Argentina de Botánica* 29(1-2): 73-76, f. 1. 1993.

P. prostratum Scribn. & Merr. (*Paspalum prostratum* Nash, nom. illeg., non *Paspalum prostratum* Scribn. & Merr.; *Paspalum prostratum* var. *pygmaeum* Scribn. & Merr.)

Costa Rica, Peru, Bolivia, Mexico, Colombia. Perennial or annual, tufted, sprawling, leaf blades linear or lanceolate acute or attenuate, spikelets elliptic glabrous solitary in two rows, upper glume and lower lemma 3-nerved, useful for erosion control, dry or moist places, along roadsides, see *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 9. 1901, *Manual of the Flora of the Northern States and Canada* 74. 1901, *Brittonia* 23(3): 293-324. 1971.

in Spanish: conejito, grama, maicillo, nudillo blanco

P. proximum Mez (*Axonopus proximum* (Mez) Parodi; *Paspalum ellipticum* Ekm., non Döll; *Paspalum ellipticum* Döll)

Southern Brazil, Paraguay. Leaf blades filiform, racemes paired, spikelets hairy, lower lemma pilose on the margins, moist meadows, damp ground, see *Flora Brasiliensis* 2(2): 71, pl. 15. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 66. 1917, *Boletim de Botânica, Departamento de Botânica. Instituto de Biociencias, Universidade de São Paulo* 8: 36. 1950, *Flora Fanerogamica do Estado de São Paulo* 1: i-xxv, 1-292. 2001, *Revista Brasileira de Botânica* 25(4): 371-389. 2002.

P. pruinosum Trin. (*Paspalum coryphaeum* Trin.; *Paspalum pruinosum* Hack.)

Brazil. See *De Graminibus Paniceis* 114. 1826, *Species Graminum* 3: t. 272. 1829-1830 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 311. 1909.

P. puberulum Roem. & Schult.

America. See *Systema Vegetabilium* 2: 316. 1817.

P. pubiflorum Rupr. ex E. Fourn. (*Paspalum geminum* Nash; *Paspalum hallii* Vasey & Scribn.; *Paspalum laeviglume* Scribn. ex Nash; *Paspalum planifolium* E. Fourn.; *Paspalum pubiflorum* Rupr. ex Galeotti; *Paspalum pubiflorum* var. *glabrum* Vasey ex Scribn.; *Paspalum pubiflorum* var. *glaucum* Scribn.; *Paspalum pubiflorum* var. *viride* E. Fourn.; *Paspalum remotum* J. Rémy; *Paspalum remotum* var. *glabrum* Vasey; *Paspalum remotum* var. *glaucum* Scribn.)

Northern America, Mexico, U.S. Perennial, decumbent, very long-stoloniferous, geniculate rooting lower nodes of culms, leaf sheaths glabrous below and pubescent above, linear leaves, paired spikelets, glabrous or short-haired seeds, dark to red stigmas, fodder, drought-tolerant, grows in low and moist partially shaded areas, in moist soil in ditches, along railroads and roadsides, floodplain forest, wetlands, found on moist open ground, swales, meadows, open fields and alluvial woods, see *Annales des Sciences Naturelles; Botanique, sér. 3* 6: 349. 1846, *Mexicanas Plantas* 2: 10-11. 1886, *Bulletin of the Torrey Botanical Club* 13: 165-166. 1886, *Contributions from the United States National Herbarium* 3(1): 19. 1892, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 32, t. 5, f. 18. 1894 and *Bulletin of the New York Botanical Garden* 1(5): 434-435. 1900, *Flora of the Southeastern United States ...* 75. 1903, *Contributions from the United States National Herbarium* 28: 53, 62, f. 30. 1929.

in English: hairy-seed crown grass, hairyseed paspalum, smooth-seed paspalum

in Mexico: camalote velludo

P. pubiflorum Rupr. ex E. Fourn. var. ***glabrum*** Vasey ex Scribn. (*Paspalum geminum* Nash; *Paspalum laeviglume* Scribn. ex Nash; *Paspalum pubiflorum* Rupr. ex E. Fourn.; *Paspalum remotum* J. Rémy; *Paspalum remotum* var. *glabrum* Vasey)

U.S. Erect, decumbent at the base, rooting at the lower nodes, open areas, alluvial soil, disturbed ground, moist places, along roadsides, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Annales des Sciences Naturelles; Botanique, sér. 3* 6: 349. 1846, *Mexicanas Plantas* 2: 11. 1886, *Bulletin of the Torrey Botanical Club* 13: 166. 1886, *Bulletin of the Agricultural Experiment Station of the University of Tennessee* 7: 32, t. 5, f. 18. 1894 and *Bulletin of the New York Botanical Garden* 1(5): 434-435. 1900, *Flora of the Southeastern United States ...* 75. 1903, *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Annals of the Missouri Botanical Garden* 74: 432-433. 1987.

P. pubiflorum Rupr. ex E. Fourn. var. ***pubiflorum*** (*Paspalum remotum* var. *glaucum* Scribn.)

Northern America, Mexico, U.S. Perennial, see *Annales des Sciences Naturelles; Botanique, sér. 3* 6: 349. 1846, *Bulletin of the Torrey Botanical Club* 13: 165. 1886, *Mexicanas Plantas* 2: 11. 1886.

P. pulchellum Kunth (*Anastrophus pulchellus* Schldl. ex Jackson; *Dichromus elegans* (Humb. & Bonpl. ex Fluegge) Schldl.; *Paspalum arenicolum* Müll. Hal.; *Paspalum elegans* Fluegge; *Paspalum tristachyum* Willd. ex Steud.; *Reimaria elegans* Humb. & Bonpl. ex Fluegge)

Central America to Brazil, Honduras, Colombia. Perennial, erect, slender, small, caespitose, densely tufted, foliage mainly basal, leaf blades linear acuminate ascending, leaf sheaths glabrous to densely pilose, ligule membranous, inflorescence Y-shaped, slender divergent racemes, spikelets elliptic-oblong glabrous solitary alternate in 2 rows on the rachis, both glumes absent, lower lemma membranous 3-nerved reddish purple, upper lemma and palea smooth shiny, coastal savannah, on sandy soil, wet savannah, wet grassland, open grass savannah, wetlands, seasonally flooded areas, low lying grassland, see *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 183, 216. 1810, *Mémoires du Muséum d'Histoire Naturelle* 2: 68. 1815, *Nomenclator Botanicus. Editio secunda* 2: 273. 1841, *Botanische Zeitung, Berlin* 10: 17. 1852, *Botanische Zeitung, Berlin* 19(44): 325. 1861, *Index Kewensis* 1: 118. 1895.

in English: grand crown grass

P. pumilum Nees (*Panicum bicurulum* Salzm. ex Steud.; *Paspalum bicurulum* Salzm. ex Steud.; *Paspalum campestris* Trin.; *Paspalum nitidum* Swallen)

Argentina, West Indies, Chile, Bolivia, Brazil, Uruguay, Paraguay. Perennial or annual, small plant, low growing to semi-prostrate, erect or ascending, tufted or shortly rhizomatous, leaves mostly basal, ligule membranous, linear or linear-lanceolate leaf blades acute, inflorescence of conjugate racemes divergent and recurved, solitary spikelets arranged alternately on a narrow rachis, spikelets glabrous broadly ovate or ovate-elliptic, upper glume herbaceous, upper lemma and palea minutely papillose, anthers yellow and stigmas purple, useful for erosion control, grazed, grows in native pasture often with carpet grass, on poor sandy soil, savannahs, along streams and margins of marshes, forest margins, wet sand, damp sandy soil, along roadsides, on poorly drained site, grassland, disturbed places, related to *Paspalum bifidifolium*, *Paspalum subciliatum* and *Paspalum notatum*, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 52. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 144. 1834, *Nomenclator Botanicus. Editio secunda* 253. 1841, *Synopsis Plantarum Glumacearum*

1: 21. 1855 [1853] and *Contr. U.S. Natl. Herb.* 26: 68, 241. 1929, *Phytologia* 14(6): 358. 1967, *Brittonia* 23(3): 293-324. 1971, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Darwiniana* 3(1-4): 53-60. 1995, *Iheringia, Série Botânica* 47: 3-44. 1996.

P. pygmaeum Hack. (*Panicum minimum* Kuntze; *Paspalum haenkeanum* var. *minimum* Nees; *Paspalum lorentzianum* Mez; *Paspalum minimum* Meyen; *Paspalum prostratum* var. *pygmaeum* Scribn. & Merr.; *Paspalum pygmaeum* var. *genuinum* Hack.; *Paspalum pygmaeum* var. *glabrescens* Hack.; *Paspalum pygmaeum* var. *pygmaeum*)

Peru, Bolivia. Annual, purplish, small, low, erect or ascending, prostrate, hairy, tufted, leaf blades lanceolate acute, spikelets elliptic or elliptic-ovate glabrous solitary in two rows, upper glume and lower lemma membranous 3-nerved, dry places, moist fields, campos, stony rocky areas, along roadsides, see *Reise um die Erde* 1: 484. 1834, *Nova Acta Physico-medica Academiae Caesareae Leopoldino-Carolinae Naturae Curiosorum Exhibentia Ephemerides sive Observationes Historias et Experimenta* 19(Suppl. 1): 6. 1841, *Linnaea* 24(2): 236. 1851, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 9. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 11: 18. 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 29. 1917, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Boletín de la Sociedad Argentina de Botánica* 16: 53-65. 1974, *Annals of the Missouri Botanical Garden* 82(1): 82-116. 1995.

P. pyramidale Nees (*Cymatochloa pyramidalis* (Nees) Schldtl. ex Döll; *Paspalum repens* P.J. Bergius)

South America, Amazonia, Argentina. See *Acta Helvetica, Physico-Mathematico-Anatomico-Botanico-Medica* 7: 129, t. 7. 1762 [1772], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 77. 1829, *Flora Brasiliensis* 2(2): 98. 1877 and *Gram. Bolivia* 111. 1998.

P. quadrifarium Lam. (*Panicum lagascae* var. *quadrifarium* (Lam.) Kuntze; *Paspalum ferrugineum* Trin.; *Paspalum quadrifarium* var. *ferrugineum* (Trin.) Herter; *Paspalum quadrifarium* var. *major* Döll; *Paspalum quadrifarium* var. *minor* Döll)

Argentina, Brazil, Uruguay, Paraguay. Perennial bunchgrass, leafy, glaucous, erect, coarse, robust, tufted, leaves coarse and pointed, sheaths hairy or glabrous, several rusty racemes, spikelets paired and small, lower glume absent, upper glume and sterile lemma hairy, fertile floret almost smooth, noxious weed, useful for erosion control, occurs on poor soils, disturbed ground, in semiswampy pastures, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Species Graminum* 2(12): t. 136. 1829, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 260-261. 1874, *Flora Brasiliensis* 2(2): 90. 1877, *Revisio Generum Plantarum* 3(2): 362. 1898

and *Anales del Museo Nacional de Buenos Aires* 11: 63. 1904, *Anales del Museo de Historia Natural de Montevideo*, ser. 2, 3: 55. 1929, *Revista Mus. La Plata* 1: 244. 1937, *Australian Journal of Botany* 42: 449-456. 1994, *Mendeliana* 7(2): 101-107. 1986.

in English: tussock paspalum

P. quarinii Morrone & Zuloaga

Paraguay. See *Candollea* 55: 311-314, f. 1. 2000.

P. quenoarum Arechav.

South America. See *Journal of Cytology and Genetics* 23: 61-67. 1988.

P. quitense Mez (*Paspalum juergensii* Hack.)

Ecuador. Swampy places, see *Repertorium Specierum Novarum Regni Vegetabilis* 7: 312. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 70. 1917, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Bradea, Boletim do Herbarium Bradeanum* 2(35): 246, f. 3. 1978, *Journal of Cytology and Genetics* 18: 26-33. 1983, *International Journal of Plant Sciences* 159(1): 153-159. 1998.

P. racemosum Lam. (*Maizilla stolonifera* (Bosc) Schldtl.; *Milium latifolium* Cav., nom. illeg., non *Milium latifolium* (L.) Moench; *Paspalanthium stoloniferum* (Bosc) Desv.; *Paspalum biglume* Steud.; *Paspalum manabiense* Mez; *Paspalum purpureum* Ruiz & Pav.; *Paspalum racemosum* Nutt., nom. illeg., non *Paspalum racemosum* Lam.; *Paspalum stoloniferum* Bosc; *Paspalum triglume* Steud.)

Peru, Colombia. Annual, erect, ascending, flimsy to robust, trailing, leaves lanceolate to ovate, sheaths inflated, purplish racemes densely arranged, spikelets solitary and elliptic, economic plant, ornamental and weedy, growing in dense clumps, sometimes confused with *Paspalum elegans* Roem. & Schult., along riverbanks, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Transactions of the Linnean Society of London* 2: 83, t. 16. 1794, *Icones Plantarum* 3: 37, t. 273. 1795, *Flora Peruviana* 1: 47. 1798, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 163. 1831, *Transactions of the American Philosophical Society, new series*, 5: 145. 1837, *Botanische Zeitung. Berlin* 8: 605. 1850, *Synopsis Plantarum Glumacearum* 1: 24, 27. 1853 [1855] and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 30. 1917.

in English: Peruvian paspalum, Peruvian crown grass

in Spanish: grama, nudillo

P. ramboi Barreto (*Paspalum juncifolium* Fernandes & al.)

South America, Brazil. Moist places, see *Caryologia* 27(4): 456. 1974, *Bonplandia (Corrientes)* 5(21-29): 291. 1983, *Cytologia* 223-228. 1991, *Iheringia, Série Botânica* 47: 3-44. 1996.

P. reclinatum Chase

Colombia. See *Journal of the Washington Academy of Sciences* 33(10): 317. 1943, *Brittonia* 23(3): 293-324. 1971.

P. rectum Nees

Brazil. See *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 104. 1850, *Botanical Gazette* 9: 54, 55. 1884.

P. redondense Swallen

Brazil. Perennial, caespitose, loosely tufted, rhizomatous, linear leaf blades, elliptic spikelets, rocky places, shallow soil, see *Phytologia* 14(6): 388. 1967.

P. reduncum Nees ex Steud. (*Paspalum connectens* Mez) (Latin *reduncus*, *a*, *um* "curved, bent backwards")

Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Synopsis Plantarum Glumacearum* 1: 31. 1855 [1853] and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Reperitorium Specierum Novarum Regni Vegetabilis* 15: 64. 1917.

P. redundans Chase

Ecuador, Galápagos Islands. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Proceedings of the California Academy of Sciences, Series 4*, 21(24): 300. 1935.

P. regnellii Mez (*Paspalum conspersum* Schrad.; *Paspalum mandiocanum* var. *stenocarpum* Döll; *Paspalum paniculatum* var. *grandiflorum* Döll; *Paspalum virgatum* var. *conspersum* (Schrad.) Döll) (after the Swedish botanist Anders Fredrik (André Frederick) Regnell, 1807-1884, plant collector (with Gustaf Anders Lindberg (1832-1900) and Salomon Eberhard Henschen, 1847-1930), physician, lichenologist, 1837 M.D. Uppsala, 1840 in Brazil, botanical explorer; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 138. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 327. 1972; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Gustaf Oskar Andersson Malme (né Andersson) (1864-1937), *Ex herbario Regneliano*. Stockholm 1898-1901 and "Die Compositen der zweiten Regnellischen Reise. III. Puente del Inca und Las Cuevas (Mendoza)." *Ark. Bot.* 24A(8): 58-66. 1932)

South America, Argentina, Bolivia, Brazil, Uruguay, Paraguay. Perennial, rhizomatous, robust, caespitose, sheaths glabrous and hairy, erect to spreading racemes, spikelets paired, lower glume absent, upper glume and sterile lemma similar and equal to the spikelet, fertile floret shining, pasture species, growing at edge of forest, seasonal creeks, grassy roadsides, low-lying areas, inundated fields, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mantissa* 2: 174. 1824, *De Graminibus Paniceis* 113. 1826, *Flora Brasiliensis* 2(2): 56, 80, 89. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Ark. Bot.* 11(4): 14. 1912, *Reperitorium Specierum Novarum Regni Vegetabilis* 15: 75. 1917, *Darwiniana* 30(1-4): 87-94. 1990.

P. remotum J. Rémy (*Paspalum scrobiculatum* var. *pubigluma* Hicken)

South America, Bolivia, Argentina. Perennial, caespitose, glabrous, ascending, conspicuous nodes, rhizomatous, flat leaves linear attenuate, inflorescence spicate, spikelets elliptic-ovate pubescent paired, upper glume and lower lemma 5-nerved, moist places, see *Annales des Sciences Naturelles; Botanique, sér. 3* 6: 349. 1846, *Bulletin of the Torrey Botanical Club* 13: 165-166. 1886 and *Darwiniana* 1: 109. 1924, *Darwiniana* 35(1-4): 29-36. 1998.

P. repens P.J. Bergius (*Axonopus repens* (P.J. Bergius) Torrend; *Ceresia fluitans* Elliott; *Cymatochloa fluitans* (Elliott) Schldtl.; *Cymatochloa pyramidalis* (Nees) Schldtl. ex Döll; *Cymatochloa repens* (P.J. Bergius) Schldtl.; *Paspalum bistipulatum* Hochst. ex Steud.; *Paspalum fluitans* (Elliott) Kunth; *Paspalum frankii* Steud.; *Paspalum gracile* Rudge; *Paspalum mucronatum* Muhl.; *Paspalum natans* J. Le Conte; *Paspalum pyramidale* Nees; *Paspalum repens* var. *fluitans* (Elliott) Wipff & S.D. Jones)

Mexico, eastern U.S. to Argentina, Bolivia, Brazil, Paraguay. Perennial, weak, aquatic or terrestrial, mostly submerged grass, spongy, sprawling and somewhat floating, creeping in mud, green-branched, rooted at the nodes, inflated and loose sheaths, ligule erose, leaf blades lanceolate to linear-lanceolate tapering at the base, inflorescence oblong with a straight erect central axis, lateral branches mostly whorled, spikes 1-sided, solitary spikelets compressed dorsiventrally and lanceolate or elliptic, lower glume absent, upper glume membranous 2-nerved, lower lemma 2-nerved, upper lemma and palea coriaceous smooth, forage, provides cover for fishes, found on quiet waters and dewatered flats, shallow water, streams, ditches, in marsh and swamps, muddy shores, in lakes and rivers, seasonal creeks, see *Acta Helvetica, Physico-Mathematico-Anatomico-Botanico-Medica* 7: 129, t. 7. 1762 [1772], *Plantarum Guianae Rariorum Icones et Descriptiones ...* 20, t. 26. 1805, *A Sketch of the Botany of South-Carolina and Georgia* 1: 109, t. 6, f. 4. 1816, *Descriptio uberior Graminum* 96. 1817, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 285. 1820, *Révision des Graminées* 1: 24. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 77. 1829, *Botanische Zeitung, Berlin* 12(47): 822. 1854, *Synopsis Plantarum Glumacearum* 1: 19, 29. 1855 [1853], *Flora Brasiliensis* 2(2): 98. 1877 and *Broteria*, ser. 3, 2: 119. 1933, *Fl. Guianas Series A: Phanerogams* 507. 1990, *Phytologia* 77(6): 461. 1994, *Gram. Bolivia* 111. 1998.

in English: water paspalum, knot grass

in Spanish: gramalote, paja de agua, trenza acuática, gramalote de tahuampa

P. repens P.J. Bergius var. *fluitans* (Elliott) Wipff & S.D. Jones (*Ceresia fluitans* Elliott; *Paspalum fluitans* (Elliott) Kunth)

U.S., Florida, Texas, Ecuador, Venezuela. River swamps, rice fields, see [1772], *A Sketch of the Botany of South-Carolina and Georgia* 1: 109, t. 6, f. 4. 1816, *Révision des Graminées* 1: 24. 1829, *Botanische Zeitung. Berlin* 12(47): 822. 1854 and *Phytologia* 77(6): 461. 1994.

in English: water paspalum

P. repens P.J. Bergius var. ***repens*** (*Paspalum repens* P.J. Bergius)

South America, Ecuador, Venezuela, Bolivia, Brazil, Argentina, Paraguay. See *Acta Helvetica, Physico-Mathematico-Anatomico-Botanico-Medica* 7: 129, t. 7. 1762 [1772].

P. reptatum Hitchc. & Chase

Cuba, Jamaica. Rare species, wet ground, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 18(7): 318. 1917.

P. restingense Renvoize

Brazil. Perennial, rhizomatous, erect, conspicuous dark nodes, leaves basal, ligule villous, leaf blades narrowly-lanceolate with scabrid margins, spikelets narrowly-elliptic paired hairy to pilose, upper glume 5-nerved, upper lemma and palea pallid, restinga forest, shade, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Kew Bulletin* 39(1): 179. 1984.

P. reticulinerve Renvoize (*Paspalum aspidiotes* Trin.)

Bolivia. Perennial, caespitose, villous, erect, leaf blades linear attenuate densely pubescent finely acute, 2-3 racemes digitate, lanceolate spikelets solitary paired densely imbricate and compressed dorsiventrally, upper glume 5-nerved winged, lower lemma coriaceous 3-nerved, humid savannah, similar to *Paspalum aspidiotes*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Species Graminum* 3: t. 269. 1829-1830, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Kew Bulletin* 50(2): 339, f. 1. 1995.

P. richardii Steud. (*Paspalum laxum* Lam.; *Paspalum laxum* A. Rich. ex Steud.)

West Indies. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Synopsis Plantarum Glumacearum* 1: 17. 1855 [1853].

P. riedelii Mez (*Paspalum ambustum* Swallen) (for the German traveler Ludwig Riedel, 1790-1861, plant collector in Brazil (with the German surgeon Georg Heinrich von Langsdorff, 1774-1852); see Carlos Augusto Taunay, *Manual do Agricultor Brasileiro*. Rio de Janeiro 1839; J.H. Barnhart, *Biographical notes upon botanists*. 3: 156. Boston 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 233. Oxford 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. Paris 1845; Günther Schmid, *Chamisso als*

Naturforscher. Eine Bibliographie. Leipzig 1942; Stafleu and Cowan, *Taxonomic literature*. 4: 789-790. 1983)

Brazil, Paraguay. Perennial, caespitose, leaf blades linear, spikelets elliptic, swampy ground, see *Repertorium Specierum Novarum Regni Vegetabilis* 15: 66. 1917.

P. riparium Nees

Amazonas, Brazil, Colombia, Venezuela. Annual or perennial, tufted, ascending racemes, spikelets paired nearly round, lower lemma crimped, rocky areas, stream sides, seasonally inundated plains, closely related to *Paspalum melanospermum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 56. 1829 and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

P. robustum Link ex Steud. (*Paspalum elegans* Fluegge; *Paspalum tenellum* Willd.)

America. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 89. 1809, *Nomenclator Botanicus. Editio secunda* 2: 273. 1841 and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

P. rocanum León (named for Melanio Roca, botanical collector)

Cuba, Peru, Amazonas. Savannah, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Memoirs of the Torrey Botanical Club* 16: 57. 1920, *Bull. Torrey Bot. Club* 50: 44. 1923, *Novon* 12(3): 394. 2002.

P. rottboellioides C. Wright

Cuba. Sandy areas, savannah, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Anales de la Academia de Ciencias Medicas ...* 8: 204. 1871 and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

P. rudimentosum Steud.

Mexico. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Synopsis Plantarum Glumacearum* 1: 24. 1855 [1853] and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

P. rufum Nees ex Steud. (*Panicum ostenii* Herter; *Paspalum giganteum* Arechav., nom. illeg., non *Paspalum giganteum* Baldwin ex Vasey; *Paspalum hassleri* Hack.; *Paspalum ostenii* Herter)

Uruguay, Brazil. Palatable, grows on sandy fertile soils, wet fields, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Synopsis Plantarum Glumacearum* 1: 26. 1853, *Anales del Museo Nacional de Montevideo* 1: 62. 1894 and *Bulletin de l'Herbier Boissier* 4(3): 268. 1904, *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Anales del Museo Nacional de Montevideo*, ser. 2, 3: 56. 1929, *Australian Journal of Botany* 42: 449-456. 1994.

P. rugulosum Morrone & Zuloaga

Ecuador. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908,

Annals of the Missouri Botanical Garden 82(1): 108-110, f. 13. 1995.

P. rupestre Trin. (*Paspalum leoninum* Chase)

Cuba, the Caribbean. Dry hills, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Linnaea* 10(3): 293. 1836 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Botanical Gazette* 51(4): 301. 1911.

in English: rock crown grass

P. rupium Renvoize

Brazil. Perennial, tufted, nodes pubescent, leaf blades linear tapering to an acute tip, spikelets narrowly elliptic glabrous paired, lower glume usually absent or a nerveless scale, upper glume 3-nerved, upper lemma and palea pallid, campo rupestre, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Kew Bulletin* 39(1): 179. 1984.

P. saccharoides Nees ex Trin. (*Moenchia speciosa* Wender ex Steud.; *Panicum saccharoides* A. Rich., nom. illeg., non *Panicum saccharoides* Trin.; *Paspalum polystachyum* (Sw.) Kuntze, nom. illeg., non *Paspalum polystachyum* R. Br.; *Saccharum polystachyum* Sw.; *Syllepsis polystachya* (Sw.) E. Fourn. ex Hack.; *Tricholaena saccharoides* (Kunth) Griseb.)

Central America, the Caribbean, Ecuador, Costa Rica, Peru, Venezuela. Perennial bunchgrass, solid, erect and decumbent, branched, scandent, drooping, rooting at the lower nodes, leaf blades linear acuminate, stoloniferous, inflorescence terminal ovate or orbicular with several racemes delicate, spikelets solitary lanceolate lax in two rows, upper glume membranous 2-nerved with hairy margins, lower lemma membranous glabrous, yellow anthers, creamy flowers, roadside banks, riverbeds, open areas, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum seu Prodrum* 21. 1788, *Species Graminum* 1: t. 107. 1828, *Révision des Graminées* 2: 237, t. 30. 1830, *Nomenclator Botanicus. Editio secunda* 2: 153. 1841, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 265. 1857, *Flora Brasiliensis* 2(3): 251. 1883, *Revisio Generum Plantarum* 2: 786. 1891 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contr. U.S. Natl. Herb.* 28: 236. 1929, *Brittonia* 23(3): 293-324. 1971.

P. sanguinale (L.) Lam. (*Digitaria sanguinalis* (L.) Scop.; *Panicum sanguinale* L.; *Syntherisma sanguinalis* (L.) Dulac)

Asia. See *Species Plantarum* 1: 57. 1753, *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Observationes Botanicae* 4: 16. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Flora Atlantica* 1: 59. 1798, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 91. 1809, *De Graminibus Paniceis* 77. 1826, *Mantissa* 2: 262. 1832, *Enu-*

meratio Plantarum Omnium Hucusque Cognitarum 1: 83. 1833, *Flore du Département des Hautes-Pyrénées* 77. 1867, *Journal of the Linnean Society, Botany* 19: 190. 1882, *The Flora of British India* 7: 14-16. 1896 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Notulae Systematicae. Herbarium de Paris* 2: 222-223. 1912, *Contributions from the United States National Herbarium* 28(1): i-xvii, 1-310. 1929.

in India: akkaabu hullu, arotaro, bara takria, chamarien, charmara, chikkari, dinohi, dubra, fakri, fakria, farw, hen, hennu akkaabu hullu, hombaale hullu, karsih, kewai, khurash, koli kalamhullu, korkol jodi, kurad, makar jali, modhan, mothi-kabbal, mothi-kabbal takri, rirga, sannakki hullu, shikaol, shikar, shimpagyan hullu, shimpigyanhullu, suka, takri, takriya, tara, taro, thakhriya, thapashi hullu, tikhria

in Thailand: yaa teenkaa, yaa tinkaa

P. sanguinale (L.) Lam. var. ***cruciatum*** (Nees ex Steud.) Hook.f. (*Paspalum sanguinale* (L.) Lam.; *Panicum cruciatum* Nees ex Steud.)

Asia, India. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Synopsis Plantarum Glumacearum* 1: 39. 1855 [1853], *The Flora of British India* 7: 14-15. 1896.

P. sanguinale (L.) Lam. var. ***rotleri*** Hook.f. (*Digitaria sanguinalis* var. *rotleri* (Hook.f.) Prain)

India. See *Révision des Graminées* 1: 33. 1829, *The Flora of British India* 7: 16. 1896 and *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 1181. 1903.

P. sanguinolentum Trin. (also spelled ***sanguineolentum***) (*Paspalum erianthum* Nees ex Trin.)

Central Brazil. Leaf blades narrowly lanceolate and acuminate, spikelets sparsely to densely silky hairy, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *De Graminibus Paniceis* 116, 121. 1826 and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

P. sauetii Chase (*Paspalum caespitosum* Fluegge; *Paspalum poiretii* Roem. & Schult.)

Cuba. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 161. 1810 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 28(1): 147, f. 90. 1929.

P. scabrum Scribn. (*Paspalum candidum* (Humb. & Bonpl. ex Fluegge) Kunth; *Reimaria candida* Humb. & Bonpl. ex Fluegge)

Guatemala. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 214. 1810, *Mémoires du Muséum d'Histoire Naturelle* 2: 68. 1815, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 36,

t. 3. 1897 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Brittonia* 23(3): 293-324. 1971.

in Colombia: yaraguá Uribe

P. scalare Trin. (*Paspalum scalare* var. *villosulum* Döll)

Brazil. Perennial, slender, wiry, much-branched, knotty base, leaf blades linear acuminate spreading at right angles, slender racemes, spikelets paired elliptic-oblong upper glume weakly 3-nerved, lower lemma membranous 2-nerved, upper lemma and palea pallid, campo rupestre, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Species Graminum* 3: t. 274. 1829-1830, *Flora Brasiliensis* 2(2): 50. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

P. scalare Trin. var. ***glabriglume*** Döll

Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Species Graminum* 1828-1836, *Flora Brasiliensis* 2(2): 50. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

P. scalare Trin. var. ***scalare***

Brazil. See *Species Graminum* 1828-1836.

P. schultesii Swallen

Colombia. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Phytologia* 14(6): 387. 1967.

P. scrobiculatum L. (*Paspalum amazonicum* Trin.; *Paspalum auriculatum* Presl; *Paspalum barbatum* Schumacher, nom. illeg., non *Paspalum barbatum* (Trin.) Schult.; *Paspalum borbonicum* Steud.; *Paspalum boscianum* Fluegge; *Paspalum brunneum* Bosc ex Fluegge; *Paspalum cartilagineum* J. Presl; *Paspalum coloratum* Rich. ex Döll; *Paspalum commersonii* Lam.; *Paspalum commutatum* Nees; *Paspalum confertum* J. Le Conte; *Paspalum dissectum* (L.) L.; *Paspalum dissectum* var. *grande* Nees; *Paspalum frumentaceum* Rottb. ex Roem. & Schult.; *Paspalum jardinii* Steud.; *Paspalum kora* Willd.; *Paspalum ledermannii* Mez; *Paspalum metzii* Steud.; *Paspalum orbiculare* Forst.f.; *Paspalum polystachyum* R. Br.; *Paspalum purpurascens* Elliott; *Paspalum scrobiculatum* auct.; *Paspalum scrobiculatum* var. *commersonii* (Lam.) Stapf; *Paspalum scrobiculatum* var. *jardinii* (Steud.) Franch.; *Paspalum scrobiculatum* var. *orbiculatum* Weigelt; *Paspalum scrobiculatum* var. *polystachyum* (R. Br.) Stapf; *Paspalum scrobiculatum* var. *velutinum* Hack.; *Paspalum virgatum* Walter, nom. illeg., non *Paspalum virgatum* L.; *Paspalum virgatum* var. *purpurascens* (Elliott) Alph. Wood) (Latin *scrobiculus* "a little ditch") (after the Swiss horticulturist Carl Ludwig Ledermann, 1875-1958, traveler, explorer, collected in West Cameroon (Kamerun, Cameroun), wrote "Eine botanische Wanderung nach Deutsch-Adamaua." *Mitteil. Deutsch. Schutzge.* 25: 20-55. 1912; see F.N. Hepper and F. Neate, *Plant Collectors in West Africa.* 48-49. 1971; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun.* 7: 1-110. Paris 1968; Frank Nigel

Hepper, "Botanical collectors in West Africa, except French territories, since 1860." in *Comptes Rendus de l'Association pour l'étude taxonomique de la flore d'Afrique*, (A.E.T.F.A.T.). 69-75. Lisbon 1962; F.N. Hepper, "C. Ledermann's botanical collecting localities in Kamerun (Cameroun) 1908-1909." *Kew Bulletin.* 29(2): 365-381. 1974)

Old World tropics and subtropics. Annual or short-lived perennial, very variable, pale green, erect or shortly decumbent at the base, vigorous, loosely to weakly tufted, leafy and shallow rooted, rhizomatous and/or vigorous stoloniferous habit, sheaths more or less glabrous, basal leaf sheaths flattened, no auricles, ligule membranous ciliolate, succulent leaves oblong and hairless, inflorescence composed of 1-14 to 20 racemes flattened and ascending, racemes alternate or subopposite, spikelets solitary and pedicellate arranged in two rows, lower glume usually absent, sterile lemma wrinkled, fertile floret papillose-striate, stigmas usually purple, highly polymorphic species, grain as famine food, grains boiled and eaten in the same way as rice, economic grass widely cultivated by Gonds and Korkus and other jungle tribes of India, noxious weed species, invasive, native pasture species, fodder, forage, livestock feed, very palatable and highly digestible up to flowering, grazed by cattle and buffaloes, human food, cereal, grains ground into meal and used for puddings, grain crop species, can be attacked by the paspalum ergot, new grains said to be narcotic or poisonous, very tolerant of flooding, not very drought resistant, useful for erosion control, plant used to treat scorpion stings, grows in poor veld, open grassy areas, in moist areas, patanas, from fertile clay loams to sandy loams, fallow fields, streams, drain banks, sandy soils and loam, irrigation ditches, uncultivated lands, abandoned lands, wet soils, wadis, in semiswamp forest, disturbed soils, along roadsides, damp grassland and swamp, closely related to *Paspalum vaginatum* Swartz and *Paspalum plicatum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Species Plantarum, Editio Secunda* 1: 81. 1762, *Mantissa Plantarum* 29. 1767, *Florulae Insularum Australium Prodrumus* 7. 1786, *Flora Caroliniana, secundum ...* 75. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175, f. 43, f. 1. 1791, *Species Plantarum. Editio quarta* 1: 332. 1797, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 170-171. 1810, *Prodrumus Florae Novae Hollandiae* 1: 188. 1810, *A Sketch of the Botany of South-Carolina and Georgia* 1: 108, t. 6, f. 3. 1816, *Syst. Veg.* 2: 296. 1817, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 285. 1820, *Flora Indica; or Descriptions ...* 1: 283-284. 1820, *Beskrivelse af Guineiske planter* 53. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 59. 1829, *Reliquiae Haenkeanae* 1(4-5): 216-217. 1830, *Linnaea* 10(3): 294. 1836, *Florae Africae Australioris Illustrationes Monographicae I. Gramineae.* 15. 1841, *Synopsis Plantarum Glumacearum* 1: 18, 21, 27-28. 1855 [1853 or 1854], *Plantae*

Indiae Batavae Orientalis 2: 113. 1857, *A Class-book of Botany* 781. 1861, *Enum. Pl. Zeyl.* 357. 1864, *Flora Brasiliensis* 2(2): 76, 78. 1877, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 233. 1885 and *Handb. Fl. Ceylon* 5: 121. 1900, *Philippine Journal of Science* 1: Suppl. 345. 1906, *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Bibliotheca Botanica* 85: 288. 1915, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 65. 1917, *Flora of Tropical Africa* 9: 573, 576. 1920, *Darwiniana* 1: 109. 1924, *Bulletin of Miscellaneous Information Kew* 1928(1): 40-41. 1928, *J. Arnold Arb.* 29: 298. 1948, *Grasses of Ceylon* 135. 1956, *Grasses of Burma ...* 341. 1960, *Kew Bulletin* 30(1): 101-105. 1975, *Flora of Tropical East Africa* 451-898. 1982, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Blumea* 30: 297, 299, 305-306, 312. 1985, *Cytologia* 52: 487-491. 1987, *Journal of Cytology and Genetics* 25: 140-143, 322-323. 1990.

in English: wild paspalum, veld paspalum, bull paspalum, Indian paspalum, India paspalum, Indian crown grass, creeping paspalum, ditchgrass, ditch millet, ricegrass, koda, koda millet, kodo millet, khodo millet, native millet, scrobic, scrobic millet, scrobic paspalum, water couch, water couch grass

in Spanish: mijo koda

in Angola: likamba

in Cameroon: fafabo gorko

in Gambia: barankato, falisingo, fatango

in Ghana: bamrog, chesimbri, goner

in Guinea: barabia, barabiya, borombia, boromhiya, bilkollo, kenké sama, maléfèrèn, maléféné, tamidi

in Guinea-Bissau: djabi maudo

in Liberia: dfuo su, duo su

in Mali: baraburya ba, barobia, bolo anala, dara koré, diadié, kussein, laruha, nkungurumo, parkatari, tiékou, tiéku

in Niger: nkoungouroumo, nkungurumo, tumbin gaaku, tumbin jaki

in Nigeria: gauri cholli, ikpò ntà, ikpoo, ikute ala, okanli, owu, tamban tsuntsu, tumbin jaakii

in Senegal: barabudiaba, baraburyaba, barabuyaba, barobia, dara koré, diadié, gargada, garganda, ndugupfit, parkatari, tiéku

in Sierra Leone: alekore, balekore, binkolo, kapia, kapika, kharatuna, kpika, lefebuiyie, maloninda, minasabine, pendiki, yanee, zimi

in southern Africa: dronkgras, sloopgras, veld paspalum; isiamuyisane (Zulu)

in Upper Volta: hiburu

in Cambodia: nhieuh

in Japan: hai-suzume-no-hie (= creeping *Paspalum*)

in India: aaraka, allu, alu, arige chettu, arikalu, arike, aruga, arugu, asakalu, ban kodo, chakera, chinke, haaraka, haaraka akki, haaraka hullu, haarike, haraka, hareek, harik, janhe, kiraruga, koda, kodaka, kodav, kodda gadi, kodda jari, kod-dara, kodela, kodeli, kodo, kodoa dhan, kodo, kodoa dhan, kodoadhan, kodon, kodra, kodram, kodrava, kodro, kodru, kodu, koduadhaan, kodus, kokra, kora, koradoosha, kordrava, kudarli, kudda jari, kuddala, kudpal, madanagra, marsi, menya, nalea, neer, niraaruga, paata arige chettu, pacodd, pacoll, pankhagar, pataarige, sawan dundgarko, uddala, vanakodrava, varagu, varaku

in the Philippines: angangsug, bias biasan, bubulis, paragis, sabung sabungan

in Sri Lanka: amu, varagu

in Thailand: yaa plong hin, ya plong heen, ya plong hin

in Vietnam: co sau rom, co trung, co chira

in Hawaii: mau'u laiki

P. scrobiculatum L. var. ***auriculatum*** (J. Presl) Merr. (*Paspalum auriculatum* J. Presl; *Paspalum zollingeri* Steud.)

The Philippines, India to Malaysia. Racemes 3-8 alternate, see *Reliquiae Haenkeanae* 1: 217. 1830, *Synopsis Plantarum Glumacearum* 1: 28. 1855 [1853] and *Philippine Journal of Science* 1: Suppl. 345. 1906, *Blumea* 30(2): 279-318. 1985.

P. scrobiculatum L. var. ***bispicatum*** Hack. (*Paspalum adelogaenum* Steud.; *Paspalum cartilagineum* J. Presl; *Paspalum cartilagineum* var. *biglumaceum* Fosberg & Sachet; *Paspalum cartilagineum* var. *cartilagineum*; *Paspalum commersonii* Lam.; *Paspalum commersonii* var. *hirsutum* Jansen; *Paspalum firmum* Trin.; *Paspalum kora* Willd.; *Paspalum mauritanicum* Nees ex Steud.; *Paspalum metzii* Steud.; *Paspalum orbiculare* var. *cartilagineum* (J. Presl) Summerh. & C.E. Hubb.; *Paspalum polo* F.M. Bailey; *Paspalum polystachyum* R. Br.; *Paspalum scrobiculatum* var. *commersonii* (Lam.) Stapf; *Paspalum scrobiculatum* var. *gracillimum* Domin; *Paspalum scrobiculatum* var. *polystachyum* (R. Br.) Stapf)

Paleotropics, South Africa, Zimbabwe. Annual or perennial, loosely tufted or decumbent to creeping, 1-14 racemes alternate, weed species, forest, lower montane forest, see *Mantissa Plantarum* 29. 1767, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 175, f. 43, f. 1. 1791, *Species Plantarum. Editio quarta* 1: 332. 1797, *Prodromus Florae Novae Hollandiae* 1: 188. 1810, *De Graminibus Panicis* 105. 1826, *Reliquiae Haenkeanae* 1(4-5): 216. 1830, *Synopsis Plantarum Glumacearum* 1: 21-22, 25, 27. 1855 [1853], *Queensland Agricultural Journal* 1: 234, f. 1. 1897 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 20: 146. 1914, *Bibliotheca Botanica* 85: 288. 1915, *Flora of Tropical Africa* 9: 573, 576. 1920, *Bulletin of Miscellaneous Information Kew*

1930; 257. 1930, *Reinwardtia* 2(2): 319. 1953, *Micronesica* 18(2): 81. 1982 [1984], *Blumea* 30: 305-306. 1985.

in English: koda grass, scrobic

in Cambodia: smau 'ânchien

in Indonesia: jaringan, kumpai batu, rumput ketih belalang

in Malaysia: pala belang, rumput tulo santadok

in the Philippines: bias-biasin, sabung-sabungan, tat-awwa

in Thailand: ya-sakhorbik

in Vietnam: co' san tru'ng, co' tru'ng

P. scrobiculatum L. var. *horneri* (Henrard) de Koning & Sosef (*Paspalum horneri* Henrard)

Asia, Assam. Racemes 1-4 more or less alternate to subopposite, see *Blumea* 30(2): 306-307. 1985.

P. scrobiculatum L. var. *lanceolatum* de Koning & Sosef (*Paspalum lamprocaryon* K. Schum.)

Tropical Africa, Malawi. Leaf sheaths encircling the nodes, racemes 2-4, see *Die Pflanzenwelt Ost-Afrikas* C: 100. 1895 and *Blumea* 30(2): 312. 1985.

P. scrobiculatum L. var. *scrobiculatum* (*Paspalum comersonii* var. *turgidum* (Büse) Jansen; *Paspalum scrobiculatum* var. *turgidum* Büse)

Tropics. Racemes 1-2 more or less alternate to subopposite, cultivated, weed species, fodder, forage, human food, cereal, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Plantae Indiae Batavae Orientalis* 2: 113. 1857 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Reinwardtia* 2(2): 320. 1953.

in English: kodra millet, kodo millet, bastard millet

in Indonesia: rebu bawang, rumput kinangan, sukut krisik

P. scrobiculatum L. var. *thunbergii* (Kunth ex Steud.) Makino (*Paspalum scrobiculatum* L.; *Paspalum thunbergii* Kunth ex Steud.)

Asia. See *Mantissa Plantarum* 29. 1767, *Nomenclator Botanicus. Editio secunda* 2: 273. 1841, *Botanical Magazine* 10: 60. 1896.

P. scutatum Nees ex Trin. (*Paspalum scutatum* Nees) (Latin *scutatus, a, um* "armed with a scutu," *scutum, i* "an oblong shield")

Warm regions. Annual, tufted, erect, leaf blades linear or linear-lanceolate acute spikelets scutate glabrous paired, upper glume scutate gibbous 3-nerved tough apiculate, lower lemma scutate 0- to 1-nerved tough apiculate, upper lemma and palea conical striate, disturbed places, sandy soils, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *De Graminibus Paniceis* 105. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 45. 1829 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Darwiniana* 3(1-4): 53-60. 1995.

P. secans Hitchc. & Chase (*Paspalum arundinaceum* Poir.; *Paspalum pleostachyum* Döll)

Puerto Rico, U.S. Perennial, tufted, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 310. 1816, *Flora Brasiliensis* 2(2): 58. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 18(7): 319. 1917, *Contr. U.S. Natl. Herb.* 28: 206. 1929, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979, *Flora of Puerto Rico and Adjacent Islands: A Systematic Synopsis* 1-342. 1982, *Las Gramíneas de México* 5: 1-466. 1999.

in English: slender ditch crown grass, slender ditch paspalum

P. sericatum Swallen (*Paspalum erianthum* Nees ex Trin.)

Brazil. Rocky places, slopes, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *De Graminibus Paniceis* 121. 1826 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Phytologia* 14(6): 371. 1967.

P. serpens J. Presl ex Trin. (*Paspalum orbiculatum* Poir.; *Paspalum serpens* Nees, nom. illeg., non *Paspalum serpens* J. Presl ex Trin.)

Amazonas, Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Encyclopédie Méthodique, Botanique* 5: 32. 1804, *De Graminibus Paniceis* 102. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 50. 1829 and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

P. serpentinum Hochst. ex Steud. (*Paspalum argyrocondylon* Steud.; *Paspalum maculosum* var. *rotundiflorum* Döll)

Venezuela, Belize, Honduras. Perennial, erect, caespitose, leaves mostly basal, spreading racemes, growing in clumps, lowland savannah, savannahs, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *De Graminibus Paniceis* 98. 1826, *Synopsis Plantarum Glumacearum* 1: 22. 1855 [1853], *Flora Brasiliensis* 2(2): 72. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908.

P. setaceum Michx. (*Paspalum bushii* Nash; *Paspalum ciliatifolium* Michx.; *Paspalum ciliatifolium* var. *muehlenbergii* (Nash) Fern.; *Paspalum ciliatifolium* var. *stramineum* (Nash) Fernald; *Paspalum debile* Michx.; *Paspalum debile* Muhl., nom. illeg., non *Paspalum debile* Michx.; *Paspalum dolichopus* Trin. ex Steud.; *Paspalum eriophorum* Willd. ex Nees, nom. illeg., non *Paspalum eriophorum* Schult.; *Paspalum incertum* Roem. & Schult.; *Paspalum leptostachyum* DC., nom. illeg., non *Paspalum leptostachyum* Fluegge; *Paspalum longepedunculatum* Le Conte; *Paspalum muehlenbergii* Nash; *Paspalum propinquum* Nash; *Paspalum psammophilum* Nash; *Paspalum pubescens* Muhl. ex Willd.; *Paspalum rigidifolium* Nash; *Paspalum separatum* Shinnery; *Paspalum setaceum* var. *calvescens* Fern.; *Paspalum setaceum* var. *ciliatifolium* (Michx.) Vasey; *Paspalum setaceum* var. *longepedunculatum* (Le Conte) Wood; *Paspalum setaceum* var. *muehlenbergii* (Nash) D. Banks; *Paspalum setaceum* var. *psammophilum* (Nash) D. Banks; *Paspalum setaceum* var. *rigidifolium* (Nash) D.

Banks; *Paspalum setaceum* var. *stramineum* (Nash) D.J. Banks; *Paspalum setaceum* var. *supinum* (Bosc ex Poir.) Trin.; *Paspalum setaceum* var. *villosissimum* (Nash) D. Banks; *Paspalum stramineum* Nash; *Paspalum stramineum* Ekman, nom. illeg., non *Paspalum stramineum* Nash; *Paspalum supinum* Bosc ex Poir.)

Northern America, U.S. Perennial, spreading stems, sheaths smooth, leaves often with hairy and fringed margins, flat round seeds slightly pointed and shortly hairy, provides fair grazing for wildlife and livestock, collected in sandy soil, found growing on open grasslands and wooded sites in sandy textured soils, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 43-44. 1803, *Catalogus plantarum horti botanici monspeliensis* 130. 1813, *Systema Vegetabilium* 2: 308. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 56. 1829, *Nomenclator Botanicus. Editio secunda* 2: 271. 1841, *Contributions from the United States National Herbarium* 1(4): 114. 1891, *Bulletin of the New York Botanical Garden* 1(4): 291. 1899 and *Manual of the Flora of the Northern States and Canada* 74. 1901, *Contr. U.S. Natl. Herb.* 12(3): 116, 145. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 12. 1912, *Contr. U.S. Natl. Herb.* 28: 78. 1929, *Rhodora* 36(421): 20. 1934, *Rhodora* 49(581): 121-122, pl. 1057. 1947, *Sida* 2(4): 276, f. 6. 1966, *Phytologia* 51(7): 469. 1982.

in English: slender crown grass, thin paspalum, banks lens grass, long-stalked paspalum, long-stalked lens grass, bead grass

P. setaceum Michx. var. ***ciliatifolium*** (Michx.) Vasey (*Paspalum blepharophyllum* Nash; *Paspalum ciliatifolium* Michx.; *Paspalum ciliatifolium* var. *brevifolium* Vasey; *Paspalum ciliatifolium* var. *ciliatifolium*; *Paspalum debile* Michx.; *Paspalum debile* Muhl., nom. illeg., non *Paspalum debile* Michx.; *Paspalum eggertii* Nash; *Paspalum epile* Nash; *Paspalum kentuckiense* Nash; *Paspalum latifolium* J. Le Conte; *Paspalum propinquum* Nash; *Paspalum spathaceum* Desv. ex Poir.)

Northern and southern America, Mexico, U.S. Perennial with spreading stems, sheaths usually smooth, leaves hairy along the margin, seed flat and round and covered with sparse hairs, weed species, fair grazing for wildlife and livestock, economic plant, on sandy riverbanks, sandy soil, see *Flora Boreali-Americana* 1: 43-44. 1803, *Catalogus Plantarum Americae Septentrionalis* 8. 1813, *Encyclopédie Méthodique, Botanique Suppl.* 4: 314. 1816, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 284. 1820, *Proceedings of the Academy of Natural Sciences of Philadelphia* 38: 285. 1886, *Contributions from the United States National Herbarium* 3(1): 17. 1892, *Bulletin of the New York Botanical Garden* 1(4): 291. 1899 and *Bulletin of the New York Botanical Garden* 1(5): 434. 1900, *Manual of the Flora of the Northern States and Canada*

1039. 1901, *Flora of the Southeastern United States ...* 71-72. 1903, *Contr. U.S. Natl. Herb.* 12(3): 145. 1908.

in English: fringe-leaf paspalum, thin paspalum, lens grass

P. setaceum Michx. var. ***longepedunculatum*** (Leconte) Alph. Woods (*Paspalum longepedunculatum* Leconte; *Paspalum longipedunculatum* Leconte)

Northern and southern America. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 43. 1803, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 91: 284. 1820, *A Class-book of Botany* 782. 1861 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908.

P. setaceum Michx. var. ***muhlenbergii*** (Nash) D.J. Banks (*Paspalum ciliatifolium* var. *muhlenbergii* (Nash) Fernald; *Paspalum muhlenbergii* Nash; *Paspalum pubescens* Muhl. ex Willd.; *Paspalum pubescens* var. *muhlenbergii* (Nash) House; *Paspalum setaceum* var. *calvescens* Fernald)

Northern and southern America. Perennial, open areas, slopes, along trails, hills, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 43-44. 1803, *Enumeratio Plantarum Horti Botanici Bero-linensis, ...* 89. 1809 and *Manual of the Flora of the Northern States and Canada* 75. 1901, *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *New York State Museum Bulletin* 243-244: 39. 1923, *Rhodora* 36(421): 20. 1934, *Rhodora* 49(581): 121-122, pl. 1057. 1947, *Sida* 2(4): 280, f. 8. 1966, *Annals of the Missouri Botanical Garden* 74: 432-433. 1987.

P. setaceum Michx. var. ***psammophilum*** (Nash ex Hitchc.) D.J. Banks (*Paspalum prostratum* Nash, nom. illeg., non *Paspalum prostratum* Scribn. & Merr.; *Paspalum psammophilum* Nash ex Hitchc.)

Northern and southern America. Sandy soil, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 43. 1803 and *Manual of the Flora of the Northern States and Canada* 74. 1901, *Rhodora* 8(95): 205. 1906, *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Sida* 2(4): 276, f. 5. 1966.

P. setaceum Michx. var. ***rigidifolium*** (Nash) D.J. Banks (*Paspalum rigidifolium* Nash)

Northern and southern America. Sandy soil, dry areas, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 43. 1803, *Bulletin of the New York Botanical Garden* 1(4): 292. 1899 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Sida* 2(4): 282, f. 10. 1966.

P. setaceum Michx. var. ***setaceum*** (*Paspalum debile* Muhl., nom. illeg., non *Paspalum debile* Michx.; *Paspalum dissectum* Walter, nom. illeg., non *Paspalum dissectum* (L.) L.; *Paspalum dolichopus* Trin. ex Steud.; *Paspalum dubium* DC.; *Paspalum eriophorum* Willd. ex Nees, nom. illeg., non *Paspalum eriophorum* Schult.; *Paspalum incertum* Roem. & Schult.; *Paspalum infirmum* Roem. & Schult.; *Paspalum*

leptostachyum DC., nom. illeg., non *Paspalum leptostachyum* Fluegge; *Paspalum setaceum* Michx.)

Northern and southern America. Perennial, caespitose, found in moist soil, in open sandy field, along streams and riverbanks, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Caroliniana, secundum ...* 75. 1788, *Flora Boreali-Americana* 1: 43-44. 1803, *Catalogus plantarum horti botanici monspeliensis* 130. 1813, *Systema Vegetabilium* 2: 307-308. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 56. 1829, *Nomenclator Botanicus. Editio secunda* 2: 271. 1841 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Contr. U.S. Natl. Herb.* 28: 78. 1929.

P. setaceum Michx. var. **stramineum** (Nash) D.J. Banks (*Paspalum bushii* Nash; *Paspalum chapmanii* Nash; *Paspalum ciliatifolium* var. *stramineum* (Nash) Fernald; *Paspalum eggertii* Nash; *Paspalum separatum* Shinnery; *Paspalum stramineum* Nash; *Paspalum stramineum* Ekman, nom. illeg., non *Paspalum stramineum* Nash)

Northern America, U.S., Mexico. Caespitose, sandy riverbanks, open habitats, dry areas, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 43-44. 1803, *Bulletin of the New York Botanical Garden* 1(4): 290-291. 1899 and *Bulletin of the New York Botanical Garden* 1(5): 434. 1900, *Manual of the Flora of the Northern States and Canada* 74. 1901, *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 12. 1912, *Rhodora* 36(421): 20. 1934, *Rhodora* 56(662): 32. 1954, *Sida* 2(4): 276, f. 6. 1966.

P. setaceum Michx. var. **supinum** (Bosc ex Poir.) Trin. (*Paspalum ciliatifolium* var. *dasyphyllum* (Elliott) Chapm.; *Paspalum dasyphyllum* Elliott; *Paspalum supinum* Bosc ex Poir.)

Northern and southern America. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 43-44. 1803, *Encyclopédie Méthodique, Botanique* 5: 29. 1804, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 105. 1816, *Species Graminum* 2: t. 130. 1829, *Flora of the Southern United States* 578. 1897 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908.

P. setaceum Michx. var. **villosissimum** (Nash) D.J. Banks (*Paspalum villosissimum* Nash)

Northern and southern America. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Boreali-Americana* 1: 43-44. 1803, *Bulletin of the Torrey Botanical Club* 24(1): 40. 1897 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908.

P. siccum Nees (*Axonopus siccus* (Nees) Kuhlmann; *Axonopus siccus* var. *siccus*)

Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 28. 1829 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908,

Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica 67(Bot. 11): 87. 1922, *Advancing Frontiers of Plant Sciences* 5: 1-186. 1963.

P. simile Mez (*Paspalum molle* Poir.)

Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Encyclopédie Méthodique, Botanique* 5: 34. 1804 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 70. 1917.

P. simplex Morong (*Paspalum malacophyllum* var. *lineari-folium* Hack.)

Bolivia, Argentina, Paraguay. Perennial, erect, bunchgrass, apomictic, leafy, leaf margins and sheaths pubescent, leaf blades linear acuminate, shortly rhizomatous, spikelets purple oblong boat-shaped, glumes lacking, lower lemma 3-nerved membranous, anthers yellow and stigmas purple, related to *Paspalum malacophyllum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Species Graminum* 3: t. 271. 1829-1830, *Annals of the New York Academy of Sciences* 7: 258. 1893 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 341. 1909, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Kurtziana* 19: 35-45. 1987, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994, *Candollea* 55: 105-135. 2000.

P. sincoranum Mez (*Paspalum candidum* (Humb. & Bonpl. ex Fluegge) Kunth; *Reimaria candida* Humb. & Bonpl. ex Fluegge)

Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 214. 1810, *Mémoires du Muséum d'Histoire Naturelle* 2: 68. 1815 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 9. 1921, *Annals of the Missouri Botanical Garden* 82(1): 82-116. 1995.

P. soboliferum Chase (*Paspalum humboldtianum* Fluegge)

Ecuador. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 67. 1810 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Contributions from the United States National Herbarium* 24(8): 443. 1927.

P. sodiroanum Hack. (*Paspalum peruvianum* Mez; *Paspalum prostratum* Scribn. & Merr.; *Paspalum sodiroanum* Hack. ex Sodiro; *Paspalum sodiroanum* var. *terminale* Hack. ex Sodiro) (after the Italian botanist Luigi Sodiro, 1836-1909, clergyman, 1870 to Ecuador, professor of botany, botanical explorer, author of *Cryptogamae Vasculares Quitenses*. Quito 1893; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 299. 1965)

Southern America, Ecuador, Colombia. Inflorescence racemose, growing in cultivated fields, see *Systema Naturae,*

Editio Decima 2: 846, 855, 1359. 1759, *Anales de la Universidad Central del Ecuador* 3(25): 476-477. 1889 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 9. 1901, *Österreichische Botanische Zeitschrift* 51: 237. 1901, *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 28. 1917.

in Spanish: grama, maicillo, nudillo, pasto negro, siquiquigua

P. soukupii Carbonó

Peru. Inflorescence of unilateral winged racemes, spikelets consisting of only two bracts and a single flower, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Annals of the Missouri Botanical Garden* 82(1): 112-113, f. 15. 1995, *Mutisia* 73: 2, f. 1. 1995, *Annals of the Missouri Botanical Garden* 88: 351-372. 2001.

P. sparsum Chase

Mexico. Along roadsides, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Publications of the Carnegie Institution of Washington* 436: 341, f. 5. 1934.

P. squamatum Steud. (*Paspalum distichum* L.; *Paspalum vaginatum* Sw.).

Guinea. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum seu Prodrum* 21. 1788, *Synopsis Plantarum Glumacearum* 1: 21. 1855 [1853], *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881 and *Contr. U.S. Natl. Herb.* 12: 116, 136. 1908, *Taxon* 21: 546. 1972, *Taxon* 25: 513. 1976, *Taxon* 32: 281. 1983.

P. squamulatum E. Fourn. (*Paspalum minus* E. Fourn.; *Paspalum sumichrasti* E. Fourn.)

South America, Costa Rica, Mexico. Perennial, erect, decumbent, rooting at the nodes, clustered, clumped, forage, growing in open habitats, riverbanks, secondary forest, along roadside, weedy sites, pastures, meadows, edge of lawn, disturbed areas, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881, *Mexicanas Plantas* 2: 6, 11. 1886 and *Contr. U.S. Natl. Herb.* 28: 67, 116, 118. 1929, *Brittonia* 23(3): 293-324. 1971, *Taxon* 33: 126-134. 1984, *Darwiniana* 30(1-4): 87-94. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in Mexico: amatsi, tigrillo

P. standleyi Chase (for the American botanist Paul Carpenter Standley, 1884-1963, plant collector and botanical explorer (Central and Western North America, Costa Rica, Guatemala), lichenologist, with the American botanist Albert Spear Hitchcock (né Jennings), 1865-1935, wrote

Flora of the District of Columbia and Vicinity. Washington [D.C.] 1919, with Julian Alfred Steyermark, 1909-1988, curator of the *Flora of Guatemala*. [Fieldiana, Botany. vol. 24, etc.] Published by Chicago Natural History Museum; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 315. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 382. 1973; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 380. 1972; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. 1969; Stafleu and Cowan, *Taxonomic literature*. 5: 831-837. 1985; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

Panama, Ecuador. Rhizomatous, growing in colonies, marshy places, sandy soil, riverbeds, swamps, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Journal of the Washington Academy of Sciences* 17: 146. 1927, *Brittonia* 23(3): 293-324. 1971.

P. stellatum Humb. & Bonpl. ex Fluegge (*Paspalum cujabense* Trin.; *Paspalum cuyabense* Trin.; *Paspalum marginatum* Remy, nom. illeg., non *Paspalum marginatum* Trin.; *Paspalum remyi* Steud.; *Paspalum splendens* var. *sphacelatum* Hack.; *Paspalum stellatum* Humb. & Bonpl.; *Paspalum stellatum* f. *hirsuta* Hack.; *Paspalum stellatum* var. *distachyum* Nees; *Paspalum stellatum* var. *monostachyum* Nees; *Paspalum stellatum* var. *monostachyus* Nees; *Paspalum wagenarianum* Schldtl.; *Paspalus stellatus* var. *distachyus* Nees)

Argentina, Mexico and West Indies. Perennial bunchgrass, tufted, slender, erect, pubescent, leaf blades linear acuminate attenuate, ligule ciliate, terminal inflorescence, erect racemes, spikelets imbricate solitary hairy in two rows, winged rachis, lower glume absent, upper glume and lower lemma hairy, upper floret narrowly obovate, growing in clumps, ground cover, open areas, campos, savannahs, grassland, woods, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum*. Reimaria 62. 1810, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 78. 1829, *Annales des Sciences Naturelles; Botanique, sér. 3* 6: 348. 1846, *Linnaea* 26(2): 133, 803. 1854, *Synopsis Plantarum Glumacearum* 1: 28. 1855 [1853] and *Österreichische Botanische Zeitschrift* 51: 238-239. 1901, *Anales del Museo Nacional de Buenos Aires*

21: 28. 1911, *Darwiniana* 30(1-4): 87-94. 1990, *Gramíneas de Bolivia* 449-451. 1998.

in Bolivia: pasto

P. strigosum Döll ex Chase (*Paspalum bicrurulum* Salzm. ex Döll, nom. illeg., non *Paspalum bicrurulum* Salzm. ex Steud.) (from the Latin *crus, cruris* “the leg, shank, shin, foot, the lower part of the stalk”)

Brazil. Perennial, loosely tufted, hairy, leaf blades linear tapering to a point, inflorescence of 2 conjugate racemes, pointed pilose spikelets broadly elliptic solitary arranged in two rows on the rachis, upper lemma and palea strigulose, moist areas, damp places, resembles *Paspalum pumilum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Brasiliensis* 2(2): 57. 1877 and *Contributions from the United States National Herbarium* 28: 68. 1929.

P. stuckertii Hack. (*Panicum humboldtianum* (Fluegge) Kuntze; *Paspalum humboldtianum* Fluegge; *Paspalum humboldtianum* var. *stuckertii* (Hack.) Hack.) (for the Swiss (b. Basel) botanist Theodor (Teodoro) Juan Vicente Stuckert, 1852-1932, pharmacist, in Argentina (Córdoba); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 342. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 387. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 6: 55-56. Utrecht 1986)

Argentina. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 63, 67. 1810, *Revisio Generum Plantarum* 3: 361. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 63. 1904, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 12: 97. 1906.

P. subciliatum Chase

Panama, Venezuela, Brazil. Perennial or annual, erect, rhizomatous, densely tufted, ligule membranous fringed ciliate, leaf blades linear, inflorescence of 2 spreading conjugate racemes, spikelets elliptic, upper glume and lower lemma 3-nerved, upper floret glabrous, forage, lowland savannah, sandy soil, seasonally inundated areas, floodplains, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Journal of the Washington Academy of Sciences* 17: 144, f. 1. 1927, *Darwiniana* 30(1-4): 87-94. 1990.

in Venezuela: corocillo

P. subfalcatum (Döll) Tutin (*Panicum subfalcatum* Döll)

Amazonas, Brazil, Venezuela. Erect, creeping, riverbanks, open areas, sandy soil, forest, see *Species Plantarum* 1: 55. 1753, *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Brasiliensis* 2(2): 181. 1877 and *Contr. U.S.*

Natl. Herb. 12: 116. 1908, *Journal of Botany, British and Foreign* 72: 338. 1934.

P. subsesquiglume Döll (*Paspalum pictum* Ekman)

Brazil. Annual, loosely tufted, sparsely to densely hairy, erect, leaf blades linear-lanceolate acuminate, spikelets obovate-oblong paired, upper glume reduced to a membranous nerveless scale, lower lemma membranous 5-nerved pilose, upper lemma and palea minutely papillose, open rocky places, dry stony soils, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Brasiliensis* 2(2): 43. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 11, t. 6, f. 7. 1911.

P. taphrophyllum Steud. (*Paspalum notatum* Fluegge) (Greek *taphros* “a trench, ditch” and *phyllon* “a leaf”)

Martinique. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 63, 67. 1810, *Synopsis Plantarum Glumacearum* 1: 19. 1855 [1853] and *Blumea* 30: 313. 1985.

P. tectum Steud. (*Paspalum dissectum* (L.) L.)

U.S., Florida. See *Species Plantarum* 57. 1753, *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Species Plantarum, Editio Secunda* 1: 81. 1762, *Synopsis Plantarum Glumacearum* 1: 29. 1855 [1853].

P. telmatum Swallen (Greek *telma, telmatos* “marsh”)

Brazil. Wet places, riverbanks, margin of lake, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Phytologia* 14(6): 388. 1967.

P. tenacissimum Mez (*Paspalum laxum* Lam.; *Paspalum laxum* A. Rich. ex Steud.)

Central America, the Caribbean, Puerto Rico. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 176. 1791, *Synopsis Plantarum Glumacearum* 1: 17. 1853 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 11. 1921.

P. tenellum Willd. (*Panicum lagascae* (Roem. & Schult.) Kuntze; *Panicum pubescens* hort. ex Kunth; *Paspalum elegans* Fluegge; *Paspalum lagascae* Roem. & Schult.; *Paspalum liebmannii* E. Fourn.; *Paspalum pubescens* Lag., nom. illeg., non *Paspalum pubescens* Muhl. ex Willd.; *Paspalum robustum* Link ex Steud.; *Paspalum tenellum* var. *bourgeaei* E. Fourn.) (named for the French traveler Eugène Bourgeau, 1813-1877, botanical collector in Europe and Mexico, North America and Algeria. See *Bonplandia* 6: 341. 1858; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; Joseph Ewan, *Rocky Mountain Naturalists*. 167-168. The University of Denver Press 1950; Alphonse Louis Pierre Pyramus de Candolle, 1806-1893, *La phytographie ou l'art de décrire les*

végétaux considérés sous différents points de vue. 399. Paris 1880; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. 17. Royal Botanic Gardens, Kew, London 1906; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 136. Oxford 1964; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 63. Edinburgh 1970; Michel Charles Durieu de Maisonneuve (1796-1878), *Exploration scientifique de l'Algérie pendant les années 1840, 1841, 1842* publiée par ordre du gouvernement et avec le concours d'une commission académique. Sciences physiques. Botanique par MM. Bory de St.-Vincent et Durieu de Maisonneuve membres de la Commission scientifique d'Algérie. Paris 1846-1855[-1869]; Ernest Saint-Charles Cosson (1819-1889), *Compendium florum atlanticae*. 1: 24. Paris 1881-1887; J.H. Barnhart, *Biographical notes upon botanists*. 1: 230. 1965)

Ecuador, Colombia, Brazil, Guatemala, Mexico. Perennial, loosely tufted, pubescent knotty base, leaves mostly cauline, leaf blades lanceolate or linear-lanceolate acute or acuminate, spikelets elliptic-obovate paired and arranged in 4 rows on the rachis, upper glume 3-nerved, lower lemma 3-nerved, upper lemma and palea smooth, clay or rocky soils, shady or open places, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 89. 1809, *Graminum Monographiae* ... Pars I. *Paspalum*. *Reimaria* 183. 1810, *Genera et species plantarum* 2. 1816, *Systema Vegetabilium, editio decima sexta* 2: 317. 1817, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 59. 1833, *Nomenclator Botanicus, Editio secunda* 2: 273. 1841, *Mexicanas Plantas* 2: 11-12. 1886, *Revisio Generum Plantarum* 3(3): 362. 1898 and *Journal of Cytology and Genetics* 18: 26-33. 1983.

P. thollonii Franch. (*Setaria thollonii* (Franch.) Stapf) (for the French François-Romain Thollon, 1855-1896 (d. Libreville, Gabon), plant collector (Ivory Coast, S. Nig., Congo and Gabon); see F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 79. 1971; J.H. Barnhart, *Biographical notes upon botanists*. Boston 1965)

Africa. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Contributions à la flore du Congo Français* 43. 1895 and *Bulletin of Miscellaneous Information Kew* 1927: 267. 1927.

P. thunbergii Kunth ex Steud. (*Paspalum scrobiculatum* var. *thunbergii* (Kunth ex Steud.) Makino)

Asia temperate, China, Japan, Taiwan, Korea. Erect, weed species forming a large tuft, sheaths densely villous, leaves pilose, racemes more or less divaricate, puberulent spikelets densely arranged and suborbicular, useful for erosion and desertification control, used for afforestation, taro plantations, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mantissa Plantarum* 29. 1767, *Nomenclator*

Botanicus, Editio secunda 2: 273. 1841, *Botanical Magazine* 10: 60. 1896.

in English: Japanese paspalum, barnyard millet

in Japan: suzume-no-hie, suzumenohie

P. tillettii Davidse & Zuloaga (for Stephen Szlatenyi Tillett, b. 1930, botanical collector, ethnobotanist. Caespitose, along riverbanks, grassland, open areas, sandy soil, savannah, see *Leaflet W. Bot.* 8: 17. 1956; *Phytologia* 27: 213-214. 1973; *Phytologia* 31: 483. 1975; *Acta Bot. Venez.* 13: 130. 1978; *Brittonia* 30: 40. 1978; *Phytologia* 48: 291. 1981; *Wrightia* 7: 93. 1982; *Smithsonian Contr. Bot.* 56: 68. 1984; *Fl. Venez.* 2(2): 257. 1984; *Phytologia* 60: 319-320. 1986; *Ann. Missouri Bot. Gard.* 77: 260, 342. 1990; *Candollea* 47: 490. 1992; *Ernstia* 3: 64. 1993; *Curtis's Botanical Magazine* vol. 15 issue 2 p. 109, May 1998)

Venezuela. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Novon* 2(3): 195, f. 2. 1992.

P. tinctum Chase (*Paspalum pubiflorum* var. *tinctum* (Chase) Guzmán & Santana)

Mexico. Sandy soil, moist places, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mexicanas Plantas* 2: 11. 1886 and *Contributions from the United States National Herbarium* 28(1): 62, f. 30. 1929.

P. tolucensis R. Guzmán

Mexico. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Phytologia* 51(7): 466. 1982.

P. trachycoleon Steud. (*Panicum ceresia* Kuntze; *Paspalum ceresia* (Kuntze) Chase)

Venezuela, Colombia. Culms leaning on vegetation, savannah, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Synopsis Plantarum Glumacearum* 1: 28. 1855 [1853], *Revisio Generum Plantarum* 3(2): 360. 1898 and *Contributions from the United States National Herbarium* 24: 153. 1925.

P. trianae Pilg. (for the Colombian botanist José Jerónimo (also Gerónimo) Triana, 1834-1890 (d. Paris), traveler, plant collector, botanical explorer, his writings include *Nuevos jeneros i especies de plantas para la flora Neo-Granadina*. Bogotá 1855 [title page date 1854] and *Prodromus florum Novogranatensis*. Paris 1862-1867. See Enrique Pérez Arbeláez, in *D.S.B.* 13: 463-464. 1981; *Trans. Linn. Soc.* 28: 1-188. 1871 [1872]; J.H. Barnhart, *Biographical notes upon botanists*. 3: 400. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 406. Boston, Mass. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; *Brittonia* 49: 32. 1997)

Colombia, Venezuela. Rhizomatous, parámos, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 18. 1899.

P. trichophyllum Henrard (*Paspalum denticulatum* var. *ciliatum* Trin.; *Paspalum goeldii* Swallen; *Paspalum humigenum* Swallen)

Brazil. Perennial, erect, tufted, savannah, open areas, along streams, riverbanks, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *De Graminibus Paniceis* 111. 1826, *Species Graminum* 2: t. 123. 1829 and *Blumea* 4(3): 513. 1941, *Phytologia* 14(6): 361-362. 1967, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

P. trichostomum Hack.

Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Österreichische Botanische Zeitschrift* 51: 236. 1901.

P. trinii Swallen

Brazil. Annual or perennial, scabrous leaf blades, inflorescence narrowly pyramidal, ascending racemes, spikelets elliptic to obovate, upper glume and lower lemma 3-nerved, upper floret round, closely related to *Paspalum goeldii*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Phytologia* 14: 360. 1967.

P. tuberosum Mez (*Paspalum prostratum* Scribn. & Merr.)

Peru. Erect, tufted, creeping, prostrate, tuberous, knotty roots, rhizomatous, montane, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 9. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 29. 1917, *Brittonia* 23(3): 293-324. 1971.

P. tumidum Kuhl. (*Paspalum crassum* Chase)

Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Contributions from the United States National Herbarium* 17(3): 239. 1913, *Archivos do Jardim Botânico do Rio de Janeiro* 4: 349, t. 27. 1925.

P. turriforme R.W. Pohl

Costa Rica. Erect, clumped, scabrous leaves, open areas, ditches, hills, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Fieldiana: Botany, New Series* 4: 455. 1980.

P. ulei Hack. (*Axonopus barbigerus* var. *barbigerus*; *Axonopus siccus* (Nees) Kuhl.; *Axonopus ulei* (Hack.) Dedecca; *Paspalum siccum* Nees)

Warm regions, Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 28. 1829 and *Österreichische Botanische Zeitschrift* 51: 240. 1901, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 87. 1922, *Contributions from the United States*

National Herbarium 24(8) 433. 1927, *Bragantia* 15: 276. 1956.

P. umbellatum Lam. (*Cynodon dactylon* (L.) Pers.; *Cynodon umbellatus* (Lam.) Caro)

Mauritius. Sandy places, see *Species Plantarum* 1: 58. 1753, *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 177. 1791, *Syn. Pl.* 1: 85. 1805 and *Dominguezia* 6, f. 4: 16. 1983.

P. umbratile Chase (*Paspalum corcovadense* Raddi)

Honduras, Brazil. Riverbanks, shade, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Agrostografia Brasiliensis* 27. 1823 and *Contributions from the United States National Herbarium* 28(1): 132, f. 76. 1929, *Ceiba* 42(1): 1-71. 2001 [2002].

P. umbrosum Trin. (*Paspalum densiflorum* Döll; *Paspalum paniculatum* L.; *Paspalum paniculatum* subsp. *umbrosum* (Trin.) Roseng., B.R. Arrill. & Izag.; *Paspalum umbrosum* Salzm. ex Steud.)

Southern Brazil, Paraguay, Uruguay. Annual or biennial or perennial, decumbent to erect, lax, stoloniferous, rhizomatous, loosely clumped, rooting at the lower nodes, spikelets elliptic or oblong, found in damp ground, forest edge, sandy pasture, along roadsides, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 153. 1834, *Synopsis Plantarum Glumacearum* 1: 18. 1854, *Flora Brasiliensis* 2(2): 52. 1877 and *Contr. U.S. Natl. Herb.* 12(3): 116. 1908, *Gramíneas Uruguayas* 373. 1970, *Darwiniana* 35(1-4): 29-36. 1998.

P. underwoodii Nash (*Paspalum millegrana* Schrad.) (named for the American botanist Lucien Marcus Underwood, 1853-1907, professor of botany and biology; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 416. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 411. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 416-417. 1973; Charles J. Édouard Morren, *Correspondance botanique*. Liège 1874 and 1884; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ignatz Urban (1848-1931), editor, *Symbolae Antillanae*. 3: 11. Berlin 1902; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969)

The Caribbean. Along roadsides, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mantissa* 2: 175. 1824 and *Bulletin of the Torrey Botanical Club* 30(7): 375. 1903.

P. uninode Hack. (*Axonopus uninodis* (Hack.) G.A. Black)

Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 6. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 67. 1908, *Advancing Frontiers of Plant Sciences* 5: 102. 1963.

P. unispicatum (Scribn. & Merr.) Nash (*Panicum unispicatum* Scribn. & Merr.)

Central America, Mexico, Honduras. Upright, bunchgrass, more or less leafy, vigorous, spreading, shortly rhizomatous, succulent leaves with margins pubescent, along roadsides, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 14. 1901, *North American Flora* 17(2): 193. 1912, Blas Pablo Reko, *Mitobotánica zapoteca*. Tacubaya 1945, *Boletín de la Sociedad Argentina de Botánica* 16: 53-65. 1974, Joseph W. Whitecotton, *The Zapotecs: Princes, Priests, and Peasants*. Norman, University of Oklahoma 1977, Maximino Martínez (1888-1964), *Catálogo de nombres vulgares y científicos de plantas mexicanas*. México 1987.

in English: one-spike crown grass, one spike paspalum

in Mexico: dxillaa'doh nachiiitsi (Zapoteca language)

P. urbanianum Ekman ex Hitchc. (after the German botanist Ignatz Urban, 1848-1931, specialized on the flora of the West Indies, from 1889 professor Botanical Garden and Museum at Berlin-Dahlem, edited *Symbolae Antillanae seu fundamenta florum Indiae occidentalis*. Berolini etc. 1898-1928; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 417. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 411. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 418. 1973; Stafleu and Cowan, *Taxonomic literature*. 6: 606-619. 1986; *Sendtnera* 4: 209. 1997)

The Caribbean. Moist places, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Manual of the Grasses of the West Indies* 237, f. 190. 1936.

P. urvillei Steudel (*Paspalum dilatatum* var. *parviflorum* Döll; *Paspalum griseum* Hack. ex M. Corrêa; *Paspalum griseum* Hack. ex Loefgr.; *Paspalum larranagae* Arehav., also *larrañagai* or *larranagai*; *Paspalum ovatum* var. *parviflorum* Nees; *Paspalum vaseyanum* Scribn.; *Paspalum velutinum* Trin. ex Nees; *Paspalum virgatum* L.; *Paspalum virgatum* Ekm., non L.; *Paspalum virgatum* var. *parviflorum* Döll; *Paspalum virgatum* var. *pubiflorum* Vasey) (for the French traveler and explorer Jules Sébastien César Dumont d'Urville, 1790-1842, plant collector, a member of the

Linnean Society and the Société de Géographie, he took part in the voyage of the *Coquille* (commanded by L.I. Duperrey), from 1825 commander of the *Astrolabe* (former *Coquille*), among his works are *Enumeratio Plantarum quas in insulis archipelagi aut littoribus Ponti-Euxinii, annis 1819 et 1820, collegit atque detexit J. Dumont D'Urville*. Parisii 1822, *Voyage au Pôle Sud and dans l'Océanie sur les corvettes L'Astrolabe et La Zélée*. Paris 1841-1846 and *Voyage de Découvertes autour du Monde ... sur la corvette L'Astrolabe pendant les Années 1826-1829*. Paris 1832-1848; see E.S. Dodge, *Islands and Empire: Western Impact on the Pacific and East Asia*. Minneapolis 1976; Gaston Meissas, *Les grands voyageurs de notre siècle*. Paris 1889; J.H. Barnhart, *Biographical notes upon botanists*. 1: 480. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 109. Boston, Mass. 1972; R. Glenn, *The botanical explorers of New Zealand*. Wellington 1950; John Dunmore, *Who's Who in Pacific Navigation*. 89-91, 93, 135, 184, 216. Honolulu 1991; Stafleu and Cowan, *Taxonomic literature*. 1: 696-698. Utrecht 1976)

Tropics, South America, Brazil to Argentina. Perennial, erect, vigorous, smooth, robust, stout, very coarse, tussocky, basally thickened, glabrous, densely tufted, woody rhizome very stout, sheaths hairy and purplish to bluish in color, sheaths of basal leaves densely hairy, ligule membranous and pointed or dentate, blades linear and erect with smooth margins, several mostly erect racemes arranged along the primary axis, velvety ovate spikelets paired and pedicellate, spikelets with silky hairs along the edges, lower glume absent, upper glume and sterile lemma fringed with silky hairs, fertile floret nearly smooth, lower palea absent, heavy seed production, economic plant, growing in large bunches, widely introduced in tropical countries and naturalized in the wild, potential seed contaminant, fodder, pasture species, fair-quality hay, killed by heavy grazing, coarse and unpalatable as it matures, does not grow well in shade, can withstand severe drought, generally resistant to paspalum ergot, a weed of wet disturbed areas and poor soils, vleis, thrives best on heavy soils, cultivated fields, well on moist sandy places and very wet lands, riverbanks, waterways, meadows, grassland, open disturbed sites, often in swampy places, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 43. 1829, *Synopsis Plantarum Glumacearum* 1: 24. 1855 [1854 or 1853], *Flora Brasiliensis* 2(2): 64, 89. 1877, *Bulletin of the Torrey Botanical Club* 13: 167. 1886, *Anales del Museo Nacional de Montevideo* 1: 60, t. 2. 1894, *Commissão Geographica e Geologica Estado de São Paulo: Boletim* 10: 37. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 32, f. 328. 1899 and *Flora Brazil* 128. 1909, *Contr. U.S. Natl. Herb.* 28: 173. 1929, *Handb. Fl. Ceylon* 6: 315. 1931, *Cytologia* 19: 97-103. 1954, *Grasses of Ceylon* 138. 1956, *Grasses of*

Burma ... 341. 1960, *Mendeliana* 8: 53-63. 1987, *Darwiniana* 30(1-4): 87-94. 1990, *Boletim da Sociedade Broteriana*, ser. 2 64: 35-74. 1991.

in English: giant paspalum, giant paspalum grass, upright paspalum, Vasey grass, Vasey's grass, Urville's paspalum, tall paspalum

in Spanish: hierba de Vasey, vasey

in Mexico: camalote aglomerado, pasto vasey

in South Africa: langbeenwatergras, langbeen-paspalum, regop paspalum, reuse paspalum, Vasey-paspalum (see Charles Edward Hubbard, 1900-1980, "Vasey-grass in Africa (*Paspalum larranagai* Arech.);" *Kew Bull.* 94-96. 1926)

in Japan: tachi-suzume-no-hie (= erect *Paspalum*)

P. usteri Hack. (*Paspalum inaequiglume* Parodi; *Paspalum usteri* var. *villosum* Kuhlm.) (named for the Swiss botanist Alfred Usteri, 1869-1948, horticulturist, traveler, botanical collector, 1903-1904 in the Philippines, author of anthropological publications; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 418. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916)

Brazil. Perennial, along streams and riverbanks, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Repertorium Specierum Novarum Regni Vegetabilis* 5: 1. 1908, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 56. 1922, *Revista Argentina de Agronomía* 20(27): f. 1. 1953, *Darwiniana* 35(1-4): 29-36. 1998, *Candollea* 55(1): 105-135. 2000.

P. uyucense R.W. Pohl (also spelled *uyucensis*)

Honduras, Cerro Uyuca. Endangered species, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Annals of the Missouri Botanical Garden* 73(2): 501. 1986, *Flora Mesoamericana* 6: 335-352. 1994, *Ceiba* 42(1): 1-71. 2001[2002].

P. vaginatum Swartz (*Chloris virgata* Sw.; *Digitaria foliosa* Lag.; *Digitaria platicaulis* (Poir.) Desv.; *Digitaria tristachya* (J. Le Conte) Schult.; *Digitaria vaginata* (Sw.) Magnier; *Panicum littorale* (R. Br.) Kuntze, also spelled *litorale*; *Panicum vaginatum* (Sw.) Gren. & Godr., nom. illeg., non *Panicum vaginatum* Nees; *Paspalum boryanum* J. Presl; *Paspalum brachiatum* Trin. ex Nees; *Paspalum didactylum* Salzm. ex Steud.; *Paspalum distichum* L.; *Paspalum distichum* sensu Ekm., non L.; *Paspalum distichum* sensu Stapf, non L.; *Paspalum distichum* sensu Jessop, non L.; *Paspalum distichum* subsp. *vaginatum* (Sw.) Maire; *Paspalum distichum* var. *anpinense* Hayata; *Paspalum distichum* var.

littorale (R. Br.) F.M. Bailey; *Paspalum distichum* var. *nanum* (Döll) Stapf; *Paspalum distichum* var. *tristachyum* (J. Le Conte) Alph. Wood; *Paspalum distichum* var. *vaginatum* (Sw.) Griseb.; *Paspalum foliosum* (Lag.) Kunth; *Paspalum gayanum* Desv.; *Paspalum gayanus* Desv.; *Paspalum inflatum* A. Rich.; *Paspalum jaguaense* León; *Paspalum kleinianum* J. Presl; *Paspalum littorale* R. Br.; *Paspalum longiflorum* P. Beauv.; *Paspalum platycaulon* Poir.; *Paspalum reimarioides* Chapm., nom. illeg., non *Paspalum reimarioides* Brongn.; *Paspalum reptans* Poir. ex Döll; *Paspalum squamatum* Steud.; *Paspalum tristachyum* J. Le Conte; *Paspalum vaginatum* Döll, nom. illeg., non *Paspalum vaginatum* Sw.; *Paspalum vaginatum* Elliott, nom. illeg., non *Paspalum vaginatum* Sw.; *Paspalum vaginatum* subsp. *nanum* (Döll) Loxton; *Paspalum vaginatum* var. *littorale* (R. Br.) Trin. ex Büse; *Paspalum vaginatum* var. *longipes* Lange; *Paspalum vaginatum* var. *nanum* Döll; *Paspalum vaginatum* var. *reimarioides* (Chapm.) Chapm.; *Rabdochloa virgata* (Sw.) P. Beauv.; *Rottboellia uniflora* Cunningham; *Sanguinaria vaginata* (Sw.) Bubani)

Tropics and subtropics. Perennial, glabrous, more or less erect, trailing, spreading, branching, strongly rhizomatous and stoloniferous, with long creeping rhizomes and stolons and ascending stems, rooting at the nodes below the water level, leaf sheaths generally overlapping and covering the internodes, distinct ligule membranous and hairy, coarse leaf blades folded or flat, flowers in paired terminal spike-like racemes, ascending-to-spreading racemes shortly pedunculated, spikelets usually solitary and pedicellate, spikelets glabrous flattened oblong or ovate lanceolate, first glume usually absent or reduced to a rim, upper glume and sterile lemma glabrous, upper lemma and palea smooth, anthers oblong and purple, rounded seeds white and flat, usually found in a sterile condition, weed species rarely found far from the shore, very difficult to eradicate, ornamental, turf, economic plant, eaten by geese and other wild-life, forming very dense turf in pasture, useful for erosion control, stabilizing salt marsh, grows in dense colonies on salty shores, over tidal flats, along estuaries, on sandy and rocky shores, in warm and wet areas, desert oasis, near saline water, littoral mudflats, lagoons, coastal salt marshes and inland marshes, on the edges of mangrove swamps, rocky cliffs, saline soils, salty or brackish areas along the warm coasts, in area flooded frequently, at water edges on sandy soils, fresh or brackish pools, closely related to and confused with *Paspalum distichum*, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Flora Indiae Occidentalis* 1: 203. 1797, *Encyclopédie Méthodique, Botanique* 5: 34. 1804, *Flore d'Oware* 2: 46, t. 85, f. 2. 1807, *Prodromus Florae Novae Hollandiae* 1: 188. 1810, *Essai d'une Nouvelle Agrostographie* 84, 158. 1812, *Genera et species plantarum* 4. 1816, *A Sketch of the Botany of South-Carolina and Georgia* 1: 109. 1816, *Journal de Physique*,

de Chimie, d'Histoire Naturelle et des Arts 91: 285. 1820, *Mantissa* 2: 261. 1824, *Révision des Graminées* 1: 25. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 62. 1829, *Reliquiae Haenkeanae* 1(4-5): 209. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 166. 1831, *Companion to the Botanical Magazine* 2: 371. 1837, *Historia Fisica Política y Natural de la Isla de Cuba, Botanica* 11: 298. 1850, *Synopsis Plantarum Glumacearum* 1: 20-21. 1854 [1855 or 1853], *Flora Chilena* 6: 240. 1854, *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 1854: 44. 1854, *Plantae Jung-huhnianae* 3: 383. 1854, *Flore de France ... Prospectus* 3: 462. 1856, *A Class-book of Botany* 783. 1861, *Flora of the British West Indian Islands* 541. 1864, *Flora Brasiliensis* 2(2): 75. 1877, *Flora of the Southern United States* 665. 1883, *Scrinia Florae Selectae* 6: 120. St.- Quentin 1887, *Queensland Grasses* 23. 1888, *Anales del Museo Nacional de Montevideo* 1: 56. 1894, *Flora of the Southern United States* 577. 1897, *Revisio Generum Plantarum* 3(3): 362. 1898, *Flora Capensis* 7: 371. 1898 and *Flora Pyrenaea ...* 4: 258. 1901, *Contr. U.S. Natl. Herb.* 12: 136. 1908, *Icones plantarum formosandarum nec non et contributiones ad floram formosanam.* 7: 54-55, f. 27. 1918, *Contr. U.S. Natl. Herb.* 28: 41. 1921, *Handb. Fl. Ceylon* 6: 314. 1931, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 217. 1941, *Flora de Cuba* 1: 139. 1946, *Grasses of Ceylon* 134. 1956, *Grasses of Burma ...* 341. 1960, *Taxon* 21: 546. 1972, *Taxon* 25: 513. 1976, *Journal of South African Botany* 43(1): 93. 1977, *Taxon* 29: 339. 1980, *Taxon* 32: 281. 1983, Marcum K.B. and C.L. Murdoch, "Salt tolerance of the coastal salt marsh grass, *Sporobolus virginicus* (L.) Kunth." *New Phytologist* 120: 281-288. 1988, Dudeck A.E. and C.H. Peacock, "Salinity effects on growth and nutrient uptake of selected warm-season turf." *International Turfgrass Society Research Journal* 7: 680-686. 1993, Marcum K.B. and C.L. Murdoch, "Salinity tolerance mechanisms of six C4 turfgrasses." *Journal of the American Society of Horticultural Science* 119: 779-784. 1994.

in English: seashore paspalum, seashore crown grass, sand knot grass, silt grass, swamp couch, salt water couch, biscuit grass

in Gambia: niro

in Ghana: gbekle

in Senegal: hey, xerof

in Sierra Leone: gbonje, kenkende, kekirekire, pistui

in South Africa: brakpaspalum

in Japan: sawa-suzume-no-hie

in Tonga: mohuku ano

in Pacific: mosiesie, mosie kalalahi

P. validum Swallen

Brazil. Rocky places, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Phytologia* 14(6): 382. 1967.

P. variabile (E. Fourn.) Nash (*Brachiaria grossaria* Griseb. ex E. Fourn.; *Dimorphostachys ghiesbreghtii* E. Fourn.; *Dimorphostachys schaffneri* E. Fourn.; *Dimorphostachys schaffneri* var. *remotispicula* E. Fourn.; *Dimorphostachys variabilis* E. Fourn.; *Panicum pseudopaspalus* Nees; *Panicum schaffneri* (E. Fourn.) Kuntze; *Panicum schaffneri* Mez, nom. illeg., non *Panicum schaffneri* (E. Fourn.) Kuntze; *Panicum schaffneri* Griseb. ex E. Fourn.; *Panicum schiedeanum* Trin. ex Steud., nom. illeg., non *Panicum schiedeanum* Trin. ex Beal; *Paspalum haenkeanum* Nees; *Paspalum pseudopaspalus* Nees; *Paspalum schaffneri* (E. Fourn.) Scribner, nom. illeg., non *Paspalum schaffneri* Griseb. ex E. Fourn.)

Mexico. See *Species Plantarum* 1: 55. 1753, *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nomenclator Botanicus. Editio secunda* 2: 263. 1841, *Linnaea* 24(2): 236. 1851, *Flora Rossica* 4(14): 469. 1853, *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 80: 441. 1875, *Mexicanas Plantas* 2: 15-16. 1886, *Revisio Generum Plantarum* 3(3): 358. 1898 and *Publications of the Field Columbian Museum, Botanical Series* 2(1): 24. 1900, *North American Flora* 17(2): 180. 1912, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4. 1921, *Contr. U.S. Natl. Herb.* 28(1): 107. 1929.

P. velutinum (DC.) Kunth (*Digitaria leucites* (Trin.) Henrard; *Milium velutinum* DC.; *Paspalum velutinum* Trin. ex Nees; *Syntherisma velutina* (DC.) Chase)

South America. Erect, stoloniferous, creeping, pasture ground, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum seu Prodrromus* 24. 1788, *Catalogus plantarum horti botanici monspeliensis* 126. 1813, *Genera et species plantarum* 2. 1816, *Flora Indica; or Descriptions ...* 1: 317. 1820, *De Graminibus Paniceis* 85. 1826, *Révision des Graminées* 1: 27. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 43. 1829 and *Proceedings of the Biological Society of Washington* 19(34): 191. 1906, *Contributions from the United States National Herbarium* 17(3): 220. 1913, *Rhodora* 22(258): 103. 1920, *Symbolae Antillarum* 8: 23. 1920, *Proceedings of the Biological Society of Washington* 40: 84. 1927, *Mededeelingen van's Rijks-Herbarium* 61: 6. 1930, *Monograph of the Genus Digitaria* 395. 1950.

P. venezuelana (Chase) A.G. Burm. (*Thrasya venezuelana* Chase)

Venezuela. Stony places, dry soil, savannah, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Nova Genera et Species Plantarum* 1: 120-121. 1815 [1816] and *Journal of the Washington Academy of Sciences* 42(4): 122, f. 1. 1952, *Acta Botanica Venezuelica* 14(4): 90. 1985[1987].

P. viale Swallen (*Paspalum glaucescens* Hack.)

Brazil. Along roadsides, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Österreichische Botanische Zeitschrift* 51: 237. 1901, *Phytologia* 14(6): 383. 1967.

P. virgatum L. (*Ixophorus unisetus* (J. Presl) Schldl.; *Panicum lagascae* var. *virgatum* (L.) Kuntze; *Paspalum arundinaceum* Poir.; *Paspalum lagascae* var. *virgatum* (L.) Kuntze; *Paspalum leucocheilum* C. Wright; *Paspalum plicatulum* Michx.; *Paspalum virgatum* Walter, nom. illeg., non *Paspalum virgatum* L.; *Paspalum virgatum* var. *ciliatum* Döll; *Paspalum virgatum* var. *jacquinianum* Fluegge; *Paspalum virgatum* var. *linneanum* Fluegge; *Paspalum virgatum* var. *stramineum* Griseb.; *Paspalum virgatum* var. *willdenowianum* Fluegge; *Paspalum wettsteinii* Hack.) (*Paspalum virgatum* var. *jacquinianum* Fluegge named for the Austrian (b. Leiden, Netherlands) botanist Nikolaus (Nicolaus, Nicolaas) Joseph (Jozeph, Josef) von Jacquin, 1727-1817 (d. Vienna), botanical collector, traveler, sent by Francis I on a trip to the West Indies and South America 1754/1755-1759, from 1768 to 1796 professor of botany and chemistry in the Medical Faculty of the University of Vienna, 1774 elevated to the nobility, 1806 Baron, 1809 Rector of the University, 1774 edited *Pharmacopoea Austriaco-Provincialis*, 1784 edited *Beiträge zur Geschichte der Vögel*, among his numerous and valuable writings are *Examen chemicum doctrinae Meyerianae de acido pingui, et Blackianae de aere fixo, respectu calcis*. Vindobonae 1769, *Enumeratio systematica plantarum, quas in insulis Caribaeis vicinae Americae continente detexit novas, aut jam cognitae emendavit*. Lugduni Batavorum 1760, *Oxalis*. Viennae 1794, *Plantarum rariorum horti caesarei schoenbrunnensis descriptiones et icones*. Viennae 1797-1804 and *Hortus botanicus vindobonensis*. Vindobonae [Wien] 1770-1776. See Wilfried Oberhammer, in *D.S.B.* 7: 57-59. 1981; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. Oxford 1975; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; J.H. Barnhart, *Biographical notes upon botanists*. 2: 242. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 240. Boston, Mass. 1973; I.K. Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Ignatz Urban, editor, *Symbolae Antillanae*. Berlin 1898; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 189. Oxford 1964; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. 5: 294. London 1796-1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. Dresden 1916; Wilfrid Blunt and W.T. Stearn, *The Art of Botanical Illustration*. 156-158. London 1950; Linnaeus, *Fl.*

Jamaica. 27. 2 Jan. 1760; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 130-133. Palermo 1988; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 730. Stuttgart 1993; Adolar Gottlieb Julius Hans Herre, *The genera of the Mesembryanthemaceae, ... illustrations by Harry Bolus, Beatrice Carter, Mary Page and Maisie Walgate*. Cape Town 1971; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 469. Ansbach 1852; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 193. 1972; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; H. Walter Lack, "Jacquin's *Selectarum Stirpium Americanarum Historia*. The extravagant second edition and its title pages." in *Curtis's Botanical Magazine*. 15(3): 194-214. August 1998)

Southern U.S. to Brazil, West Indies, Argentina. Perennial, upright, densely caespitose, stout, coarse, robust, herbaceous, nodes dark, ligule membranous, sheaths pilose on the margins, lower sheaths papery and shining, leaf blades linear acuminate with rather cutting margins, inflorescence ovate to pyramidal, panicles at the top of slender axis, lax racemes or arching-drooping spikes, ascending to spreading racemes densely flowered, densely packed spikelets broadly obovate paired, upper glume and lower lemma membranous 3-5-nerved, upper lemma and palea granular, economic plant forming large clumps, forage, troublesome weed species in hay and pasture, useful for erosion control, grows in bare gravelly soil at roadside, campos, disturbed places, deep soil, inundated fields, lowlands, weedy roadsides, stream banks, along the edge of rivers, floodplains, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Caroliniana, secundum ...* 75. 1788, *Flora Boreali-Americana* 1: 45. 1803, *Graminum Monographiae ... Pars I. Paspalum*. Reimaria 190. 1810, *A Sketch of the Botany of South-Carolina and Georgia* 1: 108, t. 6, f. 3. 1816, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 310. 1816, *Reliquiae Haenkeanae* 1(4-5): 319. 1830, *A Class-book of Botany* 781. 1861, *Linnaea* 31: 747, 420-422. 1861-1863, *Flora of the British West Indian Islands* 543. 1864, *Anales de la Academia de Ciencias Medicas ...* 8: 203. 1871, *The American Botanist and Florist* 2: 390. 1871, *Flora Brasiliensis* 2(2): 88-89. 1877, *Bulletin of the Torrey Botanical Club* 13: 167. 1886, *Revisio Generum Plantarum* 3: 362. 1898 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 5. 1906, *Anales del Museo Nacional de Buenos Aires* 13: 247. 1906, *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 342. 1909, *Contr. U.S. Natl. Herb.* 28(1): 173, 197, 206. 1929, *Brittonia* 23(3): 293-324. 1971.

in English: upright paspalum, razor grass, sword grass, water couch, talquezal, cut grass

in Spanish: camalote blanco, pasto, grama, marciega, talquezal, zacate de burro, cortadero, matojo blanco, cortadera

in Argentina: paja colorada

in Bolivia: paja toruna

in Brazil: palha branca, milhan rojo, milhan roxo

in the Caribbean: herbe à cheval, herbe rude, zèb a chouval, zèbrid

in Colombia: marciega

in Ecuador: shoshovi

in Puerto Rico: cortadero

P. virletii Fourn.

Mexico. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mexicanas Plantas* 2: 12. 1886 and *Contr. U.S. Natl. Herb.* 28: 116. 1929.

in English: Virlet's crown grass, Virlet paspalum

P. volcanensis Zuloaga, Morrone & A. Denham

Argentina. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Novon* 10(2): 183-186, f. 1A-C, 2. 2000.

P. wagnerianum Schldtl. (*Paspalum stellatum* Humb. & Bonpl. ex Fluegge) (for the German botanist Hermann Wagner, 1823-1877, orchidologist, botanical collector in Colombia and Venezuela. See Diederich Franz Leonhard von Schlechtendal, 1794-1866, *Plantae Wagnerianae Columbiae* in *Linnaea* 25: 743-750. Dec 1853, 26: 127-144. Apr 1854, and 26: 631-674. Sep 1855; Heinrich Gottlieb Ludwig Reichenbach (1793-1879), *Bonplandia* 2: 9-26. 15 Jan 1854, 3: 65-72. 15 Mar 1855; Henri Pittier, *Manual de las Plantas Usuales de Venezuela* y su Suplemento. Caracas 1978; K.S. Levonsen, *Orchid Rev.* 82: 348-352. 1974; *Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königlich Preussischen Akademie der Wissenschaften zu Berlin* 1854: 126. 1854; *Aphorismi Botanici* 15: 200. 1824)

Venezuela. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 62. 1810, *Linnaea* 26(2): 133, 803. 1854.

P. wettsteinii Hack. (*Paspalum conspersum* Schrad.; *Paspalum virgatum* L.) (for the Austrian botanist Richard Wettstein von Westersheim, 1863-1931, traveler, plant collector, phylogenist, father of the Austrian botanist and plant physiologist Fritz (Friedrich) Wettstein von Westersheim (1895-1945); see T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 433. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and

S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. 1993; Stafleu and Cowan, *Taxonomic literature.* 7: 219-235. 1988)

South America, Argentina, southern Brazil, Uruguay, Paraguay. Perennial, stoloniferous, tufted, erect to semiprostrate to prostrate, glabrous, unbranched, spreading stems, often rooted from the nodes, sheath hairy, ligule membranous and hairy, leaves hairy with wavy margins, spikelets paired ovate or obovate, first glume usually absent or minute, upper glume and sterile lemma similar, fertile floret shining, pasture species, very palatable, very drought and ergot resistant, survives moderate flooding and poor drainage, withstands grazing well, useful for erosion control, shade tolerant, very tolerant of poor soils, best on coastal soils, humid subtropical areas, common in disturbed places, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mantissa* 2: 174. 1824 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 5. 1906, *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 66. 1908, *J. Cytol. Genet.* 18: 26-33. 1983, *Journal of Cytology and Genetics* 23: 61-67. 1988.

in English: Warrel grass, broad-leaved paspalum, broad-leaf paspalum

P. wombaliense Vanderyst (*Axonopus compressus* var. *congoensis* (Henrard) G.A. Black)

Africa. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Essai d'une Nouvelle Agrostographie* 12, 154. 1812 and *Bulletin agricole du Congo Belge* 9: 247. 1918, *Blumea* 5(3): 529. 1945, *Advancing Frontiers of Plant Sciences* 5: 81. 1963.

P. wrightii Hitchc. & Chase (*Paspalum hydrophilum* Henrard; *Paspalum hydrophilum* Henrard; *Paspalum luticolum* Swallen; *Paspalum platyaxis* (Döll) Mez; *Paspalum plicatum* var. *multinode* Hack.; *Paspalum texanum* Swallen; *Paspalum virgatum* var. *glabriusculum* Döll; *Paspalum virgatum* var. *platyaxon* Döll; *Paspalum virgatum* var. *subplicatum* Hack.)

Cuba, Venezuela, Bolivia. Endangered species, perennial or annual, aquatic or subaquatic, weak, spongy, erect or decumbent, rooting at the lower nodes, leaf blades coarse linear acuminate, ligule membranous, inflorescence narrowly pyramidal, spikelets elliptic or elliptic-obovate, upper glume and lower lemma membranous 3- to 5-nerved with a wrinkled appearance, upper floret elliptic, a weed in rice fields, grassland, riverbanks, campos, swampy areas, floodplains, wet savannah, seasonally inundated fields, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora Brasiliensis* 2(2): 89. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 342. 1909, *Contributions from the United States National Herbarium* 18(7): 310. 1917, *Repertorium Specierum Novarum Regni Vegetabilis* 15:

73. 1917, *Mededeelingen van's Rijks-Herbarium* 45: 1. 1922, *Proceedings of the Biological Society of Washington* 55: 94. 1942, *Phytologia* 14(6): 373. 1967.

P. wullschlaegelii Mez (*Paspalum maritimum* Trin.) (for the German botanist Henrich Rudolph Wullschlaegel (Wullschlägel), 1805-1864, teacher and missionary, botanical collector in Jamaica, Guyana and Nicaragua, author of *Deutsch-Negerenglisches Wörterbuch*. Löbau 1856 and *Lebensbilder aus der Geschichte der Brüdermission*. Stuttgart 1843-1848; Ignatz Urban (1848-1931), editor, *Symbolae Antillanae*. Berlin 1902; see Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916)

Suriname. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 148. 1834, *Synopsis Plantarum Glumacearum* 1: 18. 1855 [1853] and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 10. 1921, *Contributions from the United States National Herbarium* 22(6): 480, f. 81. 1922.

P. yaguaronense Henrard (*Paspalum glaucescens* Hack.)

South America, Argentina, Brazil, Uruguay, Paraguay. Tall, palatable and productive, useful for erosion control, found in damp sandy localities, below marshy field, see *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Österreichische Botanische Zeitschrift* 51: 237. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 18: 238. 1922, *Ciencia e Cultura (São Paulo)* 39: 776. 1987.

P. yucatanum Chase (*Paspalum blodgettii* Chapm.)

Mexico. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Flora of the Southern United States* 571. 1860 and *Contributions from the United States National Herbarium* 28(1): 121, f. 71. 1929.

P. zollingeri Steud. (*Paspalum scrobiculatum* var. *auriculatum* (J. Presl) Merr.)

Java, Indonesia. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759, *Reliquiae Haenkeanae* 1: 217. 1830, *Synopsis Plantarum Glumacearum* 1: 28. 1855 [1853] and *Philippine Journal of Science* 1: Suppl. 345. 1906, *Blumea* 30(2): 279-318. 1985.

P. zuloagae Davidse & Filg.

South America, Brazil. See *Systema Naturae, Editio Decima* 2: 846, 855, 1359. 1759 and *Novon* 5(2): 148, f. 2. 1995.

Paspalus Fluegge

An orthographic variant of *Paspalum* L.

Panicoideae, Paniceae, Paspalinae, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Transactions of the Linnean Society of London* 2: 83, t. 16. 1794, *Graminum Monographiae ... Pars I. Paspalum. Reimaria* 53. 1810, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 163. 1831, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 46: 443-527. 2003.

Patellocalamus W.T. Lin = Ampelocalamus S.L. Chen, T.H. Wen & G.Y. Sheng, Dendrocalamus Nees

Latin *patella, ae*, "a small dish, a plate" plus *Calamus*.

Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, type *Patellocalamus patellaris* (Gamble) W.T. Lin, see *Linnaea* 9(4): 476-477. 1835, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881, *Annals of the Royal Botanic Garden: Calcutta*. 7: 86-87, t. 75. 1896 and *Indian Forester* 58: 7. 1932, *Lingnan University Science Bulletin* 9: 66-67. 1940, *Acta Phytotaxonomica Sinica* 18: 211-216. 1980, *Acta Phytotaxonomica Sinica* 19(3): 332-334, pl. 1. 1981, *Journal of Bamboo Research* 2: 12, 148. 1983, *J. SouthWestern Forestry College* 1984(1): 134, f. 1. 1984, *Kew Bulletin, Additional Series* 13: 41, 54. 1986, *Journal of Bamboo Research* 7(4): 9, 13. 1988, *Journal of South China Agricultural University* 10(2): 43, 45-46. 1989, *Journal of Bamboo Research* 12(2): 49-52, 54, f. 1. 1993, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. *The Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 54-55. 2000.

Patis Ohwi

An anagram of the generic name *Stipa* L.

Pooideae, Stipeae, Stipinae, type *Patis coreana* (Honda ex Nakai) Ohwi, see *Species Plantarum* 1: 78. 1753, *Essai d'une Nouvelle Agrostographie* 19, 146, pl. 6, f. 7. 1812, *Proceedings of the Linnean Society of London* 1: 94. 1841, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881 and *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Journal of Japanese Botany* 17: 404. 1941, *Acta Phytotaxonomica et Geobotanica* 11: 181. 1942, *Flora of Japan* 101. 1953, *Contributions from the United States National Herbarium* 48: 617-650. 2003.

Patropyrum Á. Löve = *Aegilops* L.

Poideae, Triticeae, Triticinae, *Aegilops* subsect. *Oligomorpha* Eig, see J.C. Buxbaum, *Plantarum minus cognitarum centuria, complectens plantas circa Byzantium et in Oriente observatas* Centuria I. Petropoli 1728-1740, *Species Plantarum* 1: 85. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Familles des Plantes* 2: 36, 513. 1763, *Enumeratio Methodica Plantarum* 371. 1763, *Systema Vegetabilium* 2: 769. 1817, *Notes sur Quelques Plantes Critiques, Rares, ou Nouvelles, ...* 2: 69. 1849, *Illustrationes Plantarum Orientalium* 4: 12, 21, 23. 1851, *Flora Dalmatica* 3: 345. 1852, *Synopsis Plantarum Glumacearum* 1: 354. 1854, *Flore de France* 3: 601. 1856, *Plantae Europaeae* 1: 128. 1890 and *Repertorium Specierum Novarum Regni Vegetabilis* Beih. 55: 84, 90, 117. 1929, *Blumea, Supplement* 3: 15, 17. 1946, *Feddes Repert.* 91: 225-228, 233-234, 236. 1980, *Biologisches Zentralblatt* 101(2): 206-208. 1982, *Feddes Repert.* 95: 493, 495. 1984, *Taxon* 41: 552-583. 1992, *Taxon* 44: 611-612. 1995, *Flora de Veracruz* 114: 1-16. 2000, *Contributions from the United States National Herbarium* 48: 20-23, 478. 2003.

Pechea Lapeyr. = *Crypsis* Aiton, *Pechea* Arráb. ex Steud. (Myrsinaceae)

Chloridoideae, Cynodonteae, Sporobolinae, or Chloridoideae, Zoysieae, Sporobolinae, in syn. sub *Crypsis schoenoides* (L.) Lam., see William Townsend Aiton (1766-1849), *Hortus Kewensis*. 1: 48. 1789, *Prodromus Florae Novae Hollandiae* 532. 1810, *Suppl. Pl. Pyr.* 8. 1818, *Ionios Anthologia* 2: 448. 1834, *Nom. Bot.* edition 2, 1: 449. 1840, *Nomenclator Botanicus. Editio secunda* 2: 280. 1841, *J. Linn. Soc. Bot.* 6: 54. 1862, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881 and *Hooker's Icones Plantarum* 35(3): 1-11, plate 3457. 1947, *Fl. Afr. Nord* 2: 89. 1953, *Bull. Research Council of Israel* 11D: 91-126. 1962, *Systematic Botany* 4: 267-280. 1979, *Contributions from the United States National Herbarium* 41: 56-57, 181. 2001.

Pectinaria (Benth.) Hack. = *Eremochloa* Büse, *Pectinaria* Haw. (Asclepiadaceae), *Pectinaria* Bernh. (Apiaceae, alt. Umbelliferae), *Pectinaria* Cordemoy (Orchidaceae)

Latin *pecten*, *pectinis* “a comb,” *pectinarius*, *a*, *um* “belonging to combs.”

Panicoideae, Andropogoneae, Rottboelliinae, *Ischaemum* sect. *Pectinaria* Benth., see *Familles des Plantes* 2: 68. 1763, *Botanisches Wörterbuch* 1: 31. 1797, *Systematisches*

Verzeichnis 113, 221. 1800, *Supplementum Plantarum Succulentarum ...* 14. 1819, *Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 6, Sci. Math.* 2(4): 296. 1832, *An Introduction to the Natural System of Botany* 21. 1836, *Plantae Jung-huhniana* 3: 357. 1854, *Journal of the Linnean Society, Botany* 19: 71. 1881, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881, *Die Natürlichen Pflanzenfamilien* 2(2): 26. 1887, *Revue Générale de Botanique* 11: 412. 1899 and *Contributions from the United States National Herbarium* 46: 230, 527. 2003.

Peltophorus Desv. = *Manisuris* L., *Mnesithea* Kunth

Greek *pelte* “a shield” and *phoros* “bearing,” alluding to the shape of the flowers.

Panicoideae, Andropogoneae, Rottboelliinae, see *Mantissa Plantarum* 2: 164, 300. 1767 et 1771, *Supplementum Plantarum* 13, 114. 1781 [1782], *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 119, 167, t. 21, f. 11. 1812, *Révision des Graminées* 1: 153-154. 1829, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887, *Monographiae Phanerogamarum* 6: 291. 1889, *The Flora of British India* 7: 155. 1896 and *Flora of Tropical Africa* 9: 59. 1917, *Bulletin du Muséum d'Histoire Naturelle* 27: 371. 1921, *Contributions from the United States National Herbarium* 46: 295-296, 527. 2003.

Penicillaria Willd. = *Pennisetum* Rich.

Latin *penicillum*, *i* “a pencil, a painter's brush.”

Panicoideae, Paniceae, Cenchrinae, type *Penicillaria spicata* (L.) Willd., see *Syn. Pl.* 1: 72. 1805, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1036-1037. 1809, *Gen. Pl.* 3(2): 1106. 1833 and *Contr. U.S. Natl. Herb.* 22: 210-211. 1921, *Contributions from the United States National Herbarium* 46: 527-536. 2003.

Peniculus Swallen = *Mesosetum* Steud.

Latin *peniculus*, *i* “a little tail, brush, pencil.”

Panicoideae, Paniceae, Paspalinae, type *Peniculus angustifolius* Swallen, see *Synopsis Plantarum Glumacearum* 1: 118. 1855 [1854], *Österreichische Botanische Zeitschrift* 47: 75. 1897, *Revisio Generum Plantarum* 3[3]: 359. 1898 and *Proceedings of the Biological Society of Washington* 24: 121, 123. 1911, *American Journal of Botany* 19: 581. 1932, *Brittonia* 2(4): 363-392. 1937, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 70. 1940, *Acta Amazonica* 19: 47-114. 1989[1990], *Flora Mesoamericana* 6: 355.

1994, *Contributions from the United States National Herbarium* 46: 288-292, 527. 2003.

Pennisetum Rich. = *Amphochaeta*
Andersson, *Beckeropsis* Fig. & De Not.,
Catatherophora Steud., *Eriochaeta* Figari &
De Not., *Gymnothrix* K. Sprengel, *Gymnothrix*
P. Beauv., *Loydia* Delile, *Macrochaeta* Steud.,
Penicillaria Kunth, *Penicillaria* Willd.,
Pentastachya Steud., *Sericura* Hassk.

From the Latin *penna*, *ae* “a feather, plume” and *saeta* (*seta*), *ae* “a bristle, hair,” referring to the inflorescence, to the bristly spikes; see Christiaan Hendrik Persoon (1761/1762-1836), *Synopsis plantarum*. 1: 72. Paris et Tubingae 1805.

About 80-130 species, tropics, subtropics and warm temperate regions. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Cenchrinae, annual or perennial, variable, prostrate or erect, caespitose, decumbent, straggling, stoloniferous or rhizomatous, herbaceous, flimsy to robust, often branched, auricles present or absent, ligule a rim of short hairs, leaves flat linear to lanceolate, plants bisexual, hidden cleistogenes when present in the leaf sheaths, inflorescence a crowded spike-like panicle cylindrical to globose sometimes reduced and enclosed by the sheaths, spikelets clustered and sessile or pedicellate, spikelets enclosed by an involucre of bristles, the involucre falling off with the spikelets at maturity, 2 florets, upper floret perfect, lower floret sterile or male, reduction or suppression of the lower scales, 2 glumes very unequal and translucent, first glume small or minute, lemmas often mucronate, smooth and papery upper lemma obtuse to acute, palea present, lodicules present and very tiny or absent, 3 stamens, ovary glabrous, stigmas white, small fruit compressed, cultivated fodders, native pasture species, weed species, lawn grasses, grain crop species, playing fields, decorative inflorescences, some species used as tonic in China, several species rugged tussock grasses avoided by cattle, shady places or open habitats, savannah, woodland, pampas, rainforest, weedy ground, middle-altitude, some of the species close to *Cenchrus* L. and *Setaria*, type *Pennisetum typhoideum* Rich., complicated taxonomy, see *Synopsis Plantarum* 1: 72. 1805, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1036-1037. 1809, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Bulletin Mensuel de la Société Linnéenne et des Sociétés Botanique de Lyon, d'Anthropologie et de Biologie de Lyon réunies* 2: 71. 1815, *Anleitung zur Kenntniss der Gewächse* 2(1): 154. 1817, *Flora* 12: 465. 1829, *Genera Plantarum* 3(2): 1106. 1833, *Nomenclator Botanicus. Editio secunda* 2: 299. 1841, *Flora* 25 Beibl. 2: 2. 1842, *Ind. Sem. Hort. Monsp.* 1844, *Flora Rossica* 4(14): 472. 1853, *Agrostographiae Aegyptiacae*

Fragmenta 2: 49. 1853 [also *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 2: 49, t. 28. 1853], *Systematisches Verzeichniss der im Indischen Archipel* 60. 1854, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 374-375. 1854, *Vet. Acad. Handl. Stockholm* 1853: 136, 156. 1855 [also *Kongl. Vetensk. Acad. Handl.*], *Flora Brasiliensis* 2(2): 305, 308. 1877, *Die Natürlichen Pflanzenfamilien* 2(2): 38. 1887, *Flora Capensis* 7: 431. 1899 and *Annuario del Reale Istituto Botanico di Roma* 8: 41, 314. 1903 et 1908, *Contr. U.S. Natl. Herb.* 22: 210-211. 1921, *Flora of Tropical Africa* 9: 956-957, 962, 966. 1934, *Journ. Wash. Acad. Sci.* 45: 135-143. 1955, *Hook. Ic. Pl.* 37: t. 3643. 1967, *Kyoto University African Studies* 10: 143-212. 1976, *Amer. J. Bot.* 64: 161-176. 1977, *Willdenowia* 8: 67-79. 1977, *Folia Primatologica* 25: 277-287. 1976, *Econ. Bot.* 31: 163-174. 1977, *African Studies Monographs* 3: 109-130. 1983, *Flora Mesoamericana* 6: 371-374. 1994, *Flora of Ethiopia and Eritrea* 7: 259-275. 1995, Doust A.N. & E.A. Kellogg, “Integrating phylogeny, developmental morphology and genetics: a case study of inflorescence evolution in the ‘bristle grass’ clade (Panicoideae: Poaceae).” In Q.C.B. Cronk, R.M. Bateman and J.A. Hawkins [eds.], *Developmental Genetics and Plant Evolution*, 298-314. Taylor & Francis, London, UK 2002, Yu-Chung Chiang, Barbara A. Schaal, Chang-Hung Chou, Shong Huang and Tzen-Yuh Chiang, “Contrasting selection modes at the *Adh1* locus in outcrossing *Miscanthus sinensis* vs. inbreeding *Miscanthus condensatus* (Poaceae).” *Am. J. Bot.* 90: 561-570. 2003, *Contributions from the United States National Herbarium* 46: 527-536. 2003, Renata Reinheimer, Raúl Pozner and Abelardo C. Vegetti, “Inflorescence, spikelet, and floral development in *Panicum maximum* and *Urochloa plantaginea* (Poaceae).” *Am. J. Bot.* 92: 565-575. 2005, *Restoration Ecology* vol. 13, issue 2: 380-389. June 2005, *Journal of Ecology* vol. 93, issue 3: 512-520. June 2005.

Species

P. spp.

in Guinea: madià, madya

in Guinea-Bissau: midjo madja, midjo midja

in Nigeria: dan barno, dan gariya

in Senegal: ginaen moboy

in Colombia: paja elefante

in Ecuador: paja elefante

in Peru: paja elefante

P. adoense Steud. (*Pennisetum adoense* Hochst. ex Steud.; *Pennisetum thunbergii* Kunth)

Africa, Abyssinia. See *Révision des Graminées* 1: 50. 1829, *Nomenclator Botanicus. Editio secunda* 2: 252. 1841, *Synopsis Plantarum Glumacearum* 104. 1854.

P. advena Wipff & Veldkamp (*Pennisetum alopecuroides* (L.) Spreng.)

Northern America, U.S., Missouri. Ornamental, cultivated, see *Species Plantarum*, *Editio Secunda* 82. 1762, *Systema Vegetabilium*, *editio decima sexta* 1: 303. 1825 and *Journal of Cytology and Genetics* 25: 140-143. 1990, *Investigatio et Studium Naturae* 12: 48-65. 1992, *Sida* 18(4): 1033, f. 1. 1999.

P. albicauda Stapf & C.E. Hubb. (*Pennisetum glaucum* (L.) R. Br.)

Namibia. See *Species Plantarum* 1: 56. 1753, *Prodromus Florae Novae Hollandiae* 1: 195. 1810 and *Bulletin of Miscellaneous Information Kew* 1933: 294. 1933.

P. alopecuroides (L.) Sprengel (*Alopecurus hordeiformis* L.; *Gymnotrix compressa* (R. Br.) Brongn.; *Panicum alopecuroides* L.; *Panicum alopecuroides* L.; *Panicum americanum* L.; *Panicum compressum* R. Br.; *Penicillaria alopecuroides* (L.) Sweet; *Pennisetum alopecuroides* Desv. ex Ham., nom. illeg., non *Pennisetum alopecuroides* (L.) Spreng.; *Pennisetum alopecuroides* f. *anacanthum* Hayaschi; *Pennisetum caudatum* hort.; *Pennisetum compressum* R. Br.; *Pennisetum hordeiforme* (Thunb.) Spreng.; *Pennisetum hordeiforme* (L.) Spreng.; *Pennisetum indicum* Murr.; *Pennisetum japonicum* Trin. ex Spreng.; *Pennisetum setosum* (Sw.) Rich.; *Pennisetum typhoideum* Rich.; *Pennisetum villosum* auct.; *Setaria compressa* (R. Br.) Kunth) (resembling the genus *Alopecurus* L., Greek *alopekourous*, grass like a fox's tail, *alopex* "a fox" and *oura* "a tail")

China, Southeast Asia, India, Australia. Perennial, semi-aquatic, densely tufted or clumped, basal growth, upright, slender culms stout and compressed, pale green basal leaves, leaf sheaths shiny and flattened, ligule a ring of hairs, the inflorescence is a yellow to dark purple cylindrical to narrow-oblong panicle, dark purple bristles subtending the lanceolate spikelets, bristly-involucrate glomerules, glumes unequal, lower glume minute and nerveless, lower floret sterile, upper floret bisexual, palea hyaline, seeds food for the red-browed firetails, grain eaten in times of scarcity, grains ground into a powder and used as a flour, ornamental and very attractive, used as a tonic, excellent ground cover, weed species of disturbed areas and waste fields, grassy places and waste ground, grows in boggy areas, on banks and along roadsides, coastal sand, on rather poor soils, poorly drained areas, sandy and loamy soils, near swamps, best in full sun, often confused with *Pennisetum setaceum* (Forsskål) Chiov., see *Species Plantarum* 1: 55-56, 60. 1753, *Species Plantarum*, *Editio Secunda* 82. 1762, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Syn. Pl.* 1: 72. 1805, *Prodromus Florae Novae Hollandiae* 195. 1810, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 76. 1821, *Systema Vegetabilium*, *editio decima sexta* 1: 302-303. 1825, *Prodromus Plantarum Indiae Occidentalis* 11. 1825, *Hortus Britannicus* 440. 1826, *Révision*

des Graminées 1: 46. 1829, *Voyage autour du Monde* 2(2): 103, t. 9. 1831, *Enum. Pl.* 1:150. 1833, *Revisio Generum Plantarum* 2: 787. 1891 and *Journal of Geobotany; or the Hokuriku Journal of Botany* 22(1): 4. 1974, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Investigatio et Studium Naturae* 12: 48-65. 1992, *Taxon* 49(2): 245, 253. 2000.

in English: Chinese pennisetum, swamp foxtail grass, fountain grass, Chinese fountain grass, swamp foxtail

in Japan: chikara-shiba (= strong weeds)

P. alopecuroides (L.) Sprengel f. *purpurascens* (Thunb.) Ohwi (*Cenchrus purpurascens* Thunb.; *Pennisetum alopecuroides* (L.) Spreng.)

Asia. See *Transactions of the Linnean Society of London* 2: 329. 1794, *Systema Vegetabilium*, *editio decima sexta* 1: 303. 1825 and *Acta Phytotaxonomica et Geobotanica* 10(4): 274. 1941.

P. alopecuroides (L.) Sprengel f. *viridescens* (Miq.) Ohwi (*Pennisetum alopecuroides* (L.) Spreng.)

Asia. See *Systema Vegetabilium*, *editio decima sexta* 1: 303. 1825 and *Acta Phytotaxonomica et Geobotanica* 10(4): 274. 1941.

P. alopecuroides (L.) Sprengel subsp. *sordidum* (Koidz.) T. Koyama (*Pennisetum sordidum* Koidz.)

Asia, Japan. See *Botanical Magazine* 33: 112. 1919, *Grasses of Japan and its Neighboring Regions* 521. 1987.

P. alopecuroides (L.) Sprengel var. *erythrochaetum* Ohwi

Asia, Japan. See *Acta Phytotaxonomica et Geobotanica* 4(2): 59. 1935.

P. alopecuroides (L.) Sprengel var. *viridescens* Ohwi (*Gymnotrix japonica* (Trin.) Kunth; *Gymnotrix japonica* var. *viridescens* Miq.) (Latin *viridis*, e "green")

Asia. Spikelets enclosed by an involucre of pale green bristles, see *Annales Museum Botanicum Lugduno-Batavi* 2: 276. 1866 and *Acta Phytotaxonomica et Geobotanica* 4: 59. 1935.

in Japan: ao-chikara-shiba

P. annuum Mez

Peru. Annual, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 7. 1921.

P. bambusiforme (E. Fourn.) Hemsl. ex B.D. Jacks. (*Gymnotrix bambusiformis* E. Fourn.; *Gymnotrix bambusiformis* E. Fourn.; *Gymnotrix latifolia* J. Presl, nom. illeg., non *Gymnotrix latifolia* (Spreng.) Schult.; *Pennisetum bambusiforme* Hemsl.; *Pennisetum bambusiforme* (E. Fourn.) Hemsl. ex B.D. Jacks.; *Pennisetum preslii* Trin. ex Steud.; *Pennisetum tristachyon* Spreng.; *Pennisetum tristachyum* var. *bambusiformis* (E. Fourn.) Leeke; *Pennisetum tristachyum* var. *galeottianum* Leeke)

Mexico, Argentina, Bolivia, Peru, Honduras, Guatemala. Perennial, tall, caespitose, vigorous, erect, glabrous, canes purple branched on upper half, decumbent and rooting at the base, leaf blades hairy, several terminal and axillary purple spikes, acute spikelets, lower glume obtuse, upper glume acute, upper lemma membranous, 2 lodicules, purple bristles, medicinal, handicrafts, found in hard soil, stream bank, along roadsides and on road banks, forest areas, see *Reliquiae Haenkeanae* 1(4-5): 316. 1830, *Nomenclator Botanicus. Editio secunda* 298. 1841, *Biologia Centrali-Americana; ... Botany ...* 3: 507. 1885, *Mexicanas Plantas* 2: 48. 1886, *Index Kewensis* 2: 458. 1895 and *Zeitschrift für Naturwissenschaften* 79: 33. 1907, *Brittonia* 23(3): 293-324. 1971, *Lilloa* 36(1): 105-129. 1983, *Taxon* 33: 126-134. 1984.

in Mexico: carrizo, pakaab

P. basedowii Summerh. & C.E. Hubb. (after the anthropologist Herbert Basedow, 1881-1933, geologist and botanical collector in Central Australia)

Western Australia. See *Bulletin of Miscellaneous Information Kew* 1926: 440. 1926.

in English: spotter's grass

P. beckeroides Leeke

Africa, Abyssinia. Perennial, erect, lower leaf sheaths hispid, ligule membranous ciliate, leaf blades finely acuminate, slender inflorescence axillary, spikelets lanceolate-oblong, involucre-bristles scarcely exceeding the spikelets, lower glume acute 1-nerved, upper glume acute 3-nerved, lower lemma male, upper lemma apiculate smooth, close to *Pennisetum trisetum*, see *Zeitschrift für Naturwissenschaften* 79: 30. Berlin 1907.

P. borbonicum Kunth (*Panicum polystachion* L.; *Pennisetum polystachion* (L.) Schult.; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken)

Réunion Isl. See *Systema Naturae, Editio Decima* 870. 1759, *Nova Genera et Species Plantarum seu Prodrromus* 26. 1788, *Mantissa* 2: 146. 1824, *Révision des Graminées* 1: 259. 1830 and *Botanical Journal of the Linnean Society* 79(1): 63. 1979.

P. caffrum (Bory) Leeke (*Aristida caffra* Bory)

Africa, Réunion Isl. See *Voyage dans les Quatre Principales Îles des Mers d'Afrique ... Avec l'histoire de la traversée du capitain Baudin jusqu'au Port-Louis de l'Île Maurice*. 2: 376. Paris 1804 and *Zeitschrift für Naturwissenschaften* 79: 39. 1907.

P. chevalieri Stapf & C.E. Hubb.

North-central Africa. See *Bulletin of Miscellaneous Information Kew* 1933: 285. 1933.

P. chilense (E. Desv.) B.D. Jacks. ex R.E. Fr. (*Gymnothrix chilensis* E. Desv.; *Gymnothrix chilensis* E. Desv.; *Pennisetum chilense* B.D. Jacks.; *Pennisetum chilense* Hack. ex

Buchtien; *Pennisetum chilense* var. *macrophyllum* Parodi; *Pennisetum chilense* var. *planifolia* Hack.)

Bolivia, Argentina, Chile. Perennial, caespitose, shortly rhizomatous, leaf blades linear, scabrous acuminate, solitary panicle oblong to linear, spikelets lanceolate purplish or reddish, lower glume obtuse, lower lemma acuminate staminate, upper lemma acuminate perfect, stigmas conspicuous, in pasture lands, see *Flora Chilena* 6: 251, t. 74. 1853, *Index Kew.* 2: 1078. 1893 and *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 4, 1: 172. 1905, *Contribuciones a la Flora de Bolivia* 1: 66. 1910, *Botanisches Centralblatt* 120: 548. 1912, *Anales del Museo Nacional de Buenos Aires* 32: 517. 1925.

P. clandestinum Hochst. ex Chiov. (*Pennisetum clandestinum* Hochst. ex Chiov.; *Pennisetum inclusum* Pilg.; *Pennisetum longistylum* Hochst.; *Pennisetum longistylum* var. *clandestinum* (Hochst. ex Chiov.) Leeke; *Pennisetum longistylum* var. *clandestinum* (Hochst. ex Chiov.) Chiov., nom. illeg., non *Pennisetum longistylum* var. *clandestinum* (Hochst. ex Chiov.) Leeke)

East Africa highlands, North Africa, tropical Africa. Perennial, vigorous and aggressive, branching and rooting freely, spreading rapidly, dense-mat-forming or close sward, semiscandent, decumbent, prostrate, flattened culms strongly creeping and branching, rhizomatous and stoloniferous, slender rhizomes, long stolons multibranching, roots fibrous and tough, flowering stems very short, ligule a dense ciliate rim, leaf sheaths closely overlapping on the stolons, leaves linear and more or less slightly hairy or glabrous, plants monoecious or dioecious, flowers bisexual or unisexual, inflorescence a cluster of spikelets hidden within upper leaf sheaths, spikelets bisexual or functionally unisexual, lower glume absent or minute, second glume hyaline, lower lemma sterile epaleate lanceolate and acuminate, upper lemma bisexual, long protruding filaments and stigmas, cultivated nutritious fodder widely naturalized in tropics and subtropics, drought resistant and palatable, nutritious fodder grass if cut before flowering, very high grazing value, a pasture plant in tropical and subtropical areas, grown for pastures and lawns, playing fields, invasive, invades under heavy grazing, excellent colonizer, tolerates flooding well, useful for soil conservation and for erosion control, a serious noxious weed in turf and waste places, a troublesome weed of highland crops, can be a nitrate-toxic, prefers sandy soils, common on flat areas and banks along roads, arable land, in moist places around dams, in dry and mesic habitats, grassy areas, on alluvial soils and on moist sandy soils, irrigation channels, lakeshores, disturbed areas, in the high rainfall regions, well-drained and fertile soil, gardens and roadsides, forest clearings, see *Syn. Pl.* 1: 72. 1805, *Flora* 24(Intell. Bd.1): 19. 1841, *Tent. Fl. Abyss.* 2: 388. 1850 and *Annuario del Reale Istituto Botanico di Roma* 8: 41, t. 5, f. 2. 1903, *Zeitschrift für Naturwissenschaften* 79: 23. 1907, *Annuario del Reale Istituto Botanico di Roma*

8(3): 319. 1908, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 45: 209. 1910, *Contr. U.S. Natl. Herb.* 22: 210. 1921, *Grasses of Ceylon* 154. 1956, *Grasses of Burma ...* 344. 1960, *Fieldiana, Bot.*, n.s. 4: 463. 1980, *Cytologia* 54: 641-652. 1989, *Proc. N.Z. Grasslands Assoc.* 51: 47-50. 1990.

in English: Kikuyu, Kikuyo grass, Kikuyogras, Kikuyu-grass, Kikuyu grass (after the Kikuyu tribe, Kenya; see W. Scoreby Routledge and K. Routledge, *With a Prehistoric People: The Akikuyu of British East Africa*. London 1910; Fr. C. Cagnolo, *The Akikuyu*. Catholic Mission of the Con-solata Fathers. Nyeri, Kenya 1933)

in Portuguese: capim quicuio, quicuio, capim kikuyu, capim kikuyu, kikuiu

in Spanish: zacate africano, zacate alfombra, zacate kikuyo, pasto africano, pasto de ciudad, pasto kikuyo, pasto kikuyu, pasto Valencia, mijo perla, kikuyu, quicuyo, Sudán negro, cunde, andadora, hierba kikuyu, yerba kikuyo, kikui

in Mexico: kikuyú, kukuyú, tapete, zacate kikuyu

in East Africa: chikoko, esereti, kigombe, lindadongo, olo-bobo

in southern Africa: Kikoejoe, Kikoejoegras, Kikujugras, Kikuyugras; tajoe (Sotho)

in Thailand: ya-khikhuyu

P. complanatum (Nees) Hemsl. (*Gymnothrix complanata* Nees; *Gymnothrix grisebachiana* E. Fourn.; *Gymnothrix complanata* Nees; *Gymnothrix grisebachiana* E. Fourn.; *Gymnothrix mexicana* E. Fourn.; *Pennisetum mexicanum* (E. Fourn.) B.D. Jacks.; *Pennisetum mexicanum* Hemsl.)

Mexico, Nicaragua. Perennial, herbaceous, rhizomatous, erect, branched, nodes glabrous, ligule a ciliate membrane, leaf blades scabrous, spicate inflorescences terminal and solitary, purple spikes, spikelets sessile and acute, glumes acute, upper lemma papery to membranous, lodicules absent, growing in semimoist places, slopes, in grassy pasture, see *Bonplandia* 3: 83. 1855, *Biologia Centrali-Americana*; ... *Botany ...* 3(19): 507-508. 1885, *Mexicanas Plantas* 2: 48. 1886, *Index Kewensis* 2: 458. 1894.

in English: Nicaraguan fountaingrass

in Spanish: cola de gato

P. crinitum (Kunth) Spreng. (*Gymnothrix crinita* Kunth; *Panicum crinitum* Willd. ex Steud.; *Pennisetum crinitum* Scribn. ex Beal; *Pennisetum durum* Scribner ex Beal; *Pennisetum humboldtianum* Hemsl.)

Mexico. Perennial, erect, fodder, see *Species Plantarum* 1: 55. 1753, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Nova Genera et Species Plantarum* 1: 112-113. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 302. 1825, *Nomenclator Botanicus. Editio secunda* 2: 255. 1841, *Biologia Centrali-Americana*; ... *Botany ...* 3: 508. 1885,

Grasses of North America for Farmers and Students 2: 163. 1896 and *Contr. U.S. Natl. Herb.* 22: 229. 1921.

in Mexico: pasto

P. distachyum (E. Fourn.) Rupr. ex Chase (*Gymnothrix distachya* E. Fourn.; *Gymnothrix distachya* E. Fourn.; *Pennisetum distachyum* Rupr.)

Mexico, Guatemala, Costa Rica. Perennial, tall, erect, branched, nodes hispid, leaf blades glabrous or hirsute, several spikes terminal and axillary, bristles purplish, spikelets sessile, lower palea absent, upper lemma glabrous, 2 lodicules, fodder, common on natural pastures and small pastures, hillsides, see *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 242. 1842, *Mexicanas Plantas* 2: 48. 1886 and *Contributions from the United States National Herbarium* 22(4): 229-230. 1921, *Brittonia* 23(3): 293-324. 1971.

in Mexico: zacate

P. divisum (Forssk. ex J.F. Gmel.) Henrard (*Gymnothrix longiglumis* Munro ex Hook.f.; *Panicum dichotomum* Forssk., nom. illeg., non *Panicum dichotomum* L.; *Panicum divisum* J.F. Gmelin; *Panicum divisum* Forssk. ex Gmelin; *Pennisetum dichotomum* (Forssk.) Delile; *Pennisetum dichotomum* Delile; *Pennisetum divisum* (J.F. Gmelin) Henrard; *Pennisetum elatum* Hochst. ex Steud.)

North Africa, Algeria, Egypt, Pakistan, India, Somalia. Perennial, woody, stiff, stout, glaucous, glabrous, branched to much-branched, suffruticose, bushy, erect or geniculately ascending, shortly rhizomatous with woody rhizomes, ligule a shortly hairy rim, leaf sheaths inflated, stiff leaves inrolled and pungent, panicle oblong, spikelets lanceolate surrounded by glabrous involucre bristles, lower glume male, grain eaten, fodder relished by horses and donkeys, desert grass eaten by camels and goats, useful for erosion control, growing on the sandy plains, dry riverbeds, sandy water courses, rocky slopes, stony ground, desert, Sahara-Sindian distribution, see *Flora Aegyptiaco-Arabica* 20. 1775, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 156. 1791, *Description de l'Égypte, ... Histoire Naturelle, Tom. Second* 159, t. 8, f. 1. 1813, *Synopsis Plantarum Glumacearum* 1: 106. 1854, *The Flora of British India* 7: 85. 1896 and *Blumea* 3(3): 162. 1938, *F.W.T.A. edition 2, 3*: 463. 1972, *Fl. Palaest.* 4: 311, pl. 416. 1986, *Annali di Botanica* 45: 75-102. 1987, *Cytologia* 54: 641-652. 1989.

in English: cat's tail

in Arabic: mekhamla, oum khamela, tummâm

in Mali: mekhamla, oum khamela

in Somalia: dungharro, dungarro, dhalan

in Qatar: thaymoum

in Yemen: thamam

P. domingense (Spreng. ex Schult.) Spreng. (*Gymnotrix domingensis* Spreng. ex Schult.)

Santo Domingo, the Caribbean. See *Essai d'une Nouvelle Agrostographie* 59. 1812, *Mantissa* 2: 284. 1824, *Systema Vegetabilium, editio decima sexta* 1: 302. 1825.

P. durum Beal (*Pennisetum crinitum* Scribn. ex Beal; *Pennisetum durum* Scribn. ex Beal; *Pennisetum pringlei* Leeke)

Northern America, U.S., Arizona, Mexico. See *Grasses of North America for Farmers and Students* 2: 163. 1896 and *Contr. U.S. Natl. Herb.* 22: 229. 1921.

P. echinurus (K. Schum.) Stapf & C.E. Hubb. (*Pennisetum glaucum* (L.) R. Br.; *Pennisetum spicatum* var. *echinurus* K. Schum.)

Tropical Africa. Annual, robust, see *Species Plantarum* 1: 56. 1753, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Handbuch des Getreidebaus* 1: 284. 1885, *Die Pflanzenwelt Ost-Afrikas* 5B: 55, 56. 1895 and *Zeitschrift für Naturwissenschaften* 79: 33. 1907, *Bulletin of Miscellaneous Information Kew* 1933: 270. 1933.

in Angola: massango ambuka, massango barbado, omuhangu, onyenga

P. flaccidum Griseb. (*Gymnotrix flaccida* (Griseb.) Munro ex Aitch.; *Pennisetum centrasiaticum* Tzvelev; *Pennisetum flaccidum* Griseb. ex Roshev., nom. illeg., non *Pennisetum flaccidum* Griseb.; *Pennisetum incomptum* Nees ex Steud.)

China, Nepal, Pakistan, India, Iran. Perennial bunchgrass, slender, erect, rhizomatous, deep-rooted, hairy, purple stems, narrow gray-green arching leaves, purplish plumes, montane grass, useful for erosion control, fodder and forage, grazing and hay, eaten by Tibetan sheep and Tibetan cashmere-producing goats, common along field borders, in temperate mountainous zones, high mountain steppe in temperate or subtropical zone, semiarid rangelands of the Himalaya, see *Synopsis Plantarum Glumacearum* 1: 105. 1854, *Die geographische Verbreitung der Pflanzen Westindiens* 1865, *Catalogue of the Plants of the Punjab and Sindh* 163. 1869 and *Flora Aziatskoj Rossii* 6: 77. 1914, *The Color Encyclopedia of Ornamental Grasses: Sedges, Rushes, Cattails, and Selected Bamboos* 1999.

in English: flaccid grass, meadow pennisetum

in Nepal: Dhimchi

P. foermeranum Leeke (also spelled *foermerianum*) (named for the German botanical collector Rudolf Förmer, soldier, see Mary Gunn and Leslie Edward Wostall Codd (1908-1999), *Botanical Exploration of Southern Africa*. 157. A.A. Balkema, Cape Town 1981)

South Africa, Namibia. Perennial, robust, often woody at the base, rhizomatous, erect or geniculate, tufted, branched, stout and creeping rhizomes, ligule a fringe of short hairs, leaf blades expanded or rolled, leaf sheaths rounded, leaves narrowly linear and sharp-pointed, inflorescence lax, compact panicle, spikelets sessile or shortly pedicellate, upper

floret of innermost spikelet bisexual, upper flower of outermost spikelet male, lower floret of innermost spikelet sterile or male, growing in mountainous areas, sandy soil, often confused with *Cenchrus ciliaris* L., see *Zeitschrift für Naturforschung* 79: 26. 1907.

in South Africa: valsbloubuffelsgras, berg fuchsschwanz

P. frutescens Leeke (*Pennisetum pilcomayense* Mez)

Argentina, Paraguay. See *Zeitschrift für Naturwissenschaften* 79: 35. 1907, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 7. 1921.

P. glaucifolium Hochst. ex A. Rich. (*Gymnotrix cladodes* Hochst. ex Steud.; *Gymnotrix glaucifolia* (Hochst. ex A. Rich.) Walp.; *Pennisetum glaucifolium* var. *glaberrima* Chiov.; *Pennisetum glaucifolium* var. *procerum* Chiov.; *Pennisetum laxum* Hochst. ex Engl. ex Leeke)

Arabia, Yemen, Ethiopia. Perennial, tufted, tall, tough, woody, smooth, silky nodes, branching, ligule membranous, leaf blades flat, rhizomatous, forming loose clumps, axillary and also terminal inflorescence from the upper leaf sheaths, terminal spike-like panicle, spikelets usually solitary surrounded by an involucre of numerous bristles, lower glume a small scale ovate obtuse nerveless, upper glume 1- to 5-nerved, lower lemma male 5- to 7-nerved cuspidate, upper lemma short, among rocks, in shade, see *Essai d'une Nouvelle Agrostographie* 59. 1812, *Tentamen Florae Abyssinicae ...* 2: 382. 1850, *Annales Botanicae Systematicae* 3: 722. 1852-1853, *Synopsis Plantarum Glumacearum* 1: 104. 1854 and *Zeitschrift für Naturwissenschaften* 79: 31. 1907, *Annuario del Reale Istituto Botanico di Roma* 8(3): 321. 1908, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* vol. 40, 1, Anh.: 71, f. 37. 1930.

P. glaucocladum Stapf & C.E. Hubb. (*Pennisetum glaucocladum* Stapf & C.E. Hubbard ex Stent & Rattray; *Pennisetum macrourum* Trin.)

Tropical Africa. Perennial, tufted, leaf sheaths veined, thatching grass, growing in wet areas, along riverbanks, see *De Graminibus Paniceis* 64. 1826 and *Bulletin of Miscellaneous Information Kew* 1933: 276. 1933, *Proceedings of the Rhodesia Scientific Association* 32: 38. 1933, *Flora of Tropical East Africa, Gramineae (Part 3)*: 451-898. 1982.

in English: riverbank pennisetum

P. glaucum (L.) R. Br. (*Alopecurus typhoides* Burm.f.; *Cenchrus spicatus* (L.) Cav.; *Cenchrus spicatus* (L.) Kuntze, nom. illeg., non *Cenchrus spicatus* (L.) Cav.; *Chaetochloa glauca* (L.) Scribn.; *Chaetochloa lutescens* Weigel ex Stuntz; *Chamaeraphis glauca* (L.) Kuntze; *Holcus spicatus* L.; *Ixophorus glaucus* (L.) Nash; *Panicum americanum* L.; *Panicum compressum* Balb. ex Steud.; *Panicum glaucum* L.; *Panicum spicatum* (L.) Roxb.; *Penicillaria cylindrica* Roemer & Schultes; *Penicillaria nigratarum* Schldtl.; *Penicillaria roxburghii* A. Braun & Bouché; *Penicillaria*

spicata (L.) Willd.; *Penicillaria typhoidea* (Rich.) Fig. & De Not.; *Penicillaria vulpina* Müll. Berol.; *Pennisetum albicauda* Stapf & C.E. Hubb.; *Pennisetum americanum* (L.) Leeke; *Pennisetum americanum* (L.) K. Schum.; *Pennisetum americanum* convar. *spicatum* (L.) Tzvelev; *Pennisetum americanum* subsp. *americanum*; *Pennisetum americanum* subsp. *typhoideum* (Rich.) Maire & Weiller; *Pennisetum ancylochaete* Stapf & Hubbard; *Pennisetum cinereum* Stapf & Hubbard; *Pennisetum dalzielii* Stapf & Hubbard; *Pennisetum echinurus* (K. Schum.) Stapf & C.E. Hubb.; *Pennisetum gambiense* Stapf & Hubbard; *Pennisetum gibbosum* Stapf & Hubbard; *Pennisetum leonis* Stapf & C.E. Hubb.; *Pennisetum maiwa* Stapf & Hubbard; *Pennisetum malacochaete* Stapf et Hubbard; *Pennisetum nigritarum* (Schltdl.) Dur. & Schinz; *Pennisetum perspiciosum* Stapf & C.E. Hubb.; *Pennisetum pycnostachyum* (Steud.) Stapf & Hubbard; *Pennisetum spicatum* (L.) Körn.; *Pennisetum spicatum* (L.) Roem. & Schult.; *Pennisetum spicatum* var. *typhoideum* (Rich.) T. Durand & Schinz; *Pennisetum typhoides* (Burm.f.) Stapf & C.E. Hubb.; *Pennisetum typhoides* auct. non (Burm.) Stapf & C.E. Hubb.; *Pennisetum typhoideum* Rich.; *Pennisetum typhoideum* Rich. ex Pers.; *Pennisetum vulpinum* (Müll. Berol.) Stapf & C.E. Hubb.; *Setaria glauca* (L.) P. Beauv.; *Setaria lutescens* (Weigel) F.T. Hubb.; *Setaria lutescens* (Weigel ex Stuntz) F.T. Hubb.; *Setariopsis glauca* (L.) Samp.)

Tropical and subtropical Africa. Annual, polymorphic, caespitose, solitary or loosely clumped, stout, robust, stiff, erect, branched at the base, ligule a dense fringe of hairs, leaves linear and flat, dense spike-like inflorescence of bristly-involucrate spikelet clusters, persistent stipitate involucral bristles usually subtending two spikelets, spikelets all fertile, glumes hyaline, lower glume nerveless, lower lemma male or sterile, upper lemma bisexual, 3 stamens, caryopsis readily deciduous, grain used in hot climates where cereals are found to be too heating, planted in irrigated fields and areas with good rainfall, young plants highly nutritious and very palatable, sometimes a weed species, grown primarily for very nutritious grain, staple food grain, used for pasture and silage, nutritious, suitable for making malt, green fodder, useful for thatching and as fuel, lawn grass, windbreak, plant tonic, useful in diseases of heart, grains utilized as food and also for making alcoholic beverage, used in Africa for making native beer, grain can be used like rice or can be ground into a powder and used as a flour for making bread, cattle which eat this grass can develop stomatitis, requires dry or moist soil, drought-resistant and well-adapted in coastal plain, grows on poor sandy soils, along roadsides in disturbed ground, in semi-arid tropics, disturbed land, in drier areas on sandy soils, in dry infertile soils, marginal lands, riverbanks in sandy soils, irrigation canals, see *Species Plantarum* 1: 56. 1753, *Systema Naturae, Editio Decima* 2: 1305. 1759, *Flora Indica ... nec non Prodromus Florae Capensis* 27. 1768,

Tableau Encyclopédique et Méthodique ... Botanique 1: 169. 1791, *Descripción de las Plantas* 304. 1802, *Syn. Pl.* 1: 72. 1805, *Enumeratio Plantarum Horti Botanici Bero-linensis, ...* 1037. 1809, *Prodromus Florae Novae Hollan-diae* 1: 195. 1810, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Hortus Bengalensis, or a catalogue ...* 7. 1814, *Systema Vegetabilium* 2: 498-499. 1817, *A Manual of Bot-any* 346. 1840, *Nomenclator Botanicus. Editio secunda* 2: 254. 1841, *Bot. Zeit.* 11: 660-661. 16 Sept. 1853, *Linnaea* 25(5): 561, 565. 1853, *Agrostographiae Aegyptiacae Frag-menta* 55. Torino 1853, *Index Seminum [Berlin]* App. 26. 1855, *Annales Botanicae Systematicae* 6: 963. 1861, *Enum. Pl. Zeyl.* 361. 1864, *Handbuch des Getreidebaus* 1: 284. 1885, *Revisio Generum Plantarum* 2: 767. 1891, *Conspec-tus Florae Africae* 5: 761, 785. 1894, *Bulletin of the Torrey Botanical Club* 22(10): 423. 1895, *Die Pflanzenwelt Ost-Afrikas* 5B: 51. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897, *Revi-sio Generum Plantarum* 3(3): 346. 1898 and *Fl. Ceylon* 5: 170. 1900, *Zeitschrift für Naturwissenschaften* 79: 52. 1907, *Phil. J. Sci.* 7: 413-415. 1912, *Herbário Português* 4. Porto 1914, *U.S. Department of Agriculture. Bureau of Plant Industry. Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction* 31: 36, 86. 1914, *Rhodora* 18: 232. 1916, *Handb. Fl. Ceylon* 6: 327. 1931, *Bulletin of Miscellaneous Information Kew* 1933: 270-271, 291, 294. 1933, *Flore de l'Afrique du Nord* 1: 339. 1952, *Grasses of Ceylon* 155. 1956, *Grasses of Burma ...* 350-351. 1960, *Novosti Sist. Vyss. Rast.* 8: 72. 1971, *Feddes Repert.* 83(9-10): 662. 1973, *Agron. Trop.* 28: 229-355. 1973, *Taxon* 25: 297-304. 1976, *Amer. J. Bot.* 64: 161-176. 1977, *Bull. Soc. Bot. Fr.* 124: 341. 1977, *Econ. Bot.* 31: 163-174. 1977, Vasil V. & I.K. Vasil, "The ontogeny of somatic embryos of *Pennisetum americanum* (L.) K. Schum. I. In cultured embryos." *Botanical Gazette* 143: 454-465. 1982, *Annali di Botanica* 45: 75-102. 1987, *Cyto-logia* 56: 559-566. 1991, *Cytologia* 58: 155-160. 1993, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Breeding Science* 45: 157-161. 1995, *Journal of Cytology and Genetics* 31(1): 37-40. 1996, *Journal of Cytology and Genetics* 32(2): 155-157. 1997.

in English: yellow bristle grass, yellow foxtail millet, horse millet, glaucous bristle grass, pigeon grass, bottle grass, African millet, Indian millet, kaffir millet, pearl millet, poko grass, pussy grass, bulrush millet, bullrush millet, spiked millet, cattail millet, cat tail millet, red dwarf millet, cum-bo millet

in French: millet à chandelles, mil chandelle, millet perle, millet perlé, mil, petit mil, mil pénicillaire, mil à chandelle, millet noir, maïs noir, sorgho en épi

in Portuguese: milheto

in Spanish: mijo negro

in Arabic: bechna, dukhn, liji, mattiye, sha'r el-far

in Angola: omuhangu, ohuwe, ohué, ohuwé, masangu, masango liso, paínço liso

in Benin: likoun

in East Africa: machueri

in Ethiopia: bultuc

in Gambia: majo, sanyo, suno

in Ghana: adzago, atuko, chara, eujo, ewio, gbekui, isa locho, isa nyi, iyu, kakpaa, kudurbi, likun, lu, màà, mupona, nara, ngmaa, nyu, shibras, yoi, za, za lia, za nyan, zalia, zanyan, zia

in Guinea: ko mak, ko mek, mutiri, sanyo, sunan, syongo, tengué, usuri, watyuri

in Guinea-Bissau: madja, midjo, midjo preto, milho preto

in Ivory Coast: gbujo, gnon, jho, jo, kee, kokwè, kplaa, nyoo, soghla, wi

in Malawi: machewere, muzundi, nashasha, nyauti, ucewera, uchewere

in Mali: abora, bechna, bishen, ebena, eneli, heni, sanyo, suna, sunan, tabenhaut

in Morocco: ânîlî, illân, anelli, besnâ, tafsût, duhn, gassab

in Niger: arroem, enalae, ênelé, gawuri (the seed), gombé, haini, hamo, hanyi kirey, hatchi, hatchui, hatsii, hayni, heeni

in Nigeria: aawun, abaffi, abung, adlà, adò, agasse, akpe, akpoi, amar, aminne, argem, argem metà, argem morò, be reekk yo, berikkio, bworong, cilihwo, damroo, dauroo, dawroo, dewro, dukhn, duwatu, dzuk, ebing, emeyè, esià, eye, gagar, geeron dan kaaruwà, gegebo, geeroo, gééròd, gééròn, gerwa, gey, gey sunang, gjoro, gyelo, geroo, gyewuro, gyora, gyoro, gyorò, hul, idvù, igilo, iyeenji, ikpee, inyè, ishina, iyadi, iyedi, iyo, izuk, jimi, joro, kapai, kyaasuuwaa, lahwè, lameto, lamuti, ligi, liji, maar, madariya, madiawa, mado, maexbi, maezbi, mageyè, mai, maiwàà, maka, mangun, mar, marda, mardadin, mardu, marzi, matia, matiya, matiya, mattiye, mawi, mayi, mbe, mederey, medikici, mediya, mediyain, mèmè, mènè, mer, merda, merdà, mèrè, méré, metia, mewa, meywa, migà, misa, miwa, miyongo, modà, modo, moor, moro, mudiya, muri, mutiri, mutiya, muula, muuoi, muxurin, mwodo, nduk, nsange, nsanje, nyem, nzaimo, oka inari, oka mileti, okababa, okodu, okofu, owofe, paalè, sawa, sawi, seetu, sekete, shega, shekita, shetàà, shibra, shong, shura, to tolo, totolo, tumbusu, uutewa, veeji, weedetsu, wira, wushehara, xamzè, xamziku, xamzu, xanzo, xinà, yadi, yari, yarin, yedi, yeeji, yemdi, yetura, yittawa, yogha, yowa, za, zà, zuk, zumya

in Senegal: balut, balkutabu, balutabu, bendah, deguerem, diambu, diimb, dora diemb, dugup, gatiyah, gauri, gina, kuya, mati, mutil, mutiri, nunkuru, nutil, pod, sanio, sanyo, segerem, suna, suno, tio tande, tioh, tomak

in Sierra Leone: dida, kpelenyo, kpenyo, kus kus, mutiri, nyomui, sanyo, sene, soamdawomdo, soandlawomdo, sole,

sule, ta sor, ta sur, tafeya, tefeye, teher kposuma, tenge, tengi na, tengina

in South Africa: babalagras, babala, kaffermanna koring, manna koring, pokogras

in Sudan: dukn

in Togo: adala, adalla, amala, amale, dowili, iyo, mise, miso, naadu, nara, nyepe

in Upper Volta: ayam pumo, diwe, diwi, gawri, gawri ndaneeri, gbègèlù, gbégélù, gmèè kan, mana furu, mela, mon, mutiri

in Yemen: dukhn

in Yoruba: emeye, emeyè, mayi

in India: agradhanya, baajaree, baajera, baajra, baajri, bajra, bajra tangunanwa, bajira, bajri, ban kangni, bandra, bandri, bandari ghas, barati (cultivated), bhadli (wild), bilikorla hullu, billi, bindra, bujera, bujra, cambu, chambu, chhinchra, cumbu, dhusa, dissi, gantelu, ganti, kambu, kambu hullu, kampam, kasajonar, kolaat, kolia, kotu, kukra, kuloo jara, kuluku, kunchi, kutta choti, lahra, lendha, mat-tari, naka kora, nakka korra, nali, nalika, neori, nilakana, nilasasya, panhawa, pedda gantee, peddaganti, pingi-natchi, pinginatchi, pohwa, sajaka, sajgure, sajja, sajjae, sajjae hullu, sajjalu, sajje, sazza, seji, soma, thontwa, vajraanna, varjari, varjarika, zipti ghass

in Sri Lanka: kambu

in Vietnam: c[or] du[oo]i voi

P. glaucum (L.) R. Br. subsp. *sieberianum* (Schltdl.) Stapf & C.E. Hubb. (*Penicillaria sieberiana* Schltdl.)

Tropics and subtropics. See *Linnaea* 25(5): 565. 1853 and *Bulletin of Miscellaneous Information Kew* 1933: 270. 1933.

P. glaucum (L.) R. Br. subsp. *violaceum* (Lam.) A. Rich. (*Panicum violaceum* Lam.)

Tropics and subtropics. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 169. 1791, *Syn. Pl.* 1: 72. 1805.

P. glaucum (L.) R. Br. var. *purpurascens* Eaton & Wright
Tropics and subtropics. See *A Manual of Botany* 346. 1840.

P. gracilescens Hochst.

Ethiopia, Sudan. Perennial, slender, ascending, decumbent, rigid, smooth, glabrous, many-noded, branched, rooting below, shortly rhizomatous, leaf blades narrowly linear, inflorescence linear, spikelets narrowly elliptic-oblong, involucre 1-spiculate, glumes ovate, lower glume obtuse, upper glume acute, lower lemma sterile 3- to 5-nerved mucronate, upper lemma 3- to 5-nerved briefly mucronate, among rocks, damp ground, see *Flora* 38: 199. 1855.

P. haarereri Stapf & C.E. Hubb. (*Pennisetum macrourum* Trin.) (for A.E. Haarer, botanical collector in Tanzania 1925-1932)

Tanzania. See *De Graminibus Paniceis* 64. 1826 and *Bulletin of Miscellaneous Information Kew* 1933: 273. 1933.

P. helvolum (L.f.) R. Br. (*Panicum helvolum* L.f.)

Australia. See *Supplementum Plantarum* 107. 1781[1782], *Prodromus Florae Novae Hollandiae* 1: 195. 1810.

P. hirsutum Nees (*Cenchrus setosus* Sw.; *Panicum polystachion* L.; *Pennisetum polystachion* (L.) Schult.; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken; *Pennisetum setosum* (Sw.) Rich.)

Brazil. See *Systema Naturae, Editio Decima* 870. 1759, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Syn. Pl.* 1: 72. 1805, *Mantissa* 2: 146. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 284. 1829 and *Botanical Journal of the Linnean Society* 79(1): 63. 1979, *Lilloa* 36(1): 105-129. 1983.

P. hohenackeri Hochst. ex Steudel (*Gymnotrix cenchroides* Roem. & Schult.; *Pennisetum alopecuroides* Nees ex Steud., nom. illeg., non *Pennisetum alopecuroides* J. Jacq.; *Pennisetum alopecuroides* var. *occidentale* Pilg.; *Pennisetum aureum* Link; *Pennisetum catabasis* Stapf & C.E. Hubb.) (for the German botanist Rudolf Friedrich Hohenacker, 1798-1874, physician, plant collector, author of *Enumeratio plantarum quas in itinere per provinciam Talysch collegit* R. Fr. Hohenacker. [Moskva 1838]; see Georg Heinrich Mettenius (1823-1866), *Filices Lechlerianae Chilenses ac Peruanae* cura R.F.H. editae. Leipzig 1856-59; Georg Matthias von Martens (1788-1872) and Gottlob Ludwig Rabenhorst (1806-1881), *Algae selectae siccatae* ... Herausgegeben von R.F.H. 1852, etc.; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J.H. Barnhart, *Biographical notes upon botanists*. 2: 191. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 184. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 179. 1972; Ethelyn (Daliaette) Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

East Africa, India. Perennial, forming dense tussocks, stout culms compressed, false spikes, spikelets surrounded by numerous bristles, very little value for grazing, grass of low palatability, suitable for papermaking, used for making brooms and ropes, occurs in swampy grassland or vleis, on marshy ground, along the edges of tanks, see *Systema Vegetabilium* 2: 499. 1817, *Hortus Regius Botanicus Berolinensis* 1: 215. 1827, *Synopsis Plantarum Glumacearum* 1: 102-103. 1854 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(93): 271. 1928, *Bulletin of Miscellaneous Information Kew* 1933: 281. 1933, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Journal of the Indian Botanical Society* 66: 269-271. 1986, *Cytologia* 54: 641-652. 1989, *Journal of the Indian Botanical Society* 68:

295-299. 1989, *Genome* 32: 404-407. 1989, *Cytologia* 58: 155-160. 1993.

in English: moya grass

in India: maanai kaddi, mannai gedde, mo, mohada, moiya, mole, morthan, mowa, moya, munja pillu, munja pullu, nosai hullu, nothe gaddi, nothe hullu

P. hordeiforme (L.) Spreng. (*Alopecurus hordeiformis* L.; *Catatherophora hordeiformis* (L.) Steud.; *Cenchrus hordeiformis* (L.) Pers., nom. illeg., non *Cenchrus hordeiformis* Thunb.; *Gymnotrix hordeiformis* (L.) Nees; *Panicum alopecuroides* L.; *Pennisetum alopecuroides* (L.) Spreng.)

Africa. See *Species Plantarum* 1: 60. 1753, *Species Plantarum, Editio Secunda* 82. 1762, *Syn. Pl.* 1: 71. 1805, *Systema Vegetabilium, editio decima sexta* 1: 302-303. 1825, *Flora* 12: 465. 1829, *Linnaea* 7(3): 276. 1832 and *Taxon* 49(2): 245. 2000.

P. hordeoides (Lam.) Steud. (*Alopecurus rubicundus* Buch.-Ham. ex Wall.; *Cenchrus parviflorus* Poir.; *Gymnotrix hordeoides* (Lam.) Kunth; *Panicum antillarum* Poir.; *Panicum hordeoides* Lam.; *Pennisetum antillarum* (Poir.) Desv.; *Pennisetum imberbe* Edgew., nom. illeg., non *Pennisetum imberbe* Edgew. (1851); *Pennisetum parviflorum* (Poir.) Trin.; *Pennisetum siguirense* Mimeur; *Saccharum antillarum* (Poir.) Roem. & Schult.; *Setaria antillarum* (Poir.) Kunth)

Tropical Africa, India. Annual, unbranched purplish to brown slender spikes, good-quality hay, fodder, low grazing value, relished by stock when young, weed species difficult to eradicate, found in waste grounds, damp sites, disturbed areas, fields, open spaces, swamps, see *Encyclopédie Méthodique, Botanique* 4: 729. 1791, *Encyclopédie Méthodique, Botanique* 6: 52. 1804, *Encyclopédie Méthodique, Botanique* ... *Supplément* 4: 275. 1816, *Systema Vegetabilium* 2: 877. 1817, *De Graminibus Paniceis* 65. 1826, *Révision des Graminées* 1: 46, 48. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 180. 1831, *A Numerical List of Dried Specimens* no. 8646. 1848-49, *Journal of the Asiatic Society of Bengal* 21: 181. 1852, *Synopsis Plantarum Glumacearum* 1: 103. 1854 and *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 314. 1950.

in English: swamp grass

in Africa: fouléfelo, poulando (Kissi or Gizi); kouli (Sous-sou); yilélon gbeikoï (Guerzé); son (Konia); pouki, wouloundé (Poular); tourgnan, turignan, son, tourounia, trougnan (Malinké)

in Gambia: barato barra, farato barra

in Guinea: asigini, hulhuldé, kouli, kuli, pouki, puki, waryuy, wolondé, wouloundé

in India: bajuria, chaj-ja gadi

in Mali: bogo dolori, hulhuldfé, ngolo, sapa, wolonde, wolondé, wouloundé

in Nigeria: aapù, buludi, bushi, eru, ilosun, kakasewu, kansuwa, kyasuwa, tolo, umu

in Senegal: bara, sikili

in Sierra Leone: alinki, foi, k'palabu, kebalingi, keep, kouli, kuli, kulla, mumiyami, nguogoi, ngwegwe, ningo lobube yuwe, ningolobubeyuwe, tourounia, turunya

in Upper Volta: dansa, hihangon, kénibédo, kim ubogo, kimogo, yakalo

P. humile Hochst. ex A. Rich. (*Gymnotrix humilis* (Hochst. ex A. Rich.) Walp.; *Pennisetum humile* var. *nanum* Engl.)

Ethiopia. Perennial, low, stiffly erect, small, ascending, densely tufted, leaf blades finely acuminate, culm sheaths inflated, rhizomatous, ovoid to oblong inflorescences, involucre comprising a single whorl of slender bristles, spikelets lanceolate-oblong, very small glumes nerveless, lower lemma sterile usually nerveless, upper lemma membranous 5-nerved, upland, mountains, damp meadows, grassy areas, woodland, resembles *Pennisetum thunbergii*, see *Tentamen Florae Abyssinicae* ... 2: 383. 1850, *Annales Botanices Systematicae* 3: 722. 1852-1853, *Über die Hochgebirgsflora des tropischen Afrika* 123. 1892, *Annuario del Reale Istituto Botanico di Roma* 6: 158. 1896.

P. intectum Chase (from the Latin *intectus*, *a*, *um* "uncovered, unclad, unroofed, unconcealed, open")

Ecuador. Open areas, hillside, see *Syn. Pl.* 1: 72. 1805 and *Contr. U.S. Natl. Herb.* 22: 210. 1921, *Contributions from the United States National Herbarium* 24(8): 485. 1927.

P. kirkii Stapf (*Gymnotrix uniseta* Nees; *Pennisetum unisetum* (Nees) Benth.) (to honor the Scottish explorer Sir John Kirk, 1832-1922, colonial administrator, naturalist, surgeon, philanthropist, 1854 M.D. Edinburgh, plant collector, from 1858 (Mar 3rd) to 1863 (May 19th) doctor and naturalist on David Livingstone's second Zambesi Expedition, 1864 Fellow of the Linnean Society, 1887 Fellow of the Royal Society, from 1873 to 1887 British Consul-General at Zanzibar, his works include *This Way and That Way*. A backward look and a forward look at the problems and progress of child-welfare among the very poor. London [1917] and *The Zambesi Journal and Letters of Dr. John Kirk, 1858-1863*. Edited by Reginald Foskett. Edinburgh & London 1965; he was the father of Colonel John William Carnegie Kirk (1878-1962), author of *A British Garden Flora*. London 1927; see Hill, *Bull. Misc. Inf. Kew.* 1922: 49-63; Sir Reginald Coupland, *Kirk on the Zambesi*. Oxford 1928, *Livingstone's Last Journey*. London 1947 and *The Exploitation of East Africa*, etc. (A study of Sir J. Kirk's career at Zanzibar.) London 1939; R. Foskett, editor, *The Zambesi Doctors: David Livingstone's Letters to John Kirk 1859-1872*. Edinburgh 1964; F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 45. 1971; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 212. 1972; J.H. Barnhart, *Biographical notes upon botanists*. 2: 294. 1965; Ethelyn

Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; David Williamson, editor, *Sir John Kirk*. [1922]; Frederick Courteney Selous, *Travel and Adventure in South-East Africa*. Rowland Ward 1893; David Livingstone (1813-1873), *Missionary Travels and Researches in South Africa*. London 1857; Ernest Nelmes (1895-1959) and William Cuthbertson (c. 1859-1934), *Curtis's Botanical Magazine Dedications, 1827-1927*. 238. [1931]; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Africa. Perennial, fodder for cattle while still young, cultivated pasture, growing in red clay, in areas of good rainfall, thickets, sandy soils, near water or above streams, damp gullies, in shady areas or in partial shade, field borders, deciduous bushland, wooded savannah, see *Florae Africae Australioris Illustrationes Monographicae* 66. 1841, *Linnaea* 16(2): 219. 1842, *Flora* 27: 512. 1844, *Synopsis Plantarum Glumacearum* 1: 117. 1854, *Journal of the Linnean Society, Botany* 19: 47, 49. 1881, *Die Pflanzenwelt Ost-Afrikas* 5(8): 52. 1895, *Bulletin of Miscellaneous Information Kew* 1897: 286. 1897 and *Bull. Jard. Bot. Bruxelles* 9: 199. 1932, *Flora of Tropical East Africa* 451-898. 1982.

P. lachnorrhachis Peter (*Pennisetum purpureum* Schumacher.)

Africa. See *Beskrivelse af Guineiske planter* 44. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 64. 1828 and *Repertorium Specierum Novarum Regni Vegetabilis* (Beih.) 40: (Anhang 7), t. 35. 1930.

P. lanatum Klotzsch (*Pennisetum lanatum* Ham. ex Wall.; *Pennisetum nepalense* Griseb., nom. illeg., non *Pennisetum nepalense* Spreng.; *Pennisetum pedicellatum* Trin.)

China, India, Himalayan region. Fodder grass, useful soil binder, growing in subtropical subhumid zones, in mountain meadows, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 184. 1834, *Die Botanischen Ergebnisse der Reise Seiner Königl. Hoheit des Prinzen Waldemar von Preussen* 65, t. 99. 1862, *Akademie der Wissenschaften Gottingen. Nachrichten* 86. 1868 and *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

P. latifolium Spreng. (*Cenchrus tristachyus* (Kunth) Kuntze; *Gymnothrix latifolia* (Spreng.) Schult. ex Roem. & Schult.; *Gymnothrix tristachya* Döll; *Gymnotrix latifolia* (Spreng.) Schult.; *Gymnotrix tristachya* Kunth; *Panicum longisetum* Poir.; *Pennisetum lechleri* Steud. ex Lechler; *Pennisetum tristachyum* (Kunth) Spreng.)

Central Brazil to northern Argentina, Peru, Ecuador, Andean and Amazonian, Paraguay. Perennial bunchgrass, tall, robust, erect, tufted, appressed-pubescent, branched, shortly rhizomatous, base cormlike, culm enveloped by leaf

sheath, ligule membrane-like densely ciliate, leaves lanceolate and finely pointed, compact and pendent spiciform inflorescences, a branching false panicle, long-pedunculated spikes clustered, spikelets lanceolate and solitary, bristles as long as spikelet, lower floret sterile or neuter, upper floret hermaphrodite, glumes very short and hairy, plumose red to purple stigmas, found along roadsides, wasteland, riverbanks, open areas, sandy stream banks, pasture, damp places, see *Nova Genera et Species Plantarum* 1: 113, t. 61. 1815 [1816], *Encyclopédie Méthodique. Botanique ... Supplément* 4: 275. 1816, *Systema Vegetabilium, editio decima sexta* 1: 302. 1825, *Mantissa* 3: 601. 1827, *Berberides Americae Australis* 56. 1857, *Flora Brasiliensis* 2(2): 303, pl. 61. 1877, *Revisio Generum Plantarum* 3(3): 347. 1898. in English: Uruguay pennisetum, Uruguayan fountain grass

***P. ledermannii* Mez**

Africa, Cameroon. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 191. 1921.

***P. longisetum* (P. Beauv.) K. Schum. (*Beckeropsis uniseta* (Nees) K. Schum.; *Gymnotrix uniseta* Nees; *Setaria longiseta* P. Beauv.)**

Africa. See *Flore d'Oware* 2: 81, f. 110.2. 1819, *Florae Africae Australioris Illustrationes Monographicae* 66. 1841, *Die Pflanzenwelt Ost-Afrikas* 5C: 105. 1895 and *Bull. Jard. Bot. Bruxelles* 9: 199. 1932.

***P. longistylum* Hochst. ex A. Rich. (*Pennisetum clandestinum* Hochst. ex Chiov.; *Pennisetum longistylum* Vilm.; *Pennisetum longistylum* Hochst.; *Pennisetum longistylum* var. *clandestinum* (Hochst. ex Chiov.) Chiov., nom. illeg., non *Pennisetum longistylum* var. *clandestinum* (Hochst. ex Chiov.) Leeke)**

Africa, Ethiopia. Perennial, low-growing, mat-forming, much-branched, rhizomatous, leaf blades flat, leaf sheaths imbricate, inflorescence oblong shortly exserted, small pink flower heads, involucre of many slender bristles encircling a single spikelet sessile, spikelets narrowly lanceolate and multinerved, lower glume vestigial, upper glume ovate, lower lemma male or barren 11- to 15-nerved, upper lemma acute, simple stigma, low ground, stream banks, depressed areas, related to *Pennisetum clandestinum* and *Pennisetum villosum*, see *Flora* 24(Intell. Bd.1): 19. 1841, *Tentamen Fl. Abyss.* 2: 388. 1850, *Fl. Pleine Terre* 599. 1863 and *Annuario del Reale Istituto Botanico di Roma* 8: 41. 1903 and 319. 1908.

in English: longstyle feather grass

***P. longistylum* Hochst. ex A. Rich. var. *clandestinum* (Hochst. ex Chiov.) Leeke**

Africa. See *Flora* 24(Intell. Bd.1): 19. 1841 and *Annuario del Reale Istituto Botanico di Roma* 8: 41. 1903, *Zeitschrift für Naturwissenschaften* 79: 23. 1907.

***P. macrochaetum* Jacq. (*Panicum italicum* var. *macrochaeta* (Jacq.) Döll; *Panicum macrochaetum* (Jacq.) Voigt, nom. illeg., non *Panicum macrochaetum* Link; *Setaria macrochaeta* (Jacq.) Spreng., nom. illeg., non *Setaria macrochaeta* (Link) Schult.)**

Sri Lanka. See *Eclogae Graminum Rariorum* 3 & 4: t. 25. 1820, *Systema Vegetabilium, editio decima sexta* 1: 305. 1825, *Hortus Suburbanus Calcuttensis* 702. 1845, *Flora Brasiliensis* 2(2): 165. 1877.

***P. macrostachyon* Fresen. (*Pennisetum setaceum* (Forssk.) Chiov.; *Phalaris setacea* Forssk.)**

Africa, Ethiopia. See *Flora Aegyptiaco-Arabica* 17. 1775, *Museum Senckenbergianum* 2: 135. 1837 and *Bollettino della Società Botanica Italiana* 1923: 113. 1923.

***P. macrostachys* (Brongn.) Trin. (*Gymnotrix macrostachys* Brongn.; *Pennisetum macrostachyum* Benth., nom. illeg., non *Pennisetum macrostachys* (Brongn.) Trin.)**

East Indies. Perennial, clumped, creeping, stems broad and strong, upright-growing, stout, branched, leaves flat and sheathing, inflorescence in nodding panicles with pendulous flower heads, bristles not plumed, inflorescence purple-brown, resembles *Pennisetum setaceum* (Forssk.) Chiov., found along streams and forest edge, see *Beskrivelse af Guineiske planter* 44. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Aft.* 3: 64. 1828, *Voyage autour du Monde* 2(2): 104, t. 11. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 177. 1834, *Niger Flora* 563. 1849.

in English: fountain grass, giant burgundy fountain grass, burgundy giant fountain grass

***P. macrourum* Trin. (*Gymnotrix gigantea* (A. Rich.) Walp.; *Gymnotrix quartiniana* (A. Rich.) Walp.; *Gymnotrix riparioides* (Hochst. ex A. Rich.) Walp.; *Pennisetum angolense* Rendle; *Pennisetum angolense* var. *laxespicata* Rendle; *Pennisetum davyi* Stapf & C.E. Hubb.; *Pennisetum exile* Stapf & C.E. Hubb.; *Pennisetum franchetianum* Stapf & C.E. Hubb.; *Pennisetum giganteum* A. Rich.; *Pennisetum giganteum* var. *minor* Leeke; *Pennisetum giganteum* var. *trinervium* Pilg.; *Pennisetum glaucocladum* Stapf & C.E. Hubb.; *Pennisetum haareri* Stapf & C.E. Hubb.; *Pennisetum kisantuense* Vanderyst, nom. illeg., non *Pennisetum kisantuense* Vanderyst; *Pennisetum macropogon* Stapf & C.E. Hubb.; *Pennisetum natalense* Stapf; *Pennisetum quartinianum* A. Rich.; *Pennisetum riparioides* Hochst. ex A. Rich.; *Pennisetum scaettae* Robyns; *Pennisetum stenorrhachis* (Mez) Stapf & C.E. Hubb.; *Pennisetum stenorrhachis* Stapf & C.E. Hubb.; *Pennisetum stolzii* Mez; *Pennisetum tenue* Mez; *Pennisetum thunbergii* auct. non Kunth; *Pennisetum togoense* Mez; *Pennisetum validum* Mez) (Greek makron “large” and oura “a tail,” referring to the inflorescence) (dedicated to the French botanist Léon Richard**

Quartin-Dillon, d. 1841 during the Lefebvre expedition in Ethiopia, physician, explorer, plant collector, wrote *Des différences appréciables entre le sang de la veine porte et celui des autres veins*. in Collection des thèses soutenues à la Faculté de Médecine de Paris. an 1839-1878, tom. 14. Paris 1839-1878. See T. Lefebvre, *Voyage en Abyssinie exécuté ... par une Commission scientifique, composée de MM. T. Lefebvre, A. Petit et Quartin-Dillon, etc.* [1845]; I.H. Vegter, *Index Herbariorum*. Part II (5), *Collectors N-R*. Regnum Vegetabile vol. 109. 1983; Stafleu and Cowan, *Taxonomic literature*. 4: 452 and 763-764. Utrecht 1983; Achille Richard (1794-1852), *Tentamen florae abyssinicae*. [Collectors: R. Quartin-Dillon and A. Petit] Parisiis [1847-1851]; J.H. Barnhart, *Biographical notes upon botanists*. 3: 118. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 187. Paris 1882; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937)

Tropical Africa. Perennial bunchgrass, variable, reedlike, light green and gray-green to glaucous, erect, stout, flimsy to robust, shortly rhizomatous with a creeping rhizome, clumped or densely tufted, extensive fibrous root system, ligule a dense fringe of hairs, leaves mostly basal and scabrous, leaf blades rolled or convolute, long and thin flower head, pale brown to purple cylindrical and compact spike-like panicle, axis warty, densely crowded spikelets solitary and lanceolate to acute subtended by many scabrous bristles, lower floret reduced to a lemma, lower glume absent or present then very small and hyaline, all glumes and lemmas acute or mucronate, lower lemma sterile or male, upper lemma bisexual, seeds yellow to brown, barbed bristles on seed husk, ornamental plantings, useful for soil stabilization and for erosion control, well-established plants capable of withstanding long periods of drought, noxious weed unpalatable to stock, fodder while still young, growing on pastures and poorly maintained pastures, creek edges, in wooded places, swampy soils, near streams and marshes, ponds, swamps and along the borders of streams, damp places, grassy areas, on dry shady banks, along roadsides and highways, wasteland and urban areas, banks of rivers and creeks, on sandy soils, at forest edges, see *De Graminibus Paniceis* 64. 1826, *Tentamen Florae Abyssinicae ...* 2: 382-384. 1850, *Annales Botanicae Systematicae* 3: 722-723. 1852-53, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 189. 1899, *Flora Capensis* 7: 435. 1899 and *Mémoires de l'Herbier Boissier* 20: 8. 1900, *Zeitschrift für Naturwissenschaften* 79: 41. 1907, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 53. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 190-191. 1921, *Bulletin agricole du Congo Belge* 16: 685. 1925, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(93): 271. 1928, *Bulletin of Miscellaneous Information Kew* 1933: 270, 273, 275-278. 1933,

Bulletin Jard. Bot. Bruxelles 8: 3. 1934, *Flore Agrostologique du Congo Belge* 2: 344. 1934.

in English: bedding grass, African feather grass

in Angola: tandu

in Cameroon: gotonga

P. macrourum Trin. var. ***angustifolium*** Hack.

South Africa. See *De Graminibus Paniceis* 64. 1826 and *Mémoires de l'Herbier Boissier* 20: 8. 1900.

P. marquisense F. Brown

Marquesas, Polynesia. Rare species, see *Bernice P. Bishop Museum Bulletin* 84: 63. 1931.

P. massaicum Stapf (*Pennisetum massaicum* (Stapf) Stapf & C.E. Hubb.)

East Africa, Tanzania, Kenya. Perennial, wiry or woody, much-branched, tufted, shortly rhizomatous with woody rhizomes, leaves not pungent, dense panicle, bristles usually glabrous, spikelets oblong, lower lemma male, found in shallow soil, see *Bulletin of Miscellaneous Information Kew* 1906: 82. 1906 and 1933: 273. 1933.

in East Africa: irdhug, irdugh, irdug

P. megastachyum Steud. (*Alopecurus typhoides* Burm.f.; *Penicillaria macrostachya* Klotzsch; *Pennisetum typhoides* (Burm.f.) Stapf & C.E. Hubb.)

Asia. See *Flora Indica ... nec non Prodromus Florae Capensis* 27. 1768, *Linnaea* 25(5): 561. 1853, *Synopsis Plantarum Glumacearum* 1: 108. 1854, *Annales Botanicae Systematicae* 6: 965. 1861, *Handbuch des Getreidebaus* 1: 284. Bonn 1885, *Conspectus Florae Africae* 5: 761, 781. 1894, *Die Pflanzenwelt Ost-Afrikas* 5B: 55, 56. 1895 and *Bulletin of Miscellaneous Information Kew* 1933: 271. 1933.

P. mezianum Leeke (*Pennisetum brachystachyum* Hack.)

Tropical and subtropical Africa, Tanzania. Perennial, shrubby, green, branched, tufted, rigid, slender, hard, smooth, many-noded, fasciculately branching at the nodes, short woody rhizome, foliage mainly basal, inflorescence dense and oblong, involucre bristles more or less plumose, lower glume 1-nerved, upper glume 5-nerved apiculate, lower lemma male or sterile membranous, not aggressive, good grazing, found in poor dry soil under full sun, seasonally waterlogged soils, on red and black soils and some floodplain areas, grassland or bushland grassland, volcanic grasslands, closely related to *Pennisetum massaicum*, see *Zeitschrift für Naturwissenschaften* 79: 39. 1907, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 55: 233. 1910, *Proc. Indian Sci. Congr. Assoc.* 70(3-vi): 91. 1983, *Current Science* 58: 869-871. 1989, *International Organization of Plant Biosystematists Newsletter* 13: 20-21. 1989, *Cytologia* 54: 641-652. 1989, *Journal of the Indian Botanical Society* 68: 295-299. 1989.

in English: rabbit-tail fountain grass

P. mildbraedii Mez

East Africa. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 52. 1917.

P. molle Hitchc.

Sudan. In dry areas, see *Proceedings of the Biological Society of Washington* 43: 91. 1930.

P. montanum (Griseb.) Hack. (*Cenchrus mutilatus* Kuntze; *Chaetotropis chilensis* Kunth; *Hymenachne montana* Griseb.; *Panicum montanum* (Griseb.) Jackson ex Lillo, nom. illeg., non *Panicum montanum* Roxb.; *Pennisetum mutilatum* (Kuntze) Leeke; *Pennisetum mutilatum* Hack. ex Kuntze; *Polypogon chilensis* (Kunth) Pilg.)

Bolivia, Argentina. Perennial, branched, geniculate, rooting at the lower nodes, rhizomatous, leaf blades narrowly lanceolate acuminate, panicles terminal or axillary, loose spikelets lanceolate, lower glume membranous, upper glume obtuse or 3-lobed, lower lemma staminate or sterile, upper lemma obtuse perfect, stigmas plumose, moist habitats, shady places, mountains, see *Species Plantarum* 1: 55. 1753, *Species Plantarum* 2: 1049. 1753, *Flora Atlantica* 1: 66. 1798 [1800], *Essai d'une Nouvelle Agrostographie* 48. 1812, *Révision des Graminées* 1: 72, 271, t. 47. 1829 et 1830, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 307. 1874, *Revisio Generum Plantarum* 3(3): 347. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 84. 1904, *Zeitschrift für Naturwissenschaften* 79: 33. 1907, *Flora de la Provincia de Tucumán, Gramíneas* 27. 1916, *Repertorium Specierum Novarum Regni Vegetabilis* 16: 386. 1920, *Darwiniana* 35(1-4): 29-36. 1998.

P. multiflorum E. Fourn. (*Cenchrus multiflorus* J. Presl; *Panicum polystachion* L.; *Pennisetum polystachion* (L.) Schult.)

Mexico. See *Systema Naturae, Editio Decima* 870. 1759, *Mantissa* 2: 146. 1824, *Reliquiae Haenkeanae* 1(4-5): 318. 1830, *Biologia Centrali-Americana; ... Botany ...* 3: 508. 1885, *Mexicanas Plantas* 2: 49. 1886 and *Fl. Novo-Galic.* 14: 113. 1983.

P. myosuroides (Kunth) Spreng. (*Cenchrus myosuroides* Kunth; *Cenchrus myosuroides* var. *myosuroides*)

South America. See *Nova Genera et Species Plantarum* 1: 115-116, t. 35. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 303. 1825 and *Iowa State College Journal of Science* 37(3): 259-351. 1963, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

P. natalense Stapf (*Pennisetum macrourum* Trin.; *Pennisetum natalense* A. Peter, nom. illeg., non *Pennisetum natalense* Stapf)

South Africa, Swaziland, Tanzania. Perennial, lower floret male, palea present, growing in water, along riverbanks, vleis, see *De Graminibus Paniceis* 64. 1826, *Tentamen Florae Abyssinicae ...* 2: 382-384. 1850, *Annales Botanicae*

Systematicae 3: 722-723. 1852-53, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 189. 1899, *Flora Capensis* 7: 435. 1899 and *Mémoires de l'Herbier Boissier* 20: 8. 1900, *Zeitschrift für Naturwissenschaften* 79: 41. 1907, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 53. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 190-191. 1921, *Bulletin agricole du Congo Belge* 16: 685. 1925, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(93): 271. 1928, *Repertorium Specierum Novarum Regni Vegetabilis* Beih. 40: 247. 1931, *Bulletin of Miscellaneous Information Kew* 1933: 270, 273, 275-278. 1933, *Bulletin Jard. Bot. Bruxelles* 8: 3. 1934, *Flore Agrostologique du Congo Belge* 2: 344. 1934, *Flora of Tropical East Africa* 451-898. 1982.

in South Africa: suurbuffelsgras

P. nemorum Arechav. (*Pennisetum nervosum* (Nees) Trin.)

South America. See *Anales del Museo Nacional de Montevideo* 1: 221. 1895.

P. nervosum (Nees) Trin. (*Cenchrus nervosus* (Nees) Kuntze; *Cenchrus nervosus* var. *ramosum* Kuntze; *Gymnotrix nervosa* Nees; *Gymnotrix nervosa* Nees; *Pennisetum setosum* (Sw.) Rich.; *Pennisetum setosum* (Sw.) Rich. var. *laxiusculum* Hack.)

Ecuador, Brazil to northern Argentina, Peru, Paraguay. Perennial, semiaquatic, caespitose, tall, erect, branched, robust, nodes hairy, linear leaf blades finely acute and flat, solitary spiciform inflorescence terminal cylindrical, a long purple panicle with bristles, involucre with no single bristle longer than the others, no bristles ciliate, solitary spikelets sessile and acuminate, lower glume blunt to acuminate, upper glume acute, lower lemma acuminate sterile, upper lemma acuminate perfect, lower palea absent, 2 lodicules, can be found in moist soils, open areas, inundated places, riverbanks, along rivers and streams, see *Species Plantarum* 2: 1049. 1753, *Nova Genera et Species Plantarum seu Prodrromus* 26. 1788, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 277. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 177. 1834, *Revisio Generum Plantarum* 3(3): 347. 1898 and *Mus. Farmacol. Fac. Cienc. Med., Buenos Aires* 21: 33. 1909, *Brittonia* 23(3): 293-324. 1971, *Proceedings of the Indian Science Congress Association* 70(3-vi): 91. 1983, *Lilloa* 36(1): 105-129. 1983, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in English: bent-spike fountain grass, bentspike pennisetum

P. nicaraguense E. Fourn. (*Panicum polystachion* L.; *Pennisetum polystachion* (L.) Schult.; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken; *Pennisetum setosum* (Sw.) Rich.)

Nicaragua. See *Systema Naturae, Editio Decima* 870. 1759, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Syn. Pl.* 1: 72. 1805, *Mantissa* 2: 146. 1824, *Bulletin de la Société Botanique de France* 27: 293. 1880 and *Botanical Journal of the Linnean Society* 79(1): 63. 1979.

P. nodiflorum Franch.

Warm regions, Africa. See *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 363. 1895.

P. nubicum (Hochst.) K. Schum. ex Engl. (*Beckera nubica* (Hochst.) Hochst.; *Beckeropsis nubica* (Hochst.) Fig. & De Not.; *Gymnotrix nubica* Hochst.)

Sudan, Yemen. Annual, erect, much-branched, leaf blades linear finely acute, lower leaf blades narrowed into a false petiole, inflorescences axillary from the upper leaf sheaths, a slender false panicle, spikelets narrowly elliptic each subtended by a single fine bristle, lower lemma sterile sharply acute, upper lemma mucronate, waste places, roadsides, very closely related to *Pennisetum petiolare*, see *Flora* 27: 251, 512. 1844, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 2: 49, t. 28. 1853, *Memorie della Reale Accademia delle Scienze di Torino ser. 2* 14: 366. 1854, *Abhandlungen der Preussischen Akademie der Wissenschaften. Physikalisch-mathematische Klasse* 1894: 58. 1894.

P. obovatum Masam. & Syozi

Asia. See *Acta Phytotaxonomica et Geobotanica* 14(3): 87-88. 1951.

P. occidentale Chase

South America, Ecuador. Herbaceous, green inflorescence, found near streams and rivers, lake, see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812 and *Contr. U.S. Natl. Herb.* 22(3): 156. 1920, *Contributions from the United States National Herbarium* 24(8): 483. 1927.

P. orientale Rich. (*Panicum orientale* (Rich.) Willd.; *Pennisetum fasciculatum* Trin.; *Pennisetum setaceum* subsp. *orientale* (Rich.) Maire; *Pennisetum setaceum* var. *orientale* (Rich.) Maire; *Pennisetum triflorum* Nees ex Steudel)

Central and southwestern Asia, North Africa, Arabia, northwestern India, Pakistan, Nepal, Afghanistan. Perennial bunchgrass, deep-rooted, slender, low-growing, erect, leafy, blue gray-green foliage, short vigorous rhizomes, stout rootstock, forming large clumps, culms erect to spreading, branching from the upper nodes, ligule a ciliate rim, leaves narrow-linear to finely acuminate and slightly rough, internodes solid, cottony inflorescence loose and showy, pinkish purple to straw colored spikes, axis bristly, spikelets lanceolate, lateral spikelets smaller than the central one, lower floret staminate, lower lemma 3- to 5-nerved, forage grass, palatable, not aggressive and noninvasive, high nutritive value, valuable for pasture on rich moist soils, ornamental and drought resistant, useful for erosion control, a good soil binder, grows in high rainfall areas, along a stream, dry

hillsides, rocky slopes, in well-drained soils, rocky hills, steep wooded hills, see *Syn. Pl.* 1: 72. 1805, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1031. 1809, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 181. 1834, *Synopsis Plantarum Glumacearum* 1: 107. 1854, *Bulletin de la Société Botanique de France* 34: 391. 1887, *The Flora of British India* 7: 86. 1896, *Annuario del Reale Istituto Botanico di Roma* 7: 66. 1897 and *Handb. Fl. Ceylon* 5: 171. 1900, *Zeitschrift für Naturwissenschaften* 79: 26. 1907, *Bollettino della Società Botanica Italiana* 1923: 113. 1923, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 31: 45. 1940, *Flore de l'Afrique du Nord*: 1: 333. 1952, *Grasses of Burma ...* 346. 1960, *Proc. Indian Acad. Sci. (Sect B)* 92: 259-264. 1984, *J. Cytol. Genet.* 20: 205-206. 1985, *Current Science* 56: 784-787. 1987, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Cytologia* 54: 641-652. 1989, *Journal of Cytology and Genetics* 24: 23-29. 1989, *Journal of the Indian Botanical Society* 68: 295-299. 1989, *Cytologia* 56: 437-452. 1991, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: bedding grass, African feather grass, Orient fountain grass, hardy Oriental fountain grass, Oriental fountain grass, fountain grass, Oriental pennisetum

in India: bimalsia

P. orientale Rich. subsp. *parisiü* Trab.

Africa. See *Bulletin de la Société Botanique de France* 34: 391. 1887.

P. orientale Rich. var. *altissimum* Chiov. (*Pennisetum setaceum* (Forssk.) Chiov.)

Africa. See *Flora Aegyptiaco-Arabica* 17. 1775, *Annuario del Reale Istituto Botanico di Roma* 7: 66. 1897 and *Bollettino della Società Botanica Italiana* 1923: 113. 1923.

P. orientale Rich. var. *fasciculatum* (Trin.) Leeke

Asia. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 181. 1834 and *Zeitschrift für Naturwissenschaften* 79: 26. 1907.

P. orientale Rich. var. *griffithii* Leeke (*Pennisetum griffithii* Munro ex Hook.f.)

Asia. See *The Flora of British India* 7: 86. 1896 and *Zeitschrift für Naturwissenschaften* 79: 26. 1907.

P. orientale Rich. var. *orientale*

North Africa to India. Arid and dry habitats, closely related to *Pennisetum setaceum* (Forssk.) Chiov., see *Syn. Pl.* 1: 72. 1805.

P. orientale Rich. var. *triflorum* (Nees ex Steud.) Stapf (*Pennisetum triflorum* Nees ex Steud.)

Asia, India, Nepal. See *Synopsis Plantarum Glumacearum* 1: 107. 1854, *The Flora of British India* 7: 86. 1896 and *Handb. Fl. Ceylon* 6: 154. 1931, *Grasses of Burma* ... 346. 1960.

P. palescens Leeke (also spelled ***pallescens***) (*Pennisetum purpureum* Schumach.)

Africa. See *Beskrivelse af Guineiske planter* 44. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 64. 1828.

P. pauperum Nees ex Steudel (*Amphochaeta exaltata* Andersson; *Gymnotrix paupera* Nees ex Steud.; *Pennisetum exaltatum* (Andersson) Hook.f. & B.D. Jacks.)

Peru, Ecuador. Shrubby or arbuscular, see *Essai d'une Nouvelle Agrostographie* 59. 1812, *Synopsis Plantarum Glumacearum* 1: 102. 1854, *Kongliga Svenska Vetenskapssakademiens Handlingar* [also *Kongl. Vetensk. Acad. Handl.*] 1853: 136-137. 1855, *Index Kewensis* 1: 112, 1078. 1893.

P. pedicellatum Trin. (*Eriochaeta densiflora* Fig. & De Not.; *Eriochaeta reversa* Fig. & De Not.; *Eriochaeta secundiflora* Fig. & De Not.; *Pennisetum amoenum* Hochst. ex A. Rich.; *Pennisetum araneosum* Edgew.; *Pennisetum densiflorum* (Fig. & De Not.) T. Durand & Schinz; *Pennisetum dillonii* Steud.; *Pennisetum implicatum* Steud.; *Pennisetum intertextum* Schltld.; *Pennisetum lanatum* Ham. ex Wall.; *Pennisetum lanuginosum* Hochst.; *Pennisetum lanuginosum* var. *majus* Hochst.; *Pennisetum notarisii* T. Durand & Schinz; *Pennisetum pedicellatum* subsp. *unispiculum* Brunken; *Pennisetum pedicellatum* var. *amoenum* (Hochst. ex A. Rich.) Hochst. ex A. Rich. & Chiov.; *Pennisetum pedicellatum* var. *pallidum* Chiov.; *Pennisetum pedicellatum* var. *pubirachis* Berhaut; *Pennisetum reversum* Hack. ex Büttner; *Pennisetum secundiflorum* (Fig. & De Not.) T. Durand & Schinz)

Benin, Tanzania, Mauritania, Nigeria, Sudan, Guinea, Ghana, Mali, Ethiopia, India. Annual bunchgrass, rarely perennial, leafy, usually herbaceous, well branched from the base, leaves flat, cottony whitish inflorescences, spiciform panicle cylindrical, glabrous rachis with prominent wings, involucre 1- to 5-spiculate, inner bristles of the involucre densely villous to fluffy, spikelets usually solitary and at least one spikelet pedicelled, lower glume ciliate, upper glume obtuse apiculate, lower lemma 3-lobed male or sterile, upper floret smooth and shiny, shade species, a valuable soil stabilizer, invasive, often dominant on disturbed land, can become a noxious weed of cultivation, used for thatching and woven into mats, fodder, silage and hay, good forage before flowering, very palatable to cattle and sheep, low grazing value, used for grazing in times of scarcity, ornamental, feathery and decorative inflorescences, good drought tolerance, little frost tolerance, growing in sandy soils, dry savannah, acidic and alkaline soils, dry forest vegetation, disturbed sites, road edges and fallows,

fertile loamy soils, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 184. 1834, *Flora* 25(Beibl. 1, no. 9): 133. 1842, *Flora* 27: 252-253. 1844, *Tentamen Florae Abyssinicae* ... 2: 386. 1850, *Österreichische Botanische Zeitschrift* 9: 878. 1851, *Journal of the Asiatic Society of Bengal* 21: 180. 1852, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 375-378. 1854, *Synopsis Plantarum Glumacearum* 1: 107. 1854, *Conspectus Florae Africae* 5: 778, 781, 784. 1894 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 314-315. 1908, *Mémoires de la Société Botanique de France* 1953: 10. 1954, *Botanical Journal of the Linnean Society* 79(1): 62. 1979, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Biol. Pl.* 24: 13-19. 1982, *Cytologia* 51: 473-478. 1986, *Journal of the Indian Botanical Society* 68: 295-299. 1989, *Cytologia* 54: 73-78. 1989, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: pennisetum, annual kyasuwa grass, kyasuwa grass, kyasuma grass, kayasuwa grass, barra grass, matting grass, Nigeria grass, deenanth grass, dinanath grass

in India: dhaman, kolia chut, phalunga

in Thailand: yaa khachon chop, ya kha chon chop, ya kha chon chop dok yai

in Africa: sadioussou, bara, chohow (Malinké), pouki (Pou-lar)

in Arabic: umm dufufu

in Gambia: barra

in Ghana: china

in Mali: ngolo, ulunde, wolonde

in Niger: ankofa, borbotô, bulumbé, êboênoêwt, hargey, hurâ, k'yasuwa, kissana, têboênoêwt, êggaboêrt, wulundé, zenkey su nya

in Nigeria: buuluude, esù, ferà, hura, huran giwa, ikpakpalà, ilosun, kaafiiriimii, kaafiirimi, kamsuwa, kan suwa, kya suwaa, suroja, tsat suwaa, ulunde, umm dufufu, vichu zeen, wolonde, wuuluunde

in Senegal: bara, bob, dan, faf, fayfay, fof, ga, mbop, ngolo, ulunde, wolonde

in Upper Volta: bogodollo, bogodollooji, kimbogo, ngolo

P. pedicellatum Trin. subsp. ***pedicellatum***

Sudan. 2- to 5 spikelets in each involucre.

P. pedicellatum Trin. subsp. ***unispiculum*** Brunken (*Eriochaeta reversa* Fig. & De Not.; *Pennisetum notarisii* T. Durand & Schinz)

Warm regions, Africa, Ghana. See *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 378. 1854 and *Botanical Journal of the Linnean Society* 79(1): 62. 1979.

P. peruvianum Trin. (*Gymnothrix peruviana* (Trin.) Döll; *Gymnothrix elegans* (Hassk.) Büse; *Gymnothrix peruviana* (Trin.) Döll; *Sericura elegans* Hassk.)

Peru, Andes, Ecuador. Erect, caespitose, ascending, arching or drooping, solid, branched, feathery inflorescence, usually densely clumped or solitary, more or less waxy, forage, along roadsides, open places, dry sites, see *Syn. Pl.* 1: 72. 1805, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Linnaea* 10(3): 295. 1836, *Flora* 25(Beibl. 2): 2. 1842, *Plantae Junghuhnianae* 3: 368. 1854, *Flora Brasiliensis* 2(2): 302. 1877 and *Contr. U.S. Natl. Herb.* 22: 210. 1921.

in Ecuador: pasto

P. petiolare (Hochst.) Chiov. (*Beckera petiolaris* (Hochst.) Hochst.; *Beckeropsis petiolaris* (Hochst.) Fig. & De Not.; *Gymnothrix petiolaris* Hochst.)

Sudan. Annual, tufted, slender, branched, rounded or cordate lower leaf blades abruptly contracted into a false petiole, inflorescence axillary from the upper leaf sheaths, spikelets narrowly elliptic, each spikelet subtended by a single fine bristle, glumes truncate or emarginate, lower lemma sterile, along roadsides, field margins, disturbed places, see *Flora* 27: 250, 512. 1844, *Memorie della Reale Accademia delle Scienze di Torino* ser. 2 14: 368. 1854 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 324. 1908.

in English: petioled fountaingrass

P. pirottae Chiov. (*Beckeropsis pirottae* (Chiov.) Stapf & C.E. Hubb.)

Sudan, Blue Nile, Upper Nile. Perennial, robust, smooth, hard, much-branched, densely tussocky, leaf blades finely acute, slender inflorescence in fascicles, spikelets appressed and subtended by a single basal bristle, glumes nerveless, lemmas 5-nerved sharply acute, lower lemma sterile, on riverbanks, sandy soils, see *Annuario del Reale Istituto Botanico di Roma* 8: 37, t. 2. 1903, *Bulletin of Miscellaneous Information Kew* 1933: 269. 1933.

P. polycladum Chiov. (*Cenchrus ciliaris* L.)

Africa. See *Mantissa Plantarum* 302. 1771, *Annuario del Reale Istituto Botanico di Roma* 6: 167. 1896 and *Iowa State College Journal of Science* 37(3): 259-351. 1963.

P. polystachion (L.) Schultes (also ***polystachyon***) (*Cenchrus retusus* Sw.; *Cenchrus setosus* Sw.; *Gymnothrix geniculata* Schult.; *Gymnothrix geniculata* Schult.; *Gymnothrix polystachya* (L.) Sw. ex Trin.; *Panicum barbatum* Roxb., nom. illeg., non *Panicum barbatum* Lam.; *Panicum caudarratti* Schumach., also *cauda ratti*; *Panicum cenchroides* Schumach.; *Panicum cenchroides* Lam., nom. illeg., non *Panicum cenchroides* Rich.; *Panicum densispica* Poir.; *Panicum erubescens* Willd.; *Panicum fuscescens* Willd. ex Nees; *Panicum imberbe* Poir.; *Panicum imberbe* var. *purpurascens* (Kunth) Döll; *Panicum longisetum* Poir.; *Panicum longisetum* Torr.; *Panicum polystachion* L.; *Panicum*

subangustum Schumach.; *Panicum triticoides* Poir.; *Pennisetum alopecuroides* Desv. ex Ham., nom. illeg., non *Pennisetum alopecuroides* (L.) Spreng.; *Pennisetum alopecuroides* (L.) Spreng.; *Pennisetum amethystinum* P. Beauv.; *Pennisetum barbatum* Schult.; *Pennisetum borbonicum* Kunth; *Pennisetum breve* Nees; *Pennisetum caudarratti* (Schumach.) Franch.; *Pennisetum cenchroides* Rich. ex Pers.; *Pennisetum ciliatum* Parl. ex Hook.; *Pennisetum dasistachyum* Desv.; *Pennisetum elegans* Nees ex Steud.; *Pennisetum erubescens* (Willd.) Desv. ex Ham.; *Pennisetum erubescens* (Willd.) Link, nom. illeg., non *Pennisetum erubescens* (Willd.) Desv. ex Ham.; *Pennisetum flavescens* J. Presl; *Pennisetum gabonense* Franch.; *Pennisetum geniculatum* (Poir.) Jacq.; *Pennisetum gracile* Benth.; *Pennisetum hamiltonii* Steud.; *Pennisetum hirsutum* Nees; *Pennisetum indicum* var. *purpurascens* (Kunth) Kuntze; *Pennisetum multiflorum* E. Fourn.; *Pennisetum nicaraguense* E. Fourn.; *Pennisetum pallidum* Nees; *Pennisetum pedicellatum* sensu Senaratna; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken; *Pennisetum polystachyum* (L.) Schult.; *Pennisetum purpurascens* Kunth; *Pennisetum reversum* Hack. ex Büttner; *Pennisetum richardii* Kunth; *Pennisetum setosum* (Sw.) Rich.; *Pennisetum setosum* var. *breve* (Nees) Döll; *Pennisetum sieberi* Kunth; *Pennisetum stenostachyum* A. Peter; *Pennisetum subangustum* (Schumach.) Stapf & C.E. Hubb.; *Pennisetum tenuispiculatum* Steud.; *Pennisetum triticoides* (Poir.) Roem. & Schult.; *Pennisetum uniflorum* Kunth; *Setaria cenchroides* (Rich.) Roem. & Schult.; *Setaria erubescens* (Willd.) P. Beauv.; *Setaria purpurascens* Kunth) (Greek *polys* “many” and *stachys* “a spike”)

Tropical Africa. Annual or perennial bunchgrass, polymorphic, very variable, much branched, tall, usually terrestrial, large, tough, vigorous, many culms from one rootstock, tufted to densely tufted, sometimes rooting at the lower nodes, forming a dense tussock grassland, culms fairly erect and slender to moderately stout, often branched at the nodes, leaf sheath loose and smooth, leaf blade flat and drooping, ligule bristly, inflorescence a cylindrical panicle, curved purplish brown spikes, spikelets in groups subtended by elongate bristles, involucre 1-spiculate, some bristles ciliate, rachis glabrous, spikelets 2-flowered, upper floret fertile, 2 glumes, lower glume very tiny or absent, lower glume wide and clasping, upper glume with two lateral apical teeth, 3 stamens, stigmas feathery, upper floret readily deciduous, prolific seeder, fodder and hay, good browsing for all stock before flowering, grain used for stock feeding, young grass fairly palatable, invasive ground cover, bad weed species widely naturalized in tropics, ornamental, feathery and decorative inflorescences, culms used for thatching and to make matting, useful for erosion control, tolerates flooding well, drought-resistant, suitable for cultivation in semiarid areas, usually found on sandy soils, wet meadows, lowlands, tropical savannahs, forest edge, dis-

turbed degraded and waste areas, disturbed places beside rivers, seepage, wooded savannah, bushland, thickets, open areas, in shady areas under trees, disturbed areas along roadsides, fallow fields, nonpastoral lands, grassland on sandy soils, dry forests and woodlands of the wet-dry tropics, old cultivated lands, resembling *Pennisetum pedicellatum* Trin. and *Pennisetum purpureum* Schumach., see *Systema Naturae, Editio Decima* 2: 870. 1759, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792, *Tableau Encyclopédique et Méthodique ... Botanique* 4: 737. 1798, *Syn. Pl.* 1: 72. 1805, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1031. 1809, *Essai d'une Nouvelle Agrostographie* 51, 59, 169, 178. 1812, *Hortus Bengalensis, or a catalogue ...* 7. 1814, *Nova Genera et Species Plantarum* 1: 110, 113-114, t. 34. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 272-275. 1816, *Systema Vegetabilium, editio decima sexta* 2: 495, 877. 1817, *American Journal of Science* 4: 58. 1822, *Mantissa* 2: 146-147, 284. 1824, *Prodromus Plantarum Indiae Occidentalis* 11. 1825, *De Graminibus Paniceis* 66. 1826, *Beskrivelse af Guineiske planter* 59-60. 1827, *Hortus Regius Botanicus Berolinensis* 1: 215. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 79-80. 1828, *Révision des Graminées* 1: 49-50. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 241, 261, 284-285. 1829, *Révision des Graminées* 1: 259. 1830, *Reliquiae Haenkeanae* 1(4-5): 316. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 180. 1831, *Nomenclator Botanicus. Editio secunda* 2: 297. 1841, *Niger Flora* 184, 564. 1849, *Synopsis Plantarum Glumacearum* 1: 105, 107. 1854, *Flora Brasiliensis* 2(2): 157, 306. 1877, *Bulletin de la Société Botanique de France* 27: 293. 1880, *Mexicanas Plantas* 2: 49. 1886, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 68. 1890 [or 1889], *Revisio Generum Plantarum* 2: 787. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 363. 1895, *Contributions à la flore du Congo Français* 52: 53, 360. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: (Anhang 70), t. 36. 1930, *Bulletin of Miscellaneous Information Kew* 1933: 271. 1933, *Grasses of Ceylon* 155. 1956, *Grasses of Burma ...* 346, 348. 1960, *Botanical Journal of the Linnean Society* 79(1): 51, 63. 1979, *Micronesica* 18(2): 45-102. 1982 [1984], *Fl. Novogalic.* 14: 113. 1983, *Cytologia* 54: 641-652. 1989, *Journal of the Indian Botanical Society* 68: 295-299. 1989.

in English: foxtail, barra grass, feather pennisetum, feathery pennisetum, West Indian pennisetum, mission grass, matting grass, golden grass, thin Napier grass, dryland Napier grass, China grass

in French: queue de chat

in India: naapear hullu, neepear hullu, sanna kaddi

in Laos: hnhaaz khachoon

in Malaysia: rumput berus, rumput ekor kucing

in the Philippines: buntot-pusa, ikug-kuting

in Thailand: yaa khachon chop, ya kha chon chop, ya kha chon chop dok lek, ya-khachonchop

in Vietnam: co' duoi voi nho'

in Africa: gbalá (Malinké), pouki, puki (Poular)

in Arabic: umm dufufu

in Angola: kinute

in Gambia: barra, sano barra

in Ghana: kyasuwa

in Guinea: atyeb lanet, kuli, puki, sabire, wolonde

in Guinea-Bissau: feéta, féeta, mambinro

in Mali: bara, bogo dolori, dansa, hulhuldé, ngolo, nkolo, sapa, wolonde

in Nigeria: achara nwankita, bulude, bulunde, bushi, fera, hura, ilosun, inasua, kaafiriimii, kamsuwa, kan suwaa, kya suwaa, kya suwar fadama, kyamsuwaa, kyamsuwàà, ugbene jinni, umm dufufu, wulunde

in Senegal: ardièmba, bara, buludé, esulag

in Sierra Leone: abalingi, akepkabera, alinki, fafwiya, fovo, fovu, gbanalewu, gbanalevu, gongo le, gongo levu, gongo levuhe, kpanaleuu, kpana levu, kuli, kulla, kulla khongbena, ngaile, ngoboina, ngongo, ngongo levu, ngongo levuha, nguague, ngugu, ngungu, panyirakulla, sensendepo mbolen, sensene musuma, turunya, yereme

in Tanzania: embalakai

in Upper Volta: bogodollo, bogodollooji, hihangon, kim ubogo, kimbogo, kimogo, yakalo

in Yoruba: ilosun, inasua, irunmunu efon

P. polystachion (L.) Schultes f. ***viviparum*** Fosberg & Sachet

Marianas. See *Mantissa* 2: 146. 1824 and *Micronesica* 18(2): 86. 1982 [1984].

P. polystachion (L.) Schult. subsp. ***atrichum*** (Stapf & C.E. Hubb.) Brunken (*Pennisetum atrichum* Stapf & C.E. Hubb.; *Pennisetum reversum* var. *gymnochaetium* Hack.)

Central and southern tropical Africa, Benin. Perennial, stems rounded, hollow, up to 30 involucral bristles scaberulous, forest, transition woodland, disturbed areas, wooded savannah, see *Bulletin de l'Herbier Boissier, sér. 2*, 1: 767. 1901, *Bulletin of Miscellaneous Information Kew* 1933: 282. 1933, *Botanical Journal of the Linnean Society* 79(1): 63. 1979.

in English: golden grass

P. polystachion (L.) Schultes subsp. ***polystachion*** (*Panicum barbatum* Roxb., nom. illeg., non *Panicum barbatum* Lam.; *Panicum cauda-ratti* Schumach.; *Panicum longisetum* Poir.; *Panicum longisetum* Torr.; *Panicum polystachion* L.; *Panicum subangustum* Schumach.; *Panicum triticoides* Poir.;

Pennisetum cauda-ratti (Schumach.) Franch.; *Pennisetum elegans* Nees ex Steud.; *Pennisetum gracile* Benth.; *Pennisetum subangustum* (Schumach.) Stapf & C.E. Hubb.)

Tropical Africa, Tanzania, Uganda, Senegal. Annual, much-branched, inflorescences drooping, 6-45 involucre bristles, growing in large tufts or clumps, grass widely naturalized in tropics, found in heavily grazed and trampled areas, cleared areas, disturbed areas, gardens, see *Systema Naturae, Editio Decima* 870. 1759, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 274-275. 1816, *Systema Vegetabilium, editio decima sexta* 2: 877. 1817, *Flora Indica; or Descriptions ...* 1: 285. 1820, *American Journal of Science* 4: 58. 1822, *Mantissa* 2: 146. 1824, *Beskrivelse af Guineiske planter* 59-60. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 79-80. 1828, *Niger Flora* 564. 1849, *Synopsis Plantarum Glumacearum* 1: 105. 1854, *Mexicanas Plantas* 2: 41. 1886, *Contributions à la flore du Congo Français* 52: 360. 1896 and *Contributions from the United States National Herbarium* 22(3): 136, f. 27. 1920, *Bulletin of Miscellaneous Information Kew* 1933: 271. 1933.

P. polystachion (L.) Schult. subsp. *setosum* (Sw.) Brunken (*Cenchrus ciliaris* L.; *Cenchrus setosus* Sw.; *Gymnotrix geniculata* Schult.; *Panicum cenchroides* Rich.; *Panicum cenchroides* Lam., nom. illeg., non *Panicum cenchroides* Rich.; *Panicum densispica* Poir.; *Panicum erubescens* Willd.; *Panicum polystachion* L.; *Pennisetum borbonicum* Kunth; *Pennisetum cenchroides* Rich. ex Pers.; *Pennisetum erubescens* (Willd.) Desv. ex Ham.; *Pennisetum erubescens* (Willd.) Link, nom. illeg., non *Pennisetum erubescens* (Willd.) Desv. ex Ham.; *Pennisetum flavescens* J. Presl; *Pennisetum geniculatum* (Poir.) Jacq.; *Pennisetum hirsutum* Nees; *Pennisetum nicaraguense* E. Fourn.; *Pennisetum pallidum* Nees; *Pennisetum polystachion* (L.) Schult.; *Pennisetum purpurascens* Kunth; *Pennisetum reversum* Hack. ex Büttner; *Pennisetum richardii* Kunth; *Pennisetum setosum* (Sw.) Rich.; *Pennisetum sieberi* Kunth; *Pennisetum stenostachyum* A. Peter; *Pennisetum uniflorum* Kunth; *Setaria cenchroides* (Rich.) Roem. & Schult.; *Setaria erubescens* (Willd.) P. Beauv.)

Africa. Perennial, up to 50 involucre bristles more or less densely ciliate, see *Species Plantarum* 2: 1049. 1753, *Systema Naturae, Editio Decima* 870. 1759, *Mantissa Plantarum* 2: 302. 1771, *Nova Genera et Species Plantarum seu Prodrromus* 26. 1788, *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792, *Tableau Encyclopédique et Méthodique ... Botanique* 4: 737. 1798, *Syn. Pl.* 1: 72. 1805, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1031. 1809, *Essai d'une Nouvelle Agrostographie* 51, 169, 178. 1812, *Nova Genera et Species Plantarum* 1: 113-114, t. 34. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 4: 273. 1816, *Systema Vegetabilium, editio decima sexta* 2: 495. 1817, *Eclogae Graminum Rariorum* 3 & 4: 37, t. 26. 1820, *Mantissa* 2: 146, 284. 1824,

Prodrromus Plantarum Indiae Occidentalis 11. 1825, *Hortus Regius Botanicus Berolinensis* 1: 215. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 284-286. 1829, *Révision des Graminées* 1: 49-50, 259. 1829-1830, *Reliquiae Haenkeanae* 1(4-5): 316. 1830, *Bulletin de la Société Botanique de France* 27: 293. 1880, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 31: 68. 1890 [or 1889] and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: (Anhang 70), t. 36. 1930; 240. 1931. 1930, *Brittonia* 23(3): 293-324. 1971, *Botanical Journal of the Linnean Society* 79(1): 63. 1979, *Proceedings of the Indian Science Congress Association* 70(3-vi): 91. 1983, *Journal of the Indian Botanical Society* 68: 295-299. 1989, *Cytologia* 54: 641-652. 1989, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

P. preslii Trin. ex Steud. (*Gymnotrix bambusifomis* E. Fourn.; *Pennisetum bambusiforme* (E. Fourn.) Hemsl. ex B.D. Jacks.)

South America. See *Reliquiae Haenkeanae* 1(4-5): 316. 1830, *Nomenclator Botanicus. Editio secunda* 298. 1841, *Biologia Centrali-Americana; ... Botany ...* 3: 507. 1885, *Mexicanas Plantas* 2: 48. 1886, *Index Kewensis* 2: 458. 1895 and *Zeitschrift für Naturwissenschaften* 79: 33. 1907, *Lilloa* 36(1): 105-129. 1983, *Taxon* 33: 126-134. 1984.

P. procerum (Stapf) Clayton (*Beckeropsis procera* Stapf)

Kenya, Uganda. Slender wiry culms, filiform leaf blades, rock crevices, see *Bulletin of Miscellaneous Information Kew* 1933: 272. 1933, *Kew Bulletin* 32(3): 580. 1978, *Flora of Tropical East Africa* 451-898. 1982.

P. prolificum Chase

Mexico. Slopes, rocky places, see *Contributions from the United States National Herbarium* 22(4): 231, f. 75. 1921.

P. prostratum Griseb.

Tropical Africa, America. Perennial, aquatic, prostrate, useful for erosion control, common in or near water, freshwater, brackish, swampy areas.

P. pumilum Hack. & Engl.

Ethiopia. Annual, small, tufted, slender, erect, leaf blades narrowly linear and papillose, loose inflorescence, one sessile spikelet subtended by a single involucre bristle, glumes vestigial or absent, lower lemma ovate 5-nerved sterile, upper floret smooth, upper palea without a ciliate tip, wet grassland, resembles *Pennisetum uliginosum*, see *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 124. 1891.

P. purpurascens Kunth (*Pennisetum indicum* var. *purpurascens* (Kunth) Kuntze; *Pennisetum polystachion* (L.) Schult.; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken; *Pennisetum purpurascens* (Thunb.) Kuntze, nom. illeg., non *Pennisetum purpurascens* Kunth; *Pennisetum purpurascens* (Thunb.) Makino, nom. illeg., non

Pennisetum purpurascens Kunth; *Pennisetum purpurascens* f. *chinense* (Nees) Leeke; *Pennisetum setosum* (Sw.) Rich.) Mexico. Forage, dry and arid areas, see *Systema Naturae, Editio Decima* 870. 1759, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Transactions of the Linnean Society of London* 2: 329. 1794, *Syn. Pl.* 1: 72. 1805, *Nova Genera et Species Plantarum* 1: 113-114. 1815 [1816], *Mantissa* 2: 146. 1824, *Revisio Generum Plantarum* 2: 787. 1891 and *Zeitschrift für Naturwissenschaften* 79: 37. 1907, *Botanical Magazine* (Tokyo) 26: 294. 1912, *Botanical Journal of the Linnean Society* 79(1): 63. 1979.

P. purpurascens Kunth var. *viridescens* (Miq.) Makino (*Gymnotrix japonica* var. *viridescens* Miq.)

Asia, Japan. See *Annales Museum Botanicum Lugduno-Batavi* 2: 276. 1866 and *Botanical Magazine* (Tokyo) 26: 294. 1912.

P. purpureum Schumacher (*Gymnotrix nitens* Andersson; *Gymnotrix nitens* Andersson; *Pennisetum benthamii* Steud.; *Pennisetum benthamii* var. *nuda* Hack.; *Pennisetum benthamii* var. *sambesiense* Hack.; *Pennisetum benthamii* var. *ternatum* Hack.; *Pennisetum blepharideum* Gilli; *Pennisetum flavicomum* Leeke; *Pennisetum flexispica* K. Schum.; *Pennisetum gossweileri* Stapf & C.E. Hubb.; *Pennisetum lachnorrhachis* Peter; *Pennisetum macrostachyum* Benth., nom. illeg., non *Pennisetum macrostachys* (Brongn.) Trin.; *Pennisetum nitens* (Andersson) Hack.; *Pennisetum palescens* Leeke; *Pennisetum pruinatum* Leeke; *Pennisetum purpureum* subsp. *benthamii* (Steud.) Maire & Weiller; *Pennisetum purpureum* subsp. *eupurpureum* Maire & Weiller; *Pennisetum purpureum* subsp. *flexispica* (K. Schum.) Maire & Weiller) (for the botanist John Gossweiler, 1873-1952, plant collector, author of *Carta fitogeografica de Angola*. [Luanda] 1939, *Flora exotica de Angola*. Luanda 1950)

Tropical Africa, Ghana. Perennial bunchgrass, semiaquatic, bamboo-like or canelike, tall to giant, robust, erect or decumbent, branching from the upper and middle nodes, stoloniferous or shortly rhizomatous, large and deep fibrous root system, forming large clumps and impenetrable colonies by extensive tillering, culms densely covered with soft hairs below the inflorescence, internodes glaucous, leaf sheaths shiny and loose, ligule a tuft of white stiff bristles, leaf blade with rough edges, very long and broad leaves, yellow-green cylindrical panicle spike-like and erect, involucre with one bristle longer than the others, spikelets surrounded by a fringe of hairs, some bristles ciliate, rachis pubescent, lower glume absent or minute and nerveless, upper glume usually nerveless, lower floret staminate or sterile, upper lemma bisexual or male, lemmas and paleas lanceolate and membranous, young leaves eaten by local people, invasive weed species, crowds out all other vegetation, suitable for silage and as paper-making material, commonly grown for green fodder and forage, a source of a

medicinal salt, very palatable and nutritious, young herbage eaten by cattle and buffaloes, grains eaten by seed-eating birds, grains and pith eaten by chimpanzees, culms cut for walking sticks, stems reedlike used for fences and as wind-breaks, planted for bean stakes, useful for erosion control, ornamental, fair to high drought resistance, cannot withstand flooding or waterlogging, causes difficulties for flood control and reduces water flow, grows mainly on deep loam or scrub soils in high-rainfall coastal districts or on tablelands, moist-to-dry areas, pastures, in disturbed areas and fields, freshwater wetlands, on moist heavy soil under high-rainfall conditions, on rocky soils, grassy savannahs, in rich and well-drained soils, roadsides, riverine sites, margins of rivers and floodplains, in scrub, along dikes and ditches, canal banks, lakeshores and swamps, see *Beskrivelse af Guineiske Planter som ere fundne af Danske Botanikere isaer af Etatsraad Thonning*. 44. [Copenhagen 1828-29], *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 64. 1828, *Niger Flora* 563. 1849, *Synopsis Plantarum Glumacearum* 1: 105. 1855 [1854], *Naturwissenschaftliche Reise nach Mossambique ...* 552. 1864, *Boletim da Sociedade Broteriana* 6: 142. 1888, *Die Pflanzenwelt Ost-Afrikas* 5(C): 105. 1895 and *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 78: 400. 1905, *Zeitschrift für Naturwissenschaften* 79: 45. 1907, *Repertorium Specierum Novarum Regni Vegetabilis* (Beih.) 40: (Anhang 7), t. 35, f. 1. 1930, *Bulletin of Miscellaneous Information Kew* 1933: 274. 1933, *Flore de l'Afrique du Nord* 1: 340-341. 1952, *Grasses of Ceylon* 154. 1956, *Grasses of Burma ...* 348. 1960, *Annalen des Naturhistorischen Museums in Wien* 69: 41. 1966, *Fl. N.S.W. no. 19, Gramineae* 2: 246-247. 1975, *Amer. J. Bot.* 64: 161. 1977, *Cytologia* 54: 641-652. 1989, *Journal of the Indian Botanical Society* 68: 295-299. 1989, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: bush sugar cane, true elephant grass, elephant grass, hollow elephant's grass, hippo's corn, hippopotamus's corn, cow's sugarcane, devil's cane, purple fountain grass, Uganda grass, Napier, Napier fodder, Napier's fodder, Napier grass, Merker, Merkergrass, Merker grass, Merker grass

in Arabic: osheb el-feel

in French: napier, fausse canne à sucre, herbe à éléphant, sissongo

in Italian: erba di napier, erba elefantina, pennisetto rosso

in Africa: capim de Rhodesia (Portuguese Africa); zinyamunga (former Rhodesia); sissongo (Cameroon), senjere (Malawi), kyambama, daawaar kadaa, yambama (Hausa), moloko (Poular), tienghiéo (Kissi), mabingobingo (Swahili), hoyen (Guerzé), bô, gbô (Malinké), eesun, eesun funfun, eesun pupa, iken, esisun, eesu (Yoruba)

in Angola: madeanga, marianga

in Benin: djissouvè, hénouvè, fan vovo, essounsoun kpikpa

in Cameroon: bekoko, besong, makoko, sosom, sosom e nyak, sosom e yak

in Ghana: adai, akoko ani, anan hwerew, elanke akanla, gla, hwedie

in Ivory Coast: chelié, dia, dian voli, né

in Malawi: nsenjere, senjere

in Nigeria: achalà, acharà, acharà mili, awo, car, daawar kadaa, dawar kadaà, eperi, eromo, fe, gawri ngabbu, iiliine, ikpu, izai, izon usi, kyambama, kyambana, mbiit, mboko ekpò, mbokok ekpò, oghodogbo, osi, toloore, toll ore, tolloore, ukpò ukwu, usi, uwa nor, uwua nor, yambamaa, yiwo

in Sierra Leone: a anwo, anlal, bush shuga ken, chengjo, fa, fawa, ka staf, kulon na, kulu na, mbowi hei, molike, moloko, molokoyo, na, ngala, ngara, ngongoi, tamben

in southern Africa: olifantsgras, mfufu; mufufu (Shona)

in Yoruba: eèsun, eesun, eesun funfun, eesun pupa, iken, esisun, eesu

in Togo: adà

in India: aane hullu, dappa naeppear hullu

in Indonesia: rumput gajah

in Malaysia: rumput gajah

in the Philippines: buntot-pusa, darai, gulalay, handalau, handalawi, lagoli

in Thailand: yaa nepia, ya nepia

in Vietnam: co' duôi voi

in Brazil: capim elefante

in Colombia: pasto elefante

in Ecuador: paja elefante

in Mexico: elefante, gigante, merkerón, pasto elefante, zacate elefante, zacate gigante

in Spanish: el napier, el napier morado, gigante, hierba elefante, merker, mott, pasto elefante, pasto napier, supermerker, yerba elefante

in Micronesia: napier grass, pukso

P. ramosissimum Steud.

Africa, Guinea. See *Synopsis Plantarum Glumacearum* 1: 105. 1854.

P. ramosum (Hochst.) Schweinf. & Asch. (*Gymnotrix ramosa* Hochst.; *Pennisetum arvense* Pilg.; *Pennisetum ovale* Rupr. ex Steud.; *Pennisetum ramosum* C. Sm.; *Pennisetum ramosum* (Hochst.) Schweinf.)

Tropical Africa, Sudan, Uganda, Tanzania, Nigeria, Ethiopia. Annual or biennial, caespitose, tough, coarse, erect or ascending, dark nodes, much-branched, leaf sheaths keeled, dense inflorescence very bristly, false spikes cylindrical, angled and winged rhachis, flowers with bristly awns, flattened bristles slightly connate, upper glume sharply acute 7-nerved, lower lemma male or sterile 5-nerved, upper lemma acuminate-mucronate, a weed of cultivation and

arable land, fodder plant, grazed while still young, growing in swamps, grassland, riversides, wet places, heavy soils, along roadsides, in seasonally wet areas, see James Hingston Tuckey, *Narrative of an Expedition to Explore the River Zaire, Usually Called the Congo, in South Africa in 1816*, under the direction of Captain J.K. Tuckey, R.N. [Captain Tuckey's second Christian name is wrongly printed Kingston throughout the work.] 251. Published by the Lords Commissioners of the Admiralty. London 1818, Prof. C. Smith's *Dagbok paa en Reise til Congo i Afrika*. Christiania 1819 [author the Norwegian botanist Christen (Christian) Smith, 1785-1816 (Congo), bryologist, physician, traveler, 1814 professor of botany at the University of Christiania (Oslo), plant collector, geologist, 1816 expedition under Capt. James Hingston Tuckey (1776-1816) to Congo; all died save the British botanist and Kew gardener David Lockhart who brought Smith's specimens to Kew], *Flora* 27: 252. 1844, *Synopsis Plantarum Glumacearum* 1: 104. 1854, *Beitrag zur Flora Aethiopiens* 301. Berlin 1867 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 119. 1901, *Taxon* 10: 237-238. 1961, J.H. Barnhart, *Biographical notes upon botanists*. 3: 290. 1965, F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 75. Utrecht 1971, *Current Science* 58: 869-871. 1989, *Cytologia* 58: 155-160. 1993.

in Nigeria: géeron kàdàà

P. refractum (F. Muell.) F. Muell. (*Panicum refractum* (F. Muell.) F. Muell.; *Paractaenum refractum* (F. Muell.) R.D. Webster; *Setaria refracta* F. Muell.)

Australia. See *Fragmenta Phytographiae Australiae* 3: 147. 1862, *Fragmenta Phytographiae Australiae* 8: 109, 152. 1873-1874 and *The Australian Paniceae (Poaceae)* 148. 1987.

P. richardii Kunth (*Pennisetum polystachion* (L.) Schult.; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken; *Pennisetum setosum* (Sw.) Rich.)

South America. See *Systema Naturae, Editio Decima* 870. 1759, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Syn. Pl.* 1: 72. 1805, *Mantissa* 2: 146. 1824, *Révision des Graminées* 1: 49. 1829 and *Botanical Journal of the Linnean Society* 79(1): 63. 1979.

P. rigidum (Griseb.) Hack. (*Gymnotrix rigida* Griseb.; *Gymnotrix rigida* var. *longisetum* Griseb.; *Pennisetum rigidum* var. *longisetum* (Griseb.) Stuck.)

South America. See *Essai d'une Nouvelle Agrostographie* 59. 1812, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 263. 1874, *Pl. Lorentz*. 215. 1874, *Symbolae ad Floram Argentinam. Zweite* 308. 1879 and *Anales del Museo Nacional de Buenos Aires* 11: 84-85. 1904.

P. riparium Hochst. ex A. Rich. (*Gymnotrix riparia* (Hochst. ex A. Rich.) Walp.; *Pennisetum dowsonii* Stapf & C.E. Hubb.; *Pennisetum salifex* Stapf & C.E. Hubb.)

East Africa, Ethiopia. Perennial, ascending, semiaquatic, sometimes floating, mat-forming, trailing, spongy, stout, rooting at the lower nodes, rhizomatous and stoloniferous, leaf blades flat or folded, dense inflorescence broadly linear, spikelets narrowly lanceolate, 1-3 sessile spikelets surrounded by many scabrid bristles, lower glume absent, upper glume a small nerveless scale, variable lower lemma male or sterile 1- to 9-nerved, upper lemma acute 7- to 9-nerved, stigma long-exserted, marshy riverbanks, meadows, seasonally flooded areas, see *Tentamen Florae Abyssinicae* ... 2: 381. 1850, *Annales Botanices Systematicae* 3: 722. 1852-1853 and *Bulletin of Miscellaneous Information Kew* 1933: 279. 1933.

P. robustum Stapf & C.E. Hubb.

Angola. Annual, erect, robust, rooting at the lower nodes, see *Bulletin of Miscellaneous Information Kew* 1933: 286. 1933.

in Angola: massangu, milho painço

P. rupestre Chase

Peru. See *Contributions from the United States National Herbarium* 24(8): 484. 1927.

P. sagittatum Henrard

Bolivia, Ecuador, Peru. Herbaceous, perennial, erect, branched, sheaths hispid, leaf blades lanceolate acuminate sagittate, panicles cylindrical terminal and axillary, spikelets solitary lanceolate scabrous acute, lower glume ovate 1-nerved, upper glume 5-nerved, upper lemma 3- to 5-nerved perfect, rocky places, light shade, moist habitats, see *Blumea* Suppl. 1: 229, t. 16, f. 26. 1937.

P. schliebenii Pilger (*Pennisetum trisetum* Leek) (after the German (b. Saxony) botanist Hans-Joachim Eberhardt Schlieben, 1902-1975 (d. Essen, Germany), plant collector in Tanzania and Madagascar, photographer and writer; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 229. 1965; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 316. Cape Town 1981; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." in *Webbia*. 19: 861-863. 1965)

Tanzania, Abyssinia. Indeterminate species, see *Zeitschrift für Naturwissenschaften* 79: 30. 1907, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 804. 1933.

P. schweinfurthii Pilg. (for the German botanist Georg August Schweinfurth, 1836-1925, explorer, traveler, botanical collector in East and North Africa (tropical Africa and Arabia), ethnologist, among many other works he was the author of *Illustration de la flore d'Egypte*. Le Caire 1887, *Sur la flore des anciens jardins arabes d'Egypte*. Le Caire 1888, *The Heart of Africa*. London 1873, *Beitrag zur Flora Aethiopiens*. Berlin 1867 and *Novae species aethiopicae*. [Wien 1868]; see J.H. Barnhart, *Biographical notes upon*

botanists. 3: 249. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 357. 1972; Stafleu and Cowan, *Taxonomic literature*. 5: 430-437. 1985; G.E. Wickens, "Dr. G. Schweinfurth's journeys in the Sudan." *Kew Bulletin*. 27(1): 129-146. 1972; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." in *Webbia*. 19: 861-863. 1965; G.E. Wickens, "J.D.C. Pfund, a botanist in the Sudan with the Egyptian Military Expeditions, 1875-1876." *Kew Bulletin*. 24(1): 191-216. 1970; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 191-192. Paris 1882; A. White and B.L. Sloane, *The Stapelelieae*. Pasadena 1937)

Eastern Sudan, Ethiopia. Annual, stout, erect, leaf blades broadly rounded at base and acuminate, inflorescence linear, stout rachis woolly, 4 male spikelets surrounding one fertile spikelet of different shape, numerous short bristles, inner bristles shortly plumose, coriaceous male spikelets narrowly oblong and laterally compressed, fertile spikelets narrowly elliptic and dorsally compressed, lower glumes vestigial, closely related to *Pennisetum squamulatum*, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 121. 1901, *Current Science* 58: 869-871. 1989.

in English: annual pennisetum

P. secundiflorum (Fig. & De Not.) T. Durand & Schinz (*Eriochaeta secundiflora* Fig. & De Not.; *Pennisetum pedicellatum* Trin.)

Africa. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 184. 1834, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 375. 1854, *Conspectus Florae Africae* 5: 784. 1894.

P. setaceum (Forsskål) Chiov. (*Cenchrus asperifolius* Desf.; *Pennisetum alopecuroides* sensu Jessop, non (L.) Sprengel; *Pennisetum asperifolium* auct.; *Pennisetum asperifolium* (Desf.) Kunth, nom. suppl.; *Pennisetum atrosanguineum* hort.; *Pennisetum cupreum* A. Hitchc. ex L.H. Bail.; *Pennisetum erythraeum* Chiov.; *Pennisetum macrostachyon* Fresen.; *Pennisetum orientale* var. *altissimum* Chiov.; *Pennisetum phalaroides* (Forssk.) Schult.; *Pennisetum ruppelianum* hort. ex Mez; *Pennisetum ruppellii* Steud.; *Pennisetum ruppellii* Steud.; *Pennisetum scoparium* Chiov.; *Pennisetum spectabile* Fig. & De Not.; *Phalaris setacea* Forssk.)

Northeastern Africa. Perennial bunchgrass, sparsely branching or unbranched, erect, glaucous to bright green, stiff, slender, clumped or densely tufted, forming moderately large clumps, ligule a ciliate rim, long narrow leaf blades harsh and rigid, very scabrous leaves erect and narrow-elongate, inflorescence a plumose dense false spike, axis scabrous, spikelets shortly pedicellate subtended by numerous softly ciliate unequal bristles, involucre 2- to 4-spiculate, first glume shorter than the spikelet or suppressed or reduced to a hyaline scale, second glume lanceolate, first lemma sterile or rarely male, upper lemma bisexual or male, a prolific seed producer, a poor pasture grass, because of the hard fibrous leaves is not very palatable, little grazed, invasive and highly aggressive crowds out other herbs and seedlings, planted as an ornamental grass in parks and gardens, withstands long periods of drought, prefers well-drained ordinary garden soil, noxious weed species growing in disturbed sites and along highways, riparian canyons, damp habitats, wet ground, in dry bush and dry forest, dry open places, open stony hillsides, stony plains, eroded places, open scrubby habitats, pastures, waste places, cultivated areas, chaparrals, along roadsides, on rocky slopes and lava fields, grasslands, rocky hillsides, rocky shallow soil, see *Flora Aegyptiaco-Arabica* 17. 1775, *Mantissa* 2: 147. 1824, *Museum Senckenbergianum* 2: 135. 1837, *Memorie della Reale Accademia delle Scienze di Torino* II 12: 248. 1852, *Synopsis Plantarum Glumacearum* 1: 107. 1854, *Annuario del Reale Istituto Botanico di Roma* 7: 66. 1897 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 38-40, t. 3, 4. 1903, *Bollettino della Società Botanica Italiana* 1923: 113. 1923, *Pakistan J. Bot.* 14: 69-74. 1982, *F.T.E.A. Gramin.* 675. 1982, *Annali di Botanica* 45: 75-102. 1987, *Cytologia* 54: 641-652. 1989, *Journal of the Indian Botanical Society* 68: 295-299. 1989.

in English: African fountain grass, tender fountain grass, fountain grass, purple fountain grass, crimson fountain grass

in Spanish: yerba fuente

in Mexico: pasto fuerte

in Arabic: raetam

in East Africa: baldoli, arablal

in Ethiopia: alula

in Mali: avù

in Somalia: arap job

in South Africa: pronkgras

P. setaceum (Forsskål) Chiov. subsp. ***asperifolium*** (Desf.) Maire (*Cenchrus asperifolius* Desf.)

Africa. See *Flora Atlantica* 2: 388. 1800 and *Flore de l'Afrique du Nord* 1: 333. 1952.

P. setaceum (Forsskål) Chiov. subsp. ***orientale*** (Rich.) Maire (*Pennisetum orientale* Rich.)

Africa. See *Syn. Pl.* 1: 72. 1805 and *Flore de l'Afrique du Nord* 1: 333. 1952.

P. setaceum (Forsskål) Chiov. var. ***asperifolium*** (Desf.) Maire (*Cenchrus asperifolius* Desf.)

Africa. See *Flora Atlantica* 2: 388. 1800 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 31: 45. 1940.

P. setaceum (Forsskål) Chiov. var. ***orientale*** (Rich.) Maire (*Pennisetum orientale* Rich.)

Africa. See *Syn. Pl.* 1: 72. 1805 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 31: 45. 1940.

P. setaceum (Forsskål) Chiov. var. ***parisii*** (Trab.) Maire (*Pennisetum parisii* Trab.)

Africa. See *Flore de l'Algérie* 136. 1895 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 31: 45. 1940.

P. setosum (Sw.) Rich. (*Cenchrus setosus* Sw.; *Gymnothrix geniculata* Schult.; *Gymnotrix geniculata* Schult.; *Gymnotrix nervosa* Nees; *Panicum alopecuroideum* L.; *Panicum cenchroides* Lam., nom. illeg., non *Panicum cenchroides* Rich.; *Panicum cenchroides* Rich.; *Panicum erubescens* Willd.; *Panicum polystachion* L.; *Pennisetum alopecuroides* (L.) Spreng.; *Pennisetum alopecuroides* Desv. ex Ham., nom. illeg., non *Pennisetum alopecuroides* (L.) Spreng.; *Pennisetum erubescens* (Willd.) Desv. ex Ham.; *Pennisetum erubescens* (Willd.) Link, nom. illeg., non *Pennisetum erubescens* (Willd.) Desv. ex Ham.; *Pennisetum flavescens* J. Presl; *Pennisetum hamiltonii* Steud.; *Pennisetum hirsutum* Nees; *Pennisetum indicum* var. *purpurascens* (Kunth) Kuntze; *Pennisetum nervosum* (Nees) Trin.; *Pennisetum nicaraguense* E. Fourn.; *Pennisetum pallidum* Nees; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken; *Pennisetum purpurascens* Kunth; *Pennisetum richardii* Kunth; *Pennisetum sieberi* Kunth; *Pennisetum uniflorum* Kunth; *Setaria cenchroides* (Rich.) Roem. & Schult.; *Setaria erubescens* (Willd.) P. Beauv.)

Naturalized throughout tropics. Perennial, caespitose, erect and suberect, branched, growing in loose clumps, nodes and internodes glabrous, ligule a ciliate to villous membrane, linear leaves, hairy all over, red brown to purplish flowering heads spike-like and feathery, panicles tapering towards the apex, awned spikes, spikelets sessile and solitary, spikelets hidden by a tuft of bristles, lower glume minute or absent, upper lemma papery and shiny, lodicules absent, fodder, attractive, ornamental, weed species resistant to drought and poor soils, grows on roadside banks, dry regions, crop fields and wastelands, along roadsides, sown pastures, see *Systema Naturae, Editio Decima* 870. 1759, *Species Plantarum, Editio Secunda* 82. 1762, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792, *Tableau Encyclopédique et Méthodique ... Botanique* 4: 737. 1798, *Syn. Pl.* 1: 72. 1805, *Enumeratio Plantarum Horti Regii*

Berolinensis Altera 1031. 1809, *Essai d'une Nouvelle Agrostographie* 51, 169, 178. 1812, *Nova Genera et Species Plantarum* 1: 114, t. 34. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 495. 1817, *Mantissa* 2: 146, 284. 1824, *Prodromus Plantarum Indiae Occidentalis* 11. 1825, *Systema Vegetabilium, editio decima sexta* 1: 303. 1825, *Hortus Regius Botanicus Berolinensis* 1: 215. 1827, *Révision des Graminées* 1: 49-50. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 261, 277, 284-285. 1829, *Reliquiae Haenkeanae* 1(4-5): 316. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 177. 1834, *Nomenclator Botanicus. Editio secunda* 2: 297. 1841, *Flora Brasiliensis* 2(2): 306. 1877, *Bulletin de la Société Botanique de France* 27: 293. 1880, *Revisio Generum Plantarum* 2: 787. 1891 and *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Brittonia* 23(3): 293-324. 1971, *Botanical Journal of the Linnean Society* 79(1): 63. 1979, *Proceedings of the Indian Science Congress Association* 70(3-vi): 91. 1983, *Lilloa* 36(1): 105-129. 1983, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Las Gramíneas de México* 5: 1-466. 1999.

in English: fountain grass, feathery pennisetum

in Spanish: zacate cola de gato de bajillo

in Mexico: plumitas, zacate gusano café

in Thailand: yaa khachyon chop dok luang, ya kha chon chop dok lueang

P. setosum (Sw.) Rich. var. ***breve*** (Nees) Döll (*Pennisetum breve* Nees; *Pennisetum polystachion* (L.) Schult.)

South America. See *Systema Naturae, Editio Decima* 870. 1759, *Mantissa* 2: 146. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 261. 1829, *Flora Brasiliensis* 2(2): 306. 1877 and *Lilloa* 36(1): 105-129. 1983.

P. setosum (Sw.) Rich. var. ***laxiusculum*** Hack. (*Pennisetum nervosum* (Nees) Trin.)

South America. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 277. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 177. 1834 and *Mus. Farmacol. Fac. Cienc. Med., Buenos Aires* 21: 33. 1909, *Lilloa* 36(1): 105-129. 1983.

P. sichuanense S.L. Chen & Y.X. Jin

China. See *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1988-1989: 5. 1988-1989.

P. sichuanense S.L. Chen & Y.X. Jin var. ***equidistans*** B.S. Sun & X. Yang

China. See *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1988-1989: 5. 1988-1989, *Acta Botanica Yunnanica* 15(1): 33. 1993.

P. sieberi Kunth (*Pennisetum polystachion* (L.) Schult.; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken; *Pennisetum setosum* (Sw.) Rich.)

South America. See *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Systema Naturae, Editio Decima* 870. 1759, *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Syn. Pl.* 1: 72. 1805, *Mantissa* 2: 146. 1824, *Révision des Graminées* 1: 50. 1829 and *Botanical Journal of the Linnean Society* 79(1): 63. 1979.

P. sieberianum (Schltdl.) Stapf & C.E. Hubb. (*Penicillaria sieberiana* Schltdl.; *Penicillaria stenostachya* Klotzsch ex Müll. Berol.; *Pennisetum americanum* subsp. *stenostachyum* (Klotzsch ex A. Br. & Bouché) Brunken; *Pennisetum americanum* subsp. *stenostachyum* (Klotzsch ex Müll. Berol.) Brunken; *Pennisetum dalzielii* Stapf & C.E. Hubb.; *Pennisetum glaucum* subsp. *sieberianum* (Schltdl.) van der Zon, nom. illeg.; *Pennisetum glaucum* subsp. *sieberianum* (Schltdl.) Stapf & C.E. Hubb.)

Tropical Africa, Angola, Sudan. Annual, weedy grass highly variable, vigorous, inflorescence dense, rachis tomentose, deciduous stipitate involucre bristles, spikelets lanceolate to obovate, upper lemma lanceolate to ovate, a weed, cultivated, can be used as cane for building and thatch for roofs, material for shelter construction and fences, food for domestic animals, used grilled for food and forage, mostly dark seed heads drooping and usually resistant to shattering, grows on dry cultivated and uncultivated areas, recently abandoned fields, ponds and channels, irrigated gardens and wadi, along highways and roadsides, sandy soils and clay sand, semidesert grassland, hybridizes with *Pennisetum glaucum* and *Pennisetum violaceum*, see *Syn. Pl.* 1: 72. 1805, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Linnaea* 25(5): 565. 1853, *Index Seminum [Berlin]* app. 25. 1855 and *Zeitschrift für Naturwissenschaften* 79: 52. 1907, *Bulletin of Miscellaneous Information Kew* 1933: 270, 290. 1933, *American Journal of Botany* 64(2): 173. 1977.

in Africa: chibra, chibras, shibras, belgaga (Arabic, Lake Chad)

P. snowdenii C.E. Hubb. (*Gymnotrix cenchroides* Roem. & Schult.; *Panicum hordeiforme* (L.) Thunb.; *Pennisetum thunbergii* Kunth)

Tropical Africa, Uganda. See *Species Plantarum* 1: 55, 60. 1753, *Species Plantarum, Editio Secunda* 82. 1762, *Flora Japonica, ...* 46. 1784, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Systema Vegetabilium* 2: 499. 1817, *Systema Vegetabilium, editio decima sexta* 1: 302-303. 1825, *Révision des Graminées* 1: 50. 1829 and *Bulletin of Miscellaneous Information Kew* 1928(4): 133. 1928.

P. spectabile Fig. & De Not. (*Pennisetum setaceum* (Forssk.) Chiov.)

Africa. See *Flora Aegyptiaco-Arabica* 17. 1775, *Memorie della Reale Accademia delle Scienze di Torino* II 12: 248. 1852 and *Bollettino della Società Botanica Italiana* 1923:

113. 1923, *Pakistan J. Bot.* 14: 69-74. 1982, *F.T.E.A. Gramin.* 675. 1982, *Annali di Botanica* 45: 75-102. 1987, *Cytologia* 54: 641-652. 1989, *Journal of the Indian Botanical Society* 68: 295-299. 1989.

P. sphacelatum (Nees) T. Durand & Schinz (*Gymnotrix schimperi* (Hochst. ex A. Rich.) Walp.; *Gymnotrix sphacelata* Nees; *Panicum sphacelatum* Schumach.; *Pennisetum macrourum* Trin.; *Pennisetum macrourum* var. *angustifolium* Hack.; *Pennisetum merkeri* Leeke; *Pennisetum schimperi* Steud.; *Pennisetum schimperi* Steud. ex A. Rich.; *Pennisetum schimperi* Hochst. ex A. Rich.; *Pennisetum sphacelatum* (Schumach.) T. Durand & Schinz; *Pennisetum sphacelatum* var. *sphacelatum*; *Pennisetum sphacelatum* var. *tenuifolium* (Hack.) Stapf; *Pennisetum tenuifolium* Hack.; *Setaria sphacelata* (Schumach.) M.B. Moss ex Stapf & C.E. Hubb.)

East Africa to South Africa. Perennial, frequently submerged, wiry, coarse, densely tufted, densely tussocky, forming large clumps, shortly rhizomatous, culms usually hairy below the inflorescence or villous, ligule a ring of hairs, leaves filiform to linear becoming wiry with age, dense inflorescence spike-like, spikelets surrounded by numerous glabrous bristles, spikelets bristles fall with the grain, lower glume a nerveless scale, upper glume 1-nerved, lower lemma sterile 5-nerved, high leaf production, generally avoided by grazing animals, usually of low palatability or unpalatable, rather drought resistant, useful in the stabilization of water courses, found in wet places and drainage areas, upland grassland, in running water, along roadsides, overgrazed pastures, hard or compacted soil, stream beds and riverbanks, rocky places, rocky seepages, around vleis, moist soils, marshy soils, on deep heavy soils, hillsides, between rocks, along stream banks, see *De Graminibus Paniceis* 64. 1826, *Beskrivelse af Guineiske planter* 58-59. 1827, *Flora Africae Australioris Illustrationes Monographicae* 68. 1841, *Tentamen Florae Abyssinicae ... 2*: 381. 1850, *Annales Botanicae Systematicae* 3: 722. 1852-1853, *Conspectus Florae Africae* 5: 784. 1894, *Bulletin de l'Herbier Boissier* 3(8): 380. 1895, *Flora Capensis* 7: 436. 1899 and *Mémoires de l'Herbier Boissier* 20: 8. 1900, *Zeitschrift für Naturwissenschaften* 79: 27. 1907, *Flora of Tropical Africa* 9(5): 795-798. 1930, *International Organization of Plant Biosystematists Newsletter* 13: 20-21. 1989, *Flora of Ethiopia and Eritrea* vol. 7, p. 272. 1995.

in English: false bristle grass, pennisetum

in South Africa: bulgras

in Mexico: merkeron

P. squamulatum Fresen. (*Pennisetum pentastachyum* Hochst. ex A. Rich.; *Pennisetum pentastachyum* var. *violaceum* Avetta; *Pennisetum proximum* Leeke)

Tanzania, Kenya, Ethiopia. Perennial, variable, erect, green, robust, slender to stout, dense tussocky, very fibrous, leaf blades narrowed towards base, inflorescence linear, rachis

pubescent, involucre of 3-6 male spikelets surrounding a single terminal fertile spikelet, inner bristles plumose, male spikelets narrowly oblong laterally compressed, fertile spikelet narrowly elliptic dorsally compressed, grows on grassy slopes, stony slopes, on rocky ground in arid areas, roadsides, see *Museum Senckenbergianum* 2: 137. 1837, *Tentamen Florae Abyssinicae ... 2*: 387. 1850, *Annuario del Reale Istituto Botanico di Roma* 6: 64. 1895-96 and *Zeitschrift für Naturwissenschaften* 79: 23. 1907, *Cytologia* 54: 641-652. 1989.

P. stapfianum L. Bolus

South Africa. See *Annals of the Bolus Herbarium* 1: 108. 1915.

P. stenorrhachis (Mez) Stapf & C.E. Hubb. (*Pennisetum macrourum* Trin.; *Pennisetum tenue* Mez)

Africa. See *De Graminibus Paniceis* 64. 1826 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 53. 1917, *Bulletin of Miscellaneous Information Kew* 1933: 270. 1933.

P. stolzii Mez

Costa Rica, Africa, Malawi. Endangered species in Costa Rica, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 53. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 190. 1921.

P. stramineum Peter

Arabia, Yemen, Tanzania, Ethiopia, Kenya. Perennial, erect, wiry, slender, stout, hard, shrubby, much-branched, loosely tufted, stiff, woody, ligule a short membrane lacinate, leaves linear, short tough rhizome, silvery inflorescence slender and loose, stems and branches with terminal panicles, several scabrid bristles in each involucre, rachis narrow, spikelets lanceolate, lower glume ovate, lower lemma male acuminate-mucronate, valuable as pasture, grows in dry scattered-tree grassland, rocky areas, cliffs, grassland or bushed grassland, on tropical black-earth soils, abandoned cultivation, see *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* vol. 40, 1, Anh.: 71, f. 37. 1930.

P. subangustum (Schumach.) Stapf & C. E. Hubb. (*Panicum subangustum* Schumach.; *Pennisetum gracile* Benth.)

Ghana, Guinea, Senegal, Nigeria, Benin. Fodder grass, see *Systema Naturae, Editio Decima* 870. 1759, *Mantissa* 2: 146. 1824, *Beskrivelse af Guineiske planter* 59-60. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 79-80. 1828, *Niger Flora* 564. 1849 and *Bulletin of Miscellaneous Information Kew* 1933: 271. 1933, *Botanical Journal of Scotland* 79: 51-64. 1979.

in Sierra Leone: akepkaruni, anwo, fofole, fovo, fovui, gongo levu, gongo levu hina, gungu, haha, kale, kali, kalona, khalona, ngongo, sanwania musuma, sanwania musuma, sensenden, sensene kaima

P. tempisqueuse R.W. Pohl (Tempisque River, Costa Rica)

South America, Costa Rica. Indeterminate species, perennial, caespitose, erect, simple, nodes and internodes glabrous, ligule a ciliate membrane, terminal and solitary inflorescence, whitish spikes, spikelets sessile and acuminate, lower glume toothed, lower palea absent, upper lemma papery and membranous, 2 lodicules, see *Fieldiana, Botany* 38(2): 6, f. 2. 1976.

P. thulinii S.M. Phillips (named for the Swedish botanist Mats Thulin, b. 1948, Department of Systematic Botany, Evolutionary Biology Centre, Uppsala University, botanical collector in Somalia and Yemen, editor of *Flora of Somalia*. See *Kew Bull.* 50: 791. 1995; *Nordic J. Bot.* 20(6): 691. 2000 (2001); *Nordic J. Bot.* 21(3): 245, 249. 2001; *Nordic J. Bot.* 22(4): 420, 424, 429. 2003)

Ethiopia. Perennial, erect, delicate, densely tufted, wiry, leaf blades filiform convolute, inflorescence very slender, involucre of one sessile spikelet subtended by 2 scaberulous bristles, spikelets narrowly lanceolate, lower glume absent, upper glume a nerveless scale, lower lemma sterile, upper lemma scabrid mucronate, upper palea scabrid, stony and rocky places, rocky riverbanks, along riverbanks, similar to *Pennisetum uliginosum*, see *Kew Bulletin* 46(3): 535. 1991.

P. thunbergii Kunth (*Cenchrus geniculatus* Thunb.; *Gymnotrix glabra* Hochst.; *Panicum geniculatum* (Thunb.) Thunb. (1813), nom. illeg., non *Panicum geniculatum* Poir.; *Panicum geniculatum* (Thunb.) Thunb. (1823), nom. illeg., non *Panicum geniculatum* Poir.; *Pennisetum adoense* Steud.; *Pennisetum depauperatum* Schweinf.; *Pennisetum geniculatum* (Thunb.) E. Phillips, nom. illeg., non *Pennisetum geniculatum* (Poir.) Jacq.; *Pennisetum geniculatum* (Thunb.) Leeke, nom. illeg., non *Pennisetum geniculatum* (Poir.) Jacq.; *Pennisetum glabrum* Steud.; *Pennisetum glabrum* var. *filiformis* Chiov.; *Pennisetum leekei* Mez; *Pennisetum leekei* var. *leucostachys* Peter; *Pennisetum paucisetum* Peter; *Pennisetum schimperii* var. *glabrum* (Hochst.) T. Durand & Schinz; *Pennisetum schimperii* var. *pubiflora* A. Rich.; *Pennisetum snowdenii* C.E. Hubb.; *Pennisetum thunbergii* var. *galpinii* Stapf)

Tropical Africa, Yemen, Ethiopia to South Africa. Perennial, variable, densely caespitose or loosely tufted, soft, erect or geniculately ascending, tussock grass, rhizomatous and stoloniferous, ligule a fringe of hairs, linear inflorescence spike-like, spikelets narrowly lanceolate-oblong, spikelets surrounded by an involucre of numerous bristles, lower floret sterile, lower glume absent or reduced, upper glume truncate, lower lemma awned or mucronate, upper lemma apiculate to mucronate, anthers not penicillate at tip, a weed of cultivation, grazing value unknown, grazed by all stock, growing in wet and moist places, moist grassland, montane tussock grassland, damp sites, marshes, vleis, riverbanks, along roadsides, ponds and streams, old cultivations, short grass turf, open grassland, old pasture, cereal fields, lawns, see *Species Plantarum* 1: 55, 60. 1753, *Species Plantarum, Editio Secunda* 82. 1762, *Flora Japonica*, ... 46. 1784,

Essai d'une Nouvelle Agrostographie 59. 1812, *Flora Capensis* 1: 388. 1813, *Systema Vegetabilium* 2: 499. 1817, *Flora Capensis, Edidit et Praefatus est J.A. Schultes* [Joseph August Schultes, 1773-1831] 1: 103. 1823, *Systema Vegetabilium, editio decima sexta* 1: 302-303. 1825, *Révision des Graminées* 1: 50. 1829, *Flora* 24(Intell. Bd. 1, no. 2): 19. 1841, *Tentamen Florae Abyssinicae* ... 2: 381. 1850, *Synopsis Plantarum Glumacearum* 1: 104. 1854, *Bulletin de l'Herbier Boissier* 2(Append. 2): 26. 1894, *Conspectus Florae Africae* 5: 784. 1894, *Flora Capensis* 7: 437. 1899 and *Zeitschrift für Naturwissenschaften* 79: 43. 1907, *Annuario del Reale Istituto Botanico di Roma* 8(3): 322. 1908, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 52. 1917, *Bulletin of Miscellaneous Information Kew* 1928(4): 133. 1928, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 13(2): 46, 110. 1928, *Repertorium Specierum Novarum Regni Vegetabilis* 40: (Anhang 74). 1930, *An Introduction to the Study of the South African Grasses* ... 219. 1931, *Fl. Trop. East Africa, Gramineae* 3: 687. 1982.

in English: Thunberg's pennisetum

P. trachyphyllum Pilger

Tropical Africa, Uganda, Tanzania, Sudan. Perennial, leafy, decumbent, loosely ascending, scrambling, densely matting, tall, rooting at lower nodes, rather thick stems, often forming dense stands, black nodes glabrous, ligule a ciliate rim, leaf blades broadly linear, slender inflorescences terminal and also axillary, 1-2 subsessile spikelets surrounded by many scaberulous bristles, spikelets lanceolate-acuminate, upper glume 1- to 5-nerved acute to mucronate, lower lemma sterile 5- to 7-nerved acuminate to cuspidate, upper lemma tough and smooth, good fodder and grazing when young, large leaves readily eaten by cattle, grows in woodlands and moist locations, path sides, along stream banks, damp spaces, semishaded sites, evergreen forest glades, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 122. 1901.

P. triflorum Nees ex Steud. (*Pennisetum orientale* var. *triflorum* (Nees) Stapf; *Pennisetum orientale* var. *triflorum* (Nees ex Steud.) Stapf)

India, Himalaya. See *Synopsis Plantarum Glumacearum* 1: 107. 1854, *The Flora of British India* 7: 86. 1896.

P. trisetum Leeke (*Pennisetum schliebenii* Pilg.)

East Africa, Zimbabwe, Ethiopia. Perennial, stout, woody, smooth, lower leaf sheaths glabrous, leaf blades acuminate, ligule membranous ciliate, slender inflorescence axillary, one sessile spikelet subtended by one stout bristle, spikelets narrowly lanceolate, lower glume nerveless, lower lemma male or sterile, longest bristle exceeding spikelet, along roadsides, savannah, clearings, forest, disturbed areas, see *Zeitschrift für Naturwissenschaften* 79: 30. 1907, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 804. 1933.

P. tristachyum (Kunth) Spreng. (*Cenchrus tristachyus* (Kunth) Kuntze; *Gymnothrix tristachya* Döll; *Gymnotrix tristachya* Kunth; *Panicum longisetum* Poir.; *Panicum longisetum* Torr.; *Pennisetum tristachyon* (Kunth) Spreng.; *Pennisetum tristachyon* Spreng.; *Pennisetum tristachyum* subsp. *boliviense* Chase; *Pennisetum tristachyum* var. *jamesoni* Leeke; *Pennisetum tristachyum* var. *ruiziana* Leeke)

Mexico to Argentina, Bolivia, Ecuador. Perennial, erect, caespitose, shrubby, robust, branched, leaf blades linear-lanceolate, branched inflorescence, dense panicles cylindrical nodding, spikelets solitary lanceolate scabrous, lower glume 1-nerved obtuse to acute, upper glume 3- to 5-nerved acute, lower lemma acuminate staminate or sterile, upper lemma acute perfect, forage, riverbanks, along roadsides, see *Species Plantarum* 1: 55. 1753, *Species Plantarum* 2: 1049. 1753, *Essai d'une Nouvelle Agrostographie* 53, 59. 1812, *Nova Genera et Species Plantarum* 1: 113, t. 61. 1815 [1816], *Encyclopédie Méthodique. Botanique ... Supplément* 4: 275. 1816, *American Journal of Science* 4: 58. 1822, *Systema Vegetabilium, editio decima sexta* 1: 302. 1825, *Flora Brasiliensis* 2(2): 303, pl. 61. 1877, *Mexicanas Plantas* 2: 41, 48. 1886, *Revisio Generum Plantarum* 3(3): 347. 1898 and *Deutsche Gesellschaft für Kunst und Wissenschaft in Posen* 79: 33. 1907 [also *Zeitschrift für Naturwissenschaften*], *Contributions from the United States National Herbarium* 22(3): 136, f. 27. 1920, *Contributions from the United States National Herbarium* 24(8): 486. 1927.

in Ecuador: tundillo, tondillo

P. uliginosum Hack.

Ethiopia. Perennial, loosely tufted, slender, decumbent, rooting at the base, shortly stoloniferous, leaf blades linear smooth, loose slender inflorescences, membranous spikelets narrowly lanceolate, one sessile spikelet subtended by 1-2 bristles scabrid, glumes and lower lemma reduced to small scales, upper lemma scabrid mucronate, lower lemma 1-nerved mucronate, upper palea scabrid, grasslands, wet places, similar to *Pennisetum thunbergii*, see *Abhandlungen der Königl. Akademie der Wissenschaften in Berlin* 2: 123. 1891.

P. uniflorum Kunth (*Panicum polystachion* L.; *Pennisetum polystachion* (L.) Schult.; *Pennisetum polystachion* subsp. *setosum* (Sw.) Brunken)

Venezuela. See *Systema Naturae, Editio Decima* 870. 1759, *Nova Genera et Species Plantarum seu Prodrum* 26. 1788, *Syn. Pl.* 1: 72. 1805, *Nova Genera et Species Plantarum* 1: 114, t. 34. 1815 [1816], *Mantissa* 2: 146. 1824 and *Botanical Journal of the Linnean Society* 79(1): 63. 1979.

P. unisetum (Nees) Benth. (*Beckera dioica* Nees; *Beckera glabrescens* Steud.; *Beckera unisetata* (Nees) Nees ex Hochst.; *Beckera unisetata* (Nees) Steud., nom. illeg., non *Beckera unisetata* (Nees) Nees ex Hochst.; *Beckeropsis unisetata* (Nees) K. Schum.; *Beckeropsis unisetata* (Nees) Stapf

ex Robyns, nom. illeg., non *Beckeropsis unisetata* (Nees) K. Schum.; *Gymnotrix unisetata* Nees; *Pennisetum kirkii* Stapf)

Tropical and South Africa, Arabia, Yemen. Perennial, robust, erect, tufted, rhizomatous, scrambling, branched, hollow culms, ligule a line of hairs, leaves linear to lanceolate, lower leaves pseudopetiolate, rough leaf-edge, nodding compound panicles both terminal and axillary, spikelet with a single glabrous bristle, glumes subequal, lemma membranous acute, lower lemma sterile or barren, lower glume a scale, grain eaten as a cereal and used for the production of a beer, hay, grains and pith eaten by chimpanzees, fodder for cattle while still young, cultivated pasture, growing in red clay, disturbed sites, in areas of good rainfall, thickets, among shrubs, sandy soils, near water or above streams, damp gullies, in shady areas, shade or partial shade, field borders, deciduous bushland, wooded savannah, wooded grassland, similar to *Pennisetum procerum*, sometimes included in *Beckeropsis* Fig. & De Not., see *Flora Africae Australioris Illustrationes Monographicae* 66. 1841, *Linnaea* 16(2): 219. 1842, *Flora* 27: 512. 1844, *Synopsis Plantarum Glumacearum* 1: 117. 1854, *Journal of the Linnean Society, Botany* 19: 47, 49. 1881, *Die Pflanzenwelt Ost-Afrikas* 5(8): 52. 1895, *Bulletin of Miscellaneous Information Kew* 1897: 286. 1897 and *Bull. Jard. Bot. Bruxelles* 9: 199. 1932.

in English: Duncan grass, Natal grass, silky grass

in Malawi: mapyopyombo, chipyombo

in Nigeria: ali liya, aro ami ami, aro ani ani, fafewa, file, furo kogo, garangautsa, kara kauji, karan kauji, karan kausa, korkoro, kwarkwaroo, ufie, ukpafele

in Sierra Leone: fonfo folesekhe na, fonfonfole na, tenfeje, tonfojo

in southern Africa: sygras; nsipi (Zulu)

in Upper Volta: himikon

P. validum Mez (*Pennisetum macrourum* Trin.)

Tanzania. Indeterminate species, see *De Graminibus Panicis* 64. 1826 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 191. 1921.

P. verticillatum (L.) R. Br. (*Panicum verticillatum* L.; *Pennisetum verticillatum* (L.) R. Br. ex Sweet, nom. illeg., non *Pennisetum verticillatum* (L.) R. Br.; *Setaria verticillata* (L.) P. Beauv.)

Australia. See *Species Plantarum, Editio Secunda* 1: 82. 1762, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Hortus suburbanus Londinensis* 19. 1818 and *Illinois Biological Monographs* 29: 1-132. 1962, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 348-351, 418-429. 1969, *Taxon* 31(1): 71. 1982, *Blumea* 39: 373-384. 1994.

P. villosum R. Br. ex Fresen. (*Cenchrus longisetus* M.C. Johnston; *Cenchrus villosus* (R. Br. ex Fresen.) Kuntze, nom. illeg., non *Cenchrus villosus* (Spreng.) Spreng.; *Pen-*

nisetum longistylum Vilm., nom. illeg., non *Pennisetum longistylum* Hochst.; *Pennisetum villosum* R. Br.; *Pennisetum villosum* R. Br. var. *humile* Hochst. ex A. Rich.)

East Africa, Ethiopia, Yemen, Somalia. Perennial, low to semidecumbent, mat-forming, in dense large tussocks or scattered among other grasses, spreading, bright blue green, erect to ascending to loosely geniculately ascending, simple or branched from the lower nodes, densely tufted or loosely clumped, shortly rhizomatous with creeping rhizome, internodes and nodes glabrous, leaf sheaths compressed and keeled, ligule a densely ciliate rim, leaf-blades glabrous to villous, linear leaves flat or inrolled, glabrous or silky below the panicle, brown to purple to white cream plumose subspherical flower heads, bristles spreading and unequal, spikelets lanceolate and acute, first glume minute and obtuse or sometimes suppressed, upper glume lanceolate 1-nerved acuminate, lower floret staminate or sterile, upper lemma 5-nerved bisexual and membranous, lodicules absent or minute, reddish or orange anthers not penicillate at tip, fluffy seeds with light plumose bristles, drought-resistant, showy and ornamental, noxious weed species, cultivated and naturalized elsewhere, usually unpalatable to stock or useful for grazing, growing in gardens, open grassy places, deep soil, damp soil, banks around fields, damp sandy places, along irrigation channels, irrigated land, on clay soils, lawns, in disturbed areas, rocky hillsides, along railway lines and on roadsides, in forest, see *A Voyage to Abyssinia, and Travels into the ...* 62. 1814, *Museum Senckenbergianum* 2: 134. 1837, *Tentamen Florie Abyssinicae ...* 2: 387. 1850, *Revisio Generum Plantarum* 3(3): 347. 1898 and *Grasses of Ceylon* 154. 1956, *Grasses of Burma ...* 0351. 1960, *Sida* 01(3): 182. 1963, *Lilloa* 36(1): 105-129. 1983, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Cytologia* 54: 641-652. 1989, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995.

in English: feathertop, feather top, feathertop pennisetum, feather grass, feather top grass, long-styled feather grass, long style feather grass, white foxtail, foxtail, white fountain grass

in Mexico: zacate plumoso

in French: herbe aux écouvillons

in southern Africa: haarwurmgras

P. violaceum (Lam.) Rich. (*Panicum violaceum* Lam.; *Penicillaria fallax* Fig. & De Not.; *Pennisetum americanum* subsp. *monodii* 8Maire) Brunken, nom. illeg.; *Pennisetum chudeaui* Maire & Trab. subsp. *monodii* Maire; *Pennisetum fallax* (Fig. & De Not.) Stapf & C.E. Hubb.; *Pennisetum glaucum* subsp. *violaceum* (Lam.) van der Zon, nom. illeg.; *Pennisetum glaucum* subsp. *violaceum* (Lam.) A. Rich.; *Pennisetum mollissimum* Hochst.; *Pennisetum spicatum* var. *fallax* (Fig. & De Not.) T. Duranl & Schinz; *Pennisetum violaceum* (Lam.) Rich. ex Pers.; *Pennisetum violaceum* Trin., nom. illeg., non *Pennisetum violaceum* (Lam.) Rich.)

Saharan mountains, Sudan, Mali, Nigeria. Annual, slender to stout, leaf blades linear, dense inflorescence linear, deciduous sessile involucre bristles, spikelets lanculate, glumes reduced to scales or the lower suppressed, lower lemma sterile acuminate, upper lemma membranous 5-nerved, polymorphic weed, mature grains slender, progenitor of pearl millet, forage for arid and semiarid areas, harvested as a wild cereal in times of scarcity, disturbed places, sandy soils, resembles *Pennisetum fallax*, hybridized with (*Pennisetum glaucum*, see *Tableau Encyclopédique mt Méthodique ... Botanique* 1: 169. 1791, *Syn. Pl.* 1: 72. 1805, *De Graminibus Paniceis* 67. 1826, *Flora* 27: 253. 1844, *Memorie della Reale Accademia delle Scienze di Torino* ser. 2, 14: 371. 1854, *Handbuch des Getreidebaus* 1: 284. Bonn 1885, *Sonspectus Florae Africae* 5: 785. 1894 and *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 3: 523. 1931, *Bulletin of Miscellaneous Information Kmw* 1933: 270. 1933, *Flore Afrique Nord* 1: 337. 1952, *American Journal of Botany* 64(2): 170. 1977, *Cytologia* 54: 641-652. 1989, *Caryologia* 46: 127-138. 1993.

in Niger: éboënoewet, éboënoewt, tēboëmoëwet, yambama

P. violaceum (Lam.) Rich. var. ***chudeaui*** (Mairm & Trab.) Maire (*Pennisetum chudeaui* Maire & Trqb.) (for the French botanist René Chudeau, 1864-1921, explorer and botanical collector in Sudan and Mauritania, author of "D'Alger à Tombouctou par l'Ahaggar, l'Air et le Tchad." in *La Géographie*, t.xv, pp. [261]-270. 1907, *Sahara soudanais*. Paris 1909, *Rapport de mission en Mauritanie 1910-1911*. Supplément au J. O. de l'AOF, Rapports et Documents, 18 oct. 1913, no. 88. See A. Gruvel et R. Chudeau, *A travers la Mauritanie occidentale (de St-Louis à Port-Etienne)*. Paris, Larose, t. 2. 1911; E.F. Gautier, *Missions au Sahara* par E.-F. Gautier et R. Chudeau. Tome I, Sahara Algérien. Armand Colin, 1908; E. Ag Sidiyène, *Des arbres et des arbustes spontanés de l'Adrar des Ifoghas (Mali)*. Etude ethnolinguistique et ethnobotanique. CIRAD/ORSTOM, Paris 1996)

North Africa. See *Syn. Pl.* 1: 72. 1805 and *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 3: 523. 1931, *Flore Afrique Nord* 1: 337. 1952.

P. violaceum (Lam.) Rich. var. ***major*** Kunth

Africa. See *Syn. Pl.* 1: 72. 1805, *Révision des Graminées* 1: 49. 1829, *Enum. Pl.* 2: 116. 1835 and *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 3: 523. 1931, *Flore Afrique Nord* 1: 337. 1952.

P. violaceum (Lam.) Rich. var. ***monodianum*** Maire (for the French botanist M. Théodore Monod, 1902-2000, botanical collector in Senegal, Mali, Sahara, explorer, traveler, author of *Les déserts* Paris 1973 and *Méharées* Paris 1937, "Spectres et modes de dissémination dans l'Adrar mauritanien (Sahara occidental)." *Candollea* 29: 401-25. 1974. See Auguste Jean Baptiste Chevalier, *Flore vivante de l'Afrique*

Occidentale Française. Paris 1938; F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 57. 1971)

Africa. See *Syn. Pl.* 1: 72. 1805, *Révision des Graminées* 1: 49. 1829, *Enum. Pl.* 2: 116. 1835, *Conspectus Florae Africae* 5: 785. 1894 and *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 3: 523. 1931, *Flore de l'Afrique du Nord* 1: 337. 1952.

P. yemensis Deflers (*Pennisetum pappianum* Chiov.)

Yemen. Perennial, ascending, short woody rhizome, dense oblong purplish inflorescence, spikelets lanceolate, many slender bristles enclosing 1-2 spikelets, lower glume a nerveless scale, upper glume lanceolate 1-nerved acuminate, lower lemma male or sterile 7- to 9-nerved acuminate, upper lemma 5- to 7-nerved, stigma bifid, stream banks, similar to *Pennisetum orientale*, related to *Pennisetum villosum*, see *Voyage au Yemen* 217. 1889 and *Annali di Botanica* 2: 305. 1905.

P. weberbaueri Mez

Peru, Ecuador, Bolivia. Perennial, robust, branched, leaf blades linear acuminate, lax inflorescence much branched, loose panicles cylindrical, spikelets solitary lanceolate scabrous acute, lower glume ovate membranous, upper glume ovate membranous acute, lower lemma acute, upper lemma perfect, rocky places, moist areas, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 50. 1917.

Pentacraspedon Steudel = Amphipogon R.

Br.

Greek *pente* "five" and *kraspedon* "a fringe, border, hem."

Arundineae, see *Prodromus Florae Novae Hollandiae* 175. 1810, *London J. Bot.* 2: 415. 1843, Ernst Gottlieb von Steudel (1783-1856), *Synopsis plantarum glumacearum*. 1: 151. 1854 [1855] and *Contributions from the New South Wales National Herbarium* 1(5): 281-295. 1950.

Pentameris P. Beauv. = Pentamerista
Maguire (Theaceae), *Poagrostis* Stapf

From the Greek *pente* "five" and *meris* "part," referring to the five-awned lemma.

About 5-7 species, South Africa. Arundinoideae, Danthoniae, perennial, unarmed, woody or herbaceous, tufted, auricles present or absent, ligule a fringe of hairs, filiform leaves, plants bisexual, open or contracted inflorescence paniculate, spikelets solitary and pedicellate, median and lateral awns, 2 subequal glumes 1- to 3-nerved, lemma membranous with lobes well developed, palea hairy, 2 lodicules joined or free, 3 stamens, ovary hairy, 2 stigmas, fruit an achene, in open habitats, mountain grassland, species of *Pentameris* morphologically and anatomically very similar

to *Pentastichis* (Nees) Spach, type *Pentameris thuarii* P. Beauv., see *Flore Française. Troisième Édition* 3: 32. 1805, *Essai d'une Nouvelle Agrostographie* 92, t. 18, f. 8. 1812, *Botanical Register; consisting of coloured ...* sub. t. 112. 1816 and *Flora Capensis* 7: 760-761. 1900, *Memoirs of the New York Botanical Garden* 23: 187. 1972, N.P. Barker, "A biosystematic study of *Pentameris* (Arundineae, Poaceae)." *Bothalia* 23(1): 25-47. 1993, *Diversity & Distributions* 5(5): 213-222. Sep 1999, *New Phytologist* vol. 162, issue 1: 25-44. Apr 2004.

Species

P. distichophylla (Lehm.) Nees (*Danthonia distichophylla* Lehm.; *Pentameris dregeana* Stapf)

South Africa. Perennial, variable, decumbent, tufted, leaf sheaths pubescent, auricles absent, inflorescence a lanceolate panicle loosely contracted, spikelets 2-flowered, lemma lobes acute to acuminate, growing in sandy soils, along roadsides, see *Novarum et Minus Cognitarum Stirpium Pugillus* 3: 41. 1831, *Linnaea* 7(3): 314. 1832, *Flora Capensis* 7: 515. 1899 and *Bothalia* 23: 42. 1993.

P. longiglumis (Nees) Stapf (*Danthonia longiglumis* Nees)

South Africa. Perennial, rare, branched, erect, tufted, auricles absent, leaves rigid, lax inflorescence, spikelets 2-flowered, lemma lobes acuminate, lodicules glabrous, growing in moist places, rocky slopes, stony areas, see *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 306. 1841, *Flora Capensis* 7: 514. 1899.

P. longiglumis (Nees) Stapf subsp. *gymnocolea* N.P. Barker (from the Greek *gymnos* "naked, unclad" and *koleos* "a sheath")

South Africa. Perennial, erect, coarse, loosely tufted, see *Bothalia* 23(1): 39, f. 2C, 8, 9. 1993.

P. longiglumis (Nees) Stapf subsp. *longiglumis*

South Africa. Perennial, erect, see *Flora Capensis* 7: 514. 1899.

P. macrocalycina (Steud.) Schweick. (*Avena macrocalycina* Steud.; *Danthonia speciosa* Lehm. ex Nees; *Pentameris speciosa* (Lehm. ex Nees) Stapf)

South Africa. Perennial, erect, variable, tufted, branched, leaf sheaths appressed to the culm, auricles absent, leaves rigid and sometimes pungent, panicle contracted and lanceolate, spikelets 2-flowered, lemma lobes acuminate, lodicules glabrous, found in stony soils, sandy places, see *Species Plantarum* 1: 79. 1753, *Flora* 12(2): 482. 1829, *Florae Africae Australioris Illustrationes Monographicae* 307. 1841, *Flora Capensis* 7: 514-515. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 43: 91. 1938, *Bothalia* 23: 41. 1993.

P. obtusifolia (Hochst.) Schweick. (*Danthonia obtusifolia* Hochst.; *Pentameris squarrosa* Stapf)

South Africa. Perennial, branched, scrambler, decumbent, woody base, old leaf sheaths overlapping, auricles absent, leaves rigid and short, panicle contracted and lanceolate, spikelets 2-flowered, lodicules ciliate, growing in mountainous areas, see *Flora* 29: 120. 1846, *Flora Capensis* 7: 515-516. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 43: 91. 1938.

P. thuarii P. Beauv. (*Danthonia thouarsii* Nees; *Danthonia thuarii* (P. Beauv.) Desv.; *Pentameris thuarii* var. *burchellii* Stapf)

South Africa. Perennial, erect, tufted, single or branched, decumbent at base, auricles present usually dark to black, lax panicle, spikelets 2-flowered, lemma lobes truncate, lodicules glabrous, found along riverbanks, in damp habitats, see *Essai d'une Nouvelle Agrostographie* 92, t. 18, f. 8. 1812, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 203. 1831, *Florae Africae Australioris Illustrationes Monographicae* 337. 1841 and *Bothalia* 23(1): 36. 1993.

P. thuarii var. *burchellii* Stapf (dedicated to the British (b. Fulham, London) naturalist William John Burchell, 1781-1863 (d. Fulham, London), traveler (in South Africa 1811-1815, and Brazil 1825-1829), botanical collector, explorer, painter, writer, plants hunter, gardener, entomologist, ecologist, 1808 Fellow of the Linnean Society (1803, in Staffleu and Mennega, *Suppl. III*), author of *Travels in the Interior of Southern Africa*. London 1822-1824; see Samuel El. Bridel-Brideri, *Bryologia universa*. Lipsiae 1826-1827; Helen M. McKay, *Journal of South Africa Botany*. 1941 and *The Index to the Aboriginal, African and Dutch Names of the Plants of Southern Africa*, with reference to the *Plantarum Africae et extratropicae* by W.J. Burchell, compiled in the years from 1810 till 1815. Cape Town [1938]; Helen M. McKay, editor, *The South African Drawings of William J. Burchell*. Johannesburg 1952; Gilbert Westacott Reynolds, *The Aloes of South Africa*. Balkema, Rotterdam 1982; John Lindley, *The Genera and Species of Orchidaceous Plants*. London 1830-1840; J.H. Barnhart, *Biographical notes upon botanists*. 1: 282. 1965; John Hutchinson (1884-1972), *A Botanist in Southern Africa*. 625-641. London 1946; M. Gunn and L.E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 59. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 141-142. Oxford 1964; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. Oxford 1975; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Mia C. Karsten, *The Old Company's Garden at the Cape and Its Superintendents: Involving an Historical Account of Early Cape Botany*. Cape Town 1951;

Gordon Douglas Rowley, *A History of Succulent Plants*. 1997)

South Africa. Perennial, erect, caespitose, see *Flora Capensis* 7: 513. 1899.

P. thuarii var. *thuarii*

South Africa. See *Essai d'une Nouvelle Agrostographie* 92, t. 18, f. 8. 1812.

Pentapogon R. Br.

From the Greek *pente* "five" and *pogon* "a beard," referring to the lemmas, to five-awned lemmas; see Robert Brown (1773-1858), *Prodromus florae Novae Hollandiae et Insulae van-Diemen*. 173. London (Mar.) 1810.

A monotypic genus, southeastern Australia, Tasmania. Pooidae, Poodae, Aveneae, annual or short-lived perennial, variable, slender, erect, tufted, herbaceous, auricles present or absent, ligule membranous, leaf sheath rounded and membranous, leaves narrow and inrolled, plants bisexual, inflorescence an open dense panicle, spikelets narrow, 1 floret, 2 unequal to subequal glumes persistent and pointed, glumes membranous 1-nerved acuminate shortly awned, callus short and hairy to bearded, lemmas coriaceous rounded 5-awned, central awn with twisted column, palea 2-keeled, 2 free and membranous lodicules not toothed, 3 stamens, ovary glabrous, 2 stigmas, fruit small, ornamental, useful for soil erosion control, withstand grazing, moist soils, open woodland and lowland heaths, in grassland, see *Familles des Plantes* 2: 31, 530. 1763, *Prodromus Florae Novae Hollandiae* 173. 1810, *Synopsis Plantarum Glumacearum* 1: 193. 1854 and *Fl. Victoria* 2: 491. 1994, *World Checklist of Seed Plants* 3(1): 10. 1999.

Species

P. quadrifidus (Labill.) Baillon (*Agrostis quadrifida* Labill.; *Pentapogon billardieri* R. Br.; *Pentapogon billardieri* R. Br.)

Australia. Annual or short-lived perennial, loosely tufted, erect or bent, auricles absent, ligule not lobed, basal leaf sheaths keeled, leaf blade involute and stiff, leaves hairy to pilose, inflorescence a green and purple to brownish compact and narrow panicle, narrow spikelets 1-flowered, glumes keeled with margins membranous, incised lemma with twisted central awn, callus bearded, palea hyaline to membranous, anthers yellow or purple, fruit laterally compressed and longitudinally grooved, low forage value, shade species, in open habitats, moist places, in woodland, described as a segregate from *Calamagrostis* Adans. by Clayton & Renvoize, see *Species Plantarum* 1: 61, 78. 1753, *Novae Hollandiae Plantarum Specimen* 1: 20, t. 22. 1805, *Prodromus Florae Novae Hollandiae* 173. 1810, *Fragmenta Phytographiae Australiae* 8: 106. 1873, *Histoire des Plantes* 12: 280. 1893.

in English: five-awned spear-grass, five-awn spear grass

P. quadrifidus (Labill.) Baillon var. *parviflorus* (Benth.) D.I. Morris (*Pentapogon billardieri* R. Br. var. *parviflorus* Benth.)

Tasmania. Small flower heads, found in stream banks, see *Flora Australiensis: A Description ...* 7: 573. 1877 and *Muelleria* 72(2): 167. 1989.

P. quadrifidus (Labill.) Baillon var. *quadrifidus*

New South Wales, Victoria, Tasmania. Tufted grass, glumes subequal, growing in open woodland, dry sclerophyll forest, moist and shady situations, see *Histoire des Plantes* 12: 280. 1893.

Pentarrhaphis Kunth = *Bouteloua* Lag., *Polyschistis* J. Presl, *Strombodurus* Steud.

From the Greek *pente* “five” and *raphis* “a needle,” referring to the flowers, to a bunch of five bristles at the base of a single spikelet.

About 3 species, Mexico, Colombia. Chloridoideae, Cynodonteae, Boutelouinae, annual or perennial, herbaceous, unarmed, unbranched, caespitose, leaves mostly basal, auricles absent, ligule a fringe of hairs, plants bisexual, inflorescence a false spike, raceme rhachis a forked bristle with 2 spikelets, 1 spikelet reduced to 2 hirsute awnlike glumes, spikelets dorsally compressed 2-flowered, upper floret sterile or male, 2 glumes awned and dissimilar, lower glume hirsute bristle, upper glume lanceolate, lemmas 3-awned membranous or cartilaginous, central awn with 2 teeth, palea present, 2 free and fleshy lodicules, stamens 3, ovary glabrous, 2 white stigmas, open habitats, dry areas, savannah, gravelly soil, rocky outcrops, scrubland, type *Pentarrhaphis scabra* Kunth, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Nova Genera et Species Plantarum* 1: 177-178, t. 60. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 294, t. 41, f. 12. 1830, *Nomenclator Botanicus. Editio secunda* 2: 299. 1841, *Bulletin of the Torrey Botanical Club* 17: 229-230, 233, t. 107-108. 1890 and *Fieldiana, Botany, New Series* 4: 1-608. 1980, *Flora Novo-Galiciana* 14: 1-436. 1983, *Genera Graminum* 247-248. 1986, *Flora Mesoamericana* 6: 295. 1994, *Aliso [El Aliso]* 17: 99-130. 1998, *Las Gramíneas de México* 5: 1-466. 1999, *Aliso* 18: 61-65. Claremont, California 1999, *Contributions from the United States National Herbarium* 41: 20-33, 181, 191, 220. 2001.

Species

P. annua Swallen (*Bouteloua swallenii* Columbus)

Central America, Costa Rica, Guanacaste Region. Rare species, rocky places, bare soil, see *Ceiba* 4(5): 285-288. 1955, *Ceiba* 19(1): 1-118. 1975, *Cuscatlania* 1(6): 1-29. 1991, *Flora Mesoamericana* 6: 295. 1994, *Aliso* 18(1): 63. 1999.

P. polymorpha (E. Fourn.) Griffiths (*Atheropogon polymorphus* E. Fourn.; *Bouteloua erecta* (Vasey & Hack.) Columbus; *Bouteloua polymorpha* (E. Fourn.) Columbus; *Cathestecum erectum* Vasey & Hack.; *Pentarrhaphis fourneriana* Hack. & Scribn.)

Mexico. Both spikelets well developed, tussock forming, forage, rocky places, bare soil, see *Reliquiae Haenkeanae* 1(4-5): 294, t. 42. 1830, *Bulletin of the Torrey Botanical Club* 11: 37, pl. 45. 1884, *Mexicanas Plantas* 2: 141. 1886, *Bulletin of the Torrey Botanical Club* 17: 229, t. 107-108. 1890 and *Contributions from the United States National Herbarium* 14(3): 357, f. 21. 1912, *Phytologia* 37(4): 317-407. 1977, *Aliso* 18(1): 63. 1999.

P. scabra Kunth (*Bouteloua diversispicula* Columbus; *Bouteloua scabra* (Kunth) Columbus; *Cathestecum brevifolium* Swallen; *Pentarrhaphis paupercula* (J. Presl) Hack. & Scribn.; *Polyschistis paupercula* J. Presl)

Mexico. Perennial, erect, open areas, dry places, rocky sites, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134. 1805, *Nova Genera et Species Plantarum* 1: 178, t. 60. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 294, t. 41, f. 12. 1830, *Bulletin of the Torrey Botanical Club* 17: 233. 1890 and *Journal of the Washington Academy of Sciences* 27(12): 500. 1937, *Taxon* 33: 126-134. 1984, *Aliso* 18(1): 63-64. 1999.

Pentaschistis (Nees) Spach = *Achneria* Benth., *Achneria* Munro ex Benth., *Afrachneria* Sprague, *Poagrostis* Stapf

From the Greek *pente* “five” and *schistos* “cut,” *schizo*, *schizein* “to divide,” referring to the cleft lemmas, the lemma has five divisions; Édouard Spach (1801-1879), *Histoire naturelle des Végétaux*. 13: 164. Paris (June) 1841.

About 65-70 species, Africa and Madagascar, South Africa, Mediterranean region. Arundinoideae, Arundineae, or Danthonioideae, Danthonieae, perennial or annual, herbaceous, unarmed, slender, caespitose, xerophytic or mesophytic, branched or not, usually with unusual multicellular glands on the leaves and inflorescence branches, shoots more or less aromatic, no auricles, ligule a fringe of hairs, leaves narrow harsh, leaf blades linear to lanceolate or filiform, plants bisexual, inflorescence loosely paniculate and the branches often with glands, open panicle contracted or spiciform, spikelets with 2 or rarely 3 fertile sessile flowers, 2 glumes more or less hyaline and acute 1- to 5-nerved, lemmas membranous 5- to 11-nerved and 2-lobed with a slender bent and twisted awn, palea 2-keeled, callus short and bearded, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas white, small caryopsis longitudinally grooved, weed species, native pasture, common in open habitats, rainforests, mountainous areas, taxonomically a difficult genus, species variable and intergrading, some

awnless species sometimes in *Afrachneria*, type *Pentaschistis curvifolia* (Schr.) Stapf, see *Species Plantarum* 1: 63, 79. 1753, *Species Plantarum* 2: 1045, 1047. 1753, *Flore Française. Troisième Édition* 3: 32. 1805, *Prodromus Florae Novae Hollandiae* 185. 1810, *Essai d'une Nouvelle Agrostographie* 72, 146. 1812, *Histoire naturelle des Végétaux* 13: 164. Paris 1841, C.G.D. Nees von Esenbeck (1776-1858), *Florae Africae Australioris Illustrationes Monographicae ... I. Gramineae. Glogaviae* 1841, *Genera Plantarum* 3(2): 1158, 1163. 1883 and *Journal of Botany, British and Foreign* 60: 138. 1922, H.P. Linder et R.P. Ellis, "A revision of *Pentaschistis* (Arundinoideae: Poaceae)." *Contributions from the Bolus Herbarium* 12: 1-124. 1990, *Wageningen Agricultural University Papers* 92-1(2): 1-557. 1992, H. Du Plessis and J.J. Spies, "Chromosome numbers in the genus *Pentaschistis* (Poaceae, Danthonieae)." *Taxon* 41: 709-720. 1992, M. Lazarides, "The genus *Eriachne* (Eriachneae, Poaceae)." *Australian Systematic Botany* 8(3): 355-452. 1995, *Flora of Ethiopia and Eritrea* 7: 70-73. 1995, K.C. Klopper, J.J. Spies & B. Visser, "Cytogenetic studies in the genus *Pentaschistis* (Poaceae: Arundinoideae)." *Bothalia* 28(2): 231-238. 1998, J.H.J. Vlok and R.I. Yeaton, "The effect of overstorey proteas on plant species richness in South African mountain fynbos." *Diversity & Distributions* 5(5): 213-222. Sep 1999.

Species

P. acinosa Stapf

South Africa. Perennial, erect, tufted to loosely tufted, without glands, leaves spreading, lemmas awned, see *Florae Africae Australioris Illustrationes Monographicae* 310. 1841, *Flora Capensis* 7: 495-496. 1899.

P. airoides (Nees) Stapf (*Danthonia airoides* (Nees) Nees; *Pentameris airoides* (Nees) (resembles *Aira* L.)

South Africa, Mediterranean. Annual, slender, tufted, delicate, small or dwarf, leaves narrow and villous or pilose, inflorescence an open panicle of pedicellate spikelets, glumes acute and awnless, lemma glabrous, central awn, callus hairy, widespread weed of granite rocks, veld and heavily grazed veld, woodlands, shrublands and disturbed sites, along roadsides, pasture, this plant is often confused with *Aira* sp., see *Sem. Hort. Bot. Vratisl.* 1834, *Florae Africae Australioris Illustrationes Monographicae* 284. 1841, *Flora Capensis* 7: 511-512. 1899 and *Bothalia* 18: 111-114. 1988, *Contributions from the Bolus Herbarium* 12: 47-48. 1990, *Bothalia* 28(2): 231-238. 1998.

in English: false hair-grass

P. airoides (Nees) Stapf subsp. *airoides* (*Pentaschistis patula* (Nees) Stapf var. *glabrata* Stapf)

South Africa. Annual, sometimes or rarely with glands, lemmas awned, see *Flora Capensis* 7: 511-512. 1899.

P. airoides (Nees) Stapf subsp. *jugorum* (Stapf) Linder (*Pentaschistis jugorum* Stapf)

South Africa. Annual or biennial, tufted, with glands, lemmas awned, grows on shallow soils, alpine, high mountains, see *Flora Capensis* 7: 504-505. 1899 and *Contributions from the Bolus Herbarium* 12: 47-48. 1990.

P. alticola Linder

South Africa. Biennial, delicate, weak, without glands, lemmas awned, on rocky slopes, mountains, see *Contributions from the Bolus Herbarium* 12: 79, f. 10. 1990.

P. ampla (Nees) McClean (*Achneria ampla* (Nees) T. Durand & Schinz; *Afrachneria ampla* (Nees) Adamson; *Eriachne ampla* Nees; *Eriachne pallida* Nees)

South Africa. Perennial, woody base, tufted, weak, without glands, lemmas blunt, see *Prodromus Florae Novae Hollandiae* 183. 1810, *Florae Africae Australioris Illustrationes Monographicae* 275, 277. 1841, *Conspectus Florae Africae* 5: 836. 1894 and *South African Journal of Science* 23: 282. 1926, *Journal of South African Botany* 5: 53. 1939.

P. angustifolia (Nees) Stapf (*Danthonia angustifolia* Nees)

South Africa. Perennial, erect, decumbent, caespitose, open inflorescences, along roadsides, see *Florae Africae Australioris Illustrationes Monographicae* 302, 309. 1841, *Flora Capensis* 7: 502-503. 1899 and *Bothalia* 18: 119-122. 1988.

in South Africa: spinnekopgras

P. argentea Stapf

South Africa. Perennial, without stalked glands, tufted, underground swollen base, sometimes stoloniferous, lemmas awned, on dry sites, mountain slopes, see *Flora Capensis* 7: 487-488. 1899 and *Contr. Bolus Herb.* 12: 68. 1990, *Taxon* 41: 709-720. 1992.

P. aristidoides Stapf (*Avena aristidoides* Thunb.)

South Africa. Perennial, rhizomatous with stout and creeping rhizomes, lemmas awned, found on rocky slopes, see *Prodromus Plantarum Capensium, ...* 22. 1794, *Flora Capensis* 7: 485-486. 1899 and *Bothalia* 28(2): 231-238. 1998.

P. aristifolia Schweick.

South Africa. Annual, without glands, lemmas awned, see *Repertorium Specierum Novarum Regni Vegetabilis* 43: 89-90. 1938, *Bothalia* 18: 111-114, 119-122. 1988.

P. aspera (Thunb.) Stapf (*Andropogon asper* (Thunb.) Kunth; *Avena muricata* Spreng.; *Holcus asper* Thunb.; *Sorghum asper* (Thunb.) Roem. & Schult.)

South Africa. Perennial, erect, branched, decumbent, leaves glandular and sticky, lemmas awned, stinking, found on stony slopes, see *Species Plantarum* 2: 1045, 1047. 1753, *Methodus Plantas Horti Botanici ...* 207. 1794, *Prodromus Plantarum Capensium, ...* 20. 1794, *Systema Vegetabilium* 2: 839. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 1: 247. 1820, *Révision des Graminées* 1: 166. 1829, *Flora Capensis* 7: 500-501. 1899.

P. aurea (Steud.) McClean (*Achneria aurea* (Steud.) T. Durand & Schinz; *Afrachneria aurea* (Steud.) Adamson; *Aira aurea* Steud.; *Airopsis aurea* (Steud.) Nees; *Eriachne aurea* (Steud.) Nees)

South Africa. Perennial, tufted, see *J. Bot. (Desvaux)* 1: 200. 1809, *Flora* 12: 470. 1829, *Linnaea* 7(3): 317. 1832, *Florae Africae Australioris Illustrationes Monographicae* 1: 276. 1841, *Conspectus Florae Africae* 5: 836. 1894 and *South African Journal of Science* 23: 282. 1926, *Journal of South African Botany* 5: 53. 1939.

P. aurea (Steud.) McClean subsp. *aurea*

South Africa. Perennial, tufted, compact, glabrous, with glands, lemmas blunt, found in marshy areas, see *Taxon* 41: 709-720. 1992.

P. aurea (Steud.) McClean subsp. *pilosogluma* (McClellan) Linder (*Pentaschistis pilosogluma* McClellan)

South Africa. Perennial, tufted, villous, with glands, ligule a fringe of hairs, inflorescence an open panicle, lemmas muticous, forming tussocks, ornamental, grazing value unknown, growing along streams and rivers, slopes, mountainous areas, see *South African Journal of Science* 23: 282. 1926, *Contributions from the Bolus Herbarium* 12: 76. 1990.

P. barbata (Nees) H.P. Linder (*Danthonia barbata* Nees; *Danthonia barbata* Petrie ex J.C. Sm., nom. illeg., non *Danthonia barbata* Nees; *Danthonia scabra* var. *glomerata* Nees; *Pentaschistis leucopogon* Stapf)

South Africa. Perennial, loosely tufted, sandy places, see *Florae Africae Australioris Illustrationes Monographicae* 287, 301. 1841, *Flora Capensis* 7: 500. 1899 and *Transactions and Proceedings of the New Zealand Institute* 43: 250, 253. 1911, *Contributions from the Bolus Herbarium* 12: 30. 1990.

P. barbata (Nees) H.P. Linder subsp. *barbata* (*Pentaschistis leucopogon* Stapf)

South Africa. Perennial, loosely tufted, with glands, basal sheaths white, lemmas awned, growing in disturbed areas, coastal sands.

P. barbata (Nees) H.P. Linder subsp. *orientalis* H.P. Linder

South Africa, Cape Province. Indeterminate species, perennial, tufted, with glands, lemmas awned, on coastal dunes, see *Contributions from the Bolus Herbarium* 12: 31. 1990.

P. basutorum Stapf (see E. Casalis, *Les Bassoutos*. Paris 1859; Hugh Ashton, *The Basuto*. London 1952 and [Second edition, with a supplementary bibliography] 1957; Sir Godfrey Yeatman Lagden, *The Basutos: The Mountaineers and Their Country*. London 1909)

South Africa, Lesotho. Perennial, tufted, without glands, hard leaves, lemmas awned, see *Bulletin of Miscellaneous Information Kew* 1: 20. 1914.

P. borussica (K. Schum.) Pilg. (*Danthonia borussica* K. Schum.)

South Africa, Tanzania. Perennial, erect, decumbent at the bases, caespitose, shortly rhizomatous, leaf blades narrowly linear pilose and scabrid, basal leaf sheaths papery, inflorescence loose and open of large long-awned spikelets gray, panicle elliptic to ovate, branches of panicle glandular, glumes glandular lanceolate-oblong acute, lemma 9-nerved bifid bristly, long anthers, native pasture species, along stream banks, shade or partial shade, upland grassland, open habitats, see *Die Pflanzenwelt Ost-Afrikas* 5(C): 109. 1895 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 517. 1926, *Bulletin of Miscellaneous Information Kew* 1930: 121. 1930, *Feddes Repertorium* 45: 7. 1938.

P. calcicola H.P. Linder

South Africa, Cape Province. Perennial, tufted, tussocks, without glands, see *Contributions from the Bolus Herbarium* 12: 81, f. 12. 1990.

P. calcicola H.P. Linder var. *calcicola*

South Africa, Cape Province. Perennial, tufted, without glands, lemmas awned, growing in limestone.

P. calcicola H.P. Linder var. *hirsuta* H.P. Linder

South Africa, Cape Province. Indeterminate species, perennial, tufted, without glands, lemmas awned, found in limestone, see *Contributions from the Bolus Herbarium* 12: 83. 1990.

P. capensis (Nees) Stapf (*Triraphis capensis* Nees)

South Africa. Perennial, without glands, lemmas with spreading awns, growing in water, rocky streams, see *Florae Africae Australioris Illustrationes Monographicae* 271. 1841, *Flora Capensis* 7: 494. 1899.

P. capillaris (Thunb.) McClellan (*Achneria capillaris* (Thunb.) Stapf, nom. illeg., non *Achneria capillaris* (R. Br.) P. Beauv.; *Andropogon capillaris* (Thunb.) Kunth; *Holcus capillaris* Thunb.; *Sorghum capillaris* (Thunb.) Roem. & Schult.)

South Africa. Annual, with glands, lemmas blunt or muticous, found in coastal sands, see *Prodromus Plantarum Capensium*, ... 20. 1794, *Systema Vegetabilium* 2: 840. 1817, *Révision des Graminées* 1: 166. 1829, *Hooker's Icones Plantarum* 27(1): t. 2604, 1-2. 1899 and *South African Journal of Science* 23: 281. 1926, *Bothalia* 18: 119-122. 1988, *Taxon* 41: 709-720. 1992, *Bothalia* 28(2): 231-238. 1998.

P. caulescens Linder

South Africa. Perennial, loosely tufted to tangles, no glands, lemmas awned, on dry stony slopes, see *Contributions from the Bolus Herbarium* 12: 99, f. 17. 1990.

P. chippindalliae Linder

South Africa, Transvaal. Perennial, tufted, no glands, open inflorescence, lemmas awned, see *Contributions from the Bolus Herbarium* 12: 92, f. 15. 1990.

P. chrysurus (K. Schum.) Peter (*Danthonia chrysurus* K. Schum.)

Tanzania. Robust, awns with a very short and untwisted column, mountains, see *Die Pflanzenwelt Ost-Afrikas* 5(C): 110. 1895 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 303. 1931.

P. cirrhulosa (Nees) Linder (*Danthonia cirrhulosa* Nees; *Pentaschistis angustifolia* (Nees) Stapf var. *cirrhulosa* (Nees) Stapf; *Pentaschistis burchellii* Stapf; *Pentaschistis patuliflora* Rendle)

South Africa. Perennial, erect, tufted, purplish, glands present, inflorescence compact, lemmas awned, open areas, sandy soils, see *Journal of Botany, British and Foreign* 37(441): 381. 1899 and *Bothalia* 18: 119-122. 1988, *Contributions from the Bolus Herbarium* 12: 42. 1990, *Bothalia* 28(2): 231-238. 1998.

P. colorata (Steud.) Stapf (*Avena colorata* Steud.; *Danthonia colorata* (Steud.) Steud.; *Pentaschistis colorata* var. *polytricha* Stapf)

South Africa. Perennial, erect, tufted, no glands, lemmas awned, on stony slopes, see *Flora* 12: 481. 1829, *Synopsis Plantarum Glumacearum* 1: 241. 1854, *Flora Capensis* 7: 491. 1899 and *Bothalia* 28(2): 231-238. 1998.

P. colorata (Steud.) Stapf var. *polytricha* Stapf

South Africa. See *Flora Capensis* 7: 491. 1899.

P. curvifolia (Schrader) Stapf (*Danthonia curvifolia* Schrad.)

South Africa. Perennial, tufted, erect, culm bases decumbent, glands absent, old leaves curled, dense contracted panicle, geniculate peduncle, glumes ivory or cream, lemmas awned, dark awns, usually on sandy soil, among shrubs, along roadsides, sometimes confused with *Pentaschistis pallida* (Thunb.) Linder, see *Mantissa* 2: 386. 1824, *Flora Capensis* 7: 491-492. 1899 and *Taxon* 41: 709-720. 1992, *Bothalia* 28(2): 231-238. 1998.

in English: tassel grass

in South Africa: kwasgras

P. densifolia (Nees) Stapf (*Danthonia densifolia* Nees; *Pentaschistis densifolia* var. *intricata* Stapf)

South Africa. Perennial, delicate, soft, glands present, lemmas awned, forming clumps, see *Florae Africae Australioris Illustrationes Monographicae* 291. 1841, *Flora Capensis* 7: 506-507. 1899 and *Bothalia* 28(2): 231-238. 1998.

P. dolichochoeta S.M. Phillips

Ethiopia. Perennial, eglandular, robust, erect, leaf blades tough, panicle elliptic loosely contracted much branched

many-spiculate, branches of panicles not glandular, glumes linear-lanceolate acuminate, lemmas 7-nerved 2-toothed, long anthers, forest, upland forest, related to *Pentaschistis chrysurus* (K. Schum.) Peter and similar to *Pentaschistis borussica*, see *Kew Bulletin* 50(3): 615, f. 1. 1995.

P. ecklonii (Nees) McClean (*Achneria ecklonii* (Nees) T. Durand & Schinz; *Afrachneria ecklonii* (Nees) Adamson; *Eriachne assimilis* Steud.; *Eriachne ecklonii* Nees; *Pentaschistis bachmannii* McClean)

South Africa, Cape Province. Indeterminate species, perennial, tufted, glands present, spike-like inflorescence, lemmas blunt, see *Florae Africae Australioris Illustrationes Monographicae* 1: 273. 1841, *Synopsis Plantarum Glumacearum* 1: 236. 1854, *Conspectus Florae Africae* 5: 836. 1894 and *South African Journal of Science* 23: 282. 1926, *Journal of South African Botany* 5: 53. 1939, *Contributions from the Bolus Herbarium* 12: 52. 1990.

P. elegans (Nees) Stapf (*Danthonia elegans* Nees)

South Africa, Cape Province. Rare species, perennial, tufted, glands absent, lemmas villous to pilose, growing in sand, costal sand, coastal flats, see *Florae Africae Australioris Illustrationes Monographicae* 296. 1841, *Flora Capensis* 7: 496. 1899.

P. eriostoma (Nees) Stapf (*Danthonia eriostoma* Nees; *Pentaschistis juncifolia* Stapf)

South Africa. Perennial bunchgrass, erect, tufted to densely tufted, tussocky, without glands, basal leaf sheaths woolly, lemmas awned, see *Florae Africae Australioris Illustrationes Monographicae* 304. 1841, *Flora Capensis* 7: 489-490. 1899 and *Bothalia* 18: 111-114. 1988, *Contributions from the Bolus Herbarium* 12: 106, 107. 1990, *Taxon* 41: 709-720. 1992, *Bothalia* 28(2): 231-238. 1998.

P. exserta Linder

South Africa. Perennial, tufted, no glands, lemmas awned, along streams, in seeps, see *Contributions from the Bolus Herbarium* 12: 92. 1990.

P. galpinii (Stapf) McClean (*Achneria galpinii* Stapf)

South Africa. Tussock grass, perennial, sometimes stoloniferous, mat-forming, leaves basal and very short, glands present, leaf blade wiry and curly, ligule a ring of short hairs, reduced and contracted inflorescence gray-purple, spikelets glumes persistent, lemmas more or less awned, unknown grazing value, montane habitats, shallow soil, open areas, alpine grassland, damp places, see *Bulletin of Miscellaneous Information Kew* 1910: 59. 1910, *South African Journal of Science* 23: 282. 1926.

P. glandulosa (Schrader) Linder (*Danthonia glandulosa* Schrad.; *Pentaschistis angustifolia* var. *micrathera* (Nees) Stapf; *Pentaschistis glandulosa* (Schrader) Drège ex Stapf)

South Africa. Perennial, tufted, glands present, lemmas awned, see *Mantissa* 2: 385. 1824, *Flora Capensis* 7: 502.

1899 and *Contributions from the Bolus Herbarium* 12: 60. 1990.

P. heptamera (Nees) Stapf (*Danthonia heptamera* Nees)

South Africa. Perennial, often single, no glands, lemmas awned, found in costal sands, see *Florae Africae Australioris Illustrationes Monographicae* 309. 1841, *Flora Capensis* 7: 504. 1899.

P. holciformis (Nees) Linder (*Danthonia holciformis* Nees)

South Africa. Perennial, tufted, no glands, lemmas awned, see *Florae Africae Australioris Illustrationes Monographicae* 326. 1841 and *Contributions from the Bolus Herbarium* 12: 91. 1990.

P. juncifolia Stapf

South Africa. See *Flora Capensis* 7: 490. 1899 and *Contributions from the Bolus Herbarium* 12: 107. 1990.

P. lima (Nees) Stapf (*Danthonia lima* Nees)

South Africa, Cape Province. Rare species, perennial, montane, tufted, with glands, lemmas awned, see *Florae Africae Australioris Illustrationes Monographicae* 312. 1841, *Flora Capensis* 7: 496-497. 1899 and *Bothalia* 28(2): 231-238. 1998.

P. longipes Stapf

South Africa. Perennial, glands present, lemmas awned, found in sand, coastal sand, see *Flora Capensis* 7: 509. 1899.

P. malouinensis (Steud.) Clayton (*Achneria capensis* (Steud.) T. Durand & Schinz; *Afrachneria capensis* (Steud.) Adamson; *Airopsis steudelii* Nees; *Eriachne capensis* Steud.; *Eriachne malouinensis* Steud.; *Eriachne steudelii* (Nees) Nees; *Pentaschistis steudelii* (Nees) McClean)

South Africa. Perennial, tufted, glands absent, lemmas muticous, often found in disturbed sites, see *Flora* 12: 470. 1829, *Linnaea* 7(3): 318. 1832, *Florae Africae Australioris Illustrationes Monographicae* 278. 1841, *Synopsis Plantarum Glumacearum* 1: 236. 1854, *Conspectus Florae Africae* 5: 836. 1894 and *South African Journal of Science* 23: 281. 1926, *Journal of South African Botany* 5: 53. 1939, *Kew Bulletin* 23: 294. 1969, *Bothalia* 18: 111-114. 1988.

P. microphylla (Nees) McClean (*Achneria microphylla* (Nees) T. Durand & Schinz; *Eriachne microphylla* Nees)

South Africa. Perennial, glands present, leaves stiff, lemmas muticous, in montane grassland, dry areas, arid sites, see *Florae Africae Australioris Illustrationes Monographicae* 1: 277. 1841, *Conspectus Florae Africae* 5: 836. 1894 and *South African Journal of Science* 23: 282. 1926.

P. montana Linder

South Africa. Perennial, tufted, mat-forming, glands absent, leaves mostly basal, lemmas awned, found in arid areas, mountains, see *Contributions from the Bolus Herbarium* 12: 83, f. 13. 1990.

P. natalensis Stapf (*Pentaschistis perrieri* A. Camus)

Tanzania, Malawi, Madagascar, South Africa. Perennial, glands present, loosely to densely tufted, tussock grass, glume keeled, lemmas awned, on rocky stream bank, riverbanks, in sour grassland, see *Flora Capensis* 7: 493-494. 1899 and *Bulletin de la Société Botanique de France* 70: 691. 1928, *Taxon* 41: 709-720. 1992.

in Tanzania: kishengeve

P. oreodoxa Schweick.

South Africa. Perennial, tufted, cushion-like habit, stalked glands present, ligule a fringe of hairs, inflorescence an open panicle, lemmas awned, unknown grazing value, in sour grassland, slopes, in mountain sourveld, see *Repertorium Specierum Novarum Regni Vegetabilis* 43: 90-91. 1938.

P. pallescens (Schrad.) Stapf (*Danthonia pallescens* Schrad.; *Pentameris pallescens* (Schrad.) Nees)

South Africa. Perennial, erect, tufted, usually without glands, lemmas awned, yellow anthers, see *Mantissa* 2: 386. 1824, *Linnaea* 7(3): 312. 1832, *Flora Capensis* 7: 486-487. 1899.

P. pallida (Thunb.) Linder (*Avena pallida* Thunb.; *Danthonia angustifolia* Nees; *Danthonia pallida* (Thunb.) Roem. & Schult., nom. illeg., non *Danthonia pallida* R. Br.; *Pentaschistis angustifolia* (Nees) Stapf; *Pentaschistis angustifolia* var. *albescens* Stapf; *Pentaschistis filiformis* (Nees) Stapf; *Pentaschistis heterochaeta* Stapf; *Pentaschistis imperfecta* Stapf)

South Africa. Annual or perennial, glandular, strongly aromatic, tufted or loosely caespitose, decumbent to geniculate culm bases, rare, with glands on most parts of the plant, dense panicle with numerous spikelets, lemmas awned, weed, growing in disturbed areas, fynbos [The word *fynbos* comes from the Dutch for fine-leaved plants; *fynbos* is the major vegetation type of the small botanical region known as the Cape Floral Kingdom; *fynbos* plants are readily recognized by the sclerophyllous (hard, tough and leathery leaved) and microphyllous (small-leaved) nature of almost all woody plants and is characterized by having more than 5% cover of Cape reeds], in dry roadside ditch, along roadsides, dunes, on sand, see *Prodromus Plantarum Capensium*, ... 22. 1794, *Systema Vegetabilium* 2: 657. 1817, *Florae Africae Australioris Illustrationes Monographicae* 302. 1841, *Flora Capensis* 7: 502-503. 1899 and *Bothalia* 18: 119-122. 1988, *Contributions from the Bolus Herbarium* 12: 36. 1990, *Taxon* 41: 709-720. 1992, *Bothalia* 28(2): 231-238. 1998.

in English: false hair grass

P. papillosa (Steud.) Linder (*Avena papillosa* Steud.; *Danthonia scabra* Nees; *Pentaschistis subulifolia* Stapf; *Pentaschistis zeyheri* Stapf)

South Africa. Perennial, spreading, glandular, lemmas awned, see *Flora* 12: 434. 1829, *Florae Africae Australioris Illustrationes Monographicae* 287. 1841, *Flora Capensis* 7: 497, 499-500. 1899 and *Contributions from the Bolus Herbarium* 12: 32. 1990, *Taxon* 41: 709-720. 1992.

P. patula (Nees) Stapf (*Danthonia patula* Nees; *Pentaschistis euadenia* Stapf; *Pentaschistis patula* var. *acuta* Stapf)

South Africa. Annual, glands present, lemmas awned, found in sandy soils, see *Florae Africae Australioris Illustrationes Monographicae* 285. 1841, *Flora Capensis* 7: 510. 1899.

P. patula (Nees) Stapf var. ***glabrata*** Stapf

South Africa. See *Flora Capensis* 7: 510. 1899 and *Contr. Bolus Herb.* 12: 47. 1990.

P. patuliflora Rendle

South Africa. See *Journal of Botany, British and Foreign* 37(441): 381. 1899 and *Bothalia* 18: 119-122. 1988, *Contributions from the Bolus Herbarium* 12: 42. 1990, *Bothalia* 28(2): 231-238. 1998.

P. pictigluma (Steud.) Pilger (*Aira pictigluma* Steud.; *Danthonia anthoxanthiformis* Hochst.; *Danthonia anthoxanthiformis* var. *uberior* (Hochst.) Engl.; *Danthonia depressa* Hochst.; *Danthonia nana* Engl.; *Danthonia trisetoides* var. *schimperii* Engl.; *Danthonia uberior* Hochst.; *Pentaschistis borussica* var. *minor* Ballard & C.E. Hubb.; *Pentaschistis gracilis* S.M. Phillips; *Pentaschistis imatongensis* C.E. Hubb.; *Pentaschistis mannii* Stapf ex C.E. Hubb.; *Pentaschistis minor* (Ballard & C.E. Hubb.) Ballard & C.E. Hubb.; *Pentaschistis trisetoides* var. *schimperii* (Engl.) Pilg.)

East Africa, Ethiopia, Yemen. Perennial, usually glandular at the base of the panicle, densely tufted, erect or ascending, basal leaf sheaths papery, leaves narrowly linear, ligule a ring of hairs, inflorescence a linear spike-like to contracted panicle, spikelets narrowly lanceolate 2-flowered, glumes acute to acuminate, lemmas pubescent with 2 bristle-tipped lobes, awn bent about the middle, among rocks, open habitats, montane grassland, damp soil, see *Synopsis Plantarum Glumacearum* 1: 221, 244. 1854, *Flora* 38: 275-276, 279. 1855, *Abhandlungen der Preussischen Akademie der Wissenschaften. Physikalisch-mathematische Klasse* 2: 131. 1891, *Über die Hochgebirgsflora des tropischen Afrika* 130. 1892 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 516-517. 1926, *Bulletin of Miscellaneous Information Kew* 1930: 121. 1930, *Bulletin of Miscellaneous Information Kew* 1936: 501. 1936, *Flora of Tropical Africa* 10: 132. 1937, *Kew Bull.* 1939: 646. 1940, *Kew Bulletin* 26: 41-44. 1971, *Fl. W. Trop. Afr.* 3: 374. 1972, *Kew Bulletin* 41: 1028. 1986, *Opera Botanica* 121: 159-172. 1993.

P. pictigluma (Steud.) Pilger var. ***gracilis*** (S.M. Phillips) S.M. Phillips (*Pentaschistis gracilis* S.M. Phillips)

Ethiopia. Glandular or eglandular, leaf blades flat and pilose, gray or silvery panicles, upland grassland, fields

margins, moist places, light shade, see *Proceedings of the XIIIth Plenary Meeting of AETFAT, Zomba, Malawi, 1-11 April, 1991* 1: 372. 1994.

P. pictigluma (Steud.) Pilger var. ***mannii*** (Stapf ex C.E. Hubb.) S.M. Phillips (*Pentaschistis borussica* var. *minor* Ballard & C.E. Hubb.; *Pentaschistis mannii* Stapf ex C.E. Hubb.; *Pentaschistis pictigluma* var. *minor* (Ballard & C.E. Hubb.) S.M. Phillips)

Ethiopia. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 517. 1926, *Bulletin of Miscellaneous Information Kew* 1930: 121. 1930, *Kew Bulletin* 1936: 501. 1936, *Proceedings of the XIIIth Plenary Meeting of AETFAT, Zomba, Malawi, 1-11 April, 1991* 1: 371. 1994.

P. pictigluma (Steud.) Pilger var. ***minor*** (Ballard & C.E. Hubb.) S.M. Phillips (*Pentaschistis borussica* var. *minor* Ballard & C.E. Hubb.)

Tanzania. Leaf blades inrolled, gray panicles, leaf blades and panicle eglandular, dry stony mountains, see *Bulletin of Miscellaneous Information Kew* 1930: 121. 1930, *Proceedings of the XIIIth Plenary Meeting of AETFAT, Zomba, Malawi, 1-11 April, 1991* 1: 371. 1994.

P. pictigluma (Steud.) Pilger var. ***pictigluma***

Ethiopia. Leaf blades and panicle more or less glandular or not, golden-brown panicles.

P. praecox Linder

South Africa. Perennial, tufted, no glands, glumes acute to acuminate, lemmas awned, see *Contributions from the Bolus Herbarium* 12: 95. 1990.

P. pseudopallescens Linder

South Africa. Perennial, short-lived, weak, tufted, leaves villous, glands present or absent, lemmas awned, along streams, see *Contributions from the Bolus Herbarium* 12: 72, f. 9. 1990.

P. pungens Linder

South Africa. Annual or biennial, no glands, lemmas awned, see *Contributions from the Bolus Herbarium* 12: 97, f. 16. 1990.

P. pusilla (Nees) Linder (*Colpodium pusillum* Nees; *Poa-grostis pusilla* (Nees) Stapf)

South Africa. Perennial, green, delicate, soft, no glands, lemmas blunt or muticous, in moist habitats, along streams, see *Fundamenta Agrostographiae* 119, t. 7. 1820, *Florae Africae Australioris Illustrationes Monographicae* 149. 1841 and *Flora Capensis* 7: 760-761. 1900, *Contributions from the Bolus Herbarium* 12: 89. 1990.

P. pyrophila Linder

South Africa. Perennial, tufted, leaves pointed and pungent, glands absent, lemmas awned, found on stony slopes, see *Contributions from the Bolus Herbarium* 12: 81, f. 11. 1990.

P. reflexa Linder

South Africa. Annual or biennial, tufted, with glands, lemmas unawned, see *Contributions from the Bolus Herbarium* 12: 53, f. 7. 1990.

P. rigidissima Pilger ex H.P. Linder

South Africa. Perennial, leaves pungent and rigid, glands lacking, slender greenish inflorescences, lemmas awned, found in arid habitats, see *Contributions from the Bolus Herbarium* 12: 85, f. 14. 1990, *Bothalia* 28(2): 231-238. 1998.

P. rosea Linder

South Africa. See *Contributions from the Bolus Herbarium* 12: 70. 1990.

P. rosea Linder subsp. ***purpurascens*** Linder

South Africa. Biennial, often geniculate, glands present or absent, purplish inflorescences, lemmas awned, on sandy soils, stony slopes, see *Contributions from the Bolus Herbarium* 12: 72. 1990.

P. rosea Linder subsp. ***rosea***

South Africa. Biennial, tufted, linear leaves, glands usually present, lemmas awned, found on deep sandy soil.

in South Africa: rooigras

P. rupestris (Nees) Stapf (*Danthonia rupestris* Nees)

South Africa. Perennial, tufted, glandular on the pedicels, open inflorescences, lemmas awned, see *Florae Africae Australioris Illustrationes Monographicae* 300. 1841, *Flora Capensis* 7: 498-499. 1899 and *Bothalia* 18: 119-122. 1988, *Bothalia* 28(2): 231-238. 1998.

P. scandens Linder

South Africa. Perennial, spreading, scandent, rhizomatous, no glands, lemmas awned, found in sandy soils, coastal sands, see *Contributions from the Bolus Herbarium* 12: 101, f. 18. 1990.

P. setifolia (Thunb.) McClean (*Achneria setifolia* (Thunb.) Stapf; *Achneria tuberculata* (Nees) T. Durand & Schinz; *Andropogon setifolius* (Thunb.) Kunth; *Eriachne tuberculata* Nees; *Holcus setifolius* Thunb.)

South Africa. Perennial, tufted, glandular, ligule a ring of short and long hairs, leaves curly becoming wiry with age, inflorescence a wide-open panicle, lemmas dark, palatable, growing in sour grasslands, in rock crevices, undisturbed places, see *Flora Capensis* 1: 413. 1813, *Révision des Graminées* 1: 166. 1829, *Florae Africae Australioris Illustrationes Monographicae* 1: 274. 1841, *Conspectus Florae Africae* 5: 836. 1894, *Flora Capensis* 7: 461-462. 1899 and *South African Journal of Science* 23: 282. 1926.

in South Africa: letswiri

P. thunbergii (Kunth) Stapf (*Danthonia thunbergii* Kunth)

South Africa. Perennial, tufted, narrow leaves bearded, golden-brown panicle dense and ovate, spikelets numerous,

lemma hairy or villous on the nerves, central awn, a rare weed species of disturbed areas, along riverbanks, dry hills, see *Révision des Graminées* 1: 107. 1829, *Flora Capensis* 7: 507-508. 1899.

in English: pussy tail, dune grass

in South Africa: duinegras

P. thunbergii (Kunth) Stapf var. ***brevifolia*** Stapf

South Africa. See *Flora Capensis* 7: 508. 1899 and *Contr. Bolus Herb.* 12: 38. 1990.

P. thunbergii (Kunth) Stapf var. ***bulbothrix*** Stapf

South Africa. See *Flora Capensis* 7: 508. 1899 and *Contr. Bolus Herb.* 12: 38. 1990.

P. thunbergii (Kunth) Stapf var. ***ebarbata*** Stapf

South Africa. See *Flora Capensis* 7: 508. 1899 and *Contr. Bolus Herb.* 12: 38. 1990.

P. tomentella Stapf (*Pentaschistis brachyanthera* Stapf)

South Africa. Perennial, tufted, leaves glandular, compact inflorescence, lemmas awned.

P. tortuosa (Trin.) Stapf (*Danthonia tortuosa* Trin.; *Pentameris tortuosa* (Trin.) Nees; *Pentaschistis nutans* (Nees) Stapf)

South Africa, Cape. Perennial, tufted, tussock, glands absent, slender and nodding inflorescences, lemmas awned, common in damp places, foothills, mountains, see *Essai d'une Nouvelle Agrostographie* 92, t. 18, f. 8. 1812, *Species Graminum* 1: t. 68. 1827, *Linnaea* 7(3): 311. 1832, *Flora Capensis* 7: 488. 1899 and *Contr. Bolus Herb.* 12: 78. 1990, *Taxon* 41: 709-720. 1992.

P. trisetata Stapf (*Avena trisetata* Thunb.)

South Africa. Annual, glandular, sticky, lemmas awned, found usually on sandy soils, sand dunes, see *Prodromus Plantarum Capensium*, ... 22. 1794, *Flora Capensis* 7: 495. 1899 and *Taxon* 41: 709-720. 1992, *Bothalia* 28(2): 231-238. 1998.

in English: dune grass

in South Africa: duinegras, haasgras

P. trisetoides (Hochst. ex Steud.) Pilg. (*Danthonia segetalis* Hochst.; *Danthonia trisetoides* Hochst. ex Steud.; *Danthonia trisetoides* var. *tenuis* Engl.; *Pentaschistis segetalis* (Hochst.) Pilg.)

Ethiopia. Annual, ascending, slender, tufted, leaf blades shortly linear, panicle open or loosely contracted, branches and pedicels glandular, spikelets narrowly lanceolate to oblong, glumes lanceolate acuminate, lemmas elliptic-oblong bristly, a weed of cultivation, grassland, upland, damp soils, resembles *Pentaschistis borussica*, see *Synopsis Plantarum Glumacearum* 1: 244. 1854, *Flora* 38: 276. 1855, *Über die Hochgebirgsflora des tropischen Afrika* 131. 1892 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 516, 518. 1926.

P. tysonii Stapf (*Pentastachya fibrosa* Stapf) (the Jamaica-born South African botanist William Tyson, 1851-1920 (Grahamstown, South Africa), c. 1874 to South Africa, plant collector and tutor, a school teacher, in 1896 a Fellow of the Linnean Society, collected marine algae; see E.P. Phillips, "A brief historical sketch of the development of botanical science in South Africa and the contribution of South Africa to botany." *S. Afr. J. Sc.* 27: 53. 1930; A.W. Bayer, *S. Afr. J. Sc.* 67: 407. 1971; I.H. Vegter, *Index Herbariorum*. Part II (7), *Collectors T-Z*. Regnum Vegetabile vol. 117. 1988; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. A.A. Balkema, Cape Town 1981; *Mem. New York Bot. Gard.* 19: 104. 1969)

South Africa. Perennial, tufted, glands absent, lemmas awned, montane habitats, mountain slopes, rocky places, sour grassland, see *Flora Capensis* 7: 492-493. 1899.

P. velutina Linder

South Africa. Perennial, tufted, villous, swollen at the base, glands usually present, lemmas awned, montane habitat, see *Contributions from the Bolus Herbarium* 12: 66, f. 8. 1990.

P. veneta Linder

South Africa. Perennial, tufted, hairy, with glands, lemmas awned, often confused with *Pentastachya rupestris* (Nees) Stapf, see *Contributions from the Bolus Herbarium* 12: 29. 1990.

P. viscidula (Nees) Stapf (*Danthonia viscidula* Nees)

South Africa. Perennial, compact and swollen at the base, villous, glands usually present, lemmas awned, veld, see *Florae Africae Australioris Illustrationes Monographicae* 303. 1841, *Flora Capensis* 7: 486. 1899 and *Contr. Bolus Herb.* 12: 68. 1990, *Bothalia* 28(2): 231-238. 1998.

Pentastachya Steud. = *Pennisetum* Rich.

From the Greek *pente* "five" and *stachys* "spike."

Panicoideae, Paniceae, Cenchrinae, see *Synopsis Plantarum* 1: 72. 1805, *Enumeratio Plantarum Horti Botanici Bero-linensis*, ... 1036-1037. 1809, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Nomenclator Botanicus. Editio secunda* 2: 299. 1841, *Flora* 25(Beibl. 2): 2. 1842, *Tentamen Florae Abyssinicae* ... 2: 387. 1850, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 374-375. 1854, *Flora Brasiliensis* 2(2): 305, 308. 1877 and *Contr. U.S. Natl. Herb.* 22: 210-211. 1921, *Flora of Tropical Africa* 9: 956-957, 962, 966. 1934, *Amer. J. Bot.* 64: 161-176. 1977, *Econ. Bot.* 31: 163-174. 1977, *Flora Mesoamericana* 6: 371-374. 1994, *Contributions from the United States National Herbarium* 46: 527-536. 2003.

Pentatherum Náb. = *Agrostis* L.

From the Greek *pente* "five" and *ather* "stalk, barb, awn."

Pooideae, Poeae, Agrostidinae, type *Pentatherum olympicum* (Boiss.) Náb., see *Species Plantarum* 1: 61-63. 1753 and *Fl. Fenn.* 5: 29. 1971, *Novosti Sist. Vyss. Rast.* 8: 59. 1971, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89, 478. 2003.

Pereilema J. Presl = *Lycurus* Kunth

From the Greek *eilema* "a veil, covering, involucre," *eilo* "to be shut, to assemble."

About 3-4 species, tropical and subtropical America, Mexico to Brazil. Chloridoideae, Cynodonteae, Muhlenbergiinae, annual, erect or decumbent, slender, mainly branched at base, often rooting at the lower nodes, sheaths ciliate, ligule membranous, blade auricles ciliate and falcate, leaf blades linear, inflorescence a spiciform or contracted panicle exerted or partially included in upper sheath, clusters of fertile spikelets and several bristles, fertile spikelets subtended by sterile bristle-like spikelets, sterile florets reduced to bristles, glumes ovate subequal or unequal, second glume 1-awned, lemma lanceolate nerved and awned, long apical awn, palea hairy, lodicules truncate, 2-3 stamens, stigmas 2, savannah, disturbed slopes, weedy places, moist sites, seasonally wet areas, hillsides, type *Pereilema crinitum* J. Presl, see *Genera Plantarum* 44. 1789, *Nova Genera et Species Plantarum* 1: 141-142, pl. 45. 1815 [1816], *Reliquiae Haenkeanae* 1: 207-356. 1830, *Enumeratio Plantarum* 1833 and *U.S.D.A. Bull.* 772: 139. 1920, *Contr. U.S. Natl. Herb.* 22: 210. 1921, *Contributions from the United States National Herbarium* 24: 291-556. 1927, *Nat. Pflanz.* 2 ed, 14: 1-168. 1956, *Novon* 2: 81-110. 1992, *Flora Mesoamericana* 6: 286-287. 1994, *American Journal of Botany* 81: 622-629. 1994, *Grasses: Systematics and Evolution* 195-212. 2000, *Flora of Ecuador* 68: 90-92. 2001, *Contributions from the United States National Herbarium* 41: 138-139, 181-182. 2001.

Species

P. beyrichianum (Kunth) Hitchc. (*Muhlenbergia beyrichianum* Kunth; *Pereilema brasilianum* Trin.)

Colombia to Brazil. Annual, slender, stilt-roots from the lower nodes, sheaths scabrid, ligule erose, auricles ciliate, leaf blades linear attenuate, narrow panicle, dense clusters of 2-4 spikelets and 10-15 bristles, glumes equal 2-dentate and membranous, lemma lanceolate membranous, lemma awns straight and rigid, two stamens, rocky slopes, road-banks, see *Syn. Pl.* 1: 72. 1805, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 200. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 382. 1841 and *Contributions from the United States*

National Herbarium 24(8): 385. 1927, *Brittonia* 23(3): 293-324. 1971.

P. ciliatum Fourn. ex Hemsl. (*Pereilema ciliatum* E. Fourn. ex Hemsl.; *Pereilema ciliatum* var. *violaceum* E. Fourn.; *Pereilema setarioides* E. Fourn.)

Mexico. Bristles plumose, see *Biologia Centrali-Americana*; ... *Botany* ... 3: 543. 1885, *Mexicanas Plantas* 2: 93. 1886.

P. crinitum J. Presl (*Pereilema crinitum* var. *cirratum* E. Fourn.; *Pereilema crinitum* var. *crinitum*; *Pereilema setarioides* E. Fourn.)

Mexico to Brazil. Annual, erect, slender, glabrous, mainly branched from the base, stilt-roots from the lower nodes, sheaths slightly furrowed and inflated, falcate auricles not ciliate, ligule membranous, leaf blades linear acuminate, panicle narrow and compact, glumes equal, lemma lanceolate membranous, lemma awns flexuous and soft, 3 stamens, stony places, rocky slopes, lava, along roadsides, see *Reliquiae Haenkeanae* 1(4-5): 233, t. 37, f. a-f. 1830, *Mexicanas Plantas* 2: 93. 1886 and *Brittonia* 23(3): 293-324. 1971, *Taxon* 33: 126-134. 1984.

P. diandrum R.W. Pohl

Costa Rica. Riverbanks, along roadsides, rocky sites, see *Novon* 2(2): 102. 1992.

Periballia Trin. = *Molineria* Colla
(Amaryllidaceae), *Molineria* Parl.,
Molineriella Rouy

From the Greek *periballo* "throw round, put on, put round," possibly in reference to the dispersion of the seeds; see Carl Bernhard von Trinius (1778-1844), *Fundamenta Agrostographiae*. 133. Viennae 1820.

Possibly monotypic or about 2-4 species, Mediterranean. Pooideae, Poodae, Aveneae, annual, solitary or tufted, glabrous, herbaceous, slender, nodes glabrous, auricles present or absent, ligule membranous and fringed or unfringed, leaves flat and linear, plants bisexual, open inflorescence paniculate, spikelets ovoid, 2 florets, 2 keeled glumes persistent and membranous usually shorter than floret, lemmas awnless truncate, 3- to 7-nerved membranous, callus very short and bearded, palea nerved and membranous, 2 lodicules free and membranous, 3 stamens, ovary glabrous, two stigmas, fruit small and longitudinally grooved, each species with different chromosome numbers, sometimes included in and referred to *Deschampsia* P. Beauv., growing in dry sandy places and open habitats, see *Exposition des Familles Naturelles* 1: 134. 1805, *Fundamenta Agrostographiae* 133-134. 1820, *Memorie della Reale Accademia delle Scienze di Torino* 31(Hortus Ripul. App. 2): 331. 1826, *Flora italiana, ossia descrizione delle piante* ... 1: 236.

1850 and *Flore de France* 14: 102. 1913, *Fitologija* 39: 72-77. 1991.

Species

P. involucrata (Cav.) Jonka

Europe, Spain. Panicle lower branches sterile, see *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990.

P. laevis (Brot.) Asch. & Graebn.

Europe.

P. minuta (L.) Asch. & Graebner (*Aira minuta* L.; *Airopsis minuta* (L.) E. Desv.; *Molineria minuta* (L.) Parl.; *Molineriella minuta* (L.) Rouy)

Mediterranean. Annual, small, loosely tufted, green, erect, slender, ribbed, unbranched, internodes hollow, vestigial auricles, sheath tightly encircling culm, ligule membranous and acute, short linear leaves, pale gray to purple panicles loose and small with spreading branches, chasmogamous spikelets ovoid and shining, florets separated by a short internode, glumes acute and shorter than the lemmas, lemmas lanceolate and denticulate, callus hairy, palea toothed and not keeled, ovary glabrous and oblong, fruit longitudinally grooved or deeply furrowed, weed of disturbed woodland or pasture, moist shallow soils, dry habitats, open habitats, woodland, sometimes placed in the genera *Molineriella* Rouy or *Molineria* Parl., see *Species Plantarum* 1: 64. 1753, *Journal de Botanique, rédigé par une société de botanistes* (Desvaux) 1: 200-201. 1808, *Flora italiana, ossia descrizione delle piante* ... 1: 236-237. 1850, *Synopsis der mitteleuropäischen Flora* 2: 298. 1899 and *Flore de France* 14: 102. 1913.

in English: hairgrass, small hairgrass

in French: petite molinie des sable

in Morocco: sibouss

P. minuta (L.) Asch. & Graebner var. *lanata* Maire

Mediterranean, Morocco. See *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 94. 1942.

Peridictyon Seberg, Frederiksen & Baden

Greek *peri* "around" and *diktyon* "a net."

One species, Balkan Peninsula, Greece, Bulgaria. Pooideae, Triticodae, Triticeae, perennial, densely or loosely tufted, unbranched, auricles present, old basal sheaths fibrous, ligule an unfringed membrane, plants bisexual, inflorescence a single spike, spikelets solitary and sessile, 2 glumes subequal and awned, palea present, 2 ciliate lodicules, 3 stamens, ovary hairy, stony ground, slopes, rocky areas, type *Peridictyon sanctum* (Janka) Seberg, Fred. & Baden, see *Species Plantarum* 1: 73. 1753, *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770, *Essai d'une Nouvelle Agrostographie* 100, 15, pl. 19,

f. 35. 1812 and O. Seberg, S. Frederiksen, C. Baden and I. Linde-Laursen, “*Peridictyon*, a new genus from the Balkan Peninsula, and its relationship with *Festucopsis* (Poaceae).” *Willdenowia* 21(1-2): 87-104. 1991.

Species

P. sanctum (Janka) Seberg, Fred. & Baden (*Agropyron sanctum* (Janka) Hack. ex Formánek; *Brachypodium sanctum* (Janka) Janka; *Festuca sancta* Janka; *Festucopsis sancta* (Janka) Melderis; *Triticum sanctum* (Janka) F. Herm.)

Balkan Peninsula. Perennial, caespitose, see *Österreichische Botanische Zeitschrift* 21: 250. 1871, *Österreichische Botanische Zeitschrift* 22: 181. 1872, *Verhandlungen des Naturforschenden Vereins in Brünn* 35: 157. 1897 and *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 42. 1936, *Journal of the Linnean Society, Botany* 76: 319. 1978, *Willdenowia* 19: 99. 1990, *Willdenowia* 21(1-2): 96. 1991, *Systematic Botany* 21(2): 3-15. 1996.

Perlaria Fabr. = *Aegilops* L., *Perlaria* Heist. ex Fabr.

From the Italian *perla* “a pearl.”

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 1: 85. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Enumeratio Methodica Plantarum* (edition 2) 371. 1763, *Flore de France* 3: 601. 1856 and *Feddes Repert.* 91: 225-228. 1980, *Taxon* 41: 555-556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 20-23, 478. 2003.

Perobachne J. Presl = *Themeda* Forssk.

Panicoideae, Andropogoneae, Anthistiriinae, type *Perobachne secunda* J. Presl, see *Flora Aegyptiaco-Arabica* 178. 1775, *Reliquiae Haenkeanae* 1(4-5): 348, t. 48. 1830 and *Contributions from the United States National Herbarium* 46: 536, 613. 2003.

Perotis Aiton = *Xystidium* Trin.

From the Greek *peroo* “to mutilate,” *peros* “deficient,” *perosis* “disabling,” in reference to the nature of the small spikelets (often dangerous for the eyes), the glumes are awned and the palea minute; see William Aiton (1731-1793), *Hortus Kewensis*; or, a Catalogue of the Plants cultivated in the Royal Botanic Garden at Kew. 1: 85 and 3: 506. London 1789.

A genus of about 10-13 species, Africa, India, Sri Lanka, Australia, eastern Asia, tropics and subtropics. Chloridoideae, Cynodonteae, annual or sometimes short-lived

perennial, herbaceous, caespitose, leafy, glabrous nodes, solid internodes, auricles absent, ligule a short membrane more or less fringed, leaves lanceolate and narrow, leaf blades with margins often fringed with bristle-like hairs, plants bisexual, inflorescence a terminal single spike-like raceme bearded by the long glume awns, solitary spikelets subsessile to pedicellate and compressed laterally, spikelets bisexual and 1-flowered, one floret perfect, 2 glumes membranous 1-nerved more or less equal and long-awned, lemma acute, minute palea, 2 fleshy and glabrous lodicules, stamens 3, ovary glabrous, 2 stigmas, fruit longitudinally grooved, palatable, the ripe fruits can be harmful to stock, species often ruderal, savannah, sandy soil, open habitats, grassland, rainforest, type *Perotis latifolia* Aiton (*Perotis indica* (L.) Kuntze), see *Hortus Kewensis* 1: 85 and 3: 506. London 1789, *Species Plantarum. Editio quarta* 1: 324. 1797, *Fundamenta Agrostographiae* 102, t. 2. 1820, *De Graminibus unifloris et sesquifloris* 172. Petropoli 1824, *Anales de la Academia de Ciencias Medicas ...* 8: 288. 1871 and *Bulletin de la Société Botanique de France* 66(7): 301. 1919 [1920], *Repertorium Specierum Novarum Regni Vegetabilis* 17: 145. 1921, *Botanical Magazine* 41: 638. 1927, *Bulletin de la Société Botanique de France* 107: 206. 1960, *Austrobaileya* 3(4): 609-614. 1992, *Kew Bulletin* 50(3): 613, f. 1F-G. 1995, *Journal of Biogeography* 27(6): 1385-1401. Nov 2000, Sian Sullivan and Rick Rohde, “On non-equilibrium in arid and semi-arid grazing systems.” *Journal of Biogeography* 29(12): 1595-1618. Dec 2002, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

P. acanthoneuron Cope

Somalia. Annual, erect or geniculate and ascending, tufted, leaves lanceolate, spikelets ascending, glumes scabrid, awns slender and flexuous, fruit flattened, a weed of cultivation, on sandy soil, see *Kew Bulletin* 50(3): 611, f. 1A-C. 1995.

P. chinensis Gand.

China. See *Bulletin de la Société Botanique de France* 66(7): 301. 1919 [1920].

P. clarksonii Veldkamp

Australia. Annual, on sandy soils, see *Austrobaileya* 3: 609-610. 1992.

P. flavinodula Mez

Africa. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 145. 1921.

P. hildebrandtii Mez (*Perotis indica* f. *glabra* Chiov.; *Perotis indica* f. *hirta* Chiov.)

Tropical East Africa. Annual, wiry, slender, geniculate and ascending, tufted to loosely tufted, leaf blades lanceolate to broadly linear, inflorescence spike-like, spikelets horizontal, pedicelled awned spikelets, glumes dissimilar, lower glumes hispid to scabrid, upper glumes smooth, slender

flexuous awns, flattened fruit, little grazing value, a weed of cultivation, along roadsides, bushland, degraded areas, on red sand, dry sandy soils, shrubland, lawns, waste places, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 145. 1921.

in East Africa: anyuka

in Nigeria: kkyoi

P. holstii Mez (for the German gardener and plant collector Carl Hugo Ehrenfried Wilhelm Holst, 1865-1894, traveler in East Africa, Tanzania. See P. Hiepko, "The collections of the Botanical Museum Berlin Dahlem (B) and their history." *Englera* 7: 219-252. 1987; A.J.M. Leeuwenberg, "Iso-types of which holotypes were destroyed in Berlin." *Webbia* 19: 861-863. 1965)

East tropical Africa. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 145. 1921.

P. hordeiformis Nees (*Perotis birmanica* Gand.; *Perotis glabrata* Steud.; *Perotis hordeiformis* Nees ex Hook.; *Perotis hordeiformis* Nees ex Trin., nom. illeg., non *Perotis hordeiformis* Nees; *Perotis hordeiformis* Nees, nom. illeg., non *Perotis hordeiformis* Nees 1838)

Tropics. See *The Botany of Captain Beechey's Voyage* 247-248. 1838, *Florae Africae Australioris Illustrationes Monographicae* 1: 139. 1841, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 21, 267. 1841, *Synopsis Plantarum Glumacearum* 1: 186. 1854 and *Bulletin de la Société Botanique de France* 66(7): 301. 1919 [1920], *Grasses of Burma ...* 611-613, f. 72. 1960.

in Thailand: haang maa baa, hang ma ba

P. indica (L.) Kuntze (*Anthoxanthum indicum* L.; *Perotis hordeiformis* Nees ex Hooker & Arnott; *Perotis hordeiformis* Nees ex Trin., nom. illeg., non *Perotis hordeiformis* Nees; *Perotis latifolia* Aiton; *Perotis patula* Nees; *Perotis perottetii* Gand.; *Perotis spicata* (L.) T. Durand & H. Durand; *Saccharum spicatum* L.)

Throughout Southeast Asia, Indonesia, China, Taiwan, Nepal, Sri Lanka, Thailand, India. Annual or short-lived perennial, tufted to loosely tufted, decumbent but not rooting, semierect, stoloniferous, sheaths rolled, short ligule membranous, leaves glabrous, inflorescence a spike-like panicle, feathery flowered, spikelets borne singly on short stalks, 1-flowered, 2 glumes strongly keeled, 3 stamens, stigmas orange, fodder grass grazed by stock at all stages, low grazing value, naturalized in tropical Africa, grows near brackish water, waste places, dry sandy roadsides, see *Species Plantarum* 1: 28, 54. 1753, *Hortus Kewensis* 1: 85. 1789, *The Botany of Captain Beechey's Voyage* 247-248. 1838, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturel-*

les 6,4(3-4): 267. 1841, *Revisio Generum Plantarum* 2: 787. 1891 and *Handb. Fl. Ceylon* 5: 189. 1900, *Sylloge florae congolanae* 628. 1909, *Bulletin de la Société Botanique de France* 66(7): 301. 1919 [1920], *Handb. Fl. Ceylon* 6: 329. 1931, *Grasses of Ceylon* 103, pl. 15. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 611-613, f. 72. 1960.

in English: Indian perotis, India perotis, tail of the squirrel
in India: banda puchhi, chambar, jabbu jorle hullu, jabburu korlai hullu, kudiraival pullu, kuras, nakka peethu, nakka thoka, nakka toka, nari meese hullu, nari vaal pul, narimisai hullu, narival pillu, puniya, thopparai pillu, thopparai pullu, undar puchha

in Thailand: yaa haang ling, ya hang ling, yaa phraek, ya phraek, ya waen, yaa waen

in Nigeria: bundin kureege, bundin kureégé, wutsiyar kuréégéé

P. leptopus Pilg.

Africa, Tanzania. Annual, soft, delicate, awns green, growing in open places, savannah woodland, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 804. 1933.

P. patens Gand. (*Perotis patens* var. *parvispicula* Robyns & Tournay; *Perotis scabra* var. *parvispicula* (Robyns & Tournay) Cufod.)

Tropical and southern Africa, Madagascar. Annual or short-lived perennial, variable, light green to glaucous to purplish to reddish brown, loosely tufted to weak, branched or unbranched, open, tough and wiry, erect or geniculate, ascending, decumbent at base, small auricle, leaf sheath glabrous and rounded, ligule short and membranous, leaf blades lanceolate-oblong with a sharp tip, leaves glabrous, inflorescence linear lacking a callus at the base of the spikelet, soft straight spike or raceme, spikelets packed tightly along the rachis, awned, narrowly oblong glumes hispid with purple flexuous awns, ornamental and attractive, weedy grass, used with *Tridax procumbens* L. in stomach troubles, browsed by cattle, very low grazing value, pioneer and poor forage grass, a weed in disturbed areas, waste places, woodland, fallows, along roadsides, open areas, seepages, old cultivated areas, sandy to dry sandy soils, lawns, poor soils, bushveld, see *De Graminibus unifloris et sesquifloris* 172. 1824 and *Bulletin de la Société Botanique de France* 66(7): 301. 1919 [1920], *Bulletin du Jardin Botanique de l'État* 25: 241. 1955.

in English: bottlebrush grass, purplespike perotis, purplespike grass, cat's tail, purple spike cat's tail, early millet
in Benin: okpwi

in East Africa: siwa (Padhola)

in Ghana: gééroo susu

in Nigeria: ero yewa, èrò yéwa, iru egbara, wutsiyar kuréégéé, wutsiyaar kuréégéé

in South Africa: katstertgras, per-aar-perotis, schwanzgras
in Yoruba: ero yewa, iru egbara

P. rara R. Br. (*Saccharum rarum* (R. Br.) Poir.)

Tropical Asia, Southeast Asia, Australia. Annual or rarely perennial or biennial, purplish, slender, culms geniculate or erect, branched at the base, tufted, small, leaves lanceolate and flat, inflorescence a slender feathery raceme, spikelets subulate and finally reflexed, unequal glumes narrow-linear and scabrous, lower glume with a fine scabrous awn, lemma soft and 1-nerved, very small anthers, spear-like seeds, nutritious fodder, palatable when young, useful for erosion control, the ripe fruits can be harmful to stock and horses, decorative in flower, grows on red sandy soils, see *Species Plantarum* 1: 54. 1753, *Prodromus Florae Novae Hollandiae* 172. 1810, *Encyclopédie Méthodique. Botanique ... Supplément* 2: 70. 1811.

in English: Comet grass, Comet River grass (Comet River, a tributary of Mackenzie River, Queensland, Australia)

P. somalensis Chiov.

Somalia. Annual, erect, stout, leaves linear, large pilose spikelets ascending, glumes pilose to hispid, very long flexuous awns, fruit flattened.

P. vaginata Hack.

Namibia, Zaire, Tanzania, Zambia, Burundi. Annual, robust, creamy white, loosely tufted or single-stemmed, light green sheath at the node, dark green leaves smooth, inflorescence white, awns green, grows in open habitats, savannah, sandy soils, see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809 and *Bulletin de l'Herbier Boissier, sér. 2*, 6(9): 704. 1906, *Acta Bot. Neerl.* 15: 157. 1966.

Perrierbambus A. Camus

After the French botanist Joseph Marie Henri Alfred Perrier de la Bâthie, 1873-1958 (Paris), from 1896 to 1933 in Madagascar, among his works are *La végétation malgache*. Marseille and Paris 1921, *Les plantes introduites à Madagascar*. Toulouse 1933, *Catalogue des plantes de Madagascar*. Tananarive 1930-1940, *Biogéographie des plantes de Madagascar*. Paris 1936, *Le Tsaratanana, l'Ankaratra et l'Andringitra*. Tananarive 1927 and *Les Mélastomacées de Madagascar*. Toulouse 1932, contributed to Henri Humbert (1887-1967), *Flore de Madagascar et des Comores*. 1936-1967. See Alfred Lacroix, *Notice historique sur quatre botanistes*, etc. [On P.H. Lecomte, H. Perrier de la Bâthie, E.M. Heckel and H. Jumelle 1938; J.H. Barnhart, *Biographical notes upon botanists*. 3: 70. 1965; Pierre Boiteau, *Dictionnaire des noms malgaches de végétaux*. Micro-édition no. 85 04 10, Archives et Documents. Muséum National

d'Histoire Naturelle. 1985 and *Index des noms scientifiques avec leur équivalents malgaches*. Micro-édition no. SN 80 115 411, Archives et Documents. Muséum National d'Histoire Naturelle. 1985; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Laurence Dorr, *Plant Collectors in Madagascar and the Comoro Islands*. 1997; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997.

Two species, Madagascar. Bambusoideae, Bambusodae, Bambuseae, Hickeliinae, perennial, monopodial, shrubby or bushy, drooping, woody, persistent, branched, rhizomes leptomorph, leaves deciduous, involucre leaf blades protecting the inflorescence, plants bisexual, inflorescence racemose with 1-3 spikelets, spikelets one-flowered, glumes 1-2 very unequal, lemma rounded, palea present, 3 free and membranous lodicules, 5-6 stamens, ovary hairy and beaked, 2-3 stigmas, in dry woodland, type *Perrierbambus madagascariensis* A. Camus, see *Genera Plantarum* 1: 236. 1789, *Flora Boreali-Americana* 1: 73. 1803, *Reliquiae Haenkeanae* 1(4-5): 256. 1830, *Journal of the Linnean Society, Botany* 19: 31. 1881 and *Bulletin de la Société Botanique de France* 71: 697-701. 1924, *Bulletin de la Société Botanique de France* 72: 541-542. 1925, *Archives du Muséum d'Histoire Naturelle*, sér. 6, 12: 603. 1935, W.C. Lin, "The species and distribution of bamboos in the Republic of Malagasy (Madagascar), East Africa." *Special Bulletin of Taiwan Forestry Research Institute* no. 4. 1967.

Species

P. madagascariensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 71: 699, f. 1-13. 1924.

P. tsarasatrensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 71: 699, f. 1-13. 1924, *Bulletin de la Société Botanique de France* 71: 700-701, f. 14-22. 1925.

Perulifera A. Camus = *Pseudechinolaena* Stapf

From the Latin *perula* "a little wallet, pocket" and *fero, fers, tuli, latum, ferre* "to bear, carry."

One species, Madagascar. Panicoideae, Panicoideae, Paniceae, Panicinae, annual, herbaceous, unarmed, branched, leaf sheath inflated, auricles absent, ligule unfringed and membranous, plants bisexual, inflorescence spicate, sterile spikelets very reduced, 2 glumes unequal, palea present, 2 fleshy lodicules, 3 stamens, ovary glabrous, 2 reddish stigmas, type *Perulifera madagascariensis* A. Camus, see *Fl. Brit. India* 7: 28, 58. 1896 and *Flora of Tropical Africa* 9: 494-495. 1919, *Bulletin de la Société Botanique de France* 74: 889. 1928, *Flora Mesoamericana* 6: 298-299. 1994,

Contributions from the United States National Herbarium 46: 542-543. 2003.

Species

P. madagascariensis A. Camus (*Pseudechinolaena madagascariensis* (A. Camus) Bosser)

Madagascar. See *Bulletin de la Société Botanique de France* 74: 889. 1928, *Adansonia* 15(1): 127. 1975.

Petriella Zotov = *Ehrharta* Thunb., *Petriella* Curzi (Fungi), *Zotovia* Edgar & Connor

For the Scottish (b. Morayshire) botanist Donald Petrie, 1846-1925, went to Australia in 1868, in New Zealand 1874-1925, in 1894 chief inspector of schools, Auckland, New Zealand, wrote "List of the flowering plants indigenous to Otago." *Trans. Proc. New Zealand Inst.* 1896, "The Gramina of the Subantarctic Islands of New Zealand." *The Subantarctic Islands of New Zealand* 2: 472-481. 1909 and "Some additions to the Flora of the Subantarctic Islands of New Zealand." *T.N.Z.I.* 47: 59-60. 1915. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 76. 1965; Thomas Frederick Cheeseman, *Manual of the New Zealand Flora*. xxvii. Wellington 1906; I.H. Vegter, *Index Herbariorum*. Part II (5), *Collectors N-R*. Regnum Vegetabile vol. 109. 1983; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970.

Two species, New Zealand, Antarctic. Bambusoideae, Oryzodae, Ehrharteae, perennial, woody or herbaceous, persistent, rhizomatous, compact, unarmed, branching intravaginal, auricles present or absent, ligule a fringed membrane, plants bisexual, contracted inflorescence racemose or paniculate, spikelets solitary and pedicellate, spikelets flattened and imbricate, two glumes subequal or unequal, palea present, 2 lodicules free and membranous, two stamens, ovary glabrous, 2 white stigmas, species of open habitats, mountains, open areas, wet places, alpine, usually referred to *Zotovia* Edgar & Connor, *Ehrharta* Thunb. or *Tetrarrhena* R. Br., type *Petriella colensoi* (Hook.f.) Zotov, see *Kongl. Vetenskaps Academiens Handlingar* 40: 217, pl. 8. 1779, *Flora Novae-Zelandiae* 1: 288, t. 65a. 1853, *Transactions and Proceedings of the New Zealand Institute* 12: 356, t. 10. 1880 and *The Subantarctic Islands of New Zealand* 2: 472. 1909, *Transactions and Proceedings of the New Zealand Institute* 43: 253. 1911, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 235-236. 1943, *New Zealand Journal of Botany* 36: 568-586. 1998, *Contributions from the United States National Herbarium* 39: 56. 2000.

Species

P. colensoi (Hook.f.) Zotov (*Ehrharta colensoi* Hook.f.; *Microlaena colensoi* (Hook.f.) J.C. Sm.; *Microlaena colensoi*

(Hook.f.) Mez, nom. illeg., non *Microlaena colensoi* (Hook.f.) Mez; *Zotovia colensoi* (Hook.f.) Edgar & Connor)

New Zealand. See *Flora Novae-Zelandiae* 1: 288, t. 65a. 1853 and *Trans. & Proc. New Zealand Inst.* 43: 253. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 292. 1921, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 236. 1943, *New Zealand Journal of Botany* 36: 569, 571-573, f. 4. 1998.

P. thomsonii (Petrie) Zotov (*Ehrharta thomsonii* Petrie; *Microlaena thomsonii* (Petrie) Petrie; *Zotovia thomsonii* (Petrie) Edgar & Connor)

New Zealand. See *Prodromus Florae Novae Hollandiae* 210. 1810, *Transactions and Proceedings of the New Zealand Institute* 12: 356, t. 10. 1880 and *The Subantarctic Islands of New Zealand* 2: 472. 1909, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 235. 1943, *New Zealand Journal of Botany* 36: 569, 573-575, f. 3. 1998.

Petrina J.B. Phipps = *Danthoniopsis* Stapf

Arundinelleae, type *Petrina pruinosa* (C.E. Hubb.) J.B. Phipps, see *Hooker's Icones Plantarum* 31: t. 3075. 1916, *Bulletin of Miscellaneous Information Kew* 1934: 436. 1934, *Kew Bulletin* 1949: 351. 1949, *Kirkia* 4: 117-118. 1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 123. 1967, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

Peyritschia Fournier

Named for the Austrian botanist Johann (Joannes) Joseph Peyritsch, 1835-1889, physician, M.D. Wien 1864, professor of botany; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 77. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 308. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 581. Philadelphia 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933.

About 2-5 species, Mexico, Colombia, Venezuela, Costa Rica. Pooideae, Poeae, Aveninae, or Poodae, Aveneae, perennial, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence loosely paniculate, slender panicle contracted, spikelets flattened 2-flowered, two glumes more or less equal or subequal, lemma bilobed, palea present, 2 free and membranous lodicules, 2 stamens, 2 stigmas, wet places, similar to *Graphephorum*, sometimes referred to *Trisetum*, type *Peyritschia koelerioides* (Peyr.) E. Fourn., see *Species Plantarum* 1: 63, 79, 81. 1753, *Syn. Pl.* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 43, 91. 1812, *Mexicanas Plantas* 2: 106, 109-

111. 1886 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 99-105. 1943, *Taxon* 28: 225-235. 1979, *Agrociencia* 71: 61-69. 1988, *Contributions from the United States National Herbarium* 48: 478. 2003.

Species

P. conferta (Pilg.) Finot (*Aira conferta* (Pilg.) Hitchc.; *Deschampsia conferta* (Pilg.) Valencia; *Trisetum confertum* Pilg.)

South America, Mexico, Ecuador. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 714. 1898 and *Contributions from the United States National Herbarium* 24(8) 361. 1927, *Revista Argentina de Agronomía* 8: 127. 1941, *Contributions from the United States National Herbarium* 48: 478. 2003.

P. deyeuxioides (Kunth) Finot (*Arundo sylvatica* Schrad.; *Avena deyeuxioides* Kunth; *Avena trichopodia* J. Presl; *Calamagrostis sylvatica* (Schrad.) DC.; *Deyeuxia evoluta* E. Fourn.; *Deyeuxia sylvatica* (Schrad.) Kunth; *Deyeuxia sylvatica* (Schrad.) Vasey, nom. illeg., non *Deyeuxia sylvatica* (Schrad.) Kunth; *Deyeuxia triflora* Nees; *Trisetaria deyeuxioides* (Kunth) Poir.; *Trisetum deyeuxioides* (Kunth) Kunth; *Trisetum deyeuxioides* var. *deyeuxioides*; *Trisetum deyeuxioides* var. *pubescens* Scribn. ex Beal; *Trisetum evolutum* (E. Fourn.) Hitchc.)

North America, U.S., Mexico. See *Familles des Plantes* 2: 31, 530. 1763, *Flora Aegyptiaco-Arabica* LX, 27. 1775, *Flora Germanica* 1: 218, t. 4, f. 7. 1806, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Flore Française. Troisième Édition* 5(6): 253. 1815, *Nova Genera et Species Plantarum* 1: 147. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 5: 366. 1817, *Reliquiae Haenkeanae* 1(4-5): 254. 1830, *Révision des Graminées* 1: 77, 102. 1829, *Nomenclator Botanicus. Editio secunda* 2: 414. 1841, *Linnaea* 19(6): 691. 1847, *Bulletin de la Société Botanique de France* 24: 181. 1877, *The Grasses of the United States* 28. 1883, *Grasses of North America for Farmers and Students* 2: 374. 1896 and *Contributions from the United States National Herbarium* 17(3): 325. 1913, *N. Amer. Fl.* 17(8): 557. 1939, *Brittonia* 23(3): 293-324. 1971, *Agrociencia* 71: 78. 1988, *Contributions from the United States National Herbarium* 48: 478. 2003.

P. humilis (Louis-Marie) Finot (*Deyeuxia gracilis* E. Fourn. ex Hemsl., nom. illeg., non *Deyeuxia gracilis* Wedd.; *Deyeuxia gracilis* E. Fourn., nom. illeg., non *Deyeuxia gracilis* Wedd.; *Trisetum humile* Louis-Marie)

North America, U.S., Mexico. See *Biologia Centrali-Americana; ... Botany ...* 3: 554. 1885, *Mexicanas Plantas* 2: 106, 109. 1886 and *Rhodora* 30: 244. 1928 [1929], *Contributions from the United States National Herbarium* 48: 478. 2003.

P. koelerioides (Peyr.) E. Fourn. (*Aira koelerioides* Peyr.; *Deschampsia koelerioides* (Peyr.) Benth., nom. illeg., non *Deschampsia koelerioides* Regel; *Grappophorum altijugum* E. Fourn.; *Trisetum altijugum* (E. Fourn.) Scribn.)

Mexico. See *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Linnaea* 30(1): 5-6. 1859, *Bull. Soc. Bot. France* 24: 181. 1877, *Journal of the Linnean Society, Botany* 19: 96. 1881, *Mexicanas Plantas* 2: 109-111. 1886 and *Rhodora* 8(89): 89. 1906.

P. pringlei (Scribn.) S.D. Koch (*Deschampsia pringlei* Scribn.; *Trisetum kochianum* Hern. Torres)

Mexico. Lemma geniculate awned from lower half, forage, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 300-301, t. 13, f. 1, 1a. 1891 and *Brittonia* 23(3): 293-324. 1971, *Taxon* 28(13): 233. 1979, *Phytologia* 61(7): 454. 1987.

Phacellaria Steudel = *Chloris* Sw.,
Phacellaria Benth. (Santalaceae), *Phacellaria*
Willd. ex Steud.

Greek *phakelos* "a faggott, bundle."

Chloridoideae, Cynodonteae, Chloridinae, see *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Prodromus Florae Novae Hollandiae* 305. 1810, *Nomenclator Botanicus. Editio secunda* 2: 343. 1841, *Genera Plantarum* 3: 219, 229. 1880 and *Contributions from the United States National Herbarium* 41: 39-52, 182. 2001.

Phacelurus Griseb. = *Jardinea* Steud.,
Pseudophacelurus (Steud.) A. Camus,
Pseudovossia A. Camus, *Thyrasia* Stapf

From the Greek *phakelos* "a cluster, bundle" and *oura* "tail."

About 7-9 species, Africa, Southeast Asia, Japan, Mediterranean. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, variable, robust, stout, herbaceous, canelike, coarse, more or less branched, ligule an unfringed membrane, leaves linear and narrow, plants bisexual, inflorescence terminal, more or less flattened digitate racemes bearing pairs of sessile and pedicellate spikelets, bisexual spikelets, the lower glume of the pedicellate spikelet awnless, lower floret male or barren, 2 glumes subequal, lower glume membranous to coriaceous, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade species or open habitats, sandy riverbanks, moist places, swampy areas, grassland, woodland, related and similar to *Ischaemum*, type *Phacelurus digitatus* (Sibth. & Sm.) Griseb., see *Species Plantarum* 2: 1049. 1753, *Supplementum Plantarum* 13, 114. 1781 [1782], *Prodromus Plantarum Indiae Occidentalis* xiv, 11. 1825, *Voyage autour du Monde* 2: 64, f. 14. 1829 [1831], *Journal of the Asiatic Society of*

Bengal 5: 572. 1836, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 423-424. 1844 [1846], *Synopsis Plantarum Glumacearum* 1: 360. 1854 [1855], *Actes de la Société Linnéenne de Bordeaux* 30: 123. 1875, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887, *Monographiae Phanerogamarum* 6: 277. 1889 and *Flora of Tropical Africa* 9: 48-49. 1917, *Bulletin du Muséum d'Histoire Naturelle* 26: 665 and 27: 370. 1920-1921, *Bulletin of Miscellaneous Information Kew* 1928(1): 35-36. 1928, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 649. 1932, *Bulletin of the National Science Museum* 31: 140. 1952, *Boletim da Sociedade Broteriana, ser. 2* 37: 80. 1963, *Kew Bulletin* 32(3): 580. 1978, *Kew Bulletin* 33(2): 175-179. 1978, *J. SouthW. Agric. Univ.* 182(4): 78. 1982, *Wageningen Agricultural University Papers* 92-1(2): 521, 557, t. 113, f. 3-5. 1992, *Am. J. Bot.* 88: 1993-2012. 2001, Jeom Sook Lee and Byung Sun Ihm, "Growth strategies of four salt marsh plants on Mankyung River estuary in Korea." *Ecological Research* 19(1): 37-42. 2004.

Species

P. cambogiensis (Balansa) Clayton (*Pseudovossia cambogiensis* (Balansa) A. Camus; *Vossia cambogiensis* Balansa)

Asia. Pedicelled spikelet with an elongated callus, see *Journal of the Asiatic Society of Bengal* 5: 572. 1836, *Journal de Botanique (Morot)* 4: 109. 1890 and *Bulletin du Muséum d'Histoire Naturelle* 26: 665. 1920, *Kew Bulletin* 33(2): 177. 1978.

P. digitatus (Sm.) Griseb. (*Manisuris digitata* (Sm.) Kuntze; *Phacelurus digitatus* (Sibth. & Sm.) Griseb.; *Rottboellia digitata* Sm.; *Rottboellia digitata* Sibth. & Sm.; *Rottboellia sandorii* Friv.)

Europe. Pedicelled spikelet with an elongated callus, see *Flora Graeca* 1: 73, f. 92. 1806, *Flora* 18: 335. 1835, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 424. 1846 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 366. 1932.

P. franksae (J.M. Wood) Clayton (*Ischaemum franksae* J.M. Wood; *Ischaemum juncifolium* Ballard & C.E. Hubb.) (named for the botanical artist Millicent Franks, 1886-1961, assistant to the South African botanist but English-born John Medley Wood, 1827-1915; see M. Gunn and L.E. Codd, *Botanical Exploration of Southern Africa*. 159 and 379-381. 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 753. London 1994; J.H. Barnhart, *Biographical notes upon botanists*. 3: 516. 1965; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 379-381. Cape Town 1981; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997)

South Africa, Zambia. Perennial, tufted, lower glume muricate, rare, in damp areas, see *Bulletin of Miscellaneous*

Information Kew 1908: 226. 1908, *Kew Bulletin* 1934: 107. 1934, *Kew Bulletin* 33(2): 178. 1978.

P. gabonensis (Steud.) W.D. Clayton (*Elionurus gabonensis* (Steud.) Roberty; *Jardinea congoensis* Franch.; *Jardinea congoensis* (Hack.) Franch.; *Jardinea gabonensis* Steud.; *Rhytachne congoensis* Hack.; *Rhytachne gabonensis* (Steud.) Hack.; *Rottboellia gabonensis* (Steud.) Roberty)

Tropical Africa. Perennial, coarse, canelike, tufted, robust, lower glume muricate, thatching and matting grass, culms made into baskets and screens, common in swampy places, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Species Plantarum. Editio quarta* 4(2): 941. 1805 [1806], *Prodrum Plantarum Indiae Occidentalis* xiv, 11. 1825, *Synopsis Plantarum Glumacearum* 1: 360. 1854, *Monographiae Phanerogamarum* 6: 276-277. 1889, *Bulletin de la Société d'histoire naturelle d'Autun* 8: 321. 1895 and *Petite Flore de l'Ouest-Africain* 409. 1954, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 70. 1960, *Kew Bulletin* 35(4): 817. 1981.

in Nigeria: diwa, eji, ige, iiliine, iiliino, ire, iwa, iware, onji, shada

in Togo: loe, loku

in Yoruba: ige, ire

P. huillensis (Rendle) Clayton (*Coelorachis fasciculata* (Peter) Peter; *Coelorachis undulatifolia* (Chiov.) Chiov.; *Rottboellia huillensis* Rendle; *Rottboellia sulcata* Peter; *Rottboellia undulatifolia* Chiov.; *Thyrsia inflata* Stapf; *Thyrsia undulatifolia* (Chiov.) Robyns)

Tropical Africa. See *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 140. 1899 and *Annali di Botanica* 13: 36. 1914, *Flora of Tropical Africa* 9: 48-49. 1917, *Nuovo Giornale Botanico Italiano, n.s.*, 26: 73. 1919, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): Anh. 14, f. 15/2. 1929, *Flore Agrostologique du Congo Belge* 1: 53. 1929, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 358. 1936, *Kew Bulletin* 33(2): 177. 1978.

P. latifolius (Steud.) Ohwi (*Ischaemum latifolium* (Steud.) Miq.; *Phacelurus angustifolius* (Debeaux) Nakai; *Phacelurus latifolius* (Steud.) Keng, nom. illeg., non *Phacelurus latifolius* (Steud.) Ohwi; *Pseudophacelurus latifolius* (Steud.) A. Camus; *Rottboellia latifolia* Steud.; *Rottboellia latifolia* var. *angustifolia* Debeaux)

Asia, China. Lower glume concave, see *Flora* 29: 21. 1846, *Annales Museum Botanicum Lugduno-Batavi* 2: 291. 1866, *Actes de la Société Linnéenne de Bordeaux* 30: 123. 1875 and *Bulletin du Muséum National d'Histoire Naturelle* 27(5): 371. 1921, *Acta Phytotaxonomica et Geobotanica* 4(2): 59. 1935, *Sinensia* 10: 305, 308. 1939, *Bulletin of the National Science Museum* 31: 140. 1952, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice*

Nomenclature Systematica 240. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 798, f. 748. 1959, *Bulletin of Botanical Research* 14(2): 139. 1994.

P. latifolius (Steud.) Ohwi var. ***angustifolius*** (Debeaux) Keng (*Phacelurus latifolius* var. *angustifolius* (Debeaux) Kitag.; *Rottboellia latifolia* var. *angustifolia* Debeaux)

China. See *Report of the Institute of Scientific Research, Manchoukuo* 3(Append. 1): 85. 1839, *Actes de la Société Linnéenne de Bordeaux* 30: 123. 1875 and *Sinensia* 10: 305. 1939.

P. latifolius (Steud.) Ohwi var. ***trichophyllus*** (S.L. Zhong) B.S. Sun & Z.H. Hu (*Phacelurus trichophyllus* S.L. Zhong)

China. See *J. SouthW. Agric. Univ.* 182(4): 78. 1982, *Flora Reipublicae Popularis Sinicae* 10(2): 261, pl. 23, f. 6-8. 1997.

P. schliebenii (Pilg.) Clayton (*Thyrsia schliebenii* Pilg.)

See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 649. 1932, *Kew Bulletin* 33(2): 178. 1978.

P. speciosus (Steud.) C.E. Hubb. (*Andropogon corollatus* Steud.; *Andropogon speciosus* Steud.; *Ischaemum corollatum* (Steud.) W. Watson; *Ischaemum robustum* Hook.f.; *Ischaemum speciosum* (Steud.) W. Watson; *Phacelurus glaucus* (Hack.) Gilli; *Phacelurus speciosus* var. *afghanicus* Melderis; *Pseudophacelurus speciosus* (Steud.) A. Camus; *Rottboellia glauca* Hack.; *Rottboellia speciosa* (Steud.) Hack.; *Thyrsia viridula* Ohwi; *Vossia speciosa* (Steud.) Benth.)

Asia, India. Perennial, tufted or single, stout or slender, simple above and much-branched below, rootstock very stout and almost woody, ligule ciliate, sheaths glabrous or hirsute, leaves linear, inflorescence a panicle, spikelets lanceolate and closely appressed to the rachis, fodder, useful for erosion control, found on dry slopes, eroded areas, see *Synopsis Plantarum Glumacearum* 1: 369, 375. 1854, *Journal of the Linnean Society, Botany* 19: 70. 1881, *Himalayan Districts of the North-western Provinces of India* 10: 392. 1882, *Monographiae Phanerogamarum* 6: 282. 1889, *Österreichische Botanische Zeitschrift* 41: 47. 1891, *The Flora of British India* 7: 139. 1896 and *Bulletin du Muséum d'Histoire Naturelle* 27: 370. 1921, *Bulletin of Miscellaneous Information Kew* 1928: 35. 1928, *Acta Phytotaxonomica et Geobotanica* 17: 15. 1957, *Feddes Repertorium* 64: 219. 1962, *Dansk Biol. Skr.* 14(4): 41. 1965, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

P. zea (C.B. Clarke) Clayton (*Rottboellia thyrsioidea* Hack.; *Rottboellia zea* C.B. Clarke; *Thyrsia thyrsioidea* (C.B. Clarke) A. Camus; *Thyrsia zea* (C.B. Clarke) Stapf)

Asia, India. Stout, racemes stiff, see *Journal of the Linnean Society, Botany* 25(165-169): 86-87, pl. 35. 1889, *Monographiae Phanerogamarum* 6: 283. 1889 and *Bulletin*

du Muséum National d'Histoire Naturelle 27(5): 369. 1921, *Hooker's Icones Plantarum* 31(4): t. 3078. 1922, *Kew Bulletin* 33(2): 177. 1978.

Phaenanthoecium C.E. Hubb.

From the Greek *phaino*, *phaeino* "bring to light, reveal" and *anthos* "flower," *anthoecium*, referring to the lemmas.

One species, Yemen, Ethiopia. Arundinoideae, Danthonieae, perennial, tufted, branched, decumbent, herbaceous, slender, trailing, sometimes rooting at the nodes and weakly ascending, leaves stiff and spreading, ligule fringed, plants bisexual, inflorescence a single short raceme on a slender axis, spikelets pedicellate to shortly pedicellate, uppermost floret reduced, two short oblong glumes membranous and long hilum, upper glumes 3-4-nerved, lemmas membranous 9-nerved and bilobed with long-awned lobes, palea present, 2 lodicules ciliate, 3 stamens, ovary glabrous, 2 stigmas, type *Phaenanthoecium koestlinii* (Hochst. ex A. Rich.) C.E. Hubb., see *Flore Française. Troisième Édition* 3: 32. 1805 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: (Beibl. 85) 61. 1906, *Bulletin of Miscellaneous Information Kew* 1936(5): 329-330. 1936, *Flora of Ethiopia and Eritrea* 7: 73-74. 1995.

Species

P. koestlinii (Hochst. ex A. Rich.) C.E. Hubbard (also ***kostlini***, ***kostlinii***, ***koestlini***) (*Danthonia koestlini* Hochst. ex A. Rich.; *Phaenanthoecium koestlinii* (A. Rich.) C.E. Hubb.; *Streblochaete koestlinii* Hochst. ex A. Rich.)

Northeast tropical Africa. Perennial, slender, trailing, tufted, leaves very narrow, imbricate sheaths, spikelets 5-6-flowered, two glumes more or less equal, lemmas with a ciliate callus and a bent and twisted awn, fleshy lodicules, see *Tentamen Florae Abyssinicae ...* 2: 421. 1850 and *Bulletin of Miscellaneous Information Kew* 1936(5): 330. 1936.

Phaenosperma Munro ex Benth. = Phaenosperma Benth.

From the Greek *phaino* "to shine, to appear" and *sperma* "seed."

One species, Asia, India, China, Korea, Assam to Japan. Bambusoideae, Oryzodae, Phaenospermateae, perennial, herbaceous, robust, rhizomatous, leaf blades obliquely nerved, auricles absent, ligule membranous and unfringed, plants bisexual, inflorescence an open panicle, spikelet 1-flowered and pedicellate, 2 glumes unequal or subequal, lemma entire and membranous, palea 2-nerved, 3 free and membranous lodicules, stamens 3, ovary glabrous, 2 plumose stigmas, shade or partial shade, type *Phaenosperma globosa* Munro ex Benth., see *Journal of the Linnean Society, Botany* 19(115-116): 59-60. 1881, *Bulletin of the Torrey*

Botanical Club 22: 7. 1895 and *Acta Phytotaxonomica et Geobotanica* 11: 183. 1942, *Botanical Magazine* (Tokyo) 69: 311-315. 1956, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 78: 195-207. 1959, *Kew Bulletin* 40(3): 478. 1985, *Kew Bulletin* 42(3): 707-709. 1987.

Species

P. globosa Munro ex Benth. (*Garnotia japonica* Hack.; *Phaenosperma globosa* Benth.)

East Asia. Perennial, glumes membranous, lemma 3-7-nerved, grain with apical knob, see *Voyage autour du Monde* 2: 132. 1832 [1829] and *Österreichische Botanische Zeitschrift* 52(2): 55. 1902, *Kew Bulletin* 27: 515-562. 1972 [A systematic treatment of *Garnotia* (Gramineae)].

Phalarella Boiss. = *Phleum* L.,
Pseudophleum Dogan

The diminutive of *Phalaris* L.

Pooideae, Poeae, Alopecurinae, see *Species Plantarum* 1: 59. 1753, *Familles des Plantes* 2: 31, 607. 1763, *Essai d'une Nouvelle Agrostographie* 24, 25, 37, 146, 158, 173, t. 7, f. 5. 1812, *Observations sur les Graminées de la Flore Belgique* 131. 1823 [1824], *Hortus Regius Botanicus Berolinensis* 1: 65. 1827, *Diagnoses plantarum orientalium novarum* 1(5): 70. 1844, *Flora Rossica* 4(13): 455. 1852, *Synopsis der mitteleuropäischen Flora* 2: 154. 1899 and *Contr. U.S. Nat. Herb.* 24: 161, 167. 1925, *Acta agriculturae scandinavica* 1(1): 1-138. 1975, *Acta Botanica Academiae Scientiarum Hungaricae* 23(12): 135. 1977, *Journal of the Linnean Society, Botany* 76(4): 337-340. 1978, *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 75. 1982, *Flora Mesoamericana* 6: 242. 1994, *Plant Systematics and Evolution* 203: 11-25. 1996, *Willdenowia* 29(11-12): 45-49. 1999, *Contributions from the United States National Herbarium* 48: 478, 491-494. 2003.

Phalaridantha St.-Lag. = *Baldingera* P.
Gaertn., B. Mey. & Scherb., *Digraphis* Trin.,
Phalaris L., *Phalaroides* Wolf

From the genus *Phalaris* and *anthos* "flower."

Pooideae, Poeae, Phalaridinae, see *Species Plantarum* 1: 54-55. 1753, *Genera Plantarum* 11. 1776, *Methodus Plantas Horti Botanici ...* 201. 1794, *Flora der Wetterau* 1: 43, 96. 1799, *Fundamenta Agrostographiae* 127. 1820, *Bulletin Botanique [Genève]* 1: 220. 1830, *The Grasses of Britain* 188, t. 82. 1845, *Synopsis Plantarum Glumacearum* 1: 11. 1853, *Étude des Fleurs*, éd. 8, 2: 900. 1889 and *Iowa State College Journal of Science* 36(1): 1-96. 1961, *Taxon* 40(3): 475-485. 1991, *Taxon* 41: 567. 1992, *Flora Mesoamericana*

6: 236-237. 1994, *Webbia* 49(2): 265-329. 1995, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 140, 270-271, 479-488. 2003.

Phalaridium Nees & Meyen =
Dissanthelium Trin.

Referring to the genus *Phalaris* L.

Pooideae, Poeae, Poinae, type *Phalaridium peruvianum* Nees & Meyen, see *Linnaea* 10(3): 305. 1836, *Gramineae* 29. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 161. 1843 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 378. 1906, *Kurtziana* 25: 157-163. 1997, *Contributions from the United States National Herbarium* 48: 271-273, 478. 2003.

Phalaris L. = *Baldingera* Gaertner, Meyer & Scherb., *Digraphis* Trin., *Endallex* Raf.,
Phalaridantha St-Lager, *Phalaroides* Wolf,
Typhoides Moench

From the Greek *phalaris*, *phaleris*, used by Dioscorides for a kind of grass, ribbon grass, canary grass; *phalaros* "having a patch of white, crested," *phalos* "shining, bright, white, a part of the helmet"; Latin *phalaris* or *phaleris*, *idis* for the plant canary-grass; see Carl Linnaeus, *Species Plantarum*. 54. 1753 and *Genera Plantarum*. Edition 5. 29. 1754.

About 15-22 species, warm temperate areas. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Phalaridinae, annual or perennial, erect and leafy, rhizomatous or tufted, erect or decumbent, stems flimsy to robust, herbaceous, unbranched above, internodes hollow, auricles absent, sheaths rounded, ligule an unfringed membrane-like, leaf blades linear or oblong to linear-lanceolate, plants bisexual, a false spike or a compact panicle, spikelets ovate and compressed laterally, vestigial foliar structure subtending the inflorescence present or absent, spikelets 3-flowered, 1 shiny fertile floret, the 2 lower florets sterile reduced to villous scales, 2 glumes more or less equal and keel-winged, upper glume usually enclosing florets, sterile lemmas linear, lower lemmas rudimentary and awnless, shiny fertile lemma keeled and acute, hairy callus absent, palea present, 2 lodicules free and membranous, 3 stamens, ovary glabrous, anthers pale yellow, 2 white stigmas plumose, fruit small and compressed, weed species, fodder, native pasture species, grain crop species, food for bird seed and valuable stock feed, annual species seeds are used in bird seed, attractive seed heads and foliage, some species have caused poisoning to livestock, many species contain Dimethyltryptamine (DMT), the prototype member of the tryptamine subclass of indole derivatives, alkaloid-contents vary

considerably in both *Phalaris arundinacea* and *Phalaris aquatica*, please read “DMT: Dose-response study of N,N-dimethyltryptamine in humans: I Neuroendocrine, autonomic, and cardiovascular effects.” by R.J. Strassman and C.R. Qualls, and “II Subjective effects and preliminary results of the new rating scale” in *Archives of General Psychiatry*. 51(2): 85-97 and 98-108. 1994, can tolerate floods and extreme drought, found in damp soils and swamps, open habitats, grasslands, weedy places, type *Phalaris canariensis* L., see *Species Plantarum* 1: 54-55. 1753, *Gen. Pl.* edition 5. 29. 1754, *Genera Plantarum* 11. 1776, *Methodus Plantas Horti Botanici ...* 201. 1794, *Flora der Wetterau* 1: 43, 96. 1799, *Fundamenta Agrostographiae* 127. 1820 [Jan], *Bulletin Botanique [Genève]* 1: 220. 1830, *Étude des Fleurs*, éd. 8, 2: 900. 1889 and *Iowa State College Journal of Science* 36(1): 1-96. 1961, *Taxon* 40(3): 475-485. 1991, *Taxon* 41: 567. 1992, *Flora Mesoamericana* 6: 236-237. 1994, *Webbia* 49(2): 265-329. 1995, *Taxon* 44: 611-612. 1995, *Am. J. Bot.* 90: 235-242. 2003, *Contributions from the United States National Herbarium* 48: 140, 270-271, 310, 479-488, 684. 2003, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, “The evolution of nuclear genome structure in seed plants.” *Am. J. Bot.* 91: 1709-1725. 2004, *Journal of Applied Ecology* 41(1): 151-162. Feb 2004, *Archaeometry* 46(1): 19-33. Feb 2004, *Journal of Applied Ichthyology* 20(1): 64-70. Feb 2004, *Restoration Ecology* 12(1): 36-43. Mar 2004, *Weed Research* 44(2): 117-128. Apr 2004, *New Phytologist* 162(2): 397-411, 481-488. May 2004, *Weed Research* 44(3): 203-217. June 2004, *Grass and Forage Science* 59(2): 180-185. June 2004, *Plant Breeding* 123(3): 209-212. June 2004, *Weed Research* 44(4): 254-264. Aug 2004, *Conservation Biology* 18(4): 1132-1138. Aug 2004, *Diversity & Distributions* 10(5)-6: 377-385, Sep 2004, 107(1): 50-63. Sep 2004, *Ibis* 146(s1): 92-100. Sep 2004, *Journal of Applied Ecology* 41(5): 888-896. Oct 2004, *Ibis* 146(s2): 123-130. Nov 2004, *Weed Research* 44(6): 483-486, 487-488. Dec 2004, *Journal of Applied Ecology* 41(6): 1197-1202. Dec 2004, *Biological Journal of the Linnean Society* 83(4): 509-525. Dec 2004, *New Phytologist* 165(1): 91-97. Jan 2005, *FEBS Journal* 272(1): 217-227. Jan 2005, *Weed Research* 45(2): 140-148. Apr 2005, *Conservation Biology* 19(2): 473-481. Apr 2005, *Plant Breeding* 124(2): 147-153. Apr 2005, *Weed Research* 45(3): 175-192. June 2005, *Oikos* 110(2): 271-282, 409-416. Aug 2005.

Species

P. sp.

Fodder

in Mexico: pasto

P. amethystina Trin. (*Phalaridantha robinsoniana* (Nees ex Steud.) St.-Lég.; *Phalaris berteroniana* Steud.; *Phalaris colchaguensis* Phil.; *Phalaris robinsoniana* Nees ex Steud., see J. Ross Brown, *Crusoe's Island*. New York 1864; R.L.

Woodward, *Robinson Crusoe's Island: A History of the Juan Fernandez Islands*. Chapel Hill (N. Carolina) 1969; Benjamin Vicuña Mackenna, *Juan Fernández; historia verdadera de la isla de Robinson Crusoe*. Santiago 1883; Daniel Defoe (1660-1731), *The Life and Adventures of Robinson Crusoe* (after the Italian botanist Carlo Giuseppe Bertero, 1789-1831, physician, traveler, botanical collector, plant collector in Chile. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 175. 1965; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement II*. 118-119. 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 36. 1972; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 131. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Irving William Knobloch, compil., “A preliminary verified list of plant collectors in Mexico.” *Phytologia Memoirs*. VI. 1983; Rodolfo Emilio Giuseppe Pichi Sermolli, b. 1912, “The publication-dates of Colla's “*Plantae rarioris in regionibus chilensibus a clarissimo M.D. Bertero nuper detectae*” and “*Herbarium Pedemontanum*.” *Webbia*. 8(1): 123-140. 1951, “Additional notes on the publication-date of Colla's “*Plantae rarioris in regionibus chilensibus a clarissimo M.D. Bertero nuper detectae*.” *Webbia*. 8(2): 407-411. 1952; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993) (Chile, Colchagua

South America, Chile, Juan Fernandez Isl. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 56. 1839, *Synopsis Plantarum Glumacearum* 1: 11. 1853 or 1855 [1853], *Linnaea* 33(3-4): 276. 1864 and *Fl. Calif.* 3: 96-99. 1912, *The Natural History of Juan Fernandez and Easter Island* 2(28): 763-792. 1951, *Webbia* 49(2): 303. 1995.

P. angusta Nees ex Trin. (*Phalaris angusta* Nees, nom. illeg., non *Phalaris angusta* Nees ex Trin.; *Phalaris angusta* mon. *bracteata* Jansen & Wacht.; *Phalaris chilensis* J. Presl; *Phalaris intermedia* var. *angusta* (Nees ex Trin.) Chapm.; *Phalaris intermedia* var. *angustata* Beal; *Phalaris laxa* Spreng. ex Steud.; *Phalaris ludoviciana* Torr. ex Trin.; *Phalaris segetalis* Steud. ex Lechler)

North America and southern South America. Annual, tufted, slender or robust, erect, smooth, unbranched, without rhizomes, fibrous roots, ligule membranous, leaf blade flat and scabrid, no auricles, sheaths not keeled, uppermost leaf sheath more or less inflated, dense cylindrical to narrow-oblong purplish panicle, vestigial foliar structure subtending the inflorescence usually present, spikelets imbricate

and chasmogamous, proximal incomplete florets 2 per spikelet, hermaphrodite florets 1 per spikelet, sterile florets subequal, female-fertile floret densely pubescent, glumes with keel narrowly winged, lemmas sparsely hairy to silky hairy, ovary glabrous, fruit compressed, fodder, weed, please read E. Odriozola, C. Campero, T. Lopez, R. Marin, G. Casaro, M. Andrada, "Neuropathological effects and deaths of cattle and sheep in Argentina from *Phalaris angusta*." in *Vet. Human Toxicol.* 33(5): 465-467. 1991, Renato Silva de Sousa and Luiz Francisco Irigoyen, "Experimental poisoning by *Phalaris angusta* (Gramineae) in cattle." *Pesquisa Veterinaria Brasileira*. July Dec 19(3-4): 116-122. 1999, common on floodplains, pasture, lands subject to flooding, disturbed places, occurs under wet conditions, disturbed swamps, on low-lying grounds, wet sites, wet sandy clay, open habitats, brown wet sandy clay, cultivated and fallow lands, see *Encyclopédie Méthodique. Botanique ... Supplément 1*: 300. 1810, *Species Graminum 1*: t. 78. 1827, *Flora Brasiliensis seu Enumeratio Plantarum 2*: 391. 1829, *Reliquiae Haenkeanae 1(4-5)*: 245. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 5,3(3)*: 56. 1839, *Nomenclator Botanicus. Editio secunda 2*: 315. 1841, *Berberides Americae Australis 52*. Stuttgartiae 1857, *Flora of the Southern United States 569*. 1860, *Grasses of North America for Farmers and Students 2*: 182. 1896 and *Anales del Museo Nacional de Buenos Aires 21*: 63. 1911, *Nederlandsch Kruidkundig Archief. Verslangen en Mededelingen der Nederlandsche Botanische Vereeniging 6*: 139. Amsterdam 1917, *Webbia 49(2)*: 295. 1995.

in English: Timothy Canary grass, Timothy Canarygrass

in Finnish: Kapeatähkähelpi

***P. aquatica* L.** (*Phalaris altissima* Menezes; *Phalaris aquatica* Thunb., nom. illeg., non *Phalaris aquatica* L.; *Phalaris arundinacea* subsp. *bulbosa* Paunero; *Phalaris bulbosa* auct., non L.; *Phalaris bulbosa* var. *alata* (Trab.) Maire & Weiller; *Phalaris bulbosa* var. *clausonis* (Maire & Trab.) Maire & Weiller; *Phalaris bulbosa* var. *genuina* Maire; *Phalaris bulbosa* var. *hirtiglumis* Trab.; *Phalaris commutata* Roem.& Schult.; *Phalaris elongata* Braun-Blanq.; *Phalaris nodosa* L., nom. illeg. superfl.; *Phalaris nodosa* var. *minor* Lojac.; *Phalaris stenoptera* Hackel; *Phalaris tuberosa* L.; *Phalaris tuberosa* var. *alata* Trabut; *Phalaris tuberosa* var. *clausonis* Maire & Trab.; *Phalaris tuberosa* var. *hirtiglumis* Trabut; *Phalaris tuberosa* L. var. *stenoptera* (Hackel) A.S. Hitchc.; *Phalaris stenoptera* Hackel)

Mediterranean. Perennial bunchgrass, strong, slender to robust, slightly spreading, more or less densely to sparsely clumped, erect or geniculate, glabrous, deep-rooted, rhizomatous with short and contracted knotted rhizomes, internodes swollen near base of stem and more or less tuberous, no auricles, leaf sheath smooth and rounded, ligule

membranous and obtuse to rounded, blade flat, leaves narrow-acuminate, numerous elliptic-oblong spikelets in a dense and lobed spike-like inflorescence, panicle cylindrical to ovoid-cylindrical, vestigial foliar structure subtending the inflorescence present or absent, florets not awned, glumes subequal and narrowly winged above, sterile lemmas subequal, fertile lemma ovate and downy or silky, palea 2-nerved or veined, ovoid fruit compressed, invasive weed species widely naturalized elsewhere, palatable, competitive, perennial pasture, cultivated fodder grass, useful forage grass, agricultural crop, used for hay and silage, useful in the control of many serious weeds, useful for soil conservation purposes, may be toxic or poisonous, *Phalaris* staggers sometimes, some varieties tolerant of prolonged heavy grazing, tolerates flooding and waterlogging, drought-tolerant, common along rivers, open areas, heavy soils, sandy loam, creek banks, wet ground by streams and channels, seasonally dry places, drain margins of roadsides, moist meadows, moist fields, deep soil, coastal hillsides, waste ground, subtropical winter rainfall climates, see *Species Plantarum 1*: 55. 1753, *Centuria I. Plantarum ... 1*: 4. 1755, *Amoenitates Academicae... 4*: 264. 1759, *Mantissa Plantarum 557*. 1771, *Systema Vegetabilium. Editio decima tertia 88*. 1774, *Prodromus Plantarum Capensium, ... 19*. 1794, *Systema Vegetabilium 2*: 403. 1817, *De Graminibus Paniceis 254*. 1826, *Bulletin de la Société Botanique de France 32(7)*: 395. 1885, *Cat. Phanerogam. Madeira Porto Santo 58*. 1894, *Flore de l'Algérie 140-141*. 1895 and *Flora Sicula 3*: 251. 1908-1909, *Repertorium Specierum Novarum Regni Vegetabilis 5*: 333. 1908, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord 13*: 21. 1922, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord 24(7)*: 230. 1933, *Journal of the Washington Academy of Sciences 24(7)*: 292. 1934, *Anales del Jardín Botánico de Madrid 8*: 489. 1947, *Flore de l'Afrique du Nord: 2*: 18. 1953, *Iowa St. Coll. J. Sci.* 36: 43. 1961, R.N. Oram, J.D. Williams, "Variation in concentration and composition of toxic alkaloids among strains of *Phalaris tuberosa* L." *Nature 213*: 946-947. 1967, *Flora Ilustrada de Entre Ríos (Argentina) 2*: 115. 1969, *Fl. Trop. E. Africa 97*. 1970, R.N. Oram, "Genetic and environmental control of the amount and composition of toxins in *Phalaris tuberosa* L." in *Proceed. International Grassland Cong.:* 785-788. 1970, *Cytologia 50*: 89-99. 1985, *Revista Brasileira de Genética 9(3)*: 549-554. 1986, *Boletim da Sociedade Broteriana, ser. 2 63*: 29-66. 1990, *Informatore Botanico Italiano 22*: 227-236. 1990, *Webbia 47(1)*: 20. 1993, *Caryologia 46*: 47-52. 1993, *Bothalia 26(1)*: 63-67. 1996.

in English: Toowoomba Canary grass, Toowoomba Canary grass, Towoomba Canary grass, Toowoomba Canary grass, bulbous Canary grass, tall Canary grass, perennial Canary grass, phalaris, Harding grass, Peruvian winter grass

in French: alpiste bulbeux, phalaris tubéreux, phalaris nouveau, herbe de Harding, alpiste nouveau

in Italian: falaride tuberosa

in Spanish: rabillo de cordero, falaris bulbosa, falaris perenne, mata dulce

in Mexico: alpiste blanco, triguera

P. arundinacea L. (*Arundo colorata* Aiton; *Arundo riparia* Salisb.; *Baldingera arundinacea* (L.) Dumort.; *Baldingera arundinacea* var. *picta* (L.) Nyman; *Baldingera arundinacea* var. *rotgesii* Foucaud & Mandon ex Husn.; *Baldingera colorata* P. Gaertn., B. Mey. & Scherb.; *Calamagrostis colorata* (Aiton) Sibth.; *Calamagrostis variegata* With.; *Digraphis americana* Elliott ex Loud.; *Digraphis arundinacea* (L.) Trin.; *Digraphis arundinacea* f. *coarctata* Prah!; *Endallex arundinacea* Raf.; *Endallex arundinaceae* Raf. ex B.D. Jacks.; *Phalaridantha arundinacea* (L.) St. Lag.; *Phalaris arundinacea* f. *coarctata* (Prah!) Junge; *Phalaris arundinacea* f. *luteo-picta* Voss; *Phalaris arundinacea* f. *minor* Jansen & Wacht.; *Phalaris arundinacea* f. *pallens* Stebler ex Hegi; *Phalaris arundinacea* f. *pallida* Schwarz; *Phalaris arundinacea* f. *picta* (L.) Asch. & Graebn.; *Phalaris arundinacea* f. *picta* (L.) Paunero, nom. illeg., non *Phalaris arundinacea* f. *picta* (L.) Asch. & Graebn.; *Phalaris arundinacea* f. *ramifera* Junge; *Phalaris arundinacea* f. *ramosa* Gaudin; *Phalaris arundinacea* f. *thyrsoides* (Willk.) Paunero; *Phalaris arundinacea* f. *variegata* (Parnell) Druce; *Phalaris arundinacea* race. *rotgesii* (Foucaud & Mandon ex Husn.) Jansen & Wacht.; *Phalaris arundinacea* subsp. *hispanica* (Coincy) Kerguélen; *Phalaris arundinacea* subsp. *oehleri* Pilg.; *Phalaris arundinacea* subsp. *typica* Paunero; *Phalaris arundinacea* var. *colorata* Hartm.; *Phalaris arundinacea* var. *genuina* Hack.; *Phalaris arundinacea* var. *japonica* (Steud.) Hack.; *Phalaris arundinacea* var. *latifolia* Henrard ex Jansen; *Phalaris arundinacea* var. *leioclada* Maire; *Phalaris arundinacea* var. *picta* L.; *Phalaris arundinacea* var. *thyrsoides* Willk.; *Phalaris arundinacea* var. *variegata* Parnell; *Phalaris caesia* Nees; *Phalaris hispanica* Coincy; *Phalaris japonica* Steud.; *Phalaroides arundinacea* (L.) Rauschert; *Phalaroides arundinacea* subsp. *caesia* (Nees) Tzvelev; *Phalaroides arundinacea* subsp. *japonica* (Steud.) Tzvelev; *Phalaroides arundinacea* var. *picta* (L.) Tzvelev; *Phalaroides caesia* (Nees) Holub; *Phalaroides hispanica* (Coincy) Holub; *Phalaroides japonica* (Steud.) Czer.; *Typhoides arundinacea* (L.) Moench)

Circumboreal, temperate Eurasia, North America. Perennial or annual, tall, tufted, sod-forming, herbaceous, semi-aquatic, highly variable species often densely colonial, erect or geniculate, very robust and sturdy, smooth, sometimes rooting at the lower nodes, rhizomatous with long creeping rhizomes, sheath smooth and rounded, ligule membranous, no auricles, blade glabrous and flat, dense or loose cylindrical erect or nodding panicle, chasmogamous spikelets oblong and crowded, vestigial foliar structure subtending the inflorescence usually present, 2 sterile florets scale-like and villous, subequal glumes not winged and narrow-lan-

ceolate, fertile lemma narrow-oblong and glossy, sterile lemmas villous, palea 2-nerved, ovary glabrous, grain dark to gray-black, spreads by seeds or by creeping rhizomes, extremely aggressive and very vigorous weed widely naturalized elsewhere, groundcover, ornamental, invasive tendency, hay, cultivated fodder, planted as a forage crop in some areas, native pasture species, useful for grazing when young, a potential source of fiber (for pulping) and fuel, dense stands of this grass have little value for wildlife, have caused poisoning to mammals, a serious weed along irrigation banks and ditches, used for erosion control and to revegetate strip mine spoils, good for stream bank stabilization, excellent for rehabilitating waterways, resistant to flooding and also to temporary droughts, usually found along streams, disturbed habitats, sandy alluvium, in wet situations, poorly drained soils subject to flooding, margins of cultivated fields, in moist to seasonally wet sites, shores, wet meadows, alluvial meadows, wet and boggy soils, wetlands and riparian areas, in shallow marshes or beside water, ponds, in marshy soils, in open seepage sites, wet ditches, brackish tidelands, chaparral, open flat meadow, irrigation banks and ditches, irrigation channels, lakes, see *Species Plantarum* 1: 54-55. 1753, *Hortus Kewensis*; or, a *Catalogue ... The second edition* 1: 116. 1789, *Flora Oxoniensis* 37. 1794, *Methodus Plantas Horti Botanici ...* 202. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 24. Londini [London] (Nov.-Dec.) 1796, *An Arrangement of British Plants, Third Edition* 1796, *Oekonomisch-Technische Flora der Wetterau* 1: 96. Frankfurt a.M. 1799, *Fundamenta Agrostographiae* 127. 1820, *Observations sur les Graminées de la Flore Belgique* 130, t. 10, f. 40. 1823[1824], *Flora Helvetica* 1: 160. 1828, *Loudon's Hortus Britannicus: A Catalogue ...* 27. 1830, *Bulletin Botanique [Genève]* 1: 220. 1830, *Florae Africae Australioris Illustrationes Monographicae* 6. 1841, *Handbok i Skandinavien's Flora edition 4* 22. 1843, *The Grasses of Britain* 188, t. 82. 1845, *Synopsis Plantarum Glumacearum* 1: 11. 1855 [1853], *Österreichische Botanische Zeitschrift* 40(4): 145. 1890, *Index Kewensis* 1: 839. 1893, *Journal de Botanique (Morot)* 8: 207. 1894, *Vilmorin's Blumengärtnerei. edition 3* 1198. 1898, *Synopsis der mitteleuropäischen Flora* 2(1): 24. 1898, *Bulletin de l'Herbier Boissier* 7(9): 646. 1899 and *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten. Beihefte* 3: 60. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43(1): 91. 1909, *Nederlandsch Kruidkundig Archief. Verslagen en Mededelingen der Nederlandsche Botanische Vereeniging* 6: 141-142. 1917, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 217. 1941, *Anales del Jardín Botánico de Madrid* 1947-1948, *Flora Neerlandica* 243. 1951, *Iowa St. Coll. J. Sci.* 36: 37. 1961, *Feddes Repertorium* 79(6): 409. 1969, *Novosti Sist. Vyss. Rast.* 10: 80. 1973, *Bull. Soc. bot. Fr.* 123(56): 322. 1976, *Folia Geobotanica et Phytotaxonomica* 12(4): 428. 1977, *Fragmenta Floristica et Geobotanica* 27: 581-590. 1981, *Turun*

Yliopiston Julkaisuja: Sarja A II, Biologia-Geographica 3: 1-12. 1982, *Cytologia* 50: 89-99. 1985, *Blyttia* 1985: 7-15. 1985, S.I Apfelbaum and C.E. Sams, "Ecology and control of reed canarygrass (*Phalaris arundinacea* L.)." *Natural Areas Journal*. 7: 69-74. 1987, *Taxon* 40: 481, 483. 1991, *Watsonia* 20: 63-66. 1994, *Webbia* 49(2): 268, 270. 1995, Emily K. Green and Susan M. Galatowitsch, "Effects of *Phalaris arundinacea* and nitrate-N addition on the establishment of wetland plant communities." *Journal of Applied Ecology* 39(1): 134-144. Feb 2002, Lisa E. Wallace, "The cost of inbreeding in *Platanthera leucophaea* (Orchidaceae)." *Am. J. Bot.* 90: 235-242. 2003, *Journal of Applied Ecology* 41(1): 151-162. Feb 2004 [Competitive control of invasive vegetation: a native wetland sedge suppresses *Phalaris arundinacea* in carbon-enriched soil.], I.N. Taylor, N.C.B. Peters, S.W. Adkins and S.R. Walker, "Germination response of *Phalaris paradoxa* L. seed to different light qualities." *Weed Research* 44(4): 254-264. Aug 2004, *Weed Research* 45(2): 140-148. Apr 2005, *Conservation Biology* 19(2): 473-481. Apr 2005, *Plant Breeding* 124(2): 147-153. Apr 2005, Richard D. Foster and Paul R. Wetzal, "Invading monotypic stands of *Phalaris arundinacea*: a test of fire, herbicide, and woody and herbaceous native plant groups." *Restoration Ecology* 13(2): 318-324. June 2005, *Weed Research* 45(3): 175-192. June 2005, *Oikos* 110(2): 271-282, 409-416. Aug 2005.

in English: reed Canary grass, gardener's garters, ribbon grass, variegated grass

in French: alpiste roseau, baldingère, baldingère faux roseau, phalaris roseau

in Danish: båndgræs, røgræs

in Finnish: ruokohelpi

in Swedish: rörfen

in Spanish: hierba cinta, pasto cinto

in Colombia: alpiste de forraje

in India: patte hullu

in Japan: kusa-yoshi

in Chinese: wu se cao, cao lu

in southern Africa: langbeenkanariegras, rietgras, rietkanariegras; lekolojane (Sotho)

P. arundinacea L. subsp. ***rotgesii*** (Foucaud & E. Mandon ex Husn.) Kerguélen (*Baldingera arundinacea* var. *rotgesii* Foucaud & Mandon ex Husn.; *Phalaris rotgesii* (Foucaud & Mandon ex Husn.) Baldini)

Southwestern Europe. See *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 87. 1899 and *Lejeunia*, sér. 2, 75: 226. 1975, *Taxon* 40(3): 475-485. 1991, *Webbia* 47(1): 13. 1993.

P. arundinacea L. var. ***arundinacea***

Eurasia, Southern Africa, America. Perennial, reedlike, erect or procumbent, rooting at nodes, sheaths glabrous,

grows in wet situations, near flowing water, swamps, in damp wood, creek banks, see *Species Plantarum* 1: 55. 1753 and *New Zealand Journal of Botany* 29: 101-116. 1991, *Webbia* 49(2): 265-329. 1995, *Opera Botanica* 137: 1-42. 1999.

in English: reed Canary grass

in Swedish: vanlig rörfen

P. arundinacea L. var. ***picta*** L. (*Baldingera arundinacea* (L.) Dumort.; *Baldingera arundinacea* var. *picta* (L.) Nyman; *Baldingera arundinacea* var. *picta* (L.) Peterm.; *Baldingera arundinacea* var. *variegata* Coss. & Germ.; *Digraphis arundinacea* var. *picta* (L.) Pacher; *Phalaris americana* Elliott; *Phalaris americana* var. *picta* Eaton & J. Wright; *Phalaris arundinacea* f. *luteo-picta* Voss; *Phalaris arundinacea* f. *picta* (L.) Asch. & Graebn.; *Phalaris arundinacea* f. *picta* (L.) Paunero, nom. illeg., non *Phalaris arundinacea* f. *picta* (L.) Asch. & Graebn.; *Phalaris arundinacea* f. *variegata* (Parnell) Druce; *Phalaris arundinacea* subsp. *picta* (L.) Arcang.; *Phalaris arundinacea* var. *japonica* (Steud.) Hack.; *Phalaris arundinacea* var. *variegata* Parnell; *Phalaris japonica* Steud.; *Phalaris picta* (L.) Sloboda; *Phalaroides arundinacea* (L.) Rauschert; *Phalaroides arundinacea* convar. *picta* (L.) Holub; *Phalaroides arundinacea* subsp. *japonica* (Steud.) Tzvelev; *Phalaroides arundinacea* var. *picta* (L.) Tzvelev)

Europe. Annual, ligule entire, variegated leaves striped green and yellow, ornamental, weed, invasive tendency, spreading by vegetative means, ground cover, often along creeks, see *Species Plantarum* 1: 55. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1: 101, t. 5, f. 4. 1816, *Observations sur les Graminées de la Flore Belgique* 130, t. 10, f. 40. 1823, *Flora Lipsiensis Excursoria* 87. 1838, *A Manual of Botany* 352. 1840, *The Grasses of Britain* 188, t. 82. 1845, *Synopsis Plantarum Glumacearum* 1: 11. 1855 [1853], *Flore Descriptive et Analytique des Environs de Paris* 784. 1861, *Jahrbuch des Naturwissenschaftlichen Landesmuseums von Kärnten* 14: 119. 1880, *Compendio della Flora Italiana* 755. 1883, *Flora of Berkshire* 556. 1897, *Vilmorin's Blumengärtnererei. edition 3* 1198. 1898, *Synopsis der mitteleuropäischen Flora* 2(1): 24. 1898, *Bulletin de l'Herbier Boissier* 7(9): 646. 1899 and *Feddes Repertorium* 79(6): 409. 1969, *Novosti Sist. Vyss. Rast.* 10: 80. 1973, *Preslia* 46(2): 168-169. 1974, *Taxon* 40: 481. 1991.

in English: reed Canary grass, gardener's garters, ribbon grass

in Japan: shima-yoshi (= striped reed), shima-gaya (= striped grass)

P. brachystachys Link (*Phalaris brachystachys* var. *robusta* Thell.; *Phalaris brachystachys* var. *typica* Paunero; *Phalaris canariensis* L. subsp. *brachystachys* (Link) Posp.; *Phalaris canariensis* var. *brachystachys* (Link) Fedtsch.;

Phalaris nitida C. Presl; *Phalaris quadrivalvis* Lag.; *Phalaris truncata* auct. lusit., non Guss. ex Bertol.; *Phalaris vivipara* Paolucci)

Eurasia, Mediterranean. Annual, caespitose, leaf sheaths not keeled, no auricles, ligule membranous and smooth, blade flat and linear, green panicle, spikelets homomorphic, hermaphrodite floret 1 per spikelet, proximal incomplete florets 2 per spikelet, chasmogamous spikelets, sterile florets short and fleshy, ovary glabrous, fruit compressed, cultivated and naturalized elsewhere in temperate regions, occurs in wetlands, in cultivated fields and along roadsides, close to *Phalaris canariensis* L., see *Species Plantarum* 1: 54-55. 1753, *Neues Journal für die Botanik* 1(3): 134. 1806, *Genera et species plantarum* 3. 1816, *Cyperaceae et Gramineae Siculae* 26. 1820, *Flora Marchigiana* 19. Pesaro 1890 [1891], *Flora des Oesterreichischen Küstenlandes* 1: 59. 1897 and *Mémoires de la Société des Sciences Naturelles de Cherbourg* 38: 88. 1912, *Anales del Jardín Botánico de Madrid* 8: 492. 1948, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Informatore Botanico Italiano* 22: 227-236. 1990, *Lagascalia* 21(1): 149-154. 1999.

in English: short-spike Canary grass

in Danish: kortakset kanariegræs

in Morocco: alpiste, zwân, tigurramîn, ddemiya, fazwât

P. californica Hook. & Arn.

North America, U.S., California. Perennial, in wetlands or nonwetlands, see *The Botany of Captain Beechey's Voyage* comprising an account of the Plants collected by Messrs. Lay and Collie ... during the voyage to the Pacific and Bering's Strait, performed in H.M.S. *Blossom* ... 1825-1828. 1: 161. London [1830-] 1841 and *Webbia* 49(2): 312. 1995.

in English: California Canary grass

P. canariensis L. (*Phalaris avicularis* Salisb.; *Phalaris canariensis* f. *bracteata* Jansen & Wacht.; *Phalaris canariensis* f. *colorata* Jansen & Wacht.; *Phalaris canariensis* f. *vivipara* Junge; *Phalaris canariensis* subsp. *typica* Posp.; *Phalaris canariensis* var. *debilis* Toel & Rohlena; *Phalaris canariensis* var. *nigra* Stokes; *Phalaris canariensis* var. *subcylindrica* Thell.; *Phalaris canariensis* var. *tenuis* Jansen & Wacht.; *Phalaris canariensis* var. *villosula* Jansen & Wacht.; *Phalaris ovata* Moench)

Western Mediterranean. Annual or short-lived perennial, herbaceous, non rhizomatous, glabrous, flimsy to robust, clumped or solitary, culms erect or sometimes geniculate at the base, often branched near the base or unbranched, ligule membranous and entire, sheaths usually smooth and rounded, no auricles, leaves linear and glabrous to scabrous, compact panicle spike-like ovoid or ovoid-oblong, spikelets obovate and compressed, thick pedicels, vestigial foliar structure subtending the inflorescence usually present, chas-

mogamous spikelets, hermaphrodite floret 1 per spikelet, proximal incomplete florets 2 per spikelet, sterile florets thin and papery to foliaceous, glumes more or less equal oblanceolate and with a winged keel, shiny-yellow fertile lemma pubescent or hairy, sterile lemmas equal, palea 2-nerved, glossy grain elliptic and compressed, grown from scattered birdseed, weed species widely naturalized elsewhere, fodder, forage, hay, palatable to stock, cultivated, potential as cereal, grain crop, the canary seed of commerce, grains used in bladder troubles and in placental retention, usually found on disturbed places and sandy soils, irrigation ditches, weedy areas, railroads, cultivated lands, waste places and moist waste places, wet embankments, in open habitats, along roadsides, in dry habitats, pastures, on wet stream banks, gardens, see *Species Plantarum* 1: 54-55. 1753, *Methodus Plantas Horti Botanici* ... 208. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium* 17. 1796, *A Botanical Materia Medica* 1: 135. 1812, *Flora des Oesterreichischen Küstenlandes* 1: 59. 1897 and *Sitzungsberichte der Königlichen Böhmisches Gesellschaft der Wissenschaften, Mathematisch-Naturwissenschaftliche Classe* 49: 1. 1902, *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten* 30: 123. 1912, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 271. 1912, *Nederlandsch Kruidkundig Archief. Verslangenen en Mededelingen der Nederlandsche Botanische Vereeniging* 6: 135. 1917, *Nederlandsch Kruidkundig Archief. Verslangenen en Mededelingen der Nederlandsche Botanische Vereeniging* 52: 213. 1942, *Iowa State Journ. Sci.* 36: 59. 1961, *Fragmenta Floristica et Geobotanica* 27: 581-590. 1981, *Godishen Zbornik Biologija Biološki Fakultet Na Univerzitetot Kiril I Metodij Skopje* 35: 145-161. 1982, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Informatore Botanico Italiano* 22: 227-236. 1990, *Taxon* 40: 483. 1991, *Webbia* 49(2): 285. 1995.

in English: Canary grass, annual Canary grass, Canary seed grass, common Canary grass, birdseed grass

in French: alpiste des Canaries

in Morocco: alpiste, zwân, tigurramîn, ddemiya, fazwât

in Finnish: Kanarianhelpi

in Swedish: Kanariegräs

in German: Kanariengras

in Spanish: alpiste, alpiste blanco

in Colombia: alpiste de canarios

in Ecuador: escobilla, ocuchichupa

in Mexico: alpiste

in South Africa: gewone kanariegras, kanariesaadgras, kwarrelsaadgras

in Japan: kanari-kura-yoshi

P. caroliniana Walt. (*Phalaris americana* Elliott; *Phalaris intermedia* Bosc ex Poir.; *Phalaris intermedia* var. *microstachya* (DC.) Vasey ex L.H. Dewey; *Phalaris intermedia* var. *microstachya* (DC.) Vasey; *Phalaris microstachya* DC.; *Phalaris occidentalis* Nutt.; *Phalaris trivialis* Trin.)

Northern America, U.S., Mexico. Annual, tufted, upright, smooth, fibrous roots, elongated leaves, long-cylindrical spikes, crowded spikelets, 2 sterile lemmas, forage, reddish grains used by the native Missouri Indians before corn and sunflowers became important, usually occurs in wetlands, stream banks, moist ditches and bottomlands, disturbed areas, along roadsides, in open fields, old fields, floodplains and partially inundated prairies, see *Flora Caroliniana, secundum ...* 74. 1788, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 300. 1810, *Catalogus plantarum horti botanici monspeliensis* 131. 1813, *A Sketch of the Botany of South-Carolina and Georgia* 1: 101, t. 5, f. 4. 1816, *Transactions of the American Philosophical Society, new series*, 5: 114. 1837, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 55. 1839, *Contributions from the United States National Herbarium* 3(1): 42. 1892, *Contributions from the United States National Herbarium* 2(3): 512. 1894 and *Iowa State Journ. Sci.* 36: 80. 1961, *Webbia* 49(2): 299. 1995.

in English: Carolina Canary grass, Maygrass, Southern Canary grass

in Finnish: Lännehelpi

P. coerulescens Desf. (*Phalaris aquatica* auct. lusit., non L.; *Phalaris aquatica* var. *macrostachys* Mutel; *Phalaris bulbosa* Cav., nom. illeg., non *Phalaris bulbosa* L.; *Phalaris bulbosa* var. *coerulescens* (Desf.) Knoch; *Phalaris bulbosa* var. *nervosa* Willk.; *Phalaris coerulescens* var. *concolor* Lojac.; *Phalaris coerulescens* var. *maior* De Not.; *Phalaris coerulescens* var. *ovata* Parl.; *Phalaris coerulescens* var. *tenuis* Asch. & Graebn.; *Phalaris coerulescens* var. *villosula* De Not. ex Parl.; *Phalaris paradoxa* L.; *Phalaris paradoxa* var. *coerulescens* (Desf.) Paunero; *Phalaris tuberosa* Link, nom. illeg., non *Phalaris tuberosa* L.; *Phalaris variegata* Spreng.; *Phalaris villosula* De Not. ex Parl.)

Mediterranean. Perennial, tufted, terete, unbranched, bulbous at the base, sheaths striate and smooth, ligule oblique and membranous, no auricles, blade acuminate, a contracted panicle purple and cylindrical, chasmogamous spikelets, hermaphrodite floret 1 per spikelet, proximal incomplete florets 2 per spikelet, glumes aristate, sterile florets reduced or obsolete, bisexual lemma shining, ovary glabrous, forage, naturalized elsewhere, weed, drought-resistant, cultivated for fodder, close to *Phalaris paradoxa* L., found on grassland and woodland, moist places, coastal areas, see *Species Plantarum, Editio Secunda* 2: 1665. 1763, *Icones et*

Descriptiones Plantarum, quae aut sponte ... 1: 46, t. 64. 1791, *Flora Atlantica* 1: 56. 1798, *Journal für die Botanik* 4: 312. 1799[1800], *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 101. 1821, *Plantae Novae vel Minus Notae* opusculis diversis olim descriptae generibus quibusdam speciebusque novis adjectis iterum recognitae... 33. Parisiis 1842, *Repertorium Florae Ligusticae* 442. 1844, *Flora italiana, ossia descrizione delle piante ...* 1: 73. 1848, *Prodromus Florae Hispanicae* 1: 37. 1861, *Synopsis der mitteleuropäischen Flora* 2(1): 17. 1898 and *Gram. Madeira* 23. 1906, *Flora Sicula* 3: 251. 1908-1909, *Fl. Balearica* 1: 289. 1921, *Anales del Jardín Botánico de Madrid* 8: 486. 1948, *Iowa State College Journal of Science* 36: 1-96. 1961, *Flora de la Provincia de Buenos Aires* 4(2): 175-189. 1970, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Lagascalia* 15: 269-282. 1990, *Informatore Botanico Italiano* 22: 227-236. 1990, *Caryologia* 46: 47-52. 1993, *Webbia* 49(2): 282. 1995.

in English: blue Canary grass, sunol grass

P. elongata Braun-Blanquet (*Phalaris aquatica* L.; *Phalaris bulbosa* var. *hirtiglumis* Trab.; *Phalaris hirtiglumis* (Trab.) Baldini; *Phalaris tuberosa* var. *hirtiglumis* Trab.)

Tunisia, Algeria, Europe, Mediterranean. Coarse bunchgrass, round bulblike enlargements at the base of culm, forage, see *Amoenitates Academicarum ...* 4: 264. 1759, *Mantissa Plantarum* 557. 1771, *Bulletin de la Société Botanique de France* 32(7): 395. 1885, *Flore d'Alger* 140. 1895 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 13: 21. 1922, *Fl. Trop. E. Africa* 97. 1970, *Webbia* 47(1): 20. 1993 and 49: 279. 1995.

in English: kolea grass

P. lemmonii Vasey (after the American botanist John Gill Lemmon, 1832-1908, plant collector, correspondent of Asa Gray, wrote *Conifers of the Pacific Slope*. [Oakland, California 1902]. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 367. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 262. 1973; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 234. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Joseph Ewan, editor, *A Short History of Botany in the United States*. 12. 1969; J.W. Harshberger, *The Botanists of Philadelphia*. Philadelphia 1899; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in

Mexico." *Phytologia Memoirs*. VI. 1983; Ira L. Wiggins, *Flora of Baja California*. Stanford, California 1980)

North America, U.S., California. Annual, small, erect or geniculate, caespitose, unbranched, leaf sheaths not keeled, ligule membranous and entire, blade flat and linear, no auricles, a green panicle erect and contracted, chasmogamous spikelets, hermaphrodite floret 1 per spikelet, proximal incomplete florets 2 per spikelet, anthers yellow, ovary glabrous, occurs under moist conditions, on dry red soil, gravelly soil, usually in wetlands, cultivated fields, see *Contributions from the United States National Herbarium* 3(1): 42. 1892 and *Fl. Calif.* 3: 96-99. 1912.

in English: Lemmon's Canary grass

P. lindigii Baldini (after Alejandro Lindig, fl. 1861)

South America, Ecuador, Colombia. Savannah, see *Webbia* 49(2): 317-319, f. 11, 18. 1995.

P. maderensis (Menezes) Menezes (*Phalaris coerulescens* var. *maderensis* Menezes)

Europe, Portugal, Madeira. Endangered species, see *Flora Atlantica* 1: 56. 1798, *Cat. Phanerogam. Madeira Porto Santo* 57. 1894 and *Gram. Madeira* 23. 1906, *Webbia* 49(2): 282. 1995.

P. minor Retz. (*Phalaris ambigua* Fig. & De Not.; *Phalaris aquatica* Thunb., nom. illeg., non *Phalaris aquatica* L.; *Phalaris aquatica* var. *minor* (Retz.) Mutel; *Phalaris arundinacea* var. *minor* (Retz.) Paunero; *Phalaris brevis* Trin.; *Phalaris canariensis* L.; *Phalaris capensis* Thunb.; *Phalaris decumbens* Moench; *Phalaris gracilis* Parl.; *Phalaris haematites* Duval-Jouve & Paris; *Phalaris haematites* var. *granulosa* Sennen & Mauricio; *Phalaris mauritii* Sennen [dedicated to frère Mauricio, the co-author of *Catálogo de la flora del Rif oriental* y principalmente de las Cabilas limitrofes con Melilla... Melilla 1933]; *Phalaris minor* f. *bracteata* Jansen & Wacht.; *Phalaris minor* f. *composita* Jansen & Wacht.; *Phalaris minor* f. *glomerata* Henrard ex Jansen & Wacht.; *Phalaris minor* f. *gracilis* (Parl.) Asch. & Graebn.; *Phalaris minor* f. *haematites* Duval-Jouve & Paris ex Trab.; *Phalaris minor* f. *subcylindrica* Web. & Thell. ex Jansen & Wacht.; *Phalaris minor* subsp. *gracilis* (Parl.) Arcang.; *Phalaris minor* var. *comosula* Heldr.; *Phalaris minor* var. *genuina* Maire & Weiller; *Phalaris minor* var. *gracilis* (Parl.) Parl.; *Phalaris minor* var. *haematites* Duval-Jouve & Paris; *Phalaris minor* var. *integra* Trab.; *Phalaris minor* var. *nepalensis* (Trin.) Bor; *Phalaris minor* var. *phaeosperma* Cavara; *Phalaris nepalensis* Trin.; *Phalaris trivialis* Trin.; *Tovaroichloa peruviana* T.D. Macfarl. & But)

Mediterranean. Annual, quick growing, tufted or clumped or solitary, glabrous, flimsy, very slender to robust, erect or geniculate, articulate and ascending stems, branched or unbranched, sheaths glabrous, no auricles, ligule membranous or hyaline, blade flat, leaves lanceolate and glabrous, spike-like green panicle dense and cylindrical or

oblong-cylindrical, chasmogamous spikelets, terminal seed head not lobed, spikelets imbricate and compressed, vestigial foliar structure subtending the inflorescence usually present, one sterile floret, narrow oblong glumes with a winged keel or a toothed-erose wing margin, fertile lemma downy and oblong to narrow-ovate, ovary glabrous, fruit compressed, impermeable seed coat, a common weed of cultivation widely naturalized elsewhere, weed of wheat, a pasture species, palatable, succulent and nutritive, fodder, forage for livestock or for birdseed, grown for birdseed, when young palatable to stock, suitable for hay, may be toxic or very poisonous in its young stage but is safe when old and dried, usually found in disturbed areas and moist habitats, in wasteland, in poor sandy soils, stony places, roadsides, fields, orchards, poor pasture, damp areas, ballast, damp bare soil, see *Centuria I. Plantarum* ... 4. 1755, *Amoenitates Academicae*... 4: 264. 1759, *Observationes Botanicae* 3: 8. 1783, *Prodromus Plantarum Capensium*, ... 19. 1794, *Methodus Plantas Horti Botanici* ... 208. 1794, *Species Graminum* 1828-1836, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 50, 55. 1839, *Plantae Novae vel Minus Notae* ... 36. 1842, *Flora italiana, ossia descrizione delle piante* ... 1: 70. 1848, *Agrostographiae Aegyptiacae Fragmenta* 10, t. 6. 1853, *Bulletin de la Société Botanique de France* 14: 276. 1867, *Bulletin de la Société Botanique de France* 32(7): 394. 1885, *Synopsis der mitteleuropäischen Flora* 2(1): 21. 1898, *Bulletin de l'Herbier Boissier* 4: 396. 1898 and *Nederlandsch Kruidkundig Archief. Verslangen en Mededelingen der Nederlandsche Botanische Vereeniging* 6: 131-132. 1917, *Bull. dell' Orto Botanico della Regia Università di Napoli* 9: 42. 1927, *Catálogo de la flora del Rif oriental* y principalmente de las Cabilas limitrofes con Melilla... 125. Melilla 1933, *Anales del Jardín Botánico de Madrid* 8: 489. 1948, *Flore de l'Afrique du Nord*: 2: 23. 1953, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 616. 1960, *Brittonia* 34(4): 478-481, f. 1. 1982, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Annali di Botanica* 45: 75-102. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Bothalia* 18: 114-119. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Boletim da Sociedade Brotteriana, ser. 2* 63: 153-205. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991, *Bocconeia, Monographiae Herbarii Mediterranei Panormitani* 3: 229-250. 1992, *Caryologia* 46: 47-52. 1993, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Webbia* 49(2): 279-280, 299. 1995, *Bothalia* 26(1): 63-67. 1996, *Lagascalia* 21(1): 149-154. 1999, *Weed Research* 45(2): 140-148. Apr 2005 [Dormancy and viability of *Phalaris minor* seed in a rice-wheat cropping system].

in English: little-seeded Canary grass, littleseed Canary grass, little-seed Canary grass, small Canary grass, lesser

Canary grass, annual Canary grass, Mediterranean Canary grass

in French: phalaris mineur

in Spanish: alpiste valillo, pasto romano

in Arabic: sha'ir el-far, tassala, tassla

in Mauritania: tassala

in Morocco: alpiste, alpiste nain, zwân, tigurramîn, ddemiya, fazwât, senbout-el-far

in South Africa: kanariegras, kleinsaadkanariegras

in Finnish: Pikkuhelpi

in Swedish: Kanariegräs

in Bhutan: gongey banso, ghongey banso, ragate jihar, yup

in India: chiriya bajra

P. paradoxa L. (*Phalaris appendiculata* Schult.; *Phalaris dentata* Sieber ex Schult., nom. illeg., non *Phalaris dentata* L.f.; *Phalaris obvallata* Trin.; *Phalaris paradoxa* f. *nana* Chiov.; *Phalaris paradoxa* f. *praemorsa* (Lam.) Paunero; *Phalaris paradoxa* var. *appendiculata* (Schult.) Chiov.; *Phalaris paradoxa* var. *intacta* Coss. & Durieu; *Phalaris paradoxa* var. *intermedia* Coss. & Durieu; *Phalaris paradoxa* var. *megastachys* Goiran; *Phalaris paradoxa* var. *microstachys* Goiran; *Phalaris paradoxa* var. *praemorsa* (Lam.) Coss. & Durieu; *Phalaris paradoxa* var. *typica* Paunero; *Phalaris praemorsa* Lam.; *Phalaris pseudo-paradoxa* Fig. & De Not.; *Phalaris rubens* Ehrenb. ex Trin.; *Phalaris sibthorpii* Griseb.; *Phalaris utriculosa* L. ex Munro) (named for the British botanist John Sibthorp (b. Oxford 1758-d. Bath, Somerset 1796), 1784 MD, 1784-1796 professor of botany and Director of the Botanical Garden of Oxford, 1786-1787 traveler in Greece with Ferdinand Lukas [Lucas] Bauer (1760-1826), 1794-1795 with the Italian naturalist Francesco Borone (1769-1794) in Turkey and the Peloponnesus; he was the son of the British (b. Canwick, Lincoln) botanist Humphrey Waldo Sibthorp, 1713-1797 (d. Instow, Devon), physician, professor of botany. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 140 and 3: 275. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Stafleu and Cowan, *Taxonomic literature*. 5: 577-580. Utrecht 1985; I.H. Vegter, *Index Herbariorum*. Part II (6), *Collectors S. Regnum Vegetabile* vol. 114. 1986; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 366. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 38-42, 244. 1964; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. 1975; William Darlington, *Memorials of John Bartram and Humphry Marshall*. 428-430. 1849; Humphrey Sibthorp, *To the Gentlemen Delegates of Accounts, and of the Committee for the Physick Garden*. [An Address respecting the Botanic Library and other buildings connected with the Botanic Gardens at Oxford]

[Oxford 1778?]; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 257. Palermo 1988; H.R. Fletcher, *Story of the Royal Horticultural Society, 1804-1968*. Oxford 1969; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 626. 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 812. 1852; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 169. 1989; Sir James Edward Smith (1759-1828), *Tracts Relating to Natural History*. 288, t. 4, 5, 6, 7. [Octavo, first edition; a collection of 12 essays including "Description of a New Genus of Plants called *Boronia*."] London 1798; W.T. Stearn, "Franz and Ferdinand Bauer, masters of botanical illustration." *Endeavour*. 73: 27-35. 1960; R. Olby, in *D.S.B. (or Dictionary of Scientific Biography)*. Editor in Chief Charles Coulston Gillispie. 1: 520-521. 1981; H. Walter Lack and Victoria Ibáñez, "Recording color in late eighteenth century botanical drawings: Sydney Parkinson, Ferdinand Bauer and Thaddäus Haenke." *Curtis's Botanical Magazine*. 14(2): 87-100. May 1997; H. Walter Lack, "Recording form in early nineteenth century botanical drawings. Ferdinand Bauer's 'Cameras'." in *Curtis's Botanical Magazine*. 15(4): 254-274. November 1998; Alphonse Louis Pierre Pyramus de Candolle, 1806-1893, *La phytographie ou l'art de décrire les végétaux considérés sous différents points de vue*. 450. Paris 1880)

Mediterranean and southwestern Asia. Annual, tufted, glabrous, herbaceous, robust, erect or geniculate at the base, at first weak and decumbent, leafy, branched at base, sheaths striate and not keeled, ligule membranous to hyaline, no auricles, blade scabrous and flat, dense cylindrical panicle with spikelets of 2 kinds, both fertile and sterile spikelets within the same inflorescence, chasmogamous, sterile spikelets very variable, sessile fertile spikelet surrounded by a cluster of reduced sterile spikelets, fertile spikelet flattened, vestigial foliar structure subtending the inflorescence usually present, glumes hard with a tooth-like wing and a bristle-like apex, fertile lemma glabrous and shining, ovary glabrous, close to *Phalaris coerulescens* Desf., when young palatable to stock, of little value for fodder, a crop weed widely naturalized elsewhere, common in disturbed places and open habitats, in shallow drainage, roadsides, in roadside ditch, ballast, waste ground, deep loamy soils, along edge of cultivated fields, on heavy black cracking soil, rubbish dump, see *Species Plantarum, Editio Secunda* 2: 1665. 1763, *Flore Française* 3: 566. Paris 1778, *Mantissa* 2: 216. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 51. 1839, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 468. 1844, *Agrostographiae Aegyptiacae Fragmenta* 11. 1853, *Exploration Scientifique de l'Algérie*

2: 24-25. Paris 1854, *Journal of the Linnean Society, Botany* 6: 36. 1862 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 328. 1908, *Nuovo Giornale Botanico Italiano, n.s.* 17: 53. 1910, *Anales del Jardín Botánico de Madrid* 8: 486. 1948, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Annali di Botanica* 45: 75-102. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Bothalia* 18: 114-119. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Informatore Botanico Italiano* 22: 227-236. 1990, *Taxon* 40: 483. 1991, *Fitologija* 39: 72-77. 1991, *Webbia* 49(2): 292. 1995, *Bot. Zhurn. (Moscow & Leningrad)* 80(2): 87-90. 1995, *Flora Mediterranea* 5: 331-334. 1995, *Bothalia* 26(1): 63-67. 1996, *Weed Research* 45(1): 33-40. Feb 2005 [Burial depth and cultivation influence emergence and persistence of *Phalaris paradoxa* seed in an Australian subtropical environment.].

in English: Canary grass, hood Canary grass, gnawed canary grass, paradoxa grass, paradoxical Canary grass, Mediterranean Canary grass

in Morocco: alpiste, zwân, tigurramîn, ddemiya, d-dem-miya, fazwât, bu qbala, senbult l-far

in Finnish: Rikkahelpi

P. paradoxa L. var. ***praemorsa*** (Lam.) Coss. & Durieu

Yemen. Sterile spikelets clublike, found along roadside, roadside ditch, see *Species Plantarum, Editio Secunda* 2: 1665. 1763, *Flore Française* 3: 566. 1778, *Exploration Scientifique de l'Algérie* 2: 25. 1855.

P. peruviana H. Scholz & Gutte

South America, Peru. See *Willdenowia* 8: 379-381. 1978.

P. platensis Henrard ex Wacht. (*Phalaris arechavaletae* Herter; *Phalaris intermedia* f. *platensis* Arechav.; *Phalaris intermedia* var. *platensis* (Arechav.) Speg.; *Phalaris platensis* Henrard, nom. illeg., non *Phalaris platensis* Henrard ex Wacht.; *Phalaris platensis* (Arechav.) Parodi ex Valencia, nom. illeg., non *Phalaris platensis* Henrard ex Wacht.)

South America, Argentina, Uruguay, Brazil. See *Anales del Museo Nacional de Montevideo* 4: 298, t. 28. 1896 and *Contribucion al Estudio de la Flora del Tandil* 53. 1901, *Revista Argentina de Agronomía* 4: 298. 1937, *Blumea* 3: 167-172. 1938, *Revista Sudamericana de Botánica* 9: 105. 1953, *Iowa State College Journal of Science* 36(1): 73. 1961, *Flora de la Provincia de Buenos Aires* 4(2): 175-189. 1970, *Webbia* 49: 310. 1995.

P. truncata Guss. ex Bertol. (*Phalaris biattenuata* Gand.; *Phalaris brachystachys* var. *truncata* (Guss. ex Bertol.) Paunero; *Phalaris truncata* f. *angustata* Trab.; *Phalaris truncata* var. *angustata* (Trab.) Maire & Weiller; *Phalaris truncata* var. *typica* Maire & Weiller; *Phalaris truncata* var. *villighumis* Trab. ex Maire; *Phalaris tuberosa* L.)

Tunisia, Turkey, Algeria, Europe. Useful for erosion control, see *Mantissa Plantarum* 557. 1771, *Neues Journal für die*

Botanik 1(3): 134. 1806, *Flore d'Alger* 140. 1895 and *Anales del Jardín Botánico de Madrid* 8: 492. 1948, *Flore de l'Afrique du Nord*: 2: 20. 1953, *Iowa State College Journal of Science* 36(1): 43. 1961, *Informatore Botanico Italiano* 22: 227-236. 1990, *Webbia* 49: 284. 1995.

P. tuberosa L. (*Phalaris aquatica* L.; *Phalaris aquatica* var. *aquatica*; *Phalaris bulbosa* L.; *Phalaris truncata* Guss. ex Bertol.; *Phleum bulbosum* (L.) K. Richt., nom. illeg., non *Phleum bulbosum* Gouan)

Europe. See *Centuria I. Plantarum ...* 1: 4. 1755, *Amoen. Acad.* 4: 264. 1759, *Mantissa Plantarum* 557. 1771, *Flora Italica* 2: 777. 1835, *Plantae Europaeae* 1: 37. 1890 and *Iowa St. Coll. J. Sci.* 36: 43. 1961, *Fl. Trop. E. Africa* 97. 1970, *Webbia* 49(2): 284. 1995.

in English: Canary grass

P. x daviesii S.T. Blake (*Phalaris daviesii* S.T. Blake; *Phalaris minor* Retz. x *Phalaris aquatica* L.)

Australia. Cultivated, forage, see *Proceedings of the Royal Society of Queensland* 67(4): 27. 1956, *Webbia* 49: 319. 1995.

Phalaroides Wolf = *Digraphis* Trin., *Phalaris* L., *Typhoides* Moench

Resembling the genus *Phalaris* L.

Pooideae, Poaceae, Phalaridinae, see *Species Plantarum* 1: 54-55. 1753, *Genera Plantarum* 11. 1776, *Methodus Plantas Horti Botanici ...* 201. 1794, *Flora der Wetterau* 1: 43, 96. 1799, *Fundamenta Agrostographiae* 127. 1820, *Bulletin Botanique [Genève]* 1: 220. 1830 and *Iowa State College Journal of Science* 36(1): 1-96. 1961, *Taxon* 40(3): 475-485. 1991, *Taxon* 41: 567. 1992, *Flora Mesoamericana* 6: 236-237. 1994, *Webbia* 49(2): 265-329. 1995, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 270-271, 479-488, 684. 2003.

Phalona Dumort. = *Cynosurus* L., *Falona* Adans.

From the Greek *phalos*, *phalon* "shining, bright, white."

Pooideae, Poodae, Poaceae, or Pooideae, Poaceae, Cynosurinae, see *Species Plantarum* 1: 72-73. 1753, *Fam. Pl.* 2: 496. 1763, *Observations sur les Graminées de la Flore Belgique* 114. 1823 [1824], *Gen. Pl.* 3(2): 1183. 1883 and *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991, *Regnum Veg.* 127: 41. 1993, *Flora Mesoamericana* 6: 228-229. 1994, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 13-14. 1997, *Taxon* 49(2): 249. 2000, *Contributions from the United States National Herbarium* 48: 242, 312, 488-489. 2003.

Phanopyrum (Raf.) Nash = *Panicum* L.

Greek *phaeinos*, *phanos* “bright, light” and *pyros* “grain, wheat.”

A monotypic genus, southeastern United States. Panicoideae, Paniceae, Paspalinae, or Panicoideae, Panicodae, Paniceae, Panicinae, *Panicum* sect. *Phanopyrum*, stout perennial, erect, creeping stoloniferous bases, ligules membranous, leaf blades lanceolate, and cordate, inflorescences with spikelets arranged in unilateral branches, spikelets with lower and upper glume subequal, lower palea present, lower flower absent, upper antheridium obovoid, in wet woodlands or forest edges, type *Phanopyrum gymnocarpon* (Elliott) Nash, see *Species Plantarum* 1: 55, 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 117. 1816, *Bulletin Botanique [Genève]* 1: 220. 1830 and *Flora of the Southeastern United States ...* 104, 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *North American Flora* 3(2): 200, 210. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 242. 1931, *Taxon* 33: 126-134. 1984, Zuloaga F.O. and T. Sendulsky, “A revision of *Panicum* subg. *Phanopyrum* sect. *Stolonifera* (Poaceae: Paniceae).” *Annals of the Missouri Botanical Garden* 75: 420. 1988, Zuloaga F.O., R.P. Ellis and O. Morrone, “A revision of *Panicum* subgenus *Phanopyrum* section *Laxa* (Poaceae: Panicoideae: Paniceae).” *Annals of the Missouri Botanical Garden* 79: 770. 1992, *Flora Mesoamericana* 6: 302-318. 1994, *Blumea* 41: 181-216, 416. 1996, *Taxon* 45: 319-320. 1996, *Taxon* 47: 869. 1998, *Taxon* 48: 376. 1999, Sandra S. Aliscioni, Liliana M. Giussani, Fernando O. Zuloaga and Elizabeth A. Kellogg, “A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae.” *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 306-441, 537. 2003.

Species

P. gymnocarpon (Elliott) Nash (*Panicum gymnocarpon* Elliott; *Panicum drummondii* Nees ex Steud.; *Panicum monachnoides* Desv.)

U.S. See *A Sketch of the Botany of South-Carolina and Georgia* 1: 117. 1816, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 190. 1831, *Synopsis Plantarum Glumacearum* 1: 63. 1854 and *Flora of the Southeastern United States ...* 104. 1903.

Pharus P. Browne

From the Greek *pharos* “mantle, web, a piece of cloth, a wide cloak.”

About 5-7 species, New World tropics, the Caribbean, Venezuela, French Guiana, Brazil, Paraguay. Pharoideae, Pharaeae, perennial, herbaceous, unarmed, more or less sticky,

rhizomatous, leafy, unbranched, broad-leaved, rhizomes leptomorph, leaf blades not sagittate, leaves tapering at the base to a false petiole which is twisted, inflorescence paniculate, female spikelet 1-flowered, 2 glumes entire, lemma open and minutely hairy, sticky awnless lemmas, cylindrical female lemma involute and clasping palea keels, palea 2-nerved, lodicules absent, male spikelets soon deciduous, 6 stamens, 3 stigmas, forest shade, edge of forest, sandy soil, forest floor, in shady woods, vegetatively resembling *Streptochaeta*, type *Pharus latifolius* L., see *The Civil and Natural History of Jamaica in Three Parts* 344, t. 38, f. 3. 1756, *Systema Naturae, Editio Decima* 2: 1269. 1759, *Fl. Cap.* 7: 319. 1898 and *Bot. Arch.* 1: 212. 1922, *Bulletin Torrey Botanical Club* 82: 197. 1955, *Fieldiana, Botany, New Series* 4: 1-608. 1980, *Flora Novo-Galiciana* 14: 1-436. 1983, *Annals of the Missouri Botanical Garden* 72(4): 874-875. 1985, *Nordic Journal of Botany* 11(1): 89-91. 1991, *Systematic Botany* 18(1): 80-99. 1993, *Flora Mesoamericana* 6: 218-220. 1994, *Taxon* 45(4): 643. 1996, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Functional Ecology* 12(6): 886-895. Dec 1998, *American Bamboos* 328-333. 1999, Khidir W. Hilu and Lawrence A. Alice, “Evolutionary implications of *matK* indels in Poaceae.” *Am. J. Bot.* 86: 1735-1741. 1999, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, “Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B.” *Am. J. Bot.* 87: 96-107. 2000, *Contributions from the United States National Herbarium* 39: 97-100. 2000, Fabian A. Michelangeli, Jerrold I. Davis and Dennis W. Stevenson, “Phylogenetic relationships among Poaceae and related families as inferred from morphology, inversions in the plastid genome, and sequence data from the mitochondrial and plastid genomes.” *Am. J. Bot.* 90: 93-106. 2003, *J. Amer. Bamboo Soc.* 18(1): 7-18. 2004, *New Phytologist* vol. 162, issue 1: 25-44. Apr 2004, *New Phytologist* vol. 162, issue 3: 663-670. June 2004.

Species

P. ecuadoricus Judz.

Ecuador. See *Nordic Journal of Botany* 11(1): 89, f. 1. 1991.

P. lappulaceus Aubl. (*Pharus angustifolius* (Nees) Döll; *Pharus brasiliensis* Raddi; *Pharus brasiliensis* var. *angustifolius* Nees; *Pharus brasiliensis* var. *brasiliensis*; *Pharus brasiliensis* var. *latifolius* Nees; *Pharus brasiliensis* var. *mexicana* Rupr.; *Pharus glaber* Kunth; *Pharus glaber* var. *glaber*; *Pharus glaber* var. *parvifolius* Döll; *Pharus glaber* var. *pubescens* Döll; *Pharus kunthii* Klotzsch ex Döll; *Pharus lancifolius* Ham.; *Pharus latifolius* var. *parvifolius* Prod.; *Pharus micranthus* Schrad. ex Nees; *Pharus micranthus* var. *concolor* Döll; *Pharus micranthus* var. *discolor* Döll; *Pharus micranthus* var. *micranthus*; *Pharus parvifolius* Nash; *Pharus parvifolius* subsp. *elongatus* Judz.; *Pharus pubescens* Spreng.)

Paraguay, West Indies, Brazil. Perennial, erect, branched, caespitose, clumped, scrambling, creeping, with stilt roots, leaves mostly basal, leaf blades acuminate broadly oblanceolate to narrowly oblong-lanceolate, rhizomatous and sometimes stoloniferous, panicle branches spreading at maturity, female spikelets glumes brown glabrous, female spikelets lemmas light brown and pubescent, shade to partial shade, forest, forest shade, deep shade, forest floor, see *The Civil and Natural History of Jamaica in Three Parts* 344, pl. 38, f. 3. 1756, *Systema Naturae, Editio Decima* 2: 1269. 1759, Jean Baptiste C. Fusée Aublet (1720-1778), *Histoire des Plantes de la Guiane Française* 2: 859. Paris 1775, *Nov. Gen. Sp.* 1: 196. 1816, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 1: 241, t. 1, f. 1-4. Leipzig 1820, *Agrostografia Brasiliensis* 21. 1823, *Prodromus Plantarum Indiae Occidentalis...* 8. Londini, Parisiis et Argentorati 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 302. 1829, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 246. 1842, *Flora Brasiliensis* 2(2): 22-24. 1871, *Mexicanas Plantas* 2: 3. 1886 and *Bulletin of the Torrey Botanical Club* 35(6): 301-302. 1908, *Bot. Arch.* 1: 250. 1922, *Brittonia* 23(3): 293-324. 1971, *Annals of the Missouri Botanical Garden* 72(4): 874-875. 1985, *Darwiniana* 29: 41-45. 1989, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in El Salvador: zacate pega-pega

P. latifolius L. (*Pharus glochidiatus* J. Presl; *Pharus latifolius* var. *elegantissimus* Raspail; *Pharus latifolius* var. *latifolius*; *Pharus ovalifolius* Ham.; *Pharus parvifolius* Nash; *Pharus scaber* Kunth; *Pharus scaber* var. *scaber*)

Brazil, the Caribbean, West Indies. Erect, caespitose, clumped, more or less shrubby, leaves mostly basal, leaf blades elliptic acuminate to broadly oblanceolate, open paniculate inflorescence, panicle branches spreading at maturity, paired spikelets appressed, one spikelet long-pedicellate and staminate, other spikelet pistillate and sessile or nearly, lemma of female spikelet pubescent at the tip, common in forest, forest floor, forest shade, dense primary forest, deep shade, disturbed sites, along riverbanks, plantation, secondary forest, edge of swamp, similar to *Streptochaeta spicata* Schrad. ex Nees, see *The Civil and Natural History of Jamaica in Three Parts* 344, pl. 38, f. 3. 1756, *Systema Naturae, Editio Decima* 2: 1269. 1759, *Nov. Gen. Sp.* 1: 196. 1816, *Annales des Sciences Naturelles (Paris)* 5: 305, 459, t. 9, f. 4. 1825, *Prodromus Plantarum Indiae Occidentalis...* 8. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 536-537. 1829, *Reliquiae Haenkeanae* 1(4-5): 345. 1830 and *Contributions from the U.S. National Herbarium* 12: 125. 1908, *Bulletin of the Torrey Botanical Club* 35(6): 301-302. 1908, *Brittonia* 23(3): 293-324. 1971, Fernando Valladares, John B. Skillman and Robert W. Pearcy, "Convergence in light capture efficiencies among tropical forest understory plants with contrasting

crown architectures: a case of morphological compensation." *Am. J. Bot.* 89: 1275-1284. 2002.

in Nicaragua: barba de tigre

P. mezii Prod. (*Pharus latifolius* L.; *Pharus longifolius* Swallen)

Mexico, Guatemala, Venezuela, Colombia. Erect, clumped, caespitose, forest, disturbed sites, shade, forest edge, along riverbanks and streams, see *The Civil and Natural History of Jamaica in Three Parts* 344, pl. 38, f. 3. 1756, *Systema Naturae, Editio Decima* 2: 1269. 1759 and *Contributions from the U.S. National Herbarium* 12: 125. 1908, *Botanisches Archiv* 1: 250. 1922, *Annals of the Missouri Botanical Garden* 30(2): 163. 1943, *Brittonia* 23(3): 293-324. 1971.

P. parvifolius Nash (*Pharus brasiliensis* var. *angustifolius* Nees; *Pharus latifolius* var. *angustifolius* (Nees) Prod.; *Pharus latifolius* var. *parvifolius* Prod.; *Pharus parvifolius* subsp. *elongatus* Judz.; *Pharus parvifolius* subsp. *parvifolius*)

The Caribbean, Mexico, Brazil, Bolivia. Erect, ascending, more or less decumbent, creeping, trailing, rooting at the lower nodes, rhizomatous, leaf blades glabrous broadly to narrowly lanceolate, panicle branches spreading at maturity, female spikelets glumes brown and glabrous, female spikelets lemmas brown and pubescent to the base, shade or deep shade, forest floor, see *Systema Naturae, Editio Decima* 2: 1269. 1759, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 302. 1829 and *Bulletin of the Torrey Botanical Club* 35(6): 301-302. 1908, *Botanisches Archiv* 1: 250. 1922, *Brittonia* 23(3): 293-324. 1971, *Annals of the Missouri Botanical Garden* 72(4): 874-875. 1985.

P. parvifolius Nash subsp. *elongatus* Judz. (*Pharus parvifolius* Nash)

The Caribbean, Mexico, Brazil, Bolivia. Shade or deep shade, see *Bulletin of the Torrey Botanical Club* 35(6): 301-302. 1908, *Annals of the Missouri Botanical Garden* 72(4): 874-875. 1985.

P. parvifolius Nash subsp. *parvifolius* (*Pharus parvifolius* Nash)

The Caribbean, Brazil, Belize, Venezuela. Erect, decumbent, see *Bulletin of the Torrey Botanical Club* 35(6): 301-302. 1908.

P. virescens Döll (*Pharus latifolius* L.)

Central America, the Caribbean, Venezuela, Brazil, Guatemala. Bunchgrass, clumped, erect, robust, decumbent base, rooting at the lower nodes, shrubby, rhizomatous, leaf blades lanceolate-oblong acuminate, panicle branches long and spreading at maturity, female spikelets glumes green herbaceous, forest, forest shade, edge of forest, clearings, dense primary forest, seasonally inundated areas, muddy waters, see *The Civil and Natural History of Jamaica in Three Parts* 344, pl. 38, f. 3. 1756, *Flora Brasiliensis* 2(2): 21. 1871.

in Ecuador: gatoba, kuruntzam, kooruntzan

P. vittatus Lem. (*Pharus cornutus* Hack.)

Belize, Nicaragua, Colombia, Guatemala. Erect, ascending, decumbent, solitary or forming small colonies, female lemma almost thorn-like, forest floor, understory, shade or partial shade, forest, disturbed sites, primary forest, see *The Civil and Natural History of Jamaica in Three Parts* 344, pl. 38, f. 3. 1756, *Flore des serres et jardins de l'Europe* 3: t. 265, misc. 50. 1847 and 4: t. 316. 1848, *Gardener's chronicle, ser. 3* 26: 183-184. 1899 and *Österreichische Botanische Zeitschrift* 52: 9. 1902.

Pheidochloa S.T. Blake

From the Greek *pheidōs* “thrifty, sparing” and *chloe, chloa* “grass,” referring to the inflorescence.

Two species, Australia and New Guinea. Arundinoideae (alt. Panicoideae), Eriachneae, annual, herbaceous, unbranched or sometimes branched above, unarmed, very slender, tufted, auricles absent, ligule a line of hairs, plants bisexual, inflorescence paniculate with 2-flowered spikelets without a rachilla extension, spikelets usually cleistogamous, 2 glumes unequal separated by an internode, upper glume twice length of lower glume, lemma awned pubescent, callus pungent, palea 2-keeled 2-nerved, free lodicules very fine and thin, 2 stamens, ovary glabrous, 2 stigmas, in damp sandy areas, type *Pheidochloa gracilis* S.T. Blake, see *Blumea* 26: 128. 1980, *Acta Phytotaxonomica et Geobotanica* 11: 183. 1942, Stanley Thatcher Blake (1910-1973), in *Proceedings of the Royal Society of Queensland* 56: 20. 1944, *Bulletin of the Torrey Botanical Club* 88: 11-20. 1961, *Blumea* 19: 60. 1971, Prendergast H.V.D., P.W. Hattersley & N.E. Stone, “New structural/biochemical associations in leaf blades of C4 grasses (Poaceae).” *Australian Journal of Plant Physiology* 14: 403. 1987, *Am. J. Bot.* 88: 1993-2012. 2001.

Species

P. gracilis S.T. Blake

Australia, Northern Territory, Queensland. Slender, filiform, erect or spreading, spikelets cleistogamous, glumes acute membranous, see *Proceedings of the Royal Society of Queensland* 56: 20. 1944.

P. vulpioides Veldkamp

New Guinea. See *Blumea* 19: 61. 1971.

Phippsia (Trinius) R. Br.

Named after the British Captain Constantine John Phipps, 2nd Baron Mulgrave, 1744-1792, explorer (Arctic), a friend of J. Banks, 1773 Mulgrave's Arctic Expedition (with Israel Lyons, 1739-1775), wrote *A Voyage to the North Pole.*

London 1774; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 82. 1965; Blanche Henrey, *British Botanical and Horticultural Literature before 1800*. Oxford 1975; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 552. London 1994.

About 2 or 3 species, Arctic, mountains, Argentina, Andes. Pooideae, Poeae, Puccinelliinae, *Vilfa* subg. *Phippsia* Trin., perennial, herbaceous, dwarf, caespitose, decumbent, auricles absent, ligule an unfringed membrane, hidden cleistogenes in the leaf sheaths, plants bisexual, open or contracted panicle, spikelets pedicellate, one or two inconspicuous glumes deciduous and ovate, lemma membranous and keeled, palea keels smooth or hispid, 2 free and membranous lodicules, stamens 1-3, ovary glabrous, 2 stigmas, protruding grains, cleistogamous or chasmogamous, hidden cleistogenes more or less present or absent, in open places, damp sites, very wet soils, similar to *Sporobolus* and *Catabrosa*, hybridizes with *Puccinellia* Parl., type *Phippsia algida* (Sol.) R. Br., see *Flora Anglica* 35. 1762, *Familles des Plantes* 2: 495. 1763, *Observationum Botanicarum* 1: 42. 1764, *Utkast til en Svensk Flora* 48. 1798, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 37. 1820 [1821], *Chloris Melvilliana* 27. 1823, *A Flora of the Northern and Middle Sections of the United States* 1: 107. 1823, *Gram. Unifl. Sesquifl.* 159. 1824, *Reliquiae Haenkeanae* 1(4-5): 272. 1830, *Flora Boreali-Americana* 2: 248, pl. 229. 1840, *Flora italiana, ossia descrizione delle piante ...* 1: 366-367. 1848, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 26: 140. 1869, *A Manual of the Botany of the Northern United States (edition 6)* 668. 1890, *The Flora of British India* 7: 240. 1896, *Botaniska Notiser* 1898: 155. 1898 and *Contributions from the United States National Herbarium* 13: 74. 1910, *Rhodora* 18: 13, f. 28-32. 1916, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 759. 1929, *Flora URSS* 2: 485, 763, t. 36, f. 21. 1934, *Journal of the Washington Academy of Sciences* 34(1): 19, 21. 1944, *Acta Universitatis Lundensis* 46(1): 1713. 1950, *Meddelelser om Grønland* 136(3): 31, 73. 1953, *Bulletin of the National Museum of Canada* 135: 78, 80. 1955, *Flora Arctica URSS* 2: 199. 1964, *Taxon* 19(2): 299, 954. 1970, *Lagascalia* 5(1): 55-71. 1975, *Folia Geobotanica et Phytotaxonomica* 10(3): 274. 1975, *Botaniska Notiser* 128(4): 199, 498-501. 1975 [1976], *Darwiniana* 23(1): 179-188. 1981, *Taxon* 30(2): 510. 1981, *American Journal of Botany* 81(1): 119-126. 1994, Hong Qian, “Floristic analysis of vascular plant genera of North America north of Mexico: characteristics of phytogeography.” *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, D.A. Walker, “Hierarchical subdivision of Arctic tundra based on vegetation response to climate, parent material and topography.” *Global Change Biology* vol. 6, issue s1: 19-34. Dec 2000, Aslaug R. Hagen, Henriette Giese and Christian Brochmann, “Trans-Atlantic dispersal

and phylogeography of *Cerastium arcticum* (Caryophyllaceae) inferred from RAPD and SCAR markers." *Am. J. Bot.* 88: 103-112. 2001, *Journal of Biogeography* 28(1): 105-115. Jan 2001, *New Phytologist* 149(3): 449-454. Mar 2001, *Physiologia Plantarum* 113(3): 308-314. Nov 2001, *Contributions from the United States National Herbarium* 48: 489-491, 591-601. 2003, *Molecular Ecology* 12(2): 299-313. Feb 2003, William A. Weber, "The Middle Asian Element in the Southern Rocky Mountain Flora of the western United States: a critical biogeographical review." *Journal of Biogeography* 30(5): 649-685. May 2003, W. Wyatt Oswald, Linda B. Brubaker, Feng Sheng Hu and Daniel G. Gavin, "Pollen-vegetation calibration for tundra communities in the Arctic Foothills, northern Alaska." *Journal of Ecology* 91(6): 1022-1033. Dec 2003, Ulf Molau, Urban Nordenhäll and Bente Eriksen, "Onset of flowering and climate variability in an alpine landscape: a 10-year study from Swedish Lapland." *Am. J. Bot.* 92: 422-431. 2005.

Species

P. algida (Sol.) R. Br. (*Agrostis algida* Sol.; *Catabrosa algida* (Sol.) Fr.; *Catabrosa monandra* (Trin.) Fries; *Colpodium monandrum* Trin.; *Glyceria algida* (Sol.) Hartm.; *Phippsia algida* (Phipps) R. Br.; *Phippsia foliosa* V. Vassil.; *Phippsia monandra* Trin.; *Poa algida* (Sol.) Rupr.; *Trichodium algidum* (Sol.) Roem. & Schult.; *Vilfa algida* (Sol.) Trin.; *Vilfa monandra* (Trin.) Trin.)

Arctic, U.S., Alaska. See *Species Plantarum* 1: 61, 67. 1753, *Familles des Plantes* 2: 495. 1763, *A Voyage to the North Pole* 200. 1774, *Flora Boreali-Americana* 1: 41. 1803, *Prodromus Florae Novae Hollandiae* 179. 1810, *Essai d'une Nouvelle Agrostographie* 97. 1812, *Systema Vegetabilium* 2: 283. 1817, *Fundamenta Agrostographiae* 119, t. 7. 1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 37. 1821, *Chloris Melvilliana* 27. 1823, *Gram. Unifl. Sesquifl.* 159. 1824, *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 61. 1845[1846], *Handbok i Skandinavians Flora, Femte Upplagan* 294. 1849, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 26: 140, 142. 1869, *Botaniska Notiser* 1898: 155. 1898 and *Svensk Botanisk Tidskrift* 8: 250. 1914, *Botaniska Notiser* 1924: 130. 1924, *Bulletin of the National Museum of Canada* 92(1): 62. 1940, *Le Naturaliste Canadien* 94(4): 526. 1967, *Novosti Sist. Vyss. Rast.* 8: 76. 1971, *Folia Geobotanica et Phytotaxonomica* 10(3): 273. 1975, *Willdenowia* 19: 199-213. 1989.

P. algida (Sol.) R. Br. subsp. ***algida***

Canada, Greenland, U.S.

P. algida (Sol.) R. Br. subsp. ***concinna*** (Th. Fr.) Á. Löve & D. Löve (*Catabrosa concinna* Th. Fr.; *Phippsia algida* subsp. *algidiformis* (Harry Sm.) Á. Löve & D. Löve; *Phippsia algida* var. *algidiformis* (Harry Sm.) B. Boivin; *Phippsia*

x algidiformis (Harry Sm.) Tzvelev; *Phippsia concinna* (Th. Fr.) Lindeb.)

Canada, Greenland. See *Chloris Melvilliana* 27. 1823, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 26: 140. 1869, *Botaniska Notiser* 1898: 155. 1898 and *Svensk Botanisk Tidskrift* 8: 250. 1914, *Le Naturaliste Canadien* 94(4): 526. 1967, *Novosti Sist. Vyss. Rast.* 8: 76. 1971, *Folia Geobotanica et Phytotaxonomica* 10(3): 273. 1975.

P. wilczekii Hack. (for the Swiss botanist Ernst Wilczek, 1867-1948, botanical collector in Greenland, Argentina, North Africa and Europe; Polish botanist Rudolf Wilczek, 1903-1984, to Greenland 1937. See *Bull. Soc. Hist. Nat. Afrique* no. 26: 120. 1935; J.H. Barnhart, *Biographical notes upon botanists. 3*: 494. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 436. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 745. 1917-1933)

Argentina. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 321. 1909.

Phleum L. = *Achnodon* Link, *Achnodonton* P. Beauv., *Chilochloa* P. Beauv., *Heleochoa* P. Beauv., *Maillea* Parl., *Phalarella* Boiss., *Plantinia* Bubani, *Pseudophleum* Dogan, *Stelephuros* Adans.

From the Greek *phleos*, *phlous*, *phloun*, *phleon*, ancient name for a kind of grass growing in the swamps like reeds, *Arundo ampelodesmon*, or wool-tufted reed, applied by Theophrastus (*HP.* 4.8.1, 4.10.1, 4.10.4) to a species of *Erianthus*; *Phleos* was an epithet of Dionysus; Latin *pheos*, *phleos* applied by Plinius to a prickly plant, also called *stoebe* or *stoibe*; see Carl Linnaeus, *Species Plantarum*. 59. 1753 and *Genera Plantarum*. Edition 5. 29. 1754; Giovanni Semerano, *Le origini della cultura europea*. Dizionario della lingua Greca. 2(1): 304-305, 307. Leo S. Olschki Editore, Firenze 1994; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 682. Ansbach 1852; H. Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 478-479. 1996.

Some 15 species, temperate regions, Eurasia, America. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Alopecurinae, annual or perennial, erect, forming large clumps, leafy, herbaceous, shortly rhizomatous or stoloniferous, caespitose or decumbent, often with a swollen or bulbous base, glabrous nodes, hollow internodes, auricles absent, leaf sheath open or close near the base, ligule an unfringed membrane, leaves linear and usually flat, plants bisexual, dense contracted pedunculated inflorescence paniculate and spicate, crowded and laterally flattened spikelets, 1 floret, 2 keeled

and membranous glumes subequal and mucronate to shortly awned, lemma nerved and scabrous, callus short, narrow palea awnless and nerved, 2 membranous and toothed lodicules or lacking, 2-3 stamens, ovary with glabrous apex, 2 stigmas, fruit small, soft and densely flowered, cultivated fodder, pasture, forage, ornamental, lawns and/or playing fields, turf grass, grows in meadows, coastal sand, open habitats, dry places, wasteland, along roadsides, track margins, type *Phleum pratense* L., see *Species Plantarum* 1: 59. 1753, *Familles des Plantes* 2: 31, 607. 1763, *Essai d'une Nouvelle Agrostographie* 24, 25, 37, 146, 158, 173, t. 7, f. 5. 1812, *Observations sur les Graminées de la Flore Belgique* 131. 1823 [1824], *Hortus Regius Botanicus Berolinensis* 1: 65. 1827, *Diagnoses plantarum orientalium novarum* 1(5): 70. 1844, *Deutschl. Fl.* 619. 1849, *Flora Rossica* 4(13): 455. 1852, *Synopsis der mitteleuropäischen Flora* 2: 154. 1899 and *Flora Pyrenaea ...* 4: 268. 1901, *Contr. U.S. Nat. Herb.* 24: 161, 167. 1925, *Novosti Sist. Vyss. Rast.* 8: 70. 1971, *Acta agriculturae scandinavica* 1(1): 1-138. 1975, *Acta Botanica Academiae Scientiarum Hungaricae* 23(12): 135. 1977, *Journal of the Linnean Society, Botany* 76(4): 337-340. 1978, *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 75. 1982, *Genera Graminum* 142-143. 1986, *Flora Mesoamericana* 6: 242. 1994, *Plant Systematics and Evolution* 203: 11-25. 1996, *Willdenowia* 29(11-12): 45-49. 1999, *Am. J. Bot.* 87: 1699-1706. 2000, *Am. J. Bot.* 88: 278-284. 2001, *Am. J. Bot.* 89: 1410-1421. 2002, *Contributions from the United States National Herbarium* 48: 491-494. 2003, *Am. J. Bot.* 90: 413-422. 2003, *Am. J. Bot.* 91: 1709-1725. 2004, *Allergy* 60(6): 801-807. June 2005, *Grass and Forage Science* 60(2): 109-118. June 2005, *Conservation Biology* 19(3): 955-962. June 2005, *The Plant Journal* 42(6): 877-889. June 2005, *Global Change Biology* 11(6): 856-868. 881-893, June 2005, *Allergy* 60(7): 952-956. July 2005.

Species

P. alpinum L. (*Phleum alpinum* Vill., nom. illeg., non *Phleum alpinum* L.; *Phleum alpinum* L. subsp. *commutatum* (Gaudin) Hultén; *Phleum alpinum* L. subsp. *commutatum* (Gaudin) K. Richt.; *Phleum alpinum* L. subsp. *commutatum* (Gaudin) Malagarriga; *Phleum alpinum* L. var. *americanum* Fourn.; *Phleum alpinum* L. var. *commutatum* (Gaudin) Griseb.; *Phleum alpinum* L. var. *scribnerianum* Pammel; *Phleum alpinum* L. var. *tenue* Trin.; *Phleum arcticum* Gieseck ex Lange; *Phleum commutatum* Gaudin; *Phleum commutatum* Gaudin var. *americanum* (Fourn.) Hultén; *Phleum commutatum* var. *commutatum*; *Phleum haenkeanum* J. Presl; *Phleum pratense* L. subsp. *alpinum* (L.) Asch. & Graebn.; *Phleum pratense* L. subsp. *alpinum* (L.) Celak.; *Phleum pratense* L. var. *alpinum* (L.) Celak., nom. illeg., non *Phleum pratense* var. *alpinum* (L.) Schreb.; *Phleum pratense* L. var. *alpinum* (L.) Schreb.; *Plantinia alpina* (L.) Bubani)

Mountain areas of Europe, Asia, Northern and Southern America. Perennial, herbaceous, small, strongly tufted, culms ascending, creeping, stems without a bulbous base, open sheaths, leaf blade rolled when young, leaves linear-lanceolate and acute, blunt ligules, spike-like panicle broadly cylindrical, spikelets 1-flowered, glumes hairy, lemma very short-haired, ornamental grass, forage, grazed, usually found in alpine or subalpine regions, in mountain and boreal areas, from the montane to alpine zones, high altitudes, along stream banks, on cool soils, in moist meadows, see *Species Plantarum* 1: 59. 1753, *Beschreibung der Gräser* 103. 1769, *Histoire des Plantes de Dauphiné* 2: 62. 1787, *Alpina* 3: 4. 1808, *Species Graminum* 1: 22. 1824, *Reliquiae Haenkeanae* 1(4-5): 245. 1830, *Prodromus der Flora von Böhmen* 38. 1867, *Conspectus Florae Groenlandicae* 1: 155. 1880, *Mexicanas Plantas* 2: 90. 1886, *Proceedings of the Davenport Academy of Natural Sciences* 7: 238. 1899 and *Flora Pyrenaea ...* 4: 272. 1901, *Svensk Botanisk Tidskrift* 43(2-3): 389. 1949, Callaghan T.V., "Intraspecific variation in *Phleum alpinum* L. with specific reference to polar populations." *Arctic and Alpine Research* 6: 361-401. 1974, *J. Linn. Soc., Bot.* 76: 337-340. 1978, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984, *Not. Syst. Georg. Inst. Bot. Tbilissi* 40: 68-72. 1984, *Bot. Zhurn.* 72: 1069-1074. 1987, *Fitologija* 39: 72-77. 1991, *Acta Biologica Cracoviensia, Series Botanica* 39: 69-77. 1997, *Flora Mediterranea* 8: 251-262. 1998, Michèle R. Slaton, E. Raymond Hunt, Jr. and William K. Smith, "Estimating near-infrared leaf reflectance from leaf structural characteristics." *Am. J. Bot.* 88: 278-284. 2001.

in English: bluejoint, mountain timothy (= introduced from England to the U.S. by Timothy Hanson, early 18 century), alpine timothy, timothy grass, alpine cat's tail

in French: fléole des Alpes

in Italian: codolina alpina

in German: Alpen-Lieschgras

in Mexico: fleo alpino, timote negro

P. alpinum L. subsp. ***alpinum*** (*Phleum alpinum* f. *alpinum*; *Phleum alpinum* L. subsp. *commutatum* (Gaudin) Hultén; *Phleum alpinum* L. subsp. *commutatum* (Gaudin) K. Richt.; *Phleum alpinum* L. subsp. *commutatum* (Gaudin) Malagarriga; *Phleum alpinum* L. var. *americanum* Fourn.; *Phleum alpinum* L. var. *scribnerianum* Pammel; *Phleum alpinum* L. var. *tenue* Trin.; *Phleum arcticum* Gieseck ex Lange; *Phleum commutatum* Gaudin; *Phleum commutatum* Gaudin var. *americanum* (Fourn.) Hultén; *Phleum commutatum* var. *commutatum*; *Phleum gerardii* Panz., nom. illeg., non *Phleum gerardii* All.; *Phleum haenkeanum* J. Presl; *Phleum nigricans* Willd. ex Trin.; *Phleum pratense* L. subsp. *alpinum* (L.) Celak.; *Phleum pratense* L. var. *alpinum* (L.) Celak., nom. illeg., non *Phleum pratense* var. *alpinum* (L.) Schreb.; *Phleum pratense* L. var. *alpinum* (L.) Schreb.; *Plantinia alpina* (L.) Bubani)

Europe. See *Species Plantarum* 1: 59. 1753, *Beschreibung der Gräser* 103. 1769, *Histoire des Plantes de Dauphiné* 2: 62. 1787, *Alpina* 3: 4. 1808, *Species Graminum* 1: 22. 1824, *Reliquiae Haenkeanae* 1(4-5): 245. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 123. 1840, *Prodromus der Flora von Böhmen* 38. 1867, *Conspectus Florae Groenlandicae* 1: 155. 1880, *Mexicanas Plantas* 2: 90. 1886, *Proceedings of the Davenport Academy of Natural Sciences* 7: 238. 1899 and *Flora Pyrenaea* ... 4: 272. 1901, *Svensk Botanisk Tidskrift* 43(2-3): 389. 1949, *J. Linn. Soc., Bot.* 76: 337-340. 1978, *Willdenowia* 18: 243-252. 1988.

in German: Alpen-Lieschgras

P. alpinum L. subsp. ***commutatum*** (Gaudin) K. Richt. (*Phleum alpinum* L.; *Phleum alpinum* L. subsp. *alpinum*; *Phleum alpinum* subsp. *commutatum* (Gaudin) Hultén; *Phleum alpinum* subsp. *commutatum* (Gaudin) Malagar-riga)

Europe. See *Alpina* 3: 4. 1808, *Plantae Europaeae* 1: 36. 1890 and *Svensk Botanisk Tidskrift* 43(2-3): 389. 1949.

P. alpinum L. subsp. ***rhaeticum*** Humphries (*Phleum rhaeticum* (Humphries) Rauschert)

Europe. See *Journal of the Linnean Society, Botany* 76(4): 339. 1978, *Feddes Repertorium* 90(78): 399. 1979, *Genome* 34: 52-58. 1991, *Plant Systematics and Evolution* 203: 11-25. 1996.

in Italian: codolina retica

in German: Alpen-Lieschgras, Graubündener Lieschgras, Rätisches Lieschgras

P. aquatica L.

Europe.

P. arenarium L. (*Achnodon arenarius* (L.) Link; *Achnod-onton arenarium* (L.) Trin.; *Phalaris arenaria* (L.) Huds.)

Europe, North Africa. Annual, caryopsis ovoid, coastal sand, wastelands, see *Species Plantarum* 1: 59-60. 1753, *Flora Anglica* 21. 1762, *De Graminibus unifloris et sesquifloris* 166. Petropoli 1824, *Hortus Regius Botanicus Bero-linensis* 1: 65. 1827, *Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen. Mathematisch-physikalische Klasse* 83. 1868, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 48: 643. 1898 and *Verhandlungen der Zoologisch-botanischen Gesell-schaft in Wien* 69: 304. 1919, Law R. & A.R. Watkinson, "Response-surface analysis of two-species competition: an experiment on *Phleum arenarium* and *Vulpia fasciculata*." *Journal of Ecology* 75(3): 871-886. 1987, *Willdenowia* 19: 407, f. 2A. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991, *Watsonia* 19: 134-137. 1992, *Taxon* 49(2): 254. 2000.

in English: sand cat's tail, sand timothy

in French: fléole des sables

in Italian: codolina delle spiagge

in German: Sand-Lieschgras

P. arenarium L. forma ***breviglume*** Bornm. (*Phleum exaratum* subsp. *breviglume* (Bornm.) H. Scholz)

Europe. See *Spicilegium florum rumelicarum et bithynicarum* ... 2: 463. 1844, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 48: 643. 1898 and *Willdenowia* 19: 410. 1990.

P. bertolonii DC. (*Phleum nodosum* auct.; *Phleum nodosum* L.; *Phleum pratense* L. subsp. *bertolonii* (DC.) Bornm.; *Phleum pratense* subsp. *bertolonii* (DC.) Serb. & Nyár., nom. illeg., non *Phleum pratense* subsp. *bertolonii* (DC.) Bornm.; *Phleum pratense* var. *bertolonii* (DC.) Woods) (after the Italian botanist Antonio Bertoloni, 1775-1869, professor of botany at Bologna from 1816 to 1869, from 1817 to 1869 Praefectus of the Botanical Garden of Bologna, editor of *Annali di Storia naturale* and *Nuovi Annali delle Scienze naturali*, his writings include *Sylloge plantarum horti bononiensis*. Bononiae 1827, *Florula guatemalensis*. Bologna 1840, *Flora italica cryptogama*. Bologna 1858-1862 and *Continuatio historiae horti botanici bononiensis*. Bononiae 1834. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 177. 1965; R.E.G. Pichi Sermolli & M.P. Bizzarri, "Le collezioni pteridologiche conservate nell'Erbario di Antonio Bertoloni." *Mem. Accad. Lunigian. Sci.* 60-61. *Sci. Nat. Fis. Mat.* (1): 177-232. 1992 [1990-1991]; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 38-39. Palermo 1988)

Algeria, Morocco, Europe, Eurasia. Perennial, slender, tuberous at base, ligule membranous and acute, leaf sheath terete, leaf glabrous, auricles absent, spikes narrowly cylindrical, ornamental, lawns and/or playing fields, forage, cultivated fodder, pasture and turf grass, see *Species Plantarum* 1: 59. 1753, *Systema Naturae, Editio Decima* 871. 1759, *Species Plantarum* edition 2, 88. 1762, *Flora Anglica, Editio Altera* 26. 1778, *Hortus Regius Monspeliensis* 132. 1813, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 61(140): 157. 1828, *The Tourist's Flora* 398. 1850, *Compendio della Flora Italiana* 757. 1883 and *Flora Republicii Socialiste Romania* 12: 123. 1972, *Bot. Zhurn.* 69(4): 511-517. 1984, *Plant Systematics and Evolution* 188: 17-30. 1993, *Acta Biologica Cracoviensia, Series Botanica* 39: 69-77. 1997, *Taxon* 49(2): 254. 2000.

in English: diploid timothy, turf timothy, small timothy, smaller cat's tail

in French: fléole bulbeuse

in Italian: codolina di Bertoloni

in German: Knotiges Lieschgras, Knolliges Lieschgras

P. boissieri Bornm. (*Chilochloa paniculata* (Huds.) P. Beauv.; *Phleum exaratum* Hochst. ex Griseb.; *Phleum nodosum* sensu. Boiss., non. L.; *Phleum paniculatum* Huds.)

Europe, Iraq, Turkey. Grazed, growing in clay loam, see *Flora Anglica* 23. 1762, *Essai d'une Nouvelle Agrostographie* 37, 158. 1812, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 463. 1844 and *Bot. Zhurn.* 69(4): 511-517. 1984, *Hessische Floristische Briefe* 34: 37-42. 1985, *Bot. Zhurn.* 71: 1426-1427. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Willdenowia* 19: 405-412. 1990, *Cytologia* 56: 437-452. 1991.

P. commutatum Gaudin (*Phleum alpinum* L.; *Phleum alpinum* subsp. *alpinum*; *Phleum alpinum* subsp. *commutatum* (Gaudin) Hultén; *Phleum alpinum* subsp. *commutatum* (Gaudin) K. Richt.; *Phleum alpinum* subsp. *commutatum* (Gaudin) Malagarriga; *Phleum alpinum* var. *commutatum* (Gaudin) Griseb.)

South America, Argentina. Perennial, glaucous inflorescences, fodder, grazed, growing in wet meadows, along grassy roadsides, see *Species Plantarum* 1: 59. 1753, *Alpina* 3: 4. 1808, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 465. 1844, *Mexicanas Plantas* 2: 90. 1886 and *Flora Pyrenaea* ... 4: 272. 1901, *Svensk Botanisk Tidskrift* 43(2-3): 389. 1949, *Arkiv för Botanik, Andra Serien* 7(1): 9. 1968, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *J. Linn. Soc., Bot.* 76: 337-340. 1978, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984, *Not. Syst. Geogr. Inst. Bot. Tbilissi* 40: 68-72. 1984, *Bot. Zhurn.* 72: 1069-1074. 1987, *Fitologija* 39: 72-77. 1991, *Plant Systematics and Evolution* 188: 17-30. 1993, *Plant Systematics and Evolution* 203: 11-25. 1996, *Acta Biologica Cracoviensia, Series Botanica* 39: 69-77. 1997, *Flora Mediterranea* 8: 251-262. 1998.

in English: bluejoint

in German: Falsches Alpen-Lieschgras, Nördliches-Alpen-Lieschgras

P. crypsoides (d'Urv.) Hack. (*Phalaris crypsoides* d'Urv.)

Europe, Greece. Panicle sessile among basal leaves, glumes winged, lemma membranous 1-nerved, see *Mémoires de la Société Linnéenne de Paris* 1: 263. 1822, *Bulletin de la Société Botanique de France* 39: 274. 1892 and *Webbia* 49(2): 265-329. 1995.

P. crypsoides (d'Urv.) Hack. subsp. *sardoum* (Hack.) Horn (*Phleum sardoum* Hack.)

Italy. Endangered species.

P. exaratum Hochst. ex Griseb. (*Phleum arenarium* f. *breviglume* Bornm.; *Phleum boissieri* Bornm.; *Phleum cornutum* Mez; *Phleum exaratum* Hochst. ex Boiss., nom. illeg., non *Phleum exaratum* Hochst. ex Griseb.; *Phleum graecum* Boiss. & Heldr. ex Boiss.; *Phleum graecum* subsp. *graecum*) (from the Latin *exaratus* "furrowed, ploughed")

Europe, Turkey. See *Spicilegium florum rumelicarum et bithynicarum* ... 2: 463. 1844, *Diagnoses plantarum orientarium novarum*, ser. 2, 13: 42. 1853, *Flora Orientalis* 5: 480. 1884, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 48: 643. 1898 and *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 69: 304. 1919, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 293. 1921, *Notes from the Royal Botanic Garden, Edinburgh* 40(3): 509. 1983, *Bot. Zhurn.* 69(4): 511-517. 1984, *Hessische Floristische Briefe* 34: 37-42. 1985, *Bot. Zhurn.* 71: 1426-1427. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Willdenowia* 19: 405-412. 1990, *Cytologia* 56: 437-452. 1991.

P. exaratum Hochst. ex Griseb. subsp. *aegaeum* (Vierh.) Dogan (*Phleum arenarium* subsp. *aegaeum* Vierh.; *Phleum graecum* subsp. *aegaeum* (Vierh.) Greuter)

Europe. See *Diagnoses plantarum orientarium novarum*, ser. 1, 2(13): 42. 1853 and *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 69: 304. 1919, *Boissiera*. 13: 180. 1967, *Notes from the Royal Botanic Garden, Edinburgh* 40(3): 509. 1983.

P. gibbum Boiss. (*Pseudophleum gibbum* (Boiss.) Dogan)

Turkey. Coriaceous gibbous glumes shorter than floret, lemma rostrate, sandy soils, see *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 75, 77. 1982.

P. hirsutum Honckeny (*Phalaris alpina* Haenke; *Phalaris alpina* Turra; *Phalaris ciliata* Lag., nom. illeg., non *Phalaris ciliata* Pourret; *Phalaris michelii* Savi; *Phalaris mucronata* Desf.; *Phleum michelii* All.; *Phleum michelii* subsp. *ambiguum* (Ten.) Arcang.)

Europe. Perennial, see Gerhard August Honckeny (1724-1805), *Vollständiges systematisches Verzeichniss aller Gewächse Teutschlandes*... 1: 183. Leipzig 1782, *Flora Pedemontana* 2: 233. 1783, *Collectanea* 2: 91. Vindobonae 1789, *Genera et species plantarum* 3. 1816, *Flora Napolitana* 3: 64. 1824-1829, *Compendio della Flora Italiana* 757. 1883 and *Novosti Sist. Vyss. Rast.* 8: 69. 1971, *Fitologija* 39: 72-77. 1991, *Webbia* 49(2): 265-329. 1995.

in German: Rauhes Lieschgras, Matten-Lieschgras, Michelis Lieschgras

in Italian: codolina irsuta

in French: fléole hérissée

P. iranicum Bornm. & Gauba

Iran.

P. japonicum Franch. & Sav. (*Phleum asperum* var. *japonicum* (Franch. & Sav.) Hack.)

Asia, Japan. See *Collectanea* 1: 110. 1786, *Nuovo Giornale Botanico Italiano* 5: 317. 1873, Adrien René Franchet (1834-1900), *Enumeratio plantarum in Japonia sponte crescentium hucusque rite cognitarum adjectis descriptionibus specierum pro regione novarum quibus accedit*

determinatio herbarum in libris japonicis So-Mokou Zoussetz xylographice delineatarum. 2: 593. Paris [1873-] 1875-1879 [coauthor, Paul Amedée L. Savatier, 1830-1891], *Bulletin de l'Herbier Boissier* 7(9): 647. 1899.

P. montanum K. Koch (*Phleum ambiguum* Borbás, non Ten.; *Phleum phleoides* subsp. *montanum* (K. Koch) Tzvelev)

Europe, Iran, Turkey. Fodder, forage, grazed, loamy soil, black soil, hill, montane, see *Flora Napolitana* 3: 64. 1824, *Linnaea* 21(3): 383. 1848, *Deutsche Flora. Pharmaceutisch-medicinische Botanik...* 374. 1881 and *Novosti Sist. Vyss. Rast.* 8: 69-70. 1971, *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 86. 1982, *Fitologija* 39: 72-77. 1991.

P. paniculatum Hudson (*Chilochloa paniculata* (Huds.) P. Beauv.; *Phalaris aspera* Retz., nom. illeg., non *Phalaris aspera* Lam.; *Phalaris paniculata* Aiton; *Phleum asperum* Jacq.; *Phleum asperum* (Retz.) Jacq.; *Phleum asperum* var. *asperum*; *Phleum boissieri* Bornm.; *Plantinia aspera* (Jacq.) Bubani)

Europe. Annual, small, ornamental, fodder, on rocky soil, see *Flora Anglica* 23. 1762, *Collectanea* 1: 110. 1786, *Observationes Botanicae* 4: 14. 1786, *Hortus Kewensis; or, a Catalogue ...* 1: 87. 1789, *Flora Taurico-Caucasica* 1: 46. 1806, *Essai d'une Nouvelle Agrostographie* 158. 1812, *Nuovo Giornale Botanico Italiano* 5: 317. 1873, *Flora Orientalis* 1: 482. 1884 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 208. 1930, *Flora of Afghanistan; Results of the Kyoto University Scientific Expedition to the Karakoram and Hindukush, 1955, vol. 2* 42. 1960, *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 86. 1982, *Bot. Zhurn.* 69(4): 511-517. 1984, *Hessische Floristische Briefe* 34: 37-42. 1985, *Bot. Zhurn.* 71: 1426-1427. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Willdenowia* 19: 405-412. 1990, *Cytologia* 56: 437-452. 1991, *Webbia* 49(2): 265-329. 1995.

in English: British timothy

in Italian: codolina lima

in French: fléole paniculée

in German: Rispen-Lieschgras, Rauhes Lieschgras, Rispigies Lieschgras

P. phleoides (L.) H. Karst. (*Chilochloa boehmeri* P. Beauv.; *Phalaris phleoides* L.; *Phalaris trigyna* Host; *Phleum boehmeri* Wibel; *Phleum boehmeri* var. *macranthum* Kauffm. ex B. Fedtsch., nom. nud.; *Phleum laeve* M. Bieb.; *Phleum phalarioides* Koeler; *Phleum phalaroides* K. Koch)

Northwestern Africa, Eurasia, Europe. Perennial, herbaceous, clumped, slender, erect, shallow roots, leaves more or less flat or rolled, inflorescence narrow cylindrical and purplish, spikelets narrow oblong and mucronate, fodder, useful for erosion control, on loamy soils, sandy loam soil, plain, see *Species Plantarum* 1: 55, 59. 1753, *Primitiae*

Florae Werthemensis 125. Ienae 1799, *Flora Taurico-Caucasica* 1: 46. 1808, *Icones et Descriptiones Graminum Austriacorum* 4: 12, t. 20. 1809, *Essai d'une Nouvelle Agrostographie* 37. 1812, *Linnaea* 21(3): 383. 1848, *Flora Rossica* 4(13): 457. 1852, *Deutsche Flora. Pharmaceutisch-medicinische Botanik...* 374. 1881 and *Novosti Sist. Vyss. Rast.* 8: 69-70. 1971, *Flora Republicii Socialiste Romania* 12: 125. 1972, *Bot. Zhurn.* 69(4): 511-517. 1984, *Fitologija* 39: 72-77. 1991, *Flora Mediterranea* 1: 229-236. 1991, *Watsonia* 20: 63-66. 1994, *Webbia* 49(2): 265-329. 1995, *Flora Mediterranea* 7: 204-213. 1997, *Opera Botanica* 137: 1-42. 1999.

in English: Boehmer's cat's tail, purple-stem cat's tail

in Italian: codolina nuda

in German: Steppen-Lieschgras, Glanz-Lieschgras

P. pratense L. (*Phleum intermedium* Jord.; *Phleum nodosum* L.; *Phleum nodosum* var. *pratense* (L.) St.-Amans; *Phleum parnassicum* Boiss.; *Phleum pratense* subsp. *nodosum* (L.) Arcang.; *Phleum pratense* var. *nodosum* (L.) Hudson; *Plantinia pratensis* (L.) Bubani; *Stelephuros pratensis* (L.) Lunell)

Mediterranean region, Eurasia. Perennial bunchgrass, herbaceous, often stout, tall, erect, leafy, loosely or densely clumped or tufted or caespitose, nonrhizomatous, robust or rather stout, ascending from geniculate base, often swollen at base and forming a small bulb or cormlike, ligule membranous, open sheaths, glabrous flat leaves, auricles absent or tiny, inflorescence of chasmogamous spikelets, spike-like panicle compact and cylindrical with branches fused to rachis, spikelets compact and oblong without rachilla extension, 1 floret, glumes narrow oblong and truncate, awned, lemma truncate, palea obtuse and nerved, small seeds, ornamental, numerous varieties available, noxious weed, naturalized throughout temperate regions, a prolific seeder, a cause of hay fever, highly palatable and nutritious, cultivated fodder, food plant, pasture grass, grazing and hay, forage, good cold resistance, sensitive to drought, a very useful forage plant in mountain areas and northern countries, growing in meadows, open habitats, moist grasslands, waste grounds, disturbed sites, fields, along roadsides, moist subalpine forests, damp sandy soil, track margins, dry open areas, see *Species Plantarum* 1: 59. 1753, *Systema Naturae, Editio Decima* 871. 1759, *Beschreibung der Gräser* 103. Leipzig 1769-1810, *Flora Anglica, Editio Altera* 26. 1778, *Icones et Descriptiones Graminum Austriacorum* 2: 27, t. 36. 1802, *Hortus Regius Monspeliensis* 132. 1813, *Flora Agenaise* 23. 1821, *A Natural Arrangement of British Plants* 2: 139. 1821, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 61(140): 157. 1828, *Voyage botanique dans le midi de l'Espagne* 2: 633. 1842, *The Tourist's Flora* 398. 1850, *Prodromus der Flora von Böhmen* 38. 1867, *Prodromus der Flora von Böhmen* 38. 1869, *Compendio della Flora Italiana* 757. 1883, *Synopsis*

der mitteleuropäischen Flora 2(1): 9. 1899 and *Flora Pyrenaea ...* 4: 270. 1901, *American Midland Naturalist* 4: 216. 1915, *Revue D'Oka* 14: 144, f. 10, no. 3. 1940, *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 226: 1337. 1948, *Botaniska Notiser* 1953(3): 357. 1953, *Novosti Sist. Vyss. Rast.* 8: 71. 1971, *Flora Republicii Socialiste Romania* 12: 123-124. 1972, *Candollea* 28(1): 41. 1973, *Lejeunia* 75: 232. 1975, *Acta Botanica Academiae Scientiarum Hungaricae* 23(12): 128. 1977, *Magyar Flóra* 6: 185. 1980, *Lagascalia* 12: 124-128. 1983, *Candollea* 38(2): 654, 658. 1983, *Bot. Zhurn.* 69(4): 511-517. 1984, *Fl. Sierra Nevada* 350. 1987, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Fragmenta Floristica et Geobotanica* 33: 257-265. 1988, *Bot. Zhurn. (Moscow & Leningrad)* 75: 118-120. 1990, *Genome* 34: 52-58. 1991, *Cytologia* 56: 437-452. 1991, *Fitologija* 39: 72-77. 1991, *Regnum Veg.* 127: 75. 1993, *Plant Systematics and Evolution* 188: 17-30. 1993, *Watsonia* 21: 365-368. 1997, *Flora Mediterranea* 7: 204-213. 1997, *Acta Biologica Cracoviensia, Series Botanica* 39: 69-77. 1997, *Taxon* 49(2): 254. 2000, *Clinical & Experimental Allergy* 33(1): 43-51. Jan 2003, A. Motta et al., "Phleum pratense pollen starch granules induce humoral and cell-mediated immune responses in a rat model of allergy." *Clinical & Experimental Allergy* 34(2): 310-314. Feb 2004.

in English: timothy grass, cat's tail, meadow cat's tail, timothy, cultivated timothy, common timothy, horsegrass, herdgrass, fall panic grass

in French: fléole des prés

in Italian: codolina comune

in German: Wiesenlieschgras, Thimotheus-Gras, Thimothee

in Portuguese: capim-timóteo, rabo de gato

in Spanish: cola de topo, timoti

in Colombia: timoteo

in Mexico: timote, zacate thimoty, zacate timothy

P. pratense L. subsp. ***bertolonii*** (DC.) Bornm. (*Phleum abbreviatum* (Boiss.) Rivas Mart. et al.; *Phleum bertolonii* DC.; *Phleum brachystachyum* subsp. *abbreviatum* (Boiss.) Gamisans, Romero García & C. Morales; *Phleum nodosum* L.; *Phleum pratense* subsp. *abbreviatum* (Boiss.) Molero Mesa & Pérez Raya; *Phleum pratense* subsp. *bertolonii* (DC.) Serb. & Nyár., nom. illeg., non *Phleum pratense* subsp. *bertolonii* (DC.) Bornm.; *Phleum pratense* var. *abbreviatum* Boiss.; *Phleum pratense* var. *bertolonii* (DC.) Woods)

Europe. Low-growing, perennial, leafy, bunchgrass, palatable and nutritious, see *Species Plantarum* 1: 59. 1753, *Systema Naturae, Editio Decima* 871. 1759, *Species Plantarum* edition 2, 88. 1762, *Hortus Regius Monspeliensis* 132. 1813, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 61(140): 157. 1828,

Voyage botanique dans le midi de l'Espagne 2: 633. 1842, *The Tourist's Flora* 398. 1850 and *Flora Republicii Socialiste Romania* 12: 123. 1972, *Lagascalia* 12: 124-128. 1983, *Candollea* 38(2): 654, 658. 1983, *Bot. Zhurn.* 69(4): 511-517. 1984, *Fl. Sierra Nevada* 350. 1987, *Rivasgodaya* 6: 50. 1991, *Fitologija* 39: 72-77. 1991, *Genome* 34: 52-58. 1991, *Plant Systematics and Evolution* 188: 17-30. 1993, *Acta Biologica Cracoviensia, Series Botanica* 39: 69-77. 1997, *Taxon* 49(2): 254. 2000.

in English: timothy grass

P. pratense L. subsp. ***pratense*** (*Phleum nodosum* auct., non L.; *Phleum nodosum* L.; *Phleum pratense* subsp. *nodosum* (L.) Peterm. pro parte; *Phleum pratense* subsp. *nodosum* (L.) Arcang.; *Phleum pratense* subsp. *vulgare* (Celak.) Asch. & Graebn.; *Phleum pratense* var. *nodosum* (L.) Huds.)

Low-growing, leafy, see *Species Plantarum* 1: 59. 1753, *Systema Naturae, Editio Decima* 871. 1759, *Sp. Pl.* edition 2, 88. 1762, *Flora Anglica, Editio Altera* 26. 1778, *Flora Agenaise* 23. 1821, *Compendio della Flora Italiana* 757. 1883 and *Flora Pyrenaea ...* 4: 270. 1901, *American Midland Naturalist* 4: 216. 1915, *Bot. Zhurn.* 69(4): 511-517. 1984, *Regnum Veg.* 127: 75. 1993, *Plant Systematics and Evolution* 188: 17-30. 1993, *Acta Biologica Cracoviensia, Series Botanica* 39: 69-77. 1997, *Taxon* 49(2): 254. 2000.

in English: timothy grass, cat's tail, meadow cat's tail, timothy

in German: Wiesenlieschgras, Thimotheus-Gras, Thimothee

P. pratense L. var. ***viviparum*** Gray (*Phleum pratense* f. *viviparum* (Gray) Louis-Marie)

Europe, British Isles. See *A Natural Arrangement of British Plants* 2: 139. 1821 and *Revue D'Oka* 14: 144, f. 10, no. 3. 1940.

P. subulatum (Savi) Asch. & Graebn. (*Achnodon bellardi* (Willd.) Link; *Achnodon bellardi* (Willd.) P. Beauv.; *Achnodonton bulbosum* Woods; *Achnodonton tenuis* (Host) P. Beauv.; *Phalaris bellardii* Willd.; *Phalaris bulbosa* L.; *Phalaris cylindrica* DC.; *Phalaris sativa* Pers.; *Phalaris subulata* Savi; *Phalaris tenuis* Host; *Phleum bellardii* (Willd.) Willd.; *Phleum bulbosum* (L.) K. Richt., nom. illeg., non *Phleum bulbosum* Gouan; *Phleum pratense* var. *tenuis* (Host) Litard.; *Phleum tenue* (Host) Schrad.; *Phleum tenue* (Host) Schrad. var. *tenuis*) (after the Italian botanist Carlo Antonio Lodovico Bellardi, 1741-1826, physician, pupil of the Italian physician and botanist Carlo Allioni (1728-1804), author of *Osservazioni botaniche*. Torino 1788, *Appendix Ludovici Bellardi ad Floram pedemontanam*. Torino 1792 and *Mezzo facile ed economico per nodrire i bachi da seta ...* Torino 1787. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 158. 1965; Carlo Allioni, *Flora pedemontana*. 1: 61. Torino 1785; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis*

Joseph Banks. London 1796-1800; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. 344. Paris, Leipzig 1845; O. Mattiolo, *Cronistoria dell'Orto Botanico della Regia Università di Torino*. in *Studi sulla vegetazione nel Piemonte* pubblicati a ricordo del II Centenario della fondazione dell'Orto Botanico della R. Università di Torino. Torino 1929)

Syria, Israel, Europe, Mediterranean. Annual, caryopsis laterally compressed, ornamental, weed, occurs in waste areas, see *Flora Pisana* 1: 57. 1798, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 415. 1801, *Icones et Descriptiones Graminum Austriacorum* 2: 27, t. 36. 1802, *Syn. Pl.* 1: 78. 1805, *Flora Germanica* 1: 191. 1806, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 1: 85. 1809, *Essai d'une Nouvelle Agrostographie* 25, 146, 173, t. 7, f. 5. 1812, *Hortus Regius Botanicus Berolinensis* 1: 65. 1827, *Flora Orientalis* 5: 480. 1884, *Plantae Europaeae* 1: 37. 1890, *Synopsis der mitteleuropäischen Flora* 2: 154. 1899 and *Conspectus Florae Graecae* 348. 1904, *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 226: 1337. 1948, *Fitologija* 39: 72-77. 1991.

in English: Italian timothy

P. subulatum (Savi) Asch. & Graebn. subsp. *ciliatum* (Boiss.) Humphries (*Phleum subulatum* var. *ciliatum* (Boiss.) Halácsy; *Phleum tenue* (Host) Schrad. var. *ciliatum* Boiss.)

Europe. See *Icones et Descriptiones Graminum Austriacorum* 2: 27, t. 36. 1802, *Flora Germanica* 1: 191. 1806, *Flora Orientalis* 5: 480. 1884, *Synopsis der mitteleuropäischen Flora* 2: 154. 1899 and *Conspectus Florae Graecae* 348. 1904, *Botanical Journal of the Linnean Society* 76(4): 339. 1978.

P. subulatum (Savi) Asch. & Graebn. subsp. *subulatum*

Europe. See *Synopsis der mitteleuropäischen Flora* 2: 154. 1899.

Pholiurus Trinius = *Pholiurus* Host ex Trin.

From the Greek *pholis*, *pholidos* "scale, horny scale" and *oura* "tail," referring to the overlapping glumes and to the scaly inflorescences; see Carl Bernhard von Trinius, *Fundamenta Agrostographiae*. 131. Viennae 1820.

Monotypic genus, Southeast Europe, Central Asia. Pooideae, Poodae, Poeae, or Hainardieae, annual, caespitose, herbaceous, glabrous, auricles absent, ligule an unfringed membrane, leaves linear and flat, plants bisexual, inflorescence a single spike nonarticulated, spikelets sunken in hollows along the axis, bisexual spikelets solitary and sessile, spikelets 2-flowered and compressed laterally, each spikelet falling off entire, 2 stiff glumes more or less equal and awnless, lemmas shorter than the glumes and awnless,

palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas, coastal, coastal sandy and saline soils, type *Pholiurus pannonicus* (Host) Trin., see *Fundamenta Agrostographiae* 131. 1820, *Nat. Pflanzenfam.* 2(2): 78. 1887 and *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 39: 45-51. 1992.

Species

P. pannonicus (Host) Trin. (*Lepturus pannonicus* (Host) Kunt; *Rottboellia pannonica* Host)

Southeastern Europe. Annual, glabrous, leaves very narrow and flat, spike more or less straight, first floret sessile, raceme bilateral, spikelets distichous, membranous lemmas 3-nerved, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Icones et Descriptiones Graminum Austriacorum* 1: 19, t. 24. 1801, *Fundamenta Agrostographiae* 132. 1820.

Phragmites Adanson = *Czernya* Presl, *Miphragtes* Nieuwland, *Oxyanthe* Steud., *Trichoon* Roth, *Xenochloa* Roem. & Schult., *Xenochloa* Lichtenstein ex J.J. Roemer & J.A. Schultes

Referring to the hedge-like growth habit, growing like a fence along streams, from the Greek *phragma* "a hedge, a fence, screen," *phragmites* "of fences," *kalamos phragmites* "reed of hedges," Latin *phragmites*, for a kind of reed growing in hedges (Plinius); see M. Adanson, *Familles des Plantes*. 2: 34. 1763.

Some 3-4 species, cosmopolitan. Arundinoideae, Arundineae, perennial, aquatic, erect, tall, vigorous, large, robust, coarse, woody and persistent to herbaceous to subwoody, often persistent, culms reedlike and hollow, much-branched above or unbranched above, rhizomatous and stoloniferous, creeping rhizomes, culm nodes glabrous, culm internodes hollow, auricles present or absent, ligule a fringe of hairs or a very short membrane with a long ciliate margin, flat cauline leaves linear to oblong-lanceolate or linear-lanceolate to lanceolate, blades flat and deciduous, plants bisexual, inflorescence a large plumed panicle, silky beards at the bases of the lowest panicle branches, bisexual and stipitate spikelets with several florets, the lowest floret male or sterile or empty, 2 glumes lanceolate and unequal, florets articulate above glumes, callus plumed or silky-hairy, ribbed lemma membranous and glabrous, female-fertile lemmas hairless, lemmas awned or slender-pointed or awnless, palea 2-keeled, 2 obovate lodicules ciliate or glabrous, 2 or 3 stamens, ovary glabrous, 2 stigmas brown, small fruit compressed, aggressive root system and stolons, weed species growing in large colonies, invasive, rapid growth, could become a noxious weed, form floating fens, once established very difficult to completely eradicate, soil binder and shoreline stabilization, prevent wave and current erosion in

channels, tolerate slight salinity, used for mats and thatching, pulp used for paper and fuel, young shoots edible, cover and reed beds for wildlife, occurring in marshes and riversides, standing-water swamps, rainforest, in wet ground or shallow water, lowlands, fresh or brackish waters, fresh to saline marshes, floodplains, wetlands, shores, streams, ditches and seepage areas, sometimes confused with *Neyraudia* Hook.f., type *Arundo phragmites* L. (*Phragmites communis* Trin.), see *Species Plantarum* 1: 81. 1753, *Familles des Plantes* 2: 34, 559. 1763, *Archiv für die Botanik* 1(3): 37. 1798, *Systema Vegetabilium* 2: 29, 501. 1817, *Cyperaceae et Gramineae Siculae...* Pragae 1820, *Synopsis Plantarum Glumacearum* 1: 197. 1855 [1854], *Journal of the Linnean Society Bot.* 19: 112. 1881 and *American Midland Naturalist* 3: 332. 1914, E. Yacovleff and F.L. Herrera, "El mundo vegetal de los antiguos peruanos." *Revista del Museo Nacional.* 3: 241-322 and 4: 20-102. Lima 1934-1935, *Kew Bulletin* 21: 113-117. 1967, *Animal Behaviour Monographs* 1(3): 161-311. 1968, *Taxon* 17: 168-169. 1968, H.I. Aston, *Aquatic Plants of Australia.* 207-210. 1973, *Kyoto University African Studies* 10: 143-212. 1976, *African Studies Monographs* 3: 109-130. 1983, C.R. Peters, "African wild plants with rootstocks reported to be eaten raw: the Mocoyletons, part I." *Mitteilungen aus dem Institut für Allgemeine Botanik Hamburg* 23: 935-952. 1990, *Journal of Shenyang Agricultural University* 24(2): 89-94. 1993, D. Neuhaus, H. Kuhl, J.G. Kuhl, P. Dorfel and T. Borner, "Investigation on the genetic diversity of *Phragmites stands* using genomic fingerprinting." *Aquatic Botany* 45: 357. 1993, Gopal B. and U. Goel, "Competition and allelopathy in aquatic plant communities." *Botanical Review* 59: 155-210. 1993, *Flora Mesoamericana* 6: 252. 1994, *Am. J. Bot.* 86: 17-31. 1999, Rebecca J. Howard and Irving A. Mendelssohn, "Salinity as a constraint on growth of oligohaline marsh macrophytes. I. Species variation in stress tolerance." *Am. J. Bot.* 86: 785-794. 1999, Rebecca J. Howard and Irving A. Mendelssohn, "Salinity as a constraint on growth of oligohaline marsh macrophytes. II. Salt pulses and recovery potential." *Am. J. Bot.* 86: 795-806. 1999, *Am. J. Bot.* 87: 96-107. 2000, *Am. J. Bot.* 88: 1058-1064. 2001, Jean Armstrong and William Armstrong, "Rice and *Phragmites*: effects of organic acids on growth, root permeability, and radial oxygen loss to the rhizosphere." *Am. J. Bot.* 88: 1359-1370. 2001, *Am. J. Bot.* 89: 494-499. 2002, *Contributions from the United States National Herbarium* 46: 169, 294, 306, 537-539, 623, 635. 2003, *Am. J. Bot.* 90: 736-748. 2003, *Am. J. Bot.* 91: 1155-1162, 1446-1480. 2004, M. Namaganda, S. Phillips and K.A. Lye, "The distribution of grass species in Uganda." *African Journal of Ecology* 42(s1): 48-50. Aug 2004, Felix Gugerli, Laura Parducci and Rémy J. Petit, "Ancient plant DNA: review and prospects." *New Phytologist* 166(2): 409-418. May 2005, *Journal of Evolutionary Biology* 18(3): 713-721. May 2005, *New Phytologist* 166(2): 419-426. May 2005, *Freshwater Biology* 50(5): 798-812, 813-829.

May 2005, *European Journal of Soil Science* 56(3): 389-396. June 2005, *Ecology of Freshwater Fish* 14(2): 139-149, 150-160. June 2005.

Species

P. australis (Cav.) Trinius ex Steudel (*Arundo altissima* Benth.; *Arundo australis* Cav.; *Arundo graeca* Link; *Arundo isiacca* Delile; *Arundo maxima* Forssk.; *Arundo occidentalis* Sieber ex Schult.; *Arundo palustris* Salisb.; *Arundo phragmites* L.; *Arundo vulgaris* Lam.; *Cynodon phragmites* (L.) Raspail; *Oxyanthe phragmites* (L.) Nieuwl.; *Phragmites altissimus* (Benth.) Mabilille ex Debeaux; *Phragmites australis* subsp. *maximus* (Forssk.) Soó; *Phragmites australis* var. *berlandieri* (Fourn.) C.F. Reed; *Phragmites berlandieri* E. Fourn.; *Phragmites capensis* Nees; *Phragmites caudatus* Nees ex Meyen; *Phragmites chilensis* Steud.; *Phragmites communis* Trin.; *Phragmites communis* subsp. *berlandieri* (Fourn.) A. & D. Löve; *Phragmites communis* subsp. *maximus* (Forssk.) Clayton; *Phragmites communis* var. *berlandieri* (Fourn.) Fern.; *Phragmites communis* var. *flavescens* Custer; *Phragmites communis* var. *genuina* Stuck.; *Phragmites communis* var. *genuinus* Stuck.; *Phragmites communis* var. *hispanicus* (Nees) K. Richt.; *Phragmites communis* var. *isiacus* (Delile) Engl.; *Phragmites communis* var. *longivalvis* (Steud.) Miq.; *Phragmites communis* var. *mauritanus* (Kunth) Baker; *Phragmites communis* var. *variegatus* Hitchc. ex L.H. Bailey; *Phragmites dioica* Hack. ex Hicken; *Phragmites dioicus* Hack. ex Hicken; *Phragmites dioicus* Hack. ex Conert, nom. illeg., non *Phragmites dioicus* Hack. ex Hicken; *Phragmites fissifolius* Steud.; *Phragmites hispanicus* Nees; *Phragmites isiacus* (Delile) Kunth; *Phragmites longivalvis* Steud.; *Phragmites martinicensis* Trin. ex Steud.; *Phragmites mauritanus* Kunth; *Phragmites mauritanus* sensu Schwartz; *Phragmites maxima* (Forssk.) Chiov.; *Phragmites maximus* (Forssk.) Chiov.; *Phragmites maximus* var. *berlandieri* (E. Fourn.) Moldenke; *Phragmites maximus* var. *variegatus* (Hitchc. ex L.H. Bailey) Moldenke; *Phragmites occidentalis* Trin. ex Steud.; *Phragmites phragmites* (L.) Karst.; *Phragmites phragmites* (L.) Speng., nom. illeg., non *Phragmites phragmites* (L.) H. Karst.; *Phragmites vulgaris* (Lam.) Crép.; *Phragmites vulgaris* Britton, Sterns & Poggenb.; *Phragmites vulgaris* subsp. *maximus* (Forssk.) Chiov.; *Phragmites vulgaris* var. *longivalvis* (Steud.) W. Wight; *Phragmites vulgaris* var. *mauritanus* (Kunth) T. Durand & Schinz; *Reimaria diffusa* Spreng.; *Trichoon phragmites* (L.) Rendle; *Zizania effusa* Munro)

Cosmopolitan. Perennial, very large to huge, aquatic, vigorous, thick, erect, leafy, robust and stiff, hollow culms, much-branched, long rhizomatous, vertical and horizontal creeping rhizomes, often also with stolons, leaf sheaths smooth and open, ligule hairy and thin, leaves narrowly lanceolate with long tapering ligule, leaves flexuous and scabrous or smooth, purplish or tawny large terminal

panicles erect to pendent, sericeous inflorescence oblong to ovoid, 4-8 florets, the lowest 1 or 2 florets male, rachilla silky, callus with long silky hairs, glumes aristate or mucronate, lemma smooth and lanceolate, palea 2-keeled with hairy margins, lodicules nerved, adaptable and hardy species, forms floating fens, invasive and noxious weed, elegant, strong-growing, tolerates moderate salinity, dominates other species, rapid growth, a soil binder, stabilizes banks and drains against erosion, strip mine reclamation, young shoots edible, rhizomes eaten raw by local people as famine food, high-quality forage, wildlife food, stem eaten by baboons, eaten by cattle and horses, tough and unpalatable after maturity, may be cut for hay, cannot withstand prolonged heavy grazing, leaves used for mats, useful for temporary roofing, arrow shafts, paper and arrows, sandals are made from its stems, used medicinally as a diuretic and a diaphoretic, may be used singly as fresh juice or combined with other herbs, requires high moisture conditions, found on marshy ground, at the edge of cultivated fields, wet places, saline marshes, along irrigation channels, shallow water, coastal marshes, swamps, marsh edge, wet wastelands, banks of lakes and streams, fine sandy loam soils, shallow and gravelly soils, in tidal waters, around springs, marshes, fresh or brackish waters, sloughs, shores and ditches, along the banks of rivers and ponds, amongst rocks and sand of riverbank, see *Species Plantarum* 1: 81. 1753, *Flora Aegyptiaco-Arabica* 24. 1775, *Flore de France* 3: 615. 1778, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 24. Londini [London] (Nov.-Dec.) 1796, *Anales de Historia Natural* 1: 100. 1799, *Description de l'Égypte, ... Histoire Naturelle, Tome Second* 2: 52. 1812, *Fundamenta Agrostographiae* 134. 1820 [1822], *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 3: 14. 1822, *Mantissa* 2: 289. 1824, *Annales des Sciences Naturelles, Botanique* 5: 302. 1825, *Catalogue des Plantes Indigènes des Pyrénées et du Bas-Languedoc* 62. 1826, *Révision des Graminées* 1: 80. 1829, *Flora Helvetica* 6: 341-342. 1830, *Révision des Graminées* 2: 277, t. 50. 1830, *Reise um die Erde* 1: 407. Berlin 1834, *Linnaea* 9(1): 136. 1834, *Nomenclator Botanicus. Editio secunda* 2: 324. 1841, *Florae Africae Australioris Illustrationes Monographicae* 356. 1841, *Gramineae* 20. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 152. 1843, *Catal. Horti Genuensis* 27. 1846, *Botanisches Centralblatt* 1846: 242. 1846, *Synopsis Plantarum Glumacearum* 1(3): 195. 1855 [1854], *Proceedings of the Linnean Society of London* 6: 52. 1862, *Manual de la Flore de Belgique (edition 2)* 345. 1866, *Recherches sur les Plantes de la Corse* 2: 37, 42. 1869, *Bulletin de la Société Botanique de France* 24: 178. 1877, *Flora of Mauritius and the Seychelles ...* 454. 1877, *Bulletin de la Société Dauphinoise pour l'échange des Plantes* 7: 276. 1880, *Deutsche Flora. Pharmaceutisch-medicinische Botanik...* 379. 1881, *Flora Orientalis* 5: 563. 1884, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888, *Plantae Europaeae* 1: 71. 1890, *Über die Hochgebirgsflora des tropischen Afrika* 133. 1892, *Conspectus Florae Africae* 5: 876. 1894, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 218. 1899 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 194. 1902, *American Midland Naturalist* 3: 332. 1914, *The Standard Cyclopedia of Horticulture* 5: 2601. 1916, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 4: 389. 1918, *Nuovo Giornale Botanico Italiano n.s.* 26: 80, 110. 1919, *Bollettino della Società Botanica Italiana* 1923: 113. 1923, *Rhodora* 34: 211. 1925, *Phytologia* 1(4): 170. 1935, *Torreya* 36: 93. 1936, *Acta Phytotaxonomica et Geobotanica* 10: 266. 1941, *Bulletin of the Torrey Botanical Club* 81(1): 33. 1954, *Die Systematik und Anatomie der Arundineae* 58-60. 1961, *Kew Bulletin* 21: 116. 1967, *Taxon* 17: 168-169. 1968, *Brittonia* 23(3): 293-324. 1971, *Flora Republicii Socialiste Romania* 12: 212. 1972, *Indian Forester* 99(9): 575. 1973, *Lejeunia* 75: 234-235, 309. 1975, *La Flore du Bassin Méditerranéen. Colloques Internatl. C.N.R.S.* 235: 165-173. Paris 1975, *Acta Botanica Academiae Scientiarum Hungaricae* 23(34): 389-390. 1977[1978], *Journal of Japanese Botany* 55(11): 327. 1980, *Feddes Repertorium* 93(1-2): 20. 1982, *Webbia* 38: 715-721. 1984, *Veröffentlichungen der Geobotanischen Institutes der ETH, Stiftung Rübél, Zürich* 87: 53-65. 1986, *Lejeunia* 120: 139. 1987, *Anales de Biología, Facultad de Biología, Universidad de Murcia* 13: 27. 1987, *Phytologia* 63(5): 410. 1987, Matoh T., N. Matsushita and E. Takahashi, "Salt tolerance of the reed plant *Phragmites communis*." *Physiologia Plantarum* 72: 8-14. 1988, *Genetica* 82: 25-31. 1990, *Fitologija* 39: 72-77. 1991, *Kromosomo* 63-64: 2168-2172. 1991, *Folia Geobotanica et Phytotaxonomica* 27: 49-59. 1992, *Canadian Journal of Botany* 71: 1386-1393. 1993, McKee J. and A.J. Richards, "Variation in seed production and germinability in common reed (*Phragmites australis*) in Britain and France with respect to climate." *New Phytologist* 133: 233-243. 1996, Wijte, A. H. B. M. and J.L. Gallagher, "Effect of oxygen availability and salinity on early life history stages of salt marsh plants. I. Different germination strategies of *Spartina alterniflora* and *Phragmites australis* (Poaceae)." *American Journal of Botany* 83: 1337-1342. 1996, *New Zealand Journal of Botany* 36: 465-469. 1998, *Aquatic Botany* 64: 185-208, 223-234. 1999, *Opera Botanica* 137: 1-42. 1999, *Acta Phytotaxonomica et Geobotanica* 51: 177-186. 2000, Timothy J. Arkebauer, Jeffrey P. Chanton, Shashi B. Verma and Joon Kim, "Field measurements of internal pressurization in *Phragmites australis* (Poaceae) and implications for regulation of methane emissions in a midlatitude prairie wetland." *Am. J. Bot.* 88: 653-658. 2001, *Plant, Cell and Environment* 27(4): 393-401. Apr 2004, *Global Ecology and Biogeography* 13(3): 259-271. May 2004 [Growth of *Lythrum salicaria* and *Phragmites australis* plants originating from a wide geographical area: response to nutrient and water supply.], *Physiologia Plantarum* 121(1): 66-74.

May 2004, Brian R. Silliman and Mark D. Bertness, "Shoreline development drives invasion of *Phragmites australis* and the loss of plant diversity on New England salt marshes." *Conservation Biology* 18(5): 1424-1434. Oct 2004, *Journal of Applied Ecology* 41(5): 888-896. Oct 2004 [Effects of nitrogen addition on the invasive grass *Phragmites australis* and a native competitor *Spartina pectinata*.], *Physiologia Plantarum* 122(2): 219-225. Oct 2004, Joey Shaw et al., "The tortoise and the hare II: relative utility of 21 noncoding chloroplast DNA sequences for phylogenetic analysis." *Am. J. Bot.* 92: 142-166. 2005, *Global Change Biology* 11(1): 145-153. Jan 2005, *Plant, Cell and Environment* 28(3): 318-327. Mar 2005, *Restoration Ecology* 13(2): 358-372. June 2005.

in English: reeds, common reed, reed, ditch reed, bamboo reed, Danube grass, reed grass, giant reedgrass, giant reed, wild reed, cane, yellow cane, common marsh grass

in French: roseau, roseau des marais, roseau commun

in German: ried, schilfrohr, rohrschild

in Turkey: Kamis, sokarik otu, arpa

in Spanish: carrizo, carrizo común, caña de indio, caña de pantano, caña brava

in Arabic: aranim, bous, bus, buz haggi, buzzam, djaboub, ghab, hagna, heish moddeid, ilili, qasba, tagasiba, tiouli, tiranimine, tra'a

in Morocco: roseau, roseau des marais, âganim, aranim, kseb, l-gesba, l-gseb, l-qseb, tiuli, tissendjelt

in Niger: almôes

in Sahara (Tassili): almas

in southern Africa: lehlaka, qhoboi, riete, riet, fleikiesriet, fluitjesriet, gewone fluitjesriet, sonquasriet, vaderlandsriet, vinkriet, vlakkiesriet; otuu (Herero)

in Sudan: boos, gana

in Yoruba: ifu

in Ecuador: carrizo, carricillo

in Mexico: acatil, acatl, bi-xilla, bixilla, caña, cañote, cañoto, carricillo, carrizo, gui, gui-ya-gui, guii, halal, holo, pi-xillaqui, picua remo, picuáremu, pixilla qui gui, qui, quij, taa gui, taa quij, ya-qui, yaga-gui, zacate, zachelal, zak-halal

in Peru: caña Hueca

in Japan: yoshi, ashi

in China: lu gen, lu, wei, chia, lu ken, lu ti ken, lang ku ken

in India: dambu, dila, era, nal, nala, nalam, narkul, ped-darellu, perunanal, pitus

in Indonesia: glagah asu, plumpung

Malayan names: rumpit gedabong, mata burong puding

in the Philippines: bagang, bugang, lupi, tabunak, tagisi, tambo, tangbo, tanobong, tantanubong, tanubong, uba uba

in Thailand: o, o laai, o lai, o lek, o noi

in Vietnam: say

P. australis (Cav.) Trinius ex Steudel subsp. ***altissimus*** (Benth.) W.D. Clayton (*Arundo altissima* Benth.; *Arundo donax* sensu Forssk.; *Phragmites altissimus* (Benth.) Mabillex Debeaux; *Phragmites altissimus* (Benth.) Mabillex; *Phragmites australis* var. *altissimus* (Benth.) D. Rivera & M. Carreras; *Phragmites communis* Trin.; *Phragmites communis* var. *altissimus* (Benth.) Cariot & St.-Lag., nom. illeg., non *Phragmites communis* Trin.; *Phragmites communis* var. *altissimus* (Benth.) Mutel)

Africa, Ethiopia. Perennial, reed, hollow jointed culms, creeping rhizome, tough roots, leaves flat and smooth, lowest node few-branched, plumose feathery panicle, spikelets silky, lower glume ovate, upper glume elliptic-oblong, decorative and ornamental, used for thatching and matting, useful for erosion control, invasive, may become a troublesome weed, low grazing value, a rattle made from the culms, rootstock edible, found along irrigation channels, in or near water, shallow water of rivers, at the edges of cultivated fields, on banks, lakes, swampy areas, see *Species Plantarum* 1: 81. 1753, *Fundamenta Agrostographiae* 134. 1820 [1822], *Catalogue des Plantes Indigènes des Pyrénées et du Bas-Languedoc* 62. 1826, *Nomenclator Botanicus. Editio secunda* 2: 324. 1841, *Recherches sur les Plantes de la Corse* 2: 39. 1869, *Bulletin de la Société Dauphinoise pour l'échange des Plantes* 7: 276. 1880, *Étude des Fleurs, éd. 8* 2: 937. 1889 and *Taxon* 17: 168-169. 1968, *F.T.E.A. Gramin.* 118. 1970, *Anales de Biología, Facultad de Biología, Universidad de Murcia* 13: 27. 1987.

in English: common reed, reed grass, reed

in French: roseau, roseau des marais

in Arabic: bus, buz haggi, buzzam

in Guinea-Bissau: oncoco

in Nigeria: bus, busaaràà, bushaaràà, bushaki, bushara, buz-zam, gabara, golbi, golbol, ifù, karan bushaaràà, karan mac-ara, karan mashai, kashala, wicco nyiwa, wutsiyar giwàà

in Senegal: ba gigimb, ba jijimb, bakinto, barah, diundi, gati, mbeleg-kumpa, portol

in Yoruba: ifù

P. karka (Retzius) Trin. ex Steudel (*Arundo karka* Retz.; *Arundo roxburghii* Kunth; *Arundo vallatoria* L.; *Oxyanthe japonica* (Steud.) Steud.; *Phragmites australis* (Cav.) Trin. ex Steud.; *Phragmites karka* (Retz.) Steud.; *Phragmites laxiflorus* Steud.; *Phragmites nepalensis* Nees ex Steud.; *Phragmites roxburghii* Steud.; *Phragmites roxburghii* (Kunth) Steud.; *Phragmites vallatoria* (L.) Veldkamp; *Sericura japonica* Steud.; *Trichoon karka* (Retz.) Roth)

Tropica Africa, tropical Asia, northern Australia. Perennial, stout, erect, leafy, reed, hollow culms, with long well-developed creeping rhizomes, ligule very shallow and hairy when young, leaf sheath smooth and often longitudinally striped,

stiff-pointed leaf blades narrowly lanceolate and attenuate, leaves distichous and with a rough undersurface, large terminal panicle sometimes plume-like with capillary branches, silky hairs at the base of the panicle, small and slender spikelets with 2-4 fertile florets, glumes boat-shaped and hairy on the back, lemma linear-lanceolate and glabrous, callus with long silky hairs, palea narrow with infolded margins, weed species, grazed when young, tolerant of heavy flood, stabilizer of riverbanks, useful for erosion control, used for fertilizer, thatching and matting grass, used for making arrow shafts, culms used for *hookah*-pipes and flutes, panicles for brooms, roots used for fractures, grows in streams and lakes, river floodplains, fertile soil, moist situations, damp places, in or near water, near running fresh water, in standing water and marshy ground, in wet grassland and in swamps, along creeks, alluvial deposits, near river, along riverbanks, see *Herbarium Amboinense* 15. 1754, *Observationes Botanicae* 4: 21. 1786, *Archiv für die Botanik* 1(3): 37. 1798, *Anales de Historia Natural* 1: 100. 1799, *Révision des Graminées* 1: 79. 1829, *Nomenclator Botanicus. Editio secunda* 1: 144. 1840, *Nomenclator Botanicus. Editio secunda* 2: 324. 1841, *Flora* 25(Beibl. 2): 2. 1842, *Flora* 29: 20. 1846, *Synopsis Plantarum Glumacearum* 1: 196-197. 1855 [1854], *The Flora of British India* 7: 305. 1896 and *Handb. Fl. Ceylon* 5: 287. 1900, *Grasses of Ceylon* 34. 1956, *Grasses of Burma ...* 416. 1960, *Syst. Anat. Arundineae* 58. 1961, *Kromosomo* 63-64: 2168-2172. 1991, *Blumea* 37(1): 233. 1992.

in English: common reed, tropical reed, nodding reed, large naunal, tall reed, great reed, dog bamboo, nal grass

in Nigeria: golbi, golbiho, ifu, wutsiyar giiwaa

in Somalia: gul bilanwe

in Yoruba: ifu

in New Guinea: pit-pit [pit-pit in New Guinea is *Saccharum robustum* E.W. Brandes & Jeswiet ex Grassl.], khwof

in the Philippines: tanub

in India: bag narri, bagnarri, bansi, bichhra, deonal, dhama, drumbi, dwarena, gwarga, hulugalagu, hulugila hull, hulugilu, jeevaalada kaddi, karka, khaila, khailuwa, kikkasagaddi, maitantos, mettanthisa, naagasvaramu, naanana, naaval, nada, nadam, naga sara maitantos, nagasvaramu, nai, nairi, nal, nala, nalam, nali, nalli, nalu, nanana, nar, nara, naria, narkat, narkul, narsal, noto, nuda nar, paika gadi, patoo-ederoo, peddarellu, perunaanal, perunaanal, potagala, puvvugutthigaddi, sar, sentha, tharbai pul

in Sri Lanka: nala gas

in Thailand: yaa khaem, ya khaem, ya la pho, yaa laa pho

P. mauritanus Kunth (*Arundo australis* Cav.; *Phragmites australis* (Cav.) Trin. ex Steud.; *Phragmites capensis* Nees p.p.; *Phragmites communis* Trin.; *Phragmites communis* var. *isiacus* (A. Rich.) Engl.; *Phragmites communis* var.

mauritanus (Kunth) Baker; *Phragmites communis* var. *mossambicensis* Andersson; *Phragmites communis* var. *roxburghii* Peters; *Phragmites isiacus* A. Rich.; *Phragmites laxiflorus* Steud.; *Phragmites maxima* (Forssk.) Chiov.; *Phragmites pungens* Hack.; *Phragmites vulgaris* (Lam.) Crép.; *Phragmites vulgaris* var. *isiacus* (A. Rich.) Durand & Schinz; *Phragmites vulgaris* var. *mauritanus* (Kunth) Durand & Schinz; *Phragmites vulgaris* var. *mossambicensis* (Andersson) Duran; *Trichoon phragmites* (L.) Rendle)

Africa. Perennial water grass, culms erect and many noded, long rhizomatous, robust, ligule with fringed hairs, leaf sheaths overlapping, leaves pungent with somewhat spiny leaf tips, inflorescence an open fluffy panicle, lemmas glabrous, shoots edible, used for many building purposes, roofing, fish traps, walls of huts, fences, split to make mats, roots used as medicine, provide browsing for many of the herbivores that utilize the riparian zone, shoots and pith eaten by baboons and chimpanzees, important because of its stabilizing effect on alluvium, a role player in sediment dynamics, widespread near water, in saline reed swamps, wetlands, in water of medium depth, flooded grasslands, riverside swamps, riverbeds, margins of lakes and rivers, see *Species Plantarum* 1: 81. 1753, *Flora Aegyptiaco-Arabica* 24. 1775, *Flore de France* 3: 615. 1778, *Anales de Historia Natural* 1: 100. 1799, *Description de l'Égypte, ... Histoire Naturelle, Tom. Second* 2: 52. 1812, *Fundamenta Agrostographiae* 134. 1820 [1822], *Révision des Graminées* 1: 80. 1829, *Révision des Graminées* 2: 277, t. 50. 1830, *Nomenclator Botanicus. Editio secunda* 2: 324. 1841, *Florae Africae Australioris Illustrationes Monographicae* 356. 1841, *Synopsis Plantarum Glumacearum* 1(3): 196. 1855 [1854], *Naturwissenschaftliche Reise nach Mossambique ...* 555. 1864, *Manual de la Flore de Belgique (éd. 2)* 345. 1866, *Flora of Mauritius and the Seychelles ...* 454. 1877, *Über die Hochgebirgsflora des tropischen Afrika* 133. 1892, *Conspectus Florae Africae* 5: 876. 1895 [1894], *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 218. 1899 and *Bulletin de l'Herbier Boissier, sér. 2*, 1: 771. 1901, *Nuovo Giornale Botanico Italiano, n.s.* 26: 80, 110. 1919, S.B.K. Sekiranda and S. Kiwanuka, "A study of nutrient removal efficiency of *Phragmites mauritanus* in experimental reactors in Uganda." in *Hydrobiologia* 364(1): 83-91. 1998.

in English: lowveld reed, reeds, spear reed, reed grass

in French: roseau à feuilles piquantes

in Angola: humbu, ntete, caniço

in South Africa: dekriet, fluitjiesriet, laeveldfluitjiesriet; rihlanga (Tsonga)

in Rodrigues Island: roseau de pays, jonc

in Malawi: bango

Phyllorachis Trimen

From the Greek *phyllon* “leaf” and *rhachis* “rachis, axis, midrib of a leaf.”

One species, southern tropical Africa, Angola, Tanzania to Zimbabwe. Bambusoideae, Oryzodae, Phyllorachideae, perennial, canelike, suffrutescent, slender, branched, unarmed, scrambling, rhizomatous, auricles absent, ligule a very short membrane with ciliate fringe, plants monoecious, inflorescence bisexual terminal exserted, 1-4 unisexual spikelets, female spikelet 2-flowered without rachilla extension, one female spikelet below and 2-3 male above, male spikelets with two glumes, lower floret reduced to a lemma, lower lemma of female spikelet grooved, upper lemma awnless, palea keeled and nerved, lodicules 2 free and membranous, male florets 6-staminate, stamens absent, ovary glabrous, 2 stigmas, in forest, riverine forest, shade, type *Phyllorachis sagittata* Trimen, see *Journal of Botany, British and Foreign* 17: 353. 1879 and *Hooker's Ic. Pl.* 34: t. 3386. 1939, *Bot. Mag.* (Tokyo) 69: 83-86. 1956.

Species

P. sagittata Trimen

Africa. See *Journal of Botany, British and Foreign* 17: 355, t. 205. 1879.

Phyllostachys Siebold & Zucc. = *Sinoarundinaria* Ohwi

From the Greek *phyllon* and *stachys* “a spike,” referring to the pseudospikelet.

About 23-41/55-76 species, eastern Asia, China, Himalayas to Japan, Assam. Bambusoideae, Bambusodae, Bambuseae, Shibataeinae, perennial, erect, tall to very tall, spreading, often diffuse, hollow internodes, with widely spaced culms flattened on one side, internodes D-shaped in cross section, evergreen, tree or bamboo-like shrubs, unarmed, rhizomatous with leptomorph persistent rhizomes, monopodial branching, culms woody and leafy, shoots from lateral buds, auricles present or absent, leaf sheaths developed, culm sheath deciduous, primary branches usually 2-3 per node, one side of branch with grooves, blade short-petioled, plants bisexual and seldom flowering, reproductive structures not produced every year, inflorescence a panicle terminal and leafy, spikelets subtended by large foliaceous bracts, glumes 0-3 or one per spikelet or two, lemma acuminate and ovate, palea 2-keeled and shortly pointed, 2 or 3 membranous lodicules, 3 stamens, ovary glabrous with an apical appendage, stigmas 3, graceful and willowy foliage, hardy bamboos forming thickets by rhizomatous spread, mostly aggressive spreaders, used for fishing rods and timber, walking sticks, the ripened stems used for making furniture and building purposes, edible shoots, the shoots of some species

develop an acrid flavor when exposed to light, many species resistant to honey fungus, tend to be intolerant of heavy shade, growing well only in cool climates, need to be grown in moist soils, abandoned gardens, woodland, near stream and riversides and in wetlands, type *Phyllostachys bambusoides* Siebold & Zucc., see *Genera Plantarum* 1: 236. 1789, Philipp Franz (Balthasar) von Siebold (1796-1866) and Joseph Gerhard Zuccarini (1797-1848), in *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 3(3): 745-746, t. 5, f. 3. 1843 and Kanjiro Mayebara, *Florula austro-higoensis* sive enumeratio plantarum in provincia Higo australe sponte nascentium ... Japan 1931, *Journal of Japanese Botany* 9: 83. 1933, *Fieldiana, Botany* 24(2): 38-331. 1955, F.A. McClure (1897-1970), *Bamboos of the Genus Phyllostachys*. U.S. Department of Agriculture Handbook. no. 114: 1-69. U.S.D.A. Washington D.C. 1957, *Agriculture Handbook* 193: i-iii, 1-74. 1961, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Ceiba* 19(1): 1-118. 1975, *Phytologia* 37(4): 317-407. 1977, *Fieldiana, Botany New Series* 4: 1-608. 1980, *Acta Phytotaxonomica Sinica* 18(2): 15-19, 48-92. 1980, *Edinburgh Journal of Botany* 48: 73-80. 1991, *Cuscatlania* 1(6): 1-29. 1991, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Ruizia* 13: 1-480. 1993, *Flora Mesoamericana* 6: 194. 1994, *Phytologia* 80(1): 30-34. 1996, *Flora Reipublicae Popularis Sinicae* 9(1): i-xxvi, 1-761. 1996, *Ecological Research* 13(3): 291-299. Oct 1998, Hodkinson T.R., S.A. Renvoize, G. Ni Chonghaile, C.M.A. Stapleton & M.W. Chase, “A comparison of ITS nuclear rDNA sequence data and AFLP markers for phylogenetic studies in *Phyllostachys* (Bambusoideae, Poaceae).” *Journal of Plant Research* 113: 259-269. 2000, *Contributions from the United States National Herbarium* 39: 100-104, 112-113. 2000, *Oryx* 35(3): 250-259. July 2001, Trevor R. Hodkinson et al., “The use of Dna sequencing (ITS and *trnL-F*), AFLP, and fluorescent in situ hybridization to study allopolyploid *Miscanthus* (Poaceae).” *Am. J. Bot.* 89: 279-286. 2002, *Am. J. Bot.* 91: 707-723. 2004, C. Mohanan, “Witches’ broom disease of reed bamboos in Kerala, India.” *Forest Pathology* 34(5): 329-333. Oct 2004, *Molecular Ecology* 13(12): 3871-3887. Oct 2004, Yanyang Xu, Min Zhang, Dingyu Tu, Jincal Sun, Lequn Zhou and Arun S. Mujumdar, “A two-stage convective air and vacuum freeze-drying technique for bamboo shoots.” *International Journal of Food Science and Technology* 40(6): 589-595. June 2005.

Species

P. spp.

in China: gang zhu, k’u-chu, tan-chu, zhu ye

in Japan: hotei-chiku, kei-chiku, kuro-chiku, ma-dake, ma-dake zoku, takenoko

in Malay: rebung

in Tagalog: labong

P. acuta C.D. Chu & C.S. Chao (*Phyllostachys vivax* McClure)

China, Zhejiang, Fujian, Jiangsu. Dark green, rarely pruinose or never, shoots tapering, green sheath with dark purple spots, sheath blade flat, no sheath auricles, sheath ligule with a wavy tip, see *Acta Phytotaxonomica Sinica* 18(2): 172-173, f. 2. 1980, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. altiligulata G.G. Tang & Y.L. Xu (*Phyllostachys viridiglaucescens* Rivière & C. Rivière)

China. See *Bulletin de la Société Nationale d'Acclimatation de France* ser. 3 5: 700, 773, f. 28. 1878 and *J. Nanjing Inst. Forest.* 1985(4): 18, f. 2. 1985, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. angusta McClure

Anhui, Jiangsu, China, Zhejiang. Timber bamboo, young culm slightly pruinose, evergreen bamboo with shallow root systems that do not compete with deep tree roots, hard texture of the culms, sheath creamy and glabrous, sheath blade lanceolate or narrowly lanceolate, no sheath auricles, sheath ligule ciliate, very high content of silica, resistant to honey fungus, aggressive spreader, cultivated, edible shoots free from bitterness, canes very hard and strong, used to make fine bamboo furniture, for weaving, for making fishing rods, useful for erosion control, closely related to *Phyllostachys flexuosa* M.A. Rivière & C. Rivière, requires moist soil and dappled shade, grows well in a woodland, see *Journal of the Washington Academy of Sciences* 35(9): 278, f. 1. 1945, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: stone bamboo

P. arcana McClure

China, Sichuan, Anhui, Shaanxi. Evergreen, gray to yellowish green, shallow-rooted, heavy foliage, culms mostly quite straight and upright, thin-walled and not particularly strong, black areas form at the base of pruinose young culms, sheath blade long lanceolate, sheath thickly pruinose yellowish green with purplish stripes, no sheath auricles, sheath ligule drooping and pubescent, cultivated and wild, resistant to honey fungus, plants only flower at intervals of many years and sometimes die after flowering, a slow-to-moderate spreader, young shoots edible and cooked, canes used in basketry and weaving, as handle of farm implement, hedges, in China its split culms are woven into mats, can grow in semishade or no shade, requires moist soil, prefers a rich damp soil with shelter from cold harsh winds and prolonged frosts, see *Journal of the Washington Academy of Sciences* 35(9): 280, f. 1. 1945.

in English: half black, half black bamboo

in China: lao zhu, shi lu zhu

P. arcana McClure f. *luteosulcata* C.D. Chu & C.S. Chao

China, Zhejiang, Jiangsu. Culm with yellow longitudinal grooves, ornamental, see *Journal of the Washington Academy of Sciences* 35(9): 280, f. 1. 1945, *Acta Phytotaxonomica Sinica* 18(2): 174. 1980.

P. aristata W.T. Lin

China, Guangdong. See *Acta Phytotaxonomica Sinica* 26(3): 230-231, pl. 9. 1988, *J. South China Agr. Univ.* 15(2): 78. 1994.

P. assamica Gamble ex Brandis (*Phyllostachys bawa* E.G. Camus; *Phyllostachys bawa* Brandis ex E.G. Camus; *Phyllostachys helva* T.H. Wen; *Phyllostachys decora* McClure; *Phyllostachys mannii* Gamble)

India, Arunachal Pradesh, Assam. Caespitose, bright green, waxy ring below the nodes when young, nodes glabrous, short internodes, leaves broadly linear with a short petiole, leaf sheaths keeled and ciliate on the margins, used for making walking sticks, found along streams and riverbanks, see *Annals of the Royal Botanic Garden, Calcutta.* 7: 28, t. 28. 1896 and *Indian Trees* 607, 719. 1906, *Les Bambusées* 66. 1913, *Journal of the Arnold Arboretum* 37(2): 182, f. 2. 1956, *Bulletin of Botanical Research* 2(1): 64-65, pl. 3. 1982, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in Thailand: mep we, me pwe

P. atrovaginata C.S. Chao & H.Y. Chou (*Phyllostachys rivalis* H.R. Zhao & A.T. Liu)

China, Jiangsu, Zhejiang. Young culms glabrous and not pruinose, dark green, sheath mouth without auricles and cilia, sheath blade broadly triangular or lanceolate, sheath ligule brownish and glabrous, timber bamboo, edible shoots, see *Acta Phytotaxonomica Sinica* 18(2): 189-192, f. 11, 13. 1980, *Forest Research (China)* 1: 109-111. 1988.

P. aurea M.A. Rivière & C. Rivière (*Arundarbor aurea* (Sieber) Kuntze; *Bambos hoteitsik* Siebold; *Bambusa aurea* hort. ex Rivière & C. Rivière; *Bambusa aurea* Sieber; *Bambos hoteitsik* Zollinger; *Phyllostachys aurea* (Carrière) Rivière & C. Rivière; *Phyllostachys aurea* Carrière ex Rivière & C. Rivière; *Phyllostachys bambusoides* Sieb. & Zucc. var. *aurea* (Rivière & C. Rivière) Makino; *Phyllostachys formosana* Hayata; *Phyllostachys meyeri* McClure var. *aurea* (Rivière & C. Rivière) Pilip.; *Phyllostachys reticulata* var. *aurea* (Rivière & C. Rivière) Makino; *Phyllostachys reticulata* var. *aurea* Makino; *Sinoarundinaria formosa* (Hayata) Ohwi ex Mayeb.)

Southeastern and southwestern China, Japan. Perennial, variable, evergreen, erect, open, cylindrical or grooved, creeping, glaucous when young yellowish green at maturity, midculm branching, shallow-rooted, running leptomorph rhizomes, nodes of lower part of culm shortened and irregularly swollen, basal internodes cylindrical and often asymmetric or deformed, nodes with a swollen ring beneath, deciduous culm sheaths oblong-lanceolate and chartaceous, very short sheath ligule long ciliate, sheath auricles lacking,

dark green leaves lanceolate, spikes lanceolate, spikelets narrowly lanceolate with 1-2 fertile florets, glumes one and sometimes lacking, lemmas lanceolate and acuminate, palea present, usually 2 lodicules rarely 1 or 3, stamens very long, ovary cylindrical, 3 feathery stigmas, fast-growing, slow to establish, dense-thicket-forming, very-tight-spreading habit, invasive species with running rootstock forming impenetrable solid stands, resistant to honey fungus, flowering is rare or plants only flower at intervals of many years, usually propagated by clump division, ornamental bamboo widely cultivated especially in temperate and subtropical regions, in some countries naturalized, short and swollen internodes resembling the hand grip of a walking cane, young shoots eaten as vegetables, shoots are boiled and dried, seeds eaten raw or cooked, a fiber from the stems is used for making paper, canes very hard but superflexible, culms used as interior decoration, used to manufacture cane fishing poles, pipe stems, hedge, walking sticks, fan handles, plant supports, umbrella handles, furniture, handicrafts, established plants are drought resistant, dislikes prolonged exposure to hard frosts, can grow in semishade, requires rich and moist soil, deep and well-drained sandy soil, along roadsides, see *Bulletin de la Société Nationale d'Acclimatation de France* sér. 3, 5: 716, f. 36, 37. 1878, *Botanical Magazine* (Tokyo) 11(122): 158. 1897 and *Botanical Magazine* (Tokyo) 26: 22. 1912, *Journal of Japanese Botany* 3: 12. 1912, *Actes du III^{me} Congrès international de botanique, Bruxelles 1910* 2: 222. [1922], *Revue Horticole (Paris)* 18: 108. 1922, *Journal of Japanese Botany* 9(1): 20. 1933, *Journal of the Washington Academy of Sciences* 35(10): 286, f. 1. 1945, *Brittonia* 23(3): 293-324. 1971, *Journal of Zhejiang Forestry College* 8(1): 127-130. 1991, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, K.W. Hilu and L.V. Sharova, "Characterization of 10 KDA prolamin genes in *Phyllostachys aurea* (Bambusoideae, Poaceae)." *Am. J. Bot.* 85: 1033. 1998 [also K.W. Hilu and L.V. Sharova, "Cloning and characterization of two prolamin genes in the bamboo grass *Phyllostachys aurea*." *American Journal of Botany* 85: 1033-1037. 1998], Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang and De-Yuan Hong, "A phylogeny of the rice tribe Oryzaceae (Poaceae) based on *matK* sequence data." *Am. J. Bot.* 89: 1967-1972. 2002.

in English: fishpole bamboo, golden bamboo, golden fishing pole, walking cane bamboo, walking stick bamboo, golden Japanese bamboo

in Hungary: arany botnád

in Spanish: bambú amarillo

in Bolivia: bambú amarillo

in Mexico: bambú, bambú amarillo

in Indonesia: pring uncue

in Japan: hotei-chiku, gosan-chiku, usan-chiku (*u*, large), kosan-chiku (*ko*, small), gimmei-hotei (bud canal yellow

green, leaves green), ougon-hotei (green stripes on the yellow culm), shima-hotei (with white stripes on the leaves) in Vietnam: trus vafng

P. aurea M.A. Rivière & C. Rivière f. *albo-variegata* Makino

Japan. See *Journal of Japanese Botany* 3: 12. 1912.

P. aurea M.A. Rivière & C. Rivière f. *aurea*

China.

P. aurea M.A. Rivière & C. Rivière f. *takemurai* Muroi & H. Hamada

China.

P. aureosulcata McClure (*Phyllostachys aureosulcata* cv. *spectabilis*; *Phyllostachys aureosulcata* f. *spectabilis* C.D. Chu & C.S. Chao)

China, Zhejiang. Perennial, young culm densely ciliate and pruinose, strongly upright, culms straight and sturdy, sometimes with a distinct crook near the base, young culms green with yellow grooves, erect sheath blade long triangular, sheath scar dark wine-red, sheath auricles broadly falciform with long cilia, sheath ligule arcuate and ciliate, older culms red-brown to reddish, dense foliage, leaves green, flowers on older culms, plants only flower at intervals of many years and sometimes die after flowering, forming dense clumps, cold-hardy, shallow-rooted, woody-stemmed, resistant to honey fungus, cultivated ornamental, wood is not of high quality, one of the best species for edible shoot production, shoots notably free of acrid flavor even when raw, an aggressive spreader, good for hedges or screens and plant supports, small fishing rods, see *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 3(3): 745-746, pl. 5, f. 3. 1843 and *Journal of the Washington Academy of Sciences* 35(9): 282, f. 3. 1945, *Acta Phytotaxonomica Sinica* 18(2): 180-181. 1980, *Journal of Bamboo Research* 2(1): 72. 1983, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: yellow-grooved bamboo, yellow-groove bamboo, stake and forage bamboo

in China: Huang cao zhu

P. aureosulcata McClure f. *aureocaulis* Z.P. Wang & N.X. Ma

China, Jiangsu, Zhejiang. Basal internodes with green stripes, see *Journal Nanjing University. Natural Sciences Edition* 1983(3): 493. 1983.

P. aureosulcata McClure f. *aureosulcata*

China.

P. aureosulcata McClure f. *pekinensis* (J.L. Lu) T.H. Wen (*Phyllostachys aureosulcata* cv. *pekinensis*; *Phyllostachys aureosulcata* f. *pekinensis* J.L. Lu; *Phyllostachys pekinensis* Lu)

China, Beijing, Henan, Zhejiang. Culm entirely green, see *Act. Phyt. Sin.* 14(2): 32. 1976, *J. Henan Agr. Coll.* 1981(2): 71, f. 2. 1981, *Bulletin of Botanical Research* 2(1): 78. 1982.

P. aureosulcata McClure f. *spectabilis* C.D. Chu & C.S. Chao (*Phyllostachys aureosulcata* cv. *spectabilis*)

China, Jiangsu, Zhejiang. Culm golden yellow with irregular longitudinal stripes, ornamental, see *Acta Phytotaxonomica Sinica* 18(2): 180-181. 1980, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. aurita J.L. Lu (*Sinobambusa fimbriata* T.H. Wen)

China Guangxi, Henan, Hebei. Dark green, young culms waxy, sheath pruinose, sheath blade erect and triangular, sheath auricles falciform and hairy, sheath ligule more or less truncate and ciliate, see *Journal of the Arnold Arboretum* 6(3): 152. 1925, *J. Henan Agr.* 1981(2): 70, f. 1. 1981, *Journal of Bamboo Research* 7(1): 25-27, f. 2. 1988, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. bambusoides Siebold & Zucc. (*Bambusa bifolia* Siebold ex Munro; *Bambusa castillonii* Marliac ex Carrière; *Bambusa matake* Siebold; *Bambusa metake* Siebold; *Bambusa reticulata* Rupr.; *Bambusa sulphurea* Carrière; *Phyllostachys bambusoides* f. *castillonii* (Lat.-Marl. ex Carrière) T.P. Yi; *Phyllostachys bambusoides* f. *kashirodake* Makino; *Phyllostachys bambusoides* f. *kawadana* Makino ex Tsuboi; *Phyllostachys bambusoides* f. *shouzhu* T.P. Yi; *Phyllostachys bambusoides* f. *tanakae* Makino; *Phyllostachys bambusoides* f. *zitchiku* Makino; *Phyllostachys bambusoides* var. *castillonii* (Marliac ex Carrière) Makino ex Shiras.; *Phyllostachys bambusoides* var. *castillonii* (Lat.-Marl. ex Carrière) Makino; *Phyllostachys bambusoides* var. *castillonii-holochrysa* (Pfitzer) J. Houz.; *Phyllostachys bambusoides* var. *sulphurea* Makino ex Tsuboi; *Phyllostachys castillonii* (Lat.-Marl. ex Carrière) Mitford; *Phyllostachys castillonii* Lat.-Marl. ex Carrière; *Phyllostachys castillonii* var. *holochrysa* Pfitzer; *Phyllostachys macrantha* Siebold & Zuccarini; *Phyllostachys marliacea* Mitford; *Phyllostachys megastachya* Steudel; *Phyllostachys nigra* var. *castillonii* (Latour-Marliac ex Carrière) Bean; *Phyllostachys quilioi* Rivière & C. Rivière; *Phyllostachys quilioi* var. *castillonii-holochrysa* Regel ex J. Houz.; *Phyllostachys quilioi* var. *castillonii* (Lat.-Marliac ex Carrière) J. Houz.; *Phyllostachys quilioi* var. *marliacea* (Mitford) J. Houz.; *Phyllostachys reticulata* (Rupr.) K. Koch; *Phyllostachys reticulata* auct. non (Rupr.) K. Koch; *Phyllostachys reticulata* (Rupr.) Carr.; *Phyllostachys reticulata* f. *geniculata* Nakai; *Phyllostachys reticulata* var. *castillonii* (Lat.-Marliac ex Carrière) Makino, nom. illeg., non *Bambusa castillonii* Marliac ex Carrière; *Phyllostachys reticulata* var. *holochrysa* (Pfitzer) Nakai; *Phyllostachys reticulata* var. *marliacea* (Mitford) Makino; *Phyllostachys reticulata* var. *sulphurea* (Carrière) Makino; *Phyllostachys sulphurea* (Carrière) Rivière & C. Rivière; *Phyllostachys sulphurea* f.

viridis (Rob. A. Young) D. Ohrnberger; *Phyllostachys sulphurea* var. *viridis* Rob. A. Young; *Phyllostachys viridis* (Rob. A. Young) McClure; *Sinoarundinaria reticulata* Ohwi)

China, Japan. Perennial, tall, evergreen, monopodial, young culm green and not pruinose, caespitose, very hard, thick-walled, long-lived, erect and slightly curving towards apex, nodes with one prominent ridge and sheath scar, each node with two branches, culm sheaths glabrous spotted with brown, sheath blade flat, sheath auricles double and more or less falciform, sheath ligule and auricles greenish yellow, branches dense, leaf-sheath with auricles, inflorescence narrowly paniculate, 1-3 florets and the uppermost one usually male, spikelets subtended by sheath-like bracts, glumes 1-2 sometimes lacking, lemma ovate and acuminate, palea ciliate on the keels, 3 lodicules unequal, stamens long exerted, ovary ovoid and stipitate, 3 stigmas plumose, produces a grove with widely spaced culms, rootstock running, shallow rooted, extensive root system, rhizomes running extensively, dense-thicket-forming, plants only flower at intervals of many years and sometimes die after flowering, young shoots eaten as vegetables, shoots slightly acrid when raw, young shoots used in the treatment of haematuria, leaves antipyretic, culms used for walking sticks and in weaving, umbrella-handles, house construction, fishing rods, bridges, furniture, handicrafts, hairless sheath utilized for wrapping, cultivated ornamental garden plant, used for erosion control, can grow in semishade, requires moist soil, resistant to honey fungus, see *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 3(3): 745-746, pl. 5, f. 3. 1843, *Prolusio Florae Japonicae* 172. 1866, *Dendrologie* 2(2): 356. 1873, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 716, 773, f. 36, 37. 1878, *Revue Horticole* 58: 513, f. 122. 1886, *Journal de Botanique (Morot)* 4: 29. 1890, *The Bamboo Garden* 47: 3. 1895, *The Bamboo Garden* 158. 1896, *Botanical Magazine (Tokyo)* 11(122): 158. 1897 and *Botanical Magazine (Tokyo)* 14: 63. 1900, *Bulletin of Miscellaneous Information Kew* 1907: 232. 1907, *Journal of Japanese Botany* 3: 12. 1912, *Botanical Magazine (Tokyo)* 26: 21, 24. 1912, *Actes du III^{me} Congrès International de Botanique, Bruxelles 1910* 2: 228. [1912], *Les Bambusées* 57. 1913, *Illustrations of the Japanese Species of Bamboo* (edition 2) p. 5, 9, 10, t. 2, 7, 8, f. 2. 1914-1916, *Flora of Japan* (edition 2) 1376. 1931, *Journal of Japanese Botany* 9(1): 32-34. 1933, *Journal of the Washington Academy of Sciences* 27: 345. 1937, *Journal of the Arnold Arboretum* 37(2): 192-193. 1956, *Report Fuji Bamboo Garden* 17: 8. 1972, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Cell and Chromosome Research* 15(3): 12. 1992, *Journal of Bamboo Research* 12(4): 47. 1993, *Taxon* 49(2): 238. 2000.

in English: giant timber bamboo, timber bamboo, hardy timber bamboo, Japanese timber bamboo, Castillon

bamboo, golden bamboo, embroidered sheath bamboo, madake bamboo

in China: ban zhu gen, Ban zhu, Gang zhu, Gui zhu, Jian zhu, Ku zhu (K'u chu), Kwai chuk, Mui Tim Chuk, Tai zhu, Wu yue ji zhu, Hua ke zhu (Hakka: fa hok chuk), Zhen zhu
in Japan: ma-dake (= true bamboo), kimmei-chiku (green and yellow), gimmei-chiku (yellow and green), ougon-chiku (green stripes on the yellow culms), okina-dake (with white stripes on culms and leaves), kashiro-dake (with black dots on the sheath), konshima-dake (with dark green stripes on the leaves), kishima-dake (yellow stripes on the leaf)

in Okinawa: kara-taki

P. bambusoides Siebold & Zucc. f. *lacrima-deae* Keng f. & Wen (*Phyllostachys reticulata* f. *tanakae* Nakai)

China. Culm and branches with brownish purple spots, ornamental, used for making handicrafts, see *Bulletin of Botanical Research* 2(1): 73-74. 1982, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. bambusoides Siebold & Zucc. f. *mixta* Z.P. Wang & N.X. Ma (*Phyllostachys bambusoides* f. *mixta* N.X. Ma)

China. Spotted culm with yellow grooves, see *Journal Nanjing University. Natural Sciences Edition* 1983(3): 494. 1983.

P. bambusoides Siebold & Zucc. f. *nigrostriata* Muroi & H. Okamura

Asia. See *Report Fuji Bamboo Garden* 17: 8. 1972.

P. bambusoides Siebold & Zucc. f. *shouzhu* T.P. Yi

China, Sichuan, Hunan. Young culm pruinose, sheath glabrous, cultivated, edible shoot, culms used for making furniture or for wrapping rice food, see *Bulletin of Botanical Research* 2(4): 102-103. 1982.

P. bambusoides Siebold & Zucc. var. *castillonis* (Lat.-Marl. ex Carrière) Makino (*Bambusa castilloni* Marliac ex Carrière; *Phyllostachys bambusoides* var. *castillonis* (Marliac ex Carrière) Makino ex Shiras.; *Phyllostachys bambusoides* var. *castillonis* E.G. Camus; *Phyllostachys bambusoides* var. *castillonis* Makino; *Phyllostachys bambusoides* var. *castillonis* Marliac ex J. Houz.)

China. Yellow with bright green grooves, see *Revue Horticole* 58: 513, f. 122. 1886 and *Botanical Magazine* 14: 63, 65. 1900, *Icon. Bamb. Jap.* pl. 2, f. 1-4. 1912, *Actes du III^{me} Congrès international de botanique, Bruxelles 1910* 2: 227. 1912, *Les Bambusées* 57. 1913, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. bambusoides Siebold & Zucc. var. *marliacea* (Mitford) Makino (*Phyllostachys bambusoides* f. *marliacea* (Makino ex Tsuboi) Muroi; *Phyllostachys bambusoides* f. *marliacea* Muroi; *Phyllostachys bambusoides* var. *marliacea* J. Houz.; *Phyllostachys bambusoides* var. *marliacea* Makino ex Tsuboi; *Phyllostachys marliacea* Mitford; *Phyllostachys reticulata* var. *marliacea* (Mitford) Makino)

Asia, Japan. Culms deep green, thick wall, deep vertical stripes, internodes longitudinally wrinkled, see *Actes du III^{me} Congrès International de Botanique, Bruxelles 1910* 2: 228. [1912], *Report Fuji Bamboo Garden* 17: 8. 1972.

in Japan: shibo-chiku, katashibo-chiku (with vertical stripes on bud canal)

P. bissetii McClure (dedicated to Mr. David Bisset who was Superintendent of the USDA Plant Introduction Station in Savannah, Georgia from 1924 until 1957)

China, Sichuan, Zhejiang. Perennial, upright culms, very dense foliage, young culm internodes with sparse erect hairs, sheath blade base narrower than sheath ligule, sheath auricles developed, vigorous spreader and fast growing, shallow-rooted, wood relatively strong, shoots edible, eaten by the giant panda, resistant to honey fungus, useful for erosion control, very hardy and quite tolerant of shade and strong winds, used as handle, strips woven, see *Hooker's Icones Plantarum* 23(4): pl. 2288. 1894 and *Journal of the Arnold Arboretum* 37(2): 180, f. 1. 1956, *Journal of Bamboo Research* 10(1): 32. 1991, *Journal of Bamboo Research* 12(4): 47. 1993.

in English: David Bissett bamboo, dwarf David Bissett bamboo

P. boryana Mitford (*Phyllostachys boryana* Bean; *Phyllostachys nigra* (Lodd. ex Lindl.) Munro; *Phyllostachys nigra* f. *boryana* (Mitford) Makino; *Phyllostachys nigra* var. *boryana* (Mitford) J. Houz.)

Asia. See *Transactions of the Linnean Society of London* 26(1): 38, 123. 1868, *Gardener's chronicle, ser. 3* 15: 238. 1894, *The Bamboo Garden* 47: 3. 1895 and *Le Bambou, son étude, sa culture, son emploi* 1: 28. 1906, *Botanical Magazine* (Tokyo) 28: 26. 1912, *Forest Research (China)* 1: 109-111. 1988.

P. breviligulata W.T. Lin & Z.M. Wu

China, Guangdong. See *Acta Phytotaxonomica Sinica* 26(3): 229-230, pl. 8. 1988.

in English: short-ligulate bamboo

P. cantoniensis W.T. Lin

China. See *Journal of the South China Agricultural University* 14(3): 110-114, f. 1-6. 1993.

in English: Canton bamboo

P. carnea G.H. Ye & Z.P. Wang

China. See *Acta Phytotaxonomica Sinica* 27(3): 228-229, f. 1, 5-7. 1989.

in English: Hunan bamboo

P. chlorina Wen (*Phyllostachys sulphurea* f. *viridis* (Rob. A. Young) D. Ohrnberger)

China. See *Bulletin de la Société Nationale d'Acclimatation de France, sér. 3*, 5: 773. 1878 and *Journal of the Washington Academy of Sciences* 27: 345. 1937, *Bulletin of*

Botanical Research 2(1): 61-62, f. 1. 1982, *Bambusbrief* 1993(2): 10. 1993.

P. circumpilis C.Y. Yao & S.Y. Chen

China. See *Acta Phytotaxonomica Sinica* 18(2): 178-179, pl. 5. 1980.

P. compressa Uyeki

Korea. Internodes compressed, see *Journal of the Chosen Natural History Society* 9: 20-21. 1929, *Korean Pl. Tax.* 4(1-2): 8, f. 1. 1972, *Illustr. Fl. Korea* 79. 1985, *List Pl. kwangnung Arb.* 16. 1989.

P. concava Z.H. Yu & Z.P. Wang (*Phyllostachys rubicunda* T.H. Wen)

China, Jiangsu, Zhejiang. Young culms dark green and pruinose, sheath with purple longitudinal stripes, sheath blade triangular or lanceolate, sheath ligule margin ciliate, usually no sheath auricles, 3-4 leaves on each twig, edible shoot, culms used for furniture and construction materials, see *Acta Phytotaxonomica Sinica* 16(4): 98-99, pl. 1. 1978, *Acta Phytotaxonomica Sinica* 18(2): 192-193, pl. 14. 1980.

P. congesta Rendle (*Phyllostachys cerata* McClure; *Phyllostachys dubius* Keng; *Phyllostachys heteroclada* Oliv.; *Phyllostachys heteroclada* f. *heteroclada*; *Phyllostachys purpurata* cv. *straightstem* McClure)

China. Perennial, useful for erosion control, see *Hooker's Icones Plantarum* 23(4): pl. 2288. 1894 and *Journal of the Linnean Society, Botany* 36(254): 438-439. 1904, *Sinensia* 11(5&6): 407. 1940, *Lingnan University Science Bulletin* 9: 41, 43. 1940, *Agriculture Handbook* 114: 56. 1957, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. decora McClure (*Phyllostachys mannii* Gamble)

China. Shoots edible, culms used for furniture and construction materials, see *Annals of the Royal Botanic Garden, Calcutta.* 7: 28, t. 28. 1896 and *Journal of the Arnold Arboretum* 37(2): 182, f. 2. 1956, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: beautiful bamboo

P. dulcis McClure

Central China, Zhejiang, Fujian. Perennial, vigorous and fast-growing, shallow rooted, evergreen, arching and thick culms, basal internodes with irregular greenish longitudinal stripes, sheath blade long lanceolate and rugose, sheath auricles and cilia green, sheath ligule brown and shortly hairy, cultivated, edible and ornamental, lacking tough fibers in the culm, delicious young shoots particularly free of any acrid taste, aggressive spreading, can grow in semi-shade, requires moist soil, see *Journal of the Washington Academy of Sciences* 35(10): 285, f. 2. 1945, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: sweet shoot bamboo, white sheath bamboo

P. edulis (Carrière) J. Houz. (*Bambusa edulis* Carrière; *Bambusa heterocyclus* Carrière; *Bambusa mitis* Hort. ex Carr.; *Bambusa moosoo* Sieb.; *Bambusa pubescens* Carrière; *Phyllostachys edulis* Houz.; *Phyllostachys edulis* Carrière ex Makino; *Phyllostachys edulis* Rivière & C. Rivière; *Phyllostachys edulis* var. *heterocyclus* J. Houz.; *Phyllostachys edulis* var. *heterocyclus* (Carr.) J. Houz.; *Phyllostachys edulis* var. *heterocyclus* (Carr.) Makino; *Phyllostachys heterocyclus* (Carrière) Mitford; *Phyllostachys heterocyclus* (Carrière) S. Matsum.; *Phyllostachys heterocyclus* f. *pubescens* (J. Houz.) D.C. McClint.; *Phyllostachys mitis* auct.; *Phyllostachys mitis* Poir.; *Phyllostachys pubescens* Mazel ex J. Houz.; *Phyllostachys pubescens* (Carr.) Mazel ex J. Houz.; *Phyllostachys pubescens* var. *heterocyclus* (Carrière) J. Houz.; *Sinoarundinaria edulis* (Carrière) Ohwi ex Mayeb.)

Japan, Southeast Asia. Perennial, evergreen and very-fast-growing, running, shallow-rooted, culms densely pubescent to hairy, covered with white powder, young culms hairy to the touch, lowermost internodes shortened and swollen, zigzag nodes, culm-sheath thick and leathery with purple brown spines, leaf sheath deep green, plant with many known cultivars, edible, young shoots acrid when raw, ornamental, wood relatively soft, leaves used in the treatment of arthritic inflammations and sheaths of the stem in the treatment of nausea and sour stomach, hardy, aggressive spreading, can grow in semishade but prefers sunshine, requires moist soil, see *Genera Plantarum* 1: 236. 1789, *Flora Cochinchinensis, denuo in Germania edita* 1: 57. 1790, *Encyclopédie Méthodique. Botanique ... Supplément* 8: 704. 1808, P.F. [Balthasar] von Siebold (1796-1866), *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* 12: 5. 1830 [orig. publ.: *Synopsis Plantarum Oeconomiarum Universi Regni Japonici ... Batavia*], *Revue Horticole* 37: 380. 1866, *Revue Horticole* 48: 22. 1876, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 623. 1878, *Revue Horticole* 49: 354, f. 80. 1878, *Enumeration of Selected Scientific Names of Both Native and Foreign Plants ...* 213. Tokyo 1895 and *Le Bambou, son étude, sa culture, son emploi* 1: 7, 39, 97. 1906, *Le Bambou ...* 2: 290. 1908, *Botanical Magazine* (Tokyo) 26: 22. 1912, *Journal of Japanese Botany* 3: 5. 1926, J. Ohwi, *Florula Austro-Higoensis, sive enumeratio plantarum in provincia Higo Australe sponte nascentium ...* 86. 1931 [K. Mayebar, *Flora of the Southern Part of Higo Province, Kyusia, Japan* 1931], *Flora of Japan* 77. 1953, *Kew Bulletin* 38(3): 485. 1983, *Kew Bulletin* 43(3): 420-422. 1988, *Forest Research (China)* 1: 109-111. 1988, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: moso bamboo (in Japanese *moso* means the name of person who was in China), tortoise-shell bamboo

in Japan: moso-chiku, mousou-chiku, kikko-chiku (*kikko* means tortoise-shell)

in Okinawa: moso

in China: mao sun, mao zhu

P. edulis (Carrière) J. Houz. f. ***edulis*** (*Phyllostachys heterocyclus* f. *pubescens* (J. Houz.) D.C. McClint.; *Phyllostachys pubescens* Mazel ex J. Houz.; *Phyllostachys pubescens* (Carr.) Mazel ex J. Houz.; *Phyllostachys pubescens* var. *heterocyclus* (Carrière) J. Houz.)

China.

in English: hairy bamboo, moso bamboo

P. edulis (Carrière) J. Houz. f. ***epruinosa*** G.H. Lai

China. Glabrous, see *Journal of Bamboo Research* 14(2): 7. 1995.

P. elegans McClure

China, Hainan Island, Zhejiang, Guangdong, Fujian. Small, wild, monopodial, young culm pruinose and ribbed, sheath blade rugose, sheath auricles developed, ligule arcuate or convex, leaf blades small and lanceolate, leaves densely pubescent beneath, attractive bamboo for ornamental use, shoots have a particularly good flavor, culms are thin walled and not strong enough for construction applications, used as handle, often confused with *Phyllostachys viridiglaucescens* (Carrière) Rivière & C. Rivière, see *Journal of the Arnold Arboretum* 37(2): 183-185, f. 3. 1956, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: elegant bamboo, flowered bamboo, sweet shoot bamboo

P. erecta Wen (*Phyllostachys robustiramea* S.Y. Chen & C.Y. Yao)

China, Hangzhou. Shoot edible, see *Acta Phytotaxonomica Sinica* 18(2): 188-189, pl. 10. 1980, *Bulletin of Botanical Research* 2(1): 62-63, f. 2. 1982.

in English: black eel bamboo

P. fastuosa (Lat.-Marl.) J. Houz. (*Bambusa fastuosa* Lat.-Marl. ex Mitford; *Phyllostachys fastuosa* (Lat.-Marl. ex Mitford) J. Houz.)

Asia. See *The Bamboo Garden* 105. 1896 and *Le Bambou, son étude, sa culture, son emploi* 1: 100, 117. 1906.

P. fimbriiligula Wen

China, Zhejiang. Pruinosity ring below joint, no auricles, sheath ligule drooping, cultivated, shoots bitter or delicious, see *Journal of Bamboo Research* 2(1): 71, f. 22. 1983, *Forest Research (China)* 1: 109-111. 1988, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: horn bamboo

P. flexuosa M.A. Rivière & C. Rivière (*Bambusa flexuosa* Carrière, nom. illeg., non *Bambusa flexuosa* Munro; *Bambusa flexuosa* hort. ex Rivière & C. Rivière; *Phyllostachys flexuosa* (Carrière) M.A. Rivière & C. Rivière)

China. Perennial, young culm pruinose, graceful and slender, green to bright yellow canes, shallow rooted, zigzag growth habit, densely leafy, internodes straight and not

ribbed, sheath blade ribbon-like, culm sheaths dull green to dull brown and spotted with brown, no sheath auricles, sheath ligule greenish yellow and ciliate, dark green leaves, delicious shoots of excellent quality for eating but acrid when raw, very hardy and fast-growing, tolerant of wind and of sandy or saline soil, wood of medium quality can be used for plant supports, for weaving, handle, can grow in semishade, requires a rich damp soil, see *Revue Horticole* 1870: 320. 1870, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 758. 1878 and *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Contributions from the United States National Herbarium* 39: 100-104. 2000.

in English: bamboo, zig-zag bamboo, flexuous culm bamboo, sweet bamboo

P. glabrata S.Y. Chen & C.Y. Yao

China, Zhejiang, Fujian. Young culm not pruinose, dark green, sheath light red or yellowish brown and dark spotted, sheath blade rugose, no sheath auricle and no cilia, sheath ligule densely covered with cilia, delicious sweet shoots, see *Acta Phytotaxonomica Sinica* 18(2): 174-175, pl. 3. 1980, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. glauca McClure

China. Perennial, evergreen, rhizomes dark in color, sheath blade green with yellow margin, sheath light brownish red with purplish dark spots, no sheath auricles, sheath ligule purple and ciliate, deep woodland or light woodland, named for the bluish white powder or waxy bloom that completely covers the young culms, used for the sweet edible shoots and as an ornamental, culms used for weaving baskets, see *Journal of the Arnold Arboretum* 37(2): 185-186, f. 4. 1956, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: light bamboo

P. glauca McClure f. ***youzhu*** J.L. Lu (*Phyllostachys glauca* cv. *yunzhu*; *Phyllostachys glauca* McClure f. *yunzhu* J.L. Lu)

China, Shanxi. Brownish purple spots on the culm, edible shoot, used for weaving and making handicrafts, see *Acta Phytotaxonomica Sinica* 14(2): 32-33. 1976.

P. glauca McClure var. ***variabilis*** J.L. Lu

China, Qinyang. Tall, thick, young culm usually not pruinose, a pruinose ring below joint, edible shoot, used for weaving and making handicrafts, see *J. Henan Agr. Coll.* 1981(2): 71, f. 3. 1981.

in English: variable bamboo

P. guizhouensis C.S. Chao & J.Q. Zhang

China, Guizhou. Tall, thick, young culm green and sparsely hairy, coarse, greenish gray, a pruinose ring below the joint, culm sheath yellowish purple, sheath blade narrowly lanceolate, sheath auricles purple and falciform, sheath ligule arcuate or truncate, two leaves on each twig, leaf blade

lanceolate, stems used as building material and for furniture, see *Bamboo Research in Asia* 1982(1): 3, f. 4. 1982.

in English: Guizhou bamboo, Guizhou firm bamboo

P. helva Wen (*Phyllostachys mannii* Gamble)

China. See *Annals of the Royal Botanic Garden, Calcutta*. 7: 28, t. 28. 1896 and *Bulletin of Botanical Research* 2(1): 64-65, pl. 3. 1982, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999

P. henryi Rendle (*Phyllostachys nigra* var. *henonis* (Mitford) Stapf ex Rendle) (for the Irish botanist Augustine Henry, 1857-1930 (d. Dublin), graduated M.A. in 1878, medical officer, in 1881 the Chinese Imperial Customs Service employed him as an Assistant Medical Officer, dendrologist and plant collector in China, 1888 Fellow of the Linnean Society; see Emil Bretschneider, *History of European Botanical Discoveries in China*. 756, 774, 1092. [Reprint of the original edition 1898] Leipzig 1981; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 1932; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980; M. Hadfield, *Pioneers in Gardening*. 169-171, 172. London 1996; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 335. London 1994)

Asia, China. See *Transactions of the Linnean Society of London* 26(1): 38, 123. 1868, *The Bamboo Garden* 47: 149-151. 1895 and *Journal of the Linnean Society, Botany* 36(254): 440-443. 1904, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. heteroclada Oliv. (*Phyllostachys cerata* McClure; *Phyllostachys congesta* Rendle; *Phyllostachys dubia* Keng, also spelled *dubius*; *Phyllostachys heteroclada* f. *heteroclada*; *Phyllostachys purpurata* McClure; *Phyllostachys purpurata* cv. *straightstem* McClure)

China. Perennial, young culm with white wax powder, sheath green, sheath blade narrow triangular and erect, sheath auricles tiny, cultivated, edible shoots, used for weaving, as construction material, found along stream banks and riverbanks, see *Hooker's Icon. Pl.* 23(4): t. 2288. 1894 and *Journal of the Linnean Society, Botany* 36(254): 438-439. 1904, *Sinensia* 11(5&6): 407. 1940, *Lingnan University Science Bulletin* 9: 41. 1940, *Agriculture Handbook* 114: 56. 1957, *Journal of Bamboo Research* 3(2): 36. 1984. in English: water bamboo, fishscale bamboo

P. heteroclada Oliv. f. *denigrata* (Yi & H.R. Qi) Yi & H.R. Qi (*Phyllostachys bissetii* f. *denigrata* T.P. Yi & H.R. Qi)

China. Ornamental, see *Hooker's Icones Plantarum* 23(4): pl. 2288. 1894 and *Journal of the Arnold Arboretum* 37(2): 180, f. 1. 1956, *Journal of Bamboo Research* 10(1): 32. 1991, *Journal of Bamboo Research* 12(4): 47. 1993.

P. heteroclada Oliv. f. *purpurata* (McClure) T.H. Wen (*Phyllostachys purpurata* McClure)

China. Culm slender, curved, sheath blade purplish red, see *Lingnan University Science Bulletin* 9: 43. 1940, *Bulletin of Botanical Research* 2(1): 78. 1982, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. heteroclada Oliv. f. *solida* (S.L. Chen) C.P. Wang and Z.H. Yu (*Phyllostachys heteroclada* f. *decurtata* (S.L. Chen) T.H. Wen; *Phyllostachys parvifolia* f. *lignosa* T.H. Wen; *Phyllostachys purpurata* cv. *solidstem* McClure; *Phyllostachys purpurata* f. *decurtata* S.L. Chen; *Phyllostachys purpurata* f. *solida* S.L. Chen)

China, Sichuan, Hunan, Anhui, Zhejiang. Lower portion of the culm solid, basal internodes irregularly contracted and swollen, cultivated, delicious shoots edible, hedge, walking stick, handle, see *Agriculture Handbook* 114: 56. 1957, *Acta Phytotaxonomica Sinica* 18(2): 188, 190-191, pl. 12. 1980, *Bulletin of Botanical Research* 2(1): 75. 1982, *Journal of Bamboo Research* 3(2): 36. 1984.

P. heterocycla (Carrière) S. Matsum. (*Bambusa heterocycla* Carrière; *Bambusa pubescens* Carrière; *Phyllostachys edulis* var. *heterocycla* (Carr.) J. Houz.; *Phyllostachys edulis* var. *heterocycla* (Carr.) Makino; *Phyllostachys edulis* var. *heterocycla* (Carr.) Makino f. *subconvexa* Makino ex Tsuboi; *Phyllostachys heterocycla* S. Matsumura; *Phyllostachys heterocycla* (Carr.) Mitford, nom. illeg., non *Phyllostachys heterocycla* (Carrière) S. Matsum.; *Phyllostachys heterocycla* f. *pubescens* (Mazel ex J. Houz.) D.C. McClint.; *Phyllostachys heterocycla* var. *heterocycla*; *Phyllostachys heterocycla* var. *pubescens* (Mazel ex J. Houz.) Ohwi; *Phyllostachys mitis* var. *heterocycla* (Carrière) Makino ex Shiras., nom. illeg., non *Phyllostachys mitis* var. *heterocycla* (Carrière) Makino; *Phyllostachys mitis* var. *heterocycla* (Carrière) Makino; *Phyllostachys pubescens* (Carr.) Mazel ex J. Houz., nom. illeg., non *Phyllostachys pubescens* Mazel ex J. Houz.; *Phyllostachys pubescens* var. *heterocycla* (Carr.) J. Houz.)

China, Japan. Hardy bamboo, covered with white powder, the young culms are hairy to the touch, the culm looks zigzag with continuous irregular contraction and swellings, ornamental, shoots delicious, culm very useful for construction materials and others, aggressive spreading, very difficult to establish and young plants develop slowly, usually enclosed in *Phyllostachys edulis* (Carrière) J. Houz., see *Revue Horticole* 48: 22. 1876, *Revue Horticole* 49: 354, f. 80. 1878, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 689. 1878, *Enumeration of Selected Scientific Names of Both Native and Foreign Plants ...* 213. Tokyo 1895, *The Bamboo Garden* 160. 1896 and *Botanical Magazine (Tokyo)*, Special Issue 13: 267-270, 295-298, 319-322, 334-337, 365-368. 1900 [1899], *Le Bambou, son étude, sa culture, son emploi* 1: 7, 39-40, 97. 1906, *Le Bambou ...* 2: 290. 1908, *Botanical Magazine (Tokyo)* 26: 22. 1912, *Icones of the Bamboos of Japan* 17-18, t. 3, f. 12-13. 1912, *Icones of the Bamboos of Japan* 17-18, t. 3,

f. 12-13. 1912, *Flora of Japan* 77. 1953, *J. Arnold Arbor.* 37: 189. 1956, *Kew Bulletin* 38(3): 485. 1983, *Forest Research (China)* 1: 109-111. 1988, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: moso bamboo (in Japanese *moso* means the name of person who was in China)

in Japan: butsumen-chiku (deformed variety), kikkou-chiku, kikkochiku, kikko-chiku (*kikko* means tortoise-shell), gimmei-mousou (with yellow-green stripes on the bud canal of the culms), kimmei-mousou (with yellow culms and green stripes on the bud canal), moso-chiku, mousou chiku, okina-mousou (culms and branches yellow-green, nodes green), ougon-mousou, tatejima-mousou

P. heterocyclus (Carrière) S. Matsum. var. ***pubescens*** (Mazel ex J. Houz.) Ohwi (*Bambusa edulis* Carrière; *Bambusa mosoo* Siebold; *Phyllostachys edulis* (Carr.) M.A. Rivière & C. Rivière; *Phyllostachys edulis* (Carr.) Rivière; *Phyllostachys heterocyclus* cv. *pubescens*; *Phyllostachys heterocyclus* f. *pubescens* (Mazel) Ohwi; *Phyllostachys heterocyclus* var. *pubescens* (Mazel) Ohwi; *Phyllostachys mitis* M.A. Rivière & C. Rivière; *Phyllostachys pubescens* Mazel ex J. Houz.)

China. Culm wall thick, short internodes, young culm thickly pruinose and pubescent, sheath blade long triangular or lanceolate, sheath auricles hairy, sheath ligule bowlike, leaves narrow, delicious shoots edible, culm very useful for construction materials and others, see *Enumeration of Selected Scientific Names of Both Native and Foreign Plants* ... 213. Tokyo 1895 and *Le Bambou, son étude, sa culture, son emploi* 1: 7, 39-40, 97. 1906, *Flora of Japan* 77. 1953, *Forest Research (China)* 1: 109-111. 1988, *Bamboo Research* no. 38, p. 57. 1989 [vol. 8(1)], *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. hispida S.C. Li, S.H. Wu & S.Y. Chen (*Phyllostachys varioauriculata* S.C. Li & S.H. Wu)

China. See *Journal of the Anhui Agricultural College* 1981(2): 49-52, 2 figs. 1981, *Acta Phytotaxonomica Sinica* 20(4): 492-493, pl. 1. 1982.

in English: hairy shell bamboo

P. humilis Muroi

China, Asia. Ornamental, cultivated as a miniature potted plant.

in Japan: hime-hachiku

P. incarnata Wen (*Phyllostachys primotina* T.H. Wen)

China, Fujian, Zhejiang. Culm pruinose, sheath pinkish with brown spots, sheath blade flat and long triangular, sheath auricles brownish purple more or less sickle-shaped to ovate, sheath ligule nearly truncate and ciliate, culm used as timber, see *Bulletin of Botanical Research* 2(1): 65-66, f. 4. 1982, *Journal of Bamboo Research* 3(2): 34, f. 10. 1984, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: red shell thunder bamboo

P. iridescens C.Y. Yao & S.Y. Chen

China, Zhejiang, Shanghai, Jiangsu. Basal internodes often covered with yellowish stripes longitudinal, sheath reddish to red-purple, no sheath auricles and cilia, sheath ligule dark purple, cultivated, delicious shoots sweet, used for construction materials, handle of farm implements, sunning poles, see *Acta Phytotaxonomica Sinica* 18(2): 170-171, pl. 1. 1980, *Journal of Zhejiang Forestry College* 8(1): 127-130. 1991, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: cock bamboo

P. iridescens C.Y. Yao & S.Y. Chen f. ***luteosulcata*** C.H. Zhao & K.J. Mao

China. See *Journal of Bamboo Research* 12(3): 23. 1993.

P. iridescens C.Y. Yao & S.Y. Chen f. ***striata*** Wen

China. See *Bulletin of Botanical Research* 2(1): 74. 1982.

in English: Kanling red bamboo

P. kwangsiensis W.Y. Hsiung, Q.H. Dai & J.K. Liu

China. Culm hard and tough, young culm green and pubescent, a pruinose ring above and below sheath annulus, sheath blade long lanceolate, sheath longer than internode, sheath auricles indistinct and ciliate, sheath ligule arcuate and ciliate, acrid edible shoot, compact culm used as building material and for furniture, strips used for weaving, see *Acta Phytotaxonomica Sinica* 18(1): 34-35, pl. 7. 1980, *Bamboo Research in Asia* 1: 22. 1981, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: false hairy bamboo

P. lithophila Hayata (*Sinoarundinaria lithophila* (Hayata) Ohwi ex Mayeb.)

Taiwan. Bluish green to dark green, coriaceous and deciduous sheath with yellowish to dark brown spots, sheath blade linear-lanceolate, sheath auricles small and ciliate, sheath ligule convex and yellow pubescent, 2-3 leaves on each twig, leaves narrow lanceolate, hard culm used as construction materials, poles, rods, see *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 6: 141-142, f. 51. 1916, *Florula austro-higoensis sive enumeratio plantarum in provincia Higo australe sponte nascentium* ... 86. Japan 1931.

in English: Taiwan stone bamboo, thill bamboo

P. lofushanensis Z.P. Wang, C.H. Hu & G.H. Ye

China, Guangdong, Luofushan Mountain. Young culm with pruinose ring below joint, sheath blade long and narrow band-shaped, sheath auricles oblong and sparsely hairy, sheath ligule wider than the base of sheath, usually two leaves on each twig, leaves lanceolate or narrow lanceolate, in forests, mountains, see *Journal Nanjing University. Natural Sciences Edition* 1981(2): 258, f. 2. 1981.

in English: big node firm bamboo, big node bamboo

P. makinoi Hayata (*Phyllostachys bambusoides* Matsumura & Hayata, non Sieb. & Zucc.)

China, Fujian, Taiwan. Perennial, stiffly erect, hard, nodes with two prominent ridges, whitish green culms, white powder covering when young, first internode of the branch not caved, culm sheaths blackly spotted, sheath ligule purple with reddish cilia, leaves ovate-lanceolate, ligule of the leaves long, shallow rooted, inflorescence lanceolate, spikelets 1-2-flowered, 0-1 glumes, lemmas broadly lanceolate and acuminate, palea present, 3 lodicules ovate-lanceolate acuminate, long stamens, ovary glabrous, 3 feathery stigmas, young shoots cooked and eaten, quality of culm good and compact in texture, tough culms used for dense scaffolds and construction, basketry, furniture, papermaking and for weaving, useful for erosion control, see *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. Taihoku [= Taipei, Taiwan] 5: 250-252. 1915.

in English: Taiwan madake, Makino bamboo

in Japan: kei-chiku, keichiku, Taiwan-madake, Taiwan-madake

P. mannii Gamble (*Phyllostachys assamica* Gamble ex Brandis; *Phyllostachys bawa* Brandis ex E.G. Camus; *Phyllostachys bawa* E.G. Camus; *Phyllostachys decora* McClure; *Phyllostachys helva* T.H. Wen) (after G. Mann)

China, India, Kashia Hills, Naga Hills. Perennial, caespitose, shrubby, hard, nodes prominent, young internodes covered with very short tomentum, sheaths brownish purple with dark spots, twisted and wrinkled sheath blade triangular to lanceolate, sheath auricles purplish red, sheath ligule purplish red and ciliate, cultivated, acrid shoots edible, useful for erosion control, tough and durable culms used for making walking sticks, farm implements, for weaving sleeping mats, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 28, t. 28. 1896 and *Indian Trees* 607, 719. 1906, *Les Bambusées* 66. 1913, *Journal of the Arnold Arboretum* 37(2): 182, f. 2. 1956, *Bulletin of Botanical Research* 2(1): 64-65, pl. 3. 1982, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: imported bamboo, south-west China bamboo, south-west China firm bamboo

in Thailand: mep we, pang puk, paang puk, se daan, se dan

P. meyeri McClure (*Phyllostachys viridis* f. *laqueata* T.H. Wen) (for the Dutch botanist Frans Nicholaas Meijer [after 1908 Frank Nicholas Meyer], 1875-1918, traveler, botanical explorer and collector in China and Japan, with USDA to East Asia searching plants of economic value, drowned in Chang Jiang, Yangtze, under mysterious circumstances, author of *Chinese Plant Names ...* New York, N.Y. [1911]. See J.H. Barnhart (1871-1949), *Biographical notes upon*

botanists. 2: 483. Boston 1965; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. London 1969; Charles Lyte, *The Plant Hunters*. London 1983)

China, Zhejiang, Anhui. Perennial, evergreen, upright and shiny culms, young culm pruinose and sheath of young culm ciliate, culm sheaths spotted, sheath blade long lanceolate or ribbon-like, no sheath auricles and cilia, sheath ligule weak and shortly hairy, colonial, fast-growing, running, spreading, develops a very dense grove, wood considered of the highest quality and exceptionally strong, used for making walking sticks, farm implements, for weaving sleeping mats, shoots delicious or simply edible, requires moist soil, see *Journal of the Washington Academy of Sciences* 35(10): 286, f. 1. 1945, *Journal of the Arnold Arboretum* 37(2): 192. 1956, *Bulletin of Botanical Research* 2(1): 77. 1982, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: Meyer bamboo, hair-ring bamboo, lightly sweet bamboo, light bamboo

P. meyeri McClure f. *sphaeroidea* Wen (*Phyllostachys sulphurea* f. *viridis* (Rob. A. Young) D. Ohrnberger)

China. See *Journal of the Washington Academy of Sciences* 27: 345. 1937, *Bulletin of Botanical Research* 2(1): 74. 1982.

P. nana Rendle (*Phyllostachys nigra* var. *nigra*; *Phyllostachys puberula* (Miq.) Munro var. *nana* (Rendle) J. Houz.)

Asia. See *Transactions of the Linnean Society of London* 26(1): 38, 123. 1868 and *Journal of the Linnean Society, Botany* 36(254): 441-442. 1904.

P. nevinii Hance (*Phyllostachys nevinii* Hance var. *hupehensis* Rendle; *Phyllostachys nigra* var. *henonis* (Mitford) Stapf ex Rendle) (named for Rev. J.C. Nevin, traveler, explorer, arrived in China in 1860, collected plants for the British botanist Henry Fletcher Hance (1827-1886), see Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. 632-652, 706-707. Leipzig 1981; E.H.M. Cox, *Plant-Hunting in China: A History of Botanical Exploration in China and the Tibetan Marches*. London 1945)

China. See *Journal of Botany, British and Foreign* 14: 295. 1876, *The Bamboo Garden* 47: 149-151. 1895 and *Journal of the Linnean Society, Botany* 36(254): 442-443. 1904, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. nevinii Hance var. *hupehensis* Rendle (*Phyllostachys nigra* var. *henonis* (Mitford) Stapf ex Rendle)

China. See *Journal of Botany, British and Foreign* 14: 295. 1876, *The Bamboo Garden* 47: 149-151. 1895 and *Journal of the Linnean Society, Botany* 36(254): 442. 1904, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. nidularia Munro

China. Perennial, monopodial, thin-walled, evergreen with an aggressively growing rhizome system, small culms strong and fragile, prominent culm nodes, branching internodes somewhat compressed, culm-sheath straw colored with hairs on the margins, usually one leaf per twig, leaf blade lanceolate with a bright green upper surface, culms do not split well, sometimes cultivated as a potted ornamental, fast-growing and very aggressive, edible shoots free of acrid taste even in the raw state, culms used for papermaking and fencing, plants used for dense hedges and erosion control, useful for soil and water stabilization on hills, requires moist soil, in Guatemala considered endangered species, see *Gardener's Chronicle, new series* 9: 773-774. 1876 and *Journal of the Linnean Society, Botany* 36(254): 442. 1904, *Agriculture Handbook* 114: 44. 1957, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, Shuang-Quan Huang et al. "Honeybee-assisted wind pollination in bamboo *Phyllostachys nidularia* (Bambusoideae: Poaceae)?" *Botanical Journal of the Linnean Society* 138(1): 1-7. Jan 2002.

in English: big-node bamboo, dwarf bamboo, flower bamboo, spear and sword bamboo, writing brush bamboo, broom bamboo

P. nidularia Munro f. *farcta* H.R. Zhao & A.T. Liu

China. Middle and lower part of culm solid or nearly solid, edible shoots, plants used for dense hedges and erosion control, culms used for papermaking and fencing, see *Acta Phytotaxonomica Sinica* 18(2): 186. 1980, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: solid bamboo, solid broom bamboo

P. nidularia Munro f. *glabrovagina* (McClure) Wen (*Phyllostachys nidularia* Munro f. *glabro-vagina* T.H. Wen; *Phyllostachys nidularia* Munro f. *glabrovagina* Wen)

China. Glabrous sheath, basal nodes sparsely pubescent, see *Journal of Bamboo Research* 3(2): 36. 1984, *Journal of Bamboo Research* 4(2): 17. 1985.

in English: smooth-sheathed broom bamboo

P. nidularia Munro f. *mirabilis* Yi & C.Q. Shen

China. See *Journal of Bamboo Research* 10(1): 33. 1991.

P. nidularia Munro f. *speciosa* Yi & C.G. Chen

China. See *Journal of Bamboo Research* 10(1): 33. 1991.

P. nidularia Munro f. *sulfurea* Yi & C.G. Chen

China. See *Journal of Bamboo Research* 10(1): 32. 1991.

P. nidularia Munro f. *vexillaris* Wen

China. See *Bulletin of Botanical Research* 2(1): 74-75, f. 11. 1982.

in English: butterfly bamboo

P. nigella Wen

China, Zhejiang. Sheath blade light purple with scabrous surface, sheath auricles dark purple and ciliate, sheath ligule finely hairy and dark purple, 4-6 leaves on each twig, edible shoots, culm durable and tough, timber bamboo, see *Bulletin of Botanical Research* 2(1): 66-67, f. 5. 1982, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. nigra (Lodd. ex Lindley) Munro (*Bambusa nigra* Lodd. ex Lindley; *Bambusa kurotake* Siebold; *Bambusa puberula* Miq.; *Phyllostachys boryana* Mitford; *Phyllostachys filifera* McClure; *Phyllostachys henonis* Mitford; *Phyllostachys nigra* Pilg. ex Rendle; *Phyllostachys nigra* (Loddiges) Munro; *Phyllostachys nigra* f. *boryana* (Mitford) Makino; *Phyllostachys nigra* f. *muchisasa* (J. Houz.) Nakai; *Phyllostachys nigra* f. *nigro-punctata* Nakai, nom. illeg., non *Phyllostachys nigra* f. *nigro-punctata* (Mitford) Makino; *Phyllostachys nigra* f. *punctata* (Bean) Schelle; *Phyllostachys nigra* f. *punctata* (Bean) Makino; *Phyllostachys nigra* var. *henonis* (Mitford) Stapf ex Rendle; *Phyllostachys nigra* var. *muchisasa* Nakai; *Phyllostachys nigra* var. *punctata* Bean; *Phyllostachys nigripes* Hayata; *Phyllostachys puberula* (Miq.) Munro; *Phyllostachys puberula* f. *nigro-punctata* Makino; *Phyllostachys puberula* var. *boryana* (Mitford) Makino; *Phyllostachys puberula* var. *muchisasa* J. Houz.; *Phyllostachys puberula* var. *nigra* (Lodd. ex Lindley) J. Houz.; *Phyllostachys puberula* var. *nigra* (Lodd. ex Lindl.) Makino; *Sinoarundinaria nigra* (Lodd. ex Lindl.) Ohwi ex Mayeb.)

China, south of Yellow River. Perennial, thin-walled, erect and arching, open-thicket-forming, young culm green and pruinose, culms when young covered with dark brown to purple spots, stems purplish black to almost black at maturity, internodes cylindrical, slim branchlets with small leaves, culm sheaths pubescent greenish to buff, nodes with 2 prominent ridges, culm auricles conspicuous and bristly, abundant evergreen foliage, ligule convex and ciliate, blade bend outward, spikelets usually 2-flowered, 1 glume, lemmas linear-lanceolate, paleas keeled and pubescent, 3 lodicules ciliate, 3 stamens elongate, 3 stigmas, cultivated, very ornamental and very hardy, shallow-rooted and not particularly invasive, long-creeping rhizomes running extensively, forms a small and open grove, young shoots acrid when raw and delicious when cooked, wood hard and tough, leaves antipyretic and diuretic, juice of the stems antipyretic, antitussive, expectorant and sedative, root astringent, antipyretic, diuretic and styptic, culms used as holder of Japanese calligraphy brush, *uguisuzao* of *kakejiku*, used for walking sticks, fishing rods, plant supports, paper-pulp, cabinet-making, furniture, handicrafts, umbrella handles, musical instruments, shade-tolerant, found on fertile and moist places, see *Annales Museum Botanicum Lugduno-Batavi* 2: 285. 1866, *Transactions of the Linnean Society of London* 26(1): 38, 123. 1868, *Gardener's Chronicle* &

Agricultural Gazette, n.s., 6: 773-774. 1876, *Revue Horticole* 58: 513, f. 122. 1886, *Gardener's Chronicle*, ser. 3 15: 431. 1894, *The Bamboo Garden* 47: 3. 1895, *Royal Horticultural Society* 22: 277, f. 64. 1898 and *Journal of the Linnean Society, Botany* 36(254): 441-442. 1904, *Le Bambou, son étude, sa culture, son emploi* 1: 28. 1906, *Bulletin of Miscellaneous Information Kew* 1907: 232. 1907, *Botanical Magazine* (Tokyo) 26: 25-26. 1912, *Actes du III^e Congrès international de botanique, Bruxelles 1910* Actes 2: 222-223. 1912, *Illustrations of the Japanese Species of Bamboo* 17, pl 61, f. 2. 1914, *Icones plantarum formosanarum nec non et contributiones ad floram formosanam*. 6: 142-143, f. 53. 1916, *Illustrations of the Japanese Species of Bamboo* 2: 14-15, pl. 11, 62, 63, f. 3. 1916, *Flora of Japan* (edition 2) Rev. & Enl. 1375. 1931, *Science Education [Rika Kyô-iku]* 15(5-6): 21-27, 66-67, 69-76. 1932, *Journal of Japanese Botany* 9(1): 21-22, 24-26, pl. 4, 5. 1933, *Lingnan University Science Bulletin* 9: 42. 1940, *Journal of the Arnold Arboretum* 37: 194. 1956, *Report Fuji Bamboo Garden* 17: 9. 1972, *Phytologia* 38(3): 175. 1978, *Forest Research (China)* 1: 109-111. 1988.

in English: black bamboo, partridge cane

in Hungary: feketeszárú botnád

in China: zi zhu gen

in Japan: kuro-chiku (= black bamboo), kuro-dake, shima-dake, nitaguru-chiku, goma-dake, ummon-chiku (with black dots on the culm surface), tamba-han-chiku (with black dots)

in Okinawa: kuru-chiku

P. nigra (Lodd. ex Lindley) Munro f. ***albo-variegata*** Beetle (*Phyllostachys puberula* f. *albo-variegata* Makino)

Asia. See *Gardener's Chronicle & Agricultural Gazette*, n.s., 6: 773-774. 1876 and *Botanical Magazine* (Tokyo) 14: 64. 1900, *Phytologia* 38(3): 175. 1978.

P. nigra (Lodd. ex Lindley) Munro f. ***asagi*** Muroi & H. Okamura

Japan. See *Report of the Fuji Bamboo Garden* 17: 8. 1972.

P. nigra (Lodd. ex Lindley) Munro f. ***henonis*** (Mitford) Muroi (*Phyllostachys nigra* var. *henonis* (Mitford) Stapf ex Rendle)

China, Vietnam, Korea, Japan. See *The Bamboo Garden* 47: 149-151. 1895 and *Journal of the Linnean Society, Botany* 36(254): 442-443. 1904, *New Keys of Japanese Trees*, Revised Edn. 266. Osaka 1961, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. nigra (Lodd. ex Lindley) Munro f. ***muchisasa*** (Houzeau) R.A. Young

China, Japan.

P. nigra (Lodd. ex Lindley) Munro f. ***nigra***

China, Korea, Japan.

in English: black bamboo, purple bamboo

in French: bambou noir

P. nigra (Lodd. ex Lindley) Munro f. ***punctata*** Schelle (*Phyllostachys nigra* f. *punctata* (Bean) Nakai; *Phyllostachys nigra* var. *punctata* Bean)

China, Korea, Japan. See *Gardener's Chronicle*, ser. 3 15: 431. 1894 and *Journal of Japanese Botany* 9(1): 21. 1933.

in English: blackspot bamboo, freckled bamboo

P. nigra (Lodd. ex Lindley) Munro f. ***usuguru*** Muroi & H. Okamura

Japan. See *Report Fuji Bamboo Garden* 17: 9. 1972.

P. nigra (Lodd. ex Lindl.) Munro var. ***henonis*** (Mitford) Stapf ex Rendle (*Bambusa puberula* Miq.; *Phyllostachys fauriei* Hack.; *Phyllostachys henonis* Bean; *Phyllostachys henonis* Mitford; *Phyllostachys henryi* Rendle; *Phyllostachys mitis* (Lour.) Rivière & C. Rivière; *Phyllostachys montana* Rendle; *Phyllostachys nana* Rendle; *Phyllostachys nevinii* Hance; *Phyllostachys nevinii* var. *hupehensis* Rendle; *Phyllostachys nigra* cv. *henon* McClure; *Phyllostachys nigra* f. *henonis* Muroi ex Sugim.; *Phyllostachys nigra* f. *henonis* Muroi; *Phyllostachys nigra* var. *henonis* (Mitford) Makino, nom. illeg., non *Phyllostachys nigra* var. *henonis* (Mitford) Stapf ex Rendle; *Phyllostachys nigra* var. *henonis* Makino ex Tsuboi; *Phyllostachys nigra* var. *henonis* (Bean) Stapf ex Rendle; *Phyllostachys nigra* var. *puberula* (Miq.) Fiori; *Phyllostachys puberula* (Miq.) Munro; *Phyllostachys stauntonii* Munro; *Phyllostachys veitchiana* Rendle; *Sinoarundinaria henonis* (Bean) Ohwi ex Mayeb.) (*Phyllostachys fauriei* Hack. named for Urbain Jean Faurie, 1847-1915, plant collector in Japan, see Emil Bretschneider, *History of European Botanical Discoveries in China*. 922, 937, 940. Leipzig 1981) (*Phyllostachys stauntonii* Munro dedicated to the English (b. Galway) naturalist Sir George Leonard Staunton, 1737-1801 (d. London), diplomat, plant collector in China, physician, studied medicine in Montpellier (M.D. 1758), 1762-1779 medical officer in West Indies, 1781-1784 Madras, 1785 Baronet, Fellow of the Royal Society of London (1787) and of the Linnean Society (1789), 1792 accompanied Lord Macartney (1737-1806) on his mission to the Emperor of China, published *An Authentic Account of an Embassy from the King of Great Britain to the Emperor of China* ... Taken chiefly from the papers of ... the Earl of Macartney. London 1797, he was father of Sir George Thomas Staunton (1781-1859, d. London); see Joseph François Charpentier-Cosigny de Palma, *Voyage à Canton ... à la Chine* ... suivi d'observations sur le voyage à la Chine de Lord Macartney (rédigé par Sir G. Staunton). Paris, an VII [1798-1799]; Sir George Thomas Staunton, *Memoir of the Life and Family of Sir George Leonard Staunton*. 1823; E.H.M. Cox, *Plant-Hunting in China: A History of Botanical Exploration in China and the Tibetan Marches*. London 1945; Emil Bretschneider, *History of European Botanical Discoveries*

in China. 156-183. Leipzig 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 318. 1965; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. London 1969; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London 1904)

China, Zhejiang, Jiangsu, Sichuan. Perennial, vigorous, thick, arching, dull grayish green to bright green to whitish, hollow stems, first and second internodes of the branch not caved, very leafy, leaves lanceolate dark green and glaucous, culm-sheath purple or purplish, green branches, culm easy to crack vertically, strips pliable and tough good for weaving, medical use in infantile convulsion, culm shavings used in chronic gastritis, tea articles from this bamboo (*chasen* or the tea stirrer), shoots delicious when eaten raw, branches used as bamboo brooms, *sodegaki* (a side fence of the Japanese houses), culms used as handle of farm implements and as building material, found on red sandy loam, widely cultivated, see *Transactions of the Linnean Society of London* 26(1): 37-38, 123. 1868, *Journal of Botany, British and Foreign* 14: 295. 1876, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 689. 1878, *The Bamboo Garden* 47: 149-151. 1895, *Bulletin de l'Herbier Boissier* 7(9): 718. 1899 and *Journal of the Linnean Society, Botany* 36(254): 440-443. 1904, *Botanical Magazine* (Tokyo) 26: 25-26. 1912, *Illustrations of the Japanese Species of Bamboo* 2: 14, t. 11. 1916, *Bollettino della Reale Società Toscana d'Orticoltura* 4, 2: 97, f. 3, 4, 6. 1917, Kanjiro Mayebara, *Florula austro-higoensis* sive enumeratio plantarum in provincia Higo australe sponte nascentium ... Japan 1931, *Journal of the Arnold Arboretum* 37: 194. 1956, *New Keys of Japanese Trees*, Revised Edn. 266. Osaka 1961, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: Henon bamboo

in China: zhu ye, chu yeh, zhu li, chu li, zhu ru, chu ju

in Japan: ha-chiku, han-chiku (light greenish yellow, later brown), meguro-chiku (with dark brown oblong stripes on the bud canal, internodes green or yellowish green), megoma-chiku (with dark brown oblong stripes on the bud canal)

P. nigra (Lodd. ex Lindl.) Munro var. ***nigra*** (*Bambusa nigra* Lodd. ex Lindley; *Phyllostachys filifera* McClure; *Phyllostachys nana* Rendle; *Phyllostachys nigra* f. *punctata* (Bean) Nakai; *Phyllostachys nigripes* Hayata; *Phyllostachys puberula* var. *nigra* (Lodd. ex Lindley) J. Houz.; *Phyllostachys puberula* var. *nigra* (Lodd. ex Lindl.) Makino; *Sinoarundinaria nigra* (Lodd. ex Lindl.) Ohwi ex Mayeb.)

China. Culms black, culm-sheath chartaceous often with dark blotches, black branches, nodes marked by two prominent ridges, leaves lanceolate, spikes ovate to flabellate, spikelets lanceolate 2- to 3-flowered, usually the uppermost floret male, one glume lanceolate, lemmas oblong-lanceolate acuminate, palea present, 3 ovate lodicules, long stamens, ovary cylindrical, 3 feathery stigmas, ornamental, widely cultivated, aggressive, found along riverbanks, see *Transactions of the Linnean Society of London* 26(1): 38, 123. 1868 and *Journal of the Linnean Society, Botany* 36(254): 441-442. 1904, *Actes du III^{me} Congrès international de botanique, Bruxelles 1910* Actes 2: 223. 1912, *Icones plantarum formosananarum nec non et contributiones ad floram formosanam* 6: 142-143, f. 53. 1916, *Journal of Japanese Botany* 9: 21. 1933, *Lingnan University Science Bulletin* 9: 42. 1940.

in English: black bamboo

in Japan: kuro-chiku, goma-dake, nitaguro-chiku, meguro-chiku (internodes green or yellowish green)

P. nigrivagina Wen

China. See *Journal of Bamboo Research* 8(1): 15-17, f. 2. 1989.

in English: black shell bamboo

P. nuda McClure

China, Zhejiang. Perennial, evergreen, shallow-rooted, culms straight and thick-walled, base of culm sometimes occasionally zigzag, pruinose glaucous band beneath each node, lower culm sheaths with brownish black blotches, no sheath auricles, sheath ligule developed, leaves lanceolate, young shoots exceptionally good for eating, culm tough and elastic, culms used as handle of farm implements and as building material, cold hardy bamboo, need protection from cold winds, requires moist soil, see *Journal of the Washington Academy of Sciences* 35(10): 288, f. 2. 1945, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: bamboo, gray bamboo, stone bamboo, clean bamboo, naked bamboo

P. nuda McClure f. ***localis*** Z.P. Wang & Z.H. Yu (*Phyllostachys nuda* cv. *localis*)

China, Zhejiang. Basal internodes with brownish purple stains, see *Acta Phytotaxonomica Sinica* 18(2): 173-174. 1980.

P. nuda McClure f. ***lucida*** Wen (*Phyllostachys nuda* cv. *nuda*)

China. See *Bulletin of Botanical Research* 2(1): 75. 1982.

in English: brilliant stone bamboo, brilliant red shoot bamboo

P. parvifolia C.D. Chu & H.Y. Zou

China. Young culms pruinose, sheath brown or reddish purple, sheath blade lanceolate or narrowly triangular, no sheath auricles and cilia, sheath ligule light reddish purple

and densely shortly ciliate, shoots delicious, culms used for weaving sleeping mat, see *Acta Phytotaxonomica Sinica* 18(2): 190-191, pl. 12. 1980.

in English: Anji golden bamboo, golden bamboo

P. parvifolia C.D. Chu & H.Y. Zou f. *lignosa* Wen (*Phyllostachys heteroclada* f. *solida* (McClure) C.P. Wang & Z.H. Yu)

China. See *Hooker's Icones Plantarum* 23(4): pl. 2288. 1894 and *Agriculture Handbook* 114: 56. 1957, *Acta Phytotaxonomica Sinica* 18(2): 188. 1980, *Bulletin of Botanical Research* 2(1): 75. 1982, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: solid bamboo

P. pingyangensis Wen (*Phyllostachys bambusoides* f. *bambusoides*; *Phyllostachys pinyanensis* T.H. Wen)

China. Shoot edible, see *Bulletin of Botanical Research* 2(1): 67-68, f. 6. 1982.

P. platyglossa Z.P. Wang & Z.H. Yu

China, Zhejiang. Thin-walled, young culm pruinose, culm sheath brownish red with brown spots, sheath blade ribbon-like, sheath auricles and cilia developed, sheath ligule purple, delicious shoot edible, fragile culm used for fencing.

in English: gray water bamboo, see *Acta Phytotaxonomica Sinica* 18(2): 184, pl. 8. 1980, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. platyglossa Z.P. Wang & Z.H. Yu f. *leucodermis* G.H. Lai

China. See *Mémoires de la Société Royale des Sciences, Lettres et Arts de Nancy* 14(2): 10. 1995.

P. praecox C.D. Chu & C.S. Chao

China, Shanghai, Zhejiang, Anhui. Young culm nodes pruinose and purplish, basal internodes with yellowish green stripes, sheath densely covered with brown spots, sheath blade ribbon-like and rugose, sheath auricles and cilia undeveloped, sheath ligule shortly hairy, cultivated, vegetable, shoot delicious, see *Acta Phytotaxonomica Sinica* 18(2): 176-177, pl. 4. 1980, *Forest Research (China)* 1: 109-111. 1988, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: early bamboo

P. praecox C.D. Chu & C.S. Chao f. *notata* S.Y. Chen & C.Y. Yao (*Phyllostachys praecox* cv. *notata*)

China. Edible shoots, see *Acta Phytotaxonomica Sinica* 18(2): 177. 1980.

in English: yellow-grooved early bamboo

P. praecox C.D. Chu & C.S. Chao f. *prevernalis* S.Y. Chen & C.Y. Yao (*Phyllostachys praecox* cv. *prevernalis*)

China. Edible shoots, see *Acta Phytotaxonomica Sinica* 18(2): 177. 1980.

in English: thunder bamboo

P. praecox C.D. Chu & C.S. Chao f. *viridisulcata* P.X. Zhang & W.X. Huang

China. Internodes golden yellow, ornamental, edible shoots, see *Journal of Bamboo Research* 9(4): 39. 1990.

in English: colored early bamboo

P. primitina Wen (*Phyllostachys incarnata* T.H. Wen)

China. See *Bulletin of Botanical Research* 2(1): 65-66, f. 4. 1982, *Journal of Bamboo Research* 3(2): 34, f. 10. 1984, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: Suichang tender bamboo

P. prominens W.Y. Xiong [also W.Y. Hsiung]

China, Zhejiang. Young culm dark green and not pruinose, short contracted nodes, rugose sheath blade lanceolate or ribbon-like with orange yellow edge, sheath auricles elliptic or falciform and ciliate, sheath ligule dark purple with a wavy tip and ciliate, cultivated, edible shoots, culm used as handles, see *Acta Phytotaxonomica Sinica* 18(2): 182-183, pl. 6. 1980, *Forest Research (China)* 1: 109-111. 1988, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: swollen node bamboo

P. propinqua McClure

China, Guangxi, Hubei, Guizhou, Zhejiang. Perennial, evergreen, smooth, pruinose, sheath annulus smooth, sheath blade narrow and lanceolate or ribbon-like, no auricles and cilia, sheath ligule arcuate and finely hairy, young shoots cooked, canes hard and tough used for weaving wares and farm appliances, handles of tools, closely related to *Phyllostachys meyeri* McClure, requires moist soil, deep or light woodland, see *Journal of the Washington Academy of Sciences* 35(10): 289, f. 1. 1945, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: withered sheath bamboo, sand bamboo

P. propinqua McClure f. *lanuginosa* Wen

China. Shoots eaten, see *Bulletin of Botanical Research* 2(1): 75. 1982.

P. puberula (Miq.) Munro (*Bambusa nigra* Lodd. ex Lindl.; *Bambusa puberula* Miq.; *Phyllostachys nigra* (Lodd. ex Lindl.) Munro; *Phyllostachys nigra* var. *henonis* (Mitford) Stapf ex Rendle)

China. Shrubby, nodes with prominent rings, internodes green, culm sheaths ciliate, leaf blades lanceolate acuminate, leaves 2-3 on twigs, sheaths auricles lacking, 3 stamens, 3 stigmas, ornamental and cultivated bamboo, see *The Penny Cyclopædia of the Society for the Diffusion of Useful Knowledge*. C. Knight, 3: 357. London 1833-1843, *Annales Museum Botanicum Lugduno-Batavi* 2: 285. 1866, *Transactions of the Linnean Society of London* 26(1): 38, 123. 1868, *Gardener's Chronicle & Agricultural Gazette*, n.s., 6: 773-774. 1876, *Bulletin de la Société Nationale d'Acclimatation de France* sér. 3 5: 716, f. 36, 37. 1878, *The Bamboo Garden* 47: 149-151. 1895, *Royal Horticultural*

Society 22: 277, f. 64. 1898 and *Botanical Magazine* (Tokyo) 14: 64. 1900, *Journal of the Linnean Society, Botany* 36(254): 442-443. 1904, *Le Bambou, son étude, sa culture, son emploi* 1: 104, 117. 1906, *Actes du III^{me} Congrès international de botanique, Bruxelles 1910* 2: 222, 223. [1912], *Flora of Japan (edition 2)* Rev. & Enl. 1375. 1931, *Journal of Japanese Botany* 9(1): 20. 1933, *Phytologia* 38(3): 175. 1978, *Forest Research (China)* 1: 109-111. 1988, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. pubescens Mazel ex J. Houz. (*Phyllostachys pubescens* (Mazel) Ohwi)

China. Young culm internodes with velvety pubescence, culm sheaths coriaceous, lower nodes marked by one prominent ridge, leaves lanceolate to narrowly lanceolate, spikes lanceolate, spikelets usually one-flowered, 1-2 glumes, lemmas ovate-lanceolate and acuminate, palea present, 3 lodicules lanceolate and acuminate, very long stamens, ovary cylindrical, 3 feathery stigmas, commonly cultivated for the edible shoots, see *J. Arn. Arb.* 37: 189. 1956, Jinxing Lin, Xinqiang He, Yuxi Hu, Tingyun Kuang and R. Ceulemans, "Lignification and lignin heterogeneity for various age classes of bamboo (*Phyllostachys pubescens*) stems." *Physiologia Plantarum* 114(2): 296-302. Feb 2002, Y. Isagi, K. Shimada, H. Kushima, N. Tanaka, A. Nagao, T. Ishikawa, H. OnoDera and S. Watanabe, "Clonal structure and flowering traits of a bamboo [*Phyllostachys pubescens* (Mazel) Ohwi] stand grown from a simultaneous flowering as revealed by AFLP analysis." *Molecular Ecology* 13(7): 2017-2021. July 2004.

in English: moso bamboo

in Japan: moso, moso-chiku

P. purpurata McClure (*Phyllostachys heteroclada* Oliv.; *Phyllostachys heteroclada* f. *purpurata* (McClure) T.H. Wen)

China. Perennial, monopodial, small-to-medium size, straight-to-weak flexuous stems, branches borne in pairs, culms flattened above the branches, nodes prominent, culms with small central chambers, usually used in weaving baskets and for walking sticks, young shoots edible, useful for erosion control, a potential pioneer plant, see *Hooker's Icones Plantarum* 23(4): pl. 2288. 1894 and *Lingnan University Science Bulletin* 9: 43. 1940, *Agriculture Handbook* 114: 56. 1957, *Acta Phytotaxonomica Sinica* 18(2): 188. 1980, *Bulletin of Botanical Research* 2(1): 78. 1982, *Journal of Bamboo Research* 3(2): 36. 1984, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. purpureomaculata W.T. Lin & Z.J. Feng

China. See *Acta Phytotaxonomica Sinica* 30(6): 558-559, pl. 1, f. 5-9. 1992.

in English: small spot bamboo

P. retusa Wen (*Phyllostachys rubicunda* T.H. Wen)

China. See *Acta Phytotaxonomica Sinica* 16(4): 98-99, pl. 1. 1978, *Bulletin of Botanical Research* 2(1): 69-70, f. 14. 1982.

in English: water bamboo

P. rigida X. Jiang & Q. Li (*Phyllostachys veitchiana* Rendle)

China, Sichuan. Straight stem, young culm dark green and glabrous, pruinose, culm sheath early deciduous, erect sheath blade broadly triangular with reddish purple margin, sheath auricles falciform and reddish purple, sheath ligule reddish purple, 1-2 leaves on each twig, culm hard and solid used for furniture and weaving, food for giant panda, see *Journal of the Linnean Society, Botany* 36(254): 443-444. 1904, *Journal of the Sichuan Agricultural College* 2(2) [= no. 4]: 127-129, 1 f. 1984.

in English: hardy head green bamboo

P. rivalis H.R. Zhao & A.T. Liu (*Phyllostachys atrovaginata* C.S. Chao & H.Y. Chou)

China, Guangdong. Young culm pruinose and shortly pubescent, branches spreading, sheath blade narrow and erect, no sheath auricles, sheath ligule truncate or slightly concave, 3-5 leaves on each twig, hard leaves densely pubescent beneath, shoots edible, culms used for fencing, found growing on riverbanks and along streams, see *Acta Phytotaxonomica Sinica* 18(2): 189-192, pl. 11, 13. 1980, *Forest Research (China)* 1: 109-111. 1988.

in English: river bamboo

P. robustiramea S.Y. Chen & C.Y. Yao (*Phyllostachys erecta* T.H. Wen)

China, Zhejiang. Young culms pruinose and smooth, greenish purple to light green, thin sheath, sheath auricles with few cilia, sheath ligule light green and somewhat arcuate, edible shoot, culms used for weaving, see *Acta Phytotaxonomica Sinica* 18(2): 188-189, pl. 10. 1980, *Bulletin of Botanical Research* 2(1): 62-63, f. 2. 1982.

in English: swallow bamboo, bud bamboo

P. rubicunda Wen (*Phyllostachys concava* Z.H. Yu & C.P. Wang; *Phyllostachys retusa* T.H. Wen)

China, Zhejiang. See *Acta Phytotaxonomica Sinica* 16(4): 98-99, pl. 1. 1978, *Acta Phytotaxonomica Sinica* 18(2): 192-193, pl. 14. 1980, *Bulletin of Botanical Research* 2(1): 69-70, f. 14. 1982.

P. rubromarginata McClure (*Phyllostachys rubromarginata* f. *castigata* T.H. Wen; *Phyllostachys shuchengensis* S.C. Li & S.H. Wu)

China, Zhejiang. Perennial, monopodial, evergreen, aggressive spreader, shallow-rooted, long and slender internodes, joint flat, sheath light green with a light reddish purple hue, sheath blade long lanceolate, no sheath auricles, sheath ligule reddish purple and slightly concave, good-quality

wood easy to split, edible young shoots with a small degree of acidity when raw, used for basket making, pipes, plant supports and for weaving, stakes and construction, useful for erosion control, very hardy, tolerates cold and dry winds, requires a rich damp soil, found along roadsides and riverbanks, see *Lingnan University Science Bulletin* 9: 44. 1940, *Journal of the Anhui Agricultural College* 1981(2): 49-52, 2 figs. 1981, *Bulletin of Botanical Research* 2(1): 76-77. 1982.

in English: red margined bamboo, red marginated sheath bamboo, girl's bamboo

P. rubromarginata McClure f. *castigata* Wen

China. See *Bulletin of Botanical Research* 2(1): 76-77. 1982.

in English: daughter bamboo

P. rutila Wen

China. Young culm green, sheath bright red with brown spots, sheath narrow lanceolate, sheath auricles more or less ovate to elliptic, sheath ligule purple with an arching tip, edible shoots, see *Bulletin of Botanical Research* 2(1): 70-71, f. 8. 1982.

in English: Quxian red shell bamboo

P. sapida Yi

China. Shoots edible, see *Journal of Bamboo Research* 10(4): 21-22, f. 1. 1991.

in English: Pengxian bamboo, sweet bamboo

P. sedan Brandis ex Camus

Myanmar. See *Les Bambusées* 66. 1913, *Grasses of Burma* 11. 1945.

P. shuchengensis S.C. Li & S.H. Wu

China. See *Journal of the Anhui Agricultural College* 1981(2): 49-52, 2 figs. 1981.

P. stimulosa H.R. Zhao & A.T. Liu

China, Zhejiang. See *Acta Phytotaxonomica Sinica* 18(2): 186-187, pl. 9. 1980.

P. stimulosa H.R. Zhao & A.T. Liu f. *unifoliata* Wen

China. See *Bulletin of Botanical Research* 2(1): 77. 1982.

P. subulata W.T. Lin & Z.M. Wu

China, Guangdong.

P. sulphurea (Carrière) Rivière & Rivière (*Bambusa sulphurea* Carrière; *Phyllostachys bambusoides* Siebold & Zucc.; *Phyllostachys bambusoides* var. *castilloniholochrysa* H. de Leh.; *Phyllostachys bambusoides* var. *sulphurea* Makino ex Tsuboi; *Phyllostachys castillonis* var. *holochrysa* Pfitzer; *Phyllostachys mitis* var. *sulphurea* (Carr.) H. de Leh.; *Phyllostachys quilioi* var. *castilloniholochrysa* Regel ex J. Houz.; *Phyllostachys reticulata* var. *holochrysa* (Pfitzer) Nakai; *Phyllostachys reticulata* var. *sulphurea* (Carr.) Makino; *Phyllostachys striata* var.

sulphurea (Carrière) Nakai; *Phyllostachys viridis* (Rob. A. Young) McClure)

China. Perennial, culm and branches golden yellow, sheath yellow with green longitudinal stripes, sheath blade long slender and ribbon-like, no auricles and no cilia, sheath ligule conspicuous, evergreen and very hardy species, shallow rooted, easy to split, culm hard and solid used as handle of farm implement, strips used for weaving, requires dry or moist soil, tolerates dry conditions, see *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 3(3): 745-746, pl. 5, f. 3. 1843, *Revue Horticole* 45: 379. 1873, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 773. 1878 and *Botanical Magazine* (Tokyo) 26: 24. 1912, *Journal of the Washington Academy of Sciences* 27: 345. 1937, *Journal of the Arnold Arboretum* 37(2): 192. 1956, *Acta Phytotaxonomica Sinica* 18(2): 169. 1980, *Bulletin of Botanical Research* 2(1): 77. 1982, *Kew Bulletin* 43(3): 419. 1988, *Journal of Bamboo Research* 8(4): 40. 1989, *Journal of Bamboo Research* 9(4): 39. 1990, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Cell and Chromosome Research* 15(3): 12. 1992, *Bambusbrief* 1993(2): 10. 1993, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: yellow skin firm bamboo, golden bamboo, sulphur bamboo

P. sulphurea (Carrière) Rivière & C. Rivière f. *laqueata* (Wen) Ohrnb.

China. Edible shoot, see *Bulletin of Botanical Research* 2(1): 77. 1982.

in English: yellow shell bamboo

P. sulphurea (Carrière) Rivière & C. Rivière f. *sulphurea*

China. Ornamental.

in English: yellow skin firm bamboo, golden bamboo, sulphur bamboo

P. sulphurea (Carrière) Rivière & C. Rivière f. *tricolor* G.H. Lai

China. See *Journal of Bamboo Research* 14(2): 11. 1995.

P. sulphurea (Carrière) Rivière & C. Rivière f. *viridis* (R.A. Young) Ohrnb. (*Bambusa sulphurea* Carrière; *Phyllostachys bambusoides* Siebold & Zucc.; *Phyllostachys bambusoides* cv. *allgold* McClure; *Phyllostachys bambusoides* var. *castilloniholochrysa* (Pfitzer) J. Houz.; *Phyllostachys bambusoides* var. *sulphurea* Makino ex Tsuboi; *Phyllostachys castillonis* var. *holochrysa* Pfitzer; *Phyllostachys chlorina* T.H. Wen; *Phyllostachys faberi* Rendle; *Phyllostachys meyeri* f. *sphaeroidea* T.H. Wen; *Phyllostachys mitis* (Lour.) Rivière & C. Rivière; *Phyllostachys mitis* var. *sulphurea* (Carrière) H. de Leh.; *Phyllostachys quilioi* var. *castilloniholochrysa* Regel ex J. Houz.; *Phyllostachys reticulata* var. *holochrysa* (Pfitzer) Nakai; *Phyllostachys reticulata* var. *sulphurea* (Carrière) Makino; *Phyllostachys sulphurea* var. *viridis* Rob. A. Young; *Phyllostachys villosa*

T.H. Wen; *Phyllostachys viridis* (R.A. Young) McClure; *Phyllostachys viridis* f. *youngii* C.D. Chu & C.S. Chao)

China. Edible shoot, see *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 773. 1878 and *Journal of the Linnean Society, Botany* 36(254): 439-440. 1904, *Journal of the Washington Academy of Sciences* 27: 345. 1937, *Bulletin of Botanical Research* 2(1): 61-62, f. 1. 1982, *Bambusbrief* 1993(2): 10. 1993.

in English: bamboo, firm bamboo, green sulphur bamboo

P. sulphurea (Carrière) Rivière & C. Rivière var. ***sulphurea*** (*Bambusa sulfurea* Carrière)

China. Perennial, ornamental, cultivated.

P. sulphurea (Carrière) Rivière & C. Rivière var. ***viridis*** R.A. Young (*Bambusa sulphurea* Carrière; *Phyllostachys bambusoides* Siebold & Zucc.; *Phyllostachys bambusoides* cv. *allgold* McClure; *Phyllostachys bambusoides* var. *castilloniholochrysa* (Pfitzer) J. Houz.; *Phyllostachys bambusoides* var. *sulphurea* Makino ex Tsuboi; *Phyllostachys castillonis* var. *holochrysa* Pfitzer; *Phyllostachys chlorina* T.H. Wen; *Phyllostachys meyeri* f. *sphaeroidea* T.H. Wen; *Phyllostachys mitis* (Lour.) Rivière & C. Rivière; *Phyllostachys mitis* var. *sulphurea* (Carrière) H. de Leh.; *Phyllostachys quilioi* var. *castillonis-holochrysa* Regel ex J. Houz.; *Phyllostachys reticulata* var. *holochrysa* (Pfitzer) Nakai; *Phyllostachys reticulata* var. *sulphurea* (Carrière) Makino; *Phyllostachys sulphurea* f. *viridis* (Rob. A. Young) D. Ohrnberger; *Phyllostachys villosa* T.H. Wen; *Phyllostachys viridis* (R.A. Young) McClure; *Phyllostachys viridis* f. *youngii* C.D. Chu & C.S. Chao)

China. Perennial, green culm, ornamental, cultivated, see *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 689, 773. 1878 and *Botanical Magazine* (Tokyo) 26: 24. 1912, *Act. Congr. Int. Bot. Bruxelles* Actes 2: 228. 1912, *Journal of Japanese Botany* 9: 34. 1933, *Journal of the Washington Academy of Sciences* 27: 345. 1937, *Journal of the Washington Academy of Sciences* 35(10): 286, f. 1. 1945, *Journal of the Arnold Arboretum* 37(2): 192-193. 1956, *Acta Phytotaxonomica Sinica* 18(2): 169. 1980, *Bulletin of Botanical Research* 2(1): 61-62, 71-72, 74, f. 1. 1982, *Bambusbrief* 1993(2): 10. 1993.

in Japan: ougon-chiku (green stripes on the yellow culm), ma-dake

P. tianmuensis Z.P. Wang & N.X. Ma

China, Zhejiang. Young culm smooth bright green and not pruinose, branches yellow grooved, sheath brownish red with tiny brown spots, sheath blade long lanceolate to ribbon-like, no sheath auricle and no cilia, sheath ligule dark brownish purple and not drooping, edible shoot, see *Journal Nanjing University. Natural Sciences Edition* 1983(3): 491, f. 3. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: Tianmu early bamboo

P. tianmuensis Z.P. Wang & N.X. Ma f. ***flexicaulis*** G.H. Lai
China. Slender, erect, flexuous, see *Journal of Bamboo Research* 14(2): 12. 1995.

P. tranquillans (Koidz.) Muroi

Japan. Rather small, 1-2 branches per node, culm sheaths coriaceous, large leaves oblong-lanceolate papery-coriaceous, leaf sheaths glabrous, inflorescence broadly lanceolate, spikelets lanceolate 2- to 5-flowered, usually the uppermost floret male or sterile, one glume ovate or oblong-lanceolate, lemmas acuminate, palea present, 3 ovate lodicules, stamens exerted, ovary cylindrical, 3 feathery stigmas, see *Amatores Herbarii*. Ser. 4 16 A): 36. Kobe, Japan 1955.

in Japan: in-yo-chiku

P. varioauriculata S.C. Li & S.H. Wu (*Phyllostachys hispida* S.C. Li, Shi H. Wu & S.Y. Chen)

China. See *Journal of the Anhui Agricultural College* 1981(2): 49-52, 2 figs. 1981, *Acta Phytotaxonomica Sinica* 20(4): 492-493, pl. 1. 1982.

in English: black bamboo

P. varioauriculata S.C. Li & S.H. Wu var. ***glabrata*** G.H. Lai

China. See *Journal of Bamboo Research* 14(2): 12. 1995.

P. verrucosa G.H. Ye & Z.P. Wang

China. Young culm purple and glabrous, sheath papyraceous, sheath blade purplish yellow and bandlike, usually 2-3 leaves on each twig, leaves oblong-lanceolate and glabrous, see *Journal Nanjing University. Natural Sciences Edition* 1983(3): 482, f. 2, 3. 1983.

in English: Changsha firm bamboo

P. villosa Wen (*Phyllostachys sulphurea* f. *viridis* (Rob. A. Young) D. Ohrnberger)

China. See *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 773. 1878 and *Journal of the Washington Academy of Sciences* 27: 345. 1937, *Bulletin of Botanical Research* 2(1): 71-72. 1982, *Bambusbrief* 1993(2): 10. 1993.

in English: yellow wintersweet bamboo

P. violascens Rivière & C. Rivière (*Phyllostachys violascens* (Carrière) Rivière & C. Rivière)

Asia, China. Vigorous, see *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 770. 1878.

P. virella Wen

China, Zhejiang. Young culm green not pruinose with fine pubescence, a pruinose ring around and below joint, sheath blade dark purple, 2-3 leaves on each twig, leaves broadly lanceolate to long elliptic, sheath auricles absent, see *Bulletin of Botanical Research* 2(1): 72-73, f. 10. 1982.

in English: Dongyang green skin bamboo

P. viridiglaucescens (Carrière) Rivière & C. Rivière (also *viridi-glaucescens*) (*Bambusa viridiglaucescens* Carrière; *Phyllostachys altiligulata* G.G. Tang & Y.L. Xu)

China, Zhejiang. Perennial, young culm dark green thickly pruinose, sheath blade ribbon-like, sheath auricles narrowly falciform, sheath ligule brownish purple, evergreen and very hardy species, requires moist soil, very ornamental and shallow-rooted, young shoots usually free of acidity even when raw, canes used as plant supports and as handles, see *Bulletin de la Société Nationale d'Acclimatation de France* sér. 3 5: 700, 773, f. 28. 1878 and *J. Nanjing Inst. Forest.* 1985(4): 18, f. 2. 1985, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: green bamboo, glaucous bamboo, green glaucous bambou

in French: bambou vert glauque

P. viridis (R.A. Young) McClure (*Phyllostachys mitis* (Lour.) Rivière & C. Rivière; *Phyllostachys mitis* Rivière & C. Rivière; *Phyllostachys sulphurea* (Carrière) Rivière & C. Rivière; *Phyllostachys sulphurea* f. *viridis* (Rob. A. Young) D. Ohrnberger; *Phyllostachys sulphurea* var. *viridis* R.A. Young)

China. Strong, hard, culms green to blue-green, culm internode surface rough, culm sheaths blotched and minutely hairy, see *Flora Cochinchinensis, denuo in Germania edita* 1: 57. 1790, *Revue Horticole* 45: 379. 1873, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3 5: 689, 773. 1878 and *Journal of the Washington Academy of Sciences* 27: 345. 1937, *Journal of the Arnold Arboretum* 37(2): 192-193, 195. 1956, *Agriculture Handbook* 114: 65. 1957, *Acta Phytotaxonomica Sinica* 18(2): 169. 1980, *Bulletin of Botanical Research* 2(1): 77. 1982, *Journal of Bamboo Research* 3(2): 35. 1984, *Journal of Bamboo Research* 8(4): 40. 1989, *Journal of Bamboo Research* 9(4): 39. 1990, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Bambusbrief* 1993(2): 10. 1993, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in Japan: kou-chiku, ougon-kou-chiku, robert-ougon-chiku (culms yellow-green and later golden), gimmei-kou-chiku, uzo-gimmei-chiku

P. vivax McClure (*Phyllostachys vivax* cv. *vivax*)

China. Evergreen, thin-walled and fragile, young culms green, a pruinose ring below joint, culms gray-green when mature, internodes with longitudinal ridges, sheath blade long and slender, no sheath auricles and no cilia, sheath ligule short, drooping leaves broad and long, a giant running bamboo, shallow rooted, aggressive once established, excellent timber bamboo for ornamental use, strips used for weaving, the best timber bamboo for colder climates, young shoots usually free of acidity even when raw, closely related to *Phyllostachys bambusoides* Siebold & Zucc., see *Journal of the Washington Academy of Sciences* 35(10): 292, f. 3. 1945, *Acta Phytotaxonomica Sinica* 14(2): 32.

1976, *Journal of Bamboo Research* 2(1): 72. 1983, *Journal of Bamboo Research* 4(1): 56. 1985, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: giant timber bamboo, vigorous bamboo, elegant bamboo, smooth-sheath bamboo

P. vivax McClure f. *aureocaulis* N.X. Ma (*Phyllostachys vivax* cv. *aureocaulis*)

China. Golden yellow culm with green longitudinal stripes, ornamental, see *Journal of Bamboo Research* 4(1): 56. 1985.

P. vivax McClure f. *huangwenzhu* J.L. Lu (*Phyllostachys vivax* f. *huanwenzhu* J.L. Yu)

China. Yellow grooves on its internodes, shoot edible, hardy and cold-resistant, see *Acta Phytotaxonomica Sinica* 14(2): 32. 1976.

in English: yellow groove bamboo

P. vivax McClure f. *vittata* Wen

China. See *Journal of Bamboo Research* 2(1): 72. 1983.

P. yunhoensis S.Y. Chen & C.Y. Yao

China, Zhejiang. Young culm pruinose with narrow pruinose ring under each joint, young shoot purplish green, sheath smooth dark green or yellowish, sheath blade ribbon-like orange yellow, sheath auricles sickle-shaped or ovate, sheath ligule slightly arcuate, culm used as poles, delicious edible shoots, see *Acta Phytotaxonomica Sinica* 18(2): 183-184, pl. 7. 1980.

in English: black tortoise bamboo, Yunhe sheath bamboo

Pilgerochloa Eig = *Ventenata* Koeler

Dedicated to the German botanist Robert Knuds Friedrich Pilger, 1876-1953, traveler, botanical explorer, plant collector in Brazil (Matto Grosso), Director at Botanical Garden Berlin-Dahlem, his works include "Gramineae novae, a cl. K. Skottsberg in Patagonia australi et in Fuegia collectae." *Repert. Spec. Nov. Regni Veg.* 12: 304-308. 1913 and "Sobra algunas gramíneas de América del Sur." *Revista Argent. Agron.* 11(4): 257-264. 1944. See L.R. Parodi, "Robert Pilger." *Revista Argent. Agron.* 20(2): 107-114. 1953; H. Melchior, "Zum Gedächtnis von Robert Pilger." *Bot. Jahrb. Syst.* 76(3): 385-409. 1954; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; E.D. Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 151. 1937; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 310. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden.

327. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; August Weberbauer, *Die Pflanzenwelt der peruanischen Andes in ihren Grundzügen dargestellt*. 39. Leipzig 1911.

One species, Iran, Asia Minor. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Agrostidinae, annual, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, spikelets pedicellate and flattened, 2 glumes unequal to very unequal, lemmas hairy awned, geniculate awn, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, often referred to *Ventenata*, see *Descriptio Graminum in Gallia et Germania* 272. 1802, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881, *Flora Orientalis* 5: 539. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis* 26: 71. 1929, *Contributions from the United States National Herbarium* 48: 688. 2003.

Species

P. eigiana H. Scholz & Raus

Asia Minor. See *Willdenowia* 12(1): 56. 1982.

Pinga Widjaja

A vernacular name.

One species, New Guinea. Sympodial bamboo, scrambling, 6 stamens, ovary glabrous, 3 stigmas, similar to *Neololeba*, see *Reinwardtia* 11(2): 121-124. 1997.

Species

P. marginata Widjaja

New Guinea.

Piptatherum P. Beauv. = *Oryzopsis* Michaux, *Urachne* Trin.

From the Greek *pipto* "to fall" and *ather* "stalk, barb, awn," falling awn, referring to the deciduous awn on the lemma; see A. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 17, 173. Paris (Dec.) 1812.

About 24-26 species, Old World subtropics, southwestern Asia, eastern Mediterranean. Stipoideae, Stipeae, Stipinae, or Pooideae, Stipeae, Stipinae, perennial, herbaceous, more or less densely or loosely tufted, branched or unbranched, culm nodes glabrous, ligule membranous, no auricles, leaf blade flat or involute, plants bisexual, open or contracted panicles, bisexual and solitary pedicellate spikelets, spikelets with female-fertile florets only, spikelets with 1 bisexual flower, floret dorsally compressed, glumes subequal, lemma hardened and cylindrical-ovoid, lemma smooth with a caducous terminal awn, awns weakly to strongly bent, blunt to

sharp callus very small, 2 or 3 lodicules free and hyaline to membranous, 3 stamens, ovary glabrous, 2 stigmas, weed species, cultivated fodder, sometimes referred to and included in *Oryzopsis* Michaux, hybridizes with *Achnatherum hymenoides* (Roemer & Schultes) Barkworth (*Stipa* sensu lato), type *Piptatherum caerulescens* (Desf.) P. Beauv., see *Species Plantarum* 1: 55, 61, 78. 1753, *Flora Boreali-Americana* 1: 51, t. 9. 1803, *Essai d'une Nouvelle Agrostographie* 17, 18, 173. 1812, *Fundamenta Agrostographiae* 109-110. 1820, *Species Graminum Stipaceorum* 9, 19. 1842, Charles Wilkes, 1798-1877, *Narrative of the United States Exploring Expedition*. During the years ... Philadelphia 1845, Asa Gray, 1810-1888, *Botany. Phanerogamia*. vol. XIV. United States Exploring Expedition ... 1838-1842. Under the command of C. Wilkes. Philadelphia 1854-1857, *Genera Plantarum* 3(2): 1142. 1883 and *U.S. Dept. Agric. Bull.* 772: 156, 158. 1920, D.C. Haskell, *The United States Exploring Expedition 1838-1842 and Its Publications 1844-1874*. New York 1942, D.B. Tyler, *The Wilkes Expedition: The First United States Exploring Expedition (1838-1842)*. Philadelphia 1968, *Novosti Sist. Vyss. Rast.* 9: 56. 1972, *Notes Roy. Bot. Gard. Edinburgh* 33(3): 361, 363, 364, 370, 401. 1975, G.A. Doumani, editor, *Antarctic Bibliography*. Washington, Library of Congress 1965-1979, *Phytologia* 74(1): 1-25. 1993, *Gayana, Botánica* 53(2): 277-284. 1996, *Grasses: Systematics and Evolution* 75-82. 2000, Robert D. Dorn, *Vascular Plants of Wyoming* Third edition. iv + 412 pages. Mountain West Publishing, Cheyenne, Wyoming 2001, *Restoration Ecology* 9(1): 1-12. Mar 2001, *Restoration Ecology* 10(4): 695-702. Dec 2002, *Contributions from the United States National Herbarium* 48: 469-473, 494-495, 684-687. 2003, *Restoration Ecology* 12(1): 20-28. Mar 2004, *EPPO Bulletin* 34(1): 43-56. Apr 2004, *Journal of Biogeography* 32(1): 85-98. Jan 2005.

Species

P. aequiglume (Duthie ex Hook.f.) Roshev. (*Oryzopsis aequiglumis* Duthie ex Hook.f.; *Oryzopsis fasciculata* Hackel; *Piptatherum aequiglume* (Hook.f.) Roshev.)

Asia, Karakorum Mountains, China. Useful for erosion control, see *The Flora of British India* 7: 234. 1896 and *Österreichische Botanische Zeitschrift* 52: 10. 1902, *Notes from the Royal Botanic Garden, Edinburgh* 33(3): 379. 1975.

P. badachschanicum (Tzvelev) Ikonn. (*Piptatherum hilariae* subsp. *badachschanicum* Tzvelev)

Asia. See *Not. Syst. Herb. Inst. Bot. & Zool. Acad. Sci. Uzbekistan* 10: 20. 1948, *Novosti Sist. Vyss. Rast.* 11: 12. 1974, *Grasses of Uttar Pradesh* 64. 1994.

P. caerulescens (Desf.) P. Beauv. (also spelled *coerulescens*) (*Agrostis caerulescens* (Desf.) Poir.; *Agrostis caerulescens* (Desf.) Lam. ex DC.; *Milium caerulescens* Desf.; *Oryzopsis caerulescens* (Desf.) Hack.; *Piptatherum*

caerulescens auct.; *Stipa caerulescens* (Desf.) Raspail; *Urachne caerulescens* (Desf.) Trin.)

Europe, Italy, Morocco, Algeria, Spain. Good for mine spoil bank reclamation, useful for erosion control, see *Flora Atlantica* 1: 66, t. 12. 1798, *Encyclopédie Méthodique, Botanique* Suppl. 1: 258. 1810, *Essai d'une Nouvelle Agrostographie* 18. 1812, *Flore de France* 6: 250. 1815, *Fundamenta Agrostographiae* 110. 1820, *Beitraege zur Erhaltung und Erforschung Heimische Orchideen* 5: 449. 1825, *Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse, Denkschriften* 1: 75. 1885.

P. canadense (Poir.) Dorn (also spelled *canadensis*) (*Oryzopsis canadensis* (Poir.) Torr.; *Oryzopsis juncea* Britton, Sterns & Poggenb.; *Oryzopsis macounii* (Scribn.) Beal; *Piptatherum canadensis* (Poir.) Barkworth; *Stipa canadensis* Poir.; *Stipa juncea* Michx., nom. illeg., non *Stipa juncea* L.; *Stipa macounii* Scribn.; *Urachne canadensis* (Poir.) Torr.)

Northern America, Canada. See *Flora Boreali-Americana* 1: 54. 1803, *Encyclopédie Méthodique, Botanique* 7: 452. 1806, *North American Gramineae and Cyperaceae* 2: 114. 1835, *Species Graminum Stipaceorum* 19. 1842, *Fl. New York* 2: 433. 1843, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 67. 1888, *Catalogue of Canadian Plants* 2(5): 390. 1890, *Grasses of North America for Farmers and Students* 2: 229. 1896 and *Contr. U.S. Natl. Herb.* 12: 150. 1908, *Vascular Plants of Wyoming* (edition 3) 377. 2001.

P. exiguum (Thurb.) Dorn (*Oryzopsis exigua* Thurb.; *Oryzopsis exigua* var. *exigua*; *Piptatherum exiguum* (Thurb.) Barkworth)

North America, Canada, Columbia Basin region. Perennial, strongly tufted, smooth to slightly rough sheath, ligule pointed, no auricles, inrolled leaves, spike-like flower head with short upward-pointing branches pressed close to the stem, glumes broad, hardened lemma, short and twisted awns, see *United States Exploring Expedition* 17: 481. 1874 and *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Vascular Plants of Wyoming* (edition 3) 377. 2001.

in English: little rice grass

P. gracile Mez (*Oryzopsis gracilis* (Mez) Pilger; *Oryzopsis lateralis* Stapf; *Piptatherum laterale* auct. non (Munro ex Regel) Roshev.)

Asia, Karakorum Mountains, China, Himalayan Region, Nepal. Solitary, usually no rhizomes, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(486-491): 211. 1921, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14: 347. 1939, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

P. hilariae Pazij (*Oryzopsis hilariae* (Pazij) Uniyal; *Oryzopsis humilis* Bor; *Oryzopsis wendelboi* Bor; *Piptatherum binabium* Pazij; *Piptatherum schugnanicum* Roshev.; *Piptatherum tremuloides* Ovcz. & Czukav.)

Asia, Karakorum Mountains. See *Not. Syst. Herb. Inst. Bot. & Zool. Acad. Sci. Uzbekistan* 10: 20. 1948, *Novosti Sist. Vyss. Rast.* 11: 12. 1974, *Grasses of Uttar Pradesh* 64. 1994.

P. holciforme (M. Bieb.) Roem. & Schult. (*Agrostis holciformis* M. Bieb.; *Oryzopsis holciformis* (M. Bieb.) Hack.; *Oryzopsis holciformis* (M. Bieb.) Richter; *Oryzopsis kopetdagensis* Roshev.; *Piptatherum karataviense* Roshev.)

Iran, Israel, Egypt, Syria, Europe. Erect plant, coarse, tall, blue flat basal leaves, dark seeds, animal food, forage, endangered species (in Jordan), found in loamy soils, rocky slopes, dry hillside, disturbed habitats, forested slopes, see *Flora Taurico-Caucasica* 1: 54. 1808, *Systema Vegetabilium* 2: 328. 1817, *Systema Vegetabilium, editio decima sexta* 1: 251. 1825, *Species Graminum Stipaceorum* 15. 1842, *Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse, Denkschriften* 50(2): 8. 1885, *Mittheilungen der Thüringischen Botanischen Vereins* N.F. 13 & 14: 42. 1899 and *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 55: 164. 1903, *Conspectus Florae Graecae* 3: 354. 1904, *Flora URSS* 2: 117, 743, t. 5, f. 17. 1934, *Notes from the Royal Botanic Garden, Edinburgh* 33(3): 372. 1975, *Plant Taxonomy, Phytogeography and Related Subjects: The Davis & Hedge Festschrift* by P.H. Davis, Ian Charleson Hedge, Kit Tan (editor), R.R. Mill (editor), Thomas S. Elias (editor). 117. Edinburgh University Press. 1989, *Conspectus Florae Orientalis* 6: 186. 1991, *Kew Bulletin* 47(4): 655. 1992.

in English: ricegrass

P. holciforme (M. Bieb.) Roem. & Schult. var. ***longiglume*** Hausskn. (*Oryzopsis holciformis* var. *longiglumis* (Hausskn.) Halácsy; *Piptatherum longiglume* (Hausskn.) Holub)

Europe. See *Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse, Denkschriften* 50(2): 8. 1885, *Mittheilungen der Thüringischen Botanischen Vereins* N.F. 13 & 14: 42. 1899 and *Conspectus Florae Graecae* 3: 354. 1904, *Folia Geobotanica et Phytotaxonomica* 12(4): 429. 1977.

P. laterale (Munro ex Regel) Roshev. (*Milium laterale* Munro ex Regel; *Milium laterale* Regel; *Oryzopsis lateralis* (Munro ex Regel) Stapf; *Oryzopsis lateralis* (Regel) Stapf; *Piptatherum laterale* Munro ex Aitch.; *Piptatherum laterale* Munro ex Regel; *Piptatherum laterale* (Regel) Roshev.)

China, Turkey, Nepal. See *Journal of the Linnean Society, Botany* 18: 106. 1880, *The Flora of British India* 7: 234. 1896 and *Notes from the Royal Botanic Garden, Edinburgh* 33(3): 394. 1975.

P. micranthum (Trin. & Rupr.) Barkworth (*Oryzopsis micrantha* (Trin. & Rupr.) Thurb.; *Urachne micrantha* Trin. & Rupr.)

North America, U.S., Canada, Columbia Basin. Perennial or annual, strongly tufted, open sheath smooth to slightly hairy, ligule blunt and finely hairy along the edge, flat or slightly inrolled leaf blades, open spike-like flower head with branches that spread out from the stem axis, glumes papery and sharply pointed, lemma hairless, awn straight and stiff, very rare species, grows on dry rocky slopes, see *Species Graminum Stipaceorum* 16, 19. 1842, *Proceedings of the Academy of Natural Sciences of Philadelphia* 15: 78. 1864 and *Phytologia* 74(1): 19. 1993.

in English: small-flowered rice grass, little seed rice grass, littleseed ricegrass, little ricegrass

P. microcarpum (Pilg.) Tzvelev (*Oryzopsis microcarpa* Pilg.)

Asia, India, Pakistan. Useful for erosion control, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14: 346. 1939, *Grasses of Burma, Ceylon, India and Pakistan* 640. 1960, *Novosti Sist. Vyss. Rast.* 11: 12. 1974.

P. miliaceum (L.) Cosson (*Achnatherum miliaceum* (L.) P. Beauv.; *Agrostis miliacea* L.; *Milium multiflorum* Cav.; *Milium multiflorum* var. *multiflorum*; *Milium multiflorum* var. *thomasi* (Duby) Goiran; *Milium thomasi* Duby; *Nassella multiflora* (Cav.) Druce; *Oryzopsis miliacea* (L.) Benth. & Hook.f. ex Aschers. & Schweinf.; *Oryzopsis multiflora* (Cav.) Druce; *Oryzopsis thomasi* (Duby) Pinto da Silva; *Piptatherum miliaceum* subsp. *thomasi* (Duby) Soják; *Piptatherum multiflorum* (Cav.) P. Beauv.; *Piptatherum thomasi* (Duby) Kunth; *Stipa miliacea* (L.) Hoover; *Urachne miliacea* (L.) K. Koch)

Eurasia, Mediterranean region, Asia. Perennial bunchgrass, wiry, tufted to loosely tufted, loosely clumped, rigid and smooth, stout, glabrous, leafy, branched, base sometimes decumbent, short contracted rhizome, hairy cataphylls, ligule hyaline, leaf sheath membranous, flat or involute leaves, panicle open and loose, glumes subequal, membranous to hyaline glumes acuminate to long-acuminate, lower glume slightly keeled, lemma bearing an apical deciduous awn slightly bent, palea 2-nerved, 3 lodicules, seed with a shiny outer coat, weed and aggressive species naturalized elsewhere, cultivated fodder, forage, stem used in animal's eye infection, drought-tolerant, useful to stabilize mine dumps and for erosion control, revegetator, cover plant, used as a sand binder and for seeding burned areas, endangered species (in Jordan), very similar to *Stipa platychaeta* Hughes, suited to a wide variety of soil types, characteristic of disturbed places, damp shaded wastes, moist and semi-arid regions, sandy dunes beach area, along roadsides, wasteland, pasture, dry banks, creek channels, creek banks, rocky shallow sandy loam, sandy to loam, rocky sandy soil,

see *Species Plantarum* 1: 61. 1753, *Descripción de las Plantas* 36. 1802, *Essai d'une Nouvelle Agrostographie* 17, 18, 19, 20, 146, 148, 168, 173, pl. 6, f. 7. 1812, *Aug. Pyrami de Candolle Botanicon Gallicum* 1: 505. 1828, *Révision des Graminées* 3: Suppl.: XIV. 1834, *Linnaea* 21(4): 439. 1848, *Notes sur Quelques Plantes Critiques, Rares ou Nouvelles*, ... 129. Paris et Leipzig [1849-1852], *Flora Chilena* 6: 263. 1854, *Mémoires de l'Institute d'Égypte* 2: 169. 1887 and *Nuovo Giornale Botanico Italiano, nuova serie* 17: 60. 1910, *Botanical Exchange Club and Society of the British Isles* 3(1912): 180. 1913, *A Botanical Arrangement of British Plants (edition 2)* 125. 1928, *Ind. Sem. Agron. Nat. Lusit.* 1964: 6. 1964, *Leaflets of Western Botany* 10(16): 340. 1966, *Annali di Botanica* 45: 75-102. 1987, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Bocconeae, Monographiae Herbarii Mediterranei Panormitani* 1: 303-364. 1991, *Flora Mediterranea* 7: 240-246. 1997.

in English: rice millet, many-flowered millet, many-flowered millet grass, millet mountain rice, smilo grass, smilo in Morocco: guzmir

in Spanish: triguera triguera borde, ñiosa, ñiosa, ñiosa

P. molinioides Boiss. (*Oryzopsis molinioides* (Boiss.) Hack. ex Paulsen; *Oryzopsis molinioides* (Boiss.) Hack.; *Piptatherum laterale* (Munro ex Regel) Roshev.)

Armenia, Iran, Pakistan, Iraq. Glaucous, flat basal leaves, open panicles, dark to black seed, useful for erosion control, see *Diagnoses plantarum orientalium novarum, ser. 1*, 1(7): 121. 1846 and *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 55: 165. 1903.

P. munroi (Stapf) Mez (*Oryzopsis geminiramula* Ohwi; *Oryzopsis munroi* Stapf; *Oryzopsis stewartiana* Bor) (for Sir William Munro, 1818-1880, British botanist, plant collector, 1834-1838 India, 1847 Kashmir, 1870-1875 Barbados. See T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 278. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 216. Oxford 1964; Warren R. Dawson, *The Banks Letters, a Calendar of the Manuscript Correspondence of Sir Joseph Banks*. London 1958; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Mea Allan, *The Hookers of Kew*. London 1967; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. 199. London 1918; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Ralph Randles Stewart, *An Annotated Catalogue of the Vascular Plants of West Pakistan and Kashmir*. Karachi 1972; Ignatz Urban, editor, *Symbolae Antillanae*. 3: 91. Berlin 1902) (*Oryzopsis stewartiana* Bor dedicated to the American botanist Ralph Randles Stewart, b. 1890, traveler, botanical collector in many parts of Pakistan and Kashmir (Mussoorie, in India, Ladak, Frontier Regions, Punjab, Chamba, Kashmir), Principal Emeritus of Gordon College (Rawalpindi), Research Associate at the

Herbarium (University of Michigan, Ann Arbor, U.S.), compiled *An Annotated Catalogue of the Vascular Plants of West Pakistan and Kashmir*. [in *Flora of West Pakistan*. Editors: E. Nasir and S.I. Ali] Karachi 1972; see T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 383. 1972; J.H. Barnhart, *Biographical notes upon botanists*. 3: 329. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 388. 1973)

Asia, Karakorum Mountains, China, Nepal, India, Western Himalaya. Useful for erosion control, see *The Flora of British India* 7: 234. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(486-491): 212. 1921, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

P. paradoxum (L.) P. Beauv. (*Agrostis paradoxa* L.; *Milium paradoxum* L.; *Milium paradoxum* (L.) L.; *Oryzopsis paradoxa* (L.) Nutt.; *Oryzopsis paradoxa* (L.) Batt. & Traub, nom. illeg., non *Oryzopsis paradoxa* (L.) Nutt.; *Stipa paradoxa* (L.) Raspail)

Morocco, Algeria, Europe. Useful for erosion control, see *Species Plantarum* 1: 62. 1753, *Journal of the Academy of Natural Sciences of Philadelphia* 3: 128. 1823 and *Lagascalia* 12: 124-128. 1983, *Taxon* 49(2): 243. 2000.

P. pungens (Torr.) Dorn (*Milium pungens* Torr.; *Oryzopsis parviflora* Nutt.; *Oryzopsis pungens* (Torr. ex Spreng.) A.S. Hitchc.; *Oryzopsis pungens* (Torr.) Hitchc.; *Panicum firmum* Kunth; *Panicum firmum* F. Aresch., nom. illeg., non *Panicum firmum* Kunth; *Piptatherum pungens* (Torr.) Barkworth; *Urachne brevicaudata* Trin.; *Urachne canadensis* Torr. & A. Gray ex Trin. & Rupr.)

North America, Columbia Basin region. Perennial, tufted, open and smooth sheath, no auricles, leaves flat or slightly inrolled, spike-like flower head with branches that are tightly pressed against the spike axis, the awn falls off at maturity, grows on moist slopes, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 102. 1821, *Journal of the Academy of Natural Sciences of Philadelphia* 3: 125. 1823, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 127. 1834, *Révision des Graminées* 1: 37. 1829, *Species Graminum Stipaceorum* 17, 19. 1842, Nils Johann Andersson (Anderson), 1821-1880, *En Verldsomsegling Skildrad I Bref*. [First edition, the first account of the first Swedish circumnavigation in the *Eugenie*, 1851-1852] Stockholm 1854 and *Contributions from the United States National Herbarium* 12(3): 151. 1908, F.W.C. Areschoug (1830-1908), *Plantae sub itinere navis bellicae Eugeniae anno 1852 a N. J. Andersson circa Guayaquil collectae* 116. 1910, *Repert. Sp. Nov.* 10: 299-303. 1912, *Vascular Plants of Wyoming* (edition 3) 377. 2001.

in English: short-awned rice grass

P. purpurascens (Hack. ex Paulsen) Roshev. (*Oryzopsis purpurascens* Hack. ex Paulsen; *Piptatherum purpurascens* (Hack.) Roshev.)

Iran, Afghanistan, Russia. Useful for erosion control, growing on moist areas, slopes, see *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 55: 164. 1903.

P. racemosum (Sm.) Eaton (*Milium racemosum* Sm.; *Oryzopsis melanocarpa* Muhl.; *Oryzopsis racemosa* (Sm.) Ricker ex A.S. Hitchc.; *Piptatherum nigrum* Torr.; *Piptatherum racemosum* (Sm.) Barkworth, nom. illeg., non *Piptatherum racemosum* (Sm.) Eaton; *Piptatherum racemosum* Ricker ex A.S. Hitchc.; *Urachne melanosperma* Link; *Urachne racemosa* (Sm.) Trin.)

North America, U.S., Canada. Perennial, found in dry rocky woods, see *The Cyclopaedia; or, Universal Dictionary of Arts, ...* 23: *Milium* no. 15. 1813, *Descriptio uberior Graminum* 79. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 79. 1823, *Gram. Unifl. Sesquifl.* 174. 1824, *Hortus Regius Botanicus Berolinensis* 1: 94. 1827, *Manual of Botany for North America. Fifth edition* 351. 1829 and *Rhodora* 8(95): 210. 1906, *Phytologia* 74(1): 19. 1993.

in English: blackseed ricegrass, black mountain rice

P. shoshoneanum (Curto & Douglass M. Hend.) P.M. Peterson & Soreng (*Stipa shoshoneana* Curto & Douglass M. Hend.)

North America, U.S., Idaho. See *Madroño* 45(1): 59, f. 1. 1998 [1999], *Contributions from the United States National Herbarium* 48: 495. 2003.

P. songaricum (Trin. & Rupr.) Roshev. ex Nikitina (*Milium holciforme* var. *soongaricum* (Trin. & Rupr.) Griseb., also spelled *songaricum*; *Oryzopsis holciformis* var. *songorica* (Trin. & Rupr.) Hack.; *Oryzopsis songarica* (Trin. & Rupr.) B. Fedtsch.; *Piptatherum soongaricum* (Trin. & Rupr.) Roshev.; *Urachne songarica* Trin. & Rupr.) (see Grigorij Silyc (Grégoire, Gregor Silic, Grigory Siluic, Ghrighorii Siluich, Silitsch, Siliovitsch, Silovitsch) Karelin, 1801-1872, and Ivan Petrovich Kirilow, 1821-1842, authors of *Enumeratio plantarum in desertis Songoriae orientalis*. [Moskwa 1842])

China, Mongolia, Russia. Useful for erosion control, see *Systema Vegetabilium, editio decima sexta* 1: 251. 1825, *Species Graminum Stipaceorum* 15. 1842, *Flora Rossica* 4(13): 446. 1852, *Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse, Denkschriften* 50(2): 8. 1885 and *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 55: 164. 1903, *Flora Uzbekistanica* 1: 188, 537. 1941, *Novosti Sist. Vyss. Rast.* 11: 9. 1974.

P. vicarium (Grig.) Roshev. ex Nikitina (*Oryzopsis caeruleascens* auct.; *Oryzopsis microcarpa* Pilger; *Oryzopsis*

vicaria Grig.; *Piptatherum caeruleum* auct.; *Piptatherum vicarium* (Grig.) Roshev.)

Asia, Karakorum Mountains.

P. virescens (Trin.) Boiss. (*Milium paradoxum* var. *virescens* (Trin.) Fiori; *Oryzopsis paradoxa* var. *virescens* (Trin.) K. Richt.; *Oryzopsis virescens* (Trin.) Beck; *Urachne virescens* Trin.)

Bulgaria, Europe, Armenia, Russia, Turkey. See *Fundamenta Agrostographiae* 110. 1820, *Journal of the Academy of Natural Sciences of Philadelphia* 3: 128. 1823, *Flora Orientalis* 5: 507. 1884, *Fl. Nieder-Oesterr.* 1: 51. 1890, *Plantae Europaeae* 1: 34. 1890 and *Nuova Flora Analitica d'Italia* 1: 87. 1923, *Fitologija* 39: 72-77. 1991.

Piptochaetium Presl = *Caryochloa* Spreng.,
Caryochloa Trin., *Podopogon* Raf.

Greek *pipto* "to fall" and *chaite* "bristle, long hair, foliage," referring to the deciduous awns.

About 35 species, U.S. to Argentina, northern and South America. Stipoideae, Stipeae, Stipinae, perennial, caespitose, herbaceous, unbranched, leaves mostly basal, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets pedicellate, female-fertile floret terminal, two more or less equal glumes lanceolate acuminate or aristulate, lemmas often dark-pigmented with margins inrolled along median line, awn deciduous or not, palea grooved, 2 or 3 lodicules free and membranous, ovary glabrous, 2 stigmas, cleistogamous or chasmogamous, native pasture species, species of open habitats, pampas, resembling *Stipa* and *Nasella*, type *Piptochaetium setifolium* J. Presl, see *Species Plantarum* 1: 78-79. 1753, *Genera Plantarum* 33. 1789, *Flora Boreali-Americana* 1: 51. 1803, *Fundamenta Agrostographiae* 109. 1820, *Neogenyton, or Indication of Sixty-Six New Genera of Plants of North America*. 4. 1825, *De Graminibus Paniceis* 54, 248. 1826, *Systema Vegetabilium, editio decima sexta* 4(2): 22, 30. 1827, *Reliquiae Haenkeanae* 1: 222. 1830, *Species Graminum Stipaceorum* 22. 1842, *Die Natürlichen Pflanzenfamilien* 2(2): 40. 1887 and *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 213-310. 1944, *Fieldiana, Botany* 24(2): 38-331. 1955, *Boletín de la Sociedad Argentina de Botánica* 12: 167-179. 1968, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Flora Patagónica* 8(3): 333-340. 1978, *Iselya* 1(4): 161-165. 1980, *Taxon* 32: 649. 1983, *Brenesia* 25-26: 169-178. 1986, *Systematic Botany* 13(2): 196-201. 1988, *Arnaldoa* 1(1): 11-34. 1991, *Phytologia* 74(1): 1-25. 1993, *Candollea* 48(1): 1-13, 15-18. 1993, *Flora Mesoamericana* 6: 244. 1994, *Gayana, Botánica* 53(2): 277-284. 1996, *Darwiniana* 36(1-4): 107-157. 1998 [Revisión de las especies Sudamericanas del género *Piptochaetium* (Poaceae, Pooideae, Stipeae)], *Grasses: Systematics and Evolution* 75-82. 2000,

Monocotiledóneas Mexicanas: una Sinopsis Florística 10: 7-236. 2000, *Annals of the Missouri Botanical Garden* 89(3): 305-336. 2002, *Flora de Veracruz* 127: 1-28. 2002, *Journal of Biogeography* 29(2): 221-229. Feb 2002, A.S. Moretto and R.A. Distel, "Soil nitrogen availability under grasses of different palatability in a temperate semiarid rangeland of central Argentina." *Austral. Ecology* 27(5): 509-514. Oct 2002, *Contributions from the United States National Herbarium* 48: 228, 495-504, 581. 2003, *Austral. Ecology* 28(3): 263-270. June 2003, *Botanical Journal of the Linnean Society* 144(4): 483-495. Apr 2004, *Global Change Biology* May 2005 [Land-use change and water losses: the case of grassland afforestation across a soil textural gradient in central Argentina.].

Species

P. alpinum L.B. Sm.

Brazil. See *Phytologia* 22(2): 89, f. 14-15. 1971.

P. angolense Phil.

Chile. See *Anales de la Universidad de Chile* 93: 734. 1896.

P. angustifolium (Hitchc.) Valencia & Costas (*Piptochaetium linearis* (Swallen) Valdez Reyna, Jesus & Barkworth; *Stipa angustifolia* Hitchc.; *Stipa linearis* Swallen)

Mexico, Argentina. Fodder, rocky places, see *Contributions from the United States National Herbarium* 24(7): 246, t. 52, f. 1, 2. 1925, *Journal of the Washington Academy of Sciences* 30(5): 211, f. 1. 1940, *Boletín de la Sociedad Argentina de Botánica* 12: 177. 1968.

in Mexico: pasto

P. avenaceum (L.) Parodi (*Piptochaetium avenacellum* Barkworth; *Piptochaetium leianthum* (Hitchc.) Beetle; *Podopogon avenaceus* Raf. ex B.D. Jacks.; *Podopogon barbatus* Raf. ex B.D. Jacks.; *Stipa avenacea* L.; *Stipa avenacea* var. *avenacea*; *Stipa avenacea* var. *bicolor* Eaton & J. Wright; *Stipa barbata* Michx., nom. illeg., non *Stipa barbata* Desf.; *Stipa diffusa* Willd. ex Steud., nom. illeg., non *Stipa diffusa* Walter; *Stipa leiantha* Hitchc.; *Stipa virginica* Pers.)

Northern America, U.S., Mexico. Perennial, weed, rocky places, woods, see *Species Plantarum* 1: 78-79. 1753, *Flora Boreali-Americana* 1: 53. 1803, *Syn. Pl.* 1: 99. 1805, *Nomenclator Botanicus. Editio secunda* 2: 643. 1841, *A Manual of Botany* 444. 1848, *Index Kewensis* 2: 580. 1894 and *Contributions from the United States National Herbarium* 24(7): 236, t. 51, f. 8-9. 1925, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 229. 1944, *Phytologia* 54(1): 4. 1983, *Taxon* 32: 649. 1983, *Systematic Botany* 13(2): 196, f. 1. 1988.

in English: black oat grass, blackseed needlegrass, blackseed speargrass

P. avenacioides (Nash) Valencia & Costas (*Stipa avenacioides* Nash)

U.S., Florida. Perennial, see *Bulletin of the Torrey Botanical Club* 22(10): 423. 1895 and *Boletín de la Sociedad Argentina de Botánica* 12: 175. 1968.

in English: Florida needlegrass, Florida speargrass

P. bicolor (Vahl) E. Desv. (*Oryzopsis bicolor* (Vahl) Speg.; *Oryzopsis bicolor* var. *minor* Speg.; *Piptochaetium bicolor* var. *bicolor*; *Piptochaetium bicolor* var. *minor* (Speg.) Parodi; *Piptochaetium bicolor* var. *typicum* Parodi; *Stipa bicolor* Vahl; *Stipa fernandeziana* (Trin. & Rupr.) Steud.; *Stipa intermedia* Trin. & Rupr.; *Stipa megalantha* Steud.; *Urachne grandiflora* Steud. & Hochst. ex Steud.; *Urachne megalantha* Steud.)

South America, Argentina, Uruguay, Chile. Useful for erosion control, see *Symbolae Botanicae, ...* 5(2): 24. 1791, *Nomenclator Botanicus. Editio secunda* 2: 731. 1841, *Species Graminum Stipaceorum* 19, 26, 28. 1842, *Synopsis Plantarum Glumacearum* 1: 124. 1854, *Flora Chilena* 6: 273. 1854 and *Anales del Museo Nacional de Montevideo* 4(2): 6, 8-9, f. 3f-g. 1901, *Revista del Museo de La Plata* 6(25): 252. 1944, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970.

P. bicolor (Vahl) E. Desv. var. *minor* (Speg.) Parodi (*Oryzopsis bicolor* var. *minor* Speg.)

South America. See *Flora Chilena* 6: 273. 1854 and *Anales del Museo Nacional de Montevideo* 4(2): 6, 8-9, f. 3f-g. 1901, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 256, f. 17B, 18E. 1944.

P. brachyspermum (Speg.) Parodi (*Oryzopsis napostaensis* var. *brachysperma* Speg.)

South America, Argentina. See *Anales del Museo Nacional de Montevideo* 4(2): 15-18, f. 6d-f. 1901, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 229, 241, f. 9. 1944.

P. brevicealyx (E. Fourn.) Ricker (*Oryzopsis fournieriana* Hemsl.; *Piptochaetium brevicealyx* subsp. *flexuosum* Barkworth; *Stipa brevicealyx* E. Fourn.)

Mexico. See *Biologia Centrali-Americana; ... Botany ...* 3(19): 538. 1885, *Mexicanas Plantas* 2: 150. 1886 and *Contributions from the United States National Herbarium* 17(3): 286. 1913, *Systematic Botany* 13(2): 200, f. 9, 11, 13. 1988.

P. brevicealyx (E. Fourn.) Ricker subsp. *brevicealyx* (*Stipa brevicealyx* subsp. *brevicealyx*)

South America. See *Mexicanas Plantas* 2: 150. 1886.

P. brevicealyx (E. Fourn.) Ricker subsp. *flexuosum* Barkworth

South America, Mexico. See *Systematic Botany* 13(2): 200, f. 9, 11, 13. 1988.

P. burkartianum Parodi

Argentina. See *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 229, 291, f. 35A, 36A. 1944.

P. cabrerai Parodi

Argentina. See *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 229, 243, f. 10, 10, 12B. 1944.

P. calvescens Parodi

Argentina. See *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 229, 278, f. 27B, 28. 1944.

P. confusum Parodi

Argentina. See *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 229, 246, f. 13, 18F. 1944

P. cucullatum Roseng. & Izag.

Uruguay. See *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 90: 3, f. 1-2. 1966.

P. featherstonei (Hitchc.) Tovar (*Piptochaetium indutum* Parodi; *Piptochaetium juninense* Tovar & Gutte; *Stipa featherstonei* Hitchc.) (for the America botanist William Featherstone, 1922 and 1923 botanical collector in Peru with J. Francis Macbride (1892-1976), they collected in highland regions of the Departments of Lima, Junín, Huánuco, Ancash and Pasco, these expeditions yielded nearly 6,000 numbers and duplicates. See *Brittonia* 32(4): 548-550. 1980; *Revis. Barnadesia* 26, 29. 1965; *Bull. Torrey Bot. Club* 52: 18. 1925; *Fieldiana* #231, Botany Series IV, No. 4. 29 June 1925; *Notizbl. Bot. Gart. Berlin-Dahlem* 10: 832. 1929; *Madroño* 23: 456. 1976; *Taxon* 35: 932-934. 1986)

South America, Peru, Junín. Bunchgrass, forming colonies, disturbed areas, grassland, hillsides, slopes, rocky places, dry areas, see *Proceedings of the Biological Society of Washington* 36: 196. 1923, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 229, 258, f. 18A, 19. 1944, *Feddes Repertorium* 91(4): 205, f. 1, t. 1. 1980, *Opuscula Botánica Pharmaciae Complutensis [now Rivas-godaya]* 4: 104. 1988 [Universidad Complutense de Madrid].

P. fimbriatum (Kunth) Hitchc. (*Avena stipoides* Willd. ex Steud.; *Milium mexicanum* Sprengel; *Oryzopsis fimbriata* (Kunth) Hemsl.; *Oryzopsis seleri* Pilg.; *Piptatherum mexicanum* (Spreng.) Schult.; *Piptochaetium fimbriatum* var. *confine* I.M. Johnston.; *Piptochaetium fimbriatum* var. *fimbriatum*; *Piptochaetium seleri* (Pilg.) Henrard; *Stipa fimbriata* Kunth)

North America, U.S., Mexico. Caespitose, forage, grazed, see *Nova Genera et Species Plantarum* 1: 126. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 251. 1825, *Mantissa* 3(Add. 1): 564. 1827, *Nomenclator Botanicus. Editio secunda* 2: 146. 1841, *Biologia Centrali-Americana; ... Botany ...* 3(19): 538. 1885 and *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die*

angrenzenden Länder 51: 192. 1909, *Journal of the Washington Academy of Sciences* 23(10): 453. 1933, *Blumea* 3(3): 452. 1940, *Journal of the Arnold Arboretum* 24: 396. 1943.

in Mexico: arrocillo, falso espartillo del pinar

P. hackelii (Arechav.) Parodi (*Oryzopsis hackelii* (Arechav.) Speg.; *Piptochaetium hackelii* (Arechav.) Herter, nom. illeg., non *Piptochaetium hackelii* (Arechav.) Parodi; *Stipa hackelii* Arechav.; *Stipa tandilensis* Kuntze)

South America. See *Anales del Museo Nacional de Buenos Aires* 4: 179, f. 2. 1895, *Revisio Generum Plantarum* 3(2): 373. 1898 and *Anales del Museo Nacional de Montevideo* 4(2): 10-12, f. 4. 1901, *Revista de la Facultad de Agronomía y Veterinaria* 7(1): 162. 1930, *Estudios Botánicos en la Región Uruguaya* 4: 34. 1930-1931.

P. hirtum Phil.

Chile. See *Anales de la Universidad de Chile* 43: 559. 1873, *Anales de la Universidad de Chile* 93: 733. 1896 and *Darwiniana* 36: 133. 1998.

P. indutum Parodi

Bolivia, Argentina. Bunchgrass, leaf blades involute acicular, lax or contracted panicle oblong, glumes subequal glabrous 5-nerved acuminate, awn persistent bigeniculate, callus pungent, small colonies, more or less palatable, stony places, puna, see *Revista del Museo de La Plata (Nueva Serie)*, *Sección Botánica* 6(25): 229, 258, f. 18A, 19. 1944.

P. jubatum Henrard

Uruguay. See *Recueil des Travaux Botaniques Néerlandais* 36: 537. 1939, *Meded. Bot. Mus. Herb. Rijks Univ. Utrecht* 67: 537. 1939.

P. lasianthum Griseb. (*Oryzopsis lasiantha* (Griseb.) Speg.; *Piptochaetium erianthum* Balansa)

South America, Argentina, Uruguay, Brazil. Useful for erosion control, stony areas, see *Symbolae ad Floram Argentinam. Zweite* 297. 1879 [also in *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen Phys. Cl.* 24(1): 1-345. 1879], *Bulletin de la Société Botanique de France* 32: 244. 1885 and *Anales del Museo Nacional de Montevideo* 4(2): 1-3, f. 1. 1901, P.G. Lorentz (1835-1881), *La Vegetación del Nordeste de la Provincia de Entre Ríos*. 2^a edition Paraná. pp. 55. 1947.

P. leiopodium (Speg.) Henrard (*Oryzopsis lejopoda* Speg.; *Piptochaetium lejopodium* (Speg.) Henrard)

South America, Uruguay, Argentina. Useful for erosion control, see *Anales del Museo Nacional de Montevideo* 4(2): 19, f. 7. 1901, *Meded. Bot. Mus. Herb. Rijks Univ. Utrecht* 67: 536. 1939, *Recueil des Travaux Botaniques Néerlandais* 36: 536. 1939.

P. medium (Speg.) Torres (*Oryzopsis bicolor* var. *media* Speg.)

Argentina. See *Anales del Museo Nacional de Montevideo* 4(2): 9, f. 3d-e. 1901, *Boletín de la Sociedad Argentina de Botánica* 11(4): 251. 1969.

P. montevidense (Spreng.) Parodi (*Caryochloa montevidensis* Spreng.; *Caryochloa montevidensis* var. *brasiliensis* (Trin.) Döll; *Caryochloa montevidensis* var. *brasiliensis* (Trin. & Rupr.) Döll ex Ekman; *Caryochloa montevidensis* var. *montevidensis*; *Oryzopsis montevidensis* (Spreng.) Hauman; *Oryzopsis montevidensis* (Spreng.) Speg., nom. illeg., non *Oryzopsis montevidensis* (Spreng.) Hauman; *Oryzopsis montevidensis* f. *brasiliensis* Speg.; *Oryzopsis montevidensis* f. *trachycarpa* Speg.; *Oryzopsis montevidensis* f. *typica* Speg.; *Oryzopsis montevidensis* var. *brasiliensis* (Trin. & Rupr.) Speg.; *Oryzopsis tuberculata* (E. Desv.) Speg.; *Oryzopsis verrucosa* (Phil.) Speg.; *Oryzopsis verruculosa* (Phil.) Speg.; *Piptochaetium granulatum* Phil.; *Piptochaetium humile* Phil.; *Piptochaetium leiocarpum* f. *subpappilosa* Hack.; *Piptochaetium moelleri* Phil.; *Piptochaetium montevidense* (Spreng.) Herter, nom. illeg., non *Piptochaetium montevidense* (Spreng.) Parodi; *Piptochaetium panicoides* f. *subpappillosum* (Hack.) Parodi; *Piptochaetium panicoides* var. *subpappillosum* (Hack.) Petetin; *Piptochaetium subnudum* Phil.; *Piptochaetium tuberculatum* E. Desv.; *Piptochaetium verrucosum* Phil.; *Stipa panicoides* Nees, nom. illeg., non *Stipa panicoides* Lam.; *Urachne depressa* Steud.; *Urachne panicoides* Nees ex Trin.; *Urachne panicoides* Trin. ex Nees; *Urachne panicoides* var. *brasiliensis* Trin. & Rupr.)

Argentina, Peru, Paraguay, Chile, Bolivia, southern Brazil. Perennial, erect, caespitose, leaf blades filiform pubescent to scabrid, oblong panicle contracted, glumes lanceolate glabrous aristulate, lower glume 5-nerved, upper glume 3-nerved, lemma globose obovate, gibbous, awn flexuous deciduous, weed, grass useful for erosion control, along roadsides, open areas, rocky or stony places, see *Systema Vegetabilium, editio decima sexta* 4(2): 30. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 376. 1829, *Reliquiae Haenkeanae* 1(4-5): 222, t. 37, f. 2. 1830, *Species Graminum Stipaceorum* 1: 19, 23. 1842, *Synopsis Plantarum Glumacearum* 1: 123. 1854, *Flora Chilena* 6: 270, 272, pl. 75, f. 2. 1854, *Linnaea* 33(3-4): 280. 1864, *Anales de la Universidad de Chile* 93: 730, 731, 732, 734. 1896 and *Anales del Museo Nacional de Montevideo* 4(2): 26-28, f. 10, 11d-f. 1901, *Anales del Museo Nacional de Buenos Aires* 13: 463. 1906, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 40. 1913, *Anales del Museo Nacional de Buenos Aires* 29: 116. 1917, *Revista Argentina de Botánica* 1(1): 10, 11. 1925, *Revista de la Facultad de Agronomía y Veterinaria* 7(1): 163. 1930, *Flora del Uruguay* 1: 34. 1931, *Revista del Museo de La Plata (Nueva Serie)*, *Sección Botánica* 6(25): 302. 1944, *Flora Chilena* 6: 272. 1954, *Flora Patagónica* 3: 339. 1978.

P. napostaense (Speg.) Hack. (*Oryzopsis napostaensis* Speg.; *Oryzopsis napostaensis* var. *brachyphylla* Speg.,

Oryzopsis napostaensis var. *macrophylla* Speg.; *Oryzopsis napostaensis* var. *napostaensis*; *Stipa capillifolia* Hack.; *Stipa hypogona* Hack.)

South America, Argentina. See *Anales del Museo Nacional de Montevideo* 4(2): 15-18, f. 6d-f. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 95, 103. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 73. 1911, *Contr. U.S. Natl. Herb.* 24(7): 278. 1925, *Revista del Museo de La Plata (Nueva Serie)*, *Sección Botánica* 6(25): 229, 241, f. 9. 1944, *Flora Patagónica* 8(3): 333-340. 1978, Lucrecia Gallego, Roberto A. Distel, Ricardo Camina and Ricardo M. Rodríguez Iglesias, "Soil phytoliths as evidence for species replacement in grazed rangelands of central Argentina." *Ecography* 27(6): 725-732. Dec 2004.

P. palustre Mujica-Sallés & Longhi-Wagner

Brazil. See *Candollea* 48(1): 1-13, 15-18. 1993.

P. panicoides (Lam.) E. Desv. (*Oryzopsis leiocarpa* Speg.; *Oryzopsis leiocarpa* var. *leiocarpa*; *Oryzopsis leiocarpa* var. *major* Speg.; *Oryzopsis panicoides* (Lam.) Speg.; *Oryzopsis setacea* A. Rich.; *Oryzopsis setifolia* (J. Presl) Henrard; *Piptatherum elegans* P. Beauv.; *Piptatherum panicoides* Gibert; *Piptochaetium leiocarpum* (Speg.) Hack.; *Piptochaetium leiocarpum* f. *leiocarpum*; *Piptochaetium leiocarpum* f. *subpapillosum* Hack.; *Piptochaetium panicoides* f. *panicoides*; *Piptochaetium panicoides* f. *subpapillosum* (Hack.) Parodi; *Piptochaetium panicoides* var. *subpapillosum* (Hack.) Petetin; *Piptochaetium setifolium* J. Presl; *Piptochaetium subnudum* Phil.; *Stipa lineolata* Mez; *Stipa panicoides* Lam.; *Stipa panicoides* Nees, nom. illeg., non *Stipa panicoides* Lam.; *Stipa setifolia* (J. Presl) Kunth; *Urachne panicoides* Trin. ex Nees; *Urachne panicoides* var. *panicoides*; *Urachne panicoides* var. *vulgaris* Döll; *Urachne setacea* (A. Rich.) Walp.; *Urachne simplex* var. *peruviana* Trin. & Rupr.)

Venezuela to Bolivia, Chile, Argentina, Ecuador. Caespitose, leaf blades filiform scabrid to pubescent, oblong panicle contracted, glumes lanceolate glabrous aristulate, lower glume 5-nerved, upper glume 3-nerved, lemma obovate gibbous smooth, flexuous awn deciduous, callus blunt, meadow grass, disturbed areas, grassland, very similar to *Piptochaetium montevidense*, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 158. 1791, *Essai d'une Nouvelle Agrostographie* 17, 173. 1812, Jean Baptiste G.M. Bory de Saint-Vincent (1778-1846), *Dictionnaire classique d'histoire naturelle* 12: 445. [17 vols.] Paris 1822-1831, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 376. 1829, *Reliquiae Haenkeanae* 1(4-5): 222, t. 37, f. 2. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 182. 1833, *Linnaea* 10(3): 292. 1836, *Species Graminum Stipaceorum* 23. 1842, *Annals of Botany. Oxford* 3: 730. 1852-53, *Flora Chilena* 6: 270, pl. 75, f. 2. 1854, José Ernesto Gibert (1818-1886), *Enum. Pl. Montev.* 117. 1873 [Enumeratio plantarum sponte nascentium agro montevidensi cum

synonimis selectis / scripsit Ernestus Gibert. Montevideo: Sumptibus Societatis "La Asociación Rural del Uruguay," 1873], *Flora Brasiliensis* 2(3): 4. 1878, *Anales de la Universidad de Chile* 93: 731. 1896 and *Anales del Museo Nacional de Montevideo* 4(2): 31-35, f. 12, 13. 1901, *Anales del Museo Nacional de Buenos Aires* 13: 463. 1906, *Mededeelingen van's Rijks-Herbarium* 40: 57. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 205. 1921, *Revista Argentina de Botánica* 1(1): 10. 1925, *Revista del Museo de La Plata (Nueva Serie)*, *Sección Botánica* 6(25): 302. 1944, *Flora Patagónica* 3: 339. 1978.

P. pringlei (Beal) Parodi (*Oryzopsis erecta* Beal; *Oryzopsis pringlei* Beal; *Stipa pringlei* Scribn. ex Vasey; *Stipa pringlei* Scribn. ex Beal)

South America, U.S., Mexico. Good forage, see *Botanical Gazette* 15(5): 112. 1890, *Contributions from the United States National Herbarium* 3(1): 54. 1892, *Grasses of North America for Farmers and Students* 2: 230. 1896 and *Revista del Museo de La Plata (Nueva Serie)*, *Sección Botánica* 6(25): 230, f. 1D. 1944.

P. ruprechtianum E. Desv. (*Oryzopsis bicolor* var. *major* Speg.; *Oryzopsis ruprechtiana* (E. Desv.) Speg.; *Stipa bicolor* Vahl; *Stipa bicolor* Trin. & Rupr., nom. illeg., non *Stipa bicolor* Vahl; *Stipa ruprechtiana* (E. Desv.) Herter)

South America, Chile, southern Brazil. Lemma oblong, growing in disturbed places, see *Symbolae Botanicae, ...* 5(2): 24. 1791, *Species Graminum Stipaceorum* 26. 1842, *Flora Chilena* 6: 273-274. 1854 and *Anales del Museo Nacional de Montevideo* 4(2): 6, 9, 12-14, f. 3a-c, 5. 1901, *Revista Sudamericana de Botánica* 6(5-6): 141. 1940.

P. sagasteguii Sánchez Vega (for the Peruvian botanist Abundio Sagástegui Alva, b. 1932, botanical collector in Peru, Director of the Museo de Historia Natural of the Universidad Privada Antenor Orrego (UPAO), Trujillo, Perú, founder of *Arnaldoa* [the journal's name commemorates the northern Peruvian genus *Arnaldoa* (Asteraceae), and honors the botanist for which the plant was originally named, Dr. Arnaldo López Miranda, Professor at the Universidad Nacional de La Libertad], studied the flora de Contumazá (Cajamarca), author of "Flora endémica de los Andes Norperuanos." *Arnaldoa* 2(1): 43-64. 1994, co-author of *Diversidad florística del norte de Perú*. Lima, WWF 1999 [with Michael O. Dillon, Isidoro Sánchez Vega, Segundo Leiva González and Pedro Lezama Asencio], with Segundo Leiva González wrote *Flora invasora de los Cultivos del Perú*. 1993, with M.O. Dillon wrote "Inventario preliminar de la flora del Bosque Monteseco." *Arnaldoa* 1(1): 35-52. 1991, with S. Leiva, P. Lezama, N. Hensold and M.O. Dillon "Inventario preliminar del Bosque Cachil." *Arnaldoa* 3(2): 19-34. 1995. See M.O. Dillon, A. Sagástegui A., I. Sánchez V., S. Llatas Q. and N. Hensold, "Floristic inventory and biogeographic analysis of montane forests in northwestern Peru." pp. 251-269, in S. P. Churchill et al.

[eds.], *Biodiversity and Conservation of Neotropical Montane Forests*. New York Botanical Gardens, Bronx 1995; *Nord. J. Bot.* 20(1): 19. 2000; *Bonplandia* 9: 79. 1996; *Sida* 17: 761. 1997)

South America, Peru. See *Arnaldoa* 1(1): 17. 1991.

P. seleri (Pilg.) Henrard (*Oryzopsis seleri* Pilg.) (dedicated to the German archeologist and anthropologist Eduard Georg Seler, 1849-1922, traveler (Central America), botanist and plant collector, his writings include *Notice sur les Langues Zapotèque et Mixtèque*. Congrès International des Américanistes. Compte-Rendu. 8th sess. Paris 1890, *Codex Vaticanus no. 3773* ... An old Mexican Pictorial manuscript. 1902-1903, "The Bat God of the Maya Race." *Bureau of American Ethnology*. Bull. 28. 1904, "The Mexican Picture Writings of Alexander von Humboldt." *Bureau of American Ethnology*. Bull. 28: 127-229. 1904, *Codex Borgia*. Berlin 1904-1909 and *Einige Kapitel aus dem Geschichtswerke des Fray Bernardino de Sahagún* aus dem Aztekischen etc. Stuttgart 1927. See Jacques Soustelle, *The Four Suns*. 134. New York 1971; H.R. Harvey and Hanns J. Prem, editors, *Explorations in Ethnohistory: Indians of Central Mexico in the Sixteenth Century*. University of New Mexico Press, Albuquerque 1984; J.H. Barnhart, *Biographical notes upon botanists*. 3: 258. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Ludwig Eduard Theodor Loesener (1865-1941), *Plantae selerianae* die von Dr. Eduard Seler und Frau Caecilie Seler [née Sachs, 1855-1933] in Mexico gesammelten Pflanzen unter Mitwirkung von Fachmännern veröffentlicht ... [1894-1923]; *Festschrift Eduard Seler*, edited by Walter Lehmann. Stuttgart 1922; Caecilie Seler-Sachs, *Auf alten Wegen in Mexiko und Guatemala*. 1960; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

Mexico. See *Reliquiae Haenkeanae* 1(4-5): 222, t. 37, f. 2. 1830 and *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 51: 192. 1909, *Blumea* 3(3): 452. 1940.

P. setosum (Trin.) Arechav. (*Piptochaetium macrocarpum* Phil.; *Piptochaetium pallidum* Phil. ex Griseb.; *Piptochaetium purpuratum* Phil.; *Stipa pallida* Herter; *Stipa pallida* (Phil. ex Griseb.) Kuntze; *Urachne fusca* Steud.; *Urachne setosa* Trin.)

South America, Chile, Uruguay. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 124. 1834, *Synopsis Plantarum Glumacearum* 1: 123. 1854, *Linnaea* 29(1): 86. 1858, *Symbolae ad Floram Argentanam. Zweite* ... 297. 1879, *Anales del Museo Nacional de Montevideo* 1(4): 330. 1896, *Anales de la Universidad de Chile* 93: 735. 1896, *Revisio Generum Plantarum* 3(2): 373. 1898 and *Revista del Museo de La Plata (Nueva Serie), Sección*

Botánica 6(25): 213-230. 1944, *Annals of the Missouri Bot. Gard.* 89(3): 329. 2002.

P. stipoides (Trin. & Rupr.) Hack. ex Arechav. (*Caryochloa stipoides* (Trin. & Rupr.) Kuntze, also spelled *stipodes*; *Oryzopsis grisebachii* Speg.; *Oryzopsis stipoides* (Trin. & Rupr.) Speg.; *Piptatherum stipoides* Gibert; *Piptochaetium chaetophorum* Griseb.; *Piptochaetium cuspidatum* Phil.; *Piptochaetium grisebachii* (Speg.) Herter; *Piptochaetium ovatum* f. *atrata* Hack.; *Piptochaetium ovatum* var. *chaetophorum* (Griseb.) Hack.; *Piptochaetium ovatum* var. *purpurascens* Hack.; *Piptochaetium stipoides* (Trin. & Rupr.) Hack.; *Piptochaetium stipoides* var. *chaetophorum* (Griseb.) Parodi; *Piptochaetium stipoides* var. *genuinum* Parodi; *Piptochaetium stipoides* var. *parviflorum* Parodi; *Piptochaetium stipoides* var. *purpurascens* (Hack.) Parodi; *Piptochaetium verruculosum* (Mez) Henrard; *Stipa verruculosa* Mez; *Urachne stipoides* Trin. & Rupr.)

South America, Argentina. See *De Graminibus Paniceis* 54, 248. 1826, *Species Graminum Stipaceorum* 19, 25. 1842, *Flora Chilena* 6: 273. 1854, *Enum. Pl. Montev.* 117. 1873, *Symbolae ad Floram Argentanam. Zweite* ... 298. 1879, *Revisio Generum Plantarum* 2: 765. 1891, *Anales del Museo Nacional de Montevideo* 1(4): 328, f. 18. 1896, *Anales de la Universidad de Chile* 93: 732. 1896 and *Anales del Museo Nacional de Montevideo* 4(2): 4-6, 23-26, f. 2a-c, 9. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 104. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 85-86. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 206. 1921, *Mededeelingen van's Rijks-Herbarium* 54: 380. 1927, *Revista Sudamericana de Botánica* 6(5-6): 141. 1940, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 266-267, 275, 306, f. 21A, D-E, 22, 23A, 25A-B. 1944, *Annals of the Missouri Bot. Gard.* 89(3): 330. 2002.

P. stipoides (Trin. & Rupr.) Hack. ex Arechav. var. **echinulatum** Parodi

Southern America. See *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 271, 306, f. 21F, 24. 1944.

P. stipoides (Trin. & Rupr.) Hack. ex Arechav. var. **purpurascens** (Hack.) Parodi (*Piptochaetium ovatum* f. *atrata* Hack.; *Piptochaetium ovatum* var. *purpurascens* Hack.; *Piptochaetium stipoides* (Trin. & Rupr.) Hack. ex Arechav.; *Piptochaetium stipoides* var. *stipoides*; *Urachne stipoides* Trin. & Rupr.)

Southern America. See *Species Graminum Stipaceorum* 25. 1842, *Flora Chilena* 6: 273. 1854, *Anales del Museo Nacional de Montevideo* 1(4): 328, f. 18. 1896 and *Anales del Museo Nacional de Buenos Aires* 21: 85-86. 1911, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 267, 306, f. 21D-E, 23A, 25A. 1944, *Annals of the Missouri Bot. Gard.* 89(3): 330. 2002.

P. stipoides (Trin. & Rupr.) Hack. ex Arechav. var. *stipoides* (*Caryochloa stipoides* (Trin. & Rupr.) Kuntze, also spelled *stipodes*; *Oryzopsis grisebachii* Speg.; *Oryzopsis stipoides* (Trin. & Rupr.) Speg.; *Piptatherum stipoides* Gibert; *Piptochaetium chaetophorum* Griseb.; *Piptochaetium cuspidatum* Phil.; *Piptochaetium grisebachii* (Speg.) Herter; *Piptochaetium ovatum* f. *atrata* Hack.; *Piptochaetium ovatum* var. *chaetophorum* (Griseb.) Hack.; *Piptochaetium ovatum* var. *purpurascens* Hack.; *Piptochaetium pallidum* Phil. ex Griseb.; *Piptochaetium stipoides* (Trin. & Rupr.) Hack.; *Piptochaetium stipoides* var. *chaetophorum* (Griseb.) Parodi; *Piptochaetium stipoides* var. *genuinum* Parodi; *Piptochaetium stipoides* var. *parviflorum* Parodi; *Piptochaetium stipoides* var. *purpurascens* (Hack.) Parodi; *Piptochaetium verruculosum* (Mez) Henrard; *Piptochaetium verruculosum* (Mez) Herter, nom. illeg., non *Piptochaetium verruculosum* (Mez) Henrard; *Stipa pallida* Herter; *Stipa pallida* (Phil. ex Griseb.) Kuntze; *Stipa verruculosa* Mez; *Urachne stipoides* Trin. & Rupr.)

South America. See *De Graminibus Paniceis* 54, 248. 1826, *Species Graminum Stipaceorum* 19, 25. 1842, *Flora Chilena* 6: 273. 1854, *Enum. Pl. Montev.* 117. 1873, *Symbolae ad Floram Argentinam. Zweite ...* 297-298. 1879, *Revisio Generum Plantarum* 2: 765. 1891, *Anales del Museo Nacional de Montevideo* 1(4): 328, f. 18. 1896, *Anales de la Universidad de Chile* 93: 732. 1896, *Revisio Generum Plantarum* 3(2): 373. 1898 and *Anales del Museo Nacional de Montevideo* 4(2): 4-6, 23-26, f. 2a-c, 9. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 104. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 85-86. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 206. 1921, *Mededeelingen van's Rijks-Herbarium* 54: 380. 1927, *Revista Sudamericana de Botánica* 6(5-6): 141. 1940, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 266-267, 275, 306, f. 21A, D-E, 22, 23A, 25A-B. 1944, *Annals of the Missouri Bot. Gard.* 89(3): 330. 2002.

P. tovarii Sánchez Vega (for the Peruvian botanist Oscar Tovar Serpa, b. 1923, botanical collector in Peru. See *Brittonia* 34(4): 478-481, f. 1. 1982; *Phytologia* 84(5): 351. 1998 [Aug 1999]; *J. Arnold Arbor.* 37: 290. 1956; *Kurtziana* 28(1): 103. 2000; *Taxon* 39(4): 610. 1990)

South America, Peru. See *Arnaldoa* 1(1): 25. 1991.

P. tovarii Sánchez Vega subsp. *pilosum* Sánchez Vega (*Piptochaetium pilosum* (Sánchez Vega) Ciald. & Giussani)

South America. See *Arnaldoa* 1(1): 29. 1991, *Annals of the Missouri Botanical Garden* 89(3): 327. 2002.

P. tovarii Sánchez Vega subsp. *tovarii*

South America.

P. uruguense Griseb. (*Oryzopsis uruguayensis* (Griseb.) Speg.; *Piptochaetium uruguayense* Griseb.; *Piptochaetium uruguayense* var. *microcarpum* Parodi; *Piptochaetium uruguense* var. *genuinum* Parodi; *Piptochaetium uruguense* var.

microcarpum Parodi; *Piptochaetium uruguense* var. *uruguense*)

Argentina, Uruguay. See *Symbolae ad Floram Argentinam. Zweite ...* 297. 1879 and *Anales del Museo Nacional de Montevideo* 4(2): 29-31, f. 11a-c. 1901, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 290, f. 35B-C, 36B. 1944.

P. verruculosum (Mez) Henrard (*Piptochaetium stipoides* (Trin. & Rupr.) Hack. ex Arechav.; *Piptochaetium stipoides* var. *stipoides*; *Piptochaetium stipoides* var. *verruculosum* (Mez) Parodi; *Piptochaetium verruculosum* (Mez) Herter, nom. illeg., non *Piptochaetium verruculosum* (Mez) Henrard; *Stipa verruculosa* Mez; *Urachne stipoides* Trin. & Rupr.)

Argentina. See *Species Graminum Stipaceorum* 25. 1842, *Anales del Museo Nacional de Montevideo* 1(4): 328, f. 18. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 206. 1921, *Mededeelingen van's Rijks-Herbarium* 54: 380. 1927, *Revista Sudamericana de Botánica* 6(5-6): 141. 1940, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 230, 269, 306, f. 21C, 23B. 1944.

P. virescens (Kunth) Parodi (*Oryzopsis pringlei* Scribn. ex Beal, nom. illeg., non *Oryzopsis pringlei* Beal; *Stipa arsenii* Hack.; *Stipa caerulea* J. Presl; *Stipa virescens* Kunth)

North America, Mexico. Fodder, see *Nova Genera et Species Plantarum* 1: 126. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 227. 1830, *Grasses of North America (edition 2)* 2: 226. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 8: 515. 1910, *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 230. 1944, *Phytologia* 54(1): 4. 1983.

in Mexico: flechilla verdosa

P. virescens (Kunth) Parodi var. *arsenii* (Hack.) Beetle (*Stipa arsenii* Hack.)

North America, Mexico. See *Repertorium Specierum Novarum Regni Vegetabilis* 8: 515. 1910, *Phytologia* 54(1): 4. 1983.

P. virescens (Kunth) Parodi var. *virescens* (*Stipa caerulea* J. Presl)

North America. See *Reliquiae Haenkeanae* 1(4-5): 227. 1830.

Piptophyllum C.E. Hubb. = *Crinipes* Hochst., *Triraphis* R. Br.

From the Greek *pipto* "to fall" and *phyllon* "leaf," referring to the leaf blades disarticulating from the sheaths.

One species, south tropical Africa, Angola. Arundinoideae or Chloridoideae, perennial, herbaceous, erect, slender, fibrous base, leaf blades deciduous, auricles absent, ligule

a fringe of hairs, delicate open inflorescence paniculate, panicle with capillary branches, spikelets pedicellate and flattened, 2-flowered, two unequal or subequal glumes 1-nerved, lemmas membranous with a long flexuous central awn slightly twisted at base, awn much longer than lemma, palea present, 2 fleshy glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas, rocky and stony places, related to *Zenkeria*, resembling *Nematopoa* and *Pentaschistis*, type *Piptophyllum welwitschii* (Rendle) C.E. Hubb., see *Prodromus Florae Novae Hollandiae* 185. 1810, *Histoire Naturelle des Végétaux* 13: 164. 1841, *Flora* 38: 279-280. 1855 and *Fl. Afrique Nord* 2: 191. 1953, *Kew Bulletin* 12: 53. 1957, *Contributions from the United States National Herbarium* 41: 231-232. 2001, *Contributions from the United States National Herbarium* 46: 166, 627. 2003.

Species

P. welwitschii (Rendle) C.E. Hubb. (*Pentaschistis welwitschii* Rendle)

Angola. Glumes shorter than lemma and shortly awned, lemmas 5-9-nerved and 2-lobed, damp places.

Piptostachya (C.E. Hubb.) J.B. Phipps = Zonotriche (C.E. Hubb.) J.B. Phipps

Greek *pipto* "to fall" and *stachys* "a spike."

Arundinelleae, *Tristachya* sect. *Piptostachya* C.E. Hubb., type *Piptostachya inamoena* (K. Schum.) J.B. Phipps (*Tristachya inamoena* K. Schum.; *Zonotriche inamoena* (K. Schum.) Clayton), see *Die Pflanzenwelt Ost-Afrikas* C: 109. 1895 and *Bulletin of Miscellaneous Information Kew* 1936(5): 322. 1936, *Kirkia* 4: 107-109, 113. 1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Boletim da Sociedade Broteriana, ser. 2* 41: 199-200. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

Piresia Swallen

Dedicated to the Brazilian botanist João Murça Pires, 1916-1994, Center for Tropical Research, Brazilian Institute for Agricultural Research, Belém, collected extensively in Amazonas and Paras, Brazil, 1941-1947 Colombia and Peru, 1965-1966 New York Botanical Garden's Third Serra da Neblina Expedition [the highest point in Brazil is the Serra da Neblina on the border with Venezuela], with Ghillean T. Prance wrote "The vegetation types of the Brazilian Amazon." in G.T. Prance and Thomas E. Lovejoy, editors. *Key Environments: Amazonia*. Pergamon Press, Oxford 1985, with Ricardo de S. Seco e Joaquim Ivanir Gomes wrote *Taxonomia e Fitogeografia das Espécies de Seringueira*. Embrapa Amazônia Oriental 2002. See *Mem. New York Bot. Gard.* 17: 90. 1967; *Mem. New York Bot. Gard.* 23: 345. 1972; *Ann. Missouri Bot. Gard.* 63: 57. 1976

[1977]; *Mem. New York Bot. Gard.* 30: 109, 120. 1977; *Phytologia* 41: 10. 1978; *Mem. New York Bot. Gard.* 29: 141. 1978; *Brittonia* 33: 397. 1981; *Mem. New York Bot. Gard.* 32: 188. 1981; *Syst. Bot.* 6: 88. 1981; *Phytologia* 51: 244. 1982; *Phytologia* 54: 460-461. 1983; *Mem. New York Bot. Gard.* 38: 72. 1984; *Bradea* 5: 301. 1989; *Fl. Neotrop. Monogr.* 52: 371. 1990; *Mem. New York Bot. Gard.* 65: 129, 363. 1991; *Bol. Mus. Paraense Emilio Goeldi, n.s., Bot.* 7: 129, 141. 1991; *Brittonia* 44: 332. 1992; *Taxon* 44: 653-655. 1995; *Novon* 6: 195, 312. 1996.

About 4-7 species, Venezuela, Brazil, Trinidad, tropical America, Amazon. Bambusoideae, Olyreae, Olyrinae, or Bambusoideae, Oryzodae, Olyreae, perennial, fernlike, delicate, small, low to dwarf, dimorphic, caespitose, unarmed, herbaceous, erect to weakly ascending, decumbent, unbranched, low-growing, thin roots, fertile culms horizontal decumbent with axillary flowering spikes prostrate to ascending, plants monoecious, inflorescence terminal and axillary of mixed male and female spikelets, often inflorescences from base of culms, raceme-like panicle, spikelets in triplets or paired, fertile spikelets unisexual ovate to lanceolate, glumes herbaceous and acute, lemma pubescent and coriaceous, palea present, 0-3 female spikelet staminodes, 3 male spikelet stamens, 2 stigmas, sterile ovary with 1 stigma sometimes present, primary forest, wet lowland forest, in sandy places, forest shade, forest floor, type *Piresia goeldii* Swallen, see *Phytologia* 11(3): 152-153. 1964, *Brittonia* 34(2): 199-209. 1982 [New species of *Cryptochloa* and *Piresia* (Poaceae: Bambusoideae)], *Flora of the Guianas. Series A, Phanerogams* 529-534. 1990, *Ruizia* 13: 1-480. 1993, *Systematic Botany* 18(1): 80-99. 1993, *American Bamboos* 302-304. 1999, *Contributions from the United States National Herbarium* 39: 105. 2000.

Species

P. goeldii Swallen (named for the Swiss zoologist Emil or Emílio August Goeldi, 1859-1917, entomologist, director of the Museum of Natural History and Ethnography of Pará, in Belém, wrote a number of papers on mosquitoes in the Amazon. See Nelson Sanjad, "On 'the abominable profession of being a vampire': Emílio Goeldi and Mosquitos in Pará (1905)." *História, Ciências, Saúde — Manguinhos*, vol. 10(1): 85-111, Jan.-Apr. 2003; *Gen. Inga, Bot.* 317. 1997)

Brazil, Venezuela, Peru, Colombia. Perennial, caespitose, subherbaceous, fernlike leaves 2-ranked, leaf blades lanceolate to ovate and acuminate at the apex, inflorescences from decumbent culms, shade-loving, seasonally inundated soil, forest, shade, see *Phytologia* 11(3): 153. 1964.

P. leptophylla Soderstr.

Ecuador, Brazil. Perennial, tufted, erect, ascending, delicate, wiry culms of 2 types, fertile culm decumbent and bearing several small racemes at the end, sterile culm with

prominent nodes and leafy in the upper part, leaf blades linear-lanceolate glabrous acute shortly pseudopetiolate, lower part of raceme enclosed in a leaf sheath, female spikelets ovate glabrous with prominent nerves, male spikelets linear-lanceolate, forming small clumps, forest floor, light shade to deep shade, seasonally inundated soil, resting forest, under shrubs and trees, on sandy soil, see *Brittonia* 34(2): 206, f. 4. 1982.

P. macrophylla Soderstr.

French Guiana, Peru, Brazil. Perennial, caespitose, fan-shaped leaves appearing palmate, leaf blades oblong acuminate glabrous, inflorescences both decumbent and terminal, forest shade, see *Brittonia* 34(2): 203, f. 3. 1982.

P. sympodica (Döll) Swallen (*Olyra sympodica* Döll; *Raddia bififormis* Hitchc. & Chase; *Raddia sympodica* (Döll) Hitchc.)

West Indies, the Caribbean, Trinidad, Venezuela, Brazil, French Guiana. Perennial, erect, low to dwarf, caespitose, decumbent floriferous culms leafless, fan-shaped leaves appearing palmate, leaf blades lanceolate to narrowly oblong and acuminate, inflorescences spicate horizontal, forming small clumps, ground cover, medicinal, in sandy soil, forest, under trees or shrubs, shade or partial shade, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Opuscoli Scientifici* 3: 410. 1819, *Flora Brasiliensis* 2(2): 322. 1877 and *Contributions from the U.S. National Herbarium* 18(7): 358. 1917, *Manual of the Grasses of the West Indies* 372. 1936, *Annals of the Missouri Botanical Garden* 29(4): 317-318. 1942, *Phytologia* 11(3): 152-153. 1964.

in Peru: shúnkushun

Piresiella Judz., Zuloaga & Morrone

A diminutive of *Piresia*.

One species, the Caribbean, Cuba. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, herbaceous, unarmed, caespitose, delicate, erect, small, unbranched, tuberous, dimorphic, stoloniferous, flowering culms leafless, auricles absent, sheaths glabrous and ciliate, leaves ovate, ligule an unfringed membrane, rhizomes pachymorph, plants monoecious, inflorescence spicate, fertile spikelets unisexual, 2 ascending and unisexual racemes, spikelets solitary and shortly pedicellate, 2 glumes subequal, palea present, 3 free lodicules, no stamens, male florets 2-staminate, ovary glabrous, savannah, stream banks, shade, river margins, segregated from *Mniochloa*, type *Piresiella strephioides* (Griseb.) Judz., Zuloaga & Morrone, see *Proceedings of the Biological Society of Washington* 21: 185. 1908, *Annals of the Missouri Botanical Garden* 80(4): 846-871. 1993, *American Bamboos* 304-306. 1999, *Contributions from the United States National Herbarium* 39: 105. 2000.

Species

P. strephioides (Griseb.) Judz., Zuloaga & Morrone (*Mniochloa strephioides* (Griseb.) Chase; *Olyra strephioides* Griseb.)

The Caribbean. See *Catalogus Plantarum Cubensium*. 229. Lipsiae 1866 and *Proceedings of the Biological Society of Washington* 21: 186. 1908, *Annals of the Missouri Botanical Garden* 80(4): 857. 1993.

Pithecurus Kunth = Schizachyrium Nees

Greek *pithekos* “an ape, monkey” and *oura* “tail.”

Panicoideae, Andropogoneae, Andropogoninae, see *Species Plantarum* 2: 1045. 1753, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 331. 1829, *Révision des Graminées* 2: 571. 1832, *Plantae Junghuhnianae* 3: 359. 1854, *Flora Australiensis: A Description ...* 7: 535. 1878, *Flora Brasiliensis* 2(4): 296. 1883 and *Contributions from the United States National Herbarium* 46: 539, 560-569. 2003.

Plagiantha S.A. Renvoize

From the Greek *plagios* “oblique” and *anthos* “flower.”

One species, Brazil, Bahia. Panicoideae, Paniceae, Paspalinae, annual or perennial, erect or ascending, loosely tufted, branched, often rooting from the lower nodes, slender, leaf blades lanceolate to narrowly lanceolate, plants bisexual, inflorescence paniculate, panicle branches spreading, small spikelets gibbous, two glumes blunt, lower lemma membranous 2-nerved, palea thickened, related to *Steinchisma* and *Panicum*, type *Plagiantha tenella* Renvoize, sandy places, damp ground, in cerrado, see *Kew Bulletin* 37(2): 323-333. 1982, S.A. Renvoize, *The Grasses of Bahia* 178. Kew 1994, *Darwiniana* 3(1-4): 53-60. 1995, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Contributions from the United States National Herbarium* 46: 539. 2003, *Am. J. Bot.* 90: 796-821. 2003.

Species

P. tenella Renvoize

Brazil. Annual or short-lived perennial, herbaceous, wiry, loosely caespitose, erect, geniculately ascending, panicle ovate, spikelets oblong glabrous, lower glume broadly ovate 3- to 5-nerved, upper glume ovate 5-nerved, upper lemma and palea apiculate, shade or partial shade, in woodland, see *Kew Bulletin* 37(2): 323, f. 1. 1982.

Plagiarthron P.A. DuVign. = Loxodera Launert

From the Greek *plagios* “oblique, placed sideways” and *arthron* “a joint.”

Andropogoneae, see *Bulletin de la Société Botanique de Belgique* 90: 187. 1958, *Boletim da Sociedade Broteriana, ser. 2* 37: 80-81. 1963, *Kew Bulletin* 32(4): 767-771. 1978.

Plagiochloa Adamson & Sprague =
Brizopyrum Link, *Brizopyrum* Stapf, *Tribolium*
Desv.

Greek *plagios* “oblique, placed sideways” and *chloe*, *chloa* “grass,” in reference to the spikelets on the rachis; see Robert Stephen Adamson (1855-1965) and Thomas Archibald Sprague (1877-1958), in *Journal of South African Botany* 7: 89. (Apr.) 1941.

About 5-11 species, South Africa. Danthonioideae, Danthoniae, perennial, variable, straggling, leaves rolled, inflorescence a spike or spike-like panicle or raceme, spikelets placed obliquely to the rachis, glabrous or hairy glumes shortly awned or awnless, hairy lemmas awnless or shortly awned, wet areas, sandy soils, disturbed areas, often in *Tribolium* Desv., type *Plagiochloa uniolae* (L.f.) Adamson & Sprague (*Tribolium uniolae* (L.f.) Renvoize), see *Supplementum Plantarum* 110. 1781 [1782], *Hort. Berol.* 1: 159. 1827, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168, t. 7, f. 2. 1831, *Fl. Cap.* 7: 318. 1898 and *Journal of South African Botany* 7(2): 89-90. 1941, *Nord. J. Bot.* 1: 20. 1981, *Kew Bulletin* 40(4): 797. 1985, *American Journal of Botany* 79: 689-700. 1992, *South African Journal of Botany* 60(1): 22-26 and 60(5): 279-284. 1994, H.P. Linder and G. Davidse, “The systematics of *Tribolium* Desv. (Danthoniae: Poaceae).” *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 119(4): 445-507. 1997, *Systematic Entomology* 27(4): 469-517. Oct 2002, *Contributions from the United States National Herbarium* 46: 143, 539, 622. 2003.

Plagiolytrum Nees = *Dinebra* Jacq.,
Tripogon Roem. & Schult.

From the Greek *plagios* “oblique, placed sideways” and *elytron* “sheath, cover, scale, husk.”

Chloridoideae, Cynodonteae, see *Fragmenta Botanica* 77, 98, t. 121, f. 1. 1809, *Systema Vegetabilium* 2: 34, 600. 1817, *Hortus Regius Botanicus Berolinensis* 1: 44, 280. 1827, *Proceedings of the Linnean Society of London* 1: 95. 1841, *Ann. Mag. Nat. Hist.* 7: 221. May 1841, *Synopsis Plantarum Glumacearum* 1: 301. 1854, *Bull. Soc. Bot. Fr.* 14: 89. 1867, *A List of the Grasses of N.W. India, Indigenous and Cultivated* 33. 1883, *Rev. Gen. Pl.* 2: 759. 1891, *Fl. Alg. Monocot.* 245. 1895 and *Kew Bulletin* 25: 301-322. 1971, *Candollea* 46: 533-535. 1991, *Contributions from the United States National Herbarium* 41: 67-68, 182, 231. 2001.

Plagiosetum Benth.

From the Greek *plagios* “oblique, placed sideways” and Latin *seta*, *ae* “bristle,” unilateral bristles.

One species, Australia. Panicoideae, Panicodae, Paniceae, annual, herbaceous, leafy, caespitose, erect, decumbent, branched, nodes glabrous and hollow internodes, ligule a rim of silky hairs, leaf blades narrow and flat, plants bisexual, inflorescence a false spike with branches reflexed at maturity and falling off with the spikelets, spikelets with involucre of slender and not spiny bristles deciduous with the spikelets, florets 2, lower floret male or sterile, upper floret bisexual, two glumes very unequal, upper lemma hard and shining, palea present, 2 fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, fruit flattened, dry sandy areas, open places, similar to *Paractaenum* and *Setaria*, type *Plagiosetum refractum* (F. Mueller) Benth., see *Hooker's Icones Plantarum* 13: 33, t. 1242. 1877.

Species

P. refractum (F. Mueller) Benth. (*Panicum refractum* (F. Muell.) F. Muell.; *Paractaenum refractum* (F. Muell.) R.D. Webster; *Pennisetum refractum* (F. Muell.) F. Muell.; *Plagiosetum refractum* Benth.; *Setaria refracta* F. Muell.)

Queensland, Northern Territory, New South Wales, South Australia, Western Australia. Annual or short-lived perennial, tufted, leafy, geniculate stems, stiff, glabrous, inflorescence racemose and erect, cuneate deciduous racemes, primary branches reflexed, flattened peduncle, spikelets solitary and ovate-oblong and obtuse, florets 2, lower floret sterile, upper floret bisexual, sterile lemma many-nerved and epaleate, bisexual lemma acute, not grazed, grows on deep sandy soils, sand hills, see *Species Plantarum* 1: 55. 1753, *Syn. Pl.* 1: 72. 1805, *Essai d'une Nouvelle Agrostographie* 47, 51, 178. 1812, *Fragmenta Phytographiae Australiae* 3: 147. 1862, *Fragmenta Phytographiae Australiae* 8: 109, 152. 1872-1874, *Hooker's Icones Plantarum* 13: 33, t. 1242. 1877 and *The Australian Paniceae (Poaceae)* 148. 1987.

in English: bristle brush grass

Planichloa B.K. Simon = *Ectrosia* R. Br.

Latin *planus* “flat” and Greek *chloe*, *chloa* “grass,” or from the Greek *planos* “roaming, deceiving,” referring to the strongly flattened spikelets.

One species, Australia, northern Queensland. Chloridoideae, annual, hispid, herbaceous, erect, more or less unbranched, auricles absent, leaf sheaths hispid to scabrous, ligule fringed and membranous, linear leaves, plants bisexual, open to contracted inflorescence paniculate, spikelets pedicellate and flattened, two glumes unequal to very unequal, lemmas with lateral nerves grouped together, palea

present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 feathery stigmas, with little pockets in the seed head, food for Golden-shouldered parrots (*Psephotus chrysopterygius* Gould), type *Planichloa nervilemma* B.K. Simon, open areas, sandy soils, see *Austrobaileya* 2(3): 212. 1986, BirdLife International. *Threatened Birds of the World*. Lynx Edicions and BirdLife International, Barcelona, Spain and Cambridge, U.K. 2000.

Species

P. nervilemma B.K. Simon

Queensland. Lemmas keeled, see *Austrobaileya* 2(3): 212. 1986.

in English: glimmer grass

Planotia Munro = *Chusquea* Kunth,
Neurolepis Meissn.

Possibly an anagram of *Platonia*.

Bambusoideae, Bambuseae, Chusqueinae, type *Planotia elata* (Kunth) Munro, see *Révision des Graminées* 1: 327, t. 76. 1830, *Linnaea* 9(4): 486. 1835, *Plantarum vascularium genera secundum ordines ...* 1: 426. 1843, *Flora of the British West Indian Islands* 530. 1864, *Transactions of the Linnean Society of London* 26(1): 70-73. 1868, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 720-721. 1898 and *Die Natürlichen Pflanzenfamilien* Nachtrag (zum 2-4 Teil)1: 21. 1906, *Contributions from the United States National Herbarium* 39: 79-81, 105. 2000, *Bamboo Sci. Cult.* 17(1): 60. 2003.

Plantinia Bubani = *Phleum* L.

Pooideae, Poeae, Alopecurinae, see *Species Plantarum* 1: 59. 1753, *Collectanea* 1: 110. 1786, *Nuovo Giornale Botanico Italiano* 5: 317. 1873 and *Flora Pyrenaea ...* 4: 268, 270, 272. 1901, *Contributions from the United States National Herbarium* 48: 491-494, 504. 2003.

Platonia Kunth = *Chusquea* Kunth,
Neurolepis Meissn., *Platonia* Mart.
(Clusiaceae), *Platonia* Raf. (Cistaceae)

Possibly dedicated to Plato or Platon, a Greek philosopher, the disciple of Socrates.

Bambusoideae, Bambuseae, Chusqueinae, type *Platonia elata* Kunth, see *Familles des Plantes* 2: 434. 1763, *Medical Repository* 5: 352. 1808, *Caratteri di Alcuni Nuovi Generi e Nuove Specie di Animali e Piante della Sicilia* 73. Palermo 1810, *Travels in Brazil* 2: 490. 1816, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Révision des Graminées* 1: 139, 327, t. 76. 1829-1830, *Nova*

Genera et Species Plantarum ... 3: 168, 169, t. 288-II, 289. 1829 [1832], *Linnaea* 9(4): 486. 1835, *An Introduction to the Natural System of Botany* 74. July 1836, *Allgemeine Naturgeschichte* 3: 1431. 1841, *Plantarum vascularium genera secundum ordines ...* 1: 426. 1843, *Annales des Sciences Naturelles; Botanique, série 4* 14: 299. 1860, *Flora of the British West Indian Islands* 530. 1864, *Transactions of the Linnean Society of London* 26(1): 71. 1868 and *Die Natürlichen Pflanzenfamilien* Nachtrag (zum 3 Teil)1: 21. 1906, *Botanical Museum Leaflets* 17: 18, t. 9. 1955, *Taxon* 8: 313. 1959, D.J. Allan, in *D.S.B.* 11: 22-31. 1981, R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 701. Stuttgart 1993, *Contributions from the United States National Herbarium* 39: 79-81, 106. 2000, *Taxon* 51(3): 813. 2002.

Plazerium Kunth = *Eriochrysis* P. Beauv.

Panicoideae, Andropogoneae, Saccharinae, see *Species Plantarum* 1: 54. 1753, *Essai d'une Nouvelle Agrostographie* 8, t. 4, f. 11. 1812, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 474. 1833, *Flora Brasiliensis* 2(4): 253. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 24. 1887, *Monographiae Phanerogamarum* 6: 29. 1889 and *Bulletin de la Société Botanique de France* 70: 736. 1923, A.S. Hitchcock, *Manual of the Grasses of the West Indies* 1-439. 1936, *Bulletin of the Botanical Society of Bengal* 8: 143-148. 1954, *Flora Mesoamericana* 6: 379. 1994, L. Catusas Guerra, "Las gramíneas (Poaceae) de Cuba, I." *Fontqueria* 46: [i-ii], 1-259. 1997, *Contributions from the United States National Herbarium* 46: 239-240, 539. 2003.

Plectrachne Henrard

Greek *plektron* "a spur, cock's spur" and *achne* "chaff, glume," referring to the sharp callus or to the lemma, stiff and awned.

About 11-16 species, Australia. Chloridoideae, Triodieae, perennial, aromatic, resinous or nonresinous, caespitose, leaves mainly basal, tussock-forming, branched from the lower nodes or simple, leaf sheaths shorter than culm internodes, pungent and needle-like leaves, auricles absent, long erect leaf blades subulate and rigid, ligule-fringed or ciliate, plants bisexual, inflorescence paniculate open or contracted, spikelets pedicellate, bisexual spikelets, lower 1-4 florets hermaphrodite, 2 glumes stiff and nerved, glumes persistent and more or less equal to subequal, coriaceous lemmas 3-lobed with lobes aristulate, hairy callus, palea 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 plumose stigmas, in dry open sandy thickets, sandy or stony and arid soils, open areas, sandstone ridges, resembles and often in *Triodia*, type *Plectrachne schinzii* Henrard, see *Prodromus Florae Novae Hollandiae* 182, 185. 1810 and

Jan Theodor Henrard (1881-1974), *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 74: 132. (June) 1929, *Kew Bulletin* 26-30. 1941, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, M. Lazarides, "New taxa of tropical Australian grasses (Poaceae)." *Nuytsia* 5(2): 273-303. 1984.

Species

P. aristiglumis Lazarides (*Triodia aristiglumis* (Lazarides) Lazarides)

Northern Territory, Arnhem Land. Perennial, tufted, tussocky, nonresinous, leaf sheath hirsute to pilose, loose and sparse panicles, florets closely imbricate and exerted, 2-lobed glumes and lemmas, glumes membranous to cartilaginous and unequally 3-awned, see *Nuytsia* 5(2): 278. 1984, *Australian Systematic Botany* 10(3): 405. 1997.

P. bromoides (F. Muell.) C.E. Hubb. (*Triodia bromoides* (F. Muell.) Lazarides; *Triraphis bromoides* F. Muell.)

Western Australia. See *Fragmenta Phytographiae Australiae* 8: 108. 1873 and *Hooker's Icones Plantarum* t. 3385. 1939, *Australian Systematic Botany* 10(3): 417. 1997.

P. bunglensis S.W.L. Jacobs (*Triodia bunglensis* (S.W.L. Jacobs) Lazarides) (Bungle Bungle Range, Purnululu National Park)

Western Australia, Northern Province. See *Nuytsia* 8(2): 222. 1992, *Australian Systematic Botany* 10(3): 418. 1997.

P. bynoei C.E. Hubb. (*Triodia bynoei* (C.E. Hubb.) Lazarides) (for Benjamin Bynoe, b. about 1803-1865, assistant surgeon and surgeon in the Royal Navy 1825-63, plant collector, 1837-1843 Beagle voyages, with Darwin on the Galápagos, described Australian biota on the third voyage, later accompanied several voyages to Australia as the surgeon on convict ships, he is credited by Gould with the discovery of Spinifex (or Plumed) Pigeon, he wrote the first description of the birth of the marsupials. See Robert Fitzroy, R.N., 1805-1865 and Phillip Parker King (1791-1856), *Narrative of the Surveying Voyages of His Majesty's Ships Adventure and Beagle*, between the Years 1826 and 1836, describing their examination of the Southern Shores of South America, and the Beagle's circumnavigation of the Globe. [Three volumes in four (appendix), vol. 3 written by Charles Darwin] [First edition, first issue recording the historic voyage of the *Beagle*, including Darwin's *Journal* which forms the third volume of the *Narrative*] London, Henry Colburn 1839; Charles Darwin, *The Voyage of the Beagle*. London 1845; John Dunmore, *Who's Who in Pacific Navigation*. Honolulu 1991; Ida Lee (afterwards Marriott), *Early Explorers in Australia*. London 1925; A.E. Orchard, *A History of Systematic Botany in Australia*, in *Flora of Australia* vol. 1, edition 2, ABRIS. 1999; J.J. Keevil, "Benjamin Bynoe (1804-1865) Surgeon of H.M.S. Beagle." *Journal of the Royal Naval Medical Service* 35: 251-268. 1949; C. Bateson, *The Convict Ships 1787-1868*. Reed,

Sydney, London 1974; D.L. Serventy and H.M. Whittell, *Birds of Western Australia*. Paterson Brokensha, Perth 1962; D. Watts, *Kangaroos and Wallabies*. New Holland Publ. 1998)

Western Australia, Northern Territory. Perennial, aromatic, viscid, branched near the base, forming clumps, spreading, leaf sheaths ciliate, leaves resinous and curling, panicle loose to rather dense, spikelets biseriate, spikelets loosely flowered, the lower 2 florets hermaphrodite, glumes entire or notched, basal lemma without lateral awns, lodicules membranous, see *Bulletin of Miscellaneous Information Kew* 1941: 30. 1941, *Fl. W. Aust.* 1(1): 83. 1952, *Journal of the Royal Society of Western Australia* 44(3): 81. 1961, *Australian Systematic Botany* 10(3): 422. 1997.

P. caroliniana S.W.L. Jacobs

Western Australia. See *Nuytsia* 8(2): 221. 1992.

P. contorta Lazarides (*Triodia contorta* (Lazarides) Lazarides)

Northern Territory, Arnhem Land. Perennial, tussocky, non resinous, leaf blades straight and pilose, leaf sheaths glabrous or hairy and ciliate on margins, loose panicles, spikelets 6- to 7-flowered and 1-awned, exerted florets, glumes membranous and acuminate, 2-lobed lemma and glumes, strongly curved awns of the lemma, see *Nuytsia* 5(2): 278-279. 1984, *Australian Systematic Botany* 20(3): 426. 1997.

P. danthonioides (F. Muell.) C.E. Hubb. (*Triodia danthonioides* (F. Muell.) Lazarides; *Triraphis danthonioides* F. Muell.)

Western Australia. See *Fragmenta Phytographiae Australiae* 8: 125. 1873 and *Hooker's Icones Plantarum* 34: t. 3385. 1939, *Australian Systematic Botany* 10(3): 427. 1997.

P. desertorum C.E. Hubb. (*Triodia desertorum* (C.E. Hubb.) Lazarides)

Western Australia, Victoria Desert. See *Bulletin of Miscellaneous Information Kew* 1941: 28. 1941, *Australian Systematic Botany* 10(3): 429. 1997.

P. dielsii C.E. Hubb. (*Triodia dielsii* (C.E. Hubb.) Lazarides)

Western Australia. See *Bulletin of Miscellaneous Information Kew* 1941: 27. 1941, *Australian Systematic Botany* 10(3): 431. 1997.

P. drummondii C.E. Hubb.

Western Australia. See *Bulletin of Miscellaneous Information Kew* 1941: 26. 1941.

P. helmsii C.E. Hubb. (*Triodia helmsii* (C.E. Hubb.) Lazarides; *Triraphis bromoides* sensu J. Black) (for Richard Helms, born in Altona, Germany, on 12 December 1842, died in Sydney, New South Wales, on 17 July 1914, collector, naturalist and botanist, dentist, entomologist and bacteriologist, naturalist on the Elder Exploring Expedition to central Australia, May 1891-June 1892 [equipped and

financed by Sir Thomas Elder, 1818-1897], expedition to Mt. Kosciuszko in 1888, 1893 and 1901. See David Lindsay (1856-1922), *Journal of the Elder Scientific Exploring Expedition...* Adelaide, C.E. Bristow, 1893; Ralph Tate, *Scientific Results of the Elder Scientific Exploring Expedition, 1891* / edited by Professor Ralph Tate Adelaide: Royal Society of South Australia, 1892. *Transactions of the Royal Society of South Australia*; v. 16, pt. 1; *Trans. & Proc. R. Soc. SA* 16(3): 333-383. 1896; *Handbook of Instructions for the Guidance of the Officers of the Elder Scientific Exploration Expedition to the Unknown Portions of Australia*. Adelaide, Issued by the Council of the Royal Geographical Society of Australasia, South Australian Branch, Adelaide 1891. First Edition; J.A. Thomson, "On the rock specimens from Central and Western Australia. Collected by the Elder Scientific Exploring Expedition of 1891-1892." *Journ. and Proc. Roy. Soc. New South Wales* 1911, 45, pt. 3, 292-317. 1912)

South Australia, Western Australia, Queensland. Perennial, caespitose, slender glabrous culms, rigid stems, at the base a tuft of rigid leaves, leaf sheaths bearded, leaf blades very pungent, nodes glabrous, panicle loose, spikelets narrow-oblong, fertile florets 3-4, purplish glumes narrow and acute, awns 3-nerved, rachilla between glumes with tooth-like projection, palea narrow oblong and membranous, see *Bulletin of Miscellaneous Information Kew* 1941: 29. 1941, *Australian Systematic Botany* 10(3): 434. 1997.

in English: porcupine grass

P. melvillei (R. Br.) C.E. Hubb. (*Triodia melvillei* (C.E. Hubb.) Lazarides)

Western Australia. Perennial, tussock, dense, glabrous, leaf blades rigid and pubescent, viscid leaves, leaf sheaths bearded and resinous, dense panicle, spikelets narrow oblong, fertile florets 4-8, glumes acute, lemmas continuous with awns, palea membranous, on dunes, rocky places, hills, see *Bulletin of Miscellaneous Information Kew* 1941: 28. 1941, *Australian Systematic Botany* 10(3): 451. 1997.

P. mollis Lazarides

Western Australia, Northern Province. Perennial, glabrous, compact, smooth, nonresinous, slender, soft, leafy, tussocky, branched at the lower nodes, leaf blades thickened, leaf sheaths loose, leaves filiform and pungent, panicle contracted and dense, spikelet with one hermaphrodite floret and neuter florets above, glumes lanceolate and acuminate, lemma coriaceous 3-lobed and 3-awned, palea notched or entire, damp ground, see *Nuytsia* 5(2): 279-280. 1984.

P. pungens (R. Br.) C.E. Hubb. (*Pappophorum pungens* (R. Br.) Trin.; *Triraphis pungens* R. Br.)

Western Australia, Queensland. Perennial, tussocky, straggling, viscid, resinous, sometimes stoloniferous, leaf sheaths sometimes ciliate and bearded, leaf blades curling when old, panicle rather loose, lower 2-4 florets fertile, other florets often reduced to the awns, glumes mucronate

and keeled, palea coriaceous, see *Genera Plantarum* 2: 787. 1791, *Prodromus Florae Novae Hollandiae* 1: 185. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 92. 1830 and *Hooker's Icones Plantarum* 34: t. 3385. 1939.

in English: curly spinifex

P. pungens (R. Br.) C.E. Hubb. var. ***callosum*** C.E. Hubb. Queensland.

P. pungens (R. Br.) C.E. Hubb. var. ***pungens***

Queensland. See *Hooker's Icones Plantarum* 34: t. 3385. 1939.

P. rigidissima (Pilg.) C.E. Hubb. (*Triodia rigidissima* (Pilg.) Lazarides; *Triraphis rigidissima* Pilg.)

Western Australia. See *Hooker's Icones Plantarum* 34: t. 3385. 1939, *Australian Systematic Botany* 10(3): 468. 1997.

P. schinzii Henrard

Northern Territory, Western Australia. Tussocky, dense, compact, resinous, rigid, basal internodes woolly, leaf sheaths silky, dense panicles, spikelets lanceolate, florets closely imbricate, lower 2-4 florets fertile, subequal glumes lanceolate and acuminate, palea coriaceous to membranous, see *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 74: 134. 1929.

in English: silvery spinifex, feathertop spinifex

P. uniaristata Lazarides (*Triodia uniaristata* (Lazarides) Lazarides)

Northern Territory. Perennial, nonresinous, tussocky, erect, branched near the base, leaf sheaths with rounded auricles ciliate or ciliolate, leaf blades filiform and pungent, loose panicle, spikelets 4-flowered, florets enclosed by glumes, glumes membranous to cartilaginous with two apical lobes acuminate, 1-awned lemmas, palea membranous, see *Nuytsia* 5(2): 280-281. 1984, *Australian Systematic Botany* 10(3): 482. 1997.

Pleiadelphia Stapf = *Elymandra* Stapf

Greek *pleios* "many, more than one" and *adelphos* "brother."

About 1-2 species, west tropical Africa. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae or Panicoideae, Andropogoneae, Anthistirinae, annual, herbaceous, unarmed, branched, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, spikelets in triplets or paired, sterile spikelets awnless, 2 glumes more or less equal, palea absent, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, sandy soil, type *Pleiadelphia gossweileri* Stapf, see *Mexicanas Plantas* 2: 51, 67. 1886 and *Flora of Tropical Africa* 9: 320-321, 407-408. 1919, *Hooker's Icones Plantarum* 30: t. 3121. 1927, *Journal*

d'Agriculture Tropicale 1: 48. 1954, *Kew Bulletin* 20(2): 287-293. 1966, W.D. Clayton, "A revision of the genus *Hyparrhenia*" in *Kew Bulletin, Additional Series* 2: 1-196. 1969, *Contributions from the United States National Herbarium* 46: 229, 539. 2003.

Species

P. gossweileri Stapf (*Elymandra gossweileri* (Stapf) Clayton; *Themeda gossweileri* (Stapf) Roberly)

Angola. Single raceme, see *Flora Aegyptiaco-Arabica* 178. 1775 and *Hooker's Icones Plantarum* 30: t. 3121. 1927, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 103. 1960, *Kew Bulletin* 20(2): 288-289. 1966.

Pleioblastus Nakai = *Arundinaria* Michx.,
Arundinaria auct.

From the Greek *pleios* "many, more than one" and *blastos* "bud, sprout, germ, ovary, sucker," shoots with many branches.

About 20 or more (ca. 42) species, temperate areas of eastern Asia, Japan and China. Bambusoideae, Bambusoideae, Bambuseae, Arundinariinae, erect, caespitose, spreading, monopodial, culms hollow, reedlike, 3-7 branches at each node, bud canal shallow, two type of rhizomes, thick and long creeping rhizome, culm sheaths persistent or caducous, leaves papery or coriaceous, from the apices of branchlets bearing leaf blades inflorescence spicate or racemose, spikelet linear, 5-13 flowers, two glumes or rarely none, lemmas ovate and acuminate, palea present, 3 ovate lodicules, 3 stamens, ovary cylindrical, 3 feathery stigmas, growing in a cluster, sunny places, species difficult to identify, formerly included in and probable synonym of *Arundinaria* Michx., closely related to *Arundinaria*, type *Pleioblastus communis* (Makino) Nakai, see *Genera Plantarum* 1: 236. 1789, *Flora Boreali-Americana* 1: 73-74. 1803, *The Bamboo Garden* 46: 547. 1894 and *Botanical Magazine* 15(168): 18. 1901, *Journal of the Arnold Arboretum* 6(3): 145-146. 1925, *Taxon* 6(7): 207. 1957, *Agriculture Handbook* 114: 1-69. 1957, *Zlaki SSSR* 88. 1976, *Acta Phytotax. Geobot.* 30(4-6): 145. 1979, *Ann. Bot.* 48: 407-410. 1981, W.D. Clayton & S.A. Renvoize, "Genera graminum." *Kew Bulletin, Additional Series* 13: 45. 1986, *Grass Systematics and Evolution* 225-238. 1987 [The position of bamboo genera and allies in a system of grass classification], *Smithsonian Contr. Botany* 72: 1-75. 1988, *Kew Bulletin* 44(2): 349-367. 1989, *Journal of Bamboo Research* 10(3): 28-30. 1991, *Bull. Bot. Res., Harbin* 11(4): 41. 1991, *J. Bamb. Res.* 12(4): 1-6. 1993, *J. Bamb. Res.* 13(1): 1-23. 1994, *Flora Reipublicae Popularis Sinicae* 9(1): i-xxvi, 1-761. 1996 [Bambusoideae], *Castanea* 62: 8-21. 1997, *The Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 106. 2000.

Species

P. acutiligulatus W.T. Lin

China. See *Journal of Bamboo Research* 12(3): 4, f. 4. 1993.

P. akebono (Makino) Nakai (*Arundinaria variegata* var. *akebono* Makino)

Japan, origin unknown. Glabrous, branched, 1-2 branches per node, internodes glabrous, nodes glabrous, leaves distichous and glabrous, leaf blades narrowly lanceolate to linear lanceolate, rarely cultivated, see *Botanical Magazine* 26(300): 15, 17. 1912, *Flora of Japan (edition 2)* Rev. & enl. 1380. 1931, *Science Education [Rika Kyô-iku]* 15(6): 69. 1932, *J. Jap. Bot.* 9: 236. 1933, *Journal of Japanese Botany* 10: 204, pl. 35. 1934.

in Japan: akebono-zasa

P. altiligulatus S.L. Chen & S.Y. Chen

China. Young culm glabrous, sheath persistent glabrous, no sheath auricle or cilia, sheath ligule pruinose, sheath blade lanceolate, 2-3 leaves on each twig, no leaf auricles, leaf blade lanceolate densely tomentose beneath, used for weaving baskets or other containers, for bamboo furniture, for handle of umbrella or other handicrafts, shoots bitter not edible, see *Acta Phytotaxonomica Sinica* 21(4): 407, pl. 3. 1983, *Journal of the Henan Science and Technology University* 1(1): 113. 1985.

P. amarus (Keng) Keng f. (*Arundinaria amara* Keng; *Pleioblastus amarus* S.Y. Chen)

China, Yunnan, Guizhou. Young culm pruinose, 3-5 branches on each node, sheath thick papery to coriaceous, sheath auricles tiny, sheath ligule truncate, sheath blade thin and long lanceolate, leaves lanceolate pubescent beneath, bitter shoot not edible, culm used for handicrafts, umbrella stalk, flagpole, see *Sinensia* 6: 148, f. 2. 1935, *Technical Bulletin of the National Forestry Research Bureau* 8: 14. 1948, *Acta Phytotaxonomica Sinica* 21(4): 413. 1983.

P. amarus (Keng) P.C. Keng f. *huangshanensis* C.L. Huang
China. See *Journal of Bamboo Research* 15(3): 14, f. 1. 1996.

P. amarus (Keng) P.C. Keng var. *hangzhouensis* S.L. Chen & S.Y. Chen

China, Hangzhou, Zhejiang. Culm smooth, sheath green to green purple, no sheath auricle, sheath blade linear-lanceolate, see *Acta Phytotaxonomica Sinica* 21(4): 408, pl. 4. 1983, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. amarus (Keng) P.C. Keng var. *pendulifolius* S.Y. Chen

China. Leafy twigs drooping, sheath not pruinose, ligule truncate concave, see *Acta Phytotaxonomica Sinica* 21(4): 413. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. amarus (Keng) P.C. Keng var. *subglabratus* S.Y. Chen (*Arundinaria hsienchuensis* var. *subglabrata* (S.Y. Chen) C.S. Chao & G.Y. Yang)

China, Zhejiang. Sheath glabrous and caducous, see *Acta Phytotaxonomica Sinica* 21(4): 413. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Journal of Bamboo Research* 13(1): 17. 1994, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. amarus (Keng) P.C. Keng var. ***tubatus*** Wen

China, Zhejiang. Culm sheath hard, see *Bulletin of Botanical Research* 3(1): 93-94, f. 2. 1983.

P. angustatus W.T. Lin (*Arundinaria angustifolia* (Mitford) J. Houz.; *Bambusa angustifolia* Mitford)

China. See *The Bamboo Garden* 46: 547. 1894 and *Le Bambou, son étude, sa culture, son emploi* 2: 272. 1908, *Journal of Bamboo Research* 13(2): 18-19, f. 3. 1994.

P. angustifolius (Mitford) Nakai (*Arundinaria angustifolia* (Mitford) Nakai; *Arundinaria angustifolia* (Mitford) J. Houz.; *Bambusa angustifolia* Mitford; *Pleioblastus angustifolius* Nakai)

Asia. White stripes on the leaves, see *The Bamboo Garden* 46: 547. 1894 and *Le Bambou, son étude, sa culture, son emploi* 2: 272. 1908, *Journal of Japanese Botany* 10(5): 294. 1934.

in Japan: azuma-nezasa, himeshima-dake

P. argenteostriatus Nakai (*Arundinaria argenteostriata* (Regel) Kuntze; *Arundinaria argenteostriata* (Regel) Ohwi; *Arundinaria argenteostriata* (Regel) Vilm.; *Bambusa argenteo-striata* Regel; *Bambusa argenteostriata* Regel; *Nipponocalamus argenteostriatus* (Regel) Nakai; *Pleioblastus argenteo-striatus* (Regel) Nakai; *Pleioblastus argenteostriatus* (Regel) Nakai; *Sasa argenteo-striata* (Regel) E.G. Camus)

Japan. Culm sheaths glabrous, nodes puberulous to pubescent, leaf sheaths glabrous, leaf blades lanceolate and glabrous, rarely cultivated, see *Gartenflora* 14: 363, pl. 490, f. 5. 1865, *Revisio Generum Plantarum* 2: 761. 1891 and *Bulletin de la Société Dendrologique de France* 12: 82. 1909, *Les Bambusées* 23. 1913, *Journal of Japanese Botany* 9(4): 236. 1933, *Journal of Japanese Botany* 18: 350. 1942, *Fl. Japan* 80. 1953.

in Japan: okina-dake, akebono-zasa, shiroshima-iyosudare (white stripes)

P. argenteostriatus Nakai f. ***argenteostriatus***

Japan. See *Journal of Japanese Botany* 10: 204. 1934.

P. argenteostriatus Nakai f. ***glaber*** (Makino) Murata (*Arundinaria variegata* f. *glabra* Makino)

Japan. See *Botanical Magazine* 26: 17. 1912, *Acta Phytotaxonomica et Geobotanica* 30(4-6): 147. 1979.

P. argenteostriatus Nakai f. ***pumilus*** (Mitford) Muroi

Japan.

P. brevinodus W.T. Lin

China. See *Journal of Bamboo Research* 13(2): 19-20, f. 4. 1994.

P. chino (Franch. & Sav.) Makino (*Arundinaria chino* (Franch. & Sav.) Makino; *Arundinaria chino* var. *laydekeri* (Makino) Ohwi; *Arundinaria laydekeri* Bean ex Vilm.; *Arundinaria simonii* var. *chino* (Franch. & Sav.) Makino; *Bambusa chino* Franch. & Sav.; *Pleioblastus chino* Makino; *Pleioblastus chino* var. *laydekeri* (Bean ex Vilm.) Makino; *Pleioblastus maximowiczii* var. *chino* (Franch. & Sav.) Nakai)

Japan, Honshû, Hokkaido. Glabrous, sheath glabrous, leaf blades narrowly lanceolate and papery, spikelets lanceolate, 8-12 flowers, cultivated, sunny places, see *Enum. Pl. Jap.* 2(1): 183. 1876, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, f. 43-50. 1878, *Enumeratio Plantarum in Japonia Sponte Crescentium* ... 2(2): 183, 607. 1879, *The Bamboo Garden* 98. 1896 and *Botanical Magazine* 14(161): 98. 1900, *Bulletin de la Société Dendrologique de France* 12: 80. 1909, *Botanical Magazine* 26(300): 14. 1912, *Journal of the Arnold Arboretum* 6(3): 146. 1925, *Journal of Japanese Botany* 3(6): 23. 1926, *Science Education [Rika Kyô-iku]* 15(6): 70. 1932, *Journal of Japanese Botany* 9: 236. 1933, *Journal of Japanese Botany* 10: 293. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 84. 1935, *Journal of Japanese Botany* 18: 366. 1942, *Bulletin of the National Science Museum* 28: 66. 1954, *Report Fuji Bamboo Garden* 17: 9. 1972, *Hikobia* 8(1-2): 65-66. 1977.

in Japan: azuma-nezasa, gintai-azumanezasa, kinkazan, himeshima-dake (leaves with white stripes), kimmei-azumanezasa (yellow-white stripes), furi-azumanezasa (yellow stripes)

P. chino (Franch. & Sav.) Makino f. ***elegantissimus*** (Makino ex Tsuboi) Muroi & H. Okamura

Japan.

P. chino (Franch. & Sav.) Makino f. ***miyakeanus*** Muroi

Japan.

P. chino (Franch. & Sav.) Makino f. ***nebulosus*** (Makino) Muroi

Japan.

P. chino (Franch. & Sav.) Makino f. ***villosus*** S. Suzuki

Japan. See *Hikobia* 8(1-2): 65. 1977.

P. chino (Franch. & Sav.) Makino var. ***chino*** (*Arundinaria chino* (Franch. & Sav.) Makino; *Arundinaria japonica* Franch. & Sav.; *Arundinaria maximowiczii* hort. ex A. Rivière & C. Rivière; *Arundinaria simonii* var. *chino* (Franch. & Sav.) Makino; *Bambusa chino* Franch. & Sav.; *Pleioblastus maximowiczii* (hort. ex A. Rivière & C. Rivière) Nakai; *Pleioblastus maximowiczii* var. *chino* (Franch. & Sav.) Nakai)

Japan. Culm sheaths glabrous, nodes and internodes glabrous, leaf sheaths glabrous to pubescent, leaf blades narrowly lanceolate and papery, leaves glabrous on both surfaces, spikelets lanceolate, 8-12 florets, 1-2 glumes membranous, first glume sometimes lacking, second glume ovate-lanceolate, lemmas broadly lanceolate and acuminate, palea 2-mucronate, 3 lodicules, stamens exserted, short ovary cylindrical, 3 feathery stigmas, sunny places, see *Enum. Pl. Jap.* 2(1): 183. 1876, *Enumeratio Plantarum in Japonia Sponte Crescentium ...* 2(1): 182. 1877, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, 783, f. 43-50. 1878 and *Botanical Magazine* 14(161): 98. 1900, *Bulletin de la Société Dendrologique de France* 12: 80. 1909, *Botanical Magazine* 26(300): 14. 1912, *Journal of the Arnold Arboretum* 6(3): 146. 1925, *Journal of Japanese Botany* 3(6): 23. 1926, *Science Education [Rika Kyô-iku]* 15(6): 70. 1932.

in Japan: azuma-nezasa, gintai-azumanezasa, kinkazan, himeshima-dake (leaves with white stripes), kimmei-azumanezasa (yellow-white stripes), fuyi-azumanezasa (yellow stripes)

P. chino (Franch. & Sav.) Makino var. ***hisauchii*** Makino (*Arundinaria ramosa* Makino; *Nipponocalamus hisauchii* (Makino) Nakai; *Pleioblastus maximowiczii* var. *hisauchii* (Makino) Makino & Nemoto; *Sasa ramosa* (Makino) Makino & Shibata; *Sasaella ramosa* (Makino) Makino)

Japan. Culm smooth, purplish green to bluish green, 3-9 branches on each node, sheath persistent or shedding late, no sheath auricles, sheath ligule truncate and pubescent, sheath blade narrow and long lanceolate, leaves linear-lanceolate, cultivated, see *Botanical Magazine* (Tokyo) 14(156): 22. 1900, *Botanical Magazine* (Tokyo) 15(168): 18, 24. 1901, *Botanical Magazine* (Tokyo) 26: 16. 1912, *Journal of the Arnold Arboretum* 6(3): 146. 1925, *Journal of Japanese Botany* 3(11): 44. 1926, *Journal of Japanese Botany* 6: 15. 1929, *Flora of Japan* (edition 2) Rev. & enl. 1379. 1931, *Journal of Japanese Botany* 18(7): 350, 356. 1942, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. chino (Franch. & Sav.) Makino var. ***vaginatus*** (Hackel) S. Suzuki (*Arundinaria chino* f. *vaginata* (Hack.) Crouzet ex Demoly; *Arundinaria vaginata* Hack.; *Nipponocalamus vaginatus* (Hack.) Nakai; *Pleioblastus vaginatus* (Hack.) Nakai; *Thamnocalamus vaginatus* (Hack.) E.G. Camus)

Japan. Glabrous, leaves tough and glabrous, leaf blades linear-lanceolate, see *Transactions of the Linnean Society of London* 26(1): 33, 157. 1868, *Bulletin de l'Herbier Boissier* 7(10): 717. 1899 and *Botanical Magazine* 26(300): 14. 1912, *Les Bambusées* 53. 1913, *Journal of Japanese Botany* 10(4): 215-219, pl. 42. 1934, *Journal of Japanese Botany* 18: 350, 366. 1942, *Herbarium* 8(1-2): 65. 1977, *Bambou-section France* 7: 21. 1990.

in Japan: hakone-dake

P. chino (Franch. & Sav.) Makino var. ***viridis*** (Makino) S. Suzuki (*Arundinaria variegata* var. *viridis* Makino; *Pleioblastus variegatus* var. *viridis* (Makino) D.C. McClint.; *Sasa variegata* var. *viridis* (Makino) E.G. Camus)

Japan. Glabrous, leaves tough and glabrous, leaf blades lanceolate, see *Botanical Magazine* (Tokyo) 26: 15. 1912, *Les Bambusées* 21. 1913, *Journal of Japanese Botany* 3(6): 23. 1926, *Hikobia* 8(1-2): 66. 1977, *Plantsman* 4(3) 190. 1982.

in Japan: nezasa

P. chrysanthus (Mitford ex Bean) D.C. McClint. (*Arundinaria chrysantha* Mitford ex Bean; *Sasa chrysantha* (Mitford ex Bean) E.G. Camus)

Asia, America. See *The Gardener's Chronicle & Agricultural Gazette* 15: 238. 1894 and *Les Bambusées* 23. 1913, *Plantsman* 4(3): 191. 1982.

P. cucphuongensis Nguyen

Vietnam. See *Bot. Zhurn.* (Moscow & Leningrad) 76(6): 875. 1991.

P. distichus Muroi & H. Okamura (*Arundinaria argenteostriata* var. *disticha* (Mitford) Honda; *Arundinaria argenteostriata* var. *distichus* (Mitford) Ohwi, nom. illeg., non *Arundinaria argenteostriata* var. *disticha* (Mitford) Honda; *Arundinaria disticha* (Mitford) Bean; *Arundinaria variabilis* var. *disticha* (Mitford) Houz.; *Bambusa disticha* Mitford; *Bambusa nana* hort. ex Bean, non *Bambusa nana* Roxb.; *Pleioblastus distichus* (Mitford) Nakai; *Pseudosasa disticha* (Mitford) Nakai; *Sasa disticha* (Mitford) E.G. Camus; *Sasa pygmaea* var. *disticha* (Mitford) C.S. Chao & G.G. Tang)

Japan, origin unknown. Smooth, culm sheath and leaf sheath glabrous, leaves coriaceous to papery, used as ground covering, makes good hedges, culms used for fishing rods, see *Hortus Bengalensis, or a Catalogue ...* 25. 1814, *Flora Indica; or, Descriptions of Indian Plants* 2: 199. 1832, *The Bamboo Garden* 46: 547. 1894, *Gardener's Chronicle, ser. 3* 15: 368. 1894 and *Mitteilungen der Deutschen Dendrologischen Gesellschaft* 16: 227. 1907, *Bulletin de la Société Dendrologique de France* 12: 81-82. 1909, *Les Bambusées* t. 5, f. B. 1913, *Journal of the Arnold Arboretum* 6: 150. 1925, *Science Education [Rika Kyô-iku]* 15(6): 69. 1932, *Journal of Japanese Botany* 9: 236. 1933, *Flora Sylvatica Koreana* 20: 21. 1933, *The Illustrated Dictionary of Gardening, ...* 1: 188. 1951, *Flora of Japan* 80. 1953, *Nomina Plantarum Japonicarum. Editio Emendata* 373. 1957, *Journal of Nanjing Institute of Forestry* 1985(4) 15. 1985.

in Japan: oroshima-chiku

P. fortunei (Van Houtte ex Munro) Nakai (*Arundarbor fortunei* (Van Houtte ex Munro) Kuntze; *Arundinaria fortunei* (Van Houtte ex Munro) Rivière & C. Rivière; *Arundinaria variabilis* var. *fortunei* (Van Houtte ex Munro) Houz.; *Bambusa fortunei* Van Houtte ex Munro; *Nipponocalamus*

fortunei (Van Houtte ex Munro) Nakai; *Pleioblastus fortunei* Nakai; *Pleioblastus fortunei* (Van Houtte) Nakai; *Sasa fortunei* (Van Houtte ex Munro) Fiori)

Asia, Japan. Very slender, simple or branched, nodes and internodes glabrous, slender running rhizomes, leaf sheath glabrous, ligule small or tiny, leaf blades acuminate narrowly lanceolate, leaves densely puberulous to densely softly pubescent, ornamental, decorative, widely cultivated, ground covering, potted plant, see *Transactions of the Linnean Society of London* 26: 111. 1868, *Transactions of the Linnean Society of London* 26: 111. 1876, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 797. 1878, *Revisio Generum Plantarum* 2: 761. 1891 and *Mitteilungen des Deutschen Dendrologischen Gesellschaft* 16: 226. Berlin 1907, *Botanical Magazine* (Tokyo) 26(300): 15. 1912, *Bambusées* 21. 1913, *Bollettino della Reale Società Toscana d'Orticoltura*, ser. 4, 2: 42. 1917, *Journal of Japanese Botany* 3(6): 23. 1926, *Journal of Japanese Botany* 9(4): 232, 234, t. 30. 1933, *Flora of Japan* (edition 2) (suppl.) 868. 1936, *Journal of Japanese Botany* 18: 350, 355. 1942, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: dwarf white-striped bamboo

in Japan: chigo-zasa, shima-dake, shiroshima-kenezasa, shima-kenezasa (little white stripes), kiakebono-kenezasa, shimofuri-kene zasa

P. globinodum C.H. Hu (*Clavinodum globinodum* (C.H. Hu) Keng f. & T.H. Wen)

China, Hainan. Light green to greenish yellow, fragile, 5-7 branches on each node, smooth, pruinose, culm sheath coriaceous and persistent, sheath auricles small or absent, sheath ligule flat or concave, sheath blade erect lanceolate or triangular, leaves long lanceolate glabrous, see *Journal Nanjing University. Natural Sciences Edition* 1982(3): 734, f. 2. 1982, *Journal of Bamboo Research* 3(2): 23, 26. 1984.

P. gozadakensis Nakai (*Arundinaria gozadakensis* (Nakai) Masamume; *Nipponocalamus gozadakensis* (Nakai) Honda)

Japan. Glabrous, not pruinose, light green sheath, culms spaced, long rhizomes, no auricles and no cilia, sheath ligule concave and truncate, sheath blade green, leaf blades linear-lanceolate and glabrous, leaves tough and coriaceous, cultivated, used for fencing, easy to split, related to *Pleioblastus linearis* (Hackel) Nakai, see *Journal of Japanese Botany* 11(1): 4-5, f. 2. 1935, *Journal of Japanese Botany* 18: 350. 1942, *Science Reports of Kanazawa University* 2: 255. 1956, *Nomina Plantarum Japonicarum. Editio Emendata* 381. 1957.

in Japan: gozadake-zasa

P. gramineus (Bean) Nakai (*Arundinaria graminea* (Bean) Makino; *Arundinaria hindsii* var. *graminea* Bean; *Thamnocalamus hindsii* var. *graminea* (Bean) E.G. Camus)

Japan. Glabrous, young culm greenish yellow, a pruinose ring under joint, many branches on each node, sheath greenish shorter than internode, no auricles and no cilia, sheath ligule truncate or concave, sheath blade narrow-lanceolate, leaves glabrous and coriaceous, leaf blades linear to narrowly lanceolate to broadly linear, spikelets broadly lanceolate and flattened, 5-8 florets, 2 glumes subequal, lemmas ovate and acuminate, palea 2-keeled, 3 ovate lodicules, 3 stamens, ovary narrowly ovoid, 3 feathery stigmas, ornamental, cultivated, shoot bitter not edible, see *The Gardener's Chronicle & Agricultural Gazette* 3(15): 238. 1894 and *Botanical Magazine* (Tokyo) 26(300): 18. 1912, *Les Bambusées* 52-53, t. 25, f. a. 1913, *Journal of the Arnold Arboretum* 6(3): 146. 1925, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in Japan: taimin-chiku, rasetsu-chiku, tsushi-chiku

P. hattorianus Koidzumi

Japan. Rare, branched, culm sheaths densely hairy to densely pilose, leaf sheaths densely hairy to densely pilose, internodes minutely hairy, leaf blades linear to narrowly lanceolate to lanceolate, see *Acta Phytotaxonomica et Geobotanica* 4: 22. 1935.

in Japan: arage-nezasa, hosoba-azuma-nezasa

P. higoensis Makino (*Arundinaria higoensis* Makino; *Arundinaria kiusiana* Makino; *Nipponocalamus higoensis* (Makino) Honda; *Nipponocalamus kiusianus* (Makino) Nakai; *Pleioblastus kiusianus* Makino)

Japan. See *Journal of Japanese Botany* 5(10): 43-44. 1928, *Journal of Japanese Botany* 18: 350, 357. 1942, *Nomina Plantarum Japonicarum. Editio Emendata* 381. 1957, *Hikobia* 8(1-2): 65. 1977.

P. hindsii (Munro) Nakai (*Arundinaria hindsii* Munro; *Pleioblastus hindsii* Nakai; *Pseudosasa hindsii* (Munro) C.D. Chu & C.S. Chao; *Pseudosasa hindsii* (Munro) S.L. Chen & G.Y. Sheng ex T.G. Liang; *Thamnocalamus hindsii* (Munro) E.G. Camus) (after the British naval surgeon Richard Brinsley Hinds, ca. 1812-1847 (d. Perth, Western Australia), plant collector, wrote *The Regions of Vegetation*. 1843, from 1836 to 1842 attached as surgeon and naturalist to HMS *Sulphur*. See George Bentham, *The Botany of the Voyage of H.M.S. Sulphur, under the Command of Captain Sir Edward Belcher ... during the Years 1836-1842*. [Edited by R.B. Hinds] London 1844[-1846]; *The Zoology of the Voyage of H.M.S. Sulphur, under the Command of Captain Sir Edward Belcher ... during the Years 1836-1842*. (Shells, by R.B. Hinds.) [edited by R.B. Hinds] London 1843[-1845]; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 38. 1971; A. Lasègue, *Musée botanique de Benjamin Delessert*. 329, 386. Paris 1845; J.H. Barnhart, *Biographical notes upon botanists*. 2: 178. 1965; Edward Belcher (1799-1877), *Narrative of a Voyage Round the World Performed in HMS Ship "Sulphur" during the Years*

1836-1842. London 1843; J. Ewan, editor, *A Short History of Botany in the United States*. 116. New York and London 1969; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. 1: 438. London 1918; G.A.C. Herklots, *The Hong Kong Countryside*. 163. Hong Kong 1965; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Southern China. Dark green, culm sheath glabrous, nodes glabrous and not prominent, long internodes glabrous, 3-5 erect branches per node, leaf sheath glabrous, leaves erect and glabrous, leaf blades narrowly lanceolate and papery to rather coriaceous, cultivated, used as a windbreaker and for making flutes, edible shoots, see *Transactions of the Linnean Society of London* 26(1): 31, 33, 157. 1868 and *Les Bambusées* 52, t. 25, f. a. 1913, *Journal of the Arnold Arboretum* 6(3): 145-146, 150. 1925, *Journal of Japanese Botany* 9(4): 236. 1933, *Journal of Japanese Botany* 34: 53 f. 2, 3. 1959, *Report Fuji Bamboo Garden* 17: 9, 105. 1972, *Flora Reipublicae Popularis Sinicae* 9(1): 653-654, pl. 199, f. 11-12. 1996.

in Japan: kanzan-chiku, kikkou-kanzan

P. hsienchuensis T.H. Wen (*Arundinaria hsienchuensis* (T.H. Wen) C.S. Chao & G.Y. Yang)

China. Sheath green densely silky, sheath auricles falciform, sheath ligule curved, sheath blade narrow erect and ribbon-like, 4-5 leaves on each twig, leaves lanceolate, see *Bulletin of Botanical Research* 3(1): 92-93, f. 1. 1983, *Acta Phytotaxonomica Sinica* 21(4): 409-410, pl. 6. 1983, *Journal of Bamboo Research* 13(1): 17. 1994.

P. humilis (Mitford) Nakai (*Arundinaria fortunei* f. *viridis* hort. ex E.G. Camus; *Arundinaria humilis* Mitford; *Nipponocalamus humilis* (Mitford) Nakai; *Pseudosasa humilis* (Mitford) T.Q. Nguyen; *Sasa humilis* (Mitford) E.G. Camus; *Yushania humilis* (Mitford) W.C. Lin)

Japan. Branched, nodes and internodes glabrous, culm sheaths glabrous, leaf sheaths more or less densely pilose, leaves glabrous or hairy upper, leaf blades narrowly lanceolate to lanceolate, see *The Bamboo Garden* 98, 103. 1896 and *Les Bambusées* 22. 1913, *Journal of Japanese Botany* 11(1): 2. 1935, *Acta Phytotaxonomica et Geobotanica* 8: 116. 1939, *Journal of Japanese Botany* 18: 350, 356. 1942, *Acta Phytotaxonomica Sinica* 6(4): 355-356. 1957, *Bulletin of the Taiwan Forest Research Institute* 248: 13. 1974, *Hikobia* 8(1-2): 67. 1977, *Kew Bulletin* 38(3): 485. 1983, *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 880. 1991.

in Japan: toyooka-zasa

P. humilis (Mitford) Nakai f. *ohmiensis* (Koidzumi) S. Suzuki

Japan. See *Hikobia* 8(1-2): 67. 1977.

P. incarnatus S.L. Chen & G.Y. Sheng

China, Fujian. Node pruinose, 5-7 branches on each node, sheath green, no sheath auricles and cilia, sheath ligule green to reddish, sheath blade linear, 3-4 leaves on each branch, leaves ovate to ovate-lanceolate and pubescent beneath, see *Bulletin of Botanical Research* 11(4): 42. 1991.

P. intermedius S.Y. Chen

China, Zhejiang. Young culm green, pruinose, sheath shedding late as long as the internode, sheath auricles and cilia present, sheath ligule pruinose, sheath blade lanceolate, leaves lanceolate, used for handicrafts, umbrella stalk, see *Acta Phytotaxonomica Sinica* 21(4): 408-409, pl. 5. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. juxianensis Wen, C.Y. Yao & S.Y. Chen

China, Zhejiang. Young culm green, pruinose, sheath green pruinose, sheath auricles present, sheath ligule truncate pruinose, sheath blade lanceolate, used for handicrafts, umbrella stalk, see *Acta Phytotaxonomica Sinica* 21(4): 409-410, pl. 6. 1983, *Bulletin of Botanical Research* 3(1): 92-93, f. 1. 1983, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. kodzuma Makino (*Arundinaria simonii* f. *pseudosimonii* (Koidz.) Honda; *Nipponocalamus kodzuma* (Makino) Nakai; *Nipponocalamus pseudosimonii* (Koidz.) Nakai; *Pleiolblastus pseudosimonii* Koidz.; *Pleiolblastus simonii* f. *pseudo-simonii* (Koidz.) Muroi)

Japan. Robust, nodes and internodes glabrous, culm sheaths glabrous, leaf sheaths glabrous, leaf blades lanceolate and coriaceous, leaves glabrous and erect, see *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, f. 43-50. 1878 and *Journal of the Arnold Arboretum* 6(3): 147. 1925, *Journal of Japanese Botany* 5(10): 43-44. 1928, *Acta Phytotaxonomica et Geobotanica* 4: 165. 1935, *Journal of Japanese Botany* 18: 350, 357, 363. 1942, *Amatores Herbarii* 10: 212. 1942, *Nomina Plantarum Japonicarum. Editio Emendata* 374. 1957, *Hikobia* 8(1-2): 65. 1977, *Journal of Japanese Botany* 66: 194-198. 1991.

in Japan: kibo-shino

P. kongosanensis Makino (*Nipponocalamus kongosanensis* (Makino) Nakai; *Pleiolblastus viridistriatus* var. *kongosanensis* (Makino) D.C. McClint.)

Japan, Mt. Kongu, Osaka Prefecture. Branched, pubescent to densely hairy, nodes pilose to strongly hairy, internodes densely pubescent, culm sheaths densely puberulous, leaf sheath densely minutely hairy, leaf blades lanceolate or narrowly lanceolate and more or less pubescent to puberulous, see *Journal of Japanese Botany* 3(3): 11. 1926, *Journal of Japanese Botany* 5(2): 10. 1928, *Acta Phytotaxonomica et Geobotanica* 4: 165. 1935, *Journal of Japanese Botany* 18: 350, 357. 1942, *Report Fuji Bamboo*

Garden 17: 9. 1972, *Plantsman* 4(3): 191. 1982, *Hikobia* 8(1-2): 68. 1977.

in Japan: kongou-dake, kongo-dake, kisuji-kongou (yellow stripes)

P. kongosanensis Makino f. ***akibensis*** (Makino & Nakai) S. Suzuki (*Pleioblastus akibensis* Makino & Nakai)

Japan. See *Science Education [Rika Kyô-iku]* 15(6): 69. 1932, *Hikobia* 8(1-2): 68. 1977.

P. kwangsiensis W.Y. Hsiung & C.S. Chao (*Arundinaria kwangsiensis* (W.Y. Hsiung & C.S. Chao) C.S. Chao & G.Y. Yang; *Pleioblastus maculatus* (McClure) C.D. Chu & C.S. Chao)

China. See *Acta Phytotaxonomica Sinica* 18(1): 31-32, pl. 5. 1980, *Bamboo Research in Asia* 1: 18. 1981, *Journal of Bamboo Research* 13(1): 16. 1994, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. linearis (Hack.) Nakai (*Arundinaria linearis* Hack.; *Pleioblastus linearis* Nakai)

Japan. Nodes and internodes glabrous, culm sheath scabrous and densely covered with long hairs, no sheath auricles or cilia, sheath ligule convex, sheath blade linear-lanceolate, leaf sheaths glabrous, 4-5 leaves on each twig, leaves glabrous and tough, leaf blades linear to broadly linear, spikelets broadly lanceolate and flattened, 4-5 florets, glumes 0-2 lanceolate, lemmas broadly lanceolate and acuminate, palea 2-keeled, 3 ovate lodicules, 3 stamens exerted, ovary narrowly ovoid, 3 feathery stigmas, cultivated, used for roof covering, see *Bulletin de l'Herbier Boissier* 7(9): 721. 1899 and *Journal of the Arnold Arboretum* 6(3): 146. 1925, *Journal of Japanese Botany* 11: 4. 1935, *Science Reports of Kanazawa University* 2: 255. 1956.

in Japan: Ryûkyû-chiku, gyoyo-chiku

in Okinawa: yanbaru-chiku

P. longifimbriatus S.Y. Chen

China, Guangdong. Pruinose, glabrous, sheath thin coriaceous, sheath auricles falciform, sheath blade lanceolate, cultivated, strong and hard, not so easy to split, used for frame and fencing, see *Acta Phytotaxonomica Sinica* 21(4): 411, pl. 7. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

P. longinternodius B.M. Yang

China. See *Bamboo Res.* 39 [1989/2]: 1, f. 1. 1989.

P. maculatus (McClure) C.D. Chu & C.S. Chao (*Arundinaria chinensis* C.S. Chao & G.Y. Yang; *Arundinaria maculata* Hack.; *Arundinaria maculata* (McClure) C.D. Chu & C.S. Chao ex K.M. Lan, nom. illeg., non *Arundinaria maculata* Hack.; *Pleioblastus kwangsiensis* W.Y. Hsiung & C.S. Chao; *Pleioblastus maculatus* var. *longitubus* S.C. Li & Z.M. Wu; *Sinobambusa maculata* McClure; *Sinocalamus maculatus* McClure)

China, Sichuan, Guangxi, Yunnan, Hunan. Young culm green, white powdery, sheath coriaceous shedding late, sheath auricles small purplish, sheath ligule purplish slight concave, sheath blade lanceolate, leaves lanceolate, cultivated, used for frame and fencing, see *Österreichische Botanische Zeitschrift* 53: 69, 516. 1903, *Lingnan University Science Bulletin* 9: 64. 1940, *Acta Phytotaxonomica Sinica* 18(1): 31-32, pl. 5. 1980, *Bamboo Research in Asia* 1: 18. 1981, *Journal of the Anhui Agricultural College* 4: 10. 1987, *Flora Guizhouensis* 5: 320. 1988, *Journal of Bamboo Research* 13(1): 13. 1994, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. maculosoides T.H. Wen

China, Zhejiang. Pruinose, pubescent on nodes, 3-5 branches on each node, sheath dark greenish, sheath auricles absent or weak, sheath ligule with white cilia, sheath blade narrow-lanceolate to linear, 3-5 leaves on each twig, leaves broad-lanceolate, see *Journal of Bamboo Research* 3(2): 33, t. 9. 1984.

P. matsunoi Nakai (*Arundinaria matsunoi* Makino; *Nipponocalamus matsunoi* (Makino & Nemoto) Nakai; *Pleioblastus matsunoi* Makino & Nemoto)

Japan. Robust, nodes and internodes glabrous, culm sheaths glabrous, leaf sheaths pilose to villous, leaf blades lanceolate and coriaceous, leaves glabrous, see *Journal of Japanese Botany* 2: 8. 1918, *Journal of the Arnold Arboretum* 6: 146. 1925, *Flora of Japan (edition 2)* p. 1378. 1931, *Journal of Japanese Botany* 10: 276. 1934, *Journal of Japanese Botany* 18: 350, 359. 1942.

in Japan: Yokohama-dake

P. nabeshimanus Koidzumi (*Pseudosasa nabeshimana* (Koidz.) Koidz.)

Japan. Rare, dense, culm sheaths pubescent or puberulous, leaf sheaths puberulous, internodes minutely pubescent, nodes glabrous, leaf blades lanceolate to narrowly lanceolate, leaves glabrous and coriaceous, see *Acta Phytotaxonomica et Geobotanica* 3: 15. 1934.

in Japan: shirashima-medake

P. nagashima (Lat.-Marl. ex Mitford) Nakai (*Arundinaria nagashima* Mitf.; *Arundinaria nagashima* (Lat.-Marl. ex Mitford) Asch. & Graebn.; *Bambusa nagashima* Lat.-Marl. ex Mitford; *Nipponocalamus nagashima* (Marliac ex Mitford) Nakai; *Pleioblastus nagashima* (Mitford) Nakai)

Asia temperate, Japan. Branched, see *The Bamboo Garden* 46: 547. 1894 and *Synopsis der mitteleuropäischen Flora* 2: 773. 1902, *Journal of Japanese Botany* 9(4): 215, pl. 20. 1933, *Journal of Japanese Botany* 18: 350, 360. 1942.

in Japan: hiro-zasa

P. nagashima (Lat.-Marl. ex Mitford) Nakai f. ***yasuokensis*** (Nakai) S. Suzuki (*Pleioblastus yasuokensis* Nakai)

Japan. See *Journal of Japanese Botany* 11(1): 9. 1935, *Hikobia* 8(1-2): 67. 1977.

P. nagashima (Lat.-Marl. ex Mitford) Nakai var. ***koidzumii*** (Makino ex Koidzumi) S. Suzuki (*Pleioblastus koidzumii* Makino ex Koidz.)

Japan. Branched, culm sheaths densely pubescent, nodes glabrous, internodes minutely hairy to puberulous, leaf sheaths glabrous, leaf blades lanceolate and papery, leaves glabrous on both surfaces, see *Acta Phytotaxonomica et Geobotanica* 6: 69. 1937, *Hikobia* 8(1-2): 67. 1977.

in Japan: echizen-nezasa

P. nagashima (Lat.-Marl. ex Mitford) Nakai var. ***koidzumii*** (Makino ex Koidzumi) S. Suzuki f. ***dokyoanus*** (Koidzumi) Suzuki (*Pleioblastus dokyoanus* Koidz.; *Pleioblastus nagashima* f. *dokyoanus* (Koidz.) S. Suzuki)

Japan. See *Acta Phytotaxonomica et Geobotanica* 6: 218. 1937, *Hikobia* 8(1-2): 67. 1977.

P. nagashima (Lat.-Marl. ex Mitford) Nakai var. ***nagashima***

Japan. Branched, culm sheaths densely pubescent, nodes densely pilose to villous, internodes minutely hairy, leaf sheaths densely pubescent, leaf blades lanceolate and papery, leaves more or less glabrous to minutely hairy.

in Japan: hiro-zasa

P. oleosus Wen (*Arundinaria oleosa* (T.H. Wen) Demoly)

China, Zhejiang, Fujian, Yunnan. Young culm not pruinose, 3 branches on each node, yellow, sheath green with golden pappus, sheath auricles scabrous ovate or absent, sheath ligule truncate or convex, sheath blade linear or bandlike, 2-4 leaves on each twig, leaves lanceolate glabrous, see *Journal of Bamboo Research* 1(1): 24-25, f. 3. 1982, *Bamboo-section France* 7: 21. 1990.

P. patellaris W.T. Lin & Z.M. Wu (*Pleioblastus patellaris* W.T. Lin)

Japan. See *Journal South China Agricultural University* 14(3): 113-114. 1993.

P. pseudosasaoides S. Suzuki

Japan. Dense, nodes and internodes glabrous, culm sheaths pilose, leaf sheaths glabrous, leaf blades lanceolate and coriaceous, leaves glabrous, spikelets linear to narrowly lanceolate and flattened, 6-9 florets, 2 glumes more or less equal, lemmas ovate acuminate, palea 2-mucronate, 3 ovate lodicules, stamens exerted, ovary narrowly ovoid, 3 feathery stigmas, see *Hikobia* 8(1-2): 64. 1977.

in Japan: echigo-medake

P. pygmaeus (Miquel) Nakai (*Arundarbor pygmaea* (Miq.) Kuntze; *Arundinaria variegata* var. *pygmaea* (Miq.) Makino; *Bambusa pygmaea* Miq.; *Nipponocalamus pygmaea* (Miq.) Nakai; *Pleioblastus variegatus* var. *pygmaea* (Miq.) Makino ex Makino; *Sasa pygmaea* (Miq.) Rehder;

Sasa pygmaea E.G. Camus; *Sasa variegata* var. *pygmaea* (Miq.) E.G. Camus)

Japan. Leaves distichous, decorative grass rarely cultivated, see *Annales Museum Botanicum Lugduno-Batavi* 2: 286. 1866, *Revisio Generum Plantarum* 2: 761. 1891 and *Botanical Magazine* 15(168): 18. 1901, *Botanical Magazine* 26(300): 15, 17. 1912, *Les Bambusées* 21, 22. 1913, *Manual of Cultivated Trees and Shrubs* 71. 1927, *Flora of Japan (edition 2)* Rev. & enl. 1380. 1931, *Science Education [Rika Kyô-iku]* 15(6): 70. 1932, *Journal of Japanese Botany* 9(4): 234-237, pl. 31. 1933, *Journal of Japanese Botany* 11(1): 8-9. 1935, *Journal of Japanese Botany* 18(7): 350, 362. 1942, *Hikobia* 8(1-2): 66. 1977.

in Japan: ke-oroshima-chiku

P. pygmaeus (Miquel) Nakai var. ***distichus*** (Mitford) Nakai (*Bambusa disticha* Mitford)

Japan. Internodes and culm sheaths glabrous, nodes glabrous or shortly hairy, leaf sheaths glabrous, leaves glabrous and erect, leaf blades linear-lanceolate and coriaceous, cultivated, ornamental, decorative, see *The Bamboo Garden* 46: 547. 1894 and *Journal of Japanese Botany* 10(4): 207, f. 37. 1934.

in Japan: oroshima-chiku

P. pygmaeus (Miquel) Nakai var. ***pygmaeus***

Japan. Internodes and culm sheaths glabrous, nodes densely pubescent or puberulous, leaf sheaths minutely and softly pubescent to puberulous, leaves pubescent to puberulous, leaf blades linear-lanceolate and coriaceous, cultivated.

in Japan: ke-oroshima-chiku

P. rugatus Wen & S.Y. Chen (*Arundinaria rugata* (T.H. Wen & S.Y. Chen) C.S. Chao & G.Y. Yang)

China, Zhejiang. Sheath coriaceous, sheath auricles falciform, sheath ligule nearly truncate and ciliate, sheath blade long triangular and erect, 3-4 leaves on each twig, see *Journal of Bamboo Research* 1(1): 26-27, f. 4. 1982, *Journal of Bamboo Research* 13(1): 18. 1994.

P. sanmingensis S.L. Chen & G.Y. Sheng

China, Sanming, Fujian. Young culm pruinose, 3-5 branches on each node, nodes slightly convex, sheath coriaceous yellowish, sheath auricles ovate and purple, sheath ligule purple, sheath blade narrow-lanceolate, 3-4 leaves on each twig, leaves lanceolate, see *Bulletin of Botanical Research* 11(4): 42-43. 1991.

P. shibuyanensis Makino (*Arundinaria variegata* f. *pubescens* Makino; *Nipponocalamus shibuyanensis* (Makino ex Nakai) Nakai; *Pleioblastus shibuyanensis* Makino ex Nakai)

Japan, Mt. Saigouyama, Shibuya Ward, Tokyo. Glabrous, nodes and internodes glabrous, leaf blades lanceolate and papery, leaves densely pubescent beneath and glabrous upper, see *Botanical Magazine* (Tokyo) 26: 16. 1912, *Science Education [Rika Kyô-iku]* 15(6): 70. 1932, *Journal of*

Japanese Botany 10: 197. pl. 33. 1934, *Journal of Japanese Botany* 18: 350, 364. 1942, *Hikobia* 8(1-2): 66. 1977.

in Japan: shibuya-zasa, ueda-zasa (green and white-striped)

P. shibuyanus Makino var. ***basihirsutus*** S. Suzuki (*Arundinaria variegata* f. *pubescens* Makino; *Pleioblastus pubescens* (Makino) Nakai; *Pleioblastus shibuyanus* f. *pubescens* (Makino) S. Suzuki; *Pleioblastus tectus* Koidz.)

Japan. See *Botanical Magazine* 26(300): 15, 16. 1912, *Journal of Japanese Botany* 9(4): 219-223, pl. 23. 1933, *Acta Phytotaxonomica et Geobotanica* 4: 15, 81. 1935, *Hikobia* 8(1-2): 66. 1977, *Hikobia* 8(3-4): 348. 1980.

P. simonii (Carrière) Nakai (*Arundinaria brachyclada* Hack. ex Matsumura; *Arundinaria chino* f. *vaginata* (Hack.) Crouzet ex Demoly; *Arundinaria fortunei* Fenzl; *Arundinaria simonii* (Carr.) A. & C. Riv.; *Arundinaria vaginata* Hack.; *Bambusa simonii* Carr.; *Nipponocalamus simonii* (Carrière) Nakai; *Nipponocalamus vaginatus* (Hack.) Nakai; *Pleioblastus chino* var. *vaginatus* (Hack.) S. Suzuki; *Pleioblastus vaginatus* (Hack.) Nakai; *Thamnocalamus vaginatus* (Hack.) E.G. Camus)

China, Zhejiang, India, Japan. Creeping, reedlike, usually monopodial, robust, hollow, nodes glabrous or densely villous, long rhizome, internodes glabrous, sheath light green, no sheath auricles, sheath ligule arcuate light purple, sheath blade lanceolate, leaf blades narrowly lanceolate to linear-lanceolate, leaves base narrowed to a short petiole, 3-7 buds on each node, 3-7 spreading branches, spikelet linear to narrowly lanceolate with two bracts at base, 4-10-13 florets, 2 pilose glumes more or less equal, lemmas ovate and acuminate, palea 2-mucronate, 3 lodicules, 3 stamens exerted, ovary cylindrical, 3 stigmas pilose to feathery, cultivated, used for living fences and fans, fishing rod, cages, see *La Revue Horticole* 37: 380. 1866, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, f. 43-50. 1878, *Bulletin de l'Herbier Boissier* 7(10): 717. 1899 and *Botanical Magazine* 26(300): 14. 1912, *Les Bambusées* 53. 1913, *Journal of the Arnold Arboretum* 6(3): 147. 1925, *Journal of Japanese Botany* 3(6): 23. 1926, *Journal of Japanese Botany* 01(4): 215-219, pl. 42. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 165. 1935, *Journal of Japanese Botany* 18(7): 350, 364, 366. 1942, *Amatores Herbarii* 10: 212. 1942, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Herbarium* 8(1-2): 65. 1977, *Journal of Phytogeography and Taxonomy* 28(1): 32. 1980, *Bambou-section France* 7: 21. 1990, Sachiko Funayama, Ichiro Terashima and Tetsukazu Yahara, "Effects of virus infection and light environment on population dynamics of *Eupatorium makinoides* (Asteraceae)." *Am. J. Bot.* 88: 616-622. 2001.

in Japan: me-dake, kawa-take, hagawari-me-dake (variable leaves), kisuji-medake (leaves with yellow stripes), shiro-suji-medake (leaves with white stripes)

P. simonii (Carrière) Nakai var. ***heterophyllus*** Nakai (*Arundinaria simonii* var. *heterophylla* Makino)

Japan. Leaf blades variable and differentiated into various types on a single culm, see *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, f. 43-50. 1878 and *Icones of the Bamboos of Japan* pl. 8, f. 18-24. 1912, *Journal of the Arnold Arboretum* 6: 147. 1925.

P. solidus S.Y. Chen (*Arundinaria solida* (S.Y. Chen) C.S. Chao & G.Y. Yang)

China, Fujian, Zhejiang. Young culm prickly hairy, sheath light green slightly pruinose, sheath auricles falciform, sheath ligule truncate or convex, sheath blade lanceolate, leaves narrow-lanceolate, culm hard but fragile used for handicrafts, umbrella stalk, see *Acta Phytotaxonomica Sinica* 21(4): 411, pl. 8. 1983, *Journal of Bamboo Research* 13(1): 18. 1994, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. subrectangularis Yi & H. Long

China. See *Journal of Bamboo Research* 14(1): 17-20, f. 2. 1995.

P. truncatus Wen

China. See *Journal of Bamboo Research* 3(2): 32. 1984.

P. variegatus (Siebold ex Miquel) Makino (*Arundinaria fortunei* (Van Houtte ex Munro) Rivière & C. Rivière; *Arundinaria variabilis* var. *variegata* (Siebold ex Miq.) Makino ex Shirasawa; *Arundinaria variabilis* var. *variegata* (Siebold ex Miq.) Makino; *Arundinaria variegata* (Siebold ex Miq.) Makino; *Bambusa fortunei* Van Houtte ex Munro; *Bambusa variegata* Siebold ex Miq.; *Pleioblastus variegatus* (Siebold ex Miq.) Makino; *Pseudosasa variegata* (Siebold ex Miq.) Nakai; *Sasa fortunei* (Van Houtte ex Munro) Fiori; *Sasa variegata* (Siebold ex Miq.) E.G. Camus)

Japan. See *Annales Museum Botanicum Lugduno-Batavi* 2: 285. 1866, *Transactions of the Linnean Society of London* 26: 111. 1876, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, 797, f. 43-50. 1878 and *Botanical Magazine* (Tokyo) 14: 63. 1900, *Botanical Magazine* 15(168): 18. 1901, *Bulletin de la Société Dendrologique de France* 12: 81. 1909, *Botanical Magazine* 26(300): 15-17. 1912, *Les Bambusées* 21. 1913, *Bollettino della Reale Società Toscana d'Orticoltura*, ser. 4, 2: 42. 1917, *Journal of Japanese Botany* 24: 16. 1920, *Journal of the Arnold Arboretum* 6(3): 150. 1925, *Journal of Japanese Botany* 3(6): 23. 1926, *Flora of Japan* (edition 2) 1379-1380. 1931, *J. Jap. Bot.* 9: 232. 1933, *Plantsman* 4(3): 190-191. 1982, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. variegatus (Siebold ex Miquel) Makino f. ***humilis*** (Makino ex Tsuboi) Makino & Nemoto

Japan.

P. variegatus (Siebold ex Miquel) Makino f. ***variegatus***

Japan.

P. viridistriatus (Siebold ex André) Makino (*Arundinaria auricomma* Mitford; *Arundinaria variegata* var. *viridi-striata* (Siebold ex André) Makino; *Arundinaria variegata* var. *viridistriata* (Siebold ex André) Makino; *Arundinaria viridistriata* Makino ex Nakai; *Arundinaria viridistriata* (Siebold ex André) Makino ex Nakai; *Bambusa viridi-striata* Siebold ex André; *Bambusa viridistriata* Siebold ex André; *Pleioblastus auricomus* (Mitford) D.C. McClint.; *Pleioblastus viridi-striatus* (Siebold ex André) Makino; *Pleioblastus viridistriatus* (Regel) Makino; *Sasaella viridistriata* (Siebold ex André) Nakai)

Japan, origin unknown. Weak, simple or branched, delicate, densely velvety, soft and hairy, nodes and internodes velvety to minutely hairy, culm sheaths velutinous, leaf blades lanceolate, leaves densely pubescent, widely cultivated, decorative, potted plant, see *L'illustration horticole* 19: 319, pl.108. 1872, *The Bamboo Garden* 101. 1896 and *Botanical Magazine* 26(300): 15-17. 1912, *Journal of Japanese Botany* 3(3): 11. 1926, *Journal of Japanese Botany* 3(6): 23. 1926, *Journal of Japanese Botany* 5(2): 10. 1928, *Journal of Japanese Botany* 6: 15. 1929, *Science Education [Rika Kyô-iku]* 15(6): 70. 1932, *Journal of Japanese Botany* 10(9): 568. 1934, *Fl. Japan Suppl.* 9: 862. 1936, *Plantsman* 4(3): 191. 1982, *Bamboo Society Newsletter* 12: 11. 1991, *Taxon* 50: 911-912. 2001.

in Japan: kamuro-zasa

P. wuyishanensis Q.F. Zheng & K.F. Huang

China, Fujian. Young culm pruinose, sheath coriaceous and persistent as long as internode or slightly shorter, sheath ligule truncate purple, sheath blade lanceolate, 3-4 leaves on each branch, leaves lanceolate with white pubescence beneath, see *Wuyi Science Journal* 2: 17-20, f. 2. 1982.

P. yixingensis S.L. Chen & S.Y. Chen (*Arundinaria yixingensis* (S.L. Chen & S.Y. Chen) C.S. Chao & G.Y. Yang)

China, Fujian, Zhejiang. Young culm pruinose, greenish yellow, sheath greenish, sheath auricles strongly falciform, sheath ligule slightly concave or strongly arcuate, sheath blade lanceolate, leaves lanceolate, used for making umbrella stalk, see *Acta Phytotaxonomica Sinica* 21(4): 411-412, f. 9. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Journal of Zhejiang Forestry College* 8(1): 127-130. 1991, *Journal of Bamboo Research* 13(1): 19. 1994, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

Pleiodon Rchb. = *Bouteloua* Lag., *Polyodon* Kunth

From the Greek *pleios* “more than one” and *odontos*, *odontos* “a tooth.”

Chloridoideae, Cynodonteae, Boutelouinae, see *Varietades de Ciencias, Literatura y Artes* 2(4, 21): 134, 141. 1805, *Nova Genera et Species Plantarum* 1: 174, 175, t. 55. 1815

[1816], *Nom. Gen. Pl.* 38. 1841, *Gen. Pl.* 3(2): 1169. 1883 and *Contributions from the United States National Herbarium* 41: 20-33, 182, 190. 2001.

Pleioneura (C.E. Hubb.) J.B. Phipps = *Danthoniopsis* Stapf, *Loudetia* Hochst. ex Steud., *Pleioneura* Rech.f. (Caryophyllaceae), *Ratraya* J.B. Phipps

Greek *pleios* “full of” and *neuron* “nerve.”

Arundinelleae, *Loudetia* sect. *Pleioneura* C.E. Hubb., type *Pleioneura ramosa* (Stapf) J.B. Phipps, see *Genera Plantarum* 299. 4 Aug 1789, *Synopsis Plantarum Glumacearum* 1: 238. 1854, *Bulletin of Miscellaneous Information Kew* 1897: 298. 1897 and *Hooker's Icones Plantarum* 31: t. 3075. 1916, *Bulletin of Miscellaneous Information Kew* 1936(5): 320, 321, 324. 1936, *Kew Bulletin* 1949: 353. 1949, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 75: 357. 1951, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 226-354, f. 18. 1957, *Kirkia* 4: 100, 101, t. 10, f. 1. 1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Boletim da Sociedade Broteriana, ser. 2* 46: 418-421. 1972 [1973], *Taxon* 27(2-3): 301. 1978.

Pleopogon Nutt. = *Lycurus* Kunth

Greek *pleos* “full, complete, filled” and *pogon* “beard.”

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Pleopogon setosum* Nutt., see *Nova Genera et Species Plantarum* 1: 141, 142, pl. 45. 1815 [1816], *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 25. 1848, *J. Acad. Nat. Sci. Philadelphia*, ser. 2, 1: 189. 1848 and *U.S.D.A. Bull.* 772: 139. 1920, *Phytologia* 57: 287. 1985, *Contributions from the United States National Herbarium* 41: 138-139, 182. 2001.

Pleuraphis Torrey = *Hilaria* Kunth

Greek *pleura* “side, lateral” and *raphis* “a needle,” referring to the lateral spikelets and the position of awn on lower glume.

About three species, America. Chloridoideae, Cynodonteae, Hilariinae, perennial, erect, decumbent, branched at the base, bushlike, forming a sod, solid internodes, rhizomatous, shallow root system, dense roots, tough scaly rhizomes, basal leaves, inflorescence spicate, spikelets upright in clusters of 3, development of adventitious buds on rhizomes, understory species, hay readily eaten by cattle, forage, palatable to highly palatable, palatable to livestock only when it is green and succulent, prefers arid and slightly mesic habitats, resistant to heavy grazing and trampling,

drought-tolerant and adapted to alkaline soils, stabilizes blowing sand, colonizes sand dunes, sometimes confused with and referred to *Hilaria* Kunth, type *Pleuraphis jamesii* Torr., on dry sandy to rocky slopes and flats, semidesert grassland, on well-drained gravelly slopes, on heavy alluvial soils, sandy loam, on clay soils, lowland places subject to periodic flooding, arid environments, bajadas, scrublands, woodlands, may become infested with ergot, see *Nova Genera et Species Plantarum* 1: 116-118, pl. 37. 1815 [1816], *Annals of the Lyceum of Natural History of New York* 1(1): 148-150, t. 10. 1824 and E.R. Sohns, "The genus *Hilaria* (Gramineae)." *Journal of the Washington Academy of Sciences* 46(10): 311-321. 1956, *American Journal of Botany* 45: 757-767. 1958, *Memoir San Diego Society of Natural History* 12: 1-140. 1981, *Taxon* 33: 126-134. 1984, *Global Change Biology* 5(6): 659-668. Aug 1999, *Ecological Entomology* 25(4): 403-412. Nov 2000, *Contributions from the United States National Herbarium* 41: 128-129. 182-183. 2001, *New Phytologist* 150(2): 449-458. May 2001, *Global Change Biology* 8(3): 247-264. Mar 2002, *Flora of North America North of Mexico* 25: 1-783. 2003, *Global Change Biology* 9(2): 276-285. Feb 2003, *Oikos* 100(3): 497-506. Mar 2003, *Global Change Biology* 9(5): 718-728, 729-735. May 2003, *Global Change Biology* 9(8): 1223-1233. Aug 2003, *Global Change Biology* 9(11): 1582-1590. Nov 2003, C.A. Moffet, R.E. Zartman, D.B. Wester and R.E. Sosebee, "Effects on infiltration, erosion, and soil organic carbon in Chihuahuan Desert grasslands and shrublands." *J. Environ. Qual.* 34: 299-311. 2005, *Diversity & Distributions* 11(1): 45-55, Jan 2005, *Global Change Biology* 11(5): 749-756. May 2005.

Species

P. jamesii Torrey (*Hilaria jamesii* (Torr.) Benth.; *Hilaria sericea* Benth.; *Pleuraphis sericea* Nutt. ex Benth.)

Northern America, U.S., Mexico, California. Perennial bunchgrass, erect or decumbent, rhizomatous, nodes hairy, leaves recurved when dry, erect spikes, forage, scrub and woodland areas, on well-drained sandy soils, dry flats and foothills, see *Annals of the Lyceum of Natural History of New York* 1(1): 148-150, t. 10. 1824, *Journal of the Linnean Society, Botany* 19: 62. 1881.

in English: galleta grass, James' galleta, curly grass

in Spanish: galleta

P. mutica Buckley (*Hilaria mutica* (Buckl.) Benth.)

Northern America, U.S., Mexico. Perennial, tufted, smooth, erect, decumbent bases, rhizomatous, creeping, coarse and fibrous roots, strong rootstock, sod-forming, woody and scaly rhizomes, leaves harsh and stiff, erect spikes, about 30 fascicles on each spike, withstands grazing, intolerant of shifting sand, fairly resistant to drought, cut for hay,

forage for cattle and horses, unpalatable after maturity, tough dry stems with little nutritional value, heavy soils, on clay soils, on dry mesas, bottomland sites, rocky slopes, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 95. 1862, *Journal of the Linnean Society, Botany* 19: 62. 1881.

in English: tobosa grass

in Spanish: zacate galleta, toboso común, tobosa

P. rigida Thurber (*Hilaria rigida* (Thurb.) Benth. ex Scribn.; *Hilaria rigida* (Thurb.) Scribn.)

Northern America, U.S., Mexico. Perennial bunchgrass, coarse, rigid, clumped, erect or decumbent, shortly rhizomatous, tillering, forage, palatable, desert grass, dry rocky ledges, disturbed sandy areas, sand dunes, see *Nova Genera et Species Plantarum* 1: 116-117, pl. 37. 1815 [1816], *Geological Survey of California, Botany* 2: 293-294. 1880, *Bulletin of the Torrey Botanical Club* 9: 86. 1882 and P.S. Nobel, "Spacing and transpiration of various sized clumps of a desert grass, *Hilaria rigida*." *Journal of Ecology* 69: 735-742. 1981, *Taxon* 33: 126-134. 1984, P.S. Nobel, "Root distribution and seasonal production in the northwestern Sonoran Desert for a C3 subshrub, a C4 bunchgrass, and a CAM leaf succulent." *Am. J. Bot.* 84: 949. 1997, Pierre Martre, Gretchen B. North, Edward G. Bobich & Park S. Nobel, "Root deployment and shoot growth for two desert species in response to soil rockiness." *American Journal of Botany* 89: 1933-1939. 2002.

in English: big galleta

in Mexico: zacate galleta gigante

Pleuroplitis Trin. = *Arthraxon* P. Beauv.,
Lucaea Kunth

Panicoideae, Andropogoneae, Andropogoninae, type *Pleuroplitis langsdorffii* Trin., see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 111, t. 11, f. 6. (Dec.) 1812, *Fundamenta Agrostographiae* 174-175, t. 16. 1820, *Révision des Graminées* 2: 489, t. 159. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 271, 275. 1832, *Edinburgh New Philosophical Journal* 18: 180-182. 1835, *Flora* 29: 18. 1846, *Tentamen Florae Abyssinicae ...* 2: 447-448, t. 102. 1850, *Beiträge zur Flora der Cap Verdischen Inseln* 152. 1852, *Flora Rossica* 4(14): 477, 478. 1853, *Synopsis Plantarum Glumacearum* 1: 414. 1854, *Flora van Nederlandsch Indië* 3: 481. 1857, *Bulletin de l'Académie Impériale des Sciences de Saint Pétersbourg*, sér. 3, 10: 369-370, 373-377, t. 10, f. 5, 6-10. 1866 and *Blumea* 27: 255-300. 1981, *Contributions from the United States National Herbarium* 46: 104-110, 285, 539-540. 2003.

Pleuropogon R. Br. = *Lepitoma* Steud.,
Lophochlaena Nees

Greek *pleuron* "side, rib, lateral" and *pogon* "beard," referring to the nature of the glumes, to the bristly palea.

About 5-6 species, Canada, Arctic and Subarctic, Northern America, U.S., Greenland. Pooideae, Poodae, Meliceae, annual or perennial, herbaceous, aquatic or nonaquatic, emergent and submerged, sometimes floating, rhizomatous, stoloniferous, tufted, erect, decumbent, auricles absent, leaf blades linear, ligule an unfringed membrane, plants bisexual, inflorescence racemose, a single open raceme with distant and deflexed branches, spikelets solitary and pedicellate, 2 glumes membranous and unequal, upper glume 1- to 3-nerved, lemmas 7-nerved with or without a terminal awn, palea keels narrowly winged and dorsally notched or awned, 2 membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, dry sandy places, shallow waters, wet meadows, marshes, low-lying areas, poorly drained soils, along streams, type *Pleuropogon sabinei* R. Br., see *Chloris Melvillianiana* 31. 1823, *Annals of Natural History* 1: 283. 1838, *Nomenclator Botanicus. Editio secunda* 2: 29, 355. 1841 and *Novon* 4(1): 16-17. 1994, *Global Change Biology* vol. 6, issue s1: 19-34. Dec 2000, *Contributions from the United States National Herbarium* 48: 421, 431, 504-505. 2003.

Species

P. californicus (Nees) Benth. ex Vasey (*Lepitoma brevifolia* Torr. ex Steud.; *Lophochlaena californica* Nees; *Pleuropogon davyi* L.D. Benson; *Pleuropogon douglasii* Trin. ex Steud.)

North America, U.S. Short-lived perennial, see *Annals of Natural History* 1: 283. 1838, *Nomenclator Botanicus. Editio secunda* 2: 355. 1841, *The Grasses of the United States* 40. 1883 and *American Journal of Botany* 28: 360. 1941, *Novon* 4: 17. 1994.

in English: annual semaphore grass

P. californicus (Nees) Benth. ex Vasey var. ***californicus*** (*Lepitoma brevifolia* Torr. ex Steud.; *Lophochlaena californica* var. *californica*; *Pleuropogon douglasii* Trin. ex Steud.)

North America, U.S. See *Annals of Natural History* 1: 283. 1838, *Nomenclator Botanicus. Editio secunda* 2: 355. 1841, *The Grasses of the United States* 40. 1883 and *American Journal of Botany* 28: 360. 1941, *Novon* 4: 17. 1994.

in English: annual semaphore grass

P. californicus (Nees) Benth. ex Vasey var. ***davyi*** (L.D. Benson) But (*Lophochlaena californica* var. *davyi* (L.D. Benson) Á. Löve & D. Löve; *Pleuropogon davyi* L.D. Benson)

North America, U.S. See *American Journal of Botany* 28: 360. 1941, *Taxon* 27(4): 375. 1978, *Novon* 4(1): 17. 1994.

in English: annual semaphore grass

P. hooverianus (L.D. Benson) J.T. Howell (*Lophochlaena refracta* var. *hooveriana* (L.D. Benson) Á. Löve & D. Löve; *Pleuropogon refractus* var. *hooverianus* L.D. Benson)

North America, U.S. Meadows, freshwater wetlands, see *Proceedings of the American Academy of Arts and Sciences* 8: 409. 1872, *The Grasses of the United States* 40. 1883 and *American Journal of Botany* 28: 360. 1941, *Leaflets of Western Botany* 4(10): 247. 1946, *Taxon* 27(4): 375. 1978.

in English: north coast semaphore grass

P. oregonus Chase (*Lophochlaena oregona* (Chase) But; *Pleuropogon oregonus* (Gray) Benth.)

North America, U.S. Rare, wet meadows, marshlands, stream banks, see *The Grasses of the United States* 40. 1883 and *Journal of the Washington Academy of Sciences* 28(2): 52, f. 1. 1938, *Madroño* 33(2): 146. 1986.

in English: Oregon semaphore grass

P. refractus (A. Gray) Benth. (*Lophochlaena refracta* A. Gray; *Pleuropogon oregonus* (Gray) Benth.; *Pleuropogon refractus* var. *hooverianus* L.D. Benson; *Pleuropogon refractus* var. *refractus*)

West Coast of North America, U.S. Perennial, spikelets angled downward and stalked on a single axis, occurs in seasonally wet places, lakeshores, along creeks, rivers, in alluvial forests, see *Proceedings of the American Academy of Arts and Sciences* 8: 409. 1872, *The Grasses of the United States* 40. 1883 and *American Journal of Botany* 28: 360. 1941, *Leaflets of Western Botany* 4(10): 247. 1946, *Taxon* 27(4): 375. 1978.

in English: nodding semaphore grass, nodding false semaphore grass

P. sabinei R. Br. (also spelled ***sabinii***) (*Melica sabinei* (R. Br.) Raspail; *Pleuropogon sabinei* f. *aquaticus* Simmons; *Pleuropogon sabinei* f. *sabinei*; *Pleuropogon sabinei* f. *terrestris* Simmons; *Pleuropogon sabinei* var. *elatior* Hook.; *Pleuropogon sabinei* var. *humilior* Hook.; *Pleuropogon sabinei* var. *sabinei*) (for the British zoologist and explorer Edward Sabine, 1788-1883, botanical collector, 1817 F.L.S., 1818 F.R.S., astronomer to Arctic expeditions under J. Ross, 1818 and W.E. Parry, 1819-20, 1821-23 and 1824-25, President Royal Society 1861-1871, brother of Joseph Sabine (1770-1837). See Sir William Edward Parry (1790-1855), *Journal of a Voyage for the Discovery of a North-West Passage*. London 1821 and *Journal of a Second Voyage for the Discovery of a North-West Passage*. London 1824; F. Griffiths, editor *Politics of the Northwest Passage*. Kingston 1987; Bern. Keating, *The Northwest Passage*. Chicago 1970; John Dunmore, *Who's Who in Pacific Navigation*. 18, 73, 214. University of Hawaii Press, Honolulu 1991; A. Hervé & F. de Lanoye, *Voyages dans les glaces du Pole Arctique à la recherche du Passage Nord-Ouest*. Paris 1854; J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 3: 197. Boston 1965; Emil Bretschneider (1833-

1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition, St. Petersburg 1898.] Leipzig 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 602. London 1994; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; Mea Allan, *The Hookers of Kew*. London 1967; H.R. Fletcher and W.H. Brown, *Royal Botanic Garden Edinburgh, 1670-1970*. Edinburgh 1970; H.R. Fletcher, *Story of the Royal Horticultural Society, 1804-1968*. Oxford 1969; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; Kenneth Lemmon, *The Golden Age of Plant Hunters*. London 1968; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London 1904; Nathan Reingold, in *D.S.B. (or Dictionary of Scientific Biography*. Editor in Chief Charles Coulston Gillispie.) 12: 49-53. New York 1981)

North America, U.S., Canada. Erect, decumbent, glabrous, rooting at the lower nodes, rhizomatous, leaves submerged and emergent, inflorescence racemose, 2-awned, stream borders, damp ground, wet meadows, ponds, shallow waters, see *Species Plantarum* 1: 66. 1753, *Chloris Melviliana* 31. 1823, *Annales des Sciences Naturelles (Paris)* 5: 443. 1825, *Flora Boreali-Americana* 2: 249. 1840 and Herman Georg Simmons (1866-1943), *The Vascular Plants in the Flora of Ellesmereland* 170. Kristiania [Oslo] 1906 [also *Report of the Second Norwegian Arctic Expedition in the "Fram" 1898-1902* 1906], *Novon* 4(1): 16. 1994.

in English: false semaphore grass

Plinthanthesis Steudel = *Blakeochloa* Veldkamp

From the Greek *plinthos*, *plinth* "pedestal of a column" and *anthesis* "flowering," *anthos* "flower," referring to the raceme-like inflorescence; some suggest a derivation from *plinthos* and *antithesis* "the opposite," alluding to the awn.

About 3 species, southeastern Australia. Arundinoideae, or Danthonioideae, Danthonieae, perennial, tufted, herbaceous, unbranched, glabrous nodes, ligule a fringe of short hairs, leaf blade flat or convolute, auricles absent, plants bisexual, inflorescence paniculate, spikelets pedicellate, florets 2-many, 2 glumes 1- to 3-nerved more or less equal, lemmas membranous 7- to 9-nerved mucronate or with a geniculate central awn, lemmas rounded on the back and more or less evenly pubescent in lower half only, palea entire or 2-toothed, 2 lodicules membranous and not toothed, 3 stamens, ovary glabrous, 2 stigmas, upland, sandstone, swamps, open habitats, sometimes referred to *Rytidosperma* Steudel and *Danthonia* DC. sensu lato, type *Plinthanthesis urvillei* Steud., see *Flore Française. Troisième Édition* 3: 32. 1805, *Prodromus Florae Novae Hollandiae* 177, 182. 1810, E.G. von Steudel (1783-1856),

Synopsis plantarum glumacearum. 1: 14, 425. Stuttgartiae (Dec.) 1853 [1855] and S.T. Blake, "*Plinthanthesis* and *Danthonia* and a review of the Australian species of *Lep-tochloa* (Gramineae)." *Contributions from the Queensland Herbarium* 14: 3. 1972, *Senckenbergiana Biologica* 56: 163. 1975, *New Zealand Journal of Botany* 17(3): 324. 1979, *Flora of Macaronesia: Checklist of Vascular Plants (edition 2)* 1: 93. Oslo 1979, *Taxon* 29: 293. 1980, *Taxon* 30: 478, 657. 1981, *Taxon* 31: 737. 1982, A. Hansen & P. Sunding, *Flora of Macaronesia: Checklist of Vascular Plants*. 4th revised edition. *Sommerfeltia*, vol. 17, 294 p., Botanical Garden and Museum, University of Oslo, Oslo, Norway 1993, H.P. Linder & G.A. Verboom, "Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex." *Telopea* 6(4): 597-627. 1996, H.P. Linder, "Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae)." *Telopea* 7(3): 269-274. 1997, *Flora of Australia* vol. 44B, Poaceae 3: 30-32. 2005.

Species

P. paradoxa (R. Br.) S.T. Blake (*Blakeochloa paradoxa* (R. Br.) Veldkamp; *Danthonia paradoxa* R. Br.; *Triodia littoralis* Spreng.)

New South Wales, Victoria. Perennial, caespitose, hard, woody, leaf blades rolled and scabrous, bisexual florets 3-5, often with 1 reduced sterile floret above, lemma awned and 2-lobed, awn bent, palea 2-keeled and silky, grows in swamps on sandstone, marshy habitats, see *Prodromus Florae Novae Hollandiae* 177, 182. 1810, *Systema Vegetabilium, editio decima sexta* 1: 330. 1825 [1824] and *Contributions from the Queensland Herbarium* 14: 3. 1972, *Taxon* 29: 296. 1980, *Taxon* 30(2): 478. 1981.

in English: wiry wallaby-grass

P. rodwayi (C.E. Hubbard) S.T. Blake (*Blakeochloa rodwayi* (C.E. Hubb.) Veldkamp; *Danthonia rodwayi* C.E. Hubbard) (named for the Australian botanist Frederick A. Rodway, 1880-1956, botanical collector in New South Wales and Western Australia, son of Leonard Rodway; or, according to some author, possibly after the British (b. Devon) botanist Leonard Rodway, 1853-1936 (d. Tasmania), dental surgeon, 1880 to Tasmania, 1896-1932 Honorary Government Botanist, 1928-1932 Director of the Herbarium and Botanic Garden, Hobart, his writings include *The Tasmanian Flora*. Tasmania, Hobart 1903 and *Some Wild Flowers of Tasmania*. Hobart 1910; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 168. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 335. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 351. 1973; Stafleu and Cowan, *Taxonomic literature*. 4: 834-836. 1983)

New South Wales, Victoria. Perennial, caespitose, leaf blade linear and scabrous, 2 bisexual florets, sometimes 1 reduced sterile floret above, lemmas usually awnless or mucronate, palea 2-keeled, grows in montane woodland, vulnerable species, see *Hooker's Icones Plantarum* ser. 5, 5, subt. 3439. 1943, *Contributions from the Queensland Herbarium* 14: 3. 1972, *Taxon* 29: 296. 1980, *Taxon* 30(2): 478. 1981, J.D. Briggs & J.H. Leigh, *Rare or Threatened Australian Plants*. Melbourne, Australia: CSIRO Publications 1996, K.S. Walter and H.J. Gillett, [editors.] *1997 IUCN Red List of Threatened Plants*. Compiled by the World Conservation Monitoring Centre. IUCN — The World Conservation Union, Gland, Switzerland and Cambridge, U.K. 1998.

in English: wallaby-grass

P. urvillei Steudel (*Blakeochloa urvillei* (Steudel) Veldkamp; *Danthonia urvillei* (Steud.) Conert; *Danthonia vickeryi* or *vickeryae* C.E. Hubbard) (named for the French traveler and explorer Jules Sébastien César Dumont d'Urville, 1790-1842, plant collector, a member of the Linnean Society and the Société de Géographie, he took part in the voyage of the *Coquille* (commanded by L.I. Duperrey), from 1825 commander of the *Astrolabe* (former *Coquille*), his writings include *Enumeratio Plantarum quas in insulis archipelagi aut littoribus Ponti-Euxinii, annis 1819 et 1820, collegit atque detexit J. Dumont D'Urville*. Paris 1822, *Voyage au Pôle Sud and dans l'Océanie sur les corvettes L'Astrolabe et La Zélée*. Paris 1841-1846 and *Voyage de Découvertes autour du Monde ... sur la corvette L'Astrolabe pendant les Années 1826-1829*. Paris 1832-1848; see E.S. Dodge, *Islands and Empire: Western Impact on the Pacific and East Asia*. Minneapolis 1976; Gaston Meissas, *Les grands voyageurs de notre siècle*. Paris 1889; J.H. Barnhart, *Biographical notes upon botanists*. 1: 480. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 109. Boston, Mass. 1972; R. Glenn, *The Botanical Explorers of New Zealand*. Wellington 1950; John Dunmore, *Who's Who in Pacific Navigation*. University of Hawaii Press, Honolulu 1991)

Australia. Perennial, caespitose, leaf blade rolled, inflorescence open and spreading, bisexual florets 3-4, often one reduced sterile floret, glumes subequal, lemmas silky and 2-lobed, awn reflexed or twisted at the base, awns exerted from the glumes, grows in woodland, see *Synopsis Plantarum Glumacearum* 1: 14. 1855 [1853] and *Hooker's Icones Plantarum* ser. 5, 5, subt. 3439, p. 2. 1943, *Senckenbergiana Biologica* 56: 153-164. 1975, *Taxon* 29: 296. 1980, *Taxon* 30(2): 478. 1981.

in English: wallaby-grass

Plotia Steudel = *Glyceria* R. Br., *Plotia* Adans. (Myrsinaceae), *Plotia* Neck. (Myrsinaceae)

For the English (b. Borden, Kent) naturalist Robert Plot, 1640-1696 (d. Kent), chemist, 1677 a Fellow of the Royal Society, 1683 first Keeper of the Ashmolean Museum at Oxford, his writings include *The Natural History of Oxfordshire*. [Folio, first edition, the classic Baconian natural history] The Theatre: Oxford 1677 and *De origine fontium Oxonii* 1685. See R. Pulteney, *Historical and Biographical Sketches of the Progress of Botany in England*. 1: 350-352. London 1790; James Britten, *The Sloane herbarium ... revised and edited by J.E. Dandy*. 1958; A.G. Keller, in *D.S.B.* 11: 40-41. 1981; R.T. Gunther, *Early Science in Cambridge*. Oxford 1937; Elisabeth Leedham-Green, *A Concise History of the University of Cambridge*. Cambridge, University Press 1996.

Pooideae, Meliceae, see *Familles des Plantes* 2: 226. 1763, Noel [Natalis] Joseph de Necker (1730-1793), *Elementa botanica genera genuina, species naturales omnium vegetabilium detectorum ... secundum systema omologium seu naturale...* 2: 55. Neowedae ad Rhenum [Neuwied] 1790, *Prodromus Florae Novae Hollandiae* 179, 532. 1810, *Nomenclator Botanicus. Editio secunda* 2: 356. 1841 and *Contributions from the United States National Herbarium* 48: 371-379, 505. 2003.

Poa L. = *Arctopoa* (Griseb.) Probat., *Bellardiochloa* Chiov., *Dasympoa* Pilg., *Neuropoa* Clayton, *Ochlopoa* (Asch. & Graebn.) H. Scholz, *Oreopoa* Grand., *Panion* Lunell, *Panicularia* Heist. ex Fabr., *Parodiochloa* C.E. Hubb., *Poagris* Raf., *Poagrostis* Raf., *Poidium* Nees

From the ancient Greek name *poa, poie, poia* "grass, pasture grass"; see Carl Linnaeus (1707-1778), *Species Plantarum*. 67. 1753 and *Genera Plantarum*. Edition 5. 31. 1754; Giovanni Semerano, *Le origini della cultura europea*. Dizionario Etimologici. Basi semitiche delle lingue indeuropee. Dizionario della lingua Greca. 2(1): 236. Leo S. Olschki Editore, Firenze 1994.

Some 200(-300)/500 species, cosmopolitan, cool temperate and cold regions, tropical mountains. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Poinae, annual or perennial, more or less 15 species annual, some apomixis, variable in foliage texture and color, glabrous, slender to robust, herbaceous, tufted, sometimes rhizomatous or stoloniferous, caespitose or decumbent, some small and delicate, straggling, hollow internodes, unbranched, leaves usually mostly basal, auricles absent, membranous ligules, leaf blades

usually flat and sometimes with 2 visible veins on each side of the central nerve, leaves narrow and usually linear or linear-lanceolate, plants bisexual with bisexual solitary spikelets or sometimes dioecious, inflorescence paniculate open or contracted, spikelets stipitate and often compressed laterally or flattened, with hermaphrodite florets or without, spikelets hermaphrodite or female-only or hermaphrodite and female-only or male-only, uppermost flowers rudimentary or reduced, male spikelets with glumes, nerved glumes acute and persistent, glumes shorter than the florets and shorter than the adjacent lemmas, lemma smooth, keeled and awnless lemmas, palea awnless and 2-keeled with keels wingless, 2 lodicules free and membranous, stamens 3 or rarely 1, ovary glabrous, stigmas white, round hilum, the web or hairy callus present or absent, callus short and blunt, several species reproduce asexually, variable habit and habitat, value in soil conservation and wildlife habitat, most species occur in soils of low fertility, cultivated fodder, weed and pasture species, lawns and playing fields, shade species, growing in grasslands and meadows, in coastal sand, rainforest, pampas, a very difficult genus, type *Poa pratensis* L., see *Species Plantarum* 1: 63, 67-68. 1753, *Systema Naturae, Editio Decima* 2: 874. 1759, *Enumeratio Methodica Plantarum* 207. 1759, *Prodromus Florae Novae Hollandiae* 179. 1810, *Essai d'une Nouvelle Agrostographie* 97. 1812, *Flora Americae Septentrionalis; or, ...* 1: 76. 1814, *Nova Genera et Species Plantarum* 1: 158. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 696. 1817, *Chloris Melvilliana* 29. 1823, *Reliquiae Haenkeanae* 1(4-5): 271. 1830, *An Introduction to the Natural System of Botany* 450. 1836, *Flora Telluriana* 1: 18. 1837, *A Manual of the Botany of the Northern United States* 596. 1848, *Flora Rossica* 4(13): 392. 1852, *Fl. N.Z.* 1: 307. 1853, *Synopsis Plantarum Glumacearum* 1: 263, 279, 288. 1854, *Flora der Provinz Brandenburg* 1: 844. 1864, *Conspectus florum europaeae: seu Enumeratio methodica plantarum phanerogamarum Europae indigenarum, indicatio distributionis geographicae singularum etc.* 835. 1882, *Flora Europaea* 26: 186. 1891, *Contributions from the United States National Herbarium* 3(4): 262. 1895, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 716-717. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 5. 1899 and *Synopsis der mitteleuropäischen Flora* 2: 387. 1900, *T.N.Z.I* 46: 38. 1914, *American Midland Naturalist* 4: 221. 1914, *Illustrated Flora of the Pacific States* 1: 201, f. 461. 1923, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 725. 1929, *Stud. Veg. Piemonte* 13, 60. 1929, *Publications of the Field Columbian Museum, Botanical Series* 8(5): 298. 1931, *Flora URSS* 2: 397, 401, 415. 1934, *Svensk Botanisk Tidskrift* 32: 296. 1938, *Journal of the Bombay Natural History Society* 50(4): 1-838. 1952, *N.Z. J. Sci. Tech.* 38A: 742-751. 1957, *Nature* 189: 160. 1961, *Austral. J. Bot.* 9: 152-161. 1961, *Arktische-skaia Flora SSSR* 2: 121. 1964, *Rec. Dom. Mus.* 5(15): 127.

1965, *New Zealand Journal of Botany* 6: 267-276. 1968, *Novosti Sist. Vyss. Rast.* 8: 34. 1971, *Novosti Sist. Vyss. Rast.* 11: 49. 1974, *Bulletin of the British Museum (Natural History), Botany* 8: 395-396. 1981, *Darwiniana* 23: 303-306. 1981, *Kew Bulletin* 40(4): 728. 1985, *New Zealand J. Bot.* 24: 425-503. 1986, *Flora and Fauna Alpine Australasia* 413-434. 1986, *Systematic Botany* 16(3): 512, 513, 523. 1991, *Phytologia* 71(5): 410. 1991, *Bulletin, University Museum, University of Tokyo* 34: 169-249. 1991, *Blumea* 38: 421. 1994, *Flora of Ethiopia and Eritrea* 7: 19-23. 1995, *Australian Journal of Botany* 43: 577-599. 1995, *Novon* 8(2): 187-188, 193. 1998, *Willdenowia* 28: 172. 1998, *Taxon* 49(2): 254. 2000, *Ber. Institut für Landschafts- und Pflanzenökologie Univ. Hohenheim* 16: 58-59. Stuttgart 2003, *Flora Reipublicae Popularis Sinicae* 9(2): 178-179, 198, 210. 2003, *Contributions from the United States National Herbarium* 48: 119, 245, 468, 473-476, 477, 505-580, 581, 582-583. 2003, *Am. J. Bot.* 91: 1709-1725. 2004, *Journal of Ecology* 93(3): 576-583. June 2005, *Ecography* 28(3): 273-282. June 2005, *Grass and Forage Science* vol. 60, issue 2: 136-145, 146-150. June 2005, *New Phytologist* 166(3): 737-751. June 2005.

Species

P. abbreviata R. Br. (*Poa abbreviata* Blytt ex Ledeb., nom. illeg., non *Poa abbreviata* R. Br.; *Poa jordalii* A.E. Porsild) (named for Louis Henrik Jordal, 1919-1951, botanical collector in Alaska, killed in a plane crash)

North America, U.S., Canada, Circumpolar. Caespitose, low to very dwarf, erect, leaves dark green and mostly basal, ligules membranous and lanceolate, inflorescence paniculate, minute and soft spikelets, lemma hairy, growing along streams, lakeshores, near the sea, on the beach ridges near the shoreline, on clay substrate, in moist to well-drained areas, imperfectly drained moist areas, dry meadows, see *Chloris Melvilliana* 29. 1823, *Flora Rossica* 4(13): 373. 1852 and *Meddelelser om Grønland* 64: 171, f. 1. 1927, *The Canadian Field-Naturalist* 79: 82, f. 1. 1965, *Botaniska Notiser* 126(4): 468. 1973, *Novosti Sist. Vyss. Rast.* 11: 30. 1974, *Phytologia* 43(1): 106. 1979, *Bot. Zhurn. (Moscow & Leningrad)* 69(2): 259. 1984.

in English: Northern bluegrass

P. abbreviata R. Br. subsp. *abbreviata*

North America. See *Chloris Melvilliana* 29. 1823.

in English: Northern bluegrass

P. abbreviata R. Br. subsp. *marshii* Soreng

North America, California. Perennial, extremely rare, slopes, listed as sensitive by the Nevada Natural Heritage Program, see *Phytologia* 71(5): 390, f. 1a, e. 1991 [1992].

in English: Marsh bluegrass, Marsh's bluegrass

P. abbreviata R. Br. subsp. *pattersonii* (Vasey) Á. & D. Löve & B.M. Kapoor (*Poa abbreviata* subsp. *jordalii*)

(Porsild) Hultén; *Poa abbreviata* subsp. *jordalii* (A.E. Porsild) Tzvelev; *Poa abbreviata* var. *jordalii* (Porsild) Boivin; *Poa abbreviata* var. *jordalii* (A.E. Porsild) Prob., nom. illeg., non *Poa abbreviata* var. *jordalii* (A.E. Porsild) B. Boivin; *Poa jordalii* Porsild; *Poa pattersonii* Vasey)

North America, California. Mountains, sometimes treated as *Poa pattersonii* Vasey, see *Contributions from the United States National Herbarium* 1(8): 275. 1893 and *The Canadian Field-Naturalist* 79: 82, f. 1. 1965, *Arctic and Alpine Research* 3(2): 143. 1971, *Botaniska Notiser* 126(4): 468. 1973, *Novosti Sist. Vyss. Rast.* 11: 30. 1974, *Phytologia* 43(1): 106. 1979, *Bot. Zhurn. (Moscow & Leningrad)* 69(2): 259. 1984.

P. acicularifolia Buchanan

New Zealand. Perennial, low to small, rhizomatous, woody and much-branched rhizome, rooting at the nodes, leaf sheath membranous, ligule entire and tapered, inflorescence an open loose panicle, glumes subequal, lemma obtuse, palea keels scabrous to scabrid, see *Indigenous Grasses of New Zealand*, t. 49A. 1880 and *New Zealand J. Bot.* 24: 442. 1986.

P. acicularifolia subsp. *acicularifolia*

New Zealand. Alpine, mat-forming, low, curved leaves short and stiff, found on limestone, see *Indigenous Grasses of New Zealand*, t. 49A. 1880 and *New Zealand J. Bot.* 24: 425-503. 1986.

P. acicularifolia subsp. *ophitalis* Edgar

New Zealand. Subalpine, tufted, leaves erect, short hairy lemmas, loose mats forming, see *Indigenous Grasses of New Zealand*, t. 49A. 1880 and *New Zealand Journal of Botany* 24(3): 444-446, f. 3. 1986.

P. acinaciphylla E. Desv. (*Poa villaruelii* Phil.)

Chile. See *Flora Chilena* 6: 412. 1854, *Anales de la Universidad de Chile* 94: 169. 1896.

P. acroleuca Steudel (*Poa familiaris* Steud.; *Poa psilocaulis* Steud.)

Asia, Japan. See *Synopsis Plantarum Glumacearum* 1: 256, 426. 1854, *Annales Museum Botanicum Lugduno-Batavi* 2: 280. 1866 and *Botanical Magazine* 27: 116. 1913, *Bot. Mag. Tokyo* 30: 227. 1916, *Botanical Magazine (Tokyo)* 41: 640. 1927, *Journal of Japanese Botany* 32: 306. 1957, *Grasses of Japan and its Neighboring Regions* 523. 1987, *Journal of Japanese Botany* 63: 334-343. 1988, *Botanical Magazine* 101: 311-331. 1988, *Journal of Japanese Botany (Tokyo)* 67(4): 205. 1992.

in Japan: mizoichigotsunagi

P. acroleuca Steudel f. *submoniliformis* (Makino) T. Koyama (*Poa acroleuca* f. *robusta* Hack. ex Honda; *Poa acroleuca* var. *submoniliformis* Makino)

Japan. See *Synopsis Plantarum Glumacearum* 1: 256. 1854 and *Botanical Magazine* 27: 116. 1913, *Grasses of Japan and its Neighboring Regions* 523. 1987.

P. aequatoriensis Hack. (*Poa subspicata* (J. Presl) Kunth)

South America, Peru, Ecuador. Perennial, scabrous, leaves glaucous to blue-green, reddish to green-purplish inflorescence, see *Reliquiae Haenkeanae* 1(4-5): 281. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 326. 1833 and *Österreichische Botanische Zeitschrift* 52(11): 450. 1902.

P. aequigluma Tovar (*Poa perligulata* Pilg.; *Poa pseudoaequigluma* Tovar)

Peru, Bolivia. Perennial, caespitose, low, coriaceous, tough, upright or arching, clumped, cushion forming, leaves basal and ascending, oblong panicle contracted with 5-20 spikelets oblong glabrous 2-flowered, equal glumes oblong glabrous 3-nerved acute, lower lemma oblong 5-nerved acute or blunt, palatable, moist puna, páramos, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(108): 779. 1933, *Memorias del Museo de Historia Natural "Javier Prado"* 15: 13, t. 2A. 1965, *Boletín de la Sociedad Peruana de Botanica* 7: 8. 1974, *Kurtziana* 28(1): 95-136. 2000.

P. affinis R. Br. (*Poa affinis* Salzm. ex Steud., nom. illeg., non *Poa affinis* R. Br.; *Poa caespitosa* var. *affinis* (R. Br.) Benth.)

Australia, Victoria, New South Wales. Perennial, densely or loosely caespitose, rarely rhizomatous or stoloniferous, often branching at the nodes, auricles present or absent, leaf sheaths keeled, ligule membranous to chartaceous and obtuse to truncate, leaf blade flat and grooved, green or purple panicle erect and much exerted, chasmogamous spikelets, glumes acute, lemmas more or less pubescent, callus glabrous or webbed, palea narrowly elliptic to oblong, anthers yellow or purple, web present or absent, ovary glabrous, grows near the coast, on sandstone, see *Prodromus Florae Novae Hollandiae* 179. 1810, *Nomenclator Botanicus. Editio secunda* 2: 357. 1841, *Flora Novae-Zelandiae* 1: 307. 1853, *Flora Australiensis: A Description ...* 7: 652. 1878 and *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970, *New Zealand J. Bot.* 24: 450-451. 1986.

P. aitchisonii Boiss. (after the British (b. India) botanist James Edward Tierney Aitchison, 1836-1898 (Surrey), physician, M.D. Edinburgh 1858, East India Company (Bengal Medical Service), plant collector in India and Afghanistan and Ireland, 1863 Fellow of the Linnean Society, 1883 Fellow of the Royal Society; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 24. 1965; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. London 1914; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 5. Boston, Mass. 1972; E.M. Tucker, *Catalogue of the*

library of the Arnold Arboretum of Harvard University. 1917-1933; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 129. London 1904)

Pakistan, Afghanistan, the Himalayas. See *Flora Orientalis* 5: 602. 1884.

P. aitosensis Kozh. & Stoeva

Bulgaria. Rare species.

P. alopecurus (Gaudich. ex Mirb.) Kunth (*Aira superbiens* Steud.; *Arundo alopecurus* Gaudich. ex Mirb., also spelled *alopecuros*; *Arundo antarctica* d'Urv.; *Festuca alopecurus* (Gaudich. ex Mirb.) Brongn., nom. illeg., non *Festuca alopecurus* Schousboe; *Festuca alopecurus* (Gaudich. ex Mirb.) d'Urv., nom. illeg., non *Festuca alopecurus* Schousboe; *Festuca antarctica* (d'Urv.) Kunth, nom. illeg., non *Festuca antarctica* Spreng.; *Festuca antarctica* var. *g* Hook.f.; *Festuca arenaria* Lam., nom. illeg., non *Festuca arenaria* Osbeck; *Festuca arundo* Hook.f.; *Festuca fuegiana* Hook.f.; *Festuca fuegiana* var. *vivipara* Hook.; *Poa alopecurus* subsp. *fuegiana* (Hook.f.) D.M. Moore & Dogg.; *Poa antarctica* (d'Urv.) Raspail; *Poa antarctica* (d'Urv.) St.-Yves, nom. illeg., non *Poa antarctica* (d'Urv.) Raspail; *Poa antarctica* (d'Urv.) Pilg., nom. illeg., non *Poa antarctica* (d'Urv.) Raspail; *Poa flabellata* var. *antarctica* (d'Urv.) Raspail; *Poa fuegiana* (Hook.f.) Hack.; *Poa magellanica* Phil. ex Speng.; *Poa superbiens* (Steud.) Hauman & Parodi)

Argentina, Chile, Antarctic. Endangered species, found in sandy areas, see *Encyclopédie Méthodique, Botanique* 1: 191. 1791, *Annales des Sciences Naturelles, Botanique* 5: 100. 1825, *Mémoires de la Société Linnéenne de Paris* 4: 602, 604. 1826, *Révision des Graminées* 1: 116. 1829, *Annales des Sciences d'Observation* 2: 87. Paris 1829, *Voyage autour du Monde* 2(2): 32. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 408. 1833, *Flora Antarctica* 2: 380-381. 1846-47, *Synopsis Plantarum Glumacearum* 1: 424. 1854, *Anales del Museo Nacional de Buenos Aires* 5: 91. 1896 and *Svenska Expeditionen till Magellansländer* 3(5): 225. 1900, *Kongliga Svenska Vetenskapsakademiens Handlingar* 50: 14. 1913, *Candollea* 3: 281. 1927, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 344. 1929, *Bulletin, British Antarctic Survey* 43: 105. 1976.

P. alopecurus (Gaudich. ex Mirb.) Kunth subsp. ***alopecurus*** (*Arundo alopecuros* Gaudich. ex Mirb.; *Arundo antarctica* d'Urv.; *Poa flabellata* var. *alopecurus* (Gaudich. ex Mirb.) Raspail; *Poa flabellata* var. *antarctica* (d'Urv.) Raspail; *Poa rigidifolia* var. *rigidifolia*)

Argentina, Chile, Antarctic. See *Annales des Sciences Naturelles, Botanique* 5: 100. 1825, *Mémoires de la Société Linnéenne de Paris* 4: 602. 1826, *Annales des Sciences d'Observation* 2: 86-89. 1829, *Synopsis Plantarum Glumacearum* 1: 260. 1854.

P. alopecurus (Gaudich. ex Mirb.) Kunth subsp. ***fuegiana*** (Hook.f.) D.M. Moore & Dogg. (*Aira superbiens* Steud.; *Deyeuxia vivipara* Phil.; *Festuca fuegiana* Hook.f.; *Festuca fuegiana* var. *vivipara* Hook.; *Festuca pogonantha* Franch.; *Poa fuegiana* (Hook.f.) Hack.; *Poa fuegiana* var. *fuegiana*; *Poa fuegiana* var. *involuta* Hack.; *Poa pogonantha* (Franch.) Parodi; *Poa superbiens* (Steud.) Hauman & Parodi)

Argentina, Chile, Antarctic. Sandy areas, see *Species Plantarum* 1: 63, 67, 73. 1753, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Flora Antarctica* 2: 380. 1846, *Synopsis Plantarum Glumacearum* 1: 424. 1854, *Linnaea* 29(1): 90. 1858, *Mission Scientifique du Cap Horn, Botanique* 5: 387, t. 10. 1889 and *Svenska Expeditionen till Magellansländer* 3(5): 225. 1900, *Wissenschaftliche Ergebnisse der Schwedischen Südpolar-Expedition 1901-1903* 4(4): 7. 1906, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 344. 1929, *Revista Argentina de Agronomía* 20: 180. 1953, *Bulletin, British Antarctic Survey* 43: 105. 1976.

P. alopecurus (Gaudich. ex Mirb.) Kunth subsp. ***prichardii*** (Rendle) Giussani & Soreng (*Festuca shuka* Speng.; *Poa commersonii* Franch.; *Poa prichardii* Rendle; *Poa shuka* (Speng.) Parodi) (named for Major Hesketh Vernon Hesketh Prichard, 1876-1922, perished of blood poisoning, traveler, explorer, 1900-1901 London Daily Express expedition to Patagonia, author of *En el corazón de la Patagonia*. En busca del último milodón. 1900/1901. Ediciones Zagier & Urruty 1994, *Hunting Camps in Wood and Wilderness* [Argentina (Patagonia), and Canada (Newfoundland)]. William Heinemann 1910. See Eric Parker, *Hesketh Prichard, D.S.O., M.C. Hunter, Explorer, Naturalist, Cricketer, Author, Soldier*. London: Unwin 1924; *Through the Heart of Patagonia*. By Hesketh Vernon Hesketh Prichard, Francisco Pascasio Moreno, Arthur Smith Woodward, Oldfield Thomas, James Britten, A.B. Rendle and John Guille Millais. New York, D. Appleton and Co., 1902)

Argentina, Chile, Antarctic. See *Mission Scientifique du Cap Horn, Botanique* 5: 385. 1889, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 95. 1896 and *Journal of Botany, British and Foreign* 42: 324. 1904, *Revista Argentina de Agronomía* 20(4): 180. 1953, *Ann. Missouri Bot. Gard.* 87: 220. 2000, *Contributions from the United States National Herbarium* 48: 508. 2003.

P. alpina L. (*Poa alpina* Kom.; *Poa alpina* Pall. ex Roem. & Schult.; *Poa alpina* subsp. *vivipara* (L.) Arcang.; *Poa alpina* var. *minor* Scribner, nom. illeg., non *Poa alpina* var. *minor* W.D.J. Koch; *Poa alpina* var. *vivipara* L.; *Poa badensis* Haenke ex Willd.; *Poa badensis* Haenke ex Willd. subsp. *insularis* (Parl.) Hayek; *Poa borisii* Stef.; *Poa elbrussica* Timpko; *Poa insularis* Parl.; *Poa pratensis* var. *alpina* (L.) Huds.; *Poa violascens* Phil., nom. illeg., non *Poa violascens* Cheval.; *Poa vivipara* (L.) Willd.; *Uralespis mutica* E. Fourn.; *Uralespis mutica* E. Fourn.)

Central Asia, Europe, Arctic regions of the Northern Hemisphere. Perennial bunchgrass, tufted, alpine, small size, erect, very low-growing, leaves mostly in a basal tuft, glabrous, smooth, not very leafy, leaf blades persistent, no auricles, old sheaths persist at the base of the plant, blunt ligules erose, thick leaves linear and short-acuminate, dense panicles ovoid and shortly branched, spikelets ovate, glumes subequal broad, lemmas acute, web absent, pasture species, forage, useful for erosion control, commonly occurs in mountain meadows, in open meadows or gravelly disturbed sites, snow patches, boreal and mountain climates, on calcareous soils, see *Species Plantarum* 1: 67-68. 1753, *Flora Anglica, Editio Altera* 39. 1778, *Species Plantarum, Editio quarta* 1: 392. 1797, *Systema Vegetabilium* 2: 537. 1817, *Linnaea* 29(1): 100. 1858, *Compendio della Flora Italiana* 185. 1871, *Mexicanas Plantas* 2: 110. 1886, *Grasses of North America for Farmers and Students* 2: 543. 1896 and *Contrib. U. S. Nat. Herb.* 13: 68. 1910, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Fitologija* 27: 3-23. 1984, *Fitologija* 30: 3-29. 1985, *Taxon* 35: 195. 1986, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *Bot. Zhurn.* 72: 1069-1074. 1987, *Willdenowia* 19: 199-213. 1989, *Amer. J. Bot.* 77: 1385, 1395, 1396, 1397. 1990, *International Organization of Plant Biosystematists Newsletter* 24: 15-19. 1995, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 254. 2000, *Diversity* 16: 43-45. 2000.

in English: bluegrass, alpine meadow grass, alpine bluegrass

in French: pâturin des Alpes

P. alpina L. subsp. ***alpina*** (*Poa blepharachne* Steud.)

Central Asia, Europe, Arctic regions of the Northern Hemisphere. See *Synopsis Plantarum Glumacearum* 1: 252-253. 1854.

P. alpina L. subsp. ***insularis*** (Parl.) Hayek (*Poa alpina* subsp. *bivonae* (Parl. ex Guss.) Soják; *Poa badensis* subsp. *insularis* (Parl.) Hayek; *Poa bivonae* Parl. ex Guss.; *Poa insularis* Parl.)

Europe. See *Species Plantarum, Editio quarta* 1: 392. 1797, *Florae Siculae Synopsis* 1: 99. 1843, *Flora italiana, ossia descrizione delle piante ...* 1: 341. 1848 and *Repertorium Specierum Novarum Regni Vegetabilis* 30, vol. 3: 264. 1933.

P. alpina L. subsp. ***vivipara*** (L.) Arcang. (*Poa alpina* f. *vivipara* (L.) B. Boivin; *Poa alpina* subsp. *vivipara* (L.) Tzvelev, nom. illeg., non *Poa alpina* subsp. *vivipara* (L.) Arcang.; *Poa alpina* var. *vivipara* L.; *Poa vivipara* (L.) Willd.)

Europe. See *Species Plantarum* 1: 67. 1753, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 103. 1809, *Compendio della Flora Italiana* 185. 1871 and *Contrib. U. S. Nat. Herb.* 13: 68. 1910, *Le Naturaliste Canadien* 94(5):

628. 1967, *Novosti Sist. Vyss. Rast.* 9: 47. 1972, *Opera Botanica* 121: 19-27. 1993, *Taxon* 49(2): 254. 2000.

P. alpina L. var. ***alpina***

Denmark, Greenland.

in Danish: alm. fjeld-rapgræs, fdjeld-rapgræs

P. alpina L. var. ***vivipara*** (L.) Tzvelev (*Poa alpina* f. *vivipara* (L.) B. Boivin; *Poa alpina* subsp. *vivipara* (L.) Arcang.; *Poa alpina* subsp. *vivipara* (L.) Tzvelev, nom. illeg., non *Poa alpina* subsp. *vivipara* (L.) Arcang.; *Poa vivipara* (L.) Willd.)

Denmark, Greenland, Norway. Viviparous, see *Species Plantarum* 1: 67. 1753, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 103. 1809 and *Le Naturaliste Canadien* 94(5): 628. 1967, *Novosti Sist. Vyss. Rast.* 9: 47. 1972, *Opera Botanica* 121: 19-27. 1993, *Taxon* 49(2): 254. 2000.

in Danish: topspirende fjeld-rapgræs

P. alsodes A. Gray (*Poa diantha* Alph. Wood, nom. illeg., non *Poa diantha* Steud.) (Greek *alsodes* "woodland, growing in woods")

North America. Perennial, common in woods and alluvial woods, hillsides, cool moist woods and thickets, see *A Manual of the Botany of the Northern United States, Second Edition* 562. 1856, *A Class-book of Botany* 797. 1861, *Bulletin of the Torrey Botanical Club* 21(5): 228. 1894.

in English: grove blue grass, woodland bluegrass

P. ammophila A.E. Porsild (*Poa hartzii* subsp. *ammophila* (A.E. Porsild) Soreng)

Canada, Arctic Coast. Forming colonies, sandy soils, see *Bulletin de la Société Botanique de France* 66(7): 302. 1919 [1920], *Sargentia; continuation of the contributions from the Arnold arboretum of Harvard University* 4: 12. 1943, *Phytologia* 71(5): 404. 1991 [1992].

P. anae Tovar (*Poa rivas-martinezii* Tovar)

Peru. See *Publicaciones del Museo de Historia Natural "Javier Prado." Serie B. Botánica* 33: 3, 6. 1985.

P. anceps G. Forst. (*Poa affinis* var. *agrostioidea* Hook.f.; *Poa affinis* var. *multiflora* Hook.f.; *Poa anceps* (Gaudin) Boreau, nom. illeg., non *Poa anceps* G. Forst.; *Poa anceps* (Gaudin) Hegelm.; *Poa anceps* (Gaudin) Hegetschw. & Heer, nom. illeg., non *Poa anceps* G. Forst.; *Poa anceps* C. Presl, nom. illeg., non *Poa anceps* G. Forst.; *Poa anceps* Rehmann, nom. illeg., non *Poa anceps* G. Forst.; *Poa anceps* var. *condensata* Cheeseman; *Poa anceps* var. *densiflora* Hook.f.; *Poa anceps* var. *elata* Hook.f.; *Poa anceps* var. *foliosa* Hook.f.)

New Zealand. Perennial, very variable, coriaceous, coarse, stoloniferous with thick stolons, rooting at the nodes, leaf sheath coriaceous and strongly keeled, leaves stiff, panicle much branched and whorled, glumes subequal, lemma hairy, palea keels scabrid, coastal, cliffs, subalpine, grassland,

rocky coastal places, see *Florulae Insularum Australium Prodrumus* 8. 1786, *Prodrumus Florae Novae Hollandiae* 179. 1810, *Agrostologia Helvetica, definitionem ...* 1: 215. 1811, *Cyperaceae et Gramineae Siculae* 43. 1820, *Die Flora der Schweiz* 81. 1840, *Flora Novae-Zelandiae* 1: 306-307. 1853, *Flore du Centre de la France* (edition 3) 2: 721. 1857, *Handbook of the New Zealand Flora* 1: 339. 1864 and *Manual of the New Zealand Flora* 904. 1906, *New Zealand J. Bot.* 24: 450-451. 1986.

P. anceps G. Forst. subsp. ***anceps***

New Zealand. Variable, erect or trailing, panicle open with spreading branches, coastal to subalpine, open habitats, open forest.

P. anceps G. Forst. subsp. ***polyphylla*** (Hack.) Edgar (*Poa anceps* var. *polyphylla* (Hack.) Zotov; *Poa polyphylla* Hack.; *Poa polyphylla* f. *compacta* Hack.)

New Zealand. Loosely tufted, trailing, leaf sheath glabrous, panicle contracted with stiff erect branches, coastal, cliffs, along roadsides, roadside banks, see *Florulae Insularum Australium Prodrumus* 8. 1786 and *Transactions and Proceedings of the New Zealand Institute* 35: 383. 1903, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 236. 1943, *New Zealand Journal of Botany* 24(3): 452. 1986.

P. andina Trin. (*Deschampsia latifolia* Phil., nom. illeg., non *Deschampsia latifolia* Hochst. ex A. Rich.; *Poa acrochaeta* Hack.; *Poa andina* Nutt. ex S. Watson, nom. illeg., non *Poa andina* Trin.; *Poa andina* Nutt. ex Vasey; *Poa arida* Vasey; *Poa aristata* Phil.; *Poa straminea* Steud.)

Southern America, Bolivia, Chile. Mountains, wet spots, see *Linnaea* 10(3): 306. 1836, *Berberides Americae Australis* 52. 1857, *Linnaea* 29(1): 91. 1858, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 388. 1871, *Anales de la Universidad de Chile* 43: 574. 1873, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 290. 1878 [1879], *Catalogue of Canadian Plants* 2(4): 223. 1888, *Contributions from the United States National Herbarium* 1(8): 270. 1893, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 74. 1893, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 31. 1897 and *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 172. 1911, *Contr. U.S. Natl. Herb.* 48: 510. 2003.

P. androgyna Hack. (*Poa horridula* Pilg.)

Bolivia, Peru. Perennial, caespitose, erect, leaf blades linear acute, loose inflorescence, panicle narrowly ovate, spikelets drooping oblong or elliptic, glumes unequal lanceolate acute, lower glume 1-nerved, upper glume 3-nerved, lower lemma lanceolate 5-nerved pubescent, puna, see *Berberides Americae Australis* 56. 1857 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37:

506. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 6: 158. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 11: 26-27. 1912, *Fontqueria* 21: 17. 1988, *Willdenowia* 27: 237. 1997.

P. angustata R. Br. (*Atropis angustata* (R. Br.) Griseb.; *Atropis angustata* (R. Br.) V.I. Krecz.; *Glyceria angustata* (R. Br.) Fr.; *Glyceria angustata* (R. Br.) Vasey, nom. illeg., non *Glyceria angustata* (R. Br.) Fr.; *Panicularia angustata* (R. Br.) Scribn.; *Phippsia angustata* (R. Br.) Á. Löve & D. Löve; *Poa angustata* (Griseb.) Parodi, nom. illeg., non *Poa angustata* R. Br.; *Poa angustata* J. Vahl; *Poa angustata* Parodi; *Puccinellia angustata* (R. Br.) E.L. Rand & Redfield; *Puccinellia angustata* (R. Br.) Nash, nom. illeg., non *Puccinellia angustata* (R. Br.) E.L. Rand & Redfield)

Argentina. Indeterminate species, see *Chloris Melvilliana* 29. 1823, *Herbarium Pedemontanum* 6: 235. 1836, *Botaniska Notiser* 155. 1840, Elias Magnus Fries, *Novitiarum florum suecicae mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Flora Rossica* 4(13): 390. 1852, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 288. 1879, *Bulletin of the Torrey Botanical Club* 15: 48. 1888, *Flora of Mount Desert Island, Maine* 181. 1894, *Memoirs of the Torrey Botanical Club* 5: 54. 1894, *Bulletin of the Torrey Botanical Club* 22(12): 512. 1895 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 45. 1928, *Flora URSS* 2: 470, 472, t. 25, f. 4. 1934, *Botaniska Notiser* 128(4): 498. 1975 [1976].

P. annua L. (*Aira pumila* Pursh; *Catabrosa pumila* (Pursh) Roem. & Schult.; *Eragrostis infirma* (Kunth) Steud.; *Festuca tenuiculmis* Tovar; *Megastachya infirma* (Kunth) Roem. & Schult.; *Ochlopoa annua* (L.) H. Scholz; *Poa aestivalis* J. Presl; *Poa algida* Trin.; *Poa annua* f. *reptans* (Hausskn.) T. Koyama; *Poa annua* var. *annua*; *Poa annua* L. var. *aquatica* Aschers.; *Poa annua* var. *eriolepis* E. Desv.; *Poa annua* L. var. *reptans* Hausskn.; *Poa annua* var. *rigidiuscula* L.H. Dewey; *Poa bipollicaris* Hochst.; *Poa falconeri* Hook.f.; *Poa hohenackeri* Trin.; *Poa infirma* Kunth; *Poa meyenii* Nees & Meyen; *Poa royleana* Nees ex Steud.)

Europe, large climate range. Annual, sometimes biennial, herbaceous, loosely to densely tufted, yellowish green, glabrous, small, low, smooth, slender, weak, creeping or erect, culms usually geniculate at the base, sometimes rooting from the lower nodes, fibrous roots, leaves nonauriculate, leaf sheaths keeled and striate, whitish ligule thin and membranous, flat or folded leaves narrowly linear and smooth, crinkled young leaves, panicles loose and pyramidal to ovate, spikelets with crowded florets, spikelets ovate to oblong spreading or deflexed at maturity after anthesis, chasmogamous, florets green and purple, glumes persistent unequal keeled, lower glume lanceolate 1-nerved, upper glume oblong to lanceolate 3-nerved, lemmas elliptic to obtuse 5-nerved with conspicuous broad hyaline margins

and tip, web absent, palea keels fringed, anthers yellow, ovary glabrous, fruit glabrous, ornamental, palatable, very low grazing value, grazed by livestock and horses, noxious weed species, found in turf, herb fields, in stream, wetlands, damp places, in muddy soil along river, sandy soil, moist alluvial soils, cultivated ground and disturbed sites, moist disturbed areas, in disturbed soil near creek, gardens, lawns, fallow fields, open habitats, open woods, shaded forest edge, in sandy clay over loam, in wet soils, on rich soils, along roadsides, waste places, flood deposit, see *Species Plantarum* 1: 68. 1753, *Flora Americae Septentrionalis*; or, ... 1: 76. 1814, *Nova Genera et Species Plantarum* 1: 158. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 585, 696. 1817, *Reliquiae Haenkeanae* 1(4-5): 272. 1830, *Linnaea* 10(3): 306. 1836, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 60. 1836, *Nomenclator Botanicus. Editio secunda* 1: 563. 1840, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19(Suppl. 1): 31. 1841, *Flora Chilena* 6: 405. 1854, *Synopsis Plantarum Glumacearum* 1: 256. 1854, *Flora* 38: 321. 1855, *Enum. Pl. Zeyl.* 372. 1864, *Mittheilungen der Thüringischen Botanischen Vereins* 9: 7. 1891, *Contributions from the United States National Herbarium* 3(4): 262. 1895, *The Flora of British India* 7: 342. 1896 and *Handb. Fl. Ceylon* 5: 305. 1900, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Journal of the Bombay Natural History Society* 50(4): 1-838. 1952, *Grasses of Ceylon* 43. 1956, *Grasses of Burma ...* 555. 1960, *Arkticheskaia Flora SSSR* 2: 1-274. 1964, *Flora of Iraq* 9: i-vi, 1-588. 1968, *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970, *Brittonia* 23(3): 293-324. 1971, *Memorias del Museo de Historia Natural "Javier Prado"* 16: 55, t. 12B. Lima 1972, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Le Naturaliste Canadien* 111: 447-449. 1984, *Fitologija* 31: 21-33. 1986, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Grasses of Japan and its Neighboring Regions* 523. 1987, *Journal of Cytology and Genetics* 22: 12-22, 161-162. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 72: 1069-1074. 1987, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Journal of Japanese Botany* 63: 334-343. 1988, *Bothalia* 18: 114-119. 1988, *Anales del Jardín Botánico de Madrid* 47: 411-417. 1990, *CIS Chromosome Information Service* 48: 5-7. 1990, *Journal of Cytology and Genetics* 25: 147-148. 1990, *Investigatio et Studium Naturae* 12: 48-65. 1992, *Ruizia; Monografías del Real Jardín Botánico* 13: 1-480. 1993, *Opera Botanica* 121: 159-172. 1993, *Blumea* 38: 421. 1994, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Grassland of China* 1995(1): 16-20. 1995, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996,

Bothalia 27: 75-82. 1997, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 254. 2000, *Ber. Institut für Landschafts- und Pflanzenökologie Univ. Hohenheim* 16: 58-59. Stuttgart 2003.

in English: annual bluegrass, annual meadow grass, annual poa, dwarf meadow grass, low spear grass, six weeks grass, winter grass, goose grass, sparrow's coat

in French: pâturin annuel

in Spanish: espiguilla, hierba de puerco, hierba de punta

in Mexico: pastillo de invierno, pasto azul anual, zacate de ratón

in Morocco: sibouss, dzimi

in southern Africa: eenjarige blougras, straatgras, wintergras; joang-ba-lintja, jwang ba dintja, leholá (Sotho)

in India: chirua

in Japan: suzume-no-katabira

P. annua L. f. ***reptans*** (Hauskn.) T. Koyama (*Poa annua* var. *reptans* Hauskn.)

Asia, Japan. Cultivated, ornamental, golf courses, see *Species Plantarum* 1: 68. 1753, *Mittheilungen der Thüringischen Botanischen Vereins* 9: 7. 1891 and *Grasses of Japan and its Neighboring Regions* 523. 1987.

P. antipoda Petrie

New Zealand, Antipodes Islands. Perennial, stoloniferous, soft, drooping, tufted, rooting at the nodes, leaf sheath smooth, ligule entire, loose panicle, glumes unequal or subequal, lemma acute, coastal, rocky sites, grassland, herbfields, see *The Subantarctic Islands of New Zealand* 2: 478. 1909, *New Zealand J. Bot.* 24: 454. 1986.

P. arachnifera Torrey (*Poa arachnifera* var. *glabrata* Vasey ex Beal; *Poa arachnifera* var. *glabrata* Vasey ex L.H. Dewey; *Poa arachnifera* var. *glabrata* Vasey; *Poa densiflora* Buckley; *Poa glabrescens* Nash; *Poa nemoralis* L.; *Poa nevadensis* Vasey ex Scribn.; *Poa pratensis* subsp. *agassizensis* (B. Boivin & D. Löve) Roy L. Taylor & MacBryde; *Poa tenuifolia* var. *scabra* Vasey)

Western U.S., Arkansas. Perennial, upright stems, flat base, slender creeping rootstocks, overlapping sheaths whitish to purplish in color, long blades veined, inflorescence oblong and dense or open, male and female flowers grow on different plants, male heads smooth, cultivated winter fodder and lawn grass, forage, ornamental and heat-resistant, grows on prairies and open woodlands, see *Species Plantarum* 1: 67, 69-70. 1753, *Exploration of the Red River of Louisiana* 301. 1853, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 96-97. 1862, *Bulletin of the Torrey Botanical Club* 10: 66. 1883, *A Descriptive Catalogue of the Grasses of the United States* 79. 1885, *Contributions from the United States National Herbarium* 2(3): 546. 1894, *Grasses of North America (edition 2)* 2: 535. 1896 and *Flora of the Southeastern United States ...* 154:

1327. 1903, *Le Naturaliste Canadien* 87: 173-176, f. 1. 1960, *Canadian Journal of Botany* 56(2): 193. 1978, *Phytologia* 71: 401. 1991, *Taxon* 49(2): 255. 2000.

in English: Texas bluegrass, bluegrass

P. arctica R. Brown (*Poa aperta* Scribn. & Merr., orth. var. *Poa aperta* Scribn. & Merr.; *Poa alpicola* Nash; *Poa alpigena* var. *vivipara* (Malmgren) Schol.; *Poa arctica* f. *vivipara* (Hook.) Scoggan; *Poa arctica* subsp. *grayana* (Vasey) Á. Löve, D. Löve & B.M. Kapoor; *Poa arctica* subsp. *williamsii* (Nash) Hultén; *Poa arctica* var. *vivipara* Hook.; *Poa arctica* var. *vivipara* (Malmgren) Schol. ex Flovic, nom. illeg., non *Poa arctica* var. *vivipara* Hook.; *Poa callichroa* Rydb.; *Poa cenisia* auct., non All.; *Poa cenisia* var. *arctica* (R. Br.) Richt.; *Poa chionogenes* Gand.; *Poa debilis* V.N. Vassil., nom. illeg., non *Poa debilis* Thuill.; *Poa flexuosa* Wahlenb.; *Poa flexuosa* var. *vivipara* (Hook.) Lange, nom. illeg., non *Poa flexuosa* var. *vivipara* Malmgren; *Poa flexuosa* var. *vivipara* Malmgren; *Poa grayana* Vasey; *Poa laxa* var. *occidentalis* Vasey ex Rydb. & Shear; *Poa longipila* Nash; *Poa petschorica* Roshev.; *Poa phoenicea* Rydb.; *Poa pratensis* var. *vivipara* (Malmgren) Boivin; *Poa rigens* auct., non Hartm.; *Poa rigens* var. *vivipara* (Malmgren) Schol.; *Poa stricta* Lindeb., nom. illeg., non *Poa stricta* Roth; *Poa tricholepis* Rydb.; *Poa williamsii* Nash)

Russia, Eurasia, Denmark, Northern America, Greenland. Perennial, loosely tufted, rhizomatous with short rhizomes, auricles absent, sheaths open, pointed ligule, leaves short, pyramid-shaped flower head, purplish spikelets, glumes equal, lemmas more or less hairy at the base, web often present, branches reflexed, highly polymorphic grass, common in moist to wet meadows, open areas, alpine and subalpine zone, along streams, see *Auctuarium ad Floram Pedemontanam* 40. 1789, *Chloris Melvilliana* 30. 1823, *Journal of a Third Voyage for the Discovery of a North-West Passage* 206. 1826, *Flora Suecica* no. 108. 1826, *Botaniska Notiser* 1855: 10. 1856, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 19: 253. 1862, *Conspectus Florae Groenlandicae* 1: 178. 1880, *Plantae Europaeae* 1: 83. 1890, *Contributions from the United States National Herbarium* 1(8): 272. 1893, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 32. 1897 and *Memoirs of the New York Botanical Garden* 1: 46-47. 1900, *Bulletin of the New York Botanical Garden* 2(6): 156-157. 1901, *Bulletin of the Torrey Botanical Club* 32(11): 603, 605-606. 1905, *Bulletin de la Société Botanique de France* 66(7): 302. 1919 [1920], *Hereditas; genetiskt arkiv*. 24: 316. 1938, *Acta Universitatis Lundensis* (n. ser.) 36: 202. 1942, *Arctic and Alpine Research* 3(2): 143. 1971, *The Flora of Canada* 1: 51. 1978, Ulf Molau, Urban Nordenhäll and Bente Eriksen, "Onset of flowering and climate variability in an alpine landscape: a 10-year study from Swedish Lapland." *Am. J. Bot.* 92: 422-431. 2005.

in English: arctic bluegrass, arctic meadow grass

in Danish: arktisk rapgræs

P. arctica R. Br. subsp. ***aperta*** (Scribn. & Merr.) Soreng (*Poa aperta* Scribn. & Merr.; *Poa tricholepis* Rydb.)

North America. Perennial, mountain, open areas, moist places, see *Chloris Melvilliana* 30. 1823 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 4-5. 1901, *Bulletin of the Torrey Botanical Club* 32: 606. 1905, *Great Basin Naturalist* 45(3): 404. 1985.

in English: arctic bluegrass

P. arctica R. Br. subsp. ***arctica*** (*Poa arctica* f. *arctica*; *Poa arctica* subsp. *longiculmis* Hultén; *Poa arctica* subsp. *williamsii* (Nash) Hultén; *Poa arctica* var. *glabriflora* Rosh.; *Poa arctica* var. *vivipara* Hook.; *Poa brintnellii* Raup; *Poa cenisia* All. var. *arctica* (R. Br.) Richter; *Poa colorata* Steud.; *Poa debilis* V.N. Vassil., nom. illeg., non *Poa debilis* Thuill.; *Poa deschampsoides* Ohwi; *Poa longipila* Nash; *Poa williamsii* Nash) (Brintnell Lake, Canada)

North America, Russia, Siberia, U.S. Perennial, highly polymorphic, sometimes tufted, rhizomatous, decumbent, glabrous, leaves mostly in a basal tuft, no auricles, a colonizer of disturbed habitats, common in wet meadows, alpine and subalpine zone, wet mossy meadow, wet hummocky meadows, open woods, dry meadows, along streams, tundra, slopes, ridges, seashore, imperfectly drained moist areas, on moderately to imperfectly drained gravel, see *Chloris Melvilliana* 30. 1823, *Synopsis Plantarum Glumacearum* 1: 252. 1854 and *Memoirs of the New York Botanical Garden* 1: 46. 1900, *Bulletin of the New York Botanical Garden* 2(6): 156-157. 1901, *Botanical Magazine* 45: 195. 1931, *Acta Universitatis Lundensis* (n. ser.) 36: 202, f. 141b. 1942, *Sargentia; continuation of the contributions from the Arnold arboretum of Harvard University* 6: 112, f. 11. 1947.

in English: arctic bluegrass

P. arctica R. Br. subsp. ***caespitans*** Simmons ex Nannf. (*Poa arctica* f. *neophora* (B. Boivin) Scoggan; *Poa arctica* f. *neophora* B. Boivin; *Poa arctica* R. Br. subsp. *caespitans* Nannf.; *Poa arctica* var. *caespitans* (Nannf.) Hylander; *Poa arctica* var. *caespitans* (Simmons ex Nannf.) Nannf.; *Poa arctica* var. *caespitans* (Simmons ex Nannf.) B. Boivin, nom. illeg., non *Poa arctica* var. *caespitans* (Simmons ex Nannf.) Nannf.; *Poa filipes* Lange; *Poa rigens* f. *filipes* (Lange) Lindm.; *Poa tolmatchewii* Roshev.; *Poa trichopoda* Lange, nom. illeg., non *Poa trichopoda* Heldr. & Sartori ex Boiss.)

Europe, Arctic Islands, North America. Perennial, caespitose, rhizomatous, erect, ligules membranous, sheaths with the margins fused only in the lower part, inflorescence paniculate, second glume oblanceolate, grows in wet meadows, imperfectly drained moist areas, hummocks, river terraces, tundra, around the margins of ponds, marshes, along streams, slopes, ridges, cliffs, see *Chloris Melvilliana* 30. 1823, *Conspectus Florae Groenlandicae* 1: 175. 1880 and

Hartmans Handbok i Skandinavians Flora 2: 211. 1926, *Symbolae Botanicae Upsaliensis* 4: 71, f. 1, t. 13-14, 15a. 1940, *Uppsala Universitets Årsskrift* 7: 78. 1945, *Le Naturaliste Canadien* 94(4): 526, 635. 1967, *The Flora of Canada* 1: 51. 1978.

P. arctica R. Br. subsp. ***grayana*** (Vasey) Á. & D. Löve and B.M. Kapoor (*Poa alpicola* Nash; *Poa arctica* var. *grayana* (Vasey) Dorn; *Poa callichroa* Rydb.; *Poa chionogenes* Gand.; *Poa grayana* Vasey; *Poa longipila* Nash; *Poa phoenicea* Rydb.; *Poa tricholepis* Rydb.)

North America. Perennial, see *Chloris Melvilliana* 30. 1823, *Contributions from the United States National Herbarium* 1(8): 272. 1893 and *Memoirs of the New York Botanical Garden* 1: 46-47. 1900, *Bulletin of the Torrey Botanical Club* 32(11): 603, 605-606. 1905, *Bulletin de la Société Botanique de France* 66(7): 302. 1919 [1920], *Arctic and Alpine Research* 3(2): 143. 1971, *Vascular Plants of Wyoming* (edition 1) 298. 1988.

in English: arctic bluegrass

P. arctica R. Br. subsp. ***lanata*** (Scribner & Merr.) Soreng (*Poa arctica* f. *neophora* B. Boivin; *Poa arctica* var. *lanata* (Scribn. & Merr.) Boivin; *Poa arctica* var. *vivipara* Hultén; *Poa bracteosa* Kom.; *Poa komarovii* Roshev.; *Poa komarovii* f. *vivipara* (Roshev.) Boivin; *Poa komarovii* var. *vivipara* Roshev.; *Poa lanata* Scribn. & Merr.; *Poa lanata* var. *vivipara* Hultén; *Poa lanata* var. *vivipara* Kom. ex Fedtsch.; *Poa malacantha* Komarov; *Poa malacantha* var. *vivipara* (Roshev.) Tzvelev; *Poa petraea* Trin. ex Kom.)

North America, Russia. Perennial, see *Chloris Melvilliana* 30. 1823 and *Contributions from the United States National Herbarium* 13: 72, f. 16. 1910, *Flora Peninsulae Kamtschatka* 1: 173. 1927, *Flora of the Aleutian Islands* 90. 1937, *Le Naturaliste Canadien* 94: 527, 635-636. 1967, *Phytologia* 71(5): 395. 1991 [1992].

in English: arctic bluegrass

P. arctica R. Brown var. ***arctica***

North America, Russia, Siberia, U.S. Perennial.

P. arechavaletae Parodi

Uruguay. See *Revista Argentina de Agronomía* 3: 141, t. 3. 1936.

P. arida Vasey (*Paneion aridum* (Vasey) Lunell; *Paneion pratericola* (Rydb. & Nash) Lunell; *Poa andina* Nutt. ex S. Watson, nom. illeg., non *Poa andina* Trin.; *Poa andina* Nutt. ex Vasey; *Poa andina* var. *purpura* Vasey ex Macoun; *Poa californica* Munro ex Coult., nom. illeg., non *Poa californica* Steud.; *Poa fendleriana* var. *arida* (Vasey) M.E. Jones; *Poa glaucifolia* Scribn. & T.A. Williams; *Poa overi* Rydb.; *Poa planifolia* Scribn. & T.A. Williams, nom. illeg., non *Poa planifolia* Kuntze; *Poa plattensis* Rydb.; *Poa pratensisformis* Rydb.; *Poa pratensis* var. *pseudopratensis* (Scribn. & Rydb.) M.E. Jones; *Poa pratericola* Rydb. & Nash; *Poa pseudopratensis* Scribn. & Rydb., nom. illeg., non *Poa*

pseudopratensis Beyer; *Poa sheldonii* Vasey) (*Poa overi* Rydb. after the American collector and naturalist William Henry Over, 1866-1956, archaeologist, assistant curator of the University of South Dakota Museum 1912, zoologist, interested in the history and culture of the Arikara and the Native peoples of South Dakota, botanical collector in Minnesota, South Dakota, with Stephen Sargent Visher, 1887-1967. See Otto Neuhaus, "A Seed on Fertile Ground" *South Dakota Magazine* vol. 16, No. 1, 33. May/June 2000; "Notes from the Northwest South Dakota" *Curio Collectors* 1912) (*Poa sheldonii* Vasey named for Charles Stiles Sheldon, c. 1891, botanical collector in U.S., Vermont, Oklahoma)

North America, U.S., Canada. Perennial, erect, glaucous, mildly rhizomatous to nearly rhizomatous, ligule acute, leaves mostly basal, panicle narrow and compact, lemmas lacking a tuft of cobwebby hairs at the base, drought and dry soils tolerant, useful for erosion control, palatable, low-value forage, growing on moist banks, on disturbed sites, pastures, meadows and wet meadows, prairies, shores and seepage areas, piedmont valleys, saline soils, foothills and alpine sites, plains, wet sandy soils, alkaline meadows, see *United States Geological Expolration [sic] of the Fortieth Parallel. Botany* 388. 1871, *Manual of the Botany ... of the Rocky Mountain Region* . . 420. 1885, *Catalogue of Canadian Plants* 2(4): 223. 1888, *Contributions from the United States National Herbarium* 1(8): 270, 276. 1893, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 74. 1893, *Contributions from the United States National Herbarium* 3(8): 531, t. 20. 1896, *Circular, Division of Agrostology, United States Department of Agriculture* 10: 3-4, 6. 1899 and *Memoirs of the New York Botanical Garden* 1: 51. 1900, *Contributions to Western Botany* 14: 14-15. 1912, *American Midland Naturalist* 4: 222-223. 1915, *Flora of the Rocky Mountains* 79. 1917, *Brittonia* 1(2): 84-85. 1931.

in English: prairie bluegrass, plains bluegrass

P. arnoldii Melderis

Western Nepal. Perennial, erect, glabrous, leaf blades linear-acuminate, loose inflorescence paniculate, spikelets elliptic-oblong, palea keeled, see *Enumeration of the Flow-ering Plants of Nepal* 1: 142. 1978.

P. arnowiae Soreng (*Poa curta* auct. non Rydb.)

North America. See *Novon* 8(2): 197, f. 2. 1998.

P. asperifolia Bor

China, Tibet. See *Kew Bulletin* 7(1): 130. 1952.

P. astonii Petrie (*Poa astonii* var. *oraria* (Petrie) Zotov; *Poa oraria* Petrie)

New Zealand. Glaucous, spreading, slender rhizome, leaf sheath shining and glabrous, ligule entire, leaf blade inrolled, narrow panicle with stiff branches, glumes subequal, lemma acute to acuminate and shortly mucronate,

coastal, on beaches, rocky cliffs, see *Transactions and Proceedings of the New Zealand Institute* 38: 423. 1906, *Transactions and Proceedings of the New Zealand Institute* 42: 196. 1910, *Transactions and Proceedings of the Royal Society of New Zealand* 75: 236. 1943, *New Zealand J. Bot.* 24: 439. 1986.

P. atropidiformis Hack. (*Dissanthelium atropidiforme* (Hack.) Soreng)

Chile. Páramos, see *Linnaea* 10(3): 305. 1836 and *Svenska Expeditionen till Magellansländer* 3(5): 224. 1900, *Novon* 8(2): 200. 1998.

P. atropidiformis Hack. var. ***atropidiformis*** (*Dissanthelium atropidiforme* var. *atropidiforme*)

Chile. See *Novon* 8(2): 200. 1998.

P. atropidiformis Hack. var. ***patagonica*** (Parodi) Nicora (*Dissanthelium atropidiforme* var. *patagonicum* (Parodi) Soreng; *Dissanthelium patagonicum* Parodi)

Chile, Patagonia. See *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 80, f. 7. 1925, *Darwiniana* 18: 97. 1973, *Novon* 8(2): 200. 1998.

P. atropurpurea Scribner

North America, U.S., California, San Bernardino Mts. Perennial, rhizomatous, occurs under moist conditions in meadow habitats, very rare grass, vulnerable and endangered species, see *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 53-54, t. 10. 1898.

in English: San Bernardino bluegrass, San Bernardino blue grass

P. attenuata Trin. (*Poa albertii* Regel, also spelled *albertii*; *Poa attenuata* Czet., nom. illeg., non *Poa attenuata* Trin.; *Poa attenuata* subsp. *argunensis* (Roshev.) Tzvelev; *Poa attenuata* subsp. *dahurica* (Trin.) Olan.; *Poa attenuata* var. *dahurica* (Trin.) Turcz.; *Poa attenuata* var. *dahurica* (Trin.) Griseb.; *Poa attenuata* var. *dahurica* (Trin.) Krilov, nom. illeg., non *Poa attenuata* var. *dahurica* (Trin.) Griseb.; *Poa dahurica* Trin.; *Poa julducicola* Regel; *Poa neglecta* Steud.; *Poa nemoralis* var. *ligulata* Stapf; *Poa sphondylodes* var. *dahurica* (Trin.) Melderis; *Sesleria pavlovii* Litv.)

Asia, China, Russia. Drought-tolerant, found in ditches, drainage ditches, along roadsides, dark brown soil, riverbanks, well-drained soils, sandy loam, gravel, rocky soil, subalpine meadow, see *Flora Carniolica* 189. 1760, *Enumeratio Plantarum, quas in China Boreali* 71. 1833, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 2: 527. St. Petersburg 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 63. 1836, *Synopsis Plantarum Glumacearum* 2: 253. 1854, *Bulletin de la Société Impériale des Naturalistes de Moscou* 29(1): 38. 1856, *The Flora of British India* 7: 341. 1896 and *Fl. Altaica* 7: 1656.

1914, *Novosti Sist. Vyss. Rast.* 11: 31. 1974, *Folia Geobotanica et Phytotaxonomica* 19: 28-39. 1984.

P. attenuata Trin. subsp. ***argunensis*** (Roshev.) Tzvelev (*Poa albertii* Regel; *Poa argunensis* Roshev.; *Poa argunensis* var. *tshuensis* Serg.; *Poa attenuata* Trin.; *Poa attenuata* var. *dahurica* (Trin.) Turcz.; *Poa attenuata* var. *dahurica* (Trin.) Krilov, nom. illeg., non *Poa attenuata* var. *dahurica* (Trin.) Turcz.; *Poa attenuata* var. *tshuensis* (Serg.) Tzvelev; *Poa dahurica* Trin.; *Poa julducicola* Regel; *Sesleria pavlovii* Litv.)

Mongolia, Asia, Russia, Siberia. Growing in sand hills, dry places, sandy soils, along the rivers and streams, rocky and gravelly soil, see *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 2: 527. St. Petersburg 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 63. 1836, *Bulletin de la Société Impériale des Naturalistes de Moscou* 29(1): 38. 1856 and *Novosti Sist. Vyss. Rast.* 11: 31, 41. 1974.

P. attenuata Trin. subsp. ***attenuata*** (*Poa albertii* Regel; *Poa attenuata* subsp. *dahurica* (Trin.) Olan.; *Poa attenuata* var. *dahurica* (Trin.) Griseb.; *Poa attenuata* var. *dahurica* (Trin.) Krilov, nom. illeg., non *Poa attenuata* var. *dahurica* (Trin.) Griseb.; *Poa dahurica* Trin.; *Poa julducicola* Regel; *Poa sphondylodes* var. *dahurica* (Trin.) Melderis; *Sesleria pavlovii* Litv.)

Mongolia, Asia, China, Russia. See *Flora Carniolica* 189. 1760, *Enumeratio Plantarum, quas in China Boreali* 71. 1833, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 2: 527. St. Petersburg 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 63. 1836, *Flora Rossica* 4(13): 371. 1852, *Synopsis Plantarum Glumacearum* 2: 253. 1854, *Bulletin de la Société Impériale des Naturalistes de Moscou* 29(1): 38. 1856, *The Flora of British India* 7: 341. 1896 and *Fl. Altaica* 7: 1656. 1914, *Flora of the Mongolian Steppe and Desert Areas* 1: 99, f. 8. 1949, *Novosti Sist. Vyss. Rast.* 11: 31. 1974, *Zlaki SSSR* 474, 476. 1976, *Turczaninowia* 1(4): 17. 1998.

P. attenuata Trin. subsp. ***botryoides*** (Trin. ex Griseb.) Tzvelev (*Poa attenuata* var. *botryoides* (Trin. ex Griseb.) Tzvelev; *Poa botryoides* (Trin. ex Griseb.) Kom.; *Poa botryoides* (Trin. ex Griseb.) Trin. ex Roshev.; *Poa botryoides* (Trin. ex Griseb.) Litw. ex Pavlov; *Poa botryoides* Trin. ex A. Besse; *Poa palustris* var. *botryoides* (Trin. ex Griseb.) Hack. ex B. Fedtsch.; *Poa serotina* Ehrh. var. *botryoides* Trin. ex Griseb.)

China, Mongolia, Asia, Russia. Found in rocky slope, open grassland, shallow soil, sandy soil, alluvial gravel, open

forest, see *Systema Naturae, Editio Decima* 2: 874. 1759, *Beiträge zur Naturkunde* 6: 83. 1791, *Flora* 17(28): 30. 1834, *Flora Rossica* 4(13): 375. 1852 and *Flora Peninsulae Kamtschatka* 1: 177. 1927, *Bulletin de la Société Impériale des Naturalistes de Moscou* 38: 22. 1929, *Novosti Sist. Vyss. Rast.* 11: 31. 1974, *Bot. Zhurn. SSSR* 69(12): 1699-1700. 1984.

P. aucklandica Petrie (*Poa kirkii* var. *aucklandica* (Petrie) Zotov)

New Zealand, Auckland Island. Perennial, slender, tufted, rhizomatous with slender rhizomes, leaf sheath fibrous when old, leaves narrow and usually erect, leaf blades persistent, loose panicle, glumes smooth, on hillsides, see *Indigenous Grasses of New Zealand*, t. 51B. 1880 and *The Subantarctic Islands of New Zealand* 2: 478. 1909, *Transactions of the Royal Society of New Zealand* 73: 236. 1943, *New Zealand J. Bot.* 24(3): 465. 1986.

P. aucklandica Petrie subsp. *aucklandica*

New Zealand. Loosely tufted, leaf sheath glabrous, leaf blade soft, glumes subequal, lemmas acute, see *The Subantarctic Islands of New Zealand* 2: 478. 1909.

P. aucklandica Petrie subsp. *campbellensis* (Petrie) Edgar (*Poa campbellensis* Petrie; *Poa kirkii* var. *campbellensis* (Petrie) Zotov)

New Zealand, Campbell Island. Tufted, small, close-packed, leaf sheath glabrous, stiff inrolled leaf blade, glumes unequal, see *Indigenous Grasses of New Zealand*, t. 51B. 1880 and *The Subantarctic Islands of New Zealand* 2: 478. 1909, *Transactions and Proceedings of the New Zealand Institute* 50: 211. 1917 [1918], *Transactions of the Royal Society of New Zealand* 73: 236. 1943, *New Zealand Journal of Botany* 24(3): 467. 1986.

P. aucklandica Petrie subsp. *rakiura* Edgar

New Zealand. Rare grass, loosely tufted, slender, leaf blade soft, glumes unequal to subequal, lemmas obtuse, found among rocks, grassland, see *New Zealand Journal of Botany* 24(3): 467, f. 7. 1986.

P. australis R. Br. (*Arundo poiformis* Labill.; *Poa australis* (Nees) Sieber ex Trin., nom. illeg., non *Poa australis* R. Br.; *Poa caespitosa* Poir. var. *australis* Benth.; *Poa implexa* Trin.; *Poa poiformis* (Labill.) Druce)

Australia. Useful for erosion control, see *Encyclopédie Méthodique, Botanique* 5: 73. 1804, *Novae Hollandiae Plantarum Specimen* 1: 27. 1804, *Prodromus Florae Novae Hollandiae* 179. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 1(4): 388. 1830, *Flora Australiensis: A Description ...* 7: 653. 1878 and *Report. Botanical Exchange Club. London. Suppl.* 2: 640. 1917, *Contributions from the New South Wales National Herbarium* 4(2): 208. 1970.

P. autumnalis Muhl. ex Ell. (*Poa campyle* Schult.; *Poa elliottii* Spreng.; *Poa flexuosa* Muhl., nom. illeg., non *Poa flexuosa* Sm.; *Poa hexantha* Alph. Wood; *Poa vestita* Bosc ex Steud.)

North America. Perennial, herbaceous, endangered grass, found in moist woods, meadows, partial shade, see *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 159. 1816, *Descriptio uberior Graminum* 148. 1817, *Mantissa* 2: 304. 1824, *Systema Vegetabilium, editio decima sexta* 1: 338. 1825, *Nomenclator Botanicus. Editio secunda* 2: 363. 1841, *Contributions from the United States National Herbarium* 1(8): 271. 1893, *Grasses of North America for Farmers and Students* 2: 534. 1896.

in English: autumn bluegrass, flexuous spear grass

P. ayacuchensis Tovar

Peru. See *Boletín de la Sociedad Peruana de Botánica* 7: 6. 1974.

P. ayseniensis Hack.

Chile. See *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 173. 1911, Espinosa Bustos, Marcial Ramon (1874-1959), "Plantas de Aysen." *Bol. Mus. Nac. Chile* xiv. Santiago de Chile 1935, R.R. Latham, "Expedicion científica MacQueen al Aysen." *Bol. Mus. Nac. Chile* 14: 7-57. 1935, Günther Kunkel, "Aufzeichnungen über die Vegetationsverhältnisse von puerto Aysén (Westpatagonien)." *Ber. Schweiz. Bot. Ges.* 69: 286-96. 1959, Carlos Munoz Pizarro, *Preliminary List of Plants Collected for the Expedition to Laguna de San Rafael, Province of Aisen, 1959*. American Geographical Society, New York 1960.

P. bactriana Roshev.

Asia, Iran, Pakistan. See *Bull. Tadjik. Acad. Sci.* 2: 377. 1934, *Novosti Sist. Vyss. Rast.* 10: 96. 1973.

P. badensis Haenke ex Willd. (*Poa alpina* auct.; *Poa alpina* proles. *badensis* (Haenke ex Willd.) Asch. & Graebn.; *Poa alpina* L. subsp. *badensis* (Haenke ex Willd.) Beck; *Poa alpina* subsp. *badensis* (Haenke ex Willd.) Arcang.; *Poa alpina* var. *badensis* (Haenke ex Willd.) Mert. & Koch; *Poa badensis* var. *imeretica* (Somm. & Levier) Tzvelev; *Poa bulbosa* L. subsp. *badensis* (Haenke ex Willd.) Beck; *Poa cenisia* var. *badensis* (Haenke ex Willd.) Rchb.; *Poa imeretica* Somm. & Levier)

Europe, Asia, Russia. Useful for erosion control, see *Species Plantarum* 1: 67-68, 70. 1753, *Flora Anglica, Editio Altera* 39. 1778, *Auctuarium ad Floram Pedemontanam* 40. 1789, *Species Plantarum. Editio quarta* 1: 392. 1797, *Systema Vegetabilium* 2: 537. 1817, *Deutschlands Flora* 1(2): 607. 1823, *Icones florae germanicae et helveticae* 1: 35, t. 83, f. 1625. 1834, *Linnaea* 29(1): 100. 1858, *Compendio della Flora Italiana* 185. 1871, *Mexicanas Plantas* 2: 110. 1886, *Grasses of North America for Farmers and Students* 2: 543. 1896, *Nuovo Giornale Botanico Italiano, new series* 4: 210. 1897 and *Synopsis der mitteleuropäischen Flora* 2:

398. 1900, *Contrib. U. S. Nat. Herb.* 13: 68. 1910, *Novosti Sist. Vyss. Rast.* 10: 93. 1973, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Fitologija* 27: 3-23. 1984, *Fitologija* 30: 3-29. 1985, *Taxon* 35: 195. 1986, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *Bot. Zhurn.* 72: 1069-1074. 1987, *Willdenowia* 19: 199-213. 1989, *Amer. J. Bot.* 77: 1385, 1395, 1396, 1397. 1990, *International Organization of Plant Biosystematists Newsletter* 24: 15-19. 1995, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 254. 2000, *Diversity* 16: 43-45. 2000.

in English: Baden's bluegrass, Baden bluegrass

P. bajaensis Soreng

Mexico, Baja California. Perennial, densely tufted, leaf sheaths slightly keeled, ligules membranous, without rhizomes, basal sheaths persistent, erect panicles open and sparse, branches widely spreading to reflexed, glumes and lemmas keeled, slopes, forests, mountains, sandy to rocky soils, meadows, related to *Poa strictiramea* Hitchc., see F.W. Gould and R. Moran, "The grasses of Baja California, Mexico." *San Diego Society of Natural History, Memoir* 12: 1-140. 1981, *Journal of the Arnold Arboretum* 66: 201-242. 1985, *Madroño* 48(2): 123-127. 2001 [2002].

P. bergii Hieron. (*Poa barrosiana* Parodi; *Poa bergii* var. *bergii*)

Argentina. See *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 3: 374. 1879, *Revista de la facultad de agronomía; universidad nacional de La Plata* 3: 628. 1897 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 11: 134, f. 3 & 4. 1932.

P. bigelovii Vasey & Scribner (*Panicum compressum* (L.) Lunell; *Poa annua* var. *stricta* Vasey ex Scribn.; *Poa compressa* L.; *Poa compressa* f. *depauperata* Millsp., nom. illeg., non *Poa compressa* var. *depauperata* Mutel; *Poa compressa* var. *sylvestris* Torr.; *Poa stricta* Roth) (after the American botanist Jacob (James) Bigelow, 1787-1879, physician, M.D. University of Pennsylvania 1810, among his writings are *An Address on the Limits of Education*. Boston 1875, *American Medical Botany*. Boston 1817-1820, *Elements of Technology*. Boston 1831, *A History of the Cemetery of Mount Auburn*. Cambridge, Mass. 1860, *Modern Inquiries: Classical, Professional, and Miscellaneous*. Boston 1867, *Nature in Disease*. Boston 1854, *Florula bostoniensis*. Boston 1814 and "Some Account of the White Mountains of New Hampshire." *New England Journal of Medicine and Surgery*. [1817?]. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 181. 1965; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Cambridge, Harvard University Press 1967; R.J. Wolfe, *Jacob Bigelow's American Medical Botany 1817-1821*. Boston 1979; G.E. Ellis, *Memoir of Jacob Bigelow*. Cambridge, Mass. 1880; Mariella

Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 40. Palermo 1988)

North America, California, Mexico, U.S. Annual, in dry woods, rocky places, see *Species Plantarum* 1: 67-69. 1753, *Systema Vegetabilium* 2: 565. 1817, *A Flora of the Northern and Middle Sections of the United States* 1(1): 110. 1823, *Bulletin of the Torrey Botanical Club* 10(1): 31. 1883, *A Descriptive Catalogue of the Grasses of the United States* 81. 1885, *Bulletin, West Virginia Agricultural Experiment Station* 24(2): 472. 1892, *Contributions from the United States National Herbarium* 1(8): 270. 1893 and *American Midland Naturalist* 4: 222. 1915, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Great Basin Naturalist* 45: 395-422. 1985, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzegeographie* 107: 203-228. 1985, *Phytologia* 61: 119-125. 1986, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996, *Watsonia* 21: 365-368. 1997, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 255. 2000.

in English: Bigelow's bluegrass, Bigelow bluegrass

P. binata Nees (*Poa atherstonei* Stapf; *Poa heterogama* Hack.)

South Africa, Lesotho, Zimbabwe. Perennial, tufted, usually clump-forming, rhizomatous with oblique rhizomes, leaf blade expanded, ligule membranous, old leaf sheaths fibrous, ovate to pyramidal inflorescence purple to dark gray-purple, open panicle, palatable, growing near streams, bare ground, mountains, grassland, moist areas, near streams, see *Florae Africae Australioris Illustrationes Monographicae* 378. 1841 and *Flora Capensis* 7: 713. 1900, *Bothalia* 27: 75-82. 1997, *Bothalia* 29(2): 335-341. 1999.

in South Africa: jwang ba dintja, lehola

P. bolanderi Vasey (*Poa bolanderi* subsp. *bolanderi*; *Poa bolanderi* subsp. *chandleri* (Burt Davy) Piper; *Poa horneri* St. John; *Poa howellii* Vasey & Scribner var. *chandleri* Burt Davy) (dedicated to the American (California) (b. in Germany) botanist Henry Nicholas Bolander, 1831 (or 1832)-1897, plant collector (California), ca. 1867-1872 with Albert Kellogg (1813-1887), 1873-1874 with Albert Kellogg et al. (California), Bolander was a friend and correspondent of Charles Léo Lesquereux (1806-1889), author of *A Catalogue of the Plants Growing in the Vicinity of San Francisco*. San Francisco 1870. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 212. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 448. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. New York

and London 1969; W.L. Jepson, in *Erythea*. 6: 100-107. 1898; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954)

North America, California. Annual, forage, on dry soil, disturbed areas, damp soil, dark soil, rocky places, see *Botanical Gazette* 7(3): 32-33. 1882, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 78. 1893 and *University of California Publications in Botany* 1: 60. 1902, *Contributions from the United States National Herbarium* 11: 132. 1906, *Contributions to Western Botany* 14: 15. 1912, *Fl. S.-E. Washington* 54. 1937, *A California Flora* edition 1, 1484. 1959.

in English: Bolander's bluegrass, Bolander's blue grass

P. bolanderi Vasey var. ***howellii*** (Vasey & Scribn.) M.E. Jones (*Poa bolanderi* subsp. *howellii* D.D. Keck; *Poa howellii* Vasey & Scribn.)

Northern America, U.S. See *Botanical Gazette* 7: 32. 1882, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 78. 1893 and *Contributions to Western Botany* 14: 15. 1912, *A California Flora* edition 1, 1484. 1959.

P. bolanderi Vasey var. ***kelloggii*** (Vasey) M.E. Jones (*Poa kelloggii* Vasey)

Northern America, U.S. Woodlands, see *Botanical Gazette* 7: 32-33. 1882, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 79. 1893 and *Contributions to Western Botany* 14: 15. 1912.

P. bonariensis (Lam.) Kunth (*Festuca bonariensis* Lam.; *Poa montevidensis* Arechav.; *Poa pallens* Poir.; *Schedonorus bonariensis* (Lam.) Roem. & Schult.)

South America, Argentina. Pubescent, webbed, woods, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 192. 1791, *Encyclopédie Méthodique, Botanique* 5: 91. 1804, *Essai d'une Nouvelle Agrostographie* 99, 162, 177. 1812, *Systema Vegetabilium* 2: 709. 1817, *Révision des Graminées* 1: 115. 1829, *Anales del Museo Nacional de Montevideo* 1(6): 479. 1897 and *Anales del Museo Nacional de Buenos Aires* 21: 148. 1911.

P. borneensis Jansen

Asia, Borneo, Mount Kinabalu. Erect, densely caespitose, found in open areas, scrub, wet rocky places, see *Reinwardtia* 2(2): 322, f. 15. 1953, *Blumea* 38: 409-457. 1994.

P. boxiana Luces (for the British botanist Harold Edmond Box, b. 1898, traveler, botanical collector in Antigua and Barbuda, St. Lucia, Venezuela and West Africa, author of "Pteridophyta of St. Kitts." *J. Bot. Lond.* 75: 241-258, pl. 612. 1937 [coauthor Arthur Hugh Garfit Alston, 1902-1958], "Note on the vegetation of Redonda, B.W.I." *J. Bot., Lond.* pp. 311-313. 1939, "Observations on the landslides in St. Lucia, B.W.I., in November 1938." *Emp. For. J.* 18: 119-121. 1939, "Report upon a collection of plants from Anquilla B.W.I." *J. Bot., Lond.* pp. 14-16. 1940, "An undescribed species of *Mastichodendron* (Sapotaceae) from

Barbados and Antigua." *Bull. Brit. Mus. (Nat. Hist.), Bot., i.* London 1951 [co-author William Raymond Philipson, 1911-1997]. See *Huntia* 4: 153. 1982; J.H. Barnhart, *Biographical notes upon botanists* 1: 234. 1965)

Venezuela. Rhizomatous, páramos, see *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 4-5, f. 2. 1953.

P. brachyanthera Hultén (*Poa pseudoabbreviata* Roshev.)

North America, Alaska. See *Flora of the Aleutian Islands* 86. 1937.

P. bracteosa Komarov (*Poa arctica* subsp. *lanata* (Scribn. & Merr.) Soreng; *Poa lanata* Scribn. & Merr.; *Poa malacantha* Kom.)

Asia, Japan. Rocky places, tundra, see *Chloris Melvilliana* 30. 1823 and *Contributions from the United States National Herbarium* 13: 72, f. 16. 1910, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990, *Phytologia* 71(5): 395. 1991 [1992].

in Japan: chishimanagahagusa

P. bradei Pilger

Brazil. See *Rodriguésia* 1(3): 37. 1935, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 12: 689. 1935.

P. breviglumis Hook.f. (*Poa breviglumis* var. *brockiei* Zotov; *Poa breviglumis* var. *moarii* Zotov; *Poa imbecilla* Sol. ex Spreng. var. *breviglumis* (Hook.f.) Cheeseman)

New Zealand. Perennial, weak, loosely tufted, soft, stoloniferous or rhizomatous, rooting at the lower nodes, leaf sheath membranous and ribbed, leaf blades persistent, loose panicle with scabrid branches, glumes unequal, palea keels smooth, open habitats, coastal to alpine, grassy places, moist banks, see *Plantarum Novarum ex Herbario Sprengelii Centuriam* 9. 1807, *Flora Antarctica* 1: 101. 1844 [1845] and *Manual of the New Zealand Flora* 201. 1925, *Records of the Dominion Museum* 5: 131-132. 1965.

P. breviglumis Hook.f. var. ***brockiei*** Zotov

New Zealand, Campbell Island. Densely tufted at base, stems branched, short narrow leaves, see *Flora Antarctica* 1: 101. 1844 [1845] and *Records of the Dominion Museum* 5: 131. 1965.

P. breviglumis Hook.f. var. ***moarii*** Zotov (for Neville Taylor Moar, b. 1926, botanical collector in New Zealand, author of *Pollen Grains of New Zealand Dicotyledonous Plants*. Manaaki Whenua Press, Lincoln, New Zealand 1993, "Notes on the vegetation and the flora of Mount Augustus, Buller County." *N.Z. Journ. Sci. Tech., A.* xxxvii. [Wellington] 1955)

Antipodes Island, Lord Auckland Island. Rare grass, see *Flora Antarctica* 1: 101. 1844 and *Records of the Dominion Museum* 5: 132. 1965.

P. brevis Hitchc.

Peru. Wet rocky places, see *Contributions from the United States National Herbarium* 24(8) 328. 1927.

P. buchananii Zotov (*Poa albida* Buchanan, nom. illeg., non *Poa albida* Turcz. & Trin.; *Poa anceps* var. *alpina* Hook.f.; *Poa pygmaea* Buchanan; *Poa sclerophylla* Berggr., nom. illeg., non *Poa sclerophylla* (Trin.) Kunth)

New Zealand, South Island. Perennial, densely tufted, glaucous, stiff and dense, close-packed leaves, sheaths of uppermost leaves often enclosing culm, ligule rounded, leaf blade densely scabrid and persistent, spike-like panicle contracted and narrow oblong, spikelets densely packed, glumes equal to subequal, lemma obtuse, palea keels scabrid, mountains, alpine to subalpine, see *Species Plantarum* 1: 67. 1753, *Florulae Insularum Australium Prodrumus* 8. 1786, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 340. 1833, *Handbook of the New Zealand Flora* 339. 1864, *Indigenous Grasses of New Zealand* 143, t. 50A, C. 1880 and *Transactions and Proceedings of the Royal Society of New Zealand* 73: 236. 1943.

P. bulbosa L. (*Paneion bulbosum* var. *viviparum* (Koeler) Lunell; *Poa alpina* var. *vivipara* L.; *Poa bulbosa* subsp. *bulbosa*; *Poa bulbosa* subsp. *leucoglossa* Velen.; *Poa bulbosa* subsp. *pseudoconcinna* (Schur) Domin; *Poa bulbosa* subsp. *vivipara* (Koeler) Arcang.; *Poa bulbosa* var. *elanata* Stapf; *Poa bulbosa* var. *vivipara* Koeler; *Poa carniolica* Hladnik & Graf ex Rchb.; *Poa leucoglossa* Velen.; *Poa montana* Balansa, nom. illeg., non *Poa montana* All.; *Poa pseudoconcinna* Schur; *Poa sinaica* Steud.; *Poa vivipara* (L.) Willd.)

Eurasia. Perennial, herbaceous, bulbous at the base, shoots swollen at base, viviparous, densely tufted, erect or geniculate, small, glabrous, roots fibrous, culms terete, basal leaf sheaths swollen and forming a pearlike bulb, leaf blades persistent, leaves non auriculate, ligule membranous, bright green leaves narrow-linear and flat, leafy flower head, green to purple panicles compact and oblong or ovate, compressed spikelets ovate to broadly oblong, glumes keeled, lemmas nerved and densely fringed, web present and copious, palea 2-keeled and scabrous, anthers yellow and purplish, ovary glabrous, fruit laterally compressed and ventrally compressed, weed species naturalized throughout temperate regions, can withstand dry conditions and saline soils, useful for erosion control and pasture, fodder, forage, golf course cover plant, increased from bulblets, found in disturbed sites, paths, waste ground, dry areas, gravelly well-drained soils, dry gravelly soil, lawns, dry riverbanks, dry hillsides, around seasonal pans, dry fields, dry stream bed, high banks, arid lands, clay loam soil, damp situations, roadsides, lawns, along the creek, wastelands or grasslands, around wheat fields, in open habitats, foothill woodland, see *Species Plantarum* 1: 67, 70. 1753, *Descriptio Graminum in Gallia et Germania* 189. 1802, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 103. 1809, *Icones florae germanicae et helveticae* 11: 34. 1834, *Synopsis*

Plantarum Glumacearum 1: 256. 1854, *Enumeratio Plantarum Transsilvaniae* 773. 1866, *Bulletin de la Société Botanique de France* 21: 17. 1874, *Compendio della Flora Italiana* 785. 1884, *The Flora of British India* 7: 338. 1896 and *American Midland Naturalist* 4: 222. 1915, *Journal of the Bombay Natural History Society* 51(1): 53-103. 1952, *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970, R.D. Meikle, *Flora of Cyprus*. Kew: Bentham Moxon Trust, Royal Botanic Gardens 1977-1985, *Great Basin Naturalist* 45: 395-422. 1985, *Flora of Turkey and the East Aegean Islands* 9: 470-486. 1985, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 1001: 1-130. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *CIS Chromosome Information Service* 47: 20-22. 1989, *Bulletin, University Museum, University of Tokyo* 34: 169-249. 1991, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Vascular Plants of British Columbia* 129-138. 1994, *Flora Mediterranea* 5: 331-334, 340-345. 1995, *Bothalia* 27: 75-82. 1997, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 255. 2000.

in English: bulbous meadow grass, bulbous bluegrass, bulbous poa

in French: pâturin bulbeux

in Spanish: grama cebollera

in Turkey: çayir otu

P. bulbosa L. subsp. ***bulbosa*** (*Poa bulbosa* proles. *pseudoconcinna* (Schur) Asch. & Graebn.; *Poa bulbosa* subsp. *pseudoconcinna* (Schur) Domin; *Poa bulbosa* var. *eragrostoides* Borbás; *Poa bulbosa* var. *psammophila* (Schur) Asch. & Graebn.; *Poa psammophila* Schur; *Poa pseudoconcinna* Schur)

Eurasia. Perennial, see *Enumeratio Plantarum Transsilvaniae* 773. 1866 and *Synopsis der mitteleuropäischen Flora* 2: 392-393. 1900.

P. bulbosa L. subsp. ***nevskii*** (Roshev. ex Ovcz.) Tzvelev (*Poa nevskii* Roshev. ex Ovcz.; *Poa nevskii* Roshev.)

Eurasia, Russia. Perennial, see *Species Plantarum* 1: 67, 70. 1753 and *Novosti Sist. Vyss. Rast.* 10: 95. 1973.

P. bulbosa L. subsp. ***vivipara*** (Koeler) Arcang. (*Paneion bulbosum* var. *viviparum* (Koeler) Lunell; *Poa attenuata* var. *desertorum* (Trin.) Griseb.; *Poa bulbosa* monst. *vivipara* (Koeler) Asch. & Graebn.; *Poa bulbosa* subsp. *crispa* (Thuill.) Tzvelev; *Poa bulbosa* var. *vivipara* Koeler; *Poa crispa* Thuill.; *Poa desertorum* Trin.)

Europe. See *Flore des Environs de Paris* (éd. 2) 45. 1799, *Descriptio Graminum in Gallia et Germania* 189. 1802, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 2: 527. 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sci-*

ences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 4,2(1): 66. 1836, *Flora Rossica* 4(13): 371. 1852, *Compendio della Flora Italiana* 785. 1884 and *Synopsis der mitteleuropäischen Flora* 2: 392. 1900, *American Midland Naturalist* 4: 222. 1915, *Novosti Sist. Vyss. Rast.* 9: 47. 1972, *Biologia* 54: 43-49. 1999.

P. cabreriana Anton & Ariza Esp. (*Poa serotina* var. *purpurea* Griseb.)

South America, Argentina. See *Flora Germanica* 1: 299. 1806, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 251. 1874 and *Darwiniana* 22(4): 535. 1980.

P. caespitosa Poir.

Australia, New Zealand. See *Encyclopédie Méthodique, Botanique* 5: 73. 1804.

P. calchaquiensis Hackel (*Poa buchtienii* Hack.; *Poa buchtienii* var. *buchtienii*; *Poa buchtienii* var. *subacuminata* Hack.)

Bolivia, Argentina, Catamarca, Jujuy, La Rioja, Salta, Tucumán, Cumbres Calchaquíes. Perennial, dioecious, erect, rhizomatous, rare, leaf blades scabrous acute, panicle narrowly oblong with short branches, spikelets ovate to oblong, 3-8 purple florets, glumes subequal ovate to lanceolate glabrous acute to acuminate, lower glume 1-nerved, upper glume 1- to 3-nerved, lemmas ovate 1- to 5-nerved acute or acuminate, rocky slopes, see *Anales del Museo Nacional de Buenos Aires* 21: 148. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 11: 29-30. 1912.

P. candamoana Pilg.

Colombia, Ecuador, Peru, Bolivia. Perennial bunchgrass, caespitose, erect, small, inconspicuous, forming small clumps, leaves mostly basal, leaf blades linear acute, purplish brown inflorescence, open panicle ovate to oblong with solitary or paired branches, long floret stalks, clusters of drooping spikelets, glumes unequal lanceolate acute, lower glume 1-nerved, upper glume 3-nerved, lower lemma lanceolate 5-nerved acute, mountain, rocky places, puna, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 381. 1906, *Willdenowia* 27: 235-247. 1997.

P. carazensis Pilg.

Peru, Ancash. Tufted, among boulders, slopes, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 380. 1906.

P. celsa Edgar

New Zealand. Perennial, tufted, erect, leaf blades persistent, pubescent scabrid leaf sheaths, leaves folded or flat, panicle branches spreading and slender, glumes equal or subequal, palea keels scabrid, on rocky places, see *New Zealand Journal of Botany* 24(3): 463, f. 4. 1986.

P. cenisia All. (*Brachypodium cenesium* (All.) P. Beauv.; *Poa cenisia* subsp. *contracta* Nyár.; *Poa contracta* Nyár., nom. illeg., non *Poa contracta* Retz.; *Poa distichophylla* Gaudin; *Poa fontqueri* Braun-Blanq.)

Europe, Spain, Italy, France. Sandy areas, dry riverbeds, see *Observationes Botanicae* 3: 11. 1783, *Auctuarium ad Floram Pedemontanam* 40. Torino 1789, *Alpina* 3: 39. 1808, *Essai d'une Nouvelle Agrostographie* 100-101, 155, 174, pl. 19, f. 35. 1812, Elias Magnus Fries, *Novitarum florum suecicae mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845 and *Contr. U.S. Natl. Herb.* 24: 196. 1925, *Bul. Grad. Bot. Univ. Cluj* 11: 8, 39 1931, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 10: 166. 1933, *Stat. Intern. Géobot. Médit. Alp. Montpellier* 87: 270. 1945, *Fitologija* 31: 21-33. 1986, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *Fitologija* 41: 70-75. 1991.

P. cenisia All. subsp. ***cenisia***

Europe, Italy, France, Austria. See *Auctuarium ad Floram Pedemontanam* 40. 1789.

P. cenisia All. subsp. ***contracta*** (Nyár.) Nyár. (*Poa cenisia* subsp. *cenisia*; *Poa cenisia* subsp. *dolosa* (Boiss. & Heldr.) K. Richt.; *Poa cenisia* var. *dolosa* (Boiss. & Heldr.) Boiss.; *Poa contracta* Nyár., nom. illeg., non *Poa contracta* Retz.; *Poa x custurae* Nyár. pro parte; *Poa distichophylla* Gaudin; *Poa dolosa* Boiss. & Heldr.; *Poa oreophila* Heldr.; *Poa oreophila* Boiss. & Heldr.; *Poa psychrophila* Boiss. & Heldr.)

Europe. See *Observationes Botanicae* 3: 11. 1783, *Auctuarium ad Floram Pedemontanam* 40. 1789, *Alpina* 3: 39. 1808, *Diagnoses plantarum orientalium novarum, ser. 2*, 3(4): 136-137. 1859, *Flora Orientalis* 5: 603. 1884 and *Bul. Grad. Bot. Univ. Cluj* 11: 8, 39 1931, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 10: 166. 1933, *Fl. Turkey* 9: 478. 1985, *Fitologija* 41: 70-75. 1991.

P. cenisia All. subsp. ***fontqueri*** (Braun-Blanq.) S. Rivas Martinez, F. Fernandez Gonzales, D. Sanches Mata & J.M. Pizarro (*Poa fontqueri* Braun-Blanq.)

Europe, Mediterranean. See *Itinera Geobotanica* 4: 117. 1990.

P. cenisia All. subsp. ***sardoa*** Em. Schmid (*Poa fontqueri* Braun-Blanq.)

Europe, Italy, France. Useful for erosion control, see *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 78: 239. 1933.

P. chaixii Vill. (*Festuca silvatica* (Pollich) Vill.; *Poa commutata* Roem. & Schult.; *Poa haemi* F. Herm.; *Poa silvatica* Pollich; *Poa sudetica* Haenke; *Poa sulcata* Lag.; *Poa sylvatica* Chaix, nom. illeg., non *Poa sylvatica* Pollich) (for the French botanist Dominique Chaix, 1730-1799, a friend of Dominique Villars (Villar until 1785), 1745-1814; see

J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 3: 437. 1965; Stafleu and Cowan, *Taxonomic literature*. 6: 739-741. 1986; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 419. Boston, Mass. 1972; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 794. 1993)

Europe, Russia, Southwest Asia. Perennial, robust, bright green, clumped, erect, leaves flat or folded, leaf sheaths keeled, panicles ovoid to ovoid-oblong, spikelets ovate to oblong, lemmas lanceolate to oblong and glabrous, see *Species Plantarum* 1: 73. 1753, *Historia Plantarum in Palatinatu Electoralis* 1: 83. 1776, *Flora Delphinalis* 7. 1785, Jean Emmanuel Gilibert (1741-1814), Caroli Linnæi ... *Systema plantarum Europæ*, exhibens characteres naturales generum, characteres essentialia generum & specierum, synonyma antiquorum, phrases specificas recentiorum Halleri, Scopoli, &c. Descriptiones rariorum, nec-non floras tres novas, lugdunæam, delphinalem, lithuanicam, non ommissis plantis exoticis in hortis Europæ vulgo obviis. Curante Joan. Emman. Gilibert. Colonia-Allobrogum, sumptibus Piestre & Delamolliere, 1785-1787, *Histoire des Plantes de Dauphiné* 2: 128, t. 3. Grenoble, Lyon and Paris 1787, *Beobachtungen auf Reisen nach dem Riesengebirge* 120. 1791, *Genera et species plantarum* 3. 1816, *Systema Vegetabilium* 2: 555. 1817 and *Repert. Spec. Nov. Regni Veg.* 30: 251. 1932, *Fragmenta Floristica et Geobotanica* 19: 265-270. 1973, *Fitologija* 31: 21-33. 1986, *Bot. Zhurn.* 72: 1069-1074. 1987, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *Acta Biologica Cracoviensia, Series Botanica* 31: 1-17. 1989 [1990], *Opera Botanica* 137: 1-42. 1999.

in English: forest bluegrass, broad-leaved meadow grass, broad-leaf bluegrass

P. chamaeclinis Pilg. (*Poa aequigluma* Tovar)

Peru, Bolivia. Perennial, low, tufted and scattered, stoloniferous, forming small colonies, glabrous leaf blades obtuse or subacute, contracted panicle oblong or elliptic, spikelets oblong glabrous 2-flowered, glumes ovate subequal 3-nerved acute, lower lemma ovate 5-nerved acute, moist spot, dry rocky areas, puna, wet places, related to *Poa ovata*, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 379. 1906, *Memorias del Museo de Historia Natural "Javier Prado"* 15: 13, t. 2A. 1965, *Willdenowia* 27: 237. 1997.

P. chambersii Soreng (for Kenton Lee Chambers, b. 1929, botanical collector in the U.S., author of "A Biosystematic study of the annual species of *Microseris*." *Contr. Dudley Herb.* 4: 207-312. 1955. See *Contr. Gray Herb.* 207: 54. 1977; Konrad Bachmann, "Genome size and phenotypic evolution in *Microseris* (Asteraceae, Cichorieae)." *Pl. Syst. Evol., Suppl.* 2: 41-66. 1979)

U.S., Oregon. Slopes, see *Novon* 8(2): 195, f. 1. 1998.

P. chapmaniana Scribner

North America, U.S. Annual, found in cultivated fields and weedy places, riparian zones, see *Bulletin of the Torrey Botanical Club* 21(1): 38. 1894.

in English: Chapman's bluegrass, Chapman bluegrass, Chapman poa

P. chathamica Petrie (*Poa anceps* var. *chathamica* (Petrie) Zotov)

New Zealand. Perennial, very variable in habit, drooping, densely tufted, rhizomatous, leaf blades persistent, leaf sheath coriaceous and ribbed, ligule a ciliate rim, leaves coriaceous folded to flat, plants bisexual, panicle loose or contracted, glumes subequal acute to acuminate, lemma scabrid, palea keels stiffly scabrid, coastal, open areas, boggy spots, rocky sites, sphagnum or peat, sandy places, sand dunes, see *Transactions and Proceedings of the New Zealand Institute* 34: 394. 1902, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 236. 1943.

P. cheelii Vickery (after the Australian (b. England, Kent) botanist Edwin Cheel, 1872-1951 (d. Sydney), one of the contributors to *The Flora of the Northern Territory* by Alfred J. Ewart and Olive B. Davies. Melbourne 1917, with the Australian naturalist Sir John Burton Cleland (1878-1971) wrote Notes on Australian Fungi. no. IV. *Polyporus, Fomes and Hexagona*. 1918 and *Notes on the Early Stages of Development of *Lysurus gardneri*-L. australiensis*, etc. 1918; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 144. London 1994)

Australia, Queensland, New South Wales. Perennial, rhizomatous with scaly rhizomes, enveloping scales, leaves nonauriculate, leaf sheath keeled, ligule membranous and truncate, inflorescence a green panicle erect and open or contracted with spikelets strongly compressed, chasmogamous spikelets, glumes acute, lemmas obtuse, web present, anthers yellow, ovary glabrous, dark fruit compressed, on stony sites, poor soils, in open habitats, eucalyptus forest on poor soil, see *Contributions from the New South Wales National Herbarium* 4: 195. 1970.

P. chirripoensis R.W. Pohl (*Poa huancavelicae* Tovar; *Poa pardoana* Pilg.; *Poa pauciflora* Roem. & Schult.; *Poa petrosa* Swallen) (Peru, Huancavelica)

Costa Rica, Cerro Chirripó. Rare species, rhizomatous, leaves flat and short, creamy inflorescence, no awns, forming tufts, among rocks, dry slopes, see *Systema Vegetabilium* 2:

549. 1817 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 379. 1906, *Contributions from the United States National Herbarium* 29: 255. 1948, *Memorias del Museo de Historia Natural "Javier Prado"* 15: 52, t.12A. 1965, *Fieldiana, Botany* 38(2): 10, f. 4. 1976, *Willdenowia* 27: 237. 1997.

P. chokensis S.M. Phillips

Ethiopia. Perennial, tussocky, linear leaf blades flat or folded, open panicle with loosely ascending branches, spikelets 3- to 5-flowered, florets tightly imbricate, lemmas chartaceous prominently nerved subacute, see *Kew Bulletin* 41(4): 1027. 1986, *Flora of Ethiopia* 7: 20, 23. 1995.

P. chonotica Phil. (*Deschampsia latifolia* Phil., nom. illeg., non *Deschampsia latifolia* Hochst. ex A. Rich.; *Poa berningeri* Pilg.; *Poa borchersii* Phil.; *Poa chubutensis* Speg.; *Poa flabellata* var. *mucronulata* Hack. ex Dusén; *Poa latifolia* Phil., nom. illeg., non *Poa latifolia* G. Forst.; *Poa robusta* Phil., nom. illeg., non *Poa robusta* Steud.) (for Otto Berninger, b. 1898, botanical collector in Chile; for Augusto Borchers, botanical collector in Chile, see *Bol. Mus. Nac. Hist. Nat. Santiago de Chile* 45: 96. 1995, *Sendtnera* 4: 44. 1997)

Chile, Cerro de Chonos. See *Essai d'une Nouvelle Agrostographie* 91. 1812, *Annales des Sciences d'Observation* 2: 86, t. 4, f. 11. 1829, *Linnaea* 29(1): 91, 97. 1858, *Anales de la Universidad de Chile* 43: 574. 1873, *Anales de la Universidad de Chile* 94: 172. 1896 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 196. 1902, *Reports of the Princeton University Expeditions to Patagonia 1896-1899, Botany, Volume viii, Supplement* 8(3): 56. 1914 [1915], *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 761. 1929.

P. cita Edgar (*Poa caespitosa* Poir.; *Poa caespitosa* G. Forst. ex Spreng.; *Poa caespitosa* G. Forst.; *Poa caespitosa* Spreng., nom. illeg., non *Poa caespitosa* Poir.; *Poa caespitosa* (G. Forst.) Hook. ex Speg., nom. illeg., non *Poa caespitosa* Poir.; *Poa caespitosa* var. *leioclada* Hack.; *Poa caespitosa* var. *planifolia* Petrie; *Poa laevis* R. Br. var. *filiifolia* Hook.f.)

New Zealand. Alpine grass, tussock-forming, variable, leaf sheaths dark cream and shiny, very short ligule hairy or ciliate, leaf blades persistent, leaves leathery and fringed, open and twisted panicle, glumes subequal acute to subacuminate, lemma obtuse and scabrid, awns absent, palea keels densely ciliate, found in moist areas, pastures, woods, open scrub, coastal slopes, coastal cliffs, rocky places, lowland to subalpine, see *Florulae Insularum Australium Prodrumus* 89. 1786, *Commentationes Societatis Regiae Scientiarum Gottingensis* 9: 22. 1787, *Encyclopédie Méthodique, Botanique* 5: 73. 1804, *Pl. Nov. Herb. Spreng.* 7, no. 10. 1807, *Mantissa Prima Florae Halensis* 33. 1807, *Prodrumus Florae Novae Hollandiae* 179. 1810, *Flora Novae-Zelandiae* 1: 307. 1853, *Anales Museo Nacional de*

Historia Natural de Buenos Aires 5: 91. 1896 and *Manual of the New Zealand Flora* 908. 1906, *Transactions and Proceedings of the New Zealand Institute* 47: 58. 1915, *New Zealand Journal of Botany* 24(3): 446-447. 1986, *New Zealand Journal of Botany* 27: 531-563. 1989.

in English: silver tussock

P. clelandii Vickery (after the Australian naturalist Sir John Burton Cleland, 1878-1971, botanist, ethnologist, explorer)

South Australia, Victoria, Tasmania. Perennial, slender, compressed culms, purplish and greenish to glaucous, shortly rhizomatous or tufted, dense tight tussocks, leaves nonauriculate, leaf sheaths keeled, ligule glabrous, leaf blades flat and stiff with pointed apex, green and purple panicle more or less lanceolate with erect or spreading branches, chasmogamous spikelets, upper glume 3-veined, callus glabrous or webbed, palea 2-keeled with wingless keels, anthers yellow or purple, ovary glabrous, fruit compressed and grooved, common in moist sites, sandy swampland, rocky places, open habitats, wet heathlands, see *Contributions from the New South Wales National Herbarium* 4: 193. 1970.

in English: matted tussock-grass

P. clivicola Vickery (Latin *clivus*, *i* "a hill, ascending road, a gently sloping height")

Australia, Victoria, New South Wales, Kosciuszko Plateau. Perennial, erect, slender to very slender, tufted, leaves mostly basal, auricles absent, leaf sheath pale and usually not keeled, ligule membranous and truncate, green or glaucous leaves inrolled and rough, a green and purple panicle open and erect, spikelets strongly compressed, chasmogamous spikelets, glumes more or less equal and nerved, lemmas acute, web absent, palea membranous, anthers yellow or purple, ovary glabrous, fruit elliptic and compressed, moisture-retentive acidic soils, swampy plain, in wet sites, open grassland, eucalypt woodland, in open habitats, in peat swamp, sometimes confused with *Poa meionectes* Vickery, see *Contributions from the New South Wales National Herbarium* 4: 213. 1970.

in English: fine-leaved snowgrass

P. cockayneana Petrie (*Poa cockaynaiana* Petrie)

New Zealand. Perennial, stoloniferous, alpine to subalpine, often decumbent at base, clump forming or sward forming, coriaceous leaf blades persistent, leaf sheath membranous and ribbed, ligule ciliate, loose panicle, clustered spikelets, glumes subequal, palea keels ciliate, growing in shrubland, moist soils, see *Transactions and Proceedings of the New Zealand Institute* 45: 274. 1913, *New Zealand J. Bot.* 24: 448. 1986.

in English: avalanche grass

P. colensoi Hook.f. (*Poa colensoi* var. *breviligulata* Petrie; *Poa colensoi* var. *guthrie-smithiana* (Petrie) Zotov; *Poa colensoi* var. *intermedia* Cheeseman; *Poa guthrie-smithiana*

Petrie; *Poa intermedia* Koeler; *Poa intermedia* Buchanan, nom. illeg., non *Poa intermedia* Koeler; *Poa intermedia* Steud., nom. illeg., non *Poa intermedia* Koeler; *Poa intermedia* Dalla Torre & Sarnth., nom. illeg., non *Poa intermedia* Koeler) (after the British (Cornish) missionary Rev. (John) William Colenso, 1811-1899 (d. Napier, New Zealand), ethnologist and explorer, botanist, printer, plant collector, North Island, New Zealand, friend and companion of Allan Cunningham, friend and correspondent of Sir William Hooker, 1861 elected to the Parliament, 1865 Fellow of the Linnean Society, 1886 a Fellow of the Royal Society, his works include *Fifty Years Ago in New Zealand*. Napier 1888 and *An Account of Visits to, and Crossing Over, the Ruahine Mountain Range*. Napier 1884; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 366. 1965; B. Graham, "Of William Colenso, 1811-1899." *The Cornish Garden*. 1982; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. 236-239. London 1969; Austin G. Bagnall and George Conrad Petersen, *William Colenso: Printer, Missionary, Botanist, Explorer, Politician*. Wellington 1948; Leonard Huxley, *Life and Letters of Sir J.D. Hooker*. London 1918; G.A. Doumani, editor, *Antarctic Bibliography*. Washington, Library of Congress 1965-1979; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 147. Oxford 1964; R. Glenn, *The Botanical Explorers of New Zealand*. Wellington 1950; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Audrey le Lièvre, "William Colenso, New Zealand botanist: something of his life and work." *The Kew Magazine*. 7(4): 186-200. November 1990; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement IV: Ce-Cz*. 264-266. Königstein 1997)

New Zealand. Perennial, erect or arching, short, smooth and flimsy, tussock-forming, bright blue-green foliage, leaf blades stiff, long obtuse entire ligule, pale sheaths persistent and membranous, narrow leaves threadlike, panicle lax and open, spikelets blue, glumes subequal oblong-ovate, awns absent, lemma scabrous or smooth, palea keels ciliate, ligule variable short and long, ornamental, common in lowland to high alpine regions, mountains, tussock grassland, see *Descriptio Graminum in Gallia et Germania* 203. 1802, *Synopsis Plantarum Glumacearum* 1: 252. 1854, *Handbook of the New Zealand Flora* 340. 1864, *Manual of the Indigenous Grasses of New Zealand* 131, t. 48A. 1880 and *Manual of the New Zealand Flora* 908. 1906, *Flora der gefürsteten Grafschaft Tirol* 6(1): 244. 1906, *Transactions and Proceedings of the New Zealand Institute* 45: 275. 1913, *Transactions and Proceedings of the New Zealand Institute* 47: 57. 1915, *Transactions and Proceedings of the*

New Zealand Institute 73: 236. 1943, *New Zealand Journal of Botany* 24(3): 440. 1986.

in English: blue tussock

P. compressa L. (*Panicum compressum* (L.) Lunell; *Poa bigelovii* Vasey & Scribn.; *Poa compressa* f. *depauperata* Millsp., nom. illeg., non *Poa compressa* var. *depauperata* Mutel; *Poa compressa* var. *sylvestris* Torr.; *Poa langeana* Rchb.)

Eurasia. Perennial, herbaceous, caespitose, sod-forming, loosely tufted, bluish green, slender, stiff, erect or geniculate, branched or unbranched, stems flattened near the base, rhizomatous with wiry and slender rhizomes, leaves mostly basal, leaf tip curved, auricles absent, leaf sheaths compressed and keeled, ligule membranous and slightly hairy to very minutely ciliate, leaf blades persistent stiff and folded, flowers contain both male and female parts, slender inflorescence, contracted stiff panicle, spikelets densely clustered, vestigial foliar structure subtending the inflorescence present or absent, glumes ovate and nearly equal, lemmas often pointed at the tip, web present or absent, palea keeled and infolded, anthers yellow, ovary glabrous, grain compressed and yellowish, weed species naturalized elsewhere in temperate regions, ornamental, turf, cultivated fodder, good forage, palatable and nutritious, pioneer and colonizer of disturbed soils, useful for erosion control and pasture, suitable for revegetation of mined areas, resistant to grazing, does not withstand heavy grazing, drought-tolerant, found in waste places, gardens, most disturbed habitats, relatively moist disturbed sites, open habitats, open woods, dry soils, moist to dry prairies, dry woods, on rocky-stony hillside, sandy areas, dam sites, along roadsides and horse trails, waste places, disturbed ground, under dry conditions in meadow habitats, shores, stream banks, fields and rock outcrops, wet banks of creek, foothill woodland, meadows, clearings and around edge of woods, chaparral, pastures, see *Species Plantarum* 1: 67-69. 1753, *Systema Vegetabilium* 2: 565. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 110. 1823, *Flora Germanica Excursoria* 140. 1830, *Bulletin of the Torrey Botanical Club* 10(1): 31. 1883, *A Descriptive Catalogue of the Grasses of the United States* 81. 1885, *Bulletin, West Virginia Agricultural Experiment Station* 24(2): 472. 1892, *Contributions from the United States National Herbarium* 1(8): 270. 1893 and *American Midland Naturalist* 4: 222. 1915, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Journal of the Bombay Natural History Society* 51(1): 53-103. 1952, *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Gramíneas Uruguayas* [i-vii], 1-489. 1970, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Great Basin Naturalist* 45: 395-422. 1985, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Phytologia* 61: 119-125. 1986, *Denkschriften der*

Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften] 100: 1-130. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996, *Watsonia* 21: 365-368. 1997, *Opera Botanica* 137: 1-42. 1999, *Las Gramíneas de México* 5: 1-466. 1999, *Taxon* 49(2): 255. 2000.

in English: Canada bluegrass, Canadian bluegrass, flattened meadow grass, flat-stem bluegrass

in Colombia: pasto azul del Canadá

in Mexico: zacate azul del Canadá

P. confinis Vasey

North America, U.S., California, Pacific Northwest, Canada. Perennial, suitable for erosion control, found in coastal habitats, on sandy seashore, sandy ocean beach, in wetlands or nonwetlands, see *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 75. 1893.

in English: beach bluegrass, coastline bluegrass

P. cookii (Hook.f.) Hook.f. (*Festuca cookii* Hook.f.; *Poa hamiltonii* Kirk) (for the British (b. Yorkshire) circumnavigator Capt. James Cook, R.N., 1728-1779 (killed, Hawaii), 1776 Fellow of the Royal Society, explorer. See John Cawte Beaglehole, editor, *The "Endeavour" Journals of Joseph Banks 1768-1771*. Sydney 1962, *The Journals of Captain James Cook on his Voyages of Discovery*. Edited by J.C. Beaglehole, etc. 1955 and *The Voyage of the Endeavour 1768-1771*. Cambridge 1968; A. Grenfell Price, editor, *The Explorations of Captain James Cook in the Pacific as Told by Selections of His Own Journals, 1768-1779*. New York 1957; John Gwyther, *Captain Cook and the South Pacific, the Voyage of the "Endeavour" 1768-1771*. Boston 1955; Pierre Sonnerat (1748-1814), *Voyage aux Indes Orientales et à la Chine, fait par ordre du Roi, depuis 1774 jusqu'en 1781*. 231, t. 130. Paris 1782; William H. Chickering, *Within the Sounds of These Waves*. NY. 1941; Andrew Kippis, *A Narrative of the Voyages Round the World Performed by Captain James Cook*. [The first full-length life of Cook, the standard biography for over a century.] Chiswick 1820; John Dunmore, *Who's Who in Pacific Navigation*. University of Hawaii Press, Honolulu 1991; J.H. Barnhart, *Biographical notes upon botanists*. 1: 376. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 82. 1972; John Cawte Beaglehole, in *D.S.B.* 3: 396-397. 1981; Thomas Frederick Cheeseman, *Manual of the New Zealand Flora*. Wellington 1906)

New Zealand. Perennial, spreading, simple, erect, densely tufted, leafy, old sheaths fibrous, ligule lacerate, leaf blades persistent, erect oblong contracted panicles, spikelets glabrous, lower flowers bisexual or hermaphrodite, upper flowers female, membranous glumes unequal, near the sea, rocky places, moist soil, peat, among rocks, see *Flora Antarctica* 2: 382. 1847[1846], *Philosophical Transactions of the Royal Society of London* 168: 22. 1879, *Transactions*

and Proceedings of the New Zealand Institute 27: 353. 1895 and Pammenter N.W. & V.R. Smith, "The effect of salinity on leaf water relations and chemical composition in the sub-Antarctic tussock grass *Poa cookii* Hook.f." *New Phytologist* 94: 585-594. 1983, *New Zealand J. Bot.* 24: 433. 1986.

P. costiniana Vickery (dedicated to Dr. Alec B. Costin, b. 1925, Australian alpine ecologist, Australian Institute of Alpine Studies, Bodalla, wrote *A Study of the Ecosystems of the Monaro Region of New South Wales*. N.S.W. Government Printer, Sydney 1954, "The high mountain vegetation of Australia." *Aust. J. Bot.* 5(2): 173-189. 1957, "Sub-alpine and alpine communities." pp. 191-198 in R.M. Moore (editor) *Australian Grasslands*. Australian National University Press Canberra 1975, "Vegetation of high mountains in Australia in relation to land use biogeography and ecology in Australia." *Monographicae Biologicae*, VIII: 427-451. 1959, "The grazing factor and the maintenance of catchment values in the Australian Alps." *Div. of Plant Ind. Tech. Pap.*, No. 10, CSIRO, Australia 1958. See A.B. Costin, M. Gray, C.J. Totterdell & Dane J. Wimbush, *Kosciuszko Alpine Flora*. CSIRO, Melbourne 1979)

Australia, Victoria, New South Wales, Mt. Kosciuszko, Tasmania. Perennial, vigorous, prickly, erect, densely tufted, unbranched, leaves mostly basal, auricles absent, ligule truncate and membranous to chartaceous, green or glaucous leaves closely folded and pungent-pointed, leaf sheath pale or purplish, green and purplish panicles usually open and pyramidal, chasmogamous spikelets, web present or absent, palea 2-keeled with keels wingless, anthers yellow or purple, ovary glabrous, moist to wet soils, alpine or subalpine regions, bogs, stream banks, alpine grassland, see *Contributions from the New South Wales National Herbarium* 4: 214. 1970.

in English: bog snowgrass

P. crassicaudex Vickery

South Australia, Victoria. Perennial, purplish and green, more or less densely tufted from a contracted rootstock, lower or basal internodes often somewhat swollen and yellow, glabrous nodes, leaves mostly basal, auricles absent, basal leaf sheaths keeled, ligule ciliolate and thin, leaf blades flat to inrolled, leaves hairy, a panicle erect and open, chasmogamous spikelets, lemmas nerved, web developed, anthers yellow or purple, ovary glabrous, grows in open habitats, eucalypt woodlands, see *Contributions from the New South Wales National Herbarium* 4: 233. 1970.

in English: thick-stem tussock-grass, tussock-grass

P. cucullata Hack. (*Poa aequatoriensis* Hack.; *Poa cucullata* Hack. ex Sodiro; *Poa depauperata* Kunth, nom. illeg., non *Poa depauperata* Kit. ex Spreng.; *Poa huancavelicae* Tovar; *Poa pauciflora* Roem. & Schult.)

Ecuador. Bunchgrass, tufted or solitary, individual plants, depressions and low-lying ground, boggy spots, páramos, boggy páramos, see *Species Plantarum* 1: 73-74. 1753,

Plantarum Minus Cognitarum Pugillus Halae [Halle] 1813-1815, *Prodromus Systematis Naturalis Regni Vegetabilis* 1: 162. 1815 [1816], *Systema Vegetabilium* 2: 549. 1817, *Anales de la Universidad Central del Ecuador* 3(25): 482. 1889 and *Österreichische Botanische Zeitschrift* 52: 377, 450. 1902, *Memorias del Museo de Historia Natural "Javier Prado"* 15: 52, t.12A. 1965, *Watsonia* 16: 300. 1987.

P. cumingii Trin. (*Distichlis ammobia* Phil.; *Distichlis volckmannii* Phil.; *Poa conformis* Nees ex Steud.; *Poa cumingii* Nees; *Poa curva* Nees ex Steud.; *Poa dialystostachya* Phil.; *Poa phalaroides* Nees ex Steud.; *Poa stachyodes* Phil.) (for Hermann Volckmann, collector in Chile; see Rudolf A. Philippi (1808-1904), *Observaciones botánicas sobre algunas plantas recojidas en Chile* por los señores don Ricardo Pearce i don Jerman Volckmann. An. Univ. Chile, xviii. Santiago 1861)

Chile. Web present, sandy places, see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 66. 1836, *Synopsis Plantarum Glumacearum* 1: 258-259. 1854, *Anales de la Universidad de Chile* 43: 569, 571. 1873, *Anales de la Universidad de Chile* 94: 167-168. 1896.

P. curtifolia Scribner

Northern America, U.S. See *Circular, Division of Agrostology, United States Department of Agriculture* 16: 3. 1899 and *American Journal of Botany* 74: 1431-1437. 1987.

in English: little mountain bluegrass

P. cusickii Vasey (*Poa alpina* var. *purpurascens* Vasey; *Poa capillarifolia* Scribn. & T.A. Williams; *Poa cottonii* Piper; *Poa epilis* Scribner; *Poa filifolia* Vasey; *Poa hansenii* Scribner; *Poa idahoensis* Beal; *Poa nematophylla* Rydb.; *Poa paddensis* T.A. Williams; *Poa scaberrima* Rydb.; *Poa scabrifolia* A. Heller; *Poa spillmanii* Piper; *Poa subaristata* Scribner ex Beal, nom. illeg., non *Poa subaristata* Phil.; *Poa subaristata* Scribner; *Poa subpurpurea* Rydb.) (after George Hansen, 1863-1908, collector in Western U.S., author of *The Orchid Hybrids*. Enumeration and classification of all hybrids of orchids published up to October 15, 1895. London, Dulau & Co. 1895, *Where the Big Trees Grow*. Flora of the Sequoia region, collected in the counties of Amador, Calaveras and Alpine, State of California. San Francisco, Bacon Printing Co., 1895, *The Orchid Hybrids. Second supplement*. Berkeley, Calif. Issued May 1, 1897)

Northern America, U.S., Pacific Northwest, Canada. Perennial bunchgrass, densely tufted, dioecious, no rhizomes, no auricles, dead sheaths persist at the base of the living leaf sheaths, ligules pointed, rough leaves, closed and compact flower head, glumes unequal and slightly keeled, lemmas keeled and nerved, no webbing at the base, palatable, grows mostly on dry sites, open places, in alpine meadows, sub-alpine forest, inactive floodplains, on rocky banks, in wet-

lands or nonwetlands, mostly on loamy textured soils, terraces, in poor to very poor condition, xeric meadows, dry margins of meadows, on rocky slopes, see *A Descriptive Catalogue of the Grasses of the United States* 79. 1885, *Catalogue of Canadian Plants* 4: 227. 1888, *Contributions from the United States National Herbarium* 1(8): 271. 1893, *Grasses of North America for Farmers and Students* 2: 533, 539. 1896, *Bulletin of the Torrey Botanical Club* 24(6): 310. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 53, t. 9. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 1, 5. 1899, *Erythea* 7: 102. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 17(editor 2): 261, f. 557. 1901, *Proceedings of the Biological Society of Washington* 18: 146. 1905, *Bulletin of the Torrey Botanical Club* 32(11): 606. 1905, *Bulletin of the Torrey Botanical Club* 36: 534. 1909, *Wyoming Agric. Exp. Sta. Bull.* 418: 22. 1964, *Syst. Bot.* 16: 518. 1991.

in English: Cusick's bluegrass, skyline bluegrass

P. cusickii Vasey subsp. *cusickii* (*Poa capillarifolia* Scribn. & T.A. Williams; *Poa cottonii* Piper; *Poa cusickii* var. *cusickii*; *Poa filifolia* Vasey; *Poa hansenii* Scribn.; *Poa idahoensis* Beal; *Poa pringlei* var. *hansenii* (Scribn.) Smiley; *Poa scabrifolia* A. Heller; *Poa spillmanii* Piper; *Poa subaristata* Scribn. ex Beal, nom. illeg., non *Poa subaristata* Phil.) (for the agriculturalist William Jasper Spillman, 1863-1931, geneticist, received his B.S. in 1886 University of Missouri, 1894 joined the Washington State University at Washington Agricultural College, 1902 with the USDA, teacher, educator, agrostologist, botanical collector in Missouri, Indiana and Illinois, editor of *Farm Journal*, from 1922 until 1931 part-time professor of commercial geography at the Foreign Service School of Georgetown University, he rediscovered Mendel's Law while engaged in wheat hybridization experiments, author of *Mendel's Law*. [New York, & c., 1903]. See *The Problem of Indian Administration*. Baltimore: Johns Hopkins Press, 1928; Ethelyn (Dali-aette) Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J.H. Barnhart, *Biographical notes upon botanists*. 3: 310. 1965)

North America, U.S., California. Perennial, dense basal tuft of leaves, common in moist to dry habitat, sagebrush scrub, in wetlands or nonwetlands, alpine, rocky banks, see *Bulletin of the Torrey Botanical Club* 10(1): 31. 1883, *Contributions from the United States National Herbarium* 1(8): 271. 1893, *Grasses of North America for Farmers and Students* 2: 533, 539. 1896, *Bulletin of the Torrey Botanical Club* 24(6): 310. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 53, t. 9. 1898, *Erythea, a Journal of Botany, West American and General*. 7: 102. Berkeley, California 1899, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 1. 1899 and *Proceedings of the Biological Society of*

Washington 18: 146. 1905, *University of California Publications in Botany* 9: 104. 1921.

in English: Cusick's bluegrass

P. cusickii Vasey subsp. ***epilis*** (Scribner) W.A. Weber (*Poa cusickii* var. *epilis* (Scribn.) C.L. Hitchc.; *Poa epilis* Scribner; *Poa fendleriana* (Steud.) Vasey; *Poa purpurascens* var. *epilis* (Scribn.) M.E. Jones)

North America, U.S., California, Canada. Perennial, dense basal tuft of leaves, flower head compact, lemmas smooth, subalpine forest, open places, meadows, moist areas, in wetlands or nonwetlands, moist meadows, see *Contributions from the United States National Herbarium* 1(8): 271. 1893, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 5. 1899 and *Contributions to Western Botany* 14: 14. 1912, *Vascular Plants of the Pacific Northwest* 1: 659. 1969, *Phytologia* 51(6): 375. 1982.

in English: skyline bluegrass, Cusick's bluegrass

P. cusickii Vasey subsp. ***pallida*** Soreng (*Poa scaberrima* Rydb.; *Poa subaristata* Phil.; *Poa subaristata* Scribn. ex Beal, nom. illeg., non *Poa subaristata* Phil.; *Poa subaristata* Scribn.)

North America, California. Perennial, dense basal tuft of leaves, found in dry alpine ridges, in wetlands or nonwetlands, see *Catalogue of Canadian Plants* 4: 227. 1888, *Contributions from the United States National Herbarium* 1(8): 271. 1893, *Grasses of North America for Farmers and Students* 2: 533. 1896, *Anales de la Universidad de Chile* 94: 171. 1896 and *Bulletin of the Torrey Botanical Club* 36: 534. 1909, *Systematic Botany* 16(3): 518. 1991.

in English: skyline bluegrass, Cusick's bluegrass

P. cusickii Vasey subsp. ***purpurascens*** (Vasey) Soreng (*Eragrostis purpurascens* (Spreng.) Schult.; *Poa alpina* var. *purpurascens* Vasey; *Poa alpina* var. *purpurascens* Beal, nom. illeg., non *Poa alpina* var. *purpurascens* Vasey; *Poa cusickii* var. *purpurascens* (Vasey) C.L. Hitchc.; *Poa paddensis* T.A. Williams; *Poa purpurascens* Spreng.; *Poa purpurascens* Vasey, nom. illeg., non *Poa purpurascens* Spreng.; *Poa subpurpurea* Rydb.)

North America, California. Perennial, dense to sparse basal tuft of leaves, flower head loosely contracted, lemmas hairy at the base of the keel, subalpine forest, in wetlands or nonwetlands, see *Species Plantarum* 1: 67. 1753, *Genera Plantarum* 23. 1776, *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* . 33-34. 1819, *Mantissa* 2: 317. 1824, *Botanical Gazette* 6: 297. 1881, *A Descriptive Catalogue of the Grasses of the United States* 79. 1885, *Contributions from the United States National Herbarium* 1(8): 271. 1893, *Grasses of North America for Farmers and Students* 2: 543. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 17 (edition 2): 261, f. 557. 1901, *Bulletin of the Torrey Botanical Club* 32(11):

606. 1905, *Vascular Plants of the Pacific Northwest* 1: 659. 1969, *Phytologia* 71(5): 396. 1991 [1992].

in English: purple bluegrass, Cusick's bluegrass

P. cuspidata Nutt. (*Aira triflora* Elliott; *Graphephorum elliottii* Kunth; *Graphephorum melicoideum* var. *triflorum* (Elliott) Alph. Wood; *Poa brachyphylla* J.A. Schultes; *Poa brevifolia* Muhl., nom. illeg., non *Poa brevifolia* DC.; *Poa cuspidata* Roth, nom. illeg., non *Poa cuspidata* Nutt.; *Poa cuspidata* Vasey ex Scribn., nom. illeg., non *Poa cuspidata* Nutt.; *Poa pungens* Georgi; *Poa pungens* Nutt., nom. illeg., non *Poa pungens* Georgi; *Poa trinervata* Willd. ex Muhl.; *Triodia greenii* Spreng.)

North America. Perennial, herbaceous, found on dry wooded hillsides, banks, rocky places, oak woods, see Johann Gottlieb Georgi (1729-1802), *Geographisch-physikalische und Naturhistorische Beschreibung des Russischen Reichs* 4 Th. 4: 693. Königsberg 1797-1800, *A Sketch of the Botany of South-Carolina and Georgia* 1: 153. 1816, *Descriptio uberior Graminum et plantarum calamariarum Americae septentrionalis indigenarum et cicurum*. 138. Philadelphiae 1817, *The Genera of North American Plants* 1: 66. 1818, William Paul Crillon Barton (1786-1856), *Compendium florae philadelphicae*: containing a description of the indigenous and naturalized plants found within a circuit of ten miles around Philadelphia. By William P.C. Barton ... Two vols. 1: 61. Philadelphia 1818, *Novae Plantarum Species* 72. 1821, *Mantissa* 2: 304. 1824, *Systema Vegetabilium, editio decima sexta* 1: 330. 1825, *Révision des Graminées* 1: 80. 1829, *The American Botanist and Florist* 2: 398. 1871, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 6. 1899.

in English: early bluegrass, bluegrass

P. darwiniana Parodi (*Arundo antarctica* d'Urv.; *Catabrosa antarctica* Hook.f.; *Festuca antarctica* Spreng.; *Festuca antipoda* F. Muell.; *Poa antarctica* (Hook.f.) Stapf, nom. illeg., non *Poa antarctica* (d'Urv.) Raspail; *Poa antarctica* (d'Urv.) St.-Yves, nom. illeg., non *Poa antarctica* (d'Urv.) Raspail; *Sieglingia antarctica* (Hook.f.) Macloskie, nom. illeg., non *Sieglingia antarctica* (Hook.f.) Kuntze; *Triodia antarctica* Hook.f.)

Argentina. See *Species Plantarum* 1: 67, 73. 1753, *Prodromus Florae Novae Hollandiae* 182. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 23. 1815, *Mémoires de la Société Linnéenne de Paris* 4: 602. 1826, *Annales des Sciences d'Observation* 2: 87. 1829, *Flora Antarctica* 1: 102, t. 56. 1844[1845], *Flora Antarctica* 2: 380. 1846, *The Vegetation of the Chatham-Islands* ... 60. 1864, *Icones Plantarum* 7: t. 2607. 1899 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2]*, *Botany* 8(1,5,1): 214. 1904, *Candollea* 3: 281. 1927, *Revista Argentina de Agronomía* 4(4): 243. 1937.

P. davisii Bor (for the English botanist Peter Hadland Davis, 1918-1992, botanical collector in Turkey and Bangladesh,

with Mohammed (Mohan) Salar Khan (1924-2002), Mosharraf Hossain, Faik Yaltirik and Mark J.E. Coode, 1945 University of Edinburgh, traveler, Professor of Taxonomic Botany (1979-1985) Edinburgh University Botany Department, author of "Floristic link between N.W. Africa and S.W. Asia." *Ann. Naturhist. Mus. Wien* 75: 43-57. 1971, "Old and new places names used in studies on the Turkish flora." *Notes R. Bot. Gdn Edinb.* 22: 587-91. [1958], "The Vegetation of the deserts near Cairo." *J. Ecol.* 41: 157-73. 1953, "Cliff vegetation in the eastern Mediterranean." *J. Ecol.* 39: 63-93. 1951, *Flora of Turkey and the East Aegean Islands* / edited by P.H. Davis. Edinburgh, at the University Press, 1985, "Hints for hard-pressed collectors." *Watsonia* 4: 283-289. 1961. See *The Davis & Hedge Festschrift*, commemorating the seventieth birthday of Peter Hadland Davis and the sixtieth birthday of Ian Charleson Hedge: plant taxonomy, phytogeography, and related subjects / edited by Kit Tan, assisted by R.R. Mill and T.S. Elias. Edinburgh: University Press 1989; William Thomas Stearn (1911-2001), *Peonies of Greece: a taxonomic and historical survey of the genus *Paeonia* in Greece* / William T. Stearn and Peter H. Davis; foreword by Niki A. Goulandris. Kifissia, Greece: Goulandris Natural History Museum 1984; James Cullen (1936-), *The Identification of Flowering Plant Families*, including a key to those native and cultivated in north temperate regions / P.H. Davis, J. Cullen. 4th edition. Cambridge: Cambridge University Press, 1997; V.H. Heywood, "Obituaries: Peter Hadland Davis (1918-1992)." *Watsonia* 20: 67-180. 1994; P.H. Davis and V.H. Heywood, *Principles of Angiosperm Taxonomy*. London: Oliver & Boyd. 1963)

Turkey, Asia. Rare species, see *Notes from the Royal Botanic Garden, Edinburgh* 31(3): 395. 1972, *Flora of Turkey and the East Aegean Islands* 9: 470-486. 1985.

P. densa Troitsky (*Festuca conferta* Troitsky ex Grossh.)

Russia, Asia, Iran. Perennial bunchgrass, erect, bulbous base, dense spike-like panicles, found in rocky slopes, steppe, see *Flora Kavkaza* 1: 115. 1928, *Novosti Sist. Vyss. Rast.* 11: 40. 1974.

P. denticulata Hack.

Bolivia. See *Repertorium Specierum Novarum Regni Vegetabilis* 11: 27. 1912.

P. dentigluma Tovar

Peru. Semiaquatic, see *Publicaciones del Museo de Historia Natural "Javier Prado."* Serie B. Botánica 33: 5. 1985.

P. denudata Steud. (*Koeleria rigidula* Steud.; *Poa araucana* Phil.; *Poa chilensis* Trin., nom. illeg., non *Poa chilensis* Moris; *Poa chiloensis* Phil.; *Poa eligulata* Hack.; *Poa fonkii* Phil.; *Poa nahuelhuapiensis* Nicora; *Poa vaginiflora* Steud.; *Poa vaginifolia* Steud. ex Lechler; *Poa vaginiformis* Steud. ex F. Phil.; *Trisetum rigidulum* (Steud.) Domin) (for Francisco Fonk, explorer, botanical collector in Chile 1857-1858, with Fernando Hess, author of *Viajes de Fray Fran-*

cisco Menéndez a Nahuel Huapi. Publicados y comentados por... Valparaiso 1900, "Biografía del Dr. Carlos Martín." *Rev. Chilena de Hist. Natural* t.XII, pp.174-177. 1908; see *Annales de Chimie et de Physique*, Mars 1856)

Chile. Rocky places, see *Syn. Pl.* 1: 97. 1805, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 62. 1836, *Synopsis Plantarum Glumacearum* 1: 259, 293. 1854, *Berberides Americae Australis* 52. 1857, *Linnaea* 30(2): 206. 1859, *Linnaea* 33(3-4): 294. 1864, *Anales de la Universidad de Chile* 332. 1881, *Journal of the Linnean Society, Botany* 21: 238. 1884, *Anales de la Universidad de Chile* 94: 171. 1896 and *Österreichische Botanische Zeitschrift* 52(10): 375. 1902, *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1* [2], *Botany* 8(1,5,1): 226. 1904, *Bibliotheca Botanica* 65: 296. 1907, *Hickenia* 1(18): 106. 1977.

P. diaboli Soreng & D.J. Keil (for the Diablo Canyon Nuclear Power Plant)

North America, U.S., California. Perennial, tufted, erect, decumbent, branching above the base, spreading, gynomonocious, rhizomatous and stoloniferous, coastal mountains, slopes, see *Madroño* 50(4): 300-306. 2003.

P. dipsacea Petrie (*Poa cheesemanii* Hack.; *Poa kirkii* var. *cheesemanii* (Hack.) Zotov; *Poa kirkii* var. *dipsacea* (Petrie) Zotov; *Poa wallii* Petrie) (Greek *dipsa* "thirst," Latin *dipsacos*, *i* for the plant teasel, Plinius, *Dipsacus fullonum* L.) (dedicated to the English [born at Nuwara Eliya in Ceylon/Sri Lanka] botanist Arnold Wall, 1869-1966, philologist, writer, poet, mountaineer, botanical collector, 1899 arrived in Christchurch, professor of English at Canterbury College, New Zealand, in the 1920s became honorary keeper of the herbarium in the Canterbury Museum, author of "A Preliminary catalogue of New Zealand plants cultivated in Britain." *Trans. N.Z. Inst.* 60: 379-393. 1929, *The Flora of Mount Cook*. Christchurch, Lyttelton Tomes Co., Printer, 1925, "The Indigenous grasses of mount Herbert Banks Peninsula, and its neighbourhood." *N.Z. J. Sci. Tech.* 6: 144-147. 1923 and *New Zealand English*. 1938. See Lucy May Cranwell (1907-), *The Botany of Auckland*. Auckland, N.Z.: Auckland Institute and War Memorial Museum, 1981; Philosophical Institute of Canterbury, Christchurch, *New Zealand. Natural History of Canterbury*, issued by the Philosophical Institute of Canterbury. A series of articles on the early history of the province and on the history of scientific investigation, up till 1926, as well as on some results of this investigation. R. Speight, Arnold Wall and R.M. Laing, honorary editors. Christchurch, Printed by Simpson & Williams, 1927)

New Zealand. Perennial, alpine to subalpine, erect, tufted, stiff, open, very variable in size, shortly rhizomatous, leaf blades persistent, ligule obtuse, submembranous unequal

glumes acute to obtuse, lemma ciliate, palea keels ciliate, found along streams, tussock grassland, seepages, herb field, riverbanks, see *Indigenous Grasses of New Zealand* t. 51B. 1880, *Transactions and Proceedings of the New Zealand Institute* 26: 271. 1894 and *Transactions and Proceedings of the New Zealand Institute* 35: 383. 1903, *Transactions and Proceedings of the New Zealand Institute* 54: 571. 1923, *Transactions of the Royal Society of New Zealand* 73: 236. 1943, *New Zealand J. Bot.* 24: 460. 1986.

P. dissanthelioides Tovar (*Poa andicola* Renvoize)

Peru, Bolivia. Annual, tufted, ligule membranous, leaf sheaths inflated, leaf blades linear and acute, panicles ovate to oblong, ovate spikelets 3-flowered, glumes lanceolate unequal glabrous keeled acute, lower glume 1-nerved, upper glume 3-nerved, lower lemma ovate herbaceous 1-nerved acute, palea pilose, similar to *Poa chamaeclinis* Pilg., see *Revista de Ciencias (San Marcos)* 73(1): 102. 1981, *Gramíneas de Bolivia* 138. 1998.

P. diversifolia (Boiss. & Balansa) Boiss. (*Festuca diversifolia* Boiss. & Balansa; *Poa diversifolia* (Boiss. & Balansa) Hack. ex Boiss.)

Syria, Asia, Turkey. Useful for erosion control, see *Bulletin de la Société Botanique de France* 4: 306. 1857, *Flora Orientalis* 5: 600. 1884.

P. diversifolia (Boiss. & Balansa) Boiss. var. *hartmanni* Hack.

Europe, Lebanon. See *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 15-16: 192. 1903-1904.

P. dolichophylla Hack. (*Poa calamagrostioides* Hack.; *Poa pilcomayensis* var. *calamagrostioides* Hack.)

Argentina. See *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 346. 1909, *Anales del Museo Nacional de Buenos Aires* 21: 150, 157. 1911, *Kurtziana* 28(1): 124. 2000.

P. douglasii Nees (*Brizopyrum douglasii* (Nees) Hook. & Arn.; *Distichlis ammobia* Phil.; *Distichlis volckmannii* Phil., also spelled *volkmannii*; *Poa californica* Steud.; *Poa douglasii* subsp. *douglasii*)

North America, California. Perennial, coastal habitats, occurs in wetlands or nonwetlands, see *Annals of Natural History* 1: 284. 1838, *The Botany of Capt. Beechey's Voyage*; comprising an account of the Plants collected by Messrs. Lay and Collie ... during the voyage to the Pacific and Bering's Strait, performed in H.M.S. *Blossom* ... 1825-1828. 404. London [1830-] 1841, *Synopsis Plantarum Glumacearum* 1: 261. 1854, *Anales de la Universidad de Chile* 43: 569, 571. 1873, *Bulletin of the Torrey Botanical Club* 15: 11. 1888 and *Leaflets of Western Botany* 10(7): 118. 1964, *Le Naturaliste Canadien* 94(4): 527. 1967.

in English: sand-dune bluegrass, seashore bluegrass, maritime bluegrass, Douglas' bluegrass

P. drummondiana Nees (*Poa brizochloa* F.Muell.; *Poa cognata* Steud.; *Poa nodosa* Nees)

South Australia, Victoria, Western Australia. Perennial, short creeping branching rhizome, culms erect or geniculate, slender, basal internodes often somewhat swollen, leaves mostly basal, auricles present or absent, leaf sheaths keeled, ligule acute or obtuse, stiff leaf blades flat or inrolled or folded, slightly nodding green and purple panicle contracted or spreading, spikelets laterally compressed and broadly oblong-ovate, anthers yellow, ovary glabrous, fruit compressed and grooved, web absent, often on sand on limestone, on sand hills, in eucalyptus woodlands, see *London Journal of Botany* 2: 418. 1843, *Plantae Preissianae* 2: 105. 1846, *Synopsis Plantarum Glumacearum* 1: 262. 1854, *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1854-1855: 45. 1855. in English: knotted meadow grass, shaking grass, knotted poa

P. durifolia Giussani, Nicora & F.A. Roig (*Poa ligularis* var. *stricta* Nicora & F.A. Roig)

South America, Argentina. See *Systema Vegetabilium* 2: 565. 1817, *Synopsis Plantarum Glumacearum* 1: 257. 1854 and *Hickenia* 2(58): 275, f. 1 (g-j). 1998, *Darwiniana* 38(1-2): 53-55, f. 3, 5. 2000.

P. duseunii Hack. (*Poa ibarii* Phil.; *Poa rigidifolia* Steud. var. *ibari* (Phil.) Giussani; *Poa spiciformis* var. *ibarii* (Phil.) Giussani) (dedicated to the Swedish botanist Per Karl Hjalmar Dusen, 1855-1926, explorer and botanical collector (West Africa), civil engineer, bryologist, author of *New and Some Little Known Mosses from the West Coast of Africa*. Stockholm 1895, 1896; see F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 27. 1971; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London 1904; Benjamin Daydon Jackson (1846-1927), "A list of the contributors to the herbarium of the Royal Botanic Gardens, Kew, brought down to 31st December 1899." *Bull. Misc. Inf. Kew*. 1901 and "A list of the collectors whose plants are in the herbarium of the Royal Botanic Gardens, Kew, to 31st December 1899." in *Kew Bulletin*. 1-80. 1901; J.H. Barnhart, *Biographical notes upon botanists*. 1: 486. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 110. 1972) (*Poa ibarii* Phil. named for Enrique Ibar Sierra, d. 1878, a medical student, he accompanied an exploratory commission to Patagonia, in 1878, shortly after he returned from that trip, Ibar Sierra died of a heart condition; see *Estudios sobre las aguas de Skyring i la parte Austral. de Patagonia por El comandante i oficiales de la Corbata 'Magallanes.'* *Memoria de Don Enrique Ibar Sierra*. Santiago: Imprenta Nacional, 1879; Melica Muñoz Schick, "100 años de la Sección de Botánica del Museo Nacional de Historia Natural (1889-1989)." *Boletín del Museo Nacional de Historia Natural de*

Chile, 42. 1991; Bernardo Gotschlich, "Apuntes Biográficos sobre el señor don Federico Philippi." *Boletín del Museo Nacional* 3: 1. 1911; Diego Barros Arana, *El Doctor Don Rodolfo Amando Philippi su vida i sus obras. Obra escrita por encargo del Consejo de Instrucción Pública. Seguida de una bibliografía de las obras del Doctor Philippi por Don Carlos Riche*. Santiago de Chile: Imprenta Cervantes, 1904; Patience A. Schell, "Capturing Chile: Santiago's Museo Nacional during the Nineteenth Century." *Journal of Latin American Cultural Studies*, 10: 1. Mar. 2001; *Guía del Museo Nacional de Chile en Septiembre de 1878*. Santiago: Imprenta de los Avisos, 1878; Tomás Rogers: "Exploración de las aguas Skyring." *Anuario Hidrográfico de Chile*, 1879; Enrique Simpson: "Exploraciones hechas por la corbeta Chacabuco en los archipiélagos de Guaitecas, Chonos y Taitao." *Anuario Hidrográfico de Chile*, 1879; Francisco Vidal Gormaz: "Los descubrimientos del estrecho de Magallanes." *Anuario Hidrográfico de Chile*, 1879

Chile, Argentina. See *Synopsis Plantarum Glumacearum* 1: 260. 1854, *Anales de la Universidad de Chile* 94: 170. 1896 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapssakademien* 7(2): 8, t. 3, f. 1. Stockholm 1908, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 344. 1929, *Annals of the Missouri Botanical Garden* 87: 221. 2000, *Gayana, Bot.* 59(1): 31. 2002, *Contributions from the United States National Herbarium* 48: 567. 2003.

P. eminens J. Presl (*Arctopoa eminens* (J. Presl) Prob.; *Festuca neogaea* Steud.; *Glyceria glumaris* (Trin.) Griseb.; *Poa glumaris* Trin.; *Poa glumaris* var. *kurilensis* (Hack.) Kudô; *Poa rigens* Trin. ex Scribn. & Merr., nom. illeg., non *Poa rigens* Hartm.; *Poa trinii* Scribn. & Merr.)

U.S., North America, Alaska, Russia. See *Reliquiae Haenkeanae* 1(4-5): 273. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 379. 1830, *Flora Rossica* 4(13): 392. 1852, *Synopsis Plantarum Glumacearum* 1: 252, 313. 1854 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(6): 524. 1904, *Contributions from the United States National Herbarium* 13: 73. 1910, *Journal of the College of Agriculture, Hokkaido Imperial University* 11: 73. 1922, *Novosti Sist. Vyss. Rast.* 11: 50. 1974, *Bot. Zhurn.* (Moscow & Leningrad) 69(5): 689. 1984, *Plant Systematics and Evolution* 181: 57-76. 1992, *Nordic Journal of Botany* 13(6): 616. 1993.

in English: large-flower bluegrass

in Japan: oniichigotsunagi

P. ensiformis Vickery (*Poa caespitosa* G. Forst. var. *latifolia* Benth.)

Australia, New South Wales, Mt. Kosciuszko, Victoria. Perennial, culms green, loosely to densely tufted, erect, rhizomatous with horizontal rhizomes, vigorous root system, leaves mostly basal, auricles vestigial, ligule membranous and truncate, stiff and rigid leaves deep green, sheaths

deep purple, green and purple panicle loosely contracted or spreading, spikelets green or purplish, chasmogamous spikelets, glumes more or less equal, lemmas hairy or pubescent, web copious, anthers yellow or purple, ovary glabrous, can cover large areas, can become somewhat invasive, growing in moist soils, areas with running water, along roadsides, near springs, see *Flora Australiensis: A Description ...* 7: 652. 1878 and *Contributions from the New South Wales National Herbarium* 4: 188. 1970.

in English: purple-sheathed tussock grass, Cabramurra grass

P. epileuca (Stapf) Stapf (*Aniselytron epileuca* (Stapf) Soják; *Aniselytron epileuca* (Stapf) Bennet & Raizada, nom. illeg., non *Aniselytron epileuca* (Stapf) Soják; *Aulacolepis epileuca* (Stapf) Hitchc.; *Calamagrostis epileuca* (Stapf) Govaerts; *Deyeuxia epileuca* Stapf)

Asia, Sulawesi, New Guinea. Perennial, tufted, low, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung I* 102: 135, 147. 1893, *Transactions of the Linnean Society of London, Botany* 4: 247, t. 20c, 10-16. 1894, *Hooker's Icones Plantarum* 27: sub t. 2607. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 3(42-43): 241-244. 1906 [1907], *Philippine Journal of Science* 5(4): 328-330. 1910, *Journal of the Washington Academy of Sciences* 24(7): 291. 1934, *Brittonia* 2(2): 117. 1936, *Indian Forester* 107(7): 434. 1981, *Taxon* 31(3): 561. 1982, H.M. Korthof and J.F. Veldkamp, "A revision of *Aniselytron* with some new combinations in *Deyeuxia* in S.E. Asia (Gramineae)." *The Gardens' Bulletin Singapore* 37(2): 213-223. 1984, *World Checklist of Seed Plants* 3(1): 10. 1999.

P. eragrostoides L. Liou

China. See *Flora Reipublicae Popularis Sinicae* 9(2): 392. 2003.

P. erinacea Speg.

South America, Argentina, Rio Chubut. Rare species, useful for erosion control, found in arid areas, see *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 198. 1902.

P. eyerdamii Hultén (*Poa kamtschatica* Fisch. ex Komarov; *Poa palustris* L.) (for the American explorer Walter Jacob Eyerdam, b. 1892, botanical collector in Kamtchatka, North American West coast, Alaska, Canada and South America, 1938-1939 University of California Second Botanical Garden Expedition to the Andes under the direction of T.H. Goodspeed, author of "Some interesting plants found in the Aleutian Islands." *Little Gardens* 7: 1-3, 21. 1936. See *Ann. Missouri Bot. Gard.* 64: 568. 1977. [1978]; R.P. Adams, T.A. Zanoni and E. Jaime Miller, "Walter Jacob Eyerdam, colector de plantas y animales en Haití en 1927." *Moscsoa* 6: 226-241. 1990; T. Harper Goodspeed, *Plant Hunters in*

The Andes. 16. Robert Hale Limited, [n.d.] [1941] and *Plant Hunters in the Andes*. Second edition, revised and enlarged. 13. University of California Press, Berkeley and Los Angeles 1961)

Alaska. Endangered species, see *Systema Naturae, Editio Decima* 2: 874. 1759, *Bull. Soc. Bot. France* 9: 453. 1862 and *Flora URSS* 2: 397. 1934, *Acta Universitatis Lundensis* 38(1): 206, f. 3e-h. 1942, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Fitologija* 31: 21-33. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 76: 476-479. 1991, *Taxon* 49(2): 256. 2000.

in English: Eyerdam's bluegrass

P. fauriei Hackel (*Poa tateyamensis* Honda) (named for Urbain Jean Faurie, 1847-1915, plant collector in Japan; see Emil Bretschneider, *History of European Botanical Discoveries in China*. 922, 937, 940. Leipzig 1981)

Asia, Japan. See *Bulletin de l'Herbier Boissier* 7(9): 711. 1899 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 86. 1930.

in Japan: ainusomosomo

P. fawcettiae Vickery (see Dennis John Carr and Stella Grace Maisie Carr [née Fawcett] (1912-1988), eds., *People and Plants in Australia*. London 1981; S.G.M. Carr & D.J. Carr, "The French contribution to the discovery of Australia and its flora." in *Endeavour*. 124: 21-26. 1976)

New South Wales, Mt. Kosciuszko, Kosciuszko National Park, Victoria. Perennial, densely tufted, smooth, culms erect and often purplish or pinkish at the base, branched, often with short creeping rhizomes or stolons, leaves mostly basal, auricles absent, ligule membranous, leaves pungent-pointed and glaucous to bluish, green and purple panicles pyramidal with spreading branches, spikelets purplish and glossy, chasmogamous spikelets, glumes more or less equal, lemmas obtuse and hairy, web present or absent, anthers yellow or purple, ovary glabrous, ornamental grass, growing in acidic soils, subalpine meadows, alpine and subalpine grassland, eucalypt woodland, open habitats, confused with the closely allied *Poa phillipsiana* Vickery, see *Contributions from the New South Wales National Herbarium* 4: 232, 238. 1970.

in English: smooth blue snowgrass, horny snowgrass

P. fax J.H. Willis & Court (*Poa lepida* Hochst. ex A. Rich.; *Poa lepida* sensu F. Muell., non Nees ex Steudel, nec *Poa lepida* A. Rich., nom. illeg., non *Poa lepida* Hochst. ex A. Rich.; *Neuropoa fax* (J.H. Willis & Court) Clayton) (Latin *fax, facis* "a torch")

South Australia, Western Australia, New South Wales, Victoria. Annual, greenish or purplish, small and slender, erect or decumbent, auricles vestigial or absent, ligule membranous and thin, leaf sheaths keeled, leaf blades thin and flaccid, green to purple panicle narrow and linear, spikelets strongly compressed and ovate to ovate-oblong, glumes

obtuse, lemmas keeled and obtuse, web absent, palea 2-keeled with keels wingless, anthers yellow or purple, palea linear, ovary glabrous, fruit dark and compressed, halophytic species, along the coasts, swamps, sand dunes, open habitats, see *Species Plantarum* 1: 67-68. 1753, *Tentamen Florae Abyssinicae ...* 2: 424. 1850, *Fragmenta Phytographiae Australiae* 8: 170. 1873 and *Ill. Fl. U.S. Canada* edition 2, 1: 252. 1913, *Muelleria* 1: 45. 1955, J.W. Vickery, "A taxonomic study of the genus *Poa* L. in Australia." *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970, W.D. Clayton, *Kew Bulletin* 40(4): 727-729. 1984 [1985], *Las Gramíneas de México* 5: 1-466. 1999.

in English: scaly meadow grass, scaly poa

P. fendleriana (Steudel) Vasey (*Atropis californica* Munro ex A. Gray; *Atropis californica* Munro ex Thurb.; *Atropis fendleriana* (Steud.) Beal; *Eragrostis fendleriana* Steud.; *Panicularia fendleriana* (Steud.) Kuntze; *Poa andina* var. *majora* Vasey; *Poa andina* var. *spicata* Vasey; *Poa brevipaniculata* Scribn. & T.A. Williams; *Poa brevipaniculata* var. *subpallida* T.A. Williams; *Poa californica* (Munro ex Thurb.) Scribn., nom. illeg., non *Poa californica* Steud.; *Poa eatonii* S. Watson; *Poa fendleriana* subsp. *fendleriana*; *Poa fendleriana* var. *arizonica* T.A. Williams; *Poa fendleriana* var. *spicata* (Vasey) Scribn.; *Poa longepedunculata* Scribn.; *Poa longepedunculata* var. *viridescens* T.A. Williams; *Poa scabriuscula* T.A. Williams; *Puccinellia fendleriana* (Steud.) Ponert; *Uralepis poaeoides* Buckley) (species dedicated the American botanist Daniel Cady Eaton, 1834-1895, explorer, student of ferns, for many years professor of paleobotany at Yale University, with Sereno Watson (1826-1892) on the Clarence King Expedition, his writings include *Ferns of the Southwest*. 1878, *The Ferns of North America*. Boston [1877-] 1879-1880, *Filices wrightianae et fendlerianae*. 1860 and "List of ferns from southern Patagonia." in J.N. Rose, "List of plants collected by the U.S.S. Albatross in 1887-91 along the western coast of America." *Contr. U.S. Natl. Herb.* 1(5): 135-142. 1892, he was a grandson of Amos Eaton (1776-1842). See J.H. Barnhart, *Biographical notes upon botanists*. 1: 491. 1965; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 113. 1972; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 146-148. 1973; Georges Perrot, *Value to History of the Study of the Fine Arts ...* Translated and annotated by D.C. Eaton. [1899]; Carl Friederichs, *Greek Sculpture*. Translated and annotated by D.C.E. New Haven 1883; Joseph William Blankinship (1862-1938), "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliogra-

phy.” in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904)

Northern America, Canada, U.S. Perennial bunchgrass, pale bluish green to bright green, leaves mostly in a basal clump, erect inflorescence, forage grass, less palatable when mature, common on well-drained soils in open woodland and forested areas, open places, meadows, dry mountain sides, loose gravelly soil, see *Linnaea* 10(3): 306. 1836, *Synopsis Plantarum Glumacearum* 1: 278. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 94, 336. 1862, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 386. 1871, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 290. 1878, *Geological Survey of California, Botany* 2: 309. 1880, *Bulletin of the Torrey Botanical Club* 10(1): 31. 1883, *Revisio Generum Plantarum* 2: 782. 1891, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 74. 1893, *Grasses of North America for Farmers and Students* 2: 576. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 31. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 54, t. 11. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 9-10: 2-5. 1899 and *Feddes Repertorium* 84(9-10): 739. 1974, *Great Basin Nat.* 45: 407. 1985

in English: mutton grass, muttongrass, mutton bluegrass, Fendler bluegrass

P. fendleriana (Steudel) Vasey subsp. *albescens* (A.S. Hitchc.) Soreng (*Poa albescens* A.S. Hitchc.; *Poa griffithsii* Hitchc.) (named for David Griffiths, 1867-1935)

North America, Mexico. Perennial, see *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 74. 1893 and *Contributions from the United States National Herbarium* 17(3): 375. 1913, *Great Basin Naturalist* 45(3): 407. 1985.

in English: mutton grass, muttongrass

P. fendleriana (Steudel) Vasey subsp. *fendleriana* (*Eragrostis fendleriana* Steud.; *Poa andina* var. *major* Vasey; *Poa andina* var. *spicata* Vasey; *Poa brevipaniculata* Scribn. & T.A. Williams; *Poa brevipaniculata* var. *subpallida* T.A. Williams; *Poa eatonii* S. Watson; *Poa fendleriana* var. *spicata* (Vasey) Scribn.; *Poa longepedunculata* Scribn.; *Poa longepedunculata* var. *viridescens* T.A. Williams; *Poa scabriuscula* T.A. Williams)

North America, Canada, U.S. Perennial, in meadows, rocky places, loose gravelly soil, open areas, dry mountain sides, see *Linnaea* 10(3): 306. 1836, *Synopsis Plantarum Glumacearum* 1: 278. 1854, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 386. 1871, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 290. 1878, *U.S. Department*

of Agriculture. Division of Botany. Bulletin 13(2): t. 74. 1893, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 31. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 54, t. 11. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 2-3. 1899, *Circular, Division of Agrostology, United States Department of Agriculture* 10: 4-5. 1899 and *Great Basin Naturalist* 45(3): 407. 1985.

in English: mutton grass, muttongrass

P. fendleriana (Steudel) Vasey subsp. *longiligula* (Scribner & T.A. Williams) Soreng (*Panicum longiligulum* (Scribn. & T.A. Williams) Lunell; *Poa fendleriana* var. *arizonica* T.A. Williams; *Poa fendleriana* (Steudel) Vasey var. *longiligula* (Scribner & Williams) Gould; *Poa longiligula* Scribn. & Williams; *Poa montana* Vasey, nom. illeg., non *Poa montana* All.)

North America, U.S., California. Perennial, subalpine forest, occurs in nonwetlands and occasionally on wetlands, see *Acta Physiologiae Plantarum* 155. 1874, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 74. 1893, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 3. 1899, *Circular, Division of Agrostology, United States Department of Agriculture* 10: 5. 1899 and *American Midland Naturalist* 4: 222. 1915, *Madroño* 10: 94. 1949, *Great Basin Naturalist* 45(3): 408. 1985.

in English: Fendler's bluegrass, muttongrass, long-tongue mutton grass

P. fernaldiana Nannf. (*Poa flexuosa* subsp. *fernaldiana* (Nannf.) Á. Löve & D. Löve; *Poa laxa* subsp. *fernaldiana* (Nannf.) Hyl.; *Poa laxa* var. *debilior* M.E. Jones) (dedicated to the American (b. Maine) botanist Merritt Lyndon Fernald, 1873-1950 (Cambridge, Massachusetts), botanical collector, from 1899 to 1950 editor of *Rhodora*, rearranged and revised the Asa Gray's *Manual of Botany* (eighth edition, 1950), his writings include "Realignment in the genus *Panicum*." *Contr. Gray Herb. Harv.*, 103. *Rhodora* 36: 61-87. 1934, "The Genus *Puccinellia* in eastern North America." *Rhodora*, 18, *Contr. Gray Herb. Harv.*, n.s., no 46, 1916. 23 p., *Biographical Memoir of Benjamin Lincoln Robinson, 1864-1935*. Washington 1937, *The Linear-leaved North American Species of Potamogeton, Section Axillares*. [Boston, Mass.] 1932, "Five common rhizomatous species of *Muhlenbergia*." *Contr. Gray. Herb. Harv.* no 148: 221-38. 1943, "Notes on *Danthonia*." *Rhodora* 45: 239-246. 1943 and *Persistence of Plants in Unglaciated Areas of Boreal America*. Boston, Mass. 1925. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 536. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 124. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 278. Philadelphia 1964; J. Ewan,

editor, *A Short History of Botany in the United States*. New York and London 1969; J. Ewan, in *D.S.B.* 4: 583-584. 1981)

North America, U.S., Canada, Labrador, Newfoundland, Quebec, Maine, New Hampshire, New York, Vermont. Vulnerable species, in thin soil, rocky places, see *Beobachtungen auf Reisen nach dem Riesengebirge* 118. 1791, *Flora Britannica* 1: 101. 1800, *Contributions to Western Botany* 14: 15. 1912, *Symbolae Botanicae Upsaliensis* 5: 50, 55, f. 6, t. 4. 1935, *Botaniska Notiser* 3: 355. 1953, *Taxon* 13: 202. 1964.

in English: wavy bluegrass

P. ferreyrae Tovar (for Ramón Alejandro Ferreyra, b. 1912, with Augusto Weberbauer 1947-1949, author of *Sinopsis de la flora peruana*. Lima: Editorial Los Pinos E.I.R.L. 1979, "Comunidades vegetales de algunas lomas costaneras del Perú." Bol. Estac. Exp. Agric. Lima no. 53, 1953, *Flora invasora de los cultivos de Pucallpa y Tingo Maria*. Lima: [The author] 1970, "Las Especies de *Arnaldoa* del Peru (Compositae)." *Publ. Mus. Hist. Nat. Prado, (Bot.)* no. 19. 1965, *Extinction is forever*. Endangered Species in Andean and Coastal Peru. The New York Botanical Garden 1977. See Oscar Tovar, "Revisión de las especies peruanas del género *Calamagrostis*." *Memorias del Museo de Historia Natural "Javier Prado"* no. 11, Lima, Universidad Nacional Mayor de San Marcos 1960; "Los tipos de vegetacion de la costa Peruana." *Anales Real Jardín Botánico. Madrid* 40(1). 1983)

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 15: 37, t. 8B. 1965.

P. fibrata Swallen (*Poa x fibrata* Swallen, pro sp.; *Poa x limosa* Scribn. & T.A. Williams, pro sp.; *Poa limosa* Scribn. & T.A. Williams)

North America, U.S., California. Endangered species, in dry areas, flats, subsaline places, see *Circular, Division of Agrostology, United States Department of Agriculture* 9-10: 5. 1899 and *Journal of the Washington Academy of Sciences* 30(5): 210. 1940, *Phytologia* 71: 403. 1991.

in English: Lassen County bluegrass

P. fibrifera Pilger

Peru. Perennial bunchgrass, tufted, coarse, clumped, rhizomatous, loose paniculate inflorescence, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 380. 1906, *Willdenowia* 27: 237. 1997.

in Peru: cabanilla

P. flabellata (Lam.) Raspail (*Dactylis caespitosa* G. Forst.; *Festuca antarctica* Spreng.; *Festuca caespitosa* (G. Forst.) Roem. & Schult., nom. illeg., non *Festuca caespitosa* Desf.; *Festuca flabellata* Lam.; *Festuca urvilleana* Steud.; *Parodi-ochloa flabellata* (Lam.) C.E. Hubb.; *Poa andina* Trin.; *Poa caespitosa* (G. Forst.) Hook. ex Speng., nom. illeg., non *Poa caespitosa* Poir.; *Poa controversa* Steud.; *Poa controversa*

var. *minor* Steud.; *Poa flabellata* (Lam.) Hook.f., nom. illeg., non *Poa flabellata* (Lam.) Raspail; *Poa forsteri* Steud.; *Sesleria americana* Nees ex Steud.)

Southern America, Falkland Islands (Malvinas), Argentina, Chile. Forming very dense clumps or tussocks, culms pinkish at the base, useful for erosion control, see *Commentationes Societatis Regiae Scientiarum Gottingensis* 9: 22. 1787, *Encyclopédie Méthodique, Botanique* 2: 462. 1788, *Plantarum Minus Cognitarum Pugillus* 2: 23. 1815, *Systema Vegetabilium* 2: 732. 1817, *Annales des Sciences Naturelles, Botanique* 5: 100. 1825, *Mémoires de la Société Linnéenne de Paris* 4: 602. 1826, *Annales des Sciences d'Observation* 2: 86, t. 4, f. 11. 1829, *Annales des Sciences d'Observation* 2: 87, t. 89, f. 5. 1829, *Linnaea* 10(3): 306. 1836, *Synopsis Plantarum Glumacearum* 1: 260, 296, 312. 1854, *Philosophical Transactions of the Royal Society of London* 168: 22. 1877, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 91. 1896 and *Reports of the Princeton University Expeditions to Patagonia 1896-1899, Botany, Volume viii, Supplement* 8(3): 56. 1914 [1915], *Bulletin of the British Museum (Natural History), Botany* 8: 396. 1981.

in English: tussock grass

P. foliosa (Hook.f.) Hook.f. (*Festuca foliosa* Hook.f.)

New Zealand. Dioecious, rarely bisexual, often forming swards, massive tussocks, coastal, tough, shortly stoloniferous, woody narrow stolons, old leaf sheaths fibrous, lower leaf sheaths smooth, coriaceous leaf blades persistent, ligule entire, dense panicle, glumes subequal and membranous, palea keels ciliate, callus hairy, palatable to very palatable, found in rocky places near the sea, slopes, cliffs, see *Flora Antarctica* 1: 99-100, t. 55. 1844 [1845], *Handbook of the New Zealand Flora* 338. 1864 and *The Subantarctic Islands of New Zealand* 2: 476. 1909, *New Zealand J. Bot.* 24: 434. 1986.

P. fordeana F. Muell. (*Glyceria fordeana* (F. Muell.) Benth.; *Panicularia fordeana* (F. Muell.) Kuntze; *Poa caespitosa* var. *flexuosa* F.M. Reader; *Poa hackelii* Reader, nom. illeg., non *Poa hackelii* Post) (for the Australian botanical and entomological artist Mrs. Helena Forde, née Scott, 1832-1910; as a result of their work the Scott sisters, Helena and Harriet, were elected honorary members of the Entomological Society)

South Australia, Queensland, New South Wales, Victoria. Perennial, semiaquatic, greenish or straw colored, slender, rhizomatous with creeping rhizomes, erect or ascending, curved and ascending at the base, culms occasionally branched from the lower nodes, leaves mostly basal, vestigial auricles or absent, sheath keeled and compressed, ligule membranous and hairy, green to light green panicles narrowly or broadly oblong to pyramidal-acute, spikelets compressed and linear to linear-lanceolate, glumes acute to obtuse to ovate, lemmas keeled and woolly, web obsolete,

anthers yellow, ovary glabrous, fruit compressed, common in wet soils, inland swamps, wet situations, sandy-clay banks, on heavy clay soils, in swamps and stagnant water, open habitats, see *Herbarium Pedemontanum* 6: 235. 1836, *Fragmenta Phytographiae Australiae* 8: 130. 1873, *Revisio Generum Plantarum* 1: 782. 1891 and *Victorian Naturalist; Journal and Magazine of the Field Naturalists' Club of Victoria* 23: 89. 1906.

in English: Forde poa, Forde's poa, sweet swamp-grass

P. fuegiana (Hook.f.) Hack. (*Festuca fuegiana* Hook.f.; *Poa alopecurus* (Gaudich. ex Mirb.) Kunth; *Poa alopecurus* subsp. *fuegiana* (Hook.f.) D.M. Moore & Dogg.)

Argentina, Chile. See *Annales des Sciences Naturelles, Botanique* 5: 100. 1825, *Révision des Graminées* 1: 116. 1829, *Flora Antarctica* 2: 380. 1846 and *Svenska Expeditionen till Magellansländer* 3(5): 225. 1900, *Wissenschaftliche Ergebnisse der Schwedischen Südpolar-Expedition 1901-1903* 4(4): 7. 1906, *Bulletin, British Antarctic Survey* 43: 105. 1976.

P. gayana E. Desv. (*Poa patagonica* var. *neuquina* Nicora) (dedicated to the French botanist Claude Gay, 1800-1873, traveled to South America in 1828-1832 and in 1834-1842, his works include *Historia física y política de Chile. Botánica [Flora chilena]*. Paris 1845-1852[-1854] and "Extrait d'une lettre de M.C. Gay, datée de Valparaiso le 13 janvier 1837, contenant quelques détails sur la végétation de Coquimbo au Chili." *Ann. Sci. Nat.*, sér. 2. 7: 380-381. 1837. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 34. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. 138-141. Paris 1845; D. Barros Arana, "Don Claudio Gay y su obra." *Anales Univ. Chile*. 48: 5-227. 1876; C. Porter, "Don Claudio Gay. Notas biográficas y bibliográficas." *Revista Chilena Hist. Nat.* 6(3): 110-132. 1902; Lüer Hugo Gunckel (1901-1997), "Cosas poco conocidas relacionadas con Claudio Gay." (*Anales de la Academia Chilena de Ciencias Naturales*, no. 23) In: *Rev. Univ., Santiago*, 44-45: 23-28. 1960; L.H. Gunckel, "Recuerdos juveniles de Claudio Gay." *Bol. Mus. Nac. Hist. Nat.* 35: 5-10. 1977; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 141. 1972; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; *Plantas Altoandinas en la flora silvestre de Chile*, by Adriana Hoffman, Flavia Liberoni, Mélica Muñoz and John Watson. Santiago, Chile: Edic. Fundacion Claudio Gay, 1998)

Chile. See *Flora Chilena* 6: 416. 1854, *Anales de la Universidad de Chile* 94: 168. 1896 and *Hickenia* 1(18): 107. 1977.

P. gerardii All.

Europe, North America. See [*Auctuarium ad synopsis methodicam stirpium horti regii taurinensis*] *Mélanges*

Philos.-Math. Soc. Roy. Turin 5: 95. 1774 and *Taxon* 19: 623. 1970.

P. gilgiana Pilg. (*Melica expansa* Steud. ex Lechler) (for the German botanist Ernst Friedrich Gilg, 1867-1933, taxonomist, contributor to H.G.A. Engler and K.A.E. Prantl *Die Natürlichen Pflanzenfamilien* edition 1 and edition 2, to Engler's *Das Pflanzenreich*. (with J.R. Perkins, 1853-1933), author of *Der botanische Garten zu Dahlem bei Berlin*. (Nach einem Vortrag von A. Engler.) Berlin 1907 [*Ber. Deutsch. Pharm. Ges.* xvii], *Die Ephedrinhaltigen Stammpflanzen der "Ma-Huang"-Droge*. Berlin 1930, *Lehrbuch der pharmakognosie*, von dr. Ernst Gilg ... dr. Wilhelm Brandt ... und dr. Paul Norbert Schürhoff. 4., bedeutend verm. und verb. Aufl. Berlin, J. Springer, 1927, *Phanerogamen Blütenpflanzen*, von Prof. Dr. Ernst Gilg und Dr. Reno Muschler. Leipzig, Quelle & Meyer, 1909, *Uebersicht über die auf der deutschen Kamerun-expedition gesammelten ... Pflanzen*. [Berlin 1896]. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 48. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 144. 1972; Stafleu and Cowan, *Taxonomic literature*. 1: 941-942. Utrecht 1976)

Bolivia, Peru. Perennial bunchgrass, erect, caespitose, leaf sheaths keeled, leaf blades linear rigid pungent, loose panicle ovate, purplish red florets, spikelets clustered and 3-flowered, glumes unequal lanceolate, lower glume 1-nerved, upper glume 3-nerved, lower lemma oblong-lanceolate glabrous 5-nerved acute or apiculate, found in moist areas, grassland, wet spots, see *Berberides Americae Australis* 56. 1857, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 507. 1906, *Memorias del Museo de Historia Natural "Javier Prado"* 15: 1-65. 1965, *Willdenowia* 27: 237. 1997.

P. glaberrima Tovar

Peru, Bolivia. Perennial bunchgrass, tufted, erect, leaf blades acute, loosely spreading inflorescence, ovate panicle, clustered spikelets elliptic 3- to 4-flowered, glumes unequal, lower glume ovate or lanceolate 1-nerved acute, upper glume ovate 3-nerved acute, lower lemma lanceolate or ovate 5-nerved glabrous acute, rocky places, grassy areas, slopes, marsh edge, wet puna, see *Memorias del Museo de Historia Natural "Javier Prado"* 15: 40, t.9A. 1965.

P. glauca M. Vahl (*Paneion glaucum* (Vahl) Lunell; *Poa anadyrica* Roshev.; *Poa balfourii* Parnell; *Poa blyttii* Lindb.; *Poa bryophila* Trin.; *Poa caesia* Sm.; *Poa caesia* f. *elator* Andersson; *Poa caesia* var. *glauca* (Vahl) Hartm.; *Poa caesia* var. *strictior* A. Gray; *Poa cenisia* var. *virens* Griseb.; *Poa conferta* Blytt, nom. illeg., non *Poa conferta* Elliott; *Poa dissitiflora* Roem. & Schult.; *Poa evenkiensis* Reverd.; *Poa ganeschinii* Roshev.; *Poa glauca* Poir.; *Poa glauca* Schkuhr, nom. illeg., non *Poa glauca* Vahl; *Poa glauca* f. *pallida* (Lange) J. Cay.; *Poa glauca* subsp. *conferta* Lindm. *Poa glauca* subsp. *glaucanthos* (Gaudin)

Lindm.; *Poa glauca* var. *anadryica* (Roshev.) Tzvelev; *Poa glauca* var. *atroviolacea* Lange; *Poa glauca* var. *bryophila* (Trin.) Tzvelev; *Poa glauca* var. *caesia* (Sm.) Hartm.; *Poa glauca* var. *elatior* (Andersson) Lange; *Poa glauca* var. *glaucantha* (Gaud.) Blytt; *Poa glauca* var. *glaucanthos* (Gaudin) Lindm.; *Poa glauca* var. *glaucanthos* (Gaud.) Blytt; *Poa glauca* var. *pallida* Lange; *Poa glauca* var. *strictior* (A. Gray) M.E. Jones; *Poa glauca* var. *tenuior* Simmons; *Poa glaucantha* Gaudin; *Poa glaucanthos* Gaudin; *Poa hispidula* var. *aleutica* Hultén; *Poa kenteica* Ivanova; *Poa nemoralis* L. f. *glaucantha* (Gaudin) Ghisa & Beldie; *Poa nemoralis* proles. *glauca* (Vahl) Asch. & Graebn.; *Poa nemoralis* proles. *glaucantha* (Gaudin) Asch. & Graebn.; *Poa nemoralis* proles. *glaucanthos* (Gaudin) Asch. & Graebn.; *Poa nemoralis* subsp. *glauca* (Vahl) Gaudin; *Poa nemoralis* var. *glauca* (Vahl) Wahlenb.; *Poa nemoralis* var. *glaucantha* (Gaudin) Rchb.; *Poa nemoralis* var. *glaucanthos* (Gaudin) Rchb.; *Poa palustris* L.; *Poa scopulorum* Butters & Abbe; *Poa soczawae* Roshev.; *Poa turczaninovii* Serg.; *Poa udensis* Trautv. & C.A. Mey.; *Poa viridis* Raf.; *Poa x tormentuosa* Butters & Abbe (River Anadyr, Siberia) (Mongolia, Mt. Kentei) (V.B. Soczava) (Russia, mouth of Uda)

Asia, China, Mongolia, Russia, Europe. Perennial bunchgrass, arctic or alpine, low, herbaceous, loosely tufted, glaucous, upright to semierect, stiff, flat and compressed stems, culms numerous, basal clump of narrow leaves, auricles absent, hairless sheaths closed only at the base, ligules blunt to rounded, leaves glabrous, stiff and erect inflorescence, flowering culm nodes not rooting at the lower nodes, narrow lance-shaped bluish gray flower head, open and short panicles, spikelets ovate to oblong, glumes sharp and lanceolate, oblong lemma obtuse and keeled, no cobwebby hairs at the base of the lemma, a pioneer species, useful for erosion control, susceptible to powdery mildew, ground cover, found in dry soil, imperfectly drained moist areas, montane to alpine zones, disturbed environments with sandy or gravel substrates, gravelly meadows, alpine meadows, hummocks, along roadsides and ditch bank, along streams, ravines, dry rocky slope, riverbank, see *Species Plantarum* 1: 69-70. 1753, *Auctuarium ad Floram Pedemontanam* 40. 1789, *Flora Danica* 6(17): 3, t. 964. 1790, *Botanisches Handbuch* 49. 1799, *Flora Britannica* 1: 103. 1800, *Encyclopédie Méthodique, Botanique* 5: 73. 1804, *Alpina* 3: 36. 1808, *Medical Repository* 5: 353. 1808, *Agrostologia Helvetica, definitionem ...* 1: 182. 1811, *Systema Vegetabilium* 2: 540. 1817, *Handbok i Skandinaviens Flora* 57. 1820, *Flora Suecica* 1: 59. 1824, *Flora Helvetica* 1: 240. 1828, *Flora Germanica Excursoria* 1: 47. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 65. 1836, *Plantae Scandinaviae Descriptionibus et Figuris analyticis Adumbratae. Fasciculus Secundus Gramineae*

Scandinaviae ... 43. 1852, *Flora Rossica* 4(13): 374. 1852, *Norges Flora* 1: 123. 1861, *A Manual of Botany of the Northern United States (edition 5)* 629. 1867, *Conspectus Florae Groenlandicae* 1: 173. 1880, *Contributions from the United States National Herbarium* 1(8): 272. 1893, *Botaniska Notiser* 1898: 154. 1898 and *Synopsis der mitteleuropäischen Flora* 2: 411. 1900, *Report of the Second Norwegian Arctic Expedition in the "Fram" 1898-1902* no. 2, 162. 1906, *Contributions to Western Botany* 14: 14. 1912, *American Midland Naturalist* 4: 222. 1915, *Botaniska Notiser* 1926: 275. 1926, *Flora of the Aleutian Islands* 88. 1937, *Rhodora* 49: 14, 16, pl. 1051, f. 1-8. 1947, *Novosti Sist. Vyss. Rast.* 11: 41. 1974, *Taxon* 34: 346-351. 1985, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999.

in English: glaucous meadow grass, glaucous bluegrass, upland bluegrass, white bluegrass, bluegrass

in Japan: takaneichigotsunagi

P. glauca Vahl subsp. ***glauca*** (*Poa anadryica* Roshev.; *Poa bryophila* Trin.; *Poa caesia* Sm.; *Poa evenkiensis* Reverd.; *Poa ganeschini* Roshev.; *Poa glauca* Poir.; *Poa glauca* subsp. *conferta* (Blytt) Lindm.; *Poa glauca* subsp. *glaucanthos* (Gaudin) Lindm.; *Poa glauca* var. *conferta* (Blytt) Nannf.; *Poa glauca* var. *laxiuscula* (Blytt) Lindm.; *Poa glaucanthos* Gaudin; *Poa nascopieana* Polunin; *Poa nemoralis* subsp. *caesia* (Gaudin) Gaudin; *Poa scopulorum* Butters & Abbe; *Poa soczawae* Roshev.; *Poa x tormentuosa* Butters & Abbe; *Poa turczaninovii* Serg.; *Poa udensis* Trautv. & C.A. Mey.)

North America, Europe, Russia, Siberia. Perennial bunchgrass, loosely tufted, fine and wiry culms, decumbent at the base, short and dark green leaf blades, numerous lax seed heads, small grains, lemmas pubescent and sparsely webbed at the base, suitable for ground cover, soil erosion control on disturbed lands, low-fertility soils, riverbanks, see *Flora Danica* 6(17): 3, t. 964. 1790, *Flora Britannica* 1: 103. 1800, *Encyclopédie Méthodique, Botanique* 5: 73. 1804, *Agrostologia Helvetica, definitionem ...* 1: 184. 1811, *Flora Helvetica* 1: 240. 1828, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 65. 1836.

in English: glaucous bluegrass, upland bluegrass

P. glauca Vahl subsp. ***kitadakensis*** (Ohwi) T. Koyama (*Poa glauca* Vahl var. *kitadakensis* (Ohwi) Ohwi; *Poa kitadakensis* Ohwi) (Japan, Hondo, Mt. Kitadake)

Japan. Rare grass, see *Acta Phytotaxonomica et Geobotanica* 7: 133. 1938, *Bulletin of the National Science Museum* 26: 2. 1949, *Grasses of Japan and its Neighboring Regions* 524. 1987.

P. glauca Vahl subsp. ***litvinoviana*** (Ovcz.) Tzvelev (*Poa glauca* subsp. *litvinoviana*

(Tzvelev) Tzvelev; *Poa glauciculmis* Ovcz.; *Poa lapidosa* Drob.; *Poa litvinoviana* Ovcz.; *Poa litvinowiana* Ovcz.; *Poa litwinowiana* Ovcz.; *Poa marginata* Ovcz.; *Poa pseudotremuloides* Ovcz. & Czukav.; *Poa roshevitzii* Golosk.; *Poa tremuloides* Litv.; *Poa tremuloides* Litv. ex Ovcz.; *Poa tristis* Trin. subsp. *litvinoviana* (Ovcz.) Olon.)

China, Russia, Iran, Pakistan. Perennial, low-growing, drought-resistant, found in abandoned fields, see *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 2: 528. 1835 and *Bull. Tadjik. Akad. Sci.* 1(1): 19, 22, 24, 26. 1933, *Fl. URSS* 2: 402, 417, 421, 756. 1934, *Fl. Uzbekistan*. 1: 538. 1941, *Novosti Sist. Vyss. Rast.* 11: 32. 1974, *Turczaninowia* 1(4): 18. 1998.

P. glauca Vahl subsp. ***rupicola*** (Nash) W.A. Weber (*Poa glauca* subsp. *rupicola* (Nash ex Rydb.) W.A. Weber; *Poa glauca* var. *rupicola* (Nash ex Rydb.) Boivin; *Poa glauca* var. *rupicola* (Nash) Boivin; *Poa rupestris* With.; *Poa rupestris* Vasey, nom. illeg., non *Poa rupestris* With.; *Poa rupicola* Nash ex Rydb.; *Poa rupicola* Nash; *Puccinellia rupestris* (With.) Fernald & Weath.)

North America, California, Wyoming. Perennial, alpine, see *Flora Danica* 6(17): 3, t. 964. 1790, *An Arrangement of British Plants, Third Edition* 1796, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Bulletin of the Torrey Botanical Club* 14: 94. 1887 and *Memoirs of the New York Botanical Garden* 1: 49. 1900, *Rhodora* 18: 10, f. 17-22. 1916, *Le Naturaliste Canadien* 94(4): 527. 1967, *Phytologia* 51(6): 375. 1982, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 16: 341-349. 1986, *Contr. U.S. Natl. Herb.* 48: 563. 2003.

in English: timberline bluegrass

P. glaucifolia Scribn. & T.A. Williams (*Poa arida* Vasey; *Poa planifolia* Kuntze; *Poa planifolia* Scribn. & T.A. Williams, nom. illeg., non *Poa planifolia* Kuntze; *Poa plattensis* Rydb.)

North America, U.S., New Mexico. On moist banks, see *Contributions from the United States National Herbarium* 1(8): 270. 1893, *Revisio Generum Plantarum* 3(3): 366. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 9-10: 3-4, 6. 1899 and *Memoirs of the New York Botanical Garden* 1: 51. 1900, *Contributions to Western Botany* 14: 14-15. 1912, *American Midland Naturalist* 4: 222-223. 1915, *Flora of the Rocky Mountains* 79. 1917, *Brittonia* 1(2): 84-85. 1931.

P. granitica Braun-Blanq. (*Poa deyllii* Chrték & Jirasek; *Poa flexuosa* Wahlenb.)

Central Europe, Slovakia. Indeterminate species, on rocky places, see G. Wahlenberg (1780-1851), *Flora Carpatorum Principalium ...* 22. Göttingen 1814, *Flora Suecica* no. 108. 1826 and *Archives de Botanique, Bulletin Mensuel* 3: 46. Caen 1929, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 10: 173. 1933, *Feddes Repertorium*

69: 177. 1964, *Revue Roumaine de Biologie, Série Botanique* 10: 355. 1965.

P. granitica Braun-Blanq. subsp. ***granitica*** (*Poa cenisia* All. subsp. *granitica* (Braun-Blanq.) Borza)

Europe. See *Auctuarium ad Floram Pedemontanam* 40. 1789 and *Archives de Botanique, Bulletin Mensuel* 3: 46. Caen 1929.

P. grisebachii R.E. Fr.

Argentina. See August H.R. Grisebach (1814-1879), *Symbolae ad floram argentinam* 289. Göttingen 1879 and *Nova Acta Regiae Societatis Scientiarum Upsaliensis, ser. 4, 1*: 182, t. 9, f. 8. 1905, *Kurtziana* 27(2): 366. 1999.

P. gunnii Vickery (*Poa australis* var. *monticola* Hook.f.; *Poa caespitosa* var. *alpina* F. Muell. ex Benth.) (for the South African (b. Cape Town) botanist Ronald Campbell Gunn, 1808-1881 (d. Launceston, Tasmania), traveler and naturalist, scientist, landowner, plant collector, migrated to Tasmania in 1829-1830, Superintendent of Convicts for Northern Tasmania, Police Magistrate at Stanley and Hobart, friend of Robert William Lawrence (1807-1833), correspondent of William Jackson Hooker (1785-1865) and John Lindley, a Fellow of the Linnean Society (1850) and of the Royal Society (1854), a founder of the *Tasmanian Journal of Natural Sciences*, secretary to Sir John Franklin (Governor of Tasmania); see F. von Mueller, "Report on the plants collected during Mr. Babbage's expedition into the north-western interior of South Australia in 1858 [by F. Mueller]." *Victorian Parliamentary Papers*. 9. 1859-1860; T.E. Burns and John Rowland Skemp, *Van Diemen's Land Correspondents: Letters from R.C. Gunn [and Others] ... to Sir William J. Hooker, 1827-1849*. Queen Victoria Museum. [Launceston] 1961; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 283. Paris, Leipzig 1845; Vickery, J.W., (1970). *Contr. New South Wales Natl Herb.* 4: 217-218)

Tasmania. Perennial, tufted, slender, erect and unbranched, culms terete, leaves mostly basal, auricles absent, leaf sheaths keeled and green or sometimes red to purplish, ligule entire, leaves bright green and rarely flat, a panicle green and purplish, chasmogamous spikelets, subtending foliar structure absent, glumes green to purplish, anthers purplish or yellow, ovary glabrous, a variable species, handsome and attractive, usually grows in alpine woodland, acidic soils, subalpine shrubbery or grasslands, closely related to *Poa costiniana* Vickery, see *Encyclopédie Méthodique, Botanique* 5: 73. 1804, *Prodromus Florae Novae Hollandiae* 179. 1810, *Flora Tasmaniae* 2: 123. 1858, *Transactions and Proceedings of the New Zealand Institute* 9: 500. 1877, *Flora Australiensis: A Description ...* 7: 652. 1878 and *Contributions from the New South Wales National Herbarium* 4: 214, 217. 1970.

in English: snowgrass

P. gymnantha Pilger (*Poa ovata* Tovar)

Peru, Bolivia. Perennial, caespitose, small, erect, leaves mostly basal, leaf blades acute, basal sheaths fibrous, forming dense colonies, dense oblong panicle, spikelets oblong-elliptic 2- to 3-flowered, glumes lanceolate subequal acute, lower glume 1- to 3-nerved, upper glume 3-nerved, lower lemma lanceolate 5-nerved scabrous acute, grazed, found in moist spots, wet puna, standing water, shallow water, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 28. 1920, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 780. 1933, *Memorias del Museo de Historia Natural "Javier Prado"* 15: 17, t. 3A. 1965, *Willdenowia* 27: 236. 1997.

P. hachadoensis Nicora

Argentina. See *Hickenia* 1(18): 102. 1977.

P. hachadoensis Nicora var. *hachadoensis*

Argentina. See *Hickenia* 1(18): 102. 1977.

P. hachadoensis Nicora var. *pilosa* Nicora

Argentina. See *Hickenia* 1(18): 103. 1977.

P. hakusanensis Hackel (*Poa yezomontana* Honda)

Asia, Japan. See *Bulletin de l'Herbier Boissier* 7(9): 709. 1899 and *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 164. 1931.

in Japan: hakusan'ichigotsunagi

P. halmaturina J.M. Black

South Australia, Victoria, Tasmania. Perennial, erect, small, rigid and glabrous, tufted, rhizomatous with elongate and scaly rhizomes, leaves mostly basal, auricles absent, leaf sheaths keeled, ligule truncate, green and purple panicle contracted and almost spike-like with short and erect branches, chasmogamous spikelets, lemmas hairy on the keel, web present, anthers yellow, ovary glabrous, rare species, common in open habitats, coastal and maritime-arenicolous, sand dunes, dunes behind beach, considered to be very close to *Poa poiformis* (Labill.) Druce, see *Transact. Royal Soc. S. Australia* 66: 248. 1942, *Flora South Australia (edition 2)* 124. 1943, *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970.

in English: Kangaroo Island poa

P. harae Rajbh.

Eastern Nepal. Perennial, erect, caespitose, shortly stoloniferous, leaf blades linear acuminate, oblong panicle with spreading branches, spikelets 2- to 3-flowered, glumes subequal, lower glumes lanceolate, upper glumes elliptic, alpine regions, moist places, see *Acta Phytotaxonomica et Geobotanica* 39(1-3): 55. 1988.

P. hartzii Gandog. (*Poa abbreviata* f. *arenaria* Rosenv.; *Poa glauca* f. *arenaria* Hartz; *Poa glauca* var. *atroviolacea* Lange f. *prolifera* Simmons; *Poa hartzii* f. *prolifera* (Simmons) Boivin; *Poa hartzii* var. *vivipara* Polunin; *Poa vrangelica* Tzvelev)

North America, Canada. Caespitose, erect, glabrous, low-growing, leaves mostly in a basal tufts, ligules with apices acuminate, colonizer, found on alluvial clay, calcareous soils, slopes, sand, on hillsides, floodplains, see *Meddelelser om Grønland* 9: 350. 1896 and *Bulletin de la Société Botanique de France* 66(7): 302. 1919 [1920], *Meddelelser om Grønland* 101(3): 145. 1933, *Bulletin of the National Museum of Canada Biol. Ser.* 24 92: 72, t. 3. 1940, *Sargentia; Continuation of the Contributions from the Arnold Arboretum of Harvard University* 4: 12. 1943, *Novosti Sist. Vyss. Rast.* 11: 37. 1974, *Phytologia* 71(5): 407, f. 4. 1991 [1992], *Novosti Sist. Vyss. Rast.* 32: 182. 2000.

P. hartzii Gandog. subsp. *alaskana* Soreng (*Poa alaskana* (Soreng) Tzvelev)

North America, U.S., Alaska. Endangered grass, forming tufts, found in sand dunes, see *Bulletin de la Société Botanique de France* 66(7): 302. 1919 [1920], *Phytologia* 71(5): 407, f. 4. 1991 [1992], *Novosti Sist. Vyss. Rast.* 32: 182. 2000.

P. hartzii Gandog. subsp. *hartzii* (*Poa hartzii* var. *vivipara* Polunin)

Eurasia, North America. See *Bulletin de la Société Botanique de France* 66(7): 302. 1919 [1920], *Bulletin of the National Museum of Canada Biol. Ser.* 24 92: 72, t. 3. 1940.

P. hartzii Gandog. subsp. *vrangelica* (Tzvelev) Soreng & L.J. Gillespie (*Poa hartzii* var. *vrangelica* (Tzvelev) Prob.; *Poa pekulnejensis* Jurtzev & Tzvelev; *Poa vrangelica* Tzvelev)

Europe, Russia, Vrangal Island. See *Novosti Sist. Vyss. Rast.* 11: 37. 1974, *Bot. Zhurn.* (Kiev) 65(10): 1465. 1980, *Bot. Zhurn.* (Moscow & Leningrad) 69(2): 259. 1984, *Contributions from the United States National Herbarium* 48: 538. 2003.

P. hartzii Gandog. var. *hartzii* (*Poa abbreviata* f. *arenaria* Rosenv.; *Poa hartzii* f. *arenaria* (Rosenv.) T.J. Sørensen; *Poa hartzii* f. *hartzii*)

Eurasia, North America. See *Bulletin de la Société Botanique de France* 66(7): 302. 1919 [1920], *Meddelelser om Grønland* 101(3): 145. 1933.

P. hartzii Gandog. var. *vivipara* Polunin (*Poa glauca* f. *prolifera* Simmons; *Poa hartzii* f. *prolifera* (Simmons) B. Boivin)

Canada, Ellesmere Island. See *Flora Danica* 6(17): 3, t. 964. 1790 and *The Vascular Plants in the Flora of Ellesmere Island* 163-164. 1906, *Bulletin of the National Museum of Canada Biol. Ser.* 24 92(1): 70, f. 3. 1940, *Le Naturaliste Canadien* 94(4): 526. 1967.

P. hayachinensis Koidz. (*Poa yezoalpina* Tatew. & Kawano)

Japan. Rare species, alpine, see *Botanical Magazine* 31: 254-255. 1917, *Journal of Japanese Botany* 36: 337, f. 1. 1961.

in Japan: nanbusomosomo

P. hedbergii S.M. Phillips

Ethiopia. Perennial, densely tufted, erect or ascending, leaf blades narrowly linear acute, contracted panicle elliptic to narrowly oblong, spikelets clustered narrowly elliptic 3- to 4-flowered, florets loosely imbricate, glumes 1- to 3-nerved acuminate, upper glume narrowly elliptic-oblong, lower glume narrowly lanceolate, lemmas glabrous scabrid, palea keels scabrid, on mountains, among rocks, closely related to *Poa ruwenzoriensis*, see *Kew Bulletin* 44(1): 134. 1989, *Flora of Ethiopia* 7: 20, 23. 1995.

P. helmsii Vick. (after Richard Helms, 1842-1914, born in Altona, Germany, arrived in Australia in 1858, naturalist and botanist, dentist, museum curator, collector, entomologist and bacteriologist, expedition to Mt. Kosciuszko in 1888, 1893 and 1901, naturalist on the Elder Exploring Expedition to central Australia, May 1891-June 1892)

Victoria, New South Wales, Mt. Kosciuszko. Perennial, green, tufted, vigorous, coarse, leaves mostly basal, auricles absent, sheaths compressed and keeled, ligule truncate, rough leaves not pungent, panicles pyramidal, spikelets green or purplish, chasmogamous spikelets, lemmas hairy, web present and well-developed, palea scabrous, anthers yellow, ovary glabrous, tussock grass, in wet areas, wet soils of creeks and swamps, swampy alpine meadows, moist acidic soils, mountain streams, on granite alluvium, see *Contributions from the New South Wales National Herbarium* 4: 205. 1970.

in English: broad-leaved snowgrass

P. hesperia Edgar

New Zealand. Perennial, alpine to subalpine, turf-forming, erect, slender, rhizomatous, leaf sheath coriaceous, ligule entire, coriaceous leaf blades lax, panicle branches spreading, glumes subequal to equal, lemma silky, palea keels shortly hairy, in stony grassland, rocky places, tussock grassland, see *New Zealand Journal of Botany* 24(3): 442, f. 2. 1986.

P. hiemata Vickery (Latin *hiemalis*, e “belonging to winter”)

Victoria, New South Wales, Mt. Kosciuszko, Tasmania. Perennial, glabrous, branched, more or less erect or ascending, bright green or glaucous, densely caespitose, rhizomatous with vertical rhizomes, leaves mostly basal, auricles absent, compressed sheaths pale green or rarely purplish, ligule membranous and truncate, leaves softly pointed and smooth, green or purplish panicles open or condensed, chasmogamous spikelets, upper glume longest, web usually absent, anthers yellow or purple, ovary glabrous, fruit compressed and grooved, moist soils, open habitats, alpine and subalpine areas and grasslands, moisture-retentive acidic soils, rocky sites, see *Contributions from the New South Wales National Herbarium* 4: 230. 1970.

in English: soft snowgrass

P. hieronymii Hack.

Argentina. Erect and ascending, prostrate, see *Österreichische Botanische Zeitschrift* 52(10): 380. 1902.

P. hisauchii Honda (*Poa acroleuca* var. *spiciformis* Honda)

Asia, Japan. See *Synopsis Plantarum Glumacearum* 1: 256. 1854 and *Botanical Magazine* 41: 640. 1927, *Botanical Magazine* (Tokyo) 42: 132. 1928, *Journal of Japanese Botany* 63: 334-343. 1988, *Botanical Magazine* 101: 311-331. 1988, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991.

in Japan: tachimizoichigotsunagi

P. holciformis J. Presl (*Festuca elliotii* Hack.; *Koeleria poaeoides* Nees ex Steud.; *Poa chilensis* Trin., nom. illeg., non *Poa chilensis* Moris; *Poa chilensis* var. *robustior* Phil.) (for the English (b. India, Calcutta) botanist George Francis Scott-Elliot, 1862-1934 (d. Dumfries, Scotland), 1890 Fellow of the Linnean Society, botanist on the Sierra Leone Boundary Commission, plant collector in Sierra Leone (1891-1892) and in East Africa (with the British East Africa Expedition, 1893-1894), President of the Antiquarian Society, among his writings are “The Hedge woundwort—*Stachys sylvatica* L.” Rep. Bot. Exch. Cl., pp. 640-50. 1933, *Report on the District Traversed by the Anglo-French Boundary Commission*. Sierra Leone. Botany. 1893, *The Flora of Dumfriesshire*. Dumfries 1896 and *A Naturalist in Mid-Africa: Being an Account of a Journey to the Mountains of the Moon and Tanganyika*. London 1896. See Samuel P. Oliver, *The Life of Philibert Commerson*. Edited by G.F. Scott-Elliot. London 1909; J.H. Barnhart, *Biographical notes upon botanists*. 1: 504. 1965; Benjamin Daydon Jackson (1846-1927), “A list of the contributors to the herbarium of the Royal Botanic Gardens, Kew, brought down to 31st December 1899.” *Bull. Misc. Inf. Kew*. 1901 and “A list of the collectors whose plants are in the herbarium of the Royal Botanic Gardens, Kew, to 31st December 1899.” in *Kew Bulletin*. 1-80. 1901; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 320. Cape Town 1981; [Sotheby’s — Marquess of Bute], *Catalogue of a Portion of the Valuable Library from Dumfries House, Ayrshire*. The Property of the Most Hon. The Marquess of Bute. The First Portion: the important collection of mathematical and scientific books. Sale of 3-4 July 1961. The Second Portion: Americana, early printed books, travel, early Italian literature, bibliography, books on the arts and architecture. Sale of 16-18 Oct. 1961. London; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 73-74. 1971; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London 1904; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Auguste Jean Baptiste Chevalier (1873-

1956), *Flore vivante de l'Afrique Occidentale Française*. 1: xxvii-xxx. Paris 1938)

Chile, Argentina. Perennial, robust, caespitose, stout, vigorous, see *Reliquiae Haenkeanae* 1(4-5): 272. 1830, *Linnaea* 10: 306-307. 1836, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 62. 1836, *Synopsis Plantarum Glumacearum* 1: 295. 1854, *Anales de la Universidad de Chile* 94: 172. 1896, *Rep. Missouri Bot. Gard.* 10: 35-39, pl. 1-54. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 2: 70. 1906.

P. homomalla Nees

Western Australia. Perennial, rhizomatous, tall, much-branched, rooting at nodes above the base, nodes more or less swollen, vestigial auricles or absent, leaf sheaths compressed, ligule membranous or chartaceous, inflorescence a green to purple panicle, subtending foliar structure absent, anthers yellow, ovary glabrous, in moist areas, close to *Poa australis* R. Br., see *Prodromus Florae Novae Hollandiae* 179. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 388. 1830, Johann Georg Christian Lehmann (1792-1860), *Plantae Preissianae ... Plantarum quas in Australasia occidentali et meridionali-occidentali annis 1838-41 collegit L. Preiss.* 2: 104. Hamburgi 1846 and C.A. Gardner, *Flora of Western Australia*. vol. 1, part 1. Gramineae. (Govt. Printers: Perth.) 1952.

P. hookeri Vickery (*Poa australis* R. Br. var. *capillifolia* Hook.f.)

Victoria, Alpine National Park, Snowy River National Park, Tasmania, New South Wales. Perennial, caespitose, small, slender, erect, leaves mostly basal, auricles absent, leaf sheaths scabrous and compressed, ligule entire and membranous, leaves more or less hispid to scabrous, green and purple panicle loosely contracted, glumes acute, lemmas pubescent, web absent, anthers yellow or purple, ovary glabrous, found in open habitats, disturbed sites, along roadsides, woodland, on dry lowland areas in open woodland, eucalyptus woodland, rare in Victoria, see *Contributions from the New South Wales National Herbarium* 4: 222. 1970.

in English: Hooker's tussock-grass

P. hookeriana (F. Muell. ex Hook.f.) F. Muell. (*Austrofestuca hookeriana* (F. Muell. ex Hook.f.) S.W.L. Jacobs; *Festuca hookeriana* F. Muell. ex Hook.f.; *Hookerchloa hookeriana* (F. Muell. ex Hook.f.) E.B. Alexeev; *Schedonorus hookerianus* (F. Muell. ex Hook.f.) Benth.)

Australia. See *Essai d'une Nouvelle Agrostographie* 99, 162, 177. 1812, *Flora Tasmaniae* 2: 127, t. 165. 1858, *Fragmenta Phytographiae Australiae* 8: 131. 1873, *Flora Australiensis: A Description ...* 7: 656. 1878 and *Telopea* 3(4): 602. 1990.

P. horridula Pilg. (*Melica expansa* Steud. ex Lechler; *Poa androgyna* Hack.; *Poa dumetorum* Hack.; *Poa dumetorum* var. *dumetorum*; *Poa dumetorum* var. *unduavensis* Hack.; *Poa pardoana* Pilg.; *Poa piifontii* J. Fernandez Casas, J. Molero & A. Susanna; *Poa pufontii* Fern. Casas, Molero & Susanna; *Poa unduavensis* Hack.)

Ecuador, Bolivia, Peru. Perennial, erect, bunchgrass, coarse, tufted, robust stems with dark nodes, spreading foliage, leaf blades flat linear scabrous acute, rhizomatous, green to purplish inflorescence on slender reflexed pedicels, loose panicle oblong to ovate with scabrous branches, spikelets clustered oblong to elliptic, glumes unequal lanceolate acute or acuminate, lower glume 1-nerved, upper glume 3-nerved, lower lemma lanceolate 5-nerved acute more or less pubescent to pilose, awns lacking, in small clumps, open tufts, found in rocky places, between rocks, puna, in rock slides, grassland, dense forest, mountain, alpine, moist areas, among shrubs, see *Berberides Americae Australis* 56. 1857 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 506. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 6: 158. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 11: 26-27. 1912, *Fontqueria* 21: 17. 1988, *Willdenowia* 27: 237. 1997.

in Peru: sunsa, sunsa-sunsa

P. hothamensis Vickery (*Poa hothamensis* var. *parviflora* N.G. Walsh) (from Mt Hotham region, Victorian Alps)

Australia, Victoria. Perennial, erect, tufted, often rhizomatous or stoloniferous, leaves mostly basal, auricles absent, ligule membranous, sheath purplish and slightly compressed, leaves usually stiff, culms slightly flattened, green and purple panicle contracted or open, spikelets often purplish, upper glume slightly longer, web present or absent, anthers yellow or purple, ovary glabrous, suitable for rehabilitation and revegetation of alpine and subalpine areas, growing in acidic soils, granite, montane dry woodland, open habitats, see *Contributions from the New South Wales National Herbarium* 4: 191. 1970, *Muelleria* 7(4): 451. 1992.

in English: ledge grass

P. hothamensis Vickery var. *hothamensis*

Australia, Victoria. Perennial, tussock grass, rhizomatous with rhizomes elongate and oblique, leaf sheaths puberulous, anthers yellow, in rocky sites, in grassland and woodland.

P. hothamensis Vickery var. *parviflora* N.G. Walsh

Australia, Victoria. Perennial, stoloniferous with aerial stolons, sheaths glabrous or scabrous, ligule membranous and thin, velvety leaves, grows in moist forests, open forests, rare grass in Croajingolong National Park, see in *Muelleria* 7(4): 451, 454. 1992.

in English: soft ledge grass

P. howellii Vasey & Scribner (*Poa bolanderi* subsp. *howellii* (Vasey & Scribn.) Keck; *Poa bolanderi* subsp. *howellii* D.D. Keck; *Poa bolanderi* var. *howellii* (Vasey & Scribn.) M.E. Jones; *Poa howellii* var. *microsperma* Vasey) (after the American self-taught botanist Thomas Jefferson Howell, 1842-1912, in 1850 came west on the Oregon Trail, explorer, botanical collector for Dr. Asa Gray, expeditions to the Siskiyou Mountains and northern California, author of *A Catalogue of the Known Plants (Phaenogamia and Pteridophyta of Oregon, Washington, and Idaho)* 1887 and *Flora of Northwest America* 1903. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 211. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 184. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; Kenneth and Robin Lodewick, "Oregon Penstemons and Clues to Pacific Northwest Botanical History." *Oregon Historical Quarterly* vol. 93, No. 4: 407-471. Winter 1992-1993)

North America, California. In swamps and woods, in forest, coastal, see *Botanical Gazette* 7(3): 32. 1882, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 78. 1893, *Contributions from the United States National Herbarium* 1(8): 273. 1893 and *University of California Publications in Botany* 1: 60. 1902, *Contributions to Western Botany* 14: 15. 1912, *A California Flora* edition 1, 1484. 1959.

in English: Howell's blue grass

P. huancavelicae Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 15: 52, t. 12A. 1965.

P. hubbardiana Parodi

Argentina. See *Notas del Museo de la Plata, Botánica* 2(11): 10-13, f. 4. 1937.

P. huecu Parodi (*Poa indigesta* Parodi)

Argentina. See *Revista Argentina de Agronomía* 17: 183, 187, f. 7. 1950.

P. humillima Pilger (*Poa humillima* var. *exserta* Hack. ex Buchtien)

Ecuador, Argentina, Catamarca, Tucuman, Bolivia, Peru. Perennial or annual, low, dwarf, small, basal sheaths inflated, leaf blades glabrous coriaceous acute, ovoid to oblong panicle dense, spikelets oblong 3- to 4-flowered glabrous, glumes ovate unequal subacute, lower glume 1-nerved, upper glume 3-nerved, lower lemma ovate 5-nerved, rare species, forming mats, resembles *Catabrosa werdermannii*, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37(4): 378.

1906, *Contribuciones a la Flora de Bolivia* 1: 82. 1910, *Willdenowia* 27: 236. 1997.

P. hybrida Gaudin (*Poa chaixii* var. *hybrida* (Gaudin) Korsh; *Poa chaixii* var. *hybrida* (Gaudin) Fiori, nom. illeg., non *Poa chaixii* var. *hybrida* (Gaudin) Korsh; *Poa jurana* Genty; *Poa sudetica* subsp. *hybrida* (Gaudin) Bonnier & Layens; *Poa sudetica* var. *hybrida* (Gaudin) Griseb.)

Europe, Greece, Switzerland. See *Flora Delphinalis* 7. 1785 [1786], *Beobachtungen auf Reisen nach dem Riesengebirge* 120. 1791, *Alpina* 3: 46. 1808, *Flora Rossica* 4(13): 380. 1852, Charles Magnier, *Scrinia florae selectae*. Saint-Quentin 1882-1897, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg (Sér. 7) VIIIe* 7: 475. 1898 and *Nuova Flora Analitica d'Italia* 1: 130. 1923, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987.

P. hylobates Bor

Western Nepal. Annual, caespitose, slender, ligule membranous and scabrid, loose panicle, spikelets 2- to 3-flowered, glumes keeled, lemma oblong-obtuse, palea 2-keeled, plumose stigmas, see *Bulletin of the Botanical Survey of India* 7: 132. 1965.

P. iberica Fisch. & al. (*Poa iberica* Fisch. & C.A. Mey.; *Poa longifolia* Trin. var. *planifolia* Sommer & Levier)

Asia, Russia. Useful for erosion control, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 61. 1836.

P. imbecilla Sol. ex Spreng. (*Eragrostis imbecilla* Steud.; *Eragrostis imbecilla* Benth., nom. illeg., non *Eragrostis imbecilla* Steud.; *Leptochloa debilis* Stapf ex C.E. Hubb.; *Poa imbecilla* R. Br., nom. illeg., non *Poa imbecilla* Sol. ex Spreng.; *Poa imbecilla* Spreng.; *Poa imbecilla* Sol. ex G. Forst.; *Poa matthewsii* var. *minor* Petrie; *Poa sprengelii* Kunth)

New Zealand. Perennial, loosely tufted, erect, slender, shortly rhizomatous, culm nodes swollen, leaves variable, leaf sheath membranous, ligule entire, leaf blades persistent, lax inflorescence paniculate with delicate branches, glumes obtuse subequal to unequal, lemmas variable, palea keels ciliate, found in open habitat, open forest, rocky places, see *Genera Plantarum* 23. 1776, *Florulae Insularum Australium Prodrromus Appendix* 89. 1786, *Plantarum Novarum ex Herbario Sprengelii Centuriam* 9. 1807, *Prodrromus Florae Novae Hollandiae* 180-181. 1810, *Essai d'une Nouvelle Agrostographie* 71. 1812, *Révision des Graminées* 1: 116. 1829, *Flora Antarctica* 1: 101. 1844[1845], *Synopsis Plantarum Glumacearum* 1: 279. 1854, *Flora Australiensis: A Description ...* 7: 643. 1878 and *Transactions and Proceedings of the New Zealand Institute* 34: 392-393. 1902, *Manual of the New Zealand Flora* 913. 1906, *Manual of the New Zealand Flora* 201. 1925,

Bulletin of Miscellaneous Information Kew 1941: 26. 1941, *Contr. Queensland Herb.* 14: 6. 1972, *New Zealand J. Bot.* 34: 471. 1986, *Novon* 8: 77. 1998.

P. imperialis Bor

Eastern Nepal. Perennial, stoloniferous, smooth, leaf blades linear-acuminate, ligule oblong, panicle with spreading branches, spikelets oblong, palea keeled, on rocky places, riverbanks, see *Kew Bulletin* 12(3): 414. 1958.

P. incrassata Petrie (*Poa exigua* Hook.f., nom. illeg., non *Poa exigua* Dumort.; *Poa kirkii* var. *incrassata* (Petrie) Zotov)

Antipodes Islands. Perennial rare species, tufted, small, low, glaucous, subantarctic, alpine and subalpine, leaf blades persistent usually folded, leaf sheath shining and membranous, ligule entire, inflorescence paniculate compact spike-like or racemose with stiff short branches, glumes subequal glabrous, lemma ovate strongly folded to hooded, palea keels scabrid, damp soil, see *Observations sur les Graminées de la Flore Belgique* 113. 1824, *Handbook of the New Zealand Flora* 338. 1864, *Indigenous Grasses of New Zealand* t. 51B. 1880 and *Transactions and Proceedings of the New Zealand Institute* 34: 394. 1902, *T.R.S.N.Z.* 73: 236. 1943.

P. induta Vickery (Latin *induo, ui, utum, ere* “to put on an article of dress or ornament,” *indutus* “apparel”)

Victoria, New South Wales. Perennial, erect and unbranched, loosely or densely caespitose, grayish green, leaves mostly basal, auricles absent, sheath densely hairy and compressed, ligule membranous to papery or chartaceous, leaves densely hairy and lax, green and purple panicle narrow and 1-sided, chasmogamous spikelets, glumes acute and purplish, web present, anthers yellow, ovary glabrous, fruit compressed and grooved, attractive, shade species, found in well-drained acidic soils, under eucalypt forest, in montane eucalypt woodland, similar to *Poa petrophila* Vickery, see *Contributions from the New South Wales National Herbarium* 4: 236, 238. 1970.

P. infirma Kunth (*Catabrosa thomsonii* Hook.f.; *Colpodium thomsonii* (Hook.f.) Hack.; *Eragrostis infirma* (Kunth) Steud.; *Megastachya infirma* (Kunth) Roem. & Schult.; *Ochlopoa infirma* (Kunth) H. Scholz; *Poa annua* L.; *Poa annua* f. *annua*; *Poa annua* subsp. *exilis* (Tommasini) Murb.; *Poa annua* subsp. *exilis* (Tomm. ex Freyn) Asch. & Graebn.; *Poa annua* var. *exilis* Tomm. ex Freyn; *Poa annua* var. *tommasinii* Asch. & Graebn.; *Poa exilis* (Tomm. ex Freyn) Murb.; *Poa exilis* Murb. ex Asch. & Graebn.; *Poa remotiflora* Murb., nom. illeg., non *Poa remotiflora* Rupr.)

Probable origin Europe. Annual, small, very short-lived, erect or ascending, spreading or prostrate, somewhat yellowish, caespitose, loosely tufted, branched or unbranched, leaves mostly basal, leaf blades persistent flat or folded, auricles absent, sheaths keeled and flattened, ligule membranous and truncate, leaves glabrous with hooded tip, a

green lax open panicle ovate or lanceolate with branches always erect, lower panicle branches erect to spreading after anthesis, 2-6 florets, spikelets distant and sessile, persistent glumes subequal to unequal, lower glume ovate 1-nerved, upper glume elliptic or oblong 1- to 3-nerved, silky lemma oblong to elliptic 5-nerved, palea keels ciliate, anthers yellow, ovary glabrous, weed species, very variable in forms, scarce species, in disturbed places, confused with *Poa annua* L. and *Poa trivialis* L., found along roadsides, stony places, wastelands, see *Species Plantarum* 1: 67-68. 1753, *Genera Plantarum* 23. 1776, *Essai d'une Nouvelle Agrostographie* 74, 97, 167. 1812, *Nova Genera et Species Plantarum* 1: 158. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 2: 585. 1817, *Fundamenta Agrostographiae* 119, t. 7. 1820, *Nomenclator Botanicus. Editio secunda* 1: 158, 563. 1840, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 27: 469. 1878, *The Flora of British India* 7: 311. 1896 and *Synopsis der mitteleuropäischen Flora* 2: 389-390. 1900, Svante Samuel Murbeck (1859-1946), *Contributions à la connaissance de la flore du nord-ouest de l'Afrique et plus spécialement de la Tunisie ...* Lund 1897-1905, *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 172. 1903, *Acta Universitatis Lundensis* 4: 73. 1905, *Journal of the Bombay Natural History Society* 50(4): 1-838. 1952, *New Zealand Journal of Botany* 24: 425-503. 1986, *Revista de Ciencias (San Marcos)* 74: 48-57. 1986, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Bulletin, University Museum, University of Tokyo* 34: 169-249. 1991, *Ruizia; Monografías del Real Jardín Botánico* 13: 1-480. 1993, *Blumea* 38: 421. 1994, *Vascular Plants of British Columbia* 129-138. 1994, *Gramíneas de Bolivia* 140-141. 1998, *Ber. Institut für Landschafts- und Pflanzenökologie Univ. Hohenheim* 16: 58-59. Stuttgart 2003.

in English: weak bluegrass, early meadow-grass, early winter grass

P. interior Rydb. (*Paneion interius* (Rydb.) Lunell; *Poa coloradensis* Vasey ex Pammel; *Poa nemoralis* subsp. *interior* (Rydb.) W.A. Weber; *Poa nemoralis* var. *interior* (Rydb.) Butters & Abbe; *Poa subtrivialis* Rydb.)

North America, U.S. Perennial, caespitose, inflorescence ascending, growing in dense clumps, open areas, along roadsides, open rocky slopes, along rivers, flowing waters, in coniferous forest along stream, see *Species Plantarum* 1: 69-70. 1753, *Bulletin, Division of Agrostology United States Department of Agriculture* 9: 41. 1897 and *Bulletin of the Torrey Botanical Club* 32(11): 604-605. 1905, *Bulletin of the Torrey Botanical Club* 36: 536. 1909, *American Midland Naturalist* 4: 222. 1915, *Rhodora* 49: 6. 1947, *Phytologia* 51(6): 375. 1982.

in English: inland bluegrass

P. intrusa Edgar

New Zealand. Perennial, montane and subalpine, loosely tufted, tussock, erect, leaf blades persistent subcoriaceous flat or folded, leaf sheath glabrous keeled submembranous, ligule ciliate, panicle branches slender and spreading, glumes equal to subequal, lemma scabrid, callus glabrous, grassland, open forest, see *New Zealand Journal of Botany* 24(3): 463-465, f. 5. 1986.

P. iridifolia Hauman (*Poa lanigera* Nees var. *tandilensis* Hack.) (Argentina, Prov. Buenos Aires, Tandil)

South America, Argentina, Uruguay. Perennial, robust, clumped, green, leaves erect and glabrous, sheaths keeled and flattened, panicles ovoid and erect to pendent, spikelets oblong to oblong-lanceolate, lemmas keeled and lanceolate to oblong, rare species, useful for erosion control, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 491. 1829 and *Anales del Museo Nacional de Buenos Aires* 21: 152. 1911, *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 407, t. 1. 1917.

P. jugicola D.I. Morris

Tasmania. Perennial, caespitose, densely or loosely tufted, usually erect, rhizomatous with spreading rhizomes, stoloniferous with short ascending stolons, leaves mostly basal, auricles absent, sheaths keeled, ligule obtuse or truncate, a green panicle loosely contracted, chasmogamous spikelets, subtending foliar structure present or absent, web present, yellow anthers, ovary glabrous, mesophytic, subalpine, see in *Muelleria* 7(2): 167-169. 1990.

P. kanaii Rajbh.

Central Nepal. Perennial, erect, loosely tufted, smooth, short creeping rhizomes, leaf blades with scabrous margins, panicle ovate or oblong, 2-3 flowers, in alpine regions, see *Acta Phytotaxonomica et Geobotanica* 39(1-3): 58. 1988.

P. keckii Soreng (named for the American botanist David Daniels Keck, 1903-1995, experimental taxonomist, from 1950 to 1959 at the New York Botanical Garden, his writings include "Taxonomic notes on the California flora." *Aliso* 4: 101-114. 1958, "A revision of the genus *Orthocarpus*." *Proc. Calif. Acad. Sci.*, ser. 4, 16(17): 517-571. 1927, "Studies upon the taxonomy of the Madinae." *Madroño*. 3: 4-18. 1935, "The silverswords of Hawaii." *Carnegie Inst. Wash. News Serv. Bull.* 4: 75-78. 1936 and "The Hawaiian silverswords: systematics, affinities, and phytogeographic problems of the genus *Argyroxiphium*." *Occas. Pap. Bernice P. Bishop Mus.* 11(19): 1-38. 1936. See Jens Christian Clausen (1891-1969), D.D. Keck and William McKinley Hiesey (Heusi), "Experimental studies on the nature of species. I. Effect of varied environments on western American plants." *Publications of the Carnegie Institution of Washington* 520. 1940; Philip Alexander Munz (1892-1974), *A California flora*, [by] P.A. Munz in collaboration with David D. Keck. Berkeley, Published for the Rancho Santa Ana Botanic Garden by the University of California Press, 1959; J.H. Barnhart, *Biographical notes upon botanists*. 2:

276, 1: 354. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 207. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 248. 1973; Joseph Ewan, editor, *A Short History of Botany in the United States*. 112, 114. 1969; Elmer Drew Merrill, in *Contr. U.S. Natl. Herb.* 30(1): 173. 1947; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

North America, California. Perennial, alpine, see *Systematic Botany* 16(3): 520, f. 3-4. 1991.

in English: Keck's bluegrass

P. kelloggii Vasey (*Poa bolanderi* var. *kelloggii* (Vasey) M.E. Jones) (for the American botanist Albert Kellogg, 1813-1887 (Alameda, California), physician, traveler, plant collector, pioneer of the Californian botany, 1853 one of the founders of the California Academy of Sciences, author of *Forest Trees of California*. [Sacramento 1882], *Golden Bloomeria* (Hesperian). [San Francisco, 1859], *Trees and Shrubbery of the State*. [Sacramento, 1866] and *Remarks ... on the Late Doctor J.B. Trask, before the California Academy of Sciences July 21, 1879* [San Francisco] 1879. See Edward Lee Greene, in *Pittonia*. 1: 145-151. 1887; J.H. Barnhart, *Biographical notes upon botanists*. 2: 279. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 208. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Joseph Ewan, editor, *A Short History of Botany in the United States*. 9. 1969; Sereno Watson (1826-1892), *Botany of California*. Cambridge, Mass. 1876, 1880; Howard Atwood Kelly and Walter Lincoln Burrage, *Dictionary of American Medical Biography: Lives of Eminent Physicians of the United States and Canada, from the Earliest Times*. New York 1928; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; William H. Brewer, *Biographical Memoirs*. National Academy of Sciences. 5: 267-290. 1903; Erwin G. Guddé, *California Place Names. The Origin and Etymology of Current Geographical Names*. University of California Press, Berkeley 1974 [1949]; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. Philadelphia 1899)

North America, California. Perennial, flowers all perfect, woodlands, see *Botanical Gazette* 7: 32. 1882, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): 79, t. 79. 1893 and *Contributions to Western Botany* 14: 15. 1912.

in English: Kellogg's bluegrass, redwood bluegrass

P. keysseri Pilg. (*Poa cruttwellii* C.E. Hubb.; *Poa gymnohypsos* Gilli) (dedicated to the German ethnologist Christian Keysser, 1877-1961, 1899-1920 Lutheran missionary in New Guinea, 1922-1939 Missionsinspektor und Lehrer am Missionsseminar Neuendettelsau, collected plants and animals, author of *Eine Papuagemeinde*. Kassel: Barenreiter-Verlag, 1930, *Wörterbuch der Kâte-Sprache, gesprochen in Neuguinea*. Dictionary of the Kâte-Language, etc. [Germ. & Engl.] Berlin 1925, *Gottes Weg ins Hubeland*. Dresden: CL. Ungelenk, 1936, *A People Reborn*. Pasadena: William Carey, 1980, *Sanggang, Cannibal Chief to Christian*. Edited by Esther Winter. Madang, Papua New Guinea: Kristen Press, 1986. See Willem Adolf Krige, *Die Problem van eiesoortige kerkvorming by Christian Keysser*. Franeker 1954; Christian Keysser, "Aus dem Leben der Kaileute." in Richard Neuhaus, *Deutsch Neu-Guinea*. Berlin 1911; "Mission Work Among Primitive Peoples in New Guinea." *Internat. Review of Missions*, XIII, 426-435. 1924)

Papua New Guinea. Small, herbaceous, alpine, amongst rocks, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62: 459-460. 1929, *Brittonia* 2(2): 110. 1936, *Kew Bulletin* 1949: 474. 1950, *The Alpine Flora of New Guinea* 2: 1067-1068. 1979, *Feddes Repertorium* 92: 293, 297, t. 12. 1981, *Blumea* 38(2): 432. 1994.

P. keysseri Pilg. subsp. *keysseri*

Papua New Guinea. Small, herbaceous, alpine, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62: 460. 1929.

P. keysseri Pilg. var. *brassii* (Hitchc.) Veldkamp (*Poa brassii* Hitchc.; *Poa keysseri* subsp. *brassii* (Hitchc.) Veldkamp) (for Leonard John Brass, 1900-1971, born in Toowoomba, Queensland, the leader and official botanist of the Archbold Collecting Expeditions to tropical areas (Papua New Guinea, British Solomon Islands, etc., 1933-34, 1936-37 and 1938-39, May to November 1953, March 1956 to January 1957, March to December 1959), collecting plants for the Arnold Arboretum on the second and fourth New Guinea expeditions, Feb-Sept. 1948 expedition to Australia, the Archbold Cape York Expedition, wrote "Results of the Archbold expeditions, no. 86: summary of the sixth Archbold expedition to New Guinea (1959)." *Bull. Amer. Mus. Nat. Hist.* 127-216. 1964, "Results of the Archbold expeditions, no. 79. Summary of the fifth Archbold expedition to New Guinea (1956-1957)." *Bull. Amer. Mus. Nat. Hist.* 118: 1-69. 1959, "Summary of the fourth Archbold Expedition to New Guinea." in *Bulletin of the American Museum of Natural History*. vol. III. Article no. 2. New York 1953, "Vegetation of Nyasaland: report on the Vernay Nyasaland expedition of 1946." *Mem. N.Y. Bot. Gdn.* 8: 161-90. 1953. See also J.S. Womersley, "Plant collecting for anthropologist geographers and ecologists in New Guinea." *Bot. Bull.*

New Guinea. 2: 69. 1969; E.D. Merrill & L.M. Perry, "Plantae Papuanae Archboldianae, III." *Jour. Arnold Arb.* 21: 292-293. 1940; E.D. Merrill & M.L. Perry "Plantae Papuanae Archboldianae, XVI." *Jour. Arnold Arb.* 26: 229-266. 1945; C.G.G.J. van Steenis, editor, "Cyclopaedia of collectors." in *Flora Malesiana*. vols. 1 and 8 (pt. 1). 1950 and 1973; Elmer D. Merrill, *A botanical bibliography of the islands of the Pacific*. 210. Washington 1947; H.M. Van Deusen, "Obituary: Leonard John Brass." *North Queensland Naturalist* vol. 39, no. 156: 2-3. 1971)

Papua New Guinea. Along roadsides, abandoned fields, see *Brittonia* 2(2): 110. 1936, *The Alpine Flora of New Guinea* 2: 1067. 1979, *Blumea* 38(2): 432. 1994.

P. keysseri Pilg. var. *keysseri* (*Poa cruttwellii* C.E. Hubb.; *Poa gymnohypsos* Gilli; *Poa keysseri* subsp. *keysseri*) (for the Reverend Norman Edward Garry Cruttwell [also spelled Crutwell], 1916-1995, Anglican Mission in Menapi, botanical collector in Papua New Guinea, author of "Orchid-hunting in New Guinea." *J. R. Hort. Soc.* 77: 254-60. [1952], "On the rooftop of New Guinea. Mountain flora in Papua." *Wildlife Austral.* 11(11): 499-505 (1949). See *New Religious Movements in Melanesia* / contributions by Norman Crutwell ... et al.; edited by Carl Loeliger and Garry Trompf. Suva, Fiji: IPS, USP, 1985; "Saucer Concentration Over Papua." by Rev. Norman E.G. Crutwell, in *Flying Saucer Revue* V/5 September-October, 1959; "Saucer Men Seen in Flight." by Rev. Norman E.G. Crutwell. In *FSR* V/6 November-December, 1959; "What Happened in Papua?" by Rev. Norman E.G. Crutwell. In *FSR* VI/6 November-December, 1960; "Flying Saucers Over Papua, A Report on Papuan Unidentified Flying Objects," by Cruttwell, *N.E.G.*, 1960)

New Guinea. Rocky places, amongst stones, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62: 459-460. 1929, *Brittonia* 2(2): 110. 1936, *Kew Bulletin* 1949: 474. 1950, *The Alpine Flora of New Guinea* 2: 1067-1068. 1979, *Feddes Repertorium* 92: 293, 297, t. 12. 1981, *Blumea* 38(2): 432. 1994.

P. keysseri Pilg. var. *saruwagetica* (Pilg.) Veldkamp (*Poa archboldii* Hitchc.; *Poa keysseri* subsp. *saruwagetica* (Pilg.) Veldkamp; *Poa saruwagetica* Pilg.)

Papua New Guinea. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 62: 459-460. 1929, *Brittonia* 2(2): 109. 1936, *The Alpine Flora of New Guinea* 2: 1068. 1979, *Blumea* 38(2): 433. 1994.

P. kirkii Buchanan (*Poa kirkii* var. *collinsii* Hack.; *Poa kirkii* var. *mackayi* (Buchanan) Hack.; *Poa mackayii* Buchanan; *Poa mackayi* Buchanan)

New Zealand. Perennial, slender, montane to alpine, erect, tufted, sometimes stoloniferous, leaf sheath smooth, ligule entire, leaf blades flat and persistent, inflorescence loosely spreading, glumes equal to subequal, lemma nerves scabrid, palea keels ciliate, in grassland, open forest, see *Indigenous*

Grasses of New Zealand, t. 51A-B. 1880, *Transactions and Proceedings of the New Zealand Institute* 26: 271. 1894 and *Transactions and Proceedings of the New Zealand Institute* 35: 383. 1903, *Manual of the New Zealand Flora* 910. 1906, *Transactions and Proceedings of the New Zealand Institute* 50: 211. 1917 [1918], *Transactions of the Royal Society of New Zealand* 73: 236. 1943, *New Zealand J. Bot.* 24: 145, 461. 1986.

P. kurtzii R.E. Fr. (*Poa altoperuana* R. Lara & Fern. Casas; *Poa asperiflora* Hack.; *Poa munozensis* Hack.; *Poa pflanzii* Pilg.) (dedicated to the German botanist Friz Kurtz, 1854-1920, Argentina/Córdoba 1884-1915 professor of botany, explorer, botanical collector, author of "Informe preliminar de un viaje botánico efectuado en las provincias de Córdoba, San Luis y Mendoza hasta la frontera de Chile, en los meses de diciembre 1885 a febrero 1886." *Bol. Acad. Nac. Ci.* 9: 349-370. 1886, "Dos viajes botánicos al Rio Salado superior 1891-1893." *Bol. Acad. Cord.* xiii. Buenos Aires, 1893, "Essai d'une bibliographie botanique de l'Argentine." *Bol. Acad. Cienc. Cordoba* 19-20. 1912-1915, *Collectanea ad Floram Argentinam*. Buenos Aires, 1900, "Enumeracion de las Plantas recogidas por G. Bodenbender en la Precordillera de Mendoza (Octubre de 1896.)" *Bol. Acad. Cienc. Cord.* xv. [Buenos Aires, 1897], "Die Flora des Chilcatgebietes im südöstlichen Alaska, nach den Sammlungen der Gebrüder Krause [Expedition der Bremer geographischen Gesellschaft im Jahre 1882]." *Bot. Jahrb.* 19: 327-493. 1894. See Nikolai Michailovic Alboff (Albov, Albov) (1866-1897), "Contributions à la flore de la Terre de Feu. II. Énumération des plantes du canal de Beagle et de quelques autres endroits de la Terre de Feu. [Cyperaceae and Gramineae by F. Kurtz.]" *Revista Mus. La Plata.* 7: 355-402. 1896; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Eugène John Benjamin Autran (1855-1912), "Notice biographique sur Nicolas Alboff." *Anales Mus. La Plata, Secc. Bot.* 1: i-vi. 1903; J.H. Barnhart, *Biographical notes upon botanists*. 2: 329. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 223. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Bolivia, Peru, Chile, Argentina, Tucuman, Dpto. Tafi, Cerro Muñoz. Perennial, caespitose, erect, leaves mainly basal, leaf blades scabrous pungent, slender open panicle oblong-ovate with filiform branches, spikelets oblong 3- to 4-flowered, glumes subequal lanceolate acute to acuminate, lower glume 1-nerved, upper glume 3-nerved, lower lemma ovate 5-nerved acute, palea keels scabrous, stony places, moist puna, see *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 4, 1: 183, t. 9, f. 7. 1905, *Anales del Museo Nacional de Buenos Aires* 21: 155. 1911, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 187. 1912[1913], *Repertorium Specierum*

Novarum Regni Vegetabilis 11: 28. 1912, *Fontqueria* 21: 19. 1988, *Kurtziana* 27(2): 366. 1999, *Kurtziana* 28(1): 114. 2000.

P. labillardieri Steudel (*Poa billardieri* Steudel, in error; *Poa billardieri* Steud. ex Benth., orth. var.; *Poa labillardieri* Steudel) (named for the French explorer Jacques Julien Houtton de Labillardière, 1755-1834, botanist, traveler, from 1791-1795 on expedition to find the French navigator Jean François de Galaup de la Pérouse (1741-1788), among his works *Icones plantarum Syriae rariorum*. Lutetiae Parisiorum [Paris] 1791 [1791-1812], *Relation du voyage à la recherche de la Pérouse*. Paris [1800] and *Novae Hollandiae plantarum specimen*. Parisiis 1804-1806 [1807]. See Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. 573. Paris, Leipzig 1845; J.H. Barnhart, *Biographical notes upon botanists*. 2: 331. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; M.N. Chaudhri, I.H. Vegter and C.M. De Wal, *Index Herbariorum*, Part II (3), *Collectors I-L*. Regnum Vegetabile vol. 86. 1972; H.M. Cooper, *French Exploration in South Australia*. Adelaide 1952; John Dunmore, *French Explorers in the Pacific*. Oxford 1965-1969; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; N.J.B. Plomley, *The Baudin Expedition and the Tasmanian Aborigines*. Hobart 1982; Numa Broc, *Dictionnaire illustré des explorateurs français du XIXe siècle*. Afrique. Paris 1988; Sir James Edward Smith, *A Specimen of the Botany of New Holland*. 1, t. 1. London 1793; Warren R. Dawson, *The Banks Letters*. London 1958; J.C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Ida Lee, *Early Explorers in Australia*. From the log-books and journals, including the Diary of Allan Cunningham. London 1925; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987)

South Australia, New South Wales, Victoria, Tasmania, Queensland. Perennial, green to grayish or gray-green, slender, coarse, robust, densely tufted, forming large tussocks, rarely rhizomatous, bright blue or bluish foliage, leaves mostly basal, bulk of dead dry leaves at base, auricles absent, sheath pale green or rarely purplish, ligule truncate and papery, rough to scabrous leaves flat or channeled, plume-like heads of flowers on long stems, purple or greenish panicle narrow and pyramidal, spikelets strongly compressed, vestigial foliar structure subtending the inflorescence absent, chasmogamous spikelets, lemmas hairy, web densely copious, anthers yellow, ovary glabrous, pasture, cultivated, very variable ornamental grass, graceful

appearance, drought-resistant, fast-growing and salt-tolerant, bird-attracting, specimen plant, widespread in grasslands, grassy woodlands and sclerophyll forests, common in wet places, alluvial and moist soils, prefers ample water, acidic soils, woodland of eucalyptus, confused with *Poa poiiformis* (Labill.) Druce, similar to *Stipa trichotoma* Nees (or *Nassella trichotoma* (Nees) Hack. ex Arechav.), see *Systema Vegetabilium, editio decima sexta* 1: 330. 1824, *Fl. Bras. Enum. Pl.* 2(1): 375. 1829, *Synopsis Plantarum Glumacearum* 1: 262. 1854, *Flora Australiensis: A Description...* 7: 651. 1878, *Anales Mus. Nac. Montevideo* 1: 336. 1895 and *Candollea* 3: 284. 1927, *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970, *New Zealand Journal of Botany* 24: 425-503. 1986, *Australian Journal of Botany* 39: 367-374. 1991, *Telopea* 6: 593. 1995.

in English: tussock grass, common tussock grass, tussock, silver tussock, large tussock grass, rough poa tussock

P. labillardieri Steudel var. *acris* Vickery

Australia, Victoria, Tasmania. Bluish leaves sharply pointed, purple sheaths, alpine to subalpine, see *Contributions from the New South Wales National Herbarium* 4: 205. 1970.

P. labillardieri Steudel var. *labillardieri*

Australia.

P. laetevirens R.E. Fr. (*Poa atacamensis* Parodi; *Poa nana* Savi; *Poa nana* Phil., nom. illeg., non *Poa nana* Savi; *Puccinellia atacamensis* (Parodi) Sorong)

Argentina. Along rivers and streams, moist places, see *Annalen der Botanik. ed. Usteri* 24: 49. 1800, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 8: 87. 1891 and *Nova Acta Regiae Societatis Scientiarum Upsaliensis, ser. 4*, 1: 181. 1905, *Revista Argentina de Agronomía* 29(1-2): 18. 1962 [1963], *Novon* 8(2): 200. 1998, *Kurtziana* 27(2): 366. 1999, *Kurtziana* 28(1): 95-136. 2000.

P. laevis R. Br. (*Arundo laevis* (R. Br.) Poir.; *Arundo poiiformis* Labill.; *Atropis laevis* Beal; *Poa australis* var. *laevis* Kirk; *Poa australis* var. *monticola* Hook.f.; *Poa caespitosa* var. *laevis* (R. Br.) Benth.; *Poa laevis* Borbás, nom. illeg., non *Poa laevis* R. Br.; *Poa laevis* Vasey, nom. illeg., non *Poa laevis* R. Br.; *Poa poiiformis* (Labill.) Druce; *Puccinellia laevis* (Beal) Ponert)

Europe, Australia. Woodland, forest, see *Species Plantarum* 1: 81. 1753, *Encyclopédie Méthodique, Botanique* 5: 73. 1804, *Novae Hollandiae Plantarum Specimen* 1: 27. 1804, *Prodromus Florae Novae Hollandiae* 179. 1810, *Encyclopédie Méthodique, Botanique* Suppl. 4: 707. 1816, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Flora Novae-Zelandiae* 1(4): 307. 1853, *Flora Tasmaniae*

2: 123. 1858, *Transactions and Proceedings of the New Zealand Institute* 9: 500. 1877, *Österreichische Botanische Zeitschrift* 27: 425. 1877, *Flora Australiensis: A Description ...* 7: 652. 1878, *Contributions from the United States National Herbarium* 1(8): 273. 1893, *Grasses of North America for Farmers and Students* 2: 577. 1896 and *Rep. Botanical Exchange Club. London. Suppl.* 2: 640. 1917, *Flora URSS* 2: 470. 1934, *Feddes Repertorium* 84(9-10): 739. 1974, *New Zealand J. Bot.* 24: 446. 1986.

P. langtangensis Melderis

Central Nepal. Perennial, erect, slender, loosely caespitose, leaves glabrous, panicle loosely spreading, spikelets lanceolate, 2-flowered, lower glumes lanceolate, palea keeled, along rivers and streams, see *Enumeration of the Flowering Plants of Nepal* 1: 143. 1978.

P. languida Hitchc. (*Poa debilis* Thuill.; *Poa debilis* Torr., nom. illeg., non *Poa debilis* Thuill.; *Poa saltuensis* Fernald & Wiegand)

Northern America, U.S., Canada. Perennial, herbaceous, growing in moist woods and fen, woods and alluvial banks, rocky riverbanks, see *Flore des Environs de Paris* edition 2 43. 1799, *Fl. New York* 2: 459. 1843 and *Rhodora* 20(235): 122-126. 1918, *Proceedings of the Biological Society of Washington* 41: 159. 1928.

in English: drooping bluegrass, woodland bluegrass

P. lanigera Nees (*Poa lanigera* Nees var. *lanigera*; *Poa lanigera* Nees var. *vaginata* Döll; *Poa vaginata* (Döll) Herter, nom. illeg., non *Poa vaginata* Pamp.)

South America, Uruguay, Brazil, Argentina. Caespitose, useful for erosion control, in moist areas, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 491. 1829, *Flora Brasiliensis* 2(3): 120. 1878 and *Anales del Museo Nacional de Buenos Aires* 21: 152. 1911, *Archivo Botanico* 12: 20. 1936, *Revista Sudamericana de Botánica* 6(5-6): 144. 1940.

P. lanigera Nees var. *nudiuscula* Döll

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 491. 1829, *Flora Brasiliensis* 2(3): 120. 1878.

P. lanuginosa Poir. (*Festuca lanata* Spreng.; *Poa bergii* var. *chubutensis* Speg.; *Poa boecheri* Parodi; *Poa lanuginosa* var. *lanuginosa*; *Poa magellanica* Phil. ex Macloskie; *Poa patagonica* Phil.; *Poa patagonica* var. *patagonica*) (Argentina, Chubut) (for the Danish botanist Tyge Wittrock Böcher, 1909-1983, explorer, plant collector, author of *Det grønne Grønland*; redaktion ved Bent Fredskild & Jens J. Böcher; med bidrag af Marianne Philipp. [Copenhagen]: Rhodos, 2000, "*Festuca polesica* Zapal., its chromosome number and occurrence in Denmark." *Bot. Notiser* 4: 353-360. 1947, *Contributions to the Flora and Plant Geography of West Greenland: 3. Vascular Plants Collected or Observed during the Botanical Expedition to West Greenland 1946*. København: C.A. Reitzel, 1952 [Den Botaniske Ekspedition til Vestgrønland 1946], "Leaf anatomy in

Sporobolus rigens (Tr.) Desv. (Gramineae).” *Bot. Notiser* 125: 344-360. 1971, *The Flora of Greenland*. By Tyge Böcher, Kjeld Holmen and Knud Jakobsen. English translation by T.T. Elkington and M.C. Lewis. Illus. by Ingeborg Frederiksen. Copenhagen, Haase, 1968 [Translation of Grønlands Flora. Translated from the Danish 2nd rev. edition, 1966]. See *Hickenia* 1(18): 103. 1977; Áskell Löve, “Tyge W. Böcher: 1909-1983 in memoriam.” *Arctic Alp. Res.* 16(1): 119-120. 1984)

South America, Uruguay, Argentina, Chile. Useful for erosion control, see *Encyclopédie Méthodique, Botanique* 5: 91. 1804, *Systema Vegetabilium, editio decima sexta* 1: 353. 1825, *Anales de la Universidad de Chile* 94: 168. 1896, *Revista de la Facultad de Agronomía; Universidad Nacional de La Plata* 3: 628-629. 1897 and *Reports of the Princeton University Expeditions to Patagonia ... Botany* 8: 229. 1904, *Revista Argentina de Agronomía* 28: 100, f. 1. 1961 [1962].

P. lanuginosa Poir. var. ***elata*** Speg.

Argentina. See *Revista de la facultad de Agronomía; universidad nacional de La Plata* 3: 628-629. 1897.

P. laxa Haenke (*Poa elegans* Lam. ex DC., nom. illeg., non *Poa elegans* Poir.; *Poa laxa* Lam., nom. illeg., non *Poa laxa* Haenke; *Poa laxa* Willd., nom. illeg., non *Poa laxa* Haenke; *Poa media* Schur, nom. illeg., non *Poa media* (L.) Cav.; *Poa riphaea* (Asch. & Graebn.) Fritsch; *Poa tremula* Schur)

Europe, Canada, U.S. Perennial, herbaceous, common in calcareous fill, alpine, mountains, see *Beobachtungen auf Reisen nach dem Riesengebirge* 118. 1791, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 183. 1791, *Flore Française. Troisième Édition* 3: 62. 1805, *Alpina* 3: 44. 1808, *Flora Lapponica* 40. 1812, *Flora Silesiae* 1: 427. 1827, H.G.L. Reichenbach (1793-1879), *Agrostografia Germanica* pl. 84, f. 1631. Leipzig 1834, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 2: 528. 1835, *Flora italiana, ossia descrizione delle piante ...* 1: 347. 1848, *Icones florum germanicae et helveticae* 50, pl. 152, f. 396. 1850, P.J. Ferdinand Schur (1799-1878), *Sertum florum Transsilvaniae* 4: 86-87. Hermannstadt 1853, *The Student's Flora of the British Islands* 444. 1870, *Handb. Skand. Fl. (edition 10)* 1: 264. 1870, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 290. 1878 [1879], *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 32. 1897, *Schriften der Berlinischen Gesellschaft naturforschender Freunde* 8: 123. 1898 and *Synopsis der mitteleuropäischen Flora* 2: 402-403. 1900, *Excursionsflora für Österreich* 2: 65. 1909, *Flora Republicii Socialiste Romania* 12: 391. 1972, *Fitologija* 30: 3-29. 1985, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 32: 59-65. 1985,

Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften] 100: 1-130. 1987.

in English: Mt. Washington bluegrass, bluegrass

P. laxa Haenke subsp. ***banffiana*** Soreng (*Poa laxa* var. *occidentalis* Vasey ex Rydb. & Shear; *Poa laxa* var. *palle-scens* W.D.J. Koch)

Northern America, British Columbia, Alberta, U.S., Montana. Endangered grass, alpine, ridges, slopes, see *Synopsis Florae Germanicae et Helveticae (edition 2)* 926. 1844, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 32. 1897 and William Grant Craib (1882-1933), *The Flora of Banffshire*. Trans. Banffsh. Field Club. Banff 1912, Alf Erling Porsild (1901-1977), *Botanical Excursion to Jasper and Banff National Parks, Alberta: Alpine and Subalpine Flora*. Ottawa 1959, *Phytologia* 71(5): 396, f. 2. 1991.

P. laxa Haenke subsp. ***fernaldiana*** (Nannf.) N. Hyl. (*Poa fernaldiana* Nannfeldt; *Poa flexuosa* subsp. *fernaldiana* (Nannf.) Á. & D. Löve; *Poa laxa* var. *debilior* M.E. Jones)

North America. Alpine meadows, mountains, rocky places, see *Flora Britannica* 1: 101. 1800 and *Contributions to Western Botany* 14: 15. 1912, *Symbolae Botanicae Upsaliensis* 5: 50, 55, f. 6, t. 4. 1935, *Botaniska Notiser* 3: 355. 1953, *Taxon* 13: 202. 1964.

P. laxa Haenke subsp. ***flexuosa*** (Sm.) N. Hyl. (*Poa flexuosa* Sm.; *Poa laxa* var. *flexuosa* (Sm.) Hartm.)

North America, Europe, Scotland. Alpine meadows, mountains, rocky places, see *Flora Britannica* 1: 101. 1800, *Handbok i Skandinaviens Flora* 57. 1820 and *Botaniska Notiser* 3: 35. 1953.

P. laxa Haenke subsp. ***laxa***

Europe, Canada, U.S. Perennial.

P. laxa Haenke subsp. ***pruinosa*** E.J. Nyárády (*Poa pruinosa* (E.J. Nyárády) Nyárády, nom. illeg., non *Poa pruinosa* Korotky)

Romania. Rare grass.

P. laxiflora Buckley (*Poa leptocoma* subsp. *elatior* Scribn. & Merr.; *Poa remissa* Hitchc.)

North America, British Columbia, Alaska, Oregon, Washington. Rare species, woods and forests, moist places, bogs, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 374. 1830, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 96. 1862 and *Contributions from the United States National Herbarium* 13: 71. 1910, *Proceedings of the Biological Society of Washington* 41: 158. 1928.

in English: loose-flowered bluegrass, loose-flower bluegrass

P. laxiuscula (Blytt) Lange (*Poa aspera* var. *laxiuscula* Blytt; *Poa glauca* var. *laxiuscula* (Blytt) Lindm.)

Europe. See *Hortus Botanicus Vindobonensis* 3: 32, t. 56. 1776, *Flora Danica* 6(17): 3, t. 964. 1790, Mattias Numsen Blytt (1789-1862), *Norges Flora* 1: 122. Oslo 1861, *Flora Danica* 17(50): 4, pl. 2946. 1880.

P. legionensis (Lainz) Fern. Casas & M. Laínz (*Poa alpina* subsp. *legionensis* (Lainz) S. Rivas-Martínez, T.E. Dias, J.A.F. Prieto, J. Loidi & A. Penas; *Poa legionensis* Fernandez Casas & Lainz; *Poa pratensis* subsp. *legionensis* Lainz) Spain. Rare species, see *Species Plantarum* 1: 67-68. 1753 and Manuel Laínz, S.J., *Mis contribuciones al conocimiento de la flora de Asturias*. Diputación Provincial de Asturias, Instituto de Estudios Asturianos (del C.S.I.C.), Oviedo 1982 [Discurso leído por el autor en el acto de su solemne recepción académica como miembro numerario del Instituto de Estudios Asturianos, en Oviedo, el 12 de Marzo de 1982; contestación al mismo del Rvdo P. José María Patac de las Traviesas, S.J.], *Anales del Jardín Botánico de Madrid* 39: 191. 1982, S. Rivas-Martínez (b. 1935) et al., *Los Picos de Europa: la vegetación de la Alta Montaña Cantábrica*. León: Ediciones Leonisas, 1984, *Boletim da Sociedade Broteriana*, ser. 2 64: 35-74. 1991.

P. leibergii Scribn. (*Atropis pulchella* Beal; *Poa gracillima* var. *vaseyochloa* (Scribn.) M.E. Jones; *Poa hansenii* Scribn.; *Poa pringlei* var. *hansenii* (Scribn.) Smiley; *Poa pulchella* Salisb.; *Poa pulchella* Vasey, nom. illeg., non *Poa pulchella* Salisb.; *Poa vaseyochloa* Scribn.; *Puccinellia pulchella* (Beal) Ponert) (for the Swedish-born American botanist John Bernhard Leiberger, 1853-1913, plant collector, explorer, traveler, bryologist, among his writings are *Forest Conditions in the Absaroka Division of the Yellowstone Forest, Montana, and the Livingston and Big Timber Quadrangles*. [United States of America. Geological Survey. Professional Paper. no. 29] 1904, *Forest Conditions in the Little Belt Mountains Forest Reserve, Montana, and the Little Belt Mountains Quadrangle*. [United States of America. Geological Survey. Professional Paper. no. 30] 1904, *Forest Conditions in the Northern Sierra Nevada, California*. [United States of America. Geological Survey. Professional Paper. no. 8] 1902 and *General Report on a Botanical Survey of the Coeur d'Alene Mountains in Idaho during the summer of 1895*. [United States of America. Department of Agriculture. Botanical Division. Contributions from the U.S. National Herbarium. vol. 5. no. 1] 1897, with T.F. Rixon and A. Dodwell wrote *Forest Conditions in the San Francisco Mountains Forest Reserve, Arizona*. [United States of America. Geological Survey. Professional Paper. no. 22] 1904. See H.D. Langille et al., *Forest Conditions in the Cascade Range Forest Reserve, Oregon*. [United States of America. Geological Survey. Professional Paper. no. 9] 1903; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Joseph William Blankinship, "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904; J.H. Barnhart,

Biographical notes upon botanists. 2: 364. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 233. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 261-262. 1973; Stafleu and Cowan, *Taxonomic literature*. 2: 824-825. 1979)

North America. Mountains, ridges and slopes, riverbanks, hillsides, see *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 21. Londini [London] (Nov.-Dec.) 1796, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Botanical Gazette* 7: 32. 1882, *Bulletin of the Torrey Botanical Club* 10(1): 31. 1883, *Grasses of North America for Farmers and Students* 2: 574. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 8: 6, t. 2. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 53, t. 9. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 1. 1899 and *Contributions to Western Botany* 14: 14. 1912, *University of California Publications in Botany* 9: 104. 1921, *Flora URSS* 2: 470. 1934, *Man. Grass. U.S.* f. 174, 941-942. 1950, *Feddes Repertorium* 84(9-10): 740. 1974.

in English: Leiberger's bluegrass

P. leioclada Hack. (*Poa leioclada* Hack. ex Sodiro)

Ecuador. Short leaves, inflorescence loose and spreading, see *Anales de la Universidad Central del Ecuador* 3(25): 482. 1889 and *Österreichische Botanische Zeitschrift* 52(11): 452. 1902.

P. leptoclada Hochst. ex A. Rich. (*Eragrostis puberula* Steud.; *Poa friesiorum* Pilg.; *Poa leptoclada* Hochst. ex Steud.; *Poa leptoclada* A. Rich.; *Poa schimperiana* var. *longigluma* Chiov., also spelled *schimperana*; *Poa schimperiana* var. *micrantha* Chiov.) (for the Swedish botanists Robert Elias Fries 1876-1966, and Thore Christian Elias Fries, 1886-1930, travelers and collectors, see Mary Gunn and Leslie Edward Wostall Codd (1908-1999), *Botanical Exploration of Southern Africa*. 159. [T.C.E. Fries d. 1931] A.A. Balkema, Cape Town 1981; J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 2: 11. Boston 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 134. Boston, Mass. 1972; Alain White (1880-1951) and Boyd Lincoln Sloane (1886-1955), *The Stapelieae*. Pasadena 1: 137. 1937; Frans A. Stafleu and Cowan, *Taxonomic literature*. 1: 889. 1976)

Tropical Africa, Ethiopia, Uganda. Perennial or annual, extremely variable, straggling or compact, slender, tufted, erect or ascending, leaves narrowly linear and acute, inflorescence a linear contracted panicle spiciform with erect branches appressed to the main axis, spikelets 2- to 4-flowered, glumes acute, lower glume narrowly lanceolate, upper glume elliptic to lanceolate to narrowly oblong, lemma acute glabrous or pubescent, growing in wet places

and wet stony places, woodland, forest shade, moist shady situations, high altitude grasslands, alpine, disturbed ground, mountains, cliffs, among rocks, rare in South Africa, intergrades with *Poa schimperiana*, see *Tentamen Florae Abyssinicae* ... 2: 422-423. 1850, *Synopsis Plantarum Glumacearum* 1: 257, 268. 1854 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 377. 1908, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(90): 1127. 1927.

P. leptocoma Trin. (*Agropyron magellanicum* (E. Desv.) Hack. var. *glabrivalva* (Speg.) Hauman & Vandervek., nom. illeg., non *Agropyron magellanicum* var. *glabrivalva* (Speg.) Macloskie & Dusén; *Poa crandallii* Gand.; *Poa flavidula* Kom.; *Poa glauca* Vahl; *Poa leptocoma* subsp. *leptocoma*; *Poa leptocoma* var. *leptocoma*; *Poa leptocoma* var. *scabrinervis* Hultén; *Poa nivicola* var. *flavidula* (Kom.) Roshev.; *Poa stenantha* Trin. var. *leptocoma* (Trin.) Griseb.) (for the American botanist Charles Spencer Crandall, 1852-1929, professor, botanical collector in U.S., Colorado, with Jacob Hoover Cowen)

North America, Canada, Alaska. Perennial, densely tufted, slender stems, smooth or slightly rough leaf sheaths, ligules blunt, no auricles, often purplish flower head open and drooping, glumes keeled and pointed to lanceolate, lemmas strongly keeled, dense and long silky hairs cover the keel and lemma edges, cobwebby hairs at the base of the lemma, common in moist meadows in the alpine and subalpine areas, see *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770, *Flora Danica* 6(17): 3, t. 964. 1790, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 374, 376. 1830, *Flora Rossica* 4(13): 373. 1852, *Flora Chilena* 6: 452. 1854, *Anales del Museo Nacional de Buenos Aires* 5: 98. 1896 and *Wissenschaftliche Ergebnisse der Schwedischen Expedition nach den Magellansländern* 3(5): 231[or 331]. 1900, *Contributions from the United States National Herbarium* 13(3): 69, 71, pl. 15. 1910, *Contributions to Western Botany* 14: 15. 1912, *Transactions of the Linnean Society of London, Botany* 9. 1916, *Anales Museo Nacional de Historia Natural de Buenos Aires* 29: 25. 1917, *Bulletin de la Société Botanique de France* 66(7): 301-302. 1919 [1920], *Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR* 5: 146. 1924, *Flora URSS* 2: 380. 1934, *Acta Universitatis Lundensis* n. ser. 38: 215. 1942, *Vascular Plants of the Pacific Northwest* 1: 667. 1969, *Novosti Sist. Vyss. Rast.* 9: 54. 1972, *Taxon* 34: 346-351. 1985, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999.

in English: marsh bluegrass, bog bluegrass

P. leptocoma Trin. subsp. *leptocoma*

North America, California. Perennial, subalpine forest, moist conditions, occurs in wetlands, sometimes found in nonwetlands, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 374, 376. 1830.

in English: bog bluegrass

P. lettermanii Vasey (*Atropis lettermanii* (Vasey) Beal; *Poa brandegei* Scribn. ex Beal, also spelled *brandegi*; *Poa montevansii* Kelso; *Puccinellia lettermanii* (Vasey) Ponert) (named for George Washington Letterman, 1841 (or 1840)-1913, teacher in the public schools, botanical collector, explorer and traveler, in 1885 at Fossil Butte area, see Joseph Ewan, *Rocky Mountain Naturalists*. 249-250. The University of Denver Press 1950)

North America, California, Colorado, Mount Evans. Perennial, mountains, alpine, see *Flora italiana, ossia descrizione delle piante* ... 1: 366. 1848, *Contributions from the United States National Herbarium* 1(8): 273. 1893, *Grasses of North America for Farmers and Students* 2: 544, 579. 1896 and *Flora URSS* 2: 470. 1934, *Biological Leaflet [Washington]* 29: 2. 1945, *Feddes Repertorium* 84(9-10): 740. 1974, *Taxon* 37: 397-398. 1988.

in English: Letterman's bluegrass

P. ligularis Nees ex Steud. (*Poa denudata* var. *minor* Ball; *Poa ligularis* var. *ligularis*)

Southern America, Argentina. Caespitose, useful for erosion control, clump-forming, see *Synopsis Plantarum Glumacearum* 1: 257, 259. 1854, *Journal of the Linnean Society, Botany* 21: 238. 1884 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2]*, *Botany* 8(1,5,1): 226. 1904, *Hickenia* 2(58): 275, f. 1 (g-j). 1998.

P. ligulata Boiss. (*Poa concinna* var. *membranacea* Boiss.; *Poa membranacea* (Boiss.) C. Vicioso)

Europe, Spain, Morocco. See *Prodromus Florae Novae Hollandiae* 180. 1810, *Elenchus Plantarum Novarum* 89. 1838, *Voyage botanique dans le midi de l'Espagne* 2: 659. 1844 and *Anales del Jardín Botánico de Madrid* 2: 192. 1942.

P. lilloi Hack.

Argentina. Caespitose, riverbanks, along streams, see *Anales del Museo Nacional de Buenos Aires* 21: 153. 1911.

P. limosa Scribn. & T.A. Williams (*Poa fibrata* Swallen; *Poa scabrella* (Thurb.) Benth. ex Vasey; *Poa* x *fibrata* Swallen (pro sp.); *Poa* x *limosa* Scribn. & Williams pro sp.) [*Poa pratensis* L. x *Poa secunda* Presl, or *Poa pratensis* x *Poa secunda* subsp. *juncifolia*, or *Poa secunda* x *Poa pratensis*]

North America. Found in dry subsaline flats, see *Geological Survey of California, Botany* 2: 310-311. 1880, *The Grasses of the United States* 42. 1883, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 5. 1899 and *Journal of the Washington Academy of Sciences* 30(5): 210. 1940, *Phytologia* 71: 403. 1991.

P. lindsayi Hook.f. (for the Scottish physician William Lauder Lindsay, 1829-1880, M.D., Edinburgh 1852, lichenologist, 1854-1879 Perth, F.L.S. 1858, visited New Zealand 1861-1862, botanical collector in Iceland and New Zealand, wrote "On the Toot plant and poison of New Zealand." [*Brit. & For. Med.-Chir. Rev.* 1865, 153, and 1868, 465. London], *Contribution to New Zealand Botany*. London: William & Norgate, 1868, "The Lichen flora of Greenland." *Trans. Bot. Soc. Edinburgh* 10: 32-65. 1869, *The Flora of Iceland*. Edinburgh New Philosophical Journal, New Series, July 1861. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 387. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 239. Boston, Mass. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 463. 1973; Thomas Frederick Cheeseman, *Manual of the New Zealand Flora*. xxvii. Wellington 1906; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 103. Edinburgh 1970; M.E. Mitchell, *Bibl. Irish Lichenol.* 11: 13. 1979; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 163. London 1904; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 430. London 1994)

New Zealand. Perennial, alpine, tiny, small, delicate, very slender, tufted, blue-gray to bluish, leaf blades persistent, thin and rough sheaths, ragged truncate ligule, leaves rough usually folded, slender flower stalk purplish, open flower head, glumes subequal, lemma silky hairy, awn absent, palea keels ciliate, slopes, riverbeds, ridges, hillsides, dry stony areas, see *Handbook of the New Zealand Flora* 340. 1864 and *New Zealand J. Bot.* 24: 474. 1986.

in English: Lindsay's poa

P. lipskyi Roshev. (*Poa bedeliensis* Litv.; *Poa contracta* Ovcz. & Czukav., nom. illeg., non *Poa contracta* Retz.; *Poa dispansa* Ovcz.; *Poa kungeica* Golosk.; *Poa ovczinnikovii* Ikonn.; *Poa pseudodissecta* Ovcz.; *Poa taldyksuensis* Roshev.)

Asia, China, Mongolia. Growing in sandy loam soil, hillsides, mountains, see *Izv. Bot. Sada Akad. Nauk SSSR* 30: 303, 778. 1931 [1932], *Flora URSS* 2: 415, 755. 1934, *Novosti Sist. Vyss. Rast.* 11: 26, 40. 1974, *Zlaki SSSR* 451. 1976, *Novosti Sist. Vyss. Rast.* 15: 221. 1979.

P. litorosa Cheeseman (*Festuca scoparia* Hook.f.)

Australia, New Zealand. Tussock, wiry, erect, stiff, growing in large tufts, rhizomatous with slender rhizomes, leaf

blades persistent and inrolled, leaf sheath coriaceous, ligule a ciliate rim, panicle contracted with short and erect branches, glumes unequal, lemma obtuse, palea keels ciliate, coastal, found in rocky places, tussock grassland, peat, near the sea, see *Révision des Graminées* 2: 535, t. 182. 1829 [1832], *Flora Antarctica* 1: 98-99. 1844 [1845] and *Manual of the New Zealand Flora* 902, 1155-1156. 1906.

P. longifolia Trin. (*Eragrostis longifolia* Hochst. ex Steud.; *Poa controversa* Bal., nom. illeg., non *Poa controversa* Steud.; *Poa longifolia* Hochst. ex A. Rich., nom. illeg., non *Poa longifolia* Trin.; *Poa longifolia* subsp. *meyeri* (Trin. ex Roshev.) Tzvelev; *Poa longiligula* Scribn. & T.A. Williams; *Poa meyeri* Trin. ex Roshev.; *Poa paryadrica* Boiss.)

Asia, Iran, Russia. Useful for erosion control, growing in wet spots, slopes, hillsides, open meadow, heavy clay, open habitats, see *Genera Plantarum* 23. 1776, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 61. 1836, *Tentamen Florae Abyssinicae ...* 2: 425. 1850, *Synopsis Plantarum Glumacearum* 1: 260. 1854, Petr Aleksandrovich Tchihichatscheff [Pierre Alexandrowitsch de Tchihatcheff] (1812-1890), *Asie Mineure*, description physique, statistique et archéologique de cette contrée. Troisième partie: *Botanique*. Paris, Gide 1860, *Bulletin de la Société Botanique de France* 21: 16. 1874, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 3. 1899 and *Flora URSS* 2: 383, 753. 1934, *Novosti Sist. Vyss. Rast.* 11: 28-29. 1974, *Zlaki SSSR* 463. 1976.

P. longifolia Trin. subsp. ***fageturnum*** (P.A. Smirn.) Tzvelev (*Poa fageturnum* P.A. Smirn.)

Europe, Russia. See *Bulletin de la Société Impériale des Naturalistes de Moscou* 58: 4, 57. 1953, *Novosti Sist. Vyss. Rast.* 11: 28-29. 1974.

P. longifolia Trin. var. ***planifolia*** Sommier & Levier
Russia.

P. lowanensis N.G. Walsh

Australia, Victoria. Perennial, shortly rhizomatous or caespitose, leaves mostly basal, leaves nonauriculate, leaf sheaths usually not keeled, ligule truncate, leaves stiff, more or less contracted panicle green to purple, chasmogamous spikelets, copious web, lemma hairy, broad and thin margin of the lemma, palea keeled, anthers yellow or purple, ovary glabrous, rare species, growing in siliceous sands, mallee vegetation on inland sand-dunes, in mallee scrub, mallee heaths, arid tussock grasslands, see *Muelleria* 7(3): 381. 1991.

P. macrantha Vasey (*Melica macrantha* (Vasey) Beal; *Poa douglasii* Nees subsp. *macrantha* (Vasey) Keck; *Poa douglasii* var. *macrantha* (Vasey) Boivin)

North America, California. Perennial, on sandy shores, riverbanks, see *Species Plantarum* 1: 66-67. 1753, *Annals of Natural History* 1: 284. 1838, *Bulletin of the Torrey Botanical Club* 15: 11. 1888, *Bulletin of the Torrey Botanical Club* 17(6): 153. 1890 and *Leaflets of Western Botany* 10(7): 118. 1964, *Le Naturaliste Canadien* 94(4): 527. 1967, *Contr. U.S. Natl. Herb.* 48: 547. 2003.

in English: large-flowered sand-dune bluegrass, seashore bluegrass

P. macrocalyx Trautv. & C.A. Meyer (*Poa hispidula* Vasey; *Poa hispidula* f. *vivipara* (Hultén) Boivin; *Poa hispidula* var. *aleutica* Hultén; *Poa hispidula* var. *vivipara* Hultén; *Poa ketoiensis* Tatew. & Ohwi; *Poa macrocalyx* subsp. *tatewakiana* (Ohwi) Vorosch.; *Poa macrocalyx* var. *chishimana* Ohwi; *Poa macrocalyx* var. *fallax* (Hack.) Ohwi; *Poa macrocalyx* var. *scabriflora* (Hack.) Ohwi; *Poa macrocalyx* var. *tatewakiana* (Ohwi) Ohwi; *Poa norbergii* Hultén; *Poa scabriflora* Hack.; *Poa stenantha* var. *fallax* Hack.; *Poa stenantha* var. *japonica* Hack.; *Poa tatewakiana* Ohwi; *Poa tschegleevii* V.N. Vassil.; *Poa turneri* Scribn.) (for Lucien McShan Turner, 1847-1909, botanical collector in Alaska, in 1874 dispatched by the U.S. Army Signal Corps to St. Michael, conducted meteorological observations, in Labrador 1882-1884, author of *Contributions to the Natural History of Alaska, Results of Investigations Made Chiefly in the Yukon District and the Aleutian Islands: Conducted under the Auspices of the Signal Service, United States Army, Extending from May, 1874 to August, 1881*, published in Washington, 1886)

North America, Siberia. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 376. 1830, Alexander Theodor von Middendorff (1815-1894), *Reise in den äussersten Norden und Osten Sibiriens während der Jahre 1843 und 1844: mit allerhöchster Genehmigung auf Veranstaltung der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg ausgeführt und in Verbindung mit vielen Gelehrten, herausgegeben von A. Th. v. Middendorff. Erster Band. St. Petersburg: Buchdr. der K. Akademie der Wissenschaften: Zu haben bei Eggers 1847-1856, Florula Ochotensis Phaenogama* 1(2): 103. 1856 [also *Reise in den äussersten Norden und Osten Sibiriens* 1(Theil 2, Lieferung 3): 103. 1856], *Contributions from the United States National Herbarium* 1(8): 272. 1893, *Bulletin, Division of Agrostology United States Department of Agriculture* 8: 5-6, t. 1. 1897, *Bulletin de l'Herbier Boissier* 7(9): 708. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 3(42-43): 244. 1907, *Botanical Magazine* (Tokyo) 31: 255. 1917, *Bot. Mag.* Tokyo 41: 641. 1927, *Acta Phytotaxonomica et Geobotanica* 4: 61. 1935, *Flora of the Aleutian Islands* 88. 1937, *Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR* 8: 215. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 124. 1941, *Acta Universitatis Lundensis* 38(1): 218, f. 3a-d. 1942, *Flora of Japan*

164. 1965, *Le Naturaliste Canadien* 94: 635. 1967, *Vasc. Pl. Russ. Far East* 1: 275. 1985, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1675-1678. 1989.

in English: large-glume bluegrass

in Japan: karafutoichigotsunagi

P. macrocalyx Trautv. & C.A. Meyer subsp. *sugawarae* (Ohwi) Vorosch. (*Poa sugawarae* Ohwi) (for Shigezo Sugawara, fl. 1937, author of *Illustrated Flora of Saghalien* with descriptions and figures of phanerogams and higher gryptogams indigenous to Saghalien. Tokyo: Katai Shokubutsu Toshi Kankōkai, 1937)

Russia, Japan. See *Acta Phytotaxonomica et Geobotanica* 4: 63. 1935.

P. macrocalyx Trautv. & C.A. Meyer subsp. *tatewakiana* (Ohwi) Vorosch. (*Poa tatewakiana* Ohwi)

Russia, Japan. See *Acta Phytotaxonomica et Geobotanica* 10: 124. 1941.

P. macrocalyx Trautv. & C.A. Meyer var. *koriakiensis* Vorosch. (*Poa macrocalyx* subsp. *koriakiensis* (Vorosch.) Vorosch.)

Russia.

P. macroclada Rydb. (*Poa stenantha* Trin.)

North America, U.S., Colorado, Idaho, Montana. Rare species, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 376. 1830 and *Bulletin of the Torrey Botanical Club* 32(11): 604. 1905.

in English: Rydberg's bluegrass, Rydberg bluegrass

P. maia Edgar

New Zealand. Perennial, erect, tufted, shortly rhizomatous, leaf blades usually folded and persistent, leaf sheath membranous, ligule entire, lax inflorescence with spreading branches, glumes unequal, lemma smooth, palea keels scabrid, wet places, wet open forest, tussock grassland, moist ground, damp sites, see *New Zealand Journal of Botany* 24(3): 470, f. 8. 1986.

P. malacantha Komarov (*Poa arctica* subsp. *lanata* (Scribn. & Merr.) Soreng; *Poa bracteosa* Kom.; *Poa komarovii* Roshev.)

Asia, Japan. See *Chloris Melvilliana* 30. 1823 and *Contributions from the United States National Herbarium* 13: 72, f. 16. 1910, *Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR* 5: 147, 149. 1924, *Izv. Glavn. Bot. Sada SSSR* 26(3): 286-287. 1927, *Acta Phytotaxonomica et Geobotanica* 2: 31. 1933, *Arctic. Fl. SSSR* 125. 1964, *Grasses of Japan and its Neighboring Regions* 524. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990, *Phytologia* 71(5): 395. 1991.

in Japan: murasakisomosomo

P. malacantha Komarov var. *shinanoana* (Ohwi) Ohwi (*Poa shinanoana* Ohwi)

Asia, Japan. See *Acta Phytotaxonomica et Geobotanica* 2: 31. 1933, *Flora of Japan* (edition 2) 1439. 1965, *Grasses of Japan and its Neighboring Regions* 524. 1987.

P. maniototo Petrie (Maniototo Plain, Otago)

New Zealand. Perennial, alpine, tufted, compact, very small to tiny, bluish to green, slender flowering culms, sheaths shiny whitish and persistent, small ligule fringed with hairs, leaves curled and stiff, inflorescence a spike-like panicle, compact flower head, bluish spikelets, glumes equal to subequal, awns absent, palea pubescent, useful for erosion control, on rocky stony areas, semiarid dwarf grasslands, short tussock grassland, see *Transactions and Proceedings of the New Zealand Institute* 22: 443. 1890 and *New Zealand J. Bot.* 24: 446. 1986.

in English: desert poa

P. mannii Munro ex Hillebr. (*Poa mannii* Munro) (for the German-born American botanist Horace Mann, Jr., 1844-1868, assistant to Asa Gray, plant collector in Pacific, Hawaii, with William T. Brigham, 1841-1926, author of *Catalogue of the Phænogamous Plants of the United States*, east of the Mississippi, and of the vascular cryptogamous plants of North America, north of Mexico. Edition 2, rev. and cor. Cambridge, Mass., published by B.P. Mann [1872], "Notes on *Alsinidendron*, *Platydesma*, and *Brighamia*, new genera of Hawaiian plants; with an analysis of the Hawaiian flora." *Mem. Boston Soc. Nat. Hist.* 1: 529-541. 1869, "Enumeration of Hawaiian Plants." Cambridge [Mass.], *Proc. Am. Acad. Arts.* 7: 143-235. 1867, "Revision of the genus *Schiedea*, and of the Hawaiian Rutaceae." *Proc. Boston Soc. Nat. Hist.* 10: 309-319. 1866, "Statistics and geographical range of Hawaiian (Sandwich Islands) plants." *J. Bot.* 7: 171-183. 1869; he was the son of the American politician Horace Mann (1796-1859). See V. McCaughey, *Haw. For. Agr.* 16: 27, 53. 1919; Roger G. Rose, *A Museum to Instruct and Delight: William T. Brigham and the Founding of Bernice Pauahi Bishop Museum*. Bishop Mus. Press. Honolulu 1980; J.H. Barnhart, *Biographical notes upon botanists*. 2: 443. Boston 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 252. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 280. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; A.H. Dupree, *Asa Gray - American botanist, friend of Darwin*. J. Hopkins 1988; Joseph Ewan, editor, *A Short History of Botany in the United States*. 10. New York and London 1969; Elmer Drew Merrill, in *Bernice P. Bishop Mus. Bull.* 144: 130. 1937 and *Contr. U.S. Natl. Herb.* 30(1): 203-204. 1947)

U.S., Hawaii. Perennial, endangered species, see *Flora of the Hawaiian Islands* 526. 1888.

in English: Mann's bluegrass, Olokele Gulch bluegrass

P. marcida A.S. Hitchc. (*Poa saltuensis* Fern. & Wieg. var. *marcida* (A.S. Hitchc.) Boivin)

North America. Found in moist places, forest, woods, wooded and alluvial banks, along riverbanks, wet clearings, see *Fl. New York* 2: 459. 1843, *Catalogue of Canadian Plants* 2(4): 225. 1888 and *Rhodora* 20(235): 122-126. 1918, *Proceedings of the Biological Society of Washington* 41: 158-159. 1928, *Le Naturaliste Canadien* 94(4): 527. 1967.

in English: withered bluegrass

P. mariesii Rendle (*Poa annua* f. *maxima* Hack. ex Honda; *Poa nipponica* Koidzumi) (for Charles Maries, c. 1851-1902 (d. Gwalior, India), gardener, traveler, from 1877 to 1879 plant collector for Messrs. Veitch in Japan and China, 1887 Fellow of the Linnean Society, author of "A Visit to Naini Tal, Kumaon, India: the summer residence of the Lieut.-Governor of the North-West Provinces." *Journal of the Royal Horticultural Society* 22, London 1899. See I.H. Vegter, *Index Herbariorum*. Part II (4), *Collectors M. Regnum Vegetabile* vol. 93. 1976; James H. Veitch, *Hortus Veitchii, a History of the Rise and Progress of the Nurseries of Messrs. James Veitch and Sons*, etc. 79-84, 96. London 1906; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 90. 1989; Shirley Heriz-Smith, "William Purdom (1880-1921). A Westmorland Planthunter in China." *Hortus*. 38: 49-62. 1996; E.H.M. Cox, *Plant-Hunting in China: A History of Botanical Exploration in China and the Tibetan Marches*. 103-104. London 1945; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. 79-82. London 1969; E. Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981)

Asia, Japan, China. See *Species Plantarum* 1: 68. 1753 and *Linnaea* 36(4): 425. 1904, *Botanical Magazine* (Tokyo) 31: 256. 1917, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 77. 1930, *Journal of Japanese Botany* 63: 334-343. 1988, *Botanical Magazine* 101: 311-331. 1988.

in Japan: oichigotsunagi, ohichigotsunagi

P. marshallii Tovar (See K. Akilan, J.K. Marshall and al., "Restoration of catchment water balance: Responses of clonal river red gum (*Eucalyptus camaldulensis*) to water-logging." *Restoration Ecology* 5(2): 101-108. 1997; J.K. Marshall, A.L. Morgan et al., "Water uptake by two river red gum (*Eucalyptus camaldulensis*) clones in a discharge site plantation in the Western Australian wheat belt." *Journal of Hydrology Amsterdam* 200(1-4): 136-148. 1997; W.J. Parton and J.K. Marshall, "MODENV: A grassland ecosystem model." *Proceedings of the 1973 Summer Computer Simulation Conference*, Simulation Councils, Inc., La Jolla, Calif. p. 769-776. 1973; J.K. Marshall, in *Journal of Ecology* vol. 55, pages 207-220. 1967; G.A. Laursen and O.K. Miller, Jr., "The Distribution of Fungal Hyphae in Arctic

Soil on the Tundra Biome Sites, Barrow, Alaska.” in *Below-ground Ecosystem Symposium: A Synthesis of Plant Associated Processes*. Col. St. Univ. Range Sci. Dept., Sci. Series No. 26, J.K. Marshall, editor, 1977)

Peru. Grassland, see *Revista de Ciencias (San Marcos)* 73(1): 103. 1981.

P. matsumurae Hackel (*Poa chosenensis* Ohwi; *Poa iwateana* Ohwi; *Poa iwayae* Honda; *Poa tomentosa* Koidz.; *Poa trivialis* var. *tomentella* Honda)

Asia, Japan. See *Bulletin de l'Herbier Boissier* 7(9): 709. 1899 and *Botanical Magazine (Tokyo)* 31: 255. 1917, *Botanical Magazine* 42: 133. 1928, *Acta Phytotaxonomica et Geobotanica* 4: 59-60. 1935, *Botanical Magazine (Tokyo)* 53: 50-51. 1939, *Flora of Japan* 122. 1953.

in Japan: itoichigotsunagi

P. matthewsii Petrie (*Poa imbecilla* var. *matthewsii* (Petrie) Hack.; *Poa matthewsii* var. *tenuis* Petrie)

New Zealand. Perennial, montane, erect or geniculate and ascending, very slender, stoloniferous, leaf blades persistent and flat, leaf sheath membranous with scabrid margins, ligule entire, delicate soft leaves, loose and delicate panicle, almost glabrous spikelets usually clustered at branchlet tips, glumes unequal, palea keels scabrid, found in open forest, see *Plantarum Novarum ex Herbario Sprengelii Centuriam* 9. Halle 1807 and *Transactions and Proceedings of the New Zealand Institute* 34: 392-393. 1902, *Manual of the New Zealand Flora* 913. 1906, *New Zealand J. Bot.* 24: 470-471. 1986.

P. megalantha (Parodi) Herter (*Poa stuckertii* var. *megalantha* Parodi)

Argentina, Uruguay. See *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 11: 137. 1932, *Revista Argentina de Agronomía* 3: 150, t. 6. 1936, *Revista Sudamericana de Botánica* 9(3): 64. 1952.

P. meionectes Vickery (*Poa exilis* (Tomm. ex Freyn) Murb.; *Poa exilis* Vickery, nom. illeg., non *Poa exilis* (Tomm. ex Freyn) Murb.) (perhaps from Greek *meionekteo* “to be poor, come short, fall short, to be short,” *meionektikos* “disposed to take too little,” *meion* “smaller, less” and *echo* “to hold, to sustain”)

South Australia, New South Wales, Victoria. Perennial, tufted, forming small and low tussocks, culms erect, pinky to red at base, leaves mostly basal, auricles absent, often purplish sheaths, ligule membranous and truncate, leaves scabrous, green or purplish panicle spreading with branches filiform, small spikelets compressed, chasmogamous spikelets, web absent, palea scabrous, yellow anthers, ovary glabrous, usually in eucalypt woodland on coastal ranges, in open eucalypt woodland, in dry sclerophyll forest, open habitats, sometimes confused with *Poa clivicola* Vickery and *Poa exilis* Vickery, see *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien*

27: 469. 1878 and *Acta Universitatis Lundensis* 4: 73. 1905, *Contributions from the New South Wales National Herbarium* 4: 212. 1970, *Contributions from the New South Wales National Herbarium* 4(5): 250. 1972.

P. mendocina Nicora & F.A. Roig

Argentina. See *Hickenia* 2: 273-275, f. 1. 1998.

P. molinerii Balbis (*Poa alpina* L. subsp. *xerophila* Braun-Blanq.; *Poa badensis* Haenke ex Willd. var. *xerophila* (Braun-Blanq.) Suess.; *Poa badensis* var. *xerophila* Braun-Blanq.; *Poa molinerii* Lam. & DC., nom. illeg., non *Poa molinerii* Balb.; *Poa xerophila* Kerguélen)

Europe. See *Species Plantarum. Editio quarta* 1: 392. 1797, Giovanni Battista Balbis (1765-1831), *Elenco delle piante crescenti nei contorni di Torino ...* 85. Torino [1801], *Miscellanea Botanica. Mem. Acad. Sci. Turin* 7. 1804, *Flore Française. Troisième Édition* 3: 65. 1805, *Enumeratio Plantarum Transsilvaniae* 776. 1866 and *Jahresbericht der Naturforschenden Gesellschaft Graubündens* 58: 78. 1917-1918, *Flora Republicii Socialiste Romania* 12: 387. 1972, *Fitologija* 27: 3-23. 1984, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 37. 1987, Michel Francois-Jaques Kerguélen (b. 1928), *Index synonymique de la flore de France*. Paris: Secrétariat de la Faune et de la Flore, Museum National d'Histoire Naturelle, 1993.

P. molinerii Balbis subsp. *glacialis* Beldie

Romania. Rare grass.

P. mollis Vickery

Tasmania. Perennial, caespitose, erect, leaves mostly basal, auricles absent, purple leaf sheaths terete, ligule chartaceous and truncate, softly hairy leaves, a loosely contracted panicle gray green and purple, chasmogamous spikelets, usually glabrous lemma internerves, web absent, anthers yellow, ovary glabrous, dry sites on cliffs and hills, mesophytic, very similar and very close to *Poa morrisii* Vickery, see *Contributions from the New South Wales National Herbarium* 4: 241. 1970.

P. morrisii Vick. (after the Australian botanist Patrick Francis Morris, 1896-1974, plant collector, author of “Ecology of Marysville and Lake Mountain.” *Vict. Nat.* 46: 34-42. 1929, “A New combination of *Helichrysum*.” *Victoria Nat.* 61: 147-148. 1944, “Grasses of the Melbourne district.” *Vict. Nat.* 43: 253-259. 1927, “Confused taxonomy in the *Ozothamnus* section of *Helichrysum*, and its rectification.” *Victoria Nat.* 59: 84-88. 1942. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 516. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; James Wales Claredon Audas (1872-1959), “Alien plants recorded as naturalised in Victoria.” *Vict. Nat., Melb.* 49, 1932; James Wales

Claredon Audas, *Supplement to Professor Ewart's "Weeds, poison plants and naturalized aliens of Victoria."* / by J.W. Audas and P.F. Morris; with a foreword by W. Laidlaw. Melbourne: Melbourne University Press 1925; Victoria. Dept. of Agriculture, *The Weeds, Poison Plants, and Naturalized Aliens of Victoria*. By Alfred James Ewart [1872-1937] ... Assisted by James Richard Tovey [1873-1922] ... Also a supplement by J.W. Audas and P.F. Morris. Melbourne, Kemp, 1909)

South Australia, Victoria. Perennial, velvety, tufted, rarely rhizomatous, leaves mostly basal, auricles absent, ligule truncate and hairy, grayish green to blue-green leaves softly hairy and pointed, densely hairy sheaths compressed and keeled, green or purplish panicles pyramidal and erect, chasmogamous spikelets, glumes short and hairy, glume keel often scabrous to the base, cilia on the lemma margins, web scanty or obsolete, palea keeled, anthers yellow, ovary glabrous, acidic and moist soils, mesophytic, often confused with *Poa rodwayi* Vickery and *Poa crassicaudex* Vickery, see *Contributions from the New South Wales National Herbarium* 4: 239. 1970.

P. mucuchachensis Luces

Venezuela, Páramo de Mucuchíes, Mérida. Rhizomatous, see *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 3-4, f. 1. 1953, Zoraida Luces de Febres (b. 1922), *Las Gramíneas del Distrito Federal*. Caracas 1963 [also published in *Academia de Ciencias Fisicas, Matematicas y Naturales, Caracas, Boletín*, no. 63].

P. muhavurensis C.E. Hubb.

Uganda. Perennial, densely tufted, stiffly erect, basal tuft of short leaves, leaf blades linear, panicle branches stiffly spreading, clustered spikelets 2- to 4-flowered, florets imbricate elliptic, glumes lanceolate subacute, lemmas ovate glabrous subacute, stony places, mountains, see *Bulletin du Jardin Botanique de l'État* 25: 244. 1955, *Flora of Ethiopia* 7: 22. 1995.

P. mulalensis Kunth

Ecuador, Mulalo (or Mulaló), Cotopaxi. See *Nova Genera et Species Plantarum* 1: 162-163. 1815 [1816].

P. mulleri Swallen (for the American ecologist and botanist Cornelius Herman Mueller, later (after 1937) Muller, 1909-1997, botanical collector in Mexico and U.S., specialist on *Quercus*, author of "The Oaks of Texas." *Contr. Tex. Res. Found.* 1: 21-323. 1951, "The Central American species of *Quercus*." Washington, D.C.: U.S. Govt. Print. Off., 1942. (United States. Dept. of Agriculture. Miscellaneous publication no. 477). See J.H. Barnhart, *Biographical notes upon botanists*. 2: 527. 1965; Rogers McVaugh, "Botanical exploration in Nueva Galicia from 1790 to the present time." *Contr. Univ. Mich. Herb.* 9(3): 205-357. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; *J. Arnold Arbor.* 24: 94. 1943; Irving William Knobloch, compiled by, "A preliminary

verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983)

Mexico. See *Journal of the Washington Academy of Sciences* 30(5): 211. 1940.

P. mustangensis Rajbh.

Central Nepal. Perennial, scabrid, leaf sheaths glabrous, ligule ovate, panicle linear with ascending branches, spikelets 2- to 4-flowered, glumes ovate and scabrid, lower lemmas ovate, see *Acta Phytotaxonomica et Geobotanica* 39(1-3): 61. 1988.

P. myriantha Hack.

Argentina, Bolivia. Perennial, solitary, slender, lax, leaf sheaths scabrous, leaf blades linear lax glabrous acute, lax panicle oblong, spikelets ovate-oblong 3- to 7-flowered, glumes subequal ovate acuminate glabrous, lower glume 1-nerved, upper glume 3-nerved, lemma ovate 3-nerved acute, palea keels scabrous, see *Anales del Museo Nacional de Buenos Aires* 13(6): 517. 1906.

P. napensis Beetle

North America, U.S., California, Napa. Perennial and extremely rare, endangered species, occurs in wetlands and meadows, in alkaline soil, moist areas, springs, see *Leaflets of Western Botany* 4(12): 289. 1946, *Systematic Botany* 16(3): 507-528. 1991.

in English: Napa bluegrass

P. nascopieana Polunin (named for the Hudson Bay Company ship *Nascopie*)

Canada, Franklin, Baffin Island. Endangered species, found in damp soil, tundra, see Nicholas Vladimir Polunin (1909-1997), *Botany of the Canadian Eastern Arctic ...* Ottawa 1940 [Canada. National Museum, Ottawa. Bulletin no. 92, 97, 104; Biological series no. 24, 26, 32].

P. nemoralis L. (*Agrostis alba* (L.) Lunell; *Agrostis alba* L.; *Agrostis alba* f. *alba*; *Agrostis alba* var. *alba*; *Agrostis stolonifera* f. *alba* (L.) Schur; *Agrostis stolonifera* var. *alba* (L.) Lilj.; *Agrostis stolonifera* var. *alba* (L.) Kuntze, nom. illeg., non *Agrostis stolonifera* var. *alba* (L.) Lilj.; *Agrostis vulgaris* var. *alba* (L.) Gatt.; *Decandolia alba* (L.) Bastard; *Festuca capitata* Balb.; *Panicum nemorale* (L.) Lunell; *Poa asperula* Steud.; *Poa balbisii* Parl.; *Poa balfourii* auct.; *Poa capitata* Nutt.; *Poa glaucanthos* Gaudin, also spelled *glaucantha*; *Poa hypanica* Prokudin; *Poa kamtschatica* (L.) Fisch. ex Komarov; *Poa lapponica* Prokudin; *Poa nemoralis* Torr., nom. illeg., non *Poa nemoralis* L.; *Poa nemoralis* L. subsp. *balbisii* (Balb.) Hack.; *Poa nemoralis* subsp. *hypanica* (Prokudin) Tzvelev; *Poa nemoralis* L. subsp. *nemoralis*; *Poa pratensis* var. *fagetorum* Rech.f. & Scheff.; *Vilfa alba* (L.) P. Beauv.) (the specific name from the Latin *nemorosus*, *a, um* (*nemus, moris* "a tree, wood, grove") "woody, wooded, inhabiting woods, growing in groves")

Europe, Algeria, Morocco, Asia. Perennial bunchgrass, herbaceous, densely to loosely tufted, sometimes rhizomatous,

fine stems erect to spreading, culms rounded in section, no auricles, leaf blades persistent, very short blunt ligule, leaf sheath membranous, narrow acute leaves, panicle lax and open, erect to drooping flower head, narrow panicles ovoid to cylindrical, spikelets laterally flattened and lanceolate to ovate, glumes persistent and subequal or equal, lower glumes 3-veined or ribbed, lemmas narrow-oblong and keeled, web present or absent, palea keels scabrid, ornamental grass naturalized elsewhere in temperate regions, turf, lawns and playing fields, pasture and hay, common in well-drained mountain meadows, in moist forests, in moist regions at higher elevations, along roadsides, dry woods and edges, deep clay loam, gravelly brown loamy soils, meadows, on stream banks, see Johannes Scheuchzer (1684-1738), *Agrostographia sive graminum, juncorum, cyperorum, cyperoidum, iisque affinium historia...* Tiguri [Zürich] 1719, *Species Plantarum* 1: 61-63, 67, 69-70. 1753, *Familles des Plantes* 2: 495. 1763, *Flora Danica* 6(17): 3, t. 964. 1790, Samuel Liljebblad (1761-1815), *Utkast til en Svensk Flora, Andra Uplagan* 37. 1798, *Flora Britannica* 106. 1800, *Alpina* 3: 27, 36. 1808, *Essai sur la Flore du Département de Maine et Loire* 29. 1809, *Agrostologia Helvetica, definitionem ...* 1: 184. 1811, *Essai d'une Nouvelle Agrostographie* 16,146, 181. 1812, *Systema Vegetabilium* 2: 545. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 111. 1823, *Flora Suecica* 1: 59. 1824, *Systema Vegetabilium, editio decima sexta* 4: Cur. Post. 36. 1827, *Flora Helvetica* 1: 240. 1828, *Transactions of the American Philosophical Society, new series*, 5: 146. 1835, *Flora italiana, ossia descrizione delle piante ...* 1: 360. 1848, *Enumeratio Plantarum Transsylvanicae* 731. 1866, *The Tennessee Flora; With Special Reference to the Flora of Nashville* 99. 1887, *Revisio Generum Plantarum* 2: 759. 1891 and *Linnaea* 36(4): 424. 1904, *Prodrome de la Flore Corse* 1: 137. 1910, *American Midland Naturalist* 4: 216, 222. 1915, *Flora URSS* 2: 397. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 69: 546. 1939, *Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR* 11: 30. 1949, *Journal of the Bombay Natural History Society* 50(4): 1-838. 1952, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 165-166. 1957, *Novosti Sist. Vyss. Rast.* 9: 50. 1972, *Novosti Sist. Vyss. Rast.* 11: 31. 1974, *Fl. Fennica* 5: 1-209. 1975, *Flora of Tierra del Fuego* 1-396. 1983, *Great Basin Naturalist* 45: 395-422. 1985, *Flora of Turkey and the East Aegean Islands* 9: 470-486. 1985, *Gayana, Botánica* 42: 1-157. 1985, *Taxon* 34: 159-164. 1985, *Willdenowia* 15: 393-400. 1986, *Fitologija* 31: 21-33. 1986, *New Zealand Journal of Botany* 24: 425-503. 1986, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991,

Bulletin of Botanical Research 14(2): 140. 1994, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 255. 2000.

in English: wood meadow grass, wood bluegrass, forest bluegrass

in French: pâturin des bois

P. nemoralis L. subsp. ***interior*** (Rydb.) W.A. Weber (*Paneion interius* (Rydb.) Lunell; *Poa interior* Rydb.; *Poa nemoralis* var. *interior* (Rydb.) Butters & Abbe)

North America. See *Species Plantarum* 1: 67, 69-70. 1753 and *Bulletin of the Torrey Botanical Club* 32(11): 604-605. 1905, *American Midland Naturalist* 4: 216, 222. 1915, *Phytologia* 51(6): 375. 1982.

in English: inland bluegrass

P. nemoralis L. subsp. ***montana*** (Gaudin) Gaudin (*Poa nemoralis* subsp. *montana* (Gaudin) Chrtek & Jirasek, nom. illeg., non *Poa nemoralis* subsp. *montana* (Gaudin) Gaudin; *Poa nemoralis* var. *montana* Gaudin)

Europe, Switzerland. See *Alpina* 3: 27. 1808, *Agrostologia Helvetica, definitionem ...* 1: 186. 1811, *Flora Helvetica* 1: 239, 241. 1828.

P. nemoralis L. subsp. ***nemoralis*** (*Poa nemoralis* var. *nemoralis*)

Europe. Along roadsides, dry woods, see *Species Plantarum* 1: 69-70. 1753.

in English: wood bluegrass

P. nemoralis L. var. ***nemoralis***

Europe. Along roadsides, dry woods, see *Species Plantarum* 1: 69-70. 1753.

in English: wood bluegrass

P. neosachalinensis N.S. Probatova (*Poa sachalinensis* (Koidz.) Honda; *Poa sachalinensis* var. *yezoensis* Ohwi; *Poa sugawarana* Koidz. ex Sugaw.; *Poa yezoensis* Ohwi)

Russia, Japan. See *Botanical Magazine* (Tokyo) 41: 641. 1927, *Ill. Fl. Saghal.* 1: 221, t. 106. 1937, *Acta Phytotaxonomica et Geobotanica* 10(2): 123. 1941, Sihizmund Semenovich Kharkevich (Chief editor), *Vascular Plants of the Russian Far East: ... Juncaceae, Poaceae (Gramineae)*. [translation of the 1985 Russian edition, *Sosudistyie Rasteniya Sovetskogo Dal'nego Vostoka, or Sosudistyie Rasteniya Sovetskogo Dal'nego Vostoka = Plantae vasculares Orientis extremi Sovietici*] Science Pub. Inc., Enfield, N.J. November 2003.

P. nervosa (Hook.) Vasey (*Festuca nervosa* Hook.; *Poa columbiensis* Steud.; *Poa cuspidata* Vasey ex Scribn., nom. illeg., non *Poa cuspidata* Nutt.; *Poa nervosa* var. *nervosa*; *Poa nervosa* var. *wheeleri* (Vasey) C.L. Hitchc.; *Poa olneyae* Piper; *Poa pulchella* var. *major* Vasey; *Poa subreflexa* Rydb.; *Poa vaseyana* Scribn.; *Poa vaseyana* Scribn. ex Beal; *Poa wheeleri* Vasey; *Poa wheeleri* var. *vaseyana* (Scribn.) Will. & Pammel) (for the American botanist Stephen Thayer Olney, 1812-1878, author of *Catalogue of*

Plants. Providence 1845. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 28. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 294. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 465. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. 92. New York and London 1969)

Northern America, Canada, U.S., Pacific Northwest. Perennial, see *Flora Boreali-Americana* 2: 251, t. 232. 1840, *Synopsis Plantarum Glumacearum* 1: 261. 1854, *Catalogue of Plants* 55. 1874, *Botanical Gazette* 7(3): 32. 1882, *Bulletin of the Torrey Botanical Club* 15: 49. 1888, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 81, 82. 1893, *Grasses of North America for Farmers and Students* 2: 532, 538. 1896, *Circular, Division of Agronomy, United States Department of Agriculture* 9: 6. 1899, *Erythraea* 7: 101. 1899 and *Bulletin of the Torrey Botanical Club* 36: 535. 1909, *Proceedings of the Iowa Academy of Science* 20: 144. 1915, *Vascular Plants of the Pacific Northwest* 1: 671. 1969, *Contr. U.S. Natl. Herb.* 48: 561. 2003.

in English: Hooker's bluegrass, Wheeler bluegrass

P. nipponica Koidzumi (*Poa annua* f. *maxima* Hack. ex Honda; *Poa mariesii* Rendle)

Asia, Japan, China. See *Species Plantarum* 1: 68. 1753 and *Linnaea* 36(4): 425. 1904, *Botanical Magazine* (Tokyo) 31: 256. 1917, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 77. 1930, *Journal of Japanese Botany* 63: 334-343. 1988, *Botanical Magazine* 101: 311-331. 1988.

in Japan: oichigotsunagi, ohichigotsunagi

P. novae-zelandiae Hack. (*Poa novae-zelandiae* f. *humilior* Hack.; *Poa novae-zelandiae* f. *laxiuscula* Hack.; *Poa novae-zelandiae* var. *wallii* Petrie)

New Zealand. Perennial, stout, variable in size, tufted, montane to alpine, leaf sheath membranous ribbed, ligule entire, coriaceous leaves erect and narrow, leaf blades persistent and folded, dense panicle with erect or spreading branches, gynomonocious, lower flowers bisexual, upper flowers female, glumes equal to subequal, lemma acute to acuminate, found in rocky places, grassland, riverbeds, see *Handbook N.Z. Fl.* 338. 1864, *Indig. Grasses N.Z.* t. 43B. 1880 and *Transactions and Proceedings of the New Zealand Institute* 35: 381-382. 1903, *Manual of the New Zealand Flora* 189. 1925, *Records of the Dominion Museum* 5(15): 127. 1965, *New Zealand J. Bot.* 24: 435-436. 1986.

P. obvallata Steud. (*Deyeuxia vulcanica* Phil.; *Poa boelckeii* Nicora; *Poa julietii* Phil.; *Poa pachypogon* Nees; *Poa subaristata* Phil.; *Poa tristigmatica* E. Desv.) (for Osvaldo

Boelcke, 1920-1990, botanical collector in Argentina and Chile, author of *Plantas vasculares de la Argentina: nativas y exóticas*. 2nd edition. Buenos Aires: Editorial Hemisferio Sur 1992, "Lorenzo R. Parodi." *Bol. Soc. Argent. Bot.* 12, 1968, "Suma agrostológica editada en memoria de Lorenzo Raimundo Parodi." *Bol. Soc. Argent. Bot.* 12, 1968, "Establishment of new forage plants in the grasslands of northern Patagonia in Argentina." *Proc. Int. Grassl. Congr.* 8: 159-161. 1960. See *Bol. Soc. Argent. Bot.* 11: 154. 1967; *Darwiniana* 16: 654. 1971; *Hickenia* 1(18): 106-107. 1977; *Darwiniana* 24: 142. 1982; *Transecta botánica de la Patagonia austral*. Editores O. Boelcke, D.M. Moore, F.A. Roig. Buenos Aires: Consejo Nacional de Investigaciones Científicas y Técnicas (Argentina), Instituto de la Patagonia (Chile), Royal Society (UK), 1985; *Bol. Soc. Argent. Bot.* 25: 468. 1988; *Taxon* 42: 929. 1993; *Brittonia* 54(1): 50. 2002)

Chile. See *Essai d'une Nouvelle Agrostographie* 43. 1812, *Flora Chilena* 6: 419. 1854, *Synopsis Plantarum Glumacearum* 1: 258. 1854, *Linnaea* 29(1): 90. 1858, *Anales de la Universidad de Chile* 43: 575. 1873, *Anales de la Universidad de Chile* 94: 171. 1896 and *Hickenia* 1(18): 104. 1977, *Contr. U.S. Natl. Herb.* 48: 573. 2003.

P. occidentalis Vasey (*Poa autumnalis* var. *robusta* (Vasey) Beal; *Poa flexuosa* var. *occidentalis* Vasey; *Poa flexuosa* var. *robusta* Vasey; *Poa lacustris* A. Heller; *Poa occidentalis* (Vasey) Rydb., nom. illeg., non *Poa occidentalis* Vasey; *Poa platyphylla* Nash & Rydb.; *Poa trivialis* var. *occidentalis* Vasey)

North America. See *Flora Britannica* 1: 101. 1800, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 159. 1816, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 290. 1878 [1879], *A Descriptive Catalogue of the Grasses of the United States* 85. 1885, *Contributions from the United States National Herbarium* 1(8): 271, 274. 1893, *Grasses of North America for Farmers and Students* 2: 534. 1896 and *Memoirs of the New York Botanical Garden* 1: 50. 1900, *Bulletin of the Torrey Botanical Club* 28(5): 266. 1901, *Catalogue of North American Plants North of Mexico (edition 3)* 45. 1909, *Muhlenbergia: A Journal of Botany* 6: 12. 1910, *Sida* 10: 138. 1983.

in English: New Mexico bluegrass, Mexican bluegrass

P. ogamontana R. Mochizuchi

Japan. Rare species.

P. orizabensis Hitchc. (*Poa glycerioides* Rupr.)

Mexico, Puebla, Mt. Orizaba. See *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 235. 1842 and *Contributions from the United States National Herbarium* 17(3): 374. 1913.

P. orthophylla Pilger

Colombia. Erect, tufted, loosely spreading inflorescence, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 715-716. 1898.

P. pallens Poir. (*Festuca bonariensis* Lam.; *Poa bonariensis* (Lam.) Kunth; *Poa cenisia* var. *pallens* Asch. & Graebn.; *Poa halleridis* Roem. & Schult.; *Poa pallens* Hallier f. ex Gaudin, nom. illeg., non *Poa pallens* Poir.; *Poa pallescens* W.D.J. Koch)

Europe, Argentina. Pubescent, webbed, see *Auctuarium ad Floram Pedemontanam* 40. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 192. 1791, *Encyclopédie Méthodique, Botanique* 5: 91. 1804, *Alpina* 3: 41. 1808, *Systema Vegetabilium* 2: 539. 1817, *Révision des Graminées* 1: 115. 1829, *Synopsis Florae Germanicae et Helveticae* Index: 69. 1838 and *Synopsis der mitteleuropäischen Flora* 2: 404. 1900.

P. paludigena Fernald & Wiegand (*Poa sylvestris* A. Gray var. *palustris* Dudley)

Northern America, U.S. Perennial, herbaceous, rare and threatened grass, growing in marshes, bogs, boggy woods and swamps, cold swamps, see *A Manual of the Botany of the Northern United States* 596. 1848, *Cornell University Science Bulletin* 2: 128. 1886 and *Rhodora* 20(235): 126-127. 1918.

in English: bog bluegrass

P. palustris L. (*Panicum triflorum* (Gilib.) Lunell; *Panicum triflorum* Lunell; *Poa crocata* Michx.; *Poa eyerdamii* Hultén; *Poa fertilis* Host; *Poa glauca* var. *crocata* (Michx.) M.E. Jones; *Poa janczewskii* Zapal.; *Poa kamtschatica* (L.) Fisch. ex Komarov; *Poa palustris* var. *strictula* (Steud.) Hack.; *Poa pinetorum* Klokov; *Poa rotundata* Trin.; *Poa serotina* Ehrh.; *Poa serotina* Ehrh. ex Hoffm.; *Poa serotina* Ehrh. ex Schrad.; *Poa strictula* Steud.; *Poa tanfiljewii* Roshev.; *Poa triflora* Gilib.; *Poa volhynensis* Klokov) (for W.J. Eyerdam)

Asia temperate and tropical, Europe, Northern America. Perennial, herbaceous, yellow-green or purple, erect, caespitose, clumped or densely bunched, flimsy-to-robust stems, purplish lower stems usually curved and decumbent at the base, stems rooting at the nodes like stolons, auricles absent, sheaths glabrous and overlapping, ligules rounded and lacerate or entire, leaf blades flaccid and scabrid, open-branched flower head, very loose panicles ovoid to oblong, glumes subequal and narrow, lemmas narrow-oblong and strongly keeled, web present or absent, pasture species, cultivated fodder naturalized elsewhere in temperate regions, forage, useful for erosion control and revegetation, occurs in wetlands, marshes, in meadow habitats, lowland meadows and wet meadows, mountain meadows, moist conditions, shores and thickets, moist woods, in moist forests and forest openings, wet soils, alluvial soils, wet floodplains, sandy gravelly soils, gravelly soil with coarse

fragments, hillsides, swamps, shores, sloughs, stream banks, ditches, loamy soil, boggy ground, see *Systema Naturae, Editio Decima* 2: 874. 1759, *Beiträge zur Naturkunde* 6: 83. 1791, *Exercitia Phytologica* 2: 531. Lugduni Gallorum 1792, *Flora Boreali-Americana* 1: 68. 1803, *Icones et Descriptiones Graminum Austriacorum* 3: 10, t. 15. 1805, *Flora Germanica* 1: 299. 1806, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 387. 1830, *Synopsis Plantarum Glumacearum* 1: 426. 1855 [1854], *Bull. Soc. Bot. France* 9: 453. 1862, *Bulletin de l'Herbier Boissier* 7(9): 710. 1899 and *Synopsis der mitteleuropäischen Flora* 2: 418. 1900, *Contributions to Western Botany* 14: 14. 1912, *American Midland Naturalist* 4: 223. 1915, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Acta Universitatis Lundensis* 38(1): 206, f. 3e-h. 1942, *Journal of the Bombay Natural History Society* 51(1): 53-103. 1952, *Flora of Alaska and Neighboring Territories; A Manual of the Vascular Plants* i-xxi, 1-1008. 1968, *Flora Europaea* 5: 159-1167. 1980, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Gayana, Botánica* 42: 1-157. 1985, *Great Basin Naturalist* 45: 395-422. 1985, *Fitologija* 31: 21-33. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 76: 476-479. 1991, *Bulletin, University Museum, University of Tokyo* 34: 169-249. 1991, *Vascular Plants of British Columbia* 129-138. 1994, *Flora of the Yukon Territory* i-xvii, 1-669. 1996, *Taxon* 49(2): 256. 2000.

in English: swamp meadow grass, fowl bluegrass, fowl meadow grass

in French: pâturin des marais, pâturin tardif

in Spanish: poa de los pantanos, poa paludosa

in Portuguese: poa-paludosa

P. pannonica A. Kern. (*Poa podolica* (Blocki ex Asch. & Graebn.) Blocki ex Zapal.; *Poa sterilis* proles. *pannonica* (A. Kern.) Asch. & Graebn.)

Europe, Moldova. See *Flora Taurico-Caucasica* 1: 62. 1808, *Österreichische Botanische Zeitschrift* 14: 84. 1864 and *Synopsis der mitteleuropäischen Flora* 2: 412, 415. 1900, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 118. 1971[1972].

P. pannonica A. Kern. subsp. *pannonica* (*Poa podolica* Blocki; *Poa podolica* (Blocki ex Asch. & Graebn.) Blocki ex Zapal.)

Central Europe, Romania. See *Österreichische Botanische Zeitschrift* 14: 84. 1864 and *Synopsis der mitteleuropäischen Flora* 2: 412. 1900.

P. pannonica A. Kern. subsp. *scabra* (Asch. & Graebn.) Soó (*Poa pannonica* subsp. *scabra* (Asch.) Soó; *Poa scabra* Kit. ex Steud.; *Poa scabra* Asch.; *Poa scabra* Ehrh.; *Poa sterilis* M. Bieb. subsp. *scabra* (Kit.) Asch. & Graebn.; *Poa sterilis* var. *scabra* (Asch.) Asch. & Graebn.)

Hungary, Romania, Yugoslavia. Rare grass, useful for erosion control, see *Beiträge zur Naturkunde* 6: 83. 1791, *Flora Taurico-Caucasica* 1: 62. 1808, *Nomenclator Botanicus. Editio secunda* 2: 362. 1841, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 17: 568. 1867 and *Synopsis der mitteleuropäischen Flora* 2: 414. 1900, *Excerpta Botanica. Sectio A. Taxonomica et Chorologica* 2(5): 432. 1960.

P. paposana Phil.

Chile. Coastal, see *Florula Atacamensis seu enumeratio plantarum*, quas in itinere per desertum atacamense observavit Dr. R. Philippi ... 55. Halis Saxonum [Halle] 1860.

P. papuana Stapf (*Poa papuana* subsp. *papuana*)

Borneo, Sulawesi, Papua New Guinea. Perennial, densely tufted, low, erect panicles, found in marshy areas, depressions, see *Hooker's Icones Plantarum* 27(1): t. 2607, 1-2. 1899 and *The Alpine Flora of New Guinea* 2: 1150. 1979, *Blumea* 38(2): 446. 1994.

P. paramoensis Laegaard

Ecuador, Páramo de las Cajas. Erect, loosely tufted, see *Novon* 8(1): 28-29, f. 2. 1988.

P. parviceps Hack. (*Festuca angustata* Griseb.; *Poa angustata* (Griseb.) Parodi, nom. illeg., non *Poa angustata* R. Br.; *Poa scaberula* f. *nudiflora* Hauman)

Argentina. See *Chloris Melvilliana* 29. 1823, *Flora Antarctica* 2: 378. 1846, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 288. 1879 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 298-299. 1914, *Anales de Sociedad Científica Argentina* 86: 238. 1918, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 45. 1928.

P. parviceps Hack. var. ***jujuyensis*** Parodi ex Nicora

Argentina. See *Hickenia* 2(33): 143, f. 1. 1997.

P. parviceps Hack. var. ***parviceps*** (*Festuca angustata* Griseb.; *Poa angustata* (Griseb.) Parodi, nom. illeg., non *Poa angustata* R. Br.; *Poa scaberula* f. *nudiflora* Hauman)

Argentina. See *Chloris Melvilliana* 29. 1823, *Flora Antarctica* 2: 378. 1846, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 288. 1879 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 298-299. 1914, *Anales de Sociedad Científica Argentina* 86: 238. 1918, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 45. 1928.

P. pattersonii Vasey (*Poa abbreviata* subsp. *pattersonii* (Vasey) Á. Löve, D. Löve & B.M. Kapoor) (named for the American botanist Harry Norton Patterson, 1853-1919, printer, explorer, collected in the U.S., Illinois and Colorado, author of *Check-list of North American Plants*, including Mexican species which approach the U.S. Boundary. Oquawka, Ill. [1887]. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 55. 1965; I.C. Hedge and J.M. Lamond,

Index of Collectors in the Edinburgh Herbarium. 117. Edinburgh 1970; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 302. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 22. Oxford 1964; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; J. Ewan, *Botanical Explorers of Colorado* ii. Edwin James. iii. John Charles Fremont. iv. Harry Norton Patterson. v. Thomas Conrad Porter. [s.l.], 1942-1944; Charles J. Édouard Morren, *Correspondance botanique*. Liège 1884; Alfred Rehder, 1863-1949, *Bibliography of Cultivated Trees and Shrubs Hardy in the Cooler Temperate Regions of the Northern Hemisphere*. Jamaica Plain, Massachusetts 1949; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

North America, California. Perennial, alpine, mountains, extremely rare species, see *Chloris Melvilliana* 29. 1823, *Contributions from the United States National Herbarium* 1(8): 275. 1893 and *Arctic and Alpine Research* 3(2): 143. 1971.

in English: Patterson's bluegrass

P. pauciflora Roem. & Schult. (*Deyeuxia capillaris* Clarion ex E. Fourn.; *Poa chirripoensis* R.W. Pohl; *Poa depauperata* Kunth, nom. illeg., non *Poa depauperata* Kit. ex Spreng.; *Poa huancavelicae* Tovar; *Poa orthophylla* Pilg.; *Poa pardoana* Pilg.; *Poa pauciflora* (Thurb.) Benth. ex Vasey, nom. illeg., non *Poa pauciflora* Roem. & Schult.; *Poa petrosa* Swallen; *Poa trachyphylla* Pilg.)

Colombia, Ecuador. Rhizomatous, leaves flat and short, inflorescence creamy to greenish, slender pedicels, awns lacking, alpine, rocky slopes, among rocks, small tufts, páramos, see *Essai d'une Nouvelle Agrostographie* 43. 1812, *Plantarum minus cognitarum pugillus primus[secundus]* / auctore Curtio Sprengel, Halae 1813-1815, *Prodromus Systematis Naturalis Regni Vegetabilis* 1: 162. 1815 [1816], *Systema Vegetabilium* 2: 549. 1817, *Geological Survey of California, Botany* 2: 310. 1880, *The Grasses of the United States* 42. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 580. 1885, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 715. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 379. 1906, *Contributions from the United States National Herbarium* 29: 255. 1948, Volkmar Vareschi (1906-1991), *Flora de Los Páramos de Venezuela*. Universidad de Los Andes. Mérida - Venezuela 1970, *Fieldiana, Botany* 38(2): 10, f. 4. 1976, Karl Weidmann, *Páramos venezolanos*. Caracas 1991, *Willdenowia* 27: 237. 1997.

P. paucispicula Scribn. & Merr. (*Poa barguzinensis* Popov; *Poa glacialis* Scribn. & Merr., nom. illeg., non *Poa glacialis*

Pall. ex Colla; *Poa glacialis* Stapf, nom. illeg., non *Poa glacialis* Pall. ex Colla; *Poa leptocoma* Trin.; *Poa leptocoma* subsp. *paucispicula* (Scribn. & Merr.) Tzvelev; *Poa leptocoma* var. *paucispicula* (Scribn. & Merr.) C.L. Hitchc.; *Poa merrilliana* A.S. Hitchc.; *Poa nivicola* Kom. ex Fedtsch.; *Poa nivicola* Kom.; *Poa stenantha* var. *leptocoma* (Trin.) Griseb.; *Poa taimyrensis* Roshev.)

North America, Alaska. Alpine, riverbanks, slopes, hilly tundra, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 374, 376. 1830, *Flora Rossica* 4(13): 373. 1852 and *Journal of the Linnean Society, Botany* 37: 532. 1906, *Contributions from the United States National Herbarium* 13(3): 68-69, pl. 15. 1910, *American Journal of Botany* 2: 309. 1915, *Vascular Plants of the Pacific Northwest* 1: 667. 1969, *Novosti Sist. Vyss. Rast.* 9: 54. 1972.

P. pentapolitana H. Scholz

Libya. Rare species, see *Willdenowia* 6(2): 292, f. 1-2. 1971.

P. pearsonii Reeder (for O.P. Pearson, see A.K. Pearson & O.P. Pearson, "Natural history of breeding behavior of the tinamou, *Nothoprocta ornata*." *Auk* 72: 113-127. 1955, O.P. Pearson and M.I. Christie, "Sympatric species of *Euneomys* (Rodentia, Cricetidae)." *Studies Neotrop. Fauna Env.* 26: 121-127. 1991, O. Pearson and H.A. Lagiglia, "Fuerte de San Rafael": una localidad tipo ilusoria. *Rev. Mus. Hist. Nat. San Rafael* 12: 35-43. 1992, O.P. Pearson, "Reproduction in a South American mouse, *Abrothrix longipilis*." *Anat. Rec.* 234: 73-88. 1992, O.P. Pearson and M. I. Christie, "Rodent guano (amberat) from caves in Argentina." *Studies Neotrop. Fauna Env.* 28: 105-111. 1993, Oliver P. Pearson and Anita K. Pearson, "La fauna de mamíferos pequeños de Cueva Trafal I, Argentina: pasado y presente." *Praehistoria*, Buenos Aires 1: 211-222. 1993, A.K. Pearson, O.P. Pearson and I.A. Gomez, "Biology of the bamboo *Chusquea culeou* (Poacea: Bambusoideae) in southern Argentina." *Vegetatio* 111: 93-126. 1994, Oliver P. Pearson and G.J. Kenagy, "Reproduction." in *Seventy-Five Years of Mammalogy* (1919-1994). Special Publication No. 11, the *American Society of Mammalogists* (E.C. Birney and J.R. Choate, eds.), pp. 271-287. 1994, Oliver P. Pearson, "The impact of an eruption of Volcan Hadson on small mammals in Argentine Patagonia." *Mastozoología Neotropical* 1: 103-112. 1994, Oliver P. Pearson, "Annotated keys for identifying small mammals living in or near Nahuel Huapi National Park or Lanin National Park, southern Argentina." *Mastozoología Neotropical* 2: 99-148. 1995, Oliver P. Pearson, "In memoriam: Wilbur Brooks Quay, 1927-1994." *Auk* 112: 489-491. 1995, Oliver P. Pearson, Monticulos "Mima". *Revista Patagonia Silvestre/Snap* No. 4, 2 p. 1997, G.J. Kenagy and O.P. Pearson, "Life with fur and without: experimental field energetics and survival of naked meadow voles." *Oecologia* 122: 220-224. 2000)

Peru, Bolivia. Perennial, caespitose, erect, leaf blades linear rigid pungent, open panicle oblong to ovate with ascending branches, spikelets oblong to elliptic 2- to 3-flowered, glumes subequal lanceolate acute, lower glume 1-nerved, upper glume 3-nerved, lower lemma lanceolate scabrous acute 5-nerved, grasslands, puna, similar to *Poa asperiflora*, see *Journal of the Washington Academy of Sciences* 41: 295. 1951.

P. pedersenii Nicora

Paraguay. Grassland, see *Candollea* 50(2): 544, f. 1. 1995.

P. perconcinna J.R. Edm. (*Poa bulbosa* L. subsp. *concinna* (Gaudin) Hayek; *Poa bulbosa* subsp. *concinna* Hayek; *Poa concinna* Gaudin, nom. illeg., non *Poa concinna* R. Br.; *Poa molinerii* Lam. & DC., nom. illeg., non *Poa molinerii* Balb.)

Europe. See *Species Plantarum* 1: 70. 1753, Giovanni Battista Balbis (1765-1831), *Elenco delle piante crescenti nei contorni di Torino ...* 85. Torino [1801], *Flore Française. Troisième Édition* 3: 65. 1805, *Prodromus Florae Novae Hollandiae* 180. 1810, *Agrostologia Helvetica, definitionem ...* 196. 1811 and *Repertorium Specierum Novarum Regni Vegetabilis* Beih. 30. 3: 260. 1932, *Botanical Journal of the Linnean Society* 76(4): 330. 1978, *Fitologija* 27: 3-23. 1984, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987.

P. perligulata Pilg. (*Catabrosa burkartii* Hitchc.) (dedicated to the Argentinean botanist Arturo E. Burkart, 1906-1975, agronomist, botanical collector in Argentina and Venezuela, author of *Historia del Instituto de Botanica Darwinion*. Buenos Aires: Academia Nacional de Ciencias 1975, "Alejandro de Humboldt (1769-1859) en el centenario de su muerte." *Rev. Cienc. Invest.* 15: 145-158. 1959, *Flora ilustrada de Entre Rios* (Argentina) / dirigida por Arturo Burkart. Buenos Aires: Instituto Nacional de Tecnología Agropecuaria 1969-, "Burmeister como botánico." *Rev. Univ. La Plata* no. 4: 5-11. 1958, "La Obra de Holmberg como botánico." *Darwiniana* 10: 9-18. 1952, "El Botanico Henri F. Pittier (1857-1950)." *Bol. Soc. Argent. Bot.* 3: 183-186. 1950. See *Darwiniana* 3(1): 7-26, 27-47, 126-149. 1937; *Darwiniana* 3(2): 117-302, pl. 1-22. 1939; *Darwiniana* 4(1): 57-128, pl. 1-23. 1940; J.H. Barnhart, *Biographical notes upon botanists.* 1: 284. 1965; *Darwiniana* 17: 355. 1972; R.S. Cowan, *Taxon* 24(4): 553-554. 1975)

Bolivia, Peru. Perennial, tufted, erect or ascending, leaf sheaths papery, leaf blades linear acute, dense panicle elliptic to oblong, spikelets elliptic 2-flowered, glumes ovate acute membranous, lower glume 1-nerved, upper glume 3-nerved, lower lemma ovate 5-nerved acute glabrous, moist puna, see *Essai d'une Nouvelle Agrostographie* 97. 1812 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(108): 779. 1933, *Journal of the*

Washington Academy of Sciences 24(11): 481. 1934, *Kurtziana* 28(1): 122. 2000.

P. petrophila Vickery (Greek *petros* “rock” and *philos* “lover, loving,” referring to the rocky habitats)

New South Wales, Kosciuszko region, Victoria. Perennial, densely caespitose, tussock grass, velvety, leaves mostly basal, auricles absent, leaf sheaths compressed and purple at base, ligule truncate and papery, stiff leaves, a panicle purplish and contracted, chasmogamous spikelets, lemmas hairy to scabrous, yellow anthers, ovary glabrous, fruit compressed and grooved, web more or less absent, growing in shallow soils amongst rocks, on shallow stony soils, in open habitats and eucalyptus woodland, similar to *Poa induta* Vickery, see *Contributions from the New South Wales National Herbarium* 4: 238. 1970.

P. petrosa Swallen (*Poa pauciflora* Roem. & Schult.)

Venezuela. Rhizomatous, leaves flat and short, small cobweb, inflorescence purplish to greenish, on dry slopes, see *Essai d'une Nouvelle Agrostographie* 43. 1812, *Plantarum minus cognitarum pugillus primus [-secundus] / auctore Curtio Sprengel, Halae 1813-1815, Prodromus Systematis Naturalis Regni Vegetabilis* 1: 162. 1815 [1816], *Systema Vegetabilium* 2: 549. 1817, *Geological Survey of California, Botany* 2: 310. 1880, *The Grasses of the United States* 42. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 580. 1885, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25: 715. 1898 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 379. 1906, *Contributions from the United States National Herbarium* 29: 255. 1948, Volkmar Vareschi (1906-1991), *Flora de Los Páramos de Venezuela*. Universidad de Los Andes. Mérida - Venezuela 1970, *Fieldiana, Botany* 38(2): 10, f. 4. 1976, Karl Weidmann, *Páramos venezolanos*. Caracas 1991, *Willdenowia* 27: 237. 1997.

P. phillipsiana Vickery

Australia, New South Wales, Victoria. Perennial tussock grass, densely caespitose, leaves mostly basal, auricles absent, ligule firm and truncate, sheath purplish and keeled, bluish leaves with rough surface, green and purple panicle loosely spreading, spikelets terminal, chasmogamous spikelets, glumes acute, lemmas hairy and narrowly oblong to narrowly ovate, web scanty, palea pubescent, anthers yellow or purple, ovary glabrous, fruit compressed, dry sites in alpine and subalpine regions, granitic soils, in open habitats, often confused with *Poa fawcettiae* Vickery, very similar to *Poa sieberiana* Spreng. var. *sieberiana*, see *Contributions from the New South Wales National Herbarium* 4: 238. 1970.

in English: bluegrass

P. pilcomayensis Hack. (*Poa pilcomayensis* var. *pilcomayensis*) (Paraguay, Gran Choco, Pilcomayo River)

Uruguay, Argentina, Paraguay. Perennial, straight inflorescence, growing in colonies, useful for erosion control, see *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 346. 1909, *Anales del Museo Nacional de Buenos Aires* 21: 157. 1911, *Kurtziana* 28(1): 124. 2000.

P. piperi A.S. Hitchc. (*Poa rhizomata* Hitchc.) (for the American (born in Victoria, British Columbia, Canada) botanist Charles Vancouver Piper, 1867-1926, agronomist, studied at the University of Washington, 1890 founded the Herbarium at State College (Pullman, Washington), 1893-1903 professor of botany at the State College, 1903-1926 Director of the office of forage crops for US Department of Agriculture, his writings include “North American species of Festuca.” *Contr. U.S. Nat. Herb.* 10: 1-48. 1906, *The Flora of the Palouse Region*. Pullman, Washington 1901, “*Andropogon halepensis* and *Andropogon sorghum*.” *Proc. Biol. Soc. Wash.* 28: 25-44. 1915, *Forage Plants and Their Culture*. New York, The Macmillan Company 1917 and *Flora of the State of Washington*. Washington 1906. See *Flora of the Northwest Coast*, including the area west of the summit of the Cascade Mountains, from the forty-ninth parallel south to the Calapooia Mountains on the south border of Lane County, Oregon. By Charles V. Piper ... and R. Kent Beattie ... Lancaster, Pa., Press of the New era printing company 1915; J.H. Barnhart, *Biographical notes upon botanists*. 3: 88. 1965; J. Ewan, editor, *A Short History of Botany in the United States*. 11. 1969; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 311. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 327-328. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 584. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

North America, California. Perennial, rhizomatous, plants nearly all pistillate or staminate-flowered, rare species, chaparral, in serpentine substrate, in damp shady woods, see *A Flora of California* 1: 155. 1912, *Illustrated Flora of the Pacific States* 1: 201, f. 461. 1923.

in English: Piper’s bluegrass

P. pirinica Stoj. & Acht. (*Poa dolosa* Boiss. & Heldr.)

Bulgaria, Greece. Rare species, see *Diagnoses plantarum orientarium novarum, ser. 2*, 3(4): 136. 1859 and *Fitologija* 31: 21-33. 1986.

P. planifolia Kuntze (*Colpodium planifolium* (Kuntze) K. Schum.; *Poa acutifolia* Hauman; *Poa chilensis* var.

planifolia (Kuntze) Hauman; *Poa planifolia* Scribn. & T.A. Williams)

Argentina. Stiff, broad leaves, contracted inflorescence, see *Fundamenta Agrostographiae* 119, t. 7. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 62. 1836, *Revisio Generum Plantarum* 3(3): 366. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 3-4. 1899 and *Botanischer Jahresbericht*. 26(1): 330. 1900, *Anales del Museo Nacional de Buenos Aires* 29: 405, t. 4. 1917, *Anales de Sociedad Científica Argentina* 86: 238. 1918.

P. plicata Hack. (*Poa glomerifera* Hack.)

Argentina. Stony places, see *Österreichische Botanische Zeitschrift* 52(10): 378. 1902, *Anales del Museo Nacional de Buenos Aires* 21: 151. 1911.

P. poecila Phil. (*Aira spiciformis* Steud.; *Koeleria sterilis* Steud.; *Poa poecilantha* Rupr.; *Poa rigidifolia* Steud.; *Poa rigidifolia* var. *rigidifolia*; *Poa spiciformis* (Steud.) Hauman & Parodi) (from the Greek *poikilos* “spotted, many-colored, mottled”)

Chile, Argentina. See *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 63, t. 5. 1845, *Synopsis Plantarum Glumacearum* 1: 260, 293, 424. 1854, *Anales de la Universidad de Chile* 43(46): 573. 1872 [1873] and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 344. 1929.

P. poiformis (Labill.) Druce (*Arundo poiformis* Labill., but also spelled *poaeformis*; *Poa australis* sensu J.M. Black, partly, non R. Br.; *Poa australis* R. Br.; *Poa australis* R. Br. var. *billardieri* Hook.f.; *Poa australis* var. *billardieri* (Labill.) Hook.f.; *Poa caespitosa* var. *australis* Benth.; *Poa caespitosa* var. *laevis* (R. Br.) Benth.; *Poa caespitosa* var. *plebeia* (R. Br.) Benth.; *Poa laevis* R. Br.; *Poa plebeia* R. Br.; *Poa urvillei* Steud.)

South Australia, New South Wales, Victoria, Western Australia, Tasmania. Perennial, erect, branched or unbranched, pungent-pointed, tufted densely, rarely rhizomatous or stoloniferous, leaves mostly basal, auricles absent, sheath smooth and keeled, ligule truncate and papery, green to bluish green leaves strongly convolute and rigid, pale greenish to straw colored narrow and contracted panicles, chasmogamous spikelets, glumes more or less equal, lemma acute to obtuse, web long and copious, palea scabrous, anthers yellow or purple, ovary glabrous, fruit compressed and grooved, useful for soil erosion control, a coastal species, mesophytic, maritime-arenicolous, cliff tops and coastal sand dunes, on ocean foreshores and estuaries, in open habitats, acidic or alkaline soils, confused with *Poa billardieri* Steudel, allied to *Poa halmaturina* J. Black, see *Species Plantarum* 1: 81. 1753, *Novae Hollandiae Plantarum Specimen* 1: 27. 1804, *Prodromus Florae Novae Hollandiae* 179. 1810, *Synopsis Plantarum Glumacearum*

1: 262. 1854, *Flora Tasmaniae* 2: 125. 1858 and *Report. Botanical Exchange Club. London*. 1916: 640. 1917, *Contr. New South Wales Natl. Herb.* 4(2): 208. 1970, *Muelleria* 7(2): 169. 1990.

in English: blue tussock grass, tussock grass, coast tussock grass

P. poiformis (Labill.) Druce var. ***poiformis***

Australia. Perennial, unbranched, large tussocks forming, found in slightly saline alluvial flats.

P. poiformis (Labill.) Druce var. ***ramifer*** D.I. Morris

Western Australia, Tasmania, Victoria, Bass Strait Islands, New South Wales. Perennial, rhizomatous or stoloniferous roots, culms branched, leaves fine and glaucous, purplish sheaths, on sand dunes, see *Muelleria* 7(2): 169-170, f. 16. 1989 [1990].

P. porphyroclados Nees (*Poa caespitosa* var. *serpentum* (Nees) Benth.; *Poa maxwellii* Benth.; *Poa serpentum* Nees; *Poa sieberiana* var. *spithamea* Nees)

Western Australia, Serpentine River. Perennial, caespitose, leaves mostly basal, auricles absent, basal leaf sheaths not keeled, ligule truncate and papery, leaves grooved, chasmogamous spikelets, an open panicle green and purple, web present or absent, palea membranous, yellow anthers, ovary glabrous, found in open habitats, mesophytic, see *Florulae Insularum Australium Prodromus* 89. 1786, *Commentationes Societatis Regiae Scientiarum Göttingensis* 9: 22. 1787, *Encyclopédie Méthodique, Botanique* 5: 73. 1804, *Mantissa Prima Florae Halensis* 33. 1807, *Systema Vegetabilium, editio decima sexta* 4; *Curae Posteriores* 35. 1827, *Plantae Preissianae* 2: 105-106. 1846, *Flora Australiensis: A Description ...* 7: 652-653. 1878, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 91. 1896.

P. porsildii Gjaerevoll (for the Danish botanist Alf Erling Porsild, 1901-1977, botanical collector in Canada and Greenland, author of *The Alpine Flora of the East Slope of the Mackenzie Mountains, Northwest Territories*. Ottawa 1945, *Vascular Plants Collected on Kiska and Great Sitkin Islands in the Aleutians* by Lt. H.R. McCarthy and Cpl. N. Kellas Aughust, September, and October, 1943. [Ottawa] 1944, *Botanical Excursion to Jasper and Banff National Parks, Alberta: Alpine and Subalpine Flora*. Ottawa 1959, *Vascular plants of Continental Northwest Territories, Canada* / A. Erling Porsild, William J. Cody. Ottawa: National Museum of Natural Sciences, National Museums of Canada 1980, “*Puccinellia ambigua* Th. Sør., new to the Hudson Bay Region.” *Can. Fld. Nat.* 83: 163-164. 1969; collaborator of his father the Danish botanist Morton Pedersen Porsild (1872-1956). See J.H. Barnhart, *Biographical notes upon botanists*. 3: 100. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 315. 1972; J. Ewan, editor, *A Short History of Botany in the United States*. 24. 1969; *Nordic J. Bot.* 2: 529. 1983)

North America, Canada, Yukon Territory, Alaska. Vulnerable species, alpine, see *Det Kongel. Norske Videnskabers Selskabs Forhandling* 29(16): 72, 74, f. 1. Trondheim 1957.

in English: Porsild's grass

P. pratensis L. (*Paneion pratense* (L.) Lunell; *Poa agassizensis* Boivin & D. Löve; *Poa anceps* var. *breviculmis* Hook.f.; *Poa angustifolia* Elliott, nom. illeg., non *Poa angustifolia* L.; *Poa angustifolia* L.; *Poa angustifolia* subsp. *costata* (Schumach.) Richt.; *Poa angustifolia* var. *pratensis* Simonk.; *Poa angustiglumis* Roshev.; *Poa articulata* Ovcz., nom. illeg., non *Poa articulata* Schrank; *Poa attica* Boiss. & Heldr.; *Poa bidentata* Stapf; *Poa boliviensis* Hack.; *Poa bourgaei* E. Fourn. ex Hemsl.; *Poa bourgaei* E. Fourn.; *Poa costata* Schumach.; *Poa garanica* Ikonn.; *Poa gelida* Roem. & Schult.; *Poa ianthoides* Roiv.; *Poa intermedia* Steud., nom. illeg., non *Poa intermedia* Koeler; *Poa luzoniensis* Merr.; *Poa magensiana* Potztal; *Poa maydelii* Roshev.; *Poa menachensis* Schweinf.; *Poa oligeria* Steud.; *Poa peckii* Chase; *Poa pinegensis* Roshev.; *Poa pratensis* proles. *costata* (Schumach.) Asch. & Graebn.; *Poa pratensis* subsp. *attica* (Boiss. & Heldr.) Rech.f.; *Poa pratensis* var. *costata* (Schumach.) Fr.; *Poa pratensis* var. *gelida* (Roem. & Schult.) Bochn.; *Poa pratensis* var. *laxiflora* Lange; *Poa pratensis* var. *macounii* Boivin; *Poa pratensis* var. *stricta* Hook.; *Poa pratensis* L. var. *subglabriflora* Roshev.; *Poa pratensis* var. *urjancaica* (Roshev.) Bondar ex O.N. Korovina; *Poa rigens* Hartm.; *Poa rigens* Hartm. subsp. *colpodea* (Th. Fr.) D. Löve; *Poa serotina* Ehrh.; *Poa subglabriflora* Roshev.; *Poa turfosa* Litv.; *Poa urjancaica* Roshev.; *Poa viridis* Gilib.; *Poa viridis* Schreb. ex Pursh; *Poa viridis* Muhl.) (Baron George von Maydell, 1859 collector in Russia)

Europe, Asia temperate and tropical, large climate range. Perennial, very variable, loosely or densely tufted, erect, ascending or geniculate, sod-forming, low-growing, herbaceous, smooth, leaves mostly basal, rhizomatous with slender creeping rhizomes, auricles vestigial or absent, ligule always very short, leaf sheaths smooth and compressed, basal leaf sheaths papery, ligule membranous obtuse to truncate, glabrous or slightly hairy leaf blades linear or narrow-linear, numerous erect flowering stems, panicles ovate to pyramidal with scabrous branches, ovate to oblong spikelets 2- to 5-flowered and somewhat compressed, hermaphrodite florets homogamous, glumes narrowly ovate unequal acuminate, lower glume 1-nerved, upper glume 3-nerved, lower lemma oblong, lemmas hairy on the keel and marginal nerves, web long and copious, palea with scabrous and wingless keels, anthers yellow or purple, ovary glabrous, fruit compressed, weed species widespread in temperate regions, soil improver, the pollen of this species may cause hay fever, cultivated fodder grass and widely naturalized, pasture species, highly palatable and nutritious when young and green, lawns and playing fields, golf courses,

useful for erosion control, can survive on rather poor soils, ornamental, turf, very resistant to cold and heat, more or less resistant to drought, more or less intolerant of drought, common in rich soils, open areas, open woods, open forests, dry woods, along rivers and streams, along roadsides, waste ground, in cool and moist districts, seepage areas, pastures, in prairies and fields, uncut lawns, in disturbed and well-watered sites, damp meadows, mountain meadows, lawn grass on damp limy soils, on well-drained loams or clay loams rich in humus, in wetlands or nonwetlands, along roadsides, in riparian environments, riparian woodlands, mountain grasslands, mountain brushlands, see *Species Plantarum* 1: 67-68. 1753, *Florulae Insularum Australium Prodromus* 8. 1786, *Beiträge zur Naturkunde* 6: 83. 1791, *Exercitia Phytologica* 2: 530. 1792, *Agrostologia Helvetica, definitionem ...* 1: 214. 1811, *Catalogus Plantarum Americae Septentrionalis* 11. 1813, *Flora Americae Septentrionalis; or, ...* 1: 79. 1814, *A Sketch of the Botany of South-Carolina and Georgia* 1: 160. 1816, *Systema Vegetabilium* 2: 540. 1817, *Handbok i Skandinaviens Flora* edition 1 448. 1820, *Flora Boreali-Americana* 2: 246. 1840, *Summa Vegetabilium Scandinaviae* 76. 1846, *Flora Novae-Zelandiae* 306. 1853, *Diagnoses plantarum orientalium novarum, ser. 2, (fasc. 13):* 57. 1853 [or 1854?], *Synopsis Plantarum Glumacearum* 1: 252, 426. 1854, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 26: 138. 1869, *Conspectus Florae Groenlandicae* 1: 177. 1880, *Mexicanas Plantas* 2: 113. 1886 and *Flora Capensis* 7: 713. 1900, *Synopsis der mitteleuropäischen Flora* 2: 433. 1900, *Philippine Journal of Science* 1(Suppl.): 180. 1906, *Reperitorium Specierum Novarum Regni Vegetabilis* 11: 25. 1912, *American Midland Naturalist* 4: 222. 1915, *Schedae ad herbarium Florae Rossicae, a Museo botanico Academiae imperialis scientiarum Petropolitanae editum* Sanktpeterburg 1898-1911, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *T.R.S.N.Z.* 65: 2. 1935, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Journal of the Washington Academy of Sciences* 28(2): 54, f. 2. 1938, *Journal of the Bombay Natural History Society* 51(1): 53-103. 1952, *Annales Botanici Societatis Zoologicae-Botanicae Fennicae "Vanamo"* 28(2): 199. 1954, *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Willdenowia* 2: 168. 1959, *Grasses of Burma ...* 559. 1960, *Le Naturaliste Canadien* 87: 173-176, f. 1. 1960, *Taxon* 17(1): 89. 1968, *British Antarctic Survey Scientific Reports* 60: 1-202, 1-6 pls. 1968, *Check-list of the Vascular Plants of Greenland* 1-40. 1968, *Flora of Alaska and Neighboring Territories; A Manual of the Vascular Plants* i-xxi, 1-1008. 1968, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Flora Patagónica* 3: 1-583. 1978, *Novosti Sist. Vyss. Rast.* 15: 221. 1979, *Flora Europaea* 5: 159-1167. 1980, *Provancheria* 12: 62. 1981, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Flora of Pakistan. n. 143. Poaceae* 410. 1982, *Flora of Tierra del Fuego* 1-396. 1983, *New Zealand J. Bot.* 24: 459.

1986, *Journal of Cytology and Genetics* 21: 155. 1986, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, Warren Lambert Wagner, *Manual of the Flowering Plants of Hawaii* 2: 1481-1604. University of Hawaii Press, Honolulu 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Cytologia* 56: 437-452. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 77(2): 113-114. 1992, *Flora Mesoamericana* 6: 230-231. 1994, *Blumea* 38: 409-457. 1994, *Grassland of China* 1995(1): 16-20. 1995, *Bothalia* 27: 75-82. 1997, *Taxon* 48(1): 157-159. 1998, *Guide to the Vascular Plants of Florida* i-x, 1-806. 1998, *Bothalia* 29(2): 335-341. 1999, *Taxon* 49(2): 254. 2000, *Taxon* 49(4): 802. 2000, *Flora of Bhutan* 3(2): i-vii + 457-883. 2000, *Brittonia* 54(3): 154-163. 2002.

in English: Kentucky bluegrass, June grass, junegrass, smooth meadow grass, smooth-stalked meadow grass, meadow grass, common meadow grass, meadow poa, spear grass, winter grass

in French: pâturin des prés

in Spanish: grama de prados, poa común, zacate poa

in Colombia: pasto azul de Kentucky

in Mexico: zacate azul de las praderas, zacate azul del Kentucky

in Portuguese: capim-do-campo

in Japan: nagahagusa

P. pratensis L. subsp. ***agassizensis*** (B. Boivin & D. Löve) Roy L. Taylor & MacBryde (*Poa agassizensis* B. Boivin & D. Löve) (See Rosamond Wolff Purcell, *Finders, Keepers: Eight Collectors* / R.W. Purcell & Stephen Jay Gould, New York: W.W. Norton 1992)

Northern America, Canada. Prairies, turf, pasture, hay, wildlife, habitat, soil erosion control, see *Svensk Bot. Tidskr.* 53: 371. 1959, *Le Naturaliste Canadien* 87: 173-176, f. 1. 1960, *Canadian Journal of Botany* 56(2): 193. 1978, A.E. Porsild and W. Cody, *Checklist of the Vascular Plants of the Northwest Territories Canada* 1980.

in English: Kentucky bluegrass, meadow grass, smooth meadow grass, June grass, speargrass, bluegrass

P. pratensis L. subsp. ***alpigena*** (Blytt) Hiitonen (*Poa alpigena* (Fries) Lindm.; *Poa alpigena* Lindm.; *Poa alpigena* subsp. *staintonii* Melderis; *Poa hispidula* var. *aleutica* Hultén; *Poa pratensis* var. *alpestris* Fr.; *Poa pratensis* L. subsp. *alpigena* (Fries) Hiitonen; *Poa pratensis* L. subsp. *alpigena* (Fries ex Blytt) Hiitonen; *Poa pratensis* subsp. *alpigena* (Lindm.) Hiitonen; *Poa pratensis* var. *alpigena* Fries; *Poa pratensis* var. *alpigena* Fr. ex Blytt; *Poa pratensis* var. *iantha* Laest.; *Poa rigens* Hartm.)

North America, U.S., Alaska, Asia, Russia, Norway. Perennial, alpine grass, sod-forming, common in wet meadows, marshy depressions, on damp sand near the seashore,

imperfectly drained moist areas, on moist to well-drained places, around the margins of ponds, slopes, disturbed sites, ridges, along streams, snow patches, creek flood plains, see *Species Plantarum* 1: 67-68. 1753, *Handbok i Skandinaviens Flora* edition 1, 448. 1820, *Kongl. Vetenskaps Akademiens Handlingar* 329. 1822, *Summa Vegetabilium Scandinaviae* 1: 76. 1846, *Norges Flora* 1: 130. 1861, *Contributions from the United States National Herbarium* 1(8): 272. 1893 and *Svensk Fanerogamflora* 91. 1918, *Suomen Kasvio* 205. 1933, *Flora of the Aleutian Islands* 88. 1937, *Enumeration of the Flowering Plants of Nepal* 1: 142. 1978.

in English: Kentucky bluegrass, Northern meadow grass

P. pratensis L. subsp. ***angustifolia*** (L.) Lej. (*Poa angustifolia* L.; *Poa angustifolia* Elliott, nom. illeg., non *Poa angustifolia* L.; *Poa attica* Boiss. & Heldr.; *Poa pratensis* subsp. *angustifolia* (L.) Gaudin, nom. illeg., non *Poa pratensis* subsp. *angustifolia* (L.) Lej.; *Poa pratensis* subsp. *angustifolia* (L.) H. Lindb.; *Poa pratensis* subsp. *angustifolia* (L.) Arcangeli; *Poa pratensis* subsp. *angustifolia* (L.) Dumort.; *Poa pratensis* subsp. *attica* (Boiss. & Heldr.) Rech.f.; *Poa pratensis* subsp. *strigosa* (Hoffm.) Gaudin, nom. illeg., non *Poa pratensis* var. *strigosa* (Hoffm.) Lej.; *Poa pratensis* var. *angustifolia* (L.) Sm.; *Poa pratensis* var. *attica* (Boiss. & Heldr.) Boiss.; *Poa pratensis* var. *strigosa* (Hoffm.) Lej.; *Poa setacea* Hoffm., nom. illeg., non *Poa setacea* Huds.; *Poa strigosa* Hoffm.; *Poa viridula* Palib.)

Europe. Perennial, rhizomatous, coarse, rather compact panicle, naturalized elsewhere in temperate regions, common in loam soil, high mountain meadow, dry soil in the open, disturbed ground, very dry sandy road bank, gravelly soil, opening in woods, see *Species Plantarum* 1: 67-68. 1753, *Deutschland Flora* 3: 44. 1800, *Flora Britannica* 1: 105. 1800, *Agrostologia Helvetica, definitionem ...* 1: 214-215. 1811, *A Sketch of the Botany of South-Carolina and Georgia* 1: 160. 1816, *Flora Helvetica* 259-260. 1828, *Compendium Florae Belgicae* 82. 1828, *Diagnoses plantarum orientalium novarum, ser. 2, (fasc. 13):* 57. 1853 [1854?], *Compendio della Flora Italiana* edition 1, 787. 1884, *Flora Orientalis* 5: 601. 1884 and *Schedae Plantae Finlandiae Exsiccatae* fasc. 1-VIII: 20. 1906, *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 105: 780. Vienna 1943, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 254. 2000.

in English: narrow-leaf meadow grass, narrow-leaved meadow grass, Kentucky bluegrass

in Danish: smalbladet rapgræs

P. pratensis L. subsp. ***colpodea*** (Fries) Tzvelev (*Poa alpigena* f. *vivipara* Roshev.; *Poa alpigena* (Fries) Lindm. subsp. *colpodea* (Fries) Tzvelev; *Poa alpigena* subsp. *colpodea* (Th. Fr.) Jurtzev & V.V. Petrovsky; *Poa alpigena* (Fries) Lindm. var. *colpodea* (Fries) Schol.; *Poa alpigena* var. *vivipara* Hultén, nom. illeg., non *Poa alpigena* f.

vivipara Roshev.; *Poa arctica* subsp. *stricta* (Hartm.) Nannf.; *Poa arctica* var. *stricta* (Hartm.) Nannf.; *Poa laxa* subsp. *stricta* Hartm., nom. illeg., non *Poa stricta* Roth; *Poa lindebergii* Tzvelev; *Poa pratensis* f. *hultenii* Boivin; *Poa pratensis* f. *prolifera* Simmons; *Poa pratensis* var. *colpodea* (Fries) Soreng; *Poa pratensis* var. *vivipara* (Malmgr.) Boivin; *Poa rigens* subsp. *colpodea* (Th. Fr.) D. Löve; *Poa stricta* Lindeb., nom. illeg., non *Poa stricta* Roth; *Poa stricta* subsp. *colpodea* Th. Fr.; *Poa tolmachewii* var. *stricta* (Hartm.) Tzvelev (Greek *kolpodes*, *kolpoeides* “like a breast, winding, loose, like a bay, turgid, embosomed”)

North America, Europe. Rhizomatous, low-growing, leaves mostly in a basal tuft, riverbanks, see *Species Plantarum* 1: 67-68. 1753, *Handbok i Skandnaviens Flora* edition 1, 448. 1820, *Botaniska Notiser* 1855: 10. 1856, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 26: 138. 1869, *Handbok i Skandinviens Flora, Tionde Upplagan* 1: 264. 1870 and *Report of the Second Norwegian Arctic Expedition in the “Fram” 1898-1902* 169. 1906, *Svensk Fanerogamflora* 91. 1918, *Skrifter om Svalbard og Nordishavet* 62: 89. 1934, *Symbolae Botanicae Upsaliensis* 4(4): 67. 1940, *Acta Universitatis Lundensis* 2: 198. 1942, *Uppsala Universitets Årsskrift* 7: 78. 1945, *Le Naturaliste Canadien* 94: 636. 1967, *Taxon* 17(1): 89. 1968, *Novosti Sist. Vyss. Rast.* 9: 47. 1972, *Novosti Sist. Vyss. Rast.* 11: 27. 1974, *Phytologia* 71(5): 403. 1991 [1992].

in English: Kentucky bluegrass

P. pratensis L. subsp. ***irrigata*** (Lindm.) Lindb.f. (*Poa athroostachya* Oett.; *Poa czernjajevii* Prok.; *Poa groenlandica* Steud.; *Poa humilis* Ehrh. ex Hoffm.; *Poa humilis* Ehrh. ex Sm.; *Poa humilis* Ehrh.; *Poa irrigata* Lindm.; *Poa pratensis* L. subsp. *rigens* (Hartman) Tzvelev; *Poa pratensis* L. subsp. *subcaerulea* (Sm.) Hiitonen; *Poa pratensis* subsp. *subcaerulea* (Sm.) Tutin, nom. illeg., non *Poa pratensis* subsp. *subcaerulea* (Sm.) Hiitonen; *Poa pratensis* var. *alpina* (L.) Huds.; *Poa pratensis* var. *humilis* (Ehrh. ex Hoffm.) Spenn.; *Poa pratensis* var. *humilis* (Ehrh. ex Sm.) Griseb., nom. illeg., non *Poa pratensis* var. *humilis* (Ehrh. ex Hoffm.) Spenn.; *Poa pratensis* L. var. *rigens* (Hartman) Wahlenb.; *Poa pratensis* var. *rigens* (Hartm.) Laest.; *Poa rigens* Hartm.; *Poa subcaerulea* Sm.)

Europe. Perennial, see *Species Plantarum* 1: 67-68. 1753, *Flora Anglica, Editio Altera* 39. 1778, *Beiträge zur Naturkunde* 6: 84. 1791, *Deutschland Flora* 3: 45. 1800, *English Botany* 14: t. 1004. 1802, *Flora Britannica* 3: 1387. 1804, *Handbok i Skandnaviens Flora* edition 1, 448. 1820, *Kongl. Vetenskaps Akademiens Handlingar* 328. 1822, *Flora Friburgensis* 1: 130. 1825, *Flora Rossica* 379. 1852, *Synopsis Plantarum Glumacearum* 1: 252. 1854 and *Botaniska Notiser* 1905: 88, f. 1. 1905, *Repertorium Specierum Novarum Regni Vegetabilis* 21: 310. 1925, *Suomen Kasvio* 205, f. 5. 1933, *Flora of the British Isles* 1441. 1952, *Novosti Sist. Vyss. Rast.* 9: 47. 1972.

in English: spreading bluegrass

P. pratensis L. subsp. ***pratensis*** (*Paneion pratense* (L.) Lunell; *Poa agassizensis* Boivin & D. Löve; *Poa alpigena* Lindm.; *Poa angustifolia* L.; *Poa angustifolia* var. *angustiglumis* (Roshev.) Vorosch.; *Poa angustiglumis* Roshev.; *Poa articulata* Ovcz., nom. illeg., non *Poa articulata* Schrank; *Poa boliviensis* Hack.; *Poa garanica* Ikonn.; *Poa ianthoides* Roiv.; *Poa maydelii* Roshev.; *Poa paratunkensis* Kom.; *Poa peckii* Chase; *Poa pinegensis* Roshev.; *Poa pratensis* L. subsp. *agassizensis* (Boivin & D. Löve) Taylor & MacBryde; *Poa pratensis* subsp. *alpigena* (Lindm.) Hiitonen; *Poa pratensis* L. subsp. *angustifolia* (L.) Lej.; *Poa pratensis* var. *alpigena* Fr. ex Blytt; *Poa pratensis* L. var. *angustifolia* (L.) Gaudin; *Poa pratensis* var. *angustiglumis* (Roshev.) Bondar ex O.N. Korovina; *Poa pratensis* L. var. *domestica* Laestad.; *Poa pratensis* L. var. *gelida* (Roemer & J.A. Schultes) Böcher; *Poa pratensis* L. var. *iantha* Wahlenb.; *Poa pratensis* var. *pinegensis* (Roshev.) Bondar ex O.N. Korovina; *Poa pratensis* var. *pratensis*; *Poa pratensis* var. *transnominatum* Bondar ex O.N. Korovina; *Poa subglabriflora* Roshev.; *Poa turfosa* Litv.; *Poa urjanichaica* Roshev.)

Europe. Perennial, naturalized elsewhere in temperate regions, growing in meadows, dry woods, wetlands or non-wetlands, riverbanks, fields, subalpine, along roadsides, chaparral, see *Species Plantarum* 1: 67-68. 1753, *Norges Flora* 1: 130. 1861 and *Repertorium Specierum Novarum Regni Vegetabilis* 11: 25. 1912, *American Midland Naturalist* 4: 222. 1915, *Schedae ad herbarium Florae Rossicae*, a Museo botanico Academiae imperialis scientiarum Petropolitanae editum Sanktpeterburg 1898-1911, *Svensk Fanerogamflora* 91. 1918, *Izv. Bot. Sada Akad. Nauk SSSR* 30: 303, 777-778. 1931 [1932], *Suomen Kasvio* 205. 1933, *Journal of the Washington Academy of Sciences* 28(2): 54, f. 2. 1938, *Annales Botanici Societatis Zoologicae-Botanicae Fennicae “Vanamo”* 28(2): 199. 1954, *Novosti Sist. Vyss. Rast.* 15: 221. 1979.

in English: Kentucky bluegrass, Agassiz Kentucky bluegrass, narrow-leaved Kentucky bluegrass, smooth meadow grass

P. pratensis L. var. ***colpodea*** (Fries) Soreng (*Poa alpigena* f. *vivipara* Roshev.; *Poa alpigena* subsp. *colpodea* (Th. Fr.) Jurtzev & V.V. Petrovsky; *Poa alpigena* subsp. *colpodea* (Th. Fr.) Tzvelev; *Poa alpigena* var. *colpodea* (Th. Fr.) Schol.; *Poa alpigena* var. *vivipara* (Malmgren) Schol.; *Poa colpodea* T. Fries; *Poa flexuosa* var. *vivipara* Malmgren; *Poa pratensis* subsp. *colpodea* (Th. Fr.) Tzvelev; *Poa pratensis* var. *vivipara* (Malmgren) Boivin, nom. illeg., non *Poa pratensis* var. *vivipara* Huds.; *Poa rigens* subsp. *colpodea* (Th. Fr.) D. Löve; *Poa stricta* subsp. *colpodea* Th. Fr.)

Europe. See *Handbok i Skandnaviens Flora* edition 1, 448. 1820, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 19: 253. 1862, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 26: 138.

1869 and *Svensk Fanerogamflora* 91. 1918, *Flora of the U.S.S.R.* 2: 390. 1934, *Skrifter om Svalbard og Nordishavet* 62: 88-89. 1934, *Le Naturaliste Canadien* 94: 527. 1967, *Taxon* 17(1): 89. 1968, *Novosti Sist. Vyss. Rast.* 9: 47. 1972, *Phytologia* 71(5): 403. 1991 [1992].

P. pringlei Scribn. (*Atropis pringlei* (Scribn.) Vasey ex Beal; *Atropis suksdorfii* Beal; *Melica argentea* (Howell) Beal; *Melica nana* Beal; *Poa argentea* Howell; *Poa suksdorfii* (Beal) Vasey ex Piper; *Puccinellia pringlei* (Scribn.) Ponert) (after the American botanist Cyrus Guernsey Pringle, 1838-1911, Quaker, plant collector; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 111. 1965; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 335-336. 1973; Ira L. Wiggins, *Flora of Baja California.* 42. Stanford, California 1980; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* 596. Philadelphia 1964; Gordon Douglas Rowley, *A History of Succulent Plants.* California 1997; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs.* VI. 1983; Helen Burns Davis, *Life and Work of Cyrus Guernsey Pringle.* Burlington, Vt. 1936).

Northern America, U.S., California, Idaho, Montana, Nevada, Oregon, Washington. Rare species, perennial, alpine and subalpine, near glaciers, in wetlands or nonwetlands, occurring in rocky soil under dry conditions, gravelly places, see *Species Plantarum* 1: 66. 1753, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Bulletin of the Torrey Botanical Club* 10(1): 31. 1883, *Bulletin of the Torrey Botanical Club* 15: 11. 1888, *Bulletin of the Torrey Botanical Club* 17: 153. 1890, *Grasses of North America for Farmers and Students* 2: 504, 574, 578. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 53, t. 9. 1898 and *Contributions from the United States National Herbarium* 11: 135. 1906, *University of California Publications in Botany* 9: 104. 1921, *Flora URSS* 2: 470. 1934, *Feddes Repertorium* 84(9-10): 740. 1974, *Syst. Bot.* 16: 516. 1991.

in English: Pringle bluegrass, Pringle's bluegrass

P. pseudamoena Bor (*Poa amoena* Bor, nom. illeg., non *Poa amoena* (J. Presl) Kunth)

India, Uttar Pradesh, Himalaya. Indeterminate species, see *Reliquiae Haenkeanae* 1(4-5): 275. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 342. 1833 and *Kew Bulletin* 1948: 140. 1948, *Kew Bulletin* 1953: 276. 1953, *Bulletin, University Museum, University of Tokyo* 34: 169-249. 1991.

P. pseudoabbreviata Roshev. (*Poa brachyanthera* Hultén; *Poa subabbreviata* Roshev. ex Tolm.)

North America, Alaska. See *Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR* 3: 91. 1922, *Flora of the Aleutian Islands* 86. 1937.

in English: Polar bluegrass

P. pseudobulbosa Bor

Turkey. Rare species, shady places, rocky areas, see *Notes from the Royal Botanic Garden, Edinburgh* 31(3): 395. 1972, *Flora of Turkey and the East Aegean Islands* 9: 470-486. 1985.

P. pseudoschimperiana Chiov.

Ethiopia, Eritrea. Perennial, loosely tufted, slender, erect, basal sheaths fibrous, rounded ligule, leaf blades acute, inflorescence paniculate, panicle branches suberect to more or less spreading, spikelets 3-flowered elliptic-oblong, lower glume narrowly elliptic-oblong acute, upper glume elliptic, lemmas narrowly elliptic-oblong, dry areas, hill-sides, similar to *Poa leptoclada*, see *Annuario del Reale Istituto Botanico di Roma* 8(3): 376. 1908.

P. psilolepis Keng (*Poa psilolepis* Keng ex L. Liou, nom. illeg., non *Poa psilolepis* Keng)

Asia, China. Disturbed sites, gravelly loam, sand dune area, grassy fields, see *Sunyatsenia* 6(1): 56. 1941, *Flora Reipublicae Popularis Sinicae* 9(2): 400-401. 2003.

P. pulviniformis (Veldkamp) Veldkamp (*Poa papuana* subsp. *pulviniformis* Veldkamp)

Papua New Guinea. See *Hooker's Icones Plantarum* 27(1): t. 2607, 1-2. 1899 and *The Alpine Flora of New Guinea* 2: 1150. 1979, *Blumea* 38(2): 446. 1994.

P. pumila Host (*Poa alpina* L. subsp. *parnassica* (Boiss.) K. Richt.; *Poa alpina* var. *parnassica* Boiss.; *Poa alpina* var. *pumila* (Host) Rchb.; *Poa pumila* Phil., nom. illeg., non *Poa pumila* Host; *Poa pumila* var. *flavida* Porc.; *Poa thes-sala* Boiss. & Orph.)

Europe. See *Species Plantarum* 1: 67. 1753, *Flora Austriaca* 1: 146. 1827, *Agrostographia Germanica* 35, pl. 81, f. 1623. 1834, *Diagnoses plantarum orientalium novarum, ser. 2, 4*: 135. 1859 and *Mitteilungen aus dem Botanischen Laboratorium der Technischen Hochschule in Wien* 9: 132. 1910, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Fl. Reipub. Pop. Sinic.* 9(2): 164. 2003.

P. pumilio Hochst.

Ethiopia. Perennial, small, cushion-forming, panicle much branched, glumes broadly obtuse, subacute lemmas smooth glabrous, rocky mountains, see *Flora* 38: 321. 1855 and *Flora of Ethiopia* 7: 22-23. 1995.

P. pungionifolia Speg. (*Poa acutissima* Pilg.)

Argentina. See *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 199. 1902, *Repertorium Specierum Novarum Regni Vegetabilis* 12: 306. 1913.

P. pusilla Berggr. (*Poa anceps* var. *debilis* Kirk ex Buchanan; *Poa anceps* var. *debilis* Buchanan, nom. illeg., non *Poa anceps* var. *debilis* Kirk ex Buchanan; *Poa anceps* var. *gracilis* Cheeseman; *Poa anceps* var. *minima* Buchanan; *Poa pusilla* var. *seticulmis* (Petrie) Cockayne; *Poa seticulmis* Petrie)

New Zealand. Perennial, subalpine, slender to very slender, tufted, open, erect or drooping above, delicate, rhizomatous with slender and long-creeping rhizome, ligule ciliate and truncate, leaf blades persistent and folded or inrolled, narrow and flaccid leaves, panicle branches spreading, glumes subequal, lemma obtuse, palea keels shortly ciliate, on sandy dry areas, damp sand flats, stony places, tussock grassland, sand dunes, see *Florulae Insularum Australium Prodrumus* 8. 1786, *Indigenous Grasses of New Zealand*, t. 46E-F. 1880 and *Transactions and Proceedings of the New Zealand Institute* 34: 391. 1902, *Manual of the New Zealand Flora* 904. 1906, *Dept. Lands Rep. Dune Areas New Zealand* 34. 1911, *New Zealand J. Bot.* 24: 453. 1986.

P. pygmaea Buchanan (*Poa buchananii* Zotov)

New Zealand. Perennial, alpine to subalpine, forming cushions, small, low, dwarf, culms branched to much-branched, prostrate branches rooting, leaf blades persistent, leaf sheath membranous and glabrous, ligule entire, leaves stiff and inrolled, flowering culms filiform, panicle compact, glumes equal, lemma ovate obtuse, palea keels ciliate, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 340. 1833, *Indigenous Grasses of New Zealand*, t. 50A. 1880 and *Transactions and Proceedings of the Royal Society of New Zealand* 73: 236. 1943.

P. queenslandica C.E. Hubb.

New South Wales, Queensland. Perennial, tall, loosely tufted, contracted rootstock, erect or geniculate ascending stems, often branched, vestigial auricles present, ligule truncate and lacerate, flat leaves linear and softly pointed, sheaths striate and glabrous, green to purple panicles loose with spreading branches, spikelets green, subtending foliar structure absent, glumes more or less equal, lemma hairy, web absent, palea 2-keeled with keels wingless, anthers yellow, ovary glabrous, shade species, tussocky grass, mesophytic, growing in temperate rainforests, in rainforest openings, along rainforest tracks and roads, margins of rainforests, in red loam, see *Bulletin of Miscellaneous Information Kew* 1934: 449. 1934.

in English: Queensland poa

P. radula Franchet & Savatier (*Poa ibukiana* Koidz.; *Poa ketoiensis* Tatew. & Ohwi)

Asia, Japan. See *Enumeratio Plantarum in Japonia Sponte Crescentium* ... 2: 174, 602. 1879 and *Botanical Magazine*

37: 53-53. 1923, *Acta Phytotaxonomica et Geobotanica* 4: 61. 1935, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990.

in Japan: ibukisomosomo

P. ragonesei Nicora

Argentina. See *Hickenia* 2(33): 145, f. 2. 1995.

P. ramosissima Hook.f.

New Zealand. Perennial, coastal, soft, much-branched, slender, trailing, prostrate and erect, stoloniferous, leafy, leaf blades persistent, leaf sheath glabrous, ligule lacerate to deeply lacerate, flat leaves scabrid to scabrous, gynomonocious flowers, panicle compact, spikelets scabrid, lower flowers bisexual, upper flowers female, glumes subequal, lemma elliptic, tiny palea, on cliffs and rocks, near the sea, see *Flora Antarctica* 1: 101. 1844 [1845] and *New Zealand Journal of Botany* 24: 425-503. 1986.

P. reflexa Vasey & Scribner (*Poa acuminata* Scribn. ex Beal; *Poa leptocoma* var. *reflexa* (Vasey & Scribn.) M.E. Jones; *Poa leptocoma* var. *reflexa* (Vasey & Scribn. ex Vasey) M.E. Jones; *Poa pudica* Rydb.; *Poa reflexa* Vasey & Scribner ex Vasey; *Poa reflexa* Elliott ex Scribn. & Merr., nom. illeg., non *Poa reflexa* Vasey & Scribn.)

North America, U.S., Colorado. Alpine and subalpine, found in wet meadows, bogs, in shade, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 374. 1830, *A Descriptive Catalogue of the Grasses of the United States* 83. 1885, *Contributions from the United States National Herbarium* 1(8): 276. 1893, *Grasses of North America for Farmers and Students* 2: 538. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 27: 5. 1900, *Bulletin of the Torrey Botanical Club* 32(11): 603-604. 1905, *Contributions to Western Botany* 14: 15. 1912, *Contr. U.S. Natl. Herb.* 48: 507. 2003.

in English: nodding bluegrass

P. rehmannii (Asch. & Graebn.) Woloszczak (*Poa nemoralis* L. subsp. *rehmannii* Asch. & Graebn.) (after the Austrian-Polish plant collector and botanist Dr. Anton(i) Rehmann (Rehman), 1840-1917, geographer, traveler, plant collector in South Africa (1875-1877 and 1879-1880) and Southern Russia (1868), with Eustach Woloszczak (1835-1918). See J.H. Barnhart, *Biographical notes upon botanists*. 3: 139. 1965; Stafleu and Cowan, *Taxonomic literature*. 4: 655-656. 1983; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 176. 1904; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 328. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 230. 1964; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 292-294. 1981)

Romania, Russia, Eurasia. Rare species, see *Synopsis der mitteleuropäischen Flora* 2: 412. 1900, *Flora Polonica Exs.* 10-11: no. 1020. 1904.

Local name: firuta

P. reitzii Swallen

Brazil. See *Sellowia* 7: 9-10. 1956.

P. remota Forselles (*Glyceria remota* (Forselles) Fr.; *Hydro-poa remota* (Fr.) Dumort.; *Panicularia remota* (Forselles) Kuntze; *Poa chaixii* var. *remota* (Forselles) K. Richt.; *Poa quadripedalis* Ehrh. ex Koeler; *Poa remota* Kunth, nom. illeg., non *Poa remota* Forselles; *Poa sudetica* var. *remota* (Forselles) Fr.)

Asia, Russia, Europe. Tufted, ligule entire, soft leaf blade persistent, filiform panicle branches paired and drooping, glumes unequal, lemma obtuse, palea keels ciliate, see *Flora Delphinalis* 7. 1785 [1786], *Beobachtungen auf Reisen nach dem Riesengebirge* 120. 1791, *Descriptio Graminum in Gallia et Germania* 160. 1802, *Linneska Inst. Skrift.* 1: 6, t. 1. 1807, *Prodromus Florae Novae Hollandiae* 179. 1810, *Nova Genera et Species Plantarum* 1: 163. 1815 [1816], Elias Magnus Fries, *Novitiarum florum suecicarum mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845, *Bulletin de la Société Botanique de Belgique* 7: 67. 1868, *Revisio Generum Plantarum* 1: 782. 1891, *Bulletin de l'Herbier Boissier* 7(9): 712. 1899 and *Novosti Sist. Vyss. Rast.* 8: 25, 48. 1971, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 33: 63-67. 1986, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987.

P. resinulosa Nees ex Steud. (*Koeleria rigidula* Steud.; *Poa decolorata* Pilg.; *Trisetum rigidulum* (Steud.) Domin)

South America, Argentina. See *Syn. Pl.* 1: 97. 1805, *Synopsis Plantarum Glumacearum* 1: 259, 293. 1854 and *Bibliotheca Botanica* 65: 296. 1907, *Repertorium Specierum Novarum Regni Vegetabilis* 12: 307. 1913.

P. rhadina Bor (*Poa setulosa* Bor)

India, Uttar Pradesh. Endangered species, see *Kew Bulletin* 1948: 138, 142. 1948.

P. rhizomata A.S. Hitchc. (*Poa piperi* Hitchc.)

North America, California. Perennial, rhizomatous, in damp areas, shade, damp shady woods, in serpentine substrates, see *A Flora of California* 1: 155. 1912, *Illustrated Flora of the Pacific States* 1: 201, f. 461. 1923.

in English: timber bluegrass, rhizome bluegrass

P. riphaea (Asch. & Graebn.) Fritsch (*Poa laxa* Haenke; *Poa laxa* var. *riphaea* Asch. & Graebn.)

Slovakia, Czech Republic. Indeterminate species, see Johannes Scheuchzer, *Agrostographia sive graminum, jun-corum, cyperorum, cyperoidum, iisque affinium historia...* 1719, *Beobachtungen auf Reisen nach dem Riesengebirge*

118. 1791 and *Synopsis der mitteleuropäischen Flora* 2: 402. 1900, *Excursionsflora für Österreich* 2: 65. 1909, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 32: 59-65. 1985, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987.

P. robusta Steud. (*Festuca arenaria* Lam., nom. illeg., non *Festuca arenaria* Osbeck; *Poa acutissima* Pilg.; *Poa arenaria* Lam.; *Poa arenicola* St-Yves; *Poa pungionifolia* Speg.; *Poa robusta* Phil., nom. illeg., non *Poa robusta* Steud.)

South America, Argentina, Chile. Swamps, sandy areas, coastal, see *Species Plantarum* 1: 73. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 183. 1771, Pehr Osbeck (1723-1805), *Utkast till Flora Hallandica* 8. 1788, *Encyclopédie Méthodique, Botanique* 1: 191. 1791, *Synopsis Plantarum Glumacearum* 1: 426. 1854, *Anales de la Universidad de Chile* 43: 574. 1873 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 199. 1902, *Repertorium Specierum Novarum Regni Vegetabilis* 12: 306. 1913, *Candollea* 3: 282. 1927.

P. rodwayi Vickery (*Poa australis* var. *capillifolia* Hook.f.; *Poa caespitosa* var. *capillifolia* Hook.f.) (after the British (b. Devon) botanist Leonard Rodway, 1853-1936 (d. Tasmania), dental surgeon, 1880 to Tasmania, 1896-1932 Honorary Government Botanist, 1928-1932 Director of the Herbarium and Botanic Garden, Hobart, his writings include *The Tasmanian Flora*. Tasmania, Hobart 1903 and *Some Wild Flowers of Tasmania*. Hobart 1910; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 168. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 335. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 351. 1973; Stafleu and Cowan, *Taxonomic literature*. 4: 834-836. 1983)

South Australia, Victoria, Tasmania. Perennial, tufted, smooth, slender, grayish white, rarely rhizomatous, leaves mostly basal, auricles absent, upper sheaths green and hairy, stiff leaves convolute and scabrous, green or purplish panicles open and pyramidal, chasmogamous spikelets, subtending foliar structure absent, glumes short, lemmas hairy on the keel and lateral and marginal nerves, web obsolete, palea bidentate, anthers yellow or purple, ovary glabrous, fruit compressed and furrowed, rarely cultivated, common in open habitats, open woodland of eucalyptus, grassland and woodland, acidic soils, confused with *Poa morrisii* Vick., allied to *Poa mollis* Vickery, see *Flora Tasmaniae* 2: 124. 1858 and *Contributions from the New South Wales National Herbarium* 4: 235. 1970.

P. rupicola Nash (*Poa glauca* subsp. *rupicola* (Nash) W.A. Weber; *Poa glauca* var. *rupicola* (Nash) B. Boivin; *Poa rupestris* Vasey, nom. illeg., non *Poa rupestris* With.)

North America. Perennial, see *Flora Danica* 6(17): 3, t. 964. 1790, *Bulletin of the Torrey Botanical Club* 14: 94. 1887 and *Memoirs of the New York Botanical Garden* 1: 49. 1900, *Le Naturaliste Canadien* 94(4): 527. 1967, *Phytologia* 51(6): 375. 1982, *Taxon* 35: 195. 1986, *Contr. U.S. Natl. Herb.* 48: 563. 2003.

P. ruprechtii Peyr. (for F.A. Ruprecht, botanical collector in Mexico, see Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 476, 581, 657. Philadelphia 1964; Martin Martens (1797-1863) and Henri Guillaume Galeotti (1814-1858), *Enumeratio synoptica plantarum phanerogamicarum* ab Henrico Galeotti in regionibus mexicanis collectarum [Bruxelles 1842-1845]; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 59. Plainfield, N.J. 1983; Rogers McVaugh, b. 1909, "Galeotti's Botanical Work in Mexico: The Numbering of his Collections and a Brief Itinerary." *Contr. Univ. Mich. Herb.* 11(5): 291-297. 1972; Michael Joseph Scheidweiler (1799-1861), "Descriptio diagnostica nonnullarum Cactearum quae a domino Galeotti in provinciis Potosi et Guanaxato regni Mexicani inveniuntur. Genus *Ariocarpus*." in *Bull. Acad. Sci. Brux.* 5: 491-492. 1838)

Mexico. Erect, forage, disturbed areas, along roadsides, see *Linnaea* 30(1): 5-8. 1859.

in Mexico: pasto azul velludo

P. ruwenzoriensis Robyns & Tournay (*Poa glacialis* Stapf, nom. illeg., non *Poa glacialis* Pall. ex Colla)

East Africa. Broad leaf blades, papery basal leaf sheaths, lemmas woolly-hairy on the keel, closely related to *Poa hedbergii*, see *Herbarium Pedemontanum* 6: 58. 1836 and *Journal of the Linnean Society, Botany* 37: 532. 1906, *Flore des Spermatophytes du Parc National Albert* 3: 186. 1955.

P. sachalinensis (Koidz.) Honda (*Poa finitima* T. Koyama; *Poa macrocalyx* var. *sachalinensis* Koidz.; *Poa sachalinensis* var. *yezoensis* Ohwi; *Poa sugawarana* Koidz. ex Sugaw.; *Poa trivialiformis* Kom.; *Poa yatsugatakensis* Honda; *Poa yezoensis* Ohwi)

Japan. See *Reise in den Äussersten Norden und Osten Sibiriens* 1(Theil 2, Lieferung 3): 103. 1856 [also *Florula Ochotensis Phaenogama* 1(2): 103. 1856] and *Botanical Magazine* 31: 255. 1917, *Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR* 5: 150. 1924, *Botanical Magazine* (Tokyo) 41: 641. 1927, *Botanical Magazine* 43: 540. 1929, Shigezo Sugawara, *Illustrated Flora of Saghalien*. Tokyo 1937, *Acta Phytotaxonomica et Geobotanica* 10(2): 123. 1941, *Botanical Magazine* 69: 213. 1956, *Vasc. Pl. Russ. Far East* 1: 273, 275. 1985.

P. sachalinensis (Koidz.) Honda var. ***yatsugatakensis*** (Honda) Ohwi (*Poa shinanoana* var. *yatsugatakensis* (Honda) T. Shimizu; *Poa yatsugatakensis* Honda)

Japan, Yatsugatake, Shinano. Rare grass, see *Botanical Magazine* 43: 540. 1929, *Acta Phytotaxonomica et Geobotanica* 2: 31. 1933, *Flora of Japan* 120. 1953, *New Alpine Flora of Japan* 2: 358. 1983.

P. sallacustris N.G. Walsh

Australia, Victoria. Perennial, erect or ascending, rhizomatous, auricles absent, leaf sheaths keeled and compressed, ligule hairy, leaves folded, a green panicle open and erect, chasmogamous spikelets, web present, lodicules elliptic, anthers yellow, ovary glabrous, fruit compressed, vulnerable species, halophytic, on the margins of salt lakes, in open habitats, closely related to *Poa fordeana* F. Muell., see *Muelleria* 7(3): 379. 1991.

P. saltuensis Fernald & Wiegand (*Poa debilis* Thuill.; *Poa debilis* Torr., nom. illeg., non *Poa debilis* Thuill.; *Poa debilis* var. *acutiflora* Vasey ex Macoun; *Poa languida* A.S. Hitchc.; *Poa saltuensis* var. *microlepis* Fern. & Wieg.; *Poa saltuensis* var. *saltuensis*)

North America, Canada. Perennial, herbaceous, growing in dry woods, thickets, rocky riverbanks, woods, wooded and alluvial banks, along riverbanks, wet clearings, see *Flore des Environs de Paris* éd. 2 43. 1799, *Fl. New York* 2: 459. 1843, *Catalogue of Canadian Plants* 2(4): 225. 1888 and *Rhodora* 20(235): 122-126. 1918, *Proceedings of the Biological Society of Washington* 41: 158-159. 1928, *Le Naturaliste Canadien* 94(4): 527. 1967.

in English: old-pasture bluegrass, oldpasture bluegrass

P. sandvicensis (Reichardt) A.S. Hitchc. (*Festuca sandvicensis* Reichardt; *Poa longeradiata* Hillebr.)

U.S., Hawaii. Perennial, endangered species, see *Species Plantarum* 1: 73. 1753, *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe*. 76(1): 726. 1878, *Flora of the Hawaiian Islands* 526. 1888 and *Memoirs of the Bernice Pauahi Bishop Museum*... 8(3): 121. 1922, *Bishop Mus. Occas. Pap.* 60: 56. 1999.

in English: Hawaiian bluegrass, Hawaiian blue grass, Hawaii bluegrass

P. saxicola R. Br. (*Poa saxicola* var. *saxicola*)

Victoria, Tasmania, New South Wales, Mt. Kosciuszko region. Perennial, green, glabrous, stiffly erect, culms compressed, densely caespitose, rarely with rhizomatous roots, internodes compressed, leaves mostly basal, auricles absent, upper sheaths green and striate, ligule membranous to papery and truncate, leaves slightly rough and blunt-tipped, green and purple panicles arching and few-branched, vestigial foliar structure subtending the inflorescence present or absent, glumes more or less equal, lemma acute or obtuse, web absent, anthers yellow or purple, ovary

glabrous, fruit compressed and grooved, rarely cultivated, growing in rocky grassland and shrubland, eucalypt woodlands, in subalpine meadows, acidic and moist soils, herb fields, see *Prodromus Florae Novae Hollandiae* 1: 180. 1810, *London Journal of Botany* 2: 418. 1843.

in English: rock poa

P. scaberula Hook.f (*Dasypoa tenuis* Pilg.; *Poa anfamensis* Negritto & Anton; *Poa conglomerata* Rupr. ex Peyr.; *Poa conglomerata* Rupr.; *Poa dactyliformis* Steud.; *Poa maullinica* Phil.; *Poa micranthera* Hack.) (Chile, Maullin)

Argentina, Ecuador, Chile, Peru, Mexico. Annual or perennial, erect, tufted, lax leaf blades scabrous arching subacute, inflorescence erect, oblong panicle dense and interrupted, spikelets ovate 3- to 5-flowered, green and purplish florets, glumes unequal lanceolate scabrous 1- to 3-nerved acute, lower lemma lanceolate 5-nerved coriaceous, moist places, shade, riverbanks, flats, along streams, see *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 235. 1842, *Flora Antarctica* 2: 378. 1846, *Synopsis Plantarum Glumacearum* 1: 426. 1854, *Linnaea* 30(1): 8. 1859, *Anales de la Universidad de Chile* 94: 164. 1896, *Revista de la facultad de Agronomía; Universidad Nacional de La Plata* 3: 628. 1897, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 716-717. 1898 and *Anales del Museo Nacional de Buenos Aires* 21: 154. 1911, *Contr. U.S. Natl. Herb.* 17(3): 374. 1913, *Anales de Sociedad Científica Argentina* 86: 238. 1918, *Darwiniana* 35(1-4): 159-161, f. 1. 1998.

P. scaberula Hook.f var. ***gracillima*** Speg.

Argentina. See *Revista de la facultad de agronomia; universidad nacional de La Plata* 3: 628. 1897.

P. scabrivaginata Tovar

Peru. See *Memorias del Museo de Historia Natural "Javier Prado"* 15: 48, t.11A. 1965.

P. schimperiana Hochst. ex A. Rich. (also ***schimperana***) (*Poa oligantha* Hochst.; *Poa viridiflora* Hochst.)

Yemen, Ethiopia. Perennial, weakly ascending, loosely tufted, slender, erect, straggling, shortly rhizomatous, leaf blades linear, open panicle very lax with lower branches deflexed, spikelets 2- to 4-flowered with the florets loosely imbricate, glumes lanceolate acute, acuminate lemmas, common in damp places, shaded cliffs, rocky areas, mountains, rocky streamsides, along the banks of streams, very similar in habit to *Poa leptoclada* Hochst. ex A. Rich., see *Tentamen Florae Abyssinicae ...* 2: 423. 1850, *Flora* 38: 322-323. 1855 and *Opera Botanica* 121: 159-172. 1993.

P. schistacea Edgar & Connor

New Zealand. Perennial, dioecious, rhizomatous, pubescent leaf blades persistent, leaf sheath keeled membranous and glabrous, ligule entire, leaves erect or curved to involute or inrolled, panicle branches ascending, glumes subequal, on

rocky places, mountains, see *New Zealand Journal of Botany* 37: 63-65, f. 1. 1999.

P. schizantha Parodi

Argentina. Rare species, sandy dunes, coastal, see *Notas del Museo de la Plata, Botánica* 5: 325, f. 1-2. 1940.

P. secunda J. Presl (*Atropis scabrella* Thurb.; *Festuca patagonica* Phil.; *Festuca spaniantha* Phil.; *Glyceria canbyi* Scribner; *Paneion sandbergii* (Vasey) Lunell; *Poa ampla* Merr.; *Poa brachyglossa* Piper; *Poa buckleyana* Nash; *Poa buckleyana* Nash var. *sandbergii* (Vasey) M.E. Jones; *Poa canbyi* (Scribner) T.J. Howell; *Poa confusa* Rydb.; *Poa englishii* St. John & Hardin; *Poa fallens* Pilg.; *Poa fulvescens* Trin.; *Poa gracillima* Vasey; *Poa gracillima* Vasey var. *multnomae* (Piper) C.L. Hitchc., after Multnomah Falls, Oregon; *Poa incurva* Scribn. & T.A. Williams; *Poa juncifolia* Scribn.; *Poa juncifolia* subsp. *porteri* Keck; *Poa juncifolia* var. *ampla* (Merr.) Dorn; *Poa laevigata* Scribn.; *Poa nevadensis* Vasey ex Scribn.; *Poa nevadensis* var. *juncifolia* (Scribn.) Beetle; *Poa orcuttiana* Vasey; *Poa sandbergii* Vasey; *Poa scabrella* (Thurb.) Benth. ex Vasey; *Poa secunda* subsp. *juncifolia* (Scribner) Soreng; *Poa secunda* subsp. *secunda*; *Poa secunda* J. Presl var. *elongata* (Vasey) Dorn; *Poa secunda* var. *incurva* (Scribn. & Williams) Beetle; *Poa secunda* var. *stenophylla* (Vasey) Beetle; *Poa stenantha* var. *sandbergii* (Vasey) Boivin; *Poa tenuifolia* Nutt. ex S. Watson, nom. illeg., non *Poa tenuifolia* A. Rich.; *Poa tenuifolia* var. *scabra* Vasey)

Northern America, U.S. Perennial bunchgrass, alpine and subalpine, erect, bluish purplish to glaucous, mildly rhizomatous, shallow-rooted, strongly tufted or tussocky, auricles absent, flat ligules, mass of basal leaves, narrow heads on mostly leafless stems, purplish spikelets, unflattened spikelets, slightly unequal glumes, no cobwebby hairs at the base of the lemmas, hay and forage, highly drought-resistant, relatively coarse and palatable, relatively short-lived, useful for erosion control and revegetation, reclamation, stabilization, occurs in slope habitats, on flats and ridgetops, on well-drained soil, in open sun to partial shade, on periodically flooded stream banks, chaparral, in saline and alkaline meadows, in alkaline soil under dry and moist conditions, in rich clay loam soils, ridges, in rocky or sandy soils, meadows and dry meadows, foothill woodland, sagebrush scrub, open timberline, grasslands, see *Systema Vegetabilium* 2: 697. 1817, *Reliquiae Haenkeanae* 1(4-5): 271. 1830, *Linnaea* 10(3): 306. 1836, *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas adjectis nonnullis Grahamianis enumerat novasque describit). 342. London 1839-1857, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 96. 1862, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 387. 1871, *Geological Survey of California, Botany* 2: 310-311. 1880, *The Grasses of the United States* 42. 1883, *Bulletin of the Torrey Botanical Club* 10: 66, 77, f. 1-4. 1883, *West American Scientist* 3: 165. 1887, *Revisio*

Generum Plantarum 2: 783. 1891, *Contributions from the United States National Herbarium* 1(8): 272, 276. 1893, *Bulletin of the Torrey Botanical Club* 22(11): 465. 1895, *Anales de la Universidad de Chile* 94: 174. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 51-52, f. 11. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 1, 4-6. 1899 and *Rhodora* 4(43): 145. 1902, *A Flora of Northwest America* 7: 764. 1903, *Contributions to Western Botany* 14: 14. 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 12: 306. 1913, *American Midland Naturalist* 4: 223. 1915, *Amer. Midl. Naturalist* 47: 241. 1952, *Feddes Repertorium* 84(9-10): 740. 1974, *Journal of the Arnold Arboretum* 66: 201-242. 1985, *Phytologia* 71(5): 401-402. 1991, *Systematic Botany* 16(3): 507-528. 1991.

in English: Sandberg bluegrass, Nevada bluegrass, Sierra bluegrass, 1-sided bluegrass, alkali bluegrass, big bluegrass, curly bluegrass, rush bluegrass, wild bluegrass, Western bluegrass

P. secunda J. Presl subsp. ***juncifolia*** (Scribn.) Sorong (*Atropis nevadensis* (Vasey ex Scribn.) Beal; *Atropis pauciflora* Thurb.; *Panicularia thurberiana* Kuntze; *Poa ampla* Merr.; *Poa brachyglossa* Piper; *Poa confusa* Rydb.; *Poa fendleriana* var. *juncifolia* (Scribn.) M.E. Jones; *Poa juncifolia* Scribn.; *Poa juncifolia* subsp. *juncifolia*; *Poa juncifolia* subsp. *porteri* D.D. Keck; *Poa juncifolia* var. *ampla* (Merr.) Dorn; *Poa laeviculmis* T.A. Williams; *Poa nevadensis* Vasey ex Scribn.; *Poa nevadensis* var. *juncifolia* (Scribn.) Beetle; *Poa pauciflora* Roem. & Schult.; *Poa pauciflora* (Thurb.) Benth. ex Vasey, nom. illeg., non *Poa pauciflora* Roem. & Schult.; *Poa tenuifolia* var. *scabra* Vasey ex Scribn.; *Poa thurberiana* (Kuntze) Vasey; *Poa truncata* Rydb.; *Puccinellia nevadensis* (Vasey ex Scribn.) Ponert) (C.L. Porter)

North America, U.S. Bunchgrass, wet meadows, grassy plain, dry gravelly soils, see *Systema Vegetabilium* 2: 549. 1817, *Herbarium Pedemontanum* 6: 235. 1836, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Tentamen Florae Abyssinicae ...* 2: 425. 1850, *Geological Survey of California, Botany* 2: 310. 1880, *Bulletin of the Torrey Botanical Club* 10: 66. 1883, *The Grasses of the United States* 42. 1883, *Revisio Generum Plantarum* 2: 783. 1891, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 74, 84. 1893, *Grasses of North America for Farmers and Students* 2: 577. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 52, t. 8. 1898 and *Rhodora* 4(43): 145. 1902, *Botanical Gazette* 36: 55. 1903, *Proceedings of the Biological Society of Washington* 18: 145. 1905, *Bulletin of the Torrey Botanical Club* 32(11): 607. 1905, *Contributions to Western Botany* 14: 14. 1912, *Flora URSS* 2: 470. 1934, *Manual Grass. U.S.* f. 262. 1935, *Wyoming Agric. Exp. Stat. Bull.* 418: 24. 1964, *Feddes Repertorium* 84(9-10): 740. 1974, *University of Wyoming Agriculture Experiment Station* 39R [2nd edn]: 69. 1977, *American Journal of Botany* 74: 1431-1437. 1987,

Vascular Plants of Wyoming 298. 1988, *Phytologia* 71(5): 401-402. 1991.

P. secunda J. Presl subsp. ***secunda*** (*Aira brevifolia* Pursh; *Aira missurica* Spreng. ex B.D. Jacks.; *Airopsis brevifolia* (Pursh) Roem. & Schult.; *Atropis californica* Munro ex A. Gray; *Atropis californica* Munro ex Thurb.; *Atropis canbyi* (Scribn.) Beal; *Atropis laevis* Beal; *Atropis laevis* var. *rigida* Beal; *Atropis scabrella* Thurb.; *Atropis tenuifolia* Thurb.; *Atropis tenuifolia* var. *stenophylla* Vasey ex Beal; *Festuca oregona* Vasey; *Festuca patagonica* Phil.; *Festuca spaniantha* Phil.; *Glyceria canbyi* Scribn.; *Panicum sandbergii* (Vasey) Lunell; *Panicularia nuttalliana* Kuntze; *Panicularia scabrella* (Thurb.) Kuntze; *Poa acutiglumis* Scribn.; *Poa andina* Nutt. ex S. Watson, nom. illeg., non *Poa andina* Trin.; *Poa buckleyana* Nash; *Poa buckleyana* var. *buckleyana*; *Poa buckleyana* var. *elongata* (Vasey) M.E. Jones; *Poa buckleyana* var. *sandbergii* (Vasey) M.E. Jones; *Poa buckleyana* var. *stenophylla* (Vasey ex Beal) Jones; *Poa californica* (Munro ex Thurb.) Scribn., nom. illeg., non *Poa californica* Steud.; *Poa californica* Munro ex Coult., nom. illeg., non *Poa californica* Steud.; *Poa canbyi* (Scribn.) Howell; *Poa canbyi* (Scribn.) Piper, nom. illeg., non *Poa canbyi* (Scribn.) Howell; *Poa capillaris* L.; *Poa capillaris* Scribn., nom. illeg., non *Poa capillaris* L.; *Poa fallens* Pilg.; *Poa gracillima* Vasey; *Poa gracillima* var. *gracillima*; *Poa gracillima* var. *saxatilis* (Scribn. & T.A. Williams) Hack.; *Poa helleri* Rydb.; *Poa incurva* Scribn. & T.A. Williams; *Poa invaginata* Scribn. & T.A. Williams; *Poa laevigata* Scribn.; *Poa laevis* Vasey, nom. illeg., non *Poa laevis* R. Br.; *Poa laevis* R. Br.; *Poa leckenbyi* Scribn.; *Poa lucida* Vasey; *Poa nevadensis* Vasey ex Scribn.; *Poa nevadensis* var. *laevigata* (Scribn.) M.E. Jones; *Poa nevadensis* var. *leckenbyi* (Scribn.) M.E. Jones; *Poa nudata* Scribn.; *Poa orcuttiana* Vasey; *Poa patagonica* Phil.; *Poa sandbergii* Vasey; *Poa saxatilis* Scribn. & T.A. Williams; *Poa scabrella* (Thurb.) Benth. ex Vasey; *Poa secunda* var. *elongata* (Vasey) Dorn; *Poa secunda* var. *incurva* (Scribn. & T.A. Williams) Beetle; *Poa secunda* var. *stenophylla* (Vasey ex Beal) Beetle; *Poa stenantha* var. *sandbergii* (Vasey) B. Boivin; *Poa tenuifolia* Buckley, nom. illeg., non *Poa tenuifolia* A. Rich.; *Poa tenuifolia* A. Rich.; *Poa tenuifolia* var. *elongata* Vasey; *Poa tenuifolia* var. *oregona* (Vasey) Vasey; *Poa wyomingensis* Scribn.; *Puccinellia canbyi* (Scribn.) Ponert; *Puccinellia laevis* (Beal) Ponert; *Puccinellia scabrella* (Thurb.) Ponert; *Sclerochloa californica* Munro)

North America, U.S. Dry rocky places, clay soils, see *Species Plantarum* 1: 63, 67-68, 73. 1753, *Journal de Botanique*, redigé par une société de botanistes. (N.A. Desvaux, 1784-1856) 1: 200. 1808-1809, *Prodromus Florae Novae Hollandiae* 179. 1810, *Essai d'une Nouvelle Agrostographie* 97, 177. 1812, *Flora Americae Septentrionalis; or, ...* 1: 76. 1814, *Systema Vegetabilium* 2: 578. 1817, *Reliquiae Haenkeanae* 1(4-5): 271. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg*,

Sixième Série. Sciences Mathématiques, Physiques et Naturelles 1(4): 376. 1830, *Herbarium Pedemontanum* 6: 235. 1836, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Tentamen Florae Abyssinicae ...* 2: 425. 1850, *Plantas Hartwegianas imprimis Mexicanas* 342. 1857, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 96, 336. 1862, *United States Geological Exploration [sic] of the Fortieth Parallel. Botany* 388. 1871, *Botanical Gazette* 2(10): 126-127. 1877, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 290. 1878 [1879], *Geological Survey of California, Botany* 2: 309-311. 1880, *Bulletin of the Torrey Botanical Club* 10: 31, 66, 77, f. 1-4. 1883, *The Grasses of the United States* 42. 1883, *A Descriptive Catalogue of the Grasses of the United States* 85. 1885, *Manual of the Botany ... of the Rocky Mountain Region . .* 420. 1885, *West American Scientist* 3: 165. 1887, *Revisio Generum Plantarum* 2: 783. 1891, *Index Kewensis* 1: 68. 1893, *Contributions from the United States National Herbarium* 1(8): 272, 274, 276. 1893, *Bulletin of the Torrey Botanical Club* 22(11): 465. 1895, *Grasses of North America for Farmers and Students* 2: 577, 578, 580. 1896, *Anales de la Universidad de Chile* 94: 168, 174. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 31. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 51-52, f. 11. 1898, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 1-2, 4, 6. 1899, *Proceedings of the Davenport Academy of Natural Sciences* 7: 242. 1899 and *A Flora of Northwest America* 7: 764. 1903, *Contributions from the United States National Herbarium* 11: 132. 1906, *Bulletin of the Torrey Botanical Club* 36: 534. 1909, *Contributions to Western Botany* 14: 14. 1912, *Repertorium Specierum Novarum Regni Vegetabilis* 12: 306. 1913, *American Midland Naturalist* 4: 223. 1915, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 21: 79. 1915, *Flora URSS* 2: 470. 1934, *Feddes Repertorium* 84(9-10): 739-740. 1974, *University of Wyoming Agriculture Experiment Station* 39R [2nd edition]: 73-74. 1977, *Phytologia* 43(1): 106. 1979, *American Journal of Botany* 74: 1431-1437. 1987, *Vascular Plants of Wyoming* 298. 1988, *Contr. U.S. Natl. Herb.* 48: 510. 2003.

P. seleri Pilg. (*Poa guatemalensis* Hitchc.)

Guatemala. See *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 51: 195. 1909, *Proceedings of the Biological Society of Washington* 40: 81. 1927.

P. sellowii Nees (*Poa umbrosa* Trin.)

Souther Brazil. Perennial, rhizomatous, dioecious, shade, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 491. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 386. 1830.

P. senex Edgar

New Zealand, South Island. Perennial, rare, alpine, small, very slender, low, stoloniferous, glabrous, tufted, erect or geniculate, leaf blades smooth and persistent, leaf sheath membranous ribbed and keeled, ligule entire, leaves flat or folded, panicle open or compact, spikelets ovate to oblong, glumes unequal to subequal, lemma obtuse and glabrous with hairy nerves, palea keels scabrid, in damp areas, mountains, near streams or water courses, see *New Zealand Journal of Botany* 24(3): 477-479, f. 11. 1986.

P. serpentum Nees (*Poa caespitosa* var. *serpentum* (Nees) Benth.; *Poa maxwellii* Benth.) (for the English-born Australian George Maxwell, 1804-1880, established in Albany 1846, accompanied James Drummond to the Stirling Range, Western Australia 1846-1847, later he collected for Mueller. See Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 478. London 1994; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. London 1904; Dennis John Carr and S.G.M. Carr, eds., *People and Plants in Australia*. London 1981)

Australia. See *Florulae Insularum Australium Prodrum* 89. 1786, *Commentationes Societatis Regiae Scientiarum Göttingensis* 9: 22. 1787, *Encyclopédie Méthodique, Botanique* 5: 73. 1804, *Mantissa Prima Florae Halensis* 33. 1807, *Plantae Preissianae* 2: 105-106. 1846, *Flora Australiensis: A Description ...* 7: 652-653. 1878, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 91. 1896.

P. sharpii Swallen (for Aaron John [Jack] Sharp, 1904-1997, botanical collector in U.S., Mexico, Guatemala and Philippines, author of "Notes on the flora of Mexico: world distribution of the woody dicotyledonous families and the origin of the modern vegetation." *J. Ecol.* 41: 374-380. 1953. See *Rhodora* 66: 402. 1964; Isao Yoshimura, "Some lichens from the Southern Appalachians and Mexico." *Bryologist* 71: 108-113. 1968; Zennoske Iwatsuki, "The Bryogeographical relationships between eastern Asia and North America: 1-2." *J. Hattori Bot. Lab.* no. 30-31, 1967-1968; *Rhodora* 78: 696. 1976; *The Moss Flora of Mexico* / edited by Aaron J. Sharp, Howard Crum & Patricia M. Eckel. *Memoirs of the New York Botanical Garden* v. 69. New York: New York Botanical Garden 1994; *Bryol. Res.* 7(12): 374. 2001)

Mexico. Shade, see *Contributions from the United States National Herbarium* 29(9): 400. 1950.

P. shinanoana Ohwi (*Poa komarovii* var. *shinanoana* (Ohwi) Ohwi; *Poa malacantha* subsp. *shinanoana* (Ohwi) T. Koyama; *Poa malacantha* var. *shinanoana* (Ohwi) Ohwi; *Poa yatsugataensis* var. *shinanoana* (Ohwi) T. Shimizu)

Japan. Alpine, see *Botaniceskie Materialy Gerbarija Glavnogo Botaniceskogo Sasa RSFSR* 5: 149. 1924,

Izvestija Glavnogo Botan. Sada SSSR 26(3): 286. 1927, *Botanical Magazine* 43: 540. 1929, *Acta Phytotaxonomica et Geobotanica* 2: 31. 1933, *Acta Phytotaxonomica et Geobotanica* 10: 123. 1941, *Bulletin of the National Science Museum* 26: 2. 1949, *Flora of Japan* (edition 2) 1439. 1965, Masao Kitagawa, *Neo-Lineamenta Florae Manshuricae*, or: Enumeration of the spontaneous vascular plants hitherto known from Manchuria (North Eastern China) together with their synonyms and distribution. [Flora et Vegetatio Mundi: vol. 004] Lubrecht & Cramer, Limited 1978, *New Alpine Flora of Japan* 2: 358. 1983, *Journal of Japanese Botany* 59(2): 41. 1984, *Grasses of Japan and its Neighboring Regions* 524. 1987.

P. sibirica Roshev. (*Poa sibirica* Holmb.; *Poa trivialis* var. *altaica* Griseb.)

Russia, Mongolia. Low-spreading, found on mountain light brown soil, see *Flora Rossica* 4(13): 380. 1852 and *Izv. Imp. Saint Peterburgsk. Bot. Sada* 12: 121. 1912, *Flora URSS* 2: 380. 1934, *Novosti Sist. Vyss. Rast.* 9: 50. 1972, *Zlaki SSSR* 462. 1976.

P. sibirica Roshev. subsp. *insignis* (M.A. Litv. ex Roshev.) Olon. (*Poa insignis* M.A. Litv. ex Roshev.; *Poa sibirica* subsp. *uralensis* Tzvelev)

Russia. See *Flora URSS* 2: 384, 753. 1934, *Novosti Sist. Vyss. Rast.* 9: 50. 1972, *Turczaninowia* 1(4): 13. 1998.

P. sieberiana Spreng. (*Poa australis* R. Br.; *Poa australis* var. *sieberiana* (Spreng.) Hook.f.; *Poa caespitosa* var. *australis* Benth.; *Poa implexa* Trin.) (the specific name after the Bohemian naturalist Franz Wilhelm Sieber, 1789-1844, traveler, botanist, plant collector in South Africa, Mauritius and Australia, in 1823 in New South Wales, author of *Herbarium florum aegyptiacae*, sive collectio stirpium rariorum Aegypti indigenorum. Vindobonae [Wien] 1820 and *Reise nach der Insel Kreta*. Leipzig und Sorau 1823; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 275. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; D.J. Carr and S.G.M. Carr, eds., *People and Plants in Australia*. 1981; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 257. Palermo 1988; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981; Joseph Vallot, "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 191-192. Paris 1882; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 74. 1971; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 244. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980)

Australia, Victoria, Tasmania, New South Wales, Queensland. Perennial, stiff, mainly erect, tufted, green to grayish

green, small, wiry, dead dry leaves at the base, leaf blades persistent, ligule truncate ciliate, sheaths coriaceous, leaves rough and curled to inrolled, inflorescence compact to lax, panicles pyramidal with spreading branches, spikelets green or purplish, glumes more or less equal to unequal, lemma pubescent, palea keels ciliate, extremely variable species, freely to moderately well-drained soils, grassland, rocky slopes, margin of swamps, lowland to montane, see *Systema Vegetabilium, editio decima sexta* 4; *Curae Posteriores* 35. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 388. 1830, *Flora Tasmaniae* 2: 125. 1858, *Flora Australiensis: A Description ...* 7: 653. 1878 and *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970, *New Zealand Journal of Botany* 24: 425-503. 1986.

in English: tussock grass, snow grass, rough poa tussock

P. sieberiana Spreng. var. *cyanophylla* Vickery

New South Wales. Perennial, ascending, stoloniferous or caespitose, dense tussock, shortly stoloniferous root system, leaves mostly basal, auricles absent, leaf sheaths keeled, fine and filiform to very narrow bluish leaves, green and purple panicle erect and open, chasmogamous spikelets, lemma membranous, web absent, anthers yellow or purple, ovary glabrous, fruit compressed and grooved, attractive grass, cultivated, eucalypt woodland, alpine grasslands, dry slopes, sclerophyll forest, see *Contributions from the New South Wales National Herbarium* 4: 227. 1970.

P. sieberiana Spreng. var. *hirtella* Vickery (*Poa crassicaudex* Vickery)

New South Wales. Perennial, caespitose, weak, shortly rhizomatous, internodes slightly swollen or not swollen, leaves mostly basal, auricles absent, leaf sheaths compressed, ligule truncate, hairy and narrow leaves, chasmogamous spikelets, green and purple panicle erect and open, web present, anthers yellow, ovary glabrous, fruit compressed, in open habitats, in moist situations, mesophytic, close to *Poa crassicaudex* Vickery, see *Contributions from the New South Wales National Herbarium* 4: 228. 1970.

P. sieberiana Spreng. var. *sieberiana*

Tasmania, New South Wales, Victoria, Queensland. Perennial, densely caespitose, forming small tussocks, basal culm internodes not swollen, leaves mostly basal and green, auricles absent, leaf sheaths compressed and keeled, ligule truncate, erect panicle green and purple, anther yellow or purple, ovary glabrous, margin of swamps, woodland, granite.

in English: fine-leafed tussock grass, snow grass

P. sierrae J.T. Howell

North America, California. Perennial, vulnerable species, in shady places, along roadsides and trails, see *Wasmann Journal of Biology* 37(1-2): 18-19. San Francisco 1979 [1980].

in English: Sierran bluegrass

P. simensis Hochst. ex A. Rich. (*Poa psilophylla* Hochst.)

Yemen, Ethiopia. Perennial, slender, densely tufted, wiry, basal leaf sheaths fibrous when old, long ligule, flexuous leaf blades narrowly linear to filiform, open panicle flexuous with loosely ascending branches, spikelets ovate 3-flowered, florets loosely imbricate, glumes acute to acuminate, pubescent lemmas membranous sharply acute, forest shade, upland forest, montane grassland, very similar to *Poa pratensis* L., see *Tentamen Florae Abyssinicae* ... 2: 422. 1850 and *Flora* 38: 322. 1955.

P. sinaica Steud. (*Poa bulbosa* L.; *Poa bulbosa* subsp. *sinaica* (Steud.) Tzvelev; *Poa reuteriana* Boiss. & Buhse) (after the Swiss botanist George François Reuter, 1805-1872, botanical collector; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 147. 1965)

Asia, Iran, Israel, Turkey, Syria. Useful for erosion control, along roadsides, road embankments, see *Fl. Cyprus* 2: 1742, *Species Plantarum* 1: 67, 70. 1753, *Descriptio Graminum in Gallia et Germania* 189. 1802, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 103. 1809, *Icones florae germanicae et helveticae* 11: 34. 1834, *Synopsis Plantarum Glumacearum* 1: 256. 1854, *Mémoires de la Société Impériale des Naturalistes de Moscou* 12: 227. 1860, *Enumeratio Plantarum Transsilvaniae* 773. 1866, *Bulletin de la Société Botanique de France* 21: 17. 1874, *Compendio della Flora Italiana* 785. 1884, *The Flora of British India* 7: 338. 1896 and *Mémoires de l'Institut Égyptien* 4: 310. 1901, *American Midland Naturalist* 4: 222. 1915, *Bulletin of Miscellaneous Information Kew* 7(1940): 283. 1940, *Journal of the Bombay Natural History Society* 51(1): 53-103. 1952, *Publications from the Cairo University Herbarium* 5: 51. 1972 [1974], *Novosti Sist. Vyss. Rast.* 10: 95. 1973, *Zlaci SSSR* 451. 1976, R.D. Meikle, *Flora of Cyprus*. Kew: Bentham Moxon Trust, Royal Botanic Gardens 1977-1985, *Botanika Chronika* 3(1-2): 20. Patras 1983, *Great Basin Naturalist* 45: 395-422. 1985, *Flora of Turkey and the East Aegean Islands* 9: 470-486. 1985, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 1001: 1-130. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *CIS Chromosome Information Service* 47: 20-22. 1989, *Bulletin, University Museum, University of Tokyo* 34: 169-249. 1991, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Vascular Plants of British Columbia* 129-138. 1994, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Flora Mediterranea* 5: 331-334, 340-345. 1995, *Bothalia* 27: 75-82. 1997, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 255. 2000.

P. siphonoglossa Hack.

U.S., Hawaii. Perennial, endangered species, see *Repertorium Specierum Novarum Regni Vegetabilis* 11: 24. 1912,

Mem. Bernice Bish. Mus. 8: 119. 1922, *Bishop Mus. Occas. Pap.* 60: 56. 1999.

in English: island bluegrass, Kauai bluegrass

P. spania Edgar & Molloy

New Zealand. Perennial, short-lived, small, tufted, slender to very slender, leaf blades persistent, ligule lacerate and ciliate, leaf sheath membranous and ribbed, wiry folded inrolled leaves, glumes subequal, silky hairy lemmas, palea keels hairy, in grassland, see *New Zealand Journal of Botany* 37: 43. 1999.

P. speluncarum Edmondson

Turkey. Rare species, see *Flora of Turkey and the East Aegean Islands* 9: 623. 473. 1985.

P. spiciformis (Steud.) Hauman & Parodi (*Aira spiciformis* Steud.; *Koeleria sterilis* Steud.; *Poa poecila* Phil.; *Poa rigidifolia* Steud.; *Poa spiciformis* D.F. Cui, nom. illeg., non *Poa spiciformis* (Steud.) Hauman & Parodi)

Argentina, Chile. See *Syn. Pl.* 1: 97. 1805, *Synopsis Plantarum Glumacearum* 1: 260, 293, 424. 1854, *Anales de la Universidad de Chile* 43(46): 573. 1872 [1873] and *Bib. Bot.* 65: 241. pl. 16. f. 4, 5, 6. 1907, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 344. 1929, *Fl. Xinjiangensis* 6: 691. 1996 [Xin Jiang Zhi Wu Zhi Bian Ji We Yuan Hui = *Flora Xinjiangensis*: tomus 6 / Commissione Redactorum Florae Xinjiangensis / Redactore: Cui Nai Ran. *Flora Xinjiangensis* Tomus 6: Angiospermae, Monocotyledoneae. Xinjiang: Xin Jiang Ke Ji Wei Sheng Chu Ban She = Xinjiang Science & Technology & Hygiene Publishing House, 1996], *Revista Chilena de Historia Natural* 70: 421-434. 1997.

P. spiciformis (Steud.) Hauman & Parodi var. ***ibarii*** (Phil.) Giussani (*Poa dusenii* Hack.; *Poa ibarii* Phil.)

Chile, Patagonia, Argentina. See *Synopsis Plantarum Glumacearum* 1: 260. 1854, *Anales de la Universidad de Chile* 94: 170. 1896 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 7(2): 8, t. 3, f. 1. 1908, *Annals of the Missouri Botanical Garden* 87: 221. 2000, *Contributions from the United States National Herbarium* 48: 567. 2003.

P. spiciformis (Steud.) Hauman & Parodi var. ***spiciformis***
Argentina. See *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 344. 1929.

P. spicigera Tovar (*Poa staffordiae* Tovar) (named for Dora B. Stafford, 1930-1939 botanical collector in Peru, in 1937 in San Antonio de Esquilache, near Puno)

Peru, Bolivia. Perennial, tufted, glaucous, erect, acute and apiculate leaf blades flat or folded, oblong panicle exerted, spikelets elliptic 2-flowered glabrous, glumes unequal ovate acute, lower glume 1-nerved, upper glume 3-nerved, lower lemma 5-nerved acute, moist places, bogs, wet puna, see *Memorias del Museo de Historia Natural "Javier Prado"*

15: 20, t. 4A. 1965, *Revista de Ciencias (San Marcos)* 73(1): 105. 1981.

P. stebbinsi Soreng

North America, California. Perennial, alpine and subalpine, in rocky soils under dry conditions, usually in nonwetlands, sometimes found on wetlands, related species *Poa hansenii* Scribn., see *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 53, t. 9. 1898 and *Systematic Botany* 16(3): 513. 1991.

in English: Stebbin's bluegrass

P. stenantha Trin. (*Poa chorizantha* E. Desv.; *Poa englishii* H. St. John & Hardin; *Poa flavicans* Griseb.; *Poa macroclada* Rydb.; *Poa trivialis* L.) (for Carl Schurz English)

North America, Alaska. Perennial, tufted, smooth sheaths, ligules sharply pointed and with rough hairs, auricles absent, basal leaves, open flower head spreading or drooping, three-nerved glumes unequal in length, strongly keeled lemmas with long hairs at the base, cobwebby callus below the base of the lemma absent, grows in wet meadows and forest openings in the montane to subalpine zones, see *Species Plantarum* 1: 67. 1753, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 374, 376. 1830, *Flora Rossica* 4(13): 373. 1852, *Flora Chilena* 6: 407. 1854, *Contributions from the United States National Herbarium* 1(8): 276. 1893, *Bulletin de l'Herbier Boissier* 7(9): 708. 1899 and *Bulletin of the Torrey Botanical Club* 32(11): 604. 1905, *Mazama* 11: 64. 1929, *Acta Universitatis Lundensis* n. ser. 38: 220. 1942, *Le Naturaliste Canadien* 94: 636. 1967, *Brittonia* 23(3): 293-324. 1971, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Phytologia* 43(1): 106. 1979, *Flora of Turkey and the East Aegean Islands* 9: 470-486. 1985, *New Zealand Journal of Botany* 24: 425-503. 1986, *Bot. Zhurn.* 71: 1426-1427. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *CIS Chromosome Information Service* 48: 7-8. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Cytologia* 56: 131-133, 437-452. 1991, *International Organization of Plant Biosystematists Newsletter* 24: 15-19. 1995, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 256. 2000.

in English: narrow-flower bluegrass, narrow-flowered bluegrass

P. stenantha Trin. var. *stenantha*

North America, Alaska. Perennial, tufted.

P. stenantha Trin. var. *vivipara* Trin. (*Poa stenantha* f. *vivipara* (Trin.) B. Boivin; *Poa stenantha* var. *vivipara* Hultén, nom. illeg., non *Poa stenantha* var. *vivipara* Trin.; *Poa stenantha* var. *vivipara* Trautv., nom. illeg., non *Poa stenantha* var. *vivipara* Trin.)

Eurasia, Russia, Northern America. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg.*

Sixième Série. Sciences Mathématiques, Physiques et Naturelles 1(4): 376. 1830 and *Acta Universitatis Lundensis* n. ser. 38: 220. 1942, *Le Naturaliste Canadien* 94: 636. 1967, *Contr. U.S. Natl. Herb.* 48: 568. 2003.

P. stepparia Nicora

Argentina. See *Hickenia* 1(18): 101. 1977.

P. sterilis M. Bieb. (*Festuca asperrima* Link; *Poa biebersteinii* H.N. Pojark.; *Poa biebersteinii* (Asch. & Graebn.) H.N. Pojark.; *Poa erythropoda* Klokov; *Poa nemoralis* var. *sterilis* (M. Bieb.) R.E. Regel; *Poa sterilis* subsp. *biebersteinii* (H.N. Pojark.) Tzvelev; *Poa sterilis* subsp. *biebersteinii* (Asch. & Graebn.) Tzvelev; *Poa sterilis* var. *biebersteinii* Asch. & Graebn.)

Asia, Turkey, Iran, Europe. Perennial, fine leaves, panicle open, useful for erosion control, common on mountain foothills, rocky soil, see *Flora Taurico-Caucasica* 1: 62. 1808, *Enumeratio Plantarum* 41. 1822, *Hortus Regius Botanicus Berolinensis* 2: 270. 1833, *Flora Rossica* 4(13): 375. 1852, *Österreichische Botanische Zeitschrift* 14: 84. 1864, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 17: 568. 1867, *Trudy Imp. Saint Pétersbourg. Bot. Sada* 7: 614. 1881, *Österreichische Botanische Zeitschrift* 37: 156. 1887 and *Synopsis der mitteleuropäischen Flora* 2: 414-416. 1900, *Trudy Nauchno-Issl. Inst. Biol.* 37: 14. 1963, *Novosti Sist. Vyss. Rast.* 9: 51. 1972.

P. stiriaca Fritsch & Hayek (*Poa capillifolia* (Kalchbr. ex Neilr.) Degen ex Domin; *Poa capillifolia* auct., non Kalchbr.; *Poa capillifolia* (Kalchbr. ex Neilr.) Mecn., nom. illeg., non *Poa capillifolia* (Kalchbr. ex Neilr.) Degen ex Domin; *Poa pratensis* L. subsp. *pratensis* var. *stiriaca* (Dörf.) Suess.; *Poa pratensis* var. *stiriaca* (Fritsch & Hayek) Suess.)

Europe, Poland, Austria. Useful for erosion control, see *Jahreskat. Wiener Bot. Tauschvereins* 1904: 226. 1904, *Acta Botanica Bohemica* 11: 34. 1936, *Österreichische Botanische Zeitschrift* 88: 91. 1939, *Acta Facultatis Rerum Naturalium Universitatis Comenianae, Botanica* 34: 3-20. 1987.

P. strictiramea A.S. Hitchc. (*Poa coahuilensis* Beetle; *Poa filiculmis* Swallen, nom. illeg., non *Poa filiculmis* Roshev.; *Poa involuta* A.S. Hitchc.)

North America, Texas, Mexico. Rare species, leaf blade flat or folded, leaf sheath persisting, ligule apex truncate to acute, open panicle with branches spreading, 2-5 florets, first glume 1- to 3-nerved, lemma keeled, slopes, see *Contributions from the United States National Herbarium* 17(3): 375. 1913, *Proceedings of the Biological Society of Washington* 41: 159. 1928, *Contributions from the United States National Herbarium* 29(9): 400. 1950, *Phytologia* 52(1): 17. 1982, *Systematic Botany* 16(3): 507-528. 1991, *Madroño* 48(2): 123-127. 2001 [2002].

in English: big bend bluegrass, Chisos bluegrass

P. stuckertii (Hack.) Parodi (*Poa lanigera* var. *stuckertii* Hack.; *Poa stuckertii* var. *stuckertii*)

Uruguay. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 491. 1829 and *Anales del Museo Nacional de Buenos Aires* 21: 152. 1911, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 11: 137. 1932, *Revista Argentina de Agronomía* 3: 150, t. 6. 1936, *Revista Sudamericana de Botánica* 9(3): 64. 1952.

P. subcaerulea Sm. (*Poa arthroostacha* Oett.; *Poa athroostachya* Oett.; *Poa czernjajevii* Prok.; *Poa humilis* Ehrh. ex Hoffm.; *Poa irrigata* Lindm.; *Poa irrigata* f. *rigens* (Hartm.) Lindm.; *Poa pratensis* subsp. *irrigata* (Lindm.) Lindb.f.; *Poa pratensis* subsp. *irrigata* (Lindm.) Tzvelev; *Poa pratensis* subsp. *rigens* (Hartman) Tzvelev; *Poa pratensis* subsp. *subcaerulea* (Sm.) Hiitonen; *Poa pratensis* subsp. *subcaerulea* (Sm.) Tutin, nom. illeg., non *Poa pratensis* subsp. *subcaerulea* (Sm.) Hiitonen; *Poa pratensis* var. *rigens* (Hartman) Wahlenb.; *Poa pratensis* var. *rigens* (Hartm.) Laest.; *Poa pratensis* var. *subcaerulea* (Sm.) Sm.; *Poa pratensis* var. *subcaerulea* (Sm.) Asch. & Graebn., nom. illeg., non *Poa pratensis* var. *subcaerulea* (Sm.) Sm.; *Poa rigens* Hartm.)

North America, Europe. See *Species Plantarum* 1: 67-68. 1753, *Deutschland Flora* 3: 45. 1800, *English Botany* 14: t. 1004. 1802, *Agrostologia Helvetica, definitionem ...* 1: 215. 1811, *Handbok i Skandinavien Flora* edition 1, 448. 1820, *Kongl. Vetenskaps Academiens Handlingar* 1822: 328. 1822, *English Flora* 1: 126. 1824 and *Synopsis der mitteleuropäischen Flora* 2: 433. 1900, *Botaniska Notiser* 1905: 88, 90, f. 1. 1905, *Repertorium Specierum Novarum Regni Vegetabilis* 21: 310. 1925, Ilmari Hiitonen, *Suomen kasvio*. Helsinki: Kustannusosakeyhtio Otava 1933, *Flora of the British Isles* 1441. 1952, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 118. 1971[1972], *Novosti Sist. Vyss. Rast.* 9: 47. 1972, *Vascular Plants of British Columbia* 129-138. 1994, *Opera Botanica* 137: 1-42. 1999.

P. subnervis Hack.

Argentina, Patagonia. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 7(2): 7, t. 3, f. 1. 1908.

P. subnervis Hack. var. *spgazziniana* Nicora (*Poa spegazziniana* Parodi)

Argentina. See *Dansk Botanisk Arkiv* 22(1): 67. 1963, *Hickenia* (18): 103. 1977.

P. subnervis Hack. var. *subnervis*

Argentina.

P. subfastigiata Trin. (*Arctopoa subfastigiata* (Trin.) Prob.; *Glyceria subfastigiata* (Trin.) Griseb.)

Asia, Mongolia. Alpine, along rivers and stream banks, brown fine sandy soils, marshy grounds, marshes, see *Prodromus Florae Novae Hollandiae* 179. 1810, *Flora Altaica* 1: 96-97. 1829, C.F. von Ledebour (1785-1851), *Flora Rossica sive enumeratio plantarum in totius imperii Rossici*

provinciis Europaeis, Asiaticis et Americanis hucusque observatarum. 4(13): 392. Stuttgartiae, E. Schweizerbart, 1842-1853 and *Novosti Sist. Vyss. Rast.* 11: 49, 52. 1974, *Bot. Zhurn. SSSR* 69(12): 1699-1700. 1984.

P. sublanata Reverd.

Russia. See *Arkticheskaia Flora SSSR* 1: 135. 1964, *Zlakii SSSR* 458. 1976, *Turczaninowia* 1(4): 11. 1998.

P. sublimis Edgar

New Zealand. Perennial, subalpine to alpine, low, dwarf, small, smooth, tufted, forming small cushions, leaf blades persistent, leaf sheath glabrous, ligule entire, stiff leaves folded, inflorescence paniculate with slender spreading branches, glumes subequal, lemma ovate obtuse, tiny anthers, found along streams, mountains, rocky places and among rocks, riverbanks, see *New Zealand Journal of Botany* 24(3): 465, f. 6. 1986.

P. subspicata (J. Presl) Kunth (*Brizopyrum subspicatum* J. Presl; *Poa jelskii* Hack.; *Poa pubiflora* Benth.) (for Constantin von Jelski, zoologist, 1860-1879 botanical collector in French Guiana, Guyana and Peru, see Ignaz (Ignacy) von Szyszylowicz (1857-1910), "Diagnoses plantarum novarum a cl. d. Cl. Jelski in Peruvia lectarum. Pars Ima." *Diss. Acad. Crac.* xxix, Cracoviæ 1894)

South America. See *Reliquiae Haenkeanae* 1(4-5): 281. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 326. 1833, *Plantas Hartwegianas imprimis Mexicanas* 261. 1846 and *Österreichische Botanische Zeitschrift* 52(11): 454. 1902.

P. subvestita (Hack.) Edgar (*Poa novae-zelandiae* var. *subvestita* Hack.)

New Zealand. Perennial, dioecious, stout, robust, tufted, smooth, montane to alpine, leaf blades persistent, leaf sheath membranous and ribbed, ligule entire and pointed, stiff and erect flat leaves, loose and drooping inflorescence with short branches, glumes subequal, lemma usually obtuse, palea keels ciliate, in rocky places, cliffs, near the sea, on limestone, see *Transactions and Proceedings of the New Zealand Institute* 35: 381-382. 1903, *New Zealand Journal of Botany* 24(3): 435-436. 1986.

P. sudicola Edgar

New Zealand. Perennial, rare, subalpine, dioecious, slender, tufted, very long rhizomatous, leaf blade inrolled and persistent, leaf sheath keeled smooth and membranous, ligule entire, narrow leaves, panicle branches slender, glumes subequal and glabrous, lemma acute and glabrous, palea keels ciliate, slopes, see *New Zealand Journal of Botany* 24(3): 437-439, f. 1. 1986.

P. suksdorfii (Beal) Vasey ex Piper (*Atropis suksdorfii* Beal; *Poa pringlei* Scribn.; *Poa suksdorfii* Vasey ex Beal) (after the American (b. Holstein, Germany) botanist Wilhelm Nikolaus Suksdorf, 1850-1932; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 346. Boston 1965)

North America. Mountain, gravelly areas, see *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Bulletin of the Torrey Botanical Club* 10(1): 31. 1883, *Grasses of North America for Farmers and Students* 2: 574, 578. 1896 and *Contributions from the United States National Herbarium* 11: 135. 1906, *Flora URSS* 2: 470. 1934, *Feddes Repertorium* 84(9-10): 740. 1974, *Syst. Bot.* 16: 516. 1991.

in English: Western bluegrass

P. superata Hack.

Argentina. Rhizomatous, along roadsides, see *Anales del Museo Nacional de Buenos Aires* 21: 159. 1911.

P. supina Schrad. (*Poa annua* L. prol. *supina* (Schrad.) Asch. & Graebn.; *Poa annua* subsp. *supina* (Schrad.) Link; *Poa annua* subsp. *supina* (Schrad.) Husn.; *Poa annua* subsp. *varia* (Gaudin) Gaudin; *Poa annua* var. *supina* (Gaudin) Spenn.; *Poa annua* var. *supina* (Schrad.) Link, nom. illeg., non *Poa annua* var. *supina* (Gaudin) Spenn.; *Poa bifida* Fröhner; *Poa exigua* Foucaud & E. Mandon ex Husn., nom. illeg., non *Poa exigua* Dumort.; *Poa foucaudii* Hack.; *Poa supina* f. *exigua* Gamisans; *Poa supina* subsp. *foucaudii* (Hack.) Pignatti; *Poa supina* subsp. *ustulata* (S.E. Fröhner) Á. Löve & D. Löve; *Poa ustulata* S.E. Fröhner; *Poa variegata* Haller f., nom. illeg., non *Poa variegata* Lam.)

Asia, China, Mongolia, Siberia, Russia, Europe. Perennial, alpine, creeping, stout, somewhat caespitose, low-growing, weed, aggressive, ornamental, useful for erosion control, found in pastures and damp places, meadows, slopes, alpine swales, see *Species Plantarum* 1: 68. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1(1): 182. 1791, *Catalogus Plantarum in Helvetia* 38. 1800, *Flora Germanica* 1: 289. 1806, *Agrostologia Helvetica, definitionem ...* 2: 189. 1811, *Observations sur les Graminées de la Flore Belgique* 113. 1824, *Flora Friburgensis* 1: 127. 1825, *Hortus Regius Botanicus Berolinensis* 181. 1827, *Flora Helvetica* 1: 243. 1828, *Enumeratio Plantarum Transsilvaniae* 778. 1866, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 51. 1898 and *Synopsis der mitteleuropäischen Flora* 2: 389. 1900, *Annuaire du Conservatoire et Jardin Botaniques de Genève* 9: 112. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 88: 436-437. 1968, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 118. 1971[1972], *Candollea* 29(1): 48. 1974, *Botaniska Notiser* 128(4): 498. 1975[1976], *Denkschriften der Schweizerischen* 100: 1-130. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Opera Botanica* 137: 1-42. 1999.

in English: supina bluegrass

P. sylvestris Gray (*Poa macroclada* Rydb.; *Poa paludigena* Fernald & Wiegand; *Poa sylvestris* var. *palustris* Dudley)

North America. Perennial, herbaceous, caespitose, slightly reddish, found in rich woods, bogs, forest, open oak woods, mowed areas, open disturbed soils, meadows, alluvial gravel, marshes, moist slopes, sandy alluvium, alluvial

woods along streams, see *A Manual of the Botany of the Northern United States* 596. 1848, *Cornell University Science Bulletin* 2: 128. 1886 and *Rhodora* 20(235): 126-127. 1918, *Manual of the Grasses of the United States (edition 2, revised by A. Chase)* 1951.

in English: woodland bluegrass, sylvan spear grass

P. tacanae Swallen

Guatemala, Volcan Tacaná. Woods, slopes, see *Contributions from the United States National Herbarium* 29(9): 399. 1950.

P. talamancae Pohl

Costa Rica. Rare species, alpine, páramos, open areas, see *Fieldiana, Botany* 38(2): 8, f. 3. 1976.

P. tatarica Fischer ex Griseb. (*Eragrostis collina* Trin.; *Eragrostis tatarica* (Fischer ex Griseb.) Henrard, nom. illeg., non *Eragrostis tatarica* (Fischer ex Griseb.) Nevski; *Eragrostis tatarica* (Fischer ex Griseb.) Nevski; *Poa collina* (Trin.) K. Koch, nom. illeg., non *Poa collina* Host; *Poa tatarica* Fischer)

Europe. See *Genera Plantarum* 23. 1776, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg, Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 413. 1830, *Linnaea* 21(4): 405. 1848 and *Blumea* 3(3): 425. 1940.

P. tenera F. Muell. ex Hook.f. (*Poa caespitosa* var. *tenera* (F. Muell. ex Hook.f.) Benth.; *Poa effusa* (Nees) Steud., nom. illeg. non Kit.; *Poa humifusa* J.M. Black; *Poa saxicola* var. *effusa* Nees)

South Australia, Victoria, Tasmania, New South Wales. Perennial, branched above, delicate, flaccid and soft, bright green and rarely purplish, weak and slender, climbing habit, aerial or trailing stolons, sometimes forming tussocks, internodes compressed, auricles absent, compressed sheaths pale green to red to purplish, ligule glabrous, soft leaves flat and linear, green panicles with filiform branches, spikelets compressed and delicate, lemmas minutely pubescent, glumes more or less equal, web obsolete, anthers yellow, ovary glabrous, shade species, moist shaded soils, moisture-retentive acidic soils, shady and moist areas well drained, see *Florulae Insularum Australium Prodrumus* 89. 1786, *Encyclopédie Méthodique, Botanique* 5: 73. 1804, *Mantissa Prima Florae Halensis* 33. 1807, *Prodrumus Florae Novae Hollandiae* 1: 180. 1810, Josef August Schultes (1773-1831), *Österreichs Flora*, edition 2. 1: 227. Wien 1814, *London Journal of Botany* 2: 418. 1843, *Synopsis Plantarum Glumacearum* 1: 262. 1854, *Flora Tasmaniae* 2: 124, t. 164. 1858, *Flora Australiensis: A Description ...* 7: 653. 1878, *Anales Museo Nacional de Historia Natural de Buenos Aires* 5: 91. 1896 and *Flora South Australia (edition 2)* 123. 1943.

in English: slender tussock grass, soft tussock grass

P. tenerrima Scribner (*Poa gracillima* Vasey)

California. Perennial, foothill woodland, damp soil, see *Contributions from the United States National Herbarium* 1(8): 272. 1893, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 4-5. 1899 and *American Journal of Botany* 74: 1431-1437. 1987.

in English: delicate bluegrass

P. tennantiana Petrie (*Poa foliosa* var. *tennantiana* (Petrie) Cheeseman)

New Zealand. Perennial, rare, robust, coastal, stout, tufted, strongly rhizomatous, old leaf sheaths fibrous, leaf blades persistent, pubescent leaf sheath membranous and striate, ligule entire and pointed, stiff leaves flat, much-branched inflorescence, glumes subequal acute, lemma pubescent, palea keels scabrid, open forest, forest margins, clearings, see *Handbook of the New Zealand Flora* 338. 1864, *The Subantarctic Islands of New Zealand* 2: 476. 1909, *Man. N.Z. Fl.* 188. 1925, *New Zealand J. Bot.* 24: 188, 434. 1986, *New Zealand J. Bot.* 27: 531-563. 1989.

P. tibetica Munro ex Stapf (*Arctopoa tibetica* (Munro ex Stapf) Probst.; *Poa ciliatiflora* Roshev.; *Poa fedtschenkoi* Roshev.; *Poa pricei* N.D. Simpson, sometimes *pricei*; *Poa pseudotibetica* Noltie; *Poa tianschanica* (Regel) Hack. ex O. Fedtsch.; *Poa tibetica* Munro; *Poa tibetica* var. *aristulata* Stapf)

Asia, China, Tibet. Wet meadows, plains, mountains, swamps, see J.F. Duthie (1845-1922), *List of North-West Indian Plants* 1885, *The Flora of British India* 7: 339. 1896 and *Fl. Pamir* p. 209. 1903, *Trudy Imp. Saint Pétersbourg. Bot. Sada* 21: 441. 1903, *Journal of the Linnean Society, Botany* 41: 452, pl. 23, f. 4-12. 1913, *Izv. Bot. Sada Akad. Nauk SSSR* 30: 297. 1931, *Flora URSS* 2: 414, 755. 1934, *Journal of the Bombay Natural History Society* 51(1): 51-103. 1952, *Novosti Sist. Vyss. Rast.* 11: 49, 52. 1974, *Bulletin, University Museum, University of Tokyo* 34: 169-249. 1991, *Edinburgh Journal of Botany* 57(2): 279-281, f. 1A-D. 2000.

P. timoleontis Heldr. ex Boiss. (*Poa bulbosa* L. subsp. *timoleontis* (Heldr. ex Boiss.) Hayek; *Poa dshilgensis* Roshev.; *Poa macroglossa* Hack. ex Post)

Europe, Greece. See *Species Plantarum* 1: 70. 1753, *Flora Orientalis* 5: 607. 1884, *Flora of Syria, Palestine, and Sinai* 885. 1896 and *Novosti Sist. Vyss. Rast.* 10: 94. 1973, *Flora Europaea* 5: 159-1167. 1980, *Flora of Turkey and the East Aegean Islands* 9: 470-486. 1985, *Willdenowia* 15: 393-400. 1986.

P. tolmatchewii Roshev. (*Poa arctica* R. Br. x *Poa glauca* Vahl; *Poa arctica* subsp. *caespitans* Simmons ex Nannf.; *Poa arctica* var. *caespitans* (Simmons ex Nannf.) B. Boivin, nom. illeg., non *Poa arctica* var. *caespitans* (Simmons ex Nannf.) Nannf.; *Poa arctica* var. *caespitans* (Simmons ex Nannf.) Nannf.; *Poa filipes* Lange; *Poa tolmatchewii* Roshev.)

Europe. Shortly stoloniferous, see *Chloris Melvilliana* 30. 1823, *Conspectus Florae Groenlandicae* 1: 175. 1880 and *Izv. Bot. Sada Akad. Nauk SSSR* 30: 229. 1931, *Symbolae Botanicae Upsaliensis* 4: 71. 1 f.; t. 13-14, 15a. 1940, *Uppsala Universitets Årsskrift* 7: 78. 1945, *Arkticheskaia Flora SSSR* 2: 1-274. 1964, *Le Naturaliste Canadien* 94(4): 526. 1967, *Flora Europaea* 5: 159-1167. 1980.

P. tonsa Edgar

New Zealand. Perennial, compact, subalpine to alpine, tufted, small, slender, low, leaf blades persistent and flat, leaf sheath ribbed and membranous, ligule erose, leaves coriaceous, open inflorescence paniculate with filiform branches, glumes subequal, lemma ovate and shortly hairy, palea keels scabrid, on rocky places, river flats and banks, snow tussock grassland, see *New Zealand Journal of Botany* 24(3): 477, f. 10. 1986.

P. tovarii Soreng (*Poa geniculata* Tovar, nom. illeg., non *Poa geniculata* Durieu)

South America, Peru. Roadsides, see *Exploration Scientifique de l'Algérie* 2: t. 40, f. 4. 1849 and *Publicaciones del Museo de Historia Natural "Javier Prado". Serie B. Botánica* 32: 8, f. 6-8. 1984, *Novon* 8(2): 200. 1998.

P. trachyphylla Pilg. (*Poa trachyphylla* Hack. ex Sodiro; *Poa trachyphylla* Hack., nom. illeg., non *Poa trachyphylla* Pilg.)

Colombia. See *Anales de la Universidad Central del Ecuador* 3(25): 482. 1889, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 715. 1898 and *Österreichische Botanische Zeitschrift* 52(10): 379. 1902.

P. tracyi Vasey (*Poa autumnalis* var. *robusta* (Vasey) Beal; *Poa flexuosa* var. *occidentalis* Vasey; *Poa flexuosa* var. *robusta* Vasey; *Poa lacustris* A. Heller; *Poa nervosa* var. *tracyi* (Vasey) Beal; *Poa occidentalis* (Vasey) Rydb., nom. illeg., non *Poa occidentalis* Vasey) (named for the American botanist Samuel Mills Tracy, 1847-1920, plant collector, see Joseph Ewan, *Rocky Mountain Naturalists*. 200, 323-324. The University of Denver Press 1950)

North America, U.S., New Mexico. See *Flora Britannica* 1: 101. 1800, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 159. 1816, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 290. 1878, *Bulletin of the Torrey Botanical Club* 15(2): 49. 1888, *Contributions from the United States National Herbarium* 1(8): 271, 276. 1893, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 81. 1893, *Grasses of North America for Farmers and Students* 2: 534, 538. 1896 and *Memoirs of the New York Botanical Garden* 1: 50. 1900, *Catalogue of North American Plants North of Mexico (edition 3)* 45. 1909, *Muhlenbergia; A Journal of Botany* 6: 12. Los Gatos, California 1910, *Sida* 10: 138. 1983, *Great Basin Naturalist* 45: 395-422. 1985.

in English: Tracy's bluegrass

P. trichophylla Boiss. (*Poa trichophylla* Heldr. & Sartori ex Boiss.; *Poa trichopoda* Heldr. & Sart.; *Poa trichopoda* Heldr. & Sartori ex Boiss.)

Greece. Rare species, see *Diagnoses plantarum orientalium novarum*, ser. 2, 3(4): 136. 1859, *Flora Orientalis* 5: 604. 1884 and *Flora Europaea* 5: 159-1167. 1980, *Willdenowia* 15: 393-400. 1986.

P. trivialiformis Kom. (*Poa macrocalyx* var. *sachalinensis* Koidz.; *Poa sachalinensis* (Koidz.) Honda)

Asia, Japan, Russia. See *Reise in den Äussersten Norden und Osten Sibiriens* 1(Theil 2, Lieferung 3): 103. 1856 and *Botanical Magazine* (Tokyo) 31: 255. 1917, *Bot. Mag.* (Tokyo) 41: 641. 1927, *Vasc. Pl. Russ. Far East* 1: 275. 1985.

P. trivialis L. (*Aira semineutra* Waldst.; *Poa ariguensis* Steud.; *Poa attica* Boiss. & Heldr.; *Poa breviculmis* Pilg.; *Poa callida* Rydb.; *Poa chrysantha* Lindm.; *Poa limicola* Pilg.; *Poa maullinica* Phil.; *Poa modesta* Phil., nom. illeg., non *Poa modesta* Tuck.; *Poa peronini* Boiss.; *Poa pichinchensis* Hack.; *Poa pratensis* L.; *Poa semineutra* (Waldst.) Trin.; *Poa stenantha* auct.; *Poa stolonifera* Hall. ex Muhlenb.; *Poa sylvicola* Guss.; *Poa trachyphylla* Hack. ex Sodiro; *Poa trachyphylla* Hack., nom. illeg., non *Poa trachyphylla* Pilg.; *Poa trivialis* f. *palescens* Stebler & Volkart; *Poa trivialis* subsp. *sylvicola* (Guss.) H. Lindb.; *Poa trivialis* var. *filiculmis* Scribn.; *Poa trivialis* var. *filiculmis* Scribn. ex Beal; *Poa trivialis* var. *seminutra* (Waldst.) K. Richt.; *Poa trivialis* var. *sylvicola* (Guss.) Hack.; *Poa trivialis* var. *umbrosa* Balansa; *Poa trivialis* var. *woronowii* (Roshev.) Grossh.; *Poa woronowii* Roshev.) (Chile, Arigue)

Eurasia. Perennial with a short lifetime, herbaceous, open, fine-stemmed, robust to weak, dark green, purple-topped, loosely tufted, sod-forming, erect or geniculate, prostrate growth habit, decumbent at the base and rooting at the lower nodes, stoloniferous with creeping slender and leafy stolons, culm nodes constricted, auricles vestigial or absent, reddish sheath compressed and keeled, prominent pointed ligule thinly to firmly membranous, drooping flat leaf blades persistent, leaves pale green to yellowish green with 2 visible veins on each side of the central nerve, open and very lax pyramid-shaped flower head, green to purple panicle erect or nodding, glumes unequal acute to acuminate, lemmas glabrous, web often copious, palea acute with scabrid keels, anthers yellow or purplish, ovary glabrous, fruit compressed and keeled, very variable species naturalized elsewhere in temperate regions, rare in South Africa, fodder, forage, pasture grass, ornamental and cultivated, lawns and playing fields, golf courses, putting greens and fairways, drought-sensitive, turf grass on wet soils, not adapted on dry sites, noxious weed of lawns and pastures, limited use in lawn mixtures for shady areas, common in sandy meadows, along roadsides, in cool and moist environment, moist

disturbed woods, grassland, wet meadows, boggy soil, wet sites, damp shaded areas, wasteland, shallow water around springs or along spring-fed streams, springheads, in waterlogged lawn, glades, brook sides, swamps and alluvial woods, lowland to montane, see *Species Plantarum* 1: 67. 1753, *Descriptio uberior Graminum* 1: 139. 1817, *Fundamenta Agrostographiae* 139. 1820, *Synopsis Plantarum Glumacearum* 1: 259. 1854, *Diagnoses plantarum orientalium novarum*, ser. 2, (fasc. 13): 57. 1853 [1854?], *Linnaea* 30(2): 205. 1859, *Bulletin de la Société Botanique de France* 21: 16. 1874, *Flora Orientalis* 5: 604. 1884, *Anales de la Universidad Central del Ecuador* 3(25): 482. 1889, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 1890: 127. 1890, *Anales de la Universidad de Chile* 94: 164. 1896, *Grasses of North America for Farmers and Students* 2: 532. 1896 and *Synopsis der mitteleuropäischen Flora* 2(1): 426. 1900, *Plantae Europaeae* I: 87. 1900, *Österreichische Botanische Zeitschrift* 52(10): 379. 1902, *Österreichische Botanische Zeitschrift* 53(5): 199. 1903, *Repertorium Specierum Novarum Regni Vegetabilis* 12: 308. 1905, *Oefversigt af Förhandlingar, Finska Vetenskaps-Societeten* 48(13): 9. Helsinki 1906, *Bulletin of the Torrey Botanical Club* 36: 533. 1909, *Repertorium Specierum Novarum Regni Vegetabilis* 12: 307. 1913, *Kongliga Svenska Vetenskapsakademien Handlingar* 56: 176. 1916, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Flora of the U.S.S.R.* 2: 387, t. 28, f. 19. 1934, *Trudy Bot. Inst.* (Baku) 8: 261. 1939, *Journal of the Bombay Natural History Society* 51(1): 53-103. 1952, *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970, *Brittonia* 23(3): 293-324. 1971, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Flora of Turkey and the East Aegean Islands* 9: 470-486. 1985, *New Zealand Journal of Botany* 24: 425-503. 1986, *Bot. Zhurn.* 71: 1426-1427. 1986, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *CIS Chromosome Information Service* 48: 7-8. 1990, *Boletim da Sociedade Broteriana*, ser. 2 63: 153-205. 1990, *Cytologia* 56: 131-133, 437-452. 1991, *International Organization of Plant Biosystematists Newsletter* 24: 15-19. 1995, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 256. 2000.

in English: rough meadow grass, bluegrass, rough bluegrass, rough-stalked meadow grass, rough-stalk bluegrass, rough-stalk meadow grass

in French: pâturin commun

in Spanish: espiquilla, poa común

in Portuguese: poa-comum, relvão

P. trivialis L. subsp. *sylvicola* (Guss.) H. Lindb. (*Poa attica* auct., non Boiss. & Heldr.; *Poa sylvicola* Guss.; *Poa trivialis* var. *sylvicola* (Guss.) Hack.)

South Europe, Asia, Iran, Iraq, Russia, Turkey. Perennial, common along ditch banks and creeks, see *Species*

Plantarum 1: 67. 1753, Giovanni Gussone (1787-1866), *Enumeratio plantarum vascularium in insula Inarime sponte provenientium vel oeconomico usu passim cultarum*. Neapoli 1854, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 1890: 127. 1890 and *Oefversigt af Förhandlingar, Finska Vetenskaps-Societeten* 48(13): 9. 1906, *Annali di Botanica* 45: 75-102. 1987, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Taxon* 49(2): 256. 2000.

P. trivialis L. subsp. *trivialis* (*Poa tristriata* Steven; *Poa woronowii* Roshev.)

Europe, Eurasia, Turkmenistan. See *Mémoires de la Société Impériale des Naturalistes de Moscou* 3: 252. 1813 and *Denkschriften der Schweizerischen* 100: 1-130. 1987, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *Anales del Jardín Botánico de Madrid* 47: 411-417. 1990.

P. trivialis L. var. *glabra* Döll

Asia, Iran. Perennial, see *Rheinische Flora* 92. 1843 and *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988.

P. tucumana Parodi

Argentina. See *Revista Argentina de Agronomía* 29(1-2): 15-17. 1962 [1963].

P. umbricola Vickery

South Australia. Perennial, greenish to purplish, straggling, leafy, branched, fascicles of shoots, auricles absent, basal leaf sheaths slightly keeled, ligule firmly membranous, leaf blades flat and firm, green to purple panicles with slender branches, spikelets compressed and chasmogamous, lemmas usually glabrous and obtuse, web absent or scanty, anthers yellow or purplish, ovary glabrous, fruit compressed and grooved, rare species, shade species, among rocks, wooded hillsides, confused with *Poa clelandii* Vick. and *Poa tenera* F. Muell. ex Hook.f., see *Contributions from the New South Wales National Herbarium* 4: 145-243. 1970.

P. umbrosa Trin. (*Poa sellowii* Nees)

Bolivia, Brazil. Perennial, slender, ascending, leaf blades linear scabrous acute or acuminate, lax panicle oblong with branches filiform flexuous scabrous, spikelets oblong 3- to 8-flowered, glumes lanceolate cuspidate, lower glume 1-nerved, upper glume 3-nerved, lemmas lanceolate acute or acuminate 5-nerved, shade, wooded hillsides, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 491. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 386. 1830.

P. unilateralis Scribn. ex Vasey (*Atropis unilaterale* (Scribn. ex Vasey) Beal; *Poa pachypholis* Piper; *Poa unilateralis* Scribn.; *Puccinellia unilateralis* (Scribn. ex Vasey) Ponert)

North America, California, Oregon, Washington. Rare species, perennial, coastal habitats, ocean cliffs, see *Flora*

italiana, ossia descrizione delle piante ... 1: 366. 1848, U.S. Department of Agriculture. Division of Botany. *Bulletin* 13(2): t. 85. 1893, *Grasses of North America for Farmers and Students* 2: 581. 1896 and *Proceedings of the Biological Society of Washington* 18: 146. 1905, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Flora URSS* 2: 470. 1934, *Feddes Repertorium* 84(9-10): 740. 1974, *Systematic Botany* 16(3): 507-528. 1991, *Novon* 8(2): 199. 1998.

in English: ocean-bluff bluegrass, sea cliff bluegrass, San Francisco bluegrass

P. unilateralis Scribn. ex Vasey subsp. *pachypholis* D.D. Keck ex Soreng (*Poa pachypholis* Piper)

North America. See *Proceedings of the Biological Society of Washington* 18: 146. 1905, *Novon* 8(2): 199. 1998.

P. unilateralis Scribn. ex Vasey subsp. *unilateralis*

North America. See U.S. Department of Agriculture. Division of Botany. *Bulletin* 13(2): t. 85. 1893.

P. urssulensis Trin. (*Poa nemoraliformis* Roshev.; *Poa nemoralis* var. *urssulensis* (Trin.) Griseb.)

Asia, Russia, Mongolia. Perennial, subalpine meadow, see *Species Plantarum* 1: 69-70. 1753, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 2: 527. 1835, *Flora Rossica* 4(13): 376. 1852 and *Bot. Zhurn. (Moscow & Leningrad)* 76: 476-479. 1991, *Turczaninowia* 1(4): 16. 1998.

P. uruguayensis Parodi

Uruguay. See *Revista Argentina de Agronomía* 3: 147, t. 5. 1936.

P. ussuriensis Roshev.

Russia, Europe. See *Flora URSS* 2: 394, 794. 1934, *Journal of the Washington Academy of Sciences* 45(7): 214. 1955.

P. vaseyochloa Scribn. (*Atropis pulchella* Beal; *Poa gracillima* var. *vaseyochloa* (Scribn.) M.E. Jones; *Poa leibergii* Scribn.; *Poa pulchella* Vasey, nom. illeg., non *Poa pulchella* Salisb.; *Puccinellia pulchella* (Beal) Ponert)

Oregon, Washington. Rare species, mountains, hillsides, riverbanks, see *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 21. Londini [London] 1796, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848, *Botanical Gazette* 7(3): 32. 1882, *Contributions from the United States National Herbarium* 1(8): 272. 1893, *Grasses of North America for Farmers and Students* 2: 574. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 8: 6, t. 2. 1897, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 1. 1899 and *Contributions to Western Botany* 14: 14. 1912, *Flora URSS* 2: 470. 1934, *Man. Grass. U.S. f.* 174, 941-942. 1950, *Feddes Repertorium* 84(9-10): 740. 1974, *The Flora of Canada* 2: 93-545. 1978 [1979].

P. venosa Swallen

Guatemala. Alpine, meadow, see *Contributions from the United States National Herbarium* 29(9): 399. 1950.

P. versicolor Besser (*Poa nemoralis* subsp. *podolica* Blocki ex Asch. & Graebn.; *Poa podolica* (Blocki ex Asch. & Graebn.) Blocki ex Zapal.; *Poa polonica* Blocki; *Poa romanica* Prodán; *Poa sterilis* auct., non M. Bieb.; *Poa sterilis* subsp. *versicolor* (Besser) Asch. & Graebn.; *Poa sterilis* var. *versicolor* (Besser) Griseb.)

Europe, Asia, Iran, Siberia, Turkey, Afghanistan. Perennial, useful for erosion control, see *Enumeratio Plantarum* 41. 1822, *Flora Rossica* 4(13): 375. 1852, *Deutsche Botanische Monatschrift* 3: 131. 1885 and *Synopsis der mitteleuropäischen Flora* 2: 412, 415. 1900, *Flora Europaea* 5: 159-1167. 1980.

P. versicolor Besser subsp. ***araratica*** (Trautv.) Tzvelev (*Poa araratica* Trautv.; *Poa versicolor* var. *araratica* (Trautv.) Grossh.)

Asia, Iran, Turkey, Afghanistan. Perennial bunchgrass, bluish to green, loosely tufted, basal leaves, narrow flower heads, see *Trudy Imp. Saint Peterburgsk. Bot. Sada* 2: 486. 1875 and *Novosti Sist. Vyss. Rast.* 11: 31. 1974.

P. versicolor Besser subsp. ***ochotensis*** (Trin.) Tzvelev (*Poa ochotensis* Trin.; *Poa sphondylodes* Trinius)

Asia, China, Japan, Russia. Perennial, useful for erosion control, subalpine meadows, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 377. 1830, *Enumeratio Plantarum, quas in China Boreali* 71. 1833 and *Novosti Sist. Vyss. Rast.* 11: 31. 1974.

P. versicolor Besser subsp. ***relaxa*** (Ovcz.) Tzvelev (*Poa relaxa* Ovcz.; *Poa urgutina* Drob.)

Iran, Asia, Russia. Perennial, on dry hillsides, see *Flora Uzbekistanica* 1: 538. 1941, *Novosti Sist. Vyss. Rast.* 11: 31. 1974.

P. versicolor Besser subsp. ***stepposa*** (Krylov) Tzvelev (*Poa attenuata* var. *stepposa* Krylov; *Poa ochotensis* subsp. *stepposa* (Kryl.) Tzvelev; *Poa stepposa* (Krylov) Roshev.; *Poa transbaicalica* Roshev.)

Asia, Mongolia, Siberia, Russia. Perennial, growing on coarse brown sandy soils, dark brown soil, along roadsides, mountain light brown soil, open mountain meadows, see *Fl. Altaica* 7: 1656. 1914, *Flora Turkmenii* 1: 145. 1932, *Fl. URSS* 2: 401, 754. 1934, *Novosti Sist. Vyss. Rast.* 9: 51. 1972.

P. versicolor Besser subsp. ***versicolor***

Europe, Romania, Moldova. Perennial.

P. viridifolia Hochst. (*Poa oligantha* Hochst.; *Poa oligantha* Hochst. ex Steud.; *Poa schimperana* Hochst. ex A. Rich.; *Poa viridiflora* Hochst.)

North America, Africa. Loosely tufted, see *Tentamen Florae Abyssinicae* ... 2: 423. 1850, *Synopsis Plantarum*

Glumacearum 1: 257. 1854, *Flora* 38: 322-323. 1855 and *Opera Botanica* 121: 159-172. 1993.

P. viridula Palibin (*Poa angustifolia* L.; *Poa pratensis* subsp. *angustifolia* (L.) Arcang.; *Poa pratensis* subsp. *angustifolia* (L.) Lej.; *Poa pratensis* subsp. *angustifolia* (L.) H. Lindb.; *Poa pratensis* subsp. *angustifolia* (L.) Gaudin, nom. illeg., non *Poa pratensis* subsp. *angustifolia* (L.) Lej.; *Poa pratensis* var. *angustifolia* (L.) Sm.)

Asia, Japan. See *Species Plantarum* 1: 67-68. 1753, *Flora Britannica* 1: 105. 1800, *Agrostologia Helvetica, definitionem* ... 1: 214. 1811, *Compendium Florae Belgicae* 82. 1828, *Flora Helvetica* 259. 1828, *Compendio della Flora Italiana* edition 1, 787. 1884 and *Trudy Imp. Saint Peterburgsk. Bot. Sada* 19(2): 134. 1901, *Schedae Plantae Finlandiae Exsiccatae* fasc. 1-VIII: 20. 1906, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Journal of Cytology and Genetics* 21: 155. 1986, *Opera Botanica* 137: 1-42. 1999, *Taxon* 49(2): 254. 2000.

in Japan: aoichigotsunagi

P. wheeleri Vasey (*Poa curta* Rydb.; *Poa cuspidata* Vasey ex Scribner, nom. illeg., non *Poa cuspidata* Nutt.; *Poa nervosa* (Hook.) Vasey; *Poa nervosa* var. *wheeleri* (Vasey) C.L. Hitchc.; *Poa olneyae* Piper; *Poa subreflexa* Rydb.; *Poa vaseyana* Scribn.; *Poa vaseyana* Scribn. ex Beal; *Poa wheeleri* var. *vaseyana* (Scribn.) Will. & Pammel; *Poa wheeleri* var. *vaseyana* (Scribn. ex Beal) Will. & Pammel) (for George Montague Wheeler, b. 1842, see Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950)

Northern America, U.S., California, Canada. Perennial, loosely tufted, shortly rhizomatous, auricles absent, blunt or rounded ligules, stem leaf blades inrolled and finely hairy, open to contracted flower head with slender branches, this species reproduces apomictically, useful for erosion control and revegetation, grows in moist meadows, open forests, alpine and subalpine zones, see also *Poa nervosa* (Hook.) Vasey, see *Flora Boreali-Americana* 2: 251, t. 232. 1840, *Catalogue of Plants* 55. 1874, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): t. 81. 1893, *Grasses of North America for Farmers and Students* 2: 532. 1896, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 6. 1899, *Erythea* 7: 101. 1899 and *Bulletin of the Torrey Botanical Club* 36: 534-535. 1909, *Proceedings of the Iowa Academy of Science* 20: 144. 1915, *Vascular Plants of the Pacific Northwest* 1: 671. 1969, *Vascular Plants of British Columbia* 129-138. 1994.

in English: Wheeler's bluegrass, Wheeler bluegrass

P. wolfii Scribner (*Poa alsodes* var. *wolfii* (Scribn.) Vasey ex Scribn.) (for John Wolf, 1820-1897, botanical collector in U.S., naturalist, U.S. Geological Survey under G.M. Wheeler, Colorado, Illinois; see Joseph Ewan, *Rocky Mountain Naturalists*. 293, 340. The University of Denver Press 1950)

North America. Perennial, caespitose, clumped, purplish, open canopy, see *A Manual of the Botany of the Northern United States. Second Edition* 562. 1856, *Bulletin of the Torrey Botanical Club* 21(5): 228. 1894.

in English: Wolf's bluegrass

P. xenica Edgar & Connor

New Zealand. Dioecious, rare, endangered, erect, coarse, many noded, rooting at nodes, leaf blades persistent folded and flat, open leaf sheath keeled and ribbed, ligule ciliate, long leaves coriaceous, inflorescence subtended by bracts, spikelets gaping at anthesis, glumes unequal, lemma ciliate and pubescent, palea bifid with hairy keels, callus glabrous, in shrublands, damp places, see *New Zealand Journal of Botany* 37: 65-67, f. 3. 1999.

P. yatsugatakensis Honda (*Poa macrocalyx* var. *sachalinensis* Koidz.; *Poa sachalinensis* (Koidz.) Honda; *Poa sachalinensis* var. *yatsugatakensis* (Honda) Ohwi; *Poa shinanoana* var. *yatsugatakensis* (Honda) T. Shimizu) (Mt. Yatsugatake)

Japan. Alpine, mountain, see *Botanical Magazine* 31: 255. 1917, *Botanical Magazine* 41: 641. 1927, *Botanical Magazine* (Tokyo) 43: 540. 1929, *Acta Phytotaxonomica et Geobotanica* 2: 31. 1933, *Acta Phytotaxonomica et Geobotanica* 10: 123. 1941, *Flora of Japan* 120. 1953, *New Alpine Flora of Japan* 2: 358. 1983, *Journal of Japanese Botany* 59(2): 41. 1984.

P. x digena Melderis [*Poa angustifolia* x *Poa stapfiana*] (*Poa digena* Melderis)

Central Nepal. Leaf blades plicate, leaf sheaths glabrous, slender creeping rhizomes, spikelets ovate or oblong, usually 3 florets, palea keeled, see *Enumeration of the Flowering Plants of Nepal* 1: 143. 1978.

P. x gaspensis Fernald (*Poa alpina* x *Poa pratensis* subsp. *alpigena*; *Poa gaspensis* Fernald)

North America, Canada, Gaspé County. Alluvial soils, sandy beaches, gravelly, wooded banks, wooded alluvial riverbanks, see *Rhodora* 31(363): 46-47, f. 1. 1929.

P. x limosa Scribner & T.A. Williams (pro sp.) (*Atropis scabrella* Thurb.; *Poa fibrata* Swallen; *Poa limosa* Scribn. & T.A. Williams; *Poa pratensis* x *Poa secunda* subsp. *juncifolia*; *Poa scabrella* (Thurb.) Benth. ex Vasey; *Poa secunda* x *P. pratensis*; *Poa x fibrata* Swallen, pro sp.)

North America, U.S. Dry flats, saline to subsaline areas, see *Geological Survey of California, Botany* 2: 310-311. 1880, *The Grasses of the United States* 42. 1883, *Circular, Division of Agrostology, United States Department of Agriculture* 9: 5. 1899 and *Journal of the Washington Academy of Sciences* 30(5): 210. 1940, *Phytologia* 71: 403. 1991.

P. x nematophylla Rydb. pro sp. (*Poa cusickii* Vasey x *Poa fendleriana* (Steudel) Vasey; *Poa cusickii* Vasey subsp. *pubens* Keck; *Poa longiligula* Scribner & Williams var. *wyomingensis* T.A. Williams; *Poa nematophylla* Rydb.) (for

the American botanist William Conklin Cusick, 1842-1922, Oregon plant collector; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 407. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

North America, U.S. Perennial, on sandy plain, red sand, see *Contributions from the United States National Herbarium* 1(8): 271. 1893, *Circular, Division of Agrostology, United States Department of Agriculture* 10: 3. 1899 and *Bulletin of the Torrey Botanical Club* 32(11): 606. 1905, *Wyoming Agric. Exp. Sta. Bull.* 418: 22. 1964.

Poagris Raf. = *Poa* L.

Greek *poa* "grass, pasture grass" and *agrius* "wild," Latin *agrius* "wild," for *Poa* L.

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Poinae, see *Species Plantarum* 1: 67-68. 1753, *Encyclopédie Méthodique, Botanique* 2: 462. 1788, Constantine Samuel Rafinesque (1783-1840), *Flora Telluriana*. 1: 18. 1836 [1837] and *Bulletin of the British Museum (Natural History)*, *Botany* 8: 395-396. 1981, *Contributions from the United States National Herbarium* 48: 505-581. 2003.

Poagrostis Stapf = *Colpodium* Trin., *Pentameris* P. Beauv., *Pentaschistis* (Nees) Spach

The genera *Poa* L. and *Agrostis* L.

About one or two species, South Africa. Arundinoideae, Arundineae, or Danthonieae, annual, rarely perennial, loosely tufted, herbaceous, short, branched, sometimes rhizomatous, ligule fringed, plants bisexual, delicate inflorescence, an open contracted panicle with capillary branches, spikelets 1-flowered, two glumes more or less equal 1- to 3-nerved membranous, lemma membranous 7-nerved hairy, palea present, two lodicules, three stamens, ovary glabrous, two stigmas, slopes, damp places, mountains, usually in *Pentaschistis* (Nees) Spach, type *Poagrostis pusilla* (Nees) Stapf, see *Species Plantarum* 1: 63, 79. 1753, *Species Plantarum* 2: 1045, 1047. 1753, *Flore Française. Troisième Édition* 3: 32. 1805, *Prodromus Florae Novae Hollandiae* 185. 1810, *Essai d'une Nouvelle Agrostographie* 72, 92, 146, t. 18, f. 8. 1812, *Fundamenta Agrostographiae* 119, t. 7. 1820, *Histoire naturelle des Végétaux* 13: 164. Paris 1841, C.G.D. Nees von Esenbeck (1776-1858), *Flora Africae Australioris Illustrationes Monographicae ... I. Gramineae. Glogaviae* 1841, *Genera Plantarum* 3(2): 1158, 1163. 1883 and *Flora Capensis* 7: 760-761. 1900, *J. Bot.* 60: 138. 1922, H.P. Linder and R.P. Ellis, "A revision of *Pentaschistis* (Arundinoideae: Poaceae)." *Contributions from the Bolus Herbarium* 12: 1-124. 1990, Wageningen

Agricultural University Papers 92-1(2): 1-557. 1992, H. Du Plessis and J.J. Spies, "Chromosome numbers in the genus *Pentaschistis* (Poaceae, Danthonieae)." *Taxon* 41: 709-720. 1992, M. Lazarides, "The genus *Eriachne* (Eriachneae, Poaceae)." *Australian Systematic Botany* 8(3): 355-452. 1995, K.C. Klopper, J.J. Spies & B. Visser, "Cytogenetic studies in the genus *Pentaschistis* (Poaceae: Arundoideae)." *Bothalia* 28(2): 231-238. 1998.

Species

P. pusilla (Nees) Stapf (*Colpodium pusillum* Nees; *Pentaschistis pusilla* (Nees) H.P. Linder)

South Africa. Leaf blades not pungent, lemma finely pubescent and denticulate, see *Florae Africae Australioris Illustrationes Monographicae* 149. 1841 and *Flora Capensis* 7: 760-761. 1900, *Contributions from the Bolus Herbarium* 12: 89. 1990.

Poarion Rchb. = *Aegialina* Schult. & Schult.f., *Aegialitis* Trin., *Aegialitis* R. Br. (Plumbaginaceae), *Rostraria* Trin.

From the Greek *poa* "grass, pasture grass," the diminutive *poarion*.

Pooideae, Poeae, Aveninae, see *Syn. Pl.* 1: 97. 1805, *Prodromus Florae Novae Hollandiae* 426. 1810, *Fundamenta Agrostographiae* 127, 149, t. 9, 13. 1820, *Mantissa* 2: 13, 222. 1824, *Conspectus Regni Vegetabilis* 51. 1828, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 65. 1830 and *Zlaki SSSR* 267. 1976, *Contributions from the United States National Herbarium* 48: 20, 581, 604. 2003.

Pobeguinea (Stapf) Jacques-Félix = *Anadelphia* Hack., *Pobeguinea* Jacques-Félix

After the French botanist Charles Henri Oliver Pobéguin, 1856-1951, colonial administrator in French Africa, plant collector in West Africa (French Guinea and Ivory Coast), author of *Essai sur la flore de la Guinée française* produits forestiers, agricoles et industriels. Paris 1906 and *Les plantes médicinales de la Guinée*. Paris 1912; see Auguste Jean Baptiste Chevalier (1873-1956), *Flore vivante de l'Afrique Occidentale Française*. 1938; J.H. Barnhart, *Biographical notes upon botanists*. 3: 93. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 65. 1971.

About 4 species, tropical West Africa. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, *Andropogon* sect. *Pobeguinea* Stapf, perennial or annual, caespitose,

herbaceous, branched or unbranched, auricles present or absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate open or contracted, male and female fertile spikelets in the same inflorescence, 2 glumes more or less equal, palea absent, 2 small free lodicules, stamens 3, ovary glabrous, 2 stigmas, savannah, rainforest, open habitats, sometimes or often included in *Anadelphia* Hack., see *Species Plantarum* 2: 1045. 1753, *Essai d'une Nouvelle Agrostographie* 132-133, 160. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 364. 1829, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 240-241. 1885, *Die Natürlichen Pflanzenfamilien* 2(2): 27. 1887, *Journal of Botany, British and Foreign* 31: 357. 1893 and *Journal de Botanique (Morot)* 19: 100. 1905, *Flora of Tropical Africa* 9: 398-400. 1919, *Revue internationale de botanique appliquée et d'agriculture tropicale* 14: 199. 1934, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 172-174. 1950, *Kew Bulletin* 20: 281. 1966.

Species

P. arrecta (Stapf) Jacq.-Fél. (*Anadelphia arrecta* (Stapf) Stapf; *Andropogon arrectus* Stapf; *Andropogon glaucopurpureus* Stapf; *Hypogynium arrectum* (Stapf) Roberty)

Africa, Gabon. Herbaceous, savannah, see *Journal de Botanique (Morot)* 19: 101. 1905, *Flora of Tropical Africa* 9: 396. 1919, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 173. 1950, *Boissiera*. 9: 182. 1960.

P. gabonensis Koechlin

Africa. See *Bulletin de la Société Botanique de France* 108: 243. 1961.

P. hamata (Stapf) Jacq.-Fél. (*Anadelphia hamata* Stapf; *Hypogynium hamatum* (Stapf) Roberty)

Tropical Africa. See *Flora of Tropical Africa* 9: 395. 1919, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 174. 1950, *Boissiera*. 9: 183. 1960.

P. trichaeta (Reznik) Jacq.-Fél. (*Hypogynium trichaetum* (Reznik) Roberty; *Monium trichaetum* Reznik)

Africa, Guinea. See *Flora of Tropical Africa* 9: 399. 1919, *Bulletin du Muséum d'Histoire Naturelle*, série 2, 4: 1046. 1932, *Revue internationale de botanique appliquée et d'agriculture tropicale* 30: 174. 1950, *Boissiera*. 9: 183. 1960.

Podagrostis (Griseb.) Scribner & Merr. = *Agrostis* L.

From the Greek *pous*, *podos* "a foot" plus *agrostis*, *agrostidos* "grass, weed, couch grass."

Pooideae, Poeae, Agrostidinae, or Pooideae, Aveneae, *Agrostis* sect. *Podagrostis* Griseb., type *Podagrostis aequi-*

valvis (Trin.) Scribn. & Merr., very often or usually in *Agrostis* L., see *Species Plantarum* 1: 61-63, 70. 1753, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Flora Rossica* 4(13): 436. 1852 and *Contributions from the United States National Herbarium* 13(3): 58. 1910, *Fl. Fenn.* 5: 29. 1971, *Taxon* 41: 556. 1992, *Flora Mesoamericana* 6: 237-240. 1994, *Gayana, Botánica* 54(2): 91-156. 1997, *Contributions from the United States National Herbarium* 48: 42-89, 581. 2003.

Species

P. aequivalvis (Trin.) Scribn. & Merrill (*Agrostis aequivalvis* (Trin.) Trin.; *Agrostis aequivalvis* var. *aequivalvis*; *Agrostis canina* var. *aequivalvis* Trin.; *Calamagrostis aequivalvis* (Trin.) Steffen; *Deyeuxia aequivalvis* Benth. ex Vasey)

North America. See *Species Plantarum* 1: 62. 1753, *Familles des Plantes* 2: 31, 530. 1763, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(2): 171. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 362. 1841, *Contributions from the United States National Herbarium* 3(1): 77. 1892 and *Contributions from the United States National Herbarium* 13(3): 58. 1910, *Beihefte zum Botanischen Centralblatt* 58b: 162. 1938.

in English: northern bent grass

P. humilis (Vasey) Björkman (*Agrostis humilis* Vasey)

North America. See *Bulletin of the Torrey Botanical Club* 10: 21. 1883 and *Symbolae Botanicae Upsaliensis* 17: 15. 1960.

in English: mountain bent grass

P. sesquiflora (E. Desv.) Parodi ex Nicora (*Agrostis sesquiflora* E. Desv.; *Agrostis sesquivalvis* E. Desv. ex Benth.; *Briza sesquiflora* (E. Desv.) Pilg.; *Deyeuxia sesquiflora* (E. Desv.) Benth. & Hook.f. ex W.D. Jacks.)

South America, Chile. See *Species Plantarum* 1: 70. 1753, *Flora Chilena* 6: 318, t. 77, f. 3. 1854, *Journal of the Linnean Society, Botany* 19: 91. 1881, *Index Kewensis* 740. 1893 and *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 45: 6. 1938, *Flora Patagónica* 3: 368. 1978.

P. thurberiana (Hitchc.) Hultén (*Agrostis atrata* Rydb.; *Agrostis hillebrandii* Thurb. ex Bol.; *Agrostis thurberiana* Hitchc.)

North America, Canada. Moist places, see *Transactions of the California State Agricultural Society* 1864-5: 136. 1866 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 68: 23, t. 1, f. 1. 1905, *Bulletin of the Torrey*

Botanical Club 36: 531. 1909, *Flora of the Aleutian Islands* 75. 1937.

in English: Thurber bent grass, Thurber redtop

Podinapus Dulac

Orth. var. of *Podionapus* Dulac.

See *Species Plantarum* 1: 63-65. 1753, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Flore du Département des Hautes-Pyrénées* 82-83. 1867.

Podionapus Dulac = *Deschampsia* P. Beauv.

Pooideae, Poeae, Airinae, see *Species Plantarum* 1: 63-65. 1753, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Flore du Département des Hautes-Pyrénées* 82-83. 1867 and *Contributions from the United States National Herbarium* 48: 245-256, 581. 2003.

Podophorus Philippi

From the Greek *pous*, *podos* "a foot" and *phoros* "bearing, carrying."

One species, Chile, Juan Fernández Island. Pooideae, Stipeae, Duthieinae, or Pooideae, Poodae, Poeae, annual or perennial, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets 1-flowered, 2 glumes herbaceous and acute, lower glume 3-nerved, upper glume 5-nerved, lemma with a flexuous terminal awn, palea 2-nerved 2-keeled, 2 free membranous lodicules, 2 stamens, ovary hairy, 2 stigmas, possibly related to *Megalachne* Steud., type *Podophorus bromoides* Phil., see *Botanische Zeitung. Berlin* 14(37): 648. 1856, *Anales de la Universidad de Chile* 13: 169. 1856 and *Boletín de la Sociedad de Biología de Concepción* 48: 165-172. 1974, *Taxon* 29: 645-666. 1980, *Brittonia* 54: 159. 2002, *Contributions from the United States National Herbarium* 48: 581. 2003.

Species

P. bromoides Phil.

Juan Fernández Island. Glumes and lemma 5-nerved.

Podopogon Raf. = *Piptochaetium* J. Presl

Greek *pous*, *podos* "a foot" and *pogon* "beard."

Pooideae, Stipeae, Stipinae, type *Stipa avenacea* L., see *Species Plantarum* 1: 78-79. 1753, *Fundamenta Agrostographiae* 109. 1820, C.S. Rafinesque, *Neogenyton*, or Indication of Sixty-Six New Genera of Plants of North America. 4. 1825, *Reliquiae Haenkeanae* 1: 222, t. 37, f.

2. 1830, *Species Graminum Stipaceorum* 22. 1842, *Synopsis Plantarum Glumacearum* 1: 118. 1854, *Index Kewensis* 2: 580. 1894 and *Revista del Museo de La Plata (Nueva Serie)*, *Sección Botánica* 6: 232, 234. 1944, E.D. Merrill, *Index rafinesquianus*. 76. 1949, *Taxon* 32: 649. 1983, *Arnaldoa* 1(1): 11-34. 1991, *Annals of the Missouri Botanical Garden* 89(3): 305-336. 2002, *Contributions from the United States National Herbarium* 48: 495-504, 581. 2003.

Podosaemum Kunth = *Muhlenbergia* Schreb.

Orth. var. of *Podosemum* Desv.

Chloridoideae, Cynodonteae, Muhlenbergiinae, see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Essai d'une Nouvelle Agrostographie* 29, 176, 179, t. 8, f. 2, 3. 1812, *Mémoires du Muséum d'Histoire Naturelle* 2: 72. 1815 and *Contributions from the United States National Herbarium* 41: 143-173, 188-190. 2001, *Contributions from the United States National Herbarium* 48: 581-582. 2003.

Podosemum Desv. = *Muhlenbergia* Schreb., *Podosaemum* Kunth

Probably from the Greek *pous*, *podos* "a foot" and Latin *semen* "seed."

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Podosemum capillare* (Lam.) Desv. (*Muhlenbergia capillaris* (Lam.) Trin.), see *Genera Plantarum* 44. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 158. 1791, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 29, 176, 179, t. 8, f. 2, 3. 1812, *De Graminibus unifloris et sesquifloris* 191-192, 296, t. 5, f. 15. Petropoli 1824 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 71. 1956, *Contributions from the United States National Herbarium* 34(4): 111. 1967, *Sida* 13(3): 303-314. 1989, *Contributions from the United States National Herbarium* 41: 143-173, 188-190. 2001, *Contributions from the United States National Herbarium* 48: 581-582. 2003.

Poecilostachys Hackel = *Chloachne* Stapf

From the Greek *poikilos* "spotted" and *stachys* "spike."

About 20 species, tropical Africa, Madagascar. Panicoideae, Panicoideae, Paniceae, perennial, decumbent, branched, tufted, herbaceous, rambling, scrambling, running, trailing, rhizomatous, leaf blades linear to lanceolate, auricles absent, plants bisexual, inflorescence of several lax racemes

unilateral bearing paired spikelets, spikelets laterally compressed, two glumes unequal or subequal, lower glume awned or acute to mucronate, upper glume acute to mucronate, upper lemma strongly flattened with margins flat or inrolled, palea present, 2 joined lodicules, 3 stamens, ovary glabrous, 2 stigmas, evergreen forest, in dense shade or partial shade, broad-leaved forest, forest floor, understory, near streams, type *Poecilostachys hildebrandtii* Hack., see *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung I* 89: 131. 1884, *Journal of the Linnean Society, Botany* 21: 317-353, 407-455. 1884-1885 and *Journal of the Linnean Society, Botany* 40: 231. 1911, *Mémoires de l'Institut Scientifique de Madagascar, Série B, Biologie Végétale* 6: 1-272. 1955.

Species

P. alleizettei A. Camus (for the French botanist Aymar Charles d'Alleizette, 1884-1967, botanical collector in Algeria, France, Madagascar, Martinique, New Caledonia, Vietnam and Seychelles, author of "Compte rendu de l'excursion de la Société botanique de France au Col de Glaize, le 21 juillet 1927." *Bull. Soc. Bot. Fr.* 78: 531-539. 1931 and "Contribution à l'étude de la végétation des environs de Tanarive." *Bull. Mus. Hist. Nat. Paris* 17: 171-189. 1911. See Charles Gaudichaud-Beaupré (1789-1854), *Voyage autour du monde exécuté pendant les années 1836 et 1837 sur la corvette "La Bonite"* commandée par M. Vaillant ... Botanique. Explication et description des planches de l'Atlas par M. Charles d'Alleizette. Arthus Bertrand, Paris 1866; Ch. d'Alleizette et J.-E. Loiseau, "Observations sur la flore d'Auvergne. (Deuxième note)." Extrait de la *Revue des sciences naturelles d'Auvergne*, Fascicule 1-2, 1955; *Revue des Sciences Naturelles d'Auvergne* (1957/1-2), publiée par La Société d'Histoire Naturelle d'Auvergne. Clermont-Ferrand, 1957, Collection *Revue des Sciences Naturelles d'Auvergne - Nlle Série - Vol 23 - Fasc. 1-2/1957*; *Bulletin de la Société Botanique de France* 75(1): 38-42. 1928)

Madagascar. See *Bulletin de la Société Botanique de France* 100: 24. 1953.

P. ambositrensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 100: 23. 1953.

P. analabensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 100: 21. 1953.

P. analamazaotrensis A. Camus

Madagascar. See *Nat. Malgache* 5: 145. 1953.

P. bakeri (Schinz) C.E. Hubb. (*Oplismenus bakeri* Schinz; *Oplismenus bromoides* Baker, nom. illeg., non *Oplismenus bromoides* (Lam.) P. Beauv.; *Panicum bromoides* Lam.)

Madagascar. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170. 1791, *Flore d'Oware* 2: 14. 1807 [1810], *Journal of the Linnean Society, Botany* 21: 452. 1885 and *Bulletin of Miscellaneous Information Kew* 1935(5): 307. 1935, *Conspectus Florae Africae* 5: 771. 1985.

P. bathiei A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 100: 22. 1953.

P. bromoides Stapf (*Oplismenus bromoides* (Lam.) P. Beauv.; *Oplismenus bromoides* Baker, nom. illeg., non *Oplismenus bromoides* (Lam.) P. Beauv.; *Panicum bromoides* Lam.)

Madagascar. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170. 1791, *Flore d'Oware* 2: 14. 1807 [1810], *Essai d'une Nouvelle Agrostographie* 54. 1812, *Journal of the Linnean Society, Botany* 21: 452. 1885 and *Hooker's Icones Plantarum*, t. 3071. 1916, *Bulletin of Miscellaneous Information Kew* 1935(5): 307. 1935, *Conspectus Florae Africae* 5: 771. 1985.

P. capuronii A. Camus (after the forest botanist René Paul Raymond Capuron, 1921-1971, specialized in the systematics of forest trees, author of "Contribution à l'étude de la flore forestière de Madagascar." *Adansonia* 12: 205-211. 1972. See Werner Rauh, 1913-2000, *Succulent and Xerophytic Plants of Madagascar*. 1: 11, 90. 1995 and 2: 383 (bibliography). Strawberry Press, Mill Valley, California 1998; Alessandro Luciano Bernardi, "Capuron ne répond jamais (plus)." *Adansonia* sér. 2, 12: 11-12. 1972; André Aubréville (1897-1982), "Adieu à Capuron." *Adansonia* sér. 2, 12: 7-9. 1972; Jean François Leroy (1915-1999), "René Capuron (1921-1971): fondateur de la botanique forestière de Madagascar." *Adansonia* sér. 2, 12: 13-38. 1972)

Madagascar. See *Bulletin de la Société Botanique de France* 100: 20. 1953.

P. confertiflora A. Camus

Madagascar. See *Notulae Systematicae. Herbarium de Paris* 15: 411. 1959.

P. decaryana A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 100: 23. 1953.

P. festucaceus (Mez) A. Camus (*Oplismenus festucaceus* Mez)

Madagascar. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 54. 1917, *Bulletin de la Société Botanique de France* 77: 641. 1930.

P. geminata Hack. (*Lophatherum geminatum* Baker)

Madagascar. Lower glume acute to mucronate, see *Voyage autour du Monde* 49. 1831 [1829], *Journal of the Linnean Society, Botany* 20: 300. 1883.

P. gougerotiana A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 92: 52. 1945.

P. hildebrandtii Hack.

Madagascar. See *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung I* 89: 131. 1884.

P. humbertii A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 75: 37. 1928, *Bulletin de la Société Botanique de France* 97: 85. 1950.

P. leandrii A. Camus (for Jacques Désiré Léandri, 1903-1982, botanical collector in Morocco, Corsica and Madagascar, author of "Aimée Camus 1er mai 1879-17 avril 1965." *Adansonia* 6: 3-21. 1966, "Henri Perrier de la Bâthie: 11 août 1873-2 octobre 1958." *Taxon* 11: 1-3. 1962, "Notes sur les Euphorbiacées Malgaches." *Adansonia* 2: 216-23. 1962, Les arbres et grands arbustes Malgaches de la famille des Euphorbiaceae. *Naturaliste Malgache* 4: 47-82. 1952. See Lecomte and Leandri, "L'oeuvre botanique de Lamarck." *Arch. Mus. Hist. Nat.* 6.6: 31. 1930)

Madagascar. See *Notulae Systematicae. Herbarium de Paris* 15: 411. 1959.

P. mainborondroensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 97: 81. 1950.

P. marojejensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 97: 81. 1950.

P. musicicola A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 100: 21. 1953.

P. onibensis A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 100: 22. 1953.

P. oplismenoides (Hack.) Clayton (*Chloachne oplismenoides* (Hack.) Robyns; *Chloachne secunda* Stapf; *Panicum oplismenoides* Hack.; *Poecilostachys flaccidula* Stapf ex Rendle)

Africa, Tanzania, Mozambique. Perennial, straggling, stoloniferous, rooting at the lower nodes, leaf blades narrowly lanceolate flaccid acuminate, ligule a ciliate membrane, ascending racemes, spikelets narrowly lanceolate-oblong, lower glume acute to mucronate, upper glume and lower lemma with stiff bristles, upper lemma narrowly elliptic with sharply acute tip, along riverbanks, damp places, near streams, evergreen forest, deep shade, see *Species Plantarum* 1: 55. 1753, *Boletim da Sociedade Broteriana* 6: 141. 1888 and *Journal of the Linnean Society, Botany* 40: 231. 1911, *Hooker's Icones Plantarum* 31: t. 3072. 1916, *Bulletin du Jardin Botanique de l'État* 9(3): 173.

1932, *Kew Bulletin* 42: 403. 1987, *Flora of Ethiopia* 7: 194. 1995.

P. viguieri A. Camus

Madagascar. Lower glume acute to mucronate, forest, see *Bulletin de la Société Botanique de France* 75: 36. 1950.

Pogochloa S. Moore = *Gouinia* E. Fourn.,
Gouinia E. Fourn. ex Benth. & Hook.f.

From the Greek *pogon* “beard” and *chloe*, *chloa* “grass.”

Chloridoideae, Cynodonteae, Gouiniinae, type *Pogochloa brasiliensis* S. Moore, see *Genera Plantarum* 3: 1178. 1883, *Mexicanas Plantas* 2: 103. 1886, *Transactions of the Linnean Society of London, Botany* 4(3): 509, t. 37, f. 9-23. 1895 and *American Journal of Botany* 22: 32, 36. 1935, *Contributions from the United States National Herbarium* 41: 122-123, 190. 2001.

Pogonachne Bor

From the Greek *pogon* “beard” and *achne* “chaff, glume.”

One species, India. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual, herbaceous, stilt-rooted, ligule an unfringed membrane, inflorescence paniculate and spatheate, single racemes, plants bisexual, sessile spikelet vestigial or suppressed, shorter spikelets sterile, pedicelled spikelet fertile strongly laterally compressed, small scales between internode and pedicel, two glumes subequal, lower glume coriaceous entire, upper glume awnless 5-nerved, awn arising from bidentate tip of lemma, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, two stigmas, type *Pogonachne racemosa* Bor, see *Kew Bulletin* 4: 176. 1949.

Species

P. racemosa Bor

India. Raceme fragile, sessile spikelet male or barren, spikelet awned, upper glume hair-tufted.

Pogonarthria Stapf

From the Greek *pogon* “beard” and *arthron* “a joint,” possibly referring to the rachilla joints, hairy.

About 4 species, tropical Africa, southern Africa. Chloridoideae, Eragrostideae, Eleusininae, or Chloridoideae, Eragrostideae, Eragrostidinae, annual or perennial, unarmed, caespitose, herbaceous, branched or unbranched, tough, auricles absent, short ligule fringed or a line of hairs, leaf blades not pungent, plants bisexual, inflorescences racemose and sickle-shaped, short stiff slender racemes deciduous, crowded spikelets biseriate and several-flowered, 2

unequal glumes acute to acuminate 1-nerved, membranous lemmas divergent keeled acuminate to shortly awned, palea notched, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, some species probably toxic, open habitats, in shallow or poor sandy soils or in disturbed places, savannah grasslands, undisturbed grassland, between *Eragrostis* and *Harpachne*, type *Pogonarthria falcata* (Hack.) Rendle, see *Flora Capensis* 7: 316. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 232. 1899 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 362. 1908, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 57: 532. 1912, *Bulletin of Miscellaneous Information Kew* 1932: 325. 1932, *Senckenbergiana Biologica* 47(4): 303-307. 1966, *Journal of Biogeography* 27(6): 1385-1401. Nov 2000, David C. Hartnett, Andre F. Potgieter and Gail W. T. Wilson, “Fire effects on mycorrhizal symbiosis and root system architecture in southern African savannah grasses.” *African Journal of Ecology* vol. 42(4): 328-337. Dec 2004, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, “Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications.” *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

P. fleckii (Hack.) Hack. (*Diplachne fleckii* Hack.; *Pogonarthria tuberculata* Pilg.) (the species was named after Dr. E. Fleck, geologist and plant collector in South-West Africa, see Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 155. 1981)

Zimbabwe, Namibia. Annual, erect or geniculate, tufted to densely tufted, weak, rigid, hairy, leaf blade expanded or folded, ligule a fringe of short hairs, leaf sheaths rounded, leaves linear, inflorescence a compound raceme, spike-like racemes arranged singly or whorled, spikelets attached to one side of the secondary axis, pioneer grass, low forage value, growing on sandy soils, well-drained sites, open habitats, open bush, veld, disturbed areas, see *Essai d'une Nouvelle Agrostographie* 80. 1812, *Bulletin de l'Herbier Boissier* 4(App. 3): 25. 1896 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43(1): 92. 1909, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 57: 532. 1912.

in southern Africa: eenjarige denneboomgras, haariges tanengras

P. leiarthra Hack.

South Africa, Namibia. Annual, rare, tufted to loosely tufted, glabrous, found in sandy soils, red sand, see *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 57: 531. 1912.

P. refracta Launert

Tropical Africa, Zambia. See *Senckenbergiana Biologica* 47(4): 304, f. 1-11. 1966.

P. squarrosa (Licht. ex Roem. & Schult.) Pilg. (*Eragrostis marlothii* Hack.; *Leptochloa falcata* Hack. ex Schinz; *Lep- tochloa falcata* Hack.; *Panicum natalense* Hochst.; *Poa squarrosa* Licht. ex Roem. & Schult.; *Poa squarrosa* Roem. & Schult.; *Pogonarthria falcata* (Hack. ex Schinz) Rendle; *Pogonarthria falcata* (Hack.) Rendle; *Pogonarthria hackelii* Chiov.; *Pogonarthria orthoclada* Peter; *Pogonarthria squarrosa* (Roem. & Schult.) Pilg.)

Tropical Africa, eastern and southern Africa. Perennial, very variable, tufted to densely tufted, erect, unbranched, clumped, stiff, sometimes shortly rhizomatous, shallow-rooted, leaf blade usually rolled and pointed, leaf sheath glabrous and more or less keeled to rounded, ligule a ring of short white hairs, inflorescence linear-oblong to pyramidal, sickle-shaped racemes ascending or spreading, spikelets 4- to 10-flowered, racemes grouped simply or arranged spirally, glumes lanceolate, lemmas 3-nerved sharply acuminate, pioneer grass, weed species hard and unpalatable, very low grazing value, possibly a source of vegetable salt, usually in disturbed areas, open waste places, grassland, sandy soil, uncultivated lands, poor soils, along roadsides, woodland and open woodland, old lands, see *Species Plantarum* 1: 55, 67. 1753, *Genera Plantarum* 23. 1776, *Essai d'une Nouvelle Agrostographie* 71. 1812, *Systema Vegetabilium* 2: 553. 1817, *Flora* 29: 113. 1846, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 404. 1889, *Bulletin de l'Herbier Boissier* 3(8): 386. 1895, *Flora Capensis* 7: 316. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 232. 1899 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 5: 149. 1910, *Annali di Botanica* 10(3): 413. 1912, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1. Anhang): 79. 1930, *Cytologia* 19: 97-103. 1954, *Bothalia* 17: 135-136. 1987.

in English: cross grass, herringbone grass, sickle grass

in Angola: kaxixi

in Nigeria: lammu lammugel, lammulammugel

in southern Africa: pluimsekkelgras, sekelgras, meerjarige denneboomgras, ausdauerndes tannengras; lefieloane (Sotho); lefheto (Tswana)

Pogonatherum P. Beauv. = *Homoplitis* Trin., *Pogonopsis* Presl

From the Greek *pogon* "a beard" and *ather* "awn," referring to the glumes, to the appearance of the inflorescences.

Some 3 species, tropical Asia, India. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial, trailing, densely tufted and branched, slender, delicate, caespitose, decumbent, sometimes woody, culm internodes solid,

auricles absent, leaf blades linear, ligule a fringed membrane, leaves narrow and flat, plants bisexual, inflorescence axillary with spikelets laterally compressed, sessile and pedicellate spikelets of the same sex, pairs of sessile and pedicellate spikelets, sessile spikelets with 1-2 florets, the lower floret male and the upper bisexual or perfect, callus obtuse with an involucreal beard, two glumes subequal, lower glume convex on back and not keeled, upper glume awned 1-nerved, upper lemma bifid with a long slender awn, pedicellate spikelet with 1 floret usually female, palea nerveless, lodicules absent, stamens 1-2, ovary glabrous, 2 stigmas, found in damp rocky places, cliffs, stream beds, steep banks, shady places, mountains, resembling to *Lophopogon*, type *Pogonatherum saccharoideum* P. Beauv. (nom. illeg. superfl. for *Saccharum paniceum* Lam.), see Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie*. 56, 176, pl. 11, f. 7. Paris (Dec.) 1812, *Fundamenta Agrostographiae* 166. 1820, *Reliquiae Haenkeanae* 1(4-5): 333, t. 46. 1830, *Synopsis Plantarum Glumacearum* 1: 379. 1854 and *J. Arnold Arbor.* 31: 130-132. 1950, *Reinwardtia* 2: 333-334. 1953, *Boissiera*. 382. 1960, *Grasses of Burma ...* 200, 202. 1960, *Contributions from the United States National Herbarium* 46: 252, 540-541. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Weed Biology and Management* 5(2): 62-68. June 2005.

Species

P. crinitum (Thunb.) Kunth (*Andropogon crinitum* Thunb.; *Andropogon crinitus* Thunb.; *Andropogon monandrus* Roxb.; *Andropogon peduncularis* Kunth; *Cinna filiformis* Llanos, nom. illeg., non *Cinna filiformis* Link; *Homoplitis crinita* (Thunb.) Trin.; *Ischaemum crinitum* (Thunb.) Trin.; *Panicum polystachyum* Burm. ex Kunth, nom. illeg., non *Panicum polystachion* L.; *Pogonatherum refractum* Nees; *Pogonatherum saccharoideum* var. *crinitum* (Thunb.) F.N. Williams; *Pogonatherum saccharoideum* var. *monandrum* (Roxb.) Hack.; *Pogonatherum crinitum* (Thunb.) Steud.; *Pogonopsis tenera* J. Presl; *Pollinia monandra* Spreng.)

Asia, Japan, Afghanistan to India. Perennial, slender, tufted, wiry, weak, trailing, reddish brown, leaf sheath loose and smooth, leaf blade lanceolate, slender spike-like raceme, paired spikelets on a flattened axis, sessile spikelet usually 1-flowered, lower floret empty or reduced to a lemma, upper floret with 1-2 stamens, glumes hyaline, lemmas hairy, long awns, palea 2-toothed, ornamental, a paste of the ashes of the whole plant applied for skin diseases, grows in wet places, lowlands and lower elevations, slopes, along roadsides and streams, on banks, often in sandy places, see *Species Plantarum* 1: 5, 55. 1753, *Species Plantarum* 2: 1045, 1049. 1753, *Flora Japonica, ...* 40, t. 7. 1784, *Systema Vegetabilium. Editio decima quarta* 14: 903. 1784, *Fundamenta Agrostographiae* 166. 1820, *Flora Indica; or Descriptions ...* 1: 264. 1820, *Systema Vegetabilium, editio*

decima sexta 1: 288. 1825, *Révision des Graminées* 1: 166. 1829, *Reliquiae Haenkeanae* 1(4-5): 333, t. 46. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 298. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 478. 1833, *Nomenclator Botanicus. Editio secunda* 2: 261. 1841, *Gramineae* 50. 1841, *Fragmentos de Algunas Plantas Filipinas* 9. 1851, *Genera Plantarum* 3(2): 1127. 1883, *Monographiae Phanerogamarum* 6: 193. 1889 and *Handb. Fl. Ceylon* 5: 222. 1900, *Bulletin de l'Herbier Boissier, sér. 2, 4*: 221. 1904, *J. Arnold Arbor.* 31: 131. 1950, *Grasses of Ceylon* 172. 1956, *Flora of Pakistan. n. 143. Poaceae* 272. 1982.

in English: bamboo grass

in Japan: itachi-gaya

in Okinawa: hâmei-kûgii

in China: bi zi cao

in Thailand: yaa phai yong, ya phai yong, ya yung, yaa yuung

P. paniceum (Lam.) Hackel (*Perotis polystachya* Willd.; *Pogonatherum polystachyum* (Willd.) Roem. & Schult.; *Pogonatherum saccharoideum* P. Beauv.; *Pogonatherum saccharoideum* var. *genuinum* Hack.; *Pollinia polystachya* (Willd.) Spreng.; *Saccharum paniceum* Lam.)

East Africa. Perennial, ornamental, wiry, tufted, stiff, erect, reddish, leaves acuminate and hispid, sessile spikelet usually 2-flowered, lower floret staminate, upper floret with 2 stamens, wet places and riversides, see *Species Plantarum* 1: 54. 1753, *Encyclopédie Méthodique, Botanique* 1: 595, 40, f. 1. 1783, *Hortus Kewensis* 1: 85. 1789, *Species Plantarum. Editio quarta* 1: 324. 1797, *Essai d'une Nouvelle Agrostographie* 56: 176, pl. 11, f. 7. 1812, *Systema Vegetabilium* 2: 497. 1817, *Genera Plantarum* 3(2): 1127. 1883, *Monographiae Phanerogamarum* 6: 193. 1889 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 12: 178. 1906.

P. rufobarbatum Griffith (*Pogonatherum majus* Griseb.)

India. Tough, robust, solid, nodes glabrous, see *Notulae ad Plantas Asiaticas* 3: 81. 1851, August Heinrich Rudolph Grisebach, *Die geographische Verbreitung der Pflanzen Westindiens* Göttingen 1865.

Pogoneura Napper

From the Greek *pogon* “beard” and *neuron* “nerve.”

One species, East Africa. Chloridoideae, Eragrostideae, annual, herbaceous, unbranched, unarmed, glandular, ligule a ring of hairs, plants bisexual, inflorescence of slender racemes, spikelets solitary 2- to 3-flowered, 2 glumes unequal or subequal, lateral nerves of lemma ciliate or villous, palea with hairy crested keels, lodicules tiny or absent, 3 stamens, ovary glabrous, 2 stigmas, savannah,

possibly related to *Trichoneura*, type *Pogoneura biflora* Napper, see *Kirkia* 3: 112. 1963.

Species

P. biflora Napper

Tanzania. Glumes enfolding florets, upper glumes 1-nerved, lemmas rounded bidentate shortly awned, on clay soils.

Pogonochloa C.E. Hubb.

Greek *pogon* “beard” and *chloe, chloa* “grass.”

One species, Zambia, Zimbabwe, southern tropical Africa. Chloridoideae, Cynodonteae, perennial, tufted, herbaceous, unbranched, solid, unarmed, auricles absent, ligule a fringed membrane, leaf blades linear, plants bisexual, inflorescence spicate and contracted, racemes very short and crowded into a spiciform head, spikelets laterally compressed 2- to 3-flowered, second floret male or sterile, third floret reduced to an awn, 2 glumes subequal keeled membranous shortly awned, spikelets solitary, lemma membranous with a long flexuous awn, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, possibly related to *Schoenefeldia*, type *Pogonochloa greenwayi* C.E. Hubb., see *Hooker's Icones Plantarum* 35: t. 3421. 1940.

Species

P. greenwayi C.E. Hubb.

Zimbabwe. Glumes enclosing florets.

Pogononeura Napper

From the Greek *pogon* “beard” and *neuron* “nerve.”

One species, East Africa. Chloridoideae, annual, herbaceous, unbranched, unarmed, glandular, ligule a ring of hairs, plants bisexual, inflorescence spicate, slender racemes, spikelets solitary, 2 glumes unequal or subequal, palea present with hairy keels, lodicules tiny or absent, 3 stamens, ovary glabrous, 2 stigmas, see *Kirkia* 3: 112. 1963.

Species

P. biflora Napper

Tanzania.

Pogonopsis Presl = Pogonatherum P. Beauv.

Greek *pogon* “beard” and *opsis* “resembling.”

Panicoideae, Andropogoneae, Saccharinae, type *Pogonopsis tenera* J. Presl, see *Essai d'une nouvelle Agrostographie*. 56, 176, pl. 11, f. 7. Paris (Dec.) 1812, *Fundamenta Agrostographiae* 166. 1820, *Reliquiae Haenkeanae* 1(4-5): 333, t. 46. 1830, *Synopsis Plantarum Glumacearum* 1: 379. 1854

and *J. Arnold Arbor.* 31: 130-132. 1950, *Reinwardtia* 2: 333-334. 1953, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 382. 1960, *Grasses of Burma ...* 200, 202. 1960, *Contributions from the United States National Herbarium* 46: 540-541. 2003.

Pohlidium Davidse, Soderstrom & Ellis

Dedicated to the American botanist Richard Walter Pohl, 1916-1993, agrostologist, botanical collector in Colombia, Costa Rica, Honduras, U.S. (Texas and Iowa), author of "The genera of native bamboos of Costa Rica." *Rev. Biol. Trop.* 24(2): 243-249. 1976, "The Grasses of Iowa." *Iowa St. J. Sci.* 40: 341-566. 1966. See *Brittonia* 30: 160, 308. 1978; Gerrit Davidse, "Chromosome numbers of tropical American grasses (Gramineae): 5." *Ann. Missouri Bot. Gard.* 65: 637-649. 1978; Emmet J. Judziewicz, *Grasses of La Selva, Costa Rica: Poaceae (Gramineae) of Estación Biológica La Selva* (Organization of Tropical Studies), Puerto Viejo de Sarapiquí, Prov. Heredia, Costa Rica / Emmet J. Judziewicz and Richard W. Pohl. Madison, Wis.: University of Wisconsin 1984; *Phytologia* 60: 370. 1986; *Taxon* 43: 138. 1994; Lynn G. Clark, *Agnes Chase's First Book of Grasses: The Structure of Grasses Explained for Beginners* / Lynn G. Clark and Richard W. Pohl. 4th edition. Washington: Smithsonian Institution 1996; Jacob Peter Anderson (1874-1953), *Flora of Alaska and Adjacent Parts of Canada; an Illustrated Descriptive Text of All Vascular Plants Known to Occur within the Region Covered*. Integrated and indexed at the Anderson Herbarium by Richard W. Pohl. Ames, Iowa State University Press 1959.

One species, Panama, the Caribbean. Centothecoideae, Centothecae, or Panicoideae, Centothecae, or Bambusoideae, Oryzodae, Centothecae, perennial, tufted, herbaceous, branched, auricles present, ligule present or absent, leaf blades ovate pseudopetiolate, flowering culms leafy, plants monoecious, inflorescence paniculate and open with male spikelets on the periphery, spikelets unisexual, female spikelet 1-flowered and without glumes, male spikelets glumed or not, male florets 2-3-flowered and 2-3-staminate, palea present, 2 fleshy lodicules, no stamens, ovary glabrous, 2 stigmas, shade, rocky places, type *Pohlidium petiolatum* Davidse, Soderstr. & R.P. Ellis, see *Systematic Botany* 11(1): 131, f. 1-14. 1986, *Flora Mesoamericana* 6: 250. 1994, *Contributions from the United States National Herbarium* 46: 541. 2003.

Species

P. petiolatum Davidse, Soderstr. & R.P. Ellis

Panama.

Poidium Nees = *Briza* L., *Lombardochloa* Roseng. & B.R. Arrill., *Microbriza* Parodi ex Nicora & Rúgolo, *Monostemon* Henrard, *Poa* L.

Referring to the genus *Poa* L.

About 2-10 species, South America. Pooideae, Poeae, Brizinae, or Pooideae, Poodae, Poeae, perennial, herbaceous, unbranched, tufted, auricles absent, old sheaths fibrous, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, spikelets pedicellate, cleistogamous or chasmogamous, two glumes subequal, lower glume 1- to 3-nerved, upper glume 3-nerved, lemmas lanceolate or linear, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 1 stamen, ovary glabrous, 2 stigmas, marsh, sometimes referred to *Poa*, type *Poidium brasiliense* Nees ex Steud., see *Species Plantarum* 1: 67-68, 70. 1753, *An Introduction to the Natural System of Botany* 450. 1836, *Synopsis Plantarum Glumacearum* 1: 288. 1854 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 70. 1913, *Revista de la Facultad de Agronomía y Veterinaria* 3: 133. 1920, *Mededeelingen van's Rijks-Herbarium* 40: 72. 1921, Matthei, "Der *Briza*-Komplex in Südamerika: *Briza*, *Calotheca*, *Chascolytrum*, *Poidium* (Gramineae)," *Willdenowia*. Beihefte 8: 1-168. 1975, *Anales de la Facultad de Química de Montevideo* 9: 260. 1979, *Darwiniana* 23(1): 279-309. 1981, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 41: 22. 1987, *Cladistics* 14: 287-296. 1998, *Grasses: Systematics and Evolution* 61-74. 2000, *Contributions from the United States National Herbarium* 48: 582-583. 2003.

Species

P. ambiguum (Hack.) Matthei (*Briza ambigua* Hack.)

Brazil. See *Österreichische Botanische Zeitschrift* 52: 308. 1902, *Willdenowia*, Beih. 8: 121. 1975.

P. brachychaetum (Ekman) Matthei (*Briza brachychaete* Ekman; *Microbriza brachychaete* (Ekman) Parodi ex Nicora & Rúgolo)

Brazil. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 60, t. 4, f. 3. 1913, *Willdenowia*, Beih. 8: 107. 1975, *Darwiniana* 23(1): 292, 296. 1981.

P. brasiliense Nees ex Steud. (*Briza brasiliensis* (Nees ex Steud.) Ekman; *Briza itatiaiae* Ekman; *Poa brasiliensis* Raddi; *Poa poidium* Döll; *Poidium brasiliense* Nees ex Lindl.)

Brazil. See *Species Plantarum* 1: 67. 1753, *Agrostografia Brasiliensis* 51. 1823, *A Natural System of Botany*, edition 2, 450. 1836, *Synopsis Plantarum Glumacearum* 1: 288. 1854, *Flora Brasiliensis* 2(3): 119. 1878 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 57, 58, t. 4, f. 1. 1913, *Willdenowia* 8: 112. 1975.

P. calotheca (Trin.) Matthei (*Briza calotheca* (Trin.) Hack.; *Briza neesii* Döll; *Briza neesii* var. *angustifolia* Döll; *Briza neesii* var. *erecta* Döll; *Briza neesii* var. *flaccida* Döll; *Briza neesii* var. *laeviuscula* Döll; *Briza poa* Nees ex Steud.; *Briza scabra* Nees ex Steud.; *Eragrostis calotheca* Trin.; *Eragrostis crassa* Jedwabn.)

Brazil, Argentina. Tufted, erect, moist places, hillsides, slopes, open areas, rocky, see *Genera Plantarum* 23. 1776, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 414. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 340. 1833, *Synopsis Plantarum Glumacearum* 1: 276, 283. 1854, *Flora Brasiliensis* 2(3): 113, 132-133. 1878 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 282. 1904, *Botanisches Archiv* 5(3-4): 187. 1924, *Willdenowia*, Beih. 8: 116. 1975.

P. itatiaiae (Ekman) Nicora & Rúgolo (*Briza itatiaiae* Ekman)

Brazil. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 57, 58, t. 4, f. 1. 1913, *Darwiniana* 23(2): 306. 1981.

P. juergensii (Hack.) Matthei (*Briza juergensii* Hack.; *Eragrostis uniolooides* (Retz.) Nees ex Steud.)

Brazil, Colombia. Tufted, along roadsides, moist areas, see *Observationes Botanicae* 5: 19. 1788, *Synopsis Plantarum Glumacearum* 1: 264. 1854 and *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 76. 1915, *Willdenowia*, Beih. 8: 114. 1975, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 23: 118-131. 1988.

P. monandrum (Hack.) Matthei (*Briza lilloi* Parodi; *Briza mandoniana* (Griseb.) Henrard; *Briza mandoniana* var. *herzogiana* Henrard; *Briza mandoniana* var. *mandoniana*; *Briza mandoniana* var. *tuberculata* Henrard; *Briza mandoniana* var. *vallegrandensis* Henrard; *Briza monandra* (Hack.) Pilg.; *Briza monandra* var. *monandra*; *Briza stricta* var. *mandoniana* (Griseb.) Hauman; *Calotheca stricta* var. *mandoniana* Griseb.; *Poa monandra* Hack.) (for the French traveler Gilbert [Gustav] Mandon, 1799-1866, botanical collector in Bolivia, Portugal, Tunisia and Canary Islands. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 442. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 3: 273. Utrecht 1981; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Franz Georg Philipp Buchenau, 1831-1906, "Ueber die von Mandon in Bolivia gesammelten Juncaceen und einige andere südamerikanische Pflanzen dieser familie." *Abh. Naturwiss. Vereine Bremen*. 4: 119-139. 1875)

Bolivia, Argentina, Brazil. Tufted, open, along riverbanks, meadows, see *The Botany of Captain Beechey's Voyage* 50. 1832, *Nomenclator Botanicus. Editio secunda* 1: 225. 1840,

Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen 24: 289. 1879 and *Österreichische Botanische Zeitschrift* 52(10): 376. 1902, *Revista de la Facultad de Agronomía y Veterinaria* 3: 133, f. 6(1), f. 7(1). 1920, *Mededeelingen van's Rijks-Herbarium* 40: 70-71. 1921, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 725. 1929, *Willdenowia*, Beih. 8: 103. 1975.

P. poimorphum (J. Presl) Matthei (*Briza hackelii* (Lindm.) Ekman; *Briza hackelii* f. *hackelii*; *Briza hackelii* f. *pseudisachne* Ekman; *Briza poimorpha* (J. Presl) Henrard; *Isachne hackelii* Lindm.; *Isachne poaemorpha* (J. Presl) Mez ex Ekman; *Microbriza poimorpha* (J. Presl) Parodi ex Nicora & Rúgolo; *Monostemon tuberculosus* Balansa ex Henrard; *Panicum poaemorphum* J. Presl; *Panicum poaemorphum* J. Presl)

South America, Uruguay, Peru, Brazil. See *Prodromus Florae Novae Hollandiae* 196. 1810, *Reliquiae Haenkeanae* 1(4-5): 310. 1830 and *Kongliga Svenska Vetenskapsakademien Handlingar* 34(6): 11, t. 5. 1900, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 61. 1913, *Mededeelingen van's Rijks-Herbarium* 40: 73. 1921, *Willdenowia*, Beih. 8: 108. 1975, *Darwiniana* 23(1): 292, 295. 1981.

P. rufum (J. Presl) Matthei (*Briza glomerata* Arechav.; *Briza glomerata* Kuntze & Hack. ex Kuntze, nom. illeg., non *Briza glomerata* Arechav.; *Briza rufa* (J. Presl) Steud.; *Briza rufa* var. *rufa*; *Briza rufa* var. *sparsipilosa* Roseng., B.R. Arrill. & Izag.; *Briza scabra* (Nees ex Steud.) Ekman; *Chascolytrum rufum* J. Presl; *Chondrachyrum scabrum* Nees ex Steud.; *Lombardochloa rufa* (J. Presl) Roseng. & B.R. Arrill.; *Lombardochloa rufa* var. *rufa*; *Lombardochloa rufa* var. *sparsepilosa* (Roseng., B.R. Arrill. & Izag.) Roseng. & B.R. Arrill.)

South America. Tufted, see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Reliquiae Haenkeanae* 1(4-5): 282. 1830, *A Natural System of Botany* 2: 449. 1836, *Nomenclator Botanicus. Editio secunda* 1: 225. 1840, *Synopsis Plantarum Glumacearum* 1: 288. 1854, *Anales del Museo Nacional de Montevideo* 1(6): 469, t. 59. 1897, *Revisio Generum Plantarum* 3(2): 342. 1898 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 53. 1913, *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 105: 30. 1968, *Willdenowia*, Beih. 8: 98. 1975, *Anales de la Facultad de Química de Montevideo* 9: 260. 1979.

P. uniolae (Nees) Matthei (*Briza flava* Desv.; *Briza spicigera* (J. Presl) Steud.; *Briza uniolae* (Nees) Nees ex Steud.; *Briza uniolae* var. *modestior* Döll; *Briza uniolae* var. *robustior* Döll; *Briza uniolae* var. *uniolae*; *Chascolytrum spicigerum* J. Presl; *Cynosurus uniolae* L.f.; *Eragrostis uniolae* Nees; *Poa anomala* Kunth; *Poa uniolae* (L.f.) Schrad.)

South America. Tufted, see *Supplementum Plantarum* 110. 1781 [1782], *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Göttingische gelehrte Anzeigen (unter der Aufsicht der Königl. Gesellschaft der Wissenschaften)* 1821, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 494-495. 1829, *Reliquiae Haenkeanae* 1(4-5): 282. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 207. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 365. 1833, *Nomenclator Botanicus. Editio secunda* 1: 225. 1840, *Synopsis Plantarum Glumacearum* 1: 283. 1854, *Flora Brasiliensis* 2(3): 131. 1878 and *Willdenowia*, *Beih.* 8: 93. 1975.

Polevansia de Winter

After the Welsh (b. near Cardiff, Wales) botanist Iltyd (Iltyd) Buller Pole-Evans, 1879-1968 (d. Umtali, Rhodesia), mycologist, plant collector, traveler, 1907 Fellow of the Linnean Society, 1918-1939 Director Botanical Survey South Africa, 1921-1939 founder and editor of *Bothalia* (A record of contributions from the National Herbarium, Union of South Africa, Pretoria), editor of volumes 1-19 of *The Flowering Plants of South Africa* (A magazine containing hand-colored figures with descriptions of the flowering plants indigenous to South Africa, London, Johannesburg, and Cape Town. Superseded by *Flowering Plants of Africa*, Pretoria and Ashford), his writings include "A vegetation map of South Africa." *Mem. Bot. Surv. S. Afr.* 15. Pretoria 1936, "The Vegetation of South Africa." In: *South Africa and science*, edited by H.J. Crocker and J. MacCrae, pp. 192-214. 1929, "Gouwziecte" veld: its vegetation and flora. *Rep. Dir. Vet. Educ. Res.* 9-10: 109-119. 1923 and "A reconnaissance trip through the eastern portion of the Bechuanaland Protectorate, April 1931." *Mem. Bot. Surv. S. Afr.* 21: 5-73. 1948. See Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 283-285. 1981; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 314. 1972; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 557. 1994; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Gilbert Westacott Reynolds (1895-1967), *The Aloes of South Africa*. Balkema, Rotterdam 1982.

One species, South Africa, Eastern Cape. Chloridoideae, Cynodonteae, Chloridinae, perennial, herbaceous, unbranched, unarmed, rooting at the nodes, rhizomatous, stoloniferous, decumbent, mat-forming, leaves mostly basal, auricles absent, ligule a fringed membrane, leaf blades linear-lanceolate, plants bisexual, inflorescence spicate with spikelets solitary, spikelets with female-fertile florets only, one floret bisexual, 2 glumes unequal, lemmas shortly mucronate, palea present, 2 free and fleshy lodicules,

stamens 3, ovary glabrous, 2 plumose stigmas, open areas, mountain grassland, rocky or stony places, closely related to *Willkommia* Hackel, type *Polevansia rigida* De Winter, see *Bothalia* 9: 130-131. 1966.

Species

P. rigida De Winter

South Africa, Lesotho. Perennial, leaf sheaths overlapping, leaf blades linear, inflorescence rigid, spike-like racemes, glumes persistent, callus of floret short and obtuse, lemma coriaceous, found often near water.

Pollinia Sprengel = *Chrysopogon* Trin.

After the Italian botanist Ciro Pollini, 1782-1833, physician; see Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 218. Regione Siciliana, Palermo 1988.

Panicoideae, Andropogoneae, Sorghinae, type *Chrysopogon gryllus* (L.) Trin., see *Species Plantarum* 2: 1045. 1753, *Plantarum Minus Cognitarum Pugillus* 2: 10. 1815, *Fundamenta Agrostographiae* 188. 1820, *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *Austrobaileya* 5(3): 503-533. 1999, *Contributions from the United States National Herbarium* 46: 159-161, 541. 2003.

Pollinia Trinius = *Microstegium* Nees

For the Italian botanist Ciro (Cyrus, Siro) Pollini, 1782-1833, physician, lichenologist, bryologist, among his publications are *Sulle alghe viventi nelle terme Euganee*. Milano 1817, *Flora veronensis*. Veronae 1822-1824, *Elementi di botanica*. Verona 1810-1811, *Discorso storico sulla Botanica recitato ... 6 Aprile 1811*. Verona 1812, *Catechismo agrario, coronato dell'Accademia d'Agricoltura ... di Verona*. Verona 1807, *Sinonimia botanica moderna, ossia elenco dei diversi nomi attribuiti dagli autori moderni alle piante*. Milano 1805 and *Catalogo delle piante dell'orto botanico veronese per l'anno 1814*. Verona 1814. See G. Moretti, *Intorno alla Flora veronensis*. Milano 1822; J.H. Barnhart, *Biographical notes upon botanists*. 3: 96. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 314. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 218. Regione Siciliana, Palermo 1988.

Panicoideae, Andropogoneae, Saccharinae, see *Révision des Graminées* 1: 160. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(4): 304. 1832, *A Natural*

System of Botany Edition 2. 447. 1836, *Proceedings of the Linnean Society of London* 1: 92. 1841, *Genera Plantarum* 3(2): 1127. 1883, *Monographiae Phanerogamarum* 6: 152. 1889 and *Contributions from the United States National Herbarium* 46: 292, 541-542. 2003.

Pollinidium Stapf ex Haines = *Eulaliopsis*
Honda, *Pollinidium* Haines

Resembling *Pollinia*.

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, type *Pollinidium angustifolium* (Trin.) Haines, see *Observationes Botanicae* 5: 21. 1789, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 300. 1832, *Hooker's Icon. Pl.* 18: pl. 1773. 1888 and *Botanical Magazine* 37: 124. 1923, *The Botany of Bihar and Orissa* 5: 1020. 1924, *Botanical Magazine* 38: 56. 1924, *Bulletin of Miscellaneous Information Kew* 1932(2): 72. 1932, *Hooker's Icon. Pl.* 33(3): t. 3262, p. 6. 1935.

Polliniopsis Hayata = *Microstegium* Nees

Resembling *Pollinia*.

One species, Taiwan. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, variable, rare, herbaceous, creeping or rambling, tufted or sprawling, decumbent, more or less branched and rooting from lower nodes, internodes solid, leaf blades narrowly elliptic or lanceolate, ligule short, plants bisexual, inflorescence terminal, digitate or solitary racemes bearing pairs of pedicellate spikelets, 2 glumes more or less equal to subequal, lower glume concave, upper glume awned, lemmas bidentate linear, palea present or absent, 2 lodicules free and fleshy, stamens 3 or rarely 2, ovary glabrous, 2 stigmas, invasive weed species, shady places, type *Polliniopsis somai* Hayata, see *Essai d'une Nouvelle Agrostographie* 56, 176, pl. 11, f. 7. 1812, *Plantarum Minus Cognitarum Pugillus* 2: 10. 1815, *Fundamenta Agrostographiae* 188. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(4): 304. 1832, *A Natural System of Botany* edition 2, 447. 1836, *Nomenclator Botanicus. Editio secunda* 1: 556. 1840, *Proceedings of the Linnean Society of London* 1: 92. 1841, *Flora* 29: 117. 1846, *Synopsis Plantarum Glumacearum* 1: 357, 396. 1854, *Die Natürlichen Pflanzenfamilien* 2(2): 24. 1887, *Hooker's Icones Plantarum* 25: t. 2466. 1896, *The Flora of British India* 7: 163-164. 1896 and *Icones plantarum formosanarum nec non et contributiones ad floram formosanam*. 7: 74-75, f. 43. 1918, *Annales de la Société Linnéenne de Lyon, sér. 2* 68: 201. 1922 [1921], *Bulletin of*

Miscellaneous Information Kew 1927: 79. 1927, *Sinensia* 3(3): 91-92. 1932, *The Families of Flowering Plants. II. Monocotyledons* 2: 227, f. 40. 1934, *Blumea* 3(3): 453. 1940, *Botanical Magazine* (Tokyo) 56(691): 16. 1942, *The Grasses of Burma* 2, 62. 1945, *Kew Bulletin* 7(2): 209-223. 1952, *Bulletin du Jardin Botanique de l'État* 25: 240. 1955, *Novosti Sist. Vyss. Rast.* 1966: 15. 1966, *Kew Bulletin* 35(4): 816. 1981, *Journal of the Bombay Natural History Society* 79(3): 652. 1983, A.K. Goel and B.P. Uniyal, "On the occurrence of a few grasses in Pakistan and Nepal (*Ischaemum impressum*, *Ischnochloa falconeri*, *Microstegium vimineum*, *Puccinellia tenuiflora*)." *Journal of Economic and Taxonomic Botany* 4(3): 43. 1983, *Contributions from the United States National Herbarium* 46: 292. 2003.

Species

P. somai Hayata (*Microstegium japonicum* subsp. *somae* (Hayata) T. Koyama; *Microstegium somai* (Hayata) Ohwi; *Polliniopsis somai* Hayata)

Asia. Creeping, rambling, paired racemes with tough rachis, lemmas awned, palea absent, see *Icones plantarum formosanarum nec non et contributiones ad floram formosanam*. 7: 76-77, f. 45. 1918, *Botanical Magazine* 43: 394. 1929, *Acta Phytotaxonomica et Geobotanica* 11(3): 155. 1942, *Grasses of Japan and its Neighboring Regions* 516. 1987.

Polyantherix Nees = *Elymus* L., *Sitanion* Raf.

From the Greek *polys* "many" and *antherix*, *antherikos* "beard of an ear of corn, the ear itself."

Pooideae, Triticeae, Hordeinae, type *Polyantherix hystrix* (Nutt.) Nees, see *Species Plantarum* 1: 83. 1753, *The Genera of North American Plants* 1: 86. 1818, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, *Annals of Natural History* 1: 284. 1838, *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 10. 1899 and *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307, 583, 612-614. 2003.

Polyanthus C.H. Hu & Y.C. Hu =
Arundinaria Michx., *Polyanthus* C.H. Hu,
Polyanthus Y.C. Hu

From the Greek *polys* "many" and *anthos* "flower."

A monotypic genus. Bamboo, sometimes referred to *Arundinaria chinensis*, type *Polyanthus longispiculatus* (B.M. Yang) C.H. Hu ex Y.X. Hu, see *Flora Boreali-Americana* 1: 73-74. 1803 and *Oesterr. Bot. Z.* 53: 516. 1903, *Lingnan*.

Univ. Sci. Bull. No. 9: 64, 1940, *Acta Phytotax. Sin.* 18: 31. 1980, *J. Bamboo Res.* (1): 24, pl. 3. 1982, *Fl. Guizhouensis* 5: 320. 1988, *Journal of Bamboo Research* 10(3): 28-30. 1991, *J. Bamboo Res.* 13(1): 13. 1994.

Species

P. longispiculatus (B.M. Yang) C.H. Hu ex Y.X. Hu (*Arundinaria maculata* (McClure) C.D. Chu & C.S. Chao ex K.M. Lan; *Pleioblastus longispiculatus* B.M. Yang; *Pleioblastus maculatus* (McClure) C.D. Chu & C.S. Chao; *Pleioblastus oleosus* T.H. Wen; *Polyanthus longispiculatus* (B.M. Yang) C.H. Hu; *Sinobambusa maculata* McClure)

China, Hunan. See *Nat. Sci. J. Hunan Normal Univ.* 9(3): 4, f. 2. 1986 [also *J. Hunan Normal Univ., Nat. Sci. Ed.*], *J. Bamb. Res.* 10(3): 28-29. 1991.

Polyneura Peter = *Panicum* L.

Greek *polys* “many” and *neuron* “nerve,” ancient Greek *polyneuron* or *arnoglosson* for a species of *Plantago*, Latin *polyneuron* for a plant, a species of *Plantago*, great plantain.

Panicoideae, Paniceae, Paspalinae, or Panicoideae, Panicodae, Paniceae, Panicinae, type *Polyneura squarrosa* Peter, see *Species Plantarum* 1: 55, 58. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 117. 1816, *Bulletin Botanique [Genève]* 1: 220. 1830, *Flora Rossica* 4(14): 469. 1853 and *Flora of the Southeastern United States ...* 104, 1327. 1903, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *North American Flora* 3(2): 200, 210. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 242. 1931, *Die Natürlichen Pflanzenfamilien* edition 2 14e: 20. 1940, *Kew Bulletin* 34(3): 559. 1979 [1980], *Taxon* 33: 126-134. 1984, *Flora Mesoamericana* 6: 302-318. 1994, *Blumea* 41: 181-216, 416. 1996, *Taxon* 45: 319-320. 1996, *Taxon* 47: 869. 1998, *Taxon* 48: 376. 1999, *Contributions from the United States National Herbarium* 46: 306-441, 537. 2003.

Polyodon Kunth = *Bouteloua* Lag.

From the Greek *polys* “many” and *odous, odontos* “a tooth.”

Chloridoideae, Cynodonteae, Boutelouinae, type *Polyodon distichum* Kunth, see *Varietades de Ciencias, Literatura y Artes* 2(4, 21): 134, 141. 1805, *Species Plantarum. Editio quarta* 4(2): 937. 1805 [1806], *Nova Genera et Species Plantarum* 1: 174, 175, t. 55. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 294. 1825, *Nom. Gen. Pl.* 38. 1841, *Journal of the Linnean Society, Botany* 19: 105. 1881, *Gen. Pl.* 3(2): 1169. 1883 and *Brittonia* 23(3): 293-324. 1971, *Taxon* 33: 126-134. 1984, *Contributions from the United States National Herbarium* 41: 20-33, 190. 2001.

x Polypogonagrostis (Ascherson et Graebner) Maire & Weiler

Agropogon, Agrostis x Polypogon.

See *Flore de l'Afrique du Nord* : 2: 151. 1953, *Genera Graminum* 375. 1986.

Polypogon Desf. = *Chaetotropis* Kunth, *Nowodworskyia* Presl, *Raspailia* Presl, *Santia* Savi

From the Greek *polys* “many” and *pogon* “a beard,” much-bearded, the panicles are hairy, bristly, setaceous, whiskery; see René Louiche Desfontaines, *Flora atlantica*, sive Historia plantarum, quae in Atlante, agro Tunetano et Algeriensi crescunt. 1: 66. Paris (Apr.) 1798.

About 10-18 species, tropical and warm temperate areas, tropical mountains. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Agrostidinae, annual or perennial, herbaceous, slender, hollow, stoloniferous or caespitose, loosely tufted or solitary, upright or ascending, stems often decumbent, auricles absent, leaf sheath margins free, ligule an unfringed membrane, flat leaves linear to linear-lanceolate scabrous or setaceous, plants bisexual, silky and bristly inflorescence, panicle contracted to spike-like with deciduous spikelets, spikelets with female-fertile florets only, spikelets 1-flowered and short stipitate, papery to leathery narrow glumes awned and 1-nerved, awns of the glumes several times longer than the body, lemma membranous 5-nerved, awn straight to bent or absent, palea 2-nerved, 2 glabrous lodicules toothed or untoothed, stamens one to three, anthers pale yellow to tan, ovary glabrous, stigmas white, grain golden-brown, weed species of open habitats, pampas, salt marshes and damp pasture, moist soils along streams, shores, around springs, in meadows and in ditches, grasslands, wet sand or mud of stream banks, ornamental, closely related to and hybridization with *Agrostis* L., type *Polypogon monspeliensis* (L.) Desf., see *Flora Atlantica* 1: 66-67. 1798 [1800], *Memoria di Matematica e di Fisica della Società Italiana di Scienze Residente in Modena, Parte contenente le Memorie di Fisica* 8: 479. 1799, *Révision des Graminées* 1: 72. 1829, *Reliquiae Haenkeanae* 1(4-5): 238-239, 351, t. 40, 80. 1830, *Syn. Mitteleur. Fl.* 2(1): 160, 163. 1899 and *Symbolae Botanicae Upsaliensis* 17(1): 1-112. 1960 [Studies in *Agrostis* and related genera.], *Flora Mesoamericana* 6: 241-242. 1994, *Hickenia* 2(44): 209-214. 1997, *Hickenia* 2(57): 267-272. 1998, *Restoration Ecology* 6(1): 83-93. Mar 1998, *Las Gramíneas de México* 5: 1-466. 1999, *Restoration Ecology* 7(4): 411-412. Dec 1999, Gregory B. Noe and Joy B. Zedler, “Differential effects of four abiotic factors on the germination of salt marsh annuals.” *Am. J. Bot.* 87: 1679-1692. 2000, *Global Ecology and Biogeography* 10(2): 205-217. Mar 2001,

Oikos 99(3): 469-480. Dec 2002, *Contributions from the United States National Herbarium* 48: 232, 468, 583-588, 601, 605. 2003, *Journal of Biogeography* Volume 30, issue 12: 1937-1937. Dec 2003, *Oikos* 107(1): 128-140. Sep 2004, *Ecological Management and Restoration* 5(3): 183-190. Dec 2004, Bibit Halliday Traut, "The role of coastal ecotones: a case study of the salt marsh/upland transition zone in California." *Journal of Ecology* 93(2): 279-290. Apr 2005, Sonia L. Fontana, "Coastal dune vegetation and pollen representation in south Buenos Aires Province, Argentina." *Journal of Biogeography* 32(4): 719-735. Apr 2005.

Species

P. australis Brongn. (*Polypogon adscensionis* Trin.; *Polypogon chonoticus* Hook.f.; *Polypogon crinitus* Trin., nom. illeg., non *Polypogon crinitus* (Schreb.) Nutt.; *Polypogon elongatus* var. *patagonica* Speg.; *Polypogon interruptus* var. *crinitus* (Kuntze) Hack.; *Polypogon littoralis* var. *crinitus* Kuntze; *Polypogon purpurascens* Phil.; *Polypogon radicans* Steud.) (Ascension Isl., Chile)

South America, Chile, Chonos Archipelago, Argentina. Perennial, herbaceous, found in streams and ditches, see *Nova Genera et Species Plantarum* 1: 134-135. 1815 [1816], *The Genera of North American Plants* 1: 50. 1818, *De Graminibus unifloris et sesquifloris* 171. 1824, *Voyage autour du Monde* 2: 21. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 257. 1841, *Flora Antarctica* 2: 374. 1846, *Synopsis Plantarum Glumacearum* 1: 184. 1854, *Anales de la Universidad de Chile* 94: 9. 1896, *Revista de la Facultad de Agronomía y Veterinaria* 30-31: 582. 1897, *Revisio Generum Plantarum* 3: 367. 1898 and *Anales del Museo Nacional de Buenos Aires* 13: 473. 1906. in English: Chilean beard grass, Chilean rabbit's-foot grass, Chilean polypogon

in Spanish: cola de zorro

P. chilensis (Kunth) Pilg. (*Agrostis muricata* (J. Presl) Kunth; *Agrostis pectinata* Hack. & Arechav.; *Chaetotropis chilensis* Kunth; *Chaetotropis latifolia* Phil.; *Polypogon affine* Brongn.; *Polypogon chaetotropis* Trin.; *Vilfa muricata* J. Presl)

South America, Chile, southern Brazil to Argentina, Uruguay, Paraguay. Perennial, glumes acuminate, lemma muticous or shortly awned, common in disturbed places, sandy soil, moist places, see *Species Plantarum* 1: 61. 1753, *Familles des Plantes* 2: 495. 1763, *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 2(2): 19. 1829, *Révision des Graminées* 1: 72, 271, t. 47. 1829-1830, *Reliquiae Haenkeanae* 1(4-5): 240. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 219.

1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 262. 1841, *Linnaea* 30(2): 205. 1859, *Anales del Museo Nacional de Montevideo* 1(4): 347, t. 36. 1896 and *Repertorium Specierum Novarum Regni Vegetabilis* 16: 386. 1920.

P. elongatus Kunth (*Alopecurus elongatus* (Kunth) Poir.; *Arundinella berteroniana* (Schult.) Hitchc. & Chase; *Chaetotropis elongata* (Kunth) Björkman; *Chaetotropis elongata* var. *elongata*; *Chaetotropis elongata* var. *longearistata* Nicora; *Nowodworskya agrostoides* J. Presl; *Polypogon elongatus* Lag., nom. illeg., non *Polypogon elongatus* Kunth; *Polypogon elongatus* var. *strictus* E. Desv.; *Polypogon inaequalis* Trin.; *Polypogon intermedius* Carmich.; *Polypogon mexicanus* hort. ex Steud.; *Raspailia agrostoides* J. Presl; *Vilfa acutiglumia* Steud. ex Lechler)

South America, U.S., Mexico to Argentina, Chile, Bolivia, Peru, Colombia. Perennial or annual, riparian, herbaceous, loosely tufted, somewhat spreading, erect, decumbent and rooting at the nodes, leaf blades flat acute, dense panicles oblong contracted, pedicels deciduous, glumes pilose aristate subulate lanceolate scabrous, lemma glabrous and awned, ornamental, forage, found in salt marshes and on sand dunes, wet sand, muddy places, stream beds, marshy areas, disturbed places, see *Species Plantarum* 1: 60. 1753, *Familles des Plantes* 2: 495. 1763, *Nova Genera et Species Plantarum* 1: 134-135. 1815 [1816], *Genera et species plantarum* 3. 1816, *Encyclopédie Méthodique, Botanique Suppl.* 5: 495. 1817, *Transactions of the Linnean Society of London* 12: 504. 1819, *De Graminibus paniceis* 24. Petropoli 1826, *Révision des Graminées* 1: 72. 1829, *Reliquiae Haenkeanae* 1: 239, 351, t. 40, 80. 1830, *Flora Chilena* 6: 302. 1854, *Synopsis Plantarum Glumacearum* 1: 185. 1855 [1854], *Berberides Americae Australis* 56. 1857, *Revista de la Facultad de Agronomía y Veterinaria* 30-31: 582. 1897 and *Anales del Museo Nacional de Buenos Aires* 21: 94. 1911, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 182. 1913, *Symbolae Botanicae Upsaliensis* 17(1): 14. 1960, *Flora de la Provincia de Buenos Aires* 4(2): 208. 1970, *Brittonia* 23(3): 293-324. 1971.

in English: stream bank rabbit's-foot grass, stream bank rabbitsfoot grass

in Colombia: rabo de cachorro

in Mexico: cola de zorra, polibarbado largo

P. exasperatus (Trin.) Renvoize (*Agrostis asperigluma* Steud.; *Agrostis exasperata* Trin.; *Agrostis exasperata* var. *purpurascens* Kuntze; *Agrostis hackelii* R.E. Fr.; *Agrostis hackelii* f. *viridiflora* Hack.; *Agrostis haenkeana* Hitchc.; *Agrostis kuntzei* Mez; *Agrostis mucronata* J. Presl, nom. illeg., non *Agrostis mucronata* (Kunth) Spreng.; *Agrostis patagonica* Phil.; *Agrostis sanctacruzensis* Speg.; *Agrostis*

santacruzencis Speg.; *Agrostis speeiana* Mez; *Chaetotropis araucana* Phil.; *Chaetotropis asperigluma* (Steud.) Nicora; *Chaetotropis exasperata* (Trin.) Björkman; *Chaetotropis hackelii* (R.E. Fr.) Björkman; *Polypogon hackelii* (R.E. Fr.) Renvoize; *Vilfa acutiglumia* Steud. ex Lechler)

Argentina, Chile, Bolivia. Perennial, tufted, erect or ascending, leaf blades linear acute flat, loose panicles oblong, glumes lanceolate acute or mucronate scabrous or hispid, in moist places, see *Reliquiae Haenkeanae* 1(4-5): 238. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 352. 1841, *Synopsis Plantarum Glumacearum* 1: 422. 1854, *Berberides Americae Australis* 56. 1857, *Linnaea* 29(1): 88. 1858, *Anales de la Universidad de Chile* 94: 17. 1896, *Revisio Generum Plantarum* 3: 339. 1898 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 187, 190. 1902, *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 4, 1: 175, t. 9, f. 9-11. 1905, *Anales del Museo Nacional de Buenos Aires* 13: 474. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 300. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 18(1-3): 3. 1922, *Contributions from the United States National Herbarium* 24(8) 381. 1927, *Symbolae Botanicae Upsaliensis* 17(1): 14. 1960, *Flora Patagónica* 8(3): 402. 1978, *Gramíneas de Bolivia* 235-236. 1998.

P. fugax Nees ex Steudel (*Nowodworskya fugax* (Nees ex Steud.) Nevski; *Polypogon demissus* Steud.; *Polypogon higegaweri* Steud.; *Polypogon higegaweri* f. *demissus* (Steud.) I.C. Chung, also spelled *demissus*; *Polypogon littoralis* hort.; *Polypogon littoralis* var. *higegaweri* (Steud.) Hook.f., also spelled *hagegaweri*)

Himalayan region, Nepal, Somalia. Annual or perennial bunchgrass, very variable in size, often floating, low, loosely clumped, upright or ascending from geniculate base, often decumbent and rooting from the nodes, ligule rounded, glabrous and scabrous leaf blades linear-lanceolate and acute, compact and cylindrical panicle narrowly ovate, green to purple spikelets oblong, glumes rough and emarginate, lemma elliptic smooth awnless or shortly awned, grazed by cattle, a weed of wheat and rice, irrigation ditches, damp wasteland, plains and hills, swampy ground, banks of streams, sand flats, along roadsides, resembles *Polypogon monspeliensis*, see *Synopsis Plantarum Glumacearum* 1: 184, 422. 1854, *The Flora of British India* 7: 246. 1896 and *Journal of the Washington Academy of Sciences* 45(7): 215. 1955, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Cytology and Genetics* 21: 155. 1986, *Journal of Cytology and Genetics* 69: 447-451. 1990, *New Zealand Journal of Botany* 29: 101-116. 1991, *Cytologia* 56: 437-452. 1991, *Flora Mediterranea* 8: 307-313. 1998.

in English: ditch polypogon

in Japan: hie-gaeri

P. griquensis (Stapf) Gibbs.-Russ. (*Agrostis griquensis* Stapf; *Polypogon minutiflorus* Pilg.)

South Africa. Annual, rare, tufted, narrow cylindrical inflorescence, lemmas finely awned, disseminule formed by the floret and the short stipe, see *Bulletin of Miscellaneous Information Kew* 1897: 290. 1897 and *Memoirs of the Botanical Survey of South Africa* 58: 275. 1990.

P. hackelii (R.E. Fr.) Renvoize (*Agrostis hackelii* R.E. Fr.; *Chaetotropis hackelii* (R.E. Fr.) Björkman; *Polypogon exasperatus* (Trin.) Renvoize)

Argentina, Bolivia. Perennial, tufted, leaf blades linear scabrous flat acute, oblong panicles with branches straight or arching, compact spikelets lanceolate densely clustered, glumes acute or mucronate, lemmas aristate, in moist places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 352. 1841 and *Nova Acta Regiae Societatis Scientiarum Upsaliensis*, ser. 4, 1: 175, t. 9, f. 9-11. 1905, *Symbolae Botanicae Upsaliensis* 17(1): 14. 1960, *Gramíneas de Bolivia* 236. 1998.

P. imberbis (Phil.) Johow (*Agrostis tehuelcha* Speg.; *Chaetotropis imberbis* (Phil.) Björkman; *Chaetotropis imberbis* var. *bonariensis* Nicora; *Chaetotropis imberbis* var. *imberbis*; *Chaetotropis rioplatensis* (Herter) Björkman; *Nowodworskya imberbis* Phil.; *Polypogon elongatus* f. *minor* Hack.; *Polypogon elongatus* var. *muticus* Hack.; *Polypogon imberbis* (Phil.) Pilg., nom. illeg., non *Polypogon imberbis* (Phil.) Johow; *Polypogon imberbis* f. *aristata* Skottsb.; *Polypogon rioplatensis* Herter; *Polypogon rioplatensis* f. *elegans* Herter; *Polypogon rioplatensis* f. *robusta* Herter)

South America, Argentina, Brazil, Chile, Uruguay, U.S. See *Anales de la Universidad de Chile* 43: 562. 1873, Friedrich [Federico] Richard Adalbert Johow (1859-1933), *Estudios sobre la flora de las Islas de Juan Fernandez* ... 136. Santiago de Chile 1896 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 186. 1902, *Anales del Museo Nacional de Buenos Aires* 21: 94. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 16: 387. 1920, *The Natural History of Juan Fernandez and Easter Island* 2: 100. 1922, *Revista Sudamericana de Botánica* 6: 140. 1940, *Symbolae Botanicae Upsaliensis* 17(1): 14. 1960, *Flora de la Provincia de Buenos Aires* 4(2): 211. 1970.

P. interruptus Kunth (*Agrostis littoralis* With., nom. illeg., non *Agrostis littoralis* Lam.; *Agrostis lutosus* Poir.; *Alopecurus interruptus* (Kunth) Poir.; *Polypogon brachyatherus* Phil.; *Polypogon breviaristatus* Phil.; *Polypogon cachinensis* Phil.; *Polypogon interruptus* var. *breviaristatus* E. Desv.; *Polypogon interruptus* var. *interruptus*; *Polypogon interruptus* var. *longearistata* E. Desv.; *Polypogon littoralis* Sm.; *Polypogon littoralis* var. *interruptus* (Kunth) Kuntze; *Polypogon lutosus* auct. non (Poir.) A.S. Hitchc.; *Polypogon*

lutosus (Poir.) Hitchc.; *Polypogon microstachys* Phil.; *Polypogon tarapacanus* Phil.) (Chile, Cachinal de la Sierra; Chile, Tarapacá)

South America, Chile, Bolivia, Peru, Argentina, Ecuador. Perennial or annual, small, caespitose, herbaceous, erect, leaf blades flat acute, dense panicle, glumes acute or blunt, lemma aristate, fodder, growing in cultivated fields, moist soils along streams and rivers, in disturbed areas and disturbed wetlands, sandy soil, in wet to dry waste places, damp pastures, in moist ditches and margins, swamp and wetland areas, shores, around springs, similar to *Agropogon littoralis*, see *An Arrangement of British Plants, Third Edition* 1796, *Compendium Florae Britannicae* 13. 1800, *Encyclopédie Méthodique, Botanique* Suppl. 1: 249. 1810, *Nova Genera et Species Plantarum* 1: 134, t. 44. 1815 [1816], *Encyclopédie Méthodique, Botanique* Suppl. 5: 495. 1817, *Flora Chilena* 6: 298. 1854, *Florula Atacamensis seu enumeratio plantarum*, quas in itinere per desertum atacamense observavit Dr. R. Philippi ... 54. Halis Saxonium [Halle] 1860, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 82. Leipzig 1891, *Anales de la Universidad de Chile* 94: 8. 1896, *Revisio Generum Plantarum* 3(3): 367. 1898 and *Anales del Museo Nacional de Buenos Aires* 13: 473. 1906, *United States Department of Agriculture: Bulletin* 772: 138. 1920, *Nómina de las plantas recolectadas en el Valle de Cochabamba* 2: 17-86. 1966.

in English: ditch beard grass, beard grass, ditch rabbit's-foot grass, ditch polypogon

in Chile: colcha

in Mexico: zacate Natal

P. linearis Trin. (*Polypogon longiflorus* Nees ex Steud.; *Polypogon longiflorus* Nees ex Trin.)

Chile. See *Linnaea* 10(3): 301. 1836, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 263. 1841, *Nomenclator Botanicus. Editio secunda* 2: 378. 1841.

P. littoralis Smith (*Agropogon littoralis* (Sm.) C.E. Hubb.; *Agrostis littoralis* With., nom. illeg., non *Agrostis littoralis* Lam.; *Agrostis littoralis* Lam.; *Agrostis lutosus* Poir.; *Polypogon interruptus* Kunth; *Polypogon lutosus* (Poir.) Hitchc.)

Europe. Perennial, loosely tufted, erect and branched, leaf blade flat and ribbed, inflorescence a soft and bristly panicle rather loose, 1 floret, glumes subequal, lemma truncate and 5-toothed, palea 2-toothed, wet areas, disturbed sites, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 161. 1791, *Encyclopédie Méthodique, Botanique* Suppl. 1: 249. 1810, *Nova Genera et Species Plantarum* 1: 134, t. 44. 1815 [1816], *Compendium Florae Britannicae* (edition 2) 13. 1816, *The Genera of North American Plants* 1: 50. 1818, *De Graminibus unifloris et sesquifloris* 171. 1824,

Synopsis Plantarum Glumacearum 1: 422. 1854, *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* II 1: 35. 1860, *Exploration Scientifique de l'Algérie* 2: 288. 1867, *Flora Brasiliensis* 2(3A): 1-160, t. 1-43. 1878, *The Flora of British India* 7: 246. 1896, *Revisio Generum Plantarum* 3: 367. 1898 and *United States Department of Agriculture: Bulletin* 772: 138. 1920, *Journal of Ecology* 33: 333. 1946, *Blumea* 35: 446. 1991.

in English: perennial beard grass

P. maritimus Willd. (*Agrostis littoralis* With., nom. illeg., non *Agrostis littoralis* Lam.; *Alopecurus maritimus* (Willd.) Poir.; *Chaetopogon creticus* (Coustur. & Gand.) Hayek; *Polypogon monspeliensis* var. *maritimus* (Willd.) Cosson & Durand)

Mediterranean, Algeria, Egypt, Eurasia, China. Annual, herbaceous, tufted, erect or spreading, branched or unbranched, auricles absent, ligule acute and membranous, narrowly-ovate to oblong panicle bristly and dense, spikelets cleistogamous, glumes subacutely 2-lobed and awned, lemmas awnless, anthers yellow, weed species, found in sandy coastal areas, coastal wetlands, disturbed areas, damp places, see *Flora Atlantica* 1: 67. 1798, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 443. 1801, *Encyclopédie Méthodique, Botanique* 8: 779. 1808, *Flora Siculae Prodromus* (suppl.) 1: 19. 1832, *Flora Rossica* 4(13): 443. 1852, *Exploration Scientifique de l'Algérie* 2: 70. 1854, *Flora Orientalis* 5: 520. 1884 and *Boletim da Sociedade Broteriana* 57: 77-85. 1984, *Lagascalia* 15: 119-124. 1988, *Boletim da Sociedade Broteriana* 64: 35-74. 1991.

in English: Mediterranean beard grass, Mediterranean rabbit's-foot grass, coast beard grass, maritime rabbit's-foot grass, coastal bargrass

P. maritimus Willd. subsp. *maritimus*

Europe.

P. maritimus Willd. subsp. *subspathaceus* (Req.) Bonnier & Layens (*Polypogon maritimus* var. *subspathaceus* (Req.) Parl.; *Polypogon subspathaceus* Req.)

Europe, Mediterranean region, mainly on the islands. See *Annales des Sciences Naturelles (Paris)* 5: 386. 1825, *Flora italiana, ossia descrizione delle piante ...* 1: 200. 1848.

P. mollis (Th.) C.E. Hubb. & E.W. Groves (*Phalaris mollis* Thouars)

Tristan da Cunha. Indeterminate species, see Louis Marie Aubert du Petit Thouars (1758-1831), *Esquisse de la Flore de l'Isle de Tristan d'Acugna* 37. Paris 1808 and *Bulletin of the British Museum (Natural History), Botany* 8: 399. 1981, *Webbia* 49(2): 265-329. 1995.

P. monspeliensis (L.) Desf. (*Agrostis alopecuroides* Lam.; *Agrostis alopecuroides* (Buckley) A. Gray, nom. illeg., non *Agrostis alopecuroides* Lam.; *Agrostis crinita* (Schreb.) Moench; *Agrostis crinita* (L. f.) R. Br., nom. illeg., non

Agrostis crinita (Schreb.) Moench; *Agrostis crinita* (Trin. & Rupr.) Nees, nom. illeg., non *Agrostis crinita* (Schreb.) Moench; *Agrostis crinita* Rich. ex Trin. & Rupr., nom. illeg., non *Agrostis crinita* (Schreb.) Moench; *Alopecurus aristatus* var. *monspeliensis* (L.) Huds.; *Alopecurus monspeliensis* L.; *Phalaris aristata* Gouan ex P. Beauv., nom. illeg., non *Phalaris aristata* Schousboe ex Willd.; *Phalaris crinita* Forssk.; *Phalaris cristata* Forssk.; *Phleum crinitum* Schreb.; *Phleum monspeliensis* (L.) Koeler; *Polypogon crinitus* (Schreb.) Nutt.; *Polypogon flavescens* J. Presl; *Polypogon monspeliensis* f. *argentinus* Hack.; *Polypogon monspeliensis* f. *nana* Stuck.; *Santia monspeliensis* (L.) Parl.) (from the Latin *Monspelim*, *Monspessulus* “Montpellier, South France”)

North Africa, Asia, Europe. Annual, semiaquatic, usually coastal, herbaceous, small, very variable in size, bushy in moist places, slender stems solitary or clumped or loosely tufted, erect, spreading, geniculate at base, usually branched near base, often bent at nodes in lower stem, rooting when growing in standing water, soft foliage rough to touch, auricles absent, papery thin ligules, open leaf sheaths smooth to rough, leaf blade flat, leaves linear to linear-lanceolate, inflorescence of chasmogamous spikelets, green to yellow-green and silky spike-like very dense panicle, narrow oblong spikelets, 1 floret, obtuse glumes awned and short-ciliate, glume awns spreading, lemmas smooth and shining and shortly awned, palea membranous and 2-toothed, grain amber, awn of empty glumes three or four times as long as the glume, heavy seed producer, salt-tolerant, weed species, fodder, heavily grazed to ground level by sheep and goats, seeds eaten by birds, ornamental compact silky inflorescence, growing in irrigated areas, irrigation canals, often close to water, cultivated fields, brackish soils, along roadsides, in recently flooded areas, in disturbed areas and disturbed wetlands, in wet-to-dry waste places, in heavy clay loam, damp soils, around the edges of vernal pools, damp pastures near the sea, in moist ditches and margins, swamp and wetland areas, along ditch, moist soils along streams and near the edge of marsh, shores, around springs, moist river bed, see *Species Plantarum* 1: 61. 1753, *Flora Aegyptiaco-Arabica* 17, 19. 1775, *Flora Anglica* edition 2, 2: 28. 1778, *Supplementum Plantarum* 90. 1781, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 160. 1791, *Methodus Plantas Horti Botanici ...* 178. 1794, *Flora Atlantica* 1: 66-67. 1798, *Memoria di Matematica e di Fisica della Società Italiana di Scienze Residente in Modena, Parte contenente le Memorie di Fisica* 8: 479. 1799, *Descriptio Graminum in Gallia et Germania* 57. 1802, *Prodromus Florae Novae Hollandiae* 170. 1810, *Essai d'une Nouvelle Agrostographie* 172. 1812, *The Genera of North American Plants* 1: 50. 1818, *Flora* 12: 466. 1829, *Reliquiae Haenkeanae* 1: 234. 1830, *Linnaea* 10(3): 301. 1836, *Species Graminum Stipaceorum* 4-5. 1842, *Flora Palermitana* 1: 73. 1845, *Exploration Scienti-*

fique de l'Algérie 2: 70. 1854, *Pacif. Railr. Rep.* 5(2): 366. 1858, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 88, 333. 1862, *Enum. Pl. Zeyl.* 370, 444. 1864 and *Handb. Fl. Ceylon* 5: 259. 1900, *Anales del Museo Nacional de Buenos Aires* 11: 108. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 95. 1911, *Grasses of Ceylon* 60. 1956, *Grasses of Burma ...* 403. 1960, *Bulletin of the Botanical Survey of India* 25: 208. 1983, *Journal of Cytology and Genetics* 18: 60-61. 1983, *Fl. Turk.* 9: 356. 1985, *Journal of Cytology and Genetics* 22: 161-162. 1987, *Annali di Botanica* 45: 75-102. 1987, *Lagascalia* 15: 119-124. 1988, *Bothalia* 18: 114-119. 1988, *Journal of Cytology and Genetics* 25: 147-148. 1990, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Cytologia* 56: 436-452. 1991, *Candollea* 48(1): 221-230. 1993, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Watsonia* 20: 63-66. 1994, *Bothalia* 26(1): 63-67. 1996, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 13-14. 1997, *Flora Mediterranea* 8: 307-313. 1998, J.C. Callaway and J.B. Zedler, “Interactions between a salt marsh native perennial (*Salicornia virginica*) and an exotic annual (*Polypogon monspeliensis*) under varied salinity and hydroperiod.” *Wetlands Ecology and Management* 5: 179-194. 1998, *Taxon* 49(2): 245. 2000, Gregory B. Noe and Joy B. Zedler, “Differential effects of four abiotic factors on the germination of salt marsh annuals.” *Am. J. Bot.* 87: 1679-1692. 2000.

in English: annual beard grass, annual barbggrass, beard grass, rabbit's foot grass, rabbitfoot grass, rabbit foot grass, annual rabbit's foot grass, rabbit's foot, Montpellier beard grass, rabbitfoot polypogon

in French: polypogon de Montpellier

in Arabic: deil el-qott, dêl el fâr, gemh elfar

in Mauritania: gemh elfar

in Morocco: bousibouss, bu sibus

in South Africa: brakbaardgras, brakgras

in India: chitra, malhar, mandusi

in Japan: hama-hie-gaeri

in Mexico: cola de zorra

P. parvulus Roseng., B.R. Arrill. & Izag. (*Chaetotropis parvula* (Roseng., B.R. Arrill. & Izag.) Nicora)

South America, Uruguay. See *Gramíneas Uruguayas* 33, f. 8-9. 1970, *Hickenia* 2(19): 85. 1993.

P. schimperianus (Hochst. ex Steud.) Cope (*Agrostis alba* var. *schimperiana* (Hochst. ex A. Rich.) Engl.; *Agrostis alba* var. *simensis* (Hochst. ex A. Rich.) Engl.; *Agrostis fissa* Stapf; *Agrostis hirtella* Steud.; *Agrostis hirtella* Hochst. ex Steud.; *Agrostis schimperiana* Hochst. ex Steud.; *Agrostis schimperiana* Steud.; *Agrostis schimperiana* Hochst. ex A. Rich.; *Agrostis simensis* Hochst. ex A. Rich.)

East Africa, Zambia, Yemen. Perennial, loosely tufted, slender, weak, delicate, prostrate, geniculately ascending, root-

ing at the lower nodes, sometimes shortly stoloniferous or rhizomatous, narrow open panicle with ascending branches and spikelets clustered along the primary branches, deciduous florets, pedicels articulated, glumes acute pointed 1-nerved, lemmas 5-nerved glabrous, often in *Agrostis*, found in marsh and wet places, stream sides, upland grassland, mountain springs, often in *Polypogon*, see *Species Plantarum* 1: 63. 1753, *Tentamen Florae Abyssinicae* ... 2: 400. 1850, *Synopsis Plantarum Glumacearum* 1: 170, 173. 1854, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 128. 1891, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 58. 1894, *Bulletin of Miscellaneous Information Kew* 1897: 289. 1897 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 52. 1903, *Grass. Saudi Arabia* 132. 1989, *Kew Bulletin* 50(1): 116. 1995, *Flora of Ethiopia* 7: 44-46. 1995.

P. strictus Nees

South Africa, Cape. Annual, tufted, glumes awned, lemmas awned, usually found in coastal areas, in wet places.

P. tenellus R.Br. (*Alopecurus tenellus* (R. Br.) Chase; *Podosemum tenellum* Kunth; *Polypogon tenellus* (Kunth) Spreng., nom. illeg., non *Polypogon tenellus* R. Br.)

Australia. Annual, caespitose, slender, unbranched, auricles absent, upper sheath usually slightly inflated, ligule membranous, a panicle green and purple, spikelets pedicellate, anthers yellow, see *Prodromus Florae Novae Hollandiae* 173. 1810, *Nova Genera et Species Plantarum* 1: 128. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 243. 1825, *Synopsis Plantarum Glumacearum* 1: 184. 1855 [1854], *Flora Australiensis: A Description* ... 7: 547. 1878.

P. viridis (Gouan) Breistroffer (*Agrestis verticillata* (Vill.) Bubani; *Agrostis alba* L.; *Agrostis alba* var. *densiflora* Guss.; *Agrostis alba* var. *verticillata* (Vill.) Pers.; *Agrostis aquatica* Buckley, nom. illeg., non *Agrostis aquatica* Pourret; *Agrostis condensata* Willd. ex Steud.; *Agrostis decumbens* Muhl. ex Elliott; *Agrostis semiverticillata* (Forssk.) C. Christ.; *Agrostis stolonifera* var. *densiflora* (Guss.) Chiov.; *Agrostis stolonifera* var. *verticillata* (Vill.) St.-Amans; *Agrostis verticillata* Villars; *Agrostis villarsii* Poir.; *Agrostis viridis* Gouan; *Nowodworskya semiverticillata* (Forssk.) Nevski; *Nowodworskya verticillata* (Vill.) Nevski; *Phalaris semiverticillata* Forssk.; *Polypogon elongatus* Kunth; *Polypogon littoralis* var. *muticus* Hook.f.; *Polypogon semiverticillatus* (Forssk.) Hylander; *Polypogon semiverticillatus* (Forssk.) Hoover, nom. illeg., non *Polypogon semiverticillatus* (Forssk.) Hyl.; *Polypogon subverticillatus* (Forssk.) Hyl.; *Vilfa verticillata* (Vill.) P. Beauv.)

North Africa, Mediterranean, Algeria, Egypt. Perennial bunchgrass or annual, aquatic, unbranched, noded, robust, smooth, broad-leaved, scabrous, loosely tufted or stoloniferous, erect or geniculate, culm bases decumbent, often with creeping stolons rooting at nodes, ligule membranous, leaf blade flat and acuminate to acute, chasmogamous,

green or green-purple inflorescence, contracted panicle lobed with ascending branches, spikelets readily deciduous, glumes obtuse entire 1-nerved, lemma denticulate, glumes and lemmas awnless, weed species, forage, found in disturbed areas, waste ground, riverbanks, marshy grassland, stream banks, damp soils, wet sites, open grassy areas, wet sand, drains and verges, along roadsides, in or near water, on small floating islands in the mill pond or large springs, on dry-to-damp rocky soil, along lakeshores, often placed in *Agrostis* L., see *Species Plantarum* 1: 63. 1753, *Hortus Regius Monspeliensis* 546. 1762, *Flora Aegyptiaco-Arabica* 17. 1775, Dominique Villars (1745-1814), *Prospectus de l'Histoire des Plantes de Dauphiné* 16. Grenoble 1779, *Synopsis Plantarum* 1: 76. 1805, *Encyclopédie Méthodique, Botanique Suppl.* 1: 251. 1810, *Essai d'une Nouvelle Agrostographie* 16, 148, 182. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1: 136. 1816, *Flora Agenaise* 28. 1821, *Suppl. Fl. Sic. Prodr.* 1: 15. 1832, *Nomenclator Botanicus* edition 2, 1: 40. 1840, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 90. 1862, *The Flora of British India* 7: 246. 1896 and *Flora Pyrenaea* ... 4: 282. 1901, *Dansk Botanisk Arkiv* 4(3): 12. 1922, *Malpighia* 35. 1939, *Uppsala Universitets Årsskrift* 7: 74. 1945, *Leaflets of Western Botany* 5(8): 138. 1948, *Bulletin de la Société Botanique de France* 110(89): 56, 110. 1966, *Fl. Iraq* 9: 318, pl. 116. 1968, *Journal of Cytology and Genetics* 21: 155. 1986, *Annali di Botanica* 45: 75-102. 1987, *Lagascalia* 15: 119-124. 1988, *Journal of the Indian Botanical Society* 69: 447-451. 1990, *Cytologia* 56: 437-452. 1991, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Bothalia* 26(1): 63-67. 1996.

in English: bent grass, water bent grass, water bent, beardless rabbit's-foot grass, green bentgrass

in Mexico: cola de ardilla, cola de zorrillo, pasto

in Arabic: deil el-far, naaejm

Polypogonagrostis (Ascherson & Graebner) Maire & Weiler

See *Flore de l'Afrique du Nord* : 2: 151. 1953, *Genera Graminum* 375. 1986, *Contributions from the United States National Herbarium* 48: 588. 2003.

Polyraphis (Trin.) Lindl. = Pappophorum Schreb.

From the Greek *polys* "many, much" and *raphis* "a needle."

Chloridoideae, Pappophoreae, or Chloridoideae, Cynodonteae, *Pappophorum* sect. *Polyraphis* Trin., see *Genera Plantarum* 2: 787. 1791, *Symbolae Botanicae, ...* 3: 10, t. 51. 1794, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques,*

Physiques et Naturelles 1(1): 91. 1830, *The Vegetable Kingdom* 115. 1847 and *Contributions from the United States National Herbarium* 41: 178-181, 191. 2001.

Polyschistis Presl = *Bouteloua* Lag.,
Pentarrhaphis Kunth

Greek *polys* “many, much” and *schistos* “cut, divided.”

Chloridoideae, Cynodonteae, Boutelouinae, type *Polyschistis paupercula* J. Presl, see *Varietades de Ciencias, Literatura y Artes* 2(4, 21): 134, 141. 1805, *Nova Genera et Species Plantarum* 1: 177-178, t. 60. 1815 [1816], *Gen. Sp. Nov.* 5. 1816, *Reliquiae Haenkeanae* 1(4-5): 294, t. 41, f. 12. 1830, *Bulletin of the Torrey Botanical Club* 17: 233. 1890 and *Aliso* 18(1): 64. 1999, *Contributions from the United States National Herbarium* 41: 20-33, 181, 191. 2001.

Polytoca R. Br. = *Cyathorhachis* Steud.,
Cyathorhachis Nees ex Steud.

Greek *polys* “many” and *tokos* ‘a birth,’ *polytokia* “fecundity,” referring to the numerous offspring.

About 2-6 species, Indomalayan region, Southeast Asia, India. Panicoideae, Andropogonodae, Maydeae, or Chionachninae, perennial or annual, robust, caespitose, stout, branched, culm internodes solid or sometimes compressed, glabrous or softly bearded nodes, auricles present or absent, ligule an unfringed membrane, plants monoecious, male and female spikelets on the same inflorescence and usually the male above, all the fertile spikelets unisexual, inflorescences lateral and terminal, spike-like racemes and panicles, sessile and pedicellate spikelets pairs, spikelets unisexual, female sessile spikelet with 2 florets, female pedicellate spikelet sterile, male sessile spikelet with 2 florets, glumes 2 more or less equal, lower glume of female spikelet obtuse or emarginate, upper glume many-nerved, palea 2-nerved, lodicules absent, no stamens, ovary glabrous, 2 stigmas red, good fodder species, cattle fodder, forest margins, type *Polytoca bracteata* R. Br., see John Joseph Bennett (1801-1876) and Robert Brown, *Plantae Javanicae rariorum*. 15, 18, 20, f. 5. London (July) 1838, *Synopsis Plantarum Glumacearum* 1: 403. 1854 [1855] and *Blumea* 47(3): 545-580. 2002 [Revision of Chionachninae (Gramineae: Andropogoneae)].

Species

P. digitata (L.f.) Druce (*Apluda digitata* L.f.; *Coix heteroclita* Roxb.; *Polytoca bracteata* R. Br.; *Polytoca digitata* (L.f.) Henrard, nom. illeg., non *Polytoca digitata* (L.f.) Druce; *Polytoca heteroclita* (Roxb.) Koord.)

Asia, Thailand. Tufted, hispid, lower glume of sessile male spikelet chartaceous, male pedicellate spikelet like female, see *Species Plantarum* 2: 972. 1753, *Supplementum Plantarum* 434. 1782, *Flora Indica; or, Descriptions of Indian Plants* 3: 572. 1832, *Plantae Javanicae Rariores* 20, f. 5. 1838 and S.H. Koorders (1863-1919), *Exkursionsflora von Java ...* 4 vols. 1: 99. Jena 1911-1937, *Report. Botanical Exchange Club. London.* 4: 641. 1917, *Mededeelingen van's Rijks-Herbarium* 67: 10. 1931.

in Thailand: khaao phot phee, khao phot phi

P. macrophylla Benth. (*Chionachne macrophylla* (Benth.) Clayton)

Malesia. Cattle fodder, see *Plantae Javanicae Rariores* 15, 18. 1838, *Journal of the Linnean Society, Botany* 19: 52. 1881 and *Kew Bulletin* 35(4): 814. 1981, *Blumea* 47(3): 563. 2002.

P. wallichiana (Nees ex Steud.) Bentham (*Cyathorhachis wallichiana* Nees ex Steud.; *Polytoca wallichiana* (Nees) Steud.) (named for the Danish (b. Copenhagen) physician Nathaniel Wallich (originally Nathan Wulff or Wolff), 1786-1854 (d. London), botanist and botanical collector (India, Malaya, Cape, Nepal), pupil of Vahl at Copenhagen, in 1807 went out to India as surgeon, 1809 with William Roxburgh (1751-1815) at Calcutta, 1813 with the Hon. East India Company, 1815-1846 Superintendent of the Calcutta Botanic Garden (like his predecessor W. Roxburgh), 1818 Fellow of the Linnean Society, 1820-1822 plant collector in Nepal, 1829 Fellow of the Royal Society, 1833 visited Assam, correspondent of the naturalist and plant collector John Reeves (1774-1856), among his most valuable writings are *Tentamen Florae Nepalensis*. Calcutta and Serampore 1824-1826, *Descriptions of Some Rare Indian Plants*. [Asiatic Researches 1820] 1820 and *Plantae Asiaticae rariorum*. London [1829-] 1830-1832, father of George Charles Wallich (b. Calcutta 1815-d. Marylebone, London 1899); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 454. 1965; I.H. Vegter, *Index Herbariorum*. Part II (7), *Collectors T-Z*. Regnum Vegetabile vol. 117. 1988; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 796. 1993; C.F.A. Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; I.H. Vegter, *Index Herbariorum*. Part II (5), *Collectors N-R*. Regnum Vegetabile vol. 109. 1983; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 369-370. 1981; K. Biswas, editor, *The Original Correspondence of Sir Joseph Banks Relating to the Foundation of the Royal Botanic Garden, Calcutta and The Summary of the 150th Anniversary Volume of the Royal Botanic Garden, Calcutta*. Calcutta 1950; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Andrew Thomas Gage, *A History of the Linnean Society of London*. London 1938; K. Lemmon, *Golden Age of Plant Hunters*. London. 1968D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. London

1914; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; E. Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 425. Boston, Mass. 1972; Daniel Merriman, in *D.S.B.* 14: 145-146. 1981; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; [Sir J.E. Smith], *Memoir and Correspondence of ... Sir J.E. Smith ...* Edited by Lady Pleasance Smith. London 1832; M. Archer, *Natural History Drawings in the India Office Library*. London 1962; James Britten and George E. Simonds Boulger, *A Biographical Index of Deceased British and Irish Botanists*. London 1931)

Burma. Slender, lower glume of sessile male spikelet herbaceous and unwinged, lower glume awned, see *Synopsis Plantarum Glumacearum* 1: 403. 1854, *Journal of the Linnean Society, Botany* 19: 52. 1881 and *Meded. Rijks-Herb.* 67: 9. 1931.

Polytrias Hackel = Aethonopogon Kuntze

Greek *polys* "many" and *treis, tria* "three," referring to the spikelets, in group of three; see H.G.A. Engler & K.A.E. Prantl (1849-1893), *Die Natürlichen Pflanzenfamilien*. 2(2): 24. (July) 1887.

One species, Indonesia, Java. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial, herbaceous, creeping, erect, stoloniferous, leaves mainly basal, auricles absent, ligule a short fringed membrane, plants bisexual, inflorescence terminal, a single raceme bearing the spikelets in triplets, 2 spikelets sessile and one pedicelled at each node of the raceme, the shorter spikelets bisexual, 2 glumes more or less equal, lower glume cartilaginous 2-keeled, upper glume truncate, upper lemma 2-dentate awned, palea 2-nerved, lodicules absent, 3 stamens, ovary glabrous, 2 stigmas, mat-forming, lawn grass, open humid habitats, along roadsides, lawns, wasteland, playing fields, closely related to *Eulalia*, type *Polytrias praemorsa* (Nees ex Steud.) Hack., see *Révision des Graminées* 1: 160. 1829, *Die Natürlichen Pflanzenfamilien*. 2(2): 24. 1887, *Monographiae Phanerogamarum* 6: 189, t. 1, f. 13. 1889, *Revisio Generum Plantarum* 2: 788. 1891 and *Bulletin of the Tokyo Science Museum* 18: 2. 1947, *Flora Mesoamericana* 6: 380. 1994, *Contributions from the United States National Herbarium* 46: 14, 542. 2003.

Species

P. indica (Houtt.) Veldk. (*Andropogon amaurus* Büse; *Andropogon diversiflorus* Steud.; *Andropogon firmandus* Steud.; *Eulalia amauro* (Büse) Ohwi; *Eulalia praemorsa* (Nees) Stapf ex Ridl.; *Eulalia praemorsa* (Nees ex Steud.) Stapf ex Ridl.; *Ischaemum indicum* (Houtt.) Merr.; *Phleum indicum* Houtt.; *Pogonatherum amauro* (Büse) Roberty; *Pollinia diversiflora* (Steud.) Nash; *Pollinia praemorsa* Nees; *Pollinia praemorsa* Nees ex Steud.; *Polytrias amauro* (Büse) O. Kuntze; *Polytrias amauro* subvar. *pallida* Kuntze; *Polytrias diversiflora* (Steud.) Nash; *Polytrias praemorsa* (Nees) Hack.; *Polytrias racemosa* (Nees) Hack.)

Pantropical, Southeast Asia. Perennial, erect and prostrate, caespitose, branched, mat-forming, leaf sheath tightly wrapped around the stem, leaf blade often purple, ligule a fringed membrane, brown simple spike-like raceme, spikelets in group of three, one spikelet stalked and the other 2 sessile, lower glume ovate and very hairy, upper glume boat-shaped, lemma hyaline and keeled, long twisted awn, palea hyaline, fodder for cattle, low nutritional value, used as a lawn grass, see *Species Plantarum* 1: 59. 1753, *Species Plantarum* 2: 1049. 1753, *Natuurlijke Historie* 13: 198, t. 90, f. 2. 1782, *Observationes Botanicae* 6: 36. 1791, *Essai d'une Nouvelle Agrostographie* 56, 176, pl. 11, f. 7. 1812, *Révision des Graminées* 1: 160. 1829, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 98. 1850, *Synopsis Plantarum Glumacearum* 1: 370, 373, 409. 1854 [1855], *Plantae Junghuhnianae* 3: 360. 1854, *Flora Hongkongensis* 426. 1861, *Genera Plantarum* 3(2): 1127. 1883, *Monographiae Phanerogamarum* 6: 189, t. 1, f. 13. 1889, *Revisio Generum Plantarum* 2: 788-789. 1891 and *Torreyia* 5: 110. 1905, *Journal of the Federated Malay States Museums* 10: 251. 1922, *Journal of the Arnold Arboretum* 19(4): 320. 1938, *Bulletin of the Tokyo Science Museum* 18: 2. 1947, *Grasses of Ceylon* 168. 1956, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 180. 1960, *Boissiera*. 9: 393. 1960, *Micronesica* 18(2): 45-102. 1982, *Acta Botanica Yunnanica* 5(4): 345-346. 1983, *Blumea* 36(1): 180-181. 1991.

in English: Java grass

in Thailand: yaa nuan chan, ya nuan chan

Pommereulla L.f. = Melanocenchris Nees

One species, India, eastern Asia, Sri Lanka. Chloridoideae, perennial, stout, erect, tough, leaves mostly basal, leaf sheaths closely imbricate, leaf blades strap-like, ligule ciliate, stoloniferous, erect flowering culms, plants bisexual, inflorescence a single raceme, uppermost leaf sheath partially enclosing spikes, spikelets turbinate sessile with 1-2 empty lemmas and 2-3 fertile florets, two glumes membranous, upper glume 3-nerved, lemmas coriaceous 7- to 9-nerved 4-lobed, sterile florets reduced to lemmas, palea

membranous and acuminate, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas, lowlands, coastal, arid and dry regions, related to *Astrebula* and *Lintonia*, type *Pommereulla cornucopiae* L.f., see *Nova Graminum Genera* 31. 1780 [21 Dec 1779], *Der Gesellschaft naturforschender Freunde zu Berlin, neue Schriften* 4: 218. 1803, *Novae Plantarum Species* 33. 1821, *Proceedings of the Linnean Society of London* 1: 94, 95. 1841, *Nomenclator Botanicus. Editio secunda* 2: 379. 1841, *Illustrationes Plantarum Orientalium* 4: 38, pl. 326. 1850-1853, *Revisio Generum Plantarum* 1(2): 780. 1891, *The Flora of British India* 7: 283, 300. 1896 and *Handb. Fl. Ceylon* 5: 284, 286. 1900, *Flora of the Presidency of Madras* 10: 1831. 1934, *Kew Bulletin* 1935: 148. 1935, *Grasses of Ceylon* 87, 92. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 123. 1959, *Grasses of Burma ...* 473, 620, f. 74. 1960, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

P. cornucopiae L.f.

Southern India, Sri Lanka. Perennial, stout, herbaceous, leaf blades linear, spikes partially hidden by upper leaf sheath, spikelets solitary, glumes glabrous, sterile lemmas 4-lobed, palea present, lodicules glabrous, costal, sand flats.

Ponceletia Thouars = *Ponceletia* R. Br. (Epacridaceae), *Psammophila* Schult., *Spartina* Schreb.

After Abbé Poncelet or Père Polycarpe or Polycarpe Poncelet, born in Verdun, author of *Histoire naturelle du Froment*. Paris 1779, *La Nature dans la Formation du Tonnerre*. Paris 1766, *Chimie du Goût et de l'Odorat*. Paris 1755 and *Nouvelle Chymie du goût et de l'odorat*. 1800.

Chloridoideae, Cynodonteae, or Chloridoideae, Zoysieae, Sporobolinae, type *Ponceletia arundinacea* Thouars, see *Genera Plantarum* 43. 1789, *Catalecta Botanica* 3: 10. 1806, *Esquisse de la Flore de l'Isle de Tristan d'Acugna* 36. 1808, *Prodromus Florae Novae Hollandiae* 554. 1810, *Transactions of the Linnean Society of London* 12: 504. 1819, *Systema Vegetabilium* 1 Mant. 1: 69, 231. 1822 and *Iowa State College Journal of Science* 30(4): 471-574. 1956, *Journal of the Linnean Society, Botany* 60: 381-405. 1968, *Contributions from the United States National Herbarium* 41: 191, 195-200. 2001.

Poranthera Raf. = *Poranthera* Rudge (Euphorbiaceae), *Sorghastrum* Nash

Greek *poros* "opening, pore" and *anthera* "anther."

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Sorghinae, see *Methodus Plantas Horti Botanici ...* 207. 1794, *Transactions of the Linnean Society of London* 10: 302. 1811, *A Sketch of the Botany of South-Carolina and Georgia* 1: 144. 1816, C.S. Rafinesque, *Seringe Bull. Bot.* 1: 221. 1830, *Index Kewensis* 2: 606. 1894 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Flora of Tropical Africa* 9: 111. 1917, E.D. Merrill, *Index rafinesquianus*. 76. 1949, *University of California Publications in Botany* 23(6): 324. 1950, *Contributions from the United States National Herbarium* 46: 542, 594-598. 2003.

Porroteranthe Steud. = *Glyceria* R. Br.

Greek *porro, proso* "forwards, onwards, further in," Latin *porrum* and *porrus* "leek," *anthos* flower.

Pooideae, Meliceae, type *Porroteranthe drummondii* Steud., see *Familles des Plantes* 2: 226. 1763, Noel [Natalis] Joseph de Necker (1730-1793), *Elementa botanica genera genuina*, species naturales omnium vegetabilium detectorum ..., secundum systema omologium seu naturale... 2: 55. Neowedae ad Rhenum [Neuwied] 1790, *Prodromus Florae Novae Hollandiae* 179, 532. 1810, *Nomenclator Botanicus. Editio secunda* 2: 356. 1841, *Synopsis Plantarum Glumacearum* 1: 287. 1854 and *Kew Bulletin* 1934: 450. 1934, *Contributions from the United States National Herbarium* 48: 371-379, 589. 2003.

Porteresia Tateoka = *Indoryza* Henry & Roy, *Sclerophyllum* Gaudin, *Sclerophyllum* Griff.

For the French botanist Roland Portères, 1906-1974, agronomist, ethnobotanist, traveler, plant collector in Senegal, Guinea, Mali, Ivory Coast, West Cameroon, author of "Eleusine caracana Gaertner, céréale des humanités pauvres des pays tropicaux." *Bulletin de l'Institut Français d'Afrique noire*. tom. 13: 1-78. 1951, "Les céréales ... du genre *Digitaria* en Afrique et en Europe." *Journ. Agric. Trop. Bot. Appl.* ii. Paris 1955, "La Physionomie de la végétation pastorale." *Mem. Soc. Broteriana* 13: 105-106. 1958 and *Observations sur les possibilités de culture du soja en Guinée forestière*. Nogent-sur-Marne 1946. See Gilbert Bouriquet et al., "Le vanillier et la vanille." *Encycl. Biol.* vol. 46. [Taxonomy by Roland Portères] Paris 1954; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 1-110. Paris 1968; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 66. Utrecht 1971; Auguste Jean Baptiste Chevalier, *Flore vivante de l'Afrique Occidentale Française*. 1: xxvii-xxx. Paris 1938; Cours de [sic] ethno-botanique et ethno-zoologie (1969-1970). vol. 1, *Ethno-botanique générale* / Roland Portères. Paris:

Institut d'Ethnologie; Muséum National d'Histoire Naturelle [1970?].

One species, Asia, India, Myanmar. Bambusoideae, Oryzodae, Oryzeae, perennial, herbaceous, more or less aquatic, leaves linear, leaf blades tough with tuberculate-prickly margins, plants bisexual, inflorescence paniculate, spikelets bisexual and pedicellate, glumes absent or present, fertile lemma coriaceous and strongly keeled, palea present, 2 membranous lodicules, usually 6 stamens, ovary glabrous, 2 stigmas, found in swampy areas, tidal swamps, possibly adapted to the salinity in the soils, closely related to *Oryza* L., see *Species Plantarum* 1: 333. 1753, *Flora Helvetica* 5: 47. 1829, *Notulae ad Plantas Asiaticas* 3: 8. Calcutta 1851 and *American Journal of Botany* 51: 539-543. 1964, *Bulletin of the National Science Museum* 8: 406. Tokyo 1965, *Bulletin of the Botanical Survey of India* 8: 42-44. 1966, *Bulletin of the Botanical Survey of India* 10: 274. 1969, *Bulletin of the Torrey Botanical Club* 101: 244. 1974, *Genera Graminum* 71. 1986, D.A. Vaughan, "The genus *Oryza* L.: current status of taxonomy." International Rice Research Institute, Manila, Philippines 1989, Francis R. Horne and Ari Kahn, "Water loss and viability in *Zizania* (Poaceae) seeds during short-term desiccation." *Am. J. Bot.* 87: 1707-1711. 2000, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang and De-Yuan Hong, "A phylogeny of the rice tribe Oryzeae (Poaceae) based on *matK* sequence data." *American Journal of Botany* 89: 1967-1972. 2002.

Species

P. coarctata (Roxb.) Tateoka (*Indoryza coarctata* (Roxb.) A.N. Henry & B. Roy; *Oryza coarctata* Roxb.; *Sclerophyllum coarctatum* (Roxb.) Griff.)

India. Grain said to be edible, see *Flora Indica*; or, *Descriptions of Indian Plants* 2: 206. 1832, *Notulae ad Plantas Asiaticas* 3: 8. 1851 and *Bulletin of the Botanical Survey of India* 10: 274. 1969, R.J. Probert and P.L. Longley, "Recalcitrant seed storage physiology in three aquatic grasses (*Zizania palustris*, *Spartina anglica* and *Porteresia coarctata*)." *Annals of Botany* 63: 53-63. 1989.

Potamochloa Griff. = Hygroryza Nees

Greek *potamos* and *chloe*, *chloa* "grass."

Bambusoideae, Oryzodae, Oryzeae, type *Potamochloa retzii* Griff. (nom. illeg. superfl. for *Pharus aristatus* Retz.), see *Species Plantarum* 1: 333. 1753, *Observationes Botanicae* 5: 23. 1789, *Edinburgh New Philosophical Journal* 15: 380. 1833, *Journal of the Asiatic Society of Bengal* 5: 571, t. 24. 1836, *Synopsis Plantarum Glumacearum* 1: 4. 1855 [1853] and *Cytologia* 56: 95-102. 1991, *Am. J. Bot.* 89: 1967-1972. 2002.

Potamophila R. Br. = Maltebrunia Kunth, Potamophila Schrank (Phytolaccaceae)

From the Greek *potamos* "a river" and *philein* "to love," *philos* "lover, loving," alluding to the habitats of the species.

One species, Australia, New South Wales. Bambusoideae, Oryzodae, Oryzeae, perennial, aquatic, erect, tall, rhizomatous, tufted, leafy, auricles present or absent, ligule an unfringed membrane, linear leaf blades not petiolate, inflorescence of mixed unisexual and bisexual spikelets, lax panicles, 3 florets, the uppermost floret well developed and fertile, the lower 2 florets reduced to very small scale-like lemmas, glumes present to absent, sterile lemmas ovate membranous nerveless, fertile lemma awnless, palea and lodicules present, 6 stamens, ovary glabrous, 2 stigmas plumose, fruit more or less compressed, propagated using divisions and seed, a wild relative of domestic rice, the closest relative of *Potamophila* R. Br. is *Chikusichloa* Koidzumi which is endemic in Asia, along streams and rivers, gravel banks, type *Potamophila parviflora* R. Br., see *Species Plantarum* 1: 333. 1753, R. Brown, *Prodromus florum Novae Hollandiae et Insulae van-Diemen* 211. London (Mar.) 1810, *Plantae rariorum horti academici monacensis* 2: t. 63. 1819 [1821], *Révision des Graminées* 1: 183, t. 3. 1830, *Florae Africae Australioris Illustrationes Monographicae* 194. 1841, *Journal of the Linnean Society, Botany* 19: 55. 1881, *Genera Plantarum* 3: 1116. 1883 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 652. 1932, Bernard De Winter (b. 1924), "A morphological, anatomical and cytological study of *Potamophila prehensilis* (Nees) Benth." *Bothalia* 6. 1951, *Bulletin de la Société Botanique de France* 108: 243. 1961, *Flore du Gabon* 5: 243. 1962, *Hooker's Icones Plantarum* 36: 3, t. 3595. 1962, H. Duistermaat, "A revision of *Oryza* (Gramineae) in Malesia and Australia." *Blumea* 32: 157. 1987, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang and De-Yuan Hong, "A phylogeny of the rice tribe Oryzeae (Poaceae) based on *matK* sequence data." *American Journal of Botany* 89: 1967-1972. 2002.

Species

P. parviflora R. Br. (*Oryza parviflora* (R. Br.) Baill.; *Potamophila parviflora* Schrank, Phytolaccaceae, nom. illeg., non *Potamophila parviflora* R. Br.)

Australia. Perennial, aquatic, riparian, tall, tufted, reedlike, rhizomatous, ligule membranous, 3 florets, the lower 2 florets reduced and sterile, the upper floret bisexual, lemma membranous, palea nerved and membranous, useful for water erosion control, grows along streams and streamlets, wetter areas, see *Prodromus Florae Novae Hollandiae* 211. 1810, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1063. 1892, M. Abedinia, R.J. Henry et al., "Distribution and phylogeny of *Potamophila parviflora* R. Br. a wild

relative of rice from eastern Australia." *Genetic Resources and Crop Evolution* 45(5): 399-406. 1998.

in English: watergrass, Australian wild rice

Preissia Opiz = *Avena* L.

For the German botanist Balthazar Preiss (Preis), 1765-1850, physician, author of *Rhizographie*. Prag 1823; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 107. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 765. 1993.

Pooideae, Poeae, Aveninae, see *Species Plantarum* 1: 79-80. 1753 and *Taxon* 40: 132. 1991, *Contributions from the United States National Herbarium* 48: 126-138, 589. 2003.

Pringleochloa Scribner = *Atheropogon* Muhl. ex Willd., *Bouteloua* Lag.

After the American botanist Cyrus Guernsey Pringle, 1838-1911, Quaker, plant collector, Pacific States and Mexico, Baja California, wrote *The Record of a Quaker Conscience. C. Pringle's Diary*. New York 1918. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 111. 1965; T.W. Bosser, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 318. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; W. Brockway, "An eminent Botanist, Mr. C.G. Pringle, etc." [Mexico, 1895] *The Two Republics* 5 Nov., 1895; Friedrich Wilhelm Klatt (1825-1897), "Berichtungen zu einigen von C.G. Pringle in Mexiko gesammelten Compositen." *Arbeit. Bot. Mus. Hamb.* [Hamburg, 1893]; Ezra Brainerd (1844-1924), "Cyrus Guernsey Pringle." *Rhodora* 13: 225-232. 1911; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Helen Burns Davis, *Life and Work of Cyrus Guernsey Pringle*. Burlington, Vt. 1936; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 335-336. 1973; Ira L. Wiggins, *Flora of Baja California*. 42. Stanford, California 1980; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 596. University of Pennsylvania Press, Philadelphia 1964; Gordon Douglas Rowley, *A History of Succulent Plants*. California 1997; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; John H. Thomas, "Botanical explorations in Washington, Oregon, California and adjacent regions." *Huntia* v. 3, no. 1, p. 18. 1979.

One species, Mexico, the Caribbean. Chloridoideae, Cynodonteae, Boutelouinae, perennial, herbaceous,

unbranched, unarmed, stoloniferous, ligule fringed, monoecious or dioecious, plants monoecious with staminate spikelets and pistillate spikelets, inflorescence spicate with 3-5 spikelets in each glomerule, two glumes subequal, palea present, 2 free and fleshy lodicules, stamens absent, 3 staminodes, ovary glabrous, 2 stigmas, open areas, plains, dry habitats, type *Pringleochloa stolonifera* (E. Fourn.) Scribn., see *Varietades de Ciencias, Literatura y Artes* 2(4, 21): 134, 141. 1805, *Species Plantarum. Editio quarta* 4(2): 937. 1805 [1806], *Reliquiae Haenkeanae* 1(4-5): 293, t. 41, f. 1-11. 1830, *A Manual of the Botany of the Northern United States. Second Edition* 553. 1856, *Genera Plantarum* 3(2): 1168-1169. 1883, *Botanical Gazette* 21: 137-138. 1896, *Circular, Division of Agrostology, United States Department of Agriculture* 15: 7. 1899 and *Contributions from the United States National Herbarium* 41: 17-18, 20-33, 191. 2001.

Species

P. stolonifera (E. Fourn.) Scribn. (*Atheropogon stolonifera* E. Fourn.; *Bouteloua reederorum* Columbus; *Bouteloua stolonifera* Scribn.)

Mexico. Perennial, leaves mostly basal, auricles absent, awns of rudiment ciliate, fodder, see *Mexicanas Plantas* 2: 140. 1886, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 302. 1891, *Botanical Gazette* 21: 138. 1896 and J. Rzedowski, *Vegetación de Mexico*. Editorial Limusa. Mexico, D.F., Mexico 1978, *Genera Graminum* 249. 1986, *Aliso* 18(1): 63. 1999.

in Mexico: zacate

Prionachne Nees ex Lindl. = *Prionachne* Nees, *Prionanthium* Desv.

Greek *prion* "a saw" and *achne* "chaff, glume."

Arundinoideae, Danthonieae, see *An Introduction to the Natural System of Botany* 447. 1836.

Prionanthium Desv. = *Chondrolaena* Nees, *Prionachne* Nees ex Lindl.

From the Greek *prion* "a saw" and *anthos* "flower," lemma keels serrated.

About 3 species, South Africa. Arundinoideae, Danthonieae, annual, slender, tufted, herbaceous, unarmed, glandular, more or less branched, flowering culms leafless, auricles absent, ligule a fringed membrane, leaf blades tapering, plants bisexual, inflorescence a single spike or a single raceme, 2-flowered, spikelets paired or solitary, spikelets with female-fertile florets only or with incomplete florets, 2 subequal glumes 5- to 8-nerved and strongly keeled, lemmas 3-nerved acute, palea present, 2 minute

lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, common in seasonally wet places, damp, along roadsides, open habitats, related to *Tribolium*, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168-169, t. 7, f. 3. 1831, *An Introduction to the Natural System of Botany* 447. 1836, *Florae Africae Australioris Illustrationes Monographicae* 1: 133. 1841 and G. Davidse, "A revision of the genus *Prionanthium* (Poaceae: Arundineae)." *Bothalia* 18: 143-153. 1988, *South African Journal of Botany* 60: 285-292. 1994.

Species

P. dentatum (L.f.) Henrard (*Phalaris dentata* L.f.; *Phalaris dentata* Thunb.; *Prionanthium rigidum* Desv.)

South Africa. Annual, rare, tufted, panicle spike-like, spikelets compressed, glumes glandular 3- to 4-nerved, lemmas pubescent, palea pubescent, along roadsides, see *Species Plantarum* 1: 54. 1753, *Supplementum Plantarum* 106. 1781 [1782] and *Blumea* 4(3): 530. 1941, *South African Journal of Botany* 60: 285-292. 1994.

P. ecklonii (Nees) Stapf (*Prionachne ecklonii* Nees)

South Africa. Annual, rare, tufted, panicle spike-like, spikelets paired, glumes glandular, lemmas glabrous, paleas glabrous, along roadsides, in grazed veld, see *An Introduction to the Natural System of Botany* 447. 1836, *Flora Capensis* 7: 456-457. 1899.

P. pholiuroides Stapf (*Prionachne pholiuroides* (Stapf) Phillips)

South Africa. Annual, rare, tufted, spikelets solitary, glumes usually glandular, lemmas glabrous, paleas glabrous, common in seasonally wet places, shallow soil, moist depressions, open habitats, limestone, sandy soil, see *Flora Capensis* 7: 456. 1899 and *South African Grasses* (S. Afr. Agric. Serv.) 6: t. 63. 1931.

Prospophys Dulac = *Nardurus* (Bluff, Nees & Schauer) Rchb., *Vulpia* Gmelin

Greek *prospophys* "growing to, ongrowth, growth of new wood."

Pooideae, Poaceae, Loliinae, type *Prospophys tenella* (Reichb. ex Godron) Dulac, see *Species Plantarum* 1: 73. 1753, *Flora Badensis Alsatica* 1: 8. 1805, *Observations sur les Graminées de la Flore Belgique* 99, 100. 1824, *Genera Plantarum* 101. 1836, *Flore de Département des Hautes-Pyrénées* 67. 1867, *Die Natürlichen Pflanzenfamilien* 2(2): 75. 1887 and *Nordic Journal of Botany* 1(1): 24. 1981, *Contributions from the United States National Herbarium* 48: 454, 589, 690-694. 2003.

Prosphytochloa Schweick. = *Potamophila* R. Br.

Greek *prospophys* "growing to, growth of new wood" and *chloe, chloa* "grass," indicating the nature of the plant.

One species, South Africa, Transvaal. Bambusoideae, Oryzodae, Oryzeae, perennial, herbaceous, branched, unarmed, erect, scandent, climbing, leafy, long-rhizomatous, horizontal rhizomes, cataphylls, leaf blades not petiolate, leaf tips filiform and clinging, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence an open panicle, 3 florets, spikelets solitary and pedicelled, lower 2 florets sterile, uppermost floret bisexual, glumes reduced or absent, lemmas acuminate and awnless, palea present, 2 free and membranous lodicules, 6 stamens, ovary glabrous, 2 plumose stigmas white, shade species, in moist forests, shady forest, sometimes referred to *Potamophila* R. Br., type *Prosphytochloa prehensilis* (Nees) Schweick., see *Der Züchter. Zeitschrift für theoretische und angewandte Genetik* 31(4): 193-195. Berlin 1961, H. Duistermaat, "A revision of *Oryza* (Gramineae) in Malesia and Australia." *Blumea* 32: 157-157. 1987, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang and De-Yuan Hong, "A phylogeny of the rice tribe Oryzeae (Poaceae) based on *matK* sequence data." *American Journal of Botany* 89: 1967-1972. 2002.

Species

P. prehensilis (Nees) Schweick. (*Maltebrunia prehensilis* Nees; *Oryza prehensilis* (Nees) Steud.; *Potamophila prehensilis* (Nees) Benth.)

South Africa. Perennial, tall, loosely paniculate, minute cuplike glumes, subulate sterile lemmas, see *Species Plantarum* 1: 333. 1753, *Prodromus Florae Novae Hollandiae* 211. 1810, *Révision des Graminées* 1: 6. 1829, *Florae Africae Australioris Illustrationes Monographicae* 1: 194. 1841, *Synopsis Plantarum Glumacearum* 1: 3. 1855 [1853], *Genera Plantarum* 3: 1116. 1883 and *Der Züchter. Zeitschrift für theoretische und angewandte Genetik* 31(4): 194-195. 1961, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

Psamma P. Beauv. = *Ammophila* Host

Greek *psammos* "sand," referring to the habitat.

Pooideae, Poaceae, Agrostidinae, see *Species Plantarum* 1: 82. 1753, *Familles des Plantes* 2: 31, 530. 1763, *Icones et Descriptiones Graminum Austriacorum* 4: 24, t. 41. 1809, A. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 143-144, 176, t. 6, f. 1. Paris (Dec.) 1812, *Systema Vegetabilium* 2: 845. 1817, *A Manual of the Botany of the Northern United States* 583. 1848, Paul Mabille (1835-1923), *Recherches sur les plantes de la Corse*. 1: 33. Paris 1867-1869 and *Feddes Repertorium* 52: 269. 1943,

Contributions from the United States National Herbarium 48: 107, 589. 2003.

Psammagrostis C.A. Gardner & C.E. Hubb.

Greek *psammos* “sand” and *agrostis*, *agrostidos* “grass, weed, couch grass.” One species, Australia. Chloridoideae, Eragrostideae, annual, erect, herbaceous, branched, geniculate, decumbent, ascending, auricles absent, leaf sheaths inflated, ligule a fringe of hairs, leaves linear-lanceolate, plants bisexual, inflorescence axillary subtended by a spatheole, reduced raceme bearing 1-3 spikelets, spikelets clustered, two glumes more or less unequal, upper glume 3-nerved, lower glume nerveless or 1-nerved, lemmas keeled coriaceous glabrous obtuse mucronate, palea 2-keeled, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, open areas, sandy places, slopes, hills, similar to *Eragrostis* and *Thaumastochloa*, type *Psammagrostis wiseana* C.A. Gardner & C.E. Hubb., see *Familles des Plantes* 2: 31, 530. 1763, *Icones et Descriptiones Graminum Austriacorum* 4: 24, t. 41. 1809, A. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 143, 176. Paris (Dec.) 1812, *A Manual of the Botany of the Northern United States* 583. 1848 and Charles Austin Gardner (1896-1970) and Charles Edward Hubbard (1900-1980), *Hooker's Icones Plantarum*. Ser. 5. (Sep.) 1938 [or *Hooker's Icones Plantarum* 34: t. 3361. 1938].

Species

P. wiseana C.A. Gardner & C.E. Hubb. (for the Hon. Frank Joseph Scott Wise, 1897-1986, Australian Labor Party, a farmer, 1936 Minister for Agriculture and the North-West, Minister for Lands and Agriculture 1939-1945, 1945-1947 premier of Western Australia, 1951-1956 Administrator for the Northern Territory, he played a prominent part in the development of plantations on the Gascoyne River and also in the introduction of buffel grass into pastoral areas in Western Australia)

Australia. Ephemeral, raceme subtended by a spatheole, spikelets borne in leaf sheaths axils, glumes not awned, palea coriaceous.

Psammochloa A. Hitchc.

From the Greek *psammos* “sand” and *chloe*, *chloa* “grass.”

One species, Mongolia. Stipoideae, Stipeae, perennial, robust, herbaceous, long rhizomes, stoloniferous, auricles absent, nodes hidden by leaf sheaths, ligule membranous and unfringed, plants bisexual, open inflorescence paniculate, spikelets pedicellate, two glumes subequal, lemma villos and awnless, unkeeled palea 5- to 7-nerved and acute, 3 lodicules free and membranous, 3 stamens, ovary glabrous, 2 stigmas, open areas, mobile sand dunes, fixed

dunes, related to *Stipa*, similar to *Ammophila*, type *Psammochloa mongolica* Hitchc., see *Species Graminum* 3: t. 352. 1836 and *Fl. Aziatsk. Ross.* 2(12): 173. 1916, *Journal of the Washington Academy of Sciences*. 17: 140. 1927, *Kew Bulletin* 6: 186-192. 1951, Wang K.Q., S. Ge and M. Dong, “Allozyme variance and clonal diversity in the rhizomatous grass *Psammochloa villosa* (Gramineae).” *Acta Botanica Sinica* 41: 537-540 (in Chinese). 1999, Li A. & S. Ge, “Genetic variation and clonal diversity of *Psammochloa villosa* (Poaceae) detected by ISSR markers.” *Annals of Botany* 87: 585-590. 2001, Andrea R. Pluess and Jürg Stöcklin, “Population genetic diversity of the clonal plant *Geum reptans* (Rosaceae) in the Swiss Alps.” *Am. J. Bot.* 91: 2013-2021. 2004.

Species

P. mongolica Hitchc. (*Arundo villosa* Trin.; *Psammochloa villosa* (Trin.) Bor; *Timouria mongolica* (Hitchc.) Roshev.)

Mongolia, Gobi Desert. Rhizomatous, sand-binder, robust, see *Journal of the Washington Academy of Sciences* 17: 140. 1927, *Journal of the Washington Academy of Sciences* 18: 502. 1928, Feihai Yu, Ming Dong and Bertil Krüsi, “Clonal integration helps *Psammochloa villosa* survive sand burial in an inland dune.” *New Phytologist* 162(3): 697-704. June 2004.

Psammophila Schult. = *Ponceletia* Thouars, *Ponceletia* R. Br. (Epacridaceae), *Psammophila* Fourr. (Caryophyllaceae), *Psammophiliella* Ikonn., *Spartina* Schreb.

Greek *psammos* “sand” and *philos* “lover, loving.”

Chloridoideae, Cynodonteae, or Chloridoideae, Zoysieae, Sporobolinae, type *Psammophila arundinacea* (Thouars) Schult. (*Ponceletia arundinacea* Thouars), see *Genera Plantarum* 43. 1789, *Catalecta Botanica* 3: 10. 1806, *Esquisse de la Flore de l'Isle de Tristan d'Acugna* 36. 1808, *Prodromus Florae Novae Hollandiae* 554. 1810, *Transactions of the Linnean Society of London* 12: 504. 1819, *Systema Vegetabilium* 1 Mant. 1: 69, 231. 1822 and *Iowa State College Journal of Science* 30(4): 471-574. 1956, *Journal of the Linnean Society, Botany* 60: 381-405. 1968, *Contributions from the United States National Herbarium* 41: 191, 195-200. 2001.

Psammopyrum Á. Löve = *Thinopyrum* Á. Löve

Greek *psammos* “sand” and *pyros* “grain, wheat.”

Pooideae, Triticeae, Hordeinae, type *Psammopyrum pungens* (Pers.) Á. Löve, see *Syn. Pl.* 1: 109. 1805, *Linnaea* 17: 395. 1843, *Flore de France* 3: 607. 1855 and *Ann. Sci.*

Nat. Bot., sér. 10, 14: 234. 1932, *Botanical Journal of the Linnean Society* 76(4): 380. 1978, *Taxon* 29(2-3): 351. 1980, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 87: 50. 1986, *Contributions from the United States National Herbarium* 48: 589, 653-654. 2003.

Psathyrostachys Nevski = *Psathyrostachys* (Boiss.) Nevski

From the Greek *psathyros* “fragile, friable” and *stachys* “a spike,” rachis fragile readily disarticulating between the spikelets.

About 7-8 species, European Russia, Volga, Asia, south Europe. Pooideae, Triticeae, Hordeinae, or Pooideae, Triticoideae, Triticeae, perennial, densely or loosely tufted, herbaceous, unbranched, hollow, shortly rhizomatous, with underground stolons, creeping, auricles present or absent, ligule an unfringed membrane, plants bisexual, inflorescence spicate, spikes linear, spikelets 1-2-flowered all sessile and similar in groups of 2 or 3 in regular longitudinal rows, lowermost floret fertile, 2 subequal glumes awnlike entire, lemmas lanceolate 5-7-veined awned to acuminate, palea 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, good fodder plants, open areas, slopes, steppe, desert and semidesert, stony places, similar to *Sitanion*, closely related to *Leymus* and *Hordeum*, hybrids with *Leymus*, type *Psathyrostachys lanuginosa* (Trin.) Nevski, see *Species Plantarum* 1: 83. 1753 and *Trudy Tiflisskogo Botanicheskogo Sada* 6(1): 97. 1902, *Acta Inst. Bot. Acad. Sci. URSS, Ser. 1, Fasc. 1*: 22, 27. 1933, *Flora URSS* 2: 712, 714-715, pl. 50, f. 5. 1934, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 192. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 437. 1959, *Feddes Repertorium* 83: 507. 1973, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984, *Flora Sibiriae* 2: 53. 1990, *Nordic Journal of Botany* 9(5): 449-460. 1990, C. Baden, “A taxonomic revision of *Psathyrostachys* (Poaceae).” *Nordic Journal of Botany* 11(1): 3-26. 1991, *Plant Systematics and Evolution* 189: 217-231. 1994 [Relationships between species of *Leymus*, *Psathyrostachys* and *Hordeum* (Poaceae, Triticeae) inferred from Southern hybridization of genomic and cloned DNA probes.], M. Ørgaard, and J.S. Heslop-Harrison, “Investigations of genome relationships between *Leymus*, *Psathyrostachys* and *Hordeum* inferred by genomic DNA:DNA *in situ* hybridization. *Annals of Botany* 73: 195-203. 1994, Seberg, O., G. Petersen and C. Baden, “The phylogeny of *Psathyrostachys* Nevski (Triticeae, Poaceae)—are we able to see the wood for the trees?” In R. R.-C. Wang et al. [eds.], *Proceedings of the 2nd International Triticeae Symposium*, 247-253. Utah State University Press, Logan, Utah, U.S. 1994, *Acta Agrestia Sin.* 8(3): 193-197. 2000, Kesara Anamthawat-Jónsson and Sigríður K. Bödvarsdóttir, “Genomic and genetic relationships

among species of *Leymus* (Poaceae: Triticeae) inferred from 18S-26S ribosomal genes.” *Am. J. Bot.* 88: 553-559. 2001, *Contributions from the United States National Herbarium* 48: 589. 2003, Zeng-Yu Wang, Yaxin Ge, Megann Scott and German Spangenberg, “Viability and longevity of pollen from transgenic and nontransgenic tall fescue (*Festuca arundinacea*) (Poaceae) plants.” *Am. J. Bot.* 91: 523-530. 2004, *Am. J. Bot.* 91: 1709-1725. 2004.

Species

P. caduca (Boiss.) Melderis (*Elymus caducus* Boiss.; *Hordeum caducum* Munro ex Aitch.)

Europe, Asia, Afghanistan. See *Journal of the Linnean Society, Botany* 18: 110. 1880, *Flora Orientalis* 5: 691. 1884 and *Biologiske Skrifter* 14(4): 93. 1965.

P. fragilis (Boiss.) Nevski (*Elymus fragilis* (Boiss.) Griseb.; *Elymus fragilis* Boiss.; *Hordeum fragile* Boiss.; *Psathyrostachys scabriphylla* Ponert)

Russia. See *Diagnoses plantarum orientaliarum novarum, ser. 1*, 7: 128. 1846, *Flora Rossica* 4(13): 330. 1852 and *Flora URSS* 2: 716. 1934, *Novosti Sist. Vyssh. Rast.* 9: 58. 1972, *Feddes Repertorium* 83: 507. 1973, *Euphytica* 33: 363-367. 1984, *Canadian Journal of Genetics and Cytology* 26: 430-435. 1984, *Nordic Journal of Botany* 9: 449-460. 1990, *Nordic Journal of Botany* 11(1): 10. 1991, *Acta Botanica Boreali-Occidentalia Sinica* 13(6): 92-97. 1993, *Plant Systematics and Evolution* 191: 183-198. 1994, *Annals of Botany* 73: 195-203. 1994, *Pakistan Journal of Botany* 26: 353-366. 1994, Linde-Laursen, I. and C. Baden, “Comparison of the Giemsa C-banded karyotypes of the three subspecies of *Psathyrostachys fragilis*, subsp. *villosus* (2x), *secaliformis* (2x, 4x) and *fragilis* (2x) (Poaceae), with notes on chromosome pairing.” *Plant Systematics and Evolution* 191: 183-198. 1994.

P. fragilis (Boiss.) Nevski subsp. ***fragilis***

Russia.

P. fragilis (Boiss.) Nevski subsp. ***secaliformis*** Tzvelev (*Elymus secaliformis* Trin. ex Steud.)

Russia. See *Nomenclator Botanicus. Editio secunda* 1: 551. 1841 and *Novosti Sist. Vyssh. Rast.* 9: 58. 1972.

P. fragilis (Boiss.) Nevski subsp. ***villosus*** Baden

Russia. See *Nordic Journal of Botany* 11(1): 10. 1991.

P. huashanica Keng ex P.C. Kuo (*Psathyrostachys huashanica* Keng)

China. Rhizomatous, loosely tufted, glabrous, leaf sheaths glabrous, ligules ciliate, leaf blades usually flat, greenish inflorescence, spikelets 2-3 at each node, 1-3 florets, rachis densely pubescent with hirsute margin, glumes scabrous, lemmas glabrous to sparsely scabrous, palea ciliolate along keels, on stony slopes, rocky places, see *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 437. 1959, *Flora Tsinlingensis* 1(1): 440. 1976, *Plant Systematics and*

Evolution 151: 203-213. 1986, *International Organization of Plant Biosystematists Newsletter* 13: 20-21. 1989, *Nordic Journal of Botany* 9: 11-14, 449-460. 1989-1990, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Genome* 33: 563-570. 1990, *Acta Genetica Sinica* 18(6): 513-519. 1991, *Acta Phytotaxonomica Sinica* 31: 393-398. 1993 [A study on hybrids between *Psathyrostachys huachanica* and two species of *Roegneria*.], *Acta Botanica Boreali-Occidentalia Sinica* 13(6): 92-97. 1993, *Annals of Botany* 73: 471-479. 1994, *Pakistan Journal of Botany* 26: 353-366. 1994, *Plant Systematics and Evolution* 194: 83-91. 1995, *Plant Systematics and Evolution* 197: 225-231. 1995, *Plant Systematics and Evolution* 202: 265-269. 1996, *Acta Genetica Sinica* 23(6): 447-452. 1996, *Journal of Nanjing Agricultural University* 21(1): 10-13. 1998.

P. hyalantha (Rupr.) Tzvelev (*Elymus hyalanthus* Rupr.; *Psathyrostachys juncea* (Fischer) Nevski; *Psathyrostachys juncea* subsp. *hyalantha* (Rupr.) Tzvelev)

Russia. See *Mémoires de la Société Impériale des Naturalistes de Moscou* 1: 25, t. 4. 1811, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg (Sér. 7)* 14(4): 36. 1869 and *Flora URSS* 2: 714, pl. 50, f. 6a-e. 1934, *Novosti Sist. Vyss. Rast.* 9: 58. 1972, *Nordic J. Bot.* 11(1): 21. 1991, *Novon* 7(3): 229. 1997.

P. juncea (Fischer) Nevski (*Elymus albertii* Regel; *Elymus altaicus* A. Spreng.; *Elymus caespitosus* Sukaczew; *Elymus cretaceus* Zing. ex Nevski; *Elymus desertorum* Kar. & Kir.; *Elymus desertorum* var. *angustifolius* Kar. & Kir.; *Elymus desertorum* var. *desertorum*; *Elymus desertorum* var. *latifolius* Kar. & Kir.; *Elymus hyalanthus* Rupr.; *Elymus junceus* Fisch.; *Elymus junceus* var. *albertii* (Regel) Roshev. ex Fedtsch.; *Elymus junceus* var. *caespitosus* (Sukaczew) Reverd.; *Elymus junceus* var. *desertorum* (Kar. & Kir.) Regel; *Elymus junceus* var. *junceus*; *Elymus junceus* var. *typica* Trautv.; *Elymus junceus* var. *villosus* Drob.; *Psathyrostachys caespitosa* (Sukaczew) Peshkova; *Psathyrostachys hyalantha* (Rupr.) Tzvelev; *Psathyrostachys juncea* subsp. *hyalantha* (Rupr.) Tzvelev; *Psathyrostachys juncea* var. *hyalantha* (Rupr.) S.L. Chen; *Psathyrostachys perennis* Keng; *Triticum juncellum* F. Herm.; *Triticum junceum* L.)

Volga Region. Densely tufted, glabrous and smooth, leaf sheaths glabrous and smooth, glabrous to scabrous leaf blades glaucous to grayish green flat or with involute margin, spike rachis very brittle, spikelets narrowly elliptic in group of 2-3 with 1-3 florets, lower floret perfect, upper floret perfect or vestigial, glumes scabrous or puberulent 1-veined, lemma lanceolate usually hairy, anthers yellow or purple, cool-season forage grass, weed, slopes, along roadsides, broadly adapted to semiarid regions of North America, see *Species Plantarum* 1: 85. 1753, *Centuria I. Plantarum ... 1*: 6. 1755, *Mémoires de la Société Impériale des Naturalistes de Moscou* 1: 25, t. 4. 1811, *Tentamen Supplementi ad Systematis Vegetabilium, ... 5*. 1828, *Bulletin*

de la Société Impériale des Naturalistes de Moscou 14: 867. 1841, *Bulletin de la Société Impériale des Naturalistes de Moscou* 115. 1867, *Bulletin de la Société Impériale des Naturalistes de Moscou* 41(2): 284. 1868, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg (Sér. 7)* 14(4): 36. 1869 and *Trudy Bot. Muz. Imp. Akad. Nauk* 14: 133, t. 1, f. 6. 1915, *Flora URSS* 2: 714, pl. 50, f. 6a-e. 1934, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 41. 1936, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 437. 1959, *Fl. Krasnojarsk. Kraja* 2: 137. 1964, *Novosti Sist. Vyss. Rast.* 9: 58. 1972, *Plant Systematics and Evolution* 151: 203-213. 1986, *Nordic Journal of Botany* 9: 11-14. 1989, *Flora Sibiriae* 2: 53. 1990, *Cytologia* 55: 639-643. 1990, *Genome* 33: 563-570. 1990, *Nord. J. Bot.* 11(1): 21. 1991, *Nordic J. Bot.* 12: 167. 1992, William, M. D. H. M. and A. Mujeeb-Kazi, "Isozyme and cytological markers of some *Psathyrostachys juncea* accessions." *Theoretical and Applied Genetics* 84: 528-534. 1992, *Nordic Journal of Botany* 13: 481-493. 1993, *Acta Botanica Boreali-Occidentalia Sinica* 13(6): 92-97. 1993, *Annals of Botany* 73: 471-479. 1994, *Pakistan Journal of Botany* 26: 353-366. 1994, *Plant Systematics and Evolution* 194: 83-91. 1995, *Plant Systematics and Evolution* 197: 225-231. 1995, *Novon* 7(3): 229. 1997, *Journal of Nanjing Agricultural University* 21(1): 10-13. 1998, *Acta Botanica Sinica* 41(3): 258-262. 1999, *Acta Agrestia Sin.* 8(3): 193-197. 2000, *Taxon* 49(2): 258. 2000, Wang Z.Y., D. Lehmann, J. Bell and A. Hopkins, "Development of an efficient plant regeneration system for Russian wildrye (*Psathyrostachys juncea*)." *Plant Cell Reports* 20(9): 797-801. 2002.

in English: Russian wild rye

P. juncea (Fischer) Nevski var. ***hyalantha*** (Ruprecht) S.L. Chen

Central Asia, Russia. Culms densely hairy below spike, anthers purple, mountain, slopes, grassland, on steppes.

P. juncea (Fischer) Nevski var. ***juncea***

Central Asia, Russia. Culms below spike smooth and glabrous or scabrous, anthers yellow.

P. kronenburgii (Hack.) Nevski (*Elymus kronenburgii* (Hack.) Nikif.; *Hordeum kronenburgii* Hack.)

Russia. Usually densely tufted, glabrous, leaf sheaths fibrous, spikes greenish, rachis pubescent, spikelet narrowly ovate usually 3 at each node, 1-2 florets, glumes pilose, lemma pilose 5-veined tapering into a short awn, palea 2-keels ciliate, anthers violet, riverbanks, mountain slopes, grassy areas, see *Species Plantarum* 1: 84. 1753 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 11: 133. 1905, *Flora URSS* 2: 713. 1934, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Acta Botanica Boreali-Occidentalia Sinica* 13(6): 92-97. 1993.

P. lanuginosa (Trin.) Nevski (*Elymus lanuginosus* Trin.; *Hordeum lanuginosum* (Trin.) Schenck)

Russia. Densely tufted, glabrous, leaf sheaths glabrous, leaf blades flat to subinvolute, spike ovate villous, rachis brittle, spikelets usually 2-3 per node, 1-2 florets, glumes densely hirsute, lemma densely villous, palea densely ciliate along 2-keels, see *Flora Altaica* 1: 121. 1829 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40(1): 109. 1907, *Flora URSS* 2: 714, pl. 50, f. 5. 1934, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Acta Botanica Boreali-Occidentalia Sinica* 13(6): 92-97. 1993, Linde-Laursen, I., and C. Baden, "Giemsa C-banded karyotypes of two cytotypes (2x, 4x) of *Psathyrostachys lanuginosa* (Poaceae; Triticeae)." *Hereditas* 120: 113-120. 1994, *Pakistan Journal of Botany* 26: 353-366. 1994.

P. rupestris (Alexeenko) Nevski (*Hordeum rupestre* Alexeenko; *Hordeum rupestre* var. *intermedium* Alex.; *Psathyrostachys rupestris* var. *intermedia* (Alex.) Tzvelev) Russia. See *Flora URSS* 2: 715. 1934, *Zlaki SSSR* 191. 1976, *Grasses of the Soviet Union* 276. 1983, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991.

P. rupestris (Alexeenko) Nevski subsp. *daghestanica* Russia.

P. rupestris (Alexeenko) Nevski subsp. *rupestris* Russia.

P. stoloniformis

China. Loosely tufted, rhizomatous, glabrous, leaf blades involute at margin scabrous on both surfaces, spike oblong, rachis with hirsute margin, spikelets narrowly elliptic usually 3 at each node, 1-2 florets, glumes scabrous and pilose, lemmas usually sparsely pilose, palea bifid, see *Nordic Journal of Botany* 9(5): 449-460. 1990, *Genome* 35: 676-680. 1992, *Guihaia* 13: 146-148. 1993, *Annals of Botany* 73: 195-203, 471-479. 1994, *Plant Systematics and Evolution* 189: 217-231. 1994.

Pseudanthistiria (Hackel) Hook.f.

From the Greek *pseudes* "false, untrue" plus the genus *Anthistiria* L.f.

About 4 species, India, Sri Lanka to Thailand. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, *Andropogon* sect. *Pseudanthistiria* Hack., annual or perennial, herbaceous, slender, erect, trailing, ascending, prostrate, wiry, rooting at the nodes, ligule a very short unfringed membrane, leaf blades linear to lanceolate, leaves glabrous or pilose, plants bisexual, inflorescence a leafy false panicle, 2-10 bunches of solitary racemes enclosed by a sheathing spatheole, spikelets sessile and pedicellate, longer spikelets male and awnless, sessile spikelet dorsally compressed and 2-flowered, upper floret perfect, lower floret reduced to a short lemma, two glumes subequal, lower glume not grooved, upper glume awnless, lower lemma absent, upper lemma with glabrous awn, palea tiny or

absent, two free and fleshy lodicules, ovary glabrous, two stigmas, open areas, disturbed places, hills, related to *Mono-cymbium*, type *Pseudanthistiria heteroclita* (Roxb.) Hook.f., see *Nova Graminum Genera* 35. 1779, *Flora Brasiliensis seu Enumeratio Plantarum* 364. 1829, Rudolf Friedrich Hohenacker (1798-1874), *Anzeigen getrocknete Pflanzen aus Klein-Asien, Sibirien und Ost-Indien ...* Fr. Metz, Pl. Indiae orientalis prov. Canara. in: *Flora*, Jena, 30, p. 622. 1847, *Monographiae Phanerogamarum* 6: 400. 1889, *The Flora of British India* 7: 219-220. 1897 [1896] and *Journal of the Bombay Natural History Society* 73(1): 192. 1976.

Species

P. burmanica Hook.f. (*Andropogon monomerus* Hochst.) India. See *Species Plantarum* 2: 1045. 1753, *The Flora of British India* 7: 220. 1897 [1896].

P. emeiica S.L. Chen & T.D. Zhuang

China. See *Bulletin of Botanical Research* 8(3): 45, f. 2. 1988.

P. heteroclita (Roxb.) Hook.f. (*Andropogon heteroclitus* (Roxb.) Nees; *Anthistiria heteroclita* Roxb.; *Hypogynium heteroclitum* (Roxb.) Roberty)

Hong Kong. Used for thatching, see *Flora Indica; or Descriptions ...* 1: 253. 1820, *Florae Africae Australioris Illustrationes Monographicae* 115. 1841, *The Flora of British India* 7: 219. 1897 [1896] and *Boissiera*. 9: 190. 1960, *Taxon* 34: 159-164. 1985.

in India: jhinkuphul ghas

P. umbellata (Hack.) Hook.f. (*Andropogon umbellatus* Hack.)

India and Sri Lanka. Annual, leaf blades linear to lanceolate, false panicle, pedicelled spikelet staminate or barren, awn geniculate, see *Enum. Pl. Zeyl.* 366. 1864, *Monographiae Phanerogamarum* 6: 401. 1889 and *Handb. Fl. Ceylon* 5: 247. 1900, *Grasses of Ceylon* 188. 1956, *Grasses of Burma ...* 204. 1960.

Pseudarrhenatherum Rouy =

Arrhenatherum P. Beauv., *Thorea* Rouy, *Thorea* J. Briquet (Apiaceae, alt. Umbelliferae)

From the Greek *pseudes* "false" and the genus *Arrhenatherum* P. Beauv.

About 2 species, Europe. Pooideae, Poodae, Aveneae, or Aveninae, perennial, tufted, herbaceous, unbranched, auricles absent, ligule a ciliate to fringed membrane, plants bisexual, inflorescence paniculate, spikelets pedicellate, 2 glumes unequal to very unequal, palea present, 2 free membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, open areas, dry places, grasslands, sometimes referred to *Arrhenatherum*, see *Species Plantarum* 1: 79, 264. 1753, *Essai*

d'une Nouvelle Agrostographie 55, 152, 153. 1812, *Mantissa* Addit. I. ad Mant. Cl. III: 526 [326]. 1827, *An Introduction to the Natural System of Botany* 21. July 1836, *Voyage botanique dans le midi de l'Espagne* 2: 657. 1844, Ludwig Georg Karl Pfeiffer (1805-1877), *Nomenclator botanicus*. Nominum ad finem anni 1858 publici juris factorum, classes, ordines, tribus, familias, divisiones, genera, subgenera vel sectiones designantium enumeratio alphabetica. Adjectis auctoribus, temporibus, locis systematicis, apud varios, notis literariis atque etymologicis et synonymis. Conscriptus Ludovicus Pfeiffer. Cassellis, sumptibus T. Fisherii, [1871-] 1873-1874 and *Archives des Sciences Physiques et Naturelles* sér. 4. 13: 614. 1902, *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 671. 1914, *Bulletin de la Société Botanique de France* 68: 401. 1921, *Contributions from the United States National Herbarium* 48: 119-121. 2003.

Species

P. longifolium (Thore) Rouy (*Arrhenatherum longifolium* (Thore) Dulac; *Arrhenatherum thorei* (Duby) Des Moul.; *Avena longifolia* Thore; *Avenastrum longifolium* (Thore) Samp.; *Thorea longifolia* (Thore) Rouy; *Thoreochloa longifolia* (Thore) Holub)

Europe. See Jean Thore, *Promenade sur les côtes du golfe de Gascogne*, etc. 92. Bordeaux 1810, *Flore de Département des Hautes-Pyrénées* 78. 1867 and *Bulletin de la Société Botanique de France* 68: 401-402. 1921, *Boletim da Sociedade Broteriana*, ser. 2 7: 119. 1931, *Acta Universitatis Carolinae: Biologica* 1962: 154. 1962.

P. setifolia (Brot.) Smythies (*Avena setifolia* Brot.; *Helictotrichon setifolium* (Brot.) J.M. Couderc & Guédès)

Europe. See *Flora Lusitanica* 108. 1804 and *Taxon* 25(1): 188. 1976, *Englera* 3(3): 645. 1986.

Pseudechinolaena Stapf = *Loxostachys* Peter, *Perulifera* A. Camus

Greek *pseudes* "false" and the genus *Echinolaena* Desv.

About 1-6 species, Madagascar and the pantropics. Panicoidae, Panicoideae, Paniceae, Panicinae, or Panicoideae, Paniceae, Setariinae, perennial or annual, herbaceous, creeping, slender, trailing, mat-forming, culms leafy and branched above, decumbent at the base and rooting at the nodes, internodes solid, auricles absent, ligule a fringed or ciliate membrane, leaf blades lanceolate to acuminate and flat, plants bisexual, inflorescence a lax slender raceme sparsely flowered, spikelets paired or solitary, very often 1 spikelet of the pair very reduced, 2 florets, lower floret sterile or male, upper floret perfect, 2 glumes subequal, lower glume smooth acute to awned, upper glume gibbous and hooked after fertilization, lemmas lanceolate, lower lemma papery or coriaceous with membranous margins,

upper lemma cartilaginous or coriaceous, lower palea keels rounded, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 plumose stigmas, damp places, in forest shade, under tree shade, ground cover, related to *Oplismenus* and *Poecilostachys*, type *Pseudechinolaena polystachya* (Kunth) Stapf, see *Species Plantarum* 1: 55. 1753, *Encyclopédie Méthodique, Botanique* 6: 50. 1804, *Essai d'une Nouvelle Agrostographie* 53. 1812, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 75. 1813, *Agrostografia Brasiliensis* 41. 1823, *De Graminibus Paniceis* 138. 1826, *The Flora of British India* 7: 28, 58. 1897 [1896] and *Anales del Museo Nacional de Buenos Aires* 11: 74. 1904, *Flora of Tropical Africa* 9: 494-495. 1919, *Bulletin de la Société Botanique de France* 74: 889. 1928, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 203, Anh. 55. 1930, *Boletín técnico. Ministerio de Agricultura y Cria.* 41. 1937, Guillermo Herter (1884-1958), *Fl. Illustr. Urug.* 1: 127. [Report. Nov. Spec. Regn. Veg. 118, 1939] Montevideo 1939-1957, *Revista Sudamericana de Botánica* 7(6-8): 196. 1943, *Revista Sudamericana de Botánica* 9: 118. 1953, *Adansonia* 15(1): 132. 1975, *Iselya* 1: 115-139. 1979 [Botanical Journal of the X Club. Madison, WI], *Flora Mesoamericana* 6: 298-299. 1994, *Am. J. Bot.* 88: 1993-2012. 2001, *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 285, 542-543. 2003.

Species

P. camusiana Bosser

Madagascar. See *Adansonia* 15(1): 132-133. 1975.

P. madagascariensis (A. Camus) Bosser (*Perulifera madagascariensis* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 74: 889. 1928, *Adansonia* 15(1): 127. 1975.

P. moratii Bosser

Madagascar. See *Adansonia* 15(1): 133. 1975.

P. perrieri A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 96: 51. 1949.

P. polystachya (Kunth) Stapf (*Echinochloa polystachya* (Kunth) Roberty, nom. illeg., non *Echinochloa polystachya* (Kunth) Hitchc.; *Echinolaena polystachya* Kunth; *Echinolaena trinii* Zoll. & Moritz; *Ichnanthus pallens* (Sw.) Munro ex Benth.; *Lappago aliena* Spreng.; *Lappago oplismenoides* Speg.; *Loxostachys uncinata* (Raddi) Peter; *Nazia aliena* (Spreng.) Scribn.; *Nazia racemosa* var. *aliena* (Spreng.) Scribn. & J.G. Sm.; *Oplismenus oplismenoides* (Speg.) Speg.; *Panicum echinatum* Willd. ex Döll; *Panicum glandulosum* Nees ex Trin.; *Panicum glandulosum* Nees; *Panicum heteranthum* Link; *Panicum heterochlamys* Peter; *Panicum nemorosum* Trin.; *Panicum polystachyum* (Kunth) Engl., nom. illeg., non *Panicum polystachion* L.; *Panicum polystachyum* (Kunth) K. Schum.; *Panicum polystachyum*

J. Presl, nom. illeg., non *Panicum polystachion* L.; *Panicum uncinatum* Raddi; *Tragus alienus* (Spreng.) Schult.)

Tropics. Perennial or annual, slender, creeping, spreading, decumbent habit, basally prostrate and ascending, stoloniferous, rooting at the nodes, pubescent or hispid, mat-forming or thick masses forming, leaf sheaths hairy, leaves lanceolate and finely acuminate, erect flowering culms, panicles widely spaced, lowest raceme with distant spikelet, loosely ascending racemes, spikelets burrlike, upper glume acuminate and with coarse hooked spines, lower glume acute to acuminate, upper lemma subcoriaceous pale glossy, weedy, ground cover, browsed by all stock, leafy parts readily eaten by animals, common in rocky outcrops, disturbed places, pastures, along trails, forest edges, hill forest, secondary jungles, secondary growth, understory and forest shade, moist soil, woodland, bushland, see *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 203. 1768, *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Flore d'Oware* 2: 14. 1807 [1810], *Essai d'une Nouvelle Agrostographie* 56. 1812, *Nova Genera et Species Plantarum* [quarto] 1: 119. 1815 [1816], [folio] 1: 97. 1816, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 3: 15. 1822, *Agrostografia Brasiliensis* 41. 1823, *Mantissa* 2: 205. 1824, *De Graminibus Paniceis* 174. 1826, *Hortus Regius Botanicus Berolinensis* 1: 212. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 128-129. 1829, *Reliquiae Haenkeanae* 1(4-5): 312. 1830, *Systematisches Verzeichniss der im Indischen Archipel* 102. 1845-1846, *Flora Hongkongensis* 414. 1861, *Flora Brasiliensis* 2(2): 193. 1877, *Anales de Sociedad Científica Argentina* 16: 111. 1883, *Revisio Generum Plantarum* 2: 780. 1891, *Die Pflanzenwelt Ost-Afrikas* C: 103. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 12. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* (edition 1) 28, f. 324. 1899 and *Anales del Museo Nacional de Buenos Aires* 9: 7. 1903, *Flora of Tropical Africa* 9(3): 494-495. 1919, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 168, 173, 204. 1930 [1931], *Handb. Fl. Ceylon* 6: 319. 1931, *Petite Flore de l'Ouest-Africain* 398. 1954, *Grasses of Ceylon* 148. 1956, *Grasses of Burma ...* 352. 1960, *Brittonia* 23(3): 293-324. 1971, *Iselya* 1(3): 115-139. 1979, *Darwiniana* 30(1-4): 87-94. 1990, *Darwiniana* 35(1-4): 29-36. 1998.

in Sierra Leone: nane, nani

P. tenuis Bosser

Madagascar. See *Adansonia* 15(1): 128. 1975.

Pseudobambusa Nguyen

From the Greek *pseudes* "false" and *Bambusa*.

A monotypic genus, Myanmar, India, Vietnam. Bambuseae, Bambusinae, type *Pseudobambusa schizostachyoides*

(Kurz) T.Q. Nguyen, see *Genera Plantarum* 1: 236. 1789, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 43. 1820 [1821], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829, *Transactions of the Linnean Society of London* 26(1): 138. 1868, *Forest Flora of British Burma* 2: 565. 1877, *Annals of the royal botanic garden. Calcutta*. 7: 48. 1896 and *Bulletin of the Botanical Survey of India* 22(1-4): 176. 1980 [1982], *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 992. 1991, *Bamboos of the World* 310. 1999.

Species

P. kurzii (Munro) Ohrnb. (*Bambusa kurzii* (Munro) N.P. Balakr.; *Melocanna kurzii* Munro; *Schizostachyum kurzii* (Munro) R.B. Majumdar)

India, Vietnam. See *Transactions of the Linnean Society of London* 26(1): 134. 1868 and *Bulletin of the Botanical Survey of India* 22(1-4): 176. 1980, *Fl. Ind. Enumerat.-Monocot.* 281. 1989.

in Vietnam: nua, neua

Pseudobrachiaria Launert = Brachiaria (Trin.) Griseb., Urochloa P. Beauv.

From the Greek *pseudes* "false" and *Brachiaria* (Trin.) Griseb.

Panicoideae, Paniceae, Melinidinae, type *Pseudobrachiaria deflexa* (Schumach.) Launert, see *Species Plantarum* 1: 55. 1753, *Essai d'une Nouvelle Agrostographie* 52, 53, t. 11, f. 1. 1812, *De Graminibus Paniceis* 51, 125, 266. 1826, *Beskrivelse af Guineiske planter* 63-64. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 83-84. 1828, *Flora Rossica* 4(14): 469. 1853, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853] and *Bulletin of Miscellaneous Information Kew* 1923(9): 315. 1923, *Bulletin du Jardin Botanique de l'État* 9(3): 181. 1932, *Flora of West Tropical Africa* 2: 563, in clav., 564. 1936, *Mitteilungen der Botanischen Staatssammlung München* 8: 158. 1970, *Canad. J. Bot.* 65: 2297-2309. 1987, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 11(4): 443. 1989 [1990], *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Contributions from the United States National Herbarium* 46: 141-143, 629-634. 2003.

Pseudobromus K. Schumann = Festuca L.

From the Greek *pseudes* "false" plus *Bromus* L.

About 3 species, Madagascar, tropical Africa, South Africa. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, perennial, herbaceous, unbranched, tufted, auricles present, leaf blades linear to linear-lanceolate, ligule an unfriended

membrane, plants bisexual, open inflorescence paniculate, spikelets pedicellate, 2 glumes unequal, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 white stigmas, damp places, in forest shade, under tree shade, ground cover, sometimes referred to *Festuca*, type *Pseudobromus silvaticus* K. Schum., see *Species Plantarum* 1: 73-74. 1753, *Essai d'une Nouvelle Agrostographie* 39, 155. 1812, *Die Pflanzenwelt Ost-Afrikas* C: 108. 1895, *Bulletin de l'Herbier Boissier* 3(8): 382. 1895 and *Flora Capensis* 7: 763-764. 1900, *Notulae Systematicae. Herbarium de Paris* 12: 149-150. 1946, *Bulletin de la Société Botanique de France* 102: 120. 1955, *Watsonia* 16: 300. 1987, *Contributions from the United States National Herbarium* 46: 312-368. 2003.

Species

P. brassii C.E. Hubb.

Africa. See *Kew Bulletin* 1949: 341. 1949.

P. engleri (Pilg.) Clayton (*Festuca engleri* Pilg.)

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 85. 1907, *Kew Bulletin* 23: 293. 1969.

P. silvaticus K. Schum. (also spelled *sylvaticus*) (*Brachelytrum silvaticum* (K. Schum.) Hack.; *Festuca africana* (Hack.) Clayton)

Africa, Tanzania. See *Die Pflanzenwelt Ost-Afrikas* C: 108. 1895, *Die Natürlichen Pflanzenfamilien* 2(2): Nacht. 42. 1897 and *Kew Bulletin* 40(4): 727-728. 1985.

Pseudochaetochloa A. Hitchc.

From the Greek *pseudes* and the genus *Chaetochloa* Scribn., *chaite* "bristle, long hair" and *chloe*, *chloa* "grass."

One species, Western Australia. Panicoideae, Panicoideae, Paniceae, subtribe Cenchrinae, perennial, tufted, herbaceous, branched, auricles absent, ligule fringed, plants dioecious, inflorescence paniculate subspiciform, deciduous branchlets spreading, 2-5 spikelets with bristles, 2 male florets per spikelet, hermaphrodite florets wanting, two glumes unequal, upper lemma membranous, open areas, stony places, slopes, sometimes referred to *Pennisetum*, type *Pseudochaetochloa australiensis* Hitchc., see Albert Spear Hitchcock (1865-1935), in *Journal of the Washington Academy of Sciences*. 14(21): 492. 1924.

Species

P. australiensis Hitchc.

Australia. Inflorescence a contracted spike-like panicle not spatheate, bristles or scales subtending the spikelets and deciduous with them, glumes membranous, see *Journal of the Washington Academy of Sciences* 14(21): 492. 1924.

Pseudocoix A. Camus = *Hickelia* A. Camus

Greek *pseudes* "false" plus *Coix* L.

One species, Madagascar and Tanzania. Bambusoideae, Bambusoideae, Bambuseae, Bambusinae, perennial, shrubby, erect, branched, leaning on trees, woody, scrambler, scandent, fragile, leafy, rhizomes pachymorph, leaf blades linear, plants bisexual, inflorescence compound, spikelets subtended by a bract, spikelets 1-flowered, glumes 2-3 membranous and 1-2 indurated, lemma smooth, palea not convolute, lodicules present, 6 stamens, ovary hairy, 3 stigmas, forest, sometimes referred to *Hickelia*, see *Reliquiae Haenkeanae* 1: 256. 1830 and *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 179: 478-480. 1924, *Bulletin de la Société Botanique de France* 71: 903-906. 1925, *Archives du Muséum d'Histoire Naturelle*, sér. 6, 12: 603. Paris 1935, *Kew Bulletin* 49(3): 429-443. 1994.

Species

P. perrieri A. Camus (*Hickelia perrieri* (Camus) S. Dransf.)

Madagascar. See *Kew Bulletin* 49(3): 441. 1994.

Pseudodanthonia Bor & C.E. Hubb. = *Sinochasea* Keng

Greek *pseudes* "false" and *Danthonia* DC., after the French botanist D. (Étienne) Danthoine, fl. 1788, agrostologist.

About 1-2 species, Asia, Himalaya. Pooideae, Poodae, Aveneae, or Arundinoideae, Danthonieae, perennial, tufted, herbaceous, usually unbranched, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence racemose or paniculate, spikelets pedicellate, 2 glumes subequal 5- to 9-nerved, lemmas coriaceous hairy bifid, palea present, 2 free and fleshy lodicules, 3 stamens, ovary hairy, 3 plumose sessile stigmas, mountains, slopes, open areas, type *Pseudodanthonia himalaica* (Hook.f.) Bor & C.E. Hubb., see *Flore Française. Troisième Édition* 3: 32. 1805 and *Kew Bulletin* 12: 425. 1958, *Journal of the Washington Academy of Sciences* 48(4): 115-117, f. 1. 1958.

Species

P. himalaica (Hook.f.) Bor & C.E. Hubb. (*Danthonia himalaica* Hook.f.)

India. See *The Flora of British India* 7: 281. 1897 [1896] and *Kew Bulletin* 12: 427. 1958.

P. trigyna (Keng) Clayton (*Sinochasea trigyna* Keng)

India, China. Spikelet 1-flowered, see *Journal of the Washington Academy of Sciences* 48(4): 115-117, f. 1. 1958, *Kew Bulletin* 40(4): 729. 1985.

Pseudodichanthium Bor

Presumably related to *Dichanthium*.

One species, India. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual, slender, straggling, more or less aromatic, auricles absent, leaf blades linear, ligule membranous, plants bisexual, inflorescence racemose, single racemes with imbricate spikelets, spikelets sessile and pedicellate, 2 glumes unequal, lower glume convex cartilaginous broadly winged, upper lemma entire awned, palea absent, 3 stamens, ovary glabrous, 2 stigmas, light shade, forest, type *Pseudodichanthium serrafalcoides* (Cooke & Stapf) Bor, see *Species Plantarum* 2: 1045. 1753, *Annalen der Botanik. ed. Usteri* 18: 11. 1796 and *Indian Forester* 66: 271. 1940, *Grasses of Burma ...* 204. 1960, *Journal of the Bombay Natural History Society* 84(2): 388. 1987[1988].

Species

P. serrafalcoides (T. Cooke & Stapf) Bor (*Andropogon cookei* Stapf ex Cooke; *Andropogon cookei* Stapf ex Woodrow; *Andropogon serrafalcoides* Cooke & Stapf; *Dichanthium serrafalcoides* (T. Cooke & Stapf) Blatt. & McCann; *Pseudodichanthium cookei* (Stapf ex Cooke) M.R. Almeida) (for the British botanist Theodore Cooke, 1836-1910, 1892 FLS, botanical collector in India, author of *The Flora of the Presidency of Bombay ...* London [1901-] 1903-1908. See Herbert Mills Birdwood (1837-1907), "A catalogue of the flora of Matheran and Mahabaleshwar [Mahabaleshwar or Mahabaleshwar]... with a note by T. Cooke." Revised edn. *Journ. Bomb. Nat. Hist. Soc.* x. Bombay 1897; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 148. Oxford 1964; J.H. Barnhart, *Biographical notes upon botanists*. 1: 377. 1965; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. 71. Edinburgh 1970; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 166. London 1994)

India. Culm with nodal swelling at the base of the internode, inflorescence terminal and axillary, spikelets broadly winged, see *Journal of the Bombay Natural History Society* 13: 438. 1893 and *Bulletin of Miscellaneous Information Kew* 1908: 450. 1908, *Journal of the Bombay Natural History Society* 32: 426. 1928, *Indian Forester* 66: 272. 1940.

Pseudolasiacis (A. Camus) A. Camus =
Lasiacis (Griseb.) Hitchc.

Greek *pseudes* "false" plus *Lasiacis* (Griseb.) Hitchc.

Paniceae, *Panicum* subg. *Pseudolasiacis* A. Camus, usually in *Lasiacis*, see *Species Plantarum* 1: 55, 58. 1753, *Systema Naturae, Editio Decima* 2: 871. 1759, *Flora of the British*

West Indian Islands 551. 1864 and *Contributions from the United States National Herbarium* 15: 13-15, 16. 1910, *Contr. U.S. Natl. Herb.* 22: 13. 1920, *Bulletin de la Société Botanique de France* 73: 974. 1927, *Bulletin Mensuel de la Société Linnéenne de Lyon* 14: 72. 1945, *Notulae Systematicae. Herbarium du Muséum de Paris* 12: 86-87. 1945, *Fieldiana, Botany* 24(2): 38-331. 1955, *Annals of the Missouri Botanical Garden* 65(4): 1133-1254. 1978[1979], *Flora Mesoamericana* 6: 318-321. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Adansonia, Sér.* 3 21(2): 231-237. 1999.

Species

P. bathiei (A. Camus) A. Camus (*Panicum bathiei* A. Camus)

Africa. See *Bulletin de la Société Botanique de France* 73: 977. 1926, *Bulletin Mensuel de la Société Linnéenne de Lyon* 14: 72. 1945.

P. leptolomoides (A. Camus) A. Camus (*Panicum alleizettei* A. Camus; *Panicum bathiei* A. Camus; *Panicum frappieri* A. Camus; *Panicum lemeeanum* A. Camus; *Panicum leptolomoides* A. Camus; *Panicum leptolomoides* var. *ambrensis* A. Camus; *Pseudolasiacis lemeena* (A. Camus) A. Camus)

Madagascar. Climbing, leaning, see *Bulletin du Muséum National d'Histoire Naturelle* 30: 514. 1924, *Bulletin Mensuel de la Société Linnéenne de Lyon* 14: 72. 1945, *Notulae Systematicae. Herbarium du Muséum de Paris* 12: 86-87. 1945, *Bulletin de la Société Botanique de France* 99: 143. 1952, *Bulletin de la Société Botanique de France* 106: 215. 1959.

P. leptolomoides (A. Camus) A. Camus var. *coursii* (A. Camus) Bosser (*Panicum coursii* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 107: 215. 1959, *Adansonia, Sér.* 3 21(2): 233. 1999.

P. neoperrieri (A. Camus) A. Camus (*Panicum ihosyense* A. Camus; *Panicum neoperrieri* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 73: 976. 1926, *Bulletin de la Société Botanique de France* 81: 54. 1934, *Bulletin Mensuel de la Société Linnéenne de Lyon* 14: 72. 1945, *Adansonia, Sér.* 3 21(2): 235, f. 2(map). 1999.

Pseudopentameris Conert

From the Greek *pseudes* "false" with *Pentameris* P. Beauv.

About 2-4 species, South Africa. Arundinoideae, Dantho-
nieae, perennial, herbaceous, unarmed, erect, tufted, forming clumps, branched or simple, auricles present, ligule a fringe of hairs, leaf blades linear, leaves rigid or soft, plants bisexual, inflorescence paniculate sometimes racemose, panicle contracted, spikelets solitary and pedicelled, 2 florets bisexual, central awn geniculate and twisted in lower

part, glumes more or less equal 3- to 7-nerved, lemmas bilobed coriaceous 9-nerved, geniculate central awn, palea present, 2 free and fleshy lodicules glabrous or ciliate, 3 stamens, ovary glabrous with apical pseudostigmata, dark stigmas, open habitats, mountain, sometimes referred to and included in *Danthonia* sensu lato, type *Pseudopentameris macrantha* (Schrad.) Conert, see *Flore Française. Troisième Édition* 3: 32. 1805, *Essai d'une Nouvelle Agrostographie* 92, t. 18, f. 8. 1812 and *Mitteilungen der Botanischen Staatssammlung München* 10: 299-308. 1971, *Zoologica Africana* 13(2): 329-350. 1978.

Species

P. brachyphylla (Stapf) Conert (*Danthonia brachyphylla* Stapf)

South Africa. Perennial, tufted, leaves basal, old leaves curled, lemmas pubescent, central awn geniculate, found in rocky soils, sandy slopes, see *Flora Capensis* 7: 520-521. 1899 and *Mitteilungen der Botanischen Staatssammlung München* 10: 304. 1971.

P. macrantha (Schrad.) Conert (*Danthonia macrantha* Schrad.; *Pentameris macrantha* (Schrad.) Nees)

South Africa. Perennial, tufted, erect, forming large clumps, lemmas glabrous and pubescent, central awn geniculate, grains eaten by baboons, found in rocky soils, sandy or stony slopes, see *Mantissa* 2: 385. 1824, *Linnaea* 7(3): 312. 1832 and *Mitteilungen der Botanischen Staatssammlung München* 10: 304. 1971.

Pseudophacelurus A. Camus = Phacelurus Griseb.

Greek *pseudes* "false" plus the genus *Phacelurus* Griseb.

Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, type *Pseudophacelurus speciosus* (Steud.) A. Camus, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Spicilegium florum rumelicarum et bithynicarum ...* 2: 423-424. 1844 [1846], *Flora* 29: 21. 1846, *Synopsis Plantarum Glumacearum* 1: 375. 1854, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887 and *Bulletin du Muséum d'Histoire Naturelle* 27(5): 370-371. 1921.

Pseudophleum Dogan = Phleum L.

Greek *pseudes* "false" plus *Phleum* L.

One species, Europe, Turkey. Pooideae, Poodae, Aveneae, or Pooideae, Poaceae, Alopecurinae, annual, herbaceous, unbranched, auricles absent, narrow leaf blades, ligule membranous, plants bisexual, inflorescence paniculate, spikelets more or less pedicellate or sessile, 2 glumes unequal, palea 2-keeled 2-nerved, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas,

sometimes referred to *Phleum*, type *Pseudophleum gibbum* (Boiss.) Dogan, see *Species Plantarum* 1: 59. 1753 and *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 75. 1982, *Contributions from the United States National Herbarium* 48: 491-494. 2003.

Species

P. gibbum (Boiss.) Dogan (*Phleum gibbum* Boiss.)

Turkey. Glumes 3-nerved, sandy soils, see *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 77. 1982.

Pseudopogonatherum A. Camus = Eulalia Kunth, *Puliculum* Stapf ex Haines

About 2 species, tropical Asia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, perennial or rarely annual, tufted or forming tussocks, leaves mainly basal, auricles absent, narrow leaves, ligule a fringed membrane, inflorescence of digitate or subdigitate racemes, tough rachis, spikelets paired, two glumes more or less equal, lower glume 2-nerved, upper glume 1-nerved, palea nerveless, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, sometimes included in and referred to *Eulalia*, type *Pseudopogonatherum irritans* (R. Br.) A. Camus, see K.S. Kunth, *Révision des Graminées*. 1: 160. Paris 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 90. 1836, *Die Natürlichen Pflanzenfamilien*. 2(2): 24. (July) 1887, *Monographiae Phanerogamarum* 6: 189, t. 1, f. 13. 1889, *Revisio Generum Plantarum* 2: 788. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2* 68: 203-205. 1921, *Fl. Indo-Chine* 7: 254. 1922, *The Botany of Bihar and Orissa* 5: 1018. 1924, *Bulletin of the Tokyo Science Museum* 18: 2. 1947, *Index Grass Sp.* 3: 203. 1962, Alan N. Andersen, Francisco M. Azcarate and Ian D. Cowie, "Seed selection by an exceptionally rich community of harvester ants in the Australian seasonal tropics." *Journal of Animal Ecology* 69(6): 975-984. Dec 2000, Natalie A. Rositter, Samantha A. Setterfield, Michael M. Douglas and Lindsay B. Hutley, "Testing the grass-fire cycle: alien grass invasion in the tropical savannahs of northern Australia." *Diversity & Distributions* 9(3): 169-176. May 2003.

Species

P. contortum (Brongn.) A. Camus (*Andropogon asthenostachys* Steud.; *Andropogon koretrostachys* Trin.; *Erianthus articulatus* (Trin.) F. Muell.; *Eulalia concinna* Nees ex Steud.; *Eulalia contorta* (Brongn.) Kuntze; *Eulalia contorta* (Brongn.) Pilg.; *Eulalia koretrostachys* (Trin.) Henrard; *Pogonatherum contortum* Brongn.; *Pollinia articulata* Trin.; *Pollinia collina* Balansa; *Pollinia setifolia* Nees; *Pseudopogonatherum collinum* (Balansa) A. Camus; *Pseudopogonatherum koretrostachys* (Trin.) Henrard;

Pseudopogonatherum koretrostachys (Trin.) Ohwi, nom. illeg., non *Pseudopogonatherum koretrostachys* (Trin.) Henrard; *Pseudopogonatherum setifolium* (Nees) A. Camus; *Puliculum articulatum* (Trin.) Haines)

Indochina, India, Australia. See *Species Plantarum* 2: 1045. 1753, *Voyage autour du Monde* 2(2): 90, t. 17. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 273. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 90. 1836, *Hooker's Journal of Botany and Kew Garden Miscellany* 2: 101. 1850, *Synopsis Plantarum Glumacearum* 1: 381, 412. 1854 [1855], *Fragmenta Phytographiae Australiae* 8: 118. 1873, *Journal de Botanique (Morot)* 4: 81. 1890, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2* 68: 203-206. 1921, *Flore Générale de l'Indo-Chine* 7: 256. 1922, *The Botany of Bihar and Orissa* 5: 1018. 1924, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 121. 1940, *Blumea* 4(3): 521. 1941, *Bulletin of the Tokyo Science Museum* 18: 3. 1947, *Acta Phytotaxonomica Sinica* 18(4): 489. 1980, *Acta Botanica Yunnanica* 4(4): 351. 1982.

Annual, tufted, slender, leaves linear, spikelets pedicellate.

P. contortum (Brongn.) A. Camus var. ***linearifolium*** S.L. Chen (*Eulalia contorta* var. *linearifolia* Keng; *Pseudopogonatherum contortum* var. *linearifolium* Keng f.; *Pseudopogonatherum contortum* var. *linearifolium* (Keng) Keng f., nom. illeg., non *Pseudopogonatherum contortum* var. *linearifolium* S.L. Chen)

China. See *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 140, 237. 1957, *Acta Phytotaxonomica Sinica* 18(4): 489. 1980, *Acta Botanica Yunnanica* 4(4): 351. 1982.

P. contortum (Brongn.) A. Camus var. ***pedicellatum*** (Hack.) Keng f. (*Pollinia articulata* var. *pedicellata* Hack.)

China. See *Acta Botanica Yunnanica* 4(4): 352. 1982.

P. contortum (Brongn.) A. Camus var. ***sinense*** (Keng) Keng & S.L. Chen (*Eulalia contorta* var. *sinensis* Keng; *Pseudopogonatherum contortum* var. *sinense* Keng f.)

China. See *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 237. 1957, *Flora Hainanica* 4: 455, 540. 1977, *Acta Phytotaxonomica Sinica* 18(4): 489. 1980, *Acta Botanica Yunnanica* 4(4): 351. 1982, *Icon. Cormoph. Sin.* 5: 187. 1986, *Guihaia* 13(4): 321-322. 1993.

P. irritans (R. Br.) A. Camus (*Erianthus irritans* (R. Br.) Kunth; *Eulalia irritans* (R. Br.) Kuntze; *Pogonatherum irritans* (R. Br.) Roberty; *Pollinia irritans* (R. Br.) Benth.; *Pseudopogonatherum irritans* (R. Br.) Ohwi, nom. illeg.,

non *Pseudopogonatherum irritans* (R. Br.) A. Camus; *Saccharum irritans* R. Br.)

Australia, India, Asia. See *Prodromus Florae Novae Hollandiae* 1: 203. 1810, *Révision des Graminées* 1: 160. 1829, *Flora Australiensis: A Description ...* 7: 525. 1878, *Revisio Generum Plantarum* 1(2): 775. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 205. 1922, *Bulletin of the Tokyo Science Museum* 18: 3. 1947, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 386. 1960, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961.

Pseudoraphis Griff.

Greek *pseudes* "false" and *rhaphis*, *rhaphidos* "a needle," referring to the solitary stiff bristle, to the needle-like bristles.

About 6-7 species, India, Japan, Australia, Eastern Asia. Panicoideae, Panicodae, Paniceae, subtribe Cenchrinae, perennial, aquatic or semiaquatic, decumbent, herbaceous, branched, rooting at the lower nodes, stoloniferous, creeping or forming large floating masses, nodes usually glabrous, internodes hollow, auricles lanceolate or variable, flattened leaf sheaths, leaf blades acuminate and narrow, ligule membranous often pointed, plants bisexual, inflorescence a solitary raceme or panicle of spiciform racemes ending in a long persistent bristle, spikelets solitary and shortly pedicellate, spikelets acute and falling with the glumes, 2 florets, lower floret male or neuter, upper floret usually female or rarely hermaphrodite, solitary and erect stiff bristle below the uppermost spikelet, 2 glumes very unequal and dissimilar, lower glume minute, upper glume coriaceous, lower lemma acute to acuminate or shortly awned, upper lemma translucent and nerveless, palea present, 2 lodicules more or less joined and fleshy, palea present, 2 fleshy lodicules, 0-3 stamens, ovary glabrous, small fruit dorsally compressed, fodder and cover plants, weeds of irrigation, found in marshes and riverbanks, swamps, ponds and lakes, wetlands, open habitats, type *Pseudoraphis brunoniana* (Wall. & Griff.) Griff., see *Species Plantarum* 1: 55. 1753, *Species Plantarum* 2: 1047. 1753, *Der Naturforscher* 23(1): 209. 1788, *Prodromus Florae Novae Hollandiae* 193. 1810, William Griffith (1810-1845), *Notulae ad Plantas Asiaticas* 3: 29, t. 139, f. 217. Calcutta 1851 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10: 210. 1928, J.W. Vickery, "*Pseudoraphis spinescens* (R. Br.) n. comb." *Proc. Roy. Soc. Qld.* 62: 69-72. 1952, *Grasses of Burma ...* 352-355. 1960, *Flora Hainanica* 4: 442, 540, f. 1232. Chinese Academy of Sciences, Beijing 1977, R.D. Webster, *The Australian Paniceae* (Poaceae). J. Cramer: Berlin and Stuttgart. 1987, *Guihaia* 15(4): 305-306, f. 1. 1995, R.T. Kingsford, "Ecological impacts of dams, water diversions and river

management on floodplain wetlands in Australia." *Austral. Ecology* 25(2): 109-127. Apr 2000, *Freshwater Biology* 46(6): 777-786. June 2001, *Freshwater Biology* 48(6): 962-971. June 2003, *Ecological Management and Restoration* 5(2): 143-145. Aug 2004, *Journal of Applied Ecology* 41(4): 615-629. Aug 2004, *Ecological Management and Restoration* vol. 5, issue 3: 191-198. Dec 2004.

Species

P. abortiva (R. Br.) Pilger (*Panicum abortivum* R. Br.; *Pseudoraphis spinescens* (R. Br.) Vickery)

Australia. See *Prodromus Florae Novae Hollandiae* 193. 1810 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10: 210. 1928, *Proceedings of the Royal Society of Queensland* 62(7): 69. 1952.

P. balansae Henrard (*Pseudoraphis longipaleacea* Chia)

Vietnam, Southeast Asia, Thailand, China. Perennial, slender, floating, rhizomatous, leaf sheaths keeled, leaf blades linear, ligule membranous and truncate, erect racemes, usually a single acute spikelet, terminal bristle, 3 stamens in lower floret, see *Blumea* Suppl. 1: 230, t. 17. 1937, *Flora Hainanica* 4: 442, 540, f. 1232. 1977, *Novon* 13: 469. 2003.

in China: chang fu wei zhen mao

P. brunoniana (Wall. & Griff.) Griff. (*Chamaeraphis brunoniana* (Wall. & Griff.) A. Camus; *Chamaeraphis brunoniana* (Griffith) A. Camus; *Chamaeraphis spinescens* var. *brunoniana* (Wall. & Griff.) Hook.f.; *Chamaeraphis spinescens* var. *brunoniana* (Griff.) Hook.f.; *Holcus natans* Roxb. ex Hook.f.; *Panicum brunonianum* Wall. & Griff.; *Panicum intermedium* Griff., nom. illeg., non *Panicum intermedium* Vahl ex Hornem.)

Southeast Asia, China, India, Myanmar. Perennial, aquatic, usually floating, rooting in water, emergent, stoloniferous, leaf blades linear-lanceolate, ligule membranous, inflorescence open, stiff racemes spreading, bristles or scales subtending the spikelets, upper floret pistillate, upper glume lanceolate, closely related to and often confused with *Pseudoraphis spinescens* (R. Brown) Vickery, see *Encyclopédie Méthodique, Botanique*, Suppl. 2: 189. 1811, *Journal of the Asiatic Society of Bengal* 5: 574. 1836, *Notulae ad Plantas Asiaticas* 3: 29, t. 139, f. 217. 1851, *The Flora of British India* 7: 62. 1897 [1896] and *Flore Générale de l'Indo-Chine* 7: 479. 1922, *Grasses of Burma ...* 353. 1960.

in China: wei zhen mao

in Thailand: krok khao, krok khao

P. minuta (Mez) Pilg. (*Chamaeraphis gracilis* Hack. ex Hook.f., nom. illeg., non *Chamaeraphis gracilis* Hack.; *Chamaeraphis minuta* Mez)

Southeast Asia, Vietnam, India. Swamps, see *The Flora of British India* 7: 62. 1897 [1896] and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 48. 1917,

Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem 10: 210. 1928.

P. paradoxa (R. Br.) Pilger (*Panicum paradoxum* R. Br.)

Australia, New South Wales, Queensland, Victoria. Perennial, stoloniferous, glabrous nodes, ligule truncate, inflorescence a raceme, spikelets on very short branches, lower glume truncate, lower lemma male, upper lemma female and elliptic, fodder, cover plants, weeds of irrigation, seasonal or permanent pools and riverbanks, coastal districts. in English: slender mudgrass, thorny mudgrass

P. sordida (Thwaites) S.L. Chen & S. M. Phillips (*Chamaeraphis depauperata* Nees ex Steud.; *Chamaeraphis spinescens* var. *depauperata* Nees ex Hook.f.; *Chamaeraphis squarrosa* var. *depauperata* (Nees ex Hook.f.) Masam.; *Panicum sordidum* Thwaites; *Pseudoraphis depauperata* (Nees ex Steud.) Keng; *Pseudoraphis depauperata* (Nees ex Hook.f.) Keng; *Pseudoraphis spinescens* var. *depauperata* (Nees ex Hook.f.) Bor; *Pseudoraphis squarrosa* var. *depauperata* (Nees ex Hook.f.) Hara; *Pseudoraphis ukishiba* J. Ohwi)

Southeast Asia, China. Tufted, leaf sheaths loose, auricles more or less inconspicuous, leaf blades linear, ligule a ciliate membrane, racemes erect, single spikelet, terminal bristle, inflorescence spike-like contracted and enclosed by the uppermost leaf sheath, 2 stamens in lower floret, along rivers and streams, lakes, shallow water, see *Encyclopédie Méthodique, Botanique*, Suppl. 2: 189. 1811, *Enumeratio Plantarum Zeylaniae* 443. 1864, *The Flora of British India* 7: 62. 1897 [1896] and *Contributions from the United States National Herbarium* 24: 203. 1925, *Journal of the Arnold Arboretum* 20(3): 313. 1939, *Sinensia* 11: 413. 1940, *Transactions of the Natural History Society of Taiwan* 30: 18. 1940, *Journal of Japanese Botany* 17: 398. 1941, *Novon* 13(4): 469. 2003.

in China: shou ji wei zhen mao

P. spinescens (R. Br.) Vickery (*Anatherum squarrosus* (L.f.) P. Beauv.; *Andropogon squarrosus* L.f.; *Chamaeraphis abortiva* (R. Br.) Poir.; *Chamaeraphis aspera* (König) Nees; *Chamaeraphis spinescens* Poir.; *Chamaeraphis spinescens* (R. Br.) Poir.; *Chamaeraphis spinescens* var. *parvispicula* Benth.; *Chamaeraphis spinosa* P. Beauv. ex Roem. & Schult.; *Chamaeraphis squarrosa* (L.f.) Chase; *Echinochloa squarrosa* (L.f.) Roem. & Schult.; *Oplismenus abortivus* (R. Br.) Desv.; *Orthopogon abortivus* (R. Br.) Spreng.; *Orthopogon squarrosus* (L.f.) Spreng.; *Panicum abortivum* R. Br.; *Panicum asperum* König, nom. illeg., non *Panicum asperum* Lam.; *Panicum spinescens* R. Br.; *Panicum squarrosus* (L.f.) Lam., nom. illeg., non *Panicum squarrosus* Retz.; *Pseudoraphis abortiva* (R. Br.) Pilg.; *Pseudoraphis aspera* (König) Pilger; *Pseudoraphis squarrosa* (L.f.) Chase; *Pseudoraphis squarrosa* (L.f.) Hara)

Indonesia to Australia, India and Sri Lanka, Thailand, Malaysia, Papua New Guinea. Perennial with trailing

flexible stems, aquatic or semiaquatic, emergent, decumbent, prostrate, stoloniferous, low creeping, nodes pubescent, leaf sheaths laterally compressed and keeled, ligule fringed, open panicle with numerous spikelets on long slender branches, erect seed head, stiff bristle, solitary and secund spikelets narrow and acuminate, lower glume abaxial and nerveless, upper glume pointed and nerved, lower lemma male, upper lemma female, palatable, extensively used as fodder, highly palatable to water buffalo, good for grazing, heavily grazed by deer and wallabies, ground cover, forms dense and almost pure stands on floodplains that are seasonally dry, sometimes floating mats in the water, sensitive to flood timing, requires a long period of flooding to produce flowers and set seed, provides habitat for waterbirds and amphibians, used for nesting, intolerant of very long periods of submergence, found in frequently flooded areas, on seasonal intermittent freshwater ponds and marshes, swamp wet-dry edges, lagoons, pools and riverbanks, riverine floodplains, in damp or muddy areas, freshwater swamps and lowland freshwater swamps, on deep waterholes and shallow streams, see *Supplementum Plantarum* 433. 1781 [1782], *Der Naturforscher* 23(1): 209. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Flore d'Oware* 2: 14. 1807 [1810], *Prodromus Florae Novae Hollandiae* 193. 1810, *Encyclopédie Méthodique. Botanique ... Supplément* 2. 189. 1811, *Essai d'une Nouvelle Agrostographie* 53, 128, 150. 1812, *Systema Vegetabilium* 2: 479. 1817, *Mantissa* 2: 253. 1824, *Systema Vegetabilium, editio decima sexta* 1: 306-307. 1825, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 186. 1831, *A Numerical List of Dried Specimens* 8679. 1849, *Flora Australiensis: A Description ...* 7: 499. 1878 and *Contributions from the United States National Herbarium* 24: 203. 1925, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10: 210. 1928, *Handb. Fl. Ceylon* 6: 326. 1931, *Journal of the Arnold Arboretum* 20(3): 313. 1939, *Journal of Japanese Botany* 17: 398. 1941, *Proceedings of the Royal Society of Queensland* 62(7): 69. 1952, *Ceylon J. Sci., Biol. Sci.* 2(2): 129. 1959, *Grasses of Burma ...* 258-259, 353. 1960.

in English: spiny mudgrass, Moira grass

in Thailand: yaa phraek nam, ya phraek nam, yak preak nam

P. spinescens (R. Br.) Vickery var. *depauperata* (Nees ex Steud.) Bor (*Chamaeraphis depauperata* Nees ex Steud.; *Chamaeraphis spinescens* var. *depauperata* Nees ex Hook.f.; *Chamaeraphis spinescens* var. *depauperata* (Nees ex Steud.) Hook.f.; *Chamaeraphis squarrosa* var. *depauperata* (Nees ex Hook.f.) Masam.; *Panicum sordidum* Thwaites; *Pseudoraphis depauperata* (Nees ex Steud.) Keng; *Pseudoraphis depauperata* (Nees ex Hook.f.) Keng; *Pseudoraphis spinescens* var. *depauperata* (Nees ex Hook.f.) Bor; *Pseudoraphis squarrosa* var. *depauperata* (Nees ex Hook.f.) Hara; *Pseudoraphis ukishiba* J. Ohwi)

India, Australia. See *Encyclopédie Méthodique, Botanique, Suppl.* 2: 189. 1811, *Synopsis Plantarum Glumacearum* 1: 49. 1854, *Enumeratio Plantarum Zeylaniae* 443. 1864, *The Flora of British India* 7: 62. 1897 [1896] and *Fl. Ceylon* 5: 165. 1900, *Contributions from the United States National Herbarium* 24: 203. 1925, *Journal of the Arnold Arboretum* 20(3): 313. 1939, *Sinensia* 11: 413. 1940, *Transactions of the Natural History Society of Taiwan* 30: 18. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 273. 1941, *Journal of Japanese Botany* 17: 398. 1941, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 354. 1960, *Novon* 13(4): 469. 2003.

P. spinescens (R. Br.) Vickery var. *subglabra* (Thwaites ex Trimen) Bor (*Chamaeraphis spinescens* var. *subglabra* Thwaites ex Trimen; *Pseudoraphis squarrosa* (L.f.) Chase; *Pseudoraphis squarrosa* var. *subglabra* (Thwaites ex Trimen) Senaratna)

India, Australia. See *Encyclopédie Méthodique, Botanique, Suppl.* 2: 189. 1811, *Syst. Cat. Pl. Ceyl.* 106. 1885 and *Journal of the Arnold Arboretum* 20(3): 313. 1939, *Grasses of Ceylon [Peradeniya Manual]* 153. 1956, *Grasses of Burma, Ceylon, India and Pakistan* 354. 1960.

Pseudoroegneria (Nevski) Á. Löve = *Elymus* L.

From the Greek *pseudes* "false" plus *Roegneria* K. Koch.

About 15-16 species, Central Asia, China, North America, Middle East. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, *Elytrigia* sect. *Pseudoroegneria* Nevski, perennial, tufted or densely tufted, herbaceous, erect, unbranched, auricles present, leaf blades linear, ligule membranous, plants bisexual, inflorescence a single spike, spikelet solitary at each node, two glumes lanceolate, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, sometimes included in *Elytrigia* Desv., sometimes referred to *Elymus* and *Elytrigia*, open areas, open hillsides, drought-tolerant, type *Pseudoroegneria strigosa* (M. Bieb.) Á. Löve, see *Species Plantarum* 1: 83, 85. 1753, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Flora Taurico-Caucasica* 3: 81. 1819, *Flora Altaica* 1: 117. 1829, *Verzeichniss der Pflanzen...* 25. 1831, *Linnaea* 21(4): 413. 1848, *Bulletin de la Société Botanique de France* 4: 307. 1857, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 27-28. 1897 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 10: 21. 1904, *Flora URSS* 2: 636, 638, 640. 1934, *Trudy Sredne-Aziatskogo Gosudarstvennogo Universiteta. Seriya 8b, Botanika* 17: 60. 1934, *Grasses of Burma, Ceylon, India and Pakistan* 693, 695. 1960, *Novosti Sistematiki Vysshchikh Rastenii* 9: 60. 1972, *Novosti Sistematiki Vysshchikh Rastenii* 12: 44. 1975, *Novosti Sist. Vyssh. Nizsh. Rast. (Kiev)*

1976: 12, 14. 1976[1977], *Taxon* 29(1): 168. 1980, D.R. Dewey, "The genomic system of classification as a guide to intergeneric hybridization with the perennial Triticeae." In D.R. Dewey [editor], *Gene Manipulation in Plant Improvement*, 209-279. Plenum Press, New York, New York, U.S. 1984, *Acta Botanica Yunnanica* 6(1): 75-76, pl. 1. 1984, *Feddes Repertorium* 95(7-8): 444-447. 1984, *Genome* 29: 247-252. 1987, *American Journal of Botany* 76: 796-805. 1989, *Genome* 33: 563-570, 668-673. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 75(9): 1321. 1990, *Genome* 34: 860-867. 1991, *Genome* 35: 881-885. 1992, *Canadian Journal of Botany* 70: 900-909. 1992, *Genome* 36: 102-111. 1993, *Cathaya* 6: 13. 1994, *Plant Systematics and Evolution* 194: 189-205. 1995, *Systematic Botany* 21(2): 3-15. 1996, *Journal of Ecology* 87(5): 873-884. Oct 1999, *Restoration Ecology* 9(3): 326-331. Sep 2001, *Plant Breeding* 120(5): 375-380. Oct 2001, *Restoration Ecology* 10(1): 88-95. Mar 2002, *Functional Ecology* 16(6): 758-765, 874-877. Dec 2002, *Contributions from the United States National Herbarium* 48: 590. 2003, *Global Change Biology* 9(7): 1097-1105. July 2003, *Am. J. Bot.* 91: 1709-1725. 2004, *Journal of Biogeography* 31(3): 415-424. Mar 2004, *New Phytologist* 162(1): 9-24. Apr 2004, *Functional Ecology* 18(4): 489-496. Aug 2004, *Restoration Ecology* 12(4): 546-551. Dec 2004, *Ecology Letters* 8(2): 209-217. Feb 2005, *Botanical Journal of the Linnean Society* 147(4): 501-508. Apr 2005, *Restoration Ecology* 13(2): 292-301. June 2005, *Journal of Ecology* vol. 93, issue 3: 576-583. June 2005.

Species

P. cognata (Hackel) Á. Löve (*Agropyron cognatum* Hackel; *Agropyron dshungaricum* Nevski; *Agropyron ferganense* Drobow; *Elymus cognatus* (Hack.) Cope; *Elytrigia cognata* (Hack.) Holub; *Elytrigia cognata* (Hack.) O. Anders & D. Podlech; *Elytrigia dshungarica* (Nevski) Nevski; *Elytrigia ferganensis* (Drobow) Nevski; *Pseudoroegneria ferganensis* (Drobow) Dewey)

China. Erect, glabrous, smooth, glaucous-green, erect inflorescence spicate, spike loose, glumes lanceolate, stony slopes, see *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 11: 22. 1905, *Flora URSS* 2: 641. 1934, *rudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. I, Fl. Sist. Vyssh. Rast.* 2: 81. 1936, *Grasses of Burma ...* 690. 1960, *Mitteilungen der Botanischen Staatssammlung München* 12: 311. 1976, *Folia Geobotanica et Phytotaxonomica* 12(4): 426. 1977, D.R. Dewey, "Cytogenetics of *Agropyron ferganense* and its hybrids with six species of *Agropyron*, *Elymus*, and *Sitanion*." *American Journal of Botany* 68(2): 216-225. 1981, *Flora of Pakistan* 143: 628. 1982, *Feddes Repert.* Band 95(7-8): 446. 1984, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie*

110: 7-15. 1988, *Hereditas; genetiskt arkiv.* 114: 117-124. 1991.

P. deweyi K.B. Jensen, S.L. Hatch & Wipff (for the American botanist Lyster Hoxie Dewey, 1865-1944, hempologist, botanist at USDA 1890-1935, author of "The Russian thistle [*Salsola kali tragus*] its history as a weed in the United States, with an account of the means available for its eradication." *Bull. U.S. Dep. Agric.* no. 15, 1894 and *Fiber Production in the Western Hemisphere*. Miscellaneous publication / United States Department of Agriculture no. 518. Washington D.C.: United States Government Printing Office, 1943. See J.H. Barnhart, *Biographical notes upon botanists.* 1: 450. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* 240-241. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs.* VI. 1983)

North America, Canada. See *Canadian Journal of Botany* 70(5): 907, f. 4. 1992.

P. spicata (Pursh) Á. Löve (*Agropyron divergens* (Nees ex Steud.) P. Candargy; *Agropyron divergens* (Nees ex Steud.) Vasey; *Agropyron divergens* var. *tenue* Vasey ex Macoun; *Agropyron divergens* var. *tenuispicum* Scribn. & J.G. Sm.; *Agropyron spicatum* (Pursh) Scribn. & J.G. Sm.; *Agropyron spicatum* var. *tenuispicum* (Scribn. & J.G. Sm.) Rydb.; *Elymus spicatus* (Pursh) Gould; *Elytrigia spicata* (Pursh) D.R. Dewey; *Festuca spicata* Pursh; *Roegneria spicata* (Pursh) Beetle; *Schedonorus spicatus* (Pursh) Roem. & Schult.; *Triticum divergens* Nees ex Steud.; *Zeia spicata* (Pursh) Lunell)

Northern America, Canada, U.S. Perennial, clustered, erect, leaves flat or involute, slender spikes, glumes narrow, lemma with strongly divergent awn, useful for erosion control, forage, see *Species Plantarum* 1: 83, 85. 1753, *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770, *Essai d'une Nouvelle Agrostographie* 99, 162, 177. 1812, *Flora Americae Septentrionalis; or, ...* 1: 83. 1814, *Systema Vegetabilium* 2: 707. 1817, *Synopsis Plantarum Glumacearum* 1: 347. 1854, [*Catalogue of Canadian Plants* 96. 1885] *A Descriptive Catalogue of the Grasses of the United States* 96. 1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 27, 33. 1897 and *Memoirs of the New York Botanical Garden* 1: 61. 1900, *Archives de Biologie Végétale Pure et Appliquée* 1: 21, 41. Athens 1901, *American Midland Naturalist* 4: 227. 1915, *Man. Grass. U.S.* 777. 1935, *Madroño* 9(4): 125. 1947, *Taxon* 29(1): 168. 1980, *Brittonia* 35(1): 31. 1983, *Phytologia* 55(3): 213. 1984, *Biologisches Zentralblatt* 105: 361-368. 1986, *Genome* 29: 247-252, 470-480. 1987, *Botanical Gazette* 148: 123-129. 1987, *Genome* 30: 879-884. 1988, *Genome* 32: 468-474, 640-645. 1989, *Genome* 33: 563-570. 1990,

Genome 34: 860-867. 1991, *Genome* 35: 881-885. 1992, *Genome* 36: 72-76. 1993, *Plant Systematics and Evolution* 186: 193-212. 1993, *Nordic Journal of Botany* 13: 353-367. 1993, *Cathaya* 6: 1-14. 1994, *Plant Systematics and Evolution* 197: 1-17. 1995, *International Journal of Plant Sciences* 156: 731-739. 1995, *Plant Systematics and Evolution* 209: 63-73. 1998, Steven R. Larson, Thomas A. Jones and Kevin B. Jensen, "Population structure in *Pseudoroegneria spicata* (Poaceae: Triticeae) modeled by Bayesian clustering of AFLP genotypes." *Am. J. Bot.* 91: 1789-1801. 2004.

in English: beardless wheatgrass, bluebunch wheatgrass

P. spicata (Pursh) Á. Löve subsp. *inermis* (Scribn. & J.G. Sm.) Á. Löve (*Agropyron divergens* var. *inermis* Scribn. & J.G. Sm., also spelled *inermis*; *Agropyron inermis* (Scribn. & J.G. Sm.) Rydb.; *Agropyron spicatum* f. *inermis* (Scribn. & J.G. Sm.) Beetle; *Agropyron spicatum* var. *inermis* (Scribn. & J.G. Sm.) Heller; *Roegneria spicata* f. *inermis* (Scribn. & J.G. Sm.) Beetle)

Northern America, Canada, U.S. Perennial, see *A Descriptive Catalogue of the Grasses of the United States* 96. 1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 27, 33. 1897 and *Catalogue of North American Plants North of Mexico* edition 2 3. 1900, *Bulletin of the Torrey Botanical Club* 36: 539. 1909, *Man. Grass. U.S.* 773. 1935, *Leaflets of Western Botany* 6(8): 162. 1951, *Taxon* 29(1): 169. 1980, *Phytologia* 55(3): 213. 1984, *Biologisches Zentralblatt* 105: 361-368. 1986, *Genome* 29: 247-252, 470-480. 1987.

in English: beardless wheatgrass

P. spicata (Pursh) Á. Löve subsp. *spicata* (*Agropyron divergens* var. *tenuispicum* Scribn. & J.G. Sm.; *Agropyron spicatum* (Pursh) Scribn. & J.G. Sm.; *Agropyron spicatum* subsp. *puberulentum* Piper; *Agropyron spicatum* var. *pubescens* Elmer; *Agropyron spicatum* var. *spicatum*; *Agropyron spicatum* var. *tenuispicum* (Scribn. & J.G. Sm.) Rydb.; *Agropyron spicatum* var. *vaseyi* (Scribn. & J.G. Sm.) E. Nelson; *Agropyron vaseyi* Scribn. & J.G. Sm.; *Elymus spicatus* (Pursh) Gould; *Elytrigia spicata* (Pursh) D.R. Dewey; *Roegneria spicata* (Pursh) Beetle)

Northern America, Canada, U.S. Perennial, see *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 27, 33. 1897 and *Memoirs of the New York Botanical Garden* 1: 61. 1900, *Botanical Gazette* 36: 52. 1903, *Botanical Gazette* 38: 378. 1904, *Contributions from the United States National Herbarium* 11: 147. 1906, *Taxon* 29(1): 168. 1980.

in English: bluebunch wheatgrass

P. stipifolia (Czern. ex Nevski) Á. Löve (*Agropyron stipifolium* Czern. ex Nevski; *Elymus stipifolius* (Czern. ex Nevski) Melderis; *Elytrigia stipifolia* (Czern. ex Nevski) Nevski)

Georgia, Armenia, Russia, Ukraine, North Caucasus. Indeterminate species, spikes narrow with distant spikelets, on rocky and dry places, along roadsides, disturbed sites, old orchard areas, see *Flora URSS* 2: 637. 1934, *Botanical Journal of the Linnean Society* 76(4): 376. 1978, *Feddes Repertorium* 95(7-8): 445. 1984, *Genome* 29: 247-252. 1987, *Genome* 36: 102-111. 1993, *Pakistan Journal of Botany* 26: 353-366. 1994, *International Journal of Plant Sciences* 156: 731-739. 1995.

Pseudoryza Griff. = *Blepharochloa* Endl., *Leersia* Sw., *Leersia* Sol. ex Sw.

Greek *pseudes* "false" plus the genus *Oryza* L.

Ehrhartoideae, Oryzeae, Oryzinae, type *Pseudoryza ciliata* (Retz.) Griff., see *Nova Genera et Species Plantarum seu Prodromus* 1, 21. 1788, *Observationes Botanicae* 5: 23. 1789, *Genera Plantarum* 1352. 1840, William Griffith, 1810-1845, *Icones plantarum asiaticarum*. 3: t. 144, f. 1. Calcutta 1847-1854, *Index Kewensis* 1: 312. 1895 and *Brittonia* 23(3): 293-324. 1971, *Phytologia* 37(4): 317-407. 1977, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Cuscutlania* 1(6): 1-29. 1991, H.I. Oka, "Ecology of wild rice planted in Taiwan. IV. Interactions between perennial and annual types of wild rice and *Leersia hexandra* in mixed planting." in *J. Agric. & Forestry* 43(3): 55-56, Publ. by Nail. Chung Hsing Univ. Taichung. Taiwan. ROC 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Contributions from the United States National Herbarium* 39: 35, 64-67. 2000.

Pseudosasa Makino ex Nakai = *Pseudosasa* Makino, *Yadakeya* Mak.

Greek *pseudes* "false" with *Sasa* Makino & Shib., referring to the number of the stamens.

About 8-36 species, Japan and Taiwan, eastern Asia. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Arundinariinae, dense shrubby perennial, erect, spreading, woody and persistent, sympodial, unarmed, forming thickets, creeping rhizomes hypogeous, leaf blades coriaceous, leaves long-lanceolate, flowering culms leafy, upper culm nodes often with 1-3 branches, branched above, branches usually absent from the lower nodes, culm sheaths persistent or shedding late, sheath blade often erect, leaf sheath without auricles, culm internodes hollow, rhizomes pachymorph and leptomorph, plants bisexual, inflorescence a racemose panicle, spikelets linear or lanceolate several-flowered, two glumes unequal to subequal, lemmas ovate, palea present, 3 lodicules, stamens 3-4, ovary glabrous, feathery stigmas 2-3, woodland, along roadsides, closely related to *Sasa*, sometimes referred to *Arundinaria*, type

Pseudosasa japonica (Siebold & Zucc. ex Steud.) Makino ex Nakai, see *Genera Plantarum* 1: 236. 1789, *Flora Boreali-Americana* 1: 73. 1803 and *Botanical Magazine* 15(168): 18. 1901, *J. Jap. Bot.* 2(4): 15. 1920, *Journal of the Arnold Arboretum* 6(3): 148, 150. 1925, *Journal of Japanese Botany* 6(7): 16. 1929, *Taxon* 6(7): 207. 1957, *Agriculture Handbook* 193: i-iii, 1-74. 1961, *Bulletin of Botanical Research* 11(4): 44-46. 1991, *Taxon* 45: 543-544. 1996, *Ecological Research* 13(1): 41-53. Mar 1998, *Taxon* 48: 359-360. 1999, *European Journal of Soil Science* 50(2): 217-226. July 1999, *Contributions from the United States National Herbarium* 39: 106-107, 116. 2000, *Ecological Research* 19(5): 485-493. Sep 2004.

Species

P. acutivagina Wen & S.C. Chen (*Acidosasa nanunica* (McClure) C.S. Chao & G.Y. Yang; *Indocalamus nanunicus* McClure)

China, Zhejiang. Pruinose, white pubescent, coriaceous sheath persistent or shedding late and longer than internode, no sheath auricles and no cilia, sheath blade erect, 3 branches on each node, 2-3 leaves on each twig, leaves broad-lanceolate to ovate lanceolate and densely pubescent beneath, used as hedge, living green fence, cultivated, see *Journal of the Arnold Arboretum* 6(3): 148. 1925, *Lingnan University Science Bulletin* 9: 25. 1940, *Journal of Bamboo Research* 1(2): 31. 1982, *Journal of Bamboo Research* 3(2): 31, f. 7. 1984, *Acta Phytotaxonomica Sinica* 39(1): 39. 2001.

P. aerea Wen

China, Zhejiang. Sheath auricles present, sheath ligule truncate, sheath blade lanceolate erect, 3-5 leaves on each twig, leaves lanceolate glabrous, used for making farm implements, umbrella stalks, handicrafts, see *Bulletin of Botanical Research* 3(1): 94-95, pl. 3. 1983.

P. altiligulata Wen (*Acidosasa nanunica* (McClure) C.S. Chao & G.Y. Yang; *Indocalamus nanunicus* McClure)

China. See *Journal of the Arnold Arboretum* 6(3): 148. 1925, *Lingnan University Science Bulletin* 9: 25. 1940, *Journal of Bamboo Research* 1(2): 31. 1982, *Journal of Bamboo Research* 3(2): 31, f. 7. 1984, *Journal of Bamboo Research* 8(1): 18-20, f. 3. 1989, *Acta Phytotaxonomica Sinica* 39(1): 39. 2001.

P. amabilis (McClure) Keng f. (*Arundinaria amabilis* McClure; *Pseudosasa amabilis* var. *amabilis*)

China. Clumps pluricaespitose and diffuse, straight, rhizomes monopodial, internodes cylindrical, long and straight internodes, no sheath auricles, branching nodes slightly swollen, branches in mid-culms in threes, culm leaves tardily deciduous, leaves thick and hard, leaf blades narrow long lanceolate, cultivated, ornamental, culms material for fishing rods, vaulting poles and furniture construction etc., see *Lingnan Science Journal* 10(1): 6, t. 1-8. 1931, *Lingnan*

Science Journal 13: 503. 1934, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 154. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 31. 1959, *Forest Research (China)* 1: 109-111. 1988, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Journal of Zhejiang Forestry College* 8(1): 127-130. 1991.

in English: Tsingli cane, Tongking cane, Tongking bamboo, Tonkin cane, Tonkin bamboo, tea stick bamboo

in China: ch'a kon chuk

P. amabilis (McClure) Keng f. var. *convexa* Z.P. Wang & G.H. Ye (*Arundinaria amabilis* var. *convexa* (Z.P. Wang & G.H. Ye) C.S. Chao & G.Y. Yang)

China. Back of ligule pubescent and pruinose, see *Journal Nanjing University. Natural Sciences Edition* 1981(1): 98. 1981, *Journal of Bamboo Research* 13(1): 5. 1994.

P. amabilis (McClure) Keng f. var. *farinosa* C.S. Chao (*Arundinaria amabilis* var. *farinosa* (C.S. Chao ex S.L. Chen & G.Y. Sheng) C.S. Chao & G.Y. Yang)

China. Papery sheath, sheath blade triangular, see *Bulletin of Botanical Research* 11(4): 45. 1991, *Journal of Bamboo Research* 13(1): 5. 1994.

P. amabilis (McClure) Keng f. var. *tenuis* S.L. Chen & G.Y. Sheng

China. Sheath almost glabrous, short ligule, see *Acta Phytotaxonomica Sinica* 21(4): 407. 1983.

P. aureovagina W.T. Lin

China. See *Journal of Bamboo Research* 12(3): 4-5, f. 5. 1993.

P. baiyunensis W.T. Lin

China. See *Journal of Bamboo Research* 13(2): 20-22, f. 5. 1994.

P. basiaurita (W.T. Lin & X.B. Ye) Keng f. (*Arundinaria basiaurita* W.T. Lin & X.B. Ye)

China. See *Acta Phytotaxonomica Sinica* 26(3): 231, pl. 10. 1988, *Journal of Bamboo Research* 13(4): 59. 1994.

P. brevipalea B.M. Yang

China.

P. cantori (Munro) Keng f. (also spelled *cantorii*) (*Arundinaria cantori* (Munro) Kuntze; *Arundinaria basigibbosa* McClure; *Arundinaria cantorii* (Munro) L.C. Chia; *Arundinaria funghomii* McClure; *Bambusa cantorii* Munro)

China, Guangxi. Waxy, branching at upper part of the culm, branches close to the culm, sheath persistent or shedding late, sheath auricles small, sheath blade erect and narrow lanceolate, 7-10 leaves on each twig, cultivated, used for making furniture, see *Transactions of the Linnean Society of London* 26(1): 111. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Lingnan University Science Bulletin* 9: 1, 3. 1940, *Claves Generum et Specierum Graminearum*

Primarum Sinicarum Appendice Nomenclatione Systematica 12, 154. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 32. 1959, *Kew Bulletin* 37(4): 591. 1983.

in English: small hedge bamboo, cantor bamboo

P. flexuosa Yi & X.M. Zhou

China. See *Journal of Bamboo Research* 15(3): 1-4, f. 1. 1996.

P. gracilis S.L. Chen & G.Y. Sheng

China, Hunan. Slender, sheath shedding late, sheath auricles inconspicuous, sheath ligule very short, sheath blade broadly ovate lanceolate, 2-3 branches per node, 2-3 leaves on each branch, leaves lanceolate, similar to *Arundinaria amabilis* McClure, see *Acta Phytotaxonomica Sinica* 21(4): 405, pl. 1. 1983.

P. guanxianensis Yi

China, Guanxian, Sichuan. Sheath purplish greenish persistent, sheath auricles elliptic, sheath ligule arcuate brownish, sheath blade linear-lanceolate, 4 leaves on each twig, leaves lanceolate, see *Bulletin of Botanical Research* 2(4): 103-104, pl. 3. 1982.

P. hainanensis G.A. Fu

China. See *Journal of Bamboo Research* 13(3): 1-3, f. 1. 1994.

P. hamadae Hatusima

Japan. Branched, three branches per node, culm sheaths glabrous, internodes velutinous and glabrescent, nodes horizontal and not prominent, leaf sheaths glabrous, leaves oblong-lanceolate and glabrous, see *Journal of Geobotany, Hokuriku* 15(4): 86, f. 1 [87]. 1967.

in Japan: oba-yadake

P. hirta S.L. Chen & G.Y. Sheng

China. See *Bulletin of Botanical Research* 11(4): 43-44. 1991.

P. japonica (Siebold & Zucc. ex Steud.) Makino ex Nakai (*Arundinaria japonica* Sieb. & Zucc. ex Steud.; *Pseudosasa japonica* (Siebold & Zucc.) Makino; *Sasa japonica* (Siebold & Zucc. ex Steud.) Makino; *Yadakeya japonica* (Siebold & Zucc. ex Steud.) Makino)

Asia temperate, Japan, South Korea. Tufted, nodes prominent, forming dense thickets, creeping rhizomes running extensively, culm banded white just below the nodes, culm sheath green or dark, sheath persistent shorter than internode, no sheath auricles, ligule broad and truncate, branches one per node, sometimes 2-3 branches at upper nodes, leaf sheath glabrous, 4-7 leaves on each twig, leaves lanceolate and coriaceous, inflorescence purplish, 5-10 flowered, spikelets flattened with distichous florets, 2 glumes acuminate, lemmas acute shortly awned, paleas keeled and ciliate, 3-4 stamens, ovary glabrous, 3 stigmas elongate, ornamental, cultivated and escaped from cultivation, naturalized

elsewhere, used for making arrows, found along riverbanks, roadsides, gardens, abandoned fields, waste places, see *Synopsis Plantarum Glumacearum* 1: 334. 1854 and *Botanical Magazine* (Tokyo) 26(300): 13, f. 2. 1912, *Les Bambusées* 19. 1913, *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 6: 138-139, f. 49. 1916, *Journal of Japanese Botany* 2(4): 15. 1920, *Journal of the Arnold Arboretum* 6(3): 150. 1925, *Journal of Japanese Botany* 3: 44. 1926, *Journal of Japanese Botany* 6(7): 16. 1929, *Science Education [Rika Kyô-iku]* 15(6): 71. 1932, *Flora Sylvatica Koreana* 20: 20. 1933, *New Keys of Japanese Trees*, Revised Edn. 470. Osaka 1961, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: arrow bamboo

in Japan: yadake, ya-dake, akebono-ya-dake (leaf blade green and yellow-white), akebonosuji-ya-dake, me-take

P. japonica (Siebold & Zucc. ex Steud.) Makino ex Nakai var. ***japonica***

Japan. Branched above, one branch per node, culm sheaths densely pilose, leaf sheaths glabrous, long and glabrous internodes, nodes glabrous and not prominent, leaves lanceolate, spikelets linear with 5-7 florets distichously arranged, 2 glumes papery, first glume lanceolate, second glume ovate, lemmas ovate and with a sharp point, palea 2-keeled, 3 lodicules, stamens exerted, ovary ovoid to narrowly ovoid, 3 feathery stigmas, see *Synopsis Plantarum Glumacearum* 1: 334. 1854 and *Botanical Magazine* (Tokyo) 26(300): 13, f. 2. 1912, *Journal of Japanese Botany* 2(4): 15. 1920, *Journal of the Arnold Arboretum* 6(3): 150. 1925, *Journal of Japanese Botany* 6(7): 16. 1929.

in Japan: ya-dake

P. japonica (Siebold & Zucc. ex Steud.) Makino ex Nakai var. ***pleioblastoides*** Muroi

Japan. Three branches at each node.

in Japan: meni-ya-dake

P. japonica (Siebold & Zucc. ex Steud.) Makino ex Nakai var. ***tsutsumiana*** Yanagita

Japan, origin unknown. Cultivated, rhizome swollen, several swollen internodes at the base of the culms, rarely cultivated, used as a potted plant, see *Journal of the Japanese Forestry Soc.* 16: 598. Tokyo 1934, *Amatores Herbarii* (Ser. 4) 16(4): 36. Kobe, Japan 1955.

in Japan: rakkyo-ya-dake, rakkyo-yadake, rakkyo-dake

P. longiligula Wen (*Pseudosasa longiligulata* (McClure) Koidz.; *Sasa longiligulata* McClure)

China, Guangxi. Thick-walled, green, sheath coriaceous, sheath ligule long, sheath blade narrow-lanceolate, sheath auricles elliptic, 1-3 branches on each node, leaves broad-lanceolate or narrow-lanceolate finely pubescent beneath, shoot edible, used for making furniture, see *Acta Phytotaxonomica et Geobotanica* 9(4): 226-227. 1940, *Lingnan*

Science Journal 19(4): 536-537, t. 38. 1940, *Journal of Bamboo Research* 1(1): 27-28, f. 5. 1982.

P. longivaginata H.R. Zhao & Y.L. Yang

China. Slopes, see *Acta Phytotaxonomica Sinica* 20(2): 217-218, pl. 2. 1982.

P. maculifera J.L. Lu

China, Henan. Young culm pruinose, sheath pruinose, sheath blade triangular-lanceolate, sheath ligule arcuate, no sheath auricles, 2-4 leaves on each twig, leaves linear-lanceolate, see *Journal of the Henan Agricultural College* 1981(2): 70-79, f. 1-6. 1981.

P. maculifera J.L. Lu var. *hirsuta* S.L. Chen & G.Y. Sheng

China, Zhejiang. Silky sheath, sheath ligule high, leaves linear-lanceolate, see *Bulletin of Botanical Research* 11(4): 45-46. 1991.

P. magilaminaria B.M. Yang

China. See *Journal of the Henan Science and Technology University* 1(1): 111, f. 1. 1985.

P. membraniligulata B.M. Yang

China. See *Bamboo Research in Asia* 1989(2): 3. 1989.

P. multifloscula (W.T. Lin) W.T. Lin (*Arundinaria multifloscula* W.T. Lin)

China. See *Acta Phytotaxonomica Sinica* 26(3): 231-232, pl. 11. 1988, *Guihaia* 10(1): 18. 1990.

P. nanunica (McClure) Z.P. Wang & G.H. Ye (*Acidosasa nanunica* (McClure) C.S. Chao & G.Y. Yang; *Arundinaria nanunica* (McClure) C.D. Chu & C.S. Chao; *Indocalamus nanunicus* McClure; *Pseudosasa nanunica* (McClure) Z.P. Wang & G.H. Ye)

China, Guangdong, Hunan, Lianshan. Internodes scabrous pruinose, sheath caducous or shedding late, sheath auricle and cilia inconspicuous or absent, sheath ligule well developed, sheath blade erect, leaves coriaceous lanceolate, see *Journal of the Arnold Arboretum* 6(3): 148. 1925, *Lingnan Univ. Sci. Bull.* 9: 25. 1940, *J. Nanjing Techn. Coll. For. Prod.* 1980(3): 26. 1980, *Journal Nanjing University Natural Sciences* 1: 97. 1981, *Journal of Bamboo Research* 1(2): 31. 1982, *Journal Nanjing University Natural Sciences* 23(3): 453-462. 1987, *J. Bamb. Res.* 13(1): 10. 1994, *Acta Phytotaxonomica Sinica* 39(1): 39. 2001.

P. nanunica (McClure) Z.P. Wang & G.H. Ye var. *angustifolia* S.L. Chen & G.Y. Sheng

China, Hunan. See *Bulletin of Botanical Research* 11(4): 45. 1991.

P. nigronodis G.A. Fu

China. See *Journal of Bamboo Research* 15(1): 4, f. 1. 1996.

P. orthotropa S.L. Chen & Wen

China, Guangxi. Green purplish, sheath coriaceous almost persistent, sheath auricles small and weak, sheath blade erect ovate triangular, 3 branches on each node, 4-7 leaves

on each twig, leaves long lanceolate, see *Journal of Bamboo Research* 1(1): 46, f. 1. 1982.

P. owatarii (Makino) Makino ex Nakai (*Arundinaria owatarii* Makino; *Pseudosasa owatarii* Makino; *Sasa owatarii* (Makino) Makino; *Yadakeya owatarii* (Makino) Makino)

Japan. Densely branched in the upper part of the culm, internodes glabrous, nodes not prominent and glabrous, culm sheaths glabrous, leaf sheaths glabrous, leaves glabrous, leaf blades narrowly lanceolate and chartaceous, see *Botanical Magazine* 21: 16. 1907, *Botanical Magazine* 26: 14. 1912, *Journal of Japanese Botany* 2(4): 16. 1920.

in Japan: Yakushima-ya-dake (endemic to Yakushima Isl., Kyûshû), chabo-yakushima (dwarf), kisuji-yakushima (golden-striped), shirosuji-yakushima (striped)

P. owatarii (Makino) Makino ex Nakai f. *pygmaea* Muroi
Japan.

in Japan: chiyabo-yakushima, chabo-yakushima

P. pallidiflora (McClure) S.L. Chen & G.Y. Sheng (*Arundinaria pallidiflora* (McClure) T.H. Wen; *Indocalamus pallidiflorus* McClure)

China, Guangdong. Internodes glabrous, culm sheath persistent, no sheath auricles and cilia, no sheath ligule, sheath blade small, 1-2 branches, leaves lanceolate, see *Lingnan University Science Bulletin* 9: 26-27. 1940, *Journal of Bamboo Research* 5(2): 19. 1986, *Bulletin of Botanical Research* 11(4): 44. 1991.

P. parilis Yi & D.H. Hu

China. See *Journal of Bamboo Research* 14(1): 20-23, f. 3. 1995.

P. projecta (W.T. Lin) Keng f. (*Arundinaria projecta* W.T. Lin)

China. See *Guihaia* 10(1): 16, f. 1. 1990, *Journal of Bamboo Research* 13(4): 65. 1994.

P. pubiflora (Keng) Keng f. (*Arundinaria pubiflora* Keng; *Indocalamus pubiflorus* (Keng) Keng f.)

China. See *Sinensia* 7(3): 414, f. 4. 1936, *Technical Bulletin of the National Forestry Research Bureau* (China) 8: 12. 1948, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 154. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 32. 1959.

P. pubioicatrix W.T. Lin (also spelled *pubicicatrix*)

China. See *Journal of Bamboo Research* 13(2): 22-23, f. 6. 1994.

P. subsolida S.L. Chen & G.Y. Sheng (*Arundinaria subsolida* (S.L. Chen & G.Y. Sheng) C.S. Chao & G.Y. Yang)

China, Hunan. Solid, strips on the back of sheath, leaf auricles absent or tiny, underside of leaf pubescent, similar to *Pseudosasa cantori* (Munro) Keng f., see *Acta Phytotaxonomica Sinica* 21(4): 405-407, pl. 2. 1983, *Acta*

Phytotaxonomica Sinica 29(5): 452-455. 1991, *Journal of Bamboo Research* 13(1): 16. 1994.

P. truncatula S.L. Chen & G.Y. Sheng

China, Zhejiang. Young culm flossy, glabrous, persistent and papery sheath shorter than the internode, no sheath auricles and cilia, sheath ligule truncate with ciliate margin, sheath blade triangular to ovate lanceolate, leaves ovate lanceolate, see *Bulletin of Botanical Research* 11(4): 44, pl. 2: 1-4. 1991.

P. usawai (Hayata) Makino & Nemoto (also spelled *usawae*) (*Arundinaria usawai* Hayata; *Pleioblastus usawai* Ohki; *Pleioblastus usawai* (Hayata) Ohki; *Pseudosasa japonica* var. *usawai* (Hayata) Muroi; *Pseudosasa usawai* Nakai)

Taiwan. Dark green, 1 to 2-3 branches per node, sheath hard and coriaceous, sheath auricles small inconspicuous, sheath ligule truncate, sheath blade linear-lanceolate, 2-6 leaves on each twig, see *Icones plantarum formosananarum nec non et contributiones ad floram formosanam*. 6: 138-139, f. 49. 1916, *Journal of Japanese Botany* 2(4): 15. 1920, *Botanical Magazine* (Tokyo) 42: 520. 1928, *Flora of Japan* (edition 2) 1390. 1931, *Science Education [Rika Kyô-iku]* 15(6): 71. 1932, *New Keys of Japanese Trees*, Revised Edn. 470. Osaka 1961.

in English; usawa cane

in Japan: kawa-kamuri-dake, kawa-kamuri-yadake

P. viridula S.L. Chen & G.Y. Sheng

China. See *Bulletin of Botanical Research* 11(4): 46-47, pl. 2: 5-6. 1991, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

P. vittata B.M. Yang

China. See *Bamboo Research in Asia* 1989(2): 2. 1989.

P. wuyiensis S.L. Chen & G.Y. Sheng

China. Pruinose, sheath coriaceous, sheath ligule arcuate, no sheath auricles and cilia, sheath blade linear-lanceolate, 3 branches on each node, 3-4 leaves on each branches, leaves narrow-lanceolate, see *Bulletin of Botanical Research* 11(4): 46, pl. 1, f. 6-8. 1991.

P. yuelushanensis B.M. Yang

China, Hunan. Thin striae, node convex, pruinose and white pubescence, culm sheath shedding late, sheath auricle weak, sheath ligule truncate, sheath blade narrow lanceolate, 1-3 branches on each node, leaf lanceolate or ovate, see *Natural Science Journal of Hunan Normal University* 9(3): 90. 1986.

Pseudosecale (Godr.) Degen = *Dasypyrum*
(Coss. & Durieu) T. Durand

From the Greek *pseudes* “false” and *Secale* L.

Pooideae, Triticeae, Triticinae, *Triticum* sect. *Pseudosecale* Godr., see *Species Plantarum* 1: 84. 1753, Michel Charles Durieu de Maisonneuve (1796-1878), *Exploration scientifique de l'Algérie: sciences naturelles. Botanique*. Michel Charles Durieu et al. *Flore d'Algérie. Cryptogamie*. Première Partie. Par Durieu de Maisonneuve. Avec le concours de MM. Montagne, Bory de Saint-Vincent, L.R. Tulasne, C. Tulasne, Lèveillé.—2. *Flore d'Algérie. Phanérogamie*. Groupe des Glumacées. Par E. Cosson et Durieu de Maisonneuve.—3. Atlas de La Flore d'Algérie ou illustrations d'un grand nombre de plantes nouvelles ou rares de ce pays... Paris, Imprimerie Impériale [1846-1869], *Flore de France ... Prospectus* 3: 599. 1856, *Index Generum Phanerogamorum* 504. 1888 and *Archives de Biologie Végétale Pure et Appliquée* 1: 35, 62. 1901, *Flora Velebitica* 1: 574-575. 1936, *Fl. Afrique Nord* 3: 333. 1955, *Hereditas; genetiskt arkiv*. 114: 237-244. 1991, *Acta Phytotaxonomica Sinica* 37(2): 125-130. 1999, *Taxon* 49(2): 257. 2000, *Contributions from the United States National Herbarium* 48: 245, 590. 2003.

Pseudosorghum A. Camus

From the Greek *pseudes* “false” plus *Sorghum* Moench.

Two species, tropical Asia, Indomalaysia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual, erect, decumbent, herbaceous, more or less branched or unbranched, culm internodes solid, leaves flat and linear, auricles absent, plants bisexual, terminal inflorescence densely paniculate, small dense panicle with very short branches, racemes bearing numerous pairs of sessile and pedicellate spikelets, bisexual spikelets, sessile spikelet awned, pedicellate spikelet unawned, floret single and male, basal spikelets barren, 2 glumes subequal, lower glume cartilaginous glabrous, upper lemma bilobed awned, palea present or absent, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, shade, damp places, open areas, type *Pseudosorghum fasciculare* (Roxb.) A. Camus, see *Species Plantarum* 2: 1045. 1753, *Methodus Plantas Horti Botanici ...* 207. 1794, *Synopsis Plantarum Glumacearum* 1: 369. 1854, *Flora* 68(8): 141. 1885 and *Bulletin du Muséum d'Histoire Naturelle* 26: 662-663. 1920 [or 1921], *Sinensia* 10: 317, 338. 1939.

Species

P. fasciculare (Roxb.) A. Camus (*Andropogon fascicularis* Roxb.; *Andropogon gangeticus* Hack.; *Andropogon nitidulus* Hook.f.; *Andropogon tonkinensis* Balansa; *Sorghum fasciculare* (Roxb.) Haines; *Sorghum gangeticum* (Hackel) Stapf ex Haines; *Sorghum gangeticum* (Hack.) Kuntze; *Sorghum gangeticum* (Hack.) Stapf ex Haines, nom. illeg., non *Sorghum gangeticum* (Hack.) Kuntze)

India. Annual, erect from a decumbent and branching base, leafy, simple or branched, often nodding, sheaths glabrous

or hairy, ligule often ciliate, hispid leaves, inflorescence paniculate with jointed racemes, at each joint a sessile awned spikelet and a pedicelled not awned spikelet, see *Flora Indica; or Descriptions ...* 1: 269. 1820, *Fodder Grasses N. India* 34. 1888, *Monographiae Phanerogamarum* 6: 539. 1889, *Journal de Botanique, rédigé par une société de botanistes* 4: 112. 1890, *Revisio Generum Plantarum* 2: 791. 1891, *The Flora of British India* 7: 199. 1897 [1896] and *Bulletin du Muséum d'Histoire Naturelle* 26: 662. 1920, Henry Haselfoot Haines (1867-1945), *The Botany of Bihar and Orissa: an account of all the known indigenous plants of the Province and of the most important or most commonly cultivated exotic ones ...* in 6 parts. 5: 1034. London, Govt. of Bihar & Orissa 1921-1925.

in India: kachi gadi, kasi gadi, khar jhara, konda jeri, kora gadi, mular, sonahi

Pseudostachyum Munro = *Dinochloa* Büse,
Melocalamus Benth., *Schizostachyum* Nees

Greek *pseudes* “false” and *stachys* “a spike.”

About 1-2 species, tropical and subtropical, eastern Himalaya, India, Assam, Upper Myanmar. Bambusoideae, Bambusodae, Bambuseae, sympodial, pluricaespitose, perennial, woody and persistent, flexible and durable, pendulous or scandent above or not scandent, culm wall thin, internodes short, more than 10 branches at each node, branched near their tops, most of branches fascicled, rhizomes pachymorph, flowering culms leafy, culm sheaths truncate-triangular and caducous, sheath blade erect, culm internodes hollow, pruinose ring below joint, rhizomes culms arising singly from long creeping rhizome, plants unarmed and bisexual, flowering itercauctant, inflorescence spicate and bracteate, spikelets with basal buds, 1 glume per spikelet, palea present, 3-5 lodicules, 6 stamens, ovary glabrous, 2 stigmas, culm stalk hard and tough, used for fish screens and fish fences, shade species, moist and shady places, sometimes referred to *Schizostachyum*, type *Pseudostachyum polymorphum* Munro, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829, *Plantae Jung-huhnianae* 3: 387. 1854, *Transactions of the Linnean Society of London* 26(1): 141-142, t. 4. 1868, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 42(2): 252-253. 1873, *Genera Plantarum* 3: 1095, 1212. 1883 and *Kew Bulletin* 1936: 253. 1936, *Contributions from the United States National Herbarium* 39: 56, 112. 2000.

Species

P. polymorphum Munro (*Schizostachyum leviculme* McClure; *Schizostachyum polymorphum* (Gamble) R.B. Majumdar)

India, Darjeeling, Sikkim, Bhutan. Bending or drooping, no conspicuous main branch, culm stalk long and slender

forming a running false-rhizome, culm wall very thin, young culm light green, smooth internodes lightly waxy, culm sheaths broad, leaf sheaths pruinose, sheath auricles and cilia weak, sheath blade triangular and erect, leaves elliptically lanceolate, cultivated, culms easy to split, processed culm stalk waterproof, hammered flat stems used as binding material or for fence weaving, for baskets and mats, see *Sunyatsenia* 6(1): 43-46, t. 10. 1941, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 282. Calcutta 1989, *Edinburgh Journal Bot.* 51: 30. 1994.

Common names: philim, dai

In India: bajal, basal, nal, paphok, parphok, pheling, purphiok, tolli

P. wakha Brandis ex Camus

Myanmar. See *Les Bambusées* 162. 1913.

Pseudostreptogyne A. Camus = *Lycchloa*
Samuelsson, *Streblochaete* Hochst. ex Pilg.

Greek *pseudes* plus *Streptogyna* P. Beauv., Greek *streptos* “twisted” and *gyne* “female, ovary,” referring to the nature of the ovary.

Pooideae, Poodae, Meliceae, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: (Beibl. 85) 61. 1906, *Bulletin de la Société Botanique de France* 77: 476. 1930, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 25(8): 4. 1933.

Pseudovossia A. Camus = *Phacelurus*
Griseb.

Greek *pseudes* “false” and the genus *Vossia* Wallich & Griffith, after the German poet Johann Heinrich Voss, 1751-1826.

One species, Asia, Indochina. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, herbaceous, branched or unbranched, plants bisexual, inflorescence digitate, spikelets in pairs, two glumes unequal and dissimilar, lower glume 2-keeled, palea awnless, 3 stamens, ovary glabrous, 2 stigmas, type *Pseudovossia cambogiensis* (Balansa) A. Camus, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Journal of the Asiatic Society of Bengal* 5: 572. 1836, *Spicilegium florae rumelicae et bithynicae ...* 2: 423-424. 1844 [1846], *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887 and *Bulletin du Muséum d'Histoire Naturelle* 26: 665. 1921 [1920].

Species

P. cambogiensis (Balansa) A. Camus (*Phacelurus cambogiensis* (Balansa) Clayton; *Vossia cambogiensis* Balansa)

Indochina. See *Journal de Botanique (Morot)* 4: 109. 1890 and *Bulletin du Muséum d'Histoire Naturelle* 26: 665. 1920, *Kew Bulletin* 33(2): 177. 1978.

Pseudoxytenanthera Soderstr. & R.P. Ellis = *Schizostachyum* Nees

Greek *pseudes* "false" and the genus *Oxytenanthera* Munro.

About 1 or 10-12 species, Southern India and Sri Lanka. Bambusoideae, Bambusodae, Bambuseae, Bambusinae, or Bambusoideae, Bambusodae, Bambuseae, Melocanninae, perennial, woody, branched, vinelike, unarmed, pluricaespitose, sympodial rhizomes, forming loose clumps, culm sheaths deciduous, plants bisexual, inflorescence indeterminate or itercaucant, spikelets sessile, clusters of pseudospikelets, two glumes unequal 10- to 11-nerved, empty glumes, bracts beneath the glumes, 6 stamens, ovary glabrous, 2-3 stigmas, type *Pseudoxytenanthera monadelphica* (Thwaites) Soderstr. & R.P. Ellis, see *Linnaea* 9(4): 476. 1835, *Enum. Pl. Zeyl.* 376. 1864, *Transactions of the Linnean Society of London* 26(1): 123, 126, 129. 1868 and *Smithsonian Contributions to Botany* 72: 1-75. 1988, *Fl. Ind. Enumerat.-Monocot.* 280. 1989, *Journal of the Bombay Natural History Society* 87(3): 440. 1990 [1991], *Plant Resources of South-East Asia (PROSEA)* (Pl Res SEAs) vol. 7: 130-145, 153-154. 1995 [Bamboos], *Contributions from the United States National Herbarium* 39: 112. 2000.

Species

P. albociliata (Munro) Nguyen (*Dendrocalamus albociliata* (Munro) J.L. Sun; *Gigantochloa albociliata* (Munro) Kurz; *Gigantochloa albo-ciliata* (Munro) Kurz; *Oxytenanthera albociliata* Munro; *Pseudotenanthera albociliata* (Munro) R.B. Majumdar; *Pseudoxytenanthera albociliata* (Munro) Majumdar)

India, Bangladesh. See *Transactions of the Linnean Society of London* 26(1): 129. 1868, *Preliminary Report on the Forest and other Vegetation of Pegu* App. A: 136, App. B: 93. 1875, *Forest Flora of British Burma* 2: 555. 1877 and *Redai-zhiwu-yanjiu-lunwen-baogaoji / Zhongguo Kexueyuan Yunnan Redai Zhiwu Yanjiusuo.* – Kunming: Yunnan-Renmin-Chubanshe, 1982, *Redai-yaredai-senlin-shengtai-xitong-yanjiu* = Tropical and subtropical forest ecosystem. – Guangzhou 1984, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

P. bourdillonii (Gamble) Naithani (*Oxytenanthera bourdillonii* Gamble; *Pseudotenanthera bourdillonii* (Gamble) R.B. Majumdar; *Pseudoxytenanthera bourdillonii* (Gamble) Majumdar; *Pseudoxytenanthera bourdillonii* (Gamble) Ohrenb.) (for the British-Indian born forest officer Thomas Fulton Bourdillon, 1849-1930, author of *The Forest Trees of Travancore ...* Trivandrum 1908 and *Report on the Forests of Travancore.* Trivandrum 1893. See J.H. Barnhart

(1871-1949), *Biographical notes upon botanists.* 1: 230. Boston 1965; Ethelyn (Daliaette) Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1: 102. Cambridge, Mass. 1917-1933)

India, Kerala. Straggling, open clumps forming, long internodes, culm sheaths striate and leathery, leaves linear-lanceolate and acuminate ending in a twisted point, leaf sheaths striate, ligule serrate, large inflorescence, spikelets 3-flowered, 2 empty glumes, lemmas mucronate, paleas 2-keeled ciliate on the keels, stamens exserted, ovary hairy, 3 stigmas, used for making combs, young shoots edible, internodes employed to carry maps, see *Fl. Ind. Enumerat.-Monocot.* 280. 1989, *Journal of the Bombay Natural History Society* 87(3): 440. 1990[1991].

in India: arambu, ponmumgil

P. densa (Camus) Nguyen (*Gigantochloa densa* (E.G. Camus) T.Q. Nguyen; *Oxytenanthera densa* (E.G. Camus) E.G. Camus; *Oxytenanthera thwaitesii* var. *densa* E.G. Camus)

Vietnam, Laos. See *Transactions of the Linnean Society of London* 26(1): 123, 129. 1868 and *Les Bambusées* 147, et Atlas pl. 91, f. C. 1913, *Flore Générale de l'Indo-Chine* 7(5): 620. [1923], *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 224. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

P. dinhensis (A. Camus) Nguyen (*Gigantochloa dinhensis* (A. Camus) T.Q. Nguyen; *Oxytenanthera dinhensis* A. Camus)

Vietnam. See *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 224. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

P. hayatae (Camus) Nguyen (*Gigantochloa hayatae* (A. Camus) T.Q. Nguyen; *Oxytenanthera hayatae* A. Camus)

Vietnam. See *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 224. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

P. hosseusii (Pilger) Nguyen (*Gigantochloa hosseusii* (Pilg.) T.Q. Nguyen; *Oxytenanthera hosseusii* Pilg.)

Vietnam, Laos, Myanmar, Thailand. See *Repertorium Specierum Novarum Regni Vegetabilis* 3(27-28): 116. 1906, *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 224. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

P. monadelphica (Thw.) Soderstrom and Ellis (*Bambusa monadelphica* (Thwaites) Muell.; *Dendrocalamus monadelphus* Thw.; *Oxytenanthera densa* (E.G. Camus) E.G. Camus; *Oxytenanthera monadelphica* (Thw.) Alston; *Oxytenanthera thwaitesii* Munro; *Oxytenanthera thwaitesii* var. *densa* E.G. Camus; *Pseudotenanthera monadelphica* (Thwaites) R.B. Majumdar)

South India, Karnataka, Tamil Nadu, Kerala, Sri Lanka. Pluricaespitose, gregarious, smooth, soft, sympodial, reed-like, spaced, stout, erect, usually curved, scandent or

subscandent, straggling, branched from the base, very small leaves but these very variable in size, culm sheaths truncate at the mouth and ciliate on the margins, pachymorph rhizomes, pseudospikelets sessile, 1-3 florets, 2-3 empty glumes, lodicules absent, 6 stamens, ovary glabrous, 3 plumose stigmas, used for thatching and fencing, for basket making, see *Genera Plantarum* 1: 236. 1789, *Enumeratio Plantarum Zeylaniae* 5: 376. 1864, *Transactions of the Linnean Society of London* 26(1): 129-130. 1868, *Proc. Zool. & Accl. Soc. Victoria* 1: 265. 1872, *Fl. Brit. Ind.* 7: 402. 1896 and *Fl. Ceylon* 5: 316. 1900, *Les Bambusées* 147, et Atlas pl. 91, f. C. 1913, *Flore Générale de l'Indo-Chine* 7(5): 620. [1923], *A Handbook to the Flora of Ceylon* [*Handb. Fl. Ceylon*] 6: 342. 1931, *Grasses of Ceylon* 29. 1956, *Smithsonian Contributions to Botany* 72: 52. 1988, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* 280. 1989.

in English: shrubby bamboo, thornless reed

in India: kalmungil, oote bidiru, otal, otte bidiru, vati, wattai

P. parvifolia (Brandis ex Gamble) Nguyen (*Gigantochloa parvifolia* (Brandis ex Gamble) T.Q. Nguyen; *Oxytenanthera parvifolia* Brandis ex Gamble)

Vietnam, Myanmar, Thailand. See *Annals of the Royal Botanic Garden. Calcutta.* 7: 72. 1896, *Fl. Brit. Ind.* 7: 402. 1896 and *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 224. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

P. poilanei (Camus) Nguyen (*Gigantochloa poilanei* (Camus) T.Q. Nguyen; *Oxytenanthera poilanei* Camus)

Vietnam. See *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 224. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

P. ritcheyi (Munro) Naithani (also spelled ***ritchiei***) (*Arundarbor ritcheyi* (Munro) Kuntze; *Bambusa ritcheyi* Munro; *Oxytenanthera monostigma* Bedd.; *Oxytenanthera ritcheyi* (Munro) Blatter and McCann; *Oxytenanthera ritcheyi* (Munro) V.J. Nair & R. Ansari; *Pseudotenanthera ritcheyi* (Munro) R.B. Majumdar; *Schizostachyum blumei* Nees)

India, Maharashtra, Tamil Nadu, Karnataka, Kerala. Solid, strong, densely velvety, nodes prominent, culm sheaths papery, leaves variable linear-lanceolate acuminate, leaf sheaths striate and glabrous, ligule acute or rounded, large terminal inflorescence, spikelets 1-flowered, glumes unequal, lemmas long-mucronate, paleas blunt, stamens exserted, ovary glabrous, one stigma plumose, culms used for fencing and baskets, punto poles, walking sticks, found on tops of the ridges, hills and slopes, shallow rocky soil, deciduous forest, dry areas, undergrowth in mixed deciduous forests, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829, *Transactions of the Linnean Society of London* 26(1): 113. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Journal of the Bombay Natural History Society* 33: 773. 1929, *Blumea* 2: 87. 1936, *Journal of Economic*

and Taxonomic Botany 3(2): 616. 1982, *Fl. Ind. Enumerat.-Monocot.* 280. 1989, *Journal of the Bombay Natural History Society* 87(3): 440. 1990[1991].

in India: chawa, chiva saave bidiru, chivaa, chiwa, chiwan, choomaree, choua, chumaari, garte, huda, manga, mangam, saave bidiru, tandali, udhe

P. stocksii (Munro) Naithani (*Gigantochloa stocksii* (Munro) T.Q. Nguyen; *Oxytenanthera stocksii* Munro; *Pseudotenanthera stocksii* (Munro) R.B. Majumdar; *Pseudoxytenanthera stocksii* (Munro) Nguyen) (for the English M.D. John Ellerton Stocks, 1822-1854, traveler, from 1847 on Bombay Medical Staff, FLS 1848, botanical collector in India, pupil of J. Lindley. See *Polish Bot. J.* 46(1): 61. 2001; John Richard Edmondson (1948-), *Catalogue of the Plant Collections of J. E. Stocks from Pakistan in the Roylean Herbarium (LIV)* / Liverpool: National Museums & Galleries on Merseyside 1995; "Dr. John Ellerton Stocks and Mr. Philip Barker Webb." *Gdnrs' Chron.* 1854; [Don Conner Fine Books & Jeff Weber Rare Books], *Catalogue 41: Charles Darwin and His Circle* including: Alfred Russel Wallace, Thomas Huxley and Charles Lyell. Mostly from the Library of Eric T. Pengelley. Sacramento and Glendale, California 1996; Thomas H.[enry] Huxley, *Darwiniana: Essays.* New York 1897; Thomas Henry Huxley (1825-1895), *Man's Place in Nature and a Supplementary Essay.* London 1909; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists.* 657. 1994; *The Scientific Memoirs of T.H. Huxley.* Edited by Professor Michael Foster ... and by Professor E. Ray Lankester. London 1898-1903; Wesley C. Williams, in *D.S.B.* 6: 589-597. 1981; John Macgillivray (1822-1867), *Narrative of the Voyage of H.M.S. Rattlesnake, Commanded by the late Captain Owen Stanley during ... 1846-1850.* London 1852; Thomas Henry Huxley, *Collected Essays.* 9 volumes. London 1894-1908; *The Life and Letters of T.H. Huxley,* edited by Leonard Huxley. Appleton & Co., New York 1901; Robert Wight, *Icones Plantarum Indiae Orientalis, or Figures of Indian Plants.* Pl. 1295. Madras 1840-1853)

India, Karnataka, Andhra Pradesh, Kerala, Goa, Vietnam. Glabrous, when young covered with dense white or gray deciduous tomentum, few branches at the node, culm sheaths striate, leaves linear-lanceolate attenuate at the base into a petiole, leaf sheaths striate and glabrous, ligule dentate, spikelets mucronate, stamens exserted, ovary hairy, 1 stigma plumose, strong culms used for construction purposes and basketry, making umbrellas, found along the banks of streams, well-drained deep loamy soil, see *Transactions of the Linnean Society of London* 26(1): 130. 1868 and *Fl. Ind. Enumerat.-Monocot.* 280. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 224. 1990, *Journal of the Bombay Natural History Society* 87(3): 440. 1990[1991], *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

in India: chivari, konda, mes, oor-shema, pannangi

P. tenuispiculata (Camus) Nguyen (*Gigantochloa tenuispiculata* (A. Camus) T.Q. Nguyen; *Oxytenanthera tenuispiculata* A. Camus)

Vietnam. See *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 225. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76(7): 993. 1991.

Pseudozoysia Chiov.

Greek *pseudēs* “false” plus the genus *Zoysia* Willd., after the Austrian botanist Karl von Zoys, 1756-1800, plant collector.

One species, Somalia. Chloridoideae, Cynodonteae, perennial, herbaceous, inflated sheath, plants bisexual, false spike or cylindrical false racemes sessile, spikelets paired, 2 glumes hard and longer than the florets, lower glume ovate, upper glume globose and enclosing the floret, lemma obtuse, palea present, on coastal dunes, open areas, sand dunes, type *Pseudozoysia sessilis* Chiov., see *Plantae Novae vel Minus Notae e regione Aethiopica* 20-21. 1928 [1911-1951, also *Plantae Novae vel Minus Notae ex Aethiopia*, series published in different journals].

Species

P. sessilis Chiov.

Somalia. Perennial, short-lived, tufted, glumes tuberculate, upper glume saccate, open habitats, coastal sand dunes.

Psilantha (K. Koch) Tzvelev = *Eragrostis* Wolf

Greek *psilos* “bare, naked” and *anthos* “flower.”

Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eragrostidinae, see *Species Plantarum* 1: 63-64, 67, 73. 1753, *Genera Plantarum* 23. 1776, *Methodus Plantas Horti Botanici* ... 186. 1794, *Utkast til en Svensk Flora, Andra Uplagan* 47. 1798, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, *Hortus Regius Botanicus Berolinensis* 1: 176. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 413. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 204. 1831, *Linnaea* 21(4): 405. 1848, *Flora Orientalis* 5: 599. 1883 and *Flora URSS* 2: 319, t. 24, f. 10, a, b. 1934, *Delectus Seminum Hortus Botanicus Reg. Kujbyshev* 13. 1938, *Acta Bot. Neerl.* 15: 157. 1966, *Bot. Zhurn. (Moscow & Leningrad)* 53: 311. 1968, *Taxon* 49(2): 244. 2000, *Contributions from the United States National Herbarium* 41: 81-115, 191. 2001.

Psilathera Link = *Sesleria* Scop.

From the Greek *psilos* “bare, naked” and *ather* “an awn.”

One species, Europe, Mediterranean. Pooideae, Poodae, Seslerieae, perennial, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, sterile spikelets reduced to a bract or vestigial, 2 glumes subequal, palea 2-nerved 2-keeled, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, sometimes referred to *Sesleria*, type *Psilathera tenella* (Host) Link, see *Species Plantarum* 1: 72. 1753, Petri Arduini ... *Animadversionum botanicarum specimen*. Patavii 1759, *Flora Carniolica* 189. 1760, Petri Harduini veronensis horti publici patavini custodis *animadversionum botanicarum specimen alterum*. Venetia 1764, *Hortus Regius Botanicus Berolinensis* 1: 121. 1827 and *Opera Botanica Cechica* 3: 223. 1946, *Ind. Nom. Genericorum* 3: 1607. 1979.

Species

P. ovata (Hoppe) Deyl (*Cynosurus ovatus* Hoppe)

Central Europe. Glumes 1-nerved.

Psilochloa Launert = *Panicum* L.

Greek *psilos* and *chloe*, *chloa* “grass.”

Africa, Namibia, Panicoideae, Paniceae, Paspalinae, or Panicoideae, Panicodae, Paniceae, Panicinae, type *Psilochloa pilgeriana* (Schweick.) Launert (*Acroceras pilgerianum* Schweick.; *Acroceras pilgerianum* Schweick.; *Panicum pilgerianum* (Schweick.) Clayton), see *Species Plantarum* 1: 55, 58. 1753 and *Flora of Tropical Africa* 9: 621. 1920, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 242. 1931, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(122): 199-200. 1938, *Die Natürlichen Pflanzenfamilien* edition 2, 14e: 20. 1940, *Mitteilungen der Botanischen Staatssammlung München* 8: 147-163. 1970, *Kew Bulletin* 34(3): 559. 1979 [1980], *Taxon* 33: 126-134. 1984, *Kew Bulletin* 42: 402. 1987, *Blumea* 41: 181-216, 416. 1996, *Taxon* 45: 319-320. 1996, *Taxon* 47: 869. 1998, *Taxon* 48: 376. 1999, *Contributions from the United States National Herbarium* 46: 306-441, 537. 2003.

Psilolemma S.M. Phillips

Greek *psilos* “bare, naked” and *lemma* “rind, sheath,” referring to the glabrous lemmas.

One species, East Africa, Ethiopia. Chloridoideae, Eragrostideae, perennial, wiry, herbaceous, stoloniferous, tuberous, leaf blades stiff and linear, ligule fringed, leaf blades distichous and pungent, auricles absent, plants bisexual, inflorescence spicate, spikelets breaking up at maturity, two unequal glumes 1-nerved, smooth glabrous lemmas, palea

2-nerved 2-keeled, 2 stigmas, open areas, a segregate from *Eragrostis*, type *Psilolemma jaegeri* (Pilg.) S.M. Phillips, see *Kew Bulletin* 29(2): 267. 1974, *Flora of Tropical East Africa* 2: 181. Apr. 1974, *Genera Graminum* 223. 1986.

Species

P. jaegeri (Pilg.) S.M. Phillips (*Diplachne jaegeri* Pilg.; *Odysea jaegeri* (Pilg.) Robyns & Tournay)

Africa, Tanzania. Ligule a line of hairs, leaf blades stiff, inflorescence of short racemes bearing 1-5 spikelets, glumes 1-nerved, lemmas rounded obtuse, see *Essai d'une Nouvelle Agrostographie* 80. 1812 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43(1): 94. 1909, *Hooker's Icones Plantarum* 31: t. 3100. 1922, *Flore des Spermatophytes du Parc National Albert* 3: 166. 1955.

Psilopogon Hochst. ex A. Rich. = *Arthraxon* P. Beauv., *Microstegium* Nees, *Psilopogon* Hochst., *Psilopogon* Phil. (Asteraceae, alt. Compositae)

From the Greek *psilos* and *pogon* “a beard.”

Panicoideae, Andropogoneae, Andropogoninae, type *Psilopogon capensis* Hochst., see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 111, t. 11, f. 6. (Dec.) 1812, *A Natural System of Botany* 447. 1836, *Flora* 29: 117. 1846, *Tentamen Florae Abyssinicae* ... 2: 447. 1850, *Ind. Sem. Hort. Genuens.* (1852): 25. 1852, *Flora* 39: 189. 1856, *Linnaea* 33: 126. 1864, Georg August Schweinfurth (1836-1925), *Beitrag zur Flora Aethiopiens* ... 310. Berlin 1867 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 201. 1921 [1922], *Contributions from the United States National Herbarium* 46: 104-110, 292, 543. 2003.

Psilostachys Steud. = *Dimeria* R. Br., *Psilostachys* Turcz. (Euphorbiaceae), *Psilostachys* Hochstetter (Amaranthaceae)

From the Greek *psilos* “bare, naked” and *stachys* “a spike.”

Andropogoneae, type *Psilostachys hohenackeri* Steud., see *Prodromus Florae Novae Hollandiae* 204. 1810, *Bijdragen tot de flora van Nederlandsch Indië* 612-613. 1826, *Bulletin de la Société Impériale des Naturalistes de Moscou* 16: 58. 1843, *Flora* 27. Beil. 1: 6. 1844, *Synopsis Plantarum Glumacearum* 1: 413. 1854, N.A. Dalzell (1817-1878), *The Bombay Flora*: or, Short descriptions of all the indigenous plants hitherto discovered in or near the Bombay presidency: together with a supplement of introduced and naturalized species / by Nicholas A. Dalzell and Alexander Gibson. 305. Bombay: Education Society's Press 1861.

Psilurus Trinius = *Asprella* Host, *Asprella* Schreb.

Slender spikes, from the Greek *psilos* “naked, slender” and *oura* “tail.”

A monotypic genus, Mediterranean, Pakistan, naturalized elsewhere. Pooideae, Poodae, Poae, annual, herbaceous, glabrous, slender, caespitose or solitary, leafy, smooth, unbranched, auricles absent, unfringed ligule membranous and minute, leaves flat and filiform to linear, plants bisexual, inflorescence a slender articulated and wiry spike or a slender raceme, solitary spikelets sessile and distichous, spikelets distant, glumes 1 per spikelet and shorter than the very small and membranous lemmas, lower glume absent and the upper very small, terminal spikelet with 2 glumes, lemmas keeled and awned, palea narrowly oblong to narrowly ovate, 2 lodicules, stamen 1, ovary glabrous, 2 stigmas, dry places, open areas, gravelly, related to *Vulpia* Gmel., see *Species Plantarum* 1: 53. 1753, *Genera Plantarum* 45. 1789, *Icones et descriptiones graminum austriacorum*... 4: 17. Vindobonae [Wien] 1801-1809, Carl Bernhard von Trinius, *Fundamenta Agrostographiae*. 93. Viennae (Jan.) 1820 and H. Schinz and Albert Thellung (1881-1928), in *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich*. 58: 40, adnot. (Sep.) 1913.

Species

P. incurvus (Gouan) Schinz & Thell. (*Nardus aristata* L.; *Nardus incurva* Gouan; *Psilurus aristatus* (L.) Duval-Jouve; *Psilurus aristatus* (L.) Lange; *Psilurus nardoides* Trinius, *Psilurus rottboellioides* Griff.)

Europe. Annual, tufted, small, delicate, slender, glabrous, filiform, leafy, ligule truncate, blade involute, a green to purple slender curved spike, spikelets distichous, chasmogamous spikelets, lower glume absent, solitary glume minute and ovate, lemma coriaceous linear-lanceolate 3-nerved, palea nerved, fruit keeled and compressed, weed species, grows in sandy and stony soils, sensitive to climatic changes and especially to changes in temperature and soil moisture, see Johannes Scheuchzer (1684-1738), *Agrostographia sive graminum, juncorum, cyperorum, cyperoidum, iisque affinium historia*... Tiguri [Zürich] 1719, *Hortus Regius Monspelienensis* 33. 1762, *Species Plantarum, Editio Secunda* 78. 1762, *Fundamenta Agrostographiae* 93. 1820, *Notulae ad Plantas Asiaticas* 3: 95. pl. 154. f.1. 1851, *Bulletin de la Société Botanique de France* 13: 132. 1866 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 58: 40. 1913, *Flora Republicii Socialiste Romania* 12: 567. 1972, *Bot. J. Linn. Soc.* 91: 441. 1985, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990.

in English: bristle-tail grass

Pterium Desv. = *Lamarckia* Moench

From *pterion*, the diminutive of the Greek *pteron* “feather.”

Pooideae, Poaeae, Dactylidinae, type *Pterium elegans* Desv., see *Methodus Plantas Horti Botanici ...* 201. 1794, Georg Ludwig Koeler (1765-1807), *Descriptio graminum* in Gallia et Germania tam sponte nascentium quam humana industria copiosus provenientium, Francofurti ad Moenum 1802, *Journal de Botanique, Appliquée à l'Agriculture, à la Pharmacie, à la Médecine et aux Arts* 1: 75-76. 1813 and *Contributions from the United States National Herbarium* 48: 420-421, 590. 2003.

Pterochlaena Chiov. = *Alloteropsis* Presl

From the Greek *pteron* “wing” and *chlaena* “a cloak, blanket.”

Africa, Zaire, Panicoideae, Panicodae, Paniceae, Setariinae, or Panicoideae, Paniceae, Paspalinae, type *Pterochlaena catangensis* Chiov. (*Alloteropsis semialata* (R. Br.) Hitchc.), see *Prodromus Florae Novae Hollandiae* 192. 1810, *Reliquiae Haenkeanae* 1(4-5): 343-344, t. 47. 1830 and *Contributions from the United States National Herbarium* 12(6): 210. 1909, *Annali di Botanica* 13: 47. 1914, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Botanical Journal of the Linnean Society* 97: 255-259. 1988, *ASBS Symposium 1990: Indo-Pacific Biogeography*, 14. 1990, *Contributions from the United States National Herbarium* 46: 16. 2003.

Pterochloris (A. Camus) A. Camus = *Chloris* Swartz

From the Greek *pteron* plus *Chloris* Swartz.

One species, Madagascar. Chloridoideae, *Chloris* subg. *Pterochloris* A. Camus, perennial, erect, herbaceous, decumbent, unbranched, stoloniferous, solid internodes, leaf blades pseudopetiolate, auricles absent, ligule fringed, linear leaves, plants bisexual, inflorescence spicate, spikelets solitary and imbricate, two subequal glumes 1-nerved, palea present, lodicules wanting, 3 stamens, ovary glabrous, 2 stigmas, sometimes referred to *Chloris*, see *Nova Genera et Species Plantarum seu Prodromus* 25. 1788 and *Bulletin de la Société Botanique de France* 97: 227. 1950, *Bulletin du Muséum d'Histoire Naturelle* (Paris) sér. 2, 29: 349. 1957, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Contributions from the United States National Herbarium* 41: 39-52. 2001.

Species

P. humbertiana (A. Camus) A. Camus (*Chloris humbertiana* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 91: 63. 1944, *Bulletin du Muséum d'Histoire Naturelle* (Paris) sér. 2, 29: 350. 1957.

Pteropodium Steud. = *Calamagrostis* Adans., *Pteropodium* A. DC. ex Meisn. (Bignoniaceae)

Greek *pteron* “wing” and *podion* “a little foot, stalk.”

Pooideae, Poaeae, Agrostidinae, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Plantarum vascularium genera, secundum ordines naturales digesta ...* 1: 300, Commentarium 209. Lipsiae 1836-1843, *Nomenclator Botanicus. Editio secunda* 2: 414. 1841, *Prodromus Systematis Naturalis Regni Vegetabilis* 9: 239. 1845 and *Fl. Neotrop.* 25(2): 52. 1992, *Contributions from the United States National Herbarium* 48: 191-227, 590. 2003.

Pterygostachyum Nees ex Steud. = *Dimeria* R. Br., *Pterygostachyum* Steud.

Greek *pteryx*, *pterygos* “wing, small wing” and *stachys* “a spike.”

Andropogoneae, type *Pterygostachyum lehmannii* Nees ex Steud., see *Prodromus Florae Novae Hollandiae* 204. 1810, *Synopsis Plantarum Glumacearum* 1: 413. 1854[1855], *Monographiae Phanerogamarum* 6: 82. 1889 and *Grasses of Burma ...* 139. 1960.

Ptilagrostis Griseb. = *Stipa* L.

Greek *ptilon* “a wing, feather” and *agrostis*, *agrostidos* “grass, couch grass,” referring to the pilose awns.

About 8 species, Asia, Siberia, Himalayas, Northern America. Stipoideae, Stipeae, or Pooideae, Stipeae, Stipinae, perennial, caespitose, herbaceous, branched or unbranched, strictly intravaginal branching, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets pedicellate, 2 glumes more or less equal, lower glume 0- to 5-nerved, upper glume 0- to 3-nerved, lemmas hairy, awns long-plumose, 3 lodicules present, 3 stamens, ovary glabrous, 2 stigmas, cleistogamous or chasmogamous, native pasture species, alpine to subalpine, open habitats, sometimes referred to and included in *Stipa* L., type *Ptilagrostis mongholica* (Turcz. ex Trin.) Griseb., see *Species Plantarum* 1: 78. 1753, *Flora Rossica* 4(13): 447. 1852 and *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, N.N. Tzvelev, *Grasses of the Soviet Union*. Vols. I and II. (Nanka: Leningrad). English translation 1983. Oxonion Press: New Delhi 1976, *Systematic Botany* 8: 395-419. 1983, H. Freitag, “The genus *Stipa* (Gramineae) in Southwest and South

Asia." *Notes, Royal Bot. Gard. Edinburgh* 42(3): 355-489. 1985, M.E. Barkworth and J. Everett, *Evolution in the Stipeae: Identification and Relationships of Its Monophyletic Taxa*. In 'Grass Systematics and Evolution', pp. 251-264. Eds T.R. Soderstrom, K.W. Hilu, C.S. Campbell and M.E. Barkworth. Smithsonian Inst.: Washington 1987, M.E. Barkworth, "North American Stipeae (Gramineae): taxonomic changes and other comments." *Phytologia* 74, 1-25. 1993, *Am. J. Bot.* 86: 1735-1741. 1999, *Am. J. Bot.* 87: 96-107. 2000, *Contributions from the United States National Herbarium* 48: 590-591. 2003, *Journal of Biogeography* 30(5): 649-685. May 2003 [The Middle Asian Element in the Southern Rocky Mountain Flora of the western United States: a critical biogeographical review.], *Am. J. Bot.* 92: 411-421. 2005.

Species

P. alpina (F. Schmidt) Sipliv. (*Lasiagrostis alpina* F. Schmidt; *Stipa alpina* (F. Schmidt) Petrov, nom. illeg., non *Stipa alpina* (F. Schmidt) Roshev. ex B. Fedtsch.; *Stipa alpina* (F. Schmidt) Roshev. ex B. Fedtsch.)

Russia. See *Reisen im Amur-Lande* 73. 1868 and *Flora Iakutiae* 1: 138. 1930.

P. concinna Hooker (*Stipa concinna* Hooker f.)

India, Sikkim, Pamir. See *The Flora of British India* 7: 230. 1897 [1896] and *Flora URSS* 2: 75. 1934.

P. dichotoma Keng ex Tzvelev (*Ptilagrostis dichotoma* Keng)

Asia, China. Subalpine meadow, silt loam, see *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 213. 1957, *Pl. Asiae Centr.* 4: 43. 1968.

P. kingii (Bolander) Barkworth (*Oryzopsis kingii* (Bol.) Beal; *Stipa kingii* Bol.)

U.S. See *Flora Boreali-Americana* 1: 51. 1803, *Proceedings of the California Academy of Sciences* 4: 170. 1872, *Grasses of North America for Farmers and Students* 2: 229. 1896 and *Systematic Botany* 8(4): 417. 1983, *The Jepson Manual: Higher Plants of California* 1993.

in English: King's ricegrass

P. mongholica (Turcz. ex Trin.) Griseb. (*Achnatherum mongholicum* (Turcz. ex Trin.) Ohwi; *Achnatherum sibiricum* (L.) Keng ex Tzvelev, nom. illeg., non *Achnatherum sibiricum* (L.) Keng; *Avena sibirica* L.; *Ptilagrostis czekanowskii* (Petrov) Sipliv.; *Stipa czekanowskii* Petrov; *Stipa mongholica* Turcz. ex Trin.)

China, Mongolia, Nepal, Russia, Siberia. Perennial, common in subalpine mountain meadows, on dark loam, mountain brown soil, shallow dark brown soil, open mountain meadow, see *Species Plantarum* 1: 78-79. 1753, *Essai d'une Nouvelle Agrostographie* 19, 146, pl. 6, f. 7. 1812, *Bull.*

Sci. Acad. Imp. Sci. Saint-Petersbourg 1: 67. 1836, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 42. 1836, *Flora Rossica* 4(13): 447. 1852 and *Flora Aziatskoj Rossii* 1(12): 131. 1916, *Flora Iakutiae* 1: 136, f. 42. 1930, *Journal of Japanese Botany* 17(7): 403. 1941, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 9(3): 590, f. 525. 1959, *Novosti Sist. Vyss. Rast.* 11: 7. 1974, *Folia Geobotanica et Phytotaxonomica* 19: 28-39. 1984, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990.

P. mongholica (Turcz. ex Trin.) Griseb. subsp. ***mongholica***

Asia, Mongolia, Siberia. Perennial, see *Flora Rossica* 4: 447. 1852.

P. mongholica (Turcz. ex Trin.) Griseb. subsp. ***porteri*** (Rydb.) Barkworth (*Ptilagrostis porteri* (Rydb.) W.A. Weber; *Stipa porteri* Rydb.)

U.S. Perennial, see *Flora Rossica* 4(13): 447. 1852 and *Bulletin of the Torrey Botanical Club* 32(11): 599. 1905, *University of Colorado Studies: Series in Biology* 23: 2. 1966, *Systematic Botany* 8(4): 417. 1983.

in English: Porter's false needlegrass

P. minutiflora (V.S. Titov ex Roshev.) Czer. (*Ptilagrostis mongholica* subsp. *minutiflora* (V.S. Titov ex Roshev.) Tzvelev; *Ptilagrostis mongholica* var. *minutiflora* (Titov ex Roshevitz) Roshev.; *Stipa mongholica* var. *minutiflora* V.S. Titov ex Roshev.)

Asia, Eurasia, Russia. See *Flora Aziatskoj Rossii* 1(12): 131. 1916, *Novosti Sist. Vyss. Rast.* 11: 7. 1974.

P. porteri (Rydb.) W.A. Weber (*Ptilagrostis mongholica* subsp. *porteri* (Rydb.) Barkworth; *Stipa porteri* Rydb.)

North America. Perennial, see *Flora Rossica* 4(13): 447. 1852 and *Bulletin of the Torrey Botanical Club* 32(11): 599. 1905, *University of Colorado Studies: Series in Biology* 23: 2. 1966, *Systematic Botany* 8(4): 417. 1983.

in English: Porter's false needlegrass

P. schischkinii (Tzvelev) Czer. (*Ptilagrostis concinna* auct.; *Ptilagrostis concinna* subsp. *schischkinii* Tzvelev)

Russia. See *Novosti Sist. Vyss. Rast.* 11: 8. 1974, *Sosudistye Rasteniia SSSR* 379. 1981.

Ptiloneilema Steudel = *Melanocenchris* Nees

From the Greek *ptilon* "feather" and *eilema* "a veil, covering, involucre."

Cynodontae, type *Ptiloneilema plumosum* Steud., see *Proceedings of the Linnean Society of London* 1: 94. 1841, *Synopsis Plantarum Glumacearum* 1: 201. 1854 [1855], *Flora* 38: 273. 1855.

Ptilonema Hook.f. = *Melanocenchris* Nees

An orthographic variant of *Ptiloneilema* Steudel, see *Proceedings of the Linnean Society of London* 1: 94. 1841, *Synopsis Plantarum Glumacearum* 1: 201. 12-13 Apr 1854 [1855], *The Flora of British India* 7: 284. 1897.

x Pucciphippsia Tzvelev = *Maltea* B. Boivin

Phippsia x *Puccinellia*.

See *Le Naturaliste Canadien* 94: 526. 1967, *Novosti Sist. Vyssh. Rast.* 8: 76. 1971, *Genera Graminum* 375. 1986, *Contributions from the United States National Herbarium* 48: 601. 2003.

Puccinellia Parlatores = *Atropis* (Trin.) Rupr. ex Griseb., *Atropis* Rupr., *Heleochloa* Fr., *Heleochloa* (Fr.) Drejer

After the Italian botanist Benedetto Luigi Puccinelli, 1808-1850, professor of botany, from 1830 to 1850 Director of the Botanical Garden of Lucca, his works include *Synopsis plantarum in Agro Lucensi sponte nascentium*. Lucca [Lucca] 1841 [-1848] and *Osservazioni sui funghi dell'Agro Lucchese*. Lucca 1841. See Filippo Parlatores (1816-1877), *Flora Italiana*. 1: 366. 1848[-1850]; J.H. Barnhart, *Biographical notes upon botanists*. 3: 114. 1965; Paolo Emilio Tomei, "Benedetto Puccinelli botanico." *Riv. Arch. St. Econ. Cost.* 3(4): 28-30. 1975; P.E. Tomei, "L'opera micologica di Benedetto Puccinelli, lucchese." *Micologia Italiana*. 5(2): 33-35. 1976; P.E. Tomei and M.E. Seghieri, "I cultori di botanica in Lucchesia dal XVI al XIX secolo." *Atti Ist. Bot. Lab. Critt. Univ. Pavia*. 14(6): 249-271. 1981; P.E. Tomei and S. Lucchesi, *Le indagini micologiche in Lucchesia*. Lucca 1980; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 175. 1904; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 319. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 157. Berlin & Hamburg 1989.

About 25-80 species, temperate regions throughout the world, mostly in Asia. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Puccinelliinae, perennial or annual or biennial, herbaceous, rhizomatous or stoloniferous, more or less caespitose, creeping, prostrate, decumbent, rooting at the lower nodes or not, leaves mostly basal, auricles absent, leaf sheath loose and open, ligule an unfringed membrane, setaceous leaves flat and linear or folded or involute, plants bisexual, chasmogamous or cleistogamous, inflorescence a narrow panicle open or contracted, 2-several-flowered,

solitary spikelets subterete and very densely clustered or loosely arranged, spikelets pedicellate, glumes usually unequal, upper glume 3-nerved, lower glume 1-nerved, membranous lemmas rounded awnless 5-nerved, upper lemmas sterile, palea emarginate and 2-keeled, 2 lodicules free and glabrous, 3 stamens, ovary glabrous without apical appendage, grain brown, cultivated fodder, rather palatable as forage, native pasture species, alkali grass, usually halophytic, saline or alkaline habitats, coastal salt marshes, mountain grasslands, allied to *Poa* L., difficult to distinguish from *Festuca* L. or *Glyceria*, a number of species formerly contained in *Glyceria* R. Br. have been moved into *Torreyochloa* G.L. Church and *Puccinellia*, hybrids with *Phippsia* (Trin.) R. Br., type *Puccinellia distans* (Jacq.) Parl., see *Species Plantarum* 1: 67. 1753, *Prodromus Florae Novae Hollandiae* 179. 1810, *Chloris Melvilliana* 27. 1823, *Floram Scanicam* 202. 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 68. 1836, *Flora Excursionaria Hafniensis* 39. 1838, *Novitiae Florae Suecicae. Edit. Altera* 1: 8. 1839, *Summa Vegetabilium Scandinaviae* 1: 77. 1845, *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 64-65, t. 6. 1845 [1846], *Flora Italiana*. 1: 366-367. 1848 [-1850], *Flora Rossica* 4(13): 388. 1852, *A Manual of the Botany of the Northern United States* 560. 1856, *Genera Plantarum* 3(2): 1198. 1883 and *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 28. 1936, *T.R.S.N.Z.* 69: 265-269. 1939, *American Journal of Botany* 36: 155-156. 1949, *Rhodora* 54: 44. 1952, *N.Z. J. Sci. Tech.* 38A: 742-751. 1957, *Grasses of Burma, Ceylon, India and Pakistan*, 1-767. 1960, *Flora of Alaska and Neighboring Territories; A Manual of the Vascular Plants* 1-1008. 1968, *Fl. Iranica* 70: 62. 1970, *Novosti Sist. Vyssh. Rast.* 10: 85. 1973, *Anderson's Flora of Alaska and Adjacent Parts of Canada* i-xvi, 1-724. 1974, *Bot. J. Linn. Soc.* 76(4): 364. 1978, *The Flora of Canada* 2: 93-545. 1978 [1979], *Flora of Alberta (edition 2)* 1-687. 1983, *Systematic Botany* 8: 341-353. 1983, *Bot. Zhurn. (Moscow & Leningrad)* 74(12): 1787-1791. 1989, *Madroño* 37: 55-58. 1990, *Systematic Botany* 16: 431-445. 1991, *New Zealand J. Bot.* 34: 17-32. 1996, Geraldine L. Dodd and Lisa A. Donovan, "Water potential and ionic effects on germination and seedling growth of two cold desert shrubs." *Am. J. Bot.* 86: 1146-1153. 1999, Brian Keane, Stephan Pelikan, Greg P. Toth, M. Kate Smith and Steven H. Rogstad, "Genetic diversity of *Typha latifolia* (Typhaceae) and the impact of pollutants examined with tandem-repetitive DNA probes." *Am. J. Bot.* 86: 1226-1238. 1999, *Grasses: Systematics and Evolution* 61-74. 2000, M. Ajmal Khan and Salman Gulzar, "Light, salinity, and temperature effects on the seed germination of perennial grasses." *Am. J. Bot.* 90: 131-134. 2003, *Am. J. Bot.* 90: 1416-1424. 2003, *Contributions from the United States National Herbarium*

48: 123-126, 382, 591-601. 2003, *Journal of Ecology* 92(1): 72-85. Feb 2004 [Structure and organization of a northern New England salt marsh plant community], *Functional Ecology* 18(1): 141-147. Feb 2004, *Journal of Applied Ecology* 41(3): 440-448, 449-463. June 2004, *Journal of Ecology* 92(4): 648-660. Aug 2004 [Initiation and maintenance of vegetation mosaics in an Arctic salt marsh], *Journal of Applied Ecology* 41(4): 664-674. Aug 2004 [Influence of deferred grazing on vegetation dynamics and livestock productivity in an Andean pastoral system], C. Brochmann et al., "Polyploidy in arctic plants." *Biological Journal of the Linnean Society* 82(4): 521-536. Aug 2004, R.G. Hughes, "Climate change and loss of salt marshes: consequences for birds." *Ibis* 146(s1): 21-28. Sep 2004, *Ibis* 146(s1): 101-110. Sep 2004 [Managed realignment in the UK, the first 5 years of colonization by birds], *Journal of Ecology* 92(6): 1001-1010. Dec 2004 [Nutrient limitation of plant growth and forage quality in Arctic coastal marshes].

Species

P. acroxantha C.A. Sm. & C.E. Hubb.

South Africa. Perennial, rare, tufted to loosely tufted, culms 2-noded, inflorescence linear with slender branches, in moist places, ditches, depressions, see *Bulletin of Miscellaneous Information Kew* 1929(3): 86, 83. 1929, *Bothalia* 27: 75-82. 1997.

P. agrostidea T.J. Sørensen (*Phippsia agrostidea* (T.J. Sørensen) Á. Löve & D. Löve; *Puccinellia arctica* (Hook.) Fernald & Weath.)

North America Arctic, Canada, U.S. Perennial, caespitose, halophytic, purplish, glabrous, sheaths glabrous, ligule lacinate, leaf blades appressed to the stem, inflorescence densely paniculate, lemma lanceolate and hairy, palea scabrous, rare species, growing in dry flats, tundra, slopes, seashore, in areas periodically flooded or salt sprayed, see *Flora Boreali-Americana* 2: 248, t. 229. 1840 and *Rhodora* 18: 4. 1916, *Bulletin of the National Museum of Canada* 135: 78. 1955, *Botaniska Notiser* 128(4): 498. 1975 [1976].

in English: tundra alkali grass, bent alkaligrass, boreal alkali grass

P. americana Sørensen (*Poa maritima* Huds.; *Puccinellia maritima* auct. non (Huds.) Parl.; *Puccinellia maritima* (Huds.) Parl.)

North America, Canada. See *Flora Anglica* 35. 1762, *Flora italiana, ossia descrizione delle piante ...* 1: 370. 1848 and *Meddelelser om Grønland* 136(3): 67. 1953.

in English: American alkali grass

P. andersonii Swallen (*Phippsia andersonii* (Swallen) Á. Löve & D. Löve; *Puccinellia glabra* Swallen; *Puccinellia triflora* Swallen) (named for the American botanist Jacob Peter Anderson, 1874-1953, plant collector in Alaska since 1914, author of *Flora of Alaska and Adjacent Parts of*

Canada; An Illustrated Descriptive Text of All Vascular Plants Known to Occur within the Region Covered. Integrated and indexed at the Anderson Herbarium by Richard W. Pohl. Ames, Iowa State University Press 1959; see Joseph Ewan, *Rocky Mountain Naturalists*. 150. The University of Denver Press 1950; *Anderson's Flora of Alaska and Adjacent Parts of Canada*. [By] Stanley Larson Welsh. Provo, Utah, Brigham Young University Press 1974)

Northern America, Canada, U.S., Alaska, Greenland. Perennial, halophytic, littoral, caespitose, decumbent, glabrous, leaves mostly basal, sheaths glabrous, ligule membranous, auricles absent, inflorescence paniculate with stiffly spreading panicle branches, lemma ovate and more or less glabrous, found in very wet soils, seashore, sand, silt, drained moist areas, on coastal flats, clays, see *Journal of the Washington Academy of Sciences* 34(1): 21. 1944, *Check-list of the Vascular Plants of Greenland* 1-40. 1968, *Botaniska Notiser* 128(4): 498. 1975 [1976].

in English: Anderson's alkali grass

P. angusta (Nees) C.A. Sm. & C.E. Hubb. (*Atropis angusta* (Nees) Stapf; *Festuca angusta* (Nees) Asch. & Graebn., nom. illeg., non *Festuca angustata* Griseb.; *Sclerochloa angusta* Nees)

South Africa. Perennial, tufted to densely, culms 1-noded, leaf sheaths shiny and overlapping, panicle linear, pasture, growing in disturbed areas, saline soils, desert, grassland, see *Florae Africae Australioris Illustrationes Monographicae* 381. 1841, *Flora Danica* 15: 3, t. 2583. 1858 and *Flora Capensis* 7: 717. 1900, *Synopsis der mitteleuropäischen Flora* 2: 460. 1900, *Rhodora* 18: 14. 1916, *Meddelelser om Grønland* 58: 44. 1920, *Bulletin of Miscellaneous Information Kew* 1929(3): 85, 83-86, t. 4. 1929, *Flora of the U.S.S.R.* 2: 477, 760. 1934, *Novosti Sist. Vyss. Rast.* 8: 80. 1971, *Bothalia* 27: 75-82. 1997, *Bothalia* 29(2): 335-341. 1999.

in English: finch alkali grass

in South Africa: brakgras, vinkbrakgras, vinkgras

P. angustata (R. Br.) E.L. Rand & Redfield (*Atropis angustata* (R. Br.) Griseb.; *Atropis angustata* (R. Br.) V.I. Krecz.; *Festuca angusta* (Nees) Asch. & Graebn., nom. illeg., non *Festuca angustata* Griseb.; *Glyceria angustata* (R. Br.) Fr.; *Glyceria angustata* (R. Br.) Vasey, nom. illeg., non *Glyceria angustata* (R. Br.) Fr.; *Glyceria vaginata* Lange; *Glyceria vaginata* f. *contracta* Lange; *Panicularia angustata* (R. Br.) Scribn.; *Phippsia angustata* (R. Br.) Á. & D. Löve; *Poa angustata* R. Br.; *Puccinellia angustata* (R. Br.) Nash, nom. illeg., non *Puccinellia angustata* (R. Br.) E.L. Rand & Redfield; *Puccinellia contracta* (Lange) Sørensen; *Puccinellia taimyrensis* Roshev.)

Circumpolar, Northern America, Canada. Densely tufted, halophyte, stout, erect or decumbent, auricles absent, leaf sheaths glabrous, ligule membranous, inflorescence paniculate, lemma hairy, palea with hairy veins, recorded in

ridges, in clay or silt environments, tundra, cliffs, seashore, riverbank sand, in more or less well-drained areas, disturbed places, considerable variation within the taxon, see *Prodromus Florae Novae Hollandiae* 179. 1810, *Chloris Melvilliana* 27, 29. 1823, *Herbarium Pedemontanum* 6: 235. 1836, *Florae Africae Australioris Illustrationes Monographicae* 381. 1841, Elias Magnus Fries, *Novitiarum florae suecicae mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845, *Flora Rossica* 4(13): 390. 1852, *Flora Danica* 15: 3, t. 2583. 1858, Adolf Erik Nordenskiöld (1832-1901), [Vegas färd kring Asien och Europa ... English] *The Voyage of the Vega Round Asia and Europe: with a Historical Review of Previous Journeys Along the North Coast of the Old World*, translated by Alexander Leslie. 1st English edition. London: Macmillan 1881, *Vega-expeditionens vetenskapliga iakttagelser* 1: 273. 1882, *Bulletin of the Torrey Botanical Club* 15(2): 48. 1888, *Flora of Mount Desert Island, Maine* 181. 1894, *Memoirs of the Torrey Botanical Club* 5: 54. 1894, *Bulletin of the Torrey Botanical Club* 22(12): 512. 1895 and *Rhodora* 18: 14. 1916, *Meddelelser om Grønland* 58: 44. 1920, *Meddelelser om Grønland* 58: 44. 1926, *Bulletin of Miscellaneous Information Kew* 1929(3): 83-86, t. 4. 1929, *Flora of the U.S.S.R.* 2: 470, 472, 477, 760, t. 25, f. 4. 1934, *Botanicheskie Materialy Gerbariia Instituta Botaniki Akademii Nauk Kazakhskoi SSR* 11: 27. 1949, *Meddelelser om Grønland* 136(3): 30, 74, 77. 1953, *Novosti Sist. Vyss. Rast.* 8: 80. 1971, *Botaniska Notiser* 128(4): 498. 1975 [1976].

in English: Northern alkali grass

P. anisoclada (V. Krecz.) V. Krecz. (*Atropis anisoclada* Krecz.; *Atropis gigantea* Grossh.; *Puccinellia anisoclada* (Krecz.) Parsa; *Puccinellia gigantea* (Grossh.) Grossh.)

Russia. See *Genera Plantarum* 656. 1791, *Hortus Regius Botanicus Hafniensis* 2: 953. 1815, *Flora Rossica* 4(13): 389. 1852 and *Monit. Jard. Bot. Tiflis* 46/47: 35, t. 2. 1919, *Flora Kavkaza* 1: 114. 1928, *Flora URSS* 2: 487-488, 764-765. 1934, *Flora Uzbekistanica* 1: 252-253. 1941, *Flora of Iran [Parsa]* 5: 734. 1951.

P. anisoclada (V. Krecz.) V. Krecz. subsp. *melderisiana* Kit Tan

Turkey. Vulnerable grass, see *Plant Systematics and Evolution* 154(1-2): 127. 1986.

P. arctica (Hook.) Fernald & Weatherby (*Glyceria arctica* Hook.; *Glyceria distans* (Jacq.) Wahlenb. var. *arctica* (Hook.) Gelert ex N.W. Simmonds; *Glyceria maritima* (Huds.) Wahlenb. var. *arctica* (Hook.) Kurtz; *Phippsia agrostoides* (T.J. Sørensen) Å. Löve & D. Löve; *Phippsia arctica* (Hook.) Å. & D. Löve; *Phippsia borealis* (Swallen) Å. & D. Löve; *Phippsia poacea* (T.J. Sørensen) Å. Löve & D. Löve; *Puccinellia agrostidea* T.J. Sørensen; *Puccinellia borealis* Swallen; *Puccinellia poacea* T.J. Sørensen)

Northern America, British Columbia, Canada, Franklin, Saskatchewan, Yukon Territory, U.S., Alaska. Perennial,

caespitose, erect, glabrous, sheaths glabrous, ligule membranous, inflorescence paniculate, spikelets pedicellate, palea with scabrous veins, vulnerable species, found in wet meadows, on beach, tundra, disturbed areas, seashore, wet sand, meadows subject to periodical flooding, see *Flora Upsaliensis* 36. 1820, *Flora Boreali-Americana* 2: 248, t. 229. 1840, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 19: 423. 1894 and *Report of the Second Norwegian Arctic Expedition in the Fram 1898-1902* 2: 158. 1906, *Rhodora* 18: 4. 1916, *Bulletin of the National Museum of Canada* 135: 78, 81. 1955, *Botaniska Notiser* 128(4): 498, 500. 1975 [1976].

in English: Arctic alkali grass

P. argentinensis (Hack.) Parodi (*Atropis argentinensis* Hack.)

Argentina. See *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 8(8): 45. 1908, *Flora URSS* 2: 470. 1934, *Notas del Museo de la Plata, Botánica* 2(11): 13-14. 1937.

P. biflora (Steud.) Parodi (*Atropis biflora* (Steud.) St.-Yves & Camus; *Festuca biflora* Steud.; *Glyceria leptostachys* Speg., nom. illeg., non *Glyceria leptostachya* Buckley; *Panicularia leptostachya* (Speg.) Macloskie; *Panicularia leptostachya* (Buckley) Piper, nom. illeg., non *Panicularia leptostachya* (Speg.) Macloskie; *Puccinellia biflora* (Steud.) Camus, nom. illeg., non *Puccinellia biflora* (Steud.) Parodi)

South America. See *Synopsis Plantarum Glumacearum* 1: 428. 1854, *Anales del Museo Nacional de Buenos Aires* 5: 94, t. 4, f. G. 1896 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1* [2], *Botany* 8(1,5,1): 220. 1904, *Fl. N.W. Coast* 59. 1915, *Bulletin du Muséum d'Histoire Naturelle* 32: 306. 1926, *Notas del Museo de la Plata, Botánica* 2(11): 14. 1937, *Notulae Systematicae. Herbarium du Museum de Paris* 12: 85. 1945, *Flora Patagónica* 8(3): 128-134. 1978.

P. borealis Swallen (*Phippsia borealis* (Swallen) Å. Löve & D. Löve; *Phippsia borealis* subsp. *borealis*; *Phippsia borealis* subsp. *neglecta* (Tzvelev) Å. Löve & D. Löve; *Phippsia nutkaensis* (J. Presl) Å. Löve & D. Löve; *Phippsia nutkaensis* subsp. *borealis* (Holmb.) Å. Löve & D. Löve; *Puccinellia borealis* subsp. *borealis*; *Puccinellia borealis* subsp. *neglecta* Tzvelev; *Puccinellia coarctata* subsp. *borealis* Holmb.)

South America. See *Botaniska Notiser* 1916: 251-254. 1916, *Journal of the Washington Academy of Sciences* 34(1): 19. 1944, *Arkticheskaia Flora SSSR* 1: 206. 1964, *Botaniska Notiser* 128(4): 498-500. 1975 [1976].

P. bruggemannii Sørensen (*Phippsia bruggemannii* (T.J. Sørensen) Å. Löve and D. Löve) (for P.F. Bruggeman)

North America, Canada. Caespitose, halophyte, densely tufted, erect or prostrate, glabrous, leaves without auricles,

sheaths glabrous, ligule membranous, inflorescence paniculate, spikelets pedicellate, lemma elliptic, palea with hairy veins, vulnerable species, recorded in ridges, slopes, in moist depressions of dune swales, in clay or silt environments, tundra, damp sand, cliffs, seashore, riverbank sand, in more or less well-drained areas and moderately well drained, disturbed places, see *Bulletin of the National Museum of Canada* 135: 80. 1955, *Botaniska Notiser* 128(4): 199. 1975 [1976], *The Flora of Canada* 2: 93-545. 1978 [1979], *Nordic Journal of Botany* 13(3): 247-252. 1993.

P. bulbosa (Grossh.) Grossh. (*Atropis bulbosa* Grossh.; *Puccinellia gigantea* subsp. *bulbosa* (Grossh.) Tzvelev)

Asia, Iran. See *Monit. Jard. Bot. Tiflis* 46/47: 36, t. 2. 1919, *Flora Kavkaza* 1: 114. 1928, *Zlaki SSSR* 502. 1976.

P. bulbosa (Grossh.) Grossh. subsp. ***bulbosa*** (*Atropis bulbosa* Grossh.)

Asia, Turkey. Found in seasonally wet marshes, saline clay loam soils.

P. bulbosa (Grossh.) Grossh. subsp. ***caesarea*** Kit Tan

Asia, Turkey. See *Flora of Turkey and the East Aegean Islands* 9: 624, 506. 1985.

P. byrrangensis Tzvelev (*Phippsia vahliana* subsp. *byrrangensis* (Tzvelev) Á. Löve & D. Löve)

Russia. Rare species, see *Novosti Sist. Vyss. Rast.* 8: 80. 1971, *Botaniska Notiser* 128(4): 501. 1975[1976].

P. ciliata Bor

Turkey. Perennial, tufted, unbranched, nonauriculate, leaf sheaths chartaceous, ligule acuminate to acute, stiff leaves long and thin, an erect panicle green to purple to yellowish, palea narrowly elliptic and membranous, anthers yellow, ovary glabrous, small fruit ventrally compressed, excellent feed quality, useful as pasture, weeds, colonizing grass, forage plant and seed crop, sensitive to heavy grazing, halophytic, tolerant of the saline and waterlogged conditions, suitable for the reclamation of salty land, may be grown on salt-affected soils, for saline and waterlogged land, saline soil, salty ground, near the sea, see *Notes from the Royal Botanic Garden, Edinburgh* 28: 299. 1968.

P. deschampsoides T.J. Sørensen (*Phippsia deschampsoides* (T.J. Sørensen) Á. Löve & D. Löve; *Puccinellia nuttalliana* (Schult.) Hitchc.) (resembling the genus *Deschampsia* P. Beauv., Gramineae)

Northern America, Canada, Keewatin, Manitoba, Quebec, Yukon Territory. Rare species, coastal, see *Mantissa* 2: 303. 1824 and *A Flora of California* 1: 162. 1912, *Meddelelser om Grønland* 136: 31. 1953, *Check-list of the Vascular Plants of Greenland* 1-40. 1968, *Botaniska Notiser* 128(4): 499. 1975 [1976], *The Flora of Canada* 2: 93-545. 1978 [1979].

in English: polar alkali grass

P. distans (Jacq.) Parl. (*Aira aquatica* var. *distans* (Jacq.) Huds.; *Atropis distans* (Jacq.) Griseb.; *Atropis distans* (L.) Griseb.; *Atropis distans* var. *tenuis* (Uechtr.) Rouy; *Catabrosa distans* (Jacq.) Link ex Heynh.; *Catabrosa distans* (L.) Link; *Festuca distans* (Jacq.) Kunth; *Glyceria distans* (L.) Wahlenb.; *Glyceria distans* (Jacq.) Wahlenb.; *Glyceria distans* var. *tenuis* Uechtr.; *Heleochoa distans* (L.) Drejer; *Hydrochloa distans* (Jacq.) Hartm.; *Hydrochloa distans* (L.) Hartm.; *Molinia distans* (L.) Hartm.; *Panicularia distans* (Jacq.) Kuntze; *Phippsia distans* (Jacq.) Á. Löve & D. Löve; *Poa arenaria* Retz., nom. illeg., non *Poa arenaria* Lam.; *Poa distans* Jacq.; *Poa distans* L., nom. illeg., non *Poa distans* Jacq.; *Poa retroflexa* Curtis; *Puccinellia bilykiana* Klokov; *Puccinellia distans* (L.) Parl.; *Puccinellia distans* var. *retroflexa* (Curtis) Wolley-Dod; *Puccinellia distans* var. *tenuis* (Uechtr.) Fernald & Weath.; *Puccinellia pseudoconvoluta* Klokov; *Puccinellia retroflexa* (Curtis) Holmb.; *Puccinellia sachalinensis* Ohwi; *Puccinellia suksdorfii* H. St. John; *Sclerochloa arenaria* (Retz.) Nees; *Sclerochloa distans* (Jacq.) Bab.; *Sclerochloa distans* (L.) Bab.; *Sclerochloa multiculmis* Syme ex Sowerby; *Sclerochloa multiculmis* var. *distans* (Jacq.) Syme)

Europe. Perennial bunchgrass, halophytic, tufted, erect or decumbent and sometimes rooting at the nodes above the base, slender, glabrous, unbranched, culm enclosed by uppermost leaf sheath at flowering, auricles absent, membrane-like ligule obtuse to truncate, smooth to rough leaf sheaths, grayish or whitish green leaves flat and linear to filiform, open and narrowly branched flower head, green to purple panicle pyramidal or lanceolate or narrow-oblong, panicle branches reflexed at maturity, glumes unequal not keeled, first glume subacute and dorsally rounded, second glume obtuse to truncate, lemmas blunt or truncate, lack pubescence on the lemma nerves, palea narrowly elliptic with keels wingless, anthers yellow, fruit ventrally compressed, pastures, weeds, ornamental grass widely naturalized in temperate regions, salt tolerant, grows in saline sites, mudflats, shores, salt flats and along lakeshores in the lowland to montane zones, salt pans, in wet alkali spot, wet disturbed places, in mountain meadows, swamps, springs, ballast, in salty marshes and on sandy grounds, along irrigation ditches, muddy estuaries, roadsides, waste ground, poorly drained saline areas, see *Species Plantarum* 1: 64, 67, 73. 1753, *Observationum Botanicarum* 1: 42. 1764, *Mantissa Plantarum* 32. 1767, *Flora Anglica, Editio Altera* 34. 1778, A.J. Retzius (1742-1821), *Florae Scandinaviae prodromus: enumerans plantas Sveciae, Lapponiae, Finlandiae et Pomeraniae ac Daniae, Norvegiae, Holstiae, Islandiae Groenlandiaeque* (edition 1). 16. 1779, *Baiersche Flora* 1: 100, 334. 1789, *Collectanea* 233. 1809, *Prodromus Florae Novae Hollandiae* 179. 1810, *Essai d'une Nouvelle Agrostographie* 97, 135, 165, 177. 1812, *Genera Graminum* 8. 1819, *Flora Upsaliensis* 36. 1820, *Handbok i Skandinavien Flora* 56. 1820, *Révision des Graminées* 1: 129. 1829,

Herbarium Pedemontanum 6: 235. 1836, *Flora Excursoria Hafniensis* 39. 1838, *Florae Africae Australioris Illustrationes Monographicae* 380. 1841, *Nomenclator Botanicus* 2: 126. 1843, *Manual of British Botany* 370. 1843, *Linnaea* 17(4): 405. 1844, *Flora Italiana*. 1: 367. 1848 [1850], *Flora Rossica* 4(13): 388. 1852, *Exploration Scientifique de l'Algérie* 140. 1855, *Notes sur quelques plantes rares ou critiques de la Belgique* 229. 1865, François Crépin (1830-1903), *Mém. Cour. Acad. Belg.* 18: 7. 1866, *English Botany, ... Third Edition* 11: 103-104, t. 1755, 1756. 1873, *A Manual of the Botany of the Northern United States (edition 6)* 668. 1890, *Revisio Generum Plantarum* 2: 782. 1891 and *Flore de France* 14: 195. 1913, *Rhodora* 18: 12. 1916, *Svensk Fanerogamflora* 97. 1918, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Botaniska Notiser* 1926: 182. 1926, *Contribution from the Department of Botany State College of Washington* 2: 80. 1928, *Acta Phytotaxonomica et Geobotanica* 2: 32. 1933, *Flora URSS* 2: 470. 1934, *Flora of Sussex* 516. 1937, *Sunyatsenia* 6(1): 58. 1941, *Bot. Mater. Gerb. Bot. Inst. Komarova Acad. Nauk SSSR* 12: 44, 46. 1950, *Flore de l'Afrique du Nord*: 3: 114. 1955, *Le Naturaliste Canadien* 94: 527. 1967, *Folia Geobotanica et Phytotaxonomica* 10(3): 274. 1975, *Botanical Journal of the Linnean Society* 76(4): 363. 1978, *Grassland of China* 4: 53-60. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991, *Flora Mediterranea* 1: 229-236. 1991, *New Zealand Journal of Botany* 34: 17-32. 1996, *Opera Botanica* 137: 1-42. 1999, Abdel-Kader Ainouche and Randall J. Bayer, "Phylogenetic relationships in *Lupinus* (Fabaceae: Papilionoideae) based on internal transcribed spacer sequences (ITS) of nuclear ribosomal DNA." *Am. J. Bot.* 86: 590-607. 1999, *Taxon* 49(2): 255. 2000, *Grassland of China* 2000(5): 1-5. 2000.

in English: European alkali grass, weeping alkali grass, reflexed salt marsh grass, reflexed salt grass, reflexed poa, reflexed meadow grass, spreading alkali grass, slender alkali grass, goosegrass

P. distans (Jacq.) Parl. subsp. ***borealis*** (Holmberg) W.E. Hughes (*Atropis pulvinata* (Fr.) V.I. Krecz.; *Atropis suecica* Holmb.; *Glyceria nutkaensis* (J. Presl) Fr.; *Phippsia nutkaensis* (Presl) Á. Löve & D. Löve; *Phippsia nutkaensis* subsp. *borealis* (Holmb.) Á. Löve & D. Löve; *Phippsia sibirica* (Holmb.) Á. Löve & D. Löve; *Poa nutkaensis* J. Presl; *Puccinellia capillaris* (Lilj.) Jansen; *Puccinellia coarctata* Fernald & Weath.; *Puccinellia coarctata* var. *pseudofasciculata* T.J. Sørensen; *Puccinellia coarctata* Fernald & Weath.; *Puccinellia distans* var. *angustifolia* (Blytt) Holmb.; *Puccinellia nutkaensis* (J. Presl) Fernald & Weath.; *Puccinellia pulvinata* (Fr.) Tzvelev; *Puccinellia retroflexa* sensu Holmb.; *Puccinellia retroflexa* sensu Holmb. subsp. *borealis* Holmb.; *Puccinellia sibirica* Holmb.; *Puccinellia suecica* (Holmb.) Holmb.)

Eurasia, coasts of northern and western Europe. Found along roadsides and wasteland, see *Reliquiae Haenkeanae*

1(4-5): 272. 1830, *Novitium Florae Suecicae Mantissa* 3: Add. 176. Lund 1843, *Flora italiana, ossia descrizione delle piante ...* 1: 367. 1848 and *Rhodora* 18: 22, f. 49-53. 1916, *Svensk Fanerogamflora* 97. 1918, *Botaniska Notiser* 1926: 182. 1926, *Botaniska Notiser* 128(4): 500. 1975 [1976], *Botanical Journal of the Linnean Society* 76(4): 363. 1978, *Turun yliopiston julkaisu – Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Sida* 12: 409-417. 1987.

in English: European alkali grass, weeping alkali grass

P. distans (Jacq.) Parl. subsp. ***distans*** (*Atropis pseudoconvoluta* (Klokov) Stankov; *Poa distans* Jacq.; *Poa retroflexa* Curtis; *Puccinellia distans* var. *tenuis* (Uechtr.) Fernald & Weath.; *Puccinellia retroflexa* (Curtis) Holmb.; *Puccinellia suksdorfii* H. St. John)

Eurasia. Found along roadsides and waste places.

in English: European alkali grass, weeping alkali grass

P. distans (L.) Parl. subsp. ***hauptiana*** (Trin. ex V.I. Krecz.) W.E. Hughes (*Atropis hauptiana* Trin. ex V.I. Krecz.; *Phippsia hauptiana* (Trin. ex V.I. Krecz.) Á. Löve & D. Löve; *Poa hauptiana* (Trin. ex V.I. Krecz.) Trin. ex Kom.; *Puccinellia hauptiana* (Trin. ex V.I. Krecz.) Kitag.; *Puccinellia hauptiana* (Trin. ex V.I. Krecz.) V.I. Krecz., nom. illeg., non *Puccinellia hauptiana* (Trin. ex V.I. Krecz.) Kitag.; *Puccinellia hauptiana* Krecz.)

Europe. See *Flora italiana, ossia descrizione delle piante ...* 1: 367. 1848 and *Flora URSS* 2: 485, 763, t. 36, f. 21. 1934, *Report of the Institute of Scientific Research, Manchoukuo* 1: 255. 1937, *Flora Leningradskoi Oblasti* 1: 149. 1955, *Botaniska Notiser* 128(4): 499. 1975 [1976], *Botanical Journal of the Linnean Society* 76(4): 363. 1978.

P. distans (L.) Parl. subsp. ***limosa*** (Schur) Soo & Jáv. (*Atropis distans* var. *limosa* Schur; *Puccinellia distans* subsp. *limosa* (Schur) Jáv.; *Puccinellia limosa* (Schur) Holmb.)

Southeast and central Europe, Hungary. See *Enumeratio Plantarum Transsilvaniae* 779. 1866 and *Botaniska Notiser* 110. 1920.

P. fasciculata (Torrey) E.P. Bicknell (*Atropis borneri* (Bab.) K. Richt.; *Atropis borneri* (Bab.) Stapf, nom. illeg., non *Atropis borneri* (Bab.) K. Richt.; *Atropis conferta* (Fr.) Rouy; *Atropis distans* var. *conferta* (Fr.) Beal; *Festuca borneri* Bab.; *Festuca delawarica* (Link) Kunth; *Glyceria borneri* Bab.; *Glyceria borneri* (Bab.) Bab.; *Glyceria conferta* Fr.; *Glyceria delawarica* (Link) Heynh.; *Glyceria distans* (Jacq.) Wahlenb.; *Glyceria distans* subsp. *conferta* (Fr.) Hook.f.; *Phippsia fasciculata* (Torr.) Á. Löve & D. Löve; *Poa borneri* (Bab.) Parnell; *Poa delawarica* Link; *Poa delawarica* Balb., nom. illeg., non *Poa delawarica* Link; *Poa fasciculata* Torrey; *Puccinellia borneri* (Bab.) Hitchc.; *Puccinellia borneri* (Bab.) Hayek, nom. illeg., non *Puccinellia borneri* (Bab.) Hitchc.; *Puccinellia conferta* (Fr.) Ponert;

Puccinellia fasciculata (Torrey) Bickn. var. *caespitosa* Allan & Jansen; *Puccinellia fasciculata* var. *fasciculata*; *Puccinellia fasciculata* var. *novazelandica* Allan & Jansen; *Puccinellia fasciculata* var. *scott-thomsonii* (Allan & Jansen) Zotov; *Puccinellia scott-thomsonii* Allan & Jansen; *Sclerochloa arenaria* var. *fasciculata* (Torr.) A. Gray; *Sclerochloa borneri* (Bab.) Bab.; *Sclerochloa multiculmis* subsp. *borneri* (Bab.) Syme) (British (b. Henfield) botanist William J. Borrer, the Elder, 1781-1862 (d. Henfield, Sussex), horticulturist, traveler, plant collector, 1835 Fellow of the Royal Society, 1805 Fellow of the Linnean Society, with Dawson Turner (1775-1858) wrote *Specimen of a Lichenographia Britannica*. Yarmouth 1839, author of *English Botany ... Supplement ...* The descriptions, synonyms and places of growth, etc. vol. IV, London 1849-63 (in James Sowerby (1757-1822) and J.E. Smith, *English Botany*). See J.H. Barnhart, *Biographical notes upon botanists*. 1: 224. 1965; Hewett Cottrell Watson (1804-1881), *Topographical Botany*. Edition 2. London 1883; Dawson Turner and Lewis Weston Dillwyn, *The Botanist's Guide through England and Wales*. London 1805; Mea Allan, *The Hookers of Kew*. London 1967; G.F.W. Meyer (1782-1856), *Primitiae florum essequeboensis*. 79, t. 1. Gottingae 1818) (*Puccinellia scott-thomsonii* Allan & Jansen named for John Scott Thomson, 1882-1943, botanical collector in New Zealand, author of "Notes on hydrogen-ion concentration of forest soils in the vicinity of Dunedin, New Zealand." *Trans. R. Soc. N.Z.* 66: 192-200. 1936, "Some aspects of the vegetation and flora of South Island." *J.N.Z. Inst. Hort.* 4, 1935. See Leonard Cockayne (1855-1934), "Some New Zealand indigenous-induced weeds and indigenous-induced modified and mixed plant-communities." *J. Linn. Soc. (Bot.)* 49: 13-45. 1932; George Simpson, "Results of a brief botanical excursion to Rough Peaks Range." *N.Z.J. Sci. Tech.* 8: 372-378. 1926)

North America, Europe. Perennial, halophyte, grayish green or yellowish green or glaucous, tufted, erect or geniculate or spreading, unbranched, internodes solid, auricles absent, leaf sheath glabrous subcoriaceous, relatively long and acute to obtuse ligule, linear leaves narrow and flat or folded, panicle branches erect, a green to purple lanceolate and unilateral to contracted panicle, vestigial foliar structure subtending the inflorescence present or absent, glumes unequal ovate or obtuse, lemmas subobtusate with a small apiculus, palea entire or apically notched or bidentate, ovary glabrous, fruit ventrally compressed and glabrous, weeds, near the sea and salt marshes, lagoons, brackish shores, in saline areas near water, stream, mudflats, salt swamp, sandy seashores, waste ground, disturbed areas, ballast, see *Flora Upsaliensis* 36. 1820, *A Flora of the Northern and Middle Sections of the United States* 1: 107. 1823, *Hortus Regius Botanicus Berolinensis* 1: 174. 1827, *Tentamen Supplementi ad Systematis Vegetabilium*, . . . 6. Gottingae 1828, *Révision des Graminées* 1: 129. 1829, *Transactions of the Linnean Society of London* 17: 565. 1837, Elias Magnus Fries,

Novitiarum florum suecicarum mantissa [prima, altera, tertia] et Continuaciones [1-5] [Academic Dissertations]. Lund 1832-1845, *Nomenclator Botanicus* 1: 360. 1840, *Flora Africae Australioris Illustrationes Monographicae* 380. 1841, *English Botany, the Second Edition* 3: t. 2797. 1843, *Manual of British Botany* 370. 1843, *The Grasses of Britain* 220, t. 98. 1845, *A Manual of the Botany of the Northern United States* 594. 1848, *Flora Rossica* 4(13): 388. 1852, *Notes sur quelques plantes rares ou critiques de la Belgique* 5: 15. 1865, *The Student's Flora of the British Islands* 446. 1870, *English Botany, ... Third Edition* 11: 103, 105, t. 1755, 1756. 1873, *Plantae Europaeae* 1: 92. 1890, *Grasses of North America for Farmers and Students* 2: 573. 1896 and *Flora Capensis* 7: 716-717. 1900, *Bull. Torrey Bot. Club* 35(4): 197. 1908, *Rhodora* 10(112): 65. 1908, *Flore de France* 14: 194. 1913, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 273. 1932, *Transactions and Proceedings of the Royal Society of New Zealand* 69: 265-269. 1939, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 236. 1943, *Feddes Repertorium* 84(9-10): 739. 1974, *Folia Geobotanica et Phytotaxonomica* 10(3): 274. 1975, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 16: 341-349. 1986, *New Zealand J. Bot.* 34: 29. 1996, *Opera Botanica* 137: 1-42. 1999.

in English: Borrer's saltmarsh grass, Borrers saltmarsh grass, saltmarsh alkali grass, saltmarsh goosegrass, salt grass

P. fasciculata (Torrey) E.P. Bickn. subsp. *pungens* (Pau) W.E. Hughes (*Glyceria pungens* Pau; *Puccinellia dolicholepis* subsp. *fominii* (Bilyk) Tzvelev; *Puccinellia pungens* (Pau) E. Paunero)

Spain. Vulnerable grass, see Carlos Pau (1857-1937), *Notas Botánicas á la Flora Española* 6: 113. Madrid 1895 and *Symposium Dedicated to the Memory of A.V. Fomin (Acad. Sci. Ukraine)* 218. 1938, *Anales del Instituto Botánico A. J. Cavanilles* 17(2): 39. 1959, *Zlaki SSSR* 503. 1976, *Botanical Journal of the Linnean Society* 76(4): 363. 1978, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 16: 341-349. 1986.

P. festuciformis (Host) Parl. (*Atropis festuciformis* (Host) Richter; *Atropis palustris* subsp. *festuciformis* (Host) Briq.; *Catabrosa festuciformis* (Host) Link; *Glyceria convoluta* subsp. *festuciformis* (Host) Douin; *Glyceria festuciformis* (Host) Heynh. ex Rchb.; *Poa festuciformis* Host; *Puccinellia poecilantha* (C. Koch) Grossh.)

Europe. Perennial, see *Icones et Descriptiones Graminum Austriacorum* 3: 12, t. 17. 1805, *Hortus Regius Botanicus Hafniensis* 2: 953. 1815, *Flora Germanica Excursoria* 45. 1830, *Novitiarum Florae Suecicae Mantissa* 3(Add.): 176. 1842, *Linnaea* 17(4): 405. 1844, *Flora italiana, ossia descrizione delle piante ...* 1: 368. 1848, *Plantae Europaeae* 1: 91. 1890 and *Wiss. Mitt. Bosn. Herzeg.* 9: 447. 1904,

Prodrome de la Flore Corse 1: 149. 1910, *Botanical Journal of the Linnean Society* 76(4): 363. 1978, *Fontqueria* 53: 4. 1999, G.B. Noe and J.B. Zedler, "Different effects of four abiotic factors on the germination of salt marsh annuals." *American Journal of Botany* 87: 1679-1692. 2000.

P. festuciformis (Host) Parl. subsp. ***convoluta*** (Hornem.) W.E. Hughes (*Atropis convoluta* (Hornem.) Griseb.; *Atropis palustris* subsp. *convoluta* (Hornem.) Briq.; *Festuca convoluta* (Hornem.) Kunth; *Glyceria convoluta* (Hornem.) Fr.; *Poa convoluta* Hornem.; *Puccinellia convoluta* (Hornem.) Fourr.; *Puccinellia convoluta* (Hornem.) Grossh., nom. illeg., non *Puccinellia convoluta* (Hornem.) Fourr.; *Puccinellia convoluta* (Hornem.) Hayek, nom. illeg., non *Puccinellia convoluta* (Hornem.) Fourr.; *Puccinellia convoluta* (Hornem.) Podp., nom. illeg., non *Puccinellia convoluta* (Hornem.) Fourr.; *Puccinellia distans* var. *convoluta* (Hornem.) Honda; *Puccinellia festuciformis* subsp. *convoluta* (Hornem.) W.E. Hughes)

Europe. See *Hortus Regius Botanicus Hafniensis* 2: 953. 1815, *Révision des Graminées* 1: 129. 1829, *Novitarium Florae Suecicae Mantissa* 3(Add.): 176. 1842, *Flora Rossica* 4(13): 389. 1852, *Annales de la Société Linnéenne de Lyon, sér. 2*, 17: 184. 1869 and *Prodrome de la Flore Corse* 1: 149. 1910, *Flora Kavkaza* 1: 115. 1928, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 58. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 30(3): 275. 1932, *Botanical Journal of the Linnean Society* 76(4): 363. 1978.

P. festuciformis (Host) Parl. subsp. ***intermedia*** (Schur) W.E. Hughes (*Atropis intermedia* Schur; *Puccinellia intermedia* (Schur) Holmb.; *Puccinellia intermedia* (Schur) Janch.)

Europe. Perennial, see *Enumeratio Plantarum Transsilvaniae* 779. 1866 and *Wiener Botanische Zeitschrift* 93: 84. 1944, *Botanical Journal of the Linnean Society* 76(4): 363. 1978.

P. festuciformis (Host) Parl. subsp. ***tenuifolia*** (Boiss. & Reut.) W.E. Hughes (*Atropis battandieri* Speg.; *Atropis tenuifolia* Thurb.; *Glyceria tenuifolia* Boiss. & Reut.; *Puccinellia battandieri* (Speg.) Ponert, nom. illeg., non *Puccinellia tenuifolia* (Boiss. & Reut.) Andr.)

Europe. See *Pugillus Plantarum Novarum Africae Borealis Hispaniaeque Australis* 127. 1852, *Geological Survey of California, Botany* 2: 310. 1880 and *Revista Argentina de Botánica* 1: 255. 1926, *Botanical Journal of the Linnean Society* 76(4): 363. 1978.

P. foucaudii (Hackel) Coste (*Glyceria foucaudii* (Hack.) H.J. Coste; *Poa exigua* Dumort.; *Poa exigua* Foucaud & E. Mandon ex Husn., nom. illeg., non *Poa exigua* Dumort.; *Poa foucaudii* Hack.; *Poa supina* Schrad.; *Poa supina* f. *exigua* Gamisans; *Poa supina* subsp. *foucaudii* (Hack.) Pignatti)

France. Vulnerable species, see *Flora Germanica* 1: 289. 1806, *Observations sur les Graminées de la Flore Belgique* 113. 1824, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 88 t. 33. 1899 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 9: 112. 1905, *Candollea* 29(1): 48. 1974.

in English: puccinellia de foucaud

P. frigida (Phil.) I.M. Johnst. (*Catabrosa frigida* Phil.; *Poa eremophila* Phil.; *Poa hypsophila* Phil.; *Poa oresigena* Phil.; *Poa pumila* Phil., nom. illeg., non *Poa pumila* Host; *Poa taltalensis* Pilg.; *Puccinellia hypsophila* (Phil.) L. Parodi ex Espinosa; *Puccinellia hypsophila* (Phil.) Nicora; *Puccinellia oresigena* (Phil.) Hitchc.)

Bolivia, Chile, Argentina. Annual or short-lived perennial, caespitose, erect or ascending, leaves mainly basal, leaf blades linear involute glabrous acute, panicle exerted ovate or linear, spikelets 2- to 3-flowered, sandy places, stony areas, dry to semiarid areas, see *Florula Atacamensis seu Enumeratio ...* 55-56. 1860, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen* 8: 87. 1891 and *Contributions from the United States National Herbarium* 24(8): 326. 1927, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9(34): 300. 1929, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 762. 1929, *Revista Chilena de Historia Natural* 42: 325. 1939, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: 128. 1994.

P. gigantea (Grossh.) Grossh. (*Atropis anisoclada* Krecz.; *Atropis chilochloa* Krecz.; *Atropis convoluta* (Hornem.) Griseb.; *Atropis gigantea* Grossh.; *Atropis sclerodes* Krecz.; *Puccinellia anisoclada* (Krecz.) Parsa; *Puccinellia brachylepis* Klokov; *Puccinellia chilochloa* (Krecz.) Krecz.; *Puccinellia chilochloa* (Krecz.) V.I. Krecz. ex Drobow; *Puccinellia sclerodes* (Krecz.) V.I. Krecz. ex Drobow)

Europe, Asia, Iran. Spreading, coarse, rhizomatous, purplish, growing in salty wet bottom land, in wet meadow areas, see *Genera Plantarum* 656. 1791, *Hortus Regius Botanicus Hafniensis* 2: 953. 1815, *Flora Rossica* 4(13): 389. 1852 and *Monit. Jard. Bot. Tiflis* 46/47: 35, t. 2. 1919, *Flora Kavkaza* 1: 114. 1928, *Flora URSS* 2: 487-488, 764-765. 1934, *Flora Uzbekistanica* 1: 252-253. 1941, *Flora of Iran [Parsa]* 5: 734. 1951, *Zlaki SSSR* 502. 1976.

P. glabra Swallen (*Poa nutkaensis* J. Presl; *Puccinellia nutkaensis* (J. Presl) Fernald & Weath.)

U.S., Alaska. On tide flats, see *Reliquiae Haenkeanae* 1(4-5): 272. 1830 and *Rhodora* 18: 22, f. 49-53. 1916, *Journal of the Washington Academy of Sciences* 34(1): 16-23. 1944, *Sida* 12: 409-417. 1987.

P. glaucescens (Phil.) Parodi (*Atropis osteniana* Pilg.; *Catabrosa glaucescens* Phil.; *Glyceria glaucescens* (Phil.) Benth.; *Panicularia glaucescens* (Phil.) Kuntze; *Puccinellia*

glaucescens var. *osteniana* (Pilg.) Parodi; *Puccinellia johnstonii* Muñoz; *Puccinellia osteniana* (Pilg.) Herter

South America, Argentina, Uruguay, Chile. See *Anales de la Universidad de Chile* 43: 569. 1873, *Journal of the Linnean Society, Botany* 19: 116. 1881, *Revisio Generum Plantarum* 1: 783. 1891 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9: 290. 1925, *Notas del Museo de la Plata, Botánica* 2(11): 14-15. 1937, *Revista Sudamericana de Botánica* 5(1-2): 23. 1937, *Agricultura Técnica* (Santiago) 8(2): 81, f. 10-12. 1948, *Bol. Soc. Argent. Bot.* 3: 116. 1950, *British Antarctic Survey Scientific Reports* 60: 1-202, 1-6 pls. 1968, *Darwiniana* 23(1): 179-188. 1981, *Gayana, Botánica* 42: 1-157. 1985, *Hickenia* 2(33): 143-148. 1995.

P. gorodkovii Tzvelev (*Phippsia gorodkovii* (Tzvelev) Á. Löve & D. Löve)

Russia. Rare species, see *Flora Arctica URSS* 2: 199. 1964, *Botaniska Notiser* 128(4): 499. 1975 [1976].

P. groenlandica T.J. Sørensen (*Glyceria arctica* var. *capillaris* Lange; *Glyceria arctica* var. *dasyantha* Lange; *Glyceria arctica* var. *laxa* Lange; *Phippsia groenlandica* (T.J. Sørensen) Á. Löve & D. Löve)

Greenland. See *Flora Boreali-Americana* 2: 248, pl. 229. 1840, *Conspectus Florae Groenlandicae* [Meddelelser om Grønland ... Tredie Hefte.] 1: 169. 1880 and *Meddelelser om Grønland* 136: 37. 1953, *Botaniska Notiser* 128(4): 499. 1975 [1976].

P. hauptiana (Trin. ex V.I. Krecz.) Kitag. (*Atropis hauptiana* Trin. ex V.I. Krecz.; *Puccinellia distans* (Jacq.) Parl.; *Puccinellia distans* subsp. *hauptiana* (Trin. ex V.I. Krecz.) W.E. Hughes; *Puccinellia hauptiana* V. Krecz.; *Puccinellia hauptiana* (Trin. ex V.I. Krecz.) V.I. Krecz., nom. illeg., non *Puccinellia hauptiana* (Trin. ex V.I. Krecz.) Kitag.)

Russia. Wetlands, see *Flora italiana, ossia descrizione delle piante ...* 1: 367. 1848 and *Flora URSS* 2: 485, 763, t. 36, f. 21. 1934, *Report of the Institute of Scientific Research, Manchoukuo* 1: 255. 1937, *Flora Leningradskoi Oblasti* 1: 149. 1955, *Botanical Journal of the Linnean Society* 76(4): 363. 1978, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996.

P. howellii J.I. Davis

U.S., California. Perennial, endangered and rare species, see *Madroño* 37(1): 55-58, f. 1. 1990.

in English: Howell's alkali grass, Howell's alkaligrass

P. hultenii Swallen (after the Swedish botanist Eric Oskar Gunnar Hultén, 1894-1981, explorer (Alaska, Yukon), a specialist of flora of northeastern Asia, botanical collector, author of *Flora of Alaska and Neighboring Territories; a Manual of the Vascular Plants*. Stanford, Calif., Stanford University Press 1968, *Flora of the Aleutian Islands and Westernmost Alaska Peninsula, with Notes on the Flora of Commander Islands*. 2d edition rev. and enl. Weinheim, J.

Cramer; New York, Hafner Pub. Co. 1960, *Schedae operis quod inscribitur / G. Samuelsson, plantae sueciae exsiccatae /* edidit Eric Hultén. [Stockholm?]: Falköpings Tidnings, 1946, "Flora of Kamtchatka and the adjacent islands ...: i-iv." *K. Svenska Vetenskakad. Handl. ser. 3, 5-8, 1927-1930*. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 217. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 186. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 381. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; Stafleu and Cowan, *Taxonomic literature*. 2: 361-362. 1979; R. Coutts, *Yukon Places and Names*. Sidney, BC: Gray's Publishing Limited, 1980; Melody Webb, *Yukon: The Last Frontier*. Vancouver: UBC Press, 1993; Richard J. Abbott and Christian Brochmann, "History and evolution of the arctic flora: in the footsteps of Eric Hultén." *Molecular Ecology* 12(2): 299-313. Feb 2003)

Alaska. Vulnerable species, see *Journal of the Washington Academy of Sciences* 34(1): 22. 1944.

in English: Port Hobron alkali grass

P. interior T.J. Sørensen ex Hultén (*Phippsia interior* (Sørensen) Á. & D. Löve; *Phippsia interior* (Sørensen ex Hultén) Á. & D. Löve; *Poa nuttalliana* Schult.; *Puccinellia interior* Sørensen; *Puccinellia nuttalliana* (Schult.) Hitchc.)

Alaska. See *Mantissa* 2: 303. 1824 and *A Flora of California* 1: 162. 1912, *Acta Universitatis Lundensis* 46(1): 1713. 1950, *Botaniska Notiser* 128(4): 499. 1975 [1976], *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991.

in English: inland alkali grass

P. intermedia (Schur) Janch. (*Atropis intermedia* Schur; *Puccinellia festuciformis* subsp. *intermedia* (Schur) W.E. Hughes; *Puccinellia intermedia* (Schur) Janch.)

Turkey, Europe. Perennial, coastal grass, growing near shore, low coastal saline marshes, heavy clay soils, moist areas, see *Flora italiana, ossia descrizione delle piante ...* 1: 368. 1848, *Enumeratio Plantarum Transsilvaniae* 779. 1866 and *Wiener Botanische Zeitschrift* 93: 84. 1944, *Botanical Journal of the Linnean Society* 76(4): 363. 1978.

P. jennissejensis (Roshev.) Tzvelev (*Atropis jennisseiensis* Roshev.; *Phippsia vahliana* subsp. *jennisseiensis* (Roshev.) Á. Löve & D. Löve; *Puccinellia jennisseiensis* Krecz.)

Russia. Rare species, see *Izv. Bot. Sada Akad. Nauk SSSR* 30: 300. 1932, *Flora URSS* 2: 471. 1934, *Flora Arctica URSS* 2: 195. 1964, *Botaniska Notiser* 128(4): 501. 1975 [1976].

P. kamtschatica Holmb. (*Atropis kamtschatica* (Holmb.) Krecz.)

U.S., Northern America, Alaska. Vulnerable species, see *Botaniska Notiser* 208-209. 1927, *Flora URSS* 2: 479, t. 36, f. 13. 1934, *Novosti Sist. Vyss. Rast.* 8: 80. 1971, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991.

in English: Alaska alkali grass

P. kashmiriana Bor

India, Himachal Pradesh, Jammu and Kashmir. Rare species, perennial, tufted, erect, leaf blades flat or folded, panicle contracted, branches with 1-2 spikelet each, spikelets 2- to 3-flowered, glumes oblong-elliptic and acute, lemma acute, forming patches in alpine regions, see *Kew Bulletin* 1953(8): 270-271. 1953, *Grasses of Burma ...* 562. 1960.

P. kengiana Ohwi (*Glyceria stricta* Hook.f.; *Puccinellia stricta* Keng, nom. illeg., non *Puccinellia stricta* (Hook.f.) Blom; *Puccinellia stricta* (Hook.f.) Blom; *Sclerochloa kengiana* (Ohwi) Tzvelev)

Japan, China. See *Flora Novae-Zelandiae* 304. 1853 and *Acta Horti Gothoburgensis* 5: 89. 1930, *Sinensia* 4(11): 321-322, f. 1. 1934, *Journal of Japanese Botany* 12(9): 654. 1936.

P. kurilensis (Takeda) Honda (*Atropis kurilensis* Takeda; *Atropis paupercula* (Holm) Steffen; *Glyceria paupercula* Holm; *Glyceria pumila* Vasey; *Puccinellia pumila* (Vasey) Hitchc.)

Japan. Salt marshes, see *Bulletin of the Torrey Botanical Club* 15(2): 48. 1888 and *Repertorium Specierum Novarum Regni Vegetabilis* 3: 337. 1907, *Journal of the Linnean Society, Botany* 42: 497. 1914, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 59. 1930, *American Journal of Botany* 21(3): 129. 1934, *Bot. Zhurn. (Moscow & Leningrad)* 71: 1426-1427. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 80(2): 87-90. 1995.

in Japan: chishimadojotsunagi

P. langeana (Berlin) T.J. Sørensen (*Atropis paupercula* (Holm) Steffen; *Atropis paupercula* (Holm) V.I. Krecz.; *Glyceria langeana* Berlin; *Glyceria paupercula* Holm; *Phippsia langeana* (Berlin) Á. Löve & D. Löve; *Phippsia langeana* (Th. Sor.) Á. Löve & D. Löve; *Puccinellia langeana* (Berlin) T.J. Sørensen, nom. illeg., non *Puccinellia langeana* (Berlin) T.J. Sørensen; *Puccinellia langeana* (Berlin) Tzvelev, nom. illeg., non *Puccinellia langeana* (Berlin) T.J. Sørensen; *Puccinellia langeana* subsp. *langeana*; *Puccinellia langeana* subsp. *typica* T.J. Sørensen; *Puccinellia paupercula* (Holm) Fernald & Weath.; *Puccinellia tenella* subsp. *langeana* (Berlin) Tzvelev)

Arctic, Alaska, Yukon. Erect, caespitose, leaves mainly basal, ligule membranous, spikelets pedicellate, palea present, wet sand and clay, just above the high tide zone, coastal sands, see *Repertorium Specierum Novarum Regni Vegetabilis* 3: 337. 1907, *Contributions from the United States National Herbarium* 13(3): 78. 1910, *Rhodora* 18:

18, f. 63-67. 1916, *Meddelelser om Grønland* 58: 45. 1926, *Flora URSS* 2: 480, t. 37, f. 15. 1934, *Kungl. Fysiografiska Sällskapet i Lund Förhandlingar* 61: 1710. 1950, *Meddelelser om Grønland* 136: 24. 1953, *Arkticheskaia Flora SSSR* 2: 187, 190. 1964, *Botaniska Notiser* 128(4): 499. 1975 [1976].

P. langeana (Berlin) T.J. Sørensen ex Hultén subsp. *langeana* (*Glyceria langeana* Berlin; *Glyceria paupercula* Holm; *Phippsia langeana* (Berlin) Á. Löve and D. Löve; *Puccinellia paupercula* Fernald and Weath.; *Puccinellia tenella* subsp. *langeana* (Berlin) Tzvelev)

North America, Canada. Sand, seashore, coastal, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 7: 79. 1884 and *Repert. Spec. Nov. Regni Veg.* 3: 337. 1907, *Rhodora* 18: 18. 1916, *Fl. of Alaska and Yukon* 10: 1710. 1950, *Arkt. Fl. SSSR* 2: 187, 190. 1964, *Bot. Not.* 128: 499. [1975] 1976.

P. laurentiana Fernald & Weatherby (*Phippsia laurentiana* (Fernald & Weath.) Á. Löve & D. Löve; *Poa nutkaensis* J. Presl; *Puccinellia nutkaensis* (J. Presl) Fernald & Weath.)

Northern America. Found in gravelly seashores, gravelly beach, see *Reliquiae Haenkeanae* 1(4-5): 272. 1830 and *Rhodora* 18: 14, 22, f. 33-38, 49-53. 1916, *Check-list of the Vascular Plants of Greenland* 1-40. 1968, *Botaniska Notiser* 128(4): 499. 1975 [1976], *Sida* 12: 409-417. 1987.

P. lemmonii (Vasey) Scribner (*Atropis lemmonii* (Vasey) Vasey; *Atropis lettermanii* (Vasey) Beal; *Glyceria lemmoni* (Vasey) Vasey; *Glyceria lemmoni* Vasey; *Poa lemmonii* Vasey; *Poa lettermanii* Vasey; *Puccinellia rubida* Elmer)

Northern America, U.S. Perennial, see *Botanical Gazette* 3(2): 13. 1878, *A Descriptive Catalogue of the Grasses of the United States* 88. 1885, *Bulletin of the Torrey Botanical Club* 13(7): 119. 1886, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(2): 90. 1893, *Contributions from the United States National Herbarium* 1(8): 273. 1893, *Grasses of North America for Farmers and Students* 2: 579. 1896, *American Grasses - II* 276, f. 572. 1899 and *Botanical Gazette (London)* 36: 56. 1903, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *A California Flora* 1-1681. 1959.

in English: Lemmon's alkali grass

P. limosa (Schur) Holmb. (*Atropis distans* f. *limosa* Schur; *Atropis distans* var. *limosa* Schur; *Phippsia limosa* (Schur) Á. Löve & D. Löve; *Puccinellia distans* subsp. *limosa* (Schur) Soo & Jav.)

Europe. See *Flora Rossica* 4(13): 388. 1852, *Enumeratio Plantarum Transsilvaniae* 779. 1866 and *Botaniska Notiser* 110. 1920, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 117. 1971[1972], *Folia Geobotanica et Phytotaxonomica* 10(3): 274. 1975.

P. lucida Fern. & Weatherby (*Puccinellia nutkaensis* (J. Presl) Fernald & Weath.)

Northern America, U.S., Canada. See *Reliquiae Haenkeanae* 1(4-5): 272. 1830 and *Rhodora* 18: 16, 22, f. 49-53, 54-58. 1916, *Sida* 12: 409-417. 1987.

in English: shining alkali grass

P. macquariensis (Cheeseman) Allan & Jansen (*Triodia macquariensis* Cheeseman) (Macquarie Island)

New Zealand. Perennial, coastal, tufted, erect or geniculate, culms hidden by leaf sheaths, ligule with irregular margin, leaf sheath hyaline and whitish green, leaf blade smooth, soft leaves, panicle lanceolate with short and erect angled branches, glumes unequal, palea keels ciliate, cliffs, rocky places, see *Prodromus Florae Novae Hollandiae* 182. 1810 and *Australasian Antarctic Expedition 1911-1914, Scientific Reports, Series C Zoology and Botany* 7(3): 34. Sydney 1919, *Transactions and Proceedings of the Royal Society of New Zealand* 69: 268. 1939, *New Zealand Journal of Botany* 13: 721-742. 1975, *Fl. Australia* 50 (Oceanic Islands) 2: 572. 1993, *New Zealand Journal of Botany* 34: 17-32. 1996.

P. magellanica (Hook.f.) Parodi (*Atropis laxa* Pilg.; *Atropis magellanica* (Hook.f.) E. Desv.; *Catabrosa magellanica* Hook.f.; *Glyceria antarctica* Speg.; *Glyceria fuegiana* Speg.; *Glyceria magellanica* (Hook.f.) Benth.; *Panicularia antarctica* (Speg.) Macloskie; *Panicularia fuegiana* (Speg.) Macloskie; *Panicularia magellanica* (Hook.f.) Kuntze; *Panicularia magellanica* (Hook.f.) Macloskie, nom. illeg., non *Panicularia magellanica* (Hook.f.) Kuntze; *Puccinellia antarctica* (Speg.) Parodi; *Puccinellia laxa* (Pilg.) Parodi)

South America, Argentina. Near streams, along rivers, see *Flora Antarctica* 2: 387. 1847, *Fl. Chile* 6: 394. 1853, *Journal of the Linnean Society, Botany* 19: 116. 1881, *Revisio Generum Plantarum* 1: 783. 1891, *Anales del Museo Nacional de Historia Natural de Buenos Aires* 5: 91-92. 1896 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2]*, *Botany* 8(1,5,1): 219-220. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 12: 305. 1913, *Notas del Museo de la Plata, Botánica* 2(11): 13, 15. 1937, *Flora Patagónica* 8(3): 128-134. 1978, *Darwiniana* 23(1): 179-188. 1981, *Flora of Tierra del Fuego* 1-396. 1983, *Gayana, Botánica* 42: 1-157. 1985.

P. maritima (Hudson) Parlatore (*Atropis distans* var. *maritima* (Huds.) Coss. & Durieu; *Atropis maritima* Griseb.; *Atropis maritima* (Huds.) Griseb.; *Catabrosa maritima* (Huds.) Link; *Diachroa maritima* Nutt. ex Steud.; *Festuca distans* var. *maritima* (Huds.) Mutel; *Festuca maritima* (Huds.) K. Koch; *Glyceria maritima* (Hudson) Wahlenb.; *Panicularia maritima* (Huds.) Scribn.; *Phippsia maritima* (Huds.) Á. Löve; *Poa maritima* Huds.; *Poa maritima* Bigelow, nom. illeg., non *Poa maritima* Huds.; *Poa maritima* Muhl., nom. illeg., non *Poa maritima* Huds.; *Puccinellia americana* T.J. Sørensen; *Sclerochloa arenaria* var. *maritima* (Huds.) A. Gray; *Sclerochloa maritima* (Huds.) Lindl.)

France, western Europe. Perennial, herbaceous, stoloniferous, short tillers rooted at the bases, growing in salt marshes, brackish shores, ballast, waste ground, see *Flora Anglica* 35. 1762, *Descriptio uberior Graminum* 148. 1817, *Révision des Graminées* 1: 129. 1829, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *Flore Française* 4: 116. 1837, *Nomenclator Botanicus. Editio secunda* 1: 497. 1840, *Flora Bostoniensis.... third edition ...* 36. 1840, *Florae Africae Australioris Illustrationes Monographicae* 380. 1841, *Manual of British Botany* 370. 1843, *Linnaea* 17(4): 405. 1844, *Flora italiana, ossia descrizione delle piante ...* 1: 370. 1848, *Linnaea* 21(4): 410. 1848, *A Manual of the Botany of the Northern United States* 594. 1848, *Flora Rossica* 4(13): 388-389. 1852, *Exploration Scientifique de l'Algérie* 2: 141. 1855, *A Manual of the Botany of the Northern United States (edition 6)* 668. 1890, *Memoirs of the Torrey Botanical Club* 5(4): 54. 1894 and *Meddelelser om Grønland* 136(3): 67. 1953, *Arkticheskaia Flora SSSR* 2: 1-274. 1964, *Taxon* 19(2): 299, 954. 1970, Munns R. H. Greenway G. O. Kirst, "Halotolerant eukaryotes." in O.L. Lange, P.S. Nobel, C.B. Osmond and H. Ziegler [editors.], *Physiological Plant Ecology* II, 59-135. *Encyclopedia of Plant Physiology*, New Series 12C. Springer-Verlag, Berlin, Germany 1983, Anthony D. Fox and Johnny Kahlert, "Repeated grazing of a salt marsh grass by moulting greylag geese *Anser anser* does sequential harvesting optimise biomass or protein gain?" *Journal of Avian Biology* 34(1): 89-96. Feb 2003.

in English: seaside alkali grass, common salt marsh grass, seaside spargrass

P. mendozina (Hack.) Parodi (*Atropis argentinensis* f. *mendoza* Hack., nom. illeg., non *Atropis argentinensis* f. *mendoza* Hack.; *Atropis convoluta* var. *mendoza* Hack.; *Puccinellia blomii* Jansen) (dedicated to the Swedish botanist Carl Hilding Blom, 1885-1972 [b. 1888 according to Brummitt/Powell and Harvard University Herbaria, Index of Botanists], printer; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 202. Boston 1965; *Botaniska Notiser* 125(4): 541. 1972)

South America. See *Flora Rossica* 4(13): 389. 1852 and *Anales del Museo Nacional de Buenos Aires* 13: 519. 1906, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 8(8): 45. 1908, *Anales del Museo Nacional de Buenos Aires* 21: 162. 1911, *Blumea* 5: 530. 1945, *Revista Argentina de Agronomía* 28: 105. 1962 [1961].

P. nipponica Ohwi

Japan, Hokkaido. See *Botanical Magazine* (Tokyo) 45: 379. 1931.

in Japan: tachidojotsunagi

P. nutkaensis (J. Presl) Fernald & Weath. (*Glyceria nutkaensis* (J. Presl) Fr.; *Phippsia coarctata* (Fernald & Weath.) Á. Löve; *Phippsia nutkaensis* (J. Presl) Á. & D. Löve; *Phippsia nutkaensis* subsp. *borealis* (Holmb.) Á.

Löve & D. Löve; *Poa nutkaensis* J. Presl; *Puccinellia coarctata* Fernald & Weath.; *Puccinellia coarctata* subsp. *borealis* Holmb.; *Puccinellia glabra* Swallen; *Puccinellia grandis* Swallen; *Puccinellia lucida* Fernald & Weath.; *Puccinellia macra* Fernald & Weath.; *Puccinellia retroflexa* subsp. *borealis* Holmb.; *Puccinellia triflora* Swallen)

Northern America, U.S., California. Perennial, herbaceous, in brackish shores, on flats frequently overflowed by tides, sea beaches, wet places, springy areas, see *Reliquiae Haenkeanae* 1(4-5): 272. 1830, Elias Magnus Fries, *Novitarum florum suecicae mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845 and *Rhodora* 18: 13, 16, 22, f. 28-32, 39-43, 49-53, 54-58. 1916, *Botaniska Notiser* 1916: 251-254. 1916, *Svensk Fanerogamflora* 97. 1918, *Botaniska Notiser* 1926: 182. 1926, *Journal of the Washington Academy of Sciences* 34(1): 18, 20. 1944, *Taxon* 19(2): 299. 1970, *Botaniska Notiser* 128(4): 500. 1975 [1976], *The Flora of Canada* 2: 93-545. 1978 [1979], *Sida* 12: 409-417. 1987.

in English: Alaska alkali grass, Nootka alkali grass

P. nuttalliana (Schultes) A. Hitchcock (*Atropis airoides* (Nutt.) Holm; *Atropis nuttalliana* (Schult.) Pilg.; *Festuca nuttalliana* (Schult.) Kunth; *Glyceria airoides* (Nutt.) Fries, nom. illeg., non *Glyceria airoides* (Koeler) Reichb.; *Glyceria montana* Buckley; *Panicularia distans* var. *airoides* (Nutt.) Scribn.; *Phippsia airoides* (S. Watson & J.M. Coult.) Á. Löve & D. Löve; *Phippsia borealis* subsp. *neglecta* (Tzvelev) Á. Löve & D. Löve; *Phippsia deschampsoides* (T.J. Sørensen) Á. Löve & D. Löve; *Phippsia interior* (T.J. Sørensen ex Hultén) Á. Löve & D. Löve; *Poa airoides* Nutt., nom. illeg., non *Poa airoides* Koeler; *Poa nuttalliana* Schult.; *Puccinellia airoides* (Nuttall) S. Watson & J.M. Coulter; *Puccinellia airoides* S. Watson & J.M. Coult.; *Puccinellia borealis* subsp. *neglecta* Tzvelev; *Puccinellia cusickii* Weatherby; *Puccinellia deschampsoides* T.J. Sørensen; *Puccinellia interior* T.J. Sørensen ex Hultén; *Puccinellia neglecta* (Tzvelev) Bubnova)

Northern America, Canada, U.S., Greenland. Perennial bunchgrass, halophyte, tufted, erect, sheaths open to partially closed, large and open flower head widely branched, spikelets purplish or green with four to seven flowers, glumes more or less keeled and sparsely hairy, lemmas pointed, useful for erosion control, very palatable in its early growth stages, palatability declines with maturity, provide forage for small mammals and large herbivores, occurs in saline meadows along the coast, in relatively moist alkaline meadows, shores, stream banks, scattered tufts at edges of ponds or lakes and on saline wet flats, seepage areas, ditches, moist alkaline soils, depressed areas, see *The Genera of North American Plants* 1: 68. 1818, *Mantissa* 2: 303. 1824, *Révision des Graminées* 1: 129. 1829, *Novitiae Florae Suecicae* 3: Add. 176. 1843, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 96. 1862, *A Manual of the Botany of the Northern United States* (edition

6) 668. 1890, *Revisio Generum Plantarum* 2: 782. 1891, *Memoirs of the Torrey Botanical Club* 5: 54. 1894 and *Botanical Gazette* 46: 427. 1908, *A Flora of California* 1: 162. 1912, *Rhodora* 18: 182. 1916, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9: 291. 1925, *Acta Universitatis Lundensis* 46(1): 1713. 1950, *Meddelelser om Grønland* 136: 31. 1953, A.J. Macke and I.A. Ungar, "The effects of salinity on germination and early growth of *Puccinellia nuttalliana*." *Canadian Journal of Botany* 49: 515-520. 1971, *Botaniska Notiser* 128(4): 499. 1975 [1976], *Taxon* 30(2): 510. 1981, R.D. Guy and D.M. Reid, *Plant Cell and Environment*. 9: 65-72. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991.

in English: Nuttall's alkali grass, Cusick's alkaligrass, Nuttall's salt-meadowgrass

P. parishii A.S. Hitchc. (dedicated to the American botanist and botanical collector Samuel Bonsall Parish (1838-1928) author of *A Catalogue of Plants Collected in the Salton Sink*. Washington, D.C. 1913, see George Neville Jones (1903-1970), *An Annotated Bibliography of Mexican Ferns*. Univ. Illinois Press 1966; J.H. Barnhart, *Biographical notes upon botanists*. 3: 48. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 566. University of Pennsylvania Press, Philadelphia 1964; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 301. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 321. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum*. 1: 172. London 1904; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; George Edmund Lindsay (b. 1916), *Notes Concerning the Botanical Explorers and Exploration of Lower California, Mexico*. San Francisco 1955)

Arizona, California, New Mexico. Annual, dwarf, tufted or solitary, leaves flat or involute, panicle narrow and few-flowered, alkaline springs, seasonally wet areas that occur at the heads of drainages, damp soils, once considered an endangered and rare species, requires wet alkaline soils, frequently grows with *Distichlis stricta* (salt grass), *Sporobolus airoides* (alkali sacaton), *Carex* spp. (sedges), *Scirpus* spp. (bulrushes), *Juncus* spp. (rushes), *Eleocharis* spp. (spike rushes) and *Anemopsis californica* (yerba mansa), see A.S. Hitchcock, "New species of grasses from the United States." *Proceedings of the Biological Society of Washington* 41:157-164. 1928, U.S. Fish and Wildlife Service, "Endangered and threatened wildlife and plants; withdrawal of proposed rule to list the plant *Puccinellia parishii*

(Parish's alkali grass) as endangered." *Federal Register* 63: 51329-51332. 1998.

in English: Parish's alkali grass, bog alkaligrass

P. parviflora (Hack.) Parodi (*Atropis parviflora* Hack.; *Atropis preslii* subsp. *pusilla* Hack.; *Puccinellia pusilla* (Hack.) Parodi)

South America, Argentina. Páramos, see *Svenska Expeditionen till Magellansländer* 3(5): 226-227. 1900, *Notas del Museo de la Plata, Botánica* 2(11): 15. 1937, *Flora Patagónica* 8(3): 128-134. 1978.

P. parvula Hitchc.

Argentina, Chile, Bolivia. Perennial, caespitose, decumbent or ascending, leaf blades filiform convolute glabrous acute, interrupted panicle contracted spike-like or ovate, spikelets 2- to 3-flowered, glumes obtuse, 3 stamens, riverbeds, along streams, puna, dry or semiarid places, see *Contributions from the United States National Herbarium* 24(8): 325. 1927.

P. pauciflora (Presl) Munz (*Glyceria pauciflora* J. Presl; *Torreyochloa pallida* var. *pauciflora* (J. Presl) J.I. Davis; *Torreyochloa pauciflora* (Presl) Church)

North America. Perennial, tufted, inflorescence an open panicle, lemmas glabrous or scabrous and with a blunt tip, alkaline and fresh water seepage areas often at high elevations, see *Reliquiae Haenkeanae* 1(4-5): 257. 1830, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 96. 1862 and *Torrey* 1(4): 43. 1901, *American Journal of Botany* 36: 164. 1949, *Aliso [El Aliso]* 4(1): 87. Claremont, California, U.S. 1958, *Vascular Plants of the Pacific Northwest* 1: 689. 1969, *Flora of Alberta (edition 2)* i-xii, 1-687. 1983, *Phytologia* 70(5): 364. 1991.

in English: weak alkali grass

P. peisonis (Beck) Jáv.

Europe. Lacking salt glands, see R. Stelzer and A. Läubli, "Salt- and flooding tolerance of *Puccinellia peisonis*: I. The effect of NaCl- and KCl-Salinity on growth at varied oxygen supply to the root." *Z. Pflanzenphysiol.* 83(1): 35-42. 1977, R. Stelzer and A. Läubli, "Salt- and flooding tolerance of *Puccinellia peisonis*. IV. Root respiration and the role of aerenchyma in providing atmospheric oxygen to the roots." *Zeitschrift für Pflanzenphysiologie* Bd. 97(2): 171-178. 1980.

P. phryganodes (Trin.) Scribn. & Merr. (also spelled ***phryganoides***) (*Atropis phryganodes* (Trin.) V.I. Krecz.; *Atropis phryganodes* (Trin.) Steffen; *Glyceria phryganoides* (Trin.) Fr.; *Phippsia neoarctica* Á. Löve & D. Löve; *Phippsia phryganodes* (Trin.) Á. & D. Löve; *Phippsia vilfoidea* (Andersson ex Malme) Á. Löve & D. Löve subsp. *beringensis* Á. Löve & D. Löve; *Poa geniculata* Turcz. ex Kom.; *Poa phryganodes* Trin.; *Puccinellia ambigua* T.J. Sørensen; *Puccinellia distans* f. *ambigua* (T.J. Sørensen) B. Boivin;

Puccinellia phryganodes subsp. *phryganodes*; *Puccinellia vilfoidea* subsp. *beringensis* (Á. Löve & D. Löve) Czerep.; *Puccinellia* x *phryganodes* Scribn. & Merr. pro sp.) (Greek *phryganon* "dry stick, undershrub")

Circumpolar distribution, U.S., Alaska, Canada. Perennial, usually brownish red or green, caespitose or not caespitose, glabrous, decumbent or prostrate, flowering culm nodes rooting at the lower nodes, tussocky, rhizomatous or stoloniferous, auricles absent, culm and stolon ligules, growing in seashores meadows, zones usually covered by high tides, wet saline meadows, arctic salt marshes, saline or brackish marshes, seashore, moist areas, sites moderately well-drained, silty and sandy shores, damp brackish sand, endangered species in Finland, member of *Primula sibirica*-group, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles.* 1(4): 389. 1830, Elias Magnus Fries, *Novitiarum florum suecicae mantissa* [prima, altera, tertia] et Continuationes [1-5] [Academic Dissertations]. Lund 1832-1845, *Flora italiana, ossia descrizione delle piante ...* 1: 367. 1848 and *Contributions from the United States National Herbarium* 13: 78. 1910, *Beihefte zum Botanischen Centralblatt* 44: 330. 1928, *Flora URSS* 2: 470-471, 757, 759. 1934, *Meddelelser om Grønland* 136(3): 64. 1953, *Botaniska Notiser* 114: 35. 1961, *Canad. J. Bot.* 39: 136. 1961, *Le Naturaliste Canadien* 94(4): 527. 1967, *Novosti Sist. Vyss. Rast.* 8: 77. 1971, *Botaniska Notiser* 128(4): 499-501. 1975 [1976], *The Flora of Canada* 2: 93-545. 1978 [1979], R.J. Jeffries and L.D. Gottlieb, "Genetic variation within and between populations of the asexual plant *Puccinellia* x *phryganodes*." *Canadian Journal of Botany* 61: 774-779. 1983, *Willdenowia* 19: 199-213. 1989, Sergei Kirillovich Czerepanov, *Vascular Plants of Russia and Adjacent States* (the former USSR). Cambridge, Cambridge University Press 1995.

in English: creeping alkali grass

in Finland: rönsorsimo

in Sweden: arktiskt saltgräs

P. phryganodes (Trin.) Scribn. & Merr. subsp. ***geniculata*** (Krecz.) Tzvelev (*Atropis geniculata* Krecz.; *Puccinellia geniculata* Krecz.; *Puccinellia geniculata* Krecz. ex T.J. Sørensen; *Puccinellia geniculata* (Krecz.) Hultén)

Northern America. See *Flora URSS* 2: 471, 759. 1934, *Acta Universitatis Lundensis* 46(1): 1715. 1950, *Meddelelser om Grønland* 136(1): 58, 89, 103. 1953, *Novosti Sist. Vyss. Rast.* 8: 77. 1971.

P. phryganodes (Trin.) Scribn. & Merr. subsp. ***phryganodes*** (*Phippsia phryganodes* (Trin.) Á. & D. Löve; *Poa phryganodes* Trin.)

Northern America. See *Contributions from the United States National Herbarium* 13: 78. 1910.

P. poacea T.J. Sørensen (*Phippsia poacea* (T.J. Sørensen) Á. Löve and D. Löve; *Puccinellia arctica* sensu Scoggan, pro parte; *Puccinellia arctica* (Hook.) Fernald & Weath.)

Northern America, Canadian Arctic Archipelago, Franklin. Caespitose, stout, erect, base geniculate, sheath hairy, ligule hairy or glabrous, inflorescence paniculate, spikelets pedicellate, second glume elliptic, palea with scabrous veins, endangered species, recorded along streams, river terraces, hummocks, lakeshores, slopes, seashore, see *Flora Boreali-Americana* 2: 248, t. 229. 1840 and *Rhodora* 18: 4. 1916, *Bulletin of the National Museum of Canada* 135: 81. 1955, *Botaniska Notiser* 128(4): 500. 1975 [1976].

P. porsildii T.J. Sørensen (*Phippsia porsildii* (T.J. Sørensen) Á. Löve & D. Löve) (for the Danish botanist Morten Pedersen Porsild, 1872-1956, botanical collector in Greenland and U.S., father of Alf Erling Porsild (1901-1977), from 1906-1946 Director of the Danish Arctic biological station at Disko. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 100. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 315. 1972; J. Ewan, editor, *A Short History of Botany in the United States*. 24. 1969; *Nordic J. Bot.* 2: 529. 1983; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 333. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; I. Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; Carl Frederik Albert Christensen (1872-1942), *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926 and *Den danske botaniske litteratur 1880-1911*. Copenhagen 1913)

Greenland. See *Meddelelser om Grønland* 136: 35. 1953, *Botaniska Notiser* 128(4): 500. 1975 [1976].

P. preslii (Hack.) Ponert (*Aira tenuifolia* (J. Presl) Steud.; *Atropis preslii* Hack.; *Atropis preslii* subsp. *pusilla* Hack.; *Atropis tenuifolia* (J. Presl) Hauman, nom. illeg., non *Atropis tenuifolia* Thurb.; *Atropis tenuifolia* (J. Presl) Speg., nom. illeg., non *Atropis tenuifolia* Thurb.; *Catabrosa tenuifolia* J. Presl; *Glyceria tenuifolia* (J. Presl) Steud., nom. illeg., non *Glyceria tenuifolia* Boiss. & Reut.; *Panicularia tenuifolia* (J. Presl) Kuntze; *Puccinellia parodii* Nicora, nom. illeg., non *Puccinellia preslii* (Hack.) Ponert; *Puccinellia pusilla* (Hack.) Parodi; *Puccinellia tenuifolia* (J. Presl) Parodi, nom. illeg., non *Puccinellia tenuifolia* (Boiss. & Reut.) Andr.)

South America. See *Reliquiae Haenkeanae* 1(4-5): 256. 1830, *Synopsis Plantarum Glumacearum* 1: 223, 826. 1854, *Geological Survey of California, Botany* 2: 310. 1880, *Revisio Generum Plantarum* 1: 782. 1891 and *Svenska Expeditionen till Magellansländer* 3(5): 227. 1900, *Anales de*

Sociedad Científica Argentina 86: 229. 1918, *Revista Argentina de Botánica* 1: 225. 1926, *Notas del Museo de la Plata, Botánica* 2(11): 15-16. 1937, *Feddes Repertorium* 845(9-10): 740. 1974, *Darwiniana* 37(3-4): 311, f. 1 N-Q. 1999.

P. pumila (Vasey) A.S. Hitchc. (*Atropis alaskana* (Scribn. & Merr.) Krecz.; *Atropis kurilensis* Takeda; *Atropis paupercula* (Holm) Krecz.; *Atropis paupercula* (Holm) Steffen; *Glyceria paupercula* Holm; *Glyceria pumila* Vasey; *Phippsia langeana* (Berlin) Á. Löve & D. Löve subsp. *alaskana* (Scribn. & Merr.) Á. Löve & D. Löve; *Puccinellia alaskana* Scribn. and Merr.; *Puccinellia distans* var. *minor* (S. Watson) B. Boivin; *Puccinellia kurilensis* auct. non (Takeda) Honda p.p.; *Puccinellia kurilensis* (Takeda) Honda; *Puccinellia langeana* subsp. *alaskana* (Scribn. & Merr.) T.J. Sørensen; *Puccinellia longiglumis* Raym.; *Puccinellia longiglumis* (Fernald & Weath.) Raymond ex Bowden; *Puccinellia maritima* var. *minor* S. Watson; *Puccinellia paupercula* (Holm) Fernald & Weath.; *Puccinellia paupercula* var. *alaskana* (Scribn. & Merr.) Fernald & Weath.; *Puccinellia paupercula* var. *longiglumis* Fernald and Weath.; *Puccinellia paupercula* var. *paupercula*; *Puccinellia tenella* (Lange) Holmb. ex Porsild subsp. *alaskana* (Scribn. & Merr.) Tzvelev)

Arctic Islands, Northern America, U.S. Perennial, coastal, herbaceous, caespitose, halophytic, decumbent, glabrous, leaf sheaths glabrous or hairy, ligule glabrous, auricles absent, inflorescence paniculate and diffuse, spikelets pedicellate, awnless, lemma glabrous or scabrous, rare species, grows in poorly drained sand, imperfectly drained moist areas, zones reached by the highest tides, seashore and on wet mud at the seashore, salt marshes, see *Flora italiana, ossia descrizione delle piante* ... 1: 366-367, 370. 1848, *Bulletin of the Torrey Botanical Club* 15(2): 48. 1888, *A Manual of the Botany of the Northern United States (edition 6)* 668. 1890 and *Repertorium Specierum Novarum Regni Vegetabilis* 3: 337. 1907, *Contributions from the United States National Herbarium* 13(3): 78. 1910, *Journal of the Linnean Society, Botany* 42: 497. 1914, *Rhodora* 18: 18, 20, f. 63-67, 68-72, 73-77. 1916, *Meddelelser om Grønland* 58: 45. 1926, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 59. 1930, *American Journal of Botany* 21(3): 129. 1934, *Flora URSS* 2: 480, t. 37, f. 15. 1934, *Canadian Journal of Botany* 36: 134. 1961, *Le Naturaliste Canadien* 94: 527. 1967, *Botaniska Notiser* 128(4): 499. 1975 [1976], *Zlaki SSSR* 510. 1976, *Bot. Zhurn.* 71: 1426-1427. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 80(2): 87-90. 1995.

in English: dwarf alkali grass

P. pusilla (Hack.) Parodi (*Atropis battandieri* Speg.; *Atropis parviflora* Hack.; *Atropis preslii* Hack.; *Atropis preslii* subsp. *breviculmis* Hack.; *Atropis preslii* subsp. *pusilla* Hack.; *Atropis tenuifolia* Thurb.; *Glyceria tenuifolia* Boiss. & Reut.; *Puccinellia battandieri* (Speg.) Ponert, nom. illeg.,

non *Puccinellia tenuifolia* (Boiss. & Reut.) Andr.; *Puccinellia parviflora* (Hack.) Parodi; *Puccinellia preslii* (Hack.) Ponert)

South America. Páramos, see *Pugillus Plantarum Novarum Africae Borealis Hispaniaeque Australis* 127. 1852, *Geological Survey of California, Botany* 2: 310. 1880 and *Svenska Expeditionen till Magellansländer* 3(5): 226-227. 1900, *Wissenschaftliche Ergebnisse der Schwedischen Südpolar-Expedition 1901-1903* 4(4): 7. 1906, *Revista Argentina de Botánica* 1: 255. 1926, *Notas del Museo de la Plata, Botánica* 2(11): 15. 1937, *Feddes Repertorium* 84(9-10): 739-740. 1974.

P. raroflorens Edgar

New Zealand. Perennial, small, low, loose, mat-forming, culms hidden by leaf sheaths, leaf sheath glabrous, ligule truncate or blunt, leaves very short and curved, panicle lacking and overtopped by leaf blades, glumes unequal submembranous, lemma glabrous, palea keels scabrid, salty soils, salt pans, see *New Zealand Journal of Botany* 34: 22, f. 2. 1996.

P. rupestris (With.) Fern. & Weatherby (*Atropis procumbens* (Curtis) Thurb.; *Festuca procumbens* (Curtis) Kunth, nom. illeg., non *Festuca procumbens* Muhl.; *Glyceria procumbens* (Curtis) Dumort.; *Glyceria rupestris* (With.) E.S. Marshall; *Panicularia procumbens* (Curtis) Kuntze; *Poa procumbens* Curtis; *Poa rupestris* With.; *Poa secunda* Zea ex Roem. ex Schult.; *Sclerochloa procumbens* (Curtis) P. Beauv.; *Scleropoa procumbens* (Curtis) Parl.)

Europe. Perennial, annual or biennial, herbaceous, tufted, procumbent to ascending, leaf sheath glabrous membranous ribbed, ligule truncate, leaf blade flat or folded with scabrid margins, panicle ovate or oblong, glumes unequal and strongly nerved, lemma hairy, palea keels ciliate and bifid apex, found in ballast, rocky and stony areas, damp sites, muddy places, stream and lagoon margins, see *An Arrangement of British Plants, Third Edition* 1796, *Flora Londinensis* London [1775-] 1777-1798, *Essai d'une Nouvelle Agrostographie* 97, 98, 177. 1812, *Systema Vegetabilium* 2: 697. 1817, *Observations sur les Graminées de la Flore Belgique* 145. 1823, *Révision des Graminées* 1: 129. 1829, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 431. 1846, *Flora italiana, ossia descrizione delle piante* ... 1: 474. 1848, *Geological Survey of California, Botany* 2: 309. 1880, *Revisio Generum Plantarum* 2: 782. 1891 and *Rhodora* 18: 10, f. 17-22. 1916, *Collectanea Botanica a Barcinonensi Botanico Instituto Edita* 16: 341-349. 1986, *New Zealand Journal of Botany* 34: 17-32. 1996.

in English: British alkali grass, goosegrass

P. sevangensis Grossh. (*Atropis sevangensis* (Grossh.) Krecz.; *Puccinellia distans* subsp. *sevangensis* (Grossh.) Tzvelev) (Sevan Isl.)

Russia, Eurasia, Asia, Iran. See *Flora Kavkaza* 1: 114. 1928, *Flora URSS* 2: 486, 763, t. 37, f. 23. 1934, *Zlaki SSSR* 508. 1976.

P. sibirica Holmb. (*Atropis sibirica* (Holmb.) Krecz.; *Phippsia sibirica* (Holmb.) Á. Löve & D. Löve)

Siberia. See *Botaniska Notiser* 1927: 206-207. 1927, *Flora URSS* 2: 479, t. 36, f. 12. 1934, *Botaniska Notiser* 128(4): 499-500. 1975 [1976].

P. simplex Scribn.

Northern America, U.S. Annual, herbaceous, woodland, see *Circular, Division of Agrostology, United States Department of Agriculture* 16: 1, f. 1. 1899.

in English: California alkali grass

P. skottsbergii (Pilg.) Parodi (*Atropis skottsbergii* Pilg.)

South America, Argentina. See *Repertorium Specierum Novarum Regni Vegetabilis* 12: 305. 1913, *Notas del Museo de la Plata, Botánica* 2(11): 16. 1937.

P. stricta (Hook.f.) C.H. Blom (*Atropis stricta* (Hook.f.) Hack.; *Atropis stricta* var. *suborbicularis* Hack.; *Festuca syrtica* (F. Muell.) F. Muell.; *Glyceria stricta* Hook.f.; *Panicularia syrtica* (F. Muell.) Kuntze; *Poa syrtica* Muell.; *Puccinellia stricta* Keng, nom. illeg., non *Puccinellia stricta* (Hook.f.) Blom; *Puccinellia stricta* f. *luxurians* Allan & Jansen; *Puccinellia stricta* f. *pumila* Allan & Jansen; *Puccinellia stricta* var. *suborbicularis* (Hack.) Allan & Jansen)

South Australia, Victoria, Tasmania, New South Wales, New Zealand. Annual or perennial, halophyte, coastal, very variable in appearance and height, tufted, tussock-forming, glabrous, slender, erect, nodes hidden by leaf sheaths, internodes solid, stiff culms hidden by uppermost leaf sheaths at flowering, auricles absent, ligule membranous to chartaceous, leaf sheath glabrous, leaves involute and filiform with scabrid margins, green panicle very narrow, inflorescence of cleistogamous spikelets, spikelets narrow and linear on short stiff or thick pedicels, upper florets often reduced, glumes unequal, lemmas obtuse and glabrous or with very minute hairs, palea with scabrous and wingless keels, anthers yellow, ventrally compressed fruit, pioneer, fodder, high waterlogging tolerance, high salt wind tolerance, low drought tolerance, high wind tolerance, useful for erosion control, common in salty and often sandy areas near water, coastal or inland salty or brackish marshes, sandy or stony ground, marshes, salt marshes, salt meadows, sandy shores, saline soils, wetlands, see *Flora Novae-Zelandiae* 304. 1853, *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 45. 1855, *Revisio Generum Plantarum* 1: 782. 1891 and *Manual of the New Zealand Flora* 914-915. 1906, *Acta Horti Gothoburgensis* 5: 89. 1930, *Sinensia* 4(11): 321-322, f. 1. Nanking 1934, *Trans. Roy. Soc. New Zealand* 69: 265-266. 1939, *New Zealand Journal of Botany* 34: 17-32. 1996.

in English: Australian saltmarsh grass, marsh grass, salt-marsh grass, salt grass

P. stricta (Hook.f.) C.H. Blom var. *perlaxa* Stapf ex N.G. Walsh

Tasmania, New South Wales, Victoria, South Australia. Inflorescence open and sparse, lemma acute, common in salt marsh, on heavy soils, see in *Muelleria* 7(3): 382-384. 1991.

P. stricta (Hook.f.) C.H. Blom var. *stricta*

Victoria, Tasmania. Tussock grass, inflorescence contracted, lemma acuminate or rounded, recorded from saline areas, salt marshes, coastal, mudflats, saline lagoons, sandy areas near water, sand near beach, see *Acta Horti Gothoburgensis* 5: 89. 1930.

P. sublaevis (Holmb.) Tzvelev (*Puccinellia kamtschatica* Holmb. var. *sublaevis* Holmb.)

Alaska, Russia. Endangered species, see *Botaniska Notiser* 1927: 208-209. 1927, *Novosti Sist. Vyss. Rast.* 8: 80. 1971.

in English: smooth alkali grass

P. svalbardensis Rönning (*Phippsia svalbardensis* (Rönning) Á. Löve & D. Löve)

Norway. Rare species, see *Skrifter, som udi det Kongelige Videnskabers Selskab ere Fremlagde* 4: 9. Copenhagen 1963, *Botaniska Notiser* 128(4): 500. 1975 [1976].

P. tenella (Lange) Holmb. ex Porsild (*Atropis laeviuscula* V.I. Krecz.; *Atropis tenella* (Lange) K. Richt.; *Atropis tenella* (Lange) V.I. Krecz., nom. illeg., non *Atropis tenella* (Lange) K. Richt.; *Glyceria tenella* Lange; *Phippsia langeana* subsp. *asiatica* (T.J. Sørensen) Á. Löve & D. Löve; *Phippsia tenella* (Lange) Á. Löve & D. Löve; *Puccinellia laeviuscula* V.I. Krecz.; *Puccinellia langeana* subsp. *asiatica* T.J. Sørensen)

Northern America, Canada, Alaska, U.S., Asia, Russia, Siberia, Europe. Perennial, see A.N. Nordenskiöld, [Vegas färd kring Asien och Europa ... English] *The Voyage of the Vega Round Asia and Europe: with a Historical Review of Previous Journeys Along the North Coast of the Old World*, translated by Alexander Leslie. 1st English edition, London 1881, *Vega-expeditionens vetenskapliga iakttagelser* 1: 313, t. 6. Stockholm 1882-1887, *Plantae Europaeae* 1: 92. 1890 and *Meddelelser om Grønland* 58: 45. Copenhagen 1926, *Flora URSS* 2: 483, 762, t. 37, f. 17. 1934, *Kungl. Fysiografiska Sällskapet i Lund Förhandlingar* 61: 1710. Lund 1950, *Botaniska Notiser* 128(4): 499-500. 1975 [1976], *Dictionary of Scientific Biography* 10: 148-149. 1981, Frans A. Stafleu and Richard S. Cowan in *Taxonomic literature*. 3: 765-766. Utrecht 1981.

in English: tundra alkaligrass

P. tenella (Lange) Holmberg ex Porsild subsp. *alaskana* (Scribn. & Merr.) Tzvelev (*Atropis alaskana* (Scribn. & Merr.) V.I. Krecz.; *Glyceria pumila* Vasey; *Phippsia*

langeana (Berlin) Á. & D. Löve subsp. *alaskana* (Scribn. & Merr.) Á. & D. Löve; *Puccinellia alaskana* Scribn. & Merr.; *Puccinellia kurilensis* auct. non (Takeda) Honda p.p.; *Puccinellia langeana* (Berlin) T.J. Sørensen ex Hultén subsp. *alaskana* (Scribn. & Merr.) Sørensen; *Puccinellia paupercula* (Holm) Fern. & Weatherby var. *alaskana* (Scribn. & Merr.) Fern. & Weatherby; *Puccinellia pumila* (Vasey) Hitchc.; *Puccinellia pumila* auct. non (Vasey) A.S. Hitchc.)

Northern America, Canada, Alaska, U.S., Russia. Perennial, occurs in salt marshes, gravelly beaches, see *Bulletin of the Torrey Botanical Club* 15(2): 48. 1888 and *Contributions from the United States National Herbarium* 13(3): 78. 1910, *Rhodora* 18: 18, f. 63-67, 68-72. 1916, *Meddelelser om Grønland* 58: 45. 1926, *Flora URSS* 2: 480. 1934, *American Journal of Botany* 21(3): 129. 1934, *Acta Universitatis Lundensis* 2 (46): 1710. 1950, *Botaniska Notiser* 128(4): 499. 1975 [1976], *Zlaki SSSR* 510. 1976.

in English: tundra alkaligrass

P. tenella (Lange) Holmb. ex Porsild subsp. *langeana* (Berlin) Tzvelev (*Glyceria langeana* Berlin; *Glyceria paupercula* Holm; *Phippsia langeana* (Berlin) Á. & D. Löve; *Puccinellia distans* (Jacq.) Parl. var. *minor* (S. Wats.) Boivin; *Puccinellia langeana* (Berlin) T.J. Sørensen ex Hultén; *Puccinellia langeana* (Berlin) T.J. Sørensen; *Puccinellia langeana* (Berlin) Tzvelev, nom. illeg., non *Puccinellia langeana* (Berlin) T.J. Sørensen; *Puccinellia langeana* subsp. *asiatica* T.J. Sørensen; *Puccinellia langeana* (Berlin) T.J. Sørensen ex Hultén subsp. *langeana*; *Puccinellia longiglumis* Fern. & Weatherby; *Puccinellia paupercula* (Holm) Fern. & Weatherby; *Puccinellia paupercula* (Holm) Fern. & Weatherby var. *longiglumis* Fern. & Weatherby; *Puccinellia pumila* (Vasey) A.S. Hitchc. var. *fernaldii* Hultén)

Russia, Northern America, Canada, Greenland. Perennial, caespitose, erect, glabrous, sheaths glabrous, ligule membranous, auricles absent, inflorescence paniculate, spikelets pedicellate and purplish, lemma oblong, palea with glabrous veins, recorded in ridges, slopes, in moist depressions of dune swales, wet sand, peat bogs, in clay or silt environments, tundra, cliffs, seashore, above the high-tide zone, riverbank sand, in more or less well-drained areas and moderately well-drained, disturbed places, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 7: 79. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis* 3: 337. 1907, *Contributions from the United States National Herbarium* 13(3): 78. 1910, *Rhodora* 18: 18, f. 63-67. 1916, *Meddelelser om Grønland* 58: 45. 1926, *Flora URSS* 2: 480, t. 37, f. 15. 1934, *Kungl. Fysiografiska Sällskapet i Lund Förhandlingar* 61: 1710. 1950, *Meddelelser om Grønland* 136: 24. 1953, *Arkticheskaia Flora SSSR* 2: 187, 190. 1964, *Botaniska Notiser* 128(4): 499. 1975 [1976].

in English: tundra alkaligrass

P. tenella (Lange) Holmb. ex Porsild subsp. ***tenella*** (*Glyceria tenella* Lange; *Phippsia langeana* (Berlin) Á. & D. Löve subsp. *asiatica* (Sørensen) Á. & D. Löve; *Phippsia tenella* (Lange) Á. & D. Löve; *Puccinellia langeana* (Berlin) Sørensen ex Hultén subsp. *asiatica* T.J. Sørensen)

Northern America, Canada, Europe, Siberia. Perennial, see *Vega-expeditionens vetenskapliga iakttagelser* 1: 313, t. 6. 1882, *Plantae Europaeae* 1: 92. 1890 and *Meddelelser om Grønland* 58: 45. Copenhagen 1926, *Flora URSS* 2: 483, 762, t. 37, f. 17. 1934, *Kungl. Fysiografiska Sällskapet i Lund Förhandlingar* 61: 1710. Lund 1950, *Botaniska Notiser* 128(4): 499-500. 1975 [1976].

in English: tundra alkaligrass

P. tenuiflora (Griseb.) Scribn. & Merr. (*Atropis tenuiflora* Griseb.; *Glyceria distans* var. *tenuiflora* Turcz.; *Puccinellia tenuiflora* (Turcz.) Scribn. & Merr.)

Northern America, U.S. Forage, mountain steppe, mountain light brown soil, meadows and wet meadows, hillsides, in rather wet soils, see *Flora Rossica* 4(13): 388-389. 1852 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 10: 70. 1907, *Contributions from the United States National Herbarium* 13: 78. 1910, *Novosti Sist. Vyss. Rast.* 8: 79. 1971, *Bot. Zhurn. (Moscow & Leningrad)* 73(9): 1336. 1988, *Grassland of China* 4: 53-60. 1989, A.L. Takhtadzhyan [A. Takhtajan], editor, *Numeri chromosomatum magnoliophytorum florum URSS*. Akademiya nauk SSSR, Botanicheskii institut im V.L. Komarova. 1990-1993.

P. thomsonii (Stapf ex Hook.f.) R.R. Stewart (*Atropis thomsonii* (Stapf ex Hook.f.) Pamp.; *Glyceria thomsonii* Stapf ex Hook.f.; *Puccinellia thomsonii* J. Stewart; *Puccinellia thomsonii* Jansen)

India, Jammu and Kashmir. Indeterminate species, see *The Flora of British India* 7: 347-348. 1897 and *Fl. Caracorum* 10: 77. 1930, *Brittonia* 5: 418. 1945, *Grasses of Burma, Ceylon, India and Pakistan* 563. 1960.

P. vaginata (Lange) Fernald & Weatherby (*Glyceria vaginata* Lange; *Phippsia rosenkrantzii* (T.J. Sørensen) Á. Löve & D. Löve; *Phippsia vaginata* (Lange) Á. & D. Löve; *Puccinellia angustata* var. *vaginata* (Lange) Holmb. ex Porsild; *Puccinellia capillaris* var. *vaginata* (Lange) Tzvelev; *Puccinellia rosenkrantzii* T.J. Sørensen; *Puccinellia vaginata* var. *paradoxa* T.J. Sørensen; *Puccinellia vaginata* var. *vaginata*)

Northern America, Greenland. Caespitose, erect or decumbent, glabrous, flag leaf sheaths inflated or not inflated, sheath glabrous, ligule membranous, auricles absent, inflorescence paniculate, spikelets pedicellate and laterally compressed, second glume ovate, lemma hairy, grows in seashore, on clay by the seashore, on seashore mudflats, slopes, river terraces, moist ditch, imperfectly drained moist areas, moist depression, see *Flora Danica* 15: 3, t. 2583.

1858 and *Rhodora* 18: 14. 1916, *Meddelelser om Grønland* 58: 44. 1920, *Meddelelser om Grønland* 136(3): 33, 47, 50. 1953, *Botaniska Notiser* 128(4): 500. 1975 [1976].

in English: Arctic tussock alkali grass

P. vaginata (Lange) Fernald and Weath. var. ***paradoxa*** Sørensen

Greenland. See *Rhodora* 18: 14. 1916, *Meddelelser om Grønland* 136: 47. 1953.

P. vahliana (Liebm.) Scribn. & Merr. (*Atropis vahliana* (Liebm.) K. Richt.; *Colpodium vahlianum* (Liebm.) Nevski; *Glyceria vahliana* (Liebm.) Th. Fr.; *Phippsia vahliana* (Liebm.) Á. & D. Löve; *Poa vahliana* Liebm.; *Puccinellia vahliana* (Liebm.) Tolm., nom. illeg., non *Puccinellia vahliana* (Liebm.) Scribn. & Merr.) (for the Danish botanist Jens Laurentius (Lorenz) Moestue Vahl (1796-1854), plant collector, traveler, librarian, son of the Norwegian-born Danish botanist Martin Vahl (1749-1804); see Paul Gaimard, *Voyages de la Commission Scientifique du Nord, en Scandinavie, en Laponie, au Spitzberg et aux Féroë, pendant les années 1838, 1839 et 1840, sur la Corvette La Recherche*, commandée par M. Fabvre ... Géographie physique, Géographie botanique, Botanique et Physiologie, etc. Paris [1842-1848]; J.H. Barnhart, *Biographical notes upon botanists*. 3: 419. 1965; Stafleu and Cowan, *Taxonomic literature*. 6: 628-631. Utrecht 1986; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; C.F.A. Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 412. Boston, Mass. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Greenland, Northern America. Caespitose, erect, glabrous, curly roots, auricles absent, inflorescence paniculate, spikelets pedicellate and laterally compressed, second glume ovate, palea hairy, growing in seasonally wet meadows, on flood plain, ephemeral lakes, on seepage slopes, imperfectly drained moist areas, along streams, marshes, lakeshores, snow patches, on snow-beds, tundra, see *Flora Danica* t. 2401. 1845, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 26: 140. 1869, *Plantae Europaeae* 1: 92. 1890 and *Contributions from the United States National Herbarium* 13: 78. 1910, *Trudy Bot. Muz. Rossiisk. Akad. Nauk* 24: 283. 1932, *Flora URSS* 2: 436. 1934, *Arkticheskaia Flora SSSR* 2: 1-274. 1964, *Botaniska Notiser* 128(4): 501. 1975 [1976].

in English: Vahl's alkali grass

P. walkeri (Kirk) Allan (*Atropis novae-zealandiae* (Petrie) Hack.; *Atropis walkeri* (Kirk) Cockayne; *Atropis walkeri* (Kirk) Cheeseman, nom. illeg., non *Atropis walkeri* (Kirk) Cockayne; *Glyceria novae-zealandiae* Petrie; *Poa walkeri*

Kirk; *Puccinellia novae-zealandiae* (Petrie) Allan & Jansen)

New Zealand. Erect, dense, compact, stiff, tufted, leafy, culms usually hidden by sheaths, leaf sheath glabrous and membranous, ligule entire, leaf blades scabrid and folded, panicle compact and erect with stiff branches, glumes unequal, coastal, in salt marshes, see *Transactions and Proceedings of the Royal Society of New Zealand* 17: 224. 1885 and *Transactions and Proceedings of the Royal Society of New Zealand* 33: 329. 1901, *Manual of the New Zealand Flora* 915. 1906, *Rep. Bot. Surv. Stewart Island* 50. 1909, *Manual of the New Zealand Flora* 2: 203. 1925, *Department of Scientific and Industrial Research Bulletin* 49: 40, 157. 1936, *Transactions and Proceedings of the Royal Society of New Zealand* 66: 266. 1939, *New Zealand J. Bot.* 34: 25. 1996.

P. walkeri (Kirk) Allan subsp. *antipoda* (Petrie) Edgar (*Atropis antipoda* Petrie; *Puccinellia antipoda* (Petrie) Allan & Jansen)

New Zealand, Antipodes Islands. Lemma apex ciliate, palea keels scabrid and excurrent, coastal, see *The Subantarctic Islands of New Zealand* 2: 480. 1909, *Department of Scientific and Industrial Research Bulletin* 49: 40, 157. 1936, *Transactions and Proceedings of the Royal Society of New Zealand* 69: 266. 1939, *New Zealand Journal of Botany* 34: 26-27. 1996.

P. walkeri (Kirk) Allan subsp. *chathamica* (Cheeseman) Edgar (*Atropis chathamica* Cheeseman; *Puccinellia chathamica* (Cheeseman) Allan & Jansen)

New Zealand, Chatham Islands. Panicle branches smooth, lemma apex ciliate, palea keels scabrid, coastal, in salt marshes, slopes, shores, near the sea, see *Transactions and Proceedings of the New Zealand Institute* 53: 423. 1921, *Manual of the New Zealand Flora* 2: 203. 1925, *Transactions and Proceedings of the Royal Society of New Zealand* 69: 266. 1939, *New Zealand Journal of Botany* 34: 26-27. 1996.

P. walkeri (Kirk) Allan subsp. *walkeri*

New Zealand. Panicle branches scabrid, lemma apex ciliate, on saline soils, sandy and stony ground, see *Department of Scientific and Industrial Research Bulletin* 49: 40, 157. 1936.

P. wrightii (Scribn. & Merr.) Tzvelev (*Colpodium wrightii* Scribn. & Merr.; *Colpodium wrightii* var. *flavum* Scribn. & Merr.; *Colpodium wrightii* var. *wrightii*; *Phippsia wrightii* (Scribn. & Merr.) Á. & D. Löve; *Poa wrightii* (Scribn. & Merr.) Hitchc.) (for the American botanist Charles (Carlos) Wright, 1811-1885, botanical explorer, botanical collector for Asa Gray in the Mexican Boundary Region, explorer and traveler, from 1853 to 1855 under Capt. Cadwalader Ringgold (1802-1867) and Comm. John Rodgers (1812-1882) on the five-ship North Pacific Exploring Expedition, plant collector in Cuba 1856-1857. See Asa Gray (1810-

1888), *Plantae Wrightianae Texano-Neo-Mexicanae*. 1852-1853; A.H. Dupree, *Asa Gray - American Botanist, Friend of Darwin*. J. Hopkins 1988; August Heinrich Rudolf Grisebach (1814-1879), *Plantae wrightianae, e Cuba orientali*. Cantabrigiae, Nov. Angl. 1860-1862 and *Catalogus Plantarum Cubensium*. Lipsiae 1866; Francisco Adolfo Sauvalle (1807-1879), *Flora Cubana*. Enumeratio nova plantarum cubensium vel revisio catalogi grisebachiani, exhibens descriptiones generum specierumque novarum Caroli Wright et Francisci Sauvalle, etc. Havanae [Habana] [1868-] 1873; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; J.H. Barnhart, *Biographical notes upon botanists*. 3: 523. 1965; W.P. Cummings, S.E. Hillier, D.B. Quinn and G. Williams, *The Exploration of North America 1630-1776*. London 1974; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 443. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Elmer Drew Merrill, in *Contr. U.S. Natl. Herb.* 30(1): 318. 1947 and in *Bernice P. Bishop Mus. Bull.* 144: 192. 1937; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 381. Cape Town 1981; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Stafleu and Cowan, *Taxonomic literature*. 7: 464-466. 1988)

Alaska, Russia. Vulnerable species, tundra, see *Contributions from the United States National Herbarium* 13: 74-75. 1910, *American Journal of Botany* 2: 309. 1915, *Flora Arctica URSS* 2: 193-194. 1964, *Novosti Sist. Vyss. Rast.* 10: 86. 1973, *Botaniska Notiser* 128(4): 501. 1975 [1976].

in English: Wright's alkali grass

Puelia Franchet = *Atractocarpa* Franch.

After the French botanist Timothée Puel, 1812-1890, physician, wrote *Catalogue des plantes vasculaires qui croissent dans le département Lot*. Cahors 1845-1853; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 114. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J.T. Timothée Puel, *Essai sur les causes locales de la différence de taille qu'on observe chez les habitants des deux cantons de Latronquière et de Livernon*. in *Collection des thèses soutenues à la Faculté de Médecine de Paris*. an 1839-1878. Paris 1839-1878.

About 5 or 6 species, Cameroon, Zaire, Gabon, Sierra Leone, Angola. Bambusoideae, Bambusodae, Puelieae, perennial, simple, herbaceous, sympodial, unbranched, unarmed, rhizomatous with rhizomes pachymorph, leafless or leafy, auricles absent, ligule a fringed membrane, external ligules, plants bisexual without hermaphrodite florets, inflorescence a narrow panicle, dimorphic florets, one fertile floret, lower florets male or proximal incomplete florets male, uppermost floret female, 2-7 glumes very unequal, lower glume 4- to 5-nerved, upper glume 7-nerved, palea present, lemmas convolute, lodicules present, 6 stamens, ovary glabrous, 2 or 3 stigmas, some species sometimes with root tubers, in forest shade, patches, forest floor, rain-forest, evergreen forest, type *Puelia ciliata* Franchet, see *Bulletin Mensuel de la Société Linnéenne de Paris* 1: 674-675, 676. 1887 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 124-125. 1901, *Hooker's Icones Plantarum* 37: t. 3642. 1967, *Fl. Trop. E. Afr. Gramin.* 1: 15. 1970, T.R. Soderstrom, "Some evolutionary trends in the Bambusoideae (Poaceae)." *Annals of the Missouri Botanical Garden* 68: 15-47. 1981, *Grass Systematics and Evolution* 225-238. 1987 [The position of the bamboo genera and allies in a system of grass classification.], GPWG (Grass Phylogeny Working Group), "Proposal for a subfamilial reclassification of the Poaceae," in *Monocots II, Abstracts*, 15. Royal Botanic Gardens Sydney, Australia 1998, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, "Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B." *Am. J. Bot.* 87: 96-107. 2000.

Species

P. ciliata Franch. (*Guaduella oblonga* Hutchinson ex W.D. Clayton; *Puelia acuminata* Pilg.; *Puelia ciliata* Chev.; *Puelia subsessilis* Pilg.)

Africa, Gabon. Panicle branches subtended by little bracts, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 124-125. 1901, *Exploration botanique de l'Afrique occidentale française* ... Paris 1920, *Kew Bulletin* 16: 247. 1962.

P. coriacea W.D. Clayton

Zaire. See *Kew Bulletin* 20: 271, f. 6. 1966.

P. dewevrei DeWildeman & T. Durand (also spelled *dewerrei*) (for the Belgian botanist Alfred Dewèvre, 1866-1897, died Léopoldville, Belgian Congo, wrote *Les Caoutchoucs africains*; étude monographique des lianes du genre *Landolphia*. Bruxelles 1895, *Les Caoutchoucs africains*. 1. Monographie du Caoutchouc. 2. Les Caoutchoucs africains. 3. Les Caoutchoucs du Congo. Bruxelles, Louvain 1895, *Les plantes utiles du Congo*. Edition 2. Bruxelles 1894 and *La récolte des produits végétaux au Congo*, etc. Bruxelles 1895. See Emile August(e) Joseph De Wildeman (1866-1947), *Reliquiae Dewevreanae* ou Énumération des Plantes récoltées par Alfr. Dewèvre en 1895-96 dans l'État

Indépendant du Congo. Fasc 1-2. Bruxelles 1901; J.H. Barnhart, *Biographical notes upon botanists*. 1: 450. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 201. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916)

Zaire, Gabon.

P. olyrififormis (Franch.) W.D. Clayton (*Atractocarpa olyrififormis* Franch.)

Tropical Africa. Perennial, herbaceous, stout, suffruticose or subwoody, shortly rhizomatous, sometimes tuberous, forest floor, evergreen forest, see *Bulletin Mensuel de la Société Linnéenne de Paris* 1: 675. 1887 and *Kew Bulletin* 20: 273. 1966.

P. schumanniana Pilger

Gabon, Cameroon. Herbaceous, shortly rhizomatous, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 126. 1901.

Puliculum Stapf ex Haines = *Eulalia* Kunth, *Pseudopogonatherum* A. Camus, *Puliculum* Haines

Latin *pulex*, *pulicis* "a flea," *pulico* "to produce fleas."

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, type *Puliculum articulatum* (Trin.) Haines, see K.S. Kunth, *Révision des Graminées*. 1: 160. Paris 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 90. 1836, *Die Natürlichen Pflanzenfamilien*. 2(2): 24. (July) 1887, *Monographiae Phanerogamarum* 6: 189, t. 1, f. 13. 1889, *Revisio Generum Plantarum* 2: 788. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2* 68: 203-205. 1921, *Fl. Indo-Chine* 7: 254. 1922, *The Botany of Bihar and Orissa* 5: 1018. 1924, *Bulletin of the Tokyo Science Museum* 18: 2. 1947, *Index Grass Sp.* 3: 203. 1962.

Pyrrhanthera Zotov

From the Greek *pyrros* "flame-colored, red" and *anthera* "anther."

Monotypic, New Zealand. Arundinoideae, Danthoneae, Danthoniinae, or Arundineae, perennial, slender, erect, filiform, short, low-growing, caespitose, long-rhizomatous with creeping woody rhizomes, mat-forming, leaves mostly basal, auricles absent, leaf sheath appressed, leaf blades filiform, plants bisexual, inflorescence racemose or paniculate, a reduced panicle of 1-3 spikelets 3-flowered, third floret sometimes rudimentary, 2 glumes more or less equal 7- to 9-nerved, lemmas lobed or 3-toothed, palea present,

2 ciliate lodicules free and fleshy and more or less truncate, 3 stamens, ovary glabrous, 2 stigmas, fruit an achene, open habitats, grassland, sandy ground, sometimes referred to *Rytidosperma* and *Danthonia* sensu lato, type *Pyrrhanthera exigua* (Kirk) Zotov, see *Flore Française. Troisième Édition* 3: 32. 1805, *Prodromus Florae Novae Hollandiae* 182. 1810, *Synopsis Plantarum Glumacearum* 1: 425. 1854, *T.N.Z.I.* 14: 378. 1882, *Gard. Chron.* 1: 260. 1882, *Revisio Generum Plantarum* 2: 789. 1891 and *T.R.S.N.Z.* 73: 234.

1943, *New Zealand Journal of Botany* 1: 125-126. 1963, *Telopea* 6(4): 614. 1996.

Species

P. exigua (Kirk) Zotov (*Danthonia exigua* (Kirk) Zotov; *Rytidosperma exiguum* (Kirk) H.P. Linder; *Sieglingia exigua* (Kirk) Kuntze; *Triodia exigua* Kirk)

New Zealand. Glumes awnless, lemmas coriaceous 9-nerved.

Q

Qiongzhusua C.J. Hsueh [J.R. Xue] & T.P. Yi

= *Chimonobambusa* Makino, *Oreocalamus*

Keng, *Qiongzhusua* (T.H. Wen & D.

Ohrnberger) J.R. Xue & T.P. Yi, *Qiongzhusua*

Hsueh & Yi, *Qiongzhusua* J.R. Xue & T.P. Yi,

Qiongzhusua Hsueh & Yi

About 3-8 species, China, Guizhou, western Hubei, Sichuan, Yunnan. Bambuseae, amphipodial, erect, diffuse, shrub-like to arborescent, sometimes clustering, thick-walled, cylindrical or sometimes four-edged, usually three subequal branches on each node, slender twigs, internodes cylindrical, node swollen, underground stems, rhizomes leptomorph, sheath annulus more or less convex, culm sheaths caducous and thick papyraceous to coriaceous, auricles absent, blades lanceolate to narrowly lanceolate, sheath blade narrow, ligules minute or absent, pseudoinflorescence, inflorescence iterant and paniculate, spikelets 3- to 8-flowered, pseudospikelet racemes grouped in loose fascicles subtended by bracts, lemmas papery, 3 lodicules membranous, 3 stamens, 3 membranous lodicules, 2 stigmas plumose, often placed in *Chimonobambusa* Makino, type *Qiongzhusua tumidinoda* Hsueh & Yi, see *Botanical Magazine* 28(329): 153. 1914, *Taxon* 6(7): 201-202. 1957, *Acta Botanica Yunnanica* 2(1): 91-99. 1980, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Taxon* 45: 218. 1996, *Bamboos of the World* 177-178, 180, 182-183, 186-188. 1999, Anwaruddin Choudhury, "An overview of the status and conservation of the red panda *Ailurus fulgens* in India, with reference to its global status." *Oryx* 35(3): 250-259. July 2001.

Species

Q. communis C.J. Hsueh & T.P. Yi (*Chimonobambusa communis* (J.R. Xue & T.P. Yi) K.M. Lan; *Chimonobambusa communis* (J.R. Xue & T.P. Yi) Wen & D. Ohrnberger; *Oreocalamus communis* (J.R. Xue & T.P. Yi) Keng f.)

China, Sichuan, Hubei, Guizhou. Basal internodes cylindrical or square, three branches per node, culm sheath caducous more or less tough or papery, sheath blade triangular, no sheath auricles, sheath ligule arcuate and glabrous, leaves lanceolate with pubescence beneath, edible shoot, soft culm suitable for weaving, matting, papermaking, see *Sunyatsenia* 4: 146. 1940, *Acta Botanica Yunnanica* 2(1): 96-98, pl. 3. 1980, *Journal Nanjing University. Natural*

Sciences Edition 22(3): 416. 1986, *Flora Guizhouensis* 5: 308. 1988.

Q. intermedia C.J. Hsueh & T.P. Yi (*Chimonobambusa macrophylla* f. *intermedia* (J.R. Xue & D.Z. Li) T.H. Wen & D. Ohrnberger)

China, Sichuan. Young culms pruinose, basal culm almost solid, three or more branches per node, culm sheath caducous, sheath blade erect, sheath ligule pubescent, see *Acta Botanica Yunnanica* 10(1): 53, f. 2. 1988.

Q. luzhiensis C.J. Hsueh & T.P. Yi (*Chimonobambusa luzhiensis* (J.R. Xue & T.P. Yi) K.M. Lan; *Chimonobambusa luzhiensis* (J.R. Xue & T.P. Yi) T. H. Wen & D. Ohrnberger; *Oreocalamus luzhiensis* (J.R. Xue & T.P. Yi) Keng f.)

China, Guangdong. Cylindrical, culm annulus flat, sheath annulus convex, sheath coriaceous and persistent, sheath blade erect linear-lanceolate, no sheath auricles, sheath ligule truncate shortly pubescent, leaves coriaceous and glabrous, leaf blades lanceolate, see *Acta Botanica Yunnanica* 5(1): 45-46, pl. 4. 1983, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1986, *Flora Guizhouensis* 5: 309. 1988.

Q. macrophylla C.J. Hsueh & T.P. Yi (*Chimonobambusa macrophylla* (J.R. Xue & T.P. Yi) T.H. Wen & D. Ohrnberger)

China, Sichuan. Culm slender, shoot greenish purple, no cilia on sheath mouth, leaves oblong-lanceolate, edible shoot, ornamental, see *Acta Phytotaxonomica Sinica* 23(5): 398-399, pl. 1. 1985.

Q. macrophylla C.J. Hsueh & T.P. Yi f. ***leiboensis*** Hsueh & T.P. Yi (*Chimonobambusa macrophylla* f. *leiboensis* (J.R. Xue & T.P. Yi) T.H. Wen & D. Ohrnberger; *Qiongzhusua macrophylla* f. *leiboensis* J.R. Xue & D.Z. Li)

China, Sichuan, Leibo. Young culm slightly pruinose, see *Acta Botanica Yunnanica* 10(1): 51, f. 1. 1988.

Q. opienensis C.J. Hsueh & T.P. Yi (*Chimonobambusa opienensis* (J.R. Xue & T.P. Yi) T.H. Wen & D. Ohrnberger; *Oreocalamus opienensis* (J.R. Xue & T.P. Yi) Keng f.)

China, Sichuan. Cylindrical, basal internodes sometimes square, 1-5 branches on each node, sheath dark purplish caducous, sheath blade triangular, no sheath auricles, sheath ligule entire, 1-2 leaves on each twig, leaves lanceolate, see *Acta Botanica Yunnanica* 2(1): 98-99, pl. 4. 1980, *Journal*

Nanjing University. *Natural Sciences Edition* 22(3): 416. 1986.

Q. puberula C.J. Hsueh & T.P. Yi (*Chimonobambusa puberula* (J.R. Xue & T.P. Yi) K.M. Lan; *Chimonobambusa puberula* (J.R. Xue & T.P. Yi) T.H. Wen & D. Ohrnberger; *Oreocalamus puberulus* (J.R. Xue & T.P. Yi) Keng f.)

China, Guizhou. Young culm pubescent not pruinose, sheath annulus convex, sheath coriaceous, sheath blade erect and triangular, no sheath auricles, cilia on sheath mouth, sheath ligule truncate, 2-4 leaves on each twig, tough leaves lanceolate, edible shoot, culm used for papermaking and for weaving, see *Acta Botanica Yunnanica* 5(1): 42-44, f. 3. 1983, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1986, *Flora Guizhouensis* 5: 308. 1988.

Q. rigidula C.J. Hsueh & T.P. Yi (*Chimonobambusa rigidula* (J.R. Xue & T.P. Yi) T. H. Wen & D. Ohrnberger; *Oreocalamus rigidulus* (J.R. Xue & T.P. Yi) Keng f.)

China, Sichuan. Culms square or cylindrical, glabrous, sheath caducous and more or less glabrous, sheath blade triangular, sheath auricles absent, sheath ligule truncate and glabrous, 1-2 leaves on twig, leaves lanceolate, edible shoots, culm used for papermaking, strips used for weaving, see *Acta Phytotaxonomica Sinica* 21(1): 96-99, pl. 2. 1983, *Journal Nanjing University. Natural Sciences Edition* 22(3): 416. 1896.

Q. tumidinoda C.J. Hsueh & T.P. Yi (*Chimonobambusa tumidinoda* (J.R. Xue & T.P. Yi) T.H. Wen; *Chimonobambusa tumidissinoda* J.R. Xue & T.P. Yi ex D. Ohrnb.)

Guizhou, Sichuan, Yunnan, Type species, three branches per node, basal internodes solid, sheath annulus convex, sheath purplish red, sheath blade erect, rhizomes amphipodial, culms sheaths early deciduous, no sheath auricles, sheath ligule densely pubescent, leaves narrowly lanceolate, edible shoots, ornamental, used for walking sticks and for making handicrafts, see *Acta Botanica Yunnanica* 2(1): 93, pl. 1-2. 1980, *Journal of Bamboo Research* 10(1): 17. 1991.

R

Rabdochloa P. Beauv. = Leptochloa P. Beauv.

From the Greek *rhabdos* “a rod, stick, a magic wand” and *chloe, chloa* “grass.”

Chloridoideae, Cynodonteae, or Eragrostideae, type *Rabdochloa domingensis* (Jacq.) P. Beauv., see *Systema Naturae, Editio Decima* 2: 873. 1759, *Nicolai Josephi Jacquin Miscellanea austriaca ...* 2: 363. 1781, *Flora Indiae Occidentalis* 1: 203. 1797, *Flora Boreali-Americana* 1: 59. 1803, Ambroise Palisot de Beauvois, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 71, 84, 158, 161, 176, t. 17, f. 3. Paris (Dec) 1812, *Nova Genera et Species Plantarum* 1: 169. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 471. 1829, *Geological Survey of California, Botany* 2: 293. 1880, *Revisio Generum Plantarum* 2: 788. 1891 and *Anales del Museo Nacional de Buenos Aires* 11: 121. 1904, *Contr. U.S. Natl. Herb.* 24(6): 180, 187. 1925, *Contributions from the United States National Herbarium* 41: 130-137, 191. 2001.

Racemobambos Holttum = Microcalamus Gamble, *Microcalamus* Franch., *Neomicrocalamus* Keng f.

Referring to the arrangement of the spikelets, from the Latin *racemus, i* “the stalk of a cluster, a bunch, cluster” plus *Bambos*.

About 16-20 species, Peninsular Malaysia, Assam and southern China, Sabah, Borneo, Indonesia, Sulawesi, Papua New Guinea, Solomon Islands. Bambusoideae, Bambusoideae, Bambuseae, Bambusinae, or Racemobambosinae, perennial, diffuse, sympodial, very long culms erect to suberect, very slender, scandent, scrambling, clambering, leaning, somewhat climbing, loosely tufted, straight, branched, solid, thin-walled, several branches at each node, single branch bud enclosed by a prophyll, culm sheaths thin and papery and persistent, rhizomes with long neck, plants bisexual, at the end of a leafy branch inflorescence semeluctant or determinate, a panicle or a raceme, each spikelet usually subtended by a tiny bract, 3-8 perfect florets and one rudimentary vestigial terminal floret, spikelets with 2-3 empty glumes, glume absent or in terminal spikelets, palea 2-keeled, 3 or 0 lodicules, 6 stamens, ovary usually hairy,

3 long plumose stigmas, ornamental, culms used for making blow pipes, arrow heads, mountain forests, secondary forests, in forest margins, type *Racemobambos gibbsiae* (Stapf) Holttum, see *Flora Boreali-Americana* 1: 73. 1803, *Transactions of the Linnean Society of London* 26(1): 33, 138, 157. 1868, *Journal de Botanique (Morot)* 3(17): 282, f. B. 1889, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 59(2): 207, pl. 7. 1890 and *Gard. Bull. Singapore* 15: 267-273. 1956, *Phytomorphology* 1: 88. 1956, *Kew Bulletin* 21(2): 263-292. 1967, *Journal of Bamboo Research* 2(2): 10. 1983, *Kew Bulletin* 37(4): 661-679. 1983, *J. Bamboo Res.* 5(2): 11. 1986, *Kew Bulletin* 44(2): 349-367. 1989, S. Dransfield, *The Bamboos of Sabah*. Sabah Forest Records, no. 14: 44-55. Malaysia 1992, *Plant Resources of South-East Asia (PROSEA) (Pl Res SEAs)* vol. 7: 152. 1995, K.K. Seethalakshmi, *Bamboos of India: a compendium* / K.K. Seethalakshmi, M.S. Muktesh Kumar; assisted by K. Sankara Pillai, N. Sarojam. Peechi: Bamboo Information Centre-India, Kerala Forest Research Institute; Beijing: International Network for Bamboo and Rattan, 1998.

Species

R. celebica S. Dransf.

Sulawesi, Indonesia. Slopes, see *Kew Bulletin* 47(4): 707, f. 1. 1992.

R. ceramica S. Dransf.

Indonesia. Forest, see *Reinwardtia* 9(4): 386, f. 1. 1980.

R. clarkei (Gamble ex Brandis) Muktesh Kumar (*Arundinaria clarkei* Gamble ex Brandis; *Neomicrocalamus clarkei* (Gamble ex Brandis) Majumdar)

India, Sikkim. Shrubby, solid, spikelets with 2 empty glumes and 1-2 fertile florets, 6 stamens, 3 plumose stigmas, see *Indian Trees* 666. 1906, *Journal of Bamboo Research* 2(2): 10. 1983, *Fl. Ind. Enumerat.-Monocot.* 279. 1989.

in India: lading va

R. congesta (Pilger) Holttum (*Arundinaria congesta* Pilger)

Papua New Guinea, Goodenough Island. Culms used for bow strings and arrow heads, dense thickets forming, found in montane forest, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 173. 1914, *Kew Bulletin* 21: 282. 1967.

R. gibbsiae (Stapf) Holttum (*Bambusa gibbsiae* Stapf) (for the English (b. London) botanist from the British Museum Lilian Suzette Gibbs, 1870-1925 (d. Santa Cruz, Tenerife), 1905 fellow of the Linnean Society, traveler, plant collector in southern Rhodesia and Mount Kinabalu, collector of botanical specimens, orchid collector (*Eulophia squalida*, *Paphiopedilum dayanum* and *Trichoglottis kinabaluensis*), February 1910 Mt. Kinabalu (about 1,000 plants in all were collected) with D.R. Maxwell (Assistant District Officer, Kota Belud), she was the first woman to reach the summit of Mt. Kinabalu (North Borneo), wrote *A Contribution to the Phytogeography and Flora of the Arfak Mountains*. London 1917 and "A contribution to the flora and plant formations of Mount Kinabalu and the Highlands of British North Borneo." in *Journal of the Linnean Society. Botany*. 42: 1-240. 1914; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 44. 1965; D.R. Maxwell, "Ascent of Mount Kinabalu." *British North Borneo Herald*. 65-67. Apr, 1st 1910; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 276. London 1994; *Bol. Soc. Brot.* ser. 2, 3: pl. 5. 1925)

Mt. Kinabalu. Slender, erect, leaning and scrambling, inflorescence shortly racemose, spikelets hairy, 3 glumes, lemma hairy, palea hairy, dense thickets forming, found in montane forest, see *Journal of the Linnean Society, Botany* 42: 189. 1914, *Gardens' Bulletin, Straits Settlements* 15: 272. 1956.

R. glabra Holttum

Brunei, Sabah, Sarawak. Erect or spreading, thin-walled, inflorescence racemose, 3 glumes, lemma and palea glabrous, see *Gard. Bull. Sing.* 15: 270. 1956, *Sandakania* 1: 7-9. 1992.

R. hepburnii S. Dransf. (after A. John Hepburn, a forester)

Mt. Kinabalu, Sabah. Scrambling, leaning, leaves narrow, spikelets glabrous, lemma and palea glabrous, see *Kew Bulletin* 37(4): 670, f. 1 B-D, 5. 1983.

R. hirsuta Holttum

Sabah. Open tufted, scrambling, hairy spikelets, 2 glumes, lemma and palea hairy, found in the lowlands, see *Gardens' Bulletin, Straits Settlements* 15: 272. 1956.

R. hirta Holttum

Papua New Guinea. Straggling, see *Kew Bulletin* 21: 283, f. 3. 1967.

R. holttumii S. Dransf.

Papua New Guinea. See *Kew Bulletin* 37(4): 670, f. 4. 1983.

R. kutaiensis S. Dransf.

Indonesia, Borneo. Forest, see *Kew Bulletin* 37(4): 674, f. 6. 1983.

R. mannii (Gamble) Muktesh Kumar (*Arundinaria mannii* Gamble; *Cephalostachyum mannii* (Gamble) Stapleton & D.Z. Li; *Neomicrocalamus mannii* (Gamble) Majumdar; *Racemobambos mannii* (Gamble) Campbell)

India. Slender, tufted, climbing, wiry, graceful, solid, much-branched, internodes smooth, nodes swollen, culm sheath slender and persistent, thin leaves lanceolate and papery, leaf sheaths glabrous and striate, culms split and used as binding material for building huts, see *Annals of the Royal Botanic Garden. Calcutta*. 7(26): t. 26. 1896, *Fl. Brit. Ind.* 7: 38. 1896 and *Notes on Sino-Himalayan Bamboo Species* 23. 1988, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 279. Calcutta 1989, *Indian Forester* 120(3): 268-271. 1994, *Kew Bulletin* 52(3): 700. 1997.

in India: beneng, kabeneng

R. multiramosa Holttum

Papua New Guinea. See *Kew Bulletin* 21: 282. 1967.

R. novohibernica S. Dransf.

Papua New Guinea. Mountain forest, see *Kew Bulletin* 37(4): 676. 1983.

R. pairinii K.M. Wong (dedicated to Datuk Sri Joseph Pairin Kitingan, Sabah's Prime Minister)

Sabah. Open tufted, erect, scrambling, pendulous tips, spikelets with 2 glumes, lemma mucronate and pubescent, palea hairy, see *Sandakania* 1: 1-6. 1992.

R. prainii (Gamble) Keng F. & T.H. Wen (*Arundinaria prainii* Gamble; *Arundinaria prainii* (Gamble) Gamble; *Microcalamus prainii* Gamble; *Neomicrocalamus microphyllus* C.J. Hsueh & T.P. Yi; *Neomicrocalamus prainii* (Gamble) Keng f.; *Racemobambos prainii* (Gamble) Campbell; *Thamnocalamus prainii* (Gamble) Camus)

India. Climbing, wiry, shrubby, scrambling, solid, slender, smooth, glabrous, thick-walled, nodes prominent, culm sheaths dotted, leaf blades lanceolate, ligule inconspicuous, leaf sheaths pubescent, 3- to 6-flowered, palea obtuse, 3 lodicules, 6 stamens, ovary oblong and pubescent, 3 long plumose stigmas, culms used for basket making and in the construction of huts, on riverbanks, mountain forests, rocky places, see *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 59(2): 207, pl. 7. 1890 and *Les Bambusées* 54. 1913, *Journal of Bamboo Research* 2(1-2): 10, 35, 38, t. 5. 1983, *Journal of Bamboo Research* 5(2): 13. 1986.

in India: kevva, sampit, uppit, usepeit

R. raynalii Holttum

Indonesia, Irian Jaya. See *Adansonia*, sér. 2, 15: 95. 1975, Kade Sidiyasa, *Tree flora of Indonesia*: check list for Irian Jaya compiled by K. Sidiyasa, U. Sutisna, Marfuah-Sutiyono, Titi Kalima-Sutrasno & T.C. Whitmore/edited by T.C. Whitmore, I.G.M. Tantra & U. Sutisna. Bogor, Indonesia: Ministry of Forestry, Forest Research and Development Agency, 1997, Mark James Elgar Coode, *Checklist of the Flowering Plants of N. E. Kepala Burung* (Vogelkop), Irian Jaya, Indonesia: A report to the John D. and Catherine T. MacArthur Foundation: Aug 1997/M.J.E. Coode, S.C.

Hinchcliffe & J. Marsden. Kew: Royal Botanic Gardens, Kew 1997.

R. rigidifolia Holtt.

Sabah, Mt. Kinabalu. Scrambling bamboo, stiff leaf blades, spikelets glabrous, 2 glumes, lemma and palea glabrous, see *Gardens' Bulletin, Straits Settlements* 15: 273. 1956.

R. rupicola Widjaja

Indonesia. See *Reinwardtia* 11(2): 126-128. 1997.

R. schultzei (Pilger) Holttum (*Arundinaria schultzei* Pilg.) (for Leonhard Sigismund Schultze-Jena, 1872-1955, botanical collector in Southwest Africa, New Guinea and Guatemala, orchidologist, zoologist, ornithologist, author of *Aus Namaland und Kalahari*. Bericht an die Kgl. preuss. akademie der wissenschaften zu Berlin über eine forschungsreise im westlichen und zentralen Südafrika, ausgeführt in den jahren 1903-1905 ... Mit 25 tafeln in heliogravüre und lichtdruck, 1 karte und 286 abbildungen im text. Jena 1907)

Indonesia, Papua New Guinea. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 52: 172. 1914, *Kew Bulletin* 21: 283. 1967.

R. sessilis Widjaja

Indonesia. See *Reinwardtia* 11(2): 128-130. 1997.

R. setifera Holtt.

Peninsular Malaysia. Culms well-spaced, flexuous, very loosely clustered, very slender, long-necked slender rhizomes, linear leaves, spikelets shortly stalked, 2 empty glumes, 3 lodicules, 6 stamens, ovary shortly hairy, forests, along riverbanks, see *Gard. Bull. Sing.* 15: 268, 271. 1956 and 16: 134. 1958.

Raddia Bertoloni = *Hellera* Döll, *Olyra* L., *Raddia* DC. (Hippocrateaceae), *Raddia* Mazziari, *Strepthium* Schrad. ex Nees, *Strepthium* Nees

After the Italian botanist Giuseppe Raddi (Josephus Raddius), 1770-1829, cryptogamist, traveler, explorer, plant collector (Brazil, Madeira and Egypt), mycologist, wrote *Synopsis filicum brasiliensium*. Bononiae [Bologna] 1819. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 122. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 322. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; Johannes Proskauer, in *D.S.B.* 10: 13. 1981; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 223. Regione Siciliana, Palermo 1988; R. Zander, F. Encke, G. Buchheim &

S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

About 5-12 species, Brazil and French Guiana, Central and South America. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, erect or decumbent, unarmed, fernlike, tufted, rhizomatous, herbaceous, leaf blades pseudopetiolate ovate-oblong or lanceolate-oblong, ligule inconspicuous, plants monoecious with inflorescences unisexual, inflorescence indeterminate, sexes in separate inflorescences, male panicle usually terminal, axillary female racemes, male florets 2- or 3-staminate, 2 glumes membranous and subequal, lemma coriaceous, female spikelets disarticulating above glumes, palea present, stamens absent, often highly variable, forest, shade, forest floor, sandy soils, lowland, type *Raddia brasiliensis* Bertoloni, see *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Opuscoli Scientifci* 3: 410. 1819, *Prodromus Systematis Naturalis Regni Vegetabilis* 1: 570. 1824, *Agrostologia Brasiliensis* 298-299. 1829 (or *Flora Brasiliensis seu Enumeratio Plantarum in Brasilia...* Stuttgartiae et Tubingae 1829-1833), *Ionios Anthologia* 2: 448. 1834, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 114. 1834, *Flora Brasiliensis* 2, 2: 314. 1877, *Botanical Magazine* 122: t. 7469. 1896 and *Proceedings of the Biological Society of Washington* 21: 185. 1908, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 21, t. 2, f. 3, t. 6, f. 9. 1911, *Contributions from the United States National Herbarium* 18(7): 358. 1917, *Contributions from the United States National Herbarium* 22(6): 505. 1922, *Proceedings of the Biological Society of Washington* 40: 87. 1927, *Contributions from the United States National Herbarium* 24(8): 491. 1927, *Brittonia* 23(3): 293-324. 1971, *Brittonia* 37(1): 22-35. 1985, *American Bamboos* 306-309. 1999, *Contributions from the United States National Herbarium* 39: 62, 82-88, 107-108, 113. 2000.

Species

R. angustifolia Soderstr. & Zuloaga

Brazil. See *Brittonia* 37(1): 32, f. 6. 1985.

R. brasiliensis Bertol. (*Olyra brasiliensis* (Bertol.) Spreng.; *Olyra floribunda* Raddi; *Olyra floribunda* var. *floribunda*)

Brazil. Wiry, erect or decumbent, knotty base, shortly rhizomatous, leaf blades ovate-oblong, female raceme scarcely exerted from the leaf sheaths, spikelets pubescent, male panicle ovate exerted from the uppermost leaf sheath, spikelets pilose acuminate, see *Agrostografia Brasiliensis* 20. 1823, *Systema Vegetabilium* 4: Cur. Post. 29. 1827.

R. distichophylla (Schrad. ex Nees) Chase (*Olyra polypodioides* Trin.; *Raddia polypodioides* (Trin.) Chase; *Strepthium distichophyllum* Schrad. ex Nees)

Brazil. Tufted, wiry, erect, knotty base, shortly rhizomatous, nodes bearded, leaf blades asymmetrically obtuse glabrous apiculate, female racemes not fully exerted, female spikelets acute or acuminate, on the upper part of the culm male panicles many-flowered not fully exerted, male spikelets glabrous acuminate, sleep movements of the leaf blades, forest shade, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 298. 1829 [alternative title: *Agrostologia Brasiliensis*], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 117. 1834 and *Proceedings of the Biological Society of Washington* 21: 184-185. 1908.

R. esenbeckii (Steud.) C.E. Calderón & Soderstr. (*Olyra nana* Döll; *Panicum esenbeckii* Steud.; *Raddia nana* (Döll) Chase; *Raddiella esenbeckii* (Steud.) C.E. Calderón & Soderstr.; *Raddiella nana* (Döll) Swallen)

South America. See *Synopsis Plantarum Glumacearum* 1: 90. 1854, *Flora Brasiliensis* 2(2): 329. 1877 and *Proceedings of the Biological Society of Washington* 21: 185. 1908, *Bulletin of the Torrey Botanical Club* 75(1): 89. 1948, *Smithsonian Contributions to Botany* 44: 21. 1980, *Ann. Missouri Bot. Gard.* 78: 933. 1991.

R. guianensis (Brongn.) Hitchc. (*Olyra floribunda* var. *microphylla* Döll; *Olyra urbaniana* Mez; *Raddia urbaniana* Hitchc. & Chase; *Strephium guianense* Brongn.)

French Guiana, the Caribbean, Brazil, Venezuela. Perennial, caespitose, erect, often decumbent, rooting at the nodes, fernlike foliage, leaf blades linear to narrowly oblong-lanceolate, contracted panicles of male spikelets borne from the upper nodes, racemose panicles of female spikelets borne from the middle nodes, cultivated, ornamental, forest floor, mountains, see *Agrostografia Brasiliensis* 20. 1823, *Bulletin de la Société Botanique de France* 7: 470. 1860, *Flora Brasiliensis* 2, 2: 329. 1877 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7(63): 47. 1917, *Contributions from the U.S. National Herbarium* 18(7): 359. 1917, *Manual of the Grasses of the West Indies* 373. 1936.

R. portoi Kuhl. (for the Brazilian botanist Paulo Campos Porto, b. 1889, wrote "Uma *Octomeria* nova." *Arch. Jard. Bot. Rio de J.* 3: 285-288. 1922 and "Um Caso de hibridação natural [*Cattleya itatiayae*]." *Arch. Jard. Bot. Rio de J.* 2: 65-66. 1918 See Pancrace Bessa (1772-1835), *Catalogue: four hundred floral watercolor paintings* by the master Pancrace Bessa: the world renowned collection of Sr. Paulo de Campos-Porto ... dispersal by public auction ... Gallery of Lewis S. Hart ... Beverly Hills, California [Nov 17-18 1947] Beverly Hills 1947)

Brazil. Erect, wiry, nodes not bearded, knotty base, shortly rhizomatous, leaf blades lanceolate-oblong glabrous, female raceme scarcely exerted from the leaf sheaths, male panicle may be ovate exerted, spikelets glabrous acuminate, forest

shade, see *Archivos do Jardim Botânico do Rio de Janeiro* 4: 350. 1925.

R. soderstromii L.G. Clark & Judz.

Brazil. Rhizomatous, spreading.

Raddia Mazziari = *Crypsis* Aiton

After the Italian botanist Giuseppe Raddi, 1770-1829.

Chloridoideae, Zoysieae, Sporobolinae, type *Raddia aculeata* Mazziari, see *Contributions from the United States National Herbarium* 41: 56-57, 191. 2001.

Raddiella Swallen

The diminutive of *Raddia*.

About 7-8 species, tropical America, Panama to Brazil, West Indies. Bambusoideae, Olyreae, Olyrinae, or Bambusoideae, Oryzodae, Olyreae, perennial or annual, weak, herbaceous, delicate, unarmed, trailing, caespitose, low, erect, decumbent, often forming mats, ligule membranous, narrow leaves pseudopetiolate, rhizomes pachymorph, plants monoecious, inflorescence determinate or indeterminate, sexes in separate inflorescences, male usually terminal, axillary female, raceme-like panicle, female spikelets falling entire swollen callus at spikelets base, 2 glumes herbaceous, lower glume 3-nerved, upper glume 3- to 5-nerved, male florets 3-staminate, palea present, stamens absent, 2 stigmas, damp soils, depressions, dry savannah, woodlands, secondary forests, wet places, near streams, on rocks, sandy soils, type *Raddiella nana* (Döll) Swallen (nom. superfl. illeg. for *Raddiella esenbeckii* (Steud.) C.E. Calderón & Soderstr.), see *Species Plantarum* 1: 44. 1753, *Genera Plantarum* 26. 1789 and *Bulletin of the Torrey Botanical Club* 75(1): 89. 1948, B. Maguire et al., "The Botany of the Guayana Highland. VI." *Memoirs of the New York Botanical Garden* 12(3): 1-7. 1965, *Smithsonian Contributions to Botany* 44: 1-27. 1980, *Brittonia* 37: 22-35. 1985, *Smithsonian Contributions to Botany* 69: 64. 1989, *Annals of the Missouri Botanical Garden* 78: 928-941. 1991, *Flora of the Guianas. Series A, Phanerogams* 541-545. 1990, *Edinburgh Journal of Botany* 48: 73-80. 1991, *Flora Mesoamericana* 6: 212-213. 1994, S.A. Renvoize, *Gramíneas de Bolivia* 55. 1998, *American Bamboos* 309-311. 1999, *Contributions from the United States National Herbarium* 39: 108-109. 2000.

Species

R. esenbeckii (Steud.) C.E. Calderón & Soderstr. (*Olyra hoehnei* Pilg.; *Olyra lateralis* (J. Presl ex Nees) Chase; *Olyra nana* Döll; *Panicum esenbeckii* Steud.; *Panicum laterale* J. Presl ex Nees; *Parodiolyra lateralis* (J. Presl ex Nees) Soderstr. & Zuloaga; *Raddia nana* (Döll) Chase; *Raddiella nana* (Döll) Swallen) (*Olyra hoehnei* Pilg. named

for the Brazilian botanist Frederico Carlos Hoehne, 1882-1959, plant collector, among his writings are *Monographia illustrada das Aristolochiaceas brasileiras*. Manguinhos 1927, "Quais as melhores madeiras do nosso país." *Notas Agrícolas*. vol. 1. São Paulo 1930, "A cultura e exploração sistemática e intensiva das Paineiras." *O Campo*, ano 1, no. 3. Rio 1930, "A utilidade das Paineiras nas indústrias." *O Campo*, ano 1, no. 1. Rio 1930, *As plantas ornamentaes da flora brasílica*. São Paulo 1930-1936, *Plantas e substâncias vegetais tóxicas e medicinais*. S. Paulo, Rio de Janeiro 1939, "Dezoito novas espécies para a flora do Brasil e outras regioes da América meridional e central." *Arq. Bot. Estado São Paulo*. 1: 39-49. 1939, "Aristolochiaceae." in *Fl. Bras.* 15: 1-141. 1942, "Arborização urbana." in *Relatorio Anual do Instituto de Botânica*. Secretaria da Agricultura, Indústria e Comércio. 56-104. São Paulo 1944, *Frutas indígenas*. Instituto de Botânica. São Paulo 1946, "Uma nova *Aristolochia* de procedência incerta." *Arq. Bot. Estado São Paulo*. 2(6): 171 & pl. 61. 1952 and "Novidades da família das Gesneriaceae do Brasil." *Sellowia*. 9: 37-79. 1958, joint author with M. Kuhlmann & Oswaldo Handro of *O jardim botânico de São Paulo*. 1941. See Maria do Carmo Conceição Sanchotene (b. 1952), *Frutíferas Nativas úteis à fauna na arborização urbana*. Porto Alegre 1989; J.H. Barnhart, *Biographical notes upon botanists*. 2: 186. 1965; Eurico Santos, *Nossas Madeiras*. Belo Horizonte 1987; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 178. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Brazil, Colombia, Bolivia, Venezuela. Perennial, caespitose, wiry, erect or decumbent, cylindrical, branching, stoloniferous, leaf blades ovate-triangular glabrous apiculate, terminal inflorescence male and female, small panicle scarcely exerted from the leaf sheaths, spikelets staminate lanceolate glabrous, spikelets pistillate pubescent elliptic or ovate, sleep movements of the leaf blades, savannah, shade, damp places, wet to dry savannah, on poor soil, rocky areas, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 213-214. 1829, *Reliquiae Haenkeanae* 1(4-5): 305. 1830, *Synopsis Plantarum Glumacearum* 1: 90. 1854, *Flora Brasiliensis* 2(2): 329. 1877 and *Proceedings of the Biological Society of Washington* 21: 179, 185. 1908, *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 18: 122. Berlin 1922, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Bulletin of the Torrey Botanical Club* 75(1): 89. 1948, *Smithsonian Contributions to Botany* 44: 21. 1980, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Smithsonian Contr. Bot.* 69: 66. 1989.

R. kaieteurana Soderstr.

Guyana, Venezuela, Suriname, Brazil. Perennial or annual, weak, decumbent, trailing, creeping, stoloniferous, ligules membranous, leaf blades elliptic acute and apiculate,

inflorescences terminal and axillary from the upper nodes, each axillary nodes bearing female inflorescences, moist areas, related to *Raddiella malmeana*, see *Memoirs of the New York Botanical Garden* 12(3): 6. 1965.

R. lunata Zuloaga & Judz.

Brazil. See *Annals of the Missouri Botanical Garden* 78(4): 936, f. 9, 10, 14. 1991.

R. malmeana (Ekman) Swallen (*Olyra malmeana* Ekman; *Raddia malmeana* (Ekman) Hitchc.) (for the Swedish botanist Gustaf Oskar Andersson Malme (né Andersson), 1864-1937, lichenologist, at the Stockholm Riksmuseum, traveled in South America (1901-1903, Argentina, Paraguay), his writings include *Ex herbario Regnelliano*. Stockholm 1898-1901, "Über die Asclepiadaceen-Gattung *Tweedia* Hooker & Arnott." *Ark. Bot.* 2(7): 1-20. 1904, *Die Bauhinien von Matto Grosso*. [Stockholm 1905], "Asclepiadaceae Duseninanae in Paraná collectae." *Ark. Bot.* 21A(3): 1-48. 1927, "Die Compositen der zweiten Regnellschen Reise. III. Puente del Inca und Las Cuevas (Mendoza)." *Ark. Bot.* 24A(8): 58-66. 1932, "Asclepiadaceae austroamericanae praecipue andinae." *Ark. Bot.* 25A(7): 1-26. 1932, "Asclepiadaceae Brasilienses, novae vel minus bene cognitae." *Ark. Bot.* 28A(5): 1-28. 1936, "Über die Gattung *Grisebachiella* Lorentz." *Ark. Bot.* 28B(2): 1-4. 1936, "Beiträge zur Kenntniss der chilenischen Asclepiadaceen." *Ark. Bot.* 28B(6): 1-6. 1936 and "Die in Rio Grande do Sul vorkommenden Spezies der Gattung *Lathyrus*." *Revista Sudamer. Bot.* 3(1-2): 8-13. 1936, with A.F.M. Glaziou (1828-1906) wrote *Xyridaceae brasilienses*. Stockholm 1898. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 440. 1965; I.C. Hedge & J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 250. 1972; Frederico Carlos Hoehne, M. Kuhlmann & Oswaldo Handro, *O jardim botânico de São Paulo*. 128. 1941; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Brazil. Stony places, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 21, t. 2, f. 3, t. 6, f. 9. 1911, *Contributions from the U.S. National Herbarium* 22(6): 505. 1922, *Bulletin of the Torrey Botanical Club* 75(1): 89. 1948.

R. minima Judz. & Zuloaga

Brazil. See *Annals of the Missouri Botanical Garden* 78(4): 939. 1991.

R. molliculma (Swallen) C.E. Calderón & Soderstr. (*Panicum molliculmum* Swallen)

Colombia. See *Botanical Museum Leaflets* 16(4): 57. 1953, *Smithsonian Contributions to Botany* 44: 22. 1980.

R. potaroensis Soderstr. (*Raddiella maipuriensis* Soderstr., from Maipuri Falls)

Venezuela, Guyana. Sometimes annual, delicate, matted, weak, glabrous, decumbent, stoloniferous, inflorescences all axillary, savannah, wet rocks, see *Memoirs of the New York Botanical Garden* 12(3): 6-7. 1965.

Raimundochloa A.M. Molina = *Koeleria* Pers., *Parodiochloa* C.E. Hubb., *Parodiochloa* A.M. Molina, *Rostraria* Trin.

South America, after the Argentine botanist Lorenzo Raimundo Parodi, 1895-1966.

Pooideae, Poaceae, Aveninae, see *Species Plantarum* 1: 67. 1753, *Syn. Pl.* 1: 97. 1805, *Fundamenta Agrostographiae* 149, t. 13. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 65. 1830, *Florula Atacamensis seu enumeratio plantarum ...* 55. Halis Saxonum [Halle] 1860 and *Zlaki SSSR* 267. 1976, *Bulletin of the British Museum (Natural History), Botany* 8: 395-396. 1981, *Parodiana* 4(1): 110-112, f. 1-2. 1986, *Parodiana* 4(2): 402. 1986, *Contributions from the United States National Herbarium* 48: 477, 579, 604. 2003.

Ramosia Merr. = *Centotheca* Desv.

Bambusoideae, Oryzodae, Centothecoideae, Centothecoaceae, see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810 and *Philippine Journal of Science* 11: 2. 1916, *Blumea* 19(1): 60. 1971.

Raram Adans. = *Cenchrus* L.

Latin *rarus, rara, rarum* "thin, rare, scanty, scattered, few, sparsely."

Panicoideae, Paniceae, Cenchrinae, type *Cenchrus echinatus* L., see *Species Plantarum* 2: 1049-1050. 1753, *Familles des Plantes* 2: 35, 597. 1763 and *Contributions from the United States National Herbarium* 46: 144-150. 2003.

Raspailia Presl = *Nowodworskya* J. Presl, *Polyogon* Desf.

For the French (b. Carpentras) scientist François Vincent Raspail, 1794-1878 (d. Arcueil, near Paris), botanist, politician, chemist, naturalist, one of the founders of cytochemistry and cellular pathology, determined the agent of scabies (*Sarcoptes scabiei*), self-educated in science, among his numerous publications are *Manuel annuaire de la Santé pour 1847, ou médecine et pharmacie domestiques*. Paris 1847, *Mémoires sur la famille des Graminées*. Paris 1825

[-1826], *De la Pologne sur les bords de la Vistule et dans l'émigration*. Paris 1839, *L'Ami du Peuple en 1848*. [1848], *Le Choléra en 1865*. Paris 1865 and *Nouveau Système de Physiologie Végétale et de Botanique*. Paris 1837. See Marc Klein, in *D.S.B.* 11: 300-302. [b. 1794] 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 129. Boston 1965; [François Vincent Raspail], *Procès et défense de F.V. Raspail, poursuivi ... en exercice illégal de la médecine ... sur la dénonciation formelle des sieurs Fouquier ... et Orfila ... agissant comme vice-président et président d'une association anonyme de médecins*. Paris 1846; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Stafleu & Cowan, *Taxonomic literature*. 4: 582-583. [born 29 Jan 1791] Utrecht 1983; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 325. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 612-613. University of Pennsylvania Press, Philadelphia 1964.

Pooideae, Poaceae, Agrostidinae, type *Raspailia agrostoides* J. Presl (nom. inval., provis. for *Nowodworskya agrostoides* J. Presl), see *Flora Atlantica* 1: 66-67. 1798 [1800], *Memoria di Matematica e di Fisica della Società Italiana di Scienze Residente in Modena, Parte contenente le Memorie di Fisica* 8: 479. 1799, *Révision des Graminées* 1: 72. 1829, *Reliquiae Haenkeanae* 1(4-5): 238-239, 351, t. 40, 80. 1830, *Syn. Mitteleur. Fl.* 2(1): 160, 163. 1899 and *Flora URSS* 2: 297. 1934, *Symbolae Botanicae Upsaliensis* 17(1): 1-112. 1960, *Flora Mesoamericana* 6: 241-242. 1994, *Las Gramíneas de México* 5: 1-466. 1999, *Contr. U.S. Natl. Herb.* 48: 468, 583-588. 2003.

Ratraya J.B. Phipps = *Danthoniopsis* Stapf

After James Mcfarlane Rattray, 1907-1974, botanist, with the South African botanist Sydney Margaret Stent (1875-1942) wrote "The grasses of Southern Rhodesia." *Proc. Rhod. Sci. Ass.* 32: 1-64. 1933. See Stafleu & Cowan, *Taxonomic literature*. 4: 586. 1983; Mary Gunn & Leslie E. Codd, *Botanical Exploration of Southern Africa*. 290 [for George Rattray, 1872-1941], 334 [for Sydney Margaret Stent]. Cape Town 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 324. 1965; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 67. [genus named for the Scottish diatomist John Rattray, 1858-1900] 1971; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 573. London 1994; A. White & B.L. Sloane, *The Stapelieae*. Pasadena 1937.

Arundinelleae, type *Ratraya petiolata* J.B. Phipps, see *Bulletin of Miscellaneous Information Kew* 1897: 298. 1897 and *Hooker's Icones Plantarum* 31: t. 3075. 1916, *Bulletin of Miscellaneous Information Kew* 1936(5): 320, 321, 324. 1936, *Kew Bulletin* 1949: 353. 1949, *Botanische*

Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 75: 357. 1951, *Kirkia* 4: 100-101, t. 10, f. 1. 1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Boletim da Sociedade Broteriana, ser. 2* 46: 421. 1972 [1973], *Taxon* 27(2-3): 301. 1978.

Ratzeburgia Kunth = *Aikinia* R. Br.
(Gesneriaceae), *Aikinia* Wall., *Mnesithea*
Kunth

For the German botanist Julius Theodor Christian Ratzeburg, 1801-1871, entomologist, physician, forester, zoologist, M.D. Berlin 1825, professor of natural sciences, his publications include *Die Forst-Insecten*. Berlin 1837-1844, *Die Waldverderbniss*, etc. Berlin 1866-1868, *Forstnaturwissenschaftliche Reisen durch verschiedene Gegenden Deutschlands ...* Im Anhage, Gebirgsboden-Analysen vom Professor Dr. F. Schulze zu Eldena, etc. Berlin 1842, *Forstwissenschaftliches Schriftsteller-Lexikon*. Berlin 1872. See Stafleu & Cowan, *Taxonomic literature*. 4: 586-587. Utrecht 1983; G.W. von Viebahn, *Statistik des zollvereinten und nördlichen Deutschlands*. In Verbindung mit ... Ratzeburg ... herausgegeben von G. von Viebahn. 1858; J.H. Barnhart, *Biographical notes upon botanists*. 3: 130. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933.

One species, Southeast Asia, Burma. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, leafy, rather slender, herbaceous, caespitose, stoloniferous, auricles absent, ligule an unfringed membrane, leaves linear, plants bisexual, inflorescence terminal and axillary of single cylindrical raceme, spikelets in triplets of 2 sessile spikelets appressed back to back, edges of the spikelets protected by the modified internode and pedicel, pedicellate spikelet vestigial and sterile, 2 glumes more or less equal, lower floret barren, palea short or very reduced, lodicules present, 3 stamens, ovary glabrous, 2 stigmas, used for fodder or for thatching, damp grassland, marshy places, type *Ratzeburgia pulcherrima* Kunth, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Supplementum Carpologicae* 1(1): 3, pl. 181, f. 3. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Révision des Graminées* 1: 153-154. 1829, *Rel. Haenk.* 1: 329. 1830, *Voyage autour du Monde* 2: 64, f. 14. 1829 [1831], *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 180, t. 9, f. 3. 1831, *Révision des Graminées* 2: 487, t. 158. 1831, *Plantae Asiaticae Rariores* 3: 46, 65, t. 273. 1832, *A Natural System of Botany* edition 2: 379. 1836, *Nomenclator Botanicus. Editio secunda* 2: 439. 1841, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887, *Revisio Generum Plantarum* 2: 776. 1891 and *United States Department of Agriculture: Bulletin* 772: 278. 1920,

Hooker's Icones Plantarum 36: t. 3548. 1956, *Blumea* 31(2): 281-307. 1986, *Austrobaileya* 3(1): 79-99. 1989, T.J. Killeen, "The grasses of Chiquitania, Santa Cruz, Bolivia." *Annals of the Missouri Botanical Garden* 77(1): 147, 160. 1990, *Flora Mesoamericana* 6: 396-397. 1994.

Species

R. pulcherrima Kunth (*Aikinia elegans* Wall.; *Mnesithea pulcherrima* (Kunth) de Koning & Sosef; *Ophiuros auriculatus* Trin.; *Rottboellia elegans* (Wall.) Roberty; *Rottboellia pulcherrima* Wall. ex Kunth)

Myanmar. Perennial, inflorescence terminal, a single flattened raceme, modified pedicel and internode frame-like, lower glume crustaceous, short grassland, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(1): 246. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 468. 1833 and *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 85. 1960.

Reana Brign. = *Euchlaena* Schrader, *Zea* L.

Named for the Italian botanist Filippo Re, 1763-1817, economic botanist, phytopathologist, 1814-1817 Director of the Botanical Garden at Modena, wrote *Del cotone e delle avvertenze per ben coltivarlo*. 2a edizione Milano 1811, *Saggio sulla coltivazione e su gli usi del pomo di terra*. Milano, 1817 and *Saggio teorico-pratico sulle malattie delle piante*. 2a edizione. Milano 1817. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 133. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 326. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 584-585. 1917-1933; Giorgio Montecchi, *Aziende tipografiche, stampatori e librai a Modena dal Quattrocento al Settecento*. Mucchi, Modena 1988. Possibly after the Italian botanist Giovanni Francesco Re, 1773-1833, physician, professor of botany.

Panicoideae, Andropogoneae, Tripsacinae, type *Reana giovanninii* Brign. (subfamily, Chloridoideae), see *Species Plantarum* 2: 971-972. 1753, Heinrich Adolph Schrader (1767-1836), *Index seminum horti academici goettingensis*. 3. 1832, *Annales des Sciences Naturelles; Botanique, sér.* 3 12: 365. 1849, *Bulletin de la Société Nationale d'Acclimatation de France* 19: 581. 1872, *Bulletin de la Société Botanique de France* 15(3): 468. 1876 and *Lexikon Generum Phanerogamarum* 600. 1904, *Contributions from the United States National Herbarium* 46: 240-241, 543, 635-639. 2003.

Rebentischia Opiz = *Trisetum* Pers.

Possibly named for the German botanist Johann Friedrich Rebentisch, 1772-1810, author of *Prodromus florum neomarchicae* secundum systema proprium conscriptus atque figuris XX coloratis adornatus. Auctore Joanne Frid. Rebentisch. Cum praefatione C.L. Willdenow, in qua de vegetabilium cryptogamicorum dispositione tractatur. Berolini, Impensis F. Schüppel, 1804. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 134. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1: 585. 1917-1933.

Pooideae, Poaceae, Aveninae, see *Syn. Pl.* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 88, 153, t. 18, f. 1. 1812, *Lotos* 4: 104. 1854 and *U.S.D.A. Bull.* 772: 107-109. 1920, *Taxon* 36: 75. 1987, *Contributions from the United States National Herbarium* 48: 601-602, 659-676. 2003.

Reboulea Kunth = *Colobanthus* (Trin.)

Spach, *Reboullia* Raddi, *Reboullia* Raddi, *Sphenopholis* Scribn.

For the French botanist Eugène de Reboul, 1781-1851; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 134. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Helmut Genast, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 529. [genus *Reboullia* dedicated the French naturalist to Henri-Paul-Irénée Reboul, 1763-1839] Basel 1996.

Pooideae, Poodae, Aveneae, or Pooideae, Poaceae, Aveninae, type *Reboulea gracilis* Kunth (*Sphenopholis obtusata* (Michx.) Scribn.), see *Révision des Graminées* 2: 341, t. 84. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 66. 1830, *Der Deutsche Botaniker Herbarienbuch* 1(2): 149. 1841, *Histoire Naturelle des Végétaux* 13: 163. 1841 and *Rhodora* 8(92): 142, 144. 1906, *Index Kewensis* 13: 33. 1966, *Flora of Alaska and Neighboring Territories; A Manual of the Vascular Plants* i-xxi, 1-1008. 1968, *Anderson's Flora of Alaska and Adjacent Parts of Canada* i-xvi, 1-724. 1974, *Flora of the Yukon Territory* i-xvii, 1-669. 1996, *Contributions from the United States National Herbarium* 48: 237, 601, 614-617. 2003.

Redfieldia Vasey = *Grapphephorum* Desv., *Styppeiochloa* De Winter

For the American botanist John Howard Redfield, 1815-1895, zoologist, conchologist, plant collector, palaeontologist, a curator of the Herbarium of the Philadelphia Academy of Natural Sciences, author of *Recollections of John*

Howard Redfield [privately printed] 1900, with the American botanist Edward Lothrop Rand (1859-1924) wrote *Flora of Mount Desert Island*. Cambridge 1894, he was the son of the American meteorologist and palaeontologist William C. Redfield (1789-1857); see Harold L. Burstyn, in *D.S.B.* 11: 340-341. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 127, 135. 1965; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. 1899; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 327. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950.

One species, North America, central U.S. Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, Muhlenbergiinae, perennial, erect, caespitose, rhizomatous, auricles absent, ligule a line of hairs, leaf blades involute with filiform tip, inflorescence a slender delicate panicle exerted, 2- to 6-flowered spikelets, callus bearded with long silky hairs, spikelets solitary, 2 glumes acuminate very unequal or subequal, second glume awnless, chartaceous lemmas 3-nerved often mucronate, palea glabrous, lodicules rounded, ovary glabrous, open areas, hills, related to *Tridens* and *Eragrostis*, type *Redfieldia flexuosa* (Thurb. ex A. Gray) Vasey, see *Bulletin Torrey Botanical Club* 14: 133-134. 1887 and *Bull. Soc. Botanique de France* 73: 1023-1024. 1926, *Manual of the Grasses of the United States*, in *United States Department of Agriculture Miscellaneous Publication*. 1935, *Manual of the Grasses of the United States*, in *United States Department of Agriculture Miscellaneous Publication* second edition, revised by A. Chase. 1951, *Botanisches Jahrb.* 76: 281-384. 1954, *Nat. Pflanz.*, second edition, 14: 1-168. 1956, *American Journal of Botany* 44: 756-768. 1957, *Recent Advances in Botany* 1: 133-145. 1961, *American Journal of Botany* 51: 453-463. 1964, *Bothalia* 9: 134-137. 1966, *Brittonia* 23: 105-117. 1971, *Michigan Academician* 5: 373-383. 1973, *The Grasses of Texas* 1975, *Madroño* 23(8): 434-438. 1976, *Kew Bulletin* 37: 133-162. 1982, *American Journal of Botany* 81: 622-629. 1994, *Contributions from the United States National Herbarium* 41: 123-124, 192. 2001, *Flora of North America North of Mexico* 25: 1-783. 2003, *Kew Bulletin* 58(3): 741. 2003.

Species

R. flexuosa (Thurb. ex A. Gray) Vasey (*Grapphephorum flexuosum* Thurb. ex A. Gray; *Redfieldia flexuosa* (A. Gray) Vasey)

Central U.S. Chloridoideae, Cynodonteae, perennial, herbaceous, rhizomatous, florets bearded from callus, lemmas keeled acute to acuminate, plants bisexual, sandy areas,

sand hills, see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Proceedings of the Academy of Natural Sciences of Philadelphia* 1863: 78. 1864, *Bulletin of the Torrey Botanical Club* 14: 133. 1887.

Reederochloa Soderstrom & H.F. Decker

Named after the North American agrostologist, J.R. Reeder.

One species, North America, Mexico. Chloridoideae, Cynodonteae, Monanthochloinae, perennial, herbaceous, unbranched, erect, dimorphic, tufted, stoloniferous, leaves mainly basal, ligule membranous, sheaths ciliate to pilose, leaves mostly basal, auricles absent, plants dioecious, inflorescence of 2-4 clustered spikelets, loose panicles, male florets 3-staminate, fertile spikelets sessile hidden among upper leaf sheaths, 2 glumes unequal 2- to 8-nerved, second glume awnless, lemma acute coriaceous 9- to 14-nerved, palea glabrous, fleshy lodicules, stamens absent, ovary glabrous, 2 stigmas, male spikelets glabrous, alkaline flats, open areas, closely related to *Monanthochloe* and *Distichlis*, type *Reederochloa eludens* Soderstr. H.F. Decker, see *Brittonia* 16(3): 334-339. 1964, *Contributions from the United States National Herbarium* 41: 192. 2001.

Species

R. eludens Sod. & Decker

Mexico. See *Brittonia* 16(3): 335, f. 1-10. 1964, *Taxon* 33: 126-134. 1984.

Rehia Fijten = *Bulbulus* Swallen

After the British botanist Richard Eric Holttum, 1895-1990, traveler and botanical explorer (Malay Peninsula, British North Borneo, Sumatra). See Peter John Edwards, *R.E. Holttum Publications, 1919-1996: A Bibliography*, Peter J. Edwards, Sylvia M.D. Fitzgerald, Robert J. Johns, Lothian Lynas, Margaret R. Newman, Michael G. Price & Patricia J. Wortley, Kew: Royal Botanic Gardens, Kew 1997; J.H. Barnhart, *Biographical notes upon botanists*. 2: 197. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 180. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 351. London 1994.

One species, Brazil and the Guianas, Amazon. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, tufted, slender, herbaceous, unbranched, unarmed, basal culm internode swollen and thickened, ligule membranous, plants monoecious, sexes

mixed in the same inflorescence, inflorescence raceme-like, 2-5 female spikelets with 1-2 male spikelets, 2 glumes acute and papery, lemma pubescent, palea present, stamens absent, forest shade, wet forest, sandy forest, lowland, rain-forest, related to *Olyra* L., type *Rehia nervata* (Swallen) Fijten, see *Phytologia* 11(3): 154. 1964, *Blumea* 22(3): 416. 1975, *Brittonia* 34: 25-29. 1982, *Flora of the Guianas. Series A, Phanerogams* 545-547. 1990, *American Bamboos* 312-314. 1999, *Contributions from the United States National Herbarium* 39: 35, 109. 2000, *J. Amer. Bamboo Soc.* 18(1): 7-18. 2004.

Species

R. nervata (Swallen) Fijten (*Bulbulus nervatus* Swallen; *Rehia nervata* Fijten)

French Guiana, Guyana, Brazil, Suriname. Perennial, erect to decumbent, wiry, cormose, clump forming, leaf sheaths overlapping, synflorescence terminal and contracted, inflorescences partially hidden by the leaves, female spikelet lanceolate, spikelets one-flowered, see *Phytologia* 11(3): 154. 1964, *Fl. Suriname*, Add. & Corr. 1(2): 354. 1968, *Blumea* 22(3): 416. 1975.

Reimaria Humb. & Bonpl. ex Fluegge = *Paspalum* L., *Reimaria* Fluegge

Dedicated to Johann Albert H. Reimarus (1729-1814), philosopher, natural theologian.

Panicoideae, Paniceae, Paspalinae, type *Reimaria candida* Humb. & Bonpl. ex Fluegge, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, Johann Flüggé (Johannes Flueggé or Fluegge), 1775-1816, *Graminum monographiae ... Pars I. Paspalum. Reimaria*. 213-214. Hamburgi 1810 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *U.S. Dept. Agric. Bull.* 772: 227. 20 Mar 1920, *Contributions from the United States National Herbarium* 46: 443-527, 543. 2003.

Reimarochloa A. Hitchc.

Dedicated to J.A.H. Reimarus (1729-1814).

About 4 species, southern U.S. to Argentina. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, herbaceous, tufted, erect, straggling, procumbent, prostrate, sprawling, stoloniferous, auricles absent, plants bisexual, inflorescence of subdigitate or digitate stiff racemes, cleistogamous spikelets, borne singly 2-flowered spikelets acute to acuminate, lower floret sterile, both glumes absent or 1 glume present, upper lemma membranous to coriaceous with narrow margins, lower lemma membranous 3-nerved and palea absent, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, semi-aquatic, wetlands, seasonally inundated fields, muddy places, below shrubs and trees, on sand beaches and along

sandy riverbanks, flats, along rivers and streams, ponds and pond margins, resembling *Digitaria*, related to *Paspalum*, type *Reimarochloa acuta* (Fluegge) Hitchc., see *Species Plantarum* 1: 55, 61. 1753, *Enumeratio Methodica Plantarum* 207. 1759, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Graminum monographiae ... Pars I. Paspalum. Reimaria*. 213-214, 217. 1810 and *Contributions from the United States National Herbarium* 12(6): 198-199. 1909, *Revista de Biología Tropical* 22(2): 247-251. 1975, *Dominguezia* 4: 41. 1982, *Flora of the Guianas. Series A, Phanerogams* 548-551. 1990, *Flora Mesoamericana* 6: 353. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Gramíneas de Bolivia* 506-508. 1998, *Contributions from the United States National Herbarium* 46: 543-544. 2003.

Species

R. aberrans (Döll) Chase (*Reimaria aberrans* Döll; *Reimarochloa aberrans* (Döll) Kuhlm., nom. illeg., non *Reimarochloa aberrans* (Döll) Chase)

Bolivia, Brazil. Stoloniferous, prostrate, nodes usually bearded, leaf blades linear acute or acuminate, inflorescence exserted, spikelets lanceolate glabrous acute or acuminate, moist ground sandy soils, see *Flora Brasiliensis* 2(2): 38, pl. 13. 1877 and *Proceedings of the Biological Society of Washington* 24: 137. 1911, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 91. 1922.

R. acuta (Fluegge) Hitchc. (*Agrostis brasiliensis* Spreng.; *Panicum acutum* (Fluegge) Raspail; *Panicum oxyanthum* Steud.; *Reimaria acuta* Fluegge; *Reimaria acuta* var. *glabrata* Döll; *Reimaria acuta* var. *villosa* Döll; *Reimaria brasiliensis* (Spreng.) Schltr.; *Reimarochloa acuta* (Fluegge) Kuhlm., nom. illeg., non *Reimarochloa acuta* (Fluegge) Hitchc.; *Reimarochloa brasiliensis* (Spreng.) Hitchc.)

Venezuela. Stoloniferous, prostrate, erect, nodes pubescent, leaf blades linear acute glabrous or pilose, leaf sheaths inflated, inflorescence exserted, racemes erect or deflexed, spikelets cleistogamous lanceolate acuminate glabrous or pilose, upper glume absent, along sandy riverbanks, flats, along rivers and streams, ponds and pond margins, see *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* . 45. 1818, *Annales des Sciences Naturelles (Paris)* 5: 299. 1825, *Botanische Zeitung. Berlin* 10: 17. 1852, *Synopsis Plantarum Glumacearum* 1: 41. 1853, *Flora Brasiliensis* 2(2): 38. 1877 and *Contributions from the United States National Herbarium* 12(6): 198. 1909, *Comissão de Linhas Telegraficas, Botanica* 67(Bot. 11): 91. 1922.

R. brasiliensis (Spreng.) Hitchc. (*Agrostis brasiliensis* Spreng.; *Panicum oxyanthum* Steud.; *Reimaria brasiliensis* (Spreng.) Schltr.)

Brazil. See *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* . 45. 1818, *Botanische Zeitung.*

Berlin 10: 17. 1852, *Synopsis Plantarum Glumacearum* 1: 41. 1853 and *Contributions from the United States National Herbarium* 12(6): 198. 1909.

R. oligostachya (Munro ex Benth.) Hitchc. (*Reimaria oligostachya* Munro ex Benth.)

U.S., Florida; the Caribbean. See *Journal of the Linnean Society, Botany* 19: 34. 1881 and *Contributions from the United States National Herbarium* 12(6): 199. 1909.

Reimbolea Debeaux

See *Revue de Botanique, Bulletin Mensuel* 8: 266. 1890 and *Genera Graminum* 376. 1986.

Reitzia Swallen

Named for the Brazilian botanist Padre Raulino Reitz, 1919-1990, Jesuit, author and editor of *Flora Ilustrada Catarinense*. Conselho Nacional de Pesquisas. Instituto Brasileiro de Desenvolvimento Florestal. Herbário "Barbosa Rodrigues." Itajaí, Brazil 1965-1988. See *Candollea* 46: 418. 1991; *Taxon* 42: 930. 1993; *Darwiniana* 37(1-2): 157. 1999; *Harvard Pap. Bot.* 4(1): 275. 1999.

One species, Brazil. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, herbaceous, unarmed, unbranched, densely tufted, leafy, small, clump-forming, rhizomes pachymorph, plants monoecious, sexes mixed in the same inflorescence, inflorescence raceme-like, 2-5 female spikelets with 1-2 male spikelets, all the fertile spikelets unisexual, 2 glumes coriaceous, lemma of male spikelets 3- to 5-nerved, palea present, stamens absent, male florets 3-staminate, 2 plumose stigmas, in forest, shade, similar to *Olyra* L., type *Reitzia smithii* Swallen, see *Sellowia* 7: 7-8. 1956, *American Bamboos* 314-316. 1999, *Contributions from the United States National Herbarium* 39: 109. 2000, *J. Amer. Bamboo Soc.* 18(1): 7-18. 2004.

Species

R. smithii Swallen (for L.B. Smith)

Brazil. Female spikelet lanceolate, glumes acuminate, lemma cartilaginous, see *Flora Ilustrada Catarinense* 1(Gram.): 1-435. 1981.

in Brazil: capim-zebra

Relchela Steud. = *Lechlera* Griseb. (Iridaceae), *Lechlera* Steud.

An anagram of *Lechlera* Steud.

Dedicated to the German botanist Wilibald (Willibaldus) Lechler, 1814-1856, naturalist, pharmacist, explorer, 1850-1855 Chile, author of *Berberides Americae australis*.

[Edited by G. Zeller.] Stuttgartiae 1857, see J.H. Barnhart, *Biographical notes upon botanists*. 2: 357. 1965.

One species, Chile, Argentina. Pooideae, Poeae, Aveninae, or Pooideae, Poodae, Aveneae, perennial, herbaceous, unbranched, rhizomatous, stoloniferous, auricles absent, ligule an unfringed membrane, plants bisexual, contracted inflorescence paniculate, spikelets pedicellate and imbricate, 2 glumes subequal or unequal, lemmas rounded awnless, palea coriaceous, 2 free and membranous lodicules, 3 stamens, ovary hairy on top, 2 stigmas, cleistogamous and chasmogamous, forest, shade, woodland margins, linked with *Helictotrichon*, confused with *Calamagrostis* or *Stipa*, type *Relchela panicoides* Steud., see *Species Plantarum* 1: 55, 61. 1753, *Synopsis Plantarum Glumacearum* 1: 101. 1855 [1854] and *Journal of the Arnold Arboretum* 22: 209-218, pl. 1. 1941, E.G. Nicora & Z.E. Rúgolo de Agrasar, *Los generos de Gramineas de America Austral*. Editorial Hemisferio sur S.A. Buenos Aires 1987, *Contributions from the United States National Herbarium* 48: 421, 602. 2003.

Species

R. panicoides Steud. (*Agrostis asperula* Phil.; *Agrostis coralensis* Phil.; *Agrostis limonias* Phil.; *Panicum oligostachyum* Steud.)

Chile. Panicle contracted, spikelets 1- to 2-flowered, glumes membranous, margins of lemma covering the palea, see *Synopsis Plantarum Glumacearum* 1: 97, 101. 1854, *Linnaea* 29(1): 87. 1857-1858, *Linnaea* 33(3-4): 286. 1864 and *Gayana, Botánica* 54(2): 91-156. 1997.

Rendlia Chioyenda = *Microchloa* R. Br.

After the British (b. London) botanist Alfred Barton Rendle, 1865-1938 (d. Surrey), traveler, plant collector, in 1888 a fellow of the Linnean Society, keeper of the Botany Dept. of the British Museum (Natural History), 1923-1927 president of the Linnean Society, 1909 fellow of the Royal Society, editor of the *Journal of Botany*. See Alfred Barton Rendle and al., "Catalogue of the Plants collected by Mr. and Mrs. P.A. Talbot in the Oban District of South Nigeria." *British Museum Trustees, Natural History*. [For the English botanist Spencer Le Marchant Moore, 1850-1931, was co-author.] London 1913; J.H. Barnhart, *Biographical notes upon botanists*. 3: 144. 1965; T.W. Bossert, compilation, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 329. Boston, Mass. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 342. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Elmer Drew Merrill, *Contr. U.S. Natl. Herb.* 30(1): 253-254. 1947 and *Bernice P. Bishop Mus. Bull.* 144: 157. 1937; Fawcett et Rendle, *Flora of Jamaica*. 1910-1936; William Philip Hiern (1839-1925), *Catalogue of the African Plants Collected by*

F. Welwitsch in 1853-61. London 1896-1901; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14 Aufl. Stuttgart 1993; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980; Gilbert Westacott Reynolds, *The Aloes of South Africa*. Rotterdam 1982.

One species, eastern tropical and southern Africa. Chloridoideae, Cynodonteae, Chloridinae, perennial, herbaceous, short, unbranched, unarmed, densely tufted, cushion-like, leaves mostly basal, auricles absent, ligule a fringed membrane, old leaf sheaths fibrous, leaf blade folded and wiry, plants bisexual, inflorescence a single spike, spikelets solitary, incomplete florets distal to the female fertile florets, lower floret bisexual, upper floret male or sterile, 2 glumes more or less equal, glumes longer than florets, upper glume 1-nerved, palea present or absent, 2 free and fleshy lodicules or sometimes absent, 3 stamens, ovary glabrous, ovary suppressed in the upper floret, 2 dark stigmas, open areas, shallow soils, savannah, grasslands, well-drained sandy soils, type *Rendlia obtusifolia* Chiov., see *Prodromus Florae Novae Hollandiae* 208. 1810, *Révision des Graminées* 1: 92. 1829, *Bulletin de l'Herbier Boissier* 7(1): 25. 1899 and *Annali di Botanica* 13: 53-55. 1914, *Bulletin de la Société Botanique de Belgique* 96: 128. 1963, *Kew Bulletin* 37: 419. 1982, *Kew Bulletin* 40(4): 90-91. 1985, Watson and Dallwitz, *The Grass Genera of the World*. 817-818. 1994, *Bothalia* 24(1): 92-96. 1994, *Contributions from the United States National Herbarium* 41: 137, 141. 2001.

Species

R. altera (Rendle) Chiov. (*Harpechloa altera* Rendle; *Microchloa altera* var. *nelsonii* Stapf; *Rendlia nelsonii* (Stapf) Chiov.)

Tropical Africa. Perennial, tufted, wiry, leaf sheaths persistent and woolly when old, ligule a fringed membrane, spikelets with 2 florets, relatively unpalatable, grazed, see *Flora Capensis* 7: 637. 1900, *Annali di Botanica* 13: 54. 1914.

in English: Mahem's crest (*mahem* is a name for the crowned crane), toothbrush grass

in South Africa: kleinrolblaar

Rettbergia Raddi = *Chusquea* Kunth

Bambusoideae, Bambuseae, Chusqueinae, type *Rettbergia bambusoides* Raddi, see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Synopsis Plantarum* 1: 254. 1822, *Agrostografia Brasiliensis* 17-18, t. 1, f. 1. Lucca 1823, *Linnaea* 9(4): 467, 489. 1834, *Flora Brasiliensis* 2(3): 196. 1880 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 20. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 81. 1908, *Brittonia* 48(2): 250. 1996, *The Bamboos* 3: 33-44. 1997, *Contributions from the United States National Herbarium* 39: 36-52, 109. 2000.

Reynaudia Kunth

Named for A.A. Reynaud, b. 1804, botanical collector in Burma, Cape. See 1829 Collection Blossville/Reynaud, *Expédition de la Gabarre La Chevette*, Indian Ocean, 1827-1828.

One species, West Indies, the Caribbean, Cuba. Panicoideae, Panicodae, Paniceae (Arthropogoneae), or Panicoideae, Paniceae, Arthropogoninae, perennial, herbaceous, unbranched, tufted, leaves basal, auricles absent, plants bisexual, contracted inflorescence paniculate, spikelets pedicellate and flattened, 2 florets, lower floret present, 2 membranous glumes nerved and awned, lower lemma mucronate, palea absent, 2 stamens, type *Reynaudia filiformis* (Spreng. ex Schult.) Kunth, savannah, prairies, open areas, slopes, see *Flora Atlantica* 1: 66. 1798 [1800], *Révision des Graminées* 1: 72, 195. 1829-1830 and *Ann. Missouri Bot. Gard.* 88: 351-372. 2001, *Contributions from the United States National Herbarium* 46: 542, 544. 2003.

Species

R. filiformis (Spreng. ex Schult.) Kunth (*Polypogon cubensis* A. Rich.; *Polypogon filiformis* Spreng. ex Schult.)

West Indies, the Caribbean. Densely tufted, lower glume narrowly oblong and bilobed, see *Mantissa* 2: 182. 1824, *Révision des Graminées* 1: 195. 1830, *Historia Fisica Politica y Natural de la Isla de Cuba*, *Botanica* 11: 313. 1850 and *Genera Graminum* 300-301. 1986.

Rhabdochloa Kunth

Orthographic variant of *Rabdochloa* P. Beauv.

See *Mémoires du Muséum d'Histoire Naturelle* 2: 73. 1815.

Rhachidospermum Vasey = Jouvea E. Fourn.

From the Greek *rhachis* "rachis, axis" and *sperma* "a seed."

Chloridoideae, Eragrostideae, type *Rhachidospermum mexicanum* Vasey, see *Bulletin de la Société Botanique de Belgique* 15(3): 475-476. 1876, *Botanical Gazette* 15: 106, 110, t. 12. 1890, *Bulletin of the Torrey Botanical Club* 23: 143. 1896 and *Bulletin Torrey Botanical Club* 66: 315-325. 1939, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 168. 1956, *Brittonia* 23(3): 293-324. 1971, *Ceiba* 19(1): 1-118. 1975, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Flora Novo-Galiciana* 14: 1-436. 1983, *Memoir San Diego Society of Natural History* 16: 1-66. 1989, *Flora Mesoamericana* 6: 258-259. 1994, *Contributions from the United States National Herbarium* 41: 129, 192. 2001, *Flora of Ecuador* 68: 13-14. 2001.

Rhampholepis Stapf = Sacciolepis Nash

Greek *rhamphos* "a beak" and *lepis* "a scale."

Paniceae, type *Sacciolepis curvata* (L.) Chase, see *Manual of the Flora of the Northern States and Canada* 89. 1901, *Proceedings of the Biological Society of Washington* 21: 8. 1908, *Flora of Tropical Africa* 9: 15. 1917.

Rhaphis Lour. = Chrysopogon Trin., Rhaphis Walp. (Arecaceae)

From the Greek *rhaphis* "a needle."

Panicoideae, Andropogoneae, Sorghinae, type *Rhaphis trivialis* Lour., see *Species Plantarum* 2: 1045. 1753, *Flora Cochinchinensis* 538, 552-553. 1790, *Fundamenta Agrostographiae* 187-188. 1820, *Annales Botanicae Systematicae* 3: 471. 1852, *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *Boissiera*. 9: 282, 289. 1960, *Contributions from the United States National Herbarium* 46: 159-161, 544-545. 2003.

Rheochloa Filg., P.M. Peterson & Y. Herrera

Alluding to the flightless bird, common *Rhea*, also called *nandu*, after which the type locality of the genus is named.

One species, Brazil. Chloridoideae, Cynodonteae, perennial, leaf blades lanceolate, ligule a fringed membrane, plants bisexual, 2 glumes, 3 stamens, ovary glabrous, 2 stigmas, type *Rheochloa scabriflora* Filg., P.M. Peterson & Y. Herrera, see *Syst. Bot.* 24(2): 123-127, f. 1-3. 1999, *Contributions from the United States National Herbarium* 41: 192. 2001.

Species

R. scabriflora Filg., P.M. Peterson & Y. Herrera

Central Brazil. Herbaceous, decumbent, weak, internodes hollow, grassland, savannah, scrub forest, chaparral.

Rhiniachne Steud. = Thelepogon Roth ex Roemer & Schult.

Greek *rhine* "a file, rasp" or *rhis*, *rhinos* "snout, nose" and *achne* "chaff, glume." Andropogoneae, in syn. sub *Jardinea abyssinica*, see *Flora Aegyptiaco-Arabica* 178. 1775, *Systema Vegetabilium* 2: 46, 788. 1817, *Novae Plantarum Species* 62. 1821, *Gramineae* 67-68. 1841, *Nova Acta Phys. Med. Acad. Caes. Leop. Carol. Nat. Cur.* 19(Suppl. 1): 199-200. 1843, *Tentamen Florae Abyssinicae ...* 2: 470. 1850, *Synopsis Plantarum Glumacearum* 1: 360. 1854 and *Petite Flore de l'Ouest-Africain* 410. 1954.

Rhipidocladum McClure

From the Greek *rhipis*, *rhipidos* “a bellows, a lady’s fan, a fan” and *klados* “branch.”

About 10/17-20 species, Mexico to Brazil, Bolivia, Argentina. Bambusoideae, Bambuseae, Arthrotyliidiinae, or Bambusoideae, Bambusodae, Bambuseae, perennial, sympodial, woody, shrubby, tree or scrambler, hollow, branched, fan-shaped branch clusters, unarmed, caespitose, slender, erect, more or less scandent, climbing, arching, viny, drooping, blade of culm-sheath not constricted at base, midculm nodes with subsidiary branchlets, stiff and erect blades, plants bisexual, inflorescence determinate, raceme loose and unilateral, spikelets single more or less crowded, awned or unawned, 2-3 unequal glumes, palea 2-keeled, 0-3 lodicules, 3 stamens, ovary glabrous, 2 stigmas, savannah, forest, lowland forest, stream banks, moist forests, jungle, secondary vegetation, montane, páramos, montane evergreen forest, along roadsides, wet slopes, semideciduous broadleaf forest, related to *Merostachys*, type *Rhipidocladum armonicum* (Parodi) McClure, see *Flora Boreali-Americana* 1: 73. 1803, *Bambuseae* 27. 1839 and *Journal of the Washington Academy of Sciences* 32(6): 167, f. 1. 1942, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Ceiba* 19(1): 1-118. 1975, *Phytologia* 37(4): 317-407. 1977, *Fieldiana, Botany, New Series* 4: 1-608. 1980, *Flora Novogaliciana* 14: 1-436. 1983, *Annals of the Missouri Botanical Garden* 72(2): 272-276. 1985, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Flora of the Guianas. Series A, Phanerogams* 551-556. 1990, *Novon* 1(2): 76-87. 1991, *American Journal of Botany* 78(9): 1260-1279. 1991, *Cuscatlania* 1(6): 1-29. 1991, *Novon* 2(2): 81-110. 1992, *Ruizia* 13: 1-480. 1993, *Systematic Botany* 18(1): 80-99. 1993, *Flora Mesoamericana* 6: 199-201. 1994, *American Bamboos* 190-194. 1999, William T. Pockman & John S. Sperry, “Vulnerability to xylem cavitation and the distribution of Sonoran Desert vegetation.” *Am. J. Bot.* 87: 1287-1299. 2000, *Contributions from the United States National Herbarium* 39: 109-111. 2000, Laura L. Jaquish & Frank W. Ewers, “Seasonal conductivity and embolism in the roots and stems of two clonal ring-porous trees, *Sassafras albidum* (Lauraceae) and *Rhus typhina* (Anacardiaceae).” *Am. J. Bot.* 88: 206-212. 2001, *Botanical Journal of the Linnean Society* 138(1): 45-55. Jan 2002 [Cauline anatomy of native woody bamboos in Argentina and neighbouring areas: epidermis].

Species

R. abregoense Londoño & L.G. Clark (*Rhipidocladum abregoensis* Londoño & L.G. Clark)

Colombia. See *Novon* 8(4): 419, f. 5. 1998.

R. ampliflorum (McClure) McClure (*Arthrotylidium ampliflorum* McClure)

Venezuela. See *Journal of the Washington Academy of Sciences* 32(6): 167, f. 1. 1942, *Smithsonian Contributions to Botany* 9: 105. 1973.

R. angustiflorum (Stapf) McClure (*Arthrotylidium angustiflorum* Stapf)

Tropical America. See *Bulletin of Miscellaneous Information Kew* 1913: 268. 1913, *Smithsonian Contributions to Botany* 9: 105. 1973.

R. bartlettii (McClure) McClure (*Arthrotylidium bartlettii* McClure) (after the American botanist Harley Harris Bartlett, 1886-1960, professor of botany, biologist, traveler and botanical explorer (Southeast Asia, Mexico, Central America and Argentina), plant collector, author of “The Concept of the genus.” *Bull. Torrey Bot. Club.* 67: 349-389. 1940, “Sumatran plants collected in Asahan and Karoland, with notes on their vernacular names.” *Pap. Mich. Acad. Sci.* 6: 1-66. 1926, “The Batak lands of North Sumatra, from the standpoint of recent American botanical collections.” *Nat. Appl. Sci. Bull.* 4: 211-323. 1935. See *Asa Gray Bull.* n.s. 3: 291-561. 1961; J.H. Barnhart, *Biographical notes upon botanists.* 1: 131. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 27. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* 115. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* Library of the New York Botanical Garden. 24. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States.* New York and London 1969; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen.* 14. Aufl. Stuttgart 1993; Irving William Knobloch, compilation, “A preliminary verified list of plant collectors in Mexico.” *Phytologia Memoirs.* VI. Plainfield, N.J. 1983)

Mexico, Guatemala, Belize. Erect, climbing, arching, slender, scandent, sprawling, shrubby, clumped, forest, riverbanks, deciduous forest, see *Phytologia* 5(1): 81. 1954, *Smithsonian Contributions to Botany* 9: 105. 1973.

R. clarkiae R.W. Pohl (named for L.G. Clark)

Costa Rica. Erect, climbing, arching, drooping, slender, scandent, clambering, sprawling, shrubby, densely clumped, internodes hollow, wet forest, see *Annals of the Missouri Botanical Garden* 72(2): 272, f. 1a-e. 1985.

R. geminatum (McClure) McClure (*Arthrotylidium geminatum* McClure)

Venezuela, Colombia. Erect, arching at tip, hanging over, stiff, densely clumped, heavy, woody, tough, twin nodes, internodes hollow, paired spikelets, culms filled with water,

1 elongated internode followed by a very short internode, fascicles of branches from the nodes, páramos, montane forest, pastures, see *Journal of the Washington Academy of Sciences* 32(6): 169, f. 2. 1942, *Smithsonian Contributions to Botany* 9: 105. 1973, *American Journal of Botany* 78(9): 1271. 1991.

in Colombia: popo

in Venezuela: tunda

R. harmonicum (Parodi) McClure (*Arthrostylidium harmonicum* Parodi)

Colombia, Bolivia, Mexico, Ecuador. Unarmed, arching, leaf blades linear or linear-ovate acuminate, bilateral raceme, each raceme with 4-8 spikelets, rachis zigzag, 2-3 glumes acute, 1-2 lemmas obtuse sterile, moist wood, see *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 19: 479, f. 1. 1944, *Smithsonian Contributions to Botany* 9: 101, 105, f. 42. 1973.

R. longispiculatum Londoño & L.G. Clark

Colombia. Woody, forming large colonies, forest, slopes, see Volkmar Vareschi (1906-1991), *Flora de Los Páramos de Venezuela*. Universidad de Los Andes. Merida - Venezuela 1970, *American Journal of Botany* 78(9): 1272. 1991, Karl Weidmann, *Páramos venezolanos*. Caracas 1991.

R. martinezii Davidse & R.W. Pohl (named for the Mexican botanist Esteban Martínez Soto, botanical collector. See *Listados florísticos de Mexico*. 22, Region de Calakmul, Campeche / Esteban Martínez, Mario Sousa S., Clara Hilda Ramos Alvarez. Mexico City: Universidad Nacional Autónoma de México, Instituto de Biología, 2001; *Fl. Neotrop. Monogr.* 52: 154. 1990; *Acta Bot. Mex.* 18: 25. 1992; *Novon* 4: 123. 1994; *Sida* 18: 227. 1998; *Harvard Pap. Bot.* 5(2): 408. 2001; *Acta Bot. Hung.* 45(1-2): 2. 2003)

Mexico. Erect, montane forest, see *Novon* 2(2): 90, f. 4. 1992.

R. maxonii (Hitchc.) McClure (*Arthrostylidium maxonii* Hitchc.; *Rhipidocladum* aff. *maxonii* (Hitchc.) McClure) (after the American botanist William Ralph Maxon, 1877-1948, pteridologist, botanical collector in Costa Rica, Cuba, Guatemala, Jamaica, Nicaragua, Panama, United States of America, his writings include *A Study of Certain Mexican and Guatemalan Species of Polypodium*. 1903, *Studies of Tropical American Ferns*. 1908, "Studies of tropical American ferns. No. 4." *Contr. U.S. Natl. Herb.* 17: 133-179. 1913, "Report upon a collection of ferns from western South America." *Smithsonian Misc. Collect.* 65(8): 1-12. 1915, "Studies of tropical American ferns. No. 6." *Contr. U.S. Natl. Herb.* 17: 541-608. 1916, "The lip-ferns of the southwestern United States related to *Cheilanthes myriophylla*." *Proc. Biol. Soc. Wash.* 31: 139-152. 1918, *New Selaginellas from the Western United States*. City of Washington 1920 and *Pteridophyta of Porto Rico and the Virgin Islands*. [New York] 1926, with Charles Alfred Weatherby

(1875-1949) wrote "Some species of *Notholaena*, new and old. I. The group of *Notholaena nivea*." *Contr. Gray Herb.* 127: 3-15. 1939. See *Phytologia* 52: 230. 1982; J.H. Barnhart, *Biographical notes upon botanists*. 2: 466. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 258. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 283-284. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. 100. New York and London 1969; Thomas Henry Kearney (1874-1956), *Leaflet. Western Bot.* 8: 277-278. 1958; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Guyana, Costa Rica. Erect, arching, woody, vining, weak, hollow, delicate, loosely tufted, rhizomes pachymorph sympodial, forming large colonies or tangled masses, forest, forest floor, see *Proceedings of the Biological Society of Washington* 40: 80. 1927, *Smithsonian Contributions to Botany* 9: 105. 1973.

R. neumannii Sulekic, Rúgolo & L.G. Clark (*Rhipidocladum neumannii* Sulekic, Rúgolo & L.G. Clark)

Argentina, Bolivia. Perennial, rhizomatous, erect, arching, scandent, scrambling, shrubby, slender, tapering, densely clumped, hollow stems, used for making whistles and flutes, forest, slopes, see *Bull. Brit. Mus. (Nat. Hist.), Bot.* 20: 24. 1990, *Darwiniana* 35: 155. 1998, *Darwiniana* 37(3-4): 317, 341, f. 1-2. 1999.

R. pacuarensis R.W. Pohl

Nicaragua, Costa Rica. Erect, climbing, forming colonies, see *Annals of the Missouri Botanical Garden* 72(2): 273, f. 1 f-i. 1985.

R. panamense R.W. Pohl

Panama. Erect, clambering, see *Annals of the Missouri Botanical Garden* 72(2): 275, f. 1 j-l. 1985.

R. parviflorum (Trin.) McClure (*Arthrostylidium trinii* Rupr.; *Arundinaria parviflora* Trin.; *Arundinaria trinii* Rupr. ex Döll)

Venezuela, Peru, Colombia, Brazil. Erect, weak, delicate, upper nodes more branched, lower nodes with 1-sided branching, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(6): 619. 1835, *Bambuseae* 29, t. 4. 1839, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles*

3(1): 119. 1839, *Fl. Bras.* 2(3): 174. 1880 and *Smithsonian Contributions to Botany* 9: 105. 1973.

R. pittieri (Hack.) McClure (*Arthrostylidium excelsum* Griseb.; *Arthrostylidium pittieri* Hack.; *Arundinaria excelsa* (Griseb.) Hack.; *Arundinaria pittieri* (Hack.) E.G. Camus)

Nicaragua, Mexico, Guatemala, Honduras. Erect, tufted, shrubby, crowded, densely clumped, arching, clambering, scrambling, hollow, drooping, slender to very slender, forming large colonies, forest, along roadsides, on slopes, used to make baskets and buildings, see *Flora of the British West Indian Islands* 529. 1864 and *Österreichische Botanische Zeitschrift* 53: 69, 75, 516. 1903, *Les Bambusées* 40. 1913, *Smithsonian Contributions to Botany* 9: 105. 1973.

in El Salvador: jumilile

in Mexico: jimba

R. prestoei (Munro) McClure (*Arthrostylidium prestoei* Munro; *Arundinaria prestoei* (Munro) Hack.) (after the British botanist Henry Prestoe, 1842-1923 (Sussex), gardener, traveler, plant collector, 1864-1886 Government Botanist Trinidad, author of *Report on the Coffee Cultivation in Dominica*. Trinidad 1875, *List of Duplicate Plants in the Government Botanic Gardens, November 1874*. Port of Spain: G.P.O. 1874, *Catalogue of Plants Cultivated in the Royal Botanical Gardens, Trinidad, from 1865 to 1870*. Port of Spain 1870. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 108. 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 563. London 1994; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; A. Henderson & G. Galeano, "Euterpe, Prestoea, and Neonicholsonia (Palmae: Euterpeinae)." *Flora Neotropica*. vol. 72. The New York Botanical Garden, New York 1996; Ignatz Urban (1848-1931), editor, *Symbolae Antillanae*. Berlin 1902)

The Caribbean. See *Bulletin of Miscellaneous Information Kew* 1895: 186. 1895 and *Österreichische Botanische Zeitschrift* 53: 516. 1903, *Smithsonian Contributions to Botany* 9: 106. 1973.

R. racemiflorum (Steud.) McClure (*Arthrostylidium racemiflorum* Steud.; *Arundinaria racemiflora* (Steud.) Hack.; *Merostachys racemiflora* (Steud.) E. Fourn.; *Rhipidoctadum parviflorum* (Trin.) McClure)

Central Panama, Venezuela, Bolivia, Suriname, the Caribbean, Mexico, Guatemala. Erect, woody, caespitose, arching, clambering, scrambling, trailing, drooping, vinelike bamboo, hollow, smooth, 60-80 branches per node, forming large colonies, sympodial rhizomes, leaf blades lanceolate, inflorescence shortly racemose with 10 spikelets per raceme, spikelets crowded and unawned, sterile lemma solitary, ornamental, handicrafts, fences, forest, savannah, sandy or stony soils, forest floor, see *Systema Vegetabilium, editio decima sexta* 1: 132, 249. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg*.

Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 3,1(6): 619. 1835, *Synopsis Plantarum Glumacearum* 1: 336. 1854, *Mexic. Pl.* 2: 131. 1886 and *Österreichische Botanische Zeitschrift* 53: 516. 1903, *Smithsonian Contributions to Botany* 9: 105-106. 1973, *American Journal of Botany* 78(9): 1275. 1991, H. Cochard, F.W. Ewers & M.T. Tyree, "Water relations of a tropical vinelike bamboo (*Rhipidoctadum racemiflorum*): root pressures, vulnerability to cavitation and seasonal changes in embolism." *Journal of Experimental Botany* 45(277): 1085-1089. 1994, *Darwiniana* 37(3-4): 317, 341, f. 1-2. 1999.

in Bolivia: tacuarilla

in Mexico: canutillo, chiquilla, chiquión, chiquita, gui-yaa, otate, otatillo

R. sibilans Davidse, Judz. & L.G. Clark

Venezuela. Woody, smooth, hollow, caespitose, clumped, narrow foliage leaf blades, spikelets terminal and awned, used for making whistles, see *Novon* 1(2): 84, f. 5, 6. 1991.

Rhizocephalus Boiss.

From the Greek *rhiza* "root" and *kephale* "head," referring to the shortly pedicellate spikelets.

Two species, Asia central and southwest, eastern Mediterranean. Pooideae, Poeae, Aveneae, annual, herbaceous, short to dwarf, leaves basal, auricles absent, ligule an unfringed membrane, plants bisexual, contracted inflorescence sessile, panicle capitate, 2 glumes subequal or equal, lemma coriaceous 5-nerved mucronate, palea well developed, lodicules absent, 2 stamens, ovary glabrous, 2 stigmas, caryopsis rostrate, open areas, dry and arid regions, similar to *Crypsis* and related to *Phleum*, type *Rhizocephalus orientalis* Boiss., see *Collectanea* 233. 1809, *Diagnoses plantarum orientalium novarum* 1(5): 68. 1844 and *Flora of Syria, Palestine, and Sinai* 2: 717. 1933, *Flora URSS* 2: 127, 743. 1934.

Species

R. orientalis Boiss. (*Heleochloa orientalis* (Boiss.) Dinsm.; *Heleochloa turkestanica* Litw.; *Rhizocephalus turkestanicus* (Litw.) Roshev.)

Asia.

R. turkestanicus (Litw.) Roshev. (*Heleochloa turkestanica* Litw.; *Rhizocephalus orientalis* Boiss.)

Eurasia. Glumes acute, lemma keeled.

Rhombolytrum E. Desv. = *Rhombolytrum* Link

Orth. var., see *Flora Chilena* 6: 387. 1854.

Rhombolythrum Airy Shaw

See *Rhombolythrum* Link.

Rhombolythrum Link = *Gymnachne* Parodi,
Rhomboelythrum E. Desv.

Greek *rhombos* and *elytron* "sheath, scale, husk," lemmas broadly lanceolate or rhomboid.

About 2-3 species, South America, Uruguay, southern Brazil, Chile. Pooideae, Poeae, Brizinae, or Pooideae, Poodae, Poeae, perennial, herbaceous, unbranched, tufted, rhizomatous, auricles absent, ligule an unfringed membrane, plants bisexual, panicle loosely contracted, spikelets pedicellate and imbricate, several flowered, short rachilla, 2 glumes subequal, lemmas keeled and dorsally compressed, palea present, 2 free and membranous lodicules, 1 stamen, ovary glabrous, 2 stigmas, cleistogamous or chasmogamous, stony places, slopes, open areas, sometimes treated as a synonym of *Poidium*, type *Rhombolythrum rhomboideum* Link, see *Species Plantarum* 1: 67, 70. 1753, *Prodromus Florae Novae Hollandiae* 182. 1810, *Hortus Regius Botanicus Berolinensis* 2: 296. 1833, *Flora Chilena* 6: 387, t. 81, f. 1. 1854, *Linnaea* 33(3-4): 293. 1864, *Die Natürlichen Pflanzenfamilien* 2(2): 68. 1887, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): t. 33. 1891 and *Manual of the Flora of the Northern States and Canada* 129. 1901, *Notas del Museo de la Plata, Botánica* 3: 29, 30, f. 4. 1938, *Darwiniana* 23: 298-302. 1981, *Contributions from the United States National Herbarium* 48: 381, 602-603. 2003.

Species

R. monandrum (Hack.) Nicora & Rúgolo (*Briza bidentata* Roseng., B.R. Arrill. & Izag.; *Briza monandra* (Hack.) Pilg.; *Eragrostis monandra* Hack.)

Brazil. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 320. 1909, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 725. 1929, *Boletín de la Facultad de Agronomía de Universidad de la República, Montevideo* 105: 24. 1968, *Darwiniana* 23: 302. 1981.

R. rhomboideum Link (*Poa tumidula* Steud.; *Rhombolythrum quinquevenium* Phil.)

Chile. See *Hortus Regius Botanicus Berolinensis* 2: 296. 1833, *Synopsis Plantarum Glumacearum* 1: 258. 1854, *Linnaea* 33(3-4): 293. 1864.

Rhynchelythrum Nees = *Melinis* P. Beauv.

See *Rhynchelythrum* Nees.

Rhynchelythrum Nees = *Melinis* P. Beauv.,
Monachyron Parl., *Monachyron* Parl. ex Hook.

From the Greek *rhynchos* "horn, beak, snout" and *elytron* "sheath, cover, scale, husk," referring to the upper glume and lower lemmas.

About 14-37 species, tropical Africa, Madagascar, Arabia, Southeast Asia, Indochina. Panicoideae, Panicodae, Paniceae, Melinideae, rarely annual or mostly perennial, herbaceous, rhizomatous or stoloniferous, clumped, erect or ascending, often geniculate and often rooting at the lower nodes, branched or unbranched, ligule fringed, leaf blades narrow filiform linear, auricles present or absent, plants bisexual, inflorescence racemose or paniculate, finely branched panicle, spikelets short-stipitate and keeled, lower floret staminate or neuter, upper floret perfect, 2 glumes very unequal, reduced lower glume, second glume laterally swollen and beaked, upper glume 5-nerved awned or awnless, upper lemma laterally flattened, lower lemma tapering to a narrow beak, awned or awnless, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, ornamental flowering panicle, weed species, often in open habitats, disturbed places, rainforest, open stony hillsides, savannah, grassland, a genus of closely related species, a difficult genus, sometimes referred to *Melinis* and *Tricholaena*, sometimes synonymized with *Melinis*, type *Rhynchelythrum dregeanum* Nees, see *Species Plantarum* 1: 54-55. 1753, *Essai d'une Nouvelle Agrostographie* 54, t. 11, f. 4. 1812, *Mantissa* 2: 8, 163. 1824, John Lindley, *A Natural System of Botany*. second edition. 378, 446. London (Oct.) 1836, *Linnaea* 11(Litt.-Ber.): 129. 1837, *Niger Flora* 190-191. 1849, *Synopsis Plantarum Glumacearum* 1: 120. 1854, *Gen. S. Afr. Pl.* edition 2: 428. 1869, *Proceedings of the Royal Society of Edinburgh* 12: 97, 411. 1884, *Fodd. Grasses N. India* 21. 1888, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 143. 1888, *Conspectus Florae Africae* 5: 769. 1894, *Die Pflanzenwelt Ost-Afrikas* 104. 1895, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 355. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 196-198, 200-201. 1899, *Flora Capensis* 7: 442-443. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 133. 1904, *Boll. Reale Orto Bot. Giardino Colon. Palermo* 9: 49. 1910, *Annali di Botanica* 8: 310. 1911, *Journal of the Linnean Society, Botany* 40: 232. 1911, *Annali di Botanica* 13: 45. 1914, *Nuovo Giornale Botanico Italiano* 26: 78. 1919, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 198-200. 1921, *Kew Bulletin* 1925: 364. 1925, *Feddes Rep. Beih.* 40, 1: Anh. 19. 1930, *Flora of Tropical Africa* 9: 870, 874, 879-880, 885-887, 889-892, 895-897, 900-907. 1930, *Bulletin du Jardin Botanique de l'État* 9: 193, t. 3. 1932, *Bulletin of Miscellaneous Information Kew* 1936(5): 323-324. 1936,

Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem 13: 697. 1937, *Kew Bull.* 1939: 649. 1940, *Willdenowia* 6: 285-289. 1971, *Flora of Tropical East Africa* 451-898. 1982, *Bibliotheca Botanica* 138: 1-149. 1988, *Flora Mesoamericana* 6: 365. 1994, O. Morrone & F.O. Zuloaga, "Géneros *Paspalidium*, *Pennisetum*, *Rhynchelytrum*, *Stenotaphrum* y *Urochloa*. In *Panicaceae*, parte A, fascículo 18, parte 1. *Flora Fanerogámica Argentina* 12. 1995, *Austral. Ecology* 25(2): 140-149, 507-522. Apr 2000, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Journal of Phytopathology* 150(4-5): 196-199. May 2002 [*Heteropogon triticeus*, a new host of *Claviceps sorghi* in India], *Contributions from the United States National Herbarium* 46: 287, 297, 545. 2003, *Journal of Biogeography* 31(9): 1445-1461. Sep 2004.

Species

R. grandiflorum Hochst. (*Melinis brevipila* (Hack.) Hack.; *Melinis ejubata* Mez; *Melinis grandiflora* (Hochst. ex A. Rich.) Hack.; *Melinis otaviensis* Mez; *Melinis repens* subsp. *grandiflora* (Hochst.) Zizka; *Rhynchelytrum brevipilum* (Hack.) Chiov.; *Rhynchelytrum costatum* Stapf & C.E. Hubb.; *Tricholaena brevipila* Hack.; *Tricholaena grandiflora* Hochst. ex A. Rich.; *Tricholaena grandiflora* var. *glabrescens* Rendle; *Tricholaena uniglumis* Durand & Schinz)

Arabia, Yemen. Annual, tufted, erect, pubescent, leaf sheaths pilose, panicle glabrous or pubescent, lower glume small to tiny, upper glume awned with a long narrow beak, see *Flora* 27: 249. 1844, *Tentamen Florae Abyssinicae* ... 2: 445. 1850, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 143. 1888, *Conspectus Florae Africae* 5: 770. 1894, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 196. 1899 and *Österreichische Botanische Zeitschrift* 51: 454, 464. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 195-196. 1921, *Flora of Tropical Africa* 9: 874. 1930, *Biblioth. Bot.* 138: 55, 60. 1988.

R. kallimorphon Clayton (*Melinis kallimorpha* (Clayton) Zizka)

Zambia. See *Kew Bulletin* 33(1): 22. 1978, *Bibliotheca Botanica* 138: 64. 1988.

R. longisetum (A. Rich.) Stapf & C.E. Hubb. (*Melinis longiseta* (A. Rich.) Zizka; *Melinis longiseta* subsp. *longiseta*; *Panicum longisetum* Poir.; *Panicum macrotrichum* Steud.; *Rhynchelytrum minutiflorum* (Rendle) Stapf & C.E. Hubb.; *Rhynchelytrum minutiflorum* var. *melinoides* (Stent) Stapf & C.E. Hubb.; *Saccharum longisetum* (A. Rich.) Walp.; *Tricholaena longiseta* A. Rich.; *Tricholaena melinoides* Stent; *Tricholaena minutiflora* Rendle)

Ethiopia. Perennial, erect, tufted, leaves hairy, upper glume awned, lower lemma awned, in sandy areas, open habitats, open woodland, see *Encyclopédie Méthodique. Botanique*

... *Supplément* 4: 275. 1816, *Tentamen Florae Abyssinicae* ... 2: 446. 1850, *Annales Botanicae Systematicae* 3: 793. 1852, *Synopsis Plantarum Glumacearum* 1: 92. 1854, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 198. 1899 and *Kew Bulletin* 1925: 364. 1925, *Flora of Tropical Africa* 9: 902-904. 1930, *Bibliotheca Botanica* 138: 73, 75, 76. 1988.

R. nerviglume (Franch.) Chiov. (*Melinis bachmannii* Mez; *Melinis muenzneri* Mez; *Melinis nerviglumis* (Franch.) Zizka; *Melinis nyassana* Mez; *Melinis rosea* (Nees) Hack.; *Melinis setifolia* (Stapf) Hack.; *Melinis villosipes* Mez; *Monachyron roseum* (Nees) Parl.; *Panicum busseanum* Mez; *Panicum elongatum* Mez, nom. illeg., non *Panicum elongatum* Pursh; *Panicum gracillimum* Mez, nom. illeg., non *Panicum gracillimum* Scribn.; *Panicum roseum* (Nees) Steud., nom. illeg., non *Panicum roseum* Willd. ex Spreng.; *Panicum sphacelatum* (Benth.) Steud., nom. illeg., non *Panicum sphacelatum* Schumach.; *Panicum teneriffae* var. *rosea* (Nees) F.M. Bailey; *Rhynchelytrum filifolium* (Franch.) Stapf & C.E. Hubb.; *Rhynchelytrum nyassanum* (Mez) Stapf & C.E. Hubb.; *Rhynchelytrum ramosum* Stapf & C.E. Hubb.; *Rhynchelytrum repens* var. *roseum* (Nees) Chiov.; *Rhynchelytrum roseum* (Nees) Stapf & C.E. Hubb.; *Rhynchelytrum roseum* (Nees) Stapf & C.E. Hubb. ex Bews; *Rhynchelytrum setifolium* (Stapf) Chiov.; *Rhynchelytrum stuposum* Stapf & C.E. Hubb.; *Tricholaena busseana* (Mez) Peter; *Tricholaena congoensis* Franch.; *Tricholaena filifolia* Franch.; *Tricholaena nerviglumis* Franch.; *Tricholaena repens* var. *rosea* (Nees) Alberts.; *Tricholaena rosea* Nees; *Tricholaena rosea* subvar. *nsoaensis* Vanderyst; *Tricholaena rosea* var. *van-heei* Vanderyst; *Tricholaena setifolia* Stapf; *Tricholaena sphacelata* Benth.)

Tanzania, Malawi, Angola. Perennial, robust, solid, tough, weed, along roadsides, see *Systema Vegetabilium, editio decima sexta* 1: 315. 1825, *Linnaea* 11(Litt.-Ber.): 129. 1837, *Niger Flora* 559. 1849, *Flora italiana, ossia descrizione delle piante* ... 1: 131. 1850, *Synopsis Plantarum Glumacearum* 1: 92. 1854, *Queensland Grasses* 22. 1888, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 355-357. 1895, *Flora Capensis* 7: 442-443. 1899 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 131-132. 1904, *Annali di Botanica* 8: 310. 1911, *Giornale Botanico Italiano* n.s. 26: 78. 1919, *Bulletin agricole du Congo Belge* 11: 107, 108. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 198-199. 1921, *The World's Grasses* 223. 1929, *Flora of Tropical Africa* 9: 880, 892, 895-897. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 259. 1931, *Bulletin of Miscellaneous Information Kew* 1934(3): 110. 1934, *Manual of the Grasses of the West Indies* 331. 1936, *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 275. 1939, *Bulletin of the Imperial Bureau of Pastures and Forage*

Crops 37: 10. 1947, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Bibliotheca Botanica* 138: 111. 1988.

in English: bristle-leaved red top, red top grass

in Southern Africa: blinkgras, ferweelgras, steekblaar-blinkgras; letsoiri-le-lenyenyane (Sotho)

R. repens (Willd.) C.E. Hubb. (*Erianthus repens* (Willd.) P. Beauv.; *Melinis affinis* Mez; *Melinis argentea* Mez; *Melinis bertlingii* Mez; *Melinis brachyrhynchus* Mez; *Melinis congesta* Mez; *Melinis mutica* Mez; *Melinis nitens* Mez; *Melinis paupera* Mez; *Melinis pulchra* Mez; *Melinis rangei* Mez; *Melinis repens* (Willd.) Zizka; *Melinis repens* subsp. *grandiflora* (Hochst.) Zizka; *Melinis repens* subsp. *repens*; *Melinis rosea* (Nees) Hack.; *Melinis ruficoma* (Hochst. ex Steud.) Chiov.; *Melinis seineri* Mez; *Melinis stolzii* Mez; *Melinis ugandensis* Mez; *Melinis villosa* (Parl.) Hack.; *Monachyron roseum* (Nees) Parl.; *Monachyron tonsum* (Nees) Parl.; *Monachyron villosum* Parl.; *Panicum braunii* Steud.; *Panicum braunii* Mez, nom. illeg., non *Panicum braunii* Steud.; *Panicum grandiflorum* Trin. ex Nees; *Panicum insigne* Steud.; *Panicum roseum* (Nees) Steud., nom. illeg., non *Panicum roseum* Willd. ex Spreng.; *Panicum roseum* f. *hirtum* Kuntze; *Panicum setinsigne* Mez; *Panicum sphacelatum* (Benth.) Steud., nom. illeg., non *Panicum sphacelatum* Schumach.; *Panicum teneriffae* (L.f.) Spreng. var. *rosea* (Nees) F.M. Bailey; *Panicum tonsum* (Nees) Steud.; *Panicum zizanioides* Kunth; *Rhynchelytrum dregeanum* Nees; *Rhynchelytrum dregeanum* var. *annuum* Chiov.; *Rhynchelytrum dregeanum* var. *intermedium* Chiov.; *Rhynchelytrum grandiflorum* Hochst.; *Rhynchelytrum repens* var. *roseum* (Nees) Chiov.; *Rhynchelytrum roseum* (Nees) Stapf & C.E. Hubb. ex Bews; *Rhynchelytrum roseum* (Nees) Stapf & C.E. Hubb.; *Rhynchelytrum ruficomum* Hochst. ex Steud.; *Rhynchelytrum stolzii* (Mez) Stapf & C.E. Hubb.; *Rhynchelytrum tonsum* (Nees) Lanza & Mattei; *Rhynchelytrum villosum* (Parl.) Chiov.; *Saccharum grandiflorum* (Hochst. ex A. Rich.) Walp.; *Saccharum repens* Willd.; *Saccharum sphacelatum* (Benth.) Walp.; *Tricholaena dregeana* (Nees) T. Durand & Schinz; *Tricholaena fragilis* A. Braun; *Tricholaena grandiflora* Hochst. ex A. Rich.; *Tricholaena grandiflora* var. *collina* Rendle; *Tricholaena monachyron* Oliv.; *Tricholaena repens* (Willd.) A.S. Hitchc.; *Tricholaena repens* var. *rosea* (Nees) Alberts.; *Tricholaena rosea* Nees; *Tricholaena rosea* var. *sphacelata* A. Chev.; *Tricholaena sphacelata* Benth.; *Tricholaena tonsa* Nees; *Tricholaena tonsa* var. *submutica* Schweinfurth; *Tricholaena villosa* (Parl.) Durand & Schinz) (Latin *repens* "creeping, prostrate")

Tropical Africa. Variable, annual or sometimes perennial, short-lived, tufted or densely tufted, upright or ascending, open, usually much branched, erect or often geniculate and forming roots at the lower nodes, flimsy, frequently hairy on the lowermost internodes, leaf blade expanded or folded, leaf sheath loose and covered with bulbous hairs, ligule

stiffly hairy, softly hairy leaves long-acute and flat, inflorescence an open fluffy panicle cylindrical to ovoid, densely villous or densely silky pubescent spikelets, lower glume small with short hairs, upper glume densely covered with hairs, upper glume and lemma extend to form awns, bristly palea hyaline and keeled, weed species growing and spreading rapidly, hardy, ornamental and attractive when in flower, grown for fodder, young plants palatable and tender, mature plants woody and tough, commonly found in disturbed places, along roadsides, cliffs, stony soils, open scrubland, rocky areas, open rocky ground, on soil of low fertility, on shallow rocky soil, poor grasslands, field borders, cultivated areas, see *Species Plantarum. Editio quarta* 1: 322. 1797, *Essai d'une Nouvelle Agrostographie* 14, 54, 162, 177. 1812, *Systema Vegetabilium, editio decima sexta* 1: 315. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 143. 1829, *Linnaea* 11(Litt.-Ber.): 129. 1837, *Flora* 24: 275. 1841, *Niger Flora* 191, 559. 1849, *Flora italiana, ossia descrizione delle piante ...* 1: 131. 1850, *Tentamen Florae Abyssinicae ...* 2: 445. 1850, *Annales Botanicae Systematicae* 3: 792-793. 1852, *Synopsis Plantarum Glumacearum* 1: 92-93, 120. 1854, *Queensland Grasses* 22. 1888, *Conspectus Florae Africae* 5: 769, 771. 1894, *Bulletin de l'Herbier Boissier* 2: App. 2: 96. 1894, *Hooker's Icones Plantarum* 24: t. 2374. 1895, *Revisio Generum Plantarum* 3(3): 363. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 195. 1899 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 133. 1904, *Annali di Botanica* 5: 62. 1906, *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 49. 1910, *Flore de l'Afrique Centrale Française, Énumération des Plantes Récoltées* 1: 366. 1913, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56-57: 5, 195-200. 1921, *The World's Grasses* 223. 1929, *Flora of Tropical Africa* 9: 880, 885. 1930, *Bulletin of Miscellaneous Information Kew* 1934(3): 110. 1934, *Manual of the Grasses of the West Indies* 331. 1936, *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 275. 1939, *Bulletin of the Imperial Bureau of Pastures and Forage Crops* 37: 10. 1947, *Cytologia* 19: 97-103. 1954, *Grasses of Ceylon* 151. 1956, *Grasses of Burma ...* 355. 1960, *Journal of Cytology and Genetics* 15: 51-57. 1980, *New Zealand Journal of Botany* 25: 346. 1987, *Bothalia* 18: 111-114. 1988, *Biblioth. Bot.* 138: 55. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Blumea* 41: 199. 1996, N.P. Barker, H.P. Linder and E. Harley, "Sequences of the grass-specific insert in the chloroplast *rpoC2* gene elucidate generic relationships of the Arundoideae (Poaceae)." *Systematic Botany* 23(3): 327-350. 1999 [July-Sept 1998].

in English: Natal grass, red Natal grass, Natal red top grass, Natal red top, red top grass, ruby grass, fairy grass, red top

in Mexico: cola de zorra, pasto carretero, pasto ilusión, pasto natal, pasto del Senegal, pasto Senegal, pasto senegalés, zacate natal

in Angola: capim favorito, lusonde, ohulungumbe

in Benin: sogbédia

in South Africa: bergrooigras, blinkgras, ferweelgras, meerjarige ferweelgras, eenjarige ferweelgras, einjähriges seidengras, haargras, hangegras, kopersaadgras, Natal blinkgras, Natalse rooipluim, rooihaargras, rooiwol-saadgras, wolgras, ausdauerndes seidengras

in Yoruba: eeran eye, owu, sokodoya

R. roseum (Nees) Stapf & C.E. Hubb. (*Melinis repens* (Willd.) Zizka; *Melinis repens* subsp. *repens*; *Melinis rosea* (Nees) Hack.; *Monachyrion roseum* (Nees) Parl.; *Panicum roseum* (Nees) Steud., nom. illeg., non *Panicum roseum* Willd. ex Spreng.; *Panicum teneriffae* var. *rosea* (Nees) F.M. Bailey; *Rhynchelytrum repens* (Willd.) C.E. Hubb.; *Rhynchelytrum repens* var. *roseum* (Nees) Chiov.; *Rhynchelytrum roseum* (Nees) Stapf & C.E. Hubb. ex Bews; *Saccharum repens* Willd.; *Tricholaena repens* (Willd.) Hitchc.; *Tricholaena repens* var. *rosea* (Nees) Alberts.; *Tricholaena rosea* Nees)

Tropical Africa. See *Species Plantarum. Editio quarta* 1: 322. 1797, *Systema Vegetabilium, editio decima sexta* 1: 315. 1825, *Linnaea* 11(Litt.-Ber.): 129. 1837, *Flora italiana, ossia descrizione delle piante ...* 1: 131. 1850, *Synopsis Plantarum Glumacearum* 1: 92. 1854, *Queensland Grasses* 22. 1888 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *The World's Grasses* 223. 1929, *Flora of Tropical Africa* 9: 880. 1930, *Bulletin of Miscellaneous Information Kew* 1934(3): 110. 1934, *Manual of the Grasses of the West Indies* 331. 1936, *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 275. 1939, *Bulletin of the Imperial Bureau of Pastures and Forage Crops* 37: 10. 1947, *Cytologia* 19: 97-103. 1954, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Bothalia* 18: 111-114. 1988, *Biblioth. Bot.* 138: 55. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990.

R. scabridum (K. Schum.) Chiov. (*Melinis scabrida* (K. Schum.) Hack.; *Tricholaena scabrida* K. Schum.)

Tanzania. See *Die Pflanzenwelt Ost-Afrikas* 104. 1895 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Annuario del Reale Istituto Botanico di Roma* 8: 310. 1908, *Biblioth. Bot.* 138: 80. 1988.

R. subglabrum (Mez) Stapf & C.E. Hubb. (*Melinis denu-data* Mez; *Melinis eylesii* Stapf & C.E. Hubb.; *Melinis merkeri* Mez; *Melinis subglabra* Mez; *Rhynchelytrum denudatum* (Mez) Stapf & C.E. Hubb.; *Rhynchelytrum merkeri* (Mez) Stapf & C.E. Hubb.; *Rhynchelytrum suberostratum* Stapf & C.E. Hubb.)

Tropical Africa, Zimbabwe. Annual, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 199. 1921, *Bulletin of Miscellaneous*

Information Kew 1926: 441. 1926, *Flora of Tropical Africa* 9: 879, 886-887, 889. 1930, *Biblioth. Bot.* 138: 67. 1988.

R. villosum (Parl.) Chiov. (*Melinis affinis* Mez; *Melinis barbeyana* Mez; *Melinis bertlingii* Mez; *Melinis mutica* Mez; *Melinis pulchra* Mez; *Melinis rangei* Mez; *Melinis repens* (Willd.) Zizka; *Melinis repens* subsp. *grandiflora* (Hochst.) Zizka; *Melinis villosa* (Parl.) Hack.; *Melinis wightii* (Nees) Hack.; *Monachyrion villosum* Parl.; *Panicum megalanthum* Steud.; *Rhynchelytrum grandiflorum* Hochst.; *Rhynchelytrum repens* (Willd.) C.E. Hubb.; *Rhynchelytrum wightii* Duthie; *Saccharum repens* Willd.; *Tricholaena tuberculosa* Hack. ex Hook.f.; *Tricholaena villosa* (Parl.) Durand & Schinz; *Tricholaena wightii* Arnold & Nees)

Africa, South Africa. Variable, usually annual, sometimes semiperennial, erect or geniculate, adventitious roots from the lower nodes, ligule a fringe of short hairs, leaf blade soft and expanded, leaf sheaths rounded, inflorescence paniculate, open and interrupted panicle, spikelets silky, upper glume and lemma awned or awnless, pioneer grass, pasture, valuable as grazing, occurs in disturbed areas, grassy plains, sandy soil, very closely related to *Rhynchelytrum repens* (Willd.) C.E. Hubb., see *Species Plantarum* 1: 55. 1753, *Species Plantarum. Editio quarta* 1: 322. 1797, *Mantissa* 2: 8, 163. 1824, *Linnaea* 16(2): 218. 1842, *Flora* 27: 249. 1844, *Niger Flora* 190-191. 1849, *Synopsis Plantarum Glumacearum* 1: 93. 1854, *Fodd. Grasses N. India* 21. 1888, *Conspectus Florae Africae* 5: 771. 1894, *The Flora of British India* 7: 65. 1896 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Annuario del Reale Istituto Botanico di Roma* 8: 310. 1907, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 195-197. 1921, *Bulletin of Miscellaneous Information Kew* 1934(3): 110. 1934, *Cytologia* 19: 97-103. 1954, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Bibliotheca Botanica* 138: 55, 60. 1988, *Bothalia* 18: 111-114. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: Natal grass, red Natal grass, Natal red top grass, Natal red top, red top grass, ruby grass, fairy grass, red top

in South Africa: bergrooigras, blinkgras, ferweelgras, eenjarige ferweelgras, einjähriges seidengras, haargras, hangegras, kopersaadgras, Natal blinkgras, Natalse rooipluim, rooihaargras, rooiwolsaadgras, wolgras

Rhynchoryza Baillon

From the Greek *rhynchos* "horn, beak, snout" and *oryza* "rice," referring to the beaked lemma.

One species, Paraguay, Argentina. Ehrhartoideae, Oryzaceae, Oryzinae, or Bambusoideae, Oryzodae, Oryzaceae, perennial, herbaceous, narrow linear leaf blades, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets pedicellate, glumes lacking or very reduced, fertile lemma herbaceous with a long beak, sterile lemmas

cuspidate broadly ovate, palea present, 2 membranous lodicules, usually 6 stamens, 2 stigmas plumose, found in swamps, damp areas, similar to *Oryza*, type *Rhynchoryza subulata* (Nees) Baill., see *Species Plantarum* 1: 333. 1753, Henri Ernest Baillon, 1827-1895, *Histoire des plantes*. 12: 291. Paris, London, Leipzig 1866-1895, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1063. 1894 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 151. 1956, *Bol. Soc. Arg. Bot.* 12: 57-97. 1968, *Contributions from the United States National Herbarium* 39: 111, 116-118. 2000, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang & De-Yuan Hong, "A phylogeny of the rice tribe Oryzeae (Poaceae) based on *matK* sequence data." *Am. J. Bot.* 89: 1967-1972. 2002.

Species

R. subulata (Nees) Baillon (*Oryza subulata* Nees)

Suriname, Uruguay, Paraguay, Brazil, Argentina. Caespitose, floating, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 518. 1829, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1063. 1894 & D.A. Vaughan, *The Wild Relatives of Rice: A Genetic Resources Handbook*. International Rice Research Institute, Manila, Philippines 1994.

Rhytachne Desv. = *Lepturoopsis* Steud.

From the Greek *rhytis* "a wrinkle" and *achne* "chaff, glume."

About 10-12 species, tropical South America, tropical and southern Africa, Madagascar. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, rarely annual or perennial, variable, herbaceous, unbranched, tufted, auricles present or absent, leaf blades narrow or filiform, leaf sheaths glabrous and somewhat inflated, ligule an unfringed membrane, plants bisexual, inflorescence a single terminal raceme bearing paired spikelets, lower floret male or rarely sterile, upper floret bisexual, 2 glumes more or less equal, lower glume convex wingless, upper glume sometimes awned, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 dark stigmas, pedicellate spikelets often reduced or suppressed, forming thickets, open habitats, roadsides, moist places, temporarily waterlogged sites, in seasonally wet savannah, sandy beach, pans, riversides, grassland, riverbanks, streams, related to *Phacelurus*, type *Rhytachne rottboellioides* Desv. ex Ham., see *Mantissa Plantarum* 2: 164. 1767, *Mantissa Plantarum* 2: 301. 1771, *Supplementum Plantarum* 13, 114. 1781 [1782], *Methodus Plantas Horti Botanici ...* 207. 1794, *Prodromus Plantarum Indiae Occidentalis* xiv, 11-12. 1825, *Révision des Graminées* 1: 153. 1829, *Voyage autour du Monde* 2: 64, f. 14. 1829 [1831], *Synopsis Plantarum Glumacearum* 1: 357-358, 360. 1854, *Journal of the Linnean Society, Botany* 22: 533. 1887, *Die Natürlichen Pflanzenfamilien* 2(2): 25.

1887, *Monographiae Phanerogamarum* 6: 275-277. 1889, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 138. 1899 and *Mémoires de la Société Botanique de France* 8: 99. 1908, *Annali di Botanica* 13: 36. 1914, *Flora of Tropical Africa* 9: 85. 1917, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 54: 280. 1917, *Nuovo Giornale Botanico Italiano* n. s. 26: 73. 1919, *Bulletin of Miscellaneous Information Kew* 1934: 108. 1934, *Revue internationale de botanique appliquée et d'agriculture tropicale* 32: 552. 1952, *Bulletin de la Société Botanique de Belgique* 90: 187. 1958, *Bulletin de l'Institut Française d'Afrique Noire* 22: 108. 1960, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 71. 1960, *Boletim da Sociedade Broteriana, ser. 2* 37: 82. 1963, *Kew Bulletin* 32(4): 767-771. 1978, *Brittonia* 36: 402-405. 1984, *J. Heredity* 75: 196-202. 1984, *Hereditas (Beijing)* 7(5): 23-24. 1985, *Cytologia* 53: 653-658. 1988, *Annals of Botany* 64: 675-681. 1989, *Flora of the Guianas. Series A, Phanerogams* 559-561. 1990, *Cytologia* 55: 141-151. 1990, *Flora Mesoamericana* 6: 396. 1994, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Breeding Science* 45: 157-161. 1995, *Journal of Wuhan Botanical Research* 15(3): 277-278. 1997, *Acta Botanica Yunnanica* 20(1): 33-34. 1998, *Contributions from the United States National Herbarium* 46: 284, 545. 2003.

Species

R. furtiva Clayton

Upper Volta. Inflorescence axillary, lower glume winged, see *Kew Bulletin* 20: 258, f. 1. 1966.

R. glabra (Gledhill) Clayton (*Lepargochloa glabra* Gledhill)

Sierra Leone. See *Boletim da Sociedade Broteriana, ser. 2* 40: 65, f. 1, t. 1. 1966, *Kew Bulletin* 23: 295. 1969.

R. gonzalezii Davidse (*Manisuris loricata* (Trin.) Kuntze; *Rottboellia loricata* Trin.; *Sorghum bicolor* (L.) Moench)

Venezuela. Annual, tufted, erect, branched, sessile spikelet upper glume awned, marshy areas in savannah, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 250. 1832, *Revisio Generum Plantarum* 2: 780. 1891 and *Brittonia* 36(4): 402-405, f. 1. 1984.

R. gracilis Stapf (*Rhytachne minor* Pilg.)

Tropical Africa. Annual, slender, lower floret barren, grazed by cattle when young, on sandy soil, shallow soils, see *Journal de Botanique (Morot)* 19: 98. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 54: 280. 1917.

R. guianensis (Hitcch.) Clayton (*Manisuris guianensis* Hitcch.)

South America. Perennial, tufted, erect, slender, glabrous, solid, branched, sessile spikelet upper glume awnless, lowland savannahs, wet soil, sandy places, see *Contributions from the United States National Herbarium* 22(6): 510, f. 86. 1922, *Kew Bulletin* 20: 262. 1966.

R. latifolia Clayton

South Africa, Tanzania. Perennial, rare, tufted, pedicel flattened, lower glume nerved winged, pedicellate spikelets reduced to a minute scale, shady places, streamsides, woodland pans, see *Kew Bulletin* 32(4): 770. 1978.

R. megastachya Jacq.-Fél.

French Guiana. See *Revue internationale de botanique appliquée et d'agriculture tropicale* 32: 552. 1952, *Kew Bulletin* 20: 262. 1966.

R. perfecta Jacq.-Fél.

French Guinea. The longer spikelets bisexual, lower glume winged, see *Journal d'Agriculture Traditionnelle et de Botanique Appliquée* 1(1-4): 41, t. 4. 1954.

R. robusta Stapf (*Rottboellia robusta* (Stapf) Keng)

Southern tropical Africa, Namibia. Perennial, rare, tufted, see *Flora of Tropical Africa* 9: 82. 1917, *Sinensia* 10: 306, 338. 1939.

R. rottboellioides Desv. ex Ham. (*Coelorachis loricata* (Trin.) Nash; *Manisuris loricata* (Trin.) Kuntze; *Mnesithea subgibbosa* (Winkl. ex Hack.) de Koning & Sosef; *Rhytachne benguellensis* Rendle; *Rhytachne caespitosa* (Baker) Bosser; *Rhytachne geminatosubulata* Duvign.; *Rhytachne mannii* Stapf; *Rhytachne rottboellioides* Desv.; *Rhytachne rottboellioides* var. *guineensis* Camus & Schnell; *Rhytachne subgibbosa* (Winkl. ex Hack.) Clayton; *Rottboellia caespitosa* Baker; *Rottboellia filifolia* C. Wright; *Rottboellia loricata* Trin.; *Rottboellia loricata* subsp. *subgibbosa* Winkl. ex Hack.; *Rottboellia rhytachne* Hack.; *Rottboellia setifolia* K. Schum.)

Tropical America and Africa. Perennial, rare, slender, densely tufted, leaf blades linear acuminate, terminal racemes, simple spikelet narrowly ovate oblong, florets sunken in rachis, rugose or smooth lower glume acuminate or bidenticulate, lower glume very variable, upper glume occasionally awned, pedicellate spikelets reduced, grazed by cattle when young, low grazing value, usually in swamps, seasonally wet grasslands, vleis, marshy grounds, swampy areas, grasslands, shallow soil, see *Prodromus Plantarum Indiae Occidentalis* 12. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 250. 1832, *Anales de la Academia de Ciencias Medicas ...* 8: 209. Habana 1871, *Flora Brasiliensis* 2(3): 311, t. 71, f. 2. 1883, *Boletim da Sociedade Broteriana* 3: 136. 1885, *Journal of the Linnean Society, Botany* 22: 533. 1887, *Revisio Generum Plantarum* 2: 780. 1891, *Die*

Pflanzenwelt Ost-Afrikas C: 96. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 138. 1899 and *North American Flora* 17(1): 85. 1909, *Flora of Tropical Africa* 9: 85. 1917, *Revue Générale de Botanique* 57: 591. 1950, *Bulletin de la Société Botanique de Belgique* 90: 187. 1958, *Kew Bulletin* 20: 261. 1966, *Adansonia: recueil périodique d'observations botanique, n.s.* 8: 516. 1968, *Blumea* 31(2): 292. 1986.

in Ghana: lipomale

in Guinea: sodorko

in Nigeria: iwa

in Sierra Leone: akek

R. subgibbosa (Winkl. ex Hack.) W.D. Clayton (*Mnesithea subgibbosa* (Winkl. ex Hack.) de Koning & Sosef; *Rhytachne rottboellioides* Desv. ex Ham.; *Rottboellia loricata* subsp. *glaberrima* Hack.; *Rottboellia loricata* Trin. subsp. *subgibbosa* Winkl. ex Hack.)

Brazil, Paraguay. Perennial, tufted or tussock, filiform leaf blades glabrous, inflorescence a single cylindrical raceme, sessile spikelet narrowly ovate glabrous awnless, lower glume smooth, pedicelled spikelet glabrous awnless, damp places, among rocks, campo rupestre, similar to *Rhytachne rottboellioides*, see *Prodromus Plantarum Indiae Occidentalis* 12. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 250. 1832, *Flora Brasiliensis* 2(3): 311, t. 71, f. 2, 3. 1883 and *Kew Bulletin* 20: 261. 1966, *Blumea* 31(2): 292. 1986.

R. triaristata (Steud.) Stapf (*Lepturopsis triaristata* Steud.; *Rhytachne trisetata* Hack.; *Rottboellia triaristata* (Steud.) Roberty)

Tropical Africa. Annual, slender, a weed of arable fields and cultivated lands, palatable grazing, on disturbed sites, stream sides, see *Prodromus Plantarum Indiae Occidentalis* 11-12. 1825, *Synopsis Plantarum Glumacearum* 1: 357-358. 1854, *Monographiae Phanerogamarum* 6: 275. 1889 and *Flora of Tropical Africa* 9: 85. 1917, *Bulletin de l'Institut Française d'Afrique Noire* 22: 108. 1960, *Boissiera*. 9: 71. 1960, *Kew Bulletin* 32(4): 767-771. 1978.

in Nigeria: iwa

in Sierra Leone: foni yambei

Rhytidachne K. Schumann = *Rhytachne* Desv.

From the Greek *rhytis*, *rhytidós* "a wrinkle" and *achne* "chaff, glume."

Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, see *Pflanzenw. Ost.-Afr.* 5(C): 96. 1895.

Richardsiella Elffers & Kennedy-O'Byrne

The genus dedicated to the amateur botanist Mary Alice Eleanor Richards (née Stokes), 1885-1977, collected African plants for Kew, author of *Checklist of the Flora of Mbala (Abercorn) and District*. Mbala 1969, see P.M. Benoit, *A Contribution to a Flora of Merioneth* [list of species] by Peter Benoit & Mary Richards. 2nd edition, revised Haverfordwest, West Wales Naturalists' Trust 1963. First published in *Nature in Wales* 7, 44-66, 92-111 and 146-166. 1961. See Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 581. 1994; Stafleu & Cowan, *Taxonomic literature*. 4: 769. Utrecht 1983.

One species, Sudan, Angola, tropical Africa. Chloridoideae, annual, wiry, unarmed, slender, filiform, tufted, ligule fringed, plants bisexual, inflorescence spicate and contracted, raceme rhachis terminating in a bristle, spikelets sessile imbricate, 2 unequal glumes deciduous and shortly awned, upper glume awned, lemmas 1-nerved, palea ciliate, lodicules present or absent, 2 stamens, ovary glabrous, 2 stigmas, dry regions, sandy places, open areas, a segregate from *Eragrostis*, type *Richardsiella eruciformis* Elffers & Kenn. O'Byrne, see *Kew Bulletin* 11: 455. 1957.

Species

R. eruciformis Elffers & Kenn.-O'Byrne

Zambia. Upper glume tubercled, lemmas margins ciliate, in seasonally damp depressions.

Riedelia Kunth = *Arundinella* Raddi,
Goldbachia Trin., *Riedelia* Cham.
(Verbenaceae), *Riedelia* Meisn. (Ericaceae),
Riedelia Oliv. (Zingiberaceae)

Panicoideae, Arundinelleae, in syn. sub *Goldbachia*, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 81. 1820, *Agrostografia Brasiliensis* 36-37, t. 1, f. 3. 1823, *Hortus Regius Botanicus Berolinensis* 1: 230. 1827, *Linnaea* 7: 240 (or 224). 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 515. 1833, *Flora Brasiliensis* 7: 171-172. 1863, *Hooker's Icones Plantarum* 15: 15. 1883 and *Contributions from the United States National Herbarium* 46: 111-113, 242, 545-546. 2003.

Ripidium Trin. = *Erianthus* Michx.,
Ripidium Bernh. (Schizaeaceae), *Saccharum* L.

Rhipidion, the diminutive the Greek *rhipis*, *rhipidos* "a fan."

Panicoideae, Andropogoneae, Saccharinae, type *Ripidium ravennae* (L.) Trin., see *Species Plantarum* 1: 54. 1753, *Species Plantarum, Editio Secunda* 2: 1481. 1763, *Journal für die Botanik* 1800(2): 127. 1801, *Icones et Descriptiones*

Graminum Austriacorum 2: 2, t. 2. 1802, André Michaux, *Flora Boreali-Americana*. 1: 54-55. Paris 1803, *Fundamenta Agrostographiae* 169. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 333. 1832 and *N. Amer. Fl.* 17: 90. 30 June 1909, *Lloydia* 21(3): 157-188. 1958, *Darwiniana* 23: 559-585. 1981, *Flora Mesoamericana* 6: 378-379. 1994, H.M. Longhi-Wagner, V. Bittich, M. das G. Lapa Wanderley & G.J. Shepherd, *Flora Fanerogamica do Estado de São Paulo* 1: 1-292. 2001, *Contributions from the United States National Herbarium* 46: 230-233, 546, 550-557. 2003.

Robynsiochloa Jacq.-Fél. = *Rottboellia* L.f.

After the Belgian botanist Frans Hubert Édouard Arthur Walter Robyns, 1901-1986, traveler and plant collector (Ivory Coast), from 1954 to 1964 president of the International Association for Plant Taxonomy, among his writings are *Flore agrostologique du Congo belge et du Ruanda-Urundi* ... Bruxelles 1929-1934, *Tentamen monographiae Vangueriae generumque affinium*. [in *Bull. Jard. Bot. Brux.* 11: 1-359. 1928] Bruxelles 1928 and "Essai de révision des espèces africaines du genre *Annona* L." *Bull. Soc. Bot. Belg.* 67: 7-50. 1934, co-author of *Flore générale de Belgique*. Bruxelles 1950, etc.; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 166. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 334. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 351. 1973; F.N. Hepper & Fiona Neate, *Plant Collectors in West Africa*. 69. 1971.

One species, Tropical Africa. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, stoloniferous, erect or ascending, caespitose, herbaceous, branched, leaves flat, auricles absent, sheaths hispid to bristly, ligule an unfringed membrane, plants bisexual, the lower part of raceme bearing pairs of sessile and pedicellate spikelets, spikelets paired and compressed dorsiventrally, bisexual spikelets, upper floret bisexual, lower floret male or sterile, pedicellate spikelets reduced, male florets 3-staminate, 2 glumes more or less equal, lower glume 2-keeled, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, shade species, fodder, itch grass, a serious and noxious weed of cultivated ground, found in swamps, dry soils, woodlands, rainforests, on tropical coastlines, in disturbed grounds, type *Robynsiochloa purpurascens* (Robyns) Jacq.-Fél., see *Supplementum Plantarum* 13, 114. 1781 [1782], *Fl. Coch.* 51. 1790 and *Contr. U.S. Natl. Herb.* 24: 201. 1925, *Flore Agrostologique du Congo Belge* 1: 66. 1929, *Blumea, Supplement* 3: 15, 17. 1946, *Journal d'Agriculture Tropicale* 7: 406. Paris 1960, H. Runemark, "A revision of *Parapholis* and *Monerma* (Gramineae) in the Mediterranean." in *Bot. Not.*

115: 1-17. 1962, *Feddes Repert.* 106: 169-171. 1995, *Harvard Pap. Bot.* 8: 63-65. 1996, *Contributions from the United States National Herbarium* 46: 546-548. 2003.

Species

R. goalparensis (Bor) Clayton (*Rottboellia goalparensis* Bor)

Africa. See *Indian Forest Records: Botany* 1(3): 100. 1939, *Kew Bulletin* 35(4): 817. 1981.

Roegneria Koch = *Elymus* L.

Pooideae, Triticeae, Hordeinae, type *Roegneria caucasica* K. Koch, see *Species Plantarum* 1: 83. 1753, *Linnaea* 21(4): 413. 1848 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 183-184, 186-188. 1957, *Flora Illustralis Plantarum Primarum Sinicarum: Gramineae* 301, 352, 357, 366, 371, 373, 391, 398-399, 404-406, 408. 1959, *Journal of Nanjing Agricultural University* 1: 19, 22-23, 31, 43, 45, 64, 68, 72, 75-76, 79, 82. 1963, *Canad. J. Bot.* 42: 554. 1964, *Acta Botanica Yunnanica* 10: 139-146, 261-270. 1988, *Acta Botanica Yunnanica* 12: 57-66, 161-171. 1990, *Taxon* 41: 562-563. 1992, *Guihaia* 12(3): 222-228. 1992, *Acta Botanica Yunnanica* 14: 164-168. 1992, *Acta Phytotaxonomica Sinica* 30(4): 342-345. 1992, *Cytologia* 58: 187-193. 1993, *Acta Phytotaxonomica Sinica* 31: 393-398. 1993, *Taxon* 44: 611-612. 1995, *Guihaia* 18(1): 35-40. 1998, *Acta Pratacult. Sin.* 8(4): 23-28. 1999, *Plant Systematics and Evolution* 217: 215-220. 1999, *Acta Botanica Yunnanica* 22(2): 155-160. 2000, *Novon* 12(3): 424-429. 2002 [Nomenclatural novelties in Chinese *Elymus* (Poaceae, Triticeae)], *Contributions from the United States National Herbarium* 48: 279-307, 603-604. 2003.

Roemeria Zea ex Roem. & Schultes =

Diarrhena P. Beauv., *Roemeria* Medik.

(Papaveraceae), *Roemeria* Moench

(Amaranthaceae), *Roemeria* Thunb.

(Anacardiaceae)

For the Swiss botanist Johann Jakob Roemer (Römer), 1763-1819, physician and naturalist, studied at the Universities of Zürich and Göttingen, from 1797 to 1819 director of the Botanical Garden of the Naturforschende Gesellschaft Zürich, coeditor with Paul Usteri (1768-1831) of *Magazin für die Botanik*. Zürich 1787-1791, among his many works are *Scriptores de plantis hispanicis, lusitanicis, brasiliensibus*. Norimbergae [Nürnberg] 1796 and *Catalogus horti botanici societatis physicae turicensis*. Zürich 1802; see Paul Usteri (1768-1831), in *Annalen der Botanick.* 1(3): 15.

(July) 1792; J.H. Barnhart, *Biographical notes upon botanists.* 3: 169. 1965; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch.* 769. 1852; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 335. 1972; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen.* 14 Aufl. 770f. 1993; E. Bretschneider, *History of European Botanical Discoveries in China.* Leipzig 1981; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford.* 233-234. 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* 638. 1964; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks.* London 1800; G. Murray, *History of the collections contained in the Natural History Departments of the British Museum.* 1: 177. 1904; Rodolfo E.G. Pichi Sermolli, "The publication of Roth's genera *Athyrium* and *Polystichum*." *Webbia.* 8(2): 437-442. 1952.

Pooideae, Diarrheneae, type *Roemeria zea* Roem. & Schult., see *Annalen der Botanick. ed. Usteri* 1(3): 15. 1792, *Methodus Plantas Horti Botanici ...* 191. 1794, *Nova Genera Plantarum* 130-131. 1798, *Flora Boreali-Americana* 1: 67, t. 10. 1803, *Essai d'une Nouvelle Agrostographie* 142, 160, 162, t. 25, f. 2. 1812, *Systema Vegetabilium* 1: 61, 287. 1817 and *Bulletin of the Torrey Botanical Club* 118: 128-136. 1991, *Contributions from the United States National Herbarium* 48: 269, 604. 2003.

Roshevitzia Tzvelev = *Diandrochloa* De Winter, *Eragrostis* Wolf

For the Russian botanist Roman (Romain) Julievich Roshevitz, 1882-1949, agrostologist; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 180. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 338. 1972.

Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eragrostidinae, type *Roshevitzia diarrhena* (Schult. & Schult. f.) Tzvelev, see *Genera Plantarum* 23. 1776, *Flora Japonica, ...* 51. 1784, *Flora Caroliniana, secundum ...* 80. 1788, *Icones et Descriptiones Graminum Austriaeorum* 4: 15. 1809, *Prodromus Florae Novae Hollandiae* 180. 1810, *Flora Indica; or Descriptions ...* 1: 337. 1820, *Synopsis Plantarum Glumacearum* 1: 268. 1854 and *Bothalia* 7(2): 387-389. 1960, *Acta Bot. Neerl.* 15: 157. 1966, *Bot. Zhurn. (Moscow & Leningrad)* 53: 311. 1968, *Novosti Sist. Vyss. Rast.* 7: 50. 1970[1971], *Contributions from the United States National Herbarium* 41: 66, 81-115, 192. 2001.

Rostraria Trinius = *Aegialina* Schult. & Schult.f., *Aegialitis* Trin., *Ktenosachne* Steud., *Lophochloa* Rchb., *Parodiochloa* A.M. Molina, *Poarion* Rchb., *Raimundochloa* A.M. Molina, *Wilhelmsia* K. Koch

Latin *rostrum*, *i* “the beak of a bird.”

About 5-10 species, temperate, Europe, Mediterranean, Middle East, Northwest India. Pooideae, Poaceae Aveninae (Koeleriinae), annual, caespitose, erect or creeping at the base, glabrous to hirsute, sheaths terete and pubescent, auricles absent, ligules membranous, leaves mostly basal, internodes hollow, plants bisexual, panicles contracted, spikelets solitary 1- to several-flowered, unequal glumes keeled, lemmas membranous keeled 5-nerved with a straight subapical awnlet, paleas mucronate or short awned, 3 stamens, 2 stigmas, weedy places, dry areas, disturbed sites, derived from *Koeleria* Pers., very close to *Trisetaria*, sometimes included in *Koeleria* Pers. and *Lophochloa* Rchb., see *Species Plantarum* 1: 63, 76. 1753, *Systema Naturae*, edition 12 94. 1757, *Flora Aegyptiaco-Arabica* lx, 27. 1775, *Synopsis Plantarum* 1: 97. 1805, *Fundamenta Agrostographiae* 127, 149, t. 9, 13. 1820, *Mantissa* 2: 13, 222. 1824, *Conspicuum Regni Vegetabilis* 51. 1828, *Flora Germanica Excursoria* 42. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 65. 1830, *Linnaea* 21(4): 400. 1848, *Synopsis Plantarum Glumacearum* 1: 150. 1854 [1855], *Genera Plantarum* 3(2): 1184. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 70. 1887 and *Rhodora* 58: 93-96. 1956, *Zlaci SSSR* 267. 1976, *Journal of the Linnean Society, Botany* 76: 320-322. 1978, *Bulletin of the British Museum (Natural History), Botany* 8: 395. 1981, *Parodiana* 4(1): 110-112, f. 1-2 and 4(2): 401-402. 1986, *Journal of Applied Ecology* 39(3): 427-444. June 2002, *Contributions from the United States National Herbarium* 48: 20, 419, 431, 477, 581, 601, 604, 694. 2003, S. Henderson & H. Schäfer, “Synopsis of the genus *Rostraria* (Poaceae) in the Azores.” *Botanical Journal of the Linnean Society* 141(1): 125-131. Jan 2003, *Oikos* 106(2): 209-216. Aug 2004.

Species

R. cristata (L.) Tzvelev (*Bromus cristatus* (L.) Spreng., nom. illeg., non *Bromus cristatus* L.; *Bromus cultus* Steud.; *Festuca cristata* L.; *Festuca gerardii* Vill.; *Festuca phleoides* Vill.; *Koeleria brachystachya* DC.; *Koeleria campestris* Phil.; *Koeleria cristata* (L.) Bertol.; *Koeleria gerardi* (Vill.) Shinnery; *Koeleria macrantha* (Ledeb.) Schult.; *Koeleria phleoides* (Vill.) Pers.; *Leptochloa phleoides* Willk. & Lange; *Lophochloa cristata* (L.) Hyl.; *Lophochloa phleoides* (Vill.) Rchb.; *Rostraria brachystachya* (DC.) Holub; *Trisetaria cristata* (L.) Kerguelen; *Trisetaria phleoides* (Vill.) Nevski; *Trisetum cristatum* (L.) Potzta; *Trisetum*

minutiflorum Phil.; *Trisetum phleoides* (Vill.) Trin., nom. illeg., non *Trisetum phleoides* (d'Urv.) Kunth; *Wilhelmsia caucasica* C. Koch)

Arabian Peninsula, Mediterranean, Sudan, Pakistan, north-west India. Annual, variable, ascending, erect or geniculate ascending, glabrous, tufted, sheath glabrous, ligule ciliate and membranous, leaf blade flat, dense panicle spike-like, spikelets laterally compressed 3- to 10-flowered, unequal glumes keeled sparsely hairy, first glume 1-nerved narrowly lanceolate, upper glume 3-nerved elliptic, elliptic lemmas acute with a subapical straight awn, weed of disturbed places, growing in wet site, coastal areas, see *Flora Delphinalis* 7. 1785 [1786] (also in *Syst. Pl. Eur.* 1: 7. 1785 [June 1786]), *Histoire des Plantes de Dauphiné* 1: 249-250. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 182-183. 1791, *Synopsis Plantarum* 1: 97. 1805, *Flora Taurico-Caucasica* 1: 67. 1808, *Essai d'une Nouvelle Agrostographie* 71, 84, 166, 175. 1812, *Catalogus plantarum horti botanici monspeliensis* 120. 1813, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg (Sér. 7)* 5: 515. 1815, *The Genera of North American Plants* 1: 74. 1818, *Amoenitates Italicae* 67. 1819, *Fundamenta Agrostographiae* 144. 1820, *Mantissa* 2: 345. 1824, *Hortus Regius Botanicus Berolinensis* 1: 127. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1: 65. 1830, *Flora Germanica Excursoria* 42. 1830, *Hortus Regius Botanicus Berolinensis* 2: 276. 1833, *A Class-book of Botany* 613. 1847, *A Manual of the Botany of the Northern United States* 591. 1848, *Synopsis Plantarum Glumacearum* 1: 323. 1854, *Linnaea* 29(1): 94. 1858, *Flore du Département des Hautes-Pyrénées* 85. 1867, *Prodromus Florae Hispanicae* 1: 74. 1870, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 251. 1874, *Transactions of the Kansas Academy of Science* 9: 118. 1885, *Mexicanas Plantas* 2: 109. 1886, *Catalogue of Canadian Plants* 2(4): 218. 1888, *Anales de la Universidad de Chile* 94: 26. 1896 and *A Flora of Western Middle California* 62. 1901, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 9: 42. 1903, *Flora of Los Angeles and Vicinity* 46. Stanford University, California 1904, *Bibliotheca Botanica* 65: 172-173, 175, 211, 223-224, 226, 233-239, t. 14, f. 6-9. 1907, *Brittonia* 1(2): 84. 1931, *Bot. Not.* 1953: 355. 1953, *Rhodora* 58: 95. 1956, *Willdenowia* 5: 119. 1968, *Novosti Sist. Vyss. Rast.* 7: 47-48. 1970 [1971], *Folia Geobotanica et Phytotaxonomica* 9(3): 271. 1974, *Lejeunia* 75: 273. 1975, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Canadian Journal of Botany* 56(2): 193. 1978, *Informatore Botanico Italiano* 14: 221-225. 1982, *Phytologia* 54(1): 3. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Flora of Turkey and the East Aegean Islands* 9: 328. 1985, *Bot. Zhurn. (Moscow & Leningrad)* 71: 1426-1427. 1986,

Fl. Libya 145: 167. 1988, *Fitologija* 39: 72-77. 1991, *Bot. Zhurn. (Moscow & Leningrad)* 76: 476-479. 1991, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Fragmenta Floristica et Geobotanica Suppl.* 2(1): 251-278. 1993, *Bot. Zhurn. (Moscow & Leningrad)* 79(7): 134-135. 1994, *Systematic Botany* 19(1): 6-20. 1994, *South African Journal of Botany* 61: 60-65. 1995, *Grassland of China* 1995(1): 16-20. 1995, *Bothalia* 26(1): 53-61. 1996, *Taxon* 49(2): 244. 2000.

in English: crested rostraria, annual cat's tail, bristly koeler's grass, annual koeleria, annual junegrass, cat-tail grass, Mediterranean hair grass

in French: koelérie fausse fléole, rostraria à crête

in Arabic: samme

in Morocco: sibus

R. pumila (Desf.) Tzvelev (*Avena pumila* Desf.)

Australia. See *Flora Atlantica* 1: 103. 1798 and *Novosti Sist. Vyssh. Rast.* 7: 48. 1970, *Journal of Cytology and Genetics* 21: 152-154. 1986.

R. trachyantha (Phil.) Sorong (*Koeleria trachyantha* Phil.; *Parodiocloa trachyantha* (Phil.) A.M. Molina; *Raimundocloa trachyantha* (Phil.) A.M. Molina)

Chile. See *Florula Atacamensis seu enumeratio plantarum ...* 55. Halis Saxonum [Halle] 1860 and *Parodiana* 4(1): 112-120 and 4(2): 402. 1986.

Rotbolla Zumaglini = *Rottboellia* L.f.

Orthographic variant, see *Flora Pedemontana* 1: 142. 1849.

Rotbolla T. Nuttall = *Rottboellia* L.f.

Orthographic variant, see *Rottboellia* L.f.

Rothia Borkh. = *Mibora* Adans. *Rothia* Lam.

(Asteraceae, alt. Compositae), *Rothia* Pers.

(Fabaceae, alt. Leguminosae), *Rothia* Schreb.

(Asteraceae, alt. Compositae)

For the German botanist Albrecht Wilhelm Roth, 1757-1834, physician, studied at Halle and Erlangen, M.D. Erlangen 1778, his works include *Dissertatio ... de diaeta puerperarum bene instituenda*. Erlangae [1778], *Catalecta botanica*. Lipsiae 1797-1806, *Tentamen Florae Germanicae*. Lipsiae 1788, etc., *Botanische Abhandlungen und Beobachtungen*. Nürnberg 1787 and *Novae plantarum species praesertim Indiae orientalis*. Ex collectione doct. Benj. Heynii. Halberstadii 1821, father of the German botanist C.W. Roth (1810-1881); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 182. 1965; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*.

14 Aufl. Stuttgart 1993; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 235-236. Regione Siciliana, Palermo 1988; Christian Hendrik Persoon (1761-1836), *Synopsis plantarum*. 2: 638 & Corrigenda. Paris et Tubingae 1807; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 339. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; G. Schmid, *Goethe und die Naturwissenschaften*. Halle 1940; Giulio Giorello & Agnese Grieco, a cura di, *Goethe scienziato*. Einaudi Editore, Torino 1998.

Pooideae, Poeae, Miliinae, see *Familles des Plantes* 2: 495. 1763, *Genera Plantarum* 531. 1791, J.B.A.P. de Monnet (Monet) de Lamarck, *Journal d'histoire naturelle ...* Paris 1792, M.B. Borkhausen, *Tentamen dispositionis plantarum Germaniae seminiferarum ...* 43. 1792, August Wilhelm Eberhard Christoph Wibel, *Primitiae Florae Werthemensis* 126. Ienae [Jena] 1799, *English Botany* 16: 1127. 1803, *Synopsis Plantarum* 2: 638. 1807, *Essai d'une Nouvelle Agrostographie* 167, pl. 8, f. 4. 1812, *Observations sur les Plantes des Environs d'Angers* 45. 1818, *Fundamenta Agrostographiae* 135. 1820, *Dictionnaire des Sciences Naturelles [second édition]* 31: 17. 1824 and *Boll. Soc. Bot. Ital.* 1925: 151. 1925, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 220. 1941, *Preslia* 46(2): 168. 1974, *Taxon* 49(2): 243. 2000, *Contributions from the United States National Herbarium* 48: 450-451, 604. 2003.

Rottboelia Dumort. = *Rottboellia* L.f.

Orthographic variant, see *Analyse des Familles de Plantes* 64, 99. 1829.

Rottboella L.f. = *Rottboellia* L.f.

Orthographic variant, see *Supplementum Plantarum* 114, 462. 1781 [1782].

Rottboellia L.f. = *Hemarthria* R. Br., *Henrardia* C.E. Hubb., *Monerma* P. Beauv., *Robynsiocloa* Jacq.-Fél., *Rottboellia* Scop. (Olacaceae), *Stegosia* Lour.

After the Danish botanist Christen Friis Rottboell (Rottbøll), 1727-1797, physician, M.D. Copenhagen 1755, pupil

of Linnaeus, traveler, 1770-1797 Director of the Copenhagen Botanical Garden, 1776-1797 professor of medicine, among his writings are *Descriptiones plantarum rariorum*. Havniae [Copenhagen] 1772, *Plantas Horti Universitatis rariores* programmata ... descriptis C.F. Rottböll, etc. Hafniae 1773 and *Descriptiones rariorum plantarum, nec non materiae medicae atque oeconomicae e terra surinamensi* ... Havniae [1776]; see Johann G. König (1728-1785), *Dissertationem inauguralem de remediorum indigenorum ad morbos cuivis regioni endemicos expugnandos efficacia*, praeside C.F. Rottböll. Hafniae 1773; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 236-237. Regione Siciliana, Palermo 1988; Carl Frederik Albert Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; J.H. Barnhart, *Biographical notes upon botanists*. 3: 183. 1965; C. Linnaeus (filius), *Supplementum Plantarum*. 114. 1782; J.W. Horne-mann, *Naturh. Tidsskr.* 1: 566-567. 1837; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 340. 1972; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14 Aufl. Stuttgart 1993; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845.

Some 4 species, Old World tropics. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, annual, robust, erect or ascending, caespitose, herbaceous, branched, leaf blades linear flat, auricles absent, lower sheaths sharply hispid to bristly and irritating, ligule a short ciliate membrane, plants bisexual, inflorescence of single racemes axillary or terminal, pedunculated and solitary raceme flattened or cylindrical subtended by a spathe, the lower part of raceme bearing pairs of sessile and pedicellate spikelets always smooth, spikelets paired and awnless, sessile spikelet not globose, 2 florets, upper floret bisexual, lower floret of sessile spikelet male, pedicellate spikelets reduced, glumes more or less equal, lower glume papery or coriaceous, lemmas hyaline, upper lemma entire and awnless, palea present and hyaline, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, compressed fruit, shade species, fodder, itch grass, a serious and noxious weed of cultivated ground, habitat variable, found in swamps, dry soils, woodlands, rainforests, on tropical coastlines, in disturbed grounds, some authorities place the genus within *Hemarthria* R. Br., type *Rottboellia exaltata* L.f., see *Mantissa Plantarum* 2: 164. 1767, *Introductio ad Historiam Naturalem* 233. 1777, *Supplementum Plantarum* 13, 114. 1781 [1782], *Flora Cochinchinensis* 1: 34, 51. 1790, *Supplementum Carpologicae* 1(1): 3, t. 181, f. 3. 1805, *Prodromus Florae Novae Hollandiae* 207. 1810, *Nouveau*

Bulletin des Sciences, publié par la Société Philomatique de Paris 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 116-117, 168, 177, t. 20, f. 10. 1812, *The Genera of North American Plants* 1: 83-84. 1818, *Révision des Graminées* 1: 153. 1829, *Voyage autour du Monde* 2: 64, f. 14. 1829 [1831], *Spicilegium florum rumelicarum et bithynicarum* ... 2: 423. 1844 [1846], *Flora Brasiliensis* 2(4): 309-310. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887, *Indian Forester* 20: 1. 1894, *The Flora of British India* 7(21): 152. 1897 [1896] and *Contr. U.S. Natl. Herb.* 24: 201. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 368. 1930, *Blumea, Supplement* 3: 15, 17. 1946, *Journal d'Agriculture Tropicale* 7: 406. Paris 1960, H. Runemark, "A revision of *Parapholis* and *Monerma* (Gramineae) in the Mediterranean." *Bot. Not.* 115: 1-17. 1962, *Kariba Studies*, vol. II. Manchester University Press, Manchester 1962, *Zambian Papers* 5. Manchester University Press, Manchester 1971, *Blumea* 31(2): 281-307. 1986, *Folia Primatologica* 48: 78-120. 1987, *Austrobaileya* 3(1): 79-99. 1989, *Flora Mesoamericana* 6: 397-398. 1994, *Feddes Repert.* 106: 169-171. 1995, *Harvard Pap. Bot.* 8: 63-65. 1996, *Journal of Phytopathology* 148(2): 95-99. Feb 2000, *Plant Pathology* 49(2): 302-307. Apr 2000, *Weed Research* 41(1): 59-67. Feb 2001, *Weed Biology and Management* 1(1): 15-19. Mar 2001, *Weed Research* 41(6): 475-490. Dec 2001, *Weed Research* 42(2): 89-92, 123-134. Apr 2002, *Weed Biology and Management* 2(2): 92-97. June 2002 [Interval between sequential applications of asulam for regrowth control of torpedograss (*Panicum repens* L.)], *Contributions from the United States National Herbarium* 46: 247-248, 546-548, 607. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Weed Research* 43(5): 303-322. Oct 2003, *Weed Biology and Management* 5(1): 8-13. Mar 2005.

Species

R. aurita Steudel (*Coelorachis aurita* (Steud.) A. Camus; *Coelorachis aurita* (Steud.) Henrard, nom. illeg., non *Coelorachis aurita* (Steud.) A. Camus; *Coelorachis aurita* (Steud.) A. Camus; *Manisuris aurita* (Steud.) Kuntze ex Hitchc. & Chase; *Manisuris aurita* (Steud.) Hitchc. & Chase, nom. illeg., non *Manisuris aurita* (Steud.) Kuntze; *Manisuris aurita* (Steud.) Kuhlman, nom. illeg., non *Manisuris aurita* (Steud.) Kuntze; *Manisuris aurita* (Steud.) Kuntze; *Manisuris fasciculata* (Lam.) Hitchc.; *Mnesithea aurita* (Steud.) de Koning & Sosef)

South America, Parana, Brazil, Paraguay. Common in low fields, depressions, see *Synopsis Plantarum Glumacearum* 1: 361. 1854, *Monographiae Phanerogamarum* 6: 311. 1889, *Revisio Generum Plantarum* 3(3): 356. 1898 and *Contributions from the United States National Herbarium* 18(7): 276. 1917, *Annales de la société linnéenne de Lyon, sér. 2* 68: 197. 1921, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica*

67(Bot. 11): 90. 1922, *Blumea* 4(3): 515. 1941, *Blumea* 31(2): 290. 1986.

R. cochinchinensis (Loureiro) W.D. Clayton (*Aegilops exaltata* L.; *Manisuris exaltata* (L.f.) Kuntze; *Ophiuros corymbosus* (L.f.) C.F. Gaertn.; *Ophiurus corymbosus* (L.f.) Gaertn.; *Ophiuros exaltatus* (L.) Kuntze; *Ophiurus exaltatus* (L.) Kuntze; *Rottboellia arundinacea* Hochst. ex A. Rich.; *Rottboellia corymbosa* L.f.; *Rottboellia exaltata* (L.) L.f.; *Rottboellia exaltata* L.f., nom. illeg., non *Rottboellia exaltata* (L.) L.f.; *Rottboellia exaltata* f. *arundinacea* (Hochst. ex A. Rich.) Hack.; *Stegosia cochinchinensis* Lour.; *Stegosia exaltata* (L.f.) Nash)

Throughout Old World tropics. Annual or perennial, fast growing, herbaceous to canelike, tufted, erect, robust, leafy, coarse, solid, simple or branched, stilt roots from the lower nodes, stems prickly, leaf sheaths hispid with sharp bristles, ligule membranous, leaves oblong with scabrous margins, inflorescence stiff and erect, spikes or racemes solitary and terminal, sessile spikelets oblong-elliptic, fertile florets sunk within the rhachis, pedicellate spikelets reduced and shorter than the sessile spikelets, grain ovate, grains eaten by local people, manure, used as hay and silage, fodder grass, relished by cattle, occasionally used as forage for horses and sheep, spikes eaten by baboons, unpalatable when tall as its stiff hairs cause irritation, potential seed contaminant, considered one of the most noxious and serious weeds in crops such as upland rice, sorghum, sugar cane, common beans and maize, soybean, used to make matting, widespread in shady wet places on disturbed soils, gardens, abandoned farmland, savannah, cultivated grounds, deep soils at low to middle elevations, heavy soils, loamy sand to clay, rice fields, grazed land, woodland, mouth of streams, irrigated lands, wastelands, in open areas, in high rainfall areas, in seasonally flooded meadows, forest edges, clearings, along rivers, on sandy riverbanks, gravelly soils, see *Mantissa Plantarum* 575. 1771, *Nova Graminum Genera* 40, t. 1. 1779, *Supplementum Plantarum* 114. 1781 [1782], *Flora Cochinchinensis* 51. 1790, *Tentamen Florae Abyssinicae* ... 2: 444. 1850, *Boletim da Sociedade Brotteriana* 5: 215. 1887, *Revisio Generum Plantarum* 2: 779. 1891 and *North American Flora* 17(1): 84. 1909, *Kew Bulletin* 35(4): 817. 1981, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Cytologia* 51: 43-50. 1986, *Cytologia* 54: 335-342. 1989, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Journal of the Indian Botanical Society* 73: 289-293. 1994, M.C. Smith, R. Reeder & M. Thomas, "A model of the biological control of *Rottboellia cochinchinensis* with the head smut *Sporisorium ophiuri*." *Journal of Applied Ecology* 34: 388-398. 1997, *Weed Biology and Management* 5(1): 8-13. Mar 2005 [Growth behavior of itchgrass (*Rottboellia cochinchinensis*) in Peninsular Malaysia].

in English: Guinea-fowl grass, itch grass, prickle grass, kokoma grass, shamva grass, Raoul grass, Kelly grass, Saloum grass, white gungui, horse corn, corn grass

in French: l'herbe Bette-Elise

in Spanish: caminadora, paja peluda

in the Caribbean: herbe à canne, herbe à riz, zèb a diri, zèb a kann

in the Guianas: alesí grasi

in Angola: nsongo, nsonso

in East Africa: ewokiwok, mbaya, mwamba nyama, nyam-rungru

in Gambia: safala, saloum barra

in Ghana: kalinyada, nyehin

in Mali: gambé, kuono, niélo, niélo yelori, sian, wanga

in Niger: gasamma, naniérého

in Nigeria: achala nkita, agahama, agumbogo, cilà, dààwàà dààwàà, daddawàà, gyaazamàà, holo, loyo, nyalo

in Senegal: falèmbal, kananar, pellen, vaga sian

in Sierra Leone: akepkaruni, anwo, fofole, fovo, fovu, gongo levu, gongo levu hina, gungu, haha, kale, kali, kalona, khalona, ngongo, sanwania musuma, sanwanya musuma, sensenden, sensene kaima

in South Africa: tarentaalgras

in Upper Volta: gandjanga, kaliniaga, kalinjanga, karyaga, lawula, nelooje, neloori, sian

in Yoruba: holo

in Japan: tsuno-ai-ashi

in Okinawa: yamatsu-gusa

in India: bara swati, barsali, bhursali, bura swooate, gunit, hutia, kinangu pillu, konda panookoo, konda panuku, pedda panuku, pedda panuku gaddi, sontha, sothu alagu pillu

in the Philippines Islands: girum, talangiu

in Thailand: yaa khayong, ya khayong, ya ko, yaa ko, ya prong khai, yaa prong khaai

R. formosa R. Br. (*Mnesithea formosa* (R. Br.) de Koning & Sosef)

Southeast Asia, Australia. See *Prodromus Florae Novae Hollandiae* 1: 206. 1810 and *Bibliotheca Botanica* 85: 261. 1915, *Blumea* 31(2): 288. 1986.

R. purpurascens (Robyns) Jacq.-Fél. (*Chasmopodium purpurascens* (Robyns) Clayton; *Robynsiochloa purpurascens* (Robyns) Jacq.-Fél.)

Tropical Africa. Perennial, erect, robust, wiry, rooting at the lower nodes, a weed of rice fields, growing in swamps, in or near deep water, see *Flora of Tropical Africa* 9: 76. 1917, *Flore Agrostologique du Congo Belge* 1: 66. 1929, *Journal d'Agriculture Tropicale* 7: 406. 1960, *Kew Bulletin* 28(1): 51. 1973.

R. selloana Hack. (*Coelorachis aurita* (Steud.) A. Camus; *Coelorachis selloana* (Hack.) A. Camus; *Coelorachis sell-oana* (Hack.) Henrard, nom. illeg., non *Coelorachis sell-oana* (Hack.) Camus; *Coelorachis selloana* (Hack.) A. Camus; *Manisuris selloana* (Hack.) Kuntze; *Mnesithea sell-oana* (Hack.) de Koning & Sosef) (after the German gardener Friedrich Sellow (Sello), 1789-1831 (d. by drowning), botanical explorer, naturalist, plant collector in Brazil and Uruguay, in Brazil with the German botanist Maximilian Alexander Philipp zu Wied-Neuwied (1782-1867); the German Baron Karl von Stein zum Altenstein, 1770-1840, historian, a statesman at the court of King Frederick William III of Prussia, sent the botanical collector Friedrich Sellow to Brazil; see M.A.P. zu Wied-Neuwied, *Reise nach Brasilien in den Jahren 1815 bis 1817*. Frankfurt a.M. 1820-1821; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 779. Stuttgart 1993; J.H. Barnhart, *Biographical notes upon botanists*. 3: 259. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Günther Schmid, *Chamisso als Naturforscher. Eine Bibliographie*. Leipzig 1942; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; W.G. Herter & S.J. Rambo, "Nas pegadas dos naturalistas Sellow e Saint-Hilaire." *Revista Sudamericana de Botânica*. 10, 3: 61-98. 1953)

Southern America, Argentina, Uruguay, Brazil. Perennial, tufted, well grazed by cattle, occurs in dry grasslands on sandy soil, see *Flora Brasiliensis* 2(4): 312. 1883, *Revisio Generum Plantarum* 2: 780. 1891 and *Annales de la société linnéenne de Lyon, sér. 2* 67: 198. 1922 and 68: 197. 1921, *Blumea* 4(3): 515. 1941, *Kurtziana* 12-13: 7-35. 1979, *Blumea* 31(2): 292. 1986, *Darwiniana* 30(1-4): 87-94. 1990.

Rottbolla Lam. = *Rottboellia* L.f.

Orthographic variant, see Jean Baptiste Antoine Pierre de Monnet (Monet) de Lamarck, 1744-1829, *Tableau encyclopédique et méthodique des trois règnes de la nature. Botanique ...* Paris 1791-1823.

Rottbollia Juss. = *Rottboellia* L.f.

Orthographic variant, see *Genera Plantarum* 31. 1789.

Rouxia Husnot = [x *Elyhordeum* Mansf. ex Tsitsin & K.A. Petrova, *Elymus* x *Hordeum*]

After the French botanist Nisius Roux, 1854-1923, see Maurice A.F. Breistroffer, "Note sur N. Roux et la flore drômoise." *Bull. Soc. Linn. Lyon* 7: 100-104. 1942, J.H. Barnhart, *Biographical notes upon botanists*. 3: 185. 1965.

Pooideae, Triticeae, Hordeinae, see *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 76. 1899 and *Botaniska Notiser* 1953(3): 357. 1953, *Lejeunia* 75: 297. 1975, *Genera Graminum* 375. 1986, *Contributions from the United States National Herbarium* 48: 277-278. 2003.

Roylea Nees ex Steud. = *Melanocenchris* Nees, *Roylea* Steud., *Roylea* Wall. ex Benth. (Lamiaceae, alt. Labiatae)

Named for the British botanist John Forbes Royle (1798-1858), surgeon with the East India Company in Bengal, 1833 F.L.S., 1837 F.R.S., traveler and plant collector, among his writings are *Illustrations of the Botany and other branches of the Natural History of the Himalayan Mountains and the Flora of Cashmere*. London 1839-1840, *An Essay on the Antiquity of Hindoo Medicine*. London 1837 and *A Manual of Materia Medica and Therapeutics*. London 1847; see M. Archer, *Natural History Drawings in the India Office Library*. London 1962; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; J.H. Barnhart, *Biographical notes upon botanists*. 3: 187. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Mea Allan, *The Hookers of Kew*. London 1967; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 654. Philadelphia 1964; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. London 1914; H.R. Fletcher, *Story of the Royal Horticultural Society, 1804-1968*. Oxford 1969; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 237. Regione Siciliana, Palermo 1988; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 598. 1994.

Cynodonteae, see *Plantae Asiaticae Rariores* 1: 57, t. 74. 1830, *Nomenclator Botanicus. Editio secunda* 2: 475. 1841, *Proceedings of the Linnean Society of London* 1: 94. 1841.

Runcina Allamand

Runcina was a rural goddess presiding over weeding, Latin *runcino*, are "to plane off," *runco*, are "to weed out, root up, to pluck, to mow," Latin *runcina*, ae and Greek *rhykane* for a plane, see *Nova Acta Phys. Med. Acad. Caes. Leop. Carol. Nat. Cur.* 4: 94. 1770 and *Genera Graminum* 376. 1986.

Rupestrina Prov. = *Trisetum* Pers.

Latin *rupes*, is "a rock."

Pooideae, Poaceae, Aveninae, type *Rupestrina pubescens* Prov., see *Species Plantarum* 1: 64. 1753, *Syn. Pl.* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 88, 153, t. 18, f. 1. 1812, *The Flora of Canada* 689. 1862, *Plantae Europaeae* 1: 59. 1890 and *U.S.D.A. Bull.* 772: 107-109. 1920, *Systematic Botany* 11: 567-578. 1986, *Taxon* 35: 195. 1986, *Taxon* 36: 75. 1987, *New Zealand J. Bot.* 36: 556-557. 1998, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, *Contributions from the United States National Herbarium* 48: 605, 659-676. 2003.

Rytidosperma Steudel = *Deschampsia* P. Beauv., *Erythranthera* Zotov, *Monostachya* Merr., *Notodanthonia* Zotov, *Thonandia* H.P. Linder

From the Greek *rhytis*, *rhytidós* "a wrinkle" and *sperma* "a seed."

About 35-90 species, South America, Australasian region. Arundinoideae, or Danthonioideae, Danthonieae, Danthoniinae, perennial, herbaceous, caespitose, unbranched, glabrous or hairy, auricles absent, leaf sheath hairy, ligule a rim of hairs, leaf blade persistent or disarticulating, plants bisexual, open to contracted inflorescence racemose or paniculate, florets hermaphrodite, chasmogamous and cleistogamous, hidden cleistogenes in the leaf sheaths, 2 glumes more or less equal and membranous, lemma hairy over whole surface or hairs in tufts, lemma with scabrid lobes and awned, 1-3 awns straight, central awn usually geniculate with a more or less twisted column, palea membranous 2 cuneate lodicules hairy or glabrous and fleshy or membranous, 3 stamens, ovary glabrous, 2 stigmas, open habitats, dry sites, lawns, depressions, open grasslands, woodlands, playing fields, uplands, mountain grassland, taxonomic confusion, a difficult genus, close to *Notodanthonia* and *Austrodanthonia*, type *Rytidosperma lechleri* Steud., see *Species Plantarum* 1: 63. 1753, *Flore Française. Troisième Édition* 3: 32. 1805, *Prodromus Florae Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Systema Vegetabilium* 2: 690. 1817, *A Manual of the Botany of the Northern United States* 605. 1848, Ernst Gottlieb von Steudel (1783-1856), *Synopsis Plantarum Glumacearum* 1: 425. 1854 and *Philippine Journal of Science* 5: 330-331. 1910, *Man. N.Z. Fl.* 171-179. 1925, *Contrib. N.S.W. National Herbarium* 2: 249-325. 1956, *New Zealand Journal of Botany* 1: 78-136. 1963, S.T. Blake, "Plinthanthesis and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae)." *Contributions from the Queensland Herbarium* 14: 3. 1972, *Darwiniana* 18: 80-106. 1973, *N.Z. J. Bot.* 17: 311-337. 1979, *Genera Graminum* 172-173, 175, 177. 1986, *New Zealand Journal of Botany* 25: 115-170. 1987, *New Zealand Journal of Botany* 29: 117-129. 1991, *Courier Forschungsinstitut*

Senckenberg 186: 60-103. 1995, H.P. Linder & N.G. Walsh, "A new species of *Rytidosperma* (Poaceae: Arundinae) in New South Wales and Victoria." *Muelleria* 8: 283-285. 1995, *Flora of Ethiopia and Eritrea* 7: 74. 1995, H.P. Linder & G.A. Verboom, "Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex." *Telopea* 6(4): 597-627. 1996, *Sendtnera* 3: 11-93. 1996, *Flora Fanerog. Argentina* 22: 15-19. 1996, H.P. Linder, "Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae)." *Telopea* 7(3): 269-274. 1997, N.P. Barker, H.P. Linder & E. Harley, "Sequences of the grass-specific insert in the chloroplast *rpoC2* gene elucidate generic relationships of the Arundinoideae (Poaceae)." *Systematic Botany* 23(3): 327-350. 1999 [July Sept 1998], J. Bastow Wilson et al., "Quantitative aspects of community structure examined in a semi-arid grassland." *Journal of Ecology* 88(5): 749-756. Oct 2000, *Journal of Biogeography* 27(6): 1269-1277. Nov 2000, *Ecological Management and Restoration* 2(1): 47-52. Apr 2001, *Flora of Australia* vol. 43, Poaceae 1: 164. 2002 ["*Danthonia* of Australian authors is here considered to comprise *Austrodanthonia*, *Joycea*, *Notodanthonia* and *Rytidosperma*"], *Austral. Ecology* 27(4): 369-384. June 2002, Klaus Mummenhoff, Peter Linder, Nikolai Friesen, John L. Bowman, Ji-Young Lee & Andreas Franzke, "Molecular evidence for bicontinental hybridogenous genomic constitution in *Lepidium sensu stricto* (Brassicaceae) species from Australia and New Zealand." *Am. J. Bot.* 91: 254-261. 2004, *Flora of Australia* 44 B: 64-70. 2005.

Species

R. auriculatum (J.M. Black) Connor & Edgar (*Austrodanthonia auriculata* (J.M. Black) H.P. Linder; *Danthonia auriculata* J.M. Black; *Notodanthonia auriculata* (J.M. Black) Zotov)

Australia. Rhizomatous, tufted, base swollen, sheaths hairy, leaf blades densely and stiffly hairy, compact and erect panicle, awns exerted from glumes, more or less equal glumes, see *Transactions and Proceedings of the Royal Society of South Australia* 53: 261. 1929, *Contr. New South Wales National Herb.* 2: 309. 1956, *New Zealand Journal of Botany* 1: 113. 1963, *New Zealand Journal of Botany* 17(3): 322. 1979, *Telopea* 7(3): 270. 1997.

R. australe (Petrie) Connor & Edgar (*Danthonia petriei* (Petrie) Zotov; *Danthonia petriei* var. *mucronulata* (Hack. ex Cheeseman) Zotov; *Erythranthera australis* (Petrie) Zotov; *Rytidosperma australe* (Petrie) Clayton & Renvoize ex Connor & Edgar; *Rytidosperma australe* (Petrie) H.P. Linder; *Triodia australis* Petrie; *Triodia australis* var. *mucronulata* Hack. ex Cheeseman)

New Zealand, Tasmania, New South Wales. Rhizomatous, low, wiry, erect or spreading, tufted, innovation buds intravaginal, leaf sheath glabrous or hairy, leaf blades flat to folded, glumes notched or acute, lemma glabrous, montane

to alpine, swamps, grasslands, damp places, see *Transactions and Proceedings of the New Zealand Institute* 22: 442. 1890 and *Man. N.Z. Fl.* 897. 1906, *T.R.S.N.Z.* 73: 234. 1943, *New Zealand Journal of Botany* 1: 125. 1963, *New Zealand Journal of Botany* 25(1): 166. 1987, *Telopea* 6(4): 613. 1996.

R. biannulare (Zotov) Connor & Edgar (*Austrodanthonia biannularis* (Zotov) H.P. Linder; *Notodanthonia biannularis* Zotov)

New Zealand. Tussocky, leaf sheaths glabrous, leaf blades often rolled, narrow leaves, panicle dense, spikelets on slender pedicels, glumes lanceolate more or less equal, lemma hairy, along roadsides, see *New Zealand Journal of Botany* 1: 116. 1963, *New Zealand Journal of Botany* 17(3): 324. 1979, *Telopea* 7(3): 270. 1997.

R. buchananii (Hook.f.) Connor & Edgar (*Danthonia buchananii* Hook.f.; *Danthonia semiannularis* (Labill.) R. Br. var. *brevisetata* Hook.f.; *Notodanthonia buchananii* (Hook.f.) Zotov)

New Zealand. Tussocky, montane and subalpine, leaf sheath glabrous or rarely hairy, leaf blade folded or rolled, leaves more or less pungent, panicle erect more or less compact, awn divergent, glumes lanceolate more or less equal, in grasslands, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Novae-Zelandiae* 1: 304. 1853, *Handbook of the New Zealand Flora* 333. 1864 and *New Zealand Journal of Botany* 1: 110. 1963, *New Zealand Journal of Botany* 17(3): 320. 1979.

R. caespitosum (Gaudich.) Connor & Edgar (*Austrodanthonia caespitosa* (Gaudich.) H.P. Linder; *Danthonia caespitosa* Gaudich.; *Notodanthonia caespitosa* (Gaudich.) Zotov)

Australia. Tufted, dense, crowded, erect, sometimes shortly rhizomatous, leaf sheath glabrous or rarely hairy, leaves more or less pungent, erect and compact inflorescence paniculate, awns exerted from the glumes, lower lemma hairy, palea narrow-lanceolate, in dry places, grassland, waste ground, see Charles Gaudichaud-Beaupré (1789-1854), *Voyage autour du Monde, entrepris par Ordre du Roi, ... exécuté sur les Corvettes de S. M. l'Uranie et la Physicienne ... Botanique* 4: 408. Paris 1826 [-1830] and *New Zealand Journal of Botany* 1: 117. 1963, *New Zealand Journal of Botany* 17(3): 325. 1979, *Telopea* 7(3): 271. 1997.

R. clavatum (Zotov) Connor & Edgar (*Amphibromus nervosus* (Hook.f.) Baill.; *Austrodanthonia clavata* (Zotov) H.P. Linder; *Danthonia nervosa* Hook.f.; *Danthonia nervosa* Colenso, nom. illeg., non *Danthonia nervosa* Hook.f.; *Danthonia pilosa* R. Br.; *Danthonia pilosa* var. *stricta* Buchanan; *Notodanthonia clavata* Zotov; *Notodanthonia stricta* (Buchanan) Zotov)

New Zealand. Scabrous or glabrous, variable, slender or stout, shortly rhizomatous, tufted, spreading, leaf blade flat or folded, contracted panicle or raceme, glumes subequal,

awn column flat, dry hills, dry areas, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Tasmaniae* 2: 121, t. 163A. 1858, *Indigenous Grasses of New Zealand* t. 33 (2A). 1879, *Histoire des Plantes* 12: 203. 1893, *T.N.Z.I.* 28: 612. 1896 and *New Zealand Journal of Botany* 1: 119, 121. 1963, *New Zealand Journal of Botany* 17(3): 326. 1979, *New Zealand Journal of Botany* 29: 117-129. 1991, *Telopea* 7(3): 271. 1997.

R. corinum Connor & Edgar

New Zealand. Tussocky, montane and subalpine, compact, small, leaves pungent, small compact erect panicle racemose, glumes acute or subacute, rocky places, see *New Zealand Journal of Botany* 17(3): 317. 1979.

R. dimidiatum (Vickery) Connor & Edgar (*Danthonia dimidiata* Vickery; *Notodanthonia dimidiata* (Vickery) Veldkamp)

Tasmania, Victoria. Caespitose, innovation buds intravaginal, similar to *Rytidosperma fortunae-hibernae* and *Rytidosperma pauciflorum*, see *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 296. 1980.

R. erianthum (Lindl.) Connor & Edgar (*Austrodanthonia eriantha* (Lindl.) H.P. Linder; *Danthonia eriantha* Lindl.; *Notodanthonia eriantha* (Lindl.) Veldkamp)

Australia. Tufted, hairy, leaf sheaths glabrous and long-haired, leaf blade densely hairy, short panicle, glumes more or less equal, awns exerted from the glumes, palea broadly obovate, see Sir Thomas Livingstone Mitchell, 1792-1855, *Three Expeditions into the Interior of Eastern Australia* 2: 304. London 1838 and *New Zealand Journal of Botany* 17(3): 323. 1979, *Taxon* 29: 296. 1980, *Telopea* 7(3): 271. 1997.

R. fortunae-hibernae (Renvoize) Connor & Edgar (*Danthonia fortunae-hibernae* Renvoize)

Tasmania. Caespitose, innovation buds intravaginal, similar to *Rytidosperma dimidiatum* and *Rytidosperma pauciflorum*, see *Kew Bull.* 30: 596. 1976, *New Zealand Journal of Botany* 17(3): 332. 1979.

R. geniculatum (J.M. Black) Connor & Edgar (*Austrodanthonia geniculata* (J.M. Black) H.P. Linder; *Danthonia geniculata* J.M. Black; *Notodanthonia geniculata* (J.M. Black) Zotov)

Australia. Tussocky, small, compact, leaf blade inrolled, leaves almost pungent, short and broad panicle, glumes more or less equal, awns included by glumes, dry areas, see *Transactions and Proceedings of the Royal Society of South Australia* 53: 261. 1929, *Contr. New South Wales Natl. Herb.* 2: 279. 1956, *New Zealand Journal of Botany* 1: 114. 1963, *New Zealand Journal of Botany* 17(3): 323. 1979, *Telopea* 7(3): 271. 1997.

R. gracile (Hook.f.) Connor & Edgar (*Danthonia gracilis* Hook.f.; *Danthonia semiannularis* var. *gracilis* (Hook.f.)

Hook.f.; *Notodanthonia gracilis* (Hook.f.) Zotov; *Thonandia gracilis* (Hook.f.) H.P. Linder)

New Zealand, Tasmania. Tufted, leafy, prostrate, stoloniferous, rooting at the nodes, leaf blade flat with inrolled margins, panicle erect to lax and drooping, awns exerted from the glumes, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Novae-Zelandiae* 1: 303, t. 69B. 1853, *Handbook of the New Zealand Flora* 333. 1864 and *New Zealand Journal of Botany* 1: 123. 1963, *New Zealand Journal of Botany* 17(3): 330. 1979, *Telopea* 6(4): 612. 1996.

R. laeve (Vickery) Connor & Edgar (*Austrodanthonia laevis* (Vickery) H.P. Linder; *Danthonia laevis* Vickery; *Notodanthonia laevis* (Vickery) Zotov)

Australia. Shortly rhizomatous, wiry, slender, see *Contributions from the New South Wales National Herbarium* 1(5): 299. 1950, *New Zealand Journal of Botany* 1: 117. 1963, *New Zealand Journal of Botany* 17(3): 325. 1979, *Telopea* 7(3): 272. 1997.

R. lechleri Steud. (*Danthonia glabra* Phil.; *Notodanthonia lechleri* (Steud.) Veldkamp; *Rytidosperma glabrum* (Phil.) Nicora)

Chile. See *Synopsis Plantarum Glumacearum* 1: 425. 1854, *Anales de la Universidad de Chile* 94: 30. 1896 and *Darwiniana* 18: 87, f. 2A-F. 1973, *Taxon* 29: 297. 1980.

R. maculatum (Zotov) Connor & Edgar (*Notodanthonia maculata* Zotov)

New Zealand. Erect, low growing, shortly rhizomatous, leaf sheath hairy, leaf blade inrolled, erect inflorescence of racemose panicle, awns exerted from the glumes, short stiff hairy pedicels, glumes more or less equal, see *New Zealand Journal of Botany* 1: 108. 1963, *New Zealand Journal of Botany* 17(3): 320. 1979.

R. merum Connor & Edgar (*Austrodanthonia mera* (Connor & Edgar) H.P. Linder; *Notodanthonia mera* (Connor & Edgar) H.P. Linder)

New Zealand. Densely tufted, very slender, shortly rhizomatous, drooping or trailing, leaf sheath glabrous, inflorescence a raceme, spikelets almost sessile, awns exerted from the glumes, short stout callus, glumes more or less equal, see *New Zealand Journal of Botany* 17(3): 328, f. 3. 1979, *Telopea* 7(3): 272. 1997.

R. nigricans (Petrie) Connor & Edgar (*Danthonia gracilis* var. *nigricans* (Petrie) Zotov; *Danthonia nigricans* (Petrie) Calder; *Danthonia semiannularis* var. *nigricans* Petrie; *Notodanthonia nigricans* (Petrie) Zotov; *Thonandia nigricans* (Petrie) H.P. Linder)

New Zealand. Stiffly erect, montane and alpine, open, tufted, leaf sheath glabrous or hairy, leaf blades usually folded, panicle usually erect, awns exerted from the glumes, boggy sites, wet ground, see *Flora Novae-Zelandiae* 1: 303, t. 69B. 1853 and *Transactions and Proceedings*

of the New Zealand Institute 46: 37. 1914, *Journal of the Linnean Society, Botany* 51: 8. 1937, *T.R.S.N.Z.* 73: 234. 1943, *New Zealand Journal of Botany* 1: 123. 1963, *New Zealand Journal of Botany* 17(3): 331. 1979, *Telopea* 6: 612. 1996.

R. nitens (D.I. Morris) H.P. Linder (*Danthonia nitens* D.I. Morris)

Tasmania. Rare, caespitose, innovation buds intravaginal, similar to *Rytidosperma niviculum*, see *Telopea* 6: 614. 1996.

R. niviculum (Vickery) Connor & Edgar (*Danthonia nivicola* Vickery; *Danthonia pulvinorum* D.I. Morris; *Notodanthonia nivicola* (Vickery) Veldkamp; *Rytidosperma pulvinorum* (D.I. Morris) Connor & Edgar)

Tasmania, New South Wales. Cushion-forming, innovation buds intravaginal, alpine areas, wet grasslands, similar to *Rytidosperma nitens* and *Rytidosperma nudiflorum*, see *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 296. 1980.

R. nudiflorum (P. Morris) Connor & Edgar (*Danthonia nudiflora* P. Morris; *Notodanthonia nudiflora* (P. Morris) Veldkamp)

Southeastern Australia. Caespitose, innovation buds intravaginal, similar to *Rytidosperma niviculum*, see *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 296. 1980.

R. nudum (Hook.f.) Connor & Edgar (*Danthonia nuda* Hook.f.; *Notodanthonia nuda* (Hook.f.) Zotov)

New Zealand. Tufted, alpine, small, open, leafy, rooting at the nodes, leaf blade folded, leaves acute, leaf sheaths glabrous, small and erect inflorescence paniculate, glumes more or less equal, awns exerted from the glumes, boggy sites, wet grounds, see *Flora Novae-Zelandiae* 2: 337. 1855 and *New Zealand Journal of Botany* 1: 112. 1963, *New Zealand Journal of Botany* 17(3): 322. 1979.

R. paschale (Pilg.) C. Baeza (*Danthonia paschalis* Pilg.)

Easter Island, Chile. See *The Natural History of Juan Fernandez and Easter Island* 2: 67, f. 1d-h. 1922, *Gayana, Botánica* 47(3-4): 84. 1990 [1991], *Sendtnera* 3: 67. 1996, *Gayana, Botánica* 53(2): 329-333. 1996.

R. pauciflorum (R. Br.) Connor & Edgar (*Danthonia pauciflora* R. Br.; *Notodanthonia pauciflora* (R. Br.) Veldkamp)

Tasmania. Caespitose, innovation buds intravaginal, similar to *Rytidosperma dimidiatum* and *Rytidosperma fortunaehibernae*, see *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 297. 1980.

R. penicillatum (Labill.) Connor & Edgar (*Arundo penicillata* Labill.; *Austrodanthonia penicillata* (Labill.) H.P. Linder; *Danthonia penicillata* (Labill.) R. Br. ex P. Beauvais; *Danthonia penicillata* (Labill.) F. Muell., nom. illeg., non *Danthonia penicillata* (Labill.) R. Br. ex P. Beauvais;

Danthonia racemosa var. *penicillata* (Labill.) Benth.; *Notodanthonia penicillata* (Labill.) Zotov)

Australia. Loosely tufted, slender, dense, hairy to scabrid, shortly rhizomatous, leaf blade usually folded and inrolled, slender elongate panicle, rachis and pedicels stiffly hairy, glumes more or less equal, awns exerted from the glumes, awn column twisted and divergent, in grassland, see *Novae Hollandiae Plantarum Specimen* 1: 26, t. 34. 1804, *Essai d'une Nouvelle Agrostographie* 92, 153, 160. 1812, *Fragmenta Phytographiae Australiae* 8: 135. 1873, *Flora Australiensis: A Description ...* 7: 594. 1878 and *New Zealand Journal of Botany* 1: 122. 1963, *New Zealand Journal of Botany* 17(3): 327. 1979, *New Zealand Journal of Botany* 29: 117-129. 1991, *Telopea* 7(3): 272. 1997.

R. petrosum Connor & Edgar

New Zealand. Tufted, coastal, tussocky, wiry, small, stiff, rooting at the nodes, leaves pungent or semipungent, stiff leaf blade glabrous and inrolled, inflorescence racemose or paniculate, rachis and pedicels glabrous, glumes more or less equal, awns exerted from the glumes, upper lemma sparsely hairy, rocky places, see *New Zealand Journal of Botany* 17(3): 317, f. 1. 1979.

R. pictum (Nees & Meyen) Nicora (*Danthonia picta* Nees & Meyen; *Notodanthonia picta* (Nees & Meyen) Veldkamp)

South America, Chile. See *Gramineae* 25-26. 1841, *Nova Acta Phys. Med. Acad. Caes. Leop. Carol. Nat. Cur.* 19(Suppl. 1): 157-158 (1843 and *Darwiniana* 18: 91, f. 3 A-D. 1973, *Taxon* 29: 297. 1980.

R. pictum (Nees & Meyen) Nicora var. *bimucronatum* Nicora (*Notodanthonia picta* var. *bimucronata* (Nicora) Veldkamp)

South America, Argentina. See *Darwiniana* 18: 91, f. 3 E. 1973, *Taxon* 29: 297. 1980.

R. pictum (Nees & Meyen) Nicora var. *pictum*

South America. See *Darwiniana* 18: 91, f. 3 A-D. 1973.

R. pilosum (R. Br.) Connor & Edgar (*Danthonia penicillata* var. *pilosa* (R. Br.) F. Muell. ex Maiden & Betche; *Danthonia pilosa* R. Br.; *Notodanthonia pilosa* (R. Br.) Zotov)

Australia. Densely tufted, coarse, harsh, stout, stiff, shortly rhizomatous, leaf sheath glabrous or sparsely hairy, leaf blade flat to inrolled, panicle more or less compact, glumes subacute more or less equal, awns exerted from the glumes, see *Prodromus Florae Novae Hollandiae* 177. 1810 and *A Census of New South Wales Plants* 22. 1916, *Contributions from the New South Wales National Herbarium* 2: 313. 1956, *New Zealand Journal of Botany* 1: 118. 1963, *New Zealand Journal of Botany* 17: 326, 332. 1979.

R. pilosum (R. Br.) Connor & Edgar var. *paleaceum* (Vickery) Connor & Edgar (*Danthonia pilosa* var. *paleacea* Vickery; *Notodanthonia pilosa* var. *paleacea* (Vickery) Veldkamp)

Australia, New Zealand. See *Prodromus Florae Novae Hollandiae* 177. 1810 and *Contributions from the New South Wales National Herbarium* 2: 313. 1956, *New Zealand Journal of Botany* 1: 118. 1963, *New Zealand Journal of Botany* 17(3): 326, 332. 1979, *Taxon* 29: 297. 1980.

R. pulchrum (Zotov) Connor & Edgar (*Notodanthonia pulchra* Zotov)

New Zealand. Densely tufted, alpine and subalpine, small, open, rooting at the nodes, leaf blade glabrous, leaves acute, leaf sheath glabrous, small inflorescence paniculate, glumes ovate more or less equal, awns exerted from the glumes, in boggy sites, see *New Zealand Journal of Botany* 1: 111. 1963, *New Zealand Journal of Botany* 17(3): 321. 1979.

R. pumilum (Kirk) Clayton & Renvoize ex Connor & Edgar (*Atropis pumila* Kirk; *Danthonia kirkii* Zotov; *Erythranthera pumila* (Kirk) Zotov; *Rytidosperma pumilum* (Kirk) H.P. Linder, nom. illeg., non *Rytidosperma pumilum* (Kirk) Clayton & Renvoize ex Connor & Edgar; *Triodia pumila* (Kirk) Hack. ex Cheeseman)

New Zealand, Australia. Tufted, vulnerable, montane to alpine, low growing, small, slender, stiff, cushion-forming, leaf sheath glabrous, leaf blades setaceous, lemma more or less hairy, inflorescence paniculate and racemose, narrow spikelets, florets enclosed by glumes, glumes lanceolate more or less equal, in grassland, see *Transactions and Proceedings of the New Zealand Institute* 14: 379. 1882 and *Manual of the New Zealand Flora* 896. 1906, *T.R.S.N.Z.* 73: 234. 1943, *New Zealand Journal of Botany* 1: 124-125. 1963, *New Zealand Journal of Botany* 25(1): 166. 1987, *Telopea* 6(4): 615. 1996.

R. quirihuense C. Baeza

Chile. See *Novon* 12(1): 31-34, f. 1. 2002.

R. racemosum (R. Br.) Connor & Edgar (*Austrodanthonia racemosa* (R. Br.) H.P. Linder; *Danthonia penicillata* var. *racemosa* (R. Br.) F. Muell. ex Maiden & Betche; *Danthonia pilosa* var. *racemosa* Buchanan; *Danthonia racemosa* R. Br.; *Notodanthonia racemosa* (R. Br.) Zotov)

Australia. Variable, shortly rhizomatous, leaf sheath glabrous or stiffly hairy, leaf blade flat, erect racemose panicle, glumes ovate more or less equal, awns exerted from the glumes, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Australiensis: A Description ...* 7: 594. 1878, *Indigenous Grasses of New Zealand* t. 33 (2) B. 1879 and *A Census of New South Wales Plants* 22. 1916, *New Zealand Journal of Botany* 1: 121. 1963, *New Zealand Journal of Botany* 17(3): 327, 332. 1979, *Telopea* 7(3): 273. 1997.

R. racemosum (R. Br.) Connor & Edgar var. *obtusatum* (F. Muell. ex Benth.) Connor & Edgar (*Austrodanthonia racemosa* var. *obtusata* (F. Muell. ex Benth.) H.P. Linder; *Danthonia racemosa* var. *obtusata* F. Muell. ex Benth.; *Notodanthonia racemosa* var. *obtusata* (F. Muell. ex Benth.) Veldkamp)

Australia. See *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Australiensis: A Description ...* 7: 594. 1878 and *New Zealand Journal of Botany* 17(3): 332. 1979, *Taxon* 29: 297. 1980, *Telopea* 7(3): 273. 1997.

R. setifolium (Hook.f.) Connor & Edgar (*Danthonia semiannularis* Buchanan; *Danthonia semiannularis* var. *setifolia* Hook.f.; *Danthonia setifolia* (Hook.f.) Calder; *Danthonia setifolia* (Hook.f.) Cockayne; *Notodanthonia setifolia* (Hook.f.) Zotov)

New Zealand. Tussocky, montane to alpine, stiff, rooting at the nodes, leaf sheath glabrous, leaf blade inrolled, panicle more or less erect, glumes ovate more or less equal, awns exerted from the glumes, rocky areas, grassland, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Flora Novae-Zelandiae* 1: 304. 1853, *Manual of the Indigenous Grasses of New Zealand* t. 34 (2) A. 1879 and *New Zealand Journal of Agriculture* 23: 146. 1921, *Journal of the Linnean Society, Botany* 51: 88. 1937, *New Zealand Journal of Botany* 1: 108. 1963, *New Zealand Journal of Botany* 17(3): 316. 1979.

R. sorianoi Nicora (*Notodanthonia sorianoi* (Nicora) Veldkamp)

Argentina. See *Darwiniana* 18: 89, f. 2G-L. 1973, *Taxon* 29: 297. 1980.

R. subulatum (A. Rich.) T. Cope (*Danthonia albida* Hochst. ex Steud.; *Danthonia candida* Hochst. ex Steud.; *Danthonia subulata* A. Rich.; *Danthonia subulata* Hook.f., nom. illeg., non *Danthonia subulata* A. Rich.)

Ethiopia, Yemen. Perennial, densely tufted, ligule a ciliate rim, spine-tipped leaves, rigid and spinescent leaves erect and inrolled, linear spike-like panicle, glumes more or less equal, lemmas bifid and sparsely pilose, awn with a twisted column, see *Tentamen Florae Abyssinicae ...* 2: 420. 1850, *Synopsis Plantarum Glumacearum* 1: 244. 1854, *Flora Tasmaniae* 2: 121, t. 161. 1860 and *Kew Bulletin* 39(4): 835. 1984.

R. tenue (Petrie) Connor & Edgar (*Danthonia buchananii* Hook.f.; *Danthonia buchananii* var. *tenuis* Petrie; *Notodanthonia tenuis* (Petrie) Zotov)

New Zealand. Tufted, slender, rooting at the nodes, leaf blade inrolled, leaf sheath hairy or glabrous, inflorescence erect and contracted, glumes subacute more or less equal, awns more or less included by glumes, see *Handbook of the New Zealand Flora* 333. 1864 and *Transactions and Proceedings of the New Zealand Institute* 46: 37. 1914, *New Zealand Journal of Botany* 1: 111. 1963, *New Zealand Journal of Botany* 17(3): 321. 1979, *New Zealand Journal of Botany* 26: 163-167. 1988.

R. tenuius (Steud.) O.E. Erikss., A. Hansen & Sunding (*Austrodanthonia tenuior* (Steud.) H.P. Linder; *Danthonia tenuior* (Steud.) Conert; *Notodanthonia tenuior* (Steud.) S.T. Blake; *Plinthanthesis tenuior* Steud.; *Rytidosperma*

tenuius (Steud.) Connor & Edgar; *Rytidosperma tenuius* (Steud.) A. Hansen & Sunding)

Australia. Erect, tussock, coarse, stout, shortly rhizomatous, leaf blade flat, inflorescence paniculate, glumes subacute more or less equal, awns more or less included by or exerted from glumes, see *Synopsis Plantarum Glumacearum* 1: 14. 1855 [1853] and *Contributions from the New South Wales National Herbarium* 1(5): 301. 1950, *New Zealand Journal of Botany* 1: 114. 1963, *Contributions from the Queensland Herbarium* 14: 3. 1972, *Senckenbergiana Biologica* 56: 163. 1975, *Flora of Macaronesia: Checklist of Vascular Plants (2nd revised edition)* 1: 93. 1979, *New Zealand Journal of Botany* 17(3): 324. 1979, *Telopea* 7(3): 269, 273. 1997.

R. thomsonii (Buchanan) Connor & Edgar (*Danthonia thomsonii* Buchanan; *Notodanthonia thomsonii* (Buchanan) Zotov; *Triodia thomsonii* (Buchanan) Petrie)

New Zealand. Variable, tussock, tufted, shortly rhizomatous, leaf blade stiff and inrolled, leaves semipungent, glumes subacute more or less equal, see *Indigenous Grasses of New Zealand* t. 36 (2). 1879 and *Transactions and Proceedings of the New Zealand Institute* 44: 188. 1912, *New Zealand Journal of Botany* 1: 112. 1963, *New Zealand Journal of Botany* 17(3): 322. 1979.

R. unarede (Raoul) Connor & Edgar (*Danthonia cingula* Steud.; *Danthonia semiannularis* var. *unarede* (Raoul) Hook.f.; *Danthonia unarede* Raoul; *Notodanthonia unarede* (Raoul) Zotov; *Thonandia unarede* (Raoul) H.P. Linder)

New Zealand. Tufted, montane, open, shortly rhizomatous, glabrous, leaf blade flat or inrolled, long-branched panicle, glumes acute more or less equal, awns exerted from the glumes, see *Prodromus Florae Novae Hollandiae* 177. 1810, *Annales des Sciences Naturelles; Botanique, sér. 3* 2: 116. 1844, *Flora Novae-Zelandiae* 1: 304. 1853, *Synopsis Plantarum Glumacearum* 1: 246. 1854 [1853] and *New Zealand Journal of Botany* 1: 122. 1963, *New Zealand Journal of Botany* 17(3): 328. 1979, *Telopea* 6(4): 613. 1996.

R. vickeryae M. Gray & H.P. Linder

New South Wales. Loose, mat-forming, innovation buds intravaginal, spreading rhizomes, along stream banks, see *Austral. Syst. Bot.* 12: 744. 1999.

R. violaceum (E. Desv.) Nicora (*Danthonia violacea* E. Desv.; *Notodanthonia violacea* (E. Desv.) Veldkamp)

Chile. See *Flora Chilena* 6: 365, t. 80, f. 1. 1854 and *Darwiniana* 18: 91, f. 3 F-K. 1973, *Taxon* 29: 297. 1980, *Gayana, Botánica* 53(2): 329-333. 1996.

R. virescens (E. Desv.) Nicora (*Danthonia andina* Phil.; *Danthonia picta* var. *patagonica* Speg.; *Danthonia virescens* E. Desv.; *Danthonia werdermannii* Pilg.; *Notodanthonia virescens* (E. Desv.) Veldkamp; *Notodanthonia virescens* var. *patagonica* (Speg.) Veldkamp; *Rytidosperma*

virescens var. *patagonicum* (Speg.) Nicora) (for the German (b. Berlin) botanist Erich Werdermann, 1892-1959 (Bremen), plant geographer, traveler (South Africa, Namibia, Chile, Bolivia, Brazil, Mexico), explorer, plant collector, anatomist, professor of botany, plant physiologist, author of "Friedrich Boedeker." *Kakteenkunde* Hft 5, 1937, *Brasilien und seine Säulenkakteen*. Neudamm, J. Neumann [ca. 1933] and "Excursión botánica a la alta Cordillera de Atacama (Chile)." Trad. del alemán por G. Looser. *Rev. Universit.* [Univ. Catol. Chile] xiv. [Santiago] 1929. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 477. 1965; Gualterio Looser (1898-1982), "El Botanico Dr. Erich Werdermann." (*An. Acad. Chil. Cienc. Nat.* no. 23) in *Revista Universitaria Santiago* 44-45: 232-234. 1960)

Chile. Stony places, dry areas, see *Gramineae* 25-26. 1841, *Flora Chilena* 6: 363. 1854, *Anales de la Universidad de Chile* 94: 33. 1896 and *Anales del Museo Nacional de Buenos Aires* 7: 193. 1902, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(97): 758. 1929, *Darwiniana* 18: 93, f. 4A-E. 1973, *Taxon* 29: 297. 1980.

R. virescens (E. Desv.) Nicora var. **parvispiculum** Nicora (*Notodanthonia virescens* var. *parvispicula* (Nicora) Veldkamp)

Argentina. See *Darwiniana* 18: 95, f. 4F. 1973, *Taxon* 29: 297. 1980.

R. virescens (E. Desv.) Nicora var. **virescens**

Argentina, Chile. See *Darwiniana* 18: 18: 93, f. 4 A-E. 1973, *Gayana, Botánica* 53(2): 329-333. 1996.

R. viride (Zotov) Connor & Edgar (*Notodanthonia viridis* Zotov)

New Zealand. Tussocky, montane and subalpine, stiff, leaf blade inrolled, leaf sheath usually glabrous, leaves pungent, panicle erect, glumes linear-lanceolate, awns exerted from the glumes, rocky places, see *New Zealand Journal of Botany* 1: 108. 1963, *New Zealand Journal of Botany* 17(3): 316. 1979.

Rytilix Raf. ex Hitchc. = *Hackelochloa* Kuntze, *Mnesithea* Kunth

Panicoideae, Andropogoneae, Rottboelliinae, see *Mantissa Plantarum* 2: 575. 1771, *Révision des Graminées* 1: 153-154. 1829, C.S. Rafinesque, *Seringe Bull. Bot.* 1: 219. 1830, *Revisio Generum Plantarum* 2: 776. 1891 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 282: 20. 1913, *United States Department of Agriculture: Bulletin* 772: 278. 1920, E.D. Merrill, *Index rafinesquianus*. The plant names published by C.S. Rafinesque, etc. 76. Jamaica Plain, Massachusetts 1949, *Contributions from the United States National Herbarium* 46: 246, 295-296, 550. 2003.

S

Sabsab Adans. = *Paspalum* L.

Panicoideae, Paniceae, Paspalinae, see *Systema Naturae*, *Editio Decima* 846, 855, 1359. 1759, *Familles des Plantes* 2: 31, 599. 1763 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Contributions from the United States National Herbarium* 46: 443-527, 550. 2003.

Saccharifera Stokes = *Saccharum* L.

From *Saccharum* L. and *fero, fers, tuli, latum, ferre* “to bear, carry.”

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, see *Species Plantarum* 1: 54. 1753, *A Botanical Materia Medica* 1: 131-132. 1812 and *Contributions from the United States National Herbarium* 46: 550-557. 2003.

Saccharum L. = *Erianthus* Michx., *Lasiorrhachis* (Hack.) Stapf, *Narenga* Bor, *Ripidium* Bernh. (Schizaeaceae), *Ripidium* Trin., *Saccharifera* Stokes

From the Greek *sakcharon* “sugar”; Indian *sarkara* “the juice prepared from sugarcane,” *uch, uchari* “sugar”; Malay *singkara*; Sanskrit *hascha* “pleasure,” *ha, hu* “good,” *ikshu, ikshuka, ikshuraka* “sugarcane,” *ikshurasa* “juice of sugarcane”; see Carl Linnaeus, *Species Plantarum*. 54. 1753 and *Genera Plantarum*. edition 5. 28. 1754.

About 5-6 *sensu stricto* (3 wild, 2 cultigens) or 35-40 species, tropics and subtropics, warm temperate. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial, cane-like, erect, tall, vigorous and robust, coarse, clumped or rhizomatous, caespitose, stout to massive and hard to solid, persistent, herbaceous or woody, culm nodes glabrous, solid culm internodes, ligule membranous and fringed, leaf sheaths rounded, leaves linear-lanceolate to linear, plants bisexual, inflorescence a large terminal and silky plumose, much branched panicle broad or narrow, spikelets borne in pairs and enveloped in long white hairs, 1 spikelet sessile and 1 pedicellate, 2 florets, lower floret sterile or reduced, upper floret bisexual, fluffy callus hairs, 2 glumes more or less equal, lower lemma sterile and papery, lemma of upper

floret absent or lanceolate and shortly awned or awnless, palea narrow, lodicules present, 2-3 stamens, ovary glabrous, 2 plumose stigmas, pedicelled spikelet similar to the sessile, ornamental, naturalized, may become invasive, cultivated fodder, a source of sugar, used in construction work, used for weaving house walls, all species may be used as hosts for the ornamental parasite *Aeginetia indica* L. (Orobanchaceae, alt. Scrophulariaceae), shade species, riversides, pampas, valley bottoms, open hillsides, hybridization with genera *Erianthus* Michaux, *Imperata* Cirillo, *Miscanthidium* Stapf, *Miscanthus* Andersson, *Narenga* Bor, *Sclerostachya* (Hackel) Camus and *Sorghum* Moench, awned species were formerly placed in *Erianthus*, type *Saccharum officinarum* L., see Sir Hans Sloane (1660-1753), *A Voyage to the Islands Madera, Barbados, Nieves, S. Christophers and Jamaica* 1: t. 66. London 1707-1725, *Species Plantarum* 1: 54. 1753, *Species Plantarum* 2: 1045. 1753, *Genera Plantarum*. edition 5. 28. 1754, *Familles des Plantes* 2: 31, 530. 1763, *Genera Plantarum* 2: 787. 1791, *Journal für die Botanik* 1800(2): 127. 1801, *Flora Boreali-Americana* 1: 54-55. 1803, *Syn. Pl.* 1: 103. 1805, *Bot. Mat. Med.* 1: 131. 1812, *Essai d'une Nouvelle Agrostographie* 8. 1812, *Fundamenta Agrostographiae* 169. 1820, *Flora Indica; or Descriptions ...* 1: 241. 1820, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 315-316. 1829, *Synopsis Plantarum Glumacearum* 1: 123, 407. 1854, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 12: 165. 1855, *Flora Brasiliensis* 2(4): 253, 255. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 24. 1887, *Monographiae Phanerogamarum* 6: 29, 121, 471. 1889 and *N. Amer. Fl.* 17: 90. 1909, *Flore Générale de l'Indo-Chine* 7: 243. 1922, *Bulletin de la Société Botanique de France* 70: 736. 1923, *Hooker's Icones Plantarum* 32: t. 3124. 1927, *Dict. Econ. Prod. Mal. Penins.* 1923. 1935, *Indian Forester* 66: 267. 1940, *Fl. Assam* 5: 315. 1940, *Lloydia* 21(3): 157-188. 1958, *USDA Agric. Handb.* 122: 1-307. 1958, *Grasses of Burma, Ceylon, India and Pakistan* 208-214. 1960, *Phytologia* 14: 91-93. 1966, *Darwiniana* 23: 559-585. 1981, *Genera Graminum* 330-331. 1986, *Baileya* 23: 109-125. 1991, *Flora Mesoamericana* 6: 378-379. 1994, *Sida* 16(2): 233-244. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Sida* 16(3): 551-580. 1995, *J. Fujian Acad. Agric. Sci.* 11(3): 19-22. 1996, T.R. Hodkinson, M.W. Chase, M.D. Lledo, N. Salamin and S.A. Renvoize, “Phylogenetics of *Miscanthus*, *Saccharum* and related genera

(Saccharinae, Andropogoneae, Poaceae) based on DNA sequences from ITS nuclear ribosomal DNA and plastid trnL intron and trnL-F intergenic spacers." *Journal of Plant Research* 115: 381-392. 2002, *Contributions from the United States National Herbarium* 46: 230-233, 297, 546, 550-557. 2003, *Molecular Ecology* 14(7): 1897-1909. June 2005, *Restoration Ecology* 13(2): 334-340. June 2005, *Physiologia Plantarum* 124(2): 249-259. June 2005, *Conservation Biology* 19(3): 793-805. June 2005, *Weed Research* 45(3): 212-219. June 2005, *Molecular Ecology* 14(8): 2319-2329. July 2005.

Species

S. alopecuroides (L.) Nutt. (*Andropogon alopecuroides* L.; *Andropogon divaricatus* L., also spelled *divaricatum*; *Erianthus alopecuroides* (L.) Elliott; *Erianthus alopecuroides* var. *hirsutus* Nash, also spelled *hirsutis*; *Erianthus divaricatus* (L.) A.S. Hitchc.; *Erianthus giganteus* Muhl.; *Erianthus tracyi* Nash; *Pappophorum pappiferum* (Lam.) Kuntze; *Saccharum alopecuroides* subvar. *divaricatum* (L.) Roberty; *Saccharum pappiferum* Lam.) (named for S.M. Tracy)

U.S., northern America. Found in gravel soils, along railroad tracks and along roadsides, see *Species Plantarum* 2: 1045. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 155. 1791, *A Sketch of the Botany of South-Carolina and Georgia* 1(1): 38. 1816, *The Genera of North American Plants* 1: 60. 1818, *Bulletin of the Torrey Botanical Club* 24: 37. 1897, *Revisio Generum Plantarum* 3(3): 365. 1898 and *Flora of the Southeastern United States ...* 55. 1903, *Contributions from the United States National Herbarium* 12(3): 125. 1908, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 357. 1960.

in English: silver plume grass

S. angustifolium (Nees) Trin. (*Andropogon erianthus* Link; *Andropogon saccharoides* Sw.; *Erianthus angustifolius* Nees, also spelled *angustifolium*; *Erianthus angustifolius* var. *angustifolius*; *Erianthus biaristatus* (Hack.) Swallen; *Erianthus divaricatus* var. *angustifolius* (Nees) Hack.; *Erianthus fischerianus* Rupr. ex Döll; *Erianthus saccharoides* Michx.; *Erianthus saccharoides* subsp. *angustifolius* (Nees) Hack.; *Erianthus saccharoides* subsp. *biaristatus* (Hack.) Hack.; *Erianthus saccharoides* var. *angustifolius* (Nees) Kuntze; *Erianthus saccharoides* var. *biaristatus* Hack.; *Erianthus saccharoides* var. *neesii* Hack.; *Saccharum alopecuroides* subvar. *angustifolium* (Nees) Roberty; *Saccharum angustifolium* Reinw. ex de Vriese)

Argentina, Venezuela, Brazil. Caespitose, slender, robust, leaf blades linear acuminate glabrous, terminal panicle oblong villous, panicles fully exerted from the uppermost leaf sheath, spikelets lanceolate acuminate, lower glume pilose, lower lemma muticous, upper lemma bidentate, 2 stamens, common in damp places, see *Nova Genera et*

Species Plantarum seu Prodrumus 26. 1788, *Flora Boreali-Americana* 1: 55. 1803, *Hortus Regius Botanicus Berolinensis* 1: 243. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 316-317. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 92. 1836, *Plantae Indiae Batavae Orientalis* 107. 1857, *Flora Brasiliensis* 2: 258. 1883, *Monographiae Phanerogamarum* 6: 132. 1889 and *Contributions from the United States National Herbarium* 12(3): 125. 1908, *Boissiera*. 9: 357. 1960, *Phytologia* 14(2): 92. 1966.

S. arundinaceum Retz. (*Erianthus arundinaceus* (Retz.) Jeswiet, also spelled *arundinaceum*; *Imperata exaltata* (Roxb.) Brongn.; *Ripidium arundinaceum* (Retz.) Grassl; *Saccharum exaltatum* Roxb.; *Saccharum procerum* sensu Trimen, non Roxb.)

India, Asia temperate and tropical, China. Perennial, grows in large clumps, tufted and upright, stout and massive, leafy, internodes very long, leaf sheaths overlapping and tight on the stem, ligule a membranous rim with short hairs or ciliate, whitish to dark green leaves linear and acute, plumose inflorescence silky pubescent and white to pinkish, terminal panicles very open, sessile and stalked spikelets, spikelets lanceolate with white to gray hairs, glumes hairy to pilose on the back, ornamental, very coarse leaves avoided by cattle, leaf buds eaten in salads, pulp used in paper manufacture, culms used to make arrows and for building purposes, for making screens and walls, found in heavy waterlogged soils, plains and low hills, see *Observationes Botanicae* 4: 14. 1786, *Plantarum Rariorum Regni Neapolitani* 2: 26. 1792, *Hortus Bengalensis, or a Catalogue ...* 6, 81. 1814, *Flora Indica; or Descriptions ...* 1: 248-249. 1820, *Voyage autour du Monde* 2(2): 101. 1829 [1831] and *Handb. Fl. Ceylon* 5: 202. 1900, *Bulletin du Muséum d'Histoire Naturelle* 4: 139. 1915, *Nuovo Giornale Botanico Italiano, n.s.* 22(2): 256. 1915, *Archief voor de Suikerindustrie in Nederland en Nederlandsch-Indië* 33: 399. Pasuruan, Dutch E. Indies [Indonesia] 1925, *Grasses of Ceylon* 167. 1956, *Grasses of Burma ...* 211. 1960, *Proc. 14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 244. 1972, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Journal of Yunnan Agricultural University* 7(1): 59-62. 1992, *Journal of Yunnan Agricultural University* 12(4): 253-356. 1997.

in English: reedy sugarcane, devil sugar cane, girdle grass, wild sugarcane, moonshee reed, pen reed grass, pin reed grass

in China: ban mao

in India: abbe, adava, adavicheruku, ama, baragu, bellu ponik, bramhamekhalamu, eludugiranaanal, garba ganda, gundra, kanra, karkana, kerpa, kondakanamu, lekhini hullu, mekhala pullu, moonj, mujamu, munigida, munj, munja, munjagaddi, munji, nadamu, nala, palawar, pikarumbu,

polagaddi, poonika, ponugu, ramsar, rellu, sar, sara, saramu, sarapullu, sarkand, sarkanda, shara, tejanaka, teng, tilanaka

in Japan: yoshi-susuki

in Okinawa: to-guchi-chi

Malayan name: tebrau

in Sri Lanka: pi karumbu, pikarumbu, rambuk

in Thailand: khaem, pong, ta po, traeng

S. asperum (Nees) Steud. (*Erianthus asper* Nees; *Erianthus asper* var. *asper*; *Erianthus asper* var. *brasilianus* (Trin.) Hack.; *Erianthus asper* var. *typicus* Hack.; *Erianthus brasilianus* (Trin.) Andersson; *Erianthus cuspidatus* Andersson; *Imperata brasiliensis* var. *mexicana* Rupr.; *Saccharum alopecuroides* subvar. *asperum* (Nees) Roberty; *Saccharum alopecuroides* subvar. *brasilianum* (Trin.) Roberty; *Saccharum brasilianum* Trin.)

Argentina, Paraguay, Brazil. Perennial, stout, caespitose, inflorescence ovate with ascending branches, panicles fully exerted from the uppermost leaf-sheath, stout peduncles, spikelets lanceolate, lower glume glabrous and scabrid, found in damp places, see *Species Plantarum* 1: 54. 1753, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 315-316. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 311, 331. 1832, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 245. 1842, *Synopsis Plantarum Glumacearum* 1: 407. 1854, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 12: 162. 1855, *Flora Brasiliensis* 2(4): 259-260, pl. 61, f. 1. 1883 and *Boissiera*. 9: 357. 1960.

S. balansae (Hack.) Roberty (*Erianthus balansae* Hack.; *Saccharum villosum* Steud.)

Argentina, Paraguay. See *Synopsis Plantarum Glumacearum* 1: 408. 1854, *Monographiae Phanerogamarum* 6: 133. 1889 and *Boissiera*. 9: 357. 1960.

S. baldwinii Spreng. (*Andropogon durus* (Trin.) Steud.; *Erianthus strictus* Ell.; *Erianthus strictus* Baldwin; *Erianthus strictus* (Host) Borbás, nom. illeg., non *Erianthus strictus* Baldwin; *Erianthus strictus* Bluff & Fingerh., nom. illeg., non *Erianthus strictus* Baldwin; *Pollinia dura* Trin.; *Saccharum baldwinii* Roberty; *Saccharum strictum* (Ell.) Ell. ex Nutt.; *Saccharum strictum* (Baldwin) Nutt., nom. illeg., non *Saccharum strictum* (Host) Spreng.)

U.S. See *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *A Sketch of the Botany of South-Carolina and Georgia* 1(1): 39. 1816, *The Genera of North American Plants* 1: 60. 1818, *Systema Vegetabilium, editio decima sexta* 1: 282. 1825, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4, 2(1): 91. 1836, *Nomenclator Botanicus* edition 2 1: 91. 1840, *Genera Plantarum* 3(2): 1127. 1883 and *Boissiera*.

era. 9: 352. 1960, *International Organization of Plant Biostatisticians Newsletter* 13: 20-21. 1989.

in English: narrow plume grass

S. barberi Jeswiet (*Saccharum officinarum* subsp. *barberi* (Jeswiet) Burkill; *Saccharum sinense* Roxb.)

Asia temperate, India. Cultivated, human food, sugar, related to sugarcane, *Saccharum officinarum* L., see *Flora Indica; or Descriptions ...* 1: 244-248. 1820 and *Archief voor de Suikerindustrie in Nederland en Nederlandsch-Indië* 33: 396 [404]. 1925, *A Dictionary of the Economic Products of the Malay Peninsula* 2: 1927. 1935.

in English: Indian cane, Indian sugarcane

S. beccarii (Stapf) T.A. Cope (*Erianthus beccarii* (Stapf) Jansen; *Spodiopogon beccarii* Stapf)

Asia tropical, Sumatra. Spikelets with raised nerves, see *Bulletin of Miscellaneous Information Kew* 1898: 228. 1898 and *Reinwardtia* 2(2): 275. 1953, *Kew Bulletin* 35(3): 703. 1980.

S. bengalense Retz. (*Erianthus bengalensis* (Retz.) C. E. Hubb. & R.E. Vaughan ex R.R. Stewart, also spelled *bengalense*; *Erianthus bengalensis* (Retz.) Bharadw., Basu Chaudh. & Sinha, nom. illeg., non *Erianthus bengalensis* (Retz.) Hubbard & Vaughn ex Stewart; *Erianthus ciliaris* (Andersson) Jeswiet; *Erianthus ciliaris* var. *ciliaris*; *Erianthus munja* Jesw.; *Erianthus munja* (Roxb.) Jeswiet; *Erianthus procerus* (Roxb.) Raizada; *Erianthus sara* (Roxb.) Rumke; *Imperata sara* (Roxb.) Schult.; *Ripidium bengalense* (Retz.) Grassl; *Saccharum ciliare* Anderss.; *Saccharum moonja* Royle; *Saccharum munja* Roxb.; *Saccharum procerum* Roxb.; *Saccharum sara* Roxb.; *Saccharum spontaneum* L.)

India, Pakistan, Indomalaysia, Asia tropical and temperate. Clumped, stout, erect, very leafy at the base, ligule a truncate membranous ring, leaf sheaths silky and glabrous, glaucous leaves, inflorescence plumose with branches almost whorled, white panicles cylindrical and compact, pubescent paired spikelets lanceolate and silver-gray, growing in clumps, cattle eat the young and immature leaves, yields very valuable fiber used for cordage and ropes, leaves used for thatching and a source of paper pulp, leaves worked into mats, young leaves for fodder, ornamental, medicinal value, said to be aphrodisiac, stems useful in burning sensations and blood troubles, roots burnt near women after delivery, used for erosion control, used as a sand binder, common on alluvial sandy soils, see *Mantissa Plantarum* 183. 1771, *Observationes Botanicae* 5: 16. 1789, *Flora Indica; or Descriptions ...* 1: 248-250. 1820, *Mantissa* 2: 166. 1824, *Illustrations of the Botany ... of the Himalayan Mountains ...* 416. 1839, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 12: 155-156. 1855 and *Archief voor de Suikerindustrie in Nederland en Nederlandsch-Indië* 33: 399. 1925, *Archief voor de Suikerindustrie in Nederland en Nederlandsch-Indië* 2: 223, t. 2. 1934, *The Grasses of*

Mauritius and Rodriguez 97. London 1940, *Brittonia* 5: 458. 1945, *Indian Forester* 80: 41. 1954, *Agra University Journal of Research (Science)* 311. 1957, *Proc. 14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 244. 1972, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 22: 12-22. 1987, *Proceedings of the Indian Science Congress Association* 75(3-vi): 359-360. 1988, *Cytologia* 54: 499-504. 1989, *Journal of Cytology and Genetics* 25: 220-237. 1990.

in English: pin reed grass

in India: bellu-ponik, bind (the flowering stem), dholu sara, ekar, garba ganda, ganda, garba, ghua (the blossom), gundra, ikar, kana (the lower portion of the flowering stem), kanda, kanra, kanwar, karkana, majori (the entire stem from the base), munj (the leaf sheath and the fiber which it yields), munja, palawar, palwar, panni, patawar, ramsar, ram sara, sar (the leaves), sara, sarghas, sarhari, sarjbar, sarka, sarkanda, sarkara, sarpat, sarr, sentha (the lower portion of the flowering stem), shur, shura, sirki (the upper portion of the flowering stem), tejunuka, til (the upper portion of the flowering stem), tilak (the blossom), tilanaka, tilon (the blossom)

S. brevibarbe (Michx.) Pers. (*Erianthus alopecuroides* var. *brevibarbis* (Michx.) Chapm.; *Erianthus brevibarbis* Michx.; *Erianthus saccharoides* var. *brevibarbis* (Michx.) Hack.; *Saccharum alopecuroides* subvar. *brevibarbe* (Michx.) Roberty)

Northern America, U.S. See *Flora Boreali-Americana* 1: 55. 1803, *Syn. Pl.* 1: 103. 1805, *A Sketch of the Botany of South-Carolina and Georgia* 1(1): 38. 1816, *Flora of the Southern United States* 583. 1860, *Monographiae Phanerogamarum* 6: 131. 1889 and *Boissiera*. 9: 357. 1960.

in English: brown plume grass, short-beard plume grass

S. brevibarbe (Michx.) Pers. var. *brevibarbe* (*Erianthus brevibarbis* Michx.; *Erianthus brevibarbis* var. *brevibarbis*; *Erianthus saccharoides* var. *brevibarbis* (Michx.) Hack.)

Northern America, U.S. See *Flora Boreali-Americana* 1: 55. 1803, *Monographiae Phanerogamarum* 6: 131. 1889.

in English: plume grass

S. brevibarbe (Michx.) Pers. var. *contortum* (Elliott) R.D. Webster (*Calamagrostis rubra* Bosc ex Kunth; *Erianthus alopecuroides* var. *contortus* (Elliott) Chapm.; *Erianthus alopecuroides* var. *contortus* (Baldwin ex Elliott) Chapm.; *Erianthus brevibarbis* Michx.; *Erianthus brevibarbis* var. *contortus* (Elliott) D.B. Ward; *Erianthus brevibarbis* var. *contortus* (Baldwin ex Elliott) D.B. Ward; *Erianthus contortus* Elliott; *Erianthus contortus* Baldwin ex Elliott; *Erianthus saccharoides* subsp. *contortus* (Elliott) Hack.; *Erianthus saccharoides* subsp. *contortus* (Baldwin ex Elliott) Hack.; *Erianthus smallii* Nash; *Saccharum alopecuroides* subvar.

contortum (Elliott) Roberty; *Saccharum brevibarbe* var. *contortum* (Baldwin ex Elliott) R.D. Webster; *Saccharum contortum* (Elliott) Nutt.; *Saccharum contortum* (Baldwin ex Elliott) Nutt.) (for the American taxonomic botanist John Kunkel Small, 1869-1938, Herbarium of Columbia College, Museum of the New York Botanical Garden, traveler and botanical explorer, author of the monumental *Flora of the Southeastern United States*. 1903, his articles appeared regularly in the *Journal of the New York Botanical Garden*. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 287. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 245. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Stafleu and Cowan, *Taxonomic literature*. 5: 650-657. Utrecht 1985; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; Thomas Conrad Porter, 1822-1901, *Flora of Pennsylvania*. Edited with the addition of analytical keys by John Kunkel Small. Boston 1903)

Northern America, U.S. Slopes, see *A Sketch of the Botany of South-Carolina and Georgia* 1(1): 38, 40. 1816, *The Genera of North American Plants* 1: 60. 1818, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 478. 1833, *Flora of the Southern United States* 582. 1860, *Monographiae Phanerogamarum* 6: 131. 1889 and *Bulletin of the New York Botanical Garden* 1(5): 429-430. 1900, *Boissiera*. 9: 357. 1960, *International Organization of Plant Systematists Newsletter* 13: 20-21. 1989, *Sida* 16(3): 569. 1995, *Novon* 11(3): 362. 2001.

in English: bent-awn plume grass, beard grass

S. coarctatum (Fernald) R.D. Webster (*Erianthus coarctatus* Fernald; *Erianthus coarctatus* var. *coarctatus*; *Erianthus coarctatus* var. *elliottianus* Fern.)

Northern America, U.S. Near ponds and streams, swamps, see *Rhodora* 45(534): 246, pl. 758. 1943, *Sida* 16(3): 572. 1995.

S. edule Hassk. (*Saccharum robustum* Brandes & Jeswiet ex Grassl; *Saccharum spontaneum* var. *edule* (Hassk.) K. Schum. & Lauterb.)

Asia, Indonesia, Papua New Guinea. Young or immature inflorescences eaten, along riverbanks, near streams, see *Mantissa Plantarum* 183. 1771, *Flora* 25(Beibl. 2): 3. 1842 and *Die Flora der deutschen Schutzgebiete in der Südsee* 166. 1901, *Journal of the Arnold Arboretum* 27: 234. 1946, *Caryologia* 37: 351-357. 1984.

in English: lowland pit pit

in Malay: tebu bertelur, telur tebu

in New Guinea: pit pit, noi

S. fallax Balansa (*Erianthus chrysothrix* Hack.; *Erianthus fallax* (Balansa) Ohwi; *Erianthus fallax* (Balansa) Ohwi; *Erianthus longifolius* (Munro ex Benth.) A. Camus; *Eriochrysis longifolia* Munro; *Narenga fallax* (Balansa) Bor; *Narenga fallax* var. *fallax*; *Saccharum longifolium* Munro ex Benth.)

China, India, Assam, Asia tropical and temperate. See *Journal of the Linnean Society, Botany* 19(115-116): 66. 1881, *Journal de Botanique (Morot)* 4(4): 80-81. 1890 and *Flore Générale de l'Indo-Chine* 7: 246. 1922, *Bulletin of the Tokyo Science Museum* 18: 2. 1947, *Kew Bulletin* 1948(3): 162. 1948, *Reinwardtia* 2(2): 275. 1953, *Flora Reipublicae Popularis Sinicae* 10(2): 37. 1997.

S. filifolium Steud. (*Andropogon elongatus* (R. Br.) Spreng.; *Andropogon elongatus* var. *elongatus*; *Erianthus filifolius* (Steud.) Nees ex Hack.; *Erianthus filifolius* Steud.; *Erianthus filifolius* Nees ex B.D. Jacks.; *Holcus elongatus* R. Br.)

India, Nepal, Asia tropical and temperate, Pakistan. See *Prodromus Florae Novae Hollandiae* 1: 200. 1810, *Systema Vegetabilium, editio decima sexta* 1: 287. 1825, *Synopsis Plantarum Glumacearum* 1: 409. 1855, *Index Kewensis* 864. 1893.

S. giganteum (Walter) Pers. (*Andropogon erianthus* Link; *Anthoxanthum giganteum* Walter; *Erianthus compactus* Nash; *Erianthus giganteus* (Walt.) P. Beauv.; *Erianthus giganteus* (Walter) C.E. Hubb., nom. illeg., non *Erianthus giganteus* (Walter) P. Beauv.; *Erianthus giganteus* (Walter) Muhl.; *Erianthus giganteus* Muhl.; *Erianthus giganteus* var. *compactus* (Nash) Fern.; *Erianthus giganteus* var. *giganteus*; *Erianthus laxis* Nash; *Erianthus saccharoides* Michx.; *Erianthus saccharoides* subsp. *genuinus* Hack.; *Erianthus saccharoides* var. *compactus* (Nash) Fernald; *Erianthus saccharoides* var. *michauxii* Hack.; *Erianthus tracyi* Nash; *Erianthus trinii* Hack.; *Erianthus trinii* (Hack.) Hack.; *Saccharum alopecuroides* subvar. *compactus* (Nash) Roberty, also spelled *compactum*; *Saccharum erianthoides* Raspail; *Saccharum giganteum* Trin. ex Hack., nom. illeg., non *Saccharum giganteum* (Walter) Pers.)

Northern America, U.S. Found in wet areas, along rivers, wet stream banks, open areas, swamps, see *Flora Caroliniana, secundum* ... 65. 1788, *Flora Boreali-Americana* 1: 55. 1803, *Syn. Pl.* 1: 103. 1805, *Essai d'une Nouvelle Agrostographie* 14, 151, 177. 1812, *Catalogus Plantarum Americae Septentrionalis* 4. 1813, *Descriptio uberior Graminum* 192, 203. 1817, *Annales des Sciences Naturelles, Botanique* 5: 308. 1825, *Hortus Regius Botanicus Berolinensis* 1: 243. 1827, *Flora Brasiliensis* 2(4): 257. 1883, *Monographiae Phanerogamarum* 6: 135. 1889, *Bulletin of the Torrey Botanical Club* 22(10): 419. 1895, *Bulletin of the Torrey*

Botanical Club 24(7): 344-345. 1897 and *Rhodora* 14(164): 166. 1912, *Rhodora* 45(534): 252. 1943, *Rhodora* 52: 71. 1950, *Boissiera*. 9: 357. 1960, *International Organization of Plant Biosystematists Newsletter* 13: 20-21. 1989.

in English: sugar-cane plume grass, giant plume grass, sugarcane plumegrass

S. kanashiroi (Ohwi) Ohwi (*Erianthus kanashiroi* Ohwi; *Ripidium kanashiroi* (Ohwi) Grassl; *Saccharum kanashiroi* Ohwi) (for T. Kanashiro)

Japan, Asia temperate. See *Acta Phytotaxonomica et Geobotanica* 7: 37. 1938 and 11: 152. 1942, *Proc. 14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 244. 1972.

S. longisetosum (Andersson) V. Naray. ex Bor (*Erianthus longisetosus* Andersson; *Erianthus longisetosus* Andersson ex Benth., nom. illeg., non *Erianthus longisetosus* Andersson)

Asia tropical, Bhutan, Nepal, Bangladesh, India, Assam. Leaves relished by the cattle used as fodder, hay or silage, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 163-164. 1855, *Journal of the Linnean Society, Botany* 19(1881): 67. 1881 and *Flora of Assam* 5(1): 461. 1940.

S. longisetosum (Andersson) V. Naray. ex Bor var. **hookeri** (Hack.) U. Shukla (*Eccoilopus hookeri* (Hack.) Grassl; *Erianthus hookeri* Hack.; *Erianthus longisetosus* var. *hookeri* (Hack.) Bor; *Saccharum hookeri* (Hack.) V. Naray. ex Bor; *Saccharum longisetosum* var. *hookeri* (Hack.) Bor)

Asia tropical, Bhutan, India. See *Monographiae Phanerogamarum* 6: 142. 1889 and *Flora of Assam* 5(1): 461. 1940, *Grasses of Burma* ... 151. 1960, *Proc. 14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 243. 1972.

S. longisetosum (Andersson) V. Naray. ex Bor var. **longisetosum** (*Eccoilopus longisetosus* (Andersson) Grassl; *Erianthus longisetosus* Andersson)

Asia tropical, India, Nepal. See *Journal of the Linnean Society, Botany* 25: 82, 85, t. 34. 1889 and *14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 243. 1972.

S. narenga (Nees ex Steudel) Wall. ex Hackel (*Eriochrysis giordaniiana* Chiov.; *Eriochrysis narenga* Nees ex Steud.; *Eriochrysis porphyrocoma* Hance ex Trimen; *Narenga porphyrocoma* (Hance ex Trimen) Bor; *Saccharum narenga* (Nees ex Steud.) Hack.; *Saccharum porphyrocoma* (Hance ex Trimen) Hack.; *Sclerostachya narenga* (Nees ex Steud.) Grassl)

Asia tropical and temperate, China, Nepal, India, Orissa, Assam, Bihar, Uttar Pradesh, Madhya Pradesh. Perennial, stout, somewhat slender, culms silky and tough, rhizomatous with a much-branched rhizome, nodes bearded, sheaths very rough, ligule ciliolate, leaves acute with very rough margins, narrow dense panicles woolly and erect, spikelets coriaceous paired, branchlets brittle, lower glume coriaceous narrowly lanceolate-oblong, upper glume with ciliate

margins, lower lemma lanceolate, upper lemma awnless, culms and leaves used for thatching and rough mats and screens, low value as fodder, young leaves browsed by cattle, a soil binder, found on well-drained loam, sandy soils, damp, see *Synopsis Plantarum Glumacearum* 1: 411. 1854, *Journal of Botany, British and Foreign* 14(166): 294. 1876, *Monographiae Phanerogamarum* 6: 119-120. 1889, *Journal de Botanique (Morot)* 4: 80. 1890 and *Atti della Reale Accademia d'Italia. Memorie della classe di scienze fisiche, matematiche e naturali* 11(2): 61. 1940, *Proceedings of the 14th Congress of the International Society of Sugar Cane Technologists* 1972: 241. 1972.

in India: bata, barota, ganeria, kamal, kanwal, kanwar, ronsa, tamar, tamara, tanwar, taunra

S. officinarum L. (*Saccharum atrorubens* Cuzent & Pancher ex Drake; *Saccharum fragile* Cuzent & Pancher ex Drake; *Saccharum glabrum* Cuzent & Pancher ex Drake; *Saccharum hybridum* hort. ex R.M. Grey; *Saccharum infirmum* Steud. ex Lechler; *Saccharum luzonicum* Cuzent & Pancher ex Drake; *Saccharum monandrum* Rottb.; *Saccharum obscurum* Cuzent & Pancher ex Drake; *Saccharum occidentale* Sw.; *Saccharum officinarum* var. *brevipedicellatum* Hack.; *Saccharum officinarum* var. *genuinum* Hack.; *Saccharum officinarum* var. *giganteum* Kunth; *Saccharum officinarum* var. *jamaicense* Sickenb.; *Saccharum officinarum* var. *litteratum-breve* Hassk.; *Saccharum officinarum* var. *litteratum* Hack., nom. illeg., non *Saccharum officinarum* var. *litteratum* Hassk.; *Saccharum officinarum* var. *litteratum* Hassk.; *Saccharum officinarum* var. *luridum* Hassk.; *Saccharum officinarum* var. *luteum-durum* Hassk.; *Saccharum officinarum* var. *oceanicum* Endl.; *Saccharum officinarum* var. *officinarum*; *Saccharum officinarum* var. *otaheitense* Hassk., nom. illeg., non *Saccharum officinarum* var. *otaheitense* Roem. & Schult.; *Saccharum officinarum* var. *otaheitense* Roem. & Schult.; *Saccharum officinarum* var. *purpureum* Kunth; *Saccharum officinarum* var. *rubrum-altum* Hassk.; *Saccharum officinarum* var. *rubrum-humile* Hassk.; *Saccharum officinarum* var. *tahitense* Andersson, nom. illeg., non *Saccharum officinarum* var. *tahitense* Kunth; *Saccharum officinarum* var. *tahitense* Kunth; *Saccharum officinarum* var. *violaceum* Pers.; *Saccharum rubicundum* Cuzent & Pancher ex Drake; *Saccharum sinense* Roxb.; *Saccharum violaceum* Tussac)

Pantropical. Perennial, large, tall, tufted, clumped, smooth, bamboo-like, upright or ascending, culms decumbent in the lower half, waxy below each node, rooting above the nodes, secondary shoots, ligule short and hairy, leaf sheath loose and hairy, rough leaves linear-lanceolate spiny at margins, brittle inflorescence pyramidal, large panicle plume-like, peduncle silky, spikelets white pubescent and lanceolate, lower floret sterile, upper floret bisexual, glumes glabrous, upper lemma absent, food plant, sometimes escapes as a weed, stalks quite palatable because of the sugar content, cultivated extensively, medicinal, fodder, not usually

grazed, suitable for hay and silage, the sugar cane of commerce, fairly drought resistant, susceptible to frost, will tolerate short floods, used to hold soil and act as a wind-break, fibrous canes manufactured into thatching and lining materials, ash from the leaves applied to burns, a large number of cultivars are bred for sugar production, found in open areas, wet sites, tropical rainforests, dry stony places, see *Species Plantarum* 1: 54. 1753, *Acta Literaria Universitatis Hafniensis* 285. 1778, *Syn. Pl.* 1: 102. 1805, *Flore des Antilles* 1: 160, t. 25. 1808, *Systema Vegetabilium* 2: 285. 1817, *Pl. Corom.* 3: 26, tab. 232. 1819, *Adnotationes Botanicae* 17. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 474. 1833, *Annalen des Wiener Museums der Naturgeschichte* 1: 158. 1836, *Plantae Javanicae Rariores* 47, 49-50. 1848, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 154. 1855, *Berberides Americae Australis* 56. 1857, *Flora Brasiliensis* 2(4): 256. 1883, *Monographiae Phanerogamarum* 6: 113. 1889, *Flore de la Polynésie Française* 256. 1892 and *Handb. Fl. Ceylon* 5: 202. 1900, *Mémoires de l'Institut Égyptien* 4: 302. 1901, *Report of the Harvard Botanical Gardens, Soledad Estate, Cienfuegos, Cuba* 58. 1927, *Grasses of Ceylon* 166-167. 1956, *USDA Handb.* 122. 1958, *Grasses of Burma ...* 212. 1960, *Caryologia* 37: 351-357. 1984, *Taxon* 38: 98. 1989, *Feddes Repertorium* 103: 175-178. 1992, *J. Fujian Acad. Agric. Sci.* 11(3): 19-22. 1996.

in English: sugar cane, sugarcane, noble cane, noble sugarcane, North Indian sugar cane, thin canes, North Indian canes, black sugar cane

in Italian: canna da zucchero

in French: canne à sucre, roseau sucré

in Spanish: caña, caña de azúcar, caña dulce, caña japonesa

in Brazil: caña de açúcar, caña dulce

in Colombia: cañas de azúcar, caña dulce, cañaduz

in Mexico: caen, caña, caña de azúcar, cha'ncat, coba-guinaxi, coba-qui-naxi, dathshí, dusho, goba gui naxi, guba-guinashi, guinashi guba, maca, maca neuwech, ne-wech, newech, nite, nito, nito-guia-baa-xtilla, nito-guia-baa-xtillanité, nito naxi, pacab, pepa, pexa, uhuatl, yori-sama, yori-sana

in Nicaragua: gániesi, tisnak

in Peru: impuco, itica, mishi quiro, ñaamura, paat (Mayna Jivaro and Achual Jivaro), paantam sapé (Mayna Jivaro), nupá paat (Huambisa Jivaro), pagat, pagad, pochoasiri, pochwaksuru, sabi, senoorr, senorr, taa vata, xai

in South America: caña criolla, caña de Batavia, caña de Otahiti, cañamelares, cañaduzales, cañuzales

in Angola: cana sacarina, muangue

in Arabic: qasab, qvasab

in Cameroon: asisang, sosom

in Ghana: afungu, afunu, ahiria, ahleu, ahwedie, ahwere, ahweree, ahwerew, akanla, ashiwere, boyle, boyle biri, boyle fe, boyle ibo, fofonu, fonfon, fonfongu, igbara, she, takandà

in Guinea: anyisa, sukuru

in Ivory Coast: ahrana, jibodo, jibodò

in Malawi: mlungo, muwa, njuwa, mihali, misale, nzimbe

in Morocco: qseb es-sukkar, qseb s-sukkar, qasab sakkurî, qasab lahlû, roseau sucré

in Nigeria: achara mmako, akele, anggbo ibo, arakè, arakke, arakkè, bonkwunkwo, chife mayo, dakwohi, dalimi, elukpò, emo, ewò ugenyi, gwalagwaji, gyauron rakèè, ileche, imangko, ireke, ireké, iyelegh, izagai, izaghai, jeer, kantù, karan sarki, kuburu, kyarno, lake, lamarudu, magang, mangkong kong, mboko, mbokok, obubit mbokok, okpetè, okpò, okpogh, okwere, ra'ke, raake, rakèè, rekè, sekar, sugà, ugwè, uji, ukhuire, ukpogh, ukpu

in Senegal: banta, bantu u sukar, diamb u sukar, sukara

in Sierra Leone: chengjima kpandeu, fanyokene, gawude, gba, gban de, gban poto, gboga, igban, ka suka ken, kag-bokan, khemunyi, kpa, kpan, kuma, likala, nyokene, nyoko, shuga ken, shugaken, suga ken, sugaken

in South Africa: suikerriet

in Sudan: gass b-el-sukar

in Tanzania: moba

in Upper Volta: nemewelo

in Yemen: qasab

in Yoruba: ireke, ireké

in Bhutan: gunchha, guchu, khomin, ukhu

in Cambodia: ampeou

in China: gan zhe, kan che

in India: adhipathra, a'k, ak, angarigai, aos, arukanupula-kranuga, asibatthiragam, asipathra, bahalabahurasa, baraii, bhoorirasa, cheni kabbu, cheraaku, cheraakubhedamu, cheraku, cherukabodi, cherukoo-bodi, cherukoo-duboo, cheruku, darbheshu, deerghachhada, ganda, gandidi, ganna, gudada, gudadru, gudakaashtha, gudamoola, gudathrina, gunnaa, ikh, ikhari, ikku, ikshu, ikshu kaanda, ikshuhu, ikshura, ikshupu, inju, kaantaarakam, kaantaaramu, kabbo, kabbu, kabirya, kajali, kajooli, kala kalbari, kalai, kamad, kamand, kandya, kanguruka, kannal, kantaara, kantara, kantaraka, kanupula-cheruku, karimba, karimbu, karimpa, karimpu, karinpa, karkotaka, karmbu, karumbu, katari, kavangiri, khabbu, khadgathraka, khanda, kian, kiyan, kooshiar, koshakara, kullooa, kumad, laavucheruku, madhura kaanda, madhuthrina, madhuthrinam, madhu-yashti, madudirunam, mahaarasa, malbari, mrithyupushpa, naisakar, nai-shakar, neshakr, nishakar, oomsa, paruvayoni, patta patti kabbu, paunda (for chewing), payodhara, pona (for chewing), poori, poovan karumbu, pottikanupucheruku,

prapundraahva, pundaram, pundia, pundra, pundraka, pundya, qasabe-sakar, qasabus-sakar, rasaala, rasaalamu, rasaalu, rasadaali, rasalah, rikhu, rusala, santha, sarkara, sastra, serdi, shakir surkh, sheardi, sheradi, sherdi, sukumasaka, thanneer kabbu, thellacheraaku, tilak (the inflorescence), thiyyamranu, thrinadhiya, thunta, uk, ukh, ukhari, ukkiragandam, ukkiragandi, uny, us, usa, uss, uukh, uus, vamsukanu, vansha, velam, vella karimpu, vengarumbu, vipularasa, vrishya, wansi

in India (for the sugar): bhura, bura, bura shakkar, bura sharukkarai, buro, chini, chini shakkar, khand, khandsari (open pan sugar), lal shakar, makhtami shakar, nat sakkare, nattu panjasara, nattu shakkara, nattu sharkkara, nattu sharukkarai, panjasara, panjasaram, rab shakkar, rab ki shakkar, rap shakkara, saghia, sakhar, sakkar, sakkare, sakkarul abyaz, sakkarul-hind, sakkere, shakar, shakare hindi, shakare suped, shakkar, shakkara, sharkara, sharkkara, sharukkarai, sini, sukar, tagiya

in Ladakhi: khara, kara, kuram (raw), buram

Malayan name: tebu

in the Philippines: tubo, atbo, agbo, caña dulce, tubu, una, unas, unat

in South Laos: (people Nya Hön) grao

in Sri Lanka: karumbu, uk, ukh

in Thailand: am po, ka thee, ka thi, oi, oi daeng, oi dam, oi khom, yaa kha naeng

in Tibetan: bu-ram, ka-ra

in Vietnam: mia

in Japan: kara-satô-kibi, shin-satô-kibi (shin = true), satô-kibi

in Okinawa: satô-kibi, uji

in Hawaii: ko

in Micronesia: sehu

in Pacific: to

in New Guinea: tuo

S. perrieri (A. Camus) Clayton (*Erianthus perrieri* A. Camus; *Lasiorrhachis perrieri* (A. Camus) Bosser; *Lasiorrhachis perrieri* (A. Camus) Bosser; *Miscanthidium perrieri* (A. Camus) A. Camus)

Africa, Madagascar. Rare, collected in rocky places, see *Bulletin de la Société Botanique de France* 71: 1182. 1924, *Adansonia* 8: 515. 1968, *Kew Bulletin* 35(4): 818. 1981.

S. procerum Roxb. (*Erianthus ciliaris* var. *elegans* Jeswiet ex Backer; *Erianthus elegans* (Jeswiet ex Backer) Rümke; *Erianthus procerus* (Roxb.) Raizada; *Erianthus procerus* var. *elegans* (Jeswiet ex Backer) Mukh.; *Ripidium procerum* (Roxb.) Grassl; *Saccharum bengalense* Retz.)

Northeast India, Asia tropical, Southeast Asia, Nepal. Naturalized, silky lax panicles, ornamental and elegant, resembles *Saccharum officinarum* L., roots used in urinary

diseases, see *Flora Indica; or Descriptions ...* 1: 248. 1820 and *Handboek voor de Flora van Java* 2: 42. 1928, *Archief voor de Suikerindustrie in Nederland en Nederlandsch-Indië* 2: 214, 229. 1934, *Indian Forester* 80: 41. 1954, *Proc. 14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 244. 1972, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 22: 12-22. 1987, *Proceedings of the Indian Science Congress Association* 75(3-vi): 359-360. 1988, *Cytologia* 54: 499-504. 1989, *Journal of Cytology and Genetics* 25: 220-237. 1990.

in India: sarkanda, teng

in Thailand: sa mong, ya kha mong, yaa khamong

S. ravennae (L.) L. (*Andropogon ravennae* L.; *Erianthus elephantinus* Hook.f.; *Erianthus jamaicensis* (Trin.) Andersson; *Erianthus purpurascens* Andersson; *Erianthus ravennae* (L.) P. Beauv.; *Erianthus ravennae* var. *binervis* Chiov.; *Erianthus ravennae* var. *jamaicensis* (Trin.) Hack.; *Erianthus ravennae* var. *purpurascens* (Anderss.) Hack.; *Ripidium elephantinum* (Hook.f.) Grassl; *Ripidium ravennae* (L.) Trin.; *Saccharum elephantinum* (Hook.f.) S. Naray. ex Bor; *Saccharum jamaicense* Trin.; *Saccharum ravennae* (L.) Murray)

Europe, Mediterranean region, North Africa, Algeria, Sahara, Asia temperate and tropical, India. Perennial, robust, tufted to densely tufted, thick, solid, ornamental, smooth, sheath with stiff hairs, white pubescent leaves linear and rough, inflorescence a large plumose panicle, erect panicles gray or purplish, racemes sessile and branched, sessile spikelets acuminate and lanceolate, spikelets awned, glumes more or less equal, upper lemma awned, eaten the young leaves, culms used for screens, provides paper pulp, occurs along water courses, swamps, along irrigation channels, in wetlands or nonwetlands, resembles *Cortaderia* spp., see *Species Plantarum, Editio Secunda* 2: 1481. 1763, *A System of Vegetables: English Translation from the Thirteenth Edition* 88. 1774, *Essai d'une Nouvelle Agrostographie* 14, 162, 177. 1812, *Fundamenta Agrostographiae* 169. 1820, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 312. 1832, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens Handlingar* 12: 161-163. 1855 [also *Kongliga Svenska Vetenskapsakademiens Handlingar*], *The Fodder Grasses of Northern India* 87. 1888, *Monographiae Phanerogamarum* 6: 140-141. 1889, *The Flora of British India* 7: 122. 1896 and *Flora Somala* 327. 1929, *Etudes sur la Flore et la Végétation du Sahara Central* 54. [Alger] 1933-1940, *Flora of Assam* 5(1): 461. 1940, *Proc. 14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 244. 1972, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Annali di Botanica* 45: 75-102. 1987, *Fl. Libya* 145: 325. 1988, *Fitologija* 39: 72-77. 1991, *Taxon* 49(2): 246. 2000.

in English: Ravenna's grass, Ravennagrass, Ravenna grass, Italian sugar cane, plume grass

in India: dhalsar, dholu, dolsar, dolu

in Somalia: chado, alala, alalo

in Sahara (Tassili): tésangalt

S. robustum E.W. Brandes & Jeswiet ex Grassl (*Saccharum edule* Hassk.; *Saccharum sinense* Roxb.; *Saccharum spontaneum* var. *edule* (Hassk.) K. Schum. & Lauterb.)

Papua New Guinea, Asia tropical, Pacific. Decumbent, tall, robust, extremely vigorous, leaves linear-lanceolate, large plume-like panicles, related to sugarcane, *Saccharum officinarum* L., sometimes used for fencing, found on riverbanks, lowlands to mountains, along drains, stream beds, see *Mantissa Plantarum* 183. 1771, *Flora Indica; or Descriptions ...* 1: 244-248. 1820, *Flora* 25(Beibl. 2): 3. 1842 and *Die Flora der deutschen Schutzgebiete in der Südsee* 166. 1901, *Journal of the Arnold Arboretum* 27: 234, 236. 1946, *ISSCT Sugarcane Breeders' Newsl.* 34: 17. 1974, *Caryologia* 37: 351-357. 1984.

S. rufipilum Steudel (*Erianthus fulvus* Nees ex Hackel, nom. illeg., non *Erianthus fulvus* (R. Br.) Kunth; *Erianthus fulvus* Steud. ex Hack., nom. illeg., non *Erianthus fulvus* (R. Br.) Kunth; *Erianthus pallens* Hack.; *Erianthus rufipilus* (Steudel) Grisebach; *Erianthus versicolor* Nees ex Steud.; *Erianthus versicolor* var. *pallens* (Hack.) Hook.f.; *Miscanthus rufipilus* (Steud.) Grassl)

Asia tropical, Nepal, Pakistan, India, Sikkim, Arunachal Pradesh, Jammu and Kashmir. Tufted, leaves acute, panicles cylindrical and purplish to silvery, see *Synopsis Plantarum Glumacearum* 1: 409. 1855, *Die geographische Verbreitung der Pflanzen Westindiens* 92. 1868, *Monographiae Phanerogamarum* 6: 145, 147. 1889, *The Flora of British India* 7(21): 124. 1897 [1896] and *Proc. 14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 242. 1972.

in India: chuktubang

S. sinense Roxb. (*Saccharum chinense* Osbeck; *Saccharum officinarum* subsp. *sinense* (Roxb.) Burkill; *Saccharum spontaneum* var. *sinense* (Roxb.) Andersson)

South Asia, India, China. Perennial, tall, vigorous, slender, side shoots, thin hard canes, 4 glumes, lodicules nonciliate, it is almost completely sterile, probably a hybrid between *Saccharum officinarum* L. and *Saccharum spontaneum* L., cultivated, high fiber content, suitable for hay and silage, fodder, cannot stand heavy frosts but will survive light frost, it will not tolerate prolonged flooding, adapted to poor soils and dry conditions, related to *Saccharum officinarum* L., Pehr Osbeck (1723-1805), *A Voyage to China and the East Indies*, by Peter Osbeck. Together with *A Voyage to Suratte*, by Olof Toreen (1723-1753) and an account of the Chinese husbandry, by Captain Charles Gustavus Ekeberg. Translated from the German by John Reinhold Forster (1729-1798), ... to which are added a fauna and flora sinensis.

London 1771, *Plants of the Coast of Coromandel* 3: t. 232. 1818, *Flora Indica; or Descriptions ...* 1: 244-248. 1820, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 157. 1855 and *A Dictionary of the Economic Products of the Malay Peninsula* 2: 1927. 1935.

in English: Chinese cane, Chinese sugarcane, Japanese cane, Uba cane, thin canes, North Indian canes

in India: cheni kabbu, ganna, ukh

in Thailand: oi daeng

in Mexico: caña japonesa

S. spontaneum L. (*Imperata spontanea* (L.) P. Beauv.; *Imperata spontanea* (L.) P. Beauv. ex Roem. & Schult., nom. illeg., non *Imperata spontanea* (L.) P. Beauv.; *Saccharum aegyptiacum* Willd.; *Saccharum angustifolium* Reinw. ex de Vriese; *Saccharum arenicolum* Ohwi; *Saccharum bengalense* Retz.; *Saccharum biflorum* Forssk.; *Saccharum boga* Buch.-Ham. ex Wall.; *Saccharum caducum* Tausch; *Saccharum canaliculatum* Roxb.; *Saccharum casi* Buch.-Ham. ex Wall.; *Saccharum chinense* Nees ex Hook. & Arn.; *Saccharum glaza* Reinw. ex Blume; *Saccharum insulare* Brongn.; *Saccharum klagha* Jungh. ex Steud.; *Saccharum lota* Buch.-Ham. ex Wall.; *Saccharum modhara* Hook.f.; *Saccharum palisotii* Tausch; *Saccharum propinquum* Steud.; *Saccharum punctatum* Schumach.; *Saccharum semidecumbens* Roxb.; *Saccharum speciosissimum* Tausch; *Saccharum spontaneum* subsp. *aegyptiacum* (Willd.) Hack.; *Saccharum spontaneum* subsp. *biflorum* (Forssk.) Pilg.; *Saccharum spontaneum* var. *aegyptiacum* (Willd.) Hack.; *Saccharum spontaneum* var. *insulare* (Brongn.) Fosberg & Sachet; *Saccharum spontaneum* var. *klagha* (Jungh. ex Steud.) Hack.; *Saccharum spontaneum* var. *spontaneum*; *Saccharum stenophyllum* Büse; *Saccharum tenuis* Buch.-Ham. ex Wall., also spelled *tenuis*; *Tricholaena semidecumbens* (Roxb.) Schult.) (*Saccharum palisotii* Tausch named the French botanist Ambroise Marie François Joseph Palisot de Beauvois (Pallisat de Beauvois), 1752-1820, traveler and explorer, 1786-1788 Landolphe Expedition to Gulf of Guinea (Niger Delta), his writings include *Essai d'une nouvelle Agrostographie*, ou nouveaux genres des Graminées. Paris 1812 and *Flore d'Oware et de Bénin*, en Afrique. Paris 1804-1807 [1803-1820]. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 43. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; William Darlington, *Reliquiae Baldwinianae*. 160. Philadelphia 1843; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 63. 1971; Auguste J.B. Chevalier, *Flore vivante de l'Afrique Occidentale Française*. 1938; Stafleu and Cowan, *Taxonomic literature*. 4: 15-19. 1983; Jean François Landolphe (1765-1825), *Mémoires du Capitaine Landolphe*, contenant

l'histoire de ses voyages pendant trente-six ans, aux côtes d'Afrique, et aux deux Amériques; rédigées sur son manuscrit, par J.S. Quesné. Paris 1823; E.D. Merrill, in *Proc. Amer. Phil. Soc.* 76: 899-920. 1936; H. Heine, in *Adansonia*. Sér. 2, 7: 115-140. 1967; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 761. 1993; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 653. Ansbach 1852; J. Ewan, editor, *A Short History of Botany in the United States*. 1969; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906)

Tropical Africa, Asia temperate and tropical, Europe. Perennial, vigorous, erect and coarse, very polymorphic, very variable, rhizomatous with extensive and stout rhizome system, slender, clumped to densely tufted, an enormous root system, ligule a membranous rim, sheaths glabrous, glaucous leaves narrow linear and acute with a prominent midrib, silvery panicles oblong and plume-like, paired spikelets lanceolate and overtopped by the long hairs from the callus, glumes persistent and lanceolate to pointed, upper lemma strap-shaped, grain as famine food, tender shoots eaten as a vegetable, provides poor fodder normally not relished by cattle, used to feed buffaloes in India, fodder only in time of scarcity, used for thatching and light construction work, hedging and as a windbreak, screening, pulp suitable for paper manufacture, noxious and invasive weed, soil stabilizer, a vigorous coloniser of bare ground, revegetator, potential in erosion control, medicinal, roots used as diuretic, a good degree of drought tolerance, will tolerate some flooding, can grow in poor soils, common on damp places and swamps, field borders, permanent streams, damp sandy places, damp depressions, river sand banks, along roadsides, disturbed lowlands in wetter areas, alluvial plains, shifting sand dunes, see *Mantissa Plantarum* 183. 1771, *Flora Aegyptiaco-Arabica* 16. 1775, *Observationes Botanicae* 5: 16. 1789, *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 82. 1809, *Essai d'une Nouvelle Agrostographie* 8, 165. 1812, *Hortus Bengalensis, or a catalogue ...* 6. 1814, *Systema Vegetabilium* 2: 289. 1817, *Flora Indica; or Descriptions ...* 1: 241. 1820, *The Botany of Captain Beechey's Voyage* 241. 1821, *Mantissa* 2: 8, 163, 164. 1824, *Beskrivelse af Guineiske planter* 46. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 66. 1828, *Voyage autour du Monde* 2(2): 99. 1829[1831], *Flora* 19(2): 527. 1836, *Synopsis Plantarum Glumacearum* 1: 405-406. 1854, *Plantae Indiae Batavae Orientalis* 107. 1857, *Enum. Pl. Zeyl.* 369. 1864, *Monographiae Phanerogamarum* 6: 115-116. 1889, *The Flora of British India* 7(21): 119. 1897 [1896] and *Handb. Fl. Ceylon* 5: 201. 1900, *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von*

Eric Graf von Rosen 1: 191. 1915, *Techn. Bull. USDA* 811. 1942, *Bulletin of the National Science Museum* 26: 3. 1949, *Grasses of Ceylon* 166. 1956, *Agra University Journal of Research (Science)* 311. 1957, *Grasses of Burma ...* 214. 1960, *Proc. 14th Congr. Int. Soc. Sugar Cane Technologists* 1972: 244. 1972, *Micronesica* 18(2): 89. 1982[1984], *Journal of Cytology and Genetics* 18: 58-59. 1983, *Caryologia* 37: 351-357. 1984, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 22: 12-22. 1987, *Proceedings of the Indian Science Congress Association* 75(3-vi): 359-360. 1988, *Cytologia* 54: 499-504. 1989, *Current Science* 58: 755-757. 1989, *Journal of Cytology and Genetics* 25: 140-143, 220-237. 1990, *Cytologia* 55: 645-648, 655-658. 1990, *Cytologia* 56: 261-263. 1991, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: wild sugar cane, wild cane, thatch grass, fodder cane, false sugar cane, cusa grass, naunal grass, dog bamboo, arrow reed, buffalo reed

in Nigeria: aakutsu, abookin kibiiya, abookin kibiyàà, abukin kibiya, eesu, esusu, falfoli, igomough ki ikaregh, jibwi, kauleji, kaulewol, kekyanda, kibiyàà, kwekyan, kyamroo, kyauron kibiyaa, kyauroo, mos, saa kwet, sansari, shasari, sheme

in Sierra Leone: kafon

in Somalia: seef-dhaley, sifdalei

in Yoruba: eesu, esusu

in Bhutan: sanu kans, kash, kush

in Cambodia: 'âm'pëu préi

in India: achabaram, anjani, billugaddi, chhote-kase, coos, darbhe, darbhe hullu, dharba, dharbi, dhub, eruvai, hodiku hullu, huchhu kabbu, ikshugandha, ishika, kaadu kabbu, kaaki veduru, kaakicheruku, kaandekshu, kaas, kaasa, kaash, kaasha, kaavi veduru, kagara, kahi, kahu, kakicheraku, kanh, kans, kansa, kansi (for small plants growing on poor soils), kas, kasa, kasaada, kasai, kasayi, kash, kasha, khagar, khaggara, khori, khurree, khus, kore gadi, koregadi, kosa, kosangam, kucham, kumil, kurbagam, kus, kusha, mudduli hullu, muthhala hullu, naadal, naanal, naanarbul, naannana, nanal, nanmugappul, nannana, padar, peykarumbu, raellugaddi, rara, rasaalamu, relloo gaddy, sangabidam, saravanam, sarupparasi, sasabaram, shveth-achaamar, sugattaan, suvedasaaram, tant, thittiru, thittruchi, thuttam, vedasam, verricheruku

in Indonesia: glagah, tatebu

in Japan: nan-goku-wase-obana (= early-flowering *Miscanthus*)

in Laos: lau, ph'ông

in Papua New Guinea: pit-pit

in the Philippines: bogang, bugang, lidda, salin, sidda, sikai, sikal, talahib, tibayo, tigbau

in Sri Lanka: wal uk

in Thailand: alo, khaem dok khaao, khaem dok khao, khaa long, kha long, kha luang, khaa luang, lao, oi daeng, oi lao, phong

in Vietnam: co' lách

S. spontaneum L. subsp. *aegyptiacum* (Willd.) Hack. (*Saccharum aegyptiacum* Willd., also spelled *aegypticum*; *Saccharum biflorum* Forssk.; *Saccharum spontaneum* var. *aegyptiacum* (Willd.) Hack.)

Asia temperate, Middle East, tropical and northern Africa. Perennial, rhizomatous, ligule sickle-shaped, callus bearded, glumes coriaceous to glabrous, upper lemma shortly awned, found on the riverbanks, see *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 82. 1809, *Monographiae Phanerogamarum* 6: 115. 1889.

in English: African fodder cane

in Arabic: buz farsi, ganisch, ganish

S. spontaneum L. subsp. *spontaneum* (*Saccharum arenicola* Ohwi; *Saccharum spontaneum* var. *arenicola* (Ohwi) Ohwi)

Asia temperate and tropical, China, India, Japan. Leaf blade narrow, ligule triangular, see *Bulletin of the National Science Museum* 26: 3. 1949.

in English: Asian fodder cane

S. strictum (Host) Spreng. (*Andropogon strictus* Host; *Erianthus hostii* Griseb.; *Erianthus strictus* (Host) Borbás, nom. illeg.; *Erianthus strictus* Baldwin; *Ripidium strictum* (Host) Trin.; *Saccharum baldwinii* Roberty; *Saccharum strictum* (Host) Spreng.; *Saccharum strictum* (Baldwin) Nutt., nom. illeg., non *Saccharum strictum* (Host) Spreng.)

Asia temperate, Europe. See *Icones et Descriptiones Graminum Austriacorum* 2: 2, t. 2. 1802, *Plantarum Minus Cognitarum Pugillus* 2: 16. 1815, *A Sketch of the Botany of South-Carolina and Georgia* 1(1): 39. 1816, *The Genera of North American Plants* 1: 60. 1818, *Spicilegium florum rumelicae et bithynicae ...* 2: 548. 1844 and *Boissiera*. 352. 1960.

S. trinii (Hack.) Renvoize (*Erianthus balansae* Hack.; *Erianthus clandestinus* Swallen ex L.B. Sm., Wassh. & R.M. Klein; *Erianthus clandestinus* Swallen; *Erianthus glabrinodis* (Hack.) Swallen; *Erianthus purpureus* Swallen; *Erianthus saccharoides* Michx.; *Erianthus saccharoides* subvar. *glabrinodis* Hack.; *Erianthus saccharoides* var. *trinii* Hack.; *Erianthus trinii* Hack.; *Erianthus trinii* (Hack.) Hack.; *Erianthus trinii* subvar. *glabrinodis* (Hack.) Hack.; *Erianthus trinii* var. *glabrinodis* (Hack.) Hack.; *Saccharum alopecuroides* (L.) Nutt.; *Saccharum alopecuroides* subvar. *trinii* (Hack.) Roberty; *Saccharum balansae* (Hack.) Roberty; *Saccharum giganteum* Trin. ex Hack., nom. illeg.,

non *Saccharum giganteum* (Walter) Pers.; *Spodiopogon foliatus* E. Fourn.; *Spodiopogon foliatus* var. *erubescens* E. Fourn.; *Spodiopogon vaginatus* E. Fourn.) (for the German botanist Carl (Karl) Bernhard Freiherr von Trinius, 1778-1844, physician, traveler, agrostologist)

Mexico, Paraguay, Uruguay, Argentina, Brazil. Robust, suffrutescent, semiaquatic, woody, solid, emergent, caespitose, pubescent, leaves glabrous or pubescent, leaf blades linear acuminate attenuate at the base, inflorescence narrowly cylindrical of small panicles with spreading branches, terminal panicles oblong enclosed by the uppermost leaf sheath, spikelets narrowly ovate acuminate, glumes pilose, lower lemma entire, upper lemma with a straight awn, 2 stamens, cleistogamous and chasmogamous, unpalatable, growing on floating mats, commonly found in open areas, swampy ground, savannahs, and often in damp places, see *Genera Plantarum* 2: 787. 1791, *Symbolae Botanicae*, ... 3: 10, t. 51. 1794, *Fundamenta Agrostographiae* 192. 1820, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 331-332. 1829, *Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 6, Sci. Math.* 2: 311. 1832, *Synopsis Plantarum Glumacearum* 1: 408. 1854, *Plantae Junghuhnianae* 3: 359. 1854, *Flora Brasiliensis* 2(4): 258. 1883, *Mexicanas Plantas* 2: 52-53. 1886, *Monographiae Phanerogamarum* 6: 133, 135. 1889 and *Fl. Suriname* 1(1): 421. 1943, *Boissiera*. 9: 358. 1960, *Phytologia* 14(2): 92-93. 1966, *Flora Illustrada Catarinense* 1(Gram.): 1165-1167, t. 225, f. u-v. 1982, *Kew Bulletin* 39(1): 184. 1984.

S. viguieri (A. Camus) Clayton (*Erianthus viguieri* A. Camus; *Lasiorchachis viguieri* (A. Camus) Bosser; *Miscanthidium viguieri* (A. Camus) A. Camus)

Madagascar, Africa. See *Flora of Tropical Africa* 9(1): 89, 10. 1917, *Bulletin de la Société Botanique de France* 71: 1182. 1924, *Bulletin de la Société Botanique de France* 106: 339. 1959, *Adansonia* sér. 2, 8: 515. 1968, *Kew Bulletin* 35(4): 818. 1981.

S. villosum Steud. (*Erianthus balansae* Hack.; *Erianthus clandestinus* Swallen ex L.B. Sm., Wassh. & R.M. Klein; *Erianthus clandestinus* Swallen; *Erianthus glabrinodis* (Hack.) Swallen; *Erianthus purpureus* Swallen; *Erianthus saccharoides* subvar. *glabrinodis* Hack.; *Erianthus saccharoides* subvar. *villosus* (Steud.) Hack.; *Erianthus saccharoides* var. *trinii* Hack.; *Erianthus trinii* (Hack.) Hack.; *Erianthus trinii* subvar. *glabrinodis* (Hack.) Hack.; *Erianthus trinii* subvar. *trinii*; *Erianthus trinii* subvar. *villosus* (Steud.) Hack.; *Erianthus trinii* var. *glabrinodis* (Hack.) Hack.; *Erianthus trinii* var. *trinii*; *Erianthus trinii* var. *villosus* (Steud.) Hack.; *Saccharum alopecuroides* subvar. *trinii* (Hack.) Roberty; *Saccharum balansae* (Hack.) Roberty; *Saccharum giganteum* Trin. ex Hack., nom. illeg., non *Saccharum giganteum* (Walter) Pers.; *Saccharum trinii* (Hack.) Renvoize; *Spodiopogon foliatus* E. Fourn. ex Döll; *Spodiopogon foliatus* E. Fourn.; *Spodiopogon foliatus* var.

erubescens E. Fourn.; *Spodiopogon foliatus* var. *foliatus*; *Spodiopogon vaginatus* E. Fourn.)

Brazil. See *Synopsis Plantarum Glumacearum* 1: 408. 1854, *Flora Brasiliensis* 2(4): 257-258. 1883, *Mexicanas Plantas* 2: 52-53. 1886, *Monographiae Phanerogamarum* 6: 133, 135-136. 1889 and *Boissiera*. 9: 357-358. 1960, *Phytologia* 14(2): 92-93. 1966, *Flora Illustrada Catarinense* 1(Gram.): 1165-1167, t. 225, f. u-v. 1982, *Kew Bulletin* 39(1): 184. 1984, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

S. williamsii (Bor) Bor ex Cope (*Erianthus williamsii* Bor; *Saccharum williamsii* (Bor) Bor)

Central Nepal. Caespitose, inflorescence drooping and silky, see *Kew Bulletin* 12(3): 413. 1958, *Grasses of Burma, Ceylon, India and Pakistan* 214. 1960, *Kew Bulletin* 35(3): 703. 1980.

Sacciolepis Nash = Rhampholepis Stapf

From the Greek *sakkos* "sack" and *lepis* "a scale," referring to the saccate second glume; see Nathaniel Lord Britton (1859-1934), *Manual of the flora of the northern states and Canada*. New York 1901.

About 30-40 species, tropics and subtropics, Africa. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Panicinae, annual or perennial of variable habit, hollow, caespitose or decumbent, herbaceous, aquatic, paludose, emergent, submerged, branched, leafy, rhizomatous or stoloniferous, often auricles present or absent, ligule a membrane fringed or unfringed, leaves oblong or linear to linear-lanceolate, plants bisexual, inflorescence a spiciform panicle open or contracted with gibbous ribbed spikelets often densely clustered, spikelets more or less turgid on short and filiform pedicels, sterile spikelets at the base of the inflorescence, 2 florets, lower floret sterile or male, upper floret bisexual, 2 glumes very unequal and ribbed, lower glume soft or rigid or sometimes reduced to a small scale, curved upper glume saccate or inflated at base, lower lemma narrow, upper lemma oblong and dorsally compressed, palea present and entire, 2 small and broad-cuneate lodicules free and fleshy, 3 stamens, ovary apex glabrous, 2 stigmas, small grain elliptic and dorsally compressed, native pasture species, rainforest, open habitats, alluvial swamps, bushland, swamps, pampas, wet places, marshes, in or near water, shallow water, type *Sacciolepis gibba* (Elliott) Nash, see *Essai d'une Nouvelle Agrostographie* 48. 1812 and *Manual of the Flora of the Northern States and Canada* 89. 1901, *Proceedings of the Biological Society of Washington* 21: 8. 1908, *Flora Tropical Africa* 9: 15. 1917, *Kew Bulletin* 27: 387-406. 1972, R.W. Pohl and N.R. Lersten, "Stem aerenchyma as a character separating *Hymenachne* and *Sacciolepis* (Gramineae: Panicoideae)." *Brittonia* 27(3): 223-227. 1975, *Flora of Tropical East Africa*

451-898. 1982, Judziewicz E. J., "A new South American species of *Sacciolepis* (Poaceae: Panicoideae: Paniceae), with a summary of the genus in the New World." *Systematic Botany* 15: 415-420. 1990, *Flora Mesoamericana* 6: 328. 1994, *Flora of Ethiopia* 7: 194-196. 1995, *Weed Research* 39(2): 159-169. Apr 1999, *Am. J. Bot.* 88: 1993-2012. 2001, *Weed Research* 42(2): 89-99. Apr 2002, *Contributions from the United States National Herbarium* 46: 557-558. 2003, *American Journal of Botany* 90: 796-821. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003.

Species

S. sp.

in Nigeria: tappo

S. africana C.E. Hubb. & Snowden (*Sacciolepis mukuku* Vanderyst)

Tropical Africa, Madagascar. Perennial or annual, spongy, thick and swollen, weak, succulent, rhizomatous, erect, tufted, decumbent and rooting at the lower nodes, dense spicate inflorescence, spikelets compressed, lower glume 5- to 7-nerved, upper glume 9- to 11-nerved, useful grass, forming floating mats in shallow water, native pasture species, forage, good fodder, eaten during times of scarcity, a weed of rice paddy and corn fields, found in water, wet pastures, alluvial swamps, in shallow pool, seasonally flooded areas, along riverbanks, swamps, bushland, muddy waters, see *Bull. Agric. Congo Belge* 10: 249. 1919, *Bulletin agricole du Congo Belge* 16: 680. 1926, *Bulletin of Miscellaneous Information Kew* 1936(5): 294. 1936.

in Gambia: nyara fingo

in Guinea-Bissau: umpolpol

in Liberia: bu su

in Mali: niepoto

in Niger: bātata, burgu

in Nigeria: babaci, bubuci

in Sierra Leone: be, birikolonosefine, elinke, hombo, kintibo, koboro, kuli, tamedi sarana

in Upper Volta: kulugu savandé

S. angusta (Trin.) Stapf (*Panicum angustum* Trin.; *Panicum indicum* var. *angustum* (Trin.) Hook.f.; *Sacciolepis indica* var. *angusta* (Trin.) Keng)

Tropical Africa. See *The Gardeners Dictionary: ... eighth edition* no. 3. 1768, *Species Graminum* 3: t. 334. 1835, *The Flora of British India* 7(21): 42. 1897 [1896] and *Proceedings of the Biological Society of Washington* 21: 8. 1908, *Flora of Tropical Africa* 9: 763. 1920, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 220. 1957.

S. angustissima (Hochst. ex Steudel) Kuhlmann (*Panicum angustissimum* Hochstetter ex Steudel; *Panicum matogrossense* Kuntze; *Sacciolepis angustissima* (Steudel)

Kuhlmann; *Sacciolepis karsteniana* Mez; *Sacciolepis myuros* (Lam.) Chase; *Sacciolepis pungens* Swallen) (*Sacciolepis karsteniana* Mez, possibly dedicated to the German botanist Hermann Karsten, 1817-1908, traveler in South America 1844-1856, wrote *Plantae columbianae*. Fasciculus primus. Halis Saxonum [Halle] 1857 and *Florae Columbiae terrarumque adiacentium specimina selecta in peregrinatione ... Berolini* 1858 [1859]-1869; see J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 2: 272. Boston 1965; Ethelyn (Daliaette) Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; *Taxon* 12: 103-105. 1963)

Colombia, Venezuela, Brazil, Bolivia. Perennial or annual, wiry, terrestrial, tufted, erect, glabrous, usually branched, ligule membranous, leaf blades linear acute somewhat pungent, inflorescence terminal and densely spike-like, hairy spikelets ovate not gibbous, lower glume 3-nerved, upper glume 7-nerved, upper lemma shiny obtuse to acute, found along riverbanks, campos, seasonally inundated areas, ponds, wet places, swamps, lowland savannahs, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Synopsis Plantarum Glumacearum* 1: 66. 1853, *Fl. Bras.* 2(2): 236. 1877, *Revisio Generum Plantarum* 3: 362. 1898 and *Enum. Vasc. Pl. Suriname* 53. 1906, *Proceedings of the Biological Society of Washington* 21: 7. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 123. 1918, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67, Anexo 5(Bot. 11): 57-58, 92, t. 4. 1922, *Fl. Suriname* 1(1): 403. 1943, *Phytologia* 14(2): 85. 1966.

S. auriculata Stapf (*Sacciolepis indica* (L.) Chase; *Sacciolepis pergracilis* Chiov.)

Uganda, Madagascar, Benin. Herbaceous, slender, thin, weak, tufted, fibrous root system, see *Proceedings of the Biological Society of Washington* 21: 8. 1908, *Flora of Tropical Africa* 9: 762. 1920, *Plantae Novae vel Minus Notae e regione Aethiopica* 24. 1928 [1911-1951], series published in different journals, also *Plantae Novae vel Minus Notae ex Aethiopia*.

S. barbigrandularis Mez (*Sacciolepis transbarbata* Stapf)

Tanzania. Along riverbanks, streams, see *Flora of Tropical Africa* 9: 761. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 194. 1921.

S. campestris (Nees) Parodi ex Nicora (*Hymenachne campestris* Nees; *Panicum vilvoide* var. *campestre* (Nees) Döll; *Sacciolepis campestris* (Nees) Parodi ex Burkart, nom. illeg., non *Sacciolepis campestris* (Nees) Parodi ex Nicora; *Sacciolepis vilvoide* (Trin.) Chase)

Brazil. See *De Graminibus Paniceis* 171. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 274-275. 1829, *Flora Brasiliensis* 2(2): 233. 1877 and *Proceedings of the Biological Society of Washington* 21: 7. 1908, *Darwiniana* 15(1-2): 75. 1969, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 275. 1969.

S. chevalieri Stapf (*Panicum incurvum* (Stapf) Peter, nom. illeg., non *Panicum incurvum* L. ex Munro; *Sacciolepis antsirabensis* A. Camus; *Sacciolepis brevifolia* Stapf; *Sacciolepis incurva* Stapf; *Sacciolepis palustris* Napper; *Sacciolepis strictula* Pilg.)

Tropical Africa, Madagascar, Tanzania. Perennial, herbaceous, tufted, shortly rhizomatous, shortly stoloniferous, filiform leaf blades, dense panicle spike-like, spikelets compressed, found in wet soils, swamps, marshes, vleis, along streams, see *Flora of Tropical Africa* 9: 754-755, 761. 1920, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 202, 203. 1930, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 651. 1932, *Bulletin de la Société Botanique de France* 104: 282. 1957, *Kirkia* 3: 128. 1963.

S. curvata (L.) Chase (*Panicum coryphorum* Kunth; *Panicum curvatum* L.; *Panicum petersi* Eichgr. ex Peter)

India, Sri Lanka, South Africa, Madagascar, Tanzania. Short-lived perennial or annual, trailing, slender, tufted, branched, prostrate at the base, spreading, rooting at the lower nodes, leaf sheaths rounded on the back, soft leaf blades, narrow panicles loosely contracted, spikelets pedicellate, upper glume longer than lower glume, a good fodder for horses, used for the treatment of malaria, found in wet soils, swamps, pastures, vleis, along streams and rivers, shady places, under trees, forest undergrowth, along roadsides, dry stream bed, see *Systema Naturae*, edition 12 2: 732. 1767, *Révision des Graminées* 2: 387, t. 107. 1831 and *Proceedings of the Biological Society of Washington* 21: 8. 1908, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften, Göttingen. Mathematisch-Physikalische Klasse* 13(2): 110. 1928, *Grasses of Ceylon* 122. 1956, *Grasses of Burma* ... 357. 1960.

in English: forest hood grass

in East Africa: ukoka dume (Swahili)

in South Africa: kappiegras

S. cymbiandra (Pilg.) Stapf (*Sacciolepis cymbiandra* Stapf)

Africa, Benin. Perennial, erect, emergent, spongy culms, weed of deepwater rice, grazed by stock, growing in marshy places, in or near water.

in Sierra Leone: yoli

S. fenestrata Bor

Southeast Asia, Thailand. Indeterminate species, see *Dansk Botanisk Arkiv* 23: 154, f. 1. 1965.

S. geniculata B.K. Simon

Zambia. See *Kirkia* 8: 86. 1971.

S. gibba (Elliott) Nash (*Panicum gibbum* Elliott; *Sacciolepis striata* f. *gibba* (Elliott) Fernald)

Northern America, U.S., Guianas. Grows in damp and wet soils, see also *Sacciolepis striata* (L.) Nash, see *Species Plantarum* 2: 1048. 1753, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 116. 1816 and *Manual of the Flora of the Northern States and Canada* 89. 1901, *Bulletin of the Torrey Botanical Club* 30(7): 383. 1903.

S. huillensis (Rendle) Stapf (*Panicum huillense* Rendle; *Sacciolepis lebrunii* Robyns; *Sacciolepis micrococca* Mez; *Sacciolepis spiciformis* (A. Rich.) Stapf) (after the Belgian botanist Jean-Paul Antoine Lebrun, 1906-1985, his works include *Recherches morphologiques et systématiques sur les Caféiers du Congo*. Bruxelles 1941, *Aspects de végétation des parcs nationaux du Congo Belge. Série I. Parc National Albert. Volume I. Fascicules 3-4-5 ... La Végétation du Nyiracoongo*. Bruxelles 1941 *La Végétation de la plaine alluviale au Sud du lac Édouard*. [Exploration du Parc National Albert. Mission J. Lebrun. fasc. I.] Bruxelles 1947 and "La végétation psammophile du littoral congolais." *Brussel Kon. Acad. Overz. Wet. K l. Nat. Gen. Wet. N.R. XVIII - 1*, pl. 165. 1969, with W. Robyns wrote "Essai d'une monographie du genre *Tinnea*." *Bull. Jard. Bot. Bruxelles* 8: 161-183. 1930, with A. Taton and L. Toussaint wrote *Contribution à l'étude de la flore du Parc National de la Kagera*. [Exploration du Parc National de la Kagera. Mission J. Lebrun. fasc. I.] Bruxelles 1948, with G. Gilbert wrote "Une classification écologique des forêts du Congo." Sér. scient. no. 64, *INEAC*. Bruxelles 1954; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 356. 1965)

Tropical Africa, South Africa. Short-lived perennial or annual, rare, montane, aquatic, loosely tufted, inflorescence spike-like, spikelets shortly pedicellate and laterally compressed, in sandy soil, damp pasture, sometimes submerged in water, see *Tentamen Florae Abyssinicae* ... 2: 359. 1850, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 174. 1899 and *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 15: 122. 1918, *Flora of Tropical Africa* 9: 755-756. 1920, *Bulletin du Jardin Botanique de l'État* 9(3): 185. 1932.

in English: annual swamp grass

S. incana Mez (*Sacciolepis transbarbata* Stapf)

Zambia. See *Flora of Tropical Africa* 9: 761. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 194. 1921.

S. indica (L.) Chase (*Aira indica* L.; *Aira spicata* L.; *Hymenachne indica* (L.) Büse; *Hymenachne myuros* (Lam.) P. Beauv.; *Panicum angustum* Trin.; *Panicum arcuatum* R. Br.; *Panicum conglomeratum* L.; *Panicum glomeratum* (L.) Salisb.; *Panicum contractum* Wight & Arn. ex Nees, nom.

illeg., non *Panicum contractum* Moon; *Panicum glaucidulum* Peter; *Panicum indicum* L.; *Panicum indicum* (L.) L., nom. illeg., non *Panicum indicum* Miller; *Panicum indicum* var. *angustum* (Trin.) Hook.f.; *Panicum indicum* var. *brachiatum* Hook.f.; *Panicum microstachyum* Lam., nom. illeg., non *Panicum curvatum* L.; *Panicum myuros* Lam.; *Panicum phalaroides* Roem. & Schult.; *Panicum spicatum* (L.) Farw., nom. illeg., non *Panicum spicatum* (L.) Roxb.; *Sacciolepis angusta* (Trin.) Stapf; *Sacciolepis auriculata* Stapf; *Sacciolepis brachiata* (Hook.f.) Senaratna; *Sacciolepis claviformis* B.K. Simon; *Sacciolepis contracta* (Wight & Arn. ex Nees) Hitchc.; *Sacciolepis contracta* Hitchc.; *Sacciolepis gracilis* Stent & Rattray; *Sacciolepis myuros* (Lam.) Chase; *Sacciolepis pergracilis* Chiov.; *Sacciolepis spicata* (L.) Honda ex Masam.; *Sacciolepis spicata* (L.) Honda, nom. illeg., non *Sacciolepis spicata* (L.) Honda ex Masam.; *Sporobolus setarioides* Peter)

Old World tropics. Annual or short-lived perennial, tufted to loosely tufted, slender, solid, spreading, sprawling, more or less weakly rhizomatous, mostly glabrous, erect or decumbent at the base and rooting at the lower nodes, foliage mostly basal, leaf sheaths glabrous, ligule membranous more or less glabrous or ciliate with white hairs, linear leaf blades oblong and acuminate, erect spike-like panicle oblong to elongate, spikelets glabrous or hispid, densely crowded pedicellate spikelets, first floret sterile, second floret fertile, glumes membranous and very unequal, soft and clasping lower glume 5-nerved, 9-nerved upper glume curved and inflated at base, 7-nerved lower lemma more or less glabrous, upper lemma with margins involute, palea present as a small hyaline scale, seeds commonly dispersed by animals, weed species in maize fields and in rice padis, low forage value, good fodder but rarely used because of its small yield, grazed by swamp buffaloes in Vietnam, grows in moist places and wet areas, near running fresh water, lower montane forest, openings in wet forest and along trails, marshy places, in mud, freshwater swamps, beach along river, poor wet soils in open areas, disturbed and open areas in wet habitats, sandy soil, grasslands, crests of ridges, roadsides, periodically flooded habitats, seasonally inundated bushland, poorly drained open depressions where the soils remain waterlogged for extended periods, see *Species Plantarum* 1: 63-64. 1753, *Sp. Pl.* edition 2: 94. 1762, *Mantissa Plantarum* 2: 184. 1771, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 170, 172. 1791, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 18. Londini [London] (Nov-Dec) 1796, *Prodromus Florae Novae Hollandiae* 189. 1810, *Essai d'une Nouvelle Agrostographie* 49, 165. 1812, *Systema Vegetabilium* 2: 452. 1817, *Species Graminum* 3: t. 334. 1835, *Linnaea* 10(Litt.-Ber.): 117. 1836, *Plantae Junghuhnianae* 3: 377. 1854, *The Flora of British India* 7: 42. 1896 and *A Handbook to the Flora of Ceylon* 5: 148. 1900, *Proceedings of the Biological Society of Washington* 21: 7-8. 1908, *Flora of Tropical*

Africa 9: 762-763. 1920, *Memoirs of the Bernice Pauahi Bishop Museum ...* 8(3): 199, f. 90. 1922, *Plantae Novae vel Minus Notae e regione Aethiopica* 24. 1928 [also *Plantae Novae vel Minus Notae ex Aethiopia*], *Abhandlungen der Königlichen Gesellschaft der Wissenschaften, Göttingen. Mathematisch-Physikalische Klasse* 13(2): 111. 1928, *Prelim. Report Veg. Yakus.* 46. 1929, *Rhodora* 32: 262. 1930, *Journal of the Faculty of Science: University of Tokyo, Sect. 3, Botany* 3: 261. 1930, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 202 & Anhang 52, t. 27, f. 3b. 1930, *Proceedings of the Rhodesia Scientific Association* 32: 31. 1933, *Mem. Fac. Sc. & Agric. Taihoku Imp. Univ.* 11(4): 488. 1934, *Peradeniya Manual* 8: 121. 1956 [also *Grasses of Ceylon* 121. 1956], *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 220. 1957, *Grasses of Burma ...* 357. 1960, *Kirkia* 8: 85. 1971, *Grasses of Japan and its Neighboring Regions* 527. 1987, *Taxon* 49(2): 244. 2000.

in English: Glenwood grass, Indian cupscale grass, India cupscale grass

in India: dhamsiria, kari kore hullu, kari korle hullu, kora, lodi-gadi

in the Philippines: buntot-pusa, sabsabung, salaimaya, sangumai, sikuan

Malayan names: rumput bidis, bontoh darat

in Thailand: ya plong lek

S. indica (L.) Chase subsp. *oryztorum* (Makino) T. Koyama (*Panicum indicum* var. *oryztorum* Makino)

Asia. See *Botanical Magazine* 27: 28, 116. 1913, *Grasses of Japan and its Neighboring Regions* 527. 1987.

S. indica (L.) Chase var. *angusta* (Trin.) Keng (*Panicum angustum* Trin.)

Asia. See *Species Graminum* 3: t. 334. 1835 and *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 220. 1957.

S. indica (L.) Chase var. *intermedia* S.M. Almeida

Asia. See *Journal of the Bombay Natural History Society* 83(1): 184. 1986.

S. indica (L.) Chase var. *turgida* (Ridl.) Gilliland (*Sacciolepis turgida* Ridl.)

Asia. See *The Flora of the Malay Peninsula* 5: 231. 1925, *The Gardens' Bulletin Singapore* 20(4): 314. 1964.

S. indica (L.) Chase var. *villosa* (Hook.f.) Ohwi (*Panicum indicum* var. *villosum* Hook.f.)

Asia. See *The Flora of British India* 7: 42. 1896.

S. interrupta (Willd.) Stapf (*Hymenachne interrupta* (Willd.) Büse; *Panicum interruptum* Willdenow; *Panicum inundatum* Kunth; *Panicum turritum* Thunb.; *Panicum uliginosum* Roth ex Roem. & Schult.; *Sacciolepis interrupta* Chase)

India, Southeast Asia, Vietnam, Indonesia. Perennial, stout, thick, trailing, coarse, spongy, succulent, inflated, aquatic, submerged or partially submerged, decumbent, creeping, rhizomatous, rooting at the lower nodes, leaf sheaths inflated, ligules truncate, inflorescence contracted, erect flowering branches, spikelets acuminate, grains eaten by local people, potential environmental weed, good fodder grass relished by elephants, eaten by the cattle when young and not covered by algae, in Vietnam a source of feed for cattle and heifers, suitable for mud-binding, common in fallow lands and paddy fields, in moist and marshy soils, in shallow water, lakes, clayey and sandy, natural freshwater habitats, swampy areas, alluvial swamps, see *Museum Naturalium Academiae Upsaliensis* 10: 148. Upsaliae [Uppsala] 23 Nov 1791, *Species Plantarum. Editio quarta* 1: 341. 1797, *Systema Vegetabilium* 2: 442. 1817, *Plant. Sp. Ind. Orient.* 50. 1821 [1820], *Révision des Graminées* 1: 34. 1829, *Plantae Junghuhnianae* 3: 337. 1854 and *Flora of Tropical Africa* 9: 757, 761. 1920, *Grasses of Ceylon* 122. 1956, *Grasses of Burma ...* 358. 1960.

in Arabic: guilguil

in India: hodike hullu, modike hullu, nardula, pakalia, tandan pillu, tandan pullu, wolam

in Thailand: yaa plong, ya plong, ya plong ma, yaa plong man

S. leptorhachis Stapf (*Panicum rigens* Mez, nom. illeg., non *Panicum rigens* Sw.; *Sacciolepis johnstonii* C.E. Hubb. & Snowden; *Sacciolepis kimayalaensis* Vanderyst; *Sacciolepis rigens* (Mez) A. Chev.) (named for H.B. Johnston, see F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 42. Utrecht 1971)

Tropical Africa. Perennial, loosely tufted, solid, erect, vigorous, rhizomatous with short oblique rhizome, growing in moist sandy soils, in low-lying rain-flooded areas, along rivers, streams, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 141. 1904, *Flora of Tropical Africa* 9: 763. 1920, *Bull. Agric. Congo Belge* 10: 249. 1920, *Bulletin Agricole du Congo Belge* 16: 679. 1925, *Revue internationale de botanique appliquée et d'agriculture tropicale* 14: 29. 1934, *Bulletin of Miscellaneous Information Kew* 1936(5): 314. 1936, *Syst. Bot.* 15: 408. 1990.

S. micrococca Mez (*Panicum huillense* Rendle; *Panicum micrococcum* (Mez) Peter; *Sacciolepis huillensis* (Rendle) Stapf; *Sacciolepis nana* Stapf)

Senegal to Sudan, Benin. Annual, tufted, papillose upper leaf surface, glabrous spikelets, a weed of rice padis, found in damp and swampy places, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 174. 1899 and *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 15: 122. 1918, *Flora of Tropical Africa* 9: 753,

755. 1920, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 202 & Anhang, 52. 1930.

S. myosuroides (R. Br.) A. Camus (*Hymenachne myosuroides* (R. Br.) Balansa; *Panicum myosuroides* R. Br.; *Sacciolepis myosuroides* (R. Br.) Chase ex E.G. Camus; *Sacciolepis myosuroides* (R. Br.) Hughes, nom. illeg.)

Malaysia, Nepal, China, India, Sri Lanka, Australia. Perennial or annual, erect, creeping, slender, tufted, often geniculate, soft blades, ligule a ciliate membrane, spike-like inflorescence, panicles densely flowered, small spikelets glabrous, useful for erosion control, native pasture species, good fodder for cattle and buffaloes, found in lowlands influenced by the tides, marshes, moist or wet sites, floodplains, water courses, on sandy soils, in clay pockets, rice fields, see *Prodromus Florae Novae Hollandiae* 189. 1810, *Journal de Botanique (Morot)* 4(7): 143. 1890 and *Flore Générale de l'Indo-Chine* 7: 460. 1922, *Bulletin of Miscellaneous Information Kew* 1923(9): 330. 1923, *Grasses of Ceylon* 122. 1956, *Grasses of Burma ...* 358. 1960.

in Vietnam: mon mo

in India: dhidhina, didhina, kodela, kora lom, musa panchi, musapunchi, pokalia, saphetkar, supedkhar, suphetka

S. myosuroides (R. Br.) A. Camus var. *nana* S.L. Chen & T.D. Zhuang

China. See *Bulletin of Botanical Research* 4(2): 124-125. 1984.

S. myuros (Lam.) Chase (*Hymenachne myosurus* (Rich.) Nees; *Hymenachne myuros* (Lam.) P. Beauv.; *Hymenachne phleiforme* (J. Presl) E. Fourn.; *Panicum myosurus* Rich.; *Panicum myuros* Lam.; *Panicum phleiforme* J. Presl)

Mexico, Brazil, Bolivia, Colombia, Guatemala, West Indies, Costa Rica, Venezuela, Peru, Paraguay. Perennial or annual, tufted, aquatic, erect, slender, robust, soft, leaves glabrous, basal leaf sheaths usually inflated, leaf blades linear acute, dense inflorescence, slender panicle spiciform unbranched, spikelets ovate glabrous or rarely pubescent, lower glume 5-nerved, upper glume 9-nerved gibbous, upper glume and lower lemma veined, upper lemma shiny apiculate, lower lemma 7-nerved, forage, useful for erosion control, emollient, used for orchitis, common on very shallow ponds, in Vietnam a source of feed for heifers, growing in wet areas, margin of marshes, ponds, seasonally wet plains, campos, grassland, savannahs and marshy savannahs, resembles *Sacciolepis pungens*, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792, *Essai d'une Nouvelle Agrostographie* 48, 49, 165. 1812, *Prim. Fl. Esseq.* 50. 1818, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 276. 1829, *Reliquiae Haenkeanae* 1(4-5): 302. 1830, *Mexicanas Plantas* 2: 36. 1886 and *Proceedings of the Biological Society of Washington* 21: 7. 1908.

in Brazil: capim amonjeaba, amonjeaba

S. nana Stapf (*Panicum micrococum* (Mez) Peter; *Sacciolepis micrococca* Mez)

Tropical Africa, Central African Republic. See *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 15: 122. 1918, *Flora of Tropical Africa* 9: 753. 1920, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 202 & Anhang, 52. 1930.

S. oryzetora (Makino) Honda (*Panicum indicum* var. *oryzetorum* Makino; *Sacciolepis indica* subsp. *oryzetorum* (Makino) T. Koyama)

Asia, Japan. See *Botanical Magazine* 27: 28, 116. 1913, *Botanical Magazine* 37: 118. 1923, *Grasses of Japan and its Neighboring Regions* 527. 1987.

S. otachyrioides E.J. Judziewicz

Venezuela, Guyana, Colombia, Brazil, Bolivia. Annual or perennial, tufted, erect, small, ligules membranous, leaves glabrous, leaf blades linear acute, inflorescence densely spicate, glabrous spikelets narrowly ovate, lower glume 3- to 5-nerved, upper glume 7- to 9-nerved, saccate or gibbous lower lemma 7-nerved, shiny upper lemma oblong-elliptic acute, growing on clay, savannah, white sand savannah, campos, seasonally inundated areas, moist places, along riverbanks and lakes, sandy shores, related to *Sacciolepis myuros* (Lam.) Chase, see *Systematic Botany* 15(3): 418, f. 1A-J. 1990.

S. scirpoides Stapf (*Panicum typhurum* Stapf; *Sacciolepis typhura* (Stapf) Stapf)

Tropical Africa. See *Flora Capensis* 7: 414. 1899 and *Flora of Tropical Africa* 9: 759-760. 1920.

S. spicata (L.) Honda ex Masam. (*Aira spicata* L.; *Sacciolepis indica* (L.) Chase; *Sacciolepis spicata* (L.) Honda, nom. illeg., non *Sacciolepis spicata* (L.) Honda ex Masam.)

Japan. See *Species Plantarum* 63. 1753 and *Proceedings of the Biological Society of Washington* 21: 8. 1908, *Prelim. Report Veg. Yakus.* 46. 1929, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 261. 1930, *Memoirs Faculty Science & Agriculture Taihoku Imperial University* 11(4): 488. 1934.

S. spiciformis (A. Rich.) Stapf (*Panicum myosuroides* var. *spiciforme* (A. Rich.) Engl.; *Panicum spiciforme* A. Rich.; *Sacciolepis huillensis* (Rendle) Stapf)

Tropical Africa, Swaziland, Zambia. Annual, erect, slender, solitary or tufted, rooting at nodes, glabrous leaf blades ribbed and papillose on upper surface, panicle spiciform, spikelets ovate-oblong laterally compressed, lower glume ovate 3- to 5-nerved, upper glume gibbously ovate 7- to 9-nerved, lower lemma sterile, growing in standing water, swampy grassland, closely related to *Sacciolepis indica*, see *Tentamen Florae Abyssinicae ...* 2: 359. 1850, *Über die Hochgebirgsflora des tropischen Afrika* 118. Berlin 1892, *Catalogue of the African Plants Collected by Dr. F. Wel-*

witsch in 1853-61 2(1): 174. 1899 and *Flora of Tropical Africa* 9: 755-756. 1920.

S. striata (L.) Nash (*Digitaria striata* Hughes; *Holcus striatus* L.; *Hymenachne striata* (Lam.) Griseb.; *Hymenachne striata* (Linnaeus) A.H.R. Grisebach; *Panicum aquaticum* Bosc ex Spreng., nom. illeg., non *Panicum aquaticum* Poir.; *Panicum aquaticum* Muhlenberg, nom. illeg., non *Panicum aquaticum* Poir.; *Panicum bermudianum* Steud.; *Panicum elliotianum* Schultes; *Panicum fluitans* Brickell ex Muhlenb.; *Panicum gibbum* Elliott; *Panicum hydrophilum* Schultes; *Panicum striatum* (Linnaeus) Lamarck; *Panicum striatum* Lam.; *Sacciolepis gibba* (Elliott) Nash; *Sacciolepis striata* f. *gibba* (Elliott) Fernald; *Sorghum striatum* (Linnaeus) P. Beauv.)

U.S., Florida. Perennial or annual, aquatic or semiaquatic, weak, erect or leaning, slender, sprawling, emergent, decumbent, stoloniferous with creeping stolons, rooting at nodes, sheaths hairy, ligule ciliato-membranous, leaf blades flat and smooth to hairy marked with fine parallel lines, leaf bases cordate and clasping, inflorescence loosely spicate, 1-flowered spikelets borne in crowded spike-like panicles or racemes, spikelets glabrous and stalked, inflated or saccate upper glume, gray grains, food for waterfowl, weed species, growing in large stands or colonies on wet shores and in marshes, wet savannahs, freshwater marshes, around ponds and lakes, on muck of seasonal ponds, emergent fresh marsh habitat, coastal marshes, swamps and ditches in the coastal plains, ditches, wetlands, sloughs, margins of bayous and streams, pools, littoral beds along the river channel, adapted to deep water with high flows and varying water levels, see *Species Plantarum* 2: 1048. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Essai d'une Nouvelle Agrostographie* 132, 165. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1: 116. 1816, *Descriptio uberior Graminum* 126. 1817, *Mantissa* 2: 237, 256. 1824, *Systema Vegetabilium, editio decima sexta* 1: 319. 1825, *Nomenclator Botanicus. Editio secunda* 2: 253. 1841, *Flora of the British West Indian Islands* 554. 1864 and *Manual of the Flora of the Northern States and Canada* 89. 1901, *Bulletin of the Torrey Botanical Club* 30(7): 383. 1903, *Contr. U.S. Natl. Herb.* 12: 127. 1908, *Bulletin of Miscellaneous Information Kew* 1923(9): 311. 1923, *Rhodora* 44(526): 381. 1942.

in English: American cupscale, American cupscale grass, saccolepis, saccate grass, bagscale, gibbous panic grass

S. transbarbata Stapf (*Sacciolepis barbiglandularis* Mez; *Sacciolepis circumciliata* Mez; *Sacciolepis incana* Mez)

Tropical Africa. Along streams, woodland, see *Flora of Tropical Africa* 9: 761. 1920, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 194. 1921.

S. typhura (Stapf) Stapf (*Panicum cinereo-vestitum* Pilg.; *Panicum typhurum* Stapf; *Sacciolepis cinereo-vestita* (Pilg.)

C.E. Hubb.; *Sacciolepis glaucescens* Stapf; *Sacciolepis kimpasaensis* Vanderyst; *Sacciolepis scirpoides* Stapf; *Sacciolepis trollii* Pilg.; *Sacciolepis velutina* Napper; *Sacciolepis wittei* Robyns; *Sacciolepis wombaliensis* Vanderyst) (Greek *typhe*, *tiphe* applied by Theophrastus, Dioscorides and Aristoteles (*Historia animalium*) to a kind of grass or straw or other aquatic plants used for stuffing beds and bolsters; Latin *tiphe*, *es* for a kind of grain, Peter's corn, 1-grained wheat (Plinius), Greek *oura* "tail"; see Carl Linnaeus, *Species Plantarum*. 971. 1753 and *Genera Plantarum*. edition 5. 418. 1754; M. Cortelazzo & P. Zolli, *Dizionario etimologico della lingua italiana*. 5: 1338. Bologna 1988; G. Semerano, *Le origini della cultura europea*. Dizionario Etimologici. Dizionario della lingua Greca. 2(1): 293. Leo S. Olschki Editore, Firenze 1994; H. Genast, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 666. 1996)

Tropical Africa, Benin, Swaziland, Gabon, Namibia. Perennial or annual, erect, stout, robust, spongy, aquatic, tufted, rhizomatous with creeping rhizomes, spicate inflorescence, low grazing value, grows in seasonally flooded areas, wet sites, swamps, floodplain edge, marshes, seepage, see *Flora Capensis* 7: 414. 1899 and *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 201, t. 14, f. 2. 1915, *Flora of Tropical Africa* 9: 759-760. 1920, *Bulletin agricole du Congo Belge* 16: 679. 1925, *Bulletin du Jardin Botanique de l'État* 9(3): 186, 188. 1932, *Bulletin of Miscellaneous Information Kew* 1934: 110. 1934, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 12: 381. 1935, *Kirkia* 3: 129. 1963.

S. velutina Napper (*Panicum typhurum* Stapf; *Sacciolepis typhura* (Stapf) Stapf)

Kenya. See *Flora Capensis* 7: 414. 1899 and *Flora of Tropical Africa* 9: 760. 1920, *Kirkia* 3: 129. 1963.

S. viguieri A. Camus (for the French botanist René Viguier, 1880-1931, bryologist and specialist of Araliaceae, from 1919 to 1931 professor of botany at the University and Director of the Municipal Botanical Garden at Caen)

Madagascar. See *Bulletin de la Société Botanique de France* 72: 618-623. 1925.

S. vilvoides (Trin.) Chase (*Hymenachne campestris* Nees; *Hymenachne fluviatilis* Nees ex Trin.; *Hymenachne fluviatilis* Nees; *Panicum camporum* Kunth; *Panicum caudatum* Salzm. ex Döll, nom. illeg., non *Panicum caudatum* Lam.; *Panicum indicum* var. *vilfodes* (Trin.) Kuntze; *Panicum strumosum* J. Presl; *Panicum vilfoides* Trin. ex B.D. Jacks.; *Panicum vilvoides* Trinius, also *vilfoides*; *Panicum vilvoides* Trin. var. *campestre* (Nees) Döll; *Panicum vilvoides* var. *fluviatile* (Nees) Döll; *Sacciolepis campestris* (Nees) Parodi ex Burkart, nom. illeg., non *Sacciolepis campestris* (Nees) Parodi ex Nicora; *Sacciolepis campestris* (Nees) Parodi ex Nicora; *Sacciolepis strumosa* (J. Presl) Chase)

Brazil, Argentina, Venezuela, Paraguay, West Indies. Annual or perennial, erect, tufted, variable, slender or stout, paludose, aquatic, leaves glabrous, linear leaf blades acuminate, panicle spiciform with tightly packed spikelets ovate and acuminate, lower glume 5- to 7-nerved, gibbous upper glume 9-nerved, upper lemma elliptic shiny acuminate, found in grazed rangeland, riverbanks, ponds and swampy places, campos, shallow water, savannahs, damp sandy soil, see *De Graminibus Paniceis* 171. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 273-274. 1829, *Reliquiae Haenkeanae* 1(4-5): 303. 1830, *Révision des Graminées* 587. 1834, *Flora Brasiliensis* 2(2): 232-233. 1877, *Index Kewensis* 2(3): 420. 1894, *Revisio Generum Plantarum* 3(3): 361. 1898 and *Proceedings of the Biological Society of Washington* 21: 7-8. 1908, *Darwiniana* 15(1-2): 75. 1969, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 275. 1969.

Salmasia Bubani = *Aira* L., *Salmasia* Schreb. (Chrysobalanaceae)

Pooideae, Poeae, Airinae, see *Species Plantarum* 1: 63, 65-66. 1753, *Histoire des plantes de la Guiane Française* 1: 287, t. 112. 1775, *Genera Plantarum* 201. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 500. 1791 [1792], *Species Plantarum. Editio quarta* 1: 1502. 1797, *Narrative of an Expedition to Explore the River Zaire* 433. 1818, *Nuovo Giornale Botanico Italiano* 5: 317. 1873 and *Flora Pyrenaea ...* 4: 315-316, 319. 1901, *Amer. J. Bot.* 21: 135. 1934, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 89-96, 605. 2003.

Sanguinaria Bubani = *Digitaria* Haller, *Sanguinaria* L. (Papaveraceae)

Latin *sanguinarius*, *a*, *um* "blood, belonging to blood," *sanguis*, *inis* "blood." Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Digitariinae, type *Sanguinaria nevadensis* Bub., see *Species Plantarum* 1: 55, 505. 1753, *Enumeratio Methodica Plantarum* 207. 1759, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Fam. Pl.* 2: 495. 1763, *Das Neueste aus dem Reiche der Pflanzen ...* 2: 4. 1764, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Observationes Botanicae* 4: 16. 1786, *Flora Caroliniana, secundum ...* 76. 1788, *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Agrostografia Brasiliensis* 31, t. 1, f. 4. 1823, *De Graminibus Paniceis* 48, 76. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 20, 85, 87. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 165, t. 7, f. 1. 1831, *A Manual of the Botany of the Northern United States* 611. 1848, *Synopsis Plantarum Glumacearum* 1: 37-38. 1855 [1853], *Linnaea* 26: 533. 1855, *Anales de la Universidad de Chile* 36: 207-208.

1870, *Flora Australiensis: A Description ...* 7: 464. 1878 and *Flora Pyrenaea ...* 4: 256-258. 1901, *Österreichische Botanische Zeitschrift* 51: 290. 1901, *Proceedings of the Biological Society of Washington* 19(34): 191-192. 1906, *Notulae Systematicae. Herbarium du Museum de Paris* 2: 216. 1912, *Flora of Tropical Africa* 9: 424. 1919, *Hooker's Icones Plantarum* 35: t. 3420. 1940, *Monograph of the Genus Digitaria* 573, 851, 866. 1950, *Bothalia* 7: 467. 1961, *Journal of the Arnold Arboretum* 47(3): 270-272. 1966, *Blumea* 21(1): 1-80. 1973, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Flora of Tropical East Africa* 451-898. 1982, *Brunonia* 6: 131-213. 1984, *Sida* 12(1): 209-222. 1987, *Flora Mesoamericana* 6: 365-371. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Genera Graminum* 298-300. 1999, *Contributions from the United States National Herbarium* 46: 193-213, 558. 2003.

Sanguinella Gleichen = *Digitaria* Haller

From the Latin *sanguis, inis* "blood."

Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Digitariinae, see *Das Neueste aus dem Reiche der Pflanzen ...* 2: 4. 1764 and *Bothalia* 7: 467. 1961, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Genera Graminum* 298-300. 1999, *Contributions from the United States National Herbarium* 46: 193-213. 2003.

Santia Savi = *Polypogon* Desf., *Santia* Wight & Arn. (Rubiaceae)

For the Italian botanist Giorgio Santi, 1746-1822, professor of botany and chemistry, 1782-1814 Director of the Botanical Garden of Pisa (succeeded Angelo Attilio Tilli, Director from 1740 to 1782), his writings include *Analisi chimica delle acque dei bagni Pisani, e dell'acqua acidula di Asciano*. Pisa 1789 and *Viaggio al Montamiata*. Pisa 1795. See L. Amadei, "Note sull'Herbarium Horti Pisani: l'origine delle collezioni." *Museol. Scient.* 4(1-2): 119-129. 1987; Fabio Garbari, L. Tomasi Tongiorgi and A. Tosi, *Giardino dei Semplici: L'Orto Botanico di Pisa dal XVI al XX secolo*. Pisa 1991; F.A. Staffeu, "Die Geschichte der Herbarien." *Bot. Jahrb. Syst.* 108(2/3): 155-166. 1987; J.H. Barnhart, *Biographical notes upon botanists*. 3: 210. 1965; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Pooideae, Poaceae, Agrostidinae, see *Species Plantarum* 1: 61. 1753, *Memoria di Matematica e di Fisica della Società Italiana di Scienze Residente in Modena, Parte contenente le Memorie di Fisica* 8: 479. 1799, *Flora Atlantica* 1: 66-67. 1798 [1800], *Flora Palermitana* 1: 73. 1845 and

Contributions from the United States National Herbarium 48: 583-588, 605. 2003.

Sarga Ewart & White = *Sarga* Ewart, *Sorghum* Moench

Meaning not explained, possibly from the Greek *sargane* "a basket, a plait, a band" or derived from *sorghum*, or from Latin *sargus* "a kind of sea fish."

Panicoideae, Andropogoneae, Sorghinae, serious weeds and poisons, providing fodder and grain for stock, pollen for bees, formerly known as *Sorghum* and formerly making up the bulk of subgenera *Parasorghum* and *Stiposorghum*, type *Sarga stipoidea* Ewart & White, see *Methodus Plantas Horti Botanici ...* 207. 1794, *Prodromus Florae Novae Hollandiae* 200. 1810, *Révision des Graminées* 2: 367. 1830, *Tentamen Florae Abyssinicae ...* 2: 469. 1850, *Naturwissenschaftliche Reise nach Mossambique ...* 563. 1863, *Flora Australiensis: A Description ...* 7: 541. 1878, *Monographiae Phanerogamarum* 6: 524-525. 1889 and A.J. Ewart et al., *Proceedings of the Royal Society of Victoria* ser. 2, 23: 296. 1911, *University of Queensland Papers: Department of Botany* 1: 18, 21. 1941, *Flora of Australia* Volume 43, Poaceae 1: 238-239. 2002, *Contributions from the United States National Herbarium* 46: 558, 598-606. 2003, R.E. Spangler, "Taxonomy of *Sarga*, *Sorghum* and *Vacoparis* (Poaceae: Andropogoneae)." *Australian Systematic Botany* 16(3): 279-299. 2003, *American Journal of Botany* 91: 1709-1725. 2004, T. Vigilante, D.M.J.S. Bowman, R. Fisher, J. Russell-Smith and C. Yates, "Contemporary landscape burning patterns in the far North Kimberley region of north-west Australia: human influences and environmental determinants." *Journal of Biogeography* 31(8): 1317-1333. Aug 2004.

Species

S. angustum (S.T. Blake) Spangler (*Sorghum angustum* S.T. Blake)

Australia.

S. intrans (F. Muell. ex Benth.) Spangler (*Sorghum intrans* F. Muell. ex Benth.)

Australia.

S. leiocladum (Hack.) Spangler (*Andropogon australis* var. *leiocladus* Hack.)

Australia.

S. plumosum (R. Br.) Spangler (*Holcus plumosus* R. Br.)

Australia.

S. timorensis (Kunth) Spangler (*Andropogon tropicus* var. *timorensis* Kunth)

Australia, Asia.

Sarocalamus Stapleton

China, Himalaya. Bambusoideae, erect to drooping, tillering, unarmed, leptomorph rhizomes, inflorescence branches erect, 3 stamens, type *Sarocalamus racemosus* (Munro) Stapleton, see *Transactions of the Linnean Society of London* 26(1): 17. 1868, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1067. 1893 and *Acta Phytotaxonomica Sinica* 6(4): 355-356. 1957, *Journal of Bamboo Research* 1(2): 171. 1982, *Journal of Bamboo Research* 2(1): 39. 1983, *Fl. Ind. Enumerat.-Monocot.* 283. 1989, *Kew Bulletin* 44: 352. 1989, Chris M.A. Stapleton et al., "Sarocalamus, a New Sino-Himalayan Bamboo Genus (Poaceae: Bambusoideae)." *Novon* 14: 345-349. 2004.

Species

S. faberi (Rendle) Stapleton (*Arundinaria faberi* Rendle; *Bashania faberi* (Rendle) T.P. Yi; *Sinarundinaria faberi* (Rendle) Keng f.)

Asia. See *Journal of the Linnean Society, Botany* 36(254): 435. 1904, *Journal of Japanese Botany* 11(1): 1. 1935, *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal of Bamboo Research* 12(2): 52-53. 1993, *Novon* 14(3): 348. 2004.

S. racemosus (Munro) Stapleton (*Arundinaria racemosa* Munro; *Fargesia racemosa* (Munro) Yi; *Yushania racemosa* (Munro) R.B. Majumdar)

Asia. See *Transactions of the Linnean Society of London* 26(1): 17. 1868, and *Journal of Bamboo Research* 2(1): 39. 1983, *Fl. Ind. Enumerat.-Monocot.* 283. 1989, *Cell and Chromosome Research* 15(3): 12. 1992, *Novon* 14(3): 347. 2004.

S. spanostachyus (T.P. Yi) Stapleton (*Bashania spanostachya* T.P. Yi)

China. See *Acta Botanica Yunnanica* 11(1): 35-37, f. 1. 1989, *Novon* 14(3): 348. 2004.

Sartidia De Winter

An anagram of *Aristida*, a related genus.

About 4 species, Southern Africa, Madagascar. Arundinoideae, Aristideae, perennial, herbaceous, unbranched, unarmed, densely tufted, rhizomatous, auricles absent, ligule densely fringed, plants bisexual, inflorescence paniculate, narrow and erect panicle, spikelets solitary and pedicellate, 1 floret bisexual, 2 glumes more or less equal, upper glume 3-nerved, lower glume 3- to 7-nerved, pungent floret callus, 3 glabrous spreading awns, palea present, 2 free and toothed lodicules, 3 stamens, ovary glabrous, 2 plumose or feathery stigmas, savannah, type *Sartidia angolensis* (C.E. Hubb.) De Winter, see *Species Plantarum* 1: 82. 1753 and *Kirkia* 3: 137. 1963, *Am. J. Bot.* 88: 1988-1992. 2001.

Species

S. angolensis (C.E. Hubb.) De Winter (*Aristida angolensis* C.E. Hubb.)

Zambia, Angola. Perennial, rare, erect, tufted, rhizomatous, callus acute, savannahs, desert, see *Kew Bulletin* 1949: 359. 1949, *Kirkia* 3: 137. 1963.

S. jucunda (Schweick.) De Winter (*Aristida jucunda* Schweick.)

South Africa, Transvaal. Perennial, rare, rhizomatous, densely tufted, callus obtuse, rocky places, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 76(2): 221-223. 1954.

S. perrieri (A. Camus) Bourreil (*Aristida perrieri* A. Camus)

Africa, Madagascar. See *Bulletin de la Société Botanique de France* 73: 434. 1926.

S. vanderystii (De Wild.) De Winter (*Aristida vanderystii* De Wild.)

Africa, Congo. See *Bulletin du Jardin Botanique de l'État* 6: 40, t. 35, f. 7-12. 1919.

Sasa Makino & Shibata = *Neosasamorpha* Tatewaki, *Nipponobambusa* Muroi, *Sasaella* Makino, *Sasamorpha* Nakai

After a Japanese name.

About 20-58 species, eastern Asia, mainly Japan, Korea. Bambusoideae, Bambusodae, Bambuseae, Arundinariinae, perennial, usually sympodial, rarely monopodial, shrubby, ascending, woody, diffuse, spreading, slender, unarmed, persistent, internodes without grooves, long creeping rhizomes, upper culm nodes with 1 branch, flowering culms leafy, culm sheaths usually persistent, internodes hollow, ligule an unfringed membrane, leaves chartaceous to coriaceous, plants bisexual, inflorescence paniculate or racemose, spikelets compressed and linear-lanceolate, 4-10 flowers, 2 glumes at the base of each spikelet, palea present, 3 lodicules ovate or narrowly ovate, 6 stamens, ovary glabrous without the apical appendage, 3 feathery stigmas, woodland, see *Genera Plantarum* 1: 236. 1789, *Flora Boreali-Americana* 1: 73. 1803, *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 3(3): 745, pl. 5, f. 3. 1843, *Bulletin de l'Herbier Boissier* 7(9): 716. 1899 and *Botanical Magazine (Tokyo)* 15(168): 18, 25, 27. 1901, *Bulletin de la Société Dendrologique de France* 12: 73-87. 1909, *Journal of the Arnold Arboretum* 6(3): 145-150. 1925, *Journal of Japanese Botany* 6: 15-16. 1929, *Flora of Hokkaido and Saghalien*. in J. Fac. Agric. Hokkaido Univ., 26, 1930-1932, *Journal of the Faculty of Science, Hokkaido University. Series 5, Botany* 26: 180-181, 183, 189. 1931, *Research*

Bulletins of the College Experiment Forests, College of Agriculture, Hokkaido Imperial University vol. 7: 99-130, pl. 1-4. 1932, *Science Education [Rika Kyô-iku]* 15(5-6): 21-27, 66-67, 69-76. 1932, *Journal of Japanese Botany* 10: 564, 599. 1934, *Acta Phytotax. & Geobot. Kyoto* 9: 159, 227. 1940, M. Tatewaki, "Hokkaido sasarui no bunrui [Classification of genus *Sasa* in Hokkaido.]" *Hokkaido Ringyô-kaihô* 38(1): 4-9, 38(2): 1-9, 38(3): 1-8, 38(4): 1-10, 38(6): 1-11, 38(8): 1-13. 1940, H. Muroi, *Hyogo Prefecture Journal, Secondary Edition, Natural History* 6: 88-90. 1940, *Bibliography of Cultivated Trees and Shrubs* hardy in the cooler temperate of the northern hemisphere ... 635. Jamaica Plains, Massachusetts [The Arnold Arboretum of Harvard University] 1949, *Taxon* 6(7): 206-208. 1957, *Jap. J. Bot.* 18: 289-307. 1964, *Japanese Journal of Botany* 19: 99-125. 1965, *Japanese Journal of Botany* 19: 419-457. 1967, *Jap. J. Bot.* 50: 129-142. 1975, *Hikobia* 7: 94-110. 1975, *Jap. J. Bot.* 51: 97-103, 151-158, 220-224, 269-277. 1976, *Taxon* 27: 424. 1978, *J. Jap. Bot.* 64(2): 42. 1989, *Journal of Japanese Botany* 67: 286-290. 1992, *Taxon* 45: 543-544. 1996, *Taxon* 48: 359-360, 377. 1999, *Taxon* 49(2): 235-238, 545-546. 2000, *Contributions from the United States National Herbarium* 39: 111-112. 2000.

Species

S. admirabilis Koidz. (*Sasa elegantissima* Koidz.; *Sasa nana* var. *elegantissima* (Koidz.) S. Suzuki)

Japan. Leaf tips dangling, see *Botanical Magazine* 26: 11, f. 1. 1912, *Acta Phytotaxonomica et Geobotanica* 4: 86. 1935, *Acta Phytotaxonomica et Geobotanica* 8: 55. 1939, *Japanese Journal of Botany* 19(3): 453. 1967.

in Japan: katuragi-zasa, tanga-zasa

S. akiuensis (S. Suzuki) S. Suzuki (*Sasa suzukii* var. *akiuensis* S. Suzuki)

Japan, Akiu, Miyagi Prefecture, northern Honshu. Robust, culm sheaths and nodes densely pilose, internodes densely puberulous, leaves glabrous beneath, leaf sheaths glabrous, leaf blades chartaceous-coriaceous oblong-lanceolate, flowers not seen, species similar to *Sasa suzukii* Nakai, see *Japanese Journal of Botany* 18: 306. 1964, *Hikobia* 7(3-4): 95. 1975.

in Japan: akiu-nemagari

S. albosericea W.T. Lin et J.Y. Lin

China. See *Acta Phytotaxonomica Sinica* 26(3): 232-233, pl. 12. 1988.

S. amphitricha Koidz. (*Sasa chartacea* (Makino) Makino & Shibata; *Sasa kawanoyuensis* Koidz.; *Sasa kawanoyuensis* var. *pilosa* Koidz.; *Sasa kawanoyuensis* var. *puberula* Koidz.; *Sasa kozasa* Nakai; *Sasa kusirensis* Nakai; *Sasa nikkoensis* var. *ionochaeta* Nakai; *Sasa sendaica* (Makino))

Japan. See *Botanical Magazine* (Tokyo) 15: 27. 1901, *Journal of Japanese Botany* 5(2): 8. 1928, *Journal of Japanese*

Botany 6: 23. 1929, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 186. 1931, *Journal of Japanese Botany* 10(9): 553. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 18. Kyoto 1935, *Botanical Magazine* (Tokyo) 46: 50. 1936, *Acta Phytotaxonomica et Geobotanica* 22: 9. 1948, *Journal of Japanese Botany* 22: 10. 1948, *Journal of Japanese Botany* 67: 31-34. 1992.

in Japan: ohkuma-zasa, sendai-zasa

S. argenteostriata (Regel) E.G. Camus (*Arundarbor argenteostriata* (Regel) Kuntze; *Arundinaria argenteostriata* (Regel) Ohwi; *Arundinaria argenteostriata* (Regel) Vilm.; *Bambusa argenteo-striata* Regel; *Bambusa argenteostriata* Regel; *Nipponocalamus argenteostriatus* (Regel) Nakai; *Pleioblastus argenteo-striatus* (Regel) Nakai; *Sasa argenteo-striata* (Regel) E.G. Camus; *Sasa argenteostriata* E.G. Camus)

Japan. Culm green, glabrous, sheath green shorter than internode, no sheath auricles, sheath ligule very tiny, leaves ovate lanceolate, ornamental, see *Gartenflora* 14: 363, pl. 490, f. 5. 1865, *Revisio Generum Plantarum* 2: 761. 1891 and *Les Bambusées* 23. 1913, *Journal of Japanese Botany* 9(4): 236. 1933, *Journal of Japanese Botany* 18: 350. 1942, *Fl. Japan* 80. 1953.

in Japan: okina-dake

S. asahinae Makino et Nakai (*Neosasamorpha asahinae* (Makino & Nakai ex Nakai) Tatew.; *Sasa asahinae* Makino & Nakai ex Nakai) (named for the Japanese lichenologist Yasuhiko Asahina (1881-1975), with the biochemist Keita Shibata (Shibata Keito), 1877-1949, wrote *Chemistry of lichen substances*. 1954; see T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 364. 1972)

Japan. Internode glabrous, branching on the upper part of the culm, leaves lanceolate or oblong-lanceolate, see *Journal of Japanese Botany* 10(9): 548. 1934.

in Japan: goteba-zasa

S. aureostriata (Regel) E.G. Camus (*Arundarbor aureostriata* (Regel) Kuntze; *Arundinaria aureo-striata* (Regel) Vilm.; *Arundinaria variabilis* var. *aureo-striata* (Regel) Makino ex Houz. de Leh.; *Bambusa aureostriata* Regel; *Phyllostachys kumasasa* var. *aureo-striata* (Regel) Makino; *Sasa aureo-striata* (Regel) E.G. Camus; *Shibataea chinensis* cv. *aureo-striata*; *Shibataea chinensis* f. *aureostriata* (Regel) C.H. Hu; *Shibataea kumasaca* (Zoll. ex Steud.) Makino f. *aureo-striata* (Regel) Suzuki; *Shibataea kumasaca* var. *aureo-striata* (Regel) Makino; *Shibataea kumasaca* var. *aureo-striata* (Regel) Nakai, nom. illeg., non *Shibataea kumasaca* var. *aureo-striata* (Regel) Makino)

Japan. See *Gartenflora* 14: 362. 1865, *Revisio Generum Plantarum* 2: 761. 1891, *Botanical Magazine* (Tokyo), Special Issue 156-160. 1897 and *Le Bambou* 1: 113. 1906, *Les Bambusées* 23. 1913, *Botanical Magazine* (Tokyo) 28(325):

22, 155. 1914, *Journal of Japanese Botany* 9(2): 80-81, 85, pl. 9. 1933, *Index to Japanese Bambusaceae* 100, 339. 1978, *Acta Phytotaxonomica Sinica* 26(2): 136-137. 1988.

S. borealis (Hack.) Makino & Shibata (*Arundinaria borealis* Makino; *Arundinaria purpurascens* Hack.; *Bambusa borealis* Hack.; *Bambusa purpurascens* Makino; *Neosasamorpha tobaeana* (Makino & Uchida) Tatew.; *Pseudosasa purpurascens* (Hack.) Makino; *Pseudosasa spiculosa* (Schmid) Makino; *Sasa amabilis* Makino & Nakai; *Sasa purpurascens* (Hack.) E.G. Camus; *Sasa purpurascens* (Hack.) Ohwi; *Sasa spiculosa* (Schmid) Makino; *Sasa spiculosa* var. *subpubescens* Makino & Uchida; *Sasa tobaeana* Makino & Uchida; *Sasamorpha amabilis* Nakai; *Sasamorpha borealis* (Hack.) Nakai; *Sasamorpha borealis* var. *purpurascens* (Hack.) Hiyama; *Sasamorpha chiisanensis* Nakai; *Sasamorpha purpurascens* Nakai; *Sasamorpha purpurascens* (Hack.) Nakai; *Sasamorpha purpurascens* f. *macrochaeta* Nakai; *Sasamorpha purpurascens* f. *psilostachys* (Nakai) Tatew.; *Sasamorpha purpurascens* f. *subpubescens* (Makino & Uchida) Nakai; *Sasamorpha purpurascens* var. *borealis* (Hack.) Nakai; *Sasamorpha purpurascens* var. *hidakana* Tatew. & Yoshim.; *Sasamorpha purpurascens* var. *macrochaeta* (Nakai) Nakai; *Sasamorpha purpurascens* var. *psilostachys* Nakai; *Sasamorpha purpurascens* var. *typica* Nakai; *Sasamorpha tobaeana* (Makino & Uchida) Uchida & Koidz.)

Japan. See *Bulletin de l'Herbier Boissier* 7(9): 716, 720. 1899 and *Botanical Magazine* (Tokyo) 14: 20, 62. 1900, *Botanical Magazine* (Tokyo) 15: 24. 1901, *Botanical Magazine* (Tokyo) 26: 12. 1912, *Journal of Japanese Botany* 2: 16. 1920, *Journal of Japanese Botany* 6: 24. 1929, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 181. Sapporo, Japan 1931, *Botanical Magazine* (Tokyo) 46: 37, 41. 1932, *Journal of Japanese Botany* 9: 160. 1933, *Journal of Japanese Botany* 11: 75. 1935, *Acta Phytotaxonomica et Geobotanica* 10: 317. 1941, *Journal of Japanese Botany* 28: 154. 1953, *Bulletin of the National Science Museum* 33: 66. 1953, *Journal of Japanese Botany* 67: 31-34. 1992.

S. borealis (Hack.) Makino & Shibata var. **purpurascens** Muroi (*Sasamorpha purpurascens* Nakai; *Sasamorpha purpurascens* (Hack.) Nakai)

Japan. Erect, straight, culm sheath with long hairs, branching on the upper part, leaves coriaceous, spikelets lanceolate and flattened, see *Bulletin de l'Herbier Boissier* 7(9): 716. 1899 and *Journal of the Faculty of Agriculture of the Hokkaido University* 26(2): 180-181. 1931.

in Japan: suzu-dake, kisuji-suzu (with several yellow stripes on the leaf blade), shirosuji-suzu (white stripes and minute green dots).

S. cernua Makino (*Arundinaria kurilensis* var. *spiculosa* Schmid; *Sasa cernua* var. *nikkoensis* (Nakai) S. Suzuki; *Sasa confusa* var. *lasiochlamys* (Koidz.) Tatew.; *Sasa*

kurilensis var. *cernua* (Makino) Nakai; *Sasa kurilensis* var. *lasiochlamys* Koidz.; *Sasa matsudae* var. *nikkoensis* Nakai; *Sasa momosei* Nakai; *Sasa nambuana* Koidz.; *Sasa nishigoensis* Nakai; *Sasa nishiyamensis* Uchida; *Sasa sorstitialis* Koidz.; *Sasa spiculosa* (Schmid) Makino)

Japan, North Korea. Robust, culm and leaf sheaths glabrous, internodes pubescent to puberulous, leaf blades oblong and rounded, spikelets lanceolate and flattened with 5-7 florets, 2 glumes lanceolate, lemmas papery-coriaceous, palea scabrous, 3 ovate lodicules acute and subequal, stamens exerted, ovary oblong, 3 plumose stigmas, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg* (Sér. 7) 122: 198. 1868 and *Botanical Magazine* 25: 27. 1901, *Botanical Magazine* (Tokyo) 26: 12. 1912, *Journal of Japanese Botany* 6: 12. 1929, *Journal of the Faculty of Agriculture of the Hokkaido University* 26(2): 183. 1931, *Journal of Japanese Botany* 11: 81-82, 85-86, 376, 536, 818. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 17. 1935, *Acta Phytotaxonomica et Geobotanica* 5: 200. 1936, *Acta Phytotaxonomica et Geobotanica* 9: 189. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 258. 1941, *Japanese Journal of Botany* 18: 303. 1964.

in Japan: okuyama-zasa

S. cernua Makino f. **nebulosa** (Makino & Shibata) Tatewaki (*Arundinaria paniculata* f. *nebulosa* Makino; *Pseudosasa kurilensis* var. *nebulosa* (Makino) Makino; *Sasa cernua* var. *nebulosa* (Makino) Koidz.; *Sasa nebulosa* (Makino) Koidz.; *Sasa nebulosa* (Makino) Ohwi; *Sasa palmata* f. *nebulosa* (Makino) S. Suzuki; *Sasa paniculata* f. *nebulosa* (Makino) Makino & Shibata; *Sasa paniculata* f. *nebulosa* (Makino) Nakai, nom. illeg., non *Sasa paniculata* f. *nebulosa* (Makino) Makino & Shibata; *Sasa paniculata* f. *nebulosa* (Makino) Nakai, nom. illeg., non *Sasa paniculata* f. *nebulosa* (Makino) Makino & Shibata; *Sasa paniculata* var. *ontakensis* (Franch. & Sav.) E.G. Camus; *Sasa senanensis* f. *nebulosa* (Makino) Rehder)

Japan. See *Botanical Magazine* (Tokyo) 14(158): 50, 52. 1900, *Botanical Magazine* 15: 25-26. 1901, *Les Bambusées* 24-25. 1913, *Journal of the Arnold Arboretum* 1(1): 58. 1919, *Journal of Japanese Botany* 5(4): 15. 1928, *Botanical Magazine* 42: 311. 1928, *Journ. Fac. Agric. Hokkaido Univ.* 31(2): 195. 1930, *Acta Phytotaxonomica et Geobotanica* 10: 137. 1941, *Japanese Journal of Botany* 19(1): 107. 1965.

S. chartacea (Makino) Makino & Shibata (*Arundinaria chartacea* Makino; *Sasa amphitricha* Koidz.; *Sasa apoenensis* Nakai; *Sasa chartacea* (Makino) Makino; *Sasa chartacea* f. *kaiensis* (Koidz.) S. Suzuki; *Sasa chartacea* f. *kogensis* (Nakai) S. Suzuki; *Sasa chartacea* var. *kogensis* (Nakai) S. Suzuki; *Sasa kaiensis* Koidz.; *Sasa kawanoyuensis* Koidz.; *Sasa kawanoyuensis* var. *pilosa* Koidz.; *Sasa kawanoyuensis* var. *puberula* Koidz.; *Sasa kogensis* Nakai; *Sasa kozasa* Nakai; *Sasa kusirensis* Nakai; *Sasa nikkoensis*

var. *ionochaeta* Nakai; *Sasa sendaica* Makino; *Sasa sendaica* f. *apoiensis* (Nakai) S. Suzuki)

Japan. Simple, slender, see *Botanical Magazine* 14(158): 55. 1900, *Botanical Magazine* (Tokyo) 15: 18, 27. 1901, *Journal of Japanese Botany* 5(2): 8. 1928, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 185-186. 1931, *Journal of Japanese Botany* 10: 553. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 18. 1935, *Journal of Japanese Botany* 11(12): 813-814. 1935, *Botanical Magazine* (Tokyo) 46: 50. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 72. 1937, *Acta Phytotaxonomica et Geobotanica* 22: 9. 1948, *Journal of Japanese Botany* 22: 10. 1948, *Japanese Journal of Botany* 19(3): 441, 444. 1967, *Journal of Japanese Botany* 67: 31-34. 1992.

in Japan: ohkuma-zasa, sendai-zasa

S. chartacea (Makino) Makino & Shibata f. *iwakiensis* (Koidzumi) S. Suzuki (*Sasa chartacea* f. *trichodon* (Koidz.) S. Suzuki; *Sasa iwakiensis* Koidz.; *Sasa sendaica* f. *iwakiensis* (Koidz.) S. Suzuki; *Sasa trichodon* Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 5: 199. 1936, *Acta Phytotaxonomica et Geobotanica* 8: 58. 1939, *Japanese Journal of Botany* 19: 442, 445. 1967, *Hikobia* 7(3-4): 104. 1975.

S. chartacea (Makino) Makino & Shibata var. *chartacea*

Japan. Slender, simple, puberulous, leaf sheaths minutely pubescent, leaf blades tough or membranaceous, leaves oblong-lanceolate and more or less densely pubescent, spikelets linear, 4-8 florets, 2 small lanceolate glumes, lemmas ovate acuminate, palea present, 3 ovate lodicules, stamens exerted, ovary ovoid, 3 feathery stigmas.

in Japan: ohkuma-zasa, sendai-zasa

S. chartacea (Makino) Makino & Shibata var. *mollis* (Nakai) S. Suzuki (*Sasa mollis* Nakai)

Japan. Slender, simple, leaf sheaths velutinous or velvety, leaf blades tough or membranaceous or chartaceous, leaves oblong-lanceolate and more or less densely softly pubescent, see *Botanical Magazine* 46: 46. 1932, *Hikobia* 7(3-4): 104. 1975.

in Japan: birodo-miyako-zasa

S. chartacea (Makino) Makino & Shibata var. *nana* (Makino) S. Suzuki (*Sasa nana* Makino)

Japan. Slender, simple, leaf sheaths glabrous, culm sheaths pubescent, nodes and internodes puberulous, leaf blades tough or membranaceous or chartaceous, leaves oblong-lanceolate and more or less densely softly pubescent, spikelets linear, 4-6 florets, 2 small lanceolate glumes, papery lemmas ovate acuminate, palea present, 3 ovate lodicules, stamens exerted, ovary ovoid, 3 feathery stigmas, see *Botanical Magazine* 26: 11, f. 1. 1912, *Hikobia* 8(1-2): 60. 1977.

in Japan: nikko-zasa, miyama-suzu

S. chartacea (Makino) Makino & Shibata var. *nana* (Makino) S. Suzuki f. *hattoriana* (Koidzumi) S. Suzuki (*Sasa chartacea* f. *hattoriana* (Koidz.) S. Suzuki; *Sasa hattoriana* Koidz.; *Sasa nana* f. *hattoriana* (Koidz.) S. Suzuki; *Sasa sendaica* var. *hattoriana* (Koidz.) S. Suzuki)

Japan. See *Botanical Magazine* 26: 11, f. 1. 1912, *Journal of Japanese Botany* 5(2): 8. 1928, *Acta Phytotaxonomica et Geobotanica* 4: 167. 1935, *Japanese Journal of Botany* 19(3): 445. 1967, *Hikobia* 7(3-4): 107. 1975, *Hikobia* 8(1-2): 60. 1977.

S. chartacea (Makino) Makino & Shibata var. *shimotsukensis* S. Suzuki

Japan. Slender, simple, leaf sheaths glabrous, leaf blades tough or membranaceous or chartaceous, leaves oblong-lanceolate and more or less densely softly pubescent, flowers not seen, see *Hikobia* 7(3-4): 104. 1975.

in Japan: azuma-miyako-zasa

S. duplicata W.T. Lin & Z.J. Feng

China. See *Acta Phytotaxonomica Sinica* 30(6): 561-562, pl. 3, f. 3-6. 1992.

S. elegantissima Koidz. (*Sasa admirabilis* Koidz.; *Sasa nana* var. *elegantissima* (Koidz.) S. Suzuki)

Japan. Simple, slender, leaf tips dangling, culm sheaths pilose, nodes and internodes pilose, leaf sheaths glabrous, leaf blades oblong-lanceolate, leaves more or less glabrous upper and densely softly pubescent beneath, see *Botanical Magazine* 26: 11, f. 1. 1912, *Acta Phytotaxonomica et Geobotanica* 4: 86. 1935, *Acta Phytotaxonomica et Geobotanica* 8: 55. 1939, *Japanese Journal of Botany* 19(3): 453. 1967.

in Japan: katuragi-zasa, tanga-zasa

S. fortunei (Van Houtte ex Munro) Fiori (*Arundarbor fortunei* (Van Houtte) Kuntze; *Arundarbor fortunei* (Van Houtte ex Munro) Kuntze; *Arundinaria fortunei* (Van Houtte) Rivière & C. Rivière; *Arundinaria fortunei* (Van Houtte ex Munro) Rivière & C. Rivière; *Arundinaria variabilis* var. *fortunei* (Van Houtte) Houz.; *Arundinaria variabilis* var. *fortunei* (Van Houtte ex Munro) Houz.; *Arundinaria variegata* (Siebold ex Miq.) Makino; *Bambusa fortunei* Van Houtte; *Bambusa fortunei* Van Houtte ex Munro; *Bambusa picta* Siebold & Zucc. ex Munro; *Bambusa variegata* Siebold ex Miq.; *Nipponocalamus fortunei* (Van Houtte) Nakai; *Nipponocalamus fortunei* (Van Houtte ex Munro) Nakai; *Pleioblastus fortunei* (Van Houtte) Nakai; *Pleioblastus fortunei* Nakai; *Pleioblastus fortunei* (Van Houtte ex Munro) Nakai; *Pleioblastus variegatus* (Siebold ex Miq.) Makino; *Sasa fortunei* (Van Houtte) Fiori; *Sasa variegata* (Siebold ex Miq.) E.G. Camus) (for the Scottish botanist and gardener Robert Fortune, 1812-1880, botanical explorer, traveler, plant collector in China (for the Royal Horticultural Society) and Japan, horticulturist, introduced the tea plant from China into India. See Alice Margaret

Coats, *The Quest for Plants: A History of the Horticultural Explorers*. 71-75, 101-110. London 1969; E.H.M. Cox, *Plant-hunting in China: A History of Botanical Exploration in China and the Tibetan Marches*. 76-92. London 1945; J.H. Barnhart, *Biographical notes upon botanists*. 1: 561. Boston 1965; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. Regnum Vegetabile vol. 9. 1957; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 711. Stuttgart 1993; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981)

Asia, Japan. Green, very slender, cultivated, ornamental, slender running rhizomes, culm sheaths green, branched or unbranched, leaf sheath glabrous, ligule small or tiny, leaf blade acuminate, see *Annales Museum Botanicum Lugduno-Batavi* 2: 285. 1866, *Transactions of the Linnean Society of London* 26: 111. 1868, *Transactions of the Linnean Society of London* 26: 111. 1876, *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 797. 1878, *Revisio Generum Plantarum* 2: 761. 1891 and *Mitteilungen des Deutschen Dendrologischen Gesellschaft* 16: 226. Berlin 1907, *Bulletin de la Société Dendrologique de France* 12: 81. 1909, *Botanical Magazine* (Tokyo) 26(300): 15. 1912, *Bambusées* 21. 1913, *Bollettino della Reale Società Toscana d'Orticoltura*, ser. 4, 2: 42. 1917, *Journal of the Arnold Arboretum* 6(3): 145. 1925, *Journal of Japanese Botany* 3(6): 23. 1926, *Journal of Japanese Botany* 9(4): 232, 234, t. 30. 1933, *Journal of Japanese Botany* 18: 350, 355. 1942, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in English: dwarf white-stripe bamboo

in Japan: chigo-zasa

S. fugeshiensis Koidzumi (*Sasa fugeshiensis* var. *kurehaensis* (Koidz.) S. Suzuki; *Sasa kurehaensis* Koidz.)

Japan. Robust, densely pubescent to puberulous, leaves coriaceous and entirely glabrous on both surfaces, leaf blades ovate-oblong to oblong, see *Acta Phytotaxonomica et Geobotanica* 4: 167, 170. 1935, *Acta Phytotaxonomica et Geobotanica* 9: 151. 1940, *Japanese Journal of Botany* 19: 120. 1965.

in Japan: fugeshi-zasa

S. fugeshiensis Koidzumi f. *asahimontana* (Koidzumi) S. Suzuki (*Sasa asahimontana* Koidz.; *Sasa fugeshiensis* var. *asahimontana* (Koidz.) S. Suzuki)

Japan. See *Acta Phytotaxonomica et Geobotanica* 9: 151. 1940, *Japanese Journal of Botany* 19: 119. 1965, *Hikobia* 7(3-4): 100. 1975.

in Japan: asahi-zasa

S. gracillima Nakai (*Sasa adstricta* Koidz.; *Sasa gracillima* var. *kinugawensis* S. Suzuki; *Sasa hukubensis* Koidz.; *Sasa ohmiana* Koidz.; *Sasa paraelegans* Nakai; *Sasa plexipes* Koidz.; *Sasa surugensis* Nakai)

Japan. Culm thin, glabrous, slender, simple, leaves membranaceous, leaf blades lanceolate to oblong-lanceolate, used as ground cover, found in deciduous tree forest, see *Botanical Magazine* 46: 47. 1932, *Acta Phytotaxonomica et Geobotanica* 3: 154. 1934, *Journal of Japanese Botany* 11: 78, 816. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 22. 1935, *Acta Phytotaxonomica et Geobotanica* 5: 198. 1936, *Japanese Journal of Botany* 19: 438. 1967.

in Japan: unzen-zasa

S. gracillima Nakai f. *shirashima* Muroi & H. Okamura
Japan.

S. guangdongensis W.T. Lin & X.B. Ye

China. See *Acta Phytotaxonomica Sinica* 26(2): 148-149, pl. 3. 1988.

S. guangxiensis C.D. Chu & C.S. Chao

China, Guangxi. Pubescent and glabrous, culm sheath caducous, sheath auricles present, sheath blade lanceolate, 3-8 leaves on each branch, leaves ovate lanceolate to lanceolate, see *Journal of Nanjing Technological College of Forest Products* 1981(3): 34-35, t. 3. 1981.

S. hainanensis C.D. Chu & C.S. Chao

China. See *Acta Phytotaxonomica Sinica* 18(1): 31, pl. 4. 1980, *Bamboo Research in Asia* 1: 16. 1981.

S. hayatae Makino (*Arundinaria tanzawana* (Makino) Nemoto; *Sasa glaucissima* Koidz.; *Sasa nipponica* f. *glaucissima* (Koidz.) S. Suzuki; *Sasa tanzawana* Makino; *Sasaella tanzawana* (Makino) Makino)

Japan. Branched above, nodes glabrous and strongly prominent, internodes glabrous, culm sheaths glabrous, leaf sheaths glabrous or sparsely pilose, leaves glabrous upper and densely softly pubescent beneath, leaf blades lanceolate to oblong-lanceolate, spikelets linear and flattened, 4-5 florets, 2 glumes linear, lemmas ovate and acuminate, palea present, 3 ovate lodicules obtuse, stamens exerted, ovary cylindrical, 3 plumose stigmas, see *Botanical Magazine* 15: 24. 1901, *Journal of Japanese Botany* 3(4): 16. 1926, *Journal of Japanese Botany* 4(1): 2. 1927, *Journal of Japanese Botany* 6: 15. 1929, *Acta Phytotaxonomica et Geobotanica* 4: 87. 1935, *Fl. Japan Suppl.* 861. 1936, *Japanese Journal of Botany* 19: 434. 1967, *J. Jap. Bot.* 66: 195. 1991.

in Japan: miyama-kuma-zasa, tanzawa-zasa, kokuma-zasa, asagishima-hira-zasa (a mutated type with yellow stripes on the leaf blade)

S. hayatae Makino f. *hispidula* S. Suzuki

Japan. See *Journal of Japanese Botany* 58(1): 20. 1983.

S. hayatae Makino var. *hirtella* (Nakai) S. Suzuki (*Sasa hirtella* Nakai; *Sasa tanzawana* var. *hirtella* (Nakai) S. Suzuki)

Japan. See *Science Education [Rika Kyô-iku]* 15(6): 72. 1932, *Journal of Japanese Botany* 10(9): 567. 1934,

Japanese Journal of Botany 18(3): 101. 1964, *Journal of Japanese Botany* 60(11): 339. 1985.

S. heterotricha Koidzumi (*Sasa kaihunourana* Koidz.; *Sasa tanahasiana* Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 4: 168. 1935, *Acta Phytotaxonomica et Geobotanica* 10: 257. 1941, *Hikobia* 8(1-2): 59. 1977.

in Japan: kutegawa-zasa

S. heterotricha Koidzumi var. ***heterotricha***

Japan. Culm sheaths densely pilose to villous, internodes densely pubescent to puberulous, nodes more or less glabrous to puberulous, leaf sheaths puberulous or velvety, leaf blades oblong-lanceolate to lanceolate or oblong.

in Japan: kutegawa-zasa

S. heterotricha Koidzumi var. ***nagatoensis*** S. Suzuki

Japan. Internodes and leaf sheaths glabrous, culm sheaths pilose, nodes glabrous, leaf blades oblong-lanceolate to lanceolate to oblong, see *Hikobia* 8(1-2): 59. 1977.

in Japan: inu-kutegawa-zasa

S. hibaconuca Koidzumi (*Sasa tokatiensis* Tatew. & Yoshim.)

Japan. Rare, simple, slender, culm sheaths velvety, leaf sheaths puberulous, internodes pubescent to puberulous, leaf blades oblong-lanceolate and glabrous, leaves tough and papery, flowers not seen, see *Transactions of the Sapporo Natural History Society* 16: 6. 1939, *Acta Phytotaxonomica et Geobotanica* 8: 57. 1939.

in Japan: onuka-zasa

S. hirta (Koidzumi) Tzvelev (*Sasa kurilensis* var. *hirta* (Koidz.) S. Suzuki; *Sasa naigoensis* Nakai; *Sasa pseudocernua* var. *hirta* Koidz.; *Sasa spiculosa* var. *hirta* (Koidz.) Tzvelev)

Japan. See *Botanical Magazine* 25: 27. 1901, *Botanical Magazine* 26: 12. 1912, *Journal of Japanese Botany* 11(6): 377. 1935, *Acta Phytotaxonomica et Geobotanica* 9: 174. 1940, *Journal of Japanese Botany* 18(3): 301. 1964, *Novosti Sist. Vyss. Rast.* 12: 62. 1975.

S. hubeiensis (C.H. Hu) C.H. Hu (*Sasamorpha hubeiensis* C.H. Hu)

China, Hubei. Cylindrical, yellow or yellowish, glossy, pruinose, internodes shortened, sheath persistent and longer than internode, sheath auricle absent, sheath ligule truncate, sheath blade lanceolate, 1 branch on each node, top of branch covered with deciduous wart, 3 leaves on each twig, leaf ovate lanceolate to lanceolate, see *Journal of the Faculty of Science, Hokkaido University. Series 5, Botany* 26(2): 180. 1931, *Bamboo Research in Asia* 1985(2): 60. 1985.

S. ishizuchiana Makino (*Sasa chokaiensis* Makino ex Koidz.; *Sasa consentanea* Koidz.; *Sasa ishizuchiana*

Makino ex Koidz.; *Sasa kundjuana* Koidz.; *Sasa kurokawana* Makino; *Sasa maruyamana* Koidz.; *Sasa omokoensis* Makino & Koidz.; *Sasa palmata* f. *kurokawana* (Makino) S. Suzuki; *Sasa palmata* var. *niijimai* (Tatew. ex Nakai) S. Suzuki)

Japan. See *Les Bambusées* 25. 1913, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 188. 1931, *Journal of Japanese Botany* 7(9): 27. 1931, *Acta Phytotaxonomica et Geobotanica* 3: 24, 26. 1934, *Acta Phytotaxonomica et Geobotanica* 6: 73-74. 1937, *Acta Phytotaxonomica et Geobotanica* 8: 56. 1939, *Japanese Journal of Botany* 19: 108-109. 1965.

S. japonica (Siebold & Zucc.) Makino (*Arundinaria japonica* Siebold & Zucc.; *Arundinaria japonica* Siebold & Zucc. ex Steud.; *Pseudosasa japonica* (Siebold & Zucc.) Makino; *Pseudosasa japonica* (Siebold & Zucc. ex Steud.) Makino ex Nakai; *Sasa japonica* (Siebold & Zucc. ex Steud.) Makino; *Sasa japonica* f. *hakonensis* Makino ex Tsuboi; *Yadakeya japonica* (Siebold & Zucc. ex Steud.) Makino)

Japan. See *Synopsis Plantarum Glumacearum* 1: 334. 1854 and *Botanical Magazine* (Tokyo) 26(300): 13, f. 2. 1912, *Les Bambusées* 19. 1913, *Icones plantarum formosanarum nec non et contributiones ad floram formosanam.* 6: 138-139, f. 49. 1916, *Journal of Japanese Botany* 2(4): 15. 1920, *Journal of the Arnold Arboretum* 6(3): 150. 1925, *Journal of Japanese Botany* 3: 44. 1926, *Journal of Japanese Botany* 6(7): 16. 1929, *Science Education [Rika Kyô-iku]* 15(6): 71. 1932, *Flora Sylvatica Koreana* 20: 20. 1933, *New Keys of Japanese Trees*, Revised Edn. 470. Osaka 1961, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in English: arrow bamboo

in Japan: ya-dake

S. kagamiana Makino & Uchida (*Neosasamorpha kagamiana* (Makino & Uchida) Koidz.)

Japan. See *Journal of Japanese Botany* 5(10): 42. 1928, *Journal of Japanese Botany* 7(9): 22. 1930, *Bulletin of the Imperial College of Agriculture and Forestry* 12: 84. 1936, *Hokkaido Ringyô-kaihô* 38(2): 8. 1940, *Acta Phytotaxonomica et Geobotanica* 9: 227. 1940, *Acta Phytotaxonomica et Geobotanica* 11: 106, 111. 1942, *Acta Phytotaxonomica et Geobotanica* 30(4-6): 144. 1979.

in Japan: kagami-nanbusuzu

S. kagamiana Makino & Uchida subsp. ***kagamiana***

Japan. Rare, robust, culm sheaths villose, internodes puberulous or glabrous, nodes glabrous or densely pubescent, leaf sheaths puberulous, leaf blades oblong-lanceolate and chartaceous.

in Japan: kagami-nanbusuzu

S. kagamiana Makino & Uchida subsp. ***yoshinoi*** (Koidzumi) S. Suzuki (*Neosasamorpha kagamiana* subsp. *yoshinoi* (Koidz.) S. Suzuki; *Sasa kashidensis* var. *yoshinoi* Koidz.)

Japan. Rare, low, small, slender, culm sheaths villose, internodes puberulous, nodes densely hairy or densely pilose, leaf sheaths densely puberulous, leaf blades oblong-lanceolate to lanceolate and chartaceous, leaves entirely glabrous, see *Acta Phytotaxonomica et Geobotanica* 3: 23. 1934, *Acta Phytotaxonomica et Geobotanica* 9: 227. 1940, *Hikobia* 8(1-2): 64. 1977, *Journal of Japanese Botany* 64(2): 46. 1989.

in Japan: arima-kosuzu

S. kagamiana Makino & Uchida var. *inukamiensis* (Koidz.) S. Suzuki (*Sasa inukamiensis* Koidz.)

Japan. Rare, leaf sheaths glabrous, see *Acta Phytotaxonomica et Geobotanica* 11: 4. 1942, *Hikobia* 8(1-2): 64. 1977.

S. kashidensis Makino (*Neosasamorpha shimidzuana* subsp. *kashidensis* (Makino & Koidz.) S. Suzuki; *Sasa kashidensis* Makino & Koidz.; *Sasa shimidzuana* subsp. *kashidensis* S. Suzuki) (from Kashida Village, Minamikuwata County, Kyoto Prefecture)

Japan. Culm sheaths and nodes densely hairy, leaf blades oblong-lanceolate and chartaceous, leaves softly pubescent on the back, ground covering, growing in the deciduous tree forest, see *Journal of Japanese Botany* 2(4): 15. 1920, *Acta Phytotaxonomica et Geobotanica* 3: 23. 1934, *Acta Phytotax. & Geobot.* 4: 169. 1935, *Acta Phytotaxonomica et Geobotanica* 9: 228. 1940, *Hikobia* 8(1-2): 63. 1977, *Journal of Japanese Botany* 64(2): 46. 1989.

in Japan: kashida-zasa

S. kogasensis Nakai (*Sasa arikai* Miyabe & Tatewaki)

Japan. See *Botanical Magazine* 46: 46. 1932, *Transactions of the Sapporo Natural History Society* 13: 110. 1933.

in Japan: kogashi-zasa, yukawa-zasa

S. kogasensis Nakai var. *kogasensis*

Japan. Simple, slender, densely pubescent, leaf sheaths puberulous, leaf blades oblong-lanceolate and glabrous.

in Japan: kogashi-zasa, yukawa-zasa

S. kogasensis Nakai var. *nasuensis* (Kimura & S. Suzuki) S. Suzuki (*Sasa arikai* var. *nasuensis* Kimura & S. Suzuki ex Kimura)

Japan. Rare, simple, slender, culm sheaths densely pubescent, nodes glabrous, leaf sheaths and internodes glabrous, leaf blades oblong-lanceolate and glabrous, see *Journal of Japanese Botany* 40: 186. 1965, *Hikobia* 7(3-4): 108. 1975.

in Japan: nasuno-yukawa-zasa

S. kurilensis (Rupr.) Makino & Shibata (*Arundarbor kurilensis* (Rupr.) Kuntze, also spelled *kurilensis*; *Arundinaria kurilensis* Rupr.; *Arundinaria kurilensis* var. *genuina* F. Schmidt; *Bambusa kurilensis* (Rupr.) Hack.; *Bambusa kurilensis* (Rupr.) Miyabe; *Pseudosasa kurilensis* (Rupr.) Makino; *Sasa capillaris* Nakai; *Sasa coreana* Nakai; *Sasa*

koidzumii Makino ex Koidz.; *Sasa kurilensis* f. *yezo-alpina* (Nakai) Tatew.; *Sasa kurilensis* var. *genuina* (F. Schmidt) Nakai; *Sasa kurilensis* var. *pilosa* Tatew.; *Sasa pseudocernua* var. *psilonodosa* Koidz.; *Sasa pseudocernua* var. *setigera* Koidz.; *Sasa ramosissima* Koidz.; *Sasa yezo-alpina* Nakai)

Japan. Sympodial branching, leaf blades thick, inflorescence laterally issues from the upper branch, shoots eaten by the local people, mountains, see *Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint Pétersbourg* 8: 121. 1850, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg* (Sér. 7) 12(2): 198. 1868, *Memoirs of the Boston Society of Natural History* 4: 271. 1890, *Revisio Generum Plantarum* 2: 760. 1891, *Bulletin de l'Herbier Boissier* 7(9): 719. 1899 and *Botanical Magazine* 14(index): 61. 1900, *Botanical Magazine* (Tokyo) 15: 18, 27. 1901, *Botanical Magazine* 31: 4, 41. 1916, *Journal of Japanese Botany* 5(2): 4. 1928, *Journal of Japanese Botany* 5(4): 15. 1928, *Journal of Japanese Botany* 6: 12. 1929, *Tennen Kinenbutsu Chosahokoku* 12: 58. 1930 [Preserv. Natural Monuments Japan], *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 182-183. 1931, *Science Education [Rika Kyô-iku]* 15(6): 71. 1932, *Acta Phytotaxonomica et Geobotanica* 3: 18. 1934, *Journal of Japanese Botany* 10(9): 555-556. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 17. 1935, *Journal of Japanese Botany* 11(12): 818. 1935, *Acta Phytotaxonomica et Geobotanica* 7: 116, 257. 1938, *Hokkaido Ringyô-kaihô* 38: 247, 250. 1940, *Atti della Reale Accademia Nazionale dei Lincei: Rendiconto dell' Adunanza Solenne del ...* 38: 249. 1940, *Acta Phytotaxonomica et Geobotanica* 9: 174. 1940, *Acta Phytotaxonomica et Geobotanica* 11: 314. 1942, *Acta Phytotaxonomica et Geobotanica* 12: 115. 1943, *Journal of Japanese Botany* 18(3): 301. 1964, *Journal of Japanese Botany* 67: 31-34. 1992.

in Japan: chishima-zasa, nemagari-dake, suzuko (= the shoots), takara-nemagari (whitish variegation), shimashimofuri-nemagari (with dots and stripes), kikan-shiro-akebono (leaves milky white), shiroakebono-chishima (white leaves with wide stripes), kiakebono-nemagari (variable stripes and dots), kiakebono-chishima (variable stripes and dots), shimofuri-nemagari (white dots), chabo-shimofuri-chishima (white dots) (*chabo* in Japanese are the dwarf hens), chabo-konshima-chishima (navy-blue to dark green stripes), nochizae-kifu-chishima (dots clear later), nochizae-kifu-nemagari (dots clear later), shirofu-chishima (yellow-white stripes), miiro-chishima (with three colors), chabo-makiba-nemagari

S. kurilensis (Rupr.) Makino & Shibata f. *pseudokurilensis* (Nakai) S. Suzuki (*Sasa hayachinecola* Makino ex Koidz.; *Sasa pseudokurilensis* Nakai)

Japan. See *Journal of Japanese Botany* 10(9): 563-564. 1934, *Acta Phytotaxonomica et Geobotanica* 3: 154. 1934, *Journal of Japanese Botany* 18(3): 300. 1964.

S. kurilensis (Rupr.) Makino & Shibata var. *gigantea* Tatewaki (*Sasa gigantea* Tatew.; *Sasa kurilensis* var. *cernua* (Makino) Nakai)

Japan. Ovate-oblong leaves, see *Journal of Japanese Botany* 6: 12. 1929, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 183. 1930, *Trans. Hokkaido For. Soc.* 38: 249. 1940, [M. Tatewaki, "Hokkaido sasarui no bunrui [Classification of genus *Sasa* in Hokkaido]" *Hokkaido Ringyô-kaihô*. 1940.

in Japan: ezo-nemagari, hiroha-nemagari

S. kurilensis (Rupr.) Makino & Shibata var. *jotanii* K. Inoue & Tanimoto (*Sasa jotanii* (K. Inoue & Tanim.) M. Kobay.)

Japan. See *Journal of Japanese Botany* 60(8): 250. 1985, *Journal of Japanese Botany* 75(4): 245-246, f. 1-2. 2000.

S. kurilensis (Rupr.) Makino & Shibata var. *kurilensis* (*Sasa kurilensis* var. *genuina* (F. Schmidt) Nakai)

Japan, Korea. Ascending, robust, glabrous, upper portions densely branched, leaf blades coriaceous, spikelets lanceolate and flattened with 2 glumes and 6-9 florets, ovate glumes chartaceous and acute, lemmas coriaceous and ovate, palea present, 3 lodicules rather obtuse, stamens exerted, ovary ovoid, feathery stigmas, see *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 182. 1931.

in Japan: chishima-zasa, nemagari-dake

S. kurilensis (Rupr.) Makino & Shibata var. *uchidae* (Makino) Makino (*Pseudosasa uchidae* (Makino) Makino; *Sasa kurilensis* f. *uchidae* (Makino) S. Suzuki; *Sasa uchidae* Makino)

Japan. See *Journal of Japanese Botany* 5(2): 4-5. 1928, *Journal of Japanese Botany* 5(4): 16. 1928, *Journal of Japanese Botany* 5(10): 41. 1928, *Journal of Japanese Botany* 18(3): 300. 1964.

S. kurokawana Makino (*Sasa palmata* f. *kurokawana* (Makino) S. Suzuki; *Sasa palmata* var. *nijimai* (Tatew. ex Nakai) S. Suzuki; *Sasa tectoria* Makino ex Koidz.; *Sasa tectria* Makino)

Japan. Used as roof covering, see *Les Bambusées* 25. 1913, *Journal of Japanese Botany* 7(9): 27. 1931, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 188. 1931, *Acta Phytotaxonomica et Geobotanica* 3: 20. 1934, *Japanese Journal of Botany* 19: 108-109. 1965.

in Japan: yanefuki-zasa, kishima-yanefuki (with yellow stripes on the leaves)

S. kurokawana Makino f. *aureostriata* Muroi & Y. Tanaka Japan.

S. longiligulata McClure (*Pseudosasa longiligulata* (McClure) Koidz.)

China, Guangdong. Bright and reddish purple, sheath auricle and cilia absent, sheath ligule curved on edge, sheath blade erect, leaf lanceolate and strongly papery, see *Lingnan*

Science Journal 19(4): 536-537, t. 38. 1940, *Acta Phytotaxonomica et Geobotanica* 9(4): 226-227. 1940.

S. maculata Nakai (*Sasa nagasei* S. Suzuki; *Sasa nipponica* f. *glaucostrigata* (Koidz.) S. Suzuki)

Japan. See *Botanical Magazine* 15: 24. 1901, *Journal of Japanese Botany* 11(12): 814-815. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 87. 1935, *Japanese Journal of Botany* 19: 434. 1967, *Journal of Japanese Botany* 58(1): 18. 1983.

S. maculata Nakai var. *abei* S. Suzuki

Japan. See *Journal of Japanese Botany* 69(1): 34. 1994.

S. magnifica (Nakai) S. Suzuki (*Arundinaria magnifica* Nakai; *Neosasamorpha magnifica* (Nakai) S. Suzuki; *Sasaella magnifica* (Nakai) Koidz.)

Japan. Upper portions densely branched, culm sheaths pubescent, nodes and internodes densely puberulous, leaf sheaths velvety, leaves oblong-lanceolate and papery, see *Journal of Japanese Botany* 10(9): 577-578. 1934, *Acta Phytotaxonomica et Geobotanica* 10: 297. 1941, *Hikobia* 8(1-2): 62. 1977, *Journal of Japanese Botany* 64(20): 44. 1989.

in Japan: isshochi-zasa

S. magnifica (Nakai) S. Suzuki subsp. *fujitae* S. Suzuki (*Neosasamorpha magnifica* subsp. *fujitae* (S. Suzuki) S. Suzuki; *Sasa magnifica* subsp. *fugitae* S. Suzuki)

Japan. See *Hikobia* 8(3-4): 147. 1980, *Journal of Japanese Botany* 64(2): 44-45. 1989.

S. magnifica (Nakai) S. Suzuki var. *igaensis* (Nakai) S. Suzuki (*Sasa igaensis* (Nakai) Koidz., nom. illeg., non *Sasa igaensis* Nakai; *Sasa igagoyeana* Koidz.; *Sasamorpha igaensis* Nakai)

Japan. Rare, upper portions densely branched, culm sheaths almost glabrous, see *Journal of Japanese Botany* 10(9): 552-553, 581. 1934, *Acta Phytotaxonomica et Geobotanica* 11: 224, 312. 1942, *Hikobia* 8(1-2): 62. 1977.

S. magnonoda Wen & G.L. Liao

China. See *Journal of Bamboo Research* 10(1): 14. 1991.

S. masamuneana (Makino) C.S. Chao & Renvoize (*Arundinaria arvensis* Koidz.; *Arundinaria atropurpurea* Nakai; *Arundinaria babataneycsiana* Koidz.; *Arundinaria epitricha* Nakai; *Arundinaria glabra* Nakai; *Arundinaria glabra* var. *pilosa* Koidz.; *Arundinaria kiboensis* Nakai; *Arundinaria koshiensis* Koidz.; *Arundinaria magohukuana* Koidz.; *Arundinaria masamuneana* Makino; *Arundinaria minaguchii* (Makino & Koidz.) Makino; *Arundinaria minomarsa* Koidz.; *Arundinaria minomarsa* var. *lasioclada* Koidz.; *Arundinaria ogamiensis* Koidz.; *Arundinaria rhynacantha* Koidz., also spelled *rhynacantha*; *Arundinaria tanegashimensis* (Makino & Koidz.) Masam.; *Arundinaria tangoensis* (Koidz.) Koidz.; *Arundinaria zifukuensis* Nakai; *Nipponocalamus masamuneanus* (Makino) Nakai;

Nipponocalamus tanegashimensis (Makino & Koidz.) Nakai; *Pleioblastus masamuneanus* Makino; *Pleioblastus tanegasimensis* Makino & Koidz.; *Sasa tangoensis* Koidz.; *Sasaella arvensis* (Koidz.) Koidz.; *Sasaella atropurpurea* Makino & Nakai ex Nakai; *Sasaella auriculata* Koidz.; *Sasaella babataneyosiana* (Koidz.) Koidz.; *Sasaella epitricha* Nakai; *Sasaella glabra* (Nakai) Koidz.; *Sasaella kiboensis* (Nakai) Koidz.; *Sasaella koshiensis* (Koidz.) Koidz.; *Sasaella magohukuana* (Koidz.) Koidz.; *Sasaella masamuneana* (Makino) Hatusima & Muroi; *Sasaella masamuneana* (Makino) Hatusima & Muroi ex Sugimoto; *Sasaella masamuneana* f. *albostrigata* (Muroi) D.C. McClint.; *Sasaella minaguchii* Makino & Koidz.; *Sasaella minomarsa* (Koidz.) Koidz.; *Sasaella ogamiensis* (Koidz.) Koidz.; *Sasaella rhynchantha* (Koidz.) Koidz.; *Sasaella tangoensis* (Koidz.) Koidz.)

Japan. See *Journal of Japanese Botany* 6(1): 5, 15. 1929, *Science Education [Rika Kyō-iku]* 15(6): 75. 1932, *Journal of Japanese Botany* 10: 574, 577, 743. 1934, *Acta Phytotaxonomica et Geobotanica* 3: 15-16, 21, 68. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 20, 82, 91, 161. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 65, 217, 276-277. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 113. 1938, *Acta Phytotaxonomica et Geobotanica* 8: 114. 1939, *Acta Phytotaxonomica et Geobotanica* 9: 75. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 296-297. 1941, *Journal of Japanese Botany* 18: 359, 366. 1942, *Acta Phytotaxonomica et Geobotanica* 12: 165. 1943, *Bulletin of the National Science Museum* 33: 27. 1953, *Journal of Japanese Botany* 51: 99. 1976, *Kew Bulletin* 44: 368. 1989.

in Japan: shiya-zasa, shiyya-zasa (leaves glabrous), kishima-shiyya (with yellow stripes on the leaves), shiroshima-shiyya (with white stripes)

S. megalophylla Makino (*Sasa akagiensis* Koidz.; *Sasa akitensis* Nakai; *Sasa arakiyeitiana* Koidz.; *Sasa blepharodes* Koidz.; *Sasa buddhistica* Koidz.; *Sasa intercedens* Koidz.; *Sasa kasidensis* Nakai; *Sasa kasimontana* Nakai; *Sasa kassizanensis* Koidz.; *Sasa kitamiana* Nakai; *Sasa laevissima* Koidz.; *Sasa megalophylla* Makino & Uchida; *Sasa megalophylla* f. *aureo-variegata* S. Suzuki; *Sasa megalophylla* f. *aureovariegata* S. Suzuki; *Sasa notoensis* Nakai; *Sasa okuyezoensis* Koidz.; *Sasa pseudonana* Nakai; *Sasa sacrariocola* Koidz.; *Sasa senanensis* f. *nobilis* S. Suzuki; *Sasa sugawarae* Nakai; *Sasa sylvatica* Tatew.; *Sasa vulcanica* Koidz.; *Sasa yasokichii* Tatew. & Tomooka)

Japan. Robust, glabrous or minutely pubescent, culm sheaths pilose or hairy, leaf sheaths glabrous, leaf blades lanceolate to oblong-lanceolate, linear spikelets, 5-7 florets, 2 small glumes lanceolate, lemmas chartaceous, palea present, 3 ovate lodicules, stamens exserted, ovary ovoid, 3 feathery stigmas, see *Journal of Japanese Botany* 6: 23. 1929, *Botanical Magazine* (Tokyo) 46: 93. 1932, *Journal of Japanese Botany* 10(9): 550-551, 560-561. 1934, *Acta Phytotaxonomica et Geobotanica* 3: 26. 1934, *Journal of*

Japanese Botany 11(6): 374-375. 1935, *Journal of Japanese Botany* 11(9): 601, 604, pl. 69. 1935, *Journal of Japanese Botany* 11(12): 812-813. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 88. 1935, *Journal of Japanese Botany* 12(4): 226. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 71, 223, 286, 290. 1937, *Transactions of the Sapporo Natural History Society* 16: 190. 1940, *Acta Phytotaxonomica et Geobotanica* 9: 81, 82, 182, 184, 185, 187. 1940, *Journal of Japanese Botany* 22: 10. 1948, *Japanese Journal of Botany* 19(3): 426. 1967, *Journal of Japanese Botany* 67: 31-34. 1992.

in Japan: ohba-zasa, kintai-zasa (with yellow stripes on the leaf blade)

S. megalophylla Makino f. *aureovariegata* S. Suzuki

Japan.

S. megalophylla Makino f. *pankensis* (Nakai) S. Suzuki (*Sasa megalophylla* var. *ohdana* (Koidz.) S. Suzuki; *Sasa ohdana* Koidz.; *Sasa pankensis* Nakai; *Sasa septentrionalis* var. *pankensis* (Nakai) S. Suzuki)

Japan. See *Journal of Japanese Botany* 5(2): 6. 1928, *Journal of Japanese Botany* 10(9): 553-554. 1934, *Acta Phytotaxonomica et Geobotanica* 5: 201. 1936, *Japanese Journal of Botany* 19(3): 427, 431. 1967, *Hikobia* 7(3-4): 102. 1975.

S. miakeana S. Suzuki

Japan. See *Journal of Japanese Botany* 67(5): 287. 1992.

S. minensis S. Suzuki

Japan. See *Journal of Japanese Botany* 67(5): 286. 1992.

S. minensis S. Suzuki var. *awaensis* S. Suzuki

Japan. See *Journal of Japanese Botany* 69(1): 34. 1994.

S. nipponica Makino (*Arundinaria nipponica* (Makino) Makino; *Bambusa nipponica* Makino; *Neosamomorpha elegans* (Makino) Koidz.; *Sasa asoensis* Nakai; *Sasa elegans* Makino, nom. illeg., non *Sasa elegans* Makino; *Sasa glaucissima* Koidz.; *Sasa hatenashiensis* Koidz.; *Sasa hikosanensis* Makino & Koidz. ex Koidz.; *Sasa iyoensis* Nakai; *Sasa nipponica* (Makino) Makino & Shibata; *Sasa nipponica* f. *glaucissima* (Koidz.) S. Suzuki; *Sasa nipponica* f. *pyncotricha* (Koidz.) S. Suzuki; *Sasa nipponica* f. *scaberula* Muroi; *Sasa nipponica* var. *asoensis* (Nakai) S. Suzuki; *Sasa nipponica* var. *pyncotricha* (Koidz.) S. Suzuki; *Sasa nunobikiensis* Koidz.; *Sasa pyncotricha* Koidz.; *Sasa scaberula* Makino & Koidz. ex Koidz.; *Sasa tenuissima* Makino & Nakai; *Sasa ureneiana* Koidz.)

Japan. Simple, slender, long and thin internodes glabrous, strongly prominent nodes largely swollen and glabrous, leaves densely softly pubescent beneath, leaf blades oblong-lanceolate to lanceolate, spikelets linear, 5-8 florets, 2 small glumes lanceolate, lemmas coriaceous ovate acuminate, palea present, 3 ovate lodicules, stamens exserted, ovary ovoid to cylindrical, 3 feathery stigmas, used as a ground cover, see *Journal of Japanese Botany* 9: 72. 1895 and

Botanical Magazine (Tokyo) 14(156): 23. 1900, *Botanical Magazine* 15: 24. 1901, *Journal of the Linnean Society, Botany* 42: 498. 1914, *Journal of Japanese Botany* 5: 4. 1928, *Bot. Mag.* (Tokyo) 42: 393. 1928, *Botanical Magazine* 46: 46, 47. 1932, *Acta Phytotaxonomica et Geobotanica* 3: 22, 23, 24. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 87. 1935, *Journal of Japanese Botany* 11(6): 371. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 222. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 116. 1938, *Acta Phytotaxonomica et Geobotanica* 8: 116. 1939, *Acta Phytotaxonomica et Geobotanica* 9: 227. 1940, *Japanese Journal of Botany* 19: 434, 436. 1967, *J. Jap. Bot.* 66: 195. 1991.

in Japan: miyako-zasa, shiroshima-miyako (leaf blades with long or short white stripes)

S. nipponica Makino f. ***mikawana*** (Koidzumi) S. Suzuki (*Sasa bicolor* Koidz.; *Sasa hiyeiana* Koidz.; *Sasa kuntaensis* Koidz.; *Sasa mikawana* Koidz.; *Sasa nipponica* var. *bicolor* (Koidz.) S. Suzuki; *Sasa yoigana* Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 3: 70. 1934, *Acta Phytotaxonomica et Geobotanica* 5: 128. 1936, *Acta Phytotaxonomica et Geobotanica* 7: 255, 260. 1938, *Acta Phytotaxonomica et Geobotanica* 8: 193. 1939, *Japanese Journal of Botany* 19: 435. 1967.

S. nipponica Makino f. ***nandaiensis*** (Koidzumi) S. Suzuki (*Sasa nandaiensis* Koidz.; *Sasa tashiroi* Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 6: 76, 221. 1937, *Japanese Journal of Botany* 19(3): 437. 1967.

S. nipponica Makino f. ***robustior*** Makino ex Tsuboi

Japan. See I. Tsuboi, *Illustrations of the Japanese Species of Bamboo* p. 52, pl. 53. 1916.

S. oblongula C.H. Hu

China, Guangdong. Yellowish green, smooth, glabrous, culm sheath persistent, sheath blade lanceolate, 1 branch on each joint, 3-5 leaves on the top of each branch, leaves short and small lanceolate, see *Journal of Bamboo Research* 6(4): 18-20, f. 2. 1987.

S. occidentalis S. Suzuki

Japan. See *Journal of Japanese Botany* 58(12): 358. 1983.

S. oshidensis Makino & Uchida (*Neosasamorpha oshidensis* (Makino ex Uchida) Tatew.; *Sasa oshidensis* Makino ex Uchida; *Sasamorpha oshidensis* (Makino ex Uchida) Nakai)

Japan. See *Journal of Japanese Botany* 6: 21. 1929, *Botanical Magazine* 46: 39. 1932, *Bulletin of the Scientific Researches of the Alumni Association of the Morioka Imperial College of Agriculture and Forestry* 12: 81. 1936.

in Japan: ohshida-zasa, oshida zasa

S. oshidensis Makino & Uchida subsp. ***glabra*** (Koidzumi) S. Suzuki (*Neosasamorpha oshidensis* subsp. *glabra* (Koidz.) S. Suzuki; *Sasa kashidensis* var. *glabra* Koidz.)

Japan. Dwarf, culm sheaths densely pilose, leaf sheaths glabrous, internodes and nodes glabrous, leaf blades oblong-lanceolate and glabrous on both the surfaces, see *Acta Phytotaxonomica et Geobotanica* 3: 23. 1934, *Hikobia* 8(1-2): 62. 1977, *Journal of Japanese Botany* 64(2): 45. 1989.

in Japan: kenashi-kashida-zasa

S. oshidensis Makino & Uchida subsp. ***oshidensis***

Japan. Robust, culm sheaths densely pilose, nodes densely pilose, internodes puberulous, leaf sheaths glabrous, leaf blades oblong to oblong-lanceolate and glabrous on both the surfaces, spikelets lanceolate with 4-6 florets, 2 glumes ovate, the second glume usually subtending a bud, lemmas chartaceous and ovate, palea present, 3 ovate lodicules rather acute, stamens exserted, ovary cylindrical, 3 feathery stigmas.

in Japan: ohshida-zasa, oshida zasa

S. oshidensis Makino & Uchida var. ***kobemontana*** (Koidzumi) S. Suzuki (*Sasa kobemontana* Koidz.)

Japan. Leaf sheaths more or less densely puberulous, see *Acta Phytotaxonomica et Geobotanica* 22: 8. 1948, *Hikobia* 8(12): 63. 1977.

S. oshidensis Makino & Uchida var. ***shigaensis*** (Koidzumi) S. Suzuki (*Neosasamorpha shigaensis* (Koidz.) Koidz.; *Sasa shigaensis* Koidz.)

Japan, Shiga Prefecture, central Honshu. Leaf sheaths puberulous, see *Acta Phytotaxonomica et Geobotanica* 8: 116. 1939, *Acta Phytotaxonomica et Geobotanica* 9: 228. 1940, *Hikobia* 8(1-2): 62. 1977.

S. palmata (hort. ex Burb.) E.G. Camus (*Arundinaria mirabile* (hort. ex Burb.) Hack.; *Arundinaria palmata* (hort. ex Burb.) Bean; *Bambusa palmata* hort. ex Burb.; *Bambusa palmata* Marliac ex N.E. Br.; *Bambusa palmata* Marliac; *Sasa amplissima* Koidz.; *Sasa chimakisasa* Koidz.; *Sasa koshinaiana* Koidz.; *Sasa laevisissima* Koidz.; *Sasa lingulata* Koidz.; *Sasa nakasiretokoensis* Koidz.; *Sasa palmata* Nakai; *Sasa palmata* (Marliac) Nakai; *Sasa palmata* (hort. ex Burb.) Nakai, nom. illeg., non *Sasa palmata* (hort. ex Burb.) E.G. Camus; *Sasa palmata* E.G. Camus; *Sasa palmata* (Bean) Nakai; *Sasa palmata* (Mitford) E.G. Camus; *Sasa pseudobrachyphylla* Nakai; *Sasa shikotanensis* Nakai; *Sasa shikotanensis* var. *pseudobrachyphylla* (Nakai) Koidz.; *Sasa soyensis* Nakai)

Japan, South Korea. Perennial, small, robust, rapidly spreading, rhizomes extensively running, green stems, culm sheath glaucous when young, leaves dark green above and glaucous beneath, branches only from upper nodes or from the lower part of the culm, ligule truncate, nodes hairy and somewhat swollen, inflorescence of small panicles with few short racemes, ornamental, cultivated and naturalized elsewhere, forming large stands, found in old gardens, parks, forests, see *Kew Bulletin* 1889: 79. 1889, *Gard. Chron.* ser.

3, 7: 641. 1890, *Gard. Chron.* ser. 3, 15: 238. 1894, *Natürlichen Pflanzenfamilien* 1: 97. 1897 and *Bambusées* 25. 1913, *Science Education [Rika Kyô-iku]* 15(6): 73. 1932, *Journal of Japanese Botany* 10: 554, 561. 1934, *Journal of Japanese Botany* 11: 816-817. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 90. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 281. 1937, *Acta Phytotaxonomica et Geobotanica* 9: 150, 176, 185. 1940, *U.S.D.A. Agric. Handb.* 193: 30. 1961.

in English: broadleaf bamboo

in Japan: chimaki-zasa, shakotan-chiku (with black-brown dots on the culm)

S. palmata (hort. ex Burb.) E.G. Camus f. *australis* (Makino) S. Suzuki

(*Sasa australis* Makino; *Sasa basihirsuta* Koidz.; *Sasa dewaensis* Koidz.; *Sasa inequilateralis* var. *villosa* Koidz.; *Sasa koshinaiana* var. *lasionodosa* Koidz.; *Sasa muratana* Koidz.; *Sasa shimabarensis* Koidz.; *Sasa smectica* Koidz.; *Sasa stereophylla* Koidz.; *Sasa veitchii* var. *basihirsuta* (Koidz.) S. Suzuki; *Sasa yagiana* Koidz.)

Japan. See *Journal of the Arnold Arboretum* 1(1): 58. 1919, *Journal of Japanese Botany* 5(10): 42-43. 1928, *Acta Phytotaxonomica et Geobotanica* 3: 154. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 86, 169. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 70, 284, 288. 1937, *Acta Phytotaxonomica et Geobotanica* 8: 193. 1939, *Acta Phytotaxonomica et Geobotanica* 9: 176. 1940, *Acta Phytotaxonomica et Geobotanica* 12: 165, 166. 1943, *Japanese Journal of Botany* 19: 106. 1965, *Japanese Journal of Botany* 19: 423. 1967.

S. palmata (hort. ex Burb.) E.G. Camus f. *linearifolia* (Koidz.) S. Suzuki (*Sasa gracillima* f. *linearifolia* (Koidz.) S. Suzuki; *Sasa linearifolia* Koidz.; *Sasa palmata* (hort. ex Burb.) E.G. Camus var. *niijimai* (Tatewaki ex Nakai) S. Suzuki f. *linearifolia* (Koidzumi) S. Suzuki)

Japan. See *Botanical Magazine* 46: 47. 1932, *Acta Phytotaxonomica et Geobotanica* 4: 88. 1935, *Japanese Journal of Botany* 19: 110. 1965, *Japanese Journal of Botany* 19(3): 438. 1967.

S. palmata (hort. ex Burb.) E.G. Camus f. *nebulosa* (Makino) S. Suzuki (*Arundinaria paniculata* f. *nebulosa* Makino; *Bambusa palmata* f. *nebulosa* Makino; *Pseudosasa kurilensis* var. *nebulosa* (Makino) Makino; *Sasa cernua* f. *nebulosa* (Makino) Tatew.; *Sasa cernua* var. *nebulosa* (Makino) Koidz.; *Sasa kurilensis* var. *nebulosa* (Makino) Makino; *Sasa nebulosa* (Makino) Koidz.; *Sasa nebulosa* (Makino) Ohwi; *Sasa paniculata* f. *nebulosa* (Makino) Makino & Shibata; *Sasa paniculata* f. *nebulosa* (Makino) Nakai, nom. illeg., non *Sasa paniculata* f. *nebulosa* (Makino) Makino & Shibata; *Sasa senanensis* f. *nebulosa* (Makino) Rehder)

Japan. See *Botanical Magazine* 14(158): 50, 52, 61. 1900, *Botanical Magazine* 15: 25-27. 1901, *Les Bambusées* 24. 1913, *Journal of the Arnold Arboretum* 1(1): 58. 1919, *Journal of Japanese Botany* 5(4): 4, 15. 1928, *Botanical Magazine* (Tokyo) 42: 311. 1928, *Journal of Japanese Botany* 6: 12. 1929, *Journal of the Faculty of Agriculture of the Hokkaido University* 31(2): 195. 1930, *Bioactive Plants* 3: 25. 1934, *Acta Phytotaxonomica et Geobotanica* 10: 137. 1941, *Japanese Journal of Botany* 19(1): 107. 1965.

S. palmata (hort. ex Burb.) E.G. Camus var. *niijimai* (Tatewaki ex Nakai) S. Suzuki (also spelled *niijima*) (*Sasa austrokurilensis* Koidz.; *Sasa epitrichoides* Koidz.; *Sasa kurokawana* Makino; *Sasa niijimai* Tatew. ex Nakai; *Sasa palmata* f. *kurokawana* (Makino) S. Suzuki; *Sasa palmata* f. *niijimai* (Tatew. ex Nakai) S. Suzuki)

Japan. Leaves oblong-lanceolate glabrous on both surfaces, see *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 188. 1931, *Journal of Japanese Botany* 7(9): 27. 1931, *Acta Phytotaxonomica et Geobotanica* 6: 280. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 260. 1941, *Japanese Journal of Botany* 19(1): 108-109. 1965.

in Japan: rubeshibe-zasa, iga-zasa

S. palmata (hort. ex Burb.) E.G. Camus var. *palmata*

Japan. Robust, internodes and nodes glabrous, culm sheaths glabrous, leaf sheaths glabrous, leaves ovate-oblong to oblong and entirely glabrous on both surfaces, spikelets linear with 5-10 florets, 2 small glumes lanceolate, the second glume usually subtending no bud, lemmas chartaceous and ovate acuminate, palea present, 3 oblong lodicules, stamens exserted, ovary ovoid, 3 plumose stigmas.

in Japan: chimaki-zasa

S. palmata (hort. ex Burb.) E.G. Camus var. *yosaensis* (Koidzumi) S. Suzuki (*Sasa chimakisasa* var. *yosaensis* Koidz.)

Japan. Rare, leaf sheaths densely puberulous, see *Acta Phytotaxonomica et Geobotanica* 6: 281. 1937, *Japanese Journal of Botany* 19(1): 108. 1965.

S. paniculata (F. Schmidt) Makino & Shibata (*Arundinaria kurilensis* var. *paniculata* Schmidt; *Arundinaria paniculata* (Schmidt) Makino; *Bambusa senanensis* Franch. & Sav.; *Sasa bellatula* Koidz.; *Sasa dissitiflora* Nakai; *Sasa kassiana* Koidz.; *Sasa kuriyamensis* Nakai; *Sasa longifolia* Koidz.; *Sasa nakaii* Makino; *Sasa okudana* Makino; *Sasa omokoensis* var. *pilosa* Koidz.; *Sasa osoreyamensis* Nakai; *Sasa paniculata* var. *paniculata*; *Sasa pilosa* Nakai; *Sasa propinqua* Koidz.; *Sasa pseudo-nipponica* Tatewaki ex Nakai; *Sasa senanensis* (Franch. & Sav.) Rehder; *Sasa stripitans* Koidz., also spelled *stipitans*; *Sasa subverticillata* Nakai; *Sasa tambaensis* Makino & Koidz. ex Koidz.)

Japan. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg (Sér. 7)* 122: 198. 1868, *Enumeratio Plantarum in Japonia Sponte Crescentium ...* 2: 606. 1879

and *Botanical Magazine* 14(158): 50, 52, 53. 1900, *Botanical Magazine* (Tokyo) 15: 25-27. 1901, *Botanical Magazine* (Tokyo) 15: 25-26. 1901, *Bulletin de la Société Dendrologique de France* 12: 84. 1909, *Les Bambusées* 24, 25. 1913, *Journal of Japanese Botany* 3: 12. 1926, *Journal of Japanese Botany* 5(10): 42. 1928, *Journal of Japanese Botany* 6: 13. 1929, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 181, 184, 189, 191, 193. [1930] 1931, *Botanical Magazine* (Tokyo) 46: 93. 1932, *Journal of Japanese Botany* 8: 43. 1932, *Acta Phytotaxonomica et Geobotanica* 3: 18, 153. 1934, *Journal of Japanese Botany* 10(9): 551, 556-557. 1934, *Journal of Japanese Botany* 11: 77. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 87, 91. 1935, *Bulletin of the Scientific Researches of the Alumni Association of the Morioka Imperial College of Agriculture and Forestry* 12: 85. 1936, *Journal of Japanese Botany* 12: 227. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 221. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 117. 1938, *Acta Phytotaxonomica et Geobotanica* 8: 56. 1939, *Acta Phytotaxonomica et Geobotanica* 9: 79, 179. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 213. 1941, *Japanese Journal of Botany* 19(1): 114-117. 1965.

S. pubens Nakai (*Sasa gombeiana* Koidz.).

Japan. Rare, culm sheaths velutinous, leaf sheaths velutinous, internodes pubescent, nodes pilose, leaves entirely glabrous or rarely pubescent only at the base beneath, leaf blades coriaceous oblong-lanceolate, see *Journal of Japanese Botany* 11(2): 83. 1935, *Acta Phytotaxonomica et Geobotanica* 10: 256. 1941.

in Japan: ke-zasa

S. pubiculmis Makino (*Neosasamorpha pubiculmis* (Makino) S. Suzuki; *Sasa neopubiculmis* Koidz.; *Sasa pubiculmis* Koidz.)

Japan. See *Journal of Japanese Botany* 6: 10, 25. 1930, *Acta Phytotaxonomica et Geobotanica* 12: 114, 164. 1943, *Hikobia* 8(1-2): 62. 1977, *Journal of Japanese Botany* 64(9): 273. 1989.

in Japan: omoe-zasa

S. pubiculmis Makino subsp. *pubiculmis*

Japan. Robust, nodes puberulous to pilose, culm sheaths and internodes densely pubescent to puberulous or velvety, leaf sheaths densely puberulous, leaf blades oblong-lanceolate, leaves chartaceous and softly pubescent.

in Japan: omoe-zasa

S. pubiculmis Makino subsp. *sugimotoi* (Nakai) S. Suzuki (*Neosasamorpha pubiculmis* subsp. *sugimotoi* (Nakai) S. Suzuki; *Neosasamorpha sugimotoi* (Nakai) Koidz.; *Sasa sugimotoi* Nakai)

Japan. Rare, slender, small, low, nodes glabrous or thinly pubescent, culm sheaths and internodes densely pubescent to puberulous or velvety, leaf sheaths velvety, leaf blades

lanceolate, leaves chartaceous and softly pubescent, see *Journal of Japanese Botany* 11(2): 86. 1935, *Acta Phytotaxonomica et Geobotanica* 9: 228. 1940, *Hikobia* 8(1-2): 62. 1977, *Journal of Japanese Botany* 64(9): 273. 1989.

in Japan: mikawa-zasa, tsubame-zasa

S. pubiculmis Makino var. *chitosensis* (Nakai) S. Suzuki (*Neosasamorpha chitosensis* (Nakai) Tatew.; *Sasa chitosensis* Nakai)

Japan, Hokkaido. Culms hairy to glabrous, leaf sheaths glabrous, see *Journal of Japanese Botany* 10(9): 549-550. 1934, *Hikobia* 8(1-2): 62. 1977, *Journal of Japanese Botany* 67: 31-34. 1992.

S. pulcherrima Koidzumi (*Sasa alpestris* Nakai; *Sasa kundjuana* Koidz.)

Japan. Simple, slender, culm sheaths pilose, leaf sheaths and internodes glabrous, leaf blades lanceolate to oblong-lanceolate, leaves chartaceous and glabrous, see *Acta Phytotaxonomica et Geobotanica* 3: 155. 1934, *Journal of Japanese Botany* 12(4): 225. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 73. 1937.

in Japan: utsukushi-zasa

S. pulcherrima Koidzumi f. *hispidula* S. Suzuki

Japan. See *Hikobia* 8(3-4): 348. 1980.

S. pygmaea (Miq.) Rehder (*Arundarbor pygmaea* (Miq.) Kuntze; *Arundinaria pygmaea* (Miq.) Asch. & Graebn.; *Arundinaria pygmaea* (Miq.) Mitford; *Arundinaria pygmaea* (Mitford) J. Houz., nom. illeg., non *Arundinaria pygmaea* (Miq.) Asch. & Graebn.; *Arundinaria pygmaea* Kurz ex Teijsm. & Binn., nom. illeg., non *Arundinaria pygmaea* (Miq.) Asch. & Graebn.; *Arundinaria pygmaeus* (Miq.) Mitf.; *Arundinaria variegata* var. *pygmaea* (Miq.) Makino; *Bambusa pygmaea* Miq.; *Nipponocalamus pygmaea* (Miq.) Nakai; *Pleiolblastus pygmaeus* (Miq.) Nakai; *Pleiolblastus variegatus* var. *pygmaea* (Miq.) Makino ex Makino; *Sasa pygmaea* (Miq.) E.G. Camus ex Rehder; *Sasa pygmaea* (Miq.) E.G. Camus; *Sasa pygmaea* E.G. Camus; *Sasa pygmaea* var. *pygmaea*; *Sasa variegata* var. *pygmaea* (Miq.) E.G. Camus)

Asia temperate, Japan. Perennial, solid, glabrous, branching culms, dense foliage bright green and whitish pubescent, leaves rounded at the base, leaf blade linear-lanceolate, ornamental, useful for erosion control, see *Annales Museum Botanicum Lugduno-Batavi* 2: 286. 1866, *Revisio Generum Plantarum* 2: 761. 1891, *The Bamboo Garden* 49. 1896 and *Botanical Magazine* 26(300): 15, 17. 1912, *Les Bambusées* 21, 22, 25. 1913, *Journal of the Arnold Arboretum* 6(3): 145. 1925, *Journal of Japanese Botany* 3(6): 23. 1926, *Manual of Cultivated Trees and Shrubs* 71. 1927, *Flora of Japan* (edition 2) Revised and enlarged 1380. 1931, *Science Education [Rika Kyô-iku]* 15(6): 70. 1932, *Journal of Japanese Botany* 9(4): 234-237, pl. 31. 1933, *Journal of Japanese Botany* 18(7): 350, 362. 1942.

in English: pygmy bamboo

S. pygmaea (Miq.) Rehder var. *disticha* (Mitford) C.S. Chao & G.G. Tang (*Arundinaria argenteostriata* var. *disticha* (Mitford) Honda; *Arundinaria argenteostriata* var. *distichus* (Mitford) Ohwi, nom. illeg., non *Arundinaria argenteostriata* var. *disticha* (Mitford) Honda; *Arundinaria disticha* (Mitford) Bean; *Arundinaria pygmaea* (Miq.) Asch. & Graebn. var. *disticha* (Mitford) C.S. Chao & Renvoize; *Arundinaria variabilis* var. *disticha* (Mitford) Houz.; *Bambusa disticha* Mitford; *Bambusa nana* hort.; *Pleioblastus distichus* (Mitford) Nakai; *Pleioblastus distichus* (Mitford) Muroi & H. Okamura; *Pleioblastus pygmaeus* var. *distichus* (Mitford) Nakai; *Pseudosasa disticha* (Mitford) Nakai; *Sasa disticha* (Mitford) E.G. Camus)

Asia temperate, Japan. Perennial, 1 branch at each node, sheath shorter than internode, no sheath auricle, sheath blade triangular-ovate, 4-10 leaves on each twig, small lanceolate leaves arranged in 2 rows, cultivated, ornamental, see *The Bamboo Garden* 46: 547. 1894 and *Synopsis der mitteleuropäischen Flora* 2(1): 773. 1902, *Mitteilungen der Deutschen Dendrologischen Gesellschaft* 16: 227. 1907, *Bulletin de la Société Dendrologique de France* 12: 81, 82. 1909, *Journal of the Arnold Arboretum* 6: 150. 1925, *Science Education* 15(6): 69. Tokyo 1932, *Flora Sylvatica Koreana* 20: 21. 1933, *Journal of Japanese Botany* 9: 236. 1933, *Journal of Japanese Botany* 10(4): 207, f. 37. 1934, *The Illustrated Dictionary of Gardening*, ... 1: 188. 1951, *Flora of Japan* 80. 1953, *Nomina Plantarum Japonicarum. Editio Emendata* 373. 1957, *Journal of Nanjing Institute of Forestry* 1985(4): 15. 1985, *Kew Bulletin* 44(2): 368. 1989.

S. qingyuanensis (C.D. Hu) C.D. Hu (*Sasamorpha qingyuanensis* C.H. Hu)

China, Qingyuan, Zhejiang. Cylindrical, pruinose, internodes irregularly shortened, sheath persistent as long as the internode, no sheath auricles or cilia, 1 branch on each node, 3 leaves on each twig, leaves ovate or ovate lanceolate or long ovate, see *Journal of Bamboo Research* 2(1): 52, t. 2. 1983

S. quelpaertensis Nakai

Korea. See *Science Education* 15(6): 73. 1932, *Flora Sylvatica Koreana* 20: 40. 1933.

S. ramosa (Makino) Makino & Shibata (*Arundinaria chikatsuaufumiana* Koidz.; *Arundinaria confusa* Nakai; *Arundinaria decipiens* Nakai; *Arundinaria dimorpha* Hack. ex Nakai; *Arundinaria distichophylla* (Koidz.) Koidz.; *Arundinaria distichophylla* Koidz.; *Arundinaria exsaniosa* Koidz.; *Arundinaria incantans* Koidz.; *Arundinaria kisoensis* Koidz.; *Arundinaria komiyamana* (Makino & Hisauti) Nakai; *Arundinaria kunimiana* Koidz.; *Arundinaria matsushimensis* (Makino) Makino ex Koidz.; *Arundinaria mikurensis* Nakai; *Arundinaria musashiensis* Nakai; *Arundinaria nikkoensis* Nakai; *Arundinaria okadana* (Makino) Nakai; *Arundinaria ramosa* Makino; *Arundinaria ramosa* var. *distichophylla* Koidz.; *Arundinaria ramosa* var.

viridiflora Nakai; *Arundinaria sakaii* Nakai; *Arundinaria sasaelloides* Muroi; *Arundinaria sugimotoi* Nakai; *Arundinaria toyomurensis* Nakai; *Arundinaria tsukubensis* Koidz.; *Arundinaria vagans* Gamble; *Arundinaria viridistriata* var. *agrestis* Makino; *Arundinaria yonoskei* Nakai; *Bambusa ramosa* Makino; *Pleioblastus chino* var. *hisauchii* Makino; *Pleioblastus viridi-striata* var. *hortensis* Makino; *Pleioblastus viridistriatus* (Siebold ex André) Makino; *Pleioblastus viridistriatus* var. *agrestis* Makino; *Sasa agrestis* (Makino) Makino; *Sasa hannonensis* Makino; *Sasa komiyamana* Makino & Hisauti; *Sasa matsushimensis* Makino; *Sasa okadana* Makino; *Sasa sasaelloides* Makino & Uchida; *Sasaella agrestis* (Makino) Makino; *Sasaella chikatsuaufumiana* (Koidz.) Koidz.; *Sasaella confusa* (Nakai) Honda; *Sasaella decipiens* (Nakai) Honda; *Sasaella dimorpha* (Hack. ex Nakai) Koidz.; *Sasaella distichophylla* Koidz.; *Sasaella exsaniosa* (Koidz.) Koidz.; *Sasaella hannonensis* (Makino) Makino; *Sasaella incantans* (Koidz.) Koidz.; *Sasaella kisoensis* Koidz.; *Sasaella komiyamana* (Makino & Hisauti) Makino; *Sasaella kunimiana* Koidz.; *Sasaella matsushimensis* (Makino) Makino; *Sasaella mikurensis* (Nakai) Koidz.; *Sasaella musashiensis* (Nakai) Makino & Nakai ex Nakai; *Sasaella nikkoensis* Makino & Nakai; *Sasaella okadana* (Makino) Makino; *Sasaella ramosa* (Makino) Makino; *Sasaella sakaii* (Nakai) Koidz.; *Sasaella sasaelloides* (Makino & Uchida) Koidz.; *Sasaella sugimotoi* (Nakai) Koidz.; *Sasaella toyomurensis* (Nakai) Koidz.; *Sasaella tsukubensis* (Koidz.) Koidz.; *Sasaella yonosukei* (Nakai) Koidz.)

Japan. Erect, green to purplish, sometimes forming a dense stand, long rhizomes, nodes usually with 1 slender branch, culm sheaths glabrous, noxious weed with a very invasive rhizome system, see *Botanical Magazine* (Tokyo) 14(156): 22, 62. 1900, *Botanical Magazine* (Tokyo) 15(168): 24. 1901, *Bull. Misc. Inform. Kew* 1915: 350. 1915, *Journal of Japanese Botany* 3: 11-12, 16, 44. 1926, *Journal of Japanese Botany* 5: 6, 16, 20-21. 1928, *Journal of Japanese Botany* 6: 15-16. 1929, *Science Education [Rika Kyô-iku]* 15(6): 76. 1932, *Acta Phytotaxonomica et Geobotanica* 3: 152. 1934, *Journal of Japanese Botany* 10: 569-571, 578, 747-748. 1934, *Journal of Japanese Botany* 11: 3, 805, 808. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 81, 161. 1935, *Journal of Japanese Botany* 12: 222. 1936, *Journal of Japanese Botany* 15: 523. 1939, *Acta Phytotaxonomica et Geobotanica* 8: 192. 1939, *Acta Phytotaxonomica et Geobotanica* 9: 77. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 209-210, 295-298. 1941, *Kew Bull.* 38: 192. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

in Japan: azuma-zasa, kimmei-azuma-zasa

S. rubrovaginata C.H. Hu

China, Guangxi. Smooth, glabrous, light green, pruinose, nodes swollen, culm sheath persistent half length of internode and hard and fragile, sheath auricle and cilia undeveloped, sheath ligule truncate and extremely short,

sheath blade deciduous, 5-6 leaves on top of each branch, leaves broad-lanceolate or lanceolate, see *Bamboo Research in Asia* 1985(2): 59, t. 1. 1985.

S. samaniana Nakai (*Sasa diabolica* Koidz.; *Sasa fallax* Koidz.; *Sasa geniculata* Koidz.; *Sasa laetevirens* Koidz.; *Sasa obtecta* Koidz.; *Sasa osuwasacrariocola* Koidz.; *Sasa samaniana* Nakai var. *yoshinoi* (Koidzumi) S. Suzuki f. *hidejiroana* (Koidzumi) S. Suzuki; *Sasa samaniana* f. *osuwasacrariocola* (Koidz.) S. Suzuki; *Sasa villosa* Makino & Nakai ex Nakai; *Sasa yoshinoi* Koidz.)

Japan. See *J. Fac. Agric. Sapporo* 26: 184. 1931, *Botanical Magazine* 46: 52. 1932, *Acta Phytotaxonomica et Geobotanica* 3: 24, 25, 69. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 17, 166. 1935, *Acta Phytotaxonomica et Geobotanica* 8: 192. 1939, *Acta Phytotaxonomica et Geobotanica* 10: 256, 259. 1941, *Japanese Journal of Botany* 19(3): 448-449. 1967, *Hikobia* 7(3-4): 106. 1975, *Journal of Japanese Botany* 67: 31-34. 1992.

in Japan: apoi-zasa

S. samaniana Nakai f. *villosula* S. Suzuki

Japan. See *Hikobia* 8(3-4): 348. 1980.

S. samaniana Nakai var. *samaniana*

Japan. Simple, slender, culm sheaths pubescent, nodes and internodes puberulous or glabrous, leaf sheaths puberulous or sometimes with long hairs, leaf blades coriaceous-chartaceous and oblong-lanceolate, leaves densely softly pubescent beneath.

in Japan: apoi-zasa

S. samaniana Nakai var. *villosa* (Makino & Nakai) S. Suzuki (*Sasa samaniana* var. *villosa* (Makino & Nakai ex Nakai) S. Suzuki; *Sasa villosa* Makino & Nakai ex Nakai)

Japan. Simple, slender, densely hairy to densely villous, leaf blades coriaceous-chartaceous and oblong-lanceolate, leaves densely softly pubescent beneath, see *Botanical Magazine* 46: 52. 1932, *Hikobia* 7(3-4): 105. 1975.

in Japan: ke-miyako-zasa

S. samaniana Nakai var. *yoshinoi* (Koidzumi) S. Suzuki (*Sasa geniculata* Koidz.; *Sasa yoshinoi* Koidz.)

Japan. Simple, slender, densely hairy to densely pubescent, glabrous leaf sheaths, leaf blades oblong-lanceolate, leaves densely softly pubescent beneath and more or less glabrous to pilose upper, spikelets linear, 5-8 florets, 2 small lanceolate glumes, lemmas ovate acuminate, palea present, 3 ovate lodicules, stamens exerted, ovary cylindrical, 3 stigmas feathery, see *Acta Phytotaxonomica et Geobotanica* 3: 69. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 17. 1935, *Hikobia* 7(3-4): 105. 1975.

in Japan: bicchu-miyako-zasa, nasuno-miyako-zasa

S. scytophylla Koidzumi

Japan. Robust, glabrous leaves, culm sheaths pilose, nodes strongly prominent and pubescent, internodes and leaf

sheaths glabrous, coriaceous leaf blades oblong-lanceolate or lanceolate-oblong, leaves entirely glabrous on both surfaces, similar to *Sasa tokugawana* Makino, see *Acta Phytotaxonomica et Geobotanica* 3: 26. 1934.

in Japan: inu-tokugawa-zasa

S. scytophylla Koidzumi f. *aureostriata* S. Suzuki

Japan. See *Journal of Japanese Botany* 60(11): 339. 1985.

S. scytophylla Koidzumi f. *lasionodosa* S. Suzuki

Japan. See *Journal of Japanese Botany* 58(12): 361. 1983.

S. senanensis (Franch. & Sav.) Rehder (*Arundinaria brevifolia* Koidz.; *Bambusa senanensis* Franch. & Sav., also spelled *senamensis*; *Sasa paniculata* (F. Schmidt) Makino & Shibata; *Sasa pilosa* Nakai; *Sasa rivularis* Nakai; *Sasa senanensis* f. *rivularis* (Nakai) S. Suzuki; *Sasa stripitans* Koidz.; *Sasa tesioensis* Tatew.; *Sasa uyetsuensis* Koidz.)

Japan. Perennial, robust, dwarf, branched at lower portions of the culm, spikelets linear with 4-7 florets, 2 small glumes lanceolate, useful for erosion control, see *Enumeratio Plantarum in Japonia Sponte Crescentium ...* 2: 182, 606. 1879 and *Botanical Magazine* (Tokyo) 14(158): 22, 52. 1900, *Botanical Magazine* (Tokyo) 15: 25. 1901, *Journal of the Arnold Arboretum* 1(1): 58, 59. 1919, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 181, 184, 189, 191, 193. [1930] 1931, *Research Bull. Coll. Exper. Forest Coll. Agric. Hokk. Imp. Univ.* 7: 202. 1932, *Botanical Magazine* (Tokyo) 47: 228. 1933, *Acta Phytotaxonomica et Geobotanica* 4: 91. 1935, *Acta Phytotaxonomica et Geobotanica* 9: 179. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 209, 213. 1941, *Japanese Journal of Botany* 19: 115-117. 1965, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1675-1678. 1989, *Journal of Japanese Botany* 67: 31-34. 1992, Suyama Y., K. Obayashi and I. Hayashi, "Clonal structure in a dwarf bamboo (*Sasa senanensis*) population inferred from amplified fragment length polymorphism (AFLP) fingerprints." *Molecular Ecology* 9(7): 901-906. 2000.

in Japan: kumai-zasa

S. senanensis (Franch. & Sav.) Rehder f. *argillacea* (Koidzumi) S. Suzuki (*Sasa argillacea* Koidz.; *Sasa megalophylla* var. *argillacea* (Koidz.) S. Suzuki; *Sasa paniculata* var. *subcordatiphylla* (Koidz.) S. Suzuki; *Sasa senanensis* var. *subcordatiphylla* (Koidz.) S. Suzuki; *Sasa subcordatiphylla* Koidz.; *Sasa umbrosa* Koidz.; *Sasa yahikoensis* f. *umbrosa* (Koidz.) S. Suzuki)

Japan. See *Journal of Japanese Botany* 6: 14, 23. 1929, *Acta Phytotaxonomica et Geobotanica* 3: 26. 1934, *Acta Phytotaxonomica et Geobotanica* 6: 288. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 213. 1941, *Japanese Journal of Botany* 19(1): 117, 124. 1965, *Japanese Journal of Botany* 19(3): 426. 1967, *Hikobia* 7: 99. 1975.

S. senanensis (Franch. & Sav.) Rehder f. *hispidula* (Tatewaki) S. Suzuki (*Sasa paniculata* f. *villosula* (Koidz.)

S. Suzuki; *Sasa paniculata* var. *villosula* Koidz.; *Sasa rivularis* var. *hispidula* Tatew.)

Japan. See *Botanical Magazine* 15: 25. 1901, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 191. 1931, *Transactions of the Sapporo Natural History Society* 13: 111. 1933, *Acta Phytotaxonomica et Geobotanica* 7: 117. 1938, *Japanese Journal of Botany* 19(1): 114. 1965, *Japanese Journal of Botany* 19: 457. 1967.

S. senanensis (Franch. & Sav.) Rehder f. *nobilis* (Makino & Uchida) S. Suzuki (*Sasa nobilis* (Makino & Uchida) Nakai; *Sasa paniculata* var. *nobilis* Makino & Uchida; *Sasa senanensis* var. *nobilis* (Makino & Uchida) Nemoto, Makino & Nemoto)

Japan. See *Botanical Magazine* 15: 25. 1901, *Journal of Japanese Botany* 5(10): 42. 1928, *Fl. Japan* 2: 1397. 1931, *Journal of Japanese Botany* 10(9): 559-560. 1934, *Hikobia* 7(3-4): 98. 1975.

S. senanensis (Franch. & Sav.) Rehder f. *subnobilis* (Uchida) Muroi

Japan.

S. senanensis (Franch. & Sav.) Rehder var. *harai* (Nakai) S. Suzuki (also spelled *harae*) (*Sasa harai* Nakai; *Sasa paniculata* f. *harai* (Nakai) S. Suzuki; *Sasa paniculata* f. *uyetsuensis* (Koidz.) S. Suzuki; *Sasa paniculata* var. *harai* (Nakai) S. Suzuki; *Sasa senanensis* f. *uyetsuensis* (Koidz.) S. Suzuki; *Sasa uyetsuensis* Koidz.)

Japan. Leaves glabrous or sparsely long-pilose upper and densely softly pubescent beneath, leaf blades ovate-oblong, see *Journal of Japanese Botany* 10(9): 557. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 91. 1935, *Japanese Journal of Botany* 19(1): 115-116. 1965.

in Japan: minakami-zasa

S. senanensis (Franch. & Sav.) Rehder var. *senanensis*

Japan. Robust, branched at lower portions of the culm, nodes and internodes glabrous or puberulous, leaf sheaths glabrous, culm sheaths glabrous, leaf blades oblong-lanceolate and coriaceous, leaves densely softly pubescent beneath, spikelets linear with 4-7 florets, 2 small glumes lanceolate, lemmas chartaceous and ovate acuminate, palea present, 3 oblong lodicules, exerted stamens, ovary ovoid, 3 feathery stigmas.

in Japan: kuma-zasa, kumai-zasa, shinano-zasa

S. septentrionalis Makino (*Sasa fukuchiyamensis* Makino ex Koidz.; *Sasa imatophylla* Koidz.; *Sasa kakudensis* Koidz.; *Sasa maokateiensis* Koidz.; *Sasa tonensis* Nakai)

Japan. See *Journal of Japanese Botany* 5(2): 6. 1928, *Journal of Japanese Botany* 10(9): 553-554, 563. 1934, *Acta Phytotaxonomica et Geobotanica* 3: 20. 1934, *Acta Phytotaxonomica et Geobotanica* 5: 46. 1936, *Bulletin of the Scientific Researches of the Alumni Association of the*

Morioka Imperial College of Agriculture and Forestry 12: 84. 1936, *Acta Phytotaxonomica et Geobotanica* 10: 257. 1941, *Japanese Journal of Botany* 19: 431. 1967.

in Japan: miyama-zasa

S. septentrionalis Makino f. *kuzakaina* (Koidz.) S. Suzuki (*Sasa kuzakaina* Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 6: 73. 1937, *Japanese Journal of Botany* 19(3): 430. 1967.

S. septentrionalis Makino var. *membranacea* (Makino & Uchida) S. Suzuki (*Sasa geibiensis* Koidz.; *Sasa hoshidaititiana* Koidz.; *Sasa kanayamensis* Nakai; *Sasa membranacea* Makino & Uchida; *Sasa yukii* Nakai ex S. Suzuki)

Japan. Leaves ovate-oblong to broadly ovate-oblong, see *Journal of Japanese Botany* 6: 14. 1929, *Acta Phytotaxonomica et Geobotanica* 4: 168. 1935, *Journal of Japanese Botany* 11(2): 81. 1935, *Acta Phytotaxonomica et Geobotanica* 8: 115. 1939, *Japanese Journal of Botany* 19(3): 430. 1967.

in Japan: usuba-zasa

S. septentrionalis Makino var. *septentrionalis*

Japan. Culm sheaths pilose, internodes minutely pubescent, leaf sheaths pubescent to puberulous, leaf blades oblong-lanceolate and coriaceous, leaves densely softly pubescent beneath and glabrous upper, spikelets linear with 5-7 florets, 2 small glumes lanceolate, lemmas chartaceous and ovate acuminate, palea present, 3 oblong lodicules, exerted stamens, ovary ovoid to cylindrical, 3 feathery stigmas.

in Japan: miyama-zasa

S. shimidzuana Makino (*Neosasamorpha shimidzuana* (Makino) Koidz.)

Japan. See *Journal of Japanese Botany* 2(4): 15. 1920, *Acta Phytotaxonomica et Geobotanica* 9: 228. 1940, *Hikobia* 8(12): 63. 1977.

in Japan: hakone-nambu-suzu

S. shimidzuana Makino subsp. *kashidensis* (Makino & Koidzumi) S. Suzuki (*Neosasamorpha shimidzuana* subsp. *kashidensis* (Makino & Koidz.) S. Suzuki; *Sasa kashidensis* Makino & Koidz.; *Sasa shimidzuana* Makino subsp. *kashidensis* (Makino ex Koidzumi) S. Suzuki)

Japan. Small, low, slender, upper and basal portions branched, culm sheaths densely pilose, nodes pilose or glabrous, internodes puberulous, leaf sheaths glabrous, leaf blades oblong-lanceolate and chartaceous, leaves glabrous upper and more or less densely pubescent beneath, see *Acta Phytotaxonomica et Geobotanica* 3: 23. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 169. 1935, *Acta Phytotaxonomica et Geobotanica* 9: 228. 1940, *Hikobia* 8(1-2): 63. 1977, *Journal of Japanese Botany* 64(2): 46. 1989.

in Japan: kashida-zasa

S. shimidzuana Makino subsp. *shimidzuana*

Japan. Robust, branched above, culm sheaths densely or sparsely pilose, nodes pilose or sometimes glabrous, internodes puberulous, leaf sheaths glabrous, leaves glabrous upper and densely pubescent beneath, leaf blades oblong to oblong-lanceolate and papery.

in Japan: hakone-nambu-suzu

S. shimidzuana Makino var. *asagishiana* (Makino & Uchida) S. Suzuki (*Neosasamorpha asagishiana* (Makino & S. Uchida ex Nakai) Tatew.; *Sasa asagishiana* Makino & S. Uchida ex Nakai; *Sasa shimidzuana* var. *asagishiana* (Makino & S. Uchida ex Nakai) S. Suzuki; *Sasamorpha asagishiana* (Makino & S. Uchida ex Nakai) Koidz.)

Japan. Rare, leaf sheaths densely puberulous, see *Science Education [Rika Kyô-iku]* 15(6): 71. 1932, *Journal of Japanese Botany* 10: 548. 1934, *Acta Phytotaxonomica et Geobotanica* 3: 16. 1934, *Hikobia* 8(1-2): 63. 1977.

S. sinica Keng (*Sasa sinica* f. *glabra* (C.H. Hu) C.H. Hu; *Sasamorpha sinica* (Keng) Koidz.; *Sasamorpha sinica* f. *glabra* C.H. Hu)

China, Anhui, Zhejiang. Hard and smooth, hollow, cylindrical, slight concave, sheath persistent, 1 branch on each node, 1 or 2 leaves on each twig, leaves lanceolate, see *Sinensia* 7: 748. 1936, *Acta Phytotaxonomica et Geobotanica* 9(4): 227. 1940, *Journal of Bamboo Research* 2(1): 55. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

S. stenophylla Koidzumi (*Neosasamorpha stenophylla* (Koidz.) S. Suzuki)

Japan. See *Acta Phytotaxonomica et Geobotanica* 5: 48. 1936, *Journal of Japanese Botany* 64(2): 43. 1989.

S. stenophylla Koidzumi subsp. *stenophylla*

Japan. Upper and basal portions branched, leaves linear-lanceolate chartaceous-membranous and glabrous.

in Japan: saiyo-zasa

S. stenophylla Koidzumi subsp. *tobagenzoana* (Koidzumi) S. Suzuki (*Neosasamorpha stenophylla* subsp. *tobagenzoana* (Koidz.) S. Suzuki; *Neosasamorpha tobagenzoana* (Koidz.) Tatew.; *Sasa tobagenzoana* Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 5: 202. 1936, *Journal of Japanese Botany* 56(9): 296. 1981, *Journal of Japanese Botany* 64(2): 43-44. 1989.

S. stenophylla Koidzumi subsp. *yoshiokai* (Nakai) S. Suzuki (*Sasa yoshiokai* Nakai)

Japan. Rare, robust, branched at the upper portions, culm sheaths and leaf sheaths glabrous, internodes more or less glabrous or puberulous, nodes glabrous or pilose, leaves coriaceous-chartaceous and glabrous on both surfaces, leaf blades oblong-lanceolate to oblong, see *Hikobia* 8(1-2): 61. 1977.

in Japan: nagato-zasa

S. subglabra McClure

China. See *Lingnan University Science Bulletin* 9: 45. 1940.

S. subvillosa S. Suzuki

Japan. Robust, culm sheaths densely velutinous, internodes puberulous, leaf sheaths velvety, leaf blades oblong-lanceolate and slightly pubescent, see *Japanese Journal of Botany* 18(3): 307. 1964.

in Japan: asaka-nemagari

S. sulcata W.T. Lin

China. See *Journal of Bamboo Research* 12(2): 35. 1993.

S. suzukii Nakai (*Sasa gigantissima* Koidz.; *Sasa koiyeana* Koidz.; *Sasa kosakensis* Nakai; *Sasa naigoensis* Nakai; *Sasa suzukii* var. *kosakensis* (Nakai) S. Suzuki)

Japan. Robust, culm sheaths densely pilose, nodes and internodes almost glabrous, leaf sheaths glabrous, leaf blades oblong-lanceolate to oblong, leaves coriaceous usually glabrous, species similar to *Sasa akiuensis* (S. Suzuki) S. Suzuki, see *Botanical Magazine* 26: 11, f. 1. 1912, *Acta Phytotaxonomica et Geobotanica* 4: 86. 1935, *Journal of Japanese Botany* 11(1): 78-79. 1935, *Journal of Japanese Botany* 11(6): 377. 1935, *Journal of Japanese Botany* 12(4): 227. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 71, 283. 1937, *Acta Phytotaxonomica et Geobotanica* 8: 117. 1939, *Japanese Journal of Botany* 18: 306. 1964, *Japanese Journal of Botany* 19(3): 453. 1967, *Hikobia* 7(3-4): 95. 1975.

in Japan: kawauchi-zasa

S. takizawana Makino & Uchida (*Neosasamorpha takizawana* (Makino & Uchida) Tatew.)

Japan. See *Journal of Japanese Botany* 7(9): 22. 1930, *Bulletin of the Imperial College of Agriculture and Forestry* 12: 84. 1936, *Acta Phytotaxonomica et Geobotanica* 30(4-6): 144. 1979.

in Japan: takizawa-zasa

S. takizawana Makino & Uchida subsp. *nakashimana* (Koidzumi) S. Suzuki (*Neosasamorpha nakashimana* (Koidz.) Koidz.; *Neosasamorpha takizawana* subsp. *nakashimana* (Koidz.) S. Suzuki; *Sasa nakashimana* (Koidz.) Koidz.; *Sasamorpha nakashimana* Koidz.)

Japan. Rare, small, low, slender, upper and lower portions branched, culm sheaths villose, nodes pubescent, internodes puberulous, leaf sheaths puberulous, leaf blades narrowly oblong-lanceolate and chartaceous, leaves pubescent beneath, see *Acta Phytotaxonomica et Geobotanica* 5: 164. 1936, *Acta Phytotaxonomica et Geobotanica* 9: 228. 1940, *Hikobia* 8(1-2): 64. 1977, *Journal of Japanese Botany* 64(2): 47. 1989.

in Japan: kirishima-zasa, kirishima-suzu

S. takizawana Makino & Uchida subsp. ***takizawana***

Japan. Robust, internodes glabrous or pubescent or puberulous, nodes pilose or glabrous, culm sheaths villose, coriaceous leaf blades oblong-lanceolate, leaves glabrous upper and softly pubescent beneath, leaf sheaths glabrous, spikelets linear 5-8-flowered, 2 glumes lanceolate and acuminate, lemmas coriaceous and acuminate, palea present, 3 ovate lodicules acuminate, stamens exerted, ovary ovoid, 3 plumose stigmas.

in Japan: takizawa-zasa

S. takizawana Makino & Uchida var. ***lasioclada*** (Makino and Nakai) S. Suzuki (*Neosasamorpha lasioclada* (Makino & Nakai) Tatew.; *Sasa lasioclada* Makino & Nakai; *Sasamorpha lasioclada* (Makino & Nakai) Tatew.)

Japan. Leaf sheaths densely puberulous, see *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 180, 187. 1931, *Hikobia* 8(1-2): 64. 1977, *Journal of Japanese Botany* 67: 31-34. 1992.

S. tatewakiana Makino (*Sasa futadensis* Nakai; *Sasa tatewakiana* var. *glabrifolia* Makino; *Sasa uyemurana* Makino & Uchida)

Japan. Robust, densely branched above, thinly pubescent to velvety, densely velutinous internodes, leaf blades oblong-lanceolate, spikelets lanceolate and flattened with 4-9 florets, 1-2 glumes lanceolate, sometimes lacking the first glume, lemmas coriaceous and ovate, palea scabrous, 3 ovate lodicules obtuse, stamens exerted, ovary elliptical, 3 plumose stigmas, see *Journal of Japanese Botany* 5(10): 41-42. 1928, *Journal of Japanese Botany* 11(6): 375-376. 1935.

in Japan: ezo-miyama-zasa

S. tatewakiana Makino var. ***muroiana*** (Koidzumi) S. Suzuki (*Sasa muroiana* Koidz.; *Sasa queribunda* Koidz.; *Sasa velutinosus* Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 6: 286. 1937, *Acta Phytotaxonomica et Geobotanica* 9: 80. 1940, *Japanese Journal of Botany* 18(3): 305. 1964.

S. tokugawana Makino (*Sasa mayebarae* Nakai)

Japan. Robust, branched above, nodes strongly prominent and glabrous, culm sheaths densely pilose, internodes glabrous, leaf sheaths pilose, leaf blades oblong-lanceolate, leaves glabrous upper and densely softly pubescent beneath, see *Journal of Japanese Botany* 1(2): 6. 1916, *Journal of Japanese Botany* 11(6): 373. 1935.

in Japan: tokugawa-zasa

S. tokugawana Makino var. ***iyomensis*** S. Suzuki

Japan. See *Journal of Japanese Botany* 58(12): 360. 1983.

S. tomentosa C.D. Chu & C.S. Chao

China, Guangxi, Rongshui. Glabrous, sheath auricles falciform, sheath ligule short and glabrous, sheath blade lanceolate, 2-3 leaves on each twig, leaf ovate lanceolate or

lanceolate, see *Journal of Nanjing Technological College of Forest Products* 1981(3): 35-36, t. 4. 1981.

S. tsuboiana Makino (*Pleioblastus tsuboi* (Makino) Muroi; *Sasa amagiensis* Makino; *Sasa encaustiomarginata* Koidz.; *Sasa hatchoensis* Nakai; *Sasa maxima* Nakai; *Sasa phyllophorrhachis* Koidz.; *Sasa tsuboiana* f. *hatchoensis* (Nakai) S. Suzuki; *Sasa yokotai* Nakai; *Sasaella maxima* Nakai)

Japan. Glabrous, robust, densely branched above, nodes strongly prominent, leaf blades oblong-lanceolate to lanceolate and glabrous on both surfaces, linear spikelets flattened with 4-6 florets, 2 glumes narrowly lanceolate, lemmas chartaceous and ovate, palea smooth, 3 ovate lodicules obtuse, stamens exerted, ovary narrowly ovoid, 3 plumose stigmas, see *Botanical Magazine* 26: 23. 1912, *Journal of Japanese Botany* 7: 22. 1931, *Bot. Mag.* (Tokyo) 46: 93. 1932, *Science Education* 15(6): 75. 1932, *Journal of Japanese Botany* 10(9): 558-559, 564-566. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 15, 166. 1935, *Amatores Herbarii* 10: 211. 1942, *Japanese Journal of Botany* 19: 100. 1965.

in Japan: ibuki-zasa (the type locality is Mt. Ibuki), tsuboi-zasa

S. tsuboiana Makino f. ***akebono*** Muroi & Y. Tanaka

Japan.

S. tsuboiana Makino f. ***asagishima*** Muroi & H. Okamura

Japan. See *Journal of Japanese Botany* 58(1): 21. 1983.

S. tsukubanantaicola Koidz. (*Neosasamorpha tsukubanantaicola* (Koidz.) Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 8: 193. 1937, *Acta Phytotaxonomica et Geobotanica* 9: 228. 1940.

S. tsukubensis Nakai (*Neosasamorpha tsukubensis* (Nakai) S. Suzuki)

Japan. Upper portions of the culm branched, see *Journal of Japanese Botany* 11(2): 86-87. 1935, *Acta Phytotaxonomica et Geobotanica* 8: 58. 1939, *Hikobia* 8(1-2): 61. 1977, *Journal of Japanese Botany* 64(2): 44. 1989.

in Japan: tsukuba-nambusuzu

S. tsukubensis Nakai subsp. ***pubifolia*** (Koidzumi) S. Suzuki (*Neosasamorpha tsukubensis* subsp. *pubifolia* (Koidz.) S. Suzuki; *Sasa kashidensis* var. *pubifolia* Koidz.)

Japan. Small, slender, low, branched at the upper and lower portions, nodes glabrous, internodes more or less glabrous or puberulous, culm sheaths and leaf sheaths glabrous, leaves papery and pubescent, leaf blades linear-lanceolate, spikelets linear with 5-7 florets, 2 glumes, first glume sometimes lacking, second glume often subtending a bud, lemmas ovate and acuminate, palea present, stamens exerted, see *Acta Phytotaxonomica et Geobotanica* 3: 23. 1934,

see *Acta Phytotaxonomica et Geobotanica* 3: 23. 1934,

Hikobia 8(1-2): 61. 1977, *Journal of Japanese Botany* 64(2): 44. 1989.

in Japan: keban-kashida-zasa, ina-kosuzu

S. tsukubensis Nakai subsp. *tsukubensis*

Japan. Robust, branched at the upper portions, culm sheaths and leaf sheaths glabrous, internodes more or less glabrous or puberulous, nodes glabrous or pilose, leaf blades oblong-lanceolate to oblong, leaves papery and pubescent, flowers not seen.

in Japan: tsukuba-nambusuzu

S. veitchii (Carrière) Rehder (*Arundinaria albo-marginata* (Miq.) Makino; *Arundinaria albo-marginata* f. *minor* Makino; *Arundinaria veitchii* (Carrière) N.E. Br.; *Bambusa albo-marginata* Makino; *Bambusa senanensis* var. *albo-marginata* Faurie ex Hack.; *Bambusa veitchii* Carrière; *Phyllostachys bambusoides* var. *albomarginata* Miq.; *Sasa albomarginata* (Miq.) Makino & Shibata; *Sasa albo-marginata* (Miq.) Makino & Shibata; *Sasa albomarginata* f. *minor* Makino & Shibata; *Sasa atagoensis* Makino & Koidz.; *Sasa doiyoshioana* Koidz.; *Sasa higoensis* Nakai; *Sasa kinkiensis* Koidz.; *Sasa rigescens* Koidz.)

Japan. Perennial, ornamental, leaf sheath ciliate to glabrous, green leaves, cultivated and naturalized elsewhere, useful for erosion control, see *Gard. Chron.* 1: 332. 1888, *Revue Horticole (Paris)* 90. 1888, *Gard. Chron.* 5: 521. 1889, *Bulletin de l'Herbier Boissier* 7(9): 720. 1899 and *Botanical Magazine* (Tokyo) 14(157): 31-32. 1900, *Botanical Magazine* (Tokyo) 15: 25. 1901, *Journal of the Arnold Arboretum* 1(1): 58. 1919, *Acta Phytotaxonomica et Geobotanica* 3: 21. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 16. 1935, *Journal of Japanese Botany* 11: 371. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 70. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 257. 1938, *U.S.D.A. Agric. Handb.* 193: 31. 1961, *Japanese Journal of Botany* 19: 419-457. 1967, *Report Fuji Bamboo Garden* 17: 9. 1972, *Kew Bulletin* 38(3): 485. 1983, *Taxon* 49(2): 235-238. 2000.

in English: kuma bamboo grass, striped bamboo

in Japan: kuma-zasa, kumazasa

S. veitchii (Carrière) Rehder f. *minor* (Makino) Nakai (*Arundinaria albo-marginata* f. *minor* Makino; *Sasa veitchii* f. *minor* (Makino) D.C. McClint.)

Japan. See *Botanical Magazine* 14(157): 32. 1900, *Science Education [Rika Kyô-iku]* 15(6): 75. 1932.

S. veitchii (Carrière) Rehder f. *myojinensis* (Koidzumi) S. Suzuki (*Sasa myojinensis* Koidz.; *Sasa veitchii* var. *myojinensis* (Koidz.) S. Suzuki)

Japan. See *Acta Phytotaxonomica et Geobotanica* 6: 75. 1937, *Japanese Journal of Botany* 19(3): 423. 1967, *Hikobia* 7(3-4): 101. 1975.

S. veitchii (Carrière) Rehder f. *persimilis* (Koidzumi & Araki) S. Suzuki (*Sasa persimilis* Koidz. & Araki)

Japan. See *Acta Phytotaxonomica et Geobotanica* 6: 285. 1937, *New Keys of Japanese Trees* 473. 1961, *Japanese Journal of Botany* 19(3): 420. 1967.

S. veitchii (Carrière) Rehder var. *grandifolia* (Koidzumi) S. Suzuki (*Sasa grandifolia* Koidz.; *Sasa sadaoi* Nakai)

Japan. Leaf blades oblong-lanceolate to ovate-oblong, spikelets linear, 5-8 florets, 2 glumes small and lanceolate, papery lemmas ovate and acuminate, palea present, 3 ovate lodicules, stamens exserted, ovary ovoid, 3 feathery stigmas, see *Journal of Japanese Botany* 11(2): 84. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 18. 1935, *Japanese Journal of Botany* 19(3): 422. 1967.

in Japan: oh-zasa

S. veitchii (Carrière) Rehder var. *hirsuta* (Koidzumi) S. Suzuki (*Sasa auriculata* Koidz.; *Sasa horribilis* Koidz.; *Sasa notopeninsulae* Koidz.; *Sasa omokoensis* var. *hirsuta* Koidz.; *Sasa sachalinensis* Makino & Nakai; *Sasa sasagameinensis* Koidz.; *Sasa sayekiensis* Koidz.; *Sasa tangoana* Nakai; *Sasa tyuhgokensis* Makino; *Sasa uii* Nakai; *Sasa veitchii* f. *tyuhgokensis* Muroi; *Sasa yettiensis* Koidz.)

Japan. Leaf blades oblong-lanceolate to linear-oblong, see *Journal of Japanese Botany* 4: 3. 1927, *Journal of the Faculty of Agriculture of the Hokkaido University* 26(2): 190. 1931, *Acta Phytotaxonomica et Geobotanica* 3: 26, 153. 1934, *Journal of Japanese Botany* 11(2): 84-85. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 19, 171. 1935, *Acta Phytotaxonomica et Geobotanica* 5: 202. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 287. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 258. 1938, *Acta Phytotaxonomica et Geobotanica* 10: 211. 1941, *New Keys of Japanese Trees* 473. 1961, *Japanese Journal of Botany* 19(3): 421. 1967.

in Japan: chugoku-zasa (growing in the mountains in Chugoku District)

S. veitchii (Carrière) Rehder var. *tyuhgokensis* (Makino) S. Suzuki (*Sasa tyuhgokensis* Makino; *Sasa veitchii* f. *tyuhgokensis* Muroi)

Japan. See *Journal of Japanese Botany* 4: 3. 1927, *New Keys of Japanese Trees* 473. 1961, *Journal of Japanese Botany* 60(11): 340. 1985.

S. veitchii (Carrière) Rehder var. *veitchii*

Japan. Branched at the lower portions, culm sheaths densely pilose, leaf sheaths glabrous, internodes and nodes glabrous, leaves glabrous on both surfaces, leaf blades broadly linear to linear-oblong, spikelets linear, 4-8 florets, 2 small glumes lanceolate, lemmas acuminate ovate, palea present, 3 ovate lodicules, stamens exserted, ovary ovoid, 3 feathery stigmas, ornamental, cultivated and naturalized elsewhere.

in Japan: kuma-zasa

S. yahikoensis Makino (*Sasa epitricha* Koidz.; *Sasa iwaki-ana* Makino & Koidz.; *Sasa otayana* Koidz.; *Sasa tomookana* Koidz.; *Sasa yessoensis* Koidz.)

Japan. See *Journal of Japanese Botany* 6: 14. 1929, *Acta Phytotaxonomica et Geobotanica* 3: 18. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 172. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 222, 288. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 254. 1938, *Japanese Journal of Botany* 19: 124. 1965.

in Japan: yahiko-zasa

S. yahikoensis Makino f. *mogamensis* (Nakai) S. Suzuki (*Sasa nobilis* var. *mogamensis* Nakai; *Sasa yahikoensis* var. *mogamensis* (Nakai) S. Suzuki)

Japan. See *Journal of Japanese Botany* 10(9): 559-560. 1934, *Japanese Journal of Botany* 19: 124. 1965, *Hikobia* 7(3-4): 101. 1975.

S. yahikoensis Makino subsp. *yahikoensis*

Japan. Robust, densely pubescent to puberulous, leaf sheaths velvety, leaves glabrous or pilose upper and densely softly pubescent beneath, leaf blades oblong-lanceolate and papery.

in Japan: yahiko-zasa

S. yahikoensis Makino var. *depauperata* (Takeda) S. Suzuki (*Sasa depauperata* Nakai; *Sasa dilacerata* Koidz.; *Sasa iwabuchiana* Koidz.; *Sasa kutcharoensis* Koidz.; *Sasa meakensis* Nakai; *Sasa miyabei* Nakai; *Sasa nipponica* var. *depauperata* Takeda; *Sasa tobishimensis* Nakai; *Sasa yahikoensis* var. *glabella* Nakai)

Japan. Internodes and culm sheaths puberulous, leaf sheaths more or less glabrous to pubescent, leaf blades oblong-lanceolate and pubescent beneath, see *Botanical Magazine* 15: 24. 1901, *Journal of the Linnean Society, Botany* 42: 498. 1914, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 185, 188. 1931, *Bot. Mag.* (Tokyo) 46: 93. 1932, *Journal of Japanese Botany* 10(9): 551. 1934, *Journal of Japanese Botany* 11(2): 79-80. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 18. 1935, *Journal of Japanese Botany* 11(6): 375. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 282. 1937, *Acta Phytotaxonomica et Geobotanica* 9: 149. 1940, *Japanese Journal of Botany* 19(1): 121. 1965.

in Japan: shikotan-zasa

S. yahikoensis Makino var. *oseana* (Makino) S. Suzuki (*Sasa iaminata* Tatew. & Tomooka; *Sasa koshiensis* Koidz.; *Sasa macrospila* Koidz., also spelled *macropila*; *Sasa oseana* Makino; *Sasa oseana* (Makino) Makino ex Nakai; *Sasa paniculata* var. *oseana* Makino; *Sasa parontakensis* Nakai; *Sasa tonamimontana* Koidz.)

Japan. Nodes densely pilose, see *Botanical Magazine* 15: 25. 1901, *Journal of Japanese Botany* 8: 43. 1932, *J. Jap. Bot.* 8: 43. 1933, *Journal of Japanese Botany* 10(9): 561-562. 1934, *Journal of Japanese Botany* 11(2): 82-83. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 73, 77, 283. 1937,

Transactions of the Sapporo Natural History Society 13: 189. 1940, *Japanese Journal of Botany* 19(1): 123. 1965.

in Japan: oze-zasa

S. yahikoensis Makino var. *rotundissima* (Makino and Uchida) S. Suzuki (*Sasa iburiensis* Nakai; *Sasa rotundissima* Makino & Uchida)

Japan. Culm sheaths hairy, internodes and leaf sheaths glabrous, leaves ovate-oblong and softly pubescent beneath, see *Journal of Japanese Botany* 6: 22. 1929, *Journal of Japanese Botany* 16: 2. 1940, *Japanese Journal of Botany* 19(1): 125. 1965.

in Japan: iwate-zasa

Sasaella Makino = Sasa Makino & Shibata

The diminutive of *Sasa* Makino & Shibata.

About 10-13 species, Japan. Bambuseae, Arundinariinae, erect, spreading, sympodial, creeping rhizomes hypogeous, 1-3 branches per node, nodes swollen, internodes elongated, culm sheath persistent and coriaceous, leaves lanceolate to oblong-lanceolate and acuminate with a sharp point, leaf sheaths coriaceous, inflorescence paniculate, spikelets narrowly lanceolate 5- to 10-floreted, 2 glumes, lemmas ovate and acuminate, palea present, 3 ovate lodicules, 2-6 stamens, ovary ovoid, 3 feathery stigmas, possibly a natural hybrid between *Sasa* and *Pleioblastus*, type *Sasaella ramosa* (Makino) Makino, see *Flora Boreali-Americana* 1: 73. 1803 and *Botanical Magazine* (Tokyo) 15(168): 18, 25, 27. 1901, *Journal of Japanese Botany* 6: 15. 1929, *Bibliogr. Cult. Trees* 635. 1949, *Taxon* 6(7): 208. 1957, *Taxon* 45: 543. 1996, *Taxon* 48: 377. 1999, *Contributions from the United States National Herbarium* 39: 111-112. 2000, *Taxon* 49(2): 235-238. 2000.

Species

S. atamiana (Nakai) S. Suzuki (*Arundinaria atamiana* Nakai; *Arundinaria koyana* Nakai; *Arundinaria leucorhoda* f. *atamiana* (Nakai) Murata; *Arundinaria shinanoana* Koidz.; *Sasaella atamiana* Makino ex Nakai; *Sasaella koyana* (Nakai) Nakai ex Koidz.; *Sasaella leucorhoda* f. *atamiana* (Nakai) S. Suzuki; *Sasaella shinanoana* (Koidz.) Koidz.)

Japan. See *Science Education [Rika Kyô-iku]* 15(6): 75. 1932, *Journal of Japanese Botany* 10(9): 573-574. 1934, *Acta Phytotaxonomica et Geobotanica* 3: 151. 1934, *Journal of Japanese Botany* 11(12): 807-808. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 67. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 297. 1941, *Journal of Japanese Botany* 51(9): 272. 1976, *Acta Phytocologia et Geobotanica Sinica* 30(46): 142. 1979, *Journal of Japanese Botany* 56(7): 218. 1981.

in Japan: atami-shino

S. atamiana (Nakai) S. Suzuki var. ***atamiana***

Japan. Rare, culm sheaths densely pubescent to pilose, nodes and internodes glabrous, leaf sheaths glabrous or more or less pilose, leaf blades lanceolate, leaves glabrous upper and densely softly pubescent beneath.

in Japan: atami-shino

S. atamiana (Nakai) S. Suzuki var. ***kanayamensis*** (Nakai) S. Suzuki (*Arundinaria hukudana* Koidz.; *Arundinaria kanayamensis* Nakai; *Arundinaria leucorhoda* var. *kanayamensis* (Nakai) Murata; *Arundinaria mollissima* Koidz.; *Arundinaria muroiana* Koidz.; *Sasa mollissima* Koidzumi; *Sasaella hukudana* (Koidz.) Koidz.; *Sasaella kanayamensis* (Nakai) Koidz.; *Sasaella leucorhoda* var. *kanayamensis* (Nakai) S. Suzuki; *Sasaella muroiana* (Koidz.) Koidz.)

Japan. Culm sheaths densely pubescent to pilose, nodes glabrous, internodes glabrous or puberulous, leaf sheaths densely pilose, leaf blades lanceolate, leaves more or less glabrous upper and densely softly pubescent beneath, spikelets narrowly lanceolate, 7-9 florets, 2 glumes unequal to subequal, first glume lanceolate, second glume narrowly ovate, lemmas ovate, palea 2-keeled, 3 ovate lodicules, stamens exerted, ovary ovoid to narrowly ovoid, 3 feathery stigmas, see *Journal of Japanese Botany* 10(12): 743-744. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 171. 1935, *Acta Phytotaxonomica et Geobotanica* 5: 42. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 67. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 296-297. 1941, *Journal of Japanese Botany* 51(9): 273. 1976, *Acta Phytocologia et Geobotanica Sinica* 30(4-6): 142. 1979, *Journal of Japanese Botany* 56(6): 218. 1981.

in Japan: ka-sueko-zasa

S. bitchuensis (Makino) Makino ex Koidzumi (*Arundinaria bitchuensis* (Makino) Koidz.; *Sasa bitchuensis* Makino)

Japan. See *Botanical Magazine* (Tokyo) 28: 31. 1914, *Acta Phytotaxonomica et Geobotanica* 7: 252. 1938, *Acta Phytotaxonomica et Geobotanica* 10: 296. 1941.

in Japan: jobo-zasa

S. bitchuensis (Makino) Makino ex Koidzumi f. ***praestantissima*** (Koidzumi) S. Suzuki (*Arundinaria horiyoshitakana* Koidz.; *Arundinaria iyasakaensis* Koidz.; *Arundinaria praestantissima* Koidz.; *Sasaella horiyoshitakana* (Koidz.) Koidz.; *Sasaella iyasakaensis* (Koidz.) Koidz.; *Sasaella praestantissima* (Koidz.) Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 5: 165. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 277. 1937, *Acta Phytotaxonomica et Geobotanica* 8: 114. 1939, *Acta Phytotaxonomica et Geobotanica* 10: 296-297. 1941, *Journal of Japanese Botany* 51(7): 222. 1976.

S. bitchuensis (Makino) Makino ex Koidzumi var. ***bitchuensis***

Japan. Culm sheaths densely pubescent, nodes and internodes puberulous to densely pubescent, leaf sheaths glabrous, leaf blades oblong-lanceolate and glabrous.

in Japan: jobo-zasa

S. bitchuensis (Makino) Makino ex Koidzumi var. ***tashirozentaroana*** (Koidzumi) S. Suzuki (*Arundinaria fallax* Nakai; *Arundinaria tashirozentaroana* Koidz.; *Sasaella fallax* (Nakai) Koidz.; *Sasaella tashirozentaroana* (Koidz.) Koidz.)

Japan. Leaf sheaths densely minutely pubescent to puberulous, see *Acta Phytotaxonomica et Geobotanica* 4: 163. 1935, *Journal of Japanese Botany* 12(4): 221. 1936, *Acta Phytotaxonomica et Geobotanica* 10: 296, 298. 1941, *Journal of Japanese Botany* 51(7): 221, 321. 1976.

S. caudiceps (Koidzumi) Koidzumi (*Arundinaria caudiceps* Koidz.; *Arundinaria tiutaroana* Koidz.; *Sasaella tiutaroana* (Koidz.) Koidz.)

Japan. Rare to very rare, culm sheaths velvety, leaf sheaths densely puberulous, nodes and internodes puberulous, leaf blades lanceolate to oblong-lanceolate and glabrous, see *Acta Phytotaxonomica et Geobotanica* 6: 65. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 252. 1938, *Acta Phytotaxonomica et Geobotanica* 10: 296, 298. 1941.

in Japan: oni-gujo-shino

S. caudiceps (Koidzumi) Koidzumi var. ***psilovaginula*** S. Suzuki

Japan. See *Journal of Japanese Botany* 62(9): 278. 1987.

S. hidaensis (Makino) Makino (*Sasa hidaensis* Makino; *Sasaella iwatekensis* Makino & Uchida; *Sasaella iwatekensis* var. *hidaensis* (Makino & Uchida) S. Suzuki)

Japan. See *Journal of Japanese Botany* 3: 46. 1926, *Journal of Japanese Botany* 6(7): 15. 1929, *Journal of Japanese Botany* 51(9): 271. 1976.

in Japan: hishu-zasa

S. hidaensis (Makino) Makino f. ***kishinoana*** (Koidzumi) S. Suzuki (*Arundinaria kishinoana* Koidz.; *Arundinaria kisoensis* Koidzumi; *Sasaella iwatekensis* f. *kishinoana* (Koidz.) S. Suzuki; *Sasaella kishinoana* (Koidz.) Koidz.; *Sasaella kisoensis* Koidz.)

Japan. See *Journal of Japanese Botany* 6(7): 15. 1929, *Acta Phytotaxonomica et Geobotanica* 4: 21. 1935, *Acta Phytotaxonomica et Geobotanica* 8: 192. 1939, *Acta Phytotaxonomica et Geobotanica* 10: 297. 1941, *Journal of Japanese Botany* 51(9): 272. 1976, *Journal of Japanese Botany* 52(12): 369. 1977.

S. hidaensis (Makino) Makino f. ***yenaensis*** (Koidzumi) S. Suzuki (*Arundinaria novoagrariae* Koidz.; *Arundinaria tenuifolia* Koidz.; *Arundinaria yenaensis* Koidz.; *Sasaella iwatekensis* f. *yenaensis* (Koidz.) S. Suzuki; *Sasaella*

novoagrariae (Koidz.) Koidz.; *Sasaella tenuifolia* (Koidz.) Koidz.; *Sasaella yenaensis* (Koidz.) Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 6: 216. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 252. 1938, *Acta Phytotaxonomica et Geobotanica* 10: 298. 1941, *Acta Phytotaxonomica et Geobotanica* 12: 115. 1943, *Journal of Japanese Botany* 51(9): 271. 1976, *Journal of Japanese Botany* 52(12): 369. 1977.

S. *hidaensis* (Makino) Makino var. *hidaensis* (*Arundinaria hidaensis* (Makino) Nakai; *Arundinaria imadatensis* Koidz.; *Sasaella imadatensis* (Koidz.) Koidz.)

Japan. One branch per node, leaf sheaths glabrous, culm sheaths densely pubescent, nodes glabrous or puberulous, internodes puberulous or glabrous, leaf blades lanceolate and acuminate, leaves glabrous upper and densely softly pubescent beneath, see *Journal of Japanese Botany* 10(9): 569. 1934, *Acta Phytotaxonomica et Geobotanica* 6: 66. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 297. 1941, *Journal of Japanese Botany* 51(9): 271. 1976.

in Japan: hishu-zasa

S. *hidaensis* (Makino) Makino var. *iwatekensis* (Makino & Uchida) S. Suzuki (*Sasaella iwatekensis* Makino & Uchida)

Japan. One branch per node, leaf sheaths densely puberulous, culm sheaths densely pubescent, nodes glabrous or puberulous, internodes puberulous or glabrous, leaf blades lanceolate and acuminate, leaves densely softly pubescent beneath, see *Journal of Japanese Botany* 6(7): 15. 1929, *Journal of Japanese Botany* 52(12): 369. 1977.

in Japan: yabu-zasa

S. *hidaensis* (Makino) Makino var. *muraii* (Makino & Uchida) S. Suzuki (*Arundinaria hidaensis* var. *muraii* (Makino & Uchida) Murata; *Sasaella uchidai* var. *muraii* Makino & Uchida)

Japan. See *Journal of Japanese Botany* 10(9): 569. 1934, *Bulletin of the Scientific Researches of the Alumni Association of the Morioka Imperial College of Agriculture and Forestry* 12: 82. 1936, *Acta Phytocologia et Geobotanica Sinica* 30(46): 143. 1979, *Journal of Japanese Botany* 56(7): 219. 1981.

S. *hisauchii* (Makino) Makino (*Arundinaria hakonensis* Nakai; *Arundinaria hisauchii* Makino ex Tsuboi; *Arundinaria yamakitensis* Makino; *Nipponobambusa hisauchii* (Makino) Muroi, nom. illeg., non *Nipponobambusa hisauchii* (Makino) Muroi; *Nipponobambusa yamakitensis* (Makino) Muroi; *Pleioblastus yamakitensis* (Makino) Makino; *Pseudosasa hisauchii* Makino; *Sasa hisauchii* (Makino) Makino; *Sasaella hakonensis* Koidz.; *Sasaella hakonensis* (Nakai) Nakai ex Koidz.)

Japan. Three branches per node, leaf sheaths more or less densely pilose, culm sheaths more or less densely pilose, nodes glabrous, internodes glabrous, leaves glabrous narrowly lanceolate, allied to *Sasaella ikegamii* (Nakai)

S. Suzuki, see *Illustrations of the Japanese Species of Bamboo*. edition 2, 40, t. 38, f. 2. 1916, *Three Pl. New Jap.* 2. 1925, *Journal of Japanese Botany* 3(1): 4, 11, 22. 1926, *Journal of Japanese Botany* 5: 16. 1928, *Journal of Japanese Botany* 6: 15. 1929, *Journal of Japanese Botany* 10: 569, 749. 1934, *Acta Phytotaxonomica et Geobotanica* 10: 296. 1941, *Amatores Herbarii* 10: 212. 1942, *Bot. Mag.* (Tokyo) 56: 508. 1942, *New Keys Jap. Tr.* 453. 1961.

in Japan: hime-suzu-dake

S. *ikegamii* (Nakai) S. Suzuki (*Arundinaria ikegamii* Nakai; *Arundinaria tajimana* Koidz.; *Nipponobambusa ikegamii* (Nakai) Sasam.; *Sasaella ikegamii* Nakai; *Sasaella tajimana* (Koidz.) Koidz.; *XSasinaria ikegamii* (Nakai) Demoly)

Japan. Rare, 1 branch per node, leaf sheaths densely pilose or glabrous, culm sheaths densely pubescent to densely pilose, nodes glabrous, internodes puberulous or glabrous, leaf blades lanceolate to oblong-lanceolate and glabrous on both surfaces, spikelets narrowly lanceolate and flattened, 5-9 florets, 2 small glumes lanceolate, lemmas ovate acuminate, palea 2-mucronate, 3 ovate lodicules, related to *Sasaella hisauchii* (Makino) Makino, see *Journal of Japanese Botany* 10(9): 576-577. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 163. 1935, *Acta Phytotaxonomica et Geobotanica* 10: 297. 1941, *Report of the Fuji Bamboo Garden* 5: 54-56. 1960, *Journal of Japanese Botany* 51(7): 223. 1976, *Bambou-section France* 29: 13. 1998.

in Japan: kariwa-shino

S. *iwatekensis* Makino & Uchida (*Arundinaria elegantissima* (Koidz.) Koidz.; *Arundinaria hebechlamys* Nakai; *Arundinaria hosidaikitiana* Koidz.; *Arundinaria hosidaikitiana* var. *spanolongitricha* Koidz.; *Arundinaria iwatekensis* (Makino & Uchida) Nakai; *Arundinaria kimurai* Nakai; *Arundinaria longipes* Nakai; *Arundinaria praeumbrans* Koidz.; *Arundinaria retropila* Nakai; *Arundinaria siroyamensis* (Makino ex Koidz.) Makino ex Koidz.; *Arundinaria tejiroana* Koidz.; *Sasa iwatekensis* Makino & Uchida; *Sasa siroyamensis* Makino ex Koidz.; *Sasaella elegantissima* (Koidz.) Koidz.; *Sasaella hebechlamys* Nakai; *Sasaella hidaensis* var. *iwatekensis* (Makino & Uchida) S. Suzuki; *Sasaella iwatekensis* var. *hidaensis* (Makino & Uchida) S. Suzuki; *Sasaella kimurai* (Nakai) Koidz.; *Sasaella longipes* (Nakai) Koidz.; *Sasaella praeumbrans* Koidz.; *Sasaella retropila* (Nakai) Koidz.; *Sasaella siroyamensis* Makino ex Koidz.; *Sasaella tejiroana* (Koidz.) Koidz.; *Sasaella uchidai* var. *muraii* Makino & Uchida; *Semiarundinaria elegantissima* Koidz.)

Japan. See *Journal of Japanese Botany* 6(7): 15. 1929, *Science Education* 15(6): 75. 1932, *Journal of Japanese Botany* 10(9): 569, 575. 1934, *Journal of Japanese Botany* 10(12): 746-747. 1934, *Acta Phytotaxonomica et Geobotanica* 3: 152. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 19-21. 1935, *Journal of Japanese Botany* 12(4): 221-222.

1936, *Bulletin of the Scientific Researches of the Alumni Association of the Morioka Imperial College of Agriculture and Forestry* 12: 82. 1936, *Acta Phytotaxonomica et Geobotanica* 6: 276. 1937, *Acta Phytotaxonomica et Geobotanica* 9: 76. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 61, 296-298. 1941, *Journal of Japanese Botany* 51(9): 271-272. 1976, *Journal of Japanese Botany* 52(12): 369. 1977.

S. iwatekensis Makino & Uchida f. ***kishinoana*** (Koidz.) S. Suzuki (*Arundinaria kishinoana* Koidz.; *Arundinaria kisoensis* Koidzumi; *Arundinaria sikokiana* Koidzumi; *Sasaella hidaensis* f. *kishinoana* (Koidz.) S. Suzuki; *Sasaella kishinoana* (Koidz.) Koidz.; *Sasaella kisoensis* Koidz.; *Sasaella sikokiana* Koidzumi)

Japan. See *Acta Phytotaxonomica et Geobotanica* 4: 21. 1935, *Acta Phytotaxonomica et Geobotanica* 8: 192. 1939, *Acta Phytotaxonomica et Geobotanica* 10: 254, 297. 1941, *Journal of Japanese Botany* 51(9): 272. 1976, *Journal of Japanese Botany* 52(12): 369. 1977.

S. iwatekensis Makino & Uchida f. ***yenaensis*** (Koidz.) S. Suzuki (*Arundinaria tenuifolia* Koidz.; *Arundinaria yenaensis* Koidz.; *Sasaella tenuifolia* (Koidz.) Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 6: 216. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 252. 1938, *Journal of Japanese Botany* 51(9): 271. 1976.

S. kogasensis (Nakai) Nakai ex Koidzumi (*Arundinaria kariwaensis* Koidz.; *Arundinaria kogasensis* Nakai; *Sasaella kariwaensis* (Koidz.) Koidz.; *Sasaella kogasensis* (Nakai) Koidz.)

Japan. See *Journal of Japanese Botany* 10(12): 745. 1934, *Acta Phytotaxonomica et Geobotanica* 6: 276. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 297. 1941.

in Japan: hime-shino

S. kogasensis (Nakai) Nakai ex Koidzumi f. ***uchidae*** (Makino) S. Suzuki (also spelled *uchidai*) (*Sasaella uchidai* Makino ex Uchida)

Japan. See *Bulletin of the Scientific Researches of the Alumni Association of the Morioka Imperial College of Agriculture and Forestry* 12: 82. 1936, *Journal of Japanese Botany* 51(9): 275. 1976.

S. kogasensis (Nakai) Nakai ex Koidzumi var. ***gracillima*** S. Suzuki

Japan, origin unknown. Branching in the middle of the culm, leaf sheaths velutinous, nodes glabrous, culm sheath pubescent to velvety, internodes puberulous, leaf blades lanceolate to linear-lanceolate, leaves pilose or glabrous upper and densely softly pubescent beneath, widely cultivated, used as ground covering, see *Journal of Japanese Botany* 55(1): 28. 1980.

in Japan: hime-shino, ko-chiku, kochiku

S. kogasensis (Nakai) Nakai ex Koidzumi var. ***kogasensis*** Japan. Rare, 1 branch per node, culm sheaths velutinous, leaf sheaths densely pubescent, nodes and internodes puberulous, leaf blades lanceolate or linear-lanceolate to oblong-lanceolate, leaves pilose or glabrous upper and densely softly pubescent beneath.

in Japan: hime-shino kogashi-azuma-zasa

S. kogasensis (Nakai) Nakai ex Koidzumi var. ***yoshinoi*** (Koidzumi) S. Suzuki (*Arundinaria hebechlamys* var. *yoshinoi* (Koidz.) Murata; *Arundinaria kesenensis* Koidz.; *Arundinaria yoshinoi* Koidz.; *Sasaella kesenensis* (Koidz.) Koidz.; *Sasaella yoshinoi* (Koidz.) Koidz.)

Japan. Leaf sheaths glabrous, see *Journal of Japanese Botany* 10(9): 575. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 174. 1935, *Acta Phytotaxonomica et Geobotanica* 5: 198. 1936, *Acta Phytotaxonomica et Geobotanica* 10: 296, 298. 1941, *Journal of Japanese Botany* 51(9): 275. 1976, *Acta Phytotaxonomica et Geobotanica* 30(4-6): 144. 1979.

S. leucorhoda (Koidzumi) Koidzumi (*Arundinaria leucorhoda* (Koidz.) Koidz.; *Pleioblastus leucorhodus* Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 3: 15, 151. 1934, *Acta Phytotaxonomica et Geobotanica* 10: 197. 1941.

S. leucorhoda (Koidzumi) Koidzumi f. ***atamiana*** (Nakai) S. Suzuki (*Arundinaria atamiana* Nakai; *Arundinaria leucorhoda* f. *atamiana* (Nakai) Murata; *Sasaella atamiana* (Nakai) Suzuki; *Sasaella atamiana* Makino ex Nakai)

Japan. See *Science Education [Rika Kyô-iku]* 15(6): 75. 1932, *Journal of Japanese Botany* 10(9): 573-574. 1934, *Journal of Japanese Botany* 51(9): 272. 1976, *Acta Phytocologia et Geobotanica Sinica* 30(46): 142. 1979, *Journal of Japanese Botany* 56(7): 218. 1981.

S. leucorhoda (Koidzumi) Koidzumi var. ***kanayamensis*** (Nakai) S. Suzuki (*Arundinaria kanayamensis* Nakai; *Arundinaria leucorhoda* var. *kanayamensis* (Nakai) Murata; *Sasaella atamiana* var. *kanayamensis* (Nakai) S. Suzuki; *Sasaella kanayamensis* (Nakai) Koidz.)

Japan. See *Journal of Japanese Botany* 10(12): 743-744. 1934, *Acta Phytotaxonomica et Geobotanica* 10: 296. 1941, *Journal of Japanese Botany* 51(9): 273. 1976, *Acta Phytocologia et Geobotanica Sinica* 30(4-6): 142. 1979, *Journal of Japanese Botany* 56(6): 218. 1981.

S. masamuneana (Makino) Hatusima & Muroi (*Arundinaria arvensis* Koidz.; *Arundinaria atropurpurea* Nakai; *Arundinaria babataneyosiana* Koidz.; *Arundinaria epitricha* Nakai; *Arundinaria glabra* Nakai; *Arundinaria glabra* var. *pilosa* Koidz.; *Arundinaria kiboensis* Nakai; *Arundinaria koshiensis* Koidz.; *Arundinaria magohukuana* Koidz.; *Arundinaria masamuneana* Makino; *Arundinaria minaguchii* (Makino & Koidz.) Makino; *Arundinaria minomarsa* Koidz.; *Arundinaria minomarsa* var. *lasioclada* Koidz.; *Arundinaria ogamiensis* Koidz.; *Arundinaria*

rhyncantha Koidz., also spelled *rhynacantha*; *Arundinaria tanegashimensis* (Makino & Koidz.) Masam.; *Arundinaria tangoensis* (Koidz.) Koidz.; *Arundinaria zifukuensis* Nakai; *Nipponocalamus masamuneanus* (Makino) Nakai; *Nipponocalamus tanegashimensis* (Makino & Koidz.) Nakai; *Pleioblastus masamuneanus* Makino; *Pleioblastus tanegashimensis* Makino & Koidz.; *Sasa masamuneana* (Makino) C.S. Chao & Renvoize; *Sasa tangoensis* Koidz.; *Sasaella arvensis* (Koidz.) Koidz.; *Sasaella atropurpurea* Makino & Nakai ex Nakai; *Sasaella auriculata* Koidz.; *Sasaella babataneyosiana* (Koidz.) Koidz.; *Sasaella epitricha* Nakai; *Sasaella glabra* (Nakai) Koidz.; *Sasaella kiboensis* (Nakai) Koidz.; *Sasaella koshiensis* (Koidz.) Koidz.; *Sasaella magohukuana* (Koidz.) Koidz.; *Sasaella masamuneana* (Makino) Hatusima & Muroi ex Sugimoto; *Sasaella masamuneana* f. *albostriata* (Muroi) D.C. McClint.; *Sasaella minaguchii* Makino & Koidz.; *Sasaella minomarsa* (Koidz.) Koidz.; *Sasaella ogamiensis* (Koidz.) Koidz.; *Sasaella rhynchantha* (Koidz.) Koidz.; *Sasaella tangoensis* (Koidz.) Koidz.)

Japan. One branch per node, culm sheaths and leaf sheaths glabrous, internodes and nodes usually glabrous, leaf blades lanceolate to oblong-lanceolate, leaves papery and glabrous, see *Journal of Japanese Botany* 6(1): 5. 1929, *Science Education [Rika Kyô-iku]* 15(6): 75. 1932, *Journal of Japanese Botany* 10: 574, 577, 743. 1934, *Acta Phytotaxonomica et Geobotanica* 3: 15-16, 21, 68. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 20, 82, 91, 161. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 65, 217, 276-277. 1937, *Acta Phytotaxonomica et Geobotanica* 7: 113. 1938, *Acta Phytotaxonomica et Geobotanica* 8: 114. 1939, *Acta Phytotaxonomica et Geobotanica* 9: 75. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 296-297. 1941, *Journal of Japanese Botany* 18: 359, 366. 1942, *Acta Phytotaxonomica et Geobotanica* 12: 165. 1943, *Bulletin of the National Science Museum* 33: 27. 1953, *New Keys Jap. Tr.* 475. 1961, *Journal of Japanese Botany* 51: 99. 1976, *Kew Bulletin* 44: 368. 1989.

in Japan: kurio-zasa, genkei-chiku, shiya-zasa, shiyya-zasa (leaves glabrous), kishima-shiyya (with yellow stripes on the leaves), shiroshima-shiyya (with white stripes)

S. masamuneana (Makino) Hatusima & Muroi f. **hashimotoi** (Makino) S. Suzuki (*Arundinaria akiensis* Nakai; *Arundinaria elongatifolia* Koidz.; *Arundinaria hashimotoi* (Makino) Koidz.; *Arundinaria longifolia* Koidz., nom. illeg., non *Arundinaria longifolia* E. Fourn.; *Arundinaria longifolia* E. Fourn.; *Arundinaria phalerata* Koidz.; *Arundinaria santanensis* Koidz.; *Nipponocalamus yakushimensis* (Nakai) Nakai; *Pleioblastus hashimotoi* Makino; *Pleioblastus yakusimensis* Nakai; *Sasaella akiensis* (Nakai) Nakai ex Koidz.; *Sasaella elongatifolia* Koidz.; *Sasaella hashimotoi* (Makino) Koidz.; *Sasaella phalerata* Koidz.; *Sasaella santanensis* (Koidz.) Koidz.)

Japan. See *Mexicanas Plantas* 2: 131. 1886 and *Journal of Japanese Botany* 8: 45. 1933, *Journal of Japanese Botany* 10(4): 199-200, pl. 34. 1934, *Journal of Japanese Botany* 10(12): 742. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 16, 20. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 216. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 260, 296-297. 1941, *Journal of Japanese Botany* 18: 368. 1942, *Journal of Japanese Botany* 51(4): 101. 1976.

S. masamuneana (Makino) Hatusima & Muroi f. **muramatsuana** (Koidzumi) S. Suzuki (*Arundinaria muramatsuana* Koidz.; *Sasaella muramatsuana* (Koidz.) Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 4: 82. 1935, *Acta Phytotaxonomica et Geobotanica* 10: 297. 1941, *Journal of Japanese Botany* 51(4): 103. 1976.

S. masamuneana (Makino) Hatusima & Muroi var. **amoena** (Nakai) S. Suzuki (*Arundinaria amoena* Nakai; *Arundinaria macrostachya* Koidz., nom. illeg., non *Arundinaria macrostachya* Nees; *Arundinaria megastachys* Koidz.; *Sasaella amoena* (Nakai) Koidz.)

Japan. See *Linnaea* 9(4): 481. 1834 and *Journal of Japanese Botany* 10(12): 741. 1934, *Acta Phytotaxonomica et Geobotanica* 5: 127. 1936, *Acta Phytotaxonomica et Geobotanica* 10: 260, 296. 1941, *Journal of Japanese Botany* 51(4): 103. 1976.

S. ovarifolia Muroi & Kashiwagi

Japan.

S. ramosa (Makino) Makino (*Arundinaria agrestis* (Makino) Nakai; *Arundinaria chikatsufumiana* Koidz.; *Arundinaria confusa* Nakai; *Arundinaria decipiens* Nakai; *Arundinaria dimorpha* Hack. ex Nakai; *Arundinaria distichophylla* (Koidz.) Koidz.; *Arundinaria exsaniosa* Koidz.; *Arundinaria incantans* Koidz.; *Arundinaria kisoensis* Koidz.; *Arundinaria komiyamana* (Makino & Hisauti) Nakai; *Arundinaria kunimiana* Koidz.; *Arundinaria matsushimensis* (Makino) Makino ex Koidz.; *Arundinaria mikurensis* Nakai; *Arundinaria musashiensis* Nakai; *Arundinaria nikkoensis* Nakai; *Arundinaria okadana* (Makino) Nakai; *Arundinaria pygmaea* Mitford; *Arundinaria ramosa* Makino; *Arundinaria ramosa* var. *distichophylla* Koidz.; *Arundinaria ramosa* var. *viridiflora* Nakai; *Arundinaria sakaii* Nakai; *Arundinaria sasaelloides* Muroi; *Arundinaria sawadae* Makino; *Arundinaria sawadae* (Makino) Nakai; *Arundinaria sugimotoi* Nakai; *Arundinaria toyomurensis* Nakai; *Arundinaria tsukubensis* Koidz.; *Arundinaria vagans* Gamble; *Arundinaria viridistriata* var. *agrestis* Makino; *Arundinaria viridistriata* var. *vagans* (Gamble) Nakai; *Arundinaria yonoskei* Nakai; *Bambusa pygmaea* Mitford, nom. illeg., non *Bambusa pygmaea* Miquel; *Bambusa ramosa* Makino; *Nipponobambusa komiyamana* (Makino & Hisauti) Muroi; *Nipponobambusa nikkoensis* (Makino & Nakai ex Nakai) Muroi; *Nipponobambusa sawadae* f. *viridis* Muroi; *Nipponobambusa sawadae* var. *hirta* Muroi; *Pleioblastus kogumi* hort. ex H. Simon &

W. Simon; *Pleioblastus sawadae* Makino; *Pleioblastus viridistriatus* f. *vagans* (Gamble) Muroi; *Pleioblastus viridistriatus* var. *hortensis* Makino; *Pleioblastus viridistriatus* var. *vagans* (Gamble) Nakai ex Rehder; *Sasa agrestis* (Makino) Makino; *Sasa arundinoides* Makino & Uchida; *Sasa hanoensis* Makino; *Sasa komiyamana* Makino & Hisauti; *Sasa matsushimensis* Makino; *Sasa okadana* Makino; *Sasa ramosa* (Makino) Makino & Shibata; *Sasa saitoana* Koidz.; *Sasa sasaelloides* Makino & Uchida ex Uchida; *Sasa sasaelloides* Makino & Uchida; *Sasa vagans* McClintock; *Sasaella agrestis* (Makino) Makino; *Sasaella chikatsuafumiana* (Koidz.) Koidz.; *Sasaella confusa* (Nakai) Honda; *Sasaella decipiens* (Nakai) Honda; *Sasaella dimorpha* (Hack. ex Nakai) Koidz.; *Sasaella distichophylla* Koidz.; *Sasaella exsaniosa* (Koidz.) Koidz.; *Sasaella hanoensis* (Makino) Makino; *Sasaella incantans* (Koidz.) Koidz.; *Sasaella kisoensis* Koidz.; *Sasaella komiyamana* (Makino & Hisauti) Makino; *Sasaella kunimiana* Koidz.; *Sasaella marunoi* Hatusima; *Sasaella matsushimensis* (Makino) Makino; *Sasaella mikurensis* (Nakai) Koidz.; *Sasaella musashiensis* (Nakai) Makino & Nakai ex Nakai; *Sasaella nikkoensis* Makino & Nakai; *Sasaella okadana* (Makino) Makino; *Sasaella ramosa* var. *viridiflora* (Nakai) Sasamura; *Sasaella sakaii* (Nakai) Koidz.; *Sasaella sakaii* (Nakai) Nakai ex Koidz.; *Sasaella sasaelloides* (Makino & Uchida) Makino ex Uchida; *Sasaella sawadae* (Makino) Makino ex Koidz.; *Sasaella sugimotoi* (Nakai) Koidz.; *Sasaella sugimotoi* (Nakai) Nakai ex Koidz.; *Sasaella toyomurensis* (Nakai) Koidz.; *Sasaella toyomurensis* (Nakai) Nakai ex Koidz.; *Sasaella tsukubensis* (Koidz.) Koidz.; *Sasaella viridistriata* var. *vagans* (Gamble) Nakai; *Sasaella yonoskei* (Nakai) Koidz.; *Sasaella yonosukei* (Nakai) Koidz.)

Japan. See *Garden* vol. 46: 529-531, 546-548. 1894, *The Bamboo Garden* 49-50. 1896 and *Botanical Magazine* 14(156): 22, 62. 1900, *Botanical Magazine* 15: 24. 1901, *Botanical Magazine* 26: 15. 1912, *Bulletin of Miscellaneous Information Kew* 350. 1915, *Journal of Japanese Botany* 3: 11-12, 16. 1926, *Japanese Botany* 4: 3. 1927, *Journal of Japanese Botany* 5: 6-7, 16-17, 20-21. 1928, *Journal of Japanese Botany* 6(7): 15. 1929, *Science Education [Rika Kyô-iku]* 15: 75-76. Tokyo 1932, *Acta Phytotaxonomica et Geobotanica* 3: 152. 1934, *Journal of Japanese Botany* 10(9): 567, 569-571, 578-579. 1934, *Journal of Japanese Botany* 10(12): 747-749. 1934, *Journal of Japanese Botany* 11(1): 3. 1935, *Acta Phytotaxonomica et Geobotanica* 4: 81, 89, 161. 1935, *Journal of Japanese Botany* 11(12): 805-806, 808. 1935, *Journal of Japanese Botany* 12: 222. 1936, *Bulletin of the Scientific Researches of the Alumni Association of the Morioka Imperial College of Agriculture and Forestry* 12: 82. 1936, *Jour. Pl. Iwate* 2(2): 123, 128, 129. 1937, *Journal of Japanese Botany* 15: 523, 536. 1939, *Acta Phytotaxonomica et Geobotanica* 8: 192. 1939, *Acta*

Phytotaxonomica et Geobotanica 9: 77. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 209-210, 295-298. 1941, *Rep. Fuji Bamboo Gard.* 2: 74. 1957, *Nomina Plantarum Japonicarum. Editio Emendata* 386. 1957, *New Keys Jap. Trees* 71. 1961, *Amatores Herbarii* 24(4): 12. 1964, *Journal of Geobotany* 20(2): 36-37. 1972, *Report Fuji Bamboo Garden* 17: 10. 1972.

in Japan: azuma-zasa

S. ramosa (Makino) Makino f. **tomikusensis** (Nakai) S. Suzuki (*Arundinaria otayana* Koidz.; *Arundinaria pubescens* Nakai, nom. illeg., non *Arundinaria pubescens* (Rupr.) Hack.; *Arundinaria ramosa* f. *tomikusensis* (Nakai) Murata; *Arundinaria tomikusensis* Nakai; *Arundinaria tsurumati-ana* Koidz.; *Sasaella otayana* (Koidz.) Koidz.; *Sasaella tomikusensis* (Nakai) Koidz.; *Sasaella tsurumatiana* (Koidz.) Koidz.)

Japan. See *Journal of Japanese Botany* 10(12): 744-747. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 162. 1935, *Acta Phytotaxonomica et Geobotanica* 8: 114. 1939, *Acta Phytotaxonomica et Geobotanica* 10: 297-298. 1941, *Journal of Japanese Botany* 51(5): 155. 1976, *Acta Phytoecologia et Geobotanica Sinica* 30(4-6): 137. 1979.

S. ramosa (Makino) Makino f. **trichophila** (Koidzumi) S. Suzuki (*Arundinaria trichophila* Koidz.; *Sasaella trichophila* (Koidz.) Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 4: 83. 1935, *Acta Phytotaxonomica et Geobotanica* 10: 298. 1941, *Journal of Japanese Botany* 51(5): 157. 1976.

S. ramosa (Makino) Makino var. **latifolia** (Nakai) S. Suzuki (*Arundinaria nambuensis* Koidz.; *Arundinaria ramosa* var. *latifolia* Nakai; *Arundinaria velutina* Nakai; *Arundinaria yessaensis* Koidz.; *Sasaella benten* Makino & Nakai; *Sasaella nambuensis* Koidz.; *Sasaella velutina* Makino & Nakai ex Nakai; *Sasaella yessaensis* (Koidz.) Koidz.)

Japan. See *Science Education* 15(6): 75. 1932, *Journal of Japanese Botany* 10(9): 571-572, 580-581. 1934, *Acta Phytotaxonomica et Geobotanica* 6: 278. 1937, *Acta Phytotaxonomica et Geobotanica* 10: 210, 298. 1941, *Journal of Japanese Botany* 51(5): 156. 1976.

S. ramosa (Makino) Makino var. **ramosa**

Japan. Nodes and internodes glabrous or pubescent, culm sheaths glabrous, leaf sheaths glabrous, 1 branch per node, leaf blades lanceolate to oblong-lanceolate, leaves glabrous or hairy upper and densely softly pubescent beneath, spikelets narrowly lanceolate, 6-11 florets, 2 glumes subequal or unequal, lemmas ovate and acuminate, palea 2-keeled, 3 ovate lodicules, stamens exserted, ovary ovoid, 3 feathery stigmas.

in Japan: azuma-zasa

S. ramosa (Makino) Makino var. **suwekoana** (Makino) S. Suzuki (*Arundinaria ramosa* var. *suwekoana* (Makino) Murata; *Arundinaria suwekoana* (Makino) Nakai; *Sasa*

suwekoana Makino; *Sasaella suwekoana* (Makino) Makino)

Japan. Rare, glabrous, leaf blades lanceolate to oblong-lanceolate, leaves pilose or hairy on the upper surface and densely softly pubescent beneath, see *Journal of Japanese Botany* 5(2): 7-8. 1928, *Journal of Japanese Botany* 6(7): 15. 1929, *Journal of Japanese Botany* 6: 15. 1932, *Journal of Japanese Botany* 10(9): 573. 1934, *Journal of Japanese Botany* 51(5): 157. 1976, *Acta Phytocologia et Geobotanica Sinica* 30(4-6): 138. 1979.

in Japan: sueko-zasa

S. sadoensis (Nakai) S. Suzuki (*Arundinaria ramosa* var. *sadoensis* Nakai; *Arundinaria sadoensis* (Makino ex Koidzumi) Makino ex Koidzumi; *Arundinaria sadoensis* (Makino ex Koidzumi) Makino; *Nipponobambusa sadoensis* (Makino ex Koidzumi) Muroi; *Nipponocalamus sadoensis* Makino ex Koidzumi; *Pleioblastus sadoensis* Makino ex Koidzumi; *Sasa sadoensis* (Makino ex Koidzumi) S. Suzuki; *Sasaella sadoensis* Makino ex Nakai)

Japan. Leaf sheaths pilose, nodes and internodes glabrous, culm sheaths glabrous, leaf blades lanceolate to oblong-lanceolate, leaves papery and glabrous, spikelets lanceolate, 7-10 florets, 2 glumes unequal, first glume lanceolate acuminate, second glume ovate acute and often subtending a bud, lemmas broadly ovate acute, palea 2-mucronate, 3 ovate lodicules, stamens exerted, ovary ovoid, 3 plumose stigmas, see *Journal of Japanese Botany* 10(9): 572. 1934, *Acta Phytotaxonomica et Geobotanica* 3: 68. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 19. 1935, H. Muroi, *Hyogo Prefecture Journal, Secondary Edition, Natural History* 6: 89. 1940, *Journal of Japanese Botany* 18(7): 350, 363. 1942, *Journal of Japanese Botany* 51(5): 151. 1976.

in Japan: sado-zasa

S. sasakiana Makino & Uchida (*Arundinaria sasakiana* (Makino & Uchida) Nakai; *Nipponocalamus sasakiana* (Makino & Uchida) Muroi ex Sugimoto)

Japan, origin unknown. Robust, glabrous, erect, branching in the upper part of the culm, 3 branches on 1 node, leaf blades lanceolate dark green, used as a windbreaker and for handicrafts, edible young shoots, see *Journal of Japanese Botany* 6(7): 15. 1929, *Journal of Japanese Botany* 10(9): 572-573. 1934, *New Keys Jap. Trees* 464. 1961.

in Japan: toge-dake, touge-dake, touge-zasa

S. sawadai (Makino) Makino ex Koidzumi (*Arundinaria sawadai* (Makino) Nakai; *Nipponobambusa sawadai* (Makino) Muroi; *Pleioblastus sawadai* Makino; *Sasaella marunoi* Hatus.; *Sasaella sawadai* (Makino) Koidz.)

Japan. Rare to very rare, 3 branches per node, internodes and nodes glabrous, leaf blades lanceolate, leaves glabrous upper and densely pubescent beneath, see *Journal of Japanese Botany* 4(1): 3. 1927, *Journal of Japanese Botany* 10(9): 573. 1934, *Hyogo Prefecture Journal, Secondary*

Edition, Natural History 6: 89. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 297. 1941, *Journal of Geobotany* 20(2): 36. 1972.

in Japan: hakone-shino, hakone-medake

S. sawadai (Makino) Makino ex Koidzumi var. *aobayamana* S. Suzuki

Japan. Densely puberulous leaf sheaths, usually 3 branches per node, internodes minutely pubescent to puberulous, nodes prominent and glabrous, culm sheaths glabrous or sometimes minutely hairy to pilose, leaf blades lanceolate to linear-oblong, leaves densely softly pubescent beneath, see *Journal of Japanese Botany* 53(2): 29. 1978.

in Japan: aobayama-zasa

S. shiobarensis (Nakai) Nakai ex Koidzumi (*Arundinaria aikawensis* Nakai; *Arundinaria iwabuchii* Koidz.; *Arundinaria nikkomontana* Koidz.; *Arundinaria sadoensis* var. *infrapilosa* Koidz.; *Arundinaria sedenicola* Koidz.; *Arundinaria shiobarensis* Nakai; *Nipponobambusa sadoensis* var. *infrapilosa* (Koidz.) Muroi; *Sasaella aikawensis* (Nakai) Koidz.; *Sasaella iwabuchii* Makino ex Koidz.; *Sasaella nikkomontana* (Koidz.) Koidz.; *Sasaella sedenicola* (Koidz.) Koidz.; *Sasaella shiobarensis* (Nakai) Koidz.; *Sasaella shiobarensis* (Nakai) Nakai ex Koidz.)

Japan. Nodes and internodes glabrous, leaf sheaths more or less densely hairy to pilose, culm sheaths glabrous, leaf blades lanceolate, leaves more or less glabrous to hairy upper and densely pubescent beneath, see *Journal of Japanese Botany* 10(9): 579-580. 1934, *Acta Phytotaxonomica et Geobotanica* 4: 19. 1935, *Journal of Japanese Botany* 11(6): 369. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 66. 1937, *Acta Phytotaxonomica et Geobotanica* 9: 77, 229. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 296-297. 1941.

in Japan: shiobara-zasa

S. shiobarensis (Nakai) Nakai ex Koidzumi f. *mitinokuensis* (Koidzumi) S. Suzuki (*Arundinaria mitinokuensis* Koidz.; *Arundinaria sadoensis* f. *mitinokuensis* (Koidz.) Murata; *Sasaella mitinokuensis* (Koidz.) Koidz.)

Japan. See *Acta Phytotaxonomica et Geobotanica* 9: 76. 1940, *Acta Phytotaxonomica et Geobotanica* 10: 297. 1941, *Journal of Japanese Botany* 51(7): 221. 1976, *Acta Phytocologia et Geobotanica Sinica* 30(4-6): 141. 1979.

S. shiobarensis (Nakai) Nakai ex Koidzumi var. *yessaensis* (Koidzumi) S. Suzuki (*Arundinaria nambuensis* Koidz.; *Arundinaria yessaensis* Koidz.; *Sasa nambuensis* Makino & Uchida ex Uchida; *Sasaella nambuensis* Koidz.; *Sasaella yessaensis* (Koidz.) Koidz.)

Japan. Leaf sheaths densely pubescent to puberulous to minutely hairy, see *Science Education* 15(6): 75. 1932, *Journal of Japanese Botany* 10(9): 571-572, 580-581. 1934, *Acta Phytotaxonomica et Geobotanica* 6: 278. 1937, *Acta*

Phytotaxonomica et Geobotanica 10: 210, 298. 1941, *Journal of Japanese Botany* 51(5): 156. 1976.

Sasamorpha Nakai = *Sasa* Makino & Shibata, *Sasamorpha* (Nakai) C.H. Hu

From the genus *Sasa* and Greek *morphe* “a form, shape.”

Three or more species, eastern Asia, Japan, Korea. Bambusoideae, Bambuseae, Arundinariinae, erect, spreading, monopodial, creeping rhizomes hypogeous, 1 branch per node, nodes flat and not swollen, culm sheath persistent and coriaceous, leaves lanceolate and acuminate with a sharp point, leaf sheaths coriaceous, inflorescence paniculate, spikelets lanceolate 4- to 8-flowered, 2 glumes at the base of each spikelet, lemmas ovate, palea present, 3 ovate lodicules, 6 stamens, ovary ovoid, 3 feathery stigmas, type *Arundinaria purpurascens* Hack., see *Flora Boreali-Americana* 1: 73. 1803, *Bulletin de l'Herbier Boissier* 7(9): 716. 1899 and *Botanical Magazine* (Tokyo) 15(168): 18, 25, 27. 1901, *Journal of Japanese Botany* 6: 15. 1929, *Fl. Hokkaido & Saghalien* 2: 180. 1930, *Journal of the Faculty of Science, Hokkaido University. Series 5, Botany* 26: 180. 1931, *Botanical Magazine* (Tokyo) 46: 41. 1932, *Bibliogr. Cult. Trees* 635. 1949, *Taxon* 6(7): 208. 1957, *Taxon* 45: 543. 1996, *Taxon* 48: 377. 1999, *Taxon* 49: 235-238, 545-546. 2000, *Contributions from the United States National Herbarium* 39: 111-112. 2000.

Species

S. borealis (Hackel) Nakai (*Arundinaria borealis* Makino; *Arundinaria purpurascens* Hack.; *Bambusa borealis* Hack.; *Bambusa purpurascens* Makino; *Neosasamorpha tobaeana* (Makino & Uchida) Tatew.; *Pseudosasa purpurascens* (Hack.) Makino; *Pseudosasa spiculosa* (Schmid) Makino; *Sasa amabilis* Makino & Nakai; *Sasa purpurascens* (Hack.) E.G. Camus; *Sasa purpurascens* (Hack.) Ohwi; *Sasa spiculosa* (Schmid) Makino; *Sasa spiculosa* var. *subpubescens* Makino & Uchida; *Sasa tobaeana* Makino & Uchida; *Sasamorpha amabilis* Nakai; *Sasamorpha borealis* var. *purpurascens* (Hack.) Hiyama; *Sasamorpha chiisanensis* Nakai; *Sasamorpha purpurascens* Nakai; *Sasamorpha purpurascens* (Hack.) Nakai; *Sasamorpha purpurascens* f. *macrochaeta* Nakai; *Sasamorpha purpurascens* f. *psilostachys* (Nakai) Tatew.; *Sasamorpha purpurascens* f. *subpubescens* (Makino & Uchida) Nakai; *Sasamorpha purpurascens* var. *borealis* (Hack.) Nakai; *Sasamorpha purpurascens* var. *hidakana* Tatew. & Yoshim.; *Sasamorpha purpurascens* var. *macrochaeta* (Nakai) Nakai; *Sasamorpha purpurascens* var. *psilostachys* Nakai; *Sasamorpha purpurascens* var. *typica* Nakai; *Sasamorpha tobaeana* (Makino & Uchida) Uchida & Koidz.)

Japan. See *Bulletin de l'Herbier Boissier* 7(9): 716, 720. 1899 and *Botanical Magazine* (Tokyo) 14: 20, 62. 1900,

Botanical Magazine (Tokyo) 15: 24. 1901, *Botanical Magazine* (Tokyo) 26: 12. 1912, *Journal of Japanese Botany* 2: 16. 1920, *Journal of Japanese Botany* 6: 24. 1929, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 181. Sapporo, Japan 1931, *Botanical Magazine* (Tokyo) 46: 37, 41. 1932, *Journal of Japanese Botany* 9: 160. 1933, *Journal of Japanese Botany* 11(1): 75-76. 1935, *Acta Phytotaxonomica et Geobotanica* 10: 317. 1941, *Journal of Japanese Botany* 28: 154. 1953, *Bulletin of the National Science Museum* 33: 66. 1953, *Journal of the Washington Academy of Sciences* 45: 216. 1955, *Journal of Japanese Botany* 67: 31-34. 1992.

in Japan: suzu-dake

S. borealis (Hackel) Nakai var. *angustior* (Makino) S. Suzuki (*Pseudosasa spiculosa* f. *angustior* (Makino) Makino; *Sasa spiculosa* f. *angustior* Makino; *Sasamorpha gracilis* Nakai; *Sasamorpha purpurascens* var. *angustior* (Makino) Nakai)

Japan. Rare, slender branches, culm sheaths hairy to sparsely pilose, leaf sheaths puberulous or sometimes glabrous, nodes densely hairy to pilose, internodes puberulous or sometimes glabrous, leaves lanceolate to narrowly lanceolate, small inflorescence paniculate of 3-4 spikelets lanceolate, 3-4 florets, 2 glumes, lemmas ciliate, palea present, see *Journal of Japanese Botany* 2: 16. 1920, *Journal of Japanese Botany* 5(2): 9. 1928, *Journal of Japanese Botany* 5(4): 16. 1928, *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 181. 1931, *Botanical Magazine* (Tokyo) 46: 38, 42. 1932, *Journal of Japanese Botany* 50(5): 137. 1975.

in Japan: hosoba-suzu-dake

S. borealis (Hackel) Nakai var. *borealis*

Japan and Korea. Erect, branched, culm sheaths pilose, nodes densely pilose, internodes puberulous, leaf sheaths puberulous, leaf blades oblong-lanceolate and coriaceous, leaves glabrous or pubescent, spikelets lanceolate and flattened, 5-8 florets distichous, 2 glumes more or less broadly lanceolate, second glume usually subtending a bud, lemmas acuminate narrowly ovate, palea 2-keeled, 3 ovate lodicules, stamens exserted, ovary ovoid to narrowly ovoid, 3 plumose stigmas.

in Japan: suzu-dake

S. borealis (Hackel) Nakai var. *pilosa* (Uchida) S. Suzuki (*Sasa tobaeana* var. *pilosa* Uchida; *Sasamorpha tobaeana* var. *pilosa* (Uchida) Uchida)

Japan. Leaves shortly hairy, see *Bulletin of the Scientific Researches of the Alumni Association of the Morioka Imperial College of Agriculture and Forestry* 12: 83. 1936, *Acta Phytotaxonomica et Geobotanica* 10-11: 3, 317. 1941, *Journal of Japanese Botany* 50(5): 138. 1975.

S. borealis (Hackel) Nakai var. *viridescens* (Nakai) S. Suzuki (*Sasamorpha purpurascens* var. *viridescens* Nakai)

Japan. Branched at the upper portions of the culm, culm sheaths pilose, nodes more or less glabrous to pubescent or puberulous, leaves glabrous, see *Botanical Magazine* 46: 42. 1932, *Japanese Journal of Botany* 20(5): 139. 1975.

in Japan: hachijo-suzu-dake

S. mollis Nakai (*Sasamorpha sikokiana* Koidz.)

Japan. Branched upper portions, nodes densely villous to pilose, culm sheaths densely hairy to pilose, leaf sheaths minutely hairy or glabrous, internodes puberulous or glabrous or glabrescent, leaf blades oblong-lanceolate, see *Journal of the Faculty of Agriculture of the Hokkaido University* 26: 181. 1931, *Botanical Magazine* 46: 39. 1932, *Journal Japanese Botany* 9(3): 158. 1933, *Journal of Japanese Botany* 11(1): 75-76. 1935, *Acta Phytotaxonomica et Geobotanica* 6: 78. 1937, *Journal of Japanese Botany* 28: 154. 1953.

in Japan: ke-suzu

Saugetia A. Hitchcock & Chase = *Enteropogon* Nees

Named for the French-born Cuban botanist Joseph Sylvestre (José Silvestre) Sauget y Barbis (aka Frère Léon, Hermano León), 1871-1955, Havana 1905, author of *Las exploraciones botánicas de Cuba*. Habana 1918 and "Nouveaux Anastraphia de la flore cubaine." *Contr. Inst. Bot. Univ. Montreal*. 49: 77-86. 1944, with Hermano Alain (Dr. E.E. Lioger) wrote *Flora de Cuba*. Habana 1946-1963; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 210. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 234. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 262. 1973.

Two species, the Caribbean. Chloridoideae, Cynodonteae, Chloridinae, perennial, unarmed, slender, herbaceous, wiry, tufted, branched, auricles absent, ligule a short fringed membrane, plants bisexual, inflorescence spicate or singly racemose, solitary spikelets, first floret stipitate, 2 glumes unequal to very unequal, lower glume 0- to 1-nerved, upper glume 1-nerved, palea present, 2 free and fleshy lodicules, ovary glabrous, 2 red stigmas, savannah, wood, sometimes included in *Enteropogon*, type *Saugetia fasciculata* Hitchc. & Chase, see *An Introduction to the Natural System of Botany* 381, 448, 485. 1836 and *Contributions from the United States National Herbarium* 18(7): 378. 1917, *Contributions from the United States National Herbarium* 41: 78-79, 193. 2001.

Species

S. fasciculata Hitchc. & Chase (*Enteropogon fasciculatus* Clayton & Renvoize)

Cuba. See *Contributions from the United States National Herbarium* 18(7): 378. 1917, *Kew Bulletin, Additional Series* 13: 239. 1986.

S. pleiostachya Hitchc. & Ekman

Cuba. See *Manual of the Grasses of the West Indies* 123. 1936.

Savastana Schrank = *Anthoxanthum* L.,
Hierochloe R. Br., *Savastana* Raf.
(Melastomataceae), *Savastania* Scop.
(Melastomataceae)

Pooideae, Poeae, Phalaridinae, type *Savastana hirta* Schrank, see *Species Plantarum* 1: 28. 1753, *Introductio ad Historiam Naturalem* 213. 1777, *Baiersche Flora* 1: 100, 337. 1789, *Prodromus Florae Novae Hollandiae* 208. 1810, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812, *Sylva Telluriana* 100. 1838 and *Balaton Fl.* 315. 1900, *Bot. Not.* 124: 146. 1971, *Novosti Sist. Vyss. Rast.* 10: 81. 1973, *Blumea* 30(2): 348. 1985, *Berichte der Bayerischen Botanischen Gesellschaft zur Erforschung der Heimischen Flora* 60: 73-83. 1989, *Regnum Veg.* 127: 19. 1993, *Contributions from the United States National Herbarium* vol. 48: 111, 385-386, 605. 2003.

Schaffnera Benth = *Schaffnerella* Nash,
Schaffneria Fée (Aspleniaceae), *Schaffneria*
Fée ex T. Moore (Aspleniaceae)

After the German pharmacist Wilhelm Schaffner (J. Guillermo Schaffner), 1830-1882, plant collector, from 1856 in Mexico.

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Schaffnera gracilis* Benth., see *Mémoires sur les Familles des Fougères* 7: 56-57, pl. 17, f. 1. 1855, *Hooker's Icones Plantarum* 14: 59, t. 1378. 1882 and *Contributions from the United States National Herbarium* 41: 193. 2001.

Schaffnerella Nash = *Schaffnera* Benth,
Schaffneria Fée (Aspleniaceae)

For the German pharmacist Wilhelm Schaffner (J. Guillermo, J. Wilhelm), 1830-1882, from 1856 collected in Mexico. See Manuel Villada, "El Sr. Dr. Guillermo Schaffner." *Naturaleza*. 4: 32. [Sociedad Mexicana de Historia Natural] Mexico City 1878; Nicolas Jean Baptiste Gaston Guibourt (1790-1861), "Observations sur les productions du Mexique." *Jour. Pharm. et Chim.* 4: 95-108.

1866; J.H. Barnhart, *Biographical notes upon botanists*. 3: 224. 1965; Berthold Carl Seemann (1825-1871), “*Hanburia*, eine neue Cucurbitaceen gattung von Mexico.” *Bonplandia*. 6: 293. 1858, 7: 2-3. 1859, 10: 189-190. 1862; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 351. 1972; Irving William Knobloch, compil., “A preliminary verified list of plant collectors in Mexico.” *Phytologia Memoirs*. VI. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Stafleu and Cowan, *Taxonomic literature*. 5: 113. 1985.

One species, Central America. Chloridoideae, Cynodonteae, Muhlenbergiinae, annual, herbaceous, tufted, leaves mainly basal, auricles absent, narrow leaves, ligule membranous, plants bisexual, inflorescence paniculate, single raceme bearing 1-3 appressed spikelets laterally flattened, each raceme subtended by a bract, 1 female fertile floret, 2 glumes unequal to very unequal, lower glume suppressed or minute or vestigial, upper glume 3- to 5-awned and 7- to 9-nerved, lemma keeled subapically awned, palea present, lodicules absent, 3 stamens, ovary glabrous, 2 stigmas, related to *Opizia*, type *Schaffnerella gracilis* (Benth.) Nash, see *Mémoires sur les Familles des Fougères* 7: 56-57, pl. 17, f. 1. 1855 and *North American Flora* 17(2): 141. 1912, *Aliso* 20(1): 45-50. 2001, *Contributions from the United States National Herbarium* 41: 193. 2001.

Species

S. gracilis (Benth.) Nash (*Schaffnera gracilis* Benth.)

Central America. Compound inflorescence, raceme very short, lemma membranous, palea wingless, grows on hill-sides, see *Hooker's Icones Plantarum* 14: 59, t. 1378. 1882.

Schedonnardus Steudel = *Spirochloe* Lunell

Greek *schedon* “near, nearby” and *Nardus*, another grass genus, *nardos* “spikenard.”

One species, America. Chloridoideae, Cynodonteae, Muhlenbergiinae, perennial, tufted, herbaceous, unbranched, auricles absent, ligule an unfringed membrane, plants bisexual, open spicate inflorescence, racemes scattered along a central axis, spikelets solitary sessile laterally compressed 1-flowered, 2 glumes very unequal, lower glume divergent pointed, lemmas keeled acuminate, palea present, lodicules present or absent, stamens 3, ovary glabrous, 2 stigmas, open habitats, dry plains, prairies, saline plains, related to *Gymnopogon*, type *Schedonnardus texanus* Steud., see *Genera Plantarum* 43. 1789, *Prodromus Florae Novae Hollandiae* 207. 1810, *Synopsis Plantarum Glumacearum* 1: 146. 1854 and *American Midland Naturalist* 4: 220. 1915, *Contributions from the United States National Herbarium* 41: 193, 200. 2001.

Species

S. paniculatus (Nutt.) Trel. (*Lepturus paniculatus* Nutt.; *Rottboellia paniculata* (Nutt.) Spreng.; *Schedonnardus texanus* Steud.; *Spartina dissitiflora* Steud.; *Spirochloe paniculata* (Nutt.) Lunell)

Northern America, U.S. Lemma membranous, weed species, found in dry open rocky soil, in gravel, see *Supplementum Plantarum* 13, 114. 1781 [1782], *The Genera of North American Plants* 1: 81. 1818, *Systema Vegetabilium, editio decima sexta* 1: 300. 1825, *Synopsis Plantarum Glumacearum* 1: 215. 1854, *Annual Report of the Geological Survey of Arkansas* 1888(4): 236. 1891.

in English: tumble grass (= referring to the tumbleweed dispersal mode)

Schedonorus P. Beauv. = *Bucetum* Parnell, *Drymonaetes* Fourr., *Festuca* L., *Schenodorus* P. Beauv., *Schoenodorus* Roem. & Schult.

Greek *schedo* “near, nearby” and *oros* “mountain,” possibly referring to the habitat.

About 3 species, South America. Pooideae, Poeae, Loliinae, auricles present, ovary glabrous, type *Schedonorus elatior* (L.) P. Beauv., genus sometimes or often in *Festuca*, confusions in taxonomy and nomenclature, see *Species Plantarum* 1: 73, 79, 83. 1753, Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie*. 99, 162, 177, pl. 19, f. 2. Paris 1812, *Systema Vegetabilium* 698-710. 1817, *Synopsis Florae Germanicae et Helveticae* 813. 1837, *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 444. 1841, *The Grasses of Scotland* 104. 1842, *Deutschl. Fl.* 643. 1849, *Commentario della Società Crittogamologica Italiana* 1: 231. 1863, *Annales de la société linnéenne de Lyon, sér. 2*, 17: 187. 1869, *The Grasses of Scotland* 104. 1872, *Nomencl. Bot.* 2: 1071. 1874 and *Contr. U.S. Natl. Herb.* 24(6): 193. 1925, *Zlaki SSSR* 2: 393. 1976, *Genera Graminum* 93-94. 1986, *Watsonia* 16: 300. 1987, *Novosti Sist. Vyss. Rast.* 23: 14. 1988, *Novon* 3(3): 239-243. 1993, *Phytologia* 83: 85-88. 1997 [1998], *Preslia* 70: 111-113. 1998, *Contributions from the United States National Herbarium* 48: 191, 274, 312-368, 605-607, 608. 2003.

Species

S. arundinaceus (Schreb.) Dumort. (*Aira arundinacea* Lilj. ex Roem. & Schult., nom. illeg., non *Aira arundinacea* L.; *Arundo festucacea* Willd.; *Avena secunda* Salisb.; *Bromus arundinaceus* (Schreb.) Roth; *Bromus elatior* (L.) Koeler; *Bucetum elatius* (L.) Parnell; *Donax borealis* Trin.; *Donax festucaceus* (Willd.) P. Beauv.; *Festuca arundinacea* Schreb.; *Festuca arundinacea* (L.) Lilj., nom. illeg., non *Festuca arundinacea* Schreb.; *Festuca arundinacea* Vill., nom. illeg., non *Festuca arundinacea* Schreb.; *Festuca*

borealis (Trin.) Mert. & Koch ex Roehl.; *Festuca donacina* Wahlenb.; *Festuca elatior* L.; *Festuca elatior* subsp. *arundinacea* (Schreb.) Celak.; *Festuca elatior* f. *elatior*; *Festuca elatior* subsp. *arundinacea* (Schreb.) Hack.; *Festuca elatior* subsp. *elatior*; *Festuca elatior* subsp. *pratensis* (Huds.) Hack.; *Festuca elatior* subvar. *orientalis* Hack.; *Festuca elatior* var. *arundinacea* Schreb.; *Festuca elatior* var. *arundinacea* (Schreb.) Wimm.; *Festuca fenas* Lag.; *Festuca mediterranea* (Hack.) Rouy; *Festuca orientalis* (Hack.) V. Krecz. & Bobrov; *Festuca phoenix* (Scop.) Vill., nom. illeg., non *Festuca phoenix* Vill.; *Festuca pratensis* Huds. var. *arundinacea* Hack.; *Fluminia arundinacea* (Roem. & Schult.) Fr.; *Fluminia festucacea* (Willd.) Hitchc.; *Glyceria arundinacea* (Roem. & Schult.) Fr., nom. illeg., non *Glyceria arundinacea* Kunth; *Gnomonia elatior* (L.) Lunell; *Grapphephorum arundinaceum* (Roem. & Schult.) Asch.; *Grapphephorum festucaceum* (Willd.) A. Gray; *Lolium arundinaceum* (Schreb.) Darbysh.; *Poa elatior* (L.) Moench; *Poa kunthii* Lindm.; *Poa phoenix* Scop.; *Poa remota* Kunth, nom. illeg., non *Poa remota* Forselles; *Poa uliginosa* Willd. ex Spreng.; *Schedonorus arundinaceus* Roem. & Schult.; *Schedonorus elatior* (L.) P. Beauv.; *Schedonorus phoenix* (Scop.) Holub; *Schedonorus arundinaceus* Gaudin ex Roem. & Schult.; *Scolochloa arundinacea* (Roem. & Schult.) MacMill.; *Scolochloa festucacea* (Willd.) Link; *Tragus elatior* Panz. ex B.D. Jacks.; *Triodia festucacea* (Willd.) Roth)

Europe. Long-lived perennial bunchgrass, erect and stout, tufted, occasionally referred to as *Festuca elatior* L. and to *Festuca arundinacea* Schreb., see *Species Plantarum* 1: 64, 67, 73, 75-76, 79. 1753, *Flora Anglica* 37. 1762, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 203. 1768, *Spicilegium Florae Lipsicae* 57. 1771, *Flora Carniolica, Editio Secunda* 1: 74. 1771, *Prospectus de l'Histoire des Plantes de Dauphiné* 17. 1779, *Tentamen Florae Germanicae* 2: 141. 1789, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 22. 1796, *Svensk Flora*. edition 2. 47. 1798, *Descriptio Graminum in Gallia et Germania* 214. 1802, *Enumeratio Plantarum Horti Botanici Berolinensis*, ...1: 126. 1809, *Essai d'une Nouvelle Agrostographie* 78, 152, 161, 177, pl. 19, f. 2. 1812, *Nova Genera et Species Plantarum* 1: 163. 1815 [1816], *Elenchus Plantarum* 4. 1816, *Systema Vegetabilium* 2: 700. 1817, *Fundamenta Agrostographiae* 156. 1820, *J. C. Rohlings Deutschlands Flora* 1(2): 664. 1823, *Flora Suecica* 1: 64. 1824, *Observations sur les Graminées de la Flore Belgique* 106. 1824, *Systema Vegetabilium, editio decima sexta* 1: 342. 1825, *Enumeratio Plantarum Phaenogamarum in Germania* 1(1): 382. 1827, *The Grasses of Scotland* 107, t. 46. 1842, *Summa Vegetabilium Scandinaviae* 247. 1846, *Fl. Schles.* edition 3, 59. 1857, *Proceedings of the American Academy of Arts and Sciences* 5: 191. 1861, *Flora der Provinz Brandenburg* 1: 852. 1864, *Prodr. Fl. Bohmen* 1: 51. 1867, *Monographia Festucarum Europearum* 150, 152, 154. 1882, *The*

Metaspermae of the Minnesota Valley 79. 1892, *Index Kewensis* 2: 1098. 1895 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 44: 45. 1909, *Flore de France* 14: 226. 1913, *American Midland Naturalist* 4: 224. 1915, *United States Department of Agriculture: Bulletin* 772: 38, f. 11. 1920, *Webbia* 21: 616. 1966, *Brittonia* 19: 131. 1967, *Bothalia* 16: 59. 1986, *Taxon* 40: 136. 1991, *Novon* 3(3): 241. 1993, *Preslia* 70(2): 113. 1998, *Bot. Zhurn.* (Moscow & Leningrad) 84: 114. 1999.

S. giganteus (L.) Holub (*Avena gigantea* (L.) Salisb.; *Bromus giganteus* L.; *Bucetum giganteum* (L.) Parnell; *Festuca bonassorum* Bornm.; *Festuca gigantea* Krock.; *Festuca gigantea* (L.) Vill.; *Festuca pseudogigantea* Ovcz. & Shibkova; *Forasaccus giganteus* (L.) Bubani; *Lolium giganteum* (L.) Darbyshire; *Schedonorus giganteus* (L.) Soreng & Terrell, nom. illeg., non *Schedonorus giganteus* (L.) Holub; *Trisetum flaccidum* (Hack. ex Hook.f.) R.R. Stewart; *Zerna gigantea* (L.) Panz. ex B.D. Jacks.)

Europe, west and central Asia, North Africa, India. Perennial bunchgrass, stems tufted, erect, fodder, tolerant of shade, dry sites or wet soils, see *Species Plantarum* 1: 73, 76-77, 79. 1753, *Histoire des Plantes de Dauphiné* 2: 110. 1787, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 23. 1796, *The Grasses of Scotland* 108, t. 47. 1842, *Index Kewensis* 2: 1249. 1895, *The Flora of British India* 7: 280. 1896 and *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 73: 188. 1934, *Brittonia* 5: 431. 1945, *Novon* 3: 241. 1993, *Watsonia* 21: 365-368. 1997, *Phytologia* 83(2): 86. 1997, *Preslia* 70(2): 113. 1998, *Opera Botanica* 137: 1-42. 1999, *Bot. Zhurn.* (Moscow & Leningrad) 84: 114. 1999, *Taxon* 49(2): 248. 2000.

S. pratensis (Huds.) P. Beauv. (*Bromus pratensis* (Huds.) Spreng., nom. illeg., non *Bromus pratensis* Lam.; *Bucetum pratense* (Huds.) Parn.; *Festuca americana* (Pers.) F. Dietr.; *Festuca apennina* De Not.; *Festuca elatior* L.; *Festuca elatior* auct. Amer.; *Festuca elatior* sensu J. Black; *Festuca elatior* L. subsp. *elatior*; *Festuca elatior* subsp. *pratensis* (Huds.) Hack.; *Festuca elatior* var. *pratensis* (Huds.) A. Gray; *Festuca fluitans* var. *pratensis* (Huds.) Huds.; *Festuca glabra* Spreng., nom. illeg., non *Festuca glabra* Lightf.; *Festuca poaeoides* Michx., nom. illeg., non *Festuca poaeoides* Thuill.; *Festuca poaeoides* var. *americana* Pers.; *Festuca pratensis* Hudson; *Lolium festuca* Raspail ex Mutel; *Lolium festuca* Raspail; *Lolium pratense* (Huds.) Darbysh.; *Schedonorus americanus* (Pers.) Roem. & Schult.; *Tragus pratensis* (Huds.) Panz. ex B.D. Jacks.)

Europe, west Asia. Perennial, loosely tufted, stout, smooth, unbranched, erect above a geniculate base, often with decumbent stem bases, noxious weed, invasive and widely naturalized elsewhere, cultivated fodder, forage, pasture grass, useful for erosion control and for stabilizing the soil, growing in abandoned pastures, steep slopes, meadows, roadsides, fields, disturbed areas, grasslands, moist shores,

on peat soils, on clay soils, see *Species Plantarum* 1: 73, 75-76, 83. 1753, *Flora Anglica* 37. 1762, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 203. 1768, *Flora Anglica, Editio Altera* 47. 1778, *Flore des Environs de Paris* éd. 2. 1: 51. 1799, *Flora Boreali-Americana* 1: 67. 1803, *Syn. Pl.* 1: 94. 1805, *Essai d'une Nouvelle Agrostographie* 99, 162-163, 177. 1812, *Systema Vegetabilium* 2: 706. 1817, F.G. Dietrich (1768-1850), *Nachtrag zum vollständigen Lexicon der Gärtnerei und Botanik ...* 3: 332. 1817, *Mantissa* 2: 402. 1824, *Systema Vegetabilium, editio decima sexta* 1: 353, 359. 1825, *Annales des Sciences d'Observation* 2: 244. 1829, *Fl. Franc.* 4: 111. 1837, *The Grasses of Scotland* 105, t. 46. 1842, *Repertorium Florae Ligusticae* 468. 1844, *Prosp. Fl. Ligust.* 56. 1846, *Manual of Botany for North America. Fifth edition* 634. 1867, *Botanisches Centralblatt* 8: 407. 1881, *Index Kewensis* 2: 1099. 1895 and *Brittonia* 19: 131. 1967, *Turun yliopiston julkaisu - Annales Universitatis Turkuensis, Sarja A II, Biologia-Geographica* 3: 1-12. 1982 [also *Ann. Univ. Fenn. Abo.*, A 3: 1-12. 1982], *Bothalia* 16: 59. 1986, *Plant Systematics and Evolution* 152: 153-166. 1986, *Citologija i Genetika* 22: 28-31. 1988, *Annali di Botanica* 48: 71-80. 1990, *Taxon* 40: 135. 1991, *Novon* 3(3): 242. 1993, *Opera Botanica* 137: 1-42. 1999, *Ber. Institut für Landschafts- und Pflanzenökologie Univ. Hohenheim* 16: 75. Stuttgart 2003.

Schellingia Steud. = *Aegopogon* Humb. & Bonpl. ex Willd.

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Schellingia tenera* Steud., see *Species Plantarum. Editio quarta* 4(2): 899. 1806, *Catalogus plantarum horti botanici monspeliensis* 120. 1813, *Genera et species plantarum* 4. 1816, *Nova Genera et Species Plantarum* 1: 133, t. 43. 1815 [1816], *Systema Vegetabilium* 2: 805. 1817, *De Graminibus unifloris et sesquifloris* 164. Petropoli 1824, *Flora* 33: 231-232. 1850, *Mexicanas Plantas* 2: 71-72. 1886, *Bulletin of the Torrey Botanical Club* 13(12): 230. 1886 and *North American Flora* 17(2): 138. 1912, *University of Wyoming Publications* 8(2): 19. 1948, *Contributions from the United States National Herbarium* 41: 9-11, 193. 2001.

Schenckochloa Ortiz = *Gouinia* E. Fourn. ex Benth. & Hook.f.

After the German botanist Johann Heinrich Rudolf Schenck, 1860-1927, traveler, professor of botany, Director of the Botanical Garden of Darmstadt, plant collector in Brazil and Mexico, author of "Acaciae myrmecophilae novae." *Fedd. Rep.* 12: 360-363. 1913 and "Wilhelm Schimper: Nachruf." *Naturwiss. Rundschau* 17, 1902. See J.H. Barnhart, *Biographical notes upon botanists.* 3: 224. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 352.

1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* 1917-1933; Stafleu and Cowan, *Taxonomic literature.* 5: 130-133. 1985; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico.* Philadelphia 1964; Irving William Knobloch, compilation, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs.* VI. 1983; Carl Chun, *Wissenschaftliche Ergebnisse der Deutschen Tiefsee-Expedition auf dem Dampfer "Valdivia" 1898-1899 ... Herausgegeben von C. Chun ... band ii.* Jena, G. Fischer, 1905-1908.

One species, Brazil. Chloridoideae, Cynodonteae, Gouiniinae, or Poaceae, Chloridoideae, Eragrostidae, perennial, unbranched, tufted, herbaceous, leaves basal, leaf sheaths overlapping culm nodes, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence spicate, spikelets solitary shortly pedicellate, rachilla triangular, 2 subequal glumes 1-nerved, lemmas awned, palea present, 3 stamens, open areas, sandy habitat, dunes, coastal, type *Schenckochloa barbata* (Hack.) J.J. Ortiz, see *Essai d'une Nouvelle Agrostographie* 80. 1812, *Genera Plantarum* 3: 1178. 1883, *Mexicanas Plantas* 2: 103. 1886 and Jason Richard Swallen, "The grass genus *Gouinia*." *Amer. J. Bot.* 22: 31-41. 1935, *Bull. Torrey Botanical Club* 88: 143-152. 1961, *Lilloa* 34: 57-88. 1975, *Candollea* 46: 241-249. 1991 [*Schenckochloa* (Poaceae, Chloridoideae, Eragrostidae), un genero nuevo del noreste de Brasil], *Acta Botanica Mexicana* 23: 1-33. 1993 [Estudio sistemático del género *Gouinia* (Gramineae, Chloridoideae, Eragrostidae)], *Flora Mesoamericana* 6: 262. 1994, *Contributions from the United States National Herbarium* 41: 122-123, 193. 2001, *Flora of Ecuador.* Gramineae (part 2) Subfam. Chloridoideae. 68: 23-25. 2001.

Species

S. barbata (Hack.) J. Ortiz (*Diplachne barbata* Hack.; *Gouinia barbata* (Hack.) Swallen)

Brazil. See *Österreichische Botanische Zeitschrift* 52: 240. 1902, *American Journal of Botany* 22: 37. 1935.

Schenodorus P. Beauv. = *Schedonorus* P. Beauv.

Orthographic variant of *Schedonorus* P. Beauv., see *Essai d'une nouvelle Agrostographie.* 99, 162, 177, pl. 19, f. 2. Paris 1812, *Systema Vegetabilium* 2: 698-710. 1817 and *Contributions from the United States National Herbarium* 48: 605-607. 2003.

Schirostachyum Vriese

Referring to *Schizostachyum* Nees, see Willem Hendrik de Vriese (1806-1862), *Plantae Indiae Batavae Orientalis:*

quas, in itinere per insulas Archipelagi Indici Javam, Amboinam, Celebem, Ternatam, aliasque, annis 1815-1821 exploravit Casp. Georg. Carol. Reinwardt ... jussu augustissimi regis Guilielmi III / digessit et illustravit Guil. Henr. de Vriese. Lugduni-Batavorum 1856-1857.

Schismus P. Beauv. = *Electra* Panzer,
Hemisacris Steud.

Greek *schismos* "cleaving," referring to the lemma tip, the lemma is split.

About 5 species, northern and southern Africa, Middle East, Mediterranean to northwest India. Arundinoideae, Arundineae, or Danthonioideae, Danthoniae, annual or short-lived perennial, herbaceous, unbranched, xerophytic, caespitose or decumbent, culms ascending or mat-forming, no auricles, ligule a rim of hairs, leaves mostly basal, leaf blades linear to linear-lanceolate, plants bisexual and paniculate, panicles narrow or contracted, spikelets solitary several-flowered and pedicellate, 5-9 florets, reduced floret at apex, 2 glumes deciduous with spikelet, lower glume 5- to 7-nerved, upper glume 3- to 7-nerved, lemmas 7- to 9-nerved and rounded on the back, female fertile lemmas awnless or mucronate or with a short straight awn, lemma apex bifid to emarginate, paleas 2-veined and awnless, callus hairy, 2 joined or free lodicules fleshy and ciliate or glabrous, stamens 3, ovary glabrous, 2 stigmas, seeds dorsiventrally compressed, native pasture species, a preferred food for desert tortoises in the Mohave desert, invasive weed, open habitats, dry open places, arid regions and deserts, linked to *Rytidosperma*, type *Schismus marginatus* P. Beauv., see *Species Plantarum* 1: 73. 1753, *Syn. Pl.* 1: 97. 1805, *Essai d'une nouvelle Agrostographie* 73, 162, 177, t. 15, f. 4. Paris 1812, *Ideen zu einer künftigen Revision der Gattungen der Gräser...* 49. 1813, *Denkschriften der Königlichen Akademie der Wissenschaften zu Muenchen* 4: 253-312. 1813 [1814], *Flora* 12: 490. 1829 and *Contr. U.S. Natl. Herb.* 24: 181. 1925, *Abhandlungen herausgegeben von der Senckenbergischen Naturforschenden Gesellschaft* 532: 1-81. 1974, *Restoration Ecology* 5(2): 156-161, June 1997, *Plant Species Biology* 15(2): 113-125. Aug 2000, *Global Ecology and Biogeography* 10(2): 205-217. Mar 2001, *Flora of North America North of Mexico*, Magnoliophyta: Commelinidae (in part): Poaceae, part 2, vol. 25. 2003, *Contributions from the United States National Herbarium* 46: 225, 248, 558-560. 2003, *Ecography* 26(1): 29-44. Feb 2003, *Journal of Applied Ecology* 40(2): 344-353. Apr 2003, *Restoration Ecology* 11(3): 317-324. Sep 2003, *Journal of Applied Ecology* 40(6): 1008-1024. Dec 2003, Converse Griffith, Eunsuk Kim and Kathleen Donohue, "Life-history variation and adaptation in the historically mobile plant *Arabidopsis thaliana* (Brassicaceae) in North America." *Am. J. Bot.* 91: 837-849. 2004, *Ecological*

Research 19(5): 533-540. Sep 2004, *Flora of Australia* Volume 44B, Poaceae 3: 34-35. 2005.

Species

S. arabicus Nees (*Schismus arabicus* var. *arabicus*; *Schismus arabicus* var. *violaceus* Muschl.; *Schismus barbatus* subsp. *arabicus* (Nees) Maire & Weiller; *Schismus calycinus* var. *arabicus* (Nees) Barratte, nom. illeg., non *Schismus calycinus* var. *arabicus* (Nees) Kuntze; *Schismus calycinus* var. *arabicus* (Nees) Kuntze; *Schismus calycinus* var. *arabicus* (Nees) Brown & Barr., nom. illeg., non *Schismus calycinus* var. *arabicus* (Nees) Kuntze; *Schismus marginatus* Hook.f.; *Schismus spectabilis* Fig. & De Not.)

Mediterranean, western and northern Sahara, Egypt, Asia temperate and tropical. Annual, low, tufted, forming extensive and dense carpets, rapidly spreading, stems ascending and geniculate, leaves setaceous and very narrow, inflorescence a narrow and erect panicle, flowers greenish purple to purplish, glumes membranous, lemma deeply 2-lobed acute, palea acute, forage, native pasture species, able to survive long rainless periods, ants aid the dispersal of the grass, a common weed of pastoral lands, salt lakes and woodlands, granite rocks, relatively flat and sandy terrains, see *Florae Africae Australioris Illustrationes Monographicae* 1: 422. 1841, *Linnaea* 21(3): 397. 1848, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 255. 1852, *Catalogue Raisonné des Plantes Vasculaires de la Tunisie* 475. 1896 and *Verh. Bot. Vereins Prov. Brandenburg* 49: 75. 1908, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 310. 1939, *Bocconeia, Monographiae Herbarii Mediterranei Panormitani* 3: 229-250. 1992, Gutterman Y., "Effect of day length during plant development and caryopsis maturation on flowering and germination, in addition to temperature during dry storage and light during wetting, of *Schismus arabicus* (Poaceae) in the Negev desert, Israel." *Journal of Arid Environments* 33: 439-448. 1994.

in English: split grass, Mediterranean grass, Arabian Mediterranean grass, Arabian grass, araby grass, Arabian schismus, schismus, tufted grass

S. barbatus (Loefl. ex L.) Thell. (*Electra brevifolia* Nees ex Steud.; *Electra calycina* Panz.; *Electra nitida* Panz. ex Steud.; *Electra ovalis* Nees ex Steud.; *Festuca barbata* L.; *Festuca barbata* Loefl. ex L.; *Festuca calycina* Loefl.; *Festuca minuta* Steven ex M. Bieb.; *Festuca minuta* Hoffm., nom. illeg., non *Festuca minuta* Steven ex M. Bieb.; *Hemisacris gonatodes* Steud.; *Koeleria calycina* (Loefl.) DC. & Lam.; *Schismus arabicus* var. *minutus* Boiss.; *Schismus barbatus* (L.) Thell.; *Schismus barbatus* f. *coloratus* Jahand. & Maire; *Schismus barbatus* subsp. *calycinus* Maire & Weiller; *Schismus barbatus* subsp. *perennis* Maire; *Schismus barbatus* var. *genuinus* Maire; *Schismus barbatus* var. *minutus* Maire & Weiller; *Schismus barbatus* var. *minutus* Cuenod, nom. illeg., non *Schismus barbatus* var. *minutus*

Maire & Weiller; *Schismus brevifolius* Nees; *Schismus calycinus* (L.) C. Koch; *Schismus calycinus* (Loefl.) K. Koch; *Schismus calycinus* (Loefl.) Coss. & Durieu, nom. illeg., non *Schismus calycinus* (Loefl.) K. Koch; *Schismus calycinus* (Loefl.) Duval-Jouve, nom. illeg., non *Schismus calycinus* (Loefl.) K. Koch; *Schismus calycinus* f. *nana* Kuntze; *Schismus calycinus* subvar. *minutus* Coss. & Durieu; *Schismus calycinus* var. *calycinus*; *Schismus calycinus* var. *genuinus* Maire; *Schismus calycinus* var. *marginatus* Kuntze; *Schismus calycinus* var. *minutus* Kuntze; *Schismus calycinus* var. *neglectus* Kuntze; *Schismus calycinus* var. *tenuis* T. Durand & Schinz; *Schismus fasciculatus* P. Beauv. ex Trin.; *Schismus fasciculatus* P. Beauv.; *Schismus fasciculatus* var. *flaccidus* Stapf; *Schismus fasciculatus* var. *perennans* Stapf; *Schismus fasciculatus* var. *tenuis* (Steud.) Stapf; *Schismus hirsutus* Trin.; *Schismus marginatus* P. Beauv.; *Schismus minutus* (Hoffm.) Roem. & Schult.; *Schismus ovalis* Nees; *Schismus perennis* Duce. & Maire; *Schismus scaberrimus* var. *nanus* Nees; *Schismus tenuis* Steud.)

North Africa, South Africa, southwest Asia, Middle East. Annual, low growing, small, densely matting, tufted, ascending and geniculate, dark green, leaves setaceous, leaf blade inrolled and very narrow, inflorescence narrow and erect, greenish purple panicle, florets bisexual, long glumes subequal, lemma with a deep notch, palea obtuse, shiny translucent grain, forage grass, native pasture species, drought-tolerant, a common weed of pastoral lands, open sunny locations, open areas, alluvial soils, irrigated pastures, semiarid regions, in sandy areas, in river bed, along roadsides, disturbed sites, cultivated fields, gardens, woods, closely related to *Schismus arabicus*, see *Demonstrationes Plantarum* 3. 1753, *Iter Hispanicum* 116. 1758, *Commentationes Societatis Physico-Medicæ apud Universitatem Literarum Caesaream Mosquensem Institutæ* 1: 43. 1808, *Flora Taurico-Caucasica* 1: 70. 1808, *Essai d'une Nouvelle Agrostographie* 74, 162, t. 15, f. 4, 177. 1812, *Flore Française. Troisième Édition* 6: 271. 1815, *Systema Vegetabilium* 2: 584. 1817, *Fundamenta Agrostographiæ* 148. 1820, *Flora* 12: 490. 1829, *Nomenclator Botanicus. Editio secunda* 1: 516. 1840, *Floræ Africae Australioris Illustrationes Monographicae* 1: 421-423. 1841, *Linnaea* 21(3): 397. 1848, *Synopsis Plantarum Glumacearum* 1: 295. 1854, *Exploration Scientifique de l'Algérie* 2: 138. 1855, *Annotations à la Flore de France et d'Allemagne* 289. 1855, *Flora Orientalis* 5: 598. 1884, *Conspectus Floræ Africae* 5: 907. 1894 and *Flora Capensis* 7: 694. 1900, *Bulletin de l'Herbier Boissier, sér. 2, 7*: 391. 1907, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 23: 220. 1932, *Mémoires de la Société d'Histoire Naturelle de l'Afrique du Nord* 3: 69. 1933, *Catalogue des Plantes du Maroc* 863. 1934, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 30: 310. 1939, *Flore de l'Afrique du Nord* 2: 369. 1953, *Flore Analytique et Synoptique de la Tunisie* 116. 1954, *Annali di Botanica* 45:

75-102. 1987, *Bothalia* 18: 119-122. 1988, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Lagascalia* 20(2): 265-275. 1998, *Taxon* 49(2): 250. 2000.

in English: Arabian grass, kelch grass, mulcha grass, Mediterranean schismus, Mediterranean grass, common Mediterranean grass, schismus

in French: schismus barbu

in Morocco: bousibouss

S. inermis (Stapf) C.E. Hubb. (*Danthonia inermis* Stapf; *Schismus koelerioides* Stapf)

South Africa. Perennial, tufted, erect, decumbent base, shortly stemmed, lemmas densely pubescent, panicle dense and contracted, spikelets purplish to green, on grassy slopes, rocky or stony places, see *Flora Capensis* 7: 534-535, 694-695. 1899 [1900] and *Flora of Tropical Africa* 10: 147. 1937.

S. pleuropogon Stapf

South Africa. Perennial, stoloniferous, rare, spikelets ovate, straight awn, grows in moist areas, see *Kew Bulletin* 1916: 234. 1917.

S. scaberrimus Nees (*Electra scaberrima* Nees ex Steud.; *Schismus aristulatus* Stapf)

South Africa. Annual or perennial, tufted, spikelets ovate, lemmas pubescent, sandy areas, in marshy seepage, dry river beds, see *Nomenclator Botanicus. Editio secunda* 1: 546. 1840, *Floræ Africae Australioris Illustrationes Monographicae* 1: 423. 1841 and *Flora Capensis* 7: 695. 1900, *Abh. Senckenb. Naturforsch. Ges.* 532: 62. 1974, *Bothalia* 18: 111-114. 1988.

Schistachne Figari & De Not. = *Aristida* L., *Stipagrostis* Nees

From the Greek *schistos* "cut, divided" and *achne* "chaff, glume."

Arundinoideae, Aristideae, or Aristidoideae, Aristideae, type *Schistachne ciliata* (Desf.) Fig. & De Not., see *Species Plantarum* 1: 82. 1753, *Neues Journal für die Botanik* 3: 255. 1809, *Linnaea* 7(3): 290-291. 1832, *Species Graminum Stipaceorum* 163. 1842, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 252. 1852, *Genera Plantarum* 3(2): 1141. 1883 and *Meded. Rijks.-Herb.* 54: 9. 1926, *Mededeelingen van's Rijks-Herbarium* 58: 34-36, 45-46. 1929, *Kurtziana* 1: 123-206. 1961, *Flora Mesoamericana* 6: 253-257. 1994, *Contributions from the United States National Herbarium* 46: 69-104. 2003.

Schizachne Hackel

Greek *schizo*, *schizein* "to split, divide" and *achne* "chaff, glume," referring to the lemmas.

One to 2 species, Asia, Eurasia, North America. Pooideae, Poodae, Meliceae, perennial, herbaceous, unbranched, tufted, shortly rhizomatous, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets pedicellate several-flowered, sterile florets terminal, rachilla fragile, callus hairy to bearded, 2 membranous glumes unequal to very unequal, lower glume 3-nerved, upper glume 5-nerved, bifid lemmas 7-nerved, straight awn subterminal, palea keels ciliate, 2 fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, growing in moist areas, woodlands, open habitats, related to *Trinichloa*, resembles *Melica*, type *Schizachne fauriei* Hack., see *Species Plantarum* 1: 66, 79. 1753 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 322-323. 1909, *Journal of the Washington Academy of Sciences* 18(8): 203-206. 1928, *Madroño* 7(5): 129-130. 1944, *Grasses: Systematics and Evolution* 61-74. 2000, *Contributions from the United States National Herbarium* 48: 607-608. 2003, William A. Weber, "The Middle Asian element in the Southern Rocky Mountain Flora of the western United States: a critical biogeographical review." *Journal of Biogeography* 30(5): 649-685. May 2003.

Species

S. komarovii Roshev. (*Avena striata* var. *capillipes* Kom.; *Schizachne purpurascens* (Torr.) Swallen; *Schizachne purpurascens* subsp. *capillipes* (Kom.) Tzvelev)

Russia, Eurasia. See *Encyclopédie Méthodique, Botanique* 1: 332. 1783 and *Flora Peninsulae Kamtschatka* 1: 158. 1927, *Journal of the Washington Academy of Sciences* 18: 204, f. 1. 1928, *Flora URSS* 2: 544. 1934, *Zlaki SSSR* 546-547. 1976.

S. purpurascens (Torr.) Swallen (*Avena callosa* Turcz. ex Griseb.; *Avena purpurascens* DC.; *Avena striata* Michx., nom. illeg., non *Avena striata* Lam.; *Avena striata* f. *albicans* Fernald; *Avena torreyi* Nash; *Bromelica striata* (Hitc.) Farw.; *Melica callosa* (Turcz. ex Griseb.) Ohwi; *Melica purpurascens* (Torr.) Hitchc.; *Melica striata* Hitchc.; *Melica striata* f. *albicans* (Fernald) Fernald; *Schizachne callosa* (Turcz. ex Griseb.) Ohwi; *Schizachne fauriei* Hack.; *Schizachne purpurascens* f. *albicans* (Fernald) Fernald; *Schizachne purpurascens* f. *purpurascens*; *Schizachne purpurascens* subsp. *callosa* (Turcz. ex Griseb.) T. Koyama & Kawano; *Schizachne purpurascens* var. *callosa* (Turcz. ex Griseb.) B. Boivin; *Schizachne purpurascens* var. *callosa* (Turcz. ex Griseb.) Kitag.; *Schizachne purpurascens* var. *pubescens* Dore; *Schizachne striata* (Hitc.) Hultén; *Trisetum purpurascens* Torr.)

Northern America. See *Encyclopédie Méthodique, Botanique* 1: 332. 1783, *Flora Boreali-Americana* 1: 73. 1803, *Catalogus plantarum horti botanici monspeliensis* 82. 1813, *A Flora of the Northern and Middle Sections of the United States* 1: 127. 1823, *Flora Rossica* 4(13): 416. 1852 and *Rhodora* 7(83): 244. 1905, *Rhodora* 8(95): 211. 1906,

Contributions from the United States National Herbarium 12(3): 156. 1908, *Rhodora* 10(111): 47. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 323. 1909, *An Illustrated Flora of the Northern United States* 1: 219. 1913, *Rhodora* 21: 77. 1919, *Journal of the Washington Academy of Sciences* 18: 204, f. 1. 1928, *Botanical Magazine* (Tokyo) 45: 195. 1931, *Acta Phytotaxonomica et Geobotanica* 2(4): 279. 1933, *Svensk Botanisk Tidskrift* 30: 518. 1936, *Rhodora* 44(520): 139. 1942, *Canadian Journal of Botany* 42: 862. 1964, *Zlaki SSSR* 546-547. 1976, *Le Naturaliste Canadien* 103(6): 563. 1976, *Phytologia* 43(1): 106. 1979, *Neo-Lineamenta Florae Manshuricae* 109. 1979, *Bot. Zhurn. SSSR* 70(1): 126-128. 1985.

S. purpurascens (Torr.) Swallen var. *purpurascens*

Northern America.

Schizachyrium Nees = *Pithecurus* Kunth, *Schizopogon* Spreng., *Schizopogon* Rchb. ex Spreng., *Ystia* Compère

From the Greek *schizo*, *schizein* "to split, divide" and *achyron* "chaff, husk," alluding to the glume or referring to the toothed lemma; see Nees von Esenbeck, *Agrostologia Brasiliensis*. 331. 1829 in C.F.P. von Martius *Flora Brasiliensis*.

About 60-100 species, tropics. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual or perennial, branched, caespitose, stout or slender, delicate, woody or herbaceous, rhizomatous or stoloniferous, sometimes decumbent or leaning at base, leaves not aromatic, auricles absent, ligule a short fringed membrane, leaf blades flat and linear, plants bisexual, solitary slender racemes with oblique branches, racemes axillary and arranged in a compound panicle, spikelets paired, florets 2 per spikelet and the lower sterile, sessile spikelets awned and bisexual, upper floret bisexual, lower floret reduced to a lemma, lower glume convex or rarely concave, upper glume rarely awned, upper lemma 2-lobed with a slender glabrous awn between the lobes, stalked spikelets awned or unawned and more or less reduced, *Schizachyrium kwiluense* with bisexual pedicelled spikelet, palea present or absent, 2 lodicules tiny and fleshy, 2 or 3 stamens, ovary glabrous, 2 stigmas plumose above, handsome and ornamental weed species useful for erosion control, native pasture species, grazing, growing in sandy beaches or dunes, open habitats, poor sandy pastures, clearings, grasslands, along roadsides, hilltops, slopes, savannahs, scrub forests, rainforests, along riverbanks, hickory and oak woods, saturated soil in moist depression, moist meadows, moist pinelands, mangrove swamps, riverbank forest, disturbed sites, confusions in taxonomy and nomenclature, very closely related to *Andropogon*, type *Schizachyrium brevifolium* (Sw.) Nees ex Büse, see *Species Plantarum* 2: 1045, 1049. 1753, *Methodus Plantas Horti Botanici ...* 207. 1794, *Annalen der Botanick. ed. Usteri* 18:

11. 1796, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 331-332. 1829, *Rel. Haenk.* 1: 331. 1830, *Genera plantarum* edition 9, 1: 55. 1830, *Révision des Graminées* 2: 571. 1832, *Plantae Junghuhnianae* 3: 359. 1854, *Fl. Ned. Ind.* 3: 495. 1857, *Flora Australiensis: A Description ...* 7: 535. 1878, *Genera Plantarum* 3(2): 1127. 1883 and *Flora of Tropical Africa* 9: 182-183. 1917, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Bulletin du Jardin Botanique de l'État* 33: 400. 1963, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 447-508. 1969, *Kew Bulletin* 39(1): 169-178. 1984, *Genera Graminum* 352-353. 1986, *Flora Mesoamericana* 6: 391-393. 1994, *Flora of Ethiopia and Eritrea* 7: 317-319. 1995, *Gramineas de Bolivia* 600-605. 1998, *Am. J. Bot.* 85: 1266-1272, 1609-1617, 1695-1703. 1998, Gabriel Crowley and Stephen Garnett, "Seeds of the annual grasses *Schizachyrium* spp. as a food resource for tropical granivorous birds." *Austral. Ecology* 24: 3: 208-220. June 1999, *Journal of Ecology* 87(3): 476-489. June 1999, *Am. J. Bot.* 87: 412-417. 2000, Pedro F. Quintana-Ascencio and Eric S. Menges, "Competitive abilities of three narrowly endemic plant species in experimental neighborhoods along a fire gradient." *Am. J. Bot.* 87: 690-699. 2000, *Am. J. Bot.* 88: 1458-1468, 1650-1656, 1824-1829, 1993-2012. 2001, *Am. J. Bot.* 89: 494-499, 972-980, 1843-1846. 2002, *Contributions from the United States National Herbarium* 46: 539, 560-569, 635. 2003, William E. Rogers and Evan Siemann, "Effects of simulated herbivory and resources on Chinese tallow tree (*Sapium sebiferum*, Euphorbiaceae) invasion of native coastal prairie." *Am. J. Bot.* 90: 243-249. 2003, *Am. J. Bot.* 91: 416-421. 2004, *Journal of Applied Ecology* 41(2): 389-397. Apr 2004, *Global Change Biology* 10(5): 863-876. May 2004 [Comparison of the mass and energy exchange of a pasture and a mature transitional tropical forest of the southern Amazon Basin during a seasonal transition.], *Journal of Ecology* 92(3): 409-421. June 2004, *Oikos* 106(1): 151-157. July 2004, *Journal of Applied Ecology* 41(4): 604-614. Aug 2004 [Application of the fire-grazing interaction to restore a shifting mosaic on tallgrass prairie.], *Ecology Letters* 7(8): 661-668. Aug 2004, *Oikos* 107(1): 199-205. Sep 2004, *Conservation Biology* 18(5): 1435-1439. Oct 2004, *Weed Biology and Management* 4(4): 218-221. Dec 2004, *Restoration Ecology* 12(4): 568-574, 597-604. Dec 2004, *Austral. Ecology* 30(1): 79-90. Feb 2005, *Oikos* 108(2): 209-218. Feb 2005, *Journal of Applied Ecology* 42(1): 60-69. Feb 2005, *Global Change Biology* 11(2): 266-277. Feb 2005, *Restoration Ecology* 13(1): 20-28. Mar 2005, A. Fraser and K. Kindscher, "Spatial distribution of *Spartina pectinata* transplants to restore wet prairie." *Restoration Ecology* 13(1): 144-151. Mar 2005, *Journal of Animal Ecology* 74(2): 342-352. Mar 2005, *Global Change Biology* 11(3): 435-449. Mar 2005, *Journal of Ecology* 93(2): 384-394. Apr 2005, *Journal of Biogeography* 32(4): 719-735. Apr 2005, *Ecology Letters* 8(6): 604-611. June 2005, *Restoration Ecology* 13(2): 312-317, 380-389, 413-424. June 2005.
- Species**
- S.* sp.
- in English: little bluestem, beardgrass, bunchgrass
- S. beckii* Killeen (for Stephan G. Beck, plant collector in Bolivia; see *Parodiana* 7: 20. 1992, *Anal. Jard. Bot. Madrid* 51: 58. 1993, *Brittonia* 46: 311. 1994, *Novon* 7: 246. 1997, *BioLlania* 6: 510. 1997, *Gram. Bolivia* 122. 1998, *Sida* 20(1): 15. 2002, *Novon* 13(1): 110. 2003)
- Bolivia. Perennial, caespitose, leaf blades linear acute, rooting at lower nodes, racemes erect, rhachis and pedicels ciliate, found in open savannah, campos, see *Annals of the Missouri Botanical Garden* 77(1): 184, f. 6. 1990.
- S. brevifolium* (Swartz) Nees ex Büse (*Andropogon bootanensis* Hook.f.; *Andropogon brevifolius* Sw.; *Andropogon brevifolius* var. *flaccidus* (A. Rich.) Hack.; *Andropogon debilis* Kunth; *Andropogon exsertus* Steud.; *Andropogon flaccidus* A. Rich.; *Andropogon floridus* Trin.; *Andropogon obtusifolius* Poir.; *Andropogon parviflorus* Roxb.; *Andropogon parviflorus* (R. Br.) Domin, nom. illeg., non *Andropogon parviflorus* Roxb.; *Andropogon parvifolius* Hitchc.; *Andropogon tenellus* Roxb.; *Andropogon tenellus* J. Presl, nom. illeg., non *Andropogon tenellus* Roxb.; *Holcus parviflorus* R. Br.; *Pollinia brevifolia* (Sw.) Spreng.; *Pollinia vaginata* Spreng.; *Schizachyrium bootanense* (Hook.f.) A. Camus; *Schizachyrium brevifolium* (Swartz) Büse; *Schizachyrium brevifolium* var. *flaccidum* (A. Rich.) Stapf; *Schizachyrium parvifolium* (Hitchc.) Borhidi & Catasús; *Sorghum brevifolium* (Sw.) Kuntze)
- Southeast Asia, India, Bhutan. Annual or perennial, loosely tufted, delicate, slender, spreading, decumbent, straggling, trailing, mat-forming, stoloniferous, long runners, deep reddish purple leaf sheath loose and keeled, short blunt leaf blades oblong and linear, ligule a shallow membrane, slender spike-like racemes, alternate pairs of sessile or stalked spikelets, sessile spikelet lanceolate, lower glume flat, upper glume hyaline, paleas absent, native pasture species, fodder grass, good grazing, low food value, ruderal, in rocky places with poor soil, lowlands, paddy fields, damp ground, campos, shaded sites, abandoned cultivations, along roadsides, see *Nova Genera et Species Plantarum seu Prodrromus* 26. 1788, *Encyclopédie Méthodique, Botanique Suppl.* 1: 583. 1810, *Prodrromus Florae Novae Hollandiae* 199. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 11, 13. 1815, *Flora Indica; or Descriptions ...* 1: 259, 277. 1820, *Révis. Gram.* 1: Suppl. xxxix. 1830, *Reliquiae Haenkeanae* 1(4-5): 335. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 265. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 488. 1833, *Tentamen Florae Abyssinicae ...* 2: 452. 1850,

Plantae Junghuhnianae 3: 359. 1854, *Synopsis Plantarum Glumacearum* 1: 366. 1854, *Genera Plantarum* 3(2): 1127. 1883, *Monographiae Phanerogamarum* 6: 364. 1889, *Revisio Generum Plantarum* 2: 791. 1891, *The Flora of British India* 7(21): 166-167. 1897 [1896] and *Contr. U.S. Natl. Herb.* 12: 143. 1908, *Bibliotheca Botanica* 85(2): 263. 1915, *Flora of Tropical Africa* 9: 188. 1917, *Manual of the Grasses of the West Indies* 391. 1936, *Acta Botanica Academiae Scientiarum Hungaricae* 26(3-4): 258. 1980[1981], *Taxon* 34: 159-164. 1985.

in Spanish: serillo dulce

in Guinea-Bissau: encheré

in Nigeria: jan rauno, takrumo, zomo

in Senegal: hat u blek

in Thailand: ya nang takkataen, ya rang takkataen

S. cirratum (Hackel) Wooton & Standl. (*Andropogon cirratus* Hack.; *Andropogon lolioides* E. Fourn. ex Hemsl.; *Andropogon lolioides* E. Fourn.; *Andropogon scoparius* subvar. *lolioides* (E. Fourn.) Hack.; *Schizachyrium cirratum* (Hack.) Nash, nom. illeg., non *Schizachyrium cirratum* (Hack.) Wooton & Standl.; *Schizachyrium scoparium* subvar. *lolioides* (E. Fourn.) Roberty; *Schizachyrium tenerum* var. *cirratum* (Hack.) Roberty; *Sorghum cirratum* (Hack.) Kuntze)

Northern America. Shrubby, spikelets and foliage pubescent, glaucous, good forage, in open savannahs, see *Flora Boreali-Americana* 1: 57. 1803, *Flora* 68(7): 119. 1885, *Biologia Centrali-Americana*;... *Botany* ... 3: 528. 1885, *Mexicanas Plantas* 2: 62. 1886, *Monographiae Phanerogamarum* 6: 384. 1889, *Revisio Generum Plantarum* 2: 791. 1891 and *Flora of the Southeastern United States* ... 59. 1903, *New Mexico Agricultural Experiment Station: Bulletin* 81: 30. 1912, *North American Flora* 17(2): 105. 1912, *Boissiera*. 9: 226, 229. 1960.

in English: Texas false bluestem, Texas beardgrass

in Mexico: popotillo texano

S. condensatum (Kunth) Nees (*Andropogon benthamianus* Steud.; *Andropogon condensatus* Kunth; *Andropogon condensatus* f. *condensatus*; *Andropogon condensatus* f. *lactiflorus* Hack.; *Andropogon condensatus* subsp. *condensatus*; *Andropogon condensatus* subsp. *corymbosus* Hack.; *Andropogon condensatus* subsp. *elongatus* Hack.; *Andropogon condensatus* subvar. *condensatus*; *Andropogon condensatus* subvar. *exserens* Hack.; *Andropogon condensatus* subvar. *lactiflorus* Hack.; *Andropogon condensatus* subvar. *latens* Hack.; *Andropogon condensatus* subvar. *typicus* Hack.; *Andropogon condensatus* var. *condensatus*; *Andropogon condensatus* var. *elongatus* (Hack.) Hack.; *Andropogon condensatus* var. *genuinus* Hack.; *Andropogon condensatus* var. *paniculatus* (Kunth) Hack.; *Andropogon condensatus* var. *typicus* Hack.; *Andropogon latifolius* Spreng.; *Andropogon lechleri* Steud. ex Lechler; *Andropogon lechleri*

Steud. ex Hack.; *Andropogon lhotskyi* Steud.; *Andropogon lhotskyi* Steud. ex E. Fourn., nom. illeg., non *Andropogon lhotskyi* Steud.; *Andropogon microstachyus* Desv.; *Andropogon microstachyus* Desv. ex Ham.; *Andropogon paniculatus* Lam.; *Andropogon paniculatus* Kunth, nom. illeg., non *Andropogon paniculatus* Lam.; *Andropogon paniculatus* var. *elongatus* (Hack.) Hack.; *Andropogon plumiger* Ekman; *Andropogon rectirhachis* E. Fourn.; *Andropogon rectirhachis* E. Fourn. ex Hemsl.; *Andropogon scoparius* Michx.; *Andropogon scoparius* J. Presl, nom. illeg., non *Andropogon scoparius* Michx.; *Cymbopogon condensatus* (Kunth) Spreng.; *Ischaemopogon latifolius* (Spreng.) Griseb.; *Ischaemum latifolium* (Spreng.) Kunth; *Pollinia microstachya* (Desv.) Desv.; *Pollinia microstachya* (Desv. ex Ham.) Desv.; *Pollinia scoparia* (Michx.) Spreng.; *Schizachyrium bimucronatum* Roseng., B.R. Arrill. & Izag.; *Schizachyrium condensatum* subvar. *elongatum* (Hack.) Roberty; *Schizachyrium condensatum* var. *paniculatum* (Kunth) Roberty; *Schizachyrium lactiflorum* (Hack.) Herter; *Schizachyrium microstachyum* (Desv. ex Ham.) Roseng., B.R. Arrill. & Izag.; *Schizachyrium microstachyum* subsp. *elongatum* (Hack.) Roseng., B.R. Arrill. & Izag.; *Schizachyrium mucronatum* Roseng., B.R. Arrill. & Izag.; *Schizachyrium neoscoparium* Herter; *Schizachyrium paniculatum* (Kunth) Herter; *Schizachyrium plumigerum* (Ekman) Parodi; *Schizachyrium scoparium* (Michx.) Nash; *Sorghum condensatum* (Kunth) Kuntze; *Sorghum condensatum* var. *lactiflorum* (Hack.) Hack. ex Kuntze; *Sorghum scoparium* (Michx.) Kuntze; *Spodiopogon latifolius* (Spreng.) Nees (to commemorate the Austro-Hungarian (born in Poland, Lemberg, Lwów, Galicia) naturalist Johann (Jan) Lhotsky (Lhotzky), 1800-ca. 1860/1866, physician, M.D. Wien 1830, plant collector, traveler explorer, writer, Brazil 1831, New South Wales 1832-1836, Tasmania from 1836 to 1838, wrote *A Journey from Sydney to the Australian Alps*, undertaken in the months of January, February, March, 1834. Sydney 1835, *Hunger and Revolution*. [An anti-Corn-Law tract.] [1843] and *On Cases of Death by Starvation*. 1844. See [Johann Lhotsky], *Illustrations of the Present State and Future Prospects of the Colony of New South Wales*. Sydney 1835; J.H. Barnhart, *Biographical notes upon botanists*. 2: 378. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. 281-282. 1845; J.C. Schauer, in *Linnaea*. 10: 309. 1836; Douglas Pike, editor, *Australian Dictionary of Biography*. 2: 114-115. 1967; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 199. 1964; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. 223-226. Hordern House, Sydney 1987)

Tropical and subtropical America. Annual or short-lived perennial, caespitose, erect, robust, glabrous, unbranched and branched, lower culm internodes stout, sheath keeled and glabrous, ligule a firm membrane, leaf blades linear acute, inflorescence variable, numerous solitary flexuous racemes subtended by spathes, spathes involute or flattened,

sessile spikelets narrowly ovate to lanceolate, pedicellate spikelet scarcely developed and sterile, lower glume smooth, weed, forage, along roadsides, mesic shrubland and grassland, suspected toxicity, the roots have been used as a diuretic and sudorific, decoction of roots is diuretic and emollient, the toxic fungus *Claviceps purpurea* (Fr.) Tulasne found on some species of *Andropogon*, grassy places, open fields, savannahs, along roadsides, see *Flore de France* 3: 633. 1778, *Flora Boreali-Americana* 1: 57. 1803, *Nova Genera et Species Plantarum* 1: 188. 1815 [1816], *Plantarum Minus Cognitarum Pugillus* 2: 13-14. 1815, *Fundamenta Agrostographiae* 192. 1820, *Systema Vegetabilium, editio decima sexta* 1: 286, 289. 1825, *Prodromus Plantarum Indiae Occidentalis* 8-9. 1825, *Révision des Graminées* 168. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 333-334, 360. 1829, *Reliquiae Haenkeanae* 1: 338. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 174. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 494. 1833, *Synopsis Plantarum Glumacearum* 1: 382, 384. 1854, *Berberides Americae Australis* 56. 1857, *Flora of the British West Indian Islands* 560. 1864, *Genera Plantarum* 3(2): 1127. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 529. 1885, *Mexicanas Plantas* 2: 61. 1886, *Monographiae Phanerogamarum* 6: 388. 1889, *Revisio Generum Plantarum* 2: 791-792. 1891, *Revisio Generum Plantarum* 3(2): 368. 1898 and *Flora of the Southeastern United States ...* 59. 1903, *Anales del Museo Nacional de Buenos Aires* 13: 417. 1906, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 7, t. 1, f. 2, t. 6, f. 1. 1911, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Revista Sudamericana de Botánica* 7(6-8): 193. 1943, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 229-230. 1960, *Revista Argentina de Agronomía* 28: 122. 1962, *Boletín de la Facultad de Agronomía de la Universidad de la Republica, Montevideo* 103: 32, 35, 37, f. 8. 1968.

in English: Colombian false bluestem, little bluestem, bush beardgrass

in Mexico: cola de venado, zacate de sabana

S. crinizonatum S.T. Blake

Australia. Annual, solitary or tufted, more or less spreading, see *Contributions from the Queensland Herbarium* 17: 22. 1974.

S. cubense (Hack.) Nash (*Andropogon cubensis* Hack.; *Schizachyrium scoparium* subvar. *cubense* (Hack.) Roberty; *Sorghum cubense* (Hack.) Kuntze)

Cuba. See *Flora* 68(7): 121. 1885, *Revisio Generum Plantarum* 2: 791. 1891 and *North American Flora* 17(2): 109. 1912, *Boissiera*. 9: 229. 1960.

S. delavayi (Hackel) Bor (*Andropogon bootanensis* Hook.f.; *Andropogon delavayi* Hack.; *Eremopogon delavayi* (Hack.) A. Camus; *Schizachyrium bootanense* (Hook.f.) A. Camus)

(species dedicated to the French botanist Pierre Jean Marie Delavay, 1834-1895, missionary and plant collector in China; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 436. 1965; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. 236-239. London 1969; Adrien René Franchet (1834-1900), *Plantae delavayanae* plantes de Chine recueillies au Yun-nan par l'Abbé Delavay. [Collector the Abbé Pierre Jean Marie Delavay.] Paris 1889 [-1890])

Asia, Bhutan. Rhizomatous, perennial, wiry, erect, unbranched, growing in open areas, rocky places, see *Monographiae Phanerogamarum* 6: 404-405. 1889, *The Flora of British India* 7(21): 166-167. 1897 [1896] and *Annales de la Société Linnéenne de Lyon, sér. 2*, 68: 208. 1921 [1922], *Ann. Société Linnéenne de Lyon* 70: 90. 1923, *Indian Forest Records, Botany* 1: 95. 1939.

S. dolosum S.T. Blake

Australia. See *Contributions from the Queensland Herbarium* 17: 16-29, f. 1G, 5. 1974.

S. exile (Hochst.) Pilger (*Andropogon exilis* Hochst.; *Schizachyrium exile* (Hochst.) Stapf, nom. illeg., non *Schizachyrium exile* (Hochst.) Pilg.; *Schizachyrium inclusum* Stent)

Tropical Africa to Asia. Annual, tufted or loosely tufted, slender, erect, leaf blade expanded, ligule short and membranous, leaf sheaths rounded to slightly keeled, leaves with tapering tips, inflorescence paniculate, racemes reddish tinged, small single spikes enclosed at the base by a spathe, each spike with its own spathe, rachis internodes slender villous, a tuft of spreading hairs from each joint, pioneer grass, used for coarse matting and for thatching, chopped and mixed with clay used for building huts, low grazing value, grazed only while young, unpalatable in dry seasons, a common weed of cultivated fields, found in open places, sandy loam, roadsides, poor dry soils, disturbed gravelly sites, bush and woodland margins, low-lying areas, see *Flora* 27: 241. 1844 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 412. 1914, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 54: 284. 1917, *Flora of Tropical Africa* 9(2): 191. 1917, *Bothalia* 1(3): 172-174, t. 2. 1922.

in English: red grass

in Arabic: geishsh an naar

in India: nale hullu

in Niger: ajêghar-zaggaren, hamary, jâ'n bako, jâ'n ramno, kâlawa kiné, subcirey, subu kirey, wadéhu

in Nigeria: acho, datse, datsi, dogo, don'si, farin shibe, gamba, geishsh an naar, geronu, jam, jan, jan baiye, jan bako, jan baku, jan baujéé, jan ramnoo, jan rano, jan raunoo,

kumbura tsuuli, kyauria, leleurie, ngarmasam, ngirmasan, rauno, tidingho

in Senegal: holo, mambil hon, mbati ogay, ndiebel, perland

in Upper Volta: bomodo, hudo nai, hudo wodeeho, uonga

in Yoruba: leleurie

S. fragile (R. Br.) Camus (*Andropogon fragilis* R. Br.; *Andropogon obliquiberbis* Hack.; *Schizachyrium obliquiberbe* (Hack.) A. Camus; *Sorghum obliquiberbe* (Hack.) Kuntze)

Australia, Western Australia, Queensland, Northern Territory, New South Wales. Annual, sheath reddish, ligule truncate and ciliate, raceme with subtending reddish spathe, callus shortly bearded at the base, upper lemma with a geniculate awn, pedicellate spikelet reduced to a narrow lower glume, low forage value, delicate, sandy or stony soils, disturbed ground, see *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Flora* 68(7): 117. 1885, *Revisio Generum Plantarum* 2: 792. 1891 and *Journal of the Linnean Society, Botany* 36(253): 372-373. 1904, *Philippine Journal of Science* 1(Suppl.): 267. 1906, *An Enumeration of Philippine Flowering Plants* 1: 45. 1922, *Annales de la Société Linnéenne de Lyon, sér. 2*, 70: 89. 1923, *Notulae Systematicae. Herbarium du Muséum de Paris* 4: 87. 1923, *A Handbook to the Flora of Ceylon* 6: 334. 1931, *Acta Botanica Neerlandica* 1: 338. 1953, *Reinwardtia* 2(2): 337-338. 1953, *Boissiera*. 9: 222. 1960.

in Thailand: ya rang takkataen

S. gaumeri Nash (*Andropogon gaumeri* (Nash) Hitchc.; *Schizachyrium gaumeri* Hitchc.) (after George Franklin Gaumer, 1850-1929, botanical collector in Honduras and Mexico)

Mexico. See *North American Flora* 17(2): 102. 1912, *Contributions from the United States National Herbarium* 17(3): 202. 1913.

S. gracile (Spreng.) Nash (*Andropogon gracilis* Spreng.; *Andropogon juncifolius* Desv. ex Ham.; *Schizachyrium scoparium* subvar. *gracile* (Spreng.) Roberty; *Sorghum gracile* (Spreng.) Kuntze)

South America, the Caribbean. See *Prodromus Plantarum Indiae Occidentalis* 9. 1825, *Systema Vegetabilium, editio decima sexta* 1: 284. 1825, *Revisio Generum Plantarum* 2: 791. 1891 and *Flora of the Southeastern United States* ...59, 60. 1903, *Boissiera*. 9: 229. 1960.

S. gracile (Spreng.) Nash var. *firmior* J. Jiménez Alm.

Santo Domingo. See *Anales Academia Republica Dominicana, Botánica* 1(1): 111. 1975.

S. gracile (Spreng.) Nash var. *gracile*

South America.

S. gracilipes (Hack.) A. Camus (*Andropogon gracilipes* Hack.; *Sorghum gracilipes* (Hack.) Kuntze)

Brazil to Argentina. Perennial, erect, weak, clumped, lower culm internodes slender, racemes flexuous, lower glume scaberulous, grassland, forest and forest edge, see *Flora* 68(7): 120. 1885, *Revisio Generum Plantarum* 2(3): 791. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 70: 90. 1923.

S. imberbe (Hackel) A. Camus (*Andropogon imberbis* Hack., nom. illeg., non *Andropogon imberbis* Steud.; *Andropogon imberbis* var. *genuinus* Hack.; *Andropogon salzmännii* (Trin.) Hack.; *Andropogon salzmännii* (Trin. ex Steud.) Hack.; *Andropogon salzmännii* var. *aristatus* Hack.; *Rottboellia salzmännii* Trin. ex Steud.; *Schizachyrium salzmännii* subsp. *imberbe* (Hack.) Roberty)

Southern America. Brittle inflorescences, awned, similar to *Schizachyrium salzmännii*, see *Synopsis Plantarum Glumacearum* 1: 361. 1854, *Flora* 68: 119. 1885, *Monographiae Phanerogamarum* 6: 380. 1889 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 341. 1909, *North American Flora* 17(2): 104. 1912, *Annales de la Société Linnéenne de Lyon, sér. 2*, 70: 89. 1923, *Boissiera*. 9: 224. 1960.

S. impressum (Hackel) A. Camus (*Andropogon impressus* Hack.)

India, Jammu, Kashmir. Endangered species, see *Österreichische Botanische Zeitschrift* 41: 49. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 70: 91. 1923.

S. jeffreysii (Hack.) Stapf (*Andropogon jeffreysii* Hack.) (M.D.W. Jeffreys, b. 1915, plant collector in Nigeria)

Tropical Africa, Transvaal, Namibia. Perennial, loosely tufted or tufted, leaves glabrous, racemes hairy, upper lemma bifid, usually in open habitats, veld, see *Proceedings of the Rhodesia Scientific Association* 7(2): 70. 1908, *Flora of Tropical Africa* 9: 198. 1919.

S. kelleri (Hackel) Stapf (*Andropogon kelleri* Hack.) (for Robert Keller, 1854-1939)

Africa, Ethiopia. Dry stony soils, see *Mémoires de l'Herbier Boissier* 20: 6. 1900.

S. kwiluense Vanderyst

Africa. See *Bulletin de la Société Botanique de Belgique* 15: 37. 1922.

S. lomaense A. Camus (*Anadelphia lomaensis* (A. Camus) Jacq.-Fél.)

Africa, Sierra Leone. Rare species, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 240. 1885 and *Journal d'Agriculture Tropicale et de Botanique Appliquée* 1(5-6): 210, t. 12, f. 1-6. 1954, *Adansonia* 1981(2): 145. 1981.

S. maclaudii (Jacq.-Fél.) S.T. Blake (*Schizachyrium brevifolium* var. *maclaudii* Jacq.-Fél.)

Tropical Africa, Colombia. Annual, slender, decumbent, flat leaf blades linear obtuse, loosely slender inflorescence,

sessile spikelet lower glume flat, provides good pasture, campos, see *Plantae Junghuhnianae* 3: 359. 1854 and *Revue internationale de botanique appliquée et d'agriculture tropicale* 33: 432, f. 5b. 1953, *Proceedings of the Royal Society of Queensland* 80: 76. 1969.

in Sierra Leone: fulufala, funfurena, kasoe, kirin kerolal

S. malacostachyum (J. Presl) Nash (*Andropogon malacostachyus* J. Presl; *Andropogon yucatanus* Swallen; *Schizachyrium brevifolium* subvar. *malacostachyum* (J. Presl) Roberty; *Schizachyrium curassavicum* Nash; *Schizachyrium malacostachyum* J. Presl; *Sorghum malacostachyum* (J. Presl) Kuntze)

North America, Mexico. Annual, along roadsides, see *Reliquiae Haenkeanae* 1(4-5): 337. 1830, *Plantae Junghuhnianae* 3: 359. 1854, *Revisio Generum Plantarum* 2: 792. 1891 and *North American Flora* 17: 102. 1912, *Torreyia* 13: 273. 1913, *Publications of the Carnegie Institution of Washington* 436: 353. 1934, *Boissiera*. 9: 236. 1960.

S. maritimum (Chapm.) Nash (*Andropogon maritimus* Chapman; *Andropogon scoparius* subsp. *maritimus* (Chapm.) Hack.; *Schizachyrium scoparium* subvar. *maritimum* (Chapm.) Roberty)

U.S. See *Flora Boreali-Americana* 1: 57. 1803, *Flora of the Southern United States* 668. 1883, *Monographiae Phanerogamarum* 6: 385. 1889 and *Flora of the Southeastern United States* ...59. 1903, *Boissiera*. 9: 230. 1960.

in English: gull false bluestem

S. mexicanum (Hitchc.) A. Camus (*Andropogon mexicanus* Hitchc.)

North America, Mexico. Perennial, herbaceous, good forage, see *Contributions from the United States National Herbarium* 17(3): 204. 1913.

in Mexico: tallo azul mexicano

S. microstachyum (Desv. ex Ham.) Roseng. B.R. Arrill. & Izag. (*Andropogon condensatus* subsp. *elongatus* Hack.; *Andropogon condensatus* var. *elongatus* (Hack.) Hack.; *Andropogon condensatus* var. *elongatus* Roberty; *Andropogon condensatus* var. *paniculatus* (Kunth) Hack.; *Andropogon condensatus* var. *typicus* Hack.; *Andropogon lechleri* Steud. ex Hack.; *Andropogon lhotskyi* Steud. ex E. Fourn., nom. illeg., non *Andropogon lhotskyi* Steud.; *Andropogon microstachyus* Desv. ex Ham.; *Andropogon paniculatus* Lam.; *Andropogon paniculatus* Kunth, nom. illeg., non *Andropogon paniculatus* Lam.; *Andropogon paniculatus* var. *elongatus* (Hack.) Hack.; *Andropogon paniculatus* var. *paniculatus*; *Andropogon plumiger* Ekman; *Andropogon scoparius* Michx.; *Andropogon scoparius* J. Presl, nom. illeg., non *Andropogon scoparius* Michx.; *Pollinia microstachya* (Desv. ex Ham.) Desv.; *Schizachyrium condensatum* (Kunth) Nees; *Schizachyrium condensatum* subvar. *elongatum* (Hack.) Roberty; *Schizachyrium condensatum* var. *paniculatum* (Kunth) Roberty; *Schizachyrium*

microstachyum subsp. *elongatum* (Hack.) Roseng., B.R. Arrill. & Izag.; *Schizachyrium microstachyum* subsp. *microstachyum*; *Schizachyrium neoscoparium* Herter; *Schizachyrium paniculatum* (Kunth) Herter; *Schizachyrium plumigerum* (Ekman) Parodi)

Southern America, Argentina, Brazil. Erect, slender, herbaceous, good forage, see *Flore de France* 3: 633. 1778, *Flora Boreali-Americana* 1: 57. 1803, *Nova Genera et Species Plantarum* 1: 188. 1815 [1816], *Prodromus Plantarum Indiae Occidentalis* 8-9. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 333-334. 1829, *Reliquiae Haenkeanae* 1: 338. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 174. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 494. 1833, *Mexicanas Plantas* 2: 61. 1886, *Monographiae Phanerogamarum* 6: 388. 1889 and *Anales del Museo Nacional de Buenos Aires* 13: 417. 1906, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 7, t. 1, f. 2, t. 6, f. 1. 1911, *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Revista Sudamericana de Botánica* 7(6-8): 193. 1943, *Boissiera*. 9: 229-230, 234. 1960, *Revista Argentina de Agronomía* 28: 122. 1962, *Boletín de la Facultad de Agronomía de la Universidad de la República, Montevideo* 103: 35, 37. 1968.

in Mexico: tallo cizaña azul

S. mitchelliana B.K. Simon

Australia. See *Austrobaileya* 3(1): 90, f. 7. 1989.

S. muelleri Nash (*Andropogon muelleri* (Nash) Hitchc.; *Schizachyrium muelleri* (Nash) Gould)

Mexico. See *North American Flora* 17(2): 106. 1912, *Contributions from the United States National Herbarium* 17(3): 204. 1913.

S. multinervosum Nash (*Andropogon multinervosus* (Nash) Hitchc. & Chase; *Schizachyrium tenerum* var. *multinervosum* (Nash) Roberty)

Cuba. See *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 336-338. 1829 and *North American Flora* 17(2): 109. 1912, *Contributions from the United States National Herbarium* 18(7): 280. 1917, *Boissiera*. 9: 226. 1960.

S. niveum (Swallen) Gould (*Andropogon niveus* Swallen)

U.S., Florida. Endangered species, see *Journal of the Washington Academy of Sciences* 31(8): 354, f. 7. 1941, *Brittonia* 19(1): 73. 1967.

in English: pinescrub bluestem

S. nodulosum (Hack.) Stapf (*Andropogon nodulosus* Hack.)

Tropical Africa. Annual, in rocky places, shallow gravelly soils, see *Flora* 68(7): 116. 1885 and *Flora of Tropical Africa* 9: 194. 1917.

in Upper Volta: hudo nai

S. occultum S.T. Blake

Australia. See *Contributions from the Queensland Herbarium* 17: 24-26, f. 1E, 5. 1974.

S. pachyarthron C.A. Gardner

Australia. Useful for erosion control, see *Flora of Western Australia* 1: 336. 1952.

S. paranjpyeanum (Bhide) Raizada & Jain (*Andropogon paranjpyeanus* Bhide; *Dichanthium paranjpyeanum* (Bhide) Clayton; *Eremopogon paranjpyeanus* (Bhide) Blatt. & McCann)

India, Karnataka, Maharashtra. Rare species, weak, delicate, leaves hairy, racemes solitary, lower glume of sessile spikelets oblong and obtuse, open rocky places, see *J. Proc. Asiat. Soc. Bengal* 7: 514, pl. iv. 1911, *Journal of the Bombay Natural History Society* 32: 427. 1928, *The Bombay Grasses* 97-98. 1935, *Proc. Indian Sci. Congress Abstr.* part 3: 130. 1953, *J. Bombay Nat. Hist.* 54: 861. 1957, *Grasses of Burma ...* 216. 1960, *J. Bombay Nat. Hist. Soc.* 70: 237, t. 4. 1973, *Kew Bulletin* 32(3): 579. 1978.

S. parvifolium (Hitchc.) Borh. & Catusus (*Andropogon parvifolius* Hitchc.)

Cuba. Endangered species, see *Manual of the Grasses of the West Indies* 391. 1936, *Acta Botanica Academiae Scientiarum Hungaricae* 26(3-4): 258. 1980 [1981].

S. perplexum S.T. Blake

Australia. See *Contributions from the Queensland Herbarium* 17: 14-16, f. 1B, 3. 1974.

S. platyphyllum (Franch.) Stapf (*Andropogon brevifolius* Sw.; *Andropogon brevifolius* var. *platyphyllus* Franch.; *Andropogon platyphyllus* (Franch.) Pilg., nom. illeg., non *Andropogon platyphyllus* Hack.; *Pollinia brevifolia* (Sw.) Spreng.; *Schizachyrium brevifolium* (Sw.) Nees ex Büse; *Sorghum brevifolium* (Sw.) Kuntze)

Sudan, Uganda. Annual or perennial, trailing, blunt leaf blades, good fodder, grazed by cattle, in marshy places, low lying areas, swampy sites, see *Nova Genera et Species Plantarum seu Prodrromus* 26. 1788, *Plantarum Minus Cognitarum Pugillus* 2: 13. 1815, *Plantae Junghuhnianae* 3: 359. 1854, *Revisio Generum Plantarum* 2: 791. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 324. 1895 [or 1893] and *Contr. U.S. Natl. Herb.* 12: 143. 1908, *Flora of Tropical Africa* 9: 188. 1917, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 166. 1940, *Taxon* 34: 159-164. 1985.

in Senegal: khat diambor, khat lek

S. praematurum (Fernald) C.F. Reed (*Andropogon praematurus* Fernald)

South America. See *Rhodora* 42(502): 413-415, pl. 626, f. 1-3. 1940, *Rhodora* 44(526): 383. 1942, *Phytologia* 67(6): 451. 1989.

S. pseudeulalia (Hosok.) S.T. Blake (*Microstegium pseudeulalia* Hosok.)

Australia. See *Transactions of the Natural History Society of Taiwan* 28: 151. 1938, *Proceedings of the Royal Society of Queensland* 80: 77. 1969.

S. pulchellum (Don ex Hook.) Stapf (*Andropogon pulchellus* D. Don ex Hook.; *Schizachyrium pulchellum* (D. Don) Stapf)

Tropical Africa. Perennial, creeping, prostrate, vigorous, stoloniferous, rooting at the nodes, spreading, useful for sand binding, coastal dunes, sandy places, sandy beaches, along rivers and streams, see *Niger Flora* 571. 1849 and *Flora of Tropical Africa* 9: 203. 1919.

in Senegal: bin blé

S. reedii (Hitchc. & Ekman) Borh. & Catusus (*Andropogon reedii* Hitchc. & Ekman; *Schizachyrium scoparium* subvar. *reedii* (Hitchc. & Ekman) Roberty)

The Caribbean, West Indies. See *Flora of the Southeastern United States ...* 59. 1903, *Manual of the Grasses of the West Indies* 390. 1936, *Boissiera.* 9: 230. 1960, *Acta Botanica Academiae Scientiarum Hungaricae* 26(3-4): 258. 1980 [1981].

S. rhizomatum (Swallen) Gould (*Andropogon rhizomatus* Swallen)

Florida, Northern America, U.S. See *Journal of the Washington Academy of Sciences* 31(8): 352, f. 6. 1941, *Brittonia* 19(1): 73. 1967.

in English: Florida false bluestem

S. riedelii (Trin.) A. Camus (*Andropogon riedelii* Trin.; *Andropogon riedelii* var. *multirameus* Hack.; *Andropogon semiberbis* (Nees) Kunth; *Schizachyrium riedelii* var. *multirameum* (Hack.) Henrard; *Schizachyrium sanguineum* (Retz.) Alston; *Schizachyrium sanguineum* subvar. *riedelii* (Trin.) Roberty; *Schizachyrium semiberbe* var. *humile* Nees; *Sorghum riedelii* (Trin.) Kuntze)

French Guyana, Suriname, Colombia and Brazil. Reddish racemes stiff and straight, found on sandy soils, see *Observationes Botanicae* 3: 25. 1783, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 336. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 263. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 489. 1833, *Monographiae Phanerogamarum* 6: 371. 1889, *Revisio Generum Plantarum* 2(3): 792. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 70: 88. 1924, *A Handbook to the Flora of Ceylon* 6: 334. 1931, *Flora of Suriname* 1(1): 434. 1943, *Boissiera.* 9: 222. 1960, *Kew Bulletin* 39(1): 172. 1984, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

S. ruderale W.D. Clayton

Tropical Africa. Annual, loosely tufted, browsed by stock only when young, low grazing value, see *Kew Bulletin* 19: 451. 1965.

in Upper Volta: hutarda, uonga

S. rupestre (K. Schum.) Stapf

Tropical Africa. Perennial, tufted, inflorescence with many barren branches, racemes hairy, upper lemma bifid, browsed by stock only when young, low grazing value, usually in moist areas, stony slopes, wet meadows, bush coastal bush, sandy loam, see *Flora of Tropical Africa* 9: 204. 1919.

S. salzmännii (Trin. ex Steud.) Nash (*Andropogon aristatus* Poir.; *Andropogon glabratus* Trin. ex E. Fourn., nom. illeg., non *Andropogon glabratus* (Brongn.) Steud.; *Andropogon imberbis* Steud.; *Andropogon imberbis* Hack.; *Andropogon imberbis* var. *genuinus* Hack.; *Andropogon imberbis* var. *muticus* Hack.; *Andropogon salzmännii* (Trin. ex Steud.) Hack.; *Andropogon salzmännii* (Trin. ex Steud.) Hitchc., nom. illeg., non *Andropogon salzmännii* (Trin. ex Steud.) Hack.; *Andropogon salzmännii* var. *aristatus* Hack.; *Apogonia glabrata* E. Fourn.; *Ischaemum aristatum* L.; *Rottboellia salzmännii* Trin. ex Steud.; *Schizachyrium imberbe* (Hack.) A. Camus; *Schizachyrium salzmännii* subsp. *imberbe* (Hack.) Roberty; *Sorghum salzmännii* (Trin. ex Steud.) Kuntze)

North America, Paraguay, Mexico to Argentina. Perennial, erect, glaucous, caespitose, shortly rhizomatous, leaf blades linear acuminate, lowest leaf sheaths keeled, fragile solitary racemes terminal and also axillary, internodes and pedicels glabrous, awned or awnless sessile spikelet glabrous or scabrous, pedicelled spikelet muticous, grassland, campos, scrub, stony places, similar to *Schizachyrium imberbe*, see *Species Plantarum* 2: 1049. 1753, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 585. 1811, *Synopsis Plantarum Glumacearum* 1: 361, 375. 1854, *Flora* 68: 119. 1885, *Mexicanas Plantas* 2: 63. 1886, *Monographiae Phanerogamarum* 6: 380. 1889, *Revisio Generum Plantarum* 2: 790. 1891 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 341. 1909, *North American Flora* 17(2): 104. 1912, *Contributions from the United States National Herbarium* 17(3): 204. 1913, *Annales de la Société Linnéenne de Lyon, sér. 2*, 70: 89. 1923 [1924], *Boissiera*. 9: 224. 1960.

S. sanguineum (Retz.) Alston (*Andropogon acuminatus* Swallen; *Andropogon caespitosus* Phil.; *Andropogon domingensis* (Spreng. ex Schult.) F.T. Hubb., nom. illeg., non *Andropogon domingensis* (Roem. & Schult.) Steud.; *Andropogon feensis* E. Fourn.; *Andropogon feensis* E. Fourn. ex Hemsl.; *Andropogon flavescens* J. Presl; *Andropogon hirtiflorus* (Nees) Kunth; *Andropogon hirtiflorus* Hook.f.; *Andropogon hirtiflorus* var. *brevipedicellatus* Beal; *Andropogon hirtiflorus* var. *feensis* (E. Fourn.) Hack.; *Andropogon hirtiflorus* var. *genuinus* Hack.; *Andropogon*

hirtiflorus var. *hirtiflorus*; *Andropogon hirtiflorus* var. *oligostachyus* (Chapm.) Hack.; *Andropogon hirtiflorus* var. *semiberbis* (Nees) Stapf; *Andropogon leptostachyus* Benth.; *Andropogon luxurians* Ekman; *Andropogon malacostachyus* J. Presl; *Andropogon myosurus* J. Presl; *Andropogon myosurus* var. *feensis* (E. Fourn.) Urbina; *Andropogon oligostachyus* Chapm.; *Andropogon pseudograya* Steud.; *Andropogon riedelii* Trin.; *Andropogon riedelii* var. *genuinus* Hack.; *Andropogon riedelii* var. *multirameus* Hack.; *Andropogon sanguineus* (Retz.) Merr.; *Andropogon sanguineus* var. *brevipedicellatus* (Beal) Y. Herrera; *Andropogon sanguineus* var. *oligostachyus* (Chapm.) Y. Herrera; *Andropogon scabriflorus* Rupr. ex Hack.; *Andropogon schottii* Rupr. ex Hack.; *Andropogon schottii* subvar. *asperiglumis* Hack.; *Andropogon schottii* subvar. *schottii*; *Andropogon schottii* subvar. *typicus* Hack.; *Andropogon semiberbis* (Nees) Kunth; *Andropogon semiberbis* subvar. *leptostachyus* (Benth.) Hack.; *Andropogon semiberbis* subvar. *pruinatus* Hack.; *Andropogon semiberbis* var. *genuinus* subvar. *pruinatus* Hack.; *Andropogon semiberbis* var. *humilis* Nees ex Túrpe; *Andropogon semiberbis* var. *incertus* Hack.; *Andropogon semiglaber* (Nash) Beetle; *Andropogon tabina* Steud. ex Lechler; *Andropogon tener* Curtiss ex Hack.; *Andropogon vaginatus* J. Presl; *Andropogon vaginatus* Elliott; *Andropogon velatus* Kunth; *Andropogon virginicus* var. *vaginatus* (Elliott) Alph. Wood; *Aristida domingensis* (Spreng. ex Schult.) Kunth; *Rottboellia sanguinea* Retz.; *Schizachyrium biciliatum* Roseng., B.R. Arrill. & Izag.; *Schizachyrium brevifolium* subvar. *malacostachyum* (J. Presl) Roberty; *Schizachyrium condensatum* var. *scabriflorum* (Rupr. ex Hack.) Roberty; *Schizachyrium domingense* (Spreng. ex Schult.) Nash; *Schizachyrium feense* (E. Fourn.) A. Camus; *Schizachyrium hirtiflorum* Nees; *Schizachyrium malacostachyum* (J. Presl) Nash; *Schizachyrium myosurus* (J. Presl) A. Camus; *Schizachyrium oligostachyum* (Chapm.) Nash; *Schizachyrium riedelii* (Trin.) A. Camus; *Schizachyrium riedelii* var. *multirameum* (Hack.) Henrard; *Schizachyrium sanguineum* subvar. *domingense* (Spreng. ex Schult.) Roberty; *Schizachyrium sanguineum* subvar. *feense* (E. Fourn.) Roberty; *Schizachyrium sanguineum* subvar. *hirtiflorum* (Nees) Roberty; *Schizachyrium sanguineum* subvar. *multirameum* (Hack.) Roberty; *Schizachyrium sanguineum* subvar. *myosurus* (J. Presl) Roberty; *Schizachyrium sanguineum* subvar. *riedelii* (Trin.) Roberty; *Schizachyrium sanguineum* subvar. *schottii* (Rupr. ex Hack.) Roberty; *Schizachyrium sanguineum* subvar. *semiberbe* (Nees) Roberty; *Schizachyrium sanguineum* var. *brevipedicellatum* (Beal) S.L. Hatch; *Schizachyrium sanguineum* var. *hirtiflorum* (Nees) S.L. Hatch; *Schizachyrium sanguineum* var. *oligostachyum* (Chapm.) S.L. Hatch; *Schizachyrium sanguineum* var. *sanguineum*; *Schizachyrium scabriflorum* (Rupr. ex Hack.) A. Camus; *Schizachyrium schottii* (Rupr. ex Hack.) Nash; *Schizachyrium semiberbe* Nees; *Schizachyrium semiberbe* var. *humile* Nees; *Schizachyrium semiglabrum* Nash;

Schizachyrium weberbaueri Pilg.; *Schizachyrium weberbaueri* var. *minus* Pilg.; *Sorghum hirtiflorum* (Nees) Kuntze; *Sorghum hirtiflorum* Kuntze; *Sorghum malacostachyum* (J. Presl) Kuntze; *Sorghum myosurus* (J. Presl) Kuntze; *Sorghum riedelii* (Trin.) Kuntze; *Sorghum scabriflorum* (Rupr. ex Hack.) Kuntze; *Sorghum schottii* (Rupr. ex Hack.) Kuntze; *Sorghum semiberbe* (Nees) Kuntze; *Streptachne domingensis* Spreng. ex Schult.; *Thelepogon sanguineus* (Retz.) Spreng. (named for the Austrian botanist Heinrich Wilhelm Schott, 1794-1865, traveler and plant collector, 1817-1821 to Brazil; see J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 3: 239. Boston 1965; Herma Newman Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 240. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; F.A. Stafleu and R.S. Cowan, *Taxonomic literature*. 5: 304-308. 1985)

Tropics. Perennial, very polymorphic, tufted, tussocky, robust, reddish, erect, creeping, sometimes shortly rhizomatous, branched from the upper nodes, leaf sheath smooth and glabrous, ligule a strongly curved membrane entire, leaf blades flat acute, narrow sparse compound inflorescence, rachis internodes and pedicels ciliate, racemes usually glabrous and straight at maturity, spikelets of two types and paired, sessile spikelet ciliate or glabrous, pedicelled spikelet male lanceolate acuminate or awned, fodder, a good pasture grass when young, used for thatching and matting, found in open grassland, cerrado, open bushland, sandy places, stony hillsides, near streams, among rocks, in bushveld, wet stream sides, dry or moist soils, riverbanks, see *Species Plantarum* 1: 82. 1753, *Species Plantarum* 2: 1046. 1753, *Observationes Botanicae* 3: 25. 1783, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 148. 1816, *Systema Vegetabilium* 2: 46, 788. 1817, *Mantissa* 2: 188. 1824, *Systema Vegetabilium, editio decima sexta* 1: 299. 1825 [1824], *Révision des Graminées* 1: 62. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 333-336. 1829, *Reliquiae Haenkeanae* 1(4-5): 336-337, 339. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 263. 1832, *Révision des Graminées* 2: 571. 1833, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 488-489. 1833, *Niger Flora* 571. 1849, *Plantae Junghuhnianae* 3: 359. 1854, *Synopsis Plantarum Glumacearum* 1: 365. 1854, *Berberides Americae Australis* 56. 1857, *Flora of the Southern United States* 581. 1860, *A Class-book of Botany* 808. 1861, *Linnaea* 33(3-4): 275. 1864, *Flora Brasiliensis* 2(3): 299. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 527. 1885, *Mexicanas Plantas* 2: 62. 1886, *Monographiae Phanerogamarum* 6: 370-372, 383. 1889, *Revisio Generum Plantarum* 2(3): 792. 1891, *Grasses of North America for Farmers and Students*

2: 44. 1896, *The Flora of British India* 7(21): 167. 1897 [1896], *Catálogo de Plantas Mexicanas* 379. 1897, *Flora Capensis* 7: 337. 1898 and *Handb. Fl. Ceylon* 5: 240. 1900, *Flora of the Southeastern United States ...* 59. 1903, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 6, t. 1, f. 1, t. 6, f. 2. 1911, *North American Flora* 17(2): 102-103, 105. 1912, *Proceedings of the American Academy of Arts and Sciences* 49(8): 493. 1913, *Philippine Journal of Science* 12(2): 101, 161. 1917, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 8(76): 452-453. 1923, *Annales de la Société Linn. de Lyon, sér. 2* 70: 88-89. 1923[1924], *A Handbook to the Flora of Ceylon* 6: 334. 1931, *Flora of Suriname* 1(1): 434. 1943, *Cytologia* 19: 97-103. 1954, *Grasses of Ceylon* 194. 1956, *Los Angeles County Museum Contributions in Science* 22: 1, f. 1. 1958, *Boissiera*. 9: 221-222, 230, 236. 1960, *Grasses of Burma ...* 216. 1960, *Gramíneas Uruguayas* 195, f. 80. 1970, *Brittonia* 30(4): 496. 1978, *Phycologia* 52(1): 11. 1982, *Fl. Novo-Galiciana* 14: 351. 1983, *Sida* 10(4): 321. 1984, *Leaflet* 39(1): 173. 1984, *Boletín de la Sociedad Botánica de México* 48: 22. 1988[1989], *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in English: crimson false bluestem, red autumn grass

in Mexico: pasto, popotillo, popotillo hirsuto, popotillo lanudo, tallo azul hirsuto

in Nigeria: gadega, jan datse, kyaure, pasi

in South Africa: rooiherfsgras, rooidekgras

in Upper Volta: hutarda, uonga, yantaare, yantaaje

in Yoruba: pasi

in Thailand: ya rang takkataen

S. sanguineum (Retz.) Alston var. *hirtiflorum* (Nees) Hatch (*Andropogon domingensis* (Spreng. ex J.A. Schultes) F.T. Hubbard, non Steud.; *Andropogon feensis* E. Fourn.; *Andropogon hirtiflorus* (Nees) Kunth; *Andropogon hirtiflorus* var. *brevipedicellatus* Beal; *Andropogon hirtiflorus* var. *feensis* (Fourn.) Hack.; *Andropogon hirtiflorus* var. *oligostachyus* (Chapman) Hack.; *Andropogon oligostachyus* Chapman; *Schizachyrium domingense* (Spreng. ex J.A. Schultes) Nash; *Schizachyrium feense* (Fourn.) A. Camus; *Schizachyrium hirtiflorum* Nees; *Schizachyrium sanguineum* var. *brevipedicellatum* (Beal) Hatch; *Schizachyrium sanguineum* var. *oligostachyum* (Chapman) Hatch)

U.S., Mexico. Erect, leaf blades ciliate or hispid, forage, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 334-336. 1829, *Révision des Graminées* 2: 571. 1833, *Mexicanas Plantas* 2: 62. 1886, *Monographiae Phanerogamarum* 6: 372. 1889, *Grasses of North America for Farmers and Students* 2: 44. 1896 and *Brittonia* 30(4): 496. 1978, *Sida* 10(4): 321. 1984.

S. sanguineum (Retz.) Alston var. *sanguineum* (*Andropogon semiberbis* (Nees) Kunth; *Rottboellia sanguinea* Retz.; *Schizachyrium semiberbe* Nees)

U.S. See *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 336. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 489. 1833 and *Cytologia* 19: 97-103. 1954.

S. scabriflorum (Rupr. ex Hack.) A. Camus (*Andropogon scabriflorus* Rupr. ex Hack.; *Schizachyrium condensatum* var. *scabriflorum* (Rupr. ex Hack.) Roberty; *Schizachyrium sanguineum* (Retz.) Alston; *Sorghum scabriflorum* (Rupr. ex Hack.) Kuntze)

Brazil, Bolivia, Paraguay. Annual, caespitose, erect, leaf blades flat linear glabrous, erect racemes straight, inflorescence slender and lax, sessile spikelet lanceolate with geniculate awn, pedicelled spikelet much reduced, open habitats, campos, savannah, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 333-334. 1829, *Flora Brasiliensis* 2(3): 299. 1883, *Revisio Generum Plantarum* 2: 792. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 70: 89. 1923, *Boissiera*. 9: 230. 1960.

S. scintillans Stapf (*Andropogon scintillans* (Stapf) Pilg.)

Tropical Africa, Sierra Leone. Annual, slender, good fodder for stock, on wet stony places, see *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 166. 1940.

in Sierra Leone: foni

S. scoparium (Michaux) Nash (*Andropogon flexilis* Bosc ex Poir.; *Andropogon halei* Alph. Wood; *Andropogon maderensis* Swallen; *Andropogon neomexicanus* Nash; *Andropogon praematurus* Fernald; *Andropogon praematurus* f. *hirtivaginatus* Fernald; *Andropogon praematurus* f. *praematurus*; *Andropogon purpurascens* Muhl. ex Willd.; *Andropogon scoparius* Michx.; *Andropogon scoparius* f. *calvescens* Fernald; *Andropogon scoparius* f. *scoparius*; *Andropogon scoparius* subsp. *euscoparius* Hack. ex Beal; *Andropogon scoparius* subsp. *genuinus* Hack.; *Andropogon scoparius* subvar. *caesius* Hack.; *Andropogon scoparius* subvar. *flexilis* (Bosc ex Poir.) Hack.; *Andropogon scoparius* subvar. *serpentinus* Hack.; *Andropogon scoparius* subvar. *simplicior* Hack.; *Andropogon scoparius* var. *flexilis* (Bosc ex Poir.) Hack.; *Andropogon scoparius* var. *frequens* F.T. Hubb.; *Andropogon scoparius* var. *genuinus* Fernald & Griscom; *Andropogon scoparius* var. *glaucescens* House; *Andropogon scoparius* var. *maritimus* Hack. ex L.H. Dewey; *Andropogon scoparius* var. *multirameus* Hack. ex Gatt.; *Andropogon scoparius* var. *neo-mexicanus* (Nash) Michx.; *Andropogon scoparius* var. *polycladus* Scribn. & C.R. Ball; *Andropogon scoparius* var. *scoparius*; *Andropogon scoparius* var. *septentrionalis* Fernald & Griscom; *Andropogon scoparius* var. *villosissimus* Kearney; *Andropogon spadiceus* Swallen; *Pollinia scoparia* (Michx.) Spreng.; *Schizachyrium acuminatum* Nash; *Schizachyrium littorale* (Nash) C. Bickn.; *Schizachyrium neo-mexicanum* (Nash) Nash; *Schizachyrium praematurum* (Fernald) C.F. Reed; *Schizachyrium praematurum* f. *hirtivaginatum* (Fernald) C.F. Reed; *Schizachyrium scoparium* f. *calvescens* (Fernald) C.F. Reed; *Schizachyrium scoparium* f.

villosissimum (Kearney) C.F. Reed; *Schizachyrium scoparium* subvar. *flexile* (Bosc ex Poir.) Roberty; *Schizachyrium scoparium* var. *frequens* (F.T. Hubb.) Gould; *Schizachyrium scoparium* var. *neomexicanum* (Nash) Hitchc.; *Schizachyrium scoparium* var. *polycladum* (Scribn. & C.R. Ball) C.F. Reed; *Schizachyrium spadiceum* (Swallen) Wipff; *Schizachyrium stoloniferum* var. *wolfei* H. De Selm; *Schizachyrium triaristatum* Nash; *Schizachyrium villosissimum* (Kearney) Nash; *Sorghum scoparium* (Michx.) Kuntze) (for Josiah Hale, botanical collector in the U.S., Louisiana)

Northern America, U.S., Mexico. Perennial bunchgrass, handsome, ornamental, greenish bluish coloration at the base of the stems, clumped, drought-tolerant, strong, slender stems, erect and more or less densely branched above, short papery ligule, leaves green or glaucous and purplish, peduncle enclosed by sheaths, sessile spikelet long-awned, stalked spikelet short-awned, useful for erosion control, revegetation, grazing, forage, used by wildlife for food and cover, weed species, potential seed contaminant, not recommended for wet or heavy clay soils, excellent for dry sandy soils, dunes, disturbed areas, occurs on old fields, roadsides and open woods, clearings, see *Flora Boreali-Americana* 1: 57. 1803, *Species Plantarum. Editio quarta* 4: 913. 1806, *Encyclopédie Méthodique, Botanique Suppl.* 1: 583. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 13. 1815, *A Class-book of Botany* edition 3 809. 1861, *The Tennessee Flora; With Special Reference to the Flora of Nashville* 97. 1887, *Monographiae Phanerogamarum* 6: 384. 1889, *Revisio Generum Plantarum* 2: 792. 1891, *Contributions from the United States National Herbarium* 2(3): 495. 1894, *Grasses of North America for Farmers and Students* 2: 46. 1896, *Bulletin of the Torrey Botanical Club* 25(2): 83. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 40-41. 1901, *Flora of the Southeastern United States* ...59-60. 1903, *North American Flora* 17(2): 107. 1912, *Rhodora* 19(222): 103. 1917, *New York State Museum Bulletin* 254: 68. 1924, *Proceedings of the Biological Society of Washington* 41: 15. 1928, *Rhodora* 37: 143, 144, 145, pl. 339, f. 1-2. 1935, *Rhodora* 42(502): 413-415, pl. 626, f. 1-3. 1940, *Rhodora* 44(526): 383. 1942, *Rhodora* 45(538): 390. 1943, *Proceedings of the Biological Society of Washington* 56: 82. 1943, *Boissiera*. 9: 229. 1960, *Brittonia* 19(1): 73. 1967, *Sida* 6(2): 114-115. 1975, J.G. Carmen and D.D. Briske, "Morphologic and allozymic variation between long-term grazed and nongrazed populations of the bunchgrass *Schizachyrium scoparium* var. *frequens*." *Oecologia* 66: 332-337. 1985, *Phytologia* 63(5): 410. 1987, *Phytologia* 67(6): 451. 1989, R.C. Anderson and A.E. Liberta, "Growth of little bluestem (*Schizachyrium scoparium*) (Poaceae) in fumigated and nonfumigated soils under various inorganic nutrient conditions." *American Journal of Botany* 76(1): 95-104. 1989, D.G. Williams and D.D. Briske, "Size and ecological significance of the physiological individual in the bunchgrass *Schizachyrium scoparium*." *Oikos* 62(1): 41-47. 1991,

G.B. Williamson, E.M. Obee and J.D. Weidenhamer, "Inhibition of *Schizachyrium scoparium* (Poaceae) by the allelochemical hydrocinnamic acid." *Journal of Chemical Ecology* 18: 2095-2105. 1992, R.C. Anderson, B.A.D. Hetrick and G.W.T. Wilson, "Mycorrhizal dependence of *Andropogon gerardii* and *Schizachyrium scoparium* in two prairie soils." *American Midland Naturalist* 132(2): 366-376. 1994, *Phytologia* 80(1): 35. 1996, D.R. Huff, J.A. Quinn, B. Higgins and A.J. Palazzo, "Random amplified polymorphic DNA (RAPD) variation among native little bluestem [*Schizachyrium scoparium* (Michx.) Nash] populations from sites of high and low fertility in forest and grassland biomes." *Molecular Ecology* 7(11): 1591-1597. Nov 1998, Daniel R. Taub and Manuel T. Lerdau, "Relationship between leaf nitrogen and photosynthetic rate for three NAD-ME and three NADP-ME C4 grasses." *Am. J. Bot.* 87: 412-417. 2000, J.B. West, J.F. Espeleta and L.A. Donovan, "Root longevity and phenology differences between two co-occurring savannah bunchgrasses with different leaf habits." *Functional Ecology* 17(1): 20-28. Feb 2003, G. Gregory Peterson and Christopher Neill, "Using soil 13C to detect the Historic Presence of *Schizachyrium scoparium* (Little Bluestem) grasslands on Martha's Vineyard." *Restoration Ecology* 11(1): 116-122. Mar 2003, Justin D. Derner et al., "Structural attributes of *Schizachyrium scoparium* in restored Texas Blackland Prairies." *Restoration Ecology* 12(1): 80-84. Mar 2004.

in English: bluestem, little false bluestem, little bluestem, broom beardgrass, prairie grass, wire grass, bunchgrass, prairie beardgrass

in Mexico: popotillo azul, popotillo cañuelo

S. scoparium (Michaux) Nash subsp. ***divergens*** (Hackel) Gandhi & Smeins (*Andropogon divergens* (Hack.) Andersson ex Hitchc.; *Andropogon scoparius* var. *divergens* Hack.; *Schizachyrium scoparium* var. *divergens* (Hack.) Gould)

Northern America, U.S. See *Monographiae Phanerogamarum* 6: 385. 1889 and *Brittonia* 19(1): 73. 1967, *Harvard Papers in Botany* 8: 68. 1996.

in English: eastern little bluestem

S. scoparium (Michaux) Nash subsp. ***littoralis*** (Nash) Gandhi & Smeins (also spelled ***littorale***) (*Andropogon littoralis* Nash; *Schizachyrium littorale* (Nash) E.P. Bicknell; *Schizachyrium scoparium* var. *littoralis* (Nash) Gould)

Northern America, Eastern U.S., Massachusetts. Stems crowded often decumbent at base, inflorescence villous, erosion control, revegetation, see *Manual of the Flora of the Northern States and Canada* 69. 1901, *Bulletin of the Torrey Botanical Club* 35(4): 182. 1908, *Harvard Papers in Botany* 8: 68. 1996.

in English: coastal little bluestem, seacoast bluestem, sea-coast beardgrass

S. scoparium (Michaux) Nash subsp. ***neomexicanum*** (Nash) Gandhi & Smeins (*Andropogon neomexicanus* Nash; *Andropogon scoparius* var. *neomexicanus* (Nash) Hitchc.; *Schizachyrium neomexicanum* (Nash) Nash; *Schizachyrium scoparium* var. *neomexicanum* (Nash) Gould)

Northern America, Mexico; U.S., New Mexico, Arizona. See *Bulletin of the Torrey Botanical Club* 25(2): 83. 1898 and *Proceedings of the Biological Society of Washington* 41: 163. 1928, *Harvard Papers in Botany* 8: 68. 1996.

in English: New Mexico little bluestem

S. scoparium (Michaux) Nash subsp. ***scoparium***

Northern America, British Columbia, U.S.

in English: little bluestem

S. scoparium (Michaux) Nash var. ***divergens*** (Hackel) Gould (*Andropogon divergens* (Hack.) Andersson ex A.S. Hitchc.; *Andropogon divergens* Andersson ex Hack.; *Andropogon scoparius* var. *divergens* Hack.; *Andropogon scoparius* var. *virilis* Shinnery; *Schizachyrium scoparium* subsp. *divergens* (Hack.) Gandhi & Smeins; *Schizachyrium scoparium* var. *virile* (Shinnery) Gould)

Northern America, U.S. See *Monographiae Phanerogamarum* 6: 385. 1889 and *Journal of the Washington Academy of Sciences* 23(10): 456. 1933, *Rhodora* 56(662): 36. 1954, *Brittonia* 19(1): 73. 1967, *Harvard Papers in Botany* 8: 68. 1996.

in English: eastern little bluestem

S. scoparium (Michaux) Nash var. ***littorale*** (Nash) Gould (*Andropogon littoralis* Nash; *Andropogon scoparius* var. *dulcis* Fernald & Griscom, also spelled *dulcis*; *Andropogon scoparius* var. *littoralis* (Nash) Hitchc.; *Schizachyrium littorale* (Nash) E.P. Bicknell; *Schizachyrium scoparium* subsp. *littorale* (Nash) Gandhi & Smeins)

Northern America, U.S. Sandy banks, see *Manual of the Flora of the Northern States and Canada* 69. 1901, *Rhodora* 8(95): 205. 1906, *Bulletin of the Torrey Botanical Club* 35(4): 182. 1908, *Rhodora* 37(436): 145, pl. 340, f. 1-2. 1935, *Brittonia* 19(1): 73. 1967, *Harvard Papers in Botany* 8: 68. 1996.

S. scoparium (Michaux) Nash var. ***neomexicanum*** (Nash) Hitchc. (*Andropogon neomexicanus* Nash; *Andropogon scoparius* var. *neo-mexicanus* (Nash) Michx.; *Schizachyrium neo-mexicanum* (Nash) Nash; *Schizachyrium scoparium* subsp. *neomexicanum* (Nash) Gandhi & Smeins; *Schizachyrium scoparium* var. *neomexicanum* (Nash) Gould, nom. illeg., non *Schizachyrium scoparium* var. *neomexicanum* (Nash) Hitchc.)

Northern America, Mexico, U.S., New Mexico, Arizona. See *Bulletin of the Torrey Botanical Club* 25(2): 83. 1898 and *North American Flora* 17(2): 107. 1912, *Proceedings of the Biological Society of Washington* 41: 15, 163. 1928,

Brittonia 19(1): 73. 1967, *Harvard Papers in Botany* 8: 68. 1996.

S. scoparium (Michaux) Nash var. **scoparium** (*Andropogon praematurus* Fern.; *Andropogon scoparius* Michx.; *Andropogon scoparius* var. *frequens* F.T. Hubbard; *Andropogon scoparius* var. *neomexicanus* (Nash) A.S. Hitchc.; *Andropogon scoparius* var. *polycladus* Scribn. & Ball; *Andropogon scoparius* var. *septentrionalis* Fern. & Grisc.; *Andropogon scoparius* var. *dulcis* Fern. & Grisc.; *Schizachyrium praematurum* (Fern.) C.F. Reed; *Schizachyrium scoparium* subsp. *neomexicanum* (Nash) Gandhi & Smeins; *Schizachyrium scoparium* var. *frequens* (F.T. Hubbard) Gould; *Schizachyrium scoparium* var. *neomexicanum* (Nash) Gould; *Schizachyrium scoparium* var. *polycladum* (Scribn. & Ball) C.F. Reed)

Northern America, U.S.

in English: New Mexico bluestem

S. scoparium (Michaux) Nash var. **stoloniferum** (Nash) J. Wipff (*Andropogon stolonifer* (Nash) A.S. Hitchc.; *Schizachyrium stoloniferum* Nash; *Schizachyrium stoloniferum* var. *wolfei* De Selm)

U.S. See *Flora of the Southeastern United States ...* 59. 1903, *American Journal of Botany* 2: 299. 1915, *Sida* 6(2): 114-115. 1975, *Phytologia* 80(1): 37. 1996.

S. scoparium (Michaux) Nash var. **virile** (Shinners) Gould (*Andropogon scoparius* var. *virilis* Shinners; *Schizachyrium scoparium* f. *virile* (Shinners) Gandhi & Smeins)

U.S. See *Rhodora* 56(662): 36. 1954, *Brittonia* 19(1): 73. 1967, *Harvard Papers in Botany* 8: 68. 1996.

S. semitectum (Swallen) Reeder (*Andropogon semitectus* Swallen)

America, Guatemala. See *Contributions from the United States National Herbarium* 29(9): 427. 1950, *Phytologia* 55(4): 252. 1984.

S. sericatum (Swallen) Gould (*Andropogon gracilis* Spreng.; *Andropogon sericatus* Swallen)

America, U.S. See *Systema Vegetabilium, editio decima sexta* 1: 284. 1825 and *Journal of the Washington Academy of Sciences* 31(8): 355, f. 8. 1941, *Brittonia* 19(1): 73. 1967.

S. spadiceum (Swallen) J. Wipff (*Andropogon spadiceus* Swallen; *Schizachyrium scoparium* (Michx.) Nash)

U.S. See *Flora Boreali-Americana* 1: 57. 1803 and *Flora of the Southeastern United States ...* 59. 1903, *Proceedings of the Biological Society of Washington* 56: 82. 1943, *Phytologia* 80(1): 35. 1996.

S. spicatum (Spreng.) Herter (*Andropogon condensatus* subsp. *elongatus* Hack.; *Andropogon consanguineus* Kunth; *Andropogon consanguineus* var. *genuinus* Hack.; *Andropogon consanguineus* var. *humilior* Hack.; *Andropogon intermedius* R. Br.; *Deyeuxia spicata* Spreng.; *Schizachyrium condensatum* subvar. *elongatum* (Hack.) Roberty;

Schizachyrium condensatum var. *intermedium* (Nees) Roberty; *Schizachyrium intermedium* Nees; *Schizachyrium spicatum* var. *breviarticulatum* Roseng., B.R. Arrill. & Izag.; *Schizachyrium spicatum* var. *spicatum*; *Sorghum condensatum* var. *intermedium* (Nees) Kuntze; *Sorghum consanguineum* (Kunth) Kuntze)

South America. Perennial, tufted, glaucous, stony soil, see *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Systema Vegetabilium, editio decima sexta* 1: 254. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 333-334. 1829, *Révision des Graminées* 1: Suppl. xxxix. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 494. 1833, *Flora Brasiliensis* 2(4): 298. 1883 [or 2(3): 298. 1883], *Revisio Generum Plantarum* 2(3): 791. 1891, *Revisio Generum Plantarum* 2(3): 368. 1898 and *Revista Sudamericana de Botánica* 6(5-6): 135. 1940, *Boissiera*. 9: 229. 1960, *Boletín de la Facultad de Agronomía de la Universidad de la Republica, Montevideo* 103: 29, f. 6. 1968.

S. stoloniferum Nash (*Andropogon stolonifer* (Nash) Hitchc.; *Schizachyrium scoparium* var. *stoloniferum* (Nash) Wipff)

U.S. See *Flora of the Southeastern United States ...* 59. 1903, *American Journal of Botany* 2: 299. 1915, *Phytologia* 80(1): 37. 1996.

S. sulcatum (Ekman) S.T. Blake (*Andropogon brevifolius* var. *leptatherus* Hack.; *Andropogon sulcatus* Ekman)

America. Annual or short-lived perennial, slender, tufted, scrambling, decumbent, delicate, ascending, leaf blades flat linear acute, inflorescence lax and slender, sessile spikelet linear with lower glume grooved, campos, see *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Monographiae Phanerogamarum* 6: 364. 1889 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 4, t. 1, f. 3, t. 6, f. 3. 1911, *Proceedings of the Royal Society of Queensland* 80(6): 78. 1969.

S. tenerum Nees (*Andropogon campestris* Kunth, nom. illeg., non *Andropogon campestris* Trin.; *Andropogon filiformis* Pers.; *Andropogon gracilis* Spreng.; *Andropogon gracilis* J. Presl, nom. illeg., non *Andropogon gracilis* Spreng.; *Andropogon leptophyllus* Trin.; *Andropogon neesii* Trin.; *Andropogon preslii* Kunth; *Andropogon tener* Curtiss ex Hack.; *Andropogon tener* (Nees) Kunth; *Andropogon tener* Muhlenb. ex Merr. & Hu; *Andropogon tener* subvar. *hirtiglumis* Henrard; *Andropogon tener* subvar. *pilosus* (Hack.) Hack.; *Andropogon tener* subvar. *scabriglumis* Hack.; *Andropogon tener* subvar. *typicus* Hack.; *Andropogon tener* var. *dubius* (Nees) Hack.; *Andropogon tener* var. *filiformis* (Nees) Hack.; *Andropogon tener* var. *genuinus* Hack.; *Andropogon tener* var. *neesii* (Trin.) Hack.; *Andropogon tener* var. *pilosus* Hack.; *Elionurus dubius* Nees; *Schizachyrium filiforme* Nees; *Schizachyrium tenerum* var. *filiforme* (Nees) Roberty; *Schizachyrium tenerum* var.

scabriglume (Hack.) Roberty; *Sorghum tenerum* (Nees) Kuntze)

Mexico and West Indies to northern Argentina. Perennial bunchgrass, slender, sparsely branched, tufted, erect or weakly ascending, perennating buds at the base of culms, wiry acuminate leaf blades filiform or linear, inflorescence a single straight raceme slender or stiff, racemes dark green, spikelets paired, sessile spikelet glabrous and awned or mucronate, pedicelled spikelet awnless or mucronate, fodder, grazed when young and tender, occurs on prairies and in sand hills, campos, cerrado, wet or dry fields, grassland, stony areas, similar to *Schizachyrium sanguineum*, see *Synopsis Plantarum* 1: 103. 1805, *Species Plantarum. Editio quarta* 4(2): 941. 1805 [1806], *Systema Vegetabilium, editio decima sexta* 1: 284. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 336-339, 358. 1829, *Reliquiae Haenkeanae* 1(4-5): 336. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 263-264. 1832, *Révision des Graminées* 2: 565, t. 197. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 489. 1833, *Flora Brasiliensis* 2(4): 301-302. 1883, *Monographiae Phanerogamarum* 6: 370, 379. 1889 and *Mededeelingen van's Rijks-Herbarium* 40: 42. 1921, *Musci Alleghanienses* 25: 42. 1949, *Boissiera*. 9: 226. 1960.

in English: slender false bluestem, slender bluestem

in Mexico: pasto

S. urceolatum (Hack.) Stapf (*Andropogon urceolatus* Hack.)

Tropical Africa, Sudan, Senegal, Sahel. Annual, erect, slender, tufted, wiry, leaf blades linear acute, sessile spikelet linear, lower glume keeled and winged, upper lemma bifid, pedicelled spikelet sterile, rhachis internodes stout glabrous, on shallow stony soil, see *Flora* 68(7): 115. 1885 and *Flora of Tropical Africa* 9: 190. 1917.

in Upper Volta: hudo nai, hudonai

S. ursulus Stapf (*Andropogon ursulus* (Stapf) Pilg.)

Southern tropical Africa. Perennial, tufted, leaf sheaths yellowish, inflorescence yellowish and hairy, found in open habitats, veld, sandy places, sour veld, see *Flora of Tropical Africa* 9: 197. 1919, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 2. 14e: 166. 1940.

S. villosum (Poir.) Veldkamp (*Rottboellia villosa* Poir.)

America, West Indies. See *Encyclopédie Méthodique, Botanique* 6: 313. 1804 and *Blumea* 31(2): 306. 1986.

Schizopogon Rchb. ex Spreng. = *Schizachyrium* Nees

From the Greek *schizo* "to split, divide" and *pogon* "beard."

Panicoideae, Andropogoneae, Andropogoninae, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 331-332. 1829, *Genera plantarum* edition 9, 1: 55. 1830, *Plantae Junghuhnianae* 3: 359. 1854, *Flora Australiensis: A Description ...* 7: 535. 1878, *Genera Plantarum* 3(2): 1127. 1883 and *Contributions from the United States National Herbarium* 46: 560-569. 2003.

Schizostachyum Nees = *Cephalostachyum* Munro, *Dendrochloa* C.E. Parkinson, *Leptocanna* L.C. Chia & H.L. Fung, *Leptocanna* (N.H. Xia) L.C. Chia & H.L. Fung, *Neohouzeaua* A. Camus, *Pseudostachyum* Munro, *Teinostachyum* Munro

From the Greek *schizo*, *schizein* "to split, divide" and *stachys* "spike, ear of corn," alluding to spacing of spikelets.

About 30-60 species, temperate Southeast Asia, Thailand, Malesia, Madagascar, India. Bambusoideae, Bambusodae, Bambuseae, Melocanninae, sympodial, perennial, variable, slender, thin- or thick-walled, arborescent or shrubby, woody and persistent, unarmed, closely tufted, usually erect to suberect with drooping tips, scandent or not scandent, somewhat scrambling, bending, manifold branching, many short branches at each node, sheath shedding late, young shoots covered with pale hairs, rhizomes pachymorph, flowering culms leafy, internodes hairy, ligule a membrane fringed or unfringed, leaves auriculate, stalked leaf blades, plants bisexual, pseudospikelets short or long with several small empty bracts, spikelets slender cylindrical not flattened, 1-4 perfect flowers and 1-2 terminal vestigial flowers, glumes present or usually absent, lemmas acuminate to pungent, palea 2-keeled, uppermost palea convolute, lodicules present or absent, stamens usually 6 or 4-6 free or united, ovary glabrous with an apical appendage, 2-3 plumose stigmas white or reddish, found growing wild, sometimes cultivated, savannah, along roadsides, wastelands, lowlands, in forest and forest margins, type *Schizostachyum blumei* Nees, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 43. 1820 [1821], *Agrostologia Brasiliensis* 534-535. 1829 [or *Flora Brasiliensis seu Enumeratio Plantarum in Brasilia ... Stuttgartiae et Tubingae* 1829-1833], *Pl. Ind. Bat. Or.* 116: 1857, *Transactions of the Linnean Society of London* 26(1): 126, 138-139, 141-143, t. 3, 4. 1868 and *Bulletin du Muséum National d'Histoire Naturelle* 28(1): 100-101. 1922, *The Indian Forester* 59: 707. 1933, *J. Wash. Acad. Sci.* 24: 541-548. 1934, *Lingnan Science Journal* 14: 567-602. 1935, *Blumea* 2: 86-97. 1936, *Bulletin de la Société Linnéenne de Lyon* 9: 185-188. 1945, *Fieldiana, Botany* 24(2): 38-331. 1955, *Taxon* 6(7): 201, 206, 209. 1957, *Gard. Bull. Singapore* 16: 31. 1958, *Acta Phytotaxonomica Sinica* 19(2): 212-214, pl. 7. 1981, *Kew Bulletin* 38(2): 321-331. 1983, *Grass Systematics and*

Evolution 225-238. 1987, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 272-283. Calcutta 1989, *Journal of Tropical and Subtropical Botany* 1(1): 5. 1993, *Plant Resources of South-East Asia (PROSEA)* (Pl Res SEAs) Vol. 7: 130-145, 153-154. 1995 [Bamboos], *Reinwardtia* 11(2): 57-152. 1997, *Contributions from the United States National Herbarium* 39: 36, 68, 112. 2000, *Annals of the Association of American Geographers* 93(3): 624-635. Sep 2003.

Species

S. sp.

Asia.

in Indonesia: awi tamiyang, bambu suling, bambu tamiyang sonoh, buluh, buluh bamban, buluh kerbau, buluh mam-pouw, buluh mape, buluh mpe, buluh mumpo, buluh serik, buluh tangkal, kalae, kauayan, pring andeng, pring wuluh, pring wuluh andeng, tiying kedampal, tiying buluh

in Vietnam: mang, mang nua

S. aciculare Gamble

Southern Thailand, Peninsular Malaysia. Slender, small, erect or scrambling, pendulous tip, culm sheath blades erect to reflexed, pseudospikelets long and slender, food, used for making handicrafts, growing in forest, see *Ann. Roy. Bot. Gard. Calcutta* 7: 117, pl. 104. 1896 and *Gard. Bull. Sing.* 16: 39. 1958.

in Malaysia: buloh akar, buloh padi

in Thailand: kasian, lawk, lok, lot, mai plong yao

in Vietnam: mang, mang nua

S. aequiramosum Widjaja

Indonesia. See *Reinwardtia* 11(2): 131. 1997.

S. alopecurus (Stapf) Holttum (*Oxytenanthera alopecurus* Stapf)

Indonesia. See *Bulletin of Miscellaneous Information Kew* 1909: 266. 1909, *Kew Bulletin* 21: 280. 1967.

S. arunachalensis Naithani

India, Arunachal Pradesh. Semiscandent, erect at first and then pendulous, nodes swollen with thick ring of brown hairs, internodes smooth, leaf sheaths with reticulate auricles, leaves oblong-lanceolate, occurs in wet mountain slopes, see *Indian Forester* 118(3): 230. 1992.

in India: tuchur

S. atrocingulare Widjaja

Indonesia. See *Reinwardtia* 11(2): 132. 1997.

S. bamban Widjaja

Indonesia. See *Reinwardtia* 11(2): 134. 1997.

S. beddomei (Fischer) Majumdar (*Teinostachyum beddomei* Fischer; *Teinostachyum wightii* Beddome)

India, Kerala, Karnataka. Semiscandent, at first erect, leaning, pendulous branches, nodes with a ring, culm sheaths papery, large terminal drooping inflorescence, spikes bracteate, spikelets with 2-3 fertile florets and 1 terminal incomplete floret, glumes mucronate, lemmas mucronate, paleas 2-keeled, stamens exerted, ovary smooth, 2 short plumose stigmas, species flower at long intervals and die after flowering, culms used for making mats and for fencing, see *Flora of the Presidency of Madras* 10: 1860. 1934, *Kew Bull.* 1935: 148. 1935, *Fl. Ind. Enumerat.-Monocot.* 281. 1989.

in India: chittu, mai-eettari, nanyura

S. blumei Nees (also spelled *blumii*) (*Melocanna longispiculata* Kurz; *Melocanna zollingeri* Steud. var. *longispiculata* Kurz ex Munro; *Schizostachyum longispiculatum* (Kurz ex Munro) Kurz)

Borneo, Sumatra. Slender, long, erect or leaning over older culms, drooping or arching, with long pendulous tips, densely tufted, compactly clumped, bushy, sympodial, branching from midculm nodes upward, young shoots erect and slender, young culms rough to scabrous then smooth, nodes not swollen, white waxy rings below the nodes, culm sheath blade erect and narrowly lanceolate, sheath ligule very short and irregularly dentate, sheath auricles bristly, large leaf blades round at the base and long lanceolate to tapering, long pseudospikelets, slender spikelets, 1 perfect floret and a rachilla extension with 1 vestigial floret, lemma pointed, lodicules absent, cultivated, used for making fishing rods and for musical instruments, flutes, related to *Schizostachyum latifolium* Gamble, found in lowland forests, wastelands, forest margins, along roadsides, along streams and rivers, dipterocarp forest, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829, *Catalogus plantarum quae in Horto botanico bogoriensi ...* 20. 1866, *Transactions of the Linnean Society of London* 26(1): 134. 1868, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 39: 89, t. 6, f. 1. 1870 and *Blumea* 2: 86-97. 1936, *Kew Bulletin* 38(2): 330-331. 1983.

in Brunei: buluh lacau

in Indonesia: awi tamiyang

in Malaysia: buloh anap, bongulungul, bongulungun, tom-botuon

in Thailand: hia, miang fai, miang phai, wa klo, waa klo

S. brachycladum (Kurz ex Munro) Kurz (*Melocanna brachyclada* Kurz; *Schizostachyum brachycladum* (Kurz) Kurz; *Schizostachyum brachycladum* (Munro) Kurz; *Schizostachyum brachycladum* Kurz)

Southeast Asia. Sympodial, densely tufted, stiffly erect, straight, thin-walled, smooth, closely growing, slender tips drooping, nodes not swollen, internodes smooth, short branches from the midculm nodes upward, culm sheaths rigid and persistent, blades of culm sheaths triangular with

acuminate apex, sheath ligule entire, sheath auricles small and bristly, 6-10 or more oblong-lanceolate leaves on each twig, leaves pubescent beneath and glabrous above, inflorescences terminating leafy branches, pseudospikelets borne in dense clusters at the distal nodes of a leafy shoots, 1-2 perfect florets and a rudimentary floret on a rachilla extension, palea with 2 short apical points, 3 lodicules, 6 stamens, 3 plumose stigmas, propagated by rhizome and culm cuttings, ornamental, often cultivated and naturalized, flowers continuously, useful for erosion control, young shoots bitter but edible, internodes used as cooking vessels for preparing a glutinous rice cake (the *lemang*), culms used for roofing and for making water containers, for weaving, growing wild or spontaneous, in disturbed or secondary forests, in wastelands, along roadsides, on well-drained sandy clays, hill slopes, on sandy loamy soil, disturbed areas, secondary forests, related to *Schizostachyum zollingeri* Steudel, see *Catalogus plantarum quae in Horto botanico bogoriensi ...* 20. 1866, *J. Asiat. Soc. Bengal. Part 2. Natural History* 39(2): 89, t. 6, f. 2, 29. 1870 and *Gardens' Bulletin Singapore* 16: 45-47. 1958, *Canopy International* 12(6): 5-7. 1986.

in Indonesia: buluh leman, buluh sero, buluh tolang, talang kuning (yellowish)

in Malaysia: buloh leman, buloh silau, buloh telang, buluh leman, buluh nipis, buluh padi, buluh pelang, buluh urat rusa

in the Philippine Islands: buho, kauayang, kauayang buho

in Sabah: buloh, buloh rugadding (yellowish), wuloh

in Thailand: kriap, mai pho, phai luaeng, phai po, phai por, po

S. brachycladum Kurz var. ***auriculatum*** Holttum

Indonesia, Singapore. Culm sheath auricles large, see *Gardens' Bulletin, Straits Settlements* 16: 47. 1958.

S. brachythyrus (K. Schumann) Holttum (*Oxytenanthera brachythyrus* K. Schum.)

Indonesia. See *Die Flora von Kaiser Wilhelms Land* 23. 1889 and *Kew Bulletin* 21: 281. 1967.

S. capitatum (Munro) Majumdar (*Bambusa capitata* Trin.; *Schizostachyum capitatum* (Trin.) Rupr.)

India, Arunachal Pradesh, Sikkim, Meghalaya; Bhutan. Shrubby, scandent or semiscandent, subarborescent, pendulous, leaning, nodes not prominent, culm sheaths papery, leaves with a twisted tip, leaf sheaths glabrous and fimbriate in the throat, short ligule, globular inflorescence, sterile spikelets hidden by scales, fertile spikelets with 1-3 sterile florets at the base, 2 glumes, paleas nerved, 3 lodicules ciliate at the tip, 6 exerted stamens, ovary glabrous, 2 hairy stigmas, see *Genera Plantarum* 1: 236. 1789, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3(1):

626-627. 1835, *Bambuseae* 46-47, t. 17, f. 46. 1839, *Transactions of the Linnean Society of London* 26(1): 139. 1868 and *Fl. Ind. Enumerat.-Monocot.* 281. 1989.

in India: goba, gope bans, payong

S. capitatum (Munro) Majumdar var. ***capitatum*** (Gamble) Majumdar (*Cephalostachyum capitatum* Munro)

India. Shrubby, arborescent or subarborescent, semiscandent, pendulous, nodes not prominent, 3 lodicules, 6 stamens, ovary furrowed, 2 hairy stigmas, leaves used as fodder.

in India: gope bans, payong

S. capitatum (Munro) Majumdar var. ***decompositum*** (Gamble) Majumdar (*Cephalostachyum capitatum* Munro var. *decompositum* Gamble)

India, Sikkim, Meghalaya. Spikelets clustered, see *Fl. Ind. Enumerat.-Monocot.* 281. 1989.

S. castaneum Widjaja

Indonesia. See *Reinwardtia* 11(2): 134-136. 1997.

S. caudatum Backer ex Heyne (*Schizostachyum caudatum* Backer)

Indonesia, Sumatra. Densely tufted, thick-walled, erect, drooping tips, green to dull green, culm sheath light green to orange, erect sheath blade broadly triangular, sheath auricles long and bristly, inflorescence at the end of leafy branch, slender pseudospikelets, considered sacred by local people, see *De Nuttige Planten van Nederlandsch- Indië* 1: 304. 1927.

in Indonesia: bambu buta, buluh bungkok

S. chinense Rendle (*Leptocanna chinensis* (Rendle) L.C. Chia & H.L. Fung)

China. Resinous, see *Journal of the Linnean Society, Botany* 36: 448. 1904, *Acta Phytotaxonomica Sinica* 19(2): 212-214, pl. 7. 1981.

S. copelandii F. Mueller & Hackel

Papua New Guinea. See *Österreichische Botanische Zeitschrift* 46: 241. 1896.

S. cornutum Widjaja

Indonesia. See *Reinwardtia* 11(2): 136-137. 1997.

S. curranii Gamble

Southeast Asia, the Philippines. See *Philippine Journal of Science* 5: 277. 1910.

in the Philippine Islands: kauayan

S. cuspidatum Widjaja

Indonesia. See *Reinwardtia* 11(2): 137-138. 1997.

S. dielsianum (Pilger) Merr. (*Dinochloa dielsiana* Pilg.)

Southeast Asia. Sprawling, scandent, widely branched, linear leaves with rounded base, inflorescence with slender branches, medicinal, a refreshing beverage from a decoction of the rhizomes, growing in thickets and forests at low

altitude, see *Fragmenta Florae Philippinae* 2: 148. 1904, *Philippine Journal of Science* 1(Suppl.): 391. 1906.

in the Philippine Islands: bikal baboy, bikal boboi

S. diffusum (Blanco) Merrill (*Arundarbor diffusa* (Blanco) Kuntze; *Bambusa diffusa* Blanco; *Dinochloa diffusa* (Blanco) Merr.)

Southeast Asia, China, Philippines. See *Flora de Filipinas* 269. 1837, *Revisio Generum Plantarum* 2: 761. 1891 and *Philip. Govt. Lab. Bur. Bull.* 27: 93. 1905, *American Journal of Botany* 3: 62. 1916.

in the Philippine Islands: babui, baliaro, bikal, bikal-babi, bikal-babui, bikil, bolikao, bong-bong, butor, gimak, indi, inri, hindi, lilit, loob, mangnau, tagisi, usiu

S. dullooa (Gamble) Majumdar (*Neohouzeaua dullooa* (Gamble) Camus; *Teinostachyum dullooa* Gamble)

India, Assam, Meghalaya, Tripura, north Bengal. Tufted, more or less large, sometimes scandent, culms and culm sheaths variable, nodes prominent, thin walls, subulate blade, leaves oblong-lanceolate and acuminate, leaf sheaths ciliate on the edges, ligule long-fimbriate, slender spikelets 1-flowered, 2-4 empty glumes long mucronate, paleas 2-awned, 6 stamens, ovary glabrous, 3 short reddish stigmas, culms used for carrying water for making baskets and mats, umbrellas and small boxes, see *Annals of the Royal Botanic Garden. Calcutta.* 101. 1896 and *Bulletin du Muséum National d'Histoire Naturelle* 28(1): 101. 1922, *Fl. Ind. Enumerat.-Monocot.* 281. 1989.

in India: dullooa, püksalu, tokre bans, wadroo

S. dumetorum (Hance) Munro (*Bambusa dumetorum* Hance ex Walp.; *Bambusa dumetorum* Hance)

China. Semiscandent, top drooping or scandent, young culms greenish, pruinose ring below each joint, sheath green with purplish margins and top truncate, sheath ligule very low, sheath blade linear, leaves lanceolate with scabrous surface and glossy underside, rhizome with medicinal value, cultivated and ornamental, see Berthold Seemann (1825-1871), *The Botany of the Voyage of H.M.S. Herald* ... 424. London 1852-1857, *Annales Botanicæ Systematicæ* 3: 781. 1853, *Transactions of the Linnean Society of London* 26(1): 123, 136. 1868.

S. dumetorum (Hance) Munro var. *xinwuense* (Wen & J.Y. Chin) N.H. Xia (*Schizostachyum xinwuense* T.H. Wen & J.Y. Chin)

China. See *Journal of Bamboo Research* 1(1): 28-29, f. 6. 1982, *Journal of Tropical and Subtropical Botany* 1(1): 7. 1993.

S. fenixii Gamble (*Cyrtochloa fenixii* (Gamble) S. Dransf.)

Southeast Asia, the Philippines. Scandent, see *Philippine Journal of Science* 6: 189. 1913, *Kew Bulletin* 53(4): 861, 864, f. 2, 3A-J. 1998.

in the Philippine Islands: bolo, paua, puser

S. flavescens (Kurz) Majumdar (*Cephalostachyum flavescens* Kurz)

India, Andaman Islands, Myanmar. Evergreen, tufted, more or less arborescent, smooth, dull green turning yellow, nodes not prominent, culm sheaths smooth or covered with appressed hairs, leaves linear contracted at the base into a very short petiole, leaf sheaths glabrous, narrow inconspicuous ligule, bracteate spikelets, empty bract-like glumes, paleas 2-keeled, lodicules ciliate, ovary stipitate and smooth, 3 stigmas, see *Forest Flora of British Burma* 2: 564. 1877 and *Fl. Ind. Enumerat.-Monocot.* 281. 1989.

S. flexuosum Widjaja

Indonesia. See *Reinwardtia* 11(2): 138-140. 1997.

S. fuchsianum (Gamble) Majumdar (*Cephalostachyum fuchsianum* Gamble; *Schizostachyum latifolium* (Gamble) Majumdar)

India, Arunachal Pradesh, Sikkim; Bhutan, China. Arborescent, woody, semiscandent, soft, thin-walled, nodes prominent, culm sheath thin, leaves ovate-lanceolate with a long petiole, leaf sheaths long ciliate on the edges, ligule ciliate, globular inflorescence, spikelets elongate, glumes ovate, lemmas tessellate, paleas 2-keeled and mucronate, lodicules minutely ciliate, stamens exerted, 2 short stigmas, culms used for basket making, seeds edible, see *Annals of the Royal Botanic Garden. Calcutta.* 7: 107, t. 94. 1896 and *Fl. Ind. Enumerat.-Monocot.* 281. 1989, *Edinburgh Journal Botany* 51: 29. 1994.

in India: palom

S. funghomii McClure

China. Straight or slightly bending, sheath hard but brittle, sheath auricles tiny, sheath blade retroflexed, leaves oblong-lanceolate its underside covered with pubescence, cultivated, used for weaving, papermaking, see *Lingnan Science Journal* 14(4): 585-588, f. 1, 3, t. 34, 39, f. 4-7. 1935.

S. glaucifolium (Rupr.) Munro (*Bambusa glaucifolia* Rupr.)

Pacific, Hawaii. Perennial, subshrub to shrub, sacred uses, used for construction of walls, canals to transport water, fencing, containers for liquids, see *Bambuseae* 57. 1839, *Transactions of the Linnean Society of London* 26(1): 123, 137. 1868.

in English: Polynesian 'ohe

in Hawaii: 'ohe

in the Pacific: 'ofe, 'ofe para, 'ofe tea, 'ofe 'ura, 'ohe

S. glaucocladum Widjaja

Indonesia. See *Reinwardtia* 11(2): 140-142. 1997.

S. gracile (Kurz ex Munro) Holttum (*Melocanna gracilis* Munro; *Melocanna gracilis* Kurz ex Munro; *Schizostachyum gracile* (Munro) Holttum; *Schizostachyum gracile* var. *erectum* Holttum; *Schizostachyum tenue* Gamble)

Peninsular Malaysia, Indonesia, eastern Sumatra. Bushy, untidy, loosely tufted, usually erect, strongly arched over culms, green to dull green, culm sheath densely pubescent, sheath blade broadly triangular and erect, sheath auricles bristly, clusters of pseudospikelets found at the distal nodes of a slender leafy shoot, several empty and prophyllate bud subtending bracts, 1 perfect flower, 3 lodicules, 6 stamens, 3 plumose stigmas, ornamental, found on the edges of forest, wastelands, along riverbanks and streams, ponds, swampy areas, along roadsides, see *Transactions of the Linnean Society of London* 26(1): 133. 1868, *Annals of the Royal Botanic Garden, Calcutta*. 7: 114, pl. 100. 1896 and *Kew Bull.* 2: 206. 1956, *Gard. Bull. Sing.* 16: 37-38. 1958.

in Indonesia: buluh alar, buluh giling

in Malaysia: buloh akar, buloh rapen, buluh akar, buluh rappen

S. gracile (Kurz ex Munro) Holttum var. ***erectum*** Holttum
Peninsular Malaysia. Usually erect, drooping, strongly arched over culms, see *Gardens' Bulletin, Straits Settlements* 16: 38. 1958.

S. grande Ridley

Peninsular Malaysia, northern Sumatra, southern Thailand. Tufted, gregarious, thin-walled, erect and strongly arched, drooping or leaning, open, sympodial, white ring below the nodes, branching from all nodes, erect culm sheaths rigid and deciduous, sheath ligule irregularly toothed, sheath auricles small and bristly, very broad leaves usually glabrous, inflorescence of groups of pseudospikelets, 3 hermaphrodite florets and 1 rudimentary terminal floret, long rachilla internode, 3 lodicules, aggressive weed species difficult to eradicate, leaves used as wrappers, young shoots edible, culms used as frames, for making baskets, handicrafts, internodes used as cooking vessels for preparing a glutinous rice cake (*lemang*), found in overlogged forests, open places, edges of forests, foothills, see *Journal of the Straits Branch of the Royal Asiatic Society* 82: 204. 1920, *Gard. Bull. Sing.* 16: 49-51. 1958, *Journal of the American Bamboo Society* 7(1-2): 1-15. 1989, *Nature Malaysiana* 16(4): 130-135. 1991, *Journal of Tropical Forest Science* 4(1): 87-93. 1991.

in Indonesia: buluh lemeng

in Malaysia: buloh semeliang, buloh seminyeh, buluh semeliang, buluh seminyeh

in Thailand: pai marieng, phai miang, phai ta kwang

S. griffithii (Munro) Majumdar (*Cephalostachyum griffithii* (Munro) Kurz, also spelled *griffithsii*; *Teinostachyum griffithii* Munro)

India, Assam, Arunachal Pradesh, Meghalaya, Thailand. Straggling or suberect, scandent, erect at first, drooping, arching, culm sheaths glabrous, leaves oblong-lanceolate rounded at the base into a wrinkled petiole, nodes with verticillate branches, leaf sheaths keeled, falcate auricles,

fringed ligule, spikelets narrow, 3-5 hermaphrodite florets, 1-2 glumes, lemmas pubescent, paleas 2-keeled, lodicules equal or subequal, stamens exerted, ovary stipitate and beaked, 2-3 stigmas white or purplish, culms used for making baskets and pipes, umbrella handles, see *Transactions of the Linnean Society of London* 26(1): 143, t. 3. 1868, *Forest Flora of British Burma* 2: 566. 1877 and *Fl. Ind. Enumerat.-Monocot.* 281. 1989.

in India: behti, beti

S. hainanense Merrill ex McClure

China. Growing upward, long slender top drooping or scandent, long slender branches, sheath blade very narrow and long, leaves long lanceolate, strip woven into rain hats, long internodes made into flutes, used in fencing, growing in tropic rain forests, see *Porterfield, Govt. Bur. Econ. Inf., Booklet Ser.* 2: 74. 1926, *Lingnan Science Journal* 14(4): 591, t. 36, 39, f. 1. 1935.

S. hantu S. Dransfield

Malaysia, Borneo. Tufted, open, diffuse, erect, leaning, drooping, thick-wall, young internodes white and hairy, nodes swollen, on a leafy branch groups of pseudospikelets, used to make baskets, see *Kew Bulletin* 38(2): 327-329, f. 4. 1983.

in Malaysia: buloh hantu

S. helferi (Munro) Majumdar (*Arundarbor helferi* (Munro) Kuntze; *Bambusa helferi* Munro; *Neohouzeaua helferi* (Munro) Gamble; *Pseudostachyum helferi* (Munro) Kurz; *Teinostachyum helferi* (Munro) Gamble)

India, Meghalaya. Evergreen, sometimes scandent, tufted, spreading, bushy, climbing, much arched, rooting when touch the ground, thin walls, forming large impenetrable thickets, nodes somewhat inflated or thickened, internodes velvety pubescent, culm sheaths thick and persistent, leaves oblong-lanceolate and variable in size, leaf sheaths smooth, long-fringed auricle, ligule narrow and fringed, usually 2 slender spikelets together, usually 2 glumes, lemmas hirsute and mucronate, 6 stamens monadelphous, ovary glabrous, 3 stigmas reddish, culms used for making baskets, see *Transactions of the Linnean Society of London* 26(1): 114. 1868, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 42(2): 253. 1873, *Revisio Generum Plantarum* 2: 761. 1891, *Annals of the Royal Botanic Garden, Calcutta*. 7: 102. 1896 and *Bulletin of Miscellaneous Information Kew* 1923: 91. 1923, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 281. Calcutta 1989.

in India: tumar, tumoh, walay, wali

in Thailand: tho ha kai, tho kheo, so khae ya, hia khrua

S. insulare Ridley

Thailand. See *Journal of the Straits Branch of the Royal Asiatic Society* 61: 64. 1912.

S. iraten Steud. (*Schizostachyum biflorum* McClure) (a Javanese plant name)

Java, Bali, Sumatra. Erect, slightly arched outwards, drooping tips, sympodial, densely tufted, branching from midculm upward, nodes swollen and with whitish ring below, culm sheaths narrowly lanceolate and persistent, sheath ligule serrate, sheath auricles short and bristly, leaves glabrous, leaf blades lanceolate or linear-lanceolate, clusters of pseudospikelets, slender and glabrous spikelets cylindrical, 1-2 perfect florets and a rudimentary floret on a rachilla extension, paleas glabrous and acuminate, cultivated, internodes used as cooking vessels for preparing a glutinous rice cake (*lemang*), culms used for fishing rods and to make blowpipes, internodes made into flutes, closely related to *Schizostachyum lima* (Blanco) Merrill and to *Schizostachyum jaculans* Holttum, found in disturbed forest, scrub vegetation, secondary hill forest, see *Synopsis Plantarum Glumacearum* 1: 332. 1854 and *Blumea* 2: 89. 1936, *Kew Bulletin* 38(2): 332. 1958.

in Indonesia: awi bunar, awi tamiyang, pring wuluh

in Malaysia: buluh gunggur

S. irratun Kurz

Indonesia, Java. See Bystriakova, N., Kapos, V., Stapleton, C. & Lysenko, I. *Bamboo Biodiversity*. UNEP-WCMC/INBAR. 2003.

in Indonesia: bambu tamiyang

S. jaculans Holtt. (*Schizostachyum blumei* sensu Gamble, non Nees)

Peninsular Malaysia, origin not known. Densely tufted, clumped, sympodial, erect, slender, long pendulous or drooping tips, sometimes outarched to the ground, branching from midculm nodes upward, slender internodes, white waxy ring below the nodes, culm sheath yellow-green, sheath ligule fringed and bristly, sheath auricles lacking, leaf blades pubescent beneath and glabrous above, inflorescence of pseudospikelets in dense tufts at the node of leafless glabrous shoots, spikelets cylindrical, basal bracts empty, 1 perfect flower, no lodicules, 6 stamens, 3 plumose stigmas, wild and cultivated, used to make blowpipes, the status of this species should be resolved, useful for erosion control, see *Agrost. Bras.* 534-535. 1829, *Annals of the Royal Botanic Garden, Calcutta.* 1896 and *Blumea* 2: 86. 1936, *Kew Bulletin* 1953(4): 493-496. 1953, *Gard. Bull. Sing.* 16: 40-42. 1958, *Kew Bull.* 38(2): 330. 1983.

in Malaysia: buloh kasap, buloh sumpitan, buloh temiang, buluh kasap, buluh sumpitan, buluh temiang, buluh tikus

S. khoonmengii S. Dransf.

Brunei Darussalam. See *Kew Bulletin* 55(2): 491-494. 2000.

S. kurzii (Munro) Majumdar (*Bambusa kurzii* (Munro) Balakr.; *Bambusa schizostachyoides* (Kurz) Kurz ex Gamble; *Melocanna kurzii* Munro; *Pseudobambusa kurzii* (Munro) Ohrnberger; *Teinostachyum schizostachyoides* Kurz)

India, Andaman Islands. Woody, arborescent, evergreen, tufted, green, glossy, 1-4 branches from each node, nodes not thickened, wall of internodes thin, leaves lanceolate to linear-lanceolate, leaf sheaths hispid at first, spikelets bracteate, 2-3 fertile florets and a terminal imperfect one, 1-2 glumes ovate, lemmas rough, paleas ciliate on the keels, 0-3 lodicules, ovary hairy, 3 hairy stigmas, see *Transactions of the Linnean Society of London* 26(1): 134. 1868 and *Bulletin of the Botanical Survey of India* 22(1-4): 176. 1980, *Fl. Ind. Enumerat.-Monocot.* 281. 1989, *Bamboos of the World* 310. 1999.

S. latifolium Gamble (*Cephalostachyum fuchsiaenum* Gamble; *Cephalostachyum latifolium* Munro; *Melocanna zollingeri* var. *longispiculata* Kurz ex Munro; *Ochlandra ridleyi* Gamble; *Schizostachyum latifolium* (Munro) Majumdar, nom. illeg., non *Schizostachyum latifolium* Gamble; *Schizostachyum latifolium* (Gamble) Majumdar; *Schizostachyum longispiculatum* sensu Holttum, non Kurz; *Schizostachyum longispiculatum* (Kurz ex Munro) Kurz sensu Holttum; *Schizostachyum ridleyi* (Gamble) Holttum)

India, Peninsular Malaysia, Sabah, Indonesia, Borneo. Shrubby, sympodial, tufted, open, scrambling, erect or somewhat erect with long arching tips, slender drooping culm tips, nodes not swollen, manifold branching, culm sheath long persistent, sheath auricles bristly, blades of culm sheaths ovate-lanceolate and deflexed or spreading, leaves glabrous ovate or ovate-lanceolate and narrowed into a short petiole, leaf sheaths ciliate, long pseudospikelets in clusters at the distal nodes of basally leafy branches, slender spikelets 1-flowered with a rachilla extension bearing a vestigial floret, lemma hairy, palea 2-tipped, 3-10 lodicules or exceptionally only 1, 6 stamens, 2-3 plumose stigmas, cultivated and wild, culms used in basketry (*seraung*) and for making blowpipes, mats and woven objects, common in tropical lowlands, along roadsides, wastelands, along rivers, at forest edges and riversides, streams, secondary forest, disturbed situations, taxonomic difficulties in delimiting this species, often confused with *Schizostachyum blumei* Nees, see *Enumeratio Plantarum Zeylaniae* 376. 1864, *Transactions of the Linnean Society of London* 26(1): 134. 1868, *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 39: 89, t. 6, f. 1. 1870, *Annals of the Royal Botanic Garden, Calcutta.* 7: 107, 117, 127, t. 94. 1896 and *Gardens' Bulletin, Straits Settlements* 11(4): 296. 1947, *Gard. Bull. Sing.* 16: 48-49. 1958 (as *longispiculatum*), *Kew Bulletin* 38(2): 331. 1983, *Fl. Ind. Enumerat.-Monocot.* 281. 1989.

in Brunei: buluh lacau, buluh lachau, buluh lakaw

in Indonesia: buluh suling

in Malaysia: buloh engkalad, buloh pelupu, buloh pisa, pelupu

in Singapore: buloh kasip

S. lengguanii K.M. Wong (for the senior forest botanist Leng-Guan Saw, Forest Research Institute Malaysia, Kepong, Kuala Lumpur)

Malaysia. Narrow leaves, inflorescence of pseudospikelets, 1 perfect flower, 3 lodicules, see *Gard. Bull. Singapore* 52(2): 289. 2000.

S. lima (Blanco) Merrill (*Arundarbor lima* (Blanco) Kuntze; *Bambusa lima* Blanco; *Schizostachyum hallieri* Gamble; *Schizostachyum stenocladum* A. Camus)

Brunei, Sarawak, Sabah, the Philippines, Indonesia, Papua New Guinea. Erect, straight, drooping tips, densely tufted, sympodial, young internodes with white waxy powder, branches fascicled, culm sheath ligule with long bristles, blades of culm sheaths lanceolate and deflexed, sheath auricles bristly, leaves more or less glabrous to glabrescent, groups of pseudospikelets, slender spikelets 1-flowered with a rachilla extension bearing a vestigial floret or sometimes absent, lemma and palea acuminate, wild and cultivated, young shoots eaten, culms used as construction materials, containers, flooring, for housing, mats (*sawali*), fishing rods and flutes, found in disturbed areas, lowland tropics, moist conditions, forest margins, along rivers, roadsides, wastelands, riverbanks, closely related to *Schizostachyum iraten* Steudel and to *Schizostachyum jaculans* Holttum, confused with *Schizostachyum lumampao* (Blanco) Merrill, see *Flora de Filipinas* 271. 1837, *Revisio Generum Plantarum* 2: 761. 1891 and *Philippine Journal of Science Bot.* 5: 274. 1910, *American Journal of Botany* 3: 62. 1916, *Bulletin de la Société Botanique de France* 81: 759. 1935, *Kew Bulletin* 21: 278-280. 1967, *Bulletin of the Forestry and Forest Research Institute* 301: 79-118. 1978.

in Indonesia: buluh toi

in Malaysia: sumbiling

in the Philippine Islands: anos, bagakai, bitu, bolo, buho, lakap, nao-*nap*, sumbiling, sumibiling

S. lumampao (Blanco) Merrill (*Arundarbor lumampao* (Blanco) Kuntze; *Bambusa lumampao* Blanco; *Bambusa lumampao* Blanco)

The Philippines. Sympodial, densely tufted, erect, ascending, branching at the upper portion of the culm, asymmetrical to oblique nodes, internodes glabrous, culm sheath persistent and hairy, sheath ligule very short and ciliate, sheath auricles indistinct, leaf blades linear-lanceolate, flowering at the upper portion of the culm, groups of pseudospikelets, spikelets linear-lanceolate, 1 fertile floret, 2 empty glumes, cultivated, commonly propagated by rhizome and culm cuttings, cane for basketry, mats (*sawali*) and fences, flutes and handicrafts, found in secondary forests, foothills, forested hills, valleys, well-drained sandy loam, clay loam, see *Flora de Filipinas* 272. 1837, *Revisio Generum Plantarum* 2: 761. 1891 and *American Journal of Botany* 3: 62-63, 65. 1916, *Bulletin of the Forestry and Forest Research Institute* 301: 79-118. 1978.

in the Philippine Islands: babakan, bagakan, balu, boho, bokau, bolo, buho, bulo, caña de hoho, daso, lumampao, lumanpao, *napnap*, oras, vulu

S. lutescens Widjaja

Indonesia. See *Reinwardtia* 11(2): 142-144. 1997.

S. luzonicum Gamble (*Cyrtochloa luzonica* (Gamble) S. Dransf.)

The Philippines. See *Philippine Journal of Science* 5: 277. 1910, *Kew Bulletin* 53(4): 861, 871, f. 6. 1998.

S. mampouw Widjaja

Indonesia. See *Reinwardtia* 11(2): 144-145. 1997.

S. mannii Majumdar (*Bambusa khasiana* sensu Gamble, non Munro)

Northeastern India. Shrubby, tufted, blade inflated at the base, culm sheaths triangular and deciduous, see *Transactions of the Linnean Society of London* 26(1): 97. 1868, *Revisio Generum Plantarum* 2: 761. 1891 and *Fl. Ind. Enumerat.-Monocot.* 281. 1989.

S. pallidum (Munro) Majumdar (*Cephalostachyum pallidum* Munro)

India, Arunachal Pradesh, Manipur, Meghalaya. Shrubby or arborescent, leaves ovate-lanceolate rounded at the base into a petiole often wrinkled, leaf sheaths ciliate on the margins ending in a short rounded auricle, lemmas shortly-awned, paleas 2-keeled, lodicules pubescent and ciliate, 2 hairy stigmas, see *Transactions of the Linnean Society of London* 26(1): 139. 1868 and *Fl. Ind. Enumerat.-Monocot.* 282. 1989.

in India: beetee bans, serrah

S. parvifolium Munro (*Sirochloa parvifolia* (Munro) S. Dransf.)

Madagascar. See *Transactions of the Linnean Society of London* 26(1): 136. 1868 and *Kew Bulletin* 57(4): 963, 965-969, f. 1. 2002.

S. pergracile (Munro) Majumdar (*Cephalostachyum pergracile* Munro)

India. Deciduous, woody, arborescent, tufted, erect, nodes scarcely thickened, culm sheaths dark, inflorescence a large panicle, spikelets in bracteate clusters, without glumes, 2 narrow lodicules persistent, ovary smooth, 2-3 stout stigmas recurved, the species often flowers sporadically, ornamental and very attractive, young shoots edible, culms used for building and basket making, paper and mat making, for lacquer ware, culm with a node used as a container for rice, in Burma internode of a 1-year-old culm used for cooking glutinous rice, dry culms used as a source of fuel, split culms used as fishing rods, occurs in moderately moist soils, in dry and moist deciduous forests, well-drained fresh loam, mixed deciduous forests, low hills, near *nullahs* or *nallahs*, see *Transactions of the Linnean Society of London* 26(1):

141. 1868 and *Flora Indicae, Enumeratio Monocotyledonae* 272-283. 1989.

in India: bhalan bans, dangi, dungi, latang, matang, wootang

S. perrieri A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 71: 780-781. 1924.

S. pilosum S. Dransfield

Sabah, Malaysia. Erect, leaning or drooping, densely tufted, thin-walled, white waxy when young, culm sheath waxy and hairy, sheath blade erect and broadly lanceolate, at the end of a leafy branch few groups of pseudospikelets at each node, spikelets 2-flowered with a rachilla extension bearing a vestigial floret, 3 lodicules, culms used for basketry and roofing, common in damp places, forest, wastelands, forest margins, along roadsides, related to *Schizostachyum grande* Ridley, see *Kew Bulletin* 38(2): 325-327, f. 3. 1983.

in Malaysia: buloh pus, pus

S. pleianthemum S. Dransfield

Indonesia. Secondary forest, see *Kew Bulletin* 38(2): 325, f. 2. 1983.

S. polymorphum (Munro) Majumdar (*Pseudostachyum polymorphum* Munro)

India, Assam, Meghalaya, Arunachal Pradesh, Sikkim, Myanmar. Shrubby, single culm, flexible, scandent, leaning, solitary, thick-walled, long creeping and jointed rhizome, culm sheaths smaller than the internodes, leaves oblong-lanceolate and rounded at the base into a short petiole, leaf sheaths white-pubescent, large inflorescence paniculate curved, spikelets 1-flowered, 1 glume, paleas 2-keeled and ciliate, 3-5 lodicules, 6 stamens, 2 hairy stigmas, the species flowers frequently, culms can be easily split and are flexible, used for basketry and mat making, toys, in Myanmar used by wizards and priests who roast the stem and then prophesy, occurs in moist areas, see *Transactions of the Linnean Society of London* 26(1): 142, t. 4. 1868 and *Fl. Ind. Enumerat.-Monocot.* 282. 1989, *Edin. J. Bot.* 51: 30. 1994.

in India: bajal, filing, nal, paphak, parphok, pheling, purphiok, serrah, silloh, tolli, wachal, wachall

in the Philippine Islands: bayto

S. pseudolima McClure

Temperate Asia, China, Vietnam. Culm top drooping or scandent, branches small and short, young culms dark green and scabrous, sheath shedding late or persistent and hard but brittle, sheath auricles degenerated, sheath blade linear-lanceolate, leaf blades oblong to lanceolate, leaves underside covered with deciduous pubescence, used as punt poles, in weaving and in pulping, making utensils for daily use, see *Lingnan Science Journal* 19(4): 537-538, t. 39-40. 1940.

S. rogersii Brandis

India, Andaman Island. Tufted, weak, arching, erect, leaning, overhanging, thin-walled, culm sheaths thin and much shorter than the internodes, spikelets 1-flowered, 2-4 glumes, paleas 2-dentate, 3 unequal lodicules, ovary glabrous, 3 stigmas, culms used for making arrows and blowpipes, see *Indian Trees* 679. 1906.

S. sanguineum W.P. Zhang

China. See *Bamboo Research in Asia* 1989(4): 12. 1989.

S. seshagirianum Majumdar

India, Arunachal Pradesh. Shrubby, scandent, tufted, blade inflated at base, see *Fl. Ind. Enumerat.-Monocot.* 282. 1989, N. Bystriakova, V. Kapos, C. Stapleton & I. Lysenko, *Bamboo Biodiversity*. UNEP-WCMC/INBAR. 2003.

S. silicatum Widjaja

Indonesia. See *Reinwardtia* 11(2): 145-147. 1997.

S. terminale Holttum

Sabah, Peninsular Malaysia, Brunei. Scrambling, clambering or climbing, open tufted, erect, leaning, slightly geniculate at the nodes, drooping tips, very slender branches, dominant middle branch, inflorescence of pseudospikelets, spikelets very long, 3-5 perfect flowers, lemma and palea glabrous and smooth, 3-5 lodicules, common along riverbanks, seasonally inundated areas, flooded places, swampy sites, see *Gardens' Bulletin, Straits Settlements* 15: 274. 1956 and 16: 51. 1958, *Gard. Bull. Sing.* 43: 39-42. 1991.

S. tessellatum A. Camus

Solomon Islands. See *Bulletin de la Société Botanique de France* 81: 785. 1935.

S. textorium (Blanco) Merrill (*Arundarbor textoria* (Blanco) Kuntze; *Bambus textoria* Blanco; *Bambusa textoria* Blanco)

The Philippines. See *Flora de Filipinas* 270. 1877, *Revisio Generum Plantarum* 2: 761. 1891 and *American Journal of Botany* 3: 64. 1916.

S. toppingii Gamble (*Cyrtochloa toppingii* (Gamble) S. Dransf.)

Asia, the Philippines. Erect, scandent, see *Philippine Journal of Science* 5: 276. 1910, *Kew Bulletin* 53(4): 861-862, f. 1, 3K-W. 1998.

in the Philippine Islands: usiu

S. undulatum S. Dransfield

Sumatra, Indonesia. See *Kew Bulletin* 38(2): 323, 325, f. 1. 1983.

S. warburgii Hackel (*Oxytenanthera warburgii* (Hack.) K. Schum. ex Volkens)

Papua New Guinea, Indonesia. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 13: 263. 1890 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 31: 457. 1901.

S. whitei Holttum (for Cyril Tenison White, 1890-1950) Solomon Islands. See *Kew Bulletin* 21: 280. 1967.

S. xinwuense Wen & J.Y. Chin (*Schizostachyum dumentorum* var. *xinwuense* (T.H. Wen & J.Y. Chin) N.H. Xia)

China, Jiangxi. Climber, thin branches, sheath auricle absent, sheath ligule truncate and rough, sheath blade broadly linear to narrow lanceolate, leaf blades lanceolate to narrow lanceolate, see *Transactions of the Linnean Society of London* 26(1): 123, 136. 1868 and *Journal of Bamboo Research* 1(1): 28-29, f. 6. 1982, *Journal of Tropical and Subtropical Botany* 1(1): 7. 1993.

S. zollingeri Steudel (*Melocanna zollingeri* (Steud.) Kurz ex Munro; *Schizostachyum chilanthum* (Büse) Kurz; *Schizostachyum chilanthum* sensu Gamble p.p., non *Chloothamnus chilanthus* Büse) (named for the Swiss botanist Heinrich Zollinger, 1818-1859, school-teacher, studied with Alph. de Candolle, plant collector and botanical explorer in Java and Sumatra, among his writings are *Observationes phytographicae*. [Batavia 1844-1846], *Over de soorten van Rottlera*. Batavia 1856, *Observationes botanicae novae*. [Batavia 1857] and *Sur la végétation autour des cratères volcaniques de l'île de Java*. [Genève] 1858, see also in *Verhandelingen der Natuurkundige Vereen. in Nederlandsche Indië*. 1: 19. 1856 [Acta Soc. Regiae Sci. Indo-Neerl. 1(4): 19. post 1 Sep 1856]; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 543. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 450. Boston, Mass. 1972; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Alexander Moritz, 1806-1850, *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844 auf Java gesammelten Pflanzen*, etc. Solothurn 1845-1846)

Peninsular Malaysia, Java, Vietnam, southern Thailand. Sympodial, erect to stiffly erect, compact clump, closely growing, slender tips drooping, young culms shortly hairy, branching from the midculm nodes upward, culm sheaths persistent with dark shiny hairs, sheath blade erect and broadly lanceolate to triangular, sheath ligule smooth or shortly pubescent, sheath auricles bristly, leaf blades oblong lanceolate, inflorescence of pseudospikelets, 1 perfect floret and a rachilla extension with 1 small rudimentary floret, 2 glumes, 3 lodicules, 6 stamens, 3 plumose stigmas, variable species, sporadic flowering, drought resistant, cultivated, ornamental, young shoots may be eaten, used for flooring and for cooking *lemang* rice, for weaving, mats, woven screens and handicrafts, basketry, found at forest margins and streamsides, forest clearings, primary forests, clay loams, disturbed areas, well-drained soils, sandy loams, see

Synopsis Plantarum Glumacearum 1: 332. 1854, *Plantae Junghuhnianae* 3: 386. 1854, *Transactions of the Linnean Society of London* 26(1): 134. 1868, *Annals of the Royal Botanic Garden, Calcutta*. 7: 115. 1896 and *Blumea* 2: 60. 1936, *Gard. Bull. Sing.* 16: 42-45. 1958, *The Malaysian Forester* 44: 453-463. 1981, *Journal of Tropical Forest Science* 4(1): 87-93. 1991.

in Indonesia: bambu lampar, buluh nipis, buluh telor

in Malaysia: buloh dinding, buloh nipis, buloh telor, buluh aur, buluh deli, buluh dinding, buluh kasap, buluh kecai, buluh lemang, buluh nipis, buluh pa'ao, buluh pauh, buluh pelang, buluh raga, buluh telur, buluh tulo

in Thailand: miang fai, miang phai, phai kap daeng, phai miangfai, po

Schleropelta Buckley = *Hilaria* Kunth

Greek *skleros* "hard, dry" plus *peltis* "a shield."

Chloridoideae, Cynodonteae, Hilariinae, type *Schleropelta stolonifera* Buckley (*Hilaria belangeri* (Steud.) Nash), see *Nova Genera et Species Plantarum* 1: 116-118, pl. 37. 1815 [1816], *Synopsis Plantarum Glumacearum* 1: 111. 1854, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 1. 1866 and *North American Flora* 17(2): 135. 1912, *Contributions from the United States National Herbarium* 41: 128-129, 193. 2001.

Schmidtia Steudel ex J.A. Schmidt = *Antoschmidtia* Boiss., *Schmidtia* Moench (Asteraceae, alt. Compositae), *Schmidtia* Tratt.

In honor of the German botanist Johann Anton Schmidt, 1823-1905, professor of botany, traveler, plant collector, 1851 Capo Verde Islands, author of *Beiträge zur Flora der Cap Verdischen Inseln*. Heidelberg 1852 and *Flora von Heidelberg*. Heidelberg 1857, and contributor to C.F.P. von Martius, *Flora Brasiliensis* (Labiatae, Scrophulariaceae, Phytolaccaceae, Nyctaginaceae, Plumbaginaceae, Plantaginaceae); see David Porter (1780-1843), *Journal of a Cruise Made to the Pacific Ocean ... in the United States Frigate Essex, in the Years 1812, 1813, and 1814*. Containing descriptions of the Cape Verd [*sic*] Islands, etc. Philadelphia 1815; J.H. Barnhart, *Biographical notes upon botanists*. 3: 232. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 353. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933.

Two species, tropical Africa, Pakistan. Chloridoideae, Pappophoreae, annual or perennial, viscid, aromatic, glandular,

unarmed, herbaceous, usually branched, tufted to decumbent, auricles absent, ligule a fringe of hairs, leaves linear to linear-lanceolate, plants bisexual, open or contracted panicle, spikelets solitary, 2 glumes very unequal and strongly 7- to 14-nerved, female fertile lemmas 6-lobed and 5-awned, uppermost 1 or 2 florets sterile and reduced, palea present, 2 lodicules fleshy and ciliate, 3 stamens, ovary glabrous, 2 stigmas white, species of open habitats, open bushlands, woods, dry to very dry areas, bushlands, open grasslands, dry sandy and stony places, red sandy soil, type *Schmidtia pappophoroides* Steud. ex J.A. Schmidt, see *Suppl. Meth.* 217. 1802, *Flora des Österreichischen Kaiserthumes* 1: 12. 1816, *Beiträge zur Flora der Cap Verdischen Inseln* 144-145. 1852, *Flora Orientalis* 5: 559. 1884.

Species

S. kalahariensis Stent (*Antoschmidtia kalahariensis* (Stent) Bremek. & Oberm.)

Sudan, Namibia, South Africa. Annual, tufted, erect or geniculate, prostrate, generally unbranched or occasionally much branched, coarse, hairy, slightly sticky and with an unpleasant sour smell, stoloniferous, cataphylls absent, fibrous roots, often rooting from the lower nodes, culms always terminating in an inflorescence, leaf sheaths mostly densely round and hairy, ligule an inconspicuous fringe of short hairs, leaf blades sharply tipped and usually expanded at the base, inflorescence a spike-like contracted panicle, lemmas 5-awned, hay and pasture, pioneer grass relatively palatable and nutritious, low grazing value, grazed before the flowering stage and when dry, found in dry to very dry areas, sandy places, sandy and loamy soils, open veld, poor sandy soil, disturbed locations, often confused with *Enneapogon cenchroides* (Licht. ex Roemer & Schultes) C.E. Hubb., see *Bothalia* 2: 421, 423. 1928, *Annals of the Transvaal Museum* 16: 405. 1935.

in English: sour grass, bushman grass

in South Africa: suurgras, eenjarige vyfnaaldgras, Kalaharisuurgras, Schmidts sauergras, fünfborstengras

S. pappophoroides Steud. ex J.A. Schmidt (*Antoschmidtia bulbosa* (Stapf) Peter; *Antoschmidtia pappophoroides* (Steud. ex J.A. Schmidt) Boiss.; *Schmidtia bulbosa* Stapf)

Eastern and central tropical Africa, South Africa, Angola. Perennial bunchgrass, erect or geniculately ascending, tufted, tussocky, leafy, shrubby, woody, many nodes, slightly swollen at the base, very variable in size and in hairiness, hairy cataphylls present, rhizomatous, often stoloniferous and rooting at the lower nodes, woody rootstock, creeping rhizome, leaf blades rolled and expanded, leaf sheaths usually round and hairy, ligule a fringe of short hairs, inflorescence a loosely contracted elliptic panicle, elliptic to obovate spikelets 4- to 10-flowered, sterile and inflorescence bearing-shoots both on the same plant, green glumes, upper lemmas 5-awned and 6-lobed, lower lemma

densely silky villous, palea villous, high to low grazing value, palatable to very palatable, drought-tolerant, useful for erosion control, common in sandy and dry stony soils, open bushlands, on limy, on stony clay soils, open grasslands, open woodlands, see *Beiträge zur Flora der Cap Verdischen Inseln* 145. 1852, *Flora Orientalis* 5: 559. 1884 and *Flora Capensis* 7: 658. 1900, *Repertorium Specierum Novarum Regni Vegetabilis*, Beihefte 40(1): 307. 1931.

in English: sand quick grass, Kalahari sandquick

in South Africa: blougras, suurgras, fünfborstengras, fünfborsten Kräuselgras, kopgras, lidjiesgras, vaalgras, vaalkrulgras, krulgras, blouplatsaadjie, Kalahari sandkweek, sandkweek, kalkweek, Schmidts Kräuselgras

Schmidtia Tratt. = Coleanthus J. Seidel

Named in honor of the German botanist Franz Wilibald Schmidt, 1764-1796, professor of botany, physician; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 231. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Pooideae, Poeae, Agrostidinae, type *Schmidtia subtilis* Tratt., see *Suppl. Meth.* 217. 1802, *Flora des Österreichischen Kaiserthumes* 1: 12. 1816, *Systema Vegetabilium* 2: 11, 276. 1817, *Beiträge zur Flora der Cap Verdischen Inseln* 144-145. 1852, *Flora Orientalis* 5: 559. 1884 and *Contributions from the United States National Herbarium* 48: 237, 608. 2003.

Schmidtia Raf. = Coleanthus J. Seidel

For the German botanist Franz Wilibald Schmidt, 1764-1796.

Pooideae, Poeae, Agrostidinae, see *Suppl. Meth.* 217. 1802, *Flora des Österreichischen Kaiserthumes* 1: 12. 1816, C.S. Rafinesque, *Autikon botanikon*. Icones plantarum select. nov. vel rariorum, etc. 187. Philadelphia 1840, *Beiträge zur Flora der Cap Verdischen Inseln* 144-145. 1852, *Flora Orientalis* 5: 559. 1884 and E.D. Merrill, *Index rafinesquianus*. 76. 1949, *Contributions from the United States National Herbarium* 48: 237, 608. 2003.

Schnizleinia Steudel = Boissiera Hochst. ex Steud., Boissiera Steud.

Bromeae, in syn. sub *Boissiera bromoides* Hochst. & Steudel, see *The Natural History of Aleppo* 2: 224. 1794, *Mémoires de l'Académie Impériale des Sciences de Saint*

Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles 1(1): 92. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 54. 1836, *Flora* 21: 25. 1838, *Nomenclator Botanicus. Editio secunda* 1: 213. 1840, Sir Dietrich Brandis (1824-1907), Fridolin Carl Leopold Spenner (1798-1841), Alois (Aloys) Putterlick (1810-1845), Stephan Friedrich Ladislaus Endlicher (1804-1849), Carl Wilhelm Bischof, Johann Xaver Robert Caspary (1818-1887), Adalbert Carl Friedrich Hellwig Conrad Schnizlein (1814-1868) and Theodor Friedrich Ludwig Nees von Esenbeck (1787-1837), *Genera Plantarum Florae Germanicae* iconibus et descriptionibus illustrata ... Bonnae [1833-] 1835-1860, *Syn. Pl. Glum.* 1: 200. 1854, *Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse, Denkschriften* 50(2): 9. 1885 and *Journal of Botany, British and Foreign* 75: 189. 1937, *Feddes Repertorium* 79: 338. 1969, Stafleu and Cowan, *Taxonomic literature* 5: 279-284. 1985.

Schoenanthus Adans. = *Ischaemum* L.

Greek *schoinos* "a rush, reed, cord" and *anthos* "flower," *schoinanthe* "flower of *schoinos*."

Panicoideae, Andropogoneae, Ischaeminae, see *Species Plantarum* 2: 1049. 1753, *Familles des Plantes* 2: 38, 602. 1763 and *N. Amer. Fl.* 17: 94. 1909, *Contributions from the United States National Herbarium* 46: 275-276. 2003.

Schoenefeldia Kunth

For the German botanist Wladimir de Schoenefeld (Schoenefeld), 1816-1875, a student of Adr. de Jussieu, one of the founders of the Société Botanique de France, wrote "Rapport sur une excursion faite en août 1860 ... au Bourgd'Oisans." *Bull. Soc. Bot. France.* 7(8): 804-815. Paris 1863; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 236. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; Stafleu & Cowan, *Taxonomic literature.* 5: 286-287. 1985.

Two species, India, tropical Africa, Madagascar. Chloridoideae, Cynodonteae, annual or perennial, herbaceous, tufted, auricles absent, ligule a fringed membrane, plants bisexual, inflorescence digitate or subdigitate, racemes single or digitate, spikelets solitary and sessile, usually all florets female-fertile, 2 narrow glumes very unequal, acuminate to shortly awned glumes 1-nerved, lemma keeled and 2-toothed with a long flexuous sinuous awn, palea present, 2 free and fleshy lodicules, stamens 2 or 3, ovary glabrous, 2 stigmas, open habitats, dry grasslands on sandy soils, sandy fields, savannahs, clay soils, orange sand, seasonally

flooded areas, related to *Chloris* Sw., type *Schoenefeldia gracilis* Kunth, see *Révision des Graminées* 1: 86. 1829 and Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

S. gracilis Kunth (*Chloris myosuroides* Hook.f.; *Chloris pallida* (Edgew.) Hook.f., nom. illeg., non *Chloris pallida* Willd.; *Schoenefeldia pallida* Edgew.)

Arabia, Yemen, Sahel-Sudanian region. Annual, tufted, glabrous, erect, slender, geniculately ascending, smooth, ligule a hairy rim, narrow flat leaf blades tough, inflorescence digitate of straight spikes solitary or 2 to 4 together, spikelets 1-flowered without a rachilla extension, glumes scabrid on the keel, lower glume acute and mucronate, fertile lemma ciliate on the nerves and with a scaberulous awn, sterile lemma with a short awn, forage, low grazing value, browsed whilst still young, good fodder for sheep and camels, used for thatching and cordage, on sandy areas, see *Nova Genera et Species Plantarum seu Prodromus* 1, 25. 1788, *Révision des Graminées* 1: 283, t. 53. 1829, *Journal of the Asiatic Society of Bengal* 21: 183. 1852, *The Flora of British India* 7(22): 289-290. 1897 [1896].

in Mali: burdi, furala, furale, guare lalale, lakio wanduho, sààna yà, sààna ya, ulukumissé, urga

in Niger: budù, fari'n tchawa, geenal, hudo rimo, ihaerdaen-allagh, ikaerdan, karagéhô, kébulu, kotokoli, n-allagh, sub kaarey, zubu kwarey

in Nigeria: kakuma, rumayza, rumaza, sawun kadafkaràà, shinaka, sinaka, tafa duwa, wutsiyaar beeràà, wutsiyar beeràà, wutsiyar birii, wutsiyar kadangare, wutsiyar kuusùù

in Senegal: alas ndiad, furaba, gen u gold, golombale, ndiad, pellen, rov, salombale, suarelalale, ulukumissé, urga

in Upper Volta: buruudi, celbi, lamyondon, nyomre, nyoobe, sarao, selbo, silazurè, tugu legan

in India: machhighas, tarwaria

S. transiens (Pilg.) Chiov. (*Chloris transiens* Pilg.)

Tropical East Africa. Perennial, densely tufted, erect or geniculately ascending, leaf blades glabrous or loosely pilose, inflorescence of 2-4 slender spikes, cleistogamous, spikelets 2-flowered flattened, upper floret reduced, lower glume, lemma ciliate, awns curved, grows in heavy soils, shrubland, in seasonally flooded plains, orange sands, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 418. 1914, *Resultati Scientifici della Missione Stefanini-Paoli nella Somalia Italiana* 1: 186. 1916.

in Somalia: xalfo

Schoenodorus Roemer & Schultes =
Bellardiochloa Chiov., *Festuca* L., *Poa* L.,
Schedonorus P. Beauv.

Orth. var. of the genus *Schedonorus* P. Beauv., or from the Greek *schoinos* “rush, reed, cord” plus *doron* “a gift.”

Pooideae, Poeae, Loliinae, see *Species Plantarum* 1: 67. 1753, *Mémoires de l'Académie Royale des Sciences* 5: 214, t. 3. 1792, *Essai d'une Nouvelle Agrostographie* 99, 162, 177. 1812, *Systema Vegetabilium* 2: 42. 1817, *Hortus Regius Botanicus Berolinensis* 1: 171. 1827, *Hortus Regius Botanicus Berolinensis* 1: 171. 1829 and *Stud. Veg. Piemonte* 13. 1929, *Fragmenta Floristica et Geobotanica* 19: 265-270. 1973, *Denkschriften der Schweizerischen [Naturforschenden Gesellschaft] [Akademie der Naturwissenschaften]* 100: 1-130. 1987, *Fitologija* 39: 72-77. 1991, *Contributions from the United States National Herbarium* 48: 313-368, 505-580, 605-607, 608. 2003.

Schultesia Sprengel = *Chloris* Sw.,
Eustachys Desv., *Schultesia* Mart.
(Gentianaceae), *Schultesia* Roth
(Campanulaceae), *Schultesia* Schrad.
(Amaranthaceae)

For the Austrian botanist Josef August Schultes, 1773-1831, M.D. Wien 1796, naturalist, plant collector, among his writings are *Reise auf den Glockner*. Wien 1804, *Ratio medendi in schola clinica medica*. Lipsiae 1828, *Reisen durch Oberösterreich in den Jahren 1794-1808*. Tübingen 1809 and *Observationes botanicae*. Oeniponti [Innsbruck] 1809, with Johann Jakob Roemer (1763-1819) wrote *Systema vegetabilium*. 1807-1830; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 244. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 240. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Günther Schmid, *Chamisso als Naturforscher. Eine Bibliographie*. Leipzig 1942; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. Leipzig 1981; G. Schmid, *Goethe und die Naturwissenschaften*. Halle 1940.

Chloridoideae, Cynodonteae, Chloridinae, see *Nova Genera et Species Plantarum seu Prodrum* 1, 25. 1788, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188-189. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 17. 1815, *Göttingische gelehrte Anzeigen unter der Aufsicht der Königl.* 1821: 708. 1821, *Enumeratio Plantarum Phaenogamarum in Germania* 1: 690. 1827, *Nova Genera et Species Plantarum ...* 2(2): 103-104, t. 180. 1826 [1827], *Conspectus Regni Vegetabilis* 4.

1828 and *Contributions from the United States National Herbarium* 41: 39-52, 117-118, 193-194. 2001.

Sciadonardus Steud. = *Gymnopogon* P.
Beauv.

Greek *skias*, *skiados* “canopy, umbel of plants” and *nardos* “spikenard.”

Chloridoideae, Cynodonteae, see *Flora Boreali-Americana* 1: 58. 1803, *Essai d'une Nouvelle Agrostographie* 41, 164. 1812, *Flora* 33: 229. 1850, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888 and *Iowa State College Journal of Science* 45(3): 319-385. 1971, *Contributions from the United States National Herbarium* 41: 124-127, 194. 2001.

Scirpobambus Kuntze = *Oxytenanthera*
Munro

Latin *scirpus*, *i* “a rush, bulrush” plus *bambos*, *bambusa*.

Bambuseae, see *Transactions of the Linnean Society of London* 26(1): 126-127. 1868 and *Lexicon Generum Phanerogamarum ...* 509. 1903 [1904], *Taxon* 6(7): 206. 1957.

Sclerachne R. Br. = *Chionachne* R. Br.

Greek *skleros* “hard, dry” and *achne* “chaff, glume.”

One species, from India to Southeast Asia, Thailand. Panicoideae, Andropogonodae, Maydeae, or Andropogoneae, Chionachninae, annual, herbaceous, erect, prostrate, decumbent, auricles absent, plants monoecious, hermaphrodite florets absent, inflorescence paniculate with unequal branches, spike-like reduced racemes, a single raceme with 1-3 female segments and 1-2 male segments, spikelets solitary or paired, male spikelets with 2 glumes, male florets 3-staminate, palea present, lodicules absent, no stamens, in forest margins, type *Sclerachne punctata* R. Br., see *Transactions of the American Philosophical Society, new series*, 5: 142. 1835, John Joseph Bennett and Robert Brown, *Plantae Javanicae Rariores* 15, 18, t. 4. London 1838, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 273. 1841, *Fragmenta Phytographiae Australiae* 8: 116. 1873, *Flora Australiensis* 7: 515. 1878, *Contributions from the United States National Herbarium* 2(3): 518. 1894 and *Meded. Rijks-Herb.* 67: 1-17. 1931, R.P. Celarier, “Cytotaxonomy of the Andropogoneae 2. Subtribes Ischaeminae, Rottboellinae, and the Maydeae.” *Cytologia* 22: 160-183. 1957, *Kew Bulletin* 35: 813. 1981, *Blumea* 47(3): 545-580.

2002 [Revision of Chionachninae (Gramineae: Andropogoneae), by T.A. Jannink & J.F. Veldkamp].

Species

S. punctata R. Br. (*Chionachne massiei* Balansa; *Chionachne punctata* (R. Br.) Jannink; *Polytoca massii* (Balansa) Schenck; *Polytoca punctata* (R. Br.) Stapf ex Hook.f.)

Java, Indonesia. Inflorescence axillary, sessile spikelet lower glume winged emarginate, pedicelled spikelet barren small or vestigial, male segment with short internodes and fused pedicels, see *Plantae Javanicae Rariores* 15, 20, t. 4. 1838, *Journal de Botanique (Morot)* 4: 78. 1890, *The Flora of British India* 7(21): 102. 1897 [1896] and *Mededeelingen van's Rijks-Herbarium* 67: 9. 1931, *Blumea* 47(3): 564, 566-567, f. 8. 2002.

Sclerachne Torr. ex Trin. = *Greenia* Nutt., *Greenia* S. Wallman (Liliaceae), *Limnas* Trin., *Limnodea* L.H. Dewey, *Sclerachne* Trin., *Thurberia* Benth.

Greek *skleros* “hard, dry” and *achne* “chaff, glume.”

Pooideae, Poaceae, Aveninae, see *De Fructibus et Seminibus Plantarum* 2: 188. Apr-May 1791, *Fundamenta Agrostographiae* 116, t. 6. 1820, *Transactions of the American Philosophical Society, new series*, 5: 142. 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 273-275. 1841, *Synopsis Plantarum Glumacearum* 1: 421. 1854, *Memoirs of the American Academy of Arts and Science, new series* 5: 308. 1854, *Journal of the Linnean Society, Botany* 19: 58. 1881, *Department of Agriculture. Special Report* 63: 16. 1883, *Contributions from the United States National Herbarium* 2(3): 518. 1894 and *Bulletin, Division of Agrostology United States Department of Agriculture* 7(edition 3): 139. 1900, *Sida* 19(1): 195-200. 2000, *Contributions from the United States National Herbarium* 48: 381, 425-426, 608, 654. 2003.

Sclerandrium Stapf & C.E. Hubb. = *Germainia* Balansa & Poitr.

Greek *skleros* “hard, dry” and *aner, andros* “male, man,” referring to the lower glume of the male spikelets.

Northern Australia, Arnhem's Land. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, type *Sclerandrium truncatiglume* (F. Muell. ex Benth.) Stapf & C.E. Hubb., see *Bulletin de la Société d'Histoire Naturelle de Toulouse* 7: 344, f. 1-9. 1873, *Flora Australiensis: A Description ...* 7: 518-519. 1878, *Monogr. Phan.* 6: 255. 1889, *Journal de Botanique (Morot)* 4: 83. 1890 and *Lex-*

ikon Generum Phanerogamarum 247. 1903 [1904], *Bulletin du Muséum d'Histoire Naturelle* 25: 285. 1919, O. Stapf and Charles Edward Hubbard, *Hooker's Icones Plantarum. Ser. 5. 3, t. 3262*. 1935, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 124. 1940, *Australian Journal of Botany* 2: 108. 1954, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Dansk Botanisk Arkiv* 23(4): 467-471. 1968, *Thai Forest Bulletin. Botany* 6: 29-59. 1972, *Blumea* 45: 443-475. 2000.

Sclerochloa P. Beauv. = *Amblychloa* Link, *Crassipes* Swallen, *Desmazeria* Dumort.

From the Greek *skleros* “hard, dry” and *chloe, chloa* “grass,” referring to the nature of grass, to the thick glumes, to leathery glumes and lemmas.

About 1-2 species, Eurasia, southern Europe to western Asia. Pooideae, Poodae, Poaceae, or Pooideae, Poaceae, Puccinelliinae, annual, tufted, erect, ascending to geniculate and branching at base, herbaceous, auricles absent, ligule membranous, leaves flat and linear, culm nodes glabrous, culm internodes solid, plants bisexual, paniculate inflorescence 1-sided and dense, bisexual and solitary spikelets compressed laterally with short stout or thick pedicels, glumes unequal and obtuse, upper glume 5-9-nerved, lower glume 3- to 5-nerved, awnless lemmas cartilaginous and rounded on the back, palea nerved, 2 lodicules free and membranous, ovary glabrous, small fruit triangular beaked, hairy callus absent, disturbance species, in dry areas, saline soils, open habitats, disturbed weedy places, type *Sclerochloa dura* (L.) P. Beauv., see Ambroise Marie François Joseph Palisot de Beauvois (1752-1820), *Essai d'une nouvelle Agrostographie* 97, 98, 174, 177, t. 19, f. 4. Paris (Dec) 1812, *Commentationes Botanicae* 26-27. 1822, *Botanicon Gallicum* 1: 522. Paris 1828-1830, *Linnaea* 17(4): 399. 1844, *Spicilegium florum rumelicarum et bithynicarum ...* 2: 431. 1846, Carl Frederik Nyman (1820-1893), *Sylloge florum europaeae, seu Plantarum vascularium Europae indigenarum, enumeratio, adjectis synonymis gravioribus et indicata singularum distributione geographica*. 423. Oerebroae 1855 and *Contr. U.S. Natl. Herb.* 10: 2. 1906, *American Journal of Botany* 18(8): 684-685, f. 1-4. 1931, *Journal of Cytology and Genetics* 21: 155. 1986, D.M. Brandenburg, J.R. Estes & J.W. Thieret, “Hard Grass (*Sclerochloa dura*, Poaceae) in the United States.” *Sida*. 14(3): 369-376. 1991, *Cytologia* 56: 437-452. 1991, *Flora Mediterranea* 8: 307-313. 1998, *Contributions from the United States National Herbarium* 48: 106-107, 239, 256, 608-609. 2003, *Weed Biology and Management* Volume 3, Issue 4: 197-203. Dec 2003.

Species

S. dura (L.) P. Beauv. (*Amblychloa dura* Link ex B.D. Jacks.; *Crassipes annuus* Swallen; *Cynosurus durus* L.;

Eleusine dura (L.) Lam.; *Festuca dura* (L.) Vill.; *Poa dura* (L.) Raspail, nom. illeg., non *Poa dura* (L.) Scop.; *Poa dura* (L.) Roth; *Poa dura* (L.) Scop., nom. illeg., non *Poa dura* (L.) Scop.; *Sesleria dura* (L.) Kunth

Europe and Asia. Annual, tufted, glabrous, small, stiff, tough, ascending to prostrate, short or prostrate tussocks, bright green, auricles absent, ligule membranous and acute, short unilateral spike-like green panicle, spikelets sessile, uppermost floret often reduced, lemmas truncate keeled 5- to 7-nerved, palea 2-keeled with keels wingless, anthers yellow, elliptical fruit laterally compressed and keeled, weed, grows in disturbed areas, waste grounds, campgrounds, playgrounds, athletic fields, disturbed gravel roadside, fairgrounds, roadsides, superficially similar to and often grows with *Poa annua* L., see *Plantae per Galliam, Hispaniam et Italiam observata* ... Opus posthumum, editum cura et studio Antonio de Jussieu, medici. 1213, t. 50. Paris 1714, *Species Plantarum* 1: 67, 72-73. 1753, *Flora Carniolica* 189. 1760, *Flora Carniolica, Editio Secunda* 1: 70. 1772, *Histoire des Plantes de Dauphiné* 2: 94. 1787, *Tentamen Florae Germanicae* 1: 43. 1788, *De Fructibus et Seminibus Plantarum* 1: 7. 1788, *Tableau Encyclopédique et Méthodique* ... *Botanique* 1: 203. 1791, *Essai d'une Nouvelle Agrostographie* 98, 174, 177. 1812, *Annales des Sciences Naturelles (Paris)* sér. I 5: 444, 458, t. 8, f. 4. 1825, *Révision des Graminées* 1: 110. 1829, *Index Kewensis* 1: 104. 1895 and *American Journal of Botany* 18(8): 685, f. 1-4. 1931, *Bot. J. Linn. Soc.* 91: 438. 1985.

in English: hard meadow-grass, hardgrass, common hard grass

Sclerodactylon Stapf = *Arthrochlaena* Boiv. ex Benth.

From the Greek *skleros* "hard, dry" and *daktylos* "a finger," referring to the inflorescence.

About 1-2 species, eastern Madagascar, southwestern China. Chloridoideae, Eragrostideae, perennial, unbranched, armed, tufted, stoloniferous, leaves mainly basal, auricles absent, leaf blades woody and terete, hard rigid leaves needle-like to sharply pointed, ligule a fringe of hairs, plants bisexual, inflorescence of paired or digitate racemes, solitary imbricate spikelets, 2 glumes very unequal to unequal, upper glume awned or awnless, lemma strongly keeled glabrous acute, palea winged, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas, saline flats, swamps, mangrove swamps, seashores, related to *Dactyloctenium* and *Eragrostis*, type *Sclerodactylon juncifolium* Stapf, see *De Fructibus et Seminibus Plantarum* 1: 7. 1788, *Journal of the Linnean Society, Botany* 19: 107. 1881 and *Bulletin of Miscellaneous Information Kew* 1911: 318. 1911, *Acta Botanica Sinica* 9(1): 54-55, f. 2. 1960.

Species

S. macrostachyum (Benth.) A. Camus (*Eleusine macrostachya* Benth.)

Madagascar. See *Journal of the Linnean Society, Botany* 19: 107. 1881 and *Bulletin de la Société Botanique de France* 79: 38. 1932.

Sclerodeyeuxia (Stapf) Pilger = *Calamagrostis* Adans., *Sclerodeyeuxia* Pilger

From the Greek *skleros* "hard, dry" and the genus *Deyeuxia*, dedicated to the French professor of pharmacology Nicolas Deyeux, 1745-1837, among his publications are *Analyse des nouvelles eaux minérales de Passy*, communiquée à l'École de médecine de Paris. Paris 1808 and *Considérations chimiques et médicales sur le sang des ictériques*, présentées ... à l'École de médecine de Paris. Paris 1804.

Pooideae, Poodae, Aveneae, *Deyeuxia* sect. *Sclerodeyeuxia* Stapf, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie, ou nouveaux genres des Graminées*. 43, pl. IX. Paris 1812, *Hooker's Icones Plantarum* 27(1): t. 2605, 1-2. 1899 and *Brittonia* 2(2): 117. 1936, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 19. 1947, *Darwiniana* 19(2-4): 404-412. 1975 [Z.E. Rúgolo de Agrasar, *Novedades en el género Deyeuxia Clarion (Gramineae)*], *Flora Mesoamericana* 6: 240-241. 1994, Xenia Villavicencio, *Revision der Gattung Deyeuxia in Bolivien: eine taxonomisch-anatomische studie*... 1-304. Berlin 1995, *Flora of Ethiopia and Eritrea* 7: 51-52. 1995, *New Zealand Journal of Botany* 33: 1-33. 1995, *Bot. Zhurn. (Moscow & Leningrad)* 81(5): 98-101. 1996, *Flora Mediterranea* 8: 251-262. 1998, *Opera Botanica* 137: 1-42. 1999, *New Zealand Journal of Botany* 37: 63-70. 1999, *Telopea* 9(3): 439-448. 2001, *Contributions from the United States National Herbarium* 48: 191-227. 2003.

Sclerolaena A. Camus = *Boivinella* A. Camus, *Cyphochlaena* Hack., *Sclerolaena* R. Br. (Chenopodiaceae)

Greek *skleros* and *chlaena* "a cloak, blanket."

Indian Ocean Islands, Madagascar. Panicoideae, Panicodae, Paniceae, see *Prodromus Florae Novae Hollandiae* 410. 1810 and *Österreichische Botanische Zeitschrift* 51: 465. 1901, *Bulletin de la Société Botanique de France* 72: 175, 622. 1925, *Bulletin du Muséum d'Histoire Naturelle* 31: 390. 1925, *Adansonia: recueil périodique d'observations botaniques, n.s.* 5: 411-413. 1965.

Sclerophyllum Griff. = *Oryza* L., *Porteresia* Tateoka, *Sclerophyllum* Gaudin (Compositae)

From the Greek *skleros* and *phyllon* “leaf.”

Oryzae, see *Species Plantarum* 1: 333. 1753, *Flora Helvetica* 5: 47. 1829, *Flora Indica*; or, *Descriptions of Indian Plants* 2: 206. 1832, *Notulae ad Plantas Asiaticas* 3: 8. Calcutta 1851 and *Botanical Magazine* 76(899): 165-173. 1963, *American Journal of Botany* 51: 539-543. 1964, *Bulletin of the National Science Museum* 8: 406. Tokyo 1965, *Bulletin of the Botanical Survey of India* 8: 42-44. 1966, *Bulletin of the Botanical Survey of India* 10: 274. 1969, *Bulletin of the Torrey Botanical Club* 101: 244. 1974.

Scleropoa Griseb. = *Catapodium* Link, *Cutandia* Willk., *Desmazeria* Dumort.

From the Greek *skleros* “hard, dry” and *poa* “grass, pasture grass.”

Pooideae, Poeae, Ammochloinae, type *Scleropoa rigida* (L.) Griseb., see *Commentationes Botanicae* 26-27. 1822, *Observations sur les Graminées de la Flore Belgique* 110, 113. 1823 [1824], *Hortus Regius Botanicus Berolinensis* 1: 44, 145, 280. 1827, *Spicilegium florum rumelicarum et bithynicarum* ... 2: 431. 1846, *Botanische Zeitung. Berlin* 18: 130. 1860, *Catalogue Raisonné des Plantes Vasculaires de la Tunisie* 483. Paris 1896 and *Flore de France* 14: 290-291. 1913, *Contributions from the United States National Herbarium* 48: 230, 241, 256. 2003.

Scleropogon Philippi = *Lesourdia* E. Fourn.

Greek *skleros* “hard, dry” and *pogon* “a beard,” referring to the awns.

One species, southern U.S., Mexico, Argentina, Chile. Chloridoideae, Cynodonteae, or Eragrostideae, perennial, highly variable, herbaceous, creeping, mat-forming, caespitose, erect, stoloniferous, leaves mostly basal, auricles absent, ligule a line of hairs, leaf blades pungent, plants usually dioecious or sometimes monoecious, plants staminate or pistillate, rarely bisexual, inflorescence a raceme or a panicle, spikelets solitary, extra spikelet scales, female inflorescence subtended by a scarious appendage or a glume-like bract, in pistillate spikelets upper florets reduced to awns, glumes 2 more or less equal, lemmas rolled with 3 long spreading awns, palea with 2 short awnlets, lodicules absent in pistillate spikelets, 3 stamens, 2 stigmas, male inflorescence without appendage, native pasture species, open areas, salty flats, along roadsides, grasslands, plains, dry fields, related to *Tridens*, type *Scleropogon brevifolius* Phil., see *Syn. Pl.* 2: 9. 1806 [1807], *Anales de la Universidad de Chile* 36: 205-206. 1870, *Bulletin de la Société Botanique de France* 27: 102, t. 3-4, f. 12. 1880, *Proceedings*

of the American Academy of Arts and Sciences 18: 181. 1883 and *Not. Bot. Gart. Berlin* 15: 15-22. 1940, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 167, 49. 1956, *Phytologia* 49(1): 33-43. 1981, *Fl. Novo-Galiciana* 14: 354. 1983, *Genera Graminum* 207. 1986, *Phytologia* 62: 267-275. 1987, *American Journal of Botany* 81: 622-629. 1994, *BioLlania* 6: 473-490. 1997, *Plant Species Biology* 13: 35-50. 1998, *Contributions from the United States National Herbarium* 41: 138, 194. 2001.

Species

S. brevifolius Philippi (*Festuca macrostachya* Torr. & A. Gray; *Lesourdia karwinskyana* E. Fourn.; *Lesourdia multiflora* E. Fourn.; *Scleropogon karwinskyanus* (E. Fourn.) Benth. ex S. Watson; *Scleropogon longisetus* Beetle; *Tricuspis monstra* Munro ex Hemsl.)

North America, southwestern U.S. Perennial, stoloniferous, spikelets unisexual, awns much longer than body of lemma, low forage value, useful for erosion control, see *Pacif. Railr. Rep.* 2(4): 177. 1855, *Diagnoses Plantarum Novarum ... Mexicanarum* 3: 56. 1880.

in English: burro grass

in Mexico: zacate burro, zacate de burro

Sclerostachya (Andersson ex Hackel) A.

Camus = *Miscanthus* Andersson, *Saccharum* L., *Sclerostachya* (Hackel) A. Camus, *Sclerostachyum* Stapf ex Ridl.

From the Greek *skleros* and *stachys* “spike, an ear of grain, ear of corn.”

About 2-3 species, India, Malaysia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, *Andropogon* subgen. *Sclerostachya* Andersson ex Hack., perennial, herbaceous, coarse, stout, robust, often forming large clumps, rigid leaf blades linear lanceolate, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate with whorled or fascicled branches, 2 glumes more or less equal, lower glume 2-keeled and 3-nerved, upper glume 3-nerved, palea keels lacking, 2 free and glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas, sometimes referred to *Saccharum* and *Miscanthus*, hybrids with *Narenga* and *Saccharum*, see *Species Plantarum* 1: 54. 1753, *Synopsis Plantarum Glumacearum* 1: 411. 1855 [1854], *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 165-166. 1855, *Monographiae Phanerogamarum* 6: 119, 121. 1889 and *Contr. U.S. Natl. Herb.* 9: 400. 1905, *U.S. Dept. Agric. Bull.* 772: 254. 1920, *Flore Générale de l'Indo-Chine* 7: 243. 1922, *The Flora of the Malay Peninsula* 5: 194. 1925, *Proceedings of the 14th Congress of the International Society of Sugar Cane Technologists* 1972: 241. 1972, *Caryologia* 37: 351-357. 1984, *Flora Mesoamericana*

6: 378-379. 1994, *Sida* 16(2): 233-244. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Sida* 16(3): 551-580. 1995, *J. Fujian Acad. Agric. Sci.* 11(3): 19-22. 1996, *Journal of Plant Research* 115: 381-392. 2002, *Contributions from the United States National Herbarium* 46: 294-295, 550-557. 2003.

Species

S. fusca (Roxb.) A. Camus (*Eriochrysis attenuata* Nees ex Steud.; *Eriochrysis fusca* (Roxb.) Trin.; *Miscanthus fuscus* (Roxb.) Benth.; *Saccharum fuscum* Roxb.; *Sclerostachya milroyi* Bor; *Tricholaena fusca* (Roxb.) Schult.)

Asia tropical, India, Thailand. Perennial, coarse, tufted, silky, reedlike, ligule a ciliate membrane-like, rigid leaves linear-lanceolate with rough margins, inflorescence paniculate with branches whorled or solitary, spikelets in pairs, used for thatching and light fences, pens and screens, related to *Saccharum officinarum* L., common in moist habitats, in shallow depressions, see *Essai d'une Nouvelle Agrostographie* 8. 1812, *Flora Indica; or Descriptions ...* 1: 241. 1820, *Mantissa* 2: 8, 163-164. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 315. 1832, *Synopsis Plantarum Glumacearum* 1: 411. 1855 [1854], *Journal of the Linnean Society, Botany* 19: 65. 1881 and *Indian Forest Records: Botany* 1: 85. 1939.

in India: kandu rellugaddi, khilut, khuree, kilat, pata-khuree, retwa, tillak, tilluk

in Thailand: khaem, khaem doi, kham, yaa phong, ya phong, ya rakam, yaa rakam, yaa saeng, ya saeng

S. ridleyi (Hack.) A. Camus (*Saccharum ridleyi* Hack.)

Asia tropical, Thailand. See *Österreichische Botanische Zeitschrift* 41: 6. 1891 and *Annales de la Société Linnéenne de Lyon, sér. 2*, 71: 104 [or 103]. 1925.

Scolochloa Link = *Fluminia* Fr., *Grapphephorum* Desv., *Scolochloa* Mert. & W.D.J. Koch

Greek *skolos* "thorn, prickle," *skolops* "anything pointed" and *chloe*, *chloa* "grass."

One or 2 species, north temperate regions. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Scolochloinae, perennial, rhizomatous, auricles absent, ligule an unfringed membrane, rhizomes succulent, plants bisexual, inflorescence paniculate, panicle open, spikelets pedicellate, 2 glumes very unequal, upper glume 3- to 5-nerved membranous, lemmas smooth coriaceous, palea present, 2 lodicules, 3 stamens, ovary hairy on top, 2 stigmas, native pasture species, in shallow water, wet meadows, along streams, lakes, rivers, type *Scolochloa festucacea* (Willd.) Link, see *Species Plantarum* 1: 81. 1753, *Nouveau Bulletin des Sciences*,

publié par la Société Philomatique de Paris 2: 189. 1810, *Essai d'une Nouvelle Agrostographie* 99, 162, 177. 1812, *Deutschlands Flora* 1: 374, 528, 539. 1823, *Enumeratio Plantarum Horti Botanici Berolinensis* 1: 136-137. 1827, *Flora Helvetica* 1: 202. 1828, *Summa Vegetabilium Scandinaviae* 1: 76. 1845, *Summa Vegetabilium Scandinaviae* 1: 247. 1846, *Reisen im Amur-Lande, Bot.* 201, 244, t. 8, f. 15-21. 1868, *Genera Plantarum* 3(2): 1197. 1883 and *Acta Biologica Cracoviensia, Series Botanica* 27: 57-74. 1985, *Bot. Zhurn. (Moscow & Leningrad)* 76: 476-479. 1991, *Feddes Repertorium* 112(5-6): 333. 2001, *Contributions from the United States National Herbarium* 48: 368, 380-381, 609. 2003.

Species

S. festucacea (Willd.) Link (*Aira arundinacea* Lilj. ex Roem. & Schult., nom. illeg., non *Aira arundinacea* L.; *Arundo festucacea* Willd.; *Donax borealis* Trin.; *Donax festucaceus* (Willd.) P. Beauv.; *Festuca arundinacea* (L.) Lilj., nom. illeg., non *Festuca arundinacea* Schreb.; *Festuca borealis* (Trin.) Mert. & Koch ex Roehl.; *Festuca donacina* Wahlenb.; *Fluminia arundinacea* (Roem. & Schult.) Fr.; *Fluminia festucacea* (Willd.) Hitchc.; *Glyceria arundinacea* (Roem. & Schult.) Fr., nom. illeg., non *Glyceria arundinacea* Kunth; *Grapphephorum arundinaceum* (Roem. & Schult.) Asch.; *Grapphephorum festucaceum* (Willd.) A. Gray; *Schedonorus arundinaceus* Roem. & Schult.; *Schedonorus arundinaceus* Gaudin ex Roem. & Schult.; *Scolochloa arundinacea* (Roem. & Schult.) MacMill.; *Triodia festucacea* (Willd.) Roth)

Europe. Succulent rhizomes, spikelets several-flowered, floret callus bearded, lemmas 5- to 7-nerved, see *Species Plantarum* 1: 63-64, 81. 1753, *Flora Cochinchinensis* 1: 1, 11. 1790, *Utkast til en Svensk Flora* 49. 1792, *Svensk Flora* edition 2. 47. 1798, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 126. 1809, *Essai d'une Nouvelle Agrostographie* 78, 152, 161. 1812, *Systema Vegetabilium* 2: 700. 1817, *Fundamenta Agrostographiae* 156. 1820, *J. C. Rohlings Deutschlands Flora* 1(2): 664. 1823, *Flora Suecica* 1: 64. 1824, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 137. 1827, *Enumeratio Plantarum Phaenogamarum in Germania* 1(1): 382. 1827, *Summa Vegetabilium Scandinaviae* 247. 1846, *Proceedings of the American Academy of Arts and Sciences* 5: 191. 1861, *Flora der Provinz Brandenburg* 1: 852. 1864, *The Metaspermae of the Minnesota Valley* 79. 1892 and *United States Department of Agriculture: Bulletin* 772: 38, f. 11. 1920.

in English: sprangletop

Scolochloa Mert. & W.D.J. Koch = *Arundo* L., *Donax* P. Beauv.

From the Greek *skolos* "thorn, prickle," *skolops* "anything pointed" and *chloe*, *chloa* "grass."

Arundinoideae, Arundineae, type *Scolochloa arundinacea* (P. Beauv.) Mert. & Koch, see *Species Plantarum* 1: 81. 1753, *J. C. Rohlings Deutschlands Flora* 1: 374, 528, 530, 539. 1823 and *Fl. Bermuda* 29. 1918, *Contributions from the United States National Herbarium* 46: 113-115, 569. 2003.

Scribneria Hackel

For the American botanist Frank Lamson-Scribner (Franklin Pierce Lamson), 1851-1938, agrostologist, his writings include *Useful and Ornamental Grasses*. [see United States of America - Division of Agrostology. *Bulletin*, no. 3.] 1896, "Notes on the grasses in the Bernhardt Herbarium, collected by Thaddeus Haenke, and described by J.S. Presl." *Annual Rep. Missouri Bot. Gard.* 10: 35-59. 1899 and "New or little known grasses." *U.S.D.A. Circ.* 30: 1-8. 1901; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 339. Boston 1965; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 363-364. 1973; J.W. Harshberger, *The Botanists of Philadelphia and Their Work*. 358-360. 1899; Thomas Henry Kearney (1874-1956), in *Leaflet. Western Bot.* 8(12): 276. 1958; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Joseph William Blankinship (1862-1938), "A century of botanical exploration in Montana, 1805-1905: collectors, herbaria and bibliography." in *Montana Agric. Coll. Sci. Studies Bot.* 1: 1-31. 1904.

One species, western U.S. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Scribneriinae, annual, tufted, robust, herbaceous, unbranched, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence spicate or racemose, raceme rachis tough, spikelets solitary or paired, 2 glumes more or less equal, upper glume 4-nerved, lemma awned, palea present, 2 free membranous lodicules, 1 stamen, ovary glabrous, 2 stigmas, open ground, rocky places, type *Scribneria bolanderi* (Thurb.) Hack., see *Botanical Gazette* 11(5): 105-106, t. 5. 1886 and *Grasses: Systematics and Evolution* 61-74. 2000, *Contributions from the United States National Herbarium* 48: 609-610. 2003.

Species

S. bolanderi (Thurb.) Hack. (*Lepturus bolanderi* Thurb.)

U.S., California. Spikelets 1-flowered, lemma membranous 3-nerved, dry gravelly soil, see *Prodromus Florae Novae Hollandiae* 207. 1810, *Proceedings of the American Academy of Arts and Sciences* 7: 401. 1868, *Botanical Gazette* 11(5): 105-106, t. 5. 1886.

Scrotochloa Judz. = *Leptaspis* R. Br.

Possibly from the Latin *scrotum*, *i* "scrotum, a pouch" and Greek *chloe*, *chloa* "grass," see also *Leptaspis* R. Br., Greek *leptos* "slender" and *aspis* "a shield," the fruit is enclosed in the enlarged glume.

About 2 species, Sri Lanka, Southeast Asia, Pacific, southern India. Bambusoideae, Oryzodae, Phareae, perennial, erect, decumbent, herbaceous, unbranched, more or less hollow, rooting at the nodes, auricles absent, leaf blades pseudopetiolate, ligule a tiny unfringed membrane, plants monoecious, open inflorescence paniculate and nondigitate, all fertile spikelets unisexual, hermaphrodite florets absent, female spikelets with urn-shaped lemmas, staminate spikelets caducous, 2 glumes more or less equal, palea present, lodicules apparently lacking or absent, no stamens, 3 stigmas, male spikelets glumed, male florets 6-staminate, forest shade, rainforest, sometimes referred to *Leptaspis*, type *Scrotochloa urceolata* (Roxb.) Judz., see *Prodromus Florae Novae Hollandiae* 211. 1810 and *Phytologia* 56(4): 299-304. 1984, *Genera Graminum* 68. 1986, *Smithsonian Contr. Botany* 65: 1-27. 1987, Khidir W. Hilu and Lawrence A. Alice, "Evolutionary implications of *matK* indels in Poaceae." *Am. J. Bot.* 86: 1735-1741. 1999, Fabian A. Michelangeli, Jerrold I Davis and Dennis Wm. Stevenson, "Phylogenetic relationships among Poaceae and related families as inferred from morphology, inversions in the plastid genome, and sequence data from the mitochondrial and plastid genomes." *Am. J. Bot.* 90: 93-106. 2003.

Species

S. tararaensis (Jansen) Judz. (*Leptaspis tararaensis* Jansen)

Papua New Guinea. Perennial, bambusoid, see *Reinwardtia* 2(2): 304. 1953, *Phytologia* 56(4): 300. 1984.

S. urceolata (Roxb.) Judz. (*Leptaspis manillensis* Steud.; *Leptaspis urceolata* (Roxb.) R. Br.; *Pharus urceolatus* Roxb.)

Southern India, Sri Lanka. Perennial, bambusoid, leaf blades stalked, lemma pyriform with a terminal orifice, see *The Civil and Natural History of Jamaica in Three Parts* 344, pl. 38, f. 3. 1756, *Flora Indica; or, Descriptions of Indian Plants* 2: 611-612. 1832, *Plantae Javanicae Rariores* 1: 23, t. 6. 1838, *Synopsis Plantarum Glumacearum* 1: 8. 1855 [1853], *Enum. Pl. Zeyl.* 357. 1864 and *Handb. Fl. Ceylon* 5: 190-191. 1900, *Grasses of Ceylon* 21-22. 1956, *Grasses of Burma ...* 617, 619. 1960, *Phytologia* 56(4): 300. 1984.

Scutachne A. Hitchc. & Chase

Latin *scutum*, *i* "an oblong shield, a shield" and Greek *achne* "chaff, glume."

Two species, Cuba, the Caribbean. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Melinidinae, perennial, caespitose, herbaceous, auricles absent, leaves basal or mostly basal, leaf blades narrow, plants bisexual, inflorescence paniculate or spicate, spikelets pedicellate and compressed, shorter spikelets sterile, 2 glumes very unequal, lower glume 7- to 9-nerved, upper glume and lower lemma coriaceous, upper glume 7-nerved, upper lemma acuminate, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, rocky areas, rocky slopes, see *Scutachne dura* (Griseb.) Hitchc. & Chase, see *Species Plantarum* 1: 55. 1753, *Reliquiae Haenkeanae* 1(4-5): 343. 1830 and *Proceedings of the Biological Society of Washington* 24: 148-149. 1911, *Contributions from the United States National Herbarium* 46: 569. 2003.

Species

S. amphistemom (C. Wright) Hitchc. & Chase (*Alloteropsis amphistemom* (C. Wright) Hitchc.; *Panicum amphistemom* C. Wright)

The Caribbean. Densely tufted, primary branches simple, see *Anales de la Academia de Ciencias Medicas ...* 8: 207. 1871 and *Contributions from the United States National Herbarium* 12(6): 211. 1909, *Proceedings of the Biological Society of Washington* 24: 149. 1911.

S. dura (Griseb.) Hitchc. & Chase (*Alloteropsis dura* (Griseb.) Hitchc.; *Panicum durum* Griseb.)

The Caribbean. See *Memoirs of the American Academy of Arts and Science, new series* 8: 533. 1862 and *Contributions from the United States National Herbarium* 12(6): 211. 1909, *Proceedings of the Biological Society of Washington* 24: 149. 1911.

Secale L. = Gramen Ség.

The classical Latin name *secale* (*sicale*), *secalis* "a kind of grain, rye, black spelt," *seges*, *segetis* "a cornfield, a field, ground," Akkadian *se'u*, *sehu* "grain, corn"; see Carl Linnaeus, *Species Plantarum*. 84. 1753 and *Genera Plantarum*. edition 5. 36. 1754; S. Battaglia, *Grande dizionario della lingua italiana*. XVIII: 449-450. 1997; H. Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 573. 1996; M. Cortelazzo & P. Zolli, *Dizionario etimologico della lingua italiana*. 5: 1174-1175. 1988; N. Tommaseo & B. Bellini, *Dizionario della lingua italiana*. Torino 1865-1879; Giovanni Semerano, *Le origini della cultura europea*. *Dizionario della lingua Latina e di voci moderne*. 2(2): 559, 560. Firenze 1994.

About 3-5 species, Mediterranean region, Asia. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Triticinae, annual, biennial or rarely perennial, herbaceous, tufted or solitary, erect, unbranched, auricles present, sheaths open, ligule an unfringed membrane, scabrous leaves linear and

flat or inrolled, plants bisexual, cleistogamous or chasmogamous, a single dense cylindrical spike or raceme finally drooping, spikelets solitary and sessile, spikelets distichous and erect, 2-3 fertile or bisexual florets, 2 linear glumes subequal to very unequal, glumes 1-nerved acuminate or awned, lemmas 1 or 2 in each spikelet and tapering to long straight awn, callus very short, palea narrow and awnless, 2 lodicules free and ciliate, 3 stamens, ovary hairy, ovary hairy, 2 stigmas, fruit longitudinally grooved, a weed of wheat and barley, stock fodder, used as a crop, stems for straw-matting and archery targets, binding sand, species of open habitats, sandy soils, dry hillsides, species of *Secale* L. are outcrossing, taxonomic placement not certain, there is considerable taxonomic confusion concerning this genus, intergeneric hybrids with *Triticum* L., *Agropyron* Gaertner, *Aegilops* L., *Hordeum* L. and *Elytrigia* Desv., type *Secale cereale* L., see *Species Plantarum* 1: 84. 1753, *Plantae Veronenses* 3: 145. 1754, *Genera Plantarum*. edition 5. 36. 1754 and *American Journal of Botany* 59(1): 59-70. 1972, *Biol. J. Linn. Soc.* 13: 299-313. 1980, *Feddes Repert.* 95: 425-521. 1984, *Am. J. Bot.* 85: 1581-1585. 1998, Jeremy D. Pickett-Heaps, Brian E.S. Gunning, Roy C. Brown, Betty E. Lemmon and Ann L. Cleary, "The cytoplasmic concept in dividing plant cells: cytoplasmic domains and the evolution of spatially organized cell division." *Am. J. Bot.* 86: 153-172. 1999, J. Spencer Johnston, Michael D. Bennett, A. Lane Rayburn, David W. Galbraith and H. James Price, "Reference standards for determination of DNA content of plant nuclei." *Am. J. Bot.* 86: 609-613. 1999, H. Lloyd Mogensen and Maxine Losoff Rusche, "Occurrence of plastids in rye (Poaceae) sperm cells." *American Journal of Botany* 87: 1189-1192. 2000, *Am. J. Bot.* 87: 1757-1764. 2000, *Am. J. Bot.* 88: 553-559. 2001, *Am. J. Bot.* 89: 12-21. 2002, *Contributions from the United States National Herbarium* 48: 379-380, 610. 2003, Wanda J. Kelly and Todd J. Cooke, "Geometrical relationships specifying the phyllotactic pattern of aquatic plants." *Am. J. Bot.* 90: 1131-1143. 2003, *Am. J. Bot.* 91: 1022-1035. 2004, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, "The evolution of nuclear genome structure in seed plants." *Am. J. Bot.* 91: 1709-1725. 2004, *Am. J. Bot.* 91: 1789-1801. 2004, *Am. J. Bot.* 92: 852-858. 2005, Roberta J. Mason-Gamer, "The β -amylase genes of grasses and a phylogenetic analysis of the Triticeae (Poaceae)." *Am. J. Bot.* 92: 1045-1058. 2005, *Plant Breeding* 124(1): 39-43. Feb 2005, *Journal of Agronomy and Crop Science* 191(1): 55-63. Feb 2005, *New Phytologist* 165(2): 391-410, Feb 2005 [Genome conflict in the gramineae], *Journal of Food Lipids* 12(1): 12-22. Mar 2005, *EPPO Bulletin* 35(1): 225-227. Apr 2005, *Plant Breeding* 124(2): 147-153. Apr 2005, *Clinical & Experimental Allergy* 35(4): 441-447. Apr 2005, *Allergy* 60(5): 619-625. May 2005, *Weed Biology and Management* 5(2): 62-68. June 2005, *Physiologia Plantarum* 124(2): 249-259. June 2005, T.D. Khanh, M.I. Chung, T.D. Xuan and S. Tawata, "The Exploitation of Crop Allelopathy in Sustainable

Agricultural Production.” *Journal of Agronomy and Crop Science* 191(3): 172-184. June 2005, *Insect Molecular Biology* 14(3): 309-318. June 2005.

Species

S. afghanicum (Vavilov) Roshev. (*Secale ancestrale* var. *afghanicum* (Vavilov) Ivanov & G.V. Yakovlev; *Secale cereale* subsp. *afghanicum* (Vavilov) K. Hammer; *Secale cereale* var. *afghanicum* Vavilov; *Secale segetale* (Zhuk.) Roshev.; *Secale segetale* subsp. *afganicum* (Vavilov) Bondar ex O.N. Korovina; *Secale segetale* var. *afghanicum* (Vavilov) Tzvelev)

Afghanistan. Annual, see *Novosti Sist. Vyss. Rast.* 10: 46. 1973, *Kulturpflanze* 35: 146. 1987, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Acta Biologica Cracoviensia, Series Botanica* 36: 23-30, pls. 2-3. 1994.

S. africanum Stapf (*Secale montanum* subsp. *africanum* (Stapf) Kobyl.; *Secale strictum* subsp. *africanum* (Stapf) K. Hammer)

South Africa, Cape Province. Vulnerable species, rare, perennial, loosely tufted, inflorescence very dense and linear, lemma keel hairy, growing on riverbanks, undisturbed places, see *Flora Sicula* (Presl) 1: xlvi. 1826, *Florae Siculae Prodrumus* 1: 145. 1827, *Hooker's Icones Plantarum* 27(1): t. 2601, 1-2. 1899 and *Kulturpflanze* 35: 142. 1987, *Hereditas (Beijing)* 10: 5-7. 1988, *Annals of Botany* 64: 315-324. 1989, *Chromosoma* 101: 206-213. 1991, *Bothalia* 29(2): 335-341. 1999.

S. anatolicum Boiss. (*Secale daralagesi* Thüm.; *Secale montanum* subsp. *anatolicum* (Boiss.) Tzvelev; *Secale montanum* Guss. var. *anatolicum* Boiss.; *Secale strictum* subsp. *africanum* (Boiss.) K. Hammer)

Anatolia. See *Sovetskaja Botanika* 6: 101. 1938, *Novosti Sist. Vyss. Rast.* 10: 46. 1973, *Kulturpflanze* 35: 140. 1987, *Genome* 29: 594-597. 1987.

S. cereale L. (*Secale montanum* Guss.; *Secale turkestanicum* Bensin; *Triticum cereale* (L.) Asch. & Graebn.; *Triticum cereale* (L.) Salisb.; *Triticum secale* Link)

Europe, Eurasia. Annual or biennial, tufted, erect, pubescent, auricles present, basal leaf sheaths not keeled, ligule membranous and truncate, flat and linear leaves, bearded and finally drooping distichous spike, cleistogamous and heteromorphic spikelets, rachis tardily disarticulating, hermaphrodite spikelets sessile, 2 bisexual florets, incomplete florets morphologically similar to hermaphrodite florets, glumes subulate or tapering to an awn, lemma long-awned, palea membranous and narrowly ovate, ovary pilose, grain crop species, used for making bread and for stock feed, sand-binder, used for erosion control and for soil stabilization, widely cultivated, found in waste places, along roadsides, in fallow lands or field margins, see *Species Plantarum* 1: 84-85. 1753, *Prodrumus stirpium in horto ad Chapel Allerton gentium*. 27. Londini [London] (Nov-

Dec) 1796 and *Bulletin of the Torrey Botanical Club* 60(3): 156-160, f. 1-2. 1933, *Canad. J. Bot.* 40: 1704. 1962, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 120. 1971[1972], *Acta Biologica* 29: 23-32. 1984, *Flora of Turkey and the East Aegean Islands* 9: 259. 1985, *Acta Botanica Sinica* 27: 460-464. 1985, *Citol. Genet. (Kiev)* 19(6): 428-433. 1985, *Acta Botanica Sinica* 28: 595-598. 1986, *Chromosoma* 94: 249-252. 1986, *Korean Journal of Botany* 29: 77-84. 1986, *Cytologia* 51: 489-492. 1986, *Bjulleten' Glavnogo Botaniceskogo Sada* 140: 68-73. 1986, *Acta Genetica Sinica* 14: 344-348. 1987, *Kulturpflanze* 35: 146. 1987, *Stain Technology* 63: 271-275. 1988, *Journal of the Northwestern Teachers College, Natural Science* 1: 58-63. 1988, *Heredity: An International Journal of Genetics* 60: 47-54. 1988, *Genome* 30: 361-365. 1988, *Acta Botanica Boreali-Occidentalia Sinica* 9: 116-122. 1989, *Plant Chromosome Research* 187-193. 1989, *Proceedings of the Indian Science Congress Association* 76(3, vi): 180. 1989, *Japanese Journal of Breeding* 40: 147-152. 1990, *Genome* 33: 425-432. 1990, *Pakistan Journal of Botany* 22: 1-10. 1990, *Plant Systematics and Evolution* 189: 217-231. 1994, *Chromosoma* 103: 331-337. 1994, *Plant Systematics and Evolution* 193: 243-248. 1994, *Pakistan Journal of Botany* 26: 353-366. 1994, *Chromosoma* 104: 298-307. 1995, *Cytologia* 60: 243-247. 1995, *Journal of Plant Research* 108: 209-216. 1995, *Acta Botanica Sinica* 39(8): 697-700. 1997, *Journal of Shandong Agricultural University* 29(4): 435-442. 1998, *Acta Botanica Sinica* 40(2): 158-162. 1998, *Bothalia* 29(2): 335-341. 1999.

in English: rye, cereal rye, silver tip triticale, common rye, cultivated rye

in Italian: ségale, sécale, sécola, ségala, ségalla, ségla, ségola

in Morocco: seigle cultivé, petit blé dur, orge des chrétiens, skâliya, âsqâliyâ, shqaliya, sentî, âsentîl, ashentil, âsentît, isentî, ishenti, sentiya, tisentît, tishentit, âdkûin, adkuyn, âdkû, qmih, es-sa'îr er-rûmî, 'alas

in Spanish: centeno

in Colombia: centeno

in Mexico: centeno

in Peru: centeno

in India: rye

in Indonesia: gandum hitam

in China: mai jiao

S. cereale L. subsp. ***afghanicum*** (Vavilov) K. Hammer (*Secale afghanicum* (Vavilov) Roshev.; *Secale cereale* var. *afghanicum* Vavilov)

Asia. Annual, see *Kulturpflanze* 35: 146. 1987.

S. cereale L. subsp. ***cereale*** (*Secale cereale* cv. *multicaule* Metzg. ex Alef.; *Secale cereale* var. *viride* Vavilov; *Secale cereale* var. *vulgare* Körn. & H. Werner)

Europe. Annual, useful sand-binding species, suitable for erosion control, widely cultivated.

in English: rye, cereal rye

in Turkey: çavdar

S. cereale L. subsp. *dighoricum* Vavilov (*Secale ancestrale* var. *dighoricum* (Vavilov) Ivanov & G.V. Yakovlev; *Secale cereale* var. *dighoricum* (Vavilov) V. Yaaska; *Secale dighoricum* (Vavilov) Roshev.; *Secale segetale* subsp. *dighoricum* (Vavilov) Tzvelev)

Eurasia. Annual, see *Novosti Sist. Vyss. Rast.* 10: 46. 1973.

S. cereale L. subsp. *rigidum* Vavilov & Antropov (*Secale turkestanicum* Bensin)

Eurasia. Annual.

S. cereale L. subsp. *segetale* Zhuk (*Secale segetale* (Zhuk.) Roshev.)

Asia temperate, Eurasia. Annual, weed, see *Acta Botanica Yunnanica* 12: 57-66. 1990, *Acta Biologica Cracoviensia, Series Botanica* 36: 23-30, pls. 2-3. 1994.

S. cereale L. subsp. *tetraploidum* Kobyl.

Eurasia. Annual, cultivated.

S. cereale L. subsp. *tsitsinii* Kobyl. (Nikolai Vasil'evich Tsitsin, 1898-1980, Academician of the Division of Mathematical and Natural Sciences since 29.01.1939)

Eurasia. Annual, cultivated.

S. cereale L. var. *ancestrale* (Zhuk.) Kit Tan (*Secale cereale* L. subsp. *ancestrale* Zhuk.; *Secale ancestrale* (Zhuk.) Zhuk.)

Europe, Turkey. Rare species, annual, found in sandy places in vineyards, field edges, see *Flora of Turkey and the East Aegean Islands* 9: 259. 1985.

S. cereale L. var. *vavilovii* (Grossh.) Mayss. (*Secale vavilovii* Grossh.)

Eurasia, Armenia, Azerbaijan. Indeterminate species, annual, weed, found in dry gorges, irrigation ditches.

in Turkey: çavdar

S. ciliatoglume (Boiss.) Grossh. (*Secale strictum* (C. Presl) C. Presl subsp. *strictum* var. *ciliatoglume* (Boiss.) Fred & G. Petersen)

Europe.

S. kuprijanovii Grossh. (*Secale montanum* subsp. *kuprijanovii* (Grossh.) Tzvelev; *Secale strictum* subsp. *kuprijanovii* (Grossh.) K. Hammer)

Eurasia, North Caucasus, Georgia. Indeterminate species, see *Flora Kavkaza* 1: 136. 1928, *Acta Inst. Bot. Acad. Sc. URSS, Ser. 1, Fasc 2, 63.* 1936, *Novosti Sist. Vyss. Rast.* 10: 46. 1973, *Kulturpflanze* 35: 140. 1987.

S. montanum Guss.

Europe. See *Florae Siculae Prodrumus* 1: 145. 1827 and *Notes from the Royal Botanic Garden, Edinburgh* 44: 351-

356. 1987, *Japanese Journal of Breeding* 40: 147-152. 1990, *Genome* 33: 425-432. 1990, *Nucleus* 40(1,2): 31-32. 1997.

S. rhodopaeum Delip. (also spelled *rhodopaecum*)

Bulgaria. Rare species, see *Fitologija* 39: 72-77. 1991.

S. strictum C. Presl (*Secale strictum* (Presl) C. Presl; *Triticum strictum* C. Presl)

Europe, Israel, Turkey, Syria, Morocco. Perennial or annual, caespitose, rachis rapidly disarticulating at maturity, glumes acuminate or awned, found in dry stony or rocky mountain sides, see *Flora Sicula* (Presl) 1: xlvi. 1826 and *Nordic Journal of Botany* 13: 481-493. 1993.

S. strictum (C. Presl) C. Presl subsp. *africanum* (Stapf) K. Hammer (*Secale africanum* Stapf)

South Africa. Annual, cereal, see *Flora Sicula* (Presl) 1: xlvi. 1826, *Florae Siculae Prodrumus* 1: 145. 1827, *Hooker's Icones Plantarum* 27(1): t. 2601, 1-2. 1899 and *Kulturpflanze* 35: 142. 1987, *Hereditas (Beijing)* 10: 5-7. 1988, *Annals of Botany* 64: 315-324. 1989, *Chromosoma* 101: 206-213. 1991, *Bothalia* 29(2): 335-341. 1999.

in English: wild rye

S. strictum (C. Presl) C. Presl subsp. *anatolicum* (Boiss.) K. Hammer (*Secale anatolicum* Boiss.; *Secale montanum* subsp. *anatolicum* (Boiss.) Tzvelev)

Asia, Iran, Turkey. Perennial, see *Sovetskaja Botanika* 6: 101. 1938, *Novosti Sist. Vyss. Rast.* 10: 46. 1973, *Kulturpflanze* 35: 140. 1987, *Genome* 29: 594-597. 1987.

S. strictum (C. Presl) C. Presl subsp. *ciliatoglume* (Boiss.) K. Hammer (*Secale ciliatoglume* (Boiss.) Grossh.; *Secale montanum* var. *ciliatoglume* Boiss.)

Asia, Iran, Turkey. Annual.

S. strictum (C. Presl) C. Presl subsp. *kuprijanovii* (Grossh.) K. Hammer (*Secale kuprijanovii* Grossh.; *Secale montanum* subsp. *kuprijanovii* (Grossh.) Tzvelev)

Asia, Georgia, Armenia. Perennial or annual, occurs in mountain meadows, see *Flora Kavkaza* 1: 136. 1928, *Acta Inst. Bot. Acad. Sc. URSS, Ser. 1, Fasc 2, 63.* 1936, *Novosti Sist. Vyss. Rast.* 10: 46. 1973, *Kulturpflanze* 35: 140. 1987.

S. strictum (C. Presl) C. Presl subsp. *strictum* (*Secale dal-maticum* Vis.; *Secale montanum* Guss.)

Europe, Israel, Turkey, Syria, Morocco. Annual or short-lived perennial, semiarid conditions.

in English: mountain rye, mountain brome

S. sylvestre Host (*Secale fragile* M. Bieb.)

Eurasia, Europe. Perennial, reported to be self-compatible, found in sandy soils, see *Bot. Zhurn.* 71: 1426-1427. 1986.

S. vavilovii Grossh. (*Secale cereale* subsp. *vavilovii* (Grossh.) Kobyl.; *Secale transcaucasicum* Grossh.)

Eurasia, Armenia. Indeterminate species, see *Japanese Journal of Breeding* 35: 275-284. 1985, *Chromosoma* 94: 249-252. 1986.

S. x derzhavinii Tzvelev (*Secale strictum* (C. Presl) C. Presl x *Secale cereale* L.)

Russia. Cultivated,

Secalidium Schur = *Dasypyrum* (Coss. & Durieu) T. Durand

Referring to *Secale* L.

Pooideae, Triticaceae, Triticinae, see *Exploration Scientifique de l'Algerie, Botanique II, Phanérogamie* 202. Paris 1855, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 16: 37. 1866, *Enumeratio Plantarum Transsilvaniae* 807. May-Sep 1866, *Index Generum Phanerogamorum* 504. 1888 and *Archives de Biologie Végétale Pure et Appliquée* 1: 35, 62. 1901, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33: 101. 1942, *Fl. Afrique Nord* 3: 333. 1955, *Contributions from the United States National Herbarium* 48: 245, 610. 2003.

x Secalotricum Meister ex Kostoff

Triticosecale.

See *Rev. Int. Bot. Appl. Agric. Trop.* 16: 251. 1936.

Sehima Forssk. = *Hologamium* Nees

From the Arabic *saehim* or *sehim*, vernacular names for *Sehima ischaemoides* Forssk. collected in Yemen, Al Hadiyah ["Yemen in montibus ad Hadfe"], 1763; see P. Forsskål (1732-1763), *Flora aegyptiaco-arabica*. 178. Copenhagen 1775.

About 5 species, Old World tropics. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Ischaeminae, perennial or annual, variable, caespitose, herbaceous, auricles absent, ligule ciliate and membranous or a line of hairs, leaf blades narrow and linear, plants bisexual, inflorescence a single terminal raceme exerted from the uppermost sheath, spikelets paired, sessile spikelet slightly laterally or dorsally compressed, pedicellate spikelet male or sterile and strongly dorsally compressed, pedicels more or less flat, 2 glumes, glumes of the sessile spikelets more or less equal, lower glume concave or convex, lower glume of sessile spikelet nerved, upper glume awned, lower lemma male, upper lemma bisexual with a bent awn, upper lemma awn glabrous or pubescent, palea 2-nerved, 2 lodicules free and fleshy, stamens 3, ovary glabrous, 2 stigmas, grain compressed, fodder grasses, dry regions, in open patches, dry soils, dry

bushlands, savannahs, heavy clay, open habitats, a segregate from *Ischaemum*, type *Sehima ischaemoides* Forssk., see *Species Plantarum* 2: 1045, 1049. 1753, *Flora Aegyptiaco-Arabica* 178. 1775, *Edinburgh New Philosophical Journal* 18: 185. 1835 and *Flora of Ethiopia and Eritrea* 7: 316-317. 1995, *Contributions from the United States National Herbarium* 46: 569. 2003, *Journal of Phytopathology* Volume 153, Issue 1: 1-4. Jan 2005.

Species

S. galpinii Stent

Southern tropical Africa. Perennial, robust, densely tufted, unbranched, basal leaf sheath hairy, leaves flattened and scabrid, ligule a ring of hairs, spike-like raceme, spikelets paired, sessile spikelets with flattish or convex lower glume, used as thatching grass, grows on black peat soils, in open patches, see *Bothalia* 1(4): 239. 1924.

in English: deck grass, yellow turfgrass

in South Africa: dekgras (Afrikaans), geelturfgras

S. ischaemoides Forssk. (*Andropogon insculptus* (Hochst. ex A. Rich.) Andersson, also spelled *insculptus*; *Andropogon insculptus* (Hochst.) Andersson; *Andropogon insculptus* Hochst. ex A. Rich.; *Andropogon lineatus* Steud.; *Andropogon rynchophorus* Stapf; *Andropogon schangulensis* Rupr. ex Steud.; *Andropogon sehima* Steud.; *Ischaemum insculptum* (Hochst.) Hochst. ex A. Rich.; *Ischaemum laxum* var. *insculptum* (Hochst. ex A. Rich.) Hack.; *Sehima insculptum* Hochst.; *Sehima kotschyi* Hochst.)

Tropical Africa, Asia, Pakistan. Annual, erect, glaucous, tufted, montane to submontane, villous racemes, sessile spikelets with grooved and 2-toothed lower glume, useful for erosion control and for soil conservation, good fodder, palatable to cattle, browsed at all stages, common in dry soils, subdesert sandy areas, savannah, subdesert grasslands, deciduous bushlands, on saline soils, see *Prodromus Florae Novae Hollandiae* 205. 1810, *Flora* 1844: 247. 1844, *Tentamen Florae Abyssinicae* ... 2: 458, 472. 1850, *Synopsis Plantarum Glumacearum* 1: 369. 1854, *Beitrag zur Flora Aethiopiens* ... 130. 1867, *Monographiae Phanerogamarum* 6: 245. 1889 and *Mémoires de la Société Botanique de France* 8b: 101. 1908, *Bol. Inst. Bioci.* 57: 38. 1998.

in Arabic: saehim, sehîm

in Mali: allomoze

in Niger: alfêlia, fari'n tchawa, ikêrdan-alagh, karagého, kotokoli, sub kaarey, subu kwaré

S. nervosa (Rottler ex Roem. & Schult.) Stapf (also spelled *nervosum*) (*Andropogon macrostachyus* (Hochst. ex A. Rich.) Andersson; *Andropogon nervosus* Rottler; *Andropogon nervosus* Rottler ex Roem. & Schult.; *Andropogon robertianus* (R. Br.) Steud.; *Andropogon striatus* Klein ex Willd.; *Andropogon tacazensis* Steud.; *Hologamium*

nervosum Nees; *Hologamium nervosum* (Rottler) Nees; *Hologamium nervosum* (Rottler ex Roem. & Schult.) Nees; *Ischaemum laxum* R. Br.; *Ischaemum macrostachyum* Hochst. ex A. Rich.; *Ischaemum nervosum* (Rottler) Thwaites; *Ischaemum nervosum* (Rottler ex Roem. & Schult.) Thwaites; *Ischaemum striatum* (Klein ex Willd.) Domin; *Pollinia striata* (Klein ex Willd.) Spreng.; *Sehima macrostachyum* Hochst. ex Hack.; *Sehima nervosa* (Rottler) Stapf; *Sehima nervosum* Stapf; *Sehima nervosum* (Rottl.) Stapf

Eastern tropical Africa, Southeast Asia, Australia, Arabia, Paleotropics. Perennial or annual, wiry, tufted or densely tufted, erect, harsh fragile leaves, leaves glaucous ending in a fine point, simple and solitary erect or somewhat curved racemes, spikelets pale green and purplish, slender awn twisted at the base, pedicels with white hairs or ciliate, sessile spikelets acuminate, pedicelled spikelets lanceolate, lower glume stiff and grooved, lower glume of sessile spikelet with a membranous tip, lower lemma sterile, pedicellate spikelets narrow and acuminate, excellent pasture grass, low quality forage, fodder grass, palatable to low palatability to cattle, relished by sheep, resistant to canopy closure, important grass for hay in India, used for grazing and cut forage, useful for erosion control, a decreaser species, common on rocky hills, in areas of good rainfall, *Acacia* bushland, black laterite, open bush in partial shade, riverine scrub, desert grassland, red earths, dry subhumid zone, tropical savannah, see *Der Gesellschaft naturforschender Freunde zu Berlin, neue Schriften* 4: 218. 1803, *Species Plantarum. Editio quarta* 4: 903. 1806, *Prodromus Florae Novae Hollandiae* 205. 1810, *Plantarum Minus Cognitarum Pugillus* 2: 12. 1815, *Systema Vegetabilium* 2: 812. 1817, *Edinburgh New Philosophical Journal* 18: 185. 1835, *Tentamen Florae Abyssinicae ...* 2: 472. 1850, *Synopsis Plantarum Glumacearum* 1: 369. 1854, *Enumeratio Plantarum Zeylaniae* 365. 1864, *Beitrag zur Flora Aethiopiens ...* 310. 1867, *Genera Plantarum* 3(2): 1127. 1883, *Monographiae Phanerogamarum* 6: 245. 1889 and *Handb. Fl. Ceylon* 5: 219. 1900, *Bibliotheca Botanica* 85(2): 260. 1915, *Flora of Tropical Africa* 9: 36. 1917, *Handb. Fl. Ceylon* 6: 330. 1931, *Grasses of Ceylon* 173. 1956, *Grasses of Burma ...* 218. 1960, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: rat's-tail grass, rattail grass, white grass, sain grass

in India: bara paonia, chikka saadi hullu, chikka sali hullu, gandhi, gundra, hirn, kari kode hullu, karikooda hullu, kura eetti, kuraitti, nalai hullu, nendra gaddi, nendra pul, paunat, pavna, sagen, sain, saina, sainad, sainar, saindor, sairan, sairi, sarun, sedwa, sena, send, seran, shahala, shara, sheda, sira, telagadi

S. notatum (Hack.) A. Camus (*Ischaemum notatum* Hack.)

Asia, India. Used for paper pulp, see *Monographiae Phanerogamarum* 6: 246. 1889 and *Bulletin du Muséum d'Histoire Naturelle* 27: 373. 1921 [or 5: 373. 1921]

S. sulcatum (Hack.) A. Camus (also spelled *sulcata*) (*Ischaemum sulcatum* Hack.)

India. Annual, weak, quick growing, slender, much-branched, narrow leaves with pointed tips, racemes long awned, drought resistant, valued green fodder, excellent fodder grass, excellent hay, very nutritious at the flowering stage, can be turned into silage, found in areas of low rainfall, black soil, see *Monographiae Phanerogamarum* 6: 248. 1889 and *Bulletin du Muséum d'Histoire Naturelle* 27: 373. 1921.

in India: chota paonia, paonia, paonia, paunat, pavanya, pavna, pawana, pohna, ponai, sada, sainar, sheda

Sellulocalamus W.T. Lin = *Dendrocalamus* Nees

Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, see *Linnaea* 9(4): 476-477. 1835 and *Indian Forester* 58: 7. 1932, *Lingnan University Science Bulletin* 9: 66-67. 1940, *Acta Phytotaxonomica Sinica* 18: 211-216. 1980, *Journal of Bamboo Research* 2: 12, 31, 148, f. 3. 1983, *Kew Bulletin, Additional Series* 13: 54. 1986, *Journal of Bamboo Research* 6(2): 16-19, f. 4. 1987, *Journal of Bamboo Research* 7(4): 9, 13. 1988, *Journal of South China Agricultural University* 10(2): 40-47. 1989, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. *The Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 54-55, 112. 2000.

Semeiostachys Drobow = *Elymus* L.

Greek *semeion* and *stachys* "spike, an ear of grain, ear of corn."

Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 83. 1753 and *Flora Uzbekistanica* 1: 281, 539. 1941, *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307, 610. 2003.

Semiarundinaria Makino ex Nakai = ***Brachystachyum* Keng, *Semiarundinaria*** **Makino, *Semiarundinaria* Nakai**

Latin *semi* and the genus *Arundinaria*, an intermediate type.

About 5-13 species, eastern Asia, eastern China, Japan, Vietnam. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Shibataeinae, shrubby perennial or small tree, monopodial branching, woody and persistent, cylindrical, dense, pluricaespitose, unarmed, rhizomes leptomorph, culm internodes hollow, nodes not swollen, culm sheaths deciduous in their entirety or not

completely deciduous, sheath leathery and densely pubescent, sheath blade linear-lanceolate, flowering culms leafy, leaf blades lanceolate and glabrous, branched above, short branches, usually 3 branches per node when young and 6-8 twigs, plants bisexual, inflorescence compound racemose or paniculate, spikelets subtended by a spatheole, spikelet 2- to 7-flowered, 0-3 glumes, lemmas acuminate, palea present, 3 lodicules free and membranous, 3 stamens filaments free long-exserted, ovary glabrous with an apical appendage, 3 feathery stigmas, in woodland, type *Semiarundinaria fastuosa* (Lat.-Marl. ex Mitford) Makino, see *Flora Boreali-Americana* 1: 73. 1803, *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 3(3): 745, pl. 5, f. 3. 1843 and *Journal of the Arnold Arboretum* 6(3): 150-152. 1925, *Sunyatsenia* 4(3-4): 151, 153. 1940, *Taxon* 6(7): 208. 1957, *Agriculture Handbook* 193: i-iii, 1-74. 1961, *Flora Reipublicae Popularis Sinicae* 9(1): i-xxvi, 1-761. 1996, *Contributions from the United States National Herbarium* 39: 112. 2000.

Species

S. densiflora (Rendle) T.H. Wen (*Arundinaria densiflora* Rendle; *Brachystachyum densiflorum* (Rendle) Keng; *Brachystachyum densiflorum* var. *densiflorum*; *Fargesia densiflora* (Rendle) Nakai)

China, Guangdong, Hubei. Perennial, green, sparsely hairy first, becoming glabrous, pith chambered, internodes glaucous below nodes, culm sheaths papery sparsely hispid completely deciduous, leaves 2-5 per twig, sheath margin ciliolate, ligules truncate, leaf blades lanceolate or oblong-lanceolate sharply pointed, 2-8 pseudospikelets on flowering branches, 5- to 7-flowered, 1-3 glumes, lemmas ovate-lanceolate, culms slides used for weaving, see *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1067. 1893 and *Journal of the Linnean Society, Botany* 36(254): 434-435. 1904, *Journal of the Arnold Arboretum* 6(3): 152. 1925, *Sunyatsenia* 4(3-4): 151, 153. 1940, *Acta Phytotaxonomica Sinica* 21(4): 404. 1983, *Journal of Bamboo Research* 8(1): 24. 1989.

S. farinosa McClure (*Sinobambusa farinosa* (McClure) T.H. Wen)

East Asia, China. See *Lingnan University Science Bulletin* 9: 45. 1940, *Journal of Bamboo Research* 1(1): 35. 1982.

S. fastuosa (Lat.-Marl. ex Mitford) Makino (*Arundinaria fastuosa* (Lat.-Marl. ex Mitford) Houz.; *Arundinaria fastuosa* (Lat.-Marl. ex Mitford) J. Houz.; *Arundinaria fastuosa* (Lat.-Marl. ex Mitford) Makino; *Arundinaria fastuosa* Makino; *Arundinaria narihira* (Bean) Makino; *Bambusa fastuosa* Lat.-Marl. ex Mitford; *Bambusa fastuosa* Mitford; *Bambusa narihira* Bean; *Phyllostachys fastuosa* (Lat.-Marl. ex Mitford) J. Houz.; *Semiarundinaria fastuosa* (Lat.-Marl. ex Mitford) Makino ex Nakai, nom. illeg., non *Semiarundinaria fastuosa* (Lat.-Marl. ex Mitford) Makino; *Semiarundinaria*

fastuosa (Mitford) Makino; *Semiarundinaria fastuosa* (Mitford) Nakai)

Temperate Asia, Japan, Taiwan. Erect, semifastigiate, young culm green and later purplish red, 3-8 branches at each node, culm sheath glabrous partially deciduous, sheath blade linear-lanceolate, usually sheath auricles absent or very tiny, short ligule, on 1 branch 4-6 leaves papery, leaf blades linear-lanceolate or broadly lanceolate, inflorescence lanceolate or broadly lanceolate, 1 spikelet 3- to 6-flowered, 1 glume 1- to 2-spikeleted, lodicule ciliate, cultivated, ornamental, thicket-forming, rhizomes shortly creeping, useful for erosion control, used for a windbreak or screen, see *The Bamboo Garden* 46: 547. 1894, *The Bamboo Garden* 105. 1896, *Botanical Magazine* (Tokyo) 11: 159. 1897 and *Botanical Magazine* (Tokyo) 26: 19. 1912, *Journal of Japanese Botany* 2(2): 8. 1918, *Journal of the Arnold Arboretum* 6(3): 151. 1925.

in English: narihira bamboo

in Japan: narihira-dake

S. fastuosa (Lat.-Marl. ex Mitford) Makino var. *fastuosa*

Japan, Honshu. Nodes slightly prominent, 3-8 branches per node, culm-sheaths glabrous, on 1 branch 4-6 leaves papery, leaf blades linear-lanceolate to broadly lanceolate, inflorescence lanceolate to broadly lanceolate, spikelets narrowly lanceolate 3- to 6-flowered, the uppermost 1-3 flowers male, glumes usually none or rarely 1, lemmas acuminate, palea present, 3 obovoid lodicules, exserted stamens, ovary cylindrical, 3 feathery stigmas, cultivated.

in Japan: narihira-dake

S. fastuosa (Lat.-Marl. ex Mitford) Makino var. *viridis* (Makino) (*Semiarundinaria fastuosa* var. *viridis* (Makino) Murata; *Semiarundinaria viridis* (Makino) Makino)

Japan, Honshu. See *Journal of Japanese Botany* 2: 8. 1918, *Journal of Japanese Botany* 5(2): 3. 1928.

S. fortis Koidzumi

Japan. Nodes densely pubescent, 3-7 branches per node, internodes densely pubescent to puberulous, culm sheath pubescent, leaves lanceolate to broadly lanceolate and chartaceous, leaf sheaths densely covered with minute hairs, auricles absent, ligule truncated, leaves lanceolate, spikelets narrow lanceolate 2- to 3-flowered, 2 glumes ovate membranaceous, lemmas ovate to broadly lanceolate, palea present, 3 broadly lanceolate lodicules, stamens exserted, ovary cylindrical, 3 feathery stigmas, see *Acta Phytotaxonomica et Geobotanica* 10: 63. 1941.

in Japan: kuma-narihira, madara-narihira (culm with dark to black dots), asakogidake

S. kagamiana Makino

Origin unknown, Japan. Surface sparsely hairy, green and purplish, node somewhat swollen, 3-7 short branches per node, culm sheath glabrous, auricles absent, leaf sheath

pubescent, leaves lanceolate or narrowly lanceolate and chartaceous, spikelets narrowly lanceolate, 4-5 florets, 1 glume broadly lanceolate, lemmas ovate-lanceolate, palea present, 3 lanceolate lodicules, exerted stamens, ovary cylindrical, 3 feathery stigmas, cultivated, used as a wind-breaker and screen, see *Journal of Japanese Botany* 5(2): 2-3. 1928.

in Japan: rikuchu-dake

S. okuboii Makino (*Sinobambusa tootsik* var. *tootsik*)

Origin unknown, Japan. Nodes prominent, 3-7 branches to a node, culm-sheaths glabrous, ligule fimbriate, leaf blades broadly lanceolate, leaves terminal on the branches, spikelets lanceolate, 4-5 florets, 1 glume ovate, lemmas ovate with sharp point, palea present, 3 ovate lodicules, stamens exerted, ovary cylindrical, 3 feathery stigmas, cultivated, see *Journal of Japanese Botany* 2: 8. 1918, *Journal of Japanese Botany* 8(9-10): 45. 1933.

in Japan: bizen-narihira

S. shapoensis McClure

China. See *Lingnan University Science Bulletin* 9: 54. 1940.

S. sinica Wen

China. See *Journal of Bamboo Research* 8(1): 13-15, f. 1. 1989.

S. tranquillans Koidz. (*Hibanobambusa tranquillans* (Koidz.) Maruyama & H. Okamura)

Asia, China. See *Acta Phytotaxonomica et Geobotanica* 10: 314. 1941, *Acta Phytotaxonomica et Geobotanica* 11(1): 1. 1942, *Report Fuji Bamboo Garden* 16: 30. 1971.

S. venusta McClure (*Acidosasa venusta* (McClure) Z.P. Wang & G.H. Ye ex C.S. Chao & C.D. Chu; *Acidosasa venusta* (McClure) Z.P. Wang & G.H. Ye)

East Asia, China. See *Lingnan University Science Bulletin* 9: 55. 1940, *Journal Nanjing University. Natural Sciences Edition* 1981: 99. 1981, *Journal of Bamboo Research* 1(2): 31. 1982, *Acta Phytotaxonomica Sinica* 29(6): 524, f. 6. 1991.

S. viridis (Makino) Makino (*Semiarundinaria fastuosa* var. *viridis* Makino; *Semiarundinaria viridis* Makino)

Natural habitat unknown, Japan. Green culms and branches, 3-8 branches per node, long internodes, culm sheath with short hairs at the base or glabrous, papery leaves narrowly lanceolate, ligule truncated, used for making flutes, see *Journal of Japanese Botany* 2: 8. 1918, *Journal of Japanese Botany* 5(2): 3. 1928.

in Japan: ao-narihira, aihara-dake

S. yashadake (Makino ex Shiros.) Makino (*Arundinaria narihira* f. *yashadake* Makino ex Shiras.; *Semiarundinaria yashadake* (Makino) Makino; *Semiarundinaria yashadake* (Makino) (Pond Yasha, Gifu Prefecture)

Natural habitat unknown, Japan. Hollow bud canal, culms round, culm sheaths densely pilose at the base, 3-8 branches per nodes, long internodes, broad leaves oblong-lanceolate to broadly lanceolate, inflorescence spicate lanceolate to broadly lanceolate, spikelets narrowly lanceolate, 3-4 florets all perfect, glumes lacking, lemmas lanceolate and acuminate, palea present, 3 ovate lodicules, exerted stamens, ovary cylindrical, 3 feathery stigmas, widely cultivated, see *Botanical Magazine* (Tokyo) 11: 159. 1897 and *Icones of the Bamboos Japan* 38, t. 15. 1912, *Journal of Japanese Botany* 2: 8. 1918, *Journal of Japanese Botany* 5(2): 3. 1928.

in Japan: yasha-dake

S. yashadake Makino f. *kimmei* Muroi & Kashiwagi

Japan. Cultivated, rare.

Senisetum Honda = *Agrostis* L., *Heptaseta* Koidz.

Pooideae, Poeae, Agrostidinae, type *Senisetum hideoi* (Ohwi) Honda, see *Species Plantarum* 1: 61-63. 1753 and *Botanical Magazine* 44: 568. 1930, *Botanical Magazine* (Tokyo) 46: 371. 1932, *Botanical Magazine* (Tokyo) 47: 146. 1933, *Fl. Fenn.* 5: 29. 1971, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89, 383, 610. 2003.

Senites Adans. = *Zeugites* P. Browne

Centothechoideae, Centotheceae, or Panicoideae, Centotheceae, see *The Civil and Natural History of Jamaica in Three Parts* 341. 1756, *Systema Naturae, Editio Decima* 2: 1306. 1759, *Familles des Plantes* 2: 39, 604. 1763, *Species Plantarum. Editio quarta* 4: 204. 1805, *Révision des Graminées* 2: 485, t. 157. 1831, *Bulletin de la Société Botanique de Belgique* 15(3): 464. 1876, *Mexicanas Plantas* 2: 121. 1886, *Botanical Gazette* 21: 134, t. 12. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 50, t. 6. 1898 and *Österreichische Botanische Zeitschrift* 52(10): 373. 1902, *Contributions from the United States National Herbarium* 12(3): 127. 1908, *Symbolae Antillarum* 6: 3. 1909, *Contributions from the United States National Herbarium* 17(3): 368-370. 1913, *Contributions from the United States National Herbarium* 18(7): 392. 1917, *Torreya* 19: 48. 1919, *Flora Mesoamericana* 6: 248-249. 1994, *Contributions from the United States National Herbarium* 46: 569, 639-641. 2003.

Sennenia Sennen = *Trisetaria* Forssk.

Dedicated to the French botanist Étienne Marcelin Grenier-Blanc Sennen, 1861-1937, clergyman, see *Bulletin de l'Académie Internationale de Géographie, Botanique* 18:

468. 1908; J.H. Barnhart (1871-1949), *Biographical notes upon botanists*. 1: 197. Boston 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. Boston, Mass. 1972; Herminia Newman Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 241. Oxford 1964; Stafleu and Cowan, *Taxonomic literature*. 5: 509-512. 1985.

Aveneae, see *Flora Aegyptiaco-Arabica* 60. 1775, *Varietades de Ciencias, Literatura y Artes* 4(22): 212. 1805 and *Bulletin de l'Académie Internationale de Géographie, Botanique* 18: 468. 1908.

Sericrostis Raf. = *Muhlenbergia* Schreb.

Greek *serikos* “silky” and *Agrostis*.

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Stipa sericea* Michx., see *Genera Plantarum* 44. 1789, *Systema Naturae ...editio decima tertia, aucta, reformata* 2: 171. 1791, *Flora Boreali-Americana* 1: 54. 1803, C.S. Rafinesque, *Neogenyton, or Indication of Sixty-Six New Genera of Plants of North America*. 4. 1825, *Nom. Bot.* 2: 1142. 1874 and *Contributions from the United States National Herbarium* 41: 143-173, 194. 2001.

Sericura Hassk. = *Pennisetum* Rich.

From the Greek *serikos* “silky” and *oura* “a tail.”

Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Cenchrinae, type *Sericura elegans* Hassk., see *Syn. Pl.* 1: 72. 1805, *Essai d'une Nouvelle Agrostographie* 59. 1812, *Flora* 25(Beibl. 2): 2. 1842, *Flora* 29: 20. 1846, *Plantae Junghuhnianae* 3: 368. 1854, *Synopsis Plantarum Glumacearum* 1: 197. 1855 [1854] and *Contr. U.S. Natl. Herb.* 22: 210. 1921, *Contributions from the United States National Herbarium* 46: 527-536, 569. 2003.

Serigrostis Steud. = *Muhlenbergia* Schreb.

From the Greek *serikos* “silky” plus *agrostis*, *agrostidos* “grass, weed, couch grass.”

Chloridoideae, Cynodonteae, Muhlenbergiinae, see *Contributions from the United States National Herbarium* 41: 143-173. 2001.

Serrafalcus Parl. = *Bromus* L.

Latin *serra*, *ae* “saw” and *falx*, *falcis* “a sickle, scythe,” referring to the awns of *Serrafalcus alopecuros* (Poiret) C. Gardner.

Pooideae, Bromeae, type *Serrafalcus racemosus* (L.) Parl., see *Species Plantarum* 1: 76. 1753, Filippo Parlatore (1816-1877), *Rariorum plantarum et haud cognitarum in Sicilia sponte provenientium*. 2: 14. Panormi [Palermo] 1838-1840 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *U.S. Dept. Agric. Bull.* 772: 24. 1920, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Bot. Jahrb. Syst.* 102: 359-379, 447. 1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191, 610-611. 2003.

Sesleria Scopoli = *Diptychum* Dulac, *Psilathera* Link, *Sesleriella* Deyl

For the Italian (Venetian) naturalist Leonardo (Lionardo) Sesler, d. 1785, physician, owner of a private botanical garden, author of *Lettera intorno ad un nuovo genere di Piante terrestri*, in Vitaliano Donati (1713-1763), *Della storia naturale marina dell'Adriatico*. [edited by G. Rubbi-Carli.] Venezia 1750; see Giovanni Antonio Scopoli, *Flora Carniolica*. 189. Viennae 1760; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 780. 1993; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 169. 1989; J.H. Barnhart, *Biographical notes upon botanists*. 3: 261. Boston 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 361. 1972; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800.

About 25-27 species, Balkans, Eurasia, Europe and western Asia. Pooideae, Poodae, Seslerieae, perennial, tufted, herbaceous, auricles absent, leaf blades linear, ligule an unfringed membrane, plants bisexual, inflorescence paniculate and contracted, 2- to 5-flowered, sterile spikelets reduced or vestigial, bract-like scales at the base of the inflorescence, 2 glumes more or less equal, lemmas membranous 2- to 5-toothed, palea muticous or 2-awned, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 pubescent stigmas, open habitats, mountains, rocky places, a difficult genus, species closely related and intergrading, type *Sesleria caerulea* (L.) Ard., see *Species Plantarum* 1: 59, 63, 72-73. 1753, Petri Arduini ... *Animadversionum botanicarum specimen*. Patavii 1759, *Flora Carniolica* 189. 1760, Petri Harduini veronensis horti publici patavini custodis *animadversionum botanicarum specimen alterum*. Venetia 1764, *Hortus Regius Botanicus Berolinensis* 1: 121. 1827, *Flore de Département des Hautes-Pyrénées* 81. 1867 and *Opera Botanica Cech.* 3: 104, 176, 230. 1946, *Ind. Nom. Genericorum* 3: 1607. 1979, *Fitologija* 39: 72-77. 1991, *Caryologia* 51: 123-132. 1998, *Functional Ecology* Volume 12, Issue 5: 834-842. Oct 1998, *Opera Botanica* 137: 1-42. 1999, *Grass and Forage Science* 54(1): 1-18. Mar 1999, *Journal of Biogeography* 26(3): 629-642. May 1999,

Botanika Chronika 13: 133-140. 2000, *Journal of Applied Ecology* 37(1): 3-15. Feb 2000, *Restoration Ecology* 8(1): 74-79. Mar 2000, *Journal of Ecology* 88(4): 709-726. Aug 2000, *Journal of Ecology* 89(1): 126-144. Feb 2001, *Journal of Ecology* 90(4): 737-752. Aug 2002, *Contributions from the United States National Herbarium* 48: 611. 2003, *Restoration Ecology* 12(3): 311-317. Sep 2004, *Journal of Ecology* 93(1): 214-226. Feb 2005.

Species

S. alba Sibth. & Sm. (*Sesleria alba* Sm.; *Sesleria albanica* Ujhelyi)

Europe, Albania. See *Feddes Repertorium* 62: 63. 1959, *Fitologija* 39: 72-77. 1991, *Botanika Chronika* 13: 133-140. 2000.

S. albicans Kit. ex Schult. (*Aira varia* Jacq.; *Sesleria caerulea* (L.) Ard.; *Sesleria caerulea* subsp. *calcaria* (Opiz) Hegi; *Sesleria calcaria* Opiz; *Sesleria deyliana* Á. Löve & D. Löve; *Sesleria hungarica* Ujhelyi; *Sesleria varia* (Jacq.) Wettst.; *Sesleria variabilis* (Opiz) Wettst. ex Deyl)

Central Europe. See *Enumeratio Stirpium Pleraumque, quae sponte crescung in agro Vindobonensi* 15. 1762, *Österreichs Flora ... zweyte ... Auflage* 1: 216. Wien 1814, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 38: 557. 1888 and *Acta Horti Gothoburgensis* 20: 186. 1956, *Botanical Journal of the Linnean Society* 76(4): 364. 1978, *International Organization of Plant Biosystematists Newsletter* 24: 15-19. 1995, *Taxon* 50: 1103. 2001.

S. anatolica Deyl (*Sesleria autumnalis* auct.; *Sesleria autumnalis* subsp. *anatolica* (Deyl) Tzvelev; *Sesleria autumnalis* var. *voronovii* (Deyl) Tzvelev)

Turkey. See *Opera Botanica Cech.* 3: 104. 1946, *Zlaki SSSR* 532. 1976.

S. araratica Kit Tan

Turkey, Eurasia. Rare, see *Flora of Turkey and the East Aegean Islands* 9: 635, 524. 1985.

S. argentea (Savi) Savi (*Festuca argentea* Savi; *Sesleria argentea* Savi)

Europe. See *Annalen der Botanick. ed. Usteri* 24: 49. 1800, *Botanicon Etruscum* 1: 68. Pisis [Pisa] 1808 and *Fontqueria* 14: 12. 1987.

S. autumnalis (Scop.) F.W Schultz (*Phleum autumnale* Scop.; *Sesleria autumnalis* auct.)

Eurasia, Europe. Perennial, caespitose, see *Flora Carniolica, Editio Secunda* 1: 56. 1772, *Archives de la Flore de France et d'Allemagne* 318. 1855 and *Zlaki SSSR* 532. 1976.

in English: autumn moor grass

S. barcensis Simonk.

Central Europe, Hungary. See *Flora Republicii Socialiste Romania* 12: 225. 1972.

S. bielzii Schur (*Sesleria coeruleans* subsp. *bielzii* (Schur) Gergely & Beldie)

Central Europe, Romania. See *Flora Republicii Socialiste Romania* 12: 223. 1972.

S. caerulea (L.) Ard. (*Aira varia* Jacq.; *Cynosurus caeruleus* L.; *Sesleria albicans* Kit. ex Schult.; *Sesleria caerulea* Ard.; *Sesleria caerulea* subsp. *uliginosa* (Opiz) Celak.; *Sesleria uliginosa* Opiz; *Sesleria varia* (Jacq.) Wettst.)

Europe. See *Species Plantarum* 1: 72. 1753, *Enumeratio Stirpium Pleraumque, quae sponte crescung in agro Vindobonensi* 15. 1762, *Animadversionum Botanicarum Specimen Alterum* 18. 1764, J.A. Schultes, *Österreichs Flora ... zweyte ... Auflage* 1: 216. 1814, *Oekonomisch-technische Flora Böhmens* 1: 492. 1836, *Annalen des Naturhistorischen Museums in Wien* 2: 42. 1887, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 38: 557. 1888 and *Bollettino della Società Botanica Italiana* 1917: 50. 1917, *Botaniska Notiser* 1953(3): 354. 1953, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 119. 1971[1972], *Taxon* 50: 1103. 2001.

in English: blue moorgrass

S. coeruleans Friv. (*Sesleria bielzii* Schur; *Sesleria coeruleans* subsp. *bielzii* (Schur) Gergely & Beldie)

Bulgaria. See *Flora Republicii Socialiste Romania* 12: 223. 1972, *Botanika Chronika* 13: 133-140. 2000.

S. cylindrica (Balb.) DC.

Europe. See *Suplemento de ciencias del boletin del instituto de estudios asturianos. Oviedo* 22: 42. 1976.

S. doerfleri Hayek

Greece. Rare.

S. heufleriana Schur

Europe. See *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 119. 1971[1972], *Flora Republicii Socialiste Romania* 12: 224. 1972.

S. heufleriana Schur subsp. ***hungarica*** (Ujhelyi) Deyl

Poland, Hungary. Rare, see *Feddes Repertorium* 62: 65. 1959, *Botanical Journal of the Linnean Society* 76(4): 364. 1978.

S. hungarica Ujhelyi

Hungary. See *Feddes Repertorium* 62: 65. 1959.

S. klasterskyi Deyl

Bulgaria. Rare, see *Opera Botanica Cechica* 3: 144. 1946.

S. leucocephala Lam. ex DC. (*Sesleria leucocephala* DC.; *Sesleriella leucocephala* (Lam. ex DC.) Deyl)

Europe. See *Opera Botanica Cechica* 3: 230, 234. 1946.

S. nitida Ten.

Europe. See *Flora Napolitana* 1: 322. 1811-1815.

S. ovata (Hoppe) A. Kerner

Europe, Alps. Perennial, caespitose.

in Germany: Eiköpfiges Blaugras

in French: seslérie ovale

in Italian: sesleria delle morene

S. rigida Heuff. ex Rchb.

Europe. See *Opera Botanica Cechica* 3: 193. 1946, *Flora Republicii Socialiste Romania* 12: 219-220. 1972, *Botanical Journal of the Linnean Society* 76(4): 364. 1978.

S. robusta Schott, Nyman & Kotschy (*Sesleria pontica* Deyl)

Europe. See *Feddes Repertorium* 62: 60. 1959, *Botanical Journal of the Linnean Society* 76(4): 364. 1978.

S. sadleriana Janka

Central Europe. See *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 119. 1971[1972].

S. sadleriana Janka subsp. *tatrae* (Degen) Deyl

Central Europe. See *Botanical Journal of the Linnean Society* 76(4): 364. 1978.

S. stenophylla (G. Beck) Ujhelyi

Hungary. See *Index Horti Botanici Universitatis Budapestinensis* 4: 73. 1940.

S. taygetea Hayek

Greece. Rare.

S. tenerrima (Fritsch) Hayek

Europe.

S. tenuifolia Schrader

Europe.

S. tenuifolia Schrader subsp. *kalnikensis* (Jav.) Deyl (*Sesleria kalnikensis* Javorka)

Europe. See *Magyar Botanikai Lapok* 10: 311. 1911, *Botanical Journal of the Linnean Society* 76(4): 364. 1978.

Sesleriella Deyl = *Sesleria* Scop.

The diminutive of *Sesleria* Scop.

About 2 species, Eurasia, central and southern Europe. Pooideae, Poodae, Seslerieae, perennial, caespitose, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, sterile spikelets reduced or vestigial, bract-like scales at the base of the inflorescence, 2 glumes more or less equal, lemmas membranous, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, open habitats, sometimes referred to *Sesleria*, type *Sesleriella sphaerocephala* (Ard.) Deyl, see *Flora Carniolica* 189. 1760, *Animadversionum Botanicarum Specimen Alterum* 18. 1764 and *Opera Botanica Cech.* 3: 230. 1946, *Ind. Nom. Genericorum* 3: 1607. 1979.

Species

S. leucocephala (Lam. ex DC.) Deyl (*Sesleria leucocephala* DC.; *Sesleria leucocephala* Lam. ex DC.)

Europe. See *Opera Botanica Cechica* 3: 230, 234. 1946.

S. sphaerocephala (Ard.) Deyl

Europe. Glumes 1-nerved.

Sessleria Sprengel

Orthographic variant of *Sesleria* Scop., see *Plantarum Minus Cognitarum Pugillus* 2: 21. 1815.

Setaria P. Beauv. = *Acrochaete* Peter, *Camusiella* Bosser, *Camussiella* Bosser, *Chaetochloa* Scribn., *Cymbosetaria* Schweick., *Ixophorus* Nash, *Miliastrum* Fabr., *Paspalidium* Stapf, *Setaria* Ach. ex Michx. (Lichen), *Tansaniochloa* Rauschert

From the Latin *saeta* (*seta*), *ae* “a bristle, hair,” the spikelets are bristly, in reference to the sterile bristles beneath the spikelet; see A.M.F.J. Palisot de Beauvois, *Essai d'une nouvelle Agrostographie*. 51, 178. Paris (Dec) 1812.

About (100-)110/(140-)150 species, tropics and subtropics. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Setariinae, annual or perennial, herbaceous, clumped, heterogeneous, rhizomatous or stoloniferous, tufted, decumbent at base, erect, sometimes branched from the base, auricles absent, ligule a ciliate rim, leaf blades oblong to elliptic to ovate, leaf sheaths open or closed at the base, leaves often scabrid, panicle open or contracted or spiciform, plants bisexual with large arching spikes, spikelets solitary and short-stipitate with involucre of rough bristles continuous with the rachis, panicle branches tips modified into bristles subtending the spikelets, 1 or 2 florets, lower floret usually sterile or male, upper floret perfect, disarticulation of the spikelets above the bristle attachments, 2 glumes unequal and papery, 2 lemmas, lower lemma sulcate and sterile, upper fertile and rugose, lower palea tiny or absent, 2 fleshy and glabrous lodicules, 3 stamens, ovary glabrous, 2 reddish or white stigmas, small fruit more or less sculptured, bristles on the seed heads, noxious wide-spread weed species, hay, cultivated fodder, native pasture species, grain crop species, major or minor cereal, birdseed, young shoots eaten, cultivated as a vegetable, ornamental, shade species, some species hosts for maize and sugarcane mosaic viruses, the barbed awns can cause ulcers in horses' mouths, setarias contain oxalates that can poison cattle, commonly occurs along drainage ditches and on irrigated land, in rainforest, woodland, grassland, pampas, weedy places, open habitats, habitat variable, much taxonomic confusion, large number of intermediate species, closely

related to *Pennisetum*, type *Setaria viridis* (L.) P. Beauv., see *Species Plantarum* 1: 55. 1753, *Enumeratio Methodica Plantarum* 206. 1759, *Flora Boreali-Americana* 2: 331. 1803, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Nova Genera et Species Plantarum* 1: 111-112. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 237. 1829, *Historia Fisica Politica y Natural de la Isla de Cuba, Botanica* 11: 302. 1850, *Index Seminum [Berlin]* 18. 1855, *Synopsis Plantarum Glumacearum* 1: 49. 1855 [1853], *Linnaea* 31(4): 420. 1861, *Flora Brasiliensis* 2(2): 156. 1877, *Flora of the Hawaiian Islands* 503. 1888, *An Illustrated Flora of the Northern United States* 1: 125. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 38-39. 1897, *Flora Capensis* 7: 420. 1899 and *Contributions from the United States National Herbarium* 15: 22. 1910, *Beiträge zur Biologie der Pflanzen* 10(1): 42. 1910, *Bulletin of Miscellaneous Information Kew* 4: 126. 1920, *Contr. U.S. Natl. Herb.* 22(3): 156. 1920, *Flora of Tropical Africa* 9: 582-583. 1920, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 203, Anh. 54, t. 28, f. 2. 1930, *North American Flora* 17(4): 316. 1931, *Hooker's Icones Plantarum* 34: t. 3320. 1936, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 71-72. 1940, *J. Wash. Acad. Sci.* 44: 116-122. 1954, *Cytologia* 19: 97-103. 1954, *Illinois Biological Monographs* 29: 1-132. 1962, *Flora of the Netherlands Antilles* 1: 121-203. 1963, *Adansonia sér.* 2, 6: 105. 1966, *Austral. J. Bot.* 16: 539-544, 551-554. 1968, *Novosti Sist. Vyss. Rast.* 8: 71. 1971, *Willdenowia* 8: 67-79. 1977, *J. Agric. Trad. Bot. Appl.* 26: 53-60. 1979, *Journal of Human Evolution* 10: 565-583. 1981, *Taxon* 31(3): 561. 1982, *Bulletin of Botanical Research* 4(1): 62. 1984, *Revista Brasileira de Genética* 7(3): 535-548. 1984, *Folia Primatologica* 48: 78-120. 1987, *Grasses of Japan and its Neighboring Regions* 320. 1987, *Flora Mesoamericana* 6: 359-363. 1994, J.F. Veldkamp, "Miscellaneous notes on southeast Asian Gramineae: 9. *Setaria* and *Paspalidium*." *Blumea* 39: 373-384. 1994, R.D. Webster, "Nomenclatural changes in *Setaria* and *Paspalidium* (Poaceae: Paniceae)." *Sida* 16: 439-446. 1995, *Flora of Ethiopia and Eritrea* 7: 234-243. 1995, *Darwiniana* 37(1-2): 47. 1999, *Sida* 18(4): 1037-1047. 1999, Andrew N. Doust and Elizabeth A. Kellogg, "Inflorescence diversification in the panicoid "bristle grass" clade (Paniceae, Poaceae): evidence from molecular phylogenies and developmental morphology." *Am. J. Bot.* 89: 1203-1222. 2000 ["... the so-called "bristle clade" (Paniceae), ... It includes all panicoid species in which some inflorescence branch meristems are converted to setae or bristles. These are novel structures that have some aspects of spikelet identity and some of branch identity."], *Am. J. Bot.* 88: 1993-2012. 2001, *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 569-593. 2003, *Journal of Agronomy and Crop Science* 191(3): 172-184. June 2005, *Weed Research* 45(3): 228-235. June 2005 [A single polymerase chain reaction-based assay for simultaneous

detection of 2 mutations conferring resistance to tubulin-binding herbicides in *Setaria viridis*.], *Journal of Agronomy and Crop Science* 191(3): 195-201. June 2005, *Restoration Ecology* Volume 13, Issue 2: 413-424. June 2005.

Species

S. sp.

in Mexico: pega-pega

in Nigeria: lesleddeho

in Mongolia: osun honug

S. acromelaena (Hochst.) T. Durand & Schinz (*Panicum acromelaenum* Hochst.; *Setaria abyssinica* var. *annua* Chiov.)

Sudan, Ethiopia, Tanzania, Kenya, Uganda. Annual, tufted, slender to robust, much-branched, pubescent nodes, leaf blades broadly linear, contracted cylindrical panicle spike-like, spikelets round or gibbously ovate, upper glume 5- to 7-nerved, lower lemma sterile 5-nerved, rugole upper lemma strongly convex, weed of cultivated ground, grassland, seasonally flooded areas, black clays, see *Flora* 38: 198. 1855, *Conspectus Florae Africae* 5: 772. 1894 and *Österreichische Botanische Zeitschrift* 51: 460. 1901, *Annali di Botanica* 8(3): 311. 1908, *Sida* 15(3): 447-489. 1993.

S. adhaerens (Forssk.) Chiov. (*Chaetochloa brevispica* Scribn. & Merr.; *Chaetochloa brevispica* Scribn., nom. illeg., non *Chaetochloa brevispica* Scribn. & Merr.; *Panicum adhaerens* Forssk.; *Panicum aparine* Steud.; *Panicum respiciens* (Hochst. ex A. Rich.) Hochst. ex Steud.; *Panicum rottleri* (Spreng.) Nees, nom. illeg., non *Panicum rottleri* Kunth; *Panicum verticillatum* var. *aparine* (Steud.) Asch. & Schweinf.; *Panicum verticillatum* var. *parviflorum* Döll; *Pennisetum respiciens* A. Rich.; *Setaria aparine* (Steud.) Chiov.; *Setaria brevispica* (Scribn. & Merr.) K. Schum.; *Setaria depauperata* Phil.; *Setaria respiciens* (Hochst. ex A. Rich.) Walp.; *Setaria rottleri* Spreng.; *Setaria verticillata* subsp. *aparine* (Steud.) T. Durand & Schinz; *Setaria verticillata* var. *aparine* (Steud.) Asch. & Schweinf.; *Setaria verticillata* (L.) P. Beauv. var. *respiciens* (A. Rich.) A. Braun; *Setaria verticillata* var. *respiciens* (Walp.) K. Schum.)

U.S., New Mexico, Texas. Annual or perennial, caespitose, erect or geniculate, branched from the base, glabrous, ligule ciliate, weed in maize and cultivated fields, forage, common on disturbed soils, open habitats, related and confused with *Setaria verticillata* (L.) P. Beauv., see *Species Plantarum, Editio Secunda* 1: 82. 1762, *Flora Aegyptiaco-Arabica* 20. 1775, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Systema Vegetabilium, editio decima sexta* 1: 304. 1825, *Florae Siculae Prodromus* 80. 1827, *Florae Africae Australioris Illustrationes Monographicae* 53. 1841, *Tentamen Florae Abyssinicae ...*: 379. 1850, *Annales Botanicae Systematicae* 3: 721. 1852, *Synopsis Plantarum*

Glumacearum 1: 52. 1853 [1854], *Flora Brasiliensis* 2(2): 172. 1877, *Mémoires de l'Institut Égyptien* 2: 161. 1887, *Illustration de la Flore d'Égypte* 161. 1889, *Conspectus Florae Africae* 5: 775. 1894, *Die Pflanzenwelt Ost-Afrikas* 5C: 105. 1895, *Anales de la Universidad de Chile* 93: 715. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 15, f. 5. 1900, *Field Columbian Museum, Publ.* 2(1): 26. 1900, *Botanischer Jahresbericht* 28(1): 417. 1902, *Nuovo Giornale Botanico Italiano* 19: 419. 1912, *Nuovo Giornale Botanico Italiano* 26: 77. 1919, *Blumea* 3: 383, 415. 1940, *Collectanea botanica: a Barcinonensi Botanico Instituto edita* 7(6): 1662. Barcelona 1968, *Willdenowia* 7(2): 420. 1974, *Flora Illustrata Catarinense* 1(Gram.): 443-906. 1982, *Revista de Biologia* 13(1-4): 135. Lisbon 1986 or 1987, *Annali di Botanica* 45: 75-102. 1987, *Boletim da Sociedade Broteriana, ser. 2* 62: 289. 1989, *Revista de Biologia* 62: 289. 1990.

in English: Trans-pecos bristle grass, southern foxtail, bur bristlegrass

in Mexico: zacate peludo

S. alonsoi Pensiero & Anton (*Setaria onurus* f. *grandiflora* Hack.)

Argentina. See *Flora of the British West Indian Islands* 555. 1864 and *Anales del Museo Nacional de Buenos Aires* 21: 50. 1911, *Novon* 4(3): 287, f. 1. 1994.

S. apiculata (Scribn. & Merr.) K. Schum. (*Chaetochloa apiculata* Scribn. & Merr.; *Setaria queenslandica* Domin)

Australia. See *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 9. 1900, *Just's botanischer Jahresbericht*. 28(1): 417. 1900[1902], *Bibliotheca Botanica* 20(85): 330, t. 18, f. 9, t. 15, f. 1-2. 1915.

S. appendiculata (Hack.) Stapf (*Chaetochloa australiensis* Scribn. & Merr.; *Panicum appendiculatum* Hack.; *Setaria arizonica* Rominger; *Setaria atrata* Hack.; *Setaria australiensis* (Scribner & Merr.) Vickery; *Setaria basifissa* Peter; *Setaria blepharoechaeta* Chiov.; *Setaria haarei* Stapf & C.E. Hubb.; *Setaria hereroensis* Herrm.; *Setaria pennata* Mez ex Peter)

Tropical Africa, Namibia. Perennial, erect or geniculate, tufted or densely tufted, much-branched, robust, often thickened at the base, rhizomatous, sometimes stoloniferous, culm nodes hairy, leaf blades initially folded and later expanded, ligule a fringe of short hairs, leaf sheath rounded, leaves tapering to a long needle-like point with 2 sagittate projections at the base, open inflorescence paniculate, compact panicle narrowly oblong, spikelets elliptic not gibbous, solitary bristles inconspicuous, upper glume 7- to 13-nerved, lower glume 5-nerved, lower lemma male, upper lemma rugose cuspidate, pasture grass, palatable, high nutritive value, often in shady places, dry riverbeds, stony slopes, savannahs and dwarf shrub savannahs, among bushes, see *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 122. 1891, *Bulletin de l'Herbier*

Boissier 4 (appendix 3): 13. 1896, *Flora Capensis* 7: 422. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 29. 1900, *Beiträge zur Biologie der Pflanzen* 10(1): 43. 1910, *Annali di Botanica* 10(3): 408. 1912, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 63, 235, f. 32.1. 1930 [1931], *Flora of Tropical Africa* 9: 834. 1930, *Contributions from the New South Wales National Herbarium* 1(6): 335. 1951, *Illinois Biological Monographs* 29: 66. 1962.

in South Africa: berggras, fels borstenhirse

S. arenaria Kitag.

China. Sandy places, see *Report of the Institute of Scientific Research, Manchoukuo* 4: 77, t. 1, f. 1. 1940.

S. arizonica Rominger (*Setaria appendiculata* (Hack.) Stapf)

U.S., Arizona. Annual, slopes, see *Bulletin de l'Herbier Boissier* 4(appendix 3): 13. 1896, *Flora Capensis* 7: 422. 1899 and *Illinois Biological Monographs* 29: 66. 1962.

in English: Arizona bristle grass

S. atrata Hack. (*Setaria appendiculata* (Hack.) Stapf; *Setaria blepharoechaeta* Chiov.; *Setaria pennata* Mez ex Peter)

East Africa, southern Sudan, Ethiopia, Malawi. Perennial, erect, forming dense tussocks, leaf blades tough, panicle linear, bristles ciliate, spikelets lanceolate-elliptic, lower lemma 5-nerved, swamps, see *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 122. 1891, *Bulletin de l'Herbier Boissier* 4(Append. 3): 13. 1896, *Flora Capensis* 7: 422. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 235. 1931.

S. australiensis (Scribner & Merr.) Vickery (*Chaetochloa australiensis* Scribn. & Merr.; *Setaria appendiculata* (Hack.) Stapf)

Australia, New South Wales, Queensland. Perennial, canelike, forming large tufts, sheath glabrous and smooth, ligule densely bearded, leaf blade flat and scabrous, panicle long exserted and contracted with spreading branches, bristles more or less straight to flexuous, lower glume apiculate, lower lemma sterile and acute, upper lemma bisexual and acute, grows on riverbanks, shady forests, see *Bulletin de l'Herbier Boissier* 4(appendix 3): 13. 1896, *Flora Capensis* 7: 422. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 29. 1900, *Contributions from the New South Wales National Herbarium* 1(6): 335. 1951.

in English: scrub pigeon grass

S. barbata (Lam.) Kunth (*Chaetochloa barbata* (Lam.) A.S. Hitchc. & Chase; *Chaetochloa costata* (Roxb.) Skeels; *Chamaeraphis costata* (Roxb.) Kuntze; *Chamaeraphis viatica* (Salzm. ex Döll) Kuntze; *Panicum barbatum* Lam.; *Panicum basisetum* Steud.; *Panicum costatum* Roxb.; *Panicum flavescens* sensu Hook.f., non Swartz; *Panicum*

lineatum Schumach.; *Panicum plicatum* var. *costatum* (Roxb.) Baker; *Panicum rarisetum* Steud.; *Panicum rhachitrichum* Hochst.; *Panicum viaticum* Salzm. ex Döll; *Setaria basiseta* (Steud.) T. Durand & Schinz; *Setaria costata* Stapf ex Vanderyst; *Setaria rachitricha* (Hochst.) Rendle; *Setaria rhachitricha* (Hochst.) Rendle)

Tropical Africa and Southeast Asia, India, the Philippines, Indonesia, Uganda, Nigeria, Sudan, Mali, Tanzania, Ghana, Guinea, Madagascar, Mauritius. Perennial or annual, weak, slender, rather flaccid, loosely tufted, erect or geniculately ascending, creeping, often decumbent and sometimes rooting from lower nodes, nodes hairy, leaf blades elliptic and acuminate, ligule a fringed membrane, leaf sheaths compressed and glabrous or villose, leaves papery and pleated lengthwise, inflorescence an open 1-sided panicle with ascending spikes, elliptic spikelets clustered and subtended by a single bristle, lower floret male, upper floret bisexual, lower glume obtuse or bluntly acute, upper glume 7-nerved, upper lemma rugose or transversely rough, lower lemma 7-nerved, 3 stamens, spikelets bear irritant bristles, weed species widely naturalized in tropics, forage, fodder for all stock, growing in high rainfall areas, deep and well-fertilized soils, savannahs, in shade or light shade, open scrub, waste places, around irrigated plantations and cultivated fields, disturbed lands, see *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Flora Indica; or Descriptions ...* 1: 314. 1820, *Beskrivelse af Guineeiske planter* 61. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 81. 1828, *Révision des Graminées* 1: 47. 1829, *Flora* 27(16): 254. 1844, *Synopsis Plantarum Glumacearum* 1: 52. 1853, *Flora of Mauritius and the Seychelles ...* 436. 1877, *Flora Brasiliensis* 2(2): 155. 1877, *Revisio Generum Plantarum* 2: 770-771. 1891, *Conspectus Florae Africae* 5: 772. 1894, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 188. 1899 and *Handb. Fl. Ceylon* 5: 360. 1900, *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 282: 15. 1913, *Contributions from the United States National Herbarium* 18(7): 348. 1917, *Bulletin agricole du Congo Belge* 10: 250. 1919, *Handb. Fl. Ceylon* 6: 326. 1931, *Grasses of Ceylon* 124. 1956, *Grasses of Burma ...* 360. 1960.

in English: bristly foxtail grass, marvet, East indian bristle grass, corn grass

in Spanish: palmilla

in French: herbe de riz, herbe bambou

in the Caribbean: herbe à riz, herbe canot, zèb a diri, zèb kanòt

in Guinea-Bissau: bara, ntchacufalo, udetchoboi, udetcho-loi, untchancufalo

in Mauritius: basawni

in Nigeria: ele adodo, gambadawari, iloloriwanga, kosabere in Senegal: diieyba

in Sierra Leone: kwofie, sibule, yarangi

S. barbinodis R.A.W. Herrm. (*Chaetochloa barbinodis* (R.A.W. Herrm.) Hitchc.)

Bolivia. Perennial, caespitose, nodes pubescent or bearded, leaf blades linear scabrous acuminate, dense panicle cylindrical, spikelets globose, upper lemma finely rugose, see *Beiträge zur Biologie der Pflanzen* 10(1): 60. 1910, *Contributions from the United States National Herbarium* 24(8): 480. 1927.

S. brigalow R.D. Webster (*Paspalidium caespitosum* C.E. Hubb.; *Setaria caespitosa* Hack. & Arechav.)

Australia, Queensland, New South Wales. Perennial, tufted, more or less erect, simple or branched, sheath smooth, ligule present, leaves green and more or less glabrous, panicles erect and narrow, green to purplish spikelets, lower glume not inflated, upper glume obtuse, lemmas pointed, lower lemma sterile, upper lemma elliptic and shining, ornamental, useful for soil conservation, see *Anales del Museo Nacional de Montevideo* 1: 166, f. 15. 1894 and *Flora of Tropical Africa* 9: 582. 1920, *Bulletin of Miscellaneous Information Kew* 1934: 446. 1934, *Sida* 16(3): 441. 1995.

in English: brigalow grass, brigalow woodland grass (= brigalow is a kind of woodland, the name brigalow is also given to a distinctive tree form)

S. caespitosa Hack. & Arechav. (*Chaetochloa caespitosa* (Hack. & Arechav.) Speg.; *Chaetochloa rariflora* (J.C. Mikan ex Trin.) Hitchc. & Chase; *Panicum onurus* Willd. ex Trin.; *Panicum rariflorum* (J.C. Mikan ex Trin.) Makino & Nemoto, nom. illeg., non *Panicum rariflorum* Lam.; *Paspalidium caespitosum* C.E. Hubb.; *Setaria onurus* (Willd. ex Trin.) Griseb.; *Setaria rariflora* J.C. Mikan ex Trin.; *Setaria rariflora* J. Presl, nom. illeg., non *Setaria rariflora* J.C. Mikan ex Trin.; *Setaria vaginata* Spreng.)

Southern America, Uruguay. Annual, rocky slopes, stony places, in canyons, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 78. 1821, *Systema Vegetabilium, editio decima sexta* 4 Cur. Post.: 33. 1827, *Reliquiae Haenkeanae* 1(4-5): 313. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 226. 1834, *Flora of the British West Indian Islands* 555. 1864, *Anales del Museo Nacional de Montevideo* 1: 166, f. 15. 1894 and *Contribución al Estudio de la Flora del Tandil* 52. La Plata & Buenos Aires 1901, *Contributions from the United States National Herbarium* 18(7): 349. 1917, *Flora of Japan* 1475. 1925, *Bulletin of Miscellaneous Information Kew* 1934: 446. 1934, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 348-351, 418-429. 1969.

S. cernua Kunth (*Chaetochloa cernua* (Kunth) Hitchc.; *Panicum cernuum* (Kunth) Willd. ex Spreng.; *Panicum stenothyrsum* Pilg.)

Ecuador. Caespitose, forage, see *Nova Genera et Species Plantarum* 1: 111-112. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 318. 1825, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 25(5): 710. 1898 and *Contributions from the United States National Herbarium* 24(8): 478. 1927.

Local name: gramalote

S. chapmanii (Vasey) Pilg. (*Panicum chapmanii* Vasey; *Paspalidium chapmanii* (Vasey) R.W. Pohl) (for Alvin Wentworth Chapman, 1809-1899)

U.S., Florida; Mexico; Cuba. See *Bulletin of the Torrey Botanical Club* 11(6): 61. 1884 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Novon* 2(2): 106. 1992.

in English: coral panic grass

S. chondrachne (Steud.) Honda (*Chaetochloa chondrachne* (Steud.) Honda; *Panicum chondrachne* Steud.; *Setaria chondrachne* Honda)

Asia, Japan. See *Synopsis Plantarum Glumacearum* 1: 51. 1853 and *Botanical Magazine* 38: 193. 1924, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 234-235. 1930.

S. clivalis (Ridl.) Veldkamp (*Chamaeraphis gracilis* Hack.; *Chamaeraphis gracilis* (Kunth) Kuntze ex Stuck., nom. illeg., non *Chamaeraphis gracilis* Hack.; *Panicum chamaeraphoides* Hack.; *Panicum clivale* Ridl.; *Setaria chamaeraphoides* (Hack.) Backer; *Setaria gracilis* Kunth; *Setaria javana* R.A.W. Herrm.; *Setaria laxa* Merr.; *Setaria laxa* var. *nativitatis* Jansen)

Southeast Asia. See *Nova Genera et Species Plantarum* 1: 109. 1815 [1816], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 236. 1885 and *Anales del Museo Nacional de Buenos Aires* 11: 76. 1904, *Journal of the Straits Branch of the Royal Asiatic Society* 45: 242. 1906, *Philippine Journal of Science* 1(suppl.): 366. 1906, *Beiträge zur Biologie der Pflanzen* 10(1): 50. 1910, *Exkursionsflora von Java ...* 1: 35. 1911, *Allg. Bot. Z. Syst.* 20: 164. 1914, *De Nuttige Planten van Nederlandsch- Indië* 1: 203. Batavia 1922, *Reinwardtia* 2: 343. 1953, *Miscellaneous Papers, Landbouwhogeschool, Wageningen* 19: 315-320. 1980, *Blumea* 39: 373-384. 1994.

S. cordobensis R.A.W. Herrm. (*Panicum platycaule* Hack. & Stuck.; *Setaria onurus* (Willd. ex Trin.) Griseb.; *Setaria onurus* f. *grandiflora* Hack.; *Setaria platycaulis* Stuck. & Hack.)

Argentina. See *Flora of the British West Indian Islands* 555. 1864 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 15: 140. 1909, *Beiträge zur Biologie der Pflanzen* 10(1): 53-54. 1910, *Anales del Museo*

Nacional de Buenos Aires 21: 50-51. 1911, *Publicaciones del Museo de Historia Natural "Javier Prado". Serie B. Botánica* 32: 9, f. 12-16. 1984, *Caryologia* 48(3-4): 255-263. 1995, *Darwiniana* 37(1-2): 56, f. 28. 1999.

S. cordobensis R.A.W. Herrm. var. *cordobensis* Argentina.

S. cordobensis R.A.W. Herrm. var. *limense* (Tovar) Pensiero (*Setaria limense* Tovar)

South America, Peru. See *Publicaciones del Museo de Historia Natural "Javier Prado". Serie B. Botánica* 32: 9, f. 12-16. 1984, *Darwiniana* 37(1-2): 56, f. 28. 1999.

S. corrugata (Elliott) J.A. Schultes (*Chaetochloa corrugata* (Elliott) Scribn.; *Chaetochloa hispida* Scribn. & Merr.; *Chamaeraphis corrugata* (Elliott) Kuntze; *Panicum corrugatum* Ell.; *Pennisetum corrugatum* (Elliott) Nutt.; *Setaria glauca* var. *corrugata* (Elliott) Schrad.; *Setaria hispida* (Scribn. & Merr.) K. Schum.)

U.S. Coastal plain, sandy places, see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 113. 1816, *The Genera of North American Plants* 1: 55. 1818, *Mantissa* 2: 276. 1824, *Linnaea* 12(4): 429. 1838, *Revisio Generum Plantarum* 2: 770. 1891, *U.S. Department of Agriculture. Division of Botany. Bulletin* 4: 39. 1897 and *U.S. Department of Agriculture. Division of Botany. Bulletin* 21: 25, f. 13. 1900, *Just's Botanischer Jahresbericht* 28(1): 417. 1902.

in English: coastal bristle grass, bristle grass, coastal foxtail

S. dielsii Herrm. (*Setaria macrostachya* sensu J. Black, non Kunth) (the species in honor of the German botanist Friedrich Ludwig Emil Diels, 1874-1945, Director of Berlin-Dahlem Botanic Garden and Museum, friend and companion of Ernst Georg Pritzel (1875-1946), contributed to H.G.A. Engler & K.A.E. Prantl *Die Natürlichen Pflanzenfamilien* edition 1 and edition 2, to Engler *Das Pflanzenreich*)

South Australia, Northern Territory, Queensland, Western Australia. Annual, glabrous, rigid, geniculate near the base, panicle spike-like with conspicuous bristles with erect teeth, spikelets glabrous and ovate-acute, bristle usually at the base of the pedicel of each spikelet, first glume ovate, weed and fodder, see *Beiträge zur Biologie der Pflanzen* 10(1): 52-53. 1910.

in English: Diels pigeon grass

S. distans (Trin.) Veldkamp (*Panicum commixtum* Steud.; *Panicum distans* Trin.; *Panicum radiatius* H. St. John; *Paspalidium disjunctum* S.T. Blake; *Paspalidium distans* (Trin.) Hughes; *Paspalidium flavidum* var. *distans* (Trin.) Hook.f.; *Paspalidium radiatum* Vickery)

Asia tropical, Papua New Guinea, Queensland, New South Wales, Northern Territory. Tufted perennial grass, not branched, ascending to erect, sheath glabrous or villous, ligule densely ciliate, leaves linear and green, panicles very

narrow, spikelets green to purplish and acute, lower glume obtuse to acute, upper glume obtuse, lemmas acute and elliptic, lower lemma sterile, upper lemma rugulose, scrubs and woodlands, poor soils and moist, see *Species Graminum* 2: t. 172. 1829, *Synopsis Plantarum Glumacearum* 1: 59. 1854, *The Flora of British India* 7: 29. 1896 and *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Contributions from the New South Wales National Herbarium* 1(6): 332-334. 1950 [1951], *Proceedings of the Royal Society of Queensland* 84(5): 65-66, t. 7, f. 5. 1973, *Blumea* 39(1-2): 376. 1994, *Sida* 16(3): 439-446. 1995.

S. distantiflora (A. Rich.) Pilg. (*Panicum distantiflorum* A. Rich.; *Panicum tenerum* Beyr. ex Trin.; *Paspalidium distantiflorum* (A. Rich.) Davidse & R.W. Pohl)

The Caribbean, Cuba. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 341. 1834, *Historia Fisica Política y Natural de la Isla de Cuba, Botanica* 11: 302. 1850 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Novon* 2(2): 106. 1992.

S. faberi R.A.W. Herrmann (also ***faberii***) (*Setaria autumnalis* Ohwi; *Setaria macrocarpa* Luchnik)

Southeast Asia, China, Japan, Taiwan. Annual, more or less erect to bent then ascending, coarse, caespitose, loosely tufted, clump forming, branching from near base, nodes smooth or slightly hairy, fibrous root system, more or less ciliate sheaths, ligule a fringe of hairs, leaves rolled in the bud and hairy on the upper surface, no auricles, seed head a cylindrical bristly panicle drooping at maturity, 1 flower per spikelet, grains usually enclosed by scales, reproducing by seed, invasive and extremely troublesome, noxious weed species of many agronomic crops, in corn and soybean fields, turf, landscapes and nurseries, found on roadsides and generally any disturbed habitat, railroads, lawns and gardens, waste places and fields, see *Beiträge zur Biologie der Pflanzen* 10(1): 51. 1910, *Acta Phytotaxonomica et Geobotanica* 7(3): 129. 1938, *Canad. J. Bot.* 65: 1396-1402. 1987, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 25-26. 1997, Jack Dekker and Mark Hargrove, "Weedy adaptation in *Setaria* spp. V. Effects of gaseous environment on giant foxtail (*Setaria faberii*) (Poaceae) seed germination." *Am. J. Bot.* 89: 410-416. 2002.

in English: giant foxtail, nodding foxtail, nodding foxtail grass, Japanese bristle grass

in Japan: akinoenokorogusa

S. febrigii R.A.W. Herrmann (*Panicum globuliferum* Steud.; *Setaria globulifera* (Steud.) Griseb.; *Setaria onurus* (Willd. ex Trin.) Griseb.; *Setaria onurus* f. *ramulosa* Hack.) (named for Karl Fiebrig, botanical collector in Bolivia and Paraguay)

Brazil, Uruguay, Bolivia, Paraguay. Perennial, leaf blades linear acuminate more or less scabrous, dense spiciform

panicle, spikelets globose with 1 basal bristle, upper lemma rugulose, savannahs, sandy soils, see *Synopsis Plantarum Glumacearum* 1: 51. 1853, *Flora of the British West Indian Islands* 555. 1864, *Symbolae ad Floram Argentinam. Zweite* 307. 1879 and *Beiträge zur Biologie der Pflanzen* 10(1): 51. 1910, *Anales del Museo Nacional de Buenos Aires* 21: 50. 1911, *Revista Brasileira de Genética* 7(3): 535-548. 1984.

S. finita Launert

Namibia. Annual, tufted or loosely tufted, slender, erect or geniculate, rooting at the nodes, leaf sheaths rounded or keeled, leaf blade linear, thin ligule membranous, open lax panicle, mucronate spikelets, bristles solitary, lemmas rugose, palatable, little value as grazing, found along streams, rivers, shady places, see *Prodromus einer Flora von Südwestafrika* 34: 160. 1970.

S. firmula (A.S. Hitchc. & Chase) Pilger (*Panicum firmulum* A.S. Hitchc. & Chase; *Setaria reverchonii* subsp. *firmula* (Hitchc. & Chase) W.E. Fox)

North America. See *Contributions from the United States National Herbarium* 15: 27-28, f. 9. 1910, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Sida* 18(4): 1041. 1999, *Flora of North America North of Mexico* 25: i-xxv, 1-783. 2003.

in English: knot grass, knotgrass

S. flabellata Stapf (*Setaria sphacelata* (Schumach.) M.B. Moss ex Stapf & C.E. Hubb.)

South Africa. See *Beskrivelse af Guineiske planter* 58-59. 1827, *Flora Capensis* 7: 425-426. 1899 and *Flora of Tropical Africa* 9(5): 795-798. 1930, *Bulletin du Jardin Botanique de Buitenzorg, ser. 3*, 17: 38. 1941, *Cytologia* 19: 97-103. 1954.

S. flabellata Stapf forma ***hirsutior*** de Wit

South Africa. See *Flora Capensis* 7: 425. 1899 and *Bulletin du Jardin Botanique de Buitenzorg, ser. 3*, 17: 38. 1941.

S. flabellata Stapf subsp. ***natalensis*** de Wit (*Setaria sphacelata* var. *torta* (Stapf) Clayton)

South Africa. See *Flora Capensis* 7: 425. 1899 and *Flora of Tropical Africa* 9: 795-798, 801. 1930, *Bulletin du Jardin Botanique de Buitenzorg, ser. 3*, 17: 38. 1941, *Kew Bulletin* 33(3): 506. 1979.

S. flava (Nees) Kunth (*Cenchrus parviflorus* Poir.; *Panicum flavum* Nees; *Setaria flava* Merr., nom. illeg., non *Setaria flava* (Nees) Kunth; *Setaria geniculata* P. Beauv.; *Setaria parviflora* (Poir.) Kerguelén; *Setaria parviflora* var. *parviflora*)

Brazil. See *Encyclopédie Méthodique, Botanique* 6: 52. 1804, *Essai d'une Nouvelle Agrostographie* 51, 169, 178. 1812, *Révision des Graminées* 1: 46. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 238-239. 1829, *Mexicanas Plantas* 2: 46. 1886 and *Philippine Journal of*

Science (suppl. 28) 365. 1906, *Lejeunia*; *Revue de Botanique. Nouvelle série* 120: 161. 1987.

S. flavida (Retz.) Veldkamp (*Panicum flavidum* Retz.; *Paspalidium flavidum* (Retz.) A. Camus; *Setaria flavida* Hornem. ex Rchb.; *Setaria germanica* P. Beauv.) (Latin *flavus, a, um* 'pure yellow')

Africa, Vietnam, Thailand, China, Bhutan, India, Indonesia, Pakistan. Annual, slender, somewhat compressed, erect from a short decumbent base, ligule absent or a rim of hairs, leaves narrowly linear and acuminate, spikelets almost sessile in 2 rows and globose in shape, grain collected and eaten in times of need, weed species, valued for grazing, forage, excellent fodder for cattle and horses, found in fallow fields, in dry places, see *Observationes Botanicae* 4: 15. 1786, *Flora Germanica Excursoria* 29. 1830 and *Flore Générale de l'Indo-Chine* 7: 419. 1922, *Blumea* 39(1-2): 376. 1994.

in India: barti, chapri, dhanera, ghuti jara, guthi jara, landia, matamar

in the Philippines: sabung-sabung, giling, baili ixao

in Thailand: ya nok si chomphu

S. geminata (Forssk.) Veldkamp (*Digitaria affinis* Roem. & Schult.; *Digitaria appressa* (Lam.) Pers.; *Echinochloa geminata* (Forssk.) Roberty; *Panicum affine* (Roem. & Schult.) Nees, nom. illeg., non *Panicum affine* Poir.; *Panicum appressum* (Lam.) Döll, nom. illeg., non *Panicum appressum* Forssk.; *Panicum beckmanniiforme* J.C. Mikan ex Trin.; *Panicum briziforme* J. Presl; *Panicum carnosum* Salzm. ex Steud.; *Panicum emergens* Hochst.; *Panicum fluitans* Retz.; *Panicum geminatum* Forssk.; *Panicum glomeratum* Buckley, nom. illeg., non *Panicum glomeratum* Moench; *Panicum paludivagum* Hitchc. & Chase; *Panicum truncatum* Trin.; *Paspalidium geminatum* (Forssk.) Stapf; *Paspalidium geminatum* var. *paludivagum* (Hitchc. & Chase) Gould; *Paspalidium paludivagum* (Hitchc. & Chase) Parodi; *Paspalidium paludivagum* (Hitchc. & Chase) Pilg., nom. illeg., non *Paspalidium paludivagum* (Hitchc. & Chase) Parodi; *Paspalidium paludivagum* (Hitchc. & Chase) Herter, nom. illeg., non *Paspalidium paludivagum* (Hitchc. & Chase) Parodi; *Paspalidium paludivagum* (Hitchc. & Chase) Henrard, nom. illeg., non *Paspalidium paludivagum* (Hitchc. & Chase) Parodi; *Paspalum adpressum* Pers. ex B.D. Jacks.; *Paspalum appressum* Lam.)

Old World tropics. Perennial, aquatic, prostrate and erect, rooting at the nodes, creeping, rhizomatous or stoloniferous, rhizomes spongy and floating, stems soft and inflated, leaf blades acuminate, spikelets ovate, axis of the inflorescence winged, lower glume truncate, upper lemma granulate, growing in water, pans, wet soils, sandy soils, marshy soils, edge of rivers and lakes, streamsides, vleis, active dunes, submerged in the water and muddy soils, often referred to *Paspalidium geminatum* (Forssk.) Stapf, see *Flora Aegyptiaco-Arabica* 18. 1775, *Observationes Botanicae* 3: 8.

1783, *Reliquiae Haenkeanae* 1(4-5): 302. 1830 and *Contributions from the United States National Herbarium* 15: 32-33, f. 13. 1910, *Flora of Tropical Africa* 9: 583. 1920, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afr. Noire, Sér. A.* 17: 64. 1955, *Blumea* 39(1-2): 377. 1994, *Sida* 16(3): 443. 1995.

in Somalia: sabul, sabool

S. geminata (Forssk.) Veldkamp var. ***geminata***

Tropical Africa, Southern America, India, Indonesia, Mexico, U.S., Florida. See *Blumea* 39(1-2): 377. 1994.

S. geminata (Forssk.) Veldkamp var. ***paludivaga*** (A.S. Hitchc. & Chase) R.D. Webster (also spelled ***paludivagum***) (*Panicum paludivagum* A.S. Hitchc. & Chase; *Paspalidium geminatum* var. *paludivagum* (Hitchc. & Chase) Gould; *Paspalidium paludivagum* (Hitchc. & Chase) Parodi)

U.S., Florida, Texas, Mexico. See *Contributions from the United States National Herbarium* 15: 32-33, f. 13. 1910, *Blumea* 39(1-2): 377. 1994, *Sida* 16(3): 443. 1995.

S. geniculata (Lam.) P. Beauv. (*Cenchrus parviflorus* Poir.; *Chaetochloa corrugata* (Elliott) Scribn.; *Chaetochloa corrugata* var. *parviflora* (Poir.) Scribn. & Merr.; *Chaetochloa flava* (Nees) Scribn.; *Chaetochloa flava* (Nees) Kuhl., nom. illeg., non *Chaetochloa flava* (Nees) Scribn.; *Chaetochloa geniculata* (Poir.) Millsp. & Chase; *Chaetochloa geniculata* var. *perennis* (Hall ex Smyth) House; *Chaetochloa geniculata* var. *purpurascens* (Elliott) Farw.; *Chaetochloa gracilis* (Kunth) Scribn. & Merr.; *Chaetochloa imberbis* (Poir.) Scribn.; *Chaetochloa imberbis* var. *geniculata* (Poir.) Scribn. & Merr.; *Chaetochloa imberbis* var. *penicillata* (Willd. ex Nees) Scribn. & Merr.; *Chaetochloa imberbis* var. *perennis* (Hall ex Smyth) Scribn. & Merr.; *Chaetochloa imberbis* var. *streptobotrys* (E. Fourn.) Scribn. & Merr.; *Chaetochloa imberbis* var. *versicolor* (E.P. Bicknell) Stone; *Chaetochloa laevigata* Scribn.; *Chaetochloa occidentalis* Nash; *Chaetochloa parviflora* (Poir.) Scribn.; *Chaetochloa penicillata* (Willd. ex Nees) Scribn.; *Chaetochloa perennis* (Beal) E.P. Bicknell; *Chaetochloa purpurascens* (Kunth) Scribn. & Merr.; *Chaetochloa ventenatii* (Kunth) Nash; *Chaetochloa versicolor* E.P. Bicknell; *Chaetochloa viridis* var. *purpurascens* (Kunth) Honda; *Chamaeraphis glauca* (L.) Kuntze; *Chamaeraphis glauca* var. *geniculata* (Poir.) Kuntze; *Chamaeraphis glauca* var. *imberbis* (Poir.) Kuntze; *Chamaeraphis glauca* var. *laevigata* (Nutt.) Beal; *Chamaeraphis glauca* var. *penicillata* (Willd. ex Nees) Kuntze; *Chamaeraphis glauca* var. *perennis* Beal; *Chamaeraphis gracilis* Hack.; *Chamaeraphis gracilis* (Kunth) Kuntze ex Stuck., nom. illeg., non *Chamaeraphis gracilis* Hack.; *Chamaeraphis imberbis* (Poir.) Kuntze ex Stuck.; *Chamaeraphis penicillata* (Willd. ex Nees) J. Presl ex Stuck.; *Chamaeraphis ventenatii* (Kunth) Beal; *Echinochloa geniculata* (Poir.) Millsp.; *Ixophorus glaucus* var. *laevigata* (Muhl. ex Elliott) Chapm. ex Gatt.; *Panicum berteronianum* (Schult.) Steud.; *Panicum*

dasyurum Willd. ex Nees; *Panicum flavum* Nees; *Panicum fuscescens* Willd. ex Nees; *Panicum geniculatum* Willd., nom. illeg., non *Panicum geniculatum* Poir.; *Panicum geniculatum* Poir.; *Panicum geniculatum* Muhl., nom. illeg., non *Panicum geniculatum* Poir.; *Panicum glaberrimum* Elliott ex Scribn. & Merr., nom. illeg., non *Panicum glaberrimum* Steud.; *Panicum glaucum* var. *purpurascens* Elliott; *Panicum imberbe* Poir.; *Panicum imberbe* var. *dasyurum* (Willd. ex Nees) Döll; *Panicum imberbe* var. *gracile* (Kunth) Kneuck.; *Panicum imberbe* var. *purpurascens* (Kunth) Döll; *Panicum laevigatum* Muhl. ex Elliott, nom. illeg., non *Panicum laevigatum* Lam.; *Panicum lutescens* Weigel; *Panicum lutescens* var. *flavum* (Nees) Backer; *Panicum medium* Muhl. ex Elliott; *Panicum occidentale* (Nash) Nieuwl., nom. illeg., non *Panicum occidentale* Scribn.; *Panicum penicillatum* Willd. ex Nees, nom. illeg., non *Panicum penicillatum* Nees ex Trin.; *Panicum tejucense* Nees; *Panicum ventenatii* (Kunth) Steud.; *Panicum versicolor* (E.P. Bicknell) Nieuwl., nom. illeg., non *Panicum versicolor* Döll; *Pennisetum geniculatum* (Poir.) Jacq.; *Pennisetum indicum* subvar. *parviflora* (Poir.) Leeke; *Pennisetum laevigatum* Nutt.; *Pennisetum parviflorum* (Poir.) Trin.; *Setaria affinis* Schult.; *Setaria berteroniana* Schult.; *Setaria flava* (Nees) Kunt; *Setaria geniculata* (Poir.) P. Beauv.; *Setaria geniculata* (Willd.) P. Beauv.; *Setaria geniculata* Seibert ex Kunth; *Setaria geniculata* P. Beauv.; *Setaria glauca* (L.) P. Beauv.; *Setaria glauca* var. *geniculata* (Poir.) Urb.; *Setaria glauca* var. *imberbis* (Poir.) Griseb.; *Setaria glauca* var. *laevigata* (Nutt.) Chapm.; *Setaria glauca* var. *penicillata* (Willd. ex Nees) Griseb.; *Setaria glauca* var. *purpurascens* (Kunth) Torr.; *Setaria glauca* var. *purpurascens* (Kunth) Urb., nom. illeg., non *Setaria glauca* var. *purpurascens* (Kunth) Torr.; *Setaria gracilis* Kunth; *Setaria gracilis* f. *penicillata* (Willd. ex Nees) Mez ex Ekman; *Setaria gracilis* var. *dasyura* (Willd. ex Nees) Arechav.; *Setaria imberbis* (Poir.) Roem. & Schult.; *Setaria imberbis* (Poir.) T. Durand & Schinz; *Setaria imberbis* var. *gracilis* (Kunth) Hack.; *Setaria imberbis* var. *perennis* (Hall ex Smyth) Hitchc.; *Setaria imberbis* var. *purpurascens* (Kunth) Hack.; *Setaria laevigata* (Nutt.) Schult.; *Setaria lutescens* (Weigel ex Stuntz) F.T. Hubb.; *Setaria lutescens* var. *flava* (Nees) Yamamoto; *Setaria parviflora* (Poir.) Kerguelen; *Setaria penicillata* (Willd. ex Nees) J. Presl; *Setaria perennis* Hall ex Smyth; *Setaria purpurascens* Kunth; *Setaria stipaeulmis* Müll. Hal.; *Setaria streptobotrys* E. Fourn.; *Setaria tejucensis* (Nees) Kunth; *Setaria ventenatii* Kunth

Tropical and temperate America, U.S. Perennial, tufted, wiry, green to purplish, erect or leaning, culms compressed and geniculate at base, rhizomatous with knotty rhizomes, rooting at the nodes, smooth sheaths, smooth leaf blades, erect leaves linear and flat mostly overlapping below middle of stem, ligule hairy, bristly and erect inflorescences, dense cylindrical spike-like panicle, several bristles below each spikelet, lower lemma rugose, weed in sugarcane, prefers

wet conditions and moist soils, may occur as a single plant or as a colony, often in ditches along roadsides, gardens, prairie remnants and noncultivated areas, shifting coastal sands, brackish marsh, sand hills, brackish or fresh shores, flatwoods, pinelands, beach grass dune, low and tall thickets, dense grassland dunes, roadsides, disturbed areas, fore-dune grasslands, see *Species Plantarum* 1: 56. 1753, *Observationes Botanicae* 20. 1772, *Encyclopédie Méthodique, Botanique* 4: 727 [737]. 1798, *Encyclopédie Méthodique, Botanique* 6: 52. 1804, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1031. 1809, *Essai d'une Nouvelle Agrostographie* 51, 169, 178. 1812, *Nova Genera et Species Plantarum* 1: 109-110. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1: 112-113. 1816, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 272. 1816, *Systema Vegetabilium* 2: 891. 1817, *The Genera of North American Plants* 1: 55. 1818, *Eclogae Graminum Rariorum* pt. 3 & 4: 37: t. 26. 1820, *Mantissa* 2: 275-276. 1824, *A Flora of the Northern and Middle Sections of the United States* 153. 1824, *De Graminibus Paniceis* 65. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 238, 241-243. 1829, *Révision des Graminées* 1: 46, 50 and 251, t. 37. 1829-1830, *Reliquiae Haenkeanae* 1(4-5): 314. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 150. 1833, *Nomenclator Botanicus. Editio secunda* 2: 265. 1841, *Synopsis Plantarum Glumacearum* 1: 50. 1853, *Flora Chilena* 6: 248. 1854, *Flora of the Southern United States* 578. 1860, *Botanische Zeitung, Berlin* 19(44): 323. 1861, *Flora of the British West Indian Islands* 554. 1864, *Flora Brasiliensis* 2(2): 157. 1877, *Mexicanas Plantas* 2: 46-47. 1886, *Revisio Generum Plantarum* 2: 767. 1891, *Checklist of the Plants of Kansas* (edition 2) 26. 1892, *Conspectus Florae Africae* 5: 773. 1894, *Anales del Museo Nacional de Montevideo* 1: 165. 1894, *Grasses of North America for Farmers and Students* 2: 153, 155-156. 1896, *U.S. Department of Agriculture. Division of Botany. Bulletin* 4: 39. 1897, *Bulletin of the Torrey Botanical Club* 25(2): 105, 107, pl. 329. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 10-13, 15, f. 2, 4 and 24, t. 12. 1900, *Field Columbian Museum, Publ.* 2(1): 26. 1900, *Contributions from the United States National Herbarium* 5: 515. 1901, *Manual of the Flora of the Northern States and Canada* 90. 1901, *Bulletin, Division of Agrostology United States Department of Agriculture* 29: 3. 1901, *The Flora of Tennessee* 38. 1901, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 8: 13. 1902, *Symbolae Antillarum* 4: 96. 1903, *Publications of the Field Columbian Museum, Botanical Series* 3: 37. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 76. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 442. 1906, *Rhodora* 8(95): 210. 1906, *Zeitschrift für Naturwissenschaften* 79: 19. 1907, *Annual Report of the New Jersey State Museum* 1910: 213. 1911, *American Midland Naturalist* 2: 64. 1911, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13: 33. 1913, *Rhodora* 18: 232. 1916,

Contr. U.S. Natl. Herb. 22(3): 171. 1920, *Symbolae Antillarum* 8: 35. 1920, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 88. 1922, *New York State Museum Bulletin* 254: 85. 1924, *Botanical Magazine* 38: 197. 1924, *De Nuttige Planten van Nederlandsch- Indië* 1: 220. 1927, *Journal of the Society of Tropical Agriculture* 11: 277. 1937, *Papers of the Michigan Academy of Science, Arts and Letters* 26: 5. 1941, *Ciencia e Cultura (São Paulo)* 32: 723. 1980, *Austrobaileya* 2(1): 22. 1984, *Revista Brasil. Genet.* 7: 535-548. 1984, *Lejeunia; Revue de Botanique. Nouvelle série* 120: 161. 1987, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Darwiniana* 37: 89-90. 1999.

in English: knotroot foxtail, knotroot foxtail grass, little foxtail, little foxtail grass, bristly foxtail, perennial foxtail, yellow foxtail, yellow foxtail millet, bristle grass, yellow bristle grass, knotroot bristle grass, bottle grass, pigeon grass, slender pigeongrass

in Spanish: cepillo de botellas, limpia botella, cola de zorra, zacate bermuda, cepillo de dientes, deshollinador

in Mexico: cola de zorra, gusanillo, gusanillo temprano, gusano, mijillo, pajita, pajita cardosa, pajita cerdosa, remolín, x-nok-suuk, zacate amargo, zacate cerdoso, zacate peludo, zacate sedoso

in India: ban kangni, bandari ghas, bandra, bandri, barati (cultivated), bhadli (wild), bilikorla hullu, dissi, kolaat, kotu, kunchi, kukra, nakka korra, pingi-natchi, zipti ghass

in Thailand: haang maa, ya hang ma chingchok, yaa haang maa ching chok, yaa haang maa noi

S. globoidea (Domin) R.D. Webster (*Panicum globoideum* Domin; *Paspalidium globoideum* (Domin) Hughes)

Australia, Queensland, New South Wales. Tufting perennial, forming a dense tussocks, erect, contracted rootstock, not branched, sheath glabrous, ligule membranous and truncate, leaves glabrous and green, panicles with several racemes, spikelets swollen and globose, lower glume shortly acute, upper glume inflated, lower lemma sterile or male, upper lemma apiculate, heavy soils, grasslands, stock fodder grass, seed eaten by birds, see *Repertorium Specierum Novarum Regni Vegetabilis* 10: 119. 1911, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Sida* 16(3): 443. 1995.

in English: shot grass, sago grass

S. globulare J. Presl (*Panicum globulare* (J. Presl) Steud.) Philippines. See *Reliquiae Haenkeanae* 1(4-5): 314. 1830, *Nomenclator Botanicus. Editio secunda* 2: 257, 574. 1841 and *Blumea* 39: 384. 1994.

S. globulifera (Steud.) Griseb. (also spelled ***globolifera***) (*Chaetochloa globulifera* (Steud.) Kuhlmann; *Panicum globuliferum* Steud.; *Setaria berroi* Hack.; *Setaria dura* Mez; *Setaria dura* Mez ex Ekman; *Setaria dura* R.A.W. Herrm.;

Setaria paucifolia var. *planifolia* Hack.; *Setaria scabrifolia* (Nees) Kunth)

Southern Brazil and Uruguay, Argentina. Perennial, erect, tough, leaf blades linear, panicle narrowly oblong and more or less branched, 1 bristle per spikelet, damp places, marshes and swamps, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 246. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 154, 524. 1833, *Synopsis Plantarum Glumacearum* 1: 51. 1853, *Symbolae ad Floram Argentinam. Zweite* 307. 1879 and *Kongliga Svenska Vetenskaps Akademiens Handlingar* 34(6): 10. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 6-7: 313, 342. 1909, *Beiträge zur Biologie der Pflanzen* 10(1): 43-44. 1910, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 26. 1912, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 88. 1922, *Darwiniana* 37: 60. 1999.

S. gracillima Hook.f.

Southeast Asia, Sri Lanka. Perennial, decumbent, leaf sheaths pubescent, leaf blades linear, spikelets acute, lower floret staminate, closely related to *Setaria intermedia* Roem. & Schult., see *The Flora of British India* 7(21): 81. 1897 [1896] and *Handb. Fl. Ceylon* 5: 164. 1900, *Grasses of Ceylon* 125. 1956, *Grasses of Burma* ... 361. 1960.

S. gracilipes C.E. Hubb.

Nigeria. Wet places, along streams, see *Kew Bulletin* 4: 362. 1949.

S. gracilis Kunth (*Chamaeraphis gracilis* (Kunth) Kuntze ex Stuck., nom. illeg., non *Chamaeraphis gracilis* Hack.; *Panicum geniculatum* Lam.; *Panicum glaucum* sensu Thw., non L.; *Panicum imberbe* var. *gracile* (Kunth) Kneuck.; *Setaria geniculata* auct.; *Setaria geniculata* (Willd.) P. Beauv.; *Setaria geniculata* (Poir.) Kunth; *Setaria glauca* sensu Trimen, non (L.) P. Beauv.; *Setaria glauca* var. *purpurascens* (Kunth) Torr.; *Setaria gracilis* Spreng. ex Trin.; *Setaria imberbis* var. *gracilis* (Kunth) Hack.; *Setaria parviflora* (Poir.) Kerguelen; *Setaria parviflora* var. *parviflora*; *Setaria purpurascens* Kunth)

Cosmopolitan. Perennial, short-lived, variable, terrestrial, tufted, slender, flattened or compressed, erect or geniculate, more or less densely branched from the lower nodes, knotted rhizome and knotty base, leaf sheath keeled and smooth, ligule ciliate, acuminate leaf blades linear or narrowly lanceolate, spiciform panicle narrow cylindrical with densely packed spikelets ovate acute, each spikelets subtended by 4-10 antrorsely scabrid bristles, lower floret sterile, glumes ovate to broadly ovate, upper lemma rugulose, commonly found on poor soil, in disturbed places, along roadsides, pastures, wastelands, crops, sandy soils, along edges of forests, similar to *Setaria pumila*, see *Species Plantarum* 1: 56. 1753, *Encyclopédie Méthodique, Botanique* 4: 727 [737]. 1798, *Trans. Amer. Philos. Soc.* 4: 235. 1799, *Encyclopédie Méthodique, Botanique* 6: 52. 1804, *Enumeratio*

Plantarum Horti Botanici Berolinensis, ... 1031. 1809, *Essai d'une Nouvelle Agrostographie* 51, 169, 178. 1812, *Nova Genera et Species Plantarum* 1: 109-110. 1815 [1816], *Encyclopédie Méthodique. Botanique ... Supplément* 4: 272. 1816, *A Flora of the Northern and Middle Sections of the United States* 153. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 241-242. 1829, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 1: 226. 1834, *Flora Chilena* 6: 248. 1854, *Enum. Pl. Zeyl.* 361. 1885, *Anales del Museo Nacional de Montevideo* 1: 165. 1894 and *Handb. Fl. Ceylon* 5: 162. 1900 *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 8: 13. 1902, *Anales del Museo Nacional de Buenos Aires* 11: 76-77. 1904, *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 275. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 441-442. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 372. 1909, *Anales del Museo Nacional de Buenos Aires* 21: 48-49. 1911, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13: 33. 1913, *Handb. Fl. Ceylon* 6: 326. 1931, *Grasses of Ceylon* 125. 1956, *Grasses of Burma ...* 360. 1960, *Fl. N.S.W. n. 19, Gramineae* 2: 236. 1975, *Bull. Soc. Bot. France* 124: 344. 1977, *Kew Bulletin* 33: 501. 1979, *Austrobaileya* 2(1): 22. 1984, *Lejeunia*; *Revue de Botanique. Nouvelle série* 120: 161. 1987, *Proc. N.Z. Grasslands Assoc.* 51: 47-50. 1990, *Boletín de la Sociedad Argentina de Botánica* 29(1-2): 59. 1993.

in English: knot-root bristle grass, knotted bristle grass

in Sri Lanka: kavalu

S. grisebachii E. Fourn. (*Chaetochloa grisebachii* (E. Fourn.) Scribn.; *Chaetochloa grisebachii* var. *ampla* Scribn. & Merr.; *Chaetochloa grisebachii* var. *mexicana* Scribn. & Merr.; *Chaetochloa membranifolia* (R.A.W. Herrm.) Hitchc.; *Setaria laevis* E. Fourn.; *Setaria membranifolia* R.A.W. Herrm.; *Setaria mexicana* W. Schaffn. ex Scribn. & Merr.; *Setaria pseudoverticillata* E. Fourn.; *Setaria setosa* var. *caudata* (Lam.) Griseb.; *Setaria yucatanica* R.A.W. Herrm.) (for the German (b. Hannover) botanist August Heinrich Rudolph Grisebach, 1814-1879 (d. Göttingen), phytogeographer, botanical taxonomist, plant collector, traveler, professor of botany, Director of the Botanical Garden of Göttingen, 1859 Fellow of the Linnean Society, his works include *Flora of the British West Indian Islands*. London [1859-]1864, *Plantae wrightianae, e Cuba orientali*. Cantabrigiae, Nov. Angl. [Cambridge, Boston] 1860-1862, *Symbolae ad floram argentiniam*. Göttingen 1879 and *Catalogus Plantarum Cubensium*. Lipsiae 1866; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 89. 1965; Charles F.A. Morren (1807-1858), *Biographie de Auguste Grisebach 1814-1879*. Liège 1881; Armando T. Hunziker, *Catalogo de los tipos "Grisebachianos" conservados en Córdoba*. Córdoba 1960; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di*

Palermo. 117. Palermo 1988; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Carl Frederik Albert Christensen (1872-1942), *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Gerhard Wagenitz, in *D.S.B.* 5: 546-547. 1981)

Mexico, New Mexico, Arizona. Annual, caespitose, erect, glabrous, ligule densely ciliate, spikelets ovate, fodder, weedy open areas, common on rocky slopes, forests, in desert scrubs and desert grasslands, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Flora of the British West Indian Islands* 555. 1864, *Mexicanas Plantas* 2: 43, 45. 1886, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 36-37, f. 21. 1900, *Beiträge zur Biologie der Pflanzen* 10(1): 51-52, 61. 1910, *Contr. U.S. Natl. Herb.* 22(3): 182-183. 1920, *Contributions from the United States National Herbarium* 24(8): 478. 1927, *Darwiniana* 37: 61. 1999.

in English: Grisebach's bristle grass, Grisebach bristle grass, Grisebach bristlegrass

in Mexico: chilib-suub, zacate

S. hassleri Hack. (*Setaria hassleri* R.A.W. Herrm., nom. illeg., non *Setaria hassleri* Hack.)

Paraguay. See *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 275. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 440. 1906, *Beiträge zur Biologie der Pflanzen* 10(1): 51-52, 61. 1910, *Darwiniana* 37: 62. 1999.

S. homblei De Wild. (*Setaria sphacelata* var. *torta* (Stapf) Clayton) (dedicated to Henri Antoine Homble, 1883-1921, botanical collector in tropical Africa)

Africa. See *Annales de la Société Scientifique de Bruxelles* 39(3): 134. 1920, *Flora of Tropical Africa* 9: 795-798, 801. 1930, *Kew Bulletin* 33(3): 506. 1979.

S. homonyma (Steud.) Chiov. (*Panicum chamaeraphis* Nees ex A. Braun; *Panicum homonymum* Steud.; *Panicum rhachitrichum* Hook.f., nom. illeg., non *Panicum rhachitrichum* Hochst.; *Setaria aequalis* Stapf; *Setaria homonyma* Stapf ex Vanderyst; *Setaria kialaensis* Vanderyst; *Setaria lancea* Stapf ex Massey; *Setaria microprolepis* Stapf)

South Africa. Annual, tufted, clump forming, slender, often branched, erect or geniculate and rooting at the lower nodes, bending and rooting, semiproscumbent to laxly ascending, leaf sheath compressed and hairy, ligule a ring of hairs, leaf blades pleated lengthwise and lanceolate, open panicle,

several racemes spreading or suberect, spikelets in 2 rows, spikelets with stiff bristle attached to the pedicel, upper glume 5- to 7-nerved, lower lemma 5-nerved, rugose fertile floret, natural pasture, good fodder grass, shade species, often a weed in disturbed areas, occurs in forest, shady places in woodlands, paths, edge of swamps, riverbanks, moist sandy soils, along roadsides and trails, bushveld, savannahs, disturbed areas, floodplains, riverbanks, cultivated lands, forest edges, see *Synopsis Plantarum Glumacearum* 1: 48. 1853, *Index Seminum [Berlin]* 20. 1855, *The Flora of British India* 7: 56. 1896 and *Nuovo Giornale Botanico Italiano, new series* 26: 78. 1919, *Étude de l'agrostologie agricole tropicale*. Bas et Moyen-Congo Belge, ... 59. Bruxelles 1921 [Dec 1919], *Bulletin agricole du Congo Belge* 16: 682. 1925, *Sudan Grasses* 34. 1926, *Bulletin of Miscellaneous Information Kew* 1927: 267. 1927, *Flora of Tropical Africa* 9: 849. 1930, C.R. Babu, *Herbaceous Flora of Dehra Dun* 642. New Dehli 1977.

in English: fan-leaf bristle grass, fan-leaved bristle grass

in Tanzania: jitongotongo

in South Africa: waaierblaarmannagras

S. hunzikeri Anton

Argentina. See *Kurtziana* 17: 139. 1984.

S. inaequalis (F. Muell.) R.D. Webster (*Holcolemma dispar* Clayton; *Holcolemma inaequale* Clayton; *Panicum inaequale* F. Muell.; *Panicum inaequale* Pilg., nom. illeg., non *Panicum inaequale* F. Muell.; *Paspalidium inaequale* (F. Muell.) Hughes)

Australia. See *Fragmenta Phytographiae Australiae* 8: 189. 1874 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 133. 1901, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Bulletin of Miscellaneous Information Kew* 1929: 244. 1929, *Kew Bulletin* 32(4): 773. 1978, *Kew Bulletin* 42: 402. 1987, *Sida* 16(3): 443. 1995.

S. incrassata (Hochst.) Hack. (*Panicum incrassatum* Hochst.; *Setaria abyssinica* Hack.; *Setaria abyssinica* var. *brevisetata* Chiov.; *Setaria abyssinica* var. *longisetata* Chiov.; *Setaria albida* Stapf; *Setaria avettae* Pirota; *Setaria bequaertii* Robyns; *Setaria breviseta* Peter; *Setaria ciliolata* Stapf & C.E. Hubb.; *Setaria eylesii* Stapf & C.E. Hubb.; *Setaria eylesii* Stapf; *Setaria gerrardii* Stapf; *Setaria gerrardii* var. *purpurea* Stapf; *Setaria holstii* R.A.W. Herrm.; *Setaria interrupta* Peter, nom. illeg., non *Setaria interrupta* Desv.; *Setaria kersteniana* Peter; *Setaria lacunosa* Peter; *Setaria lindiensis* Pilg.; *Setaria longissima* Chiov.; *Setaria lynesii* Stapf & C.E. Hubb.; *Setaria merkeri* R.A.W. Herrm.; *Setaria modesta* Stapf; *Setaria mombassana* R.A.W. Herrm.; *Setaria nigrirostris* (Nees) T. Durand & Schinz; *Setaria nigrirostris* var. *pallida* de Wit; *Setaria pabularis* Stapf; *Setaria palustris* Stapf; *Setaria perberis* Stapf ex de Wit; *Setaria perberbis* de Wit; *Setaria phanerococca* Stapf; *Setaria phleoides* Stapf; *Setaria phragmitoides* Stapf;

Setaria plurinervis Stapf; *Setaria polyphylla* Stapf; *Setaria porphyrantha* Stapf; *Setaria ramulosa* Peter; *Setaria rudi-folia* Stapf; *Setaria setulosa* Stapf; *Setaria woodii* Hack.; *Setaria woodii* subsp. *bechuanica* de Wit; *Setaria woodii* var. *fonsalutis* de Wit; *Setaria woodii* var. *woodii*) (Latin *incrassatus* “made stout, fattened”) (after the Belgian Joseph Charles Bequaert (Bequart), b. 1886, plant collector in the Belgian Congo and Liberia (1926-1927, 1943-1944). See R.P. Strong, *The African Republic of Liberia ... Harvard Expedition 1926-1927*. Harvard 1930; Émile A. de Wildeman, *Plantae Bequaertianae. Études sur les récoltes botaniques du Dr. J. Bequaert ... au Congo belge, etc.* 1921; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Utrecht 1954; Sir Harry Johnston, *Liberia*. With an appendix on the Flora of Liberia by Dr. Otto Stapf. London 1906; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 9. Utrecht 1971; Irving William Knobloch, compil., “A preliminary verified list of plant collectors in Mexico.” *Phytologia Memoirs*. VI. 1983; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954)

Tropical and South Africa, Australia. Perennial, polymorphic, largely tufted, densely clumped, blue-green to reddish, culms geniculate and ascending, hairy nodes, spreading by short rhizomes, ligule a narrow and densely ciliate rim, leaf-sheaths striate and glabrous, leaves linear with coarse margins, panicle spike-like interrupted at the base or contracted, bristles purple, lower floret male, upper floret perfect, glumes membranous, upper glume 5- to 7-nerved, lower lemma 5-nerved, upper lemma strongly convex, smooth seeds green to yellow, a prolific seeder, weed, native pasture species, grains eaten by baboons, palatable and well accepted by cattle and sheep, very valuable fodder, because of the hyperparathyroidism (“big head”) avoid grazing horses on pastures dominated by purple pigeon grass, drought-tolerant and tolerant of temporary waterlogging, used for thatching and hut-building, easy to establish on heavy black soils, savannah, on heavier clay and medium textured soils, common on cracking black earths, rocky hillsides, on seasonally waterlogged black clay, stony hillsides, on cracking clay soils and in wet sites, vleis and marshes, forest edges, on riverbanks, stony slopes, in open bush steppes, margins of evergreen forests, closely related to *Setaria sphacelata*, see *Flora* 38: 197. 1855, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 122. 1891, *Conspectus Florae Africae* 5: 774. 1894, *Annuario del Reale Istituto Botanico di Roma* 7: 159, t. 5. 1896 (sometimes vol. 6), *Flora Capensis* 7: 424. 1899, *Bulletin de l'Herbier Boissier* 7(1): 24. 1899 and *Österreichische Botanische Zeitschrift* 51: 460. 1901, *Annali di Botanica* 8(3): 311. 1908, *Beiträge zur Biologie der Pflanzen* 10(1): 44-46. 1910, *Annali di Botanica* 13: 46. 1910 [or 1914], *Flora of Tropical Africa* 9: 779, 781-782, 784-789, 791, 807-809, 831. 1930, *Repertorium Specierum*

Novarum Regni Vegetabilis, Beihefte 40(1): 64, f. 32.2 and 67-69, f. 34.1, 2. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 234. 1931, *Bulletin du Jardin Botanique de l'État* 9(3): 190. 1932, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(121): 94-95. 1938, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17(1): 26, 31, 36. 1941.

in English: wood bristle grass, bristle grass, vlei bristle grass, purple pigeon grass, purple pigeon, canary millet

in South Africa: turfsetaria, vlei bristlegrass, vleimannagras
in Tanzania: liyonsolo (Sangu name)

S. intermedia Roem. & Schult. (*Chaetochloa intermedia* (Roem. & Schult.) Stuntz; *Echinochloa intermedia* (Vahl ex Hornem.) Roem. & Schult.; *Panicum intermedium* Griff., nom. illeg., non *Panicum intermedium* Vahl ex Hornem.; *Panicum intermedium* (Roth ex Roem. & Schult.) Roth, nom. illeg., non *Panicum intermedium* Vahl ex Hornem.; *Panicum intermedium* (Roem. & Schult.) Roth, nom. illeg., non *Panicum intermedium* Vahl ex Hornem.; *Panicum intermedium* Salzm. ex Steud., nom. illeg., non *Panicum intermedium* Vahl ex Hornem.; *Panicum tomentosum* Roxb.; *Setaria intermedia* Roth ex Roem. & Schult.; *Setaria tomentosa* (Roxb.) Kunth)

East Africa, China, India, Indonesia, Thailand, Sri Lanka. Annual, weak, tufted, slender, branched, erect or geniculate ascending, often decumbent and rooting at the nodes, leaf sheaths keeled, leaves long and narrow, lower leaf blades not petiolate, inflorescence pyramidal or cylindrical, panicle contracted narrowly lanceolate, spikelets broadly elliptic, 1-2 barbed bristles below each spikelet, lower floret sterile, lower glume obtuse or acute, upper lemma rugose, low viability of the grains, valued for grazing when young, good fodder for cattle and horses, common along the edges of cultivated fields, cultivated dry soil, under the shade of trees, dry pasture ground, grassland, resembling *Setaria verticillata*, see *Hortus Regius Botanicus Hafniensis* 1: 82. 1813, *Systema Vegetabilium* 2: 447, 489. 1817, *Flora Indica; or Descriptions ...* 1: 303. 1820, *Novae Plantarum Species* 47. 1821, *Révision des Graminées* 1: 47. 1829, *Notulae ad Plantas Asiaticas* 3: 29, t. 139, f. 217. 1851, *Synopsis Plantarum Glumacearum* 1: 51. 1853 and *Handb. Fl. Ceylon* 125. 1900, *U.S. Department of Agriculture. Bureau of Plant Industry. Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction* 31: 36, 85. 1914, *Grasses of Burma ...* 365. 1960, *Aspects of Plant Sciences* 11: 467-473. 1989, *Journal of Cytology and Genetics* 25: 147-148. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in India: arranki gaddi, chikta, chilatia, chiriya-chaina, chota chikiya, chota sarsata, dodda antapurlai hullu, dodda antupurule hullu, kari ottai hullu, lapti, lenda, londi jaljatan, ludi jara, ludi, noktowa, sawa, undar punchha

S. italica (L.) P. Beauv. (*Chaetochloa germanica* (Mill.) Smyth; *Chaetochloa italica* (L.) Scribn.; *Chaetochloa italica* f. *praecox* (Alef.) Farw.; *Chaetochloa italica* var. *germanica* (Mill.) Scribn.; *Chaetochloa italica* var. *germanica* (Mill.) Farw., nom. illeg., non *Chaetochloa italica* var. *germanica* (Mill.) Scribn.; *Chamaeraphis italica* (L.) Kuntze; *Chamaeraphis italica* var. *germanica* (Mill.) Kuntze; *Ixophorus italicus* (L.) Nash; *Panicum elongatum* Salisb., nom. illeg. superfl.; *Panicum elongatum* Poir., nom. illeg., non *Panicum elongatum* Salisb.; *Panicum elongatum* Pursh, nom. illeg., non *Panicum elongatum* Salisb.; *Panicum germanicum* Mill.; *Panicum glomeratum* Moench, nom. illeg. superfl.; *Panicum italicum* L.; *Panicum italicum* var. *californicum* (Kellogg) Körn. & Werner; *Panicum italicum* var. *germanicum* (Mill.) Koeler; *Panicum italicum* var. *germanicum* (Mill.) Döll, nom. illeg., non *Panicum italicum* var. *germanicum* (Mill.) Koeler; *Panicum italicum* var. *inermis* Döll; *Panicum italicum* var. *italicum* (Mill.) Koeler; *Panicum italicum* var. *italicum*; *Panicum viride* L.; *Panicum viride* subsp. *italicum* (L.) Asch. & Graebn.; *Panicum viride* var. *italicum* (L.) Backer; *Penicillaria italica* (L.) Oken; *Pennisetum germanicum* (Mill.) Baumg.; *Pennisetum italicum* (L.) R. Br.; *Setaria californica* Kellogg; *Setaria germanica* (Mill.) P. Beauv.; *Setaria italica* subsp. *germanica* (Mill.) Douin; *Setaria italica* subsp. *stramineofructa* F.T. Hubb.; *Setaria italica* subvar. *densior* F.T. Hubb.; *Setaria italica* subvar. *germanica* (Mill.) F.T. Hubb.; *Setaria italica* subvar. *metzgeri* (Koern.) F.T. Hubbard; *Setaria italica* var. *germanica* (Mill.) Beck; *Setaria italica* var. *germanica* (Mill.) Griseb.; *Setaria italica* var. *germanica* (Mill.) Opiz; *Setaria italica* var. *germanica* (Mill.) Richt.; *Setaria italica* var. *germanica* (Mill.) Schrad.; *Setaria italica* (L.) Beauv. var. *metzgeri* (Koern.) Jáv.; *Setaria italica* var. *stramineofructa* (F.T. Hubbard) Bailey; *Setaria viridis* (L.) P. Beauv.; *Setaria viridis* subsp. *italica* (L.) Briq.; *Setariopsis italica* (L.) Samp.)

Origin unknown. Annual, stout, leafy, fast growing, erect, tufted, sometimes geniculate at the base, branching from base, ligule ciliate, leaf sheaths fringed with hairs and slightly keeled, leaves linear to narrow-lanceolate, compact inflorescence erect to pendent to nodding, broad-elliptic to globose spikelets bristled with erect teeth, lower floret male or sterile, upper floret bisexual and deciduous, in upper florets lemma yellow, lower glume acute or subacute, lower lemma sterile more or less epaleate, fertile lemma dark smooth or wrinkled and falling as a false fruit, 2 lodicules, 3 stamens, 2 plumose stigmas, wild taxa and cultivated widely cultivated, grown as a crop, extremely resistant to drought, used for brewing, source of valuable human food and vegetable, roasted and ground as flour, the grain used for feeding cage-birds and poultry, cultivated for the grain and forage for cattle, straw a good fodder and used for thatching, staple hay crop, medicinal, diuretic and astringent, used externally in rheumatism, plant used as a sedative

to the gravid uterus, a noxious invasive weed, potential seed contaminant, grains used externally in rheumatism, considered to be derived from *Setaria viridis* (L.) P. Beauv., requires sandy loams to clay loams, see *Species Plantarum* 1: 56. 1753, *Systema Naturae, Editio Decima* 2: 870. 1759, *Methodus Plantas Horti Botanici ...* 207. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 18. Londini [London] (Nov-Dec) 1796, *Descriptio Graminum in Gallia et Germania* 17. 1802, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Essai d'une Nouvelle Agrostographie* 51, 169-170, 173, 178. 1812, *Flora Americae Septentrionalis; or, ...* 1: 69. 1813 [1814], *Encyclopédie Méthodique. Botanique ... Supplément* 4: 278. 1816, *Enumeratio Stirpium Transsilvaniae* 3: 277. 1816, *Linnaea* 12(4): 430. 1838, *Allgemeine Naturgeschichte* 3(1): 406. 1841, *Rheinische Flora* 128. 1843, *Flora Rossica* 4(14): 471. 1853, *Enum. Pl. Zeyl.* 361. 1864, *Landwirthschaftliche Flora* 315-316. 1866, *Proceedings of the California Academy of Sciences, Series 2*, 1: 26. 1873, *Flora Brasiliensis* 2(2): 165. 1877, *Handbuch des Getreidebaus* 1: 272, 273, 276. Bonn 1885, *Plantae Europaeae* 1: 28. 1890, *Revisio Generum Plantarum* 2: 767-768. 1891, *Bulletin of the Torrey Botanical Club* 22(10): 423. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 32, 39. 1897, *Synopsis der mitteleuropäischen Flora* 2: 77. 1899 and *Handb. Fl. Ceylon* 5: 164. 1900, *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegovina* 9: 424. 1904, *Contr. U.S. Natl. Herb.* 15: 104. 1910, *Prodrome de la Flore Corse* 1: 68. 1910, *Mémoires de la Société des Sciences Naturelles de Cherbourg* 38: 85. 1912, *Transactions of the Kansas Academy of Science* 25: 89. 1913, *American Journal of Botany* 2: 189-196. 1915, *Papers of the Michigan Academy of Science, Arts and Letters* 1: 86. 1923, *Gentes Herbarum; occasional papers on the kind of plants* 1: 133. 1923, *Handboek voor de Flora van Java* 2: 142. 1928, *Bonn. Fl. Compl.* 11: 127. 1932, *Anais da Faculdade de Sciencias do Porto* 19: 69. Oporto 1934, *Grasses of Ceylon* 125. 1956, *Grasses of Burma ...* 362. 1960, *J. Cytol. Genet.* 14: 75-79. 1979, *Fragmenta Floristica et Geobotanica* 27: 581-590. 1981, *Journal of Wuhan Botanical Research* 3(4): 409-412. 1985, *Scientia Agricultura Sinica* 22: 30-34. 1989, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Fitologija* 39: 72-77. 1991, *Blumea* 39: 373-384. 1994, *J. Henan Vocational-Techn. Teaching Coll.* 24(1): 1-7. 1996, Devos K.M., Wang Z.M., Beales J., Sasaki Y. and Gale M.D., "Comparative genetic maps of foxtail millet (*Setaria italica*) and rice (*Oryza sativa*)."
Theoretical and Applied Genetics 96: 63-68. 1998.

in English: foxtail, millet, spiked millet, Italian millet, foxtail millet, moha millet, common millet, Japanese millet, German millet, Hungarian millet, Hungarian grass, Italian bristle grass, Bengal grass, Deccan grass, Arabic dukhn, red rala, boer manna, boer millet, liberty millet, dwarf setaria, giant setaria

in Spanish: mijo minor, panizo, mijo de Italia, moha

in French: millet d'Italie, millet des oiseaux, petit mil, séttaire d'Italie, millet à grappes

in Arabic: dukhn

in Morocco: tafsût, duhn

in southern Africa: boer manna, geelboermanna, geelgras, katstertgras, manna, mannakoring, rooimanna, vinger-manna, witmanna; joang-ba-lipere (Sotho)

in Cambodia: kuor thpou, kuö thpu:

in China: su mi, liang, ku tzu, su ya, chu ya

in Bhutan: yangra, kumduk zu, tanduk zu

in India: aarike, bertia, bhadle, chena, chenna, chikta, chilatia, chinaka, chiurr, erba, gal, kaang, kaango akki, kakni, kakun, kala kangni, kalakangni, kang, kanghuni, kangni, kangu, kangui, kanguni, kangunika, kanku, kaon, karang, karibiragu, kauni, khar, khauni, kirakang, kiraklang, kiranj, koni, kora, koralu, korra, korralu, ksongu, kungo gida, kusht, lenda, londi jaliatan, ludi jara, naoni, navana, navane, navaneakki, navani, peethathandula, pingni, pitatandula, priangu thene, priyangu, priyangu thene, raala, raale, rala, rathi, rawla, salau, samak, samve, shak, shali, shyamaka, syamdhan, tanahal, tangan, tanghun, tangun, tauna, tena, tenai, tennai, thenai, thene gida, thennai, thina, thinai, tina, tinai, tinnai, u'rai-shoho, varayi

in Indonesia: jawawut, juwawut

in Laos: khao fang, khauz fa:ngz

in Malaysia: rumput ekor kucing, sekoi, sekui

in the Philippines: bikakau, borona, bukakau, bukakaw, daua, dawa, rautnokara, sabug, sammang, turai

Malayan name: rumput iskoi

in Sri Lanka: tanahal, thana hal, thinai, tinai

in Thailand: faang haang maa, fang hang ma, fanghangma, haang maa, khao faang, khao fang

in Vietnam: ke, k[ee]

S. italica (L.) P. Beauv. subsp. *colchica* (Dekapr. & Kasparian) Maisaya & Gorgidze

Russia.

S. italica (L.) P. Beauv. subsp. *maxima* (Alef.) Dekapr. & Kasparian (*Setaria italica* subsp. *maxima* Dekapr. & Kaspar., nom. illeg., non *Setaria italica* var. *maxima* Alef. ex Hegi)

Russia.

S. italica (L.) P. Beauv. subsp. *nigrofructa* (Körn. & H. Werner) F.T. Hubb. (*Panicum italicum* var. *nigrum* Körn. & H. Werner)

Europe. See *Handbuch des Getreidebaus* 1: 272, 273-274. 1885 and *American Journal of Botany* 2: 195. 1915.

- S. italica* (L.) P. Beauv. subsp. *pyncocoma* (Steud.) de Wet (*Panicum pyncocomum* Steud.)
Europe. See *Synopsis Plantarum Glumacearum* 1: 417. 1854 and *Kulturpflanze* 29: 190. 1981.
- S. italica* (L.) P. Beauv. subsp. *rubrofructa* F.T. Hubb.
Europe. See *American Journal of Botany* 2: 193. 1915.
- S. italica* (L.) P. Beauv. var. *acuminata* Dekapr. & Kasparian
Russia.
- S. italica* (L.) P. Beauv. var. *atra* (Körn.) F.T. Hubb. (*Panicum italicum* var. *atrum* Körn.)
Europe. See *American Journal of Botany* 2: 196. 1915.
- S. italica* (L.) P. Beauv. var. *barbata* Gammie
Asia, India. See *Memoirs of the Department of Agriculture in India. Botanical Series* 4(1): 5. 1911.
- S. italica* (L.) P. Beauv. var. *breviseta* Ducommun
Europe. See *Taschenbuch für den Schweizerischen Botaniker* 835. 1869.
- S. italica* (L.) P. Beauv. var. *brunneoseta* F.T. Hubb.
Asia, the Philippines. See *American Journal of Botany* 2: 192. 1915.
- S. italica* (L.) P. Beauv. var. *capitata* Dekapr. & Kasparian
Russia.
- S. italica* (L.) P. Beauv. var. *clavata* Dekapr. & Kasparian
Russia. See *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 19(2): 570. 1928.
- S. italica* (L.) P. Beauv. var. *colchica* Dekapr. & Kasparian (*Setaria italica* subsp. *colchica* (Dekapr. & Kaspar.) Maisaya & Gorgidze)
Russia. See *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 19(2): 570. 1928.
- S. italica* (L.) P. Beauv. var. *compacta* Beck
Europe. See *Flora von Nieder-Österreich* 1: 46. 1890.
- S. italica* (L.) P. Beauv. var. *dissecta* Dekapr. & Kasparian
Russia. See *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 19(2): 570. 1928.
- S. italica* (L.) P. Beauv. var. *georgica* Dekapr. & Kasparian
Russia. See *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 19(2): 570. 1928.
- S. italica* (L.) P. Beauv. var. *hostii* F.T. Hubb.
Europe. See *American Journal of Botany* 2: 190. 1915.
- S. italica* (L.) P. Beauv. var. *iberica* Dekapr. & Kasparian
Russia. See *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 19(2): 570. 1928.
- S. italica* (L.) P. Beauv. var. *lobata* Dekapr. & Kasparian (*Panicum italicum* var. *lobatum* Körn.)
Eurasia. See *Handbuch des Getreidebaus* 1: 272, 273. 1885 and *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 19(2): 570. 1928.
- S. italica* (L.) P. Beauv. var. *longiseta* (Döll) Fedtsch. (*Panicum italicum* var. *longisetum* Döll)
Europe. See *Rheinische Flora* 128. 1843 and *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 19(2): 568. 1928.
- S. italica* (L.) P. Beauv. var. *longiseta* Dekapr. & Kasparian
Europe. See *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 19(2): 568. 1928.
- S. italica* (L.) P. Beauv. var. *macrochaeta* (Körn.) Dekapr. & Kasparian (*Panicum italicum* var. *macrochaetum* Körn.)
Eurasia. See *Handbuch des Getreidebaus* 1: 272,-273. 1885 and *Trudy po Prikladnoi Botanike, Genetike i Seleksii* 19(2): 568. 1928.
- S. italica* (L.) P. Beauv. var. *macrostachya* (Kunth) Mathieu (*Setaria macrostachya* Kunth)
Europe. See *Nova Genera et Species Plantarum* 1: 110. 1815 [1816], *Flore Générale de Belgique* 1: 586. 1853.
- S. italica* (L.) P. Beauv. var. *major* (Gaudin) Ohwi (*Panicum viride* var. *majus* Gaudin; *Setaria viridis* var. *major* Gray)
Asia. See *Agrostologia Helvetica, definitionem ...* 1: 18. 1811, *A Natural Arrangement of British Plants* 2: 157. 1821 and *Acta Phytocologia et Geobotanica Sinica* 11: 51. 1952.
- S. italica* (L.) P. Beauv. var. *maritima* (Lam.) Podp. (*Panicum maritimum* Lam.)
Europe. See *Encyclopédie Méthodique, Botanique* 4: 727. 1798, *Flore Générale de Belgique* 1: 586. 1853.
- S. italica* (L.) P. Beauv. var. *maritima* (Mich. & Lej.) Mathieu
Europe. See *Encyclopédie Méthodique, Botanique* 4: 727. 1798.
- S. italica* (L.) P. Beauv. var. *maxima* Alef. ex Hegi
Europe. See *Illustrierte Flora von Mittel-Europa* 1: 194. 1906.
- S. italica* (L.) P. Beauv. var. *minima* Honda
Europe. See *Botanical Magazine* (Tokyo) 53: 99. 1939.
- S. italica* (L.) P. Beauv. var. *moharia* Alef. ex Hegi
Germany. Annual, see *Illustrierte Flora von Mittel-Europa* 1: 194. 1906.
- S. italica* (L.) P. Beauv. var. *nigrofructa* (Körn.) L.H. Bailey (*Panicum italicum* var. *nigrum* Körn. & H. Werner)
Europe. See *Handbuch des Getreidebaus* 1: 272,-274. 1885 and *Gentes Herbarum; Occasional Papers on the Kind of Plants* 1: 133. 1923.
- S. italica* (L.) P. Beauv. var. *purpurea* Gammie
Asia, India. See *Memoirs of the Department of Agriculture in India. Botanical Series* 4(1): 5. 1911.

S. italica (L.) P. Beauv. var. *purpureoseta* F.T. Hubb.

U.S. See *American Journal of Botany* 2: 194. 1915.

S. italica (L.) P. Beauv. var. *rubra* (Körn.) F.T. Hubb. (*Panicum italicum* var. *rubrum* Körn.)

Europe. See *Handbuch des Getreidebaus* 1: 272,-274. 1885 and *American Journal of Botany* 2: 194. 1915.

S. italica (L.) P. Beauv. var. *rubrofructa* (F.T. Hubb.) L.H. Bailey

U.S. See *American Journal of Botany* 2: 193. 1915.

S. italica (L.) P. Beauv. var. *setosa* (Sw.) P. Beauv. (*Panicum setosum* Sw.; *Setaria setosa* (Sw.) P. Beauv.)

Europe. See *Nova Genera et Species Plantarum seu Prodromus* 22. 1788, *Essai d'une Nouvelle Agrostographie* 51, 170-171, 178. 1812, *Flore Générale de Belgique* 1: 586. 1853.

S. italica (L.) P. Beauv. var. *typhoidea* Gammie

Asia, India. See *Memoirs of the Department of Agriculture in India. Botanical Series* 4(1): 6. 1911.

S. jaffrei Morat

New Caledonia. Vulnerable species, see *Adansonia: recueil périodique d'observations botanique, n.s.* 18(2): 528, t. 1, f. 1-10. 1978.

S. jubiflora (Trin.) R.D. Webster (*Panicum flavidum* Retz. *Panicum flavidum* sensu Benth., non Retz.; *Panicum flavidum* var. *jubiflorum* (Trin.) Domin; *Panicum jubiflorum* Trin.; *Paspalidium jubiflorum* (Trin.) Hughes) (manelike arrangement of flowers, from the Latin *juba* "mane, the crest" and *flos, floris* "a flower")

South Australia, Queensland, New South Wales, Victoria, Western Australia, Northern Territory. Tufted perennial, glabrous, usually rather stout, extravaginal innovations, contracted rootstock, more or less branched, sheath glabrous, ligule ciliate, leaves linear and green to bluish green, panicle very narrow with several racemes, sessile spikelets pale green to dark yellowish and more or less crowded, first glume obtuse and not inflated, lemmas acute and ovate to elliptic, lower lemma sterile and epaleate, upper lemma rugulose and striolate, grows on banks of rivers, red gum forests, active flood plains and adjacent to water courses, edges of creeks and waterways, clay and clay loam soils, heavy soils, useful for soil conservation and erosion control, stock fodder grass, see *Observationes Botanicae* 4: 15. 1786, *De Graminibus Paniceis* 130. 1826 and *Bibliotheca Botanica* 85: 300. 1915, *Bulletin of Miscellaneous Information Kew* 1923(9): 317. 1923, *Sida* 16(3): 443. 1995.

in English: Warrego grass, Warrego summer grass (the common names refer to the Warrego River, southwest Queensland), Vandyke grass, yellow-flowered panic grass

S. kagerensis Mez (*Setaria grantii* Stapf; *Setaria ramentacea* Stapf)

East Africa, Tanzania. Short-lived perennial, slender, branched, rambling, weak, scandent, rooting at the lower nodes, plicate leaf blades linear to lanceolate, panicle narrowly lanceolate, spikelets elliptic-oblong, lower glume truncate, long upper glume 7-nerved, lower floret male 7-nerved, upper lemma smooth and glossy, along streams, shady places, bushland, wooded grassland, confused with *Setaria homonyma*, see *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 58. 1917, *Bulletin of Miscellaneous Information Kew* 1927: 268. 1927, *Flora of Tropical Africa* 9: 851. 1930.

S. kialaensis Vanderyst (*Setaria aequalis* Stapf; *Setaria homonyma* (Steud.) Chiov.)

Tropical Africa. Annual, caespitose, geniculate and ascending, see *Synopsis Plantarum Glumacearum* 1: 48. 1853 and *Nuovo Giornale Botanico Italiano, n.s.* 26: 78. 1919, *Bulletin agricole du Congo Belge* 16: 682. 1925, *Bulletin of Miscellaneous Information Kew* 1927: 267. 1927, *Flore des Spermatophytes du Parc National Albert* 3: 118. 1955.

in Angola: ohulungumbe-yokalundu

S. lachnea (Nees) Kunth (*Chaetochloa argentina* (R.A.W. Herrm.) Hitchc; *Chaetochloa lachnea* (Nees) Hitchc.; *Panicum lachneum* Nees; *Setaria argentina* R.A.W. Herrm.; *Setaria leiantha* Hack.; *Setaria leiantha* f. *leiantha*; *Setaria scabrifolia* (Nees) Kunth; *Setaria setosa* (Sw.) P. Beauv.; *Setaria setosa* (Sw.) P. Beauv. f. *leianthina* Hack.; *Setaria setosa* (Sw.) P. Beauv. f. *microstachya* Hack.; *Setaria submacrostachya* Luces)

Brazil, Bolivia, Argentina, Peru, Paraguay. Perennial, tufted, leaf blades linear flat acuminate, dense panicle, spikelets obovate gibbous with only 1 bristle, upper lemma rugose and smooth, under bushes and small trees, disturbed sites, along riverbanks, see *Nova Genera et Species Plantarum seu Prodromus* 22. 1788, *Essai d'une Nouvelle Agrostographie* 51, 170-171, 178. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 246, 248-249. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 154, 524. 1833 and *Anales del Museo Nacional de Buenos Aires* 11: 78. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 444. 1906, *Beiträge zur Biologie der Pflanzen* 10(1): 54-55. 1910, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Contributions from the United States National Herbarium* 24(8): 480. 1927, *Bol. Soc. Argent. Bot.* 29: 55. 1993, *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 28-29, f. 19. 1953, *Caryologia* 48(3-4): 255-263. 1995, *Darwiniana* 37: 68. 1999.

S. latifolia (Scribn.) R.A.W. Herrm. (*Chaetochloa latifolia* Scribn.; *Chaetochloa latifolia* var. *brevisetata* Scribn. & Merr.)

Mexico. See *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 44-45, t. 3. 1898 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 31. 1900, *Beiträge zur Biologie der*

Pflanzen 10(1): 54-55. 1910, *Contr. U.S. Natl. Herb.* 22(3): 194. 1920.

S. leonis (Ekman) León (*Panicum leonis* Ekman; *Paspalum leonis* (Ekman) Davidse & R.W. Pohl)

Cuba. See *Manual of the Grasses of the West Indies* 295, f. 286. 1936, *Flora de Cuba* 1: 163. 1946, *Novon* 2(2): 106. 1992.

S. leucopila (Scribner & Merr.) K. Schum. (*Chaetochloa composita* (Kunth) Scribn.; *Chaetochloa leucopila* Scribn. & Merr.; *Setaria commutata* Hack.; *Setaria composita* Kunth; *Setaria macrostachya* Kunth)

Mexico, U.S., Arizona, Texas. Perennial bunchgrass, caespitose, pale to bright green and orange-brown, stems often bending abruptly at the nodes, flat or folded leaves somewhat rough and hairy, basal leaves highly palatable, narrow cylindrical spikes, a bristle below each spikelet, good forage value, good range grass and seed producer for dove and quail, fair grazing for wildlife, not very resistant to grazing, grows in open dry ground and under the protection of brush in overgrazed areas, common on rocky slopes and along washes and canyons, often in partial shade of shrubs and trees, often in the open shade of low trees or clumps of brush, abundant on dry plains, in sandy to sandy loam soils and on extremely dry sites, open disturbed soil, along roadsides, useful for erosion control and in revegetation of eroded range sites, abandoned cropland and highway construction sites, see *Nova Genera et Species Plantarum* 1: 110-111. 1815 [1816], *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 26, f. 14. 1900, *Botanischer Jahresbericht* 28(1): 417. 1902, *Anales del Museo Nacional de Buenos Aires* 13: 439. 1906.

in English: Plains bristle grass, Plains bristlegrass, bristlegrass, stream bed bristle grass, white-haired bristlegrass
in Mexico: tempranero, tempranero prieto, zacate tempranero, zacate temprano

in Argentina: cola de zorro

S. liebmanni E. Fourn. (also *liebmanni*) (*Chaetochloa liebmanni* (Fourn.) Scribn. & Merr.; *Chaetochloa liebmanni* var. *pauciflora* (Vasey ex Beal) Scribn. & Merr.; *Chaetochloa rariflora* (J.C. Mikan ex Trin.) Hitchc. & Chase; *Chamaeraphis caudata* var. *pauciflora* Vasey ex Beal; *Panicum dissitiflorum* Steud.; *Panicum rariflorum* J. Presl ex Steud., nom. illeg., non *Panicum rariflorum* Lam.; *Panicum rariflorum* (J.C. Mikan ex Trin.) Makino & Nemoto, nom. illeg., non *Panicum rariflorum* Lam.; *Setaria caudata* var. *pauciflora* M.E. Jones; *Setaria leucopila* (Scribn. & Merr.) K. Schum.; *Setaria liebmanni* E. Fourn. ex Hemsl.; *Setaria rariflora* J. Presl, nom. illeg., non *Setaria rariflora* J.C. Mikan ex Trin.; *Setaria rariflora* J.C. Mikan ex Trinius)

South America, Costa Rica, Mexico. Annual, edible, medicinal, fodder, good forage, weed in roadsides, scattered, on rocky slopes, riverbeds, in canyons, see *Systema Vegetabilium* 2: 495. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 78. 1821, *Reliquiae Haenkeanae* 1(4-5): 313. 1830, *Synopsis Plantarum Glumacearum* 1: 51. 1853, *Biologia Centrali-Americana; ...Botany ...* 3: 505. 1885, *Mexicanas Plantas* 2: 44. 1886, *Grasses of North America for Farmers and Students* 2: 158. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 26, 31, 33, f. 14. 1900, *Botanischer Jahresbericht* 28(1): 417. 1902, *Repertorium Specierum Novarum Regni Vegetabilis* 8: 46. 1910, *Contributions from the United States National Herbarium* 18(7): 349. 1917, *Flora of Japan* 1475. 1925, *Contributions to Western Botany* 16: 13. 1930.

in English: Liebmann's bristle grass, bristlegrass

in Mexico: cola de zorra, lequalquimichi, ratoncillo, weewok

in Nicaragua: cola de coyote

S. lindenberghiana (Nees) Stapf (*Chaetochloa lindenberghiana* (Nees) Hitchc.; *Panicum lindenberghianum* Nees; *Setaria angustissima* Stapf; *Setaria mauritiana* Spreng.; *Setaria mauritiana* var. *angustifolia* Rendle; *Setaria phillipsii* de Wit; *Setaria phillipsii* var. *lanata* de Wit; *Setaria subsetosa* Stapf; *Setaria thermitaria* Chiov.) (for the German botanist Johann Bernhard Wilhelm Lindenberg, 1781-1851, bryologist, author of *Monographie der Riccieen*. [Bonn 1837] and *Synopsis hepaticarum europaeorum*. Bonn 1829. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 385. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913)*. Dresden 1916; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 157. Regione Siciliana, Palermo 1988; G.C. Wittstein, *Etymologisch-botanisches Handwörterbuch*. 527. 1852; Stafleu and Cowan, *Taxonomic literature*. 3: 46-47. Utrecht 1981)

Tropical Africa, South Africa, Tanzania, Zaire, Zimbabwe. Perennial, erect, tufted, slender to robust, forming dense tussocks, usually branched, shortly rhizomatous, ligule a ring of hairs, leaf blades linear and scabrid, leaf sheaths compressed and keeled, linear leaves finely plicate, old leaf sheaths fibrous, inflorescence open or contracted, narrow panicle loosely contracted, spikelets lanceolate acute and flushed with purplish, solitary bristles, upper glume 7-nerved, lower lemma 7-nerved male, fertile lemma rugose, good hay, palatable, edible grains, resistant to drought, common on loamy to gravelly soil, in rock crevices, in partial shade, rocky or stony slopes, open woodlands, woody thickets, grasslands, under trees, in ravines, at edges of rocks, in

wooded places near streams, in open bushveld, forests, riverbanks, may be confused with *Setaria longiseta* and *Setaria megaphylla*, see *Systema Vegetabilium, editio decima sexta* 1: 305. 1825, *Florae Africae Australioris Illustrationes Monographicae* 47-48. 1841, *Flora Capensis* 7: 422. 1899, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 188. 1899 and U.S. Department of Agriculture. Bureau of Plant Industry. *Inventary of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction* 34: 16. 1915, *Nuovo Giornale Botanico Italiano* n. ser. 29: 112. 1923, *Flora of Tropical Africa* 9: 835, 837. 1930, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17(1): 21, 22. 1941.

in English: mountain bristle grass, tussock grass

in South Africa: bergsetaria, bosbuffelsgras, koppiesbuffelsgras, randjiesgras, randjiesbuffelsgras, watergras

S. longepetiolata (Pilg.) A. Camus (*Panicum longepetiolum* Pilg.; *Setaria longiseta* P. Beauv.)

Africa. See *Flore d'Oware* 2: 81, f. 110.2. 1819 [or 1818] and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 45. 1902, *Bulletin de la Société Botanique de France* 74: 633. 1927.

S. longicauda Desv.

Brazil. See *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 181. 1831.

S. longipila E. Fourn. (*Chaetochloa longipila* (E. Fourn.) Scribn. & Merr.; *Setaria longipila* E. Fourn. ex Hemsl.)

Mexico. Good forage, see *Biologia Centrali-Americana; ... Botany ...* 3: 505. 1885, *Mexicanas Plantas* 2: 47. 1886 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 22. 1900.

S. longiseta (L.) P. Beauv. (*Chaetochloa longiseta* (P. Beauv.) Chase; *Panicum rescissum* Trin.; *Pennisetum longisetum* (P. Beauv.) K. Schum.; *Setaria lasiothyrsa* Stapf ex Massey; *Setaria longepetiolata* (Pilg.) A. Camus; *Setaria paniciformis* Rendle)

Tropical Africa, Zimbabwe, Tanzania, Mozambique, Nigeria, Sudan, Uganda, Benin. Annual or perennial, tufted to loosely tufted, ascending, branching, leaf blades linear acuminate, ligule membranous, auricles present, inflorescence a contracted panicle of racemes arranged spirally, slender flexuous bristles, sharply acute spikelets 2-flowered borne singly, upper glume 7-nerved, lower floret male, upper floret bisexual, upper glume 7-nerved, lower lemma 5-nerved male, upper lemma finely rugose, stamens 3, useful for erosion control, grazed by stock, hay, growing in dampish waste places, woodland, woody thickets, pathsides, shady areas, near termite mounds, fallows, similar to *Setaria orthosticha*, see *Flore d'Oware* 2: 81, f. 110.2. 1819 [or 1818], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences*

Naturelles 3,1(2-3): 218. 1834, *Die Pflanzenwelt Ost-Afrikas* 5C: 105. 1895, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 186. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 45. 1902, *Contributions from the United States National Herbarium* 24: 173. 1925, *Sudan Grasses* 33. 1926, *Bulletin de la Société Botanique de France* 74: 633. 1927.

in Nigeria: ase olongo, ilulo okweliokwokwo, odu lili, sabalaho, shabalaho

in Yoruba: ase olongo

S. macrochaeta (Link) Schult. (*Panicum macrochaetum* Link; *Pennisetum macrochaetum* Jacq.; *Setaria macrochaeta* (Jacq.) Spreng., nom. illeg., non *Setaria macrochaeta* (Link) Schult.; *Setaria macrochaeta* Hochst. ex Steud., nom. illeg., non *Setaria macrochaeta* (Link) Schult.)

Warm regions. Ornamental, annual, stems topped by thick individual curving spikes, flowers are born in compact spike-like clusters, see *Eclogae Graminum Rariorum* 3 et 4: t. 25. 1820, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 76. 1821, *Mantissa* 2: 274. 1824, *Systema Vegetabilium, editio decima sexta* 1: 305. 1825, *Nomenclator Botanicus* 2: 574. 1841.

in English: millet

S. macrosperma (Scribn. & Merr.) K. Schum. (*Chaetochloa macrosperma* Scribn. & Merr.)

U.S., Florida. See *U.S. Department of Agriculture. Division of Botany. Bulletin* 21: 33, f. 18. 1900, *Botanischer Jahresbericht*. 28(1): 417. 1902 [also *Just's botanischer Jahresbericht*], *Contr. U.S. Natl. Herb.* 22: 195. 1920.

in English: coral bristle grass

S. macrostachya Kunth (*Chaetochloa gibbosa* Scribn. & Merr.; *Chaetochloa leucopila* Scribn. & Merr.; *Chaetochloa macrostachya* (Kunth) Scribn. & Merr.; *Chaetochloa macrostachya* (Kunth) Kuhlmann.; *Chaetochloa rigida* Scribn. & Merr.; *Chamaeraphis macrostachya* (Kunth) Kuntze ex Stuck.; *Chamaeraphis setosa* var. *macrostachya* (Kunth) Kuntze; *Panicum macrostachyum* (Kunth) Nees; *Panicum macrostachyum* (Kunth) Döll, nom. illeg., non *Panicum macrostachyum* (Kunth) Nees; *Panicum macrostachyum* var. *patens* Döll; *Panicum onurus* Willd. ex Nees; *Setaria berlandieri* R.A.W. Herrm.; *Setaria caudata* var. *pauciflora* M.E. Jones; *Setaria commutata* Hack.; *Setaria gibbosa* (Scribn. & Merr.) Schum.; *Setaria inopinata* Toolin; *Setaria italica* var. *macrostachya* (Kunth) Mathieu; *Setaria leucopila* (Scribn. & Merr.) K. Schum.; *Setaria macrostachya* Hochst. ex Steud.; *Setaria rigida* (Scribn. & Merr.) K. Schum., nom. illeg., non *Setaria rigida* Stapf; *Setaria vulpiseta* (Lam.) Roem. & Schult.)

Mexico, U.S., Texas, New Mexico, Arizona, Colorado, Cuba. Perennial bunchgrass, caespitose, stiffly erect, light green tender leaves rough on the back, stems often bend

abruptly at the nodes, densely flowered flower heads, flowering spikelets greenish to yellow, panicle slim and bristly, narrow spike like seed heads, hard seed coat, rough seeds, desert grass, scattered, grass for rangeland restoration and wildlife use, used for birdseed and habitat, a favorite on reclamation sights to stabilize the soil, moderate to high quality forage for deer, the tender basal leaves moderately to highly palatable to all livestock, drought and heat resistant, grows on deep or shallow sandy to clay soils, loams, common on rocky slopes and along washes, open grassy areas, found on open dry ground and in dry woods and on well-drained soils along gullies, stream courses, under protection of brush in overgrazed areas, in areas with adequate moisture, related to *Setaria vulpiseta* (Lam.) Roem. & Schult., see *Encyclopédie Méthodique, Botanique* 4: 735 (or 745). 1798, *Essai d'une Nouvelle Agrostographie* 51, 170, 178. 1812, *Nova Genera et Species Plantarum* 1: 110. 1815 [1816], *Systema Vegetabilium* 2: 495. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 245, 251. 1829, *Flore Générale de Belgique* 1: 586. 1853, *Synopsis Plantarum Glumacearum* 1: 53. 1854, *Flora Brasiliensis* 2(2): 166-167. 1877, *Revisio Generum Plantarum* 2: 768-769. 1891 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 24, 29-30, f. 14, 16. 1900, *Botanischer Jahresbericht* 28(1): 417. 1902, *Anales del Museo Nacional de Buenos Aires* 11: 76. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 439. 1906, *Beiträge zur Biologie der Pflanzen* 10(1): 56. 1910, *Comissão de Linhas Telegraphicas ...*, *Botanica* 67(Bot. 11): 88. 1922, *Contributions to Western Botany* 16: 13. 1930, *Blumea* 3(3): 415. 1940, *Darwiniana* 37: 74. 1999, *Novon* 10(4): 415-418, f. 1-2. 2000.

in English: plains bristlegrass

in Mexico: ne-kuuk-suuk, pajita tempranera, zacate tempranero

S. macrostachya Kunth var. *reversa* Hack.

Australia. See *Nova Genera et Species Plantarum* 1: 110. 1815 [1816], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 236. 1885.

S. macrostachya Kunth var. *schultzii* Benth. (*Chaetochloa schultzii* (Benth.) Domin; *Setaria schultzii* (Benth.) Domin)

Australia. See *Flora Australiensis: A Description ...* 7: 493. 1878 and *Botanischer Jahresbericht* 28(1): 417. 1902, *Bibliotheca Botanica* 85: 331. 1915.

S. magna Griseb. (*Chaetochloa magna* (Griseb.) Scribn.; *Chamaeraphis magna* (Griseb.) Beal)

Mexico, U.S., Florida, Louisiana, Alabama, Argentina, Bolivia, Costa Rica. Annual, very large, robust, erect or geniculate, hollow, rooting at the lower nodes, leaves long and tapering usually rough to the touch, dense cylindrical panicles, large bushy spikes sometimes drooping and densely hairy, spikelets elliptic or obovate, 1-2 bristles per spikelets, lower glume 3- to 5-nerved, upper glume 7- to

9-nerved, lower lemma 7- to 9-nerved perfect, upper lemma shiny smooth, seeds valuable wildlife food, waterfowl food, found in moist soils with poor drainage, along lagoons, in deep ditches, wet parts of nontidal interdune ponds, wet prairies, brackish or freshwater marshes, swamps, low thickets, wetlands, wet disturbed areas, open dunes-thicket complex and coastal salt marshes, see *Flora of the British West Indian Islands* 554. 1864, *Grasses of North America for Farmers and Students* 2: 152. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897.

in English: giant bristle grass, giant bristlegrass, foxtail, giant foxtail grass, giant foxtail, foxtail grass, salt marsh foxtail grass

S. media Veldkamp

Indonesia. See *Blumea* 39(1-2): 378. 1994.

S. megaphylla (Steud.) T. Durand & Schinz (*Chaetochloa scheelei* (Steud.) Hitchc.; *Panicum chevalieri* Stapf; *Panicum flabellatum* Steud.; *Panicum megaphyllum* Steud.; *Panicum phyllomacrum* Steud.; *Panicum plicatile* Hochst.; *Panicum plicatile* var. *glabrescens* Chiov.; *Panicum plicatile* var. *pilosum* Chiov.; *Panicum prolisetum* Steud.; *Panicum scheelei* Steud.; *Panicum sulcatum* Aubl.; *Panicum sulcatum* Bertol., nom. illeg., non *Panicum sulcatum* Aubl.; *Panicum sulcatum* Ekm., non Raddi; *Panicum sulcatum* var. *stenophyllum* Pilg.; *Setaria acuta* Stapf & C.E. Hubb.; *Setaria chevalieri* Stapf & C.E. Hubb.; *Setaria chevalieri* Stapf; *Setaria chevalieri* var. *racemosa* de Wit; *Setaria insignis* de Wit; *Setaria macrophylla* Andersson; *Setaria megaphylla* var. *chevalieri* (Stapf & C.E. Hubb.) Berhaut; *Setaria natalensis* de Wit; *Setaria palmifolia* auct. non (Koenig) Stapf; *Setaria phyllomacra* (Steud.) T. Durand & Schinz; *Setaria plicatilis* (Hochst.) Hack. ex Engl.; *Setaria plicatilis* (Hochst.) Pilg.; *Setaria proliseta* (Steud.) T. Durand & Schinz; *Setaria sulcata* (Aubl.) A. Camus, nom. illeg., non *Setaria sulcata* Raddi; *Setaria sulcata* (Aubl.) Desv., nom. illeg., non *Setaria sulcata* Raddi; *Setaria sulcata* Chev., nom. illeg., non *Setaria sulcata* Raddi)

Tropical Africa and tropical America. Perennial, tall, large, erect, slender to robust or stout, coarse, open, loosely clumped, occasionally rooting at the nodes, often shortly rhizomatous, leaf sheath usually hairy to densely pubescent, ligule a ring of hairs, pleated leaves linear to linear-lanceolate, bristled inflorescence elongate linear to cylindrical, open to dense contracted branched panicle, acute spikelets ovate to elliptic-oblong, green solitary bristles, glumes with scarious margins and rounded tip, lower glume 3- to 5-nerved, upper glume 5- to 7-nerved, lower floret male or barren, upper lemma smooth or weakly rugulose, shade-loving grass, large ornamental clumps, used in hut building and for thatching, attractively pleated foliage, forage and fodder grass for all stock, palatability decreases as the plants mature, ground cover, suitable for cultivation and for

rehabilitation, can be used for stream bank stabilization and channel plug development, from the ashes of the whole plant a vegetable salt is obtained, found in gray sandy loam, open areas, montane forests, open forests, in and around forests, light shade of forest margins, thickets, in moist soils, often in shade or in light shade, on stream banks and in channels, wet places and woodlands, low-lying areas along rivers, water courses, disturbed areas, very similar to *Setaria sulcata* and *Setaria poiretiana*, see *Histoire des plantes de la Guiane Française* 1: 50. 1775, *Opuscoli Scientifici* 4: 230. 1820, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 184. 1831, *Synopsis Plantarum Glumacearum* 1: 52-53. 1853 [or 1854 or 1855], *Naturwissenschaftliche Reise nach Mossambique ...* 2: 550. 1854, *Flora* 38: 198. 1855, *Abhandlungen der Königl. Akademie der Wissenschaften in Berlin* 2: 121. 1891, *Conspectus Florae Africae* 5: 773-774. 1894 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 46. 1902, *Annali di Botanica* 8: 31. 1903 [also *Annuario del Reale Istituto Botanico di Roma*], *Mission Chari-Lac Tchad* 1902-1904. L'Afrique Centrale Française. 367. 1913, *Bulletin du Muséum d'Histoire Naturelle* (Paris) 30: 108. 1924, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(93): 270. 1928, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17: 11, 13, 15, 19. 1941, *Flora of Tropical Africa* 9: 842, 846. 1930, *Fl. Senegal* 2: 401. 1954, *Kew Bulletin* 33: 508. 1979, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988.

in English: buffalo grass, bush buffalo grass, forest buffalo grass, buffel grass, horse grass, corn of horses, fine sword grass, macopo grass, palm grass, ribbon bristle grass, ribbon grass, broad-leaved setaria, broad-leaved bristle grass

in Angola: omacelele, omucelele, muselele

in Cameroon: ekoko enumbà pwiwpi

in Ghana: awaha, wadjere

in Guinea: gbogola

in Ivory Coast: abobonia, aboigna, aboya, aguan, denzenbré, djuaya, hintsun, kotsinté, maka, moya moya

in Liberia: ka

in Nigeria: akarakà, oka esin, okaeshin, okaesin, okeshin, okesin

in Sierra Leone: anfonte, bobo, bobo yamba, foni, foyondo, furudevakali, hos gras, kafonte, kegbil, kebilkelen, keroi, koseaxuli, mbobo, mbowi, mbowo, mbowola, mboworo, ndogobeni, njopo bowi, tira, tukodobi, wogowagana, xoriexuli

in southern Africa: riffelblaarsetaria, riffelblaarmannagras, sclitzgras, sclitz gras, macopo grass, bosbuffelsgras, breëblaar borselgras, breëblaarsetaria; mufhafha (Venda)

in Yoruba: oka esin, okaeshin, okaesin

S. mendocina Phil. (*Chaetochloa villosissima* Scribn. & Merr.; *Setaria kuntzeana* R.A.W. Herrm.; *Setaria villiglu-mis* Hicken; *Setaria villosissima* (Scribn. & Merr.) K. Schum.)

Southern America, Chile, Argentina. Along roadsides, see *Anales de la Universidad de Chile* 93: 715. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 34, f. 19. 1900, *Botanischer Jahresbericht* 28(1): 417. 1902, *Beiträge zur Biologie der Pflanzen* 10(1): 48, 38. 1910, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 2: 4. 1915, *Darwiniana* 37: 78. 1999.

S. neglecta de Wit (*Setaria sphacelata* (Schumach.) M.B. Moss ex Stapf & C.E. Hubb.; *Setaria sphacelata* var. *sphacelata*)

South Africa, Transvaal. See *Beskrivelse af Guineiske planter* 58-59. 1827 and *Flora of Tropical Africa* 9(5): 795-798. 1930, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17: 49. 1941.

S. nicorae Pensiero

Paraguay. Greenish inflorescence, see *Novon* 7(2): 186, f. 1. 1997.

S. nigrirostris (Nees) T. Durand & Schinz (*Chaetochloa nigrirostris* (Nees) Skeels; *Panicum nigrirostre* Nees)

Swaziland, South Africa, Transvaal, Malawi. Perennial, tufted, densely clumped, simple, dark shiny green, rizhomatous with branched and dark rhizome, leaf sheath hairy, ligule a ring of hairs, leaf blades broad and flat, panicle spike-like, spikelets with dark tips, palatable grass, high grazing value, in South Africa grazed by antelope, found mostly on moist or dry clay soils, on riverbanks, on black peat soils, in open grassland, open patches in bushveld, sandy places, see *Flora Africae Australioris Illustrationes Monographicae* 55. 1841, *Conspectus Florae Africae* 5: 774. 1894 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 207: 22. 1911, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17: 26. 1941.

in English: large seed setaria, black bristle grass, black-seed bristle grass, black-seeded bristle grass, manna grass

in South Africa: grootsaad setaria, mannagras, swartsaad-mannagras

S. oblongata (Griseb.) Parodi (*Chaetochloa oblongata* (Griseb.) Hitchc.; *Panicum lilloi* Hack.; *Panicum oblongatum* Griseb.; *Setaria leiocarpa* R.A.W. Herrm.)

Argentina, Peru, Bolivia. Perennial, branched, leaf blades linear scabrous flat acuminate, lax panicle spiciform, spikelets oblong with 1 basal bristle, upper lemma striate or finely rugose, stony places, campos, see *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Abhandlungen der Königl. Gesellschaft der Wissenschaften zu Göttingen* 19: 261. 1874 and *Anales del Museo Nacional de Buenos Aires* 11: 80. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 432. 1906, *Beiträge zur Biologie der Pflanzen*

10(1): 62-63. 1910, *Contributions from the United States National Herbarium* 24(8): 480. 1927, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 13, 38. 1928, *Lilloa* 33(13): 285-291. 1973, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: i-xi, 1-1286. 1993, *Ruizia; Monografías del Jardín Botánico* 13: 1-480. 1993, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: i-xi, 1-178. 1994, *Flora Fanerogámica Argentina* 19(1): 11-16. 1995, *Darwiniana* 37: 81. 1999.

S. obscura de Wit

South Africa, Bushmans River Valley. Perennial, rare, hard, stout, densely tufted, leaves rigid and pointed, panicle spike-like, solitary bristles, lower lemma smooth and grooved, found in moist places, stream banks, high mountain grasslands, see *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17: 45. 1941.

S. oplismenoides R.A.W. Herrm. (also spelled *oplismoides*)

Australia. See *Beiträge zur Biologie der Pflanzen* 10(1): 53. 1910.

S. orthosticha Herrm.

Ethiopia, Malawi. Annual, loosely tufted, slender, erect or ascending, leaf blades nonplicate, hispid inflorescence, panicle narrowly lanceolate, hairy scabrid stout bristles, spikelets elliptic subacute, gibbous, rugose fertile floret, glumes and lower lemma membranous, upper glume 5-nerved, lower lemma 5-nerved sterile, upper lemma rugose, shady rocky places, weedy places and forest margins, related to *Setaria petiolata*, see *Beitr. Biol. Pflanz.* 10: 49. 1910, *F.T.A.* 9: 839. 1930, *Rhod. Agric. Journ.* 50: 504. 1953, *Annot. Check List Nyasal. Grass.*: 59. 1958, *F.T.E.A., Gramineae*: 533. 1982.

S. pallide-fusca (Schumach.) Stapf & C.E. Hubb. (*Panicum glaucum* Nees, nom. illeg., non *Panicum glaucum* L.; *Panicum imberbe* Poir.; *Panicum pallide-fusca* Schumach.; *Panicum penicillatum* Nees, nom. illeg., non *Panicum penicillatum* Nees ex Trin.; *Panicum rubiginosum* Steud.; *Setaria erythraeae* Mattei; *Setaria flava* Merr., nom. illeg., non *Setaria flava* (Nees) Kunth; *Setaria glauca* (L.) P. Beauv.; *Setaria glauca* Hack., nom. illeg., non *Setaria glauca* (L.) P. Beauv.; *Setaria glauca* var. *pallide-fusca* (Schumach.) T. Koyama; *Setaria imberbis* (Poir.) T. Durand & Schinz; *Setaria pallidifusca* (Schumach.) Stapf & C.E. Hubb.; *Setaria penicillata* Chiov., nom. illeg., non *Setaria penicillata* (Willd. ex Nees) J. Presl; *Setaria pumila* (Poir.) Roem. & Schult.; *Setaria pumila* subsp. *pallide-fusca* (Schumach.) B.K. Simon; *Setaria rubiginosa* (Steud.) Miq.; *Setaria sciuroidea* Müll. Hal.)

Tropics. Annual, erect, tufted or loosely tufted, slender, branched from the lower nodes, leaf blade flattened, ligule a fringed membrane with long hairs, inflorescence dense cylindrical spike-like panicle, spikes erect and linear, spikelets green with reddish to purple brown bristles, lower

lemma finely rugose, natural pasture, highly palatable, grazed to a small extent, a source of good hay, used for making ropes, noxious weed in moist disturbed areas, cultivated lands, gardens, embankments, damp soils, bare ground, lawns, see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 272-273. 1816, *Systema Vegetabilium* 2: 891. 1817, *Beskrivelse af Guineiske planter* 58. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 78. 1828, *Florae Africae Australioris Illustrationes Monographicae* 55. 1841, *Flora* 24(1): 276-277. 1841, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Naturae Curiosorum* 19(Suppl. 1): 173. 1843, *Synopsis Plantarum Glumacearum* 1: 50. 1853, *Flora van Nederlandsch Indië* 3: 467. 1857, *Botanische Zeitung. Berlin* 19(43): 316. 1861, *Boletim da Sociedade Broteriana* 3: 135. 1884, *Conspectus Florae Africae* 5: 773. 1894 and *Philippine Journal of Science* (suppl. 28) 365. 1906, *Annuario del Reale Istituto Botanico di Roma* 8: 311. 1908, *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 49. 1910, *Bulletin of Miscellaneous Information Kew* 1930: 259-260. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 233. 1931, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17: 62. 1941, *Reinwardtia* 2(2): 340. 1953, *Journal of Japanese Botany* 37(8): 237. 1962, *Austrobaileya* 2(1): 21-24. 1984, *Darwiniana* 3(1-4): 53-60. 1995, *Cytologia* 62: 225-229. 1997.

in English: garden bristle grass, garden setaria

in East Africa: aloom

in Niger: akaranbey, bâra, gâsil-wano, tûtu, warédiloem, wuridêlêm

in South Africa: tuinsetaria, tuinmannagras, mofantswe, lehola la dipere

in Sudan: danab elkadis

in Thailand: haang maa, yaa haang maa ching, yaa haang maa chok, yaa haang maa ching chok, yaa haang maa khaao, yaa haang maa noi, yaa khee on lek, yaa khon non, yaa maa ching chok

S. pallide-fusca (Schumach.) Stapf & C.E. Hubb. var. *breviseta* (Büse) Jansen (*Setaria glauca* var. *breviseta* Büse)

Asia. See *Bulletin of Miscellaneous Information Kew* 1930: 259. 1930, *Reinwardtia* 2(2): 340. 1953.

S. pallide-fusca (Schumach.) Stapf & C.E. Hubb. var. *ictura* (Büse) Jansen (*Setaria glauca* var. *ictura* Büse)

Asia. See *Bulletin of Miscellaneous Information Kew* 1930: 259. 1930, *Reinwardtia* 2(2): 340. 1953.

S. palmeri Henrard (*Chaetochloa palmifolia* (Willd. ex Poir.) Hitchc. & Chase; *Chaetochloa rigida* Scribn. & Merr.; *Chamaeraphis palmifolia* (Willd. ex Poir.) Kuntze; *Panicum palmifolium* Willd. ex Poir.; *Setaria rigida* (Scribn. & Merr.) K. Schum., nom. illeg., non *Setaria rigida* Stapf)

Asia. See *Encyclopédie Méthodique. Botanique ... Supplément* 4: 282. 1816, *Revisio Generum Plantarum* 2: 771. 1891 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 30. 1900, *Botanischer Jahresbericht* 28(1): 417. 1902, *Contributions from the United States National Herbarium* 18(7): 348. 1917, *Blumea* 3(3): 415. 1940.

S. palmifolia (Koenig) Stapf (*Chaetochloa effusa* (E. Fourn.) Hitchc.; *Chaetochloa palmifolia* Hitchc. & Chase; *Chaetochloa palmifolia* (Willd. ex Poir.) Hitchc. & Chase; *Chaetochloa sulcata* (Aubl.) Hitchc.; *Chamaeraphis effusa* (E. Fourn.) Kuntze; *Chamaeraphis palmifolia* (Willd. ex Poir.) Kuntze; *Chamaeraphis paniculifera* (Steud.) Kuntze; *Chamaeraphis sulcata* (Aubl.) Kuntze; *Panicum mexicanum* Scribn. & Merr.; *Panicum nervosum* Roxb.; *Panicum neurodes* Schult.; *Panicum palmaefolium* J. Koenig; *Panicum palmifolia* J. Koenig; *Panicum palmifolium* J. Koenig; *Panicum palmifolium* Willd. ex Poir., nom. illeg., non *Panicum palmifolium* J. Koenig; *Panicum paniculiferum* Steud.; *Panicum plicatum* Willd., nom. illeg., non *Panicum plicatum* Lam.; *Panicum plicatum* Lam.; *Panicum plicatum* var. *haitiense* Kunth ex Griseb.; *Panicum sulcatum* Aublet; *Panicum sulcatum* Bertol., nom. illeg., non *Panicum sulcatum* Aubl.; *Setaria effusa* E. Fourn.; *Setaria paniculifera* (Steudel) Hemsley; *Setaria paniculifera* (Steud.) E. Fourn. ex Hemsl.; *Setaria paniculifera* (Steud.) E. Fourn., nom. illeg., non *Setaria paniculifera* (Steud.) E. Fourn. ex Hemsl.; *Setaria plicata* (Lam.) T. Cooke; *Setaria plicata* sensu Senaratna, non (Lam.) T. Cooke; *Setaria sulcata* (Aubl.) A. Camus, nom. illeg., non *Setaria sulcata* Raddi; *Setaria sulcata* (Aubl.) Desv., nom. illeg., non *Setaria sulcata* Raddi)

Papua New Guinea, Southeast Asia, China, Japan, Taiwan, the Philippines, Sri Lanka, Indonesia, Malaysia, India, Nepal, Thailand. Perennial, tufted, large, coarse, very stout and robust, stemmy, straggling or scrambling, usually unbranched, loosely or densely clumped, leafy, stems and leaves covered with sticky hairs, culms erect or decumbent at base and rooting from lower nodes, woody rhizomatous, creeping rhizome, solid internodes, ligule membranous with ciliate margins, wide palmlike or pleated or strongly plicate leaf blades, acuminate leaves narrow-elliptic to linear-elliptic, leaf sheaths smooth with fringed margins near the leaf blade, inflorescence a long nodding panicle, loose panicle cylindrical to pyramidal with flexuous or straight branches, bristles solitary and inconspicuous, spikelets ovate to elliptic to lanceolate and sharply pointed, lower floret male or sterile, upper floret bisexual, glumes nerved, lower lemma acuminate, upper lemma smooth or rugulose, grain pale brown, very viable seeds borne in large numbers on terminal shoots, edible grass, ornamental and useful grass cultivated as a vegetable, young shoots eaten with rice, food for granivorous birds and for butterflies, a potential troublesome weed in cultivated areas, a noxious weed in tea areas, can become invasive and disruptive, shade species, prefers

well-drained organically rich soils, very adaptable to many soils and considerably drought-tolerant once established, usually growing in shade near the edge of woods, lowlands, in the partial shade of palm trees, damp shady areas, thickets, wet areas and rainforests, sometimes in disturbed areas, old clearings, gardens, waste grounds, see *Histoire des plantes de la Guiane Française* 1: 50. 1775, *Der Naturforscher* 23: 208. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1033. 1809, *Hortus Bengalensis, or a catalogue ...* 8. 1814, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 282. 1816, *Opuscoli Scientifici* 4: 230. 1820, *Mantissa* 2: 228. 1824, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 184. 1831, *Synopsis Plantarum Glumacearum* 1: 54. 1853 [1854], *Flora of the British West Indian Islands* 547. 1864, *Enum. Pl. Zeyl.* 360. 1864, *Biologia Centrali-Americana; ... Botany ...* 3: 505. 1885, *Mexicanas Plantas* 2: 42. 1886, *Revisio Generum Plantarum* 2: 770-771. 1891 and *Handb. Fl. Ceylon* 5: 157. 1900, *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 40. 1900, *The Flora of the Presidency of Bombay* 2: 919. 1908, *Contributions from the United States National Herbarium* 17(3): 260-261. 1913, *Journal of the Linnean Society, Botany* 42(285): 186. 1914, *Contributions from the United States National Herbarium* 18(7): 348. 1917, *Bulletin du Muséum d'Histoire Naturelle* 30: 108. 1924, *Handb. Fl. Ceylon* 6: 325-326. 1931, *Grasses of Ceylon* 124. 1956, *Grasses of Burma ...* 363. 1960, *Illinois Biol. Monogr.* 29: 15. 1962, *Kew Bulletin* 33: 506. 1979, *Cuscutlania* 1(6): 1-29. 1991, *Blumea* 39: 373-384. 1994.

in English: palm grass, palmgrass, Malaysian palm grass, New Guinea asparagus, broadleaved bristlegrass, short pit-pit, hailands pitpit, highlands pitpit

in Sierra Leone: kalixone, keben

in Samoa: vao 'ofe'ofe

in Papua New Guinea: hailands pitpit, highlands pitpit, pit-pit, noi

in Japan: sasa-kibi

in Malay: lachang

in the Philippines: agusais, asahas, bangas, dumbug, hagusahis, lalasa, liahon, lias, yas

in Sri Lanka: reli tana

in Thailand: yaa kaap phai, yaa khap phai, ya khap phai

in Mexico: zacate plisadero

S. palmifolia (J. König) Stapf var. ***blepharoneuron*** (A. Braun) Veldkamp (*Panicum neurodes* var. *blepharoneuron* A. Braun)

Asia. See *App. Gen. & Sp. Nov. Hort. Reg. Berol.* 20. 1855[1856] and *Journal of the Linnean Society, Botany* 42(285): 186. 1914, *Floribunda* 1(6): 22. 1988, *Blumea* 39: 373-384. 1994.

S. pampeana Parodi ex Nicora (*Setaria caudata* f. *ramosa* Hack.; *Setaria hassleri* var. *aequalis* Hack.)

Argentina. See *Systema Vegetabilium* 2: 495. 1817 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 275. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 440. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 47. 1911, *Boletín de la Sociedad Argentina de Botánica* 12: 301, f. 2-3. 1968

S. panicea (L.) Schinz & Thell.

Europe. See *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 53: 519. 1908.

S. paniculifera (Steud.) E. Fourn. ex Hemsley (*Chaetochloa effusa* (E. Fourn.) Hitchc.; *Chaetochloa sulcata* (Aubl.) Hitchc.; *Chamaeraphis effusa* (E. Fourn.) Kuntze; *Chamaeraphis paniculifera* (Steud.) Kuntze; *Chamaeraphis sulcata* (Aubl.) Kuntze; *Panicum mexicanum* Scribn. & Merr.; *Panicum paniculiferum* Steud.; *Panicum sulcatum* Aubl.; *Setaria effusa* E. Fourn.; *Setaria palmifolia* (J. König) Stapf; *Setaria paniculifera* (Steud.) E. Fourn., nom. illeg., non *Setaria paniculifera* (Steud.) E. Fourn. ex Hemsl.; *Setaria sulcata* (Aubl.) A. Camus, nom. illeg., non *Setaria sulcata* Raddi; *Setaria sulcata* (Aubl.) Desv., nom. illeg., non *Setaria sulcata* Raddi)

Mexico, Venezuela, Costa Rica, Belize, Nicaragua, Colombia, Guatemala. Perennial, caespitose, erect, glabrous or hispid, ligule hispid to villous, leaves lanceolate and hispid, open panicle inflorescence, spikelets ovate and acuminate, glumes nerved, lower palea present or absent, upper lemma rugulose, forage, suitable for cultivation, found in open moist areas, riverbanks, streams, see *Histoire des plantes de la Guiane Française* 1: 50. 1775, *Der Naturforscher* 23: 208. 1788, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 184. 1831, *Synopsis Plantarum Glumacearum* 1: 54. 1853, *Biologia Centrali-Americana; ... Botany ...* 3: 505. 1885, *Mexicanas Plantas* 2: 42. 1886, *Revisio Generum Plantarum* 2: 770. 1891 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 40. 1900, *Contributions from the United States National Herbarium* 17(3): 260-261. 1913, *Journal of the Linnean Society, Botany* 42(285): 186. 1914, *Bulletin du Muséum d'Histoire Naturelle* 30: 108. 1924.

in Guatemala: hotz-kor

S. paraguayensis Pensiero

Paraguay. Endangered species, found in moist woodlands, see *Candollea* 41(2): 469, f. 1-2. 1986.

S. parodii Nicora

Argentina. Along streams, see *Boletín de la Sociedad Argentina de Botánica* 12: 306, f. 4-5. 1968.

S. parviflora (Poiret) Kerguelen (*Cenchrus parviflorus* Poir.; *Chaetochloa corrugata* var. *parviflora* (Poir.) Scribn. & Merr.; *Chaetochloa flava* (Nees) Scribn.; *Chaetochloa flava* (Nees) Kuhl., nom. illeg., non *Chaetochloa flava* (Nees) Scribn.; *Chaetochloa geniculata* (Lam.) Millsp. &

Chase; *Chaetochloa geniculata* (Poir.) Millsp. & Chase; *Chaetochloa geniculata* var. *geniculata*; *Chaetochloa geniculata* var. *perennis* (Hall ex Smyth) House; *Chaetochloa geniculata* var. *purpurascens* (Elliott) Farw.; *Chaetochloa gracilis* (Kunth) Scribn. & Merr.; *Chaetochloa imberbis* (Poir.) Scribn.; *Chaetochloa imberbis* var. *geniculata* (Poir.) Scribn. & Merr.; *Chaetochloa imberbis* var. *imberbis*; *Chaetochloa imberbis* var. *penicillata* (Willd. ex Nees) Scribn. & Merr.; *Chaetochloa imberbis* var. *perennis* (Hall ex Smyth) Scribn. & Merr.; *Chaetochloa imberbis* var. *strepotobotrys* (E. Fourn.) Scribn. & Merr.; *Chaetochloa imberbis* var. *versicolor* (E.P. Bicknell) Stone; *Chaetochloa laevigata* Scribn.; *Chaetochloa occidentalis* Nash; *Chaetochloa parviflora* (Poir.) Scribn.; *Chaetochloa penicillata* (Willd. ex Nees) Kuhl., nom. illeg., non *Chaetochloa penicillata* (Willd. ex Nees) Scribn.; *Chaetochloa perennis* (Beal) E.P. Bicknell; *Chaetochloa purpurascens* (Kunth) Scribn. & Merr.; *Chaetochloa ventenatii* (Kunth) Nash; *Chaetochloa versicolor* E.P. Bicknell; *Chaetochloa viridis* var. *purpurascens* (Kunth) Honda; *Chamaeraphis glauca* var. *geniculata* (Poir.) Kuntze; *Chamaeraphis glauca* var. *imberbis* (Poir.) Kuntze; *Chamaeraphis glauca* var. *laevigata* (Nutt.) Beal; *Chamaeraphis glauca* var. *penicillata* (Willd. ex Nees) Kuntze; *Chamaeraphis glauca* var. *perennis* Beal; *Chamaeraphis gracilis* (Kunth) Kuntze ex Stuck., nom. illeg., non *Chamaeraphis gracilis* Hack.; *Chamaeraphis imberbis* (Poir.) Kuntze ex Stuck.; *Chamaeraphis penicillata* (Willd. ex Nees) J. Presl ex Stuck.; *Chamaeraphis ventenatii* (Kunth) Beal; *Echinochloa geniculata* (Poir.) Millsp.; *Ixophorus glaucus* var. *laevigata* (Muhl. ex Elliott) Chapm. ex Gatt.; *Panicum berteronianum* (Schult.) Steud.; *Panicum dasyurum* Willd. ex Nees; *Panicum flavum* Nees; *Panicum geniculatum* Poir.; *Panicum geniculatum* Willd., nom. illeg., non *Panicum geniculatum* Poir.; *Panicum geniculatum* Lam.; *Panicum geniculatum* Muhl., nom. illeg., non *Panicum geniculatum* Poir.; *Panicum glaberrimum* Elliott ex Scribn. & Merr., nom. illeg., non *Panicum glaberrimum* Steud.; *Panicum glaucescens* Salzm. ex Döll, nom. illeg., non *Panicum glaucescens* Kunth; *Panicum glaucum* sensu Thw.; *Panicum glaucum* var. *brasiliense* Trin. ex Nees; *Panicum glaucum* var. *purpurascens* Elliott; *Panicum imberbe* Poir.; *Panicum imberbe* Schldt.; *Panicum imberbe* var. *dasyurum* (Willd. ex Nees) Döll; *Panicum imberbe* var. *gracile* (Kunth) Kneuck.; *Panicum imberbe* var. *latifolium* Döll; *Panicum imberbe* var. *purpurascens* (Kunth) Döll; *Panicum laevigatum* Muhl. ex Elliott; *Panicum lutescens* Weigel; *Panicum lutescens* var. *flavum* (Nees) Backer; *Panicum medium* Muhl. ex Elliott; *Panicum occidentale* (Nash) Nieuwl., nom. illeg., non *Panicum occidentale* Scribn.; *Panicum pallide-fuscum* Schumach.; *Panicum penicillatum* Willd. ex Nees, nom. illeg., non *Panicum penicillatum* Nees ex Trin.; *Panicum psilocaulon* Steud.; *Panicum tejucense* Nees; *Panicum ventenatii* (Kunth) Steud.; *Panicum versicolor* (E.P. Bicknell) Nieuwl., nom. illeg., non *Panicum versicolor* Döll; *Panicum virescens* Salzm. ex Döll, nom.

illeg., non *Panicum virescens* Weigel; *Pennisetum geniculatum* (Poir.) Jacq.; *Pennisetum indicum* subvar. *parviflora* (Poir.) Leeke; *Pennisetum laevigatum* Nutt.; *Pennisetum parviflorum* (Poir.) Trin.; *Setaria affinis* Schult.; *Setaria berteroniana* Schult.; *Setaria discolor* Hack.; *Setaria flava* (Nees) Kunth; *Setaria flava* var. *pumila* E. Fourn.; *Setaria floriana* Andersson; *Setaria geniculata* auct., misapplied; *Setaria geniculata* (Poir.) P. Beauv.; *Setaria geniculata* (Willd.) P. Beauv.; *Setaria geniculata* P. Beauv.; *Setaria geniculata* var. *latifolia* E. Fourn.; *Setaria geniculata* (Lam.) P. Beauv. var. *pauciseta* Desv.; *Setaria geniculata* var. *purpurascens* (Kunth) Urb.; *Setaria glauca* sensu Trimen; *Setaria glauca* f. *normalis* Büse; *Setaria glauca* subsp. *subtesselata* Büse; *Setaria glauca* var. *geniculata* (Poir.) Urb.; *Setaria glauca* var. *imberbis* (Poir.) Griseb.; *Setaria glauca* var. *laevigata* (Nutt.) Chapm.; *Setaria glauca* var. *pallide-fusca* (Schumach.) T. Koyama; *Setaria glauca* var. *penicillata* (Willd. ex Nees) Griseb.; *Setaria glauca* var. *purpurascens* (Kunth) Torr.; *Setaria glauca* var. *purpurascens* (Kunth) Urb., nom. illeg., non *Setaria glauca* var. *purpurascens* (Kunth) Torr.; *Setaria gracilis* Kunth; *Setaria gracilis* f. *breviglumis* Hack.; *Setaria gracilis* f. *breviseta* Hack.; *Setaria gracilis* f. *brevispica* (Hack.) Hack.; *Setaria gracilis* f. *flaviseta* (Hack.) Hack.; *Setaria gracilis* f. *longiseta* (Hack.) Hack.; *Setaria gracilis* f. *megalantha* Stuck.; *Setaria gracilis* f. *penicillata* (Willd. ex Nees) Mez ex Ekman; *Setaria gracilis* f. *purpurascens* (Kunth) Hack.; *Setaria gracilis* f. *radicans* (Hack.) Hack.; *Setaria gracilis* var. *dasyura* (Willd. ex Nees) Arechav.; *Setaria gracilis* var. *glauco-caesia* Arechav.; *Setaria gracilis* var. *latifolia* (Döll) Arechav.; *Setaria gracilis* var. *pauciseta* (E. Desv.) B.K. Simon; *Setaria gracilis* var. *purpurascens* (Kunth) Arechav.; *Setaria imberbis* (Poir.) Roem. & Schult.; *Setaria imberbis* (Poir.) T. Durand & Schinz; *Setaria imberbis* f. *breviseta* Hack.; *Setaria imberbis* f. *brevispica* Hack.; *Setaria imberbis* f. *flaviseta* Hack.; *Setaria imberbis* f. *longiseta* Hack.; *Setaria imberbis* f. *radicans* Hack.; *Setaria imberbis* f. *setislongioribus* Hack.; *Setaria imberbis* f. *uberrior* Hack.; *Setaria imberbis* var. *genuina* Hack.; *Setaria imberbis* var. *gracilis* (Kunth) Hack.; *Setaria imberbis* var. *perennis* (Hall ex Smyth) Hitchc.; *Setaria imberbis* var. *purpurascens* (Kunth) Hack. ex Stuck.; *Setaria laevigata* (Nutt.) Schult.; *Setaria lutescens* var. *flava* (Nees) Yamamoto; *Setaria montana* Reeder; *Setaria parviflora* var. *parviflora*; *Setaria penicillata* (Willd. ex Nees) J. Presl; *Setaria pumila* subsp. *pallide-fusca* (Schumach.) B.K. Simon; *Setaria perennis* Hall ex Smyth; *Setaria purpurascens* Kunth; *Setaria roemerii* Jansen; *Setaria stipaeulmii* Müll. Hal.; *Setaria streptobotrys* E. Fourn.; *Setaria surgens* Stapf; *Setaria tejucensis* (Nees) Kunth; *Setaria tenella* Desv.; *Setaria ventenatii* Kunth)

Tropical America, Mexico, U.S., Brazil, Bolivia, Guatemala, Peru, Uruguay, Venezuela, Paraguay, Argentina. Perennial or annual, polymorphic, scabrous, often strag-

gling, with yellow or purplish bristles, short and wiry rhizomes, caespitose, low tufts, culms erect or geniculate near the base, ligule membranous and densely ciliate, mostly erect and narrow leaves, leaf sheath flattened, auricles absent, yellowish or purplish panicle spike-like and narrowly cylindrical, spikelets solitary on each panicle branch, short branches subtended by short branchlets divided into bristles, bristles stick out from around each spikelet, first glume ovate and acute, upper floret bisexual, lower floret male or sterile, lower lemma acute, second lemma rugulose, fruiting bracts dark, stigma pink red, useful grass naturalized elsewhere, fodder, pasture grass, weed species, used by waterfowl, growing on roadsides and roadbanks, gardens, lawns, crops, fields, freshwater and brackish marshes, coastal swales, wetlands, flatwoods, salt marsh borders, hillsides, hammocks, waste places and disturbed areas, mossy banks in primary forests, among roadside weeds in a single clump, see *Observationes Botanicae* 20. 1772, *Encyclopédie Méthodique, Botanique* 4: 727 [or 737]. 1798, *Encyclopédie Méthodique, Botanique* 6: 52. 1804, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1031. 1809, *Essai d'une Nouvelle Agrostographie* 51, 169, 178. 1812, *Catalogus Plantarum Americae Septentrionalis* 9. 1813, *Nova Genera et Species Plantarum* 1: 109-110. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1: 112-113. 1816, *Encyclopédie Méthodique, Botanique ... Supplément* 4: 272. 1816, *Systema Vegetabilium* 2: 891. 1817, *The Genera of North American Plants* 1: 55. 1818, *Eclogae Graminum Rariorum* Pt. 3 et 4: 37, t. 26. 1820, *Mantissa* 2: 275-276. 1824, *A Flora of the Northern and Middle Sections of the United States* 153. 1824, *De Graminibus Paniceis* 65. 1826, *Beskrivelse af Guineiske planter* 58. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 78. 1828, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 238-239, 241-243. 1829, *Révision des Graminées* 1: 46, 251, t. 37. 1829-1830, *Reliquiae Haenkeanae* 1(4-5): 314. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 181. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 150. 1833, *Nomenclator Botanicus. Editio secunda* 2: 265. 1841, *Synopsis Plantarum Glumacearum* 1: 50. 1853, *Flora Chilena* 6: 248. 1854, *Plantae Junghuhnianae* 3: 369. 1854, *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 138. 1855, *Flora of the Southern United States* 578. 1860, *Botanische Zeitung, Berlin* 19(44): 323. 1861, *Linnaea* 31: 431. 1861-1862, *Flora of the British West Indian Islands* 554. 1864, *Flora Brasiliensis* 2(2): 157. 1877, *Mexicanas Plantas* 2: 46-47. 1886, *Revisio Generum Plantarum* 2: 767. 1891, *Checklist of the Plants of Kansas (ed. 2)* 26. 1892, *Anales del Museo Nacional de Montevideo* 1: 164-165. 1894, *Conspectus Florae Africae* 5: 773. 1894, *Grasses of North America for Farmers and Students* 2: 153, 155-156. 1896, *U.S. Department of Agriculture. Division of Botany. Bulletin* 4: 39. 1897, *Bulletin of the Torrey Botanical Club* 25(2): 105, 107, pl. 329. 1898 and *Field Columbian*

Museum, Publ. 2(1): 26. 1900, *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 10-13, 15, 24, t. 2, 4, 12. 1900, *Manual of the Flora of the Northern States and Canada* 90. 1901, *The Flora of Tennessee* 38. 1901, *Contributions from the United States National Herbarium* 5: 515. 1901, *Bulletin, Division of Agrostology United States Department of Agriculture* 29: 3. 1901, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 8: 13. 1902, *Symbolae Antillarum* 4: 96. 1903, *Publications of the Field Columbian Museum, Botanical Series* 3: 37. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 76-77. 1904, *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 275. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 441-442. 1906, *Rhodora* 8(95): 210. 1906, *Zeitschrift für Naturwissenschaften* 79: 19. 1907, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 371. 1909, *Bulletin of Miscellaneous Information Kew* 1909: 265. 1909, *Annual Report of the New Jersey State Museum* 1910: 213. 1911, *Anales del Museo Nacional de Buenos Aires* 21: 48-49. 1911, *American Midland Naturalist* 2: 64. 1911, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13: 33. 1913, *Rhodora* 18: 232. 1916, *Symbolae Antillarum* 8: 35. 1920, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 88. 1922, *New York State Museum Bulletin* 254: 85. 1924, *Botanical Magazine (Tokyo)* 38: 197. 1924, *De Nuttige Planten van Nederlandsch- Indië* 1: 220. 1927, *Journal of the Society of Tropical Agriculture* 11: 277. 1937 [or 1939], *Papers of the Michigan Academy of Science, Arts and Letters* 26: 5. 1941, *Journal of the Arnold Arboretum* 29: 304, t. 3. 1948, *Reinwardtia* 2(2): 340, f. 18. 1953, *Journal of Japanese Botany* 37(8): 237. 1962, *Ciencia e Cultura (São Paulo)* 32: 723. 1980, *Austrobaileya* 2(1): 22. 1984, *Revista Brasileira de Genética* 7(3): 535-548. 1984, *Lejeunia* 120: 161. 1987, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Blumea* 39: 373-384. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Darwiniana* 37: 89-90. 1999.

in English: knotroot bristle grass, knotroot bristlegrass, knotroot foxtail, knotroot foxtail grass, foxtail grass, bent foxtail, bent bristly foxtail, knot-rooted bristlegrass, yellow foxtail, yellow bristlegrass, perennial foxtail, marsh bristle grass, slender pigeon grass, bent pigeon grass

in Spanish: cepillo

in French: sétaire gracile, queue de rat

in Hawaii: mau'u Kaleponi

Local name: kavalu

in Argentina: baraval

in Guatemala: Culue-k'im

in Mexico: mijillo, zacate

in Thailand: ya hang ma chingchok, ya hang ma chok, ya hang ma khao, ya khi on lek, ya khon non, ya ma chingchok

S. parviflora (Poir.) Kerguélen var. *brachytricha* Pensiero (*Panicum brachytrichum* Steud. ex Lechler; *Setaria brachytricha* Mez ex R.A.W. Herrm.)

Chile. See *Berberides Americae Australis* 52. 1857 and *Beiträge zur Biologie der Pflanzen* 10(1): 46. 1910, *Lejeunia*; *Revue de Botanique. Nouvelle série* 120: 161. 1987, *Boletín de la Sociedad Argentina de Botánica* 29(1-2): 58. 1993.

S. parviflora (Poir.) Kerguélen var. *pilosissima* (Hack.) Pensiero (*Setaria barretoii* Boldrini; *Setaria gracilis* f. *pilosissima* Hack.)

Chile. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 372. 1909, *Hickenia* 1(21): 117. 1978, *Lejeunia*; *Revue de Botanique. Nouvelle série* 120: 161. 1987, *Boletín de la Sociedad Argentina de Botánica* 29(1-2): 59. 1993.

S. paspalidioides Vickery

Australia, Queensland, New South Wales. Perennial, tufted, sheath ribbed and scabrous, ligule densely ciliate, panicle narrow and scabrous with branches erect, bristles unequal and very flexuous, spikelets mostly subtended by a bristle, lower glume acute to obtuse, lower lemma sterile and apiculate, upper lemma bisexual and rugulose, grows in dry woodland, see *Telopea* 1(1): 42. 1975.

S. paucifolia (Morong) Lindm. (*Chamaeraphis paucifolia* Morong; *Setaria glaziovii* Hack.)

South America, Paraguay. Swampy places, along roadsides, see *Annals of the New York Academy of Sciences* 7: 265. 1893 and *Kongliga Svenska Vetenskaps Akademiens Handlingar* 34(6): 10. 1900, *Österreichische Botanische Zeitschrift* 51: 460. 1901, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 342. 1909.

S. pembertonensis Mez

Australia. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 57. 1917.

S. persica hort. ex Rchb. (*Setaria italica* (L.) P. Beauv.)

Europe, Eurasia. Purple-brown spike-like flower heads, close to and confused with *Setaria glauca* (L.) P. Beauv., see *Species Plantarum* 1: 56. 1753, *Essai d'une Nouvelle Agrostographie* 51, 170, 178. 1812, *Flora Germanica Excursoria* 29. 1830.

S. petiolata Stapf & Hubbard (*Setaria interpilosa* Stapf & Hubbard)

Malawi, Lake Malawi. Annual, loosely tufted, weak, nodes glabrous, leaf blades broadly linear flaccid, leaves petiolate, panicle loosely spiciform to lanceolate and then shortly branched below, rachis loosely hirsute, bristles in clusters of 2-5, spikelets broadly elliptic, upper glume 7-nerved, lower lemma 5-nerved male or sterile, upper lemma rugose, related to *Setaria intermedia*, in wooded grassland and among rocks in shade, deciduous bushland, see *F.T.A.* 9:

813, 829. 1930, *Annot. Check List Nyasal. Grass.*: 58. 1958, F.T.E.A., *Gramineae*: 531. 1982.

S. pflanzii Pensiero

Bolivia, Argentina, Paraguay. Perennial, caespitose, nodes glabrous, leaf blades linear-lanceolate glabrous acute flat, panicle dense, spikelets ovate or globose with a solitary basal bristle, upper lemma softly rugulose, savannah, dry woodland, see *Hickenia* 2(27): 123, f. 1. 1995.

S. phanerococca Stapf (*Setaria incrassata* (Hochst.) Hack.)

Mozambique. See *Flora* 38: 197. 1855, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 122. 1891 and *Flora of Tropical Africa* 9: 784. 1930.

S. phragmitoides Stapf (*Setaria incrassata* (Hochst.) Hack.)

Tropical Africa. See *Flora* 38: 197. 1855, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 122. 1891 and *Flora of Tropical Africa* 9: 782. 1930.

S. planifolia Stapf (*Setaria anceps* var. *sericea* R.E. Massey ex Stapf; *Setaria sphacelata* var. *sericea* (R.E. Massey ex Stapf) Clayton)

Tropical Africa, Mozambique. Found in open places, often confused with *Setaria plicata* (Lam.) T. Cooke, see *Flora of Tropical Africa* 9(5): 794-798. 1930, *Kew Bulletin* 33(3): 506. 1979.

S. plicata (Lam.) T. Cooke (*Panicum excurrens* Trin.; *Panicum plicatum* Lam.; *Setaria excurrens* (Trin.) Miq.; *Setaria palmifolia* (J. König) Stapf)

China, Japan, Taiwan. Tender species, upper lemma transversely wrinkled, emollient and diuretic, tender shoots eaten as vegetable, leaves used in irregular menstruations, close to and confused with *Setaria plicatilis* (Hochst.) Hack., used for erosion control, grows on moist hills, see *Der Naturforscher* 23: 208. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Species Graminum* 1: t. 89. 1828 [1827], *Annales Museum Botanicum Lugduno-Batavi* 2: 275. 1867 and *The Flora of the Presidency of Bombay* 2: 919. 1908, *Journal of the Linnean Society, Botany* 42(285): 186. 1914, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 126, 227. 1957, *Bulletin of Botanical Research* 4(1): 64-65. 1984.

in Japan: ko-sasa-kibi, ko-sasakibi

Malayan name: akar pimpan

in Thailand: khong kai, kong kai, ya kong kai, yaa khong kaai, yaa kong khaai

S. plicatilis (Hochst.) Hack. ex Engl. (*Panicum oligochaete* (Schum.) Kneuck.; *Panicum plicatile* Hochst.; *Panicum plicatile* var. *glabrescens* Chiov.; *Panicum plicatile* var. *pilosum* Chiov.; *Setaria megaphylla* (Steud.) T. Durand & Schinz; *Setaria oligochaete* Schum.; *Setaria orthosticha* R.A.W. Herrm.; *Setaria plicatilis* (Hochst.) Pilg.)

Tropical Africa, Yemen, Sudan, Ethiopia. Perennial, tufted, erect or ascending, shortly rhizomatous, leaf blades plicate, panicle open and narrow, solitary bristles, upper lemma smooth, growing in forests, irrigation ditches, streamsides, semishade, forest margins, coastal and inland areas, woodlands, grasslands and tall grasslands, damp mountain gullies, see *Synopsis Plantarum Glumacearum* 1: 53. 1853, *Flora* 38: 198. 1855, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 121. 1891, *Conspectus Florae Africae* 5: 773. 1894, *Die Pflanzenwelt Ost-Afrikas* 105. 1895 and *Annali di Botanica* 8: 31. 1903 [*Annuario del Reale Istituto Botanico di Roma* 8(1): 31. 1903], *Beiträge zur Biologie der Pflanzen* 10: 49. 1910, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 21: 28. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10(93): 270. 1928.

in English: folded leaf tussock grass

in South Africa: breeblaarpolgras

S. poiretiana (Schult.) Kunth (*Agrostis flabellata* Salzm. ex Steud.; *Chaetochloa crus-ardeae* (Willd. ex Nees) Kuhlmann; *Chaetochloa poiretiana* (Schult.) Hitchc.; *Chaetochloa speciosa* (A. Braun) Kuhlmann; *Chamaeraphis crus-ardeae* (Willd. ex Nees) Kuntze; *Chamaeraphis jurgensenii* (E. Fourn.) Kuntze; *Chamaeraphis speciosa* Kuntze; *Chamaeraphis sulcata* (Raddi) Beal, nom. illeg., non *Chamaeraphis sulcata* (Aubl.) Kuntze; *Panicum crus-ardeae* Willd. ex Nees; *Panicum elongatum* Poir., nom. illeg., non *Panicum elongatum* Salisb.; *Panicum flabellatum* Steud.; *Panicum jurgensenii* (E. Fourn.) Scribn. & Merr.; *Panicum longepaniculatum* Benoist; *Panicum poiretianum* Schultes; *Panicum speciosum* A. Braun; *Panicum speciosum* Nees ex Trin., nom. illeg., non *Panicum speciosum* Walter; *Panicum sulcatum* Bertol., nom. illeg., non *Panicum sulcatum* Aubl.; *Setaria caudula* Stapf; *Setaria crus-ardeae* (Willd. ex Nees) Kunth; *Setaria elongata* Spreng. ex Schult.; *Setaria jurgensenii* E. Fourn.; *Setaria speciosa* (Kuntze) Kuhlmann; *Setaria speciosa* (Nees ex Trin.) Kuhlmann; *Setaria sulcata* Raddi) (after the French botanist Jean Louis Marie Poiret, 1755-1834, clergyman, from 1785 to 1786 traveled in North Africa, among his works are *Voyage en Barbarie*; ou lettres écrites de l'ancienne Numidie pendant les années 1785 et 1786, etc. Paris 1789, *Leçons de flore. Cours complet de Botanique*, etc. Paris 1819-1820 and *Histoire philosophique, littéraire, économiques des plantes de l'Europe*. Paris 1825-1829; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 95. 1965; Stafleu and Cowan, *Taxonomic literature*. 4: 319-321. 1983; François Pierre Chaumeton (1775-1819), *Flore médicale*. [Vols. 3-6: Jean Baptiste Jos. César Tyrbas de Chamberet and Jean L.M. Poiret] Paris 1814-1818; Henri Louis Duhamel du Monceau (1700-1782), *Traité des arbres et arbustes*. Seconde édition ... augmentée [by J.L.M. Poiret, etc.] [1800, etc.]; J.E. Smith, in *Transactions of the Linnean Society of London. Botany*. 9: 304. (Nov) 1808; R. Zander, F. Encke, G. Buchheim and S. Seybold,

Handwörterbuch der Pflanzennamen. 14. Aufl. 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 313. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 466. 1973; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Emil Bretschneider, *History of European Botanical Discoveries in China*. [Reprint of the original edition 1898] Leipzig 1981)

Argentina, Mexico, Honduras, Bolivia, Uruguay, Peru, Brazil, Costa Rica, Guyana, Paraguay. Perennial, robust, large, caespitose, erect, forming clumps, glabrous or hispid, stems covered with bristly hairs, ligule ciliate, plicate leaf blades elliptic and hispid or slightly, open inflorescence paniculate, very dense panicles, spikelets ovate acuminate-rostrate, lower glume ovate and nerved, lower lemma sterile somewhat membranous, lower palea present or absent, acuminate or mucronate upper lemma smooth or rugulose, low grazing value, ornamental grass suitable for cultivation, weed in coffee areas, in shady places, moist woods, in and around forests and forest margins, montane to submontane, open woodland, similar to *Setaria megaphylla*, see *Encyclopédie Méthodique. Botanique ... Supplément* 4: 278. 1816, *Opuscoli Scientifici* 4: 230. 1820, *Agrostografia Brasiliensis sive enumeratio plantarum ad familias naturales graminum et ciperoidarum spectantium, quas in Brasilia ...* 50. Lucca [1823], *Mantissa* 2: 229, 280. 1824, *De Graminibus Panicis* 169. 1826, *Révision des Graminées* 1: 47. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 253. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 155. 1833, *Revis. Gram.* 3: 590. 1834, *Synopsis Plantarum Glumacearum* 1: 53. 1853, *Mexicanas Plantas* 2: 42. 1886, *Revisio Generum Plantarum* 2: 770. 1891, *Grasses of North America for Farmers and Students* 2: 158. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 40. 1900, *Contributions from the United States National Herbarium* 22(3): 159. 1920, *Comissão de Linhas Telegraficas ...*, *Botanica* 67(Bot. 11): 69, 88. 1922, *Flora of Tropical Africa* 9: 845. 1930, *Comissão de Linhas Telegraficas ...*, *Botanica* edition 2, 11: 100. 1948, *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 22: 277. 1950, *Hickenia* 1: 73-78. 1977, *Ciencia e Cultura (São Paulo)* 32: 723. 1980, *Revista Brasileira de Genética* 7(3): 535-548. 1984.

in Spanish: grama negra, gramalote sachá, pasto palmera
in Cameroon: puchuhu

S. polyphylla Stapf (*Setaria incrassata* (Hochst.) Hack.)

Tropical Africa. See *Flora* 38: 197. 1855, *Abhandlungen der Königlichen Akademie der Wissenschaften in Berlin* 2: 122. 1891 and *Flora of Tropical Africa* 9: 808. 1930.

S. pradana (León) León (*Panicum pradanum* León; *Paspalidium pradanum* (León) Davidse & R.W. Pohl)

Cuba, Mesa de Prada. Found in open places, slopes, thickets, see *Manual of the Grasses of the West Indies* 294, f. 284. 1936, *Flora de Cuba* 1: 164. 1946, *Novon* 2(2): 81-110. 1992.

in English: roadside bristle grass

S. pseudaristata (Peter) Pilger (*Acrochaete pseudaristata* Peter; *Setaria tenuiseta* de Wit; *Tansaniochloa pseudaristata* (Peter) Rauschert)

Tropical Africa. Perennial, rare, tufted, erect, slender, shortly rhizomatous, leaves not plicate, open inflorescence, solitary bristles, lemma rugose, shade species, see *Reperitorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 203, Anhang 54, t. 28, f. 2. 1930, *Die Natürlichen Pflanzenfamilien* edition 2 14e: 72. 1940, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17(1): 15,17. 1941, *Taxon* 31(3): 561. 1982.

S. pumila (Poir.) Roemer & J.A. Schultes (*Chaetochloa glauca* var. *purpurea* Farw.; *Chaetochloa lutescens* Weigel ex Stuntz; *Panicum glaucum* var. *flavescens* Elliott; *Panicum glaucum* var. *laevigatum* J. Le Conte ex Torr.; *Panicum imberbe* var. *pumilum* (Poir.) Nees; *Panicum lutescens* Weigel; *Panicum pallide-fuscum* Schumach.; *Panicum pumilum* Poir.; *Panicum pumilum* Bosc ex Nees, nom. illeg., non *Panicum pumilum* Poir.; *Panicum rubiginosum* Steud.; *Setaria aurea* var. *rubiginosa* (Steud.) Peter; *Setaria erythraeae* Mattei; *Setaria glauca* (L.) P. Beauv.; *Setaria glauca* sensu Alston, non (L.) P. Beauv.; *Setaria glauca* var. *brevisetata* Chiov.; *Setaria glauca* var. *pallide-fusca* (Schumacher) T. Koyama; *Setaria glauca* var. *pallidifusca* (Schumacher) T. Koyama; *Setaria glauca* var. *pumila* (Poir.) Podp., nom. illeg., non *Setaria glauca* var. *pumila* (Poir.) Asch. & Graebn.; *Setaria glauca* var. *pumila* (Poir.) Asch. & Graebn.; *Setaria lutescens* (Weigel ex Stuntz) F.T. Hubbard; *Setaria pallide-fusca* (Schumacher) Stapf & C.E. Hubb.; *Setaria pallide-fusca* var. *sericea* de Wit; *Setaria pallidifusca* (Schumacher) Stapf & C.E. Hubb.; *Setaria pumila* (Link) Schult., nom. illeg., non *Setaria pumila* (Poir.) Roem. & Schult.; *Setaria pumila* subsp. *pallide-fusca* (Schumacher) B.K. Simon; *Setaria pumila* subsp. *pumila*; *Setaria rubiginosa* (Steud.) Miq.; *Setaria ustilata* de Wit) (Latin *pumilus*, a, um "dwarf")

Origin unknown. Annual, highly variable, very polymorphic, pale green to bright green, loosely or densely tufted or short-lived perennial with short rhizomes, culms erect to geniculate at the base and sometimes rooting from lower nodes, ascending, weak, fibrous roots, ligule truncate and ciliate, smooth flattened sheaths, linear to oblong leaves,

inflorescence in spike-like panicles cylindrical or oblong, spikelets ovoid with golden to reddish purple bristles with erect teeth, lower floret male or sterile, upper floret bisexual, unequal glumes, lower glume acute, upper glume obtuse, upper lemma wrinkled to rugose, grains eaten in time of scarcity, useful grass suitable for cultivation, used as hay, a good cattle fodder when young, grains eaten by baboons and used in birdseed, cattle that eat this grass can develop stomatitis, a common and noxious weed of cultivation and of arable land, weed of rice, drought-resistant, thatching grass, found in dry sandy soil, open stony hillsides, pathsides in high rainfall areas, weedy places, footpaths, gardens, along streams, seasonally inundated bushlands, in heavily grazed turf, lawns, grassland, fallow lands, along roadsides, fields and lowlands, pastures and most disturbed areas, cultivated land and waste places, sometimes confused with *Setaria gracilis* Kunth, see *Species Plantarum* 1: 56. 1753, *Observationes Botanicae* 20. 1772, *Essai d'une Nouvelle Agrostographie* 51, 169, 178. 1812, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 272-273. 1816, *A Sketch of the Botany of South-Carolina and Georgia* 1: 113. 1816, *Systema Vegetabilium* 2: 891. 1817, *Manual of Botany of the Northern States. Second Edition.* 339. 1818, *Beskrivelse af Guineiske planter* 58. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 78. 1828, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 228, 240. 1829, *Flora* 24(1): 276-277. 1841, *Synopsis Plantarum Glumacearum* 1: 50. 1853, *Flora van Nederlandsch Indië* 3: 467. 1857, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897 and *Annali di Botanica* 8: 311. 1903, *Illustrierte Flora von Mittel-Europa* 1: 191. 1906, *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 49. 1910, *U.S. Department of Agriculture. Bureau of Plant Industry. Inventory of Seeds and Plants Imported by the Office of Foreign Seed and Plant Introduction* 31: 36, 86. 1914, *Rhodora* 18: 232. 1916, *Bulletin of Miscellaneous Information Kew* 1930: 259-260. 1930, *Handb. Fl. Ceylon* 6: 326. 1931, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 233. 1931, *Papers of the Michigan Academy of Science, Arts and Letters* 26: 5. 1941, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17(1): 59, 62. 1941, *Grasses of Ceylon* 125. 1956, *Grasses of Burma ...* 363. 1960, *Journal of Japanese Botany* 37(8): 237. 1962, *Taxon* 25: 297-304. 1976, *Bull. Soc. Bot. France* 124: 342. 1977, *Kew Bulletin* 33: 501-508. 1978 [1979], *Austrobaileya* 2(1): 21-24. 1984, *Berichte des Geobotanischen Institutes der Eidgenössischen Technischen Hochschule Stiftung Rübel* 54: 42-50. 1988, *Aspects of Plant Sciences* 11: 467-473. 1989, *Fitologija* 39: 72-77. 1991, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Flora of North America North of Mexico* 25: i-xxv, 1-783. 2003.

in English: pale pigeon grass, pigeon grass, dove corn, doves' grass, horse grass, red bristle grass, garden bristle grass, yellow bristle grass, yellow bristlegrass, summergrass, smooth millet, wild millet, foxtail millet, golden foxtail, bristly foxtail, bristly foxtail grass, yellow foxtail, cattail millet, cattail grass, cat's tail, cat's tail grass, garden setaria, water setaria, annual Timothy

in Spanish: almorojo blanco

in Mexico: pajita amarilla

in French: sétaire glauque

in Portuguese: milhã-amarelada

in Bhutan: bala bansu, gogey banso, yangra bang

in India: bili korle hullu, nakkathoka gaddi

in Japan: ko-tsubu-kin-enokoro, kin enokor

in Thailand: hang ma, ya hang ma noi

in Arabic: danabal kalb

in East Africa: aloom, aluum

in Gambia: nyakourou, pura barra

in Ghana: fukagli, geron darli

in Mali: laki davangel, mbassambi uluku, ulu ndenku

in Nigeria: danabal kalb, duusàà, duza, esaggi luko, geron darli, geron tsunsaye, gundul, kyasuwar raafi, kyasuwar ta fadamà, wutsiyar beeraa

in Senegal: бага ndioke, mbasambi uluka, vul vul

in southern Africa: katstertgras, tuinmannagras, perdesoetgras, rooiborselgras, rooiborselsaadgras, rooisaadgras, tuinsetaria; lehola-la-lipere (Sotho)

in Upper Volta: basurè, bayore, bayori, kinsurè, kusugo, nazogau, safuuje, safuure

S. pumila (Poir.) Roem. & Schult. subsp. ***pallide-fusca*** (Stapf & C.E. Hubb.) B.K. Simon (*Panicum pallide-fuscum* Schumach.; *Panicum pumilum* auct. non Poir.; *Setaria glauca* sensu Vickery; *Setaria glauca* var. *pallidifusca* (Schumacher) T. Koyama; *Setaria pallide-fusca* (Schumacher) Stapf & C.E. Hubb.; *Setaria pallidifusca* (Schumacher) Stapf & C.E. Hubbard; *Setaria parviflora* (Poir.) Kerguélen)

Origin unknown. Noxious weed, invasive, useful grass, found in disturbed areas, see *Encyclopédie Méthodique, Botanique* 6: 52. 1804, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Beskrivelse af Guineiske planter* 58. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 78. 1828 and *Bulletin of Miscellaneous Information Kew* 1930: 259. 1930, *Journal of Japanese Botany* 37(8): 237. 1962, *Austrobaileya* 2(1): 21-24. 1984, *Lejeunia; Revue de Botanique. Nouvelle série* 120: 161. 1987, *Blumea* 39: 373-384. 1994.

in English: cattail grass, cat's tail grass, Queensland pigeon grass, Queensland pigeon grass, foxtail, garden bristle grass, yellow bristlegrass

in Japan: ko-tsubu-kin-enokoro

S. pumila (Poir.) Roem. & Schult. subsp. *pumila* (*Chaetochloa lutescens* Weigel ex Stuntz; *Panicum lutescens* Weigel; *Panicum pumilum* Poir.; *Setaria glauca* auct.; *Setaria lutescens* (Weigel ex Stuntz) Hubb., nom. dub.)

Useful grass, cereal, forage, fodder, birdseed, weed species widely naturalized, see *Systema Vegetabilium* 2: 891. 1817.

in English: pale pigeon grass, yellow foxtail, yellow bristle grass, pigeon grass

in French: sétaire glauque

S. queenslandica Domin (*Chaetochloa apiculata* Scribn. & Merr.; *Setaria apiculata* (Scribn. & Merr.) K. Schum.)

Australia. See *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 9. 1900, *Botanischer Jahresbericht* 28(1): 417. 1900 [1902], *Bibliotheca Botanica* 20(85): 330, t. 18, f. 9, t. 15, f. 1-2. 1915, *Sida* 15(3): 447-489. 1993.

S. ramiseta (Scribn.) Pilger (*Chaetochloa ramiseta* (Scribn.) Smyth; *Panicum ramisetum* Scribn.; *Panicum subspicatum* Vasey, nom. illeg., non *Panicum subspicatum* Desv.; *Setaria reverchonii* subsp. *ramiseta* (Scribn.) W.E. Fox)

U.S., New Mexico, Texas. Caespitose, found in open dry soil, disturbed places, see *Department of Agriculture. Botanical Division. Bulletin* 8: 25. 1889 and *Bulletin, Division of Agrostology United States Department of Agriculture* 27: 9. 1900, *Contr. U.S. Natl. Herb.* 15: 25. 1910, *Transactions of the Kansas Academy of Science* 25: 89. 1913, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Illinois Biological Monographs* 29: 1-132. 1962, *Sida* 18(4): 1037-1047. 1999.

in English: Rio Grande bristle grass, solitary bristlegrass

S. rara (R. Br.) R.D. Webster (*Panicum rarum* R. Br.; *Paspalidium rarum* (R. Br.) Hughes)

Australia. See *Prodromus Florae Novae Hollandiae* 189. 1810 and *Bulletin of Miscellaneous Information Kew* 1923(9): 318. 1923, *Sida* 16(3): 444. 1995.

S. rariflora J.C. Mikan ex Trinius (*Chaetochloa caespitosa* (Hack. & Arechav.) Speg.; *Chaetochloa onurus* (Willd. ex Trin.) Scribn. & Merr.; *Chaetochloa rariflora* (J.C. Mikan ex Trin.) Hitchc. & Chase; *Panicum onurus* Willd. ex Trin.; *Panicum rariflorum* (J.C. Mikan ex Trin.) Makino & Nemoto, nom. illeg., non *Panicum rariflorum* Lam.; *Panicum triquetrum* Willd. ex Döll; *Panicum utriculatum* Steud.; *Setaria caespitosa* Hackel & Arechav.; *Setaria liebmännii* E. Fourn.; *Setaria onurus* (Willd. ex Trin.) Griseb.; *Setaria rariflora* J. Presl, nom. illeg., non *Setaria rariflora* J.C. Mikan ex Trin.; *Setaria setosa* (Sw.) P. Beauv.; *Setaria vaginata* Spreng.)

Venezuela, Brazil. Annual, weed in roadsides, scattered, on rocky slopes, in canyons, riverbeds, rocky shores and coastal slopes, limestone flats, see *Nova Genera et Species Plantarum seu Prodromus* 22. 1788, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 78. 1821, *Systema Vegetabilium, editio decima sexta* 4 Cur. Post.: 33. 1827, *Reliquiae Haenkeanae* 1(4-5): 313. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 226. 1834, *Nomenclator Botanicus. Editio secunda* 2: 264. 1841, *Flora of the British West Indian Islands* 555. 1864, *Flora Brasiliensis* 2(2): 161. 1877, *Mexicanas Plantas* 2: 44. 1886, *Anales del Museo Nacional de Montevideo* 1: 166, f. 15. 1894 and *U.S. Department of Agriculture. Division of Botany. Bulletin* 21: 27. 1900, *Contribucion al Estudio de la Flora del Tandil* 52. 1901, *Contributions from the United States National Herbarium* 18(7): 349. 1917, *Flora of Japan* 1475. 1925, *Flora Illustrada Catarinense* 1(Gram.): 443-906. 1982.

S. reclinata Chevallier

Europe. See *Flore Générale des Environs de Paris* éd. 2, 2: 148. 1836 and *Repert. Sp. Nov.* 27: 366-368. 1930.

S. reverchonii (Vasey) Pilger (*Chaetochloa reverchonii* (Vasey) Smyth; *Panicum reverchonii* Vasey) (after the French botanist Julien Reverchon, 1834-1905, plant collector (Dallas, Texas), traveler, brother of the French plant collector Elisée Reverchon (1835-1914); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 147. Boston 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 330. Boston, Mass. 1972; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

America. Along roadsides, see *Department of Agriculture. Botanical Division. Bulletin* 8: 25. 1889 and *Transactions of the Kansas Academy of Science* 25: 88. 1913, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940.

in English: Reverchon's bristle grass, Reverchon bristlegrass

S. reverchonii (Vasey) Pilger subsp. *firmula* (Hitchc. & Chase) W.E. Fox (*Panicum firmulum* Hitchc. & Chase; *Setaria firmula* (Hitchc. & Chase) Pilg.)

America. See *Contributions from the United States National Herbarium* 15: 27-28, f. 9. 1910, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Sida* 18(4): 1041. 1999.

S. reverchonii (Vasey) Pilger subsp. *ramiseta* (Scribner) W.E. Fox (*Chaetochloa ramiseta* (Scribn.) Smyth; *Panicum ramisetum* Scribn.; *Panicum subspicatum* Vasey, nom. illeg., non *Panicum subspicatum* Desv.; *Setaria ramiseta* (Scribn.) Pilg.)

America. Caespitose, see *Department of Agriculture. Botanical Division. Bulletin* 8: 25. 1889 and *Bulletin, Division of Agrostology United States Department of Agriculture* 27: 9. 1900, *Contr. U.S. Natl. Herb.* 15: 25. 1910, *Transactions of the Kansas Academy of Science* 25: 89. 1913, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Sida* 18(4): 1041. 1999.

S. reverchonii (Vasey) Pilger subsp. ***reverchonii***

America.

S. rigida Stapf (*Chaetochloa rigida* Scribn. & Merr.; *Setaria rigida* (Scribn. & Merr.) K. Schum., nom. illeg., non *Setaria rigida* Stapf)

South Africa. Perennial, robust, erect, rhizomatous, panicle spike-like, found on stream banks, swampy areas, marshes, see *Flora Capensis* 7: 426. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 30. 1900, *Botanischer Jahresbericht* 28(1): 417. 1902.

S. rosenfurtii Nicora

Argentina. See *Flora de la Provincia de Buenos Aires* 4(2): 453. 1970.

S. rosenfurtii Nicora var. ***rosenfurtii***

Argentina.

S. rosenfurtii Nicora var. ***uruguayensis*** Pensiero

South America. See *Darwiniana* 37(1-2): 100, f. 37. 1999.

S. sagittifolia (A. Rich.) Walp. (*Cymbosetaria sagittifolia* (Hochst. ex A. Rich.) Schweick.; *Cymbosetaria sagittifolia* (A. Rich.) Schweick.; *Panicum barbigerum* Bertol.; *Panicum sagittifolium* (Hochst. ex A. Rich.) Steud.; *Pennisetum sagittifolium* Hochst. ex A. Rich.; *Setaria barbigerum* (Bertol.) Stapf; *Setaria sagittifolia* (Hochst. ex A. Rich.) Walp.)

Tropical Africa, Namibia, Swaziland, Sudan, Yemen, Arabia. Annual, tufted, open, slender, weak, erect or geniculate, a pioneer grass with rounded spikelets and characteristic sagittate leaves pseudopetiolate, leaf sheaths rounded at the top, basal sheaths slightly compressed, ligule membranous and thin, inflorescence of several spike-like racemes, open panicle narrowly oblong to ovate, unilateral branches arranged horizontally in whorls, spikelets with a single bristle, lower floret male or barren, lower glume 3-nerved, upper glume 5-nerved, lower lemma 5-nerved rugose, upper lemma gibbous keeled rugose, palatable, of little agricultural value, food for seed-eating birds, forms dense stands, grows in shady places often near rivers, riverine forests, in open to dense bushveld and in forests, mostly in sandy soils, savannah woodlands, stony and gravelly banks by wadis, see *Tentamen Florae Abyssinicae* ... 2: 379-380. 1850, *Memorie della Reale Accademia delle Scienze dell'Istituto di Bologna* 3: 250, t. 19, f. 1-2. 1851, *Annales Botanicae Systematicae* 3: 721. 1852, *Synopsis Plantarum Glumacearum* 1: 54. 1853 and *Flora of Tropical Africa* 9: 862. 1930, *Hooker's Icones Plantarum* 34: t. 3320. 1936.

in English: arrow grass

in South Africa: pylblaargras, eenjarige pylblaargras, pfeilblatthirse

S. scabrifolia (Nees) Kunth (*Chaetochloa globulifera* (Steud.) Kuhl.; *Chaetochloa lachnea* (Nees) Hitchc.; *Chaetochloa scabrifolia* (Nees) Kuhl.; *Panicum globuliferum* Steud.; *Panicum lachneum* Nees; *Panicum scabrifolium* Nees; *Paspalidium scabrifolium* S.T. Blake; *Setaria berroi* Hack.; *Setaria dura* R.A.W. Herrm.; *Setaria globulifera* (Steud.) Griseb.; *Setaria lachnea* (Nees) Kunth; *Setaria scabrifolia* (S.T. Blake) R.D. Webster, nom. illeg., non *Setaria scabrifolia* (Nees) Kunth; *Setaria setosa* var. *scabriculum* Hack.)

Brazil. Perennial, tufted, erect or geniculately ascending, weak, nodes conspicuous, forming large clumps, leaf blades linear scabrid acuminate, foliage glaucous, compact or branched panicle spiciform, spikelets ovate subtended by numerous stout antrorsely scabrid bristles, upper lemma rugose, on poor soils, forest edges, grasslands and bushlands, see *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 246, 248. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 154, 524. 1833, *Synopsis Plantarum Glumacearum* 1: 51. 1853, *Symbolae ad Floram Argentinam. Zweite* ... 307. 1879 and *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 14. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 75. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 313. 1909, *Beiträge zur Biologie der Pflanzen* 10(1): 43-44. 1910, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Comissão de Linhas Telegraficas* ..., *Botanica* 67(Bot. 11): 88. 1922, *Proceedings of the Royal Society of Queensland* 84(5): 69-70, t. 7, f. 4. 1973, *Revista Brasileira de Genética* 7(3): 535-548. 1984, *Sida* 16(3): 444. 1995, *Darwiniana* 37: 60. 1999.

S. scandens Schrad. (*Chaetochloa scandens* (Schrad.) Scribn.; *Chaetochloa scandens* (Schrad.) Scribn. & Merr., nom. illeg., non *Chaetochloa scandens* (Schrad.) Scribn.; *Chaetochloa scandens* (Schrad.) Kuhl., nom. illeg., non *Chaetochloa scandens* (Schrad.) Scribn.; *Chaetochloa verticillata* (L.) Scribn.; *Ichnanthus trinii* (Kunth) Pilg.; *Panicum rigidifolium* Trin., nom. illeg., non *Panicum rigidifolium* (Poir.) Kunth; *Panicum scandens* (Schrad.) Trinius; *Panicum scandens* var. *grandiflorum* Döll; *Panicum scandens* var. *longiseta* Döll; *Panicum scandens* var. *vulgare* Döll; *Panicum trinii* Kunth; *Pennisetum scandens* (Schrad.) Jacq.; *Pennisetum scandens* J. Jacq. ex Roem. & Schult.; *Setaria scandens* Schrad. ex Schult.; *Setaria scandens* f. *longiseta* (Döll) Hack.; *Setaria scandens* var. *sphacelata* Hack.; *Setaria trinii* Kunth)

Brazil, Bolivia, Mexico to Paraguay. Annual, caespitose, erect or geniculately ascending, branched, glabrous, nodes glabrous or hairy, ligule ciliate, scabrous and hairy flat leaf

blades narrowly lanceolate acuminate, dense spiciform panicle cylindrical with densely packed spikelets strongly gibbous, 1-3 basal bristles, upper lemma finely rugulose, leaves irritant to the skin, leaves used for treating eczema, weed species, growing among rocks, weedy areas, cerrado, along streams, caatinga, disturbed ground, grassy roadsides, fallow fields, see *Species Plantarum, Editio Secunda* 1: 82. 1762, *Mantissa* 2: 279. 1824, *De Graminibus Panicis* 166. 1826, *Species Graminum* 2(18): t. 214. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 88, 151. 1833, *Flora Brasiliensis* 2(2): 171. 1877, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897, *Enumeratio Plantarum Guatemalensium ...* 5: 91. Oquawkae 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 17. 1900, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 372. 1909, *Contribuciones a la Flora de Bolivia* 1: 66. 1910, *Comissão de Linhas Telegraficas ...*, *Botanica* 67(Bot. 11): 89. 1922, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 245. 1931.

in Brazil: capim mimoso de cacho, capim rabo de raposa, capim rabo de rato

in Mexico: zacate pegajoso

S. scheelei (Steud.) A.S. Hitchc. (*Chaetochloa polystachya* (Scheele) Scribn. & Merr.; *Chaetochloa scheelei* (Steud.) Hitchc.; *Panicum scheelei* Steud.; *Setaria polystachya* Scheele)

America. Ornamental bunchgrass, bristly seed-heads, good forage, see *Linnaea* 22(3): 339. 1849, *Synopsis Plantarum Glumacearum* 1: 51. 1853 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 37, f. 22. 1900, *Contributions from the United States National Herbarium* 22(3): 207. 1920, *Proceedings of the Biological Society of Washington* 41: 163. 1928.

in English: Southwestern bristle grass, Southwestern bristlegrass, Scheele's bristlegrass, bristlegrass

in Mexico: pajita abierta

S. setosa (Sw.) P. Beauv. (*Chaetochloa caudata* (Lam.) Scribn.; *Chaetochloa onurus* (Griseb.) Scribn. & Merr.; *Chaetochloa rariflora* (J.C. Mikan. ex Trinius) Hitchc. & Chase; *Chaetochloa setosa* (Sw.) Scribn.; *Chamaeraphis caudata* (Lam.) Britton; *Chamaeraphis caudata* var. *caudata*; *Chamaeraphis setosa* (Sw.) Kuntze; *Chamaeraphis setosa* var. *caudata* (Lam.) Kunze; *Panicum brachiatum* Poir.; *Panicum brachiatum* Bosc ex Spreng., nom. illeg., non *Panicum brachiatum* Poir.; *Panicum caudatum* Lam.; *Panicum dumetorum* A. Rich. ex Steud.; *Panicum paractaenoides* Trin.; *Panicum rariflorum* (J.C. Mikan ex Trin.) Makino & Nemoto, nom. illeg., non *Panicum rariflorum* Lam.; *Panicum restitutum* Steud.; *Panicum setosum* Sw.; *Panicum triquetrum* Willd. ex Döll; *Pennisetum swartzii* F. Muell.; *Setaria brachiata* (Poir.) Kunth; *Setaria caudata* (Lam.) Roem. & Schult.; *Setaria elongata* Spreng. ex

Schult.; *Setaria italica* var. *setosa* (Sw.) P. Beauv.; *Setaria onurus* Griseb.; *Setaria paractaenoides* (Trin.) Urb.; *Setaria rariflora* J.C. Mikan ex Trin.; *Setaria rariflora* J. Presl, nom. illeg., non *Setaria rariflora* J.C. Mikan ex Trin.; *Setaria setosa* f. *typica* Stuck.; *Setaria setosa* var. *aestiva* Hack. ex Bertoni; *Setaria setosa* var. *caudata* (Lam.) Griseb.; *Setaria setosa* var. *paractaenoides* (Trin.) Ekman, also spelled *paractaenioides*; *Setaria vaginata* Spreng.)

Brazil and West Indies, Bolivia, Venezuela, Colombia, Ecuador, Peru, Paraguay. Annual or short-lived perennial, loosely tufted, slender, erect or geniculately ascending, leaf blades linear not plicate at the base, leaves finely acuminate, spicate panicle dense or sparse, ovate spikelets sparse and irregularly spaced subtended by 1-2 antrorsely scabrid bristles, awns short or absent, upper lemma rugulose apiculate, found growing in open places on poor soils, secondary mixed dense forest, see *Nova Genera et Species Plantarum seu Prodrum* 22. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Essai d'une Nouvelle Agrostographie* 51, 170-171, 178. 1812, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 282. 1816, *Systema Vegetabilium* 2: 495. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 78. 1821, *Mantissa* 2: 280. 1824, *Systema Vegetabilium, editio decima sexta* 1: 321. 1825, *Systema Vegetabilium, editio decima sexta* 4 Cur. Post.: 33. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 248. 1829, *Révision des Graminées* 1: 47. 1829, *Reliquiae Haenkeanae* 1(4-5): 313. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 154. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 219. 1834, *Flore Générale de Belgique* 1: 586. 1853, *Synopsis Plantarum Glumacearum* 1: 49, 53. 1853, *Flora of the British West Indian Islands* 555. 1864, *Fragmenta Phytographiae Australiae* 8: 110. 1873, *Flora Brasiliensis* 2(2): 161. 1877, *Revisio Generum Plantarum* 2: 768-769. 1891, *Annals of the New York Academy of Sciences* 7: 264. 1893, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897, *Annual Report of the Missouri Botanical Garden* 10: 52. 1899 and *Anales del Museo Nacional de Buenos Aires* 11: 80. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 443-444. 1906, *Ergebnisse der Botanischen Expedition nach Südbrasilien* 1: 14. 1906, *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 79: 75. 1908, *Contributions from the United States National Herbarium* 18(7): 349. 1917, *Repertorium Specierum Novarum Regni Vegetabilis* 15: 98. 1917, *Anales Científicos Paraguayos* 2(2): 155. 1918, *Contr. U.S. Natl. Herb.* 22(3): 198. 1920, *Flora of Japan* 1475. 1925, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 22(9): 12. 1929, *Revista Brasileira de Genética* 7(3): 535-548. 1984, *Darwiniana* 37: 68. 1999.

in English: West indian bristle grass

S. setosa (Sw.) P. Beauv. var. *leiophylla* (Nees) Arechav. (*Panicum leiophyllum* Nees; *Panicum setosum* var. *leiophyllum* (Nees) Döll; *Setaria leiophylla* (Nees) Kunth)

Warm regions. See *Nova Genera et Species Plantarum seu Prodrumus* 22. 1788, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 249. 1829, *Flora Brasiliensis* 2(2): 163. 1877, *Anales del Museo Nacional de Montevideo* 1: 171. 1894.

S. setosa (Sw.) P. Beauv. var. *setosa* (*Chaetochloa setosa* (Sw.) Scribn.; *Panicum branchiatum* Poir.; *Panicum paractaenoides* Trin.; *Panicum setosum* Sw.; *Setaria paractaenoides* (Trin.) Urb.; *Setaria setosa* var. *paractaenoides* (Trin.) Ekman)

South America. See *Nova Genera et Species Plantarum seu Prodrumus* 22. 1788, *Nova Genera et Species Plantarum seu Prodrumus* 22. 1788, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Encyclopédie Méthodique, Botanique* 4: 282. 1816, *Nova Genera et Species Plantarum* 1: 109. 1815 [1816], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 219. 1834, *Flora Brasiliensis* 2(2): 157. 1877, *Anales del Museo Nacional de Montevideo* 1: 165. 1894, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 98. 1917, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 22(9): 12. 1929.

S. spartellum (S.T. Blake) R.D. Webster (*Panicum gracile* R. Br.; *Paspalidium gracile* (R. Br.) Hughes; *Paspalidium spartellum* S.T. Blake; *Setaria brownii* Desv.)

Australia, Queensland, New South Wales, Victoria. Perennial, tufted, erect and wiry, branched, knotted rootstock, extravaginal shoots, sheath glabrous, ligule a row of cilia, leaves narrowly linear and green, nodes pubescent, panicles loosely spike-like with several racemes, spikelets elliptic and sometimes subtended by a bristle, lower glume more or less acute and glabrous, lemmas acute and ovate to elliptic, lower lemma sterile and slightly constricted toward the base, second lemma more or less transversely rugose and as long as the spikelet, rocky sites, heavy soils, grazed, useful for soil conservation, see *Prodrumus Florae Novae Hollandiae* 190. 1810, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 187. 1831 and *Proceedings of the Royal Society of Queensland* 62: 97. 1952, *Sida* 16(3): 445. 1995.

in English: graceful panic grass, slender panic grass, slender panic, slender grass

S. sphacelata (Schumach.) Stapf & C.E. Hubb. (*Chaetochloa aurea* (Hochst. ex A. Braun) Hitchc.; *Chaetochloa imberbis* var. *penicillata* (Willd. ex Nees) Scribn. & Merr.; *Chaetochloa penicillata* (Willd. ex Nees) Kuhlm., nom. illeg., non *Chaetochloa penicillata* (Willd. ex Nees) Scribn.;

Chaetochloa penicillata (Willd. ex Nees) Scribn.; *Chamaeraphis glauca* var. *penicillata* (Willd. ex Nees) Kuntze; *Chamaeraphis penicillata* (Willd. ex Nees) J. Presl ex Stuck.; *Panicum chrysanthum* Steud.; *Panicum penicillatum* Willd. ex Nees, nom. illeg., non *Panicum penicillatum* Nees ex Trin.; *Panicum rudimentosum* Steud.; *Panicum sphacelatum* Schumach.; *Pennisetum aureum* (Hochst. ex A. Braun) A. Rich., nom. illeg., non *Pennisetum aureum* Link; *Pennisetum rudimentosum* Steud.; *Pennisetum sphacelatum* (Schumach.) T. Durand & Schinz; *Setaria alpestris* Peter; *Setaria anceps* Stapf; *Setaria anceps* var. *sericea* R.E. Massey ex Stapf, nom. illeg., non *Setaria anceps* var. *sericea* R.E. Massey; *Setaria angustifolia* Stapf; *Setaria aurea* Hochst. ex A. Braun; *Setaria aurea* var. *pallida* Stapf; *Setaria bussei* R.A.W. Herrm.; *Setaria chrysantha* (Steud.) Heynh.; *Setaria decipiens* de Wit, nom. illeg., non *Setaria decipiens* F.W. Schultz; *Setaria flabellata* Stapf; *Setaria glauca* (L.) P. Beauv.; *Setaria glauca* var. *aurea* (Hochst. ex A. Braun) K. Schum.; *Setaria glauca* var. *elongata* Kunth, nom. illeg., non *Setaria glauca* var. *elongata* (Pers.) Raddi; *Setaria glauca* var. *penicillata* (Willd. ex Nees) Griseb.; *Setaria gracilis* f. *penicillata* (Willd. ex Nees) Mez ex Ekman; *Setaria laxispica* Stapf; *Setaria neglecta* de Wit; *Setaria penicillata* (Willd. ex Nees) J. Presl; *Setaria perennis* Hack., nom. illeg., non *Setaria perennis* Hall ex Smyth; *Setaria rudimentosa* (Steud.) T. Durand & Schinz; *Setaria scalaris* Peter; *Setaria scandens* Schrad.; *Setaria scandens* var. *sphacelata* Hack.; *Setaria sphacelata* Stapf & C.E. Hubb. ex Moss; *Setaria sphacelata* (Schumach.) M.B. Moss ex Stapf & C.E. Hubb.; *Setaria sphacelata* (Schumach.) Stapf & C.E. Hubb. ex M.B. Moss; *Setaria sphacelata* subsp. *aquamontana* de Wit; *Setaria sphacelata* var. *anceps* (Stapf) Veldkamp; *Setaria sphacelata* var. *aurea* (Hochst. ex A. Braun) Clayton; *Setaria sphacelata* var. *sericea* (R.E. Massey ex Stapf) Clayton; *Setaria sphacelata* var. *stolonifera* de Wit; *Setaria stenantha* Stapf; *Setaria stolzii* Stapf) (from the Latin *sphacelatus*, *a*, *um* 'with brown or blackish speckling') (after the German (b. Berlin) botanist Walter Carl (Karl) Otto Busse, 1865-1933 (d. Rome), 1933 Fellow of the Linnean Society, cousin of Joseph Burtt Davy (1870-1940); see J. Lanjouw and F.A. Stafleu, *Index Herbariorum. Part II, Collectors A-D. Regnum Vegetabile* vol. 2. 1954; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 15. 1971; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19: 861. 1965; René Letouzey, "Les botanistes au Cameroun." *Flore du Cameroun*. 7: 20. Paris 1968; J.H. Barnhart, *Biographical notes upon botanists*. 1: 291. Boston 1965; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement III*. 281-284. 1995)

Tropical and South Africa, Yemen, Arabia. Polymorphic, perennial grass with colored bristles, densely to compactly

tufted, shortly rhizomatous, creeping, nodes glabrous, leaf sheaths compressed and keeled, basal sheaths fibrous with the age, leaves narrow, inflorescence an erect cylindrical spike-like panicle, spikelets subtended by 6-15 scabrous tawny to orange bristles, lower glume obtuse or acute, upper glume 5-nerved, lower lemma usually male and apiculate, upper lemma bisexual and rugose, variable species with numerous subspecies and varieties, useful grass drought resistant and tolerant of temporary waterlogging, forage grass, native pasture species, cultivated fodder, hay, silage crop, used for thatching, weed species with high oxalate content and can be toxic to stock, growing along roadsides, poor and shallow soil, stony hillsides, field borders, wooded savannahs, lowlands, along water courses, in dryish pastures, open secondary or disturbed areas, swamps and riverbanks, grassy banks, moist meadows, in loose black soil, in open savannah, limestone, see *Species Plantarum* 1: 56. 1753, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Nova Genera et Species Plantarum* 1: 109. 1815 [1816], *Mantissa* 2: 279. 1824, *Beskrivelse af Guineiske planter* 58-59. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 78-79. 1828, *Flora Brasiliensis seu Enumeratio Plantarum* 242. 1829, *Révision des Graminées* 2: 409, t. 118. 1830, *Reliquiae Haenkeanae* 1(4-5): 314. 1830, *Flora* 24(1): 276-277. 1841, *Alphabetische und Synonymische Aufzählung der Gewächse* 2: 661. 1846, *Tentamen Florae Abyssinicae ...*: 378. 1850, *Synopsis Plantarum Glumacearum* 1: 50-51. 1853 [1854 or 1855], *Flora of the British West Indian Islands* 554. 1864, *Revisio Generum Plantarum* 2: 767. 1891, *Conspectus Florae Africae* 5: 774, 784. 1894, *Bulletin de l'Herbier Boissier* 3(8): 379. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897, *Flora Capensis* 7: 425, 427. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 11, f. 2. 1900, *Die Flora der deutschen Schutzgebiete in der Südsee* 180. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 76. 1904, *Repertorium Specierum Novarum Regni Vegetabilis* 7: 372. 1909, *Beiträge zur Biologie der Pflanzen* 10(1): 46-47. 1910, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13: 33. 1913, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Comissão de Linhas Telegraficas ...*, *Botanica* 67(Bot. 11): 88. 1922, *Bulletin of Miscellaneous Information Kew* 1929(6): 195. 1929, *Fl. Sudan* 465. 1929, *Flora of Tropical Africa* 9(5): 793-798, 802-805. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 66, f. 33.2. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 67, f. 33.3. 1936, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17(1): 36, 49, 52-53. 1941, *Grasses of Burma ...* 364. 1960, *Austr. Journ. Bot.* 16: 539-544, 551-554. 1968, *Kew Bulletin* 33(3): 501-509. 1979, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 22: 12-22. 1987, *Aspects of Plant Sciences* 11: 467-473. 1989, *Blumea* 39(1-2): 382. 1994.

in English: South African pigeon grass, Rhodesian grass, setaria, African bristle grass, golden millet, golden Timothy, golden timothy grass, Rhodesian timothy grass, Kazungula grass

in Ghana: bazure

in Mali: kekumbilè, laki davangel, lakierande, mbihuri, ngoloké, ngolokumbilé, uluniku

in Nigeria: babaci, bisebadi, bishebadi, geron tsuntsu, geron tsutsu, luludo, pekun odo, pekunodo, wicco wandoho, wicho panduhi, wutsiyar birii

in Senegal: bara yuguné, burè bur, diem bu, ka kumbelé, mati a koy, ngolo ke, volvol

in Somalia: daras, daraas

in Upper Volta: bazurè, doronkayé, gimun, konsuga, kukuré dabilé, uanzonguri

in Yoruba: luludo, orisoso, pekun odo, pekunodo

S. sphacelata (Schumach.) Stapf & C.E. Hubb. var. *anceps* (Stapf) Veldkamp (*Setaria almaspicata* de Wit; *Setaria anceps* Stapf; *Setaria anceps* var. *sericea* Stapf; *Setaria anceps* var. *sericea* R.E. Massey ex Stapf, nom. illeg., non *Setaria anceps* var. *sericea* R.E. Massey; *Setaria cana* de Wit; *Setaria flabelliformis* de Wit; *Setaria sphacelata* subsp. *nodosa* de Wit; *Setaria sphacelata* subsp. *pyropea* de Wit; *Setaria sphacelata* var. *sericea* (R.E. Massey ex Stapf) Clayton; *Setaria sphacelata* var. *sericea* (Stapf) Clayton, nom. illeg.)

Benin, Ghana, Mali, Namibia, Uganda, Tanzania, South Africa. Perennial, coarse, tufted, lower culm nodes compressed, leaf sheath round, ligule a ring of hairs, orange bristles, spikelets subacute, useful grass grown for fodder, forage, palatable and nutritious when young, withstands heavy grazing, tolerant of poor sandy and stony soils, generally tolerates waterlogging over short periods, found in grassland, coastal lowlands, on wet soils, woodland and swampy places, vleis, usually on clay soils, see *Flora of Tropical Africa* 9(5): 793-798. 1930, *Kew Bulletin* 33(3): 506. 1979, *Blumea* 39(1-2): 373-384. 1994.

in English: setaria, golden Timothy, golden bristle grass

in southern Africa: goue-mannagras

S. sphacelata (Schumach.) Stapf & C.E. Hubb. var. *aurea* (Hochst. ex A. Braun) Clayton (*Chaetochloa aurea* (Hochst. ex A. Braun) Hitchc.; *Chaetochloa glauca* var. *aurea* (Hochst. ex A. Braun) Wight; *Panicum aureum* (Hochst. ex A. Braun) Nees, nom. illeg., non *Panicum aureum* (P. Beauv.) Trin.; *Panicum chrysanthum* Steud.; *Pennisetum aureum* (Hochst. ex A. Braun) A. Rich., nom. illeg., non *Pennisetum aureum* Link; *Setaria aurea* Hochst. ex A. Braun; *Setaria aurea* var. *fumigata* Peter; *Setaria aurea* var. *latifolia* Peter; *Setaria chrysantha* (Steud.) Heynh.; *Setaria glauca* var. *aurea* (Hochst. ex A. Braun) K. Schum.; *Setaria myosuroides* Peter; *Setaria trinervia* Stapf)

Tropical Africa, Yemen. Perennial, tall, densely caespitose, flattened basal leaf sheaths fibrous when old, see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Flora* 24(1): 276-277. 1841, *Linnaea* 16(2): 218. 1842, *Alphabetische und Synonymische Aufzählung der Gewächse* 2: 661. 1846, *Tentamen Florae Abyssinicae* seu enumeratio plantarum hucusque in plerisque Abyssiniae provinciis detectarum et praecipue a beatis doctoribus Richard, Martin Dillon et Antonio Petit (annis 1838-1843) lectarum auctore Achille Richard ... 2: 378. Parisiis 1850, *Synopsis Plantarum Glumacearum* 1: 50. 1853 and *Die Flora der deutschen Schutzgebiete in der Südsee* 180. 1901, *Contributions from the United States National Herbarium* 9: 223. 1905, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Flora of Tropical Africa* 9(5): 791, 795-798. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 65, t. 33, f. 1b. 1930, *Repert. Spec. Nov. Regni Veg., Beih.* 40: 232, 234. 1931, *Kew Bulletin* 33(3): 505. 1979.

in English: Rhodesian timothy grass

S. sphacelata (Schumach.) Stapf & C.E. Hubb. var. ***brevisetata*** (Schweinf.) Chiov.

Africa. See *Flora of Tropical Africa* 9(5): 795-798. 1930, *Malpighia* 343: 536. 1937.

S. sphacelata (Schumach.) Stapf & C.E. Hubb. var. ***sericea*** (R.E. Massey ex Stapf) Clayton (*Panicum polystachion* L.; *Panicum sphacelatum* Schumach.; *Pennisetum polystachion* (L.) Schult.; *Pennisetum sphacelatum* (Schumach.) T. Durand & Schinz; *Setaria almaspicata* de Wit; *Setaria anceps* Stapf ex Broun & R.E. Massey; *Setaria anceps* Stapf; *Setaria anceps* var. *sericea* R.E. Massey ex Stapf, nom. illeg., non *Setaria anceps* var. *sericea* R.E. Massey; *Setaria anceps* var. *sericea* R.E. Massey; *Setaria aurea* Hochst. ex A. Braun; *Setaria aurea* var. *palustris* Vanderyst; *Setaria cana* de Wit; *Setaria flabelliformis* de Wit; *Setaria planifolia* Stapf; *Setaria sphacelata* (Schumach.) M.B. Moss ex Stapf & C.E. Hubb.; *Setaria sphacelata* subsp. *nodosa* de Wit; *Setaria sphacelata* subsp. *pyropea* de Wit; *Setaria sphacelata* var. *anceps* (Stapf) Veldkamp; *Setaria tenuispica* Stapf & C.E. Hubb.)

Tropical Africa. Perennial, tufted, tussock or clumps forming, herbaceous, culms 4- to 10-noded, shortly rhizomatous, basal leaf sheaths flabellate to fan-shaped, panicle spike-like, bristles yellow to reddish, lower lemma rugose, forage, grows in riversides, along roadsides, open places, streams, sandy soil, moist bottomland, moist meadow, swampy areas, disturbed ground, bare soil, grasslands, hillsides, rocky hillsides, savannah woodlands, see *Systema Naturae, Editio Decima* 870. 1759, *Mantissa* 2: 146. 1824, *Beskrivelse af Guineiske planter* 58-59. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 78-79. 1828, *Flora* 24(1): 276-277. 1841, *Conspectus Florae Africae* 5: 784. 1894 and *Bulletin agricole du Congo Belge* 16: 683.

1925, *Sudan Grasses* 33. 1926, *Flora of the Sudan* 465. 1929, *Flora of Tropical Africa* 9(5): 793-798, 805. 1930, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17(1): 30, 40, 47, 48, 52. 1941, *Kew Bulletin* 33(3): 506. 1979, *International Organization of Plant Biosystematists Newsletter* 13: 20-21. 1989, *Blumea* 39: 382. 1994.

in Spanish: zacate

S. sphacelata (Schumach.) Stapf & C.E. Hubb. var. ***sphacelata*** (*Pennisetum rudimentosum* Steud.; *Setaria decipiens* de Wit, nom. illeg., non *Setaria decipiens* F.W. Schultz; *Setaria flabellata* Stapf; *Setaria flabellata* subsp. *flabellata*; *Setaria neglecta* de Wit; *Setaria perennis* Hack., nom. illeg., non *Setaria perennis* Hall ex Smyth; *Setaria rudimentosum* (Steud.) T. Durand & Schinz; *Setaria sphacelata* (Schumach.) M.B. Moss ex Stapf & C.E. Hubb.; *Setaria sphacelata* Stapf & C.E. Hubb. ex Moss; *Setaria sphacelata* subsp. *aquamontana* de Wit; *Setaria sphacelata* subsp. *sphacelata*; *Setaria sphacelata* var. *stolonifera* de Wit; *Setaria stenantha* Stapf)

Tropical East Africa. Perennial bunchgrass, tufted, robust, shortly rhizomatous, leaf sheath glabrous or hairy, ligule a ring of hairs, panicle spike-like, between the spikelets yellow cream to reddish brown bristles, wrinkled lemmas, palatable species, high grazing value, forage, cultivated fodder, silage crop, weed species, native pasture species, found in riverbanks, fallow fields, streamsides, on shallow sand, on well-drained sandy soil, meadows, along rivers, damp areas, stony slopes, sandy loams, see *Synopsis Plantarum Glumacearum* 1: 51. 1853, *Conspectus Florae Africae* 5: 774. 1894, *Bulletin de l'Herbier Boissier* 3(8): 379. 1895, *Flora Capensis* 7: 425. 1899 and *Bulletin of Miscellaneous Information Kew* 1929(6): 195. 1929, *Flora of Tropical Africa* 9(5): 795-798, 804. 1930, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17(1): 36, 49, 52-53. 1941.

in English: common bristle grass, golden millet, golden Timothy, landgrass, oldlandsgrass, Rhodesian Timothy grass, South African golden millet grass, South African pigeon grass, setaria, kazungula grass

in southern Africa: gewone setaria, katstertmannagras, gewone mannagras, mannagras, kanariegras, oulandgras; ikununu (Zulu)

in Zimbabwe: inguyu

S. sphacelata (Schumach.) Stapf & C.E. Hubb. var. ***splendida*** (Stapf) Clayton (*Setaria aurea* Hochst. ex A. Braun; *Setaria aurea* var. *kinsundensis* Vanderyst; *Setaria sphacelata* Stapf & C.E. Hubb. ex Moss; *Setaria splendida* Stapf)

East Africa, Uganda, Tanzania, South Africa, Sudan. Perennial, rare in the wild, tall, tufted, robust, very stout, reedlike, culms 6- to 16-noded, lower parts of the culms and the basal leaf-sheaths compressed and keeled, basal leaf sheaths often flabellate, panicle spike-like, bristles golden yellow, upper lemma rugose, said to be near sterile, useful cultivated grass commonly used for cut-and-carry systems, palatable,

fodder, forage, grows on sandy soils in areas with high rainfall, humid lowland tropics, see *Flora* 24(1): 276-277. 1841 and *Bulletin agricole du Congo Belge* 16: 683. 1925, *Bulletin of Miscellaneous Information Kew* 1929(6): 195. 1929, *Flora of Tropical Africa* 9: 799. 1930, *Kew Bulletin* 33(3): 506. 1979, *Flora of Tropical East Africa* 451-898. 1982.

in English: splendid grass, broadleaf setaria, splendida setaria, splendida, giant setaria

in Malaysia: sekoi

in the Philippines: bunga-bunga

in Thailand: ya taiwan

in Vietnam: co duôi chó, co ro'm

S. sphacelata (Schumach.) Stapf & C.E. Hubb. var. ***torta*** (Stapf) Clayton (*Setaria flabellata* subsp. *natalensis* de Wit; *Setaria homblei* De Willd.; *Setaria sphacelata* Stapf & C.E. Hubb. ex Moss; *Setaria torta* Stapf)

Tropical Africa, South Africa, Tanzania. Perennial, tufted, erect, shortly rhizomatous, creeping rhizome, culms unbranched, sometimes rooting at the lower nodes, leaves mostly basal, basal sheaths keeled, ligule a ring of hairs, leaves keeled, panicle spike-like, between the spikelets yellow to purple scabrid bristles, lemma rugose, natural pasture, a palatable grass found in open bushveld, wet meadows, open woods, moist or well-drained soils, along roadsides, grasslands, slopes, overgrazed veld, in disturbed areas, see *Flora Capensis* 7: 425. 1899 and *Annales de la Société Scientifique de Bruxelles* 39(3): 134. 1920, *Flora of Tropical Africa* 9(5): 795-798, 801. 1930, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17: 38. 1941, *Kew Bulletin* 33(3): 506. 1979.

in English: small creeping foxtail, creeping bristle grass, twisted leaf bristle grass

in South Africa: buffelgras, kleinkruipegras, kruipmannagras, kruipgras, mannagras

S. stolonifera Boldrini

Brazil. See *Boletín de la Sociedad Argentina de Botánica* 16(3): 228. 1975.

S. submacrostachya Luces (*Panicum lachneum* Nees; *Setaria lachnea* (Nees) Kunth)

Venezuela. See *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 248-249. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 154. 1833 and *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 28-29, f. 19. 1953.

S. sulcata Raddi (*Agrostis flabellata* Salzm. ex Steud.; *Chaetochloa crus-ardeae* (Willd. ex Nees) Kuhl.; *Chaetochloa poiretiana* (Schult.) Hitchc.; *Chaetochloa speciosa* (A. Braun) Kuhl.; *Chaetochloa sulcata* (Aubl.) Hitchc.; *Chamaeraphis crus-ardeae* (Willd. ex Nees) Kuntze; *Chamaeraphis jurgensenii* (E. Fourn.) Kuntze; *Chamaeraphis speciosa* Kuntze; *Chamaeraphis sulcata* (Aubl.) Kuntze; *Chamaeraphis sulcata* (Raddi) Beal, nom. illeg., non *Chamaeraphis sulcata* (Aubl.) Kuntze; *Panicum crus-ardeae* Willd. ex Nees; *Panicum elongatum* Salisb.; *Panicum elongatum* Pursh, nom. illeg., non *Panicum elongatum* Salisb.; *Panicum elongatum* Poir., nom. illeg., non *Panicum elongatum* Salisb.; *Panicum flabellatum* Steud.; *Panicum jurgensenii* (E. Fourn.) Scribn. & Merr.; *Panicum longepaniculatum* Benoist; *Panicum poiretianum* Schult.; *Panicum speciosum* Nees ex Trin., nom. illeg., non *Panicum speciosum* Walter; *Panicum speciosum* A. Braun; *Panicum sulcatum* Aubl.; *Panicum sulcatum* Bertol., nom. illeg., non *Panicum sulcatum* Aubl.; *Setaria crus-ardeae* (Willd. ex Nees) Kunth; *Setaria jurgensenii* E. Fourn.; *Setaria poiretiana* (Schult.) Kunth; *Setaria speciosa* (A. Braun) Kuhl.; *Setaria speciosa* (Kuntze) Kuhl.; *Setaria speciosa* (Nees ex Trin.) Kuhl.; *Setaria sulcata* (Aubl.) A. Camus, nom. illeg., non *Setaria sulcata* Raddi; *Setaria sulcata* (Aubl.) Desv., nom. illeg., non *Setaria sulcata* Raddi; *Setaria sulcata* Chev., nom. illeg., non *Setaria sulcata* Raddi; *Setaria vulpisetia* (Lam.) Roem. & Schult.)

Brazil. Perennial, rhizomatous, caespitose, scabrous leaf blades lanceolate acute to acuminate, leaves attenuate to pseudopetiolate, panicle loosely spiciform, spikelets asymmetrically ovate, lower lemma subcoriaceous, coriaceous upper lemma granulate or smooth, along streams, roadsides, forests, shade, see *Histoire des plantes de la Guiane Française* 1: 50. 1775, *Prodr. Stirp. Chap. Allerton* 18. 1796, *Encyclopédie Méthodique, Botanique* 4: 735. 1798, *Flora Americae Septentrionalis; or, ...* 1: 69. 1814, *Encyclopédie Méthodique, Botanique ... Supplément* 4: 278. 1816, *Systema Vegetabilium* 2: 495. 1817, *Opuscoli Scientifici* 4: 230. 1820, *Agrostografia Brasiliensis* 50. 1823, *Mantissa* 2: 229. 1824, *De Graminibus Paniceis* 169. 1826, *Révision des Graminées* 1: 47. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 253. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 184. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 155. 1833, *Synopsis Plantarum Glumacearum* 1: 53. 1853, *Mexicanas Plantas* 2: 42. 1886, *Revisio Generum Plantarum* 2: 770. 1891, *Grasses of North America for Farmers and Students* 2: 158. 1896 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 40. 1900, *Contr. U.S. Natl. Herb.* 15: 104. 1910, *Contributions from the United States National Herbarium* 17(3): 260. 1913, *Mission Chari-Lac Tchad 1902-1904. L'Afrique Centrale Française.* 367. 1913, *Contributions from the United States National Herbarium* 22(3): 159. 1920, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 69, 88, 100. 1922, *Bulletin du Muséum d'Histoire Naturelle* 30: 108. 1924, *Bulletin agricole du Congo Belge* 16: 682. 1925, *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 22: 277. 1950, *Revista Brasileira de Genética* 7(3): 535-548. 1984,

Boletín de la Sociedad Argentina de Botánica 29(1-2): 60. 1993, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

S. surgens Stapf (*Setaria parviflora* (Poir.) Kerguélen)

New Guinea, Australia, New South Wales, Queensland, Northern Territory. Annual, geniculate or erect, tufted, slender, sheath more or less scabrous or smooth, leaf blades more or less scabrous or smooth, ligule very short and densely ciliate, panicle spike-like cylindrical, spikelets subtended by scabrous bristles, lower glume acute, upper glume apiculate, lower lemma sterile, upper lemma bisexual and rugose, grows on sandy soils, see *Encyclopédie Méthodique, Botanique* 6: 52. 1804 and *Bulletin of Miscellaneous Information Kew* 1909: 265. 1909, *Lejeunia*; *Revue de Botanique. Nouvelle série* 120: 161. 1987, *Blumea* 39: 373-384. 1994.

S. tenacissima Schrad. ex Schult. (*Chaetochloa tenacissima* (Schrad.) A.S. Hitchc. & Chase; *Chaetochloa tenacissima* (Schrad. ex Schult.) Hitchc. & Chase; *Panicum scandens* var. *longiseta* Döll; *Panicum tenacissimum* (Schrad. ex Schult.) Nees; *Setaria scandens* f. *longiseta* (Döll) Hack.)

Brazil, Mexico, Venezuela. Annual, herbaceous, caespitose, erect, sprawling, branched, glabrous, ligule densely ciliate, leaf blades linear acuminate hairy, dense inflorescence cylindrical and hispid, purplish spikelets elliptic and gibbous, glumes nerved, lower palea absent, upper lemma rugose, growing along roadsides, see *Mantissa* 2: 279. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 238. 1829, *Flora Brasiliensis* 2(2): 171. 1877 and *Contribuciones a la Flora de Bolivia* 1: 66. 1910, *Contributions from the United States National Herbarium* 18(7): 352. 1917, *Cuscatlania* 1(6): 1-29. 1991.

in English: tropical bristle grass

S. tenax (Rich.) Desv. (*Chaetochloa impressa* (Nees) Hitchc. & Chase; *Chaetochloa salzmänniana* Hitchc.; *Chaetochloa semirugosa* (Nees) Kuhlm.; *Chaetochloa tenax* (Rich.) Hitchc.; *Chamaeraphis setosa* f. *biconvexa* (Griseb.) Kuntze; *Panicum amphibolum* Steud.; *Panicum impressum* Nees; *Panicum intermedium* Salzm. ex Steud., nom. illeg., non *Panicum intermedium* Vahl ex Hornem.; *Panicum semirugosum* Nees; *Panicum setosum* Trin. ex Döll, nom. illeg., non *Panicum setosum* Sw.; *Panicum sphaerocarpon* Salzm. ex Steud., nom. illeg., non *Panicum sphaerocarpon* Elliott; *Panicum tenax* Rich.; *Setaria biconvexa* Griseb.; *Setaria impressa* (Nees) Kunth; *Setaria salzmänniana* (Salzm. ex Steud.) Kuhlm.; *Setaria semirugosa* (Nees) Kunth; *Setaria sphaerocarpa* (Salzm. ex Steud.) F.T. Hubb.)

Mexico to Brazil, Guatemala, Honduras, Peru, Argentina, Bolivia, Venezuela, Paraguay. Perennial, caespitose, erect or geniculately ascending, glabrous, ligule ciliate, leaf blades linear acuminate scabrous, shortly rhizomatous, dense inflorescence cylindrical or narrowly oblong to pyramidal with short ascending branches, spikelets globose-

ovate subtended by 1-3 bristles retrorsely and antrorsely scabrid, lower glume 3- to 5-nerved, upper glume 7-9-nerved, lower palea present, upper lemma rugulose apiculate, found in disturbed places, forest, savannah, light shade, see *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792, *Révision des Graminées* 1: 47. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 243, 247. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 182. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 154. 1833, *Synopsis Plantarum Glumacearum* 1: 51. 1853, *Flora of the British West Indian Islands* 555. 1864, *Flora Brasiliensis* 2(2): 169. 1877, *Revisio Generum Plantarum* 2: 769. 1891 and *Contributions from the United States National Herbarium* 17(3): 265. 1913, *Contributions from the United States National Herbarium* 18(7): 350. 1917, *Contributions from the Gray Herbarium of Harvard University* 52: 60-61. 1917, *Contributions from the United States National Herbarium* 22(3): 176. 1920, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 88. 1922, *Madroño* 44(3): 299. 1997, *Darwiniana* 37: 109. 1999.

S. tenax (Rich.) Desv. var. ***antrorsa*** Rominger (*Setaria grisebachii* E. Fourn.)

Mexico. Annual, herbaceous, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 182. 1831, *Mexicanas Plantas* 2: 45. 1886, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897 and *Contr. U.S. Natl. Herb.* 22: 182. 1920, *Illinois Biological Monographs* 29: 44. 1962, *Madroño* 44(3): 300. 1997.

S. tenax (Rich.) Desv. var. ***tenax*** (*Chaetochloa tenax* (Rich.) Hitchc.; *Panicum tenax* Rich.)

French Guiana. See *Actes de la Société d'Histoire Naturelle de Paris* 1: 106. 1792 and *Contributions from the United States National Herbarium* 22(3): 176. 1920, *Madroño* 44(3): 299. 1997.

Local name: zacate

S. tenuiseta de Wit (*Acrochaete pseudaristata* Peter; *Setaria pseudaristata* (Peter) Pilg.)

Africa, South Africa. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 203, Anhang 54, t. 28, f. 2. 1930, *Die Natürlichen Pflanzenfamilien* edition 2 14e: 72. 1940, *Bulletin du Jardin Botanique de Buitenzorg, sér.* 3, 17(1): 15,17. 1941.

S. texana W.H.P. Emery

U.S., Texas. Perennial, tufted, clumped, erect, leaves dark green, flowering spikelets greenish to greenish yellow, adapted to shaded conditions, grows in sands and sandy loams, loams and clay, well drained, open grassy areas, semiarid climate, forage for grazing wildlife, see *Bulletin of the Torrey Botanical Club* 84: 97. 1957.

in English: Texas bristle grass, Texas bristlegrass, bristlegrass, Plains bristlegrass

S. trinervia Stapf (*Setaria sphacelata* var. *aurea* (Hochst. ex A. Braun) Clayton)

Africa. See *Flora* 24(1): 276-277. 1841 and *Flora of Tropical Africa* 9: 791, 795-798. 1930, *Kew Bulletin* 33(3): 505. 1979.

S. ustilata de Wit (*Setaria pumila* (Poir.) Roem. & Schult.)

South Africa, Zambia, Botswana. Annual, tufted, erect or geniculate, green, leaves smooth, panicle spike-like ovate, upper lemma rugose, shade species, under trees and tall bushes, moist to drier areas, bushveld areas, see *Encyclopédie Méthodique. Botanique ... Supplément* 4: 273. 1816, *Systema Vegetabilium* 2: 891. 1817 and *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17(1): 59. 1941.

S. utowanaea (Scribn.) Pilger (*Panicum sintenisii* Nash; *Panicum utowanaeum* Scribn.; *Paspalidium utowanaeum* (Scribn.) Davidse & R.W. Pohl) (Utowana Lake, Hamilton co., northeastern central New York, in the Adirondacks)

South America. Caespitose, on slopes, dry hillsides, woods, see *Publications of the Field Columbian Museum, Botanical Series* 2(1): 25, t. 57. 1900, *Bulletin of the Torrey Botanical Club* 30(7): 382. 1903, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Novon* 2(2): 106. 1992, José F. Pensiero, "The South American species of *Setaria* (Poaceae, Paniceae)." *Darwiniana* 37(1-2): 37-151. 1999.

in English: the Caribbean bristle grass

S. utowanaea (Scribn.) Pilger var. *ophiticola* (Hitchc. & Ekman) W.E. Fox (*Panicum ophiticola* Hitchc. & Ekman; *Paspalidium ophiticola* (Hitchc. & Ekman) Davidse & R.W. Pohl; *Setaria ophiticola* (Hitchc. & Ekman) León)

West Indies. See *Manual of the Grasses of the West Indies* 293, f. 282. 1936, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 72. 1940, *Flora de Cuba* 1: 163. 1946, *Novon* 2(2): 106. 1992, *Sida* 18(4): 1037-1047. 1999.

S. utowanaea (Scribn.) Pilger var. *subtransiens* (Hitchc. & Ekman) W.E. Fox (*Paspalidium subtransiens* (Hitchc. & Ekman) Davidse & R.W. Pohl; *Setaria subtransiens* Hitchc. & Ekman)

West Indies. See *Manual of the Grasses of the West Indies* 351, f. 323. 1936, *Novon* 2(2): 106. 1992, *Sida* 18(4): 1043. 1999.

S. utowanaea (Scribn.) Pilger var. *utowanaea*

West Indies.

S. vaginata Spreng. (*Chaetochloa caespitosa* (Hack. & Arechav.) Speg.; *Chaetochloa onurus* (Willd. ex Trin.) Scribn. & Merr.; *Panicum onurus* Willd. ex Trin.; *Panicum setosum* Sw.; *Panicum utriculatum* Steud.; *Panicum vaginatum* Nees; *Setaria caespitosa* Hack. & Arechav.; *Setaria onurus* (Willd. ex Trin.) Griseb.; *Setaria rariflora* J.C.

Mikan ex Trin.; *Setaria setosa* (Sw.) P. Beauv.; *Setaria vaginata* var. *bonariensis* Nicora)

Brazil. See *Nova Genera et Species Plantarum seu Prodrromus* 22. 1788, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 78. 1821, *Systema Vegetabilium, editio decima sexta* 4 Cur. Post.: 33. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 156-157. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 226. 1834, *Nomenclator Botanicus. Editio secunda* 2: 264. 1841, *Flora of the British West Indian Islands* 555. 1864, *Anales del Museo Nacional de Montevideo* 1: 166, f. 15. 1894 and *U.S. Department of Agriculture. Division of Botany. Bulletin* 21: 27. 1900, *Contribucion al Estudio de la Flora del Tandil* 52. 1901, *Flora de la Provincia de Buenos Aires* 4(2): 459. 1970, *Revista Brasileira de Genética* 7(3): 535-548. 1984.

S. vaginata Spreng. var. *bonariensis* Nicora

Argentina. See *Flora de la Provincia de Buenos Aires* 4(2): 459. 1970.

S. vaginata Spreng. var. *tandilensis* Nicora

Argentina. See *Flora de la Provincia de Buenos Aires* 4(2): 460. 1970.

S. vaginata Spreng. var. *vaginata* (*Chaetochloa onurus* (Willd. ex Trin.) Scribn. & Merr.; *Panicum caudatum* Lam.; *Panicum onurus* Willd. ex Trin.)

Argentina. See *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 251. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 226. 1834 and *U.S. Department of Agriculture. Division of Botany. Bulletin* 21: 27. 1900, *Darwiniana* 37: 104. 1999.

S. variifolia (Swallen) Davidse (*Panicum variifolium* Swallen; *Setaria variifolium* (Swallen) Beetle, nom. illeg., non *Setaria variifolia* (Swallen) Davidse)

South America, Mexico. See *Publications of the Carnegie Institution of Washington* 436: 345, f. 7. 1934, *Annals of the Missouri Botanical Garden* 68(1): 226. 1981, *Phytologia* 54(1): 4. 1983.

S. verticillata (L.) P. Beauv. (*Chaetochloa brevispica* Scribn. & Merr.; *Chaetochloa verticillata* (L.) Scribn.; *Chaetochloa verticillata* var. *brevisetata* (Mutel) Farw.; *Chamaeraphis aspera* (K.D. Koenig) Nees; *Chamaeraphis italica* (L.) Kuntze; *Chamaeraphis italica* var. *verticillata* (L.) Kuntze; *Chamaeraphis verticillata* (L.) Porter; *Ixophorus verticillatus* (L.) Nash; *Panicum adhaerens* Forssk.; *Panicum aparine* Steud.; *Panicum asperum* Lam.; *Panicum asperum* K.D. Koenig, nom. illeg., non *Panicum asperum* Lam.; *Panicum asperum* Link, nom. illeg., non *Panicum*

asperum Lam.; *Panicum asperum* Steud., nom. illeg., non *Panicum asperum* Lam.; *Panicum respiciens* (Hochst. ex A. Rich.) Hochst. ex Steud.; *Panicum respiciens* Hochst. ex A. Rich.; *Panicum rottleri* (Spreng.) Nees, nom. illeg., non *Panicum rottleri* Kunth; *Panicum verticillatum* L.; *Panicum verticillatum* var. *aparine* (Steud.) Asch. & Schweinf.; *Panicum verticillatum* var. *brevisetum* Mutel; *Pennisetum asperum* Schult.; *Pennisetum respiciens* Hochst. ex A. Rich.; *Pennisetum verticillatum* (L.) R. Br.; *Pseudoraphis aspera* (K.D. Koenig) Pilg.; *Setaria adhaerens* (Forssk.) Chiov.; *Setaria adhaerens* subsp. *verticillata* (L.) Belo-Corr.; *Setaria adhaerens* var. *verticillata* (L.) Belo-Corr.; *Setaria aparine* (Steud.) Chiov.; *Setaria brevispica* (Scribn. & Merr.) K. Schum.; *Setaria carnei* A.S. Hitchc.; *Setaria leiantha* Hack.; *Setaria leiantha* f. *subhirsuta* Hack.; *Setaria nubica* Link; *Setaria pratensis* Phil.; *Setaria respiciens* (Hochst. ex A. Rich.) Walp.; *Setaria rottleri* Spreng.; *Setaria verticillata* subsp. *aparine* (Steud.) T. Durand & Schinz; *Setaria verticillata* var. *aparine* (Steud.) Asch. & Schweinf.; *Setaria verticillata* var. *respiciens* (Walp.) K. Schum.; *Setaria verticillata* var. *respiciens* A. Braun; *Setaria verticillata* var. *verticillata*; *Setaria viridis* (L.) P. Beauv.; *Setaria viridis* var. *insularis* A. Terracc.; *Setariopsis verticillata* (L.) Samp.)

Origin paleotropics. Annual, green, weak, tender, sticky habit, scabrid, loosely or narrowly tufted, culms erect or usually decumbent at the base, roots fibrous, sometimes developing roots from the lower nodes, leaf blade expanded, sheath compressed or keeled, ligule densely ciliate or a fringe of short hairs, leaves linear and usually sparsely pilose, inflorescence a cylindrical spike-like panicle with spikelets densely clustered on short branches, panicle often drooping, 1 bristle at the base of each spikelet, bristles recurved and barbed, lower glume obtuse, lower lemma sterile, upper fertile lemma smooth or finely rugose, nitrogen-loving pioneer, useful grass highly variable and reproducing by seeds, medicinal, leaves and inflorescences used for diarrhoea, one of the weeds of coffee plantations and many crops, palatable, low grazing value, grazed by cattle when young, suitable for hay-making, seeds eaten by small birds, grain used for an alcoholic drink, a source of food and vegetable salt, inflorescence sticking, seed can attach itself to clothing and to animals, usually found in places seasonally wet or irrigated, in gardens and greenhouses, grasslands, shrublands, irrigation canals, in open dry areas, orchards, moist shaded ground, along stream banks, arable land and waste places, as well as in disturbed and cultivated areas, on road- and trailsides, on nitrogen-rich disturbed soils, irrigation ditches, wadi beds, close to and confused with *Setaria viridis* (L.) P. Beauv. and *Setaria adhaerens* (Forssk.) Chiov., see *Species Plantarum, Editio Secunda* 1: 82. 1762, *Flora Aegyptiaco-Arabica* 20. 1775, *Flore Française* 3: 577. 1778, *Der Naturforscher* 23(1): 209. 1788, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812,

Enumeratio Plantarum Horti Regii Berolinensis Altera 1: 75. 1821, *A Natural Arrangement of British Plants* 2: 156. 1821, *Mantissa* 2: 149. 1824, *Systema Vegetabilium, editio decima sexta* 1: 304. 1825, *Hortus Regius Botanicus Berolinensis* 1: 220. 1827, *Florae Siculae Prodromus* 80. 1827, *Flore Française* 4: 19. 1837, *Florae Africae Australioris Illustrationes Monographicae* 53. 1841, *Flore de Lorraine* 3: 127. 1844, *Flora Palermitana* 1: 36. 1845, *A Numerical List of Dried Specimens* 8679. 1849, *Tentamen Florae Abyssinicae ...* 2: 379. 1850, *Annales Botanicae Systematicae* 3: 721. 1852, *Synopsis Plantarum Glumacearum* 1: 49, 52. 1853 [or 1854], *Österreichische Botanische Zeitschrift* 9: 14. 1859, *Enum. Pl. Zeyl.* 361. 1864, *Enumeratio Plantarum Transsilvaniae* 723. 1866, *Taschenbuch für den Schweizerischen Botaniker* 835. 1869, *Cat. Sem. Hort. Berol.* 7. 1871, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 27: 457. 1878, *Mémoires de l'Institut Égyptien* 2: 161. 1887, *Illustration de la Flore d'Égypte* 161. 1889, *Revisio Generum Plantarum* 2: 767-768. 1891, *Bulletin of the Torrey Botanical Club* 20: 196. 1893, *Annali di Botanica* (Roma) 5: 93. 1894, *Conspectus Florae Africae* 5: 775. 1894, *Bulletin of the Torrey Botanical Club* 22(10): 422. 1895, *Die Pflanzenwelt Ost-Afrikas* 5C: 105. 1895, *Anales de la Universidad de Chile* 93: 715. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897, *Synopsis der mitteleuropäischen Flora* 2: 75. 1899 and *Handb. Fl. Ceylon* 5: 163. 1900, *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 15, f. 5. 1900, *Botanischer Jahresbericht* 28(1): 417. 1902, *Anales del Museo Nacional de Buenos Aires* 11: 78. 1904, *Anales del Museo Nacional de Buenos Aires* 13: 441. 1906, *Illustrierte Flora von Mittel-Europa* 1: 192. 1906, *Nuovo Giornale Botanico Italiano* n. ser. 17: 44. 1910, *Prodrome de la Flore Corse* 1: 67. 1910, *Nuovo Giornale Botanico Italiano* 19: 419. 1912, *Herbário Português* 4. 1914, *Nuovo Giornale Botanico Italiano* 26: 77. 1919, *Papers of the Michigan Academy of Science, Arts and Letters* 1: 86. 1923, *Proceedings of the Linnean Society of New South Wales* 52: 185. 1927, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10: 210. 1928, *Repert. Sp. Nov. Fedde. Beih.* 40: 229. 1931, *Blumea* 3: 415. 1940, *Flore de l'Afrique du Nord* 1: 322. 1952, *Flore Analytique et Synoptique de la Tunisie* 64. 1954, *Grasses of Ceylon* 124. 1956, *Grasses of Burma ...* 365. 1960, *Le Naturaliste Canadien* 94(4): 527. 1967, *Boletín de la Sociedad Argentina de Botánica* 12: 373-382. 1968, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 348-351, 418-429. 1969, *Journal of Japanese Botany* 46(3): 65. 1971, *Flora Republicii Socialiste Romania* 12: 77. 1972, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Grasses of Japan and its Neighboring Regions* 529. 1987, *Annali di Botanica* 45: 75-102. 1987, *Aspects of Plant Sciences* 11: 467-473, 483-493. 1989, *Boletim da Sociedade Broteriana, ser. 2* 62: 289. 1989, *Revista de Biologia (Lis-*

bon) 62: 289. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Phytologia* 68: 276-292. 1990, *Blumea* 39: 383. 1994, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: bur, bur grass, rough bristle grass, burr bristle grass, bur bristle grass, bur bristlegrass, bur foxtail grass, bur foxtail, hooked bristlegrass, clinging bristle grass, sticky bristle grass, sticky grass, bristly foxtail, foxtail grass, cat's tail, lovegrass, whorled pigeon grass

in French: sétiaire verticillée

in India: bachita, bandri, bar chitta, barchitta, bardanni, barti, bir kauni, chak-karnitta-gadi, chigirinta gaddi, chilaya, chikilinta gaddi, chicklenta, chikna bara, chir, chira, chirchira, chirchitta, dora-byara, dorayra, gadar puchha, jal-jatang-jhara, kulta, kutta, kutta bari, lapti, sanna antupurale hullu

in Thailand: yaa haang krarok, ya hang krarok, ya khai, yaa khaai, ya khamong, yaa khamong, yaa maa tit keng, ya ma tit keng

in Mexico: be-lagacuti, belaga ciiti, guixi ciiti, guixi-ziti, pe-lagacijti, pelaga cijti, zacate pegajoso

in Arabic: amlisego, lesseig, qamh el-far, saera erra, sara erra

in East Africa: anaga, ekibebia, etanuka, kamakimaki (Padhola), kiamata, malamata, maramata, riririria

in Mali: kebbe tioffé, nornaba, sé norna

in Mauritania: lesseig

in Morocco: boucbila, senboul-el-kelb

in Niger: wuré dallam

in Nigeria: amlisego, dankadafi, eemò eye, madaddafi, nyakkabre

in Senegal: nadag rev, nambag, ngok o mbep, se norna, sé norna

in Somalia: marabob, degdegle, degh-deghle, dheg-dhegle

in South Africa: boheme-ba-lipoli, katstertgras, klawergras, kleefgras, klettgras, klitsgras, klitsborselgras, klitskatstert, klitssetaria, siergras, steekgras

in Sudan: lussaig

in Upper Volta: gadiané, hudel, khine messeni, suntu

in Yoruba: eemo eye

in Hawaii: mau'u pilipili

S. verticillata (L.) P. Beauv. var. *ambigua* (Guss.) Parl. (*Chaetochloa ambigua* (Guss.) Scribn. & Merr.; *Chamaeraphis italica* var. *ambigua* (Guss.) Kuntze; *Panicum ambiguum* (Guss.) Hausskn., nom. illeg., non *Panicum ambiguum* Trin.; *Panicum verticillatum* var. *ambiguum* Guss.; *Setaria ambigua* (Guss.) Guss., nom. illeg., non *Setaria ambigua* Mérat; *Setaria verticilliformis* Dumort.; *Setaria x verticilliformis* Dumort.; *Setaria viridis* var. *ambigua* (Guss.) Coss. & Durieu; *Setaria viridis* var.

purpurascens Peck ex Dudley, nom. illeg., non *Setaria viridis* var. *purpurascens* Peterm.)

Europe, Italy. See *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Florae Siculae Prodromus* 80. 1827, *Florula belgica, opera majoris prodromus, auctore ...* 150. 1827, *Florae Siculae Synopsis* 1: 114. 1843, *Flora Palermitana* 1: 36. 1845, *Exploration Scientifique de l'Algérie* 2: 36. 1855 [or 1854], *Österreichische Botanische Zeitschrift* 25: 345. 1875, *Cornell University Science Bulletin* 2: 122. 1886, *Revisio Generum Plantarum* 2: 767-768. 1891 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 18, f. 7. 1900.

S. verticilliformis Dumort. (*Chaetochloa ambigua* (Guss.) Scribn. & Merr.; *Chamaeraphis italica* var. *ambigua* (Guss.) Kuntze; *Panicum ambiguum* (Guss.) Hausskn., nom. illeg., non *Panicum ambiguum* Trin.; *Panicum verticillatum* var. *ambiguum* Guss.; *Setaria adhaerens* var. *ambigua* (Guss.) Belo-Corr.; *Setaria ambigua* (Guss.) Guss., nom. illeg., non *Setaria ambigua* Mérat; *Setaria decipiens* Schimp. ex Nyman; *Setaria gussonei* Kerguelen; *Setaria verticillata* (L.) P. Beauv.; *Setaria verticillata* f. *ambigua* (Guss.) B. Boivin; *Setaria verticillata* f. *ambigua* (Guss.) T. Koyama, nom. illeg., non *Setaria verticillata* f. *ambigua* (Guss.) B. Boivin; *Setaria verticillata* f. *verticillata*; *Setaria verticillata* subsp. *ambigua* (Guss.) Trab. ex Cuenod; *Setaria verticillata* var. *ambigua* (Guss.) Parl.; *Setaria x verticilliformis* Dumort.; *Setaria viridis* var. *ambigua* (Guss.) Coss. & Durieu; *Setaria viridis* var. *purpurascens* Peck ex Dudley, nom. illeg., non *Setaria viridis* var. *purpurascens* Peterm.)

Warm regions. See *Essai d'une Nouvelle Agrostographie* 51, 171, 178. 1812, *Florula belgica, opera majoris prodromus, auctore ...* 150. 1827, *Florae Siculae Prodromus* 80. 1827, *Florae Siculae Synopsis* 1: 114. 1843, *Flora Palermitana* 1: 36. 1845, *Exploration Scientifique de l'Algérie* 2: 36. 1855 [or 1854], *Österreichische Botanische Zeitschrift* 25: 345. 1875, *Cornell University Science Bulletin* 2: 122. 1886, *Revisio Generum Plantarum* 2: 767-768. 1891 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 18, f. 7. 1900, *Flore Analytique et Synoptique de la Tunisie* 64. 1954, *Le Naturaliste Canadien* 94(4): 527. 1967, *Journal of Japanese Botany* 46(3): 65. 1971, *Lejeunia* 75: 305. 1975, *Boletim da Sociedade Broteriana, ser. 2* 62: 289. 1989.

S. villiglumis Hicken (*Setaria mendocina* Phil.)

Argentina. See *Anales de la Universidad de Chile* 93: 715. 1896 and *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 2: 4. 1915, *Darwiniana* 37: 78. 1999.

S. villosissima (Scribn. & Merr.) K. Schum. (*Chaetochloa villosissima* Scribn. & Merr.)

U.S. Found along roadsides, see *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 34, f. 19. 1900, *Botanischer Jahresbericht* 28(1): 417. 1902.

in English: hairy-leaf bristle grass

S. viridis (L.) P. Beauv. (*Chaetochloa viridis* (L.) Scribn.; *Chaetochloa viridis* var. *brevisetata* (Döll) Farw.; *Chaetochloa viridis* var. *major* (Gaudin) Farw.; *Chaetochloa viridis* var. *minor* Farw.; *Chaetochloa viridis* var. *weinmannii* (Roem. & Schult.) House; *Chamaeraphis italica* var. *viridis* (L.) Kuntze; *Chamaeraphis viridis* (L.) Millsp.; *Ixophorus viridis* (L.) Nash; *Panicum bicolor* Moench; *Panicum italicum* var. *viride* (L.) Körn.; *Panicum laevigatum* Lam.; *Panicum purpurascens* Raddi ex Opiz; *Panicum purpurascens* Raddi; *Panicum reclinatum* Vill; *Panicum viride* L.; *Panicum viride* var. *brevisetum* Döll; *Panicum viride* var. *majus* Gaudin; *Panicum viride* var. *reclinatum* (Vill) Asch. & Graebn.; *Panicum viride* var. *weinmannii* (Roem. & Schult.) Asch. & Graebn.; *Panicum viride* var. *weinmannii* (Roem. & Schult.) Kneuck., nom. illeg., non *Panicum viride* var. *weinmannii* (Roem. & Schult.) Asch. & Graebn.; *Pennisetum italicum* var. *viride* (L.) Körn.; *Pennisetum viride* (L.) R. Br.; *Pennisetum viride* (L.) R. Br. ex Sweet, nom. illeg., non *Pennisetum viride* (L.) R. Br.; *Pennisetum viride* var. *brevisetum* Döll; *Setaria italica* subsp. *viridis* (L.) Thell.; *Setaria viridis* f. *viridis*; *Setaria viridis* var. *brevisetata* (Döll) Hitchc.; *Setaria viridis* var. *brevisetata* (Döll) Hegi, nom. illeg., non *Setaria viridis* var. *brevisetata* (Döll) Hitchc.; *Setaria viridis* var. *reclinata* (Vill) Bréb.; *Setaria viridis* var. *robusta-alba* M. Schreib.; *Setaria viridis* var. *robusta-purpurea* M. Schreib.; *Setaria viridis* var. *weinmannii* (Roem. & Schult.) Borbás; *Setaria viridis* var. *weinmannii* (Roem. & Schult.) Brand, nom. illeg., non *Setaria viridis* var. *weinmannii* (Roem. & Schult.) Borbás; *Setaria viridis* var. *weinmannii* (Roem. & Schult.) Heuff., nom. illeg., non *Setaria viridis* var. *weinmannii* (Roem. & Schult.) Heynh.; *Setaria viridis* var. *weinmannii* (Roem. & Schult.) Heynh.; *Setaria weinmannii* Roem. & Schult.; *Setariopsis viridis* (L.) Samp.)

Temperate regions. Annual, variable, loosely clumped or loosely tufted, erect and slender, thin, sometimes geniculate, several strongly branched culms, youngest leaf rolled, smooth open sheath with a slightly hairy collar, ligule membranous and hairy to ciliate, leaves oblong and slightly scabrous or hairy, no auricles, panicles spike-like and densely flowered, linear-cylindric panicles nodding and very bristly, spikelets subtended by 1-3 persisting long bristles, bristles with erect teeth, clusters of deciduous elliptic-oblong spikelets, glumes obtuse, lower lemma sterile and acute, upper lemma bisexual and finely rugose, sometimes cultivated as a forage grass, small grains used in the same ways as rice or millet, fodder for cattle when young, drought resistant, the plant crushed and mixed with water used as an external application for bruises, seed diuretic and febrifuge, a weed of disturbed and cultivated land, weed in soybean and corn, roadsides, railroads, plains, waste places, gravelly soil, see *Species Plantarum* 1: 56. 1753, *Systema Naturae*, *Editio Decima* 2: 870. 1759, *Flore Française* 3:

578. 1778, *Flora Japonica*, ...46. 1784, *Fl. Dauph.* 2: 64. 1787, *Methodus Plantas Horti Botanici* ... 206. 1794, *Encyclopédie Méthodique, Botanique* 4: 727. 1798, *Prodromus Florae Novae Hollandiae* 1: 195. 1810, *Agrostologia Helvetica, definitionem* ... 1: 18. 1811, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Systema Vegetabilium* 2: 490. 1817, *Hortus suburbanus Londinensis* 19. 1818, *A Natural Arrangement of British Plants* 2: 157. 1821, *Flora* 5: 266. 1822, *Observations sur les Graminées de la Flore Belgique* 139. 1823 [1824], *Florae Siculae Prodromus* 80. 1827, *Flora Lipsiensis Excursoria* 77. 1838, *Nomenclator Botanicus Hortensis* 751. 1840, *Rheinische Flora* 128. 1843, *Linnaea* 21(4): 437. 1848, *Flore de la Normandie. Deuxième édition* 301. 1849, *Synopsis Plantarum Glumacearum* 1: 417. 1854, *Exploration Scientifique de l'Algérie* 2: 36. 1855 [also 1854], *Botaniska Notiser* 1856: 65. 1857, *Primitiae Florae Amurensis* 330. 1859, *Enumeratio Plantarum Transsilvaniae* 723. 1866, *Enumeratio Plantarum in Japonia Sponte Crescentium* ... 2(1): 162. 1877, *Handbuch des Getreidebaus* 1: 227, 277. Bonn 1885, *Fl. Libya* 145: 296. 1885, *Cat. Pl. Herb. Sci. Coll. Imper. Univ. Tokyo* 225. 1886, *Cornell University Science Bulletin* 2: 122. 1886, *Flora von Nieder-Österreich* 1: 46. 1890, *Revisio Generum Plantarum* 2: 767. 1891, *Bulletin, West Virginia Agricultural Experiment Station* 24(2): 466. 1892, *Annali di Botanica* 5: 93. 1894, *Bulletin of the Torrey Botanical Club* 22(10): 423. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897, *Botanical Magazine (Tokyo)* 11: 443. 1897, *Flora des Oesterreichischen Küstenlandes* 1: 51. 1897, *Synopsis der mitteleuropäischen Flora* 2: 77. 1899 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 6: 243. 1900, *Rhodora* 8(95): 210. 1906, *Illustrierte Flora von Mittel-Europa* 1: 192. Jan-June 1907, *Prodrome de la Flore Corse* 1: 68. 1910, *Nuovo Giornale Botanico Italiano* 17: 44. 1910, *Mémoires de la Société des Sciences Naturelles de Cherbourg* 38: 85. 1912, *Herbário Português* 4. 1914, *Papers of the Michigan Academy of Science, Arts and Letters* 1: 86. 1923, *New York State Museum Bulletin* 243-244: 39. 1923, *Botanical Magazine* 38: 199. 1924, *Botanical Magazine* 39: 302. 1925, *Flora of Japan* 1499. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 242-243. 1930, *Flora Iakutiae* 1: 118, f. 35. 1930, *Report of the First Scientific Expedition to Manchoukou* 4(2): 11, t. 4. 1935, *Botanical Magazine (Tokyo)* 52: 287. 1938, *Botanical Magazine (Tokyo)* 53: 99. 1939, *Report of the Institute of Scientific Research, Manchoukou* 3(App. 1): 93. 1939, *Transactions of the Natural History Society of Taiwan* 31: 327. 1941, *Acta Phytotaxonomica et Geobotanica* 11: 51-52. 1942, *Journal of Japanese Botany* 18(9): 541. 1942, *Castanea* 24(4): 136. 1959, *Svensk Botanisk Tidskrift* 53: 377. 1959, *Novosti Sist. Vyss. Rast.* 5: 19. 1969, *Weed Science* 19(4): 424-425. 1971, *Flora Republicii Socialiste Romania* 12: 78. 1972, *Zlaci SSSR* 677. 1976, *Taxon* 31(1): 71. 1982, *Naturaliste Canad.*

111: 447-449. 1984, *Journal of Wuhan Botanical Research* 3(4): 409-412. 1985, *Grasses of Japan and its Neighboring Regions* 529. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Cytologia* 56: 437-452. 1991, *Fitologija* 39: 72-77. 1991, *Investigatio et Studium Naturae* 12: 48-65. 1992.

in English: green bristle grass, green bristlegrass, bottlegrass, green foxtail, green foxtail grass, green pigeon grass, pigeon grass, rough bristle grass, wild millet, wild foxtail millet

in French: sétaire verte, herbe queue de chien

in Mongolia: urin suul

in Mexico: zacate

in Spanish: almorojo

in Arabic: deil el-far

in China: gou wei cao, su, hsien su, keou wei ts'ao

in Japan: enkorogusa

in Vietnam: co duoi cho, co rom

S. viridis (L.) P. Beauv. subsp. *pachystachys* (Franch. & Sav.) Masam. & Yanagita (*Panicum pachystachys* Franch. & Sav.; *Setaria pachystachys* (Franch. & Sav.) Matsum.)

China, Japan, Taiwan. Annual, see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Enumeratio Plantarum in Japonia Sponte Crescentium* ... 2(1): 162. 1877, *Botanical Magazine* 11: 443. 1897 and *Transactions of the Natural History Society of Taiwan* 31: 327. 1941.

S. viridis (L.) P. Beauv. subsp. *viridis*

Temperate regions. See *Essai d'une Nouvelle Agrostographie* 51, 178. 1812.

S. viridis (L.) P. Beauv. var. *major* Gray (*Chaetochloa viridis* var. *major* (Gaudin) Farw.; *Panicum viride* var. *major* Gaudin; *Setaria italica* var. *major* (Gaudin) Ohwi; *Setaria viridis* var. *major* (Gaudin) Posp., nom. illeg., non *Setaria viridis* var. *major* Gray; *Setaria viridis* var. *major* (Gaudin) Peterm., nom. illeg., non *Setaria viridis* var. *major* Gray; *Setaria viridis* var. *robusta-alba* Schreib.; *Setaria viridis* var. *robusta-purpurea* Schreib.; *Setaria viridis* var. *robusta-alba* Schreib.; *Setaria viridis* var. *robustapurpurea* Schreib.)

Warm regions. See *Agrostologia Helvetica, definitionem* ... 1: 18. 1811, *Essai d'une Nouvelle Agrostographie* 51, 170, 178. 1812, *A Natural Arrangement of British Plants* 2: 157. 1821, *Flora Lipsiensis Excursoria* 77. 1838, *Flora des Oesterreichischen Kustenlandes* 1: 51. 1897, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897 and *Papers of the Michigan Academy of Science, Arts and Letters* 1: 86. 1923, *Acta Phytoecologia et Geobotanica Sinica* 11: 51. 1942, *Weed Science* 19(4): 425. 1971.

S. viridis (L.) P. Beauv. var. *viridis* (*Chaetochloa viridis* (L.) Scribn.; *Panicum viride* L.; *Setaria viridis* var. *brevisetata*)

(Döll) A.S. Hitchc.; *Setaria viridis* var. *weinmannii* (Roemer & J.A. Schultes) Brand)

Warm regions. See *Essai d'une Nouvelle Agrostographie* 51, 178. 1812.

S. vulpiseta (Lam.) Roem. & Schultes (*Chaetochloa amplifolia* (Steud.) Scribn.; *Chaetochloa composita* (Kunth) Scribn.; *Chaetochloa macrostachya* (Kunth) Kuhl.; *Chaetochloa macrostachya* (Kunth) Scribn. & Merr.; *Chaetochloa trichorhachis* (Hack.) Hitchc.; *Chaetochloa vulpiseta* (Lam.) A.S. Hitchc. & Chase; *Chamaeraphis composita* (Kunth) Kuntze; *Chamaeraphis macrostachya* (Kunth) Kuntze ex Stuck.; *Chamaeraphis setosa* var. *macrostachya* (Kunth) Kuntze; *Chamaeraphis setosa* var. *vulpiseta* (Lam.) Kuntze; *Panicum amplifolium* Steud.; *Panicum compositum* (Kunth) Nees, nom. illeg., non *Panicum compositum* L.; *Panicum macrourum* Trin.; *Panicum macrostachyum* (Kunth) Döll, nom. illeg., non *Panicum macrostachyum* (Kunth) Nees; *Panicum macrostachyum* (Kunth) Nees; *Panicum subsphaerocarpon* Salzm. ex Schldtl.; *Panicum vulpisetum* Lam.; *Setaria alopecurus* Trin. ex Steud.; *Setaria commutata* Hack.; *Setaria composita* Kunth; *Setaria italica* var. *macrostachya* (Kunth) Mathieu; *Setaria lancifolia* R.A.W. Herrm.; *Setaria liebmannii* f. *trichorhachis* Hack.; *Setaria macrostachya* Kunth; *Setaria polystachya* Schrad. ex Schult.; *Setaria trichorhachis* (Hack.) R.C. Foster; *Setaria vulpiseta* (Lam.) Herter, nom. illeg., non *Setaria vulpiseta* (Lam.) Roem. & Schult.)

Mexico, Colombia, Paraguay, Peru, Argentina, Brazil, Ecuador. Perennial, herbaceous, caespitose, erect, in small clumps, glabrous or hairy, ligule ciliate, scabrous leaf blades linear-lanceolate acute or acuminate, dense panicle spiciform cylindrical, spikelets ovate subtended by 1-2 bristles antrorsely scabrid, glumes nerved, lower lemma sometimes inflated, lower palea present, upper lemma rugulose, along streams and rivers, waste places, campos, roadsides, open disturbed areas, see *Encyclopédie Méthodique, Botanique* 4: 735 (or 745). 1798, *Essai d'une Nouvelle Agrostographie* 51, 170, 178. 1812, *Nova Genera et Species Plantarum* 1: 110-111. 1815 [1816], *Systema Vegetabilium* 2: 495. 1817, *Mantissa* 2: 277. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 244-245. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie. Sciences Naturelles* 3,1(2-3): 227. 1834, *Flore Générale de Belgique* 1: 586. 1853, *Synopsis Plantarum Glumacearum* 1: 50, 53. 1853, *Linnaea* 31(4): 483. 1861-1862, *Flora Brasiliensis* 2(2): 166. 1877, *Mexicanas Plantas* 2: 44. 1886, *Revisio Generum Plantarum* 2: 768-769. 1891, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 39. 1897, *Enumeratio Plantarum Guatemalensium* ... 5: 91. 1899 and *Bulletin, Division of Agrostology United States Department of Agriculture* 21: 29, f. 16. 1900, *Anales del Museo Nacional de Buenos Aires* 11: 76. 1904, *Anales del Museo Nacional de Buenos Aires*

13: 439. 1906, *Repertorium Specierum Novarum Regni Vegetabilis* 8: 46. 1910, *Beiträge zur Biologie der Pflanzen* 10(1): 45, 58-59. 1910, *Contributions from the United States National Herbarium* 18(7): 350. 1917, *Contr. U.S. Natl. Herb.* 22(3): 202. 1920, *Comissão de Linhas Telegraficas ... Botanica* 67(Bot. 11): 88. 1922, *Contributions from the United States National Herbarium* 24(8): 481. 1927, *Revista Sudamericana de Botánica* 6(5-6): 139. 1940, *Bulletin du Jardin Botanique de Buitenzorg, sér. 3*, 17(1): 34. 1941, *Rhodora* 68: 339. 1966, *Revista Brasileira de Genética* 7(3): 535-548. 1984, *Boletín de la Sociedad Argentina de Botánica* 29(1-2): 60. 1993, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Darwiniana* 37: 119. 1999.

in English: Plains bristlegrass, stream bed bristlegrass

in Spanish: cola de venado, rabo de ardilla, zacate, zacate carrizo

in Mexico: ne-kuuk, zacate de carrizo

S. vulpiseta (Lam.) Roem. & Schultes var. *reversipila* (R.A.W. Herrm.) Pensiero (*Setaria reversipila* R.A.W. Herrm.)

South America, Paraguay. See *Beiträge zur Biologie der Pflanzen* 10(1): 58. 1910, *Boletín de la Sociedad Argentina de Botánica* 29(1-2): 60. 1993, *Darwiniana* 37: 119. 1999.

S. vulpiseta (Lam.) Roem. & Schultes var. *vulpiseta* (*Chaetochloa amplifolia* (Steud.) Scribn.; *Chaetochloa composita* (Kunth) Scribn.; *Chaetochloa trichorhachis* (Hack.) Hitchc.; *Chaetochloa vulpiseta* (Lam.) A.S. Hitchc. & Chase; *Chamaeraphis composita* (Kunth) Kuntze; *Chamaeraphis setosa* var. *vulpiseta* (Lam.) Kuntze; *Panicum amplifolium* Steud.; *Panicum compositum* (Kunth) Nees, nom. illeg., non *Panicum compositum* L.; *Panicum macrourum* Trin.; *Panicum vulpisetum* Lam.; *Setaria alopecurus* Trin. ex Steud.; *Setaria composita* Kunth; *Setaria holstii* mstr. *composita* (Kunth) de Wit; *Setaria lancifolia* R.A.W. Herrm.; *Setaria liebmannii* f. *trichorhachis* Hack.; *Setaria polystachya* Schrad. ex Schult.; *Setaria trichorhachis* (Hack.) R.C. Foster)

South America. See *Nova Genera et Species Plantarum* 1: 111. 1815 [1816] and *Beiträge zur Biologie der Pflanzen* 10(1): 45, 58-59. 1910, *Bulletin du Jardin Botanique de Buitenzorg, ser. 3*, 17(1): 34. 1941.

S. welwitschii Rendle (for the Austrian (b. near Klagenfurt) explorer Friedrich (Frederick) Martin Joseph Welwitsch (Welvich), 1806-1872 (d. London), M.D. Vienna 1836, zoologist, physician, botanist, traveler and plant collector (Angola, southwest Africa, Portugal), from 1839 to 1853 Director of the Botanical Garden of Lisbon, 1865 Fellow of the Linnean Society, among his works are "On the botany of Benguela, Mossamedes, etc., in Western Africa." *J. Linn. Soc. (Bot.)* 5:182-187. 1861 (Including the first description of *Welwitschia* under the name *Tumboa*) and *Apontamentos phytogeographicos sobre a flora da provincia de Angola na*

Africa equinocial. Lisboa 1858 [1859], co-author (with Frederick Currey, 1819-1881) of *Fungi angolenses*. London 1868; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 729. 1994; Joseph Vallot (1854-1925), "Études sur la flore du Sénégal." in *Bull. Soc. Bot. de France*. 29: 195-196. Paris 1882; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 798f. 1993; Frans A. Stafleu and Richard S. Cowan, *Taxonomic literature*. 7: 174-178. 1988; William Philip Hiern (1839-1925), *Catalogue of the African Plants Collected by F. Welwitsch in 1853-61*. London 1896-1901; Helmut Dolezal (1922-1981), in *Portug. Acta Biol.* 6(3-4): 257-323. 1959 and 7(1-3): 324-551. 1961; F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa*. 85. 1971; Gordon Douglas Rowley, *A History of Succulent Plants*. Mill Valley, California 1997; J.H. Barnhart, *Biographical notes upon botanists*. 3: 476. 1965; Anthonius Josephus Maria Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19: 861-863. 1965; M. Colmeiro y Penido, *La Botánica y los Botánicos de la Peninsula Hispano-Lusitana*. Madrid 1858; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 431. Boston, Mass. 1972; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 263. Oxford 1964; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 146. [1931]; Alain White and Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937; Merle A. Reinikka, *A History of the Orchid*. Timber Press 1996)

Tropical Africa, Angola. Caespitose, geniculate, ascending, dry savannahs, montane grasslands and shrublands, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 185. 1899.

in Angola: ndingu, sese

Setariopsis Scribner = *Setariopsis* Scribner ex Millsp.

Resembling *Setaria*.

About 2 species, Mexico. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Setariinae, annual or perennial, herbaceous, decumbent, rhizomatous, branched, ligule a fringed membrane, plants bisexual, inflorescence a contracted or spiciform panicle, spikelets gibbous subtended by solitary bristles, proximal incomplete florets sterile, 2 glumes very unequal and different, upper glume nerved indurated auriculate, lower lemma lyrate, small palea present, 2 free and fleshy lodicules, ovary glabrous, 2 stigmas, weedy grasslands, open habitats, rocky places,

disturbed areas, dry woods, type *Setariopsis latiglumis* (Vasey) Scribn., see *Species Plantarum* 1: 56. 1753, *Systema Naturae, Editio Decima* 2: 870. 1759, *Species Plantarum, Editio Secunda* 1: 82. 1762, *Prodromus Florae Novae Hollandiae* 193. 1810, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Publications of the Field Columbian Museum, Botanical Series* 1(3): 288-290. 1896 and *Herbário Português* 4. 1914, *N. Amer. Fl.* 17: 315. 1931, *Anais da Faculdade de Ciências Porto* 19: 69. 1934, *Flora Mesoamericana* 6: 364. 1994, *Contributions from the United States National Herbarium* 46: 593-594. 2003.

Species

S. auriculata (E. Fourn.) Scribn. (*Setaria auriculata* E. Fourn.; *Setaria auriculata* E. Fourn. ex Hemsl.; *Setaria auriculata* var. *depauperata* E. Fourn.; *Setaria paucisetata* Vasey; *Setariopsis scribneri* Mez)

Mexico. Small clumps, good forage, see *Biologia Centrali-Americana; ...Botany ...3*: 503. 1885, *Mexicanas Plantas* 2: 43-44. 1886, *Bulletin of the Torrey Botanical Club* 13(12): 230. 1886, *Publications of the Field Columbian Museum, Botanical Series* 1(3): 289. 1896 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 58. 1917.

in Mexico: k'u-uech

S. latiglumis (Vasey) Scribn. (*Chamaeraphis latiglumis* (Vasey) Kuntze; *Chamaeraphis latiglumis* (Vasey) Beal; *Setaria latiglumis* Vasey)

Mexico. Annual, caespitose, fodder, see *Bulletin of the Torrey Botanical Club* 13(12): 229. 1886, *Revisio Generum Plantarum* 2: 770. 1891, *Publications of the Field Columbian Museum, Botanical Series* 1(3): 289-90, t. 11. 1896, *Grasses of North America for Farmers and Students* 2: 152. 1896.

in Mexico: pasto

Setiactic S.L. Chen & Y.X. Jin = *Panicum* L.

Latin *saeta* (*seta*), *ae* "a bristle, hair" and Greek *ake*, *akis*, *akidos* "tip, thorn, a sharp point," the apex of upper lemma with a tuft of short setae.

Monotypic, China, Hainan. Paniceae, perennial, herbaceous, decumbent at base and usually rooting at the nodes, leaf blades glabrous and linear-lanceolate, leaf sheath compressed and keeled, inflorescence a terminal panicle with slender branchlets, spikelets dorsally compressed solitary or paired close to the base, 2 florets, lower floret with an oblong membranous palea, lower glume 5- to 7-veined/nerved, lower lemma 11-nerved, apex of upper lemma with a tuft of short setae, wet places, forest, closely related to *Acroceras* and *Lasiacis*, type *Setiactic diffusa* (L.C. Chia) S.L. Chen & Y.X. Jin, see *Flora of Tropical*

Africa 9: 621. 1920, *Acta Phytotaxonomica Sinica* 26(3): 217, 219, f. 1. 1988.

Species

S. diffusa (Chia) S.L. Chen & Y.X. Jin (*Acroceras diffusum* L.C. Chia)

China. Perennial, leaf sheaths smooth, lax panicle, spikelets oblong, glumes herbaceous, lower glume ovate-lanceolate, upper glume and lower lemma similar, upper lemma glabrous shining, see *Fl. Hain.* 4: 414, 538. 1977.

in China: ci mao tou shu shu, ci mao tou shu

Setosa Ewart = *Chamaeraphis* R. Br.

Full of bristles, bristly, from the Latin *s(a)etosus*, *a*, *um* (*saeta*).

Panicoideae, Paniceae, Paniceae, type *Setosa erecta* Ewart & Cookson, see *Prodromus Florae Novae Hollandiae* 193-194. 1810 and Alfred James Ewart (1872-1937) & Olive Blanche Davies (fl. 1917), *The Flora of the Northern Territory* 33, pl. 2. Melbourne 1917.

Shibataea Makino ex Nakai

For the Japanese botanist Keita Shibata (Shibata Keito), 1877-1949, biochemist, from 1910 to 1911 studied with the German plant physiologist and bryologist Wilhelm Friedrich Philipp Pfeffer (1845-1920) at Leipzig, founder and first editor of *Acta phytochimica*, from 1912 to 1938 professor of botany at Tokyo University, in 1917 worked in Buitenzorg, from 1938 to 1949 Director of the Iwata Institute for Plant Biochemistry, author of *Cytologische Studien über die endotrophen Mykorrhizen*. Leipzig 1902, with the Japanese lichenologist Yasuhiko Asahina (1881-1975) wrote *Chemistry of lichen substances*. 1954; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 270. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 364. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Stafleu and Cowan, *Taxonomic literature*. 5: 563. Utrecht 1985; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 780. Stuttgart 1993.

About 3-9/10 species, temperate Asia, China and Japan. Bambusoideae, Bambusodae, Bambuseae, Shibataeinae, perennial, thin, monopodial branching or amphipodial, small, pluricaespitose or scattered, shrubby, unarmed, dwarf, prominent nodes swollen, each twig with 2 internodes, culm sheath thin and deciduous, leaf sheath thick, branches and twigs thick and short, flat shoots, culm strongly flattened on one side, rhizomatous with long rhizomes, rhizomes leptomorph, the flowering culms leafy,

woody and persistent, not scandent, branched above, 2-6 very short branches at a node, plants bisexual, inflorescence compound, sessile pseudospikelets, spikelets 2-flowered, glumes 2-3 or absent or several, paleas 2-keeled, 3 free and ciliate lodicules, 3 stamens, ovary glabrous with apical appendage, 3 feathery stigmas, in woodland, type *Shibataea kumasaca* (Zoll. ex Steud.) Nakai, see *Act. III Congr. Int. Bot. Brux.* 2: 220. 1912, *Bot. Mag. Tokyo* 26: 236. 1912, *Journal of Japanese Botany* 9(2): 77-78, 83, f. 8. 1933, Alfred Rehder, 1863-1949, *Bibliography of Cultivated Trees and Shrubs Hardy in the Cooler Temperate Regions of the Northern Hemisphere*. 641. Jamaica Plain, Massachusetts 1949, *Agriculture Handbook* 193: i-iii, 1-74. 1961, *Index Jap. Bamb.* 52. 1978, *Fl. Taiwan* 5: 737. 1978, *Grass Systematics and Evolution* 225-238. 1987, *Acta Phytotax. Sin.* 26(2): 130-138. 1988, *Compend. China Bamb.* 154-157. 1994, *Flora Reipublicae Popularis Sinicae* 9(1): i-xxvi, 1-761. 1996, *Contributions from the United States National Herbarium* 39: 112. 2000.

Species

S. chiangshanensis Wen

China, Zhejiang. Perennial, culm almost semicircular, reddish brown, 3 branches at each node, sheath pubescent, sheath blade purplish red and ovate, no sheath auricles, sheath ligule short truncate, 1 leaf per twig, leaf blade serrate and ovate, rare, cultivated, ornamental, see *Bulletin of Botanical Research* 3(1): 95-96, f. 4. 1983.

S. chinensis Nakai (*Bambusa aureostriata* Regel; *Shibataea chinensis* f. *aureostriata* C.H. Hu; *Shibataea chinensis* f. *aureostriata* (Regel) C.H. Hu)

China. Perennial, glabrous, 3-6 branches at each node, internodes of lower part cylindrical, internodes of upper portion triangular, culm annulus swollen, sheath caducous and membranous, 1 leaf at the end of branch, leaves glabrous and acuminate, leaf blade ovate lanceolate or broadly lanceolate, ornamental, used as low hedges, see *Gartenflora* 14: 362, pl. 490, f. 3-4. 1865 and *Journal of Japanese Botany* 9: 81, 85, pl. 9. 1933, *Acta Phytotaxonomica Sinica* 26(2): 136-137. 1988, *Compend. China Bamb.* 154-157. 1994, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

in China: emaozhu, wozhu

in Japan: to-okame-zasa

S. chinensis Nakai var. *gracilis* C.H. Hu

China. Perennial, base of sheath minutely tomentose, ornamental, low hedges, see *Journal Nanjing University. Natural Sciences Edition* no. 3: 733, f. 1. 1982.

S. fujianica Z.D. Zhu & H.Y. Zou (*Shibataea fujianennica* C.H. Hu; *Shibataea lancifolia* var. *fujianica* C.H. Hu; *Shibataea nanpingensis* var. *fujianica* (Z.D. Zhu & H.Y. Zou) C.H. Hu)

China. Ornamental, see *Acta Phytotaxonomica Sinica* 26(2): 134-136, pl. 1, 2, f. 1-5. 1988, *Bot. Res.* 7(2): 158, 160. 1989, *Flora Reipublicae Popularis Sinicae* 9(1): 321. 1996.

S. hispida McClure

China. Glabrous, 3-4 branches on each node, culm annulus convex, sheath shedding late, sheath auricle and ligule absent, sheath blades tiny, leaves ovate lanceolate scabrous, ornamental, ground cover, useful for erosion control, see *Lingnan University Science Bulletin* 9: 57. 1940, *Sunyatsenia* 6(1): 46. 1941.

in China: luhuzhu

S. kumasaca (Zoll. ex Steudel) Makino (also spelled *kumasasa*) (*Arundinaria kumasasa* Kurz ex Teijsman & Binn.; *Bambusa kumasaca* Zoll. ex Steud.; *Bambusa kumasaca* Steud.; *Bambusa kumasasa* Zoll., nom. illeg., non *Bambusa kumasaca* Zoll. ex Steud.; *Bambusa ruscifolia* Siebold ex Munro; *Bambusa viminalis* hort. ex Bean; *Phyllostachys kumasaca* (Zoll. ex Steud.) Munro; *Phyllostachys kumasaca* (Steud.) Munro; *Phyllostachys kumasaca* Munro; *Phyllostachys ruscifolia* Siebold ex Satow; *Phyllostachys ruscifolia* Satow; *Phyllostachys ruscifolia* (Munro) Satow; *Phyllostachys viminalis* Marliac ex Mitford; *Sasa ruscifolia* A.H. Lawson; *Shibataea kumasaca* (Steudel) Makino; *Shibataea kumasaca* Makino & Shibata; *Shibataea kumasaca* (Steudel) Makino ex Nakai; *Shibataea kumasaca* (Zoll. ex Steudel) Nakai, nom. illeg., non *Shibataea kumasaca* (Zoll. ex Steud.) Makino; *Shibataea kumasaca* (Steudel) Nakai; *Shibataea kumasasa* (Steudel) Makino; *Shibataea kumasasa* (Steudel) Nakai; *Shibataea kumasasa* (Zoll.) Nakai; *Shibataea kumasasa* (Zoll.) Makino; *Shibataea ruscifolia* Makino; *Shibataea ruscifolia* (Siebold ex Munro) Makino)

Southern Japan. Monopodial, perennial, small to dwarf, branched, internodes semicylindrical or triangular, culm annulus convex, nodes prominent, 2 to 5-6 very short branches at each node, culm sheaths thinly chartaceous or papyraceous, sheath reddish, usually 1-5 leaves at each node, leaves minutely hairy on the back, leaf blades broadly lanceolate to oblong-lanceolate, spikelets linear to narrowly lanceolate with 1-2 perfect florets, 2-3 glumes lanceolate acute, lemmas broadly lanceolate acuminate, palea present, 3 lodicules broadly lanceolate acuminate or obtuse, 3 stamens exerted, ovary ovoid, 3 feathery stigmas, widely cultivated, ornamental, propagation by rhizome cutting, used for living fences and ground covering, hedge, culms dyed and used for weaving material, useful for erosion control, see *Genera Plantarum* 1: 236. 1789, *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 3(3): 745, pl. 5, f. 3. 1843, *Synopsis Plantarum Glumacearum* 1: 331. 1854 [1855], *Systematisches Verzeichniss der im Indischen Archipel* 1: 57. 1854, *Catal. Pl. Horto Bot. Bogor.* 19. 1866,

Transactions of the Linnean Society of London 26(1): 39, 123, 157. 1868, *Gard. Chron.* ser. 3, 15: 369. 1894, *Garden* 47: 3. 1895, *Cultiv. Bamb. Jap.* 70. 1899 and *Botanical Magazine* (Tokyo) 26: 236. 1912, *Botanical Magazine* (Tokyo) 28(325): 22, 155. 1914, *Journal of Japanese Botany* 9(2): 78, 80-81, 83, f. 8. 1933, *Bamb. Gard. Guide* 151. 1968, *Report Fuji Bamboo Garden* 17: 10. 1972, *Index to Japanese Bambusaceae* 100, 339. 1978, *Fl. Taiwan* 5: 737. 1978.

in English: ruscus-leaves bamboo, fiveleaf bamboo

in China: wu-ye-sa

in Japan: okame-zasa, gomai-zasa, bungo-zasa, fukuzasa (= fortune-inviting sasa), shirofuokame-zasa, fuirokame-zasa (with white stripes on the leaf)

S. lancifolia C.H. Hu (*Shibataea lanceifolia* C.H. Hu)

China, Zhejiang. Perennial, erect, solid smooth, glabrous, 3-5 branches at each node, sheath papyraceous and caducous, no sheath auricles and cilia, 1-2 leaves at each twig, leaf blades long lanceolate, ornamental, see *Journal Nanjing University. Natural Sciences Edition* 1981 (n. 2): 257, f. 1. 1981, *Acta Phytotaxonomica Sinica* 26(2): 134, pl. 11, f. 6-7. 1988, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

S. nanpingensis Q.F. Zheng & K.F. Huang (*Shibataea nanpingensis* Q.F. Zheng & K.F. Huang; *Shibataea pygmaea* F. Maekawa)

China, Nanping. Perennial, culm grooved on one side, 3 branches at each node, sheath green and shorter than internode, no auricles and no cilia on sheath mouth, sheath ligule convex, 1 leaf on each branch, leaves elliptic lanceolate with acuminate tip, ornamental, see *J. Jap. Bot.* 19(5): 150. 1943, *Wuyi Sci. J.* 2: 17, fig. 1. 1982, *Acta Phytotaxonomica Sinica* 26(2): 135, 137, f. 2. 1988, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

S. nanpingensis Q.F. Zheng & K.F. Huang var. ***fujianica*** (C.D. Chu & H.Y. Zhou) C.H. Hu (*Shibataea fujianennica* C.H. Hu; *Shibataea fujianica* Z.D. Zhu & H.Y. Zou; *Shibataea lancifolia* var. *fujianica* C.H. Hu)

China, Nanping. Young culm densely pruinose, culm annulus convex, 3 branches at each node, sheath green purplish and shorter than internodes, sheath blade bandlike, no sheath auricles and cilia, 1-2 leaves on each twig, leaves oblong-lanceolate shortly pubescent beneath, ornamental, see *Acta Phytotaxonomica Sinica* 26(2): 134-136, pl. 1, f. 1-5. 1988, *Bot. Res.* 7(2): 158, 160. 1989, *Flora Reipublicae Popularis Sinicae* 9(1): 321. 1996.

S. strigosa T.H. Wen (*Shibataea striata* Wen ex C.H. Hu, Q.F. Zheng & K.F. Huang)

China. Perennial, green, glabrous, culm annulus swollen with a round ridge, 3 branches at each node, sheath blade tiny and erect, no sheath auricles and cilia, sheath ligule arcuate or truncate with ciliate margin, 1 leaf on each twig,

leaves glabrous, ornamental, see *Bulletin of Botanical Research* 3(1): 96-97. 1983, *Acta Phytotax. Sin.* 26(2): 132. 1988.

S. tumidinoda Wen (*Shibataea chinensis* C.H. Hu)

China. Perennial, see *J. Bamb. Res.* 7(1): 23-25, f. 1. 1988.

Sibertia Steud. = *Bromus* L.

Pooideae, Bromeae, see *Genera Graminum* 144-145. 1986, *Contributions from the United States National Herbarium* 48: 154-191, 425. 2003.

Sieglingia Bernh. = *Danthonia* DC., *Triodia* R. Br.

For a botanical collector and botanist named Siegling; see Helmut Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 584. Basel 1996.

Monotypic, Europe, Algeria, Asia Minor. Arundinoideae, Danthonieae, perennial, stiff, herbaceous, densely tufted, erect or spreading, cataphylls, leaf sheath rounded to keeled and strongly ribbed, leaf sheaths fibrous when old, ligule a ring of hairs, plants bisexual, open or compact inflorescence paniculate or sometimes racemose, flowers hermaphrodite, cleistogamous and chasmogamous, cleistogenes developed in basal leaf sheaths, incomplete florets distal to the female fertile florets, 2 glumes equal to more or less equal and persistent, lemma awnless and mucronate, palea coriaceous, 2 fleshy lodicules truncate and nerved, lodicules absent in cleistogamous florets, stamens 3, ovary glabrous, stigmas 2, fruit a caryopsis, pasture, along roadsides, waste grounds, sometimes or often referred to *Danthonia*, hybrids with *Danthonia*, type *Sieglingia decumbens* (L.) Bernh., see *Systematisches Verzeichnis* 20, 44. Erfurt 1800, *Flore Française ...Troisième édition* 3: 32-33. 1805, *Prodromus Florae Novae Hollandiae* 182. 1810, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Systema Vegetabilium* 2: 690. 1817, *Bulletin Botanique Genève* 1: 221. 1830, *Pflanzen und Gebirgsarten von Marienbad* 38. Prag 1837, *Die Natürlichen Pflanzenfamilien* 2(2): 68. 1887 and *Lexikon Generum Phanerogamarum* 77. 1903, *Prodrome de la Flore Corse* 1: 114. 1910, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 94. 1942, *Flore de l'Afrique du Nord* 2: 366. 1953, J.M. de Wet, "The genus *Danthonia* in grass phylogeny." *American Journal of Botany* 41: 204-211. 1954, *Madroño* 17(3): 91-92. 1963, S.T. Blake, "*Plinthanthesis* and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae)." *Contributions from the Queensland Herbarium* 14: 3. 1972, *Flora Mesoamericana* 6: 250-251. 1994, H.P. Linder & G.A. Verboom, "Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex." *Telopea* 6(4): 597-627. 1996, H.P.

Linder, "Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae)." *Telopea* 7(3): 269-274. 1997, *Contributions from the United States National Herbarium* 46: 170-177, 594, 623. 2003.

Species

S. decumbens (L.) Bernh. (*Bromus decumbens* (L.) Koeler; *Danthonia decipiens* (O. Schwarz & Bassler) Á. Löve & D. Löve; *Danthonia decumbens* (L.) DC.; *Danthonia decumbens* subsp. *decipiens* O. Schwarz & Bassler; *Festuca decumbens* L.; *Melica decumbens* (L.) Weber; *Poa decumbens* (L.) Scop.; *Sieglingia decumbens* subsp. *decipiens* (O. Schwarz & Bassler) Soó; *Triodia decumbens* (L.) P. Beauv.)

Europe. Glumes 3- to 5-nerved, palea 2-nerved 2-keeled, see *Species Plantarum* 1: 66-67, 75-76. 1753, *Flora Carniolica, Editio Secunda* 1: 69. 1772, *Spicilegium Florae Goettingensis* 3. 1778, *Systematisches Verzeichnis* 20, 44. 1800, *Descriptio Graminum in Gallia et Germania* 242. 1802, *Flore Française. Troisième Édition* 3: 33. 1805, *Prodromus Florae Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 1: 76, 160, t. 15, f. 9. 1812, *Österreichische Botanische Zeitschrift* 27(4): 123. 1877 and *Prodrome de la Flore Corse* 1: 114. 1910, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 94. 1942, *Flore de l'Afrique du Nord*: 2: 366. 1953, *Brittonia* 23(3): 293-324. 1971, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 117, 121. 1971[1972], *Flora Republicii Socialiste Romania* 12: 790. 1972, *Folia Geobotanica et Phytotaxonomica* 10(3): 272. 1975, *Feddes Repertorium* 88(7-8): 417. 1977, *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1671-1673. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 29-66. 1990, *Opera Botanica* 137: 1-42. 1999, *Bothalia* 29(2): 335-341. 1999, *Taxon* 49(2): 250. 2000.

in English: heath grass

Silentvalleya Nair, Sreekumar, Vajravelu & Bhargavan

Referring to the Silent Valley Reserved Forest, Silent Valley National Park, 40 km from Mannarkkad, Kerala, India. The Silent Valley ecosystem comprises of 8,952 hectares of forestland on the Nilgiris plateau closed on all sides by mountains of the Western Ghats, one of the world's richest biodiversity hotspots. The local name for the park is *Sairandhrivanam* (the forest in the valley).

One species, India. Chloridoideae, perennial, herbaceous, unbranched, tufted, auricles absent, ligule membranous, plants bisexual, inflorescence spicate and not digitate, solitary spikelets, upper glume 3-nerved, lower glume nerveless, lemma 3-nerved glabrous awned, palea and lodicules present, 3 stamens, ovary glabrous, 2 stigmas, see V.C. Nair, E. Vajravelu, P. Bhargavan, Preliminary report on the botany

of Silent Valley (Palghat district, Kerala). Botanical Survey of India, Coimbatore 1980, *Journal of the Bombay Natural History Society* 79(3): 654-656. 1982[1983], J.S. Singh, S.P. Singh, A.K. Saxena and Y.S. Rawat, "The forest vegetation of Silent Valley, India." in: A.C. Chadwick and S.L. Sutton, (editors), *Tropical Rain-Forest. The Leeds Symposium*. Leeds Philosophical and Literary Society, Leeds pp. 25-52. 1984, K.S. Manilal, *Flora of Silent Valley Tropical Rain-forests of India*. The Mathrubhumi (MM) Press, Calicut 1988.

Species

S. nairii V.J. Nair & Sreek., Vajr. & Bhargavan

India, Kerala. Perennial, caespitose, 2 glumes, lemma entire with bearded callus, palea 2-nerved 2-keeled.

Simplicia Kirk

Two species, New Zealand, Antarctic. Pooideae, Poodae, Poeae, or Aveneae, perennial, herbaceous, tufted, often decumbent to erect, auricles absent, ligule an unfringed membrane, leaf sheath membranous and ribbed, plants bisexual, chasmogamous, panicle open or contracted, spikelet with rachilla extension, only 1 flower in each spikelet, 2 minute glumes unequal much shorter than floret, upper glume membranous acute, 3-nerved lemma acute awnless or awned, palea keeled 1-2-nerved, 2 free and membranous lodicules, 2-3 stamens, ovary glabrous, 2 stigmas plumose, open habitats, stony ground, open places, grassland, bluffs, resembles *Poa*, type *Simplicia laxa* Kirk, see *New Zealand Journal of Botany* 9(3): 539-544. 1971, *Transactions and Proceedings of the New Zealand Institute* 29: 497, t. 44. 1897.

Species

S. buchananii (Zotov) Zotov (*Poa uniflora* Buchanan, nom. illeg., non *Poa uniflora* Muhl.; *Simplicia laxa* var. *buchananii* Zotov)

New Zealand. Perennial, montane to subalpine, tufted, slender, ligule erose, panicle linear with erect branches, single-flowered spikelets, glumes glabrous, lemma scabrid, see *Indigenous Grasses of New Zealand* t. 49B. 1880 and *Transactions of the Royal Society of New Zealand* 73: 236. 1943, *New Zealand Journal of Botany* 9(3): 542. 1971.

S. laxa Kirk

New Zealand, South Island. Endangered, perennial, rare, flaccid, weak, decumbent, montane, soft, internodes elongate, ligule erose, leaf blades flat and narrow, open inflorescence, panicle pyramidal and sparingly branched, branches spreading, spikelets sharply pointed, 1-flowered, slightly keeled lemma pubescent to shortly pubescent, caryopsis laterally compressed, see *Transactions and Proceedings of the New Zealand Institute* 29: 497, t. 44. 1897 and

Transactions of the Royal Society of New Zealand 73: 236. 1943, *New Zealand Journal of Botany* 9(3): 541. 1971.

Sinarundinaria Nakai = *Ampelocalamus* Chen, Wen and Sheng, *Borinda* Stapleton, *Burmabambus* Keng f., *Burmabambusa* Keng f., *Butania* Keng f., *Chimonocalamus* J.R. Xue [alt. Hsueh] and Yi, *Drepanostachyum* Keng f., *Monospatha* W.T. Lin, *Otatea* (McClure & E.W. Sm.) Calderón & Soderstr., *Yushania* Keng f.

From China and the genus *Arundinaria*.

About 50 species, Asia and Madagascar, tropical Africa, Central America. Bambusoideae, Bambusodae, Bambuseae, Arundinariinae or Shibateinae, perennial, shrub or small tree, rhizomatous with sympodial rhizomes, the flowering culms leafy, culms woody and persistent, branched above, 1 ridged culm nodes, culm sheaths persistent, culm internodes solid or hollow, rhizomes pachymorph, plants conspicuously armed or unarmed, adventitious roots at the nodes, plants bisexual, inflorescence simple and exserted, a panicle or a raceme, spikelets stalked, 2 glumes, palea present, 3 free lodicules, stamens 3, stigmas 2, shade species, in woodlands, open habitats, high mountains, taxonomic confusion concerning this genus, sometimes referred to and included in *Fargesia* Franchet, type *Sinarundinaria nitida* (Mitford ex Stapf) Nakai, see *Flora Boreali-Americana* 1: 73. 1803, *Transactions of the Linnean Society of London* 26(1): 33, 157. 1868, *J. Linn. Soc. Bot.* 19: 31. 1881, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1067. 1893 and *Botanical Magazine* 28(329): 153. 1914, *Journal of the Arnold Arboretum* 6(3): 145, 148. 1925, *Journal of Japanese Botany* 11(1): 1. 1935, *Lingnan University Science Bulletin* 9: 66. 1940, *Acta Phytotaxonomica Sinica* 6(4): 355-357. 1957, *Primates* 10: 103-148. 1969, *Smithsonian Contributions to Botany* 9: 116, 119. 1973, *Acta Botanica Yunnanica* 1(2): 75-76. 1979, *Smithsonian Contributions to Botany* 44: 21. 1980, *Acta Phytotaxonomica Sinica* 19(3): 332-334, pl. 1. 1981, *J. Bamb. Res.* 1: 15-18, 40, 42, 173. 1982, *J. Bamb. Res.* 2(1): 15-16, 23. 1983, *Journal of Tree Sciences* 5: 23-25. 1986, *Kew Bulletin* 44(2): 349-367. 1989, *Journal of South China Agricultural University* 10(2): 45. 1989, *Edinburgh Journal of Botany* 51(2): 284, 290. 1994, *Journal of Bamboo Research* 13(4): 1-3, f. 1. 1994, *Contributions from the United States National Herbarium* 39: 92, 112-113, 116. 2000, Wenyao Liu, John E.D. Fox and Zaifu Xu, "Leaf litter decomposition of canopy trees, bamboo and moss in a montane moist evergreen broad-leaved forest on Ailao Mountain, Yunnan, south-west China." *Ecological Research* 15(4): 435-447. Dec 2000, Shuang-Quan Huang et al. "Honeybee-assisted wind pollination in bamboo *Phyllostachys nidularia* (Bambusoideae: Poaceae)?" *Botanical*

Journal of the Linnean Society 138(1): 1-7. Jan 2002, *African Journal of Ecology* 41(1): 1-8. Mar 2003. *Journal für Ornithologie* 144(2): 197-200. Apr 2003.

Species

S. anceps (Mitf.) Chao & Renvoize (*Arundinaria anceps* Mitford; *Arundinaria jaunsarensis* Gamble; *Chimonobambusa jaunsarensis* (Gamble) Bahadur and Naithani; *Yushania anceps* (Mitford) W.C. Lin; *Yushania jaunsarensis* (Gamble) Yi)

Northwest and the central Himalayas, hills of Uttar Pradesh. Single stem, graceful, nontufted, nonclump-forming, reed-like, rhizome long and creeping, leaves linear-lanceolate, culm sheath papery, narrow auricles falcate, inflorescence racemose, 2 glumes ciliate on margins, 2-3 lodicules fimbriate, 3 stamens, ovary glabrous, long plumose to ciliate stigma, material for pulp and paper, for mats and baskets, split culms employed for cottages, occurs in mountain slopes and ridges, in forests, see *The Bamboo Garden* 181. 1896, *Annals of the Royal Botanic Garden. Calcutta.* 7: 23, t. 22. 1896 and *Bulletin of the Taiwan Forest Research Institute* 248: 9. 1974, *Indian Journal of Forestry* 1: 41. 1978, *Journal of Bamboo Research* 2(1): 39. 1983, *Kew Bulletin* 44(2): 359. 1989.

in India: g-yons ringal, gyons, jumra, jumra-ringal, ningal, ringal, sarura, sarura ringal, sarurha

S. arunachalensis Naithani (*Chimonocalamus longispiculatus* Majumdar; *Chimonocalamus longispiculatus* (C.S. Chao & Renvoize) D.Z. Li)

India. Unarmed, see *Kew Bulletin* 43(3): 411. 1988, *Fl. Ind. Enumerat.-Monocot.* 276. 1989, *Indian Forester* 117(1): 78. 1991, *Acta Botanica Yunnanica* 16(1): 41. 1994.

S. densifolia (Munro) Chao & Renvoize (*Arundinaria densifolia* Munro; *Chimonobambusa densifolia* (Munro) Nakai; *Yushania densifolia* (Munro) R.B. Majumdar)

South India. Shrubby, smooth, thick-walled, with thick rhizome with imbricating scales, 3 stamens, ovary glabrous, 1 plumose stigma, see *Transactions of the Linnean Society of London* 26(1): 32. 1868 and *Journal of the Arnold Arboretum* 6: 151. 1925, *Smithsonian Contr. Bot.* 72: 12. 1988, *Fl. Ind. Enumerat.-Monocot.* 282. 1989, *Kew Bulletin* 44(2): 354. 1989.

S. elegans (Kurz) Chao & Renvoize (*Arundinaria elegans* Kurz; *Burmabambus elegans* (Kurz) Keng f.; *Sinobambusa elegans* (Kurz) Nakai; *Yushania elegans* (Kurz) R.B. Majumdar)

India, Arunachal Pradesh, Nagaland. Shrubby, evergreen, slender, tufted, flattened on one side, nodes prominent, internodes smooth, culm sheath deciduous covered with stiff hairs on the outer surface, leaves linear-lanceolate attenuate at the base into a short petiole, leaf sheaths glabrous, short auricles with long bristles, inflorescence terminal, spikelets compressed, 2 glumes ciliate, paleas ciliate

on the keels, 3 stamens, ovary glabrous, 2 plumose stigmas, young shoots used for making pickles, shoots used as vegetable and food, culms used in house construction and for making walls of huts, see *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 42: 249. 1873 and *Journal of the Arnold Arboretum* 6: 152. 1925, *Journal of Bamboo Research* 1(2): 40. 1982, *Fl. Ind. Enumerat.-Monocot.* 282. 1989, *Kew Bull.* 44(2): 357, 359. 1989.

in India: jilli

S. falcata (Nees) Chao & Renvoize (*Arundinaria falcata* Nees; *Arundinaria falcata* var. *glomerata* Gamble; *Arundinaria interrupta* Trin.; *Arundinaria utilis* Cleghorn; *Arundinaria utilis* Lafosse; *Chimonobambusa falcata* (Nees) Nakai; *Drepanostachyum falcatum* (Nees) Keng f.; *Drepanostachyum khasianum* (Munro) Keng f.; *Drepanostachyum khasianum* (Munro) Majumdar, nom. illeg., non *Drepanostachyum khasianum* (Munro) Keng f.; *Fargesia falcata* (Nees) T.P. Yi; *Ludolfia falcata* Nees ex Munro; *Pleiolobatus falcatus* (Nees) T.Q. Nguyen)

India. Shrubby, cylindrical, green, smooth, nodes swollen, 3 stamens, ovary glabrous, 1 plumose stigma, gregarious and sporadic flowering, culms used for making baskets and fishing rods, see *Linnaea* 9(4): 478. 1834, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(6): 620. 1835, *J. Agric. Soc. India* 13: 388. 1865, *Bull. Nat. Soc. Acclim. France* 4: 682. 1867 and *Journal of the Arnold Arboretum* 6(3): 151. 1925, *Journal of Bamboo Research* 2(1): 16, 18. 1983, *Flora Xizangica* 5: 33. 1987, *Kew Bull.* 44(2): 357-358. 1989, *Fl. Ind. Enumerat.-Monocot.* 277. 1989, *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 225. 1990.

S. floribunda (Thwaites) Chao & Renvoize (*Arundinaria floribunda* Thwaites; *Indocalamus floribundus* (Thwaites) Nakai)

India, Sri Lanka. Erect, shrubby, nodes swollen, 3 stamens, ovary glabrous, 2 stigmas, culms used for making roofs and fencing, see *Enumeratio Plantarum Zeylanicae* 375. 1864 and *Journal of the Arnold Arboretum* 6: 148. 1925, *Kew Bull.* 44(2): 356. 1989.

S. griffithiana (Munro) Chao & Renvoize (*Arundinaria griffithiana* Munro; *Chimonobambusa griffithiana* (Munro) Nakai; *Chimonocalamus griffithianus* (Munro) J.R. Xue & T.P. Yi)

India. Erect, shrubby, gregarious, internodes furrowed, prominent nodes woolly and shortly spiny, culm sheath papery, terminal panicle surrounded by sheathing bracts, spikelets with 2 empty glumes, lemmas mucronate, 3 lodicules ciliate, 3 stamens, ovary glabrous, 2 plumose stigmas, thatching grass, see *Transactions of the Linnean Society of London* 26(1): 20. 1868 and *Journal of the Arnold Arboretum* 6(3): 151. 1925, *Acta Botanica Yunnanica* 1(2): 83-84. 1979, *Kew Bull.* 44(2): 353. 1989.

in India: hango maling, khanap, khnap, knap, ukhnep, usknep, uspar

S. hirsuta (Munro) Chao & Renvoize (*Arundinaria hirsuta* Munro; *Yushania hirsuta* (Munro) R.B. Majumdar)

India. Erect, tufted, shrubby, single stems from the rhizomes, internodes hirsute, culm sheath papery, 3 stamens, ovary glabrous, 3 plumose stigmas, young shoots edible, thatching grass, culms used for fencing, roofing, doors, nursery sheds, young leaves fodder for cattle, common in lowlands, low hills, see *Transactions of the Linnean Society of London* 26(1): 30. 1868 and *Kew Bull.* 44(2): 355. 1989, *Fl. Ind. Enumerat.-Monocot.* 282. 1989.

in India: daitsisal, uskong, ustoh

S. hookeriana (Munro) Chao & Renvoize (*Arundinaria hookeriana* Munro; *Chimonobambusa hookeriana* (Munro) Nakai; *Drepanostachyum hookerianum* (Munro) Keng f.; *Himalayacalamus hookerianus* (Munro) Stapleton)

India, Sikkim. Caespitose, slender, striate, nodes ringed, inflorescence at the nodes of leafless culms, 2 glumes membranaceous, 3 stamens, ovary glabrous, 2 plumose stigmas, seeds cooked like rice, cultivated, thatching grass, culms used for fencing and water pipes, leaves used as fodder, young shoots edible, grows on hill sides, see *Transactions of the Linnean Society of London* 26(1): 29. 1868 and *Journal of the Arnold Arboretum* 6(3): 151. 1925, *Journal of Bamboo Research* 2(1): 17. 1983, *Kew Bull.* 44(2): 358-359. 1989, *Bamboo Society Newsletter* 17: 21. 1993, *Edinburgh Journal of Botany* 51: 318. 1995.

in India: pagjiok-pao, pareng, praing, praong, prem, preng, prong, singhane, singhani, suighani

S. intermedia (Munro) Chao & Renvoize (*Arundinaria intermedia* Munro; *Arundinaria suberecta* Munro; *Chimonobambusa intermedia* (Munro) Nakai; *Drepanostachyum intermedium* (Munro) Keng f.; *Drepanostachyum suberecta* (Munro) R.B. Majumdar)

Northeast India, Sikkim. Shrubby, thin, caespitose, smooth, nodes swollen and ringed, 3 stamens, ovary oblong, plumose stigma, hedge plant, young shoots edible, culms used for making arrows, leaves used for thatching and roofing, see *Transactions of the Linnean Society of London* 26(1): 28, 32. 1868 and *Journal of the Arnold Arboretum* 6: 151. 1925, *Bulletin of the Botanical Survey of India* 25(1-4): 236. 1983, *Journal of Bamboo Research* 2(1): 18. 1983, *Kew Bull.* 44(2): 357. 1989, *Edinb. J. Bot.* 51: 308. 1994.

in India: lushai lik, nigala, nigalai, nigalo, ningalo, parmiok, permiok, permyok, prongnok, purmak, purmia, purmiak, purmiok, titay, tite, titi

in Nepal: lushai lik, nigalai, ningalo, titay, tite, tite nigalo, titi

in Thailand: phai chin, phai dang

S. jainiana (C.R. Das & D.C. Pal) H.B. Naithani (*Ampelocalamus patellaris* (Gamble) Stapleton; *Chimonobambusa*

jainiana C.R. Das & D.C. Pal; *Dendrocalamus patellaris* Gamble; *Drepanostachyum jainianum* (C.R. Das & D.C. Pal) R.B. Majumdar; *Drepanostachyum patellaris* (Gamble) J.R. Xue & D.Z. Li; *Patellocalamus patellaris* (Gamble) W.T. Lin; *Sinocalamus patellaris* (Gamble) T.Q. Nguyen)

India, Sikkim, West Bengal. Caespitose, flexible, long internodes striate and hairy, many fasciculate branches, leaves oblong-lanceolate attenuate at the base into a short petiole, loose drooping panicle, lemmas tip acute, paleas 2-keeled, 3 lodicules, 3 stamens, ovary glabrous, stigma plumose, culms used for weaving, leaves used as fodder, prefers humid and cool habitats, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 86-87, t. 75. 1896 and *Journal of Economic and Taxonomic Botany, Additional Series* 4(3): 1023. 1983, *Bulletin of the Botanical Survey of India* 25(1-4): 235. 1983 [1985], *Journal of South China Agricultural University* 10(2): 45-46. 1989, *Indian Forester* 116(12): 990. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 74(11): 1662. 1989, *Edinburgh Journal of Botany* 51(3): 321-323, f. 7. 1994, *Kew Bulletin* 51(4): 811. 1996.

S. kurzii (Gamble) Muktesh Kumar (*Arundinaria kurzii* Gamble; *Drepanostachyum kurzii* Majumdar; *Drepanostachyum kurzii* (Gamble) Pandey ex D.N. Tewari)

India. Rare, bushy, shrubby, thin, smooth, nodes prominent, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 25, t. 25. 1896 and *A Monograph on Bamboo* 90. Dehra Dun 1993.

S. longispiculata Chao & Renvoize (*Arundinaria longispiculata* Bor; *Chimonocalamus longispiculatus* (C.S. Chao & Renvoize) D.Z. Li; *Sinarundinaria longispiculata* (Bor) C.S. Chao & Renvoize)

India, Lushai Hills, Mizoram. Erect, reedlike, internodes glabrous, nodes yellowish velvety and thorny, leaves lanceolate tapering at the tip and cuneate at the base, leaf sheaths glabrous with small auricles, ligules conspicuous, on a leafy branch inflorescence terminal, several spikelets, glumes scabrous near the apex, paleas 2-keeled, 3 lodicules, 3 stamens, see *Kew Bulletin* 43(3): 411. 1988, *Flora Indica Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 276. Calcutta 1989, *Acta Botanica Yunnanica* 16(1): 41. 1994.

S. microphylla (Munro) Chao & Renvoize (*Arundinaria microphylla* Munro; *Yushania microphylla* (Munro) R.B. Majumdar)

India, Bhutan. Small, shrubby, caespitose, gregarious, nodes prominent, with long and hollow rhizome neck, leaves can be used as a fodder, can be planted in water logged areas, found in large patches in wet places, see *Transactions of the Linnean Society of London* 26(1): 32. 1868 and *Kew Bull.* 44(2): 354. 1989, *Fl. Ind. Enumerat.-Monocot.* 283. 1989.

S. nagalandiana Naithani

India, Nagaland. Thorny, erect, caespitose, dark branches, nodes prominent with a circle of conical stout short spines, culm sheath without ligule, see *Indian Forester* 120(12): 1120. 1994.

S. nitida (Mitford ex Stapf) Nakai (*Arundinaria nitida* Mitford; *Arundinaria nitida* Mitford ex Stapf; *Fargesia nitida* (Mitford) Keng f. ex T.P. Yi; *Fargesia nitida* (Mitford ex Stapf) Keng f. ex T.P. Yi; *Sinarundinaria nitida* Nakai; *Sinarundinaria nitida* (Mitf.) Nakai; *Thamnocalamus nitidus* (Mitford ex Stapf) Demoly)

Asia, China. Arching when old, sympodial, numerous branches at each node, sheaths spotless, culms used to weave baskets, see *Transactions of the Linnean Society of London* 26(1): 28. 1868, *Gard. Chron.* 3rd ser. 15: 301. 1894, *Gardener's Chronicle & Agricultural Gazette* ser. III 18: 186, f. 33. 1895, *Bull. Misc. Inform. Kew* 109: 20. 1896 and *Journal of Japanese Botany* 11(1): 1. 1935, *Bamb. Res. Asia* 58. 1980, *Journal of Bamboo Research* 6(4): 14. 1987, *Bambou* 9: 13. 1991, *Edinb. J. Bot.* 51: 308. 1994.

in English: fountain bamboo, hardy blue bamboo

in China: Huaxi jianzhu

in Japan: sen-chiku

S. pantlingii (Gamble) Chao & Renvoize (*Arundinaria pantlingii* Gamble; *Butania pantlingii* (Gamble) Keng f.; *Semiarundinaria pantlingii* (Gamble) Nakai; *Sinarundinaria pantlingii* (Munro) C.S. Chao & Renvoize; *Yushania pantlingii* (Gamble) R.B. Majumdar) (for the British botanist Robert Pantling, 1856/1857-1910 (Egypt), Kew gardener, Curator Royal Botanic Gardens Calcutta and Deputy Superintendent of the Government Cinchona Plantation in Bengal, illustrated Sir George King's (1840-1909) "The Orchids of the Sikkim-Himalaya." in *Annals of the Royal Botanic Garden, Calcutta*. 8(1-4). 1898; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 47. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

India, Arunachal Pradesh, Sikkim, Nepal, Tibet. Erect, shrubby, caespitose, smooth, thin-walled, node prominent with a softly hairy ring, culm sheaths coriaceous and stiffly hairy, 2 glumes slightly ciliate, paleas 2-keeled, 3 lodicules, 3 stamens, ovary glabrous, 3 plumose stigmas, flowering rare, grows in mountain slopes, subalpine zones, rocky areas, undergrowth in forests, often forming almost pure stands, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 129, t. 118. 1896 and *Journal of the Arnold Arboretum* 6: 151. 1925, *Journal of Bamboo Research* 1(2): 42. 1982, *Fl. Ind. Enumerat.-Monocot.* 283. 1989, *Kew Bulletin* 44(2): 359. 1989.

in India: bami, ha, hima, kalo-malingo, kalo-nigala, kalo-nigalo, maling, nigala

S. polystachya (Kurz ex Gamble) Chao & Renvoize (*Arundinaria polystachya* Kurz ex Gamble; *Chimonobambusa polystachya* (Kurz ex Gamble) Nakai; *Drepanostachyum polystachyum* (Kurz ex Gamble) Majumdar; *Sinarundinaria polystachya* (Gamble) C.S. Chao & Renvoize)

India. Shrubby, 3 stamens, ovary glabrous, 2 plumose stigmas, found in warm temperate to subtropical zone, on dry hills, rocky slopes, ridges, near the streams, see *Annals of the Royal Botanic Garden. Calcutta*. 7: 7, t. 5. 1896 and *Journal of the Arnold Arboretum* 6: 151. 1925, *Fl. Ind. Enumerat.-Monocot*. 277. 1989, *Kew Bulletin* 44(2): 359. 1989.

S. rolloana (Gamble) Chao & Renvoize (*Arundinaria rolloana* Gamble; *Yushania rolloana* (Gamble) T.P. Yi) (named for James Rollo)

India, Naga Hills. Rare, shrubby, stoloniferous, culms spaced, flattened on one side, thin-walled, nodes somewhat swollen with 1-3 branchlets, creeping rhizome with imbricate scale, very broad leaves, culms used for making whistles, see *Annals of the Royal Botanic Garden. Calcutta*. 7: 24, t. 23. 1896 and *Journal of Bamboo Research* 2(1): 39. 1983, *Kew Bull.* 44(2): 355. 1989.

in India: jipvo

S. suberecta (Munro) Muktesh Kumar (*Arundinaria suberecta* Munro; *Drepanostachyum suberectum* Majumdar; *Drepanostachyum suberecta* (Munro) R.B. Majumdar; *Sinarundinaria intermedia* (Munro) C.S. Chao & Renvoize)

India. Erect, shrubby, thick, wiry, nodes swollen, culms used in building of native huts, found in warm temperate to subtropical zone, hill forests, along the banks of rivers and streams, see *Transactions of the Linnean Society of London* 26(1): 28, 32. 1868 and *Bulletin of the Botanical Survey of India* 25(1-4): 236. 1983, *Kew Bulletin* 44(2): 357. 1989, *Edinb. J. Bot.* 51: 308. 1994.

in India: lambang, namlang, ukadai namlang

in Thai: phai cheen, phai chin, phai dang

S. walkeriana (Munro) Chao & Renvoize (*Arundinaria walkeriana* Munro; *Arundinaria wightiana* Thw.; *Indocalamus walkerianus* (Munro) Nakai; *Yushania walkeriana* (Munro) R.B. Majumdar) (presumably named for Mrs. A.W. Walker (née Paton), wife of General George Warren Walker (d. 1844), plant collectors in Ceylon, she illustrated the *Flora of Ceylon*. See *Companion to the Botanical Magazine*. 2: 194-200. 1837; Robert Wight, *Icones plantarum Indiae orientalis*, or figures of Indian plants. Madras [1838-] 1840-1853; Isaac Henry Burkill, *Chapters on the History of Botany in India*. 50. Delhi 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 710. London 1994)

Sri Lanka, India, Kerala, Tamil Nadu. Erect, shrubby, densely placed clumps, sympodial pachymorph rhizomes, hollow culms, internodes smooth or rough, nodes thick,

culm leaves deciduous, leaves acuminate, culm sheath papery, 3 lodicules fimbriate, stamens 3, ovary glabrous, 2-3 feathery stigmas, culms used for fencing and roofing, see *Transactions of the Linnean Society of London* 26(1): 21. 1868, and *Journal of the Arnold Arboretum* 6(3): 148. 1925, *Bull. Misc. Inform.* 1938: 126. 1938, *Smithsonian Contr. Bot.* 72: 27. 1988, *Fl. Ind. Enumerat.-Monocot*. 282. 1989, *Kew Bull.* 44(2): 354. 1989.

S. wightiana (Nees) Chao & Renvoize (*Arundinaria hispida* Steud.; *Arundinaria wightiana* Nees; *Arundinaria wightiana* var. *hispida* (Steud.) Gamble; *Indocalamus wightianus* (Nees) Nakai; *Indocalamus wightianus* var. *hispida* (Steud.) Nakai; *Yushania wightiana* (Nees) R.B. Majumdar; *Yushania wightiana* var. *hispida* (Steud.) R.B. Majumdar & Karth.)

South India, Sri Lanka. Erect, slender, gregarious, internodes very rough and flattened on one side, nodes swollen, shortly rhizomatous, 2 glumes, lemmas mucronate, paleas ciliate on the keels, 3 lodicules unequal, 3 stamens, ovary glabrous, 2-3 plumose stigmas, used for making baskets and fencing, flowering annually, in moist areas, fertile loam, on slopes, high hills, as an undergrowth, see *Linnaea* 9(4): 482. 1834, *Synopsis Plantarum Glumacearum* 1: 335. 1854, *Annals of the Royal Botanic Garden. Calcutta*. 7: 5. 1896 and *Journal of the Arnold Arboretum* 6: 149. 1925, *Fl. Ind. Enumerat.-Monocot*. 283. 1989, *Kew Bulletin* 44(2): 356. 1989.

in English: Nilgiri bamboo

in India: chewari

Sinoarundinaria Ohwi = *Phyllostachys* Sieb. & Zucc.

From the Greek *sinai* "the Chinese" and the genus *Arundinaria* Michx.

Bambusoideae, Bambuseae, Shibataeinae, type *Phyllostachys bambusoides* Siebold & Zucc., see *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften* 3(3): 746, pl. 5, f. 3. 1843 and Kanjiro Mayebar, *Florula austro-higoensis sive enumeratio plantarum in provincia Higo australe sponte nascentium ...* Japan 1931, *Contributions from the United States National Herbarium* 39: 100-104, 113. 2000.

Sinobambusa Makino ex Nakai = *Menstrucalamus* T.P. Yi, *Neobambos* Keng f., *Neobambus* Keng f., *Neobambus* Keng ex Keng f., *Sinobambusa* Nakai, *Sinobambusa* Makino

A Chinese bamboo, from the Greek *sinai* "the Chinese" and *Bambusa*.

About 16-24 species, eastern Asia, China and Vietnam, Japan. Bambusoideae, Bambusodae, Bambuseae, Shibataeinae, perennial, monopodial branching or amphipodial, shrub or small tree, woody, unarmed, persistent, long internode, 3-5 spreading branches at each node, rhizomatous, culm sheath thin, sheath deciduous, leaves lanceolate and hairy, plants bisexual, inflorescence with slender pseudospikelets, glumes very unequal, palea present, 3 free and membranous lodicules, 2-4 stamens, ovary glabrous without the apical appendage, 2-3 feathery stigmas, in forests, similar to *Indosasa* McClure, type *Sinobambusa tootsik* (Makino) Makino, see *Journal of the Arnold Arboretum* 6(3): 150, 152. 1925, *Technical Bulletin of the National Forestry Research Bureau* (China) 8: 15. 1948, *Taxon* 6(7): 209. 1957, *Journal of Bamboo Res.* 1: 140-164. 1982, *Journal of Bamboo Research* 2(1): 57. 1983, *Kew Bulletin* 44(2): 349-367. 1989, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Journal of Bamboo Research* 11(1): 38, 40. 1992, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

Species

S. acutiligulata W.T. Lin

China. See *Journal of Bamboo Research* 12(2): 39, f. 4. 1993.

S. anaurita Wen

China. See *Journal of Bamboo Res.* 2(1): 62-63, f. 15. 1983.

S. baccanensis T.Q. Nguyen

Vietnam, Bac thai. Montane, forest, see *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 879. 1991.

S. dushanensis (C.D. Chu & J.Q. Zhang) Wen (*Arundinaria dushanensis* C.D. Chu & J.Q. Zhang)

China, Guizhou. Sheath deciduous and coriaceous, sheath blade lanceolate, sheath auricle densely hairy to ciliate, sheath ligule arcuate or truncate, leaves long lanceolate, see *Journal of Bamboo Res.* 1(1): 1, f. 1. 1982 [or *Bamboo Research in Asia* 1982(1): 1, t. 1. 1982], *Journal of Bamboo Res.* 6(3): 33. 1987.

S. exaurita W.T. Lin

China. See *Acta Phytotaxonomica Sinica* 26(3): 228-229, pl. 7. 1988.

S. farinosa (McClure) T.H. Wen (*Semiarundinaria farinosa* McClure; *Sinobambusa farinosa* (McClure) Wen ex Wen)

China, Guangdong, Jiangxi. Young culm densely pruinose, 3 branches at each node, sheath caducous densely pruinose, sheath auricle sickle-shaped, sheath ligule finely ciliate, 3-6 leaves per twig, leaves lanceolate, hardy, montane, see *Lingnan Univ. Sci. Bull.* no. 9: 45. 1940, *Journal of Bamboo Res.* 1(1): 35, 153. 1982.

S. fimbriata Wen (*Phyllostachys aurita* J.L. Lu)

China. See *J. Henan Agr.* 1981(2): 70, f. 1. 1981, *Journal of Bamboo Res.* 7(1): 25-27, f. 2. 1988.

S. henryi (McClure) C.D. Chu & C.S. Chao (*Semiarundinaria henryi* McClure)

China, Guangdong, Guangxi. Young culm minutely hairy, densely pruinose below joint, sheath coriaceous and caducous, sheath blade erect and lanceolate, sheath auricles scabrous, sheath ligule very short, usually and normally 3-5 leaves on each twig, leaf blades lanceolate or long lanceolate, leaves finely densely pubescent beneath, see *Lingnan Univ. Sci. Bull.* no. 9: 48. 1940, *Acta Phytotax. Sin.* 18(1): 32. 1980.

S. humilis McClure (*Indocalamus humilis* (McClure) Wen; *Sinobambusa humila* McClure)

China. Clump forming, see *Lingnan Univ. Sci. Bull.* no. 9: 59. 1940, *Journal of Bamboo Res.* 1(1): 35. 1982, *Journal of Nanjing University, Natural Sciences* vol. 26(2): 282-290. 1987.

S. incana Wen

China, Guangdong. Erect, arched, curved, yellowish greenish, sheath blade erect and smooth, sheath auricles weak with dark tomentum, sheath ligule shortly ciliate, 2-4 leaves on each twig, leaves glabrous, leaf blades lanceolate or narrow lanceolate, see *Journal of Bamboo Res.* 1(2): 13, 143, 147, f. 4. 1982.

S. intermedia McClure (*Arundinaria longifimbriata* (S.Y. Chen) Wen; *Arundinaria nanningensis* Q.H. Dai; *Pleioblastus longifimbriatus* S.Y. Chen)

China, Guangdong, Guangxi, Sichuan. Young culm white pubescent, pruinose ring below joint, sheath blade narrow lanceolate and erect, sheath auricles falciform and ciliate, sheath ligule ciliate, 2-4 leaves on each twig, leaves ovate-lanceolate, hardy, see *Lingnan Univ. Sci. Bull.* no. 9: 61. 1940, *Journal of Bamboo Res.* 1(2): 149, f. 5. 1982, *Acta Phytotax. Sin.* 21(4): 411, f. 7. 1983, *Journal of Bamboo Res.* 6(3): 34. 1987.

S. nandanensis Wen

China. See *Journal of Bamboo Res.* 6(3): 29, f. 1. 1987.

S. nephroaurita C.D. Chu & C.S. Chao

China, Guangdong, Guangxi, Sichuan. Young culm slightly pruinose, 3 or more branches at each node, sheath caducous and coriaceous, sheath blade triangular or narrow lanceolate, sheath auricles kidney- or sickle-shaped, sheath ligule pubescent or glabrous, 4-5 leaves at each twig, both surfaces of the leaves glabrous, leaf blades broadly lanceolate or narrowly lanceolate, see *Acta Phytotaxonomica Sinica* 18(1): 32-33, pl. 6. 1980.

S. parvifolia Wen & S.Y. Chen (*Arundinaria sulcata* (Z.P. Wang & G.H. Ye) C.S. Chao & G.Y. Yang; *Oligostachyum sulcatum* Z.P. Wang & G.H. Ye)

China. See *Journal Nanjing University. Natural Sciences Edition* 1982(1): 95, 96, f. 1. 1982, *Journal of Bamboo Res.* 6(3): 31, f. 2. 1987, *Journal of Zhejiang Forestry College*

8(1): 127-130. 1991, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Journal of Bamboo Research* 13(1): 10. 1994, *Acta Phytotaxonomica Sinica* 37(6): 541-544. 1999.

S. rubroligula McClure (*Sinobambusa rubroligulata* McClure)

China, Guangdong. Solid, tough, grayish green to glaucous, branching at the lower portion of the culm, pruinose ring below the joint, nodes swollen, culm sheath auricles absent, sheath ligule hairy and purple, 5-7 leaves on each twig, leaf blades lanceolate or elliptic-lanceolate, see *Lingnan Univ. Sci. Bull.* no. 9: 65. 1940, *Journal of Bamboo Res.* 1(2): 154, f. 8. 1982.

S. sat (Balansa) C.S. Chao & Renvoize (*Arundinaria sat* Balansa; *Arundinaria sat* var. *laxa* Camus; *Indosasa sat* (Balansa) Nguyen; *Semiarundinaria sat* (Balansa) Nakai; *Sinobambusa sat* (Bal.) T.Q. Nguyen)

Vietnam. Mountains, see *J. Bot. Paris* 4: 28. 1890 and *Bamb.* 46. 1913, *Journal Arnold Arboretum* 6: 151. 1925, *Kew Bulletin* 44(2): 366. 1989, *Bot. Zhurn.* 75(2): 225. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 879. 1991.

S. scabrada T.H. Wen

China, Guangxi. Young culm pruinose, sheath coriaceous and triangular, sheath auricles oblong and hairy to ciliate, sheath ligule shortly ciliate, 3-4 leaves on each twig, leaf blades lanceolate to narrow lanceolate, leaves glabrous both sides, see *Journal of Bamboo Res.* 2(1): 61, f. 13. 1983.

S. seminuda Wen

China, Yunnan, Fujian. Erect, curved, more or less flat to cylindrical, 3 branches at each node, young culm pruinose below joint, sheath blade narrow triangular, sheath auricles purplish and falciform, sheath ligule ciliate, 5-6 leaves at each twig, leaves lanceolate to broadly lanceolate, used for weaving, see *Journal of Bamboo Res.* 1(2): 18, 144, 152, f. 7. 1982.

S. solearis (McClure) Nguyen (*Indosasa solearis* McClure)

Vietnam. Mountains, forming thickets, see *Journal Arnold Arboretum* 23(1): 94-95. 1942, *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 879. 1991.

S. striata Wen

China, Jiangxi. Young culm pruinose below joint, sheath coriaceous and triangular, sheath auricles elliptic and ciliate, 2 leaves on each twig, leaves lanceolate and sparsely hairy beneath, used for weaving, timber bamboo, see *Journal of Bamboo Res.* 2(1): 63, f. 16. 1983.

S. sulcata W.T. Lin & Z.M. Wu

China. See *Journal of Bamboo Res.* 11(1): 33, f. 5. 1992.

S. tootsik (Makino) Makino (*Arundinaria dolichantha* Keng; *Arundinaria tootsik* Sieb. ex Makino; *Arundinaria tootsik* (Sieb.) Makino; *Bambos tootsik* Siebold; *Bambusa tootsik* Zoll.; *Neobambus dolichanthus* (Keng) Keng ex P.C. Keng; *Pleioblastus dolichanthus* (Keng) P.C. Keng;

Semiarundinaria tootsik (Sieb. ex Makino) Muroi; *Semiarundinaria tootsik* (Sieb.) Muroi; *Sinobambusa tootsik* Makino; *Sinobambusa tootsik* (Siebold ex Makino) Makino ex Nakai; *Sinobambusa tootsik* (Siebold ex Makino) Makino; *Sinobambusa tootsik* (Siebold) Makino) (the species named from *too* or *tô* "China, Chinese" and *tsik* or *chiku* meaning bamboo)

China, Guangdong, Sichuan, Fujian. Cylindrical culms, young culm dark green and pruinose, usually 3 branches per node, nodes strongly prominent and densely pilose, a pruinose ring below joint, internodes elongated, sheath caducous, coriaceous culm sheaths broadly lanceolate, sheath auricles ovate to falciform and ciliate, sheath ligule arched, leaf blades lanceolate and broadly cuneate at the base, 3-9 leaves terminal toward the top of branches, spikelets thin and very long, many florets, 1 glume ovate and acuminate, lemmas ovate, palea present, 3 ovate lodicules, 3 stamens exerted, ovary cylindrical, 3 feathery stigmas, ornamental, cultivated, hedge plant, flowers gregariously, see P.F. [Balthasar] von Siebold (1796-1866), *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* 12: 5. 1830 [orig. publ.: *Synopsis Plantarum Oeconomicarum Universi Regni Japonici ... Batavia*], *Syst. Verz. Ind. Archip.* 1. 1854 and *Botanical Magazine* (Tokyo) 14: 62. 1900, *Bot. Magaz. Tokyo* 19: 63. 1905, *J. Jap. Bot.* 2: 8. 1918, *Journal Arnold Arboretum* 6: 152. 1925, *Sinensia* 7: 418. 1936, *Amatores Herbarii* 10: 210. 1942, *Techn. Bull. Nation. For. Res. Bur. China* no. 8: 15. 1948, *Claves Gen. Spec. Gramin. Sinic.* 154. 1957, *Journal of Bamboo Res.* 1(2): 145, f. 3. 1982, *Journal of Japanese Botany* 70(4): 238. 1995.

in English: China bamboo, Chinese temple bamboo

in Japan: *tô-chiku*, *tou-chiku*, *Suzuko-narihira*, *suzukonarihira* (with numerous yellowish white stripes on the leaves), *shima-daimyo*, *shima-daimyou*, *shima-tochiku*, *shima-touchiku*

in Okinawa: *kanso-daki*

S. tootsik (Makino) Makino var. ***dentata*** Wen

China, Fujian. Sheath ligule serrate or dentate, leaves back glabrous, see *Journal of Bamboo Res.* 1(2): 13, 143, 147. 1982.

S. tootsik (Makino) Makino var. ***laeta*** (McClure) Wen (*Semiarundinaria tootsik* var. *laeta* (McClure) Wen; *Sinobambusa laeta* McClure)

China. Culm sheaths ligule truncate, see *Lingnan Univ. Sci. Bull.* no. 9: 63. 1940, *Journal of Bamboo Res.* 1(2): 13, 143, 147. 1982.

S. tootsik (Makino) Makino var. ***maeshimana*** Muroi (*Semiarundinaria tenuifolia* Koidzumi; *Sinobambusa tootsik* f. *maeshimana* (Muroi) Hatusima; *Sinobambusa tootsik* var. *maeshimana* Muroi ex Sugimoto; *Sinobambusa tootsik* var.

maesimae Muroi; *Sinobambusa tootsik* var. *tenuifolia* (Koidzumi) S. Suzuki)

China. See *Acta Phytotax. Geobot.* 11: 314. 1942, *New Keys of Japanese Trees*, revised edition. 475. Osaka 1961, *Guide Book Fuji Bamb. Gard.* 53. 1963, *Woody Pl. Jap.* 712. 1976, *Index Jap. Bamb.* 96, 339. 1978.

in Japan: hosobo-narihira-dake

S. tootsik (Makino) Makino var. *tenuifolia* (Koidzumi) S. Suzuki (*Semiarundinaria tenuifolia* Koidzumi; *Sinobambusa tootsik* var. *maeshimana* Muroi; *Sinobambusa tootsik* var. *maeshimana* Muroi ex Sugimoto)

China, Guangxi, Wuzhou. Leaves surfaces glabrous, apex of sheath ligule entire, see *Acta Phytotaxonomica et Geobotanica* 11(4): 314. 1942, *New Keys Japan. Trees* 475. 1961, *Guide Book Fuji Bamb. Gard.* 53. 1963, *Woody Pl. Jap.* 712. 1976, *Index Jap. Bamb.* 96, 339. 1978.

S. urens Wen

China, Fujian. Pruinose, initially hirsute, 3 branches at each node, sheath coriaceous, sheath auricles oblong to sickle-shaped, sheath ligule margin ciliate, 4-5 leaves at each twig, leaves lanceolate to broadly lanceolate, see *Journal of Bamboo Res.* 2(1): 59, f. 12. 1983.

S. yixingensis C.S. Chao & K.S. Xiao

China. Young culm tomentose, 3 branches at each node, small sheath blade lanceolate, leaves oblong-lanceolate shortly pubescent beneath, cultivated, see *J. Nanjing Inst. For.* no. 26: 20, f. 3. 1985 [also *Journal of Nanjing Agricultural College* 1985(4): 20. 1985].

Sinocalamus McClure = *Dendrocalamopsis*

(L.C. Chia & H.L. Fung) Keng f.,

Dendrocalamus Nees

Greek *sinai* “the Chinese” and *kalamos* “reed.”

Bambusoideae, Bambuseae, Bambusinae, type *Sinocalamus latiflorus* (Munro) McClure, this genus often in *Dendrocalamus*, see *Linnaea* 9(4): 476-477. 1835 and *Indian Forester* 58: 7. 1932, *Lingnan University Science Bulletin* 9: 66-67. 1940, *Acta Phytotaxonomica Sinica* 18(2): 211-216. 1980, *Journal of Bamboo Research* 2: 11-12, 148. 1983, *Kew Bulletin, Additional Series* 13: 54. 1986, [*Genera Graminum*], *Journal of Bamboo Research* 7(4): 9, 13. 1988, *Journal of South China Agricultural University* 10(2): 43, 45-46. 1989, *Bamboo Research in Asia* 1990(1): 3, 5. 1990, Z.-L. Li, The *Flora of China* Bambusoideae project, problems and current understanding of bamboo taxonomy in China. *The Bamboos* 5: 61-81. 1997, *Contributions from the United States National Herbarium* 39: 54-55, 113. 2000.

Sinochasea Keng = *Pseudodanthonia* Bor & C.E. Hubb.

Greek *sinai* “the Chinese” and *Chasea* Nieuwl., dedicated to the American botanist Mary Agnes Chase (née Merrill), 1869-1963, agrostologist, plant collector, traveler.

Monotypic, China, Qinghai, Xixang. Pooideae, Poodae, Aveneae, perennial, herbaceous, caespitose, auricles absent, sheaths glabrous, leaves not pseudopetiolate, ligule an unfringed membrane, plants bisexual, contracted inflorescence paniculate, spikelets pedicellate and disarticulating above the glumes, 2 glumes subequal, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 3 stigmas, type *Sinochasea trigyna* Keng, see *Claves Gen. Sp. Gram. Prim. Sinic.* 204. 1957, *Kew Bulletin* 12: 425. 1958, Yi Li Keng (1897-1975), *Journal of the Washington Academy of Sciences* 48(4): 115-118, f. 1. 1958.

Species

S. trigyna Keng (*Pseudodanthonia trigyna* (Keng) Clayton)

China. See *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 204. 1957, *Journal of the Washington Academy of Sciences* 48(4): 115-117, f. 1. 1958, *Kew Bulletin* 40(4): 729. 1985.

Sirochloa S. Dransfield = *Nastus* Juss.

One species, Madagascar. Bambusoideae, Bambuseae, Nastineae, clambering, scrambling, woody bamboos, determinate inflorescences, 1 floret in the spikelet, type *Sirochloa parvifolia* (Munro) S. Dransf., see *Genera Plantarum* 34. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 580. 1791 and *Kew Bulletin* 57(4): 963-970. 2002.

Species

S. parvifolia (Munro) S. Dransf. (*Schizostachyum bosseri* A. Camus; *Schizostachyum parvifolium* Munro)

Madagascar. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829, *Transactions of the Linnean Society of London* 26(1): 136. 1868 and *Bulletin de la Société Botanique de France* 104: 281. 1957.

Sitanion Raf. = *Elymus* L.

Greek *sitos* “grain,” *setaneios*, *setanios*, *satanios* “of this year, spring-wheat,” *sitanias pyros* “a branching cereal” (Theophrastus, *HP.* 8.2.3), Latin *sitanium*, *a*, *um* “of this year, of summer wheat.”

About 0-7 species, Northern America. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, very variable and intergrading, tufted, herbaceous, erect, spreading, hollow internodes, auricles present, ligule an unfringed

membrane, plants bisexual, inflorescence spicate short-exserted or partly included, raceme linear to oblong, bristly spikelets in groups of 2-3, central spikelet fertile and the laterals sterile, upper floret reduced, 2 glumes very narrow more or less equal, acicular glumes and bractiform involucres, awned lemmas, spikelets falling with the glumes, palea present, 2 free and membranous lodicules, 3 stamens, ovary hairy, 2 stigmas, dry hills, plains, open woods and rocky slopes, often included in *Elymus*, type *Sitanion elymoides* Raf., hybrids with *Agropyron*, *Elymus*, *Hordeum* and *Lophopyrum*, see *Species Plantarum* 1: 83-84. 1753, C.S. Rafinesque, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, *Annals of Natural History* 1: 284. 1838, *Genera Plantarum* 3(2): 1207. 1883, *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 10, 12-13, 15, 17, 19-20, t. 3. 1899 and E.D. Merrill, *Index rafinesquianus* 76. 1949, *Canad. J. Bot.* 42: 554. 1964, D.R. Dewey, "A worldwide survey of the genus *Elymus*—its phylogeny, taxonomy, and breeding potential." *Proc. Western Grass Breeders Conf.* 22: 13-20. 1973 (Conference Proceedings), D.R. Dewey, "Cytogenetics of *Agropyron ferganense* and its hybrids with 6 species of *Agropyron*, *Elymus*, and *Sitanion*." *American Journal of Botany* 68(2): 216-225. 1981, D.R. Dewey, "Historical and current taxonomic perspectives of *Agropyron*, *Elymus* and related genera." *Crop Sci.* (Madison) 23: 639. 1983, M.E. Barkworth and D.R. Dewey, "Genomically based genera in the perennial Triticeae of North America: identification and membership." *American Journal of Botany* 72(5): 767-776. 1985, *Genera Graminum* 152. 1986, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, David S. Dobkin, Adam C. Rich and William H. Pyle, "Habitat and Avifaunal Recovery from Livestock Grazing in a Riparian Meadow System of the Northwestern Great Basin." *Conservation Biology* 12(1): 209-221. Feb 1998, *Restoration Ecology* 7(2): 172-182. June 1999, Jason P. Kaye, Stephen C. Hart, Richard C. Cobb and Joseph E. Stone, "Water and Nutrient Outflow Following the Ecological Restoration of a Ponderosa Pine-Bunchgrass Ecosystem." *Restoration Ecology* 7(3): 252-261. Sep 1999, *Restoration Ecology* 9(4): 421-431. Dec 2001, *Contributions from the United States National Herbarium* 48: 279-307, 612-614. 2003, *Journal of Ecology* 91(1): 36-48. Feb 2003, Steven R. Larson, Thomas A. Jones and Kevin B. Jensen, "Population structure in *Pseudoroegneria spicata* (Poaceae: Triticeae) modeled by Bayesian clustering of AFLP genotypes." *Am. J. Bot.* 91: 1789-1801. 2004.

Species

S. brevifolium J.G. Sm.

North America. Perennial, see *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 17, t. 3. 1899.

S. californicum J.G. Sm.

North America. See *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 13. 1899.

S. elymoides Raf. (*Elymus elymoides* (Raf.) Swezey)

North America. See *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, *Doane College Natural History Studies* 1: 155. 1891.

S. hystrix (Nutt.) J.G. Smith (*Aegilops hystrix* Nutt.; *Elymus elymoides* subsp. *elymoides* (Raf.) Swezey)

U.S. Perennial, erect, spreading, ligule membranous, spike cylindrical, 2 spikelets at each node of the articulate rachis, 2- to 6-floreted, cultivated, good forage, medicinal, culinary uses, see *The Genera of North American Plants* 1: 86. 1818, *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 15, t. 2. 1899 and *Bull. Torrey Bot. Club* 89: 217-228. 1962, *Bull. Torrey Bot. Club* 91: 396-405. 1965, *Bot. Gaz.* 128: 11-16. 1967, *Bull. Torrey Bot. Club* 94: 395-404. 1967, *Bot. Gaz.* 129: 309-315, 316-322. 1968, *Am. J. Bot.* 56: 664-670. 1969, *Bot. Gaz.* 130: 203-213. 1969, *Bot. Gaz.* 131: 210-216. 1970, *Am. J. Bot.* 58: 902-908. 1971, *Am. J. Bot.* 68: 216-225. 1981.

in English: squirrel tail

in French: queue d'écureuil

in Mexico: triguillo, triguillo desértico

S. hystrix (Nutt.) J.G. Smith var. *brevifolium* (J.G. Sm.) C.L. Hitchc. (*Elymus elymoides* (Raf.) Swezey subsp. *brevifolius* (J.G. Sm.) Barkworth)

U.S. Perennial, tufted, erect to spreading, see *Vascular Plants of the Pacific Northwest* 1: 701. 1969.

in English: bottlebrush squirreltail

S. jubatum J.G. Sm.

North America. See *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 10. 1899.

S. longifolium J.G. Sm. (*Elymus longifolius* (J.G. Sm.) Gould)

North America. Forage, see *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 18. 1899 and *Brittonia* 26(1): 60. 1974.

in Mexico: cola de ardilla

S. multisetum J.G. Sm. (*Elymus multisetus* (J.G. Sm.) Burtt Davy; *Elymus multisetus* M.E. Jones, nom. illeg., non *Elymus multisetus* (J.G. Sm.) Burtt Davy)

North America. See *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 11. 1899 and *University of California Publications in Botany* 1: 57. 1902, *Contributions to Western Botany* 14: 20. 1912, *Hereditas; genetiskt arkiv.* 114: 35-39. 1991.

Sitopsis (Jaub. & Spach) Á. Löve =
Aegilops L.

From the Greek *sitos* “grain” and *opsis* “like, resemblance.”

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 1: 85. 1753, *Species Plantarum* 2: 1050-1051. 1753, *Flora Aegyptiaco-Arabica* 26. 1775, *Flora* 39: 109. 1837, *Illustrationes Plantarum Orientalium* 4: 21. 1851, *Flore de France* 3: 601. 1856 and *A Manual Flora of Egypt* by Dr. Reno Muschler ... 1: 156. 1912, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 10: 489. 1928, *Israel Journal of Botany* 26(4): 191. 1978, *Feddes Repert.* 91: 225-228. 1980, *Biologisches Zentralblatt* 101(2): 206. 1982, *Feddes Repertorium* 95(7-8): 491-492. 1984, *Taxon* 41: 555-556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 20-23, 614. 2003.

x Sitordeum Bowden

Hordeum x *Sitanion*, see *Canadian Journal of Botany* 45: 722. 1967, *Genera Graminum* 375. 1986.

Sitospelos Adans. = Elymus L.

Greek *sitos* “grain” and *pelos* “black.”

Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 83. 1753, *Familles des Plantes* 2: 36, 606. 1763 and *Canad. J. Bot.* 42: 554. 1964, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307, 614. 2003.

Smidetia Raf. = Coleanthus J. Seidel

For the German botanist Franz Wilibald Schmidt (born in Bohemia), 1764-1796, professor of botany, physician; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 231. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Pooideae, Poeae, Agrostidinae, see C.S. Rafinesque, *Autikon botanikon*. Icones plantarum select. nov. vel rariorum, etc. 187. Philadelphia 1840 and E.D. Merrill, *Index rafinesquianus* 76. 1949, *Contributions from the United States National Herbarium* 48: 237, 614. 2003.

Snowdenia C.E. Hubbard = Beckera
Fresen., *Paratheria* Griseb.

After the British (b. Silverdale, Staffs) botanist Joseph Davenport Snowden, 1886-1973, Kew gardener, economic botanist, traveler and plant collector (Uganda), wrote *The Cultivated Races of Sorghum*. London 1936; see T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 375. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 641-642. London 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

About 4 species, northeast tropical Africa, Ethiopia, Yemen and Sudan. Panicoideae, Panicodae, Paniceae, Arthropogoneae, annual or perennial, herbaceous, auricles absent, leaf sheaths loose and scabrid or smooth, ligule membranous, leaves flat, plants bisexual, inflorescence cylindrical raceme-like on slender peduncles in the axils of the upper leaves, spikelets pedicellate lanceolate 2-flowered, involucre bristle suppressed, 2 glumes very short reduced to small scales, lower lemma 5- to 7-nerved and usually awned, upper lemma 3-nerved membranous, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, native pasture species, in forest margins, field borders, areas of high rainfall, rocky slopes, partial shade, roadsides, ditches, waste grounds, similar to a subset of *Pennisetum*, type *Snowdenia microcarpha* C.E. Hubb., see *Museum Senckenbergianum* 2: 132. 1837, *Flora* 38: 199. 1855, *Catalogus plantarum cubensium* ...236. 1866 and *Bulletin of Miscellaneous Information Kew* 1929(1): 30-31. 1929, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14: 103. 1938, *Flora of Tropical East Africa* 451-898. 1982, *Flora of Ethiopia and Eritrea* 7: 257-258. 1995.

Species

S. microcarpha C.E. Hubb.

Uganda. See *Bull. Misc. Inform. Kew* 1929(1): 31. 1929.

S. mutica (Hochst.) Pilg. (*Beckera gracilis* Hochst.; *Beckera mutica* Hochst.)

Ethiopia. Perennial, slender, smooth, rambling, branching, rooting at the lower nodes, knotty rootstock with basal buds, leaf blades linear finely acuminate, leaf sheaths smooth, ligule glabrous, loose and slender racemes, 1-2 peduncles per leaf axil, spikelets narrowly lanceolate often awnless, glumes rounded or lobed, lower lemma acuminate, upper lemma acute shortly mucronate, damp shady places, very close to *Snowdenia petitiana*, see *Flora* 27: 514. 1844, *Flora* 38: 199. 1855.

S. petitiانا (A. Rich.) C.E. Hubbard (*Beckera petitiانا* A. Rich.; *Beckera scabra* Pilg.; *Snowdenia scabra* (Pilg.) Pilg.) East Africa, Arabia, Yemen. Annual, weak, wiry, delicate, slender, rambling, straggling, scandent, ascending, rooting at the lower nodes, leaf blades narrowly lanceolate, leaf sheaths slightly scabrous, 1-4 peduncles per leaf axil, spikelets acuminate lanceolate, glumes truncate to ovate, lower lemma acuminate and shortly awned, upper lemma acute and shortly mucronate, in light shade, damp places, see *Tentamen Florae Abyssinicae* ... 2: 358. 1850 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 653. 1932, *Hooker's Icones Plantarum* 37: t. 3647. 1967.

S. polystachya (Fresen.) Pilg. (*Beckera polystachya* Fresen.; *Beckera polystachya* var. *schimper* (Hochst.) Dur. & Schinz.; *Beckera schimper* Hochst.; *Beckera valida* Gay ex Fresen.)

Ethiopia, Arabia. Annual, densely to loosely tufted, decumbent and erect, slender to robust, much-branched, rooting at the lower nodes, leaf blades broadly linear, 1-6 peduncles per leaf axil, spikelets truncate to acute, glumes truncate, lower lemma shortly awned, upper lemma obtuse, famine food, fodder grass, weed, along roadsides, fallow land, gardens, light shade, see *Flora* 27: 513. 1844, *Botanische Zeitung. Berlin* 2: 354. 1844, *Conspectus Florae Africae* 5: 736. 1894.

in Ethiopia: muja

Soderstromia C. Morton = *Bouteloua* Lag., *Fourniera* Scribn., *Fourniera* J. Bommer ex E. Fourn. (Cyattheaceae)

Named for the American botanist Thomas Robert Soderstrom, 1936-1987, agrostologist, traveler, explorer and bamboo expert, New York Botanical Garden Exploration of the Wilhelmina Gebergte, Suriname, editor of *Grass Systematics and Evolution*. Proceedings of the International Symposium on Grass Systematics and Evolution, Washington, D.C., 27-31 July 1986. Smithsonian Institution Press, Washington, D.C. 1987; see *Phytologia* 24: 210, 445. 1972, *Atlas Soc. Biol. Rio Janeiro* 17: 63-67. 1974, *Bull. Torrey Bot. Club* 106: 309. 1979, *Ann. Missouri Bot. Gard.* 68: 3015-47 1981, *Brittonia* 37: 4, 15. 1985, *J. Bromel. Soc.* 37: 79-81. 1987, *Revista Brasil. Biol.* 48: 956. 1988, *Smithsonian Contributions to Botany* 72: 1-75. 1988, *Bull. Natl. Sci. Mus.* sér. B. 27(1): 4. 2001.

One species, Mexico, Mesoamerica. Chloridoideae, Cynodonteae, Boutelouinae, annual or perennial, herbaceous, branched, slender, stoloniferous, auricles absent, ligule a densely fringed membrane, plants monoecious or dioecious, all the fertile spikelets unisexual, inflorescence a false spike, clustered spikelets, male flowers 3-staminate, male spikelets with 2 fertile florets, glume-like basal bracts, palea 2-nerved

2-keeled, 2 free and membranous lodicules, no stamens, open areas, gravelly soil, grasslands, type *Fourniera mexicana* Scribn., see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Gen. Sp. Nov.* 5. 1816, *Annales des Sciences Naturelles; Botanique, sér.* 5, 18: 347. 1873, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 7-9. 1897 and *Leaflets of Western Botany* 10(16): 327. 1966, *Genera Graminum* 251. 1986, *Cuscutania* 1(6): 1-29. 1991, *Flora Mesoamericana* 6: 297. 1994, *Contributions from the United States National Herbarium* 41: 20-33, 121, 195. 2001.

Species

S. mexicana (Scribn.) C.V. Morton (*Bouteloua mexicana* (Scribn.) Columbus; *Fourniera mexicana* Scribn.)

Mexico, Honduras. Annual or perennial, spikelets axes reduced, glumes absent, growing in loose gravelly soil, see *Aliso* 18(1): 63. 1999.

Soejatmia K.M. Wong

Dedicated to the plant taxonomist Soejatmi Dransfield, tropical bamboo specialist, author of *The Bamboos of Sabah*. Sabah Forest Records, no. 14. Forestry Department, Sabah, Malaysia 1992.

Monotypic genus, Peninsular Malaysia, tropical Asia. Bambusinae, wrinkled thickened culm-sheath base, wild, lowland, hill, forest, type *Soejatmia ridleyi* (Gamble) K.M. Wong, see *Kew Bulletin* 48(3): 517-532. 1993, *Plant Resources of South-East Asia* (PROSEA) (PI Res SEAs) 7: 17, 18, 34. 1995.

Species

S. ridleyi (Gamble) K.M. Wong (*Bambusa ridleyi* Gamble) (for the British botanist Henry Nicholas Ridley, 1855-1956 (Kew, Surrey), plant collector, botanical explorer, traveler, author of *The Flora of the Malay Peninsula*. London 1922-1925; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 155. 1965; E.D. Merrill, *An Enumeration of Philippine Flowering Plants*. 4: 221-222. Manila 1925-1926)

Peninsular Malaysia. Slender, erect to suberect, vigorous, narrow and long culms, drooping, clambering, culms entangled, wrinkled and thickened culm internode bases, inflorescence of pseudospikelets, each pseudospikelet rachilla with rather long internodes, nodes from the pseudospikelet base upward are 3-4 empty bracts, 1-2 vestigial terminal flowers, bifid palea, 3 lodicules, 6 stamens, ovary apex shortly hairy, 3 stigmas, found in lowland forest, see *Genera Plantarum* 1: 236. 1789, *Annals of the Royal Botanic Garden. Calcutta*. 7: 34, t. 32. 1896, *Fl. Brit. Ind.* 7: 388. 1896 and *Kew Bulletin* 48(3): 532, f. 7. 1993.

in Malay: buluh akar

Sohnsia Airy Shaw = *Calamochloa* E. Fourn., *Calamochloe* Rchb., *Eufournia* Reeder

Named for the American botanist Ernest Reeves Sohns, 1917-2001, botanical collector in Mexico 1951-1956, 1949 Ph.D. taxonomy and morphology of the Gramineae.

One species, North America, Mexico. Chloridoideae, Cynodonteae, or Eragrostideae, perennial, erect, caespitose, glaucous, rhizomatous, herbaceous, unbranched, forming clumps, lower sheaths persistent, leaves mostly basal, auricles absent or rarely present, ligule fringed or a line of hairs, leaf blades linear flexuous, plants dioecious, contracted spike inflorescence exserted, spikelets solitary and pedicellate, male spikelets 3-5 flowered, 2 glumes more or less equal, second glume awnless, lemma cleft and awned, lemma nerves extended into 3 subulate awns, palea keels winged, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas, dry places, slopes, hillsides, calcareous soils, type *Sohnsia filifolia* (E. Fourn.) Airy Shaw, see *Conspectus Regnum Vegetabilis ... Pars I*. 1828, *Bulletin de la Société Botanique de France* 24: 177-178. 1877 and *The Families of Flowering Plants* 2: 199-229. 1934, *Journal of the Washington Academy of Sciences* 46: 109-112. 1956, *American Journal of Botany* 51: 453-463. 1964, *Kew Bulletin* 18(2): 272. 1965, *Brittonia* 19: 244. 1967, *Bulletin of the Torrey Botanical Club* 94: 1-17. 1967, *Contributions from the United States National Herbarium* 41: 117, 195. 2001, P. Dávila-Aranda, R. Lira-Saade and J. Valdés-Reyna, "Endemic species of grasses in Mexico: a phytogeographic approach." *Biodiversity and Conservation* 13(6): 1101-1121. June 2004.

Species

S. filifolia (E. Fourn.) Airy Shaw (*Calamochloa filifolia* E. Fourn.; *Eufournia filifolia* (E. Fourn.) Reeder)

Mexico. See *Bulletin de la Société Botanique de France* 24: 178. 1877 and *Kew Bulletin* 18(2): 272. 1965.

Solenachne Steudel = *Spartina* Schreb.

Greek *solen* "a tube, pipe" and *achne* "chaff, glume."

Chloridoideae, Cynodonteae, or Chloridoideae, Zoysieae, Sporobolinae, type *Solenachne phalaroides* Steud., see *Genera Plantarum* 43. 1789, *Catalecta Botanica* 3: 10. 1806, *Voyage autour du Monde* 2(2): 15, t. 2. 1829, *Synopsis Plantarum Glumacearum* 1: 12. 1855 [1853] and *Revista Sudamericana de Botánica* 6(5-6): 147. 1940, *Iowa State College Journal of Science* 30(4): 471-574. 1956, *Contributions from the United States National Herbarium* 41: 195-200. 2001.

Solenophyllum Baillon = *Monanthochloe* Engelm.

From the Greek *solen* "a tube, pipe" and *phyllon* "leaf."

Chloridoideae, Cynodonteae, Monanthochloinae, see *Transactions of the Academy of Science of St. Louis* 1: 436-437, pl. 13-14. 1859, *Histoire des Plantes* 12: 235. 1893, *Contributions from the United States National Herbarium* 41: 142, 195. 2001, *Flora Fanerogámica Argentina* 86: 1-68. 2003.

Sorghastrum Nash = *Dipogon* Steud., *Poranthera* Raf., *Poranthera* Rudge (Euphorbiaceae)

From the genus *Sorghum* Moench and *astrum*, a Latin substantial suffix indicating inferiority or incomplete resemblance.

About 16-20 species, tropics and subtropics, Africa and America. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Sorghinae, annual or perennial, herbaceous, tufted, culm bases starchy, auricles present or absent, ligule a membrane unfringed or fringed, plants bisexual, inflorescence cylindrically paniculate, sessile spikelet callus obtuse or pungent, spikelets solitary with barren to empty pedicel, rachis disarticulating, lower floret reduced to an empty lemma, 2 glumes more or less equal, upper glume 5-nerved broadly convex, lower glume coriaceous, upper lemma 2-dentate awned, palea present or absent, 2 lodicules free and fleshy, stamens 3, ovary glabrous, 2 stigmas, pedicelled spikelet absent, native pasture species, shade or open areas, natural grasslands, dry sandy soils, moist fields, open rocky slopes, hills, wet places, savannah, pampas, woodland margins, related to *Sorghum*, type *Sorghastrum avenaceum* (Michx.) Nash, see *Species Plantarum* 1: 78, 82. 1753, *Species Plantarum* 2: 1045, 1047. 1753, *Methodus Plantas Horti Botanici ...* 207. 1794, *Transactions of the Linnean Society of London* 10: 302. 1811, *Fundamenta Agrostographiae* 187. 1820, *Flora Brasiliensis seu Enumeratio Plantarum* 341. 1829, C.S. Rafinesque, *Seringe Bull. Bot.* 1: 221. 1830 [also *Bulletin Botanique, Genève*], *Nomenclator Botanicus. Editio secunda* 1: 518. 1840 and Nathaniel Lord Britton (1859-1934), *Manual of the Flora of the Northern States and Canada*. 71. New York 1901, *Flora of Tropical Africa* 9: 111. 1917, E.D. Merrill, *Index rafinesquianus*. 76. 1949, *University of California Publications in Botany* 23(6): 324. 1950, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 447-508. 1969, *Journal of Heredity* 75: 196-202. 1984, *Taxon* 35: 195-196. 1986, *Iheringia, Série Botânica* 36: 3-13. 1987, *Annals of the Missouri Botanical Garden* 74: 432-433. 1987, Patricia Dolores Davila Aranda, "Systematic revision of the genus *Sorghastrum* (Poaceae):

Andropogoneae)." 175, 185. [Thesis – Ph.D.] Ames, Iowa: Iowa State University 1988, *Bothalia* 21(2): 163-170. 1991, *Australian Systematic Botany* 4: 591-635. 1991, *Iheringia, Série Botânica* 42: 25-54. 1992, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Monographs in Systematic Botany from the Missouri Botanical Garden* 47: 1-178. 1994, *Flora Mesoamericana* 6: 382-383. 1994, G.W.T. Wilson and D.C. Hartnett, "Effects of mycorrhizae on plant growth and dynamics in experimental tall grass prairie microcosms." *Am. J. Bot.* 84: 478. 1997, *Am. J. Bot.* 85: 776. 1998, Gail W. T. Wilson and David C. Hartnett, "Interspecific variation in plant responses to mycorrhizal colonization in tallgrass prairie." *Am. J. Bot.* 85: 1732-1738. 1998, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, Gail W.T. Wilson, David C. Hartnett, Melinda D. Smith and Kerri Kobbeman, "Effects of mycorrhizae on growth and demography of tallgrass prairie forbs." *Am. J. Bot.* 88: 1452-1457. 2001, William E. Rogers and David C. Hartnett, "Temporal vegetation dynamics and recolonization mechanisms on different-sized soil disturbances in tallgrass prairie." *Am. J. Bot.* 88: 1634-1642. 2001, James K. McCarron and Alan K. Knapp, "C3 woody plant expansion in a C4 grassland: are grasses and shrubs functionally distinct?" *Am. J. Bot.* 88: 1818-1823. 2001, Said A. Damhoureyeh and David C. Hartnett, "Variation in grazing tolerance among three tallgrass prairie plant species." *Am. J. Bot.* 89: 1634-1643. 2002, *Am. J. Bot.* 89: 991-997, 1843-1846. 2002, *Journal of Biogeography* 29(5)-6: 641-651. May 2002, *Restoration Ecology* 10(2): 315-323, 324-333. June 2002, *Plant Breeding* 121(5): 417-424. Oct 2002, *Restoration Ecology* Volume 10(4): 656-664. Dec 2002, *Contributions from the United States National Herbarium* 46: 214, 542, 594-598. 2003, Jana L. Heisler, John M. Briggs and Alan K. Knapp, "Long-term patterns of shrub expansion in a C4-dominated grassland: fire frequency and the dynamics of shrub cover and abundance." *Am. J. Bot.* 90: 423-428. 2003, James K. McCarron and Alan K. Knapp, "C3 shrub expansion in a C4 grassland: positive post-fire responses in resources and shoot growth." *Am. J. Bot.* 2003 90: 1496-1501. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Global Change Biology* 9(2): 255-265. Feb 2003, *Oikos* 101(2): 345-353. May 2003, *Ecology Letters* 6(6): 509-517. June 2003, *Conservation Biology* 17(4): 990-998. Aug 2003, *Restoration Ecology* 11(3): 351-358. Sep 2003, *Journal of Ecology* Volume 91, Issue 6: 999-1007. Dec 2003, *Am. J. Bot.* 91: 416-421. 2004, *Restoration Ecology* 12(1): 80-84. Mar 2004, D.J. Gustafson, D.J. Gibson & D.L. Nickrent, "Conservation genetics of 2 co-dominant grass species in an endangered grassland ecosystem." *Journal of Applied Ecology* 41(2): 389-397. Apr 2004, *Journal of Ecology* Volume 92, Issue 3: 409-421. June 2004, *Oikos* Volume 106, Issue 1: 151-157. July 2004, *Ecology Letters* 7(8): 661-668. Aug 2004, *Oikos* 106(2): 253-262. Aug 2004, *Journal of Applied Ecology* 41(4): 604-614. Aug 2004, *Restoration Ecology* 12(4): 568-574. Dec 2004,

Global Change Biology Volume 11, Issue 2: 266-277. Feb 2005, *Global Change Biology* 11(3): 435-449. Mar 2005, *Restoration Ecology* 13(1): 20-28, 120-128. Mar 2005, *Journal of Animal Ecology* 74(2): 342-352. Mar 2005, *Journal of Applied Ecology* 42(2): 327-336. Apr 2005, *Restoration Ecology* 13(2): 413-424. June 2005.

Species

S. balansae (Hack.) Dávila (*Andropogon balansae* (Hack.) Hack.; *Sorghum balansae* Hack.; *Sorghum nutans* subvar. *balansae* (Hack.) Roberthy)

South America, Brazil, Paraguay. See *A Manual of the Botany of the Northern United States* 617. 1848, *Flora Brasiliensis* 2(4): 277. 1883, *Monographiae Phanerogamarum* 6: 534. 1889 and *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 310. 1960, *Annals of the Missouri Botanical Garden* 76(4): 1171. 1989.

S. bipennatum (Hack.) Pilger (*Andropogon bipennatus* Hack.; *Cleistachne sorghoides* Benth.; *Sorghastrum incompletum* (J. Presl) Nash; *Sorghastrum incompletum* var. *bipennatum* (Hack.) Dávila; *Sorghum bipennatum* (Hack.) Kuntze; *Sorghum bipennatum* (Hack.) Stapf, nom. illeg., non *Sorghum bipennatum* (Hack.) Kuntze)

Tropical Africa, Madagascar. Annual bunchgrass, weak, loosely tufted, decumbent and rooting at the lower nodes, panicle narrowly lanceolate, spikelets narrowly ovate, terminal sessile spikelets with 2 barren pedicels, lower glume dark, upper lemma awn bigeniculate, grazed only while young before anthesis, low grazing value, on damp soil, disturbed sites, wooded grasslands, see *Hooker's Icones Plantarum* 14: t. 1379. 1882 [or 4: 60, pl. 1379], *Flora* 68(8): 142. 1885, *Revisio Generum Plantarum* 2: 791. 1891 and *North American Flora* 17(2): 130. 1912, *Flora of Tropical Africa* 9: 144. 1917, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(121): 96. 1938, *Annals of the Missouri Botanical Garden* 76(4): 1171. 1989.

in Sierra Leone: ninki bafoen

S. brunneum Swallen

Guatemala, Mexico. Good forage, see *Contributions from the United States National Herbarium* 29(9): 428. 1950.

in Guatemala: pasto manso

S. chaseae Swallen (also spelled *chasae*) (for Agnes Chase)

Brazil. See *Phytologia* 14(2): 96. 1966.

S. contractum (Hack.) Kuhlmann & Kuhn (*Andropogon nutans* var. *contractus* (Hack.) Hack.; *Sorghastrum amplum* Swallen; *Sorghum nutans* subsp. *contractum* Hack.)

Brazil. See *Flora Brasiliensis* 2(4): 276. 1883, *Monographiae Phanerogamarum* 6: 533. 1889 and M. Kuhlmann e Eduardo Kuhn, *A flora do Distrito de Ibiti: ex-Monte Alegre, Município de Amparo* 1947: 29. 1947, *Phytologia* 14(2): 95. 1966, *Bradea* 4: 166. 1985.

S. elliotii (C. Mohr) Nash (*Chrysopogon elliotii* C. Mohr; *Sorghastrum apalachicolense* D.W. Hall)

U.S., Texas. Good forage, see *Bulletin of the Torrey Botanical Club* 24: 21. 1897 and *North American Flora* 17(2): 130. 1912, *Sida* 9(4): 303-304, f. 4. 1982.

in English: long-bristle Indian grass, slender Indian grass, long-bristled indiagrass

S. friesii (Pilg.) Pilg. (*Andropogon friesii* Pilg.; *Sorghum friesii* (Pilg.) C.E. Hubb.)

South Africa. Perennial, tufted, spikelets with empty pedicel, awns bent or straight, wet places, see *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 195. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14: 96. 1938.

S. incompletum (J. Presl) Nash (*Andropogon bipennatus* Hack.; *Andropogon galeottii* E. Fourn.; *Andropogon incompletus* J. Presl; *Andropogon nutans* var. *incompletus* (J. Presl) Hack.; *Andropogon stipoides* Rupr.; *Chrysopogon minor* Vasey; *Sorghastrum bipennatum* (Hack.) Pilg.; *Sorghastrum canescens* (Hack.) Pilg.; *Sorghastrum galeottii* (E. Fourn.) Conz., also spelled *galeotii*; *Sorghastrum incompletum* var. *bipennatum* (Hack.) Dávila; *Sorghastrum liebmannianum* Hitchc.; *Sorghastrum nutans* subvar. *canescens* (Hack.) Roberty; *Sorghum bipennatum* (Hack.) Kuntze; *Sorghum bipennatum* (Hack.) Stapf, nom. illeg., non *Sorghum bipennatum* (Hack.) Kuntze; *Sorghum canescens* Hack.; *Sorghum incompletum* (J. Presl) Stapf; *Sorghum nutans* subvar. *canescens* (Hack.) Roberty)

North America, Africa tropical, Mexico to Costa Rica. Annual, erect, nodes pubescent, leaf blades linear acuminate, inflorescence a terminal panicle oblong, spikelets lanceolate hairy, awns twisted and geniculate, glumes coriaceous, lower glume hairy, upper glume glabrous, forage, see *Reliquiae Haenkeanae* 1(4-5): 342. 1830, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9: 8. 1842, *Flora Brasiliensis* 2(4): 277. 1883, *Flora* 68(8): 142. 1885, *Mexicanas Plantas* 2: 56. 1886, *Proceedings of the American Academy of Arts and Sciences* 22: 460. 1887, *Monographiae Phanerogamarum* 6: 531. 1889, *Revisio Generum Plantarum* 2: 791. 1891 and *North American Flora* 17(2): 130. 1912, *Contributions from the United States National Herbarium* 17(3): 211. 1913, *Flora of Tropical Africa* 9: 144, 145. 1917, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 14(121): 96. 1938, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 142. 1940, *Flora Taxonomica Mexicana* 1: 170. 1946, *Boissiera*. 9: 310. 1960, *Annals of the Missouri Botanical Garden* 76(4): 1171. 1989.

S. incompletum (J. Presl) Nash var. *incompletum* (*Andropogon incompletus* J. Presl; *Andropogon nutans* var. *incompletus* (J. Presl) Hack.; *Sorghum incompletum* (J. Presl) Stapf)

South America. Annual, see *Reliquiae Haenkeanae* 1(4-5): 342. 1830, *Monographiae Phanerogamarum* 6: 531. 1889 and *Flora of Tropical Africa* 9: 144, 145. 1917.

S. minarum (Nees) Hitchc. (*Andropogon minarum* (Nees) Kunth; *Chrysopogon minarum* (Nees) Benth.; *Chrysopogon stipoides* Trin.; *Sorghum minarum* (Nees) Hack.; *Sorghum nutans* subvar. *minarum* (Nees) Roberty; *Stipa penniglumis* Trin.; *Trachypogon minarum* Nees) (Brazil, Minas Gerais)

Paraguay, Bolivia, Brazil to northern Argentina. Annual or perennial, caespitose or scattered, leaf blades acuminate, hairy inflorescence, oblong panicle erect, spikelets cylindrical, callus pungent, awns geniculate with twisted column, the seeds are diuretic, growing in dry areas, fields, campos, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 349. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 77. 1830, *Révision des Graminées* 2(33): 507. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 93. 1836, *Journal of the Linnean Society, Botany* 19: 73. 1881, *Flora Brasiliensis* 2(4): 276. 1883 and *Contributions from the United States National Herbarium* 24(8): 501. 1927, *Boissiera*. 9: 310. 1960.

in Brazil: capim açu

S. nudipes Nash

Mexico. Perennial, erect, good forage, found in sandy places, dambo, open savannah plains, seasonally waterlogged depressions, see *North American Flora* 17(2): 129. 1912.

S. nutans (L.) Nash (*Aegilops bicornis* var. *mutica* Post; *Andropogon albescens* E. Fourn.; *Andropogon arenaceus* Raf.; *Andropogon avenaceum* Michx.; *Andropogon avenaceus* Michx.; *Andropogon ciliatus* Elliott, nom. illeg., non *Andropogon ciliatum* Thunb.; *Andropogon confertus* Trin. ex E. Fourn.; *Andropogon linnaeanus* (Hack.) Scribn. & Kearney; *Andropogon nutans* L.; *Andropogon nutans* var. *avenaceus* (Michx.) Hack.; *Andropogon nutans* var. *linnaeanus* (Hack.) Hack.; *Andropogon stipoides* Kunth; *Chalcoelytrum nutans* (L.) Lunell; *Chrysopogon avenaceus* (Michx.) Benth.; *Chrysopogon nutans* (L.) Benth.; *Chrysopogon nutans* var. *avenaceus* (Michx.) Trel. ex Branner & Coville; *Chrysopogon nutans* var. *linnaeanus* (Hack.) C. Mohr; *Digitaria nutans* (L.) Beetle; *Holcus nutans* (L.) Kuntze ex Stuck.; *Holcus nutans* var. *avenaceus* (Michx.) Hack.; *Poranthera ciliata* (Elliott) Raf. ex B.D. Jacks.; *Poranthera ciliata* Raf. ex B.D. Jacks.; *Poranthera nutans* Raf. ex B.D. Jacks.; *Rhaphis nutans* (L.) Roberty; *Schizachyrium scoparium* (Michx.) Nash; *Sorghastrum albescens* (E. Fourn.) Beetle; *Sorghastrum albescens* (Hack.) Flores, nom. illeg., non *Sorghastrum albescens* (E. Fourn.) Beetle; *Sorghastrum avenaceum* (Michx.) Nash; *Sorghastrum*

flexuosum Swallen; *Sorghastrum linnaeanum* (Hack.) Nash; *Sorghastrum nutans* subsp. *nutans*; *Sorghastrum stipoides* (Kunth) Nash; *Sorghastrum viride* Swallen; *Sorghum avenaceum* (Michx.) Chapm.; *Sorghum nutans* (L.) A. Gray; *Sorghum nutans* subsp. *albescens* Hack.; *Sorghum nutans* subsp. *avenaceum* (Michx.) Hack.; *Sorghum nutans* subsp. *linnaeanum* Hack.; *Sorghum nutans* subvar. *avenaceum* (Michx.) Roberly; *Sorghum nutans* var. *genuinum* Hack.; *Stipa villosa* Walter; *Trichachne nutans* (L.) B.R. Baum)

Mexico, Brazil, U.S. to Argentina. Caespitose, callus blunt, cultivated, useful for forage, animal food, revegetator, open areas, fields and old fields, meadows, gravelly soil, see *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Caroliniana, secundum ...* 78. 1788, *Flora Boreali-Americana* 1: 57-58. 1803, *Nova Genera et Species Plantarum* 1: 189. 1815 [1816], *A Sketch of the Botany of South-Carolina and Georgia* 1: 144. 1816, *Western Review and Miscellaneous Magazine* 1: 95. 1819, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 85, 331-332. 1829, *A Manual of the Botany of the Northern United States* 617. 1848, *Illustrationes Plantarum Orientalium* 4: 11, t. 309. 1850-1853, *Flora of the Southern United States* 583. 1860, *Journal of the Linnean Society, Botany* 19: 73. 1881, *Flora Brasiliensis* 2(4): 274-276. 1883, *Biologia Centrali-Americana; ...Botany ...* 3: 525. 1885, *Mexicanas Plantas* 2: 55-56. 1886, *Monographiae Phanerogamarum* 6: 530-531. 1889, *Annual Report of the Geological Survey of Arkansas* 1888(4): 234. 1891, *Index Kewensis* 2: 606. 1894, *Flora of Syria, Palestine, and Sinai* 901. 1896, *Bulletin of the Torrey Botanical Club* 24: 21. 1897 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 40. 1901, *Flora of the Southeastern United States ...* 59, 66. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *Contr. U.S. Natl. Herb.* 12: 125. 1908, *North American Flora* 17: 129. 1912, *American Midland Naturalist* 4: 212. 1915, *Petite Flore de l'Ouest-Africain* 403. 1954, *Boissiera*. 9: 309. 1960, *Phytologia* 14(2): 96, 98. 1966, *Canadian Journal of Botany* 45: 1851. 1967, *Phytologia* 52(1): 13, 17. 1982, *Taxon* 33: 95-97. 1984, *Acta Botanica Brasiliica* 3(1): 115. 1989, G.W.T. Wilson and D.C. Hartnett, "Effects of mycorrhizae on plant growth and dynamics in experimental tall grass prairie microcosms." *Am. J. Bot.* 84: 478. 1997, C.C. Freeman, "The flora of Konza Prairie: a historical review and contemporary patterns," in A.K. Knapp, J.M. Briggs, D.C. Hartnett and S.L. Collins [editors], *Grassland Dynamics: Long-Term Ecological Research in Tallgrass Prairie*, 69-80. Oxford University Press, New York, New York, U.S. 1998, M.J. McKone, C.P. Lund and J.M. O'Brien, "Reproductive biology of 2 dominant prairie grasses (*Andropogon gerardii* and *Sorghastrum nutans*, Poaceae): male-biased sex allocation in wind-pollinated plants?" *Am. J. Bot.* 85: 776. 1998, Gail W.T. Wilson and David C. Hartnett, "Interspecific variation in plant

responses to mycorrhizal colonization in tallgrass prairie." *Am. J. Bot.* 85: 1732-1738. 1998, *American Journal of Botany* 88: 1452-1457. 2001, Said A. Damhoureyeh and David C. Hartnett, "Variation in grazing tolerance among three tallgrass prairie plant species." *Am. J. Bot.* 89: 1634-1643. 2002, James K. McCarron and Alan K. Knapp, "C3 shrub expansion in a C4 grassland: positive post-fire responses in resources and shoot growth." *Am. J. Bot.* 90: 1496-1501. 2003, Emily J. Benson, David C. Hartnett and Kale H. Mann, "Belowground bud banks and meristem limitation in tallgrass prairieplant populations." *Am. J. Bot.* 91: 416-421. 2004.

in English: Indian grass, woody grass, yellow indiangrass, yellow Indian grass

in Mexico: zacate indio

S. nutans (L.) Nash subsp. **pellitum** (Hack.) Burkart (*Andropogon nutans* var. *pellitus* (Hack.) Hack.; *Andropogon pellitus* (Hack.) Herter; *Sorghastrum pellitum* (Hack.) Parodi; *Sorghum nutans* subsp. *pellitum* Hack.)

South America. See *Flora Brasiliensis* 2(4): 275. 1883, *Monographiae Phanerogamarum* 6: 532. 1889 and *Estudios Botánicos en la Región Uruguay* 27. 1931, *Boissiera*. 9: 309. 1960, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 476. 1969.

S. pellitum (Hack.) Parodi (*Andropogon albescens* Andersson ex Hack.; *Andropogon nutans* var. *albescens* (Hack.) Hack.; *Andropogon nutans* var. *pellitus* (Hack.) Hack.; *Andropogon pellitus* (Hack.) Herter; *Andropogon saccharoides* var. *polytrichus* Griseb.; *Sorghastrum albescens* (Hack.) Flores, nom. illeg., non *Sorghastrum albescens* (E. Fourn.) Beetle; *Sorghastrum flexuosum* Swallen; *Sorghastrum nutans* subsp. *albescens* (Hack.) Burkart; *Sorghastrum nutans* subsp. *pellitum* (Hack.) Burkart; *Sorghastrum pilgeri* Herter; *Sorghum nutans* subsp. *albescens* Hack.; *Sorghum nutans* subsp. *pellitum* Hack.; *Sorghum nutans* subvar. *pellitum* (Hack.) Roberly)

South America, Brazil, Uruguay. See *Nova Genera et Species Plantarum seu Prodromus* 26. 1788, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 309. 1879, *Flora Brasiliensis* 2(4): 275. 1883, *Monographiae Phanerogamarum* 6: 531-532. 1889 and *Revista de la Facultad de Agronomía y Veterinaria* 7(1): 154. 1930, *Estudios Botánicos en la Región Uruguay* 27. 1931, *Revista Sudamericana de Botánica* 6(5-6): 136. 1940, *Boissiera*. 9: 310. 1960, *Phytologia* 14(2): 96. 1966, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 476. 1969, *Acta Botanica Brasiliica* 3(1): 115. 1989.

S. pohlianum Dávila, L.I. Cabrera & Lira

Mexico. See *Brittonia* 50(3): 305, f. 5. 1998.

S. scaberrimum (Nees) Herter (*Andropogon nutans* var. *scaberrimus* (Nees) Hack.; *Andropogon scaberrimus* (Nees) Kunth; *Sorghum nutans* subsp. *scaberrimum* (Nees)

Hack.; *Sorghum nutans* subvar. *scaberrimum* (Nees) Roberty; *Sorghum nutans* var. *neesianum* Hack.; *Trachypogon scaberrimus* Nees)

South America. Perennial, clump-forming, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 354. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 504. 1833, *Flora Brasiliensis* 2(4): 275. 1883, *Monographiae Phanerogamarum* 6: 532. 1889 and *Revista Sudamericana de Botánica* 6(5-6): 136. 1940, *Boissiera*. 9: 310. 1960.

S. secundum (Elliott) Nash (*Andropogon secundus* Elliott; *Andropogon unilateralis* Hack.; *Chrysopogon secundus* (Elliott) Benth. ex Vasey; *Sorghum nutans* subvar. *secundum* (Elliott) Roberty; *Sorghum secundum* (Elliott) Chapm.)

North America, U.S. See *A Sketch of the Botany of South-Carolina and Georgia* 1: 580. 1821, *Flora of the Southern United States* 583. 1860, *The Grasses of the United States* 20. 1883, *Monographiae Phanerogamarum* 6: 533. 1889 and *Flora of the Southeastern United States* ...67. 1903, *Boissiera*. 9: 311. 1960.

in English: lopsided Indian grass

S. setosum (Griseb.) Hitchc. (*Andropogon agrostoides* Speg.; *Andropogon francavillanus* E. Fourn.; *Andropogon nutans* var. *agrostoides* (Speg.) Hack.; *Andropogon nutans* var. *submuticus* (Hack.) Hack.; *Andropogon setosus* Griseb.; *Chrysopogon francavillanus* Hemsl.; *Holcus parviflorus* R. Br.; *Paspalum alnum* Chase; *Sorghastrum agrostoides* (Speg.) Hitchc.; *Sorghastrum francavillanum* (E. Fourn.) Hitchc.; *Sorghastrum nutans* var. *macranthum* Kuhl.; *Sorghastrum parviflorum* (Desv. ex Ham.) Hitchc. & Chase; *Sorghastrum parviflorum* Hitchc. & Chase; *Sorghastrum stipoides* subsp. *agrostoides* (Speg.) Roseng., B.R. Arrill. & Izag.; *Sorghum nutans* subsp. *micranthum* Hack.; *Sorghum nutans* subvar. *agrostoides* (Speg.) Roberty; *Sorghum nutans* var. *submuticum* Hack.; *Sorghum parviflorum* Desv. ex Ham., nom. illeg., non *Sorghum parviflorum* P. Beauv.; *Sorghum parviflorum* Desv.; *Sorghum parviflorum* P. Beauv.; *Trachypogon stipoides* (Kunth) Nees)

Mexico, Venezuela to Argentina, the Caribbean. Perennial, erect, straggling, caespitose, glaucous, clumps forming, stoloniferous, leaf blades acute glabrous, panicle narrowly oblong, spikelets lanceolate, callus blunt, glabrous awns, glumes coriaceous, lower glume pilose, upper glume glabrous, found in damp places, sandy riverbanks, open fields, wet areas, savannah and marshy savannah, rocky soil, moist campos, see *Essai d'une Nouvelle Agrostographie* 132, 165. 1812, *Prodromus Plantarum Indiae Occidentalis* 12. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 341, 351. 1829, *Catalogus plantarum cubensium* ... 235. 1866, *Anales de la Sociedad Científica Argentina* 16: 136. 1883, *Flora Brasiliensis* 2(4): 274-275. 1883, *Biologia Centrali-Americana*; ... *Botany* ... 3(19): 530. 1885, *Mexicanas Plantas*

2: 56. 1886, *Monographiae Phanerogamarum* 6: 529. 1889 and *Botanical Gazette* 51(4): 300. 1911, *Contributions from the United States National Herbarium* 17(3): 211. 1913, *Contributions from the United States National Herbarium* 18(7): 287. 1917, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 36. 1922, *Boissiera*. 9: 309. 1960, *Gramíneas Uruguayas* 201. 1970, *Journal of Cytology and Genetics* 18: 26-33. 1983, *Ciencia e Cultura (São Paulo)* 39: 776. 1987, *Darwiniana* 30(1-4): 87-94. 1990, *Australian Journal of Botany* 42: 449-456. 1994, *Darwiniana* 35(1-4): 29-36. 1998.

in Bolivia: pasto amargo

S. stipoides (Kunth) Nash (*Andropogon domingensis* Spreng. ex Steud., nom. illeg., non *Andropogon domingensis* (Roem. & Schult.) Steud.; *Andropogon humboldtianus* Steud.; *Andropogon nutans* L.; *Andropogon nutans* var. *burchellii* Hack.; *Andropogon nutans* var. *stipoides* (Kunth) Hack.; *Andropogon sargus* Ewart; *Andropogon stipoides* Kunth; *Andropogon stipoides* (Ewart & White) Gardner; *Andropogon trichopus* Stapf; *Chrysopogon stipoides* (Ewart & White) Domin; *Chrysopogon stipoides* Benth., nom. illeg., non *Chrysopogon stipoides* Trin.; *Sarga stipoides* Ewart & White; *Sorghastrum nutans* (L.) Nash; *Sorghastrum rigidifolium* (Stapf) Chippin. ex Pole-Evans; *Sorghastrum rigidifolium* Swallen, nom. illeg., non *Sorghastrum rigidifolium* (Stapf) Chippin. ex Pole-Evans; *Sorghastrum stipoides* subsp. *stipoides*; *Sorghum nutans* (L.) A. Gray; *Sorghum nutans* var. *burchellii* Hack.; *Sorghum nutans* var. *stipoides* (Kunth) Hack.; *Sorghum rigidifolium* Stapf; *Sorghum stipoides* (Ewart & White) C.A. Gardner & C.E. Hubb.; *Sorghum trichopus* (Stapf) Stapf; *Trachypogon stipoides* (Kunth) Nees)

Tropical Africa, tropical southern America. Perennial bunchgrass, caespitose, erect, polymorphic, shortly rhizomatous, leaf blades acuminate glabrous often rolled, panicle linear to narrowly lanceolate, racemes of 1-4 sessile spikelets each with a barren pedicel, spikelet lanceolate, callus shortly bearded, lower glume coriaceous pubescent shining, upper glume glabrous or pubescent, awn geniculate glabrous, provides some grazing for cattle when young, ground cover, carpet, found in wet areas, rocky campos, moist or marshy places, savannahs, grasslands, floodplains and seasonally flooded areas, see *Nova Genera et Species Plantarum* 1: 189. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 351. 1829, *Nomenclator Botanicus* edition 2 1: 91. 1840, *Synopsis Plantarum Glumacearum* 1: 238, 392. 1854, *Journal of the Linnean Society, Botany* 19: 73. 1881, *Flora Brasiliensis* 2(4): 274. 1883, *Anales de la Sociedad Científica Argentina* 16: 136. 1883, *Monographiae Phanerogamarum* 6: 530. 1889, *Bulletin of Miscellaneous Information Kew* 1897: 287. 1897 and *Flora of the Southeastern United States* ... 66. 1903, *Proceedings of the Royal Society of Victoria*, ser. 2, 23: 296. 1911, *North*

American Flora 17: 129. 1912, *Proceedings of the Royal Society of Victoria* 25: 113. 1912, *Bibliotheca Botanica* 85: 271. 1915, *Flora of Tropical Africa* 9: 141, 143. 1917, *Enumeratio Plantarum Africae Australis Extratropicae* 5. 1931, *Hooker's Icones Plantarum* 34, t. 3364, p. 6. 1938, *Bot. Surv. S. Afr. Mem.* 22: 247. 1948, *Phytologia* 14(2): 97. 1966, *Gramíneas Uruguayas* 201. 1970.

in Senegal: hu het e kobol

in Tanzania: sindesinde

S. viride Swallen (*Sorghastrum nutans* (L.) Nash)

South America, Brazil. Densely clumped, see *Flora of the Southeastern United States* ... 66. 1903, *Phytologia* 14(2): 98. 1966.

Sorghum Moench = *Blumenbachia* Koeler,
Sarga Ewart, *Sarga* Ewart & White, *Sorgum*
Adans.

The Italian *sorgo*, *soricum*, *surgus*, *suricum* (12th century), *surico* (10th century), from the spoken Latin *suricum granum* "grain from Syria," from Suria, a variation of Syria; see Conrad Moench (1744-1805), *Methodus plantas horti botanici et agri Marburgensis a staminum situ describendi*. 207. Marburgi Cattorum [Marburg] 1794-1802; S. Battaglia, *Grande dizionario della lingua italiana*. XIX: 492-493. 1997.

About 20(-24)/30(-60) species, Old World tropics and subtropics, Mexico. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Sorghinae, annual or perennial, herbaceous, simple, sometimes rhizomatous or stoloniferous, stems clumped and robust, sometimes decumbent, lush foliage, auricles absent, ligule membranous more or less fringed or ciliate, leaves linear to lanceolate or oblong, plants bisexual, inflorescence paniculate of jointed racemes, bisexual spikelets, terminal spikelets in triplets, racemes bearing pairs of sessile and pedicellate spikelets, sessile spikelets fertile with 2 florets, the lower floret male or sterile and reduced to an empty lemma, the upper floret bisexual in sessile spikelet, sessile spikelet callus obtuse or pungent, pedicellate spikelet with upper fertile floret sometimes male, lower glume of sessile spikelet dorsally flattened, upper lemma awnless or 2-dentate and awned, pedicelled spikelet developed or reduced to a glume, palea present or absent, 2 ciliate lodicules free and more or less fleshy, 3 stamens, ovary glabrous or hairy, 2 stigmas, weed species, stock feed, suitable for cultivation, important cereal, grain crop species, a staple, forage, cultivated and naturalized fodder, ornamental, decorative flowering panicles, a source of paper, brushes and brooms manufacture, sweet juice, nonsaccharine sorghum, saccharine sorghum, stock poisoning, cyanogenic, the young and wilted leaves are particularly poisonous, *Sorghum* contains hydrocyanic acid and

the alkaloid hordenine, some species may accumulate toxic amounts of nitrate, varieties differ considerably in HCN poisonings, shade species or species of open habitats, forest margins, savannahs, ruderal habitats, moist sandy soils, along roadsides, disturbed areas, rainforest, pampas, alluvial plains, the whole *Sorghum* taxonomy status still under discussion, taxonomy of the cultivated species is extremely complicated, hybrids with *Saccharum* L., type *Sorghum bicolor* (L.) Moench, see *Species Plantarum* 2: 1045, 1047. 1753, *Familles des Plantes* 2: 38, 606. 1763, *Methodus plantas horti botanici et agri Marburgensis a staminum situ describendi*. 207. 1794-1802, *Descriptio Graminum in Gallia et Germania* 28-29. 1802, *Flora Brasiliensis* 2(4): 271, 274. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Proceedings of the Royal Society of Victoria*, ser. 2, 23: 296. 1911, *Flora of Tropical Africa* 9: 105, 111. 1917, *Bulletin of Miscellaneous Information Kew* 1935(5): 222. 1935, *Hook. Ic. Pl.* 34: t. 3364. 1938, *Sinensia* 10: 282. 1939, *University of California Publications in Botany* 23(6): 283-361. 1950, *J. Linn. Soc., Bot.* 55: 191-260. 1955, *Fieldiana, Botany* 24(2): i-ix, 1-390. 1955, *Cytologia* 23: 395-418. 1959, *Kariba Studies*, vol. II. Manchester University Press, Manchester 1962, *Amer. J. Bot.* 57: 704-707. 1970, *Zambian Papers* 5. Manchester University Press, Manchester 1971, *Novosti Sist. Vyss. Rast.* 10: 79. 1973, *American Journal of Botany* 65(4): 477-484. 1978, *Journal of Heredity* 75: 196-202. 1984, *Taxon* 35: 195-196. 1986, *Iheringia, Série Botânica* 36: 3-13. 1987, *Folia Primatologica* 48: 78-120. 1987, *Annals of the Missouri Botanical Garden* 74: 432-433. 1987, *Bothalia* 21(2): 163-170. 1991, *Australian Systematic Botany* 4: 591-635. 1991, *Iheringia, Série Botânica* 42: 25-54. 1992, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, Sun Y., D.Z. Skinner, G.H. Liang and S.H. Hulbert, "Phylogenetic analysis of *Sorghum* and related taxa using internal transcribed spacers of nuclear ribosomal DNA." *Theoretical and Applied Genetics* 89: 26-32. 1994, Reeves D.W., H.H. Rogers, S.A. Prior, C.W. Wood and G.B. Runion, "Elevated atmospheric carbon dioxide effects on sorghum and soybean nutrient status." *Journal of Plant Nutrition* 17: 1939-1954. 1994, *Flora Mesoamericana* 6: 381-383. 1994, L. Catusas Guerra, "Las gramíneas (Poaceae) de Cuba, I." *Fontqueria* 46: [i-ii], 1-259. 1997, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, Spangler et al., "Andropogoneae evolution and generic limits in *Sorghum* (Poaceae) using *ndhF* sequences." *Systematic Botany* 24: 267-267. 1999, *International Journal of Food Science and Technology* 35(5): 465-471. Oct 2000, *Journal of Applied Entomology* 125(3): 109-114. Apr 2001, *Flora of Australia* Volume 43, Poaceae 1: 238-239. 2002, *International Journal of Food Science and Technology* 37(2): 129-137. Feb 2002, *Journal of Agronomy and Crop Science* 188(2): 81-85. Apr 2002, *Journal of Agronomy and Crop Science* 188(3): 212-218. June 2002, *Contributions from the United States National Herbarium*

- 46: 135, 558, 598-606. 2003, *Am. J. Bot.* 90: 571-578, 777-795, 897-904, 924-930, 1481-1486. 2003, R.E. Spangler, "Taxonomy of *Sarga*, *Sorghum* and *Vacoparis* (Poaceae: Andropogoneae)." *Australian Systematic Botany* 16(3): 279-299. 2003, *Journal of Agronomy and Crop Science* 189(1): 21-29. Feb 2003, *Australian Journal of Entomology* 42(1): 35-39. Mar 2003, *The Plant Journal* 34(5): 605-621. June 2003, *Agricultural and Forest Entomology* 5(4): 311-315. Nov 2003, Zeng-Yu Wang, Yaxin Ge, Megann Scott and German Spangenberg, "Viability and longevity of pollen from transgenic and nontransgenic tall fescue (*Festuca arundinacea*) (Poaceae) plants." *Am. J. Bot.* 91: 523-530. 2004, Humberto Fabio Causin, David C. Tremmel, Thomas W. Rufty and James F. Reynolds, "Growth, nitrogen uptake, and metabolism in 2 semiarid shrubs grown at ambient and elevated atmospheric CO₂ concentrations: effects of nitrogen supply and source." *Am. J. Bot.* 91: 565-572. 2004, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, "The evolution of nuclear genome structure in seed plants." *Am. J. Bot.* 91: 1709-1725. 2004, *Journal of Agronomy and Crop Science* 190(5): 332-338. Oct 2004, *Am. J. Bot.* 92: 297-315, 534-543, 613-624. 2005, Jinglan Wu, Denise M. Seliskar and John L. Gallagher, "The response of plasma membrane lipid composition in callus of the halophyte *Spartina patens* (Poaceae) to salinity stress." *Am. J. Bot.* 92: 852-858. 2005, *Journal of Agronomy and Crop Science* 191(1): 10-19. Feb 2005, Sue McIntyre and David Tongway, "Grassland structure in native pastures: links to soil surface condition." *Ecological Management and Restoration* 6(1): 43-50. Apr 2005, *Entomologia Experimentalis et Applicata* 115(1): 145-152. Apr 2005, *Plant Biotechnology Journal* 3(3): 363-370. May 2005, *Acta Anaesthesiologica Scandinavica* 49(5): 635-642. May 2005, *Agricultural Economics* 32(3): 253-265. May 2005, Erika L. Geiger and Guy R. McPherson, "Response of semidesert grasslands invaded by nonnative grasses to altered disturbance regimes." *Journal of Biogeography* 32(5): 895-902. May 2005, *Plant Biotechnology Journal* 3(3): 275-307. May 2005, *Review of Agricultural Economics* 27(2): 229-244. June 2005, *Journal of Agronomy and Crop Science* 191(3): 162-171, 172-184. June 2005, *Weed Biology and Management* 5(2): 62-68, 69-76. June 2005, *Weed Research* 45(3): 212-219. June 2005, Isak Niehaus, "Witches and zombies of the South African Lowveld: discourse, accusations and subjective reality." *Journal of the Royal Anthropological Institute* 11(2): 191-210. June 2005, Bertrand Hirel, Antoine Martin, Thérèse Tercé-Laforgue, María-Begoña Gonzalez-Moro and José-Maria Estavillo, "Physiology of maize I: A comprehensive and integrated view of nitrogen metabolism in a C₄ plant." *Physiologia Plantarum* 124(2): 167-177. June 2005, *New Phytologist* 166(3): 737-751. June 2005, Jochem B. Evers, Jan Vos, Christian Fournier, Bruno Andrieu, Michael Chelle and Paul C. Struik, "Towards a generic architectural model of tillering in Gramineae, as exemplified by spring wheat (*Triticum aestivum*)." *New Phytologist* 166(3): 801-812. June 2005, *The Plant Journal* 42(5): 689-707, 708-719. June 2005.
- Species**
S. spp.
- in English: grain sorghum, millet
 in Brazil: trigo
 in Mexico: sorgo negro
 in Laos: khauz f'angx, liay
 in the Philippines: batad, bukakau
 in Thailand: ya khao fang
 in East Africa: ogolo (Luo)
 in Niger: dawa, hâmo
 in South Africa: Amaquaskoorn, graansorghum, ternataanse koring, rooikafferkoring, witkafferkoring
 in Yoruba: baba, oka baba, oka isi, oka, bomo, boromo, sosoki
- S. abyssinicum*** (R. Br. ex Fresen.) Kuntze (*Andropogon abyssinicus* R. Br. ex Fresen.; *Andropogon sorghum* subsp. *abyssinicus* Piper; *Andropogon sorghum* var. *abyssinicus* Hack.; *Sorghum abyssinicum* (Hack.) Chiov., nom. illeg., non *Sorghum abyssinicum* (R. Br. ex Fresen.) Kuntze; *Sorghum abyssinicum* (Piper) Stapf, nom. illeg., non *Sorghum abyssinicum* (R. Br. ex Fresen.) Kuntze)
- Abyssinia. See *Museum Senckenbergianum* 2: 146. 1837, *Monographiae Phanerogamarum* 6: 518. 1889, *Revisio Generum Plantarum* 2: 791. 1891 and *La Collezione dei cereali della Colonia Eritrea* 20. Roma 1912, *Proceedings of the Biological Society of Washington* 28: 39. 1915, *Flora of Tropical Africa* 9: 118. 1917.
- S. amplum*** Lazarides
 Australia, Western Australia. See *Australian Systematic Botany* 4(4): 591-635. 1991.
- S. angustum*** S.T. Blake (*Sarga angustum* (S.T. Blake) Spangler)
 Australia, Queensland. Erect or ascending, green, see *University of Queensland Papers: Department of Botany* 1: 18, 21. 1941, *Australian Systematic Botany* 4(4): 591-635. 1991.
- S. ankolib*** Stapf (*Sorghum bicolor* subsp. *bicolor*)
 Tropical Africa. See *Methodus Plantas Horti Botanici ...* 207. 1794, *Monographiae Phanerogamarum* 6: 512. 1889 and *Flora of Tropical Africa* 9: 135. 1917, *Bulletin of Miscellaneous Information Kew* 1935(5): 233. 1935, *American Journal of Botany* 65(4): 477-484. 1978.
- S. annuum*** Trabut
 Algeria, Egypt. Rare species, important crop and breadstuff.
 in English: Indian millet, Egyptian maize, dourra
 in Arabic: dhurah, dhurah beida (name for the seed)

S. arundinaceum (Desv.) Stapf (*Andropogon arundinaceus* Scop., nom. illeg., non *Andropogon arundinaceus* Bergius; *Andropogon arundinaceus* Willd., nom. illeg., non *Andropogon arundinaceus* Bergius; *Andropogon avenaceus* Schrad. ex Kunth, nom. illeg., non *Andropogon avenaceus* Michx.; *Andropogon halepensis* (L.) Brot.; *Andropogon halepensis* var. *effusus* Stapf; *Andropogon sorghum* (L.) Brot.; *Andropogon sorghum* subsp. *abyssinicus* Piper; *Andropogon sorghum* subsp. *halepensis* (L.) Hack.; *Andropogon sorghum* subsp. *verticilliflorus* (Steud.) Piper; *Andropogon sorghum* subsp. *vogelianus* Piper; *Andropogon sorghum* var. *effusus* Hack.; *Andropogon sorghum* var. *halepensis* (L.) Hack.; *Andropogon sorghum* var. *virgatus* Hack.; *Andropogon stapfii* Hook.f.; *Andropogon verticilliflorus* Steud.; *Holcus halepensis* L.; *Holcus exiguus* Forssk.; *Holcus sorghum* L.; *Holcus sorghum* subsp. *verticilliflorus* (Steud.) Hitchc.; *Holcus sorghum* var. *effusus* (Hack.) Hitchc.; *Holcus sorghum* var. *exiguus* (Forssk.) Hitchc.; *Holcus sorghum* var. *verticilliflorus* (Steud.) Hitchc.; *Holcus virgatus* (Hack.) Bailey; *Raphis arundinacea* Desv.; *Raphis arundinacea* Desv.; *Sorghum abyssinicum* (Piper) Stapf, nom. illeg., non *Sorghum abyssinicum* (R. Br. ex Fresen.) Kuntze; *Sorghum aethiopicum* (Hack.) Rupr. ex Stapf; *Sorghum aethiopicum* (Hack.) Stapf; *Sorghum aterimum* Stapf; *Sorghum bicolor* subsp. *arundinaceum* (Desv.) de Wet & J.R. Harlan; *Sorghum bicolor* subsp. *arundinaceum* (Desv.) de Wet & J.R. Harlan ex Davidse; *Sorghum castaneum* C.E. Hubb. & Snowden; *Sorghum halepense* (L.) Pers.; *Sorghum halepense* f. *aristatum* Rendle; *Sorghum halepense* f. *submuticum* Hack.; *Sorghum halepense* var. *effusum* (Stapf) Burt Davy; *Sorghum lanceolatum* Stapf; *Sorghum macrochaeta* Snowden; *Sorghum pugionifolium* Snowden; *Sorghum somaliense* Snowden; *Sorghum stapfii* (Hook.f.) C.E.C. Fisch.; *Sorghum usambarense* Snowden; *Sorghum verticilliflorum* (Steud.) Stapf; *Sorghum virgatum* (Hack.) Stapf; *Sorghum vogelianum* (Piper) Stapf)

Africa, tropical Africa and South Africa. Annual or short-lived perennial or biennial, very variable, rhizomes absent, slender, leaf sheaths densely hairy at the nodes, lamina narrowly linear, inflorescence often drooping, fragile racemes, sessile spikelets ovate to elliptic finely awned, pedicelled spikelet male or sterile linear to lanceolate, lower glume often pubescent, upper lemma awned or awnless, grain eaten in time of scarcity, naturalized, forage plant, medium grazing value, a weed of sugarcane, stock poisoning, grains eaten by baboons, probably the wild progenitor of *Sorghum bicolor* (L.) Moench, found in wet places, swampy sites, stream banks, damp soils, disturbed places, alluvial soils, plains, old farmland, desert situations, old cultivated fields, irrigated grounds, canal banks, fields, see *Species Plantarum* 2: 1047-1048. 1753, *Flora Carniolica, Editio Secunda* 274. 1772, *Flora Lusitanica* 1: 88-89. 1804, *Syn. Pl.* 1: 101. 1805, *Species Plantarum* 4: 906. 1806, *Nova*

Genera et Species Plantarum 1: 189. 1815 [1816], *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 173. 1831, *Synopsis Plantarum Glumacearum* 1: 393. 1854, *Flora Brasiliensis* 2(4): 272. 1883, *Boletim da Sociedade Broteriana* 5: 213. 1887, *Monographiae Phanerogamarum* 6: 501-502, 504. 1889, *The Flora of British India* 7: 183. 1896 and *Annals of the Transvaal Museum* 3: 122. 1912, *Proceedings of the Biological Society of Washington* 28: 37, 39. 1915, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Flora of Tropical Africa* 9: 111-112, 114, 116, 118. 1917, *Gentes Herbarum; Occasional Papers on the Kind of Plants* 1: 132. 1923, *The Cultivated Races of Sorghum* 237. 1936, *Bulletin of Miscellaneous Information Kew* 1936(5): 316. 1936, *Journal of the Linnean Society, Botany* 55(358): 238-242, 245-247. 1955, *Origins of African Plant Domestication* 455. 1976, *Amer. J. Bot.* 65(4): 481. 1978, *Catalogue of the Flowering Plants and Gymnosperms of Peru* 1258. 1993 [*Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993].

in English: common wild sorghum, Tunis grass, Kavirondo sorghum, Kamerun grass, Cameroon grass

in French: mil sauvage

in Arabic: hashish el-faras

in Benin: yaro

in Ghana: baki

in Liberia: gea kpai

in Niger: âbôra, achêghor, ashaghor, besna, daonan daji, dawa'n daji, gabaraari, gabaryé, gangy hâmo, genji hamâ, karkara, kyiri, ngâwuri karayé

in Nigeria: akpuka enyimiri, daawar daaminàà, daawar doorinàà, daawar dòòrinàà, daawar kadàà, daawar rààfi, dawardan kurana, dakwumbey, firki, ikirai, imbebelé, kara kara, ngaiori, oka iye, omungélé

in Sierra Leone: buruna murutuna, hula murutuna, kende, ketanbe, kete, muruntuna, ngogbo getei, ngogbo jetei, tag-boyo, taloa, tamidi, tanki, wada kende

in Somalia: makady, makadeey

in Togo: gaman daé, idè, idi, n'dé

in Yoruba: oka iye

S. bicolor (L.) Moench (*Andropogon bicolor* (L.) Roxb.; *Andropogon bicolor* Nees, nom. illeg., non *Andropogon bicolor* (L.) Roxb.; *Andropogon caffrorum* (Thunb.) Kunth; *Andropogon drummondii* Nees ex Steud.; *Andropogon saccharatus* (L.) Roxb.; *Andropogon saccharatus* (L.) Raspail, nom. illeg., non *Andropogon saccharatus* (L.) Roxb.; *Andropogon sorghum* sensu Quin; *Andropogon sorghum* (L.) Brot.; *Andropogon sorghum* subsp. *sativus* Hack.; *Andropogon sorghum* subsp. *sudanensis* Piper; *Andropogon sorghum* subvar. *japonicus* Hack.; *Andropogon sorghum* subvar. *rubidus* Burkill ex C. Benson & C.K. Subba Rao;

Andropogon sorghum var. *agricolarum* Burkill ex C. Benson & C.K. Subba Rao; *Andropogon sorghum* var. *albofuscus* Körn.; *Andropogon sorghum* var. *arduinii* Körn.; *Andropogon sorghum* var. *bicarinatus* Hack.; *Andropogon sorghum* var. *bicolor* (L.) Hack.; *Andropogon sorghum* var. *bicolor* (L.) Koern. & Wern.; *Andropogon sorghum* var. *caudatus* Hack.; *Andropogon sorghum* var. *cernuus* (Ard.) Koern. & Wern.; *Andropogon sorghum* var. *coiminatoricus* Burkill ex Benson & Subba Rao; *Andropogon sorghum* var. *compactus* Burkill ex C. Benson & C.K. Subba Rao; *Andropogon sorghum* var. *dochna* (Forssk.) C. Chr.; *Andropogon sorghum* var. *drummondii* (Nees ex Steud.) Hack.; *Andropogon sorghum* var. *durra* (Forssk.) Hack.; *Andropogon sorghum* var. *ehrenbergianus* Körn.; *Andropogon sorghum* var. *elegans* Körn.; *Andropogon sorghum* var. *hians* Stapf; *Andropogon sorghum* var. *miliiformis* Hack.; *Andropogon sorghum* var. *nervosus* (Besser ex Schult.) Hack.; *Andropogon sorghum* var. *saccharatum* (L.) Alef.; *Andropogon sorghum* var. *saccharatus* (L.) Körn.; *Andropogon sorghum* var. *sativus* Hack.; *Andropogon sorghum* var. *splendidus* Hack.; *Andropogon sorghum* var. *subglobosus* Hack.; *Andropogon sorghum* var. *submuticus* Hack.; *Andropogon sorghum* var. *technicus* Körn.; *Andropogon sorghum* var. *vulgaris* (Pers.) Hack.; *Andropogon sorghum* var. *vulgaris* (Pers.) Stapf ex Hook.f.; *Andropogon subglabrescens* Steud.; *Andropogon vulgaris* (Pers.) Raspail; *Holcus bicolor* L.; *Holcus caffrorum* Thunb.; *Holcus cernuus* Ard.; *Holcus cernuus* Muhl., nom. illeg., non *Holcus cernuus* Ard.; *Holcus dochna* Forssk.; *Holcus durra* Forssk.; *Holcus saccharatus* L.; *Holcus saccharatus* var. *technicus* (Körn.) Farw.; *Holcus sorghum* Brot., nom. illeg., non *Holcus sorghum* L.; *Holcus sorghum* L.; *Holcus sorghum* subsp. *drummondii* (Nees ex Steud.) Hitchc.; *Holcus sorghum* var. *caffrorum* (Thunb.) L.H. Bailey; *Holcus sorghum* var. *drummondii* (Nees ex Steud.) Hitchc.; *Holcus sorghum* var. *durra* (Forssk.) Bailey; *Holcus sorghum* var. *saccharatus* (L.) L.H. Bailey; *Holcus sorghum* var. *technicus* (Körn.) L.H. Bailey; *Holcus sudanensis* (Piper) L.H. Bailey; *Milium bicolor* (L.) Cav.; *Milium nigricans* Ruiz & Pav.; *Milium sorghum* (L.) Cav.; *Panicum caffrorum* Retz.; *Panicum frumentaceum* Salisb.; *Panicum frumentaceum* Benth.; *Panicum frumentaceum* Roxb.; *Rhaphis sorghum* (L.) Roberty; *Sorghum aethiopicum* (Hack.) Rupr. ex Stapf; *Sorghum basutorum* Snowden; *Sorghum bicolor* (Nees) Kuntze, nom. illeg., non *Sorghum bicolor* (L.) Moench; *Sorghum bicolor* subsp. *bicolor*; *Sorghum bicolor* subsp. *drummondii* (Nees ex Steud.) de Wet ex Davidse; *Sorghum bicolor* subsp. *drummondii* (Nees ex Steud.) de Wet; *Sorghum bicolor* var. *arduinii* (Körn.) Snowden; *Sorghum bicolor* var. *bicolor*; *Sorghum bicolor* var. *caffrorum* (Thunb.) Mohlenbr.; *Sorghum bicolor* var. *cernuum* (Ard.) Ghisa; *Sorghum bicolor* var. *drummondii* (Nees ex Steud.) Mohlenbr.; *Sorghum bicolor* var. *saccharatum* (L.) Mohlenbr.; *Sorghum bicolor* var. *subglobosum* (Hack.) Snowden; *Sorghum bicolor* var. *technicum* (Körn.) Stapf ex Holland; *Sorghum brevicallousum*

E.D. Garber; *Sorghum caffrorum* (Thunb.) P. Beauv.; *Sorghum caffrorum* P. Beauv.; *Sorghum caffrorum* var. *albofuscum* (Körn.) Snowden; *Sorghum caffrorum* var. *bicarinatum* (Hack.) Snowden; *Sorghum caffrorum* var. *brunneolum* Snowden; *Sorghum caffrorum* var. *lasiorhachis* (Hack.) Snowden; *Sorghum caudatum* (Hack.) Stapf; *Sorghum caudatum* Stapf; *Sorghum caudatum* var. *angolense* (Rendle) Stapf; *Sorghum caudatum* var. *colorans* (Pilg.) Snowden; *Sorghum cernuum* (Ard.) Host; *Sorghum cernuum* Host; *Sorghum cernuum* var. *agricolarum* (Burkill ex C. Benson & C.K. Subba Rao) Snowden; *Sorghum cernuum* var. *orbiculatum* Snowden; *Sorghum conspicuum* Snowden; *Sorghum conspicuum* var. *pilosum* Snowden; *Sorghum conspicuum* var. *rubicundum* Snowden; *Sorghum coriaceum* Snowden; *Sorghum coriaceum* var. *subinvolutum* Snowden; *Sorghum dochna* (Forssk.) Snowden; *Sorghum dochna* var. *dochna*; *Sorghum dochna* var. *obovatum* (Hack.) J.D. Snowden; *Sorghum dochna* var. *technicum* (Körn.) Snowden; *Sorghum drummondii* (Nees) Hack. ex Beetle; *Sorghum drummondii* Nees ex Hack.; *Sorghum drummondii* (Nees ex Steud.) Millsp. & Chase; *Sorghum dura* Griseb.; *Sorghum durra* Batt. & Trab.; *Sorghum durra* (Forssk.) Stapf, nom. illeg., non *Sorghum durra* (Forssk.) Batt. & Trab.; *Sorghum durra* (Forssk.) Batt. & Trab.; *Sorghum durra* var. *coiminatoricus* (Burkill ex Benson & Subba Rao) Snowden; *Sorghum durra* (Forssk.) Stapf var. *eois* (Burkill) J.D. Snowden; *Sorghum durra* (Forssk.) Stapf var. *niloticum* (Körn.) J.D. Snowden; *Sorghum elegans* (Körn.) Snowden; *Sorghum exsertum* Snowden; *Sorghum exsertum* var. *amplum* Snowden; *Sorghum gambicum* Snowden; *Sorghum guineense* Stapf; *Sorghum guineense* var. *involutum* Stapf; *Sorghum halepense* var. *saccharatum* (L.) Goiran; *Sorghum japonicum* (Hack.) Roshev.; *Sorghum margaritifera* Stapf; *Sorghum melaleucum* Stapf; *Sorghum mellitum* Snowden; *Sorghum mellitum* var. *mellitum*; *Sorghum membranaceum* Chiov.; *Sorghum membranaceum* var. *baldra-tianum* Chiov.; *Sorghum membranaceum* var. *ehrenbergianum* (Körn.) Snowden; *Sorghum miliiforme* (Hack.) Snowden; *Sorghum nervosum* Besser ex Schult. & Schult.f.; *Sorghum nervosum* Besser ex Schult.; *Sorghum nervosum* Chiov.; *Sorghum nigricans* (Ruiz & Pav.) Snowden; *Sorghum nigricans* var. *angolense* (Rendle) Snowden; *Sorghum nigricans* var. *peruvianum* (Hack.) Snowden; *Sorghum notabile* Snowden; *Sorghum notabile* var. *notabile*; *Sorghum roxburghii* Stapf; *Sorghum roxburghii* var. *hians* (Stapf) Stapf; *Sorghum saccharatum* (L.) Moench; *Sorghum saccharatum* Host, nom. illeg., non *Sorghum saccharatum* (L.) Moench; *Sorghum saccharatum* (L.) Pers., nom. illeg., non *Sorghum saccharatum* (L.) Moench; *Sorghum saccharatum* var. *bicolor* (L.) Kerguelen; *Sorghum saccharatum* var. *technicum* (Körn.) Doronina & Ivanjuk.; *Sorghum saccharatum* var. *vulgare* (Pers.) Kuntze; *Sorghum simulans* Snowden; *Sorghum sorghum* (L.) H. Karst.; *Sorghum splendidum* (Hack.) Snowden; *Sorghum subglabrescens* Schweinf. & Asch.; *Sorghum subglabrescens* (Steud.)

Schweinf. & Asch.; *Sorghum subglabrescens* var. *compactum* (Burkill ex C. Benson & C.K. Subba Rao) Snowden; *Sorghum subglabrescens* var. *oviforme* Snowden; *Sorghum subglabrescens* var. *rubidum* (Burkill ex C. Benson & C.K. Subba Rao) Snowden; *Sorghum sudanense* (Piper) Stapf; *Sorghum technicum* Batt. & Trab.; *Sorghum technicum* (Körn.) Batt. & Trab.; *Sorghum technicum* (Körn.) Roshev.; *Sorghum vulgare* Pers.; *Sorghum vulgare* var. *angolense* Rendle; *Sorghum vulgare* var. *bicolor* (L.) Pers.; *Sorghum vulgare* var. *bicolor* (L.) Eaton & J. Wright, nom. illeg., non *Sorghum vulgare* var. *bicolor* (L.) Pers.; *Sorghum vulgare* var. *caffrorum* (Retz.) C.E. Hubb. & Rehder; *Sorghum vulgare* var. *cernuum* (Ard.) Fiori & Paol.; *Sorghum vulgare* var. *drummondii* (Nees ex Steud.) Hack. ex Chiov.; *Sorghum vulgare* var. *drummondii* (Nees ex Steud.) Hitchc.; *Sorghum vulgare* var. *durra* (Forssk.) C.E. Hubb. & Rehder; *Sorghum vulgare* var. *nervosum* (Besser ex Schult.) Forbes & Hemsley; *Sorghum vulgare* var. *nigricans* (Ruiz & Pav.) A.F. Hill; *Sorghum vulgare* var. *roxburghii* (Stapf) Haines; *Sorghum vulgare* var. *saccharatum* (L.) Boerl.; *Sorghum vulgare* var. *technicum* (Körn.) Fiori & Paol.; *Sorghum vulgare* var. *technicum* (Körn.) Jav., nom. illeg., non *Sorghum vulgare* var. *technicum* (Körn.) Fiori & Paol.; *Sorghum vulgare* var. *vulgare*)

Old World, Africa and South Africa. Robust tufted annual or weak short-lived perennial, fast growing and invasive, erect, short rhizome, culms stout to flimsy, culm nodes villous or pubescent or glabrous, membranous ligule ciliate, leaf sheath with overlapping margins, leaves flat and lanceolate with margins sometimes wavy, inflorescence a compactly branched and terminal panicle, spikelets borne in pairs, terminal spikelets in three's, mature sessile spikelets ovoid to subglobose and persistent, upper spikelet pedicellate, 2 florets, lower floret sterile reduced to a lemma, upper floret hermaphrodite, glumes colored when mature, lemma awned or not, 2 lodicules, 3 stamens, feathery stigmas, seeds white to reddish brown, an extremely variable crop-weed complex, many cultivars and much variability in growth characteristics, noxious weed species, potential seed contaminant, cultivated, very susceptible to frost and intolerant of sustained flooding, grain crop species, very palatable, cultivated as forage or silage, grains used as food for cattle and poultry, a source of human food with over 300 million people dependent on it, flowering panicles used as brushes brooms, stems used for weaving fences and mats, stems contain sweet juice, sap made into a very sweet syrup, inflorescence astringent and haemostatic, decoction of the seed demulcent and diuretic, immature plants may accumulate toxic amounts of nitrate, found in disturbed areas, lowlands, along roadsides, sandy soils, open areas, abandoned fields, see *Species Plantarum* 2: 1047. 1753, *Mantissa Plantarum* 2: 301. 1771, *Flora Aegyptiaco-Arabica* 174. 1775, *Observationes Botanicae* 2: 7. 1781, *Saggi scientifici e letterari dell' accademia di Padova* 1: 128, t. 3, f. 1, 2. 1786,

Methodus Plantas Horti Botanici ... 207. 1794, *Prodromus Plantarum Capensium*, ...1: 20. 1794, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 18. Londini [London] (Nov-Dec) 1796, *Flora Peruviana* 1: 47. 1798, *Descripción de las Plantas ...* 306. Madrid 1802, *Elenchus Plantarum Horti Regni Botanici Matritensis* 24. 1803, *Flora Lusitanica* 1: 88. 1804, *Synopsis Plantarum* 1: 101. 1805, *Icones et Descriptiones Graminum Austriacorum* 4(2): t. 3. 1809, *Essai d'une Nouvelle Agrostographie* 131, 164, 178. 1812, *Hortus Bengalensis, or a catalogue ...* 7, 21. 1814, *Descriptio uberior Graminum* 276. 1817, *Flora Indica; or Descriptions ...* 1: 274. 1820, *Annales des Sciences Naturelles (Paris)* 5: 307. 1825, *Mantissa* 2(Add. 2): 669. 1827, *Révision des Graminées* 1: 165. 1829, *A Manual of Botany* (ed. 8) 438. N.Y. 1840 [the eighth edition, by Eaton and Wright, is entitled *North American Botany*], *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 113. 1841, *Synopsis Plantarum Glumacearum* 1: 393. 1854, *Flora of the British West Indian Islands* 560. 1864, *Landwirthschaftliche Flora* 313. 1866, *Syst. Uebers. Cereal.* 20. 1873, *Deutsche Flora. Pharmaceutisch-medizinische Botanik...* 367, f. 189. 1881, *Handbuch des Getreidebaus* 1: 308, 310, 313, 314. Bonn 1885, *Monographiae Phanerogamarum* 6: 503, 505, 508, 511, 513, 515-516, 519. 1889, *Annales du Jardin Botanique de Buitenzorg* 8: 69. 1890, *Revisio Generum Plantarum* 2: 790, 793. 1891, Oscar Baumann, *Durch Massailand zur Nilquelle*. 295. Berlin 1894, *Iconographica Florae Italicae ...* 14. 1895, *Flore d'Alger* 128. 1895, *Flora Analitica d'Italia* 1: 46. 1896, *The Flora of British India* 7: 184. 1896, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 151. 1899 and *Handb. Fl. Ceylon* 5: 232. 1900, *Publications of the Field Columbian Museum, Botanical Series* 3: 21. 1903, *Journal of the Linnean Society, Botany* 36: 368. 1904, *Madras Dept. Agr. Bull.* 355: 67, 68. 1906, *Nuovo Giornale Botanico Italiano* 17: 39. 1910, *Philipp. J. Sci.* 7: 413-415. 1912, *Proceedings of the Biological Society of Washington* 28(4): 33-34. 1915, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Flora of Tropical Africa* 9: 113, 123, 125-127, 129, 131-133. 1917, *Report of the Michigan Academy of Science, Arts and Letters* 20: 163. 1918, *Dansk Botanisk Arkiv* 43: 29. 1922, *Bulletin of Miscellaneous Information: Additional Series* 9: 789. 1922, *Gentes Herbarum; Occasional Papers on the Kind of Plants* 1: 132-133. 1923, *The Botany of Bihar and Orissa* 5: 1034. 1924, *Magyar Flóra* 1: 63. 1924, *Handb. Fl. Ceylon* 6: 332. 1931, *Botanical Museum Leaflets* 1: 10. 1932, *American Journal of Botany* 21(3): 139. 1934, *Flora URSS* 2(20): 16, 739. 1934, *Bulletin of Miscellaneous Information Kew* 1935(5): 225, 230, 234, 240, 243-245, 250. 1935, *Botanical Museum Leaflets* 4(10): 178. 1937, *Feddes Repertorium* 49: 52. 1940, *Petite Flore de l'Ouest-Africain* 403. 1954, *J. Linn. Soc., Bot.* 55: 191. 1955, *Flora Republicii Socialiste Romania* 12: 61. 1972, Robert H. Mohlenbrock, *Grasses: Panicum to Danthonia* 192. 1973, *Lejeunia* 75: 262. 1975, *American*

Journal of Botany 65(4): 481. 1978, *J. Heredity* 75: 196-202. 1984, R. Weimberg, H.R. Lerner and A. Poljakoff-Mayber, "Changes in growth and water-soluble solute concentration in *Sorghum bicolor* stressed with sodium and potassium salts." *Physiologia Plantarum* 62: 472-480. 1984, *Hereditas (Beijing)* 7(5): 23-24. 1985, *Cytologia* 53: 653-658. 1988, *Annals of Botany* 64: 675-681. 1989, *Cytologia* 55: 141-151. 1990, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Breeding Science* 45: 157-161. 1995, *Journal of Wuhan Botanical Research* 15(3): 277-278. 1997, M.S. Zwick, M.N. Islam-Faridi, H.B. Zhang, G.L. Hodnett, M.I. Gomez, J.S. Kim, H.J. Price and D.M. Stelly, "Distribution and sequence analysis of the centromere-associated repetitive element CEN38 of *Sorghum bicolor* (Poaceae)." *Am. J. Bot.* 87: 1757-1764. 2000, *Taxon* 49(2): 251. 2000, *Taxon* 50(2): 577-580. 2001, J.A. Dahlberg, J.J. Burke and D.T. Rosenow, "Development of a *Sorghum* core collection: refinement and evaluation of a subset from Sudan." *Economic Botany* 58(4): 556-567. 2004, Taiichiro Hattori et al., "Application of silicon enhanced drought tolerance in *Sorghum bicolor*." *Physiologia Plantarum* 123(4): 459-466. Apr 2005, *Molecular Ecology* 14(7): 2143-2154. June 2005, *Journal of Agronomy and Crop Science* 191(3): 172-184. June 2005, *Weed Biology and Management* 5(2): 69-76. June 2005, *Journal of Agronomy and Crop Science* 191(3): 162-171. June 2005, *Weed Research* 45(3): 212-219. June 2005, Volker Beyel and Wolfgang Brüggemann, "Differential inhibition of photosynthesis during pre-flowering drought stress in *Sorghum bicolor* genotypes with different senescence traits." *Physiologia Plantarum* 124(2): 249-259. June 2005.

in English: sorghum, cultivated sorghum, grain sorghum, forage sorghum, sweet sorghum, broom millet, broomcorn, broom corn, millet, millet grass, great millet, giant millet, Indian millet, Kafir corn, Kaffir corn, Kafirs, negro Guinea grass, Guinea corn, white Guinea corn, red Guinea corn, Sierra Leone guinea corn, horse corn, Rhodesian Sudan grass, Sudan grass, milo, dwarf milo, shattercane

in French: mil, gros mil, sorgho, guernotte, le petit roseau, maïs blanc

in Arabic: bechna, berbere, dachn, dhurah, dhurah hamra, dochn, dorra, durra, gharib, mereya, sambul, taam, táam

in Angola: massambala, massa-mbala, milho miúdo, omaha, ovasa, sorgo

in Benin: agbokounvovo, kpokpo

in Cameroon: akuthinda, nzam

in Dahomey: abokun, obo, vo

in East Africa: bel

in Gambia: bambara basso, basse bakinto, bassi, bassi wulengo, bassiba, bassiba kinto, basso, bassoba, ditinge,

ferdu basso, gajabo, kingi koyo, kingi wulengo, kinti, kinto, koos, kous, manio, manjo, nyaro kinto, nyo, samba jabbo, sou fenio, sucar kalo, tinge

in Ghana: akoko, akokò, apargu, atoko, atokok, awi, bam-matica, chi, coco, demonii, fo, ide, kadaaga, kapielle, katapielle, kaziaa, koko, kokote, kulia, kumpesi, kutuwè, kutuwè peper, kyi, menpe, miaa, miin, miipulima, norun, nyunso, sho, so, tschi, worsuli, yara, za

in Guinea: banyelesyeten, banyewa, defax, defax iwarax, deli fesyax, deli warax, dexaf, ediamb, enaga, endefax, endierà, epalanga, kemank kesoor, kende missé, kende niulé, kendi bilé, kombo vatefary, lomba, mengi, mengi béli, mengi firé, nionnifing, nionnigelé, tayim, tayula, ulimp, vya ntimp, vyantimp, vyenteli vendyax, vyenteli vyempalax

in Guinea-Bissau: baieri, basse bassi, nname quinto, quin-terim

in Ivory Coast: bemberi gué, bessekre, bessekré, nyoo

in Liberia: ding, kende

in Malawi: mapemba, amapemba, mapila, namuve, gonkho, cidomba, cipira

in Mali: abora, abura, amadi bubu, bechna, bemberi, bemberi ba, de, djibi, emè, gauri, hame, isey, kende, keniki, ndza, ngu, nguyu, nion, nion ni fing, nion ni gelé, saba, sanko, sie, suku, tafsut, tchye se, yo, yu

in Morocco: sorgho, mil, tanalâ, el-qsiyba, taganimt, drâ, dra hamra, dra bida, drâ el-bîda, drâ er-rqîqa, tafsût, âfsû, 'ababû, l-besnâ, besna, beshna, âsengar, duhn, dorra, durra, gedî, le petit roseau, maïs blanc, illan

in Niger: hamà, kaana

in Nigeria: a chi duka, aakunku, abantako, adookhò, agwi, ajagama, ajagamari, ajonggo, akpakpa, akpe, akpoi, aku, akunkwashili, angaabà, angaabin, ansam dkara, asniya, ayango, ayangwa, aza, baakin raakumii, babà, badal, badankama, bade, bafillatana, bafuri, bagobara, baho, bakin rakumi, balwa cololari, balwa colorari, bange, bangtankir, banjanga, basharamba, basaramba, bazamfara, bekpui, berbere, binini, bomò, boromo, buniya, bununi, cakalari, caw, cen, chammaje, che, chi da dawa, chi da gero, chingirri, cibal, cibal ngesa, cibe, cife, cife takandari, dà, daa, daawaa, dakwuhi, dalimi, damana, danduwa, dawn, doran zabo, doru, dorra, dungogiya, durra, ebwafele, eegezee, egu, eke, ekpan, ekpoi deunderim, emiigwu, ereere, ewi, ewi dakwuhi, ewung, eyikpan, fafa, fara fara, farafara, farfara, gabara, gabeli, gabjin, gagara biri, ganda, garangatsa, gamera, gaura, gaw, gawà, gaweje, gawerka, gawri, gawri jigaari, gawri mbayeeri, gawri njolomri, gawri yolobri, gawrije, gbenge, gboron, gegebo baba, gewà, gewenggè, ghera, girar burtuu, gu, gudi, gweo, gwoyo, gyamro, gyauro, hakorin karuwa, hambana, himeirun, hwerma, ida, idar, idawn, iga, igù, igwianya, igwu, igwu abakpa, ihnmi, iimoo, iishina, ji, ikha, ikpu, ikulatang, ikulè, ikwelatam, ikwù, imoghioi, inari, inyari, iyi, iza, janare, janhauya, jarmari,

jere, kafar shamuwa, kama, mandiri, kangalè sawade, kanggeli, kanggeli aali, karaate kiishina, karaatekiishina, karan talakà, karandafi, kareerè, karkara, karmami, kas, kaso ba ki, kaso ba ni, kaso bammi, katsakatsa, ken, ker-iram, kha, khia, khiya, khria, khui, kiliram, koma, kona, kong, kono, koom, kowg, kowop, kuberi, kuburu, kunduku-ndu, kurè, kusumburwa, kuté, kwama, kwanla, kwarmà, kwemé, kwermà, kwi, kwiri, kwishi, kwoma, kwushi, kyaaràà, kyaram, kyarama, kyanan, kyananaa, lacceri, lakaaje, lakaawal, lakatblel, lakawal, leeben raakumii, lekité, leme thau, lkha, magargera, mallen kabi, mallen mama, mallen zamfara, malleri, marangwadiya, mari, mariya, masaba, masakuwa, masakwa, maskuwari, maudzen, mazakuwa, mazakwa, mazavka, mbafu, mbawaran, mbawran, mbayeri, mbayeri daneeri, mbayeri mbodeeri, mbio, mereya, miau, mijo, misa, miyo, mmee, mo, moddo, mom, mti, mukka jeda, murel, murerri, murmururi, muujin, ndalturi, ndammungeri, ndaneri, ndjikuné, ndunguri, nemo, ngaberi, ngafeli, ngawuli, ngawurà, ngobari, njigana mbaya, njigari, njolomri, nsange, nyam, nywat, nyor, nzan, nzang, nzase, o, ò, oka, oka baba, oka esin, oka isi, oka nwaajeta, okà, okà ajata, okhi okiri, okeshin, oki ighan, okili, okili inyari, okili mme, okili ocha, okoli, papira, phiau, purdi, réérù, sabade, salambata, sambul, same, sammere, sew, sewé, shu, shwaa, shwé, sie, som, sori, shosha, sosoki, sowa, su, sudumari, sukungwa, suwaa, suwat, swaa, swalak, takan dàà, takanda, takandà, takandàà, tan kwasau, tankware, teleri, ttakamù, tura, ubi, uhi, ukhi, ukhooru, umpu, uu, uwua, uxi, wa, waté, wayaati, wo, wunwundi, wutsiyar saniya, wutsiyar tunku, wuxi, ya, yabanya, yalan, yaldari, yara, yara dik, yar gwanki, yar rani, yar wuri, yara pyeng, yara syinang, yeleri, yera, yeri, yi, yie, yiir, yiira, yiiri, yire, yiri, xa, xà, xayà, xiya, xiyà, xwarmà, xwermà, xwermè, za, zaà, zabakon kaura, zadzon, zafyen, zajikwin, zangare, zarmà, ze, zie, ziyikwi, zuku, zukun, zumwe, zumwey

in Senegal: bagene, bambarali, basit bantabu, bassi, bendab, bendab after, binum, binwm, dagave, dahnat, diahnat, fela, gindab, gindab gimbara, ginyal, ginyal gepesya, haussa kala, kongosan, kotj, maka no, ngok, pim, samé, sevel, tamari, ten, tin, tyndap after

in Sierra Leone: baheri, bimberi, chende, gari, gauri, gbadi, gbali, gende, gete, kekboyoy, kende, kenele, kete, keti, keyule, kus kus, mengi, menina, murutuna, saine, serikite, serikiti, tagboyoy, tagboyoy tabanko, tagboyoy tagbalkanta, tagboyoy tagbotho, tagboyoy tayerike, tagboyoy tayule, tagboyoy tayulu, talasoi, tamerike, tayante, tangi, thoil, thol, tolle

in Sudan: durra

in Tanzania: buhembe

in Togo: ajuluwà, akpaluku, conu, dgefelu, diimon, edy-ipepeme, idi, kansina, machu, mela, nggani, neu, nyiamune, tschonde, tyetya kulma, vo

in Upper Volta: biri moonde, gawri mbayerri, gmee sen, magaaaji bodeeji, mapene, mbayeeri, mbayeeri mbodeeri, mojonoori, muko, ya, yafa, yala

in Yoruba: baba, babà, bomo, boromo, oka, oka baba, oka esin, oka isi, oka pupa, okà, sosoki

in China: gao liang, kaolang, kao liang, shu shu

in India: alangara cholam, bajra-jhupanwa, bili jola, bonda-janu, chari, chavela, cholam, cholum, chonnal, choti juar, choti junri, deerghamala, deerghashara, deo-dhan, dirghamala, enegaar jola, gidda jonna, ikshupathraka, janera, janoo, janu, jari, javar, javari, javrase-hindi, joar, jogala, jola, jolah, jolu, jonati, jondhala, jondla, jonhari, jonna, jonnalu, joorna, jovaari, jowar, jowari, juaar, juar, juari, jundri, junri, juvari jondhla, juwari, kadaval, kanggni, kasajonar, kempu jola, kharbi (= the dry stalks), kharif, konda, kondajanu, kshethrekshu, neer jola, ogaru jola, pachha jonna, periya manjal cholam, raamudi thalam braalu, rakthakhumah, sakre jola, shalu, shikhari, tella, tella-jonna, thalivirichan cholam, thellajanu, vritthathandula, yavanala, zonnalu, zurrat

in Indonesia: cantel, jagung cantel

in Japan: nami-morokoshi, sato-morokoshi

in Laos: khauz fa:ngz

in Malaysia: jagong, jagung

in Okinawa: tonuchin

in the Philippine Islands: bakau, batad, batag, bukakau, gau, layagah

in Thailand: changhan ma phut, changhan maphut, khaao faang samut khodom, khaao paang haang chaang, khaao paang nok, khaao phaang haang chaang, khao fang hang chang, khao fang samut khodom, kao liang, khao pang hang chang, khao pang nok, khao-panghangchang, mok khodom, mut khodom, mutkhodom, samut khodom, samutkhodom

in Vietnam: co' mia hai m[aaf]u

in South America: aruus (Achual Jivaro, Peru), sorguillo, sorgo, sorgo escoba, millo, maicillo

in Colombia: maíz millo

in El Salvador: triguillo

in Mexico: caña, escoba, escoba maicera, laab eem, maicena, maíz de guinea, milo sorgo, sorgo, sudán, tasau, zacate sudán

S. bicolor (L.) Moench subsp. *arundinaceum* (Desv.) de Wet & Harlan ex Davidse (*Andropogon arundinaceus* Willd., nom. illeg., non *Andropogon arundinaceus* Bergius; *Andropogon verticilliflorus* Steud.; *Rhaphis arundinacea* Desv.; *Sorghum aethiopicum* (Hack.) Rupr. ex Stapf; *Sorghum arundinaceum* (Desv.) Stapf; *Sorghum bicolor* (L.) Moench subsp. *arundinaceum* (Desv.) de Wet & Harlan; *Sorghum brevicarinatum* Snowden; *Sorghum castaneum* C.E. Hubb. & Snowden; *Sorghum lanceolatum* Stapf; *Sorghum macrochaeta* Snowden; *Sorghum panicoides* Stapf;

Sorghum pugionifolium Snowden; *Sorghum somaliense* Snowden; *Sorghum usambarense* Snowden; *Sorghum verticilliflorum* (Steud.) Stapf; *Sorghum virgatum* (Hack.) Stapf; *Sorghum vogelianum* (Piper) Stapf)

Tropical Africa, Australia. Short-lived perennial or annual, weak, erect, without rhizomes, leaf sheath round and glabrous, ligule membrane-like with hairy margin, open to slightly contracted panicle with lax branches arranged in whorls, spikelets in pairs, 1 spikelet sessile and awned, 1 spikelet pedicellate and awnless, racemes disarticulating readily at maturity, palatable fodder grass, suitable for hay-making, seeds used as an astringent, usually in wet areas, disturbed areas, riverbanks, water courses, vleis, old cultivations, along roadsides, on clay, sugarcane fields, on moist sandy soils, tropical fruit orchards, rubber plantations, see *Species Plantarum* 4: 906. 1806, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 173. 1831, *Synopsis Plantarum Glumacearum* 1: 393. 1854, *Monographiae Phanerogamarum* 6: 504. 1889 and *Proceedings of the Biological Society of Washington* 28: 34. 1915, *Flora of Tropical Africa* 9: 111-112, 114, 116, 119-120. 1917, *Bulletin of Miscellaneous Information Kew* 1936(5): 316. 1936, *The Cultivated Races of Sorghum* 237. 1936, *Journal of the Linnean Society, Botany* 55(358): 221, 238-247. 1955, *Origins of African Plant Domestication* 455. 1976, *Amer. J. Bot.* 65(4): 481. 1978, *Catalogue of the Flowering Plants and Gymnosperms of Peru* 1258. 1993 [*Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993].

in English: common wild sorghum, evergreen millet, Johnson grass, wild grain sorghum, Rhodesian Sudan grass, Kavirondo sorghum

in southern Africa: baster Jonhsongras, Jonhsongras, gewone wildesorghum, grootswartsaadgras, wilde graan-sorghum; iquangaboto (Ndebele); molémogéle (Tswana)

S. bicolor (L.) Moench subsp. **bicolor** (*Andropogon bicolor* (L.) Roxb.; *Andropogon sorghum* subsp. *sativus* Hack.; *Andropogon sorghum* var. *bicolor* (L.) Hack.; *Andropogon sorghum* var. *bicolor* (L.) Koern. & Wern.; *Andropogon sorghum* var. *elegans* Körn. ex K. Schum.; *Andropogon sorghum* var. *miliiformis* Hack.; *Andropogon sorghum* var. *nervosus* (Besser ex Schult.) Hack.; *Andropogon sorghum* var. *splendidus* Hack.; *Andropogon sorghum* var. *vulgaris* (Pers.) Hack.; *Andropogon sorghum* var. *vulgaris* (Pers.) Stapf ex Hook.f.; *Andropogon vulgaris* (Pers.) Raspail; *Holcus bicolor* L.; *Holcus dochna* Forssk.; *Holcus sorghum* L.; *Milium bicolor* (L.) Cav.; *Milium nigricans* Ruiz & Pav.; *Sorghum ankolib* Stapf; *Sorghum basutorum* Snowden; *Sorghum bicolor* (L.) Moench; *Sorghum caffrorum* (Thunb.) P. Beauv.; *Sorghum caudatum* (Hack.) Stapf; *Sorghum cernuum* (Ard.) Host; *Sorghum conspicuum* Snowden; *Sorghum coriaceum* Snowden; *Sorghum dochna* (Forssk.) Snowden; *Sorghum dulcicaule* Snowden; *Sorghum durra* (Forssk.) Stapf, nom. illeg., non *Sorghum durra* (Forssk.)

Batt. & Trab.; *Sorghum elegans* (Körn. ex K. Schum.) Snowden; *Sorghum exsertum* Snowden; *Sorghum gambicum* Snowden; *Sorghum guineense* Stapf; *Sorghum margaritiflorum* Stapf; *Sorghum melaleucum* Stapf; *Sorghum mellitum* Snowden; *Sorghum membranaceum* Chiov.; *Sorghum miliiforme* (Hack.) Snowden; *Sorghum nervosum* Besser ex Schult.; *Sorghum nigricans* (Ruiz & Pav.) Snowden; *Sorghum notabile* Snowden; *Sorghum rigidum* Snowden; *Sorghum roxburghii* Stapf; *Sorghum saccharatum* (L.) Moench; *Sorghum saccharatum* var. *bicolor* (L.) Kerguelen; *Sorghum saccharatum* var. *vulgare* (Pers.) Kuntze; *Sorghum simulans* Snowden; *Sorghum splendidum* (Hack.) Snowden; *Sorghum subglabrescens* (Steud.) Schweinf. & Asch.; *Sorghum vulgare* Pers.; *Sorghum vulgare* var. *bicolor* (L.) Eaton & J. Wright, nom. illeg., non *Sorghum vulgare* var. *bicolor* (L.) Pers.; *Sorghum vulgare* var. *bicolor* (L.) Pers.; *Sorghum vulgare* var. *nervosum* (Besser ex Schult.) Forbes & Hemsley; *Sorghum vulgare* var. *roxburghii* (Stapf) Haines)

Australia, Africa, America. Short-lived perennial or annual, racemes not disarticulating readily at maturity, riparian, see *Species Plantarum* 2: 1047. 1753, *Mantissa Plantarum* 2: 301. 1771, *Flora Aegyptiaco-Arabica* 174. 1775, *Saggi scientifici e letterari dell' accademia di Padova* 1: 128, t. 3, f. 1, 2. 1786, *Methodus Plantas Horti Botanici ...* 207. 1794, *Prodromus Plantarum Capensium, ...* 1: 20. 1794, *Flora Peruviana* 1: 47. 1798, *Synopsis Plantarum* 1: 101. 1805, *Icones et Descriptiones Graminum Austriacorum* 4(2): t. 3. 1809, *Essai d'une Nouvelle Agrostographie* 131, 164, 178. 1812, *Annales des Sciences Naturelles (Paris)* 5: 307. 1825, *Mantissa* 2(Add. 2): 669. 1827, *Synopsis Plantarum Glumacearum* 1: 393. 1854, *Beitrag zur Flora Aethiopiens ...* 302, 306. 1867, *Monographiae Phanerogamarum* 6: 503, 505, 508, 510-511, 513, 515-519. 1889, *Revisio Generum Plantarum* 2: 793. 1891, *Die Pflanzenwelt Ost-Afrikas* 53: 40. 1895, *The Flora of British India* 7: 184. 1896 and *Journal of the Linnean Society, Botany* 36: 368. 1904, *La Collezione dei cereali della Colonia Eritrea* 23, 24, 47. Roma 1912, *Flora of Tropical Africa* 9: 123, 125-126, 129, 131-135. 1917, *The Botany of Bihar and Orissa* 5: 1034. 1924, *Bulletin of Miscellaneous Information Kew* 1935(5): 225-226, 229-230, 232-234, 237-240, 244, 247-249. 1935, *Taxon* 49(2): 251. 2000.

in English: Kafir corn, grain sorghum, forage sorghum, sweet sorghum, broom millet, sorghum

in Angola: massambala, massa-mbala, omaha, ovasa, milho miúdo, sorgo

in Gambia: basi qui, bassi ki, bassi qui, bassi wulima

in Ghana: kaziegu

in Guinea-Bissau: bambaram basso, midjo cabalo

in Nigeria: abàm, aco, adam, ekpan bokungi, ekpan djurugi, ekpan emigi, ekpan etswa gutaji, ekpan gbadza, ekpan

guduchi, eyi takungi, gbagù, jan dawa, kpayi, kuyi, kuyi beyigi, mayi, mayi chintara ebe, mayi gbagu, shurugi, surù in Senegal: fabak, sangare

S. brachypodum Lazarides

Australia, Northern Territory. See *Australian Systematic Botany* 4(4): 591-635. 1991.

S. bulbosum Lazarides

Australia, Northern Territory. See *Australian Systematic Botany* 4(4): 591-635. 1991.

S. ecarinatum Lazarides

Australia, Western Australia. See *Australian Systematic Botany* 4(4): 611. 1991, *Plant, Cell and Environment* 23(8): 839-851. Aug 2000, *Journal of Applied Entomology* 125(3): 109-114. Apr 2001, *Biological Journal of the Linnean Society* 82(4): 411-423. Aug 2004, *Plant Breeding* 124(1): 96-98. Feb 2005, *New Phytologist* 165(2): 391-410. Feb 2005, *Plant Breeding* 124(2): 147-153. Apr 2005.

S. exaltatum (R. Br.) Kuntze (*Andropogon exaltatus* R. Br.; *Cymbopogon exaltatus* (R. Br.) Domin; *Cymbopogon nardus* subvar. *exaltatus* (R. Br.) Roberty)

Australia, Northern Territory. See *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Revisio Generum Plantarum* 2: 791. 1891, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 155. 1899 and *Bibliotheca Botanica* 85: 273. 1915, *Boissiera*. 9: 174, 176. 1962.

S. exstans Lazarides (also spelled *extans*)

Australia, Northern Territory. See *Australian Systematic Botany* 4(4): 613. 1991.

S. grande Lazarides

Australia, Northern Territory, Queensland. See *Australian Systematic Botany* 4(4): 615. 1991, *New Phytologist* 151(1): 257-264. July 2001, *Journal of Applied Ecology* 41(5): 846-857. Oct 2004, *Weed Research* 44(5): 341-354. Oct 2004, *Journal of Applied Microbiology* 97(6): 1329-1339. Dec 2004.

S. halepense (L.) Pers. (*Andropogon arundinaceus* Scop., nom. illeg., non *Andropogon arundinaceus* Bergius; *Andropogon controversus* Steud.; *Andropogon halepensis* (L.) Brot.; *Andropogon halepensis* subsp. *anatherus* Piper; *Andropogon halepensis* var. *anatherus* Piper; *Andropogon halepensis* var. *genuinus* Stapf; *Andropogon halepensis* var. *muticum* (Hack.) Asch. & Graebn.; *Andropogon halepensis* var. *sudanensis* (Piper) Suess.; *Andropogon miliaceus* Roxb.; *Andropogon miliiformis* Schult.; *Andropogon sorghum* subsp. *halepensis* (L.) Hack.; *Andropogon sorghum* subsp. *halepensis* Hack.; *Andropogon sorghum* subsp. *sudanensis* Piper; *Andropogon sorghum* subvar. *genuinus* Hack.; *Andropogon sorghum* subvar. *leiocladus* Hack.; *Andropogon sorghum* subvar. *muticus* Hack.; *Andropogon sorghum* subvar. *trachycladus* Hack.; *Andropogon sorghum* var. *corymbosus* Hack.; *Andropogon sorghum* var. *halepensis*

(L.) Hack.; *Andropogon sorghum* var. *perennis* Bertoni; *Andropogon sudanensis* (Piper) Leppan & Bosman; *Blumenbachia halepensis* (L.) Koeler; *Holcus halepense* L.; *Holcus halepensis* L.; *Holcus halepensis* var. *miliiformis* (Schult.) Hitchc.; *Holcus sorghum* subsp. *sudanensis* (Piper) Hitchc.; *Holcus sorghum* var. *sudanensis* (Piper) Hitchc.; *Holcus sudanensis* (Piper) L.H. Bailey; *Milium halepense* (L.) Cav.; *Rhaphis halepensis* (L.) Roberty; *Sorghum x alnum* Parodi; *Sorghum alnum* Parodi; *Sorghum arundinaceum* (Desv.) Stapf; *Sorghum bicolor* subsp. *halepense* Barkworth & al.; *Sorghum controversum* (Steud.) Snowden; *Sorghum dochna* var. *corymbosum* (Hack.) Snowden; *Sorghum halepense* f. *halepense*; *Sorghum halepense* f. *muticum* (Hack.) C.E. Hubb.; *Sorghum halepense* var. *anatherum* Barkworth & al.; *Sorghum halepense* var. *genuinum* Hack.; *Sorghum halepense* var. *muticum* (Hack.) Hayek; *Sorghum halepense* var. *muticum* (Hack.) Parodi, nom. illeg., non *Sorghum halepense* var. *muticum* (Hack.) Hayek; *Sorghum halepense* var. *sudanense* (Piper) Soó; *Sorghum miliaceum* (Roxb.) Snowden; *Sorghum miliaceum* var. *parvispicula* Snowden; *Sorghum saccharatum* var. *corymbosum* (Hack.) Doronina & Ivanjuk.; *Sorghum saccharatum* var. *halepense* (L.) Kuntze, also spelled *halapense*; *Sorghum saccharatum* var. *sudanense* (Piper) Kerguelen; *Sorghum halepense* (L.) Pers.; *Trachypogon avenaceus* Nees)

Mediterranean area. Perennial, vigorous, robust, simple, halophytic, stout, erect, strongly rhizomatous with extensively and well-developed long-creeping fleshy rhizomes, sometimes decumbent at the base with numerous adventitious roots, culm nodes downy or glabrous, internodes with scale-like bracts, narrow leaf blades, leaf sheaths chartaceous, short ligule membranous, leaves linear and white, terminal panicle compact or spreading and often reddish purple to purplish brown, spikelets paired, terminal spikelets in three's, lower spikelet sessile, upper spikelet pedicellate, spikelets cream to yellow fertile and elliptic, 2 florets, lower glume coriaceous and 2-keeled, lemma of upper floret usually awned, awn twisted and geniculate, stamens 3, grain eaten in time of scarcity, crop plant, good fodder, valuable forage and hay grass for livestock, eaten by cattle when young, very palatable in the early growing stage, rodents eat the seeds, alcoholic beverages, noxious aggressive weed and a serious pest, cultivated and naturalized, difficult to eradicate, good drought tolerance to very strongly drought resistant, susceptible to heavy frosts, sometimes causing poisoning of stock, often cyanogenic, may accumulate toxic amounts of nitrate, pollen may induce hay fever, hybridizes with cultivated sorghums, reported to be depurative and tonic, a folk remedy for blood and urinary disorders, seed demulcent and diuretic, highly adaptable, used to rehabilitate overgrazed ranges, prefers semiarid to subhumid areas, invades wet places usually swampy, along edge of sedge marsh, moist places, irrigation ditches, wet

sandy soils, waste areas, edge of roads, waste places, old pastures, open places, roadsides and other disturbed places in temperate climates, see *Species Plantarum* 2: 1047-1048. 1753, *Flora Carniolica, Editio Secunda* 274. 1772, *Methodus Plantas Horti Botanici ...* 207. 1794, *Descriptio Graminum in Gallia et Germania* 29. 1802, *Descripción de las Plantas ...* 306. 1802, *Flora Lusitanica* 1: 88-89. 1804, *Syn. Pl.* 1: 101. 1805, *Fl. Ind.* 1: 275-276. 1820, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 354. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 173. 1831, *Synopsis Plantarum Glumacearum* 1: 391. 1854, *Flora Brasiliensis* 2(4): 272. 1883, *Monographiae Phanerogamarum* 6: 501-502, 513-514. 1889, *The Flora of British India* 7: 183. 1896, *Synopsis der mitteleuropäischen Flora* 2: 47. 1898, *Revisio Generum Plantarum* 3: 368. 1898 and *Revista Agronómica Asunción* 41: 7. 1909, *Nuovo Giornale Botanico Italiano* 17: 39. 1910, *Annals of the Transvaal Museum* 3: 122. 1912, *Proceedings of the Biological Society of Washington* 28(4): 28, 33-34. 1915, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Flora of Tropical Africa* 9: 114. 1917, *Bulletin du Muséum d'Histoire Naturelle* 25: 497. 1919, *Field Crops of South Africa* 286. 1923, *Gentes Herbarum; Occasional Papers on the Kind of Plants* 1: 132. 1923, *Repertorium Specierum Novarum Regni Vegetabilis* 30(3): 367. 1932, *Bulletin of Miscellaneous Information Kew* 1935(5): 235. 1935, *Icones Plantarum* 34: t. 3364, p. 4. 1938, *Botanical Magazine* 55(660): 550. 1941, *Revista Argentina de Agronomía* 10(4): 361, f. 1-3, t. 31-34. 1943, *Revista Argentina de Agronomía* 13(1): 10. 1946, *Petite Flore de l'Ouest-Africain* 403. 1954, *Journal of the Linnean Society, Botany* 55(358): 205-208, 210-212, f. 2D-F. 1955, *Lejeunia* 75: 262. 1975, *Journal of Cytology and Genetics* 18: 58-61. 1983, *J. Heredity* 75: 196-202. 1984, *Naturaliste Canad.* 111: 447-449. 1984, *J. Cytol. Genet.* 21: 155. 1986, *Annali di Botanica* 45: 75-102. 1987, *Journal of Cytology and Genetics* 25: 147-148. 1990, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 26/27: 25-26. 1997, *Flora of North America North of Mexico* 25: 751. 2003, *Weed Research* 45(1): 2-17. Feb 2005, Erika L. Geiger and Guy R. McPherson, "Response of semidesert grasslands invaded by nonnative grasses to altered disturbance regimes." *Journal of Biogeography* 32(5): 895-902. May 2005, P.L. Morrell et al., "Crop-to-weed introgression has impacted allelic composition of johnsongrass populations with and without recent exposure to cultivated sorghum." *Molecular Ecology* 14(7): 2143-2154. June 2005.

in English: Columbus grass, Aleppo grass, Syrian grass, means grass, Johnson grass, American Johnson grass, Cuba grass, Egyptian millet, evergreen millet, grass sorghum

in Morocco: sorgho, mil, tanalâ, el-qsiyba, taganimt, drâ, drâ el-bîda, drâ er-râqqa, tafsût, âfsû, 'ababû, l-besnâ, âsen-gar, duhn, dorra, durra, gedf, le petit roseau, maïs blanc

in southern Africa: Columbusgras, Jonhsongras; iquang-aboto (Ndebele)

in Japan: Seiban-morokoshi

in India: baba jara, bajra, banchari, bara, barru, baru, barua, barwa, bhurru, bikhonda, boroo, boru, braham, chari, gaddi janu, gaddijanu, galla jari, huchhu jola, impi jola, jondhri, kaadu galagu hullu, kaattucholam, kahijola, kala mucha, kartal, karuppan pul, padda jalla gadi, podar jara, veera-kaandak

in Thailand: yaa fong, yaa pong, ya pong, ya phong, yaa phong

in Brazil: capim de Cuba, milho bravo

in Colombia: Johnson, pasto Johnson

in El Salvador: zacate Johnson

in Mexico: ak'iisu'uk, ak'il-suuc, ak'il-suuk, alpiste, maicillo, sorgo de aleppo, tío del maiz, xkuku, zacate agrarista, zacate egipto, zacate johnson, zacate johnston, zacate milo, zacate nilo, zacate parana

in Peru: grama china

in Puerto Rico: cañuela, hierba de don Carlos

S. halepense (L.) Pers. var. *propinquum* (Kunth) Ohwi (*Andropogon affinis* J. Presl, nom. illeg., non *Andropogon affinis* R. Br.; *Andropogon halepensis* var. *propinquus* (Kunth) Hack.; *Andropogon halepensis* var. *propinquus* (Kunth) Merr., nom. illeg., non *Andropogon halepensis* var. *propinquus* (Kunth) Hack.; *Andropogon propinquus* Kunth; *Andropogon sorghum* var. *propinquus* (Kunth) Hack.; *Holcus halepensis* subsp. *propinquus* (Kunth) Hitchc.; *Sorghum propinquum* (Kunth) Hitchc.)

Asia, Japan. See *Species Plantarum* 2: 1047-1048. 1753, *Flora Lusitanica* 1: 89. 1804, *Reliquiae Haenkeanae* 1(4-5): 343. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 502. 1833, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 239-240. 1885, *Monographiae Phanerogamarum* 6: 503. 1889 and *Philippine Journal of Science* 1(Suppl. 5): 336. 1906, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Lingnan Science Journal* 7: 249. 1929 [1931], *Botanical Magazine* (Tokyo) 55(660): 550. 1941.

S. interjectum Lazarides

Western Australia, Northern Territory, Queensland. See *Australian Systematic Botany* 4(4): 616. 1991.

S. intrans F. Muell. ex Benth. (*Andropogon intrans* (F. Muell. ex Benth.) F. Muell.; *Sarga intrans* (F. Muell. ex Benth.) Spangler)

Australia, Northern Territory, Queensland. Erect, dense, glaucous, tufted, leafy, grazed when young or not too old, native pastures of dry grasslands, see *Flora Australiensis: A Description ...* 7: 541. 1878, *Systematic Census of Australian Plants ...* 132. 1882 and *J. Heredity* 75: 196-202. 1984, *Australian Systematic Botany* 4: 591-635. 1991.

S. laxiflorum F.M. Bailey (*Vacoparis laxiflorum* (F.M. Bailey) Spangler)

Papua New Guinea, Australia, Northern Territory, Queensland. See Frederick Manson Bailey (1827-1915), *Report on New Plants, Preliminary to General Report on Botanical Results on Meston's Expedition to the Bellenden-Ker Range*. 1889, in Archibald Meston, *Report of the Government Scientific Expedition to Bellenden-Ker Range*. Brisbane 1889 and *Australian Systematic Botany* 4: 591-635. 1991.

S. leiocladum (Hackel) C.E. Hubb. (*Andropogon australis* subsp. *leiocladus* Hack.; *Andropogon australis* var. *leiocladus* Hack.; *Sorghum leiocladum* (Hack.) C.E. Hubb. ex Vickery)

Australasia, New South Wales, Queensland, Northern Territory, Victoria. Perennial, tufted, hairy or pilose nodes, inflorescence open, spikelets paired, 2 florets, lower spikelet sessile, upper spikelet pedicellate and reduced, terminal spikelets in three's, glumes awnless, native fodder, woodland, poor soils, see *Monographiae Phanerogamarum* 6: 524. 1889 and *Proceedings of the Linnean Society of New South Wales* 60: 357. 1935, *Hooker's Icones Plantarum* 34: t. 3364. 1938.

in English: wild sorghum

S. macrospermum E.D. Garber (*Vacoparis macrospermum* (E.D. Garber) Spangler)

Australia, Northern Territory. Annual, rare species, usually single, erect, see *University of California Publications in Botany* 23(6): 323. Berkeley, California 1950, *Cytologia* 55: 141-151. 1990, M. Lazarides, J. Lenz & L. Watson, "*Clausospicula*, a new Australian genus of grasses (Poaceae, Andropogoneae)." *Australian Systematic Botany* 4(2): 391-405. 1991, *Australian Systematic Botany* 4: 591-635. 1991 [Taxonomy, cytology and ecology of indigenous Australian sorghums (*Sorghum* Moench: Andropogoneae: Poaceae)], *Journal of Applied Entomology* Volume 125, Issue 3: 109-114. Apr 2001, Russell E. Spangler, "Taxonomy of *Sarga*, *Sorghum* and *Vacoparis* (Poaceae: Andropogoneae)." *Australian Systematic Botany* 16(3): 279-299. 2003, *Annals of Botany* 95: 219-227. 2005.

S. matarakense E.D. Garber & L.A. Snyder (*Sorghum matarakense* E.D. Garber & L.A. Snyder) (Mataranka, near Elsey Station, Northern Territory)

Australia, Northern Territory. See *Madroño* 11: 8. 1951 (cited also as 11 (1951) 8 or 9: 8. 1951), *Australian Systematic Botany* 4(4): 624. 1991, *Bothalia* 21(2): 163-170. 1991.

S. miliaceum (Roxb.) Snowden (*Andropogon halepensis* subsp. *miliiformis* (Schult.) Piper; *Andropogon miliaceus* Roxb.; *Andropogon miliiformis* Schult.; *Holcus halepensis* subsp. *miliiformis* (Schult.) Hitchc.; *Sorghum halepense* (L.) Pers.)

Asia, India. Suitable for cultivation, see *Species Plantarum* 2: 1047-1048. 1753, *Flora Lusitanica* 1: 89. 1804, *Syn. Pl.* 1: 101. 1805, *Flora Indica; or Descriptions ...* 1: 276. 1820, *Mantissa* 2: 448. 1824 and *Proceedings of the Biological Society of Washington* 28: 28. 1915 and 29: 128. 1916, *Journal of the Linnean Society, Botany* 55(358): 205-210, f. 2D-F. 1955, *American Journal of Botany* 65(4): 477-484. 1978.

S. miliaceum (Roxb.) Snowden var. *parvispicula* Snowden
Asia, India. See *Journal of the Linnean Society, Botany* 55(358): 209-210. 1955.

S. nitidum (Vahl) Pers. (*Anatherum nitidum* (Vahl) Spreng.; *Andropogon amboinicus* (L.) Merr.; *Andropogon nitidus* (Vahl) Kunth; *Andropogon serratus* Thunberg; *Andropogon serratus* var. *nitidus* (Vahl) Hack.; *Andropogon tropicus* Spreng.; *Holcus fulvus* R. Br.; *Holcus nitidus* Vahl; *Holcus serratus* Thunberg; *Poa amboinica* L.; *Sorghum fulvum* (R. Br.) P. Beauv. ex Rendle; *Sorghum fulvum* (R. Br.) P. Beauv.; *Sorghum nitidum* f. *aristatum* C.E. Hubb.; *Sorghum nitidum* var. *fulvum* (R. Br.) Hand.-Mazz.; *Sorghum serratum* (Thunb.) Kuntze, nom. illeg., non *Sorghum serratum* (Thunb.) Roem. & Schult.; *Sorghum tropicum* (Spreng.) Büse)

Australia, Asia temperate and tropical, India, China, Japan, Indonesia. Perennial or annual, tufted, erect, wiry, slender, without rhizomes, panicles lanceolate, 2-4 shining spikelets pairs, culm nodes bearded, lower glume coriaceous, upper lemma awned or muticous, wild, suitable for cultivation, forage, eaten by cattle when young, common grass in dry habitats, open disturbed areas, woodlands, roadsides and orchards, see *Mantissa Plantarum* 557. 1771, *Flora Japonica, ...* 41. 1784, *Symbolae Botanicae, ...* 2: 102. 1791, *Prodromus Plantarum Capensium, ...* 20. 1794, *Syn. Pl.* 1: 101. 1805, *Prodromus Florae Novae Hollandiae* 1: 199. 1810, *Essai d'une Nouvelle Agrostographie* 164. 1812, *Systema Vegetabilium* 2: 839. 1817, *Systema Vegetabilium, editio decima sexta* 1: 287, 290. 1825, *Plantae Junghuhnianae* 3: 359. 1854, *Synopsis Plantarum Glumacearum* 1: 393. 1854, *Monographiae Phanerogamarum* 6: 521. 1889, *Revisio Generum Plantarum* 2: 792. 1891 and *Handb. Fl. Ceylon* 5: 232. 1900, *An Interpretation of Rumphius's Herbarium Amboinense* Publication No. 9: 88. 1917, *Handboek voor de Flora van Java* 2: 99. 1928, *Handb. Fl. Ceylon* 6: 332. 1931, *Symbolae Sinicae* 7(4): 1313. 1936, *Bulletin of the Tokyo Science Museum* 18: 3-4. 1947, *Grasses of Ceylon* 182. 1956, *Grasses of Burma ...* 245-246. 1960, *J. Heredity* 75: 196-202. 1984, *Grasses of Japan and its Neighboring Regions* 530. 1987, K.E. Prasada Rao & N.K. Rao, "*Sorghum nitidum* (Vahl) Pers., occurrence, morphology and cytology." *Proceedings, Indian Academy of Sciences-Plant Sciences*. 100(5): 333-336. 1990.

in English: glossy wild sorghum

in the Philippine Islands: bagokbok

in India: hutia, khurjula, narli, phulkia

in Thailand: yaa haang maa, ya hang ma

in Papua New Guinea: pináno (Agarabi), tuwa, uwa

S. nutans (L.) A. Gray (*Andropogon nutans* L.; *Sorghastrum nutans* (L.) Nash)

South America. See *A Manual of the Botany of the Northern United States* 617. 1848 and *Flora of the Southeastern United States* ...66. 1903, *Annals of the Missouri Botanical Garden* 74: 432-433. 1987, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999.

S. nutans (L.) A. Gray var. **elongatum** Hack.

Brazil. See *Flora Brasiliensis* 2(4): 275. 1883.

S. plumosum (R. Br.) P. Beauv. (*Andropogon australis* Spreng.; *Andropogon australis* subsp. *plumosus* (R. Br.) Hack.; *Andropogon plumosus* (R. Br.) Backer, nom. illeg., non *Andropogon plumosus* Humb. & Bonpl. ex Willd.; *Holcus plumosus* R. Br.; *Sarga plumosum* (R. Br.) Spangler)

Southeast Asia, Western Australia, Northern Territory, Queensland. Perennial, tufted, hard, a decreaser species, native pasture of dry grasslands, grazed by cattle when young, useful for fodder and mulching, susceptible to heavy grazing, see *Prodromus Florae Novae Hollandiae* 200. 1810, *Essai d'une Nouvelle Agrostographie* 132, 165, 178. 1812, *Systema Vegetabilium, editio decima sexta* 1: 287. 1825, *Monographiae Phanerogamarum* 6: 523. 1889 and *De Nuttige Planten van Nederlandsch- Indië* 1: 189. 1927, *Australian Systematic Botany* 4(4): 629. 1991.

in English: plume sorghum

in Australia: ugan adndag (Uw Olkola Aboriginal language, central Cape York Peninsula, north Queensland), ukan adndag (Uw Oykangand Aboriginal language, central Cape York Peninsula, north Queensland) (for more information contact Kowanyama Land and Natural Resources Management Office, Kowanyama, QLD 4871 Australia), see also "Ethnologue." Complete Set, Volumes 1, 2. 14th Edition, edited by Barbara F. Grimes, SIL International 2000

S. procerum (R. Br.) Kuntze (*Andropogon procerus* R. Br.; *Cymbopogon procerus* (R. Br.) Domin; *Cymbopogon procerus* (R. Br.) A. Camus, nom. illeg., non *Cymbopogon procerus* (R. Br.) Domin)

Australia. See *Prodromus Florae Novae Hollandiae* 1: 202. 1810, *Revisio Generum Plantarum* 2: 791. 1891 and *Bibliotheca Botanica* 85: 273. 1915, *Revue internationale de botanique appliquée et d'agriculture tropicale* 1: 289. 1921.

S. propinquum (Kunth) Hitchc. (*Andropogon affinis* R. Br.; *Andropogon affinis* J. Presl, nom. illeg., non *Andropogon affinis* R. Br.; *Andropogon halepensis* var. *propinquus* (Kunth) Hack.; *Andropogon propinquus* Kunth; *Andropogon halepensis* var. *propinquus* (Kunth) Merr., nom. illeg., non *Andropogon halepensis* var. *propinquus* (Kunth) Hack.; *Andropogon sorghum* var. *propinquus* (Kunth)

Hack.; *Holcus halepensis* subsp. *propinquus* (Kunth) Hitchc.; *Sorghum affine* (R. Br.) Kuntze; *Sorghum affine* (Presl) Camus; *Sorghum affine* E.G. Camus & A. Camus, nom. illeg., non *Sorghum affine* (R. Br.) Kuntze; *Sorghum halepense* var. *propinquum* (Kunth) Ohwi)

Tropical Asia, India, the Philippines. Perennial, solid, long stolons, ligule a band of rim, leaf sheath smooth and tightly wrapped around the culm, leaves narrow, rhizomatous, inflorescence a loose large panicle with a silky axis, paired spikelets, sessile spikelets with a hairy lower glume, pedicelled spikelet staminate or sterile, sessile spikelets 2-flowered and deciduous when mature, grain used as famine food, whole plant used as a forage, usually not cultivated, found growing on waste grounds, lowlands, grasslands, forests, disturbed places, riverbanks, along roadsides, open hill slopes, see *Species Plantarum* 2: 1047-1048. 1753, *Flora Lusitanica* 1: 89. 1804, *Prodromus Florae Novae Hollandiae* 201. 1810, *Reliquiae Haenkeanae* 1(4-5): 343. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 502. 1833, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 6: 239-240. 1885, *Monographiae Phanerogamarum* 6: 503. 1889, *Revisio Generum Plantarum* 6: 791. 1891 and *Philippine Journal of Science* 1(Suppl. 5): 336. 1906, *Proceedings of the Biological Society of Washington* 29: 128. 1916, *Flore Générale de l'Indo-Chine* 2: 321. 1922, *Lingnan Science Journal* 7: 249. 1929 [1931], *Botanical Magazine (Tokyo)* 55(660): 550. 1941, *J. Linn. Soc., Bot.* 55: 212. 1955, *Grasses of Burma* ... 223. 1960, *Proc. Queensland* 80: 55-88. 1969.

in English: false sorghum, wild sorghum

in Indonesia: berang, glagah rayung, kano-kano

in Malaysia: tebu tikus

in Thailand: ya-pong

in Vietnam: m[is]a mi[ees]n

S. propinquum (Kunth) Hitchc. var. **siamense** (Piper) Snowden

Asia. See *Proceedings of the Biological Society of Washington* 28: 30. 1915, *Lingnan Science Journal* 7: 249. 1929 [1931], *Journal of the Linnean Society, Botany* 55(358): 214. 1955.

in Thailand: yaa fong, yaa phong, ya phong

S. purpureosericeum (Hochst. ex A. Rich.) Asch. & Schweinf. (*Andropogon purpureosericeus* Hochst. ex A. Rich.; *Sarga purpureo-sericeum* (Hochst. ex A. Rich.) Spangler; *Sorghum dimidiatum* Stapf; *Sorghum purpureosericeum* subsp. *dimidiatum* (Stapf) E.D. Garber)

Tropical Africa, East Africa, Asia tropical, India. Annual, robust, erect, nodes bearded, rather loose inflorescence spreading or nodding, panicle oblong with branches whorled, spikelets paired, sessile spikelet lanceolate, pedicelled spikelet linear to lanceolate, lower glume coriaceous

and bearded, upper lemma awned, drought resistant, suitable for cultivation, good fodder grass when young and before flowering, used for thatching and making brooms, a remedy for rheumatism, found on clay soils, fields, near water, fallow fields, poor lands, see *Tentamen Florae Abyssinicae* ... 2: 469. 1850, *Beitrag zur Flora Aethiopiens* ... 302, 310. 1867 and *J. Heredity* 75: 196-202. 1984, *Current Science* 58: 385-386. 1989.

in India: chopda kalwar, karel, karmoria, khararia, soni baba jara, tursad

S. stipoides (Ewart & Jean White) C.A. Gardner & C.E. Hubb. (*Andropogon sargus* Ewart; *Andropogon stipoides* Kunth; *Andropogon stipoides* (Ewart & White) Gardner; *Chrysopogon stipoides* (Ewart & White) Domin, nom. illeg., non *Chrysopogon stipoides* Trin.; *Sarga stipoides* Ewart & Jean White; *Sorghastrum stipoides* (Kunth) Nash) Australia, Western Australia, Northern Territory. See *Nova Genera et Species Plantarum* 1: 189. 1815 [1816] and *Proceedings of the Royal Society of Victoria* 25: 113. 1912, *North American Flora* 17: 129. 1912, *Bibliotheca Botanica* 85: 271. 1915, *Enumeratio Plantarum Africae Australis Extratropicae* 5. 1931, *Hooker's Icones Plantarum* 34: t. 3364, p. 6. 1938, *J. Heredity* 75: 196-202. 1984, *Australian Systematic Botany* 4: 591-635. 1991, *Bothalia* 21(2): 163-170. 1991.

S. timorensis (Kunth) Büse (*Andropogon australis* var. *timorensis* (Kunth) Hack.; *Andropogon tropicus* var. *timorensis* Kunth, also spelled *timorensis*; *Sarga timorensis* (Kunth) Spangler; *Sorghum australiense* E.D. Garber & L.A. Snyder; *Sorghum brevicallousum* E.D. Garber; *Sorghum intrans* F. Muell. ex Benth.; *Sorghum matarankense* E.D. Garber & L.A. Snyder; *Sorghum plumosum* (R. Br.) P. Beauv.; *Sorghum stipoides* (Ewart & White) C.A. Gardner & C.E. Hubb.)

Asia tropical, Indonesia, Western Australia, Northern Territory, Queensland. Annual or perennial, branched, tall, tufted, tussocky, more or less erect, more or less glaucous or sometimes reddish, native fodder, growth promoted by burning, grazed when young, annual food plant for Aborigines, see *Révision des Graminées* 2: 367. 1830, *Plantae Indiae Batavae Orientalis* 2: 103. 1857, *Monographiae Phanerogamarum* 6: 523. 1889 and *Reinwardtia* 2(2): 345. 1953, *Australian Systematic Botany* 4: 591-635. 1991.

S. trichocladum (Rupr. ex Hack.) Kuntze (*Andropogon trichocladus* Rupr. ex Hack.; *Holcus trichocladus* (Rupr. ex Hack.) Nash; *Sarga trichocladum* (Rupr. ex Hack.) Spangler)

South America. See *Monographiae Phanerogamarum* 6: 525. 1889, *Revisio Generum Plantarum* 2: 792. 1891 and *North American Flora* 17(2): 131. 1912, *Fl. Novo-Galliciana* 14: 369. 1983.

S. versicolor Andersson (*Sarga versicolor* (Andersson) Spangler; *Sorghum purpureosericeum* var. *trinervatum* Chiov.)

Tropical Africa, Ethiopia, Kenya, South Africa. Annual or short-lived perennial, tufted, pale green to yellowish, nodes with a ring of white hairs or bearded, rhizomes absent, leaf sheath purplish, ligule a short membrane, inflorescence brown, lax drooping oblong panicle with branches usually in whorls, spikelets paired, 1 spikelet sessile and dark and with a twisted awn, the other spikelet pedicellate and green and awnless, sessile spikelet elliptic, pedicelled spikelet linear to lanceolate, lower glume coriaceous and bearded, upper lemma awned, palatable, grains eaten by baboons, usually in coastal bushland, disturbed areas, small depressions, bogs, woodlands, black turf, along roadsides and cultivated lands, along muddy pools, see *Naturwissenschaftliche Reise nach Mossambique* ... 563. 1863 and *J. Heredity* 75: 196-202. 1984, *Current Science* 58: 385-386. 1989, *Annals of Botany* 64: 675-681. 1989.

in English: black-seed wild sorghum

in South Africa: swartsaadwildesorghum

S. x alnum Parodi [= apparently a natural hybrid derivative of *Sorghum bicolor* (L.) Moench x *Sorghum halepense* (L.) Pers.] (*Holcus halepensis* L.; *Sorghum alnum* Parodi; *Sorghum alnum* var. *alnum*; *Sorghum alnum* var. *parvispiculum* Parodi; *Sorghum halepense* (L.) Pers.)

Southern America, Argentina, Africa. Short-lived perennial, robust, blue-green, densely tufted, spreading by short stout rhizomes ascending and terminal, large waxy leaves, inflorescence an open panicle with lowermost branches in whorls of 4-9, short racemes, spikelets paired, grown for fodder, fast growing noxious weed, potential seed contaminant, prussic acid poisoning in livestock, invasive, useful on eroded hillsides, sensitive to trampling, best used for grazing by cattle, very palatable and nutritive when young, cultivated for silage and hay, drought and salt resistant, susceptible to frost, it will not tolerate prolonged flooding, it does not grow well in the shade grows in fields and waste places, roadsides and creeks, similar to *Sorghum halepense* (L.) Pers., see *Species Plantarum* 2: 1047-1048. 1753, *Syn. Pl.* 1: 101. 1805 and *Revista Argentina de Agronomía* 10(4): 361, f. 1-3, t. 31-34. 1943, *Revista Argentina de Agronomía* 6(2): 468. 1969.

in English: alnum grass, alnum sorghum, Columbus grass, five-year sorghum

in Spanish: sorgo negro, pasto colon

in the Philippines: batag, gau

in Thailand: ya-sokum

S. x drummondii (Steud.) Millsp. & Chase [= *Sorghum bicolor* (L.) Moench x *Sorghum arundinaceum* (Desv.) Stapf, a natural hybrid] (*Andropogon drummondii* Steud.; *Andropogon drummondii* Nees ex Steud.; *Andropogon*

halepensis var. *sudanensis* (Piper) Suess.; *Andropogon sorghum* var. *drummondii* (Nees ex Steud.) Hack.; *Andropogon sorghum* var. *hewisonii* Piper; *Andropogon sorghum* var. *sudanensis* Piper; *Holcus sorghum* L.; *Holcus sorghum* subsp. *drummondii* (Nees ex Steud.) Hitchc.; *Holcus sorghum* var. *drummondii* (Nees ex Steud.) Hitchc.; *Holcus sorghum* var. *hewisonii* (Piper) Hitchc.; *Holcus sorghum* var. *sudanensis* (Piper) Hitchc.; *Sorghum bicolor* subsp. *drummondii* (Steud.) de Wet; *Sorghum bicolor* subsp. *drummondii* (Nees ex Steud.) de Wet ex Davidse; *Sorghum bicolor* subsp. *drummondii* (Nees ex Steud.) de Wet; *Sorghum bicolor* var. *drummondii* (Steud.) Mohlenbr.; *Sorghum drummondii* (Nees ex Steud.) Millsp. & Chase; *Sorghum drummondii* (Nees) Hack. ex Beetle; *Sorghum drummondii* Nees ex Hack.; *Sorghum hewisonii* (Piper) Longley; *Sorghum niloticum* (Stapf ex Piper) Snowden; *Sorghum sudanense* (Piper) Stapf; *Sorghum vulgare* Pers.; *Sorghum vulgare* var. *drummondii* (Steud.) Hitchc.; *Sorghum vulgare* var. *drummondii* (Nees ex Steud.) Hack. ex Chiov.; *Sorghum vulgare* var. *sudanense* (Piper) Hitchc.)

Africa, Australia. Annual, tufted, stout, erect, thin, leaf blade lanceolate, panicle variable usually rather compact contracted or open pyramidal, inflorescences not disarticulating readily at maturity, racemes more or less crowded, spikelets paired, sessile spikelet pointed and elliptical, pedicelled spikelet male or neuter, seeds pale yellow when ripe, grains eaten by local people, cultivated for forage and hay, palatable, grazed, planted for pasture and green chop, a seed crop, excellent seed producer, ash from the plant used as cooking salt, escapes from planted areas, potential seed contaminant, pollen can cause hay fevers, may accumulate toxic to lethal concentrations of nitrate, intolerant of waterlogging, not adapted to the humid tropics, see *Species Plantarum* 2: 1047. 1753, *Synopsis Plantarum* 1: 101. 1805, *Synopsis Plantarum Glumacearum* 1: 393. 1854, *Monographiae Phanerogamarum* 6: 507. 1889 and *Publications of the Field Columbian Museum, Botanical Series* 3: 21. 1903, *Proceedings of the Biological Society of Washington* 29(27): 128. 1916, *Resultati scientifici della Missione Stefanini-Paoli nella Somalia italiana. Vol. 1. Le collezioni botaniche...* 224. Firenze 1916, *American Journal of Botany* 21(3): 139. 1934, Robert H. Mohlenbrock, *Grasses: Panicum to Danthonia* 192. 1973, *Phytologia* 37(4): 397. 1977, *American Journal of Botany* 65(4): 481. 1978, *Flora of Trop. E. Africa. Gram.* (3): 726. 1982, *Catalogue of the Flowering Plants and Gymnosperms of Peru* 1258. 1993 [*Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993].

in English: broom corn, red kaffir corn, shallu, sugar millet, sugar reed, sugar sorghum, sweet cane, sweet reed, sweet sorghum, wild grain sorghum, chicken corn, Sudan grass, white kaffir corn

in Spanish: pasto Sudan

in Angola: masambala

in southern Africa: anaguaskoorn, besemkoring, kafferkoring, witkafferkoring, rooikafferkoring, soetriet, suikerriet, wilde graansorghum, kiepiemannakoring, opblaasgras, Soedangras; imfe (Zulu); nabele (Ndebele); mapfunde (Shona)

in the Philippines: batag, bukakau, layagah

in Thailand: ya-sudan

S. x randolphianum Parodi [hybrid between *Sorghum halepense* (L.) Pers. and *Sorghum sudanense* (Piper) Stapf] South America. See *Revista Argentina de Agronomía* 13: 16. 1946.

Sorghum Adans. = *Holcus* L., *Sorghum* Moench

From the Italian *sorgo*, *soricum*, *surgus*, *suricum* (12th century).

Pooideae, Poaceae, Holcinae, see *Species Plantarum* 2: 1047-1048. 1753, *Familles des Plantes* 2: 38, 606. 1763 and *Contributions from the United States National Herbarium* 48: 387-388, 614. 2003.

Sparteum P. Beauv. = *Stipa* L.

Greek *sparton* "a rope, bond"; Latin *spartum*, *sparton*.

Pooideae, Stipeae, Stipinae, in syn. sub *Stipa*, see *Species Plantarum* 1: 78-79. 1753, *Essai d'une Nouvelle Agrostographie* 178. 1812 and *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Contributions from the United States National Herbarium* 48: 614, 617-650. 2003.

Spartina Schreber = *Chauvinia* Steud., *Limnetis* Rich., *Poncelletia* Thouars, *Poncelletia* R. Br. (Epacridaceae), *Psammophila* Schult., *Solenachne* Steud., *Trachynotia* Michaux, *Tristania* Poir.

Greek *sparton* "a rope, bond"; Latin *spartum*, *sparton*, a grass used for cordage, nets and mats; Akkadian *sabaru*, Hebrew *safar* "to bind"; see Johann Christian Daniel von Schreber (1739-1810), *Genera Plantarum*. 43. (Apr.) 1789; Elmer Drew Merrill (1876-1956), *The North American Species of Spartina*. Washington 1902.

About 16 species, west and south Europe, coastal Europe, North Africa, temperate and coastal America, North and South America, South Atlantic Islands. Chloridoideae, Cynodonteae, or Chloridoideae, Zoysieae, Sporobolinae, perennial, maritime, stout, rigid and erect, glabrous, herbaceous, rhizomatous, auricles absent, ligule a fringe of hairs, fibrous and tough leaves, plants bisexual, yellowish inflorescence

racemose and digitate, long unilateral persistent racemes, spikelets biseriate and compressed laterally, spikelets falling entire, membranous or leathery glumes very unequal and keeled, both glumes well developed, upper glume longer than flower, lemma keeled and rigid, palea present, lodicules absent or sometimes 2, 3 stamens, ovary glabrous, salt excreting hydathodes, small white patches of salt crystals on dry leaves, adaptable, often aquatic, sometimes halophytic, cover plants, soil and mudflats stabilizers, weed species, native pasture species, prairies, open habitats, marine habitat, grasslands, salt marshes, inland freshwater swamps, tidal mudflats, poor soils, high levels of salt both in the soil and in the water, coastal dunes, complicate taxonomy, type *Spartina cynosuroides* (L.) Roth, see *Genera Plantarum* 43. 1789, *Flora Boreali-Americana* 1: 63. 1803, *Syn. Pl.* 1: 72. 1805, *Catalecta Botanica* 3: 10. 1806, *Esquisse de la Flore de l'Isle de Tristan d'Acugna* 36. 1808, *Prodromus Florae Novae Hollandiae* 554. 1810, *Encyclopédie Méthodique, Botanique*, Suppl. 4: 526. 1816, *Systema Vegetabilium* 1 Mant. 1: 69, 231. 1822, *Synopsis Plantarum Glumacearum* 1: 12. 1855 [1853], *Synopsis Plantarum Glumacearum* 1: 362. 1854 [1855] and *Fieldiana, Botany* 24(2): i-ix, 1-390. 1955, *Iowa State College Journal of Science* 30(4): 471-574. 1956, *Botanical Journal of the Linnean Society, London* 60: 1-24. 1967, *Journal of the Linnean Society, Botany* 60: 381-409. 1968, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Planta* 97: 183-196. 1971, *Flora Patagónica* 3: 1-583. 1978, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *New Zealand Journal of Botany* 21: 231-236. 1983, *Gayana, Botánica* 42: 1-157. 1985, *Genera Graminum* 244-245. 1986, *New Zealand Journal of Botany* 25: 567-575. 1987, *Flora Mesoamericana* 6: 292. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, M.J. Balick, M.H. Nee & D.E. Atha, "Checklist of the vascular plants of Belize, with common names and uses." *Memoirs of the New York Botanical Garden* 85: i-ix, 1-246. 2000, Bryan R. Sherwood, Brian G. Gardiner and Tegwyn Harris, edited by, *British Saltmarshes*. Published for the Linnean Society of London by Forrest Text. 2000, *Contributions from the United States National Herbarium* 41: 39, 138, 191, 195-200, 220, 232. 2001, *Botanical Journal of the Linnean Society* 139(3): 275-294. July 2002, A. Baumel, M.L. Ainouche, R.J. Bayer, A.K. Ainouche and M.T. Misset, "Molecular phylogeny of hybridizing species from the genus *Spartina* Schreber (Poaceae)." *Molecular Phylogenetics and Evolution* 22: 303-314. 2002, *Am. J. Bot.* 91: 1022-1035. 2004, Malika L. Ainouche, Alex Baumel, Armel Salmon and Glenn Yannic, "Hybridization, polyploidy and speciation in *Spartina* (Poaceae)." *New Phytologist* 161(1): 165-172. Jan 2004, *Flora of Australia* 44B: 310-311. 2005, Armel Salmon et al. "Genetic and epigenetic consequences of recent hybridization and polyploidy in *Spartina* (Poaceae)." *Molecular Ecology* 14(4): 1163-1175. Apr 2005, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu

and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005, *Restoration Ecology* 13(2): 312-317, 358-372. June 2005, *Global Change Biology* 11(6): 856-868, 869-880. June 2005.

Species

S. alterniflora Loisel. (*Dactylis cynosuroides* L.; *Dactylis fasciculata* C. Sm.; *Dactylis maritima* Walter, nom. illeg., non *Dactylis maritima* Curtis; *Limnetis glabra* Nutt.; *Limnetis glabra* (Muhl. ex Elliott) Eaton & J. Wright; *Spartina alterniflora* var. *glabra* (Muhl. ex Bigelow) Fern.; *Spartina alterniflora* var. *glabra* (Muhl. ex Elliott) Fernald; *Spartina alterniflora* var. *pilosa* (Merr.) Fernald; *Spartina brasiliensis* Raddi; *Spartina dissitiflora* Steud.; *Spartina glabra* Muhl. ex Elliott; *Spartina glabra* Muhl.; *Spartina glabra* var. *alterniflora* (Loisel.) Merr.; *Spartina glabra* var. *pilosa* Merr.; *Spartina intermedia* Bosc ex St.-Yves; *Spartina laevigata* Bosc ex Link; *Spartina longispica* Hauman & Parodi ex St.-Yves; *Spartina maritima* (Curtis) Fernald; *Spartina maritima* f. *gracilis* St.-Yves; *Spartina maritima* subsp. *glabra* (Muhl. ex Elliott) St.-Yves; *Spartina maritima* subvar. *fallax* St.-Yves; *Spartina maritima* subvar. *pilosa* (Merr.) St.-Yves; *Spartina maritima* subvar. *radii* St.-Yves; *Spartina maritima* var. *alterniflora* (Loisel.) St.-Yves; *Spartina maritima* var. *brasiliensis* (Raddi) St.-Yves; *Spartina maritima* var. *glabra* (Muhl. ex Elliott) St.-Yves; *Spartina merrillii* A. Chev.; *Spartina stricta* (Curtis) Roth; *Spartina stricta* var. *alterniflora* (Loisel.) A. Gray; *Spartina stricta* var. *glabra* (Muhl. ex Elliott) A. Gray; *Spartina stricta* var. *maritima* (Walter) Britton, Sterns & Poggenb.; *Spartina stricta* var. *maritima* (Walter) Scribn., nom. illeg., non *Spartina stricta* var. *maritima* (Walter) Britton, Sterns & Poggenb.; *Spartina x merrillii* A. Chev.; *Trachynotia alterniflora* (Loisel.) DC.; *Trachynotia alterniflora* Steud)

Northern America, Atlantic coasts of U.S., Argentina. Perennial, herbaceous or spongy, erect, coarse, robust, rhizomatous with long rhizomes, leaf blade persistent and coriaceous, leaf sheaths more or less glabrous, ligule densely ciliate, spikelets loosely packed and almost glabrous, glumes very unequal, upper glume pilose and ciliate, marsh grass, noxious weed species forming open clumps, sometimes cut for fodder, food for animals, useful for erosion control, intertidal zone, growing in salt water, in brackish marshes, through salt marshes, estuaries, see *Species Plantarum* 1: 71. 1753, *Flora Caroliniana, secundum ...* 77. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 180. 1791, *Neue Beyträge zur Botanik* 101. 1802, *Flora Boreali-Americana* 1: 64. 1803, *Flora Lusitanica* 1: 83. 1804, *Syn. Pl.* 1: 72. 1805, *Catalecta Botanica* 3: 10. 1806, *Flora Gallica* 719. 1807, *Catalogus Plantarum Americae Septentrionalis* 8. 1813, *Flore Française ... Troisième Édition* 5: 279. 1815, *A Sketch of the Botany*

- of South-Carolina and Georgia 1: 95, t. 4, f. 2. 1816, *The Genera of North American Plants* 1: 38. 1818, *Jahrbücher der Gekwächskunde* 1(3): 92. 1820, *Agrostografia Brasiliensis sive enumeratio plantarum ad familias naturales graminum et ciperoidarum spectantium, quas in Brasilia ...* 21. Lucca [1823], *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *A Manual of Botany* 301. 1840, *Nomenclator Botanicus. Editio secunda* 2: 695. 1841, *Synopsis Plantarum Glumacearum* 1: 215. 1854, *A Manual of the Botany of the Northern United States. Second Edition* 552. 1856, *Revisio Generum Plantarum* 13 793. 1891, *Memoirs of the Torrey Botanical Club* 5: 45. 1894 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 9: 9. 1902, *Contr. U.S. Natl. Herb.* 12: 121. 1908, *Rhodora* 18: 178-180. 1916, *Candollea* 5: 24-25, 27, 48-51, 53-54, 56-57, 92, t. 1-2. 1932, *Bulletin de la Société Botanique de France* 80: 787, t. 8, f. 3. 1933, *Revista Sudam. Bot. Montevideo* 4: 177-178. 1937, *Nature* 199: 929. 1963, *Journal of the Linnean Society, Botany* 60: 381-405, 411-417. 1968, *Kew Bulletin* 24: 315-322. 1970, *Botanical Journal of the Linnean Society* 63: 321-326. 1970, Bradley P.M. and J.T. Morris, "Relative importance of ion exclusion, secretion, and accumulation in *Spartina alterniflora* Loisel." *Journal of Experimental Botany* 42: 1525-1532. 1991, C.C. Daehler and D.R. Strong, "Hybridization between introduced smooth cordgrass (*Spartina alterniflora*; Poaceae) and native California cordgrass (*S. foliosa*) in San Francisco Bay, California, USA." *Am. J. Bot.* 84: 607. 1997, Daehler C.C. and D.R. Strong, "Reduced herbivore resistance in introduced smooth cordgrass (*Spartina alterniflora*) after a century of herbivore-free growth." *Oecologia* 110: 99-108. 1997, Daehler C.C., "Variation in self-fertility and the reproductive advantage of self-fertility for an invading plant (*Spartina alterniflora*)." *Evolutionary Ecology* 12: 553-568. 1998, Carina K. Anttila, Curtis C. Daehler, Nathan E. Rank and Donald R. Strong, "Greater male fitness of a rare invader (*Spartina alterniflora*, Poaceae) threatens a common native (*Spartina foliosa*) with hybridization." *Am. J. Bot.* 85: 1597-1601. 1998, Curtis C. Daehler, "Inbreeding depression in smooth cordgrass (*Spartina alterniflora*, Poaceae) invading San Francisco Bay." *Am. J. Bot.* 86: 131-139. 1999, Curtis C. Daehler, Carina K. Anttila, Debra R. Ayres, Donald R. Strong and John P. Bailey, "Evolution of a new ecotype of *Spartina alterniflora* (Poaceae) in San Francisco Bay, California, USA." *American Journal of Botany* 86(4): 543-546. 1999, David E. Padgett and Jeffrey L. Brown, "Effects of drainage and soil organic content on growth of *Spartina alterniflora* (Poaceae) in an artificial salt marsh mesocosm." *Am. J. Bot.* 86: 697-702. 1999, *Am. J. Bot.* 91: 656-663, 672-681, 856-862. 2004, *Am. J. Bot.* 92: 495-502. 2005, C. Edward Profitt et al., "*Spartina alterniflora* genotype influences facilitation and suppression of high marsh species colonizing an early successional salt marsh." *Journal of Ecology* 93(2): 404-416. Apr 2005.
- in English: American spartina, salt-water cord grass, marsh grass, smooth cordgrass, salt marsh cord grass
- S. anglica*** C.E. Hubb. (*Spartina townsendii* var. *anglica* (C.E. Hubb.) Lambinon & Maquet)
- Europe, England. Perennial, stiff, erect, loosely tufted, stout and fleshy rhizomes, stoloniferous or stolons absent, leaf sheath glabrous, ligule densely ciliate, coriaceous leaf blades persistent or deciduous, erect and contracted panicle, hairy spikelets, glumes unequal, anthers dehiscent, noxious weed species very aggressive, forming large close clumps, soil stabilizer, rehabilitation weed, estuaries, on tidal mudflats and salt marshes, around midtide, into water, see *Kew Bulletin* 1936: 32. 1936, *Grasses: A Guide to Their Structure, Identification, Uses, and Distribution in the British Isles* 359. 1968, *Botanical Journal of the Linnean Society* 76(4): 364. 1978, *Nouvelle Flore de la Belgique, du Grand-Duché de Luxembourg, du Nord de la France et des Régions Voisines*, edition 3 923. 1983, A.J. Gray and P.E.M. Benham, editors, *Spartina anglica* — a research review. ITE research publication no. 2. London 1990, *New Zealand Journal of Botany* 29: 117-129. 1991, Raybould A. F. A. J. Gray, M.J. Lawrence and D.F. Marshall, "The evolution of *Spartina anglica* C.E. Hubbard (Gramineae): origin and genetic variability." *Biological Journal of the Linnean Society* 43: 111-126. 1991, *Journal of Ecology* Volume 88, Issue 3: 492-505. June 2000, Debra R. Ayres and Donald R. Strong, "Origin and genetic diversity of *Spartina anglica* (Poaceae) using nuclear DNA markers." *Am. J. Bot.* 88: 1863-1867. 2001, Baumel A., M.L. Ainouche and J.E. Levasseur, "Molecular investigations in populations of *Spartina anglica* C.E. Hubbard (Poaceae) invading coastal Brittany (France)." *Molecular Ecology* 10: 1689-1701. 2001, Baumel A., M.L. Ainouche, R. Kalendar and A.H. Schulman, "Retrotransposons and genomic stability in populations of the young allopolyploid species *Spartina anglica* C.E. Hubbard (Poaceae)." *Molecular Biology and Evolution* 19: 1218-1227. 2002.
- in English: spartina, marsh grass, common cordgrass, rice grass
- S. bakeri*** Merr. (*Spartina juncea* var. *bakeri* (Merr.) St.-Yves)
- North America, U.S. See *Enumeratio Plantarum Horti Botanici Berolinensis*, ... 81. 1809 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 9: 14. 1902, *Candollea* 5: 27, 91, t. 9, f. c. 1932.
- S. caespitosa*** A.A. Eaton (*Spartina x caespitosa* A.A. Eaton (pro sp.); *Spartina patens* var. *caespitosa* (A.A. Eaton) Hitchc.)
- U.S. See *Descriptio uberior Graminum* 55. 1817, *Bulletin of the Torrey Botanical Club* 25: 338. 1898 and *Rhodora* 8(95): 210. 1906, A.S. Hitchcock, *Manual of the Grasses of the United States* (ed. 2, revised by A. Chase) 1951, *Rhodora* 81: 125. 1979, H.A. Gleason & A. Cronquist,

Manual of the Vascular Plants of Northeastern United States and Adjacent Canada (edition 2) 1991.

S. ciliata Brongn. (*Solenachne ciliata* (Brongn.) Herter; *Solenachne phalaroides* Steud.; *Spartina ciliata* Kunth, nom. illeg., non *Spartina ciliata* Brongn.; *Spartina coarctata* Trin.)

South America, southern Brazil to Argentina. Racemes appressed to the axis, spikelets densely packed and overlapping, upper glume ciliate on the margins, sea level, coastal sand dunes, see *Voyage autour du Monde* 2(2): 15, t. 2. 1829, *Révision des Graminées* 1: 94. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 110. 1840, *Synopsis Plantarum Glumacearum* 1: 12. 1855 [1853] and *Revista Sudamericana de Botánica* 6(5-6): 147. 1940, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Flora Illustrada Catarinense* 1(Gram.): 1-435. 1981.

S. cynosuroides (L.) Roth (*Cynodon cynosuroides* (L.) Raspail; *Dactylis cynosuroides* L.; *Limnetis cynosuroides* (L.) Rich.; *Limnetis polystachya* (Michx.) Rich., also *polystachya*; *Paspalum cynosuroides* (L.) Brot.; *Spartina cynosuroides x gracilis* St.-Yves; *Spartina cynosuroides* var. *polystachya* (Michx.) Beal; *Spartina polystachya* (Michx.) P. Beauv.; *Spartina polystachya* var. *cynosuroides* (L.) Kuntze; *Trachynotia cynosuroides* (L.) Michx.; *Trachynotia polystachya* Michx.)

Northern America. Brackish sites, see *Species Plantarum* 1: 71. 1753, *Flora Boreali-Americana* 1: 64. 1803, *Flora Lusitanica* 1: 83. 1804, *Syn. Pl.* 1: 72. 1805, *Catalecta Botanica* 3: 10. 1806, *Essai d'une Nouvelle Agrostographie* 25, 178, 179. 1812, *Annales des Sciences Naturelles, Botanique* 5: 303. 1825, *Revisio Generum Plantarum* 13 793. 1891, *Grasses of North America for Farmers and Students* 2: 398. 1896 and *Gardener's Chronicle, ser. 3* 38(987): 372. 1905, *Contributions from the United States National Herbarium* 12: 121, 153. 1908, *Candollea* 5: 58, 61-62, 66, t. 3-4, f. a-7, b10. 1932, *Am. J. Bot.* 88: 588-593. 2001.

in English: salt reed grass

S. densiflora Brongn. (*Chauvinia chilensis* Steud.; *Spartina densiflora* subvar. *pauper* St.-Yves; *Spartina juncea* var. *laxiflora* St.-Yves; *Spartina juncea* var. *montevidense* (Arechav.) St.-Yves; *Spartina montevidensis* Arechav.; *Spartina patagonica* Speg.; *Spartina spartinae* (Trin.) Merr. ex Hitchc.)

Southern America, southern Brazil to Argentina, Chile. Wiry, noxious weed shortly rhizomatous, spikelets loosely packed, upper glume pilose and ciliolate, coastal marshes, salt marshes, see *Voyage autour du Monde* 2(2): 14. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 82. 1840, *Boston J. Nat. Hist.* 5(2): 238. 1845,

Synopsis Plantarum Glumacearum 1: 362. 1854, *Anales del Museo Nacional de Montevideo* 1: 378, t. 43. 1896, *Revista de la facultad de agronomia; universidad nacional de La Plata* 3: 579. 1897 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 345. 1909, *Contributions from the United States National Herbarium* 17(3): 329. 1913, *Revista de la Facultad de Agronomia y Veterinaria* 2: 258. 1919, *Candollea* 5: 26, 76-77, 79, 81, 88-89, t. 7, f. 16, b-17. 1932.

in English: dense-flowered cord grass

S. foliosa Trin. (*Spartina densiflora* f. *acuta* St.-Yves; *Spartina leiantha* Benth.; *Spartina stricta* var. *foliosa* (Trin.) Thurb. ex Torr.)

North America, U.S., Humboldt Bay to Mexican border. Bushy, stout, coarse, extensive creeping rhizomes, inflorescence dense spike-like structures, stands partially submerged, growing in marsh waterways, low marshes, salt marsh, salty muds, see *Voyage autour du Monde* 2(2): 14. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 114. 1840, *The botany of the voyage of H.M.S. Sulphur* 56. 1844, *United States Exploring Expedition* 2: 487. 1874 and *Candollea* 5: 76, 81. 1932, Levering C. A. W. W. Thomson, "The ultrastructure of the salt gland of *Spartina foliosa*." *Planta* 97: 183-196. 1971, Gibson, K.D., J.B. Zedler and R. Langis, "Limited response of cordgrass (*Spartina foliosa*) to soil amendments in a constructed marsh." *Ecological Applications* 4: 757-767. 1994, Carina K. Anttila, Curtis C. Daehler, Nathan E. Rank and Donald R. Strong, "Greater male fitness of a rare invader (*Spartina alterniflora*, Poaceae) threatens a common native (*Spartina foliosa*) with hybridization." *Am. J. Bot.* 85: 1597-1601. 1998, *Am. J. Bot.* 86: 795-806. 1999, *Am. J. Bot.* 87: 141-146. 2000, *Am. J. Bot.* 90: 1416-1424. 2003.

in English: California cord grass

S. gracilis Trin. (*Spartina gracilis* Hook. ex Chapm., nom. illeg., non *Spartina gracilis* Trin.)

Northern America. Perennial, useful for erosion control, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 110. 1840, *Flora of the Southern United States* 556. 1860 and C.L. Hitchcock, A. Cronquist, M. Ownbey & J.W. Thompson, *Vascular Plants of the Pacific Northwest* 1: 1-914. 1969, H.J. Scoggan, *The Flora of Canada* 2: 93-545. 1978[1979], A.E. Porsild & W. Cody, *Checklist of the Vascular Plants of the Northwest Territories Canada* i-viii, 1-607. 1980.

in English: alkali cord grass

S. junciformis Engelm. & A. Gray (*Spartina densiflora* var. *junciformis* (Engelm. & A. Gray) St.-Yves; *Spartina densiflora* var. *obtusata* Hack.)

U.S. Saline flats, saline prairies, coastal, see *Voyage autour du Monde* 2(2): 14. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 82. 1840, *Boston Journal of Natural History* 5(2): 238. 1845 and *Contributions from the United States National Herbarium* 17(3): 329. 1913, *Candollea* 5: 26, 77, t. 7, f. 16. 1932.

S. longispica Hauman & Parodi ex St.-Yves [*Spartina brasiliensis* (alterniflora) x *Spartina montevidensis* (densiflora)] (*Spartina alterniflora* Loisel.; *Spartina longispica* (Hauman & Parodi ex St.-Yves) Mobb.)

South America. See *Flora Gallica* 719. 1807 and *Candollea* 5: 27, 92. 1932, *Revista Sudam. Bot. Montevideo* 4: 177-178. 1937, *Iowa State College Journal of Science* 30: 502. 1956, *Index to Grass Species* vol. 3: 336. 1962, *Nature* 199: 929. 1963, *Journal of the Linnean Society, Botany* 60: 381-405, 411-417. 1968, *Kew Bulletin* 24: 315-322. 1970, *Botanical Journal of the Linnean Society* 63: 321-326. 1970, *American Journal of Botany* 86(4): 543-546. 1999.

S. maritima (Curtis) Fernald (*Dactylis maritima* Curtis; *Spartina capensis* Nees; *Spartina capensis* Nees ex Trin.; *Spartina intermedia* Bosc ex St.-Yves; *Spartina stricta* (Aiton) Roth; *Spartina stricta* (Curtis) Roth)

Morocco, Europe, Mediterranean. Perennial, aquatic, sometimes submerged, rhizomatous or stoloniferous, stout 1-sided inflorescences, growing in salt marshes, freshwater swamps, tidal mudflats, along coasts, see *Enum. Brit. Grasses* 46. 1787 [also *Practical Observations on the British Grasses*...London 1790], *Neue Beyträge zur Botanik* 101. 1802, *Flora Gallica* 719. 1807, *Phytographia Lusitaniae Selectior* 13, t. 5. 1816, *A Sketch of the Botany of South-Carolina and Georgia* 1: 95, t. 4, f. 2. 1816, *Agrostografia Brasiliensis* 21. 1823, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 111. 1840 and *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 9: 9. 1902, *Rhodora* 18: 180. 1916, *Contributions from the United States National Herbarium* 28(1): i-xvii, 1-310. 1929, *Candollea* 5: 24-25, 48-49, 50, 51, 53-54, 56-57, t. 1-2, f. a-4, b-2, 0-5, c-3. 1932, *Nature* 199: 929. 1963, *Journal of the Linnean Society, Botany* 60: 381-405. 1968, *Am. J. Bot.* 88: 1863-1867. 2001.

in English: Cape cord grass, small cord grass

in South Africa: Kaapse slykgras

S. patens (Aiton) Muhlenb. (*Dactylis patens* Aiton; *Spartina juncea* (Michx.) Willd.; *Spartina juncea* subvar. *americana* St.-Yves; *Spartina juncea* var. *patens* (Aiton) St.-Yves; *Spartina patens* (Ait.) Muhl. var. *juncea* (Michx.) A.S. Hitchc.; *Spartina patens* (Ait.) Muhl. var. *monogyna* (M.A. Curtis) Fernald; *Spartina platensis* Mez ex St.-Yves; *Spartina pumila* Roth; *Trachynotia juncea* Michx.)

Northern America, South America. Perennial, stems cylindrical, hollow, leaf blades linear and rolled inward or flat, leaf sheaths overlapping, leaves margins with tiny teeth near tip, spikelets lanceolate, ascending spikes, forage, medicinal value, livestock grazing, noxious weed species mat-forming, useful for erosion control, found in dune swales, dune meadows, edges, salt marsh, see *Hortus Kewensis; or, a Catalogue ...* 1: 104. 1789, *Flora Boreali-Americana* 1: 64. 1803, *Catalecta Botanica quibus plantae novae et minus cognitae describuntur atque illustrantur ...* 3: 10. Lipsiae 1806, *Enumeratio Plantarum Horti Botanici Berolinensis ...* 81. 1809, *Descriptio uberior Graminum et plantarum calamariarum Americae septentrionalis indigenarum et cicurum ...* 55. Philadelphiae 1817, *Boston Journal of Natural History* 1: 136. 1835 [1834-1837], *Bulletin of the Torrey Botanical Club* 25: 338. 1898 and *Rhodora* 8(95): 210. 1906, *Candollea* 5: 27, 84, 86, t. 8, f. b-20. 1932, *Rhodora* 49(580): 114. 1947, *Bulletin of the Torrey Botanical Club* 94: 199-200. 1967, *Journal of the Linnean Society, Botany* 60: 381-405. 1968, *Canadian Journal of Botany* 48: 183-188. 1970, *Rhodora* 81: 125. 1979, Hester M. W. I. A. Mendelssohn K. L. McKee, "Intraspecific variation in salt tolerance and morphology in the coastal grass *Spartina patens* (Poaceae). *American Journal of Botany* 83: 1521-1527. 1996, Denise M. Seliskar, "The response of *Amphiphila breviligulata* and *Spartina patens* (Poaceae) to grazing by feral horses on a dynamic mid-Atlantic barrier island." *Am. J. Bot.* 90: 1038-1044. 2003, Jinglan Wu, Denise M. Seliskar and John L. Gallagher, "The response of plasma membrane lipid composition in callus of the halophyte *Spartina patens* (Poaceae) to salinity stress." *Am. J. Bot.* 92: 852-858. 2005.

in English: salt-meadow cord grass, marsh grass, marshy cordgrass, salt marsh cord grass, salt meadow hay

in Colombia: esparto

in Mexico: retana

S. pectinata Link (*Spartina cynosuroides* (L.) Roth; *Spartina cynosuroides* f. *major* St.-Yves; *Spartina cynosuroides* var. *aureo-marginata* W. Irving; *Spartina cynosuroides* var. *michauxiana* (Hitchc.) St.-Yves; *Spartina michauxiana* A.S. Hitchc.; *Spartina michauxiana* var. *suttiei* Farw.; *Spartina michauxiana* var. *tenuior* Farw.; *Spartina pectinata* Bosc ex Link; *Spartina pectinata* f. *pectinata*; *Spartina pectinata* f. *variegata* Vict.; *Spartina pectinata* var. *suttiei* (Farw.) Fern.) (named for the French explorer André Michaux, 1746-1803, botanist and plantsman, plant collector, 1785-1796 North America, author of *Flora Boreali-Americana*. 1: 51. Paris 1803 [Repr. New York 1973, intro by J. Ewan.]. See Stafleu and Cowan, *Taxonomic literature*. 3: 456-464. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 2: 485. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. 3: 185. London 1796-1800; J. Ewan, editor, *A Short History of Botany in*

the United States. 1969; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 134. Berlin & Hamburg 1989; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 751. Stuttgart 1993; Helmut Genauß, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 384. Basel 1996; Joseph Ewan, in *D.S.B.* 9: 365-366. [d. 1802] 1981; John Dunmore, *Who's Who in Pacific Navigation*. Honolulu 1991)

Northern America. Perennial, slender inflorescences, ornamental, native pasture species, adaptable species, useful for erosion control, open soil, prairies, grasslands, salt marshes, freshwater swamps, moist soils, see *Catalecta Botanica* 3: 10. 1806, *Jahrbücher der Gewächskunde* 1(3): 92-93. Berlin und Leipzig 1820 and *Gardener's chronicle*, ser. 3 38(987): 372. 1905, *Contributions from the United States National Herbarium* 12(3): 153. 1908, *Report of the Michigan Academy of Science, Arts and Letters* 21: 352. 1920, *Candollea* 5: 58, 61, 62, t. 3, f. a-7. 1932, *Rhodora* 35: 260. 1933, *Nature Canada* 71: 209. 1944, *Nature* 199: 929. 1963, *Journal of the Linnean Society, Botany* 60: 381-405. 1968, *Kew Bulletin* 24: 315-322. 1970, Warren R.S., L.M. Baird and A.K. Thompson, "Salt tolerance in cultured cells of *Spartina pectinata*." *Plant Cell Reports* 4: 84-87. 1985, *Journal of Applied Ecology* 41(5): 888-896. Oct 2004 [Effects of nitrogen addition on the invasive grass *Phragmites australis* and a native competitor *Spartina pectinata*.], *Am. J. Bot.* 92: 852-858. 2005, A. Fraser and K. Kindscher, "Spatial Distribution of *Spartina pectinata* Transplants to Restore Wet Prairie." *Restoration Ecology* 13(1): 144-151. Mar 2005.

in English: prairie cord grass, freshwater cord grass, slough grass

S. spartinae (Trin.) Merr. ex Hitchc. (*Spartina argentinensis* Parodi; *Spartina densiflora* Brongn.; *Spartina densiflora* subvar. *argentinensis* (Parodi) St.-Yves; *Spartina densiflora* var. *junciformis* (Engelm. & A. Gray) St.-Yves; *Spartina densiflora* var. *obtusata* Hack.; *Spartina gouini* E. Fourn.; *Spartina gracilis* Hook. ex Chapm., nom. illeg., non *Spartina gracilis* Trin.; *Spartina junciformis* Engelm. & A. Gray; *Spartina multiflora* Vasey ex Beal; *Spartina pittieri* Hack.; *Spartina spartinae* (Trin.) Hitchc.; *Spartina spartinae* (Trin.) Merr.; *Vilfa spartinae* Trin.)

Northern America, Mesoamerica. Rhizomatous, large tussock grass, growing in large clumps, in colonies, in hummocks, on the beaches, open areas, sandy places, grassy areas, see *Voyage autour du Monde* 2(2): 14. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 82. 1840, *Boston Journal of Natural History* 5(2): 238. 1845, *Flora of the Southern United States* 556. 1860, *Mexicanas Plantas* 2: 135. 1886, *Grasses of North America for Farmers and Students* 2: 400. 1896 and *Österreichische*

Botanische Zeitschrift 52: 237. 1902, *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 9: 11. 1902, *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 345. 1909, *Contributions from the United States National Herbarium* 17(3): 329. 1913, *Revista de la Facultad de Agronomía y Veterinaria* 2: 258. 1919, *Candollea* 5: 26, 77, 79, t. 7, f. b-17, 16. 1932, *American Journal of Botany* 45: 757-767. 1958, *Nature* 199: 929. 1963, *American Journal of Botany* 54: 656. 1967, *Journal of the Linnean Society, Botany* 60: 381-405. 1968, *Brittonia* 23(3): 293-324. 1971.

in Spanish: zacate

S. x townsendii H. Groves & J. Groves (*Spartina townsendiae* H. Groves & J. Groves; *Spartina townsendii* H. Groves & J. Groves)

Europe, England. Perennial, stiff, erect, loosely tufted, tough fleshy scaly rhizomes, stoloniferous or stolons absent, leaf sheath glabrous, ligule densely ciliate, leaves very stiff and pointed, inflorescence compact, spikelets hairy, glumes unequal, anthers indehiscent, allopolyploid, species originated by hybridization (*Spartina alterniflora* x *Spartina maritima*), forming dense clumps, growing in mangroves swamps, in estuaries, tidal mudflats, salt lagoons, coastal areas, see *Report. Botanical Exchange Club. London*. 37. 1881 and E.H. Chater and H. Jones, "New forms of *Spartina townsendii* (Groves)." *Nature* 168: 126. 1951, R. Musselt, "La dissémination récente d'une graminée, la *Spartina townsendii*, sur le littoral français." *Annals de Géographie* 61: 53-54. 1952, D.S. Ranwell, "World resources of *Spartina townsendii* (sensu lato) and economic use of *Spartina marshland*." *Journal of Applied Ecology* 4: 239-256. 1967, *Botanical Journal of the Linnean Society* 76(4): 364. 1978, R. Storey and R.G. Wyn Jones, "Salt stress and comparative physiology in the Gramineae: III. Effect of salinity upon ion relations and glycinebetaine and proline levels in *Spartina x townsendii*." *Australian Journal of Plant Physiology* 5: 831. 1978, *Nouvelle Flore de la Belgique, du Grand-Duché de Luxembourg, du Nord de la France et des Régions Voisines*, edition 3 923. 1983, *Am. J. Bot.* 86: 543-546. 1999, *Am. J. Bot.* 88: 1258-1265, 1863-1867. 2001.

in English: cord grass

Spartochloa C.E. Hubbard

Greek *sparton* "a cord" and *chloe*, *chloa* "grass," referring to the habit of the plant.

One species, Australia. Arundinoideae, Spartochloaeae, or Centothecoideae, perennial, herbaceous, unarmed, unbranched, tufted, rushlike, terete culms, internodes solid, basal leaves, auricles absent, leaf blades tiny to reduced or absent, ligule a fringe of hairs, plants bisexual, inflorescence paniculate, slender panicle contracted, 2 glumes subequal and awnless, lemmas coriaceous 5- to 9-nerved, palea

present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open places, arid and semidesert areas, photosynthetic function on the sheaths and culms, resembling *Triodia*, see C.E. Hubbard, in *Kew Bulletin* 3: 307-308. (Oct) 1952, C. Hsiao, S.W.L. Jacobs, N.P. Barker and N.J. Chatterton, "A Molecular Phylogeny of the Subfamily Arundinoideae (Poaceae) Based on Sequences of rDNA." *Australian Systematic Botany* 11(1): 41-52. 1998, C. Hsiao, S.W.L. Jacobs, N.J. Chatterton and K.H. Asay, "A Molecular Phylogeny of the Grass Family (Poaceae) Based on the Sequences of Nuclear Ribosomal DNA (ITS)." *Australian Systematic Botany* 11(5-6): 667-688. 1998, *Flora of Australia* 43: 27, 28, 76, 97, 104, 106, 183, 194, 198, 268. 2002, G.H. Rua, "Centothecoid grasses and the evolution of panicoid spikelets." *Plant Systematics and Evolution* 240(1-4): 83-89. 2003.

Species

S. scirpoidea (Steud.) C.E. Hubb. (*Brizopyrum scirpoideum* Steud.; *Festuca scirpoidea* (Steud.) F. Muell.; *Poa scirpoidea* (Steud.) F. Muell.; *Schedonorus scirpoideus* (Steud.) Benth.)

Southwest and central Australia. Solid culms, Juncus-like readily disarticulating leaf blades, persistent leaf sheaths, glumes 1- to 3-nerved, lemmas glabrous entire, see *Species Plantarum* 1: 67, 73. 1753, *Essai d'une Nouvelle Agrostographie* 99, 162, 177. 1812, *Synopsis Plantarum Glumacearum* 1: 282. 1854, *Fragmenta Phytographiae Australiae* 8: 129. 1873, *Flora Australiensis: A Description ...* 7: 655. 1878, *Fragmenta Phytographiae Australiae* 11: 130. 1881 and *Kew Bulletin* 1952: 308. 1952.

Spartum P. Beauv. = *Lygeum* L., *Lygeum* Loeffl. ex L.

From the Latin *spartum* or *sparton*, Greek *sparton*, Spanish broom, a plant originally growing in Spain, of which ropes and mats were made (Plinius).

Lygeae, type *Lygeum spartum* L., see *Genera Plantarum edition 5* 27, [522]. 1754, *Essai d'une Nouvelle Agrostographie* 178. 1812 and W.D. Clayton & S.A. Renvoize, *Kew Bulletin, Additional Series* 13: 82. 1986.

Spathia Ewart

Greek *spathe* "a spathe, a blade."

One species, Australia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual, tufted, herbaceous, branched, internodes solid, auricles absent, leaf sheaths inflated, ligule a fringed membrane, plants bisexual, cleistogamous, inflorescence digitate terminal and axillary, racemes enclosed by a large membranous spathe, spikelets paired, fertile spikelets more or less compressed, pedicellate

spikelets awnless, 2 glumes subequal, lower glume coriaceous acute, upper lemma entire awned, lower part of awn as wide as the lemma from which it arises, palea absent, 2 fleshy lodicules, 3 stamens, ovary glabrous, 3 reddish stigmas, open areas, plains, grasslands, related to *Dichanthium*, type *Spathia neurosa* Ewart & Archer, see Alfred James Ewart and Olive Blanche Davies, *The Flora of the Northern Territory* 26, pl. 1. Melbourne 1917.

Species

S. neurosa Ewart & Archer

Northern Australia. Lower glume distinctly 2-keeled.

Spelta Wolf = *Triticum* L.

Latin *spelta*, *ae* "grains of spelt."

Pooideae, Triticeae, Triticinae, type *Triticum spelta* L., see *Species Plantarum* 1: 85-87. 1753, *Genera Plantarum* 22. 1776 and *Acta Bot. Neerl.* 15: 160. Apr 1966, *Contributions from the United States National Herbarium* 48: 614, 676-684. 2003.

Spermachiton Llanos = *Sporobolus* R. Br.

From the Greek *sperma* "a seed" and *chiton* "a tunic, covering."

Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, Sporobolinae, type *Spermachiton involutum* Llanos, see *Observationes Botanicae* 5: 19. 1789 [1788], *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Essai d'une Nouvelle Agrostographie* 26, 147, 178. 1812, *Systema Vegetabilium* 2: 368. 1817, *De Graminibus unifloris et sesquifloris* 154. Petropoli 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 86. 1840, *Nomenclator Botanicus. Editio secunda* 1: 40. 1840, *Fragmentos de Algunas Plantas Filipinas* 25. 1851, *Plantae Junghuhnianae* 3: 343. 1854, *Nom. Bot.* 2: 1274. 1874 and *A Handbook to the Flora of Ceylon* 5: 261. 1900, *Grasses Ceylon* 96. 1956, *Taxon* 22: 163. 1973, *Proceedings of the Indian Science Congress Association* 74(3, vi): 185-186. 1987, *Cytologia* 53: 53-57. 1988, *Blumea* 35(2): 393-458. 1991, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Australian Systematic Botany* 12(3): 375-448. 1999, *Contributions from the United States National Herbarium* 41: 200-219. 2001.

Spermatochiton Pilg. = *Sporobolus* R. Br.

Greek *sperma*, *spermatos* "a seed" and *chiton* "a tunic, covering."

Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, Sporobolinae, see *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Fragmentos de Algunas Plantas Filipinas* 25. 1851, *Nom. Bot.* 2: 1274. 1874 and *Flora of the Guianas, Series A: Phanerogams* 606-615. 1990, *Blumea* 35(2): 393-458. 1991, *American Journal of Botany* 81: 622-629. 1994, *Flora Mesoamericana* 6: 273-276. 1994, *Sida* 16: 529-544. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Australian Systematic Botany* 12(3): 375-448. 1999, *Contributions from the United States National Herbarium* 41: 200-219. 2001.

Sphaerella Bubani = *Airopsis* Desv.

Greek *sphaira* "a globe, ball, sphere," the diminutive.

Aveneae, see *Journal de Botanique* (Desvaux) 1: 200. 1809, *A Manual of the Botany of the Northern United States. Second Edition* 573. 1856, *Synopsis der mitteleuropäischen Flora* 2(1): 298. 1899 and *Flora Pyrenaea ...* 4: 320. 1901.

Sphaerium Kuntze = *Coix* L.

Greek *sphaira* "a globe," *sphairion* "a little ball, a pill."

Panicoideae, Andropogoneae, Coicinae, see *Species Plantarum* 2: 972. 1753, *Systema Naturae, Editio Decima*, 1261. May-June 1759, *Revisio Generum Plantarum* 2: 793. 1891 and *Fl. Trop. E. Afr. Gramineae* (3): 857. 1982, *Contributions from the United States National Herbarium* 46: 162-163, 606. 2003.

Sphaerobambos S. Dransfield

Bamboo with globose fruit, from the Greek *sphaira* "a globe" plus *bambos*, *bambusa*.

About 3 species, Asia, the Philippines, Sabah and Indonesia, Malaysia. Bambusoideae, Bambusodae, Bambuseae, Bambusinae, perennial, woody, erect or scandent, branched, unarmed, persistent, usually straight, slightly zig-zag, sympodial, internodes hollow, thin-walled, rough and hairy when young, primary branch dominant, culm sheaths deciduous, rhizomes pachymorph, plants bisexual, inflorescence itercaucant or indeterminate, inflorescence at each node of the flowering branches, spikelets 3-5 flowered, 2-3 glumes unequal, palea 2-keeled and keels winged, 6 stamens, ovary hairy, 3 stigmas, fruit globose to subglobose, forest margins, lowland forest, type *Sphaerobambos hirsuta* S. Dransf., see *Kew Bulletin* 44(3): 425-434. 1989, S. Dransfield, "The bamboos of Sabah." *Sabah Forest Record* 14: 70-71. 1992, *Plants Resources of South-East Asia* 7: 17, 18, 30, 34. 1995.

Species

S. hirsuta S. Dransfield

Sabah, Mount Kinabalu. Erect, leaning, scrambling, drooping, tufted to open tufted, thin walls, young shoot and culm sheaths hairy, spikelets with 3 glumes pubescent and 5 florets, the uppermost floret reduced, upper glume 9-nerved, lower glume 7-nerved, lemma glabrescent, paleas with winged keels, lodicules absent, see *Kew Bulletin* 44(3): 428, f. 1-3. 1989.

S. philippinensis (Gamble) S. Dransf. (*Bambusa philippinensis* (Gamble) McClure; *Guadua philippinensis* Gamble) Asia. See *Genera Plantarum* 1: 236. 1789, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 150. 1822 and *Philippine Journal of Science* 8(4): 203. 1913, *Smithsonian Contributions to Botany* 9: 68. 1973, *Kew Bull.* 44(3): 432. 1989, *Contributions from the United States National Herbarium* 39: 58-62. 2000.

S. subtilis S. Dransf.

Sulawesi. See *Kew Bulletin* 44(3): 432, f. 5. 1989.

Sphaerocaryum Nees ex Hook.f. = *Graya* Arn. ex Steud., *Graya* Endl. (Chenopodiaceae), *Sphaerocaryum* Nees ex Hook.f., *Stuedelella* Honda

From the Greek *sphaira* "a globe" and *karyon* "nut," referring to the globular grains.

One species, tropical Asia, India, China, Taiwan, Indonesia. Panicoideae, Panicodae, Isachneae, annual, herbaceous, slender to robust, delicate, erect to decumbent, ascending, prostrate and rooting base, trailing, internodes hollow, stoloniferous, short leaf blades ovate, auricles absent, ligule a fringed hairs, plants bisexual, inflorescence an open pyramidal panicle, minute spikelets 1-flowered and globose, glumes often deciduous, lemma obtuse 1-nerved pubescent, palea present, tiny lodicules, 3 stamens, ovary glabrous, 2 stigmas, found along borders of lakes and marshes, forest margins, on moist stream banks, shady sites, swampy regions, wet zones, confused with *Sporobolus*, type *Sphaerocaryum elegans* Nees ex Steud. (*Sphaerocaryum elegans* (Arn. ex Steud.) Nees ex Hook.f.), see *Species Plantarum* 1: 55. 1753, *Prodromus Florae Novae Hollandiae* 196. 1810, *Nomenclator Botanicus. Editio secunda* 2: 256, 620. 1841, *Genera Plantarum* 1376. 1841, *Syn. Pl. Glum.* 1: 119. 2-3 Mar 1854 [1855], *The Flora of British India* 7(22): 246. 1896 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 258-259. 1930, *Grasses of Ceylon* 59. 1956.

Species

S. malaccense (Trin.) Pilg. (*Graya elegans* Steud.; *Graya elegans* Arn. ex Steud.; *Isachne pulchella* Roth ex Roem. & Schult.; *Isachne pulchella* Roth, nom. illeg., non *Isachne pulchella* Roth ex Roem. & Schult.; *Panicum elegans* Arn. ex Steud.; *Panicum elegans* Wight & Arn. ex Steud.;

Panicum malaccense Trin.; *Sphaerocaryum elegans* Nees ex Steud.; *Sphaerocaryum pulchellum* (Roth ex Roem. & Schult.) Merr.; *Sphaerocaryum pulchellum* A. Camus, nom. illeg., non *Sphaerocaryum pulchellum* (Roth ex Roem. & Schult.) Merr.; *Studelella pulchella* (Roth ex Roem. & Schult.) Honda)

Southern China, Myanmar, India and Sri Lanka. Annual, slender, erect from decumbent base, leaf sheaths very short, ligule fringed, panicles pyramidal with spreading branches, spikelets elliptic or ovoid, thin glumes membranous and obtuse, upper lemma membranous, great variation in vegetative characters, damp or swampy places, see *Systema Vegetabilium* 2: 476. 1817, *Mant.* 2: 265. 1824, *De Graminibus Paniceis* 204. 1826, *Catalogue of Indian Plants* no. 2033. London 1833-1837, *Nomenclator Botanicus. Editio secunda* 2: 620. 1841, *Synopsis Plantarum Glumacearum* 1: 119. 1854, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 1858: 223. 1858 and *Handb. Fl. Ceylon* 5: 258. 1900, *Philippine Journal of Science* 11: 52. 1916, *Flore Générale de l'Indo-Chine* 7: 514. 1923, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(2): 259. 1930, *Kansas University Science Bulletin* 33: 342, t. 28, f. 2a-c, 4. 1932, *Repertorium Specierum Novarum Regni Vegetabilis* 45(1131-1137): 2. 1938, *Geological Society Special Publications* 41: 102, t. 16, f. 1-2. 1942, *Grasses of Ceylon* 59. 1956, *Grasses of Burma ...* 583. 1960.

Spheneria Kuhlms.

From the Greek *sphen* "wedge."

One species, tropical South America. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, small, fragile, delicate, unbranched, tufted, foliage mainly basal, auricles absent, ligule fringed, plants bisexual, inflorescence spicate, loosely flowered racemes, spikelets solitary and pedicellate, 2-flowered spikelets, glumes 1 per spikelet, lower glume lacking, upper glume not spurred, lemmas beaked, palea 2-nerved 2-keeled, 2 lodicules free and fleshy, stamens 3, ovary glabrous, 2 stigmas, along riverbanks, sandy savannah, similar to *Centrorchloa* and *Paspalum*, type *Spheneria setifolia* (Döll) Kuhlms., see *Comissão de Linhas Telegráficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 57-58, t. 4. 1922, *Journal of the Washington Academy of Sciences* 25: 190-193. 1935, *Flora of the Guianas. Series A, Phanerogams* 8: 604-606. 1990, *Contributions from the United States National Herbarium* 46: 606. 2003.

Species

S. kegelii (Müll. Hal.) Pilg. (*Paspalum kegelii* Müll. Hal.; *Paspalum setifolium* Döll; *Spheneria setifolia* (Döll) Kuhlms.) (dedicated to the German gardener Hermann Aribert Heinrich Kegel, 1819-1856, from 1844 to 1846 plant

collector in Suriname; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 277. 1965; August Adriaan Pulle (1878-1955), *An Enumeration of the Vascular Plants Known from Surinam*. Leiden 1906)

Brazil. Small, densely tufted, ligule membranous and ciliate, spikelets turbinate, long pungent spikelet callus, upper glume 5-nerved, growing in open white sand, see *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Botanische Zeitung, Berlin* 19(44): 324. 1861, *Flora Brasiliensis* 2(2): 61. 1877 and *Repertorium Specierum Novarum Regni Vegetabilis* 26(15): 228. 1929.

Sphenopholis Scribner = Colobanthium (Rchb.) Taylor, *Colobanthus* (Trinius) Spach, *Colobanthus* Bartl. (Caryophyllaceae), *Reboulea* Kunth, *Reboulia* Raddi

Greek *sphen* and *pholis*, *pholidos* "scale, horny scale," referring to the shape of the upper glume.

About 5-8 species, North America and West Indies, Canada to Mexico. Pooideae, Poodae, Aveneae, or Pooideae, Poaeae, Aveninae, perennial or annual, tufted, herbaceous, internodes hollow, leaf blades not pseudopetiolate, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate open or spiciform, spikelets pedicellate, 2- to 3-flowered, 2 glumes very unequal or subequal, lower glume 1- to 3-nerved, upper glume 3- to 5-nerved, lemmas membranous and keeled, if awned a geniculate or reflexed dorsal awn, palea gaping, lodicules free and membranous, 3 stamens, ovary glabrous, 2 stigmas, spikelets falling entire at maturity, open habitats or shade, prairies, woodlands, marshes, linked to *Trisetum*, type *Sphenopholis obtusata* (Michx.) Scribn., see *Syn. Pl.* 1: 97. 1805, *Révision des Graminées* 2: 341, t. 84. 1830, *Ordines Naturales Plantarum* 305. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 66. 1830, *Reliquiae Haenkeanae* 2(1): 13, t. 49, f. 2. 1831, *Der Deutsche Botaniker Herbarienbuch* 1(2): 149. 1841, *Histoire Naturelle des Végétaux* 13: 163. 1841 and *Rhodora* 8(92): 142, 144. 1906, *Iowa State College Journal of Science* 39(3): 259-336. 1965, *Bulletin of the Torrey Botanical Club* 92(3): 169-182. 1965, *Index Kewensis* 13: 33. 1966, *Flora of Alaska and Neighboring Territories; A Manual of the Vascular Plants* 1-1008. 1968, *Anderson's Flora of Alaska and Adjacent Parts of Canada* 1-724. 1974, *Agrociencia* 71: 71-102. 1988, *Flora of the Yukon Territory* 1-669. 1996, *Contributions from the United States National Herbarium* 48: 237, 602, 614-617. 2003.

Species

S. filiformis (Chapm.) Scribn. (*Aira pallens* Biehler; *Eatonia aristata* Scribn. & Merr.; *Eatonia pensylvanica* var.

filiformis Chapm.; *Sphenopholis aristata* (Scribn. & Merr.) A. Heller; *Sphenopholis x pallens* (Biehler) Scribn.; *Trisetum aristatum* (Scribn. & Merr.) Nash

U.S. Perennial, see *Plantarum Novarum ex Herbario Sprengelii Centarium* 8. 1807, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *Flora of the Southern United States* 560. 1860 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 7. 1900, *Flora of the Southeastern United States ...* 130. 1903, *Rhodora* 8(92): 144-145. 1906, *Muhlenbergia*; *A Journal of Botany* 6: 12. 1910.

in English: longleaf wedgescale

S. intermedia (Rydb.) Rydb. (*Aira capillacea* Frank ex Steudel, nom. illeg., non *Aira capillacea* Lam.; *Aira controversa* Steud.; *Eatonia intermedia* Rydb.; *Eatonia pennsylvanica* var. *major* (Torr.) A. Gray; *Koeleria pennsylvanica* var. *major* (Torr.) Torr.; *Koeleria truncata* var. *major* Torr.; *Reboulea pallens* (Biehler) Farw.; *Reboulea pallens* var. *major* (Torr.) Farw.; *Reboulea pennsylvanica* (Spreng.) A. Gray; *Reboulea pennsylvanica* var. *major* (Torr.) A. Gray; *Sphenopholis intermedia* Rydberg; *Sphenopholis intermedia* var. *pilosa* Dore; *Sphenopholis intermedia* var. *pilosa* Hoehne; *Sphenopholis obtusata* (Michx.) Scribn. var. *major* (Torr.) K.S. Erdman; *Sphenopholis x pallens* (Biehler) Scribn.; *Sphenopholis pallens* var. *major* (Torr.) Scribn. ex B.L. Rob.; *Sphenopholis pallens* var. *major* (Torr.) Scribn.; *Vilfa alba* Buckley, nom. illeg., non *Vilfa alba* (L.) P. Beauv.)

U.S. Perennial, open habitats or shady, shores, meadows, damp slopes, see *Catalogus plantarum horti botanici monspeliensis* 117. 1813, *A Flora of the Northern and Middle Sections of the United States* 1: 117. 1823, *Fl. New York* 2: 469. 1843, *A Manual of the Botany of the Northern United States* 591. 1848, *Synopsis Plantarum Glumacearum* 1: 224. 1854, *A Manual of the Botany of the Northern United States. Second Edition* 558. 1856, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 89. 1862 and *Bulletin of the Torrey Botanical Club* 32(11): 602-603. 1905, *Rhodora* 8(92): 144-145. 1906, *Rhodora* 10(112): 65. 1908, *Bulletin of the Torrey Botanical Club* 36: 533. 1909, *Report of the Michigan Academy of Science, Arts and Letters* 17: 181-182. 1916, *Iowa State Journal of Science* 39(3): 310-314, f. 3A-C, G. 1965, *Le Naturaliste Canadien* 103(6): 564. 1976, *Provancheria* 12: 55. 1981.

in English: slender wedgescale

S. interrupta (Buckley) Scribn. (*Avena elongata* Kunth; *Calamagrostis longirostris* Buckley; *Sphenopholis hallii* (Scribn.) Scribn.; *Trisetarium elongatum* (Kunth) Poir.; *Trisetum californicum* Vasey; *Trisetum elongatum* (Kunth) Kunth; *Trisetum hallii* Scribn.; *Trisetum interruptum* Buckley)

U.S., Baja California, Mexico. Annual, see *Species Plantarum* 1: 79-81. 1753, *Familles des Plantes* 2: 31, 530. 1763,

Syn. Pl. 1: 97. 1805, *Nova Genera et Species Plantarum* 1: 148. 1815 [1816], *Encyclopédie Méthodique, Botanique*, Suppl. 5: 366. 1817, *Révision des Graminées* 1: 101. 1829, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862, *A Preliminary Report on the Geological and Agricultural Survey of Texas* appendix 2. 1866, *Bulletin of the Torrey Botanical Club* 11: 6. 1884, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(1): t. 46. 1892 and *Rhodora* 8(92): 145-146. 1906, *Proceedings of the Biological Society of Washington* 41: 160. 1928, *Man. Grass. U.S.* 973. 1935, *N. Amer. Fl.* 17(8): 552. 1939, *Agrociencia* 71: 80. 1988.

S. interrupta (Buckley) Scribn. subsp. **californica** (Vasey) Scribn. (*Trisetum californicum* Vasey; *Trisetum interruptum* var. *californicum* (Vasey) Louis-Marie)

U.S. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(1): t. 46. 1892 and *Rhodora* 8(92): 146. 1906, *Rhodora* 30: 240. 1928 [1929], *N. Amer. Fl.* 17(8): 552. 1939, *Agrociencia* 71: 80. 1988.

S. interrupta (Buckley) Scribn. var. **interrupta** (*Trisetum interruptum* var. *interruptum*)

U.S. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862, *Bulletin of the Torrey Botanical Club* 11: 6. 1884 and *Proceedings of the Biological Society of Washington* 41: 160. 1928.

S. longiflora (Vasey ex L.H. Dewey) Hitchc.

America, U.S. Perennial.

in English: Texas wedgescale

S. nitida (Biehler) Scribn. (*Aira mollis* Muhl., nom. illeg., non *Aira mollis* (L.) Schreb.; *Aira nitida* Biehler; *Aira pennsylvanica* Spreng.; *Eatonia dudleyi* Vasey; *Eatonia glabra* Nash; *Eatonia nitida* (Biehler) Nash; *Eatonia pennsylvanica* (Spreng.) A. Gray; *Glyceria pennsylvanica* (Spreng.) Heynh.; *Koeleria pennsylvanica* (Spreng.) DC.; *Reboulea nitida* (Biehler) Farw.; *Reboulea nitida* var. *glabra* (Nash) Farw.; *Reboulea pennsylvanica* (Spreng.) A. Gray; *Sphenopholis glabra* (Nash) A. Heller; *Sphenopholis nitida* subsp. *glabra* (Nash) Scribn.; *Sphenopholis nitida* var. *glabra* (Nash) Scribn. ex B.L. Rob.; *Trisetum pennsylvanicum* (Spreng.) Trin., nom. illeg., non *Trisetum pennsylvanicum* (L.) P. Beauv. ex Roem. & Schult.) (W.R. Dudley)

North America, U.S. Perennial, caespitose, erect, forming clumps, rocky woods, open woods, dry and moist areas, shade or partial shade, see *Species Plantarum* 1: 63-66. 1753, *Syn. Pl.* 1: 97. 1805, *Plantarum Novarum ex Herbario Sprengelii Centarium* 8. 1807, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg (Sér. 7)* 2: 299, t. 7. 1807-1808, *Prodromus Florae Novae Hollandiae* 179. 1810, *Catalogus plantarum horti botanici monspeliensis* 117. 1813, *Descriptio uberior Graminum* 82. 1817, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts*

89: 104. 1819, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 66. 1830, *Nomenclator Botanicus* 1: 361. 1840, *A Manual of the Botany of the Northern United States* 591. 1848, *A Manual of the Botany of the Northern United States* edition 2. 558. 1856, *Botanical Gazette* 11: 116. 1886, *Bull. Cornell Univ.* 2: 126. 1886, *Bulletin of the Torrey Botanical Club* 22(12): 511. 1895 and *Manual of the Flora of the Northern States and Canada* 1043. 1901, *Rhodora* 8(92): 144-145. 1906, *Rhodora* 10(112): 65. 1908, *Muhlenbergia; A Journal of Botany* 6: 12. 1910, *Report of the Michigan Academy of Science, Arts and Letters* 17: 181. 1916.

in English: shiny wedgescale

S. obtusata (Michaux) Scribner (*Agrostis obtusata* Steud.; *Aira mexicana* Trin. ex E. Fourn.; *Aira obtusa* Raf.; *Aira obtusata* Michx.; *Aiopsis obtusata* (Michx.) Desv.; *Eatonia annua* Suksd.; *Eatonia densiflora* E. Fourn.; *Eatonia obtusata* (Michx.) A. Gray; *Eatonia obtusata* var. *purpurascens* Vasey ex Rydb. & Shear; *Eatonia obtusata* var. *robusta* Vasey ex L.H. Dewey; *Eatonia obtusata* var. *robusta* Vasey ex Rydb., nom. illeg., non *Eatonia obtusata* var. *robusta* Vasey ex L.H. Dewey; *Eatonia pubescens* Scribn. & Merr.; *Eatonia robusta* (Vasey ex L.H. Dewey) Rydb.; *Festuca obtusata* Michx. ex P. Beauv.; *Graphephorum densiflorum* E. Fourn.; *Koeleria lobata* Trin. ex Steud., nom. illeg., non *Koeleria lobata* (M. Bieb.) Roem. & Schult.; *Koeleria obtusata* Trin. ex Steud.; *Koeleria paniculata* Nutt.; *Koeleria truncata* (Muhl.) Torr.; *Koeleria truncata* var. *major* Torr.; *Poa obtusata* (Michx.) Link; *Reboulea gracilis* Kunth; *Reboulea obtusata* (Michx.) A. Gray; *Reboulea obtusata* var. *lobata* Farw.; *Reboulea obtusata* var. *obtusata*; *Reboulea obtusata* var. *pubescens* (Scribn. & Merr.) Farw.; *Reboulea truncata* Torr. ex Munro; *Sphenopholis annua* (Suksd.) A. Heller; *Sphenopholis obtusata* f. *purpurascens* (Vasey ex Rydb. & Shear) Waterf.; *Sphenopholis obtusata* var. *lobata* (Trin.) Scribn.; *Sphenopholis obtusata* var. *lobata* (Trin.) Scribn. ex B.L. Rob., nom. illeg., non *Sphenopholis obtusata* var. *lobata* (Trin.) Scribn.; *Sphenopholis obtusata* var. *major* (Torr.) Erdman; *Sphenopholis obtusata* var. *pubescens* (Scribn. & Merr.) Scribn.; *Sphenopholis obtusata* var. *pubescens* (Scribn. & Merr.) Scribn. ex B.L. Rob., nom. illeg., non *Sphenopholis obtusata* var. *pubescens* (Scribn. & Merr.) Scribn.; *Sphenopholis pubescens* (Scribn. & Merr.) A. Heller; *Sphenopholis robusta* (Vasey ex L.H. Dewey) A. Heller; *Trisetum lobatum* Trin.)

U.S. Perennial, caespitose, sandy fields, wood borders, along roadsides, open banks, shores, dry ledges, see *Flora Boreali-Americana* 1: 62. 1803, *Journal de Botanique, rédigé par une société de botanistes* 1: 200. 1808, *Essai d'une Nouvelle Agrostographie* 163. 1812, *Descriptio uberior Graminum* 83. 1817, *The Genera of North American Plants* 2: (Add.2). 1818, *A Flora of the Northern and Middle Sections of the United States* 1: 116-117. 1823, *Hortus*

Regius Botanicus Berolinensis 1: 76. 1827, *Révision des Graminées* 2: 341, t. 84. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 66. 1830, *Nomenclator Botanicus. Editio secunda* 1: 41, 849. 1840, *A Manual of the Botany of the Northern United States* 591. 1848, *A Manual of the Botany of the Northern United States. Second Edition* 558. 1856, *Journal of the Linnean Society, Botany* 6: 43. 1862, *Bulletin de la Société Botanique de France* 24: 182. 1877, *Mexicanas Plantas* 2: 111. 1886, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1891, *Contributions from the United States National Herbarium* 2(3): 544. 1894, *Contributions from the United States National Herbarium* 3(3): 190. 1895, *Bulletin, Division of Agrostology United States Department of Agriculture* 5: 30. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* 27: 6-7. 1900, *Bulletin of the Torrey Botanical Club* 32(11): 602. 1905, *Rhodora* 8(92): 144. 1906, *West American Scientist* 15: 50. 1906, *Contr. U.S. Natl. Herb.* 12: 152. 1908, *Rhodora* 10(112): 65. 1908, *Muhlenbergia; A Journal of Botany* 6: 12. 1910, *Report of the Michigan Academy of Science, Arts and Letters* 17: 181-182. 1916, *Man. Grass U.S.* 956. 1935, *Rhodora* 50(592): 93. 1948, *Iowa State Journal of Science* 39(3): 310-314, f. 3A-C, G. 1965.

in English: prairie wedgegrass, prairie wedgescale, prairie grass, wedge grass

S. pensylvanica (L.) Hitchc. (*Aira pallens* var. *aristata* Muhl. ex Elliott; *Arrhenatherum kentuckensis* Torr.; *Arrhenatherum pensylvanicum* (L.) Torr.; *Avena caroliniana* Walter; *Avena palustris* Michx.; *Avena pensylvanica* L.; *Avena pennsylvanica* Muhl., nom. illeg., non *Avena pensylvanica* L.; *Sphenopholis palustris* (Michx.) Scribn.; *Sphenopholis palustris* subsp. *flexuosa* Scribn.; *Sphenopholis palustris* var. *flexuosa* (Scribn.) Scribn. ex B.L. Rob.; *Sphenopholis pennsylvanica* (L.) Hitchc.; *Sphenopholis pensylvanica* var. *flexuosa* (Scribn.) F.T. Hubb.; *Trisetum ludovicianum* Vasey; *Trisetum palustre* (Michx.) Torr.; *Trisetum pensylvanicum* (Linnaeus) P. Beauvois ex Roemer & Schultes)

North America, U.S. Perennial, well-developed awn, meadows, wet soils, riverbanks, swamps, rich soils, woods, see *Species Plantarum* 1: 79-81. 1753, *Flora Caroliniana, secundum* ..81. 1788, *Flora Boreali-Americana* 1: 72. 1803, *Syn. Pl.* 1: 97. 1805, *Plantarum Novarum ex Herbario Sprengelii Centarium* 8. 1807, *Essai d'une Nouvelle Agrostographie* 55, 152, 153. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 151. 1816, *Systema Vegetabilium* 2: 658. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 126, 130-131. 1823, *Bulletin of the Torrey Botanical Club* 12: 6. 1885 and *Rhodora* 8(92): 143, 145. 1906, *Rhodora* 10: 65. 1908, *American Journal of Botany* 2: 304. 1915, *Rhodora* 18: 234. 1916.

in English: swamp oats, swamp wedgescale

S. x pallens (Biehler) Scribn. [*obtusata x pensylvanica*] (*Aira pallens* Biehler; *Aira pallens* Muhl., nom. illeg., non *Aira pallens* Biehler; *Eatonia aristata* Scribn. & Merr.; *Eatonia pallens* (Biehler) Scribn. & Merr.; *Reboulea pallens* (Biehler) Farw.; *Sphenopholis aristata* (Scribn. & Merr.) A. Heller; *Sphenopholis pallens* (Biehler) Scribn.; *Trisetum aristatum* (Scribn. & Merr.) Nash)

America, U.S. Perennial, see *Species Plantarum* 1: 63-66. 1753, *Syn. Pl.* 1: 97. 1805, *Plantarum Novarum ex Herbario Sprengelii Centarium* 8. 1807, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819 and *Circular, Division of Agrostology, United States Department of Agriculture* 27: 7. 1900, *Flora of the Southeastern United States* ...130. 1903, *Rhodora* 8(92): 145, 405. 1906, *Muhlenbergia; A Journal of Botany* 6: 12. 1910, *Report of the Michigan Academy of Science, Arts and Letters* 17: 181. 1916.

Sphenopus Trinius = Libyella Pamp.

Greek *sphen* "wedge" and *pous* "foot," referring to the thickened pedicels; see Carl Bernhard von Trinius (1778-1844), *Fundamenta Agrostographiae*. 1820.

About 2 species, Mediterranean, western Asia. Pooideae, Poodae, Poae, annual, caespitose, herbaceous, culm internodes hollow, auricles absent, ligule an unfringed membrane, leaves linear and narrow, plants bisexual, inflorescence a loose panicle with divaricate branchlets, several-flowered, bisexual and very small spikelets compressed laterally and long pedicellate, obtuse glumes minute and much shorter than the spikelets, lower glume 0- to 1-nerved, lemmas obtuse and awnless, hairy callus absent, palea present, 2 free lodicules membranous, 3 stamens, ovary glabrous, 2 stigmas white, callus short and blunt, halophytes, common in salty marshes, coastal areas, maritime sand, open habitats, along rivers, type *Sphenopus gouanii* Trin., see *Fundamenta Agrostographiae* 135. 1820, Svante Samuel Murbeck (1859-1946), *Contributions à la connaissance de la flore du nord-ouest de l'Afrique et plus spécialement de la Tunisie* ... Lund 1897-1905, *Mitteilungen der Thüringischen Botanischen Vereins* 13-14: 57. 1899 and *Flore analytique & synoptique de l'Algérie & de la Tunisie* 377. 1902 [1904], E. Durand (1872-1910) et J.F.G. Baratte (1857-1920), *Floræ Libycæ Prodromus: ou catalogue raisonné des plantes de Tripolitaine* Genève 1910, *Boll. Soc. Bot. Ital.* 1925: 151. 1925, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, *Bocconea, Monographiae Herbarii Mediterranei Panormitani* 3: 229-250. 1992, *Bothalia* 27: 75-82. 1997.

Species

S. divaricatus (Gouan) Rchb. (*Poa divaricata* Gouan; *Poa expansa* J.F. Gmel., also spelled *expensa*; *Sphenopus gouanii* Trinius, named for the French botanist Antoine Gouan

(Gouin) (Dupuy des Esquiles, pseud.), 1733-1821, professor of botany at Montpellier, correspondent of Linnaeus, see J.H. Barnhart, *Biographical notes upon botanists*. 2: 69. 1965)

Mediterranean. Annual, delicate, unbranched, slender, solitary or caespitose, geniculate and spreading, ligule membranous, auricles absent, leaves filiform, erect inflorescence, open panicle loose and divaricate, spikelets pedicellate, glumes unequal, lower glume reduced, upper glume 1-nerved membranous, hermaphrodite florets 3-5 per spikelet, lemmas without winged keels, 3 stamens, ovary glabrous, open habitats, saline ground, swamps, salt marshes, sandy soils, see *Species Plantarum* 1: 67-70. 1753, *Illustrationes et Observationes Botanicae* 3: 4, t. 2, f. 1. 1773, *Systema Naturae ...editio decima tertia, aucta, reformata* 181. 1791, *Fundamenta Agrostographiae* 135. 1820, *Flora Germanica Excursoria* 45. 1830.

in French: sphenopus divariqué

S. divaricatus (Gouan) Rchb. subsp. *permicranthus* (Hausskn.) H. Scholz (*Festuca expansa* var. *permicrantha* (Hausskn.) Asch. & Graebn.; *Sphenopus divaricatus* f. *permicranthus* (Hausskn.) Täckh. & G. Täckh.; *Sphenopus divaricatus* var. *permicranthus* (Hausskn.) Kneuck.; *Sphenopus gouanii* var. *permicrantha* Hausskn.)

Europe. See *Révision des Graminées* 1: 129. 1829, *Mitteilungen der Thüringischen Botanischen Vereins* 13-14: 57. 1899 and *Synopsis der mitteleuropäischen Flora* 2(1): 563. 1901, *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 14: 94. 1908, *Bulletin of the Faculty of Science Egyptian University* 17: 175. 1941, *Willdenowia* 19: 410. 1990.

Spinifex L. = Ixalum Forst.f.

From the Latin *spina*, *ae* "a thorn, spine," referring to the pointed and woody leaves or to the inflorescences, to the female spikelet clusters, large and deciduous head of bristle-tipped racemes.

About 4-5 species, Southeast Asia, India to China, Australia. Panicoideae, Panicodae, Paniceae, perennial, stout, herbaceous, vigorous, coarse, tough, much branched, bushy, decumbent, rhizomatous and caespitose, usually with creeping stems or stolons rooting at the nodes, auricles absent, leaf blades concave or convolute, ligule a fringe of hairs, hard leaves somewhat thickened and more or less pointed to spine-tipped, leaf sheath short and broad, plants dioecious or partially androdioecious, compound inflorescence terminal, with or without hermaphrodite florets, male and female inflorescences dimorphic, male inflorescence hemispherical, dorsally compressed spikelets, female inflorescence globular, clusters of spikes subtended by large bract-like spatheoles, male spikelets on separate plants, bisexual or female spikelets 1-flowered with spiny bracts in heads,

2 glumes more or less equal, membranous to crustaceous upper lemma with flat margins, palea present, 2 lodicules membranous and not toothed, 3 or 0 stamens or 3 staminodes, ovary glabrous, 2 stigmas, fruit medium sized and dorsiventrally compressed, pioneer, stabilizers of coastal sand dunes and beaches, seeds will not germinate in the presence of light, halophytic, excellent tolerance to salinity, species of open habitats and harsh environments, in sandy habitats along coastal beaches, open beach sites, sea shores, on sandy surfaces, on coastal dunes, binding coastal sand dunes, sometimes confused with the species of the genera *Triodia* R. Br. or *Plectrachne* Henrard, type *Spinifex squarrosus* L., see C. Linnaeus, *Mantissa Plantarum*. 2: 163, 300. 1771, *T.N.Z.I.* 12: 355. 1880 and *Grasses of Burma* ... 366. 1960, *Nuytsia* 5: 67-74. 1984, *New Zealand Journal of Botany* 22: 569-574. 1984, *Genera Graminum* 308. 1986, *Newslett. Austral. Syst. Bot. Soc.* 56: 13-15. 1988, *Blumea* 41: 445-454. 1996, Gregory P. Cheplick and Harry Demetri, "Impact of saltwater spray and sand deposition on the coastal annual *Triplaxis purpurea* (Poaceae)." *American Journal of Botany* 86: 703-710. 1999, *Taxon* 49(2): 257. 2000, Jean-Michel Gagné and Gilles Houle, "Factors responsible for *Honckenya peploides* (Caryophyllaceae) and *Leymus mollis* (Poaceae) spatial segregation on subarctic coastal dunes." *American Journal of Botany* 89: 479-485. 2002, *Flora of Australia* Volume 43, Poaceae 1: 122-123. 2002, Megan E. Griffiths and Colin M. Orians, "Responses of common and successional heathland species to manipulated salt spray and water availability." *American Journal of Botany* 90: 1720-1728. 2003.

Species

S. sp.

in China: lie chi shu, lie ci shu

S. hirsutus Labill.

Australia. Perennial, gray, stout, robust, dioecious, much-branched, leaf blades flat ribbed, hairy, vigorous and strong stoloniferous habit, creeping stolons rooting at the nodes, male and female flowers are borne on different plants, male inflorescence a terminal cluster of stalked racemes, female inflorescence a large globose spiny head of numerous sessile racemes, single spikelet enclosed by a large and silky-hairy bract, excellent tolerance to salinity, low water-logging tolerance, useful for erosion control and sand dune restoration, excellent for the stabilization of active dune sands on the seashore, high drought and salt wind tolerance, unpalatable to stock, grows on dune sands and sands of the seashores, exposed dunes, see *Novae Hollandiae Plantarum Specimen* 2: 81, t. 230-231. 1806-1807 and *Nuytsia* 5(1): 67-74. 1984, Ian Abbott, Neville Marchant and Ray Cranfield, "Long-term change in the floristic composition and vegetation structure of Carnac Island, Western Australia." *Journal of Biogeography* 27(2): 333-346. Mar 2000,

M. Horrocks, Y. Deng, J. Ogden and D.G. Sutton, "A reconstruction of the history of a Holocene sand dune on Great Barrier Island, northern New Zealand, using pollen and phytolith analyses." *Journal of Biogeography* 27(6): 1269-1277. Nov 2000.

in English: rolling spinifex, spinifex, spiny rolling-grass, spring rolling grass, roly-poly, hairy spinifex, coastal spinifex, beach spinifex, dune spinifex, sand spinifex grass, sand spinifex, spinifex dune grass, silver grass

S. inermis Banks & Sol. ex Hook.f.

New Zealand. See *Flora New Zealand* 1: 292. 1855.

S. littoreus (Burm.f.) Merr. (*Spinifex squarrosus* L.; *Stipa littorea* Burm.f.; *Stipa spinifex* L.)

Southeast Asia, India, Malaysia. Erect, hard, trailing, stout, creeping, many noded, stoloniferous, rooting and branching at the nodes, leaf sheaths ciliate and imbricate, leaf blades distichous, leaves thick and very pungent, ligule densely ciliate, usually dioecious, flowering shoots ascending, male spikelets lanceolate, female spikelets lanceolate-oblong, female inflorescence globose, male inflorescence 2-5 clustered turbinate heads, dried grass used as a fuel, excellent sand-binder, low value fodder, coastal sand dunes, on sandy beaches, dunes of seashore, see *Mant. Pl.* 34. 1767, *Systema Naturae, Editio Decima* 2: 98. 1767, *Flora Indica* ... *non Prodromus Florae Capensis* 29. 1768, *Mantissa Plantarum* 300. 1771 and *Handb. Fl. Ceylon* 5: 174. 1900, *Philippine Journal of Science* 7(4): 229. 1912, *De Nuttige Planten van Nederlandsch- Indië* 1: 188. 1928, *Grasses of Ceylon* 156. 1956, *Taxon* 49(2): 257. 2000, K. Shanker, J. Ramadevi, B.C. Choudhury, L. Singh and R.K. Aggarwal, "Phylogeography of olive ridley turtles (*Lepidochelys olivacea*) on the east coast of India: implications for conservation theory." *Molecular Ecology* 13(7): 1899-1909. July 2004.

in English: seashore rattan, spiny grass, water pink, rat thorn, sea pink, Ravana's whiskers [Ravana, the ten-headed King of Sri Lanka]

in China: lao shu li

in India: elikkunchipul, elimullu, gudikaanka, gundu kanko, gutti romala gaddi, iravaanan meesai, kantaka pathri, raavaanan meesai, raavanana gadda, raavanana meese hullu, raavanaasuruni meesaalu, raavanameeshullu, ravanaasurudimeesaalu, ravaanan meesai, saraanto

in Japan: tsuki-ige, hari-hama-mugi

in Okinawa: uma-hara-sa

in Sri Lanka: maha ravana ravula, ravaanan meesai

in Thailand: yaa ling lom, ya ling lom, ya loi lom, yaa loi lom

S. longifolius R. Br. (*Spinifex littoreus* var. *longifolius* (R. Br.) Backer)

Australia. Stout perennial grass, forming tussocks, stems creeping at the base, leaf blades are narrow rigid thick acicular, male and female flowers are borne on different plants, male inflorescences have spikelets alternately arranged on clustered spikes, female inflorescences spherical in outline and the seeds are clustered at the center, female inflorescences straw-colored when mature, frost sensitive, on the sand dunes along the beaches, exposed dunes, the fast-growing hybrid *Spinifex alterniflorus* has characteristics intermediate to *Spinifex hirsutus* and *Spinifex longifolius*, see *Prodromus Florae Novae Hollandiae* 198. 1810 and *De Nuttige Planten van Nederlandsch- Indië* 1: 188. 1928, J.C.Z. Woinarski, A. Fisher, K. Brennan, I. Morris and R. Chatto, "Patterns of bird species richness and composition on islands off Arnhem Land, Northern Territory, Australia." *Austral. Ecology* 26(1): 1-13. Feb 2001, Graham G. Thompson, Philip C. Withers, Eric R. Pianka and Scott A. Thompson, "Assessing biodiversity with species accumulation curves; inventories of small reptiles by pit-trapping in Western Australia." *Austral. Ecology* 28(4): 361-383. Aug 2003.

in English: long-leaved spinifex, spinifex, coastal spinifex, sand spinifex, beach spinifex, true spinifex, sea-coast grass, sandstay, porcupine grass

S. sericeus R. Br. (*Spinifex hirsutus* sensu Jessop, non Labill.)

Australia, Victoria, Queensland, Tasmania, New South Wales, New Zealand, Pacific Islands. Perennial, vigorous, leafy, dioecious, stout creeping, stoloniferous, trailing runners, leaf sheaths coriaceous, ligule a tiny ciliate rim, leaves densely silvery-silky and clustered at the nodes, bracts at the base of each male and bisexual spike, hairy or silky male spikelets rigid and acute with 2 male florets, bisexual spikelet solitary on the scabrous rachis of the spikes, lower floret neuter or sterile, upper floret female, low waterlogging tolerance, common on coastal sand dunes, pioneer grass forming colonies, effective sand stabilizer and sand-binding, high drought and salt wind tolerance, see *Prodromus Florae Novae Hollandiae* 198. 1810, *T.N.Z.I.* 12: 355. 1880 and *Nuytsia* 5: 67-74. 1984, K.M. Maze and R.D.B. Whalley, "Effects of salt spray and sand burial on *Spinifex sericeus* R. Br." *Australian Journal of Ecology* 17: 9-19. 1992, Cameron E. Webb, Ian Oliver and Anthony J. Pik, "Does Coastal Fore-dune Stabilization with *Ammophila arenaria* Restore Plant and Arthropod Communities in Southeastern Australia?" *Restoration Ecology* Volume 8, Issue 3: 283-288. Sep 2000.

in English: rolling spinifex, spinifex, sand spinifex grass, beach spinifex, spiny rolling-grass, roly-poly, hairy spinifex, coastal spinifex, silver grass, silvery sand grass

in New Zealand: kowhangatara

Spirochloe Lunell = *Lepturus* R. Br., *Schedonnardus* Steud., *Sporichloe* Pilger

From the Greek *speira* "a spiral, coil" and *chloe*, *chloa* "grass."

Chloridoideae, Cynodonteae, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Prodromus Florae Novae Hollandiae* 207. 1810, *The Genera of North American Plants* 1: 81. 1818, *Systema Vegetabilium, editio decima sexta* 1: 300. 1825, *Synopsis Plantarum Glumacearum* 1: 146. 1854 [1855], *Annual Report of the Geological Survey of Arkansas* 1888(4): 236. 1891 and *American Midland Naturalist* 4: 220. 1915, *Contributions from the United States National Herbarium* 41: 138, 193, 200. 2001.

Spirotheros Raf. = *Heteropogon* Pers.

Possibly from the Greek *speiro*, *sperro* "sow seed" and *thereios*, *theros* "summer, in summer, summer-time."

Panicoideae, Andropogoneae, Anthistiriinae, see *Species Plantarum* 2: 1045. 1753, *Syn. Pl.* 2: 533. 1807, *Bulletin Botanique [Genève]* 1: 221. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 254. 1832, *Die Natürlichen Pflanzenfamilien* 2(2): 29. 1887, *Index Kewensis* 2: 967. 1895 and *N. Amer. Fl.* 17: 127. 1912, E.D. Merrill, *Index rafinesquianus*. 76. 1949, *Kew Bulletin* 1954: 74. 1954, *Contributions from the United States National Herbarium* 46: 248-249, 607. 2003.

Spodiopogon Trinius = *Eccoilopus* Steud.

Greek *spodos*, *spodia* "ashes, ash gray" and *pogon* "a beard," referring to the hairy inflorescences; see Carl Bernhard von Trinius, *Fundamenta Agrostographiae*. 192. 1820.

About 9-10 species, temperate and subtropical Asia, Middle East. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, perennial or rarely annual, stems slender to stout, internodes solid, more or less leafy, leaves linear to lanceolate, sometimes with falsely petiolate leaf blades, plants bisexual, inflorescence paniculate densely hairy, open or contracted panicle, racemes with 1 sessile spikelet between 2 pedicellate, spikelets paired, 2-flowered, upper flower hermaphrodite, lower flowers male, 2 glumes awned or awnless, lower glume 5- to 9-nerved papery and convex, upper glume 3- to 9-nerved, upper lemma bifid and awned, ornamental, grasslands, open hillsides, related to *Saccharum*, type *Spodiopogon sibiricus* Trin., see *Fundamenta Agrostographiae* 192, t. 17. 1820, *Synopsis Plantarum Glumacearum* 1: 123. 1854 and *Grasses of Burma ...* 246-247. 1960, *Journal of Ecology* 87(4): 583-597. Aug 1999, *Contributions from the United States National Herbarium* 46:

607. 2003, Niels P.R. Anten and Tadaki Hirose, "Interspecific differences in above-ground growth patterns result in spatial and temporal partitioning of light among species in a tall-grass meadow." *Ecological Research* 19(5): 511-520. Sep 2004.

Species

S. cotulifer (Thunb.) Hack. (*Andropogon cotulifer* Thunb.; *Eccoilopus cotulifer* (Thunb.) A. Camus; *Eulalia cotulifera* (Thunb.) Munro; *Miscanthus cotulifer* (Thunb.) Benth.; *Saccharum cotuliferum* (Thunb.) Roberty)

Asia, China, India. See *Flora Japonica*, ... 41. 1784, *Annales Museum Botanicum Lugduno-Batavi* 2: 289. 1866, *Journal of the Linnean Society, Botany* 19(115-116): 65. 1881, *Monographiae Phanerogamarum* 6: 187. 1889 and *Annales de la société linneenne de Lyon, sér. 2* 70: 1, 92. 1923, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 36. 1960.

S. dubius Hack.

India, Himalaya. Fodder, see *Monographiae Phanerogamarum* 6: 186. 1889.

S. lacei Hole

Southeast Asia, Burma. See *Indian Forest Records* 5: 6, 185. pl. 1-4. 1915.

in Thailand: yang dia chae

S. rhizophorus (Steud.) Pilg. (*Andropogon albidus* Wall.; *Andropogon rhizophorus* Steud.; *Spodiopogon albidus* (Wall.) Benth.)

Asia, Nepal, India. Smooth, shining, reddish, leaf sheaths inflated, narrow panicles, inflorescence internodes clavate, see *A Numerical List of Dried Specimens* no. 8821. 1849, *Synopsis Plantarum Glumacearum* 1: 381. 1854, *Journal of the Linnean Society, Botany* 19: 66. 1881 and *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 119. 1940, *Journal of Cytology and Genetics* 15: 51-57. 1980.

in India: kanka gadi, mabbu ganjala garike hullu

S. sibiricus Trin. (*Andropogon sibiricus* (Trin.) Steud.; *Saccharum sibiricum* (Trin.) Roberty)

Siberia, China, Japan, Manchuria, Korea. See *Fundamenta Agrostographiae* 192, t. 17. 1820, *Synopsis Plantarum Glumacearum* 1: 398. 1854 and *Botanical Magazine* 29: 311. 1915, *Botanical Magazine* 39: 267. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 399, 402. 1930, *Report of the First Scientific Expedition to Manchoukou* 4(2): 122. 1935, *Botanical Magazine* 52: 288. 1938, *Report of the Institute of Scientific Research, Manchoukou* 3(App. 1): 94. 1939, *Acta Phytotaxonomica et Geobotanica* 11: 154. 1942, *Boissiera*. 371. 1960.

S. tainanensis Hayata (*Spodiopogon ramosus* Keng)

China. See *Botanical Magazine* 21: 53. 1907, *Sinensia* 10: 295. 1939.

S. takeoi Hayata (*Spodiopogon tainanensis* f. *takeoi* (Hayata) C.C. Hsu; *Spodiopogon tainanensis* var. *takeoi* (Hayata) Honda)

Taiwan. See *Botanical Magazine* 21: 53. 1907, *Icones plantarum formosanarum nec non et contributiones ad floram formosanam*. 7: 71-72, f. 39. 1918, *Botanical Magazine* 39: 268. 1925, *Taiwania* 16(2): 335. 1971.

S. tenuis Kitag. (*Spodiopogon sibiricus* var. *tenuis* (Kitag.) Kitag.)

China. See *Report of the First Scientific Expedition to Manchoukou* 4(2): 122. 1935, *Report of the Institute of Scientific Research, Manchoukou* 3(App. 1): 94. 1939.

Sporichloe Pilger = *Schedonnardus* Steud., *Spirochloe* Lunell

Greek *spora*, *sporos* "seed, spore" and *chloe*, *chloa* "grass," see *Synopsis Plantarum Glumacearum* 1: 146. 1854 [1855] and *American Midland Naturalist* 4: 220. 1915.

Sporobolus R. Br. = *Agrosticula* Raddi, *Bauchea* E. Fourn., *Bennetia* Raf., *Cryptostachys* Steud., *Diachyrium* Griseb., *Spermachiton* Llanos, *Spermatochiton* Pilger, *Triachyrum* Hochst., *Triachyrum* Hochst. ex A. Br., *Triachyrum* A. Braun

From the Greek *spora*, *sporos* "seed, spore" and *ballo*, *bolis*, *bolos* "casting," *boleo*, *bollein* "to throw," in reference to the dropping and the dispersion of the seeds; see Robert Brown (1773-1858), *Prodromus florae Novae Hollandiae et Insulae van-Diemen*. 169. London 1810.

About 100-160 species, tropical and warm temperate, subtropical. Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, Sporobolinae, or Chloridoideae, Zoysieae, Sporobolinae, perennial or annual, habitat variable, herbaceous, usually erect or decumbent, tufted or creeping, rhizomatous or stoloniferous, culm nodes glabrous, usually glandular or not, no auricles, ligule a short rim of hairs, sheaths ciliate or not, leaves linear and narrow and more or less setaceous, plants bisexual, inflorescence a panicle or a false spike, inflorescence branches whorled or not, open or contracted panicle exerted or partially included in the uppermost sheath, small spikelets stalked and disarticulating above the very unequal glumes, 1 floret bisexual, 2 glumes narrow and acuminate, glumes deciduous or persistent, 1-nerved lemmas awnless and membranous, palea often splitting as the grain develops, lodicules present or

absent, stamens 1-3, ovary glabrous without the apical appendage, 2 stigmas plumose, small fruit more or less compressed, loose pericarp mucilaginous and sticky, cleistogamous spikelets absent or present and axillary, sometimes halophytic, weed species, cultivated as ornamentals, smutgrass plants generally unpalatable to cattle, furnish forage for livestock and wildlife, useful pasture species, rush grass, edible grains, seeds an important food source for birds, some species used in revegetation, growing in pampas, marginal habitats, open places in savannah, dry savannah, rainforest, grasslands, arid places, prairies, roadsides, coastal sand dunes, coastal salt flats, dry or stony soils, mangrove swamps, seasonally flooded heavy clays, saline soils, continuous morphological variation, taxonomically a difficult genus, species intergrading and often hard to separate, genus sometimes confused with *Eragrostis* Wolf, see also *Thellungia* Stapf, type *Sporobolus indicus* (L.) R. Br., see *Flora Boreali-Americana* 1: 52. 1803, *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Essai d'une Nouvelle Agrostographie* 16, 148, 182, t. 5, f. 8. 1812, *Agrostografia brasiliensis* 33, t. 1, f. 2. 1823, *Bulletin Botanique [Genève]* 1: 220. 1830, *Révision des Graminées* 2: 421, t. 124. 1831, *Flora* 24: 712. 1841, *Flora* 33: 229. 1850, *Fragmentos de Algunas Plantas Filipinas* 25. 1851, *Synopsis Plantarum Glumacearum* 1: 181. 1854, *Bull. Soc. Bot. de France* 13: 317-326. 1866, *Nomenclator Botanicus* 2: 1274. 1874, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 257-258, t. 2, f. 8. 1874, *Journal of the Linnean Society, Botany* 19: 14-134. 1881, *Mexicanas Plantas* 2: 87. 1886, *Flora Capensis* 7(2-4): 310-791. 1898 and *Flora Capensis* 7: 579-580. 1900, *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *Bothalia* 2(1): 247-274. 1927, *Hooker's Icones Plantarum* 35(3): 1-11, plate 3457. 1947, *Fl. Afr. Nord* 2: 89. 1953, *Fieldiana, Botany* 24(2): i-ix, 1-390. 1955, *Die natürlichen Pflanzenfamilien, Zweite Auflage*, 14: 1-168. 1956, *Grasses of Burma ...* 622-635, *Kew Bulletin* 19: 287-296. 1965, *Bull. Centr. Etudes Rech. Sci.* 7: 47-75. 1968, *Folia Primatologica* 15: 1-35. 1971, *Bot. Not.* 125: 344-360. 1972, *Folia Primatologica* 21: 36-60. 1974, *Bull. Jard. Bot. Belg.* 50: 246. 1980, *Journal of Human Evolution* 10: 565-583. 1981, *Genera Graminum* 224-225. 1986, *Folia Primatologica* 48: 78-120. 1987, *Flora of the Guianas, Series A: Phanerogams* 606-615. 1990, *Blumea* 35(2): 393-458. 1991, *American Journal of Botany* 81: 622-629. 1994, *Flora Mesoamericana* 6: 273-276. 1994, *Flora of Ethiopia and Eritrea* 7: 142-156. 1995, *Sida* 16: 529-544. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Australian Systematic Botany* 12(3): 375-448. 1999, *Contributions from the United States National Herbarium* 41: 11, 18, 19, 57, 66, 200-219, 221. 2001, E. William Hamilton III, Samuel J. McNaughton and James S. Coleman, "Molecular, physiological, and growth responses to sodium stress in C4 grasses from a soil salinity gradient in the Serengeti ecosystem." *Am. J. Bot.* 88:

1258-1265. 2001, *Flora of Ecuador* 68: 60-72. 2001, Amanda L. Ingram and Jeff J. Doyle, "The origin and evolution of *Eragrostis tef* (Poaceae) and related polyploids: evidence from nuclear *waxy* and plastid *rps16*." *Am. J. Bot.* 90: 116-122. 2003, *Flora of Australia* Volume 44B, Poaceae 3: 324-346, 459. 2005, *Restoration Ecology* 13(1): 29-38. Mar 2005, *Ecological Management and Restoration* 6(1): 43-50. Apr 2005, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

S. sp.

South America, Peru. See Louis Wittmack, "Plants and Fruits." in Wilhelm Reiss and Alphons Stübel, *Necropolis of Ancón in Peru*, vol. 3, pt. 13. New York, London and Berlin 1880-1887.

S. acinifolius Stapf

South Africa, Kalahari. Perennial, rhizomatous with much-branched rhizomes, leaves pointed, spikelets solitary and terminal, see *Flora Capensis* 7: 581. 1900.

in English: limestone dropseed

in South Africa: kalkgras

S. actinocladius (F. Muell.) F. Muell. (*Sporobolus australasicus* sensu Jessop, non Domin; *Vilfa actinoclada* F. Muell.) (from the Greek *aktis*, *aktin* "a ray" and *klados* "a branch")

South Australia, New South Wales, Queensland, Northern Territory. Perennial, annual or biennial, caespitose, slender, erect, leaves spiny-ciliate with margins hirsute, leaf blades flat and linear-lanceolate, inflorescence spicate with branches finally spreading, spikelets borne in small false spikes, spikelets clustered toward the apices of branches, glumes unequal, lower glume acute and hyaline, upper glume acute and shorter than the spikelet, lemma acuminate, palea shorter than lemma, palatable and nutritious, indicator of poor rangeland condition, grows on floodplains, alkaline soils, sandy soils, inland rivers and creeks, black soils, see *Fragmenta Phytographiae Australiae* 6: 84. 1867, *Fragmenta Phytographiae Australiae* 8: 140. 1873.

in English: ray grass, Katoora grass, Katoora

S. acuminatus (Trin.) Hack. (*Sporobolus acuminatus* (Trin.) Kuhl., nom. illeg., non *Sporobolus acuminatus* (Trin.) Hack.; *Vilfa acuminata* Trin.)

South America, Brazil, Argentina, Paraguay. See *Species Graminum* 3: t. 348. 1835-1836 and *Repertorium Specierum Novarum Regni Vegetabilis* 7: 373. 1909, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 92. 1922.

S. adustus (Trin.) Roseng., B.R. Arrill. & Izag. (*Sporobolus aeneus* (Trin.) Kunth; *Sporobolus aeneus* var. *subbulbosus*

(Arechav.) Parodi; *Sporobolus subbulbosus* Arechav.; *Vilfa adusta* Trin.)

South America, Brazil, Argentina, Uruguay, Paraguay. Linear or filiform leaf blades glabrous or pilose, leaves flat or involute, panicle narrowly pyramidal with branches naked at the base, smooth spikelets, similar to *Sporobolus aeneus*, see *De Graminibus Paniceis* 23. 1826, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 213. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 80. 1840, *Anales del Museo Nacional de Montevideo* 1: 343, t. 35. 1896 and *Revista de la Facultad de Agronomía y Veterinaria* 6(2): 161, f. 16. 1928, *Gramíneas Uruguayas* 270, f. 112. 1970.

S. aeneus (Trin.) Kunth (*Agrostis sporobolus* Spreng.; *Sporobolus adustus* (Trin.) Roseng., B.R. Arrill. & Izag.; *Sporobolus aeneus* f. *parviflora* Parodi; *Sporobolus aeneus* var. *barbicollis* Hack.; *Sporobolus aeneus* var. *subbulbosus* (Arechav.) Parodi; *Sporobolus aeneus* var. *typica* Parodi; *Sporobolus camporum* Swallen; *Sporobolus eximius* (Nees ex Trin.) Ekman; *Sporobolus eximius* (Nees ex Trin.) Kuhlmann, nom. illeg., non *Sporobolus eximius* (Nees ex Trin.) Ekman; *Sporobolus sporobolus* (Spreng.) Kuntze; *Sporobolus sprengelii* Kunth; *Sporobolus subbulbosus* Arechav.; *Vilfa adusta* Trin.; *Vilfa aenea* Trin.; *Vilfa aenea* var. *angustifolia* Döll; *Vilfa aenea* var. *latifolia* Döll; *Vilfa eximia* Nees ex Trin.)

Bolivia, central and southern Brazil, Paraguay. Perennial, caespitose, shortly rhizomatous, leaves mainly basal, leaf blades linear glabrous pungent with ciliate margins, panicles narrowly oblong with ascending branches in dense whorls, spikelets smooth, lower glume acute or acuminate, in rocky places, cerrado, on sandy soil, campos, intergrades with *Sporobolus sprengelii*, see *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* 46. 1819, *De Graminibus Paniceis* 23. 1826, *Révision des Graminées* 1: 68. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 213. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 77, 80. 1840, *Flora Brasiliensis* 2(3): 34. 1878, *Anales del Museo Nacional de Montevideo* 1: 343, t. 35. 1896, *Revisio Generum Plantarum* 3(3): 369. 1898 and *Bulletin de l'Herbier Boissier, sér. 2, 4*(3): 278. 1904, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 41. 1913, *Comissão de Linhas Telegráficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 92. 1922, *Revista de la Facultad de Agronomía y Veterinaria* 6(2): 160-161, f. 16A-B. 1928, *Sellowia* 7: 10. 1956, *Gramíneas Uruguayas* 270, f. 112. 1970.

S. africanus (Poir.) Robyns & Tournay (*Agrostis africana* Poir.; *Agrostis capensis* Willd., nom. illeg., non *Agrostis*

capensis (L.) Lam.; *Agrostis spicata* Thunb., nom. illeg., non *Agrostis spicata* Vahl; *Sporobolus capensis* Kunth; *Sporobolus capensis* (Willd.) Kunth; *Sporobolus indicus* (L.) R. Br.; *Sporobolus indicus* var. *africanus* (Poir.) Jovet & Guédès; *Sporobolus indicus* var. *capensis* Engl.; *Vilfa africana* (Poir.) P. Beauv.; *Vilfa capensis* P. Beauv.)

Tropical East Africa, Ethiopia, South Africa. Perennial or biennial, coarse, stiff, tussocky, densely tufted, erect or oblique, wiry, rhizomatous, scented roots, very persistent, tough leaves and stems, bulbous glossy green base, leaf blades inrolled or flat, leaf sheath glabrous, basal leaf sheaths papery or almost coriaceous and lacking woolly hairs at the collar, leaves dark green and shiny, no ligule or inconspicuous, inflorescence not whorled, flowering heads usually covered with a black smut, narrow and contracted spike-like panicle with rigid branches more or less appressed uniformly, spikelets narrowly lanceolate very dense, glumes unequal, lower glume obtuse broadly oblong, upper glume acute and 1-nerved, lemma ovate acute, 3 stamens, seeds reddish brown and ellipsoid, spikelets eaten by local people, the seed head resembles a rat's tail, reproduces from seed, noxious vigorous weed, a strong aluminium accumulator, used for thatching and for making baskets and hats, drought resistant, tolerant of heavy grazing, fodder, green leaves high in crude protein, generally unpalatable to stock or relatively palatable, young plants sometimes eaten by cattle, mature plants relatively unpalatable, low nutritional value, can provide valuable grazing, young inflorescences eaten by baboons, used in traditional medicine for wounds and snake bite, found on coastal soils, tracks, in disturbed areas, low lying areas, near ponds, overgrazed and disturbed veld, compacted soils, degraded pastures, overgrazed veld, near streams or rivers, in moister areas, roadsides and waste places, in wet swampy areas, in hill and coastal pastures, on the alluvial soils, irrigated pastures, grassland, montane grassland, clearings, in forest and grassland edge, similar to *Sporobolus fertilis* (Steudel) Clayton and *Sporobolus indicus*, see *Prodromus Plantarum Capensium, ...* 19. 1794, *Species Plantarum* 1: 372. 1797, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 254. 1810, *Prodromus Florae Novae Hollandiae* 170. 1810, *Essai d'une Nouvelle Agrostographie* 16, 146-147, 181. 1812, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 212. 1833 and *Bulletin du Jardin Botanique de l'État Bruxelles* 25: 242. 1955, *Grasses of Burma ...* 627. 1960, *Kew Bulletin* 19(2): 291. 1965, *Taxon* 22: 163. 1973, *Bothalia* 17: 135-136. 1987, *Bothalia* 18: 114-119. 1988, *Bothalia* 21(2): 163-170. 1991, *Blumea* 35: 393-458. 1991, *Opera Botanica* 121: 159-172. 1993, *Aust. Syst. Bot.* 12: 375-448. 1999, *Global Change Biology* 7(1): 1-13. Jan 2001, *Functional Ecology* 15(1): 103-112. Feb 2001, *African Journal of Ecology* 40(1): 76-83. Mar 2002.

in English: dropseed, rat's tail, rat-tail dropseed, rat's tail dropseed, Indian rat's tail grass, rat's tailgrass, rattail grass,

rattail, South African rat-tail grass, rush grass, giant Parramatta grass, tough dropseed, smutgrass, tussock grass, African dropseed, African dropseed grass, Parramatta grass

in Nigeria: goor, pagame

in South Africa: rotstert fynsaadgras, saadgras, taai-pol, taai-polfynsaadgras, vleigras, matshiki

in Pacific: mosie hikutaha

S. agrostoides Chiov. (*Sporobolus filipes* Stapf ex Napper)

East Africa, Somalia, Zaire. Perennial, slender, ascending, loosely tufted, knotty rootstock, short oblique rhizome, basal sheaths papery and keeled, soft leaves, large panicle lanceolate to ovate and diffuse, lower glume narrowly lanceolate acute, upper glume ovate or lanceolate-oblong, lemma narrowly ovate, weed species, alluvial soils, woodlands, along roadsides, cultivation, shade, see *Annuario del Reale Istituto Botanico di Roma* 7: 67, t. 5. 1897 and *Kirkia* 4: 173. 1964.

S. airiformis Chiov.

Ethiopia, Arabia. Perennial, slender, erect, cushion forming, densely tufted, leaves mainly basal, leaf blades flat or convolute, indurated basal sheaths densely tomentose to woolly, panicle ovate and open to diffuse, lower glume ovate to oblong, upper glume narrowly ovate, lemma obtuse narrowly ovate, on rocky slopes, sandstones, limestones, open *Acacia* woodlands, a segregate from *Sporobolus stapfianus*, similar to *Sporobolus myrianthus*, see *Missione Biologica nel Paese dei Borana*, 4. *Raccolte Botaniche* 277. 1939.

S. airoides (Torrey) Torrey (*Agrostis airoides* Torr.; *Sporobolus airoides* var. *wrightii* (Munro ex Scribn.) Gould; *Sporobolus altissimus* Vasey; *Sporobolus diffusissimus* Buckley; *Sporobolus tharpitii* Hitchc.; *Sporobolus wrightii* Munro ex Scribn.; *Vilfa airoides* (Torr.) Trin. ex Steud.)

North America, U.S., New Mexico, Texas. Perennial bunchgrass, long-lived, leafy, densely tufted, no rhizomes, dense root system, erect, coarse, tough, solid, pale green, growing in large and dense clumps, fibrous roots, long slender blades, leaves fibrous, panicle pyramid-shape with widely spreading branches, seed heads loose and open, 1-flowered spikelets, seeds free from the lemma, reproduces from seeds and tillers, a famine food, native pasture species, tolerant of both drought and inundation by water, forage, fodder, fair to low quality hay, unpalatable and tough when mature and dry, palatable while succulent, relished by jackrabbits, ground cover, useful for erosion control, revegetation of saline and alkaline sites, range reseeding and revegetation of disturbed areas, used by Native Americans in California for basketry and weaving, found in saline and nonsaline soils, on harsh sites, from sand to clay, on alkaline flats, bottom lands and flats, low alluvial floodplains, in meadows and valleys, on sandy washes, moist sites, on marsh borders, on rocky soils and open plains, in arid and semiarid regions, see *Annals of the Lyceum of Natural History of New York*

1(1): 151-152. 1824, *Nomenclator Botanicus. Editio secunda* 2: 766. 1841, *Synopsis Plantarum Glumacearum* 1: 162. 1854, *Explorations and Surveys for a Railroad Route from the Mississippi River to the Pacific Ocean*. 7: 21. 1856, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 90. 1862, *Bulletin of the Torrey Botanical Club* 9: 103. 1882, *Proceedings of the California Academy of Sciences, Series 2*, 2: 212-213. 1889 and *Proceedings of the Biological Society of Washington* 41: 161-162. 1928, *Journal of the Arnold Arboretum* 24: 393. 1943, *Madroño* 10(3): 94. 1949, *Phytologia* 54(1): 5. 1983, *Sida* 16(1): 164. 1994, *Journal of Biogeography* 27(3): 687-696. May 2000, *Conservation Biology* 15(4): 844-855. Aug 2001, *Restoration Ecology* 10(4): 607-616. Dec 2002, *New Phytologist* 159(2): 391-401. Aug 2003, *Restoration Ecology* 12(3): 368-375. Sep 2004, *Diversity & Distributions* 11(1): 45-55. Jan 2005.

in English: alkali sacaton, hairgrass dropseed

in Mexico: cresta de gallo, zacate agua, zacate alcalino, zacate de agua, zacate sabana, zacatón, zacatón alcalino

S. airoides (Torrey) Torrey subsp. ***regis*** (I.M. Johnst.) Wipff & S.D. Jones (*Sporobolus regis* I.M. Johnst.)

North America, Mexico. See *Journal of the Arnold Arboretum* 24: 393. 1943, *Sida* 16(1): 164. 1994.

S. airoides (Torrey) Torrey var. ***airoides*** (*Sporobolus schaffneri* Mez)

North America, Mexico. Perennial, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 295. 1921.

S. albens Balansa (*Sporobolus humilis* J. Presl; *Vilfa humilis* (J. Presl) Steud.)

Asia. Flooded fields, see *Reliquiae Haenkeanae* 1(4-5): 241. 1830, *Nomenclator Botanicus. Editio secunda* 2: 626, 767. 1841, *Journal de Botanique (Morot)* 4(8): 164. 1890.

S. albicans (Nees ex Trin.) Nees

South Africa. Perennial, rhizomatous, mat-forming, inflorescence spike-like, glumes and lemmas membranous, see *Florae Africae Australioris Illustrationes Monographicae* I. Gramineae. 154. 1841.

S. ameliae Veldkamp

Timor, Malesia. See *Blumea* 35(2): 411, f. 1. 1991.

S. andongensis Rendle

Africa, Angola. Wet meadows, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2: 208. 1899.

S. angustifolius A. Rich. (*Sporobolus angustifolius* De Wild.; *Sporobolus indicus* var. *angustifolius* (A. Rich.) Chiov.; *Vilfa angustifolia* (A. Rich.) Steud.)

Tropical Africa, Ethiopia, Somalia. Perennial, erect, slender, densely tufted, basal leaf sheaths fibrous when old, leaves mainly basal, leaf blades usually convolute, open

panicle linear to narrowly ovate, primary branches spreading, spikelets contracted about the branchlets, setaceous pedicels, lower glume ovate to oblong, upper glume narrowly ovate, lemma ovate, on shallow soil, in high rainfall areas, grassland, steep mountain slopes, bushland, similar to *Sporobolus nervosus*, see *Prodromus Florae Novae Hollandiae* 170. 1810, *Tentamen Florae Abyssinicae ...* 2: 396. 1850, *Synopsis Plantarum Glumacearum* 1: 160. 1855 [1854] and *Annuario del Reale Istituto Botanico di Roma* 8(3): 338. 1908, *Annales de la Société Scientifique de Bruxelles* 39(3): 136. 1920.

S. apiculatus Boechat & Longhi-Wagner

Brazil. See *Bradea*, *Boletim do Herbarium Bradeanum* 6(20): 173-177, f. 1. 1993, *Flora Fanerogamica do Estado de São Paulo* 1: i-xxv, 1-292. 2001.

S. arabicus Boiss. (*Sporobolus marginatus* Hochst. ex A. Rich.; *Vilfa arabica* (Boiss.) Steud.)

Arabia, Middle East. See *Tentamen Florae Abyssinicae ...* 2: 397. 1850, *Diagnoses plantarum orientalium novarum, ser. I*, 13: 14. 1853, *Synopsis Plantarum Glumacearum* 1: 421. 1854 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 84, t. 47, f. 1. 1930; 286. 1931.

S. arenaceus Buckley (*Muhlenbergia arenacea* (Buckley) Hitchc.)

U.S. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 89. 1862 and *Proceedings of the Biological Society of Washington* 41: 161. 1928, *Man. Grass. U.S.* 886. 1935, *Manual of the Grasses of the United States* (edition 2, revised by A. Chase). 1951.

S. arenarius (Gouan) Duval-Jouve (*Agrostis arenaria* Gouan; *Phalaris disticha* Forssk.; *Sporobolus pungens* Kunth; *Sporobolus pungens* (Schreb.) Kunth)

Mediterranean. Ovate panicle, see *Illustrationes et Observationes Botanicae* 3. 1773, *Flora Aegyptiaco-Arabica* 17. 1775, *Bulletin de la Société Botanique de France* 16: 294. 1869 and *Webbia* 49(2): 265-329. 1995.

S. arenarius (Gouan) Duval-Jouve var. ***gaditanus*** (Boiss. & Reut.) T. Durand & Schinz (*Sporobolus gaditanus* Boiss. & Reut.)

Africa. See *Bulletin de la Société Botanique de France* 16: 294. 1869, *Conspectus Florae Africae* 5: 818. 1894.

S. asper (P. Beauvois) Kunth (*Agrostis aspera* Michx., nom. illeg., non *Agrostis aspera* Weber; *Agrostis composita* Poir.; *Agrostis involuta* Muhl., nom. illeg., non *Agrostis involuta* Poir.; *Agrostis longifolia* Torr.; *Muhlenbergia aspera* Trin. ex Kunth; *Muhlenbergia composita* Trin. ex Kunth; *Sporobolus asper* Kunth; *Sporobolus asper* var. *hookeri* (Trin.) Vasey; *Sporobolus asper* var. *pilosus* (Vasey) Hitchc.; *Sporobolus compositus* (Poir.) Merr.; *Sporobolus compositus* var. *compositus*; *Sporobolus compositus* var. *drummondii* (Trin.) Kartesz & Gandhi; *Sporobolus compositus* var. *macer* (Trin.) Kartesz & Gandhi; *Sporobolus*

drummondii (Trin.) Vasey; *Sporobolus longifolius* (Torr.) Alph. Wood; *Sporobolus macer* (Trin.) Hitchc.; *Sporobolus pilosus* Vasey; *Vilfa aspera* P. Beauv.; *Vilfa composita* (Poir.) P. Beauv.; *Vilfa drummondii* Trin.; *Vilfa hookeri* Trin.; *Vilfa longifolia* (Torr.) Torr.)

U.S. Perennial, caespitose, erect, solitary or tufted, robust, rhizomatous, leaves flat to inrolled, leaf sheaths hairy at the top, ligule short and fringed, narrow and very contracted panicles spike-like, erect spikelets lance-shaped, part of the inflorescence usually enclosed by the uppermost leaf sheath, most palatable when young and green, drought-tolerant, growing on dry sandy soils, sandy clay, in fallow fields, on clayey to silty soils of prairies and sandy meadows, open glade, on meadows and prairies in medium to heavy textured soils, open habitats, roadsides, railroads and rocky open woods, see *Flora Boreali-Americana* 1: 52. 1803, *Plantarum Novarum ex Herbario Sprengelii Centarium* 8. 1807, *Encyclopédie Méthodique, Botanique Suppl.* 1: 254. 1810, *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *Descriptio uberior Graminum* 72. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 90. 1823, *Révision des Graminées* 1: 68. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 210, 229. 1833, *North American Gramineae and Cyperaceae* 1: 4. 1834, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 79, 95, 106. 1840, *Gramineae* 9-10. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(suppl. 1): 141-142. 1843, *A Class-book of Botany* 1861: 775. 1861, *A Descriptive Catalogue of the Grasses of the United States* 43-44. 1885, *Contributions from the United States National Herbarium* 1(2): 56. 1890, *Botanical Gazette* 16(1): 26. 1891, *Contributions from the United States National Herbarium* 3(1): 60, 64. 1892, *Botanical Gazette* 21: 15. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 6. 1901, *Manual of the Flora of the Northern States and Canada* 1042. 1901, *American Journal of Botany* 2: 203. 1915, *North American Flora* 17(7): 488. 1928, *Proceedings of the Biological Society of Washington* 41: 161. 1928, *Rhodora* 56(662): 29-30. 1954, *Iowa State Journal of Research* 51(3): 287-321. 1977, *Phytologia* 78(1): 11. 1995, *Restoration Ecology* 6(2): 181-196. June 1998, *Journal of Animal Ecology* 67(5): 705-721. Sep 1998, *Global Change Biology* 5(5): 497-506. June 1999, *Ecology Letters* 5(5): 676-684. Sep 2002, *Conservation Biology* 17(1): 178-187. Feb 2003, Emily J. Benson, David C. Hartnett and Kale H. Mann, "Belowground bud banks and meristem limitation in tallgrass prairie plant populations." *Am. J. Bot.* 91: 416-421. 2004, *Journal of Applied Ecology* Volume 41, Issue 4: 604-614. Aug 2004.

in English: dropseed, rough dropseed, tall dropseed, tall dropseed grass, longleaf dropseed

in French: sporobole rude

S. atrovirens (Kunth) Kunth (*Agrostis atrovirens* (Kunth) Roem. & Schult.; *Vilfa atrovirens* Kunth)

Mexico. Perennial, caespitose, erect, simple, glabrous, leaves basal, fodder, see *Nova Genera et Species Plantarum* 1: 138. 1815 [1816], *Systema Vegetabilium* 2: 361. 1817, *Révision des Graminées* 1: 68. 1829.

in Mexico: zacate

S. auriculatus Vasey (*Muhlenbergia arenacea* (Buckley) Hitchc.)

U.S. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 89. 1862, *Contributions from the United States National Herbarium* 3(1): 64. 1892 and *Proceedings of the Biological Society of Washington* 41: 161. 1928.

S. australasicus Domin

Australia. Annual, slender, caespitose, ligule a fringe of hairs, open inflorescence paniculate, spikelets uniformly distributed in inflorescence, lower glume 1-nerved, an increaser species, low palatability, readily eaten even when dry and after seed fall, a coloniser of scalded ground, useful for erosion control, grows on loam flats, on denuded areas, see *Repertorium Specierum Novarum Regni Vegetabilis* 9: 553. 1911, *Blumea* 35: 451. 1991, *Australian Systematic Botany* 12(3): 375-448. 1999.

in English: Australasian dropseed, Australian dropseed

S. bahamensis Hack.

Bahamas. See *Österreichische Botanische Zeitschrift* 52(2): 56. 1902.

S. bechuanicus Gooss.

South Africa, Botswana. Perennial, rare, tufted, panicle spike-like, glumes and lemmas cartilaginous, see *Bulletin of Miscellaneous Information Kew* 1934: 197 f. 2. 1934.

S. bianouensis De Wild.

Africa. See *Annales de la Société Scientifique de Bruxelles* 39: 137. 1920.

S. blakei De Nardi ex B.K. Simon

Central Australia. Perennial, erect, caespitose, leaf blades usually flattened, leaf sheaths distinctly fibrous at base of plant, inflorescences of spicate main branches contracted and spiciform, spikelets contracted along primary inflorescences branches, lower glume ovate without nerves, upper glume elliptic, lemma lanceolate carinate 1-nerved, palea entire, a resurrection grass, drought-tolerant, arid regions, moisture depressions, water courses, similar to *Sporobolus elongatus*, see *Austrobaileya* 4: 57. 1993.

S. bogdanii Napper

Africa. See *Kirkia* 3: 119. 1963.

S. bogotensis Swallen & García-Barr. (*Sporobolus lasiophyllus* Pilg.)

Colombia, Ecuador. Perennial, caespitose, erect, straight, leaves basal, leaf sheaths tightly imbricate and keeled, ligule a line of short hairs, leaf blades linear and coriaceous, panicle pyramidal and open with branches verticillate, spikelets shortly pedicellate to sessile, glumes unequal, first glume lanceolate and acute, second glume ovate and acute, lemma ovate acute, 2 rounded lodicules, 3 stamens, grazed pastures, close to *Sporobolus lasiophyllus* Pilger and *Sporobolus purpurascens* (Sw.) Ham., see *Caldasia* 2(8): 301. 1943.

S. brasiliensis (Raddi) Hack. (*Aira brasiliensis* Raddi; *Eragrostis airoides* Nees)

Brazil. Perennial, erect, leaning, along forest edges, grasslands, along roadsides, open areas, see *Agrostografia Brasileira* 36. 1823, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 509-510. 1829 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 278. 1904, *Fontqueria* 46: [i-ii], 1-259. 1997.

S. brockmanii Stapf (*Sporobolus capensis* var. *altissimus* Chiov.; *Sporobolus indicus* (L.) R. Br. var. *microspiculus* Chiov.) (named for the British naturalist Ralph Evelyn Drake-Brockman, b. 1875, plant collector, from 1904 to 1915 Army medical officer in Abyssinia and Somaliland, author of *British Somaliland*. London 1912 and *The Mammals of Somaliland*. London 1910; see Alain Campbell White and Boyd Lincoln Sloane, *The Stapelieae*. Pasadena 1937; Alexander Bryson, *Report on the Climate and Principal Diseases of the African Station*. London 1847)

Somalia. Perennial, tufted, short oblique rhizome, leaves mostly basal, ligule pubescent, basal sheaths papery, inflorescence linear, narrow spikes, lower glume lanceolate, lemma ovate, low to moderate palatability, open areas, mountains, plains grasslands, slopes, coastal plains, dunes, sand dunes, stabilized dunes, open sandy areas, see *Species Plantarum* 63. 1753, *Prodromus Florae Novae Hollandiae* 170. 1810, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 212. 1833, *Annuario del Reale Istituto Botanico di Roma* 6: 168, t. 11. 1896 and *Bulletin of Miscellaneous Information Kew* 6: 220. 1907, *Taxon* 22: 163. 1973.

S. buckleyi Vasey (for the American naturalist Samuel Botsford Buckley, 1809-1884, traveler, geologist, explorer, plant collector in Mexico and U.S., worked with Torrey and Gray; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 276. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 168. 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. 449. Library of the New York Botanical Garden. 1973; Samuel Wood Geiser, *Naturalists of the Frontier*. 77, 211, 213, 263, 271. Dallas 1948; E.L. Core, "The botanical exploration of the Southern Appalachians, 2. Flora." *Virginia Polytechnic Institute and State University, Research Division Monogr.* 2: 42, 44. 1970; H.N. Clokie, *Account of*

the Herbaria of the Department of Botany in the University of Oxford. 140. Oxford 1964; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983)

Mexico, U.S., Texas, Belize. Perennial, densely caespitose, erect, simple, glabrous, internodes solid, leaves basal, inflorescence drooping, panicle branches spreading, glumes acute, fodder, good forage, disturbed scrub, along clearings, see *Bulletin of the Torrey Botanical Club* 10: 128. 1883.

in English: Buckley's dropseed, Buckley dropseed

in Mexico: zacatón pulguero

S. caespitosus Kunth (*Sporobolus caespitosus* Kunth; *Vilfa caespitosa* (Kunth) Trin.)

Ascension Island. Endangered or extinct species, see *Révision des Graminées* 2: 423 t. 125. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 72. 1840.

S. camporum Swallen (*Sporobolus aeneus* (Trin.) Kunth; *Sporobolus aeneus* var. *angustifolius* sensu Ekm., non Döll; *Vilfa aenea* Trin.)

Southern Brazil and Uruguay. Panicle pyramidal, see *De Graminibus Paniceis* 23. 1826, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 213. 1833 and *Sellowia* 7: 10. 1956, *Flora Illustrata Catarinense* 1(Gram.): 1-345. 1981.

S. carmichaeli Kunth (*Agrostis ramulosa* Carmich.; *Vilfa ramulosa* Kunth)

Atlantic. Nom. illeg., non *Agrostis ramulosa* Carmich., see *Species Plantarum* 1: 61-63. 1753, *Nova Genera et Species Plantarum* 1: 137. 1815 [1816], *Systema Vegetabilium* 2: 361. 1817, *Transactions of the Linnean Society of London* 12: 504. 1819, *Révision des Graminées* 1: 68. 1829.

S. caroli Mez (*Sporobolus lindleyi* sensu Benth., non (Stuedel) Benth.; *Sporobolus subtilis* F. Muell., nom. illeg., non *Sporobolus subtilis* Kunth)

South Australia, New South Wales, Victoria, Queensland, Northern Territory. Perennial or annual, caespitose, slender, leaf blade flat and ribbed, leaves linear-lanceolate and scabrous, loose inflorescence a pyramidal and compound panicle very open and much branched, lowest inflorescence branches whorled, small delicate spikelets pedicellate, floret 1 or rarely 2, pedicels spreading and longer than the spikelets, glumes unequal and acute, lower glume hyaline, palea splitting very early, heavy seeding, a coloniser of scalded ground, high quality forage, grows on floodplains, moist

soil, inland rivers and creeks, see *Fragmenta Phytographiae Australiae* 8: 140. 1873 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 299. 1921, *Austral. Syst. Bot.* 12: 388. 1999, G.D. Cook, "Effects of frequent fires and grazing on stable nitrogen isotope ratios of vegetation in northern Australia." *Austral. Ecology* 26(6): 630-636. Dec 2001, E.N. Bui and B.L. Henderson, "Vegetation indicators of salinity in northern Queensland." *Austral. Ecology* Volume 28, Issue 5: 539-552. Oct 2003.

in Australia: Yakka grass, fairy grass

S. centrifugus (Trin.) Nees (*Sporobolus schlechteri* Schweick.)

Tropical Africa, South Africa. Perennial, herbaceous, tufted, rhizomatous, filiform, ligule inconspicuous, leaf blade thread-like, basal sheaths hard and brittle, old leaf bases persistent, narrow and slender panicle, small spikelets, grazing value unknown, probably grazed by goats and sheep, found in moist well-drained soils, slopes, see *Flora Africae Australioris Illustrationes Monographicae* 158-159. 1841 and *Bothalia* 2: 260, 262, 272-273, t. 5, 7. 1927, *Bulletin of Miscellaneous Information Kew* 1935: 208. 1935, *Transactions of the Royal Society of South Africa* 26: 183, f. 4. 1938.

in English: olive dropseed

in South Africa: mabele a dinonyana

S. ciliatus J. Presl (*Agrostis villosa* Rchb. ex Spreng., nom. illeg., non *Agrostis villosa* Vill.; *Sporobolus rupestris* Kunth; *Sporobolus villosus* (Rchb. ex Spreng.) Kunth; *Vilfa ciliata* (J. Presl) Trin., nom. illeg., non *Vilfa ciliata* (Thunb.) P. Beauv.; *Vilfa preslii* Steud.; *Vilfa rupestris* (Kunth) Trin., nom. illeg., non *Vilfa rupestris* Trin.; *Vilfa villifera* Hochst. ex Steud.; *Vilfa villosa* Rchb. ex Trin.)

South America. Annual, tufted, foliage basal, leaf sheaths keeled, ligule ciliate, inflorescence spicate, spikelets clustered, savannah, closely related to *Sporobolus piliferus* (Trin.) Kunth, see *Histoire des Plantes de Dauphiné* 1: 378. 1786, *Essai d'une Nouvelle Agrostographie* 16, 181. 1812, *Gram. Unifl. Sesquifl.* 157. 1824, *Systema Vegetabilium, editio decima sexta* 5(Suppl.): 5. 1828, *Révision des Graminées* 1: 68. 1829, *Species Graminum* 3: t. 252. 1829-30, *Reliquiae Haenkeanae* 1(4-5): 242. 1830, *Révision des Graminées* 1: 267, t. 45. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 211. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 63, 66. 1840, *Nomenclator Botanicus. Editio secunda* 2: 768. 1841, *Synopsis Plantarum Glumacearum* 1: 159. 1854 and *Enum. Vasc. Pl. Suriname* 56. 1906, *Brittonia* 23(3): 293-324. 1971.

S. clandestinus (Biehler) A.S. Hitchc. (*Agrostis clandestina* Biehler; *Muhlenbergia clandestina* (Biehler) Trin.; *Sporobolus asper* var. *canovirens* (Nash) Shinnery; *Sporobolus asper*

var. *clandestinus* (Biehler) Shinnery; *Sporobolus canovirens* Nash; *Sporobolus clandestinus* var. *canovirens* (Nash) Steyermark & Kucera; *Sporobolus compositus* var. *clandestinus* (Biehler) J. Wipff & S.D. Jones; *Sporobolus longifolius* (Torr.) A.W. Wood; *Vilfa clandestina* (Biehler) Nees ex Steud.)

North America, U.S. Perennial, caespitose or single, stout, erect culms, contracted panicles, frequent on dry sandy soils, on limestone, open glade, rocky open woods and bluff edges, dry rocky soils, in developed land, alluvium above stream, see *Plantarum Novarum ex Herbario Sprengelii Centarium* 8. 1807, *De Graminibus unifloris et sesquifloris* 190-191, 296, t. 5, f. 9. Petropoli 1824, *Révision des Graminées* 1: 68. 1829, *Nomenclator Botanicus. Editio secunda* 2: 767. 1841 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 6. 1901, *Manual of the Flora of the Northern States and Canada* 1042. 1901, *Contributions from the United States National Herbarium* 12(3): 150. 1908, *Rhodora* 56(662): 30. 1954, *Rhodora* 63(745): 25. 1961, *Phytologia* 78(4): 244. 1995.

in English: rough dropseed, sand dropseed, rough rush grass, purple flower dropseed, hidden dropseed, clandestine dropseed

S. coahuilensis Valdés-Reyna

Mexico. See *Phytologia* 41(2): 81. 1978.

S. collettii (Hook.f.) Bor (*Sporobolus coromandelianus* var. *collettii* Hook.f.) (dedicated to the British botanist Sir Henry Collett, 1836-1901 (Kew, Surrey), plant collector, 1855 Bengal Army, in 1879 a Fellow of the Linnean Society, author of *Flora simlensis*. Calcutta, Simla and London 1902; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 367. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement IV*. 269-270. Königstein 1997; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937)

India. See *The Flora of British India* 7: 253. 1896 and Sir Henry Collett (1836-1901), *Flora simlensis*. Calcutta, Simla and London 1902, *Kew Bulletin* 1954: 502. 1954.

S. commutatus (Trin.) Kunth (*Agrostis coromandeliana* Retz.; *Sporobolus coromandelianus* (Retz.) Kunth; *Vilfa commutata* Trin.)

Asia. See *Observationes Botanicae* 4: 19. 1786, *Species Graminum* 1: t. 10. 1823, *Révision des Graminées* 1: 68. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 214. 1833, *Florae Africae Australioris Illustrationes Monographicae* 157. 1841, *Conspectus Florae Africae* 5: 820. 1894.

S. commutatus (Trin.) Kunth var. *trinianus* Nees

India. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 214. 1833, *Florae Africae Australioris Illustrationes Monographicae* 157. 1841.

S. compactus Clayton

Somalia. Annual or perennial, compact, creeping, cushions forming, shortly stoloniferous, scaly stolons, leaves rigid and pungent, panicle ovate and open to diffuse, lower glume ovate enclosing the base of the spikelets, upper glume oblong, lemma oblong-ovate, on plains, see *Kew Bulletin* 25(2): 248. 1971.

in Somalia: dih

S. compositus (Poir.) Merr. (*Agrostis aspera* Michx., nom. illeg.; *Agrostis composita* Poir.; *Agrostis involuta* Muhl., nom. illeg., non *Agrostis involuta* Poir.; *Glyceria stricta* Buckley, nom. illeg., non *Glyceria stricta* Hook.f.; *Muhlenbergia composita* Trin. ex Kunth; *Sporobolus asper* (P. Beauv.) Kunth; *Sporobolus asper* var. *asper*; *Sporobolus asper* var. *hookeri* (Trin.) Vasey; *Sporobolus longifolius* (Torr.) Alph. Wood; *Sporobolus pilosus* Vasey; *Vilfa aspera* P. Beauv.; *Vilfa composita* (Poir.) P. Beauv.; *Vilfa hookeri* Trin.)

North America, U.S., Canada. Perennial bunchgrass, stout, erect, leaf blades flat, panicle slender and somewhat compressed, base of the panicle enclosed in the upper leaf sheath, forage, used for revegetation, grows on heavy soils, sandy soils, on plains or hills, see *Plantarum Novarum ex Herbario Sprengelii Centarium* 8. 1807, *Encyclopédie Méthodique, Botanique Suppl.* 1: 254. 1810, *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *Descriptio uberius Graminum* 72. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 90. 1823, *Révision des Graminées* 1: 68. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 229. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 1840 6,4(1-2): 79, 106. 1840, *A Class-book of Botany* 1861: 775. 1861, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 95-96. 1862, *A Descriptive Catalogue of the Grasses of the United States* 43. 1885, *Botanical Gazette* 16(1): 26. 1891 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 6. 1901, *Man. Grass. U.S.* 958. 1935, *Phytologia* 78(4): 11, 244. 1995, *Restoration Ecology* 12(1): 80-84. Mar 2004.

in English: tall dropseed, meadow dropseed

S. compositus (Poir.) Merr. var. *compositus* (*Sporobolus asper* (P. Beauv.) Kunth; *Sporobolus asper* var. *hookeri* (Trin.) Vasey)

North America, U.S. See *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *Révision des Graminées* 1: 68. 1829, *Mémoires de l'Académie Impériale des Sciences*

de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 6,4(1-2): 106. 1840, *A Descriptive Catalogue of the Grasses of the United States* 43. 1885 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 6. 1901.

in English: tall dropseed, longleaved rushgrass, rough rushgrass

S. compositus (Poir.) Merr. var. *drummondii* (Trin.) Kartesz & Gandhi (*Sporobolus asper* (P. Beauv.) Kunth; *Sporobolus asper* var. *drummondii* (Trin.) Vasey; *Sporobolus asper* var. *pilosus* (Vasey) A.S. Hitchc.; *Sporobolus attenuatus* Nash; *Sporobolus drummondii* (Trin.) Vasey; *Sporobolus pilosus* Vasey; *Vilfa drummondii* Trin.)

North America, U.S. See *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *Révision des Graminées* 1: 68. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 106. 1840, *A Descriptive Catalogue of the Grasses of the United States* 44. 1885, *Botanical Gazette* 16(1): 26. 1891, *Contributions from the United States National Herbarium* 3(1): 60. 1892 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 6. 1901, *Flora of the Southeastern United States* ... 123. 1903, *North American Flora* 17(7): 488. 1928, *Proceedings of the Biological Society of Washington* 41: 161. 1928, *Phytologia* 78(1): 11. 1995, Kucera, Clair L., *The Grasses of Missouri* 1998.

in English: meadow dropseed

S. compositus (Poir.) Merr. var. *macer* (Trin.) Kartesz & Gandhi (*Sporobolus asper* (P. Beauv.) Kunth; *Sporobolus asper* var. *macer* (Trin.) Shinnery; *Sporobolus macer* (Trin.) A.S. Hitchc.; *Sporobolus macrus* Hitchc.; *Vilfa macra* Trin.)

North America, U.S. See *Révision des Graminées* 1: 68. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 79. 1840 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 6. 1901, *American Journal of Botany* 2: 203. 1915, Small, J.K., *Manual of the Southeastern Flora* 1933, *Rhodora* 56(662): 29. 1954, *Phytologia* 78(1): 11. 1995.

in English: Mississippi dropseed

S. confertiflorus A. Rich. (*Eragrostis japonica* (Thunb.) Trin.; *Poa japonica* Thunb.; *Vilfa confertiflora* (A. Rich.) Steud.)

Africa, Abyssinia. See *Flora Japonica* ... 51. 1784, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 405. 1830, *Tentamen Florae Abyssinicae* ...2: 397. 1850.

S. confinis (Steud.) Chiov. (*Sporobolus affinis* A. Rich., nom. illeg., non *Sporobolus affinis* Kunth; *Sporobolus phyllotrichus* Hochst.; *Vilfa confinis* Steud.; *Vilfa phyllotricha* (Hochst.) Schweinf.)

Tropical East Africa, Ethiopia, Yemen. Perennial, weak, lax, slender, spreading, erect or geniculate and loosely ascending, long rhizomatous with slender creeping rhizomes, basal leaf sheaths papery to herbaceous, leaves flat, panicle narrowly ovate, slender primary branches flexuous and ascending, spikelets clustered at the tips of the branchlets, obtuse lower glume lanceolate to oblong, acute upper glume ovate, lemma narrowly ovate to oblong, growing on field borders, open weedy places, grassland, open stony slopes, see *Tentamen Florae Abyssinicae* ... 2: 396. 1850, *Synopsis Plantarum Glumacearum* 1: 160. 1855 [1854], *Flora* 38: 201. 1855 and *Annuario del Reale Istituto Botanico di Roma* 8: 341. 1908.

S. congoensis Franch. (*Sporobolus eylesii* Stent & Rattray) (named for the British botanist Frederick Eyles, 1864-1937 (d. Salisbury, Rhodesia), plant collector in Rhodesia, his writings include "A record of Plants collected in Southern Rhodesia. Arranged on Engler's System." *Trans. R. Soc. S. Afr.* 5: 273-564. 1916, "A preliminary list of the plants of Southern Rhodesia." *S. Afr. J. Sci.* 8: 277-321. 1912 and "Constituents of the flora of Southern Rhodesia." *S. Afr. J. Sci.* 17: 181-184. 1921; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 238. 1994)

Tropical East Africa. Perennial, robust, rhizomatous, softly hairy leaves, pyramidal or whorled inflorescence paniculate, small and dark spikelets, growing in stony ground, shallow soil, rocky places, sandstones, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 369. 1895 and *Proceedings of the Rhodesia Scientific Association* 32: 52. 1933.

S. conrathii (Conrath & Hack.) Chiov. (*Sporobolus micranthus* Conrath & Hack., nom. illeg., non *Sporobolus micranthus* (Steud.) T. Durand & Schinz) (named for the Bohemian botanist Paul Conrath, 1861-1931, naturalist, collector in South Africa; see Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 122. Cape Town 1981; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement IV: Ce-Cz*. 306. Königstein 1997)

South Africa, Transvaal. Perennial, tufted, fibrous at the base, found in shallow soils, rocky places, see *Österreichische Botanische Zeitschrift* 53(5): 198. 1903, *Annali di Botanica* 13: 49. 1914.

S. consimilis Fresen. (*Sporobolus nogalensis* Chiov.; *Sporobolus robustus* sensu Chippind., non Kunth; *Sporobolus robustus* auct., sensu Altmann & Altmann, non Kunth; *Sporobolus robustus* auct., sensu Dunbar & Dunbar, non Kunth; *Sporobolus robustus* Kunth; *Vilfa consimilis* (Fresen.) Steud.; *Vilfa robusta* (Kunth) Trin.)

Tropical Africa, Ethiopia, South Africa, Namibia, Somalia. Perennial, reedlike, robust, erect, stout, harsh, tussocky,

caespitose, spreading, branching, shortly rhizomatous, sometimes stoloniferous, leaves scabrid and rather rigid, narrow panicle linear with not whorled branches, primary branches simple and ascending, spikelets appressed to the rachis, glumes acute more or less equal keeled and scabrid, both glumes as long as the spikelets, upper glume ovate, 3 anthers, leaves and grains eaten by baboons, usually on sandy soils, swamps, alkaline or saline soils, salt flats, wet places, damp places with a high salt levels, riverbeds, seasonally flooded areas, sand banks, saline swamps, saline grasslands, moist depressions, similar to *Sporobolus latzii*, see *Révision des Graminées* 2: 425. 1832, *Museum Senckenbergianum* 2: 140. 1837, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 54. 1840, *Nomenclator Botanicus. Editio secunda* 2: 767. 1841 and Augustino Osoro Onkware, "Effect of soil salinity on plant distribution and production at Loburu delta, Lake Bogoria National Reserve, Kenya." *Austral. Ecology* 25(2): 140-149. Apr 2000.

in South Africa: vleigras

in Malawi: ntseche

in Somalia: darif bal, aus dur

in German: schilfgras

S. contiguus S.T. Blake

New South Wales, Queensland. Perennial, caespitose, leaves flexuous, leaf blades flat with margins hirsute, inflorescence paniculate and spreading at maturity, branches with several false spikes loosely arranged from the base of the branches, 1 floret, lower glume hyaline and acute, upper glume acute and about as long as the spikelet, lemma lanceolate and scabrous, inland rivers and creeks, grows on floodplains, see *University of Queensland Papers: Department of Biology* 1(18): 6. 1941.

S. contractus A.S. Hitchc. (*Sporobolus cryptandrus* (Torr.) A. Gray; *Sporobolus cryptandrus* (Torr.) Gray var. *strictus* Scribn.; *Sporobolus strictus* (Scribn.) Merr., nom. illeg., non *Sporobolus strictus* Franch.)

North America, U.S. Perennial, scattered, good forage, drought-tolerant, found on dry or sandy soils, on rocky slopes, roadsides, along washes, mesas, deserts, see *A Manual of the Botany of the Northern United States* 576. 1848, *Bulletin of the Torrey Botanical Club* 9: 103. 1882 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 6. 1901, *American Journal of Botany* 2: 303. 1915.

in English: spike dropseed, narrow-spike dropseed

in Mexico: zacate alcalino espigado, zacate compacto

S. copiapinus Phil. (*Muhlenbergia asperifolia* (Nees & Meyen ex Trin.) Parodi; *Muhlenbergia asperifolia* (Nees & Meyen ex Trin.) Matthei, nom. illeg., non *Muhlenbergia*

asperifolia (Nees & Meyen ex Trin.) Parodi; *Vilfa asperifolia* Nees & Meyen ex Trin.)

Chile. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 95. 1840, *Anales de la Universidad de Chile* 94: 6. 1896 and *Revista de la Facultad de Agronomía y Veterinaria* 6: 117. 1928, *Gayana, Botánica* 41(1-2): 55. 1984.

S. cordofanus (Hochst. ex Steud.) Cosson (*Sporobolus commutatus* (Trin.) Kunth; *Sporobolus commutatus* subsp. *cordofanus* (Hochst.) T. Durand & Schinz; *Sporobolus commutatus* var. *cordofanus* (Steud.) T. Durand & Schinz; *Triachyrum cordofanum* Hochst. ex Steud.)

Africa, Sahel. Annual, tufted, ascending, leaf blades linear, panicle ovate with spreading primary branches whorled, spikelets on secondary branchlets, lower glume obtuse, upper glume narrowly ovate, good grazing grass, in sandy areas, weedy places, dry sandy soils, overgrazed sites, related to *Sporobolus ioclados*, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 214. 1833, *Flora* 25(1): Beibl. 134. 1842, *Bulletin de la Société Botanique de France* 36: 253. 1889, *Conspectus Florae Africae* 5: 820. 1894.

S. coromandelianus (Retz.) Kunth (*Agrostis coromandeliana* Retz.; *Agrostis pyramidata* Lam.; *Sporobolus argutus* (Nees) Kunth; *Sporobolus commutatus* (Trin.) Kunth; *Sporobolus coromandelianus* (Retz.) R. Br.; *Sporobolus coromandelianus* Link; *Sporobolus javensis* Ohwi; *Sporobolus parvulus* Stent; *Sporobolus patens* auct. non Swallen; *Sporobolus pulvinatus* Swallen; *Sporobolus pyramidatus* (Lam.) A.S. Hitchc.; *Vilfa arguta* Nees; *Vilfa commutata* Trin.; *Vilfa coromandeliana* (Retz.) P. Beauv.; *Vilfa roxburghiana* Nees ex Wight; *Vilfa roxburghii* Trin.)

Tropical Africa, Madagascar, India, South Africa. Annual, tufted, erect, leafy, ascending, foliage mostly basal, viscid, sparsely branched from the lower nodes, auricles more or less bearded, leaves flat, ovate open panicle, inflorescence branches not all whorled, lowest panicle branches whorled, spikelets arranged toward the apices of the panicle branches, lower glume when present oblong to obovate, upper glume acute, 3 stamens, good fodder, open or disturbed sites, fixed coastal dunes, on clay, lowlands, on bare ground, grasslands, waste ground, brackish pans, dry and arid zones, coastal dunes, tracksides, confused with *Sporobolus microprotus*, close to *Sporobolus australasicus*, see *Observationes Botanicae* 4: 19. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 161. 1791, *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *Species Graminum* 1: t. 10. 1823, *Révision des Graminées* 1: 68. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 395. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 214-215. 1833, *Catalogue of Indian Plants* 102. London

1833-1837, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(3): 59. 1839, *The Flora of British India* 7: 253. 1896 and *Handb. Fl. Ceylon* 5: 264. 1900, *Bothalia* 2: 273. 1927, *Manual of the Grasses of the West Indies* 84. 1936, *Bulletin of the Tokyo Science Museum* 18: 12. 1947, *Kew Bulletin* 1954: 502. 1954, *Grasses of Ceylon* 96. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma* ... 627. 1960, *Kew Bulletin* 19(2): 295. 1965, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Proceedings of the Indian Science Congress Association* 74(3, vi): 185-186. 1987, *Cytologia* 53: 53-57. 1988, *Blumea* 35: 413. 1991, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

in English: whorled dropseed, dropseed, small dropseed

in India: elikathunga gaddi, nari baalada hullu, yellika tungoo gadi

S. creber De Nardi (*Sporobolus indicus* (L.) R. Br. var. *creber* (De Nardi) Veldkamp)

New South Wales, Queensland, Victoria. Perennial, caespitose, erect, sheath enclosing culm, linear leaf blades folded or rolled, ligule a ciliate membrane, inflorescence spicate with branches stiff and appressed, lowermost inflorescence branches shorter than adjacent internodes, 1 floret, spikelets shortly pedicellate, lower glume hyaline acute or obtuse, upper glume acute and hyaline, lemma lanceolate acute 1-nerved, grows in woodland, native grassland, resembling *Sporobolus elongatus*, see *Prodromus Florae Novae Hollandiae* 170. 1810 and *Contributions from the New South Wales National Herbarium* 4(7): 406, pl. 1, 1A. 1973, *Blumea* 35(2): 432. 1991.

in English: slender rat's tail grass, rat's tail grass

S. cruceensis Renvoize

Bolivia, Santa Cruz. Annual, tufted, erect, delicate, leaf blades lanceolate, slender oblong panicles with filiform branches ascending, elliptic spikelets, glumes unequal and membranous, lemma and palea hyaline, stamens 3, see *Gramíneas de Bolivia* 334. 1998.

S. cryptandrus (Torr.) A. Gray (*Agrostis cryptandra* Torr.; *Sporobolus cryptandrus* subsp. *fuscicolus* (Hook.) E.K. Jones & Fassett; *Sporobolus cryptandrus* (Torr.) Gray var. *fuscicola* (Hook.) Pohl; *Sporobolus cryptandrus* var. *involutus* Farw.; *Sporobolus cryptandrus* (Torr.) Gray var. *occidentalis* E.K. Jones & Fassett; *Sporobolus cryptandrus* var. *typicus* (Torr.) E.K. Jones & Fassett; *Sporobolus cryptandrus* var. *vaginatus* Lunell; *Sporobolus subinclusus* Phil.; *Sporobolus subinclusus* f. *panicula expansa* Stuck.; *Sporobolus subinclusus* var. *expansus* Parodi; *Vilfa cryptandra* (Torr.) Trin.; *Vilfa tenacissima* var. *fuscicola* Hook.; *Vilfa triniana* Steud.)

North America, Canada, U.S., Mexico, Argentina. Perennial bunchgrass, tufted or solitary culms, solid, bluish green, erect to spreading, leafy, small clumps, persistent green base, shallow rooted, sheaths densely villous with an apical tuft of long hairs, ligules a fringe of hairs, inrolled or flat leaf blades, a distinctive flag leaf located at a right angle to the stem, panicles enclosed in the sheaths for varying lengths, lax terminal inflorescence with spreading branches, very small reddish seeds, prolific seed producer, grains consumed by native Americans, weed species, polymorphic, drought resistant, low palatability when dry, palatability declines with maturity, eaten readily by livestock while green, native pasture species, forage, pioneer plant in disturbed areas, an invader of over grazed sandy soils, a colonizer of drought disturbed and previously cultivated lands, used for revegetation and for reseeding depleted range land, abundant in sand prairie and sand savannah, usually found on sandy soil, well-drained and permeable soils, open and disturbed areas with permeable sandy soils, in disturbed sandy areas, sandy loam, dry sandy ridges and plains, dry prairies, sandy alluvial soils and gravelly soils, areas subjected to seasonal flooding, silty clay loam, clay soil, along railroads, near sea shores, sand hills and dunes, in dry sandy flats along rivers and lakes, see *Annals of the Lyceum of Natural History of New York* 1(1): 151. 1824, *Flora Boreali-Americana* 2: 239. 1839, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 69. 1840, *A Manual of the Botany of the Northern United States* 576. 1848, *Synopsis Plantarum Glumacearum* 1: 156. 1854, *Anales de la Universidad de Chile* 36: 207. 1870, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 282. 1878, *Geological Survey of California, Botany* 2: 269. 1880, *Bulletin of the Torrey Botanical Club* 9: 103. 1882, *Contributions from the United States National Herbarium* 1(2): 56. 1890, *Bulletin of the Torrey Botanical Club* 25(2): 88-89. 1898 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 6. 1901, *American Midland Naturalist* 2: 123. 1911, *Anales Museo Nacional de Historia Natural de Buenos Aires* 21: 93. 1911, *Contributions to Western Botany* 14: 11. 1912, *American Journal of Botany* 2: 303. 1915, *Rep. Michigan Acad. Sci.* 22: 179. 1921, *Revista de la Facultad de Agronomía y Veterinaria* 6(2): 149, f. 12F. 1928, *Rhodora* 52: 125-126. 1950, *Proc. N.Z. Ecol. Soc.* 17: 18-24. 1970, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Phytologia* 37(4): 317-407. 1977, *Functional Ecology* 12(4): 640-645. Aug 1998 [Granivore impact on soil-seed reserves in the central Monte desert, Argentina.], *Ecology Letters* 2(5): 286-293. Sep 1999, *Journal of Ecology* 88(6): 940-949. Dec 2000 [Post-dispersal fate of seeds in the Monte desert of Argentina: patterns of germination in successive wet and dry years.], *Austral. Ecology* 27(4): 416-421. June 2002, *Res-*

toration Ecology 10(2): 324-333. June 2002, *Austral. Ecol.* 29(5): 558-567. Oct 2004, *Oikos* 108(2): 209-218. Feb 2005.

in English: sand dropseed, prairie grass, covered-spike dropseed

in French: sporobole à fleurs cachées

in Mexico: zacate encubierto, zacatón arenoso, zacatón desgranador, zacatón en cubierto

S. cubensis A.S. Hitchc. (*Sporobolus aeneus* sensu Hitchc., non (Trin.) Kunth)

Bolivia to Brazil, West Indies, Belize. Perennial, densely tufted, clumped, erect, simple, leaves mainly basal, glabrous, ligule a ciliate membrane, leaf blades linear pungent, open oblong panicle, spikelets lanceolate, lower glume lanceolate acuminate, viscid, found in open savannah, forest, sandy soil, resembles *Sporobolus eximius*, see *De Graminibus Paniceis* 23. 1826, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 213. 1833 and *Contributions from the United States National Herbarium* 12(6): 237. 1909.

in English: Cuban dropseed

S. curtissii Small ex Kearney (*Sporobolus curtissii* (Vasey ex Beal) Small ex Scribn.; *Sporobolus curtissii* Small ex Scribn.; *Sporobolus floridanus* var. *curtissii* (Small ex Kearney) Vasey ex Beal; *Sporobolus floridanus* var. *curtissii* Vasey ex Kearney; *Sporobolus floridanus* var. *curtissii* Vasey) (after A.H. Curtiss)

U.S., Florida. Growing in open ground, along roadsides, along railways, swamps, see *Flora of the Southern United States* 550. 1860, *A Descriptive Catalogue of the Grasses of the United States* 44. 1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 1: 24. 1895, *Grasses of North America for Farmers and Students* 2: 290. 1896, *Bulletin, Division of Agrostology United States Department of Agriculture* 7: 142, f. 124. 1897.

in English: pineland dropseed, Curtiss' dropseed, Curtiss dropseed

S. densissimus Pilg.

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43(1): 91. 1909, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 77. 1911.

S. diandrus (Retzius) P. Beauv. (also spelled *diander*) (*Agrostis diandra* Retz.; *Agrostis elongata* var. *flaccida* Roth; *Spermachiton involutum* Llanos; *Sporobolus diander* (Retzius) P. Beauv.; *Sporobolus indicus* var. *diandrus* (Retz.) Jovet & Guédès; *Sporobolus indicus* (L.) R. Br. var. *flaccidus* (Roem. & Schult.) Veldkamp; *Sporobolus indicus* var. *flaccidus* (Roth) Veldkamp; *Vilfa diandra* (Retz.) Trin.; *Vilfa erosa* Trin.; *Vilfa retzii* Steud.) (from the Greek *di*, *dis* 'two, double' and *aner*, *andros* 'male, stamen')

India, Himalayas, Asia. Perennial or annual, often tufted, slender, erect, simple, leafy, glabrous, smooth, internodes solid, sheaths ribbed, ligule a line of hairs, very narrow leaves linear-lanceolate with very fine tips, fibrous roots, dense inflorescence narrowly paniculate with lax branches usually spreading at maturity, 1 floret, very small spikelets shortly pedicellate and crowded, glumes subequal or unequal, lemma acute and minutely scabrous, 2 or 3 stamens, palea shorter than lemma, weed species, used for making brooms, grazed by stock, fodder for cattle and horses, a good sand binder, ruderal, found in coastal districts, in grazing grounds, grasslands, forest glades, in woodlands, high rainfall areas, see *Observationes Botanicae* 5: 19. 1789 [1788], *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Essai d'une Nouvelle Agrostographie* 26, 147, 178. 1812, *Systema Vegetabilium* 2: 368. 1817, *De Graminibus unifloris et sesquifloris* 154. Petropoli 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 86. 1840, *Nomenclator Botanicus. Editio secunda* 1: 40. 1840, *Fragmentos de Algunas Plantas Filipinas* 25. 1851, *Plantae Junghuhnianae* 3: 343. 1854, *Enum. Pl. Zeyl.* 370. 1864, *Nom. Bot.* 2: 1274. 1874 and *A Handbook to the Flora of Ceylon* 5: 261. 1900, *Grasses of Ceylon* 95-96, pl. 14. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 629. 1960, *Taxon* 22: 163. 1973, *Proceedings of the Indian Science Congress Association* 74(3, vi): 185-186. 1987, *Cytologia* 53: 53-57. 1988, *Blumea* 35(2): 393-458. 1991, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Australian Systematic Botany* 12(3): 375-448. 1999, *Botanical Journal of the Linnean Society* Volume 148, Issue 1: 57-72. May 2005.

in English: tussock dropseed, tussocky sporobolus

in India: bena joni, chireya ka dana, chiriya-ka-dana, dodda kaare hullu, dodda kari kandakada hullu, doob, galphula, navilu dendi hullu, navilu dondi hullu, nonak, pedda nakka toka, sanna hanchi hullu, tandlen

S. dinklagei Mez

Tropical Africa, Sierra Leone to Ivory Coast. Perennial, caespitose, growing in sandy soils, along roadsides.

in Sierra Leone: koligbiti, saia, tai, taia

S. discosporus Nees (*Sporobolus blephariphyllus* A. Rich.; *Triachyrum adoense* Hochst. ex A. Braun; *Triachyrum discosporum* (Nees) Steud.)

East Africa, Ethiopia. Perennial or annual, tufted, shortly rhizomatous, ciliate leaf blades, basal rosette of leaves, whorled inflorescence, panicle branches 4-6 spiculate, drooping spikelets when old, round disc-like grains strongly flattened, grows in wet areas, open disturbed ground, moist places, overgrazed areas, see *Florae Africae Australioris Illustrationes Monographicae* 158. 1841, *Flora* 24(1841): 1, Intell. 19. 1841, *Tentamen Florae Abyssinicae ...* 2: 398.

1850, *Synopsis Plantarum Glumacearum* 1: 176. 1855 [1854].

in English: disc dropseed

in South Africa: oortjiesgras

in Tanzania: mahwa kinyaturu

S. disjunctus R. Mills ex B.K. Simon

Australia, Queensland. Perennial, erect, caespitose, ligule a ciliate membrane, linear leaf blades flat or involute, inflorescence a single spike or of spicate main branches, inflorescence branches grouped in clusters on the rachis, spikelets shortly pedicellate, lower glume lanceolate 1-nerved, lemma lanceolate carinate 1-nerved, see *Austrobaileya* 4(1): 59, f. 2. 1993.

S. distichivaginitus R.W. Pohl

Guatemala. Annual, caespitose, erect, simple, glabrous, internodes solid, leaves mostly basal, open panicles, see *Novon* 2(4): 325, f. 2. 1992.

S. domingensis (Trin.) Kunth (*Agrostis domingensis* (Trin.) Schult. & Schult.f.; *Sporobolus inordinatus* Mez; *Sporobolus pyramidatus* (Lam.) Hitchc.; *Sporobolus pyramidatus* subsp. *domingensis* (Trin.) Cat. Guerra; *Vilfa domingensis* Trin.)

U.S., Florida. Perennial, caespitose, erect, simple, glabrous, leaves basal, spikelets gray-green, good forage, beach sand, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 161. 1791, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 59. 1821, *Mantissa* 3(add. 1): 570. 1827, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 214. 1833 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 294. 1921, *Manual of the Grasses of the West Indies* 84. 1936, *Fontqueria* 44: 143. 1996, L. Catusus Guerra, "Las gramíneas (Poaceae) de Cuba, I." *Fontqueria* 46: [i-ii], 1-259. 1997.

in English: coral dropseed

S. durus Brongn.

Ascension Island. Endangered or extinct species, see *Voyage autour du Monde* 2(2): 18, t. 4. 1829.

S. effusus Desv. (*Sporobolus effusus* Franch.)

Brazil, Africa. See *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 164. 1831, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 370. 1895.

S. elatior Bosser

Africa. See *Adansonia* 9: 339. 1969.

S. elongatus R. Br. (*Sporobolus indicus* (L.) R. Br. var. *elongatus* sensu Veldkamp; *Sporobolus indicus* var. *elongatus* (R. Br.) F.M. Bailey; *Vilfa elongata* (R. Br.) Trin., nom. illeg., non *Vilfa elongata* P. Beauv.)

South Australia, Queensland, New South Wales. Perennial, tufted, clumped, slender, erect, glabrous, leaf sheaths glabrous subcoriaceous to papery, leaf blades folded or rolled,

inflorescence often lax, dense and spike-like panicle narrow with branches erect-spreading or ascending, inflorescence branches longer than adjacent internodes, dark green-gray spikelets densely crowded, 1 floret, glumes subequal or unequal, second glume shorter than the lemma, lemma acute, 2 stamens, seed reddish, native pasture species, weed species difficult to eradicate, common in the tropics, grows in woodland, in plantations and cultivated fields, on open hillsides, along riverbanks, pasture, high rainfall areas, along roadsides and in waste places, similar to *Sporobolus creber*, see *Prodromus Florae Novae Hollandiae* 1: 170. 1810, *Nova Graminum Genera* 154, 305. 1824, *A Synopsis of the Queensland Flora* 651. 1883 and *Botanical Magazine* 55: 394. 1941, *New Zealand Journal of Botany* 29: 117-129. 1991, *Blumea* 35: 451. 1991.

in English: wiregrass, slender rat's tail grass, rat-tail dropseed, rat-tail grass, rat's tail grass, elongate dropseed, hairy grass, yakka grass

in India: ratua

S. eminens J. Presl (*Sporobolus wrightii* Munro ex Scribn.; *Vilfa eminens* (J. Presl) Steud.)

Mexico. See *Reliquiae Haenkeanae* 1(4-5): 242. 1830, *Nomenclator Botanicus. Editio secunda* 2: 767. 1841, *Bulletin of the Torrey Botanical Club* 9: 103. 1882.

S. engleri Pilg.

South Africa, Namibia. Annual, tufted, on sand dunes, rocky to stony soils, dry riverbeds, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 413. 1914.

S. erectus A.S. Hitchc. (*Sporobolus muelleri* (E. Fourn.) Hitchc.; *Vilfa muelleri* E. Fourn.)

Mexico, Honduras. Perennial, caespitose, erect, simple, glabrous, leaves basal, see *Mexicanas Plantas* 2: 98. 1886 and *Contributions from the United States National Herbarium* 17(3): 313. 1913, *North American Flora* 17(7): 490. 1937.

S. exilis (Trin.) Balansa (*Sporobolus exilis* Renvoize, nom. illeg., non *Sporobolus exilis* (Trin.) Balansa; *Sporobolus indicus* (L.) R. Br.; *Sporobolus linearifolius* Nicora; *Vilfa exilis* Trin.)

Asia, southern Brazil. See *Species Plantarum* 63. 1753, *Prodromus Florae Novae Hollandiae* 170. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 89. 1840, *Journal de Botanique (Morot)* 4: 164. 1890 and *Kew Bulletin* 42(4): 923. 1987, *Blumea* 35: 393-458. 1991, *Hickenia* 2(19): 90. 1993.

S. eximius (Nees ex Trin.) Ekman (*Sporobolus aeneus* (Trin.) Kunth; *Sporobolus eximius* (Nees) Ekman; *Sporobolus eximius* (Nees ex Trin.) Kuhlm., nom. illeg., non *Sporobolus eximius* (Nees ex Trin.) Ekman; *Vilfa eximia* Nees ex Trin.)

Brazil, Paraguay. Densely pilose leaf sheath inner surface, panicle branches naked at the base, scaberulous spikelets, lower glume acuminate, similar to *Sporobolus aeneus*, see *De Graminibus Paniceis* 23. 1826, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 213. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 77. 1840 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 13(10): 41. 1913, *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 92. 1922.

S. farinosus Hosok.

Mariana Islands. See *Journal of the Society of Tropical Agriculture* 7: 321. 1935.

S. fertilis (Steudel) Clayton (*Agrostis fertilis* Steud.; *Sporobolus diandrus* var. *major* Büse; *Sporobolus elongatus* var. *purpureo-suffusus* Ohwi; *Sporobolus fertilis* var. *purpureo-suffusus* (Ohwi) Keng f. & X.S. Shen; *Sporobolus indicus* auct.; *Sporobolus indicus* subsp. *purpureo-suffusus* (Ohwi) T. Koyama; *Sporobolus indicus* var. *fertilis* (Steud.) Jovet & Guédès; *Sporobolus indicus* var. *major* (Büse) Baaijens; *Sporobolus indicus* var. *purpureo-suffusus* (Ohwi) T. Koyama)

Asia, India, Himalayas, Nepal. Perennial, tufted, stout, smooth, simple, forming dense clumps, geniculate or erect, culms arising from a fan-shaped aggregation of leaf-bases, leaf sheaths loose and keeled, ligule a shallow rim or a ciliate membrane, auricles pubescent or glabrous, leaves linear and very acute, inflorescence a narrow compressed panicle of tight racemes, branches of inflorescence usually less appressed at base of the inflorescence, spikelets 1-flowered, hyaline lower glume, upper glume pointed, lemma lanceolate and olive gray, palea and lemma equal or subequal, palea with longitudinal grooves, 3 stamens, cultivated, used as a food and fiber plant, ruderal, noxious weed species often found on waste grounds and rubbish tips, disturbed places, tea plantations, at edge of tracks, wet zones, lawns, along roadsides, similar to *Sporobolus africanus*, closely related to *Sporobolus diandrus* (Retzius) P. Beauv., see *Prodromus Florae Novae Hollandiae* 170. 1810, *Essai d'une Nouvelle Agrostographie* 26, 147, 178. 1812, *Plantae Junghuhnianae* 3: 343. 1854, *Synopsis Plantarum Glumacearum* 1: 170. 1854 and *Botanical Magazine* 55: 394. 1941, *Journal of Japanese Botany* 37(8): 235-236, 240, t. 3e. 1962, *Kew Bulletin* 19: 291. 1965, *Taxon* 22: 163. 1973, *Acta Botanica Boreali-Occidentalis Sinica* 5(2): 161. Yangling 1985, *Grasses of Japan and its Neighboring Regions* 275, 531. 1987, *Blumea* 35: 393-458. 1991, *Australian Systematic Botany* 12(3): 375-448. 1999, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

in English: rat's tail, giant Parramatta grass, Bloomsbury grass

S. festivus Hochst. ex A. Rich. (*Sporobolus festivus* var. *dilloniana* Schweinf.; *Sporobolus festivus* var. *fibrosus* Stapf; *Vilfa festiva* (Hochst. ex A. Rich.) Steud.)

Tropical East Africa, Benin, Namibia, Somalia, Mauritania. Perennial or annual, tufted to densely tufted, fibrous at the base, basal leaf sheaths fibrous when old, leaves usually convolute, open panicle delicate and narrowly ovate, primary branches spreading but not whorled, spikelets flushed with purple to red-purple, glumes acute, leaves revive after desiccation, distinctive arrangement of seeds, grains eaten in time of scarcity, pasture, good fodder grass, used for thatching, roots chewed for stomach trouble, growing in sandy soils, deciduous bushlands, open places, open woodlands, vleis, savannahs, shallow gravelly soil, rock crevices, mopane woodlands, stony hillsides, volcanic soils, well-drained areas, see *Tentamen Florae Abyssinicae* ... 2: 398. 1850, *Synopsis Plantarum Glumacearum* 1: 158. 1854, *Bulletin de l'Herbier Boissier, sér. 2, App 2*: 97. 1894 and *Sudania* 142, 155. 1911.

in English: red dropseed, bird's broom, hare's grass

in East Africa: kogue (Sandawi)

in Gambia: kunindingyamo

in Mali: bama ningui, dedu sasàà po, fitirde jaule, fitirde yaule, kafini, kononi, kononi mbi

in Niger: afer, bubukua, diriri, gawré gyawlé, kanar, lalla'n baywa, ndiriiri, talaata kambe cirey, tallaata kambe cirey, tashit aman, tatata kambé kirandi

in Nigeria: hakin furtau, hudo mboju, irun awo, lallen birii, lallen shamuwa, nalle wainabe, tsintsiyar fadama

in Senegal: dugu kunsigi

in Somalia: gidoo, geedho

in South Africa: rooigras

in Upper Volta: balbalde, burundi, lulisacé, lulisaga, lusaga, mbalbaldi

in Yoruba: irun awo

S. fibrosus Cope

Zambia. See *Kew Bulletin* 53(1): 171, f. 1D-F. 1998.

S. filiculmis L.H. Dewey (*Sporobolus filiculmis* Vasey ex Beal, nom. illeg., non *Sporobolus filiculmis* L.H. Dewey; *Sporobolus filiculmis* Vasey; *Sporobolus vaginiflorus* (Torr. ex A. Gray) Alph. Wood; *Vilfa vaginiflora* Torr. ex A. Gray)

U.S. See *North American Gramineae and Cyperaceae* 1: no. 3. 1834, *A Class-book of Botany* 775. 1861, *A Descriptive Catalogue of the Grasses of the United States* 44. 1885, *Contributions from the United States National Herbarium* 2(3): 519. 1894, *Grasses of North America for Farmers and Students* 2: 288. 1896.

S. filipes Stapf (*Sporobolus agrostoides* Chiov.; *Sporobolus filipes* Stapf ex C.E. Hubb.; *Sporobolus filipes* Stapf ex Napper)

Africa, Uganda. Perennial, tufted, often with ascending stems, leaves smooth and shining, panicle loose, lowermost branches of the panicle single or paired, glumes unequal, see *Annuario del Reale Istituto Botanico di Roma* 7: 67, t. 5. 1897 and *Bulletin of Miscellaneous Information Kew* 1933: 105. 1933, *Kirkia* 4: 173. 1964.

in East Africa: ayweywe

S. fimbriatus (Trin.) Nees (*Sporobolus fimbriatus* var. *latifolius* Stent; *Vilfa fimbriata* Trin.)

South Africa, Botswana, Kenya, Uganda, Sudan and Somalia, Tanzania, Namibia. Perennial bunchgrass, more or less erect, vigorous, unbranched or branched from the lower nodes, tufted, short oblique rhizome, leaves mostly basal, leaf blade expanded and sometimes rolled, basal sheaths papery, leaf sheath compressed and herbaceous, ligule a ring of short hairs, open to slightly contracted panicle with branches arranged irregularly or in whorls, flowers single, spikelets on branchlets usually appressed, lower glume oblong to lanceolate, upper glume ovate, lemma narrowly ovate, famine food, tillers, planted pasture, very high grazing value, palatable good fodder, grains and seed head eaten by baboons, grains pounded and eaten as porridge, useful for erosion control, xerophytic, drought-tolerant, growing in shallow rocky red clay, open deciduous bushland or grassland, heavy soils, well-drained soils, sandy well-drained loam, in shady spots, near water, near rivers or along river courses, moist conditions, semiarid grassvelds, along highways and roadsides, ungrazed sites, under trees, disturbed sites, may be confused with *Sporobolus pyramidalis* or *Sporobolus natalensis*, related to *Sporobolus macranthellus* and *Sporobolus agrostoides*, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 69. 1840, *Florae Africae Australioris Illustrationes Monographicae* 156. 1841.

in English: common dropseed, dropseed grass, bushveld dropseed, fringed dropseed, dropseed

in South Africa: blousaadgras, blousygras, fynsaadgras, bosveldfynsaadgras, gewone fynsaadgras, grootsoetgras, grootvleigras, soetvleigras, großes rispengras; matolo-amaholo (Sotho)

S. flagelliferus Peter (*Sporobolus modestus* (Peter) Peter)

Africa, Mauritania. Perennial, usually stoloniferous, swollen culm bases, see *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 1(Anh.): 82. 1930, *Feddes Repertorium, Beiheft* 41(1): 288. 1931.

S. flexuosus (Thurb. ex Vasey) Rydb. (*Sporobolus cryptandrus* var. *flexuosus* (Thurb. ex Vasey) Thurb.; *Vilfa cryptandra* var. *flexuosa* Thurb. ex Vasey)

North America, Mexico, U.S. Perennial bunchgrass, short-lived, coarse roots, the very small seeds have a hard seed coat, a famine food, fodder, low to medium palatability, unpalatable and low in nutrition at maturity, useful for erosion control, can tolerate drought, native Americans used mesa dropseed seeds as food, occurs in dry areas, along highway, deep sandy soil, deserts and desert grasslands, on well-drained sand, loamy sands and gravelly soils, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 69. 1840, *A Manual of the Botany of the Northern United States* 576. 1848, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 282. 1878, *Geological Survey of California, Botany* 2: 269. 1880 and *Bulletin of the Torrey Botanical Club* 32(11): 601. 1905.

in English: mesa dropseed, dropseed

in Mexico: zacatón, zacatón de los médanos, zacatón flexible

S. floridanus Chapman

North America, U.S., Florida. Wet savannah, see *Flora of the Southern United States* 550. 1860, *A Descriptive Catalogue of the Grasses of the United States* 44. 1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 1: 24. 1895, *Grasses of North America for Farmers and Students* 2: 290. 1896 and Weakley, A.S. and P.M. Peterson, "Taxonomy of the *Sporobolus floridanus* complex (Poaceae: Sporobolinae)." *Sida*. 18: 247-270. 1998.

in English: Florida dropseed

S. fourcadii Stent (named for the French botanist Georges Henri Fourcade, 1866-1948, plant collector in South Africa, see Mary Gunn and Leslie Edward Wostall Codd, *Botanical Exploration of Southern Africa*. 157-159. A.A. Balkema, Cape Town 1981)

South Africa. Perennial, rhizomatous, tufted, panicle not whorled, found in floodplains, on forest margins.

S. funckii (Steud.) F.M. Knuth (*Vilfa funckii* Steud.) (possibly named for the Luxemburg artist and naturalist Nicolas Funck, 1816-1896, plant collector in Colombia and Venezuela, in Middle and South America 1835-1847, collaborated with with Jean Jules Linden (1817-1898); or dedicated to the German apothecary Heinrich Christian Funck (Funcke), 1771-1839, cryptogamist, his works include *Deutschlands Moose*. Baireuth 1820 and *Kryptogamische Gewächse (besonders) des Fichtelgebirg's*. Leipzig 1801-1838; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 19. 1965; Carl (Karl) Ludwig Willdenow (1765-1812), in *Der Gesellschaft naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der gesammten Naturkunde*. 2: 19. Berlin 1808)

South America, Venezuela. See *Synopsis Plantarum Glumacearum* 1: 159. 1854 and *Repertorium Specierum Novarum Regni Vegetabilis* 43 (Beih.): 123. 1926.

S. gaditanus Boiss. & Reut. (*Agrostis alba* var. *gaditana* (Boiss. & Reut.) Henriq.; *Agrostis stolonifera* subsp. *gaditana* (Boiss. & Reut.) Vasc.; *Agrostis stolonifera* subsp. *gaditana* (Boiss. & Reut.) D. Rivera & M. Carreras, nom. illeg., non *Agrostis stolonifera* subsp. *gaditana* (Boiss. & Reut.) Vasc.; *Agrostis stolonifera* subsp. *gladitana* (Boiss. & Reut.) D. Rivera & Carreras; *Sporobolus arenarius* var. *gaditanus* (Boiss. & Reut.) T. Durand & Schinz; *Sporobolus virginicus* var. *gaditanus* (Boiss. & Reut.) Kerguelen)

Africa. See *Révision des Graminées* 1: 67. 1829, *Bulletin de la Société Botanique de France* 16: 294. 1869, *Conspetus Florae Africae* 5: 818. 1894 and *Bot. Soc. Broteriana* 20: 43. 1905, *Anales de Biología, Facultad de Biología, Universidad de Murcia* 13: 23. 1987, *Bulletin de la Société Botanique de France* 124(5-6): 345. 1977.

S. geminatus Clayton

Tanzania. See *Kew Bulletin* 25(2): 247. 1971.

S. genalensis Chiov.

Africa. See *Atti della Reale Accademia d'Italia. Memorie della classe di scienze fisiche, matematiche e naturali* 11(2): 65. 1940.

S. ghikae Schweinf. & Volkens

Ethiopia. Perennial.

S. giganteus Nash (*Sporobolus cryptandrus* var. *giganteus* (Nash) E.K. Jones; *Sporobolus cryptandrus* var. *robustus* Vasey)

North America, U.S., New Mexico. Perennial, caespitose, tall, vigorous, large, rhizomatous, clumped, very small seeds, good forage, can tolerate drought, found in mesas and sand hills, sandy grassland, see *A Manual of the Botany of the Northern United States* 576. 1848, *Contributions from the United States National Herbarium* 1(2): 56. 1890, *Bulletin of the Torrey Botanical Club* 25(2): 88-89. 1898 and *Contributions to Western Botany* 14: 11. 1912, *Manual of the Grasses of the United States* (ed. 2, revised by A. Chase) 1951.

in English: giant dropseed, giant dropseed grass

in Mexico: zacate gigante, zacatón

S. gracilis (Trin.) Merr. (*Heleocholea juncea* P. Beauv.; *Muhlenbergia cuspidata* (Torr. ex Hook.) Rydb.; *Sporobolus junceus* (P. Beauv.) Kunth; *Vilfa cuspidata* Torr. ex Hook.; *Vilfa gracilis* Trin., nom. illeg., non *Vilfa gracilis* Trin.)

North America, Canada, U.S. See *Essai d'une Nouvelle Agrostographie* 24, 147, 164, t. 7, f. 2. 1812, *Révision des Graminées* 1: 68. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie:*

Sciences Naturelles 6,4(1-2): 74. 1840, *Flora Boreali-Americana* 2: 238-239. 1840 and *Rhodora* 4(39): 48. 1902, *Bulletin of the Torrey Botanical Club* 32(11): 599. 1905.

S. greenwayi Napper (for the South African (b. Transvaal) botanist Percy (Peter) James Greenway, 1897-1980, 1928 Fellow of the Linnean Society, 1950-1958 botanist of the East African Herbarium in Nairobi, systematic botanist, plant collector with Colin Graham Trapnell and John P. Micklethwait Brenan (1917-1985) in Northern and southern Rhodesia and Nyasaland, 1970-1971 President of the Kew Guild; see Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 295. 1994)

Africa. See *Kirkia* 3: 118. 1963.

S. hajrae Umamaheswri & P. Daniel

India. See *Nordic Journal of Botany* 28(5): 577, f. 1. 1998.

S. haminesis (Schweinfurth) Schweinfurth

Africa, India.

S. hancei Rendle (after the British botanist Henry Fletcher Hance, 1827-1886 (d. Amoy, China), in 1878 a Fellow of the Linnean Society, plant collector, wrote *Adversaria in stirpes imprimis Asiae orientalis*. Paris 1866 and "Florae hongkongensis prosthete: compendious supplement to Mr. Benthams description of the plants of the island of Hong Kong." reprinted from the *Journal of the Linn. Society Bot.* 13: 95-144. 1872, from 1844 to 1886 at Hong Kong, Whampoa, Canton and Amoy. See J.H. Barnhart, *Biographical notes upon botanists*. 2: 120. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; E.H.M. Cox, *Plant-Hunting in China: A History of Botanical Exploration in China and the Tibetan Marches*. London 1945; M. Hadfield et al., *British Gardeners: A Biographical Dictionary*. 143-144. London 1980; George Benthams, *Flora hongkongensis*. London 1861; G.A.C. Herklots, *The Hong Kong Countryside*. 163-164. Hong Kong 1965; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Asia. See *Journal of the Linnean Society, Botany* 36(254): 387-388. 1904.

S. harmandii Henrard (*Sporobolus sumatranus* Ohwi)

Asia, Indochina, Vietnam. See *Repertorium Specierum Novarum Regni Vegetabilis* 21(588-600): 235. 1925, *Bulletin of the Tokyo Science Museum* 18: 12. 1947.

S. helvolicus (Trin.) T. Durand & Schinz (*Sporobolus glaucifolius* (Hochst. ex Steud.) Hochst. ex T. Durand & Schinz; *Sporobolus podotrichus* Chiov.; *Sporobolus senegalensis* (Pers.) Chiov.; *Sporobolus senegalensis* (Pers.) Chiov. var. *glaucifolius* (Hochst. ex Steud.) Chiov.; *Sporobolus senegalensis* var. *microstachyus* Chiov., also spelled

microstachys; *Sporobolus senegalensis* var. *podotrichus* (Chiov.) Chiov.; *Sporobolus trichophorus* Gand.; *Vilfa glaucifolia* Hochst. ex Steud.; *Vilfa helvola* Trin.)

Tropical Africa, India, Pakistan, Mali, Nigeria, Uganda, Sudan, Tanzania. Perennial desert grass, hard, thin, wiry, tufted, ascending, forming small tufts, stoloniferous with slender stolons, swollen culm bases, stolons vertical at first and then rooting at the nodes, basal leaf sheaths papery or not leaves flat, narrow panicle linear to lanceolate with erect branches, glumes acuminate lanceolate 1-nerved, lemma ovate and acute, field weed, excellent tolerance to salinity, forage, good fodder grass, good hay, valuable grazing grass, very palatable, fodder for camels, useful for erosion control, excellent drought tolerance, used for thatching, grows in arid and semiarid areas, open deciduous bushlands, open sandy situations, open scrub on alluvial plain, low shrublands, on saline rangelands, limestone, sandy or silty soils, seasonally flooded areas and depressions, seasonally waterlogged black soils, moist patches, on alluvial silts and black clay soils, in volcanic ash, gypsum, similar to *Sporobolus ruspolianus*, see *Synopsis Plantarum* 1: 76. 1805, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 52. 1840, *Synopsis Plantarum Glumacearum* 1: 154. 1854, *Conspectus Florae Africae* 5: 820. 1894, *Bulletin de la Société Botanique de France* 69: 321. 1896, *Annuario del Reale Istituto Botanico di Roma* 6: 168. 1896 and *Plantae Novae vel Minus Notae e regione Aethiopica* 26, 28. 1928 [1911-1951, series published in different journals, also *Plantae Novae vel Minus Notae ex Aethiopia*], S.A. Andanje and W.K. Ottichilo, "Population status and feeding habits of the translocated subpopulation of Hunter's antelope or hirola (*Beatragus hunteri*, in Tsavo East National Park, Kenya." *African Journal of Ecology* 37(1): 38-48. Mar 1999, Michael J. Jacobs and Catherine A. Schloeder, "Fire frequency and species associations in perennial grasslands of south-west Ethiopia." *African Journal of Ecology* Volume 40, Issue 1: 1-9. Mar 2002.

in English: khev grass

in Mali: afer, sakatéré, shakatee, shakatéré

in Niger: afer, bédiri, bowirdi, girfiz, illega, kanar, ngarziiri, zizia'n mora

in Nigeria: manda mabdaa, mandà mabdàa

in Somalia: jarbo, jarfo, domar, ag agar, aggagar

S. heterolepis (A. Gray) A. Gray (*Agrostis heterolepis* (A. Gray) Alph. Wood; *Vilfa heterolepis* A. Gray)

North America, Canada, U.S., Texas. Perennial, bright green to russet orange, slow growing, forming dense clumps, erect wiry culms, densely tufted or densely caespitose, involute leaves, arching foliage, open and airy panicles on slender stems, pinkish spikelets, aromatic flowers, seeds a valuable food for ground-feeding birds, highly

nutritious seeds, fodder, hay and pasture grass, ornamental and showy when in flower, tall ground cover, used for roadside revegetation and prairie rehabilitation projects, butterfly garden, low to medium palatability, drought tolerance medium to good once established, Plains Indians ground the seed to make a tasty and nutritious flour, found on wild areas or slopes, on dry sand, loam, gravel, meadows, limestone bluffs, barrens, heavy clays, dry to mesic, hot and dry areas, along railroads, common in undisturbed dry to mesic prairies, glades, open grounds, forest openings, dry rocky soils, savannahs, see *Annals of the Lyceum of Natural History of New York* 3: 233. 1835, *A Class-book of Botany* 598. 1847, *A Manual of the Botany of the Northern United States* 576. 1848 and B.C. Ebberts, R.C. Anderson and A.E. Liberta, "Aspects of the mycorrhizal ecology of prairie dropseed, *Sporobolus heterolepis* (Poaceae)." *American Journal of Botany* 74: 564-573. 1987, *Restoration Ecology* 10(4): 677-684. Dec 2002.

in English: prairie dropseed, prairie dropseed grass, northern dropseed

in French: sporobole à glumes inégales

S. hians Van Schaack

South America, Brazil. See *Annals of the Missouri Botanical Garden* 37(3): 397. 1950.

S. hildebrandtii Mez (the specific name honors a German traveler and collector in East Africa, Johann Maria Hildebrandt, 1847-1881; see [Karl August] Otto Hoffmann, 1853-1909, *Sertum plantarum madagascariensium* a cl. J.M. Hildebrandt lectarum. Dicotyledones polypetalae. [Berlin 1888])

Madagascar. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 297. 1921.

S. hintonii Hartley (dedicated to the English (b. London) George Boole Hinton, 1882-1943 (d. Mexico), plant collector in Mexico (1931-1941), botanist; see Charles Glass, "The *Geohintonia* circus." in *Cactus and Succulent Journal*. vol. 69. 1: 3-7. 1997; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 344. London 1994; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. [b. 1883] 1983; J. Hinton and J. Rzedowski, "George B. Hinton, collector of plants in southwestern Mexico." *J. Arnold Arb.* 53: 141-181. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964)

South America, Mexico. See *Bulletin of Miscellaneous Information Kew* 1941(1): 23. 1941.

S. hubbardi A. Chev.

Africa. See *Bulletin du Muséum d'Histoire Naturelle* 20: 469. 1948.

S. humifusus (Kunth) Kunth (*Agrostis humifusa* (Kunth) Roem. & Schult.; *Vilfa humifusa* Kunth)

South America, Venezuela. See *Nova Genera et Species Plantarum* 1: 137. 1815 [1816], *Systema Vegetabilium* 2: 361. 1817, *Révision des Graminées* 1: 67. 1829.

S. hypseloteros Chiov. ex Chiarugi (*Sporobolus pyramidalis* P. Beauv.)

Africa. See *Flore d'Oware* 2: 36, t. 80. 1816 and *Webbia* 8: 95. 1951.

S. inconspicuus Hack.

Africa, Namibia. See *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 57: 532. 1912.

S. indicus (L.) R. Br. (*Agrostis compressa* Poir., nom. illeg., non *Agrostis compressa* Willd.; *Agrostis elongata* Lam.; *Agrostis indica* L.; *Agrostis pyramidata* Lam.; *Agrostis tenacissima* L. f.; *Agrostis tenuissima* Spreng.; *Axonopus poiretii* Roem. & Schult.; *Sporobolus angustus* Buckley; *Sporobolus berterioanus* (Trin.) Hitchc. & Chase; *Sporobolus exilis* (Trin.) Balansa; *Sporobolus indicus* f. *indicus*; *Sporobolus indicus* subsp. *indicus*; *Sporobolus indicus* var. *exilis* (Trin.) T. Koyama; *Sporobolus indicus* var. *indicus*; *Sporobolus jacquemontii* Borhidi, non Kunth; *Sporobolus jacquemontii* Kunth; *Sporobolus lamarckii* Desv. ex Ham.; *Sporobolus littoralis* var. *elongatus* (P. Beauv.) T. Durand & Schinz; *Sporobolus minor* Trin. ex Kunth; *Sporobolus poiretii* (Roem. & Schult.) Hitchc.; *Sporobolus pyramidatus* (Lam.) Hitchc.; *Sporobolus tenacissimus* auct.; *Vilfa angusta* Buckley; *Vilfa berterioana* Trin.; *Vilfa elongata* P. Beauv.; *Vilfa exilis* Trin.; *Vilfa familiaris* Steud. ex Lechler; *Vilfa indica* (L.) Trin. ex Steud.; *Vilfa indica* Trin.; *Vilfa jacquemontii* (Kunth) Trin.; *Vilfa rupestri* Trin.; *Vilfa tenacissima* (L.f.) Kunth; *Vilfa tenacissima* var. *exilis* (Trin.) E. Fourn.; *Vilfa tenacissima* var. *intermedia* E. Fourn.)

India, Himalaya, southern U.S. to Paraguay. Perennial bunchgrass, unbranched, tufted, glabrous, firm, robust, more or less stiffly erect, slender, solitary or in small clumps, leaf sheaths slightly compressed and keeled, leaf blades linear glabrous acuminate attenuate usually folded or rolled, ligule a line of very short hairs, leaves tapering to the long filiform tip, inflorescence panicle spicate erect or nodding, panicle variable, branches appressed or loosely ascending to spreading, spikelets short-pedicelled and appressed, 1 floret, glumes unequal or subequal, upper glume acute, lemma subulate to acute, palea 2-nerved and acute, 3 stamens, dark red grains, forming dense tussocks, it stands drought, pasture, handicrafts, smutgrass plants generally unpalatable to cattle, green fodder, when old becomes tough and unpalatable, widespread in tropic and warm temperate regions, weed species of disturbed ground and pastoral areas, cultivated soils, lawns, in hot areas, clay soils, cool moist areas, rich moist bottoms, rocky stream margins, on roadsides and yards, waste places, similar to *Sporobolus jacquemontii*, see *Species Plantarum* 63. 1753,

Supplementum Plantarum 107. 1781, *Observationes Botanicae* 5: 19. 1789 [1788], *Tableau Encyclopédique et Méthodique ... Botanique* 1: 161-162. 1791, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 258. 1810, *Prodromus Florae Novae Hollandiae* 170. 1810, *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *Nova Genera et Species Plantarum* 1: 138. 1815 [1816], *Flore d'Oware* 2: 36, t. 80. 1816, *Systema Vegetabilium* 2: 318. 1817, *Prodromus Plantarum Indiae Occidentalis* 4-5. 1825, *Systema Vegetabilium, editio decima sexta* 1: 258. 1825, *De Graminibus Paniceis* 22. 1826, *Révision des Graminées* 1: 68. 1829, *Révision des Graminées* 2: 427, pl. 127. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 212. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 89, 92, 96, 100. 1840, *Flora Australiensis: A Description ...* 1: 155. 1841, *Nomenclator Botanicus. Editio secunda* 2: 767. 1841, *Tentamen Florae Abyssinicae ...* 2: 396. 1850, *Synopsis Plantarum Glumacearum* 1: 170. 1854, *Flora* 38: 201. 1855, *Berberides Americae Australis* 56. 1857, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 88-89. 1862, *A Synopsis of the Queensland Flora* 651. 1883, *Mexicanas Plantas* 2: 99. 1886, *Journal de Botanique (Morot)* 4: 164. 1890, *Conspectus Florae Africae* 5: 821. 1894 and *Flora Capensis* 586. 1900, *Annuario del Reale Istituto Botanico di Roma* 8(3): 338. 1908, *Contributions from the United States National Herbarium* 18(7): 370. 1917, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 280, 291. 1931, *Bartonia* 14: 32. 1932, *Manual of the Grasses of the West Indies* 84. 1936, *Field Museum of Natural History, Botanical Series* 13(1/1): 96-261. 1936, *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 277. 1939, *Botanical Magazine* 55: 394. 1941, *Journal of Japanese Botany* 37: 235-236, 240, t. 3e. 1962, *Agron. Lus.* 28. 1967, *Taxon* 22: 163. 1973, *Contributions from the New South Wales National Herbarium* 4(7): 406, pl. 1, 1A. 1973, *Boletim da Sociedade Broteriana* 57: 77-85. 1984, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Grasses of Japan and its Neighboring Regions* 275, 277, 531. 1987, *Proceedings of the Indian Science Congress Association* 74(3, vi): 185-186. 1987, *Cytologia* 53: 53-57. 1988, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Blumea* 35(2): 431-432, 439, 452. 1991, *Kew Bulletin* 49(3): 543. 1994, *Flora Mediterranea* 8: 251-262. 1998, *Austral. Ecology* 25(3): 213-222. June 2000 [Dormancy and germination characteristics of herbaceous species in the seasonally dry tropics of northern Australia.]

in English: smutgrass, smut grass, tapia grass, bed grass, wiregrass, dropseed, dropseed grass, Indian dropseed, Paramatta grass

in China: shu wei su

in India: bhura, ghorla, kalusra, kar usara ghas, khir, ratua, usar ki ghas

in Spanish: cerrillo, matojo de burro, espartillo, gramalote
in Argentina: espartina

in the Caribbean: cabouya, herbe à cabouya, kabouya, zèb kabouya, z'herbe fine

in Colombia: espartillo, guayacán

in Mexico: chilitsuuk, cola de ratón, liendrecillo, liendrecillo tropical, liendrilla, liendrillo, palmilla, pasto dulce, tzurumuta, zacate de encinar, zacatón indio

S. indicus (L.) R. Br. var. *africanus* (Poir.) Jovet & Guedes (*Agrostis africana* Poir.; *Agrostis capensis* Willd., nom. illegit.; *Sporobolus africanus* (Poir.) Robyns & Tournay; *Sporobolus capensis* (Willd.) Kunth; *Sporobolus indicus* (L.) R. Br.; *Sporobolus indicus* var. *capensis* Engl.; *Vilfa africana* (Poir.) P. Beauv.)

South Africa. Erect, slender, leaves basal and subulate, dark green spike-like panicle, glumes unequal, second glume shorter than the lemma, weed species, coastal species, see *Prodromus Florae Novae Hollandiae* 170. 1810, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 254. 1810, *Essai d'une Nouvelle Agrostographie* 16, 146, 181. 1812 and *Taxon* 22: 163. 1973.

in English: Parramatta grass, rat-tail grass

S. indicus (L.) R. Br. var. *andinus* Renvoize

Peru, Bolivia. Dense panicle spiciform, campos and disturbed places, see *Kew Bulletin* 49(3): 543. 1994.

S. indicus (L.) R. Br. var. *capensis* Engl. (*Agrostis africana* Poir.; *Agrostis capensis* Willd., nom. illeg., non *Agrostis capensis* (L.) Lam.; *Agrostis dianthera* Schult. & Schult.f.; *Agrostis spicata* Thunb., nom. illeg., non *Agrostis spicata* Vahl; *Panicum caudatum* Thunb., nom. illeg., non *Panicum caudatum* Lam.; *Sporobolus africanus* (Poir.) Robyns & Tournay; *Sporobolus batesii* A. Chev.; *Sporobolus capensis* Kunth; *Sporobolus indicus* var. *africanus* (Poir.) Jovet & Guédès; *Vilfa africana* (Poir.) P. Beauv.; *Vilfa capensis* P. Beauv.; *Vilfa dianthera* (Schult. & Schult. f.) Steud.) (*Sporobolus batesii* A. Chev. dedicated to the American plant collector George Latimer Bates, 1863-1940 (Cameroun), missionary; see J.H. Barnhart, *Biographical notes upon botanists*. Boston 1965; René Letouzey, "Les botanistes au Cameroun." in *Flore du Cameroun*. 7: 1-110. Paris 1968; F.N. Hepper and F. Neate, *Plant Collectors in West Africa*. 8. 1971)

Africa. Tough, stiff, inflorescence with branches stiff and appressed, weed, sandy places, see *Prodromus Plantarum Capensium*, ... 19. 1794, *Species Plantarum* 1: 372. 1797, *Prodromus Florae Novae Hollandiae* 170. 1810, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 254. 1810, *Essai d'une Nouvelle Agrostographie* 16, 146-147, 181. 1812, *Mantissa* 3: 571. 1827, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 212. 1833, *Synopsis Plantarum Glumacearum* 1: 162. 1854 and *Bulletin du Muséum d'Histoire Naturelle, sér. 2* 20: 469. 1948, *Bulletin*

du Jardin Botanique de l'État 25: 242. 1955, *Taxon* 22: 163. 1973, *Australian Systematic Botany* 12(3): 375-448. 1999.

in English: Parramatta grass, rat's tail, tufty grass

S. indicus (L.) R. Br. var. *flaccidus* (Roem. & Schult.) Veldkamp (*Agrostis diandra* Retz.; *Agrostis elongata* var. *flaccida* Roth; *Spermachiton involutum* Llanos; *Sporobolus diandrus* (Retz.) P. Beauv.; *Sporobolus diandrus* var. *dian-drus*; *Sporobolus diandrus* var. *nanus* Hook.f.; *Sporobolus indicus* (L.) R. Br.; *Sporobolus indicus* var. *flaccidus* (Roth; *Sporobolus indicus* var. *dian-drus* (Retz.) Jovet & Guédès) Veldkamp; *Sporobolus trimenii* (Hook.f.) Senaratna; *Vilfa diandra* (Retz.) Trin.; *Vilfa erosa* Trin.; *Vilfa retzii* Steud.) (*Vilfa retzii* Steud. for the Swedish scientist Anders Jahan (Johan) Retzius, 1742-1821, botanist, lichenologist, bryologist, naturalist, entomologist, professor of natural history at the University of Lund, he did work in chemistry, botany, zoology, mineralogy and paleontology, his writings include *Lectiones publicae de vermibus intestinalibus, imprimis humanis*. Holmiae 1786, he was the grandfather of the Swedish anatomist Magnus Gustaf Retzius (1842-1919) and the father of Anders Adolf Retzius (1796-1860); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 146. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 329. Boston, Mass. 1972; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Vladislav Kruta, in *D.S.B.* 11: 379-381. 1981; Gerhard Rudolph, in *D.S.B.* 11: 381-383. 1981; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 229. Regione Siciliana, Palermo 1988; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14 Aufl. Stuttgart 1993; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; Stafleu and Cowan, *Taxonomic literature*. 4: 735-738. Utrecht 1983)

India, Mauritius, Indonesia, Thailand, the Philippines. A weed species, see *Observationes Botanicae* 5: 19. 1789 [1788], *Prodromus Florae Novae Hollandiae* 170. 1810, *Essai d'une Nouvelle Agrostographie* 26, 147, 178. 1812, *Systema Vegetabilium* 2: 368. 1817, *De Graminibus unifloris et sesquifloris* 154. Petropoli 1824, *Nomenclator Botanicus. Editio secunda* 1: 40. 1840, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 86. 1840, *Fragmentos de Algunas Plantas Filipinas* 25. 1851 and *A Handbook to the Flora of Ceylon* 5: 261. 1900, *Grasses Ceylon* 96. 1956, *Taxon* 22: 163. 1973, *Blumea* 35(2): 433-434. 1991.

in English: wire grass, dropseed

S. indicus (L.) R. Br. var. *indicus* (*Agrostis indica* L.; *Sporobolus angustus* Buckl.; *Sporobolus berterioanus* (Trin.) A.S. Hitchc. & Chase; *Sporobolus elongatus* auct. non R. Br.; *Sporobolus poiretii* auct.; *Sporobolus poiretii* (Roemer & J.A. Schultes) A.S. Hitchc.)

North and South America, U.S., Florida. Perennial, slender, erect, leaf sheaths papery, panicle elongate contracted with slender basal branches ascending or spiciform, seed reddish, invasive, panicle often infested with a black fungus, found in pastures, campos, meadows and waste places.

in English: smut grass, dropseed, rattail smutgrass

in Spanish: cerrillo, matojo de burro

in Mexico: cola de ratón, liendrecillo manchado, liendrilla, palmilla, tzurumuta

S. indicus (L.) R. Br. var. *major* (Buse) Baaijens (*Agrostis fertilis* Steud.; *Cinna japonica* Nees ex Steud.; *Sporobolus diandrus* var. *major* Büse; *Sporobolus elongatus* var. *purpureo-suffusus* Ohwi; *Sporobolus fertilis* (Steud.) Clayton; *Sporobolus fertilis* var. *fertilis*; *Sporobolus fertilis* var. *pallidior* Hatus.; *Sporobolus fertilis* var. *purpureo-suffusus* (Ohwi) Keng f. & X.S. Shen; *Sporobolus indicus* (L.) R. Br.; *Sporobolus indicus* subsp. *pallidior* (T. Koyama) T. Koyama; *Sporobolus indicus* subsp. *purpureo-suffusus* (Ohwi) T. Koyama; *Sporobolus indicus* var. *fertilis* (Steud.) Jovet & Guédès; *Sporobolus indicus* var. *pallidior* T. Koyama; *Sporobolus indicus* var. *purpureo-suffusus* (Ohwi) T. Koyama)

Asia, China, India, Taiwan, Sri Lanka. A noxious weed, coarse, tussocky grass, dark green, erect, slender, leaf sheaths folded, leaves dark green mostly basal, inflorescence with branches lax at maturity, dense spike-like panicle, seeds brown, drought resistant, generally unpalatable to stock, low nutritional value, widespread on coastal soils, see *Prodromus Florae Novae Hollandiae* 170. 1810, *Essai d'une Nouvelle Agrostographie* 26, 147, 178. 1812, *Plantae Junghuhnianae* 3: 343. 1854, *Synopsis Plantarum Glumacearum* 1: 170, 182. 1854 and *Botanical Magazine* 55: 394. 1941, *Journal of Japanese Botany* 37(8): 235-236, 240, t. 3e. 1962, *Kew Bulletin* 19: 291. 1965, *Taxon* 22: 163. 1973, *Acta Botanica Boreali-Occidentalis Sinica* 5(2): 161. 1985, *Grasses of Japan and its Neighboring Regions* 275, 277, 531. 1987, *Blumea* 35(2): 437. 1991.

in English: giant Parramatta grass

S. indicus (L.) R. Br. var. *pyramidalis* (P. Beauv.) Veldkamp (*Sporobolus indicus* (L.) R. Br.; *Sporobolus indicus* f. *pyramidalis* (P. Beauv.) Peter; *Sporobolus jacquemontii* Kunth; *Sporobolus pyramidalis* P. Beauv.; *Sporobolus pyramidalis* var. *jacquemontii* (Kunth) Jovet & Guédès; *Sporobolus pyramidalis* var. *pyramidalis*; *Vilfa jacquemontii* (Kunth) Trin.; *Vilfa pyramidalis* (P. Beauv.) Trin. ex Steud.)

Africa, Yemen, Mexico, U.S., North and South America. See *Prodromus Florae Novae Hollandiae* 170. 1810, *Flore*

d'Oware 2: 36, t. 80. 1816, *Révision des Graminées* 2: 427, pl. 127. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 92. 1840, *Nomenclator Botanicus. Editio secunda* 2: 768. 1843 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 280, 291. 1931, *Taxon* 22: 163. 1973, *Blumea* 35(2): 439. 1991.

in English: West Indian dropseed

S. infirmus Mez

Tropical Africa. Annual, slender, variable, growing in rocky sites.

in Nigeria: irun awo

in Sierra Leone: babwiye, munye, munyi

in Yoruba: irun awo

S. interruptus Vasey (*Sporobolus arizonicus* Thurb. ex Vasey)

U.S., Arizona. Vulnerable species, see *Bulletin of the Torrey Botanical Club* 15(1): 8-9, pl. B, f. 1-5. 1888.

in English: black dropseed

S. iocladoides Chiov. ex Chiarugi (*Sporobolus nervosus* Hochst.; *Sporobolus stocksii* Bor; *Vilfa nervosa* (Hochst.) Schweinf.)

Africa. See *Flora* 38: 202. 1855, *Beitrag zur Flora Aethiopiens ...* 303. Berlin 1867 and *Kew Bulletin* 1948: 45. 1948, *Webbia* 8: 96. 1951.

S. ioclados (Trin.) Nees (*Agrostis kentrophyllum* K. Schum. ex Engl.; *Sporobolus arabicus* Boiss.; *Sporobolus genalensis* Chiov.; *Sporobolus ioclados* Hook.f.; *Sporobolus ioclados* var. *usitatus* (Stent) Chippind.; *Sporobolus jemenicus* Pilger ex Schwartz; *Sporobolus kentrophyllum* (K. Schum. ex Engl.) Clayton; *Sporobolus marginatus* Hochst. ex A. Rich.; *Sporobolus marginatus* var. *anceps* Chiov.; *Sporobolus marginatus* var. *scabrifolius* Chiov.; *Sporobolus usitatus* Stent; *Vilfa ioclados* Trin.; *Vilfa marginata* (Hochst. ex A. Rich.) Steud.)

South Africa, Swaziland, Zimbabwe, Mali, Sudan, Uganda, Tanzania, Namibia, Ethiopia. Perennial or annual, rather variable, tussocky, caespitose, harsh, often mat-forming, often creeping, tufted, dense, ascending, somewhat geniculate at the basal nodes, branched or unbranched, shortly rhizomatous, sometimes or often stoloniferous and rooting at the lower nodes, leaves flat often pungent, leaf blades expanded and then rolled, ligule a ring of short hairs, leaf sheath keeled, basal leaf sheaths chartaceous and persistent, open ovate panicle with branches arranged in whorls, spikelets shiny and 1-flowered, lower glume obtuse, upper lemma acute, seeds very fine, forage, grazed by stock and game, natural pasture, palatable pioneer grass highly resistant to drought, grains and seed head eaten by baboons, from the ashes of the plant obtained a salt, culms used to make

brooms, found in arid and semiarid regions, open *Acacia* woodlands and grasslands, open grasslands, riverbeds, poor soils, dry alluvial basins, black turf, in low areas subject to inundation, heavy alluvial plains, hard pans, areas of high salinity, salt pans, seasonally moist places, low shrublands, mixed bushvelds, disturbed areas, poorly drained sites, brackish soils, gray sandy clay soils, dry clay soil, on termite mounds, along roadsides, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 65. 1840, *Florae Africae Australioris Illustrationes Monographicae* 161. 1841, *Tentamen Florae Abyssinicae ...2*: 397. 1850, *Synopsis Plantarum Glumacearum* 1: 155. 1855 [1854], *Die Pflanzenwelt Ost-Afrikas* C: 108. 1895, *The Flora of British India* 7: 249. 1896 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 51. 1903, *Annuario del Reale Istituto Botanico di Roma* 8(3): 339. 1908, *Bothalia* 2: 257, 273, t. 3. 1927, *Kew Bulletin* 25(2): 248. 1971, *Kew Bulletin* 47(4): 655-664. 1992, *African Journal of Ecology* 37(2): 168-179, 194-201. June 1999, *African Journal of Ecology* 38(1): 31-37. Mar 2000, *Journal of Applied Ecology* 37(3): 491-507. June 2000, *African Journal of Ecology* 38(4): 277-285. Dec 2000, *African Journal of Ecology* 39(3): 313-316. Sep 2001, *African Journal of Ecology* 40(1): 1-9, 100-102. Mar 2002, M. Ajmal Khan and Salman Gulzar, "Light, salinity, and temperature effects on the seed germination of perennial grasses." *American Journal of Botany* 90: 131-134. 2003.

in English: pan dropseed, bushveld dropseed

in Somalia: xilfo, timohwelli

in South Africa: panfynsaadgras, veilchen nebelgras, pangras

S. jacquemontii Kunth (*Sporobolus indicus* (L.) R. Br.; *Sporobolus indicus* f. *pyramidalis* (P. Beauv.) Peter; *Sporobolus indicus* var. *pyramidalis* (P. Beauv.) Veldkamp; *Sporobolus jacquemontii* Borhidi; *Sporobolus pyramidalis* P. Beauv.; *Sporobolus pyramidalis* var. *jacquemontii* (Kunth) Jovet & Guédès; *Vilfa jacquemontii* (Kunth) Trin.) (after the French naturalist Victor V. Jacquemont, 1801-1832, explorer, plant collector, botanist, traveler in the West Indies and India, friend of Stendhal, author of *Voyage dans l'Inde* par V.J., pendant les années 1828 à 1832. [Botanical authors: Joseph Decaisne (1807-1882) and Jacques Cambessèdes, 1799-1863] Paris [1835-] 1841-1844. See David Stacton, *A Ride on a Tiger: The Curious Travels of Victor Jacquemont*. London 1954; Pierre Maes, *Un ami de Stendhal, Victor Jacquemont*. Paris 1934; J.H. Barnhart, *Biographical notes upon botanists*. 2: 241. 1965; T.W. Bosser, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 193. 1972; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 730. Stuttgart 1993; Ignatz Urban (1848-1931), *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913)*.

Nebst Aufzählung seiner Sammlungen. 359. Dresden 1916; Ignatz Urban, editor, *Symbolae Antillanae*. 3: 65. 1902; Jacques Denis Choisy (1799-1859), *Convolvulaceae orientales*. [= *Mém. Soc. Phys. Hist. nat. Genève*. 6(2): [383]-502. 1834] 94. Genève 1834; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 469. Ansbach 1852)

Tropical America, Santo Domingo, Mexico, southeast U.S. Perennial bunchgrass, caespitose, tufted, slender, coarse, erect to ascending, simple, glabrous, roots often orange colored, leaves mainly basal, sheaths rounded, ligule a ring of hairs, inflorescence a panicle, divergent panicle branches, spikelets all bisexual in unequally stalked pairs, 1-flowered, 2 glumes hyaline, upper glume obtuse, 3 stamens, stigmas white, seed head generally with no fungus, fodder, noxious weed in cut grass, smutgrass generally unpalatable to cattle, common in disturbed places, gravelly soil, open sites, weedy roadside, hard clay, dry riverbeds, often confused with *Sporobolus indicus* (L.) R. Br., see *Prodromus Florae Novae Hollandiae* 170. 1810, *Flore d'Oware* 2: 36, t. 80. 1816, *Révision des Graminées* 2: 427, pl. 127. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 92. 1840 and *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *Contributions from the United States National Herbarium* 24(8): 291-556. 1927, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 280, 291. 1931, *Fl. Suriname* 1(1): 302. 1943, *Bull. Torrey Bot. Club* 75: 82. 1948, *Fieldiana, Botany* 24(2): i-ix, 1-390. 1955, *Fl. Guy. Franç.* 1: 96. 1955, *Fl. Suriname Add. & Corr.* 1(2): 345. 1968, *Brittonia* 23(3): 293-324. 1971, *Taxon* 22: 163. 1973, *Blumea* 35(2): 439. 1991, *Conservation Biology* Volume 17, Issue 4: 999-1006. Aug 2003.

in English: American rat's tail grass, smutgrass, iron grass
in Mexico: zacate

in Ghana: nagsàà

in Liberia: ni mo

in Nigeria: odo nlili, tsintsiyar Kwaro

S. jemenicus Pilger ex Schwartz (*Sporobolus ioclados* (Trin.) Nees)

Arabia. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 65. 1840, *Florae Africae Australioris Illustrationes Monographicae* 161. 1841 and *Kew Bulletin* 47(4): 655-664. 1992.

S. jonesii Vasey (*Muhlenbergia jonesii* (Vasey) Hitchc.)

U.S. See *Botanical Gazette* 6: 297. 1881 and *A Flora of California* 1: 111. 1912.

S. junceus (P. Beauv.) Kunth (*Agrostis compressa* Poir., nom. illeg., non *Agrostis compressa* Willd.; *Agrostis juncea* Michx., nom. illeg., non *Agrostis juncea* Lam.; *Agrostis thyrsoides* Bosc ex Trin.; *Aira triglumis* Steud.; *Axonopus poiretii* Roem. & Schult.; *Bennetia juncea* Raf. ex B.D. Jacks.; *Colpodium junceum* (P. Beauv.) Trin.; *Crypsis juncea* (P. Beauv.) Steud.; *Heleochloa juncea* P. Beauv.; *Sporobolus ejuncidus* Nash; *Sporobolus gracilis* (Trin.) Merr.; *Sporobolus gracilis* (Trin.) Merr.; *Sporobolus junceus* (Michx.) Kunth; *Sporobolus poiretii* (Roem. & Schult.) Hitchc.; *Vilfa fulvescens* Trin.; *Vilfa gracilis* Trin., nom. illeg., non *Vilfa gracilis* Trin.; *Vilfa juncea* (P. Beauv.) Trin.; *Vilfa schiedeana* Trin.; *Vilfa subsetacea* Trin.; *Vilfa vinzenti* Steud.)

U.S., Florida. Perennial, tufted, dark flower heads, provides seed for birds, no awns, ground cover, a species of fungus infect this grass, found in fields, deep sandy soils, roadsides, open woods, see *Flora Boreali-Americana* 1: 52. 1803, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 258. 1810, *Essai d'une Nouvelle Agrostographie* 24, 147, 164, t. 7, f. 2. 1812, *Systema Vegetabilium* 2: 318. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 37. 1821, *Nomenclator Botanicus* 1: 242. 1821, *De Graminibus unifloris et sesquifloris* 157. 1824, *Révision des Graminées* 1: 68. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 73-74, 76, 133. 1840, *Synopsis Plantarum Glumacearum* 1: 155, 223. 1854, *Index Kewensis* 1: 291. 1893 and *Manual of the Flora of the Northern States and Canada* 106. 1901, *Rhodora* 4(39): 48. 1902, *Bartonia* 14: 32. 1932, *Taxon* 39: 327-328. 1990, *Restoration Ecology* 8(2): 175-185. June 2000, *Restoration Ecology* 9(1): 13-27. Mar 2001, *Ecological Entomology* 28(4): 439-448. Aug 2003, *Journal of Ecology* 92(3): 409-421. June 2004 [Ground cover recovery patterns and life-history traits: implications for restoration obstacles and opportunities in a species-rich savannah.].

in English: wire dropseed, purple dropseed, dropseed, sand hill dropseed, piney woods dropseed, pinelands dropseed, pineland dropseed, pinewoods dropseed, pineywood dropseed, pineywoods dropseed

S. kentrophyllus (K. Schum. ex Engl.) Clayton (*Agrostis kentrophyllum* K. Schum. ex Engl.; *Sporobolus ioclados* (Trin.) Nees)

Tropical East Africa, Somalia. Perennial, tussocky, rhizomatous and stoloniferous, inflorescence paniculate more or less whorled, spikelets appressed to the panicle branches, upper glume shorter than the spikelet, found in moist depressions, saline marshes, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 65. 1840, *Flora Africae Australioris Illustrationes Monographicae* 161. 1841,

Die Pflanzenwelt Ost-Afrikas C: 108. 1895 and *Kew Bulletin* 25(2): 248. 1971, *Kew Bulletin* 47(4): 655-664. 1992, Augustino Osoro Onkware, "Effect of soil salinity on plant distribution and production at Loburu delta, Lake Bogoria National Reserve, Kenya." *Austral. Ecology* 25(2): 140-149. Apr 2000.

S. lamarckii Desv. ex Ham. (*Sporobolus indicus* (L.) R. Br.; *Sporobolus poiretii* (Roem. & Schult.) Hitchc.)

West Indies. See *Species Plantarum* 63. 1753, *Prodromus Florae Novae Hollandiae* 170. 1810, *Systema Vegetabilium* 2: 318. 1817, *Prodromus Plantarum Indiae Occidentalis* 4-5. 1825 and *Bartonia* 14: 32. 1932.

S. lanuginellus Maire

North Africa, Morocco. Rare species, see *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 31: 6, in obs., 46. 1940.

S. lasiophyllus Pilger

South America, Peru. Bunchgrass, tufted, ligule ciliate, among the basal sheaths a thick woolly indumentum, close to *Sporobolus bogotensis*, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: 504. 1906.

S. latzii B.K. Simon (for Peter K. Latz, b. 1941, author of *Bushfires and Bush Tucker: Aboriginal Plant Use in Central Australia*. illustrated by Jenny Green. Alice Springs: IAD Press, 1995 and "Notes on the relict palm *Livistona mariae* F. Muell. in Central Australia." *Trans. Royal Society South Australia* 99: 189-196. 1975; see *Key to the Grasses of the Northern Territory, Australia* / Bryan K. Simon and Peter Latz. Darwin: Conservation Commission of the Northern Territory, 1994)

Australia, Northern Territory. Perennial, erect, caespitose, robust, reedlike, shortly rhizomatous, ligule a fringe of hairs, leaf blades flat linear, linear inflorescence paniculate open to contracted and spiciform, primary branches solitary, spikelets loosely spaced, glumes lanceolate, lower glume acute nerveless, lemma lanceolate acute 1-nerved, palea entire, in swamp, similar to *Sporobolus consimilis*, see *Australian Systematic Botany* 12(3): 399, f. 16. 1999.

S. laxis B.K. Simon (*Sporobolus indicus* var. *queenslandicus* Veldkamp)

Australia, Queensland. Perennial, caespitose, erect, ligule a ciliate membrane, linear leaf blades folded or convolute, irregular inflorescence paniculate open to contracted and spiciform, base of the panicle branches naked, acute or obtuse nerveless lower glume elliptic or lanceolate, upper glume lanceolate, acute lemma elliptic 1-nerved, 3 anthers, weed, along roadsides, grasslands, woodlands, formerly in *Sporobolus diandrus*, see *Prodromus Florae Novae Hollandiae* 170. 1810 and *Flora Capensis* 7: 586. 1900, *Austrobaileya* 1(5): 459, f. 34,1-6. 1982, *Blumea* 35(2): 452. 1991.

in English: lax ratstail grass

S. ledermanni Mez

Africa, Cameroon. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 296. 1921.

S. lenticularis S.T. Blake

Australia, Queensland. Perennial or annual, ephemeral, erect, caespitose, ligule a fringe of hairs, linear leaf blades folded or convolute or flat, reddish open inflorescence paniculate ovate with whorled inflorescence branches, spikelets loosely spaced, acute lower glume lanceolate nerveless, upper glume lanceolate, obtuse lemma elliptic 1-nerved, 3 anthers, smooth lenticular grain, coastal, on sand dunes, similar to *Sporobolus pulchellus*, see *Papers from the Department of Botany, University of Queensland* 1(18): 3. 1941.

S. ligularis Hack. (*Muhlenbergia ligularis* (Hack.) Hitchc.; *Sporobolus ligularis* Hack. ex Sodiro)

Ecuador. See *Anales de la Universidad Central del Ecuador* 3(25): 480. 1889 and *Österreichische Botanische Zeitschrift* 52(2): 57. 1902, *Contributions from the United States National Herbarium* 24(8): 388. 1927.

S. lindleyi (Steud.) Benth. (*Sporobolus pallidus* Lindl.; *Vilfa lindleyi* Steud.)

Australia. See *Syn. Pl. Glum.* 1: 162. 1854, *Fl. Austral.* 7: 623. 1878.

S. linearifolius Nicora (*Sporobolus exilis* Renvoize, nom. illeg., non *Sporobolus exilis* (Trin.) Balansa)

South America, Brazil. See *Kew Bulletin* 42(4): 923. 1987, *Hickenia* 2(19): 90. 1993.

S. linearis Mez

Mauritius. Extinct species, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 295. 1921.

S. longibrachiatus Stapf (*Sporobolus nervosus* Hochst.; *Vilfa nervosa* (Hochst.) Schweinf.)

Arabia, Ethiopia, Africa. See *Flora* 38: 202. 1855, *Beitrag zur Flora Aethiopiens ...* 303. 1867 and *Bulletin of Miscellaneous Information Kew* 1907: 219. 1907.

S. ludwigii Hochst. (dedicated to the German-born South African patron of natural sciences Carl Ferdinand Heinrich von Ludwig, 1784-1847, pharmacist; see Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 233-235. Cape Town 1981)

South Africa. Perennial, rhizomatous with long and branched rhizomes, rigid leaves, panicle whorled, often mat-forming, found in damp areas, vleis, near pans or streams, see *Flora* 29: 118. 1846.

S. macer (Trin.) Hitchc. (*Sporobolus asper* (P. Beauv.) Kunth; *Sporobolus compositus* var. *macer* (Trin.) Kartesz & Gandhi; *Vilfa macra* Trin.)

U.S. See *Essai d'une Nouvelle Agrostographie* 16, 147, 181. 1812, *Révision des Graminées* 1: 68. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 79. 1840 and *Circular, Division of Agrostology, United States Department of Agriculture* 35: 6. 1901, *American Journal of Botany* 2: 203. 1915, *Rhodora* 56(662): 29. 1954, *Phytologia* 78(1): 11. 1995.

S. macranthelus Chiov.

Eastern and southern tropical Africa, Somalia, Sudan. Perennial, robust, tussock-forming, rhizomatous, basal sheaths papery and not fibrous when old, stiff narrow leaves, linear inflorescence, open panicle much branched and not whorled, spikelets appressed or spreading, upper glume narrowly ovate, lower glume lanceolate, lemma ovate, in grassland, bushland, floodplains, loam, see *Flora Somala* 2: 452. 1932.

S. macrospermus Scribner ex Beal

Mexico. Annual, caespitose, erect, branched from the lower nodes, glabrous, internodes solid, leaves basal, open cylindrical panicles, on rocky hills, see *Grasses of North America for Farmers and Students* 2: 302. 1896.

S. maderaspatanus Bor (*Agrostis orientalis* Nees; *Sporobolus humifusus* Thw. ex Trimen, non *Sporobolus humifusus* (Kunth) Kunth; *Sporobolus orientalis* Kunth; *Sporobolus orientalis* (Nees) Kunth; *Sporobolus orientalis* sensu Hook.f.) (from Madras, India)

Sri Lanka, India. Perennial, caespitose, sparsely branched, erect, ascending, smooth, stoloniferous, auricles aciliate, leaves acuminate and pointed, ligule a densely ciliate membrane, compact spicate inflorescence, panicle branches not whorled, 2-3 stamens, good fodder for horses and cattle, makes good hay, found on seashores and beaches, saline plains, lowlands, dry and arid zones, coastal roads, see *Nova Genera et Species Plantarum* 1: 137. 1815 [1816], *Révision des Graminées* 1: 67. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 211. 1833, *Fl. Br. Ind.* 7: 251. 1896 and *Grasses of Ceylon* 96. 1956, *Kew Bulletin* 1957: 234. 1957, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Taxon* 34: 159-164. 1985.

in India: usar ke ghas

S. mangaloricus Hochst. ex Miq. (*Panicum tenuissimum* Mart. ex Schrank; *Sporobolus tenuissimus* (Mart. ex Schrank) Kuntze; *Sporobolus tenuissimus* (Mart. ex Schrank) Hack., nom. illeg., non *Sporobolus tenuissimus* (Mart. ex Schrank) Kuntze; *Vilfa mangalorica* Hochst. ex Steud.)

India. See *Denkschriften der Königlich-Baierischen Botanischen Gesellschaft in Regensburg* 2: 26. 1822, *Analecta botanica indica ...* 2: 36. 1851, *Synopsis Plantarum Glumacearum* 1: 159. 1854, *Revisio Generum Plantarum* 3(2):

369. 1898 and *Bulletin de l'Herbier Boissier, sér. 2*, 4(3): 278. 1904.

S. marginatus Hochst. ex A. Rich. (*Sporobolus arabicus* Boiss.; *Sporobolus ioclados* (Trin.) Nees; *Sporobolus pallidus* (Nees ex Trin.) Boiss., nom. illeg., non *Sporobolus pallidus* Lindl.; *Vilfa arabica* (Boiss.) Steud.; *Vilfa pallida* Nees ex Trin.)

Tropical East Africa. Perennial, rarely annual, very variable, tufted, stoloniferous, low growing, basal leaf sheaths glabrous and shining, spikelets pale or grayish green, strong and thick roots, adapted to very dry conditions, an indicator of saline soils, excellent drought tolerance and excellent tolerance to salinity, leafy, good fodder, grazing of excellent quality, low palatability, found on rocky shallow sandy soils, dry grasslands, alluvial silts, loose sandy loams, on alkaline soils, sometimes on pure salt crusts, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(2): 62, 65. 1840, *Tentamen Florae Abyssinicae* ...2: 397. 1850, *Florae Africae Australioris Illustrationes Monographicae* 161. 1841, *Diagnoses plantarum orientalium novarum, ser. 1*, 13: 14. 1853, *Synopsis Plantarum Glumacearum* 1: 421. 1854, *Flora Orientalis* 5: 512. 1884 and *Annuario del Reale Istituto Botanico di Roma* 8(1): 51. 1903, *Annuario del Reale Istituto Botanico di Roma* 8(3): 339. 1908.

S. mauritanus (Steud.) Durand & Schinz (*Sporobolus artus* Stent; *Sporobolus rigidifolius* (Trin.) Mez ex Veldkamp; *Vilfa mauritiana* Steud.; *Vilfa rigidifolia* Trin.)

Tropical Africa, Mauritius, Madagascar. Perennial, rhizomatous, tufted, erect, old basal sheaths expanded and papery, leaf blades involute, panicle ovate or sometimes contracted, primary branches whorled, spikelets acute, lower glume lanceolate acuminate, upper glume lanceolate, found in marshy areas, in gray sand, wooded grasslands, poorly drained soil, sourveld, in dry sandy soil, coastal sandflats, black clay soil, related to *Sporobolus sanguineus* and *Sporobolus centrifugus*, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 80. 1840, *Synopsis Plantarum Glumacearum* 1: 157. 1854, *Conspectus Florae Africae* 5: 822. 1894 and *Bothalia* 2: 260, 272, t. 4. 1927, *Kew Bulletin* 45(3): 582. 1990.

S. maximus Hauman

South America. See *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 5: 52. 1921.

S. mayumbensis Franch.

Africa. Forest, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 367. 1895.

S. mendocinus E. Méndez

Argentina. See *Boletín de la Sociedad Argentina de Botánica* 30(1-2): 13-15, f. 1. 1994.

S. metallicola Longhi-Wagner & Boechat

South America, Brazil. See *Acta Botanica Brasilica* 7(2): 150, f. 1. 1993.

S. micranthus (Steud.) T. Durand & Schinz (*Sporobolus bernieri* (T. Durand & Schinz) A. Camus; *Sporobolus conrathii* (Conrath & Hack.) Chiov.; *Sporobolus micranthus* Conrath & Hack., nom. illeg., non *Sporobolus micranthus* (Steud.) T. Durand & Schinz; *Sporobolus psammophilus* Stent & Rattray; *Sporobolus regularis* Mez; *Triachyrum micranthum* Steud.)

Africa, Zambia, Ethiopia. Annual, delicate, erect, solitary or tufted, unbranched, flat leaf blades broadly linear with glandular margins, panicle lanceolate, primary branches whorled in tiers, spikelets narrowly elliptic, lower glume long lanceolate acuminate, dry open places, among rocks, related and similar to *Sporobolus paniculatus* and *Sporobolus stolzii*, see *Synopsis Plantarum Glumacearum* 1: 176. 1855 [1854] and *Österreichische Botanische Zeitschrift* 53(5): 198. 1903, *Annali di Botanica* 13: 49. 1914, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 299. 1921, *Proceedings of the Rhodesia Scientific Association* 32: 51. 1933, *Bulletin de la Société Botanique de France* 107: 205. 1960.

S. microprotus Stapf (probably from the Greek *mikros* "small" and *protos* "first, foremost")

Tropical Africa, Sahel. Annual, loosely tufted, erect or ascending, spreading, sometimes prostrate, often shortly stoloniferous, broadly linear leaf blades with pectinate margins, rooting and branching at the nodes, panicle of small spikelets on whorled branches, scabrid spikelets elliptic-oblong, lower glume a tiny ovate scale, upper glume and lemma elliptic-oblong, 2 stamens, good pasture, a weed of cultivation, useful for erosion control and in fixing sand dunes, found along roadsides, waste places.

in Nigeria: babatu

in Upper Volta: liudi sagha, lussa

S. mildbraedii Pilg.

Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43(1): 92. 1909.

S. minarum Boechat & Longhi-Wagner

Brazil. See *Iheringia, Série Botânica* 44: 34, f. 1-2. 1994.

S. minimus Cope

Somalia, Oman. Vulnerable species, annual, dwarf, tiny, rigid leaves, inflorescence whorled, panicle oblong, glumes elliptic, 3 stamens, subglobose grain, found in dry water courses, see *Kew Bulletin* 47(4): 657. 1992.

S. minor Trin. ex Kunth (*Sporobolus indicus* (L.) R. Br.; *Sporobolus minor* Vasey ex A. Gray, nom. illeg., non

Sporobolus minor Trin. ex Kunth; *Sporobolus ovatus* Beal; *Vilfa rupestris* Trin.)

Southern Brazil to Argentina, Bolivia, Paraguay, Chile. Perennial, caespitose, leaves mostly basal, leaf blades filiform flexuous acuminate, panicle spicate with appressed branches, upper glume acute, seasonally flooded depressions, similar to *Sporobolus indicus* and *Sporobolus fertilis*, see *Species Plantarum* 63. 1753, *Prodromus Florae Novae Hollandiae* 170. 1810, *De Graminibus Paniceis* 22. 1826, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 212. 1833, *A Manual of the Botany of the Northern United States* (ed. 6) 646. 1890, *Grasses of North America for Farmers and Students* 2: 300. 1896.

S. minutiflorus (Trin.) Link (*Agrostis minutiflora* (Trin.) Desf. ex Steud.; *Panicum tenuissimum* Mart. ex Schrank; *Sporobolus tenuissimus* (Mart. ex Schrank) Kuntze; *Sporobolus tenuissimus* (Mart. ex Schrank) Hack., nom. illeg., non *Sporobolus tenuissimus* (Mart. ex Schrank) Kuntze; *Vilfa minutiflora* Trin.)

Africa, Gabon. See *Denkschriften der Königlich-Baierischen Botanischen Gesellschaft in Regensburg* 2: 26. 1822, *De Graminibus unifloris et sesquifloris* 158. Petropoli 1824, *Hortus Regius Botanicus Berolinensis* 1: 88. 1827, *Nomenclator Botanicus* edition 2 1: 41. 1840, *Revisio Generum Plantarum* 3(2): 369. 1898 and *Bulletin de l'Herbier Boissier*, sér. 2, 4(3): 278. 1904.

S. minutus Link (*Vilfa minuta* (Link) Trin.)

Eastern Africa, Somalia, Arabia. Annual, low, glabrous leaves, leaf blades convolute, panicle elliptic with branches in whorls, spikelets narrowly lanceolate, lower glume obtuse, upper glume lanceolate acuminate, lemma narrowly ovate acute, sandy soils, saline flats, gravelly places, similar to *Sporobolus minimus*, see *Hortus Regius Botanicus Berolinensis* 1: 88. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Avec l'Histoire de l'Académie* 2: 84. 1840, *Beiträge zur Flora der Cap Verdischen Inseln* 142. 1852 and *Willdenowia* 25(1): 192. 1995.

S. minutus Link subsp. **confertus** (J.A. Schmidt) W. Lobin, N. Kilian & T. Leyens

Africa. See *Hortus Regius Botanicus Berolinensis* 1: 88. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Avec l'Histoire de l'Académie* 2: 84. 1840, *Beiträge zur Flora der Cap Verdischen Inseln* 142. 1852 and *Willdenowia* 25(1): 192. 1995.

S. mirabilis Pilg.

Peru. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 123): 27. 1920.

S. mitchellii (Trin.) C.E. Hubbard ex S.T. Blake (*Sporobolus benthamii* F.M. Bailey; *Sporobolus virginicus* (L.) Kunth var. *pallidus* Benth.; *Vilfa mitchellii* Trin.) (species named for the British (b. Stirlingshire) Lieutenant-Colonel Sir Thomas

Livingstone Mitchell, 1792-1855 (d. Darling Point, N.S.W., Australia), plant collector, translator, 1827 Deputy Surveyor-General of New South Wales, 1839 Fellow of the Royal Society, author of *Three Expeditions into the Interior of Eastern Australia*. London 1838, *The Australian Geography, with the Shores of the Pacific and Those of the Indian Ocean*. Sydney 1851, *The Lusiad of Luis de Camoens*, closely translated. London 1854 and *Journal of Expedition into Interior of Tropical Australia*. 1848; see Dean Boyce, *Clarke of the Kindur: Convict, Bushranger, Explorer*. Melbourne 1970. 1st edition; I.H. Vegter, *Index Herbariorum*. Part II (4), *Collectors M. Regnum Vegetabile* vol. 93. 1976; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 492. London 1994; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980)

Western Australia, South Australia, New South Wales, Victoria, Queensland, Northern Territory. Perennial, stoloniferous, mat-forming, semiaquatic, erect and flexuous, creeping, with geniculate culms, base thickened, tussocky, leaves flat and alternate, ligule a fringe of hairs, pale and dense inflorescence spike-like, lowest node of inflorescence with 1 or 2 branches, floret 1, pedicels scabrous, glumes unequal or subequal, acute lower glume 1-nerved, upper glume linear, lemma elliptic acute 1-3-nerved, 3 anthers, grazed by sheep and cattle when green, a decreaser species, an indicator of good range condition, suitable for saline site revegetation, gypsum soil adapted, occurs on heavy soils of floodplains, clay soils, muddy flats and waterlogged areas, in wet and seasonally flooded areas, similar to *Sporobolus virginicus*, see *Révision des Graminées* 1: 67. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 53. 1840, *Flora Australiensis: A Description ...* 7: 621. 1878, *Botany Bulletin, Department of Agriculture, Queensland* 13: 16. 1896 and *University of Queensland Papers: Department of Botany* 1: 22. 1 June 1941, *Bull. Misc. Inform., Kew* 1941: 26. 8 Nov 1941, *Blumea* 35: 446. 1991, *Australian Systematic Botany* 12(3): 375-448. 1999.

in English: short rat-tail grass, rat-tail couch, rat's tail couch, condamine couch, swamp ratstail grass

S. modestus (Peter) Peter (*Sporobolus flagelliferus* Peter)

Africa. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 1(Anh.): 82. 1930, *Feddes Repertorium, Beiheft* 41(1): 288. 1931.

S. molleri Hack. (dedicated to the Portuguese naturalist Adolpho (Adolphe) Frederico Moller, 1842-1920, botanist; see Yakov Vladimirovich Bedryaga, *Amphibiens et reptiles*, recueillis en Portugal par A.F. Moller. Coimbra 1889)

Africa, Zambia, Uganda, Tanzania. Annual, tufted to loosely tufted, minute, linear panicle not whorled, lemma

long and needle-like, weed species, growing in well-drained soils, cultivated land, pathsides, wasteland, abandoned land, see *Boletim da Sociedade Broteriana* 5: 213. 1887.

in Guinea: sigiri

S. monandrus Roseng., B.R. Arrill. & Izag.

Brazil, Bolivia, Uruguay, Argentina, Paraguay. Annual, slender, erect, leaf blades linear acuminate, oblong panicle, 1 stamen, campos, similar to *Sporobolus tenuissimus*, related to *Sporobolus temomairensis* Judz. & Peterson, see *Boletim de la Facultad de Agronomia de Universidad de la Republica, Montevideo* 103: 12, f. 3. 1968.

S. montanus (Hook.f.) Engl. (*Sporobolus montanus* Engl.; *Vilfa montana* Hook.f.)

Tropical Africa. Perennial, densely caespitose, montane, see *Journal of the Linnean Society, Botany* 7: 228. 1864, *Abhandlungen der Königlich Preussischen Akademie der Wissenschaften. Physikalisch-mathematische Classe* 2: 127. 1892 and *Opera Botanica* 121: 159-172. 1993.

S. multinodis Hack. (*Sporobolus multinodis* var. *exasperatus* Hack.)

South America, Brazil. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 316-317. 1909.

S. multiramosus Longhi-Wagner & Boechat

South America, Brazil. See *Acta Botanica Brasiliica* 7(2): 155, f. 1. 1993.

S. myrianthus Benth. (*Eragrostis heteromera* Stapf)

Tropical Africa, Nigeria, Tanzania. Perennial, loosely tufted, slender, basal sheaths indurated and fibrous, upper glume frequently mucronate, medicinal, montane, grazed by stock, pasture, used for making brushes, growing in open weedy places, wooded savannah, see *Genera Plantarum* 23. 1776, *Niger Flora* 565. 1849 and *Flora Capensis* 7: 610. 1900.

in Tanzania: ntinde

S. natalensis (Steud.) T. Durand & Schinz (*Sporobolus capensis* Kunth; *Sporobolus capensis* var. *laxus* Nees; *Sporobolus indicus* (L.) R. Br.; *Sporobolus indicus* f. *laxus* (Nees) Peter; *Sporobolus indicus* var. *laxus* (Nees) Stapf; *Vilfa natalensis* Steud.)

Tropical East Africa, South Africa, Ethiopia. Perennial, erect, caespitose, robust, tussocky, ligule a ciliate membrane, old basal sheaths papery, leaf blades narrowly linear tapering to a long filiform tip, dense panicle much branched and not whorled, open to loosely contracted panicle with ascending or spreading primary branches, spikelets lanceolate, lower glume oblong obtuse, upper glume ovate narrowing uniformly to an acute tip, pasture weed, culms used for making baskets, found in sandy soils, grassy slopes, along roadsides, open grassland, well-drained soil, in woodlands, near water, cliffs, sandstone cliffs, in disturbed places, resembles *Sporobolus africanus* and *Sporobolus*

pyramidalis, see *Prodromus Florae Novae Hollandiae* 170. 1810, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 212. 1833, *Flora Australiensis: A Description ...* 1: 155. 1841, *Synopsis Plantarum Glumacearum* 1: 154. 1854, *Conspectus Florae Africae* 5: 822. 1894 and *Flora Capensis* 586. 1900, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 280. 1931, *Blumea* 35: 452. 1991.

in English: giant ratstail grass

S. nealleyi Vasey (for the American botanist Greenleaf Cillely Nealley, 1846-1896, collected grass for USDA, see J.H. Barnhart, *Biographical notes upon botanists*. 2: 541. Boston 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 283. Boston, Mass. 1972; Stafleu and Cowan, *Taxonomic literature*. 3: 701. 1981)

Northern America, U.S. Large caespitose grass, found in gypsum desert scrub, gypsum dune barrens, gypsum clay flat, see *Bulletin of the Torrey Botanical Club* 15: 49. 1888, *Contributions from the United States National Herbarium* 1(2): 57. 1890.

in English: Nealley's dropseed, Nealley dropseed, gypgrass, gyp dropseed

S. nebulosus Hack.

Africa, Namibia. Perennial, tufted, rhizomatous, leaves rigid and linear to filiform, old leaf sheaths persistent, spikelets solitary and terminal, grows in sand, deep sand, moist depressions, wet areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 402. 1889.

in German: nebelgras

S. neglectus Nash (*Sporobolus neglectus* Nash var. *ozarkanus* (Fern.) Steyermark & Kucera; *Sporobolus ozarkanus* Fernald; *Sporobolus vaginiflorus* (Torr. ex A. Gray) Alph. Wood; *Sporobolus vaginiflorus* var. *neglectus* (Nash) Scribn.; *Sporobolus vaginiflorus* var. *neglectus* (Nash) Shinnery, nom. illeg., non *Sporobolus vaginiflorus* var. *neglectus* (Nash) Scribn.; *Sporobolus vaginiflorus* (Torr. ex Gray) Wood var. *ozarkanus* (Fern.) Shinnery)

North America, U.S., New Mexico, Canada. Annual, caespitose, wiry, delicate, ascending stems, root system fibrous, leaves with flat to inrolled blades, leaf sheaths enfold the stem only at the base, contracted cylindrical panicles, erect slender spikelets egg-shaped, reproducing by seeds, little forage value, growing on dry open soils, pastures, lawns, open ground around shores and rocky outcrops, dry sites and sandy soils, in old alfalfa fields, roadsides, along railroads and waste ground, see *A Class-book of Botany* 775. 1861, *Bulletin of the Torrey Botanical Club* 22(11): 464. 1895 and *Bulletin, Division of Agrostology United States Department of Agriculture* (edition 2) 17: 170. 1901,

Rhodora 35(411): 109-110. 1933, *Rhodora* 56(662): 29. 1954, *Rhodora* 63(745): 25. 1961.

in English: annual dropseed, poverty grass, Ozark dropseed, small dropseed, small drop-seed, sheath head dropseed, small rush grass, puffsheath dropseed, puff-sheath dropseed

in French: sporobole négligé

S. nervosus Hochst. (*Sporobolus iocladoides* Chiov. ex Chiarugi; *Sporobolus ioclados* Hook.f.; *Sporobolus lampranthus* Pilger; *Sporobolus longibrachiatus* Stapf; *Sporobolus sladenianus* F. Bolus; *Sporobolus stocksii* Bor; *Vilfa nervosa* (Hochst.) Schweinf.) (see Harriet Margaret Louisa Bolus (née Kensit), 1877-1970, Frank Bolus and R. Glover "Flowering plants and ferns collected on the Great Karasberg by the Percy Sladen Memorial Expedition, 1912-1913." *Ann. Bolus Herb.* 1: 9-19, 72-75, 97-114. 1914-1915; Henry Harold Welch Pearson, 1870-1916, "Percy Sladen Memorial Expedition in South-West Africa, 1908-1909." *Nature*. vol. LXXXI. 1909 and "Itinerary of the Percy Sladen Memorial Expedition to the Orange River, 1910-1911." *Ann. S. Afr. Mus.* vol. IX. 1912)

Tropical Africa, Kenya, Namibia. Perennial, densely tufted, basal leaf sheaths fibrous and stiff, curly or flat leaves, rhizomatous with a short oblique rhizome, pyramidal panicle not whorled, primary branches flexuous and slender, spikelets clustered at the tips of the branchlets, glumes not keeled, lower glume lanceolate and acute, upper glume ovate and acute, lemma ovate to narrowly ovate, leaves revive after desiccation, forage grass, a good grazing grass, grazed by all stock, found in arid lands, in open *Acacia-Commiphora* bushland, bushland, alluvial plains, open places, flats, moist depressions, sandy red soil, shallow soils, gypsum, limestone, denuded areas, see *Flora* 38: 202. 1855, *Beitrag zur Flora Aethiopiens ...* 303. 1867, *The Flora of British India* 7: 249. 1896 and *Bulletin of Miscellaneous Information Kew* 1907: 219. 1907, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 48: 345. 1912, *Annals of the South African Museum* 9: 236. 1915, *Kew Bulletin* 1948: 45. 1948, *Webbia* 8: 96. 1951.

in Somalia: ramass, hamasut

S. niamensis Mez

Arabia. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 299. 1921.

S. nitens Stent

South Africa, Transvaal. Perennial bunchgrass, rhizomatous and stoloniferous, leaves margins wavy, upper glume keeled, growing on poorly drained site subject to inundation, harsh climate, on sandy soils, gardens, open grassland, overgrazed velds, coastal grasslands and saline flooded grasslands, disturbed places, see *Bothalia* 1(4): 281-282, t. 8. 1924.

S. nudiramus Boechat & Longhi-Wagner

Brazil, South America. See *Iheringia, Série Botânica* 44: 36, f. 3-6. 1994.

S. olivaceus Napper

Africa. Perennial, densely tufted, erect, slender, hard and shiny basal sheaths fibrous when old, leaf blades convolute, panicle spiciform, primary branches crowded erect appressed, spikelets narrowly lanceolate-oblong, obtuse or acute lower glume elliptic, acute upper glume ovate, lemma acute, upland grassland, bushland, see *Kirkia* 3: 117. 1963.

S. orientalis (Nees) Kunth (*Sporobolus maderaspatanus* Bor; *Sporobolus orientalis* Kunth)

Warm regions. Perennial, creeping and rooting at the nodes, leaves mostly basal, leaf blades rather narrow and tapering to a fine point, lowwiry flowering stems, panicle loose pyramidal, many minute spikelets, fodder, saline soils, this is the true *usar* grass, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 211. 1833 and *Kew Bulletin* 1957: 234. 1957.

in English: usar grass

in India: kalusra, kar usara ghas, kheo, usar ki ghas, tandua

S. pallidus Lindl. (*Sporobolus lindleyi* (Steud.) Benth.; *Vilfa lindleyi* Steud.)

Australia. Perennial, forage, used as tanning agent, can tolerate maritime exposure, can tolerate drought, can grow in saline soil, found by coasts and around salt marshes, on sandy ground.

in English: Australian dropseed

in India: budhan, budhar, karno, palengi, palinji

S. palmeri Scribner

North America, Mexico. Bunchgrass, see *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 48, t. 5. 1898.

S. pamelae B.K. Simon

Australia, Queensland. Perennial, erect, caespitose, ligule a fringe of hairs, very open and much-branched panicles, inflorescence branches not whorled, glumes oblong, lower glume acute nerveless, 3-nerved lemma linear to lanceolate, 3 anthers, see *Austrobaileya* 4(1): 61, f. 3. 1993.

S. panicoides A. Rich. (*Triachyrum longifolium* Hochst. ex Steud.)

Tropical East and South Africa, Zimbabwe, Ethiopia, Arabia. Annual, soft, erect or geniculate at the base, slender, sparse, tufted to loosely tufted, leaf sheath rounded, leaf blade smooth and expanded, ligule a fringe of short hairs, leaves narrow lancet-shaped and pointed, inflorescence whorled, open panicle elliptic to narrowly elliptic, primary branches ascending and simple, panicle-branches 1- to 4-spiculate, sparse large spikelets, spikelets of lowermost whorl often abortive or absent, glumes ovate and subequal,

lower glume lanceolate, acute upper glume elliptic-oblong, spheroid seeds orange to bright red-brown, famine food, grazed by all stock, little value as forage, grains used as food for human consumption, low mass yield, pioneer grass, found in mopane woodlands, seasonally wet places, deciduous bushlands, in areas of high rainfall, stony banks, field borders, stony hillsides, sandy soils, dry sandy soils, rocky areas, gravel fringes, disturbed places, light shade, where the soil is very shallow, see *Tentamen Florae Abyssinicae* ... 2: 399. 1850, *Synopsis Plantarum Glumacearum* 1: 176. 1855 [1854].

in English: famine grass

in Somalia: agar

in South Africa: grootsaad sporobolus, hirse nebelgras

S. paniculatus (Trinius) Dur. & Schinz (*Sporobolus myxosperma* Stapf ex Hutch. & Dalziel; *Sporobolus patulus* Hack.; *Sporobolus regularis* Mez; *Vilfa paniculata* Trin.)

Tropical Africa, Mexico, Madagascar. Annual, erect or ascending, single-stemmed or loosely tufted, often eglandular leaf blades margins, found along roadsides, open bushland, rocky sites, sandy soils, waste places, wooded grasslands, savannahs, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 67. 1840, *Conspectus Florae Africae* 5: 823. 1895 and *Österreichische Botanische Zeitschrift* 52(2): 58. 1902, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 299. 1921, *Flora of West Tropical Africa* 527. 1936.

in Nigeria: finde, hudo mbujo, lallen biri, wichiyyar zoomoo

S. partimpatens R. Mills ex B.K. Simon

Australia, Queensland. Perennial, rare, erect, caespitose, leaf blades linear, ligule a ciliate membrane, irregular inflorescence paniculate, primary inflorescence branches appressed toward apex, lowest inflorescence node whorled, lower glume nerveless, upper glume as long as spikelet, lemma lanceolate acute 1-nerved, 3 anthers, see *Austrobaileya* 4(1): 64, f. 5. 1993.

S. paucifolius Boechat & Longhi-Wagner

South America, Brazil. See *Iheringia, Série Botânica* 44: 37, f. 7-9. 1994.

S. pectinatus Hack.

South Africa. Perennial, tufted, usually unbranched, rhizomatous with long creeping rhizomes, old basal sheaths papery, leaf blades ciliate, open panicle whorled, spikelets clustered at the tip of the branches, palatable or unpalatable, common on shallow rocky soil, stony slopes, in open sour grasslands, see *Österreichische Botanische Zeitschrift* 53(5): 198. 1903, *Bothalia* 17: 135-136. 1987.

in English: fringed dropseed

in South Africa: kammetjiesgras

S. pectinellus Mez

Tropical Africa, Central African Republic. Annual, tufted, delicate, slender, diffuse panicle ovate-oblong, lower glume broadly oblong, upper glume ovate-oblong, lemma narrowly ovate, growing in stony places, moist areas, meadows, among rocks, often confused with *Sporobolus festivus*, closely related to *Sporobolus infirmus*, similar to *Sporobolus tenuissimus*, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 295. 1921.

in Ivory Coast: kubegnin

S. pellucidus Hochst. (*Sporobolus indicus* var. *pellucidus* (Hochst.) Chiov.; *Vilfa pellucida* (Hochst.) Schweinf.)

Tropical East Africa, Arabia. Perennial, densely tufted, slender, rhizomatous, basal leaf sheaths fibrous when old forming a thick basal clump of fibers, leaf blades filiform and convolute, linear to lanceolate panicle open or contracted, primary branches ascending and not whorled, upper glume ovate and acute, lemma acute, heavily grazed by stock, dry grassland, on sandy soils, deciduous bushlands, degraded open woodlands, scrub, open places, red sand, on sandy riverbanks and on sandy dry riverbanks, similar to *Sporobolus pyramidalis*, see *Prodromus Florae Novae Hollandiae* 170. 1810, *Flora* 38: 201. 1855 and *Missione Biologica nel Paese dei Borana, 4. Raccolte Botaniche* 277. 1939.

in Somalia: garogaro, ramass

S. phleoides Hack.

Argentina. See *Anales del Museo Nacional de Buenos Aires* 13: 468. 1906.

S. phyllotrichus Hochst. (*Sporobolus confinis* (Steud.) Chiov.; *Vilfa phyllotricha* (Hochst.) Schweinf.)

Africa, Kenya. See *Synopsis Plantarum Glumacearum* 1: 160. 1855 [1854], *Flora* 38: 201. 1855 and *Annuario del Reale Istituto Botanico di Roma* 8: 341. 1908.

S. piliferus (Trin.) Kunth (*Agrostis villosa* Rchb. ex Spreng.; *Sporobolus ciliatus* J. Presl; *Sporobolus ciliatus* Munro ex Hook.f.; *Sporobolus piliferus* (Trin.) Kuhl., nom. illeg., non *Sporobolus piliferus* (Trin.) Kunth; *Sporobolus praecox* A. Chev.; *Sporobolus rupestris* Kunth; *Sporobolus stachyanthus* A. Rich.; *Sporobolus stachydanthus* A. Rich.; *Sporobolus villosus* (Rchb. ex Spreng.) Kunth; *Triachyrum nilagiricum* Hochst. ex Steud.; *Triachyrum stachydanthum* (A. Rich.) Asch.; *Vilfa ciliata* (J. Presl) Trin., nom. illeg., non *Vilfa ciliata* (Thunb.) P. Beauv.; *Vilfa pilifera* Trin.; *Vilfa preslii* Steud.; *Vilfa rupestris* (Kunth) Trin., nom. illeg., non *Vilfa rupestris* Trin.; *Vilfa stachydantha* (A. Rich.) Steud.)

Tropics. Annual, caespitose, clumped, herbaceous, slender, erect, branched or not, more or less glabrous, leaves basal, leaf blades linear with glandular margins, narrow panicle spike-like or irregularly spicate, spikelets narrowly lanceolate-oblong, lower glume long lanceolate acuminate, upper glume and lemma oblong, eaten by livestock,

grassland, open situations, rocky places, marsh and edge of marsh, pathsides, resembles *Sporobolus micranthus*, see *De Graminibus unifloris et sesquifloris* 157. Petropoli 1824, *Systema Vegetabilium, editio decima sexta* 5(Suppl.): 5. 1828, *Révision des Graminées* 1: 68. 1829, *Reliquiae Haenkeanae* 1(4-5): 242. 1830, *Révision des Graminées* 1: 267, t. 45. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 211. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 63, 66. 1840, *Nomenclator Botanicus. Editio secunda* 2: 768. 1841, *Tentamen Florae Abyssinicae ...* 2: 394. 1850, *Synopsis Plantarum Glumacearum* 1: 156, 176. 1854, *Beitrag zur Flora Aethiopiens ...* 302, 311. 1867, *The Flora of British India* 7: 251. 1896 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 92. 1922, *Revue internationale de botanique appliquée et d'agriculture tropicale* 14(150): 113. 1934, *Brittonia* 23(3): 293-324. 1971, *Taxon* 34: 159-164. 1985, *Blumea* 35: 441. 1991.

S. pinetorum Weakley & P.M. Peterson

America, U.S. See *Sida* 18(1): 258, f. 1a-e, 2. 1998.

S. platensis Parodi

Argentina. See *Revista de la Facultad de Agronomía y Veterinaria* 6(2): 133, f. 7. 1928.

S. poaeoides Hack. (*Muhlenbergia plumbea* (Trin.) Hitchc.; *Vilfa plumbea* Trin.)

Mexico. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 98. 1840 and *Repertorium Specierum Novarum Regni Vegetabilis* 10(243-247): 167. 1911, *Contributions from the United States National Herbarium* 17(3): 296. 1913.

S. podotrichus Chiov.

Africa. See *Annuario del Reale Istituto Botanico di Roma* 6: 168. 1896.

S. potosiensis Wipff & S.D. Jones (*Sporobolus airoides* subsp. *potosiensis* J.J. Ortíz)

Mexico. See *Sida* 16(1): 165, 167, f. 1-4. 1994.

S. psammophilus Stent & Rattray (*Sporobolus micranthus* (Steud.) T. Durand & Schinz)

Africa. See *Synopsis Plantarum Glumacearum* 1: 176. 1855 [1854] and *Proceedings of the Rhodesia Scientific Association* 32: 51. 1933.

S. pseudairoides Parodi

South America, Paraguay, Argentina. Perennial bunchgrass, growing in dense and tight clumps, edge of marsh, along roadsides, see *Revista de la Facultad de Agronomía y Veterinaria* 6(2): 144, f. 11. 1928.

S. pulchellus R. Br. (*Agrostis pulchella* (R. Br.) Roth ex Roemer & Schultes; *Vilfa pulchella* (R. Br.) Trin., nom. illeg., non *Vilfa pulchella* C. Presl)

Australia. Perennial or annual, ephemeral, caespitose, erect, clumped, ligule a fringe of hairs, leaf blades rigid and flat or keeled, inflorescence pyramidal with slender branches spreading in whorls, spikelets lustrous and stalked, lower glume elliptic or lanceolate, upper glume lanceolate, lemma lanceolate acute 1-nerved, 3 anthers, grain trigonous, in open forest, rocky hillsides, along roadsides, deep sands, sandstone, similar to *Sporobolus lenticularis*, see *Prodromus Florae Novae Hollandiae* 1: 170. 1810, *Systema Vegetabilium* 2: 367. 1817, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 59. 1840 and *Blumea* 35: 452. 1991.

S. pungens Kunth (*Agrostis virginica* L.; *Sporobolus virginicus* (L.) Kunth)

America. See *Species Plantarum* 1: 63. 1753, *Révision des Graminées* 1: 68. 1829.

S. purpurascens (Sw.) Hamilton (*Agrostis purpurascens* Sw.; *Sporobolus muelleri* (E. Fourn.) Hitchc.; *Sporobolus purpurascens* (Sw.) Kuhl., nom. illeg., non *Sporobolus purpurascens* (Sw.) Ham.; *Vilfa grisebachiana* E. Fourn.; *Vilfa muelleri* E. Fourn.; *Vilfa liebmanni* E. Fourn.; *Vilfa purpurascens* (Sw.) P. Beauv.)

West Indies, Honduras. Perennial, caespitose, erect, sometimes slightly geniculate, glabrous sometimes branched from the lower nodes, leaves basal, tapering leaf blades flat or involute, leaf sheaths compressed and keeled, ligule a line of hairs, panicle cylindrical and narrow with ascending or appressed branches verticillate, spikelets shortly pedicellate, glumes unequal, first glume lanceolate and acute, second glume ovate acuminate, lemma and palea ovate and acute, 2 lodicules, 3 stamens, in semiarid regions, open riverside, grasslands, on roadsides, along animal trails, see *Nova Genera et Species Plantarum seu Prodromus* 25. 1788, *Essai d'une Nouvelle Agrostographie* 16, 182. 1812, *Prodromus Plantarum Indiae Occidentalis* 5. 1825, *Mexicanas Plantas* 2: 98, 100. 1886 and *Comissão de Linhas Telegraficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67(Bot. 11): 92. 1922, *North American Flora* 17(7): 490. 1937, *Brittonia* 23(3): 293-324. 1971.

in English: purple dropseed

S. pyramidalis P. Beauv. (*Agrostis indica* sensu Forssk.; *Agrostis owariensis* Schult.; *Agrostis pyramidata* Lam.; *Sporobolus argutus* (Nees) Kunth; *Sporobolus hypseloteros* Chiov. ex Chiarugi; *Sporobolus indicus* f. *pyramidalis* (P. Beauv.) Peter; *Sporobolus indicus* (L.) R. Br. var. *pyramidalis* (P. Beauv.) Veldkamp; *Sporobolus jacquemontii* Kunth; *Sporobolus rueppellianus* Fresen.; *Vilfa arguta*

Nees; *Vilfa jacquemontii* (Kunth) Trin.; *Vilfa pyramidalis* Steud.; *Vilfa pyramidalis* (P. Beauv.) Trin. ex Steud.)

Tropical Africa. Perennial, densely tufted, tall, tough, coarse, robust, vigorous, unbranched, rhizomatous, leaf sheath rounded and smooth, basal leaf sheaths more or less papery, ligule inconspicuous, linear leaf blades folded or rolled, mature leaf blades tough, contracted panicle not spike-like, branches erect and usually spreading at maturity and not whorled, spikelets pointed, seed head resembles a rats tail, glumes subequal, first glume a minute scale, upper glume obtuse or erose, lemma lanceolate acute and scabrous, 2 lodicules, 3 stamens, pinkish to purplish anthers, grain truncate, a fetish plant, ornamental, famine food, grain edible collected in time of scarcity, good brooms from a collection of the inflorescences, vegetable salt from the ashes, desiccation-sensitive grass, a nonresurrection plant, aggressive noxious weed of pasture, invasive, low palatability to unpalatable to very unpalatable, low grazing value because of its toughness, native pasture species, usually not consumed by the cattle, grains and seed head eaten by baboons, well adapted to the subtropical climate, useful for erosion control in disturbed areas, weedy species indicator of overgrazed and disturbed areas, common on poor soils, campos, along the forest edges, field borders, stream banks, in relatively fertile disturbed areas, disturbed grassy places, in overgrazed pastures, trampled veld, vleis, sandy silty soil, ruderals, in coastal and subcoastal regions, water courses, uncultivated lands, in lower rainfall areas or in areas of good rainfall, savannah, along roadsides, moist cold montane grasslands, sour grasslands, highveld grasslands, grassy slopes, heavy clay, near dams, shallow rocky soil, amongst rocks, periodically flooded areas, seasonally damp places, similar to *Sporobolus natalensis* and close to *Sporobolus indicus*, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 161. 1791, *Prodromus Florae Novae Hollandiae* 170. 1810, *Flore d'Oware* 2: 36, t. 80. 1816, *Mantissa* 199. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 395. 1829, *Révision des Graminées* 2: 427, pl. 127. 1831, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 215. 1833, *Museum Senckenbergianum* 2: 139. 1837, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 92. 1840, *Nomenclator Botanicus. Editio secunda* 2: 768. 1843 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 280, 291. 1931, *Manual of the Grasses of the West Indies* 84. 1936, *Webbia* 8: 95. 1951, *Kew Bulletin* 19: 287-293. 1965, *Taxon* 22: 163. 1973, *F.T.E.A. Gramin.* 373. 1974, *Bothalia* 18: 114-119. 1988, *Blumea* 35(2): 439. 1991, *Journal of Applied Entomology* 126(4): 188-193. May 2002, *African Journal of Ecology* 40(2): 201-204. June 2002, *African Journal of Ecology* Volume 42, Issue s1: 48-50. Aug 2004.

in English: cat's tail dropseed, catstail dropseed, giant rats grass, giant rats tail grass, giant rat's tail grass, whorled dropseed, cat's tail grass, narrow-plumed dropseed

in Arabic: sorak, soraq

in Benin: koutèchimou

in East Africa: achuku (Luo), ajur (Acholi)

in Ghana: saga

in Guinea: kono lakbin, kono lafoni, kononin na fanin, tiri, sossidibin (Malinké); fonié tioli (Poular), kon nin nabin (Konia)

in Liberia: ni mo

in Mali: burdi, gansegui, tura basa, wolo kaman

in Nigeria: cekelgol, gerorce, ilulo enyinnono, jiru, iya okolo, jaja karfi, motisan, tsintsiya, tsuntsiar gero

in Senegal: menu, tura basa

in Sierra Leone: filirasaxai, foni, kebwere, koebwere, koligbiti, kuradagi, kuradaji, mbowihei, mendo, pelis, sonta tusip

in southern Africa: katstertfynsaadgras, katstert-fynsaadgras, smalpluimfynsaadgras, taaipol, vleigras; mixiki-jane (Tsonga)

in Upper Volta: ganga, gansacé, gansaga, moki piegu, nama nazan, sompiga, tura baoa, wolo kaman

in Yoruba: motisan, sekogbona, ida odo

S. pyramidatus (Lam.) Hitchc. (*Agrostis plumosa* Ten.; *Agrostis pyramidalis* Rich. ex Steud.; *Agrostis pyramidata* Lam.; *Sporobolus affinis* Kunth; *Sporobolus argutus* (Nees) Kunth; *Sporobolus argutus* (Nees) Kunth f. *purpurascens* Hack.; *Sporobolus argutus* var. *tuberculatus* (Hack.) Hack.; *Sporobolus arkansanus* Nutt. ex Vasey; *Sporobolus coromandelianus* (Retz.) Kunth; *Sporobolus domingensis* (Trin.) Kunth; *Sporobolus indicus* (L.) R. Br.; *Sporobolus patens* Swallen; *Sporobolus pulvinatus* Swallen; *Sporobolus sabeanus* Buckley ex Vasey; *Sporobolus tuberculatus* Hack.; *Vilfa agrostioidea* Buckley; *Vilfa ambigua* Steud.; *Vilfa arguta* Nees; *Vilfa arkansana* Trin.; *Vilfa domingensis* Trin.; *Vilfa richardii* Steud.; *Vilfa sabeana* Buckley; *Vilfa subpyramidata* Trin.) (Texas, San Saba Co.)

Southwestern U.S., Argentina, Paraguay, Brazil, Bolivia. Perennial or annual, tufted, tussocky, geniculately ascending to erect, decumbent, creeping, spreading, leaves mostly basal, leaf sheaths more or less compressed and keeled, ligule ciliate, leaf blades tapering and rather thin, inflorescence erect, panicle narrowly pyramidal with branches spreading at maturity and the lower ones verticillate to subverticillate, minute spikelets slightly laterally flattened, glumes unequal, lower glume lanceolate, upper glume ovate-lanceolate, lemma and palea ovate and acute, very small lodicules, 3 stamens, fodder, salt-tolerant species, common in arid regions, poor soils, along sea shores, thorn scrub, slopes, dry coastal zones, along roadsides, in a saline scrub community, on sandy or gravelly soils, dry valleys,

disturbed areas, openings, salt flats, see *Species Plantarum* 63. 1753, *Observationes Botanicae* 4: 19. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 161. 1791, *Prodromus Florae Novae Hollandiae* 170. 1810, *Flora Napolitana* 1: lix. 1811, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 59. 1821, *Révision des Graminées* 1: 68. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 395. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 214-215. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 61, 64, 92. 1840, *Synopsis Plantarum Glumacearum* 1: 153. 1854, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 88, 90. 1862, *Contributions from the United States National Herbarium* 3(1): 61. 1892 and *Anales del Museo Nacional de Buenos Aires* 13: 470, t. 13. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 90. 1911, *Man. Grass. U.S.* 957. 1935, *Manual of the Grasses of the West Indies* 84. 1936, *Journal of the Washington Academy of Sciences* 31(8): 351-352, f. 4-5. 1941, *Brittonia* 23(3): 293-324. 1971, *Fontqueria* 44: 143. 1996.

in English: whorled dropseed, pyramidal dropseed grass

in Mexico: pasto zacate de agua, zacatón, zacatón piramidal

S. quadratus Clayton

Kenya. Perennial, tufted, erect, leaf blades woolly at the collar, basal sheaths papery to subcoriaceous, panicle densely spiciform, primary branches crowded erect appressed, spikelets narrowly lanceolate-oblong, oblong lower glume obtuse to truncate, elliptic upper glume acute, elongate lemma-tip, grain broadly obovoid to square, in heavily grazed grassland, see *Kew Bulletin* 19: 290. 1965.

S. racemosus Vasey (*Muhlenbergia ramulosa* (Kunth) Swallen; *Muhlenbergia wolfii* (Vasey) Rydb.; *Sporobolus wolfii* Vasey; *Vilfa ramulosa* Kunth)

Mexico. See *Nova Genera et Species Plantarum* 1: 137. 1815 [1816], *Bulletin of the Torrey Botanical Club* 10: 52. 1883, *Bulletin of the Torrey Botanical Club* 14: 9. 1887 and *Bulletin of the Torrey Botanical Club* 32(11): 600. 1905, *Contributions from the United States National Herbarium* 29(4): 205. 1947, *Systematic Botany Monographs* 31: 1-109. 1991.

S. ramosissimus Kunth (*Eragrostis airoides* Nees; *Vilfa ramosissima* (Kunth) Trin.)

Brazil. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 509-510. 1829, *Révision des Graminées* 2: 269, t. 46. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 58. 1840.

S. ramulosus (Kunth) Kunth (*Muhlenbergia ramulosa* (Kunth) Swallen; *Vilfa ramulosa* Kunth)

South America. See *Nova Genera et Species Plantarum* 1: 137. 1815 [1816], *Révision des Graminées* 1: 68. 1829 and *Contributions from the United States National Herbarium* 29(4): 205. 1947, *Fieldiana: Botany, New Series* 4: 1-608. 1980.

S. rangei Pilg.

Tropical East Africa. Perennial, erect, robust, rhizomatous or stoloniferous, leaf sheaths hard, found near water courses, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43: 385. 1909.

S. recurvatus Boechat & Longhi-Wagner

Brazil. See *Bradea, Boletim do Herbarium Bradeanum* 6(20): 177, f. 2. 1993.

S. reflexus Boechat & Longhi-Wagner

South America, Brazil. Moist places, see *Iheringia, Série Botânica* 44: 38, f. 10-11. 1994.

S. regis I.M. Johnst. (*Sporobolus airoides* subsp. *regis* (I.M. Johnst.) Wipff & S.D. Jones)

Mexico. See *Explorations and Surveys for a Railroad Route* 7: 21. 1856 and *Journal of the Arnold Arboretum* 24: 393. 1943, *Sida* 16(1): 164. 1994.

S. regularis Mez (*Sporobolus micranthus* (Steud.) T. Durand & Schinz)

Cameroon. Tufted, leaves ciliate, see *Synopsis Plantarum Glumacearum* 1: 176. 1855 [1854] and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 299. 1921.

S. richardsonis (Trin.) Merr. (*Muhlenbergia richardsonis* (Trin.) Rydb.; *Vilfa richardsonis* Trin.)

America. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 103. 1840 and *Rhodora* 4(39): 46. 1902, *Bulletin of the Torrey Botanical Club* 32(11): 600. 1905, *Contributions to Western Botany* 14: 12. 1912.

S. rigens (Trin.) E. Desv. (*Diachyrium arundinaceum* Griseb.; *Diachyrium rigens* (Trin.) Mez; *Epicampes arundinacea* (Griseb.) Hack. ex Stuck.; *Epicampes arundinacea* (Griseb.) Hack.; *Epicampes rigens* (Trin.) Phil., nom. illeg., non *Epicampes rigens* Benth.; *Sporobolus arundinaceus* (Griseb.) Kuntze, nom. illeg., non *Sporobolus arundinaceus* (Trin.) Kunth; *Vilfa grandiflora* Nees ex Steud.; *Vilfa rigens* Trin.; *Vilfa rigens* Thurb. ex S. Watson, nom. illeg., non *Vilfa rigens* Trin.)

South America, Argentina, Chile. Perennial, coarse, rhizomatous, solid cylindrical leaf blades, rigid leaves, dense panicle spike-like, forage species, drought resistant, fiber from the stems for thatching and matting, common in arid and semiarid regions, dry areas, dunes, see *Species Graminum* 3: t. 250. [1829-1830], *Flora Chilena* 6: 295. 1854, *Synopsis Plantarum Glumacearum* 1: 158. 1854, *Abhandlungen der Königlich Gesellschaft der Wissenschaften zu*

Göttingen 19: 257-258, t. 2, f. 8. 1874, *Geological Survey of California, Botany* 2: 276. 1880, *Revisio Generum Plantarum* 3(2): 369. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 107. 1904, *Revista de la Facultad de Agronomía y Veterinaria* 6(2): 133. 1916, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 300. 1921, *Flora de la Provincia de Buenos Aires* 4(2): 39. 1970, *Kurtziana* 24: 189. 1995.

in Argentina: junquillo, junco

S. rigens (Trin.) E. Desv. var. **atacamensis** (Parodi) Asteg. (*Sporobolus rigens* f. *atacamensis* Parodi)

Chile. See *Flora Chilena* 6: 295. 1854 and *Revista de la Facultad de Agronomía y Veterinaria* 6(2): 133. 1916, *Kurtziana* 24: 189. 1995.

S. rigens (Trin.) E. Desv. var. **expansa** E. Méndez

Chile, Argentina. See *Flora Chilena* 6: 295. 1854 and *Boletín de la Sociedad Argentina de Botánica* 30(1-2): 15-17, f. 2. 1994.

S. rigens (Trin.) E. Desv. var. **rigens**

Chile.

S. robustus Kunth (*Sporobolus robustus* sensu Chippind., non Kunth; *Vilfa robusta* Trin.; *Vilfa robusta* (Kunth) Trin.)

Western Africa, Mauritania, Senegal, Namibia. Perennial, tufted, stoloniferous, halophytic, longer branches decumbent, often rooting at the nodes, tolerates slightly saline soils, used for handicrafts and to make the traditional fishing gear and mats, fiber from the stems for thatching and matting, found on riverbanks, salty soils, salt marshes, salt spray zones, brackish soil, sand dunes, along dry riverbeds, seashores, estuaries, littoral, deserts and xeric shrublands, in the flooded areas, lagoons, see *Révision des Graminées* 2: 425. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 54. 1840.

in Gambia: wontokado

in Guinea: soufé (Soussou)

in Senegal: dambur, dambus, darak, haiselle

in Sierra Leone: boncho

S. rueppellianus Fresen. (*Sporobolus pyramidalis* P. Beauv.; *Vilfa rueppelliana* (Fresen.) Steud.) (named for the German explorer [Wilhelm Peter] Eduard [Simon] Rüppell [Rüppel], 1794-1884, zoologist, traveler and botanical collector; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 190. 1965; A. Lasègue, *Musée botanique de Benjamin Delessert*. 333, 437, 504 Paris 1845)

Africa, Nigeria, Abyssinia. See *Flore d'Oware* 2: 36, t. 80. 1816, *Museum Senckenbergianum* 2: 139. 1837, *Nomenclator Botanicus. Editio secunda* 2: 768. 1841.

S. ruspolianus Chiov.

Somalia, Ethiopia. Perennial, thin, loosely tufted, wiry, knotty base, shrubby or subshrubby, hard, woody, slender, branched from the lower nodes, leaf sheaths not imbricate, lower sheaths persistent, slender leaves flat and narrow, whitish cataphylls, stoloniferous, long creeping stolons, open or contracted ovate panicle, spikelets densely clustered, scabrid glumes acute or obtuse, lower glume narrowly lanceolate, upper glume oblong, lemma ovate lanceolate, useful for erosion control, grazed, seasonally flooded areas, calcareous soil, gypsum, open deciduous bushland, similar to *Sporobolus helvolus*, see *Flora of Ethiopia and Eritrea* 7: 155. 1995.

in Somalia: sifar

S. salsus Mez

Namibia. Perennial, rhizomatous, large spikelets, found in seasonally flooded areas, along or near rivers, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 296. 1921, *Proceedings of the Rhodesia Scientific Association* 32: 50. 1933.

S. sanguineus Rendle (*Sporobolus rhodesiensis* Stent & Rattray)

Tropical Africa, Swaziland. Perennial, tufted, rhizomatous, leaves margins ciliate, panicle linear and whorled, forage for stock, grows in stony areas, hillsides, rocky outcrops, slopes, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 209. 1899.

in English: crucifer grass

S. scabridus S.T. Blake

Queensland, Australia. Perennial, erect, densely caespitose, leaf blades flat linear, ligule a ciliate membrane, inflorescence axis and branches distinctly scabrous, spikelets more or less clustered, nerveless acute or obtuse lower glume linear or elliptic, upper glume lanceolate, obtuse lemma 1-nerved, 3 anthers, common in brigalow vegetation, similar to *Sporobolus contiguus*, *Sporobolus actinocladus* and *Sporobolus partimpatens*, see *Papers from the Department of Botany, University of Queensland* 1(18): 5. 1941.

S. seineri Mez

Africa, Namibia. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 294. 1921.

S. senegalensis (Pers.) Chiov. (*Agrostis barbata* var. *senegalensis* Pers.)

Africa. See *Synopsis Plantarum* 1: 76. 1805 and *Plantae Novae vel Minus Notae e regione Aethiopica* 26. 1928 [1911-1951, series published in different journals, also *Plantae Novae vel Minus Notae ex Aethiopia*].

S. senegalensis (Pers.) Chiov. var. **microstachyus** Chiov.

Africa, Somalia. See *Plantae Novae vel Minus Notae e regione Aethiopica* 26. 1928 [1911-1951].

S. serotinus A. Gray (*Muhlenbergia uniflora* (Muhl.) Fernald; *Poa uniflora* Muhl.)

U.S. See *Descriptio uberior Graminum* 151. 1817, *A Manual of the Botany of the Northern United States* 577. 1848 and *Rhodora* 29(337): 10. 1927.

S. sessilis B.K. Simon

Asia, Indonesia, Australia. Perennial, erect, caespitose, leaf blades filiform or linear, ligule a ciliate membrane, open inflorescence paniculate, spikelets at the base of the inflorescence branches, lower glume obtuse nerveless, upper glume lanceolate, lemma lanceolate acute 1-nerved, 2 or 3 anthers, coastal, woodland and grassland, similar to *Sporobolus diandrus* and *Sporobolus laxus*, see *Australian Systematic Botany* 12(3): 408, 421, 430, f. 10C, 19. 1999.

S. setulosus (Trin.) A. Terracc. (*Urochondra setulosa* (Trin.) C.E. Hubb.; *Vilfa setulosa* Trin.)

Africa. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 55. 1840, *Annuario del Reale Istituto Botanico di Roma* 5: 95. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 292. 1921, *Scientific Monograph [Imperial Council of Agricultural Research]* 5: 205. 1935, *Hooker's Icones Plantarum* 35: t. 3457. 1947.

S. silveanus Swallen

U.S., Texas. Grasslands, open areas, open woods, see *Journal of the Washington Academy of Sciences* 31(8): 350, f. 3. 1941.

in English: Silveanus dropseed, Sylveanus dropseed, Silveus' dropseed, Silveus dropseed

S. simplex Scribn. (*Muhlenbergia filiformis* (Thurb. ex S. Watson) Rydb.; *Muhlenbergia filiformis* var. *fortis* E.H. Kelso; *Muhlenbergia simplex* (Scribn.) Rydb., nom. illeg., non *Muhlenbergia simplex* (Spreng.) Kunth; *Sporobolus simplex* var. *thermale* Merr.; *Vilfa depauperata* var. *filiformis* Thurb. ex S. Watson)

U.S. See *United States Geological Expolration [sic] of the Fortieth Parallel. Botany* 376. 1871, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 48-49, f. 6. 1898 and *Rhodora* 4(39): 48. 1902, *Bulletin of the Torrey Botanical Club* 32(11): 600. 1905, *Rhodora* 38(452): 298. 1936.

S. indicus Stapf ex T. Cooke

Asia, India, Sind. See *The Flora of the Presidency of Bombay* 2: 1018. 1908.

S. smutsii Stent (dedicated to the South African amateur botanist Jan Christiaan Smuts, 1870-1950 (d. near Irene, Transvaal), philosopher, plant collector, with the British (b. Wark-on-Tyne, Northumberland) botanist John Hutchinson, 1884-1972 (d. Kew, Surrey), wrote "The vegetation of Schoemanskloof, eastern Transvaal." *Kew Bulletin* 417-427.

1933; see Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 326-327. 1981; Gilbert Westacott Reynolds, *The Aloes of South Africa*. Balkema, Rotterdam 1982)

South Africa, Transvaal, Namibia. See *Bothalia* 1(4): 281, t. 7. 1924.

S. somalensis Chiov. (*Sporobolus variegatus* Stapf)

Tropical Africa, Somalia, Ethiopia. Perennial, creeping, compact, cushions forming, leaf sheaths imbricate, flat leaf blades stiff and pungent, stoloniferous, flowering culms slender, stout scaly stolons, panicle ovate and open to loose, lower glume narrowly oblong, upper glume obtuse and oblong, 3-nerved lemmas ovate-oblong and erose at the tip, grasslands, alluvial soils, shrublands, limestones, open *Acacia* woodland, see *Annuario del Reale Istituto Botanico di Roma* 6: 169. 1896 and *Kew Bulletin* 1907: 218. 1907.

in Somalia: dihi

S. spicatus (Vahl) Kunth (*Agrostis spicata* Vahl; *Agrostis virginica* Forssk., nom. illeg., non *Agrostis virginica* L.; *Vilfa spicata* P. Beauv.)

Tropical East Africa, Kenya, Namibia, Botswana. Perennial, tufted, rhizomatous and long stoloniferous, spiky, wiry, tough, halophytic, decumbent creeping habit, creeping and ascending, mat-forming, basal leaf sheaths papery, rigid and pointed leaves flat or convolute, spicate inflorescence cylindrical and narrow, slender panicle spike-like not whorled, spikelets clustered and central axis not visible, glumes ovate to lanceolate, lemma oblong-elliptic, pollen purplish, grain eaten in time of scarcity, foliage with a salty taste, high palatability, low to medium grazing value, grazed by donkeys, salt tolerant, coloniser, sand dune stabilizer, occurs in alkaline sandy soils, hard clay, pans, on saline lakeshores, salt lands, places moist with salty water, salt swamps and salt plains, hot springs, coastal dunes, sandy littoral, brackish sandy soil, subkhah, muddy shorelines, floodplains, alluvial plain, sandy deserts, sand bars, seasonally flooded grasslands, on open grasslands, riverbeds, coastal grasslands, alkaline grasslands, dry grassland, see *Species Plantarum* 1: 61-63. 1753, *Flora Aegyptiaco-Arabica* 20: 1775. 1775, *Symbolae Botanicae, ...* 1: 9. 1790, *Essai d'une Nouvelle Agrostographie* 16, 182. 1812, *Révision des Graminées* 1: 67. 1829, A. Deflers, *Voyage au Yemen* 219. Paris 1889 and *Contr. U.S. Natl. Herb.* 12: 119. 1908, *F.T.E.A. Gramin.* 369. 1974, *Austral. Ecology* 25(2): 140-149. Apr 2000, Jude M. Mathooko and Samuel T. Kariuki, "Disturbances and species distribution of the riparian vegetation of a Rift Valley stream." *African Journal of Ecology* 38(2): 123-129. June 2000, *African Journal of Ecology* 40(1): 10-17. Mar 2002, Godfrey A. Olukoye, Wellington N. Wamicha and Jenesio I. Kinyamario, "Assessment of the performance of exotic and indigenous tree and shrub species for rehabilitating saline soils of Northern Kenya." *African Journal of Ecology* 41(2): 164-170. June 2003, *Journal of*

Biogeography 31(1): 5-18. Jan 2004, G.M. Ashley et al. "Sedimentation and recent history of a freshwater wetland in a semiarid environment: Lobo Swamp, Kenya, East Africa." *Sedimentology* 51(6): 1301-1321. Dec 2004, *African Journal of Ecology* 43(1): 29-34. Mar 2005.

in English: salt grass, rat's tail

in Arabic: akrich, beurgu, izizig, samma, samna

in Mali: beurgu

in Mauritania: akrich, izizig

in Niger: afar, dakesa, ontul, rikiri, tadrant, tâdrent

in Nigeria: wutsiyar beeràà

in Senegal: ndamseki

in Somalia: afrukh

S. spiciformis Swallen

North America, Mexico. See *Proceedings of the Biological Society of Washington* 56: 78. 1943.

S. splendens Swallen

Mexico. Perennial, densely caespitose, forming large tussocks, internodes solid, open panicle, spikelets purplish, forage, in saline soils, see *Boletín de la Sociedad Botánica de México* 23: 35-37, f. 6. 1958 [1959].

S. sporobolus (Spreng.) Kuntze (*Agrostis sporobolus* Spreng.; *Sporobolus aeneus* (Trin.) Kunth; *Sporobolus sprengelii* Kunth; *Vilfa sporobolus* (Spreng.) Trin.)

South America, Brazil. See *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* 46. 1819, *De Graminibus unifloris et sesquifloris* 160. Petropoli 1824, *De Graminibus Paniceis* 23. 1826, *Révision des Graminées* 1: 68. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 213. 1833, *Revisio Generum Plantarum* 3(3): 369. 1898.

S. sprengelii Kunth (*Agrostis sporobolus* Spreng.; *Sporobolus aeneus* (Trin.) Kunth)

South America. Flat leaf blades, panicle with long flexuous branches naked at the base, smooth or sparsely scaberulous spikelets, lower glume obtuse or acute, see *Novi Proventus Hortorum Academicorum Halensis et Berolinensis* 46. 1819, *De Graminibus unifloris et sesquifloris* 160. Petropoli 1824, *De Graminibus Paniceis* 23. 1826, *Révision des Graminées* 1: 68. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 213. 1833, *Revisio Generum Plantarum* 3(3): 369. 1898 and *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990.

S. stachydanthus A. Rich. (*Sporobolus piliferus* (Trin.) Kunth; *Triachyrum stachydanthum* (A. Rich.) Asch.; *Vilfa pilifera* Trin.; *Vilfa stachydantha* (A. Rich.) Steud.)

Abyssinia. See *De Graminibus unifloris et sesquifloris* 157. 1824, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 211. 1833, *Tentamen Florae Abyssinicae ... 2*: 394. 1850, *Synopsis Plantarum Glumacearum* 1: 156. 1854,

Beitrag zur Flora Aethiopiens ... 302, 311. 1867 and Blumea 35: 393-458. 1991.

S. stapfianus Gand. (*Sporobolus festivus* Hochst. ex A. Rich.)

Tropical East Africa, South Africa. Perennial, caespitose or densely caespitose, slender, ligule a ring of hairs, basal sheaths herbaceous, woolly hairs between the fibers of the basal sheaths, oval open panicle with dichotomous branching, shiny spikelets, lower glume narrowly oblong, elliptic upper glume acute, lemma acute, livestock forage grass, palatable, low grazing value, leaves revive after desiccation, a resurrection grass able to survive total desiccation or almost total dehydration, extended and severe drought stress tolerant, common in sandy open areas, shallow soils, rocky habitats, well-drained soils, wooded grassland, near streams, on sandy roadsides, deciduous bushland, often confused with *Sporobolus festivus*, see *Tentamen Florae Abyssinicae ... 2*: 398. 1850, *Synopsis Plantarum Glumacearum* 1: 158. 1854 and *Bulletin de la Société Botanique de France* 66(7): 302. 1919 [1920].

in English: fibrous dropseed

in South Africa: veselfynsaadgras, fynblousaadgras

S. stelliger Duvign. & Kiwak

Africa. See *Bulletin de la Société Botanique de Belgique* 96: 127. 1963.

S. stenostachys Peter

Africa. See *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 1(Anh.): 86. 1930.

S. stocksii Bor (*Sporobolus iocladoides* Chiov. ex Chiarugi; *Sporobolus nervosus* Hochst.)

Asia, Africa, India. See *Flora* 38: 202. 1855, *Beitrag zur Flora Aethiopiens ... 303. 1867 and Kew Bulletin* 1948: 45. 1948, *Webbia* 8: 96. 1951, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 633-688. 1960.

S. stolzii Mez

Tropical Africa, Malawi, Senegal. Annual, sometimes very short-lived, erect, tufted, leaf margins ciliate, inflorescence whorled, viscid, lower glume linear-lanceolate, globose grain, browsed, good pasture taken by all stock, abundant under trees, along trails and roadsides, sandy soil, waste places, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 297. 1921.

in Senegal: ndiisis, nduyuy

S. subbulbosus Arechav. (*Sporobolus adustus* (Trin.) Roseng., B.R. Arrill. & Izag.; *Sporobolus aeneus* var. *subbulbosus* (Arechav.) Parodi)

Uruguay. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 213. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 80. 1840, *Anales del*

Museo Nacional de Montevideo 1: 343, t. 35. 1896 and *Revista de la Facultad de Agronomía y Veterinaria* 6(2): 161, f. 16. 1928, *Gramíneas Uruguayas* 270, f. 112. 1970.

S. subtilis Kunth (*Sporobolus subtilis* F. Muell., nom. illeg., non *Sporobolus subtilis* Kunth; *Vilfa subtilis* (Kunth) Trin.)

Tropical Africa, Madagascar, Sierra Leone, Zambia. Perennial, wiry, base not fibrous, rhizomatous or stoloniferous, creeping slender rhizomes, more or less tufted, panicle with dichotomous branching, present rachilla extension, found in shallow soil, sandy places, moist areas, see *Révision des Graminées* 2: 421, t. 124. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 88. 1840, *Fragmenta Phytographiae Australiae* 8: 140. 1873.

in English: misty dropseed.

S. temomaiemensis Judziewicz & P.M. Peterson

Northern South America, Suriname. Annual, densely tufted, delicate, ligule a aciliate membrane, leaf blades ascending and arching, inflorescence an open pyramidal panicle, vulnerable species, related to *Sporobolus monandrus* Roseng., B.R. Arrill. & Izag., see *Systematic Botany* 14(4): 525-528, f. 1. 1989, *Flora of the Guianas. Series A, Phanerogams* 8: 612-613. 1990.

S. tenacissimus (L.f.) P. Beauv. (*Agrostis tenacissima* L.f.; *Sporobolus tenacissimus* (L.f.) J. Presl)

South America, Peru. See *Supplementum Plantarum* 107. 1781, *Essai d'une Nouvelle Agrostographie* 26. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 393. 1829, *Reliquiae Haenkeanae* 1(4-5): 242. 1830, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Germanicae Naturae Curiosorum* 19: Suppl. 1: 9. 1841, *Novorum Actorum Academiae Caesareae Leopoldinae-Carolinae Germanicae Naturae Curiosorum* 141. 1843.

S. tenellus (Spreng.) Kunth (*Ehrharta tenella* Spreng.; *Sporobolus tenellus* Balansa, nom. illeg., non *Sporobolus tenellus* (Spreng.) Kunth)

South Africa. Perennial, rhizomatous, mat-forming, long and branched rhizome, leaves mostly basal, panicle with dichotomous branching, spikelets solitary and terminal, found in moist areas, depressions, shallow soils, see *Tentamen Supplementi ad Systematis Vegetabilium, ...* 11. 1828, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 215. 1833, *Journal de Botanique (Morot)* 4(8): 164. 1890.

in South Africa: pankweek

S. tenuis Stapf ex A. Chev.

Africa. See *Denkschriften der Königlich-Baierischen Botanischen Gesellschaft in Regensburg* 2: 26. 1822, *Revisio Generum Plantarum* 3(2): 369. 1898 and *Bulletin de l'Herbier Boissier, sér. 2, 4(3): 278. 1904, Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 344. 1909, *Bulletin du Muséum d'Histoire Naturelle* 20: 469. 1948.

S. tenuispica Hack. (*Eragrostis spicata* Vasey)

Paraguay. See *Botanical Gazette* 16(5): 146. 1891 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 344. 1909.

S. tenuissimus (Mart. ex Schrank) Kuntze (*Agrosticula muralis* Raddi; *Agrostis minutiflora* (Trin.) Steud.; *Aira tenuissima* (Mart. ex Schrank) Spreng.; *Panicum tenuiflorum* Schrank, nom. illeg., non *Panicum tenuiflorum* R. Br.; *Panicum tenuissimum* Mart. ex Schrank; *Sporobolus mangaloricus* Hochst. ex Miq.; *Sporobolus minutiflorus* (Trin.) Link; *Sporobolus muralis* (Raddi) A.S. Hitchc. & Chase; *Sporobolus tenuissimus* (Mart. ex Schrank) Hack., nom. illeg., non *Sporobolus tenuissimus* (Mart. ex Schrank) Kuntze; *Vilfa mangalorica* (Hochst. ex Miq.) Hochst. ex Steud.; *Vilfa mangalorica* Hochst. ex Steud.; *Vilfa minutiflora* Trin.)

Pantropical. Annual, weak, shining, compressed, caespitose, delicate, erect, slender, glabrous, striate, branched, leaf sheaths compressed and keeled, ligule ciliolate, leaf blades flat and long-acuminate, leaves basal and all along the culm, inflorescence delicate and diffuse, open cylindrical narrow oblong panicle much branched with branches very slender and ascending, spikelets minute and long pedicellate, glumes unequal, lower glume oblong, upper glume ovate-oblong and acute to subacute, lemma and palea broadly ovate, very small lodicules, 3 stamens, grain truncate, weed species, cultivated as an ornamental, ruderal, disturbed places, along roadsides, wet prairies, coastal regions, meadows, clearings, gardens, cultivated fields, waste places, see *Denkschriften der Königlich-Baierischen Botanischen Gesellschaft in Regensburg* 2: 26. 1822, *Agrostografia Brasiliensis* 33t. 1, f. 2. 1823, *De Graminibus unifloris et sesquifloris* 158. 1824, *Sylloge Plantarum Novarum* 1: 192. 1824, *Systema Vegetabilium, editio decima sexta* 1: 276. 1825, *Hortus Regius Botanicus Berolinensis* 1: 88. 1827, *Analecta botanica indica ...* 2: 36. 1851, *Synopsis Plantarum Glumacearum* 1: 159. 1854, *Revisio Generum Plantarum* 3(2): 369. 1898 and *Bulletin de l'Herbier Boissier, sér. 2, 4(3): 278. 1904, Contributions from the United States National Herbarium* 18(7): 368. 1917, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979, *Acta Botanica Cubana* 4: 1-11. 1980.

in English: tropical dropseed

in India: thoma garica, thoma garika

S. teretifolius Harper

U.S., South and North Carolina, Georgia. Endangered or threatened species, found in wet savannahs and moist pine-lands, pinelands, pine savannahs, mesic savannahs, longleaf pine-wiregrass savannahs, in grasslands, bogs, pitcherplant bogs, riparian habitats, see *Bulletin of the Torrey Botanical Club* 33: 229-231. 1906.

in English: wire-leaved dropseed, wire-leaf dropseed, wire-leaf dropseed

S. testudinum Renvoize

Africa. A good fodder, see *Kew Bulletin* 15(3): 417. 1971.

S. tetragonus Bor

Asia. See *Kew Bulletin* 1949: 251. 1949.

S. texanus Vasey

U.S., Texas. Perennial, halophyte, useful for erosion control and for revegetation on reclamation projects, found in saline wetlands, marshes, see *Contributions from the United States National Herbarium* 1(2): 57. 1890.

in English: Texas dropseed

S. tharpii A.S. Hitchc. (*Agrostis airoides* Torr.; *Sporobolus airoides* (Torr.) Torr.) (dedicated to the American botanist Benjamin Carroll Tharp, 1885-1964, plant physiologist, professor of biology and botany, his works include "Texas parasitic fungi." *Mycologia*. 9(2): 105-124. 1917 and *The Vegetation of Texas*. Houston 1939, with Fred A. Barkley wrote "The genus *Ruellia* in Texas." *Amer. Midl. Nat.* 42: 1-86. 1949; see Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 733. Philadelphia 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Irving William Knobloch, compilation, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

U.S., Texas. Rare species, see *Annals of the Lyceum of Natural History of New York* 1(1): 151-152. 1824, *Explorations and Surveys for a Railroad Route 7*: 21. 1856 and *Proceedings of the Biological Society of Washington* 41: 161-162. 1928.

in English: Tharp dropseed, Tharp's dropseed, Padre island dropseed

S. thurberi Scribn. (*Muhlenbergia thurberi* (Scribn.) Rydb.)

U.S. See *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 48, f. 5. 1898 and *Bulletin of the Torrey Botanical Club* 32(11): 601. 1905.

S. torreyanus (Schult.) Nash (*Agrostis torreyana* Schult.; *Muhlenbergia torreyana* (Schult.) Hitchc.) (after the North American (b. New York) botanist John Torrey, 1796-1873 (d. New York), physician, chemist, professor of chemistry 1824-1827 (West Point) and 1827-1855 (New York), his writings include *Botany of New York*. Albany 1853 and *Plantae Frémontianae*. Washington and New York 1853, co-author with Asa Gray (1810-1888) of *A Flora of North America*. New York, London, Paris 1838-1843; see A. Hunter Dupree, in *D.S.B.* 13: 432-433. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 392. 1965)

U.S. See *Mantissa* 2: 203. 1824 and *A Manual of the Botany of the Northern United States* 107. 1901, *American Journal of Botany* 21(3): 136. 1934.

S. tourneuxii Coss. (for the French botanist Aristide-Horace Letourneux, 1820-1890, magistrate, malacologist,

1851-1876 and 1881-1890 in Algeria, 1876-1881 Alexandria, among his writings are *Étude botanique sur la Kabylie du Jurjura*. Paris 1871 and *Catalogue des Mollusques terrestres et fluviatiles recueillis dans le Département de la Vendée*. Paris 1869, with Jules René Bourguignat wrote *Prodrome de la malacologie terrestre et fluviatile de la Tunisie*. [France - Ministère de l'Instruction Publique, etc. Exploration scientifique de la Tunisie, etc.] 1887; see J.H. Barnhart, *Biographical notes upon botanists*. 2: 373. 1965; Stafleu and Cowan, *Taxonomic literature*. 2: 858-859. 1979; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 236. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 199. Oxford 1964; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ernest Saint-Charles Cosson (1819-1889), *Compendium florae atlanticae*. Paris 1881-1887 and *Répertoire alphabétique des principales localités mentionnées dans le Compendium et le Conspectus florae atlanticae* ... Par E. Cosson ... avec le concours de MM. L. Kralik, A. Letourneux, etc. 1882; Michel Charles Durieu de Maisonneuve (1796-1878), *Exploration scientifique de l'Algérie pendant les années 1840, 1841, 1842* publiée par ordre du gouvernement et avec le concours d'une commission académique. Sciences physiques. Botanique par MM. Bory de St.-Vincent et Durieu de Maisonneuve membres de la Commission scientifique d'Algérie. Paris 1846-1855[-1869]. The genus *Tournexia* Cosson, Asteraceae, is also dedicated to Henri René Letourneux de la Perraudière, 1831-1861)

North Africa, Algeria, Arabia, northwestern India. Perennial, shrubby, tough, woody or subwoody, much-branched, densely tufted, forming dense mats or glaucous cushions, hard basal leaf sheaths persistent, pungent leaves, leaf blades distichous with closely imbricate sheaths, inflorescence primary branches short and stiff, open or contracted ovate cylindrical panicle, scabrid spikelets, glumes subequal to more or less equal, lower glume ovate to lanceolate, upper glume ovate to elliptic, lemma oblong to elliptic, good grazing grass, found in saline soils, open bushlands, gypsum, stony and sandy plains, shallow soils, limestone and limestone hills, similar to *Sporobolus ruspolianus*, see *Bulletin de la Société Botanique de France* 36: 250. 1889.

in Somalia: guban gub, gorof

S. transvaalensis Gooss.

South Africa. See *Transactions of the Royal Society of South Africa* 26: 215, f. 26. 1938.

S. tremulus (Willd.) Kunth (*Agrostis tenacissima* Roxb.; *Agrostis tremula* Willd.; *Sporobolus geniculatus* Nees ex Aitch.; *Sporobolus orientalis* Thw. ex Trimen, non (Nees) Kunth; *Sporobolus virginicus* (L.) Kunth; *Vilfa geniculata* Nees ex Steud.; *Vilfa tremula* Trin.)

India, Sri Lanka, Thailand. Perennial, creeping, erect, smooth, branched to strongly branched, stoloniferous, rhizomatous, forming dense mats, ligule a ciliate membrane, leaves rigid and pointed, inflorescence spicate, panicle branches solitary, glumes membranous, palea entire, 3 stamens, grassland, wet places, lowlands, dry and arid zones, shrubland, swamps, saline waters, sandy soils, allied to *Sporobolus virginicus* (L.) Kunth, see *Species Plantarum* 1: 63. 1753, *Species Plantarum. Editio quarta* 1: 372. 1797, *Flora Indica; or Descriptions ...* 1: 318. 1820, *De Graminibus unifloris et sesquifloris* 155. 1824, *Révision des Graminées* 1: 67. 1829, *Synopsis Plantarum Glumacearum* 1: 156. 1853, James Edward Tierney Aitchison (1836-1898), *A Catalogue of the Plants of the Punjab and Sindh*. To which are added some others that, from their present geographical proximity, may be found hereafter to occur in the Punjab. 165. London 1869 and *Handb. Fl. Ceylon* 5: 263. 1900, *Grasses of Ceylon* 96. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 633. 1960.

S. trichodes Hitchc. (*Sporobolus capillaris* Vasey, nom. illeg., non *Sporobolus capillaris* Miq.)

Northern America, U.S. Forage, see *Contributions from the United States National Herbarium* 1(8): 283. 1893 and *Contributions from the United States National Herbarium* 17(3): 311. 1913.

in Mexico: zacate

S. trimenii (Hook.f.) Senaratna (*Sporobolus diandrus* var. *nanus* Hook.f.; *Sporobolus indicus* var. *flaccidus* (Roth) Veldkamp) (after the British (b. London) botanist Henry Trimen, 1843-1896 (d. Peradeniya), 1866 Fellow of the Linnean Society, from 1879 to 1896 Director of the Peradeniya Botanic Gardens in Sri Lanka, 1888 Fellow of the Royal Society, plant collector, among his many works are *Hortus zeylanicus*. Colombo 1888 and *A Handbook to the Flora of Ceylon*. London 1893-1931, editor of the *Journal of Botany*, with Robert Bentley (1821-1893) wrote *Medicinal Plants*. London [1875]-1880, he was brother of the British (b. London) entomologist Roland Trimen (1840-1916, d. Epsom, Surrey); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 401. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; B. Henrey, *British Botanical and Horticultural Literature before 1800*. Oxford 1975; Andrew Thomas Gage, *A History of the Linnean Society of London*. London 1938; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 406. Boston, Mass. 1972; H.N. Cloukie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 256. Oxford 1964; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Isaac Henry Burkill (1870-1965), *Chapters on the History of Botany in India*. Delhi 1965; Ernest Nelmes and William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*.

[1931]; H. Dolezal, in *Portug. Acta Biol.* 6: 257-323. 1959 and 7: 324-551. 1961; Miles Hadfield et al., *British Gardeners: A Biographical Dictionary*. London 1980; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 692. London 1994; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; Mary Gunn and Leslie Edward W. Codd, *Botanical Exploration of Southern Africa*. 351-352. Cape Town 1981; Stafleu and Cowan, *Taxonomic literature*. 6: 489-492. Utrecht 1986)

Sri Lanka. Similar to *Sporobolus fertilis* (Steudel) Clayton and *Sporobolus africanus* (Poir.) Robyns & Tournay, see *Prodromus Florae Novae Hollandiae* 170. 1810, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 254. 1810, *Systema Vegetabilium* 2: 368. 1817, *Synopsis Plantarum Glumacearum* 1: 170. 1854 and *A Handbook to the Flora of Ceylon* 5: 261. 1900, *Bulletin du Jardin Botanique de l'État* 25: 242. 1955, *Grasses of Ceylon* 96. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Kew Bulletin* 19: 291. 1965, *Bothalia* 17: 135-136. 1987, *Bothalia* 18: 114-119. 1988, *Bothalia* 21(2): 163-170. 1991, *Blumea* 35(2): 393-458. 1991, *Opera Botanica* 121: 159-172. 1993.

S. uniflorus (Muhl.) Scribn. & Merr. (*Muhlenbergia uniflora* (Muhl.) Fernald; *Poa uniflora* Muhl.)

U.S. See *Descriptio uberior Graminum* 151. 1817 and *United States Department of Agriculture Circular, Division* 27: 5. 1900, *Rhodora* 29(337): 10. 1927.

S. usitatus Stent (*Sporobolus ioclados* (Trin.) Nees; *Vilfa ioclados* Trin.)

South Africa. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 65. 1840, *Florae Africae Australioris Illustrationes Monographicae* 161. 1841 and *Bothalia* 2: 257, 273, t. 3. 1927.

in English: dropseed, creeping dropseed

S. utilis (Torr.) Scribn. (*Muhlenbergia utilis* (Torr.) Hitchc.; *Vilfa utilis* Torr.)

U.S. See *Pacif. Railr. Rep.* 5(2): 365. 1858, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 171, f. 467. 1899 and *Journal of the Washington Academy of Sciences* 23(10): 453. 1933, *Sida* 17(2): 349-365. 1996.

S. vaginatus (Steud.) Scribn. (*Cryptostachys vaginata* Steud.)

North America. See *North American Gramineae and Cyperaceae* 1: no. 3. 1834, *Flora* 33: 229. 1850, *A Class-book of Botany* 775. 1861, *Botanical Gazette* 21: 15. 1896.

S. vaginiflorus (Torrey ex A. Gray) A.W. Wood (*Cryptostachys vaginata* Steud.; *Sporobolus filiculmis* L.H. Dewey; *Sporobolus filiculmis* Vasey ex Beal, nom. illeg., non *Sporobolus filiculmis* L.H. Dewey; *Sporobolus filiculmis* Vasey; *Sporobolus minor* Vasey ex A. Gray, nom. illeg.,

non *Sporobolus minor* Trin. ex Kunth; *Sporobolus ovatus* Beal; *Sporobolus vaginatus* (Steud.) Scribn.; *Sporobolus vaginiflorus* var. *inaequalis* Fernald; *Sporobolus vaginiflorus* var. *minor* Scribn. ex Chapm.; *Vilfa riehlia* Steud.; *Vilfa vaginiflora* Torr. ex A. Gray)

North America, U.S., Canada. Annual, caespitose, erect to spreading, wiry, short and contracted panicles, weed species, little value for livestock, found on roadsides, dry bluffs, gravelly open habitats, on disturbed or shallow rocky sites, in developed land, areas of compacted soil, sterile soils, overgrazed fields, parking lots, sandy fields, sand prairie, on prairie hillsides, dry soils, in woodlands, along railroads, waste places, see *North American Gramineae and Cyperaceae* 1: no. 3. 1834, *Flora* 33: 229. 1850, *Synopsis Plantarum Glumacearum* 1: 154. 1854, *A Class-book of Botany* 775. 1861, *A Descriptive Catalogue of the Grasses of the United States* 44. 1885, *The Tennessee Flora; With Special Reference to the Flora of Nashville* 98. Nashville 1887, *A Manual of the Botany of the Northern United States* (ed. 6) 646. 1890, *Contributions from the United States National Herbarium* 2(3): 519. 1894, *Bulletin of the Torrey Botanical Club* 22(11): 464. 1895, *Botanical Gazette* 21: 15. 1896, *Grasses of North America for Farmers and Students* 2: 288, 300. 1896, *Flora of the Southern United States* 598. 1897 and *Bulletin, Division of Agrostology United States Department of Agriculture* (edition 2) 17: 170. 1901, *Rhodora* 35: 109. 1933, *Rhodora* 56(662): 29. 1954, Jonathan Silvertown, "Seed ecology, dormancy, and germination: a modern synthesis from Baskin and Baskin." *Am. J. Bot.* 86: 903-905. 1999.

in English: poverty grass, poverty dropseed, povertygrass, northern rushgrass, southern povertygrass, sheathed rush grass, sheathed drop-seed

in French: Sporobole engagé

in Italian: gramigna americana

S. vaginiflorus (Torr. ex A. Gray) A.W. Wood var. *ozarkanus* (Fernald) Shinnars (*Sporobolus neglectus* var. *ozarkanus* (Fern.) Steyermark & Kucera; *Sporobolus ozarkanus* Fern.)

North America. Annual, found in open or partly wooded hillsides, grasslands, open areas, along railroads, see *A Class-book of Botany* 775. 1861 and *Rhodora* 35(411): 109-110. 1933, *Rhodora* 56(662): 29. 1954, *Rhodora* 63(745): 25. 1961.

in English: Ozark dropseed, dropseed

S. vaginiflorus (Torr. ex A. Gray) A.W. Wood var. *vaginiflorus* (*Sporobolus vaginiflorus* var. *inaequalis* Fern.)

North America, U.S. See *A Class-book of Botany* 775. 1861.

S. variegatus Stapf (*Sporobolus somalensis* Chiov.)

Tropical Africa. See *Annuario del Reale Istituto Botanico di Roma* 6: 169. 1896 and *Kew Bulletin* 1907: 218. 1907.

S. verdcourtii Napper

Africa. See *Kirkia* 3: 119. 1963.

S. villosus (Rchb. ex Spreng.) Kunth (*Agrostis villosa* Rchb. ex Spreng.; *Sporobolus ciliatus* J. Presl; *Sporobolus villosus* Hochst. ex Döll, nom. illeg., non *Sporobolus villosus* (Rchb. ex Spreng.) Kunth; *Vilfa ciliata* (J. Presl) Trin., nom. illeg., non *Vilfa ciliata* (Thunb.) P. Beauv.; *Vilfa preslii* Steud.)

South America. See *Systema Vegetabilium, editio decima sexta* 5(Suppl.): 5. 1828, *Révision des Graminées* 1: 68. 1829, *Reliquiae Haenkeanae* 1(4-5): 242. 1830, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 63. 1840, *Nomenclator Botanicus. Editio secunda* 2: 768. 1841, *Flora Brasiliensis* 2(2): 234. 1877.

S. virgatus Mez ex Peter

Africa. See *Feddes Repertorium, Beiheft* 40(1): 292. 1931.

S. virginicus (L.) Kunth (*Agrostis barbata* Pers.; *Agrostis barbata* var. *senegalensis* Pers.; *Agrostis congener* Schumacher.; *Agrostis juncea* Lam.; *Agrostis littoralis* Lam.; *Agrostis orientalis* Nees; *Agrostis pungens* Muhl., nom. illeg., non *Agrostis pungens* Schreb.; *Agrostis tremula* Willd.; *Agrostis virginica* L.; *Aira congener* Schumacher.; *Aira sabulorum* Labill.; *Aira sabulorum* var. *uniflora* Balansa; *Calotheca sabulosa* Steud.; *Crypsis virginica* (L.) Nutt.; *Distichlis spicata* (L.) Greene; *Eragrostis sabulosa* (Steud.) Schweick.; *Podosemum virginicum* (L.) Link; *Sporobolus benthamii* F.M. Bailey; *Sporobolus benthamii* var. *robustus* Domin; *Sporobolus littoralis* (Lam.) Kunth; *Sporobolus littoralis* var. *elongatus* (P. Beauv.) T. Durand & Schinz; *Sporobolus matrella* Nees; *Sporobolus orientalis* Kunth; *Sporobolus pungens* Kunth; *Sporobolus senegalensis* (Pers.) Chiov.; *Sporobolus sundaicus* Ohwi; *Sporobolus tremulus* (Willd.) Kunth; *Sporobolus virginicus* (L.) Brongn., nom. illeg., non *Sporobolus virginicus* (L.) Kunth; *Sporobolus virginicus* subsp. *littoralis* (Lam.) Borhidi & O. Muñiz; *Sporobolus virginicus* var. *littoralis* (Lam.) Hitchc.; *Sporobolus virginicus* var. *minor* F.M. Bailey; *Sporobolus virginicus* var. *minor* F.M. Bailey ex B.K. Simon, nom. illeg., non *Sporobolus virginicus* var. *minor* F.M. Bailey; *Sporobolus virginicus* var. *pallidus* Benth.; *Sporobolus virginicus* var. *virginicus*; *Vilfa barbata* P. Beauv.; *Vilfa elongata* P. Beauv.; *Vilfa intermedia* Trin.; *Vilfa littoralis* (Lam.) P. Beauv.; *Vilfa luxurians* Steud. ex Lechler; *Vilfa matrella* Nees; *Vilfa tremula* Trin.; *Vilfa virginica* (L.) P. Beauv.)

Pantropical. Perennial, polymorphic, leafy, wiry, erect, ascending, decumbent base, branched, smooth, forming extensive mats, vigorous, halophyte, strongly rhizomatous and stoloniferous, thick and creeping or long slender scaly rhizomes, tiny ligule with a fringe of hairs, basal sheaths overlapping, leaf blades pungent, rigid leaves more or less spreading and distichous, inflorescence branches not whorled, dense and spike-like cylindrical panicle, spikelets

- lanceolate and laterally compressed, 1 floret, pedicels scabrous, glumes subequal and glabrous, lower glume acute and lanceolate, upper glume subulate, second glume ovate-lanceolate, lemma acute and glabrous, palea ovate and acute, 3 stamens, fodder, good palatability, low grazing value, provides highly nutritious fodder for stock and buffaloes, grain eaten in time of scarcity, pioneer, salt-tolerant, cover ground, useful for erosion control and sand binding, used to stabilize seashores and wind-eroded shorelines, unstable dunes and beaches, saline plains, for saline sites revegetation, growing along saline coastal or subcoastal areas, dry and arid zones, littoral lowlands, tropical seashores, high tide line, on tidal mudflats, on saline scalds, from clays to sands, sandy or muddy seashores, gray clay soils, pools, brackish waters, sandy and rocky seashores, on salt marsh habitats, saltwater lagoons, behind mangrove swamps, grassy areas near mangrove, coastal sand dunes, on sand hills and dunes, seashore, high salinity areas, often misidentified as *Spinifex littoreus* (Burm.f.) Merr., see *Species Plantarum* 1: 63, 71. 1753, *Illustrationes et Observationes Botanicae* 3. 1773, *Encyclopédie Méthodique, Botanique* 1: 60. 1783, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 161. 1791, *Species Plantarum* 1: 372. 1797, *Synopsis Plantarum* 1: 75-76. 1805, *Essai d'une Nouvelle Agrostographie* 16, 147, 149, 181-182. 1812, *Descriptio uberior Graminum* 72. 1817, *The Genera of North American Plants* 1: 49. 1818, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *Sertum Austro-Caledonicum* 16, t. 21. 1824, *De Graminibus unifloris et sesquifloris* 155-156. 1824, *Beskrivelse af Guineiske planter* 46. 1827, *Hortus Regius Botanicus Berolinensis* 1: 85. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 66. 1828, *Flora* 12(2): 488. 1829, *Voyage autour du Monde* 2: 17. 1829, *Révision des Graminées* 1: 67-68. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 393. 1829, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 211. 1833, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 400. 1841, *Florae Africae Australioris Illustrationes Monographicae* 152. 1841, *Berberides Americae Australis* 56. 1857, *Bulletin de la Société Botanique de France* 19: 318. 1872, *Flora Australiensis: A Description ...* 7: 621. 1878, *Bulletin of the California Academy of Sciences* 2: 415. 1887, *Conspectus Florae Africae* 5: 821. 1894, *Botany Bulletin, Department of Agriculture, Queensland* 13: 15-16. 1896 and *Handb. Fl. Ceylon* 5: 262. 1900, *Contr. U.S. Natl. Herb.* 12: 119. 1908, *Bibliotheca Botanica* 85: 348. 1915, *Plantae Novae vel Minus Notae e regione Aethiopica* 26. 1928 [1911-1951, series published in different journals, also *Plantae Novae vel Minus Notae ex Aethiopia*], *North American Flora* 17(7): 486. 1937, *Repertorium Specierum Novarum Regni Vegetabilis* 43: 91-92. 1938, *Catalogue des Plantes du Maroc* 928. 1941, *Bulletin of the Tokyo Science Museum* 18: 13. 1947, *Fl. Guy. Franç.* 1: 96. 1955, *Grasses of Ceylon* 97. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 634. 1960, *Kew Bulletin* 19(2): 295. 1965, *Austrobaileya* 2(1): 22. 1984, *Australian Journal of Botany* 36: 23-39. 1988, *Kingia* 4: 321-325. 1990, K.C. Blits and J.L. Gallagher, "Morphological and physiological responses to increased salinity in marsh and dune ecotypes of *Sporobolus virginicus* (L.) Kunth." *Oecologia* 87(3): 330-335. 1991, *Blumea* 35: 446. 1991, G. Naidoo and S. Naidoo, "Waterlogging responses of *Sporobolus virginicus* (L.) Kunth." *Oecologia* 90(3): 445-450. 1992, *Student's Fl. Tasmania* 4B: 328. 1994, *Global Ecology and Biogeography* 8(2): 117-124. Mar 1999, *Austral. Ecology* 24(3): 240-248. June 1999, *Medical and Veterinary Entomology* 13(4): 423-430. Nov 1999, *Australian Journal of Entomology* 39(3): 212-218. July 2000, *Ecological Entomology* 26(1): 25-36. Feb 2001, W.M. Musila, J.I. Kinyamario and P.D. Jungerius, "Vegetation dynamics of coastal sand dunes near Malindi, Kenya." *African Journal of Ecology* 39(2): 170-177. June 2001, *Australian Journal of Entomology* 41(1): 49-54. Jan 2002, *Restoration Ecology* 10(1): 11-15. Mar 2002, *Restoration Ecology* 10(4): 607-616. Dec 2002, Pia Laegdsgaard, "Recovery of small denuded patches of the dominant New South Wales coastal salt marsh species (*Sporobolus virginicus* and *Sarcocornia quinqueflora*) and implications for restoration using donor sites." *Ecological Management and Restoration* 3(3): 200-204. Dec 2002, Hester L. Bell and James W. O'Leary, "Effects of salinity on growth and cation accumulation of *Sporobolus virginicus* (Poaceae)." *Am. J. Bot.* 90: 1416-1424. 2003, *Journal of Ecology* 91(1): 114-125. Feb 2003, Malee Nanakorn et al., "In vitro selection of salt-tolerant cell lines in kallar grass [*Diplachne fusca* (L.) Beauv.]." *Weed Biology and Management* 3(1): 49-52. Mar 2003, *Annals of the Association of American Geographers* 93(1): 13-29. Mar 2003, *Journal of Ecology* 91(5): 837-846. Oct 2003, M.G. Chapman and D.E. Roberts, "Use of seagrass wrack in restoring disturbed Australian salt-marshes." *Ecological Management and Restoration* 5(3): 183-190. Dec 2004.
- in English: seashore rushgrass, seaside rushgrass, marsh grass, crab grass, seashore dropseed, beach dropseed, marine couch, beachgrass, salt couch, sand couch, saltwater couch, water couch, sand-and-mud couch, coast rat-tail grass, Virginian dropseed, Virginia dropseed
- in India: seema gariki, uppuruthnam pullu, uppuruthnam pillu
- in Mexico: matojo de playa, zacatón de la isla
- in Hawaii: 'aki'aki, 'aki mahiki, mahikihiki, manienie, manienie 'aki'aki, manienie mahikihiki, manienie maoli
- in Guam: hatopa
- S. virginicus** (L.) Kunth var. **arenarius** (Gouan) Maire (*Agrostis arenaria* Gouan; *Sporobolus virginicus* (L.) Kunth)

North Africa. See *Illustrationes et Observationes Botanicae* 3. 1773, *Révision des Graminées* 1: 67. 1829 and *Catalogue des Plantes du Maroc* 928. 1941.

S. virginicus (L.) Kunth var. *gaditanus* (Boiss. & Reut.) Kerguelén (*Agrostis alba* var. *gaditana* (Boiss. & Reut.) Henriq.; *Agrostis stolonifera* subsp. *gaditana* (Boiss. & Reut.) Vasc.; *Agrostis stolonifera* subsp. *gaditana* (Boiss. & Reut.) D. Rivera & M. Carreras, nom. illeg., non *Agrostis stolonifera* subsp. *gaditana* (Boiss. & Reut.) Vasc.; *Agrostis stolonifera* subsp. *gaditana* (Boiss. & Reut.) D. Rivera & Carreras; *Sporobolus arenarius* var. *gaditanus* (Boiss. & Reut.) T. Durand & Schinz; *Sporobolus gaditanus* Boiss. & Reut.)

Africa. See *Révision des Graminées* 1: 67. 1829, *Bulletin de la Société Botanique de France* 16: 294. 1869, *Conspetus Florae Africae* 5: 818. 1894 and *Bot. Soc. Broteriana* 20: 43. 1905, *Anales de Biología, Facultad de Biología, Universidad de Murcia* 13: 23. 1987, *Bulletin de la Société Botanique de France* 124(5-6): 345. 1977.

S. virginicus (L.) Kunth var. *minor* F.M. Bailey (*Sporobolus virginicus* var. *minor* F.M. Bailey ex B.K. Simon, nom. illeg., non *Sporobolus virginicus* var. *minor* F.M. Bailey)

South Australia, Queensland, New South Wales. Narrow leaves, grows in salt marshes, see *Révision des Graminées* 1: 67. 1829, *Botany Bulletin, Department of Agriculture, Queensland* 13: 15. 1896 and *Austrobaileya* 2(1): 22. 1984, *Blumea* 35: 446. 1991.

in English: marine couch

S. virginicus (L.) Kunth var. *virginicus*

Western Australia, South Australia, New South Wales, Victoria, Queensland, Northern Territory. Narrow leaves, grows on coastal areas and littoral zone, see *Révision des Graminées* 1: 67. 1829.

in English: sand couch

S. viscidus Sohns

Mexico. Common on rocky hills, see *Journal of the Washington Academy of Sciences* 46(12): 385, f. 56-61. 1956.

S. wallichii Munro ex Trimen (dedicated to the Danish (b. Copenhagen) physician Nathaniel Wallich (originally Nathan Wulff or Wolff), 1786-1854 (d. London), botanist and botanical collector (India, Malaya, Cape, Nepal), 1809 with William Roxburgh (1751-1815) at Calcutta, 1815-1846 Superintendent of the Calcutta Botanic Garden, 1818 Fellow of the Linnean Society, 1820-1822 plant collector in Nepal, 1829 Fellow of the Royal Society, among his most valuable writings are *Tentamen Florae Nepalensis*. Calcutta and Serampore 1824-1826, *Descriptions of Some Rare Indian Plants*. [Asiatic Researches 1820] 1820 and *Plantae Asiaticae rariores*. London [1829-] 1830-1832; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 454. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 796. 1993; Mary

Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 369-370. 1981; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. London 1914; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 425. Boston, Mass. 1972; Daniel Merriman, in *D.S.B.* 14: 145-146. 1981; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906)

Sri Lanka, India, Myanmar, Thailand. Annual or short-lived perennial, tufted, erect, geniculate, simple, glabrous, smooth, leaf blades finely pointed, ligule a ciliate membrane, leaf sheaths glabrous or ciliate, open panicle with spreading branches, spikelets pedicellate usually in pairs, 3 stamens, low fodder value, palatable to cattle, on steep slopes, lowlands, dry zones, gravelly soils, see *Journal of Botany, British and Foreign* 27: 171. 1889 and *Handb. Fl. Ceylon* 5: 261. 1900, *Grasses of Ceylon* 95. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma ...* 634. 1960.

S. welwitschii Rendle (*Sporobolus baumianus* Pilg.; *Sporobolus macrothrix* Pilg.)

South Africa. Perennial, wiry, tufted, rhizomatous, filiform leaves, dichotomous inflorescence, spikelets solitary, glumes unequal, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 207. 1899 and Hermann Baum, *Kunene-Sambesi-Expedition H. Baum*. 1903 ... Herausgegeben von ... O. Warburg. 175. Berlin 1903, *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 206. 1916.

S. wolfii Vasey (*Muhlenbergia ramulosa* (Kunth) Swallen; *Muhlenbergia wolfii* (Vasey) Rydb.)

U.S. See *Nova Genera et Species Plantarum* 1: 137. 1815 [1816], *Bulletin of the Torrey Botanical Club* 10: 52. 1883 and *Bulletin of the Torrey Botanical Club* 32(11): 600. 1905, *Contributions from the United States National Herbarium* 29(4): 205. 1947.

S. wrightii Munro ex Scribn. (*Bauchea karwinskyi* E. Fourn.; *Epicampes crassiculmis* Piper; *Sporobolus airoides* var. *minor* (Vasey) Beetle; *Sporobolus airoides* (Torr.) Torr. var. *wrightii* (Munro ex Scribn.) Gould; *Sporobolus altissimus* Vasey; *Sporobolus altissimus* var. *minor* Vasey; *Sporobolus eminens* J. Presl; *Sporobolus expansus* Scribn.; *Vilfa eminens* (J. Presl) Steud.) (*Bauchea karwinskyi* E. Fourn. named for the Bavarian naturalist Baron Wilhelm Friedrich Karwinski von Karwin, 1780-1855, field collector in Mexico; see Gordon Douglas Rowley, *A History of Succulent Plants*. 371. [b. 1799] Strawberry Press, Mill Valley,

California 1997; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

North America, U.S., Mexico. Perennial bunchgrass, coarse, robust, large, pale green to bright green, growing in dense clumps, flat leaves, golden feathery seedheads, reproduces by seed, grows rapidly, ornamental, valuable forage species, unpalatable old growth, leaves and stems coarse and tough when mature, useful for erosion control and for revegetation on reclamation projects, provides cover for wildlife, usually found on floodplains, along washes, on sandy loam, rocky slopes, basins, mesas, dry sandy open grounds, in lowland habitats, upper floodplain terraces, saline soils, in arid and semiarid regions, on alluvial flats and bottomlands subject to flooding, arroyos, desert marshes, in semidesert grasslands, on creek flats, silty clay loam, see *Reliquiae Haenkeanae* 1(4-5): 242. 1830, *Nomenclator Botanicus. Editio secunda* 2: 767. 1841, *Explorations and Surveys for a Railroad Route* 7: 21. 1856, *Bulletin of the Torrey Botanical Club* 9: 103. 1882, *Biol. Centr. Amer. Bot.* 3: 550. 1885, *Mexicanas Plantas* 2: 87. 1886, *Proceedings of the California Academy of Sciences, Series 2*, 2: 212-213. 1889, *Zoë* 4(4): 390. 1894 and *Proceedings of the Biological Society of Washington* 18: 144. 1905, *Madroño* 10(3): 94. 1949, *Phytologia* 54(1): 5. 1983, Brantlee Spakes Richter and Jean C. Stutz, "Mycorrhizal inoculation of Big Sacaton: implications for grassland restoration of abandoned agricultural fields." *Restoration Ecology* 10(4): 607-616. Dec 2002, *Conservation Biology* 17(2): 607-615. Apr 2003, *Functional Ecology* 17(3): 363-374. June 2003, *Functional Ecology* 18(4): 530-538. Aug 2004, *Conservation Biology* 19(3): 783-792. June 2005.

in English: sacaton, big sacaton, giant sacaton, Wright's dropseed, Wright's sacaton

in Mexico: zacatón

Stapfia Burt Davy = *Neostapfia* Burt Davy,
Stapfia Chodat (Algae)

After the Austrian botanist Otto Stapf, 1857-1933 (d. Innsbruck), traveler, Wien 1882-1889 assistant with Anton Joseph Kerner von Marilaun (1831-1898), 1900-1922 Keeper of the Herbarium of the Royal Botanic Gardens, Kew, 1908-1916 botanical secretary of the Linnean Society, 1922-1933 editor of the *Botanical Magazine*, contributor to Daniel Oliver (1830-1916), *Flora of Tropical Africa* (Apocynaceae, Verbenaceae, Myristicaceae, Gramineae, etc.), contributor to Harvey and Sonder, *Flora Capensis* (Apocynaceae, Laurineae, Proteaceae, etc.), contributed to Hooker's *Icones Plantarum*, among his numerous and valuable publications are *On the Flora of Mount Kinabalu in*

North Borneo. London 1894 and *The Aconites of India*. Calcutta 1905. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 317. 1965; Mia C. Karsten, *The Old Company's Garden at the Cape and Its Superintendents: Involving an Historical Account of Early Cape Botany*. Cape Town 1951; James Edgar Dandy (1903-1976), in *The Journal of Botany*. 69: 54. (Feb) 1931; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 382. 1973; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 380. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Mea Allan, *The Hookers of Kew*. London 1967; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 650. 1994; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; Stafleu and Cowan, *Taxonomic literature*. 5: 839-843. 1985; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; Emil Bretschneider (1833-1901), *History of European Botanical Discoveries in China*. [Reprint of the original edition, St. Petersburg 1898] Leipzig 1981.

Chloridoideae, Orcuttiae, or Chloridoideae, Cynodonteae, Orcuttiinae, see Franz J.F. Meyen (1804-1840), *Reise um die Erde* 2: 14. 1834, *Bulletin de l'Herbier Boissier* 5: 947. 1897, *Erythea* 6(11): 109-110, pl. 3. 1898, *Österreichische Botanische Zeitschrift* 49: 134. May 1899, *Bulletin, Division of Agrostology United States Department of Agriculture* 17: 221, f. 517. 1899, *Erythea* 7: 43. 1899 and *Contributions from the United States National Herbarium* 41: 175, 219. 2001.

Stapfiola Kuntze = *Desmostachya* (Stapf)
Stapf, *Desmostachya* (Hook.f.) Stapf

After the Austrian botanist Otto Stapf, 1857-1933.

Chloridoideae, Eragrostideae, see *Flora Palaestina* 12. 1756, *The Flora of British India* 7: 324. 1897, *Flora Capensis* 7: 316. 1898 and *Lexikon Generum Phanerogamarum* 532. 1903.

Stegosia Lour. = *Rottboellia* L.f.

Greek *stega*, *stegos* "roof, shelter, cover."

Panicoideae, Andropogoneae, Rottboelliinae, type *Stegosia cochinchinensis* Lour., see *Supplementum Plantarum* 13, 114. 1781 [1782], *Flora Cochinchinensis* 1: 34, 51. 1790 and *North American Flora* 17(1): 84. 1909, *Kew Bulletin*

35(4): 817. 1981, *Contributions from the United States National Herbarium* 46: 546-548, 607. 2003.

Steinchisma Raf. = *Cliffordiochloa* B.K. Simon, *Fasciculochloa* B.K. Simon & C.M. Weiller

About 4-7 species, U.S. to Argentina. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae Paspalinae, perennial, herbaceous, membranous ligules short ciliate at the apex, leaf blades lanceolate to filiform, short to long-rhizomatous, plants bisexual, lax inflorescence paniculate more or less contracted, inflorescence branches naked at the base, spikelets flattened elliptic glabrous, spikelets solitary on short or long pedicels, 2 glumes unequal, upper glume as long as spikelet, coriaceous lower lemma 3-nerved, indurate upper antherium, expanded and large lower palea as long as the upper antherium, lower flower present with 3 stamens or absent, ovary glabrous, 2 stigmas, in disturbed areas, damp places, grasslands, in open areas or near borders of rivers and streams, has been considered either a subgenus of *Panicum* or as a distinct genus, type *Steinchisma hians* (Elliott) Nash, see *Species Plantarum* 1: 55, 58. 1753, Constantine S. Rafinesque, *Seringe Bull. Bot.* 1: 220. 1830 [also *Bulletin Botanique [Genève]* 1: 220. 1830] and *Flora of the Southeastern United States* ...105. 1903, *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, E.D. Merrill, *Index rafinesquianus* 76. 1949, *Grass Systematics and Evolution* 300. 1987, *Syst. Bot.* 13: 598. 1988, *Austrobaileya* 3(4): 674, 676, f. 3. 1992, *Flora Mesoamericana* 6: 302-318. 1994, *Austrobaileya* 4(3): 369-379. 1995, Zuloaga F.O., O. Morrone, A.S. Vega & L.M. Giussani, "Revisión y análisis cladístico de *Steinchisma* (Poaceae: Panicoideae: Paniceae)." *Annals of the Missouri Botanical Garden* 85(4): 631-656. 1998 [Revision and cladistic analysis of *Steinchisma* (Poaceae: Panicoideae: Paniceae).], *Las Gramíneas de México* 5: 1-466. 1999, Melvin R. Duvall, Jeffrey D. Noll and Alexandra H. Minn, "Phylogenetics of Paniceae (Poaceae)." *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Am. J. Bot.* 88: 1993-2012. 2001, *Contributions from the United States National Herbarium* 46: 242, 607-608. 2003, *Austrobaileya* 6(3): 561-562. 2003, Sandra S. Aliscioni, Liliana M. Giussani, Fernando O. Zuloaga and Elizabeth A. Kellogg, "A molecular phylogeny of *Panicum* (Poaceae: Paniceae): tests of monophyly and phylogenetic placement within the Panicoideae." *Am. J. Bot.* 90: 796-821. 2003, *New Phytologist* 161(2): 341-370. Feb 2004.

Species

S. cuprea (Hitc. & Chase) W.V. Br. (*Panicum cupreum* Hitc. & Chase; *Panicum hians* var. *purpurascens* Scribn.; *Panicum purpurascens* Raddi)

America, Mexico. See *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 118. 1816, *Agrostografia*

Brasiliensis 47. 1823, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 296, t. 13, f. 3, 3a-3d. 1891 and *Contributions from the United States National Herbarium* 15: 120, f. 113. 1910, *Memoirs of the Torrey Botanical Club* 23(3): 20. 1977.

S. decipiens (Nees ex Trin.) W.V. Brown (*Panicum decipiens* Nees ex Trin.; *Panicum decipiens* Nees, nom. illeg., non *Panicum decipiens* Nees ex Trin.; *Panicum decipiens* (F.W. Schultz) Krause, nom. illeg., non *Panicum decipiens* Nees ex Trin.; *Panicum decipiens* var. *parviflorum* Döll; *Setaria decipiens* F.W. Schultz; *Steinchisma decipiens* (Nees) W.V. Br.)

Brazil to northern Argentina. Perennial, caespitose, erect, panicle spike-like shortly branched with congested branches, damp field, see *De Graminibus Paniceis* 227. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 193. 1829, *Flora Brasiliensis* 2(2): 237. 1877 and *Beihefte zum Botanischen Centralblatt* 29: 140. 1912, *Memoirs of the Torrey Botanical Club* 23(3): 20. 1977, *Ann. Missouri Bot. Gard.* 85: 644-646. 1998.

S. exiguiflora (Griseb.) W.V. Br. (*Digitaria minutiflora* Stapf; *Melinis minutiflora* P. Beauv.; *Panicum exiguiflorum* Griseb.; *Panicum laxum* var. *variegatum* Griseb.; *Panicum minutiflorum* (P. Beauv.) Raspail; *Panicum minutiflorum* A. Rich., nom. illeg., non *Panicum minutiflorum* (P. Beauv.) Raspail; *Panicum tricolor* Hack.)

America, Cuba, West Indies. See *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Nova Genera et Species Plantarum seu Prodrum* 23. 1788, *Essai d'une Nouvelle Agrostographie* 54, t. 11, f. 4. 1812, *Annales des Sciences Naturelles (Paris)* 5: 299. 1825, *Historia Fisica Política y Natural de la Isla de Cuba, Botanica* 11: 305. 1850, *Catalogus plantarum cubensium* ... 233-234. 1866 and *Österreichische Botanische Zeitschrift* 51: 370. 1901, *Flora of Tropical Africa* 9: 476. 1919, *Memoirs of the Torrey Botanical Club* 23(3): 20. 1977.

S. hians (Elliott) Nash (*Aira incompleta* Bosc ex Steud.; *Fasciculochloa sparshottiorum* B.K. Simon & C.M. Weiller; *Panicum hians* Elliott; *Panicum hians* var. *palle-scens* Döll; *Panicum jejunum* Trin.; *Panicum megapota-micum* Spreng.; *Panicum milioides* Nees, nom. illeg., non *Panicum milioides* Nees ex Trin.; *Panicum milioides* Nees ex Trin.; *Panicum milioides* var. *filifolium* R.A. Palacios; *Panicum oblongiflorum* Desv.; *Steinchisma hians* (Elliott) Nash ex Small)

U.S. to Argentina. Perennial, delicate, erect or ascending, caespitose, clumped, forming colonies, sometimes stoloniferous, leaf blades linear attenuate or acuminate, lax panicle ovate with long spreading branches, glabrous terminal spikelets elliptic to oblong, upper glume 3-nerved, lower lemma 3-nerved, lower palea ciliolate coriaceous, upper lemma pale scabrid, weed species, disturbed places, moist ground, rocky or stony places, marshy meadows, depressions, open areas,

related to *Panicum laxum*, see *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 118. 1816, *De Graminibus Paniceis* 225. 1826, *Systema Vegetabilium, editio decima sexta* 4(2): 34. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 175. 1829, *Bulletin Botanique [Genève]* 1: 220. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 193. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 2(1): 103. 1836, *Nomenclator Botanicus* edition 2 1: 45. 1840, *Flora Brasiliensis* 2(2): 240. 1877 and *Flora of the Southeastern United States ...* 105. 1903, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 302. 1969, *Austrobaileya* 4(3): 374, f. 1-4. 1995, *Ann. Missouri Bot. Gard.* 85: 647-649. 1998, *Austrobaileya* 5(3): 583-584, 585-586. 1999.

in English: gaping grass, gaping panicum

S. laxa (Sw.) Zuloaga (*Cliffordiochloa parvispicula* B.K. Simon; *Panicum agrostidiforme* Lam.; *Panicum agrostis* Nees ex Döll; *Panicum anceps* var. *minus* Rchb. ex Döll; *Panicum caroniense* Lucas; *Panicum diandrum* Kunth; *Panicum hondurense* Swallen; *Panicum hylaeicum* Mez; *Panicum laxum* Sw.; *Panicum laxum* f. *minor* Hack. ex Stuck.; *Panicum laxum* f. *minor* Hack.; *Panicum laxum* var. *laxum*; *Panicum laxum* var. *vestitum* L.B. Sm. & Washh.; *Panicum leptomerum* J. Presl; *Panicum luticola* Hitchc.; *Panicum nigrescens* Salzm. ex Steud.; *Panicum pilosum* var. *epilosum* E. Fourn.; *Panicum psilanthum* Steud.; *Panicum ramuliflorum* Hochst. ex Steud.; *Panicum tenuiculmum* G. Mey.; *Vilfa gavana* Steud. ex Lechler)

South America, Australia. Perennial, erect, clumped, stoloniferous, rhizomatous, sprawling, tidal mudflats, wet savannahs, along roadsides and streams, marshy areas, see *Nova Genera et Species Plantarum seu Prodromus* 23. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Flora Boreali-Americana* 1: 48. 1803, *Primitiae Florae Essequiboensis ...* 58. 1818, *Reliquiae Haenkeanae* 1(4-5): 311. 1830, *Révision des Graminées* 2: 383, t. 110. 1831, *Synopsis Plantarum Glumacearum* 1: 65-66. 1854 [1853], *Berberides Americae Australis* 56. 1857, *Flora Brasiliensis* 2(2): 213. 1877, *Mexicanas Plantas* 2: 24. 1886 and *Contr. U.S. Natl. Herb.* 12: 139. 1908, *Anales del Museo Nacional de Buenos Aires* 21: 39. 1911, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 75. 1917, *Contributions from the United States National Herbarium* 22(6): 485, f. 82. 1922, *Fl. Surinam*. 1(1): 377. 1943, *Contributions from the United States National Herbarium* 29(6): 270. 1948 [1949], *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 26-27, f. 18. 1953, *Brittonia* 23(3): 293-324. 1971, *Bradea*, *Boletim do Herbarium Bradeanum* 2(35): 245. 1978, *Fl. Guianas Series A: Phanerogams* 397-398. 1990, *Austrobaileya* 3(4): 676, f. 3. 1992, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *American Journal*

of Botany 90(5): 817. 2003, *Austrobaileya* 6(3): 561-562. 2003.

S. spathellosa (Döll) Renvoize (*Panicum milioides* var. *macrostachyum* Nees ex Döll; *Panicum schenkii* Hack.; *Panicum spathellosum* Döll; *Panicum turfosum* Mez)

Southern Brazil to northern Argentina. Caespitose, panicle ovate with long spreading branches, lower palea scaberulous, along riverbanks and streams, see *Flora Brasiliensis* 2(2): 241. 1877 and *North Carolina Agricultural Experiment Station Bulletin* 175: 116. 1900, *Österreichische Botanische Zeitschrift* 51: 426. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970, *Kew Bulletin* 42(4): 921. 1987, *Ann. Missouri Bot. Gard.* 85: 649-651. 1998.

S. stenophylla (Hack.) Zuloaga & Morrone (*Panicum goyazense* Mez; *Panicum stenophyllum* Hack.)

South America, Brazil. See *Österreichische Botanische Zeitschrift* 51: 371. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 4. 1921, *Darwiniana* 3(1-4): 53-60. 1995, *Annals of the Missouri Botanical Garden* 84(4): 651. 1998.

Steirachne Ekman

From the Greek *steiros* "barren, sterile" and *achne* "chaff, glume."

Two species, Brazil, Venezuela, Guyana. Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eragrostidineae, perennial, erect, herbaceous, caespitose, unbranched, knotty base or slightly cormose, auricles absent, sheaths not ciliate, ligule a very short ciliate membrane or a line of hairs, leaf blades glabrous linear subulate, rhizomatous, inflorescence an open panicle exerted, loose spikelets, loosely imbricate florets, hidden cleistogenes, 2 glumes persistent more or less equal, second glume awnless, setulose lemmas 3-nerved, palea keels winged ciliolate, lodicules truncate, stamens 2, ovary glabrous, 2 plumose stigmas, in damp places, along streams, depressions and sandy depressions, savannah, similar to *Eragrostis* and *Ectrosiopsis*, type *Steirachne diandra* Ekman, see *Species Plantarum* 1: 73-76. 1753, *Genera Plantarum* 23. 1776 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 35-36, t. 5, f. 1, t. 6, f. 17, text f. 1-2. 1911, *American Journal of Botany* 51: 453-463. 1964, *Flora of the Guianas, Series A: Phanerogams* 615-618. 1990, *Contributions from the United States National Herbarium* 41: 219. 2001.

Species

S. barbata (Trin.) Renvoize (*Bromus caldasii* Kunth; *Eragrostis barbata* Trin.; *Eragrostis quitensis* Trin.; *Festuca caldasii* Kunth; *Festuca caldasii* (Kunth) Kunth; *Festuca quitensis* Spreng.; *Festuca quitensis* Willd. ex Kunth, nom.

illeg., non *Festuca quitensis* Spreng.; *Festuca quitensis* Willd. ex Nees, nom. illeg., non *Festuca quitensis* Spreng.; *Festuca quitensis* Willd.; *Steirachne diandra* sensu Swallen, non Ekman)

South America. Perennial, tufted, glabrous, erect, slender, ligule ciliate, leaf blades ascending, open panicle sparsely branched, oblong spikelets laterally compressed, 6-10 florets, glumes ovate acuminate 1-nerved, narrowly ovate lemmas acuminate to subulate, cleistogamous spikelets in upper leaf axils, along riverbanks, open places, in damp grounds, see *Nova Genera et Species Plantarum (quarto ed.)* 1: 151. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 356. 1825, *Agrost. Bras.* 473. 1829 [*Flora Brasiliensis seu Enumeratio Plantarum* 473. 1829], *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 407. 1833, *Révision des Graminées* 1: 132. 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 76. 1836 and *Bull. Torrey Bot. Club* 75: 81. 1948, *Kew Bulletin* 39(1): 184. 1984, *Sida* 20(3): 1015-1022. 2003.

S. diandra Ekman (*Festuca pilosa* Nees, nom. illeg., non *Festuca pilosa* Hall.f.; *Festuca quitensis* Spreng.; *Festuca quitensis* Willd. ex Kunth, nom. illeg., non *Festuca quitensis* Spreng.; *Festuca quitensis* Willd. ex Nees, nom. illeg., non *Festuca quitensis* Spreng.; *Festuca quitensis* Willd.; *Steirachne pilosa* Ekman)

South America. Bulbous culm bases enclosing cleistogamous spikelets, savannah, see *Flora Brasiliensis seu Enumeratio Plantarum* 473. 1829 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 10(17): 36, 38, t. 5, f. 1, t. 6, f. 17, text f. 1-2. 1911.

in Brazil: capim

Stelephuros Adans. = *Phleum* L.

From the Latin name *stelephuros*, used by Plinius for a plant, perhaps Ravenna sugarcane, a species of *Saccharum*; Greek *stelephouros*, ancient name applied by Theophrastus (*HP.* 7.11.2) to the haresfoot plantain, a species of *Plantago*.

Pooideae, Poeae, Alopecurinae, see *Species Plantarum* 1: 59-60. 1753, *Familles des Plantes* 2: 31, 607. 1763 and *American Midland Naturalist* 4: 216. 1915, *Contributions from the United States National Herbarium* 48: 491-494, 617. 2003.

Stemmatospermum P. Beauv. = *Nastus* Juss.

From the Greek *stemma*, *stemma* “garland, chaplet, crown” and *sperma* “a seed,” referring to the seeds.

Bambuseae, type *Stemmatospermum verticillatum* P. Beauv., see *Genera Plantarum* 34. 1789, *Systema Naturae*

... *editio decima tertia, aucta, reformata* 2: 580. 1791, *Essai d'une Nouvelle Agrostographie* 144-145, t. 25, f. 5. 1812.

Stenochloa Nutt. = *Dissanthelium* Trin.

From the Greek *stenos* “narrow” and *chloe*, *chloa* “grass.”

Pooideae, Poeae, Poinae, type *Stenochloa californica* Nutt., see *Linnaea* 10(3): 305. 1836, *Proceedings of the Academy of Natural Sciences of Philadelphia* 4: 25. 1848, *J. Acad. Nat. Sci. Philadelphia, ser. 2*, 1: 189. 1848, *Hooker's Icones Plantarum* 4: 56, t. 1375. 1881 and *Contributions from the United States National Herbarium* 48: 271-273, 617. 2003.

Stenofestuca (Honda) Nakai = *Bromus* L.

From the Greek *stenos* “narrow, close” with *Festuca*.

Pooideae, Bromaeae, *Festuca* subg. *Stenofestuca* Honda, see *Species Plantarum* 1: 73-78. 1753, *Fl. Japon* 52. 1784, *Systema Vegetabilium. Editio decima quarta* 119. 1784 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 44, 54. 1930, *Journal of Japanese Botany* 25(1-2): 6-7. 1950, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Bot. Jahrb. Syst.* 102: 447. 1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191, 617. 2003.

Stenostachys Turcz. = *Cockaynea* Zotov, *Elymus* L., *Hystrix* Moench

From the Greek *stenos* “narrow” and *stachys* “a spike.”

About 3 species, New Zealand. Pooideae, Triticeae, Hordeinae, slender, hairy, stoloniferous, drooping or nodding inflorescences, narrow slender spikes of 10-30 spikelets with 1-3 awned to mucronate florets, spikelets solitary and sessile at nodes, glumes absent or reduced and awnlike, lodicules ciliate, ovary hairy to hispid, forests, shrublands, in grasslands, intergeneric hybrids with *Elymus* L., type *Stenostachys narduroides* Turcz., see *Species Plantarum* 1: 83-84. 1753, *Methodus Plantas Horti Botanici ...* 294-295. 1794, *Bulletin de la Société Impériale des Naturalistes de Moscou* 35(2): 311, 330. 1862 and *T.R.S.N.Z.* 73: 233-234. 1943 [also *Transactions of the Royal Society of New Zealand, Biological Sciences*], *N.Z. J. Sci. Tech.* 38A: 742-751. 1957, *Canad. J. Bot.* 42: 554. 1964, *New Zealand Journal of Botany* 20: 169-186. 1982, *Taxon* 41: 562-563. 1992, *New Zealand Journal of Botany* 32: 125-154. 1994, *Taxon* 44: 611-612. 1995, *Molecular Ecology* 8(3): 505-511. Mar 1999, *Flora of New Zealand* 5: 411-415. 2000, *Heredity* 86(5): 522-530. May 2001, *Contributions from the*

United States National Herbarium 48: 237, 279-307, 402, 617. 2003, *Tellus B* 57(1): 1-11. Feb 2005.

Species

S. deceptorix Connor

New Zealand. Perennial, robust, stout, tall, stoloniferous, tussocky, flat leaf blades, leaf sheaths keeled, narrow inflorescence slender and nodding, 1-3 florets, glumes equal, lemma long-awned, palea apex often retuse, chasmogamous or cleistogamous, grasslands, riverbanks, see *New Zealand Journal of Botany* 32: 144, f. 10. 1994.

S. gracilis (Hook.f.) Connor (*Asperella gracilis* (Hook.f.) Kirk; *Asperella gracilis* (Hook.f.) Kirk; *Cockaynea gracilis* (Hook.f.) Zotov; *Gymnostichum gracile* Hook.f.; *Hystrix gracilis* (Hook.f.) Kuntze)

New Zealand. Perennial, stoloniferous, stout, slender, leaf sheath hairy, flat leaf blades, slender inflorescences narrow and nodding, 1-3 florets, glumes usually absent or tiny, lemma prickly toothed, palea sometimes retuse, chasmogamous and cleistogamous, shrubland, grassland, see *Flora of New Zealand* 1: 312, t. 70. 1853, *Bulletin de la Société Impériale des Naturalistes de Moscou* 35(2): 331. 1862, *Revisio Generum Plantarum* 2: 778. 1891, *Transactions and Proceedings of the New Zealand Institute* 27: 352-353. 1895 and *Archives de biologie végétale pure et appliquée* 1: 64. 1901, *Man. N.Z. Fl.* 924. 1906, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 234. 1943, *New Zealand Journal of Botany* 20: 184. 1982, *New Zealand Journal of Botany* 32: 146. 1994.

S. laevis (Petrie) Connor (*Asperella laevis* Petrie; *Cockaynea laevis* (Petrie) Zotov; *Elymus laevis* (Petrie) Á. Löve & Connor, nom. illeg., non *Elymus laevis* (Scribn. & J.G. Sm.) Hoover; *Hystrix laevis* (Petrie) Allan)

New Zealand. Perennial, long slender culms, stoloniferous, long stolons, rooting at the nodes, auricles absent or tiny, slender inflorescence very narrow and nodding, glumes 2 more or less equal, lemma mucronate or shortly awned, palea apex bifid, lodicules entire or lobed, chasmogamous and cleistogamous, see *Transactions and Proceedings of the New Zealand Institute* 27: 406. 1895 and *Department of Scientific and Industrial Research Bulletin* 49: 88. 1936, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 234. 1943, *New Zealand Journal of Botany* 20(2): 184. 1982, *New Zealand Journal of Botany* 32: 146-147. 1994.

Stenotaphrum Trin. = *Diastemanthe* Steud.,
Diastemenanthe Desv., *Ophiurinella* Desv.

From the Greek *stenos* "narrow" and *taphros* "a trench, ditch," referring to the depressions or cavities in raceme axis, to the hollows of the flattened corky rachis of the raceme.

Some 7 species, tropics and subtropics. Panicoideae, Paniceae, Setariinae, or Panicoideae, Panicoideae, Paniceae, annual or perennial, herbaceous, branched, tufted, creeping or prostrate, ascending, long rhizomatous, stoloniferous with aggressive stolons, rooting at nodes, ligule a minute fringed membrane, leaf sheaths flattened or strongly compressed, short and flat leaves linear to lanceolate and basally sheathing, plants bisexual, short terminal and axillary spike-like racemes or spike-like panicle, central axis thick and swollen with 1 surface deeply hollowed, spikelets partially embedded in branch and closely spaced on one side of inflorescence axis, solitary or paired spikelets subsessile, lower floret male indurated, upper floret perfect, 2 glumes membranous and very unequal, first glume nerveless and small or minute, lower lemma leathery, upper lemma chartaceous, palea of upper florets present, 2 fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, weed species mat-forming, native pasture species, some fodders, used for binding sand and erosion control, useful lawn grass, playing fields and golf courses, tolerant of short dry periods, withstand salt spray, mainly on sandy soils, warm coastal regions, in humid areas along the coasts, sandy soils near the coast, on steep sandy soils, seaside, open areas, grassland, type *Stenotaphrum glabrum* Trin., see Carl Bernhard von Trinius (1778-1844), *Fundamenta Agrostographiae*. 175-176. Viennae (Jan) 1820, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 179, t. 8, f. 4. 1831, *Synopsis Plantarum Glumacearum* 1: 360. 1854 [or 1855] and Jonathan Deininger Sauer, "Revision of *Stenotaphrum* (Gramineae: Paniceae) with attention to its historical geography." *Brittonia* 24(2): 202-222. 1972, *Flora of Tropical East Africa* 451-898. 1982, *Crop Science (Florida)* 22: 469-473. 1982 [Classification of St. Augustinegrass], *Genera Graminum* 293-294. 1986, *Flora Mesoamericana* 6: 364. 1994, K.B. Marcum and C.L. Murdoch, "Salinity tolerance mechanisms of six C4 turfgrasses." *Journal of the American Society of Horticultural Science* 119: 779-784. 1994, *Plant Pathology* 47(1): 1-9. Feb 1998, *Austral. Ecology* 24(3): 240-248. June 1999, *Global Change Biology* 6(3): 275-286. Mar 2000, *Am. J. Bot.* 88: 992-1005, 1988-1992, 1993-2012. 2001, *Oryx* 35(4): 332-339. Oct 2001, *Australian Journal of Entomology* 41(3): 253-261. July 2002, *Australian Journal of Entomology* 41(4): 324-328. Oct 2002, *Am. J. Bot.* 90: 1416-1424. 2003, *Contributions from the United States National Herbarium* 46: 608-609. 2003, *Australian Journal of Entomology* 42(1): 51-78. Mar 2003.

Species

S. dimidiatum (L.) Brongn. (*Panicum dimidiatum* L.; *Panicum dimidiatum* Walter, nom. illeg., non *Panicum dimidiatum* L.; *Rottboellia complanata* Sw.; *Rottboellia dimidiata* (L.) L.f.; *Stenotaphrum complanatum* (Sw.) Schrank; *Stenotaphrum dimidiatum* (Thunb.) Wood; *Stenotaphrum glabrum* Trin.; *Stenotaphrum glabrum* var. *multiflorum* Döll;

Stenotaphrum koenigii Schrank; *Stenotaphrum madagascariense* Kunth; *Stenotaphrum secundatum* (Walter) Kuntze; *Stenotaphrum secundatum* sensu Alston, non (Walter) Kuntze)

Tropics, cosmopolitan. Perennial, coarsely matted, robust, stoloniferous, dense sward-forming, creeping, rooting at the nodes, vigorous, leaf sheaths strongly flattened, spike-like raceme compact and compressed, central axis thick and swollen with 1 surface deeply hollowed, spikelets partially embedded in branch, flat growing, ornamental, ground cover, lawn grass, weed species naturalized elsewhere in paleotropics, medicinal use, decoction of rhizomes diuretic and sudorific, native pasture species, good fodder, grazed by deer, can cause cuts and itchiness in humans, pioneer, well adapted to heavy shade conditions, found in forests and thickets, sandy foreshores, coastal regions, beaches and marshes, open areas, saline and freshwater, river floodplains, sandy soils, see *Species Plantarum* 1: 57. 1753, *Supplementum Plantarum* 114. 1781, *Flora Caroliniana, secundum* ... 72, 249. 1788, *Der Gesellschaft Naturforschender Freunde zu Berlin Magazin für die neuesten Entdeckungen in der Gesammten Naturkunde* 4: 89, t. 5. 1810, *Plantae rariores horti academici monacensis* 2(10): t. 98. 1819 [1821 or 1822], *Fundamenta Agrostographiae* 176. 1820, *Flora* 7(2), 1: 26, 28. 1824, *Voyage autour du Monde* 2(2): 127. 1829 [also Duperr., *Bot. Voy. Coquille* 127. 1831, also Louis-Isidor Duperrey, *Voyage autour du Monde exécuté par ordre du Roi sur la corvette La Coquille pendant les années 1822-1825.*], *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 524. 1833, *A Class-book of Botany* 807. 1861, *Flora Brasiliensis* 2(2): 301. 1877, *Revisio Generum Plantarum* 2: 794. 1891 and *Anales del Museo Nacional de Buenos Aires* 21: 57. 1911, *Handb. Fl. Ceylon* 6: 327. 1931, *Grasses of Ceylon* 132. 1956, *Grasses of Burma* ... 366. 1960, *Fl. Trop. East Africa, Gramineae* 3: 549. 1982, *Taxon* 49(2): 253. 2000.

in English: pemba grass, buffalo grass

in Mexico: pasto chato

in Rodrigues Island: chiendent bourrique, gros chiendent

in Mauritius: herbe bourik, bourik, bouriq, herbe bourrique

in La Réunion: chiendent boeuf, trainasse

in Thailand: yaa paak khwaai, ya pak khwai

S. helferi Munro ex Hook.f.

Asia, Thailand, Burma. See *The Flora of British India* 7(21): 91. 1897 [1896] and *Brittonia* 24: 205. 1972.

in Thailand: yaa lin krah bueh, ya lin krabue

S. micranthum (Desv.) C.E. Hubb. (*Ophiurinella micrantha* Desv.; *Stenotaphrum diplotaphrum* Pilg.; *Stenotaphrum lepturoides* Hensl.; *Stenotaphrum subulatum* Trin.)

Africa, Mauritius. Perennial, creeping, low, erect to ascending, prostrate and spreading, rooting at the nodes, ligule

short with a dense fringe of hairs, leaf blades lanceolate to nearly elliptic, fertile stems ascending, flowers in slender spikes narrow-cylindrical, spikelets not secund, rachis of the spikelets is not flattened, spikelets sunk in cavities of rachis, grows on sandy shores, coastal cliffs, above high tide line, in open littoral forest, ravines, tracks, often in partial shade, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 179, t. 8, f. 4. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 190. 1834, *Annals of Natural History* 1: 346. 1838 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 12: 702. 1935, *The Grasses of Mauritius and Rodriguez* 73. 1940.

S. secundatum (Walter) Kuntze (*Diastemanthe platystachys* Steud.; *Ischaemum secundatum* Walter; *Panicum dimidiatum* L.; *Panicum dimidiatum* Walter, nom. illeg., non *Panicum dimidiatum* L.; *Rottboellia dimidiata* Thunb.; *Rottboellia dimidiata* (L.) L.f.; *Rottboellia stolonifera* Poir.; *Rottboellia tripsacoides* Lam.; *Stenotaphrum americanum* Schrank; *Stenotaphrum compressum* Druce; *Stenotaphrum dimidiatum* (L.) Brongn.; *Stenotaphrum dimidiatum* var. *americanum* (Schrank) Hack.; *Stenotaphrum dimidiatum* var. *secundatum* (Walter) Domin; *Stenotaphrum glabrum* Trin.; *Stenotaphrum glabrum* var. *americanum* (Schrank) Döll; *Stenotaphrum glabrum* var. *glabrum*; *Stenotaphrum glabrum* var. *multiflorum* Döll; *Stenotaphrum sarmentosum* Nees; *Stenotaphrum secundatum* var. *secundatum*; *Stenotaphrum secundatum* var. *variegatum* Hitchc.; *Stenotaphrum swartzianum* Nees)

Native range unknown, tropics and subtropics. Perennial sodgrass, prostrate, strongly stoloniferous, glabrous, creeping, vigorous and robust, rather coarse, rooting at the nodes, branching and ascending, spreading, stems compressed, dense sward-forming, stolons with short to relatively long internodes, ligule a fringe of short hairs or a densely ciliate rim, leaf sheaths strongly flattened and keeled, leaf blades linear-oblong and glabrous, inflorescence ascending and stout, acute sessile erect rigid spikelets light green, glumes membranous and very unequal to dissimilar, first glume short and truncate, lower lemma sterile or male, upper lemma bisexual and smooth, seeds oblong, propagated vegetatively by runners and cuttings, weed species persistent under heavy grazing and trampling, grows on almost all types of soils and in shade, ornamental widely naturalized, medicinal use, useful for binding sand and for erosion control, suitable for soil conservation and rehabilitation, grazed, low quality pasture grass, high grazing value, young growth palatable, grown as a lawn grass, used as a cover crop in plantations, once established resists weed invasion, tolerates short-term flooding, poor drought tolerance, a coastal pioneer, withstands salt spray, occurs in sandy soils near the sea, on the sandy beaches, riverine edges and road verges,

freshwater sources, in humid areas on coastal sands, warm coastal regions, limestone shorelines of tropical regions, dry open and shaded areas, moist swampy soil near the seashores, in low dunes, salty and fresh water marshes, see *Species Plantarum* 1: 57. 1753, *Supplementum Plantarum* 114. 1781, *Flora Caroliniana, secundum ...* 72, 249. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 205. 1791-1792, *Prodromus Plantarum Capensium, ...* 23. 1794, *Encyclopédie Méthodique, Botanique* 6: 310. 1804, *Plantae rariores horti academici monacensis* 2(10): t. 98. 1819 [1821 or 1822], *Fundamenta Agrostographiae* 176. 1820, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 93. 1829, *Voyage autour du Monde* 2(2): 127. 1829[1832], *Florae Africae Australioris Illustrationes Monographicae* 62. 1841, *Synopsis Plantarum Glumacearum* 1: 360. 1854, *Flora Brasiliensis* 2(2): 300-301, pl. 39. 1877, *Revisio Generum Plantarum* 2: 794. 1891 and *Enum. Vasc. Pl. Suriname* 54. 1906, *Anales del Museo Nacional de Buenos Aires* 21: 57. 1911, *Botanical Society and Exchange Club of the British Isles* Suppl. 2: 648. 1917, *The Standard Cyclopedia of Horticulture* 6: 3237. 1917, *Brittonia* 24: 210. 1972, *Flora N.S.W. n. 19, Gramineae* 2: 266. 1975, *Fl. Trop. East Africa, Gramineae* 3: 549. 1982, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Taxon* 49(2): 253. 2000, R. Benkirane, A. Douira, K. Selmaoui and S. Lebbar, "Pathogénie comparée et signe sexuel des isolats Marocains de *Pyricularia grisea* (*Magnaporthe grisea*) originaires de riz et de *Stenotaphrum secundatum*." *Journal of Phytopathology* 148(2): 95-99. Feb 2000, Ruchira M. Sud and Nancy G. Dengler, "Cell lineage of vein formation in variegated leaves of the C4 grass *Stenotaphrum secundatum*." *Annals of Botany* 86: 99-112. 2000, *Am. J. Bot.* 90: 796-821. 2003.

in English: Saint Augustine grass, St. Augustinegrass, St. Augustine lawn, St. Augustine grass, St. Augustine's grass, sheep grass, Charlestongrass, wiregrass, pimento grass, buffalo grass, buffalo couch grass, buffalo couch, coastal buffalo grass, buffalo quick grass, Cape quick grass, carpet grass, coarse couch grass, coarse quick grass, quick grass, seaside quick grass, seaside quick, couch grass, mission grass, ramsammy grass, lawn grass, crabgrass, salt grass

in French: chiendent de boeuf, gros chiendent

in Spanish: pasto San Agustín, San Agustín, catalán, césped catalán, gramón, gramillón

in Jamaica: pimento grass

in Mexico: carpeta de San Agustín, gramilla de San Agustín, gramilla de San Agustín, pasto alfombra, San Agustín

in southern Africa: Augustinus gras, Augustinus kweek, strand-buffelskweek, strandbuffelsgras, buffelsgras, buffelskweek, Cape kweek, coast kweek, grove kweek, growweek, kweekgras, lidjieskweek, olifantskweek, rivierkweek, uNgwengwe; marotlo-a-mafubelu (Sotho); umtombo (Zulu)

in Hawaii: 'aki'aki haole, manienie 'aki'aki, manienie 'aki'aki haole, manienie mahikihiki

in Vietnam: co'quai chèo

Stephanachne Keng = *Pappagrostis* Roshev.

Greek *stephein* "to crown," *stephanos* "a crown, garland, that which surrounds or encompasses" and *achne* "chaff, glume," Latin *stephanos* is the name of several plants (Plinius).

About 2 species, Asia, western China, Russia. Pooideae, Poodae, Aveneae, perennial, herbaceous, tufted, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate or spicate, spikelets pedicellate 1-flowered, 2 glumes subequal 1- to 5-nerved, 1-3 awns, hairy lemmas bifid, palea hairy, 2-3 free and membranous lodicules, 3 stamens, ovary glabrous, 2 plumose stigmas, slopes, closely related to *Trikeria*, type *Stephanachne nigrescens* Keng, see *Annuaire du Conservatoire et Jardin Botaniques de Genève* 7: 325. 1904, *Flora URSS* 2: 230, 749-750. 1934, *Contributions from the Biological Laboratory of the Chinese Association for the Advancement of Science* 9: 134, 136. Nanking 1934 [also *Contr. Biol. Lab. Chin. Assoc. Advancem. Sci., Sect. Bot.*, also *Contributions from the Biological Laboratory of the Science Society of China: Botanical Series*], Tsing Hai Province Biological Research Institute. Xi zang a li di qu dong wu kao cha bao gao = *Report on an Investigation of the Flora and Fauna of the Ah Li Region of Tibet*. [s.l.] Ke xue chu ban she, 1979, *Flora Reipublicae Popularis Sinicae* 9(3): 305, pl. 75, f. 13-19. 1987, *Bulletin of Botanical Research* 17: 380-388. 1997 [in Chinese].

Species

S. monandra (P.C. Kuo & S.L. Lu) P.C. Kuo & S.L. Lu

China.

S. nigrescens Keng

China. Glumes membranous to herbaceous, 3 lodicules, see *Contributions from the Biological Laboratory of the Chinese Association for the Advancement of Science* 9: 135, f. 4. 1934.

Stereochlaena Hackel = *Chloridion* Stapf

From the Greek *stereos* "solid, firm, tight" and *chlaena*, *chlaenion* "a cloak, covering."

About 5 species, tropical East Africa to South Africa. Panicoideae, Panicodae, Paniceae, Digitariinae, annual or perennial, herbaceous, tufted, branched or not, narrow leaf blades, auricles absent, ligule a fringed membrane, sometimes stoloniferous, forming mats, plants bisexual, inflorescence spicate, spike-like racemes digitate or subdigitate, 2

florets, spikelets paired and shortly pedicellate, lower floret sterile, upper floret bisexual acute to acuminate, awn straight, 1 or 2 minute glumes per spikelet, lower glume tiny or suppressed, upper glume tiny and sometimes awned, lower lemma scabrid and nerved, palea 2-nerved, lodicules absent, 3 stamens, ovary glabrous, 2 stigmas, open habitats, slopes, stony hills, woodlands, shallow soils, open areas, savannahs, grasslands, type *Stereochlaena jeffreysii* Hack., see *Hooker's Icones Plantarum* 28: t. 2640. 1900, *Proceedings of the Rhodesia Scientific Association* 7(2): 65-66. 1908, W.D. Clayton, "The genus *Stereochlaena* (Gramineae)." *Kew Bulletin* 33(2): 295-297. 1978, *Flora of Tropical East Africa* 451-898. 1982, *Kew Bulletin, Additional Series* 13: 298, 377. 1986.

Species

S. annua Clayton

Tanzania. See *Kew Bulletin* 33(2): 295. 1978.

S. caespitosa Clayton

Tanzania. See *Kew Bulletin* 33(2): 296. 1978.

S. cameronii (Stapf) Pilg. (*Chloridion cameronii* Stapf; *Stereochlaena jeffreysii* Hack.) (Verney Lovett Cameron, 1844-1894, plant collector, traveler, Gold Coast, Tanzania, with Sir Richard Francis Burton, 1821-1890; see F.N. Hepper and Fiona Neate, *Plant Collectors in West Africa* 16. Utrecht 1971)

East tropical Africa, Malawi, Zambia. Perennial, sometimes stoloniferous, tufted, procumbent, rooting at the nodes, basal sheaths hairy, awned digitate racemes, lower lemma awned, straight awn, forming small mats, gravelly surface, dry sandy grassland, bare ground, see *Hooker's Icones Plantarum* 28: t. 2640. 1900, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 45. 1940.

S. foliacea Clayton (*Baptorhachis foliacea* (Clayton) Clayton)

Mozambique. See *Kew Bulletin* 33(2): 296. 1978, *Kew Bulletin* 42(2): 401. 1987.

S. tridentata Clayton

Tanzania. See *Kew Bulletin* 33(2): 296. 1978.

Steudelella Honda = *Sphaerocaryum* Nees ex Hook.f.

For the German botanist Ernst Gottlieb von Steudel, 1783-1856, physician, botanical collector, December 1825 with Christian Ferdinand Hochstetter (1787-1860) founded Der Botanische Reiseverein Esslingen; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 326. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 249, 280. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; E.M. Tucker, *Catalogue of the library of the Arnold*

Arboretum of Harvard University. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 722. University of Pennsylvania Press, Philadelphia 1964; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 261. Palermo 1988; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 470. 1973; Leonard Huxley, *Life and Letters of Sir Joseph Dalton Hooker*. London 1918; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Panicoideae, Panicodae, Isachneae, type *Steudelella pulchella* (Roth ex Roem. & Schult.) Honda, see *Systema Vegetabilium* 2: 476. 1817, *Prodromus Florae Novae Hollandiae* 196. 1810, *Nomenclator Botanicus. Editio secunda* 2: 620. 1841, *The Flora of British India* 7(22): 246. 1897 [1896] and *Philippine Journal of Science* 11: 52. 1916, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 258-259. 1930 [also *J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot.*].

Steyermarkochloa Davidse & R.P. Ellis

Dedicated to the American botanist Julian Alfred Steyermark, 1909-1988, botanical explorer, from 1937 to 1958 with the Field Museum of Natural History, from 1959 to 1984 at the Instituto Botanico Caracas, specialist on Rubiaceae, among his writings are "New Species of Rubiaceae from Peru collected by John Wurdack." *Bol. Soc. Venez. Ci. Nat.* 25: 232-244. 1964, *Spring Flora of Missouri*. St. Louis and Chicago 1940, *Behind the Scenes*. St. Louis, Mo. 1984 and "Rubiaceae." in Bassett Maguire, J.J. Wurdack and collaborators, "The Botany of the Guayana Highland-part V, VI, VII, IX." in *Mem. New York Bot. Gard.* 10(5): 186-278. 1964, 12(3): 178-285. 1965, 17(1): 230-439. 1967 and 23: 227-832. 1972, with Otto Huber wrote *Flora del Avila*. Caracas 1978, with Paul C. Standley curator of the *Flora of Guatemala*. [Fieldiana, Botany. volume 24, etc.] Published by Chicago Natural History Museum; see J.A. Steyermark & collaborators, "Botanical Exploration in Venezuela." in *Fieldiana, Bot.* 1951-1952; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 383. 1972; J.H. Barnhart, *Biographical notes upon botanists*. 3: 330. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 388. 1973; Laurence J. Dorr, "In Memoriam. John J. Wurdack, 1921-1998." in *Plant Science Bulletin*. 44(2): 41. Summer 1998; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Staffeu and Cowan, *Taxonomic literature*. 5: 925-926. Utrecht 1985.

Two species, tropical America, Colombia, Venezuela, Amazonas. Panicoideae (or Arundinoideae? or Bambusoideae?), Steyermarkochloaeae, perennial, stout, herbaceous, unarmed, tufted, unbranched, erect, dimorphic, densely clumped, forming colonies, vegetative and reproductive culms, auricles absent, leaf blades linear sometimes slightly twisted, ligule absent, plants bisexual, inflorescence a single raceme, spikelets shortly pedicellate and imbricate, male or bisexual spikelets at the base of the inflorescence, bisexual spikelets in the middle and female toward the tip, 2 male florets, 2 glumes subequal, awnless, palea present, lodicules absent, 2 stamens or absent, ovary glabrous, 2 stigmas, savannahs, forest, seasonally inundated places, type *Steyermarkochloa unifolia* Davidse & R.P. Ellis, see *Histoire des plantes de la Guiane Française* 2: 876, pl. 337. 1775 and *J. Linn. Soc. Bot.* 50: 337-362. 1936, *Annals of the Missouri Botanical Garden* 71(4): 995, f. 1-27. 1984 [1985], *Genera Graminum* 312-313. 1986, *Contributions from the United States National Herbarium* 46: 609. 2003.

Species

S. angustifolia (Spreng.) Judz. (*Pariana angustifolia* Spreng.; *Steyermarkochloa unifolia* Davidse & R.P. Ellis)

South America. See *Systema Vegetabilium, editio decima sexta* 2: 609. 1825 and *Annals of the Missouri Botanical Garden* 71(4): 995, f. 1-27. 1984 [1985], E.J. Judziewicz, "Steyermarkochloa angustifolia (Sprengel) Judziewicz, a new combination." *Ann. Missouri Bot. Gard.* 77: 204. 1990.

S. unifolia Davidse & R.P. Ellis (*Steyermarkochloa angustifolia* (Spreng.) Judz.)

South America. See G. Davidse & R.P. Ellis, "Steyermarkochloa unifolia Davidse & Ellis, a new genus from Venezuela and Colombia (Poaceae: Arundinoideae: Steyermarkochloaeae)." *Ann. Missouri Bot. Gard.* 71: 994-1012. 1984.

Stiburus Stapf = *Eragrostis* Wolf, *Triphlebia* Stapf, *Triphlebia* Baker (Aspleniaceae)

Possibly from the Latin *stibi, is* and *stibium, ii* "antimony, black antimony"; or from Greek *stibi* and *oura* "a tail," or *sibe* "stipa."

Two species, southern Africa. Chloridoideae, Eragrostideae, Eleusininae, or Chloridoideae, Eragrostideae, Eragrostidinae, annual, unbranched, unarmed, tufted, herbaceous, leaves mostly basal, auricles absent, glandular, ligule a very narrow fringed membrane, rhizomatous, plants bisexual, contracted inflorescence paniculate, spikelets solitary and pedicellate, 2-6 florets, lower florets bisexual, uppermost floret reduced, 2 glumes densely hairy and unequal or subequal, lemmas mucronate, palea present, 2 minute lodicules free and fleshy, stamens 3, ovary glabrous, stigmas plumose, in moist areas along streams, high

altitude sourveld, sometimes referred to *Eragrostis*, see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, O. Beccari (1843-1920), *Malesia: raccolta di osservazioni botaniche intorno alle piante dell'arcipelago Indo-Malese e Papuano* pubblicata da Odoardo Beccari, destinata principalmente a descrivere ed illustrare le piante da esso raccolte in quelle regioni durante i viaggi eseguiti dall'anno 1865 all'anno 1878 ... Genova 1877-1890, *Flora Capensis* 7: 318. 1898, *Hooker's Icones Plantarum* 27: t. 2612. 1899 and *Flora Capensis* 7(4): 696-697. 1900, *Acta Bot. Neerl.* 15: 157. 1966, *Contributions from the United States National Herbarium* 41: 81-115, 219, 230. 2001.

Species

S. alopecuroides (Hack.) Stapf (*Eragrostis alopecuroides* Balansa; *Eragrostis tincta* S.M. Phillips; *Lasiochloa alopecuroides* Hack.; *Triphlebia alopecuroides* (Hack.) Stapf)

South Africa, Zimbabwe. Perennial, tufted, rhizomatous, leaf blade flattened and hairy, ligule a short inconspicuous fringed membrane, inflorescence a contracted cylindrical spike-like panicle, dark glumes and lemmas densely hairy, grazing value unknown, the South African traditional healers use it to wash away bad luck, common in veld, open velds, slopes, sourveld, wet areas, around seepages, see *Révision des Graminées* 2: 556. 1832, *Journal de Botanique (Morot)* 4(9): 168. 1890, *Bulletin de l'Herbier Boissier* 3(8): 393. 1895 and *Flora Capensis* 7: 697. 1900, *Kew Bulletin* 37(1): 159. 1982.

in English: Pongwa grass

in South Africa: koperdraadgras, morakela, morakapele

S. conrathii Hack. (*Eragrostis conrathii* (Hack.) S.M. Phillips)

South Africa, Transvaal. Perennial, rhizomatous, tufted, glumes and lemmas hairy, usually in damp areas, wet places, mountain sourveld, see *Österreichische Botanische Zeitschrift* 52(10): 374. 1902, *Kew Bulletin* 37(1): 159. 1982.

Stilpnophleum Nevski = *Calamagrostis* Adans.

Greek *stilpnos* "shining, glittering" and *Phleum*.

Monotypic, Russia. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Agrostidinae, perennial, herbaceous, tufted, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence paniculate, spikelets pedicellate, 2 acute glumes subequal 1-nerved, palea nerved, 2 free membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, sometimes referred to *Calamagrostis* and *Deyeuxia*, type *Stilpnophleum laguroides* (Regel) Nevski (also spelled *laguroides*), see *Familles des Plantes* 2: 31, 530. 1763,

Tentamen Florae Germanicae 1: 34. 1788, George Henderson (1836-1929), *Lahore to Yârkand*. Incidents of the route and natural history of the countries traversed by the Expedition of 1870, under T.D. Forsyth. By George Henderson and Allan O. Hume. London 1873, *Trudy Imp. Saint Pétersbourg. Bot. Sada* 7: 639. 1881 and *Trudy Bot. Inst. Akad. Nauk SSSR* 3: 143. 1936, *Feddes Rep. Spec. Nov. Reg. Veg.* 63(3): 246. 1960, *Contributions from the United States National Herbarium* 48: 191-227, 617. 2003.

Species

S. laguroides (Regel) Nevski (*Calamagrostis laguroides* Regel)

Russia.

Stipa L. = *Achnatherum* P. Beauv.,
Anemanthele Veldkamp, *Aristella* Bertol.,
Aristella (Trin.) Bertol., *Austrostipa* S.W.L.
Jacobs and J. Everett, *Hesperostipa* (Elias)
Barkworth, *Jarava* Ruiz & Pav., *Lasiagrostis*
Link, *Macrochloa* Kunth, *Ortachne* Nees ex
Steud., *Orthoraphium* Nees, *Patis* Ohwi,
Ptilagrostis Griseb., *Sparteum* P. Beauv.,
Timouria Roshev., *Trichosantha* Steud.,
Trikeriaia Bor

From the Greek *stýpe*, *stýppe* “tow,” in some Eurasian species the awns are feathery and plumose; Latin *stuppa*, *stipa* “tow, oakum, hards”; see Carl Linnaeus, *Species Plantarum*. 78. 1753 and *Genera Plantarum*. edition 5. 34. 1754; Helmut Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 611. Basel 1996.

Around 200-300/400 species for *Stipa* (s. lat.) L., and about 50 species for *Stipa* (s. str.) L., mostly in temperate and warm temperate regions. Stipoideae, Stipeae, Stipinae, or Pooideae, Stipeae, Stipinae, perennial bunchgrass, rarely annual, variable, occasionally rhizomatous, stems clumped or densely tufted, caespitose or spreading, erect or ascending, bristled, long slender stems, unbranched or branched, robust basal clump of foliage, ligule membranous, leaves narrow and rough, auricles present or absent, sheaths terete and open, plants bisexual, inflorescence narrowly-paniculate, panicle dense or sparse, elongate to fusiform floret with a well-developed pungent callus and hygroscopic awn, spikelets pedicellate and borne singly, 1 bisexual floret, reduced floret absent, pungent floret, a long or short bearded callus at the base of each floret, awn flexuous or falcate, 2 glumes very unequal to more or less equal, glumes larger than the single floret, lemma membranous to coriaceous, palea membranous and 0- to 2-nerved, 2 or 3 lodicules, 3 stamens, anthers yellow, ovary glabrous, 2 or 3 or 4 white stigmas, axillary cleistogenes common, ornamental, edible

grains, weed species, provides valuable forage, used for papermaking and cordage, the diaspores penetrate the skin, mouths and eyes of stock, the species with falcate awns a problem in Australia for the quality of sheep fleeces, some species can cause a drowsiness or stuporous condition in horses, native pasture species, rocky slopes, pampas, grasslands, punas, páramos, steppes, a polyphyletic genus, taxonomic problems, often referred to *Austrostipa* S.W.L. Jacobs and J. Everett, species treated frequently as *Jarava*, some species included by some authors in *Hesperostipa* and *Austrostipa*, hybrids with *Nassella* (Trin.) E. Desv., type *Stipa pennata* L., see *Species Plantarum* 1: 78-79. 1753, *Flora Peruviana, et Chilensis Prodrumus* 2. 1794, *Flora Peruviana* 1: 5, t. 6, f. b. 1798, *Essai d'une Nouvelle Agrostographie* 19-20, 146, 178, pl. 6, f. 7. 1812, *Fundamenta Agrostographiae* 110. 1820, *Enumeratio plantarum horti regii berlinensis altera* 1: 99. Berolini [Berlin] 1827, *Révision des Graminées* 1: 58. 1829, *Fl. Ital.* 1: 690. 1833, *Nomenclator Botanicus. Editio secunda* 2: 642, 702. 1841, *Proceedings of the Linnean Society of London* 1: 94. 1841, *Species Graminum Stipaceorum* 42. 1842, *Flora Rossica* 4(13): 447. 1852, *Synopsis Plantarum Glumacearum* 1: 121, 132. 1854, *Flora der Provinz Brandenburg* 1: 812. 1864 and *Anales del Museo Nacional de Montevideo* 4(22): IV, 98. 1901, *Fl. As. Ross.* 12: 173. 1916, *Special Papers of the Geological Society of America* 41. Washington, D.C. 1942, *Acta Phytotaxonomica et Geobotanica* 11: 181. 1942, *Botanical Gazette* 113: 438-444. 1952, *Publications of the Carnegie Institution of Washington* 599. 1953, *Kew Bulletin* 9(4): 555. 1955, *Gayana, Botánica* 13: 1-137. 1965, *Boletín de la Sociedad Argentina de Botánica* 11: 303-305. 1969, *Phytomorphology* 26: 297-301. Delhi 1976, *Kansas Geol. Surv. Bull.* 218. 1979, *Willdenowia* 12: 235-240. 1982, *Taxon* 31: 233-243. 1982, *Systematic Botany* 8: 395-419. 1983, *Kew Bulletin* 40: 731-736. 1985, *Acta Botanica Neerlandica* 34: 107-108. 1985, *Notes from the Royal Botanic Garden, Edinburgh* 43: 355-489. 1985, *Flora Mesoamericana* 6: 243. 1994, K.A. Robson and J. Maze, “A comparison of rare and common grasses of the Stipeae. I. Greenhouse studies of growth and variation in 4 species from parapatric populations.” *International Journal of Plant Sciences* 156(4): 530-541. 1995, *Acta Botanica Malacitana* 21: 161. 1996, *Telopea* 6(4): 582, 587. 1996, *Am. J. Bot.* 86: 17-31. 1999, Khidir W. Hilu and Lawrence A. Alice, “Evolutionary implications of *matK* indels in Poaceae.” *Am. J. Bot.* 86: 1735-1741. 1999, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, “Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B.” *Am. J. Bot.* 87: 96-107. 2000, Matthew A. Gitzendanner and Pamela S. Soltis, “Patterns of genetic variation in rare and widespread plant congeners.” *Am. J. Bot.* 87: 783-792. 2000, *Am. J. Bot.* 87: 861-871, 986-994. 2000, S.W.L. Jacobs, J. Everett, M.E. Barkworth and C. Hsiao, “Relationships with the Stipoid grasses (Gramineae).” 75-82. 2000 in S.W.L. Jacobs and J. Everett

(Editors), *Proceedings of the Third International Symposium on Grass Systematics and Evolution*. CSIRO, Canberra, Australia, *Am. J. Bot.* 88: 616-622, 1545-1557. 2001, *Am. J. Bot.* 89: 494-499, 1624-1633. 2002, *Contributions from the United States National Herbarium* 48: 15-18, 119, 126, 383-384, 402-409, 421, 432, 455-467, 495-504, 590-591, 614, 617-650, 657-658. 2003, Joyce Maschinski, Joanne E. Baggs and Christopher F. Sacchi, "Seedling recruitment and survival of an endangered limestone endemic in its natural habitat and experimental reintroduction sites." *Am. J. Bot.* 91: 689-698. 2004, F.M. Vázquez and Mary E. Barkworth, "Resurrection and emendation of *Macrochloa* (Gramineae: Stipeae)." *Botanical Journal of the Linnean Society* 144(4): 483-495. Apr 2004, Satya Maliakal-Witt, Eric S. Menges and J.S. Denslow, "Microhabitat distribution of two Florida scrub endemic plants in comparison to their habitat-generalist congeners." *Am. J. Bot.* 92: 411-421. 2005, *Journal of Biogeography* 32(2): 311-327. Feb 2005, Kensuke Kawamura et al., "Comparing MODIS vegetation indices with AVHRR NDVI for monitoring the forage quantity and quality in Inner Mongolia grassland, China." *Grassland Science* 51(1): 33-40. Mar 2005, *Weed Biology and Management* 5(1): 31-34. Mar 2005, *Austral. Ecology* 30(2): 168-178. Apr 2005, *Journal of Biogeography* 32(4): 709-718. Apr 2005, *The Professional Geographer* 57(2): 185-197. May 2005, *Ecography* 28(3): 273-282. June 2005, *Grass and Forage Science* 60(2): 119-127. June 2005, *Journal of Biogeography* 32(6): 1043-1062, 1085-1106. June 2005.

Species

S. acrociliata Reader (*Austrostipa acrociliata* (Reader) S.W.L. Jacobs & J. Everett; *Stipa readeri* F. Muell. ex Reader)

Western Australia, South Australia, New South Wales, Victoria. Perennial, shortly rhizomatous or caespitose, wiry and often branched at nodes, ligule truncate and membranous, auricles thickened, blade ribbed, panicle sparse and spreading with few-flowered branches, spikelets gaping, glumes unequal, lemma dark brown, callus straight and sharp, awn with 1 or 2 bends, sandy areas, desert, see *Victoria Naturalist* 13: 167-168. 1897 and *Victoria Naturalist* 23: 25. 1906, *Telopea* 6(4): 584. 1996.

in English: graceful speargrass

S. aktauensis Roshev. (*Stipa deserti* Popov ex Kom.)

Russia, USSR (former), Turkestan, Aktau. Rare species, see *Izv. Bot. Sada Akad. Nauk SSSR* 30: 302. 1931 [or 1932], *Flora URSS* 2: 85. 1934.

S. aliena Keng

China. Subalpine meadows, sand dune area, sandy loam, see *Sunyatsenia* 6(1): 74-75. 1941.

S. angustifolia Hitchc. (*Piptochaetium angustifolium* (Hitchc.) Valencia & Costas)

Mexico. Forage, rocky places, see *Reliquiae Haenkeanae* 1: 222. 1830 and *Contributions from the United States National Herbarium* 24(7): 246, t. 52, f. 1, 2. 1925, *Boletín de la Sociedad Argentina de Botánica* 12: 177. 1968, *Annals of the Missouri Botanical Garden* 89(3): 305-336. 2002.

in Mexico: flechilla hoja angosta

S. anomala P.A. Smirn. (*Stipa anomala* P.A. Smirn. ex Roshev., nom. illeg., non *Stipa anomala* P.A. Smirn.; *Stipa pennata* var. *anomala* (P.A. Smirn.) Tzvelev)

Russia, Ukraine. Indeterminate species, see *Species Plantarum* 1: 78. 1753 and *Flora URSS* 2: 96, 740. 1934, *Novosti Sist. Vyss. Rast.* 11: 18. 1974.

S. apertifolia Martinovsky (*Stipa dasyvaginata* Martinovsky)

Europe, Spain. Rare species, see *Preslia* 39: 274. 1967, *Anales del Instituto Botánico A. J. Cavanilles* 27: 61. Madrid 1970.

S. apertifolia Martinovsky var. *apertifolia*

North Africa, Italy, Spain.

S. apertifolia Martinovsky var. *nevadensis* Francisco M. Vázquez & Devesa

North Africa, Italy, Spain.

S. aquarii Vickery, S.W.L. Jacobs & Everett (*Austrostipa aquarii* (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett; *Stipa aphylla* (Rodway) Townrow)

Australia, Northern Territory. Perennial, erect, see *Tasmanian Fl.* 262. 1903, *Papers and Proceedings of the Royal Society of Tasmania* 104: 85, 96. 1970, *Telopea* 3(1): 27. 1986, *Telopea* 6(4): 584. 1996.

S. arabica Trin. & Rupr. (*Stipa arabica* var. *meyeriana* Trin. & Rupr.; *Stipa arabica* var. *meyeriana* Tzvelev; *Stipa barbata* var. *arabica* (Trin. & Rupr.) Boiss. ex Kuntze; *Stipa barbata* var. *arabica* (Trin. & Rupr.) Bornm., nom. illeg., non *Stipa barbata* var. *arabica* (Trin. & Rupr.) Boiss. ex Kuntze; *Stipa meyerana* (Trin. & Rupr.) Grossh.; *Stipa meyeriana* (Trin. & Rupr.) Grossh.; *Stipa orientalis* Trin.; *Stipa szovitsiana* Trin. & Rupr.; *Stipa szovitsiana* var. *meyeriana* (Trin. & Rupr.) Roshev.)

Asia, Saudi Arabia, Syria, Iran. Perennial, open panicle, fine curved awn shortly pubescent and pigmented, useful for erosion control, heavily grazed, common on very dry rocky area, see *Flora Atlantica* 1: 97, t. 27. 1798, *Species Graminum Stipaceorum* 77-78. 1842, *Flora Rossica* 4(13): 450. 1852, *Acta Horti Petrop.* 10: 255. 1887 and *Bulletin de l'Herbier Boissier* 8: 737. 1908, *Zlaki SSSR* 583. 1976, *Botanical Journal of the Linnean Society* 144(4): 497-505. Apr 2004.

S. araxensis Grossh. (*Stipa lasiopoda* P.A. Smirn.; *Stipa pennata* var. *araxensis* (Grossh.) Freitag; *Stipa pulcherrima* subsp. *araxensis* (Grossh.) Tzvelev)

Russia. See *Linnaea* 21(4): 440. 1848 and *Beihefte zum Botanischen Centralblatt* Abt. II, 44: 200. 1927, *Novosti Sist. Vyss. Rast.* 11: 18. 1974, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 441. 1985.

S. arenicola F.A. Roig (*Jarava arenicola* (F.A. Roig) Peñailillo)

Argentina. See *Hickenia* 2: 257-260. 1998, *Contributions from the United States National Herbarium* 48: 403. 2003.

S. arida M.E. Jones (*Achnatherum aridum* (M.E. Jones) Barkworth; *Stipa mormonum* Mez)

Northern America, U.S., Utah. See *Proceedings of the California Academy of Sciences, Series 2*, 5: 725. 1895 and *Repertorium Specierum Novarum Regni Vegetabilis* 17: 209. 1921, *Phytologia* 74(1): 6. 1993.

S. aristiglumis F. Muell. (*Austrostipa aristiglumis* (F. Muell.) S.W.L. Jacobs & J. Everett)

Australia, New South Wales, Liverpool Plains, Queensland, Victoria. Perennial, caespitose, ligule ciliate, auricles present, blade flat or convolute, panicle usually spreading, spikelets gaping after floret disarticulation, glumes unequal and acuminate, lemma dark and silky, hairy callus short and broad, awn twice bent, heavy soils, on the heavy textured black earth soils, see *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 43. 1855 and *Victoria Naturalist* 17: 156. 1901, *Telopea* 6(4): 584. 1996.

in English: Plains grass

S. arundinacea (Hook.f.) Benth. (*Agrostis lessoniana* Steud.; *Anemanthele lessoniana* (Steud.) Veldkamp; *Apera arundinacea* Hook.f.; *Stipa arundinacea* Hook.f.)

East Australia, New Zealand. Perennial, clumped, upright or arching, short and creeping rhizomes, leaves coriaceous and dark green, inflorescence a pendent panicle, spikelets sparse, see *Nomenclator Botanicus. Editio secunda* 1: 41. 1840, *Flora Novae-Zelandiae* 295, t. 67. 1853, *Journal of the Linnean Society, Botany* 19: 81. 1881 and *Acta Botanica Neerlandica* 34: 108. 1985.

in English: New Zealand wind grass, pheasant's tail grass

S. austroaltaica Kotukhov

Europe. See *Bot. Zhurn. (Moscow & Leningrad)* 72(9): 1254. 1987.

S. austroitalica Martinovsky

Europe, Italy, Sicily. Endangered species, see *Webbia* 20: 723. 1965, *Webbia* 40(2): 254. 1986.

in English: Italian stipa

in Italian: lino delle fate

S. austroitalica Martinovsky subsp. *theresiae* Martinovsky & Moraldo

Europe, Italy. See *Preslia* 52(1): 18. 1980.

S. baicalensis Roshev. (*Stipa attenuata* P.A. Smirn.)

Eurasia, Mongolia. Mountain, steppe, dark brown meadow soil, see *Izv. Glavn. Bot. Sada SSSR* 28: 380. 1929.

S. barbata Desf. (*Stipa barbata* Michx., nom. illeg., non *Stipa barbata* Desf.; *Stipa barbata* var. *calatajeronensis* (Tineo ex Arcang.) Richt.; *Stipa barbata* var. *hispanica* Trinius & Ruprecht; *Stipa barbata* var. *longiaristata* Martinovsky; *Stipa calatajeronensis* Tineo; *Stipa calatajeronensis* Tineo ex Arcang.; *Stipa plumosa* Trin.; *Stipa plumosa* Pourret ex Willk.; *Stipa plumosa* Pourret ex Willk. & Lange) (*Stipa calatajeronensis* Tineo dedicated to Caltagirone, Sicily, Italy)

South Europe, Sicily, Algeria, Iran, Syria. Perennial bunchgrass, erect, robust, leaves sickle-shaped, inflorescence narrow and open, villous awns silvery to purple, long straight awns curved near the end, native pasture species, useful for erosion control, found on silty clay gravelly loam, see *Flora Atlantica* 1: 97, t. 27. 1798, *Flora Boreali-Americana* 1: 53. 1803, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 37. 1836, *Species Graminum Stipaceorum* 77. 1842, *Prodromus Florae Hispanicae* 1: 60. 1861, *Compendio della Flora Italiana* 772. 1883, *Plantae Europaeae* 1: 32. 1890 and *Acta Botanica Malacitana* 21: 125-189. 1996, *Botanical Journal of the Linnean Society* 124: 201-209. 1997.

in Morocco: awerga, tawerga, zuwway

S. barbata Desf. subsp. *barbata*

South Europe, Turkey.

S. barbata Desf. subsp. *brevipila* (Cosson & Durieu) F.M. Vázquez & Devesa (*Stipa barbata* var. *brevipila* Coss. & Durieu)

Northwest Africa. See *Exploration Scientifique de l'Algérie* 2: 76. 1867 and *Botanical Journal of the Linnean Society* 124: 202. 1997.

S. bavarica Martinovsky & H. Scholz (*Stipa pulcherrima* subsp. *bavarica* (Martinovsky & Scholz) Conert)

Europe, Germany. Vulnerable species, see *Linnaea* 21(4): 440. 1848 and *Willdenowia* 4: 322. 1968, *Illustrierte Flora von Mittel-Europa*, edition 3, 1(3: Lief. 6): 425. 1992.

in English: Bavarian feathergrass

S. baviensis Speg. (*Nassella philippii* (Steud.) Barkworth; *Stipa philippii* Steud.)

South America, Uruguay, Argentina. See *Synopsis Plantarum Glumacearum* 1: 125. 1854 and *Anales del Museo Nacional de Montevideo* 4(2): 122-124, f. 83. 1901, *Revista Argentina de Botánica* 1: 40. 1925, *Flora de la Provincia de Buenos Aires* 4(2): 255-290. 1970, *Taxon* 39(4): 611. 1990.

S. bhutanica Noltie

Bhutan. See *Edinburgh Journal of Botany* 56(2): 289, f. 1L-P. 1999.

S. bigeniculata Hughes (*Austrostipa bigeniculata* (Hughes) S.W.L. Jacobs & J. Everett)

New South Wales, Victoria, Tasmania, New Zealand. Perennial, caespitose, ligule truncate, auricles present, blade rolled and ribbed, panicle exserted, spikelets gaping after floret disarticulation, glumes unequal, tuberculate lemma reddish brown at maturity, strong callus curved and silky, awn twice bent, see *Bulletin of Miscellaneous Information Kew* 1922: 20. 1922, *Telopea* 6(4): 584. 1996.

in English: kneed speargrass, speargrass, tall speargrass

S. blackii C.E. Hubbard (*Austrostipa blackii* (C.E. Hubb.) S.W.L. Jacobs & J. Everett; *Stipa aristiglumis* var. *cana* Reader; *Stipa clelandii* Summerh. & C.E. Hubb.; *Stipa pubescens* R. Br. var. *comosa* J. Black)

New South Wales, South Australia, Western Australia, Victoria. Perennial, caespitose, ligule truncate to lacinate, auricles present, blade ribbed, panicle sparse, spikelets gaping after floret disarticulation, glumes unequal and acuminate, reddish lemma gibbous and tuberculate, callus curved and sharp, awn strongly twice bent, heavily grazed, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 43. 1855 and *Victoria Naturalist* 17: 156. 1901, *Fl. S. Australia* 1: 66. 1922, *Bulletin of Miscellaneous Information Kew* 1925: 431. 1925, *Bulletin of Miscellaneous Information Kew* 1927: 362. 1927, *Telopea* 6(4): 584. 1996.

in English: crested speargrass

S. borysthenica Klokov ex Prokudin (*Stipa joannis* Celak. subsp. *sabulosa* (Pacz.) Lavrenko; *Stipa pennata* f. *sabulosa* Pacz.; *Stipa pennata* subsp. *sabulosa* (Pacz.) Tzvelev; *Stipa pennata* var. *anomala* (P.A. Smirn.) Tzvelev)

Europe. See *Österreichische Botanische Zeitschrift* 34: 318. 1884 and *Novosti Sist. Vyssh. Rast.* 10: 80. 1973, *Novosti Sist. Vyssh. Rast.* 11: 18. 1974.

S. borysthenica Klokov ex Prokudin subsp. ***germanica*** (Endtm.) Martinovsky & Rauschert (*Stipa germanica* (Endtm.) Klokov; *Stipa joannis* Celak. subsp. *germanica* Endtm.; *Stipa sabulosa* subsp. *germanica* (Endtm.) Martinovsky & Rauschert)

Europe. See *Novosti Sist. Vyssh. Nizsh. Rast. (Kiev)* 1975: 67. 1975[1976], *Preslia* 48(2): 187. 1976.

S. brandisii Mez (*Stipa sibirica* (L.) Lam.)

India, Punjab, China, Nepal. Clumped, leaves light green, flower heads green, slight purplish markings, see *Species Plantarum* 1: 79. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 158. 1791 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 207. 1921, *Bot. Zhurn. (Moscow & Leningrad)* 79(2): 135-139. 1994.

S. breviflora Grisebach (*Stipa aliciae* Kanitz)

China, India, Nepal. See *Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen. Mathematisch-physikalische Klasse* 82. 1868.

S. breviglumis J.M. Black (*Austrostipa breviglumis* (J.M. Black) S.W.L. Jacobs & J. Everett; *Stipa verticillata* sensu J. Black)

Australia, South Australia, Victoria. Rare species, often rhizomatous, stems often branched at the nodes, panicle sparse, callus slightly curved and blunt, awn with 1 or 2 bends, see *Transactions and Proceedings of the Royal Society of South Australia* 65: 333. 1941, *Telopea* 3: 35. 1986, *Telopea* 6(4): 584. 1996.

in English: bamboo speargrass, cane speargrass

S. brevipes E. Desv. (*Jarava brevipes* (E. Desv.) Peñailillo; *Stipa hirtiflora* Hack.)

South America, Chile, Argentina. See *Flora Chilena* 6: 282. 1854 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 7: 5, t. 3, f. 7, t. 7, f. 4-5. 1908, *Gayana, Botánica* 59(1): 30. 2002.

S. breviseta Caro & Sánchez (*Jarava breviseta* (Caro & E.A. Sánchez) Peñailillo; *Ortachne breviseta* Hitchc.; *Stipa breviseta* (Hitchc.) Martic. & Quezada, nom. illeg., non *Stipa breviseta* Caro & E.A. Sánchez)

Argentina. See *Journal of the Washington Academy of Sciences* 17: 141. 1927, *Kurtziana* 7: 100, t. 7. 1973, *Gayana, Botánica* 42(1-2): 152. 1985, *Gayana, Botánica* 59(1): 30. 2002.

S. bungeana Trin. (dedicated to the Russian botanist of German extraction Alexander von Bunge, 1803-1890, botanical collector, explorer in Siberia, Mongolia and North China, traveler, 1831 on the Ecclesiastical Russian Mission to China, professor of botany and natural history at Dorpat (now Tartu, Estonia), companion of Carl (Karl) Friedrich von Ledebour (1785-1851) and C.A. Meyer on their travels in the Altai Mountains, author of *Enumeratio plantarum, quas in China boreali collegit Dr. Al. Bunge*. Anno 1831. [St. Petersburg 1833], he was the father of the physiologist Gustav von Bunge (1844-1920, d. Basel, Switzerland). See J.H. Barnhart, *Biographical notes upon botanists*. 1: 281. 1965; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 350, 435. 1973; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 141. Oxford 1964; Audrey le Lièvre, "Nineteenth-Century Dorpat and its Botanical Influence." *Curtis's Botanical Magazine*. Volume 14. 1: 35-55. Feb 1997; Frans A. Stafleu and Erik A. Mennega, *Taxonomic literature. Supplement III*. 220-223. 1995; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 58. 1972; Emil Bretschneider, *History of European*

Botanical Discoveries in China. Leipzig 1981; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Herbert Schriebers, in *D.S.B.* 2: 585-586. 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942)

Russia, Asia, China. See *Enumeratio Plantarum, quas in China Boreali* 70. 1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg*. Sav. Etrang. 2: 144. 1835 and *Weed Biology and Management* 5(1): 31-34. Mar 2005, *Global Change Biology* June 2005.

S. capensis Thunb. (*Lasiagrostis capensis* Nees; *Ortachne retorta* Nees ex Steud.; *Stipa capensis* (Nees) Kuntze, nom. illeg., non *Stipa capensis* Thunb.; *Stipa humilis* Brot., nom. illeg., non *Stipa humilis* Cav.; *Stipa retorta* Cav.; *Stipa retorta* (Nees ex Steud.) Mez, nom. illeg., non *Stipa retorta* Cav.; *Stipa seminuda* Vahl ex Hornem.; *Stipa tortilis* Desf.; *Trachypogon polymorphus* subvar. *capensis* (Thunb.) Hack.)

North Africa, Algeria, South Africa, Middle East. Annual, toxic, persistent awn bent and twisted, translucent glumes, lax lemma pubescence, useful for erosion control, found in open veld, disturbed places, see *Prodromus Plantarum Capensium*, ... 19. 1794, Antonio José Cavanilles (1745-1804), *Observaciones sobre la historia natural, geografía, agricultura, poblacion y frutos del reyno de Valencia*. Madrid 1795-1797, *Flora Atlantica* 1: 99, t. 31, f. 1. 1798, *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 41, t. 466, f. 1. 1799, *Flora Lusitanica* 1: 86. 1804, *Hortus Regius Botanicus Hafniensis* 1: 76. 1813, *Flora Brasiliensis seu Enumeratio Plantarum* 341. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg*. Sixième Série. *Sciences Mathématiques, Physiques et Naturelles* 2(4): 257. 1832, *Florae Africae Australioris Illustrationes Monographicae* 167. 1841, *Synopsis Plantarum Glumacearum* 1: 121. 1854, *Flora Brasiliensis* 2(4): 263. 1883, *Monographiae Phanerogamarum* 6: 326. 1889, *Revisio Generum Plantarum* 3(3): 371. 1898 and *Repertorium Specierum Novarum Regni Vegetabilis* 17: 208. 1921, *Boletim da Sociedade Broteriana*, ser. 2 64: 35-74. 1991, *Acta Botanica Malacitana* 21: 125-189. 1996, *Lagascalia* 20(2): 265-275. 1998, *Ecology Letters* 3(4): 349-361. July 2000, *Functional Ecology* 17(6): 766-777. Dec 2003, *Journal of Ecology* 92(2): 297-309. Apr 2004, *Oikos* 106(2): 209-216. Aug 2004, Bertrand Boeken et al., "Environmental factors affecting dispersal, germination and distribution of *Stipa capensis* in the Negev Desert, Israel." *Ecological Research* 19(5): 533-540. Sep 2004, *Botanical Journal of the Linnean Society* 146(1): 107-121. Sep 2004.

in Morocco: stipe tortillée, l-behma, el-Behma, l-gmwidiya, legmwêdiya, lagmêdiya, âwerga, tawerga, zuwuwây

S. capillacea Keng

China. On open areas, grassland, subalpine meadow, see *Sunyatsenia* 6(2): 100-102, t. 15. 1941 [or 1942], *Acta Botanica Yunnanica* 16(3): 229. 1994.

S. capillata L. (*Stipa capillata* DC., nom. illeg., non *Stipa capillata* L.)

South and Central Europe, Siberia. Perennial bunchgrass, upright, clumped, light green, leaves thread-like, inflorescence loose, nonpennate awns, frequently kills sheep, eaten by cattle up to heading time, useful for erosion control, common along roadsides, old orchards, meadow, sandy gravelly soil, disturbed areas, see *Species Plantarum, Editio Secunda* 1: 116. 1762, *Flore Française. Troisième Édition* suppl. 5: 257. 1815 and *Acta Botanica Malacitana* 21: 125-189. 1996.

in English: needlegrass

S. caucasica Schmalh. (*Stipa bella* Drobow, nom. illeg., non *Stipa bella* Phil.; *Stipa orientalis* var. *grandiflora* Rupr.)

Asia, China, Russia, Armenia. See *Flora Altaica* 1: 83. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg* (Sér. 7) 14(4): 35. 1869, *Berichte der Deutschen Botanischen Gesellschaft* 10: 293. 1892 and *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 37. 1925.

S. caucasica Schmalh. subsp. *caucasica*

Armenia, Iran, Russia.

S. caucasica Schmalh. subsp. *desertorum* (Roshev.) Tzvelev (*Stipa caucasica* f. *desertorum* Roshev.; *Stipa desertorum* (Roshev.) Ikonn.)

China, Mongolia. Useful for erosion control, see *Novosti Sist. Vyss. Rast.* 11: 20. 1974.

S. caudata Trin. (*Achnatherum caudatum* (Trin.) S.W.L. Jacobs & J. Everett; *Jarava bertrandii* (Phil.) Peñailillo; *Jarava caudata* (Trin.) Peñailillo; *Stipa amphicarpa* Phil.; *Stipa bertrandii* Phil.; *Stipa litoralis* Phil.)

South America, Argentina, Chile. Perennial, tufted, cleistogenes present in lower sheaths, ligule membranous and truncate to obtuse, auricles present or absent, panicle exerted and contracted, spikelets gaping, callus straight and blunt, awn twice bent, weed, sandy places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg*. Sixième Série. *Sciences Mathématiques, Physiques et Naturelles* 1(1): 75. 1830, *Linnaea* 33(3-4): 283. 1864, *Anales del Museo Nacional de Chile. Primera Sección — Zoolojía* 1892: 11, Lam. 3 f. 2. 1892, *Anales de la Universidad de Chile* 93: 717, 726. 1896 and S.W.L. Jacobs, J. Everett & M.E. Barkworth, "*Nassella* in Australia, the placement of *Stipa caudata* and *S. brachychaeta* and clarification of morphological terms used in the Stipeae (Gramineae)." *Taxon* 44: 33-41. 1995, *Telopea* 6(4): 582. 1996, *Gayana, Botánica* 59(1): 30-31. 2002, *Journal of Biogeography* 29(2): 221-229. Feb 2002.

in Spanish: paja vizcachera, espartillo

S. centralis Vickery, S.W.L. Jacobs & Everett (*Austrostipa centralis* (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett)

Australia, Northern Territory. Perennial, erect, see *Telopea* 3(1): 39. 1986, *Telopea* 6(4): 584. 1996.

S. ceresiensis Kuntze (*Nassella filiculmis* (Delile) Barkworth; *Stipa filiculmis* Delile)

Argentina, Santa Fé, Ceres. See *Annales des Sciences Naturelles; Botanique, sér. 3* 12: 367. 1849, *Ind. Sem. Hort. Monsp.* 7. 1849, *Revisio Generum Plantarum* 3(3): 369, 371. 1898 and *Taxon* 39(4): 610. 1990.

S. cernua Stebbins & Love (*Nassella cernua* (Stebbins & Love) Barkworth; *Stipa pulchra* var. *cernua* (Stebbins & Love) Beetle & Tofsrud)

U.S., California. Glumes unequal, in grassland, chaparral, see *American Journal of Botany* 2: 301. 1915, *Madroño* 6(4): 137-141, f. 1, pl. 13, f. 1, 3. 1941, *Leaflets of Western Botany* 5(2): 35. 1947, *Taxon* 39(4): 609. 1990, Robert L. Bugg, Cynthia S. Brown and John H. Anderson, "Restoring Native Perennial Grasses to Rural Roadsides in the Sacramento Valley of California: Establishment and Evaluation." *Restoration Ecology* 5(3): 214-228. Sep 1997.

in English: nooding needlegrass

S. chitralensis Bor (Chitral, in the Hindukush range of mountains)

India, Jammu and Kashmir, northwest Pakistan. See *Kew Bulletin* 1954: 500. 1954.

S. chrysophylla E. Desv. (*Jarava chrysophylla* (E. Desv.) Peñailillo; *Stipa chrysophylla* var. *minor* E. Desv.; *Stipa humilis* f. *chrysophylla* (E. Desv.) Kuntze; *Stipa kurtzii* Mez; *Stipa speciosa* subsp. *chrysophylla* (E. Desv.) Dusén; *Stipa speciosa* var. *andina* Hauman; *Stipa speciosa* var. *gymnostachya* Hauman)

Chile. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 41, t. 466, f. 1. 1799, *Species Graminum Stipaceorum* 45. 1842, *Flora Chilena* 6: 278, t. 76, f. 2. 1854, *Revisio Generum Plantarum* 3(3): 371. 1898 and *Reports of the Princeton University Expeditions to Patagonia 1896-1899, Botany, Volume viii, Supplement* 8(3): 30-31. 1914 [1915], *Anales de Sociedad Científica Argentina* 86: 240, f. 5. 1918, *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 204. 1921, *Gayana, Botánica* 59(1): 31. 2002.

S. chubutensis Speg. (*Jarava chubutensis* (Speg.) Peñailillo; *Stipa dasynemisis* Speg.)

South America, Uruguay, Argentina, Chubut. See *Anales del Museo Nacional de Montevideo* 4(2): 49-51, f. 7. 1901, *Revista Argentina de Botánica* 1: 21. 1925, *Boletín de la Sociedad Argentina de Botánica* 14(4): 316, f. 3. 1972,

Gayana, Botánica 59(1): 31. 2002, *Contributions from the United States National Herbarium* 48: 404. 2003.

S. clandestina Hack. (*Achnatherum clandestinum* (Hack.) Barkworth)

Mexico. Perennial bunchgrass, densely tufted, bent and twisted awn, lemmas hairy, pasture, forage, weed, found in disturbed places, see *Repertorium Specierum Novarum Regni Vegetabilis* 8: 516. 1910, *Contr. U.S. Natl. Herb.* 24(7): 238. 1925, *Phytologia* 74(1): 6. 1993.

in Mexico: zacate picoso

S. clarazii Ball (*Nassella clarazii* (Ball) Barkworth; *Stipa longiglumis* Phil.; *Stipa quadrifaria* Kuntze) (for Georges Claraz, 1832-1930, botanical collector in Argentina and Patagonia)

South America. See *Linnaea* 33(3-4): 286. 1864, *Journal of the Linnean Society, Botany* 21: 237. 1884, *Revisio Generum Plantarum* 3(3): 369, 372. 1898 and *Anales del Museo Nacional de Montevideo* 4(2): 72-73. 1901, *Taxon* 39(4): 609. 1990.

S. consanguinea Trin. & Rupr. (*Stipa koelzii* R.R. Stewart)

India, Punjab, Bhutan. Wet meadow, see *Species Graminum Stipaceorum* 78. 1842 and *Brittonia* 5: 441. 1945.

S. constricta Hitchc. (*Achnatherum constrictum* (Hitchc.) Valdés-Reyna & Barkworth)

Mexico. Clumped, fodder, rocky places, slopes, hills, see *Contributions from the United States National Herbarium* 24(7): 244, t. 51, f. 28-29. 1925, *Contributions from the United States National Herbarium* 48: 15. 2003.

in Mexico: zacate

S. coreana Honda ex Nakai (*Achnatherum coreanum* (Honda ex Nakai) Ohwi; *Orthoraphium coreanum* (Honda ex Nakai) Ohwi; *Patis coreana* (Honda ex Nakai) Ohwi; *Stipa coreana* (Hack. ex Honda) Y. Lee, nom. illeg., non *Stipa coreana* Honda ex Nakai; *Stipa coreana* Honda, nom. illeg., non *Stipa coreana* Honda ex Nakai; *Stipa japonica* Hack. ex Honda, nom. illeg., non *Stipa japonica* (Hack.) Hack.)

Asia. See *Species Plantarum* 1: 78. 1753, *Essai d'une Nouvelle Agrostographie* 19, 146, pl. 6, f. 7. 1812, *Proceedings of the Linnean Society of London* 1: 94. 1841, *Atti della Reale Accademia dei Lincei, Memorie di Classe di Scienze Fisiche, Matematiche e Naturali* (ser. 3) 10: 187, 191, 247. 1881 and *Journal of Japanese Botany* 17: 404. 1914, *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 212. 1930, *Botanical Magazine* 47: 74. 1933, *Journal of Japanese Botany* 17: 404. 1941, *Acta Phytotaxonomica et Geobotanica* 11: 181. 1942, *Flora of Japan* 101. 1953, *Manual of the Korean Grasses* 200. 1966.

S. coronata Thurb. (*Achnatherum coronatum* (Thurb.) Barkworth; *Stipa coronata* Thunb. ex S. Watson; *Stipa*

coronata var. *depauperata* (M.E. Jones) Hitchc.; *Stipa parishii* Vasey; *Stipa parishii* var. *depauperata* M.E. Jones)

U.S., California. Bunchgrass, see *Geological Survey of California, Botany* 2: 287-288. 1880, *Botanical Gazette* 7(3): 33. 1882 and *Contributions to Western Botany* 14: 11. 1912, *Contr. U.S. Natl. Herb.* 24(7): 227. 1925, *Journal of the Washington Academy of Sciences* 24(7): 292. 1934, *Taxon* 33: 126-134. 1984, *Phytologia* 74(1): 6. 1993, *A Utah Flora*. Third Edition, revised 800. 2003.

in English: giant ricegrass

S. crassiculmis P.A. Smirnov (*Stipa pulcherrima* subsp. *crassiculmis* (P.A. Smirn.) Tzvelev)

Russia. See *Linnaea* 21(4): 440. 1848 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 22: 375. 1926, *Novosti Sist. Vyss. Rast.* 11: 18. 1974, *Delpinoa* 16-17: 186. 1974-1975[1976].

S. crassiculmis P.A. Smirn. subsp. *heterotricha* Dihoru & Roman

Romania. Vulnerable grass, see *Revue Roumaine de Biologie, Série de Biologie Végétale* 22(1): 24. 1977.

Common name: colilie

S. cretacea P.A. Smirn.

Eurasia. Rare species, see *Bulletin de la Société Impériale des Naturalistes de Moscou* 49(1): 90. 1940.

S. curticoma Vick. (*Austrostipa curticoma* (Vickery) S.W.L. Jacobs & J. Everett; *Stipa bigeniculata* sensu J. Black)

Australia, Victoria, South Australia. Panicle sparse, floret cylindrical, callus curved and sharp, awn twice bent, see *Telopea* 2(1): 11. 1980, *Telopea* 6(4): 585. 1996.

S. curtiseta (A.S. Hitchc.) Barkworth (*Hesperostipa curtiseta* (Hitchc.) Barkworth; *Stipa spartea* subsp. *curtiseta* Hitchc.; *Stipa spartea* var. *curtiseta* Hitchc.)

British Columbia. Perennial, tufted, erect, leafy, sheaths open, ligule short and thickened, basal leaves, no auricles, blade usually flat to inrolled, narrow flower head with long slender awns, 1-flowered spikelets, narrow and almost equal glumes, lemmas hardened and more or less smooth to hairy, callus sharp-pointed and hairy, straight awns twisted many times from the tip of the lemma, occurs on dry open slopes, see *Contributions from the United States National Herbarium* 24(7): 230. 1925, *Canadian Journal of Botany* 56(6): 624. 1978, *Phytologia* 74(1): 15-16. 1993.

in English: short-awned porcupine grass

S. curvifolia Swallen (*Achnatherum curvifolium* (Swallen) M. Barkworth)

U.S., Mexico, New Mexico, Texas. Perennial, tufted, leaves clustered in the lower half, curling blades tightly involute and velvety-hairy, inflorescences spike-like, spikelets in dense clusters, glumes hyaline, lemma densely hairy with a sharp callus, awn bent once or twice, sometimes in well-developed soil, generally on steep slopes,

crevices of limestone cliffs and ridges, see *Journal of the Washington Academy of Sciences* 23(10): 456. 1933, *Phytologia* 74(1): 7. 1993.

in English: Guadalupe needlegrass, curl-leaf needlegrass

S. danubialis Dihoru & Roman

Romania. Vulnerable species, see *Revue Roumaine de Biologie, Série Botanique* 14: 26. 1969.

S. dasyphylla (Lindem.) Czern. ex Trautv. (*Stipa dasyphylla* Czern.; *Stipa dasyphylla* (Lindem.) Trautv.; *Stipa dasyphylla* Czern. ex Trautv.; *Stipa dasyphylla* (Lindem.) Czern. ex Roshev.; *Stipa pennata* var. *dasyphylla* Lindem.; *Stipa pennata* var. *stenophylla* Lindem.; *Stipa pulcherrima* var. *dasyphylla* Pacz. ex B. Fedtsch., nom. illeg., non *Stipa pulcherrima* var. *dasyphylla* Podp.; *Stipa stenophylla* Czern.; *Stipa stenophylla* (Lindem.) Czern. ex Trautv.)

Europe, Romania, Czech Republic, Germany, Hungary, Slovakia, Russian Federation. Rare species, see *Flora chersonensis*. Odessae 1881-1882 and *Flora URSS* 2: 100. 1934.

Common names: colilie, gyapjas arvalanyhaj

S. dregeana Steud. (*Oryzopsis keniensis* Pilg.; *Stipa keniensis* (Pilg.) Freitag) (for the German plant collector Jean François (Johann Franz) Drège, 1794-1881 (Altona), botanical explorer, traveler, arrived at the Cape in 1826, his writings include *Zwei pflanzengeografische Dokumente*. Leipzig [1843-1844], *Catalogus plantarum exsiccatarum Africae australioris, quas emturis offert*. 1837-1840 and also: *Linnaea*. 19: 583-680. 1847 and 20: 183-258. 1847, with the Prussian botanist Ernst Heinrich Friedrich Meyer (1791-1858) wrote *Commentariorum de plantis Africae australioris*. Leipzig and Königsberg 1835 [1836, 1838], he was the brother of Carl Friedrich Drège (1791-1867). See George Arnott Walker Arnott (1799-1868), "Notes on some South African plants." *Hook., J.Bot.* 3: 147-156. 1841; J.H. Barnhart, *Biographical notes upon botanists*. 1: 471. 1965; Peter MacOwan, "Personalia of botanical collectors at the Cape." *Trans. S. Afr. Philos. Soc.* 4(1): xlix-l. 1884-1886; J.H. Verduyn den Boer, *Botanists at the Cape*. 55-58. Cape Town and Stellenbosch 1929; Gilbert Westacott Reynolds, *The Aloes of South Africa*. 58, 60. Rotterdam 1982; John Hutchinson (1884-1972), *A Botanist in Southern Africa*. 642. London 1946; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 704. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 107. 1972; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 704. Ansbach 1852; Gordon Douglas Rowley, *A History of Succulent Plants*. California 1997; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. Cape Town 1981)

Ethiopia, South Africa, Kenya. Bunchgrass, vigorous, useful for erosion control, see *Synopsis Plantarum*

Glumacearum 1: 132. 1854 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 509. 1926.

S. dregeana Steud. var. *dregeana*

South Africa. Perennial, tufted, erect, rhizomatous, narrow panicle with widely spreading and ascending branches, found in moist places.

S. dregeana Steud. var. *elongata* (Nees) Stapf (*Lasiagrostis elongata* Nees)

South Africa. Perennial, rare, tufted, erect, shortly rhizomatous, knotted rhizomes, leaf blade flattened, ligule a prominent membrane, open panicle with whorled drooping branches, twisted awn, a source of grazing, found in moist places, forests, often confused with *Festuca africana* (Hack.) Clayton, see *Florae Africae Australioris Illustrationes Monographicae* 168. 1841, *Flora Capensis* 7: 573. 1899.

in English: thread grass

in South Africa: garinggras

S. drummondii Steudel (*Austrostipa drummondii* (Steud.) S.W.L. Jacobs & J. Everett; *Stipa horrifolia* J.M. Black; *Stipa luehmanii* Reader; *Stipa scabra* var. *auriculata* J.M. Black; *Stipa scabra* var. *subtricha* Reader) (*Stipa luehmanii* Reader dedicated to J.H. Luehmann, Victorian Government Botanist, Australia) (*Stipa drummondii* Steudel named for to the British botanist James Drummond, 1784 (or ca. 1786)-1863 (Perth, Western Australia), from 1809 to 1829 Curator of Cork Botanic Garden, sent plants to Capt. Mangles and W.J. Hooker, plant collector in Western Australia for Messrs. Veitch, first Government Botanist, Western Australia, and his brother Thomas Drummond, 1780-1835, Scottish botanical and zoological collector, northern U.S. (1831-1835), succeeded G. Don in nursery at Forfar, from 1828 to 1831 Curator Belfast Botanic Garden, assistant-naturalist to 2nd Land Arctic Expedition under Franklin, wrote *Musci scotici*. Forfar 1824-1825 and *Musci americani*. Glasgow 1828; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 472-473. 1965; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. *Regnum Vegetabile* vol. 2. 1954; W.H. Harvey, in *Hooker's Journal of Botany & Kew Garden Miscellany*. 7: 53. London 1855; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. London 1969; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 217-218. London 1994; Dennis John Carr & S.G.M. Carr, editors, *People and Plants in Australia*. London 1981; Roger N. Hilton, "The Drummond collection of Western Australian fungi at the Royal Botanic Gardens, Kew." *Nuytsia*. 4(3): 333-357. 1983; R.N. Hilton, "The Pre-iss collection of Western Australian fungi." *Nuytsia*. 6(3): 295-304. 1988)

South Australia, New South Wales, Victoria, Western Australia. Perennial, caespitose, ligule membranous, leaves

acute but not pungent, panicle expanded and dense, spikelets gaping, floret elliptic, glumes unequal and acute, lemma red to black-brown at maturity, silky callus straight and sharp, awn falcate, found growing on dune and coast above salt marsh, in sandy areas, dry regions, desert, swampy near-coastal areas, suitable for revegetation in salt marsh and tidal/freshwater wetlands, see *J. Trop. Australia* 31. 1848, *Synopsis Plantarum Glumacearum* 1: 128. 1854 and *Victoria Naturalist* 16: 158. 1900, *Victoria Naturalist* 17: 156. 1901, *Transactions and Proceedings of the Royal Society of South Australia* 44: 191. 1920, *Fl. South Australia* 1: 67. 1922, *Telopea* 3: 47. 1986, *Telopea* 6(4): 585. 1996.

in English: cottony speargrass

S. durifolia Parodi ex M.A. Torres (*Jarava durifolia* (Parodi ex Torres) Peñailillo; *Stipa durifolia* Torres)

Argentina. See *Comision de Investigaciones Cientificas* 13: 54, f. 1, B, b. 1997, *Contributions from the United States National Herbarium* 48: 404. 2003.

S. echinata Vickery, Jacobs & Everett (*Austrostipa echinata* (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett)

South Australia. Rare species, blades pungent and erect, panicle sparse and contracted, floret elliptic, lemma brown, callus straight and sharp, awn with 2 or 3 bends, see *Telopea* 3(1): 50. 1986, *Telopea* 6(4): 585. 1996.

S. editorum Fourn. (*Achnatherum editorum* (E. Fourn.) Valdés-Reyna ex Barkworth)

Mexico. Erect, herbaceous, fodder, see *Mexicanas Plantas* 2: 75. 1886 and *Contributions from the United States National Herbarium* 48: 16. 2003.

in Mexico: flechilla erecta, zacate

S. eremophila Reader (*Austrostipa eremophila* (Reader) S.W.L. Jacobs & J. Everett; *Stipa dura* J.M. Black; *Stipa fusca* C.E. Hubb.; *Stipa pubescens* var. *auricoma* Reader; *Stipa variegata* Summerh. & C.E. Hubb.) (from the Greek *eremos* "lonely, solitary, desert, lone," *eremia* "desert" and *philos* "loving, friend")

South Australia, Adelaide Plains, Victoria, Western Australia, New South Wales. Perennial, caespitose, nodes pubescent, ligule truncate and ciliate, auricles present, blade rolled and ribbed, panicle spreading at maturity, spikelets slightly gaping, glumes unequal and acuminate, scabrous lemma dark brown at maturity, silky callus straight or slightly curved, awn twice bent, grows in mallee or woodland, see *Prodromus Florae Novae Hollandiae* 174. 1810 and *Victoria Naturalist* 17: 154, 156. 1901, *Transactions and Proceedings of the Royal Society of South Australia* 46: 565. 1922, *Bulletin of Miscellaneous Information Kew* 1925: 432. 1925, *Bulletin of Miscellaneous Information Kew* 1927: 363. 1927, *Transactions and Proceedings of the Royal Society of South Australia* 65: 333. 1941, *Telopea* 6(4): 585. 1996.

in English: desert speargrass, rusty speargrass

S. exilis Vickery (*Austrostipa exilis* (Vickery) S.W.L. Jacobs & J. Everett)

South Australia, Victoria, Western Australia. Delicate, panicle spreading, floret cylindrical to elliptic, lemma black, callus straight and sharp, awn twice bent, see *Telopea* 2(1): 13. 1980, *Telopea* 6(4): 585. 1996.

S. feretacea Vickery, Jacobs & Everett (*Austrostipa feretacea* (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett)

Australia, Northern Territory. Perennial, spreading, see *Telopea* 3(1): 58. 1986, *Telopea* 6(4): 585. 1996.

S. filifolia Nees (*Aristida megapotamica* Spreng.; *Jarava filifolia* (Nees) Peñailillo; *Jarava megapotamica* (Spreng.) Peñailillo; *Stipa filiformis* Spreng.)

South America. See *Systema Vegetabilium, editio decima sexta* 4: 31. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 379. 1829 and *Gayana, Botánica* 59(1): 31-32. 2002.

S. flavescens Labill. (*Austrostipa flavescens* (Labill.) S.W.L. Jacobs & J. Everett; *Stipa aphanoneura* Hughes; *Stipa compacta* Hughes; *Stipa elatior* (Benth.) Hughes; *Stipa flavescens* Hook.f., non Labill.; *Stipa hirsuta* Hughes; *Stipa laeviculmis* Nees; *Stipa laevis* Mez; *Stipa pubescens* R. Br. var. *maritima* J.M. Black; *Stipa scabra* Lindley var. *elatior* Benth.; *Stipa scabra* var. *striata* Benth.; *Stipa tenuiglumis* Hughes; *Stipa variabilis* var. *elatior* (Benth.) C.A. Gardner; *Stipa variabilis* var. *striata* (Benth.) C.A. Gardner)

South Australia, Victoria, Western Australia, New South Wales, Tasmania. Perennial, stout, shortly rhizomatous, caespitose, extravaginal shoots, ciliate ligule leathery and truncate, auricles present, ribbed blade rolled to expanded, panicle contracted, floret narrow-cylindrical to elliptic, spikelets gaping, glumes unequal and acuminate, lemma dark brown at maturity, silky callus straight and sharp, awn twice bent, sandy soils in coastal areas, in heaths, wetlands, see *Novae Hollandiae Plantarum Specimen* 1: 24, t. 30. 1804, *Plantae Preissianae* 2: 99. 1846, *Flora of Australia* 7: 571. 1878 and *Bulletin of Miscellaneous Information Kew* 1921: 15, 22, 24, 25, f. 29, 30, 31, 32, 29A, 30A, 31A, 32A. 1921, *Repertorium Specierum Novarum Regni Vegetabilis* 17: 210. 1921, *Transactions and Proceedings of the Royal Society of South Australia* 67: 36. 1943, *Flora of Western Australia* 1. pt. 1: 182. 1952, *Telopea* 3: 59. 1986, E. Chesterfield, A. Trumbull-Ward, P. Hopmans and J. Whelan, *Early Changes in Vegetation from a Grazing Trial on Yanakie Isthmus, Wilsons Promontory National Park*. Flora and Fauna Technical Report No. 139. Department of Conservation and Natural Resources, East Melbourne, Victoria 1995, *Telopea* 6(4): 585. 1996.

in English: coast speargrass, tall speargrass, speargrass

S. flexuosa Vasey (*Achnatherum eminens* (Cav.) Barkworth; *Stipa eminens* Cav.; *Stipa erecta* E. Fourn., nom. illeg., non *Stipa erecta* Trin.; *Stipa flexuosa* Vasey)

United States of America, Texas. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 42, t. 467, f. 1. 1799, *Mexicanas Plantas* 2: 75. 1886, *Bulletin of the Torrey Botanical Club* 15(2): 49. 1888 and *Taxon* 33: 126-134. 1984, *Phytologia* 74(1): 7. 1993.

S. fontanesii Parl. (*Stipa holosericea* subsp. *fontanesii* (Parl.) Tzvelev; *Stipa lagascae* Guss., nom. illeg., non *Stipa lagascae* Roem. & Schult.)

Europe. See *Systema Vegetabilium* 2: 333. 1817, *Plantae rariorum quas in itinere per oras Jonii ac Adriatici maris et per regionis Samnii ac Aprutii collegit Joanne Gussone*. Neapoli 1826, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 81. 1830, *Flora italiana, ossia descrizione delle piante ...* 1: 167. 1850 and *Novosti Sist. Vyss. Rast.* 11: 15. 1974, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985.

S. gibbosa Vickery (*Austrostipa gibbosa* (Vickery) S.W.L. Jacobs & J. Everett; *Stipa aristiglumis* sensu J. Black)

South Australia, Victoria, New South Wales. Perennial, rigid, caespitose, clumped, ligule leathery and truncate, auricles present, blade flat or convolute, panicle contracted and exserted, glumes inflated, spikelets gaping at floret disarticulation, floret cylindrical and gibbous with the awn excentric, glumes unequal and acute, lemma dark to almost black at maturity, hairy and sturdy callus curved and blunt, awn twice bent, grows in open woodland or grassland, rare species in Victoria, see *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 43. 1855 and *Telopea* 2: 14. 1980, *Telopea* 6(4): 586. 1996.

in English: spurred speargrass

S. gigantea Link (*Lasiagrostis gigantea* (Link) Trin. & Rupr.; *Macrochloa arenaria* (Brot.) Kunth; *Macrochloa gigantea* (Link) Hack.; *Stipa arenaria* Brot.; *Stipa gigantea* Lag., nom. illeg., non *Stipa gigantea* Link; *Stipa pellita* (Trin. & Rupr.) Tzvelev)

Spain, Portugal, northwest Africa. Perennial, clumped, panicle open, spikelets yellow, useful for erosion control, see *Journal für die Botanik* 2: 313. Göttingen 1799, *Flora Lusitanica* 1: 86. 1804, *Elenchus Plantarum Horti Botanici* 3. 1816, *Révision des Graminées* 1: 59. 1829, *Species Graminum Stipaceorum* 96. 1842, *Catalogue Raisonné des Graminées du Portugal* 16. 1880 and *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991, *Botanical Journal of the Linnean Society* Volume 144, Issue 4, Page 483-495. Apr 2004.

S. gilliesii Hitchc. (*Nassella paramillonesis* (Speg.) Torres; *Stipa paramilloensis* Speg.)

Argentina, Mendoza. See *Anales del Museo Nacional de Montevideo* 4(2): 139-141, f. 41. 1901, *Contributions from the United States National Herbarium* 24(7): 278. 1925, *Comision de Investigaciones Cientificas* 13: 31. 1997.

S. glareosa P.A. Smirn. (*Stipa caucasica* subsp. *glareosa* (P.A. Smirn.) Tzvelev)

Asia, China, Russia. In very rocky soils, see *Berichte der Deutschen Botanischen Gesellschaft* 10: 293. 1892 and *Bulletin de la Société Impériale des Naturalistes de Moscou* 38: 12. 1929, *Feddes Repert. Sp. Nov.* 26: 266. 1929, *Novosti Sist. Vyss. Rast.* 11: 20. 1974.

S. grandifolia Keng (*Achnatherum coreanum* (Honda ex Nakai) Ohwi; *Achnatherum coreanum* var. *kengii* (Keng) Ohwi; *Orthoraphium grandifolium* (Keng) Keng)

Asia. See *Sinensia* 4(11): 322-324, f. 2. 1934, *Journal of Japanese Botany* 17(7): 404. 1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 214. 1957, *Flora Tsinlingensis* 1(1): 150. China. Academia Sinicae. Institutum Botanicum. 1976.

S. grandis P.A. Smirn.

Asia, China, Russia, Mongolia, Siberia. See *Bulletin de la Société Impériale des Naturalistes de Moscou* n. sér. 38: 14. 1929, *Feddes Repert. Sp. Nov.* 26: 266-267. 1929.

S. gynerioides Phil. (*Jarava ichu* Ruiz & Pav.; *Stipa ichu* (Ruiz & Pav.) Kunth; *Stipa ichu* f. *interrupta* Hack.; *Stipa ichu* var. *gynerioides* (Phil.) Hack.)

Southern America. See *Flora Peruviana* 1: 5, t. 6, f. b. 1798, *Révision des Graminées* 1: 60. 1829, *Anales de la Universidad de Chile* 36: 203. 1870 and *Anales del Museo Nacional de Buenos Aires* 11: 98. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 76. 1911, *Brittonia* 23(3): 293-324. 1971.

S. haussknechtii Boiss. (after the German botanist Heinrich Carl Haussknecht, 1838-1903, botanical explorer; see H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 179. Oxford 1964; J.H. Barnhart, *Biographical notes upon botanists*. 2: 140. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

Asia, Iran. Open panicles, useful for erosion control, see *Flora Orientalis* 5: 501. 1884.

S. hemipogon Benth. (*Austrostipa hemipogon* (Benth.) S.W.L. Jacobs & J. Everett; *Stipa indeprensa* J.M. Black; *Stipa nobilis* Pilg.; *Stipa semibarbata* R. Br. var. *gracilis* J.M. Black) (Latin *indeprensus*, a, um “unobserved, undiscovered”)

South Australia, Victoria, Western Australia. Rigid, panicle contracted, floret elliptic, lemma reddish, callus straight and sharp, awn twice bent, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Flora Australiensis: A Description ...* 7: 569. 1878 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 35: 70. 1904, *Transactions and Proceedings of the Royal Society of South Australia* 65: 334. 1941, *Transactions and Proceedings of the Royal Society of South Australia* 67: 36. 1943, *Telopea* 3: 63-64. 1986, *Telopea* 6(4): 586. 1996.

in English: speargrass

S. hendersonii (Vasey) Muhl. (*Achnatherum hendersonii* (Vasey) Barkworth; *Oryzopsis exigua* var. *hendersonii* (Vasey) M.E. Jones; *Oryzopsis hendersonii* Vasey; *Stipa hendersonii* (Vasey) Mehlenb.)

U.S., Oregon, Washington. Perennial, rare species, see *United States Exploring Expedition* 17: 481. 1874, *Contributions from the United States National Herbarium* 1(8): 267. 1893 and *Contributions to Western Botany* 14: 11. 1912, *Canadian Journal of Botany* 49(9): 1568. 1971, *Phytologia* 74(1): 7. 1993, *Canadian Journal of Botany* 72: 693-700. 1994.

in English: Henderson's needle grass

S. himalaica Roshev.

Afghanistan, Pakistan, India. Used as fodder.

S. hirticulmis S.L. Hatch, J. Valdés-Reyna & C.W. Morden (*Achnatherum hirticulme* (S.L. Hatch, Valdés-Reyna & Morden) Valdés-Reyna & Barkworth)

Mexico, Nuevo León. Vulnerable species, see *Systematic Botany* 11(1): 186-188, f. 1. 1986, *Contributions from the United States National Herbarium* 48: 16. 2003.

S. hirtiflora Hack. (*Jarava brevipes* (E. Desv.) Peñailillo; *Stipa brevipes* E. Desv.)

Argentina. See *Flora Chilena* 6: 282. 1854, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 7: 5, t. 3, f. 7, t. 7, f. 4-5. 1908, *Gayana, Botánica* 59(1): 30. 2002.

S. hohenackeriana Trin. & Rupr. (*Stipa hohenackeriana* subsp. *grossheimii* Tzvelev; *Stipa hohenackeriana* subsp. *ordubadica* Tzvelev; *Stipa hohenackeriana* var. *grossheimii* (Tzvelev) Tzvelev; *Stipa hohenackeriana* var. *ordubadica* (Tzvelev) Tzvelev) (for the German botanist Rudolf Friedrich Hohenacker, 1798-1874, physician, plant collector, author of *Enumeratio plantarum quas in itinere per provinciam Talysch collegit R. Fr. Hohenacker*. [Moskva 1838]. See Georg Heinrich Mettenius (1823-1866), *Filices Lechlerianae Chilenses ac Peruanae* cura R.F.H. editae. Leipzig 1856-59; Georg Matthias von Martens (1788-1872) and Gottlob Ludwig Rabenhorst (1806-1881), *Algae selectae siccatae ...* Herausgegeben von R.F.H. 1852, etc.; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; J.H. Barnhart, *Biographical notes upon botanists*. 2: 191.

1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 184. Oxford 1964; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 179. 1972; Ethelyn (Daliaette) Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

Asia, Russia. See *Species Graminum Stipaceorum* 80. 1842 and *Novosti Sist. Vyss. Rast.* 11: 16. 1974, *Flora of Turkey and the East Aegean Islands* 9: 548. 1985.

S. holosericea Trin. & Rupr.

Asia, Algeria, Tunisia. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 81. 1830, *Species Graminum Stipaceorum* 71. 1842 and *Novosti Sist. Vyss. Rast.* 11: 14. 1974, *Notes from the Royal Botanic Garden, Edinburgh* 44: 351-356. 1987.

S. holosericea Trin. & Rupr. subsp. **fontanesii** (Parl.) Tzvelev (*Stipa fontanesii* Parl.)

Tunisia, Algeria. Useful for erosion control, see *Flora italiana, ossia descrizione delle piante ...* 1: 167. 1850 and *Novosti Sist. Vyss. Rast.* 11: 15. 1974.

S. holosericea Trin. & Rupr. subsp. **holosericea**

Turkey, Armenia.

S. horridula Pilger

Easter Islands. Extinct or endangered species, see *The Natural History of Juan Fernandez and Easter Island* 2: 64, t. 6, f. 3, text f. 1a. 1922, *Telopea* 4: 10. 1990.

S. humilis Cav. (*Jarava humilis* (Cav.) Peñailillo; *Stipa chrysophylla* E. Desv.; *Stipa humilis* Brot., nom. illeg., non *Stipa humilis* Cav.; *Stipa humilis* Vahl; *Stipa humilis* f. *major* Speg.; *Stipa humilis* f. *minor* Speg.; *Stipa humilis* var. *genuina* Kuntze; *Stipa humilis* var. *intermedia* Kuntze)

Argentina. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 41, t. 466, f. 1. 1799, *Flora Lusitanica* 1: 86. 1804, *Revisio Generum Plantarum* 3: 371. 1898 and *Anales del Museo Nacional de Montevideo* 4(2): 53. 1901, *Gayana, Botánica* 59(1): 31. 2002.

S. humilis Cav. var. **decrescens** Kuntze (*Jarava humilis* var. *decrescens* (Kuntze) Peñailillo)

Argentina, Patagonia. See *Revisio Generum Plantarum* 3(3): 371. 1898 and *Contributions from the United States National Herbarium* 48: 405. 2003.

S. humilis Cav. var. **intermedia** Kuntze (*Jarava humilis* (Cav.) Peñailillo; *Stipa humilis* var. *humilis*)

Argentina, Cordillera, Patagonia. See *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 41, t. 466, f. 1. 1799, *Revisio Generum Plantarum* 3: 371. 1898 and *Gayana, Botánica* 59(1): 31. 2002.

S. humilis Cav. var. **jonesiana** Kuntze (*Achnatherum speciosum* (Trin. & Rupr.) Barkworth; *Jarava speciosa* (Trin. & Rupr.) Peñailillo; *Stipa humilis* var. *speciosa* (Trin. & Rupr.) Kuntze; *Stipa speciosa* Trin. & Rupr.)

United States of America, Nevada. See *Species Graminum Stipaceorum* 45. 1842, *Revisio Generum Plantarum* 3(2): 371. 1898 and *Phytologia* 74(1): 13. 1993, *Gayana, Botánica* 59(1): 32. 2002.

S. hystricina Speg. (*Jarava hystricina* (Speg.) Peñailillo)

Argentina. Montane, arid areas, see *Anales del Museo Nacional de Montevideo* 4(2): 115-116, f. 30. 1901, *Contributions from the United States National Herbarium* 48: 405. 2003.

S. ibarii Phil. (*Jarava ibarii* (Phil.) Peñailillo) (for Henricus Ibar, botanical collector in Chile)

Chile. Bunchgrass, see *Anales de la Universidad de Chile* 93: 716. 1896 and *Revista Argentina de Agronomía* 27(3-4): 88-89. 1960, *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 11(1-2): 55-57, t. 11. 1964, *Gayana, Botánica* 59(1): 27-34. 2002.

S. iberica Martinovsky (*Stipa pennata* subsp. *iberica* (Martinovsky) O. Bolòs)

Spain. See *Feddes Repertorium* 73: 150. 1966, *Acta Botanica Malacitana* 21: 125-189. 1996.

S. iberica Martinovsky var. **austro-iberica** (H. Scholz) F.M. Vázquez & Devesa (*Stipa iberica* subsp. *austro-iberica* H. Scholz)

Southeast Spain. See *Willdenowia* 19: 129. 1989.

S. iberica Martinovsky var. **iberica** (*Stipa iberica* var. *pygmaea* Martinovsky; *Stipa iberica* var. *pygmaea* f. *levis* Martinovsky; *Stipa pennata* subsp. *mediterranea* (Trinius & Ruprecht) Ascherson & Graebner; *Stipa pennata* var. *mediterranea* Trinius & Ruprecht)

Spain, France.

S. iberica Martinovsky var. **pseudodasyphylla** (Martinovsky) F.M. Vázquez & Devesa (*Stipa iberica* subsp. *pauneroana* f. *pseudodasyphylla* Martinovsky)

Spain.

S. ichu (Ruiz & Pav.) Kunth (*Jarava eriostachya* (Kunth) Peñailillo; *Jarava ichu* Ruiz & Pav.; *Jarava pungens* (Nees & Meyen) Matthei; *Jarava usitata* Pers.; *Stipa eriostachya* Kunth; *Stipa gynerioides* Phil.; *Stipa ichu* f. *interrupta* Hackel; *Stipa ichu* var. *gynerioides* (Phil.) Hackel; *Stipa ichu* var. *pungens* (Nees & Meyen) Kuntze; *Stipa ichu* var. *pungens* (Nees & Meyen) Pilg., nom. illeg., non *Stipa ichu* var. *pungens* (Nees & Meyen) Kuntze; *Stipa liebmanni* E. Fourn.; *Stipa pungens* Nees & Meyen)

Argentina, Bolivia, Mexico. Perennial bunchgrass, clumped, caespitose, leaf blades convolute pungent, inflorescence erect, oblong and loose panicles, glumes lanceolate and acuminate, short callus acute, along roadsides,

disturbed areas, stony and rocky places, punas, see *Flora Peruviana* 1: 5, t. 6, f. b. 1798, *Syn. Pl.* 1: 6. 1805, *Nova Genera et Species Plantarum (Quarto ed.)* 1: 127, t. 41. 1815 [1816], *Révision des Graminées* 1: 60. 1829, *Gramineae* 19. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 151. 1843, *Anales de la Universidad de Chile* 36: 203. 1870, *Mexicanas Plantas* 2: 76. 1886, *Revisio Generum Plantarum* 3(3): 372. 1898 and *Anales del Museo Nacional de Buenos Aires* 11: 98. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 76. 1911, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 778. 1933, *Brittonia* 23(3): 293-324. 1971, *Gayana, Botánica* 54(2): 190-191. 1997 [1998], *Gayana, Botánica* 59(1): 31. 2002.

S. illimanica Hack. (*Jarava illimanica* (Hack.) F. Rojas)

Bolivia, Argentina. See *Repertorium Specierum Novarum Regni Vegetabilis* 11: 22. 1912, *Gayana, Botánica* 54(2): 173. 1997 [1998].

S. jacquemontii Jaub. & Spach (*Achnatherum jacquemontii* (Jaub. & Spach) P.C. Kuo & S.L. Lu; *Lasiagrostis jacquemontii* (Jaub. & Spach) Boissier; *Lasiagrostis jacquemontii* (Jaub. & Spach) Munro ex Boiss.; *Lasiagrostis jacquemontii* (Jaub. & Spach) Munro ex Aitch.; *Stipa sibirica* var. *pallida* Hooker f.)

India, Afghanistan, Pakistan. See *Species Plantarum* 1: 79. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 158. 1791, *Illustrationes Plantarum Orientalium* 4: 60, t. 339. 1851, *Journal of the Linnean Society, Botany* 18: 107. 1880, *Flora Orientalis* 5: 506. 1884 and *Flora Republicae Popularis Sinicae* 9(3): 323, pl. 80, f. 15-19. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 79(2): 135-139. 1994.

S. jacquemontii Jaub. & Spach subsp. ***chuzomica*** Noltie
Bhutan. See *Edinburgh Journal of Botany* 56(2): 290, f. 1Q-U. 1999.

S. jagnobica Ovcz. & Czukav. (*Stipa kuhitangi* Drob.; *Stipa richterana* Karav. & Kir.; *Stipa richterana* subsp. *jagnobica* (Ovcz. & Czukav.) Tzvelev; *Stipa richteriana* Karav. & Kir.)

Tadjikistan. Rare and endangered species, see *Bulletin de la Société Impériale des Naturalistes de Moscou* 4: 862. 1941, *Flora Uzbekistanica* 1: 183, 537. 1941, *Novosti Sist. Vyss. Rast.* 11: 14. 1974.

S. joannis Celak. (*Stipa pennata* auct. scand. and ross., non L.; *Stipa pennata* subsp. *joannis* (Celak.) Hyl.; *Stipa pennata* subsp. *joannis* (Celak.) Pacz.; *Stipa pennata* var. *joannis* (Celak.) Celak.; *Stipa pennata* var. *joannis* (Celak.) Asch. & Graebn.)

Asia, Armenia, Iraq, Siberia, Russia, Europe. Useful for erosion control, see *Österreichische Botanische Zeitschrift* 34: 318. 1884, *Synopsis der mitteleuropäischen Flora* 2: 105. 1899 and *Botaniska Notiser* 1953(3): 354. 1953.

S. joannis Celak. subsp. ***balcanica*** Martinov.

Europe.

S. joannis Celak. subsp. ***joannis*** (*Stipa joannis* Celak. subsp. *penicillifera* (Pacz.) Lavrenko; *Stipa pennata* f. *penicillifera* Pacz.)

Europe.

S. joannis Celak. subsp. ***puberula*** (Podp. & Suza) Martinov. (*Stipa disjuncta* Klokov; *Stipa joannis* Celak. subsp. *joannis* var. *puberula* Podp. & Suza)

Central Europe, Russia. See *Preslia* 48(2): 187. 1976.

S. joannis Celak. var. ***puberula*** Podp. & Suza

Central Europe.

S. juncea L. (*Stipa juncea* Lam., nom. illeg., non *Stipa juncea* L.; *Stipa juncea* Michx., nom. illeg., non *Stipa juncea* L.)

Europe. See *Species Plantarum* 78. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 157. 1791, *Flora Boreali-Americana* 1: 54. 1803 and *Contr. U.S. Natl. Herb.* 12: 150. 1908.

S. juncea L. var. ***cabanassii*** F.M. Vázquez & Devesa

Spain. See *Acta Botanica Malacitana* 21: 125-189. 1996.

S. juncea L. var. ***juncea*** (*Stipa celakovskii* Martinovsky; *Stipa lagascae* aust. pl., non Roemer & Schultes)

Europe, Spain, France. See *Preslia* 48(2): 187. 1976, *Acta Botanica Malacitana* 21: 125-189. 1996.

S. juncooides Speg. (*Jarava juncooides* (Speg.) Peñailillo; *Stipa megapotamia* var. *typica* Speg.; *Stipa megapotamia* var. *juncooides* (Speg.) Speg.)

South America. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 77. 1830, Carlos Luigi Spegazzini (1858-1926), *Contribucion al estudio de la flora de la Sierra de la Ventana ...* 68. La Plata 1896 and *Anales del Museo Nacional de Montevideo* 4(2): 128. 1901, *Gayana, Botánica* 59(1): 31. 2002.

S. karataviensis Roshev.

Kazakhstan. Indeterminate species.

S. keniensis (Pilger) Freitag (*Lasiagrostis elongata* Nees; *Oryzopsis keniensis* Pilg.; *Piptatherum keniense* (Pilg.) Roshev.; *Stipa dregeana* Steud.; *Stipa dregeana* var. *elongata* (Nees) Stapf; *Stipa elongata* (Nees) Steud., nom. illeg., non *Stipa elongata* Roth)

Kenya, Tanzania, South Africa. Perennial, erect, tussocky, knotty base, shortly rhizomatous, leaf blades linear, open panicle with slender branches ascending or spreading, spikelets clustered, short obtuse callus, glumes 3-nerved, lemma linear-elliptic, awn straight, found in forest, montane, shade, see *Essai d'une Nouvelle Agrostographie* 17, 173. 1812, *Florae Africae Australioris Illustrationes Monographicae* 168. 1841, *Synopsis Plantarum Glumacearum* 1:

132. 1854, *Fl. Capensis* 7: 573. 1898 [1899] and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9(87): 509. 1926.

S. keniensis (Pilger) Freitag subsp. *keniensis*

East Africa. Perennial.

S. keniensis (Pilger) Freitag subsp. *somaliensis* Freitag

Somalia, Ethiopia. Perennial, densely tufted, panicle branches whorled, glumes subequal lanceolate, lemma with apical teeth, awn slightly twisted and scabrous, growing in forest.

S. kingii Bolander (*Oryzopsis kingii* (Bol.) Beal; *Ptilagrostis kingii* (Bol.) Barkworth)

U.S., California. Perennial, see *Flora Rossica* 4(13): 447. 1852, *Proceedings of the California Academy of Sciences* 4: 170. 1872, *Grasses of North America for Farmers and Students* 2: 229. 1896 and *Systematic Botany* 8(4): 417. 1983.

in English: Sierra false needlegrass

S. kirghisorum P.A. Smirn. (*Stipa pennata* subsp. *kirghisorum* (P.A. Smirn.) Freitag)

Asia, China, Mongolia, Siberia. Useful for erosion control, see *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 232-233. 1925, *Novosti Sist. Vyss. Rast.* 11: 18. 1974, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 438-440, f. 19. 1985.

in English: needlegrass

S. klemenzi Roshev. (*Stipa gobica* var. *klemenzi* (Roshev.) Norlindh)

Europe, Mongolia. See *Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR* 5: 12-13. 1924, "Flora of the Mongolian Steppe and other desert areas." *Rep. Sci. Exped. NW Prov. China* Publ. 31: 66. Stockholm 1949.

in English: needlegrass

S. krylovii Roshev. (*Austrostipa densiflora* (Hughes) S.W.L. Jacobs & J. Everett; *Stipa decipiens* P.A. Smirn.; *Stipa densa* P.A. Smirn.; *Stipa densiflora* Hughes; *Stipa sareptana* var. *krylovii* (Roshev.) P.C. Kuo & Y.H. Sun)

China, Japan, Siberia. See *Bulletin de la Société Impériale des Naturalistes de Moscou* 57: 52. 1882 and *Bulletin of Miscellaneous Information Kew* 1921: 18, f. 20. 1921, *Izv. Glavn. Bot. Sada SSSR* 28: 379-380. 1929, *Bull. Soc. Nat. Mosc.*, *Biol.* 46: 85. 1937, *Flora Reipublicae Popularis Sinicae* 9(3): 275, pl. 65, f. 37-41. 1987, *Telopea* 6(4): 585. 1996.

S. kurdistanica Bor (*Achnatherum longiaristatum* (Boissier) Nevski; *Achnatherum longiaristatum* (Boiss. & Hausskn. ex Boiss.) Nevski; *Achnatherum longiaristatum* (Boiss. & Hausskn.) Keng & P.C. Kuo, nom. illeg., non *Achnatherum longiaristatum* (Boiss. & Hausskn. ex Boiss.) Nevski; *Achnatherum turcomanicum* (Roshevitz) Tzvelev; *Lasiagrostis longearistata* (Boissier) Roshev. & Nevski ex

Roshev.; *Lasiagrostis longearistata* (Boiss. & Hausskn. ex Boiss.) Roshev. & Nevski; *Oryzopsis longearistata* (Boissier) Roshev.; *Oryzopsis longearistata* (Boiss. & Hausskn. ex Boiss.) Roshev.; *Oryzopsis turcomanica* Roshev.; *Pipthatherum longiaristatum* Boiss. & Hausskn. ex Boissier; *Pipthatherum longiaristatum* Boiss. & Hausskn.; *Stipa litwinowiana* P. Smirnow ex Pavlov & Lipschitz)

Iraq, Iran. See *Flora URSS* 2: 73. 1934, *Sovetsk. Bot.* 19. 1934, *Bull. Soc. Nat. Moscou*, n.s. 44: 43. 1935, *Taxon* 16: 68. 1967, *Flora Tsinlingensis* 1(1): 151. 1976.

S. lagascae Roem. & Schult. (*Stipa gigantea* f. *lagascae* (Roem. & Schult.) Hack.; *Stipa gigantea* subsp. *lagascae* (Roem. & Schult.) Trab.; *Stipa gigantea* var. *lagascae* (Roem. & Schult.) Richt.; *Stipa gigantea* var. *lagascae* (Roem. & Schult.) Hack. ex Kneuck., nom. illeg., non *Stipa gigantea* var. *lagascae* (Roem. & Schult.) Richt.; *Stipa juncea* var. *lagascae* (Roemer & Schultes) Mutel; *Stipa lagascae* Guss., nom. illeg., non *Stipa lagascae* Roem. & Schult.; *Stipa lagascae* subsp. *normalis* var. *pubescens* (Hackel) Maire; *Stipa pellita* (Trin. & Rupr.) Tzvelev; *Stipa pubescens* Lag.)

Asia, Iran, Syria, Europe. Coarse grass, erect culms, open panicles, long awns shortly pubescent or glabrous, useful for erosion control, see *Journal für die Botanik* 2: 313. 1799, *Elenchus Plantarum Horti Botanici* 3. 1816, *Systema Vegetabilium* 2: 333. 1817, *Plantae Rariores* 48. 1826, *Flore Française* 4: 27. 1837, *Österreichische Botanische Zeitschrift* 27(4): 119. 1877, *Plantae Europaeae* 1: 33. 1890, *Flore de l'Algérie* 2: 165. 1895 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 6: 84. 1900, *Annali di Botanica* 45: 75-102. 1987, *Boletim da Sociedade Broteriana*, ser. 2 64: 35-74. 1991.

S. lagascae Roem. & Schult. var. *australis* Maire (*Stipa lagascae* var. *australis* (Maire) Maire, Dubuis & Faurel, nom. illeg., non *Stipa lagascae* var. *australis* Maire)

Southwest Asia, Spain. See *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 75: 266. 1936, *Flore Analytique et Synoptique de la Tunisie* 79. 1954, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 48: 480. 1957, *Bulletin de la Société Botanique de France* 107: 18. 1960, *Acta Botanica Malacitana* 21: 125-189. 1996.

S. lagascae Roem. & Schult. var. *lagascae* (*Stipa lagascae* subsp. *normalis* var. *pubescens* f. *breviaristata* Maire; *Stipa lagascae* var. *eriphylla* Willk.; *Stipa lagascae* var. *pubescens* f. *latifolia* Maire & Weiller)

Southwest Asia, Spain. See *Bull. Soc. Hist. Nat.* 30: 307. 1939, *Flore Analytique et Synoptique de la Tunisie* 79. 1954, *Acta Botanica Malacitana* 21: 125-189. 1996.

S. lanata Vickery, Jacobs & Everett (*Austrostipa lanata* (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett)

South Australia, Western Australia. Auricles woolly, panicle contracted, floret turbinate, lemma dark and smooth, callus

curved and sharp, awn twice bent, see *Telopea* 3(1): 68. 1986, *Telopea* 6(4): 586. 1996.

S. latissimifolia Kuntze (*Nassella megapotamia* (Spreng. ex Trin.) Barkworth; *Stipa megapotamia* Spreng. ex Trin.)

Argentina. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 77. 1830, *Revisio Generum Plantarum* 3(3): 369. 1898 and *Taxon* 39(4): 610-611. 1990.

S. leiantha Hitchc. (*Piptochaetium avenaceum* (L.) Parodi; *Piptochaetium leianthum* (Hitchc.) Beetle; *Stipa avenacea* L.)

Mexico, Puebla. See *Species Plantarum* 1: 78-79. 1753, *Reliquiae Haenkeanae* 1: 222. 1830 and *Revista del Museo de La Plata (Nueva Serie), Sección Botánica* 6(25): 229. 1944, *Contributions from the United States National Herbarium* 24(7): 236, t. 51, f. 8-9. 1925, *Phytologia* 54(1): 4. 1983, *Contributions from the United States National Herbarium* 48: 495-504. 2003.

S. leptostachya Griseb. (*Jarava leptostachya* (Griseb.) F. Rojas; *Stipa andina* F.A. Roig; *Stipa capilliseta* Hitchc.; *Stipa leptostachya* var. *capilliseta* (Hitchc.) Parodi)

Argentina, Peru, Bolivia. Perennial, caespitose, leaf blades pointed, contracted panicle narrowly oblong, glumes lanceolate membranous acuminate, awn geniculate or 2-geniculate, callus bearded, see *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 299. 1879 and *Contributions from the United States National Herbarium* 24(7): 271. 1925, *Revista Argentina de Agronomía* 17: 198. 1950, *Gayana, Botánica* 13: 120. 1965, *Revista de la Facultad de Ciencias Agrarias [Universidad Nacional de Cuyo]* 12(1): 84, 85-87, t. 3. 1967, *Gayana, Botánica* 54(2): 173. 1997 [1998].

S. lessingiana Trin. & Rupr. (*Stipa pennata* var. *lessingiana* (Trin. & Rupr.) K. Richt.)

Armenia, Russia, Iran, China, Europe. Useful for erosion control, see *Species Graminum Stipaceorum* 79. 1842, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 5(1): 79. 1842, *Plantae Europaeae* 1: 32. 1890 and *Bot. Zhurn. SSSR* 69(4): 511-517. 1984.

S. lessingiana Trin. & Rupr. subsp. *brauneri* Pacz. (*Stipa brauneri* (Pacz.) Klokov)

Europe. See *Novosti Sist. Vyss. Rast.* 1975: 21. 1975 [1976].

S. lessingiana Trin. & Rupr. subsp. *lessingiana*

Central Europe.

S. letourneuxii Trab. (for the French botanist Aristide-Horace Letourneux, 1820-1890, in Algeria 1851-1876 and 1881-1890, see J.H. Barnhart, *Biographical notes upon botanists.* 2: 373. 1965) (*Stipa lagascae* subsp. *letourneuxii* (Trab.) Cuenod)

North Africa. See *Bulletin de la Société Botanique de France* 36: 405. 1889 and *Flore Analytique et Synoptique de la Tunisie* 79. 1954.

S. lithophila P.A. Smirn. ex Roshev. (*Stipa eriocaulis* subsp. *lithophila* (P.A. Smirn. ex Roshev.) Tzvelev; *Stipa lithophila* P.A. Smirn.; *Stipa pennata* subsp. *lithophila* (P.A. Smirn. ex Roshev.) Martinovsky)

Russia, Ukraine, Crimea. Rare species, see *Österreichische Botanische Zeitschrift* 33: 401. 1883 and *Flora URSS* 2: 98, 741. 1934, *Preslia* 44(1): 18. 1972, *Novosti Sist. Vyss. Rast.* 11: 18. 1974.

S. longiplumosa Roshev. ex Kom. (*Stipa longiplumosa* Roshev. ex Kom.)

Russia, USSR (former). Rare species, see *Fl. URSS* 2: 87. 1934.

S. macalpinei Reader (*Austrostipa macalpinei* (Reader) S.W.L. Jacobs & J. Everett; *Stipa compressa* R. Br. var. *lachnocolea* Benth.; *Stipa lachnocolea* (Benth.) Hughes; *Stipa scelerata* Behr. ex J.M. Black; *Stipa scelerata* Behr. ex Benth.; *Stipa setacea* R. Br. var. *latifolia* Benth.)

South Australia, Victoria, Western Australia. Sandy places, see *Prodromus Florae Novae Hollandiae* 175. 1810, *Flora of Australia* 7: 567-568. 1878, *Victoria Naturalist* 15: 143. 1899 and *Bulletin of Miscellaneous Information Kew* 1921: 26. 1921, *Fl. South Australia* 65. 1922, *Telopea* 3: 70. 1986, *Telopea* 6(4): 587. 1996.

in English: annual speargrass, one year grass

S. magnifica A. Junge

Russia, USSR (former). Rare species.

S. magrebensis F.M. Vázquez & Devesa

Northern Africa, Morocco, Algeria. Annual, erect, glabrous, ligule acute and scabrid, leaf blades convolute with pubescent upper surface, glabrous or pubescent sheaths, panicle lanceolate and contracted with scabrid branches, glumes unequal and glabrous, lemmas very pubescent, palea glabrous, awns nonpersistent, cleistogamous, closely resembles *Stipa capensis* Thunb., see *Botanical Journal of the Linnean Society* 124: 201-209. 1997.

S. mayeri Martinovsky

Yugoslavia. Rare species, see *Acta Botanica Croatica* 30: 145. 1971.

S. media (Speg.) Caro (*Jarava media* (Speg.) Peñailillo; *Stipa plumosa* var. *media* Speg.)

South America. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 37. 1836 and *Anales del Museo Nacional de Montevideo* 4(2): 40, f. 2a-c. 1901, *Kurtziana* 3: 25. 1966, *Contributions from the United States National Herbarium* 48: 406. 2003.

S. megapotamia Spreng. ex Trin. (*Aristida megapotamica* Spreng.; *Jarava megapotamica* (Spreng.) Peñailillo; *Nassella airoides* (Ekman) Barkworth; *Nassella megapotamia* (Spreng. ex Trin.) Barkworth; *Stipa airoides* Ekman; *Stipa latifolia* (L.) Raspail; *Stipa latifolia* Hack. ex Arechav., nom. illeg., non *Stipa latifolia* (L.) Raspail; *Stipa latissimifolia* Kuntze; *Stipa manicata* var. *latifolia* Speg.; *Stipa manicata* var. *media* Speg.; *Stipa megapotamica* Trin. & Rupr.; *Stipa quinquenervis* Hack.)

Southern Brazil, Argentina. See *Annales des Sciences Naturelles, Botanique* 5: 449. 1825, *Systema Vegetabilium, editio decima sexta* 4: 31. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 77. 1830, *Species Graminum Stipaceorum* 38. 1842, *Flora Chilena* 6: 288. 1854, *Anales del Museo Nacional de Buenos Aires* 4: 183, f. 4. 1895, *Revisio Generum Plantarum* 3(3): 369. 1898 and *Anales del Museo Nacional de Montevideo* 4(2): 77-78. 1901, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 31, t. 4, f. 2. 1912, *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 73. 1915, *Taxon* 39(4): 609-611. 1990, *Gayana, Botánica* 59(1): 31-32. 2002.

S. melanosperma Presl (*Nassella melanosperma* (J. Presl) Barkworth; *Stipa melanosperma* var. *erythrina* Hack.)

Southern Brazil, Argentina, Paraguay. See *Reliquiae Haenkeanae* 1(4-5): 226. 1830 and *Repertorium Specierum Novarum Regni Vegetabilis* 6(21-26): 345. 1909, *Taxon* 39(4): 611. 1990.

S. meridionalis F.M. Vázquez & Devesa

Morocco. Perennial, erect, glabrous, ligule acute and scabrid, leaf blades convolute, glabrous sheaths, lax panicle lanceolate to ovoid, glumes unequal, lemmas with bigenulate awns and 3 rows of hairs, related to *Stipa offneri* Breistr., see *Botanical Journal of the Linnean Society* 124: 201-209. 1997.

S. metatoris J. Everett & S.W.L. Jacobs (*Austrostipa metatoris* (J. Everett & S.W.L. Jacobs) S.W.L. Jacobs & J. Everett)

New South Wales, Murray Valley, South Australia. Perennial, vulnerable species, caespitose, ligule leathery and lacinate, auricles present, blade inrolled and ribbed, panicle exserted, spikelets gaping, glumes unequal and acuminate, silky and brown lemma, callus straight and silky, awn twice bent, sandy areas, see *Telopea* 2(4): 399. 1983, *Telopea* 6(4): 587. 1996.

S. milleri Noltie

Bhutan; Sikkim, India. See *Edinburgh Journal of Botany* 56(2): 288-289, f. 1G-K. 1999.

S. mollis R. Br. (*Austrostipa mollis* (R. Br.) S.W.L. Jacobs & J. Everett; *Stipa plagiopogon* J.M. Black; *Stipa semibarbata* R. Br. var. *mollis* (R. Br.) Benth.)

Western Australia, South Australia, Adelaide Plains, Tasmania, Victoria, New South Wales. Perennial, rigid, caespitose, membranous ligule ciliate and truncate, auricles absent, blade rolled and ribbed, panicle contracted and dense, spikelets gaping, floret elliptic, glumes acuminate, lemma reddish and silky, densely silky callus straight and sharp or weakly bent, awn plumose and twice bent, on sandy soils, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Flora of Australia* 7: 569. 1878 and *Transactions and Proceedings of the Royal Society of South Australia* 65: 334. 1941, *Telopea* 3: 74. 1986, *Telopea* 6(4): 587. 1996.

in English: speargrass, soft speargrass, supple speargrass

S. muelleri Tate (*Austrostipa muelleri* (Tate) S.W.L. Jacobs & J. Everett) (species dedicated to the famous German-born (Rostock) Australian scientist Baron Sir Ferdinand Jacob (Jakob) Heinrich von Mueller (Müller), 1825-1896 (d. Melbourne), botanist, pharmacist, botanical explorer, plant collector, see J.H. Barnhart, *Biographical notes upon botanists*. 2: 524. 1965)

South Australia, Victoria. Rhizomatous, stems wiry and decumbent, branched at nodes, floret elliptic, lemma brown, callus straight and sharp, awn twice bent, see *Transactions and Proceedings of the Royal Society of South Australia* 7: 70. 1885 and *Telopea* 6(4): 587. 1996.

in English: wiry speargrass

S. multispiculis J.M. Black (*Austrostipa multispiculis* (J.M. Black) S.W.L. Jacobs & J. Everett)

South Australia. Rare species, rhizomatous, rigid, panicle dense and contracted, floret cylindrical, lemma dark, callus curved and sharp, awn twice bent, see *Transactions and Proceedings of the Royal Society of South Australia* 65: 333. 1941, *Telopea* 3: 78. 1986, *Telopea* 6(4): 587. 1996.

S. mundula J.M. Black (*Austrostipa mundula* (J.M. Black) S.W.L. Jacobs & J. Everett) (from Latin *mundulus* "neat, trim," *mundule* "neatly, trimly")

South Australia, Victoria. Delicate, panicle sparse and contracted, floret turbinate to elliptic, lemma dark red, callus curved and sharp, awn twice bent, see *Transactions and Proceedings of the Royal Society of South Australia* 65: 333. 1941, *Telopea* 6(4): 587. 1996.

S. namaquensis Pilg. (*Arthratherum namaquense* Nees; *Stipagrostis anomala* De Winter; *Stipagrostis namaquensis* (Nees) De Winter)

Africa. See *Linnaea* 7(3): 290. 1832, *Florae Africae Australioris Illustrationes Monographicae* 1: 185. 1841 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 412. 1914, *Kirkia* 3: 133, 135. 1963.

S. neaei Nees ex Steud. (*Jarava neaei* (Nees ex Steud.) Peñailillo; *Stipa bella* Phil.; *Stipa pulchella* Munro ex Ball)

South America, Chile, Falkland Islands. See *Synopsis Plantarum Glumacearum* 1: 126. 1854, *Anales de la Universidad*

de Chile 26: 203. 1870, *Journal of the Linnean Society, Botany* 21: 237. 1884 and *Gayana, Botánica* 59(1): 32. 2002.

S. neesiana Trin. & Rupr. (*Nassella manicata* (E. Desv.) Barkworth; *Nassella neesiana* (Trin. & Rupr.) Barkworth; *Nassella tenuis* (Phil.) Barkworth; *Stipa contracta* Phil.; *Stipa eminens* Nees, nom. illeg., non *Stipa eminens* Cav.; *Stipa fernandeziana* Phil., nom. illeg., non *Stipa fernandeziana* (Trin. & Rupr.) Steud.; *Stipa hispida* Phil.; *Stipa longiflora* Steud.; *Stipa manicata* E. Desv.; *Stipa neesiana* f. *contorta* Hack.; *Stipa neesiana* f. *depauperata* Hack.; *Stipa neesiana* var. *chilensis* Trin. & Rupr.; *Stipa neesiana* var. *fernandeziana* Trin. & Rupr.; *Stipa neesiana* var. *glabrata* Arechav.; *Stipa neesiana* var. *hirsuta* Arechav.; *Stipa setigera* J. Presl; *Stipa setigera* var. *glabrata* (Arechav.) Speg.; *Stipa skottsbergii* Pilg.; *Stipa tenuis* Phil.; *Stipa trachysperma* Phil.; *Urachne longiflora* Steud.)

South America, Chile, Argentina. Perennial, erect, tufted, scabrous bent and twisted awn, glumes purple, weed species, found in disturbed places, cultivated lands, open rocky areas, hillsides and grassy slopes, see *Icones et Descriptiones Plantarum, quae aut sponte ...* 5: 42, t. 467, f. 1. 1799, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 374. 1829, *Reliquiae Haenkeanae* 1(4-5): 226. 1830, *Nomenclator Botanicus. Editio secunda* 2: 731. 1841, *Species Graminum Stipaceorum* 19, 27-28. 1842, *Flora Chilena* 6: 288. 1854, *Synopsis Plantarum Glumacearum* 1: 124. 1854, *Linnaea* 33(3-4): 284-285. 1864, *Anales de la Universidad de Chile* 36: 204. 1870, *Anales de la Universidad de Chile* 43: 560. 1873, *Anales del Museo Nacional de Montevideo* 1(4): 314. 1896, *Anales de la Universidad de Chile* 93: 719. 1896 and *Anales del Museo Nacional de Montevideo* 4(2): 97. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 100. 1904, *Anales del Museo Nacional de Buenos Aires* 21: 78. 1911, *Kongliga Svenska Vetenskapsakademiens Handlingar* 51(9): 22. 1914, *Contr. U.S. Natl. Herb.* 24(7): 223. 1925, *Taxon* 39(4): 610-612. 1990.

S. nivicola J.H. Willis

New South Wales, Victoria. Perennial, caespitose, shortly rhizomatous, ligule truncate and ciliate, auricles absent, blade rolled and ribbed, sparse panicle exerted and contracted, spikelets gaping, glumes subequal and acuminate to acute, lemma silky and scabrous, densely silky callus weakly bent at the tip, awn twice bent and scabrous, grows in alpine and subalpine grassland, see *Victoria Naturalist* 73: 149. 1957.

S. nodosa S.T. Blake (*Austrostipa nodosa* (S.T. Blake) S.W.L. Jacobs & J. Everett; *Stipa effusa* Hughes, nom. illeg., non *Stipa effusa* Mez; *Stipa falcata* Hughes var. *minor* J.M. Black)

South Australia, Queensland, Victoria, Tasmania, New South Wales. Perennial, caespitose, ligule truncate, auricles present, panicle sparse and spreading, spikelets gaping after

floret disarticulating, floret elliptic, glumes subequal, lemma brown and silky, silky callus straight and sharp or weakly bent at the tip, awn falcate, wetlands, see *Bulletin of Miscellaneous Information Kew* 1921: 14. 1921, *Bulletin of Miscellaneous Information Kew* 1922: 20. 1922, *Transactions and Proceedings of the Royal Society of South Australia* 65: 334. 1941, *Proceedings of the Royal Society of Queensland* 62: 89. 1952, *Telopea* 3: 86. 1986, *Telopea* 6(4): 587. 1996.

in English: speargrass, knotty speargrass

S. novakii Martinovsky

Yugoslavia. Rare species, see *Feddes Repertorium* 73: 147. 1966.

S. nullanulla J. Everett & S.W.L. Jacobs (*Austrostipa nullanulla* (J. Everett & S.W.L. Jacobs) S.W.L. Jacobs & J. Everett)

South Australia, New South Wales, Nulla Nulla, Victoria. Perennial, caespitose, small, ligule membranous and lacinate, blade rolled and rigid, panicle sparse and delicate, spikelets gaping at maturity, floret cylindrical to narrow-elliptic, glumes subequal and acute to acuminate, lemma dark red and shining, silky callus straight and sharp, awn twice bent, vulnerable species, palatable to sheep and rabbits, see *Telopea* 2(4): 398. 1983, *Telopea* 6(4): 587. 1996.

S. offneri Breistr. (*Stipa juncea* Lam., nom. illeg., non *Stipa juncea* L.; *Stipa juncea* Michx., nom. illeg., non *Stipa juncea* L.)

North Africa. Ligule glabrous, lemma with 7 rows of hairs, useful for erosion control, see *Species Plantarum* 78. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 157. 1791, *Flora Boreali-Americana* 1: 54. 1803 and *Contr. U.S. Natl. Herb.* 12: 150. 1908, *Procès-Verbaux de la Société Dauphinoise d'Études Biologiques, Bio-Club. Grenoble* 17: 2. 1950, *Bull. Soc. Bot. France* 119: 237. 1952, *Acta Botanica Malacitana* 21: 125-189. 1996.

S. oligostachya Hughes (*Austrostipa oligostachya* (Hughes) S.W.L. Jacobs & J. Everett)

South Australia, Victoria. Tussocky, rhizomatous, panicle sparse and spreading, floret cylindrical, lemma red-brown with translucent tubercles, callus straight and sharp, awn twice bent, see *Bulletin of Miscellaneous Information Kew* 1921: 12. 1921, *Telopea* 6(4): 587. 1996.

S. orientalis Trin. (*Stipa barbata* var. *orientalis* (Trin.) Kuntze)

Asia, China, Mongolia, Russia, Siberia. Erect, short, leaves mostly basal and narrow, purple to white pubescent awns, a good fodder, useful for erosion control, see *Flora Atlantica* 1: 97, t. 27. 1798, *Flora Altaica* 1: 83. 1829, *Acta Horti Petrop.* 10: 254. 1887 and A.L. Takhtadzhyan [A. Takhtajan], editor, *Numeri chromosomatum magnoliophytorum florum URSS. Akademiya nauk SSSR, Botanicheskii institut im V.L. Komarova.* 1990-1993.

S. pamirica Roshev. (*Stipa arabica* var. *pamirica* (Roshev.) Freitag; *Stipa badachschanica* subsp. *pamirica* (Roshev.) Tzvelev)

Tadjikistan. Rare and endangered species, see *Species Graminum Stipaceorum* 77. 1842 and *Novosti Sist. Vyss. Rast.* 11: 16. 1974, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 461. 1985.

S. papposa Nees (*Achnatherum papposum* (Nees) Barkworth; *Arundo plumosa* (Spreng.) Schult.; *Calamagrostis plumosa* Spreng.; *Jarava plumosa* (Spreng.) S.W.L. Jacobs & J. Everett; *Stipa delilei* Steud.; *Stipa papposa* Delile, nom. illeg., non *Stipa papposa* Nees; *Stipa tenuiflora* Phil.)

South America, Uruguay, Chile. Perennial, tufted, floret plumose above, bent and twisted awn, lemma hairy, weed species, along roadsides, see *Systema Vegetabilium, editio decima sexta* 1: 253. 1825 [1824], *Mantissa* 3: 604. 1827, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 377. 1829, *Ind. Sem. Hort. Monsp.* 7. 1849, *Synopsis Plantarum Glumacearum* 1: 126. 1854, *Linnaea* 33(3-4): 281. 1864 and *Anales del Museo Nacional de Montevideo* 4(2): 100. 1901, *Phytologia* 74(1): 11. 1993, *Acta Botanica Malacitana* 21: 125-189. 1996, *Telopea* 7(3): 301. 1997.

S. parviflora Desf. (*Stipa nuttalliana* Steud., nom. illeg., non *Stipa parviflora* Desf.; *Stipa parviflora* Nutt. ex Steud., nom. illeg., non *Stipa parviflora* Desf.)

Southwest Asia, Mediterranean. See *Flora Atlantica* 1: 98, t. 29. 1798, *Nomenclator Botanicus. Editio secunda* 2: 643. 1841.

in Morocco: awerga, tawerga, zuwway

S. parviflora Desf. var. ***parviflora*** (*Stipa ilorcitana* Sennen; *Stipa parviflora* subsp. *contorta* (Lange) Malamarriga; *Stipa parviflora* var. *contorta* Lange; *Stipa parviflora* var. *ilorcitana* (Sennen) Sennen; *Stipa parviflora* var. *ilorcitana* Sennen)

Southwest Asia, Morocco, Spain. See *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* II. 1: 36. 1860 and *Butlletí de la Institució Catalana d'Història Natural* 32: 106, 119. 1932, *Diagnoses des Nouveautés* 1928-1935: 75. 1936, *Acta Botanica Malacitana* 21: 125-189. 1996.

S. parviflora Desf. var. ***pilosa*** (Chrtek & Martinovsky) F.M. Vázquez & Devesa (*Stipa parviflora* f. *pilosa* Chrtek & Martinovsky)

Southwest Asia, Mediterranean.

S. patagonica Speg. (*Achnatherum speciosum* (Trin. & Rupr.) Barkworth; *Jarava patagonica* (Speg.) Peñailillo; *Stipa humilis* var. *speciosa* (Trin. & Rupr.) Kuntze; *Stipa speciosa* Trin. & Rupr.)

Argentina. See *Icones et Descriptiones Plantarum, quae aut sponte* ...5: 41, t. 466, f. 1. 1799, *Species Graminum Stipaceorum* 45. 1842, *Revista de la Facultad de Agronomia*

y Veterinaria 3: 581. 1897, *Revisio Generum Plantarum* 3(3): 371. 1898 and *Phytologia* 74(1): 13. 1993, *Gayana, Botánica* 59(1): 32. 2002.

S. pauneroana (Martinovsky) F.M. Vázquez & Devesa (*Stipa pauneroana* Martinovsky)

Spain. See *Acta Botanica Malacitana* 21: 125-189. 1996.

S. pellita (Trin. & Rupr.) Tzvelev (*Stipa gigantea* Link; *Stipa gigantea* var. *pellita* Trin. & Rupr.; *Stipa lagascae* Roem. & Schult.; *Stipa letourneuxii* subsp. *pellita* (Trin. & Rupr.) H. Scholz)

Azerbaijan. Indeterminate species, see *Journal für die Botanik* 2: 313. 1799, *Systema Vegetabilium* 2: 333. 1817, *Species Graminum Stipaceorum* 71. 1842, *Bulletin de la Société Botanique de France* 36: 405. 1889 and *Annali di Botanica* 45: 75-102. 1987, *Boletim da Sociedade Brotariana, ser. 2* 64: 35-74. 1991, *Willdenowia* 28: 173. 1998.

S. pennata L. (*Stipa pennata* f. *penicillifera* Pacz.; *Stipa joannis* subsp. *penicillifera* (Pacz.) Lavrenko; *Stipa pennata* subsp. *joannis* (Celak.) Hyl.; *Stipa pennata* subsp. *joannis* (Celak.) Pacz.; *Stipa pulcherrima* K. Koch subsp. *gallica* (Steven) V. Jirásek)

South and Central Europe, West Siberia, Himalaya. Perennial bunchgrass, densely tufted, stems sometimes pubescent, leaves mostly basal, leaves elongate and smooth, very open panicle, spikelets yellow, seeds with straight awn, useful for erosion control, found along roadsides, dry gravelly silt loam sites, see *Species Plantarum* 1: 78. 1753, *Österreichische Botanische Zeitschrift* 34: 318. 1884, *Sitzungsberichte der Königlichen Böhmisches Gesellschaft der Wissenschaften, Mathematisch-Naturwissenschaftliche Classe* 1887: 179. 1888 and *Botaniska Notiser* 1953(3): 354. 1953, *Notes Roy. Bot. Gard. Edinburgh* 42: 437. 1985, *Telopea* 3: 14. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 76: 476-479. 1991, *Flora Mediterranea* 1: 229-236. 1991, *Botanical Journal of the Linnean Society* 144(4): 483-495. Apr 2004.

in English: European feather grass, feather grass

in Finnish: Höyhenheinä, Stiippaheinä

S. pennata L. subsp. ***eriocaulis*** (Borbás) Martinovsky & Skalicky (*Stipa eriocaulis* Borbás; *Stipa pennata* var. *gallica* Steven; *Stipa pulcherrima* var. *gallica* (Steven) Podp.)

Europe. See *Bulletin de la Société Impériale des Naturalistes de Moscou* 30: 115. 1857, *Österreichische Botanische Zeitschrift* 33: 401. 1883 and *Acta Soc. Sci. Nat. Morav.* 2: 699. 1926.

S. pennata L. subsp. ***kirghisorum*** (Smirn.) Freitag (*Stipa kirghisorum* Smirn.)

Afghanistan, Pakistan, India. See *Repertorium Specierum Novarum Regni Vegetabilis* 21(581-587): 232-233. 1925, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 438-440, f. 19. 1985.

S. pennata L. subsp. *pennata* (*Stipa joannis* Celak.; *Stipa lejophylla* Smirnov; *Stipa joannis* subsp. *lejophylla* (Smirnov) Tzvelev)

Europe, Iran, Turkey.

S. pennata L. subsp. *pulcherrima* (K. Koch) Á. Löve & D. Löve (*Stipa pennata* f. *pulcherrima* (K. Koch) Brand; *Stipa pennata* subsp. *pulcherrima* (K. Koch) Freitag, nom. illeg., non *Stipa pennata* subsp. *pulcherrima* (K. Koch) Á. Löve & D. Löve; *Stipa pennata* var. *pulcherrima* (K. Koch) Beck; *Stipa pennata* var. *pulcherrima* (K. Koch) Halácsy)

Afghanistan, Pakistan, India. See *Linnaea* 21(4): 440. 1848 and *Conspectus Florae Graecae* 3: 352. 1904, *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegovina* 9: 426. 1904, *Synopsis der Deutschen und Schweizer Flora* 3: 2718. 1907, *Folia Geobotanica et Phytotaxonomica* 10(3): 273. 1975, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 440. 1985.

S. pennata L. subsp. *pulcherrima* (K. Koch) Freitag var. *pulcherrima* (*Stipa crassiculmis* Smirnov; *Stipa cretacea* Smirnov; *Stipa epilosa* Martinovsky; *Stipa eriocaulis* subsp. *lithophila* (Smirnov) Tzvelev; *Stipa eriocaulis* subsp. *lithophila* (P.A. Smirn. ex Roshev.) Tzvelev; *Stipa grafiana* Stev.; *Stipa lithophila* Smirnov ex Roshev.; *Stipa pennata* subsp. *crassiculmis* (Smirnov) Tzvelev; *Stipa pennata* subsp. *lejophylla* (Smirnov) Tzvelev; *Stipa pennata* subsp. *lithophila* (P.A. Smirn. ex Roshev.) Martinovsky; *Stipa pennata* var. *pulcherrima* (K. Koch) Halácsy; *Stipa pulcherrima* K. Koch; *Stipa pulcherrima* subsp. *epilosa* (Martinovsky) Tzvelev; *Stipa turcica* Martinovsky)

Armenia, Iran, Turkey. See *Österreichische Botanische Zeitschrift* 33: 401. 1883, *Bulletin de la Société Impériale des Naturalistes de Moscou* 30(2): 116. 1857 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 22: 375. 1926, *Flora URSS* 2: 98, 741. 1934, *Bulletin de la Société Impériale des Naturalistes de Moscou* 49(1): 90. 1940, *Preslia* 39: 273. 1967, *Preslia* 44(1): 18. 1972, *Novosti Sist. Vyss. Rast.* 11: 18. 1974, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Fitologija* 39: 72-77. 1991, *Acta Botanica Malacitana* 21: 125-189. 1996.

S. pennata L. subsp. *zalesski* (Wilensky) Freitag (*Stipa canescens* Smirnov ex Roshev.; *Stipa pontica* Smirnov; *Stipa rubens* Smirnov; *Stipa turcomanica* Smirnov; *Stipa zalesski* Wilensky; *Stipa zalesski* subsp. *canescens* (Smirnov) Tzvelev; *Stipa zalesski* subsp. *pontica* (Smirnov) Tzvelev; *Stipa zalesski* subsp. *turcomanica* (Smirnov) Tzvelev)

Eurasia, Turkey. See *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 21(588-600): 231-232, 234. 1925, *Repertorium Specierum Novarum Regni Vegetabilis* 26: 268. 1929, *Flora URSS* 2(101): 741. 1934, *Novosti Sist. Vyss. Rast.* 11: 17-18. 1974, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 443. 1985.

S. pennata L. var. *araxensis* (Grossh.) Freitag (*Stipa araxensis* Grossh.; *Stipa pulcherrima* subsp. *araxensis* (Grossh.) Tzvelev)

Anatolia, Eurasia. See *Beihefte zum Botanischen Centralblatt* Abt. II, 44: 200. 1927, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 441. 1985.

S. petraea Vickery (*Austrostipa petraea* (Vickery) S.W.L. Jacobs & J. Everett)

South Australia. Rhizomatous, panicle sparse and contracted, floret elliptic, lemma brown, callus straight and sharp, awn twice bent, see *Telopea* 2: 15. 1980, *Telopea* 6(4): 587. 1996.

S. petriei Buchanan (*Achnatherum petriei* (Buchanan) S.W.L. Jacobs & J. Everett)

New Zealand, South Island. Rare species, perennial, see *Indigenous Grasses of New Zealand* t. 17, 2, addenda. 1880 and *Telopea* 6(4): 582. 1996.

S. pilata Jacobs & Everett (*Austrostipa pilata* (S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett)

South Australia. Blades pungent, auricles hirsute, panicle dense and contracted, floret narrow-cylindrical to elliptic, lemma brown, callus straight and sharp, awn falcate, see *Telopea* 3(1): 92. 1986, *Telopea* 6(4): 587. 1996.

S. platychaeta Hughes (*Austrostipa platychaeta* (Hughes) S.W.L. Jacobs & J. Everett; *Stipa acrociliata* Reader var. *minor* Reader) (from the Greek *platys* "broad" and *chaite* "bristle, long hair")

South Australia, New South Wales, Western Australia, Victoria. Perennial, diffuse or caespitose, wiry, shortly rhizomatous, nodes glabrous, sheath ribbed and not inflated, auricles glabrous and thickened, ligule membranous and glabrous, panicle sparse and spreading, spikelets gaping at maturity, glumes acuminate, floret cylindrical, lemma brown and silky, callus straight and densely silky, awn falcate or curved, seed with a shiny outer coat, sandy soils, mallee, very similar to *Piptatherum miliaceum* (L.) Cosson, see *Victoria Naturalist* 13: 167. 1897 and *Victoria Naturalist* 23: 25. 1906, *Bulletin of Miscellaneous Information Kew* 1921: 16, f. 17 & 17A. 1921, *Telopea* 6(4): 587. 1996.

in Australia: flat-awned speargrass, flat-awn speargrass

S. plumigera Hughes (*Austrostipa plumigera* (Hughes) S.W.L. Jacobs & J. Everett; *Stipa eremophila* Reader var. *dodrantaria* J. Black; *Stipa gracilis* (Speg.) Speg., nom. illeg., non *Stipa gracilis* Roshev.; *Stipa plumosa* var. *gracilis* Speg.) (Latin *dodrants*, *antis* "nine twelfths or three fourths of any thing, nine inches," Latin *dodrantarius*, *a, um* "belonging to a *dodrants*: *tabulae*, the debt-books introduced in consequence of the *lex Valeria feneratoria*")

South Australia, Western Australia. Rhizomatous, panicle sparse and more or less spreading, floret narrow-cylindrical, lemma brown, callus more or less straight and sharp, awn twice bent, see *Mémoires de l'Académie Impériale des Sci-*

ences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 4,2(1): 37. 1836 and *Victoria Naturalist* 17: 154. 1901, *Anales del Museo Nacional de Montevideo* 4(2): 41, f. 2d-e. 1901, *Bulletin of Miscellaneous Information Kew* 1921: 20, f. 25 & 25A. 1921, *Revista Argentina de Botánica* 1: 16. 1925, *Transactions and Proceedings of the Royal Society of South Australia* 46: 565. 1922, *Telopea* 6(4): 588. 1996, *Comis. Invest. Ci. Monogr.* 13: 59. 1997.

S. plumosa Trinius (*Jarava plumosula* (Nees ex Steud.) F. Rojas; *Stipa gracilis* (Speg.) Speg., nom. illeg., non *Stipa gracilis* Roshev.; *Stipa plumosa* Pourret ex Willk. & Lange; *Stipa plumosa* Sieber ex Nees; *Stipa plumosa* var. *gracilis* Speg.; *Stipa plumosula* Nees ex Steud.)

Argentina, Chile. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 37. 1836, *Florae Africae Australioris Illustrationes Monographicae* 180. 1841, *Synopsis Plantarum Glumacearum* 1: 127. 1854, *Prodromus Florae Hispanicae* 1: 60. 1861 and *Anales del Museo Nacional de Montevideo* 4(2): 40-41, f. 2a-c, d-e. 1901, *Revista Argentina de Botánica* 1: 16. 1925, *Comis. Invest. Ci. Monogr.* 13: 59. 1997, *Gayana, Botánica* 54(2): 173. 1997 [1998].

S. polyclada Hack. (*Jarava polyclada* (Hack.) Peñailillo) Argentina. See *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 14(5): 77. 1908, *Anales del Museo Nacional de Buenos Aires* 14: 80-81, t. 2, f. a-e. 1911, *Contr. U.S. Natl. Herb.* 24(7): 285. 1925, *Gayana, Botánica* 59(1): 32. 2002.

S. pontica P.A. Smirn. (*Stipa pennata* var. *pontica* (P.A. Smirn.) Hayek; *Stipa zalesskii* subsp. *pontica* (P.A. Smirn.) Tzvelev)

Europe, Anatolia, Russia. See *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 21: 232. 1925, *Repertorium Specierum Novarum Regni Vegetabilis* 26: 268. 1929, *Repertorium Specierum Novarum Regni Vegetabilis* 30(3): 349. 1932, *Novosti Sist. Vyss. Rast.* 11: 18. 1974.

S. przewalskyi Roshev.

China, Asia. Subalpine shrub meadow, rocky silt loam, gravelly sand, waste areas.

S. pseudoichu Caro (*Jarava pseudoichu* (Caro) F. Rojas) Argentina, Bolivia. See *Kurtziana* 3: 103-107, f. 21. 1966, *Gayana, Botánica* 54(2): 173. 1997 [1998].

S. psylantha Speg. (*Jarava psylantha* (Speg.) Peñailillo; *Stipa argentea* Hitchc.; *Stipa dasyantha* Speg.)

Chile, Argentina. Useful for erosion control, see *Revista Argentina de Botánica* 1: 16, 21. 1925, *Contributions from the United States National Herbarium* 24(7): 273. 1925, *Gayana, Botánica* 59(1): 32. 2002.

S. puberula Steudel (*Austrostipa puberula* (Steud.) S.W.L. Jacobs & J. Everett; *Stipa arachnopus* Pilger)

South Australia, New South Wales, Western Australia, Victoria. Perennial, caespitose, ligule truncate and ciliate, auricles hirsute or densely woolly, ribbed blade rolled and flexuous, panicle sparse and spreading, floret turbinate to cylindrical, spikelets gaping, glumes subequal, silky lemma dark and smooth, callus curved and sharp, awn twice bent, in temperate mallee areas, open fields, see *Synopsis Plantarum Glumacearum* 1: 128. 1854 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 35: 70. 1904, *Telopea* 3: 96. 1986.

in English: fine-hairy speargrass

S. pubinodis Trin. & Rupr. (*Austrostipa pubinodis* (Trin. & Rupr.) S.W.L. Jacobs & J. Everett; *Stipa pubescens* sensu J. Black; *Stipa pubescens* var. *semiglabra* Reader)

South Australia, New South Wales, Victoria, Tasmania. Perennial, caespitose, short rhizome, extravaginal shoots, nodes pubescent, auricles absent or hirsute, ligule obtuse and ciliate, densely pubescent blade rolled and ribbed, panicle very sparse and contracted, floret cylindrical, spikelets gaping, glumes unequal, lemma reddish brown and smooth to tuberculate, white to reddish callus straight and sharp or weakly bent, scabrous awn twice bent or with 3 bends, grows in sandy areas, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Species Graminum Stipaceorum* 50. 1842 and *Victoria Naturalist* 17: 155. 1901, *Telopea* 6(4): 588. 1996.

in English: speargrass, long-shaft speargrass

S. pulcherrima K. Koch (*Stipa grafiana* Steven; *Stipa mediterranea* subsp. *pulcherrima* (K. Koch) Asch. & Graebn.; *Stipa pennata* f. *pulcherrima* (K. Koch) Brand; *Stipa pennata* L. subsp. *mediterranea* (Trin. & Rupr.) Asch. & Graebn.; *Stipa pennata* subsp. *pulcherrima* (K. Koch) Á. Löve & D. Löve; *Stipa pennata* subsp. *pulcherrima* (K. Koch) Freitag, nom. illeg., non *Stipa pennata* subsp. *pulcherrima* (K. Koch) Á. Löve & D. Löve; *Stipa pennata* var. *pulcherrima* (K. Koch) Beck; *Stipa pennata* var. *pulcherrima* (K. Koch) Halácsy; *Stipa pulcherrima* K. Koch subsp. *grafiana* (Steven) V. Jirásek; *Stipa pulcherrima* subsp. *grafiana* (Stev.) Pacz.)

South and central Europe. Perennial, tufted, leaves involute and usually smooth, useful for erosion control, see *Linnaea* 21(4): 440. 1848, *Bulletin de la Société Impériale des Naturalistes de Moscou* 30(2): 116. 1857, *Synopsis der mitteleuropäischen Flora* 2: 106. 1899 and *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegovina* 9: 426. 1904, *Conspectus Florae Graecae* 3: 352. 1904, *Synopsis der Deutschen und Schweizer Flora* 3: 2718. 1907, *Folia Geobotanica et Phytotaxonomica* 10(3): 273. 1975, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 440. 1985.

S. pulchra Hitchc. (*Nassella pulchra* (Hitchc.) Barkworth)

Western U.S. Perennial, gray foliage, leaves narrow, panicle nodding and loose, chaparral, grasslands, along roadsides, woodlands, see *American Journal of Botany* 2: 301. 1915, *Madroño* 6(4): 137-141, f. 1, pl. 13, f. 1, 3. 1941, *Leaflets of Western Botany* 5(2): 35. 1947, K.L. White, "Native bunchgrass (*Stipa pulchra*) on Hastings Reservation, California." *Ecology* 48: 949-955. 1967, J.C. Hull and C.H. Muller, "The potential for dominance by *Stipa pulchra* in a California grassland." *American Midland Naturalist* 97:147-175. 1975, *Taxon* 39(4): 611. 1990, *Restoration Ecology* 5(3): 214-228. Sep 1997, *Restoration Ecology* 6(1): 52-58. Mar 1998, *Restoration Ecology* 10(1): 107-111. Mar 2002, *Oikos* 105(2): 229-238. Apr 2004.

in English: purple needle grass, purple stipa

S. pungens Nees & Meyen (*Jarava pungens* (Nees & Meyen) Matthei; *Stipa ichu* (Ruiz & Pav.) Kunth; *Stipa ichu* var. *pungens* (Nees & Meyen) Kuntze; *Stipa ichu* var. *pungens* (Nees & Meyen) Pilg., nom. illeg., non *Stipa ichu* var. *pungens* (Nees & Meyen) Kuntze; *Stipa pungens* Meyen)

Argentina, Peru. See *Révision des Graminées* 1: 60. 1829, *Reise um die Erde* 1: 484. 1834, *Gramineae* 19. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 151. 1843, *Revisio Generum Plantarum* 3(3): 372. 1898 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 778. 1933, *Brittonia* 23(3): 293-324. 1971, *Gayana, Botánica* 54(2): 190-191. 1997 [1998].

S. pungionata Caro & Sánchez (*Jarava pungionata* (Caro & E.A. Sánchez) Matthei)

Argentina. See *Kurtziana* 7: 109, f. 9. 1973, *Gayana, Botánica* 54(2): 191. 1997 [1998].

S. purpurea Grisebach (*Lasiagrostis tremula* Ruprecht; *Ptilagrostis purpurea* Grisebach; *Ptilagrostis purpurea* (Griseb.) Roshev.; *Stipa basiplumosa* var. *longearistata* Munro ex Hook.f.; *Stipa pilgeriana* Hao; *Stipa semenowi* Krasn.)

India, Tibet. See *Flora Rossica* 4(13): 447. 1852, *Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen. Mathematisch-physikalische Klasse* 82. 1868, Baron Friedrich von der Osten-Sacken [and Franz Joseph Ruprecht, 1814-1870], *Sertum tianschanicum*. Botanische Ergebnisse einer Reise im mittleren Tian-Schan. 35. *Saint Pétersbourg* 1869, *Scripta Bot. Univ. Petrop.* 2: 22. 1887-1888, *The Flora of British India* 7(22): 229. 1897 [1896] and *Flora URSS* 2: 76. 1934, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 68(5): 583-584. 1938.

S. ramosissima (Trin.) Trin. (*Austrostipa ramosissima* (Trin.) S.W.L. Jacobs & J. Everett; *Stipa micrantha* Sieber ex Trin., nom. illeg., non *Stipa micrantha* Cav.; *Stipa ramosissima* (Trin.) Nees; *Stipa rugulosa* Mez; *Streptachne*

ramosissima (Trin.) Trin. & Rupr.; *Urachne ramosissima* Trin.)

Queensland, New South Wales. Perennial, caespitose, columnar growth habit, culms branched, shortly rhizomatous, sheath glabrous, blade expanded, panicle exerted and spreading, spikelets gaping at maturity, lemma very dark and tuberculate, callus bent and hairy, awn scabrous and once bent, moist places, versatile and hardy plant, heat- and drought-tolerant, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Gram. Unifl. Sesquifl.* 173. 1824, *Flora* 11(1: 19): 301. 1828, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 74. 1830, *Species Graminum Stipaceorum* 7. 1842 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 207. 1921, *Kew Bull. Misc. Inf.* (1921): 28. 1921, *Telopea* 3: 101. 1986, *Telopea* 6(4): 588. 1996.

in English: stout bamboo grass, pillar of smoke

S. rechingeri Martinovsky

Greece. Rare species, see *Preslia* 44(1): 10. 1972.

S. redowskii Trin. ex Spreng. (*Lasiagrostis redowskyi* (Trin. ex Spreng.) Woronow ex Grossh.; *Stipa redowskyi* Trin.)

Europe, Siberia. Alpine, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 53. 1821 and *Flora Kavkaza* 1: 69. 1928.

S. regeliana Hack. (named for the Swiss-born Russian physician [Johann] Albert von Regel, 1845-1908, botanist, traveler, oldest son of Edward August von Regel (1815-1892), in 1875 appointed District Physician at Kuldja in Ili, explorer of Turkestan and Eastern Asia (1876-1888); see J.H. Barnhart, *Biographical notes upon botanists*. 3: 138. 1965; Emil Bretschneider, *History of European Botanical Discoveries in China*. Leipzig 1981; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970)

Central Asia, Himalayas. See *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften. Wien. Mathematisch-naturwissenschaftlichen Classe. Abteilung I* 89: 130. 1884.

S. retorta Cav. (*Ortachne retorta* Nees ex Steud.; *Stipa capensis* Thunb.; *Stipa retorta* (Nees) Mez, nom. illeg., non *Stipa retorta* Cav.; *Stipa retorta* (Nees ex Steud.) Mez, nom. illeg., non *Stipa retorta* Cav.)

Europe, Spain, Algeria. See *Prodromus Plantarum Capensium, ...* 19. 1794, *Observaciones sobre la historia natural, geografía, agricultura, población y frutos del reyno de Valencia*. Madrid 1795-1797, *Synopsis Plantarum Glumacearum* 1: 121. 1854 and *Repertorium Specierum Novarum Regni Vegetabilis* 17: 208. 1921, *Kew Bull. Misc. Inform.* 1923: 301. 1923, *Boletim da Sociedade Broteriana*,

ser. 2 64: 35-74. 1991, *Acta Botanica Malacitana* 21: 125-189. 1996, *Lagascalia* 20(2): 265-275. 1998.

in Morocco: stipe tortillée, l-behma, el-Behma, legm-wêdiya, lagmêdiya, âwerga, tawerga, zuwwây

S. richterana Kar. & Kir. (also spelled *richteriana*) (*Stipa jagnobica* Ovcz. & Czukav.; *Stipa kuhitangi* Drob.; *Stipa richterana* Karav. & Kir.; *Stipa richterana* subsp. *jagnobica* (Ovcz. & Czukav.) Tzvelev; *Stipa woroninii* Krasn.; *Stipa woroniniana* Krasn. ex B. Fedtsch.)

Central Asia, Russia, Afghanistan. See *Bulletin de la Société Impériale des Naturalistes de Moscou* 4: 862. 1941, *Flora Uzbekistanica* 1: 183, 537. 1941, *Novosti Sist. Vyss. Rast.* 11: 14. 1974.

S. roborowskyi Roshev. (*Stipa basi plumosa* var. *longearistata* Munro ex Hooker)

China, Central Asia, Tibet, Sikkim. Subalpine meadow, gravelly loam, see *Bot. Mater. Gerb. Glavn. Bot. Sada RSFSR* 1(6): 1. 1920.

S. rohmooiana Noltie

India, Sikkim. See *Edinburgh Journal of Botany* 56(2): 287-288, f. 1A-F. 1999, *Flora of Bhutan*, vol. 3, part 2: 525-527. 2000.

S. roylei (Nees) Duthie (*Orthoraphium roylei* Nees; *Stipa orthoraphium* Steudel; *Stipa roylei* (Nees) Mez, nom. illeg., non *Stipa roylei* (Nees) Duthie)

India, Nepal, Assam, Sikkim. A useful fodder, see *Proceedings of the Linnean Society of London* 1: 94. 1841, *Synopsis Plantarum Glumacearum* 1: 131. 1854, *Grasses North-Western India* 27. 1883 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(486-491): 207. 1921.

S. rudis Spreng. (*Austrostipa rudis* (Spreng.) S.W.L. Jacobs & J. Everett)

New South Wales, Victoria, Tasmania, Queensland. Perennial tussock grass, tall, erect, wiry, open, caespitose, extravaginal shoots, ligule ovate and laciniate, auricles present, blade inrolled and ribbed, leaves flat and coarse, seed heads large and drooping down, panicle exerted, purple swollen nodes, spikelets gaping, glumes subequal, lemma tuberculate and reddish, callus reddish to white and curved, awn twice bent, sharply pointed and hooked seeds dark purple, invasive pest, grows in open woodlands, bush margins and grasslands, forms dense stands in pasture, unpalatable to stock, prolific seeding habit, barbed and sharp seeds may blind livestock, see *Systema Vegetabilium, editio decima sexta* 4: Cur. Post. 31. 1827 and *Telopea* 6(4): 588. 1996.

in English: veined speargrass, speargrass, needle grass

S. rudis Spreng. subsp. *australis* J. Everett & S.W.L. Jacobs (*Austrostipa rudis* subsp. *australis* (J. Everett & S.W.L. Jacobs) S.W.L. Jacobs & J. Everett)

New South Wales, Victoria, Tasmania. Coarse, robust, tough, spreading inflorescence paniculate, grows in wood-

land, coasts, see *Telopea* 2(4): 396. 1983, *Telopea* 6(4): 588. 1996.

S. rudis Spreng. subsp. *nervosa* (Vickery) J. Everett & S.W.L. Jacobs (*Austrostipa rudis* subsp. *nervosa* (Vickery) S.W.L. Jacobs & J. Everett; *Stipa nervosa* Vickery)

New South Wales, Victoria, Queensland. Grows in woodland, coasts, see *Contributions from the New South Wales National Herbarium* 1: 335. 1951 [or 1950], *Telopea* 2(4): 396. 1983, *Telopea* 6(4): 588. 1996.

S. rudis Spreng. subsp. *rudis* (*Stipa nervosa* var. *neutralis* Vickery)

New South Wales, Victoria, Queensland. Grows in woodland, see *Contributions from the New South Wales National Herbarium* 1(6): 335, 337. 1950.

S. sareptana A.K. Becker (*Stipa capillata* var. *sareptana* (A.K. Becker) Schmalh.)

Russia, Asia, China. Grows on fine sandy loam, useful for erosion control, see *Species Plantarum, Editio Secunda* 1: 116. 1762, *Bulletin de la Société Impériale des Naturalistes de Moscou* 57: 52. 1882.

S. scabrifolia M.A. Torres (*Jarava scabrifolia* (Torres) Peñailillo)

Argentina. See *Comision de Investigaciones Cientificas* 13: 61, f. 1, A, a. 1997, *Contributions from the United States National Herbarium* 48: 407. 2003.

S. sellowiana Nees ex Trin. & Rupr. (*Nassella sellowiana* (Nees ex Trin. & Rupr.) Peñailillo; *Stipa eminens* var. *sellowiana* (Nees ex Trin. & Rupr.) Kuntze; *Stipa molfinoi* Speg.; *Stipa sellowiana* Nees)

Brazil, Argentina. Swampy places, see *Icones et Descriptiones Plantarum, quae aut sponte . . .* 5: 42, t. 467, f. 1. 1799, *Species Graminum Stipaceorum* 38. 1842, *Revisio Generum Plantarum* 3(3): 371. 1898 and *Revista Argentina de Botánica* 1: 30. 1925, *Gayana, Botánica* 55(2): 87. 1998 [1999].

S. setacea R. Br. (*Austrostipa setacea* (R. Br.) S.W.L. Jacobs & J. Everett; *Dichelachne setacea* (R. Br.) Nees; *Stipa brachystephana* S.T. Blake; *Stipa setacea* var. *latiglumis* J. Black)

South Australia, New South Wales, Queensland. Perennial, caespitose, stems delicate, nodes glabrous, ligule obtuse, auricles glabrous and thickened, panicle sparse and contracted, spikelets gaping at maturity, floret turbinate and gibbous, lemma black and tuberculate, callus straight and densely silky, awn twice bent, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Prodromus Florae Norfolkicae* 20. 1833, *Plantae Preissianae* 2: 98. 1846, *Flora of Australia* 7: 568. 1878 and *Transactions and Proceedings of the Royal Society of South Australia* 46: 565. 1922, *Proceedings of the Royal Society of Queensland* 62: 90, t. 6. 1952, *Telopea* 3: 70, 113. 1986, *Telopea* 6(4): 589. 1996.

in English: corkscrew grass

S. setigera J. Presl (*Nassella mucronata* (Kunth) R.W. Pohl; *Nassella neesiana* (Trin. & Rupr.) Barkworth; *Stipa mucronata* Kunth; *Stipa neesiana* Trin. & Rupr.)

South America, Europe. See *Nova Genera et Species Plantarum* 1: 125-126. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 226. 1830, *Species Graminum Stipaceorum* 27-28. 1842 and *Contr. U.S. Natl. Herb.* 24(7): 223. 1925, *Taxon* 39(4): 611. 1990.

S. sibirica (L.) Lam. (*Achnatherum extremiorientale* (Hara) Keng; *Achnatherum extremiorientale* (Hara) Hara, nom. illeg., non *Achnatherum extremiorientale* (Hara) Keng; *Achnatherum extremiorientale* (Hara) Keng ex P.C. Kuo, nom. illeg., non *Achnatherum extremiorientale* (Hara) Keng; *Achnatherum sibiricum* (L.) Keng; *Achnatherum sibiricum* (L.) Keng ex Tzvelev, nom. illeg., non *Achnatherum sibiricum* (L.) Keng; *Avena sibirica* L.; *Oryzopsis sibirica* (L.) Beal; *Stipa extremiorientalis* Hara; *Stipa japonica* (Hack.) Hack.; *Stipa japonica* Hack. ex Honda, nom. illeg., non *Stipa japonica* (Hack.) Hack.; *Stipa sibirica* var. *japonica* Hack.)

Europe, Russia, Mongolia, Siberia, India. Mountain meadows, dark soil, rocky hillside, dry mountain steppe, very rocky and gravelly soil, heavily grazed areas, useful for erosion control, poisonous to horses and other domestic animals, young plants may be fatal to the grazing animals, suitable as a source of pulp for papermaking, see *Species Plantarum* 1: 79. 1753, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 158. 1791, *Grasses of North America for Farmers and Students* 2: 226. 1896, *Bulletin de l'Herbier Boissier* 7(9): 647. 1899 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 207. 1921, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 212. 1930, *Journal of Japanese Botany* 15(7): 459. 1939, *Claves Generum et Specierum Graminearum Primarium Sinicarum Appendice Nomenclatione Systematica* 107, 212. 1957, *Flora Illustralis Plantarum Primarium Sinicarum: Gramineae* 9(3): 590, f. 525. 1959, *Fl. Tsinlingensis*. 1(1): 153. 1976, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 79(2): 135-139. 1994, *Taxon* 49(2): 248. 2000.

in English: needlegrass, poisonous grass of Kashmir

in India: gobu, gogu, gumai, gurghas

S. sicula Moraldo, La Valva, Ricciardi & Caputo

Italy, Sicily. Vulnerable species, see *Delpinoa* 23-24: 139. 1981-1982 [1985].

S. spartea Trin. (*Hesperostipa curtisetata* (Hitchc.) Barkworth; *Hesperostipa spartea* (Trin.) Barkworth; *Stipa curtisetata* (Hitchc.) Barkworth; *Stipa robusta* Nutt. ex Trin.; *Stipa robusta* Nutt. ex Trin. & Rupr.; *Stipa spartea* var. *curtisetata* A.S. Hitchc.)

Northern America, U.S., Canada, British Columbia. Perennial bunchgrass, erect and leafy, basal leaves, sheaths are

open and there are no auricles, flat to inrolled leaf blades, thickened ligule, flower head somewhat narrowed, 1-flowered spikelets, glumes almost equal, lemmas hardened, sharp-pointed callus covered in stiff hairs, lemma surface smooth or covered in hairs, extremely long and twisted awns, slender awns twist many times from the tip of the lemma and bend once or more along their length, awn tip usually straight, reproduces sexually, dominant or subdominant, occurs as a pioneer species, difficult to establish by seed, forage of good palatability, sharp awns may injure grazing livestock and render the plant less palatable, Native Americans of the Missouri River Region used the stiff awns to make hair brushes, considered rare in Ontario, grows in open and grassy habitats of lower valley slopes, dry sandy soils, in plains grasslands, prairie, foothills prairie, mountain meadows, on small disturbed or denuded areas, included by some authors in *Hesperostipa* (Elias) Barkworth, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 82. 1830, *Species Graminum Stipaceorum* 69. 1842 and *Contributions from the United States National Herbarium* 24(7): 230. 1925, Melvin Randolph Gilmore, *Uses of Plants by the Indians of the Missouri River Region*. 33rd Annual Report. Bureau of American Ethnology Washington, DC 1919, *Canadian Journal of Botany* 56(6): 624. 1978, *Phytologia* 74(1): 15-16. 1993, *Restoration Ecology* 6(2): 181-196. June 1998, *Conservation Biology* 15(5): 1315-1324. Oct 2001, *Journal of Biogeography* 29(5-6): 641-651. May 2002, *Journal of Biogeography* 30(3): 419-430. Mar 2003, *Journal of Ecology* 91(6): 999-1007. Dec 2003, *Journal of Biogeography* 32(6): 1043-1062. June 2005.

in English: porcupine grass, big needle grass, western porcupine grass, short-awn porcupine grass

S. splendens Trinius (*Achnatherum splendens* (Trinius) Nevski; *Aristella longiflora* Regel; *Lasiagrostis splendens* (Trinius) Kunth; *Stipa altaica* Trinius; *Stipa kokonorica* Hao; *Stipa munroana* Bor; *Stipa schlagintweitii* Mez)

Pakistan, Afghanistan. A good fodder, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 54. 1821, *Flora Altaica* 1: 80. 1829, *Flora Italica* 1: 690. 1833[1835], *Trudy Glavn. Bot. Sada* 7: 645. 1881 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 208. 1921, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 68(5): 583. 1938, *J. Jap. Bot.* 17: 404. 1941, *Kew Bulletin* 1954: 500. 1954, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)* 647. 1960, *Journal of Cytology and Genetics* 21: 155. 1986.

S. staintonii Bor

Western and Central Nepal. Perennial, erect, caespitose, glabrous, leaf blades involute, leaf sheaths ciliate on the margin, ligule membranous, loose nodding panicle, spikelets long-awned, glumes subequal, lemma 2-lobed at the

apex, awn twice bent, on dry stony places, cliffs, see *Bulletin of the Botanical Survey of India* 7: 133. 1965.

S. stillmanii Bolander (*Achnatherum stillmanii* (Bol.) Barkworth; *Lasiagrostis tenacissima* (L.) Trin. & Rupr.; *Macrochloa tenacissima* (L.) Kunth; *Stipa tenacissima* L.)

U.S., California. Rare species, see *Centuria I. Plantarum* ... 6. 1755, *Amoen. Acad.* 4: 266. 1759, *Révision des Graminées* 1: 58. 1829, *Species Graminum Stipaceorum* 94. 1842, *Proceedings of the California Academy of Sciences* 4: 169. 1872 and *Annali di Botanica* 45: 75-102. 1987, *Phytologia* 74(1): 14. 1993.

in English: Stillman's stipa

S. stipoides (Hook.f.) Veldkamp (*Austrostipa stipoides* (Hook.f.) S.W.L. Jacobs & J. Everett; *Dichelachne stipoides* Hook.f.; *Stipa teretifolia* Steudel)

South Australia, Tasmania, Victoria, New South Wales. Perennial tussock forming, stiff, caespitose, nodes glabrous, sheath ribbed, ligule obtuse, blades pungent or with a needle-like point, panicle contracted or exerted, spikelets gaping, floret cylindrical, lemma brown and pilose, callus hairy and nearly straight, awn twice bent, coastal dunes, stream banks, pioneer, high wind and salt wind tolerance, see *Prodromus Florae Norfolkicae* 20. 1833, *Flora Novae-Zelandiae* 1: 294, t. 66. 1853, *Synopsis Plantarum Glumacearum* 1: 128. 1854 and *Blumea* 22(1): 11. 1974, *Pap. Proc. Roy. Soc. Tasmania* 112: 277-287. 1978, *Telopea* 6(4): 589. 1996.

in English: coast speargrass, prickly speargrass, needle tussock

S. stuposa Hughes (*Austrostipa stuposa* (Hughes) S.W.L. Jacobs & J. Everett)

South Australia, Tasmania, Victoria, New South Wales. Perennial, caespitose, sturdy, ligule truncate and membranous, blades hirsute and ribbed, auricles present, panicle sparse to dense, spikelets gaping, floret elliptic, glumes acuminate and unequal, lemma smooth and silky, densely silky callus straight and sharp, awn twice bent, grows in woodland or heath, see *Bulletin of Miscellaneous Information Kew* 1921: 20f, 24 & 24A. 1921, *Telopea* 6(4): 589. 1996.

in English: Tasmanian speargrass

S. styriaca Martinovsky

Austria. Vulnerable species, see *Österreichische Botanische Zeitschrift* 118: 179. 1970.

S. subaristata (Matthei) Caro & E.A. Sánchez (*Jarava subaristata* (Matthei) Matthei; *Stipa leptostachya* var. *subaristata* Matthei)

Chile, Argentina. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 299. 1879 and *Gayana, Botánica* 13: 120. 1965, *Kurtziana* 7: 96. 1973, *Gayana, Botánica* 54(2): 192. 1997 [1998], *Comision de Investigaciones Cientificas* 13: 46-47. 1997.

S. subsessiliflora (Ruprecht) Roshev. (*Lasiagrostis subsessiliflora* Ruprecht; *Stipa basiplumosa* Munro ex Hooker)

Central Asia, Pamir, India. See *Sertum Tianschanicum* 35. 1869, *The Flora of British India* 7(22): 229. 1897 [1896] and *Flora Reipublicae Popularis Sinicae* 9(3): 284, pl. 68, f. 1-5. 1987.

S. syreistschikowii P.A. Smirn. (*Stipa paradoxa* (Junge ex B. Fedtsch.) P.A. Smirn.)

Eurasia, Caucasus, Ukraine, Crimea. Indeterminate species, see *Flora Aziatskoj Rossii* 1(12): 156. 1916, *Not. Syst. Herb. Inst. Bot. Acad. Sci. URSS* 19: 647. 1959.

S. tenacissima L. (*Lasiagrostis tenacissima* (L.) Trin.; *Macrochloa tenacissima* (L.) Kunth; *Stipa gabesensis* Moraldo, Raffaelli & Ricceri; *Stipa kelibibae* Moraldo, Raffaelli, & Ricceri; *Stipa kralifii* Moraldo, Raffaelli, & Ricceri; *Stipa stillmanii* Bol.; *Stipa tenacissima* Loefl. ex L.; *Stipa tenacissima* Ucria, nom. illeg., non *Stipa tenacissima* L.)

Western Mediterranean, Portugal, Spain. Perennial, stems very stout, leaves convolute and glabrous, narrow and compact inflorescence, lemma tip bifid, leaf used in placentary retention and diarrhea, native pasture species, unpalatable, a source of fiber, used for papermaking, mats and cordage, ropes and basketry, see *Centuria I. Plantarum* ... 6. 1755, *Amoen. Acad.* 4: 266. 1759, *Hortus Regius Panhormitanus, aerae vulgaris anno MDCCLXXX noviter extractus septoque ex indigenis, exoticisque plurimas complectens plantas*. Accurante P.F. Bernardino ab Ucria. Panormi 1789, *Révision des Graminées* 1: 58. 1829, *Species Graminum Stipaceorum* 94. 1842, *Proceedings of the California Academy of Sciences* 4: 169. 1872 and *Acta societatis scientiarum fennica. Series B. Opera biologica* 1(2): 24. 1932, *Annali di Botanica* 45: 75-102. 1987, *Phytologia* 74(1): 14. 1993.

in English: esparto grass, esparto, Algerian grass, alfa, alfa grass, halfa

in Arabic: halfa

in Morocco: alfa, l-halfa, halfa, talamt, l-geddîm, geddim, âguddîm, âggurî, âruy, âwrî, ârî, arri, tizzi, tigarzi, âdaf, l-bûs, demmûg, sparte

in Spanish: esparto, atocha, atochon

S. tenuifolia Steud. (*Austrostipa tenuifolia* (Steud.) S.W.L. Jacobs & J. Everett; *Stipa eriopus* Benth.; *Stipa incurva* Hughes; *Stipa leptophylla* Hughes; *Stipa pubescens* R. Br.; *Stipa scabra* var. *occidentalis* Benth.; *Stipa scabra* var. *pubescens* Benth.; *Stipa tenuifolia* Sieber ex Steud.)

South Australia, Western Australia. Nodes glabrous, sheaths hirsute, auricles hirsute, glumes acuminate, panicle sparse and spreading, floret narrow-cylindrical, lemma dark, callus straight and sharp, awn falcate, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Nomenclator Botanicus. Editio secunda* 2: 643. 1841, *J. Trop. Australia* 31. 1848, *Synopsis Plantarum Glumacearum* 1: 128. 1854, *Flora*

Australiensis: A Description ... 7: 570-571. 1878 and *Bulletin of Miscellaneous Information Kew* 1921: 14, 16, f. 10, 16 & 10A, 16A. 1921, *Telopea* 3: 119. 1986, *Telopea* 6(4): 589. 1996.

S. tenuissima Trin. (*Nassella tenuissima* (Trin.) Barkworth; *Stipa cirrosa* E. Fourn.; *Stipa geniculata* Phil.; *Stipa mendocina* Phil.; *Stipa oreophila* Speg.; *Stipa subulata* E. Fourn.; *Stipa tenuissima* var. *oreophila* (Speg.) Speg.; *Stipa tenuissima* var. *planicola* Speg.)

South America. Perennial, very densely tufted, leaves rolled, bent and twisted awn, weed, invasive, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 36. 1836, *Anales de la Universidad de Chile* 27: 339. 1865, *Anales de la Universidad de Chile* 36: 204. 1870, *Mexicanas Plantas* 2: 75. 1886, Cárlos Luigi Spegazzini, *Contribucion al estudio de la flora de la Sierra de la Ventana ...* 65. 1896 and *Anales del Museo Nacional de Montevideo* 4(2): 155. 1901, *Taxon* 39(4): 612. 1990.

S. tigrensis Chiov.

Ethiopia, Yemen, Uganda. Perennial, erect, slender, densely tufted, leaf sheaths bearded, ligule a short membrane, tough filiform leaf blades involute, inflorescence a contracted linear panicle, spikelets 1-flowered, delicate 3-nerved glumes linear-lanceolate acuminate, biauriculate linear lemma pilose, prominent silky pungent callus, awn bent with a twisted villous column, commonly found on rocky slopes, montane grasslands, cliffs, see *Annali di Botanica* 2: 366. 1905.

S. tirsa Steven (*Stipa caucasica* f. *desertorum* Roshev.; *Stipa caucasica* subsp. *desertorum* (Roshev.) Tzvelev; *Stipa cerariorum* Panc.; *Stipa desertorum* (Roshev.) Ikonn.; *Stipa longifolia* Borbás; *Stipa longifolia* Phil., nom. illeg., non *Stipa longifolia* Borbás; *Stipa pennata* var. *stenophylla* Czern. ex Lindem.; *Stipa pennata* var. *stenophylla* Lindem.; *Stipa stenophylla* (Czern. ex Lindem.) Trautv.; *Stipa stenophylla* Czern.; *Stipa stenophylla* (Lindem.) Czern. ex Trautv.)

Armenia, Asia, Europe. On sandy soil, useful for erosion control, see *Bulletin de la Société Impériale des Naturalistes de Moscou* 30(2): 115. 1857, *Trudy Imp. Saint Pétersbourg. Bot. Sada* 9: 351. 1884, *Sitzungsberichte der Königlichen Böhmischen Gesellschaft der Wissenschaften, Mathematisch-Naturwissenschaftliche Classe* 1884: 58. 1884, *Berichte der Deutschen Botanischen Gesellschaft* 10: 293. 1892, *Anales de la Universidad de Chile* 93: 725. 1896 and *Allgemeine Botanische Zeitschrift für Systematik, Floristik, Pflanzengeographie* 8: 182. 1902, *Novosti Sist. Vyss. Rast.* 11: 20. 1974.

S. tirsa Steven subsp. ***albanica*** Martinovsky

Europe. See *Preslia* 44(1): 22. 1972.

S. tirsa Steven subsp. ***tirs***a

Armenia, Asia, Europe.

S. trichoides P.A. Smirnov (*Stipa turkestanica* subsp. *trichoides* (P.A. Smirn.) Tzvelev)

Russia, USSR (former). Rare species, see *Repertorium Specierum Novarum Regni Vegetabilis* 21(588-600): 233. 1925, *Novosti Sist. Vyss. Rast.* 11: 17. 1974.

S. trichophylla Benth. (*Austrostipa trichophylla* (Benth.) S.W.L. Jacobs & J. Everett)

South Australia, Western Australia, Northern Territory, New South Wales, Victoria. Perennial, caespitose, nodes glabrous, sheaths villous to glabrous, ligule membranous and obtuse to lacinate, auricles thickened, panicle sparse, spikelets gaping after floret disarticulation, floret elliptic, glumes acuminate, lemma brown to gold-brown at maturity, densely hairy callus straight and sharp, awn falcate, dry areas, arid and semiarid, on hillsides, see *Flora Australiensis: A Description ...* 7: 570. 1878 and *Telopea* 6(4): 589. 1996.

S. tuckeri F. Muell. (*Austrostipa tuckeri* (F. Muell.) S.W.L. Jacobs & J. Everett)

South Australia, Western Australia, New South Wales. Perennial, caespitose, rhizomatous or shortly rhizomatous, stems wiry and decumbent, branched at the nodes, sheath pubescent and ribbed, ligule obtuse and membranous, panicle pyramidal and expanded, spikelets gaping only at maturity, floret narrow-cylindrical, glumes inflated and unequal, lemma dark and tuberculate, callus almost straight and blunt, awn with 1 bend or straight, see *Fragmenta Phytographiae Australiae* 9: 129. 1881 and *Telopea* 6(4): 589. 1996.

in English: Tucker speargrass

S. tucumana Parodi (*Nassella tucumana* (Parodi) Torres)

Argentina. See *Revista Argentina de Agronomía* 15(1): 57, f. 2. 1948, *Comision de Investigaciones Cientificas* 13: 38, f. 1, G, g. 1997.

S. turkestanica Hack. (*Stipa trichoides* Smirn.; *Stipa trichoides* Smirn.)

Afghanistan, India, Pakistan. See *Repertorium Specierum Novarum Regni Vegetabilis* 21(588-600): 232-233. 1925 [also *Feddes Repertorium Specierum Novarum Regni Vegetabilis*], *Trudy Imp. Saint Pétersbourg. Bot. Sada* 26: 59. 1906, *Novosti Sist. Vyss. Rast.* 11: 17. 1974.

S. ucrainica P.A. Smirn. (*Stipa krascheninnikowii* Roshev.; *Stipa tirs*a sensu K.M. Zalessky, non Steven; *Stipa zalesskii* subsp. *ucrainica* (Smirnov) Tzvelev)

Europe, Russia, Siberia. Perennial bunchgrass, awned, useful for erosion control, see *Nomenclator Botanicus* 816. 1821 and *Repertorium Specierum Novarum Regni Vegetabilis* 22: 374. 1926, *Fl. URSS* 2: 98. 1934, *Novosti Sist. Vyss. Rast.* 11: 17. 1974.

S. ucranensis Lam.

Europe, Russia, Siberia. See *Tableau Encyclopédique et Méthodique ... Botanique* 1: 157. 1791, *Nomenclator Botanicus* 816. 1821 and *Repertorium Specierum Novarum Regni Vegetabilis* 22: 374. 1926, *Fl. URSS* 2: 98. 1934, *Novosti Sist. Vyss. Rast.* 11: 17. 1974.

S. variabilis Hughes (*Austrostipa variabilis* (Hughes) S.W.L. Jacobs & J. Everett; *Stipa pubescens* var. *effusa* Benth.)

South Australia, Western Australia. Perennial, delicate stems, tufted, nodes glabrous, auricles hirsute, sheaths pubescent to glabrous, glumes acuminate, panicle sparse and usually contracted, floret elliptic, lemma dark and hairy, callus straight and sharp, awn falcate, see *Prodromus Florae Novae Hollandiae* 174. 1810, *Flora of Australia* 7: 570-571. 1878 and *Bulletin of Miscellaneous Information Kew* 1921: 15. 1921, *Flora of Western Australia* 1. pt. 1: 182. 1952, *Telopea* 6(4): 589. 1996.

in English: variable speargrass

S. velutina Vickery, Jacobs & Everett (*Austrostipa velutina* (Vickery, S.W.L. Jacobs & J. Everett) S.W.L. Jacobs & J. Everett)

South Australia, Western Australia. Nodes velutinous, panicle sparse and contracted, floret narrow-elliptic, lemma brown, callus straight and sharp, awn twice bent, see *Telopea* 3(1): 126. 1986, *Telopea* 6(4): 589. 1996.

S. veneta Moraldo

Italy. Endangered species, see *Webbia* 40(2): 238. 1986.

S. ventanica Cabrera & Torres (*Nassella ventanica* (Cabrera & Torres) Barkworth)

Argentina. Rare species, see *Boletín de la Sociedad Argentina de Botánica* 12: 140. 1968, *Taxon* 39(4): 612. 1990.

S. verticillata Nees ex Spreng. (*Austrostipa verticillata* (Nees ex Spreng.) S.W.L. Jacobs & J. Everett; *Stipa micrantha* R. Br. ex Hughes, nom. illeg., non *Stipa micrantha* Cav.; *Streptachne verticillata* (Nees ex Spreng.) Trin. & Rupr.)

Australia, New South Wales, Queensland. Perennial, caespitose, shortly rhizomatous, branched at each node, sheath glabrous and ribbed, ligule erose to entire, panicle exerted, spikelets gaping, lemma black at maturity, callus bent and hairy, awn with 1 or 2 bends, see *Prodromus Florae Novae Hollandiae* 175. 1810, *Systema Vegetabilium, editio decima sexta* 4(Cur. Post.): 30. 1827, *Species Graminum Stipaceorum* 8-9. 1842 and *Telopea* 3: 127. 1986, *Telopea* 6(4): 589. 1996.

S. vickeryana Everett & Jacobs (*Austrostipa vickeryana* (J. Everett & S.W.L. Jacobs) S.W.L. Jacobs & J. Everett)

South Australia, Western Australia. Densely clumped, panicle sparse and slightly spreading, floret elliptic to turbinate, lemma dark and smooth, callus straight and sharp, awn twice bent to almost straight, see *Telopea* 2(4): 397. 1983, *Telopea* 6(4): 589. 1996.

S. zalesskii Wilensky (*Stipa glabrata* P.A. Smirn. ex Roshev.; *Stipa iljinii* Roshev.; *Stipa pennata* subsp. *zalesskii* (Wilensky) Freitag; *Stipa rubens* P.A. Smirn.; *Stipa ruben-tiformis* P.A. Smirn. ex Roshev.)

Czech Republic, Slovakia, Russian Federation. Rare species, see *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 21: 231-232. 1925, *rudy Imp. Saint Pétersbourg. Bot. Sada* 40: 115. 1928, *Fl. USSR* 2: 102. 1936, *Notes from the Royal Botanic Garden, Edinburgh* 42(3): 443. 1985.

Stipagrostis Nees = *Arthratherum* auct., *Schistachne* Fig. & De Not.

From the Greek *stypē* "tow," like *Stipa*, and *Agrostis*, or *agrostis*, a fodder grass.

About 50 species, Africa, southwestern and central Asia, Pakistan, Middle East, China. Arundinoideae, Aristideae, or Aristidoideae, Aristideae, perennial or rarely annual, unarmed, densely tufted, herbaceous, branched or not, erect to geniculate, sometimes with knotty rhizomatous base or suffruticose, double bundle sheath, inner sheath thick-walled, outer sheath is the site of carbon reduction, ligule densely fringed, harsh narrow leaves sometimes pungent, plants bisexual, open or contracted panicle, spikelets solitary or in fascicles, 1-flowered, female fertile floret terminal, 2 glumes very unequal to more or less equal, lower glume usually 3-nerved, upper glume 3- to 11-nerved, awns 3-branched or unbranched, awns central branch plumose, terete enfolding lemmas, small palea half the length of the lemma, lodicules present or absent, 3 stamens, ovary glabrous, 2 stigmas, sandbinders, cultivated fodders, native pasture, species of open habitats, arid stony situations, dry plains, deserts and semideserts, dunes and shifting dunes, fixed dunes, desert sand, riverbanks, sometimes included in *Aristida* L., type *Stipagrostis capensis* Nees, see *Species Plantarum* 1: 82. 1753, *Neues Journal für die Botanik* 3: 255. 1809, *Linnaea* 7(3): 290-291. 1832, *Species Graminum Stipaceorum* 163. 1842, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 252. 1852, *Genera Plantarum* 3(2): 1141. 1883 and *Meded. Rijks.-Herb.* 54: 9. 1926, *Mededeelingen van's Rijks-Herbarium* 58: 34, 35-36, 45-46, 62. 1929, *Kirkia* 3: 133. 1963, *Genera Graminum* 184-186. 1986, *Flora of Ethiopia and Eritrea* 7: 86-87. 1995, *Diversity & Distributions* 5(1-2): 51-71. Jan 1999, *African Journal of Ecology* 37(1): 69-80. Mar 1999, *Global Ecology and Biogeography* 8(3-4): 211-221. May 1999, *Journal of Animal Ecology* 68(4): 672-683. July 1999, *Diversity & Distributions* 5(6): 253-262. Nov 1999, *Global Ecology and Biogeography* 9(6): 499-516. Nov 2000, *European Journal of Soil Science* 52(1): 93-101. Mar 2001, *Journal of Animal Ecology* 70(4): 561-567. July 2001, *European Journal of Soil Science* 53(1): 29-35. Mar 2002, *African Journal of Ecology* 40(2): 103-109. June 2002,

European Journal of Soil Science 53(4): 553-562. Dec 2002, *Diversity & Distributions* 9(1): 43-53. Jan 2003, *Restoration Ecology* 11(3): 317-324. Sep 2003, Loutfy Boulou, "Surviving the extremes of the Central Sahara." and "The flora of the Jebel Uweinat massif, Sahara." *Journal of Biogeography* 30(12): 1937-1938. Dec 2003, *Functional Ecology* 17(6): 869-876. Dec 2003, *Oikos* 105(2): 325-335. Apr 2004, *Journal of Animal Ecology* 74(3): 567-578. May 2005.

Species

S. acutiflora (Trin. & Rupr.) De Winter (*Aristida acutiflora* Trin. & Rupr.)

Tropical Africa. Perennial, slender, found in dry waste places, see *Species Graminum Stipaceorum* 167. 1842 and *Kirkia* 3: 133. 1963, *Österreichische Botanische Zeitschrift* 117: 286. 1969.

in Mauritania: asserdun, sfar

S. amabilis (Schweick.) De Winter (*Aristida amabilis* Schweick.)

South Africa, Namibia, Kalahari. Perennial, suffrutescent or shrubby, tufted, small to dwarf, rhizomatous, erect or horizontal, always branched from the middle and lower nodes, forming dense bundles of shoots, creeping rhizomes, leaf blade rigid and sharply pointed, ligule a fringe of short hairs, leaf sheaths of the vegetative portions scale-like, pungent leaves, narrow inflorescence, interrupted and slightly contracted panicle, crowded and appressed spikelets, tripartite awns, central awn plumose, 2 lateral awns nonfeathery, awns without column, sand binder, little forage value, useful for erosion control, found in sand dune crests, closely related to *Stipagrostis namaquensis* (Nees) De Winter, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 76(2): 217-218. 1954, *Kirkia* 3: 133. 1963.

in English: Kalahari dune bushman grass, Kalahari coach
in South Africa: duinekweek, dünen federgras

S. anomala De Winter (*Arthratherum namaquense* Nees; *Stipa namaquensis* Pilg.; *Stipagrostis namaquensis* (Nees) De Winter)

South Africa. Annual or short-lived perennial, weak, tufted, erect or slightly geniculate at the base, leaves mostly basal, leaf blades needle-shaped and rolled, ligule a fringe of short hairs, leaf sheaths somewhat flattened, leaves curled and curved, narrow inflorescence, interrupted panicle, erect and crowded spikelets, single awn not plumose, glumes 3-nerved, lemma involute, relatively unpalatable, poorly grazed, found in sandy soil, shallow soil, gravelly plains, rocky sites, closely related to *Stipagrostis obtusa* (Delile) Nees, see *Florae Africae Australioris Illustrationes Monographicae* 1: 185. 1841 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 51(3-4): 412. 1914, *Kirkia* 3: 133, 135. 1963.

in South Africa: Torro-boesmangras, Torro federgras

S. arachnoidea (Litv.) De Winter (*Aristida arachnoidea* Litv.; *Arthratherum arachnoideum* (Litv.) Tzvelev)

Asia, Turkmenistan. See *Kirkia* 3: 133. 1963, *Novosti Sist. Vyss. Rast.* 8: 74. 1971.

S. brevifolia (Nees) De Winter (*Aristida brevifolia* (Nees) Steud.; *Arthratherum brevifolium* Nees)

South Africa, Cape. Perennial, suffrutescent, shrubby, glandular on the culms and leaf sheaths, rough, small to dwarf, robust, profusely branched, nodes woolly, short internodes, rhizomatous, leaf sheaths rounded, leaf blades expanded or rolled, ligule a fringe of short hairs, root system well developed, hard and much-branched rhizome, stiff leaves short and acute, narrow inflorescence, a contracted and interrupted panicle, spikelets with 3 awns, glumes glabrous, central awn plumose or bearded, flowering time depends on when it rains, pasture, palatable when young and green, drought resistant, growing in sandy soil, coarse and stony soils, hillsides, drainage areas, see *Species Plantarum* 1: 82. 1753, *Nomenclator Botanicus. Editio secunda* 1: 130. 1840, *Florae Africae Australioris Illustrationes Monographicae* 1: 183. 1841 and *Kirkia* 3: 133. 1963.

in English: Twabushman grass

in South Africa: kortblaarboesmangras, kurzblatt federgras, bloudak (after 3 or more dry seasons, when the grass becomes older it assumes the blue color), bloudakgras, boesmangras, bossiesgras, ghagras, grootboesmangras, langbeentoagras, langbeentwaagras, twaagras, twaboesmangras

S. ciliata (Desf.) De Winter (*Aristida ciliata* Desf.)

Algeria, Sudan, Namibia, Yemen, Pakistan. Perennial, densely tufted, erect or sometimes geniculate, unbranched, large, tussocky, conspicuous nodes densely villous, leaf sheaths somewhat woolly or densely covered with wavy hairs at the margins, basal leaf sheaths papery, leaf blades usually rolled and ending in a narrow point, ligule a fringe of short hairs, leaves convolute and wavy, inflorescence an open panicle with lateral branches well developed, spikelets with dark basal region, glumes glabrous, tripartite awn, central awn plumose, young growth more or less palatable, high nutritive value, useful for erosion control, a sandbinder, extremely drought-resistant, growing on open hillsides, dry areas, on steep stony slopes, red sandy soil, sandy soils with lime substratum, see *Neues Journal für die Botanik* 3: 255. 1809 and *Kirkia* 3: 133. 1963.

in English: tall bushman grass

in Morocco: senyal, ataf

in South Africa: langbeenboesmangras, langbeentwa, bewimpertes federgras

S. ciliata (Desf.) De Winter var. ***capensis*** (Trin. & Rupr.) De Winter (*Aristida ciliata* sensu Desf., non Steud. & Hochst. ex Steud.; *Aristida ciliata* Desf. var. ***capensis*** Trin.

& Rupr.; *Aristida ciliata* Desf. var. *pectinata* Henrard; *Aristida ciliata* Desf. var. *tricholaena* Hack.; *Aristida ciliata* Desf. var. *villosa* Hack.; *Arthratherum ciliatum* (Desf.) Nees; *Schistachne ciliata* (Desf.) Fig. & De Not.)

Namibia, South Africa. Perennial, densely or loosely tufted, erect or geniculate, nodes with a white ring of hairs, leaves mostly basal, leaf sheath hairy, ligule a ring of short hairs, hard and curled leaves, a sparse open or contracted panicle, spikelets 3-awned, central awn plumose, palatable and nutritious grass, high grazing value, valuable pasture, resistant to drought, suitable as a binder of sand, generally found in sandveld, riverbeds, dry riverbeds, gravel plains, on coarse sandy soil, see *Neues Journal für die Botanik* 3: 255. 1809, *Linnaea* 7(3): 289. 1832, *Species Graminum Stipaceorum* 164. 1842, *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 12: 252. 1852, *Bulletin de l'Herbier Boissier* 4 (Append. 3): 18. 1896 and *Meded. Rijks-Herb.* 54: 93, 95. 1926, *Bothalia* 4: 110. 1941, *Kirkia* 3: 133. 1963.

in English: large bushman grass, tall bushman grass

in South Africa: langbeenboesmangras

S. ciliata (Desf.) De Winter var. *ciliata*

Africa.

in English: tall bushman grass

in Morocco: senyal, ataf

in South Africa: langbeenboesmangras, bewimpertes federgras

S. damarensis (Mez) De Winter (*Aristida damarensis* Mez)

South Africa, Namibia. Perennial, robust, stout, loosely or laxly tufted, rhizomatous, narrow and compact inflorescence with appressed branches, erect spikelets, 3 awns plumose, generally found in drainage lines, riverbeds, dry riverbeds, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 152. 1921, *Kirkia* 3: 134. 1963.

S. dinteri (Hack.) De Winter (*Aristida dinteri* Hack.)

South Africa, Namibia, Angola. Perennial, slender, tufted, culms prickly, often glandular, narrow inflorescence, soft glumes, central awn plumose, generally found in sandy soils, riverbeds, hillsides, dry riverbeds, see *Bulletin de l'Herbier Boissier, sér. 2*, 1: 767. 1901, *Kirkia* 3: 134. 1963.

S. dregeana Nees (*Aristida dregeana* (Nees) Trin. & Rupr.)

South Africa, Cape. Erect to geniculate, loosely or densely tufted, branched, leaves mostly basal, open inflorescence, dark glumes, more or less all 3 awns plumose, generally found in shallow soils, depressions, riverbeds, along roadsides, dry riverbeds, rocky sites and between rocks, on coarse sandy soil, see *Florae Africae Australioris Illustrationes Monographicae* 1: 172. 1841, *Species Graminum Stipaceorum* 169. 1842.

in English: rock bushman grass

S. fastigiata (Hack.) De Winter (*Aristida fastigiata* Hack.)

South Africa, Namibia. Perennial, profusely branched, densely tufted, shrubby, suffrutescent, small or dwarf, nodes densely hairy, much-branched rhizomes, leaf sheaths rough and wavy, leaf blades expanded or rolled, ligule a fringe of short hairs, leaves rough or hairy, dense panicle, inflorescence exerted from the leaf sheaths, spikelets in fascicles, glumes hairy, smooth lemmas, central awn plumose, pasture, in sandy and on alkaline soils, see *Bulletin de l'Herbier Boissier, sér. 2*, 1: 768. 1901, *Kirkia* 3: 134. 1963.

in South Africa: kuifkopboesmangras, büschel federgras

S. foexiana (Maire & Wilczek) De Winter (*Aristida corradii* Chiov. ex Chiarugi; *Aristida foexiana* Maire & Wilczek)

North Africa, southwestern Africa, Saudi Arabia and Yemen. Perennial, densely tufted, slender, wiry, glabrous, leaf blades convolute, coriaceous sheaths, panicle loosely contracted, glumes 3-nerved, lower glume shorter than the upper, lemma smooth and shiny, column of awn glabrous, awn central branch glabrous and plumose, awn lateral branches glabrous, callus bearded, see *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 25: 322. 1934, *Webbia* 8: 88. 1951, *Kirkia* 3: 134. 1963.

S. garubensis (Pilg.) De Winter (*Aristida garubensis* Pilg.)

South Africa, Namibia. Shrubby, suffrutescent, woody, small or dwarf, robust, stout, branched, slender, leaves flexuous and pungent, glumes dark, central awn plumose, rocky sites and between rocks, dry riverbeds, slopes, hillsides, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 43: 344. 1912, *Kirkia* 3: 134. 1963.

S. geminifolia Nees (*Aristida geminifolia* (Nees) Trin. & Rupr.; *Aristida geminifolia* (Nees) Steud., nom. illeg., non *Aristida geminifolia* (Nees) Trin. & Rupr.)

South Africa. Shrubby, dwarf, erect or geniculate, ovate to oblong inflorescence usually not exerted from the upper leaf sheath, spikelets fascicles densely clustered, glumes densely hairy, lemmas smooth, central awn plumose, pasture, open habitats, open places, coarse sandy soils, water courses, gravel plains, see *Florae Africae Australioris Illustrationes Monographicae* 1: 173. 1841, *Species Graminum Stipaceorum* 169. 1842, *Synopsis Plantarum Glumacearum* 1: 144. 1854.

S. giessii Kers (dedicated to the German botanist Johann Wilhelm Heinrich Giess, b. 1910, farmer, to South Africa from 1926, see Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 167. A.A. Balkema, Cape Town 1981)

South Africa. Perennial, variable, tufted, scabrous to scabrid, leaves mostly basal, narrow inflorescence shortly pedicellate, central awn plumose, open places, coarse sandy soils, water courses, sandy river beds, gravel plains, stony hills, see *Svensk Botanisk Tidskrift* 65(2): 199. 1971.

S. gonatostachys (Pilg.) De Winter (*Aristida gonatostachys* Pilg.)

South Africa, Namibia. Perennial, densely tufted, scabrous to scabrid, leaves mostly basal, narrow inflorescence spike-like, spikelets with rigid pedicels, glumes scabrous to hairy, lemma smooth, central awn plumose, found in coarse sandy soils, depressions, between rocks, slopes, mountain slopes, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 48: 343. 1912, *Kirkia* 3: 134. 1963.

in English: rough-leaved bushman grass

S. grandiglumis (Roshevitz) Tzvelev (*Aristida grandiglumis* Roshevitz)

Central Asia, China. Perennial, densely tufted, branched at base, leaf sheaths smooth or scabrous, leaf blades involute, lax panicle few-spikeleted, glumes narrowly lanceolate, upper glume acuminate, awn branches densely plumose, see *Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR* 11: 18. 1949, *Zlaki SSSR* 618. 1976.

S. hermannii (Mez) De Winter (*Aristida hermannii* Mez) (for Ernst Hermann, plant collector in southwest Africa, murdered in the Herero war of 1904, see Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 184. A.A. Balkema, Cape Town 1981)

South Africa, Namibia. Geniculate to prostrate, tufted, scabrous, dense narrow inflorescence, glumes glabrous, central awn plumose, in sandy soils, hillsides, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 153. 1921, *Kirkia* 3: 134. 1963.

S. hirtigluma (Steud. ex Trin. & Rupr.) De Winter (*Aristida ciliata* Steud. & Hochst. ex Steud.; *Aristida hirtigluma* Steud. ex Trin. & Rupr.; *Aristida hirtigluma* Trin. & Rupr.; *Arthratherum ciliatum* (Desf.) Nees)

Ethiopia, Angola, tropical and southern Africa, Namibia. Annual or short-lived perennial, rather variable, densely tufted, sheaths glabrous to scabrous, leaves convolute and scabrid, panicle contracted or open, spikelets on long filiform pedicels, unequal glumes narrowly lanceolate and shortly-softly pilose, central awn plumose, lateral awns glabrous, callus bearded with 2 sets of hairs, palatable fodder before flowering or seeding, camel grass, weed of plantations, escarpment foothills, semidesert grasslands, dry stony *Acacia-Commiphora* bushland, coarse sandy soils, poor dry sandy soil, water courses, sandy riverbeds, arid waste places, see *Linnaea* 7(3): 289. 1832, *Species Graminum Stipaceorum* 171-172. 1842 and *Meded. Rijks-Herb.* 54: 232. 1927, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 1929. 1929, *Kirkia* 3: 134. 1963, *Adansonia* 11(1): 129. 1971.

in Somalia: sarem, harfo

S. hirtigluma (Steud. ex Trin. & Rupr.) De Winter subsp. *hirtigluma* (*Aristida hirtigluma* Steud. ex Trin. & Rupr.)

North Africa, Angola, West Africa, Middle East, Namibia. Annual, erect, tufted, leaves mostly basal, nodes compressible, narrow inflorescence, contracted panicle, glumes hairy, central awn plumose, pioneer grass, open places, very dry areas, rocky sites, coarse sandy soils, water courses, sandy alluvium, sandy river beds, gravel plains, stony hills, see *Linnaea* 7(3): 289. 1832, *Species Graminum Stipaceorum* 171-172. 1842 and *Meded. Rijks-Herb.* 54: 232. 1927, *Kirkia* 3: 134. 1963.

S. hirtigluma (Steud. ex Trin. & Rupr.) De Winter subsp. *patula* (Hack.) De Winter (*Aristida gracilior* Pilg. var. *gracilior*; *Aristida hirtigluma* var. *patula* Hack.)

Tropical Africa, South Africa. Perennial, erect or geniculate, unbranched, basal leaves, densely tufted, smooth, leaf blades stiff and rolled, ligule a fringe of short hairs, leaf sheaths rough or smooth, open spreading inflorescence paniculate with well-developed lateral branches, dark to purplish hairy glumes, column present, central awn plumose, on floodplains, limy soil, rocky areas, sandy soils, around pans, usually does not occur in the very dry areas, see *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse* 78: 401. 1905, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 80. 1907, *Kirkia* 3: 134. 1963.

in South Africa: bloutwa, bläuliches federgras

S. hirtigluma (Steud. ex Trin. & Rupr.) De Winter subsp. *pearsonii* (Henrard) De Winter (*Aristida gracilior* var. *pearsonii* Henrard) (named for the English botanist Henry Harold Welch Pearson, 1870-1916 (d. Wynberg, Cape Town, South Africa), Cambridge Herbarium, professor of botany (South African College, Capetown), plant collector and botanical explorer, founder and Hon. Director of the National Botanic Gardens (Kirstenbosch, South Africa); see A.C. Seward, "H.H.W. Pearson, F.R.S., Sc.D. (Cambridge)." in *The Annals of the Bolus Herbarium*. Vol. II, Part III: 131-147. July 1917; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 304. 1972; Mary Gunn & Leslie Edward W. Codd, *Botanical Exploration of Southern Africa*. 275-276. A.A. Balkema, Cape Town 1981; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 542. London 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993).

South Africa, Angola, Namibia. Annual, erect to geniculate, densely tufted, smooth, nodes compressible, open spreading inflorescence, glumes hairy, pioneer grass, pasture, low palatability, growing on sandy soils, very dry areas, stony hills, see *Mededeelingen van's Rijks-Herbarium* 54(B): 695-696. 1928, *Kirkia* 3: 134. 1963.

S. hochstetteriana (Beck ex Hack.) De Winter (also spelled *hochstetterana*) (*Aristida hochstetteriana* Beck ex Hackel)

South Africa, Namibia. Perennial, tufted, erect or geniculate, unbranched, leaves basal, leaf sheaths flattened, leaf blades rolled, ligule a fringe of short hairs, inflorescence a dense and compact panicle, only the central awn hairy to feathery, palatable, semidesert areas, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 144. 1888 and *Kirkia* 3: 134. 1963.

in English: spike bushman grass, gemsbuck tail grass

in South Africa: gemsbokstertgras, gemsbokschwanzgras

S. hochstetteriana (Beck ex Hack.) De Winter var. ***hochstetteriana*** (*Aristida hochstetteriana* Beck ex Hack.)

South Africa, Namibia. Perennial, erect, tufted to densely tufted, leaves basal, unbranched, inflorescence spicate and narrow, thick pedicels, lower glume linear and hairy, central awn plumose, found in disturbed areas, roadsides, streams, river courses, sandy to clay soils, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 144. 1888 and *Mededeelingen van's Rijks-Herbarium* 54(A): 235. 1927.

in English: spike bushman grass

S. hochstetteriana (Beck ex Hack.) De Winter var. ***secalina*** (Henrard) De Winter (*Aristida secalina* Henrard)

South Africa, Angola, Namibia. Perennial, erect, densely tufted, leaves mostly basal, unbranched and narrow inflorescence spicate, thick pedicels, lower glume linear, central awn plumose, found in sandy soils, see *Mededeelingen van's Rijks-Herbarium* 54: 168. 1926, *Kirkia* 3: 134. 1963.

in English: rye bushman grass

S. karelinii (Trin. & Rupr.) Roshev. (*Aristida karelinii* (Trin. & Rupr.) Roshev., also *karelinii*; *Aristida pennata* var. *karelinii* Trin. & Rupr., also *karelinii*; *Arthratherum karelinii* (Trin. & Rupr.) Tzvelev; *Stipagrostis karelinii* (Trin. & Rupr.) Tzvelev)

Asia, Turkmenistan. See *Species Graminum Stipaceorum* 177-178. 1842 and *Flora URSS* 2: 67, 740, t. 5, f. 9. 1934, *Willdenowia* 6: 161. 1970, *Novosti Sist. Vyss. Rast.* 8: 74. 1971, *Novosti Sist. Vyss. Rast.* 11: 71. 1974.

S. lanata (Forssk.) De Winter (*Aristida lanata* Forssk.; *Aristida lanata* Poir., nom. illeg., non *Aristida lanata* Forssk.; *Aristida plumosa* var. *lanata* (Forssk.) Trin. & Rupr.; *Chaetaria gossypina* P. Beauv. ex Roem. & Schult.)

North Africa, Algeria, Egypt. See *Species Plantarum, Editio Secunda* 1666. 1763, *Flora Aegyptiaco-Arabica* 25. 1775, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 453. 1810, *Systema Vegetabilium* 2: 391. 1817, *Species Graminum Stipaceorum* 166. 1842 and *Kirkia* 3: 135. 1963, *Fl. Palaest.* 4: 278, pl. 364. 1986, Frank Nigel Hepper and Ib Friis, *The Plants of Pehr Forsskal's "Flora Aegyptiaco-Arabica"* collected on the Royal Danish Expedition to Egypt and the Yemen 1761-1763. 279. Royal Botanic Gar-

dens, Kew [in association with the Botanical Museum, Copenhagen] 1994.

in Arabic: dhraeirae, dhraejrae, sjaefsjuf

S. lanipes (Mez) De Winter (*Aristida lanipes* Mez)

South Africa, Namibia. Perennial, rare and indeterminate, densely tufted, leaves basal, leaf sheaths densely woolly, contracted inflorescence much branched, central awn plumose, on sandy soils, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 153. 1921, *Kirkia* 3: 135. 1963.

in English: woolly bushman grass

S. lutescens (Nees) De Winter (*Aristida lutescens* (Nees) Trin. & Rupr.; *Aristida lutescens* (Nees) Steud., nom. illeg., non *Aristida lutescens* (Nees) Trin. & Rupr.; *Arthratherum lutescens* Nees)

South Africa. See *Florae Africae Australioris Illustrationes Monographicae* 1: 179. 1841, *Species Graminum Stipaceorum* 173-174. 1842, *Synopsis Plantarum Glumacearum* 1: 145. 1854 and *Kirkia* 3: 135. 1963.

S. lutescens (Nees) De Winter var. ***lutescens*** (*Aristida lutescens* (Nees) Steud.)

South Africa. Shrubby, dwarf, robust, stout, branched, rhizomatous with long and branched rhizomes, culm nodes glabrous, rigid and pungent leaves, open inflorescence, no hairs in the axils of the inflorescence branches, awns all plumose or only the central, growing in sandy soils.

S. lutescens (Nees) De Winter var. ***marlothii*** (Hack.) De Winter (*Aristida lutescens* var. *marlothii* (Hack.) Stapf; *Aristida marlothii* Hack.) (after the South African botanist Hermann Wilhelm Rudolf Marloth, 1855-1931, pharmacist, chemist, botanical explorer, plant collector, from 1833 in South Africa, he is best known for *The Flora of South Africa*. Capetown and London 1913-1932, *Dictionary of the Common Names of Plants with a List of Foreign Plants Cultivated in the Open*. Cape Town 1917, see J.H. Barnhart, *Biographical notes upon botanists*. 2: 449. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 254. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 206. 1964; Hans Herre (1895-1979), *The Genera of the Mesembryanthemaceae*. 49-50. Cape Town 1971; I.C. Hedge and J.M. Lamond, *Index of Collectors in the Edinburgh Herbarium*. Edinburgh 1970; A. White and B.L. Sloane, *The Stapelieae*. Pasadena 1937; A. Engler et al., "Plantae Marlothianae." in *Bot. Jahrb.* 10: 1-50, 242-285. 1889; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 244-245. Cape Town 1981)

South Africa, Namibia. Shrubby, dwarf, robust, stout, branched, rhizomatous, strong and branched rhizomes, rigid pungent leaves, culm nodes hairy, open inflorescence, hairs

in the axils of the inflorescence branches, awns all plumose or only the central, growing in sandy soils, see *Flora Capensis* 7: 567. 1899 and *Meded. Rijks-Herb.* 54: 336. 1927, *Kirkia* 3: 135. 1963.

S. namaquensis (Nees) De Winter (*Aristida namaquensis* (Nees) Trin. & Rupr.; *Arthratherum namaquense* Nees)

South Africa, Namibia. Perennial, dwarf, bushy, prickly, reedlike, sprawling to erect or geniculate, robust to slender, tufted, coarse, hard and tough, glabrous, internodes dark, smooth, semiupright, rhizomatous, tufted branching from the lower nodes, root system extensive and very well developed, long and strong rhizomes, roots covered with a woolly covering, leaf blade sharp and rolled, leaf sheaths woolly hairy, ligule short and membranous, leaf sheaths of lower leaves scale-like, pungent and rigid leaves, inflorescence elongate and narrow, interrupted and contracted panicle, clustered spikelets, all 3 awns plumose or hairy, easily established from seeds or runners, pasture, relatively well utilized by Karakul and Dorper sheep, xerophytic and very useful grass, particularly drought resistant, useful for erosion control and sand binding, silt catcher, found in dry riverbeds, floodplains of rivers, gravelly soils, sand dunes, low lying areas, red sand dunes, closely related to *Stipagrostis amabilis* (Schweick.) De Winter, see *Species Plantarum* 1: 82. 1753, *Flora Africae Australioris Illustrationes Monographicae* 1: 185. 1841, *Species Graminum Stipaceorum* 174-175. 1842 and *Meded. Rijks-Herb.* 54(A): 370. 1927, *Kirkia* 3: 135. 1963.

in English: river bushman grass

in South Africa: steekrietboesmangras, steekwiet, steekweek, bamboesweek, rivier federgras, ysterkweek

S. namibensis De Winter

Namibia. Annual, loosely tufted, sprawling, scabrous, leaves mostly basal, narrow and open inflorescence much branched, glumes glabrous, central awn plumose, found on sandy soils, gravel plains, in depressions where water collects, see *Bothalia* 8: 173. 1964.

S. obtusa (Delile) Nees (*Aristida obtusa* Delile; *Arthratherum obtusum* (Delile) Nees; *Stipagrostis bifida* (Karl) De Winter)

Kuwait, South Africa, Namibia, Egypt, Tunisia. Perennial, variable, tough, hard, densely tufted, small, compact, dense, glabrous dark nodes, erect or geniculate, cushiony, tussocky, dense basal leaf cover, basal sheaths persistent, leaf sheath usually glabrous or pilose, ligule a fringe of short hairs, rough or glabrous leaf blades, leaves convolute strongly curled and sometimes coiled, root system shallow and well developed, very narrow contracted panicle much branched, spikelets 3-awned, central awn plumose and bent at an angle, scaberulous to glabrous glumes narrowly lanceolate 3-nerved, lower glume slightly longer than the upper, awn column glabrous, awn central branch glabrous and plumose, awn lateral branches glabrous, callus bearded, very drought

resistant, pasture, palatable, very high grazing value, good sand binder, useful for erosion control, occurs in dry areas, semidesert, stony and sandy soils in dry areas, along roadsides, on loose sandy soil, in sand at base of outcrop, see *Description de l'Égypte, ... Histoire Naturelle, Tom. Second* 175, t. 13, f. 2. 1812, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 198. 1833, *Flora Africae Australioris Illustrationes Monographicae* I. Gramineae. 179. 1841 and *Bothalia* 21(2): 163-170. 1991, *Lagascalia* 20(2): 265-275. 1998.

in English: small bushman grass

in South Africa: kortbeenboesmangras, beesgras, kurzbein buschmanngras, feintoagras, fyntwa, kliptwa

in Sahara (Tassili): alammoz

S. paradisea (Edgew.) De Winter (*Aristida caloptila* (Jaub.) Boiss.; *Aristida paradisea* Edgew.; *Arthratherum caloptilum* Jaub.)

Egypt, Arabia, Yemen. Perennial, densely tufted, branched at the base, internodes glabrous, basal leaf sheaths somewhat horny, rigid leaves convolute and strongly curved, panicle contracted, glumes unequal and glabrous, smooth lemma, central awn plumose, lateral awns glabrous, hillsides, barren rocks, limestone, sandstone hills, see *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 16: 1219. 1848, *Illustrationes Plantarum Orientalium* 4: 54, t. 336. 1850-1853, *Flora Orientalis* 5: 497. 1884 and *Kirkia* 3: 135. 1963.

S. pennata (Trin.) De Winter (*Aristida pennata* var. *minor* Litv.; *Arthratherum pennatum* (Trin.) Tzvelev; *Arthratherum pennatum* subsp. *minus* (Litv.) Tzvelev)

China, Afghanistan. Perennial, tussocky, much branched at base, slender rhizomes, leaf sheaths smooth or scabrous, leaf blades involute, panicle lax, panicle base usually included in uppermost leaf sheath, glumes subequal narrowly lanceolate, lower glume acuminate, awn branches densely plumose, good fodder when green, useful species for binding sand, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Avec l'Histoire de l'Académie* 6: 488, t. 10. 1818 and *Mededeelingen van's Rijks-Herbarium* 54(A): 437. 1927, *Kirkia* 3: 135. 1963, *Novosti Sist. Vyss. Rast.* 8: 74. 1971, *Willdenowia* 17(1-2): 108. 1988.

S. pennata (Trin.) De Winter subsp. *minor* (Litv.) Tzvelev (*Aristida pennata* var. *minor* Litv.)

Afghanistan, Turkmenistan. See *Novosti Sist. Vyss. Rast.* 11: 71. 1974.

S. pennata (Trin.) De Winter subsp. *pennata* (*Aristida pennata* Trin.)

China.

S. plumosa (L.) Munro ex T. Anderson (*Aristida lanata* sensu Christensen, non Forssk.; *Aristida plumosa* L.; *Aristida plumosa* subsp. *kyzylkumica* Tzvelev; *Aristida plumosa*

subsp. *szovitsiana* (Trin. & Rupr.) Tzvelev; *Aristida plumosa* var. *intermedia* Litv.; *Aristida plumosa* subsp. *szovitsiana* (Trin. & Rupr.) Tzvelev; *Aristida plumosa* var. *szovitsiana* Trin. & Rupr.; *Arthratherum plumosum* (L.) Nees; *Arthratherum plumosum* subsp. *kyzylkumicum* (Tzvelev) Tzvelev; *Arthratherum plumosum* subsp. *szovitsianum* (Trin. & Rupr.) Tzvelev; *Stipagrostis plumosa* subsp. *kyzylkumica* (Tzvelev) Tzvelev)

Algeria, North Africa, Israel, Pakistan, Egypt. Perennial or annual, densely tufted, basal leaf sheaths somewhat horny and woolly, nodes glabrous, leaf blade glabrous or hairy, rigid leaves convolute and strongly curved, panicle contracted, glumes unequal and glabrous, central awn plumose, edible grain, excellent forage for horses and camels, found on sandy plains, sand hills, very arid situations, see *Species Plantarum, Editio Secunda* 1666. 1763, *Florae Africae Australioris Illustrationes Monographicae* 1: 182. 1841, *Species Graminum Stipaceorum* 165. 1842, *Journal of the Linnean Society, Botany* 5(Suppl. 1): 40. 1860 and *Willdenowia* 6(3): 519-552. 1972, *Novosti Sist. Vyss. Rast.* 8: 75. 1971, *Novosti Sist. Vyss. Rast.* 11: 71. 1974, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

in India: lonak, ronak

in Arabic: nsil

in Morocco: tagifuft, agifuft, nsil

in Niger: mali, maly, nsi, nsil, taerhaemut

in Sahara (Tassili): aghammud

S. plumosa (L.) Munro ex T. Anderson subsp. *seminuda* (Trin. & Rupr.) H. Scholz (*Aristida floccosa* Coss. ex Batt. & Trab.; *Aristida plumosa* var. *aethiopica* Trin. & Rupr.; *Aristida plumosa* var. *alexandrina* Trin. & Rupr.; *Aristida plumosa* var. *australis* Maire; *Aristida plumosa* var. *berberica* Trin. & Rupr.; *Aristida plumosa* var. *floccosa* (Cosson & Durand) T. Durand & Schinz; *Aristida plumosa* var. *seminuda* Trin. & Rupr.; *Arthratherum plumosum* var. *floccosum* Cosson & Durand; *Stipagrostis plumosa* var. *aethiopica* (Trin. & Rupr.) Tackholm; *Stipagrostis plumosa* var. *alexandrina* (Trin. & Rupr.) Tackholm)

North Africa. See *Florae Africae Australioris Illustrationes Monographicae* 1: 182. 1841, *Species Graminum Stipaceorum* 166-167. 1842, *Exploration Scientifique de l'Algérie* 2: 82. 1855, *Conspectus Florae Africae* 5: 806. 1894, *Flore de l'Algérie Monocot.* 159. 1895 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 29: 455. 1938, *Willdenowia* 6(2): 295. 1971, *Willdenowia* 6(3): 519-552. 1972, *Publications from the Cairo University Herbarium* 5: 58. 1972[1974].

S. proxima (Steud.) De Winter (*Aristida proxima* Steud.)

South Africa. Rare, shrubby, dwarf, hairy, rhizomatous, erect, tufted, long rhizomes, narrow inflorescence with densely hairy branches, glumes acute, all 3 awns plumose,

growing in sandy soils, disturbed areas, see *Synopsis Plantarum Glumacearum* 1: 145. 1855 [1854] and *Kirkia* 3: 135. 1963.

S. pungens (Desf.) De Winter (*Aristida pungens* Desf.; *Arthratherum pungens* (Desf.) P. Beauv.)

North Africa, Egypt to Morocco, Algeria, Sudan, Iran. Hollow, coarse, stiff, strong, leaves pungent, while young good forage for camels and stock, famine grain, often used to probe wounds and for rheumatic pains, culms used for weaving into mats and baskets, found on sand dunes, dry waste places, see *Flora Atlantica* 1: 109, t. 35. 1798, *Essai d'une Nouvelle Agrostographie* 33, 152, t. 8, f. 9. 1812 and *Mededeelingen van's Rijks-Herbarium* 54(B): 477. 1928, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 218. 1941, *Kirkia* 3: 135. 1963, *Willdenowia* 6(1): 163. 1970, *Willdenowia* 6(2): 297. 1971, *Annali di Botanica* 45: 75-102. 1987.

in Algeria: drinn

in Arabic: drinn, hasaknit, ibitt, loul (grains), mioukou, rechig (grains), sabat, sbat, sbot, sbott, sebbit, shouk el-ghazal, talout, tarhi, toulloult

in Mali: drinn, tulult

in Mauritania: sbot, shot

in Morocco: drinn, sabat, sbet

in Niger: drinn, madiugu, madjiugu, mayugu, sbat, tilult, tulul, telant

in Sahara (Tassili): toulloult, tullult, tulul

in Sudan: shot

S. ramulosa De Winter

Namibia. Perennial, slender, delicate, tufted, leaves pungent and prickly, narrow inflorescence sparsely branched, all 3 awns plumose, pasture, grazed, sandy soils, riverbeds, sand dunes, near water, see *Bothalia* 8: 173. 1964.

S. sabulicola (Pilg.) De Winter (*Aristida sabulicola* Pilg.)

South Africa, Namibia. Shrub or shrubby, dwarf, reedlike, branched, loosely to densely tufted, rhizomatous with robust and branched rhizomes, leaves rigid and pungent, elongate inflorescence spicate, glumes brown, all 3 awns plumose, sandy soils, dunes, sand dunes, riverbeds, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 81. 1907, *Kirkia* 3: 135. 1963.

in English: Namib dune bushman grass

S. schaeferi (Mez) De Winter (*Aristida schaeferi* Mez; *Aristida schaeferi* var. *biseriata* Henrard; *Aristida schaeferi* var. *schaeferi*)

Namibia. Perennial, densely tufted, glabrous, knotty rhizomes, leaves basal, culm nodes glabrous, narrow or open inflorescence with flexuous pedicels, central awn plumose, along dry riverbeds or water courses, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 152. 1921,

Mededeelingen van's Rijks-Herbarium 58: 41. 1929, *Meded. Rijks-Herb.* 54(C): 740. 1933, *Kirkia* 3: 136. 1963.

in English: woolly-leaved bushman grass

S. scoparia (Trin. & Rupr.) De Winter (*Aristida scoparia* Trin. & Rupr.)

Egypt, Niger, Israel. See *Species Graminum Stipaceorum* 176. 1842 and *Kirkia* 3: 136. 1963.

S. subacaulis (Nees) De Winter (*Aristida subacaulis* (Nees) Steud.; *Arthratherum subacaule* Nees)

South Africa. Annual, short, prostrate to spreading, tufted, compact, leaves mostly basal, inflorescence contracted and much branched, glumes glabrous, central awn plumose, in coarse sandy soil, hillsides, stony places, gravel flats, see *Nomenclator Botanicus* edition 2 1: 132. 1840, *Florae Africae Australioris Illustrationes Monographicae* 180. 1841 and *Kirkia* 3: 136. 1963.

in English: stemless bushman grass

S. uniplumis (Licht. ex Roem. & Schult.) De Winter (*Aristida papposa* Trin. & Rupr.; *Aristida uniplumis* Licht.; *Aristida uniplumis* Licht. ex Roem. & Schult.; *Arthratherum uniplume* (Licht. ex Roem. & Schult.) Nees; *Stipagrostis papposa* (Trin. & Rupr.) De Winter)

Tropical and South Africa, Arabia, India, Pakistan. Perennial, often short-lived, densely tufted, clumps forming, knotty rootstock, internodes glabrous, leaf blades finely acuminate, loosely contracted panicle, glumes unequal 3-nerved, finely tuberculate lemma, awn branching-point, central awn plumose, lateral awns glabrous, callus bearded, hairy seeds, grazed by cattle, useful for erosion control, growing on sandy soils, arid areas, *Acacia* bushland, open grasslands, riverbanks, semidesert scrub, see *Systema Vegetabilium* 2: 401. 1817, *Florae Africae Australioris Illustrationes Monographicae* 181. 1841, *Species Graminum Stipaceorum* 173. 1842 and *Meded. Rijks-Herb.* 54(A): 422. 1927, *Kirkia* 3: 135-136. 1963.

in Niger: awkaras, okaras, taerhaemut

S. uniplumis (Licht. ex Roem. & Schult.) De Winter var. *intermedia* (Schweick.) De Winter (*Aristida gracilior* Pilg. var. *intermedia* Schweick.; *Aristida uniplumis* Licht. ex Roem. & Schult.)

South Africa, southwest Africa, Namibia. Annual, tufted, leaves basal, inflorescence branches flexuous, glumes hairy, central awn plumose, sandy and gravel plains, depressions, seasonally flooded areas, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 40: 80. 1907, *Bothalia* 4: 124. 1941.

S. uniplumis (Licht. ex Roem. & Schult.) De Winter var. *neesii* (Trin. & Rupr.) De Winter (*Aristida uniplumis* Licht. ex Roem. & Schult.; *Aristida uniplumis* var. *neesii* Trin. & Rupr.)

South Africa. Perennial, erect, tufted, rhizomatous with branched rhizomes, leaves mostly basal, narrow inflorescence few-spikeleted, glumes glabrous, central awn plumose, pasture, useful for erosion control, gravel or sandy soils, rocky surfaces, see *Species Graminum Stipaceorum* 173. 1842.

S. uniplumis (Licht. ex Roem. & Schult.) De Winter var. *uniplumis* (*Aristida uniplumis* Licht. ex Roem. & Schult.; *Aristida uniplumis* var. *pearsonii* Henr.; *Aristida uniplumis* var. *uniplumis*)

South Africa, Angola, Kenya, Tanzania, Namibia, Uganda. Weak perennial or annual, erect to geniculate, tufted to densely tufted, culms simple or branching above, leaves mostly basal, sheath round, ligule a fringe of whitish hairs, leaf blade usually rolled, open to slightly contracted panicle, panicles open at maturity, spikelets 3-awned, central awn plumose, a tuft of stiff hairs at the base of the 3 awns, lateral awns inconspicuous, pasture grass, more or less palatable, palatability varies on different soils and in different seasons, common in sandy soils, disturbed and undisturbed areas, floodplains, along roadsides, see *Mededeelingen van's Rijks-Herbarium* 54(B): 647. 1928.

in English: bushman grass, silky bushman grass

in South Africa: beesgras, blinksaadgras, blinkblaarboesmangras, blink(h)aarboesmangras, einfederiges federgras

in southwest Africa: blinkhaar-federgras

S. vulnerans (Trin. & Rupr.) De Winter (*Aristida vulnerans* Trin. & Rupr.)

Africa. Leaf blades pungent, see *Species Graminum Stipaceorum* 175-176. 1842 and *Kirkia* 3: 136. 1963.

S. xylosa Cope

Somalia. Perennial, woody at the base, loosely tufted, branched, leaves mainly basal, internodes glabrous, panicle contracted, glumes unequal, lemma smooth, central awn plumose, lateral awns glabrous, on stony areas, plains, see *Kew Bulletin* 47(4): 655-664. 1992.

in Somalia: laah, hada', hadaf

S. zeyheri (Nees) De Winter (*Aristida capensis* var. *zeyheri* (Nees) Trin. & Rupr.; *Aristida capensis* var. *zeyheri* (Nees) Walp.; *Aristida zeyheri* (Nees) Steud.; *Arthratherum zeyheri* Nees) (for the German (b. Hesse) botanist and botanical collector Carl (Karl) Ludwig Philipp Zeyher, 1799-1858 (Cape Town, died of smallpox), traveler with Franz Wilhelm Sieber (1789-1844), with Christian Friedrich Ecklon (1795-1868) published *Enumeratio plantarum Africae Australis* 1835-1837, collected in South Africa with John Burke, from 1849 botanist at the Botanical Garden at the Cape; see William Jackson Hooker (1785-1865), *London J. Bot.* 2: 163-165. 1843, 5: 242. 1846; *Kew J. Bot.* 2: 61-62. 1850; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997; *Catalogue of the Books, Manuscripts, Maps and Drawings in the British Museum (Natural History)*. 2: 504

and 5: 2389. Weinheim 1964; Mary Gunn and Leslie E. Codd, *Botanical Exploration of Southern Africa*. 383-387, 388-395. Cape Town 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 540. 1965; C.F. Ecklon, "Nachricht über die von Ecklon und Zeyher unternommenen Reisen und deren Ausbeute in botanischer Hinsicht." *Linnaea*. 8: 390-400. 1833; Karl Boriwog Presl (1794-1852), *Botanische Bemerkungen*. Prague 1844; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. Oxford 1964; Antoine Lasègue (1793-1873), *Musée botanique de M. Benjamin Delessert*. Paris, Leipzig 1845; Ethelyn (Daliaette) Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Alain White (1880-1951) and Boyd Lincoln Sloane (1886-1955), *The Stapelieae*. Pasadena 1937; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Stafleu and Cowan, *Taxonomic literature*. 7: 534-535. Utrecht 1988)

South Africa. See *Prodromus Plantarum Capensium*, ... 19. 1794, *Nomenclator Botanicus* edition 2 1: 132. 1840, *Florae Africae Australioris Illustrationes Monographicae* 177. 1841, *Species Graminum Stipaceorum* 179. 1842, *Annales Botanicae Systematicae* 3: 751. 1853 and *Kirkia* 3: 136. 1963.

S. zeyheri (Nees) De Winter subsp. *barbata* (Stapf) De Winter (*Aristida capensis* var. *barbata* Stapf)

South Africa. Perennial, robust, stout, erect, tufted, rhizomatous with knotty rhizomes, leaves flaccid, inflorescence contracted and dense, glumes glabrous, all 3 awns plumose, growing on disturbed sites, along roadsides, coastal dunes, see *Flora Capensis* 7: 565-566. 1899 and *Kirkia* 3: 136. 1963.

in English: Cape bushman grass

S. zeyheri (Nees) De Winter subsp. *macropus* (Nees) De Winter (*Aristida capensis* Thunb.; *Aristida capensis* var. *genuina* Henrard; *Aristida capensis* var. *macropus* (Nees) Trin. & Rupr.; *Arthratherum capense* (Thunb.) Nees; *Arthratherum capense* var. *macropus* Nees)

South Africa. Perennial, robust, shortly rhizomatous, leaves basal, open inflorescence, spikelets terminal, dark glumes, all 3 awns plumose, found in sandy soils, abandoned lands, see *Prodromus Plantarum Capensium*, ... 19. 1794, *Linnaea* 7(3): 288. 1832, *Florae Africae Australioris Illustrationes Monographicae* 1: 176. 1841, *Species Graminum Stipaceorum* 179. 1842 and *Mededeelingen van's Rijks-Herbarium* 54: 77. 1926, *Kirkia* 3: 136. 1963.

in English: bushman grass

S. zeyheri (Nees) De Winter subsp. *sericans* (Hack.) De Winter (*Aristida capensis* var. *dieterleniana* Schweick.; *Aristida sericans* Hack.)

South Africa. Perennial, densely tufted, robust, erect, hard, leaf blade rolled, ligule a fringe of hairs, hard leaves, narrow contracted panicle few-spikeleted, 3 awns persistent shortly plumose, sharp grain can cause severe irritation in the animal's mouth, low or unknown grazing value, used for making soft brooms, usually on rocky and stony places, low lying areas, grassland, disturbed lands, uncultivated areas, old lands, savannah, in sandy soils of rocky areas, see *Bulletin de l'Herbier Boissier* 3(8): 381. 1895 and *Meded. Rijks-Herb.* 54(A): 556. 1927, *Bulletin of Miscellaneous Information Kew* 1939: 653. 1939, *Kirkia* 3: 136. 1963.

in English: Cape Bushman grass

in southern Africa: drieveerboesmangras, lefielo

S. zeyheri (Nees) De Winter subsp. *zeyheri* (*Aristida capensis* var. *canescens* Trin. & Rupr.; *Aristida zeyheri* (Nees) Steud.; *Arthratherum zeyheri* Nees)

South Africa. Perennial, robust, erect, tufted, rhizomatous, knotty rhizomes, leaves rigid, open inflorescence divaricate, glabrous glumes, all 3 awns plumose, usually on rocky and stony places, sandy slopes, disturbed lands, uncultivated areas, old lands, on sandy soils, see *Species Graminum Stipaceorum* 178-179. 1842.

in southern Africa: blinkaargras; bohlanya-ba-pere (Sotho)

Stipavena Vierh. = *Helictotrichon* Besser, *Helictotrichon* Besser ex Schult. & Schult.f., *Helictotrichon* Schult.

Greek *stipe* "tow," *Stipa* plus *Avena*.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 56: 369. 1906, *Feddes Repertorium* 45: 7. 1938, *Contributions from the United States National Herbarium* 48: 382-383, 650. 2003.

x Stiporyzopsis B.L. Johnson & Rogler

Oryzopsis x *Stipa*.

See *American Journal of Botany* 30: 55. 1943, *Genera Graminum* 375. 1986.

Streblochaete Hochst. ex Pilger = *Koordersiochloa* Merr., *Lycochloa* Samuelsson, *Pseudostreptogyne* A. Camus, *Streblochaete* Hochst.

From the Greek *streblos* "twisted, crooked" and *chaite* "a bristle."

A single species, tropical Africa, Southeast Asia, Java, Indonesia, the Philippines. Pooideae, Poodae, Meliceae,

perennial, herbaceous, unbranched, tufted, leaf blades broadly linear, auricles absent, sheaths margins joined, ligule a short unfringed membrane, plants bisexual, open and narrow inflorescence paniculate with filiform branches, panicle more or less 1-sided and drooping, narrow linear spikelets pedicellate 2-6-several-flowered, lower florets usually bisexual, uppermost floret male or greatly reduced, 2 membranous glumes very unequal to unequal, lower glume 1-5-nerved, upper glume 5-7-nerved, lemmas herbaceous 7-nerved, tangled awns, median awn geniculate and filiform, callus linear pungent, palea present, 2 minute lodicules free and membranous, 3 stamens, ovary glabrous, 2 stigmas, shade species, open places, forest floors, montane, type *Streblochaete nutans* Hochst. ex A. Rich., see *Species Plantarum* 1: 76-78. 1753, *Flore Française. Troisième Édition* 3: 32. 1805, *Syn. Pl.* 1: 97. 1805, *Tentamen Florae Abyssinicae* 1850 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 37: (Beibl. 85) 61. 1906, *Philipp. J. Sci., Bot.* 12: 67. 1917, *Bulletin de la Société Botanique de France* 77: 476. 1930, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 25(8): 4. 1933, *Bot. Mag. (Tokyo)* 78: 289-293. 1965, *Genera Graminum* 69, 115. 1986, C. Hsiao, N.J. Chatterton, K.H. Asay and K.B. Jensen, "Molecular phylogeny of the Pooideae (Poaceae) based on nuclear rDNA (*ITS*) sequences." *Theoretical and Applied Genetics* 90: 389-398. 1995, P. Catalán, E.A. Kellogg and R.G. Olmstead, "Phylogeny of Poaceae subfamily Pooideae based on chloroplast *ndhF* gene sequences." *Molecular Phylogenetics and Evolution* 8: 150-166. 1997, R.J. Soreng and J.I. Davis, "Phylogenetics and character evolution in the grass family (Poaceae): simultaneous analysis of morphological and chloroplast DNA restriction site characters." *Botanical Review* 64: 1-85. 1998.

Species

S. longiarista (A. Rich.) Pilg. (sometimes spelled ***longiaristatum***) (*Bromus trichopodus* A. Rich.; *Danthonia longearistata* Engl.; *Danthonia longiaristata* (A. Rich.) Engl.; *Danthonia streblochaeta* Steud.; *Streblochaete nutans* Pilg.; *Streblochaete nutans* Hochst. ex A. Rich.; *Trisetum longiaristatum* A. Rich.)

Eastern Cape, Tanzania, South Africa, Asia. Perennial, loosely tufted, slender, erect or ascending, leaf blades sharply acute, panicle nodding, bunches of disarticulated florets, glumes acute, lemma with as filiform awn coiling and entangled with its neighbours, floret callus pubescent to densely hispid, found in mountain forests, shade, uplands, see *Tentamen Florae Abyssinicae* ... 2: 417. 1850, *Synopsis Plantarum Glumacearum* 1: 245. 1854, *Abhandlungen der Preussischen Akademie der Wissenschaften. Physikalisch-mathematische Klasse* 2: 130. 1891 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 9: 516. 1926.

Strephium Schrader ex Nees = *Raddia* Bertol.

From the Greek *strepho*, *strephein* "to twist."

Bambusoideae, Olyreae, Olyrinae, type *Strephium distichophyllum* Schrad. ex Nees, see *Opuscoli Scientifici* 3: 410. 1819, *Flora Brasiliensis seu Enumeratio Plantarum in Brasilia* ... 2: 298-299. Stuttgartiae et Tubingae 1829-1833, *Bulletin de la Société Botanique de France* 7: 470. 1860, *Catalogus plantarum cubensium* ... 231. 1866, *Anales de la Academia de Ciencias Medicas* ... 8: 202. 1871, *Bulletin de la Société Botanique de Belgique* 15(3): 465. 1876 and *Manual of the Grasses of the West Indies* 373. 1936, *Contributions from the United States National Herbarium* 39: 107-108, 113. 2000.

Streptachne R. Br. = *Aristida* L., *Streptachne* Kunth

From the Greek *streptos* "twisted" and *achne* "chaff, glume."

Aristidoideae, Aristideae, type *Streptachne stipoides* R. Br., see *Species Plantarum* 1: 82. 1753, *Prodromus Florae Novae Hollandiae* 174. 1810, *Nova Genera et Species Plantarum* 1: 124, t. 40. 1815 [1816] and *Meded. Rijks.-Herb.* 54: 9. 1926, Valdés R., J. & K.W. Allred, "El género *Aristida* (Gramineae) en el nordeste de México." *Acta Botánica Mexicana* 63: 1-45. 2003, *Contributions from the United States National Herbarium* 46: 69-104, 609-610. 2003.

Streptia Döll = *Streptogyna* P. Beauv.

From the Greek *streptos* "twisted."

Ehrhartoideae, Streptogyneae, see *Essai d'une Nouvelle Agrostographie* 80, t. 16, f. 8. 1812, *Flora Brasiliensis* 2(3): 171. 1880 and *Contributions from the United States National Herbarium* 39: 113, 114. 2000.

Streptochoeta Schrader ex Nees = *Lepideilema* Trin., *Streptochoeta* Schrader

From the Greek *streptos* "twisted" and *chaite* "a bristle."

Three species, New World tropics, Mexico to Argentina, Brazil. Bambusoideae, Bambusodae, Streptochoeteae, or Anomochloideae, Streptochoeteae, perennial, sympodial, usually unbranched, woody or herbaceous, persistent, unarmed, rhizomatous, flowering culms leafy, veins of leaf blades completely parallel, auricles present and inconspicuous, ligule a fringe of hairs or absent, leaves spirally arranged, rhizomes pachymorph, plants bisexual, inflorescence terminal and spicate to spicate-racemose, pseudospikelets spirally arranged and 1-flowered, 11 or 12

glumes or bracts present, bracts 1-5 dentate spirally arranged, bract 6 a very long coiled awn, bracts 7-8 side by side lanceolate tough acuminate with reflexed hooked tips, bracts 9-11 whorled, lemma absent, palea and lodicules absent, 6 stamens monadelphous, ovary glabrous, 3 stigmas, seeds with hooklike bracts, shade species, lowlands, forest floor, forest shade, vegetatively resembling *Pharus*, type *Streptochaeta spicata* Schrad. ex Nees, see *Flora Brasiliensis seu Enumeratio Plantarum in Brasilia ... 2*: 536-537. 1829-1833, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 1(1): 93. 1830, *Linnaea* 9: 467. 1835, John Lindley, 1799-1865, *A Natural System of Botany* edition 2: 378. London 1836 and *The Families of Flowering Plants* 2: 205, 219. London 1926 and 1934, *Contributions from the U.S. National Herbarium* 24(8): 291-556. 1927, *Fieldiana, Botany* 24(2): ii-ix, 1-390. 1955, *Phytologia* 37(4): 317-407. 1977, *Selbyana* 4(1-6): i-xxx, 1-628. 1978, *Fieldiana, Botany, New Series* 4: 1-608. 1980, *Annals of the Missouri Botanical Garden* 68: 15-47. 1981, *Genera Graminum* 57-59. 1986, *Smithsonian Contributions to Botany* 68: 1-52. 1989, *Flora of the Guianas. Series A, Phanerogams* 619-622. 1990, *Annals of the Missouri Botanical Garden* 77(1): 125-201. 1990, *Systematic Botany* 18(1): 80-99. 1993, *Ruizia* 13: 1-480. 1993, *Flora Mesoamericana* 6: 210. 1994, L.G. Clark, W. Zhang and J.F. Wendel, "A phylogeny of the grass family based on *ndhF* sequence data." *Systematic Botany* 20: 436-460. 1995, L.G. Clark and E.J. Judziewicz, "The grass subfamilies Anomochlooideae and Pharoideae." *Taxon* 45: 641-645. 1996, M.R. Duvall and B.R. Morton, "Molecular phylogenetics of Poaceae: an expanded analysis of *rbcL* sequence data." *Molecular Phylogenetics and Evolution* 5: 352-358. 1996, Khidir W. Hilu and Lawrence A. Alice, "Evolutionary implications of *matK* indels in Poaceae." *Am. J. Bot.* 86: 1735-1741. 1999, *American Bamboos* 6, 325-328. 2000, *Contributions from the United States National Herbarium* 39: 68, 113-114. 2000, Sarah Mathews, Rocky C. Tsai and Elizabeth A. Kellogg, "Phylogenetic structure in the grass family (Poaceae): evidence from the nuclear gene phytochrome B." *Am. J. Bot.* 87: 96-107. 2000, GPWG (Grass Phylogeny Working Group), "Phylogeny and subfamilial classification of the grasses (Poaceae)." *Annals of the Missouri Botanical Garden* 88: 373-457. 2001, Fabian A. Michelangeli, Jerrold I. Davis and Dennis W. Stevenson, "Phylogenetic relationships among Poaceae and related families as inferred from morphology, inversions in the plastid genome, and sequence data from the mitochondrial and plastid genomes." *Am. J. Bot.* 90: 93-106. 2003, Paula J. Rudall and Richard M. Bateman, "Evolution of zygomorphy in monocot flowers: iterative patterns and developmental constraints." *New Phytologist* 162(1): 25-44. Apr 2004, Jim Provan, Pamela M. Biss, Darragh McMeel and Sarah Mathews, "Universal primers for the amplification of chloroplast microsatellites

in grasses (Poaceae)." *Molecular Ecology Notes* 4(2): 262-264. June 2004.

Species

S. angustifolia Soderstr.

Brazil. See *Annals of the Missouri Botanical Garden* 68(1): 30, f. 5-6. 1981.

S. sodiroana Hack. (*Streptochaeta sodiroana* Hack. ex Sodiro) (after the Italian botanist Luigi [later Padre Aloisio, S.J.] Sodiro, 1836-1909, clergyman, 1870 to Ecuador, professor of botany, botanical explorer, author of *Cryptogamae Vasculares Quitenses*. Quito 1893 and *Gramineas ecuatorianas de la provincia de Quito*. [Anales Universidad Quito] 1889. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 299. 1965; Staffeu and Cowan, *Taxonomic literature*. 5: 713-717. 1985; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 375. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 379. 1973; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 246. Oxford 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Dan Henry Nicolson, *Publications on Araceae* by Luis later Padre Aloisio Sodiro, draft by D. Nicolson. 1976)

Ecuador, Guatemala, Mexico, Venezuela, Belize. Tufted, herbaceous, erect, shortly rhizomatous, spicate inflorescence slightly flexuous, anthers and styles exerted, growing in small clumps, found in forest, understory, shade, in understory of deep forest, in disturbed site along trail, on terrace along river and streams, along trail on ridge in forest, see *Österreichische Botanische Zeitschrift* 40: 113. 1890, *Anales de la Universidad Central del Ecuador* 3(25): 478. 1889 and *Brittonia* 23(3): 293-324. 1971.

in Costa Rica: pega-pega

S. spicata Schrad. ex Nees (*Lepideilema lancifolium* Trin.; *Streptochaeta spicata* subsp. *ecuatoriana* Judz. & Soderstr.; *Streptochaeta spicata* Schrad. ex Nees subsp. *spicata*)

Guatemala to Brazil, Ecuador, southern Mexico to northern Argentina, the Caribbean. Perennial, terrestrial, herbaceous, sparsely branched, glabrous leaf blades lanceolate to oblong-lanceolate, narrow elongate inflorescence villous, spikelets appressed 7- to 11-flowered, lowest bract may be ciliolate, lemma long-awned, awn spirally twisted at the tip, barbed fruit, common in understory on slopes in secondary woods, along riverbanks, rocky woods, rocky slopes, moist forests, forest shade, disturbed forest, similar to *Pharus latifolius* L., see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 537. 1829, *Mémoires de l'Académie Impériale des*

Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles 1(1): 93. 1830 and *Smithsonian Contributions to Botany* 68: 39. 1989, *Systematic Botany* 18(1): 80-99. 1993.

S. spicata Schrad. ex Nees subsp. *ecuatoriana* Judz. & Soderstr. (*Streptochaeta spicata* Schrad. ex Nees)

Ecuador. See *Smithsonian Contributions to Botany* 68: 39. 1989.

S. spicata Schrad. ex Nees subsp. *spicata* (*Lepideilema lancifolium* Trin.; *Streptochaeta spicata* Schrad. ex Nees)

Belize, Colombia, Honduras, Venezuela. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 93. 1830.

Streptogyna P. Beauv. = *Streptia* Döll

From the Greek *streptos* “twisted” and *gyne* “female, ovary,” referring to the nature of the ovary.

Two species, tropical Africa, southern India and Sri Lanka, Mexico to Brazil, Central and South America. Bambusoideae, Bambusodae, Streptogyneae, or Ehrhartoideae, Streptogyneae, perennial, herbaceous, solid, spreading, unarmed, unbranched, tufted to stoloniferous, rhizomes pachymorph, flowering culms leafy, leaf sheaths strongly ribbed, auricles absent or present, short external membranous ligule, leaf blades linear to lanceolate, plants bisexual, inflorescence a single erect 1-sided raceme or a terminal spike-like panicle, 4-7-many-flowered spikelets shortly pedicellate, lower florets hermaphrodite and the upper ones sterile, the rachilla segment at the base of each floret forms a little hook, bunches of disarticulated florets dangling, 2 persistent membranous glumes very unequal, upper glume 7- to 17-nerved, lemma coriaceous 7- to 13-nerved with a straight awn, awns strongly barbed to scabrid, palea present, 3 lodicules free and membranous, stamens 2, ovary glabrous or hairy, 2 or 3 coiled tangled stigmas, shade species, clearings, forest floor, forest shade, dry forests, wet tropical forests, tropical rain forest understory, very similar to *Streptochaeta*, type *Streptogyna crinita* P. Beauv., see *Essai d'une Nouvelle Agrostographie* 80, t. 16, f. 8. 1812, *Flora Brasiliensis* 2(3): 171. 1880 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 76: 311. 1954, *J. Jap. Bot.* 33: 364-366. 1958, *Nature* 182: 1619-1620. 1958, *Bulletin de la Société Botanique de France* 118: 657. 1973, *Smithsonian Contributions to Botany* 44: 18. 1980, *Fieldiana, Botany, New Series* 4: 1-608. 1980, *Genera Graminum* 69. 1986, *Annals of the Missouri Botanical Garden* 74(4): 871-888. 1987, *Smithsonian Contributions to Botany* 65: 1-27. 1987, *Flora of the Guianas. Series A, Phanerogams* 622-625. 1990, *Ruizia* 13: 1-480. 1993, *Flora Mesoamericana* 6: 220. 1994, *Am. J. Bot.* 87: 96-107. 2000, *American Bamboos* 6, 49, 122, 126,

131-132. 2000, *Contributions from the United States National Herbarium* 39: 113, 114. 2000.

Species

S. americana C.E. Hubb.

Mexico to Bolivia. Perennial, herbaceous, terrestrial, tufted, shortly rhizomatous, scaly rhizomes lacking, well-defined outer ligule, leaves mostly basal, auricles absent, sheaths glabrous and hispid, leaf blades linear flat glabrous acuminate, inflorescence softly arching, spikelets 4- to 6-flowered, lemmas forming a tangled mass at maturity, 3 scaberulous stigmas, forming small clumps, understory, moist forests, along trails, forest floor, under trees, rainforest, between ridges, in shade of secondary forest, see *Fl. Suriname* 1(1): 287. 1943, *Bull. Torrey Bot. Club* 75: 81. 1948, *Fl. Guy. Franç.* 1: 88. 1955, *Hooker's Icones Plantarum* 36(6): t. 3572. 1956.

S. crinita P. Beauv. (*Streptogyna gerontogaea* Hook.f.)

India, Sri Lanka, Kenya, Uganda, Zaire, Central African Republic. Perennial, erect, herbaceous, unbranched, spreading, scaly rhizomes, leaf blades narrowly elliptic acuminate, inflorescence racemiform stiffly erect with several overlapping spikelets 5- to 7-flowered, lemmas linear-oblong, strongly barbed awns, callus bearded, 2 stamens, ovary villous, 2 long-exserted spinulose stigmas coiled and tangled at maturity, medicinal use, noxious pest, infusion used as enema for women's stomach ache, found along roadsides and footpaths, moist lowland forests, clearings, swampy places, forest floors, forest undergrowth, cultivated fields, light shade, see *Essai d'une Nouvelle Agrostographie* 80, t. 16, f. 8. 1812, *Enum. Pl. Zeyl.* 374. 1864 and *A Handbook to the Flora of Ceylon* 5: 301. 1900, *Grasses of Burma* ... 649. 1960.

in Congo: mana mango, manamango

in Ghana: detshenga, etwà, kyeretwè, wondu wondu

in Ivory Coast: atierfos, dontré, kpa mussé, kwamossé, kwamurè, pamussè, yoè

in Liberia: giekia ku, giekiaaku, jekiaku

in Nigeria: ako ozo

in Senegal: damordegad, damor degad, emokok

in Sierra Leone: buragai, dilag boinyondo, esul, kaiyowo, kasarek, kayowo, kongengi, malomboenda, naganaga, naganage, nanaka, nanana, sibile, sibire, tuabiya, yoyavi

in Yoruba: apala odo

Streptolophus D.K. Hughes

From the Greek *streptos* “twisted” and *lophos* “a crest.”

One species, West tropical Africa. Panicoideae, Panicoideae, Paniceae, annual, erect to decumbent, herbaceous, branched, leaf blades pseudopetiolate, ligule a fringed

membrane, plants bisexual, inflorescence spicate, rhachis of primary branches not foliaceous, spikelets with involucres of spinescent bristles, 2 small glumes unequal or subequal, lower glume nerveless, upper glume 3-nerved, palea 2-nerved, 2 lodicules, 3 stamens, ovary glabrous, 2 stigmas, type *Streptolophus sagittifolius* Hughes, see *Bulletin of Miscellaneous Information Kew* 1923(5): 177-180. 1923.

Species

S. sagittifolius Hughes

Angola. Rambling, leaf blades sagittate, spikelets compressed dorsiventrally, in thicket, see *Bulletin of Miscellaneous Information Kew* 1923(5): 178. 1923.

Streptostachys Desv.

From the Greek *streptos* plus *stachys* "ear of corn, spike."

About 3-5 species, tropical America, Brazil to Paraguay, Venezuela. Panicoideae, Paniceae, Paspalinae, or Panicoideae, Panicoideae, Paniceae, perennial, tufted, herbaceous, hollow, decumbent, erect or geniculately ascending, shortly rhizomatous, auricles absent, ligule ciliate or absent, leaves more or less clasping the culm at the base, plants bisexual, hidden cleistogenes absent, large inflorescences with stiff branches ascending to divergent, panicle sparsely branched, spikelets narrowly oblong solitary or paired, lower floret usually sterile or male, upper floret hermaphrodite pubescent, 2 ovate awnless glumes unequal or subequal, lower glume 1- to 7-nerved, base of the lower glume thickened, upper glume 5-7-nerved, lower lemma coriaceous, palea absent or rudimentary, 2 fleshy lodicules, 3 stamens, ovary glabrous, savannahs, lowland savannahs, edges of savannahs, cerrados, under shrubs, a segregate from *Panicum*, type *Streptostachys asperifolia* Desv., see *Species Plantarum* 1: 55. 1753, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris*, sér. 2, 2: 190. 1810, *Prodromus Florae Novae Hollandiae* 196. 1810, *Essai d'une Nouvelle Agrostographie* 50, t. 10, f. 11. 1812 and G. Davidse & R.W. Pohl, "Chromosome numbers of tropical American grasses (Gramineae)." *Annals of the Missouri Botanical Garden* 65: 637. 1978, *Kew Bulletin* 39(1): 182. 1984, *Smithsonian Contributions to Botany* 59: 1-63. 1985, *Flora of the Guianas. Series A, Phanerogams* 625-628. 1990, O. Morrone and F.O. Zuloaga, "Revisión del género *Streptostachys* (Poaceae: Panicoideae: Paniceae), su posición sistemática dentro de la tribu Paniceae." *Annals of the Missouri Botanical Garden* 78(2): 359-376. 1991, Morrone O., J.H. Hunziker, F.O. Zuloaga and A. Escobar, "Números cromosómicos en Paniceae sudamericanas (Poaceae: Panicoideae)." *Darwiniana* 3(1-4): 53-60. 1995, Zuloaga F.O., O. Morrone and L.M. Giussani, "A cladistic analysis of the Paniceae: a preliminary approach." In S.W.L. Jacobs and J.E. Everett [editors], *Grasses: Systematics and Evolution*, 123-135. CSIRO Publishing, Collingwood,

Victoria, Australia 2000, *Am. J. Bot.* 88: 1993-2012. 2001, *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 610. 2003.

Species

S. asperifolia Desv. (*Isachne streptostachys* Nees ex Steud.; *Panicum asperifolium* (Desv.) Hitchc.; *Panicum balanites* Trin.; *Panicum hirsutum* (P. Beauv.) Raspail, nom. illeg., non *Panicum hirsutum* Sw.; *Panicum perfoliatum* Nees; *Panicum streptostachys* Spreng.; *Panicum streptostachys* f. *paleacea* Döll; *Panicum vaginaeflorum* Steud.; *Streptostachys hirsuta* P. Beauv.)

South America, Trinidad to Brazil. Perennial or annual, erect, decumbent, loosely tufted, clumped, sparsely branched, rooting at the nodes, ligules absent, leaf blades broadly lanceolate acute to acuminate, panicle obovate or oblong with spreading or ascending branches, spikelets paired, lower glume ovate-oblong 5-nerved clasping the base of the spikelet, upper glume ovate 5-nerved, upper lemma and palea shiny, in forest, forest shade, cerrado, forest edges, savannahs, woods, see *Essai d'une Nouvelle Agrostographie* 50, t. 10, f. 11. 1812, *Annales des Sciences Naturelles (Paris)* 1 5: 299. 1825, *Systema Vegetabilium, editio decima sexta* 2: 316. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 142-143. 1829, *Linnaea* 10(3): 297. 1836, *Synopsis Plantarum Glumacearum* 1: 79-80. 1853[1854], *Flora Brasiliensis* 2(2): 231. 1877 and *Contributions from the United States National Herbarium* 22(6): 489. 1922, *Fl. Guy. Franç.* 1: 137. 1955, *Fl. Suriname, Add. & Corr.* 1(2): 367. 1968.

S. macrantha (Trin.) Zuloaga & Soderstr. (*Panicum macranthum* Trin.; *Panicum mirabile* Mez; *Panicum vaginatum* Nees)

Brazil. Small spikelets, see *De Graminibus Paniceis* 209. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 156-157. 1829 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 2. 1921, *Smithsonian Contributions to Botany* 59: 50. 1985.

S. ramosa Zuloaga & Soderstr. (*Panicum macranthum* Trin.)

Brazil. Perennial, rhizomatous, leaf blades linear and pungent, tough leaf blades linear pungent, stout densely pubescent rhizomes, panicle ovate-oblong, racemes long and flexuous, solitary oblong spikelets, pedicels short and swollen at the tip, lower glume broadly ovate 1-nerved, upper glume 5-nerved, lower lemma 5-nerved, upper lemma and palea coriaceous, growing in grasslands, cerrado, resembles *Streptostachys macrantha*, see *De Graminibus Paniceis* 209. 1826 and *Smithsonian Contributions to Botany* 59: 52-55, f. 21-22. 1985.

S. rigidifolia Filg., Morrone & Zuloaga

South America. See *Novon* 3(3): 252, f. 1-3. 1993.

S. robusta Renvoize

South America, Brazil. Perennial, dark nodes, leaf blades lanceolate flat acute, leaves cordate at the base, stiff ascending racemes, spikelets narrowly ovate arranged in pairs, lower glume absent, upper glume 5-nerved, lower lemma 7-nerved, forest shade, white sandy soils, see *Kew Bulletin* 39(1): 182. 1984.

Strombodurus Steud. = *Bouteloua* Lag.,
Pentarrhaphis Kunth

Greek *strombos* “a spinning-top, turban.”

Chloridoideae, Cynodonteae, Boutelouinae, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Nova Genera et Species Plantarum* 1: 177-178, t. 60. 1815 [1816], *Nomenclator Botanicus. Editio secunda* 2: 299. 1841 and *Contributions from the United States National Herbarium* 41: 20-33, 181, 220. 2001.

Stupa Asch. = *Stipa* L.

Orth. var., Greek *stype*, *styppe* “tow,” Latin *stuppa*, *stupa* “tow, oakum, hards,” see *Flora der Provinz Brandenburg* 1: 812. 1864.

Sturmia Hoppe = *Mibora* Adans., *Sturmia*
C.F. Gaertn. (Rubiaceae), *Sturmia* Rchb.
(Orchidaceae)

Dedicated to the German engraver Jacob (Jakob) Sturm, 1771-1848, botanical artist, naturalist, among his works *Catalog der Kaefer-Sammlung von J.S. Nürnberg* 1843, *Catalog meiner Insecten-Sammlung*. Nürnberg 1826, *Deutschlands Fauna*. Nürnberg 1805 and *Icones Coleopterorum Germaniae*. Berlin 1877, he was the son of the Nürnberg engraver Johann Georg Sturm; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 343. 1965; *Deutschlands Flora*. Nürnberg [1796-] 1798-1862; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 387. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Günther Schmid, *Chamisso als Naturforscher. Eine Bibliographie*. Leipzig 1942; Stafleu and Cowan, *Taxonomic literature*. 6: 65-72. Utrecht 1986.

Pooideae, Poeae, Miliinae, type *Sturmia minima* (L.) Hoppe, see *Species Plantarum* 63. 1753, *Familles des Plantes* 2: 495. 1763, *Primitiae Florae Werthemensis* 126. 1799, *Flora Britannica* 3: 1387. 1804, *Syn. Pl.* 1: 76. 1805, *De Fructibus et Seminibus Plantarum...* 3: t. 192, f. 3. 1805, *Essai d'une Nouvelle Agrostographie* 167, pl. 8, f. 4. 1812, *Observations sur les Plantes des Environs d'Angers* 45.

1818, *Fundamenta Agrostographiae* 114, t. 8, f. 4. 1820, *Species Graminum* 1: t. 17. 1824 and *Annuario da Academia Polytechnica do Porto* 14: 145. 1921, *Preslia* 46(2): 168. 1974, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Contributions from the United States National Herbarium* 48: 450, 651. 2003.

Stylagrostis Mez = *Calamagrostis* Adans.

Greek *stylos* “a column” and *agrostis*, *agrostidos* “grass, weed, couch grass.”

Pooideae, Poeae, Agrostidinae, type *Stylagrostis ovata* (J. Presl) Mez, see *Familles des Plantes* 2: 31, 530. 1763, *Tentamen Florae Germanicae* 1: 34. 1788, *Essai d'une Nouvelle Agrostographie* 43. 1812, *Reliquiae Haenkeanae* 1(4-5): 246. 1830 and *Botanisches Archiv* 1(1): 20. 1922, *Revision der Gattung Deyeuxia in Bolivien*. 56. Berlin 1995, *Phytologia* 65(5): 337-347. 1988, *Contributions from the United States National Herbarium* 48: 191-227, 651-652. 2003.

Styppeiochloa De Winter = *Crinipes*
Hochst.

From the Greek *styppeion* “hemp, tow” and *chloe*, *chloa* “grass,” alluding to tough and fibrous basal sheaths.

Two species, south and southeastern tropical Africa, Madagascar. Arundinoideae, Danthonieae, perennial, herbaceous, unbranched, wiry, unarmed, densely tufted, mat-forming, fibrous basal sheaths, nodes hidden at the base, auricles absent, ligule a fringe of hairs, filiform leaf blades stiff pungent, plants bisexual, contracted inflorescence paniculate, spikelets pedicellate 2- to 5-flowered, uppermost floret underdeveloped or reduced, 2 glumes unequal, lower glume 1-nerved, upper glume 1- to 3-nerved, lemmas membranous bidentate shortly awned, central awn straight, palea nerved and keeled, 2 small glabrous lodicules, stamens 3, ovary glabrous, 2 stigmas, open habitats, mountains, related to *Zenkeria*, type *Styppeiochloa gynoglossa* (Gooss.) De Winter, see *Flora* 38: 279-280. 1855, *Bulletin of the Torrey Botanical Club* 14: 133. 1887 and *Bothalia* 9: 134. 1966, *Kew Bulletin* 58(3): 739-741. 2003.

Species

S. gynoglossa (Gooss.) De Winter (*Crinipes gynoglossa* Gooss.)

Tropical Africa, South Africa. Perennial, tufted, fibrous base, uppermost floret sterile or reduced, glumes unequal, lemmas pubescent, awn shorter than lemma, found in rocky places, high altitudes, seepage areas, see *Kew Bulletin* 1934: 200. 1934, *Bothalia* 9: 134. 1966.

S. hitchcockii (A. Camus) Cope (*Redfieldia hitchcockii* A. Camus)

South Africa, Angola. Spikelets 2-flowered, 3-nerved awned lemmas, open areas, see *Bulletin de la Société Botanique de France* 73: 1024. 1926, *Kew Bulletin* 58(3): 741. 2003.

Suardia Schrank = *Melinis* P. Beauv.

For Paulus Suardus [Paolo Suardi], author of *Thesaurus Aromatariorum*. Venetiis 1504 [1506? 1510?].

Panicoideae, Paniceae, Melinidinae, type *Suardia picta* Schrank, see *Essai d'une Nouvelle Agrostographie* 54, t. 11, f. 4. 1812, Franz von Paula von Schrank (1747-1835), *Plantae rariores horti academici monacensis*, descriptae et observationibus illustratae a Francisco de Paula de Schrank, Horti Directore, Academiae regiae Scientiarum membro ordinario. Monachii [Munich/München]: Venditur in Instituto lithographico Scholae festivalis, 1817-1819 [1817-1822] and *Kew Bulletin* 21: 113. 1967, *Biblioth. Bot.* 138: 97, 103. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Contributions from the United States National Herbarium* 46: 287. 2003.

Sucrea Soderstrom

Named for the Panamanian-Brazilian botanist Benjamin Dimitri Sucre, fl. 1969-1970, horticulturist, botanical collector, author of "Flora do estado da Guanabara: Rubiaceae ii: tribo II - Cinchoneae." *Arquivos do Jardim Bot. do Rio de Janeiro* 17: 25-41. 1959-1961, "Rubiaceae da cidade do Rio de Janeiro I: tribo Spermaceae." *Rodriguésia* v. 21/22, no. 33/34: 241-280. 1959, "Ranunculaceae da cidade do Rio de Janeiro." *Rodriguésia* v. 21/22, no. 33/34: 281-284. 1959, "Nymphaeaceae da cidade do Rio de Janeiro." *Rodriguésia* v. 21/22, no. 33/34: 285-287. 1959, "Estudos das Rubiaceae brasileiras I." *Rodriguésia* v. 23/24, no. 35/36: 11-20. 1960-1961, "Estudo das Rubiaceae brasileiras III: cinco novas espécies da tribo Spermaceae." *Rodriguésia* v. 26, no. 38: 253-260. 1970; see *Rev. Brasil. Biol.* 31: 309-312. 1971, *Anais Soc. Bot. Brasil* 146-164. 1972, *Bradea* 1: 358. 1973, *Atas Soc. Biol. Rio de Janeiro* 16: 59-61. 1973, *Cienc. Cult.* 28: 357-359. 1974, *Rodriguésia* v. 27, no. 39: 225-295. 1974 [*Dorstenia* L. (Moraceae) dos Estados da Guanabara e do Rio de Janeiro.], *Bradea* pp. 473-476. 1975, *Phytologia* 46: 210. 1980, *Bradea* 4: 346. 1987, *Ann. Missouri Bot. Gard.* 75: 1107. 1988, *Darwiniana* 37(1-2): 157. 1999.

About 3 species, eastern Brazil. Bambusoideae, Oryzodae, Olyreae, or Bambusoideae, Olyreae, Olyrinae, perennial, unarmed, erect, herbaceous, unbranched, tufted, rhizomatous, auricles absent, sheaths persistent, ligule present or absent, broad and flat leaf blades pseudopetiolate, plants monoecious, open or spike-like terminal panicle, numerous 1-flowered unisexual spikelets, female spikelets above, male glumeless spikelets below, male florets 3-staminate,

female spikelets with 2 tough glumes subequal and cartilaginous along the margins, hard lemma, palea present, 3 free and fleshy lodicules, 0 stamens, ovary glabrous, 2 stigmas, moist forest, forest shade, secondary forest, slopes, this genus between *Olyra* and *Raddia*, type *Sucrea monophylla* Soderstr., see *Biotropica* 6: 141-153. 1974, *Natl. Geogr. Soc. Research Reports* 12: 647-654. 1980, *Brittonia* 33(2): 198-210. 1981, *American Bamboos* 316-319. 2000, *Contributions from the United States National Herbarium* 39: 114-115. 2000.

Species

S. maculata Soderstr.

Brazil. Forest grass, inflorescence bracts usually reddish, see *Brittonia* 33(2): 205, f. 4, 5. 1981.

S. monophylla Soderstr.

Brazil. Herbaceous, caespitose, sterile culms with a single large leaf, culms in small clumps or colonies, leaves green to glaucous, leaf blades ovate to ovate-oblong, panicle oblong or pyramidal and the lower branches in whorls, basal spikelets reddish, on thickened pedicels female spikelets elliptic to ovate, glumes membranous acuminate, lower glume 5-nerved, upper glume 3-nerved, found in shady places in forests, forest floor, under trees, see *Brittonia* 33(2): 200, f. 1-3. 1981.

S. sampaiana (Hitche.) Soderstr. (*Olyra sampaiana* Hitche.)

Brazil. Tuberos, see *Journal of the Washington Academy of Sciences* 17(9): 215, f. 1. 1927.

Suddia Renvoize

One species, Sudan. Bambusoideae, Oryzodae, Phareae, perennial, herbaceous, unbranched, spongy, rhizomatous, auricles absent, leaf blades sagittate with a false petiole, ligule an unfringed membrane, tough inflorescence paniculate, spikelets 1-flowered, 2 glumes pointed awnless, lower glume 5- to 7-nerved, upper glume 7- to 9-nerved, common in permanently moist and seasonally flooded sites, swamps, type *Suddia sagittifolia* Renvoize, see *Kew Bulletin* 39(3): 455-461. 1984, A.B. Katende, "The diversity of macrophytes in some Kyoga basin lakes and their importance as fish habitats." *African Journal of Ecology* 42(s1): 42-45. Aug 2004, M. Namaganda, S. Phillips and K.A. Lye, "The distribution of grass species in Uganda." *African Journal of Ecology* vol. 42, no. s1, 48-50(3). Aug 2004, M. Behangana, "The diversity and status of amphibians and reptiles in the Kyoga Lake Basin." *African Journal of Ecology* Volume 42, Issue s1: 51-56. Aug 2004.

Species

S. sagittifolia Renvoize

Southern Sudan. Perennial, tall, rhizomatous, in peaty soils, see *Kew Bulletin* 39(3): 455. 1984.

Swallenia Soderstr. & H.F. Decker =
Ectosperma Swallen, *Ectosperma* Vaucher
(Algae)

For the American botanist Jason Richard Swallen, 1903-1991, agrostologist, with USDA Bureau of Plant Industry, among his works are "The grass genus *Schizachne*." *Journal of the Washington Academy of Sciences* 18: 203-206. 1928, "The grass genus *Amphibromus*." *American Journal of Botany* 18: 411-415. 1931, "The grass genus *Gouinia*." *Amer. J. Bot.* 22: 31-41. 1935, "Three new grasses from Mexico and Chile." *J. Wash. Acad. Sci.* 26: 207-209. 1936 and "Gramineae." in *Flora of Panama. Ann. Missouri Bot. Gard.* 30: 104-280. 1943; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 351. Boston 1965; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; T.W. Bossert, compilation, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 390. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University. 1917-1933*; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. University of Pennsylvania Press, Philadelphia 1964.

One species, North America, U.S., California. Chloridoideae, Cynodonteae, Monanthochloinae, perennial, erect, caespitose, branching, thick rhizomes, leaf blades pungent, auricles absent, sheaths ciliate to villous, ligule a line of hairs, leaves rigid, nodes more or less woolly, plants bisexual, inflorescence a panicle exerted or partially included in upper sheath, 2 glumes more or less equal and membranous, lower glume 5- to 7-nerved, upper glume 7- to 11-nerved, second glume awnless, lemmas 5- to 7-nerved and chartaceous, palea margins villous, lodicules truncate, 3 stamens, ovary glabrous, 2 stigmas, sand dunes, slopes, type *Swallenia alexandrae* (Swallen) Soderstr. & H.F. Decker, see Jean Pierre Étienne Vaucher, 1763-1841, *Histoire des conferves d'eau douce ...* Genève 1803, *Journal of the Washington Academy of Sciences* 40(1): 19-21. 1950, *Anatomy of the Monocotyledons, I: Gramineae*. 1960, *Recent Advances in Botany* 1: 133-145. 1961, *Madroño* 17(3): 88. 1963 [*Swallenia*, a new name for the California genus *Ectosperma* (Gramineae)], *Fremontia* 7(2): 3-6. 1979, *Inventory of Rare and Endangered Vascular Plants of California*, 3rd edition. 1984, *Oryx* 33(4): 285-293. Oct 1999, *Madroño* 48(3): 152-161. 2001, *Contributions from the United States National Herbarium* 41: 73, 220. 2001.

Species

S. alexandrae (Swallen) Soderstrom & Decker
(*Ectosperma alexandrae* Swallen)

Southeastern California, Mojave Desert. Endangered and rare, perennial, ascending to erect, scaly rhizomes,

clumped, sandbinder, open habitats, see *Journal of the Washington Academy of Sciences* 40(1): 19, f. 1. 1950.

in English: Eureka Valley dune grass

Swallenochloa F.A. McClure = *Chusquea*
Kunth

For the American botanist Jason Richard Swallen, 1903-1991.

About 5-7 species or referred to and included in *Chusquea*, South America, Bolivia, Brazil. Bambusoideae, Bambuseae, Chusqueinae, or Bambusoideae, Bambusodae, Bambuseae, perennial, persistent, woody, shrubby, unarmed, more or less scandent, leafy, hollow internodes, stiffly erect branches, usually 3-5 branches per node, densely clump-forming, rhizomes pachymorph, plants bisexual, inflorescence paniculate, spikelets pedicellate, 2 glumes unequal, palea present, 3 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, dense inflorescences, páramos, high altitude, related to and often in *Chusquea*, type *Swallenochloa subessellata* (Hitchc.) McClure, see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 95: 151. 1822, *Synopsis Plantarum* 1: 254. 1822, *Agrostografía Brasiliensis sive enumeratio plantarum ad familias naturales graminum et ciperoidarum spectantium, quas in Brasilia ...* 17. Lucca [1823], *Nom. Bot.* edition 2, 2: 168. 1841, *J. Linn. Soc. Bot.* 19: 31. 1881, *Kew Bulletin* 727. 1893 and *Contributions from the Gray Herbarium of Harvard University* 184: 1-223. 1958, *Smithsonian Contributions to Botany* 9: 74-77, 106, 113, f. 43-45. 1973, *Brittonia* 30: 154-164, 297-312. 1978, *Brittonia* 31: 433-445. 1979, *Journal of Bamb. Research* 1: 15-18. 1982, *Gayana, Bot.* 42: 1-157. 1985, *Annals of the Missouri Botanical Garden* 72(4): 864-873. 1985, *Iowa State Journal of Research* 61(1): 99-102. 1986, *Annals of the Missouri Botanical Garden* 74(2): 424-428. 1987, *Grass Systematics and Evolution* 225-238. 1987, *Systematic Botany Monographs* 27: 1-127. 1989 [also Lynn G. Clark, *Systematics of Chusquea section Swallenochloa*, section Verticillatae, section Serpentes, and section Longifoliae (Poaceae-Bambusoideae). Ann Arbor, Mich.: American Society of Plant Taxonomists, 1989], *National Geographic Research* 5: 459-476. 1989, *Systematic Botany* 15(4): 617-634. 1990, *Nordic Journal of Botany* 11: 323-331. 1991, *Annals of the Missouri Botanical Garden* 78(1): 164-171. 1991, *Cuscatlania* 1(6): 1-29. 1991, L.G. Clark, "Chusquea sect. *Swallenochloa* (Poaceae: Bambusoideae) and allies in Brazil." *Brittonia* 44(4): 387-422. 1992, *Novon* 3(3): 228-238. 1993, *Ruizia* 13: 1-480. 1993, *Flora Mesoamericana* 6: 202-210. 1994, *Brittonia* 48(2): 250-262. 1996, *Systematic Botany* 22(2): 219-228. 1997, *The Bamboos* 42-43. 1997, *American Bamboos* 199-223. 2000, *Contributions from the United States National Herbarium* 39: 36-52, 115. 2000, *Am. J. Bot.* 91: 274-284. 2004.

Syllepis Fourn. = *Imperata* Cirillo

Greek *syllepsis* “taking together, conjunction,” or from *syn* “with, together” and *lepis* “scale.”

Panicoideae, Andropogoneae, Saccharinae, type *Syllepis ruprechtii* E. Fourn., see *Nova Genera et Species Plantarum seu Prodromus* 21. 1788, *Plantarum Rariorum Regni Neapolitani* 2: 26-27, t. 11. 1792, *Flora Boreali-Americana* 1: 54. 1803, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 315-316. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 331. 1832, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 245. 1842, *Flora Brasiliensis* 2(3): 251. 1883, *Mexicanas Plantas* 2: 52. 1886 and *Contr. U.S. Natl. Herb.* 28(1): 9. 1929, *Contributions from the United States National Herbarium* 46: 270-273, 610-611. 2003.

Symbasiandra Steud. = *Hilaria* Kunth

Greek *symbasis* “junction” and *aner, andros* “man, stamen.”

Chloridoideae, Cynodonteae, Hilarinae, in syn. sub *Hilaria cenchroides* Kunth, see *Nova Genera et Species Plantarum* 1: 116-118, pl. 37. 1815 [1816], *Reliquiae Haenkeanae* 1(4-5): 326, t. 14. 1830, *Nomenclator Botanicus. Editio secunda* 1: 767. 1840, *Proceedings of the American Academy of Arts and Sciences* 24: 80. 1889, *Contributions from the United States National Herbarium* 1(2): 53. 1890 and *Contributions from the United States National Herbarium* 41: 128-129, 220. 2001.

Symplectrodia Lazarides

Relationships with *Plectrachne* Henr. and *Triodia* R. Br. Greek *syn* “with, together” with *plektron* “a spur, cock’s spur” and *odous, odontos* “tooth.”

Two species, Australia. Chloridoideae, Triodieae, perennial, strongly xeromorphic habit, tufted, branched or simple, erect, rhizomatous, slender, robust, stout, solid internodes, ligule ciliate, woody leaf blades thickened and pungent, basal foliage more or less woolly, auricles absent, hard and woody leaves, plants bisexual, inflorescence a loose racemose panicle, spikelets with 1 fertile floret and a bunch of awns, solitary spikelets pedicelled, spikelets 3-6-flowered, basal floret bisexual, glumes subequal and persistent, lower glume 1-5-nerved, upper glume 3-7-nerved, sterile lemma 3-lobed and 3-awned, basal lemma 3-nerved entire acuminate, palea and lodicules present, 3 stamens, ovary glabrous, 2 stigmas, open areas, sandy soil, type *Symplectrodia lanosa* Lazarides, see M. Lazarides, “New taxa of tropical Australian grasses (Poaceae).” in *Nuytsia*. 5(2): 273-276. 1984, Arthur D. Chapman, editor, *Australian Plant Name Index*. 2795. Canberra 1991.

Species***S. gracilis*** Lazarides

Australia, Northern Territory. Perennial, slender, branched, tussocky, not rhizomatous, leaves glabrous to hirsute, glumes shortly awned, 5 or 6 florets, basal lemma usually glabrous, tussock forming, see *Nuytsia* 5(2): 276. 1984[1985].

S. lanosa Lazarides

Australia, Northern Territory. Perennial, robust, tussocky, forming clumps, rhizomatous, ligule a line of hairs, basal sheaths often densely woolly, 3-6 florets, 1 fertile floret and 5-awned sterile lemmas, hirsute lemma of the fertile florets, glumes 7-nerved, basal lemma hairy to hirsute, see *Nuytsia* 5(2): 275. 1984[1985].

Synaphe Dulac = *Catapodium* Link,
Synaphea R. Br. (Proteaceae)

Greek *synaphe* “union, connexion,” *syn* with *apto, aptein* “to fasten.”

Pooideae, Poeae, Ammochloinae, type *Synaphe rigida* (L.) Dulac, see *Flora Anglica* 10. 1754, *Trans. Linn. Soc. London* 10: 155. 1810, *Hortus Regius Botanicus Berlinensis* 1: 44, 145, 280. 1827, *Flore de Département des Hautes-Pyrénées* 90. 1867 and *Bothalia* 27: 75-82. 1997, *Bothalia* 29(2): 335-341. 1999, *Contributions from the United States National Herbarium* 48: 230, 652. 2003.

Syntherisma Walter = *Digitaria* Haller,
Digitaria Heist. ex Fabr.

Greek *syn* and *therizo* “to mow, to cut the hair,” *syntherizo* “reap together.”

Panicoideae, Paniceae, Digitariinae, type *Syntherisma praecox* Walter, see *Enumeratio Methodica Plantarum* 207. 1759, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Carniolica, Editio Secunda* 1: 52. 1771, Thomas Walter (ca. 1740-1789), *Flora Caroliniana*. 76. 1788, *Bulletin of the Torrey Botanical Club* 22(10): 420. 1895, *Bulletin of the Torrey Botanical Club* 25: 303. 1898 and *Contributions from the United States National Herbarium* 12(6): 183-258. 1909, *N. Amer. Fl.* 17: 149. 1912, *Botanical Magazine* 38: 123. 1924, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 290, 299-301. 1930, *Blumea* 21(1): 16. 1973, Andrea S. Vega & Zulma Rúgolo de Agrasar, “Morphological interpretation of the spikelet in *Digitaria atra* (Poaceae: Panicoideae: Paniceae) and emended generic description.” *Am. J. Bot.* 88: 1670-1674. 2001, *Contributions from the United States National Herbarium* 46: 193-213, 611-612. 2003.

T

Taeniatherum Nevski

From the Greek *tainia* “a band, ribbon” and *ather* “an awn,” the awn of the lemma is flat, alluding to the ribboned awn, to flat-based lemma awns.

About 1-2 species, Mediterranean, Spain, Pakistan, north-west India, central Asia. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Triticinae, annual or perennial, herbaceous, internodes hollow, auricles present, ligule an unfringed membrane, leaves linear, plants bisexual, inflorescence a spike or a false spike, raceme rachis tough, bisexual sessile spikelets 2-flowered, spikelets in pairs at each rachis node, 2 glumes unequal or subequal 1- or 3-nerved, lemma rounded on the back and keeled toward the apex, lemma entire with long recurved awn, callus long and pointed, palea present, 2 free and ciliate lodicules, 3 stamens, ovary hairy, 2 stigmas, native pasture species, sometimes referred to *Elymus*, hybrids with *Triticum aestivum* L., *Hordeum* L. and *Aegilops* L., type *Taeniatherum crinitum* (Schreb.) Nevski, see *Species Plantarum* 1: 83-85. 1753, *Beschreibung der Gräser* 2: 15, t. 24, f. 1. Leipzig 1769-1810, *Landwirthschaftliche Samenkunde* 2: 1147. 1885 and *Fl. URSS* 2: 719, tab. 50, f. 4. 1934, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984, *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 81. 1984, *Bot. Zhurn.* 71: 1426-1427. 1986, *Canadian Journal of Botany* 64: 2343-2347. 1986, *Nordic Journal of Botany* 6(4): 389-397. 1986, *Flora* 179: 171-177. 1987, *Hereditas; genetiskt arkiv.* 110: 283-288. 1989, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Nordic Journal of Botany* 13: 481-493. 1993, *Flora Mediterranea* 5: 340-345. 1995, *Global Ecology and Biogeography* 7(4): 259-272. May 1998, *Contributions from the United States National Herbarium* 48: 652. 2003, *Journal of Ecology* 91(1): 36-48. Feb 2003, *Conservation Biology* 17(3): 837-845. June 2003, *Restoration Ecology* 11(2): 185-197. June 2003, *Restoration Ecology* 11(3): 370-377. Sep 2003, *Plant Pathology* 52(6): 811-817. Dec 2003, *Am. J. Bot.* 91: 1709-1725. 2004, R.J. Mason-Gamer, “Reticulate evolution, introgression, and intertribal gene capture in an allohexaploid grass.” *Systematic Biology* 53(1): 25-37. 2004, *Conservation Biology* 18(4): 947-956. Aug 2004, *Diversity & Distributions* 10(5-6): 367-369. Sep 2004, *Restoration Ecology* 12(4): 546-551. Dec 2004, *Oikos* 109(1): 154-166. Apr 2005.

Species

T. asperum (Simonk.) Nevski (*Cuviera caput-medusae* var. *aspera* Simonk.)

Europe, Caucasus. Native pasture species, see *Fl. URSS* 2: 719, tab. 50, f. 4. 1934, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984.

T. caput-medusae (L.) Nevski (*Elymus caput-medusae* L.; *Hordelymus caput-medusae* (L.) Pignatti; *Hordeum caput-medusae* (L.) Cosson & Durand; *Leptothrix caput-medusae* (L.) Dumort.)

Europe. Annual, culms erect and several, leaf sheaths inflated, spike bristly, glumes subulate awnlike, lemmas lanceolate and scabrous, flat awns, weed, see *Species Plantarum* 1: 84. 1753, *Exploration Scientifique de l'Algérie* 2: 198. 1855, *Bulletin de la Société Botanique de Belgique* 7: 66. 1868 and *Giornale Botanico Italiano* 111(1-2): 58. 1977, *Sida* 13(1): 120. 1988, M. Siegwart, M.C. Bon, T.L. Widmer, N. Crespy and R. Sforza, “First report of *Fusarium arthrosporioides* on medusahead (*Taeniatherum caput-medusae*) and preliminary tests for host-specificity.” *Plant Pathology* 52(3): 416-416. June 2003.

in English: Medusa's head

T. caput-medusae (L.) Nevski var. *caput-medusae* (*Taeniatherum caput-medusae* subsp. *caput-medusae*; *Taeniatherum crinitum* var. *caput-medusae* (L.) Wipff)

Europe. See *Sida* 13(1): 120. 1988.

T. caput-medusae (L.) Nevski var. *crinitum* (Schreb.) Humphries (*Elymus caput-medusae* subsp. *crinitus* (Schreb.) Maire; *Elymus caput-medusae* var. *crinitus* (Schreb.) Ball; *Elymus caput-medusae* var. *crinitus* (Schreb.) Fiori; *Elymus crinitus* Schreb.; *Hordelymus caput-medusae* subsp. *crinitus* (Schreb.) Pignatti; *Hordeum crinitum* (Schreb.) Desf.; *Leptothrix crinita* (Schreb.) Dumort.; *Taeniatherum caput-medusae* subsp. *crinitum* (Schreb.) Melderis; *Taeniatherum crinitum* (Schreb.) Nevski)

Europe. See *Flora Atlantica* 1: 113. 1798, *Bulletin de la Société Botanique de Belgique* 7: 66. 1868, *Journal of the Linnean Society, Botany* 16: 732. 1878 and *Nuova Flora Analitica d'Italia* 1: 163. 1923, *Flore de l'Afrique du Nord*: 3: 393. 1955, *Giornale Botanico Italiano* 111(1-2): 58-59. 1977, *Botanical Journal of the Linnean Society* 76(4): 343. 1978, *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 81. 1984.

Taeniorhachis T.A. Cope

From the Greek *tainia* “a band, ribbon” and *rhachis*, *rachis* “rachis, axis, midrib of a leaf.”

One species, Africa, Somalia, Ethiopia. Panicoideae, Panicoideae, Paniceae, perennial, herbaceous, rhizomatous, stoloniferous, auricles absent, ligule shortly membranous, leaves folded or flat and densely pubescent, plants bisexual, spicate inflorescence digitate, rachides winged, spikelets elliptic and flattened, lower floret sterile or male, lower glume tiny, upper glume 3-nerved hairy to villous, lemmas acuminate, palea present or absent, open habitats, white sand, dune sand, coastal, type *Taeniorhachis repens* Cope, see *Kew Bulletin* 48(2): 403, f. 1. 1993, *The Grass Genera of the World* 926-927. 1994.

Species

T. repens Cope

Somalia. Perennial, creeping, rhizomes and stolons present, leaves rigid and distichous, lower glume a scale, upper glume villous, found along roadsides, coastal, dunes, sand dunes, white sand, see *Kew Bulletin* 48(2): 403, f. 1. 1993.

Talassium Spreng. = *Panicum* L.

Presumably from the Greek *talasios*, *talaseios* “of wool-spinning,” *talasia* “wool-spinning.”

Panicoideae, Paniceae, Panicinae, type *Talassium montevidense* Spreng., see *Species Plantarum* 1: 55, 58. 1753, *Essai d'une Nouvelle Agrostographie* 168, t. 10, f. 10. 1812, *Systema Vegetabilium, editio decima sexta* 1: 313. 1825 [1824], *Systema Vegetabilium, editio decima sexta* 4(2): 22, 30. 1827 and *Contr. U.S. Natl. Herb.* 15: 13-15. 1910, *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 17(2): 297-314. 2001, *Contributions from the United States National Herbarium* 46: 306-441, 612-613. 2003.

Tansaniochloa Rauschert = *Acrochaete* A.

Peter, *Setaria* P. Beauv.

A grass from Tanzania.

Panicoideae, Paniceae, Setariinae, see *Essai d'une Nouvelle Agrostographie* 51, 178. 1812 and *Contr. U.S. Natl. Herb.* 22(3): 156. 1920, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 203, Anh. 54, t. 28, f. 2. 1930, *Taxon* 31(3): 561. 1982, *Contributions from the United States National Herbarium* 46: 569-593. 2003.

Tarigidia Stent

An anagram of *Digitaria*.

One species, southern Africa. Panicoideae, Panicoideae, Paniceae, Digitariinae, perennial, glaucous, herbaceous, unarmed, tufted, leaves mainly basal, auricles present or absent, ligule an unfringed membrane, leaf blades long-linear, plants bisexual, contracted cylindrical inflorescence spiciform, numerous appressed deciduous oblong racemes, spikelets shortly pedicelled paired on lower branches or clustered, basal spikelets sometimes vestigial, 2 florets, lower floret reduced to a lemma with long spreading hairs, upper floret acute bisexual, 2 glumes more or less equal and awnless, palea present, 2 free and fleshy minute lodicules, 3 stamens, ovary glabrous, 2 plumose stigmas, species of open habitats, dry grassland, open veld, sometimes confused with *Anthephora* and *Digitaria*, type *Tarigidia aequiglumis* (Gooss.) Stent, see *Beschreibung der Gräser* 2: 105. Leipzig 1769-1810 and *Bulletin of Miscellaneous Information Kew* 1932(3): 151-152. 1932, *Transactions of the Royal Society of South Africa* 20: 195, f. 3. 1932, *Bothalia* 11: 285-286. 1974.

Species

T. aequiglumis (Gooss.) Stent (*Anthephora aequiglumis* Gooss.)

South Africa. Perennial, rare, tufted, spike-like branched inflorescence, woolly spikelets, linear lower glume 1-nerved, upper glume lanceolate 3-nerved, among rocks, stony places.

Tatianyx Zuloaga and Soderstrom

One species, Brazil. Panicoideae, Panicoideae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, herbaceous, unbranched, tufted, villous cataphylls, auricles absent, ligule a fringe of hairs, plants bisexual, open inflorescence paniculate with capillary branchlets, spikelets pedicellate with flexuous pedicels, pedicel tip oblique, 2 unequal glumes, lower glume 3- to 5-nerved, upper glume 5- to 7-nerved, lemmas awnless, palea keel-less, 2 free and fleshy lodicules, 3 stamens, ovary glabrous 2 stigmas, open habitats, savannah, related to *Panicum*, type *Tatianyx arnatices* (Trin.) Zuloaga & Soderstr., see *Species Graminum* 3: t. 317. 1829-1830 and *Smithsonian Contributions to Botany* 59: 1-63. 1985, T. Sendulsky, T. Filgueiras and A. Burman, “Fruits, embryos, and seedlings,” in T. Soderstrom, K. Hilu, C. Campbell and M. Barkworth [editors], *Grass Systematics and Evolution* 31-36. Smithsonian Institution Press, Washington, D.C., U.S. 1987, *Darwiniana* 3(1-4): 53-60. 1995, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Contributions from the United States National Herbarium* 46: 613. 2003, *Am. J. Bot.* 90: 796-821. 2003.

Species

T. arnacites (Trin.) Zuloaga & Soderstr. (*Panicum arnacites* Trin.)

Central Brazil. Upper glume and lower lemma villous, sandy soils, see *Smithsonian Contributions to Botany* 59: 56-60, f. 23-25. 1985.

Teinostachyum Munro = *Schizostachyum* Nees

Greek *tainia* “fillet, a ribbon” or *teino* “stretch, stretched” and *stachys* “spike,” referring to the long spikes.

About 2-3 species, India, subtropical forests. Bambusoideae, Bambusodae, Bambuseae, or Melocanninae, subtropical, perennial, shrubby or arborescent, woody and persistent, caespitose, flexible culms, pendulous or not scandent, branched, clumps dense, long internodes, ligule an unfringed membrane, rhizomes pachymorph, flowering culms leafy, plants bisexual, inflorescence spicate or paniculate, flowering iterant, spikelets with basal buds, 1-2 glumes, palea present, 3 free and membranous lodicules, 6 stamens, ovary glabrous, 2-3 stigmas, useful for weaving into mats, found in high rainfall forests, often or sometimes referred to *Schizostachyum*, type *Teinostachyum griffithii* Munro, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 535. 1829, *Enumeratio Plantarum Zeylaniae* 5: 375. 1864, *Transactions of the Linnean Society of London* 26(1): 114, 138, 142, 143, t. 3. 1868, Richard Henry Beddome (1830-1911), *The Flora Sylvatica for Southern India*: containing quarto plates of all the principal timber trees in southern India and Ceylon, accompanied by a botanical manual, with descriptions of every known tree and shrub, and analysis of every genus not figured in the plates. Madras [1869-74], *Journal of Botany, British and Foreign* 23: 273. 1885, *Annals of the Royal Botanic Garden. Calcutta.* 7: 102. 1896 and *Bulletin du Muséum National d'Histoire Naturelle* 28(1): 100. 1922, *Taxon* 6(7): 209. 1957, *Kew Bulletin* 38(2): 321-331. 1983, *Grass Systematics and Evolution* 225-238. 1987, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 272-283. Calcutta 1989, *Plant Resources of South-East Asia (PROSEA)* (PI Res SEAs) vol. 7: 130-145, 153-154. 1995 [Bamboos], *Contributions from the United States National Herbarium* 39: 112. 2000.

Species

T. beddomei C.E.C. Fischer (*Schizostachyum beddomei* (C.E.C. Fisch.) R.B. Majumdar)

India. Erect, scandent, pendulous, drooping, culms used for matting, fencing and basketry, see *Flora of the Presidency of Madras* 10: 1860. 1934, *Kew Bulletin* 1935: 148. 1935,

Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae Botanical Survey of India, Flora of India, Series 4, 272-283. Calcutta 1989.

in English: elephant reed

in India: cherumola, chitthu, chittu, cittn, cittu, huda, mai ita, maiyirtal, mei eeta, nannura, nanyura, oole nulle, oote madike, oote nulike, otenulike, wontenuigi

T. dullooa Gamble (*Neohouzeaua dullooa* (Gamble) Camus; *Schizostachyum dullooa* (Gamble) R.B. Majumdar)

India, Bhutan. Smooth internodes, ridged culm sheaths, leaf blades rolled, very narrow spikelets, see *Annals of the Royal Botanic Garden. Calcutta.* 7: 101. 1896 and *Bulletin du Muséum National d'Histoire Naturelle* 28(1): 101. 1922.

Local names: paksalu, tokhre bans

T. griffithii Munro (*Cephalostachyum griffithsii* (Munro) Kurz)

India, Bangladesh. See *Transactions of the Linnean Society of London* 26(1): 143, t. 3. 1868, *Forest Flora of British Burma* 2: 566. 1877.

in Thailand: fai bong luhei, phai bong lueai, phai bong luei

Tema Adans. = *Echinochloa* P. Beauv.

Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Panicinae, see *Familles des Plantes* 2: 496. 1763, *Essai d'une Nouvelle Agrostographie* 1: 53, 161, 169, t. 11, f. 2. 1812 and *Contributions from the United States National Herbarium* 46: 215-224, 613. 2003.

Temburongia S. Dransfield & K.M. Wong

From the Temburong district of Brunei.

Monotypic. Unclear placement or Bambuseae, Hickeliinae, subtribe Shibataeinae, type *Temburongia simplex* S. Dransfield & K.M. Wong, restricted to streamside forest, near running fresh water, see Dransfield, S. & K.M. Wong, “*Temburongia*, a new genus of bamboo (Gramineae-Bambusoideae) from Brunei.” *Sandakania* 7: 49-58. 1996.

Species

T. simplex S. Dransfield & K.M. Wong

Brunei. Rare, erect, scrambling, clambering, leaning, foliage leaf sheaths with small hornlike auricles, culm-sheath blade erect, auricles small rounded lobes, inflorescence of true spikelets, in groups of 1-3 along the main flowering axis, see *Sandakania* 7: 55, f. 1-5. 1996.

Temochloa S. Dransfield

One species, southern Thailand. Bambusoideae, low, delicate, scrambling, scandent, inflorescence borne on terminating leafy branches bearing 1 to 4 spikelets each

containing 1 fertile floret, see S. Dransfield, "Temochloa, a new bamboo genus (Poaceae-Bambusoideae) from Thailand." *Thai Forest Bull. (Botany)* 28: 179-182. 2000.

Species

T. liliana S. Dransf.

Thailand. Inflorescence determinate, growing on limestone hills.

in Thailand: phai khun tem

Terrellia Lunell = *Elymus* L.

Pooideae, Triticeae, Hordeinae, see *Species Plantarum* 1: 83-84. 1753 and *American Midland Naturalist* 4: 227. 1915, *Canad. J. Bot.* 42: 554. 1964, *Feddes Repertorium* 95(7-8): 425-521. 1984, *Taxon* 41: 562-563. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 279-307, 652-653. 2003.

x *Terrellymus* B.R. Baum

Elymus x *Terrellia*.

See *Canadian Journal of Botany* 57(8): 947. 1979, *Genera Graminum* 375. 1986.

Tetrachaete Chiov.

From the Greek *tetra* "four" and *chaite* "a bristle," the spikelets subtended by an involucre of 4 glumes.

One species, Arabia, Ethiopia to Tanzania. Chloridoideae, Cynodonteae, annual, wiry, herbaceous, loosely tufted, auricles absent, inflated leaf sheaths, ligule fringed, plants bisexual, inflorescence a false spike or a spiciform false raceme, spikelets paired subtended by an involucre of 4 glumes, 2 feathery glumes bristle-like and much longer than the floret, coriaceous lemmas saccate or strongly keeled, palea present, lodicules absent, 3 stamens, ovary glabrous, open habitats, dry areas, stony places, alluvium, dry stony slopes, dry open bushland, limestone, similar to *Melanocenchris*, type *Tetrachaete elionuroides* Chiov., see *Annuario del Reale Istituto Botanico di Roma* 8(1): 28-29, f. 1. 1903, *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

T. elionuroides Chiov.

Southern Arabia, Yemen, Kenya, Tanzania. Annual, delicate, tufted, spreading or weakly ascending, leaves flat, ligule a ring of hairs, plumose inflorescence embraced by inflated uppermost leaf sheath, spikelets silky-hairy, straight rigid glumes bristle-like plumose at the base, lemmas 3-nerved ovate, on stony soils, heavy clay.

Tetrachne Nees

From the Greek *tetra* "four" and *achne* "chaff, glume."

One species, mostly South Africa, Pakistan. Chloridoideae, Eragrostideae, or Chloridoideae, Cynodonteae, Uniolineae, or Chloridoideae, Eragrostideae, Uniolineae, perennial, erect, densely tufted, herbaceous, green, shortly rhizomatous, woody base, leaves mainly basal or cauline, auricles absent, ligule a dense fringe of hairs, sheaths not ciliate, plants bisexual, inflorescence a panicle exerted, primary branches 1-sided and racemose along a central axis, spikelets solitary and very shortly pedicellate, 5-6 florets, 2 rows of spikelets laterally compressed, 2 lowest florets sterile reduced to lemmas, uppermost floret reduced, 2 glumes more or less equal and keeled, second glume awnless, lemma entire strongly keeled and awnless, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, pasture, forage grass, palatable, in alluvial soils, open habitats, mountains, tropical grasslands, similar to *Uniola*, type *Tetrachne dregei* Nees, see *Florae Africae Australioris Illustrationes Monographicae* 375-376. 1841, *Journal of Botany, British and Foreign* 29: 72. 1891, *Flora Capensis* 7: 318. 1898 and *Flora Capensis* 7: 711. 1900, *Memoirs of the Botanical Survey of South Africa* 58: 1-437. 1990, *Contributions from the United States National Herbarium* 41: 220. 2001.

Species

T. dregei Nees

Africa, Lesotho, South Africa. Perennial bunchgrass, branched, tufted, oblique rhizome, semiprostrate, unarmed, robust, leaf sheaths hairy on the margin, curly leaves, inflorescence of dense spikes arranged irregularly on the primary axis, few short racemes, spikelets flattened and awnless, glumes 1-nerved, very palatable, pasture grass, very high grazing value, useful for erosion control, occurs on riverbanks, high altitude grassland, mountain slopes and rocky outcrops, sandy soils, see *Florae Africae Australioris Illustrationes Monographicae* 376. 1841.

in English: Robies cocksfoot

in South Africa: kropaargras

Tetragonocalamus Nakai = *Bambusa* Schreb., *Chimonobambusa* Makino

Bamboo with 4-angle culms, from the Greek *tetras* "four," *gonia* "an angle" and *kalamos* "a reed, cane."

One species, southern China, Taiwan. Bambusoideae, Bambusoideae, Bambuseae, or Bambusoideae, Bambuseae, Bambusinae, culms obtuse-quadragonal, monopodial branching, deciduous sheaths, culm sheath glabrous, lower nodes rooting, nodes prominent, many aerial roots from the basal portion of the culms, internodes rough, creeping rhizomes,

leaves narrowly lanceolate, inflorescence a leafless panicle, spikelets densely clustered at each node, 5-6 florets hermaphrodite, lemmas acute, palea present, 3 lodicules ovate, 6 stamens, ovary hairy at the tip, 3 stigmas, cultivated, ornamental, shoots eaten, type *Tetragonocalamus angulatus* (Munro) Nakai, see *Genera Plantarum* 1: 236. 1789, *Species Plantarum. Editio quarta* 2: 245. 1799, *Transactions of the Linnean Society of London* 26(1): 94. 1868 and *United States Department of Agriculture. Inventory* 105: 48. 1932, *Journal of Japanese Botany* 9(2): 86, 88-89, 90, pl. 10. 1933, *J. Bamboo Research* 11(1): 25. 1992, *Contributions from the United States National Herbarium* 39: 29-35, 54-55. 2000.

Species

T. quadrangularis (Franceschi) Nakai (*Bambusa quadrangularis* Franceschi; *Chimonobambusa quadrangularis* (Franceschi) Makino; *Tetragonocalamus quadrangularis* Nakai)

South China. Branch nodes swollen, lowest nodes with spiny rootlets, leaves lanceolate or narrowly lanceolate, branches spreading and overhanging, culm surface rough, cultivated, naturalized, ornamental, potted plant, see *Arboretum Amazonicum* 5: 401. 1880, *Botanical Magazine* (Tokyo) 9: 71. 1895 and *Journal of the Linnean Society, Botany* 36(254): 443. 1904, *Botanical Magazine* (Tokyo) 28(329): 153-154. 1914, *Journal of Japanese Botany* 9(2): 90. 1933, *Report Fuji Bamboo Garden* 17: 10. 1972, *Cuscutania* 1(6): 1-29. 1991, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Journal of Bamboo Research* 10(1): 17-18. 1991, *Contributions from the United States National Herbarium* 39: 36. 2000.

in English: square bamboo, square-stem bamboo, square-stemmed bamboo

in Japan: shiho-chiku, shi-hou-chiku, shihou-chiku zoku, shikaku dake, kimmei-hou-chiku (with green oblong stripes on the bud canal), tatejima-hou-chiku, suow-shikaku dake

Tetrapogon Desf. = *Codonachne* Steud.,
Cryptochloris Benth., *Lepidopironia* A. Rich.

From the Greek *tetras*, *tetra* "four" and *pogon* "beard," referring to the tufts of hairs.

About 5-6 species, Mediterranean, Middle East, India to tropical and South Africa. Chloridoideae, Cynodonteae, short-lived perennial or annual, herbaceous, tufted or stoloniferous, auricles absent, leaf sheaths keeled often flabellate, ligule a narrow short membrane with a ciliate margin, leaf blades linear, plants bisexual, cleistogamous, spicate inflorescence more or less digitate, terminal solitary 1-sided spike, tough unilateral racemes exerted or partially enclosed in the uppermost sheath, spikelets laterally compressed in pairs or solitary with 2-5 fertile florets, lower

florets fertile, upper florets sterile and reduced to clavate lemmas, 2 large to inconspicuous glumes subequal papery 1-nerved, rounded or keeled fertile lemmas awned coriaceous 3-nerved, subapical awn, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 plumose stigmas, shady places, open habitats, savannah, dry places, poor soils, closely related to *Chloris*, type *Tetrapogon villosus* Desf., see *Nova Genera et Species Plantarum seu Prodrum* 1, 25. 1788, *Flora Atlantica* 2: 388-389, t. 255. 1799, *Nomenclator Botanicus. Editio secunda* 1: 393. 1840, *Tentamen Florae Abyssinicae ...* 2: 442 & Atlas t. 101. 1850, *Hooker's Icones Plantarum* 14: t. 1376. 1882 and *Flora of Ethiopia and Eritrea* 7: 159-163. 1995, S.A. Andanje & W.K. Ottichilo, "Population status and feeding habits of the translocated subpopulation of Hunter's antelope or hirola (*Beatragus hunteri*), in Tsavo East National Park, Kenya." *African Journal of Ecology* 37(1): 38-48. Mar 1999.

Species

T. bidentatus Pilg.

East Africa, Kenya, Tanzania. Perennial, 2-3 spikes, hairy spikelets, acuminate upper glume, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 129. 1904.

T. cenchriformis (A. Rich.) W.D. Clayton (*Chloris cenchriformis* (A. Rich.) Baill. ex Schweinf. & Asch.; *Chloris cenchriformis* (A. Rich.) Baill.; *Chloris geminata* Hochst.; *Chloris spathacea* Hochst. ex Steud.; *Cryptochloris spathacea* (Hochst. ex Steud.) Benth.; *Lepidopironia cenchriformis* A. Rich.; *Tetrapogon cenchriformis* (A. Rich.) Pilg.; *Tetrapogon geminatus* (Hochst.) Chiov.; *Tetrapogon macranthus* (Desv.) Benth.; *Tetrapogon macranthus* f. *geminatus* (Hochst.) Chiov.; *Tetrapogon macranthus* f. *monostachyus* Chiov.; *Tetrapogon macranthus* f. *spathaceus* (Hochst. ex Steud.) Chiov.; *Tetrapogon macranthus* var. *geminatus* (Hochst.) Chiov.; *Tetrapogon macranthus* var. *monostachyus* Chiov.; *Tetrapogon macranthus* var. *spathaceus* (Hochst. ex Steud.) Chiov.; *Tetrapogon spathaceus* (Hochst. ex Steud.) Hackel ex Dur. & Schinz; *Tetrapogon spathaceus* (Hochst. ex Steud.) Macloskie, nom. illeg., non *Tetrapogon spathaceus* (Hochst. ex Steud.) Hack. ex T. Durand & Schinz).

Tropical Africa, Arabia. Annual or short-lived perennial, erect, loosely to densely tufted, basal leafy shoots flattened, basal leaf sheaths keeled, leaf blades acute or obtuse, racemes solitary partially enclosed in the inflated uppermost leaf sheath, spikelets 5- to 8-flowered, reddish purple awn, glumes well-developed lanceolate, lowest lemma winged ciliate, provides grazing for cattle especially while it is young, low to medium grazing value, growing on red sand, plains, in open *Acacia* scrub, hillsides, sand dunes, limestone, roadsides, on well-drained stony ground, rocky places, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 177. 1831, *Tentamen Florae Abyssinicae*

... 2: 422, t. 101. 1850, *Synopsis Plantarum Glumacearum* 1: 204. 1854, *Flora* 38: 205. 1855, Georg August Schweinfurth (1836-1925), *Beitrag zur Flora Aethiopiens ...* 310. Berlin 1867, *Journal of the Linnean Society, Botany* 19: 106. 1881, *Hooker's Icones Plantarum* 14: t. 1376. 1882, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1070. 1893, *Conspectus Florae Africae* 5: 864. 1895, *Annuario del Reale Istituto Botanico di Roma* 6: 171. 1896 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2], Botany* 8(1,5,1): 211. 1904, *Annuario del Reale Istituto Botanico di Roma* 8(3): 352-354. 1908, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 101. 1956, *Kew Bulletin* 16: 250. 1962.

in Arabic: bené ekoissé, bu areiba

in Mali: tadjemait

in Niger: bené ekoissé, bu areiba, tadjemait, tawajaght

T. ferrugineus (Renvoize) S.M. Phillips (*Chloris ferruginea* Renvoize)

Somalia, Kenya. Perennial, densely tufted, erect, shortly rhizomatous, tough leaf blades, basal sheaths keeled, 5-8 flexuous racemes subdigitate exerted from the uppermost sheath, spikelets 3-flowered occasionally 1-flowered, lowest lemma ovate coriaceous with reddish hairs, second lemma fertile or male, 3rd lemma empty, hillsides, limestone, see *Kew Bulletin* 28(2): 195, f. 1. 1973, *Kew Bulletin* 42(2): 477-478. 1987.

T. spathaceus (Hochst. ex Steud.) Hack. ex T. Durand & Schinz (*Chloris spathacea* Hochst. ex Steud.; *Lepidopironia cenchriformis* A. Rich.; *Tetrapogon cenchriformis* (A. Rich.) Clayton; *Tetrapogon spathaceus* (Hochst.) T. Durand & Schinz; *Tetrapogon spathaceus* (Hochst. ex Steud.) Macloskie, nom. illeg., non *Tetrapogon spathaceus* (Hochst. ex Steud.) Hack. ex T. Durand & Schinz)

Africa. See *Tentamen Florae Abyssinicae ...* 2: 422, t. 101. 1850, *Synopsis Plantarum Glumacearum* 1: 204. 1854, *Conspectus Florae Africae* 5: 864. 1895 and *Reports of the Princeton University Expeditions to Patagonia, 1896-1899, Volume viii, 1 [2], Botany* 8(1,5,1): 211. 1904, *Kew Bulletin* 16: 250. 1962.

T. tenellus (J. König ex Roxb.) Chiov. (*Chloris tenella* J. König ex Roxb.; *Chloris triangulata* Hochst. ex A. Rich.; *Ctenium indicum* Spreng.; *Lepidopironia triangulata* (Hochst. ex A. Rich.) Hochst. ex Schumach.; *Tetrapogon triangularis* (Hochst. ex A. Rich.) Hochst.; *Tetrapogon triangularis* (Hochst. ex A. Rich.) Schweinf.; *Tetrapogon triangularis* var. *agowensis* Chiov.; *Tetrapogon triangularis* var. *sericatus* Chiov.)

India, eastern Africa, Tanzania, Ethiopia, Arabia. Short-lived perennial or annual, weak, slender, erect or ascending, loosely tufted, basal leaf sheaths keeled, scabrid leaf blades flat acuminate, spikes solitary or paired, solitary racemes exerted or partially enclosed in the uppermost sheath, spikelets 4- to 7-flowered and 3- to 4-awned, lower 3 to 5

florets fertile, glumes persistent, upper glume ovate sharply acute, lowest lemma keeled coriaceous, sterile upper lemmas reduced, native pasture species, weed, growing in moist loamy sand, bushveld, in red sand, fertile soils, along roadsides, in dry places, in open *Acacia* scrub, in burned and cleared areas, rocky soil, disturbed sites, gardens, open woodland, abandoned fields and cultivation, on well-drained stony ground, see *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 38, 61. 1813, *Flora Indica; or Descriptions ...* 1: 330. 1820, *Systema Vegetabilium, editio decima sexta* 1: 274. 1825, *Tentamen Florae Abyssinicae ...* 2: 409. 1850, *Bulletin de l'Herbier Boissier* 2: App. 2: 97. 1894, *Fl. Br. India* 7: 291. 1896, *Annuario del Reale Istituto Botanico di Roma* 6: 171, t. 15. 1896 and *Annuario del Reale Istituto Botanico di Roma* 8(3): 352. 1908, *Grass. Saudi Arabia* 302. 1989, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

in Somalia: halfo, jeebin, hol

T. villosus Desf. (*Chloris tetrapogon* P. Beauv.; *Chloris villosa* (Desf.) Pers.; *Tetrapogon villosum* Desf.)

North and northeast Africa, Arabia, India. Perennial, densely tufted, slender, glaucous, erect, leaves mostly basal, basal leafy shoots strongly flattened, basal sheaths keeled, leaf blades tough glabrous narrowly linear, racemes paired exerted or partially enclosed, spikelets 4- to 6-flowered, all florets awned, lower 1-2 florets fertile, upper glume mucronate from a rounded apex, lower glume acute narrowly lanceolate-oblong, lowest lemma coriaceous ciliate with membranous wings, a good fodder, useful for erosion control, found on dry rocky hills, sterile land, plains, dry limestone and sandstone, saline *usar* tracts, similar to *Tetrapogon bidentatus*, see *Flora Atlantica* 2: 389, t. 255. 1799, *Syn. Pl.* 1: 87. 1805, *Essai d'une Nouvelle Agrostographie* 158. 1812 and *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994.

in India: kalia, khera madhana, kokuna, phulni, phundra jadi, sager

in Somalia: hamkhari

Tetrarrhena R. Br. = Ehrharta Thunb.

From the Greek *tetra* "four" and *arrhen* "male," the species have 4 stamens.

About 6 species, Australia. Bambusoideae, Oryzodae, Ehrharteae, or Ehrhartoideae, Ehrharteae, perennial, wiry, often long and scrambling, scandent or not, much-branched, woody or herbaceous, contracted or loose rhizomes, stoloniferous and decumbent, nodes glabrous, internodes hollow, leaf blades flat or rolled, auricles absent, ligule usually membranous, plants bisexual, inflorescence few spikeleted, unbranched or scarcely branched single raceme or spike-like panicle, spikelets sessile or shortly pedicellate, spikelets 3-flowered, rachilla terminated by a fertile floret, the

lower 2 florets sterile and reduced to empty lemmas, 2 glumes very unequal, lower glume 1-nerved, upper glume 5-nerved, laterally compressed lemmas, sterile lemmas hardened and not awned, palea present, 2 lodicules hyaline, 4 or 2 stamens, ovary glabrous, shade species, often referred to *Ehrharta* Thunb., type *Tetrarrhena distichophylla* (Labill.) R. Br., see *Kongl. Vetenskaps Academiens Handlingar* 40: 217, pl. 8. 1779, *Prodromus Florae Novae Hollandiae* 209-210. 1810, *Systema Vegetabilium, editio decima sexta* 2: 114-115. 1825, *Synopsis Plantarum Glumacearum* 1: 7. 1855 [1853] and *Telopea* 1: 40-43. 1975, *Record of the Queen Victoria Museum, new series* 55: 4. 1977, *Blumea* 28(1): 181-194. 1982, *Restoration Ecology* 5(3): 191-203. Sep 1997, *Contributions from the United States National Herbarium* 39: 56. 2000, T.R. Read, S.M. Bellairs, D.R. Mulligan and D. Lamb, "Smoke and heat effects on soil seed bank germination for the re-establishment of a native forest community in New South Wales." *Austral. Ecology* 25(1): 48-57. Feb 2000, *Austral. Ecology* 27(1): 32-54. Feb 2002.

Species

T. acuminata R. Br. (*Ehrharta acuminata* (R. Br.) Spreng.)

Australia. See *Systema Vegetabilium, editio decima sexta* 2: 114. 1825.

T. distichophylla (Labill.) R. Br. (*Ehrharta distichophylla* Labill.)

Tasmania, South Australia. Perennial, stems pubescent and decumbent, sometimes mat-forming, raceme erect, spikelets pubescent, 2 sterile florets below a single fertile floret, sterile lemmas obtuse or truncate, see *Novae Hollandiae Plantarum Specimen* 1: 90, t. 117. 1804, *Prodromus Florae Novae Hollandiae* 210. 1810.

in English: hairy rice grass

T. juncea R. Br. (*Ehrharta juncea* (R. Br.) Spreng.)

Australia, New South Wales, Queensland, Tasmania. Perennial, tufted, wiry, culms and leaves more or less rough, much branched and often long and scrambling or climbing, ligule very short and membranous, blade flat, a narrow spike-like raceme few-spikeleted, spikelets pedicellate and solitary, glumes unequal and keeled, all lemmas awnless, the 2 lower lemmas empty, palea acute and keeled, on sandstone, food plant of the indigenous Australian butterflies *Oreixenica kershawi kanuda*, Striped Xenica, and *Oreixenica kershawi kershawi*, Kershaw's brown, *Paralucia pyrodiscus lucida*, Eltham Copper, *Pasma tasmanicus*, Tasmania Skipper, *Signeta flammeata*, Bright Chilled Skipper, *Toxidid andersoni*, Anderson's Skipper, see *Systema Vegetabilium, editio decima sexta* 2: 114. 1825, *Flora Australiensis: A Description ...* 7: 554. 1878.

in English: wiry rice grass, forest wire grass

T. laevis R. Br. (*Ehrharta drummondiana* (Nees) Steud.; *Ehrharta laevis* (R. Br.) Spreng.; *Tetrarrhena drummondiana* Nees)

Australia. See *Systema Vegetabilium, editio decima sexta* 2: 115. 1825, *Synopsis Plantarum Glumacearum* 1: 7. 1855 [1853].

T. oreophila D.I. Morris (*Ehrharta oreophila* (D.I. Morris) L.P.M. Willemse)

Australia. Two stamens, see *Record of the Queen Victoria Museum, new series* 55: 4. 1977, *Blumea* 28(1): 193. 1982.

T. oreophila D.I. Morris var. *minor* D.I. Morris (*Ehrharta oreophila* var. *minor* (D.I. Morris) L.P.M. Willemse)

Australia.

T. oreophila D.I. Morris var. *oreophila*

Australia.

T. turfosa N. Walsh (Latin *turfosus* "peaty")

Australia, New South Wales, Victoria, Tasmania. Perennial, rhizomatous, forming compact tufts, culms and leaves smooth, glabrous sheath encircling the culm, ligule a ciliate rim, blade involute, inflorescence an erect spike-like raceme, spikelets sessile and purplish, glumes subequal, sterile lemmas oblong and blunt, fertile lemma keeled and nerved, palea membranous, in swamps and water courses, see *Muelleria* 7(1): 95. 1989.

Thalysia Kuntze = Zea L.

Greek *thalysia* "offerings of the first-fruits, made to Artemis," *thalos*, *thallos* "scion, child."

Panicoideae, Andropogoneae, Tripsacinae, see *Species Plantarum* 2: 971-972. 1753, *Revisio Generum Plantarum* 2: 794. 1891 and *Contributions from the United States National Herbarium* 46: 613, 635-639. 2003.

Thamnocalamus Munro = Fargesia Franch., Himalayacalamus Keng f.

Greek *thamnos* "shrub, bush" and *kalamos* "reed," referring to the nature of the plant.

About 4-7 species, temperate, China, Himalaya, South Africa, Madagascar. Bambusoideae, Bambusodae, Bambuseae, or Bambusoideae, Bambuseae, Arundinariinae, perennial, persistent, unarmed, woody, shrubby or small tree, leafy, hollow, sympodial, unicaspitose or culms in single caespitose clumps, culms drooping to pendulous, nodes marked by a ring, manifold branching, main branch indistinct, culm sheaths deciduous, auricles small or absent, ligule a fringed membrane, leaf blades linear-lanceolate and pseudopetiolate, leaves clustered in groups of 2-4 at the end of short joined branchlets, rhizome pachymorph without elongated neck, plants bisexual, flowering semelactant,

contracted inflorescence racemose or paniculate, spikelets solitary and pedicellate, 1-several florets bisexual, lowermost spikelet sessile, each of 3-5 spikelets subtended by a bract, bracts of the inflorescences large and sheathing, 2 glumes more or less equal, upper glume pointed, lemma often awned, palea present, 3 free lodicules membranous and ciliate, 3 stamens, ovary glabrous without apical appendage, usually 2-3 stigmas plumose, forest, often referred to *Fargesia* and *Himalayacalamus*, type *Thamnocalamus spathiflorus* (Trin.) Munro, see *Flora Boreali-Americana* 1: 73. 1803, *Transactions of the Linnean Society of London* 26(1): 33-34, 157. 1868, *Gen. Pl.* 3(2): 1208. 1883, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 2: 93. 1887, *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1067. 1893 and *J. Bamboo Research* 2(1): 15, 23-24. 1983, T.R. Soderstrom & R.P. Ellis, "The position of bamboo genera and allies in a system of grass classification." in *Grass Systematics and Evolution*, 225-238. (Eds T.R. Soderstrom, K.W. Hilu, C.S. Campbell and M.E. Barkworth) Smithsonian Inst., Washington 1987, *Kew Bulletin* 44(2): 349-367. 1989, *Flora Reipublicae Popularis Sinicae* 9(1): 1-761. 1996, *Contributions from the United States National Herbarium* 39: 57, 62-63, 115-116. 2000, *Oryx* 35(3): 250-259. July 2001.

Species

T. aristatus (Gamble) E.G. Camus (*Arundinaria aristata* Gamble; *Thamnocalamus spathiflorus* subsp. *aristatus* (Gamble) McClint.)

India, Tibet, Yadong. Erect, shrubby, caespitose, thick-walled, vertical streaks, internode pubescent, culm sheath coriaceous, sheath blade hastate, sheath ligule with short pubescence, leaves elliptic-lanceolate on the top of the branch, leaf sheath loose and keeled, ligule acute, 3 stamens, ovary glabrous, usually flowers gregariously, young shoots edible, leaves used as a fodder eaten by elephants, strong culms used for making *hookah*-pipes, grows in moist mountain slopes, ravines, see *Transactions of the Linnean Society of London* 26(1): 34. 1868, *Annals of the Royal Botanic Garden, Calcutta* 7: 18-20, t. 17. 1896 and *Kew Bull.* 3: 315. 1912, *Bambusées* 54, t. 37, f. E. 1913, *Moorea* 4: 20. 1985, *Kew Bulletin* 44(2): 349-367. 1989, *Cell and Chromosome Research* 15(3): 12. 1992.

in India: babain, babam, bhebham, nigala, nigalo, pat-hioo, rato, rato-nigala, ratonigalo

T. falconeri Hook.f. ex Munro (*Arundinaria falconeri* (Hook.f. ex Munro) Benth. & Hook. ex Gamble; *Arundinaria falconeri* (Hook.f. ex Munro) Benth. & Hook.f. ex Duthie; *Arundinaria falconeri* (Hook.f. ex Munro) Benth. & Hook.f.; *Arundinaria falconeri* (Hook.f. ex Munro) Duthie; *Arundinaria nobilis* Mitf.; *Drepanostachyum falconeri* (Hook.f. ex Munro) J.J.N. Campb. ex D.C. McClint.; *Fargesia collaris* T.P. Yi; *Fargesia gyirongensis* Yi; *Himalayacalamus falconeri* (Munro) Keng f.; *Himalayacalamus*

falconeri (Hook.f. ex Munro) Keng f.; *Thamnocalamus falconeri* Munro) (named for the Scottish (d. Forres, Morayshire) botanist Hugh Falconer, 1808-1865 (London), physician, M.D. Edinburgh 1829, assistant surgeon with the East India Company in Bengal, geologist, palaeobiologist, plant collector, a friend of Captain Proby Thomas Cautley, in India from 1830 to 1855, in 1832 appointed Superintendent of the Serampore [Saharanpur] Botanical Garden, in 1844 a Fellow of the Linnean Society, in 1845 Fellow of the Royal Society, in 1848 Superintendent of the Calcutta Botanic Gardens, collected for the Herbarium of the late East India Company, professor of botany at the Calcutta Medical College, vice-president of the Royal Society, foreign secretary of the Geological Society, among his writings *Descriptive Catalogue of the Fossil Remains of Vertebrata from the Sewalik Hills, the Nerbudda, Perim Island*, etc. in the Museum of the Asiatic Society of Bengal. Calcutta 1859. See Charles Murchison, *Palaeontological Memoirs and Notes of the Late Hugh Falconer, A.M., M.D.* London 1868; J.H. Barnhart, *Biographical notes upon botanists.* 1: 525. 1965; John Challinor, in *D.S.B.* 4: 518-519. 1981; Isaac Henry Burkill, *Chapters on the History of Botany in India.* Delhi 1965; J.D. Hooker & Thomas Thomson (1817-1878), *Flora Indica.* 67-68. 1855; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913.* 2: 147-148. London 1914; [East-Indian Company], *A Catalog of the Library of the Hon. East-India Company.* 1845-1851; John Keay, *Honourable Company: A History of the English East India Company.* New York. 1991; R. Desmond, *The European Discovery of the Indian Flora.* Oxford 1992; H.B. Woodward, *The History of the Geological Society of London.* 108-109. London 1908; C. Murchison, compiled and edited by, *Description of the Plates of the Fauna Antiqua Sivalensis from Notes and Memoranda* by H.F. London 1867; Casey A. Wood, *An Introduction to the Literature of Vertebrate Zoology.* Based chiefly on titles in the Blacker Library of Zoology ... and other libraries of McGill University, Montreal. London 1931; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 121. 1972)

India, Sikkim. Erect and arching, clump-forming, shrubby, slender, glaucous and greenish, thornless, thick-walled, many branches at each node, rhizomes not running, internodes red and smooth, culm sheaths glabrous, leaf sheaths glabrous, large and loose panicle, inflorescence often purplish, long racemes and short spathes, lodicules ciliate, 3 stamens, ovary glabrous, stigmas plumose, new culms with white wax, flowers gregariously, ornamental, edible shoots, culms for weaving and *hookah*-pipes, fishing rods and basketry, animal fodder, found in limestone rocky areas, moist temperate forests, on steep slopes, see *Transactions of the Linnean Society of London* 26(1): 34. 1868, *Grasses N. W. India* 46. 1883, *Genera Plantarum* 3: 1208. 1883, *The Fodder Grasses of Northern India* 46. 1883, *The Bamboo*

Garden 178. 1896, *Annals of the Royal Botanic Garden, Calcutta* 7: 20. 1896 and *Journal of Bamboo Research* 2(1): 21, 23-24, f. 2. 1983, *Journal of Bamboo Research* 2(2): 37, f. 8. 1983, *Kew Bull.* 44: 363. 1989, *Bamboo Soc. Newsletter* 15: 12. 1992, *Cell and Chromosome Research* 15(3): 12. 1992, *Edinburgh J. Bot.* 51: 308, 314, 316. 1994.

in English: fountain bamboo, fairy bamboo

Local name: singhane

in India: chye, deo ningal, deo ringal, dev ringal, dueoreningalo, kag, maling, ningal, pao muarh, pasmung, phurse, phurse nigalo, phurse nigalo, pummoon, purnoon, ringal, singhane

T. ibityensis (A. Camus) Ohrnb. (*Arundinaria ibityensis* A. Camus)

Madagascar, Mt. Ibity. See *Bulletin de la Société Botanique de France* 107: 211. 1960, *Bamboos of the World* 10. 1996.

T. spathaceus (Franchet) Soderstr. (*Arundinaria murielae* Gamble; *Arundinaria sparsiflora* Rendle; *Arundinaria spathacea* (Franch.) D.C. McClint.; *Fargesia murielae* (Gamble) T.P. Yi; *Fargesia spathacea* Franch.; *Sinarundinaria murielae* (Gamble) Nakai; *Sinarundinaria sparsiflora* (Rendle) Keng f.; *Thamnocalamus murielae* (Gamble) Demoly; *Thamnocalamus sparsiflorus* (Rendle) Keng f.; *Thamnocalamus spathaceus* (Franch.) C.D. Chu & C.S. Chao, nom. illeg., non *Thamnocalamus spathaceus* (Franch.) Soderstr.)

China. See *Bulletin Mensuel de la Société Linnéenne de Paris* 2: 1067. 1893 and *Journal of the Linnean Society, Botany* 36(254): 436-437. 1904, *Bulletin of Miscellaneous Information Kew* 1920(10): 344-345. 1920, *Journal of Japanese Botany* 11(1): 1-2. 1935, *Technical Bulletin of the National Forestry Research Bureau* 8: 14-15. 1948, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 153. 1957, *Brittonia* 31(4): 495. 1979, *Acta Phytotaxonomica Sinica* 18(1): 23. 1980, *Bamboo Research* 1: 5. 1981, *Journal of Bamboo Research* 2(1): 39. 1983, *Bulletin de l'Association Française de Botanique* 13: 10. 1990.

in English: umbrella bamboo

in China: shennong jianzhu

T. spathiflorus (Trin.) Munro (*Arundinaria spathiflora* Trin.)

Asia, Nepal. Densely tufted, erect, shrubby, gregarious, elegant, culms fistular, smooth, nodes much raised marked by a ring formed by the scars of the fallen sheath, internode striate, culm sheaths caducous densely pubescent and coriaceous, branchlets mainly from the upper nodes, leaves clustered at the ends of short branchlets, leaf sheaths glabrous, inflorescence a large panicle, spikelets loose bearing 2 empty glumes and 4-8 florets, 2 glumes unequal, 3 stamens, ovary glabrous, 3 plumose stigmas recurved, ornamental, usually flowers gregariously, strong culms used for

making hookah-pipes and fishing rods, for matting and basketry, common undergrowth, evergreen forests, mountain conifer forest, in moist shady areas, slopes, ridges, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(6): 617. 1835, *Transactions of the Linnean Society of London* 26(1): 34. 1868 and *Kew Bulletin* 44: 363. 1989.

in India: deo-ringal, deoningal, garu, myoosay, nigal, parikh, purmick, ringal, tham, tham ringal

T. spathiflorus (Trinius) Munro subsp. *nepalensis* Stapleton Nepal, China. See *Edinburgh Journal of Botany* 51(2): 283. 1994.

T. spathiflorus (Trinius) Munro subsp. *occidentalis* Stapleton

India. See *Edinburgh Journal of Botany* 51(2): 283. 1994.

T. spathiflorus (Trinius) Munro subsp. *spathiflorus* (*Arundinaria aristata* Gamble; *Arundinaria spathiflora* Trinius; *Thamnocalamus aristatus* (Gamble) E.G. Camus; *Thamnocalamus spathiflorus* subsp. *aristatus* (Gamble) McClintock)

India, Himachal Pradesh, Nepal, Bhutan, Sikkim, the Himalayas. Forming thickets, clumps more or less loose, internodes red or yellow, culm sheaths symmetrical and tough, branchlets pendulous, stems used for pipes and baskets, see *Annals of the Royal Botanic Garden, Calcutta* 7: 20. 1896 and *Moorea* 4: 20. 1985.

T. spathiflorus (Trinius) Munro var. *bhutanensis* Stapleton Bhutan. Waxy, see *Edinburgh Journal of Botany* 51(2): 283. 1994.

Local name: hum

T. spathiflorus (Trinius) Munro var. *crassinodus* (Yi) Stapleton (also *crassinoda*) (*Fargesia crassinoda* T.P. Yi)

China, Nepal. Culm sheath caducous, leaf blades triangular or linear-lanceolate and erect, leaf sheath glabrous, leaf auricle absent, mountain conifer forest, see *Journal of Bamboo Research* 2(2): 24, f. 3. 1983, *Edinburgh Journal of Botany* 51(2): 284. 1994.

T. tessellatus (Nees) Soderstrom & Ellis (*Arundinaria ibityensis* A. Camus; *Arundinaria tessellata* (Nees) Munro; *Nastus tessellatus* Nees; *Thamnocalamus ibityensis* (A. Camus) Ohrnberger; *Thamnocalamus tessellatus* Munro) (Latin *tessellatus*, *a*, *um* "checkered, tessellated, of small square stones," referring to the leaf surface)

Africa, Madagascar. Perennial, branched or much-branched, growing in dense leafy clumps, rhizomatous with woody and stout rhizomes, ligule a fringed membrane, leaf blade cross-veined, leaves margins harsh and minutely spiny, inflorescence racemose or paniculate, a spatheate single raceme or a contracted panicle, flowers bisexual, 3 stamens, ovary hairy or glabrous, grains ovate to oblong,

flowering seems to be sporadic, flowering followed by death, canes used for Zulu shields, grazing value unknown, common in wet places, near water, among rocks on mountain tops, along streams, see *Florae Africae Australioris Illustrationes Monographicae* 463. 1841, *Transactions of the Linnean Society of London* 26(1): 31. 1868 and *Bulletin de la Société Botanique de France* 107: 211. 1960, *Bothalia* 14(1): 54. 1982, *Bamboos of the World* 10. 1996.

in English: berg bamboo, miniature bamboo, Cape bamboo, Drakensberg bamboo

in South Africa: bergbamboes, Drakensberg bamboes, leqala, maqala

Thaumastochloa C.E. Hubb.

From the Greek *thauma* “a wonder, marvel,” *thaumastos* “wonderful, marvellous, strange” and *chloe*, *chloa* “grass,” referring to the nature of the plant.

Some 7-8 species, Australia to New Guinea. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, annual or perennial, herbaceous, solid internodes, auricles absent, ligule a membrane or a ciliate rim, plants bisexual, inflorescence a spike, peduncle deciduous curved and pointed, pedicelled spikelets reduced to a glume, lower floret barren, 2 glumes more or less equal, lower glume oblong 2-keeled and 5- to 9-nerved, upper glume 3- to 5-nerved, proximal lemmas 2-nerved awnless, palea present, 2 fleshy lodicules, 3 stamens, ovary glabrous, woodland, related to or derived from *Heteropholis*, type *Thaumastochloa pubescens* (Benth.) C.E. Hubb., see *Supplementum Plantarum* 13, 114. 1781 [1782], *De Fructibus et Seminibus Plantarum*... 3: t. 181, f. 3B. 1805, *Supplementum Carpologicae* 1(1): 3, t. 181, f. 3. 1805, *Révision des Graminées* 1: 153-154. 1829 and *Hooker's Icones Plantarum* ser. 5, 4(1): t. 3313, 3314. 1936, *Journal of the Royal Society of Western Australia* 44(3): 77-83. 1961, *Taiwania* 16(2): 216-218. 1971, R. de Koning, M.S.M. Sosef and J.F. Veldkamp, “A revision of *Heteropholis* and *Thaumastochloa* (Gramineae).” *The Gardens' Bulletin Singapore* 36(1): 137-162. 1983, *Austrobaileya* 3(1): 79-99. 1989, *Journal of Animal Ecology* 69(6): 975-984. Dec 2000, *Flora of Australia* 43: 275. 2002.

Species

T. brassii C.E. Hubb. (*Pogonatherum corymbosum* var. *brassii* (C.E. Hubb.) Roberty; *Rottboellia corymbosa* subvar. *brassii* (C.E. Hubb.) Roberty)

Australia, Queensland. See *Supplementum Plantarum* 114. 1781 [1782].

T. heteromorpha B.K. Simon

Australia. See *Austrobaileya* 3(1): 90-92, f. 8-9. 1989.

T. major S.T. Blake

Australia. See *Department of Botany: University of Queensland: Research (Report)* 1(18): 20. 1941.

T. monilifera Sosef & de Koning

Australia. See *The Gardens' Bulletin Singapore* 36(1): 153. 1983.

T. pubescens (Benth.) C.E. Hubb. (*Ophiuros corymbosus* var. *pubescens* Benth.; *Ophiuros pollockii* C. Marquand; *Ophiuros pubescens* (Benth.) Domin; *Rottboellia corymbosa* subvar. *pubescens* (Benth.) Roberty; *Thaumastochloa constricta* S.T. Blake; *Thaumastochloa pubescens* (Domin) C.E. Hubb.)

Australia. See *Flora Australiensis: A Description* ... 7: 512. 1878 and *Bibliotheca Botanica* 85(2): 262. 1915, *Bulletin of Miscellaneous Information Kew* 1925: 284. 1925, *Department of Botany: University of Queensland: Research (Report)* 1(18): 19. 1941, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 66. 1960.

T. rariflora (F.M. Bailey) C.E. Hubb. (*Rottboellia corymbosa* subvar. *rariflora* (Bailey) Roberty; *Rottboellia rariflora* F.M. Bailey)

Australia. Raceme of a single spikelet, see *Queensland Dep. Agric. Bot. Bull.* 8: 86. 1893.

T. rubra Sosef & de Koning

Australia, Northern Territory. See *The Gardens' Bulletin Singapore* 36(1): 157. 1983.

T. striata Sosef & de Koning

Australia, Northern Territory. See *The Gardens' Bulletin Singapore* 36(1): 156, f. 6a. 1983.

Thelepogon Roth ex Roemer & Schultes = Rhiniachne Steud.

Greek *thele* “nipple” and *pogon* “beard,” possibly referring to the stamens.

One species, tropical Africa, Asia, Indonesia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Ischaeminae, annual, stout, coarse, herbaceous, erect or decumbent, caespitose, distinctly bitter, often prop-rooted, auricles absent, sheaths hairy, ligule membranous, papery leaves acuminate and cordate, plants bisexual, inflorescence terminal with many digitate or subdigitate racemes, spikelets in pairs, 2 florets, sessile spikelets acute rugose and dorsally compressed, barren pedicel, pedicellate spikelet reduced to a naked linear pedicel, upper floret bisexual, proximal incomplete florets male, 2 glumes rugose wingless subequal, lower glume entire 7- to 9-nerved, upper glume 1- to 3-nerved, palea 2-nerved, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, eaten by cattle when young, open habitats, wet soils, seasonally moist areas, heavy soils, disturbed places, similar to *Ischaemum*, type

Thelepogon elegans Roth, see *Observationes Botanicae* 3: 25. 1783, *Systema Vegetabilium* 2: 46, 788. 1817, *Novae Plantarum Species* 62. 1821, *Systema Vegetabilium, editio decima sexta* 1: 299. 1825 [1824], *Synopsis Plantarum Glumacearum* 1: 360. 1854 and *Austrobaileya* 4(1): 105, f. 1. 1993.

Species

T. elegans Roth (*Andropogon princeps* A. Rich.; *Jardinea abyssinica* Steud.; *Meoschium elegans* (Roth) Arn. & Nees; *Rhiniachne princeps* (A. Rich.) Hochst. ex Steud.; *Rhytachne principis* (A. Rich.) T. Durand & Schinz; *Sehima elegans* (Roth) Roberty; *Thelepogon elegans* Roth ex Roem. & Schult.; *Thelepogon elegans* Roem. & Schult.)

Tropical Africa, Namibia, Indonesia, Southeast Asia. Annual, coarse, stout, tufted, stilt-rooted, branching from the base, leaf blades lanceolate with clasping base, inflorescence a cluster of very fragile racemes, sessile spikelet awned, pedicelled spikelet absent or minutely vestigial, lower glume of sessile spikelet narrowly ovate, upper glume ridged, good pasturage, fodder, fed to horses as a bitter tonic, common in wet ground, disturbed sites, on black soil, light soil, weedy places, see *Flora Aegyptiaco-Arabica* 178. 1775, *Gramineae* 67-68. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 199-200. 1843, *Tentamen Florae Abyssinicae ...* 2: 470. 1850 and *Petite Flore de l'Ouest-Africain* 410. 1954.

in Niger: bir-nya, bir-nya hâmo, borla, d'wâtamna, dhâtayia, han-handé, hârbigi

in Nigeria: âshârboen, daatà daatàà, daatanniyàà, daatanniyààr daacii, dachi, daddàatàà, dandata, data data, datanniya, datarniya, dwaatanna, dwaatarniya, gishirin dawaakii, hanhande, kagera kagum, labaho, tagarawal

in Senegal: engen etyerun, ondeuss

in India: donga tudi, gaddi poolu, ghasatki, kadi, karmod, thirpa, tirpha, tolia, tori barta

Thellungia Stapf = *Eragrostis* Wolf

After the Swiss botanist Albert Thellung, 1881-1928, at the Botanical Museum of the University of Zürich, among his numerous publications are "*Lepidium-Studien.*" *Bull. Herb. Boissier.* sér. 2. 4(7): [695]-716. 1904, *Die Gattung Lepidium* (L.) R. Br. Zürich 1906 and *La Flore adventice de Montpellier.* Cherbourg 1912; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 371. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 398. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University.* Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering*

Plants of Mexico. 733-734. Philadelphia 1964; Stafleu & Cowan, *Taxonomic literature.* 6: 242-245. Utrecht 1986.

One species, Australia. Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eragrostidinae, perennial, caespitose, compact, erect, robust, tough, wiry, herbaceous, glabrous nodes, auricles absent, ligule a fringe of short hairs, leaf blade flat and rough, plants bisexual, cleistogamous, narrow inflorescence paniculate, spikelets more or less sessile, bisexual florets usually 3, 2 glumes very unequal and pointed or acute, lemmas and glumes awnless, lemma with long-acuminate apex, palea 2-nerved and 2-keeled, 3 stamens, ovary glabrous, 2 stigmas, small fruit compressed, in grassland, brigalow scrub, in swamps, alluvial flats, disturbed areas, often referred to *Eragrostis* and *Sporobolus*, type *Thellungia advena* Stapf, see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809 and *Bulletin of Miscellaneous Information Kew* 1920(3): 97-98, f. 1-11. 1920, *Acta Bot. Neerl.* 15: 157. 1966, *Revista Brasileira de Botânica* 23(2): 177-194. 2000, *Contributions from the United States National Herbarium* 41: 81-115, 220. 2001, *Flora of Australia* vol. 44B, Poaceae 3: 341, 384, 392-393. 2005.

Species

T. advena Stapf (*Eragrostis advena* (Stapf) S.M. Phillips)

Queensland, New South Wales, Northern Territory. Perennial, compactly tufted, robust, leaf blades flat and folded, inflorescence contracted and cylindrical, cleistogamy, spikelets subsessile, persistent or tardily deciduous membranous glumes, lemma acute, pales acute, grows in semi-arid areas, on heavy clay soils, on black soils, see *Kew Bulletin* 37(1): 159. 1982.

in English: coolibah grass

Themeda Forssk. = *Androscepia* Brongn., *Anthistiria* L.f., *Aristaria* Jungh., *Heterelytron* Jungh., *Perobachne* J. Presl

From *thaemed*, an Arabic name for a grass or for a ditch with water; see Pehr (Peter) Forsskål (1732-1763), *Flora Aegyptiaco-Arabica.* 178. Copenhagen 1775; Frank Nigel Hepper & Ib Friis, *The Plants of Pehr Forsskal's "Flora Aegyptiaco-Arabica"* collected on the Royal Danish Expedition to Egypt and the Yemen 1761-1763. Royal Botanic Gardens, Kew [in association with the Botanical Museum, Copenhagen] 1994.

About (10-)18/19 species, Old World tropics, mainly in Southeast Asia and Australia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Anthistiriinae, annual or perennial, coarse, herbaceous, caespitose, leafy, rarely stoloniferous, auricles absent, ligule a very short membrane more or less fringed,

leaf sheaths variable, leaves linear and narrow, plants bisexual, inflorescence a loose and leafy panicle, racemes modified and often compacted into dense clusters, solitary racemes composed of 2 homogamous pairs of spikelets and 2-4 sessile spikelets, each raceme embraced by sheathing spatheoles, flexuous pedicels, sessile spikelet 2-flowered, fertile spikelets within an involucre of male or barren spikelets, fertile spikelets falling separately from involucre, sessile spikelets terete and awned, homogamous spikelets persistent and sterile, pedicellate spikelets similar to involucre spikelets and awnless, 2 glumes more or less equal, lower floret reduced to a lemma, upper floret perfect, hairy pungent callus, palea present or absent, 2 lodicules free and fleshy, 3 stamens, ovary apex glabrous, 2 stigmas, fruit grooved and compressed, native pasture species, forage species, ornamental, weed species, paper-making, open habitats, rocky places, along roadsides, semiarid open woodlands understoreys, derived grasslands, savannah, grassland, rainforest, closely related to *Heteropogon*, type *Themeda triandra* Forssk., see *Flora Aegyptiaco-Arabica* 178. 1775, *Nova Graminum Genera* 35. 1780 [1779], *Supplementum Plantarum* 113. 1781, *Reliquiae Haenkeanae* 1(4-5): 348, t. 48. [Collector Thaddäus Peregrinus Xaverius Haenke, 1761-1816 or 1817] Pragae [Praha] 1825-1835, *Voyage autour du Monde* 77-78. 1829 [1831], *Reliquiae Haenkeanae* 1(4-5): 348, t. 48. 1830, *Tijdschrift voor Natuurlijke Geschiedenis en Physiologie* 7: 294-297. 1840 and *Pakistan Journal of Botany* 19: 193-200. 1987, *Folia Primatologica* 48: 78-120. 1987, *Bulletin of Botanical Laboratory, North-Eastern Forestry Institute* 9(2): 55. 1989, Connie L. Soros & Nancy G. Dengler, "Ontogenetic derivation and cell differentiation in photosynthetic tissues of C3 and C4 Cyperaceae." *Am. J. Bot.* 88: 992-1005. 2001, *Flora of Australia* vol. 43, Poaceae 1: 170, 171, 172, 175, 176, 177, 225, 240, 248, 274. 2002, *Contributions from the United States National Herbarium* 46: 65, 68, 69, 248, 536, 613. 2003, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Austral. Ecology* 30(1): 74-78, 79-90. Feb 2005, Wal Whalley, "Grassland regeneration and reconstruction: the role of grazing animals." *Ecological Management and Restoration* 6(1): 3-4. Apr 2005, Suzanne M. Prober & Kevin R. Thiele, "Restoring Australia's temperate grasslands and grassy woodlands: integrating function and diversity." *Ecological Management and Restoration* 6(1): 16-27. Apr 2005, *Ecological Management and Restoration* 6(1): 34-42, 43-50, 51-60, 68-69, 69-71, 73-75, Apr 2005, *Journal of Ecology* 93(2): 384-394. Apr 2005, *Journal of Applied Ecology* 42(3): 556-566. June 2005, *Austral. Ecology* 30(4): 445-464. June 2005 [Patch dynamics in grazed subtropical native pastures in southeast Queensland.], Beth Gott, "Aboriginal fire management in southeastern Australia: aims and frequency." *Journal of Biogeography* 32(7): 1203-1208. July 2005.

Species

T. anathera (Nees ex Steud.) Hack. (*Androscepia anathera* (Nees ex Steud.) Andersson; *Androscepia anathera* var. *glabrescens* Andersson; *Androscepia anathera* var. *hirsuta* Andersson; *Anthistiria anathera* Nees ex Steud.; *Themeda anathera* var. *glabrescens* (Andersson) Hack.; *Themeda anathera* var. *hirsuta* (Andersson) Hack.)

Nepal, India, lower hills of Himachal Pradesh, Punjab, Uttar Pradesh, montane tract of West Bengal, Pakistan. Perennial, erect or geniculately ascending, tufted, very slender, leafy, culms long and curving, usually decumbent at the base, ligule membranous, leaves mostly basal and very narrow, very narrow lax elongate panicle with paired or solitary branches, involucre spikelets surrounding a sessile spikelet or spikelets, the whole raceme deciduous with the sessile spikelets attached, narrowly oblong pedicel-like callus, tolerant to grazing and transplanting, useful for erosion control, cut for fodder, hay, forage, cyanogenetic, may cause poisoning in green state, subtropical and temperate hill grasslands, sheltered shady slopes, resembling *Iseilema*, see *Synopsis Plantarum Glumacearum* 1: 402. 1854, *Nova Acta Regiae Societatis Scientiarum Upsaliensis* ser. 3 2: 249. 1856, *Monographiae Phanerogamarum* 6: 669-670. 1889 and *Bulletin du Muséum d'Histoire Naturelle* 26: 425. 1920.

in India: ghatira, jyotishmati (roots said to be luminous), kohdi

T. arguens (L.) Hack. (*Anthistiria arguens* (L.) Willd.; *Anthistiria ciliata* var. *major* Thw.; *Anthistiria frondosa* R. Br.; *Anthistiria pilifera* Steud.; *Stipa arguens* L.; *Themeda frondosa* (R. Br.) Merr.)

Australia, Southeast Asia, India, Indonesia, Thailand, Malaysia. Bunchgrass, awns in mature spikelets can cause abscesses in the mouth, weed species, naturalized elsewhere, readily grazed when young, in Indonesia used for lumbago and rheumatism, found on erosional flood clay plains, see *Species Plantarum, Editio Secunda* 117. 1762, *Species Plantarum* 4: 901. 1806, *Prodromus Florae Novae Hollandiae* 1: 200. 1810, *Synopsis Plantarum Glumacearum* 1: 400. 1854, *Enum. Pl. Zeyl.* 366. 1864, *Monographiae Phanerogamarum* 6: 657. 1889 and *Dept. Agric. Nat. Res. Bur. Sci. Manila Publ.* 9: 89. 1917, *Bulletin du Muséum d'Histoire Naturelle* 25: 671. 1919, *Acta Botanica Neerlandica* 1(3): 479. 1952.

in English: Christmas grass

in Thailand: yaa chao chuu, ya chao chu

T. arundinacea (Roxb.) Ridley (*Andropogon arundinaceus* (Roxb.) Voigt, nom. illeg., non *Andropogon arundinaceus* Bergius; *Anthistiria arundinacea* Roxb.; *Anthistiria gigantea* Cavanilles subsp. *arundinacea* (Roxb.) Hook.f.; *Anthistiria gigantea* subsp. *arundinacea* (Roxb.) Hack.; *Anthistiria gigantea* var. *arundinacea* (Roxb.) Hack. ex Ridl.; *Cymbopogon arundinacea* (Roxb.) Schult.; *Themeda arundinacea* (Roxb.) A. Camus, nom. illeg., non *Themeda*

arundinacea (Roxb.) Ridl.; *Themeda gigantea* subsp. *arundinacea* (Roxb.) Hack.; *Themeda gigantea* var. *arundinacea* (Roxb.) Hack.)

Asia, China, India, Uttar Pradesh, central and southern Assam, Bangladesh. Perennial, smooth, leaves acuminate, sheaths compressed or strongly keeled, ligule a membranous ring, inflorescence a panicle with racemes on peduncles, each racemes with 4 involucre spikelets surrounding sessile hermaphrodite spikelets, a febrifuge, eaten only when very young, hay, culms used in the construction of huts, used by cottage industries in India, leaf and stem fibers used for making ropes and cordage, found in large clumps in wet pasture land, grassland, low-lying well-drained soils, see *Icones Plantarum Rariorum* 5: 36, t. 458. 1799, *Flora Indica; or Descriptions ...* 1: 256-257. 1820, J.O. Voigt, *Hortus Suburbanus Calcuttensis* 706. Calcutta 1845, *Synopsis Plantarum Glumacearum* 1: 401. 1854, *The Fodder Grasses of Northern India* 43. 1888, *Monographiae Phanerogamarum* 6: 674. 1889, *Transactions of the Linnean Society of London, Botany* 3: 401. 1893 and *Materials for a Flora of the Malayan Peninsula* 3: 169. 1907, *Flore Générale de l'Indo-Chine* 7: 363. 1922, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: tiger grass, ulla grass

in India: azkhun, bharna, bharua, bota kher, dhala, kangua, kapur ghas, kher, sarkhara, son, ula, ulla

in Thailand: faek, faek nam, khaem luang, phaek, phaek nam, samong daeng, yaa chao chuu, yaa fae thung, ya fae thung, yaa faek, ya faek, yaa khamong, ya kha mong

T. australis (R. Br.) Stapf (*Anthistiria australis* R. Br.)

Australia, Africa, Papua New Guinea. Very similar and very closely related to *Themeda triandra* Forssk., see *Prodromus Florae Novae Hollandiae* 1: 200. 1810 and *Flora of Tropical Africa* 9: 420. 1919, D.L. Hayman, "The distribution and cytology of the chromosome races of *Themeda australis*." *Austral. J. Bot.* 8: 58-68. 1960, P.S. Woodland, "The floral morphology and embryology of *Themeda australis* (R. Br.) Stapf." *Austral. J. Bot.* 12: 157-172. 1964, *Austral. J. Bot.* 30: 373-386. 1982, *Conservation Biology* 12(6): 1279-1290. Dec 1998, *Ecological Management and Restoration* vol. 1, issue 1: 3-9. Apr 2000, *Restoration Ecology* 8(3): 283-288. Sep 2000, Donna M. Windsor & AnneMarie Clements, "A Germination and Establishment Field Trial of *Themeda australis* (Kangaroo Grass) for Mine Site Restoration in the Central Tablelands of New South Wales." *Restoration Ecology* 9(1): 104-110. Mar 2001, *Ecological Management and Restoration* 2(3): 179-188. Dec 2001, *Ecological Management and Restoration* 3(2): 117-126. Aug 2002, *Journal of Applied Ecology* 39(5): 721-734. Oct 2002, *Austral. Ecology* 27(6): 638-646. Dec 2002, *Austral. Ecology* 28(1): 14-22. Feb 2003, *Restoration Ecology* 11(4): 489-503. Dec 2003, Suzanne M. Prober, K.R. Thiele and T.B. Koen, "Spring burns control exotic annual grasses

in a temperate grassy woodland." *Ecological Management and Restoration* 5(2): 131-134. Aug 2004, *Ecology Letters* 7(11): 1077-1089. Nov 2004, *Ecography* 27(6): 798-810. Dec 2004, *Ecological Management and Restoration* 6(1): 16-27. Apr 2005, *Journal of Applied Ecology* 42(3): 556-566. June 2005.

in English: kangaroo grass

in Thailand: yaa phung chuu, ya phung chu

T. avenacea (F. Muell.) Maiden & Betche (*Anthistiria avenacea* F. Muell.; *Themeda avenacea* (F. Muell.) C. Gardner; *Themeda avenacea* (F. Muell.) Durand & Jackson; *Themeda gigantea* subsp. *avenacea* (F. Muell.) Hack.; *Themeda gigantea* var. *avenacea* (F. Muell.) Hack.)

Australia. Perennial, tufted, robust, densely woolly or silky base, racemes solitary, involucre spikelets male, some involucre spikelets shortly pedicellate, fertile spikelets densely reddish brown pubescent, callus villous, pedicellate spikelets usually sterile and similar to the involucre spikelets, very palatable grass, feed value not high, similar to *Themeda triandra* Forssk., common in wetter sites, floodplains and floodways, red soils, grassland on alluvial plains, may occur on all soil types except very deep sands, see *Fragmenta Phytographiae Australiae* 5: 206. 1866, *Monographiae Phanerogamarum* 6: 667. 1889 and *Index Kewensis* Suppl. 1, 1: 424. 1906, *A Census of New South Wales Plants* 15. 1916, *Flora of Western Australia* 1: 344. 1952, *Ecological Management and Restoration* 2(1): 17-27. Apr 2001.

in English: tall oat-grass, native oat-grass

T. caudata (Nees) A. Camus (*Androscepia gigantea* var. *armata* Andersson; *Anthistiria caudata* Nees; *Anthistiria gigantea* Cavanilles subsp. *caudata* (Nees) Hook.f.; *Themeda caudata* (Nees) Dur. & Jack.; *Themeda caudata* (Nees) Honda; *Themeda gigantea* subsp. *caudata* (Nees) Hack.; *Themeda gigantea* var. *caudata* (Nees) Keng)

India, Sikkim, Bhutan, Darjeeling, Meghalaya. Perennial, caespitose, tall, large, elegant, stout, solid, flattened, erect from a woody rootstock, leaf sheath smooth, leaf blade rough, membranous ligule fringed with short hairs, leaves with a long sharp tip, inflorescence a large compound leafy pendulous panicle, racemes with only 1 spikelet pair, the lowermost pairs male, the upper pairs bisexual, lower glume leathery with soft brown hairs, long twisted awn, palea hyaline, growing in clumps on open ground, hill grassland, see *The Botany of Captain Beechey's Voyage* 245. 1838, *Nova Acta Regiae Societatis Scientiarum Upsaliensis* 2: 248. 1856, *Monographiae Phanerogamarum* 6: 676. 1889 and *Index Kewensis* Suppl. 1: 424. 1906, *Flore Générale de l'Indo-Chine* 7: 364. 1922, *Botanical Magazine* (Tokyo) 40: 108. 1926, *Claves Generum et Specierum Graminearum Primarium Sinicarum Appendice Nomenclatione Systematica* 247. 1957.

in India: ulla

T. cymbaria Hack. (*Themeda serratifolia* (Hack.) Roberty) Southern India, Sri Lanka. Perennial, large, tufted, raceme with 1-2 fertile spikelets, lower glume of sessile spikelet more or less glabrous, good fodder, hay, used for straw boards and pressed boards, pulp suitable for writing and printing papers, see *Monographiae Phanerogamarum* 6: 668. 1889 and *Handb. Fl. Ceylon* 5: 249. 1900, *Handb. Fl. Ceylon* 6: 336. 1931, *Grasses of Ceylon* 197. 1956, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 92. 1960, *Grasses of Burma ...* 251. 1960.

in India: balai hullu, bodhai pul, fulghass, noshia palai pullu, rhatdu

in Sri Lanka: kara wata mana

T. gigantea (Cav.) Hackel (*Androscepia gigantea* (Cav.) Brongn.; *Anthistiria gigantea* Cav.)

Tropical Asia, Southeast Asia, India. Tall, leafy, fodder grass growing in large clumps, the whole raceme deciduous with the sessile spikelets attached, awnless, callus narrowly oblong, useful for paper-making, in India used for bronchitis and cough, found on open areas, along streams and roadsides, grassland, tall grasslands, steep slopes, resembling *Iseilema*, see *Icones Plantarum Rariorum* 5: 36, t. 458. 1799, *Encyclopédie Méthodique, Botanique* Suppl. 1: 396. 1810, *Flora Indica; or Descriptions ...* 1: 256-257. 1820, *Tijdschrift voor Natuurlijke Geschiedenis en Physiologie* 10: 117. 1843, *Plantae Junghuhnianae* 3: 364. 1854, *Synopsis Plantarum Glumacearum* 1: 401. 1854, *Fragmenta Phytographiae Australiae* 5: 206. 1866, *The Fodder Grasses of Northern India* 43. 1888, *Monographiae Phanerogamarum* 6: 667, 672-676. 1889 and *Bibliotheca Botanica* 85: 277. 1915, *Bulletin du Muséum d'Histoire Naturelle* (Paris) 26: 427. 1920, *Journal of the Arnold Arboretum* 29: 374. 1948, *Acta Botanica Neerlandica* 1(3): 483. 1952, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 247. 1957, *Diversity & Distributions* 9(1): 73-87. Jan 2003.

in Thailand: faek, faek nam, khaem luang, phaek, phaek nam, samong daeng, yaa chao chuu, yaa fae thung, yaa faek, yaa khamong

in India: ulla

T. gigantea (Cav.) Hackel var. **vulpina** (Andersson) Hack. (*Anthistiria vulpina* Andersson)

The Philippines, Asia. Clumped, found on open areas, along streams and roadsides, grassland, tall grasslands, steep slopes, see *Nova Acta Regiae Societatis Scientiarum Upsaliensis* ser. 3 2: 245. 1856, *Monographiae Phanerogamarum* 6: 673. 1889 and *Acta Botanica Neerlandica* 1(3): 481. 1952.

T. hookeri (Griseb.) A. Camus (*Anthistiria hookeri* Griseb.) India, Sikkim, China, Yunnan. Perennial, awned sessile spikelets, callus narrowly oblong, see *Nachrichten von der*

Gesellschaft der Wissenschaften zu Göttingen. Mathematisch-physikalische Klasse 1868: 91. 1868.

T. intermedia T. Durand & B.D. Jacks. (*Anthistiria gigantea* Cavanilles subsp. *intermedia* (Hackel) Hook.f.; *Themeda gigantea* subsp. *intermedia* Hack.; *Themeda gigantea* var. *intermedia* Hack.; *Themeda intermedia* (Hack.) Bor; *Themeda x intermedia* Bor; *Themeda x intermedia* (Hack.) Bor, *Themeda arundinacea* (Roxb.) Ridley x *Themeda villosa* (Poir.) A. Camus)

Asia, Borneo. Upper lemma lanceolate and awnless, see *The Fodder Grasses of Northern India* 43. 1888, *Monographiae Phanerogamarum* 6: 675. 1889 and *Index Kewensis* Suppl. 1: 424. 1901-1906, *Indian Forest Records: Botany* 1: 3, 96. 1938, *Acta Botanica Neerlandica* 1(3): 481. 1952.

T. japonica (Willd.) Tanaka (*Anthistiria arguens* var. *japonica* (Willd.) Andersson; *Anthistiria japonica* Willd.; *Themeda triandra* subsp. *japonica* (Willd.) T. Koyama; *Themeda triandra* var. *japonica* (Willd.) Makino)

Asia, Japan, China, Korea. Useful for erosion control, leaves red-orange, see *Flora Aegyptiaco-Arabica* 178. 1775, *Species Plantarum* 4: 901. 1806, *Nova Acta Regiae Societatis Scientiarum Upsaliensis* ser. 3 2: 236. 1856 and *Botanical Magazine* (Tokyo) 26: 213. 1912, *Journal of the Faculty of Science: University of Tokyo, Section 3, Botany* 3: 350. 1930, *Journal of Japanese Botany* 19: 59. 1943, *Grasses of Japan and its Neighboring Regions* 532. 1987.

in English: Japanese themedea

T. quadrivalvis (L.) Kuntze (*Andropogon nutans* L.; *Andropogon quadrivalvis* L.; *Anthistiria ciliata* L.f.; *Anthistiria scandens* Roxb.; *Themeda ciliata* (L.f.) Hack.; *Themeda ciliata* (L.f.) Hack. ex Duthie; *Themeda ciliata* Hack.)

India, Sikkim, Nepal, Southeast Asia. Annual or perennial, very slender, suberect or geniculately ascending, scandent, base sometimes prostrate and rooting from the lower joints, glabrous, simple or branched, tall thickets forming, ligule membranous, sheath glabrous or hairy, blade folded in bud, leaves with an acute tip, inflorescence paniculate with spathe subtending the inflorescence, involucrel spikelets male or sterile, pedicellate spikelets sterile, awn hairy twisted and slightly bent, aggressive and invasive noxious weed species naturalized elsewhere, invades crops such as sugarcane, a contaminant of pasture grass seed, fires and overstocking increase infestations, sometimes an excellent grass for stock, a valuable fodder grass when young and green, commonly made into hay, sometimes not grazed very much, a source of paper pulp, in India used for thatching, can stand very dry conditions, grows vigorously in disturbed habitats and roadsides, see *Systema Vegetabilium. Editio decima tertia* 758. 1774, *Supplementum Plantarum* 113. 1781, *Flora Indica; or Descriptions ...* 1: 253. 1820, *Fodder Grasses N. India* 43. 1888, *Monographiae Phanerogamarum* 6: 664-665. 1889, *Revisio Generum Plantarum*

2: 794. 1891 and *Acta Botanica Cubana* 26: 1-4. 1985, *Journal of Cytology and Genetics* 20: 205-206. 1985, *Austral. Ecology* 25(3): 213-222. June 2000 [Dormancy and germination characteristics of herbaceous species in the seasonally dry tropics of northern Australia.], *Taxon* 49(2): 246. 2000.

in English: grader grass, habana grass, habana oat grass, giant kangaroo grass, kangaroo grass

in India: bharwan, bhatdu, bhatharu, bhathu, bhati, bhoru, bongrut, chudur jahara, era-kolla-gadi, gaddimulwah, ganaiya, ganori, gendar, genehru, genera, ghonad, ghonadi, ghonal, ghonyar, ghunhair, gondal, gondali, gondalli, gondar, gud sukud, gundu naale hullu, guner, guniar, gunkar, guntunalai hullu, motha bondel, mothi bathi, titar, zini bathi

in Thailand: yaa kai, ya kai

T. quadrivalvis (L.) Kuntze var. *helferi* (Hack.) Bor (*Anthistiria ciliata* var. *helferi* (Hack.) Hook.f.; *Themeda ciliata* subsp. *helferi* (Hack.) A. Camus; *Themeda helferi* Hack.)

Asia. See *Monographiae Phanerogamarum* 6: 665. 1889, *The Flora of British India* 7: 214. 1896 and *Bulletin du Muséum d'Histoire Naturelle* 26: 424. 1920, *Grasses of Burma, Ceylon, India and Pakistan ...* 252. 1960, *J. Cytol. Genet.* 20: 205-206. 1985.

T. tremula (Nees ex Steud.) Hack. (*Androscepia tremula* (Nees ex Steud.) Andersson; *Anthistiria thwaitesii* Hook.f.; *Anthistiria tremula* Steud.; *Anthistiria tremula* Nees ex Steud.; *Anthistiria tremula* var. *brunnea* Hook.f.; *Anthistiria tremula* var. *thwaitesii* (Hook.f.) Hook.f.; *Themeda thwaitesii* (Hook.f.) A. Camus; *Themeda tremula* var. *brunnea* (Hook.f.) Senaratna; *Themeda tremula* var. *thwaitesii* (Hook.f.) Senaratna)

Southern India, Sri Lanka. Perennial, slender, erect, geniculately ascending, sprawling, often rooting at the lower nodes, racemes enfolded by spathes and spatheoles, raceme with 2 fertile spikelets, lower glume with a median groove, fodder, open places, pasture, along roadsides, see *Synopsis Plantarum Glumacearum* 1: 401. 1854, *Nova Acta Regiae Societatis Scientiarum Upsaliensis* 2: 247. 1856, *Monographiae Phanerogamarum* 6: 667. 1889, *The Flora of British India* 7: 215. 1896 and *Handb. Fl. Ceylon* 5: 249-250. 1900, *Bulletin du Muséum d'Histoire Naturelle* 26: 267, 424. 1920, *Handb. Fl. Ceylon* 6: 336. 1931, *Grasses of Ceylon* 197-198. 1956, *Grasses of Burma ...* 254. 1960, P.M.S. Ashton et al. "Role of Legumes in Release of Successionally Arrested Grasslands in the Central Hills of Sri Lanka." *Restoration Ecology* 5(1): 36-43. Mar 1997.

in India: bettanchi hullu, bheemana hullu, doddanchi hullu, gantu kaachi hullu

in Sri Lanka: pinibara tana

T. triandra Forssk. (*Anthistiria australis* R. Br.; *Anthistiria ciliata* sensu Benth., non L.f.; *Anthistiria ciliata* Nees; *Anthistiria forskalii* Kunth; *Anthistiria glauca* Desf.; *Anthistiria imberbis* Retz.; *Anthistiria paleacea* (Vahl) Ball; *Anthistiria punctata* Hochst. ex A. Rich.; *Calamina imberbis* (Retz.) Roem. & Schult.; *Stipa arguens* Thunb., nom. illeg., non *Stipa arguens* L.; *Stipa paleacea* Vahl; *Themeda australis* (R. Br.) Stapf; *Themeda forskalii* Hack.; *Themeda forskalii* (Kunth) Hack., nom. illeg., non *Themeda forskalii* (Kunth) Hack. ex Duthie; *Themeda forskalii* var. *glauca* (Desf.) Hack.; *Themeda forskalii* var. *imberbis* (Retz.) Hack.; *Themeda forskalii* var. *punctata* (Hochst. ex A. Rich.) Hack.; *Themeda glauca* (Desf.) Batt. & Trab.; *Themeda imberbis* (Retz.) T. Cooke; *Themeda polygama* J.F. Gmelin; *Themeda triandra* var. *burchellii* (Hackel) Stapf; *Themeda triandra* var. *hispida* (Nees) Stapf; *Themeda triandra* var. *imberbis* (Retz.) A. Camus; *Themeda triandra* var. *trachyspathea* Goossens; *Themeda triandra* var. *vulgaris* auctt. non Hackel) (dedicated to the Finnish-born Swedish botanist Pehr (Peter, Petrus, Petter) Forsskål (also Forsskål or Forskål or Forsskal), 1732-1763 (d. Yarim or Yerim, Yemen), traveler, plant collector, studied under Linnaeus in Uppsala and under Johann David Michaelis (1717-1791) in Göttingen, from 1761 to 1763 on the Royal Danish Expedition to Egypt and Yemen (under the sponsorship of King Frederick V and with the German astronomer Carsten Niebuhr (1733-1815), the Danish philologist Frederik Christian von Haven (1727-1763), the Swedish botanist Johann Peter Falck (1733-1774), the Danish physician Christian Carl Cramer (1732-1764), the German artist Georg Wilhelm Baurenfeind (1728-1763) and the Swedish ex-dragoon Berggren, d. 1763), among his writings are *Flora aegyptiaco-arabica ... post mortem auctoris* edidit Carsten Niebuhr. Copenhagen 1775 and *Icones rerum naturalium*, quas in itinere orientali depingi curavit Petrus Forsskål. Post mortem auctoris ad regis mandatum aeri incisas edidit Carsten Niebuhr. Copenhagen 1776. See Gunnar Eriksson, in *D.S.B.* 5: 74. 1981; Carsten Niebuhr, *Beschreibung von Arabien*. Kopenhagen 1772 and *Reisebeschreibung nach Arabien und andern umliegenden Ländern*. Copenhagen 1774-1778; Martin Vahl (1749-1804), *Symbolae Botanicae, sive plantarum tam earum quas in itinere imprimis orientali collegit Petrus Forskål*. Copenhagen 1790-1794; Carl Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; Carl Christensen (1872-1942), "Index to Pehr Forsskål: *Flora Aegyptiaco-Arabica* 1775, with a revision of *Herbarium Forsskål.*" *Dansk Botanisk Arkiv*. 4, 3: 1-54. 1922; Frank Nigel Hepper and Ib Friis, *The Plants of Pehr Forsskal's "Flora Aegyptiaco-Arabica" Collected on the Royal Danish Expedition to Egypt and the Yemen 1761-1763*. Kew 1994; Ib Friis, "Notes on the botanical collections and publications of Pehr Forsskal." *Kew Bulletin*. 38: 457-467. 1983; Ib Friis & Mats Thulin, "The spelling of Pehr Forsskål's family name." *Taxon* 33: 668-672. 1984;

Frank Nigel Hepper & John Richard Ironside Wood (1944), "New combinations and notes based on Forsskal's Arabian collections." *Kew Bulletin*. 38: 83-86. 1984; A.G. Miller, Ian Charleson Hedge and Rosemary Anne King (1952-), "Studies in the flora of Arabia I. A botanical bibliography of the Arabian Peninsula." *Notes from the Royal Botanic Garden, Edinburgh*. 40: 43-61. 1982; Gerald Ernest Wickens, "Studies in the flora of Arabia: III A biographical index of plant collectors in the Arabian peninsula (including Socotra)." *Notes from the Royal Botanic Garden, Edinburgh*. 40: 301-330. 1982; Frans A. Stafleu, *Linnaeus and the Linnaeans: The Spreading of Their Ideas in Systematic Botany, 1735-1789*. Utrecht 1971; J.H. Barnhart, *Biographical notes upon botanists*. 1: 559. Boston 1965; F. Boerner, *Taschenwörterbuch der botanischen Pflanzennamen*. 2. Aufl. 110. 1966; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 710f. 1993; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 369. 1852; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 130. 1972; Helmut Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 254. 1996; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 104. 1989)

Old World tropics and subtropics. Perennial bunchgrass, polymorphic and very variable in size and habit, tufted, bushy, tough, erect or geniculate, ascending, slender, often much branched, tussock or clumps forming, more or less leafy, glabrous, robust, cyanogenetic, rhizomatous, leaf blades initially folded but later expanded, basal leaf sheaths compressed and fibrous, ligule a short ciliate membrane, hairy or glabrous leaves sharply pointed, inflorescence a conspicuous interrupted panicle, several pendulous sessile racemes, spikelets enclosed at the base by a boat-shaped spathe, raceme containing 1 fertile spikelet, sessile spikelet solitary with a brown to reddish lower glume, awned with dark brown and twisted awns, pungent and bearded callus, a decreaser species, native pasture, wilted plants may cause poisoning in livestock, high grazing value, forage, very palatable and well grazed when young and before flowering, moderately palatable to unpalatable when mature, poor nutritive value, mature plants normally neglected, seed collected as human food in time of famine, cut for hay, thatching grass, habitat for native animals, stems and leaves used for pig bedding, seeds ground and baked into cakes, plants eaten by baboons, some tolerance to drought, does not tolerate flooding, susceptible to heavy stocking, useful in erosion control and rehabilitation, an indicator of excellent range condition, medicinally used in China, fiber used for making paper, grows on clay soils, open stony hillsides, hot and dry areas, savannah, pastures, in seasonally inundated areas, loose sandy soils, field borders, dambo grassland, grassy slopes, hard dry soil, open habitats, open deciduous bushland, along streams, open woodlands on clay, common

on low hills and near creeks, open grassland, waste grounds, undisturbed veld, *Themeda australe* R. Br. is a root parasite of kangaroo grass, see *Flora Aegyptiaco-Arabica* 178. 1775, *Observationes Botanicae* 3: 11. 1783, *Symbolae Botanicae*, ... 2: 24. 1791, *Syst. Nat.* 2: 149. 1791, *Prodromus Plantarum Capensium*, ... 20. 1794, *Flora Atlantica* 2: 380, t. 254. 1800, *Species Plantarum* 4: 901. 1806, *Prodromus Florae Novae Hollandiae* 1: 200. 1810, *Systema Vegetabilium* 2: 810. 1817, *Révision des Graminées* 1: 162. 1829, *Linnaea* 7: 284. 1832, *Tentamen Florae Abyssinicae* ... 2: 448. 1850, *Nova Acta Regiae Societatis Scientiarum Upsaliensis* ser. 3 2: 243. 1856, *Journal of the Linnean Society, Botany* 16: 734. 1878, *Monographiae Phanerogamarum* 6: 659, 661-663. 1889, *Flore de l'Algérie* 1(2): 128. 1895, *The Flora of British India* 7: 213. 1897 and *Handb. Fl. Ceylon* 5: 248. 1900, *The Flora of the Presidency of Bombay* 2: 993. 1908, *Botanical Magazine* 26: 213. 1912, *Bibliotheca Botanica* 85: 280. 1915, *Flora of Tropical Africa* 9: 420. 1919, *Handb. Fl. Ceylon* 6: 336. 1931, *Grasses of Ceylon* 196. 1956, *Grasses of Burma* ... 254. 1960, D.L. Hayman, "The distribution and cytology of the chromosome races of *Themeda australis*." *Austral. J. Bot.* 8: 58-68. 1960, P.S. Woodland, "The floral morphology and embryology of *Themeda australis* (R. Br.) Stapf." *Austral. J. Bot.* 12: 157-172. 1964, *Journal of Cytology and Genetics* 15: 51-57. 1980, *Austral. J. Bot.* 30: 373-386. 1982, *F.T.E.A. Gramin.* 830. 1982, *S. African J. Bot.* 52: 413-420. 1986, *Grasses of Japan and its Neighboring Regions* 532. 1987, *S. African J. Bot.* 53: 362-364. 1987, *Bothalia* 18: 119-122. 1988, C.E.J. Botha & R.F. Evert, "Plasmodesmatal distribution and frequency in vascular bundles and contiguous tissues of the leaf of *Themeda triandra*..." *Planta* 173(4): 433-441. 1988, *South African Journal of Botany* 56: 554-559. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *South African Journal of Botany* 58(4): 275-276. 1992, *South African Journal of Botany* 59(3): 305-310. 1993, *Edinburgh Journal of Botany* 56(3): 402. 2000, J.W. Morgan, "Seedling recruitment patterns over 4 years in an Australian perennial grassland community with different fire histories." *Journal of Ecology* 89(6): 908-919. Dec 2001, Ian D. Lunt, "A Protocol for Integrated Management, Monitoring, and Enhancement of Degraded *Themeda triandra* Grasslands based on Plantings of Indicator Species." *Restoration Ecology* 11(2): 223-230. June 2003, S.J.E. Wand & G.F. Midgley, "Effects of atmospheric CO₂ concentration and defoliation on the growth of *Themeda triandra*." *Grass and Forage Science* 59(3): 215-226. Sep 2004, Ian Cole & Ian D. Lunt, "Restoring Kangaroo Grass (*Themeda triandra*) to grassland and woodland understoreys: a review of establishment requirements and restoration exercises in southeast Australia." *Ecological Management and Restoration* 6(1): 28-33. Apr 2005, *Austral. Ecology* 30(4): 445-464. June 2005.

in English: angle grass, blue grass, kangaroo grass, red grass, red oat, red oat grass

in Arabic: thaemed, thamid, themed, alaf

in East Africa: achele, akil, akuduna, akwar (Luo)

in southern Africa: rooigras, rotgras, angelgras, asgras, blougras, hoëveldrooigras, platgras, rooiangel, rooihawergras, rooisaadgras, soetgras, setjhaba, swartangel; insinde (Zulu), makgulu (Tswana); seboko, seboku (Sotho); mSinde (Xhosa)

in Tanzania: orkujita ontokie

in Yemen: thamid

in Cambodia: sbö'w

in India: bettanchi hullu, bhatdi, bhatolu, bheemana handhi hullu, bhimana hanchi, era kolla gadi, eraj tukra gadi, erigai thattu pullu, erighai thattu pul, fuliu, gantu kaasi hullu, gondamanchi hullu, gudda niko gadi, peddayerra kallakarsurn, tatiyan, thodda anji hullu

in Indonesia: merakan lanang

in Laos: hnaaz fèèk

in the Philippines: bagokbok, ipatpatey, panau, samsamon, samsamong, taau, usimau, /ba'ak/

in Thailand: yaa faek, ya faek, yaa phaek, yaa phung chuu, ya phung chu

in Vietnam: co' bông cao ru'ng khôp, co'tam hung

T. triandra Forssk. var. **punctata** (Hochst. ex A. Rich) Stapf (*Anthistiria punctata* Hochst. ex A. Rich.)

Africa. Spikelets with black tubercles, see *Tentamen Florae Abyssinicae* ... 2: 448. 1850 and *Flora of Tropical Africa* 9: 419. 1919.

T. triandra Forssk. var. **roylei** (Hook.f.) Domin (*Anthistiria imberbis* var. *roylei* Hook.f.) (after the British (b. in India) botanist John Forbes Royle, 1800-1858, traveler, physician, plant collector, 1833 Fellow of the Linnean Society, 1837 Fellow of the Royal Society, in Bengal (surgeon, East India Company), Curator Saharanpur Botanical Garden, his works include *An Essay on the Antiquity of Hindoo Medicine*. London 1837 and *A Manual of Materia Medica and Therapeutics*. London 1847; see R. Desmond, *The European Discovery of the Indian Flora*. Oxford 1992; J.H. Barnhart, *Biographical notes upon botanists*. 3: 187. 1965; Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 654. Philadelphia 1964; D.G. Crawford, *A History of the Indian Medical Service, 1600-1913*. London 1914; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 237. Palermo 1988; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 598. 1994; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993)

India. See *Flora Aegyptiaco-Arabica* 178. 1775, *The Flora of British India* 7: 213. 1896 and *Bibliotheca Botanica* 85: 280. 1915.

T. villosa (Poir.) A. Camus (*Androscepi mutica* Andersson ex Hook.f.; *Anthistiria gigantea* Cavanilles subsp. *villosa* (Poir.) Hook.f.; *Anthistiria mutica* Hassk.; *Anthistiria mutica* Steud.; *Anthistiria villosa* Poir.; *Aristaria mutica* Hassk.; *Heterelytron scabrum* Jungh.; *Themeda gigantea* auct. non (Cav.) Hack.; *Themeda gigantea* subsp. *villosa* (Poir.) Hack.; *Themeda gigantea* var. *villosa* (Poir.) Keng; *Themeda gigantea* var. *villosa* Hack.; *Themeda villosa* (Poir.) T. Durand & B.D. Jacks.)

Southeast Asia, Sumatra, Nepal, China, Yunnan, India, Thailand. Perennial, cylindrical, large, tall, leafy, tufted, very stout and solid, reedlike, ligule membranous more or less ciliate, leaves very narrow tapering to a filiform tip, sheaths smooth and glabrous, basal sheaths strongly compressed, inflorescence a very large compound and leafy panicle, inflorescences branched and drooping, raceme containing 2-4 fertile spikelets, each raceme embraced below by a spatheole, many spathes and boat-shaped spatheoles, dark brown hairy bisexual spikelets, lowest homogamous spikelet sterile, upper lemma awnless or minutely awned, ornamental, poor fodder, grazed by stock when very young, noxious weed species, invasive, potential seed contaminant, fiber used for making paper, culms used for bars of the cages of birds, young shoots sweet eaten as a salad, weed in rubber plantations, grows in grassland, open spaces, on riverbanks, in rough damp grassland, see *Encyclopédie Méthodique, Botanique* Suppl. 1: 396. 1810, *Tijdschrift voor Natuurlijke Geschiedenis en Physiologie* 7: 295. 1840, *Tijdschrift voor Natuurlijke Geschiedenis en Physiologie* 10: 117. 1843, *Synopsis Plantarum Glumacearum* 1: 401. 1854, *Monographiae Phanerogamarum* 6: 675-676. 1889, *The Flora of British India* 7: 217. 1896 and *Index Kewensis* Suppl. 1: 424. 1906, *Flore Générale de l'Indo-Chine* 7: 364. 1922, *Handb. Fl. Ceylon* 6: 336. 1931, *Grasses of Ceylon* 198. 1956, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 247. 1957, *Grasses of Burma* ... 254. 1960.

in English: Lyon's grass, silky kangaroo grass

in India: ulla

in Thailand: faek nam, faek thuean, yaa yuung, ya yung

Thinopyrum Á. Löve = *Elymus* L.,
Lophopyrum Á. Löve, *Psammopyrum* Á. Löve,
Trichopyrum Á. Löve

Greek *thinoo* "to fill, choke with sand," *this*, *thin* "a heap, the sand-heaps on the beach, sand-banks" and *pyros* "grain, wheat," a salt-tolerant cereal.

- About 5-20 species, coasts of Europe, southern Africa. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Hordeinae, perennial, erect, rigid, creeping, tufted, glaucous, herbaceous, unbranched, aromatic, halophytic, rooting at nodes, auricles absent, ligule an unfringed membrane, stiff leaves narrow and linear, rhizomatous, stoloniferous, plants bisexual, inflorescence a single spike with more or less sessile spikelets, spikelets solitary and distichous, rachis fragile and stout, rachis internodes nearly flat, several florets hermaphrodite, uppermost floret reduced, 2 subequal persistent glumes 4- to 12-nerved, awnless glumes acute or truncate, lemma unawned or shortly mucronate, palea 2-keeled, 2 ciliate lodicules free and membranous, 3 stamens, ovary hairy, 2 stigmas white, fruit compressed and grooved, coastal grasses salt tolerant, suitable for revegetation of saline areas, growing in coastal sands, open habitats, taxonomic confusion concerning this genus, synonym of *Elytrigia* Desv., often referred to and included in *Elymus* and *Elytrigia*, hybrids with *Elytrigia* and *Leymus*, type *Thinopyrum junceum* (L.) Á. Löve, see *Species Plantarum* 1: 83. 1753, *Familles des Plantes* 2: 36, 606. 1763, *Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae* 14(1): 539. 1770, *Botanisches Magazin (Römer & Usteri)* 7: 5. 1790, *Methodus Plantas Horti Botanici ...* 294-295. 1794, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 132. 1809, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, *Observations sur les Graminées de la Flore Belgique* 95. 1823 [1824], *Annals of Natural History* 1: 284. 1838, *Flore de Lorraine* 3: 191. 1844, *Nomenclator Botanicus Hortensis* 2: 174. 1846, *A Manual of the Botany of the Northern United States* 604. 1848, *Linnaea* 21(4): 413. 1848, *Flora Rossica* 4(13): 330. 1852, *Synopsis Plantarum Glumacearum* 1: 237, 354. 1854, *Bulletin de la Société Impériale des Naturalistes de Moscou* 35(2): 311, 330. 1862, *Die Natürlichen Pflanzenfamilien* 2(2): 88. 1887, *Index Kewensis* 1: 836. 1893, *Graminées. Descriptions ... France, Belgique, Isles Britanniques, Suisse* 83. 1899, *Bulletin, Division of Agrostology United States Department of Agriculture* 18: 10, 12, 17, t. 3. 1899 and *American Midland Naturalist* 4: 227. 1915, *Prop. Brit. Bot.* 121. 1929, *Ann. Sci. Nat. Bot., sér. 10*, 14: 234. 1932, *Flora Uzbekistanica* 1: 281, 300, 539-540. 1941, *Bot. Not.* 1953: 58. 1953, *N.Z. J. Sci. Tech.* 35B: 315-343. 1954, *Evolution* 10: 415-420. 1956, *T.R.S.N.Z.* 84: 757. 1957, *New Zealand J. Sci.* 5: 95-119. 1962, *Canadian Journal of Botany* 42: 554. 1964, *Canadian Journal of Botany* 45: 721. 1967, *Taxon* 29(2-3): 351. 1980, *New Zealand Journal of Botany* 20: 169-186. 1982, R.D. Dewey, "The genomic system of classification as a guide to intergeneric hybridization with the perennial Triticeae," in J. P. Gustafson [editor], *Proceedings of the 16th Stadler Genetics Symposium*, 209-279. Plenum, New York, New York, U.S. 1984, *Gene Manipulation in Plant Improvement* 274. 1984, Á. Löve, "Conspectus of the Triticeae." *Feddes Repertorium* 95(7-8): 425-521. 1984, *Genera Graminum* 150-151. 1986, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 87: 49-50. 1986, *Genome* 29: 150-155. 1987, *Genome* 30: 903-914. 1988, *Agron. Abstr.* 1989: 102. 1989, *Taxon* 41: 562-563. 1992, *Theor. Appl. Gen.* 86: 288-294. 1993, *Genome* 36: 147-151, 641-651. 1993, *Pl. Syst. Evol.* 185: 33-53. 1993, *Pl. Syst. Evol.* 186: 193-212. 1993, *New Zealand Journal of Botany* 32: 125-154. 1994, *Taxon* 44: 611-612. 1995, *Genome* 39: 1093-1101. 1996, M.E. Barkworth, "Taxonomic and nomenclatural comments on the Triticeae in North America." *Phytologia* 83(4): 302-311. 1997, *Restoration Ecology* 5(3): 214-228. Sep 1997, Kesara Anamthawat-Jónsson & Sigríður K. Bödvarsdóttir, "Genomic and genetic relationships among species of *Leymus* (Poaceae: Triticeae) inferred from 18S-26S ribosomal genes." *Am. J. Bot.* 88: 553-559. 2001, X. Cai, S.S. Jones and T.D. Murray, "Molecular cytogenetic characterization of *Thinopyrum* genomes conferring perennial growth habit in wheat *Thinopyrum* amphiploids." *Plant Breeding* 120(1): 21-26. Mar 2001, *Plant Breeding* 120(6): 535-540. Dec 2001, *Plant Breeding* 121(5): 417-424. Oct 2002, R.T. Plumb, "Viruses of Poaceae: a case history in plant pathology." *Plant Pathology* 51(6): 673-682. Dec 2002, *Contributions from the United States National Herbarium* 48: 279-307, 431. 589, 653-654, 657. 2003, *Hereditas* 139(1): 18-27. Sep 2003 [Genetic diversity in wild Spanish populations of *Thinopyrum junceum* and *Thinopyrum junceiforme* using endosperm proteins and PCR-based markers.], *Am. J. Bot.* 91: 1709-1725. 2004, *New Phytologist* 165(3): 875-885. Mar 2005, *Molecular Plant Pathology* 6(2): 99-111. Mar 2005, *Botanical Journal of the Linnean Society* 147(4): 501-508. Apr 2005 [Characterization of a novel 9-ploid hybrid ($2n = 63$) with 4 genomes in an *Elytrigia* complex (Poaceae)].
- Species**
- T. bessarabicum* (Savul. & Rayss) Á. Löve (*Agropyron bessarabicum* Savul.; *Agropyron junceum* var. *bessarabicum* (Savul.) Anghel & Morariu; *Elymus farctus* subsp. *bessarabicus* (Savul.) Melderis; *Elytrigia bessarabica* (Savul.) Dubovik; *Elytrigia bessarabica* (Savul.) Holub; *Elytrigia bessarabica* (Savul.) Prok.; *Elytrigia juncea* subsp. *bessarabica* (Savul.) Tzvelev; *Thinopyrum bessarabicum* (Savul.) Á. Löve)
- Eurasia. See *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812 and *Bulletin de la Section Scientifique de l'Académie Roumaine* 8(10): 282. 1923, *Flora Republicii Socialiste Romania* 12: 616. 1972, *Novosti Sist. Vyss. Rast.* 10: 32. 1973, *Folia Geobotanica et Phytotaxonomica* 12(4): 426. 1977, *Botanical Journal of the Linnean Society* 76(4): 382-383. 1978, *Feddes Repertorium* 95(7-8): 475. 1984, *J. Exp. Bot.* 36: 1021-1031. 1986, *J. Exp. Bot.* 37: 1435-1449. 1986, *Flora* 180: 339-344. 1988, *South African Journal of Botany* 54: 541-550. 1988, *Genome* 30: 903-914. 1988, *Acta*

Botanica Neerlandica 41: 407-415. 1992, *Genome* 36: 102-111. 1993, *Plant Systematics and Evolution* 189: 217-231. 1994, *Pakistan Journal of Botany* 26: 353-366. 1994, *Theoretical and Applied Genetics* 90: 952-956. 1995, *Genome/Génome* 41(4): 580-586. 1998, *Acta Botanica Sinica* 41(3): 258-262. 1999, *Hereditas* 136(1): 59-65. Apr 2002, *Hereditas* 137(3): 180-185. Dec 2002.

T. curvifolium (Lange) D.R. Dewey (*Agropyron curvifolium* Lange; *Elymus curvifolius* (Lange) Melderis; *Elytrigia curvifolia* (Lange) Holub; *Lophopyrum curvifolium* (Lange) Á. Löve)

Europe. See *Folia Geobotanica et Phytotaxonomica* 12(4): 426. 1977, *Botanical Journal of the Linnean Society* 76(4): 377. 1978, *Feddes Repertorium* 95(7-8): 488. 1984, *Gene Manipulation in Plant Improvement* 274. 1984, *Genome* 29: 537-553. 1987, *South African Journal of Botany* 54: 541-550. 1988, *Genome* 36: 641-651. 1993, K.M. Devos, M.D. Atkinson, C.N. Chinoy, H.A. Francis, R.L. Harcourt, R.M.D. Koebner, C.J. Liu, P. Masojc, D.X. Xie and M.D. Gale, "Chromosomal rearrangements in the rye genome relative to that of wheat." *Theoretical and Applied Genetics* 85(6-7): 673-680. 1993, *Plant Pathology* 49(2): 235-242. Apr 2000, *Molecular Plant Pathology* 3(4): 185-195. July 2002, *Plant Breeding* 123(4): 389-391. Aug 2004, *Plant Breeding* 123(5): 405-409. Oct 2004.

T. distichum (Thunb.) Á. Löve (*Agropyron distichum* (Thunb.) P. Beauv.; *Elymus distichus* (Thunb.) Melderis; *Elytrigia disticha* (Thunb.) Prokudin ex Á. Löve; *Triticum distichum* Thunb.)

Southern Africa, Europe. Perennial, erect, unbranched or branched, hard, robust, rhizomatous with fleshy rhizomes, auricles absent, ligule membranous to chartaceous, leaves strongly involute, plants bisexual, chasmogamous, a single oblong spike contracted, spikelets distichous and imbricate, palea 2-keeled chartaceous to cartilaginous, 3 stamens, ovary hairy, useful for erosion control, a sand binder, growing on coastal sand dunes, see *Prodromus Plantarum Capensium*, ... 23. 1794, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812 and *Botanical Journal of the Linnean Society* 76(4): 383. 1978, *Feddes Repertorium* 95(7-8): 476. 1984, *South African Journal of Botany* 54: 541-550. 1988, *Genome* 35: 985-991. 1992, Q. Chen et al., "Molecular cytogenetic analysis of a durum wheat x *Thinopyrum distichum* hybrid used as a new source of resistance to *Fusarium* head blight in the greenhouse." *Plant Breeding* 120(5): 375-380. Oct 2001.

T. elongatum (Host) D.R. Dewey (*Agropyron elongatum* (Host) P. Beauv.; *Elymus elongatus* (Host) Runemark; *Elymus elongatus* (Host) Greuter; *Elymus elongatus* subsp. *elongatus*; *Elytrigia elongata* (Host) Nevski; *Lophopyrum elongatum* (Host) Á. Löve; *Triticum elongatum* Host.; *Triticum obtusiflorum* DC.)

Southern Europe. Perennial, tufted, erect, auricles present, ligule membranous to chartaceous, leaf blade flat, plants bisexual, inflorescence spicate and contracted, chasmogamous, several florets bisexual, uppermost floret often reduced, glumes subequal and rigid, lemmas obtuse to acuminate, palea obtuse and 2-keeled, 3 stamens, ovary hairy at the apex, a weed, useful for erosion control, land stabilisation and revegetation, saline areas, lagoons, this species formerly in *Agropyron* and *Lophopyrum*, a cultivar used as a fodder crop on saline soils, see *Icones et Descriptiones Graminum Austriacorum* 2: 18, t. 23. 1802, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812, *Catalogus plantarum horti botanici monspeliensis* 153. 1813 and *Hereditas; genetiskt arkiv.* 70(2): 156. 1972, *Annales Musei Goulandris* 1: 73. 1973, *Taxon* 29(2-3): 351. 1980, *Gene Manipulation in Plant Improvement* 274. 1984, *Biologisches Zentralblatt* 105: 361-368. 1986, *South African Journal of Botany* 54: 541-550. 1988, *Genome* 30: 903-914. 1988, *Genome* 33: 283-293. 1990, *Genome* 36: 102-111, 641-651. 1993, *Anales del Jardín Botánico de Madrid* 51(2): 280. 1994, *Plant Systematics and Evolution* 197: 225-231. 1995, T.G.E. Davies, J. Ying, Q. Xu, Z.S. Li, J. Li and R. Gordon-Weeks, "Expression analysis of putative high-affinity phosphate transporters in Chinese winter wheats." *Plant, Cell and Environment* 25(10): 1325-1339. Oct 2002.

T. gentryi (Melderis) D.R. Dewey (*Agropyron gentryi* Melderis; *Elymus gentryi* (Melderis) Melderis; *Elytrigia gentryi* (Melderis) Tzvelev; *Elytrigia intermedia* subsp. *gentryi* (Melderis) Á. Löve) (named for Howard Scott Gentry, 1903-1993, collected in Central America, Mexico, U.S., Afghanistan and Iran. See *Wrightia* 5: 138. 1965; *Madroño* 19: 74-78. 1967; *The Agave Family in Sonora*, U.S.D.A. Agric. Handb. 399 Washington, DC; *Brittonia* 26: 354. 1974; *Mem. New York Bot. Gard.* 27: 85. 1977; *Occas. Pap. Calif. Acad. Sci.* 130: 63. 1978; I.W. Knobloch, *Pl. Collectors N. Mexico* 1979; *Fl. Novo-Galiciana* 15: 27. 1989; *Taxon* 42: 929. 1993; *Brittonia* 50: 74. 1998; *Madroño* 44: 287, 291. 1998; *Castanea* 65(2): 112. 2000)

Iran. See *Flora Iranica: Gramineae* 70: 165. Graz 1970, *Novosti Sist. Vyss. Rast.* 10: 30. 1973, *Feddes Repertorium* 95(7-8): 487. 1984, *Notes from the Royal Botanic Garden, Edinburgh* 42(1): 82. 1984, *Gene Manipulation in Plant Improvement* 275. 1984, *Genome* 29: 537-553. 1987, *Botanical Journal of the Linnean Society* 117: 159-168. 1995.

T. intermedium (Host) Barkworth & D.R. Dewey (*Agropyron barbulatorum* Schur; *Agropyron glaucum* Roem. & Schult.; *Agropyron glaucum* var. *intermedium* (Host) Beck; *Agropyron hispidum* Opiz; *Agropyron intermedium* (Host) P. Beauv.; *Agropyron intermedium* subsp. *trichophorum* (Link) Asch. & Graebn.; *Agropyron intermedium* var. *intermedium*; *Agropyron intermedium* var. *trichophorum* (Link) Halácsy; *Agropyron repens* (L.) P. Beauv.; *Agropyron repens* var. *glaucum* (Roem. & Schult.) Scribn., nom. illeg.,

non *Agropyron repens* var. *glaucum* Bluff ex Nees; *Agropyron trichophorum* (Link) K. Richt.; *Agropyron truncatum* (Wallr.) Fuss; *Agropyron truncatum* subsp. *trichophorum* (Link) Soó; *Braconotia glauca* (Roem. & Schult.) Godr.; *Elymus hispidus* (Opiz) Melderis; *Elymus hispidus* subsp. *barbulatus* (Schur) Melderis; *Elymus hispidus* subsp. *hispidus*; *Elymus hispidus* (Opiz) Melderis var. *ruthenicus* (Griseb.) Dorn; *Elytrigia intermedia* (Host) Nevski; *Elytrigia intermedia* (Host) Nevski subsp. *barbulata* (Schur) A. Löve; *Elytrigia intermedia* subsp. *intermedia*; *Elytrigia intermedia* subsp. *trichophora* (Link) Á. Löve & D. Löve; *Elytrigia trichophora* (Link) Nevski; *Thinopyrum intermedium* (Host) Barkworth & D.R. Dewey; *Trichopyrum intermedium* (Host) Á. Löve; *Triticum glaucum* Desf. ex DC., nom. illeg., non *Triticum glaucum* Moench; *Triticum intermedium* Host; *Triticum repens* var. *glaucum* (Roem. & Schult.) Cosson & Durand, nom. illeg., non *Triticum repens* var. *glaucum* Pers.; *Triticum trichophorum* Link; *Zeia glauca* (Roem. & Schult.) Lunell

Eurasia. Perennial, see *Icones et Descriptiones Graminum Austriacorum* 3: 23, t. 22. 1805, *Essai d'une Nouvelle Agrostographie* 102, 146, 180, t. 20, f. 2. 1812, *Flore Française. Troisième Édition* 5: 281. 1815, *Systema Vegetabilium* 2: 752. 1817, *Oekonomisch-technische Flora Böhmens* 1: 413. 1836, *Linnaea* 17(4): 395. 1844, *Flore de Lorraine* 3: 192. 1844, *Verhandlungen und Mittheilungen des Siebenbürgischen Vereins für Naturwissenschaften zu Hermannstadt* 4: 91. 1853, *Exploration Scientifique de l'Algérie* 2: 207. 1855, *Plantae Europaeae* 1: 124. 1890, *Memoirs of the Torrey Botanical Club* 5: 57. 1894 and *Synopsis der mitteleuropäischen Flora* 2: 658. 1901, *Conspectus Florae Graecae* 3: 437. 1904, *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegovina* 9: 460. 1904, *American Midland Naturalist* 4: 226. 1915, *Botaniska Notiser* 114(1): 50. 1961, *Acta Botanica Academiae Scientiarum Hungaricae* 23(3-4): 389. 1977 [1978], *Botanical Journal of the Linnean Society* 76(4): 380-381. 1978, *Acta Genetica Sinica* 9(5): 350-356. 1982, *Gene Manipulation in Plant Improvement* 275. 1984, *Acta Biologica Cracoviensia, Series Botanica* 27: 57-74. 1985, *American Journal of Botany* 72(5): 772. 1985, *Veröffentlichungen der Geobotanischen Institutes der ETH, Stiftung Rübel, Zürich* 87: 49. 1986, *Genome* 30: 361-365. 1988, *Genome* 36: 102-111. 1993, *Pakistan Journal of Botany* 26: 353-366. 1994, *Plant Systematics and Evolution* 194: 189-205. 1995, *Restoration Ecology* 5(3): 214-228. Sep 1997, *Plant, Cell and Environment* 25(10): 1325-1339. Oct 2002, *Plant Breeding* 121(5): 417-424. Oct 2002, *Journal of Agronomy and Crop Science* 188(5): 342-349. Oct 2002, *Plant Pathology* 51(6): 673-682. Dec 2002, *Entomologia Experimentalis et Applicata* 113(2): 95-101. Nov 2004, *New Phytologist* 165(3): 875-885. Mar 2005.

in English: intermediate wheatgrass

T. intermedium (Host) Barkworth & D.R. Dewey subsp. ***barbulatum*** (Schur) Barkworth & D.R. Dewey (*Agropyron*

barbulatum Schur; *Agropyron glaucum* subsp. *barbulatum* (Schur) K. Richt.; *Agropyron glaucum* var. *barbulatum* (Schur) Richter; *Agropyron trichophorum* f. *barbulatum* (Schur) Anghel & Morariu; *Elymus hispidus* subsp. *barbulatus* (Schur) Melderis; *Elytrigia intermedia* subsp. *barbulata* (Schur) Á. Löve; *Elytrigia intermedia* subsp. *barbulata* (Schur) Soják, nom. illeg., non *Elytrigia intermedia* subsp. *barbulata* (Schur) Á. Löve; *Trichopyrum intermedium* subsp. *barbulatum* (Schur) Á. Löve)

Europe. See *Systema Vegetabilium* 2: 752. 1817, *Verhandlungen und Mittheilungen des Siebenbürgischen Vereins für Naturwissenschaften zu Hermannstadt* 4: 91. 1853, *Plantae Europaeae* 1: 124. 1890 and *Flora Republicii Socialiste Romania* 12: 615. 1972, *Botanical Journal of the Linnean Society* 76(4): 380. 1978, *Taxon* 29(2-3): 350. 1980, *American Journal of Botany* 72(5): 772. 1985, *Veröffentlichungen der Geobotanischen Institutes der ETH, Stiftung Rübel, Zürich* 87: 49. 1986, *Taxon* 35(1): 198. 1986.

T. junceiforme (Á. Löve & D. Löve) Á. Löve (*Agropyron junceiforme* (Á. Löve & D. Löve) Á. Löve & D. Löve; *Agropyron junceum* (L.) P. Beauv.; *Agropyron junceum* subsp. *boreali-atlanticum* Simonet & Guin.; *Agropyron junceum* subsp. *boreali-atlanticum* Simonet ex Guin.; *Elymus farctus* (Viv.) Runemark ex Melderis; *Elymus farctus* subsp. *boreali-atlanticus* (Simonet & Guin.) Melderis; *Elymus multinodus* Gould; *Elytrigia juncea* (L.) Nevski; *Elytrigia juncea* subsp. *boreoatlantica* (Simonet & Guin.) Hyl.; *Elytrigia junceiformis* Á. Löve & D. Löve; *Thinopyrum junceum* (L.) Á. Löve p.p.; *Triticum farctum* Viviani p.p.; *Triticum junceum* L. p.p.)

Northern and western Europe. Perennial, possibly aromatic, erect, creeping, rhizomatous with wiry or fleshy rhizomes, ligule hyaline to membranous, a single open spike narrowly oblong, spikelets cleistogamous and not imbricate, glumes glabrous, palea narrowly ovate to narrowly elliptic, 3 stamens, ovary hairy, fruit obovoid and dorsiventrally compressed, morphologically variable species, used for sand dune stabilization, coastal, maritime, sandy soils, above the high tide zone, see *Mantissa Plantarum* 327. 1771, *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812 and *Bulletin de la Société Botanique de France* 85: 176. 1938, *Rep. Univ. Inst. Appl. Sci., Reykjavik, Dept. Agric Ser. B*, 3: 106. 1948, *Botaniska Notiser* 1953: 357. 1953, *Botanical Journal of the Linnean Society* 76(4): 382-383. 1978, *Taxon* 29(2-3): 351. 1980, *Annals of Botany* 57: 35-40. 1986, *South African Journal of Botany* 54: 541-550. 1988, *Acta Botanica Neerlandica* 41: 407-415. 1992, *Genome* 35: 758-764. 1992, *Anales del Jardín Botánico de Madrid* 51(2): 280. 1994, *Opera Botanica* 137: 1-42. 1999, Pernilla Ellneskog-Staam & Arnulf Merker, "Chromosome composition, stability and fertility of allopolyploids between *Triticum turgidum* var. *carthlicum* and *Thinopyrum junceiforme*." *Hereditas* 136(1): 59-65. Apr 2002, *Hereditas* 139(1): 18-

27. Sep 2003 [Genetic diversity in wild Spanish populations of *Thinopyrum junceum* and *Thinopyrum junceiforme* using endosperm proteins and PCR-based markers.].

in English: sea wheat grass, sea couch, sand couch grass, sand couch, Russian wheatgrass

T. junceum (L.) Löve (*Agropyron junceum* (L.) P. Beauv.; *Braconotia juncea* (L.) Godr.; *Elymus farctus* (Viv.) Rune-mark & Melderis; *Elymus junceus* Fisch.; *Elymus multino-dus* Gould; *Elytrigia farcta* (Viv.) Holub; *Elytrigia juncea* (L.) Nevski; *Festuca juncea* (L.) Moench; *Festuca juncea* Phil., nom. illeg., non *Festuca juncea* (L.) Moench; *Psathy-rostachys juncea* (Fisch.) Nevski; *Triticum junceum* L.)

Europe. Morphologically variable species, see *Centuria I. Plantarum ... 1*: 6. 1755, *Mantissa Plantarum 2*: 327. 1771, *Methodus Plantas Horti Botanici ... 190*. 1794, *Mémoires de la Société Impériale des Naturalistes de Moscou 1*: 25, t. 4. 1811, *Essai d'une Nouvelle Agrostographie 102*, 146, 180. 1812, *Flore de Lorraine 3*: 192. 1844, *Verzeichniss der von Friedrich Philippi auf der Hochebene der Provinzen Antofagasta und Tarapacá gesammelten Pflanzen 88*, 89. 1891 and *Flora URSS 2*: 714, pl. 50 f. 6a-e. 1934, *Bulletin de la Société Botanique de France 85*: 176. 1938, *Madroño 9*(4): 126. 1947, *Taxon 29*(2-3): 351. 1980, *Feddes Reper-torium 95*(7-8): 476. 1984, *Plant Systematics and Evolution 151*: 203-213. 1986, *Annali di Botanica 45*: 75-102. 1987, *Genome 29*: 537-553. 1987, *Nordic Journal of Botany 9*: 11-14. 1989, *Flora Sibiriae 2*: 53. 1990, *Cytologia 55*: 639-643. 1990, *Genome 33*: 563-570. 1990, *Nord. J. Bot. 11* (1): 21. 1991, *Acta Botanica Neerlandica 41*: 407-415. 1992, *Nordic J. Bot. 12*: 167. 1992, *Genome 36*: 641-651. 1993, *Nordic Journal of Botany 13*: 481-493. 1993, *Acta Botanica Boreali-Occidentalia Sinica 13*(6): 92-97. 1993, *Annals of Botany 73*: 471-479. 1994, *Pakistan Journal of Botany 26*: 353-366. 1994, *Plant Systematics and Evolution 194*: 83-91. 1995, *Plant Systematics and Evolution 197*: 225-231. 1995, *Novon 7*(3): 229. 1997, *Journal of Nanjing Agricultural University 21*(1): 10-13. 1998, *Acta Botanica Sinica 41*(3): 258-262. 1999, *Taxon 49*(2): 258. 2000, *Hereditas 139*(1): 18-27. Sep 2003.

T. ponticum (Podp.) Barkworth & D.R. Dewey (*Agropyron elongatum* (Host) Beauv.; *Agropyron varnense* (Velen.) Hayek; *Elymus elongatus* (Host) Runemark; *Elymus elongatus* subsp. *ponticus* (Podp.) Melderis; *Elymus elongatus* var. *ponticus* (Podp.) Dorn; *Elymus varnensis* (Velen.) Runemark; *Elytrigia elongata* (Host) Nevski; *Elytrigia elongata* subsp. *pontica* (Podp.) Gamisans; *Elytrigia pontica* (Podp.) Holub; *Elytrigia pontica* subsp. *pontica*; *Lophopyrum elongatum* (Host) Á. Löve; *Lophopyrum ponticum* (Podp.) Á. Löve; *Thinopyrum ponticum* (Podp.) Z.-W. Liu & R.R.-C. Wang, nom. illeg., non *Thinopyrum ponticum* (Podp.) Barkworth & D.R. Dewey; *Thinopyrum ponticum* Barkworth & D.R. Dewey; *Triticum ponticum* Podp.)

Europe. See *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien 52*: 681. 1902, *Hereditas; genetiskt arkiv. 70*(2): 156. 1972, *Folia Geobotanica et Phytotaxonomica 8*(2): 171. 1973, *Botanical Journal of the Linnean Society 76*(4): 377. 1978, *Great Basin Naturalist 43*(4): 570. 1983, *Feddes Repertorium 95*(7-8): 489. 1984, *American Journal of Botany 72*(5): 772. 1985, *Genome 30*: 361-365. 1988, *Vascular Plants of Wyoming 298*. 1988, *Genome 33*: 283-293. 1990, *Genome 36*: 648. 1993, *Botanical Journal of the Linnean Society 112*: 149-157. 1993, *Botanical Journal of the Linnean Society 117*: 159-168. 1995, *Plant Breeding 120*(1): 21-26. Mar 2001, *Plant Breeding 120*(5): 375-380. Oct 2001, *Hereditas 141*(3): 193-198. Dec 2004, *Molecular Plant Pathology 6*(2): 99-111. Mar 2005.

in English: tall quackgrass

T. pungens (Pers.) Barkworth (*Agropyron pungens* (Pers.) Roem. & Schult.; *Agropyron pungens* var. *pungens*; *Agropyron repens* subsp. *pungens* (Pers.) Hook.f.; *Agropyron repens* var. *pungens* (Pers.) Duby; *Agropyron tetrastachys* Scribn. & J.G. Sm.; *Braconotia pungens* (Pers.) Godr.; *Elymus pungens* (Pers.) Melderis; *Elytrigia juncea* subsp. *x pungens* (Pers.) Tutin; *Elytrigia pungens* (Pers.) Tutin; *Psammopyrum pungens* (Pers.) Á. Löve; *Psammopyrum pungens* subsp. *pungens*; *Triticum pungens* Pers.; *Triticum repens* var. *pungens* (Pers.) Duby)

Europe. See *Species Plantarum 1*: 86. 1753, *Syn. Pl. 1*: 109. 1805, *Systema Vegetabilium 2*: 753. 1817, *Aug. Pyrami de Candolle Botanicon Gallicum ... Editio secunda. Ex herbariis et schedis Candollianis propriisque digestum a J.É. Duby. 1*: 529. Paris 1828, *Flore de Lorraine 3*: 192. 1844, *Student's Flora of the British Islands 504*. 1884, *Bulletin, Division of Agrostology United States Department of Agriculture 4*: 32. 1897 and *Watsonia 2*: 186. 1952, *Botanisk Tidsskrift 55*: 300. 1960, *Botanical Journal of the Linnean Society 76*(4): 380. 1978, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich 87*: 50. 1986, *Flora Mediterranea 1*: 229-236. 1991, *Phytologia 83*(4): 304. 1997 [1998].

T. pycnanthum (Godr.) Barkworth (*Agropyron acadense* F.T. Hubb.; *Agropyron pungens* var. *acadense* (F.T. Hubb.) Fernald; *Agropyron pungens* var. *pycnanthum* (Godr.) Druce; *Agropyron pycnanthum* (Godr.) Gren. & Godr.; *Agropyron repens* subvar. *pycnanthum* (Godr.) Briq.; *Elymus pycnanthus* (Godr.) Melderis; *Elytrigia pycnantha* (Godr.) Á. Löve; *Elytrigia pycnantha* (Godr.) Rauschert, nom. illeg., non *Elytrigia pycnantha* (Godr.) Á. Löve; *Triticum pycnanthum* Godr.)

Europe. Perennial, dry sandy soils, beach, see *Essai d'une Nouvelle Agrostographie 102*, 146, 180, t. 20, f. 2. 1812, *Systema Vegetabilium 2*: 753. 1817, *Mémoires, Société d'Émulation du Doubs, ser. 2, 5*: 10. 1854 [also Dominique A. Godron, 1807-1880, *Quelques notes sur la flore de*

Montpellier. Besançon 1854], *Flore de France* 3: 606. 1856 and *List of British Plants* 84. 1908, *Prodrome de la Flore Corse* 1: 186. 1910, *Rhodora* 19(217): 15-17. 1917, *Rhodora* 23(274): 232. 1921 [1922], *Botanical Journal of the Linnean Society* 76(4): 378. 1978, *Taxon* 29(2-3): 351. 1980, *Feddes Repertorium* 93(1-2): 17. 1982, *Phytologia* 83(4): 304. 1997 [1998].

in English: tick quackgrass

in Italian: gramigna litoranea

T. scirpeum (C. Presl) D.R. Dewey (*Agropyron elongatum* var. *scirpeum* (C. Presl) Fiori; *Agropyron scirpeum* C. Presl; *Elytrigia scirpea* (C. Presl) Holub; *Lophopyrum scirpeum* (C. Presl) Á. Löve)

Europe. See *Essai d'une Nouvelle Agrostographie* 102, 146, 180. 1812, *Cyperaceae et Gramineae Siculae* 49. 1820 and *Flora Analitica d'Italia* 1: 106. 1908, *Folia Geobotanica et Phytotaxonomica* 8(2): 171. 1973, *Gene Manipulation in Plant Improvement* 275. 1984, *Feddes Repertorium* 95(7-8): 489. 1984, *Genome* 29: 537-553. 1987, *South African Journal of Botany* 54: 541-550. 1988, *Genome* 36: 641-651. 1993, *Pakistan Journal of Botany* 26: 353-366. 1994.

Thonandia H.P. Linder = *Notodanthonia*
Zotov, *Rytidosperma* Steud.

An anagram of *Danthonia* DC.

Danthonioidae, Danthonieae, type *Thonandia longifolium* (R. Br.) H.P. Linder, see *Novae Hollandiae Plantarum Specimen* 1: 26, t. 33. 1804, *Flore Française. Troisième Édition* 3: 32. 1805, *Prodromus Florae Novae Hollandiae* 176. 1810, *Annales des Sciences Naturelles; Botanique, sér. 3* 2: 116. 1844, *Flora Novae-Zelandiae* 1: 303, t. 69B. 1853 and *Transactions and Proceedings of the New Zealand Institute* 46: 37. 1914, *New Zealand J. Bot.* 1: 123. 1963, S.T. Blake, "Plinthanthesis and *Danthonia* and a review of the Australian species of *Leptochloa* (Gramineae)." in *Contributions from the Queensland Herbarium* 14: 3. 1972, H.P. Linder & G.A. Verboom, "Generic limits in the *Rytidosperma* (Danthonieae, Poaceae) complex." in *Telopea* 6(4): 597-627. 1996, *Sendtnera* 3: 11-93. 1996, H.P. Linder, "Nomenclatural corrections in the *Rytidosperma* complex (Danthonieae, Poaceae)." in *Telopea* 7(3): 269-275. 1997, *Australian Systematic Botany* 11(1) 41-52. 1998, *Flora of Australia* vol. 44B, Poaceae 3: 41-45. 2005.

Thorea Rouy = *Arrhenatherum* P. Beauv.,
Pseudarrhenatherum Rouy, *Thorea* J. Briquet
(Apiaceae, alt. Umbelliferae), *Thoreauea* J.K.
Williams (Apocynaceae)

After the French naturalist Jean Thore, 1762-1823, physician; see J.H. Barnhart, *Biographical notes upon botanists.*

3: 380. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, type *Thorea longifolia* (Thore) Rouy, see *Species Plantarum* 1: 79-81, 264. 1753, *Essai d'une Nouvelle Agrostographie* 55, 152, 153. 1812, *Mantissa* Addit. I. ad Mant. Cl. III: 526 [326]. 1827, *An Introduction to the Natural System of Botany* 21. July 1836, *Voyage botanique dans le midi de l'Espagne* 2: 657. 1844, Ludwig Georg Karl Pfeiffer (1805-1877), *Nomenclator botanicus*. Nominum ad finem anni 1858 publici juris factorum, classes, ordines, tribus, familias, divisiones, genera, subgenera vel sectiones designantium enumeratio alphabetica. Adjectis auctoribus, temporibus, locis systematicis, apud varios, notis literariis atque etymologicis et synonymis. Conscriptus Ludovicus Pfeiffer. Cassellis, sumptibus T. Fisheri, [1871-] 1873-1874 and *Archives des Sciences Physiques et Naturelles* sér. 4. 13: 614. 1902, *Flore de France* vol. 14. 1913, *Verhandlungen der Gesellschaft Deutscher Naturforscher und Ärzte* 85(2): 671. 1914, *Bulletin de la Société Botanique de France* 68: 401-402. 1921 [1922], *Lundellia* 5: 47-57, f. 1-2. 2002, *Contributions from the United States National Herbarium* 48: 119-121. 2003.

Thoreochloa J. Holub = *Arrhenatherum* P.
Beauv., *Pseudarrhenatherum* Rouy

After the French naturalist Jean Thore, 1762-1823, physician; see J.H. Barnhart, *Biographical notes upon botanists.* 3: 380. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, see *Journal für die Botanik* 2: 314. 1799, Jean Thore, *Promenade sur les côtes du golfe de Gascogne*, etc. 92. Bordeaux 1810, *Essai d'une Nouvelle Agrostographie* 55, 152, 153. 1812, *Voyage botanique dans le midi de l'Espagne* 2: 657. 1839-1845, *Flore de Département des Hautes-Pyrénées* 78. 1867, *Nomenclator botanicus* 1: 274. 1872 and *Bulletin de la Société Botanique de France* 68: 401-402. 1921, *Boletim da Sociedade Broteriana, ser. 2* 7: 119. 1931, *Acta Universitatis Carolinae: Biologica* 1962: 154. 1962 [1963], *Contributions from the United States National Herbarium* 48: 119-121. 2003.

Thouarsia Kuntze = *Thuarea* Pers.

Named after the French botanist Louis-Marie Aubert Aubert du Petit-Thouars, 1758-1831, traveler and plant collector, among his publications are *Mélanges de botanique et de voyages ...* Paris 1811, *Plantes des îles de l'Afrique australe ...* Paris [1804], *Genera nova madagascariensia*. [Paris

1806], *Histoire particulière des plantes orchidées ...* Paris 1822 and *Histoire des végétaux recueillis dans les isles australes d'Afrique ...* Paris 1806 [-1808]; see Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 98. Palermo 1988; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 109. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Stafleu & Cowan, *Taxonomic literature*. 1: 704-706. 1976.

Panicaceae, see *Syn. Pl.* 1: 110. 1805, *Genera nova madagascariensis* 3. [Paris 1806], *J. Bot.* 13: 332. 1875 and *Lexikon Generum Phanerogamarum* 558. 1903.

Thrasya Kunth = Tylothrasya Döll

From the Greek *thrasys* "bold."

About 20-22-25 species, Central and South America. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial or rarely annual, small, caespitose, herbaceous, slender, robust, unbranched, ligule an unfringed membrane, leaves narrow and mostly basal, plants bisexual, inflorescence from the uppermost nodes, single raceme, spikelets solitary or paired arranged in unilateral branches, longer spikelets hermaphrodite, spikelets 2-flowered, lower floret male or sterile, upper floret bisexual, 2 glumes very unequal, upper glume acuminate and many-veined to reticulate in the upper portion, lower glume small or absent, upper glume 3- to 7-nerved, lower lemma coriaceous and splitting into 2 halves, lower palea present, upper lemma coriaceous with inrolled flat margins, 2 lodicules free and fleshy, 2-3 stamens, ovary glabrous, 2 stigmas pilose, sometimes spikelets with a slightly fleshy basal callus, fruit compressed, open habitats, savannahs, wet sands, wet rocks, moist cliffs, lowland savannahs, wet places along stream and rivers, some species of *Thrasya* within *Paspalum*, type *Thrasya paspaloides* Kunth, see *Species Plantarum* 1: 55. 1753, *Systema Naturae, Editio Decima* 846, 855, 1359. 1759, *Nova Genera et Species Plantarum* 1: 120-121, t. 39. 1815 [1816], *Species Graminum* 3: t. 280. 1829-1830, *Flora Brasiliensis* 2(2): 295-296, pl. 37. 1877, *Genera Plantarum* 3(2): 1101. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 35. 1887 and *Österreichische Botanische Zeitschrift* 51: 367. 1901, *Proceedings of the Biological Society of Washington* 24: 115. 1911, *Annals of the Missouri Botanical Garden* 30(2): 175-176. 1943, *Fieldiana: Botany, New Series* 4: 1-608. 1980, *Brittonia* 32(2): 217-221. 1980, *Acta Botanica Venezuelica* 14(4): 7-93. 1985 [1987], *Genera Graminum* 288-289. 1986, *Ann. Missouri Bot. Gard.* 74: 434-436. 1987, *Bol. Mus. Para. Emilio Goeldi, Sér. Bot.* 4(2): 235-241. 1988, *Flora of the Guianas. Series A, Phanerogams* 8: 628-639. 1990, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Flora Mesoamericana* 6:

353-355. 1994, J.J. San Jose, R. Montes and M. Mazorra, "The nature of savannah heterogeneity in the Orinoco Basin." *Global Ecology and Biogeography* 7(6): 441-455, Nov 1998, N. Trillo & G.H. Rúa, "Sobre la monofilia del género *Paspalum*: el problema de *Thrasya* y del grupo Decumbentes." *II Reunión Argentina de cladística y biogeografía, Buenos Aires*. 1999, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, S. Denham, F. Zuloaga and O. Morrone, "A systematic revision and phylogeny of *Paspalum* subgenus *Ceresia* (Poaceae: Panicoideae: Paniceae)." *Annals of the Missouri Botanical Garden* 89(3): 337-399. 2002, G.H. Rúa & S. Aliscioni, "A morphology-based cladistic analysis of *Paspalum* sect. *Pectinata*." *Systematic Botany* 27(3): 489-501. 2002, *Contributions from the United States National Herbarium* 46: 443-527, 613-616. 2003, *Am. J. Bot.* 90: 796-821. 2003.

Species

T. achlyosphila Soderstr. (from the Greek *achlys* "obscurity, a mist, darkness, trouble" and *philos* "loving"; Achlys, the goddess of obscurity, the goddess of hidden places)

Guyana. Perennial, tufted, mat-forming, branched, leaf sheaths keeled, ligule membranous, inflorescence terminal and lateral, racemes lanceolate, related to *Thrasya granitica* A.G. Burm., see *Memoirs of the New York Botanical Garden* 12(3): 2, 4. 1965.

T. auricoma A.G. Burm.

Brazil. See *Brittonia* 34: 461. 1982.

T. axillaris (Swallen) A.G. Burm. ex Judz. (*Paspalum axillare* Swallen; *Paspalum delicatum* Swallen; *Paspalum rami-anum* Camacho, Rodr.-Rodr. & L. Guevara)

Suriname, Venezuela. Annual, straggling, inflorescence terminal and axillary, solitary raceme, glumes usually absent, lower floret sterile, upper floret pitted, 2 stamens, open forest, see *Bulletin of the Torrey Botanical Club* 75: 84. 1948, *Contributions from the United States National Herbarium* 29(6): 268-269. 1948 [1949], *Fl. Suriname, Add. & Corr.* 1(2): 364. 1968, *Fl. Guianas, ser. A, Phanerog.* 8(187): 630-631. 1990.

T. campylostachya (Hack.) Chase (*Panicum campylostachyum* Hack.; *Thrasya ciliatifolia* Swallen; *Thrasya gracilis* Swallen)

South America, Mexico. Slender, tufted, geniculate and ascending, nodes pubescent, leaf blades linear flat acute glabrous or pubescent, solitary racemes terminal or axillary, spikelets elliptic glabrous, upper glume oblong 5-nerved obtuse or acute, lower lemma flat or grooved, upper lemma acute, prairie, savannah, forest, forest margins, see *Nova Genera et Species Plantarum* 1: 120-121, t. 39. 1815 [1816] and *Österreichische Botanische Zeitschrift* 51: 367. 1901, *Proceedings of the Biological Society of Washington* 24: 115. 1911, *Annals of the Missouri Botanical Garden* 30(2): 175-176. 1943.

T. cinerascens (Döll) Chase ex Judz. (*Panicum cinerascens* Döll; *Paspalum cinerascens* (Döll) A.G. Burm. & C.N. Bastos; *Thrasya cinerascens* (Döll) Judz.)

Guianas. Perennial, caespitose, coarse, inflorescence erect, paired spikelets in 2 rows, lower floret mal, upper glume reticulate in the upper portion, see *Flora Brasiliensis* 2(2): 189. 1877 and *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 4(2): 241. 1988, *Flora of the Guianas. Series A, Phanerogams* 8(187): 631-632. 1990.

T. crucensis Killeen

Bolivia, Santa Cruz. Perennial, caespitose, simple, erect, rhizomatous, forming dense clumps, leaf blades linear, rachis with ciliate margins, spikelets elliptic pubescent or pilose, glumes lanceolate, upper lemma elliptic acute, wooded savannah, sandy soil, see *Annals of the Missouri Botanical Garden* 77(1): 190, f. 7. 1990.

T. cultrata (Trinius) Nees (*Panicum cultratum* Trin.; *Paspalum cultratum* (Trin.) A.G. Burm.)

Brazil. Inflorescence with 1-3 solitary racemes, glabrous spikelets, sulcate lower lemma, see *De Graminibus Paniceis* 126. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 95. 1829 and *Proc. Biol. Soc. Wash.* 24: 115. 1911, *Acta Botanica Venezuelica* 14(4): 90. 1985[1987].

T. glaziovii A.G. Burm.

Brazil. See *Brittonia* 34: 458-462. 1982, *Edinburgh Journal of Botany* 48: 73-80. 1991.

T. granitica A.G. Burm. (*Thrasya campylostachya* sensu Amshoff & Henrard, non (Hack.) Chase)

Suriname. Perennial, tufted, terminal raceme, spikelets elliptical, raceme rachis pilose to ciliate, lower floret male, lower glume absent or minute, upper glume veined, related to *Thrasya campylostachya* (Hack.) Chase, see *Fl. Suriname* 1(1): 333. 1943, *Brittonia* 32(2): 219-220, f. 3. 1980.

T. hitchcockii Chase

Panama. Decumbent, spreading, pubescent leaves, forming dense clumps, damp places, along rivers and streams, see *Journal of the Washington Academy of Sciences* 17: 142. 1927.

T. longiligulata Bastos & A.G. Burm.

Brazil. See *Boletim do Museu Paraense Emílio Goeldi, Série Botânica* 4(2): 236, f. 1-2. 1988.

T. mosquiensis Davidse & A.G. Burm.

Nicaragua. See *Ann. Missouri Bot. Gard.* 74(2): 434, f. 1. 1987.

T. oreophila A.G. Burm.

Brazil. Along roadsides, see *Brittonia* 34: 458. 1982.

T. parvula A.G. Burm.

Brazil. Annual, minute spikelets, upper glume absent or greatly reduced, upper florets finely pitted, 2 stamens, see *Brittonia* 32(2): 217-218, f. 1. 1980.

T. paspaloides Kunth (*Ceresia aristata* Willd. ex Steud.; *Panicum thrasya* Trin.; *Thrasya setosa* Swallen; *Thrasya trinitensis* Mez)

South America. See *Nova Genera et Species Plantarum* 1: 121, t. 39. 1815 [1816], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 228. 1834, *Nomenclator Botanicus. Editio secunda* 1: 333. 1840 and *Repertorium Specierum Novarum Regni Vegetabilis* 15: 125. 1918, *Fieldiana, Botany* 28(1): 17. 1951, *Bot. J. Linn. Soc.* 82: 331-342. 1981.

T. petrosa (Trinius) Chase (*Panicum petrosum* Trin.; *Panicum petrosum* var. *mollis* Pilg.; *Thrasya petrosa* (Trin.) Kuhlman, nom. illeg., non *Thrasya petrosa* (Trin.) Chase; *Tylothrasya petrosa* (Trin.) Döll)

Mexico, Bolivia, Brazil. Perennial, erect, tufted, robust, simple or branched, nodes bearded, internodes glabrous or hairy, rhizomatous, sheaths compressed and keeled, leaf blades linear attenuate or acuminate, solitary racemes exerted terminal or axillary, pilose spikelets elliptic-lanceolate gaping at maturity, small lower glume flexuous, upper glume oblong 5-nerved obtuse or acuminate, lower floret male, lower lemma grooved on the back and splitting into 2 halves, anthers purple to orange, mild laxative, diuretic, applied as emollient for swollen liver, in pasture, grassland, stony places, woodland, sandy soil, campos, savannah and dry savannah, damp ground, in shade, resembles *Thrasya thrasyooides*, see *Species Graminum* 3: t. 280. [1829-1830], *Flora Brasiliensis* 2(2): 296, pl. 37. 1877 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 134. 1901, *Proceedings of the Biological Society of Washington* 24: 115. 1911, *Comissão de Linhas Telegráficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67 (Bot. 11): 93. 1922, *Fl. Suriname* 1(1): 332. 1943, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994.

in Brazil: barba de bode

T. petrosa (Trinius) Chase var. ***ciliata*** A.G. Burm.

Brazil. See *Proceedings of the Biological Society of Washington* 24: 115. 1911, *Brittonia* 32(2): 220, f. 4. 1980.

T. reticulata Swallen (*Paspalum multinervium* A.G. Burm.; *Paspalum reticulatum* Hack.)

Brazil. Perennial, densely tufted, nodes bearded to densely pubescent, ligule membranous and ciliate, inflorescence terminal, spikelet pedicel dimorphic, upper glume reticulate, lower floret male, sulcate lower lemma, anthers purple, closely related to *Thrasya cinerascens* (Döll) Chase ex Judz., see *Österreichische Botanische Zeitschrift* 51: 199. 1901, *Contributions from the United States National Herbarium* 29(6): 267-268. 1948 [1949], *Acta Botanica Venezuelica* 14(4): 90. 1985[1987].

T. robusta Hitchc. & Chase

West Indies, Venezuela. Perennial, caespitose, erect, nodes bearded to densely pubescent, solitary racemes, upper glume and lower lemma densely hairy, lower floret male or sterile, upper floret slightly beaked, in savannah, grassland, pasture, along roadsides, forest margin, related to *Thrasya cultrata* (Trin.) Nees, see *Contributions from the United States National Herbarium* 18(7): 297. 1917.

T. scandens (Tutin) Soderstr. & A.G. Burm. (*Paspalum scandens* Tutin; *Thrasya guianensis* Swallen)

British Guiana, French Guiana. Caespitose, scrambling, lower glume flat, upper glume finely veined, lower floret male, savannah, see *Journal of Botany, British and Foreign* 72(864): 338. 1934, *Bull. Torrey Bot. Club* 75: 85. 1948, *Memoirs of the New York Botanical Garden* 9(3): 250. 1957, *Brittonia* 32: 220. 1980.

T. schumannii (Pilg.) Pilg. (*Panicum schumannii* Pilg.)

Brazil. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 30(1): 134. 1901, *Das Pflanzenreich*, edition 2, 14e: 69, f. 39 A-O. 1940.

T. seminuda A.G. Burm.

Brazil. See *Brittonia* 32(2): 218-219, f. 2. 1980.

T. setosa Swallen (*Thrasya paspaloides* Kunth)

Venezuela. Densely pubescent, along riverbanks, forming dense clumps, see *Nova Genera et Species Plantarum* 1: 121, t. 39. 1815 [1816] and *Fieldiana, Bot.* 28(1): 17. 1951, *Bot. J. Linn. Soc.* 82: 339-341. 1981.

T. stricta A.G. Burm.

Venezuela. Forming dense colonies, see *Acta Bot. Venez.* 14(4): 75-77, f. 16. 1985 [1987].

T. thrasyooides (Trin.) Chase (*Panicum thrasyooides* Trin.; *Paspalum pilosum* Spreng. ex Steud., nom. illeg., non *Paspalum pilosum* Lam.; *Thrasya hirsuta* Nees)

Brazil, Bolivia. Erect, caespitose, slender, leaf blades linear acuminate, leaves mostly basal, ligules membranous, terminal solitary racemes, rachis with ciliate margins, spikelets elliptic-oblong pubescent, lower glume small, upper glume elliptic 3- to 5-nerved, lower lemma coriaceous acute, upper lemma acute, related to *Thrasya trinitensis*, see *De Graminibus Paniceis* 126. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 94. 1829, *Nomenclator Botanicus. Editio secunda* 2: 272. 1841 and *Proceedings of the Biological Society of Washington* 24: 114. 1911.

T. trinitensis Mez (*Thrasya paspaloides* Kunth)

Trinidad. Perennial, caespitose, compact, clumped, softly hairy, leaves mainly basal, leaf blade strongly keeled, inflorescence terminal, lower floret male, lower glume absent, upper glume veined, in savannah, dry rocky places, open savannah, marshy areas, closely related to *Thrasya paspaloides* Kunth, see *Nova Genera et Species Plantarum* 1: 121, t. 39. 1815 [1816] and *Repertorium Specierum*

Novarum Regni Vegetabilis 15: 125. 1918, *Bot. J. Linn. Soc.* 82: 339-341. 1981.

Thrasypopsis Parodi

Resembling *Thrasya*.

Two species, Brazil. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, caespitose, herbaceous, unbranched, leaves mainly basal, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence of 1-2 racemes, spikelets solitary paired, incomplete florets proximal to the female-fertile florets, 2 glumes more or less equal, small lower glume 6- to 7-nerved, coriaceous upper glume 11-17-nerved, lower lemma coriaceous 7- to 9-nerved, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, savannahs, linked to *Thrasya*, type *Thrasypopsis rawitscheri* Parodi, see *Boletín de la Sociedad Argentina de Botánica* 1(4): 293-297. 1946, *Brittonia* 32(2): 217-221. 1980, *Phyton. Annales Rei Botanicae* 23: 101-116. 1983, *Contributions from the United States National Herbarium* 46: 616. 2003.

Species

T. juergensii (Hack.) Soderstrom & A.G. Burm. (also *juergensii*) (*Panicum juergensii* Hack.; *Panicum jurgensenii* Hack., nom. illeg., non *Panicum jurgensenii* (E. Fourn.) Scribn. & Merr.; *Thrasypopsis juergensii* (Hack.) Soderstr. ex Burman; *Thrasypopsis rawitscheri* Parodi)

Southern Brazil. Solitary or packed spike-like panicles, lower glume present, lower lemma flat on the back, see *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 70-71. 1915, *Boletín de la Sociedad Argentina de Botánica* 1(4): 294, f. 1. 1946, *Brittonia* 32(2): 221. 1980.

T. repanda (Nees ex Trin.) Parodi (also *repandum*) (*Panicum repandum* Nees, nom. illeg., non *Panicum repandum* Nees ex Trin.; *Panicum repandum* Nees ex Trin.; *Thrasypopsis repanda* (Nees) Parodi)

Brazil. Solitary spike-like panicles, lower glume absent, lower lemma grooved on the back, see *Species Graminum* 2: t. 150. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 98. 1829 and *Boletín de la Sociedad Argentina de Botánica* 1(4): 297. 1946.

Thrixgyne Keng = *Duthiea* Hack.

From the Greek *thrix*, *trichos* "hair" and *gyne* "female, woman."

Aveneae, type *Thrixgyne dura* Keng, see *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 45: 200. 1896 and *Archives de Biologie Végétale*

Pure et Appliquée 1: 64-65. 1901, *Sunyatsenia* 6: 80, 82-85, t. 13. 1941, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 201. 1957, *Acta Phytotaxonomica Sinica* 10(2): 182. 1965.

Thuarea Persoon = *Microthuareia* Thouars, *Ornithocephalochloa* Kurz, *Thouarsia* Kuntze

Named after the French botanist Louis-Marie Aubert Aubert du Petit-Thouars, 1758-1831, traveler and plant collector, among his publications are *Mélanges de botanique et de voyages* ... Paris 1811, *Plantes des îles de l'Afrique australe* ... Paris [1804], *Genera nova madagascariensia*. [Paris 1806], *Histoire particulière des plantes orchidées* ... Paris 1822 and *Histoire des végétaux recueillis dans les îles australes d'Afrique* ... Paris 1806 [-1808]; see Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 98. Palermo 1988; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 109. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964.

Two species, Madagascar, Asia, Polynesia. Panicoideae, Panicoideae, Paniceae, perennial, herbaceous, unarmed, branched or unbranched, slender, decumbent, creeping, rooting at nodes, stoloniferous, mat-forming, auricles absent, ligule a fringe of hairs to a ciliate membrane-like, plants bisexual, hermaphrodite florets present or absent, inflorescence a single spiciform deciduous raceme on a very short culm, short unilateral spike enclosed in a spathiform sheath, foliaceous rhachis, 1-2 persistent bisexual spikelets below with 1 staminate or neuter floret and 1 perfect or pistillate floret, male deciduous spikelets above with 2 florets staminate, 1 to 2 glumes per spikelets, upper glume 5-nerved, lower glume small or suppressed, upper lemma with flat margins, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, beach grass, open habitats, on sandy beaches, seashore sands, related to *Brachiaria* (Trin.) Griseb., type *Thuarea sarmentosa* Pers., see *Syn. Pl.* 1: 110. 1805, *Genera nova madagascariensia* 3. [Paris 1806], *Prodromus Florae Novae Hollandiae* 197. 1810, *Journal of Botany, British and Foreign* 18: 332, t. 171, f. 1-18. 1875 and *Lexikon Generum Phanerogamarum* 558. 1903.

Species

T. involuta (G. Forst.) R. Br. ex Sm. (*Ischaemum involutum* G. Forst.; *Ornithocephalochloa arenicola* Kurz; *Panicum sarmentosum* (Pers.) Raspail, nom. illeg., non *Panicum sarmentosum* Roxb.; *Thuarea involuta* (G. Forst.) R. Br. ex Roem. & Schult., nom. illeg., non *Thuarea involuta* (G. Forst.) R. Br. ex Sm.; *Thuarea involuta* (G. Forst.) Roem. & Schult.; *Thuarea sarmentosa* Pers.)

Southeast Asia, Malaysia, Sri Lanka, eastern Polynesia. Perennial, prostrate, long creeping, diffusely branching, rooting at nodes, forming a dense mat, flowering branches erect and short, ligule short and fringed with hairs, leaves in 2 rows, leaf blades lanceolate to linear-lanceolate, inflorescence a simple raceme, spikes 1-sided and terminal enclosed by a folded sheath, spikelets sessile, second glume and lower lemma membranous, caryopsis beaked, weed, native pasture species, a good fodder and a good soil-binder, grows near the shore, coastal sand dunes, on sandy beaches, coral rubble, see *Species Plantarum* 2: 1049. 1753, *Florulae Insularum Australium Prodromus* 73. 1786, *Syn. Pl.* 1: 110. 1805, *Systema Vegetabilium* 2: 208. 1817, *Annales des Sciences Naturelles* 1. 5: 299. 1825, *Journal of Botany, British and Foreign* 18: 332, t. 171, f. 1-18. 1875 and *Grasses of Ceylon* 157. 1956, *Grasses of Burma* ... 369. 1960.

in English: beach grass

in Tonga: kefukefu

in Guam: lasaga

in Japan: Kuroiwa-zasa (Hisashi Kuroiwa was a plant collector in the Ryukyus, author of "A list of phanerogams collected in the southern part of Isl. Okinawa, one of the Loochoo chain." *Botanical Magazine* (Tokyo) 14: 109-112, 122-126, 139-143. 1900)

T. perrieri A. Camus

Madagascar. See *Bulletin de la Société Botanique de France* 75: 912. 1929.

Thurberia Bentham = *Greenia* Nutt., *Greenia* S. Wallman (Liliaceae), *Limnodea* L.H. Dewey, *Sclerachne* Torr. ex Trin., *Thurberia* A. Gray (Malvaceae)

After the American botanist George Thurber, 1821-1890, naturalist, 1850-1853 Mexican-U.S. Boundary Survey, chemist, professor of botany and horticulture at Michigan Agricultural College 1859-63 and editor of the *American Agriculturist* 1863-1885; see Joseph Ewan, *Rocky Mountain Naturalists*. 64, 321. The University of Denver Press 1950; J.H. Barnhart, *Biographical notes upon botanists*. 3: 382. Boston 1965; Ignatz Urban, *Geschichte des Königlichen Botanischen Museums zu Berlin-Dahlem (1815-1913). Nebst Aufzählung seiner Sammlungen*. 1916; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 400. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. 45. New York and London 1969; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Stafleu & Cowan, *Taxonomic*

literature. 6: 334-335. 1986; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983.

Pooideae, Poaeae, Aveninae, see *De Fructibus et Seminibus Plantarum* 2: 188. Apr-Mai 1791, *Transactions of the American Philosophical Society, new series*, 5: 142. 1835, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(3-4): 273. 1841, *Memoirs of the American Academy of Arts and Science, new series* 5: 308. 1854, *Journal of the Linnean Society, Botany* 19: 58. 1881, *Contributions from the United States National Herbarium* 2(3): 518. 1894 and D.M. Brandenburg & J.W. Thieret, "Cinna and Limnodea (Poaceae): not congeneric." *Sida* 19(1): 195-200. 2000, *Contributions from the United States National Herbarium* 48: 381, 426, 608, 654. 2003.

Thyridachne C.E. Hubb. = Tisserantiella Mimeur

From the Greek *thyridos* "a window, small door" and *achne* "chaff, glume," referring to the lower lemma.

One species, tropical Africa. Panicoideae, Panicodae, Paniceae, annual, herbaceous, ligule membranous, plants bisexual, contracted inflorescence racemose or paniculate, very slender spiciform panicle, spikelets falcate dorsally compressed, 2 glumes unequal to very unequal, lower glume nerveless, upper glume and lower lemma coriaceous, upper lemma cartilaginous, palea 2-nerved, lodicules absent, 3 stamens, ovary glabrous, 2 stigmas, related or allied to *Sacciolepis*, type *Thyridachne tisserantii* C.E. Hubb., see *Kew Bulletin* 4: 363-364. 1949, *Revue internationale de botanique appliquée et d'agriculture tropicale* 29: 593. 1949.

Species

T. tisserantii C.E. Hubb. (for the French botanist Charles Tisserant, 1886-1962, traveler, explorer and plant collector)

Africa. Upper glume gibbous.

Thyridolepis S.T. Blake

From the Greek *thyridos* "a window, small door," *thyra* "a door, entrance" and *lepis* "scale," referring to a hyaline depression in the lower glume, the scales are transparent.

About 3 species, Australia. Panicoideae, Panicodae, Neurachneae, perennial, more or less woody and persistent, scaly woolly bases, ligule fringed, blade rolled in bud, leaf blades linear to ovate and narrow, solid internodes, culms branched, plants bisexual, inflorescence a single and bristly or hairy spike-like raceme, spikelets bearded at the base

with distinct bristles from confluent tubercles, florets 2, lower floret male or sterile, upper floret bisexual, hairy callus present, 2 glumes obtuse very dissimilar, lower glume with a rectangular window surmounted by bristles, upper glume coriaceous and ribbed, lower lemma membranous barren clasping upper floret, palea entire, lodicules present or absent, 3 stamens, ovary glabrous, 2 stigmas, fruit compressed, drought-tolerant, native pasture species, fodder grasses, palatable, arid lands, dry grassland, scrub, open habitats, type *Thyridolepis mitchelliana* (Nees) S.T. Blake, see *Prodromus Florae Novae Hollandiae* 196. 1810 and Stanley Thatcher Blake (1910-1973), in *Contributions from the Queensland Herbarium*. 13: 25. 1972, *Australian Journal of Botany* 33: 317-336. 1985, Tein McDonald, "Extending that little bit further. An interview with Martin Driver and Ian Davidson." *Ecological Management and Restoration* vol. 1, issue 1: 3-9. Apr 2000, *Ecological Management and Restoration* 3(2): 81-89, 117-126, 179-188. 2002.

Species

T. mitchelliana (Nees) S.T. Blake (*Neurachne mitchelliana* Nees) (species named for the British (b. Stirlingshire) Lieutenant-Colonel Sir Thomas Livingstone Mitchell, 1792-1855 (d. Darling Point, N.S.W., Australia), plant collector, translator, in 1827 Deputy Surveyor-General of New South Wales, 1839 Fellow of the Royal Society, author of *Three Expeditions into the Interior of Eastern Australia*. London 1838, *The Australian Geography, with the Shores of the Pacific and Those of the Indian Ocean*. Sydney 1851, *The Lusiad of Luis de Camoens*, closely translated. London 1854 and *Journal of Expedition into Interior of Tropical Australia*. 1848; see Dean Boyce, *Clarke of the Kindur. Convict, Bushranger, Explorer*. Melbourne 1970. 1st edition; I.H. Vegter, *Index Herbariorum*. Part II (4), *Collectors M. Regnum Vegetabile* vol. 93. 1976; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 492. London 1994; Jonathan Wantrup, *Australian Rare Books, 1788-1900*. Hordern House, Sydney 1987; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980)

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Perennial, tufted, erect, leafy, rhizomatous, base woolly and bulbous, culm nodes more or less pubescent, leaves stiff and lanceolate, sheath pubescent, ligule hairy, stems or peduncles silky-pubescent beneath the inflorescence, racemes narrowly cylindrical and hairy, spikelets usually rostrate, spikelets cleistogamous and hairy, lower glumes with a window surmounted by bristles, lower lemma sterile, drought-tolerant, native pasture species, very useful for grazing, very palatable when young, susceptible to prolonged heavy grazing, often in sandy or stony soils, sandy plains, semiarid grassland, mulga communities, red earth soils, stony ridges, dominant on hilly

areas, see *Contributions from the Queensland Herbarium* 13: 25. 1972.

in Australia: window mulga grass, mulga grass, mulga Mitchell grass, mulga Mitchell

T. multiculmis (Pilger) S.T. Blake (*Neurachne multiculmis* Pilger)

South Australia, Western Australia, Northern Territory. Tufted, base woolly, lower culm nodes more or less silky-pubescent, racemes linear, stems silky beneath the inflorescence, spikelets acuminate and bearded at the base, first glume with a hyaline cavity, second glume with ciliate margins, first lemma male or sterile, fertile lemma scarious and long-beaked, an indicator of good range condition, susceptible to prolonged heavy grazing, see *Contributions from the Queensland Herbarium* 13: 32. 1972.

T. xerophila (Domin) S.T. Blake (*Neurachne xerophila* Domin) (Greek *xeros* “dry” and *philos* “lover, loving”)

South Australia, Western Australia, Northern Territory, Queensland, New South Wales. Perennial, tufted, erect, leafy, base woolly and bulbous, lower culm nodes pubescent, leaves stiff and lanceolate, sheath more or less hairy, ligule hairy, racemes narrowly oblong and bristly, stems or peduncles glabrous or slightly pubescent beneath the inflorescence, spikelets bearded at the base, spikelets cleistogamous or chasmogamous, first glume with a hyaline cavity, second glume scaberulous, lower lemma male or sterile and rough to pubescent, fertile lemma scarious, grows in sandy or stony soils, see *Contributions from the Queensland Herbarium* 13: 33. 1972.

Thyridostachyum Nees = *Mnesithea* Kunth

From the Greek *thyridos* “a window, small door” and *stachys* “spike.”

Panicoideae, Andropogoneae, Rottboelliinae, see *Observationes Botanicae* 3: 11. 1783, *Révision des Graminées* 1: 153-154. 1829, *A Natural System of Botany* (edition 2) 379. 1836 and *Cytologia* 51: 43-50. 1986, *New Botanist* 21: 105-114. 1994, *Contributions from the United States National Herbarium* 46: 295-296, 616. 2003.

Thyrsia Stapf = *Phacelurus* Griseb.

From the Greek *thyrsos* “a panicle, a thyrses.”

About 3-4 species, tropical Africa, Asia. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, annual, herbaceous, robust, tough, stout, reedlike, ligule an unfringed membrane, plants bisexual, inflorescence spicate, terminal racemes or panicles, spikelets paired sessile and pedicellate, 2 glumes subequal, lower glume 2-keeled, pedicellate spikelets usually sterile or male, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, often in

Phacelurus, type *Thyrsia inflata* Stapf, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Spicilegium florum rumelicarum et bithynicarum* ... 2: 423-424. 1844 [1846], *Synopsis Plantarum Glumacearum* 1: 375. 1854, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887, *Journal of the Linnean Society, Botany* 25(165-169): 86-87, pl. 35. 1889, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 140. 1899 and *Annali di Botanica* 13: 36. 1914, *Flora of Tropical Africa* 9: 48-49. 1917, *Bulletin du Muséum National d'Histoire Naturelle* 27(5): 369. 1921, *Bulletin of Miscellaneous Information Kew* 1928: 35. 1928, *Flore Agrostologique du Congo Belge* 1: 53. 1929, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 649. 1932, *Acta Phytotaxonomica et Geobotanica* 17: 15. 1957, *Grasses of Burma* ... 255. 1960, *Kew Bulletin* 33(2): 175-179. 1978, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

Species

T. zea (C.B. Clarke) Stapf (*Phacelurus zea* (C.B. Clarke) Clayton; *Rottboellia thyrsoides* Hack.; *Rottboellia zea* C.B. Clarke; *Thyrsia thyrsoides* (C.B. Clarke) A. Camus)

Asia, China, Africa. See *J. Linn. Soc., Bot.* 25(165-169): 86-87, pl. 35. 1889, *Monographiae Phanerogamarum* 6: 283. 1889 and *Bull. Mus. Natl. Hist. Nat.* 27(5): 369. 1921, *Hooker's Icon. Pl.* 31(4): t. 3078, 3093, 3100. 1922, *Kew Bulletin* 33(2): 177. 1978.

Thyrsostachys Gamble

From the Greek *thyrsos* “a panicle, a thyrses” with *stachys* “spike,” probably referring to the form and to the disposition of the inflorescence.

A genus of 2-3 species, China, Thailand to Vietnam, Myanmar. Bambusoideae, Bambusodae, Bambuseae, perennial, sympodial, woody, arborescent, solid, unicaspitose, forming clumps very dense, erect to rigidly erect at the lower part and slightly outarched at the upper part, straight, manifold branching at high part of culm, many branches at each node, main branch indistinct, rhizomes pachymorph, flowering culms leafy, a white pubescent ring both above and below each joint, culm sheaths persistent shorter than internode, sheath blade long, no sheath auricles, ligule an unfringed membrane, auricles very small, leaf blades small and narrow, plants bisexual, inflorescence iterant terminal on short leafy or leafless branches, pseudopanicles, pseudospikelets on nodes subtended by a short sheath persistent, cluster of 1-3 fertile pseudospikelets and 1-2 sterile ones, glumes 2-4 very unequal, lemmas papery, lowest palea bifid, 0-3 very thin lodicules rarely none, 6 stamens, ovary glabrous or sparsely pubescent on top, 1-3 feathery or sparsely hairy stigmas, ornamental, found growing wild and also cultivated, rainforest, mixed forest, dry lowlands, moist hill

forest, type *Thyrsostachys siamensis* Gamble, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Genera Plantarum* 1: 236. 1789, *Die Natürlichen Pflanzenfamilien* 2(2): 25. 1887, *Indian Forester* 20: 1. 1894, *Annals of the Royal Botanic Garden, Calcutta* 7: 58-60, 125, t. 51. 1896 and *Gard. Bull. Sing.* 16: 1-135. 1958, *Flora of Taiwan* 5: 768-770, 1978, *Taxon* 47: 739. 1998, *Taxon* 49(2): 273. 2000.

Species

T. oliveri Gamble

Myanmar. Tufted to densely tufted, large, sympodial, straight, erect, several branches, most of branches fascicled at the nodes, young culm green covered with white pubescence, prominent nodes thickened, wall thin or rather thick, culm sheath persistent or shedding late, culm sheaths fibrous, sheath auricles weak, sheath ligule flat, sheath blade long cordate or long triangular and erect, leaves linear-lanceolate acuminate and the base rounded into a short petiole, inflorescence terminal on short leafless branches, 2-3 fertile florets, 1-2 empty glumes, 2-3 lodicules, 6 dropping stamens, 3 stigmas, ornamental and decorative, edible seeds, young shoots eaten, culms used for construction purposes and basketry, poles and handicrafts, broom handles, building material, found in moist forests, open areas, lower hill forest, see *Indian Forester* 20: 1. 1894.

in Myanmar: mai-tong, thana-wa, thanawa

in Thailand: pao, phai raakdam, phai-ruak-dam, sa lon, waa bo suu, wa bo su

T. regia (Thomson ex Munro) Bennet (*Bambusa regia* Munro; *Bambusa regia* Thomson ex Munro; *Thyrsostachys regia* (Munro) Bennet; *Thyrsostachys siamensis* Gamble)

Thailand, Myanmar. Tufted, straight, thick-walled, several branches, persistent culm sheaths usually covering the base, nodes thickened, internodes green, culm sheaths pubescent on the back, leaves linear, 1-3 fertile florets, 2-3 glumes, 1-3 stigmas, beautiful and ornamental, young tender shoots eaten, occurs in dry and poor soils, see *Transactions of the Linnean Society of London* 26(1): 116. 1868 and *Indian Forester* 114(10): 711. 1988, *Taxon* 49(2): 273. 2000.

in English: monastery bamboo

T. siamensis Gamble (*Arundarbor regia* (Thomson ex Munro) Kuntze; *Arundarbor siamensis* Kurz ex Teijsmann & Binnendijk; *Bambusa regia* Thomson; *Bambusa regia* Thomson ex Munro; *Bambusa siamensis* Kurz ex Munro; *Thyrsostachys regia* (Thomson ex Munro) Bennet; *Thyrsostachys regia* (Munro) Bennet)

Thailand, Myanmar. Sympodial, smooth, grayish green, erect, arching, curved outwards at the tips, solid at the base, densely tufted, closely growing, very thick-walled almost solid, nodes not swollen, a white ring below the nodes, slender branches arising from midculm upward, most of the

branches fascicled, culm sheaths persistent or rotten closely covering the culm, sheath auricles absent and no cilia on sheath mouth, sheath ligule low and very short, sheath blade erect and narrow triangular or narrowly lanceolate, small leaves narrow lanceolate or linear, inflorescence terminal on leafy or leafless branches, bracteate clusters of few pseudospikelets, usually 2 perfect florets and a rachilla extension bearing a rudimentary floret, 1-2 empty glumes, 2-3 lodicules, 6 stamens, ovary apex glabrous, 1-3 stigmas, can be propagated by seed and rhizome cuttings, flowering sporadic and gregarious, flowering cycle not known, after flowering culms usually die, plants deciduous in the dry season, graceful and ornamental, elegant and decorative, delicious edible shoots pickled or steamed, wild or cultivated elsewhere, used as a wind break, fishing rod, parasol handle, basketry, for rural house building, materials for papermaking, occurs in mixed deciduous forest, dry or semievergreen forest, teak forest, hill forest, poor soil, not waterlogged areas, see *Transactions of the Linnean Society of London* 28: 116. 1868, *Revisio Generum Plantarum* 2: 761. 1891, *Annals of the Royal Botanic Garden, Calcutta* 7: 59-60, pl. 51. 1896 and *Gard. Bull. Sing.* 16: 80-81. 1958, *The Indian Forester* 114(10): 711-713. 1988, *Taxon* 47: 739. 1998.

in English: monastery bamboo, umbrella-handle bamboo, umbrella-handled bamboo, Thailand bamboo

in Indonesia: bambu jepang, bambu siam

in Myanmar: kyaung-wa, tiyova, tiyowa

in the Philippines: Thailand bamboo

in Thailand: huak, mai ruak, mai ti yo, phai ruak, ruak, sa lom, ti yo, waa bo bo, wa bo bo, wae bang, wae baang, wae pang

Local names: mai tiyo, mai hoak

Thysanachne C. Presl = *Arundinella* Raddi

Greek *thysanos* "a fringe, tassel" and *achne* "chaff, glume."

Panicoideae, Arundinelleae, type *Thysanachne scoparia* J. Presl, see *Species Plantarum* 2: 1049. 1753, *Species Plantarum. Editio quarta* 4: 908. 1806, *Agrostografia Brasiliensis* 36-37, t. 1, f. 3. 1823, *De Graminibus Paniceis* 62. 1826, *Thysanachne, Novum Plantarum Genus* 11-12, t. 6. 1829, *Reliquiae Haenkeanae* 1(4-5): 253. 1830, *Symb. Bot.* 1: 11-12. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 515. 1833, *Synopsis Plantarum Glumacearum* 1: 115. 1854, *Mexicanas Plantas* 2: 55. 1886, *Revisio Generum Plantarum* 2: 761. 1891 and *Contr. U.S. Natl. Herb.* 18(7): 290. 1917, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Contributions from the United States National Herbarium* 46: 111-113, 616-617. 2003.

Thysanolaena Nees = *Myriachaeta* Moritzi,
Thysanochlaena Gand.

Greek *thysanos* “a fringe, tassel” and *chlaena*, *chlaenion* “a cloak,” referring to the inflorescence, to the fringed upper lemma, to the pubescent fringe on the fertile lemmas.

One species, Tropical Asia. Centothecoideae, or Arundinoideae, Arundineae, or Panicoideae, Thysanolaeneae, perennial, tall, rhizomatous, tufted, stout, stems clumped, erect and reedlike, woody and persistent, usually unbranched, culm internodes solid, auricles present or absent, ligule an unfringed or fringed membrane, sheaths glabrous, leaf blades lanceolate to oblong-lanceolate and glabrous, plants bisexual, inflorescence a large ovoid contracted dense panicle, spikelets lanceolate and small to minute, bisexual spikelets with dimorphic florets disarticulating below the pedicel, lower floret sterile, upper floret perfect, 2 very unequal to subequal glumes 0- to 1-nerved and shorter than spikelet, 2 free and fleshy lodicules, 2-3 stamens, ovary glabrous, 2 stigmas plumose, screening plant, native pasture species, warm humid, open habitats, on mountains, banks of water courses, type *Thysanolaena agrostis* Nees, see *Observationes Botanicae* 4: 19. 1786, *Edinburgh New Philosophical Journal* 18: 180. 1835, *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844* 101. 1846, *The Flora of British India* 7(22): 305. 1897 [1896] and *Bulletin de la Société Botanique de France* 66(7): 303. 1919 [1920], *Repertorium Specierum Novarum Regni Vegetabilis* 17(477-480): 86. 1921, *Botanisches Archiv* 1(1): 27. 1922, *J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot.* 3: 312. 1930, *Fam. Fl. Pl.* 2: 222. 1934, *Bot. Zhurn.* 39: 901-904. 1954, *J. Jap. Bot.* 38: 319-320. 1963, *Blumea* 35(2): 393-458. 1991, *Blumea* 37(1): 231. 1992, *Am. J. Bot.* 87: 96-107. 2000, *Am. J. Bot.* 88: 1993-2012. 2001, Robert G. Birch, “*Xanthomonas albilineans* and the antipathogenesis approach to disease control.” *Molecular Plant Pathology* 2(1): 1-11. Jan 2001, *Flora of Australia* 43: 23, 27, 28. 2002, *Contributions from the United States National Herbarium* 46: 297, 617. 2003, *Am. J. Bot.* 90: 796-821. 2003, Jim Provan, Pamela M. Biss, Darragh McMeel and Sarah Mathews, “Universal primers for the amplification of chloroplast microsatellites in grasses (Poaceae).” *Molecular Ecology Notes* 4(2): 262-264. June 2004.

Species

T. latifolia (Roxb. ex Hornem.) Honda (*Agrostis latifolia* Heyne ex Bor; *Agrostis maxima* Roxb.; *Agrostis scoparia* J. König ex Bor; *Melica latifolia* Roxb. ex Hornem.; *Melica latifolia* Roxb., nom. illeg., non *Melica latifolia* Roxb. ex Hornem.; *Myriachaeta arundinacea* Zoll. & Moritzi; *Myriachaeta glauca* Moritzi ex Steud.; *Neyraudia acarifera* (Trin.) Conert; *Panicum acariferum* Trin.; *Sporobolus gigas* (Steud.) Miq.; *Sporobolus scoparius* J. Presl; *Thysanolaena acarifera* Arn. & Nees; *Thysanolaena agrostis* Nees;

Thysanolaena assamensis Gand.; *Thysanolaena birmanica* Gand.; *Thysanolaena latifolia* (Roxb.) Honda; *Thysanolaena malaccensis* Gand.; *Thysanolaena maxima* (Roxb.) Kuntze; *Thysanolaena maxima* f. *maxima*; *Thysanolaena sikkimensis* Gand.; *Vilfa gigas* Steud.; *Vilfa scoparia* (J. Presl) Steud.)

Tropical regions. Perennial, stout, very robust, solid culms solitary or clustered, strongly tufted, erect or slightly spreading, often arching, bamboo-like, leaf sheath tightly wrapped around the stem, leaf blade lanceolate and tapering to a fine point, ligule membranous and stiffly hairy, large cordate leaves, huge inflorescence paniculate, large drooping and terminal panicle, 2 flowers, tiny spikelet in pairs on a common axis, spikelets awnless and short pedicellate, upper floret hermaphrodite, lower glume transparent, margins of upper lemma with long hairs or ciliate, palea linear, screening plant, stems used for making reed-pens for writing, dried panicles and leaves used as soft brooms, tender leaves and stem tips used as fodder for cattle and buffaloes, roots used medicinally, decoction of roots used as mouth-wash in fever, native pasture species, grows in high tufts on hillsides at the forest margins, near water, riverbanks, lightly shaded slopes, rocky slopes, shrubby hillsides, ravines, in shady and moist places, gravelly soils, see *Hortus Regius Botanicus Hafniensis* Suppl.: 117. 1819, *Flora Indica; or Descriptions ...* 1: 319-320, 330. 1820, *Species Graminum* 1: t. 87. 1827, *Reliquiae Haenkeanae* 1(4-5): 243. 1830, *Edinburgh New Philosophical Journal* 18: 180. 1835, *Gramineae* 49-50. 1841, *Nomenclator Botanicus. Editio secunda* 2: 626, 768. 1841, *Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur.* 19(Suppl. 1): 181-182. 1843, *Systematisches Verzeichniss der von H. Zollinger in den Jahren 1842-1844* 101. 1846, *Synopsis Plantarum Glumacearum* 1: 160, 404. 1855 [1854], *Flora van Nederlandsch Indië* 3: 376. 1857, *Revisio Generum Plantarum* 2: 794. 1891 and *Bulletin de la Société Botanique de France* 66(7): 303. 1919 [1920], *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 312-313. 1930, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 78(2): 240-244. 1959, *Grasses of Burma, Ceylon, India and Pakistan* 650. 1960, *Taxon* 33(3): 437. 1984, *Blumea* 35(2): 451. 1991.

in English: tiger grass, bamboo grass, bouquet grass, broom grass, Asian broom grass

in India: alensunn, barucha, bushnia, chir, deobahari, garajono, hmunphiah, jurna, jurnahva, karsar, konda cheepuru, kuchi, ophi, phulbadhuni, phuljanta, pirlu, sarfi

in Indonesia: awis, lantebung, menjalin wuwu

in Laos: dok khein, kh'èem kh'ông

in Malaysia: buloh teberau, rumput buloh

in the Philippine Islands: tambu, bugubui, buybui, buybuy, eagadu, gatbo, lasa, tagadeu, tagisa, talankaran

in Thailand: khoei laa, khoei la, lao laeng, laolaeng, toing kong, tong koong, tong kong, ya kap phai yai, yaa kaap phai yai, ya mai kwat, yaa mai kwaan, yaa yuung, ya yung in Vietnam: dot, dôt, cay le, ong anh, say, dong trung ha thao, đông trung hóa tha'ô

Tiarrhena (Maxim.) Nakai = *Miscanthus* Andersson

Orthographic variant of *Triarrhena* (Maxim.) Nakai, or from the Greek *tiara* “a small crown” and *arrhen* “male.”

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 165. 1855, *Primitiae Florae Amurensis* 331. 1859, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 9: 331. 1859, *Journal of the Linnean Society, Botany* 19: 65. 1881, *Die Natürlichen Pflanzenfamilien* 2: 23. 1887, *Monographia Andropogonearum* 102. 1889 and *Botanical Magazine* 23: 107. 1909, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 391. 1930, *Journal of Japanese Botany* 25(1-2): 7. 1950, *Bull. Fac. Agric. Mie University* 17: 57, 59. 1958, *Pl. Taxonomic Soc. Korea, Seoul* 1972: 18, 17. 1972, *Journal of Huazhong Agricultural University (Suppl.)*: 56-60. 1989, *Flora Mesoamericana* 6: 378-379. 1994, *Sida* 16(2): 233-244. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Sida* 16(3): 551-580. 1995, *J. Fujian Acad. Agric. Sci.* 11(3): 19-22. 1996, *Journal of Plant Research* 115: 381-392. 2002, *Contributions from the United States National Herbarium* 46: 550-557, 617. 2003.

Timouria Roshev. = *Achnatherum* P. Beauv., *Stipa* L.

Pooideae, Stipeae, Stipinae, type *Timouria saposhnikovii* Roshev., see *Species Plantarum* 1: 78-79. 1753, *Essai d'une Nouvelle Agrostographie* 19-20, 146, pl. 6, f. 7. 1812, *Species Graminum* 3: t. 352. 1836 and *Flora Aziatskoj Rossii* 2(12): 173. 1916, *Contr. U.S. Natl. Herb.* 24(6): 181 and 24(7): 216. 1925, *Journal of the Washington Academy of Sciences* 17: 140. 1927, *Journal of the Washington Academy of Sciences* 18: 502. 1928, *Journal of the Washington Academy of Sciences* 23: 134. 1933, *Zlaki SSSR* 240. 1937, *Contributions from the United States National Herbarium* 48: 15-18, 717-650. 2003.

Tinaea Garzia = *Lamarckia* Moench, *Tinaea* Boiss. (Orchidaceae), *Tinea* Sprengel (Flacourtiaceae), *Tinea* Biv. (Orchidaceae)

Possibly from the Latin *tinea*, ae “a gnawing worm, moth,” or dedicated to Tineo, Sicilian botanist.

Pooideae, Poeae, Dactylidinae, see *Methodus Plantas Horti Botanici ...* 201. 1794, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 165. 1820 [1821], *Giornale di Scienze, Letteratura ed Arti per la Sicilia* 1833: 149. 1833, *Relazione Accademica dell'Accademia degli Zelanti di Aci-Reale di Scienze, Lettere ed Arti* 3-4: 24. 1838, *Flora Orientalis* 5: 58. 1882 and *Contributions from the United States National Herbarium* 48: 420-421, 654. 2003.

Tisserantiella Mimeur = *Thyridachne* C.E. Hubb.

For the French botanist Charles Tisserant, 1886-1962, traveler, explorer and plant collector (Angola, Equatorial Africa, Central African Republic, Mozambique), author of *Catalogue de la flore de l'Oubangui-Chari* Toulouse 1950; see I.H. Vegter, *Index Herbariorum*. Part II (7), *Collectors T-Z. Regnum Vegetabile* vol. 117.

Panicoideae, Panicodae, Paniceae, type *Tisserantiella oubanguiensis* Mimeur, see *Kew Bulletin* 4: 363-364. 1949, *Revue internationale de botanique appliquée et d'agriculture tropicale* 29: 593. 1949, Roger Sillans, *Les savanes de l'Afrique centrale ...* Avant-propos du révérend père Charles Tisserant. Paris 1958.

Toresia Pers.

Orthographic variant of *Torresia* Ruiz & Pav., see *Flora Peruviana, et Chilensis Prodromus* 125. 1794, *Syn. Pl.* 2: 534. 1807 and *Contributions from the United States National Herbarium* 48: 654-655. 2003.

Torgesia Bornm. = *Crypsis* Aiton

After the German botanist Karl Emil Wilhelm Torges, 1831-1917, military physician, agrostologist, author of “Eine Neue *Calamagrostis* Persiens.” *Mitt. Thüring. Bot. Ver.*, n.f., Hft 10: 45-47, 87-88. 1897. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 391. 1965; Stafleu & Cowan, *Taxonomic literature*. 6: 395-396. 1986; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 403. 1972.

Chloridoideae, Cynodonteae, Sporobolinae, or Chloridoideae, Zoysieae, Sporobolinae, type *Torgesia minuartioides* Bornm., see *Hortus Kewensis; or, a catalogue ...* 1: 48. 1789, *Collectanea ad omnem rem botanicam spectantia partim e propriis, partim ex amicorum schedis manuscriptis concinnavit et edidit J.J. Roemer*. Turici [Zürich], apud H. Gessnerum, [1806-]1809 and *Mittheilungen der Thüringischen Botanischen Vereins*, ser. 2, 30: 83. 1913, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 293. 1921, *Die natürlichen Pflanzenfamilien, Zweite Auflage*

14d: 62. 1956, *Contributions from the United States National Herbarium* 41: 56-57, 220. 2001.

Torresia Ruíz & Pav. = *Anthoxanthum* L.,
Hierochloa R. Br.

Pooideae, Poaceae, Phalaridinae, type *Torresia utriculata* Ruiz & Pav., see *Species Plantarum* 1: 28. 1753, *Flora Peruviana, et Chilensis Prodrum* 125. 1794, *Systema Vegetabilium Florae Peruviana et Chilensis* 1: 251. 1798, *Prodrum Florae Novae Hollandiae* 208. 1810, *Essai d'une Nouvelle Agrostographie* 62, 164, t. 12, f. 5. 1812 and *Darwiniana* 19(2-4): 422-457. 1975, *Flora Patagónica* 3: 276-285. 1978, *Gayana, Botánica* 42: 1-157. 1985, *Regnum Veg.* 127: 19. 1993, *Contributions from the United States National Herbarium* 48: 111-115, 384-386, 654-655. 2003.

Torreyochloa G.L. Church

After the North American (b. New York) botanist John Torrey, 1796-1873 (d. New York), physician, chemist, professor of chemistry 1824-1827 (West Point) and 1827-1855 (New York), his writings include *Botany of New York*. Albany 1853 and *Plantae Frémontianae*. Washington and New York 1853, co-author with Asa Gray (1810-1888) of *A Flora of North America*. New York, London, Paris 1838-1843; see A. Hunter Dupree, in *D.S.B.* 13: 432-433. 1981; J.H. Barnhart, *Biographical notes upon botanists*. 3: 392. 1965; United States. *Pacific Railroad Survey*. [Includes *Descriptions of the General Botanical Collections* by J. Torrey] Washington 1856; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Cambridge, Harvard University Press 1967; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; T.W. Bosser, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 404. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 255. Oxford 1964; William Jay Youmans, editor, *Pioneers of Science in America*. 327-335. New York 1896; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 742. 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Stafleu and Cowan, *Taxonomic literature*. 6: 401-408. Utrecht 1986; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 272.

Palermo 1988; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 790. Stuttgart 1993; Howard Atwood Kelly and Walter Lincoln Burrage, *Dictionary of American Medical Biography*. New York 1928; Georg Christian Wittstein, *Etymologisch-botanisches Handwörterbuch*. 885. Ansbach 1852; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983; William Darlington, *Reliquiae Baldwinianae*. Philadelphia 1843; J.D. Milner, *Catalogue of Portraits of Botanists Exhibited in the Museums of the Royal Botanic Gardens*. Royal Botanic Gardens, Kew, London 1906; Ernest Nelmes & William Cuthbertson, *Curtis's Botanical Magazine Dedications, 1827-1927*. 91-92. [1931]; D.B. Tyler, *The Wilkes Expedition: The First United States Exploring Expedition (1838-1842)*. Philadelphia 1968.

About 4-5 species, North America and northeast Asia, northern hemisphere. Pooideae, Poodae, Poaceae, or Pooideae, Poaceae Torreyochloinae, perennial, herbaceous, hollow, tufted, decumbent to erect, lower branches usually reflexed to erect, leaves basal, auricles absent, ligule an unfringed membrane, stoloniferous, sometimes rhizomatous, sometimes rooting at the nodes, open to partially open leaf sheaths, plants bisexual, inflorescence paniculate, spikelets pedicellate, 2 unequal to very unequal glumes 1- to 3-nerved, lemmas awnless and 5- to 7-nerved, palea present, 2 free and membranous lodicules, 3 stamens, ovary more or less hairy or glabrous, 2 stigmas, in wet meadows, wet habitats, freshwater, sometimes confused with *Glyceria*, type *Torreyochloa pauciflora* (J. Presl) G.L. Church, see *Prodrum Florae Novae Hollandiae* 179, 182. 1810, *The Genera of North American Plants* 1: 62. 1818, *Herbarium Pedemontanum* 6: 235. 1836, *Flora italiana, ossia descrizione delle piante ...* 1: 366. 1848 and *American Journal of Botany* 36: 163. 1949, *Rhodora* 54: 42-45, 197-200. 1952, *Phytologia* 70(5): 361-365. 1991, *Grasses: Systematics and Evolution* 61-74. 2000, *Contributions from the United States National Herbarium* 48: 655-656. 2003.

Species

T. californica (Beetle) Church (*Glyceria californica* Beetle; *Glyceria erecta* Hitchc.; *Puccinellia californica* (Beetle) Munz; *Torreyochloa pallida* var. *pauciflora* (J. Presl) J.I. Davis)

Northern America, U.S., California. Perennial, herbaceous, rhizomatous, rare grass, see *Reliquiae Haenkeanae* 1(4-5): 257. 1830 and *A Flora of California* 1: 161. 1912, *Madroño* 8(5): 161. 1946, *American Journal of Botany* 36: 163-164. 1949, *Aliso* 4(1): 87. 1958, *Phytologia* 70(5): 364. 1991.

in English: Sierran false manna grass, Sierra false manna-grass, Sierra Nevada alkali grass

T. erecta (A.S. Hitchc.) Church (*Glyceria erecta* A.S. Hitchc.; *Panicularia erecta* (Hitchc.) Hitchc.; *Puccinellia erecta* (A.S. Hitchc.) Munz)

Northern America, U.S. Perennial, lower branches erect, 4-6 florets, wetland, lake margins, streams, see *A Flora of California* 1: 161. 1912, *American Journal of Botany* 2: 309. 1915, *American Journal of Botany* 36: 163. 1949, *Aliso* 4(1): 87. 1958.

in English: spiked false manna grass, spiked mannagrass, upright mannagrass

T. pallida (Torrey) G.L. Church (*Glyceria pallida* (Torr.) Trin.; *Panicularia pallida* (Torr.) Kuntze; *Poa dentata* Torr.; *Poa pallida* Lag.; *Puccinellia pallida* (Torrey) R.T. Clausen; *Puccinellia pallida* (Torr.) T. Koyama, nom. illeg., non *Puccinellia pallida* (Torr.) R.T. Clausen; *Torreyochloa pallida* var. *pallida*; *Triodia pallida* (Torr.) Spreng.; *Uralespis pallida* (Torr.) Kunth; *Windsoria pallida* Torr.)

Northern America, U.S., Canada, British Columbia. Perennial, rhizomatous, pale green, slender, leaf sheath open, upper glume 3-nerved, lemma 5-nerved, shallow water, pools, springs, wetlands and wet places, pond margins, in swamps, marshes and ditches, see *Elenchus plantarum, quae in Horto Regio Botanico Matritensi colebantur anno mdccxv. Cum novarum, aut minus cognitarum stirpium diagnosi, nonnullarumque descriptionibus contractis.* Madrid. Jardín Botánico. 1816, *A Catalogue of Plants, Growing Spontaneously within Thirty Miles of the City of New York* [John Torrey, C.W. Eddy and D'Jurco V. Knevels]. New York: Lyceum of Natural History of New York (Albany: printed by Websters and Skinners). 1819, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 1: 246. 1820, *A Flora of the Northern and Middle Sections of the United States* 1: 107. 1823, *Révision des Graminées* 1: 108. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 57. 1836, *Revisio Generum Plantarum* 2: 783. 1891 and *American Journal of Botany* 36: 164. 1949, *Rhodora* 54(638): 44. 1952, *Phytologia* 43(1): 106. 1979, *Grasses of Japan and its Neighboring Regions* 526. 1987.

in English: pale false manna grass, pale manna grass, pale meadowgrass, Torrey's manna grass

in Japan: hosobadojotsunagi

T. pallida (Torrey) Church var. *fernaldii* (A.S. Hitchc.) Dore ex T. Koyama & Kawano (*Glyceria fernaldii* (A.S. Hitchc.) St. John; *Glyceria pallida* (Torr.) Trin. var. *fernaldii* A.S. Hitchc.; *Panicularia fernaldii* (Hitchc.) House; *Puccinellia fernaldii* (A.S. Hitchc.) E.G. Voss; *Torreyochloa fernaldii* (A.S. Hitchc.) Church)

Northern America, U.S., Canada. Perennial, herbaceous, growing in lake and stream edges, wetland, shallow water, wet places, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences*

Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 4,2(1): 57. 1836 and *Rhodora* 8(95): 211. 1906, *Rhodora* 19(220): 76. 1917, *New York State Museum Bulletin* 233-234: 11. 1921, *American Journal of Botany* 36: 164. 1949, *Canadian Journal of Botany* 42: 874. 1964, *Rhodora* 68: 445. 1966, *Michigan Flora* i-xv, 1-488. 1972.

in English: Fernald's false manna grass, pale meadowgrass

T. pallida (Torrey) Church var. *pallida* (*Glyceria flava* Scribn. ex Farw.; *Glyceria pallida* (Torr.) Trin.; *Glyceria pallida* var. *pallida*; *Panicularia pallida* (Torr.) Kuntze; *Panicularia pallida* var. *flava* Farwell; *Puccinellia pallida* (Torr.) R.T. Clausen; *Puccinellia pallida* subsp. *pallida*)

Northern America, U.S. Perennial, pools, pond margins, see *Revisio Generum Plantarum* 2: 783. 1891 and *Report of the Michigan Academy of Science, Arts and Letters* 6: 203. 1904, *Rhodora* 54(638): 44. 1952.

in English: pale false manna grass, pale meadowgrass

T. pallida (Torrey) Church var. *pauciflora* (J. Presl) J.I. Davis (*Glyceria californica* Beetle; *Glyceria microtheca* Buckley; *Glyceria otisii* A.S. Hitchc.; *Glyceria pauciflora* J. Presl; *Glyceria spectabilis* var. *flaccida* Trin. & Bong. ex A. Gray; *Panicularia flaccida* Elmer; *Panicularia holmii* Beal; *Panicularia multifolia* Elmer; *Panicularia pauciflora* (J. Presl) Kuntze; *Puccinellia californica* (Beetle) Munz; *Puccinellia pauciflora* (J. Presl) Munz; *Puccinellia pauciflora* var. *holmii* (Beal) C.L. Hitchc.; *Puccinellia pauciflora* var. *microtheca* (Buckley) C.L. Hitchc.; *Puccinellia pauciflora* var. *pauciflora*; *Torreyochloa californica* (Beetle) G.L. Church; *Torreyochloa otisii* (Hitchc.) G.L. Church; *Torreyochloa pauciflora* (J. Presl) G.L. Church; *Torreyochloa pauciflora* var. *holmii* (Beal) Taylor & MacBryde; *Torreyochloa pauciflora* var. *holmii* (Beal) B. Boivin, nom. illeg., non *Torreyochloa pauciflora* var. *holmii* (Beal) Roy L. Taylor & MacBryde; *Torreyochloa pauciflora* var. *microtheca* (Buckley) Roy L. Taylor & MacBryde; *Torreyochloa pauciflora* var. *microtheca* (Buckley) B. Boivin, nom. illeg., non *Torreyochloa pauciflora* var. *microtheca* (Buckley) Roy L. Taylor & MacBryde)

Northern America, U.S., Canada. Perennial, in swampy places, shallow water, see *Deutschlands Flora* 1: 586. 1823, *Reliquiae Haenkeanae* 1(4-5): 257. 1830, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 96, 336. 1862, *Revisio Generum Plantarum* 2: 783. 1891 and *Torrea* 1(4): 43. 1901, *Botanical Gazette* 36: 54-55. 1903, *A Flora of California* 1: 161. 1912, *American Journal of Botany* 21(3): 128. 1934, *Madroño* 8(5): 161. 1946, *American Journal of Botany* 36: 163-164. 1949, *Aliso* 4(1): 87. 1958, *Vascular Plants of the Pacific Northwest* 1: 689. 1969, *Canadian Journal of Botany* 56(2): 193. 1978, *Provanche-ria* 12: 73. 1981, *Phytologia* 70(5): 364. 1991.

in English: weak manna grass, pale false manna grass

T. pauciflora (J. Presl) Church (*Glyceria pauciflora* J. Presl; *Torreyochloa pallida* var. *pauciflora* (J. Presl) J.I. Davis)

Northern America, British Columbia. Perennial, 2-3 branches per node, often bent at the base, often rooting at the lower nodes, rhizomes well developed, auricles absent, leaf sheaths open to partly closed, leaves rather rough, broad inflorescence open and rather loose, 3- to 7-flowered spikelets, 2 glumes unequal, growing in shallow water, marshes, swamps, wet meadows, see *Reliquiae Haenkeanae* 1(4-5): 257. 1830 and *American Journal of Botany* 36: 163. 1949.

in English: weak false manna, weak alkaligrass

Tosagris P. Beauv. = *Muhlenbergia* Schreb.

Greek *tosos* "so many" and *agrios* "living in the fields, wild, savage," *agros* "field," Latin *ager, agri* "a field, country, a measure of length."

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Tosagris agrostidea* P. Beauv., see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Essai d'une Nouvelle Agrostographie* 29, 176, 179, t. 8, f. 2, 3. 1812 and *Contributions from the United States National Herbarium* 41: 143-173, 220. 2001.

Tovarochloa T.D. Macfarl. & But

Named for the Peruvian agrostologist Oscar Tovar Serpa, b. 1923 in Conaica, Huancavelica, Professor at the Universidad Nacional Mayor de San Marcos, Faculty of Biological Sciences, author of *Las Especies Peruanas del Género Chuquiraga (Compositae)*. Publicaciones Museo de Historia Natural "Javier Prado" Ser. B, 5: 1-29. 1952, *Las Especies Peruanas del Género Flotovia (Compositae)*. Publ. Museo de Historia Natural "Javier Prado" Ser. B, 7: 1-27. 1953, *Las Gramíneas de Huancavelica*. I Parte. Memorias Mus. Hist. Nat. "Javier Prado" 6: 1-110. 1957, *Revisión de las Especies Peruanas del Género Calamagrostis (Gramineae)*. Memorias del Mus. Hist. Nat. "Javier Prado" 11: 1-91. 1960, *Revisión de las especies Peruanas del Género Poa (Gramineae)*. Memorias del Mus. Hist. Nat. "Javier Prado" 15: 1-67. 1965, *Comunidades Vegetales de la Reserva Nacional de Vicuñas de Pampa Galeras (Dpto. Ayacucho)*. Publ. Museo de Hist. Nat. "Javier Prado" Ser. B, 27: 1-32. 1973, *Nombres Vulgares de las Plantas de la Cuenca del Mantaro (Perú Central)*. BIOTA 10 (82): 261-308. 1975, *Nuevos registros de Gramíneas para el Perú*. Revista de Ciencias, Universidad Nacional Mayor de San Marcos 73 (I): 107-114. 1981, *Vegetatio Andinae*, I. Datos sobre las Comunidades Vegetales Altoandinas de los Andes Centrales del Perú. *Lazaroa* 4: 167-187. 1982, *Revisión de las Especies Peruanas del Género Stipa (Gramineae)*. Opuscula Botánica Pharm. Complutensis 4: 75-106. 1988, *Manual de Identificación de Pastos Naturales de los Andes del Sur*

Peruano (Gramineae). Proyecto Alpacas. COTESU-IC.: 1-114. 1990, *Las Gramíneas Acuáticas de la Amazonía Peruana*. In: F. Kahn et al. *Las Plantas Vasculares en aguas Continentales del Perú*. Instituto Francés de Estudios Andinos 75: 249-285. 1993, *Las Gramíneas (Poaceae) del Perú*. *Ruizia*, tomo 13. Monografía del Real Jardín Botánico: 1-482. 1993, *Las Gramíneas (Poáceas) del Perú y su distribución en los diversos Pisos Bioclimáticos*. Actas Academia Nacional de Ciencia y Tecnología: 71-79. Madrid 1994.

One species Peru. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Poinae, annual, tiny, very minute, herbaceous, auricles absent, leaf sheaths inflated, ligules absent or an unfringed membrane, plants bisexual, contracted inflorescence paniculate capitate, spikelets 1-flowered, 2 glumes subequal, lemma awnless, palea present, 2 free membranous lodicules, 2 or 3 stamens, ovary glabrous, 2 stigmas, grasslands, open habitats, type *Tovarochloa peruviana* T.D. Macfarl. & But, see *Species Plantarum* 1: 54-55. 1753 and *Phytologia* 11(6): 361-376. 1965, *Feddes Repert.* 91 (4): 205-208. 1980, *Phytologia* 47 (6): 445-446. 1981, *Brittonia* 34(4): 478-481, f. 1. 1982, *Collectanea Botánica* 14: 515-521. 1983, *Contributions from the United States National Herbarium* 48: 656. 2003.

Species

T. peruviana T.D. Macfarlane & But (*Phalaris minor* Retz.)

Peru, High Andes. Rare, glumes 1-nerved, lemma keeled, see *Observationes Botanicae* 3: 8. 1783 and *Brittonia* 34(4): 478-481, f. 1. 1982, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Annali di Botanica* 45: 75-102. 1987, *Journal of Cytology and Genetics* 23: 38-52. 1988, *Bothalia* 18: 114-119. 1988, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Boletim da Sociedade Broteriana, ser. 2* 63: 153-205. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1174-1178. 1991, *Bocconeae, Monographiae Herbarii Mediterraneae Panormitani* 3: 229-250. 1992, *Caryologia* 46: 47-52. 1993, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Webbia* 49(2): 279-280, 299. 1995, *Bothalia* 26(1): 63-67. 1996, *Lagascalia* 21(1): 149-154. 1999.

Toxeumia Nutt. ex Scribn. & Merr. = *Calamovilfa gigantea* (Nutt.) Scribner & Merrill

Chloridoideae, see *Circular, Division of Agrostology, United States Department of Agriculture* 35: 2. 1901.

Tozzettia Savi = *Alopecurus* L., *Tozzettia* Parl. (Liliaceae)

For the Italian botanist Ottaviano Targioni Tozzetti, 1755-1829, physician, professor of botany, 1801-1829 Director of

the Botanical Garden of Florence, he was father of the Italian botanist Antonio Targioni Tozzetti (1785-1856, 1829-1856 Director of the Botanical Garden of Florence) and son of the Italian naturalist and physician Giovanni Targioni Tozzetti (b. Florence 1712-d. Florence 1783, 1737-1746 Director of the Botanical Garden of Florence); see Francesco Rodolico, in *D.S.B.* 13: 257-258. 1981; O. Mattiolo, *Cenni cronologici sugli Orti Botanici di Firenze*. Firenze 1899; J.H. Barnhart, *Biographical notes upon botanists*. 3: 360. 1965; Stafleu & Cowan, *Taxonomic literature*. 6: 167-171. 1986; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 394. Boston, Mass. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 264-265. Palermo 1988.

Pooideae, Poeae, Alopecurinae, type *Tozzettia pratensis* (L.) Savi, see *Species Plantarum* 1: 60-61. 1753, *Species Plantarum*, *Editio Secunda* 89. 1762, *Memorie di Matematica e di Fisica della Società Italiana delle Scienze* 8(2): 477. 1799, *Annalen der Botanik ... Herausgegeben von Dr. Paulus Usteri ... Zürich 1791-1800*, *English Botany* 21: t. 1467. 1805, *Observations sur les Graminées de la Flore Belgique* 132. 1823 [1824], *Nuovi Generi e Nuove Specie di Piante Monocotiledoni* 11. 1854 and *Flora Pyrenaea ...* 4: 274-275. 1901, *American Midland Naturalist* 4: 216. 1915, *Revista de la Facultad de Agronomía y Veterinaria* 7(2): 345-369. 1931, *Novosti Sist. Vyss. Rast.* 8: 12-22. 1971, *Regnum Veg.* 127: 17. 1993, *Flora Mesoamericana* 6: 242. 1994, *Turkish Journal of Botany* 23(4): 245-262. 1999, *Contributions from the United States National Herbarium* 48: 97-106, 656. 2003.

Trachynia Link = *Brachypodium* P. Beauv.

From the Greek *trachys* “rough.”

Pooideae, Brachypodieae, type *Trachynia distachya* (L.) Link, see *Essai d'une Nouvelle Agrostographie* 100-101, 155-156, 180. 1812, Johann Heinrich Friedrich Link (1767-1851), *Enumeratio plantarum horti regii berolinensis altera*. 1: 42-43. Berolini [Berlin] 1827, *Exploration Scientifique de l'Algérie* 2: 192. 1855 and *Contr. U.S. Natl. Herb.* 24: 196. 1925, *Novosti Sist. Vyss. Rast.* 12: 81. 1975, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 45: 1-250. 1991, *Flora Mesoamericana* 6: 246. 1994, *Botanical Journal of the Linnean Society* 117: 263-280. 1995, *Willdenowia* 28: 173. 1998, *Contributions from the United States National Herbarium* 48: 143-145, 656. 2003.

Trachynotia Michx. = *Spartina* Schreb.

From the Greek *trachys* “rough” and *notos* “back.”

Chloridoideae, Cynodonteae, or Chloridoideae, Zoysieae, Sporobolinae, see *Species Plantarum* 1: 71. 1753, *Genera Plantarum* 43. 1789, *Flora Boreali-Americana* 1: 63-64. 1803, *Syn. Pl.* 1: 72. 1805, *Catalecta Botanica* 3: 10. 1806, *Flora Gallica* 719. 1807, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 81. 1809, *Essai d'une Nouvelle Agrostographie* 25, 178, 179. 1812, *Flore Française. Troisième Édition* 5: 279. 1815, *Descriptio uberior Graminum* 55. 1817, *Nomenclator Botanicus. Editio secunda* 2: 695. 1841, *Grasses of North America for Farmers and Students* 2: 398. 1896 and *Rhodora* 8(95): 210. 1906, *Iowa State College Journal of Science* 30(4): 471-574. 1956, *Flora Mesoamericana* 6: 292. 1994, *Contributions from the United States National Herbarium* 41: 195-200, 220. 2001.

Trachyozus Rehb. = *Trachys* Pers.

From the Greek *trachys* “rough” and *ozos* “branch, knot.”

Panicaceae, see *Mantissa Plantarum* 302. 1771, *Syn. Pl.* 1: 85. 1805, (Heinrich Gottlieb) Ludwig Reichenbach (1793-1879), *Conspectus regni vegetabilis per gradus naturales evoluti. Tentamen ... pars prima. Inest clavis herbariorum hortorumque seu dispositio regni vegetabilis secundum classes, ordines, formationes, familias, tribus, genera et subgenera, adiecto indice locupletissimo generum, subgenerum, synonymorum et nominum francogallicorum ... Lipsiae 1828 [1829], Synopsis Plantarum Glumacearum* 1: 112. 1854.

Trachypoa Bubani = *Dactylis* L.

From the Greek *trachys* and *poa* “grass, pasture grass.”

Pooideae, Poodae, Poeae, or Pooideae, Poeae, Dactylidinae, see *Species Plantarum* 1: 71. 1753 and *Flora Pyrenaea ...* 4: 359. 1901, *University of California Publications in Botany* 31(1): 1-40. 1959 [Cytogenetic and evolutionary studies in the genus *Dactylis*. I: Morphology, distribution, and interrelationships of the diploid subspecies.], *Contributions from the United States National Herbarium* 48: 242-244, 656. 2003.

Trachypogon Nees = *Homopogon* Stapf

From the Greek *trachys* “rough” and *pogon* “a beard,” the female-fertile spikelet has plumose awns.

About 3-13 species, tropical America and Africa, Madagascar. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Germainiinae, perennial or annual, bunchgrass, herbaceous,

slender, unbranched, densely tufted, nodes hairy to bearded, leaf blades linear to convolute, auricles absent, ligule membranous, sometimes with shortly creeping rhizomes, plants bisexual, inflorescence terminal, tough solitary or several digitate racemes, pairs of narrowly oblong spikelets, pedicelled spikelet awned and fertile, sessile spikelet unawned usually male or sterile, lower spikelet shortly pedicellate, florets 2, lower floret sterile and reduced to lemma, upper floret bisexual, upper floret of the subsessile spikelet is male, 2 glumes subequal, lower glume coriaceous 2-keeled 7- to 11-nerved, upper glume 3-nerved, lemmas hairy, palea present or absent or very reduced, 2 small lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas plumose, base of the perfect spikelet sharp-pointed and hairy, mountain savannah, chaparral, tropical savannahs, llanos, open habitats, well-drained soils, see *Trachypogon montufarii* (Kunth) Nees, see *Species Plantarum* 2: 1045. 1753, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 341-343. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(4): 257. 1832 and *Mémoires de la Société Botanique de France* 8(b): 103. 1908, *Cytologia* 19: 97-103. 1954, J. Blydenstein, "La sabana de *Trachypogon* del Alto Llano." *Boletín de la Sociedad Venezolana de Ciencias Naturales* 102: 139-139. 1962, *Flora of Tropical East Africa* 451-898. 1982, J.J. San José & M.R. Fariñas, "Changes in tree density and species composition in a protected *Trachypogon* savannah, Venezuela." *Ecology* 64: 447. 1983, J.J. San José & M. R. Fariñas, "Temporal changes in the structure of a *Trachypogon* savannah protected for 25 years." *Acta Ecológica* 12: 237. 1991, *Flora Mesoamericana* 6: 380-381. 1994, *Restoration Ecology* 5(2): 147-155. June 1997, *Global Ecology and Biogeography* 7(6): 441-455. Nov 1998, *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, *African Journal of Ecology* 38(3): 188-201. Sep 2000, *Journal of Biogeography* 27(4): 1021-1029. July 2000, Nelson Ramírez, "Reproductive phenology, life-forms, and habitats of the Venezuelan Central Plain." *American Journal of Botany* 89: 836-842. 2002, *Journal of Biogeography* 29(7): 857-863. July 2002, *Contributions from the United States National Herbarium* 46: 617-622. 2003, Nelson Ramirez, "Pollination specialization and time of pollination on a tropical Venezuelan plain: variations in time and space." *Botanical Journal of the Linnean Society* 145(1): 1-16. May 2004, *Restoration Ecology* 12(4): 552-558. Dec 2004.

Species

T. macroglossus Trin. (*Andropogon macroglossus* (Trin.) Steud.; *Trachypogon filifolius* (Hack.) Hitchc.; *Trachypogon polymorphus* var. *filifolius* Hack.; *Trachypogon polymorphus* var. *macroglossus* (Trin.) Hack.; *Trachypogon renvoizei* Catasús)

South America, Brazil. Perennial, tufted, wiry, knotted base, nodes bearded, leaf blades filiform, long straight vertical auricles, racemes solitary, sessile spikelet awnless male, spikelets with short awns, on rocky soil, see *Synopsis Plantarum Glumacearum* 1: 368. 1854, *Flora Brasiliensis* 2(4): 263-264, pl. 62, f. 1. 1883 and *Contributions from the United States National Herbarium* 12(6): 191. 1909, *Fontqueria* 44: 144. 1996.

T. montufarii (Kunth) Nees (also spelled *montufarii*) (*Andropogon mollis* (Nees) Kunth; *Andropogon montufarii* Kunth; *Andropogon plumosus* Humb. & Bonpl. ex Willd.; *Holcus halepensis* L.; *Trachypogon capensis* subvar. *mollis* (Nees) Roberty; *Trachypogon capensis* subvar. *montufarii* (Kunth) Roberty; *Trachypogon densus* Swallen; *Trachypogon mollis* Nees; *Trachypogon montufarii* (Kunth) Kuntze; *Trachypogon montufarii* var. *bolivianus* (Pilg.) Pilg.; *Trachypogon montufarii* var. *mollis* (Nees) Andersson; *Trachypogon montufarii* var. *mollis* (Nees) Burkart, nom. illeg., non *Trachypogon montufarii* var. *mollis* (Nees) Andersson; *Trachypogon montufarii* var. *mollis* (Nees) E. Fourn. ex Hemsl., nom. illeg., non *Trachypogon montufarii* var. *mollis* (Nees) Andersson; *Trachypogon palmeri* Nash; *Trachypogon plumosus* (Humb. & Bonpl. ex Willd.) Nees; *Trachypogon plumosus* var. *montufarii* (Kunth) Hack.; *Trachypogon polymorphus* subvar. *mollis* (Nees) Hack.; *Trachypogon polymorphus* subvar. *typicus* Hack.; *Trachypogon polymorphus* var. *bolivianus* Pilg.; *Trachypogon polymorphus* var. *montufarii* (Kunth) Hack.; *Trachypogon rigidifolius* Swallen; *Trachypogon spicatus* (L.f.) Kuntze)

Peru, Ecuador, Venezuela, Mexico. Perennial bunchgrass, caespitose, awns pubescent in the lower half, good forage, used for buildings, see *Species Plantarum* 2: 1047-1048. 1753, *Supplementum Plantarum* 111. 1781 [1782], *Species Plantarum. Editio quarta* 4: 918. 1806, *Nova Genera et Species Plantarum* 1: 184. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 342-344. 1829, *Révision des Graminées* 2: 561, t. 195. 1832, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 14: 49. 1857, *Flora Brasiliensis* 2(4): 264-265. 1883, *Biologia Centrali-Americana; ... Botany ...* 3(19): 523. 1885, *Revisio Generum Plantarum* 2: 794. 1891, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 22-23. 1899 and *North American Flora* 17(2): 96. 1909, *Mededeelingen van's Rijks-Herbarium* 40: 40. 1921, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 777. 1933, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 150. 1960, *Phytologia* 14(2): 93-94. 1966, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 504. 1969.

in English: crinkleawn

in Mexico: polmuc, quimec

T. plumosus (Humb. & Bonpl. ex Willd.) Nees (*Andropogon dactyloides* Steud.; *Andropogon dissolutus* (Nees) Steud.; *Andropogon ligularis* (Nees) Kunth; *Andropogon montufarii* Kunth; *Andropogon plumosus* Humb. & Bonpl. ex Willd.; *Andropogon secundus* (J. Presl) Kunth; *Heteropogon secundus* J. Presl; *Trachypogon capensis* subvar. *montufarii* (Kunth) Roberty; *Trachypogon dactyloides* (Steud.) E. Fourn. ex Hemsl.; *Trachypogon dissoluta* Nees; *Trachypogon gouinii* E. Fourn.; *Trachypogon ligularis* Nees; *Trachypogon montufarii* (Kunth) Nees; *Trachypogon muelleri* E. Fourn.; *Trachypogon palmeri* Nash; *Trachypogon plumosus* subvar. *secundus* (J. Presl) Hack. ex Henrard; *Trachypogon plumosus* var. *montufarii* (Kunth) Hack.; *Trachypogon plumosus* var. *secundus* (J. Presl) Beetle; *Trachypogon polymorphus* subvar. *secundus* (J. Presl) Hack.; *Trachypogon polymorphus* var. *dissolutus* (Nees) Hack.; *Trachypogon polymorphus* var. *gouinii* (E. Fourn.) Hack.; *Trachypogon polymorphus* var. *ligularis* (Nees) Hack.; *Trachypogon polymorphus* var. *montufarii* (Kunth) Hack.; *Trachypogon polymorphus* var. *plumosus* (Humb. & Bonpl. ex Willd.) Hack.; *Trachypogon preslii* f. *secundus* (J. Presl) Andersson; *Trachypogon secundus* (J. Presl) Scribn.; *Trachypogon spicatus* (L.f.) Kuntze)

Central America, West Indies. Caespitose, straggling, sometimes rhizomatous, awns pilose to their tips, forage, savannah, stony places, see *Supplementum Plantarum* 111. 1781 [1782], *Species Plantarum. Editio quarta* 4: 918. 1806, *Nova Genera et Species Plantarum* 1: 184. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 342-345. 1829, *Reliquiae Haenkeanae* 1(4-5): 335. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 487, 497. 1833, *Linnaea* 19(6): 695. 1847, *Synopsis Plantarum Glumacearum* 1: 381. 1854, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 14: 50. 1857, *Flora Brasiliensis* 2(4): 263-265. 1883, *Biologia Centrali-Americana; ... Botany ...* 3(19): 523. 1885, *Mexicanas Plantas* 2: 66. 1886, *Monographiae Phanerogamarum* 6: 326-328. 1889, *Revisio Generum Plantarum* 2: 794. 1891 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 1. 1901, *North American Flora* 17(2): 96. 1909, *Mededeelingen van's Rijks-Herbarium* 40: 40. 1921, *Boissiera*. 9: 150. 1960, *Phytologia* 54(1): 5. 1983, *Economic Botany* 50(1): 108-114. 1996, Zdravko Baruch, Jafet M. Nassar and José Bubis, "Quantitative trait, genetic, environmental, and geographical distances among populations of the C4 grass *Trachypogon plumosus* in Neotropical savannahs." *Diversity & Distributions* 10(4): 283-292. July 2004.

T. secundus (J. Presl) Scribn. (*Andropogon plumosus* Humb. & Bonpl. ex Willd.; *Andropogon secundus* (J. Presl) Kunth, nom. illeg., non *Andropogon secundus* Elliott; *Heteropogon secundus* J. Presl; *Stipa spicata* L.f.; *Trachypogon plumosus* (Humb. & Bonpl. ex Willd.) Nees; *Trachypogon plumosus* subvar. *secundus* (J. Presl) Hack. ex Henrard;

Trachypogon plumosus var. *secundus* (J. Presl) Beetle; *Trachypogon polymorphus* subvar. *secundus* (J. Presl) Hack.; *Trachypogon preslii* f. *secundus* (J. Presl) Andersson; *Trachypogon spicatus* (L.f.) Kuntze)

Northern and Southern America, U.S., Arizona, Mexico. Perennial, caespitose, shortly rhizomatous, fodder, see *Supplementum Plantarum* 111. 1781 [1782], *Species Plantarum. Editio quarta* 4: 918. 1806, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 344. 1829, *Reliquiae Haenkeanae* 1(4-5): 335. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 487. 1833, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 14: 50. 1857, *Monographiae Phanerogamarum* 6: 326. 1889, *Revisio Generum Plantarum* 2: 794. 1891 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 1. 1901, *Mededeelingen van's Rijks-Herbarium* 40: 40. 1921, *Phytologia* 54(1): 5. 1983.

in English: crinkleawn

in Mexico: alea-pajac, barba larga

T. spicatus (L.f.) Kuntze (*Andropogon angustifolius* Sibth. & Sm.; *Andropogon angustifolius* Kunth, nom. illeg., non *Andropogon angustifolius* Sibth. & Sm.; *Andropogon canescens* (Nees) Kunth; *Andropogon dactyloides* Steud.; *Andropogon dissolutus* (Nees) Steud.; *Andropogon ligularis* (Nees) Kunth; *Andropogon mollis* (Nees) Kunth; *Andropogon montufarii* Kunth; *Andropogon nutans* L.; *Andropogon nutans* var. *stipoides* (Kunth) Hack.; *Andropogon plumosus* Humb. & Bonpl. ex Willd.; *Andropogon secundus* (J. Presl) Kunth, nom. illeg., non *Andropogon secundus* Elliott; *Andropogon spicatus* Steud.; *Andropogon stipoides* Kunth; *Andropogon stipoides* (J. Presl) Kunth, nom. illeg., non *Andropogon stipoides* Kunth; *Andropogon trichospirus* Hack.; *Andropogon truncatus* (Nees) Steud.; *Andropogon vestitus* Steud.; *Heteropogon secundus* J. Presl; *Heteropogon stipoides* J. Presl; *Heteropogon truncatus* Nees; *Sorghastrum stipoides* (Kunth) Nash; *Sorghum nutans* var. *stipoides* (Kunth) Hack.; *Stipa spicata* L.f.; *Stipa spicata* Thunb., nom. illeg., non *Stipa spicata* L.f.; *Stipa spicata* Walter, nom. illeg., non *Stipa spicata* L.f.; *Trachypogon angustifolius* E. Fourn. ex Hemsl.; *Trachypogon angustifolius* Nees ex Hack., nom. illeg., non *Trachypogon angustifolius* E. Fourn. ex Hemsl.; *Trachypogon canescens* Nees; *Trachypogon capensis* Trin., nom. illeg. superfl.; *Trachypogon capensis* subvar. *mollis* (Nees) Roberty; *Trachypogon capensis* subvar. *montufarii* (Kunth) Roberty; *Trachypogon dactyloides* (Steud.) E. Fourn. ex Hemsl.; *Trachypogon densus* Swallen; *Trachypogon dissoluta* Nees; *Trachypogon durus* Stapf; *Trachypogon glaucescens* Pilg.; *Trachypogon gouinii* E. Fourn.; *Trachypogon gracilis* Andersson; *Trachypogon gracilis* var. *ciliatus* Andersson; *Trachypogon gracilis* var. *hirtus* Andersson; *Trachypogon involutus* Pilg.; *Trachypogon karwinskyi* (Hack.) Nash; *Trachypogon ligularis* Nees; *Trachypogon mayaensis* Wipff & S.D. Jones; *Trachypogon micans* Andersson; *Trachypogon*

mollis Nees; *Trachypogon montufari* (Kunth) Nees; *Trachypogon montufari* auct. non (Kunze) Nees; *Trachypogon montufarii* var. *bolivianus* (Pilg.) Pilg.; *Trachypogon montufarii* var. *grandiflorus* Andersson; *Trachypogon montufarii* var. *mollis* (Nees) Andersson; *Trachypogon montufarii* var. *mollis* (Nees) Burkart, nom. illeg., non *Trachypogon montufarii* var. *mollis* (Nees) Andersson; *Trachypogon montufarii* var. *mollis* (Nees) E. Fourn. ex Hemsl., nom. illeg., non *Trachypogon montufarii* var. *mollis* (Nees) Andersson; *Trachypogon montufarii* var. *montufarii*; *Trachypogon montufarii* var. *pauciflorus* Andersson; *Trachypogon montufarii* var. *pilosa* E. Fourn.; *Trachypogon montufarii* var. *pilosus* E. Fourn.; *Trachypogon muelleri* E. Fourn.; *Trachypogon palmeri* Nash; *Trachypogon parviflorus* Swallen; *Trachypogon planifolius* Stapf; *Trachypogon plumosus* (Humb. & Bonpl. ex Willd.) Nees; *Trachypogon plumosus* (Willd.) Nees; *Trachypogon plumosus* (Humb. & Bonpl.) Nees; *Trachypogon plumosus* subvar. *secundus* (J. Presl) Hack. ex Henrard; *Trachypogon plumosus* var. *montufari* (Kunth) Hack.; *Trachypogon plumosus* var. *secundus* (J. Presl) Beetle; *Trachypogon polymorphus* Hack.; *Trachypogon polymorphus* subvar. *capensis* (Trin.) Hack.; *Trachypogon polymorphus* subvar. *dactyloides* (Steud.) Hack.; *Trachypogon polymorphus* subvar. *gracilis* (Andersson) Hack.; *Trachypogon polymorphus* subvar. *mollis* (Nees) Hack.; *Trachypogon polymorphus* subvar. *secundus* (J. Presl) Hack.; *Trachypogon polymorphus* var. *bolivianus* Pilg.; *Trachypogon polymorphus* var. *canescens* (Nees) Hack.; *Trachypogon polymorphus* var. *dissolutus* (Nees) Hack.; *Trachypogon polymorphus* var. *gouinii* (E. Fourn.) Hack.; *Trachypogon polymorphus* var. *karwinskyi* Hack.; *Trachypogon polymorphus* var. *ligularis* (Nees) Hack.; *Trachypogon polymorphus* var. *montufarii* (Kunth) Hack.; *Trachypogon polymorphus* var. *plumosus* (Humb. & Bonpl. ex Willd.) Hack.; *Trachypogon polymorphus* var. *tholloni* Franch.; *Trachypogon polymorphus* var. *truncatus* (Nees) Hack.; *Trachypogon polymorphus* var. *vestitus* (Andersson) Hack.; *Trachypogon preslii* Andersson; *Trachypogon preslii* f. *preslii*; *Trachypogon preslii* f. *secundus* (J. Presl) Andersson; *Trachypogon ramosus* Swallen; *Trachypogon rigidifolius* Swallen; *Trachypogon secundus* (J. Presl) Scribn.; *Trachypogon stipoides* (Kunth) Nees; *Trachypogon thollonii* (Franch.) Stapf; *Trachypogon truncatus* (Nees) Andersson; *Trachypogon vestitus* Andersson)

Tropical America, tropical and South Africa. Perennial bunchgrass, very variable, glabrous to villous, wiry, solid, rhizomatous, densely tufted, erect, slender to stout, a ring of hairs below the culm nodes, leaf sheath round, ligule an unfringed membrane 3-lobed, leaf blades usually linear tapering to a hair point, inflorescences terminal and axillary, a single terminal raceme or spike-like racemes dense and hairy, spikelets hairy, sessile spikelet male, velvety and geniculate awn, foliage used as a tea substitute, thatching grass, low to medium palatability in its young stages, low

grazing value, a weed of cultivation and plantations, traditional healers from South Africa use this grass as a contraceptive, found in coastal sand dunes, cerrado, open grassland, sour grassland, rocky grassland, open highveld grassland, woody grassland, deep sand, in bushveld, sourveld, vlei, in drier areas near edge of pan, seasonal swamps, among rocks, undisturbed sites, dry woodland, sandy soils, campo rupestre, confused with *Trachypogon montufari*, see *Species Plantarum* 1: 78-79. 1753, *Species Plantarum* 2: 1045. 1753, *Supplementum Plantarum* 111. 1781 [1782], *Flora Caroliniana, secundum* ... 78. 1788, *Prodromus Plantarum Capensium*, ... 20. 1794, *Species Plantarum. Editio quarta* 4: 918. 1806, *Florae Graecae Prodromus* 1: 47. 1806, *Syn. Pl.* 2: 533. 1807, *Nova Genera et Species Plantarum* 1: 184, 189. 1815 [1816], *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 342-345, 351. 1829, *Reliquiae Haenkeanae* 1(4-5): 335. 1830, *Révision des Graminées* 2: 561, t. 195. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 487, 497. 1833, *Nomenclator Botanicus* edition 2 1: 93. 1840, *Florae Africae Australioris Illustrationes Monographicae* 102. 1841, *Linnaea* 19(6): 695. 1847, *Synopsis Plantarum Glumacearum* 1: 368, 378, 381. 1854, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 14: 47, 49-50, 52. 1857, *Flora Brasiliensis* 2(4): 263-266, 274. 1883, *Biologia Centrali-Americana; ... Botany* ... 3(19): 522-523. 1885, *Mexicanas Plantas* 2: 66. 1886, *Monographiae Phanerogamarum* 6: 326-329, 530, 536. 1889, *Revisio Generum Plantarum* 2: 794. 1891, *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 322. 1893, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 27(1-2): 22-23. 1899 and *Manual of the Flora of the Northern States and Canada* 71. 1901, *Enum. Vasc. Pl. Suriname* 46. 1906, *Contr. U.S. Natl. Herb.* 12: 125. 1908, *North American Flora* 17(1): 96-97. 1909, *North American Flora* 17: 129. 1912, *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 1: 196. 1915, *Flora of Tropical Africa* 9: 402-403, 405-406. 1919, *Mededeelingen van's Rijks-Herbarium* 40: 40. 1921, *Contr. U.S. Natl. Herb.* 22: 510. 1922, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 777, 803. 1933, *J. Ecol.* 24: 162-184. 1936, *Fl. Suriname* 1(1): 438-439. 1943, *Brittonia* 7: 391. 1952, *Cytologia* 19: 97-103. 1954, *Fl. Guy. Franç.* 1: 159. 1955, *Memoirs of the New York Botanical Garden* 9(3): 277. 1957, *Boissiera*. 9: 150. 1960, *Phytologia* 14(2): 93-94. 1966, *Flora Illustrada de Entre Ríos (Argentina)* 6(2): 504. 1969, *Phytologia* 54(1): 5. 1983, *Taxon* 33: 95-97. 1984, *Taxon* 35: 195-196. 1986, *Wageningen Agric. Univ. Papers* 92(1): 401. 1992, *Sida* 18(1): 242, f. 1. 1998.

in English: giant spear grass, gray tussock grass, gray beard grass, arrow grass, spiked crinkleawn

in India: gandhi

in Nigeria: celbiho, juda, yandaya

in southern Africa: bokbaardgras, reuse pylgras, steekgras, danga, oro, horo, ledutla; isitube (Zulu); selokana (Sotho)

T. vestitus Andersson (*Stipa spicata* L.f.; *Stipa spicata* Thunb., nom. illeg., non *Stipa spicata* L.f.; *Stipa spicata* Walter, nom. illeg., non *Stipa spicata* L.f.; *Trachypogon polymorphus* var. *vestitus* (Andersson) Hack.; *Trachypogon spicatus* (L.f.) Kuntze)

South America, Brazil. See *Supplementum Plantarum* 111. 1781 [1782], *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 14: 52. 1857, *Flora Brasiliensis* 2(4): 263, 266. 1883, *Revisio Generum Plantarum* 2: 794. 1891.

Trachys Pers. = *Trachyozus* Reichenb.,
Trachystachys Dietr.

From the Greek *trachys* “rough.”

One species, India, Sri Lanka, Myanmar. Panicoideae, Panicoideae, Paniceae, annual, herbaceous, decumbent, erect, stoloniferous, auricles absent, leaf sheaths inflated, ligule a fringe of hairs, plants bisexual, inflorescence a pair of 1-sided racemes, rachis fragile, spikelets with bractiform involucre, fertile spikelets with 2 glumes unequal to very unequal, lower glume nerveless, upper glume 3 nerved, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, coastal, open areas, dunes, arid coastal, sandy places, type *Trachys mucronata* Pers., see *Mantissa Plantarum Altera* 302. 1771, *Syn. Pl.* 1: 85. 1805, *Conspicuum regni vegetabilis per gradus naturales evoluti*. Tentamen ... pars prima. 1828 [1829], *Species Plantarum. Editio sexta* 2: 16, 743. 1833, *Synopsis Plantarum Glumacearum* 1: 112. 1854 and *Handb. Fl. Ceylon* 5: 186. 1900, *Grasses of Ceylon* 157. 1956, *Grasses of Burma* ... 369. 1960, *Genera Graminum* 306-307. 1986, *Taxon* 49(2): 248-249. 2000.

Species

T. muricata (L.) Trin. (*Cenchrus muricatus* L.; *Panicum squarrosus* Retz.; *Trachyozus muricata* (L.) Steud.; *Trachys mucronata* Pers.; *Trachys muricata* (L.) Pers. ex Trin.)

Southern India, Sri Lanka, Myanmar. Annual, erect, creeping, stoloniferous, ligule shortly membranous, spikelets in subsessile clusters with 2-3 fertile spikelets below and 1-several reduced barren above, 2 florets, lower floret barren, upper floret perfect, see *Mantissa Plantarum* 302. 1771, *Observationes Botanicae* 4: 15. 5: t. 1. 1786, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 189. 1834, *Synopsis Plantarum Glumacearum* 1: 112. 1854.

in India: mara akkabu hullu, vennai thiraththi pul

Trachystachys A. Dietr. = *Trachys* Pers.

From the Greek *trachys* “rough” and *stachys* “spike.”

Panicoideae, Panicoideae, Paniceae, see *Syn. Pl.* 1: 85. 1805, *Species Plantarum. Editio sexta* 2: 16, 743. 1833.

Tragus Haller = *Echinanthus* Cerv., *Lappago* Schreb., *Nazia* Adans., *Tragus* Panz.

For the German botanist Hieronymus Bock (called *Tragus*, *bock* being German for goat), 1498-1554, physician, teacher, author of *New Kreütter Buch*. Strassburg 1537, *Teütsche Speiszkammer*. [Small 4to, 2nd edn.] Strasbourg 1555 and *De stirpium, maxime earum, quae in Germania nostra nascuntur*. [Strassburg 1552], with Brunfels & Fuchs one of the German fathers of botany; see Otto Brunfels (1488-1534), *Herbarum vivae eicones ad naturae imitationem summa cum diligentia et artificio effigatae*. Argentorati 1530-1540; Garrison & Morton, *Medical Bibliography*. 1806 and 1803. 1961; Edward Lee Greene, *Landmarks of Botanical History*. Edited by Frank N. Egerton. Stanford, California 1983; J.H. Barnhart, *Biographical notes upon botanists*. 1: 206. 1965; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 44. Regione Siciliana, Palermo 1988; Jerry Stannard, in *D.S.B.* 2: 218-220. 1981.

About 6-7 species, pantropical. Chloridoideae, Cynodonteae, Zoysiinae, or Chloridoideae, Cynodonteae, Traginae, annual or perennial, herbaceous, ascending or decumbent and creeping, often mat-forming, sheaths terete, ligule a very narrow fringed membrane, leaf blades flat, auricles absent, rigid hairs on the leaf margins, often stoloniferous, plants bisexual, inflorescence a cylindrical false raceme or a slender spike-like panicle, small subsessile deciduous clusters of 2 to few spikelets burrlike with hooked spines, spikelets sessile or very shortly pedicellate and usually paired, floret 1 perfect, fertile spikelets small and 1-flowered, bristles on the spikelets, glumes 1 per spikelet or 2, glumes very unequal and very dissimilar, lower glume tiny or absent, upper glume prickly or densely spiny with 5 rows of hooked spines on the back, lemma and palea membranous, lemma acute, 2 fleshy and toothed lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, fruit small and more or less dorsally compressed, mature spikelets can cause trouble, burrs a nuisance in wool, mature seed burrs can be troublesome especially to sheep, palatable, little nutritional value, grazed by cattle, poor livestock forage, weed species of open habitats, pampas, disturbed dry areas, weedy places, type *Tragus racemosus* (L.) All., see *Fam. Pl.* 2: 31, 581. 1763, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 203. 1768, *Flora Pedemontana* 2: 241. 1785, *Gen. Pl.* edition 8: 55. 1789, *Naturaleza* 1: 351. 1870, *Revisio Generum Plantarum* 2: 780. 1891 and *Cytologia* 19: 97-103. 1954, *Kew Bulletin* 36(1): 55-61. 1981,

Bothalia 24(1): 92-96. 1994, *Flora Mesoamericana* 6: 298. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Flora Mediterranea* 8: 307-313. 1998, *Thaiszia* 9(1): 31-40. 1999, *Flora of Ecuador* 68: 124-125. 2001, *Contributions from the United States National Herbarium* 41: 73, 130, 175, 220-221. 2001, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

T. spp.

in Niger: âbuggur'nâkli, êmurudu, harkia, lasagâr, shigizal, takâna

T. australianus S.T. Blake (*Tragus racemosus* sensu Benth., non (L.) All.)

Australia, all mainland States. Annual, very small, tufted, erect or ascending, decumbent or geniculate at the nodes, basal sheaths glabrous, ligule a rim of short hairs, leaves flat and ciliate or pectinate, a spike-like bristly panicle, 2 spikelets lanceolate on each peduncle, 1 bisexual floret, bristled glumes, lower glume minute or absent, upper glume lanceolate with hooked spines, lemma oblong acute or mucronate, palea 2-keeled, early colonizer, an increaser species, fodder and cover grass, resistant to heavy grazing, leaves palatable, mature spikelets adhere to animals, grows on sandy soils, clay pans, bare and disturbed areas, on red sandy soil, see *University of Queensland Papers: Department of Botany* 1(18): 12. 1941.

in English: burrgrass, small burrgrass, Australian burr grass, tickgrass

T. berteronianus J.A. Schultes (*Lappago aliena* Spreng.; *Lappago berteroniana* Schult. ex Steud.; *Lappago occidentalis* Nees ex Hook.; *Lappago phleoides* Fig. & De Not.; *Lappago racemosa* var. *erecta* Kunth; *Nazia aliena* (Spreng.) Scribn.; *Nazia aliena* auct. non (Spreng.) Scribn.; *Nazia occidentalis* (Nees) Scribn.; *Nazia racemosa* var. *aliena* (Spreng.) Scribn. & J.G. Sm.; *Nazia racemosa* var. *berteroniana* (Schult.) Hack.; *Tragus alienus* (Spreng.) Schult.; *Tragus ciliatus* Lepr. ex Kunth; *Tragus mongolorum* Ohwi; *Tragus occidentalis* Nees; *Tragus racemosus* f. *erectus* Döll; *Tragus racemosus* var. *berteronianus* (Schult.) Hack.; *Tragus racemosus* var. *brevispicula* Döll; *Tragus tscheliensis* Debeaux)

Tropical Africa, China, Egypt, America, southwestern Asia, South Africa. Annual, small, ruderal, tufted to loosely tufted, short culms, erect, decumbent or ascending, spreading, sprawling, mat-forming, usually rooting at the lower nodes, branching from base, often shortly stoloniferous, leaf sheath rounded and inflated, ligule a ring of hairs, leaves lanceolate and flattened, leaf margins fringed and hairy, long dense spike-like inflorescence narrowly cylindrical and

usually partially enclosed by the sheath of the uppermost leaf, spikelets paired and covered with hooked spines or bristles, first spikelet fertile, second spikelet rudimental or reduced to an empty glume, glumes hairs hooked, upper glume 5-nerved with prickles hooked at the tip, 3 stamens, sharp prickly seeds, heavy seeder, pioneer grass, useful for erosion control, grazed by all stock, very low grazing value, troublesome weed species more or less undesirable for cattle and sheep, low vegetative yield, found in arid and semiarid lands, stony fields, grassland, denuded grasslands, dry grassland, on poor soils and poor sandy soil, natural veld, on muddy pans, along roadsides, compacted soils, open shrubland, bushland, cultivated and uncultivated ground, trampled sites, overgrazed areas, disturbed places, silty clay, sandy soils, open areas, see *Flora Pedemontana* 2: 241. 1785, *Synopsis Plantarum Germaniae* 1: 440. 1792, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 3: 15. 1822, *Mantissa* 2: 205. 1824, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 286-287. 1829, *Révision des Graminées* 2: 413. 1831, *Annales des Sciences Naturelles; Botanique, sér. 3* 19: 373. 1853, *Synopsis Plantarum Glumacearum* 1: 112. 1854, *Flora Brasiliensis* 2(2): 123. 1877, *Actes de la Société Linnéenne de Bordeaux* 33: 71. 1879, *Revisio Generum Plantarum* 2: 780. 1891, *Zoë* 4(4): 386. 1894, *The Flora of British India* 7(21): 97. 1897 [1896], *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 12. 1897 and *Österreichische Botanische Zeitschrift* 51(6): 195. 1901, *Anales del Museo Nacional de Buenos Aires* 11: 58. 1904, *Acta Phytotaxonomica et Geobotanica* 10(4): 268. 1941, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Bothalia* 24(1): 92-96. 1994, *Austral. Ecology* 25(2): 140-149. Apr 2000 [Effect of soil salinity on plant distribution and production at Loburu delta, Lake Bogoria National Reserve, Kenya.], *Journal of Applied Ecology* 37(3): 491-507, June 2000 [Effect of stocking rate and rainfall on rangeland dynamics and cattle performance in a semiarid savannah, South Africa.], Raphael B. B. Mwalyosi, "Vegetation changes following land reclamation in the Kondoa Eroded Area, central Tanzania." *African Journal of Ecology* 38(3): 265-268. Sep 2000, *African Journal of Ecology* 39(3): 276-285. Sep 2001, *African Journal of Ecology* 43(1): 29-34. Mar 2005.

in English: burgrass, burr grass, spiked burr grass, spike burgrass, pricklegress, Bertero goatgrass, goatgrass, common carrot-seed grass, carrot-seed grass, small carrot-seed grass, spiked carrot-seed grass

in Brazil: capim carapicho de ovelho

in Mexico: zacate

in East Africa: abera (Luo)

in Malawi: mchirawakhoswe

in Somalia: nafir, harfo

in South Africa: digaarwortelsaadgras, gewone wortelsaadgras, haasgras, hassklits, kleinwortelsaadgras, klitsgras, kousgras, kousklits, luisgras, lysgras, raasklits, wolgras, wolklits, wortelsaadgras

in Upper Volta: kebbe baali

T. heptaneuron W.D. Clayton

Tanzania, Kenya, Somalia. Annual, spikelets subequal acute, upper glume 7-nerved, prickles hooked, open areas, dry sandy areas, sandy soil, saline places, open shrubland, see *Kew Bulletin* 27(1): 151. 1972.

in English: Kenya burr grass

in Somalia: nafir, harfo, rarmay

T. koelerioides Aschers. (also spelled *koeleroides*) (*Tragus major* (Hack.) Stapf; *Tragus racemosus* var. *major* Hack.)

South Africa, Transvaal. Perennial, stoloniferous and rhizomatous, inflorescence spike-like, spikelets clustered, glumes hairs curved, ruderal weed, grows on open grassland, semiarid lands, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 20: 30. 1878, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 397. 1889 and *Flora Capensis* 7: 577, 762. 1900.

in English: creeping carrot-seed grass, cushion grass, perennial carrot-seed grass, goat's-beard grass

in South Africa: kophaargras, kruipgras, kruipwortelsaadgras, kwaggakweek, olifantskweek, roletjiesgras, rooiwortelsaadgras, langbeenwortelsaadgras, meerjarige, wortelsaadgras, vetmakergras, wortelsaadgras

T. pedunculatus Pilg.

South Africa. Annual, branched, decumbent, inflorescence branched, glumes hairs straight, on sandy soils, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 45: 208. 1910.

T. racemosus (L.) All. (*Cenchrus racemosus* L.; *Lappago biflora* Roxb.; *Lappago decipiens* Fig. & De Not.; *Lappago racemosa* (L.) Honck.; *Nazia racemosa* (L.) Kuntze; *Phalaris muricata* Forssk.; *Tragus arenarius* Bremek. & Oberm.; *Tragus biflorus* Schult.; *Tragus decipiens* (Fig. & De Not.) Boiss.; *Tragus echinatus* (L.) Cav.; *Tragus halleri* Döll; *Tragus muricatus* Moench; *Tragus paucispina* Hack., also spelled *paucispinus*; *Tragus racemosus* Hook.f., nom. illeg., non *Tragus racemosus* (L.) All.; *Tragus racemosus* f. *divaricatus* Döll; *Tragus racemosus* var. *decipiens* (Fig. & De Not.) T. Durand & Schinz; *Tragus racemosus* var. *longispicula* Döll; *Tragus racemosus* var. *paucispina* (Hack.) Maire)

Northern tropical Africa, southwestern Asia, Mediterranean. Annual, loose, psammophilous, ruderal, tufted, prostrate or decumbent and finally ascending, spreading, branched, often rooting at the lower nodes, more or less leafy, leaf sheath terete, upper leaf sheath swollen, ligule

membranous and crowned by a ring of hairs, leaf blade flat and stiffly hairy on margins, auricles absent, spicate open inflorescence broadly cylindrical and often partially enclosed by the uppermost leaf sheath, bristly spikelets clustered, upper glume 7-nerved, glumes with hooked spiny hairs, fruits oblong, weed species naturalized elsewhere, palatable, after flowering unpalatable because of the harsh flower spikes, good fodder for all stock while young, poor to very low grazing value, found in waste areas, dry sandy wastelands, irrigated land, desert, moist places, on sandy soils, roadsides, stony fields, overgrazed veld, disturbed lands, cultivated fields, dry soils, drainage channels, see *Species Plantarum* 1: 54-55. 1753, *Species Plantarum* 2: 1049. 1753, *Flora Aegyptiaco-Arabica* 202. 1775, *Flora Pedemontana* 2: 241. 1785, *Synopsis Plantarum Germaniae* 1: 440. 1792, *Methodus Plantas Horti Botanici ...* 53. 1794, *Elenchus Plantarum Horti Botanici* 38. 1803, *Flora Indica; or Descriptions ...* 1: 284. 1820, *Mantissa* 2: 205. 1824, *Agrostographiae Aegyptiacae Fragmenta* 2: 73, f. 37. 1853, *Mem. Reale Accademia Scienze Torino* 387. 1854, *Flora Brasiliensis* 2(2): 122. 1877, *Revisio Generum Plantarum* 2: 780. 1891, *Conspectus Florae Africae* 5: 733. 1895, *The Flora of British India* 7(21): 97. 1897 [1896] and *Österreichische Botanische Zeitschrift* 51(6): 193. 1901, *Annals of the Transvaal Museum* 16(3): 403. 1935, *Feddes Repert.* 49: 53. 1940, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 32: 217. 1941, *Mitteilungen der Botanischen Staatssammlung München* 1: 343. 1953, *Bot. Zhurn. SSSR* 69(4): 511-517. 1984, *Fl. Libya* 145: 336. 1988, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991, *Journal of Applied Ecology* 37(3): 491-507. June 2000, *African Journal of Ecology* 40(2): 103-109. June 2002.

in English: carrot-seed grass, sweetheart grass, carrot grass, stalked carrot-seed grass, large carrot-seed grass, spike bur grass, stalked bur grass, stalked burgrass, stalked burr grass, stalked bristle grass

in French: tragus à grappes, bardanette à grappes, bardanette racémeuse, bardanette rameuse

in India: barchinte, barchinte choti, dhaman

in Italian: lappola

in Arabic: tinismirt

in Mali: abugur nekli, tafado fodo

in Mauritania: tinismirt

in Somalia: nafir, harfo

in southern Africa: grootwortelsaadgras, losaarwortelsaadgras, wortelsaadgras, klitsgras, kousgras, luisgras, lysgras; bore-ba-ntjia, borebantja (Sotho)

in Upper Volta: kebbe baali, kebbel baal

T. roxburghii Panigrahi (*Lappago biflora* Roxb.; *Tragus biflorus* Schult.; *Tragus racemosus* auct.)

East Africa, Sri Lanka, India, Thailand, Malay Peninsula. Annual or short-lived perennial, erect, glabrous, small growth, many nodes, often rooting from the lower nodes, leaf blades rigid and acuminate, ligule ciliate, leaves margins rather spiny, harsh prickly inflorescence, spiciform racemes, spikelets paired, nutritious grass, grazed, see *Flora Indica; or Descriptions ...* 1: 284. 1820, *Mantissa* 2: 205. 1824, *The Flora of British India* 7(21): 97. 1897 [1896] and *Handb. Fl. Ceylon* 5: 187. 1900, *Grasses of Ceylon* 102. 1956, *Kew Bulletin* 29(3): 496. 1974, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Journal of Economic and Taxonomic Botany* 22(2): 491-494. 1998.

in English: goat grass

in India: anthirinta gaddi, antu purale hullu, antupurale-hallu, charchada, mullagaddi, sitaghass, vandariughas

in Thailand: yaa kra chee, ya krachi, ya soi nok khao, yaa soi nok khao

Tragus Panz. = *Brachypodium* P. Beauv.

Pooideae, Brachypodieae, see *Essai d'une Nouvelle Agrostographie* 100-101, 155, pl. 19, f. 35. 1812, Georg Wolfgang Franz Panzer (1755-1829), "Ideen zu einer künftigen Revision der Gattungen der Gräser." *Denkschr. Akad. Wiss., Wien* 4: 253-312. 1813 and *Contr. U.S. Natl. Herb.* 24: 196. 1925, *Contributions from the United States National Herbarium* 48: 143-145, 656. 2003.

Tremularia Heist. ex Fabr. = *Briza* L.,
Tremularia Fabr.

From the Latin *tremulus*, *a*, *um* "shaking, trembling."

Pooideae, Poeae, Brizinae, see *Species Plantarum* 1: 70-71. 1753, *Enumeratio Methodica Plantarum* 207. 1759 and *Contributions from the United States National Herbarium* 48: 146-151, 656. 2003.

Triachyrum Hochst. = *Sporobolus* R. Br.

From the Greek *treis*, *tria* "three" and *achyron* "chaff, husk."

Chloridoideae, Cynodonteae, Sporobolinae, type *Triachyrum adoense* Hochst. ex A. Braun, see *Prodromus Florae Novae Hollandiae* 169-170. 1810, *Flora* 24: 712. 1841, *Flora Africae Australioris Illustrationes Monographicae* 158. 1841, *Tentamen Florae Abyssinicae ...* 2: 394. 1850, *Synopsis Plantarum Glumacearum* 1: 176. 1855 [1854], *Beitrag zur Flora Aethiopiens ...* 302, 311. 1867, *Nomenclator Botanicus* 2: 1274. 1874, *Bulletin de la Société Botanique de France* 36: 253. 1889 and *Contributions from the United States National Herbarium* 41: 200-219, 221. 2001.

Triaena Kunth = *Bouteloua* Lag.

Greek *triaina* "trident," referring to the flowers.

Chloridoideae, Cynodonteae, Boutelouinae, type *Triaena racemosa* Kunth, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 40, t. 8, f. 4. 1812, *Nova Genera et Species Plantarum* 1: 178-179, t. 61. 1815 [1816], *Systema Vegetabilium, editio decima sexta* 1: 293. 1825, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 176. 1831, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 307-308, f. 2. 1891 and *Contributions from the United States National Herbarium* 14(3): 343-428. 1912, *Aliso* 17(2): 99-130. 1998, *Contributions from the United States National Herbarium* 41: 20-33, 221. 2001.

Trianthium Desv. = *Chrysopogon* Trin.,
Rhaphis Lour.

From the Greek *treis*, *tria* and *anthos* "flower," referring to the flowers.

Panicoideae, Andropogoneae, Sorghinae, see *Fundamenta Agrostographiae* 187-188. 1820, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 173. 1831 and *Contributions from the United States National Herbarium* 46: 159-161, 544-545. 2003.

Triarrhena (Maxim.) Nakai = *Miscanthus*
Andersson, *Tiarrhena* (Maxim.) Nakai

From the Greek *treis*, *tria* "three" and *arrhen* "male."

Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, or Panicoideae, Andropogoneae, Saccharinae, see *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademien* 12: 165. 1855, *Primitiae Florae Amurensis* 331. 1859, *Mémoires Présentés à l'Académie Impériale des Sciences de Saint Pétersbourg par Divers Savans et lus dans ses Assemblées* 9: 331. 1859, *Journal of the Linnean Society, Botany* 19: 65. 1881, *Die Natürlichen Pflanzenfamilien* 2: 23. 1887, *Monographia Andropogonearum* 102. 1889 and *Botanical Magazine* 23: 107. 1909, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 391. 1930, *Journal of Japanese Botany* 25(1-2): 7. 1950, *Bull. Fac. Agric. Mie University* 17: 57, 59. 1958, *Pl. Taxonomic Soc. Korea, Seoul* 1972: 18, 17. 1972, *Journal of Huazhong Agricultural University (Suppl.)*: 56-60. 1989, *Flora Mesoamericana* 6: 378-379. 1994, *Sida* 16(2): 233-244. 1994, *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Sida* 16(3): 551-580. 1995, *J. Fujian Acad. Agric. Sci.* 11(3): 19-22. 1996, *Journal of Plant Research*

115: 381-392. 2002, *Contributions from the United States National Herbarium* 46: 294-295, 550-557, 617, 622. 2003.

Triathera Desv. = *Bouteloua* Lag., *Bouteloua* Hornem. ex P. Beauv.

From the Greek *treis*, *tria* “three” and *ather* “stalk, barb.”

Chloridoideae, Cynodonteae, Boutelouinae, type *Triathera americana* (L.) Desv., see *Systema Naturae, Editio Decima* 879. 1759, *Varietates de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 40, t. 8, f. 4. 1812, *Nova Genera et Species Plantarum* 1: 171-172. 1815 [1816], *Systema Vegetabilium* 2: 600. 1817, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 176. 1831, *Bulletin de la Société Botanique de France*, sér. 2, 296. 1880, *Genera Plantarum* 3(2): 1169. 1883, *Mexicanas Plantas* 2: 141. 1886 and *Flora of the Southeastern United States ...* 137. 1903, *Contributions from the United States National Herbarium* 17(3): 343. 1913, *Aliso* 17(2): 99-130. 1998, *Contributions from the United States National Herbarium* 41: 20-33, 221-222. 2001.

Triatherus Raf. = *Ctenium* Panz., *Monocera* Elliott, *Triathera* Desv.

Greek *treis*, *tria* and *ather* “stalk, barb.”

Chloridoideae, Cynodonteae, see *Flora Caroliniana, secundum ...* 249. 1788, *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 38, 61. 1813, *Denkschriften der Bayer[ischen]. Botanischen Gesellschaft in Regensburg* 4: 311, t. 13, f. 1-2. 1813 [1814], *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 176. 1816, C.S. Rafinesque, in *Am. Monthly Mag. Crit. Rev.* 3: 99. 1818, *A Class-book of Botany* 806. 1861 and *North American Flora* 17(8): 579-638. 1939, E.D. Merrill, *Index rafinesquianus*. 76. 1949, *Contributions from the United States National Herbarium* 41: 57-58, 142, 222. 2001.

Triavenopsis Candargy = *Duthiea* Hack.

Greek *treis*, *tria* and *Avena*-like.

Aveneae, type *Triavenopsis brachypodium* P. Candargy, see *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 45: 200. 1896 and *Archives de Biologie Végétale Pure et Appliquée* 1: 64-65. 1901, *Acta Phytotaxonomica Sinica* 10(2): 182. 1965.

Tribolium Desv. = *Allagostachyum* Steud., *Brizopyrum* Link, *Brizopyrum* Stapf, *Hystringium* Steud., *Lasiochloa* Kunth, *Plagiocloa* Adamson & Sprague, *Urochlaena* Nees

From the Greek *tribolos*, a name of various prickly plants; Latin *tribulus*, *tribolos*, *i* “a caltrop”; Greek *tribolos*, *treis*, *tria* “three” and *bolos* “a point”; possibly in reference to the bristly glumes surrounding the 3 florets.

About 10 species, South Africa. Arundinoideae, Danthonieae, or Arundinoideae, Arundineae, or Danthonioideae, Danthonieae, annual or perennial, herbaceous, unarmed, tufted, decumbent, mat-forming, rhizomatous or stoloniferous, auricles absent, sheath often broadly winged and clasping the inflorescence, ligule more or less membranous and fringed, plants bisexual, inflorescence spicate or racemose or paniculate, spikelets hairy solitary densely imbricate, 2-10-many fertile florets, uppermost floret sometimes reduced, 2 glumes 3- to 7-nerved more or less equal to subequal, lemmas entire coriaceous 5- to 9-nerved, lemma margins glabrate hairy below, palea notched, 2 free and fleshy glabrous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, dry areas, bushland, similar to *Schismus*, *Uniola* and *Coelachyrum*, type *Tribolium hispidum* (Thunb.) Desv., see *Species Plantarum* 1: 67-70, 71. 1753, *Commentationes Botanicae* 26. 1822, *Hortus Regius Botanicus Berolinensis* 1: 159. 1827, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168, t. 7, f. 2. 1831, *Révision des Graminées* 2: 556-557, t. 193. 1832, *Nomenclator Botanicus. Editio secunda* 1: 50. 1840, *Florae Africae Australioris Illustrationes Monographicae* 437-438. 1841, *Nomenclator Botanicus. Editio secunda* 2: 11. 1841, *Flora Capensis* 7: 318. 1898 and *Journal of South African Botany* 7(2): 89-90. 1941, *Nord. J. Bot.* 1: 20. 1981, *Kew Bulletin* 40(4): 797-798. 1985, *American Journal of Botany* 79: 689-700. 1992, *South African Journal of Botany* 60(1): 22-26. 1994, H.P. Linder & G. Davidse, “The systematics of *Tribolium* Desv. (Danthonieae: Poaceae).” *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 119(4): 445-507. 1997, *Contributions from the United States National Herbarium* 46: 143, 283, 539, 622, 629. 2003.

Species

T. acutiflorum (Nees) Renvoize (*Brizopyrum acutiflorum* Nees; *Brizopyrum acutiflorum* var. *capillaris* Nees; *Desmazeria acutiflora* (Nees) T. Durand & Schinz; *Plagiocloa acutiflora* (Nees) Adamson & Sprague)

South Africa. Perennial, weak, erect, slender, tufted, decumbent, elongated and prostrate, leaves glabrous or villous, sometimes stoloniferous, contracted inflorescences terminal and axillary, single axillary panicles below terminal panicle, spikelets 5- to 9-flowered, glumes glabrous acute, lemmas

acuminate with club-shaped hairs, palea obovate, weed, disturbed areas, along roadsides and bare roadside embankments, sandy soils, low-lying areas, seasonally wet depressions, similar to *Tribolium obliterum*, see *Florae Africae Australioris Illustrationes Monographicae* 371. 1841, *Conspectus Florae Africae* 5: 900. 1895 and *Journal of South African Botany* 7(2): 90. 1941, *Kew Bulletin* 40(4): 798. 1985, *South African Journal of Botany* 60: 285-292. 1994.

T. alternans (Nees) Renvoize (*Brizopyrum alternans* Nees; *Cynosurus uniolae* L.f.; *Desmazeria alternans* (Nees) T. Durand & Schinz; *Plagiochloa alternans* (Nees) Adamson & Sprague; *Poa alternans* (Nees) Steud.; *Tribolium uniolae* (L.f.) Renvoize)

South Africa. Perennial, tufted, inflorescence loosely spicate, spikelets distichous, glumes pubescent, on sandy soils, see *Supplementum Plantarum* 110. 1781 [1782], *Florae Africae Australioris Illustrationes Monographicae* 1: 369. 1841, *Nomenclator Botanicus. Editio secunda* 2: 358. 1841, *Conspectus Florae Africae* 5: 900. 1895 and *Journal of South African Botany* 7(2): 91. 1941, *Kew Bulletin* 40(4): 797-798. 1985, *South African Journal of Botany* 60(5): 279-284. 1994.

T. amplexum Renvoize (*Tribolium uniolae* (L.f.) Renvoize)

South Africa. Perennial, tufted, spicate panicle, axillary inflorescence, glumes glabrous, disturbed areas, sandy soil, see *Kew Bulletin* 40(4): 797. 1985.

T. brachystachyum (Nees) Renvoize (*Brizopyrum brachystachyum* (Nees) Stapf; *Brizopyrum capense* var. *brachystachyum* Nees; *Plagiochloa brachystachya* (Nees) Adamson & Sprague)

South Africa. Perennial, weak, lax, erect to decumbent, prostrate to tufted, compacted spikes exerted from the uppermost leaf, spikelets distichous, glumes pubescent, along roadsides, disturbed areas, sandy soil, mountains, see *Florae Africae Australioris Illustrationes Monographicae* 1: 373. 1841 and *Flora Capensis* 7(4): 707. 1900, *Journal of South African Botany* 7(2): 91. 1941, *Kew Bulletin* 40(4): 798. 1985.

T. ciliare (Stapf) Renvoize (*Brizopyrum ciliare* Stapf; *Dactylis ciliaris* L.; *Dactylis ciliaris* Thunb., nom. illeg., non *Dactylis ciliaris* L.; *Lasiochloa ciliaris* Kunth; *Plagiochloa ciliaris* (Stapf) Adamson & Sprague)

South Africa. Annual, weak, tufted, spikelets not distichous, glumes pubescent, in sand, limestone, in shallow soil, in sandy loam, in moist soil, see *Mantissa Plantarum* 185. 1767, *Prodromus Plantarum Capensium*, ... 22. 1794, *Révision des Graminées* 2: 555, t. 192. 1832, *Hooker's Icones Plantarum* 27(1): t. 2602. 1899 and *Journal of South African Botany* 7(2): 91. 1941, *Kew Bulletin* 40(4): 799. 1985.

T. echinatum (Thunb.) Renvoize (*Alopecurus echinatus* Thunb.; *Dactylis ascendens* Schrad.; *Lasiochloa ciliaris* Kunth; *Lasiochloa echinata* (Thunb.) Henrard; *Lasiochloa*

echinata (Thunb.) Adamson, nom. illeg., non *Lasiochloa echinata* (Thunb.) Henrard)

South Africa. Annual, vigorous, prostrate to erect, small, leaves villous, contracted terminal inflorescence partly enclosed in uppermost leaf, spikelets not distichous, 2-3 florets, glumes pubescent long acuminate, lemma awnless long acuminate, weed, useful for erosion control, along roadsides, in dry river bed, in disturbed clay soil, on loose roadside soil, in roadside depression, sandy soils, see *Prodromus Plantarum Capensium*, ... 19. 1794, *Mantissa* 2: 351. 1824, *Révision des Graminées* 2: 555, t. 192. 1832 and *Blumea* 4(3): 502. 1941, *Journal of South African Botany* 8(4): 272. 1942, *Kew Bulletin* 40(4): 798. 1985.

T. hispidum (Thunb.) Desv. (*Dactylis hirta* Schrad.; *Dactylis hispida* Thunb.; *Dactylis longifolia* Schrad.; *Lasiochloa hirta* (Schrad.) Kunth; *Lasiochloa hirta* var. *glaucescens* Nees; *Lasiochloa hirta* var. *infracta* Nees; *Lasiochloa hispida* (Thunb.) Kunth; *Lasiochloa hispida* (Thunb.) Nees, nom. illeg., non *Lasiochloa hispida* (Thunb.) Kunth; *Lasiochloa hispida* var. *brevifolia* Nees; *Lasiochloa hispida* var. *incurva* Nees; *Lasiochloa hispida* var. *longifolia* (Schrad.) Nees; *Lasiochloa hispida* var. *longiglumis* Nees; *Lasiochloa longifolia* (Schrad.) Kunth; *Lasiochloa longifolia* var. *hirta* (Schrad.) Adamson; *Lasiochloa longifolia* var. *hispida* (Thunb.) Stapf; *Lasiochloa longifolia* var. *pallens* Stapf)

South Africa. Perennial, densely tufted, prostrate to erect, wiry, spikelets not distichous, glumes densely pubescent, useful for erosion control, sandy soils, see *Prodromus Plantarum Capensium*, ... 22. 1794, *Mantissa* 2: 350-351. 1824, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168, t. 7, f. 2. 1831, *Révision des Graminées* 2: 557, 559, t. 193, 194. 1832, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 388. 1833, *Florae Africae Australioris Illustrationes Monographicae* 1: 432-435. 1841 and *Flora Capensis* 7: 699. 1900, *Journal of South African Botany* 8(4): 272. 1942.

T. obliterum (Hemsl.) Renvoize (*Brizopyrum glomeratum* Stapf; *Brizopyrum obliterum* (Hemsl.) Stapf; *Brizopyrum obliterum* var. *erectum* Stapf; *Brizopyrum obliterum* var. *obliterum*; *Desmazeria oblitera* Hemsl.; *Plagiochloa glomerata* (Stapf) Adamson & Sprague; *Plagiochloa oblitera* (Hemsl.) Adamson & Sprague; *Poa glomerata* Walter; *Poa glomerata* Thunb., nom. illeg., non *Poa glomerata* Walter)

South Africa. Perennial, vigorous to weak, erect, sometimes with decumbent culm bases, often stoloniferous, often without stolons, roots fibrous, leaves glabrous, leaf blades linear and narrow, inflorescences terminal contracted cylindrical, spikelets not distichous, 5-10 florets, glumes acute glabrous, lemma back hairy on margins, small flattened fruits, weed, invasive, may compete with native bunchgrasses, found in disturbed areas, light shade in woodland, on gravelly and well-drained soils, along roadsides, cultivated fields, low

lying areas, sandy sites, on scraped roadsides, ditch, drainage channels, roadside ditch, similar to *Tribolium acutiflorum*, see *Flora Caroliniana, secundum ...* 80. 1788, *Prodromus Plantarum Capensium, ...* 22. 1794, *Report on the Scientific Results of the Voyage of H.M.S. Challenger ...* [during the years 1873-76: under the command of Captain George S. Nares... Botany-vol. I. Botany-vol. II. Published by order of Her Majesty's Government Great Britain. Challenger Office. London 1885-1886] 1(2): 90, t. 51, f. 1-8. 1885, *Hooker's Icones Plantarum* 27(1): t. 2603. June 1899 and *Flora Capensis* 7: 703-704. 1900, *Journal of South African Botany* 7(2): 91. 1941, *Kew Bulletin* 40(4): 798. 1985.

T. obtusifolium (Nees) Renvoize (*Brizopyrum glomeratum* Stapf; *Dactylis ciliaris* L.; *Dactylis obtusifolia* (Nees) Steud.; *Desmazeria compositae* Hack.; *Lasiochloa obtusifolia* Nees; *Lasiochloa ovata* Nees; *Plagiochloa glomerata* (Stapf) Adamson & Sprague; *Poa glomerata* Thunb., nom. illeg., non *Poa glomerata* Walter; *Tribolium glomeratum* Davidse, Spies & H. du Plessis)

South Africa. Perennial, caespitose, strongly stoloniferous, brittle stolons readily and easily breaking, spikelets not distichous, glumes pubescent, sandy areas, dunes, low lying areas, on scraped roadsides, in roadside depression, on bare road shoulder, see *Mantissa Plantarum* 185. 1767, *Prodromus Plantarum Capensium, ...* 22. 1794, *Florae Africae Australioris Illustrationes Monographicae* 1: 430-431. 1841, *Synopsis Plantarum Glumacearum* 1: 298. 1854, *Bulletin de l'Herbier Boissier* 7(1): 27. 1899, *Hooker's Icones Plantarum* 27(1): t. 2603. June 1899 and *Kew Bulletin* 40(4): 799. 1985, *American Journal of Botany* 79(6): 690. 1992.

T. uniolae (L.f.) Renvoize (*Briza imbricata* Steud.; *Brizopyrum alternans* Nees; *Brizopyrum capense* (Spreng.) Nees; *Brizopyrum capense* (Trin.) Trin.; *Brizopyrum capense* var. *capillare* Nees; *Brizopyrum capense* var. *nanum* Nees; *Brizopyrum capense* var. *papillosum* (Schr.) Nees; *Brizopyrum capense* var. *villosum* Stapf; *Brizopyrum uniolae* (L.f.) Schrad.; *Cynosurus paniculatus* Thunb.; *Cynosurus uniolae* L.f.; *Desmazeria uniolae* (L.f.) Kuntze; *Desmazeria alternans* (Nees) T. Durand & Schinz; *Desmazeria capensis* (Spreng.) E. Phillips; *Desmazeria uniolae* (L.f.) Kuntze; *Eragrostis uniolae* var. *papillosa* (Schr.) T. Durand & Schinz; *Plagiochloa alternans* (Nees) Adamson & Sprague; *Plagiochloa uniolae* (L.f.) Adamson & Sprague; *Plagiochloa uniolae* var. *uniolae*; *Plagiochloa uniolae* var. *villosa* (Stapf) Adamson; *Poa alternans* (Nees) Steud.; *Poa papillosa* Schrad.; *Poa uniolae* (L.f.) Schrad.; *Tribolium alternans* (Nees) Renvoize; *Tribolium amplexum* Renvoize; *Triticum capense* Spreng.; *Uniola capensis* Trin.)

South Africa. Perennial, slender, tufted, erect to decumbent, leaves glabrous, rhizomatous, terminal inflorescences branched and exerted from uppermost leaf, single terminal panicle, unilateral raceme, 4-8 florets, glumes acute to

acuminate usually glabrous, lemma awnless, useful for erosion control, along roadsides, under light woodland, roadside margin, fields, disturbed areas, disturbed veld, among rocks, see *Supplementum Plantarum* 110. 1781 [1782], *Prodromus Plantarum Capensium, ...* 23. 1794, *Plantarum Minus Cognitarum Pugillus* 2: 23. 1815, *Göttingische gelehrte Anzeigen unter der Aufsicht der Königl....* 3: 2074. 1821, *Hort. Berol.* 1: 159. 1827, *Flora* 12(2): 489. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 494-495. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 360. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168, t. 7, f. 2. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 54. 1836, *Linnaea* 12(4): 453. 1838, *Florae Africae Australioris Illustrationes Monographicae* 1: 369, 372, 373. 1841, *Nomenclator Botanicus. Editio secunda* 2: 358. 1841, *Conspectus Florae Africae* 5: 891. 1894, *Conspectus Florae Africae* 5: 900. 1895, *Fl. Cap.* 7: 318. 1898, *Revisio Generum Plantarum* 3(3): 349. 1898 and *Flora Capensis* 7: 705-706. 1900, *An Introduction to the Study of the South African Grasses ...* 29, t. 101. 1931, *Journal of South African Botany* 7(2): 89-91. 1941, *Fl. Cap. Peninsula* 87. 1950, *Nord. J. Bot.* 1: 20. 1981, *Kew Bulletin* 40(4): 797-798. 1985, *American Journal of Botany* 79: 689-700. 1992, *South African Journal of Botany* 60(1): 22-26 and 60(5): 279-284. 1994.

T. utriculosum (Nees) Renvoize (*Lasiochloa utriculosa* Nees)

South Africa. Annual, tufted, spikelets not distichous, glumes pubescent, weed, disturbed areas, along roadside scraped areas, sandy soils, in dried-up roadside gully, in small dry depressions, sandy alluvial soils, in shade of shrubs and small trees, see *Florae Africae Australioris Illustrationes Monographicae* 1: 436. 1841 and *Kew Bulletin* 40(4): 798. 1985.

Trichachne Nees = Acicarpa Raddi, Acicarpha Juss. (Calyceraceae), Digitaria Haller

From the Greek *thrix*, *trichos* "hair" and *achne* "chaff, glume."

Panicoideae, Paniceae, Digitariinae, type *Trichachne sacchariflora* Nees, see *Species Plantarum* 1: 55. 1753, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Carniolica, Editio Secunda* 1: 52. 1771, *Annales du muséum national d'histoire naturelle* 2: 347, t. 58. 1803, *Agrostografia Brasiliensis* 31, t. 1, f. 4. 1823, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 85, 87. 1829, *Synopsis Plantarum Glumacearum* 1: 38. 1855 [1853], *Flora*

Australiensis: A Description ... 7: 464. 1878, *Flora Capensis* 7: 373. 1898 and *Monograph of the Genus Digitaria* 573, 851, 866. 1950, *Darwiniana* 19: 65-166. 1974, *Contributions from the United States National Herbarium* 46: 13, 193-213, 622-623. 2003.

Trichaeta P. Beauv. = *Trisetaria* Forssk.

From the Greek *treis*, *tria* “three” and *chaite* “a bristle,” referring to the glume. Aveneae, type *Trichaeta ovata* (Pers.) P. Beauv., see *Flora Aegyptiaco-Arabica* 60. 1775, *Essai d'une Nouvelle Agrostographie* 86, 179. 1812.

Trichloris E. Fourn. ex Benth. = *Chloridopsis* Hack., *Chloropsis* Hack. ex Kuntze, *Leptochloris* Kuntze, *Trichloris* Scherff. & Pascher (Algae)

From the Greek tri- “three” plus *Chloris* Swartz, referring to the awns.

Two species, North America to Argentina, from southern U.S. to Argentina, Ecuador. Chloridoideae, Cynodonteae, Chloridinae, perennial, tussocks, leaves linear, ligule a line of short hairs, inflorescence digitate or with several verticillate racemes on a common axis, spikelets in 2 dense rows, several fertile and 1-2 rudimental florets, short glumes, lemma tip 3-awned, dry areas, plains, hillsides, closely related to *Chloris* and *Enteropogon*, type *Trichloris pluriflora* E. Fourn., see *Nova Genera et Species Plantarum seu Prodrum* 1, 25. 1788, *Journal of the Linnean Society, Botany* 19: 102. 1881, *Mexicanas Plantas* 2: 142. 1886, *Die Natürlichen Pflanzenfamilien* 2(2): 59. 1887, *Revisio Generum Plantarum* 2: 771. 1891 and U.S. Dept. Agric. Bull. 772: 190. 1920, Adolf Pascher (1881-1945), *Die Süßwasser-Flora Deutschlands, Österreichs und der Schweiz* 4: 88, 103. 1927, *Brigham Young University Science Bulletin: Biological Series* 19(2): 1-133. 1974, *Flora Mesoamericana* 6: 287-289. 1994, *Functional Ecology* 12(4): 640-645. Aug 1998, *Journal of Ecology* 88(6): 940-949. Dec 2000, *Flora of Ecuador* 68: 105-106. 2001, *Contributions from the United States National Herbarium* 41: 39-52, 222-223. 2001, *Austral. Ecology* 26(4): 413-422. Aug 2001, *Austral. Ecology* 27(4): 416-421. June 2002, *Austral. Ecology* 29(5): 558-567. Oct 2004, *Austral. Ecology* 29(6): 661-666. Dec 2004, *Physiologia Plantarum* 123(3): 272-280. Mar 2005, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, “Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications.” *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

T. crinita (Lagasca) Parodi (*Chloris crinita* Lag.; *Chloris mendocina* Phil.; *Chloris trichodes* Lag. ex Parodi; *Chloropsis blanchardiana* (E. Fourn. ex Scribn.) Kuntze; *Chloropsis blanchardiana* Gay ex Scribn.; *Chloropsis crinita* (Lag.) Kuntze; *Chloropsis fasciculata* (E. Fourn.) Kuntze; *Chloropsis mendocina* (Phil.) Kuntze; *Leptochloris crinita* (Lag.) Munro ex Kuntze; *Leptochloris greggii* Munro ex Merr.; *Trichloris blanchardiana* E. Fourn. ex Scribn.; *Trichloris crinita* var. *triflora* Parodi; *Trichloris crinita* var. *typica* Parodi; *Trichloris fasciculata* E. Fourn.; *Trichloris mendocina* (Phil.) Kurtz; *Trichloris mendocina* (Phil.) Kurtz ex Seckt; *Trichloris mendocina* f. *blanchardiana* (E. Fourn. ex Scribn.) Kurtz; *Trichloris verticillata* E. Fourn. ex Vasey)

South America, Argentina, U.S., Mexico. Perennial bunchgrass, caespitose, erect, leaf blades flat acuminate, spikelets biseriate 2-flowered, glumes aristulate, lower lemma ciliate, ornamental, good forage, withstands extended period of drought, growing in arid and very arid regions, campos secos, sandy places, on heavy and light soils, see *Varietades de Ciencias, Literatura y Artes* 2(4): 143. 1805, *Anales de la Universidad de Chile* 36: 208. 1870, *J. Linn. Soc. Bot., London* 19: 103. 1881, *Bulletin of the Torrey Botanical Club* 9: 146. 1882, *A Descriptive Catalogue of the Grasses of the United States* 61. 1885, *Mexicanas Plantas* 2: 142. 1886, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): t. 25. 1891, *Revisio Generum Plantarum* 2: 771. 1891, *Memorias de la Facultad de Ciencias Exactas Fis. Nat. Universidad Nacional Cordoba* 1896: 37. 1897, *Revisio Generum Plantarum* 3(2): 348. 1898 and *Boletín de Academia de Ciencias, Bellas Letras y Nobles Artes. Córdoba, Spain* 16: 270. 1900, *Division of Botany, Circular (United States Department of Agriculture)* 32: 7. 1901, *Revista de la Universidad Nacional de Córdoba* 16-17: 156. 1929-1930, *Revista Argentina de Agronomía* 14(1): 62-63. 1947, *Functional Ecology* 12(4): 640-645. Aug 1998, *Journal of Ecology* 88(6): 940-949. Dec 2000, *Austral. Ecology* 26(4): 413-422. Aug 2001, *Austral. Ecology* 27(4): 416-421. June 2002, *Austral. Ecology* 29(5): 558-567. Oct 2004, *Austral. Ecology* 29(6): 661-666. Dec 2004, *Physiologia Plantarum* 123(3): 272-280. Mar 2005.

in English: false Rhodes grass, multiflowered chloris, false rhodesgrass

in Mexico: papalote, triverdin de tres

T. pluriflora E. Fourn. (*Chloris pluriflora* (E. Fourn.) W.D. Clayton; *Chloris pluriflora* (E. Fourn.) Kuntze; *Chloropsis pluriflora* (E. Fourn.) Kuntze; *Trichloris latifolia* Vasey; *Trichloris lilloi* Parodi; *Trichloris pluriflora* E. Fourn. ex Hemsl.)

North and South America, Argentina, Paraguay, U.S. Perennial, densely caespitose, erect, tough, sometimes branching from lower nodes, leaf blades linear attenuate acuminate, inflorescence racemose, narrow spikelets awned, 2-3 fertile

florets and 1-2 rudimental, glumes unequal and lanceolate, lower lemma margins ciliolate and keels scabrous, 2 lodicules, 2 stamens, good forage, steppes, dry scrubland, campos secos, see *Department of Agriculture. Special Report* 63: 32. 1883, *Biologia Centrali-Americana; ... Botany ...* 3: 560. 1885, *Mexicanas Plantas* 2: 142. 1886, *Revisio Generum Plantarum* 2: 771. 1891 and *Contr. U.S. Natl. Herb.* 17: 335. 1917, *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 9: 256, f. A-E. 1928, *Kew Bulletin* 21: 102. 1967.

in English: multi-flower windmill grass, multiflower false Rhodes grass, multiflowered false rhodesgrass

in Mexico: triverdin de cuatro, triverdin de quatro

T. pluriflora E. Fourn. f. *macra* Hack.

America. See *Anales del Museo Nacional de Buenos Aires* 11: 116. 1904.

T. pluriflora E. Fourn. f. *pluriflora*

America.

Trichochlaena Kuntze = *Melinis* P. Beauv., *Tricholaena* Schrader, *Tricholaena* Schrad. ex Schult. & Schult.f.

From the Greek *thrix*, *trichos* plus *chlaena*, *chlaenion* “a cloak”; see also *Tricholaena* Schrad.

Panicoideae, Paniceae, Melinidineae, see *Contributions from the United States National Herbarium* 46: 287, 623. 2003.

Trichochloa P. Beauv. = *Muhlenbergia* Schreb., *Trichochloa* DC.

From the Greek *thrix*, *trichos* “hair” and *chloe*, *chloa* “grass.”

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Trichochloa purpurea* P. Beauv., see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Essai d'une Nouvelle Agrostographie* 29, t. 8, f. 2. 1812, *Catalogus plantarum horti botanici monspeliensis* 151. 1813, *Fundamenta Agrostographiae* 117. 1820 and *American Midland Naturalist* 6: 20. 1919, *Contributions from the United States National Herbarium* 41: 143-173, 223-224. 2001, *Contributions from the United States National Herbarium* 46: 623. 2003.

Trichodioida Cerv. = *Dasyochloa* Willd. ex Rydb., *Erioneuron* Nash, *Tridens* Roem. & Schult.

From the Greek *thrix*, *trichos* “hair” and *diklis*, *diklidos* “double-folding, double-folding door.”

Chloridoideae, see *Nova Genera et Species Plantarum* 1: 155-156, t. 47. 1815 [1816], *Systema Vegetabilium* 2: 34, 599. 1817, *Naturaleza [Sociedad mexicana de historia natural]* 1: 346. 1870 and *Flora of the Southeastern United States ...* 143, 1327. 1903, *Agricultural Experiment Station of the Agricultural College of Colorado. Bulletin* 100: 18, 37. 1906, *A Flora of California* 1: 141. 1912, *American Journal of Botany* 48(7): 572. 1961, *Sida* 17(4): 645-666. 1997, *Contributions from the United States National Herbarium* 41: 65-66, 115-116, 224. 2001.

Trichodium Michx. = *Agrostis* L.

Pooideae, Poeae, Agrostidinae, type *Trichodium laxiflorum* Michx., see *Species Plantarum* 1: 61-63. 1753, *Familles des Plantes* 2: 31, 530. 1763, *Flora Boreali-Americana* 1: 41-42, t. 8. 1803, *Observations sur les Graminées de la Flore Belgique* 127, 129. 1823 [1824], *Systema Vegetabilium, editio decima sexta* 1: 259. 1825, *A Manual of the Botany of the Northern United States* 577. 1848 and *U.S. Dept. Agric. Bull.* 772: 127. 1920, *Fl. Fenn.* 5: 29. 1971, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89, 657. 2003.

Trichodon Benth. = *Phragmites* Adans.

From the Greek *thrix*, *trichos* “hair” and *odous*, *odontos* “tooth.”

Arundinoideae, Arundineae, see *Species Plantarum* 1: 81. 1753, *Familles des Plantes* 2: 34, 559. 1763 and *Flora Mesoamericana* 6: 252. 1994, *Contributions from the United States National Herbarium* 46: 537-539. 2003.

Tricholaena Schrader ex Schult. & Schult.f.

= *Eremochlamys* A. Peter, *Melinis* P. Beauv., *Tricholaena* Schrad., *Tricholaena* Schult., *Xylochlaena* Dalla Torre & Harms (Sarcolaenaceae), *Xylochlaena* Stapf, *Xyochlaena* Stapf

From the Greek *thrix*, *trichos* “hair” and *chlaena*, *chlaenion* “mantle, a cloak,” alluding to the silky spikelets.

About 4-12 species, Africa to India, Madagascar, Mediterranean. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Melinideae, rarely annual or perennial, unbranched or branched from the lower nodes, glaucous, tufted, herbaceous, erect to ascending, decumbent or often geniculate, ligule a fringed membrane or a fringe of hairs, leaf blades linear rigid, plants bisexual, inflorescence an open or contracted panicle, spikelets pedicellate, 2 florets, lower floret male, upper floret bisexual, glumes 1 per spikelet or

2, upper glume 5-nerved membranous and awnless to mucronate, lower glume small or absent, proximal lemmas awnless, upper lemma dorsally compressed with clasping margins, palea present, 2 lodicules free and glabrous, 3 stamens, ovary glabrous, stigmas plumose, native pasture species, species of open habitats, sandy and stony places, dry areas, sometimes ruderal, uncultivated lands, along roadsides, often confused with *Panicum* L., type *Tricholaena micrantha* Schrad. ex Schult., see *Species Plantarum* 1: 55, 63-66. 1753, *Essai d'une Nouvelle Agrostographie* 54, t. 11, f. 4. 1812, *Mantissa* 2: 8, 163. 1824, *Niger Flora* 190. 1849, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853], *Gen. S. Afr. Pl.* edition 2: 428. 1869 and *Genera Siphonogamarum* 304. 1901, *Flora of Tropical Africa* 9: 16. 1917, *Icones Plantarum* t. 3098. 1922, *Feddes Repert. Spec. Nov. Regni Veg.* Beih. 40, 1: 164, Anh. 19. 1930, *Cytologia* 19: 97-103. 1954, *Willdenowia* 6: 285-289. 1971, *Bibliotheca Botanica* 138: 1-149. 1988, *Bothalia* 18: 119-122. 1988, *Flora of Ethiopia and Eritrea* 189-191. 1995, *Contributions from the United States National Herbarium* 46: 287, 623. 2003.

Species

T. capensis (Licht. ex Roem. & Schult.) Nees (*Anthaenania glauca* Hack.; *Melinis arenaria* (Nees) Hack.; *Melinis capensis* (Licht. ex Roem. & Schult.) Hack.; *Monachyron capense* (Licht. ex Roem. & Schult.) Parl.; *Panicum ammophilum* Steud.; *Panicum arenarium* Brot.; *Panicum capense* Licht. ex Roem. & Schult.; *Panicum capense* Mez, nom. illeg., non *Panicum capense* Licht. ex Roem. & Schult.; *Tricholaena arenaria* Nees; *Tricholaena arenaria* var. *glauca* (Hack.) Stapf; *Xyochlaena arenaria* (Nees) Stapf; *Xyochlaena capensis* (Licht. ex Roem. & Schult.) Stapf)

South Africa. Perennial, caespitose, erect, see *Systema Vegetabilium* 2: 457. 1817, *Systema Vegetabilium, editio decima sexta* 1: 315. 1825, *Linnaea* 11(Litt.-Ber.): 130. 1837, *Flora italiana, ossia descrizione delle piante ...* 1: 131. 1850, *Synopsis Plantarum Glumacearum* 1: 92. 1854, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 237. 1888, *Flora Capensis* 7: 446. 1899 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 186. 1921, *Hooker's Icones Plantarum* 31: t. 3098. 1922.

T. capensis (Licht. ex Roem. & Schult.) Nees subsp. ***arenaria*** (Nees) Zizka (*Anthaenania glauca* Hack.; *Melinis arenaria* (Nees) Hack.; *Melinis arenaria* var. *glauca* (Hack.) Schinz; *Panicum ammophilum* Steud.; *Panicum arenarium* Brot.; *Panicum arenarium* M. Bieb., nom. illeg., non *Panicum arenarium* Brot.; *Panicum repens* var. *arenarium* (Brot.) Kuntze; *Tricholaena arenaria* Nees; *Tricholaena arenaria* var. *glauca* (Hack.) Stapf; *Xyochlaena arenaria* (Nees) Stapf)

Namibia. Perennial, caespitose, branched, hairy, lower glume tiny, dry areas, sandy soils, see *Species Plantarum, Editio Secunda* 1: 87. 1762, *Flora Lusitanica* 1: 82. 1804, *Flora Taurico-Caucasica* 1: 52. 1808, *Synopsis Plantarum Glumacearum* 1: 92. 1854, *Revisio Generum Plantarum* 3(3): 363. 1898 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 56: 72. 1911, *Hooker's Icones Plantarum* 31: t. 3098. 1922, *Bibliotheca Botanica* 138: 49. 1988.

T. capensis (Licht. ex Roem. & Schult.) Nees subsp. ***capensis*** (*Melinis capensis* (Licht. ex Roem. & Schult.) Hack.; *Monachyron capense* (Licht. ex Roem. & Schult.) Parl.; *Panicum capense* Licht. ex Roem. & Schult.; *Panicum capense* Mez, nom. illeg., non *Panicum capense* Licht. ex Roem. & Schult.; *Xyochlaena capensis* (Licht. ex Roem. & Schult.) Stapf)

South Africa, Namibia. Perennial, tufted, branched, hairy, dry soils, sandy areas, see *Flora italiana, ossia descrizione delle piante ...* 1: 131. 1850 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Bibliotheca Botanica* 138: 46, 48. 1988.

T. monachne (Trin.) Stapf & C.E. Hubb. (*Aira bicolor* Schumach.; *Eremochlamys arenaria* Peter; *Eremochlamys littoralis* Peter; *Melinis glabra* (Stapf) Hack.; *Melinis monachne* (Trin.) Pilg.; *Melinis trichotoma* Mez; *Panicum gracillimum* K. Schum., nom. illeg., non *Panicum gracillimum* Scribn.; *Panicum gracillimum* Mez, nom. illeg., non *Panicum gracillimum* Scribn.; *Panicum madagascariense* Spreng.; *Panicum madagascariense* var. *brevispiculum* Rendle; *Panicum madagascariense* var. *minus* Hack.; *Panicum monachne* Trin.; *Tricholaena arenaria* var. *semiglabra* Hack.; *Tricholaena bicolor* (Schumach.) C.E. Hubb.; *Tricholaena delicatula* Stapf & C.E. Hubb.; *Tricholaena glabra* Stapf; *Tricholaena madagascariense* (Spreng.) Mez ex Pilg.; *Tricholaena monachne* var. *annua* J.G. Anders.; *Xyochlaena monachne* (Trin.) Stapf; *Xyochlaena monachne* var. *minus* Hack. ex Garab.)

Tropical Africa, South Africa. Perennial short-lived or annual, wiry, glabrous, weak, erect or geniculate, decumbent, ascending, tufted or loosely tufted, highly branched, sometimes rooting from the lower nodes, creeping, leaf blade narrowly pointed at the tip, leaf sheath rounded and papery, ligule a fringe of short hairs, leaves sometimes hairy, inflorescence an open panicle, branches of the panicle arranged in pairs each with its own spikelet, spikelets with long pedicels, lower glume poorly developed, ornamental, useful for erosion control, drought resistant, provides grazing, low forage value, low mass-yield, a weed of old cultivations, growing in disturbed areas, sea shore, veld, dry areas, salt spray zone, uncultivated lands, along roadsides, open grassland, sandy soils, foreshore, see *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 86. 1821, *Systema Vegetabilium, editio decima sexta* 1: 317. 1825,

Beskrivelse af Guineiske planter 65-66. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 85-86. 1828, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 400. 1889, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 331. 1897, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 183. 1899, *Flora Capensis* 7: 446-447. 1899 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Österreichische Botanische Zeitschrift* 35: 51. 1902 [1903], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34: 131. 1904, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 57: 533. 1912, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 6: 70. 1913, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 200. 1921, *Hooker's Icones Plantarum* 31: t. 3098. 1922, *Annals of the South African Museum* 16: 395. 1925, *Flora of Tropical Africa* 9: 909, 911. 1930, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 164(Anh. 19, 20), t. 18, 19, f. 1. 1930 [1931], *Flora of Tropical Africa* 10: 89. 1937, *Kirkia* 1: 103. 1961.

in English: blue-seed tricholaena, blue-seed grass

in Angola: baba-ngombe, kabuebue, nzizi

in South Africa: blousaadgras, blousaadtricholaena, würegras

T. teneriffae (L.f.) Link (*Agrostis plumosa* Ten.; *Melinis eichingeri* Mez; *Melinis leucantha* (Hochst. ex A. Rich.) Chiov.; *Melinis somalensis* Mez; *Melinis teneriffae* (L.f.) Hack.; *Panicum leucanthum* Hochst. ex A. Rich.; *Panicum plumosum* C. Presl; *Panicum saccharoides* Trin.; *Panicum teneriffae* (L.f.) Spreng.; *Panicum teneriffae* (L.f.) R. Br.; *Panicum teneriffae* R. Br. ex B.D. Jacks., nom. illeg., non *Panicum teneriffae* (L.f.) Spreng.; *Saccharum teneriffae* L.f.; *Tricholaena eichingeri* (Mez) Stapf & C.E. Hubb.; *Tricholaena gillettii* C.E. Hubb.; *Tricholaena leucantha* (Hochst. ex A. Rich.) Stapf & C.E. Hubb.; *Tricholaena mascatensis* Gand.; *Tricholaena micrantha* Schrad.; *Tricholaena micrantha* Schrad. ex Schult.; *Tricholaena setacea* C.E. Hubb.; *Tricholaena teneriffae* subsp. *eichingeri* (Mez) Zizka; *Tricholaena teneriffae* var. *foliis-hirtulis* Hack.; *Tricholaena teneriffae* var. *hirtifolia* K. Schum.) (named for the English botanist Jan Bevington Gillett, 1911-1995, plant collector in South and tropical Africa, son of the English botanist Margaret Gillett (née Clark), 1878-1962, see J.B. Gillett, "W.G. Schimper's botanical collecting localities in Ethiopia." *Kew Bulletin*. 27(1): 115-128. 1972 and *Kew Bulletin*. 12: 460. 1958, Mary Gunn & Leslie Edward W. Codd, *Botanical Exploration of Southern Africa*. 168. 1981)

East tropical Africa, Asia, India, Mediterranean. Perennial, variable, erect or geniculately ascending, wiry, herbaceous, leafy. densely tufted or loosely caespitose, tussocky, woody

rootstock, ligule a ciliate rim, narrow leaves flat or inrolled, panicle oblong and fully exerted, spikelets hairy on filiform pedicels, lower glume sometimes absent or a minute scale, upper glume ovate 5-nerved pilose, lower lemma 5-nerved silky hairy, fodder for cattle and goats, useful for erosion control, native pasture species, occurring on dry open stony hillsides, alluvial soils, sandy places, arid areas, gravel, rocky or stony hillsides, volcanic rocks, see *Supplementum Plantarum* 106. 1781 [1782], *Flora Napolitana* 1: lix. 1811, *Mantissa* 2: 163. 1824, *Systema Vegetabilium, editio decima sexta* 1: 315. 1825, *Flora Sicula* (Presl) 1: xliii. 1826, *De Graminibus Paniceis* 245. 1826, Heinrich Friedrich Link (1767-1851), *Handbuch zur Erkennung der nutzbarsten und am häufigsten vorkommenden Gewächse* 1: 91. Berlin 1829, *Tentamen Florae Abyssinicae ...* 2: 372. 1850, *Über die Hochgebirgsflora des tropischen Afrika* 121. 1892, *Index Kewensis* 2(3): 419. 1894, *Die Pflanzenwelt Ost-Afrikas* C: 104. 1895 and *Österreichische Botanische Zeitschrift* 51: 464. 1901, *Annuario del Reale Istituto Botanico di Roma* 8(3): 308. 1908, *Bulletin de la Société Botanique de France* 66(7): 303. 1919 [1920], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 200. 1921, *Flora of Tropical Africa* 9: 912. 915. 1930, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 26: 2594. 1938, *Bulletin of Miscellaneous Information Kew* 1941: 191. 1941, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 34: 140. 1943, *Bibliotheca Botanica* 138: 46. 1988, *Kew Bulletin* 55(3): 693. 2000.

in Somalia: agar, aghar, tonghari

T. teneriffae (L.f.) Link subsp. *eichingeri* (Mez) Zizka (*Melinis eichingeri* Mez; *Tricholaena eichingeri* (Mez) Stapf & C.E. Hubb.)

Kenya, Uganda, Somalia, Tanzania. Erect, base thickened, leaf sheaths hairy, spikelets shortly hairy, on sandy soils, grassland, bushland, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 57: 200. 1921, *Flora of Tropical Africa* 9: 912. 1930, *Bibliotheca Botanica* 138: 46. 1988.

T. teneriffae (L.f.) Link subsp. *teneriffae* (*Melinis leucantha* (Hochst. ex A. Rich.) Chiov.; *Melinis somalensis* Mez; *Melinis teneriffae* (L.f.) Hack.; *Panicum leucanthum* Hochst. ex A. Rich.; *Panicum saccharoides* Trin.; *Panicum teneriffae* (L.f.) Spreng.; *Panicum teneriffae* (L.f.) R. Br.; *Panicum teneriffae* R. Br. ex B.D. Jacks., nom. illeg., non *Panicum teneriffae* (L.f.) Spreng.; *Saccharum teneriffae* L.f.; *Tricholaena gillettii* C.E. Hubb.; *Tricholaena leucantha* (Hochst. ex A. Rich.) Stapf & C.E. Hubb.; *Tricholaena mascatensis* Gand.; *Tricholaena micrantha* Schrad.; *Tricholaena micrantha* Schrad. ex Schult.; *Tricholaena setacea* C.E. Hubb.; *Tricholaena teneriffae* var. *genuina* Maire; *Tricholaena teneriffae* var. *sericea* Maire)

Sudan, Somalia, Uganda, India. Geniculately ascending, leaf sheaths more or less glabrous, spikelets hairy, sandy

ground, stony hills, dry *Acacia* bushland, see *Handbuch zur Erkennung der nutzbarsten und am häufigsten vorkommenden Gewächse* 1: 91. 1829 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 26: 2594. 1938.

T. vestita (Balf.f.) Stapf & C.E. Hubb. (*Eriochloa vestita* Balf.f.; *Melinis vestita* (Balf.f.) Chiov.; *Xyochlaena vestita* (Balf.f.) Stapf)

Socotra, Yemen. See *Proc. Bot. Soc. Edinburgh* 12: 97. 1882 and *Hooker's Icones Plantarum* 31: t. 3098. 1922, *Flora Somala* 332. 1929, *Flora of Tropical Africa* 9: 332. 1930.

Trichoneura Andersson = *Crossotropis* Stapf

From the Greek *thrix*, *trichos* "hair" and *neuron* "nerve," referring to the ciliate lemma nerves.

About 7-8 species, U.S., tropical Africa, Arabian Peninsula. Chloridoideae, Eragrostideae, Eleusininae, or Chloridoideae, Cynodonteae, annual or perennial, herbaceous, erect, tufted, often branched, leaves cauline, auricles absent, ligule an unfringed membrane, linear pointed leaf blades, plants bisexual, inflorescence open or contracted, spreading or appressed racemes along a central axis, spikelets with 3-many florets, lower floret bisexual, upper floret reduced, spikelets solitary and cuneate, 2 narrow glumes usually mucronate or awned, emarginate lemmas with 3 prominent hairy nerves, mucronate or shortly awned lemmas rounded on the back or lightly keeled, palea keels glabrous, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, open habitats, dry areas, in sandy or stony soil, open floodplains, bushveld, disturbed sites, coastal, serious taxonomic problems, genus closely allied to *Leptochloa* and *Gouinia*, type *Trichoneura hookeri* Andersson, see *Prodrum Flora Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 80. 1812, *Kongliga Svenska Vetenskapsakademiens Handlingar* 1853: 148. 1855, *Flora Capensis* 7: 317. 1898, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 226. 1899 and *Ark. Bot.* 11, 9: 1-19. 1912, *Grasses and Pastures of South Africa* 128. 1955, *Boletín de la Sociedad de Biología de Concepción* 46: 37-39. 1973, *Los Generos de Gramineas de America Austral.* 1987, *Flora of Ethiopia and Eritrea* 104-105. 1995, R.W.S Fynn and T.G. O'Connor, "Effect of stocking rate and rainfall on rangeland dynamics and cattle performance in a semiarid savannah, South Africa." *Journal of Applied Ecology* 37(3): 491-507. June 2000, *Contributions from the United States National Herbarium* 41: 56, 224. 2001, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

T. ciliata (Peter) S.M. Phillips (*Leptochloa ciliata* Peter; *Trichoneura hirtella* Napper)

Kenya, Tanzania. Perennial, compact, densely tufted, inflorescence linear-elliptic, slender racemes, spikelets usually imbricate 5- to 8-flowered, glumes lanceolate mucronate, lower glume narrowly lanceolate-oblong, upper glume narrowly elliptic-oblong, lemmas narrowly oblong membranous, in open areas, red sandy soil, woodland, *Acacia-Commiphora* woodland, see *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 263. 1930 [1931], *Kirkia* 3: 116. 1963, *Flora of Tropical East Africa* 2: 297. Apr 1974, *Kew Bulletin* 29(2): 270. Sept. 1974.

T. elegans Swallen

U.S., Texas. See *American Journal of Botany* 19(5): 439, f. 4. 1932.

T. eleusinoides (Rendle) Ekman (*Crossotropis eleusinoides* Rendle)

South Africa, Namibia. Annual, tufted, decumbent or ascending, inflorescence contracted, rocky areas, see *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(9): 13. 1912.

T. grandiglumis (Nees) Ekman (*Crossotropis grandiglumis* (Nees) Rendle; *Diplachne grandiglumis* (Nees) Hack.; *Leptochloa grandiglumis* Nees; *Trichoneura grandiglumis* var. *grandiglumis*)

Tanzania to South Africa. Perennial, tufted, slender, erect or ascending, tussocky, leaf sheath rounded, ligule a white membrane, open pyramidal inflorescence, stiff straight racemes, spikelets 4- to 9-flowered, lower glume linear-lanceolate, upper glume linear-oblong, lemmas narrowly elliptic-oblong membranous, when mature the entire inflorescence breaks off, unpalatable, low grazing value, ruderal, on sandy soils, *Acacia* bushland, open habitats, rocky places, hillsides, open grassland, open floodplains, bushveld, disturbed areas, overgrazed sandy soils, see *Flora Africae Australioris Illustrationes Monographicae* 252. 1841, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 11: 404. 1889 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(9): 15. 1912.

in English: rolling grass, tumbleweed, small rolling grass in southern Africa: rolgras, klein rolgras, waaigras, warrelgras; joang-ba-tsela (Sotho)

T. lindleyana (Kunth) Ekman (*Leptochloa albemarlensis* B.L. Rob. & Greenm.; *Leptochloa lindleyana* Kunth)

America, Ecuador. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 525. 1833, *American Journal of Science*, ser. 3, 50: 145. 1895 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(9): 9. 1912.

T. lindleyana (Kunth) Ekman var. *albemarlensis* (B.L. Rob. & Greenm.) Reeder & Reeder (*Leptochloa albemarlensis* B.L. Rob. & Greenm.)

North America. See *American Journal of Science*, ser. 3, 50: 145. 1895 and *Madroño* 20: 253. 1970.

T. lindleyana (Kunth) Ekman var. *lindleyana* (*Calamagrostis pumila* Hook.f.; *Calamagrostis pumila* Nutt. ex A. Gray, nom. illeg., non *Calamagrostis pumila* Hook.f.; *Leptochloa hookeri* (Andersson) Andersson; *Leptochloa lindleyana* Kunth; *Trichoneura hookeri* Andersson)

Ecuador, Galápagos, North America. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 525. 1833, *Transactions of the Linnean Society of London* 20: 176. 1847, *Kongl. Vetenskaps Akademiens Handlingar* 1853: 148. 1855, *Kongliga Svenska Fregatten Eugénies resa omkring jorden: under befäl af C.A. Virgin, åren 1851-1853: vetenskapliga iakttagelser ... utgifna af K. Svenska Vetenskapsakademien*. Uppsala; Stockholm, 1857-1910 [*Om Galapagos-öarnes vegetation af N.J. Andersson*; *Plantae ... a N.J. Andersson ca. Guayaquil collectae, quas descripsit F.W.C. Areschoug*. I. Botanik, etc etc], *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 334. 1862.

T. mollis (Kunth) Ekman (*Crossotropis arenaria* (Steud.) Rendle; *Crossotropis mollis* (Kunth) Stapf; *Diplachne arenaria* Steud.; *Leptochloa arenaria* Hochst. & Steud. ex Steud.; *Leptochloa longiglumis* Hitchc.; *Leptochloa mollis* Kunth; *Trichoneura arenaria* (Steud.) Ekman, *Triodia mollis* (Kunth) T. Durand & Schinz; *Uralepis arenaria* Steud.; *Uralepis ciliata* Steud.)

Saudi Arabia, Oman, Mauritania, Senegal. Annual, slender, tufted, compact inflorescence narrowly elliptic-oblong, ascending racemes, spikelets 5- to 9-flowered imbricate, linear glumes caudate at the tip, lower glume linear-lanceolate, upper glume linear-oblong, lemmas oblong membranous, grazed by all stock, on sandy soil, on dry bushland, *Acacia-Commiphora* woodland, see *Révision des Graminées* 2: 443, t. 135. 1831, *Nomenclator Botanicus*. *Editio secunda* 2: 29. 1841, *Synopsis Plantarum Glumacearum* 1: 247-248. 1854, *Conspectus Florae Africae* 5: 877. 1895, *Hooker's Icones Plantarum* 27: t. 2609. 1899 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(9): 10-11. 1912, *Proceedings of the Biological Society of Washington* 43: 91. 1930.

in Niger: akasof, akôsof, berkaar bii, brugéll, gishiri'n zomo, tchirki n'zomo, tobéhu kiri

in Nigeria: garajin fadama

T. weberbaueri Pilger

America, Peru. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 50(Beibl. 111): 1. 1913.

Trichoon Roth = *Phragmites* Adans.

From the Greek *thrix*, *trichos* "hair" and *oon* "egg."

Arundinoideae, Arundineae, see *Species Plantarum* 1: 81. 1753, *Familles des Plantes* 2: 34, 559. 1763, *Archiv für die Botanik* (Leipzig) 1(3): 37. 1798 and *Flora Mesoamericana* 6: 252. 1994, *Contributions from the United States National Herbarium* 46: 537-539, 623. 2003.

Trichopteria Nees ex Lindl. = *Trichopteryx* Nees

Greek *thrix*, *trichos* "hair" and *pteron* "wing," referring to the fruits.

Panicoideae, Panicodae, Arundinelleae, see *An Introduction to the Natural System of Botany* 449. 1836.

Trichopteryx Nees

From the Greek *thrix*, *trichos* "hair" and *pteron* "wing," possibly referring to the fruits.

About 5 species, southern and tropical Africa, Madagascar. Panicoideae, Panicodae, Arundinelleae, annual or perennial, caespitose, herbaceous, unarmed, often wiry, slender, decumbent, erect or trailing, auricles absent, ligule a fringe of hairs, leaf blades linear-lanceolate to lanceolate, plants bisexual, open or contracted panicle with filiform branches, spikelets solitary or paired, 2 florets, lower floret male or sterile, upper floret bisexual, 1 or 3 awns, the lateral awns when present shorter than the central, 2 glumes unequal, upper glume 3-nerved, lobes of upper lemma awned and hairy, lower lemma 3-nerved, palea keels wingless, 2 lodicules free and fleshy, 2 stamens, ovary glabrous, 2 plumose stigmas, callus of upper floret very short, forest margins, shade or open habitats, along roadsides, grasslands, stream banks, rocky riverbank, possibly related to *Loudetia*, type *Trichopteryx dregeana* Nees ex Lindl., see *Flore Française*. *Troisième Édition* 3: 32. 1805, *Agrostografia Brasiliensis* 36. 1823, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829, *An Introduction to the Natural System of Botany* 449. 1836, *Synopsis Plantarum Glumacearum* 1: 238. 1854, *Bulletin of Miscellaneous Information Kew* 1897: 297. 1897 and *Bulletin of Miscellaneous Information Kew* 1920(3): 112. 1920, *Bulletin of Miscellaneous Information Kew* 1934: 429. 1934, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *African Study Monographs* 20(1): 1-72. June 1999, *Contributions from the United States National Herbarium* 46: 623. 2003.

Species

T. dregeana Nees ex Lindl. (*Arundinella funaensis* Vanderyst; *Arundinella intricata* Hughes; *Danthonia*

lasiantha Baker; *Danthonia trichopteryx* (Nees ex Lindl.) Steud.; *Trichopteryx brevifolia* Hack.; *Trichopteryx dregeana* Nees; *Trichopteryx mukuluensis* De Wild.; *Trichopteryx parviflora* Hack.; *Tristachya dregeana* (Nees ex Lindl.) K. Schum.)

Southern tropical Africa. Perennial, light green, trailing, tufted, with a creeping rhizome, ligule a ring of hairs, leaf blade sometimes downward, open or contracted drooping panicle with filiform branches, the lateral awns shorter than the central, excellent soil binder useful for erosion control, leaves used for thatching, a ring of leaves (*ngatta ya nyuki*) placed on head and used to carry pots, usually found in wet areas, vleis, open habitats, among rocks, shade, open grassland, on steep slopes, hillsides, see *Synopsis Plantarum Glumacearum* 1: 244. 1854, *Journal of the Linnean Society, Botany* 25: 349. 1890, *Die Pflanzenwelt Ost-Afrikas* C: 109. 1895 and *Österreichische Botanische Zeitschrift* 52(5): 190-191. 1902, *Annales de la Société Scientifique de Bruxelles* 39: 159. 1920, *Bulletin agricole du Congo Belge* 11: 111. 1920.

in English: carpet grass

in South Africa: matgras, vleigras

Local name: kadodokela

T. elegantula (Hook.f.) Stapf (*Arundinella elegantula* Hook.f.; *Trichopteryx elegantula* Pilg. ex Peter, nom. illeg., non *Trichopteryx elegantula* Pilg. ex Peter)

Tanzania. Grassland, rocky places, see *Journal of the Proceedings of the Linnean Society* 7: 233. 1864, *Hooker's Icones Plantarum* 24: t. 2394. 1895 and *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 93. 1930, *Blumea, Supplement* 3: 29, f. 3. 1946.

T. fruticulosa Chiov. (*Trichopteryx catangensis* Chiov.; *Trichopteryx dregeana* var. *congoensis* Franch.; *Trichopteryx katangensis* De Wild.; *Trichopteryx sandaensis* Vanderyst)

French Congo. Perennial, erect, see *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 372. 1895 and *Annali di Botanica* 13: 50. 1914, *Nuovo Giornale Botanico Italiano*, n.s. 26: 68. 1919, *Bulletin agricole du Congo Belge* 11: 111. 1920, *Annales de la Société Scientifique de Bruxelles* 39: 157. 1920.

T. fruticulosa Chiov. var. ***perlaxa*** (Pilg.) C.E. Hubb. (*Trichopteryx perlaxa* Pilg.)

Gabon, Tanzania. See *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 383. 1935, *Flora of Tropical Africa* 10(1): 7. 1937.

T. marungensis Chiov. (*Arundinella marungensis* (Chiov.) Chiov.)

Tanzania, Gabon. Erect, scandent, see *Nuovo Giornale Botanico Italiano*, n.s. 26: 67. 1919, *Nuovo Giornale Botanico Italiano* 24: 113. 1923.

T. stolziana Henrard (*Trichopteryx elegantula* subsp. *stolziana* (Henrard) J.B. Phipps) (after the German missionary Adolf Ferdinand Stolz, 1871-1917, plant and orchid collector (Nyassaland, Africa), merchant; see A.J.M. Leeuwenberg, "Isotypes of which holotypes were destroyed in Berlin." *Webbia*. 19(2): 863. 1965)

Burundi, Zambia. Annual, see *Repertorium Specierum Novarum Regni Vegetabilis* 18: 242. 1922, *Feddes Repertorium Specierum Novarum Regni Vegetabilis* 4: 120. 1964.

Trichopyrum Á. Löve = *Elymus* L., *Elytrigia* Desv., *Thinopyrum* Á. Löve

From the Greek *thrix*, *trichos* and *pyros* "grain, wheat."

Pooideae, Triticeae, Hordeinae, type *Trichopyrum intermedium* (Host) Á. Löve, see *Species Plantarum* 1: 83-84. 1753, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 190. 1810 and *Ann. Sci. Nat. Bot., sér. 10*, 14: 234. 1932, *Novosti Sist. Vyss. Rast.* 10: 32. 1973, *Botanical Journal of the Linnean Society* 76(4): 382. 1978, *Taxon* 29(2-3): 351. 1980, *Veröffentlichungen des Geobotanischen Institutes Rübel in Zürich* 87: 49. 1986, *Contributions from the United States National Herbarium* 48: 279-310, 653-654. 2003.

Trichosantha Steud. = *Stipa* L.

From the Greek *thrix*, *trichos* plus *anthos* "a flower."

Pooideae, Stipeae, Stipinae, see *Species Plantarum* 1: 78-79. 1753, *Nomenclator Botanicus. Editio secunda* 2: 702. 1841 and *Contr. U.S. Natl. Herb.* 24(7): 216. 1925, *Contributions from the United States National Herbarium* 48: 617-650, 657-658. 2003.

Tricuspis P. Beauv. = *Tricuspis* Pers.

(Elaeocarpaceae), *Tridens* Roemer & Schultes, *Triodia* R. Br.

Latin *tricuspis* "having three points, three-pointed, three-tined."

Chloridoideae, Cynodonteae, see *Syn. Pl.* 2: 9. Nov 1806 [1807], *Prodromus Florae Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 77, 81, f. 15. 1812, *Systema Vegetabilium* 2: 34, 599. 1817, *A Manual of the Botany of the Northern United States* 589. 1848, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 19: 259-260. 1874, *Genera Plantarum* 3(2): 1176. 1883 and *Amer. J. Bot.* 22: 39. 1935, *Contributions from the United States National Herbarium* 41: 224-230. 2001.

Tridens Roemer & Schultes = *Antonella*
Caro, *Gossweilerochloa* Renvoize, *Tricuspis* P.
Beauv., *Triodia* R. Br., *Windsoria* Nutt.

Latin *tridens*, *tridentis* “a trident, three-pronged,” referring to the lemma tip.

About 17-18 species, eastern U.S. to Argentina, Africa, Angola. Chloridoideae, Cynodonteae, perennial, caespitose, erect, rhizomatous or not, leaves cauline, auricles absent, ligule a line of hairs or a ciliate membrane, leaf blades linear, inflorescence terminal, exposed cleistogamous, open contracted panicle exerted, spikelets slightly laterally compressed, 4-several florets per spikelet, 2 glumes subequal or very unequal, lower glume 1-nerved, upper glume 1- to 7-nerved, lemmas emarginate to bidentate and usually mucronate or shortly awned, palea keels ciliate or ciliolate, 2 lodicules rounded, 3 stamens, ovary glabrous, 2 stigmas, found in meadows, prairies, old fields, edge of ponds, dry soil, mountains, woods clearings, open woodlands, open fields, moist ditches, wetlands, similar to some species of *Eragrostis*, may be confused with *Coelachyrum*, see *Species Plantarum* 1: 68, 73-76. 1753, *Genera Plantarum* 23. 1776, *Flora Boreali-Americana* 1: 68-69. 1803, *Syn. Pl.* 1: 85. 1805, *Syn. Pl.* 2: 9. Nov 1806 [1807], *Prodromus Florae Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 77, 81, f. 15. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1: 165. 1816, *Systema Vegetabilium* 2: 34, 599. 1817, *The Genera of North American Plants* 1: 62, 70. 1818, *A Catalogue of Plants, ... City of New York* 91. 1819, *Manual of Botany for North America. Fifth edition* 447. 1829, *Hortus Regius Botanicus Berolinensis* 2: 296. 1833, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *Genera Plantarum* 3(2): 1176. 1883 and *Flora of the South-eastern United States* 143-144. 1903, *Agricultural Experiment Station of the Agricultural College of Colorado. Bulletin* 100: 18, 37. 1906, *Contributions from the United States National Herbarium* 17: 181-189. 1913, *U.S.D.A. Bull.* 772: 76. 1920, *Blumea, Supplement* 3: 83-89. 1946, *Transactions of the Royal Society of South Australia* 70: 221-233. 1946, *Australian Journal of Botany* 1: 121-184. 1953, *Bot. Jahrb.* 76: 281-384. 1954, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14d: 36. 1956, *American Journal of Botany* 48(7): 565-573. 1961, *Darwiniana* 22(1-3): 159-175. 1979, *Kew Bulletin* 33(3): 525-527. 1979, *Dominguezia* 2: 18-20. 1981, *Iheringia, Ser. Bot.* 35: 25-44. 1986, *Flora Mesoamericana* 6: 259. 1994, *American Journal of Botany* 81: 622-629. 1994, *Functional Ecology* 12(2): 176-184. Apr 1998, *Restoration Ecology* 6(2): 181-196. June 1998, Hong Qian, “Floristic analysis of vascular plant genera of North America north of Mexico: characteristics of phytogeography.” *Journal of Biogeography* vol. 26, issue 6: 1307-1321. Nov 1999, *Contributions from the United States National Herbarium* 41: 16, 121-122, 224-

230, 239. 2001, Heli M. Jutila & James B. Grace, “Effects of disturbance on germination and seedling establishment in a coastal prairie grassland: a test of the competitive release hypothesis.” *Journal of Ecology* 90(2): 291-302. Apr 2002, *Conservation Biology* 16(4): 995-1002. Aug 2002, *Global Change Biology* vol. 9, issue 3: 425-437. Mar 2003.

Species

T. albescens (Vasey) Wooton & Standl. (*Rhombolytrum albescens* (Vasey) Nash; *Sieglingia albescens* (Vasey) Kuntze; *Tricuspis albescens* (Vasey) Munro ex Vasey; *Tridens albescens* (Vasey) N.T. Burb.; *Triodia albescens* Vasey)

North America. Perennial, forage, see *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): t. 33. 1891, *Revisio Generum Plantarum* 2: 789. 1891 and *Manual of the Flora of the Northern States and Canada* 129. 1901, *New Mexico Agricultural Experiment Station: Bulletin* 81: 129. 1912, *Blumea* 3: 84. 1946.

in English: white tridens

in Mexico: tridente agrio

T. ambiguus (Elliott) Schult. (*Poa ambigua* Elliott; *Sieglingia ambigua* (Elliott) Kuntze; *Tricuspis ambigua* (Elliott) Chapm.; *Tricuspis langloisii* Nash; *Tridens langloisii* (Nash) Nash; *Triodia ambigua* (Elliott) Benth. ex Vasey, nom. illeg., non *Triodia ambigua* R. Br.; *Triodia elliottii* Bush; *Triodia langloisii* (Nash) Bush; *Uralepis ambigua* (Elliott) Kunth; *Windsoria ambigua* (Elliott) Nutt.)

North America, U.S. Perennial, primary branches raceme-like, see *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 165. 1816, *Mantissa* 2: 333. 1824, *Révision des Graminées* 1: 108. 1829, *Flora of the Southern United States* 559. 1860, *Department of Agriculture. Special Report* 63: 35. 1883, *Revisio Generum Plantarum* 2: 789. 1891, *Bulletin of the New York Botanical Garden* 1(4): 293-294. 1899 and *Transactions of the Academy of Science of St. Louis* 12(6): 72-73. 1902, *Flora of the Southeastern United States ...* 142. 1903.

in English: pine barrens fluffgrass

T. brasiliensis (Nees ex Steud.) Parodi (*Tridens brasiliensis* Nees; *Tridens brasiliensis* Nees ex Steud. ex Jacks.; *Tridens hackelii* (Arechav.) Parodi; *Triodia brasiliensis* (Nees ex Steud.) Lindm.; *Triodia figueirae* Arechav.; *Triodia hackelii* Arechav.; *Uralepis brasiliensis* Nees; *Uralepis brasiliensis* Nees ex Steud.; *Uralepis brasiliensis* Nees ex Steud.)

South America. See *Synopsis Plantarum Glumacearum* 1: 248. 1854 [1855], *Index Kewensis* 2: 1111. 1895, *Anales del Museo Nacional de Montevideo* 1: 408, 410, t. 49. 1896 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 35. 1900, *Revista Argentina de Agronomía* 4(4): 245, 247, f. 1. 1937.

T. buckleyanus (Vasey ex L.H. Dewey) Nash (*Sieglingia buckleyana* Vasey ex L.H. Dewey; *Triodia buckleyana* (Vasey ex L.H. Dewey) Vasey ex Hitchc.; *Triodia buckleyana* Vasey)

America. Perennial, see *Contributions from the United States National Herbarium* 2(3): 540. 1894 and *Flora of the Southeastern United States ...* 143. 1903, *Journal of the Washington Academy of Sciences* 23(10): 452. 1933, *Taxon* 33: 126-134. 1984.

in English: Buckley's fluffgrass

T. carolinianus (Steud.) Henrard (*Festuca caroliniana* Steud.; *Tridens drummondii* (Scribn. & Kearney) Nash ex Small; *Triodia caroliniana* (Steud.) Chase; *Triodia drummondii* Scribn. & Kearney)

North America. Perennial, see *Synopsis Plantarum Glumacearum* 1: 312. 1854, *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 37. 1897 and *Flora of the Southeastern United States ...* 143. 1903, *American Journal of Botany* 24(1): 34. 1937, *Blumea* 3(3): 424. 1940.

in English: Carolina fluffgrass

T. congestus (L.H. Dewey) Nash (*Sieglingia congesta* L.H. Dewey; *Tricuspsis albescens* Munro ex A. Gray; *Tricuspsis congesta* (L.H. Dewey) A. Heller; *Triodia congesta* (L.H. Dewey) Bush)

North America. Perennial, see *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 335. 1862, *Contributions from the United States National Herbarium* 2(3): 538. 1894 and *Catalogue of North American Plants North of Mexico (edition 2)* 28. 1900, *Transactions of the Academy of Science of St. Louis* 12(6): 67. 1902, *Flora of the Southeastern United States ...* 143. 1903.

in English: pink fluffgrass

T. eragrostoides (Vasey & Scribner) Nash (*Sieglingia eragrostoides* (Vasey & Scribn.) L.H. Dewey; *Sieglingia eragrostoides* var. *scabra* Vasey ex Beal; *Triodia eragrostoides* Vasey & Scribn.; *Triodia eragrostoides* var. *scabra* (Vasey ex Beal) Bush)

North America. Perennial, ligule membranous, forage, see *Contributions from the United States National Herbarium* 1(2): 58. 1890, *Contributions from the United States National Herbarium* 2(3): 539. 1894, *Grasses of North America for Farmers and Students* 2: 465. 1896 and *Transactions of the Academy of Science of St. Louis* 12(6): 71. 1902, *Flora of the Southeastern United States ...* 142. 1903.

in English: lovegrass tridens

in Mexico: tridente fino

T. flaccidus (Döll) Parodi (*Triodia flaccida* (Döll) Hitchc.; *Uralepis flaccida* Döll)

South America, Brazil. Perennial, tufted, erect, ascending, inflorescence terminal and exserted, open panicle drooping,

uppermost florets reduced, see *Flora Brasiliensis* 2(3): 95, pl. 27. 1878 and *Contributions from the United States National Herbarium* 22(6): 457. 1922, *Revista Argentina de Agronomía* 4(4): 249. 1937.

T. flavus (L.) Hitchc. (*Cynodon carolinianus* (P. Beauv.) Raspail; *Eragrostis arundinacea* Jedwabn.; *Eragrostis tricuspsis* Trin.; *Festuca flava* (L.) F. Muell.; *Festuca purpurea* Schreb. ex Steud.; *Festuca quadridens* Bosc ex Trin.; *Festuca quadridens* Poir.; *Panicum festucoides* Poir.; *Poa arundinacea* Poir., nom. illeg., non *Poa arundinacea* Moench; *Poa caerulea* Kunth; *Poa caerulea* Michx. ex P. Beauv.; *Poa flava* L.; *Poa quinquefida* Pursh; *Poa sesleroides* All.; *Poa sesleroides* Michx., nom. illeg., non *Poa sesleroides* All.; *Schedonorus quadridens* (Poir.) Roem. & Schult.; *Sieglingia cuprea* (Jacq.) Millsp.; *Sieglingia flava* (L.) Kuntze; *Sieglingia sesleroides* (Michx.) Scribn.; *Sieglingia sesleroides* var. *intermedia* Vasey ex L.H. Dewey; *Tricuspsis caroliniana* P. Beauv.; *Tricuspsis flava* (L.) F.T. Hubb.; *Tricuspsis novae-boracensis* P. Beauv.; *Tricuspsis quinquefida* P. Beauv. ex Don; *Tricuspsis sesleroides* Torr.; *Tricuspsis sesleroides* var. *flexuosa* Alph. Wood; *Tricuspsis sesleroides* var. *pallida* T. Holm; *Tridens flavus* f. *cuprea* (Jacq.) Fosberg; *Tridens flavus* var. *aristatus* (Scribn. & C.R. Ball) Shinnery; *Tridens quinquefidus* (Pursh) Roem. & Schult.; *Tridens sesleroides* Nash; *Triodia caerulea* (Michx.) Desv.; *Triodia cuprea* Jacq.; *Triodia festucoides* (Poir.) Desv.; *Triodia flava* (L.) Sm.; *Triodia flava* (L.) Hitchc., nom. illeg., non *Triodia flava* (L.) Sm.; *Triodia flava* f. *cuprea* (Jacq.) Fosberg; *Triodia flava* f. *flava*; *Triodia flava* var. *aristata* (Scribn. & C.R. Ball) Fernald & Griscom; *Triodia novaeboracensis* (P. Beauv.) Desv.; *Triodia sesleroides* (Michx.) Benth. ex Vasey; *Triodia sesleroides* var. *aristata* Scribn. & C.R. Ball; *Triodia triticoides* C.A. Gardner; *Uralepis cuprea* Kunth; *Uralepis cuprea* (Jacq.) Kunth; *Uralepis tricuspsis* (Trin.) Steud.; *Windsoria poiformis* Nutt.; *Windsoria sesleroides* (Michx.) Eaton)

America, U.S. Perennial, forage, dry fields, along roadsides, see *Species Plantarum* 68, 73-76. 1753, *Flora Pedemontana* 2: 246. 1785, *Flora Boreali-Americana* 1: 68-69. 1803, *Encyclopédie Méthodique, Botanique* 2: 640. 1812, *Eclogae Graminum Rariorum* 2: 21. 1812, *Essai d'une Nouvelle Agrostographie* 77, 99, 162, 177, 179, t. 3, 15, f. 10, 29. 1812, *Flora Americae Septentrionalis; or, ...* 1: 81. 1814, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 283, 329. 1816, *Systema Vegetabilium* 2: 599, 710. 1817, *The Genera of North American Plants* 1: 70. 1818, *Annales des Sciences Naturelles, Botanique* 5: 302. 1825, *Révision des Graminées* 1: 108. 1829, *Manual of Botany for North America. Fifth edition* 447. 1829, *Loudon's Hortus Britannicus. A catalogue ...* 31. 1830 [John Claudius Loudon, 1783-1843], *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 414. 1830, *Mémoires de la Société d'Agriculture, Sciences et Arts*

d'Angers 1: 202-203. 1831, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 76. 1836, *Nomenclator Botanicus. Editio secunda* 1: 564, 632. 1840, *The American Botanist and Florist* 2: 398. 1871, Ferdinand Jacob Heinrich von Mueller (1825-1896), *Select Plants*: readily eligible for industrial culture or naturalisation in Victoria, with indications of their native countries and some of their uses. [2nd edition] Melbourne 1876, *Department of Agriculture. Special Report* 63: 35. 1883, *Revisio Generum Plantarum* 2: 789. 1891, *Bulletin, West Virginia Agricultural Experiment Station* 24(2): 471. 1892, *Contributions from the United States National Herbarium* 2(3): 539. 1894, *Memoirs of the Torrey Botanical Club* 5(4): 48. 1894 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 45. 1901, *Proceedings of the Biological Society of Washington* 14: 19. 1901, *Flora of the Southeastern United States* ... 142. 1903, *Rhodora* 8(95): 210. 1906, *Contr. U.S. Natl. Herb.* 12: 120. 1908, *Rhodora* 14(164): 186. 1912, *Transactions of the Kansas Academy of Science* 25: 95. 1913, *United States Department of Agriculture: Bulletin* 772: 76, f. 35. 1920, *Botanisches Archiv* 5(3-4): 192. 1924, *Rhodora* 37(436): 134. 1935, *Castanea* 11: 67. 1946, *Flora of Western Australia* 1: 78. 1952, *Rhodora* 56(662): 27. 1954, *Castanea* 20: 58. 1957, *Functional Ecology* 12(2): 176-184. Apr 1998, *Restoration Ecology* vol. 6, issue 2: 181-196. June 1998, *Journal of Animal Ecology* 67(5): 705-721. Sep 1998, *Restoration Ecology* vol. 8, issue 3: 296-306. Sep 2000, *Global Change Biology* vol. 9, issue 3: 425-437. Mar 2003, *Restoration Ecology* 11(3): 351-358. Sep 2003.

in English: purpletop

T. flavus (L.) Hitchc. var. ***chapmanii*** (Small) Shinnars (*Sieglingia chapmanii* Small; *Tridens chapmanii* (Small) Chase; *Triodia chapmanii* (Small) Bush; *Triodia flava* var. *chapmanii* (Small) Fernald & Griscom)

North America, U.S. Perennial, see *Bulletin of the Torrey Botanical Club* 22(8): 365. 1895 and *Transactions of the Academy of Science of St. Louis* 12(6): 74. 1902, *Rhodora* 37(436): 133. 1935, *Manual of the Grasses of the United States (edition 2, revised by Agnes Chase)* 213, 971. 1951 [1950], *Rhodora* 56(662): 27. 1954.

in English: Chapman's tridens

T. flavus (L.) Hitchc. var. ***flavus*** (*Triodia flava* (L.) Smyth)

North America, U.S. Perennial.

in English: purpletop tridens

T. hackelii (Arechav.) Parodi (*Tridens brasiliensis* (Nees ex Steud.) Parodi; *Triodia hackelii* Arechav.; *Uralepis brasiliensis* Nees ex Steud.)

South America, Brazil. See *Synopsis Plantarum Glumacearum* 1: 248. 1854, *Anales del Museo Nacional de Montevideo* 1: 410. 1896 and *Revista Argentina de*

Agronomía 4(4): 245, 247, f. 1. 1937, *Systematic Botany* 28(2): 313-316. 2003.

T. muticus (Torrey) Nash (*Sieglingia mutica* (Torr.) Kuntze; *Tricuspis mutica* Torr.; *Triodia mutica* (Torr.) Scribn.; *Triodia mutica* Benth.; *Uralepis mutica* E. Fourn. ex Hemsl.; *Uralepis pilosa* Buckley)

North America, Mexico, U.S. Perennial, forage, see *Pacif. Railr. Rep.* 4(5): 156. 1857, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 94. 1862, *Bulletin of the Torrey Botanical Club* 10(1): 30. 1883, *Revisio Generum Plantarum* 2: 789. 1891 and *Flora of the Southeastern United States* ... 143. 1903, *Manual of the Grasses U.S.* 971. 1935, *Sida* 17: 657. 1997.

in English: slim tridens

in Mexico: tridente, tridente esbelto

T. muticus (Torrey) Nash f. ***effusus*** I.M. Johnst.

North America. See *The Southwestern Naturalist* 14: 258. 1969.

T. muticus (Torrey) Nash f. ***muticus***

North America.

T. muticus (Torrey) Nash var. ***elongatus*** (Buckley) Shinnars (*Sieglingia elongata* (Buckley) Nash; *Tricuspis elongata* (Buckley) A. Heller; *Tridens elongatus* (Buckley) Nash; *Triodia elongata* (Buckley) Scribn.; *Tridens x oklahomensis* (Featherly) Featherly (pro sp.); *Uralepis elongata* Buckley)

North America. Perennial, primary branches raceme-like, upper glume 3-nerved, palea keels ciliate, forage, see *Rhodora* 56(662): 28. 1954, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 89. 1862, *An Illustrated Flora of the Northern United States* 3: 504. 1898 and *Catalogue of North American Plants North of Mexico (edition 2)* 28. 1900, *Bulletin, Division of Agrostology United States Department of Agriculture* 17(edition2): 210, f. 506. 1901, *Flora of the Southeastern United States* ... 143. 1903, *Rhodora* 40(474): 243-244. 1938, *U.S. Department of Agriculture. Bureau of Plant Industry. Miscellaneous Publication* 213: 973. 1951.

in English: slim tridens

in Mexico: tridente alargado

T. muticus (Torrey) Nash var. ***muticus*** (*Tridens muticus* f. *muticus*; *Triodia mutica* (Torr.) Scribn.)

North America, Texas. Perennial.

in English: slim tridens

T. nicorae Anton (*Antonella nicorae* (Anton) Caro)

South America, Argentina. Palea glandular, see *Kurtziana* 10: 51, f. 1. 1977.

T. riograndensis Acedo & Llamas

South America, Brazil. See *Systematic Botany* 28(2): 313-316, f. 1-3. 2003.

T. strictus (Nutt.) Nash (*Eragrostis tricuspis* Trin.; *Sieglingia stricta* (Nutt.) Kuntze; *Tricuspis stricta* (Nutt.) Alph. Wood; *Triodia stricta* (Nutt.) Benth. ex Vasey; *Uralepis densiflora* Buckley; *Uralepis tricuspis* (Trin.) Steud.; *Windsoria stricta* Nutt.)

North America, U.S. Perennial, tufted, erect, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(4): 414. 1830, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *Nomenclator Botanicus. Editio secunda* 1: 564. 1840, *A Class-book of Botany* 792. 1861, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 94. 1862, *Department of Agriculture. Special Report* 63: 35. 1883, *Revisio Generum Plantarum* 2: 789. 1891 and *Flora of the Southeastern United States ...* 143. 1903, Heli M. Jutila & James B. Grace, "Effects of disturbance on germination and seedling establishment in a coastal prairie grassland: a test of the competitive release hypothesis." *Journal of Ecology* vol. 90, issue 2: 291-302. Apr 2002.

in English: longspike tridens

T. texanus (S. Watson) Nash (*Sieglingia texana* (S. Watson) Kuntze; *Tricuspis texana* Thurb. ex S. Watson; *Triodia texana* S. Watson)

North America, Mexico, U.S. Perennial, caespitose, erect, forage, see *Proceedings of the American Academy of Arts and Sciences* 18: 180. 1883, *Revisio Generum Plantarum* 2: 789. 1891 and *Flora of the Southeastern United States ...* 142. 1903.

in English: Texas fluffgrass

in Mexico: tridente texano

T. x oklahomensis (Feath.) Feath. [*Tridens flavus* (L.) Hitchc. x *Tridens strictus* (Nutt.) Nash] (*Tridens muticus* var. *elongatus* (Buckley) Shinnery; *Triodia oklahomensis* Feath.; *Uralepis elongata* Buckley)

North America, U.S. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 89. 1862 and *Rhodora* 40(474): 243-244. 1938, *U.S. Department of Agriculture. Bureau of Plant Industry. Miscellaneous Publication* 213: 973. 1951, *Rhodora* 56(662): 28. 1954.

Triglossum F.E.L. Fischer ex Roemer & Schultes = *Arundinaria* Michx., *Triglossum* Roemer & Schultes

From the Greek *treis* "three" and *glossa* "a tongue."

Bambusoideae, Bambuseae, Arundinariinae, type *Triglossum bambusinum* Fisch., see *Flora Boreali-Americana* 1: 73-74. 1803, Friedrich Ernst Ludwig von Fischer (Fedor

Bogdanovic Fischer), 1782-1854, *Catalogue du jardin des plantes, de S.E. Monsieur le Comte Aléxis de Razoumoffsky ... à Gorenki près de Moscou. [Moskva] 1812, Cat. Pl. Amer. Sept.* 14. 1813, *Systema Vegetabilium* 2: 55, 846. 1817, *Fundamenta Agrostographiae* 97. 1820 and *Contributions from the United States National Herbarium* 39: 18-24, 116. 2000.

Trikeriaia Bor

Greek *treis*, *tria*, *tri*- "three" and *keras* "horn," referring to the nature of the spikelets.

About 1-2 species, Pakistan, Tibet, India, Sikkim, Bhutan, Himalayas. Stipoideae, Stipeae, perennial, caespitose or densely tufted, herbaceous, leaf sheaths glabrous, auricles absent, leaf blades narrow, ligule a membrane-like, leaves flat or convolute or involute, plants bisexual, inflorescence paniculate, spikelets pedicels pubescent, floret lanceolate, callus obtuse, 2 glumes subequal to unequal, upper glume 3-nerved, lemma membranous, apex of lemma deeply lobed, central awn curved and persistent, palea 2-nerved acute, 3 lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, mountains, closely related to and sometimes included in *Stipa*, type *Trikeriaia hookeri* (Stapf) Bor, see *Sunyatsenia* 6(1): 71-72. 1941, *Kew Bulletin* 9(4): 555-557. 1955, *Taxon* 29: 645-666. 1980, *Notes, Royal Bot. Gard. Edinburgh* 42(3): 355-489. 1985, *Flora Reipublicae Popularis Sinicae* 9(3): 317, pl. 79, f. 8-12. 1987, *Kew Bulletin* 42(2): 350. 1987, *Annals of the Missouri Botanical Garden* 5: 261. 1987, *Flora Sichuanica* 5(2): 197. 1988, Lu, X.-F., S.-L. Lu and G.-C. Chen, "A new species of *Trikeriaia* Bor (Gramineae) from Tianshan Mts. in Xianjiang of China." *Acta Phytotaxonomica Sinica* 39(3): 275-277. 2001, F.M. Vázquez & Mary E. Barkworth, "Resurrection and emendation of *Macrochloa* (Gramineae: Stipeae)." *Botanical Journal of the Linnean Society* 144(4): 483-495. Apr 2004.

Species

T. hookeri (Stapf) Bor (*Achnatherum hookeri* (Stapf) Keng; *Stipa hookeri* Stapf; *Timouria aurita* Hitchc.)

Asia. Lower glume 3-nerved, see *Essai d'une Nouvelle Agrostographie* 19, 146, pl. 6, f. 7. 1812 and *Journal of the Washington Academy of Sciences* 23: 134. 1933, *Kew Bulletin* 5(3): 319. 1950, *Kew Bulletin* 9(4): 555-556. 1955, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 106, 213. 1957.

T. oreophila Cope

Sikkim, Bhutan. Lower glume 5-nerved, see *Kew Bulletin* 42(2): 350. 1987.

Trilobachne Schenck ex Henrard =
Polytoca R. Br.

Greek *treis*, *tria* “three,” *lobos* “pod, lobe” and *achne* “chaff, glume,” referring to the lobed glumes.

One species, India. Panicoideae, Andropogonodae, Maydeae, or Andropogoneae, Chionachninae, annual, herbaceous, unarmed, plants monoecious, inflorescence fascicled, 2 glumes subequal and dissimilar, male florets 3-staminate and with 2 lodicules, male spikelets with 2 male florets, small palea, no stamens, ovary glabrous, 2 stigmas, type *Trilobachne cookei* (Stapf) M. Schenck ex Henrard, see *Plantae Javanicae Rariores* 20. 1838 and *Mededeelingen van's Rijks-Herbarium* 67: 4, 7. 1931, *Genera Graminum* 371-372. 1986, Sarah Mathews et al., “Phylogeny of Andropogoneae inferred from phytochrome B, GBSSI, and *ndhF*.” *International Journal of Plant Sciences* vol. 163: 441. 2002, T.A. Jannink & J.F. Veldkamp, “A revision of *Chionachninae* (Gramineae: Andropogoneae).” *Blumea* 47(3): 545-580. 2002.

Species

T. cookei (Stapf) M. Schenck ex Henrard (*Polytoca cookei* Stapf)

India. See *Hooker's Icones Plantarum*, t. 2333. 1894.

Triniochloa Hitchc.

For the German botanist Carl (Karl) Bernhard Freiherr von Trinius, 1778-1844, physician, traveler, agrostologist, wrote *Fundamenta Agrostographiae*. Viennae 1820; see Stafleu & Cowan, *Taxonomic literature*. 6: 493-497. 1986; J.H. Barnhart, *Biographical notes upon botanists*. 3: 401. 1965; T.W. Bossert, compil., *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 406. Boston, Mass. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; G. Schmid, *Goethe und die Naturwissenschaften*. Halle 1940; Mariella Azzarello Di Misa, editor, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 274-277. Palermo 1988; Günther Schmid, *Chamisso als Naturforscher*. Eine Bibliographie. Leipzig 1942; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 791. Stuttgart 1993; F. Boerner & G. Kunkel, *Taschenwörterbuch der botanischen Pflanzennamen*. 4. Aufl. 181. Berlin & Hamburg 1989; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; G.C. Wittstein, *Etymologisch-botanisches Handwörterbuch*. 899. Ansbach 1852;

Helmut Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 657. [d. 1841] Basel 1996.

About 4-6 species, Mexico to Bolivia, Peru, Ecuador, Venezuela. Pooideae, Poodae, Meliceae, perennial, tufted, herbaceous, erect, sometimes forming clumps, leaf blades linear, auricles absent, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, spikelets 1-flowered dorsally compressed, 2 membranous persistent glumes unequal to very unequal, lemma 5-nerved bearing a geniculate awn, floret callus bearded, palea keeled, 2 fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, ravines, rocky places, moist ground, similar to *Stipa*, related to *Schizachne*, type *Triniochloa stipoides* (Kunth) Hitchc., see *Nova Genera et Species Plantarum* 1: 131. 1815 [1816] and *Contributions from the United States National Herbarium* 17(3): 303. 1913, *Boletín técnico. Ministerio de agricultura y cria*. 1: 31. 1937, *Flora Mesoamericana* 6: 232. 1994, *Novon* 5(1): 36-39. 1995, *Novon* 8(2): 144-146. 1998, *Caldasia* 23(2): 405-412. 2001, *Contributions from the United States National Herbarium* 48: 658. 2003.

Species

T. andina Luces

Colombia, Venezuela. See *Boletín de la Sociedad Venezolana de Ciencias Naturales* 15(80): 15-16, f. 10. 1953.

T. gracilis Gómez-Sánchez & González-Ledesma

Mexico. See *Novon* 8(2): 144, f. 1. 1998.

T. laxa Hitchc.

Mexico. See *Contributions from the United States National Herbarium* 17(3): 304. 1913.

T. micrantha (Scribn.) Hitchc. (*Avena micrantha* Scribn.)

Mexico. See *Circular, Division of Agrostology, United States Department of Agriculture* 19: 3-4, f. 1. 1900, *Contributions from the United States National Herbarium* 17(3): 304. 1913.

T. stipoides (Kunth) Hitchc. (*Agrostis aspera* Willd. ex Steud., nom. illeg., non *Agrostis aspera* Michx.; *Agrostis stipoides* (Kunth) Spreng.; *Avena stipoides* Scribn.; *Muhlenbergia alpestris* (Kunth) Trin.; *Muhlenbergia alpestris* (Kunth) Kunth; *Muhlenbergia liebmannii* E. Fourn.; *Muhlenbergia stipoides* (Kunth) Kunth, nom. illeg., non *Muhlenbergia stipoides* (Kunth) Trin.; *Podosemum alpestre* Kunth; *Podosemum stipoides* Kunth; *Polypogon alpestris* (Kunth) Spreng.; *Stipa alpestris* Willd. ex Steud.; *Trichochloa alpestris* (Kunth) Roem. & Schult.; *Trichochloa stipoides* (Kunth) Roem. & Schult.; *Triniochloa alpestris* (Kunth) Pittier)

Mexico. Slender, clumped, erect, leaf blades acuminate, oblong panicle, glumes 1-nerved acuminate, lemma cylindrical, moist places, forest shade, see *Species Plantarum* 1: 61-63, 78-81. 1753, *Genera Plantarum* 44. 1789, *Flora Atlantica* 1: 66. 1798 [1800], *Nouveau Bulletin des*

Sciences, publié par la Société Philomatique de Paris 2: 188. 1810, *Essai d'une Nouvelle Agrostographie* 29. 1812, *Nova Genera et Species Plantarum* 1: 131. 1815 [1816], *Systema Vegetabilium* 2: 388. 1817, *De Graminibus unifloris et sesquifloris* 194, t. 5, f. 24-25. 1824, *Systema Vegetabilium, editio decima sexta* 1: 243, 263. 1825, *Révision des Graminées* 1: 64. 1829, *Nomenclator Botanicus. Editio secunda* 1: 39. 1840, *Nomenclator Botanicus. Editio secunda* 2: 642. 1841, *Mexicanas Plantas* 2: 83. 1886 and *Circular, Division of Agrostology, United States Department of Agriculture* 19: 4. 1900, *Contributions from the United States National Herbarium* 17(3): 303. 1913, *Brittonia* 23(3): 293-324. 1971.

T. talpensis González-Ledesma & Gómez-Sánchez

Mexico. See *Novon* 5(1): 36, f. 1. 1995.

Triniusa Steudel = Bromus L.

For the German botanist Carl Bernhard Trinius, 1778-1844.

Pooideae, Bromeae, type *Triniusa danthoniae* (Trin.) Steud., see *Species Plantarum* 1: 76-78. 1753, C.A. von Meyer (1795-1855), *Verzeichniss der von dem Herrn Dr. Kolenati in dem mittlern Theile des Caucasus ... gesammelten Pflanzen* 1849 [the Bohemian botanist and zoologist Friedrich August Rudolph Kolenati, 1812-1864, traveled in Russia], *Synopsis Plantarum Glumacearum* 1: 328. 1854 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Bot. Jahrb. Syst.* 102: 447. 1981, *Taxon* 41: 559. 1992, *Annals of the Missouri Botanical Garden* 81(4): 784-791. 1994, *Flora Mediterranea* 8: 307-313. 1998, *Willdenowia* 28: 144. 1998, *Contributions from the United States National Herbarium* 48: 154-191, 658-659. 2003.

Triodia R. Br. = Tridens Roem. & Schult.,

Triodon Baumg.

From the Greek *treis*, *tria* "three" and *odous*, *odontos* "tooth," referring to the divided lemmas, 3-toothed or 3-lobed; see Robert Brown, *Prodromus florae Novae Hollandiae et Insulae van-Diemen*. 182. London 1810; M. Lazarides, "New taxa of tropical Australian grasses (Poaceae)." in *Nuytsia*. 5(2): 273-303. 1984.

About 64-65 species, Australia. Chloridoideae, Triodieae, perennial, caespitose, often stoloniferous, rarely rhizomatous, strongly xeromorphic habit, prickly to spiny, coarse, stiff, dense tussock or hummock-forming, shoots aromatic to resinous or not, culms branched and leafy, dead leaves inside the hummock, leaf blades rigid and pungent or sharp-pointed, ligule short and hairy, sheath glabrous or hairy, leaves linear and narrow, auricles present or absent, culm nodes glabrous, plants bisexual, inflorescence spicate or

paniculate, panicles narrow and rather loose, spikelets solitary with closely or loosely overlapping florets, fertile florets usually 3-many, upper floret sometimes sterile, 2 subequal glumes stiff and acute, lemmas 3- to 9-nerved, palea 2-keeled, callus short and bearded, 2 lodicules free and fleshy or membranous, 3 stamens, ovary glabrous, 2 stigmas, small fruit ellipsoid, many species extremely resinous, foliage highly flammable, low palatability, low nutritive value, valuable as drought reserve, a fuel source, found on arid and semiarid zones of Australia, on rocky outcrops along the coasts, sandy or stony soils, open habitats, on the slopes of low rocky hills, on low-nutrient soils of sand plains and rocky low mountain ranges in the arid inland, on the flat rocky hill tops, some species formerly classified in *Plectrachne*, type *Triodia pungens* R. Br., see Johann Jakob Bernhardt (1774-1850), *Systematisches Verzeichniss* 20, 44. 1800, *Flora Boreali-Americana* 1: 68-69. 1803, *Prodromus Florae Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 77, 81, f. 15. 1812, *Enumeratio Stirpium Transsylvanicae* 3: 238. 1816, *A Sketch of the Botany of South-Carolina and Georgia* 1: 165. 1816, *Systema Vegetabilium* 2: 34, 599. 1817, *The Genera of North American Plants* 1: 70. 1818, *A Catalogue of Plants, ... City of New York* 91. 1819, *Manual of Botany for North America. Fifth edition* 447. 1829, *Hortus Regius Botanicus Berolinensis* 2: 296. 1833, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *Genera Plantarum* 3(2): 1176. 1883, *Die Natürlichen Pflanzenfamilien* 2(2): 68. 1887 and *Flora of the Southeastern United States* 143-144. 1903, *Contributions from the United States National Herbarium* 17: 181-189. 1913, *Botanical Magazine (Tokyo)* 41: 12. 1927, *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 74: 132. 1929, *Blumea, Supplement* 3: 83-89. 1946, *Transactions of the Royal Society of South Australia* 70: 221-233. 1946, *Australian Journal of Botany* 1: 121-184. 1953, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 76: 281-384. 1954, *Aust. J. Bot.* 8: 381-395. 1960, *American Journal of Botany* 48: 565-573. 1961, *Proc. Linn. Soc. N.S.W.* 96(3): 175-185. 1971, *Kew Bulletin* 33: 525. 1979, *Dominguezia* 2: 18. 1981, S.W.L. Jacobs, "Relationships, distribution and evolution of *Triodia* and *Plectrachne* (Gramineae)." In: *Evolution of the Flora and Fauna of Arid Australia*. (Eds: W.R. Barker, P.J.M. Greenslade) Peacock Publications, Frewville, 287-290. 1982, *Nuytsia* 8(2): 219-223, 241-243. 1992, S.W.L. Jacobs, "*Spinifex* (*Triodia*, *Plectrachne*, *Symplectrodia* and *Monodia*: Poaceae) in Australia." in: *Desertified Grasslands: Their Biology and Management*. (Ed: G.P. Chapman) Academic Press, London, 47-62. 1992, *American Journal of Botany* 81: 622-629. 1994, M. Lazarides, "A revision of *Triodia* including *Plectrachne* (Poaceae, Eragrostideae, Triodiinae)." *Australian Systematic Botany* 10(3): 381-489. 1997, *Austral. Ecology* 24(5): 563-572. Oct 1999 [Regeneration after fire in *Triodia* R. Br.], J.G. Mant et al., "A phylogeny of the Triodieae..."

Grasses: Systematics and Evolution 213-217. 2000, *Contributions from the United States National Herbarium* 41: 16, 121-122, 224-230, 239. 2001, *Ecological Management and Restoration* 4(s1): S60-S68. Feb 2003 [A molecular approach to provenance delineation for the restoration of hummock grasslands (*Triodia* spp.) in arid-tropical Australia.], *Flora of Australia* vol. 43, Poaceae 1: 241, 265. 2002, D.M.J.S. Bowman, Angie Walsh and L.D. Prior, "Landscape analysis of Aboriginal fire management in Central Arnhem Land, north Australia." *Journal of Biogeography* 31(2): 207-223. Feb 2004, T. Vigilante et al., "Contemporary landscape burning patterns in the far North Kimberley region of northwest Australia: human influences and environmental determinants." *Journal of Biogeography* 31(8): 1317-1333. Aug 2004, *Oikos* 107(1): 72-89. Sep 2004, *Flora of Australia* vol. 44B, Poaceae 3: 203-256. 2005, *Austral. Ecology* 30(1): 24-39. Feb 2005 [The responses of small mammals to patches regenerating after fire and rainfall in the Simpson Desert, central Australia], Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005, D.A. Driscoll & C.M. Hardy, "Dispersal and phylogeography of the agamid lizard *Amphibolurus nobbi* in fragmented and continuous habitat." *Molecular Ecology* 14(6): 1613-1629. May 2005.

Species

T. acutispicula Lazarides (*Festuca caroliniana* Steud.; *Plectrachne caroliniana* S.W.L. Jacobs; *Triodia caroliniana* (Steud.) Chase)

Western Australia. Forming hummocks, more or less resinous, leaf blades often curved and pungent, spikelets lanceolate 3- to 7-flowered, long pungent callus bearded, in sandy soils, see *Species Plantarum* 1: 73-76. 1753, *Synopsis Plantarum Glumacearum* 1: 312. 1854 and *American Journal of Botany* 24(1): 34. 1937, *Nuytsia* 8(2): 221. 1992, *Australian Systematic Botany* 10(3): 400. 1997.

T. aerea Lazarides

Western Australia. Not resinous, much-branched, compact fastigiate habit, culms and stolons with aerial roots, narrow sparse spiciform panicles, spikelets lanceolate 3- to 4-flowered, see *Australian Systematic Botany* 10(3): 401. 1997.

T. angusta N.T. Burb.

Western Australia. Loose or compact hummocks, glaucous, biseriate secund spikelets, unequal mucronate glumes, 3-nerved lemmas, scabrous paleas, similar to *Triodia secunda*, see *Journal of the Royal Society of Western Australia* 30: 27. 1946.

T. aristiglumis (Lazarides) Lazarides (*Plectrachne aristiglumis* Lazarides)

Northern Territory, Kakadu National Park. Forming hummocks, not resinous, leaves auriculate, leaf sheaths hirsute or pilose, leaf blades flexuous pseudopetiolate, open sparse loose panicles, spikelets closely 7- to 8-flowered, unequally 3-awned glumes and lemmas, see *Nuytsia* 5(2): 278. 1984 [1985], *Australian Systematic Botany* 10(3): 405. 1997.

T. aurita Lazarides

Northern Territory. Not resinous, forming hummocks, open sparse panicle, spikelets broadly lanceolate 7- to 9-flowered, long-bearded callus, on sandstone, similar to *Triodia plectrachnoides*, see *Australian Systematic Botany* 10(3): 405. 1997.

T. basedowii E. Pritzel (*Triodia pungens* sensu J.M. Black) (after the anthropologist Herbert Basedow, 1881-1933, geologist and botanical collector in Central Australia, explorer, author of *Anthropological Notes Made on the South Australian Government North-West Prospecting Expedition, 1903*. [Extracted from the *Transactions and Proceedings of the Royal Society of South Australia*, vol. 28, pages 12-52 plus 19 plates including 1 folding and 10 in color, Adelaide, 1904])

New South Wales, Queensland, Northern Territory. Perennial, hummock-forming, variable, compact or straggling, tough, prickly, woolly, spiky, thin leaves sharply pointed and rigid, leaf sheaths not resinous, stoloniferous, panicle linear usually short and dense, spikelets ovate or oblong 3- to 13-flowered, uppermost floret sometimes reduced, glumes many-nerved and keeled, lemmas villous near the base with 3-nerved lobes, lobes of the lemmas recurved, drought resistant, provides cover for small wildlife species, refuge and shelter for small animals, grains eaten, little grazing value, useful for erosion control, soil stabilizer in sandy arid regions, well adapted to arid environments, grows in sandy regions, between dunes, arid areas, on sand dunes crests and bases of sand dunes, on sandy red soils, in red sand dunes, see *Repertorium Specierum Novarum Regni Vegetabilis* 15: 356. 1918, *Grasses Central Australia* 208, pl. 59, 209, pl. 60a. 1970.

in English: lobed spinifex, hard spinifex, spinifex

T. biflora Lazarides

Western Australia. Forming large hummocks, leaves highly resinous, leaf sheaths glabrous, loose panicles, spikelets broadly elliptic 3-flowered, lower 2 florets bisexual, upper floret sterile globular vestigial, lemmas 3-nerved, callus short and thickened, see *Australian Studies in Biological Sciences Series* 10(3): 412. 1997 [also *Australian Systematic Botany*].

T. bitextura Lazarides (*Plectrachne pungens* (R. Br.) C.E. Hubb.; *Plectrachne pungens* var. *callosum* C.E. Hubb.; *Sessleria pungens* (R. Br.) Sprengel; *Triodia pungens* R. Br.; *Triraphis pungens* R. Br.)

Queensland, Burke District, Gulf of Carpentaria. Hummock grass, loose, often stoloniferous, usually resinous, aromatic, leaves viscid, leaf blades flexuous, panicles lanceolate, spikelets 5- to 9-flowered, fertile florets 2-6, glumes usually 3- to 5-nerved, lemma with appressed pubescence and unequal awns, palea with short keels, pasture, grows on deep sandy soil, near water courses, floodplains, similar to *Triodia schinzii*, see *Prodromus Florae Novae Hollandiae* 1: 182, 185. 1810 and *Australian Systematic Botany*. 10(3): 412. 1997.

in English: curly spinifex, spinifex

T. brizoides N.T. Burb. (*Triodia burkensis* N.T. Burb.; *Triodia clelandii* N.T. Burb.) (Normanton, Burke district) (after the Australian naturalist Sir John Burton Cleland, 1878-1971, botanist, ethnologist, explorer and plant collector. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 356. 1965; John McConnell Black (1855-1951), in *Transactions and Proceedings of the Royal Society of South Australia*. 56: 46, t. II, f. 3. 1932; Dennis John Carr & S.G.M. Carr (1912-1988), editors, *People and Plants in Australia*. London 1981; Garrison & Morton, *Medical Bibliography*. 4648, 5474. 1961)

Western Australia, Northern Territory, Queensland. Compact, forming hummocks, not resinous, leaf sheaths indurated, inflorescence a raceme or a panicle few-branched, spikelets lanceolate 4- to 18-flowered, rocky or stony soils, on sandy plains, shrubland, open habitats, sometimes confused with *Triodia wiseana*, see *Journal of the Royal Society of Western Australia* 30: 24. 1946, *Australian Journal of Botany* 1(1): 161, f. 12b. 1953, *Australian Journal of Botany* 8: 385. 1960.

in English: weeping spinifex

T. bromoides (F. Muell.) Lazarides (*Plectrachne bromoides* (F. Muell.) C.E. Hubb.; *Triraphis bromoides* F. Muell.)

Western Australia. Hummock grass, prickly, not resinous, scaberulous and pubescent, loose panicles lanceolate or oblong, spikelets cuneate 2- to 7-flowered, unequal glumes long-acuminate shortly awned 1- to 5-nerved, endangered or extinct species, growing on sand plains, dunes, see *Fragmenta Phytographiae Australiae* 8: 108. 1873 and *Hooker's Icones Plantarum* t. 3385. 1939, *Australian Systematic Botany*. 10(3): 417. 1997.

T. bunglensis (S.W.L. Jacobs) Lazarides (*Plectrachne bunglensis* S.W.L. Jacobs) (Western Australia, Northern Province, Bungle Bungle Range)

Western Australia. Hummock-forming, resinous, panicles spiciform linear, spikelets solitary or paired, florets 3-5 per spikelet, fertile the lowest 1 or 2 florets, on sandstone, similar to *Triodia bynoei*, see *Nuytsia* 8(2): 222-223. 1992, *Australian Systematic Botany* 10(3): 418. 1997.

T. bunicola (S.W.L. Jacobs) Lazarides (*Triodia irritans* N.T. Burb. forma B; *Triodia irritans* var. *laxispicata* forma B; *Triodia scariosa* subsp. *bunicola* S.W.L. Jacobs)

South Australia. Hummock grass, not resinous, leaves pseudopetiolate, inflorescence a narrow usually dense panicle, on lateral branches of the panicle spikelets 5- to 8-flowered flattened, palea keels not winged, see *Australian Journal of Botany* 1(1): 172-173, f. 16d. 1953, *Telopea* 4(4): 654. 1992, *Australian Systematic Botany* 10(3): 419-420. 1997.

T. burbridgeana S.W.L. Jacobs (*Triodia procera* auct. non R. Br.) (after Nancy Tyson Burbidge, born in Yorkshire, England, 1912-1977, Curator of the Herbarium, CSIRO Division of Plant Industry, Canberra, an active conservationist, published the *Dictionary of Australian Plant Genera*, 1961 awarded the degree of Doctor of Science by the University of Western Australia, 1976 a member of the Order of Australia)

Western Australia, Northern Territory. Perennial, resinous, aromatic, forming loose hummocks, inflorescence paniculate, loose panicle, spikelets 4- to 8-flowered, smooth cartilaginous glumes, lemmas ovate-orbicular, monsoonal areas, coarse sand, among outcrops, near streams, confused with *Triodia procera*, related to *Triodia pungens* R. Br., see *Nuytsia* 8(2): 219-220. 1992, *Fl. Kimberley Region* 1234. 1992.

T. bynoei (C.E. Hubb.) Lazarides (*Plectrachne bynoei* C.E. Hubb.) (Western Australia, Northern Province, Northwest coast, Bynoe; Benjamin Bynoe, about 1803-1865, surgeon on the voyage of the Beagle (1837-1843), plant collector in Western Australia, Northern Territory and in New South Wales)

Western Australia, Queensland. Forming hummocks, resinous, aromatic, panicles contracted, spikelets 4- to 6-flowered, lemma of the lowest floret singly-awned, in sandy shallow soil, in seasonally wet sites, mainland and coastal, similar to *Triodia bunglensis*, see *Bulletin of Miscellaneous Information Kew* 1941: 30. 1941, *Australian Systematic Botany* 10(3): 422-423. 1997.

T. claytonii Lazarides (*Leptochloa mollis* Kunth; *Plectrachne mollis* Lazarides; *Trichoneura mollis* (Kunth) Ekman; *Triodia mollis* (Lazarides) Lazarides, nom. illeg., non *Triodia mollis* (Kunth) T. Durand & Schinz)

Western Australia, Queensland. Forming hummocks, few-noded, stoloniferous, nonresinous slender foliage, spikelets with only 1 fertile floret, see *Révision des Graminées* 2: 443, t. 135. 1831, *Conspectus Florae Africae* 5: 877. 1895 and *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(9): 10. 1912, *Nuytsia* 5(2): 279. 1984[1985], *Australian Systematic Botany* 10(3): 456. 1997, *Flora of Australia* 43: 375. 2002.

T. compacta (N.T. Burb.) S.W.L. Jacobs (*Triodia irritans* var. *compacta* N.T. Burb.)

South Australia. Forming hummocks, not resinous, strongly branched, leaf sheaths glabrous, leaves with long-pungent blades, small panicles subtended by a flag leaf with reduced blade, closely 6-13-flowered spikelets, on sand dunes, coastal, seashores, saline and wet flats, see *Australian Journal of Botany* 1(1): 169, f. 15a. 1953, *Telopea* 4(4): 653. 1992, *Aust. Syst. Bot.* 10(3): 424. 1997.

in English: spinifex

T. concinna N.T. Burb.

Western Australia. Forming hummocks, stoloniferous, not resinous, not aromatic, leaf blades with very short pseudopetioles, small exerted panicles, solitary or paired spikelets 5- to 12-flowered, palea keels with irregular wings, see *Australian Journal of Botany* 8: 387. 1960.

T. contorta (Lazarides) Lazarides (*Plectrachne contorta* Lazarides)

Northern Territory. Forming clumps, not resinous, loose panicles, spikelets 6- to 7-flowered, exerted florets, 1-awned glumes and lemmas, short palea, twisted lemma awns, similar to *Triodia uniaristata*, see *Nuytsia* 5(2): 278. 1984[1985], *Australian Systematic Botany* 20(3): 426. 1997.

T. cunninghamii Benth. (*Sieglingia cunninghamii* (Benth.) Kuntze)

Western Australia. Forming hummocks, leaves highly resinous, long leaf blades flat or loosely folded, sometimes stoloniferous, long narrow panicles rather dense, few-flowered spikelets, hirsute lemmas 9-nerved and 3-lobed, similar to *Triodia stenostachya*, see *Flora Australiensis: A Description ...* 7: 606-607. 1878, *Revis. Gen. Pl.* 2: 789. 1891 and *Aust. Syst. Bot.* 10(3): 426. 1997.

T. danthonioides (F. Muell.) Lazarides (*Plectrachne danthonioides* (F. Muell.) C.E. Hubb.; *Triraphis danthonioides* F. Muell.)

Western Australia, Swan River. Forming hummocks, not resinous, robust, leaf blades pseudopetiolate, leaf sheaths woolly, spikelets 5-9-flowered, lemma deeply 3-lobed 3-awned, coastal, similar to *Triodia dielsii*, see *Fragmenta Phytographiae Australiae* 8: 125. 1873 and *Hooker's Icones Plantarum* t. 3385. 1939, *Australian Systematic Botany* 10(3): 427-428. 1997.

T. desertorum (C.E. Hubb.) Lazarides (*Plectrachne desertorum* C.E. Hubb.) Western Australia, Eremaean Province, Victoria Desert. Tussocky, compact, not resinous, branched, many-noded, rigid leaf blades pseudopetiolate, loose panicles, spikelets 9-12-flowered, florets exerted, palea keels ciliate, similar to *Triodia rigidissima*, see *Bulletin of Miscellaneous Information Kew* 1941: 28. 1941, *Australian Systematic Botany* 10(3): 429. 1997.

T. dielsii (C.E. Hubb.) Lazarides (*Plectrachne dielsii* C.E. Hubb.)

Western Australia. Robust, forming hummocks, not resinous, dense panicle twice-branched, loosely 4-flowered spikelets, shortly awned lemmas, hairy paleas, on sand plains, similar to *Triodia danthonioides* and *Triodia longipalea*, see *Bulletin of Miscellaneous Information Kew* 1941(1): 27-28. 1941, *Australian Systematic Botany* 10(3): 431. 1997.

T. epactia S.W.L. Jacobs (from the Greek *epaktios* "coastal")

Western Australia, Northern Territory. Perennial, resinous, tufts or hummocks, prop roots, sometimes stoloniferous, narrow inflorescence, narrow and dense panicles, spikelets shortly pedicellate closely flowered, usually 3-17 florets, broadly winged lemmas, beaked paleas with winged keels, coastal, beach, sand dunes, deep sandy soils, coastal dunes, related to *Triodia pungens* R. Br., see *Nuytsia* 8(2): 220-221. 1992.

T. fissura R.L. Barrett, G.B. Wells & K.W. Dixon

Western Australia. Compact, stoloniferous, not resinous, not aromatic, rigid leaf blades, very short ligule entire, inflorescence a spike, spikelets biseriate 8- to 16-flowered, palea keels wingless, growing in narrow rock fissures, similar to *Triodia aerea*, closely related to *Triodia spicata*, see *Flora of Australia* 44B: 207, 458-459. 2005.

T. fitzgeraldii N.T. Burb. (for William Vincent Fitzgerald, 1867-1929, botanical collector in Tasmania and Western Australia, died on the Daru River, New Guinea)

Western Australia. Forming hummocks, stoloniferous, not resinous, leaves not auriculate, hairy leaf sheaths with long-ciliate margins, leaf blades pseudopetiolate, inflorescence a spiciform panicle with filiform and flexuous branches, few-flowered ovate spikelets, 4-6 florets, glumes more or less equal, scarious lemmas 3-lobed, on sandstone hills, see *Journal of the Royal Society of Western Australia* 30: 25. 1946, *Fl. Kimberley Region* 1232, f. 348B. 1992.

T. helmsii (C.E. Hubbard) Lazarides (*Plectrachne helmsii* C.E. Hubb.) (dedicated to Richard Helms, 1842-1919, naturalist and biologist, collected in Australia and New Zealand, 1891 Elder Exploring Expedition)

South and Western Australia, Northern Territory. Forming hummocks, resinous, slender, glabrous, rather dense panicles narrow-oblong, loosely flowered spikelets with 3-4 fertile florets, on sand dunes, sandy loams, plains, red sands, rocky hill slopes, resembles *Triodia schinzii*, see *Bulletin of Miscellaneous Information Kew* 1941(1): 29-30. 1941, *Flora S. Australia* 4: 1867, f. 850C. 1986, *Australian Systematic Botany* 10(3): 434. 1997.

T. hubbardii N.T. Burb. (for the British botanist Charles Edward Hubbard, 1900-1980, gardener, authority and specialist on grasses, from 1920 Kew Gardens, 1935 Fellow of the Linnean Society, see J.H. Barnhart, *Biographical notes upon botanists*. 2: 213. 1965)

Central Australia, Northern Territory. Forming hummocks, stoloniferous, resinous, aromatic, spreading panicles, linear spikelets with distant florets, 5-12 florets, mucronate short glumes unequal, 9-nerved lemmas with 3 flat hairy lobes, callus ribbed and blunt, on rocky hills, sandstone, see *Australian Journal of Botany* 8: 381, 389, f. 2b. 1960.

in English: Hubbard's spinifex

T. inaequiloba N.T. Burb.

Western Australia. Coarse, forming hummocks, stoloniferous, not resinous, rigid and pungent leaf blades, leaves pseudopetiolate, dense panicle, oblong or ovate spikelets with 4-8 overlapping florets, broad mucronate glumes, hirsute lemma, glabrous palea, see *Australian Journal of Botany* 8: 391. 1960.

T. integra Lazarides

Southern Northern Territory. Not resinous, leaf blades hairy, basal leaves densely ciliate, dense contracted linear panicle, spikelets lanceolate acuminate tapered to the apex, 11-18 florets, shiny lemma mucronate, mountains, see *Australian Systematic Botany* 10(3): 436-437. 1997.

T. intermedia Cheel

Western Australia, Northern Territory. Hummock grass, stoloniferous, not resinous, inflorescence a contracted panicle, closely flowered spikelets solitary or paired, 5-12 florets, broadly ovate lemmas 9-nerved, palea keels winged, caryopsis trigonous and curved, arid and semiarid inland, see *Kongliga Svenska Vetenskapsakademiens Handlingar* 52(10): 4-5. 1916, *Austral. J. Bot.* 1: 158, f. 10b. 1953.

T. inutilis N.T. Burb.

Western Australia, Northern Territory. Forming hummocks, stoloniferous, not resinous, leaf sheaths reddish woolly, dense panicles, spikelets paired closely 7- to 15-flowered, glabrous smooth paleas keeled winged, mature spikelets lateral lemma lobes divergent or recurved, slopes, limestone, hills, sandstone, ridges, stony soils, see *Australian Journal of Botany* 1(1): 162-163, f. 12c. 1953.

T. irritans R. Br. (*Festuca irritans* (R. Br.) F. Muell.; *Sieglingia irritans* (R. Br.) Kuntze; *Triodia aristata* J. Black)

Northern Territory, South Australia, New South Wales. Perennial, not resinous, compact, prickly, stiff, gray-green, large and dense tussocks, compact rounded hummocks, leaf blades glabrous, sheaths glabrous or hairy, narrow inflorescence paniculate, partly exerted panicles, spikelets oblong-lanceolate or ovate, glumes stiff and shining, lemmas nerved, groundcover, stabilizer of sand dunes and plains, growing in dry inland areas, heathland and mallee communities, slopes of the dunes, grassland, provides shelter, food and protection for several reptile species and for small native mammals, confused with *Triodia scariosa*, see *Prodromus Florae Novae Hollandiae* 182. 1810, *The Vegetation of Chatham-Islands*, ... 59. Melbourne 1864, *Revis. Gen. Pl.* 2: 789. 1891 and *Trans. & Proc. Royal Soc. S. Australia*

39: 825. 1915, *Australian Journal of Botany* 1(1): 168-169, f. 14a, 15a. 1953, *Grasses Central Australia* 211, pl. 61b. 1970, *Flora S. Australia* 4: 1871, f. 852B. 1986, *Aust. Syst. Bot.* 10(3): 424. 1997, *Austral. Ecology* 24(5): 563-572. Oct 1999, D.G. Bos, S.M. Carthew and M.F. Lorimer, "Habitat selection by the small dasyurid *Ningauy yvonneae* (Marsupialia: Dasyuridae) in South Australia." *Austral. Ecology* 27(1): 103-109. Feb 2002, Darren G. Bos & Susan M. Carthew, "The influence of behaviour and season on habitat selection by a small mammal." *Ecography* 26(6): 810-820. Dec 2003.

in English: spinifex grass, spinifex, porcupine grass, porcupine spinifex

T. irritans R. Br. var. ***irritans*** (*Triodia aristata* J. Black)

South Australia, Western Australia, Northern Territory. Leaf sheaths glabrous.

T. irritans R. Br. var. ***laxispicata*** N.T. Burbidge

South Australia, New South Wales, Queensland. Leaf sheaths minutely pubescent, inland, see *Australian Journal of Botany* 1(1): 171. 1953.

T. lanata J.M. Black

South Australia. Rare species, not resinous, hemispherical pincushion tussocks, leaf blades glabrous, sheaths woolly-tomentose and then glabrous, inflorescence narrow, open panicle sparse, solitary or paired spikelets ovate to lanceolate on slender pedicels, 4-9 florets, 3-nerved glumes silky or more or less pubescent, lemmas silky to hirsute, paleas usually glabrous with scabrous keels, on slopes, sandy soils, along roadsides, sandy plains, dunes, see *Transactions and Proceedings of the Royal Society of South Australia* 40: 57. 1916, *Australian Journal of Botany* 1(1): 168, f. 14b. 1953, *Flora S. Australia* 4: 1871, f. 852E. 1986.

T. lanigera Domin

South Australia, Western Australia. Tussocks hemispherical or pyramidal, leaf blades woolly or pubescent, sheaths woolly-tomentose and then glabrous at maturity, inflorescence a spiciform panicle dense, ovate or oblong spikelets 4- to 10-flowered, many-nerved glumes, lemma lobes dissimilar, lateral lobes of the lemmas acuminate and softly pubescent, glossy palea with curved keels, arid or seasonally arid sites, see *Journal of the Linnean Society, Botany* 41: 278. 1913, *J. Roy. Soc. W. Australia* 30: 20, pl. 1, 29, f. 2. 1946, *Australian Journal of Botany* 1(1): 154, f. 9b. 1953.

T. latzii Lazarides (for the Australian botanist and agrostologist Peter Kenneth Latz, b. 1941, author of *Bushfires and Bush Tucker: Aboriginal Plant Use in Central Australia*, illustrated by Jenny Green. Alice Springs: IAD Press 1995, and "Notes on the relict palm *Livistona mariae* F. Muell. in Central Australia." *Trans. Roy Soc. S. Austral.* 99: 189-196. 1975)

Northern Territory. Resinous, forming mats, prop roots, dense long panicles with numerous branches erect, overlapping spikelets with 9 florets, lemma lobes equal, bearded callus, on rocky hills, in sand, similar to *Triodia microstachya*, see *Australian Systematic Botany* 10(3): 444. 1997.

T. longiceps J.M. Black (*Triodia longiceps* var. *minor* J.M. Black)

Western and Central Australia, South Australia, Queensland, Northern Territory. Perennial, tussocks, robust, coarse, dense, gray-green, usually not resinous, leaf blades glabrous pungent, sheaths glabrous, sometimes stoloniferous, inflorescence a contracted slender panicle, linear narrow spikelets racemose with 6-21 florets, glumes lanceolate to ovate and keeled, minutely lobed lemmas lanceolate and indurate, stout blunt callus, grows on the slopes of low rocky hills, in swamps, along seasonally flooded water courses, rocky slopes, flats, ridges, see *Transactions and Proceedings of the Royal Society of South Australia* 54: 59. 1930, *Trans. and Proc. of the Royal S. of S. Australia* 59: 255. 1935, *Grasses Central Australia* 215, pl. 62, 217, pl. 63a. 1970.

in English: black spinifex, spinifex, gray spinifex, bull spinifex, buck spinifex, giant gray spinifex

in Australia: pujuwaja (Warlpiri people, Tanami Desert, Northern Territory)

T. longiloba Lazarides

Northern Territory, Western Australia. Forming hummocks, resinous, aromatic, leaf blades prickly on margins, linear loose panicles, deeply lobed lemmas, in sandy soils, see *Australian Systematic Botany* 10(3): 446, 448. 1997.

T. longipalea Lazarides (*Plectrachne drummondii* C.E. Hubb.; *Tridens drummondii* (Scribn. & Kearney) Nash ex Small; *Triodia drummondii* Scribn. & Kearney) (dedicated to the British botanist James Drummond, 1784 (or ca. 1786)-1863 (Perth, Western Australia), from 1809 to 1829 Curator of Cork Botanic Garden, sent plants to Capt. Mangles & W.J. Hooker, 1829 accompanied Capt. Stirling on *Parmelia*, botanical collector in Western Australia for Messrs. Veitch, first Government Botanist, Western Australia; see J.H. Barnhart, *Biographical notes upon botanists*. 1: 472-473. 1965; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A-D*. Regnum Vegetabile vol. 2. 1954; W.H. Harvey, in *Hooker's Journal of Botany & Kew Garden Miscellany*. 7: 53. London 1855; A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Alice Margaret Coats, *The Quest for Plants: A History of the Horticultural Explorers*. London 1969; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 217-218. London 1994; Dennis John Carr & S.G.M. Carr, editors, *People and Plants in Australia*. London 1981; Roger N. Hilton, "The Drummond collection of Western Australian fungi at the Royal Botanic Gardens, Kew." *Nuytsia*.

4(3): 333-357. 1983; R.N. Hilton, "The Preiss collection of Western Australian fungi." *Nuytsia*. 6(3): 295-304. 1988)

Southwest Western Australia. Forming hummocks, tall, loose, robust, not resinous, persistent overlapping leaf sheaths, dense inflorescence, long narrow panicles linear-oblong, spikelets cuneate, florets 6-10 loosely overlapping, scarious glumes lanceolate, concavo-convex caryopsis, on sand plains, salt flats, similar to *Triodia dielsii*, see *Bulletin, Division of Agrostology United States Department of Agriculture* 4: 37. 1897 and *Flora of the Southeastern United States ...* 143. 1903, *Bulletin of Miscellaneous Information Kew* 1941: 26. 1941, *Australian Systematic Botany* 10(3): 448-449. 1997.

T. marginata N.T. Burb.

Queensland, New South Wales. Forming hummocks, resinous, stoloniferous, prop roots, lower sheaths overlapping, open or dense panicles ovate to lanceolate, spikelets inflated 4- to 11-flowered, woolly lemmas with prominent lobes, on disturbed sites, plains, dunes, sandy soils, resembles *Triodia mitchellii*, see *Australian Journal of Botany* 1(1): 150-151, f. 8c. 1953, *Fl. SE Queensland* 3: 179, f. 27G. 1989.

T. melvillei (C.E. Hubb.) Lazarides (*Plectrachne melvillei* C.E. Hubb.) (after a scientist in western Australia, George Frederick Melville, b. 1914)

Northern Territory, south and Western Australia, Eremaean Province. Hummock, resinous, sheaths overlapping, contracted panicles linear-oblong, spikelets lanceolate or cuneate, 3-11 florets, grassland, sandy and stony soils, see *Bulletin of Miscellaneous Information Kew* 1941(1): 28. 1941, *Australian Systematic Botany* 10(3): 451. 1997, *Flora of Australia* 44B: 241, 244, 459. 2005.

T. microstachya R. Br. (*Festuca microstachya* (R. Br.) F. Muell.; *Festuca microstachys* (R. Br.) F. Muell., nom. illeg., non *Festuca microstachys* Nutt.; *Sieglingia microstachya* (R. Br.) Kuntze)

Northern Territory, Queensland, Western Australia. Robust, forming hummocks, resinous, aromatic, stoloniferous, with prop roots, leaf sheaths fan-shaped, small spikelets oblong or obovate, 1-7 florets glabrous, the terminal floret much reduced, glumes unequal, lobed 3-nerved lemma, mat-forming, useful for nesting, sandy habitat, grassland, similar to *Triodia latzii*, see *Prodromus Florae Novae Hollandiae* 182. 1810, *Revis. Gen. Pl.* 2: 789. 1891 and *Australian Journal of Botany* 1(1): 138, f. 5b. 1953.

in English: spinifex

T. mitchellii Benth. (*Sieglingia mitchelli* (Benth.) Kuntze; *Triodia hostilis* Domin; *Triodia mitchellii* var. *breviloba* N.T. Burb.; *Triodia mitchellii* var. *pubivagina* N.T. Burb.) (species named for the British (Sir Thomas Livingstone Mitchell, 1792-1855 (d. N.S.W., Australia), plant collector, 1839 Fellow of the Royal Society, author of *Three Expeditions into the Interior of Eastern Australia*. London 1838

and *Journal of an Expedition into the Interior of Tropical Australia*. London 1848. See I.H. Vegter, *Index Herbariorum*. Part II (4), *Collectors M*. Regnum Vegetabile vol. 93. 1976; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 492. London 1994; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980)

Queensland, New South Wales, Northern Territory. Perennial, resinous, dense, sprawling, tussock and hummock-forming, sometimes stoloniferous, with prop roots, leaf blades folded and sharply pointed, inflorescence open or compact, panicles narrowly oblong or lanceolate, spikelets solitary or paired, 4-10 loose exerted florets, uppermost floret often reduced, 3-nerved cartilaginous glumes acute to truncate, lemmas 3-lobed and silky, basal lemma lanceolate to elliptic, callus silky, palea 2-keeled with keels ciliate, stony soils, shallow soil, deep sandy soil, similar to *Triodia marginata*, see *Flora Australiensis: A Description ...* 7: 606. 1878, *Revis. Gen. Pl.* 2: 789. 1891 and *Biblioth. Bot.* 20(85): 387. 1915, *Australian Journal of Botany* 1(1): 143, 147, 149-151, f. 6c, 7, 8a & b. 1953, *Australian Journal of Botany* 10: 454. 1997.

in English: buck spinifex

T. mitchellii Benth. var. *breviloba* N.T. Burb.

Queensland, New South Wales. Leaf sheaths glabrous or hairy, inflorescence compact and linear, lemma silky, grows on sandy plains, see *Australian Journal of Botany* 1(1): 149, f. 8a. 1953.

in English: buck spinifex

T. mitchellii Benth. var. *mitchellii*

Queensland.

T. mitchellii Benth. var. *pubivagina* N.T. Burb.

Queensland, New South Wales. Leaf sheaths silky or hairy, inflorescence paniculate open and lanceolate, lemma silky, grows on sandy plains, see *Australian Journal of Botany* 1(1): 151, f. 8b. 1953.

T. molesta N.T. Burb.

Queensland, Northern Territory. Dense, tall, grayish or olive-green, forming hummocks, not resinous, with prop roots, leaf blades rigid, leaf sheaths densely woolly, dense narrow panicles spiciform, spikelets lanceolate or oblong, 7-12 florets, glumes ovate or oblong, hirsute lemmas with subequal lobes, palea keels winged, see *Australian Journal of Botany* 1(1): 164-165, f. 13a. 1953.

T. pascoeana B.K. Simon (named for David Pascoe, d. 1989, Director of Operations, Kimberley Research Project 1988)

Western Australia, western Kimberley. Perennial, robust, dense, usually nonresinous, forming hummocks, stoloniferous, leaves not auriculate, leaf blades pseudopetiolate, leaf sheaths persistent and not fan-shaped, slender inflorescence, dense panicles linear, small spikelets narrowly

oblong 3- to 11-flowered, unequal glumes 1-nerved, glabrous lobed lemmas 3-nerved, similar to *Triodia microstachya*, see *Nuytsia* 8(2): 241-243, f. 1. 1992.

T. plectrachnoides N.T. Burb.

Northern Territory. Tussocky, forming dense hummocks, not resinous, leaf auricles rounded or acute, open panicles, long-pedicelled spikelets 3- to 9-flowered, glumes indurated, lemma 3-lobed, similar to *Triodia aurita*, see *Australian Journal of Botany* 1(1): 155, 160, f. 11b. 1953, *Flora of Australia* 44B: 254. 2005.

T. plurinervata N.T. Burb.

Western Australia. Forming dense hummocks, dense, stoloniferous, leaf sheaths strongly nerved, long-pungent stiff slender leaf blades with short pseudopetioles, inflorescence a raceme, spikelets linear-oblong with short and compressed pedicels, 4-12 florets, many-nerved cartilaginous glumes, lemma 11-13-nerved and 3-toothed, palea keels winged, lodicules ciliate, coastal, on red sandy soils, steppes, hummock grassland, salt lakes, red sand dunes, see *Australian Journal of Botany* 8: 390, 392, f. 3b. 1960.

T. procera R. Br. (*Sieglingia procera* (R. Br.) Kuntze)

Northern Territory, Queensland. Robust, forming hummocks, stoloniferous, resinous, aromatic, leaf sheaths often fan-shaped, loose panicles, ovate or lanceolate spikelets 4- to 8-flowered, terminal floret reduced, truncate callus, palea keels winged, coastal and mainland, deep sandy soils, on coastal dunes, often confused with *Triodia burbidgeana*, similar to *Triodia radonensis* and *Triodia microstachya*, see *Prodromus Florae Novae Hollandiae* 182. 1810, *Revis. Gen. Pl.* 2: 789. 1891 and *Fl. Kimberley Region* 1234. 1992, *Australian Syst. Bot.* 10(3): 462. 1997.

T. prona Lazarides

Western Australia. Procumbent, forming hummocks, not resinous, leaf blades flexuous with thick pseudopetioles, loose panicles linear, spikelets cuneate with 5-7 florets overlapping, resembles *Triodia salina*, see *Australian Systematic Botany* 10(3): 463. 1997.

T. pungens R. Br. (*Festuca viscida* (Roem. & Schult.) F. Muell.; *Sieglingia pungens* (R. Br.) Kuntze; *Triodia cunninghamii* Benth.; *Triodia pungens* f. *microstachya* Domin; *Triodia pungens* var. *linearis* N.T. Burb.; *Triodia pungens* var. *parvidentata* N.T. Burb.; *Triodia viscida* Roem. & Schult.; *Triodia vulnerans* Domin)

Northwest South Australia, Western Australia, Queensland, Northern Territory. Perennial, irregular and glutinous tussock grass, straggling, spreading, green to bright green, resinous on foliage, glabrous leaf blades rigid sharp-pointed, leaf sheaths glabrous sometimes woolly, narrow linear inflorescence paniculate, contracted usually dense panicles with erect branches, on slender pedicels closely flowered spikelets linear-oblong to ovate, 3-13 florets, glumes glabrous, flowering glume purplish and silky-villous toward the base,

hairy lemmas, palea keels narrowly winged, an invader of disturbed sites, a resin obtained from the burning material used to glue handles on stone axes, not very palatable, eaten in the absence of other forage by cattle and sheep, the young regrowth after burning is grazed, occurs in sand dunes and sand plains, on plains and rocky hills, granitic plains, on dry tropical plains, coastal sand dunes, arid regions, red earths of coarse or medium texture, on the slopes of low rocky hills, on rocky slopes, laterized desert sandstone ranges, shallow soils, deep clayey sands, see *Prodromus Florae Novae Hollandiae* 182. 1810, *Systema Vegetabilium* 2: 599. 1817, *Veg. Chatham-Isl.* 59. 1864, *Flora Australiensis: A Description ...* 7: 606-607. 1878, *Revis. Gen. Pl.* 2: 789. 1891 and *Bibliotheca Botanica* 85: 385. 1915, *Australian Journal of Botany* 1(1): 145, f. 6d. 1953, *Australian Journal of Botany* 8: 383-384, f. 1b. 1960, *Australian Systematic Botany* 10(3): 426. 1997.

in English: gummy spinifex, soft spinifex

T. pungens R. Br. var. *pungens*

South Australia, Western Australia, Queensland, Northern Territory.

T. racemigera C.A. Gardner

Western Australia, Northern Territory. Forming hummocks, stoloniferous, not resinous, reddish hairy leaf sheaths, long slender leaf blades flexuous or curved, spikelets in 2 rows with 4-8 overlapping florets, lemmas hirsute, palea glabrous with winged keels, see *Flora of Western Australia* 1(1): 77-78. 1952, *Australian Journal of Botany* 1(1): 178, f. 17b. 1953, Fl. Kimberley Region 1234, f. 349A. 1992.

T. radonensis S.W.L. Jacobs (Radon Creek, Brockman Range)

Northern Territory. Trailing, loosely clumped, foliage viscid, leaves coriaceous, broad loose leaf sheaths, open panicles, oblong spikelets, 5-7 divergent florets, terminal floret much reduced, 2-lobed 3-ribbed glumes, indurated smooth inflated lemmas, lowest lemma 3-lobed, palea keels winged, similar to *Triodia procera*, see *Telopea* 4(4): 658, f. 3. 1992.

T. rigidissima (Pilger) Lazarides (*Plectrachne rigidissima* (Pilg.) C.E. Hubb.; *Triraphis rigidissima* Pilg.)

Western Australia. Forming hummocks, dense, rhizomatous, not resinous, many-noded, overlapping sheaths, loose panicles, spikelets cuneate with 4-6 florets, entire glumes, palea keels ciliate, in deep sand, hill slopes, sand plains, resembles *Triodia desertorum*, see *Bot. Jahrb. Syst.* 35: 72. 1904, *Hooker's Icones Plantarum* 34: t. 3385. 1939, *Australian Systematic Botany* 10(3): 468. 1997.

T. roscida N.T. Burb.

Western Australia, Northern Territory. Forming hummocks, stoloniferous, glaucous, not resinous, not sticky, panicles spiciform with erect branches, shortly pedicellate spikelets elliptic or cuneate 3- to 5-flowered, subequal mucronate glumes with 3 prominent nerves, palea keels narrowly

winged, on stony soils, hillslopes, mesas, see *Australian Journal of Botany* 1(1): 161, 176, f. 11a. 1953.

T. salina Lazarides

Northern Territory, Western Australia, Great Sandy Desert. Forming hummocks, loose, resinous foliage, stoloniferous, aromatic, leaf blades straight, leaf sheath glabrous, long narrow contracted panicles, spikelets narrow-cuneate 6- to 10-flowered, thick lemmas hairy, palea keels winged, in deep red soils, depressions, swales, resembles *Triodia prona*, see *Australian Systematic Botany* 10(3): 471. 1997.

T. scariosa N.T. Burb. (*Triodia irritans* var. *laxispicata* N.T. Burb.; *Triodia irritans* var. *laxispicata* f. A of N.T. Burb.; *Triodia scariosa* subsp. *yelarbonensis* S.W.L. Jacobs; *Triodia truncata* S.W.L. Jacobs)

South Australia, New South Wales, Victoria, Western Australia, Queensland. Perennial, not resinous, tussock and hummock-forming, hemispherical or flat-topped tussocks, leaf blade glabrous and folded, sheaths glabrous, leaves sharply pointed, inflorescence open or compact, long narrow panicles fully exerted, spikelets linear or lanceolate, glumes scarious and 3- to 5-nerved, lemmas villous-hirsute at the base, palea silky-hirsute 2-keeled, polymorphic species, on poor sandy soils, mallee scrubs, coastal, similar to *Triodia vella*, confused with *Triodia irritans*, see *J. Roy. Soc. W. Australia* 30: 25. 1946, *Australian Journal of Botany* 1(1): 170-174, f. 15b, 16b-d. 1953, *Telopea* 4(4): 654, 656. 1992.

in English: porcupine grass, common porcupine grass, spinifex

T. scariosa N.T. Burb. subsp. *yelarbonensis* S.W.L. Jacobs (*Triodia irritans* R. Br. var. *laxispicata* N.T. Burb. forma C) (subspecies dedicated to the Australian town of Yelarbon, Western border of the Inglewood Region, Region of Queensland)

Queensland. Mature spikelets with divergent lemmas, grows on poor alluvial soils, see *Telopea* 4(4): 654. 1992.

in English: spinifex

T. scariosa N.T. Burb. subsp. *scariosa* (*Triodia irritans* R. Br. var. *laxispicata* N.T. Burb. forma A)

South Australia, New South Wales, Victoria, Western Australia, Queensland. Mature spikelets with divergent lemmas, grows in semiarid areas, on poor soils.

in English: spinifex

T. schinzii (Henrard) Lazarides (*Plectrachne schinzii* Henrard)

Northern Territory, Western Australia. Erect, forming hummocks, sometimes resinous, leaf blades without pseudopetioles, usually dense panicles linear to oblong, spikelets linear-lanceolate 4- to 14-flowered, upper 2 or 3 florets usually sterile, long glumes many-nerved, lemma pubescent, callus slender and pungent, palea keels winged, an

indicator of good range condition, the young regrowth after burning is grazed, on dunes, plains, *Acacia* shrubland, sand hills, deep red sandy soils, resembles *Triodia bitextura*, *Triodia acutispicula* and *Triodia helmsii*, see *Vierteljahrschrift der Naturforschenden Gesellschaft in Zürich* 74: 134. 1929, *Grasses Central Australia* 197, 206, pl. 56b, 58. 1970, *Australian Systematic Botany* 10: 474. 1997.

T. secunda N.T. Burb.

Western Australia. Forming hummocks, loose, erect or prostrate, spreading, not resinous, stoloniferous, fringed auricles, leaf blades pseudopetiolate, linear panicles, hairy spikelets 3- to 8-flowered, scarious glumes mucronate, hirsute lemmas, hirsute palea with wingless keels, similar to *Triodia angusta*, see *Journal of the Royal Society of Western Australia* 30: 26-27, 33, pl. III, f. 10a-f, 11c-d. 1946, *Australian Journal of Botany* 1(1): 181, f. 18c. 1953.

T. spicata N.T. Burb.

Western Australia, Northern Territory. Compact, forming hummocks, ciliate ligule, inflorescence a spike exerted, biseriate spikelets more or less sessile, 6-20 florets, palea keels winged, on stony soils, sandstone, on sandy flats, see *Australian Journal of Botany* 1(1): 182. 1953, *Grasses Central Australia* 217, 219, pl. 63b, 65. 1970.

in English: spike-flowered spinifex, spike-flower spinifex

T. stenostachya Domin

Western Australia, Queensland, Northern Territory. Forming dense hummocks, stoloniferous, highly resinous, not aromatic, old leaf blades flexuous or curled, basal leaf sheaths loose and overlapping, large dense panicles, paired spikelet usually with 3 florets, glumes mucronate, lemmas with 3 dissimilar lobes, lowest lemma with median lobe bristle-like, palea keels wingless, in shallow soils, rocky slopes, deep littoral sands, sandy creek banks, similar to *Triodia microstachya* and *Triodia cunninghamii*, see *Bibliotheca Botanica* 20(85): 387. 1915, *Australian Journal of Botany* 1(1): 138, f. 5c. 1953.

T. tomentosa S.W.L. Jacobs

Western Australia. Not resinous, forming hummocks, leaves pseudopetiolate, leaf sheaths woolly, panicles fully exerted, spikelets lanceolate 3- to 7-flowered, glumes scarious lanceolate, minutely lobed lemmas hirsute, hairy callus, palea keels rounded, red sandy soils, gravelly, similar to *Triodia lanata*, see *Telopea* 4(4): 655-656, f. 2. 1992.

T. triaristata Lazarides

Northern Territory, western Queensland. Forming hummocks, loose, leaves resinous, long narrow lanceolate spikelets 7- to 17-flowered, fertile florets at the base, hirsute lemma with erect stiff lobes and awns, palea keels narrowly winged, not aromatic, on sandstone, see *Australian Systematic Botany* 10(3): 480. 1997.

T. triticoides C.A. Gardner (*Poa flava* L.; *Tridens flavus* (L.) Hitchc.)

Western Australia. Forming hummocks, not resinous, stoloniferous or not, leaf sheaths hirsute, spiciform and continuous panicles, spikelets solitary overlapping 7- to 10-flowered, 2-lobed lower glume, palea keels broadly winged, see *Species Plantarum* 68. 1753 and *Rhodora* 8(95): 210. 1906, *Flora of Western Australia* 1: 78. 1952, *Fl. Kimberley Region* 1235, f. 349B. 1992.

T. uniaristata (Lazarides) Lazarides (*Plectrachne uniaristata* Lazarides)

Northern Territory. Forming hummocks, branched near base, not resinous, contracted panicles, narrow spikelets with 4 florets, lemmas with 2 lateral lobes and a long twisted awn, palea glabrous, similar to *Triodia contorta*, see *Nuytsia* 5(2): 280. 1984 [1985], *Australian Systematic Botany* 10(3): 482. 1997.

T. vella Lazarides

Queensland. Forming compact tussocks, not resinous, foliage glabrous and smooth, linear and exerted panicles, spikelets narrowly oblong 3- to 6-flowered, glumes 3-nerved, lemmas and paleas woolly, similar to *Triodia scariosa*, see *Australian Systematic Botany* 10(3): 483. 1997.

T. wiseana C.A. Gardner (*Triodia wiseana* var. *brevifolia* N.T. Burb.) (dedicated to Frank Joseph Scott Wise, 1897-1986, premier of Western Australia 1945-1947)

Western Australia, Northern Territory. Hummock, not resinous, leaf sheaths pilose, leaf blades pseudopetiolate, sometimes stoloniferous, panicles dense or loose, spikelets linear to ovate 4- to 16-flowered, grassland, in shallow rocky soils, often confused with *Triodia brizoides*, see *Journal of the Royal Society of Western Australia* 27: 166. 1942, *Journal of the Royal Society of Western Australia* 30: 24, 31, pl. II, f. 4. 1946, *Australian Journal of Botany* 1(1): 158. 1953.

in English: hard spinifex

Triodon Baumg. = *Triodia* R. Br., *Triodon* DC. (Rubiaceae), *Triodon* Rich. (Cyperaceae)

From Greek *treis*, *tria* “three” and *odous*, *odontos* “tooth.”

Chloridoideae, Triodieae, see *Syn. Pl.* 1: 60. 1805, *Prodrumus Florae Novae Hollandiae* 182. 1810, *Enumeratio Stirpium Transsilvaniae* 3: 238. 1816, *Prodrumus Systematis Naturalis Regni Vegetabilis* 4: 566. 1830.

Triphlebia Stapf = *Eragrostis* Wolf, *Stiburus* Stapf, *Triphlebia* Baker (Aspleniaceae)

From the Greek *treis*, *tria* “three” and *phleps*, *phlebos* “vein.”

Chloridoideae, Cynodonteae, type *Triphlebia alopecuroides* (Hack.) Stapf, see *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, O.

Beccari, *Malesia: raccolta di osservazioni botaniche intorno alle piante dell'arcipelago Indo-Malese e Papuano* ... durante i viaggi eseguiti dall'anno 1865 all'anno 1878 ... Genova 1877-1890, *Bulletin de l'Herbier Boissier* 3(8): 393. 1895, *Flora Capensis* 7: 318. 1898, *Hooker's Icones Plantarum* 27: t. 2612. 1899 and *Flora Capensis* 7(4): 696-697. 1900, *Acta Bot. Neerl.* 15: 157. 1966, *Contributions from the United States National Herbarium* 41: 81-115. 2001.

Triplachne Link

From the Greek *triploos* "triple, threefold" and *achne* "chaff, glume."

One species, Mediterranean. Pooideae, Poodae, Aveneae, annual, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, contracted inflorescence paniculate or spicate, spikelets pedicellate, uppermost female-fertile floret, 2 glumes subequal and membranous, lemmas gibbous and hairy with 2 lateral awns and a geniculate awn, palea present, lodicules absent, 3 stamens, ovary glabrous, 2 stigmas, open places, sandy dunes, coastal, rocky places, related to *Agrostis*, sometimes confused with *Gastridium ventricosum*, see Giovanni Gussone (1787-1866), *Flora siculae prodromus*, etc. 1: 59. Neapoli 1827-1828, *Hortus Regius Botanicus Berolinensis* 2: 241. 1833 and *Lagascalia* 15: 119-124. 1988, *Willdenowia* 31: 403-408. 2001.

Species

T. nitens (Guss.) Link (*Agrostis nitens* Guss.)

Europe, Italy. Annual, glumes 1-nerved, lemma 3-awned, see *Bull. Mus. Hist. Nat.*, Paris, 2e sér., 3: 161-162. 1931.

in Italian: codino lucido

Triplasis P. Beauv. = *Diplocea* Raf.,
Merisachne Steud., *Uralepis* Nutt.

Latin *triplasius* and Greek *triplasios* "threefold, thrice as many, triple," referring to the arrangement of the flowers.

Two species, North America and Central America, eastern U.S. to Costa Rica. Chloridoideae, Cynodonteae, annual or perennial, erect, tufted, rhizomatous, nodes pubescent, leaves cauline, auricles absent, ligule a line of hairs, lower leaf sheaths sometimes inflated, leaf blades flat or involute, inflorescence a sparse panicle exerted or partially included in upper sheath, spikelets linear with 2-4 florets per spikelets, cleistogamous spikelets present in upper sheaths and at base of the lower sheaths, callus hairy, glumes unequal, second glume awnless, lemmas lobed with a short pubescent awn, palea keels ciliate, lodicules truncate, 3 stamens but none in cleistogenes, 2 stigmas, pioneer coastal plants, on dry sandy soils, along stream banks, margins of forest,

type *Triplasis americana* P. Beauv., see *Syn. Pl.* 2: 9. Nov 1806 [1807], *Prodromus Florae Novae Hollandiae* 182. 1810, *Essai d'une Nouvelle Agrostographie* 81, pl. 16. 1812, *The Genera of North American Plants* 1: 62. 1818, *American Journal of Science* 1: 252. 1818, *A Manual of the Botany of the Northern United States* 589. 1848, *Synopsis Plantarum Glumacearum* 1: 117. 1854, *Die Natürlichen Pflanzenfamilien* 2(2): 68. 1887 and *U.S.D.A. Bull.* 772: 76. 1920, *Iowa State J. Res.* 47: 71-78. 1972, *Kew Bulletin* 37: 133-162. 1982, *Flora Mesoamericana* 6: 259-260. 1994, *Contributions from the United States National Herbarium* 41: 70, 141, 230-231, 234. 2001, Megan E. Griffiths & Colin M. Orians, "Responses of common and successional heathland species to manipulated salt spray and water availability." *Am. J. Bot.* 90: 1720-1728. 2003, *New Phytologist* 164(3): 543-553. Dec 2004, Marjorie R. Lundgren & Sonia E. Sultan, "Seedling expression of cross-generational plasticity depends on reproductive architecture." *Am. J. Bot.* 92: 377-381. 2005.

Species

T. americana P. Beauv. (*Sieglingia americana* (P. Beauv.) Beal; *Tricuspis cornuta* (Elliott) A. Gray; *Triplasis cornuta* Benth. ex W.D. Jacks.; *Uralepis cornuta* Elliott)

North America, U.S. Annual, lemma short-awned, see *Essai d'une Nouvelle Agrostographie* 81, pl. 16, f. 10. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1: 580. 1821, *A Manual of the Botany of the Northern United States* 590. 1848, *Index Kewensis* 2: 1121. 1895, *Grasses of North America for Farmers and Students* 2: 466. 1896.

T. purpurea (Walt.) Chapm. (*Aira purpurea* Walter; *Diplocea barbata* Raf.; *Festuca brevifolia* Muhl.; *Festuca purpurea* (Walter) F. Muell.; *Festuca purpurea* Schreb. ex Steud.; *Glyceria brevifolia* (Muhl.) Schult.; *Merisachne drummondii* Steud.; *Panicularia brevifolia* (Muhl.) Porter; *Sieglingia purpurea* (Walter) Kuntze; *Tricuspis purpurea* (Walter) A. Gray; *Triodia purpurea* (Walter) Smyth; *Triplasis caribensis* (R.W. Pohl) Beetle; *Triplasis floridana* Gand.; *Triplasis glabra* Gand.; *Triplasis intermedia* Nash; *Triplasis purpurea* var. *caribensis* R.W. Pohl; *Triplasis sparsiflora* Chapm.; *Uralepis aristulata* Nutt.; *Uralepis purpurea* (Walter) Nutt.; *Uralepis purpurea* Nutt.)

North America. Dunegrass, highly cleistogamous, lemma with long awn, forage, highly disturbed areas, sandy beaches, see *Flora Caroliniana, secundum* ... 78. 1788, *Prodromus Florae Novae Hollandiae* 179. 1810, *Descriptio uberius Graminum* 167. 1817, *The Genera of North American Plants* 1: 62-63. 1818, *American Journal of Science* 1: 252. 1818, *Mantissa* 2: 387. 1824, *Herbarium Pedemontanum* 6: 235. 1836, *Nomenclator Botanicus. Editio secunda* 1: 564, 632. 1840, *A Manual of the Botany of the Northern United States* 589. 1848, *Synopsis Plantarum Glumacearum* 1: 117. 1854, *Flora of the Southern United States* 560. 1860, F.J.H. von Mueller, *Select Plants: ...*, with

indications of their native countries and some of their uses. 1876, *Botanical Gazette* 3(3): 19. 1878, *Revisio Generum Plantarum* 2: 789. 1891, *Bulletin of the Torrey Botanical Club* 20: 205. 1893, *Bulletin of the Torrey Botanical Club* 25: 564. 1898 and *Transactions of the Kansas Academy of Science* 25: 95. 1913, *Bulletin de la Société Botanique de France* 66(7): 303. 1919 [1920], *Phytologia* 54(1): 5. 1983, G.P. Cheplick, "Cleistogamy and seed heteromorphism in *Triplasis purpurea* (Poaceae)." *Bulletin of the Torrey Botanical Club* 123: 25-33. 1996, *Plant Ecology* 133: 79-89. 1997, G.P. Cheplick & L.Y. Sung, "Effects of maternal nutrient environment and maturation position on seed heteromorphism, germination, and seedling growth in *Triplasis purpurea* (Poaceae)." *International Journal of Plant Science* 159: 338-350. 1998, Gregory P. Cheplick & Harry Demetri, "Impact of saltwater spray and sand deposition on the coastal annual *Triplasis purpurea* (Poaceae)." *American Journal of Botany* 86: 703-710. 1999, G.P. Cheplick & H. Demetri, "Population biology of the annual grass *Triplasis purpurea* in relation to distance from shore on Staten Island, New York." *Journal of Coastal Conservation* 5: 145-154. 2000, Gregory P. Cheplick & Timothy P. White, "Saltwater spray as an agent of natural selection: no evidence of local adaptation within a coastal population of *Triplasis purpurea* (Poaceae)." *Am. J. Bot.* 89: 623-631. 2002.

in Mexico: arenoso purpureo

T. purpurea (Walt.) Chapm. var. ***caribensis*** Pohl (*Aira purpurea* Walter; *Festuca purpurea* (Walter) F. Muell.; *Sieglinia purpurea* (Walter) Kuntze; *Tricuspis purpurea* (Walter) A. Gray; *Triodia purpurea* (Walter) Smyth; *Triplasis caribensis* (R.W. Pohl) Beetle; *Triplasis purpurea* (Walt.) Chapm.; *Uralespis purpurea* (Walter) Nutt.; *Uralespis purpurea* Nutt.)

North America. Erect, ascending, forming large clumps, see *Flora Caroliniana, secundum ...* 78. 1788, *The Genera of North American Plants* 1: 62. 1818, *A Manual of the Botany of the Northern United States* 589. 1848, *Flora of the Southern United States* 560. 1860, *Select plants: ...* 1876, *Revisio Generum Plantarum* 2: 789. 1891 and *Transactions of the Kansas Academy of Science* 25: 95. 1913, *Iowa State Journal of Research* 47(1): 76, f. 3. 1972.

T. purpurea (Walt.) Chapm. var. ***purpurea***

North America.

Triplathera (Endl.) Lindley = *Bouteloua* Lag.

From the Greek *triploos* "triple, threefold" and *ather* "stalk, barb."

Chloridoideae, Cynodonteae, Boutelouinae, see *Varietades de Ciencias, Literatura y Artes* 2(4,21): 134, 141. 1805, *Gen. Sp. Nov.* 5. 1816, *Genera Plantarum* 94. 1836, *The*

Vegetable Kingdom 116. 1846 and *Contributions from the United States National Herbarium* 41: 20-33, 231. 2001.

Triplopogon Bor

From the Greek *triploos* "triple, threefold" plus *pogon* "beard," referring to the glumes.

One species, India. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae, annual, herbaceous, erect, auricles absent, leaf blades pseudopetiolate, ligule an unfringed membrane, stilt-rooted at the lower nodes, plants bisexual, inflorescence a false panicle, single raceme subtended by spatheoles, sessile spikelet laterally compressed, hermaphrodite florets lacking, 1 glume per spikelet, lower glume coriaceous and strongly convex, upper glume awnless, palea present, 2 free and fleshy lodicules, stamens absent, ovary glabrous, 2 stigmas, related to *Kerriochloa*, type *Triplopogon spathiflorus* (Hook.f.) Bor, see *Species Plantarum* 2: 1049. 1753, *Flora Aegyptiaco-Arabica* 178. 1775, *Monographiae Phanerogamarum* 6: 249. 1889, *Fl. Brit. India* 7: 138. 1896 [1897] and *Kew Bulletin* 1954: 51-56. 1954.

Species

T. ramosissimus (Hack.) Bor (*Ischaemum ramosissimum* Hack.; *Ischaemum spathiflorum* Hook.f.; *Sehima spathiflorum* (Hook.f.) Blatt. & McCann; *Triplopogon spathiflorus* (Hook.f.) Bor)

India. Lower glume of sessile spikelet grooved, see *Journal of the Bombay Natural History Society* 32: 23. 1927.

Tripogon Roemer & Schultes = *Arcangelina* Kuntze, *Archangelina* Kuntze, *Kralikia* Coss. & Durieu, *Kralikiella* Batt. & Trab., *Plagiolytrum* Nees

From the Greek *treis* "three" and *pogon* "beard," indicating the lemma and the 3 nerves, the hairs at the base of the lemma nerves.

About 21-31 species, Old World tropics. Chloridoideae, Eragrostideae, Eleusinae, or Chloridoideae, Cynodonteae, annual or perennial, small, densely tufted, erect, herbaceous, simple and slender, delicate, forming dense tussocks, rhizomatous, nodes glabrous, internodes hollow, auricles absent, sheaths terete, ligule a membranous ciliate rim or sometimes absent, leaves mostly basal, leaf blades filiform or linear and involute, plants bisexual, inflorescence a single terminal raceme long-exserted, single spike erect or curved, spikelets solitary and sessile, rachilla prominent, spikelets alternating in 2 rows, several florets, all florets bisexual or the uppermost male to reduced, glumes subequal and persistent, second glume awnless, lemma apices emarginate and lateral nerves glabrous, lemmas slightly rounded on the

back 3-veined and shortly 2-lobed or bidentate, awn straight or rarely flexuous, hairy to glabrous callus, palea 2-toothed and 2-nerved, 2 free and fleshy lodicules, 1-3 stamens, ovary glabrous, stigmas plumose, variable species, common in grassland, rocky or gravelly soils, crevice of rocks, rain-forest, pampas, wet flushes, open habitats, upland regions, savannah, related to *Leptochloa* P. Beauv., type *Tripogon bromoides* Roth ex Roem. & Schult., see *De Fructibus et Seminibus Plantarum*... 1: 7. 1788, *Fragmenta Botanica* 77, 98, t. 121, f. 1. 1809, *Systema Vegetabilium* 2: 34, 600. 1817, *Hortus Regius Botanicus Berolinensis* 1: 44, 280. 1827, *Analyse des Familles de Plantes* 63. 1829, *Proceedings of the Linnean Society of London* 1: 95. 1841, *Ann. Mag. Nat. Hist.* 7: 221. May 1841, *Synopsis Plantarum Glumacearum* 1: 301. 1854, *Bulletin de la Société Botanique de France* 14: 89. 1867, *A List of the Grasses of N.W. India, Indigenous and Cultivated* 33. 1883, *Revisio Generum Plantarum* 2: 759. 1891, Jules Aimé Battandier (1848-1922) et Louis Charles Trabut (1853-1929), *Flore de l'Algérie*: contenant la description de toutes les plantes signalées jusqu'à ce jour comme spontanées en Algérie et Catalogue des plantes du Maroc. Alger 1888-1897 and *Flora of Tropical Africa* 9: 22. 1917, *Kew Bulletin* 25(2): 301-322. 1971, *Candollea* 46: 533-535. 1991, *Flora Mesoamericana* 6: 261-262. 1994, *Flora of Ethiopia and Eritrea* 7: 95-98. 1995, *Sida* 18(3): 809-814. 1999, *Journal of Ecology* 89(2): 209-226. Apr 2001, *Journal of Applied Ecology* 38(5): 897-909. Oct 2001, *Contributions from the United States National Herbarium* 41: 231. 2001, *Kew Bulletin* 57: 911-924. 2002, *New Phytologist* 156(3): 327-349. Dec 2002, *Flora Fanerogámica Argentina* 86: 1-68. 2003, *Blumea* 48(3): 491-494. 2003, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005, *Austral. Ecology* 30(4): 445-464. June 2005.

Species

T. anantaswamianus Sreek., V.J. Nair & N.C. Nair (sometimes spelled *anataswamianus* or *ananthaswamianus*)

India, Kerala. Leaves glabrous, ligules membranous, lemmas cleft at apex into 6 lobes, keels of the paleas ciliate, see *Bulletin of the Botanical Survey of India* 25(1-4): 185. 1983 [1985].

T. bromoides Roth ex Roem. & Schult. (*Avena mysorensis* (Heyne) Spreng.; *Plagiolytrum calycinum* Nees; *Triathera bromoides* Roth ex Roem. & Schult.; *Tripogon bromoides* var. *yunnanensis* (Keng ex J.L. Yang) S.L. Chen & X.L. Yang; *Tripogon festucoides* Jaub. & Spach; *Tripogon lanatus* Hochst. ex Steud.; *Tripogon zeylanicus* Thwaites)

India, Sri Lanka. Perennial, tufted, compact, erect, glabrous, smooth, unbranched, leaves hairy and finely pointed, ligule an inconspicuous ciliolate membrane, loosely imbricate flo-

rets, glumes unequal, keels of the paleas scabrid, good fodder, useful for erosion control and as a soil binder, see *Species Plantarum* 1: 79-81. 1753, *Systema Vegetabilium* 2: 600. 1817, *Systema Vegetabilium, editio decima sexta* 1: 337. 1825, *Proceedings of the Linnean Society of London* 1: 95. 1841, *Illustrationes Plantarum Orientalium* 4: 49, f. 333. 1851, *Synopsis Plantarum Glumacearum* 1: 301. 1854, *Enum. Pl. Zeyl.* 374. 1864 and *Handb. Fl. Ceylon* 5: 273. 1900, *Grasses of Ceylon* 86. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 125. 1959, *Grasses of Burma* ... 521. 1960, *Acta Botanica Yunnanica* 5(1): 51-53, pl. 5. 1981, *Flora Reipublicae Popularis Sinicae* 10(1): 59. 1990.

T. capillatus Jaub. & Spach

Asia, India. Central awn of the lemma flexuous, see *Illustrationes Plantarum Orientalium* 4: 47, pl. 332. 1850-1853 and *Grasses of Burma* ... 521. 1960.

T. chinensis (Franch.) Hack. (*Nardurus filiformis* var. *chinensis* Franch.; *Tripogon chinensis* subsp. *coreensis* (Hack.) T. Koyama; *Tripogon chinensis* var. *coreensis* Hack.; *Tripogon chinensis* var. *genuinus* Hack.; *Tripogon chinensis* var. *longiaristatus* (Honda) I.C. Chung; *Tripogon chinensis* var. *longiaristatus* (Hack. ex Honda) I.C. Chung; *Tripogon chinensis* var. *longiaristatus* Hack. ex Honda; *Tripogon coreensis* (Hack.) Ohwi)

Asia, China, Taiwan. Found in abandoned cropland, see *Nouvelles Archives du Muséum d'Histoire Naturelle sér. 2*, 7: 149. 1884, A.R. Franchet (1834-1900), *Plantae davidianae ex Sinarum imperio*. Paris 1884-1888 and *Botanical Magazine* (Tokyo) 41: 12. 1927, *Botanical Magazine* 55: 310. 1941, *Anales del Jardín Botánico de Madrid* 6(11): 14. 1946, *Journal of the Washington Academy of Sciences* 45(7): 215. 1955, *Grasses of Japan and its Neighboring Regions* 532. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1783-1786. 1990, *Kew Bull.* 57: 915. 2002.

T. ekmanii Nicora & Rúgolo

South America, Paraguay, northeastern Argentina. See E.G. Nicora & Z.E. Rúgolo de Agrasar, "Una nueva especie de *Tripogon* Roem. & Schult. (Poaceae-Eragrosteae), *Tripogon ekmanii* Nicora & Rúgolo." *Candollea* 46(2): 533-535. 1991.

T. filiformis Nees ex Steud. (*Catapodium filiforme* Nees ex Duthie; *Plagiolytrum filiforme* Nees; *Plagiolytrum unidentatum* Nees; *Tripogon filiformis* var. *tenuispicus* Hook.f.; *Tripogon nanus* Keng ex Keng f. & L. Liou; *Tripogon semitruncatus* Nees ex Steud.; *Tripogon unidentatus* Nees ex Steud.)

China, India. Erect, slender, variable, spikelets awned, a useful fodder, see *Proceedings of the Linnean Society of London* 1: 95. 1841, *Synopsis Plantarum Glumacearum* 1: 301. 1854, *A List of the Grasses of N.W. India, Indigenous and Cultivated* 33. 1883, *The Flora of British India* 7(22): 288. 1897 [1896] and *Acta Botanica Sinica* 9(1): 71. 1960.

in India: lobaygyam

T. jacquemontii Stapf

India. Tufted, leaves and culms glaucous, wiry roots, lower glume lobed on 1 side, see *Grasses of Burma ...* 522. 1960, *Taxon* 34: 159-164. 1985.

T. larsenii Bor (dedicated to the Danish botanist Kai Larsen, b. 1926, professor of botany, among his writings are "New species of *Veratrum* and *Orchidantha* from Thailand and Laos." *Saertryk af Botanisk Tidsskrift*. 56: 345-350. 1961, "Studies in the Zingiberaceae. I. The genus *Geostachys* in Thailand." *Saertryk af Botanisk Tidsskrift*. 58: 43-49. 1962, "Studies in the Zingiberaceae. II. Notes on 2 Malayan species of *Scaphochlamys*." *Saertryk af Botanisk Tidsskrift*. 58: 191-197. 1962, "Studies in the Zingiberaceae. III. On a new species of *Kaempferia* from Thailand and its relatives." *Saertryk af Botanisk Tidsskrift*. 58: 198-203. 1962, "Preliminary report on the Thai-Danish Botanical Expedition to the Kanchanaburi Province 1961-1962." *Nat. Hist. Bull. Siam Soc.* 20(2): 109-119, 9 figs., 1 map. 1962 and "Report on the Third Thai-Danish Botanical Expedition, June-July 1963." *Nat. Hist. Bull. Siam Soc.* 20(4): 215-226. 1964, editor of "Studies in the Flora of Thailand." in *Dansk Bot. Ark.* 1961 etc., editor *Flora of Thailand*)

Thailand. Indeterminate species, see *Dansk Botanisk Arkiv* 23: 470. 1968, *Nord. J. Bot.* 20(3): 287. 2000.

T. leptophyllus (Nees ex Steud.) Cufod. (*Danthonia leptophylla* A. Rich.; *Leptochloa setacea* Hochst.; *Tripogon abyssinicus* Nees ex Steud.; *Tripogon abyssinicus* Nees ex A. Rich.; *Tripogon leptophyllus* (A. Rich.) Cuf.)

Ethiopia, Yemen, Sudan. Perennial, densely tufted, delicate, basal leaf sheaths persistent and fibrous, leaves sparsely pilose, leaf blades filiform, inflorescence rather lax, slender flexuous spikes, spikelets narrowly elliptic 4- to 10-flowered, upper glume acuminate, lemmas bidentate with a single awn, palea keels narrowly winged, moist ground, on steep and seasonally wet slopes, among rocks, grassy places, sometimes confused with *Tripogon montanus*, see *Flora* 24(1), *Intell.* 1: 20. 1841, *Tentamen Florae Abyssinicae ...* 2: 421. 1850, *Synopsis Plantarum Glumacearum* 1: 301. 1854 and *Bulletin du Jardin Botanique National de Belgique* 38(Suppl.): 1269. 1968, *Flora of Ethiopia and Eritrea* 7: 97-98. 1995.

T. lisboae Stapf

India. Flat leaf-blades, resembles *Eragrostiella*, see *Kew Bulletin* 1892: 84. 1892 and *Grasses of Burma ...* 522. 1960.

T. loliiformis (F. Muell.) C.E. Hubb. (*Diplachne loliiformis* (F. Muell.) F. Muell. ex Benth.; *Diplachne loliiformis* (F. Muell.) Benth.; *Diplachne loliiformis* var. *longiaristata* Domin; *Diplachne loliiformis* var. *plumosa* Domin; *Festuca loliiformis* F. Muell.)

Australia. Annual or short-lived perennial, very variable, caespitose, small, erect, ligule a ciliate rim, leaf blade flat or rolled, leaves hairy, inflorescence straight or curved, short dense inflorescences with overlapping spikelets, spike simple and terminal, spikelets erect and linear or narrowly oblong with 6-20 florets, the uppermost floret male, glumes obtuse and membranous, basal lemma 1-awned and 3-nerved, lemma with a short bearded callus at the base, palatable and nutritious, eaten by stock, a resurrection plant, leaves revive after desiccation, colonises scalded areas, an increaser or decreaser species, common on stony tablelands, open woodland, alluvial areas, rocky slopes, river floodplains, sandy red earths and shallow soils, see *Fragmenta Phytographiae Australiae* 8: 128. 1873, *Flora Australiensis: A Description ...* 7: 618. 1878 and *Bulletin of Miscellaneous Information Kew* 1934: 448. 1934, *Austral. Grasses* 1: 121, pl. 46. 1966.

in English: five-minute grass, rye beetlegrass, eight-day grass

T. longiaristatus Hack. ex Honda (*Tripogon chinensis* var. *longiaristatus* Hack. ex Honda; *Tripogon coreensis* var. *longiaristatus* (Nakai) Hack. ex T. Mori; *Tripogon japonicus* (Honda) Ohwi; *Tripogon longearistatus* Honda; *Tripogon longearistatus* Nakai; *Tripogon longiaristatus* subsp. *japonicus* (Honda) T. Koyama; *Tripogon longiaristatus* var. *japonicus* Honda; *Tripogon panxianensis* H. Peng)

Korea. See T. Nakai, Saishu-to narabini Kwan-to shokubutsu hokoku-sho / *Flora of Saishu and Kwan Islands* (Quelpaert). 1914, *An Enumeration of Plants Hitherto Known From Corea* 56. 1922, *Botanical Magazine* (Tokyo) 41(481): 6, 11, 12, 16. 1927, *Acta Phytotaxonomica et Geobotanica* 4: 83. 1935, *Grasses of Japan and its Neighboring Regions* 532. 1987, *Acta Botanica Yunnanica* 13(2): 147-148, pl. 1. 1991.

T. longiaristatus Hack. ex Honda var. ***japonicus*** Honda (*Tripogon japonicus* (Honda) Ohwi; *Tripogon longiaristatus* Hack. ex Honda; *Tripogon longiaristatus* subsp. *japonicus* (Honda) T. Koyama)

Japan. Rare species, see *Botanical Magazine* (Tokyo) 41: 11, 12, 16. 1927, *Acta Phytotaxonomica et Geobotanica* 4: 83. 1935, *Grasses of Japan and its Neighboring Regions* 532. 1987.

T. major Hook.f. (*Tripogon jaegerianus* A. Camus; *Tripogon liebenbergii* C.E. Hubb.; *Tripogon major* subsp. *deflexa* Gledhill; *Tripogon major* subsp. *jaegeriana* Gledhill; *Tripogon snowdenii* C.E. Hubb.; *Tripogon unisetus* Pilg.)

Tropical Africa, Cameroon. Perennial, tussocky, erect, swollen at the base, culms enclosed by the persistent leaf sheaths, spikes erect, spikelets well spaced, 6-18 florets loosely imbricate, lower glume linear-lanceolate, upper glume narrowly lanceolate, palea-keels winged, floret callus with spreading hairs, see *Journal of the Proceedings of the*

Linnean Society 7: 230. 1864 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11: 654. 1932, *Bulletin of Miscellaneous Information Kew* 1934: 118. 1934, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 1: 212, t. 12, f. 7-10. 1954, *Boletim da Sociedade Broteriana, ser. 2* 41: 166, t. 1B, C. 1967.

in Yoruba: irungbon efon

T. minimus (A. Rich.) Hochst. ex Steudel (*Festuca minima* A. Rich.; *Tripogon abyssinicus* Nees ex A. Rich.; *Tripogon calcicolus* A. Camus, also spelled *calcicola*; *Tripogon humbertianus* A. Camus; *Tripogon mandarensis* A. Camus; *Tripogon minimus* (A. Rich.) Hochst.; *Tripogon minimus* (A. Rich.) Steud.)

Tropical East Africa, Swaziland, Benin, Madagascar. Perennial, tufted, densely matted, small, old leaf sheaths fibrous, slender and erect inflorescence, spikelets narrowly elliptic-oblong, 4-10 imbricate florets, lower glume lanceolate-oblong, upper glume narrowly oblong, lemmas narrowly ovate, palea keels narrowly winged, leaves revive after desiccation, provides grazing for cattle, desert grass, open places, alluvial areas, thin sandy loam, seasonally wet areas, woodland, waterlogged sand, bushland, shallow soil, see *Tentamen Florae Abyssinicae ... 2*: 436. 1850, *Synopsis Plantarum Glumacearum* 1: 301. 1854 and *Bulletin de la Société Botanique de France* 101: 396. 1954, *Bulletin de la Société Botanique de France* 106: 214. 1959.

in Niger: bahél, bubukuwa, bubukwa, buubuukuwaa, dakléa, kangêm, kangya keeri, kuru-kosu, niaraédjé, tamatan-kola

in Nigeria: bubbuukuwaa, bukai, buke, dakesa, daskara, diskara, sabko bubbuukuwaa

in Upper Volta: bahel, bahel maccudo, mangel mangurla

T. montanus Chiov.

Uganda, Ethiopia, Sudan, Yemen. Perennial, variable, densely tufted, compact, tussocky, wiry, basal leaf sheaths papery and not fibrous, leaf blades filiform, leaves sparsely pilose to villous, spikes slender extending above the leaves, few-flowered spikelets more or less distant and appressed to the rachis, 3-5 florets, glumes very unequal, upper glume acuminate, lemmas awned, long flexuous awns, central awn variable, callus pilose to bearded, palea keels not winged, usually found near streams, upland, open to exposed places, grassland, similar to *Tripogon leptophyllus*, see *Annuario del Reale Istituto Botanico di Roma* 8(3): 351. 1908.

T. multiflorus de Miré & Gillet (*Tripogon tibesticus* de Mire, Gillet & Quezel)

Central Sahara, Yemen, Kenya. Perennial bunchgrass, densely tufted, tussocky, basal leaf sheaths fibrous or not fibrous, leaf blades filiform, leaves flat and pilose or glabrous and convolute, elongate narrow spikelets clustered, many-flowered spikelets erect or loosely ascending, 8-19 florets, the upper spikelets longer than the lower, upper

glume obtuse, lemmas entire or bidentate with a central awn, callus pilose, drought resistant, found on well-drained rocky slopes, limestone cliffs, seasonally wet areas, see *Journal d'Agriculture Tropicale et de Botanique Appliquée* 3: 737. 1956, *Journal d'Agriculture Tropicale et de Botanique Appliquée* 4: 154. 1957.

T. oliganthos Cope

Yemen. See T.A. Cope, "Some new Arabian grasses II." *Kew Bulletin*. 47(4): 655-664. 1992.

T. pungens C.E.C. Fischer

India. Culms thickened, persistent leaf sheaths, leaves rigid and pungent, see *Bulletin of Miscellaneous Information Kew* 1934: 170. 1934, *Grasses of Burma ...* 522. 1960.

T. purpurascens Duthie (*Catapodium filiforme* Nees ex Duthie; *Festuca filiformis* Nees ex Steud.; *Tripogon hookerianus* Bor ex Sultan & R.R. Stewart; *Tripogon hookerianus* Bor; *Tripogon jacquemontii* var. *submuticus* Hook.f.)

Pakistan, Oman to Yemen, northwest India, Nepal. Perennial, densely tufted, basal leaf sheaths fibrous and purplish when old, leaves pilose, spikelets purplish erect and appressed to the rachis, upper glume acuminate, lemmas bidentate with a single awn, callus pilose, common in wet areas, desert areas, sandy coarse soils, sandy gravelly alluvial soils, see *Synopsis Plantarum Glumacearum* 1: 302. 1854, *A List of the Grasses of N.W. India, Indigenous and Cultivated* 33. 1883, *The Flora of British India* 7(22): 287. 1897 [1896] and *Annals of the Royal Botanic Garden, Calcutta*. 9(1): 74-75, t. 92. 1901, *Grass. W. Pakistan* 2: 254. 1959, *Grasses of Burma, Ceylon, India and Pakistan* 522. 1960, *Taxon* 34: 159-164. 1985.

T. ravianus C.N. Sunil & A.K. Pradeep (after the Indian botanist N. Ravi, a grass specialist)

India, Tamil Nadu. Perennial, tufted, leaf sheaths glabrous, ligule a fine membrane, racemes terminal with several spikelets linear, 6-14 florets, lower glume coriaceous and broadly ovate, upper glume lanceolate and awned, lemma coriaceous, central lobes of the lemmas lanceolate, 3 awns, palea keels ciliate, 2 lodicules, 3 stamens, ovary obovate, stigma feathery, grows on wet rocky hillsides, closely allied to *Tripogon anantaswamianus* Sreek., V.J. Nair & N.C. Nair, a species endemic to Kerala, see P.V. Sreekumar and V.J. Nair, *Flora of Kerala- Grasses*. Botanical Survey of India. Calcutta 1991, A.K. Pradeep and C.N. Sunil, "Two new species of *Tripogon* (Poaceae) from India." *Sida* 18: 809-814. 1999, *Sida* 19(4): 803-806. 2001.

T. roxburghianus (Steud.) Bhide (*Lepturus roxburghianus* Steud.; *Oropetium roxburghianus* (Steud.) S.M. Phillips; *Rottboellia biflora* Roxb.)

India. Spikelets 1- to 2-flowered, lower glume symmetrical, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Prodromus Florae Novae Hollandiae* 207. 1810, *Flora Indica; or Descriptions ...* 1: 357. 1820, *Fundamenta Agrostographiae*

98, t. 3. 1820, *Synopsis Plantarum Glumacearum* 1: 357. 1854 and *Journal and Proceedings of the Asiatic Society of Bengal* 2(7): 515. 1912, *Grasses of Burma ...* 524. 1960, *Kew Bulletin* 30: 468. 1975.

T. sivarajanii Sunil (for V.V. Sivarajan, a botanist in Kerala) India, Kerala, Western Ghats. Perennial, tufted, nodes glabrous, leaves linear acuminate and villous on the upper surface, ligule a fine glabrous membrane, leaf sheaths smooth, fibrous roots, racemes with several spikelets, 5-8 florets, lower glume lanceolate and notched on one side, upper glume acute or acuminate, lemma awned, palea 2-lobed and 2-keeled, 3 stamens, ovary globose, feathery stigmas, forming turf, grows along grassy hill slopes, closely resembles *Tripogon trifidus*, see *Sida* 18(3): 809-814. 1999.

T. spicatus (Nees) Ekman (*Bromus spicatus* Nees; *Diplachne reverchonii* Vasey; *Diplachne simplex* Döll; *Diplachne spicata* (Nees) Döll; *Leptochloa spicata* (Nees) Scribn.; *Rabdochloa spicata* (Nees) Kuntze ex Stuck.; *Sieglingia schaffneri* (S. Watson) Kuntze; *Sieglingia spicata* (Nees) Kuntze ex Stuck.; *Tricuspis simplex* Griseb.; *Triodia schaffneri* S. Watson; *Triplasis setacea* Griseb.)

South America, southern U.S. to Argentina, Brazil, Paraguay. Perennial, simple, tufted, tussocky, slender, leaf sheaths furrowed, fibrous remains of old sheaths, ligule a rim of hairs, leaf blades densely hispid, inflorescence a slender unilateral raceme, spikelets 2-ranked, 4-10 florets, glumes acute lanceolate, lemma ovate and 2-lobed, palea 2-dentate, lodicules narrowly cuneate, 3 stamens, common in dry savannah, dry rocky slopes, degraded grassland, along roadsides, on gravelly slopes seasonally wet, similar to *Tripogon minimus*, see *Species Plantarum* 1: 76-78. 1753, *Essai d'une Nouvelle Agrostographie* 71, 80-81, 84, 176. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 471. 1829, *Memoirs of the American Academy of Arts and Science, new series* 8: 532. 1862, *Flora Brasiliensis* 2(3): 97, 160. 1878, *Abhandlungen der Königlich-Gesellschaft der Wissenschaften zu Göttingen* 24: 304. 1879, *Proceedings of the American Academy of Arts and Sciences* 18: 181. 1883, *Bulletin of the Torrey Botanical Club* 13(7): 118. 1886, *Revisio Generum Plantarum* 2: 789. 1891, *Proceedings of the Academy of Natural Sciences of Philadelphia* 43(2): 304. 1891 and *Anales del Museo Nacional de Buenos Aires* 11: 121, 128. 1904, *Arkiv för Botanik utgivet av K. Svenska Vetenskapsakademien* 11(4): 36. 1912, *American Journal of Botany* 45: 757-767. 1958.

in English: American five-minute grass, American tripogon

T. subtilissimus Chiov.

Ethiopia, Yemen, Somalia. Perennial, variable, slender, tufted, basal sheaths persistent, leaf blades filiform, slender to dense inflorescence curved, spikelets linear-oblong 7- to 19-flowered, short acute lower glume, lemma toothed and awned, shortly bilobed lemma-tip, on sandy soils, rocky places, bushland, see *Annali di Botanica* 5: 66. 1906.

in Somalia: harfo

T. trifidus Munro ex Hook.f. (*Tripogon trifidus* Munro ex Stapf)

Eastern India, Bhutan. Ligules ciliate, 5-8 florets, lower glumes laterally lobed and notched, upper glume 2-dentate with a short apical awn, lemma bearded at base and awned, see *Bulletin of Miscellaneous Information Kew* 1892: 85. 1892, *The Flora of British India* 7(22): 286. 1897 [1896] and *Edinb. J. Bot.* 56(3): 394. 1999.

T. vellarianus Pradeep

India, Kerala, Western Ghats, Vellarimala. Perennial, tufted, not glaucous, strongly tussock-forming habit, erect, nodes glabrous, flat leaf blades broad and linear, leaf sheaths rigid and clasping, wiry roots, large spikelets dorsiventrally flattened, 8-10 florets, lower glumes lanceolate acuminate, upper glumes elliptic-lanceolate, lemmas ovate-lanceolate and awned, palea keeled and winged, 2 lodicules, 3 stamens, ovary obovate, feathery stigmas, see *Sida* 18(3): 809-814. 1999.

T. wardii Bor

Burma/Myanmar. Lowest lemma sterile and glume-like, see *Kew Bulletin* 12(3): 417. 1958, *Grasses of Burma ...* 524. 1960.

T. wightii Hook.f.

South India. Paleas broadly winged, see *The Flora of British India* 7(22): 286. 1897 [1896] and *Grasses of Burma ...* 524. 1960.

T. yunnanensis J.L. Yang ex S.M. Phillips & S.L. Chen (*Tripogon bromoides* var. *yunnanensis* (Keng ex J.L. Yang) S.L. Chen & X.L. Yang; *Tripogon yunnanensis* Keng ex J.L. Yang)

China. See *Acta Botanica Yunnanica* 5(1): 51-53, pl. 5. 1981, *Flora Reipublicae Popularis Sinicae* 10(1): 59. 1990, *Kew Bulletin* 57(4): 921-922. 2002.

Tripsacum L. = *Dactylodes* Kuntze, *Digitaria* Adans.

Origin obscure, probably from Greek *tripsis* "rubbing, friction, durability" or *treis* "three" and *psakas* "a grain, any small piece broken off."

About 13 or more species, America, southern and eastern U.S. to Paraguay. Panicoideae, Andropogonodae, Maydeae, or Panicoideae, Andropogoneae, Tripsacinae, perennial bunchgrass, stout, usually succulent, thick and solid culms, robust, rhizomes short and stout, auricles absent, ligule a short membrane fringed, plants monoecious with separate male and female flowers, the male above and the female below on the same inflorescence, upper portion with paired male spikelets, inflorescences in terminal and axillary clusters, solitary or whorled spikes, 1 to 6 racemes of unisexual

spikelets, solitary pistillate spikelets sunken in the rachis joints, all the fertile spikelets unisexual, 2 glumes, hermaphrodite florets wanting, male and female-fertile spikelets in different parts of the same inflorescence branch, male spikelets with 2 glumes, staminate spikelets with coriaceous outer glumes or with membranous outer glumes, palea present, lodicules absent, stamens absent, ovary glabrous, 2 stigmas, weedy species forming clumps, fodder, cultivated for forage, open areas, slopes, shade, moist places, forest margins, along roadsides, creeks, woodland, cliffs, a difficult genus, closely related to and hybrids with *Zea*, type *Tripsacum dactyloides* (L.) L., see C. Linnaeus, *Systema Naturae, Editio Decima* 1253, 1261, 1379. 1759, *Familles des Plantes* 2: 38, 550. 1763, *Revisio Generum Plantarum* 2: 772. 1891 and *Botanical Gazette* 41: 294. 1906, *Boletín de la Sociedad Botánica de México* 25: 1-21. 1941, *Rhodora* 66: 371-374. 1964, *Bot. Mus. Leaflet. Harv.* 20: 289-316. 1964, *Bot. Mus. Leaflet. Harv.* 22: 33-62. 1967, *Evolution* 27: 644-655. 1974, *Phytologia* 33(3): 203-227. 1976, *American Journal of Botany* 68: 269-276. 1981, *Systematic Botany* 8: 243-249. 1983, *American Journal of Botany* 70: 706-711. 1983, *American Journal of Botany* 71: 245-251. 1984, *Flora Mesoamericana* 6: 398-400. 1994, *American Journal of Botany* 82(1): 57-63. 1995, Helmut Genaust, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 658-659. Basel 1996, *Agrociencia* 31(3): 331-334. 1997, *Heredity* 80(1): 33-39. Jan 1998 [Mapping diplosporous apomixis in tetraploid *Tripsacum*: one gene or several genes?], *Heredity* 80(1): 40-47. Jan 1998 [Non-Mendelian transmission of apomixis in maize - *Tripsacum* hybrids caused by a transmission ratio distortion], *American Journal of Botany* 85(9): 1237-1242. 1998, Lucia G. Le Roux and Elizabeth A. Kellogg, "Floral development and the formation of unisexual spikelets in the Andropogoneae (Poaceae)." *Am. J. Bot.* 86: 354-366. 1999, *Am. J. Bot.* 88: 1993-2012. 2001, Alan R. Orr, Kevin Mullen, Darcey Klaahsen and Marshall D. Sundberg, "Inflorescence development in a high-altitude annual Mexican teosinte (Poaceae)." *Am. J. Bot.* 89: 1730-1740. 2002, *Contributions from the United States National Herbarium* 46: 169, 193, 623-627. 2003, *Am. J. Bot.* 91: 165-173, 1709-1725. 2004, *Am. J. Bot.* 92: 954-959. 2005, *Plant Breeding* 124(1): 96-98. Feb 2005, *Grassland Science* 51(1): 71-78. Mar 2005, *Plant Breeding* 124(2): 147-153. Apr 2005.

Species

T. sp.

in Mexico: huaxcalotemilpilla, zacate

T. andersonii J.R. Gray (*Tripsacum guatemalense* Chitwood & Berger; *Tripsacum latifolium* Hitchc.; *Tripsacum laxum* non Nash, sensu Ostendorf) (named for E. Anderson, botanical collector in Central America)

Central America, northern South America, Mexico to Peru. Perennial, robust, vigorous, erect, ascending, caespitose,

glabrous, often decumbent when old, mat-forming, ligule a membranous ridge, leaf sheaths keeled above, leaf blades linear-lanceolate and acuminate at apex, lower leaf sheaths shortly pubescent, strongly stoloniferous, rhizomatous, inflorescences terminal and axillary, erect to curving racemes, each raceme with numerous staminate spikelets and several pistillate spikelets, staminate spikelets paired at each rachis node, pistillate spikelets sunken in cavities of the rachis, racemes basal portion female and apical male, cultivated for forage or an escape, growing in colonies, foliage used as cut fodder, soil cover, mulching, useful for erosion control, found in drained swamps, slopes, old fields, inundated and marshy conditions, tea plantations, cultivated areas, edge of forest, often confused with *Tripsacum latifolium* Hitchc., *Tripsacum laxum* Nash and *Tripsacum maizar* Hernandez-Xol. & Randolph, see *Botanical Gazette* 41(4): 294-295. 1906, *Nuttige Pflanzen in Sierplanten in Suriname* 231. 1962, *Phytologia* 33(3): 204, f. 1. 1976, *American Journal of Botany* vol. 70(5):706-711. 1983, C.L. Dewald and B.K. Kindiger, "Cytological and molecular evaluation of the reproductive behavior of *Tripsacum andersonii* and a female fertile derivative (Poaceae)." *American Journal of Botany* 85(9): 1237-1242. 1998.

in English: Guatemala grass

in Spanish: zacate de Guatemala

in Honduras: zacate de Guatemala, pasto guatemala

in Nicaragua: mamak, namak

in Malaysia: rumput jagung, rumput jelai

in Thailand: ya-kuatemala

T. australe H.C. Cutler & E.S. Anderson (*Tripsacum dactyloides* subsp. *hispidum* Hitchc.)

South America. Perennial, robust, vigorous, erect or decumbent, caespitose, glabrous, lower leaf sheaths shortly pubescent to woolly, axillary inflorescence with 1-5 racemes, terminal inflorescence with 2-10 racemes, erect to curving racemes, racemes basal portion female and apical male, savannah, lowlands, open areas, disturbed areas, campos, see *Botanical Gazette* (Crawfordsville) 41(4): 295-296. 1906, *Contr. U.S. Natl. Herb.* 22: 513. 1922, *Annals of the Missouri Botanical Garden* 28(4): 259, f. 2. 1941.

T. australe H.C. Cutler & E.S. Anderson var. *australe*

South America.

T. australe H.C. Cutler & E.S. Anderson var. *hirsutum* de Wet & Timothy

South America, Bolivia. Perennial, tufted, see *American Journal of Botany* 68(2): 272, f. 4. 1981.

T. bravum J.R. Gray

South America, Mexico. See *Phytologia* 33(3): 206, f. 3. 1976.

T. cundinamarcae de Wet & Timothy

South America. See *American Journal of Botany* 68(2): 274, f. 6. 1981.

T. dactyloides (L.) L. (*Andropogon dactyloides* Steud.; *Andropogon digitatus* Hochst. ex Steud.; *Coix angulata* Mill.; *Coix dactyloides* L.; *Dactylodes angulatum* (Mill.) Kuntze; *Dactylodes dactyloides* (L.) Kuntze; *Ischaemum glabrum* Walter; *Tripsacum dactyloides* f. *prolificum* R.S. Dayton & Dewald; *Tripsacum dactyloides* subsp. *hispidum* Hitchc.; *Tripsacum dactyloides* var. *monostachyon* (Willd.) Eaton & J. Wright; *Tripsacum dactyloides* var. *monostachyum* (Willd.) Hack.; *Tripsacum dactyloides* var. *occidentale* Cutler & Anderson; *Tripsacum monostachyon* Willd.)

Western hemisphere. Perennial, caespitose, densely clumped, glabrous, stout, solid, robust, tough, persistent, culms thick at base, rhizomatous with short and woody rhizomes, stilt rooting from lower nodes, culm sheath persistent, ligules membranous and ciliate, leaf sheaths overlapping at base, midrib of the leaves tough, leaf blades lanceolate with obtuse to subcordate base, stiff inflorescence terminal and axillary, erect to curving racemes, racemes basal portion female and apical male, hay plant and good fodder, seldom grazed, it does not tolerate standing water, useful as a soil conditioner, used for mulching, grows on moist fertile soils, shores, savannah, well-drained sites, salt marsh borders, near running fresh water, drained swamps, closely related to *Tripsacum australe*, see *Species Plantarum* 2: 972, 1045, 1049. 1753, *Systema Naturae, Editio Decima* 2: 1261. 1759, *The Gardeners Dictionary: ... eighth edition* Coix No. 2. 1768, *Flora Caroliniana, secundum ...* 249. 1788, *Hortus Berolinensis* 1, t. 1. 1803, *A Manual of Botany* 461. 1840, *Synopsis Plantarum Glumacearum* 1: 382. 1854, *Flora Brasiliensis* 2(4): 316. 1883, *Revisio Generum Plantarum* 2: 773. 1891, *Contributions from the United States National Herbarium* 3(1): 6. 1892, *Grasses of North America for Farmers and Students* 2: 19. 1896, *Catálogo de Plantas Mexicanas* 376. 1897, *Revisio Generum Plantarum* 3(2): 349. 1898 and *Botanical Gazette* 41(4): 295-296. 1906, *Contr. U.S. Natl. Herb.* 12: 124. 1908, *Annals of the Missouri Botanical Garden* 28(4): 258. 1941, *J. Hered.* 62: 280-284. 1971, *Phytologia* 57(2): 156. 1985, Lin L.-S., T.D. Ho and J.R. Harlan, "Rapid amplification and fixation of new restriction sites in the ribosomal DNA repeats in the derivatives of a cross between maize and *Tripsacum dactyloides*." *Developmental Genetics* 6: 101-112. 1985, *American Journal of Botany* 74: 1055-1059. 1987, Harcombe P.A., G.N. Cameron and E.G. Glumac, "Aboveground net primary productivity in adjacent grassland and woodland on the coastal prairie of Texas." *Journal of Vegetation Science* 4(4): 521-530. 1993, *Acta Genetica Sinica* 21(5): 398-402. 1994, *Economic Botany* 49(2): 172-182. 1995, Philip A. Fay and Alan K. Knapp, "Stomatal and photosynthetic responses to shade in sorghum, soybean and eastern gamagrass." *Physiologia Plantarum* 94(4): 613-620.

Aug 1995, *American Journal of Botany* 85(9): 1237-1242. 1998, Alan R. Orr, Rahkee Kaparathi, Chester L. Dewald and Marshall D. Sundberg, "Analysis of inflorescence organogenesis in eastern gamagrass, *Tripsacum dactyloides* (Poaceae): the wild type and the gynomonoeocious *gsf1* mutant." *Am. J. Bot.* 88: 363-381. 2001, A.L. Gurney et al., "Novel sources of resistance to *Striga hermonthica* in *Tripsacum dactyloides*, a wild relative of maize." *New Phytologist* 160(3): 557-568. Dec 2003, *Plant Breeding* 124(1): 96-98. Feb 2005, *Grassland Science* 51(1): 71-78. Mar 2005, *Plant Breeding* 124(2): 147-153. Apr 2005.

in English: gama grass, eastern gama grass

in Mexico: zacate maicero, zacate maceiro

T. dactyloides (L.) L. var. ***dactyloides*** (*Tripsacum dactyloides* subsp. *dactyloides*; *Tripsacum dactyloides* var. *genuinum* Hack.)

South America. See *Flora Brasiliensis* 2(4): 316. 1883.

T. dactyloides (L.) L. var. ***hispidum*** (Hitchc.) de Wet & J.R. Harlan (*Tripsacum dactyloides* subsp. *hispidum* Hitchc.; *Tripsacum lanceolatum* Rupr. ex E. Fourn.)

South America. See *Mexicanas Plantas* 2: 68. 1886 and *Botanical Gazette* 41(4): 295-296. 1906, *American Journal of Botany* 69(8): 1254. 1982.

T. dactyloides (L.) L. var. ***meridionale*** de Wet & J.R. Harlan
South America. See *American Journal of Botany* 68(2): 274, f. 4. 1981.

T. dactyloides (L.) L. var. ***mexicanum*** de Wet & J.R. Harlan
South America. See *American Journal of Botany* 69(8): 1254. 1982.

T. fasciculatum Trin. ex Asch. (*Andropogon fasciculatus* L.; *Microstegium fasciculatum* (L.) Henrard; *Tripsacum fasciculatum* (L.) Raspail; *Tripsacum fasciculatum* Trin. ex Steud.; *Tripsacum fasciculatum* Trin. ex Galeotti; *Tripsacum laxum* Scribn. & Merr.; *Tripsacum laxum* Nash)

Mexico, South and Central America. Stout, coarse, large, thick base, sheaths glabrous, broad-leaves, slender inflorescence racemose, widely cultivated, low nutritive value, useful silage, good fodder plant, poor tolerance to drought and flooding, used as a soil binder, humid areas, rich soils, well-drained places, closely related to *Tripsacum laxum* Nash, see *Species Plantarum* 2: 1047. 1753, *Annales des Sciences Naturelles (Paris)* 5: 306. 1825, *A Natural System of Botany* 447. 1836, *Nomenclator Botanicus. Editio secunda* 2: 712. 1841, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9: 243. 1842, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 17: 79. 1875, *Botanische Zeitung, Berlin* 33: 525. 1877 and *Blumea* 3(3): 453-454. 1940, *Phytologia* 33: 201. 1976, *Taxon* 49(2): 245. 2000.

in English: Guatemala grass, Guatemalan grass

in Central America: manillo, teocinte perenne, zeosinte

in Colombia: Guatemala

in Mexico: caña brava, malote, zacate guatemala

T. floridanum Porter ex Vasey (*Tripsacum dactyloides* var. *floridanum* (Porter ex Vasey) Beal)

North America, U.S. Forage, see *Contributions from the United States National Herbarium* 3(1): 6. 1892, *Grasses of North America for Farmers and Students* 2: 19. 1896 and *Bot. Gazette* 41: 296. 1906.

in English: Florida gamagrass

in Mexico: zacate maicero floridano, zacate maizar

T. intermedium de Wet & J.R. Harlan

South America, Mexico, Honduras. See *American Journal of Botany* 69(8): 1255. 1982.

T. jalapense de Wet & Brink

Mexico, Guatemala. Perennial, tufted, inflorescence terminal, see *American Journal of Botany* 70(8): 1141, f. 3. 1983.

T. lanceolatum Rupr. ex Fourn. (*Tripsacum acutiflorum* E. Fourn.; *Tripsacum acutiflorum* Rupr. ex E. Fourn.; *Tripsacum dactyloides* subsp. *hispidum* Hitchc.; *Tripsacum dactyloides* var. *angustifolium* Scribn.; *Tripsacum dactyloides* var. *hispidum* (Hitchc.) de Wet & J.R. Harlan; *Tripsacum dactyloides* var. *lemmonii* (Vasey) Beal; *Tripsacum lanceolatum* Rupr. ex Benth.; *Tripsacum lemmonii* Vasey)

North America, Mexico. Perennial, tufted, robust, very good forage, see George Bentham (1800-1884), *Plantas Hartwegianas imprimis Mexicanas* 347. 1857, *Bulletin de la Société Botanique de Belgique* 15: 466. 1876, *Mexicanas Plantas* 2: 68-69. 1886, *Contributions from the United States National Herbarium* 3(1): 6. 1892, *Grasses of North America for Farmers and Students* 2: 19. 1896, *Catálogo de Plantas Mexicanas* 376. 1897 and *Botanical Gazette* 41(4): 295-297. 1906, *American Journal of Botany* 69(8): 1254. 1982.

in English: Mexican gamagrass

in Mexico: maicero, mijo silvestre, milpa de venado, prodigio, zacate tule, zacatón

T. latifolium Hitchc. (*Tripsacum lanceolatum* var. *monostachyum* E. Fourn.)

North America, U.S. Sessile staminate spikelets, see *Mexicanas Plantas* 2: 69. 1886 and *Botanical Gazette* 41(4): 294-295. 1906.

in English: wideleaf gamagrass

in Mexico: guatemala

T. laxum Nash (*Dactyloides fasciculatum* Kuntze; *Tripsacum acutiflorum* E. Fourn. ex Nash; *Tripsacum acutiflorum* E. Fourn.; *Tripsacum acutiflorum* Rupr. ex E. Fourn.; *Tripsacum fasciculatum* Trin. ex Asch., nom. illeg., non *Tripsacum fasciculatum* (L.) Raspail; *Tripsacum fasciculatum* Asch.; *Tripsacum fasciculatum* (L.) Raspail; *Tripsacum*

fasciculatum Raspail; *Tripsacum fasciculatum* Trin. ex Galeotti; *Tripsacum fasciculatum* Trin. ex Steud.)

Central America, Mexico. Densely clumped, large, glabrous, leaf blades broadly elongate, 10-50 racemes per terminal inflorescence, male section of each raceme pendent, good forage, soil binder, see *Annales des Sciences Naturelles (Paris)* 5: 306. 1825, *Nomenclator Botanicus. Editio secunda* 2: 712. 1841, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9: 243. 1842, *Bulletin de la Société Botanique de Belgique* 15: 466. 1876, *Botanische Zeitung. Berlin* 33: 525. 1877, *Mexicanas Plantas* 2: 68-69. 1886, *Revisio Generum Plantarum* 2: 773. 1891 and *North American Flora* 17: 81. 1909, *American Midland Naturalist* 4: 91. 1915.

in Mexico: caña brava, malote

T. maizar Hernandez-Xol. & Randolph

North America, Mexico. Guatemala. 10-50 racemes per terminal inflorescence, male section of each raceme pendent, forage, see *Folleto Técnico Oficina de Estudios Especiales, México, Secretaría de Agricultura y Ganadería* 4: 7. 1950, *Revista de la sociedad mexicana de historia natural* 15: 59-68. 1954, *Annals of Botany* 85: 845-850. 2000.

in Mexico: zacate malote

T. manisuroides de Wet & J.R. Harlan

South America. Perennial, erect, prostrate or semierect, see *American Journal of Botany* 69(8): 1255. 1982.

T. peruvianum de Wet & Timothy

South America. See *American Journal of Botany* 68(2): 275, f. 7, 8. 1981.

T. pilosum Scribner & Merr. (*Tripsacum pilosum* var. *guatemalense* de Wet & Brink; *Tripsacum pilosum* var. *pilosum*)

South America. Very good forage, see *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 6, f. 1. 1901, *American Journal of Botany* 70(8): 1142, f. 4. 1983.

in Mexico: maicillo

T. zopilotense Hern.-Xol. & Randolph

Mexico. Perennial, caespitose, fodder, see *Folleto Técnico Oficina de Estudios Especiales, México, Secretaría de Agricultura y Ganadería* 4: 7. 1950, *Boletín de la Sociedad Botánica de México* 28: 11-18. 1963.

in Mexico: zacate

Triraphis R. Br.

From the Greek *treis* "three" and *rhaphis*, *rhaphidos* "a needle," referring to the three-awned lemmas, to the awns of the flowering glume; see Robert Brown, *Prodromus florae Novae Hollandiae et Insulae van-Diemen*. 185. London (Mar) 1810.

About 6-10 species, southern tropical Africa and South Africa, Australia. Chloridoideae, Eragrostideae, Eleusininae, or Chloridoideae, Cynodonteae, Eleusininae, annual or short-lived perennial, caespitose, erect to ascending, slender, herbaceous, glabrous nodes, solid internodes, ligule more or less membranous and fringed to ciliate, auricles absent, leaf blade bristle-like and involute, leaves narrow and mostly basal, plants bisexual, inflorescence an open or contracted panicle, pedicellate and solitary spikelets compressed laterally and disarticulating between the florets, pedicels without glands, 3-10 bisexual florets, the uppermost floret barren or reduced, 2 glumes subequal and shorter than the spikelets, upper glume 2-toothed and 1-nerved, lemmas 3-veined and 3-awned, hairy or bearded callus, membranous palea 2-keeled and 2-nerved, 2 small lodicules free and fleshy or membranous, 3 stamens, ovary glabrous, 2 plumose white stigmas, small trigonous fruit, open habitats, sandy or stony soils, savannah, close to *Neyraudia*, type *Triraphis pungens* R. Br., see *Prodromus Florae Novae Hollandiae* 185. 1810 and *Fl. Afrique Nord* 2: 191. 1953, *Grasses Central Australia* 245-246. 1970, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Contributions from the United States National Herbarium* 41: 231-232. 2001.

Species

T. andropogonoides (Steud.) Phill. (*Avena andropogonoides* Steud.)

South Africa. Perennial, tufted, brown to reddish base, rhizomatous with long creeping rhizomes, ligule a ring of hairs, leaf blade usually rolled, dense panicle open or contracted, central awn of the lemma shorter than the lemma, unpalatable, low grazing value, growing in open habitats, on well-drained soils, stony slopes, open grassland, deep sand, see *Species Plantarum* 1: 79-81. 1753 and *An Introduction to the Study of the South African Grasses ...* 219, t. 92. 1931, *Cytologia* 19: 97-103. 1954.

in English: broom needlegrass

in South Africa: besemgras

T. compacta Cope

Ethiopia. Perennial, slender, erect, tufted, leaf sheaths hispid, leaf blades linear, compact inflorescence paniculate, panicle linear, spikelets densely crowded, 6-8 florets, glumes mucronate, lower glume linear-lanceolate, upper glume linear-oblong, pilose lemmas linear-oblong, grassland, see *Kew Bulletin* 35(3): 566. 1980, *Flora of Ethiopia and Eritrea* vol. 7: 93-94. 1995.

T. devia Filg. & Zuloaga

America, Brazil. Erect, see *Novon* 9(1): 36, f. 1. 1999.

T. diantha F. Muell.

Australia. See *Fragmenta Phytographiae Australiae* 8: 125. 1873.

T. microdon Benth. (*Notochloe microdon* (Benth.) Domin; *Sieglingia microdon* (Benth.) Kuntze; *Triodia microdon* (Benth.) F. Muell.)

Australia, New South Wales. See *Flora Australiensis: A Description ...* 7: 605. 1878 and *Repertorium Specierum Novarum Regni Vegetabilis* 10: 117. 1911.

T. mollis R. Br. (*Sesleria mollis* (R. Br.) Sprengel; *Sessleria mollis* (R. Br.) Sprengel)

New South Wales, Northern Territory, Queensland, South Australia, Victoria, Western Australia. Biennial or short-lived perennial or annual, loosely tufted or tussocky, purplish, glabrous, erect stems and leaves, leaves filiform and more or less channelled, soft and compact panicle, lower glume mucronate, upper glume 2-toothed, lemma narrow, very short acute callus, seed heads purple or green, individual seeds thin, grazed, low palatability, low forage value, useful for erosion control, suspected of causing cyanide poisoning in animals, common on sandy soils and sand dunes, coastal plains, arid and semiarid areas, hind dunes, on creek banks and floodouts, sand plains, lower dune slopes, sand-mounded areas, also on red earths, see *Prodromus Florae Novae Hollandiae* 185. 1810, *Syst. Veg.* 1: 329. 1825[1824], *Flora Australiensis: A Description ...* 7: 604. 1878.

in English: purple heads, purple plume grass, purple needle grass, needle grass

T. mollis R. Br. f. *caespitosa* Domin

North Western Australia, see K. Domin, *Journal of the Linnean Society, Botany.* 41: 277. 1912.

T. mollis R. Br. f. *mollis*

Australia, see K. Domin, *Journal of the Linnean Society, Botany.* 41: 277. 1912.

T. mollis R. Br. var. *humilis* Benth.

Australia, see G. Bentham, *Flora Australiensis.* 7: 604. 1878.

T. mollis R. Br. var. *mollis*

Australia, see G. Bentham, *Flora Australiensis.* 7: 604. 1878.

T. pumilio R. Br.

Northern Africa, Mauritania. Annual, very rare, tufted, small, erect, much branched at the base, sheaths with long hairs, ligule a short ciliate membrane, leaves flat, dense panicle ovoid to oblong to elliptic, glumes unequal shortly mucronate, lemma 3-nerved densely ciliate, awns thread-like and straight, very low grazing value, limited browsing, found in sand, deserts or dry subdesert locations, moist depressions, river beds, sandy beds, see Dixon Denham (1786-1828), Hugh Clapperton (1788-1827) and Walter Oudney (1790-1824), *Narrative of Travels and Discoveries in Northern and Central Africa. 1822-1824.* [Botany by R. Brown] London 1826.

in Mali: akachakar

T. pungens R. Br. (*Pappophorum pungens* (R. Br.) Trin.; *Plectrachne pungens* (R. Br.) C.E. Hubb.)

Queensland. See *Genera Plantarum* 2: 787. 1791, *Prodrromus Florae Novae Hollandiae* 1: 185. 1810, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 92. 1830 and *Vierteljahrsschrift der Naturforschenden Gesellschaft in Zürich* 74: 132. 1929, *Hooker's Icones Plantarum* 34: t. 3385. 1939.

T. purpurea Hack. (*Triraphis fleckii* Hack.) (the species was named after Dr. E. Fleck, geologist and plant collector in southwest Africa)

Southern Africa, Namibia. Annual, tufted or loosely tufted, erect or geniculate, densely hairy, leaf blade expanded to rolled, ligule a fringe of hairs, leaf sheaths rounded, open or dense panicle, lemma with long central awn and 2 shorter lateral awns, pioneer grass, low grazing value, growing in moist sites, veld, rocky soils, on sandy and loamy soils, red sand, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 146. 1888, *Bulletin de l'Herbier Boissier* 4(app. 3): 23. 1896.

in English: red honey grass, annual needle grass

in South Africa: rooiheuninggras, straußenfedergras

T. ramosissima Hack. (*Triraphis elliotii* Rendle, also spelled *elliottii*)

Southern Africa, Namibia. Perennial, highly branched, shrubby or bushy, coarse, hard, woody, slender, wiry, yellowish, tufted, many nodes, rhizomatous, leaf sheaths rounded, ligule a fringe of short hairs, leaf blades expanded, open or dense panicle, spikelets with long hairs, central awn longer than the lemma, only young plants are eaten, grows in rocky sites, in dry river beds or water courses, in sand, floodplains, alkaline soils, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 237. 1888, *Journal of Botany, British and Foreign* 29: 73. 1891.

in South Africa: berggras, perdegras, fels straußenfedergras

T. schinzii Hack. (*Triraphis schlechteri* Pilg. ex Stent)

South Africa, Mozambique, Tanzania, Namibia, Zimbabwe, Kalahari. Perennial, yellowish to green, tufted, robust, erect, mostly unbranched, shortly rhizomatous, ligule a fringe of short hairs, leaf blade usually expanded, leaf sheaths rounded, dark green leaves tapering to a thin point, open inflorescence, interrupted panicle with slender branches, spikelets densely hairy, 2 inconspicuous lateral awns, lemmas with a prominent central awn longer than the lemma, palatable, ornamental, growing in sandy soil, deep sand, riverbanks, dunes, bushveld, grassland, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und*

die angrenzenden Länder 30: 147. 1888 and *Bothalia* 1: 294. 1921.

in English: needle grass

in South Africa: sandveld straußenfedergras, sandveldbesemgras

Trirhaphis F. Muell.

Orthographic variant, *Triraphis* R. Br., see *Journal of the Royal Society of New South Wales* 15: 237. 1882.

Trirhaphis Spreng.

Orthographic variant, *Triraphis* R. Br., see *Genera plantarum* 73. 1830.

Triscenia Griseb.

Greek *triskenes* “three-legged.”

One species, Cuba. Panicoideae, Panicodae, Paniceae, or Panicoideae, Paniceae, Paspalinae, perennial, herbaceous, unbranched, caespitose, leaves mainly basal, leaf blades filiform, plants bisexual, inflorescence spicate and contracted, spikelets shortly pedicellate with slender pedicels, 2 glumes unequal to very unequal, upper glume 3-nerved, lemmas narrow and papery, upper lemma with flat margins, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, type *Triscenia ovina* Griseb., see *Species Plantarum* 1: 55. 1753, *Memoirs of the American Academy of Arts and Science, new series* 8: 534. 1863 and A.S. Hitchcock, “Catalogue of the Grasses of Cuba,” *Contributions from the United States National Herbarium* 12(6): 183-258, vii-xi. 1909, *Contributions from the United States National Herbarium* 46: 627. 2003.

Species

T. ovina Griseb. (*Panicum nudiculme* Mez; *Panicum ovinum* Scribn. & J.G. Sm.)

Cuba. Open panicle, lower lemma awnless, upper lemma chartaceous, see *Memoirs of the American Academy of Arts and Science, new series* 8: 534. 1863, *Circular, Division of Agrostology, United States Department of Agriculture* 16: 3. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 6. 1921.

Trisetaria Forssk. = *Avellinia* Parl., *Parvotrisetum* Chrtek, *Sennenia* Sennen, *Trichaeta* P. Beauv., *Trisetum* Pers.

From *tri-* “three” plus Latin *saeta* (*seta*), *ae* “a bristle, hair,” genus *Setaria* P. Beauv.

Some 15 species, very close to *Rostraria*, often in *Trisetum*. Aveneae, Mediterranean, Himalaya, type *Trisetaria linearis* Forssk., see *Flora Aegyptiaco-Arabica* 60. 1775, *Essai d'une Nouvelle Agrostographie* 86, 179. 1812, Filippo Parlatore (1816-1877), *Plantae Novae vel Minus Notae opusculis diversis olim descriptae generibus quibusdam speciebusque novis adjectis iterum recognitae...* 59. Parisii 1842 and *Bulletin de l'Académie Internationale de Géographie, Botanique* 18: 468. 1908, *Preslia* 37: 201. 1965, *Novosti Sist. Vyss. Rast.* 7: 45. 1970 [1971], *Genera Graminum* 127. 1986, *Willdenowia* 21: 185-187. 1991, *Willdenowia* 31: 403-408. 2001, *Contributions from the United States National Herbarium* 48: 604, 659-676. 2003.

Trisetarium Poir. = *Trisetum* Pers.

From *tri-* plus Latin *saeta* (*seta*), *ae* “a bristle, hair.”

Pooideae, Poeae, Aveninae, see *Syn. Pl.* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 88, 153, t. 18, f. 1. 1812, *Nova Genera et Species Plantarum* 1: 147-148. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 5: 365-366. 1817 and *U.S.D.A. Bull.* 772: 107-109. 1920, *Taxon* 36: 75. 1987, *Contributions from the United States National Herbarium* 48: 659-676. 2003.

Trisetobromus Nevski = *Bromus* L.

From *tri-* “three,” *saeta*, *ae* “a bristle, hair” plus *Bromus* L.

Pooideae, Bromaeae, type *Trisetobromus hirtus* (Trin.) Nevski, see *Species Plantarum* 1: 76-78. 1753, *Systema Vegetabilium* 2: 654. 1817, *Linnaea* 10(3): 300. 1836, *Memorie della Reale Accademia delle Scienze di Torino* 39: 25, t. 58. 1836, *Fl. Chile* 6: 441. 1854 and *U.S.D.A. Div. Agrostol. Bull.* (also *Bulletin, Division of Agrostology United States Department of Agriculture*) 23: 1-66. 1900, *Manual of the Grasses of the United States* 55. 1935, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard. Edinburgh* 30: 366. 1970, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 154-191, 659. 2003.

x Trisetokoeleria Tzvelev

Koeleria x *Trisetum*, see *Novosti Sist. Vyss. Rast.* 7: 73. 1971, *Genera Graminum* 375. 1986.

Trisetum (Besser ex Schult. & Schult. f.) Trin. = *Acrospelion* Schult., *Acrospelion* A. Besser ex Schult. & Schult.f.

See *Nom.* 1: 38. 1781, *Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 6, Sci. Math.* 1(1): 59. 1830.

Trisetum Pers. = *Acrospelion* Schult., *Acrospelion* A. Besser ex Schult. & Schult.f., *Parvotrisetum* Chrtek, *Rebentischia* Opiz, *Rupestina* Prov., *Sennenia* Sennen, *Trisetaria* Forssk., *Trisetarium* Poir.

From *tri-* “three” and Latin *saeta* (*seta*), *ae* “a bristle, hair,” referring to the 3 awns of the lemmas.

About 70-85 species, temperate regions. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Aveninae, annual or perennial bunchgrass, all species very variable, tufted or loosely tufted or rhizomatous, erect, slender, herbaceous, conspicuous vestigial foliar structure subtending the inflorescence absent or present, hollow internodes, shoots not aromatic, ligule membranous, leaves nonauriculate, leaf blade linear and narrow, plants bisexual, inflorescence a drooping panicle loose to contracted, flowers bisexual, 2-several-flowered spikelets, chasmogamous or cleistogamous, 2 glumes unequal to subequal and keeled, glumes as long as lowest floret, lemmas 2-toothed and keeled, lemma awned from near the middle, awns usually present geniculate or reflexed to recurved, free silvery palea, 2 free and ciliate lodicules membranous, 3 stamens, ovary glabrous, 2 stigmas, cultivated fodder, native pasture species, fairly palatable grasses, found in meadows, rocky sites, open habitats, mountain slopes, along roadsides, upland grasslands, tussock grassland, weedy places, in montane and alpine areas, open forests, alpine herb fields, similar to *Helictotrichon* and *Festuca*, intergeneric hybrids with *Koeleria* and *Sphenopholis*, the taxonomic situation around *Koeleria* and *Trisetum* is unsatisfactory, extreme variations within the species, nomenclatural confusion, type *Trisetum flavescens* (L.) P. Beauv., see *Species Plantarum* 1: 79-82. 1753, *Florulae Insularum Australium Prodrum* 8. 1786, *Syn. Pl.* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 43, 88, 153, t. 18, f. 1. 1812, *Systema Vegetabilium* 2: 676. 1817, *Encyclopédie Méthodique, Botanique Suppl.* 5: 365. 1817, *Syst. Veg. Mant.* 3: 526. 1827, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 61. 1830, *Lotos* 4: 104. 1854, *Fl. Canad.* 689. 1862, *Mexicanas Plantas* 2: 109. 1886 and *U.S.D.A. Bull.* 772: 107-109. 1920, *Transactions and Proceedings of the New Zealand Institute* 57: 60. 1926, *N.Z. J. Sci. Tech.* 38A: 742-751. 1957, *Svensk Bot. Tidskr.* 53: 203-228. 1959, *Grasses of Burma, Ceylon, India and Pakistan* 447-448. 1960, *Bot. Not.* 118: 210-224. 1965, *Preslia* 37: 201. 1965, *Folia Geobot. Phytotax.* 5: 447-448. 1970, *Gard. Bull. Singapore* 36: 125-135. 1983, *Taxon* 36: 75. 1987, *Agrociencia* 71: 71-102. 1988, *Fragmenta Floristica et Geobotanica* 35: 97-99. 1991, *Fragmenta Floristica et Geobotanica* 37: 443-475. 1992, *Fragmenta Floristica et Geobotanica Suppl.* 2(1): 279-288. 1993, *New Zealand J. Bot.* 36: 539-564. 1998, Alan

Graham, "Studies in Neotropical paleobotany. XIII. An Oligo-Miocene palynoflora from Simojovel (Chiapas, Mexico)." *Am. J. Bot.* 86: 17-31. 1999, *Am. J. Bot.* 88: 1088-1095. 2001, Hong Qian, "A comparison of the taxonomic richness of temperate plants in East Asia and North America." *Am. J. Bot.* 89: 1818-1825. 2002, *Contributions from the United States National Herbarium* 48: 19, 601-602, 605, 659-676. 2003, *Am. J. Bot.* 92: 422-431. 2005.

Species

T. aeneum (Hook.f.) R.R. Stewart (*Avena aenea* Hook.f.; *Trisetum aureum* Nees ex Steud., nom. illeg., non *Trisetum aureum* (Ten.) Ten.)

Asia, Nepal, Northwest India. A useful fodder, see *Synopsis Plantarum Glumacearum* 1: 225. 1854, *The Flora of British India* 7(22): 279. 1897 [1896] and *Brittonia* 5: 431. 1945.

in English: golden trisetum

T. albidum Sodiro (*Aira spicata* L.; *Trisetum spicatum* (L.) K. Richt.)

Ecuador. See *Species Plantarum* 1: 64. 1753 and *Revista del Colegio Nacional Vicente Rocafuerte* 12: 84, 86-88. 1930, *Systematic Botany* 11: 567-578. 1986, *Taxon* 35: 195. 1986, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999.

T. ambiguum Rúgolo & Nicora

Argentina. See *Boletín de la Sociedad Argentina de Botánica* 25(3-4): 468. 1988.

T. alpestre (Host) P. Beauv. (*Avena alpestris* Host; *Trisetum flavescens* (L.) P. Beauv. subsp. *flavescens* var. *alpestre* (Host) Fiori)

Europe. See *Icones et Descriptiones Graminum Austriae* 3: 27, t. 39. 1805 and *Novosti Sist. Vyss. Rast.* 7: 64. 1970 [1971], *Fragmenta Floristica et Geobotanica* 23: 317-325. 1977, *Bot. Zhurn. (Moscow & Leningrad)* 74: 1669-1670. 1989, *Fragmenta Floristica et Geobotanica* Suppl. 2(1): 279-288. 1993, *Bulletin de la Société Neuchâteloise de Sciences Naturelles* 120: 19-33. 1997.

T. andinum Benth. (*Trisetum andinum* Phil., nom. illeg., non *Trisetum andinum* Benth.; *Trisetum spicatum* (L.) K. Richt.; *Trisetum spicatum* subsp. *andinum* (Benth.) Hultén; *Trisetum spicatum* var. *andinum* (Benth.) Louis-Marie)

Ecuador. Short dense panicles ovate-oblong, confused with *Trisetum spicatum*, see *Plantas Hartwegianas imprimis Mexicanas* 261. 1847, *Linnaea* 29(1): 93. 1858 and *Rhodora* 30: 239. 1928 [1929], *Svensk Botanisk Tidskrift* 53: 224. 1959.

T. angustum Swallen

Guatemala. See *Phytologia* 4(7): 423. 1953.

T. antarcticum (Forst.f.) Trin. (*Aira antarctica* Forst.f.; *Avena antarctica* Thunb.; *Avena antarctica* (Labill.) Roem. & Schult., nom. illeg., non *Avena antarctica* Thunb.)

New Zealand. Tufted to densely tufted, coastal, leaf sheath pubescent, ligule ciliate, leaves rigid, dense oblong and compact spike-like panicle, glumes unequal, lemma with a straight to recurved awn, on gravelly soils, sandy places, see *Florulae Insularum Australium Prodrumus* 8. 1786, *Prodrumus Plantarum Capensium*, ... 22. 1794, *Novae Hollandiae Plantarum Specimen* 2: 83, f. 232. 1807, *Systema Vegetabilium, editio decima sexta* 2: 676. 1817, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 61. 1830, *A Naturalist's Wanderings* 522. 1885 and *Manual of the New Zealand Flora* 880. 1906, *Transactions and Proceedings of the New Zealand Institute* 44: 187. 1912, *Manual of the New Zealand Flora* 169. 1925, *Transactions and Proceedings of the New Zealand Institute* 57: 60. 1926, *Transactions and Proceedings of the Royal Society of New Zealand* 64: 3. 1934, *Bothalia* 3: 185-203. 1937, *Index Kewensis* Suppl. 9: 289. 1938, *Gard. Bull. Sing.* 36: 134. 1983, *New Zealand J. Bot.* 36: 543, 549-552, 558-560. 1998.

T. arduanum Edgar & Druce (*Avena flavescens* L.; *Trisetum arduanum* Edgar & Connor)

New Zealand. Tufted, open, erect or drooping, glaucous, leaf sheath glabrous or minutely pubescent, open panicles with spreading branches, glumes unequal, awn straight and later recurved, coastal, rocky places, see *Species Plantarum* 80. 1753, *Essai d'une Nouvelle Agrostographie* 88, 153, t. 18, f. 1. 1812, *Enumeratio Stirpium Transsylvanicae* 3: 263. 1816 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 92. 1942, *Fl. Australia* 49: 442-499. 1994, *Auckl. Bot. Soc. J.* 51: 38-49. 1996, *New Zealand Journal of Botany* 36: 545-548, f. 3. 1998, *Taxon* 49(2): 247. 2000, *Fl. New Zealand* 5: 327-328. 2000.

T. argenteum (Willd.) Roem. & Schult. (*Avena argentea* Willd.; *Trisetum argenteum* Scribn., nom. illeg., non *Trisetum argenteum* (Willd.) Roem. & Schult.; *Trisetum distichophyllum* (Vill.) P. Beauv. var. *argenteum* (Willd.) Fiori)

Europe. Among rocky and stony places, see *Enumeratio Plantarum Omnium Hucusque Cognitarum* 125. 1809, *Systema Vegetabilium* 2: 665. 1817, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 49-50, f. 8. 1898.

T. aureum (Ten.) Ten. (*Koeleria aurea* Ten.; *Trisetaria aurea* (Ten.) Pignatti; *Trisetum aureum* Nees ex Steud., nom. illeg., non *Trisetum aureum* (Ten.) Ten.)

Europe, Northern America. See *Trattato di fitognosia* 1: 58. Napoli 1806, *Flora Napolitana* 2: 378. 1820, *Synopsis Plantarum Glumacearum* 1: 225. 1854, *The Flora of British India* 7: 279. 1896 and *Archivio Botanico* 31: 51. 1955.

in English: golden false oat

T. barbatipaleum (Hultén ex Veldkamp) Finot (*Trisetum spicatum* var. *barbatipaleum* Hultén ex Veldkamp; *Trisetum spicatum* var. *barbatipaleum* Hultén)

America. See *Svensk Botanisk Tidskrift* 53: 233. 1959, *The Gardens' Bulletin Singapore* 36(1): 135. 1983, *Contributions from the United States National Herbarium* 48: 661. 2003.

T. barbinode Trin. (*Trisetum barbinode* var. *hirtiflorum* (Hack.) Louis-Marie; *Trisetum hirtiflorum* Hack.)

America, Chile. See *Linnaea* 10(3): 300. 1836 and *Reperitorium Specierum Novarum Regni Vegetabilis* 10(243-247): 169. 1911, *Rhodora* 30: 240. 1928 [1929].

T. barbinode Trin. var. ***barbinode***

America.

T. brasiliense Louis-Marie (*Deschampsia brasiliensis* (Louis-Marie) Valencia)

Brazil. See *Essai d'une Nouvelle Agrostographie* 91. 1812 and *Rhodora* 30: 242. 1928 [1929], *Revista Argentina de Agronomía* 8: 128. 1941.

T. bulbosum Hitchc. (*Helictotrichon bulbosum* (Hitchc.) Parodi)

South America, Chile. See *Journal of the Washington Academy of Sciences* 17(9): 217, f. 2. 1927, *Revista Argentina de Agronomía* 16: 211. 1949.

T. burnouffii Req. ex Parl. (*Avena burnouffii* (Req.) Nyman; *Trisetum burnouffii* Req.; *Trisetum flavescens* (L.) P. Beauv. subsp. *flavescens* var. *burnouffii* (Req. ex Parl.) Briq.)

Corsica. Extinct or endangered species, medicinal, see *Médecine Traditionnelle et Pharmacopée* 413. 1854-1855.

T. canescens Buckley (*Helictotrichon canescens* (Buckl.) Clayton; *Trisetum canescens* f. *tonsum* Louis-Marie; *Trisetum canescens* f. *velutinum* Louis-Marie; *Trisetum cernuum* Trin.; *Trisetum cernuum* subsp. *canescens* (Buckley) Calder & Taylor; *Trisetum cernuum* var. *canescens* (Buckl.) Beal; *Trisetum cernuum* var. *projectum* (Louis-Marie) Beetle; *Trisetum elatum* Nutt. ex A. Gray; *Trisetum projectum* Louis-Marie; *Trisetum spicatum* (L.) Richter var. *projectum* (Louis-Marie) J.T. Howell)

Northern America, Pacific Northwest, U.S., Canada. Perennial, herbaceous, in open habitats, open forest, dry rocky soil, dry red soil, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 61. 1830, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100, 337. 1862, *Bulletin of the Torrey Botanical Club* 13(7): 118. 1886, *Plantae Europaeae* 1: 59. 1890, *Grasses of North America for Farmers and Students* 2: 380. 1896 and *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Rhodora* 30(359): 216-218. 1928, *Proceedings of the Biological Society of Washington* 41: 160. 1928, *Leaflets of Western Botany* 4(12): 288. 1946, *Canadian Journal of Botany* 43(11): 1389. 1965, *Wasmann Journal of Biology* 37(12): 22. San Francisco, California 1979 [1980], *Kew Bulletin* 40(4): 728. 1985.

in English: tall trisetum, nodding trisetum, nodding oatgrass, oat grass

T. carpaticum (Host) Roem. & Schult. (*Avena carpatica* Host; *Avena ciliaris* Kit. ex Schult.; *Trisetum ciliare* (Kit. ex Schult.) Domin)

Europe. See *Icones et Descriptiones Graminum Austriae* 4: 18, t. 31. 1809, *Österreichs Flora ... zweyte ... Auflage* 1: 268. 1814 [also *Fl. Austr., edition 2*, or *Oestreichs Flora ... zweyte ... Auflage*] and *Preslia* 13-15: 41. 1935.

T. caudulatum Trin. (*Koeleria caudulata* (Trin.) Griseb.; *Koeleria grisebachii* Domin; *Koeleria lechleri* Steud.; *Trisetum chiloense* Phil.; *Trisetum chromostachyum* E. Desv.; *Trisetum heterogamum* Steud. ex Lechler; *Trisetum heteronymum* Steud.; *Trisetum lechleri* (Steud.) Nicora; *Trisetum malacophyllum* Steud.; *Trisetum monticola* Phil.; *Trisetum ochrostachyum* Phil.; *Trisetum splendidulum* Steud.; *Trisetum variabile* E. Desv.; *Trisetum variabile* var. *chiloense* (Phil.) Louis-Marie; *Trisetum variabile* var. *flavescens* E. Desv.; *Trisetum variabile* var. *variabile*; *Trisetum variabile* var. *vidalii* (Phil.) Louis-Marie; *Trisetum vidalii* Phil.)

South America, Chile. See *Linnaea* 10(3): 300. 1836, *Synopsis Plantarum Glumacearum* 1: 229, 294. 1854, *Flora Chilena* 6: 350-351. 1854, *Berberides Americae Australis* 52. 1857, *Linnaea* 29(1): 93. 1858, *Ann. Bot.* 6: 996. 1861, *Linnaea* 33(3-4): 290-291. 1864, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 292. 1879, *Anales de la Universidad de Chile* 94: 27. 1896 and *Rhodora* 30: 240. 1928 [1929], *Flora Patagónica* 3: 252. 1978.

T. caudulatum Trin. var. ***caudulatum*** (*Koeleria caudulata* (Trin.) Griseb.)

America. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 292. 1879.

T. caudulatum Trin. var. ***correae*** Nicora (*Koeleria caudulata* (Trin.) Griseb.)

South America, Argentina. See *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 24: 292. 1879 and *Flora Patagónica* 8(3): 254. 1978.

T. cernuum Trin. (*Avena cernua* (Trin.) Kunth; *Avena leptostachys* Hook.f.; *Avena nutkaensis* J. Presl; *Trisetum cernuum* f. *pubescens* G. Jones; *Trisetum cernuum* f. *pubescens* Louis-Marie; *Trisetum cernuum* var. *luxurians* Louis-Marie; *Trisetum cernuum* var. *sandbergii* (Beal) Louis-Marie; *Trisetum fraudulentum* Steud.; *Trisetum nutkaensis* (J. Presl) Scribner & Merr. ex Davy; *Trisetum sandbergii* Beal) (Canada, Nootka)

Northern America, Pacific Northwest, U.S., Canada. Perennial, tufted, herbaceous, no auricles, basal leaf sheaths smooth, drooping and flat leaf blades, leaves with thin and prominent tips, flower head open and loose, spikelets at the end of drooping branches, upper glume much longer than

the lower one, lemmas awned, grows in moist woods, forests and stream banks, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 61. 1830, *Reliquiae Haenkeanae* 1(4-5): 254. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 306. 1833, *Flora Antarctica* 378. 1846, *Synopsis Plantarum Glumacearum* 1: 424. 1854, *Grasses of North America for Farmers and Students* 2: 378. 1896 and *University of California Publications in Botany* 1: 63. 1902, *Illustrated Flora of the Pacific States* 1: 1-557. 1923, *Rhodora* 30(359): 213-214. 1928, *University of Washington Publications in Biology* 5: 108. 1936, *Leaflets of Western Botany* 4(12): 288. 1946, *Canadian Journal of Botany* 43(11): 1389. 1965.

in English: nodding trisetum, nodding oatgrass

T. cernuum Trin. subsp. **canescens** (Buckley) Calder & Roy L. Taylor (*Helictotrichon canescens* (Buckley) Clayton; *Trisetum canescens* Buckley; *Trisetum canescens* f. *tonsum* Louis-Marie; *Trisetum canescens* f. *velutinum* Louis-Marie; *Trisetum cernuum* var. *canescens* (Buckley) Beal; *Trisetum cernuum* var. *projectum* (Louis-Marie) Beetle; *Trisetum elatum* Nutt. ex A. Gray; *Trisetum projectum* Louis-Marie)

America. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100, 337. 1862, *Grasses of North America for Farmers and Students* 2: 380. 1896 and *Rhodora* 30(359): 216-217. 1928, *Leaflets of Western Botany* 4(12): 288. 1946, *Canadian Journal of Botany* 43(11): 1389. 1965, *Kew Bulletin* 40(4): 728. 1985.

T. cernuum Trin. subsp. **cernuum** (*Trisetum cernuum* f. *pubescens* G. Jones; *Trisetum cernuum* f. *pubescens* Louis-Marie; *Trisetum cernuum* var. *cernuum*; *Trisetum cernuum* var. *luxurians* Louis-Marie; *Trisetum cernuum* var. *sandbergii* (Beal) Louis-Marie; *Trisetum fraudulentum* Steud.; *Trisetum nutkaensis* (J. Presl) Scribner & Merr. ex Davy; *Trisetum sandbergii* Beal)

America, U.S., Chile. See *Reliquiae Haenkeanae* 1(4-5): 254. 1830, *Synopsis Plantarum Glumacearum* 1: 424. 1854, *Grasses of North America for Farmers and Students* 2: 378. 1896 and *University of California Publications in Botany* 1: 63. 1902, *Rhodora* 30(359): 213-214. 1928, *University of Washington Publications in Biology* 5: 108. 1936.

T. ciliare (Kit. ex Schult.) Domin (*Avena ciliaris* Kit. ex Schult.; *Avena fusca* Kit. ex Schult., nom. illeg., non *Avena fusca* Ard.; *Trisetum carpaticum* auct.; *Trisetum fuscum* Schult.; *Trisetum fuscum* Roem. & Schult.)

Europe, Eurasia. See *Icones et Descriptiones Graminum Austriacorum* 4: 18, t. 31. 1809, J.A. Schultes (1773-1831), *Österreichs Flora edition 2* 1: 268. Wien 1814 [sometimes *Oestreichs Flora ... zweyte ... Auflage*] and *Preslia* 13-15: 41. 1935.

T. conradiae Gamisans

Corsica, Mediterranean. Vulnerable species, see *Candollea* 26(2): 332. 1971.

in French: trisète de conrad

T. cumingii (Nees ex Steud.) Parodi ex Nicora (*Koeleria cumingii* Nees ex Steud.; *Trisetum cumingii* (Nees ex Steud.) Nicora; *Trisetum cumingii* var. *cumingii*; *Trisetum cumingii* var. *santacruzense* Nicora; *Trisetum malacophyllum* Phil., nom. illeg., non *Trisetum malacophyllum* Steud.; *Trisetum mollifolium* Louis-Marie) (after Hugh Cuming, 1791-1865 (d. London), British traveler and plant collector (in South America, Argentina and Chile, the Philippines), Fellow of the Linnean Society 1832, shell collector; see A. Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 183-184. London 1994; Gordon Douglas Rowley, *A History of Succulent Plants*. 1997)

Southern America, Chile, Argentina. Perennial, see *Synopsis Plantarum Glumacearum* 1: 294. 1854, *Anales de la Universidad de Chile* 48: 566. 1873 and *Rhodora* 30: 218. 1928, *Flora Patagónica* 3: 250. 1978.

T. curvisetum Morden & Valdés-Reyna

Mexico. Open habitats, see *Brittonia* 35(4): 375, f. 1. 1983.

T. deyeuxioides (Kunth) Kunth (*Arundo sylvatica* Schrad.; *Avena deyeuxioides* Kunth; *Avena trichopodia* J. Presl; *Calamagrostis sylvatica* (Schrad.) DC.; *Deyeuxia evoluta* E. Fourn.; *Deyeuxia sylvatica* (Schrad.) Kunth; *Deyeuxia sylvatica* (Schrad.) Vasey, nom. illeg., non *Deyeuxia sylvatica* (Schrad.) Kunth; *Deyeuxia triflora* Nees; *Peyritschia deyeuxioides* (Kunth) Finot; *Trisetaria deyeuxioides* (Kunth) Poir.; *Trisetarium deyeuxioides* (Kunth) Poir.; *Trisetum deyeuxioides* var. *pubescens* Scribn. ex Beal; *Trisetum evolutum* (E. Fourn.) Hitchc.)

South America. Weed in corn field, forage, see *Flora Germanica* 1: 218, t. 4, f. 7. 1806, *Flore Française. Troisième Édition* 5(6): 253. 1815, *Nova Genera et Species Plantarum* 1: 147. 1815 [1816], *Encyclopédie Méthodique, Botanique Suppl.* 5: 366. 1817, *Révision des Graminées* 1: 77, 102. 1829, *Reliquiae Haenkeanae* 1(4-5): 254. 1830, *Linnaea* 19(6): 691. 1847, *Bulletin de la Société Botanique de France* 24: 181. 1877, *The Grasses of the United States* 28. 1883, *Grasses of North America for Farmers and Students* 2: 374. 1896 and *Contributions from the United States National Herbarium* 17(3): 325. 1913, *N. Amer. Fl.* 17(8): 557. 1939, *Brittonia* 23(3): 293-324. 1971, *Agrociencia* 71: 78. 1988, *Contributions from the United States National Herbarium* 48: 478. 2003.

in Mexico: tres cerdas paniculado

T. dianthemum (Louis-Marie) Finot (*Trisetum biflorum* Phil.; *Trisetum biflorum* Hochst.; *Trisetum spicatum* (L.) K. Richt.; *Trisetum spicatum* var. *dianthemum* Louis-Marie)

America, Chile. See *Flora* 38: 275. 1852, *Anales de la Universidad de Chile* 48: 568. 1873, *Plantae Europaeae* 1:

59. 1890 and *Rhodora* 30: 239. 1928 [1929], *Contributions from the United States National Herbarium* 48: 664. 2003.

T. distichophyllum (Vill.) P. Beauv. (*Avena distichophylla* Vill.; *Trisetaria distichophylla* (Vill.) Paunero; *Trisetum albanicum* Jáv.; *Trisetum distichophyllum* auct.; *Trisetum transcaucasicum* Seregin)

Europe. Useful for erosion control, see *Prospectus de l'Histoire des Plantes de Dauphiné* 2: 144. 1787, *Gram. Austr.* 3: 28, t. 40. 1805, *Essai d'une Nouvelle Agrostographie* 88, 153. 1812 and *Anales del Jardín Botánico de Madrid* 9: 514. 1950, *Giornale Botanico Italiano* 111(1-2): 59. 1977.

T. drucei Edgar

New Zealand. Densely tufted, ligule ciliate, panicle lanceolate, glumes unequal, recurved awn, see *New Zealand Journal of Botany* 36: 548-549, f. 5. 1998.

T. durangense Finot & P.M. Peterson

America. See *Annals of the Missouri Botanical Garden* 91(1): 19-21, f. 2. 2004.

T. filifolium Scribner ex Beal

America, Mexico. See *Grasses of North America for Farmers and Students* 2: 375. 1896.

T. filifolium Scribner ex Beal var. ***aristatum*** Scribn. ex Beal

America, Mexico. See *Grasses of North America for Farmers and Students* 2: 375. 1896.

T. filifolium Scribner ex Beal var. ***filifolium***

America.

T. flavescens (L.) P. Beauv. (*Avena flavescens* L.; *Avena sikkimensis* Hook.f.; *Rebentischia flavescens* Opiz; *Trisetaria flavescens* (L.) Baumg.; *Trisetaria flavescens* (L.) Maire, nom. illeg., non *Trisetaria flavescens* (L.) Baumg.; *Trisetum pratense* Pers.; *Trisetum sikkimense* (Hook.f.) Chrtk)

North Africa, Asia, Europe, Mediterranean. Perennial, tufted, slender, ligule obtuse and membranous, auricles absent, basal leaf sheaths not keeled, leaves mostly basal rough or glabrous, leaf blade flat, foliar structure often present, pallid and green erect and contracted panicle, chasmogamous spikelets, upper glume longer than the lower one, lemmas awned, palea gaping and oblanceolate, anthers yellow or purple, ovary glabrous, ornamental and nutritious, cultivated for fodder and hay, good forage grass, native pasture species, producing vitamin D in ultraviolet, toxic, making fine turf in lawns, found along roadsides and in grassland, fields, meadows, mountain areas, see *Species Plantarum* 80. 1753, *Syn. Pl.* 1: 97. 1805, *Essai d'une Nouvelle Agrostographie* 88, 153, t. 18, f. 1. 1812, *Enumeratio Stirpium Transsilvaniae* 3: 263. 1816, *Lotos* 4: 104. 1854, *Enumeratio Plantarum Transsilvaniae* 758. 1866, *The Flora of British India* 7: 280. 1896, *Bulletin de l'Herbier Boissier* 7(9): 702-703. 1899, *Synopsis der mitteleuropäischen Flora* 2: 265. 1899 and *Botanical Magazine* (Tokyo)

26(307): 215. 1912, *Botanical Magazine* (Tokyo) 45(532): 192. 1931, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 92. 1942, *Acta Universitatis Carolinae: Biologica* 1967: 104. 1968, *Novosti Sist. Vyss. Rast.* 7: 63. 1970[1971], *Flora Republicii Socialiste Romania* 12: 292. 1972, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 107: 203-228. 1985, *Collect. Bot.* 17(1): 196. 1987[1988], *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, *Bot. Zhurn. (Moscow & Leningrad)* 75: 1185. 1990, *Mountain Flora of Greece* 2: 808. 1991, *Fragmenta Floristica et Geobotanica Suppl.* 2(1): 279-288. 1993, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47. 1993, *Taxon* 49(2): 247. 2000, *Journal of Applied Ecology* vol. 42, issue 1: 13-24. Feb 2005.

in English: golden oat grass, yellow oat grass, yellow oats, yellow trisetum

in Spanish: pasto dorado, avena rubia, avena amarilla

in Italian: gramigna bionda

in French: avoine jaunâtre, avoine dorée, trisète jaunâtre

in Arabic: hachichet errih

T. flavescens (L.) P. Beauv. f. ***variegata*** (Gaudin) Beetle (*Avena flavescens* var. *variegata* Gaudin; *Trisetum flavescens* var. *variegatum* (Gaudin) Schur)

Europe. See *Flora Helvetica* 1: 337. 1828, *Enumeratio Plantarum Transsilvaniae* 758. 1866 and *Phytologia* 38(3): 176. 1978.

T. flavescens (L.) P. Beauv. subsp. ***flavescens*** (*Trisetum flavescens* subsp. *pratense* (Pers.) Asch. & Graebn.)

Europe. See *Essai d'une Nouvelle Agrostographie* 88, 153, t. 18, f. 1. 1812.

T. flavescens (L.) P. Beauv. subsp. ***flavescens*** var. ***corsicum*** (Rouy) Briq.

Europe, Corsica.

T. flavescens (L.) P. Beauv. subsp. ***purpurascens*** (DC.) Arcang. (*Trisetum candollei* (J. Serres) Verl.; *Trisetum flavescens* subsp. *tatricum* Chrtk)

Europe, Carpathians and Alps.

T. flavescens (L.) P. Beauv. subsp. ***splendens*** (C. Presl) Arcang. (*Trisetum splendens* C. Presl)

Europe, Sicily, Italy, Mediterranean.

T. flavescens (L.) P. Beauv. var. ***bifidum*** (Thunb.) Makino (*Bromus bifidus* Thunb.)

Asia, Japan. See *Flora Japonica, ...* 53. 1784, *Essai d'une Nouvelle Agrostographie* 88, 153, t. 18, f. 1. 1812 and *Botanical Magazine* (Tokyo) 26(307): 215. 1912.

T. foliosum Swallen

Venezuela. See *Contributions from the United States National Herbarium* 29(6): 256-257. 1948 [1949].

T. glomeratum (Kunth) Trin. ex Steud. (*Koeleria glomerata* Kunth)

North America, Europe. See *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 526. 1833, *Synopsis Plantarum Glumacearum* 1: 229. 1854.

in Hawaii: pili uka, he'upueo, mountain pili

T. gracile (Moris) Boiss. (*Avena gracilis* Moris; *Trisetum gracile* E. Fourn., nom. illeg., non *Trisetum gracile* (Moris) Boiss.; *Trisetum gracile* Sodiro, nom. illeg., non *Trisetum gracile* (Moris) Boiss.)

Corsica, Mediterranean, Sardinia. Vulnerable species, see *Stirpium Sardoarum Elenchus* 1: 50. 1827, *Voyage botanique dans le midi de l'Espagne* 2: 645. 1844, *Mexicanas Plantas* 2: 108. 1886 and *Revista del Colégio Nacional Vicente Rocafuerte* 12: 84, 85-86. 1930, *Candollea* 28(1): 54. 1973.

in French: trisète grêle

T. howellii A. Hitchc.

Galápagos, Ecuador. Rare species, see *Proceedings of the California Academy of Sciences, Series 4*, 21(24): 296. 1935, *Flora of the Galápagos Islands* 823-892. 1971, *Patterns of Evolution in Galápagos Organisms* 33-54. 1983, *Reports from the Botanical Institute, University of Aarhus* 16: 1-74. 1987.

T. inaequale Whitney

U.S., Hawaii. Endangered species, see *Occasional Papers of the Bernice Pauahi Bishop Museum* 13: 171. 1937.

in English: Whitney's oats, Whitney's false oat

T. interruptum Buckley (*Calamagrostis longirostris* Buckley; *Sphenopholis hallii* (Scribn.) Scribn.; *Sphenopholis interrupta* (Buckley) Scribn.; *Sphenopholis interrupta* var. *californica* (Vasey) Scribn.; *Trisetum californicum* Vasey; *Trisetum interruptum* E. Fourn., nom. illeg., non *Trisetum interruptum* Buckley; *Trisetum interruptum* var. *californicum* (Vasey) Louis-Marie)

U.S., Texas. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862, *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 2. 1866, *Bulletin of the Torrey Botanical Club* 11: 6. 1884, *Mexicanas Plantas* 2: 108. 1886, *U.S. Department of Agriculture. Division of Botany. Bulletin* 13(1): t. 46. 1892 and *Rhodora* 8(92): 145-146. 1906, *Proceedings of the Biological Society of Washington* 41: 160. 1928, *Rhodora* 30: 240. 1928 [1929], *Man. Grass. U.S.* 973. 1935, *N. Amer. Fl.* 17(8): 552. 1939, *Agrociencia* 71: 80. 1988.

in English: prairie false oat, prairie trisetum

T. irazuense (Kuntze) Hitchc. (*Calamagrostis irazuensis* Kuntze; *Trisetum fournieranum* Hitchc.; *Trisetum gracile* E. Fourn., nom. illeg., non *Trisetum gracile* (Moris) Boiss.; *Trisetum scabriflorum* Hitchc.; *Trisetum scabrivalve* Sodiro)

South America, Costa Rica, Irazu. Perennial, small clumps forming, fodder, palatable, open forest, shrubby vegetation, see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 103. 1819, *Mexicanas Plantas* 2: 108. 1886, *Revisio Generum Plantarum* 2: 763. 1891 and *Contributions from the United States National Herbarium* 17(3): 326. 1913, *Proceedings of the Biological Society of Washington* 40: 82. 1927, *Contributions from the United States National Herbarium* 24(8): 358. 1927, *Revista del Colégio Nacional Vicente Rocafuerte* 12: 84, 88. 1930, *Feddes Repertorium* 95(7-8): 437. 1984.

in Mexico: zacate

T. juergensii Hack. (*Deschampsia juergensii* (Hack.) Valencia)

Brazil. See *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 65(1-2): 75. 1915, *Revista Argentina de Agronomía* 8: 125. 1941.

T. lasiorhachis (Hack.) Edgar (*Trisetum antarcticum* var. *lasiorhachis* Hack.)

New Zealand. Densely tufted, pilose to villous, sometimes rhizomatous, strong, culm nodes hairy below and above, glumes unequal, awn straight to recurved, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 61. 1830 and *Manual of the New Zealand Flora* 880. 1906, *New Zealand Journal of Botany* 36: 549-553, f. 7. 1998.

T. lepidum Edgar & Druce (*Trisetum lepidum* Edgar & Connor)

New Zealand. Montane, slender, erect and often geniculate at base, ribbed leaves, leaf sheaths margins hairy, very loose inflorescence paniculate with spreading branches, glumes very unequal, found in open habitats, open forests, along streams and rivers, riverbanks, see *New Zealand Journal of Botany* 21: 14. 1983 *New Zealand Journal of Botany* 36: 553-554, f. 9. 1998, *Flora of New Zealand* 5: 331-332. 2000.

T. ligulatum Finot & Zuloaga

Mexico. See *Annals of the Missouri Botanical Garden* 91(1): 15-17, f. 1. 2004.

T. longiglume Hackel (*Deschampsia andicola* (Louis-Marie) Valencia; *Trisetum andicola* Louis-Marie)

Southern America, Chile, Argentina. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 319. 1909, *Rhodora* 30: 244. 1928 [1929], *Revista Argentina de Agronomía* 8: 129, f. 2. 1941.

T. longiglume Hackel var. ***glabratum*** Nicora

Southern America, Chile, Argentina. Rare grass, see *Flora Patagónica* 3: 245, f. 158. 1978.

T. longiglume Hackel var. ***longiglume*** (*Trisetum andicola* Louis-Marie)

Southern America, Chile, Argentina. See *Repertorium Specierum Novarum Regni Vegetabilis* 7: 319. 1909.

T. macbridei Hitchc.

South America, Peru. Tufted, see *Contributions from the United States National Herbarium* 24(8): 359. 1927.

T. martha-gonzaleziae P.M. Peterson & Finot (named for Martha González-Elizondo)

America, Mexico. See *Phytologia* 61(2): 117. 1986, *Sida* 17: 113. 1996, *Contr. Univ. Michigan Herb.* 22: 121. 1999, *Acta Bot. Mex.* 53: 39. 2000, *Contr. Univ. Michigan Herb.* 23: 333. 2001, *Annals of the Missouri Botanical Garden* 91(1): 21, f. 3. 2004.

T. melicoides (Michaux) Scribn. (*Agrostis airoides* (Poir.) Raspail, nom. illeg., non *Agrostis airoides* Torr.; *Aira melicoides* Michx.; *Arundo airoides* Poir.; *Calamagrostis airoides* (Poir.) Steud.; *Deyeuxia airoides* (Poir.) P. Beauv.; *Dupontia cooleyi* A. Gray; *Grapphephorum cooleyi* (A. Gray) Farw.; *Grapphephorum melicoides* (Michx.) Desv.; *Grapphephorum melicoideum* (Michx.) Desv.; *Grapphephorum melicoideum* var. *cooleyi* (A. Gray) Scribn.; *Grapphephorum melicoideum* var. *majus* A. Gray; *Poa melicoides* (Michx.) Nutt.; *Triodia melicoides* (Michx.) Spreng.; *Trisetum melicoides* (Michx.) Vasey ex Scribn.; *Trisetum melicoides* subsp. *cooleyi* (A. Gray) Scribn.; *Trisetum melicoides* var. *majus* (A. Gray) A.S. Hitchc.; *Trisetum melicoides* var. *majus* (A. Gray) Scribn.; *Trisetum melicoides* var. *melicoides*)

U.S. Found in gravelly shores, river thickets, see *Flora Boreali-Americana* 1: 62. 1803, *Encyclopédie Méthodique, Botanique* 6: 270. 1804, *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Essai d'une Nouvelle Agrostographie* 44, 152, 160. 1812, *The Genera of North American Plants* 1: 68. 1818, *Annales des Sciences Naturelles (Paris)* 5: 449. 1825, *Systema Vegetabilium, editio decima sexta* 1: 331. 1825, *Nomenclator Botanicus. Editio secunda* 1: 249. 1840, *A Manual of the Botany of the Northern United States. Second Edition* 556. 1856, *Proceedings of the American Academy of Arts and Sciences* 5: 191. 1861, *Botanical Gazette* 9: 169. 1884, *Memoirs of the Torrey Botanical Club* 5(4): 53. 1894 and *Rhodora* 8(89): 87. 1906, *Rhodora* 10(112): 65. 1908, *Papers of the Michigan Academy of Science, Arts and Letters* 1: 88. 1923.

in English: purple false oat, purple false oats

T. mexicanum (Swallen) S.D. Koch (*Deschampsia mexicana* Swallen; *Trisetum viride* (Kunth) Kunth)

Mexico. See *Nova Genera et Species Plantarum* 1: 147. 1815 [1816], *Révision des Graminées* 1: 101. 1829 and *Boletín de la Sociedad Botánica de México* 23: 28-30, f. 2. 1958 [1959], *Taxon* 28(1-3): 233. 1979.

T. micans (Hook.f.) Bor (*Avena micans* Hook.f.)

India, Jammu and Kashmir, Uttar Pradesh. Rare species, see *The Flora of British India* 7(22): 279. 1896 and *Grasses of Burma, Ceylon, India and Pakistan* 448. 1960.

T. montanum Vasey (*Grapphephorum shearii* (Scribn.) Rydb.; *Trisetum argenteum* Scribn., nom. illeg., non *Trisetum argenteum* (Willd.) Roem. & Schult.; *Trisetum majus* Rydb.; *Trisetum montanum* var. *pilosum* Louis-Marie; *Trisetum montanum* var. *shearii* (Scribn.) Louis-Marie; *Trisetum shearii* Scribn.; *Trisetum spicatum* subsp. *majus* (Rydb.) Hultén; *Trisetum spicatum* subsp. *montanum* (Vasey) W.A. Weber)

U.S. See *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862, *Bulletin of the Torrey Botanical Club* 13(7): 118. 1886, *Plantae Europaeae* 1: 59. 1890, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 49-50, f. 8. 1898 and *Circular, Division of Agrostology, United States Department of Agriculture* 30: 8. 1901, *Bulletin of the Torrey Botanical Club* 32(11): 602. 1905, *Proceedings of the Biological Society of Washington* 41: 160. 1928, *Rhodora* 30: 212-213. 1928, *Phytologia* 33(2): 106. 1976.

T. oreophilum Louis-Marie (*Trisetum spicatum* (L.) K. Richt.)

South America, Peru. See *Rhodora* 30: 221. 1928.

T. oreophilum Louis-Marie var. *johnstoni* Louis-Marie

Argentina. See *Rhodora* 30: 237. 1928 [1829].

T. oreophilum Louis-Marie var. *oreophilum*

America.

T. orthochaetum A.S. Hitchc.

U.S. Perennial, single stemmed, inflorescence a nodding panicle, awns slender and straight, found in boggy spots, moist meadows, edge of forests, see *American Journal of Botany* 21(3): 134, f. 3. 1934.

in English: bitter root trisetum

T. palmeri Hitchc. (*Trisetum viride* (Kunth) Kunth)

Mexico. See *Contributions from the United States National Herbarium* 17(3): 325. 1913.

T. paniceum (Lom.) Porsild

Mediterranean. See *Lagascalia* 12: 290-292. 1984, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988, M.T. Montero, "Characterization of allergens from *Trisetum paniceum* pollen: an important aeroallergen in Mediterranean continental climatic areas." *Clinical & Experimental Allergy* vol. 27, issue 12: 1442-1448. Dec 1997.

T. pensylvanicum (L.) P. Beauv. ex Roem. & Schult. (*Aira pallens* var. *aristata* Muhl. ex Elliott; *Aira pensylvanica* Spreng.; *Arrhenatherum kentuckensis* Torr.; *Arrhenatherum pensylvanicum* (L.) Torr.; *Avena caroliniana* Walter; *Avena palustris* Michx.; *Avena pensylvanica* L.; *Avena pennsylvanica* Muhl., nom. illeg., non *Avena pensylvanica* L.;

Sphenopholis palustris (Michx.) Scribn.; *Sphenopholis palustris* var. *flexuosa* (Scribn.) Scribn.; *Sphenopholis palustris* var. *flexuosa* Scribn.; *Sphenopholis pensylvanica* (L.) Hitchc.; *Sphenopholis pensylvanica* var. *flexuosa* (Scribn.) F.T. Hubb.; *Trisetum ludovicianum* Vasey; *Trisetum palustre* (Michx.) Torr.; *Trisetum pensylvanicum* (L.) P. Beauv.; *Trisetum pensylvanicum* (Spreng.) Trin., nom. illeg., non *Trisetum pensylvanicum* (L.) P. Beauv. ex Roem. & Schult.)

North America. Found in rich wet soils, swamps, river swamps, damp ground, see *Species Plantarum* 79. 1753, *Flora Caroliniana, secundum systema vegetabilium perillustrius Linnaei digesta* ... 81. Londini [London] 1788, *Flora Boreali-Americana* 1: 72. 1803, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg* 2: 299, t. 7. 1807-1808, *A Sketch of the Botany of South-Carolina and Georgia* 1: 151. 1816, *Systema Vegetabilium* 2: 658. 1817, *Descriptio uberior Graminum* 185. 1817, *A Flora of the Northern and Middle Sections of the United States* 1: 126, 130-131. 1823, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 66. 1830, *Bulletin of the Torrey Botanical Club* 12: 6. 1885 and *Rhodora* 8(92): 143, 145. 1906, *Contr. U.S. Natl. Herb.* 12: 123. 1908, *Rhodora* 10: 65. 1908, *American Journal of Botany* 2: 304. 1915, *Rhodora* 18: 234. 1916.

in English: swamp oat

T. phleoides (d'Urv.) Kunth (*Avena phleoides* d'Urv.; *Festuca phleoides* Vill.; *Trisetum hirsutum* Phil., nom. illeg., non *Trisetum hirsutum* (Gaudin) Schrad.; *Trisetum phleoides* (Vill.) Trin., nom. illeg., non *Trisetum phleoides* (d'Urv.) Kunth; *Trisetum spicatum* (L.) K. Richt.; *Trisetum spicatum* subsp. *phleoides* (d'Urv.) Hultén, nom. illeg., non *Trisetum spicatum* subsp. *phleoides* (d'Urv.) Macloskie; *Trisetum spicatum* subsp. *phleoides* (d'Urv.) Macloskie; *Trisetum spicatum* var. *hirsutum* Louis-Marie; *Trisetum subspicatum* subsp. *phleoides* (d'Urv.) Hack.; *Trisetum subspicatum* var. *phleoides* (d'Urv.) Hack.)

Southern America, Chile, Argentina. See *Species Plantarum* 1: 63. 1753, *Flore des Iles Malouines* 30. 1825, *Mémoires de la Société Linnéenne de Paris* 4: 601. 1826, *Révision des Graminées* 1: 101. 1829, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 65. 1830, *Anales de la Universidad de Chile* 46(43): 565. 1873, *Plantae Europaeae* 1: 59. 1890 and *Svenska Expeditionen till Magellansländer* 3(5): 222. 1900, *Reports of the Princeton University Expeditions to Patagonia* ... *Botany* 8: 206. 1904, *Rhodora* 30: 239. 1928 [1929], *Svensk Botanisk Tidsskrift* 53: 224. 1959.

T. pinetorum Swallen

Guatemala, Mexico. See *Phytologia* 4(7): 424. 1953.

T. preslei (Kunth) E. Desv. (*Avena pilosa* J. Presl, nom. illeg., non *Avena pilosa* Scop.; *Avena presley* Kunth; *Deschampsia lasiantha* Phil.; *Trisetum buchtienii* Hack.; *Trisetum lasiolepis* E. Desv.; *Trisetum preslei* var. *buchtienii* (Hack.) Louis-Marie)

South America, Chile. See *Flora Carniolica, Editio Secunda* 1: 86. 1772, *Rhodora* 30: 238. 1929, *Reliquiae Haenkeanae* 1(4-5): 253. 1830, *Enumeratio Plantarum Omnium Hucusque Cognitarum* 1: 304. 1833, *Flora Chilena* 6: 346-347. 1854, *Linnaea* 33(3-4): 290. 1864 and *Zeitschrift für Botanik* 54: 290. 1904.

T. preslei (Kunth) E. Desv. var. ***lasianthum*** (Phil.) Louis-Marie (*Deschampsia lasiantha* Phil.)

Chile. See *Linnaea* 33(3-4): 290. 1864 and *Rhodora* 30: 238. 1929.

T. preslei (Kunth) E. Desv. var. ***preslei***

America.

T. pringlei (Scribner ex Beal) Hitchc. (*Grappophorum pringlei* Scribn. ex Beal)

Mexico, Chiapas, Guatemala, Costa Rica. Perennial, along roadsides, see *Nouveau Bulletin des Sciences, publié par la Société Philomatique de Paris* 2: 189. 1810, *Grasses of North America for Farmers and Students* 2: 561. 1896 and *Proceedings of the Biological Society of Washington* 40: 82. 1927, *Brittonia* 23(3): 293-324. 1971.

T. projectum Louis-Marie (*Trisetum canescens* Buckley; *Trisetum cernuum* var. *projectum* (Louis-Marie) Beetle; *Trisetum spicatum* var. *projectum* (Louis-Marie) J.T. Howell)

America, U.S. See *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 61. 1830, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 100. 1862 and *Rhodora* 30(359): 217-218. 1928, *Leaflets of Western Botany* 4(12): 288. 1946, *Wasmann Journal of Biology* 37(12): 22. 1979 [1980].

T. rigidum (M. Bieb.) Roem. & Schult. (*Avena rigida* M. Bieb.)

Europe, Russia. Perennial bunchgrass, see *Flora Taurico-Caucasica* 1: 77. 1808, *Systema Vegetabilium* 2: 662. 1817 and *Novosti Sist. Vyss. Rast.* 7: 62. 1970[1971].

T. rosei Scribn. & Merr. (*Trisetum rosei* f. *tenerum* (Scribn. & Merr.) Louis-Marie; *Trisetum rosei* var. *tenerum* Scribn. & Merr.; *Trisetum spicatum* (L.) K. Richt.) (for the American botanist Joseph Nelson Rose, 1862-1928, botanical explorer, traveler, plant collector (Southwest U.S., Mexico and South America), among his works are "Notes on useful plants of Mexico." *Contr. U.S. Natl. Herb.* 5(4): 209-259. 1899 and "List of plants collected by the U.S.S. Albatross in 1887-1891 along the western coast of America." *Contr. U.S. Natl. Herb.* 1(5): 135-142. 1892, with Nathaniel Lord Britton (1859-1934) wrote *The Cactaceae*. Washington

1919-1923. See J.H. Barnhart, *Biographical notes upon botanists*. 3: 177. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 338. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 645-650. 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 354. 1973; Larry W. Mitich, *Cactus and Succulent Journal*. vol. 53, no. 6: 299-303. 1981; Gordon Douglas Rowley, *A History of Succulent Plants*. Strawberry Press, Mill Valley, California 1997; R. Zander, F. Encke, G. Buchheim & S. Seybold, *Handwörterbuch der Pflanzennamen*. 14 Aufl. Stuttgart 1993; J. Ewan & Nesta Dunn Ewan, "Biographical dictionary of Rocky mountain naturalists." *Reg. Veget.* 107: 1-253. 1981; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983; Ira L. Wiggins, *Flora of Baja California*. 43. California 1980; *Contr. U.S. Natl. Herb.* 7: 148. 1900; *Contr. U.S. Natl. Herb.* 23: 1117. 1924; *Amer. Fern. J.* 33: 135. 1943; *Sida* 4: 329-330. 1972; *J. Arnold Arbor.* 60: 225. 1979; *Bradleya* 13: 59. 1995; *Nord. J. Bot.* 17: 392. 1997)

Mexico. See *Contributions from the United States National Herbarium* 8(4): 289. 1905, *Rhodora* 30: 239. 1928 [1929].

T. serpentinum Edgar & A.P. Druce

New Zealand. Tufted, open, leaf sheaths softly pubescent, ligule ciliate, panicles narrow and loose, glumes unequal, awn recurved to straight, open habitat, open ground, grassland, see *New Zealand Journal of Botany* 36: 554-555, f. 11. 1998.

T. sibiricum Rupr. (*Avena ruprechtii* Griseb.; *Trisetum bifidum* subsp. *sibiricum* (Rupr.) T. Koyama; *Trisetum flavescens* var. *sibiricum* (Rupr.) Ohwi; *Trisetum ruprechtii* (Griseb.) Steud.)

Asia, Europe, North America. Perennial, small, erect, glabrous, rhizomatous, flowering culm nodes not rooting at the lower nodes, leaves along the stems, ligules membranous and glabrous, inflorescence paniculate, spikelets pedicellate disarticulating above the glumes, palea present, see *Species Plantarum* 1: 79. 1753, *Beiträge zur Pflanzenkunde des Russischen Reiches* 2: 65. 1845, *Flora Rossica* 4(13): 418. 1852, *Synopsis Plantarum Glumacearum* 1: 226. 1854 and *Botanical Magazine* 45: 191-192. 1931, *Report of the First Scientific Expedition to Manchoukuo* under the leadership of Shigeyasu Tokunaga, June-October 1933 4: 77. 1940 [Tokyo 1934-1940], *Grasses of Japan and its Neighboring Regions* 533. 1987.

in English: Siberian oatgrass, Siberian false oat

T. sibiricum Rupr. subsp. *litorale* Rupr. ex Roshev. (*Trisetum litorale* (Rupr. ex Roshev.) Czer., nom. illeg., non *Trisetum litorale* Phil.; *Trisetum sibiricum* subsp. *litorale* (Rupr.

ex Roshev.) Roshev.; *Trisetum sibiricum* var. *litorale* (Rupr. ex Roshevitz) Rupr. ex Roshevitz)

Alaska, Canada, Europe, Russia. Perennial, see *Linnaea* 29: 92. 1857-1858 and *Flora URSS* 2: 254. 1934.

in English: Siberian oatgrass

T. sibiricum Rupr. subsp. *sibiricum*

Europe, Russia, China. Perennial.

in English: Siberian oatgrass

T. spellenbergii Soreng, Finot & P.M. Peterson (for Richard William Spellenberg, b. 1940)

Mexico. See *Amer. J. Bot.* 79: 1200. 1922, *Wrightia* 5: 141. 1975, *Madroño* 30: 115-117. 1983, *Phytologia* 59: 91. 1985, *Brittonia* 39: 190. 1987, *Syst. Bot.* 15: 252. 1990, *Phytologia* 70: 84-85. 1991, *Phytologia* 76: 406. 1994, *Acta Bot. Mex.* 47: 26. 1999, *Sida* 18(4): 989, 995. 1999, *Madroño* 46(4): 208. 1999 [2000], *Annals of the Missouri Botanical Garden* 91(1): 23-25, f. 4. 2004.

T. spicatum (L.) K. Richt. (*Aira spicata* L.; *Avena airoides* Koeler; *Avena elongata* Kunth; *Avena mollis* Michx.; *Avena phleoides* d'Urv.; *Avena spicata* (L.) Fedtsch., nom. illeg., non *Avena spicata* L.; *Avena subspicata* Clairv.; *Avena tolucensis* Kunth; *Avena virescens* (Regel) Regel; *Briza tolucensis* Kunth; *Deyeuxia gracilis* E. Fourn.; *Deyeuxia gracilis* E. Fourn. ex Hemsl., nom. illeg., non *Deyeuxia gracilis* Wedd.; *Koeleria canescens* Torr. ex Trin.; *Koeleria spicata* Rchb. ex Willk. & Lange; *Koeleria subspicata* (L.) Rchb.; *Melica triflora* Bigelow; *Panicum spicatum* (L.) Farw.; *Rupestrina pubescens* Prov.; *Trisetaria airoides* (Koeler) Baumg.; *Trisetaria spicata* (L.) Paunero; *Trisetarium elongatum* (Kunth) Poir.; *Trisetarium tolucensis* (Kunth) Poir.; *Trisetum airoides* (Koeler) P. Beauv. ex Roem. & Schult.; *Trisetum alaskanum* Nash; *Trisetum albidum* Sodiro; *Trisetum americanum* Gand.; *Trisetum andinum* Benth.; *Trisetum andinum* Phil.; *Trisetum brittonii* Nash; *Trisetum congdonii* Scribn. & Merr.; *Trisetum disjunctum* Louis-Marie; *Trisetum elongatum* (Kunth) Kunth; *Trisetum fuegianum* Gand.; *Trisetum gracile* Sodiro; *Trisetum groenlandicum* Steud.; *Trisetum humile* Louis-Marie; *Trisetum interruptum* E. Fourn.; *Trisetum labradoricum* Steud.; *Trisetum majus* Rydb.; *Trisetum molle* Kunth; *Trisetum montanum* Vasey; *Trisetum montanum* Vasey var. *shearii* Louis-Marie; *Trisetum nivosum* E. Fourn.; *Trisetum oreophilum* Louis-Marie; *Trisetum phleoides* (d'Urv.) Kunth; *Trisetum pubiflorum* Hack.; *Trisetum rosei* Scribn. & Merr.; *Trisetum rosei* f. *tenerum* (Scribn. & Merr.) Louis-Marie; *Trisetum rosei* var. *tenerum* Scribn. & Merr.; *Trisetum spicatum* subsp. *alaskanum* (Nash) Hultén; *Trisetum spicatum* (L.) K. Richt. subsp. *alaskanum* (Nash) Hultén; *Trisetum spicatum* subsp. *andinum* (Benth.) Hultén; *Trisetum spicatum* subsp. *bolivianum* Hultén; *Trisetum spicatum* (L.) K. Richt. subsp. *congdonii* (Scribn. & Merr.) Hultén; *Trisetum spicatum* (L.) K. Richt. subsp. *majus* (Rydb.) Hultén; *Trisetum spicatum* (L.) K. Richt. subsp. *molle*

(Michx.) Hultén; *Trisetum spicatum* subsp. *molle* (Kunth) Hultén, nom. illeg., non *Trisetum spicatum* subsp. *molle* (Kunth) Piper; *Trisetum spicatum* subsp. *molle* (Kunth) Piper; *Trisetum spicatum* subsp. *phleoides* (d'Urv.) Hultén; *Trisetum spicatum* (L.) K. Richt. subsp. *pilosiglume* (Fernald) Hultén; *Trisetum spicatum* subsp. *tolucense* (Kunth) Hultén; *Trisetum spicatum* (L.) K. Richt. var. *alaskanum* (Nash) Malte ex Louis-Marie; *Trisetum spicatum* var. *barbatipaleum* Hultén; *Trisetum spicatum* var. *brittonii* (Nash) Louis-Marie; *Trisetum spicatum* (L.) K. Richt. var. *congdonii* (Scribn. & Merr.) Hitchc.; *Trisetum spicatum* var. *laxius* (Lange) Lindm.; *Trisetum spicatum* (L.) K. Richt. var. *maidenii* (Gand.) Fernald; *Trisetum spicatum* (L.) K. Richt. var. *majus* (Rydb.) Farw.; *Trisetum spicatum* var. *michauxii* H. St. John; *Trisetum spicatum* (L.) K. Richt. var. *molle* (Michx.) Beal; *Trisetum spicatum* var. *molle* (Kunth) Scribn. & Merr., nom. illeg., non *Trisetum spicatum* var. *molle* (Kunth) Beal; *Trisetum spicatum* var. *nivosum* (E. Fourn.) Louis-Marie; *Trisetum spicatum* (L.) K. Richt. var. *pilosiglume* Fernald; *Trisetum spicatum* (L.) K. Richt. var. *spicatiforme* Hultén; *Trisetum spicatum* (L.) K. Richt. var. *villosissimum* (Lange) Louis-Marie; *Trisetum subspicatum* (L.) P. Beauv.; *Trisetum subspicatum* f. *maidenii* Gand.; *Trisetum subspicatum* var. *glabrifolium* Hack. ex Macloskie; *Trisetum subspicatum* var. *molle* (Kunth) A. Gray; *Trisetum tolucense* (Kunth) Kunth; *Trisetum triflorum* (Bigelow) Á. Löve & D. Löve; *Trisetum triflorum* (Bigelow) Á. Löve & D. Löve subsp. *molle* (Michx.) Á. Löve & D. Löve; *Trisetum triflorum* subsp. *triflorum*; *Trisetum villosissimum* (Lange) Louis-Marie; *Trisetum virescens* (Regel) B. Fedtsch. (Joseph Whipple Congdon, 1834-1910) (Joseph Nelson Rose, 1862-1928)

America, Asia, Circumpolar. Perennial bunchgrass, subalpine to alpine, polymorphic and highly variable, erect, light green, in rather small dense tufts, stem and leaves are often densely hairy or rough or villous, leaf blades linear acute, basal leaf sheaths are hairy, leaves rather flat or folded or the edges inrolled on drying, ligule a fringed membrane, inflorescence spike-like rather dense and greenish purple in color, panicle compact or interrupted at base, upper glume is not much longer than the lower one, lemmas are rough and with a bent awn, native pasture species, good forage for grazing animals, forage for deer and goats, often an important constituent of high-mountain summer ranges, a high-altitude grass grazed by yaks and sheep, an early coloniser of disturbed sandy and silty ground, threatened in Wisconsin, grows in montane and alpine areas, campos, tundra meadows, on seepage slopes, ridges, cliffs, exposed or partly shaded sandstone ledges and crevices, on moist to dry sites, lakeshores, rocky places, wet ledges, most common in open meadows, stony slopes, see *Species Plantarum* 1: 63-64. 1753, *Systema Naturae, Editio Decima* 2: 873. 1759, *Descriptio uberior Graminum* 298. 1802, *Manuel d'Herborisation en Suisse et en Valais* 17. 1811, *Essai d'une*

Nouvelle Agrostographie 88, 149, 180. 1812, *Nova Genera et Species Plantarum* 1: 148. 1815 [1816], *Enumeratio Stirpium Transsilvaniae* 3: 265. 1816, *New England Journal of Medicine and Surgery, and the Collateral Branches of Science* 5: 334. 1816, *Systema Vegetabilium* 2: 666. 1817, *Mémoires de la Société Linnéenne de Paris* 4: 601. 1826, *Révision des Graminées* 1: 101. 1829, *Flora Germanica Excursoria* 49. 1830, *Bulletin de la Société Impériale des Naturalistes de Moscou* 412: 299. 1868, *Acta Horti Petrop.* 7: 635. 1881, *Biologia Centrali-Americana; ... Botany ...* 3: 554. 1885, *Plantae Europaeae* 1: 59. 1890, *Index Kewensis* 1: 399. 1893, *Grasses of North America for Farmers and Students* 2: 377. 1896 and *Österreichische Botanische Zeitschrift* 52(5): 187. 1902, *Contributions from the United States National Herbarium* 8(4): 289. 1905, *Wissenschaftliche Ergebnisse der Schwedischen Südpolar-Expedition 1901-1903* 4(4): 6. 1906, *Contributions from the United States National Herbarium* 11: 125. 1906, *Contributions from the United States National Herbarium* 13(3): 64. 1910, *Rhodora* 18: 195. 1916, *Rhodora* 30: 221, 239. 1928 [1929], *Anales del Jardín Botánico de Madrid* 9: 516. 1950, *Svensk Botanisk Tidskrift* 53: 203-228. 1959, *University of Colorado Studies: Series in Biology* 17: 7. 1965, *Svensk Botanisk Tidskrift* 69(2): 132. 1975, *Gard. Bull. Singapore* 36: 131. 1983, *Systematic Botany* 11: 567-578. 1986, *Taxon* 35: 195. 1986, *New Zealand J. Bot.* 36: 556-557. 1998, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, Michael R. Bynum and William K. Smith, "Floral movements in response to thunderstorms improve reproductive effort in the alpine species *Gentiana algida* (Gentianaceae)." *Am. J. Bot.* 88: 1088-1095. 2001, Ulf Molau, Urban Nordenhäll and Bente Eriksen, "Onset of flowering and climate variability in an alpine landscape: a 10-year study from Swedish Lapland." *Am. J. Bot.* 92: 422-431. 2005.

in English: spike trisetum, narrow false oats, narrow oatgrass, bristle grass, northern oatgrass

in Mexico: tres cerdas espigado

T. spicatum (L.) K. Richt. f. *viviparum* A.E. Porsild

America. See *Nature Canada* 4: 9. 1974 [1975].

T. spicatum (L.) K. Richt. subsp. *kinabaluense* Chrtk

Asia, Mount Kinabalu. Perennial, tussocky, see *Folia Geobotanica et Phytotaxonomica* 5: 447. 1970.

T. spicatum (L.) K. Richt. subsp. *ovatipaniculatum* Hultén ex Jonsell (*Trisetum ovatipaniculatum* (Hultén ex Jonsell) Galushko; *Trisetum spicatum* subsp. *ovatipaniculatum* Hultén)

Europe. See *Svensk Botanisk Tidskrift* 69(2): 132. 1975, *Novosti Sist. Vyss. Rast.* 13: 254. 1976.

T. spicatum (L.) K. Richt. subsp. *pilosiglume* (Fernald) Hultén (*Trisetum spicatum* var. *pilosiglume* Fernald; *Trisetum triflorum* (Bigelow) Á. Löve & D. Löve)

Europe. See *Plantae Europaeae* 1: 59. 1890 and *Rhodora* 18: 195. 1916, *Svensk Botanisk Tidskrift* 53: 215. 1959.

T. spicatum (L.) K. Richt. subsp. *spicatum* (*Trisetum molle* Kunth; *Trisetum subspicatum* var. *breviglume* Hack.; *Trisetum triflorum* (Bigelow) Á. Löve & D. Löve)

North Europe, America. See *New England Journal of Medicine and Surgery, and the Collateral Branches of Science* 5: 334. 1816, *Révision des Graminées* 1: 101. 1829, *A Manual of the Botany of the Northern United States. Second Edition* 572. 1856, *Plantae Europaeae* 1: 59. 1890, *Grasses of North America for Farmers and Students* 2: 377. 1896 and *Contributions from the United States National Herbarium* 11: 125. 1906, *Wissenschaftliche Ergebnisse der Schwedischen Südpolar-Expedition 1901-1903* 4(4): 6. 1906, *Contributions from the United States National Herbarium* 13(3): 64. 1910, *Svensk Botanisk Tidskrift* 53: 216. 1959, *University of Colorado Studies: Series in Biology* 17: 7. 1965, *Willdenowia* 18: 243-252. 1988, *Opera Botanica* 137: 1-42. 1999.

in English: spike trisetum, narrow false oats, narrow oatgrass, bristle grass, northern oatgrass

T. spicatum (L.) K. Richt. var. *spicatum*

America.

T. subspicatum (L.) P. Beauv. (*Aira spicata* L.; *Aira subspicata* L.; *Avena airoides* Koeler; *Koeleria subspicata* (L.) Rchb.; *Trisetum spicatum* (L.) K. Richt.)

Northern Europe. See *Species Plantarum* 1: 63-64. 1753, *Systema Naturae, Editio Decima* 2: 873. 1759, *Descriptio uberior Graminum* 298. 1802, *Essai d'une Nouvelle Agrostographie* 88, 149. 1812, *Flora Germanica Excursoria* 49. 1830, *A Manual of the Botany of the Northern United States. Second Edition* 572. 1856, *Plantae Europaeae* 1: 59. 1890 and *Wissenschaftliche Ergebnisse der Schwedischen Südpolar-Expedition 1901-1903* 4(4): 6. 1906, *Bulletin Colorado State University Experiment Station* 100: 34. 1906, *Reports of the Princeton University Expeditions to Patagonia ... Botany* 49. 1915.

T. tenellum (Petrie) A.W. Hill (*Trisetum antarcticum* subsp. *tenellum* Petrie; *Trisetum antarcticum* var. *tenellum* (Petrie) Cheeseman; *Trisetum tenellum* (Petrie) Allan & Zotov ex Laing & Gourlay)

New Zealand. Tufted, glabrous or pubescent culms slender and filiform, ligule ciliate, panicle spike-like, glumes subequal, lemma awned, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 1(1): 61. 1830 and *Transactions and Proceedings of the New Zealand Institute* 44: 187. 1912, *Manual of the New Zealand Flora* 169. 1925, *Transactions and Proceedings of the Royal Society of New Zealand* 64: 3. 1934, *Index Kewensis* Suppl. 9: 289. 1938, *New Zealand J. Bot.* 36: 558-560. 1998.

T. thospiticum Chrtek

Turkey. Rare species, stony places, see *Botaniska Notiser* 119: 489. 1966.

T. tonduzii Hitchc.

America, Costa Rica. Bunchgrass, tufted, stoloniferous, páramos, see *North American Flora* 17(8): 558. 1939, *Brittonia* 23(3): 293-324. 1971.

T. viride (Kunth) Kunth (*Avena viridis* Kunth; *Deschampsia mexicana* Swallen; *Deyeuxia viridis* (Kunth) E. Fourn., nom. illeg., non *Deyeuxia viridis* Phil.; *Trisetarium viride* (Kunth) Poir.; *Trisetum altum* Swallen; *Trisetum mexicanum* (Swallen) S.D. Koch; *Trisetum palmeri* Hitchc.; *Trisetum paniculatum* E. Fourn.)

South America, Mexico, Guatemala. See *Nova Genera et Species Plantarum* 1: 147. 1815 [1816], *Encyclopédie Méthodique, Botanique, Suppl.* 5: 366. 1817, *Révision des Graminées* 1: 101. 1829, *Bulletin de la Société Botanique de France* 24: 181. 1877, *Mexicanas Plantas* 2: 109. 1886 and *Contributions from the United States National Herbarium* 17(3): 325. 1913, *Phytologia* 4(7): 423. 1953, *Boletín de la Sociedad Botánica de México* 23: 28-30, f. 2. 1958 [1959], *Taxon* 28(1-3): 233. 1979.

T. virletii E. Fourn. (*Trisetum bambusifforme* E. Fourn.)

Mexico. Rhizomatous, densely clumped, forage, see *Mexicanas Plantas* 2: 108. 1886 and "Mexican Grasses in the United States National Herbarium." *Contr. U.S. Nat. Herb.* 17: 181-389. 1913 [*Mexican Grasses* 326. 1913], *Fl. Novogaliciana* 14: 400. 1983.

T. wolfii Vasey (*Grapphephorum brandegei* (Scribn.) Rydb.; *Grapphephorum muticum* (Bol.) A. Heller; *Grapphephorum wolfii* (Vasey) Vasey ex Coult.; *Trisetum brandegei* Scribn.; *Trisetum muticum* (Bol.) Scribn.; *Trisetum subspicatum* var. *muticum* Bol.; *Trisetum wolfii* f. *muticum* (Bol.) Louis-Marie; *Trisetum wolfii* var. *brandegei* (Scribn.) Louis-Marie; *Trisetum wolfii* var. *muticum* (Bol.) Scribn.)

North America, U.S., Colorado. Perennial, loosely tufted or rhizomatous, no auricles, ligules blunt, open sheaths rough, flat leaf blades, stem between the flowers sparsely hairy, flower head a narrow spike purplish before maturity, purplish spikelets, glumes equal, blunt lemmas, lemmas awnless or with very minute awns, callus sparsely hairy, found in open grasslands, wet meadows and edges of forests, in British Columbia grows in wet meadows and along streams in the subalpine zones, see *Essai d'une Nouvelle Agrostographie* 88, 149. 1812, *Monthly Report of the Department of Agriculture* 156. 1874, *Geological Survey of California, Botany* 2: 296. 1880, *Bulletin of the Torrey Botanical Club* 10: 64. 1883, *Manual of the Botany ... of the Rocky Mountain Region* . . 423. 1885, *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 50, f. 10. 1898 and *Catalogue of North American Plants North of Mexico (edition 2)* 31. 1900, *Rhodora* 8(89): 88.

1906, *Flora of the Rocky Mountains* 61. 1917, *Rhodora* 30: 241. 1928 [1929].

in English: Wolf's trisetum, beardless false oat, beardless oatgrass

T. wrangelense (Petrovsky) Probat. (*Trisetum spicatum* subsp. *wrangelense* V.V. Petrovsky)

Russia, Eurasia. Rare species, see *Bot. Zhurn.* 63(9): 1263. 1978.

T. youngii Hook.f.

New Zealand. Tufted, open, erect, subalpine to alpine, ligule ciliate, narrow lanceolate inflorescence paniculate more or less spike-like, glumes subequal and membranous, awn more or less recurved, see *Handbook of the New Zealand Flora* 335. 1864 and *New Zealand J. Bot.* 36: 560-562. 1998.

Trisiola Raf. = *Uniola* L.

Referring to *Uniola*.

Chloridoideae, Cynodonteae, Uniolinae, or Chloridoideae, Eragrostideae, Uniolinae, see *Species Plantarum* 1: 71. 1753, *Florula Ludoviciana, or, a Flora of the State of ...* 144. New York 1817, *Am. Monthly Mag. Crit. Rev.* 2: 175. 1817, *Jour. Phys. Chim. Hist. Nat.* 89: 104. 1819, *Am. Monthly Mag. Crit. Rev.* 4: 188, 190. 1819, C.S. Rafinesque, *Neogenyton, or Indication of Sixty-Six New Genera of Plants of North America*. 4. 1825 and E.D. Merrill, *Index rafinesquianus*. 77. 1949, *Contributions from the United States National Herbarium* 41: 232-234. 2001.

Trisiola Raf. = *Distichlis* Raf.

Chloridoideae, Cynodonteae, Monanthochloinae, see *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, C.S. Rafinesque, *Neogenyton, or Indication of Sixty-Six New Genera of Plants of North America*. 4. 1825 and E.D. Merrill, *Index rafinesquianus*. 77. 1949, *Contributions from the United States National Herbarium* 41: 70-73. 2001.

Tristachya Nees = *Apochaete* (C.E. Hubbard)

J.B. Phipps, *Dolichochoaete* (C.E. Hubbard)

J.B. Phipps, *Isalus* J.B. Phipps, *Loudetia* A. Br.,

Loudetia Hochst. ex A. Br., *Loudetia* Hochst.

ex Steud., *Monopogon* Presl, *Muantijamvella*

J.B. Phipps, *Veseyochloa* J.B. Phipps

From the Greek *treis* and *stachys* "spike."

About 20-22 species, tropical and southern Africa, Madagascar, tropical America. Panicoideae, Panicodae, Arundinelleae, annual or perennial, variable, herbaceous, tufted,

ligule a fringe of hairs, plants bisexual, open or contracted inflorescence paniculate or racemose, spikelets usually in triplets and pedicellate, pedicels connate, 2 florets, lower floret male, upper floret bisexual, 2 glumes more or less equal to unequal, upper and lower glumes 3-nerved or 5-nerved, awn geniculate and twisted, palea keels wingless, 2 lodicules free and fleshy, 3 stamens, ovary hairy or glabrous, 2 plumose stigmas, shade and open habitats, floodplains, thickets, slopes, near streams, grassland, campo cerrado, woodland, savannah, wet to dry soils, type *Tristachya leiostachya* Nees, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458, 460. 1829, *Reliquiae Haenkeanae* 1(4-5): 324, t. 44. 1830, *Flora* 24(2): 713. 1841, *Index seminum regii horti botanici genuensis* 24. 1852, *Synopsis Plantarum Glumacearum* 1: 238. 1854, *Die Pflanzenwelt Ost-Afrikas* C: 109. 1895, *Bulletin de l'Herbier Boissier* 3(8): 384. 1895 and *Bulletin of Miscellaneous Information Kew* 1936(5): 320, 321, 322. 1936 [also *Kew Bulletin*], *N. Amer. Flora* 17(8): 578. 1939, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77(2-3): 226-354. 1957, *Kirkia* 4: 105-107, 109-110, 113, t. 10. 1964, *Kirkia* 5(2): 232-233, 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Genera Graminum* 318. 1986, *Flora Mesoamericana* 6: 378. 1994, *Contributions from the United States National Herbarium* 46: 285, 297, 627-628. 2003.

Species

T. angustifolia Hitchc.

Mexico. See *Contributions from the United States National Herbarium* 17(3): 328. 1913.

T. avenacea (J. Presl) Scribn. & Merr. (*Monopogon avenaceus* J. Presl; *Tristachya leiostachya* Nees; *Tristachya mexicana* Kunth)

Mexico, Nicaragua. Perennial, lower lemma 3-nerved, forage, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829, *Reliquiae Haenkeanae* 1(4-5): 324, t. 44. 1830, *Révision des Graminées* 1: 308. 1833 and *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 23. 1901, *Bot. Jahrb. Syst.* 77: 302. 1957, *Phytologia* 37(4): 317-407. 1977.

T. bequaertii De Wild. (*Dolichochoaete bequaertii* (De Wild.) J.B. Phipps)

Africa. See *Bulletin du Jardin Botanique de l'État* 6: 45-46, t. 34. 1919, *Kirkia* 4: 112. 1964.

T. bicrinita (J.B. Phipps) Clayton (*Dolichochoaete bicrinita* J.B. Phipps)

Africa. See *Kirkia* 4: 112. 1964, *Kew Bulletin* 21(1): 124. 1967.

T. biseriata Stapf (*Dolichochoaete biseriata* (Stapf) J.B. Phipps)

South Africa. Perennial, tufted, leaves filiform, pedicels connate, glumes hairy, see *Bulletin of Miscellaneous Information Kew* 1897: 295. 1897 and *Kirkia* 4: 112. 1964.

T. contrerasii R. Guzmán

Mexico. See *Phytologia* 51(7): 463. 1982.

T. hispida (L.f.) K. Schum. (*Anthistiria hispida* (L.f.) Thunb.; *Apochaete hispida* (L.f.) J.B. Phipps; *Avena hispida* L.f.; *Danthonia hispida* (L.f.) Spreng.; *Tristachya granulosa* Chiov.; *Tristachya hispida* K. Schum.; *Tristachya leucothrix* Trin. ex Nees; *Tristachya leucothrix* var. *bolusii* De Wild.; *Tristachya leucothrix* var. *longearistata* De Wild.; *Tristachya leucothrix* var. *sapinii* De Wild.; *Tristachya monocephala* Hochst.; *Tristachya mukuluensis* Vanderyst)

Africa. See *Nova Graminum Genera* 35. 1779, *Supplementum Plantarum* 111. 1781 [1782], *Flora Capensis* edition 2 1: 403. 1818, *Systema Vegetabilium, editio decima sexta* 1: 331. 1825, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 460. 1829, *Flora* 29: 120. 1846, *Die Pflanzenwelt Ost-Afrikas* C: 109. 1895 and *Bulletin du Jardin Botanique de l'État* 3: 278. 1911, *Annali di Botanica* 13: 52. 1914, *Bulletin du Jardin Botanique de l'État* 6: 51-52. 1919, *Bulletin agricole du Congo Belge* 11: 113. 1920, *Bot. Jahrb. Syst.* 77: 308. 1957, *Kirkia* 4: 105. 1964.

T. huillensis Rendle (*Muantijamvella huillensis* (Rendle) J.B. Phipps)

Africa, Angola. Callus narrowly obtuse to acute, see *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 217. 1899 and *Kirkia* 4: 106. 1964.

T. laxa Scribn. & Merr.

Mexico. See *Bulletin, Division of Agrostology United States Department of Agriculture* 24: 24, f. 7. 1901.

T. leiostachya Nees (*Tristachya avenacea* (J. Presl) Scribn. & Merr.)

America, Brazil. Erect, tufted, clumped, mat-forming, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829. in Brazil: capim-flecha

T. leucothrix Nees (*Apochaete hispida* (L.f.) J.B. Phipps; *Avena hispida* L.f.; *Tristachya hispida* (L.f.) K. Schum.; *Tristachya hispida* K. Schum.; *Tristachya leucothrix* Trin. ex Nees)

South Africa, Malawi, Zaire. Perennial, tufted to loosely tufted, erect, shortly rhizomatous, basal sheaths with golden brown hairs, ligule a ring of hairs, leaf blade hairy and curled, inflorescence paniculate, spikelets in hairy triplets, pedicels connate, long twisted awn, palatability and grazing value variable, common in sourveld, low lying areas, in wet meadows, sandy soils, on stony slopes, grasslands, in marshy areas, hillsides, see *Supplementum Plantarum* 111. 1781 [1782], *Flora Brasiliensis seu Enumeratio Plantarum* 2: 460. 1829, *Die Pflanzenwelt Ost-Afrikas* C: 109. 1895 and *Bulletin du Jardin Botanique de l'État* 3: 278. 1911,

Bulletin du Jardin Botanique de l'État 6: 51-52. 1919, *Bot. Jahrb. Syst.* 77: 308. 1957, *Kirkia* 4: 105. 1964.

in English: hairy trident grass, trident grass, tristachya

in South Africa: harige driebloomgras, harige driebloom-saadgras, rooisaadgras, motswalle, letswalle

T. lualabaensis (De Wild.) J.B. Phipps (*Loudetia hitchcockii* C.E. Hubb.; *Loudetia lualabaensis* (De Wild.) C.E. Hubb.; *Trichopteryx lualabaensis* De Wild.; *Tristachya hitchcockii* (C.E. Hubb.) Conert)

Tropical Africa. Perennial, tufted, swollen at the base, not bulbous, spikelets in triplets, common in alluvial soils, river floodplains, seasonally flooded areas, see *Annales de la Société Scientifique de Bruxelles* 39 (Mém. 153): 158. 1920, *Bulletin of Miscellaneous Information Kew* 1935(5): 309. 1935 [also *Kew Bulletin* 1935: 309. 1935], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 77: (2-3): 301. 1957, *Kirkia* 4: 104. 1964.

T. nodiglumis K. Schum. (*Dolichochoaete nodiglumis* (K. Schum.) J.B. Phipps; *Tristachya bequaertii* var. *vanderystii* De Wild.; *Tristachya eylesii* Stent & Rattray)

Tropical Africa. Perennial, variable, clumping, robust, green, ligules yellowish, pedicels connate, common in sandy soils, river floodplains, grassland, see *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 334-335. 1897 and *Bulletin du Jardin Botanique de l'État* 6: 45-46, t. 34. 1919, *Proceedings of the Rhodesia Scientific Association* 32: 41. 1933, *Kirkia* 4: 111. 1964.

T. papilosa R. Guzmán

Mexico. Perennial, see *Phytologia* 51(7): 465. 1982.

T. rehmannii Hack. (*Dolichochoaete rehmannii* (Hack.) J.B. Phipps)

Tropical Africa. Perennial, tufted, unbranched, usually 1 node per culm, leaf sheath round, ligule a ring of hairs, spikelets in groups of 3 and awned, pedicels connate, hard and unpalatable, usually in open bushveld, grassland, on moist soils, on shallow stony soils, stony slopes, undisturbed veld, near vleis, see *Bulletin de l'Herbier Boissier* 3(8): 384. 1895 and *Kirkia* 4: 110. 1964.

in English: broom trident grass (commonly used for broom-making)

in South Africa: besemdriebloomgras

T. rehmannii Hack. var. *helenae* (Buscal. & Muschl.) C.E. Hubb. (*Dolichochoaete rehmannii* var. *helenae* (Buscal. & Muschl.) J.B. Phipps; *Tristachya helenae* Buscal. & Muschl.) (named for the Duchess of Aosta)

Tropical Africa. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 49: 457-515. 1913, *Bulletin of Miscellaneous Information Kew* 1934: 434. 1934, *Kirkia* 4: 111. 1964, *Biodiversity research in the Horn of Africa region*. Proceedings of the Third International

Symposium on the Flora of Ethiopia and Eritrea at the Carlsberg Academy, Copenhagen, Aug 25-27, 1999 / edited by Ib Friis and Olof Ryding. 2001, *Economic Botany* 56(3): 292-293. 2002.

T. *superba* (De Not.) Schweinf. & Asch. (*Loudetia superba* De Not.; *Trichopteryx gigantea* Stapf; *Trichopteryx gigantea* var. *gracilis* Rendle; *Trichopteryx gigantea* var. *phalagrotres* Peter; *Trichopteryx gigantea* var. *spiciformis* Pilg.; *Trichopteryx homblei* De Wild.; *Trichopteryx hookei* De Wild.; *Trichopteryx superba* (De Not.) Bagl. ex Chiov.; *Tristachya pedicellata* Stent)

Tropical Africa, Malawi, Mali, Zambia, Angola. Perennial, tufted, erect, robust, hard, hairy, stiff, bulbous base, spikelets in triads, pasture, roots used as an aphrodisiac, common in sandy soil, in low-lying areas, moist meadows, rocky sites, see *Index seminum regii horti botanici genuensis* 24. 1852, *Beitrag zur Flora Aethiopiens ...* 302. 1867, *Bulletin of Miscellaneous Information Kew* 1897: 295-296. 1897, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 215. 1899 and *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition, 1911-1912, unter Leitung von Eric Graf von Rosen* 2: 209. 1916, *Nuovo Giornale Botanico Italiano* n.s., 26: 79. 1919, *Annales de la Société Scientifique de Bruxelles* 39(3): 154. 1920, *Annales de la Société Scientifique de Bruxelles* 39(3): 155. 1920, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40: 95. 1930.

in English: hairy trident grass, giant trident grass

in Tanzania: mahua kinyaturu, mahwa kinyaturu

T. *thollonii* Franch. (*Apochaete thollonii* (Franch.) J.B. Phipps; *Tristachya elymoides* Chiov.; *Tristachya homblei* De Wild.; *Tristachya spicata* Pilger ex Peter)

Tropical Africa. See *Bulletin de la Société d'Histoire Naturelle d'Autun* 8: 374. 1895 and *Annali di Botanica* 13: 51. 1915, *Bulletin du Jardin Botanique de l'État* 6: 49, t. 33, f. 12-13. 1919, *Repertorium Specierum Novarum Regni Vegetabilis, Beihefte* 40(1): 89. 1930, *Kirkia* 4: 105. 1964.

T. *viridearistata* (J.B. Phipps) Clayton (*Veseyochloa viridearistata* J.B. Phipps)

Tropical Africa. Fragile hooked peduncle, see *Kirkia* 4: 107, t. 10, f. 3 [f. 1]. 1964, *Kew Bulletin* 21(1): 124. 1967.

Tristania Poir. = *Spartina* Schreb., *Tristania* R. Br. (Myrtaceae)

Chloridoideae, Cynodonteae, or Chloridoideae, Zoysieae, Sporobolinae, see *Genera Plantarum* 43. 1789, *Catalecta Botanica* 3: 10. 1806, *Hortus Kewensis; or, a Catalogue ... The Second Edition* 4: 417. 1812, *Encyclopédie Méthodique, Botanique, Suppl.* 4: 526. 1816 and *Contributions from the United States National Herbarium* 41: 195-200, 232. 2001.

Tristegis Nees = *Melinis* P. Beauv.

From the Greek *treis*, *tria* “three” and *steges*, *stegos* “roof, cover.”

Panicoideae, Paniceae, Melinidinae, type *Tristegis glutinosa* Nees, see *Essai d'une Nouvelle Agrostographie* 54, t. 11, f. 4. 1812, *Horae Physicae Berolinenses* 47, 54. 1820, *Revisio Generum Plantarum* 3(3): 356. 1898 and *Bibliotheca Botanica* 138: 1-149. 1988, *Contributions from the United States National Herbarium* 46: 287, 628-629. 2003.

x Triticale Müntzing = *Triticale* Tscherm.-Seys. ex Müntzing

Pooideae, Triticeae, Triticinae, see *Züchter* 8: 188. 1936, *Genera Graminum* 375. 1986, *Contributions from the United States National Herbarium* 48: 676. 2003.

x Triticosecale Wittm. ex A. Camus = *Secalotricum* Kostov, *Triticale* Müntzing, *Triticale* Tscherm.-Seys. ex Müntzing, *Triticosecale* Wittm., *Tritisecale* Lebedeff

Triticum x *Secale*.

Pooideae, Triticeae, Triticinae, see *Species Plantarum* 1: 85-87. 1753, *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1899: 59. 1899 and *Bulletin du Muséum National d'Histoire Naturelle* 33: 539. 1927, *Revue de Botanique Appliquée et d'Agriculture Tropicale* 16: 251. 1936, *Züchter* 8: 188. 1936, *Proc. Third Int. Wheat Genet. Symp.* 46. 1968, *Genera Graminum* 375. 1986, *Taxon* 35: 144-149. 1986, C.A. Stace, “*Triticale*: a case of nomenclatural mistreatment.” *Taxon* 36(2): 445-452. 1987, *Grass and Forage Science* 53(4): 301-317. Dec 1998, G. Igrejas, “Seed storage protein diversity in triticale varieties commonly grown in Portugal.” *Plant Breeding* 118(4): 303-306. Sep 1999, *Plant Breeding* 118(4): 362-364. Sep 1999, H. Özkan, I. Genc, T. Yagbasanlar and F. Toklu, “Stress tolerance in hexaploid spring triticale under Mediterranean environment.” *Plant Breeding* 118(4): 365-367. Sep 1999, S.J. Xu and L.R. Joppa, “Hexaploid triticales from hybrids of “Langdon” durum D-genome substitutions with “Gazelle” rye.” *Plant Breeding* 119(3): 223-226. July 2000, *Anzeiger für Schädlingskunde* 74(1): 17-21. Feb 2001, *Plant Breeding* 120(1): 39-42. Mar 2001, *Plant Breeding* 120(4): 291-295, Aug 2001, *Plant Breeding* 120(6): 535-540. Dec 2001, *Journal of Agronomy and Crop Science* 188(5): 357-362. Oct 2002, *Contributions from the United States National Herbarium* 48: 610, 676. 2003, Kazunori Tamai and Jian Feng Ma, “Characterization of silicon uptake by rice roots.” *New Phytologist* 158(3): 431-436. June 2003, *Journal of Applied Ecology* 40(5): 824-836. Oct 2003, *Nutrition Bulletin* 29(2): 111-142. June 2004, *Plant Breeding* 123(6): 525-530, 595-599. Dec 2004.

Triticum L. = *Aegilops* L., *Bromus* Scop., *Crithodium* Link, *Deina* Alefeld, *Fruementum* Krause, *Gigachilon* Seidl, *Nivieria* Ser., *Spelta* Wolf, *Zeia* Lunell

From the Latin *triticum*, *i* for wheat, *tero*, *-is*, *trivi*, *tritum*, *terere* “to grind, to wear away, to waste,” Greek *teiro*, *teirein* “distress, weaken,” see Plinius, L. Junius Moderatus Columella, Plautus, Cicero; Carl Linnaeus, *Species Plantarum*. 85. 1753 and *Genera Plantarum*. Edition 5. 37. 1754; Giovanni Semerano, *Le origini della cultura europea*. Dizionario della lingua Latina e di voci moderne. 2(2): 588, 594. Firenze 1994.

About 4-8/-20-25 species, eastern Mediterranean to Iran, western Asia. Pooideae, Triticoideae, Triticeae, or Pooideae, Triticeae, Triticinae, annual, tufted, herbaceous, erect, rarely decumbent at base, culms more or less stout and robust, solid nodes, hollow internodes, leaves in 2 vertical rows at the nodes, auricles present, ligule a membranous rim, leaf blades and sheaths glabrous, leaves narrowly to broadly linear or lanceolate, uppermost leaf the flag leaf, plants bisexual, inflorescence a single dense narrow spike, distichous spikelets borne singly and sessile, florets perfect, bisexual and plano-convex spikelets, rachis fragile or tough, 2 glumes more or less equal, persistent and rigid glumes awned or unawned, coriaceous lemmas rounded on the back and mucronate or awned, lemma keel scabrid, palea keeled entire or splitting at maturity, 2 ciliate lodicules free and membranous, 3 stamens, ovary hairy to hispid, 2 plumose stigmas, fruit ellipsoid and longitudinally grooved, cereal, grain crop species, winter fodder crop, used for hay-making and for alcohol production, found in stony hillsides, roadsides, dry grassland, open habitats, weedy places, taxonomic placement not certain, taxonomic confusion concerning this genus, hybridization, intergeneric hybrids with *Aegilops*, *Agropyron*, *Elymus*, *Elytrigia*, *Hordeum*, *Lophopyrum*, *Secale* and *Taenitherum*, type *Triticum aestivum* L., see *Species Plantarum* 1: 85-87. 1753 and 2: 1050-1051. 1753, *Genera Plantarum* 22. 1776, *Introductio ad Historiam Naturalem* 74. 1777, *Varietades de Ciencias, Literatura y Artes* 4(22): 212. 1805, *Observations sur les Graminées de la Flore Belgique* 94. 1823 [1824], *Flora Altaica* 1: 112. 1829, *Linnaea* 9(1): 132, pl. 3, f. 1-5. 1834, *Oekonomisch-technische Flora Böhmens* 1: 425. 1836, *Annales des Sciences Physiques et Naturelles, d'Agriculture et de l'Industrie, Publiées par la Société Royale d'Agriculture, etc., de Lyon*. 5: 114. 1842, *Flora Rossica* 4(13): 343. 1852, *Flora Chilena* 6: 452. 1854, *Exploration scientifique de l'Algérie ... Botanique II. Phanérogamie*. 202. Paris 1855, *Flore de France* 3: 601. 1856, *Landwirtschaftliche Flora* 335-336. 1866, *Botanisches Centralblatt* 73: 339. 1898 and *American Midland Naturalist* 4: 226. 1915, John Percival (1863-1949), *The Wheat Plant: A Monograph*. London 1921, *Nom. Prop. Int. Bot. Congr. Cambridge*

(England) 1930: 121. 1929, *Flora URSS* 2: 677, 688. 1934, *Acta Bot. Neerl.* 15: 160. 1966, J. MacKey, “The boundaries and subdivision of the genus *Triticum*.” *Proc. 12th Int. Bot. Congr. Leningrad [St. Petersburg]* 1975, *Feddes Repert.* 91: 225-228. 1980, *Plant Systematics and Evolution* 145: 1-13. 1984, *Acta Botanica Boreali-Occidentalia Sinica* 5(4): 260-266. 1985, *Japanese Journal of Breeding* 35: 255-267. 1985, *Taxon* 35: 144-149. 1986 [by P.K. Gupta et B.R. Baum], *Japanese Journal of Genetics* 61: 89-93. 1986, *Journal of Nanjing Agricultural University* 1: 10-14. 1986, *Plant Systematics and Evolution* 154: 183-194. 1986, *Scientia Agricultura Sinica* 20(6): 17-21. 1987, *Genome* 30: 361-365. 1988, *Kromosomo* 50: 1635-1651. 1988, *Acta Botanica Yunnanica* 12: 57-66. 1990, *Pakistan Journal of Botany* 22: 1-10. 1990, *Bot. Zhurn. (Moscow & Leningrad)* 75: 37-44. 1990, *Cytologia* 57: 417-426. 1992, *Taxon* 41: 555-556. 1992, *Chromosoma* 101: 365-373. 1992, *Journal of Plant Research* 106: 239-244. 1993, *Nordic Journal of Botany* 13: 481-493. 1993, *Plant Systematics and Evolution* 188: 125-138. 1993, *Wageningen Agricultural University Papers* 94-7: 1-512. 1994 [by M.W. van Slageren], *Acta Genetica Sinica* 21(5): 398-402. 1994, *Chromosoma* 103: 189-195. 1994, *Acta Botanica Sinica* 36(9): 714-719. 1994, *Pakistan Journal of Botany* 26: 353-366. 1994, *Flora Mesoamericana* 6: 247-248. 1994, *Flora of Ethiopia and Eritrea* vol. 7: 59-63. 1995 [“The classification of wheats has been the subject of much debate for over a century, and there is still no consensus of opinion as to the best system of nomenclature.”], *Breeding Science* 45: 157-161. 1995, *Acta Genetica Sinica* 22(2): 109-114, 116-121. 1995, *Taxon* 44: 611-612. 1995, *Acta Genetica Sinica* 23(2): 117-123. 1996, *Acta Agronomica Sinica* 22(5): 525-529. 1996, *Southwest China Journal of Agricultural Sciences* 9(1): 33-38. 1996, *New Phytologist* 137: 93-98. 1997, *Journal of Wuhan Botanical Research* 16(3): 280-282. 1998, *Journal of Shandong Agricultural University* 29(4): 435-442. 1998, *Plant Breeding* 118(4): 362-364. Sep 1999, Terry B. Ball, John S. Gardner and Nicole Anderson, “Identifying inflorescence phytoliths from selected species of wheat (*Triticum monococcum*, *T. dicoccon*, *T. dicoccoides*, and *T. aestivum*) and barley (*Hordeum vulgare* and *H. spontaneum*) (Gramineae).” *Am. J. Bot.* 86: 1615-1623. 1999, *Bothalia* 29(2): 335-341. 1999, *Revue de Cytologie et de Biologie Végétales, le Botaniste* 22(1-2): 3-7. 1999, Peter D.S. Caligari and Peter E. Brandham, editors, “Wheat Taxonomy: the legacy of John Percival.” *Proc. Percival Symposium*, Reading, July 1999. *The Linnean: Special Issue*, 3, Academic Press 2001, *Am. J. Bot.* 89: 1809-1817. 2002, *Contributions from the United States National Herbarium* 48: 20-23, 154-191, 241, 245, 369, 370, 468, 614, 676-684, 694. 2003, *Am. J. Bot.* 91: 439-448, 707-723, 789-796, 797-803, 997-1001, 1022-1035, 1523-1534, 1709-1725, 1789-1801. 2004, B.C. Husband, “Chromosomal variation in plant evolution.” *Am. J. Bot.* 91: 621-625. 2004, *Journal of Integrative Plant Biology* 47(2): 214-222. Feb 2005, *New*

Phytologist 165(3): 875-885. Mar 2005, Adrienne Ressayre, Leanne Dreyer, Sarah Triki-Teutroy, Arlette Forchioni and Sophie Nadot, "Post-meiotic cytokinesis and pollen aperture pattern ontogeny: comparison of development in 4 species differing in aperture pattern." *Am. J. Bot.* 92: 576-583. 2005, *Am. J. Bot.* 92: 833-841. 2005, Roberta J. Mason-Gamer, "The β -amylase genes of grasses and a phylogenetic analysis of the Triticeae (Poaceae)." *Am. J. Bot.* 92: 1045-1058. 2005, Kansas State University – Wheat Genetics Resource Center, <http://www.ksu.edu/wgrc/Taxonomy/taxtrit.html> [Wheat Classification Systems. Classification of *Triticum* according to the various proposed systems].

Species

T. aestivum L. (*Triticum aestivum* subsp. *vulgare* (Vill.) Thell.; *Triticum aestivum* var. *hybernum* (L.) Fiori; *Triticum aestivum* var. *hybernum* (L.) Farw., nom. illeg., non *Triticum aestivum* var. *hybernum* (L.) Fiori; *Triticum cereale* Schrank; *Triticum compositum* L.; *Triticum dicoccon* var. *timopheevii* Zhuk.; *Triticum estivum* Raf.; *Triticum hybernum* L.; *Triticum macha* Dekapr. & Menade; *Triticum orientale* Percival, nom. illeg., non *Triticum orientale* (L.) M. Bieb.; *Triticum percivalianum* Parodi; *Triticum persicum* Vavilov ex Zhukov, nom. illeg., non *Triticum persicum* (Boiss.) Aitch. & Hemsl.; *Triticum pyramidale* Percival; *Triticum sativum* Lam.; *Triticum sativum* var. *aestivum* (L.) Alph. Wood; *Triticum sativum* var. *compositum* (L.) Alph. Wood; *Triticum sativum* var. *vulgare* (Vill.) Hack.; *Triticum sativum* var. *vulgare* (Vill.) Vilm.; *Triticum sativum* var. *vulgare* Desv.; *Triticum sphaerococcum* Percival; *Triticum timopheevii* (Zhuk.) Zhuk.; *Triticum turanicum* (Percival) Jakubz.; *Triticum turgidum* var. *compositum* (L.) Gaudin; *Triticum vulgare* Villars; *Triticum vulgare* var. *aestivum* (L.) Spenn.; *Zeia vulgaris* var. *aestiva* (L.) Lunell)

Mediterranean. Annual, tufted, erect, robust, smooth, hollow, branching at the base, often in thick clumps, often strongly tillering, auricles present, leaf blade glabrous or pubescent, membrane-like ligule obtuse and truncate, smooth and open sheaths, leaves long linear and flat, 2-6 seminal roots and many secondary roots, flower head a single spike contracted and oblong, spikes linear-oblong and distichous, bearded or not bearded spikes, spikelets heteromorphic and cleistogamous, hermaphrodite spikelets sessile, upper 1 or 2 florets often sterile, nonshattering spikelets, oblong or convex glumes mucronate or with a long terminal awn, glumes and lemmas shining in fruit, palea narrowly ovate or ovate, ovary pilose, grain crop species, fodder, grains edible, cultivated, useful medicine, seeds cooling and tonic, seed oil used in dermatosis, used to stop spontaneous sweating due to deficiency of Qi, growing along roadsides in wheat-growing areas, in dry loamy clay, in roadside channel, in fallow fields, open fallow field, waste areas, weedy sites, edges of fields, escaped from

cultivation, see *Species Plantarum* 1: 85-86. 1753, *Systema Vegetabilium. Editio decima tertia* 108. 1774, *Flore Française. Troisième Édition* 625. 1778, *Histoire des Plantes de Dauphiné* 2: 153. 1787, *Flora Taurico-Caucasica* 1: 86. 1808, *Florula Ludoviciana, or, a Flora of the State of ...* 16. 1817, *Flora Friburgensis* 1: 163. 1825, *Flora Helvetica* 1: 358. 1828, *A Class-book of Botany* 619. 1847, *Die Natürlichen Pflanzenfamilien* 7: 85. 1887, *Flora Analitica d'Italia* 1: 107. 1896 and *Report of the Michigan Academy of Science, Arts and Letters* 6: 203. 1904, *La flore adventice de Montpellier* 142. 1912 (also in *Mém. Soc. Sci. Nat. Cherbourg* 38: 142. 1912), *American Midland Naturalist* 4: 226. 1915, *Grasses of Ceylon* 48. 1956, *Canad. J. Bot.* 37: 657, 674. 1959, *Enciclopedia Argentina de Agricultura y Jardinería* 1: 143. 1959, *Grasses of Burma ...* 679. 1960, *Taxon* 32: 492. 1983, *Scientia Agricultura Sinica* 20(6): 17-21. 1987, *Taxon* 49(2): 258. 2000, *Plant Breeding* 124(1): 96-98. Feb 2005, *Journal of Phytopathology* 153(2): 108-119. Feb 2005, A. Pratap, G.S. Sethi and H.K. Chaudhary, "Relative efficiency of different Gramineae genera for haploid induction in triticale and triticale x wheat hybrids through the chromosome elimination technique." *Plant Breeding* 124(2): 147-153. Apr 2005, *New Phytologist* 166(1): 185-192. Apr 2005, *Journal of Integrative Plant Biology* 47(4): 435-442. Apr 2005, Yi-Miao Tang, You-Zhi Ma, Lian-Cheng Li and Xing-Guo Ye, "Identification and characterization of reverse transcriptase domain of transcriptionally active retrotransposons in wheat genomes." *Journal of Integrative Plant Biology* 47(5): 604-612. May 2005, *New Phytologist* 166(3): 801-812, 917-932. June 2005.

in English: common bread wheat, bread wheat, volunteer wheat, light wheat, bearded wheat, beardless wheat, wheat, common wheat, silver tip wheat, spring wheat, whole wheat
in French: froment, blé, blé tendre

in Turkey: beyaz çomak, bugday

in Spanish: chamorro, escaña, esprilla, trigo, trigo candela
in Colombia: trigo

in Mexico: almidon, caztaz, trigo

in Arabic: el k'ameh, gameh, gemah, hanta, k'ameh, l-gemh, l-qemh, l-qmeh, qamh, burr

in Mali: gemah, halkama, ihered, ired, timzin

in Morocco: blé, l-gemh, l-qemh, l-qmeh, îrden, zra', l-farinâ, farina, l-fors, sqâliya, merkez, 'alas, hinta, tben, hses

in Nigeria: alkama, alkamà, alkamàà, alkamari, gameh, el k'ameh, k'ameh, lamàà, laamà, legamma, shegar, segar

in South Africa: opslagkoring

in Togo: alfintar, algaragi, algaragis, alkaki, alkubus, bashi, dashishi, dawude, fancaso, fankaso, funksaso, gurasa, kirikirino, kuskus, luwaidu, rauno, tuwon baure

in Bhutan: ka, bong

in China: fu xiao mai, fu hsiao mai, xiao mai, hsiao mai, lai, yi tang, i tang, chiao i

in India: arupa, bahudugdha, dro, dundan, gahu, gahum, gahung, gam, gandham, gandum, gau, gawn, gehu, gehub, gehum, gehun, gendoom, gendum, ghavum, giun, godamba, godhi, godhuma, godhumulu, godi, godumai, godumay, godumbaiyarisi, godumbayarisi, godumulu, gohun, gom, goodhumalu, govu, govum, hintah, jonoria, kanak, kanik, khasil, khawid (cut for fodder), kotampum, kotanpam, kothumai, ksheeri, kunak, madhuli, mahgodhuma, menchhabhojana, niksuki, nis, nistusha, pivla lotaka, pivla pote, pivla potia, rasala, safet, saman, sumana, tokar, tomar, tro, yava, yavana, zud

in Indonesia: gandum

in Japan: ko-mugi

in Malaysia: gandum

in Okinawa: umamuji

in the Philippines: trigo

in Sri Lanka: tiringu

in Thailand: khaao saa lee, khao-sa-le, khao sali, sa-le, sali, saalee

in Tibetan: gro

T. aestivum L. subsp. **aestivum** (*Triticum aestivum* subsp. *aestivocompactum* E. Schiem.; *Triticum aestivum* var. *cinereum* (Dekapr.) Mansf.; *Triticum aestivum* var. *graecum* (Körn.) Hayek; *Triticum aestivum* var. *leucospermum* (Körn.) Farw.; *Triticum aestivum* var. *lutiflatum* (Flaksb.) Mansf.; *Triticum aestivum* var. *muticum* (Schübl.) Farw.; *Triticum aestivum* var. *nigraristatum* (Flaksb.) A.A. Filatenko; *Triticum aestivum* var. *pseudoturcicum* (Vavilov) Mansf.; *Triticum aestivum* var. *pyrothrix* (Alef.) Mansf.; *Triticum aestivum* var. *suberythrospermum* (Vavilov) Mansf.; *Triticum hybernum* L.; *Triticum muticum* Schübl.; *Triticum sativum* Lam.; *Triticum vulgare* Vill.; *Triticum vulgare* var. *leucospermum* Körn.; *Triticum vulgare* subvar. *lutinflatum* Flaksb.; *Triticum vulgare* var. *lutinflatum* (Flaksb.) Vavilov; *Triticum vulgare* var. *nigraristatum* Flaksb.; *Triticum vulgare* var. *pseudoturcicum* Vavilov; *Triticum vulgare* cv. *pyrothrix* Alef.; *Triticum vulgare* var. *suberythrospermum* Vavilov; *Triticum vulgare* var. *velutinum* Schur)

Cosmopolitan. Annual, cereal, fodder, widely cultivated.

in English: bread wheat, wheat

in French: froment

in Spanish: trigo, trigo blando

in Japan: ko-mugi

in Thailand: khaao saa lee, saalee

T. aestivum L. subsp. **compactum** (Host) Mackey (*Triticum compactum* Host; *Triticum compactum* var. *atrum* Körn.; *Triticum vulgare* var. *compactum* (Host) Alef.)

Southern Europe, Asia. Annual, cereal, cultivated, spikes awned and clavate, glumes glabrous, found in dry lands and irrigated areas, see *Gram. Austr.* 4: 4, t. 7. 1809, *Landwirtschaftliche Flora* 327. 1866 and *Svensk Botanisk Tidskrift* 48: 586. 1954, *Nat. Inst. Genetics* (Misimi, Japan) 55, 61. 1961.

in English: club wheat, cluster wheat, dwarf wheat

in French: blé compact, blé ramifié

T. aestivum L. subsp. **macha** (Dekapr. & A.M. Menabde) Mackey (*Triticum macha* Dekapr. & A.M. Menabde)

Georgia. Annual, cultivated, related to wheat.

in English: macha wheat

T. aestivum L. subsp. **spelta** (L.) Thell. (*Triticum aestivum* var. *spelta* (L.) Fiori; *Triticum aestivum* var. *spelta* (L.) Bailey; *Triticum spelta* L.; *Zeia spelta* (L.) Lunell)

Cosmopolitan. Annual, cereal, starch, cultivated, related to wheat, very hardy, see *Species Plantarum* 1: 86. 1753, *Flora Aegyptiaco-Arabica* 26. 1775 and *American Midland Naturalist* 4: 226. 1915, *Mitteilungen der Naturwissenschaftlichen Gesellschaft in Winterthur* 12: 147. 1918, *Gentes Herbarum; occasional papers on the kind of plants* 1: 133. 1923.

in English: dinkel wheat, hulled wheat, spelt, spelt wheat, spelta wheat

in Italian: farro

in Arabic: hunta, qamh, qamh m'ghaejir, qamh nac aeighe, qamh staejiri

in India: jod, khapli

in Colombia: espelta

T. aestivum L. subsp. **sphaerococcum** (Percival) Mackey (*Triticum sphaerococcum* Percival; *Triticum sphaerococcum* var. *globosum* Percival; *Triticum sphaerococcum* var. *rubiginosum* Percival)

Cosmopolitan. Annual, rarely cultivated, cereal, related to wheat.

in English: Indian dwarf wheat, shot wheat

in Spanish: trigo indio

T. aestivum L. subsp. **tibeticum** J.Z. Shao

China. Slender, see *Acta Genetica Sinica* 7(2): 155. 1980, *Plant Chromosome Research* 1987 417-420. 1989, *Japanese Journal of Genetics* 65: 353-365. 1990.

T. aestivum L. subsp. **yunnanense** King ex S.L. Chen (*Triticum aestivum* subsp. *yunnanense* King)

China. Slender, hard glumes, cultivated as a food, see *Sp. Coll. Res. Nanjing Agr. Coll.* 2: 21-22. 1959, *Novon* 7(3): 230. 1997.

T. aethiopicum Jakubz. (*Gigachilon aethiopicum* (Jakubz.) Á. Löve; *Triticum abyssinicum* Steud.; *Triticum diversiflorum*

Steud.; *Triticum durum* subsp. *abyssinicum* Vavilov; *Triticum recognitum* Steud.)

Ethiopia. Very variable, see *Synopsis Plantarum Glumacearum* 1: 342. 1854 and *Feddes Repertorium* 95(7-8): 497. 1984.

in English: Ethiopian wheat

T. araraticum Jakubz. (*Triticum armeniacum* (Jakubz.) Makush.; *Triticum chaldicum* Menabde; *Triticum dicoccoides* auct.; *Triticum dicoccoides* subsp. *armeniaceum* Jakubz.; *Triticum montanum* Makush.; *Triticum nikolai* Fed. & Takht. ex Zhuk.; *Triticum timopheevii* subsp. *araraticum* (Jakubz.) C. Yen; *Triticum turgidum* subsp. *armeniaceum* (Jakubz.) Á. Löve & D. Löve)

Armenia, Azerbaijan, Southwest Asia, northern Iraq. Indeterminate species, resistant to leaf rust and powdery mildew, a wild wheat species closely related to cultivated wheat, see *Berichte der Deutschen Botanischen Gesellschaft* 26a(4): 309. 1908, *Comptes-rendus de l'académie des sciences de l'URSS* 21: 345. 1938, *Acta Phytotaxonomica Sinica* 21(3): 294. 1983, *Plant Systematics and Evolution* 169: 13-24. 1990, *Plant Systematics and Evolution* 192: 117-145. 1994, *Journal of Jiangsu Agricultural College* 19(1): 7-10. 1998, *Journal of Nanjing University: Natural Sciences* 36(2): 247-252. 2000.

T. boeoticum Boiss. (*Crithodium aegilopoides* Link; *Triticum aegilopoides* (Link) Bal. ex Koern., nom. illeg., non *Triticum aegilopoides* Forssk.; *Triticum boeoticum* subsp. *aegilopoides* (Link) Grossh.; *Triticum boeoticum* subsp. *thaouidar* (Reut. ex Hausskn.) Grossh.; *Triticum jerevani* Thüm.; *Triticum monococcum* L. subsp. *boeoticum* (Boiss.) Hayek; *Triticum monococcum* subsp. *boeoticum* (Boiss.) Á. Löve & D. Löve; *Triticum monococcum* subsp. *thaouidar* (Reut. ex Hausskn.) Zhuk.; *Triticum spontaneum* Flaksb.; *Triticum spontaneum* subsp. *aegilopoides* (Link) Flaksb.; *Triticum spontaneum* subsp. *thaouidar* (Reut. ex Hausskn.) Flaksb.; *Triticum thaouidar* Reut. ex Hausskn.) (also spelled **baeoticum**)

Europe. See *Linnaea* 9(1): 132, pl. 3, f. 1-5. 1834, *Diagnoses plantarum orientalium novarum, ser. 1*, 2(13): 69. 1854, *Handbuch des Getreidebaus* 1: 109. Bonn 1885, *Mitteilungen der Thüringischen Botanischen Vereins* N.F. 13-14: 66-67. 1899 and *Flora Kavkaza* edition 2 1: 350. 1939, *Acta Botanica Sinica* 29: 341-346. 1987, *Kromosomo* 50: 1635-1651. 1988, *Plant Chromosome Research* 187-193. 1987 [1989], *Pakistan Journal of Botany* 26: 353-366. 1994.

in Turkey: çavdarcik, yabani bugday

T. carthlicum Nevski (*Gigachilon polonicum* subsp. *carthlicum* (Nevski) Á. Löve; *Triticum ibericum* Menabde; *Triticum paradoxum* (Vavilov ex Zhukov) Parodi; *Triticum persicum* Vavilov ex Zhukov, nom. illeg., non *Triticum persicum* (Boiss.) Aitch. & Hemsl.; *Triticum turgidum* subsp. *carthlicum* (Nevski) Á. Löve & D. Löve; *Triticum turgidum* var. *carthlicum* (Nevski) Yan ex P.C. Kuo)

Europe. See *Flora URSS* 2: 685. 1934, *Revista Argentina de Agronomía* 7: 49. 1940, *Feddes Repertorium* 95(7-8): 496. 1984, *Flora Reipublicae Popularis Sinicae* 9(3): 48, pl. 15, f. 1-3. 1987.

T. compactum Host (*Triticum aestivum* subsp. *compactum* (Host) Thell.; *Triticum aestivum* subsp. *compactum* (Host) Mackey; *Triticum vulgare* var. *compactum* (Host) Alef.)

Asia, Europe. See *Icones et descriptiones graminum austriacorum...* 4: 4, t. 7. Vindobonae [Wien] 1801-1809, *Landwirtschaftliche Flora* 327. 1866 and *Svensk Botanisk Tidskrift* 48: 586. 1954.

T. dicoccoides (Körn.) Körn. ex Schweinf. (*Gigachilon polonicum* subsp. *dicoccoides* (Körn.) Á. Löve; *Triticum dicoccoides* (Körn.) Korn.; *Triticum dicoccoides* Aarons., nom. illeg., non *Triticum dicoccoides* (Körn.) Körn. ex Schweinf.; *Triticum dicoccon* subsp. *dicoccoides* (Körn.) L.B. Cai; *Triticum dicoccon* var. *dicoccoides* (Körn.) Asch. & Graebn.; *Triticum turgidum* var. *dicoccoides* (Körn.) Bowden; *Triticum vulgare* var. *dicoccoides* Körn.)

Europe. See Gustav Schübler (1787-1834), *Dissertatio inauguralis botanica sistens characteristicen [sic] et descriptiones cerealium...* Tubingae 1818 and *Synopsis der mitteleuropäischen Flora* 2: 679. 1901, *Berichte der Deutschen Botanischen Gesellschaft* 26a(4): 309. 1908, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 59: 491. 1910, *Canadian Journal of Botany* 37(4): 671. 1959, *Feddes Repertorium* 95(7-8): 496. 1984, *Acta Botanica Boreali-Occidentalia Sinica* 11(3): 221. 1991, *Pakistan Journal of Botany* 26: 353-366. 1994.

T. dicoccum (Schrank) Schübler (*Triticum aestivum* subsp. *dicoccum* (Schrank) Thell.; *Triticum aestivum* var. *dicoccum* (Schrank) L.H. Bailey; *Triticum dicoccum* Schrank; *Triticum spelta* var. *dicoccon* Schrank)

Arabia, Yemen. Cultivated in prehistoric times, rarely cultivated now, fodder for livestock, shows a very high resistance to low temperatures, a source of flour, see *Baiersche Flora* 1: 389. 1789 and *Synopsis der mitteleuropäischen Flora* 2: 679. 1901, *Mémoires de la Société des Sciences Naturelles de Cherbourg* 38: 141. 1912, *Gentes Herbarum; Occasional Papers on the Kind of Plants* 1: 133. 1923, *Zeitschrift für Pflanzenzüchtung* 55: 326. 1966.

in English: cultivated emmer

in Arabic: alas

in India: godhumalu, samba

in Morocco: blé, l-gemh, l-qemh, l-qmeh, îrden, zra', l-farinâ, l- fors, sqâliya, merkez, 'alas, hinta, then, hses

T. durum Desf. (*Gigachilon polonicum* subsp. *durum* (Desf.) Á. Löve; *Triticum aestivum* subsp. *durum* (Desf.) Thell.; *Triticum pyramidale* Percival; *Triticum turgidum* convar. *durum* (Desf.) Bowden; *Triticum turgidum* var. *durum* (Desf.) Husn.; *Triticum turgidum* var. *durum* (Desf.) Yan ex P.C. Kuo)

Europe, Mediterranean, Middle East. Very variable plant, awned inflorescence often hairy and stout, glumes strongly keeled from the bottom to the top, edible grains, widely cultivated, drought resistant, in India used to prepare cooked dishes like *upma*, *halwa* and *kesaribhat*, similar to *Triticum aestivum* L., see *Flora Atlantica* 1: 114. 1798, P.T. Husnot (1840-1929), *Graminées. Descriptions, figures et usages ... France, Belgique, Isles Britanniques, Suisse* 80. 1899 and *Mémoires de la Société des Sciences Naturelles de Cherbourg* 38: 143. 1912, *Wheat Plant Monograph* 156, 262, f. 161, 162. 1921, *Flora of Egypt* 228. 1941, *Canadian Journal of Botany* 40: 1709. 1962, *Feddes Repertorium* 95(7-8): 497. 1984, *Flora Reipublicae Popularis Sinicae* 9(3): 48, pl. 15, f. 4-6. 1987, *Genome* 30: 361-365. 1988, *South African Journal of Botany* 54: 541-550. 1988, *Genome* 35: 985-991. 1992, *Japanese Journal of Breeding* 42: 523-534. 1992, H. Li, X. Chen, Z.Y. Xin, Y.Z. Ma, H.J. Xu, X.Y. Chen and X. Jia, "Development and identification of wheat *Haynaldia villosa* T6DL.6VS chromosome translocation lines conferring resistance to powdery mildew." *Plant Breeding* 124(2): 203-205. Apr 2005.

in English: macaroni wheat, durum wheat

in Arabic: samrah

in Morocco: blé, l-gemh, l-qemh, l-qmeh, îrden, zra', l-farinâ, l- fors, sqâliya, merkez, 'alas, hinta, then, hses

in Turkey: bugday, sahman

T. ispahanicum Heslot (also spelled *isphanicum*)

Asia. Annual, cereal, cultivated, see *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 247: 2479. 1958.

T. macha Dekapr. & Menabde (*Triticum aestivum* subsp. *macha* (Dekapr. & Menabde) Mackey; *Triticum imereticum* Dekapr.; *Triticum spelta* subsp. *macha* (Dekapr. & Menabde) Dorof.; *Triticum tubalicum* Dekapr.)

Europe.

T. monococcum L. (*Crithodium monococcum* (L.) Á. Löve; *Nivieria monococcum* (L.) Ser.; *Triticum aestivum* var. *monococcum* (L.) L.H. Bailey)

Middle East, North Africa, Balkans, Romania. Diploid fodder wheat, solid or thick-walled, cultivated, tufted, slender, see *Species Plantarum* 1: 85-87. 1753, *Annales des Sciences Physiques et Naturelles, d'Agriculture et de l'Industrie, Publiées par la Société Royale d'Agriculture, etc., de Lyon*. 5: 114. 1842, *Flora Orientalis* 5: 673. 1884 and *Gentes Herbarum ...* 1: 133. 1923, *Acta Phytotaxonomica Sinica* 21(3): 292. 1983, *Feddes Repertorium* 95(7-8): 490. 1984, *Journal of Wuhan Botanical Research* 3(4): 465-467. 1985, *Genome* 30: 36-43. 1988, *Acta Agronomica Sinica* 15: 141-145. 1989, *Memoirs of the College of Agriculture; Kyoto University* 137: 1-116. 1990, *Plant Systematics and Evolution* 184: 1-10. 1993, *Pakistan Journal of Botany* 26: 353-366. 1994, *Chromosoma* 103: 189-195. 1994.

in English: einkorn wheat, small spelt

in Morocco: blé, l-gemh, l-qemh, l-qmeh, îrden, zra', l-farinâ, l- fors, sqâliya, shqaliya, merkez, 'alas, hinta, then, hses

T. monococcum L. subsp. *aegilopoides* (Link) Thell. (*Crithodium aegilopoides* Link; *Crithodium monococcum* subsp. *aegilopoides* (Link) Á. Löve; *Triticum aegilopoides* (Link) Balansa ex Körn., nom. illeg., non *Triticum aegilopoides* Forssk.; *Triticum boeoticum* Boiss.; *Triticum boeoticum* subsp. *boeoticum*; *Triticum boeoticum* subsp. *thaoudar* (Reut. ex Hausskn.) E. Schiem.; *Triticum monococcum* subsp. *boeoticum* (Boiss.) Hayek; *Triticum thaoudar* Reut. ex Hausskn.)

Asia, Europe. Annual, related to wheat, see *Linnaea* 9(1): 132, pl. 3, f. 1-5. 1834 and *Naturwissenschaftliche Wochenschrift* 17(33): 470. 1918, *Feddes Repertorium* 95(7-8): 490. 1984.

in English: wild einkorn, wild einkorn wheat

T. monococcum L. subsp. *monococcum* (*Crithodium monococcum* (L.) Á. Löve; *Triticum aestivum* var. *monococcum* (L.) L.H. Bailey; *Triticum monococcum* gr. *albohornemannii* Flaksb.; *Triticum monococcum* var. *eredvianum* Zhuk.; *Triticum monococcum* var. *hornemannii* (Clemente) Körn.; *Triticum monococcum* var. *laetissimum* Körn.; *Triticum monococcum* var. *nigricultum* Flaksb.)

Annual, cereal, starch, fodder, cultivated, related to wheat.

in Morocco: blé, l-gemh, l-qemh, l-qmeh, îrden, zra', l-farinâ, l- fors, sqâliya, merkez, 'alas, hinta, then, hses

T. petropavlovskiyi Udachin & Migush.

China. Spikes loose, slopes, mountains, see *Bot. Zhurn. (Moscow & Leningrad)* 75: 37-44. 1990.

T. polonicum L. (*Deina polonica* (L.) Alef.; *Gigachilon polonicum* Seidl; *Triticum abyssinicum* Steud.; *Triticum aestivum* var. *polonicum* (L.) Bailey; *Triticum glaucum* Moench; *Triticum polonicum* subsp. *abyssinicum* (Steud.) Vavilov; *Triticum polonicum* var. *abessinicum* Körn.; *Triticum turgidum* subsp. *polonicum* (L.) Á. Löve & D. Löve; *Triticum turgidum* subsp. *turgidum* convar. *polonicum* (L.) Mackey; *Triticum turgidum* var. *polonicum* (L.) Yan ex P.C. Kuo)

Southwest Europe, Algeria, Afghanistan, Pakistan. Solid, thick-walled, flour not suitable for bread, see *Species Plantarum, Editio Secunda* 127. 1762, *Methodus Plantas Horti Botanici ...* 174. 1794, *Hortus Regius Botanicus Berolinensis* 1: 28. 1827, *Oekonomisch-technische Flora Böhmens* 1: 425. 1836, *Synopsis Plantarum Glumacearum* 1: 342. 1854, *Landwirthschaftliche Flora* 336. 1866, *Flora Brasiliensis* 2(3): 224-225. 1880 and *Flora Reipublicae Popularis Sinicae* 9(3): 48, 51, pl. 14, f. 4-7. 1987, *Bot. Zhurn. (Moscow & Leningrad)* 75: 37-44. 1990.

in English: Polish wheat

T. spelta L. (*Triticum aestivum* subsp. *spelta* (L.) Thell.; *Triticum aestivum* subsp. *transcaucasicum* Dorof. & Laptev; *Triticum aestivum* var. *spelta* (L.) Fiori; *Triticum aestivum* var. *spelta* (L.) Bailey; *Triticum spelta* subsp. *kuckuckianum* Gokgol; *Zeia spelta* (L.) Lunell)

Europe. See *Species Plantarum* 1: 86. 1753, *Flora Aegyptiaco-Arabica* 26. 1775 and *American Midland Naturalist* 4: 226. 1915, *Mitteilungen der Naturwissenschaftlichen Gesellschaft in Winterthur* 12: 147. 1918, *Gentes Herbarum; occasional papers on the kind of plants* 1: 133. 1923, *Acta Botanica Boreali-Occidentalia Sinica* 11(3): 222. 1991.

in English: spelt wheat, dinkel wheat

T. timopheevii (Zhuk.) Zhuk. (*Triticum aestivum* L.; *Triticum dicoccon* var. *timopheevii* Zhuk.; *Triticum timopheevii* subsp. *viticulosum* Zhuk.; *Triticum timonovum* Heslot & R. Ferrary; *Triticum turgidum* subsp. *timopheevii* (Zhuk.) Á. Löve & D. Löve) (named for S.N. Timofeeva)

Georgia, Eurasia. Indeterminate species, cultivated, see *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* 248: 455. 1959, *Plant Systematics and Evolution* 154: 183-194. 1986, *Genetika* 24: 1411-1418. 1988, *Chromosoma* 103: 189-195. 1994.

T. timopheevii (Zhuk.) Zhuk. subsp. ***armeniacum*** (Jakubz.) Slageren (*Gigachilon timopheevii* subsp. *armeniacum* (Jakubz.) Á. Löve; *Triticum araraticum* Jakubz.; *Triticum armeniacum* (Jakubz.) Makush., nom. illeg.; *Triticum dicocoides* subsp. *armeniacum* Jakubz.; *Triticum timopheevii* var. *araraticum* (Jakubz.) C. Yen, nom. illeg.)

Asia temperate. Annual, related to wheat, see *Comptes rendus de l'académie des sciences de l'URSS* 21: 345. 1938, *Feddes Repertorium* 05(7-8): 497. 1984, *Wageningen Agricultural University Papers* 94(7): 92. 1994.

T. timopheevii (Zhuk.) Zhuk. subsp. ***timopheevii*** (*Gigachilon timopheevii* (Zhuk.) Á. Löve; *Triticum militinae* Zhuk. & Migush.)

Georgia, Caucasus, Russia. Annual, cereal, related to wheat, see *Genome* 33: 283-293. 1990.

in Spanish: trigo de Georgia

T. turanicum (Percival) Jakubz. (*Gigachilon polonicum* subsp. *turanicum* (Jakubz.) Á. Löve; *Triticum durum* subsp. *turanicum* (Jakubz.) L.B. Cai; *Triticum orientale* Percival, nom. illeg., non *Triticum orientale* (L.) M. Bieb.; *Triticum percivalianum* Parodi; *Triticum percivalii* C.E. Hubb. ex Schiem.; *Triticum turgidum* convar. *turanicum* (Jakubz.) Mackey; *Triticum turgidum* subsp. *turanicum* (Jakubz.) Á. Löve & D. Löve) (named for John Percival, 1863-1949)

Europe. See *Flora Taurico-Caucasica* 1: 86. 1808 and *Wheat Pl. Monogr.* 155, 204, f. 134. 1921, *Enciclopedia Argentina de Agricultura y Jardinería* 1: 143. 1959, *Feddes Repertorium* 95(7-8): 497. 1984, *Acta Botanica Boreali-Occidentalia Sinica* 11(3): 222. 1991.

T. turgidum L. (*Gigachilon aethiopicum* (Jakubz.) Á. Löve; *Gigachilon polonicum* subsp. *turgidum* (L.) Á. Löve; *Triticum aestivum* subsp. *turgidum* (L.) Domin; *Triticum aethiopicum* Jakubz.; *Triticum compositum* L.; *Triticum dicocoides* (Körn. ex Asch. & Graebn.) Schweinf.; *Triticum dicocoides* Körn. ex Schweinf.; *Triticum durum* subsp. *turgidum* (L.) Dorof.; *Triticum jakubzineri* Udachin & Shakhm.; *Triticum sativum* var. *compositum* (L.) Alph. Wood; *Triticum turgidum* subsp. *jakubzineri* Udachin & Shakhm.; *Triticum turgidum* var. *compositum* (L.) Gaudin)

Asia, Israel, Turkey, Iran. Allotetraploid wheat, annual, spike usually bearded and flattened or compressed, spikelets crowded and imbricate, glumes 1-keeled, lemma usually long-awned, cultivated, used for livestock or breakfast food, see *Species Plantarum* 1: 85-87. 1753, *Systema Vegetabilium. Editio decima tertia* 108. 1774, *Flore Française. Troisième Édition* 625. 1778, *Flora Helvetica* 1: 358. 1828, *A Class-book of Botany* 619. 1847 and *Preslia* 13-15: 43. 1935, *Euphytica* 17: 456. 1968, *Feddes Repertorium* 95(7-8): 497. 1984, *Genome* 30: 36-43. 1988, *Plant Systematics and Evolution* 184: 1-10, 127-134. 1993, *Chromosoma* 103: 189-195. 1994, *Pakistan Journal of Botany* 26: 353-366. 1994, *Taxon* 49(2): 258. 2000.

in English: durum wheat, rivet wheat, cone wheat, pollard wheat

in Morocco: blé, burr, korifla, l-gemh, l-qemh, l-qmeh, îrden, zra', l-farinâ, l- fors, sqâliya, merkez, 'alas, hinta, tben, hses

T. turgidum L. subsp. ***carthlicum*** (Nevski) Á. Löve & D. Löve (*Gigachilon polonicum* subsp. *carthlicum* (Nevski) Á. Löve; *Triticum carthlicum* Nevski; *Triticum persicum* Vavilov ex Zhuk., nom. illeg.; *Triticum turgidum* var. *carthlicum* (Nevski) Yan ex P.C. Kuo)

Southwest Asia. Annual, cereal, related to wheat, see *Flora URSS* 2: 685. 1934, *Revista Argentina de Agronomía* 7: 49. 1940, *Feddes Repertorium* 95(7-8): 496. 1984, *Flora Republicae Popularis Sinicae* 9(3): 48, pl. 15, f. 1-3. 1987, Pernilla Ellneskog-Staam and Arnulf Merker, "Chromosome composition, stability and fertility of allopolyploids between *Triticum turgidum* var. *carthlicum* and *Thinopyrum junceiforme*." *Hereditas* 136(1): 59-65. Apr 2002.

in English: Persian black wheat, Persian wheat

in Spanish: trigo de Persia

T. turgidum L. subsp. ***dicocoides*** (Körn. ex Asch. & Graebn.) Thell. (*Gigachilon polonicum* subsp. *dicocoides* (Körn. ex Asch. & Graebn.) Á. Löve; *Triticum dicocoides* (Körn. ex Asch. & Graebn.) Schweinf.; *Triticum dicocoides* var. *fulvovillosum* Percival; *Triticum dicocoides* var. *spontaneonigrum* (Flaksb.) Percival; *Triticum sativum* var. *dicocoides* Körn. ex Asch. & Graebn.)

Asia temperate, Israel, Turkey, Iran. Annual, see *Genome* 33: 283-293. 1990, Z. Peleg et al., "Genetic diversity for

drought resistance in wild emmer wheat and its ecogeographical associations." *Plant, Cell and Environment* vol. 28, issue 2: 176-191. Feb 2005.

in English: wild emmer, wild emmer wheat

T. turgidum L. subsp. ***dicoccon*** (Schrank) Thell. (*Gigachilon polonicum* subsp. *dicoccon* (Schrank) Á. Löve; *Triticum aestivum* var. *dicoccon* (Schrank) Fiori; *Triticum armeniacum* (Stolet.) Nevski; *Triticum dicoccon* (Schrank) Schübl.; *Triticum dicoccon* subsp. *asiaticum* Vavilov; *Triticum dicoccon* var. *farrum* (Bayle-Bar.) Flaksb.; *Triticum farrum* Bayle-Bar.; *Triticum spelta* var. *dicoccon* Schrank)

Asia temperate, Israel, Turkey, Iran. Annual, starch, cereal, related to wheat.

in English: emmer, emmer wheat, hulled wheat

in Italian: farro

in Portuguese: trigo branco

T. turgidum L. subsp. ***durum*** (Desf.) Husn. (*Gigachilon polonicum* subsp. *durum* (Desf.) Á. Löve; *Triticum durum* Desf.; *Triticum durum* var. *apulicum* (Körn.) Stolet.; *Triticum durum* var. *fere-alexandrinum* Jakubz. & Nikolaenko; *Triticum durum* var. *hordeiforme* (Host) Metzg.; *Triticum durum* var. *leucomelan* Diamantis, nom. inval.; *Triticum durum* var. *leucurum* (Alef.) Stolet.; *Triticum durum* var. *melanopus* (Alef.) Stolet.; *Triticum hordeiforme* Host; *Triticum pyramidale* Percival; *Triticum pyramidale* var. *pseudocompressum* Percival; *Triticum pyramidale* var. *pseudocopticum* Percival; *Triticum turgidum* var. *durum* (Desf.) Bowden; *Triticum vulgare* var. *aegyptiacum* Körn.)

Annual, cereal, starch, cultivated.

in English: durum wheat, hard wheat, macaroni wheat

in French: blé dur

in Spanish: trigo duro

T. turgidum L. subsp. ***paleocolchicum*** Á. Löve & D. Löve (*Gigachilon polonicum* subsp. *paleocolchicum* (Á. Löve & D. Löve) Á. Löve; *Triticum karamyshevii* Nevski; *Triticum paleocolchicum* A.M. Menabde, nom. illeg.; *Triticum turgidum* subsp. *palaeocolchicum* (Menabde) Á. Löve & D. Löve)

Georgia, Caucasus. Annual, cultivated, related to wheat, see *Feddes Repertorium* 95(7-8): 497. 1984.

in English: Georgian emmer

T. turgidum L. subsp. ***polonicum*** (L.) Thell. (*Gigachilon polonicum* (L.) Seidl; *Triticum petropavlovskiyi* Udachin & Migush.; *Triticum polonicum* L.)

Mediterranean, Southwest Asia. Annual, cultivated, cereal, starch, see *Species Plantarum, Editio Secunda* 127. 1762 and *Bot. Zhurn. (Moscow & Leningrad)* 75: 37-44. 1990.

in English: Polish wheat

T. turgidum L. subsp. ***turanicum*** (Jakubz.) Á. Löve & D. Löve (*Gigachilon polonicum* subsp. *turanicum* (Jakubz.) Á.

Löve; *Triticum orientale* Percival, nom. illeg.; *Triticum orientale* var. *insigne* Percival; *Triticum turanicum* Jakubz.)

Southwest Asia. Annual, cultivated, cereal, starch, related to wheat.

in English: Khorassan wheat, Oriental wheat

T. turgidum L. subsp. ***turgidum*** (*Gigachilon polonicum* subsp. *turgidum* (L.) Á. Löve; *Triticum turgidum* var. *buccale* (Alef.) Körn.; *Triticum turgidum* var. *dreischianum* Körn.; *Triticum turgidum* var. *lusitanicum* Körn.; *Triticum turgidum* var. *martensii* (Körn.) Stolet.; *Triticum turgidum* var. *plinianum* (Körn.) Stolet.; *Triticum turgidum* var. *ramosomegalopolitanum* Percival (also *ramoso-megalopolitanum*); *Triticum turgidum* var. *rubroalbum* Flaksb.; *Triticum turgidum* var. *speciosum* Percival)

Annual, cultivated, cereal, starch, related to wheat.

in English: cone wheat, rivet wheat

T. urartu Tumanian ex Gandilyan (*Crithodium urartu* (Tumanian ex Gandilyan) Á. Löve; *Triticum boeoticum* subsp. *urartu* (Thum.) Dorof.; *Triticum michaelii* Zhuk.; *Triticum monococcum* subsp. *michaelii* Fed. & Takht. ex Zhuk.; *Triticum monococcum* subsp. *urartu* (Tuman.) Á. Löve & D. Löve; *Triticum urartu* Thüm. ex Gandilyan)

Armenia, Iran, Iraq. Annual, indeterminate species, related to wheat, see *Genome* 30: 36-43. 1988, *Bot. Zhurn.* 57(2): 176-177. 1990, *Genome* 33: 283-293. 1990.

T. vavilovii (Tumanian) Jakubz. (*Triticum aestivum* subsp. *vavilovii* (Jakubz.) Á. Löve; *Triticum spelta* subsp. *vavilovii* (Jakubz.) L.B. Cai; *Triticum vavilovii* var. *vaneum* Jakubz.; *Triticum vulgare* var. *vavilovi* Tuman.)

Eurasia, Caucasus. Annual, related to wheat, see *Feddes Repertorium* 95(7-8): 499. 1984, *Acta Botanica Boreali-Occidentalia Sinica* 11(3): 222. 1991.

in English: Vavilov wheat

T. zhukovskiyi A.M. Menabde & Eritzjan (*Gigachilon zhukovskiyi* (A.M. Menabde & Eritzjan) Á. Löve; *Triticum timopheevii* subsp. *zhukovskiyi* (Menabde & Eritzjan) L.B. Cai)

Eurasia, Caucasus, Georgia. Annual, cereal, related to einkorn, see *Feddes Repertorium* 95(7-8): 498. 1984, *Acta Botanica Boreali-Occidentalia Sinica* 11(3): 220. 1991.

T. x borisovii Zhebrak (*Triticum aestivum* L. x *Triticum timopheevii* (Zhuk.) Zhuk.)

Russia.

T. x fungicidum Zhuk. (*Triticum carthlicum* Nevski x *Triticum timopheevii* (Zhuk.) Zhuk.)

Russia, Georgia. Annual.

T. x timococcum Kostov

Russia, Eurasia. Annual.

x Trititrigia Tzvelev

Elytrigia x Triticum.

See *Novosti Sist. Vyss. Rast.* 10: 59. 1973, *Genera Graminum* 375. 1986.

x Tritordeum Asch. & Graebn.

Hordeum x Triticum.

See *Synopsis der mitteleuropäischen Flora* 2(1): 748. 1902, *Genera Graminum* 375. 1986.

Triunila Raf. = Uniola L.

Referring to *Uniola L.*

Chloridoideae, Cynodonteae, Uniolinae, or Chloridoideae, Eragrostideae, Uniolinae, see *Species Plantarum* 1: 71. 1753, C.S. Rafinesque, *Neogenyton, or Indication of Sixty-Six New Genera of Plants of North America*. 4. 1825 and E.D. Merrill, *Index rafinesquianus*. 77. 1949, *Contributions from the United States National Herbarium* 41: 232-234. 2001.

Trixostis Raf. = Aristida L.

Arundinoideae, Aristideae, or Aristidoideae, Aristideae, type *Aristida gracilis* Elliott, see *Species Plantarum* 1: 82. 1753, *Encyclopédie Méthodique. Botanique ... Supplément* 1: 452. 1810, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 142, pl. 8, f. 3. 1816, C.S. Rafinesque, *Seringe Bull. Bot.* 1: 221. 1830 and *Meded. Rijks.-Herb.* 54: 9. 1926, Elmer D. Merrill (1876-1956), *Index rafinesquianus*. 77. 1949, *Acta Botánica Mexicana* 63: 1-45. 2003, *Contributions from the United States National Herbarium* 46: 69-104, 629. 2003.

Trochera Rich. = Ehrharta Thunb.

From the Greek *trochos* "a wheel, a round ball, any thing round or circular," *trocheros* "running, tripping."

Ehrhartoideae, Ehrharteae, type *Trochera striata* Rich., see *Kongl. Vetenskaps Academiens Handlingar* 40: 216-217, pl. 8. 1779, *Observations et mémoires sur la Physique, sur l'histoire naturelle et sur les arts et métiers* 13: 225. Paris 1779, Sir James Edward Smith (1759-1828), *Plantarum Icones Hactenus Ineditae* 33. Londoni 1789-1791, *Prodr. Fl. Nov. Holl.* 209-210. 1810, *Essai d'une Nouvelle Agrostographie* 62, t. 12, f. 4. 1812, *Pl. Javan. Rar.* 11. 1838, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques,*

Physiques et Naturelles. Seconde Partie: Sciences Naturelles 5,3(3): 71. 1839, *Ann. Sci. Nat. Bot.* (sér. 3) 2: 116. 1844, *Revisio Generum Plantarum* 2: 795. 1891, *Histoire des Plantes* 12: 171, f. 313, f. 314. 1893 and *Lexicon* 364. 1903, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 235. 1943, *Bot. Gaz.* 124: 264-270. 1963, *New Zealand Journal of Botany* 15: 531-534. 1977, *Blumea* 28: 181-194. 1982, *Contributions from the United States National Herbarium* 39: 56, 116. 2000.

Tschompskia Asch. & Graebn. = Arundinaria Michx.

Bambusoideae, Bambuseae, Arundinariinae, type *Arundinaria simonii* (Carrière) Rivière & C. Rivière, see *Bulletin de la Société Nationale d'Acclimatation de France*, sér. 3, 5: 774, f. 43-50. 1878 and *Synopsis der mitteleuropäischen Flora* 2(1): 772. 1902, *Contributions from the United States National Herbarium* 39: 18-24, 116. 2000.

Tuctoria Reeder

An anagram of *Orcuttia*.

Three species, Mexico, U.S., California, Baja California. Chloridoideae, Orcuttieae, or Chloridoideae, Cynodonteae, Orcuttiinae, annual, herbaceous, unbranched, aromatic, more or less hairy, erect, ascending or decumbent, ligules absent, auricles absent, plants bisexual, inflorescence partly enclosed by upper sheath or exserted, a dense many-sided raceme or a spike, imperfect florets above, 2 glumes entire or irregularly short-toothed, lemma mucronate and erose, palea keels glabrous, lodicules minute, 3 stamens, ovary glabrous, 2 stigmas, fruits wrinkled or smooth, grassland, in seasonally inundated areas, vernal pools, on moist plains, type *Tuctoria fragilis* (Swallen) Reeder, see *Bulletin of the Torrey Botanical Club* 13: 219. 1886, *Bulletin de l'Herbier Boissier* 5: 947. 1897, *Erythea, a Journal of Botany, West American and General*. 6(11): 109. Berkeley, California 1898 and 7: 43. 1899, *Österreichische Botanische Zeitschrift* 49: 134. 1899 and B. Crampton, "The grass genera *Orcuttia* and *Neostapfia*: a study in habitat and morphological specialization." *Madroño* 15(4): 97-110. 1959, J.R. Reeder, "The tribe Orcuttieae and the subtribes of Pappophoreae (Gramineae)." *Madroño* 18: 20-28. 1965, J.R. Reeder, "Systematics of the tribe Orcuttieae (Gramineae) and the description of a new segregate genus, *Tuctoria*." *American Journal of Botany* 69(7): 1082-1095. 1982, *Kew Bulletin* 40: 737-744. 1985, *Contributions from the United States National Herbarium* 41: 176-177, 232. 2001, O. Ueno, "Environmental regulation of photosynthetic metabolism in the amphibious sedge *Eleocharis baldwinii* and comparisons with related species." *Plant, Cell and Environment* 27(5): 627-639. May 2004.

Species

T. fragilis (Swallen) Reeder (*Orcuttia fragilis* Swallen)

Mexico. Good forage for cattle, see *Journal of the Washington Academy of Sciences* 34(9): 308. 1944, *Madroño* 30: 308. 1981, *American Journal of Botany* 69(7): 1090. 1982.

T. greenei (Vasey) Reeder (*Orcuttia greenei* (Vasey) Swallen)

U.S. Annual, erect and decumbent, inflorescence exserted, upper spikelets crowded, glumes subequal, fruit wrinkled, see *Botanical Gazette* 16(5): 146. 1891 and *American Journal of Botany* 69(7): 1091. 1982.

in English: Greene's tuctoria, awnless spiralgrass

T. mucronata (Crampton) Reeder (*Orcuttia mucronata* Crampton; *Tuctoria greenei* (Vasey) Reeder)

U.S. Annual, erect and decumbent, inflorescence partly enclosed by upper leaf, spikelets crowded, glumes subequal, see *Madroño* 15(4): 107-108, f. 2-3. 1959, *American Journal of Botany* 69(7): 1091. 1982.

in English: Crampton's tuctoria, prickly spiralgrass

Turraya Wall. = *Leersia* Sw., *Leersia* Sol. ex Sw.

Ehrhartoideae, Oryzeae, Oryzinae, type *Leersia hexandra* Sw., see *Nova Genera et Species Plantarum seu Prodrum* 1, 21. 1788, *A Numerical List of Dried Specimens* no. 8637d. 1848 and *Contributions from the United States National Herbarium* 39: 64-67, 116. 2000.

Tylothrasya Döll = *Thrasya* Kunth

From the Greek *tylos* "lump, knob" plus the genus *Thrasya* Kunth.

Panicoideae, Paniceae, Paspalinae, type *Tylothrasya petrosa* (Trin.) Döll, see *Nova Genera et Species Plantarum* 1: 120-121, t. 39. 1815 [1816], *Species Graminum* 3: t. 280. 1829-1830, *Flora Brasiliensis* 2(2): 295-296, pl. 37. 1877, *Genera Plantarum* 3(2): 1101. 1883 and *Proceedings of the Biological Society of Washington* 24: 115. 1911, *Comissão de Linhas Telegráficas Estratégicas de Matto-Grosso ao Amazonas, Botanica* 67 (Bot. 11): 93. 1922, *Acta Botanica Venezuelica* 14(4): 7-93. 1985[1987], *Annals of the Missouri Botanical Garden* 81(4): 768-774. 1994, *Contributions from the United States National Herbarium* 46: 613-616, 629. 2003.

Typhoides Moench = *Phalaris* L., *Phalaroides* Wolf

Greek *typhe*, *tiphe* and *eidos*, *oides* "resemblance." *Typhē*, *tiphe* applied by Theophrastus, Dioscorides and Aristoteles (*Historia animalium*) to a kind of grass or straw or other aquatic plants used for stuffing beds and bolsters, Aristophanes (*The Acharnians*) and Claudius Aelianus (*De natura animalium*) applied to a species of water bug or beetle; Latin *tiphe*, *es* for a kind of grain, Peter's corn, 1-grained wheat (Plinius); see M. Cortelazzo & P. Zolli, *Dizionario etimologico della lingua italiana*. 5: 1338. Bologna 1988; G. Semerano, *Le origini della cultura europea*. Dizionario Etimologici. Dizionario della lingua Greca. 2(1): 293. Leo S. Olschki Editore, Firenze 1994; H. Genast, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 666. 1996.

Pooideae, Poeae, Phalaridinae, see *Species Plantarum* 1: 54-55. 1753, *Genera Plantarum* 11. 1776, *Methodus Plantas Horti Botanici ...* 201-202. 1794 and *Iowa State College Journal of Science* 36(1): 1-96. 1961, *Fragmenta Floristica et Geobotanica* 27: 581-590. 1981, *Turun Yliopiston Julkaisuja: Sarja A II, Biologia-Geographica* 3: 1-12. 1982, *Cytologia* 50: 89-99. 1985, *Blyttia* 1985: 7-15. 1985, *Taxon* 41: 567. 1992, *Watsonia* 20: 63-66. 1994, *Webbia* 49(2): 265-329. 1995, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 479-488, 684. 2003.

Tzvelevia E.B. Alexeev = *Festuca* L., *Tsvelevia* E. Alexeev

Named for Nikolai Nikolaievich Tzvelev, b. 1925.

One species, Chatham Island, Antarctic, New Zealand. Pooideae, Poodae, Poeae, perennial, herbaceous, unbranched, densely tufted, auricles absent, ligule an unfringed membrane, plants bisexual, contracted inflorescence paniculate more or less ovate to ovoid, spikelets pedicellate, 2 glumes unequal, lemmas pointed and hairy, palea present, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, rocky places, type *Tzvelevia kerguelensis* (Hook.f.) E.B. Alexeev, see *The Vegetation of the Chatham-Islands ...* 60. 1864, *Philosophical Transactions of the Royal Society of London* 168: 22. 1879.

Species

T. kerguelensis (Hook.f.) E.B. Alexeev (*Festuca kerguelensis* (Hook.f.) F. Muell.; *Festuca kerguelensis* (Hook.f.) Hook.f.; *Poa kerguelensis* (Hook.f.) Steud.; *Triodia kerguelensis* Hook.f.)

Kerguelen Land. Rocky places, see *Flora Antarctica* 379. 1846, *Synopsis Plantarum Glumacearum* 1: 257. 1854.

U

Uniola L. = *Leptochloopsis* H.O. Yates,
Nevroctola Raf., *Trisiola* Raf., *Triunila* Raf.

From *uniola*, *ae* for a plant, otherwise unknown, diminutive of the Latin *unio*, *unionis* “unity, a single large pearl, a kind of single onion, oneness,” referring to the glumes; see Carl Linnaeus, *Species Plantarum*. 71. 1753 and *Genera Plantarum*. edition 5. 32. 1754; Helmut Genast, *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 670. Basel 1996.

About 4-5 species, North America, southern U.S. to Ecuador, West Indies. Chloridoideae, Eragrostideae, Uniolineae, or Chloridoideae, Cynodonteae, Uniolineae, perennial, herbaceous, halophytic, erect, caespitose, rhizomatous or stoloniferous, long and thick rhizomes, auricles absent, ligule a fringe of short hairs, leaf blades long-attenuate, leaves harsh, plants bisexual, open or contracted inflorescence spicate or paniculate and exserted, many racemes crowded and overlapping, spikelets strongly laterally compressed, 6-20 florets per spikelet, lower florets barren or empty, 2 glumes acute and shorter than the spikelets, second glume awnless, many-nerved lemmas, strongly keeled lemmas coriaceous or papery, palea keels winged, 2 free and fleshy lodicules, 3 stamens, 2 stigmas, open habitats, slopes, dry grassy plains, sand dunes and flats, salty sites, arid places, salt flats, the Caribbean and Pacific coasts, related to *Desmostachya*, type *Uniola paniculata* L., see *Species Plantarum* 71. 1753, *Flora Boreali-Americana* 1: 71. 1803, *Florula Ludoviciana*... 144. New York 1817, *Am. Monthly Mag. Crit. Rev.* 2: 175. 1817 and 4: 188, 190. 1819, *Jour. Phys. Chim. Hist. Nat.* 89: 104. 1819, *Neogenyton, or Indication of Sixty-Six New Genera of Plants of North America*. 4. 1825, *Hortus Regius Botanicus Berolinensis* 1: 159. 1827, *Preliminary Catalogue of Anthophyta and Pteridophyta Reported as Growing Spontaneously within One Hundred Miles of New York* 69. 1888 and *The Southwestern Naturalist* 11(2-3): 145-189, 372-393, 415-455. 1966-1967, *Kew Bulletin* 37: 412. 1982, *Flora Mesoamericana* 6: 257-258. 1994, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996, *Am. J. Bot.* 86: 17-31. 1999, *Restoration Ecology* 8(2): 144-150. June 2000, *Contributions from the United States National Herbarium* 41: 137, 175, 232-234. 2001, Anne Pringle & James D. Bever, “Divergent phenologies may facilitate the coexistence of arbuscular mycorrhizal fungi in a North Carolina grassland.” *Am. J. Bot.* 89:

1439-1446. 2002, *Systematic Entomology* 27(4): 469-517, Oct 2002, *Am. J. Bot.* 90: 116-122. 2003, *Annals of the Association of American Geographers* 93(1): 13-29. Mar 2003, *New Phytologist* 162(1): 25-44. Apr 2004, *Conservation Biology* 18(5): 1435-1439. Oct 2004, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu & Yun-Xiao Liu, “Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications.” *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005.

Species

U. condensata Hitchc. (*Leptochloopsis condensata* (Hitchc.) H.O. Yates; *Uniola condensata* Scribn.)

North America, Ecuador. Perennial, coarse, erect, rigid, glabrous, dense tussocks, leaves mostly basal, leaf sheaths glabrous, ligule inconspicuous or a rim of short hairs, erect leaf blades long-attenuate from a broad base, inflorescence a long and narrow panicle with branches erect and later diverging, ovate spikelets compressed, 3-5 florets and the basal 1-2 sterile, glumes lanceolate, second glume scabrid on back, fertile lemmas keeled, palea finely ciliate, 2 lodicules cuneate, 3 stamens, often a pioneer, on grassy slopes, disturbed places, road banks, see *Yearbook of Agriculture* 1894: 430. 1895 and *Contributions from the United States National Herbarium* 24(8): 345. 1927, *The Southwestern Naturalist* 11(3): 389. 1966.

U. paniculata L. (*Briza caroliniana* Lam.; *Briza caroliniana* Walter, nom. illeg., non *Briza caroliniana* Lam.; *Nevroctola maritima* Raf. ex B.D. Jacks.; *Nevroctola paniculata* Raf. ex B.D. Jacks.; *Trisiola paniculata* (L.) Raf.; *Uniola floridana* Gand.; *Uniola heterochroa* Gand.; *Uniola macrostachys* Gand.; *Uniola maritima* Michx.; *Uniola paniculata* Llanos)

Northern America, Mexico, U.S. Perennial, clumped, coarse, large spikelets, ornamental, sand binder, useful for erosion control, common on beach dunes, on sand dunes, see *Species Plantarum* 1: 71. 1753, *Encyclopédie Méthodique, Botanique* 1: 465. 1785, *Flora Caroliniana, secundum* ... 79. 1788, *Flora Boreali-Americana* 1: 71. 1803, *Florula Ludoviciana, or, a Flora of the State of* ... 144. 1817, *Fragmentos de algunas plantas de Filipinas* 32. 1851, *Index Kewensis* 2: 311. 1894 and *Contr. U.S. Natl. Herb.* 12: 121. 1908, *Bulletin de la Société Botanique de France* 66(7): 304. 1919 [1920], R.H. Wagner, “The ecology of *Uniola paniculata* L. in the dune-strand habitat of North Carolina.”

Ecological Monographs 34: 79-96. 1964, Deborah L. Miller, Lisa Yager, Mack Thetford & Mica Schneider, "Potential use of *Uniola paniculata* rhizome fragments for dune restoration." *Restoration Ecology* 11(3): 359-369. Sep 2003, Steven J. Franks, C.L. Richards, E. Gonzales, J.E. Cousins & J.L. Hamrick, "Multi-scale genetic analysis of *Uniola paniculata* (Poaceae): a coastal species with a linear, fragmented distribution." *Am. J. Bot.* 91: 1345-1351. 2004.

in English: seaoats, seaside oats, North American seaoats

U. peruviana Laegaard & Sánchez Vega

North Peru. Perennial, robust, see *Nordic Journal of Botany* 10(4): 439. 1990.

U. pittieri Hack.

Mesoamerica, South America. Perennial, coarse, stout, erect, scandent, arching, solid, stoloniferous, clumped, leaf sheaths glabrous, leaves distichous at base, ligule a dense rim of short hairs, leaf blades rolled inward and long-attenuate, narrow dense panicles, spikelets easily and readily detached, glumes unequal, first glume ovate, second glume triangular, palea lanceolate, 2 lodicules cuneate, 3 stamens, beach grass forming large colonies vital to dune stabilization, common on sand dunes, sandy sea shores, in very exposed places, in and over shrubs, in beach sand, behind the beach, among rocks, on margins of mangrove areas, close to *Uniola paniculata*, see *Österreichische Botanische Zeitschrift* 52: 309. 1902, *Brittonia* 23(3): 293-324. 1971.

U. virgata (Poir.) Griseb. (*Eleusine procera* Spreng. ex Steud.; *Leptochloopsis virgata* (Poir.) H.O. Yates; *Poa virgata* Poir.; *Uniola racemiflora* Trin.; *Uniola sparta* Trin.; *Uniola virgata* Bartram ex Pursh)

North America, West Indies. Perennial, see *Encyclopédie Méthodique, Botanique* 5: 78. 1804, *Flora Americae Septentrionalis; or, ...* 1: 82. 1814, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 55. 1836, *Linnaea* 10(3): 307. 1836, *Nomenclator Botanicus. Editio secunda* 1: 549. 1840, *Flora of the British West Indian Islands* 531. 1864 and *The Southwestern Naturalist* 11(3): 384. 1966.

in English: limestone grass

Urachne Trin. = *Oryzopsis* Michx.,
Piptatherum P. Beauv.

Greek *oura* "tail" and *achne* "chaff, glume."

Pooideae, Stipeae, Stipinae, type *Urachne coerulescens* (Desf.) Trin., see *Flora Boreali-Americana* 1: 51, t. 9. 1803, *Essai d'une Nouvelle Agrostographie* 17, 18, 173. 1812, *The Genera of North American Plants* 1: 40. 1818, Carl Bernhard von Trinius (1778-1844), *Fundamenta Agrostographiae*. 109-110. Vienna 1820, *Reliquiae Haenkeanae* 1: 222. 1830, *Mémoires de l'Académie Impériale des*

Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles 3,1(2-3): 122, 123. 1834, *Species Graminum Stipaceorum* 9, 16, 19, 20, 22. 1842, *Flora Chilena* 6: 265. 1854, *Genera Plantarum* 3(2): 1142. 1883 and *U.S. Dept. Agric. Bull.* 772: 156, 158. 1920, *Darwiniana* 7: 14. 1947, *Gayana Bot.* 47: 15. 1990, *Taxon* 39: 608. 1990, *Contributions from the United States National Herbarium* 48: 469-473, 494-495, 684-687. 2003.

Uralespis Nutt. = *Triplasis* P. Beauv.

From the Greek *oura* "tail" and *lepis* "scale."

Chloridoideae, Cynodonteae, type *Uralespis purpurea* Nutt., see *Essai d'une Nouvelle Agrostographie* 81, pl. 16, f. 10. 1812, *The Genera of North American Plants* 1: 62. 1818 and *U.S. Dept. Agric. Bull.* 772: 76. 1920, E.D. Merrill, *Index rafinesquianus*. 77. 1949, Arthur D. Chapman, editor, *Australian Plant Name Index*. 2929. ["Comments: Spelling corrected by C.S. Rafinesque in *Amer. Monthly Mag. Crit. Rev.* 4: 190. 1819"] Canberra 1991, *Contributions from the United States National Herbarium* 41: 230-231, 234-235. 2001.

Uralespis Nutt. = *Triplasis* P. Beauv.

A typographical error see *The Genera of North American Plants* 1: 62. 1818, *Gramineae* 27. 1841, *Synopsis Plantarum Glumacearum* 1: 248. 1855, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 93-95. 1862, *Mexicanas Plantas* 2: 110. 1886 and *U.S. Dept. Agric. Bull.* 772: 76. 1920, *Contributions from the United States National Herbarium* 41: 230-231, 234-235. 2001.

Uranthoecium Stapf

From the Greek *ouranos* "sky, roof, vaulted roof" and *thekion* a diminutive of *theke* "case, capsule, box," referring to the shape of the seed box, see James A. Baines, *Australian Plant Genera. An Etymological Dictionary of Australian Plant Genera*. 385-386. 1981; some suggested from *oura* "tail," *anthos* "flower" and *oikeo, ikeo* "to inhabit," or from *oura* and *anthos* "flower," *anthoecium* "spikelet," referring to the lower lemmas, attenuate.

One species, Australia. Panicoideae, Panicodae, Paniceae, annual or short-lived perennial, caespitose, herbaceous, hollow internodes, auricles absent, ligule a fringed membrane, leaves linear and narrow, culms branched from the lower nodes and flattened, plant bisexual, inflorescence a short spike, 2-4 spikelets clustered on both sides of axis, spikelets sessile with 1 sterile floret and one upper fertile, 2 glumes very unequal, first glume truncate and thin, upper glume

saccate, first lemma acuminate and longer than the glumes, palea present, two fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas plumose, grows in grassland on clay, heavy soils, open grasslands, open habitats, in gilgai, type *Uranthoecium truncatum* (Maiden & Betche) Stapf, see *Proceedings of the Linnean Society of New South Wales* 21: 741, t. 69. 1906, *Hooker's Icones Plantarum* 31: t. 3073. 1916.

Species

U. truncatum (Maiden & Betche) Stapf (*Rottboellia truncata* Maiden & Betche)

South Australia, Northern Territory, Queensland, New South Wales. Annual or short-lived perennial, erect, slender, tufted, leaves along the stems, panicles with a narrow wing along the margins of the rachis, spike axis with bract-like bristles, spikelets glabrous, lower glume truncate, second glume 2-keeled or notched, lower lemma sterile and keeled, upper lemma bisexual and firm, fodder.

in English: flat stem grass

Urelytrum Hackel

From the Greek *oura* “a tail” and *elytron* (*elyo* “to wind”) “a sheath, a cover.”

About 7 species, South and tropical Africa. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial or sometimes annual, tufted, erect, unbranched, herbaceous, aromatic or not with a bitter, quinine-like taste, auricles present, ligule an unfringed membrane, plants bisexual, inflorescence spicate or racemose, thickened internodes, 1-2 terminal racemes solitary or subdigitate, spikelets in pairs, 2 florets, lower floret male, upper floret bisexual, pedicelled spikelets long-awned, 2 glumes more or less equal, lower glume of the pedicellate spikelet long-awned, male spikelets with glumes, lower glume 2-keeled, upper glume nerved, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 plumose stigmas, open habitats, on roadsides, savannah grassland, type *Urelytrum agropyroides* (Hack.) Hack., see *Die Natürlichen Pflanzenfamilien* 2(2): 22, 25. 1887, *Monographiae Phanerogamarum* 6: 272. 1889 and *Flora of Tropical Africa* 9: 47. 1917, *Flore Agrostologique du Congo Belge* 1: 51. 1929, *Kew Bulletin* 1949: 366, 368-370, 376. 1949, *Gen. S. African Fl. Pl.* edition 2. 81. 1951, *Bulletin de la Société Botanique de France* 105: 244. 1958, *Bulletin de la Société Botanique de Belgique* 90: 221. 1958, *Kew Bulletin* 20: 257. 1966, *Boletim da Sociedade Broteriana, ser. 2* 41: 58, t. 1. 1967, *Kew Bulletin* 32(4): 767-771. 1978, *Genera Graminum* 361-362. 1986.

Species

U. annuum Stapf

Benin. See *Bull. Soc. Bot. France, lv. Mém.* VIII. 99. 1908 [also *Mémoires de la Société Botanique de France* 8: 99. 1908].

U. agropyroides (Hackel) Hack. (*Elionurus agropyroides* (Hack.) Roberty; *Rottboellia agropyroides* Hack.; *Urelytrum squarrosus* Hack.)

Tropical Africa, Madagascar. Perennial, hard, coarse, aromatic, submontane, unbranched, tufted, tussock forming, leaf sheath round, ligule an elongated membrane, single flattened raceme, spikelets paired, 1 spikelet sessile and awnless, 1 spikelet pedicellate with a flattened awn, awns which bend outwards, medicinal use, unpalatable, very low grazing value, occurs in grasslands and open bushvelds, wooded grasslands, on stony slopes, hillsides, in sandy soils, see *Supplementum Plantarum* 13, 114. 1781 [1782], *Species Plantarum. Editio quarta* 4(2): 941. 1806, *Boletim da Sociedade Broteriana* 3: 135. 1885, *Monographiae Phanerogamarum* 6: 272. 1889 and *Fl. Ovest Afr.* 409. 1954.

in English: quinine grass, centipede grass

in Nigeria: ande

in South Africa: varkstertgras

U. digitatum K. Schum.

West tropical Africa, Central African Republic. Perennial, tussocky, culms used for matting, savannah, see *Die Pflanzenwelt Ost-Afrikas* C: 97. 1895.

U. giganteum Pilger (*Rhytachne gigantea* Stapf)

West tropical Africa, Sudan, Uganda. Perennial, robust, whorled racemes, fodder, culms used for matting, growing in riverbanks, marshes, swampy places, see W. Hamilton (1783-1856), *Prodromus Plantarum Indiae Occidentalis* London 1825, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 125. 1904, *Mémoires de la Société Botanique de France* 8: 99. 1908.

in Nigeria: codorde, jeemàà, sodornde, sodornde mayo

U. henrardii Chippin.

Southern Africa. Similar to *Schizachyrium salzmannii*, see *Blumea, Supplement* 3: 25, f. 1. 1946.

U. muricatum C.E. Hubb.

West tropical Africa. Perennial, tufted, erect, tough, culms bitter-tasting, low grazing value, open areas, wooded savannah, see *Kew Bulletin* 1949: 367. 1949.

in Nigeria: rumaya, rumiya

Urochlaena Nees = *Tribolium* Desv.

From the Greek *oura* “a tail” and *chlaena*, *chlaenion* “cloak, blanket.”

One species, South Africa. Arundinoideae, Arundineae, or Danthonioideae, Danthonieae, annual, herbaceous, glabrous, branched, unarmed, caespitose, auricles absent, ligule a fringed membrane, uppermost sheath clasping the inflorescence, plants bisexual, deciduous inflorescence paniculate to spiciform, uppermost leaf sheath and inflorescence disarticulate and dispersed, panicle falling intact at maturity, 2 glumes more or less equal, lemma herbaceous awned, palea present, 2 minute and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, dry slopes, sandy places, sometimes referred to *Tribolium* Desv., type *Urochlaena pusilla* Nees, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 168, t. 7, f. 2. 1831, *Florae Africae Australioris Illustrationes Monographicae* 1: 437-438. 1841 and *Bothalia* 18: 111-114. 1988, *South African Journal of Botany* 60: 285-292. 1994, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 119(4): 445-507. 1997, *Contributions from the United States National Herbarium* 46: 622, 629. 2003.

Species

U. pusilla Nees (*Tribolium pusillum* (Nees) H.P. Linder & Davidse; *Urochlaena major* Rendle)

South Africa. Annual, tufted, soft leaves, dense spike-like panicle partially enclosed in modified leaf, glumes herbaceous 4- to 7-nerved with a recurved awn, lemmas hairy 7- to 9-nerved, along roadsides, dry sandy areas, disturbed places, dry bushlands, see *Florae Africae Australioris Illustrationes Monographicae* 1: 438. 1841, *Journal of Botany, British and Foreign* 37(441): 382. 1899 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 119(4): 495, f. 17. 1997.

Urochloa P. Beauv. = *Pseudobrachiaria* Launert

From the Greek *oura* "a tail" and *chloe*, *chloa* "grass," referring to the awns.

Some 12-120 species, tropics, mainly tropical Africa. Panicoideae, Panicoideae, Paniceae, Melinidinae, or Panicoideae, Paniceae, Setariinae, annual or perennial, morphologically variable, coarse, herbaceous, leafy, weedy, simple or branched, caespitose, erect, rhizomatous or stoloniferous, sometimes base decumbent and rooting from nodes, auricles absent, ligule a rim of short hairs or a membranous shortly ciliate rim, blade rolled in bud, leaves lanceolate, plants bisexual, a primary axis with racemes linear, spikelets single or paired, spikelets abaxial, spikelets shortly pedicellate and some with pedicel tips acting as elaiosomes, tubercle-based bristle, some spikelets reduced to disc-tipped pedicels, spikelets often constricted into a short stipe-like base, 2-3 florets, lower floret sterile or male, upper floret

bisexual, 2 glumes unequal or subequal, lower glume 3-nerved and shorter than the spikelet, upper glume acute, callus absent or short, lemmas dissimilar, upper lemma hardened and sometimes mucronate or short-awned, palea of upper florets present, 2 small lodicules free and fleshy, 3 stamens, ovary glabrous, 2 plumose reddish stigmas, grain crop species, fodder, weed species, native pasture species, minor cereal, shade species and species of open habitats, rainforest, grasslands, along irrigation ditches, pampas, prairies, loamy soils, very closely related to and most species formerly referred to *Brachiaria* (Trin.) Griseb. and vice versa, type *Urochloa panicoides* P. Beauv., see *Species Plantarum* 1: 55. 1753, *Systema Naturae, Editio Decima* 2: 870. 1759, *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Essai d'une Nouvelle Agrostographie* 52, 53, t. 11, f. 1. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 193, 208. 1834, *Flora Rossica* 4(14): 469. 1853, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853] and *Contributions from the United States National Herbarium* 15: 20, 28, 35, 78. 1910, *North American Flora* 3(2): 200, 202-203. 1915, *Journal of the Faculty of Science: University of Tokyo, Botany* 3: 244. 1930, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 11(104): 242. 1931, *Manual of the Grasses of the United States* (edition 2, revised by A. Chase) 680. 1950 [1951], *Mitteilungen der Botanischen Staatssammlung München* 8: 158. 1970, *Folia Primatologica* 15: 1-35. 1971, *Journal of Human Evolution* 10: 565-583. 1981, *Genera Graminum* 284-285. 1986, *Folia Primatologica* 48: 78-120. 1987, *Grass Syst. Evol.* 296. 1987, *Darwiniana* 31: 43-109. 1992, O. Morrone & F.O. Zuloaga, "Sinopsis del género *Urochloa* (Poaceae: Panicoideae: Paniceae) para México y América Central." *Darwiniana* 32(1-4): 59-75. 1993, *Flora Mesoamericana* 6: 331-333. 1994, *Flora of Ethiopia and Eritrea*, vol. 7: 229-232. 1995, *Memoirs of the New York Botanical Garden* 78: 509-540. 1996 [Flora of St. John, U.S. Virgin Islands], *Am. J. Bot.* 86: 17-31. 1999, *Am. J. Bot.* 88: 1988-1992, 1993-2012. 2001, *Austrobaileya* 6(3): 572. 2003, *Contributions from the United States National Herbarium* 46: 629-634. 2003, *Am. J. Bot.* 90: 796-821. 2003, *Australian Journal of Entomology* 42(1): 51-78. Mar 2003, Michael M. Douglas & Ruth A. O'Connor, "Effects of the exotic macrophyte, para grass (*Urochloa mutica*), on benthic and epiphytic macroinvertebrates of a tropical floodplain." *Freshwater Biology* 48(6): 962-971. June 2003, *Freshwater Biology* 48(6): 1105-1116. June 2003, *African Journal of Ecology* 41(2): 131-140. June 2003, *Freshwater Biology* 48(12): 2227-2233. Dec 2003, *Austral. Ecology* 29(1): 51-58. Feb 2004 [Weeds and the monitoring of biodiversity in Australian rangelands], Elmar M. Veenendaal, Olaf Kolle & Jon Lloyd, "Seasonal variation in energy fluxes and carbon dioxide exchange for a broad-leaved semiarid savannah (Mopane woodland) in Southern Africa."

Global Change Biology 10(3): 318-328. Mar 2004, *Ecological Management and Restoration* 5(3): 191-198. Dec 2004, David C. Hartnett, Andre F. Potgieter & Gail W.T. Wilson, "Fire effects on mycorrhizal symbiosis and root system architecture in southern African savannah grasses." *African Journal of Ecology* 42(4): 328-337. Dec 2004, R.A. Zahawi, "Establishment and growth of living fence species: an overlooked tool for the restoration of degraded areas in the Tropics." *Restoration Ecology* 13(1): 92-102. Mar 2005, *African Journal of Ecology* vol. 43, issue 1: 29-34. Mar 2005, Paul R. Williams, Eleanor M. Collins & Anthony C. Grice, "Cattle grazing for Para Grass management in a mixed species wetland of northeastern Australia." *Ecological Management and Restoration* 6(1): 75-76. Apr 2005.

Species

U. acuminata (Renvoize) Morrone & Zuloaga (*Brachiaria tatianae* Zuloaga & Soderstr.; *Panicum megastachyum* Nees, nom. illeg., non *Panicum megastachyum* Nees ex Trin.; *Streptostachys acuminata* Renvoize)

South America, Brazil. Perennial, erect, stout, terete, pubescent, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 154. 1829 and *Kew Bulletin* 39(1): 182. 1984, *Smithsonian Contributions to Botany* 59: 7-11, f. 3-4. 1985, *Annals of the Missouri Botanical Garden* 78(2): 372-374. 1991, *Darwiniana* 3(1-4): 53-60. 1995.

U. adspersa (Trin.) R.D. Webster (*Brachiaria adspersa* (Trin.) Parodi; *Brachiaria adspersa* (Trin.) S.T. Blake, nom. illeg., non *Brachiaria adspersa* (Trin.) Parodi; *Brachiaria echinulata* (Mez) Parodi; *Panicum adpersum* Trin.; *Panicum adpersum* var. *exile* Lindm.; *Panicum adpersum* var. *neesi* Lindm.; *Panicum echinulatum* Mez; *Panicum echinulatum* var. *boliviense* Henrard; *Panicum keyense* Mez; *Panicum thomasianum* Steud. ex Döll)

Southern America, Argentina, Bolivia, Brazil. Annual, herbaceous, erect, decumbent and rooting, leaning, weed in cultivated fields, growing on sandy soils, deciduous and semideciduous forests, near water, see *De Graminibus Panicis* 146. 1826, *Flora Brasiliensis* 2(2): 188. 1877 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 34(6): 8, t. 3. 1900, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 61-62. 1917, *Mededeelingen van's Rijks-Herbarium* 40: 50. 1921, *Darwiniana* 15: 94, 96. 1969, *Proceedings of the Royal Society of Queensland* 81: 4. 1969, *Systematic Botany* 13(4): 607. 1988.

U. advena (Vickery) R.D. Webster (*Brachiaria advena* Vickery) (Latin *advena*, *ae* "a foreigner, stranger, alien")

Perennial or annual, erect or decumbent, culms rooting at the nodes, leaf blades glabrous, inflorescence exerted at maturity, racemes pubescent, sessile and pubescent spikelets very densely arranged on the branches, upper glume and lower lemma more or less uniformly pubescent, lower glume glabrous, lower lemma without a palea, fertile

floret indurate, weed of cultivation and pastures, usually in damp sites, disturbed areas, see *Contributions from the New South Wales National Herbarium* 1(6): 329-330. 1950 [1951], *The Australian Paniceae (Poaceae)* 231. 1987.

in South Africa: phetola (Sotho)

U. albicoma (Swallen & García-Barr.) Morrone & Zuloaga (*Brachiaria albicoma* (Swallen & García-Barr.) Zuloaga & Soderstr.; *Panicum albicomum* Swallen & García-Barr.)

America, Colombia. See *Caldasia* 2: 303, f. C. 1943, *Smithsonian Contributions to Botany* 59: 11, f. 5. 1985, *Darwiniana* 31(1-4): 68. 1992.

U. arizonica (Scribn. & Merr.) Morrone & Zuloaga (*Brachiaria arizonica* (Scribn. & Merr.) S.T. Blake; *Brachiaria arizonica* var. *laeviglumis* (Scribn. & Merr.) Beetle; *Brachiaria arizonica* var. *major* (Vasey) Beetle; *Brachiaria arizonica* var. *tenuis* (Scribn. & Merr.) Beetle; *Panicum arizonicum* Scribn. & Merr.; *Panicum arizonicum* var. *arizonicum*; *Panicum arizonicum* var. *laeviglume* Scribn. & Merr.; *Panicum arizonicum* var. *major* (Vasey) Scribn. & Merr.; *Panicum arizonicum* var. *tenuis* Scribn. & Merr.; *Panicum dissitiflorum* Vasey; *Panicum fasciculatum* var. *dissitiflorum* Vasey ex Scribn. & Merr.; *Panicum fasciculatum* var. *majus* (Vasey) Beal; *Panicum fuscum* var. *major* Vasey)

Northern America, Mexico, U.S. Forage, canals and ditches, ravines, near water, see *Department of Agriculture. Botanical Division. Bulletin* 8: 26. 1889, *Proceedings of the American Academy of Arts and Sciences* 24: 80. 1889, *Grasses of North America for Farmers and Students* 2: 117. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 2-4. 1901, *Contr. U.S. Natl. Herb.* 15: 44. 1910, *Proceedings of the Royal Society of Queensland* 81: 4. 1969, *Phytologia* 52(1): 12-13. 1982, *Darwiniana* 32(1-4): 61. 1993.

in English: Arizona signal grass

U. arrecta (Hack. ex T. Durand & Schinz) Morrone & Zuloaga (*Brachiaria arrecta* (Hack. ex T. Durand & Schinz) Stent; *Brachiaria latifolia* Stapf; *Brachiaria radicans* Napper; *Panicum arrectum* Hack. ex T. Durand & Schinz)

Kenya, Uganda, South Africa. Perennial, stoloniferous or tufted, prostrate, geniculate culms, rooting at the lower nodes, flat ribbon-like rachis, lower glume nerved, does not tolerate drought, cultivated fodder, animal food, forage, pasture, economic plant, introduced and naturalized elsewhere in tropics, grows on swampy and seasonally flooded grasslands, on wet soils, vleis, in shallow water, river floodplains, see *Conspectus Florae Africae* 5: 741. 1894 and *Bothalia* 1: 263. 1924, *Kirkia* 3: 125. 1963, *Darwiniana* 31(1-4): 69. 1992.

in English: Tanner grass, Tanner

in Spanish: taner, gola

in southern Africa: phetola (Sotho)

in Brazil: capim marmelada

U. brachyura (Hackel) Stapf (*Eriochloa brachyura* (Hack. ex Schinz) Stapf; *Panicum brachyurum* Hack.; *Panicum brachyurum* Hack. ex Schinz; *Urochloa brachyura* (Hack. ex Schinz) Stapf; *Urochloa geniculata* C.E. Hubb.; *Urochloa novemnervia* C.E. Hubb.) (from the Greek *brachys* “short” and *oura* “a tail”)

Southern tropical and South Africa. Annual, tufted to loosely tufted, coarse, erect or ascending, geniculate or prostrate, leaf blades broadly linear, inflorescence of 2-10 ascending racemes, spikelets narrowly ovate, lower glume lanceolate 5-nerved, upper lemma shortly mucronate, palatable, readily eaten by livestock, used in rehabilitation projects, found in cultivated land, dry soil, riverbeds, roadsides, weedy places, often confused with *Urochloa panicoides* and *Urochloa trichopus*, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 142. 1888 and *Flora of Tropical Africa* 9: 592. 1920, *Bulletin of Miscellaneous Information Kew* 1933: 499-500. 1933, *Cytologia* 19: 97-103. 1954.

in English: urochloa, signal grass

in South Africa: urochloa

U. brizantha (Hochst. ex A. Rich.) R.D. Webster (*Brachiaria brizantha* (Hochst. ex A. Rich.) Stapf; *Brachiaria brizantha* var. *angustifolia* Stent & Rattray; *Brachiaria decumbens* Stapf; *Panicum brizanthum* Hochst.; *Panicum brizanthum* Hochst. ex A. Rich.; *Panicum brizanthum* var. *lasiochloa* Chiov.; *Panicum brizanthum* var. *latifolium* Oliv.; *Panicum brizanthum* var. *pandanifolium* Peter; *Panicum brizanthum* var. *polystachyum* De Wild. & T. Durand; *Urochloa decumbens* (Stapf) R.D. Webster)

Tropical and southern Africa. Perennial, leafy, very variable in habit, rhizomatous or stoloniferous, densely or loosely tufted, sword-forming, many stems, stout erect culms or sometimes geniculately ascending, leaf sheath rounded and hairy, ligule a ring of short white hairs, narrow and linear leaves, racemes 1-rowed, overlapping and rounded spikelets with long purplish hairs, glumes separated by a short internode, lower glume clasping, upper lemma granulose, very palatable, valuable pasture grass, forage, native pasture species, cultivated fodder, utilized as cultivated pasture in many countries, good nutritional value, naturalized and introduced into most tropical countries, propagated by seed, economic and useful plant, withstands moderate drought, can endure heavy grazing, useful for erosion control, binds loose soils, will not tolerate flooding, toxic, severe photosensitization in sheep, the seed can be used for grain, in Zimbabwe seeds are sun-dried, winnowed, ground into flour and cooked into a thick porridge, grows in sandy soil, undisturbed veld, undisturbed areas, in grassland and open woodlands, on disturbed soils, along roadsides, next to streams and under trees, alluvial soil, see *Flora* 24(Intell. 1): 19. 1841, *Tentamen Florae Abyssinicae ...* 2: 363. 1850, *Transactions of the Linnean Society of London* 29: 170. 1875 and

Pl. Thonn. Cong. 3. 1900, *Flora of Tropical Africa* 9: 528, 531. 1919, *Nuovo Giornale Botanico Italiano, new series* 26: 65. 1919, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 171, 178 & Anhang, 31, t. 19, f. 4. 1930, *Proceedings of the Rhodesia Scientific Association* 32: 23. 1933, *Ciencia e Cultura (São Paulo)* 29: 1032-1034. 1977, *The Australian Paniceae (Poaceae)* 233-234. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Bothalia* 21(2): 163-170. 1991, *Blumea* 41: 417. 1996, *Flora Fanerogamica do Estado de São Paulo* 1: i-xxv, 1-292. 2001.

in English: signal grass, bread signal grass, common signal grass, Surinam grass, St. Lucia grass, bread grass, broad leaved false paspalum, large seeded millet grass, large seeded panic grass, upright brachiaria, upright false paspalum, palisade, palisade grass, Ceylon sheep grass

in Mexico: señal

in Spanish: estrella de Africa, pasto alambe, yerba signal

in southern Rhodesia: iMunga

in southern Africa: broodgras, broodsinjaalgras; imunga (Ndebele); ipunte (Zulu); phetola (Sotho)

U. brizantha (Hochst. ex A. Rich.) R.D. Webster var. *ciliata* (Basappa & Muniy.) Ashalatha & V.J. Nair (*Brachiaria brizantha* var. *ciliata* Basappa & Muniy.)

India. See *Proceedings of the Indian Academy of Sciences* 49(4): 379. 1983, *The Australian Paniceae (Poaceae)* 233. 1987, *Bulletin of the Botanical Survey of India* 35(1-4): 29. 1993 [1997].

U. ciliatissima (Buckley) R.D. Webster (*Brachiaria ciliatissima* (Buckl.) Chase; *Panicum ciliatissimum* Buckley)

U.S. Spreading, rhizomatous, found in open areas, see *A Preliminary Report on the Geological and Agricultural Survey of Texas* App. 4. 1866 and *United States Department of Agriculture: Bulletin* 772: 221. 1920, *Contr. U.S. Nat. Herb.* 22: 38. 1920, *Systematic Botany* 13(4): 606. 1988.

in English: fringed signal grass

U. decidua Morrone & Zuloaga

South America, Brazil. Sandy areas, see *Novon* 6(3): 315, f. 3-5A-C. 1996.

U. decumbens (Stapf) R.D. Webster (*Brachiaria decumbens* Stapf; *Urochloa brizantha* (Hochst. ex A. Rich.) R.D. Webster)

Uganda, Tanzania, Kenya. Perennial, herbaceous, trailing, strongly stoloniferous, ligule a row of cilia or hairs, sheath more or less glabrous, spikelets hairy to distinctly glabrous, lower glume asymmetric and glabrous, lower lemma male or sterile, palea sometimes absent, a weed, economic plant, animal food, highly palatable to stock, readily grazed, forage, withstands drought but not waterlogging, valuable grass for erosion control, withstands heavy grazing, naturalized elsewhere in tropics and subtropics, reported to cause scouring if eaten continually for a long time, fairly

high-yielding, suitable for humid areas, well drained sandy soils, on poor and rocky soils, savannahs, wet tropics, see *Tentamen Florae Abyssinicae* ... 2: 363. 1850 and *Flora of Tropical Africa* 9: 528. 1919, *Ciencia e Cultura (São Paulo)* 29: 1032-1034. 1977, *The Australian Paniceae (Poaceae)* 233-234. 1987, *Canad. J. Bot.* 65: 2297-2309. 1987, *Journal of Cytology and Genetics* 25: 140-143. 1990.

in English: signal grass, basilisk signal grass, Surinam grass, Suriname grass, Kenya sheep grass, sheep grass

in Spanish: pasto alambre, zacate Surinam, pasto braquiaria, pasto chontalpo, pasto de la palizade, pasto de las orillas, pasto peludo, pasto prodigio, zacate prodigio, pazo undari
in Ecuador: shoshovi

U. deflexa (Schumach.) H. Scholz (*Brachiaria clavuliset* Chiov.; *Brachiaria deflexa* (Schumach.) C.E. Hubb. ex Robyns; *Brachiaria deflexa* (Schumach.) C.E. Hubb. ex Hutch. & Dalziel; *Brachiaria regularis* (Nees) Stapf; *Panicum deflexum* Schumach.; *Panicum nudiglume* Hochst.; *Panicum petiveri* Trin.; *Panicum petiveri* var. *nudiglume* (Hochst.) Chiov.; *Panicum petiveri* var. *robustissimum* Chiov.; *Panicum ramosum* var. *deflexum* Mez ex Peter; *Panicum regulare* Nees; *Pseudobrachiaria deflexa* (Schumach.) Launert)

Tropical and southern Africa, Arabia, India. Perennial to annual, weak, erect or geniculate, ascending, solitary or branched, loosely tufted, sometimes with roots at the lower nodes, leaf blade usually expanded and pointed, leaf sheaths rounded, basal sheaths often hairy, ligule a ring of short hairs, leaves linear lacking pseudopetioles, relatively straight inflorescence, panicle open and rigid, racemes often compound, spikelets shortly pedicellate glabrous to pubescent with a stipe, spikelets usually in pairs but sometimes solitary, upper lemma rugose, anthers yellow-orange, stigmas red, minor cereal, pioneer and palatable grass, human food, grain crop species, little value as forage, weedy, drought resistant, native pasture species, growing in moist places, in moist loamy sand, on red sand, shady places or open areas, open woodland, rocky outcrops, open places in forest, in open bushveld, on sandy to sandy loam soils, in gravel, in shady sites and black soils, in disturbed areas, along roadsides, burned and cleared areas, gardens, see *Species Plantarum* 1: 55. 1753, *Essai d'une Nouvelle Agrostographie* 52, 53, t. 11, f. 1. 1812, *De Graminibus Paniceis* 51, 125, 266. 1826, *Beskrivelse af Guineiske planter* 63-64. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 83-84. 1828, *Flora Rossica* 4(14): 469. 1853, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853] and *Bulletin of Miscellaneous Information Kew* 1923(9): 315. 1923, *Bulletin du Jardin Botanique de l'État* 9(3): 181. 1932, *Flora of West Tropical Africa* 2: 563, in clav., 564. 1936, *Mitteilungen der Botanischen Staatssammlung München* 8: 158. 1970, *Canad. J. Bot.* 65: 2297-2309. 1987, *Annals of the Missouri Botanical Garden* 75: 866-873.

1988, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 11(4): 443. 1989 [1990], *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994.

in English: false signal grass, Guinea millet, annual brachiaria

in India: chaprura

in South Africa: bastersinjalgras, vals brachiaria, falsche brachiaria

U. dictyoneura (Fig. & De Not.) Veldkamp (*Brachiaria dictyoneura* (Fig. & De Not.) Stapf; *Brachiaria dictyoneura* subsp. *dictyoneura*; *Brachiaria dictyoneura* subsp. *humidicola* (Rendle) Cat. Guerra; *Brachiaria humidicola* (Rendle) Schweick.; *Brachiaria keniensis* Henrard; *Brachiaria obvoluta* Stapf; *Panicum albobellereum* K. Schum. ex Engl.; *Panicum dictyoneurum* Fig. & De Not., also spelled *dictyoneura*; *Panicum humidicolum* Rendle; *Urochloa humidicola* (Rendle) Morrone & Zuloaga)

Swaziland, South Africa, Ethiopia, Kenya, Tanzania. Perennial, densely tufted, stoloniferous, shortly rhizomatous, erect to semierect, small seed heads, spikelets in 2 rows, raceme-rachis long-ciliate, forage, ground cover, adapted to acid and low-fertility soils, useful for erosion control, found along roadsides, in damp ditches, near water, damp meadows, confused with *Brachiaria humidicola* (Rendle) Schweick., see *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 329, t. 8. 1854, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 169. 1899 and *Flora of Tropical Africa* 9: 512. 1919, *Bulletin of Miscellaneous Information Kew* 1936(5): 297. 1936, *Darwiniana* 30(1-4): 87-94. 1990, *Darwiniana* 31(1-4): 80. 1992, *Blumea* 41(2): 418. 1996, *Fontqueria* 55(4): 16. 2001.

in English: koronivia grass

in Thailand: ya signal luey

U. discifera (E. Fourn.) Morrone & Zuloaga (*Panicum disciferum* E. Fourn. ex Hemsl.; *Panicum disciferum* E. Fourn.; *Urochloa plantaginea* (Link) R.D. Webster)

America. Annual, see *Biologia Centrali-Americana; ... Botany* ... 3: 488. 1885, *Mexicanas Plantas* 2: 19. 1886 and *Systematic Botany* 13(4): 607. 1988, *Darwiniana* 32(1-4): 65. 1993.

U. distachya (L.) T.Q. Nguyen (*Brachiaria distachya* (L.) Stapf; *Brachiaria miliiformis* (J. Presl) Chase; *Brachiaria subquadripara* (Trin.) Hitchc.; *Digitaria distachya* (L.) Pers.; *Panicum distachyon* L.; *Panicum miliiforme* J. Presl; *Panicum subquadriparum* Trin.; *Urochloa subquadripara* (Trin.) R.D. Webster)

Asia tropical, India, Thailand, Sri Lanka, Southeast Asia. Decumbent, rooting freely at the nodes, leaf sheath keeled and hairy on the margins, leaf blade with rough margins, ligule a fringed membrane, racemes on a winged axis, shiny spikelets attached singly on the rachis, lower florets neuter,

upper florets hermaphrodite, lemma and palea yellow-brown, lower glume tapering to a point, upper glume boat-shaped, a troublesome weed species with an aggressive stolon system, economic plant, useful for erosion control, palatable fodder grass, forage, naturalized elsewhere in tropics, see *Mantissa Plantarum* 183. 1771, *Syn. Pl.* 1: 85. 1805, *De Graminibus Paniceis* 145. 1826, *Reliquiae Haenkeanae* 1(4-5): 300. 1830 and *Flora of Tropical Africa* 9: 565. 1919, *Contributions from the United States National Herbarium* 22(1): 35. 1920, *Lingnan Science Journal* 7: 214. 1929 [1931], *Novosti Sist. Vyss. Rast.* 1966: 13. 1966, *Proc. Indian Sci. Congr. Assoc.* 70(3-vi): 94. 1983, *The Australian Paniceae (Poaceae)* 252. 1987, *Canad. J. Bot.* 65: 2297-2309. 1987.

in English: armgrass millet, green summer grass, four-arm grass

U. eminii (Mez) Davidse (*Brachiaria eminii* (Mez) Robyns; *Panicum eminii* Mez)

Tropics. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 135. 1904, *Bulletin du Jardin Botanique de l'État* 9(3): 176-177. 1932, *Monographs in Systematic Botany from the Missouri Botanical Garden* 45: 1258. 1993.

U. fasciculata (Sw.) R.D. Webster (*Brachiaria fasciculata* (Sw.) Parodi; *Brachiaria fasciculata* (Sw.) S.T. Blake, nom. illeg., non *Brachiaria fasciculata* (Sw.) Parodi; *Brachiaria fasciculata* var. *reticulata* (Torr.) Beetle, nom. illeg. non *Brachiaria fasciculata* var. *reticulata* (Torr.) Vickery; *Brachiaria fasciculata* var. *reticulata* (Torr.) Vickery; *Brachiaria fasciculata* var. *stricta* (Döll) Beetle; *Eriochloa pulchella* (Raddi) Kunth; *Panicum chartaginense* Sw.; *Panicum cruciabile* Chase; *Panicum fasciculatum* Sw.; *Panicum fasciculatum* Poir., nom. illeg., non *Panicum fasciculatum* Sw.; *Panicum fasciculatum* var. *chartaginense* (Sw.) Döll; *Panicum fasciculatum* var. *flavescens* (Sw.) Döll; *Panicum fasciculatum* var. *fuscum* (Sw.) Döll; *Panicum fasciculatum* var. *genuinum* Döll; *Panicum fasciculatum* var. *reticulatum* (Torr.) Beal; *Panicum fasciculatum* var. *strictum* Döll; *Panicum fastigiatum* Poir.; *Panicum flavescens* Sw.; *Panicum fuscum* J. Presl ex Nees; *Panicum fusco-rubens* Lam.; *Panicum fuscum* Sw.; *Panicum fuscum* var. *fasciculatum* (Sw.) Griseb.; *Panicum fuscum* var. *reticulatum* (Torr.) Scribn. & Merr.; *Panicum illinoiense* Desv.; *Panicum nigricans* Willd. ex Spreng.; *Panicum pulchellum* Raddi; *Panicum reticulatum* Griseb., nom. illeg., non *Panicum reticulatum* Torr.; *Panicum reticulatum* Thwaites ex Trimen, nom. illeg., non *Panicum reticulatum* Torr.; *Panicum reticulatum* Torr.; *Panicum spithamaeum* Willd. ex Nees; *Urochloa fasciculata* Kunth; *Urochloa fasciculata* (Sw.) R.D. Webster, nom. illeg., non *Urochloa fasciculata* Kunth; *Urochloa fasciculata* var. *reticulata* (Torr.) R.D. Webster; *Urochloa fusca* (Sw.) B.F. Hansen & Wunderlin; *Urochloa fusca* var. *reticulata* (Torr.) B.F. Hansen & Wunderlin)

Tropics. Annual or short-lived perennial, tufted, weedy, herbaceous, spreading or ascending, often rooting at base, leaf sheaths hairy or hispid, ligule hairy, leaves flat, panicles with raceme-like ascending branches, spikelets with crumpled glumes, forage, margins of rivers and streams, near water, roadsides, paddy fields, riverbeds, waste places, cultivated fields, see *Nova Genera et Species Plantarum seu Prodromus* 22-23. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Encyclopédie Méthodique, Botanique* 4: 731. 1798, *Encyclopédie Méthodique, Botanique Suppl.* 4: 277. 1816, *Agrostografia Brasiliensis sive enumeratio plantarum ad familias naturales graminum et ciperoidarum spectantium, quas in Brasilia...* 42. Lucca [1823], *Systema Vegetabilium, editio decima sexta* 1: 310. 1825, *Révision des Graminées* 1: 30-31. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 152-153. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 195. 1831, *Exploration of the Red River of Louisiana* 299. 1853, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 264. 1857, *Flora of the British West Indian Islands* 547. 1864, *Flora Brasiliensis* 2(2): 204-205. 1877, *Journal of Botany, British and Foreign* 23: 271. 1885, *Grasses of North America for Farmers and Students* 2: 117. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 4. 1901, *Contr. U.S. Natl. Herbarium* 12: 138. 1908, *Journal of the Arnold Arboretum* 20: 309. 1939, *Darwiniana* 15: 96. 1969, *Proceedings of the Royal Society of Queensland* 81: 4. 1969, *Phytologia* 52(1): 13. 1982, *The Australian Paniceae (Poaceae)* 235. 1987, *Novon* 11(3): 368. 2001.

in English: birdseed grass, browntop millet, browntop panicum

in Mexico: ahan toom, k'an-chim, piojillo, piojillo granadilla, tactla-sacat

U. fasciculata (Sw.) R.D. Webster var. *reticulata* (Torrey) R.D. Webster (*Brachiaria fasciculata* (Sw.) Parodi var. *reticulata* (Torrey) Vickery; *Brachiaria fasciculata* var. *reticulata* (Torr.) Beetle; *Panicum reticulatum* Torr.)

Central America, subtropical areas, Mexico. Annual, tufted, decumbent, sheath hairy, leaves hairy, ligule densely ciliate, racemes numerous with spikelets crowded and glabrous, spikelets solitary or paired or in triplets, lower floret sterile, fertile floret abaxial and minutely apiculate, sometimes grown for its grain, a pasture weed, a weed of sorghum crops, see *Exploration of the Red River of Louisiana* 299. 1853 and *Contributions from the New South Wales National Herbarium* 4(5): 250. 1972, *Phytologia* 52(1): 13. 1982.

U. foliosa (R. Br.) R.D. Webster (*Brachiaria foliosa* (R. Br.) Hughes; *Panicum foliosum* R. Br.; *Paspalum foliosum* (R. Br.) K. Schum. & Hollrung)

Australia, Queensland. Perennial, not stoloniferous, decumbent, knotted rootstock, sheath hairy, ligule a row of cilia,

spikelets solitary or paired, spikelets pubescent and with a short stipitate base, lower floret sterile, lower glume adaxial, upper glume stipitate, lower lemma with a palea, fertile floret striate and not mucronate, good soil, woodland, see *Prodromus Florae Novae Hollandiae* 191. 1810, *Die Flora von Kaiser Wilhelms Land* 21. 1889 and *Bulletin of Miscellaneous Information Kew* 1923(9): 315. 1923, *The Australian Paniceae (Poaceae)* 236. 1987.

in English: leafy panic

U. fusca (Sw.) B.F. Hansen & Wunderlin (*Brachiaria fasciculata* (Sw.) Parodi; *Brachiaria fasciculata* (Sw.) S.T. Blake, nom. illeg., non *Brachiaria fasciculata* (Sw.) Parodi; *Brachiaria fasciculata* var. *carthaginense* (Sw.) Beetle; *Brachiaria fasciculata* var. *fasciculata*; *Brachiaria fasciculata* var. *reticulata* (Torr.) Beetle, nom. illeg., non *Brachiaria fasciculata* var. *reticulata* (Torr.) Vickery; *Brachiaria fasciculata* var. *reticulata* (Torr.) Vickery; *Brachiaria fasciculata* var. *stricta* (Döll) Beetle; *Panicum carthaginense* Sw.; *Panicum fasciculatum* Sw.; *Panicum fasciculatum* var. *chartaginense* (Sw.) Döll; *Panicum fasciculatum* var. *flavescens* (Sw.) Döll; *Panicum fasciculatum* var. *fuscum* (Sw.) Döll; *Panicum fasciculatum* var. *genuinum* Döll; *Panicum fasciculatum* var. *reticulatum* (Torr.) Beal; *Panicum fasciculatum* var. *strictum* Döll; *Panicum fastigiatum* Poir.; *Panicum flavescens* Sw.; *Panicum fuscum* J. Presl ex Nees; *Panicum fusco-rubens* Lam.; *Panicum fuscum* Sw.; *Panicum fuscum* var. *fasciculatum* (Sw.) Griseb.; *Panicum fuscum* var. *fuscum*; *Panicum fuscum* var. *reticulatum* (Torr.) Scribn. & Merr.; *Panicum illinoiense* Desv.; *Panicum nigricans* Willd. ex Spreng.; *Panicum reticulatum* Torr.; *Panicum reticulatum* Griseb., nom. illeg., non *Panicum reticulatum* Torr.; *Panicum spithamaeum* Willd. ex Nees; *Urochloa fasciculata* Kunth; *Urochloa fasciculata* (Sw.) R.D. Webster, nom. illeg.; *Urochloa fasciculata* var. *reticulata* (Torr.) R.D. Webster; *Urochloa fasciculata* var. *reticulata* (Vickery) R. Webster; *Urochloa fusca* var. *reticulata* (Torr.) B.F. Hansen & Wunderlin)

Northern and southern America, U.S. Annual, leaves linear-lanceolate, inflorescence paniculate, purplish spikelets pedicellate, animal food, forage, economic plant, common weed in roadbed, in seasonal creeks, along trails, see *Nova Genera et Species Plantarum seu Prodromus* 22-23. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Encyclopédie Méthodique, Botanique Suppl.* 4: 277. 1816, *Agrostografia Brasiliensis sive enumeratio plantarum ad familias naturales graminum et ciperoidarum spectantium, quas in Brasilia...* 42. Lucca [1823], *Systema Vegetabilium, editio decima sexta* 1: 310. 1825, *Révision des Graminées* 1: 30-31. 1829, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 152-153. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 195. 1831, *Exploration of the Red River of Louisiana* 299. 1853, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 264. 1857, *Flora of the British*

West Indian Islands 547. 1864, *Flora Brasiliensis* 2(2): 204-205. 1877, *Journal of Botany, British and Foreign* 23: 271. 1885, *Grasses of North America for Farmers and Students* 2: 117. 1896 and *Circular, Division of Agrostology, United States Department of Agriculture* 32: 4. 1901, *Contr. U.S. Natl. Herbarium* 12: 138. 1908, *Journal of the Arnold Arboretum* 20: 309. 1939, *Darwiniana* 15: 96. 1969, *Proceedings of the Royal Society of Queensland* 81: 4. 1969, *Contributions from the New South Wales National Herbarium* 4(5): 250. 1972, *Phytologia* 52(1): 13. 1982, *The Australian Paniceae (Poaceae)* 235. 1987, *Novon* 11(3): 368. 2001.

in English: browntop signal grass, field grass, browntop urochloa

in Spanish: milha, miilha roxa, surbana

in Ecuador: opcagar

in Mexico: k'an-chim, tactla-sacat

U. gilesii Hughes (*Brachiaria gilesii* (Benth.) Chase; *Panicum gilesii* Benth.; *Urochloa gilesii* (Benth.) Hughes) (after the English-born (Bristol) Australian inland explorer William Ernest Powell Giles, 1835-1897 (d. Coolgardie, W. Australia), plant collector, botanist, knight of the Order of the Crown of Italy, honorary member of the Royal Italian Geographic Society, fellow of the Royal Geographical Society of London, in 1872 and 1873 to northern South Australia and Central Australia, in 1875 from Beltana via the Gawler Ranges to Ooldea and west across the Great Victoria Desert to Perth, among his writings are *Australia Twice Traversed ... from 1872 to 1876*. London 1889, *The Journal of a Forgotten Expedition*. Adelaide 1880 and *Geographic Travels in Central Australia from 1872 to 1874*. Melbourne 1875; *Gilesia biniflora* F. Muell. was collected by Christopher Giles (fl. 1870s), his brother. See R. Ericksen, *Ernest Giles, Explorer and Traveller. 1835-1897*. Melbourne 1978; J. Lanjouw & F.A. Stafleu, *Index Herbariorum*. Part II (2), *Collectors E-H*. Regnum Vegetabile vol. 9. 1957; F.J.H. von Mueller, *Fragmenta Phytographiae Australiae*. 9: 41. 1875; F. von Mueller, "Plants collected by Mr. Giles during his geographic exploration of central Australia in 1872, 1873 and 1874." in E. Giles, *Geographic Travels in Central Australia from 1872 to 1874*. 209-223. Melbourne 1875; F. von Mueller, "List of the plants obtained during Mr. C. Giles travels in Australia in 1875 and 1876." *J. Bot., Lond.* 15: 269-281, 300-306 and 344-349. 1877; Hugh R. Mill, *The Record of the Royal Geographical Society 1830-1930*. London 1930; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 279. 1994)

Australia, New South Wales, Queensland, South Australia, Northern Territory. Annual, low growing, loosely tufted, stiff, broadly lanceolate and hairy leaves, nodes woolly, spikelets hairy, spikelets sessile in 2 rows on a trigonous rachis, lower glume partially concealed by a ring of hairs on the callus, upper glume pubescent to glabrous, upper lemma awned or mucronate, fertile floret aristate, useful

grass, on disturbed ground, suspected of poisoning, see *Flora Australiensis: A Description ...* 7: 477. 1878 and *Contributions from the United States National Herbarium* 22(1): 35. 1920, *Bulletin of Miscellaneous Information Kew* 1923(9): 319. 1923, *Hooker's Icones Plantarum* 4: pl. 3363, p. 1. 1938, *The Australian Paniceae (Poaceae)* 238. 1987.

in English: hairy-edged arm grass

U. glumaris (Trin.) Veldkamp (*Brachiaria ambigua* (Trin.) A. Camus; *Brachiaria paspaloides* (Presl) C.E. Hubb.; *Panicum ambiguum* Trin.; *Panicum glumare* Trin.; *Panicum paspaloides* Pers.; *Panicum urochloa* Steud.; *Urochloa ambigua* (Trin.) Pilg.; *Urochloa glabra* Brongn.; *Urochloa paspaloides* J. Presl)

Tropical Asia, the Philippines. Short-lived perennial, decumbent, slender, suberect, rooting at the lower nodes, leaves pubescent, sheath apex hairy, inflorescence rachis pubescent, spikelets apiculate and ovate, increases flow of milk, good fodder grass relished by cattle, hay, suitable for turfs, growing in waste ground, low coastal forest, disturbed places, see *Syn. Pl.* 1: 81. 1805, *De Graminibus Paniceis* 143. 1826, *Reliquiae Haenkeanae* 1(4-5): 318. 1830, *Voyage Autour du Monde* 121. 1832, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 3,1(2-3): 243. 1834, *Nomenclator Botanicus. Editio secunda* 2: 264. 1841 and *Flore Générale de l'Indo-Chine* 7: 433. 1922, *Hooker's Icones Plantarum* 4: t. 3363. 1938, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14e: 35. 1940, *Blumea* 41(2): 420. 1996.

U. humidicola (Rendle) Morrone & Zuloaga (*Brachiaria dictyoneura* (Fig. & De Not.) Stapf; *Brachiaria dictyoneura* subsp. *humidicola* (Rendle) Cat. Guerra; *Brachiaria humidicola* (Rendle) Schweick.; *Brachiaria rautanenii* (Hack.) Stapf; *Panicum dictyoneurum* Fig. & De Not.; *Panicum humidicolum* Rendle; *Panicum rautanenii* Hack.; *Urochloa dictyoneura* (Fig. & De Not.) Veldkamp) (named for the Finnish Evangelical Lutheran missionary Rev. Martti Rautanen, 1845-1926, from 1880 in Namibia, Olukonda, Ovamboland, he translated the Bible in the Ndonga language; see Walther, K., "Afrikanische Pflanzen in Hamburg, Hamburger Botaniker in Afrika." *Mitt. Geogr. Ges. Hamburg* 56: 87-103. 1965)

Eastern and southeast Africa, Ethiopia, Kenya, Tanzania, South Africa, Namibia, Sudan. Perennial, procumbent, creeping, intensely and strongly stoloniferous, dense growth and slow spread, lanceolate leaf blades, racemes spaced, hairy spikelets light green, rachis narrow, lower glume purple or purple-brown, forage, produces good yields of herbage, palatable when young, withstands heavy grazing, economic plant, naturalized elsewhere in tropics, very effective for erosion control, ground cover, forms a dense mat layer, good drought and flooding tolerance, occurs in

relatively moist areas and situations, open areas, pasture, abandoned fields, woodlands, vlei edges, seasonally swampy grassland, sandy soils, along roadsides, riverbanks, see *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 329, t. 8. 1854, *Catalogue of the African Plants Collected by Dr. F. Welwitsch in 1853-61* 2(1): 169. 1899 and *Bulletin de l'Herbier Boissier, sér. 2, 2*: 935. 1902, *Flora of Tropical Africa* 9: 512-513. 1919, *Bulletin of Miscellaneous Information Kew* 1936(5): 297. 1936, *Darwiniana* 30(1-4): 87-94. 1990, *Darwiniana* 31(1-4): 80. 1992, *Blumea* 41(2): 418. 1996, *Fontqueria* 55(4): 16. 2001.

in English: creeping signal grass, koronivia grass, Coronivia grass, creeping false paspalum

in southern Africa: kruipsinjaalgras, soetkruipgras; phetola (Sotho)

U. lata (Schumach.) C.E. Hubb. (*Brachiaria lata* (Schumach.) C.E. Hubb.; *Brachiaria lata* var. *lata* (Schumach.) C.E. Hubb.; *Panicum latum* Schumach.)

Africa, Nigeria, Senegal, Ghana, Benin, Yemen. Economic plant, animal food, fodder, weed species, see *Beskrivelse af Guineiske planter* 61-62. 1827 and *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Aft. 3*: 81-82. 1828, *Bulletin of Miscellaneous Information Kew* 1934: 112. 1934, *Hooker's Icones Plantarum* 4(Pl. 3363): 2. 1938, *Kew Bulletin* 1949: 125. 1949, *Canad. J. Bot.* 65: 2297-2309. 1987.

U. lorentziana (Mez) Morrone & Zuloaga (*Brachiaria lorentziana* (Mez) Parodi; *Brachiaria platyphylla* (Munro ex C. Wright) Nash; *Panicum lorentzianum* Mez; *Panicum velutinosum* f. *violascens* Stuck.; *Panicum velutinosum* f. *viride* Stuck.) (for the German botanist Paul Günther Lorentz, 1835-1881, bryologist, plant collector in Argentina and Uruguay, explorer. See Stafleu & Cowan, *Taxonomic literature*. 3: 157-160. 1981; August Heinrich Rudolph Grisebach (1814-1879), *Plantae lorentzianae*. Göttingen 1874; J.H. Barnhart, *Biographical notes upon botanists*. 2: 402. 1965; T.W. Bossert, compilation, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 243. 1972; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 203. Oxford 1964)

Warm regions. Herbaceous, see *Anales de la Academia de Ciencias Medicas ...* 8: 206. 1871 and *Flora of the South-eastern United States ...* 81: 1327. 1903, *Anales Museo Nacional de Historia Natural de Buenos Aires* 11: 75. 1904, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 56(Beibl. 125): 1. 1921, *Darwiniana* 15(1-2): 99. 1969, *Darwiniana* 31(1-4): 82. 1992.

U. maxima (Jacq.) R.D. Webster (*Panicum gongyloides* Jacq.; *Panicum hirsutissimum* Steud.; *Panicum jumentorum* Pers.; *Panicum laeve* Lam.; *Panicum maximum* Jacq.; *Panicum maximum* var. *coloratum* C.T. White; *Panicum maximum* var. *gongyloides* (Jacq.) Döll; *Panicum maximum* var.

hirsutissimum (Steud.) Oliv.; *Panicum maximum* var. *maximum*; *Panicum maximum* var. *pubiglume* K. Schum. ex Peter; *Panicum maximum* var. *pubiglume* K. Schum.; *Panicum maximum* var. *trichoglume* Robyns; *Panicum polygamum* Sw., nom. illeg., non *Panicum polygamum* Forssk.; *Panicum polygamum* var. *gongyloides* (Jacq.) E. Fourn.; *Panicum praticola* Salzm. ex Döll; *Panicum scaberrimum* Lag.; *Panicum trichocondylum* Steud.; *Urochloa maxima* var. *trichoglumis* (Robyns) R.D. Webster)

Africa. Perennial bunchgrass rather coarse and tall, densely tufted, short and stout rhizome, open panicle, used for pasture and silage, fodder, nutritive value high when leafy and green, tolerates some drought, grows in moist areas, on disturbed sites and road verges, see *Icones Plantarum Rariorum* 1: 2, t. 13. 1781, *Collectanea* 1: 76. 1786, *Nova Genera et Species Plantarum seu Prodrromus* 24. 1788, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Syn. Pl.* 1: 83. 1805, *Eclogae Graminum Rariorum* 30, t. 21. 1814-1820, *Nova Genera et Species Plantarum (quarto edizione)* 1: 99. 1815 [1816], *Elenchus Plantarum* 2. 1816, *Systema Vegetabilium* 2: 458. 1817, *Nov. Pl. Sp. Ind. Orient.* 49. 1821, *Beskrivelse af Guineiske planter* 64. 1827, *Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh.* 3: 84. 1828, *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 201. 1831, *Florae Africae Australioris Illustrationes Monographicae* 36. 1841, *Tentamen Florae Abyssinicae ...* 2: 373. 1850, *Synopsis Plantarum Glumacearum* 1: 71-74. 1853 [or 1854], *Naturwissenschaftliche Reise nach Mossambique ...* 2: 546. 1865, *Transactions of the Linnean Society of London* 29: 171. 1875, *Flora Brasiliensis* 2(2): 203. 1877, *Report Upon United States Geographical Surveys West of the One Hundredth Meridian, in Charge of First Lieut. Geo. M. Wheeler ... vol. vi—Botany* 6: 295. 1878, *Mexicanas Plantas* 2: 28. 1886, *Die Pflanzenwelt Ost-Afrikas* B(2/3): 85. 1895, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 24(3): 333. 1897, *Revisio Generum Plantarum* 3(3): 360, 362. 1898 and *Just's botanischer Jahresbericht*. 261: 329. 1900, *Bulletin de l'Herbier Boissier, sér. 2*, 1: 766. 1901, *Annuario del Reale Istituto Botanico di Roma* 8(1): 33-34. 1903 [*Flora della Colonia Eritrea* 33. 1903], *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 143. 1904, *Transactions of the Royal Society of South Africa* 5: 300. 1916, *Bulletin agricole du Congo Belge* 13: 335. 1922, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 185, 195 & Anhang, 42. 1930, *Mémoires de l'Institut Royal Colonial Belge; Section des Sciences Naturelles et Médicales* 1(6): 31. 1932, *Queensland Agricultural Journal* 49: 112, t. 41, f. D1, 2. 1938, *Notulae Systematicae. Herbarium du Museum de Paris* 15: 413. 1959, *Kirkia* 3: 130. 1963, *Boletín de la Sociedad Argentina de Botánica* 16(4): 420-425. 1975, *Flora of the Lesser Antilles, Leeward and Windward Islands* 3: 25-220. 1979, *Flora of Tropical East Africa*

451-898. 1982, *Journal of Cytology and Genetics* 18: 58-61. 1983, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Economic and Taxonomic Botany* 7(1): 106. 1985, *Journal of Cytology and Genetics* 21: 152-154. 1986, *The Australian Paniceae (Poaceae)* 241-242. 1987, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 11(4): 443. 1989[1990], *Cytologia* 55: 471-474. 1990, *Bothalia* 21(2): 163-170. 1991, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Biologia Plantarum* 36: 37-45. 1994, *Blumea* 41: 197. 1996, *Boletim do Instituto de Biociências, Universidade Federal do Rio Grande do Sul* 59: 1-156. 2000, *Flora Fanerogamica do Estado de São Paulo* 1: 1-292. 2001.

in English: Guinea grass, slender guineagrass

in Spanish: guinea

U. megastachya (Nees ex Trin.) Morrone & Zuloaga (*Brachiaria megastachya* (Nees ex Trin.) Zuloaga & Soderstr.; *Panicum megastachyum* Nees ex Trin.)

America. See *De Graminibus Paniceis* 205. 1826 and *Smithsonian Contributions to Botany* 59: 5, f. 2. 1985, *Darwiniana* 31(1-4): 84. 1992.

U. meiziana (Hitchc.) Morrone & Zuloaga (*Brachiaria meiziana* Hitchc.)

North America, Mexico. See *Contributions from the United States National Herbarium* 12(3): 140. 1908, *Taxon* 33: 126-134. 1984, *Darwiniana* 32(1-4): 68. 1993.

U. mollis (Sw.) Morrone & Zuloaga (*Brachiaria mollis* (Sw.) Parodi; *Panicum didistichum* Mez; *Panicum molle* Sw.; *Panicum molle* Griseb., nom. illeg., non *Panicum molle* Sw.; *Panicum moritzii* Mez; *Panicum polytrichum* Mez; *Panicum velutinosum* Nees; *Panicum velutinosum* Nees ex Trin., nom. illeg., non *Panicum velutinosum* Nees)

Mexico, northern and southern America. Annual, decumbent, herbaceous, terrestrial, leaves soft and velvety, reddish fruits, forage, bad weed species, occasional weed along roadsides, see *Nova Genera et Species Plantarum seu Prodrromus* 22. 1788, *De Graminibus Paniceis* 144. 1826, *Flora Brasiliensis seu Enumeratio Plantarum* 121. 1829, *Flora of the British West Indian Islands* 547. 1864 and *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 63, 69. 1917, *Darwiniana* 15(1-2): 100. 1969, *Darwiniana* 33(1-4): 85. 1992.

in English: water grass

in Costa Rica: porchón amargo

in Mexico: pasto

U. mosambicensis (Hackel) Dandy (*Brachiaria stolonifera* Gooss.; *Echinochloa notabilis* (Hook.f.) Rhind; *Panicum mosambicense* Hack.; *Panicum notabile* Hook.f.; *Urochloa pullulans* Stapf, nom. illeg.; *Urochloa pullulans* var.

mosambicensis (Hack.) Stapf; *Urochloa rhodesiensis* Stent; *Urochloa stolonifera* (Gooss.) Chippind.)

Tropical East Africa, South Africa. Perennial, often short-lived, variable, more or less erect, semidecumbent, very leafy, often branching, coarse, smooth, shortly stoloniferous, either densely tufted or creeping, vigorous, sometimes rooting at the lower nodes, sheath more or less hairy or glabrous, ligule membranous with ciliate margins, leaves with straight margins, nodes prominent densely silky, racemes simple and semidigitately arranged around the central axis, spikelets solitary or paired borne on the lower side of the rachis, lower glume with stiff hairs, lower lemma male and mucronate or shortly awned, fertile floret ridged, large seeds, economic plant, cultivated pasture, forage, weed and fodder, grazing of good nutritive value even when dry, palatable, grazed heavily by wild animals, grains and tillers eaten by baboons, seeds boiled and eaten in times of famine, grows quickly, heavy seed production, drought resistant, poor frost tolerance, it does not tolerate soils subject to flooding or badly drained sites, useful for erosion control and revegetation, naturalized in tropics, grows in disturbed places, along roadsides, wooded grassland, overgrazed trampled veld, sandy soil and red sandy soil, coarse sand, in open grassland, in sheltered disturbed places, red clay soil and disturbed red clay soils, deciduous bushland, hard red clay soil, brown clay loam, in fertile sand-loam soil and waste ground, stolons and broad leaves protect the soil effectively against rain, wind and sun, closely related to *Urochloa oligotricha* (Fig. & De Not.) Henrard and *Urochloa stolonifera* (Goossens) Chippend., see *Boletim da Sociedade Broteriana* 6: 140. 1888, *The Flora of British India* 7: 32. 1896 and *Flora of Tropical Africa* 9: 590, 592. 1920, *Journal of Botany, British and Foreign* 69(2): 54. 1931, *Proceedings and Transactions of the Rhodesia Scientific Association* 32: 26. 1933, *The Grasses of Burma* 50. Calcutta 1945, *Herbage Abstracts* 41: 351-357. 1971, *Australian Journal of Botany* 28: 343-356. 1980, *Cytologia* 55: 431-435. 1990, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Bothalia* 21(2): 163-170. 1991, *Sida* 15(3): 405-413. 1993, Margaret Nkya, *An Ecographic Survey of Urochloa Mosambiquensis in Arid and Semi-Arid Regions of Africa*. Birmingham: School of Biological Sciences, University of Birmingham 1995, *Blumea* 41(2): 413-437. 1996, M. Serrano & J. Terán, *Identificación de Especies Vegetales en Chuquisaca — Teoría, Práctica y Resultados* 1-129. 2000.

in English: sabi grass, African liverseed grass, common urochloa, buffalo grass, bushveld herringbone grass, gonya grass, bushveld signal grass, herring-bone grass, white buffalo grass

in South Africa: gewone urochloa, bosveldbeesgras, buffelsgras, kruipsinjaalgras, witbuffelgras

in Thailand: ya sabe

U. multiculma (Andersson) Morrone & Zuloaga (*Panicum multiculmum* Andersson)

America, Ecuador. See *Kongliga Svenska Vetenskapsakademien Handlingar* 1853: 133. 1855 and *Darwiniana* 31(1-4): 87. 1992.

U. mutica (Forssk.) T.Q. Nguyen (*Brachiaria glabrinodis* (Hack.) Henrard; *Brachiaria mutica* (Forssk.) Stapf; *Brachiaria numidiana* (Lam.) Henrard; *Brachiaria purpurascens* (Raddi) Henrard; *Panicum amphibium* Steud.; *Panicum barbinode* Trin.; *Panicum equinum* Salzm. ex Steud.; *Panicum glabrinode* Hack.; *Panicum guadeloupense* Spreng. ex Steud.; *Panicum molle* Griseb., nom. illeg., non *Panicum molle* Sw.; *Panicum muticum* Forssk.; *Panicum numidianum* Lam.; *Panicum numidianum* J. Presl, nom. illeg., non *Panicum numidianum* Lam.; *Panicum numidianum* Sieber ex Schult., nom. illeg., non *Panicum numidianum* Lam.; *Panicum paraguayense* Steud. ex Döll; *Panicum pictigluma* Steud.; *Panicum punctatum* Burm.f.; *Panicum punctulatum* Arn. ex Steud.; *Panicum purpurascens* Raddi; *Panicum sarmentosum* Benth.; *Paspalum glabrinode* (Hack.) Morrone & Zuloaga; *Urochloa mutica* (Forssk.) R.D. Webster ex Zon) (Latin *muticus, a, um* “blunt”)

Pantropical. Perennial and stoloniferous, straggling, scandent, emergent, semiaquatic or aquatic, coarse sprawling stems, robust, stout and very vigorous, simple or narrowly branched, ascending from prostrate or long decumbent base, rooting at the lower nodes, flowering culms erect, leaf nodes swollen and with dense shaggy hairs, sheaths loose and overlapping, hairy leaves and sheaths, ligule a fringed ciliate rim, several lateral racemes on a common axis, glabrous spikelets purplish green and elliptic, winged rachis, pedicels solitary or paired with discoid tips, lower florets usually male, fertile floret subacute, glumes dissimilar, upper lemma obtuse and mucronate, a poor seed producer, seeds rarely viable, economic plant introduced into most tropical countries and widely cultivated, usually nontoxic, one of the best of tropical grasses for pasture, forage grass, often used as green chopped forage, not suitable for silage, used as fodder grass and for water treatment, stems and leaves very palatable, troublesome weed in cultivation, it may become a pest, forms dense monotypic stands, floating layers of vegetation, a pest of irrigation ditches and ponds, troublesome weed of sugar cane crops, useful for erosion control, useful for stream bank and stream erosion control, it does not withstand heavy grazing, tolerant of drought and of brackish water, grows well only in poorly drained soils in high-rainfall areas or on seasonally wetland, along irrigation ditches and ponds, marshes, disturbed sites, abandoned orchards, wet areas and wet pastures, wet grasslands, wet fields and ditches, alluvial soils, in both running water and temporary waterholes, in standing and running water, in swamps and shallow streams, on deep loamy soils overlying saline clays, swampy places and stream banks, see

Flora Aegyptiaco-Arabica 20. 1775, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 172. 1791, *Cyperaceae et Gramineae Siculae* 19. 1820, *Agrostografia Brasiliensis* 47. 1823, *Mantissa* 2: 267. 1824, *Species Graminum* 3: t. 318. 1829-1830, *Nom. Bot.* edition 2,2: 257. 1841, *Synopsis Plantarum Glumacearum* 1: 61, 67, 73. 1853 [or 1854], *Flora Brasiliensis* 2(2): 189. 1877 and *Annuaire du Conservatoire et Jardin Botaniques de Genève* 17: 284-285. 1914, *Flora of Tropical Africa* 9: 526. 1919, *Blumea* 3(3): 434-435. 1940, *Novosti Sistematiki Vysshchikh Rastenii* 1966: 13. 1966, *Canad. J. Bot.* 65: 2297-2309. 1987, *Darwiniana* 29(1-4): 262. 1989, *Wageningen Agricultural University Papers* 92-1(2): 264-266. 1992, Michael M. Douglas & Ruth A. O'Connor, "Weed invasion changes fuel characteristics: Para Grass (*Urochloa mutica* (Forssk.) T.Q. Nguyen) on a tropical floodplain." *Ecological Management and Restoration* 5(2): 143-145. Aug 2004.

in English: California grass, Mauritius grass, Mauritius signal grass, Scotch grass, para grass, Pará grass, paragrass, buffalo grass, Dutch grass, water grass, giant panicum, giant couch, Carib grass

in Spanish: grama, nudillo, malojilla, malojillo, hierba de Pará, pasto Pará, pasto para

in Brazil: capim da colonia

in the Caribbean: para, zèb para, herbe de para

in Colombia: pará

in Cuba: hierba de pará, hierba del paral, molojillo

in Mexico: camalote, camelote, egipto, leh-toom, pará, paraná, pasto pará, piojillo para, quixi-coba, zacate camalote, zacate colorado, zacate egipto, zacate pará

in Nicaragua: sagádi pará, walang para

in Japan: para-gurasu

in the Philippines: Pará grass

in Sri Lanka: diya tana, tannir pul

in Tonga: puakatau

U. notochthona (Domin) Hughes (*Brachiaria notochthona* (Domin) Hughes; *Urochloa gilesii* subsp. *gilesii*) (Greek *notos* "back" and *chthon*, *chthonos* "the earth, ground")

South Australia, Queensland, New South Wales, Northern Territory. Annual, ascending, ligule a row of cilia, spikelets glabrous and alternate on each side of the midrib, lower glume asymmetric, fertile floret mucronate, on heavy soils, see *Repertorium Specierum Novarum Regni Vegetabilis* 10: 60. 1911, *Bulletin of Miscellaneous Information Kew* 1923(9): 319. 1923.

U. oblita (Swallen) Morrone & Zuloaga (*Brachiaria oblita* (Swallen) Tovar; *Panicum oblitum* Swallen)

America. See *Phytologia* 14(2): 76. 1966, *Revista de Ciencias* (Universidad Nacional Mayor de San Marcos) 74(1): 50. 1986, *Darwiniana* 31(1-4): 92. 1992.

U. oligobrachiata (Pilger) Kartesz (*Brachiaria oligobrachiata* (Pilger) Henr., *Brachiaria platytaenia* Stapf; *Panicum oligobrachiatum* Pilg.; *Urochloa platytaenia* (Stapf) Crins)

U.S. See *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 33: 50. 1902, *Flora of Tropical Africa* 9: 524. 1919, *Journal of the Arnold Arboretum, Supplementary Series* 1: 267. 1991.

U. oligotricha (Fig. & De Not.) Henrard (*Brachiaria bulawayensis* (Hack.) Henrard; *Eriochloa bolbodes* (Hochst. ex Steud.) Schweinf.; *Helopus bolbodes* Hochst. ex Steud.; *Panicum bolbodes* (Hochst. ex Steud.) Asch. & Schweinf.; *Panicum bolbodes* (Hochst. ex Steud.) Chiov., nom. illeg., non *Panicum bolbodes* (Hochst. ex Steud.) Asch. & Schweinf.; *Panicum bulawayense* Hack.; *Panicum bulbodes* (Hochst. ex Steud.) Chiov.; *Panicum oligotrichum* Fig. & De Not.; *Urochloa bolbodes* (Hochst. ex Steud.) Stapf; *Urochloa bolbodes* (Steudel) Stapf; *Urochloa bulbodes* (Steudel) Stapf) (Rhodesia, Bulawayo)

Tropical East Africa, Ethiopia, South Africa. Perennial, tufted to densely tufted, culms sometimes bulbous at the base or somewhat thickened or knotty, unbranched, shortly rhizomatous with creeping rhizomes, leaf blades expanded, basal sheaths silky tomentose to densely hairy and rounded or somewhat flattened, old leaf sheaths fibrous, ligule a fringe of short of hairs, inflorescence a composite raceme, racemes spreading and unilateral, spikelets lanceolate acuminate and crowded, lower glume 5-nerved, upper lemma mucronate, natural pasture, good for soil conservation, valuable and very palatable grazing grass, readily eaten by livestock, high drought tolerance, shade-tolerant, not persistent under grazing, grows in open grassland and in bush, loamy soils, in bushveld and in disturbed places, low-rainfall tropics, on rocky clay soils, sandveld, road reserves and old cultivated lands, alkaline soils, uncultivated lands, open woodland, along roadsides, red soils, in damp places, similar to *Urochloa panicoides* and *Urochloa trichopus*, see *Memorie della Reale Accademia delle Scienze di Torino, ser. 2* 14: 333. 1854, *Synopsis Plantarum Glumacearum* 1: 100. 1854, *Beitrag zur Flora Aethiopiens ...* 306. 1867, *Bulletin de l'Herbier Boissier* 2(App. 2): 17. 1894 and *Annuario del Reale Istituto Botanico di Roma* 8: 35. 1903, *Proceedings of the Rhodesia Scientific Association* 7(2): 69. 1908, *Flora of Tropical Africa* 9: 593. 1920, *Blumea* 3(3): 436. 1940, *Blumea* 4(3): 502. 1941, *Cytologia* 55: 431-435. 1990.

in English: dubi grass, perennial signal grass, gonya grass
in southern Africa: meerjarige beesgras, ausdauerndes fettweidegras

U. ophryodes (Chase) Morrone & Zuloaga (*Brachiaria ophryodes* Chase)

America, Mexico. See *Contributions from the United States National Herbarium* 22(1): 37, f. 2. 1920, *Darwiniana* 32(1-4): 71. 1993.

U. panicoides P. Beauv. (*Hemigymnia javanica* (Poir.) Alston; *Panicum borzianum* Mattei; *Panicum controversum* Steud., nom. illeg., non *Panicum hochstetterianum* A. Rich.; *Panicum helopus* Trin.; *Panicum helopus* f. *glabrescens* K. Schum.; *Panicum helopus* var. *glabrescens* (K. Schum.) Stapf; *Panicum hochstetterianum* A. Rich.; *Panicum javanicum* Poir.; *Panicum javanicum* Poir. ex Thwaites, nom. illeg., non *Panicum javanicum* Poir.; *Panicum oxycephalum* Peter; *Panicum panicoides* (P. Beauv.) Hitchc.; *Panicum setarioides* Peter; *Panicum trichopus* subsp. *breviglume* Chiov.; *Panicum trichopus* var. *glaberrimum* Chiov.; *Panicum trichopus* var. *trichophorum* Chiov.; *Panicum urochloa* Desv.; *Setaria pilifera* Spreng.; *Urochloa helopus* (Trin.) Stapf; *Urochloa helopus* var. *hochstetteriana* (A. Rich.) Chiov.; *Urochloa javanica* (Poir.) Stapf; *Urochloa panicoides* sensu Schultes; *Urochloa panicoides* var. *pubescens* (Kunth) Bor; *Urochloa pubescens* Kunth; *Urochloa ruschii* sensu Chippind., non Pilg.; *Urochloa ruschii* Pilg.) (after the Italian botanist Antonino Borzi, 1852-1921, professor of botany, 1892-1921 Orto Botanico of Palermo; see T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 46. 1972; J.H. Barnhart, *Biographical notes upon botanists*. 1: 224. 1965) East tropical Africa, Uganda, Sudan, Kenya, Namibia, South Africa, Tanzania, Pakistan, Yemen, India. Annual, tufted to loosely tufted, stoloniferous, low, creeping, semi-prostrate spreading stems, grows more or less erect and ascending, rooting at the lower nodes, ligule a densely ciliate rim, sheath hairy or ciliate on margins, leaf blade with wavy margins, relatively broad leaves, racemes in simple arrangement along an axis, solitary or paired spikelets mostly glabrous and not warty, upper glume smooth, lower glume ovate obtuse, fruiting glume with a short awnlike point, lower lemma male or sterile, fertile floret mucronate, lower palea hyaline, free-seeding, economic plant suspected to be nitrate toxic, when dry becomes brittle, grain used in times of scarcity (bread or *khichdi*), very palatable grazing grass, pasture, good fodder for horses and cattle, best used green, invasive, noxious weed, a weed in land fallowed bare for wheat, naturalized, often forming a dense cover, used in rehabilitation projects and for the stabilization of bare compacted soils, valuable for controlling wind and water erosion, found in damp places where water collects, field borders, low grasslands, seasonally flooded depressions, sandy soils and loams, on alluvial soil, in moist disturbed places, in partial shade, grasslands, on roadsides verges, on black cracking clays, on cultivated lands and wastelands, gardens and road reserves, irrigated fields, overgrazed places, see *Essai d'une Nouvelle Agrostographie* 53, t. 11, f. 1. 1812, *Encyclopédie Méthodique. Botanique ... Supplément* 4: 274. 1816, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 84. 1821, *Systema Vegetabilium, editio decima sexta* 4(2): 33. 1827, *Révision des Graminées* 1: 31. 1829, *Mémoires de la Société d'Agriculture, Sciences et Arts*

d'Angers 1: 186. 1831, *Tentamen Florae Abyssinicae ...* 2: 369. 1850, *Synopsis Plantarum Glumacearum* 1: 60. 1854, *Enumeratio Plantarum Zeylanicae* 358. 1864, *Die Pflanzenwelt Ost-Afrikas* C: 101. 1895, *Flora Capensis* 7: 392. 1899 and *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 7: 167. 1908, *Nuovo Giornale Botanico Italiano, new series* 19: 419. 1912, *Journal of the Washington Academy of Sciences* 9: 551. 1919, *Flora of Tropical Africa* 9: 595, 597. 1920, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften, Göttingen. Mathematisch-Physikalische Klasse N.F.* 13(2): 110. 1928, *Repertorium Specierum Novarum Regni Vegetabilis* 40: 169, 180, 182 & Anhang, 34, t. 19, f. 5. 1930, *Suppl. Fl. Ceylon* 6: 323. 1931, *Flora Somala* 2: 444. 1932, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 449. 1941, *Grasses of Ceylon* 132. 1956, *Grasses of Burma, Ceylon, India and Pakistan* 372. 1960, *Journal of Cytology and Genetics* 18: 58-59. 1983, *Taxon* 33: 126-134. 1984, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 5: 609-626. 1985, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Proceedings of the Indian Science Congress Association* 74(3, vi): 172. 1987, *Annals of the Missouri Botanical Garden* 75: 866-873. 1988, *Proceedings of the Indian Academy of Sciences. Plant Sciences* 99: 453-458. 1989, *Journal of Cytology and Genetics* 25: 140-143, 147-148. 1990, *Blumea* 41: 433. 1996.

in English: annual signal grass, garden signal grass, garden grass, panic liverseed grass, liverseed grass, urochloa grass, garden urochloa, herringbone grass, kuri-millet, poke

in India: barajalganti, barat, basaunta, chapraila, chatta, galphula, jal-ganti, jalganti, jhun, kaadu bilisamme hullu, kaadubilli-saamal hullu, kakdel, kowain, kowin, kuri, kuriya, motia, pandhar, poir, salla-woodoo, sallawudu, samwan, semai, thun

in Somalia: farsho

in southern Africa: tuin-urochloa, tuinbeesgras, beesgras, eenjarige sinjaalgras, kurimanna, tuingras, kgola, kgolane; bore-ba-ntjia (Sotho)

U. paucispicata (Morong) Morrone & Zuloaga (*Acroceras paucispicatum* (Morong) Henrard; *Brachiaria paucispicata* (Morong) Clayton; *Panicum paucispicatum* Morong)

Warm areas. Perennial or annual, herbaceous, erect, decumbent, rooting at the lower nodes, see *Annals of the New York Academy of Sciences* 7: 262. 1893 and *Blumea* 3(3): 449. 1940, *Kew Bulletin* 42(4): 401. 1987, *Darwiniana* 31(1-4): 95. 1992.

U. piligera (F. Muell. ex Benth.) R.D. Webster (*Brachiaria piligera* (F. Muell. ex Benth.) D.K. Hughes; *Brachiaria piligera* var. *intercedens* (Domin) Hughes; *Brachiaria subquadripara* (Trin.) Hitchc.; *Brachiaria subquadripara* var. *piligera* (F. Muell. ex Benth.) Reeder; *Panicum intercedens* Domin; *Panicum piligerum* F. Muell. ex Benth.)

Western Australia, Queensland, New South Wales, Northern Territory. Annual, ascending, sheath and blade pilose, ligule a row of cilia, spikelets in a single row or 2 rows row, lower glume glabrous, upper glume pubescent, fertile floret without a mucro, woodland and pasture, fodder, useful for erosion control, see *Flora Australiensis: A Description ...* 7: 477. 1878 and *Journal of the Linnean Society, Botany* 41: 271. 1912, *Bulletin of Miscellaneous Information Kew* 1923(9): 315. 1923, *Lingnan Science Journal* 7: 214. 1929 [1931], *Journal of the Arnold Arboretum* 29: 273. 1948, *The Australian Paniceae (Poaceae)* 246. 1987.

U. plantaginea (Link) R.D. Webster (*Brachiaria plantaginea* (Link) A.S. Hitchc.; *Panicum disciferum* E. Fourn.; *Panicum distans* Salzm. ex Döll; *Panicum distans* Salzm. ex Steud., nom. illeg., non *Panicum distans* Trin.; *Panicum leandri* Trin.; *Panicum plantagineum* Link; *Urochloa discifera* (E. Fourn.) Morrone & Zuloaga)

Ghana, Mexico, Argentina, Bolivia, Brazil, southern America. Annual bunchgrass, shrubby, leafy, weed species, economic plant, forage, naturalized, occasional in weedy neglected sites at edges of lawns, along roadsides, see *Hortus Regius Botanicus Berolinensis* 1: 206. 1827, *Species Graminum* 3: t. 335. 1835, *Synopsis Plantarum Glumacearum* 1: 61. 1853, *Flora Brasiliensis* 2(2): 186. 1877, *Mexicanas Plantas* 2: 19. 1886 and *Contributions from the United States National Herbarium* 12(6): 212. 1909, *Systematic Botany* 13(4): 607. 1988, *Darwiniana* 32(1-4): 65. 1993, Renata Reinheimer, Raúl Pozner & Abelardo C. Vegetti, "Inflorescence, spikelet, and floral development in *Panicum maximum* and *Urochloa plantaginea* (Poaceae)." *Am. J. Bot.* 92: 565-575. 2005.

in English: Alexander grass, plantain signal grass, creeping signal grass

U. platynota (K. Schum.) Pilg. (*Brachiaria platynota* (K. Schum.) Robyns; *Panicum bifalcigerum* Stapf; *Panicum geometra* Chiov; *Panicum platynotum* K. Schum.)

Africa, Uganda, Tanzania. See *Die Pflanzenwelt Ost-Afrikas* C: 101. 1895 and *Journal of the Linnean Society, Botany* 37: 531. 1906, *Nuovo Giornale Botanico Italiano*, n.s., 19: 64, 77. 1919, *Flora of Tropical Africa* 9: 588. 1920, *Bulletin du Jardin Botanique de l'État* 9(3): 174. 1932, *Die natürlichen Pflanzenfamilien, Zweite Auflage* 14 e: 35. 1940.

U. platyphylla (Munro ex Wright) R.D. Webster (*Brachiaria extensa* Chase; *Brachiaria platyphylla* (Munro ex Wright) Nash.; *Panicum platyphyllum* Munro ex C. Wright; *Paspalum platyphyllum* Griseb., nom. illeg., non *Paspalum platyphyllum* Schult.; *Urochloa extensa* (Chase) C. Nelson & Fern. Casas; *Urochloa platyphylla* (Griseb.) R.D. Webster)

U.S., southern America, Venezuela, Argentina. Annual bunchgrass, caespitose, erect, spreading, rooting at the nodes, weed species, economic plant, growing in sandy open soils, cultivated fields, wet places, see *Catalogus*

plantarum cubensium ... 230. 1866, *Anales de la Academia de Ciencias Medicas ...* 8: 206. 1871 and *Flora of the Southeastern United States ...* 81: 1327. 1903, *Contributions from the United States National Herbarium* 28: 240. 1929, *Systematic Botany* 13(4): 606. 1988, *Fontqueria* 51: 4. 1998.

in English: broadleaf signal grass, broadleaved signal grass, white Para grass

U. praetervisa (Domin) Hughes (*Brachiaria praetervisa* (Domin) C.E. Hubb.; *Brachiaria windersii* C.E. Hubb.; *Panicum adpersum* sensu Benth., non Trinius; *Panicum kochii* Mez; *Panicum praetervisum* Domin)

South Australia, Northern Territory, New South Wales, Queensland. Annual, erect or ascending, ligule a row of cilia, leaf blades lanceolate and cordate at the base, panicle loose, racemes more or less erect or spreading, spikelets loosely arranged, lower glume adaxial, lower lemma with a palea, upper lemma shortly mucronate and obtuse, poor soils, palatable, see *Bibliotheca Botanica* 85: 309. 1915, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 60. 1917, *Bulletin of Miscellaneous Information Kew* 1923(9) 319. 1923, *Bulletin of Miscellaneous Information Kew* 1934: 446. 1934, *Hooker's Icones Plantarum* 4: t. 3363. 1938.

in English: large arm grass

U. pubigera (Roem. & Schult.) R.D. Webster (*Brachiaria holotricha* Ohwi; *Brachiaria pubigera* (Roem. & Schult.) S.T. Blake; *Brachiaria ramosa* var. *grandiflora* Hughes; *Panicum helopus* var. *glabrior* Benth.; *Panicum pubescens* R. Br., nom. illeg., non *Panicum pubescens* Lam.; *Panicum pubigerum* Roem. & Schult.)

Australia. Leafy, highly palatable especially when young, see *Encyclopédie Méthodique, Botanique* 4: 748. 1798, *Prodromus Florae Novae Hollandiae* 190. 1810, *Systema Vegetabilium* 2: 460. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 84. 1821, *Flora Australiensis: A Description ...* 7: 476. 1878 and *Flora of Tropical Africa* 9(3): 542-544. 1919, *Bulletin of Miscellaneous Information Kew* 1923(2): 315. 1923, *Bulletin of the Tokyo Science Museum* 18: 4. 1947, *Proceedings of the Royal Society of Queensland* 81: 5. 1969, *The Australian Paniceae (Poaceae)* 250. 1987, *Blumea* 41: 426. 1996.

U. ramosa (L.) T.Q. Nguyen (*Brachiaria ramosa* (L.) Stapf; *Brachiaria regularis* (Nees) Stapf; *Brachiaria regularis* var. *nidulans* (Mez) Täckh. & G. Täckh.; *Brachiaria reptans* (L.) C.A. Gardner & C.E. Hubb.; *Echinochloa ramosa* (L.) Roberty; *Panicum arvense* Kunth; *Panicum brachylachnum* Steud.; *Panicum breviradiatum* Hochst.; *Panicum canescens* Roth ex Roem. & Schult.; *Panicum cognatissimum* Steud.; *Panicum nidulans* Mez; *Panicum pallidum* Peter; *Panicum patens* Bojer, nom. illeg., non *Panicum patens* L.; *Panicum petiveri* var. *puberulum* Chiov.; *Panicum ramosa* L.; *Panicum ramosum* L.; *Panicum sorghum* Delile ex

Steud.; *Panicum supervacuum* C.B. Clarke; *Urochloa ramosa* (L.) R.D. Webster; *Urochloa reptans* (L.) Stapf; *Urochloa supervacua* (C.B. Clarke) Noltie)

Tropical Africa to South Africa, tropical Asia, Arabia. Annual, erect or geniculate, loosely tufted, leaves broadly linear, several racemes on a common axis, racemes simple or branched at base, spikelets mostly paired, pedicels shorter than the spikelets, stipe present or absent, upper glume and lower lemma membranous, upper lemma acute and rugose, weed species not aggressive, often heavily grazed, human and animal food, used for wildbird feed and as minor forage plant, cereal, forage, in South India grains used in preparing at least nine traditional foods, seeds mixed with *bajra* (millet) to increase bulk (in India, Rajasthan), found in moist and alluvial flats, shaded places, silt or clay, see *Systema Naturae, Editio Decima* 2: 870. 1759, *Mantissa Plantarum* 1: 29-30. 1767, *Systema Vegetabilium* 2: 457. 1817, *De Graminibus Paniceis* 144. 1826, *Révision des Graminées* 2: 391, t. 109. 1831, *Hortus Mauritianus* 365. 1837, *Synopsis Plantarum Glumacearum* 1: 58, 62, 69. 1854 [or 1853 or 1855], *Flora* 38: 195. 1855, *Journal of the Linnean Society, Botany* 24(164): 407-408, f. A-E. 1888 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 34(1): 136. 1904, *Annuario del Reale Istituto Botanico di Roma* 8(3): 302-303. 1908, *Flora of Tropical Africa* 9: 542, 544, 601. 1919-1920, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 13(2): 45. 1928, *Hooker's Icones Plantarum* 34(3): t. 3363. 1938, *Bulletin of the Faculty of Science Egyptian University* 17: 432. 1941, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afrique Noire Sér. A*, 17: 64, 1955, *Novosti Sistematiki Vysshchikh Rastenii* 1966: 13. 1966, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Canad. J. Bot.* 65: 2297-2309. 1987, *The Australian Paniceae (Poaceae)* 251. 1987, *Journal of Cytology and Genetics* 25: 140-143, 322-323. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Blumea* 41: 427. 1996, *Edinburgh Journal of Botany* 56(3): 394-395. 1999, *Econ. Bot.* 54: 217-227. 2000.

in English: browntop millet

in India: dhengli

in Somalia: dalat

U. reptans (L.) Stapf (*Brachiaria prostrata* (Lam.) Griseb.; *Brachiaria reptans* (L.) C.A. Gardner & C.E. Hubbard; *Brachiaria reptans* var. *hispida* Basappa & Muniy.; *Digitaria umbrosa* (Retz.) Pers.; *Echinochloa reptans* (L.) Roberty; *Panicum aurelianum* J. Hale; *Panicum caespitosum* Sw.; *Panicum calaccanzense* Steud.; *Panicum grossarium* L.; *Panicum insularum* Steud.; *Panicum luxurians* Willd. ex Nees; *Panicum parvum* Büse; *Panicum procumbens* var. *umbrosum* (Retz.) Nees; *Panicum prostratum* Lam.; *Panicum prostratum* var. *pilosum* Eggers; *Panicum reptans* L.; *Panicum reptans* (Lam.) Kunth; *Panicum umbrosum* Retz.;

Setaria umbrosa (Retz.) P. Beauv.; *Urochloa reptans* var. *glabra* S.L. Chen & Y.X. Jin)

Pantropical. Annual or perennial, prostrate, sprawling, trailing, spreading, tufted, base long creeping, stoloniferous, usually decumbent and rooting at the nodes, ascending branches, leaves lanceolate, inflorescence pyramidal, racemes divergent to spreading, paired spikelets ovate to elliptic without a stipe, lower glume clasping and hyaline, upper lemma rugose, pantropical weed species, economic plant, a good fodder for stock animals, useful for erosion control, common in and along roadbed, along the edges of fields, open areas, gravel, damp soils, black soils, hard dry soils, cultivated and irrigated lands, on sandy flat, on sandy riverbanks, see *Systema Naturae, Editio Decima* 2: 870-871. 1759, *Observationes Botanicae* 4: 16. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 155, 171. 1791, *Flora Indiae Occidentalis* 1: 146. 1797, *Syn. Pl.* 1: 85. 1805, *Essai d'une Nouvelle Agrostographie* 51, 178. 1812, *Flora Brasiliensis seu Enumeratio Plantarum* 109, 233. 1829, *Révision des Graminées* 2: 219, t. 21. 1830, *Synopsis Plantarum Glumacearum* 1: 65. 1853 [or 1854], *Plantae Junghuhnianae* 3: 373. 1854, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* 7: 263. 1857, *A Class-book of Botany* 787. 1861, *The Flora of St. Croix and the Virgin Islands* 104. 1879 and *Flora of Tropical Africa* 9: 601. 1920, *Contr. U.S. Natl. Herb.* 22: 483. 1922, *Hooker's Icones Plantarum* 34(3): t. 3363, p. 3. 1938, *Petite Flore de l'Ouest-Africain* 398. 1954, *Bull. Inst. Franç. Afrique Noire Sér. A*, 17: 64, 66, 1955, *Proceedings of the Indian Academy of Sciences* 49(4): 380. 1983, *Acta Phytotaxonomica Sinica* 22(6): 475. 1984, *Journal of Cytology and Genetics* 21: 152-154. 1986, *Journal of Cytology and Genetics* 25: 140-143, 322-323. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Blumea* 41(2): 413-437. 1996.

in English: creeping panic grass, running grass, creeping panic

in Spanish: San Juan de Castillo

in India: chaurila, choti semai, ewaikoo sawa, lahan lona, lapti, motha lona, nagrel, sarpur, shiput

in the Philippines Islands: babaka-nalabaka, marakuayan

U. rudis Stapf (*Panicum holtzii* Peter; *Urochloa gorinii* Chiov.) (named for Pompeo Gorini, see Emilio Chiovenda, 1871-1941, *Contributo alla conoscenza della Flora Somalia Transjubense*. Piante raccolte dal Dr. Pompeo Gorini nel 1925. Firenze, 1926; Frans A. Stafleu & E.A. Mennega, *Taxonomic literature. Supplement IV*. 104-110. 1997)

Tanzania, Kenya. Annual, creeping, rooting from the lower nodes, pubescent to tomentose leaves linear to lanceolate, single spikelets cuspidate and warty, lower glume truncate, upper glume spiny tuberculate, lower lemma tuberculate, palea of lower floret coriaceous, grasslands, limestones, stabilized dunes, fixed dunes, shrublands, see *Repertorium*

Specierum Novarum Regni Vegetabilis 40: 173. 1830 and *Flora of Tropical Africa* 9: 597. 1920, *Agricoltura Coloniale* 20: 107. 1926.

U. ruziziensis (R. Germ. & Evrard) Crins (*Brachiaria ruziziensis* R. Germ. & C.M. Evrard; *Urochloa ruziziensis* (R. Germ. & Evrard) Morrone & Zuloaga, nom. illeg., non *Urochloa ruziziensis* (R. Germ. & Evrard) Crins) (Ruzizi plains in Zaire)

Africa. Perennial, spreading, shortly rhizomatous, light-green broad hairy leaves and flowers, dense and spike-like green racemes, spikelets sessile and hairy, rachis of the racemes winged, lower glume distant from the rest of the spikelet, black grains, forage, very palatable, animal food, forms a dense mat under grazing, naturalized and widely distributed elsewhere in tropics, useful for erosion control, a pioneer species, spreads well from rhizomes, economic plant, good drought tolerance, does not tolerate flooding, withstands grazing well, cultivated in the humid tropics for pasture, needs good drainage and well-drained fertile soils, killed by heavy frosts, very common in swampy pastures, see *Bulletin du Jardin Botanique de l'État* 23: 373, f. 36, 37. 1953, *Journal of the Arnold Arboretum, Supplementary Series* 1: 269. 1991, *Darwiniana* 31(1-4): 101. 1992.

in English: Congo grass, Congo signal grass, prostrate signal grass, ruzi grass, Kennedy ruzi grass, bongo grass

in Spanish: yerba congo

U. sclerochlaena Chiov. ex Chiarugi (*Urochloa sclerochlaena* var. *commelinoides* Chiov.)

Ethiopia, Kenya. Perennial, ascending, procumbent, straggling, scandent, wiry, branching at the nodes, leaf blades lanceolate, inflorescence of 2-5 diverging racemes, warty coriaceous spikelets, cuspidate spikelet tips, upper lemma mucronate, sandy soil, bushland, *Acacia-Commiphora* bushland, see *Webbia* 8: 84, 86, f. 16. 1951.

U. setigera (Retz.) Stapf (*Brachiaria setigera* (Retz.) C.E. Hubb.; *Cyrtococcum setigerum* (P. Beauv.) Stapf; *Digitaria setigera* Roth; *Echinochloa setigera* (Retz.) P. Beauv.; *Panicum euryphyllum* Peter; *Panicum procumbens* var. *setigerum* (Retz.) Nees; *Panicum prostratum* var. *setigerum* (Retz.) Büse; *Panicum setigerum* Retz.; *Panicum setigerum* (Roth) Boerl.; *Panicum setigerum* P. Beauv., nom. illeg., non *Panicum setigerum* Retz.; *Panicum trichopodioides* Mez & Schum.; *Urochloa trichopodioides* (Mez & Schum.) S.M. Phillips & S.L. Chen)

Tropical East Africa, India, Thailand. Perennial, trailing, slender, tough, thin, branched, rooting at the nodes, leaf blades lanceolate, single or paired spikelets narrowly ovate, shade, riverine forest, closely related to *Urochloa panicoides*, see *Observationes Botanicae* 4: 15. 1786, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Essai d'une Nouvelle Agrostographie* 53, 161, 171. 1812, *Systema Vegetabilium* 2: 474. 1817, *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 109. 1829, *Plantae Junghuhnianae* 3:

372. 1854, *Annales du Jardin Botanique de Buitenzorg* 8: 52. 1890, *Fl. Br. India* 7: 36. 1897 and *Handb. Fl. Ceylon* 5: 141. 1900, *Flora of Tropical Africa* 9(1): 15. 1917, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 7: 60. 1917, *Flora of Tropical Africa* 9(4): 598, 746. 1920, *Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen* N.F. 13(2): 45. 1928, *Hooker's Icones Plantarum* 34(3): t. 3363. 1938, *Grasses of Ceylon* 144. 1956, *Canadian Journal of Botany* 65: 2297-2309. 1987, *Fl. Ind. Enumerat. Monocot.* 273. 1989, *Novon* 13(4): 470. 2003.

U. stolonifera (Gooss.) Chippind. (*Brachiaria stolonifera* Gooss.)

South Africa. Perennial, rhizomatous or stoloniferous, tufted, basal nodes swollen, spikelets loosely arranged, awn of upper lemma reduced, found on sandy soils, near streams or rivers, pans, disturbed places, see *Bulletin of Miscellaneous Information Kew* 1934: 195. 1934, *The Grasses and Pastures of South Africa* 381. 1955.

U. subquadripara (Trin.) R.D. Webster (*Brachiaria hybrida* Basappa & Muniy.; *Brachiaria miliiformis* (Presl & C. Presl) A. Chase; *Brachiaria miliiformis* (J. Presl) Chase; *Brachiaria subquadripida* Stehlé; *Brachiaria subquadripara* (Trin.) A.S. Hitchc.; *Brachiaria subquadripara* var. *miliiformis* (J. Presl) S.L. Chen & Y.X. Jin; *Panicum distachyum* sensu Benth., non L.; *Panicum miliiforme* J. Presl; *Panicum miliiforme* J. Presl ex C. Presl; *Panicum radicans* Llanos, nom. illeg., non *Panicum radicans* Retz.; *Panicum subquadriparum* Trin.; *Urochloa distachya* (L.) T.Q. Nguyen; *Urochloa hybrida* (Basappa & Muniy.) Ashalatha & V.J. Nair)

Southeast Asia, China, India, Japan, Sri Lanka, tropical and temperate Asia, Malaysia, Western Australia, Queensland, South Australia, New South Wales, Northern Territory. Annual or perennial, vigorous, glabrous, ascending, creeping, usually decumbent or semierect, slender, prostrate base, distally erect, sometimes rooting freely at the lower nodes, spreads well by stolons, mat-forming, flat leaves linear to lanceolate, ligule a row of short cilia, few racemes on a common axis, rachis of inflorescence glabrous, spikelets solitary on a winged axis, spikelets arranged in 2 rows, spikelets glabrous with a short stipe-like base, fertile floret very shortly stipitate, lower lemma without a membranous palea, animal food, quite good hay, economic plant, highly palatable, forage and good fodder plant, troublesome weed widely naturalized in tropics, often used as a lawn grass, aggressive stolon system, see also *Brachiaria distachya* (L.) Stapf, grows on sandy soils, cultivation, on disturbed soils and sites, roadsides, waste places, lawns, watering points, see *Mantissa Plantarum* 2: 183-184. 1771, *De Graminibus Paniceis* 145. 1826, *Reliquiae Haenkeanae* 1(4-5): 300. 1830, *Fragmentos de Algunas Plantas Filipinas* 43. 1851 and *Contributions from the United States National Herbarium* 22(1): 35. 1920, *Lingnan Science Journal* 7: 214. 1929

[1931], *Notulae Systematicae. Herbarium du Museum de Paris* 13: 78. 1947, *Grasses of Ceylon* 140. 1956, *Grasses of Burma ...* 286. 1960, *Novosti Sistematiki Vysshchikh Rastenii* 1966: 13. 1966, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 49(4): 379. 1983, *Proc. Indian Sci. Congr. Assoc.* 70(3-vi): 94. 1983, *Acta Phytotaxonomica Sinica* 22(6): 472. 1984, *The Australian Paniceae (Poaceae)* 252. 1987, *Canad. J. Bot.* 65: 2297-2309. 1987, *Blumea* 41: 426, 430. 1996, *Bulletin of the Botanical Survey of India* 35(1-4): 28. 1993 [1997].

in English: green summer grass, Thurston grass, tropical signal grass, cori grass, two-finger grass, two-spiked panic, four-arm grass, brachiaria, alexandergrass

in Spanish: gramita

in Japan: niku-kibi (= fleshy *Panicum miliaceum*)

U. texana (Buckley) R.D. Webster (*Brachiaria texana* (Buckley) S.T. Blake; *Panicum texanum* Buckley; *Panicum texanum* Vasey, nom. illeg., non *Panicum texanum* Buckley)

Northern America, Texas, Florida, U.S., Mexico. Annual or perennial, erect or ascending, clump forming, youngest leaf rolled, leaves hairy or softly pubescent, leaf sheath hairy, ligule densely ciliate, auricle absent, racemes with spikelets crowded on the branches and pilose, spikelets contracted in a short stipe-like base, pedicel apices with a ring of hairs, upper glume apiculate, lower lemma male and apiculate, fertile floret shortly stipitate, noxious weed of cultivation, invasive, economic plant, used as game-bird feed and hay, native pasture species, naturalized, fodder, good forage, grows in fields and waste places, prairies, on deep moist soils, along streams, open lands, on plains and rivers, see *A Preliminary Report on the Geological and Agricultural Survey of Texas* Appendix 3. 1866 and *The Australian Paniceae (Poaceae)* 253. 1987.

in English: buffalo grass, Texas millet, Texas panicum, Texas signal grass, Colorado grass

in Mexico: panizo tejano, panizo texano

U. trichopus (Hochst.) Stapf (*Eriochloa trichopus* (Hochst.) Benth.; *Eriochloa trichopus* var. *glabrata* Schweinf.; *Helopus trichopus* (Hochst.) Steud.; *Panicum papillosum* Fenzl ex Steud.; *Panicum trichopodon* A. Rich.; *Panicum trichopus* Hochst.; *Panicum trichopus* var. *chiovendae* Mattei; *Urochloa brachyphylla* Gilli; *Urochloa engleri* Pilger)

Eastern tropical Africa, Zimbabwe, Tanzania, Kenya, Mozambique, Nigeria, Sudan, South Africa, Arabia. Annual, herbaceous, spreading, coarse, tufted, erect to ascending, stoloniferous sod grass, leaves hispid and linear, racemes solitary arranged along an axis, single ovate spikelets, 3-nerved lower glume oblong acute, lower lemma often fringed or villous, upper lemma mucronate and papillose, a weed of cultivation and irrigation, leaves and grains eaten by baboons, good fodder for stock, forage, grain considered good famine food, found in wooded grassland and open

deciduous woodland, along roadsides, bushland, fields, sub-desert regions, along lakeshore and riverbanks, alluvial plains, cultivated lands, sandy soil, floodplains, stabilized dunes, in gravel, silty clays, similar to *Urochloa mosambicensis*, see *Flora* 27: 254. 1844, *Tentamen Florae Abyssinicae ...* 2: 369. 1850, *Synopsis Plantarum Glumacearum* 1: 100. 1854, *Journal of the Linnean Society, Botany* 19: 39. 1881, *Bulletin de l'Herbier Boissier, sér. 2*, 2(Append. 2): 17. 1894 and *Bollettino r. Orto Botanico e Giardino Coloniale di Palermo* 9: 46. 1910, *Flora of Tropical Africa* 9: 589. 1920, *Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem* 15: 450. 1941, *Annalen des Naturhistorischen Museums in Wien* 49: 40. 1966, *Cytologia* 55: 431-435. 1990.

in English: roundseed urochloa, Gonya grass

in Mali: saakat

in Niger: akasaf, âkôsof, datana, gabagari, gabagaru, gersa bonberi

in Somalia: coordo, kurdo, koordou

in South Africa: rondesaadurochloa, witgras

U. venosa (Swallen) Morrone & Zuloaga (*Panicum venosum* Swallen)

America, Mexico. See *Contributions from the United States National Herbarium* 29(9): 415. 1950, *Darwiniana* 32(1-4): 74. 1993.

U. villosa (Lam.) T.Q. Nguyen (*Brachiaria coccosperma* (Steud.) Stapf ex Reeder; *Brachiaria distichophylla* (Trin.) Stapf; *Brachiaria distichophylla* Stapf; *Brachiaria villosa* Vanderyst; *Brachiaria villosa* (Lam.) A. Camus; *Brachiaria villosa* f. *glabriglumis* (Ohwi) Ohwi; *Brachiaria villosa* var. *glaberrima* Basappa & Muniy.; *Brachiaria villosa* var. *glabrata* S.L. Chen & Y.X. Jin; *Brachiaria villosa* var. *glabriglumis* Ohwi; *Panicum coccospermum* Steud.; *Panicum villosum* Lam.; *Urochloa villosa* var. *glaberrima* (Basappa & Muniy.) Ashalatha & V.J. Nair)

Africa, Benin. Annual, loosely tufted or creeping, spreading, ascending, semicreeping, dark green, ligule densely hairy, inflorescence a spike-like panicle, spikelets borne singly or paired, upper bisexual spikelet, lower male or barren spikelet, spikelets 2-flowered, upper floret bisexual, lower floret reduced to lemma and palea or lemma alone, 2 glumes, 3 stamens, stigmas dark, edible grains, grazed, troublesome weed of cultivation, waste places, disturbed soils, waysides, fields, fallows, arable crops, see *Tableau Encyclopédique et Méthodique ... Botanique* 1: 173. 1791, *De Graminibus Paniceis* 147. 1826, *Synopsis Plantarum Glumacearum* 1: 62. 1855 [1853] and *Flora of Tropical Africa* 9: 557. 1919, *Flore Générale de l'Indo-Chine* 7: 433. 1922, *Acta Phytotaxonomica et Geobotanica* 5: 51. 1936, *Acta Phytotaxonomica et Geobotanica* 11: 43. 1942, *Journal of the Arnold Arboretum* 29: 273. 1948, *Grasses of Burma, Ceylon, India and Pakistan (excluding Bambuseae)*

286. 1960, *Novosti Sistematiki Vysshchikh Rastenii* 1966: 14. 1966, *Proceedings of the Indian Academy of Sciences* 49(4): 381. 1983, *Acta Phytotaxonomica Sinica* 22(6): 472. 1984, *Canad. J. Bot.* 65: 2297-2309. 1987, *Bulletin of the Botanical Survey of India* 35(1-4): 30. 1993 [1997], *Edinburgh Journal of Botany* 56(3): 395-396. 1999.

in English: hairy signal grass

in Guinea: akasi bayan

in Niger: adawarna, adoerna gadé, balehy, burudé, citowcè, citowciò, gaji, garaji, garii, garza, goro'n firaw, ishibaen, ishiban, kiroken

in Nigeria: gagaji, garaji, gariji, kasha, tuèpha, tupha, tufa

in Sierra Leone: funfuri, mbowi, sirilinyaxe

in West Africa: kuling kuling-ò

in Yoruba: eéran omodé

U. vittata (Stapf) Morrone & Zuloaga (*Brachiaria vittata* Stapf)

America. See *Flora of Tropical Africa* 9(3): 525. 1919, *Darwiniana* 31(1-4): 103. 1992.

U. xantholeuca (Schinz) H. Scholz (*Brachiaria pubifolia* Stapf; *Brachiaria ukambensis* (Mez) Henrard; *Brachiaria xantholeuca* (Hack.) Stapf *Brachiaria xantholeuca* (Schinz) Stapf; *Brachiaria xantholeuca* (Hack. ex Schinz) Stapf; *Panicum anisotrichum* Mez; *Panicum distichophylloides* Mez; *Panicum pubifolium* Mez; *Panicum xantholeucum* Schinz; *Panicum xantholeucum* Hack. ex Schinz; *Urochloa xantholeuca* (Hack. ex Schinz) H. Scholz)

Tropical Africa, South Africa. Perennial or annual, tufted, decumbent and branching at the lower nodes, leaves velvety, spikelets arranged in 2 rows, lower glume 3-nerved, grains eaten by humans, good fodder, grazed by game, young leaves and grains eaten by baboons, a weed of sorghum, useful for erosion control, often on red clay soils, near water, red sandy soils, sandy loam, in overgrazed and disturbed sites, farmed lands, among trees, waste places, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 141. 1888 and *Flora of Tropical Africa* 9: 541. 1919, *Bulletin du Muséum National d'Histoire Naturelle, séries 4, Section B, Adansonia. Botanique Phytochimie* 11(4): 443. 1989 [1990].

in Mali: naanama, náánàma, náá nàma

in Niger: akasof, akosof, garaji, garza, garzahi, ishiban

in Nigeria: garaji, gariji, kasha

in southern Africa: phetola (Sotho)

in Upper Volta: pagguri

in West Africa: jaje ba

Urochondra C.E. Hubb.

Greek *oura* "a tail" and *chondros* "wheat, grain of wheat, big, a grain," referring to the nature of the spikelets.

One species, northeast tropical Africa, Sudan, Somalia, Sind, northwestern India, coastal regions of Indian Ocean. Chloridoideae, Eragrostideae, perennial, herbaceous, rigid, unbranched, unarmed, tufted, tussocky, shortly rhizomatous, auricles absent, ligule a fringe of hairs, sheaths persistent, leaves rigid and pungent, plants bisexual, inflorescence contracted and spike-like, panicle cylindrical exerted from the uppermost sheath, 1 floret, spikelets strongly laterally compressed and keeled, 2 narrow glumes more or less equal and awnless, membranous lemma 1-nerved, glumes and lemmas keeled and ciliate on the keels, palea 2-nerved, lodicules absent, 3 stamens, ovary hairy, 2 stigmas, glossy grain thickened and beaked, open habitats, saline or alkaline soils, coastal sand, sandy plains, sandy seashores, closely related to *Crypsis*, type *Urochondra setulosa* (Trin.) C.E. Hubb., see *Familles des Plantes* 2: 495. 1763, *Hortus Kewensis; or, a Catalogue ...* 1: 48. 1789, *Collectanea* 233. 1809, *Prodromus Florae Novae Hollandiae* 169. 1810 and *Hooker's Icones Plantarum* 35: t. 3457. 1947, *Flora of Ethiopia and Eritrea*, vol. 7: 157. 1995.

Species

U. setulosa (Trin.) C.E. Hubb. (*Crypsis dura* Boiss.; *Crypsis setulosa* (Trin.) Mez; *Heleochloa dura* (Boiss.) Boiss.; *Heleochloa setulosa* (Trin.) Blatt. & McCann; *Sporobolus setulosus* (Trin.) A. Terracc.; *Vilfa setulosa* Trin.)

Northeastern Africa, India. Perennial, densely tufted, stiffly erect, shortly rhizomatous, lower sheaths coriaceous, ligule a line of hairs, pungent leaves inrolled to convolute, spikelets oblong and flattened, glumes linear scabrid acuminate, lemma shortly mucronate, beaked grain, open areas, salt marsh, coastal sand dunes, saline soils, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 6,4(1-2): 55. 1840, *Diagnoses plantarum orientalium novarum, ser. 2, 3(4)*: 125. 1859, *Flora Orientalis* 5: 477. 1884, *Annuario del Reale Istituto Botanico di Roma* 5: 95. 1893 and *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 292. 1921, *Scientific Monograph [Imperial Council of Agricultural Research]* 5: 205. 1935, M. Ajmal Khan & Salman Gulzar, "Light, salinity, and temperature effects on the seed germination of perennial grasses." *American Journal of Botany* 90: 131-134. 2003.

in Somalia: afrus, agrugh, afrug, afrugh

V

Vacoparis Spangler

Andropogoneae, pedicellate spikelet reduced to linear glumes, weeds and poisons, pollen for bees, fodder and grain for stock, food for humans, formerly known as *Sorghum*, see *Methodus Plantas Horti Botanici ...* 207. 1794 and *Cytologia* 55: 141-151. 1990, M. Lazarides, J. Lenz & L. Watson, “*Clausospicula*, a new Australian genus of grasses (Poaceae, Andropogoneae).” *Australian Systematic Botany* 4(2): 391-405. 1991, *Australian Systematic Botany* 4: 591-635. 1991 [Taxonomy, cytology and ecology of indigenous Australian sorghums (*Sorghum* Moench: Andropogoneae: Poaceae)], Russell E. Spangler, “Taxonomy of *Sarga*, *Sorghum* and *Vacoparis* (Poaceae: Andropogoneae).” *Australian Systematic Botany* 16(3): 279-299. 2003, *Annals of Botany* 95: 219-227. 2005, *Flora of Australia* vol. 43, Poaceae 1: 170, 238, 239, 241, 248, 274. 2002.

Species

V. laxiflorum (F.M. Bailey) Spangler (*Sorghum laxiflorum* F.M. Bailey)

Australia. See *Rep. Exped. Bellenden* 70. 1889.

V. macrospermum (E.D. Garber) Spangler (*Sorghum macrospermum* E.D. Garber)

Australia. Annual, food plant for Aborigines, see *University of California Publications in Botany* 23(6): 323. 1950.

Vahlodea Fries = *Aira* L., *Deschampsia* P. Beauv., *Erioblastus* Honda ex Nakai

For the Danish botanist Jens Laurentius (Lorenz) Moestue Vahl (1796-1854), plant collector, traveler, librarian, son of Martin Vahl (1749-1804); see Paul Gaimard, *Voyages de la Commission Scientifique du Nord, en Scandinavie, en Laponie, au Spitzberg et aux Ferøe, pendant les années 1838, 1839 et 1840, sur la Corvette La Recherche*, commandée par M. Fabvre ... Géographie physique, Géographie botanique, Botanique et Physiologie, etc. Paris [1842-1848]; J.H. Barnhart, *Biographical notes upon botanists*. 3: 419. 1965; Stafleu and Cowan, *Taxonomic literature*. 6: 628. Utrecht 1986; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; C.F.A. Christensen, *Den danske Botaniks Historie med tilhørende Bibliografi*. Copenhagen 1924-1926; A.

Lasègue, *Musée botanique de Benjamin Delessert*. Paris 1845.

About 3-4 species, northeast Asia. Pooideae, Poodae, Aveneae, or Pooideae, Poeae, Airinae, perennial, herbaceous, rhizomatous or caespitose, internodes hollow, auricles absent, flat leaf blades, ligule membranous and blunt, leaves linear, plants bisexual, open inflorescence paniculate, spikelets pedicellate, 2-3 florets, 2 glumes more or less equal, lemmas with jagged point, awn twisted and stout, palea present, 2 lodicules free and membranous, 3 stamens, ovary glabrous, 2 stigmas, grows in moist meadows, high altitudes, subalpine forests, closely related to *Deschampsia*, type *Vahlodea atropurpurea* (Wahlenb.) Fr. ex Hartm., see *Species Plantarum* 1: 63-66. 1753, *Essai d'une Nouvelle Agrostographie* 91, 149, 160. 1812, *Botaniska Notiser* 1842: 141, 178. 1842, *Handbok i Skandinavien Flora, Fjerde Upplagan* 30. 1843, *A Manual of the Botany of the Northern United States*. Second edition 572. 1856, *Die Natürlichen Pflanzenfamilien* 2(2): 54. 1887 and *Report Flora Mt. Daisetsu* 12(1): 73. 1930 1930 [Report on the Vegetation of Daisetsusan Mts. and Their Vicinities, in: Preserv. Natural Monuments Japan, vol. 12(1): 1-80, pl. 1-19, map 1-2.], *Berichte der Deutschen Botanischen Gesellschaft* 85(5-6): 279-285. 1972, *Molecular Ecology* 7(9): 1217-1232. Sep 1998, *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, Aslaug R. Hagen, Henriette Giese and Christian Brochmann, “Trans-Atlantic dispersal and phylogeography of *Cerastium arcticum* (Caryophyllaceae) inferred from RAPD and SCAR markers.” *Am. J. Bot.* 88: 103-112. 2001, *Molecular Ecology* 10(2): 497-513. Feb 2001, *Journal of Ecology* 89(6): 1072-1095. Dec 2001, Max Coleman, Aaron Liston, Joachim W. Kadereit, and Richard J. Abbott, “Repeat intercontinental dispersal and Pleistocene speciation in disjunct Mediterranean and desert *Senecio* (Asteraceae).” *Am. J. Bot.* 90: 1446-1454. 2003, *Contributions from the United States National Herbarium* 48: 89-96, 245-256, 312, 687-688. 2003, *Journal of Biogeography* 30(2): 297-303. Feb 2003, *Molecular Ecology* 12(2): 299-313. Feb 2003 [History and evolution of the arctic flora: in the footsteps of Eric Hultén], William A. Weber, “The Middle Asian Element in the Southern Rocky Mountain Flora of the western United States: a critical biogeographical review.” *Journal of Biogeography* 30(5): 649-685. May 2003.

Species

V. atropurpurea (Wahlenb.) Fr. ex Hartm. (*Aira atropurpurea* Wahlenb.; *Aira atropurpurea* var. *magellanica* (Hook.f.) Skotts.; *Aira latifolia* Hook.; *Aira magellanica* Hook.f.; *Aira pinkeneyi* Fries; *Avena atropurpurea* (Wahlenb.) Link; *Deschampsia atropurpurea* (Wahlenb.) Scheele; *Deschampsia atropurpurea* subsp. *paramushirensis* (Kudo) Hultén; *Deschampsia atropurpurea* (Wahlenb.) Scheele var. *latifolia* (Hook.) Scribn. ex Macoun; *Deschampsia atropurpurea* var. *minor* Vasey; *Deschampsia atropurpurea* (Wahlenb.) Scheele var. *paramushirensis* Kudo; *Deschampsia atropurpurea* (Wahlenb.) Scheele var. *payettii* Lepage; *Deschampsia brachyphylla* Phil.; *Deschampsia hookeriana* Scribn.; *Deschampsia latifolia* (Hook.) Vasey, nom. illeg., non *Deschampsia latifolia* Hochst. ex A. Rich.; *Deschampsia pacifica* Tatew. & Ohwi; *Erioblastus paramushirensis* (Kudo) Honda; *Holcus atropurpureus* (Wahlenb.) Wahlenb.; *Vahlodea atropurpurea* Fries; *Vahlodea atropurpurea* (Wahlenb.) Fries, nom. illeg., non *Vahlodea atropurpurea* (Wahlenb.) Fr. ex Hartm.; *Vahlodea atropurpurea* subsp. *latifolia* (Hook.) Porsild; *Vahlodea atropurpurea* subsp. *paramushirensis* (Kudo) Hultén; *Vahlodea flexuosa* (Honda) Ohwi; *Vahlodea latifolia* (Hook.) Hultén; *Vahlodea magellanica* (Hook.f.) Tzvelev; *Vahlodea paramushirensis* (Kudo) Roshev.)

Japan, Europe, Northern America, Canada, U.S., Chile, Argentina. Perennial, sheaths open, blunt ligules, open and often drooping flower head, purplish spikelets, glumes slightly unequal, montane to alpine zones, along stream banks, see *Species Plantarum* 1: 63-66. 1753, *Flora Lapponica* 37. 1812, *Svensk Botanisk Tidskrift* pl. 687. 1826-1829, *Hortus Regius Botanicus Berolinensis* 1: 119. 1827, *Flora Boreali-Americana* 2: 243, pl. 227. 1840, *Botaniska Notiser* 141, 178. 1842, *Handbok i Skandnaviens Flora, Fjerde Upplagan* 30. 1843, *Flora* 27: 56. 1844, *Flora Antarctica* 2: 376. 1846, *Summa Vegetabilium Scandinaviae* 243. 1846, *The Grasses of the United States* 29. 1883, *Botanical Gazette* 11: 97. 1886, *Bulletin of the Torrey Botanical Club* 15: 48. 1888, *Catalogue of Canadian Plants* 2(4): 209. 1888, *Anales de la Universidad de Chile* 94: 23. 1896 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 56: 174. 1916, *Journal of the College of Agriculture, Hokkaido Imperial University* 11: 71. 1922, *Kongliga Svenska Vetenskapsakademiens Handlingar* 5: 111. 1927, *Botanical Magazine* 45: 215. 1931, *Journal of the Faculty of Agriculture of the Hokkaido University* 36: 97. 1934, *Flora URSS* 2: 242, 750. 1934, *Flora of the Aleutian Islands* 83. 1937, *Acta Universitatis Lundensis, n.s.* 38: 181-182. 1942, *Nature Canada* 103(4): 389. 1976.

in English: mountain hairgrass, Arctic hairgrass

V. atropurpurea (Wahlenb.) Fr. ex Hartm. subsp. *atropurpurea* (*Aira atropurpurea* Wahlenb.; *Aira atropurpurea* var. *magellanica* (Hook.f.) Skotts.; *Aira latifolia* Hook.; *Aira magellanica* Hook.f.; *Aira pinkeneyi* Fries; *Avena*

atropurpurea (Wahlenb.) Link; *Deschampsia atropurpurea* (Wahlenb.) Scheele; *Deschampsia atropurpurea* subsp. *paramushirensis* (Kudo) Hultén; *Deschampsia atropurpurea* var. *latifolia* (Hook.) Scribn. ex Macoun; *Deschampsia atropurpurea* var. *minor* Vasey; *Deschampsia atropurpurea* var. *paramushirensis* Kudo; *Deschampsia atropurpurea* var. *payettii* Lepage; *Deschampsia brachyphylla* Phil.; *Deschampsia cespitosa* var. *latifolia* (Hochst. ex A. Rich.) Hook.f.; *Deschampsia hookeriana* Scribn.; *Deschampsia latifolia* Hochst. ex A. Rich.; *Deschampsia latifolia* (Hook.) Vasey, nom. illeg., non *Deschampsia latifolia* Hochst. ex A. Rich.; *Deschampsia pacifica* Tatew. & Ohwi; *Deschampsia paramushirensis* Honda; *Erioblastus paramushirensis* (Kudo) Honda; *Holcus atropurpureus* (Wahlenb.) Wahlenb.; *Vahlodea atropurpurea* subsp. *latifolia* (Hook.) A.E. Porsild; *Vahlodea latifolia* (Hook.) Hultén; *Vahlodea magellanica* (Hook.f.) Tzvelev; *Vahlodea paramushirensis* (Kudo) Roshev.)

North Europe, Vancouver, British Columbia, Chile. See *Species Plantarum* 1: 79-81. 1753, *Species Plantarum* 2: 1047. 1753, *Flora Lapponica* 37. 1812, *Svensk Botanisk Tidskrift* pl. 687. 1826-1829, *Hortus Regius Botanicus Berolinensis* 1: 119. 1827, *Flora Boreali-Americana* 2: 243, pl. 227. 1840, *Botaniska Notiser* 141. 1842, *Flora* 27: 56. 1844, *Flora Antarctica* 2: 376. 1846, *Tentamen Florae Abyssinicae ...* 2: 413. 1850, *The Grasses of the United States* 29. 1883, *Botanical Gazette* 11: 97. 1886, *Bulletin of the Torrey Botanical Club* 15(2): 48. 1888, *Catalogue of Canadian Plants* 2(4): 209. 1888, *Anales de la Universidad de Chile* 94: 23. 1896 and *Kongliga Svenska Vetenskapsakademiens Handlingar* 56(5): 174. 1916, *Journal of the College of Agriculture, Hokkaido Imperial University* 11: 71. 1922, *Kongliga Svenska Vetenskapsakademiens Handlingar* 5: 111. 1927, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 140. 1930, *Botanical Magazine* (Tokyo) 45: 215. 1931, *Journal of the Faculty of Agriculture of the Hokkaido University* 36: 97. 1934, *Flora URSS* 2: 242, 750. 1934, *Flora of the Aleutian Islands* 83. 1937, *Bulletin of the National Museum of Canada* 121: 86. 1951, *Nature Canada* 103(4): 389. 1976, *Opera Botanica* 121: 19-27. 1993.

V. atropurpurea (Wahlenb.) Fr. ex Hartm. subsp. *paramushirensis* (Kudo) Hultén (*Deschampsia atropurpurea* subsp. *paramushirensis* (Kudo) Hultén; *Deschampsia atropurpurea* var. *paramushirensis* Kudo; *Deschampsia atropurpurea* var. *patentissima* (Hultén) J.P. Anderson; *Deschampsia pacifica* Tatew. & Ohwi; *Deschampsia paramushirensis* Honda; *Erioblastus flexuosus* Honda ex Nakai; *Erioblastus paramushirensis* (Kudo) Honda; *Vahlodea atropurpurea* var. *patentissima* Hultén; *Vahlodea flexuosa* (Honda ex Nakai) Ohwi; *Vahlodea paramushirensis* (Kudo) Roshev.)

Sweden. See *Journal of the College of Agriculture, Hokkaido Imperial University* 11: 71. 1922, *Kongliga Svenska*

Vetenskapsakademiens Handlingar 5: 111. 1927, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 140. 1930, *Rep. Fl. Mt. Daisetsu* 12(1): 58, 73. 1930, *Botanical Magazine* (Tokyo) 45: 215. 1931, *Acta Phytotaxonomica et Geobotanica* 2: 33. 1933, *Flora URSS* 2: 242, 750. 1934, *Journal of the Faculty of Agriculture of the Hokkaido University* 36: 97. 1934, *Acta Universitatis Lundensis, n.s.* 38: 181-182. 1942, *Iowa State Journal of Science* 18: 408. 1944.

Valiha S. Dransfield

Valiha, a tube zither, is a traditional musical instrument also known as: Volo, Valeha, Valiha-volo, Baliha, Manibola, Betorky, Marovany.

Two species, Madagascar. Bambusoideae, woody bamboos, culms usually hollow, petiolate leaf blades, culms used for the construction of walls and roofs, also used for making a traditional musical instrument, found in primary forest, open hills, type *Valiha diffusa* S. Dransf., see S. Dransfield, "Valiha and *Cathariostachys*, two new bamboo genera (Gramineae-Bambusoideae) from Madagascar." *Kew Bulletin* 53(2): 375-397. 1998.

Species

V. diffusa S. Dransf.

Madagascar. Split on one side and flattened then woven into large panels, see *Kew Bulletin* 53(2): 381-388, f. 3-4. 1998.

V. perrieri (A. Camus) S. Dransf. (*Ochlandra perrieri* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 82: 310. 1935, *Kew Bulletin* 53(2): 388. 1998.

Valota Adans. = *Digitaria* Haller, *Valota* Dumort. (Amaryllidaceae), *Vallota* R.A. Salisbury ex Herbert (Amaryllidaceae)

Panicoideae, Paniceae, Digitariinae, type *Valota insularis* (L.) Chase, see *Familles des Plantes* 2: 495. 1763, *Historia Stirpium Indigenarum Helvetiae Inchoata* 2: 244. 1768, *Flora Carniolica, Editio Secunda* 1: 52. 1771, William Herbert (1778-1847), *An Appendix* 29. London 1821 ["An Appendix to the Botanical Magazine and the Botanical Register."], *Analyse des Familles de Plantes* 58. 1829 and *Contributions from the United States National Herbarium* 46: 193-213, 634. 2003.

Vaseya Thurber = *Muhlenbergia* Schreb.

For the American (b. England, Scarborough, Yorks) botanist George Vasey, 1822-1893 (d. Washington, U.S.), agrostologist, physician, in 1868 and 1869 explorer with J.W. Powell

in Colorado, curator of the United States National Herbarium, botanised in the Rockies, editor of *The American Entomologist and Botanist*, with J.W. Chickering, E. Foreman, Wm.H. Seaman and L.F. Ward wrote *Flora Columbiana*. Washington 1876, his works include *The Grasses of the United States*. Washington 1883, *Grasses of the South*. Washington 1887, *Grasses of the Southwest*. Washington 1890-1891 and *Grasses of the Pacific Slope*. Washington 1892-1893, father of George Richard Vasey; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 427. 1965; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 1973; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Howard Atwood Kelly and Walter Lincoln Burrage, *Dictionary of American Medical Biography*. New York 1928; J. Ewan, editor, *A Short History of Botany in the United States*. 45. New York and London 1969; Joseph Ewan, *Rocky Mountain Naturalists*. 327. The University of Denver Press 1950; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 703. 1994; William Marriott Canby (1831-1904) & Joseph Nelson Rose (1862-1928), "George Vasey: a biographical sketch." *Bot. Gaz.* 18: 170-183. 1893; Frederick Vernon Coville (1867-1937), "Death of Dr. George Vasey." *Bull. Torr. Bot. Club.* 20: 218-220. 1893; W.R. Maxon, "Frederick Vernon Coville." *Science*. 85: 280-281. 1937; J.W. Harshberger, *The Botanists of Philadelphia and their Work*. Philadelphia 1899; Irving William Knobloch, compiled by, "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. Plainfield, N.J. 1983; Charles Edward Hubbard, 1900-1980, "Vasey-grass in Africa (*Paspalum larranagai* Arech.)" *Kew Bull.* 94-96. 1926.

Chloridoideae, Cynodonteae, Muhlenbergiinae, type *Vaseya comata* Thurb., see *Genera Plantarum* 44. 1789, *Systema Naturae ... editio decima tertia, aucta, reformata* 2: 171. 1791, *Proceedings of the Academy of Natural Sciences of Philadelphia* 15: 79. 1863, *Journal of the Linnean Society, Botany* 19: 83. 1881 and *Contributions from the United States National Herbarium* 41: 143-173, 235. 2001.

Vaseyochloa A.S. Hitchc.

After the American botanist George Vasey, 1822-1893, agrostologist, physician, author of *The Grasses of the United States*. Washington 1883, *Grasses of the South*. Washington 1887, *Grasses of the Southwest*. Washington 1890-1891, *Grasses of the Pacific Slope*. Washington 1892-1893 and *Monograph of the Grasses of the United States and British America*. Washington 1892; see Joseph Ewan,

Rocky Mountain Naturalists. The University of Denver Press 1950.

One species, North America, U.S., Texas. Chloridoideae, Cynodonteae, Gouiniinae, perennial, erect, caespitose, rhizomatous, creeping, leaves cauline, auricles absent, ligule a line of hairs or a ciliate membrane, plants bisexual, inflorescence a panicle exserted, open racemes, spikelets narrowly ovate, 6-11 florets per spikelet, florets with shortly bearded callus, hairy pronounced rachilla, two very unequal glumes 3- to 9- nerved, second glume awnless, lemma entire and chartaceous, palea keels narrowly winged, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, persistent and prominent style bases hornlike, open habitats, along rivers and streams, riverbanks, sandy places, dunes, coastal sand dunes, related to *Coelachyrum*, type *Vaseyochloa multinervosa* (Vasey) Hitchc., see *Prodromus Florae Novae Hollandiae* 182. 1810, *Journal de Physique, de Chimie, d'Histoire Naturelle et des Arts* 89: 104. 1819, *The Botanical Gazette* 16(8): 235-236. 1891 and *Proceedings of the Biological Society of Washington* 41: 157-164. 1928, *Journal of the Washington Academy of Sciences* 23(10): 449-456. 1933, *The Grasses of Texas*. 1975, *Contributions from the United States National Herbarium* 41: 235. 2001.

Species

V. multinervosa (Vasey) Hitchc. (*Distichlis multinervosa* (Vasey) Piper; *Melica multinervosa* Vasey; *Triodia multinervosa* (Vasey) Hitchc.)

U.S. Perennial, lemma 7- to 9-nerved, see *Proceedings of the Biological Society of Washington* 18: 147. 1905, *Proceedings of the Biological Society of Washington* 41: 159. 1928.

in English: Texas grass

Ventenata G.L. Koeler = *Gaudinopsis* (Boiss.) Eig, *Heteranthus* Borkh., *Heterochaeta* Besser ex Schult. & Schult.f., *Malya* Opiz, *Pilgerochloa* Eig

For the French botanist Étienne Pierre Ventenat, 1757-1808, clergyman, librarian, brother of Louis Ventenat (1765-1794), his writings include *Monographie du genre Tilleul*. Paris 1802, *Choix de plantes*. Paris 1803 [-1808] and *Jardin de la Malmaison*. Paris 1803-1804 [-1805]; see G. Cuvier, *Éloge historique de M. Ventenat*. Paris 1809; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 281. Regione Siciliana, Palermo 1988; Yves Laissus, in *D.S.B.* 3: 172-173. 1981; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964; Antoine Lasègue, *Musée botanique de M. Benjamin Delessert*. 1845; J.H. Barnhart, *Biographical notes upon botanists*. 3: 430. 1965; Emil Bretschneider, *History of European Botanical*

Discoveries in China. Leipzig 1981; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

About 5 species, southern Europe, western Asia, Iran. Pooideae, Poeae, Agrostidinae, or Pooideae, Poodae, Aveneae, annual, herbaceous, ascending to erect, auricles absent, ligule membranous, plants bisexual, open or dense inflorescence panicle-like, 2-7 florets, lowest floret persistent, spikelets compressed, 2 herbaceous glumes more or less equal to unequal, lemmas coriaceous rounded bisexual, lemma of uppermost florets awned from back, awn bent, palea present, 2 free lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, disturbed sites, dry places, related to *Trisetaria*, type *Ventenata avenacea* Koeler, nom. illeg. superfl. for *Avena dubia* Leers, see *Species Plantarum* 1: 79-81. 1753, *Descriptio Graminum in Gallia et Germania* 272. 1802, *Flora Orientalis* 5: 540. 1884 and *Repertorium Specierum Novarum Regni Vegetabilis* 26: 71, 74. 1929, *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 81, 85. 1982, *Conspectus Florae Orientalis* 6: 93. 1991, *Contributions from the United States National Herbarium* 48: 384, 432, 688. 2003.

Species

V. blanchei Boiss. (*Pilgerochloa blanchei* (Boiss.) Eig)

Syria. Lemmas dorsally awned, see *Flora Orientalis* 5: 539. 1884.

V. dubia (Leers) Coss. (*Avena dubia* Leers; *Avena tenuis* Moench; *Gaudinia tenuis* (Moench) Trin.; *Ventenata avenacea* Koel.; *Ventenata dubia* (Leers) Coss. & Dur.; *Ventenata dubia* Coss. & Dur.)

Europe. Annual, erect, tufted, open inflorescence paniculate, branches of the panicle spreading to drooping, spikelets stalked, 2-3 florets, lowest florets generally staminate, lemmas with bent and twisted awns, upper florets bisexual, weed species, aggressive invader, spreads by seed dispersal, low palatability or unpalatable, pasture, disturbed areas, alongside roads, in fields, similar to *Bromus tectorum* L., see *Flora Herbornensis* 41. 1775, *Methodus Plantas Horti Botanici ...* 195. 1794, *Essai d'une Nouvelle Agrostographie* 95, 164. 1812, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 21. 1836, *Exploration Scientifique de l'Algérie* 2: 104. 1855, *Annales des Sciences Naturelles; Botanique, série 4* 4: 252. 1856 and *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 120. 1971[1972].

in English: North Africa grass, hairgrass, soft-bearded oat grass, ventenata grass, wiregrass

V. eigiana (H. Scholz & Raus) M. Dogan

Turkey. Rare grass.

V. macra (M. Bieb.) Boiss. (*Avena macra* M. Bieb.; *Avena macra* Steven ex M. Bieb.; *Gaudiniopsis macra* (M. Bieb.) Eig; *Gaudinopsis macra* (Steven ex M. Bieb.) Eig)

Europe. See *Flora Taurico-Caucasica* 1: 77. 1808, *Flora Orientalis* 5: 540. 1884.

Verinea Merino = *Melica* L., *Verinea* Pomel
(Liliaceae)

Pooideae, Meliceae, type *Verinea pterostachys* Merino, see *Species Plantarum* 1: 66-67. 1753, *Observations sur les Graminées de la Flore Belgique* 109. 1823 [1824], A. Pomel, *Matériaux pour la flore atlantique*, Oran 1860, *Anales de la Sociedad Española de Historia Natural* 28(Mem.): 8-9. 1899 and *Bull. U.S.D.A.* 772: 69. 1920, *Lagascalia* 12: 286-290. 1984, *Candollea* 41: 431-439. 1986, *Berichte des Geobotanischen Instituts der Eidg. Techn. Hochschule Stiftung Rübel* 57: 182-192. 1991, *Taxon* 41: 566. 1992, *Flora Mediterranea* 1: 229-236. 1991, *Flora Mediterranea* 5: 340-345. 1995, *Taxon* 44: 611-612. 1995, *Taxon* 49(2): 252. 2000, *Contributions from the United States National Herbarium* 48: 432-450, 688. 2003.

Veseyochloa J.B. Phipps = *Tristachya* Nees

For the British entomologist Leslie Desmond Edward Foster Vesey-Fitzgerald, c. 1910-1974 (d. Nairobi, Kenya), ecologist, conservationist, plant collector, see "Central African Grasslands." *J. Ecol.* 243-274. 1963.

Panicoideae, Panicodae, Arundinelleae, type *Veseyochloa viridearistata* J.B. Phipps, see *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829 and *N. Amer. Flora* 17(8): 578. 1939, *Kirkia* 4: 106-107, t. 10, f. 3 [f. 1]. 1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(2): 119-124. 1967, *Kew Bulletin* 26(1): 111-123. 1971, *Flora Mesoamericana* 6: 378. 1994, *Contributions from the United States National Herbarium* 46: 627-628. 2003.

Vetiveria Bory = *Anatherum* P. Beauv.,
Chrysopogon Trin., *Lenormandia* Steud.,
Mandelorna Steud.

From Malayalam and Tamil names of the plant *Vetiveria zizanioides* (L.) Nash, in Malayalam *veti* "cut" and *ver* "root," referring to the method of propagation or to the aromatic roots; see M.P. Nayar, *Meaning of Indian Flowering Plant Names*. 360. Dehra Dun 1985; Helmut Genaust, *Etymologisches Wörterbuch der botanischen Pflanzenna-*

men. 682. 1996; Arthur D. Chapman, editor, *Australian Plant Name Index*. 2958-2959. [Lemaire ex Cassini] Canberra 1991.

About 10 species, Old World tropics, Africa, Asia, Australia. Panicoideae, Andropogonodae, Andropogoneae, Andropogoninae or Panicoideae, Andropogoneae, Sorghinae, perennial, aromatic, herbaceous, unbranched, coarse, culms flimsy to robust, tufted, large clumps, stout and short rhizomes, foliage mostly basal, auricles absent, lower sheaths compressed, ligule a fringe of hairs, long narrow leaves, plants bisexual, inflorescence a narrow and branched panicle, racemes pedunculated and elongate, spikelets acute and 2-flowered, spikelets paired and each pair subsimilar but differing in sex, sessile spikelet with the lower floret sterile and upper floret bisexual, bisexual and spiny spikelets, 2 glumes subequal and dissimilar, lower glume spinulose or spiny, pedicellate spikelet dorsally compressed, palea present or absent, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, erosion control, versatile uses, hedging, medicinal plant, essential oils from scented roots, the shoots more or less aromatic or not at all, common to rainforest, floodplains, on streams and riverbanks, sometimes in *Chrysopogon*, type *Vetiveria odoratissima* Bory, see *Species Plantarum* 2: 1045, 1047. 1753, *Flora Cochinchinensis* 538, 552. 1790, *Essai d'une Nouvelle Agrostographie* 128, 150, t. 22, f. 11. 1812, *Pl. Pugill.* 2: 10. 1815, *Fundamenta Agrostographiae* 187-188. 1820, *Bull. Sci. Soc. Philom. Paris* 1822: 43. 1822, *Flora* 33: 229. 1850, *Synopsis Plantarum Glumacearum* 1: 359. 1854 [1855], *Die Natürlichen Pflanzenfamilien* 2(2): 28. 1887 and *American Midland Naturalist* 4: 212. 1915, *Grasses of Burma ...* 258-259. 1960, *Bulletin de l'Institut Française d'Afrique Noire* 22: 106. 1960, *Boissiera. Mémoires du Conservatoire de Botanique et de l'Institut de Botanique Systématique de l'Université de Genève* 9: 291. 1960, *Flora of the Guianas. Series A, Phanerogams* 8: 654-656. 1990, *Flora Mesoamericana* 6: 383. 1994, *Weed Research* 38(3): 167-174. June 1998, *Journal of Applied Ecology* 36(3): 374-387. June 1999, J.F. Veldkamp, "A revision of *Chrysopogon* Trin. including *Vetiveria* Bory (Poaceae) in Thailand and Malesia with notes on some other species from Africa and Australia." *Austrobaileya* 5: 503-533. 1999, *Journal of Agronomy and Crop Science* 185(2): 99-103. Sep 2000, *Journal of Applied Entomology* 124(9-10): 391-394. Dec 2000, *Austral. Ecology* 26(1): 1-13. Feb 2001, Massimo Maffei, editor, *Vetiveria*. The genus *Vetiveria*. London & New York 2002, *African Journal of Ecology* 40(1): 10-17. Mar 2002, M.P. McDonald, N.W. Galwey and T.D. Colmer, "Similarity and diversity in adventitious root anatomy as related to root aeration among a range of wetland and dryland grass species." *Plant, Cell and Environment* 25(3): 441-451. Mar 2002, *Contributions from the United States National Herbarium* 46: 19-20, 159-161, 283, 285. 2003, *Grass and Forage Science* 58(2): 210-214. June

2003, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, "The evolution of nuclear genome structure in seed plants." *Am. J. Bot.* 91: 1709-1725. 2004, *Ecological Management and Restoration* 5(3): 191-198. Dec 2004.

Species

V. arguta (Steud.) C.E. Hubbard (*Andropogon argutus* Nees ex Steud.; *Chrysopogon argutus* (Nees ex Steud.) Trin. ex B.D. Jacks.; *Vetiveria arguta* (Nees ex Steud.) C.E. Hubb.)

Mauritius, Rodrigues. Perennial, rare species, vulnerable, caespitose, erect, glabrous, tussock forming, leaf blades linear and acute, leaf sheath glabrous, ligule a minute hairy rim, panicle oblong and contracted, sessile and pedicelled spikelets, awned, used for thatching and handicraft, useful for erosion control, savannah, open areas, rocky places, see *Synopsis Plantarum Glumacearum* 1: 391. 1854, *Index Kewensis* 1: 124, 530. 1893 and *Bulletin of Miscellaneous Information Kew* 1939: 654. 1940

in Rodrigues Island: vetiver

V. filipes (Benth.) C.E. Hubb. (*Andropogon elongatus* var. *filipes* Hack.; *Chrysopogon elongatus* var. *filipes* Benth.; *Chrysopogon filipes* (Benth.) Reeder)

Southeast Asia, Australia, Queensland, Northern Territory, New South Wales. Perennial, sheath keeled, racemes slender, spikelets paired, pedicellate spikelet sterile and purple, 1-7 spikelet groups, pungent and hairy callus, readily eaten by stock, floodplains, on streams and riverbanks, see *Flora Australiensis: A Description ...* 7: 539. 1878 and *Bulletin of Miscellaneous Information Kew* 1934: 444. 1934, *Journal of the Arnold Arboretum* 29(4): 360-361. 1948, *Acta Botanica Neerlandica* 2: 386. 1953.

in English: Australian vetiver

V. fulvibarbis (Trin.) Stapf (*Anatherum fulvibarbe* (Trin.) Keng; *Andropogon fulvibarbis* Trin.; *Chrysopogon fulvibarbis* (Trin.) Veldkamp; *Rhaphis zizanioides* subvar. *fulvibarbis* (Trin.) Roberty)

Tropical Africa, Senegal. Perennial, robust, aromatic roots, grazed by cattle when young, growing on floodplains, see *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 287. 1832 and *Flora of Tropical Africa* 9: 159. 1917, *Sinensia* 10: 314, 338. 1939, *Petite Flore de l'Ouest-Africain* 403-404. 1954, *Austrobaileya* 5(3): 525. 1999.

in Mali: gongo dili

in Nigeria: cawkitiningel, isirko

in Senegal: kongo dili, kongo dlili

V. lawsonii (Hook.f.) Blatt. & McCann (*Andropogon lawsonii* Hook.f.; *Chrysopogon lawsonii* (Hook.f.) Roberty; *Chrysopogon lawsonii* (Hook.f.) Veldkamp)

Asia, India. Growing in moist ground, wet places, moist lawn, see *The Flora of British India* 7(21): 187. 1896 and

Journal of the Bombay Natural History Society 32: 409. 1928, *Boissiera*. 9: 260. 1960, *Austrobaileya* 5(3): 515. 1999.

in India: kaare hullu, mani hullu, thoddu kaare hullu

V. nigriflora (Benth.) Stapf (*Andropogon nigriflorus* Benth.; *Andropogon squarrosus* var. *chrysopogonoides* Hack.; *Andropogon squarrosus* var. *nigriflorus* (Benth.) Hack.; *Chrysopogon nigriflorus* (Benth.) Veldkamp; *Rhaphis zizanioides* (L.) Roberty; *Rhaphis zizanioides* var. *nigriflorus* (Benth.) Roberty; *Vetiveria zizanioides* var. *nigriflora* (Benth.) A. Camus)

Tropical Africa, Asia. Perennial, tufted, clumped, robust, fibrous roots, dark purple glumes, thatching roof, roots eaten by local people, roots into powder and used to heal wounds and reduce swelling, ornamental, in Mali and Senegal used as a water purifier and an antiseptic, used for matting, erosion control and sand binding, low to medium grazing value, grows in seasonally flooded plains, swampy floodplains, temporarily swampy areas, wet places, stream-sides, fresh water, see *Niger Flora* 573. 1849, *Monographiae Phanerogamarum* 6: 544. 1889 and *Flora of Tropical Africa* 9: 157. 1917, *Bulletin du Muséum National d'Histoire Naturelle* 25: 674. 1919, *Boissiera*. 9: 291. 1960, *Bulletin de l'Institut Française d'Afrique Noire* 22: 106. Jan 1960, *Austrobaileya* 5(3): 526. 1999.

in English: black vetivergrass

in Ghana: kulikarili, sansan

in Guinea: andenyi, andey

in Guinea-Bissau: cudoendo

in Mali: babin, davyi, dayi, dimipallol, diri, ghana, gongo dili, kamaré, khamaré, kieli, ngokoba, ngongon

in Niger: bawu, dhyéma, diirina, diri, djéma, dyri-nya, geema, gémaré, khayia

in Nigeria: aganya, codorde, darambuwa, jamali, jema, kambu, ngongonari, sekko, sodornde, somayo, zemako

in Senegal: bangasa, cepp, foutoula, gandenyi, kamaré, khamaré, ngokoba, saban, seban, sep, sin, sintché, sinti, sodhordé, tcham tarlé, tiep, tul

in Sierra Leone: anwona roban, anwonaroban, barewali, pindi

in Upper Volta: ciidi, ciidol, codorde, kulkaderé, nyen, rudum, sidiho, sidiire, sodorko, tchiidol

V. zizanioides (L.) Nash (*Agrostis verticillata* Lam., nom. illeg., non *Agrostis verticillata* Vill.; *Anatherum muricatum* (Retz.) P. Beauv.; *Anatherum squarrosus* (L.f.) P. Beauv.; *Anatherum zizanioides* (L.) Hitchc. & Chase; *Andropogon festucoides* J. Presl; *Andropogon muricatum* Retz.; *Andropogon muricatus* Retz.; *Andropogon odoratus* Steud.; *Andropogon squarrosus* auct.; *Andropogon squarrosus* L.f.; *Andropogon zizanioides* (L.) Urban; *Chamaeraphis muricata* (Retz.) Merr.; *Chamaeraphis squarrosa* (L.f.) Chase;

Chrysopogon festucoides (J. Presl) Veldkamp; *Chrysopogon zizanioides* (L.) Roberty; *Echinochloa squarrosa* (L.f.) Roem. & Schult.; *Holcus zizanioides* (L.) Kuntze ex Stuck.; *Orthopogon squarrosus* (L.f.) Spreng.; *Panicum squarrosus* (L.f.) Lam.; *Phalaris zizanioides* L.; *Pseudoraphis squarrosa* (L.f.) Chase; *Pseudoraphis squarrosa* (L.f.) Hara; *Rhaphis zizanioides* (L.) Roberty; *Sorghum zizanioides* (L.) Kuntze; *Vetiveria arundinacea* Griseb.; *Vetiveria festucoides* (J. Presl) Ohwi; *Vetiveria muricata* (Retz.) Griseb.; *Vetiveria odorata* Virey; *Vetiveria odoratissima* Bory)

India, Thailand, Sri Lanka, Asia tropical. Perennial, stout, wiry, coarse, robust and upright, culms glabrous and unbranched, terete, solid, densely clumped, deep-rooted, foliage densely clustered at the base, very dense extensive fibrous root system, leaf sheaths laterally compressed, ligule a scarious rim, leaves linear and scentless, stout-branched spongy rhizomes, inflorescence lanceolate with whorled branches, well-exserted and terminal panicle, spikelets paired and 2-flowered, sessile spikelet with barren lower floret and perfect upper floret, margins of lower glume very minutely spiny beneath, 2 lodicules, 3 stamens, pistil with glabrous ovary and 2 plumose stigmas, pedicelled spikelet with both florets staminate, fast-growing, essential oils from the fragrant roots used in perfumery and soaps and as a food flavouring, cultivated, valuable for long-term erosion control and soil binder, effective in slowing erosion and retaining moisture, stabilizing earthworks, hedging and support, older leaves too harsh for fodder, leaves grazed while still young, roots used for weaving mats and baskets, *pamaypay* (in the Philippines), cooling screens (*tatties*, in India), leaf juice used as anthelmintic, root teas for flu and fever, drought-resistant, can survive fire and grazing, stands very heavy grazing, tolerant of very poor soil conditions and trampling, growing on poorly drained lands, wet places, fresh-water swamps, swampy areas, plains, floodplains, lower hills, on stream banks, sloping drains, steep slopes, road shoulders, terraces, along roadsides, heavy soils, heavy clays, moist heavy soils, open areas, margins of lakes and streams, see *Mantissa Plantarum* 2: 183. 1771, *Supplementum Plantarum* 433. 1781 [1782], *Observationes Botanicae* 3: 43 [31]. 1783, *Encyclopédie Méthodique, Botanique* 1: 59. 1783, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 171. 1791, *Prodromus Florae Novae Hollandiae* 193. 1810, *Essai d'une Nouvelle Agrostographie* 53, 128, 150, atlas 15, t. 22, f. 10. 1812, *Systema Vegetabilium* 2: 479. 1817, *Bull. Sci. Soc. Philom. Paris* 1822: 43 [or 44]. 1822, *Systema Vegetabilium, editio decima sexta* 1: 307. 1825, *Reliquiae Haenkeanae* 1(4-5): 340. 1830, *Notulae ad Plantas Asiaticas* 3: 29. 1851, *Flora of the British West Indian Islands* 559-560. 1864, *Enum. Pl. Zeyl.* 368. 1864, *Monographiae Phanerogamarum* 6: 544. 1889, *Revisio Generum Plantarum* 2: 791. 1891 and *Handb. Fl. Ceylon* 5: 233. 1900, *Symbolae Antillarum* 4: 79. 1903, *Flora of*

the Southeastern United States ... 67, 1326. 1903, *Anales del Museo Nacional de Buenos Aires* 11: 48. 1904, *Contributions from the United States National Herbarium* 18(7): 285. 1917, *Bulletin du Muséum National d'Histoire Naturelle* 25: 673-674. 1919, *An Enumeration of Philippine Flowering Plants* 1(1): 75. 1922, *Contributions from the United States National Herbarium* 24: 203. 1925, *Handb. Fl. Ceylon* 6: 332. 1931, *Journal of the Arnold Arboretum* 20(3): 313. 1939, *Journal of Japanese Botany* 17: 398. 1941, *Bulletin of the Tokyo Science Museum* 18: 4. 1947, *Petite Flore de l'Ouest-Africain* 404. 1954, *Grasses of Ceylon* 184. 1956, *Boissiera*. 9: 291. 1960, *Bulletin de l'Institut Française d'Afrique Noire* 22: 106. 1960, *Flora of Pakistan* no. 143, Poaceae 305. 1982, *Journal of Cytology and Genetics* 18: 58-59, 60-61. 1983, *Cytologia* 50: 177-185. 1985, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Wagenigen Agric. Univ. Pap.* 92-1: 409. 1992, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, R.P. Adams et al., "DNA fingerprinting reveals clonal nature of *Vetiveria zizanioides* (L.) Nash, Gramineae and sources of potential new germplasm." *Molecular Ecology* 7(7): 813-818. July 1998, *Austrobaileya* 5(3): 512-513, 522. 1999, Somporn Prasertsongskun et al., "Increased activity and reduced sensitivity of glutamine synthetase in glufosinate-resistant vetiver (*Vetiveria zizanioides* Nash) cells." *Weed Biology and Management* 2(4): 171-176. Dec 2002.

in English: vetiver, vetiver grass, true vetiver, koosa, sevendara grass, khus-khus grass, khus khus, khus, cuscus grass, khuskhus, khas-khas, Indian izkhir

in French: chiendent odorant, vétiver, vétyver

in Spanish: zacate violeta

in Brazil: capim de cheiro, patcholi

in Cuba: pachulí

in Colombia: vetiver

in Venezuela: petiver

in West Indies: metrive, vétiver, vetrive

in Angola: capim vetiver, capim de bona, capim de boma, khas-khas

in Sierra Leone: kabenis, kale, sumare

in Cambodia: skya

in India: abhaya, amranalam, amrinala, avadha, avurugad-divaeru, avvuru-gaddi-veru, ba'la, bala, balah, bena, bhanavalo, biran, bura de jarob, cuscus, daaha harana, durbachi, gandar, gandel, gander, gandhadhya, ganrar, garar, haripriya, ilamich-cham-ver, ilamichamver, indraguptha, ishtakapath, izkhir, izkhire-hindi, jalamoda, jalashaya, jalavaasa, kaadu dappa kari sajje hullu, kaadu karidappasajje hallu, kaathaayana, khas, khas bena, khaskhas, khasakhasa, khas-khas (the roots), khus, khus-khus (= the poppy seeds), khuskhus, khuskhus-ghas, kuruvaeru, kuruveeru, laamajjaka, laamanacha, laamanche, laavancha, laghubhaya, lamajjakamuvaeru, lamajjakamu-veru, lavancha, lavanchi,

miya-moe, mudivaala gida, mudivala, mushkani, nalada, onci, ouru-veru, orai, panni, ramach-cham-ver, ramaccham, ramachehamver, ramachham, rambhu, ranapriya, reshira, saevya, samagandhika, savandra-mul, seenk, senth, sentha, shandaler-jar, shandler-jar (= root of the sandle), sheethamoolaka, shishira, sink, sink-jharu, siron, sugandhimoola, sugandhimula, urai, ursori, usheera, ushir, ushira, ushiram, usir, va la, va'lo, vaavancha, vala, valo, varelu, vattivaeru, vattiveeru, vattiveru, veera, veerabhadra, veerana, veeranam, veeratharu, vellanthara, vettevèr, vetti-vellu, vetti-veru, vettiveellu, vettiveeru, vettiver, vettiveru, vidavalivaeru, vidavali-veru, vilhalver, viranam, virkel, vitanamoolaka, viyal, vizhal-ver, woetiwear

in Indonesia: akar wangi, larasetu, usar

in Malaysia: akar wangi, kus kus, kusu-kusu, nara wastu, narawastu, rumput wangi

in the Philippine Islands: amoor, amora, amoras, anias de moras, anis de moro, giron, ilib, mora, moras, moro, narawastu, raiz de moras, rimodas, rimora, rimoras, tres-moras

in Sri Lanka: sevendara, vettiver

in Thailand: faek, kaeng hom, khaem hom, phaek, yaa faek hom, ya faek hom, ya-faekhom, ya-faeklum

in Vietnam: hurong bai

Vietnamocalamus Nguyen

A bamboo from Vietnam.

A monotypic genus. See *Bot. Zhurn. (Moscow & Leningrad)* 76(6): 874. 1991.

Species

V. catbaensis Nguyen

Vietnam.

Vietnamochloa Veldkamp & Nowack

A grass from Vietnam.

One species, Vietnam. Chloridoideae, annual, caespitose, herbaceous, unbranched, leaf blades linear, ligule a fringe of hairs, leaves mainly basal, plants bisexual, inflorescence paniculate and nondigitate, spikelets solitary compressed dorsiventrally, 2 glumes more or less equal, palea present, 3 stamens, 2 stigmas, type *Vietnamochloa aurea* Veldkamp & Nowack, see *Bulletin du Muséum National d'Histoire Naturelle, Miscellanea* 16(2-4): 214-215, f. 1-2. 1994 [1995].

Species

V. aurea Veldkamp & Nowack

Vietnam.

Vietnamosasa T.Q. Nguyen = *Aimeea* Rifat

From Vietnam plus *Sasa*.

About 3 species, Southeast Asia, Vietnam, Thailand, Cambodia, Laos. Bambusoideae, Bambusodae, Bambuseae, Racemobambosinae, perennial, sympodial, woody, unarmed, persistent, cylindrical, branched, rhizomatous, leafy, rhizomes leptomorph, auricles present, leaves linear-lanceolate, plants bisexual, narrow inflorescence, groups of spikelets in the axil of a glume-like bract, lowest florets bisexual, upper florets male, glumes present or absent and number of glumes variable, palea present, lodicules present, 6 stamens, 3 stigmas, dry grasslands, dry *Dipterocarpus* forests, lowland, hill forest, type *Vietnamosasa darlacensis* Nguyen, see *Bot. Zhurn. (Moscow & Leningrad)* 75(2): 221-225. 1990, *Kew Bulletin* 47(4): 707-711. 1992.

Species

V. ciliata (A. Camus) Nguyen (*Aimeea ciliata* (A. Camus) Rifat; *Arundinaria ciliata* A. Camus; *Neomicrocalamus ciliatus* (A. Camus) Demoly; *Oreiostachys ciliata* (A. Camus) Nakai; *Racemobambos ciliata* (A. Camus) C.S. Chao & Renvoize)

Thailand. In forest, see *Verhandelingen der Koninklijke Nederlandsche Akademie van Wetenschappen. Afdeling Natuurkunde; Tweede Sectie* 10: 685. 1908, *Bulletin du Muséum National d'Histoire Naturelle* 25(2): 672. 1919, *Journal of Arnold Arboretum* 6(3): 152. 1925, *The Gardens' Bulletin Singapore* 15: 268. 1956, *Kew Bulletin* 44(2): 365. 1989.

in Thailand: chot, chote, phai dioud, phai djoud, yaa hua khaeng

V. darlacensis Nguyen

Vietnam. Mountain forest.

V. pusilla (A. Chev. & A. Camus) Nguyen (*Aimeea pusilla* (A. Chev. & A. Camus) Rifat; *Arundinaria pusilla* A. Chev. & A. Camus; *Chimonobambusa pusilla* (A. Chev. & A. Camus) Nakai; *Neomicrocalamus pusillus* (A. Chev. & A. Camus) Demoly)

Thailand, Vietnam. Perennial, erect, strong, branching at the nodes, shortly rhizomatous, terminal floret sterile, glumes variable, 6 stamens, young shoots green, leaves palatable, grazed by cattle and buffaloes, in dry regions, intolerant of waterlogging and heavy grazing, see *Bull. Mus. Nat. Hist. Paris* 27: 450. 1921, *Journal Arnold Arboretum* 6: 151. 1925.

in English: bamboo grass, pek grass

in Cambodia: rüssèi préich

in Laos: ph'ek

in the Philippines: utod

in Thailand: pek, phek, phet, ya phek, ya phet

in Vietnam: le, truc th'ao

Local names: phai phek, phai phet, phek, phet, sat nho

Viguiereella A. Camus

For the French botanist René Viguiere, 1880-1931, bryologist and specialist of Araliaceae, traveler, explorer, botanical collector in Madagascar, from 1919 to 1931 professor of botany at the University and director of the Municipal Botanical Garden at Caen, author of *Recherches sur le genre Grewia*. 1917 and *Sur les Araliacées du groupe des Polyscias*. 1905; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 436. 1965; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Elmer Drew Merrill, in *Contr. U.S. Natl. Herb.* 30(1): 307. 1947 and in *Bernice P. Bishop Mus. Bull.* 144: 186. 1937.

One species, Madagascar. Chloridoideae, Eragrostideae, annual, tufted, slender, herbaceous, branched, auricles absent, ligule a fringe of hairs, plants bisexual, inflorescence a spicate raceme, a minute bract at the base of each spikelet, pungent pedicel, uppermost female-fertile floret, 2 glumes subequal, lower glume 2-nerved, upper glume 3-nerved, lemmas long awned, palea present, free lodicules, ovary glabrous, 2 stigmas, open places, dry sites, see *Bulletin Bi-Mensuel de la Société Linnéenne de Lyon* 5: 11. 1926.

Species

V. madagascariensis A. Camus

Madagascar. Spikelets subtended by a scale, fertile lemma 3- to 5-nerved.

Vilfa Adans. = *Agrostis* L.

Pooideae, Poaeae, Agrostidinae, type *Vilfa stolonifera* (L.) P. Beauv., see *Species Plantarum* 1: 61-63. 1753, *Familles des Plantes* 2: 495. 1763, *Essai d'une Nouvelle Agrostographie* 16, 148, 182. 1812, *Systema Vegetabilium* 2(2): 343. 1817, *Fundamenta Agrostographiae* 119, t. 7. 1820, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 37, 58. 1821, *Chloris Melvilliana* 27. 1823, *Observations sur les Graminées de la Flore Belgique* 127, 128. 1823 [1824], *De Graminibus unifloris et sesquifloris* 159. Petropoli 1824 and *Fl. Fenn.* 5: 29, 65. 1971, *Taxon* 41: 556. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 42-89, 688-690. 2003.

Vilfagrostis Döll = *Eragrostis* Wolf

The genera *Vilfa* and *Agrostis*, Greek *agrostis*, *agrostidos* "grass, weed, couch grass."

Chloridoideae, Cynodonteae, or Chloridoideae, Eragrostideae, Eragrostidinae, see *Species Plantarum* 1: 61. 1753, *Genera Plantarum* 23. 1776, *Icones et Descriptiones Graminum Austriacorum* 4: 15. 1809, *Flora Brasiliensis* 2(3): 137. 1878 and *Acta Bot. Neerl.* 15: 157. 1966, *Contributions from the United States National Herbarium* 41: 81-115, 239. 2001.

Vossia Wallich & Griffith = *Vossia* Adans. (Aizoaceae)

For the German poet Johann Heinrich Voss, 1751-1826, remembered chiefly for his translations of Homer, or the Dutch Gerhard Johann Voss (Vossius) (1577-1649), Dutch Humanist theologian, one of the foremost scholars of the Dutch Republic's "Golden Age" and father of the distinguished classical scholar Isaac Vossius (1618-1689); see Frans A. Stafleu and Richard S. Cowan, *Taxonomic literature*. 6: 784. [genus named for the German poet J.G. Voss] 1986; W.P.U. Jackson, *Origins and Meanings of Names of South African Plant Genera*. 37. [genus named for the Belgian botanist L. Voss, 17th cent.] Rondebosch 1990.

One species, India and tropical Africa. Panicoideae, Andropogonodae, Andropogoneae, Rottboelliinae, perennial, rhizomatous, herbaceous, aquatic, spongy, stout, submerged and often with floating culms, the upper part of the culm upright, roots and rootlets from the submerged nodes, auricles absent, leaf sheaths loose and papery, ligule a fringed or pilose membrane, plants bisexual, inflorescence spicate and digitate, racemes stout and erect, spikelets paired in long-short combinations, shorter spikelets bisexual, longer spikelets bisexual or male, 2 florets, upper floret bisexual, lower floret male, 2 glumes more or less equal and dissimilar, lower glume coriaceous, upper lemma entire and awnless, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 plumose stigmas, invasive grass, a troublesome weed of canals and rivers, forming floating mats, found in open habitats, in water, rivers, river margins, lakes, swampy areas, a segregate from *Phacelurus*, type *Vossia procera* Wall. & Griff. (*Ischaemum cuspidatum* Roxb.), see *Species Plantarum* 2: 1049. 1753, *Familles des Plantes* 2: 243. 1763, *Journal of the Asiatic Society of Bengal* 5: 572. 1836 and *African Studies Monographs* 3: 109-130. 1983, *Genera Graminum* 363. 1986, *African Journal of Ecology* 37(4): 457-470. Dec 1999, *Conservation Biology* 17(2): 500-511. Apr 2003, *Journal of Fish Biology* 63(1): 120-128. July 2003, *Journal of Biogeography* 31(1): 5-18. Jan 2004, *Ecology of Freshwater Fish* 13(1): 37-45. Mar 2004, *African Journal of Ecology* 42(s1): 6-13, 108-113. Aug 2004.

Species

V. cuspidata (Roxb.) Griffith (*Ischaemum cuspidatum* Roxb.; *Vossia procera* Wall. & Griff.)

Tropical Africa, India. Perennial, aquatic, herbaceous, robust, submerged or sometimes floating, stout, erect, rhizomatous, flowering culms leafy, spongy stems, rooting at submerged nodes, trailing, racemes solitary or not, lower glume of sessile spikelets long caudate, leaf sheaths sometimes with irritant hairs, noxious weed, used for matting and thatching, pasture, grazed by cattle and buffaloes, good fodder when young, food for elephants and hippopotamus, pith eaten by chimpanzees, common in rivers, streams, canals, floodplains, lakes and lakeshores, riverbanks, swamps, see *Hortus Bengalensis, or a Catalogue ...* 81. 1814, *Flora Indica; or Descriptions ...* 1: 325. 1820, William Griffith (1810-1845), *Notulae ad Plantas Asiaticas* 12. Calcutta 1851 and *Bulletin de la Société Botanique de France* 108: 5. 1961.

in English: hippo-grass, floating grass

in Mali: temboro

in Nigeria: barugu, burugu, damba, daura, falfoli, lambami, lingurehu, lonyo, milla, tattakya, tsamba

in Senegal: hay

in South Africa: um-soof reed

in Tanzania: luvoya

in Upper Volta: barugu, burgu, burugu

Vulpia C.C. Gmelin = *Chloammia* Raf.,
Ctenopsis De Not., *Dasiola* Raf.,
Distomomischus Dulac, *Festucaria* Link,
Loretia Duval-Jouve, *Mygalurus* Link,
Narduretia Villar, *Nardurus* (Bluff, Nees &
Schauer) Rchb., *Prospheysis* Dulac, *Zerna*
Panzer

According to Helmut Genaust (see *Etymologisches Wörterbuch der botanischen Pflanzennamen*. 691. 1996) the genus was named after the German chemist Johann Samuel Vulpius, 1760-1840 (or 1846), pharmacist and amateur botanist of Baden, Germany; or from the Latin *vulpes*, is "a fox," indicating the appearance of the plants.

About 20-28 species, temperate and subtropical regions of northern hemisphere. Pooideae, Poodae, Poeae, or Pooideae, Poeae, Loliinae, annual or rarely perennial, very variable, short-lived, glabrous, unbranched, tufted or solitary, slender, herbaceous, erect or decumbent, auricles absent, smooth sheath terete or rounded, ligule an unfringed membrane, leaves short and flat, plants bisexual, usually cleistogamous sometimes chasmogamous, inflorescence a linear and 1-sided panicle, 2 or more florets, spikelets solitary and compressed laterally, florets perfect and stipitate, reduced floret at apex, vestigial foliar structure subtending the inflorescence absent or present, 2 glumes very unequal and acute, lemmas terminating in a slender straight awn,

palea notched and awnless, 2 lodicules free and membranous, 1-3 stamens, ovary glabrous or sometimes minutely hairy at apex, 2 stigmas, these species are not important as livestock forage, damage to livestock skins and pelts, highly invasive and aggressive pasture weed species, a weed among pastures and cereal crops across temperate Australia, produces extremely large numbers of small seeds, seeds are sensitive to light, commonly these species occur in mesic to xeric habitats, grows in dry places, dry open places, open habitats, sandy countries, coastal sand, rainforest, the weedy annual species once included in *Festuca* L., hybrids with *Festuca*, type *Vulpia myuros* (L.) C.C. Gmelin, see *Species Plantarum* 1: 73. 1753, *Species Plantarum. Editio quarta* 1(1): 419. 1797, *Flora Badensis Alsatica* 1: 8. 1805, *Enumeratio Plantarum Horti Regii Berolinensis Altera* 1: 92. 1821, *Neogenyton* 4. 1825, *Genera Plantarum* 101. 1836, *Compendium Florae Germaniae. Editio altera* 1: 193. 1836, *Linnaea* 17(4): 398. 1844, *Index Sem. Hort. Genuensis* 26. 1847, *Flore du Département des Hautes-Pyrénées* 67, 91. 1867, *Die Natürlichen Pflanzenfamilien* 2(2): 75. 1887 and *Contr. U.S. Natl. Herb.* 10: 3. 1906, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 16: 100. 1925, *Notulae Systematicae. Herbarium du Museum de Paris* 11: 126. 1943, *Anales del Instituto Botánico A. J. Cavanilles* 21: 357-386. Madrid 1963, *Notes Roy. Bot. Gard.* 372. 1970, *Madroño* 22(5): 217-280. 1974, *Genetica* 46(2): 235-255. 1976, *Botaniska Notiser* 130: 173-187. 1977, *Botanical Journal of the Linnean Society* 76(4): 350. 1978, *Pl. Syst. Evol.* 136: 47-52. 1980, *Nord. J. Bot.* 1: 20. 1981, *Journal of the Indian Botanical Society* 60: 148-153. 1981, *Taxon* 33: 351-354. 1984, *Nordic Journal of Botany* 4: 289-302. 1984, *Plant Systematics and Evolution* 147: 227-236. 1984, *Flora Turkey* 9: 451. 1985, *Bot. Zhurn. SSSR* 70(1): 126-128. 1985, *Genera Graminum* 96-97. 1986, *Annali di Botanica* 45: 75-102, 1987, *Bothalia* 18: 114-119. 1988, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, *Flora Mediterranea* 1: 229-236. 1991, *Fitologija* 39: 72-77. 1991, *Plant Systematics and Evolution* 182: 21-28. 1992, *Plant Systematics and Evolution* 188: 125-138. 1993, *Flora Mesoamericana* 6: 228. 1994, *Bothalia* 27: 75-82. 1997, *Flora Mediterranea* 8: 307-313. 1998, *Am. J. Bot.* 85: 1638-1645. 1998, *Bothalia* 29(2): 335-341. 1999, *Am. J. Bot.* 87: 1699-1706. 2000, *Diversity & Distributions* 6(3): 129-135. May 2000, *Am. J. Bot.* 88: 594-607, 819-831, 1452-1457. 2001, *Global Change Biology* 7(4): 435-450. Apr 2001, *Systematic Botany* 27(2): 241-251. 2002, *Restoration Ecology* 10(1): 52-67. Mar 2002, *Oikos* 96(3): 421-432. Mar 2002, *Journal of Applied Ecology* 39(5): 708-720. Oct 2002, *New Phytologist* 156(2): 142-144. Nov 2002, *Austral. Ecology* 27(6): 638-646. Dec 2002, *Contributions from the United States National Herbarium* 48: 234, 244-245, 274, 368, 431, 454, 589, 690-694. 2003, Deborah L. Clark and Mark V. Wilson, "Post-dispersal seed fates of four prairie species." *Am. J. Bot.* 90: 730-735. 2003, *Am. J. Bot.* 90: 413-422, 1045-1053. 2003, *Journal of*

Ecology 91(2): 321-324. Apr 2003, *Conservation Biology* 17(3): 837-845. June 2003, *Austral. Ecology* 28(5): 491-498. Oct 2003, *Restoration Ecology* 12(1): 36-43. Mar 2004, *Ecological Management and Restoration* 5(2): 131-134. Aug 2004, *Diversity & Distributions* 10(5-6): 447-459. Sep 2004, *Ecography* 27(6): 798-810. Dec 2004, *Austral. Ecology* 30(1): 74-78. Feb 2005, *Oikos* 108(2): 241-252. Feb 2005, *Journal of Ecology* 93(1): 38-49, 214-226. Feb 2005, *Functional Ecology* 19(2): 273-283. Apr 2005, A. Refoufi, "Characterization of a novel 9-ploid hybrid ($2n = 63$) with four genomes in an *Elytrigia* complex (Poaceae)." *Botanical Journal of the Linnean Society* 147(4): 501-508. Apr 2005, *Oikos* 109(2): 351-359. Apr 2005, Keith L. McDougall and John W. Morgan, "Establishment of native grassland vegetation at Organ Pipes National Park near Melbourne, Victoria: Vegetation changes from 1989 to 2003." *Ecological Management and Restoration* 6(1): 34-42. Apr 2005, J. B. Kirkpatrick, Louise Gilfedder, Kerry Bridle and Andrew Zacharek, "The positive and negative conservation impacts of sheep grazing and other disturbances on the vascular plant species and vegetation of lowland subhumid Tasmania." *Ecological Management and Restoration* 6(1): 51-60. Apr 2005, *New Phytologist* 166(2): 445-454. May 2005, *Diversity & Distributions* 11(3): 183-191. May 2005, *Journal of Ecology* 93(3): 584-595. June 2005.

Species

V. alopecuroides (Schousboe) Dumort. (*Festuca alopecuroides* Schousboe; *Vulpia alopecuroides* (Schousboe) Link, nom. illeg., non *Vulpia alopecuroides* (Schousboe) Dumort.)

Algeria, Europe, Spain, Morocco. See *Det Kongelige Danske Videnskabs Selskabs Skrifter* 1800: 40. 1801, *Observations sur les Graminées de la Flore Belgique* 100. 1824, *Hortus Regius Botanicus Berolinensis* 1: 147. 1827, *Voyage botanique dans le midi de l'Espagne* 2: 670. 1844 and *Anales del Jardín Botánico de Madrid* 42: 221-225. 1985, *Boletim da Sociedade Broteriana, ser. 2* 61: 281-304. 1988, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989.

V. antucensis Trin. (*Festuca antucensis* (Trin.) Steud.; *Festuca eriolepis* E. Desv.; *Festuca eriolepis* var. *nana* Hieron.; *Vulpia australis* var. *nana* (Hieron.) Parodi; *Vulpia eriolepis* (E. Desv.) Blom; *Vulpia eriolepis* (E. Desv.) Henrard, nom. illeg., non *Vulpia eriolepis* (E. Desv.) Blom; *Vulpia eriolepis* f. *glabrata* Blom; *Vulpia eriolepis* f. *nana* (Hieron.) Blom)

Chile. See *Linnaea* 10(3): 303. 1836, *Flora Chilena* 6: 428. 1854, *Synopsis Plantarum Glumacearum* 1: 304. 1854, *Boletín de la Academia Nacional de Ciencias, Córdoba, Argentina* 3: 374. 1881 and *Acta Horti Gothoburgensis* 9: 153, 156, 159, f. 2. 1934, *Blumea* 1: 320. 1937, *Revista Argentina de Agronomía* 23: 82, f. 1-B. 1956.

V. australis (Nees ex Steud.) C.H. Blom (*Ctenopsis delicatula* (Lag.) Paunero; *Festuca australis* Nees ex Steud.;

Festuca delicatula Lag.; *Narduretia deliculata* (Lag.) Villar; *Vulpia australis* var. *australis*; *Vulpia delicatula* (Lag.) Dumort.)

Ecuador, Uruguay, Brazil. See *Varietades de Ciencias, Literatura y Artes* 4(19): 39. 1805, *Observations sur les Graminées de la Flore Belgique* 100. 1823 [1824], *Synopsis Plantarum Glumacearum* 1: 304. 1854 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 16: 102. 1925, *Acta Horti Gothoburgensis* 9: 163. 1934, *Anales del Instituto Botánico A. J. Cavanilles* 21: 365. 1963, *Watsonia* 15: 38-39. 1984, *Taxon* 33: 351-354. 1984, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, *Boletim da Sociedade Broteriana, ser. 2* 64: 35-74. 1991.

V. bromoides (L.) S.F. Gray (*Bromus dertonensis* All.; *Festuca bromoides* L.; *Festuca dertonensis* (All.) Asch. & Graebn.; *Festuca dertonensis* var. *sciurooides* (Roth) Briq.; *Festuca dertonensis* (All.) Asch. & Graebn. var. *dertonensis*; *Festuca geniculata* var. *monandra* Döll; *Festuca myuros* subsp. *sciurooides* (Roth) Rouy; *Festuca myuros* var. *bromoides* (L.) Wimm. & Grab.; *Festuca myuros* var. *sciurooides* (Roth) Coss. & Durieu; *Festuca sciurooides* Roth; *Vulpia bromoidea* St.-Lag.; *Vulpia dertonensis* (All.) Gola; *Vulpia dertonensis* (All.) Parodi, nom. illeg., non *Vulpia dertonensis* (All.) Gola; *Vulpia dertonensis* (All.) Volkart, nom. illeg., non *Vulpia dertonensis* (All.) Gola; *Vulpia dertonensis* (All.) Gola var. *dertonensis*; *Vulpia hybrida* Pau pro parte; *Vulpia myuros* (L.) C.C. Gmelin subsp. *sciurooides* (Roth) Rouy; *Vulpia myuros* (L.) C.C. Gmel. subsp. *myuros* var. *dertonensis* (All.) Fiori; *Vulpia myuros* var. *bromoides* (L.) Parl.; *Vulpia sciurooides* (Roth) Roth ex C.C. Gmelin; *Vulpia sciurooides* (Roth) C.C. Gmel.; *Vulpia sciurooides* (Roth) C.C. Gmel. var. *sciurooides*) (Tortona, Italia)

Mediterranean, Europe. Annual, slender, montane, solitary or densely to loosely tufted, erect to geniculate, erect or decumbent at base, herbaceous, auricles absent, ligule membranous, leaf sheath hyaline, very narrow leaves setaceous and filiform, inflorescence exerted from the uppermost leaf sheath, dense and narrow panicle erect and 1-sided, cleistogamous and chasmogamous spikelets, upper florets reduced or sterile, glumes very unequal or unequal, first glume subulate, second glume lanceolate, lemma membranous with a rounded callus, awn straight, palea hyaline to membranous with scabrid keels, anthers yellow, ovary glabrous, fruit compressed and furrowed, naturalized elsewhere, browsed by goats and sheep, a weed species of lawns and roadsides, irrigated fields, pasture, waste places, chaparral, damp bare soil, along roadsides, open habitats, uncultivated and disturbed areas, on sandstone, rocky places, damp or wet places, along streams, stony riverbeds, moist spots and banks, drainage ditches, see *Species Plantarum* 1: 75, 76-78. 1753, *Flora Pedemontana* 2: 249. 1785, *Botanische Abhandlungen und Beobachtungen* 43. 1787, *Flora Badensis Alsatica* 1: 8. 1805, *A Natural Arrangement of*

British Plants 2: 124. 1821, Carl [Karl] Christian Gmelin (1762-1837), *Flora Badensis Alsatica et confinium regionum cis et transrhena plantae a lacu bodamico ...* Karlsruhe 1805-1826, *Flora Silesiae* 1: 83. 1827, *Flora italiana, ossia descrizione delle piante ...* 1: 419. 1848, *Fl. N.Z.* 1: 309. 1853, *Exploration Scientifique de l'Algérie* 2: 174. 1855, *Flora Brasiliensis* 2(3): 113. 1878, Antoine Cariot (1820-1883), *Etude des fleurs*, Botanique ... 8me édition, tome 2: 939. Lyon 1889 and *Synopsis der mitteleuropäischen Flora* 2(1): 558. 1901, *Malpighia* 18: 266, 364. 1904, *Flora der Schweiz*, edition 2, 57. 1905, *Prodrome de la Flore Corse* 1: 161. 1910, *Flore de France* 14. 256. 1913, *Grasses of Ceylon* 42. 1956, *Revista Argentina de Agronomía* 23: 77. 1956, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 117. 1971[1972], *Plant Systematics and Evolution* 147: 227-236. 1984, *Boletim da Sociedade Broteriana* 57: 77-85. 1984, *Bot. J. Linn. Soc.* 91: 436. 1985, *Bothalia* 18: 114-119. 1988, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, *Opera Botanica* 121: 159-172. 1993, *Flora Australia* 50: 461-470. 1993, *Bothalia* 27: 75-82. 1997, S.A. Renvoize, *Gramíneas de Bolivia* 125-126. 1998, *Monocotiledóneas Mexicanas: una Sinopsis Florística* 10: 7-236. 2000, *Flora Fanerogamica do Estado de São Paulo* 1: i-xxv, 1-292. 2001.

in English: squirrel tail fescue, rat's tail fescue, silver grass, silk grass, brome fescue, barren fescue, hair grass, vulpia hair grass, European foxtail fescue, six-weeks fescue

in Ecuador: pajilla

V. ciliata Dumort. (*Festuca ciliata* Danthoine ex DC., non Gouan; *Festuca ciliata* Danthoine ex Lam. & DC., nom. illeg., non *Festuca ciliata* Gouan; *Festuca ciliata* Danthoine; *Festuca ciliata* Danthoine ex DC., non Gouan var. *ciliata*; *Festuca danthonii* Asch. & Graebn.; *Festuca exigua* Litw.; *Vulpia ciliata* Link)

Europe, Mediterranean. Annual or perennial, slender, densely or loosely tufted, purple-red, auricles absent, ligule membranous and truncate, leaves setaceous and filiform, green or purple raceme or panicle 1-sided, cleistogamous spikelets in the leaf sheath, spikelets with 1 or 2 female florets, lemma with a rounded callus and margins with cilia, male lemmas tapering to an awn, anthers yellow, fruit laterally compressed and furrowed, grows in disturbed montane areas, ballast, in open habitats, in dry and often sandy habitats, see *Icones et descriptiones graminum austriacorum...* 4: t. 65. Vindobonae [Wien] 1801-1809, *Observations sur les Graminées de la Flore Belgique* 100. 1824, *Hortus Regius Botanicus Berolinensis* 1: 147. 1827 and *Synopsis der mitteleuropäischen Flora* 2: 551. 1901, *Anales del Instituto Botánico A. J. Cavanilles* 22: 87. 1964, *Annali di Botanica* 45: 75-102. 1987, *Fl. Libya* 145: 31. 1988, *International Organization of Plant Biosystematists Newsletter* 13: 16. 1989, A.R. Watkinson, K.K. Newsham and L. Forrester, "*Vulpia ciliata* Dumort. ssp. *ambigua* (Le Gall)

Stace & Auquier (*Vulpia ambigua* (Le Gall) More, *Festuca ambigua* Le Gall)." *Journal of Ecology* 86(4): 690-705. Aug 1998, Andrew R. Watkinson, Robert P. Freckleton and Lisa Forrester, "Population dynamics of *Vulpia ciliata*: regional, patch and local dynamics." *Journal of Ecology* 88(6): 1012-1029. Dec 2000.

in English: feather vulpia, fringed fescue

V. ciliata Dumort. subsp. **ambigua** (Le Gall) Stace & Auquier (*Festuca ambigua* Le Gall; *Vulpia ambigua* (Le Gall) More)

Europe. See Nicolas Joseph Marie Le Gall de Kerlinou (1787-1860), *Flore du Morbihan* 731. Vannes 1852 and *Botanical Journal of the Linnean Society* 76(4): 384. 1978.

V. ciliata Dumort. subsp. **ciliata** (*Festuca barbata* Gaudin, nom. illeg., non *Festuca barbata* Loefl. ex L.; *Festuca ciliata* Danthoine ex DC., non Gouan var. *imberbis* Vis.; *Festuca danthonii* Asch. & Graebn.; *Festuca danthonii* var. *danthonii*; *Festuca danthonii* var. *imberbis* (Vis.) Asch. & Graebn.; *Vulpia aetnensis* Tineo; *Vulpia danthonii* (Asch. & Graebn.) Volkart)

Europe. See *Hortus Regius Monspeliensis* 48, 547. 1762, *Flore Française* 3: 55. 1805, *Flora Helvetica* 1: 274. 1828, *Flora Dalmatica* 1: 75. 1842 and *Synopsis der mitteleuropäischen Flora* 2: 551. 1901, *Flora der Schweiz* 57. 1905.

V. elliottea (Raf.) Fernald (*Dasiola elliottea* Raf.; *Festuca monandra* Elliot; *Festuca quadriflora* Walter, nom. illeg., non *Festuca quadriflora* Honck.; *Festuca sciurea* Nutt.; *Vulpia quadriflora* Trin. ex Steud.; *Vulpia sciurea* (Nutt.) Her-rard)

Northern America, U.S. Annual, see *Vollständiges Systematisches Verzeichniss Aller Gewächse Deutschlands* 271. 1782, *Flora Caroliniana, secundum ...* 81. 1788, *A Sketch of the Botany of South-Carolina and Georgia* 1: 170. 1816, *Neogenyton* 4. 1825, *Transactions of the American Philosophical Society, new series*, 5: 147. 1837, *Nomenclator Botanicus. Editio secunda* 2: 780. 1841 and *Blumea* 2: 323. 1937, *Rhodora* 47(556): 106. 1945.

in English: squirrel tail fescue

V. fasciculata (Forssk.) Fritsch (*Bromus hordeiformis* Lam.; *Festuca fasciculata* Forssk.; *Festuca uniglumis* Sol.; *Festuca uniglumis* Aiton; *Festuca uniglumis* Aiton var. *uniglumis*; *Vulpia fasciculata* (Forssk.) Samp.; *Vulpia membranacea* auct., non (L.) Dumort.; *Vulpia membranacea* subsp. *fasciculata* (Forssk.) O. Bolòs, Masalles & Vigo; *Vulpia uniglumis* (Sol.) Dumort.; *Vulpia uniglumis* (Aiton) Dumort.)

Mediterranean, Europe. Annual, vigorous, coarse, unbranched, solitary or loosely tufted, erect or geniculate or decumbent, auricles absent, ligule membranous and erose, leaves setaceous, plants bisexual, inflorescence racemose or paniculate, usually chasmogamous spikelets, distal florets sterile, long-awned upper glume, female lemmas

awned, callus pointed, anthers yellow, fruit laterally compressed and longitudinally furrowed, cultivated, weed, the small seeds can cause injury to animals, the mature seed heads are dangerous for the lambs, grows on coastal sand dunes, gardens, open habitats, coastal grasslands, in disturbed areas, in sandy soils, weedy disturbed places, sandy shores, dry areas, this species often confused with *Vulpia membranacea* (L.) Dumort., see *Flora Aegyptiaco-Arabica* 22. 1775, *Hortus Kewensis; or, a catalogue* 108. 1789, *Tableau Encyclopédique et Méthodique ... Botanique* 1: 195. 1791, *Agrost. Belg.* 100. 1824 and *Excursionsfl. Oesterreich* edition 2, 74. 1909, Gonçalo António da Silva Ferreira Sampaio (1865-1937), *Lista das espécies representadas no Herbário português* ... Porto [1913], *Excursion-sflora für Österreich*, edition 3, 674. 1922, *Bull. Jard. Bot. Belg.* 47: 131. 1977, *Watsonia* 15: 38-39. 1984, *Collect. Bot.* 17(1): 96. 1987[1988].

in English: dune fescue

V. fontquerana Melderis & Stace

Europe, Spain. Vulnerable species, floret callus pubescent and pungent, see *Collectanea botanica: a Barcinonensi Botanico Instituto edita* 7: 782. Barcelona 1968, *Genetica* 46(2): 235-255. 1976.

V. geniculata (L.) Link (*Brachypodium geniculatum* K. Koch; *Bromus geniculatus* L.; *Bromus geniculatus* (K. Koch) Steud., nom. illeg., non *Bromus geniculatus* L.; *Festuca geniculata* (L.) Willd.; *Festuca geniculata* (L.) Cav.; *Festuca geniculata* (L.) Lag. & Rodr.; *Loretia geniculata* (L.) Duval-Jouve; *Loretia incrassata* (Lam.) Duval-Jouve; *Vulpia stipoides* (L.) Dumort.)

Algeria, Morocco, Europe. Annual, erect or decumbent at base, useful for erosion control, see *Mant. pl.* 1: 33. 1767, *Systema Naturae*, edition 12 2: 97. 1767, *Mantissa Plantarum* 557. 1771, *Anales de Ciencias Naturales* 6(16): 150. 1803, *Hortus Regius Botanicus Berolinensis* 1: 148. 1827, *Linnaea* 21(4): 422. 1848, *Synopsis Plantarum Glumacearum* 1: 318. 1854, *Revue des Sciences Naturelles sér.* 2 2: 36, 42. 1880, *Flore d'Alger et catalogue des plantes d'Algérie* ... 91. 1884, *Conspectus Florae Africae* 5: 915. 1894 and *Genetica* 46(2): 235-255. 1976, *Bot. J. Linn. Soc.* 91: 443. 1985, *Travaux de l'Institut Scientifique, Université Mohammed V. Série Botanique* 35: 1-168. 1988.

in French: vulpia géniculée

in Morocco: bousibouss, dil-el-far

V. ligustica (All.) Link (*Bromus ligusticus* All.; *Festuca ligustica* (All.) Bertol.; *Loretia ligustica* (All.) Duval-Jouve)

Algeria, Morocco, Europe, Turkey. Useful for erosion control, see *Flora Pedemontana* 2: 249. 1785, Antonio Bertoloni (1775-1869), *Amoenitates Italicae* 8. Bononiae 1819, *Hortus Regius Botanicus Berolinensis* 1: 148. 1827 and *Genetica* 46(2): 235-255. 1976.

V. megalura (Nutt.) Rydb. (*Festuca commutata* Steud., nom. illeg., non *Festuca commutata* Scheele; *Festuca megalura* Nutt.; *Vulpia myuros* f. *megalura* (Nutt.) Stace & Cotton; *Vulpia myuros* var. *hirsuta* Hack.; *Vulpia myuros* var. *megalura* (Nutt.) Auquier)

Mediterranean region. Annual, slender, erect, low-growing, leaves setaceous, panicle not bristled, lemmas with cilia, variable arrangement of the cilia, useful for erosion control and revegetation of disturbed areas, forage, found in arid areas, see *Flora Badensis Alsatica* 1: 8. 1805, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 188. 1848, *Synopsis Plantarum Glumacearum* 1: 304. 1854, *Catalogue Raisonné des Graminées du Portugal* 24. 1880 and *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *Madroño* 22: 229. 1974, *Watsonia* 11(1): 72. 1976, *Bulletin du Jardin Botanique National de Belgique* 47(1-2): 123. 1977.

in English: fox- tail fescue

in Mexico: pasto, tupiku, uisaku

V. membranacea (L.) Dumort. (*Eriocoma membranacea* (Pursh) Beal; *Festuca longiseta* Brot.; *Festuca membranacea* (L.) Druce, nom. illeg., non *Festuca membranacea* Kit.; *Festuca uniglumis* Aiton var. *longiseta* (Brot.) Asch.; *Oryzopsis membranacea* (Pursh) Vasey; *Stipa membranacea* L.; *Stipa membranacea* Pursh, nom. illeg., non *Stipa membranacea* L.; *Vulpia longiseta* (Brot.) Hack.; *Vulpia membranacea* (L.) Link; *Vulpia membranacea* auct.; *Vulpia membranacea* var. *longiseta* (Brot.) Maire & Weiller)

Algeria, Morocco, Europe. Useful for erosion control, see *Species Plantarum* 560. 1753, *Flora Aegyptiaco-Arabica* 22. 1775, *Flora Lusitanica* 1: 116. 1804, *Flora Americae Septentrionalis; or, ...* 2: 728. 1814, *Agrost. Belg.* 100. 1824 [or *Observ. Gramin. belg.* 100. 1824], *Catalogue Raisonné des Graminées de Portugal* 24. 1880, *U.S. Department of Agriculture. Division of Botany. Bulletin* 12(2): 10, t. 10. 1891, *Grasses of North America for Farmers and Students* 2: 232. 1896 and *Annals of Scottish Natural History* 229. 1906, *Bull. Jard. Bot. Belg.* 47: 131. 1977, *Annali di Botanica* 45: 75-102. 1987, *Collect. Bot.* 17(1): 96. 1987 [1988], *Boletim da Sociedade Broteriana, ser.* 2 63: 153-205. 1990.

V. microstachys (Nutt.) Munro (*Festuca arida* Elmer; *Festuca microstachys* Nutt.; *Festuca microstachys* var. *microstachys*; *Festuca microstachys* var. *subappressa* Suksd.; *Vulpia arida* (Elmer) Henr.; *Vulpia microstachys* (Nutt.) Benth.)

Northern America, U.S., Canada. Annual, erect or geniculate, spikelets often purplish, glumes glabrous, weedy, little forage value, relatively unpalatable, occurs on dry to moderately moist disturbed sites, see *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas adjunctis nonnullis Grahamianis enumerat novasque describit). 342. London 1839-1857, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 187. 1848 and *Botanical Gazette* 36: 52.

1903, *Werdenda* 1(2): 2. 1923, *Blumea* 2: 323. 1937, *Madroño* 22: 225. 1974.

in English: small fescue, fescue

V. microstachys (Nutt.) Munro var. **ciliata** (Beal) Lonard & Gould (*Festuca eastwoodae* Piper; *Festuca grayi* (Abrams) Piper; *Festuca microstachys* subsp. *grayi* Abrams; *Festuca microstachys* var. *ciliata* A. Gray ex Beal; *Festuca microstachys* var. *ciliata* A. Gray; *Festuca pacifica* var. *ciliata* (A. Gray) Hoover; *Vulpia eastwoodiae* (Piper) Henr.; *Vulpia eastwoodae* (Piper) Henrard; *Vulpia grayi* (Piper) Henr.; *Vulpia grayi* (Abrams) Henrard; *Vulpia microstachys* var. *ciliata* Munro; *Vulpia microstachys* var. *ciliata* (A. Gray) Lonard & Gould) (named for the western American botanist Alice Eastwood, 1859-1953, curator of the Herbarium of the California Academy of Sciences 1894-1949, his works include *A Popular Flora of Denver, Colorado*. 1893, Report on a *Collection of Plants from San Juan County in Southeastern Utah*. San Francisco 1897, *Studies in the Herbarium and the Field*. San Francisco 1897 and 1898, *A Handbook of the Trees of California*. San Francisco 1905, "The *Escallonias* in Golden Gate Park, San Francisco, California with descriptions of new species." *Proc. Calif. Acad. Sci.* ser. 4, 18: 385-391. 1929, "Escallonias in Golden Gate Park - II." *Leaf. W. Bot.* 1: 81-82. 1934 and "Early Botanical Explorers of the Pacific Coast and the Trees They Found There." *California Historical Society Quarterly*. 18: 335-345. 1939. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 491. 1965; Edith M. Allison, "Bibliography and History of Colorado Botany." *Univ. Colorado Studies*. 6: 51-76. 1908; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 111. 1972; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933; J. Ewan, editor, *A Short History of Botany in the United States*. New York and London 1969; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 146. 19731; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Carol Green Wilson, "A partial gazeteer and chronology of Alice Eastwood's botanical explorations." *Leaf. West. Bot.* 7(3): 65-68. 1953; Carol Green Wilson, *Alice Eastwood's Wonderland*. The Adventures of a Botanist. California Academy of Sciences, San Francisco 1955; Joseph Ewan, *Rocky Mountain Naturalists*. The University of Denver Press 1950; Sidney Fay Blake (1892-1959) and Alice Cary Atwood (1876-1947), *Geographical Guide to Floras of the World*. Washington 1942; Ella Dales Cantelow & Herbert Clair Cantelow, "Biographical notes on persons in whose honor Alice Eastwood named native plants." *Leaf. West. Bot.* 8(5): 83-101. 1957; Irving William Knobloch, compil., "A preliminary verified list of plant collectors in Mexico." *Phytologia Memoirs*. VI. 1983)

Northern America, U.S., California. Annual, glabrous, open inflorescence, glumes and lemma hairy, found on loose sandy soil, disturbed areas, hillsides, open habitats, forest openings, dry soil, bare soil, see *Journal of the Academy of Natural Sciences of Philadelphia* 1: 187. 1848, *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas ...). 342. 1839-1857, *Proceedings of the American Academy of Arts and Sciences* 8: 410. 1872, *Grasses of North America for Farmers and Students* 2: 585. 1896 and *Flora of Los Angeles and Vicinity* 52. 1904, *Contributions from the United States National Herbarium* 10(1): 12-13, 14-16, pl. 3. 1906, *Man. Grass. U.S.* 857. 1935, *Blumea* 2: 323. 1937, *Madroño* 22(5): 225, 227. 1974.

in English: Eastwood fescue

V. microstachys (Nutt.) Munro var. **confusa** (Piper) Lonard & Gould (*Festuca confusa* Piper; *Festuca suksdorfii* Piper ex Suksd.; *Festuca tracyi* Hitchc.; *Vulpia confusa* (Piper) Henr.; *Vulpia tracyi* (A.S. Hitchc.) Henr.) (for the California botanist Joseph Prince Tracy, 1879-1953, plant collector; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 396. 1965)

Northern America, U.S. Annual, glumes hairy, lemma glabrous, grassy plains, dry hillsides, coastal-sage scrub, see *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas ...). 342. 1839-1857 and *Contributions from the United States National Herbarium* 10(1): 13, pl. 1. 1906, *Werdenda* 1(2): 2. 1923, *Illustrated Flora of the Pacific States* 1: 220, f. 514. 1923, *Blumea* 2: 323. 1937, *Madroño* 22(5): 226. 1974.

in English: Tracy's fescue, confusing fescue

V. microstachys (Nutt.) Munro var. **microstachys** (*Festuca arida* Elmer; *Festuca microstachys* Nutt.; *Festuca microstachys* var. *microstachys*; *Festuca microstachys* var. *subappressa* Suksd.; *Vulpia arida* (Elmer) Henr.)

Northern America, U.S. Annual, glumes glabrous, lemma hairy, occurs commonly in loose soil on open slopes, sandy soils, dry hillsides, open woodlands, along ditches and roadways, see *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas ...). 342. 1839-1857, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 187. 1848 and *Botanical Gazette* 36: 52. 1903, *Werdenda* 1(2): 2. 1923, *Madroño* 22(5): 225. 1974.

in English: desert fescue, small fescue

V. microstachys (Nutt.) Munro var. **pauciflora** (Scribn. ex Beal) Lonard and Gould (*Festuca dives* Suksd., nom. illeg., non *Festuca dives* F. Muell.; *Festuca microstachys* Nutt. var. *pauciflora* Scribn. ex Beal; *Festuca microstachys* Nutt. var. *simulans* (Hoover) Hoover; *Festuca pacifica* Piper; *Festuca pacifica* var. *pacifica*; *Festuca pacifica* Piper var. *simulans* Hoover; *Festuca reflexa* Buckley; *Festuca subbiflora* Suksd.; *Vulpia microstachys* var. *pauciflora* (Beal) Lonard and Gould; *Vulpia pacifica* (Piper) Rydb.; *Vulpia reflexa* (Buckl.) Rydb.)

Northern America, U.S. Annual, weakly tufted, ligules with a rough to fringed margin, sheaths open, no auricles, hair-like leaf blades, open flower head, spikelets with 2-6 loosely overlapping flowers, spikelet axis visible, glumes unequal to nearly equal, glumes glabrous or scabrous, lemmas awned, lemma glabrous or scabrous, occurs on dry meadows and disturbed sites, roadsides, on sandy disturbed ground, dry fields, see *Plantae Hartwegianae* (Plantas Hartwegianas imprimis Mexicanas ...). 342. 1839-1857, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 187. 1848, *Proc. Acad. Nat. Sci. Philadelphia* 14: 98. 1862, *Grasses of North America for Farmers and Students* 2: 586. 1896 and *Contributions from the United States National Herbarium* 10(1): 12-13. 1906, *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *Werdenda* 1(2): 2-3. 1923, *Leaflets of Western Botany* 10(16): 338. 1966, *Madroño* 22(5): 226, 228. 1974.

in English: small fescue, Pacific fescue, few-flowered fescue, fescue

V. muralis (Kunth) Nees (*Festuca dertonensis* subvar. *broteri* Litard.; *Festuca dertonensis* var. *broteri* Asch. & Graebn.; *Festuca hybrida* Brot.; *Festuca muralis* Kunth; *Festuca myuros* var. *muralis* Kunth ex Speg.; *Vulpia broteri* Boiss. & Reuter; *Vulpia hybrida* (Brot.) Pau; *Vulpia myuros* (L.) C.C. Gmel. subsp. *myuros* var. *broteri* (Boiss. & Reut.) Pérez Lara; *Vulpia myuros* (L.) C.C. Gmel. subsp. *myuros* var. *tenella* (Boiss.) Maire & Weiller) (named for the Portuguese botanist Felix de Avellar Brotero, 1744-1828, first studied medicine, professor of botany at Coimbra, director of the Royal Museum and Botanical Gardens at Coimbra, his writings include *Noções geraes das dormideiras, da sua cultura, e da extracção do verdadeiro opio*, que ellas conte'm. [Small 8 vol., first edition] Lisbon 1824 and *Flora lusitanica*. Lisboa 1804 [-1805]. See J.H. Barnhart, *Biographical notes upon botanists*. 1: 258. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 54. 1972; Miguel Colmeiro y Penido, *La Botánica y los Botánicos de la Peninsula Hispano-Lusitana*. Madrid 1858; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 1964; Mariella Azzarello Di Misa, a cura di, *Il Fondo Antico della Biblioteca dell'Orto Botanico di Palermo*. 52. Regione Siciliana, Palermo 1988)

Europe. Annual, solitary or loosely tufted, slender, erect or geniculate, auricles absent, ligule membranous and truncate, leaves setaceous and filiform, inflorescence exerted from the uppermost leaf sheath, a raceme or a panicle erect and green to purple, cleistogamous spikelets in the leaf sheath, distal florets sterile, subtending foliar structure rarely present or usually absent, glumes awnless, upper glume acute, lemmas awned, palea hyaline, anthers yellow, fruit laterally compressed and furrowed, grows in disturbed habitats, in moist or dry areas, along roadsides, road verges, see *Flora Lusitanica* 1: 115. 1804, *Synopsis Plantarum* 1:

218. 1822, *Linnaea* 19(6): 694. 1847, *Pugillus Plantarum Novarum Africae Borealis Hispaniaeque Australis* 128. 1852, *Contribucion al estudio de la flora de la Sierra ...* 74. 1896 and *Synopsis der mitteleuropäischen Flora* 2: 559. 1901, *Memorias del Museo de Ciencias Naturales de Barcelona, Serie Botánica* 1: 72. 1922, *Candollea* 7: 233. 1937. in English: wall fescue, silver grass

V. myuros (L.) C.C. Gmelin (*Avena muralis* Salisb.; *Distomomischus myuros* (L.) Dulac; *Festuca myuros* L.; *Festuca myuros* Muhl.; *Festuca megalura* Nutt.; *Festuca megalura* Nutt. var. *hirsuta* (Hack.) Asch. & Graebn.; *Festuca monandra* Elliott; *Festuca muralis* Kunth; *Festuca myuros* Muhl., nom. illeg., non *Festuca myuros* L.; *Festuca myuros* var. *muralis* Kunth ex Speg.; *Festuca pseudomyuros* Soy.-Will.; *Vulpia megalura* (Nutt.) Rydb.; *Vulpia muralis* (Kunth) Nees; *Vulpia myuros* (L.) C.C. Gmel. subsp. *myuros* var. *pseudomyuros* (Soy.-Will.) Fiori; *Vulpia myuros* (L.) C.C. Gmel. subsp. *pseudomyuros* (Soy.-Will.) Maire & Weiller; *Vulpia myuros* (L.) C.C. Gmel. var. *hirsuta* Hack.; *Vulpia pseudomyuros* (Soy.-Will.) Rchb.; *Zerna myuros* Panz. ex B.D. Jacks.)

Europe, Mediterranean, Eurasia, Africa. Annual, low-growing, glabrous or scabrous, densely or loosely tufted or solitary, densely fascicled, slender culms erect or geniculate at the base, auricles absent, ligule membranous and smooth, sheaths glabrous, leaf blades setaceous and filiform, inflorescence partially enclosed in uppermost leaf sheath, raceme or a linear erect panicle curved or nodding at maturity, cleistogamous spikelets in the leaf sheath, spikelets with 3-7 female florets, glumes setaceous, lower glume scale-like, upper glume acute, lemmas glabrous and awned, palea hyaline to membranous, anthers yellow or purple, compressed fruit grooved or furrowed, naturalized elsewhere, has been found to act as a host for the nematode that causes annual ryegrass toxicity in livestock, shade species, useful for erosion control and revegetation of disturbed areas, open fields, weed of lawns and roadsides, roadside embankment, disturbed areas, waste places, dry fields, dry sand, moist sand, wet sand of stream, arid areas, fine sandy loam, in dry rocky or sandy habitats, damp bare soil, banks in sandy soil, along streams, moist gravel, see *Species Plantarum* 1: 74-75. 1753, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 22. Londini [London] (Nov.-Dec.) 1796, *Flora Badensis Alsatica* 1: 8. 1805, *A Sketch of the Botany of South-Carolina and Georgia* 1: 170. 1816, *Descriptio uberior Graminum* 160. 1817, *Synopsis Plantarum* 1: 218. 1822, *Linnaea* 19(6): 694. 1847, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 188. 1848, *Index Kewensis* 2: 1249. 1865, *Flore du Département des Hautes-Pyrénées* 91. 1867, *Contribucion al estudio de la flora de la Sierra ...* 74. 1896 and *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *Acta Horti Gothoburgensis* 9: 161. 1934, *Grasses of Burma ...* 564. 1960, *Acta Botanica Academiae Scientiarum Hungaricae* 17(1-2): 117.

1971[1972], *Madroño* 22: 217-230. 1974, *Watsonia* 11(1): 72-73. 1976, *Bulletin du Jardin Botanique National de Belgique* 47(1-2): 117-137. 1977, *Bot. J. Linn. Soc.* 91: 436. 1985, Cynthia S. Brown and Kevin J. Rice, "The mark of Zorro: effects of the exotic annual grass *Vulpia myuros* on California Native Perennial Grasses." *Restoration Ecology* 8(1): 10-17. Mar 2000.

in English: rat's tail fescue, rat-tail fescue, rattail fescue, vulpia hair grass, six weeks fescue, silver grass, annual fescue, foxtail fescue

in South Africa: langbaardswenkgras, wildegars

V. myuros (L.) C.C. Gmel. f. *megalura* (Nutt.) Stace & Cotton (*Festuca megalura* Nutt.; *Vulpia megalura* (Nutt.) Rydb.)

North America, Eurasia. Loosely tufted grass, erect, lower glume acute, distally ciliate lemma margin, see *Flora Badensis Alsatica* 1: 8. 1805, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 188. 1848 and *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *Madroño* 22: 229. 1974, *Watsonia* 11(1): 72. 1976.

in English: foxtail fescue

V. myuros (L.) C.C. Gmel. f. *myuros*

Europe, Mediterranean, Africa, Eurasia. Tussocky grass, lower glume obtuse, glabrous or smooth lemma margin, see *Flora Badensis Alsatica* 1: 8. 1805.

in English: rat's tail fescue

V. myuros (L.) C. Gmelin var. *hirsuta* Hackel (*Festuca megalura* Nutt.; *Festuca myuros* var. *hirsuta* (Hack.) Asch. & Graebn.; *Vulpia megalura* (Nutt.) Rydb.; *Vulpia myuros* f. *hirsuta* (Hack.) C.H. Blom; *Vulpia myuros* (L.) C.C. Gmel. f. *megalura* (Nutt.) Stace & Cotton; *Vulpia myuros* subsp. *megalura* (Nutt.) Soják; *Vulpia myuros* var. *megalura* (Nutt.) Auquier)

Europe. Annual, tufted, green, lemma margin pubescent to ciliate near tip, aggressive, useful for erosion control and revegetation of disturbed areas, in gravel and gravelly spots, sunny places, washes, hillsides, on dry red gravelly soil, open areas, see *Flora Badensis Alsatica* 1: 8. 1805, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 188. 1848, *Catalogue Raisonné des Graminées du Portugal* 24. 1880 and *Synopsis der mitteleuropäischen Flora* 2: 558. 1901, *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *Acta Horti Gothoburgensis* 9: 161. 1934, *Madroño* 22: 229. 1974, *Watsonia* 11(1): 72. 1976, *Bulletin du Jardin Botanique National de Belgique* 47(1-2): 123. 1977.

in English: foxtail fescue, fox-tail fescue, rat-tail fescue, hairy rattail fescue, Zorro fescue

V. myuros (L.) C. Gmelin var. *megalura* (Nutt.) Auquier (*Festuca commutata* Steud., nom. illeg., non *Festuca commutata* Scheele; *Festuca megalura* Nutt.; *Festuca myuros* f.

megalura (Nutt.) Stace & R. Cotton; *Vulpia megalura* (Nutt.) Rydb.; *Vulpia myuros* f. *megalura* (Nutt.) Stace & R. Cotton; *Vulpia myuros* subsp. *megalura* (Nutt.) Soják)

Southern and northern America, Argentina, Brazil, Canada, U.S. Annual, lemmas ciliate on margins above, wasteland, stony places, see *Flora Badensis Alsatica* 1: 8. 1805, *Journal of the Academy of Natural Sciences of Philadelphia* 1: 188. 1848, *Synopsis Plantarum Glumacearum* 1: 304. 1854 and *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *Madroño* 22: 217-230. 1974, *Watsonia* 11(1): 72. 1976, *Bulletin du Jardin Botanique National de Belgique* 47(1-2): 117-137. 1977.

V. myuros (L.) C. Gmelin var. *myuros* (*Festuca myuros* L.; *Festuca myuros* var. *myuros*; *Vulpia myuros* (L.) C.C. Gmel. f. *myuros*)

Europe, Eurasia. Annual, lemma margin glabrous, occurs in open fields and banks in sandy soil, rough pasture, hillsides, chaparral, wasteland, see *Species Plantarum* 1: 74-75. 1753, *Flora Badensis Alsatica* 1: 8. 1805 and *Bot. J. Linn. Soc.* 91: 436. 1985.

in English: false foxtail fescue, fox-tail fescue, six weeks fescue, rat-tail fescue, rattail fescue, fescue

V. obtusa Trabut

North Africa, Algeria. Endangered species, see *Genetica* 46(2): 235-255. 1976, *Botaniska Notiser* 130: 173-187. 1977.

V. octoflora (Walter) Rydb. (*Diarrhena setacea* (Poir.) Roem. & Schult.; *Festuca octoflora* Walter; *Festuca octoflora* var. *aristulata* Torr. ex L.H. Dewey; *Festuca octoflora* var. *glauca* (Nutt.) Fernald; *Festuca octoflora* var. *octoflora*; *Festuca octoflora* var. *tenella* (Willd.) Fernald; *Festuca parviflora* Elliott; *Festuca setacea* Poir.; *Festuca tenella* Willd.; *Festuca tenella* var. *aristulata* Torr.; *Gnomonia octoflora* (Walter) Lunell; *Vulpia antofagastensis* Parodi; *Vulpia octoflora* var. *tenella* (Willd.) Fernald)

North America, U.S., Canada. Annual, herbaceous, glabrous or hairy, single or solitary, erect and often geniculate at the lower nodes, sheaths open, hairlike ligule, leaf blades narrow and involute, slender flower head with short branches that point upward, spikelets with 4-7 closely overlapping flowers, spikelet axis hidden, unequal or subequal glumes, lemmas with a short straight awn, weedy species, relatively unpalatable, provides little forage for most livestock and wildlife species, useful for erosion control, provides little cover for wildlife, commonly found growing in disturbed areas, dry slopes, open sites, dry hills, open forests, dry sterile soil, sandy or loamy to rocky soils, sandstone, along roadsides, disturbed areas, open roadsides, see *Flora Caroliniana, secundum* ... 81. 1788, *Species Plantarum. Editio quarta* 1: 419. 1797, *Encyclopédie Méthodique, Botanique* 2: 638. 1811, *A Sketch of the Botany of South-Carolina and*

Georgia 1: 170. 1816, *Systema Vegetabilium* 1: 289. 1817, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *Pacif. Railr. Rep.* 4: 156. 1856, *Contributions from the United States National Herbarium* 2(3): 547. 1894 and *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *American Midland Naturalist* 4: 224. 1915, *Rhodora* 34: 109, 209. 1932, *Rhodora* 47(556): 107. 1945, *Revista Argentina de Agronomía* 23: 86. 1956, *Madroño* 22: 221-222. 1974.

in English: six-weeks fescue, sixweeks fescue, eight-flowered fescue, six weeks grass, slender fescue

V. octoflora (Walter) Rydb. var. **glauca** (Nutt.) Fernald (*Brachypodium festucooides* Link, nom. illeg., non *Brachypodium festucooides* P. Beauv.; *Festuca gracilentia* Buckley; *Festuca octoflora* Walter var. *glauca* (Nutt.) Fernald; *Festuca octoflora* Walter var. *tenella* (Willd.) Fernald; *Festuca tenella* Willd.; *Festuca tenella* Willd. var. *glauca* Nutt.; *Schedonorus tenellus* (Willd.) P. Beauv.; *Vulpia octoflora* (Walter) Rydb. var. *tenella* (Willd.) Fernald; *Vulpia tenella* (Willd.) Heynh.)

North America, U.S. Found on cliff, sand barrens, sandy soils, dry ledges, see *Flora Caroliniana, secundum ...* 81. 1788, *Species Plantarum. Editio quarta* 1: 419. 1797, *Essai d'une Nouvelle Agrostographie* 177. 1812, *Enumeratio Plantarum Horti Botanici Berolinensis, ...* 1: 95. 1821, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 97-98. 1862 and *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *Rhodora* 34: 109, 209. 1932, *Man. Grass. U.S.* 860. 1935, *Rhodora* 47(556): 107. 1945.

in English: six-weeks fescue

V. octoflora (Walt.) Rydb. var. **hirtella** (Piper) Henrard (*Agrostis michauxii* var. *alpina* Rupr.; *Festuca octoflora* Walt. subsp. *hirtella* Piper; *Festuca octoflora* Walt. var. *hirtella* (Piper) Piper ex A.S. Hitchc.; *Festuca octoflora* var. *hirtella* (Piper) Hitchc.; *Festuca octoflora* var. *hirtella* Piper; *Festuca pusilla* Buckley)

Northern America, U.S. Annual, lemma back scabrous, sandy to rocky soils, open areas, disturbed places, see *Flora Caroliniana, secundum ...* 81. 1788, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 52: 228. 1842, *Proceedings of the Academy of Natural Sciences of Philadelphia* 14: 98. 1862 and *Contributions from the United States National Herbarium* 10(1): 12. 1906, *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *Manual of the Grasses of the United States* 60, 860. 1935, *Blumea* 2: 320. 1937.

in English: six-weeks fescue, hairy six-weeks fescue, six-weeks fescue

V. octoflora (Walter) Rydb. var. **octoflora** (*Festuca octoflora* Walter; *Festuca octoflora* Walter subsp. *octoflora*; *Festuca*

octoflora Walt. var. *aristulata* Torr. ex L.H. Dewey; *Festuca octoflora* Walter var. *octoflora*)

Northern America, U.S. Annual, lemma back scabrous or glabrous, on marsh borders, wetlands, hillsides, sandy waste ground, disturbed areas, washes, chaparral, deep shade, see *Flora Caroliniana, secundum ...* 81. 1788 and *Bulletin of the Torrey Botanical Club* 36: 538. 1909, *Madroño* 22: 221. 1974.

in English: six-weeks fescue, slender fescue, sixweeks fescue

V. persica (Boiss. & Buhse) V.I. Krecz. & Bobrov (*Nardurus persicus* Boiss. & Buhse)

Iran, Asia, Iraq. See *Flora URSS* 2: 535. 1934, *Genetica* 46(2): 235-255. 1976.

V. sicula (C. Presl) Link (*Vulpia geniculata* (L.) Link var. *attenuata* (Parl.) Fiori)

Europe, Italy. Perennial, see *Hortus Regius Botanicus Berolinensis* 2: 272. 1833 and *Genetica* 46(2): 235-255. 1976.

V. unilateralis (L.) Stace (*Brachypodium unilaterale* (L.) P. Beauv.; *Festuca maritima* L.; *Festuca tenuiflora* Schrad.; *Nardurus krausei* (Regel) V.I. Krecz. & Bobrov; *Nardurus maritimus* (L.) Murb.; *Nardurus montanus* Boiss. & Reut.; *Nardurus tenellus* Rchb. ex Godr.; *Nardurus tenuiflorus* (Schrad.) Boiss.; *Nardurus unilateralis* (L.) Boiss.; *Triticum unilaterale* L.)

Algeria, Russia, Europe. Annual, see *Systema Naturae*, edition 12 2: 102. 1767, *Essai d'une Nouvelle Agrostographie* 100, 155, pl. 19, f. 35. 1812, *Syst. Veg.* 2: 747. 1817, *Voyage botanique dans le midi de l'Espagne* 2: 677. 1844 and *Botanical Journal of the Linnean Society* 76(4): 350. 1978, *Bot. J. Linn. Soc.* 91: 442. 1985, *Lagascalia* 14(1): 165. 1986, *Anales de Biología, Facultad de Biología, Universidad de Murcia* 13: 29. 1987, *Acta Botanica Malacitana* 15: 100. 1990.

in French: nard maritime

in Morocco: dil-el-far, sbit-el-far

Vulpiella (J.A. Battandier & L.C. Trabut) P.-A. Buroillet = Vulpiella (L.C. Trabut) P.-A. Buroillet

The diminutive of the genus *Vulpia*.

One species, Mediterranean. Pooideae, Poodae, Poae, *Cutandia* subg. *Vulpiella* Batt. & Trab., annual, herbaceous, auricles absent, ligule a membrane-like, plants bisexual, inflorescence paniculate, 2 glumes very unequal and shortly awned, lemmas awned 3-nerved, palea nerved and keeled, 2 lodicules free and membranous, 3 stamens, ovary glabrous, 2 stigmas, open habitats, sandy places, dry areas, similar to *Cutandia*, type *Vulpiella incrassata* (Salzm. ex Lois.) Andr., see *Mantissa Plantarum* 557. 1771, *Flora*

Gallica 1: 85. 1828, *Annales des Sciences Naturelles; Botanique, sér. 2*, 15: 298-299. 1841, *Botanische Zeitung. Berlin* 18: 130. 1860, *Flore d'Alger* 237. 1895 and *Annales du Service Botanique (et Agronomique) de la Direction Générale de l'Agriculture Tunisie*. 4(2): 68. 1927, *Ind. Hort. Budapest* 1934: 95. 1935, *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 76: 31. 1936, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 95. 1942, *Notulae Systematicae. Herbarium du Muséum de Paris* 11: 127. 1943, *Botaniska Notiser* 130: 173-187. 1977, *Bulletin de la Société Botanique de France* 124(5-6): 347. 1977, *Nordic J. Bot.* 1: 19. 1981, *Kew Bulletin, Additional Series* 13: 108. 1986.

Species

V. tenuis (Tineo) Kerguélen (*Bromus tenuis* Tineo; *Festuca incrassata* Salzm. ex Lois.; *Vulpiella incrassata* (Salzm. ex Lois.) Andr.)

Europe, France. Attractive seeds, see Vincenzo Tineo (1791-1856), *Plantarum rariorum Siciliae minus cognitarum. Pugillus primus* 1: 3. 1817, *Flora Gallica* 1: 85. 1828, *Annales des Sciences Naturelles; Botanique, sér. 2*, 15: 299. 1841 and *La flore adventice de Montpellier* 122. 1912, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 95. 1942, *Willdenowia* 6(2): 296. 1971, *Willdenowia* 7(2): 420. 1974, *Bulletin de la Société Botanique de France* 124(5-6): 347. 1977.

W

Wangenheimia Moench = *Wangenheimia* F. Dietr. (Araliaceae)

For the German forester Friedrich Adam Julius von Wangenheim, 1749-1800, soldier; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 457. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 425. Boston, Mass. 1972; William Darlington (1782-1863), *Reliquiae Baldwinianae*. Philadelphia 1843; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Jonas C. Dryander, *Catalogue bibliothecae historico-naturalis Josephi Banks*. London 1796-1800; D.H. Nicolson, "Derivation of Aroid Generic Names." *Aroidiana*. 10: 15-25. 1988.

Two species, Spain, North Africa, Mediterranean. Pooideae, Poodae, Poae, annual, herbaceous, stiff, auricles absent, ligule an unfringed membrane, plants bisexual, inflorescence racemose or a single oblong raceme spike-like, spikelets densely imbricate, 2 glumes equal to subequal, lower glume subulate 1-nerved, navicular or boat-shaped upper glume 2-3-nerved, lemma leathery 5-nerved, palea apex bifid, 2 lodicules free and membranous, stamens 3, ovary glabrous, 2 stigmas, open habitats, dry open places, related to *Vulpia*, type *Wangenheimia disticha* Moench, see *Methodus Plantas Horti Botanici ...* 200. 1794, *Vollständiges Lexicon der Gärtnerei und Botanik* 10: 536. 1810 and *Taxon* 33: 351-354. 1984, *Kew Bulletin, Additional Series* 13: 97. 1986.

Species

W. demnatensis (Murb.) Stace (*Catapodium demnatense* (Murb.) Maire & Weiller; *Festuca demnatensis* Murb.; *Nardurus demnatensis* (Murb.) Maire)

Europe, Morocco. See *Acta Universitatis Lundensis* 18(3): 14, f. 1, t. 2. 1922, Émile Jahandiez (1876-1938) and René Maire (1878-1949), *Catalogue des plantes du Maroc* (spermatophytes et ptéridophytes). Avec la collaboration de J.A. Battandier (1848-1922), L.O. Ducellier (1878-38), M.L. Emberger (1897-1969), [et] Pius Font-Quer (1888-1964). Alger 1931-1941, *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 96. 1942, *Botanical Journal of the Linnean Society* 76: 350. 1978.

W. lima (L.) Trin. (*Cynosurus lima* L.; *Wangenheimia disticha* Moench)

Europe. Annual, low to dwarf, feathery inflorescences, flower heads rather flat in shape, ornamental, hardy, suitable for containers, see *Species Plantarum* 72. 1753, *Fundamenta Agrostographiae* 132. 1820 and *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord* 33(4): 94. 1942.

Wasatchia M.E. Jones = *Festuca* L., *Hesperochloa* (Piper) Rydb. *Leucopoa* Griseb.

U.S., Utah, Wahsatch Escarpment, Wasatch Mountains of northern Utah.

Pooideae, Poae, Loliinae, type *Wasatchia kingii* (S. Watson) M.E. Jones (*Festuca kingii* (S. Watson) Cassidy; *Hesperochloa kingii* (S. Watson) Rydb.; *Leucopoa kingii* (S. Watson) W.A. Weber; *Poa kingii* S. Watson), see *Species Plantarum* 1: 73-76. 1753, *Flora Rossica* 4(13): 383, 388. 1852, *United States Geological Expolration [sic] of the Fortieth Parallel. Botany* 387. 1871, *Bulletin Colorado State University Experiment Station* 12: 36. 1890 and *Feddes Repertorium* 2(18): 70-71. 1906, *Contributions from the United States National Herbarium* 10: 10. 1906, *Botanical Magazine* 24: 112. 1910, *Contributions to Western Botany* 14: 16. 1912, *Bulletin of the Torrey Botanical Club* 39(3): 106. 1912, *Ill. Fl. U.S. Canad.*, edition 2, 1: 269. 1913, *Acta Phytotaxonomica et Geobotanica* 1: 66-67. 1932, *Acta Phytotaxonomica et Geobotanica* 4: 33. 1935, *University of Colorado Studies: Series in Biology* 23: 2. 1966, *Bot. Zhurn.* 1253. 1971, *Watsonia* 16: 300. 1987, *Grasses of Japan and its Neighboring Regions* 508. 1987, *American Journal of Botany* 82(10): 1287-1299. 1995, *Contributions from the United States National Herbarium* 48: 383, 422, 694. 2003.

Weingaertneria Bernh. = *Corynephorus* P. Beauv.

Pooideae, Poae, Airinae, see *Species Plantarum* 65. 1753, *Systematisches Verzeichnis* 23, 51. 1800, *Essai d'une Nouvelle Agrostographie* 90, 159. 1812, *Verhandlungen der Zoologisch-botanischen Gesellschaft in Wien* 48: 645. 1898 and Antonio Xavier Pereira Coutinho (1851-1939), *A Flora de Portugal* 2: 91. Lisboa 1939, *Preslia* 34: 374-386. 1974,

Contributions from the United States National Herbarium 48: 239, 694. 2003.

Whalleya Wills & J. Bruhl

Dedicated to R.D.B. Whalley, Australian botanist.

A genus of 3 species, Australia. Paniceae, perennial, semi-aquatic, inflorescence branches stiff and spreading, palea apex notched with a central depression, food for Aborigines, suspected of photosensitisation, in the future the name of the genus could be *Walwhalleya*, type *Whalleya pungens* Wills & J. Bruhl, see *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1854/1855: 46. 1855 and Karen E Wills, R.D.B. Whalley & Jeremy J. Bruhl, "Systematic studies in Paniceae (Poaceae): *Homopholis* and *Whalleya* gen. et sp. nov." *The Australian Paniceae (Poaceae)* 96. 1987, *Australian Systematic Botany* 13(3): 437-468. 2000, *Flora of Australia* 43: 223, 242, 248, 276, 357. 2002 [as *Walwhalleya*].

Species

W. proluta (F. Muell.) Wills & J. Bruhl (*Homopholis proluta* (F. Muell.) R.D. Webster; *Panicum prolutum* F. Muell.)

Australia. Drought-resistant, forage, see *Transactions and Proceedings of the Victorian Institute for the Advancement of Science* 1854/1855: 46. 1855 and *The Australian Paniceae (Poaceae)* 96. 1987, *Australian Systematic Botany* 13: 465, f. 2b. 2000.

W. pungens Wills & J. Bruhl

Australia. See *Australian Systematic Botany* 13: 463-465, f. 1, 2c. 2000.

W. subxerophila (Domin) Wills & J. Bruhl (*Panicum subxerophilum* Domin)

Australia. Perennial, fodder, see *Bibliotheca Botanica* 85: 316. 1915, *Australian Systematic Botany* 13: 465, f. 2d. 2000.

Whiteochloa C.E. Hubbard

For the Australian botanist Cyril Tenison White, 1890–1950, plant collector, from 1917 to 1950 Government Botanist of Queensland, (maternal) grandson of Frederick Manson Bailey (1827-1915), among his publications are *Contributions to the Queensland flora*. Brisbane 1921–1946, *A Contribution to Our Knowledge of the Flora of Papua* (British New Guinea). Brisbane 1922, "The Bailey family and its place in the botanical history of Australia." *J. Hist. Soc. Qld.* 3: 362-383. 1944, and "Ligneous plants collected in New Caledonia by C.T. White in 1923." *J. Arnold Arb.* 7: 74-103. 1926. John Frederick Bailey wrote "Introduction of economic plants into Queensland." *Proc. R. Soc. Queensland.* 22: 77-102. 1910; Frederick Manson

Bailey was the author of *Catalogue of the Indigenous and Naturalized Plants of Queensland*. Brisbane 1890, *The Queensland Flora*. Brisbane 1899-1905, and *Comprehensive Catalogue of Queensland Plants Both Indigenous and Naturalised*. Brisbane [1913]; see Charles Edward Hubbard (1900-1980), *Proceedings of the Royal Society of Queensland.* 62: 111. (Aug.) 1952; J.H. Barnhart, *Biographical notes upon botanists.* 3: 485 and 1: 104. 1965; Dennis John Carr (1915-) and S.G.M. Carr (1912-1988), eds., *People and Plants in Australia*. 1981; J. Lanjouw and F.A. Stafleu, *Index Herbariorum*. Part II, *Collectors A–D*. Regnum Vegetabile vol. 2. 1954; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey*. Library of the New York Botanical Garden. 432. 1973; N. Hall, *Botanists of the Eucalypts*. Melbourne 1978 and Supplement 1980.

About 6 species, Australia. Panicoideae, Panicodae, Paniceae, annual or short-lived perennial, variable, herbaceous, tufted or decumbent, auricles absent, ligule a fringed membrane, plants bisexual, open inflorescence paniculate or racemose, spikelets dorsally or slightly laterally compressed, pedicels and inflorescence branches without articulations, glumes 2 very unequal, upper glume 5-7-nerved, lemma mucronate with a curved apiculum, lower lemma membranous to coriaceous, palea present, 2 lodicules free and fleshy, 3 stamens, ovary glabrous, 2 stigmas, open habitats, savannah, sandy alluvial soils, similar to *Panicum*, type *Whiteochloa semitonsa* (F. Muell. ex Benth.) C.E. Hubb., see *Proceedings of the Royal Society of Queensland* 62(12): 111. 1952, *Brunonia* 1: 69–93. 1978, *Austrobaileya* 2(1): 21-24. 1984, *Austral. Paniceae (Poaceae)* 1-322. 1987, L. Tran-Nguyen, K.R. Blanche, B. Egan and K.S. Gibb, "Diversity of phytoplasmas in northern Australian sugarcane and other grasses." *Plant Pathology* 49(6): 666-679. Dec 2000, K.R. Blanche, L.T.T. Tran-Nguyen and K.S. Gibb, "Detection, identification and significance of phytoplasmas in grasses in northern Australia." *Plant Pathology* 52(4): 505-512. Aug 2003.

Species

W. airoides (R. Br.) Lazarides (*Panicum airoides* R. Br.; *Panicum airoides* Fluegge ex Nees, nom. illeg., non *Panicum airoides* R. Br.)

Australia. Upper glume glabrous, palatable when young, cover plant, coastal sand dunes, see *Prodromus Florae Novae Hollandiae* 190. 1810, *Flora Brasiliensis seu Enumeratio Plantarum* 2: 175. 1810 and *Brunonia* 1: 73. 1978.

W. biciliata Lazarides

Australia. Increaser species, little-grazed, see *Brunonia* 1: 85, f. 4. 1978.

W. capillipes (Benth.) Lazarides (*Panicum capillipes* Benth.)

Australia, Indonesia. Upper glume glabrous, see *Flora Australiensis* 7: 484. 1878 and *Brunonia* 1: 79, t. 3. 1978, *Blumea* 41: 209. 1996.

W. cymbiformis (Hughes) B.K. Simon (*Panicum cymbiforme* Hughes)

Australia. Palatable when young, see *Bulletin of Miscellaneous Information Kew* 1923(9): 323. 1923, *Austrobaileya* 2(1): 23. 1984.

W. multiciliata Lazarides

Australia. Annual, slender, erect or decumbent, purplish to reddish spikelets, see *Brunonia* 1: 88, f. 5. 1978.

W. semitonasa (F. Muell. ex Benth.) C.E. Hubb. (*Panicum semitonsum* F. Muell. ex Benth.; *Paspalidium semitonsum* (F. Muell. ex Benth.) Hughes)

Australia. Inflorescence racemose with paired spikelets, see *Flora Australiensis* 7: 483. 1878 and *Bulletin of Miscellaneous Information Kew* 1923(2): 317. 1923, *Proceedings of the Royal Society of Queensland* 62: 111. 1952.

Wiestia Boiss. = *Boissiera* Hochst ex Steud., *Wiestia* Sch. Bip. (Compositae, alt. Asteraceae)

Bromeae, see *Flora* 21: 25. 1838, *Nomenclator Botanicus. Editio secunda* 1: 213. 1840, *Flora Orientalis* 5: 559. 1884 and *Grasses of Burma, Ceylon, India and Pakistan* 451–452. 1960.

Wilhelmsia K. Koch = *Rostraria* Trin., *Wilhelmsia* Rchb. (Caryophyllaceae)

Pooideae, Poeae, Aveninae, type *Wilhelmsia caucasiana* K. Koch, see *Fundamenta Agrostographiae* 149, t. 13. 1820, *Linnaea* 1: 59–60. 1826, *Conspectus Regni Vegetabilis* 206. 1828, *Linnaea* 21(4): 400. 1848 and *Taxon* 9(4): 110. 1960, *Zlaci SSSR* 267. 1976, *Contributions from the United States National Herbarium* 48: 604, 694. 2003.

Wilibald-Schmidtia Conrad = *Danthonia* DC., *Sieglingia* Bernh.

For the German (born in Bohemia) botanist Franz Wilibald Schmidt, 1764–1796, professor of botany, physician; see C.S. Rafinesque, *Autikon botanikon. Icones plantarum select. nov. vel rariorum*, etc. 187. Philadelphia 1840; E.D. Merrill, *Index rafinesquianus*. 76. 1949; J.H. Barnhart, *Biographical notes upon botanists*. 3: 231. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917–1933; R. Zander, F. Encke, G.

Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Danthonioideae, Danthonieae, see Johann Jacob Bernhardt (1774–1850), *Systematisches Verzeichnis der Pflanzen welche in der Gegend um Erfurt gefunden werden ...* 20, 44. Erfurt 1800, *Flore Française ... Troisième Édition* 3: 32. 1805, *Systema Vegetabilium* 2: 690. 1817, Friedrich August II, King of Saxony (1797–1854), *Pflanzen und Gebirgsarten von Marienbad*, gesammelt und beschrieben von dem Prinzen Friedrich ... und von J.W. von Goethe ...; ergänzt, und mit einem Anhang über die andern naturhistorischen Verhältnisse des Curortes herausgegeben von C.J. Heidler. 38. Prag 1837 [also *Naturhistorische Darstellung des Curortes Marienbad.*] and *Contributions from the United States National Herbarium* 46: 170–177, 594, 635. 2003.

Wilibalda Sternb. ex Roth = *Coleanthus* J. Seidel, *Wilibalda* Roth

For the German (born in Bohemia) botanist Franz Wilibald Schmidt, 1764–1796, professor of botany, physician; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 231. 1965; Jonas C. Dryander, *Catalogus bibliothecae historico-naturalis Josephi Banks*. London 1800; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917–1933; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

Pooideae, Poeae, Agrostidinae, see *Flora des Österreichischen Kaiserthumes* 1: 12. 1816, *Systema Vegetabilium* 2: 11, 276. 1817, *Enumeratio Plantarum Phaenogamarum in Germania* 1(1): 92. 1827 and *Contributions from the United States National Herbarium* 48: 237, 694. 2003.

Willbleibia Herter = *Willkommia* Hack.

For the German botanist Heinrich Moriz Willkomm, 1821–1895, explorer, traveler, naturalist, 1874–1892 professor of botany and director of the Botanical Garden of the University of Prague; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 501. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; Stafleu and Cowan, *Taxonomic literature*. 7: 336–346. 1988; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917–1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 438. 1972.

Chloridoideae, Cynodonteae, Traginae, type *Willbleibia texana* (Hitchc.) Herter, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden*

Länder 30: 145. 1888 and *Contributions from the United States National Herbarium* 41: 239. 2001.

Willkommia Hack. = *Willbleibia* Herter

For the German botanist Heinrich Moriz Willkomm, 1821-1895, explorer, traveler, naturalist, 1874-1892 professor of botany and director of the Botanical Garden of the University of Prague; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 501. 1965; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. 1993; Stafleu and Cowan, *Taxonomic literature*. 7: 336-346. 1988; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 438. 1972; H. Dolezal, *Portug. Acta Biol.* 6: 257-323. 1959 and 7: 324-551. 1961.

About 2-4 species, northern America, U.S., Texas, southern tropical Africa. Chloridoideae, Cynodonteae, Chloridinae, or Chloridoideae, Cynodonteae, Traginae, annual or perennial, herbaceous, unbranched, unarmed, tufted, stoloniferous, mat-forming, auricles absent, glandular, ligule a fringe of hairs, plants bisexual, inflorescence spicate nondigitate with several racemes, floret 1 bisexual with pungent callus, spikelets shortly pedicellate dorsally compressed, 2 glumes very unequal rounded membranous, upper glume deciduous, thinly membranous lemma acute to obtuse and shortly awned, awn minute and straight, palea glabrous or silky, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, open habitats, savannah, sandy areas, taxonomic confusion, type *Willkommia sarmentosa* Hack., see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 145. 1888 and Hong Qian, "Floristic analysis of vascular plant genera of North America north of Mexico: characteristics of phytogeography." *Journal of Biogeography* 26(6): 1307-1321. Nov 1999, *Contributions from the United States National Herbarium* 41: 239. 2001.

Species

W. annua Hack. (*Willbleibia annua* (Hack.) Herter)

Africa. Annual, tufted, spikelets elliptic, upper glume scarid, growing in moist soils, sandy places, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 146. 1888 and *Phyton* 7: 296. 1958.

W. newtonii Hack. (*Willbleibia newtonii* (Hack.) Herter)

Africa. Perennial, short-lived, tufted, stoloniferous, geniculate, spikelets elliptic, on sandy soils, see *Phyton* 7: 296. 1958.

W. sarmentosa Hack. (*Craspedorhachis sarmentosa* (Hack.) Pilg.; *Willbleibia sarmentosa* (Hack.) Herter)

Africa, Zambia, Zimbabwe. Perennial, stoloniferous, mat-forming, tufted, spikelets elliptic, upper glume prickly, found in moist sandy areas, marshes, pans, see *Verhandlungen des Botanischen Vereins für die Provinz Brandenburg und die angrenzenden Länder* 30: 145. 1888 and *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 27. 1947, *Phyton* (Buenos Aires) 7: 296. 1958.

W. texana Hitchc. (*Craspedorhachis texana* (Hitchc.) Pilg.; *Willbleibia texana* (Hitchc.) Herter)

Northern America, U.S. Floret with callus acute, lemma mucronate, see *Botanical Gazette* 35: 283, f. 1-2. 1903, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 27. 1947.

W. texana Hitchc. var. ***stolonifera*** Parodi (*Craspedorhachis texana* var. *stolonifera* (Parodi) Pilg.; *Willbleibia stolonifera* (Parodi) Herter)

Argentina, U.S. See *Physis. Revista de la Sociedad Argentina de Ciencias Naturales* 8: 78. 1925, *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 74: 27. 1945, *Flora de la Provincia de Buenos Aires* 4(2): 1-624. 1970.

W. texana Hitchc. var. ***texana*** (*Craspedorhachis texana* var. *texana*)

Northern America, U.S.

Windsoria Nuttall = *Tridens* Roem. & Schult.

For the British (b. Yorks) botanist John Windsor, 1787-1868 (d. Manchester), surgeon, Fellow of the Linnean Society 1814, a friend of Nuttall; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 506. 1965; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 749. 1994; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 266. Oxford 1964; Jeannette Elizabeth Graustein, *Thomas Nuttall, Naturalist. Explorations in America, 1808-1841*. Cambridge, Harvard University Press 1967.

Chloridoideae, Cynodonteae, see *Flora Pedemontana* 2: 246. 1785, *Flora Boreali-Americana* 1: 68-69. 1803, *Syn. Pl.* 2: 9. 1806 [1807] *Essai d'une Nouvelle Agrostographie* 77, f. 15. 1812, *A Sketch of the Botany of South-Carolina and Georgia* 1(2): 165. 1816, *Systema Vegetabilium* 2: 34, 599. 1817, *The Genera of North American Plants* 1: 70. 1818, *A Catalogue of Plants, ... City of New York* 91. 1819, *Manual of Botany for North America. Fifth edition* 447. 1829, *Transactions of the American Philosophical Society, new series*, 5: 147. 1835 and *Contributions from the United States National Herbarium* 41: 16, 121-122, 224-230, 239. 2001.

Wirtgenia Döll = *Paspalum* L., *Wirtgenia* Sch. Bip. (Asteraceae), *Wirtgenia* H. Andres (Ericaceae)

Panicoideae, Paniceae, Paspalinae, see *Systema Naturae*, *Editio Decima* 846, 855, 1359. 1759, *Species Graminum* 1828-1836, *Flora* 25: 435. 1842, *Flora Brasiliensis* 2(2): 40. 1877 and *Contr. U.S. Natl. Herb.* 12: 116. 1908, *Verh. Bot. Vereins Prov. Brandenburg* 56: 61. 1914, *Contributions from the United States National Herbarium* 24(8): 435. 1927, *Contributions from the United States National Herbarium* 46: 443-527, 635. 2003.

Woodrowia Stapf = *Dimeria* R. Br.

To commemorate the Kew gardener George Marshall Woodrow, 1846-1911, director of Botanical Survey of Western India 1893-1899; see Isaac Henry Burkill, *Chapters on the History of Botany in India*. Delhi 1965; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 755. 1994; M.P. Nayar, *Meaning of Indian Flowering Plant Names*. 365. Dehra Dun 1985.

Type *Woodrowia diandra* Stapf, see *Prodromus Florae Novae Hollandiae* 204. 1810, *Hooker's Icones Plantarum* 25: t. 2447. 1896 and *Journal and Proceedings of the Asiatic Society of Bengal* n.s. 7: 515. 1912.

X

Xanthanthos St.-Lag. = *Anthoxanthum* L.

Greek *xanthos* “yellow” and *anthos* “flower.”

Pooideae, Poeae, Phalaridinae, see *Species Plantarum* 1: 28. 1753, *Annales de la Société Botanique de Lyon* 7: 119. 1880 and *Regnum Veg.* 127: 19. 1993, *Contributions from the United States National Herbarium* 48: 111-115, 694. 2003.

Xanthonanthus St.-Lag. = *Anthoxanthum* L., *Xanthanthos* St.-Lag.

A word play, an anagram of the generic name *Anthoxanthum* L., Greek *xanthos* “yellow” and *anthos* “flower.”

Pooideae, Poeae, Phalaridinae, see *Species Plantarum* 1: 28. 1753, *Annales de la Société Botanique de Lyon* 7: 119. 1880 and *Regnum Veg.* 127: 19. 1993, *Contributions from the United States National Herbarium* 48: 111-115, 694. 2003.

Xenochloa Lichtenstein ex J.J. Roemer & J.A. Schultes = *Phragmites* Adans., *Xenochloa* Roemer & Schultes

Greek *xenos* “a host, foreigner, alien, stranger, guest” and *chloe*, *chloa* “grass.” Arundinoideae, Arundineae, see *Species Plantarum* 1: 81. 1753, *Familles des Plantes* 2: 34, 559. 1763, *Systema Vegetabilium* 2: 29, 501. 1817, *Fundamenta Agrostographiae* 134. 1820 [1822] *Flora Rossica* 4(13): 393. 1852 and *Die Systematik und Anatomie der Arundineae* 54-55. 1961, *Contributions from the United States National Herbarium* 46: 537-539, 635. 2003.

Xerochloa R. Br. = *Kerinozoma* Steud.

Greek *xeros* “dry” and *chloe*, *chloa* “grass,” referring to the habitat.

About 4 species, Asia, Australia. Panicoideae, Panicodae, Paniceae, or Spinificinae, annual or perennial, woody or herbaceous, tufted, persistent, erect, decumbent, auricles absent, ligules fringed, plants bisexual, inflorescence glo-

bose or paniculate, on upper culm node fascicle of several single racemes, spikelets in bunches subtended by bracts, 1-2 glumes membranous, lower lemma grooved, upper lemma fusiform and beaked, palea present, lodicules absent, ovary glabrous, 2 stigmas, 2-3 staminodes, foliage and grain grazed at all stages, salt-tolerant, pioneer and colonising plants on coastal salt flats and inland clay pans, open areas, floodplains, grassland, type *Xerochloa imberbis* R. Br., see *Species Plantarum* 2: 1045. 1753, Robert Brown, *Prodromus Florae Novae Hollandiae*. 196. 1810, *Synopsis Plantarum Glumacearum* 1: 358. 1854 [1855] and *Flora of Australia* 43: 122-123, 170, 217, 242, 275. 2002.

Species

X. barbata R. Br. (*Andropogon barbatus* (R. Br.) Raspail)

Australia. Perennial, subterete leaf blades, see *Annales des Sciences Naturelles (Paris)* 5: 307. 1825.

X. cheribon (Steud.) Ohwi (*Kerinozoma cheribon* Steud.)
Japan. See *Synopsis Plantarum Glumacearum* 1: 358. 1854 and *Bulletin of the Tokyo Science Museum* 18: 4. 1947.

X. imberbis R. Br.

Australia. Perennial, subterete leaf blades, an increaser species, salt-tolerant.

in English: rice grass

X. laniflora Benth.

Australia. Annual, flat leaf blades, salt-tolerant, found in seasonally flooded river beds, riverbanks, see *Flora Australiensis: A Description ...* 7: 502. 1878.

Xerodanthia J.B. Phipps = *Danthoniopsis* Stapf

Greek *xeros* “dry,” *anthos* “flower.”

Arundinelleae, type *Xerodanthia barbata* (Nees) J.B. Phipps, see *Florae Africae Australioris Illustrationes Monographicae* 269. 1841, *Flora Orientalis* 5: 552. 1884 and *Hooker's Icones Plantarum* 31: t. 3075. 1916, *Kirkia* 5(2): 230-231, 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967.

Xiphagrostis Coville = *Miscanthus*
Andersson

From the Greek *xiphos* “a sword” plus *agrostis*, *agrostidos* “grass, weed, couch grass.”

Panicoideae, Andropogoneae, Saccharinae, see *Sertum Austro-Caledonicum* 13, t. 18. 1824, *Mémoires de l'Académie Impériale des Sciences de Saint Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles* 2(3): 333. 1832, *Öfversigt af Förhandlingar: Kongl. Svenska Vetenskaps-Akademiens* 12: 165-166. 1855, *Bulletin de l'Herbier Boissier* 7(9): 639. 1899 and *Contributions from the United States National Herbarium* 9: 399-400. 1905, *U.S. Department of Agriculture Bureau of Plant Industry Bulletin* 137: 17. 1909, *U.S. Dept. Agric. Bull.* 772: 254. 1920, *Contributions from the United States National Herbarium* 46: 294-295, 550-557, 635. 2003.

Xyochlaena Stapf = *Melinis* P. Beauv.,
Tricholaena Schrader, *Tricholaena* Schrad. ex
Schult. & Schult.f.

Greek *xyo* “to scrape, to make smooth, to carve wood” and *chlaena*, *chlaenion* “cloak, blanket.”

Panicoideae, Paniceae, Melinidinae, type *Xyochlaena monachne* (Trin.) Stapf, see *Systema Vegetabilium* 2: 457. 1817, *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 86. Leipzig 1821, *Mantissa* 2: 8, 163. 1824, *Synopsis Plantarum Glumacearum* 1: 37. 1855 [1853], *Proceedings Botanical Soc. Edinburgh* 12: 97. 1882 and *Flora of Tropical Africa* 9: 16. 1917, *Hooker's Icones Plantarum* 31: t. 3098. 1922, *Annals of the South African Museum* 16: 395. 1925, *Flora of Tropical Africa* 9: 332. 1930, *Flora of Tropical East Africa* 451-898. 1982, *Bibliotheca Botanica* 138: 1-149. 1988, *Contributions from the United States National Herbarium* 46: 287, 623. 2003.

Xystidium Trin. = *Perotis* Aiton

Perhaps from the Greek *xyston* “a spear, dart, pole” or from *xystis*, *idos* “a rich and soft robe, a garment.”

Cynodonteae, type *Xystidium maritimum* Trin., see *Hortus Kewensis* 1: 85. 1789, *Fundamenta Agrostographiae* 102, t. 2. 1820, *Reliquiae Haenkeanae* 1(4-5): 228. 1830.

Y

Yadakeya Makino = *Pseudosasa* Makino ex Nakai

Bambusoideae, Bambuseae, Arundinariinae, type *Yadakeya japonica* (Siebold & Zucc. ex Steud.) Makino, see *Synopsis Plantarum Glumacearum* 1: 334. 1854 and *Journal of Japanese Botany* 2(4): 15. 1920, *Journal of the Arnold Arboretum* 6(3): 150. 1925, *Journal of Japanese Botany* 6(7): 15-16. 1929, *Taxon* 6(7): 207. 1957, *Contributions from the United States National Herbarium* 39: 106-107. 2000.

Yakirra Lazarides & R. Webster

The Aboriginal (in Australia) name for a species of the genus.

About 5-7 species, Australia, Myanmar (Burma). Panicoideae, Panicodae, Paniceae, annual or short-lived perennial, herbaceous, caespitose, narrow leaves flat and linear to lanceolate, plants bisexual, inflorescence racemose or paniculate sometimes unbranched, panicle open and terminal or more or less contracted and axillary, dorsally compressed spikelets long-pedicellate and solitary, upper floret borne on a cylindrical internode, glumes very unequal, sterile lemma stipitate, second glume and sterile lemma beaked, fertile lemma hard and smooth, elongated rachilla internode between the glumes, elongated rachilla internodes between the florets, 2 membranous auricles never adnate to the lemma base, elaiosomes, sometimes referred to *Ichnanthus* P. Beauv., seeds ground with water and baked, type *Yakirra pauciflora* (R. Br.) Lazarides & R.D. Webster, see *Essai d'une Nouvelle Agrostographie* 56. 1812 and *Austral. J. Bot.* 33: 579-583. 1985, Michael Lazarides and Robert D. Webster, in *Brunonia*. 7(2): 292. (Mar) 1985, *Flora of Australia* 43: 223, 242, 276. 2002.

Species

Y. australiensis (Domin) Lazarides & R.D. Webster (*Ichnanthus australiensis* (Domin) Hughes; *Panicum australiense* Domin; *Panicum pauciflorum* R. Br. var. *fastigiatum* Benth.)

South Australia, Western Australia, Northern Territory, Queensland. Short-lived, low, dense, several stems, leaf blades lanceolate, panicle more or less contracted and axillary, spikelets acute and glabrous, first glume acute and

broad, second glume acuminate, fertile lemma smooth and glossy, a 2-lobed appendage below the palea, fodder, see *Prodromus Florae Novae Hollandiae* 191. 1810, *Flora Australiensis: A Description ...* 7: 483. 1878 and *Journal of the Linnean Society, Botany* 41: 271, t. 10, 11, f. 7, 8-12. 1912, *Bulletin of Miscellaneous Information Kew* 1923(9): 329. 1923, *Brunonia* 7(2): 293. 1985.

in English: bunch panic

Y. australiensis (Domin) Lazarides & R.D. Webster var. *australiensis*

Australia.

Y. australiensis (Domin) Lazarides & R.D. Webster var. *intermedia* R.D. Webster

Australia. See *The Australian Paniceae (Poaceae)* 266. 1987.

Y. foliolosa (Munro ex Hook.f.) Clayton (*Ichnanthus foliolosus* Munro ex Hook.f.; *Panicum foliolosum* (Munro ex Hook.f.) Stieber)

Myanmar. See *The Flora of British India* 7(21): 61. 1897 [1896] and *Systematic Botany* 7: 113. 1982, *Kew Bulletin* 42(2): 403. 1987.

Y. majuscula (F. Muell. ex Benth.) Lazarides & R.D. Webster (*Ichnanthus majusculum* (F. Muell. ex Benth.) Hughes; *Panicum majusculum* F. Muell. ex Benth.; *Panicum majusculum* var. *pilosum* Domin)

Australia, Queensland. Short-lived, fodder, see *Flora Australiensis: A Description ...* 7: 482. 1878 and *Bibliotheca Botanica* 85: 310, f. 68. 1915, *Bulletin of Miscellaneous Information Kew* 1923(9): 329. 1923, *Brunonia* 7(2): 295. 1985.

Y. muelleri (Hughes) Lazarides & R.D. Webster (*Ichnanthus muelleri* Hughes; *Panicum muelleri* (Hughes) Lazarides)

Western Australia. See *Bulletin of Miscellaneous Information Kew* 1923(9): 329. 1923, *Australian Journal of Botany* 7: 335. 1959, *Brunonia* 7(2): 294. 1985.

Y. nulla Lazarides & R.D. Webster

Australia, Northern Territory. See *Brunonia* 7(2): 295. 1985.

Y. pauciflora (R. Br.) Lazarides & R.D. Webster

Australia.

Y. websteri B.K. Simon

Australia, Queensland. See *Austrobaileya* 3(4): 602, f. 9. 1992.

Ystia Compère = *Schizachyrium* Nees

Named after Rd. Père Vanderyst (van der Yst), Belgian agrostologist.

Panicoideae, Andropogoneae, Andropogoninae, type *Ystia stagnina* Compère, see *Flora Brasiliensis seu Enumeratio Plantarum* 2(1): 331-332. 1829, *Plantae Junghuhnianae* 3: 359. 1854 and *Bulletin du Jardin Botanique de l'État* 33: 400. 1963, *Contributions from the United States National Herbarium* 46: 560-569, 635. 2003.

Yuezhuea Yi = *Chimonobambusa* Makino, *Menstruocalamus* Yi, *Monstruocalamus* Yi, *Sinobambusa* Makino ex Nakai

From the Chinese yueyue-zhu shu, yueyue-zhu, yue yue zhu.

Bambusoideae, Bambuseae, Arundinariinae, or Bambusoideae, Bambuseae, Shibataeinae, ornamental, hedges, type *Yuezhuea sichuanensis* (Yi) Yi, see *Journal of the Arnold Arboretum* 6(3): 152. 1925, *Taxon* 6(7): 209. 1957, *Agriculture Handbook* 193: i-iii, 1-74. 1961, *Bulletin of Botanical Research, Harbin* 2(4): 105-107, f. 4. 1982, *J. Bamboo Res.* 6(3): 33. 1987, *Kew Bulletin* 44(2): 349-367. 1989, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991, *Journal of Bamboo Research* 11(1): 38, 40, 41, f. 1. 1992, *A Compendium of Chinese Bamboo* 221. 1994, *Flora Reipublicae Popularis Sinicae* 9(1): i-xxvi, 1-761. 1996, D. Ohrenberger, *The Bamboos of the World*, Elsevier Science B.V., Amsterdam, The Netherlands. 1999, *Contributions from the United States National Herbarium* 39: 36, 113. 2000.

Yushania Keng f. = *Burmabambus* Keng f., *Butania* Keng f., *Fargesia* Franch., *Otatea* (McClure & E.W. Sm.) Calderón & Soderstrom, *Sinarundinaria* Nakai

Of Yushan, Taiwan.

About 60-84 species, Asia and Africa, Taiwan to Sabah, Malaysia, China. Bambusoideae, Bambusodae, Bambuseae, perennial, sympodial, arbuscular, shrubby, woody and persistent, diffuse, erect below and nodding above, 1-7-many branches at each node, nodes not swollen, nodes supranodal ridge with spine-like aerial roots below, rhizomes pachymorph and invasive, rhizome long necks hollow or solid, diffuse or pluricaespitose, walls relatively thin, flowering culms leafy, leaves lanceolate, culm sheaths persistent, culm

internodes hollow, plants bisexual and unarmed, flowering semelautant, inflorescence paniculate borne terminally on leafy branches, spikelets several-to many-flowered, bisexual spikelets, 2-14 florets, 2 glumes, 3 lodicules, 3 stamens, 2-3 stigmas plumose, temperate bamboos, forming dense thickets difficult to control, waxy internodes usually rough, culms are harvested for fencing, found in mountain forests, some taxonomic confusion concerning this genus, type *Yushania niitakayamensis* (Hayata) Keng f., see *J. Linn. Soc. Bot.* 19: 31. 1881 and *Journal of Japanese Botany* 11(1): 1. 1935, *Acta Phytotaxonomica Sinica* 6(4): 355-356. 1957, *Primates* 10: 103-148. 1969, *Smithsonian Contributions to Botany* 9: 1-148. 1973, *Smithsonian Contributions to Botany* 44: 1-27. 1980, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 92. 1981, *J. Bamb. Res.* 1: 15-18. 1982, *Flora Novo-Galiciana* 14: 1-436. 1983, *Bolet. del Instituto de Botánica Universidad de Guadalajara* 5(10): 1-20. 1984, *Journal of Bamboo Research* 5(1): 8, 44. 1986, *Florae Indicae Enumeratio: Monocotyledonae, Bambusoideae* Botanical Survey of India, Flora of India, Series 4, 272-283. Calcutta 1989, *Kew Bulletin* 44(2): 349-367. 1989, *Cuscatlania* 1(6): 1-29. 1991, *Journal of Bamboo Research* 14(2): 4. 1995, *Plant Resources of South-East Asia (PROSEA) (Pl Res SEAs)* 7: 154. 1995, *Novon* 8(4): 408-428. 1998, *Bamboos of the World* 153-166. 1999, *Contributions from the United States National Herbarium* 39: 57, 92, 112-113. 2000, *Molecular Ecology* 9(9): 1247-1252. Sep 2000, *Am. J. Bot.* 88: 1058-1064, 1065-1070. 2001, *Weed Biology and Management* 1(2): 81-88. June 2001, Lisa K. M. Garnier, Jacques Durand and Isabelle Dajoz, "Limited seed dispersal and microspatial population structure of an agamosperous grass of West African savannahs, *Hyparrhenia diplandra* (Poaceae)." *Am. J. Bot.* 89: 1785-1791. 2002, *Molecular Ecology* 12(4): 809-818. Apr 2003.

Species

***Y. ailuropodina* Yi**

China. See *Journal of Bamboo Research* 15(3): 6-9, f. 3. 1996.

Y. alpina (K. Schumann) Lin (*Arundinaria alpina* K. Schum.; *Sinarundinaria alpina* (K. Schum.) Chao & Renvoize)

Africa. Shoots eaten by chimpanzees, see *Die Pflanzenwelt Ost-Afrikas* 5: 117. 1895 and *Bulletin of the Taiwan Forest Research Institute* 248: 14. 1974, *Kew Bulletin* 44(2): 361. 1989.

in English: African alpine bamboo

Y. ambositrensis (A. Camus) Ohrenb. (*Arundinaria ambositrensis* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 78: 8. 1931.

Y. anceps (Mitford) Lin (*Arundinaria anceps* Mitford; *Sinarundinaria anceps* (Mitford) C.S. Chao & Renvoize)

India, Nepal. See *The Bamboo Garden* 181. 1896 and *Bulletin of the Taiwan Forest Research Institute* 248: 9. 1974, *Kew Bulletin* 44(2): 359. 1989.

Y. andropogonoides (Hand.-Mazz.) T.P. Yi (*Arundinaria andropogonoides* (Hand.-Mazz.) Hand.-Mazz.; *Indocalamus andropogonoides* Hand.-Mazz.; *Sinarundinaria andropogonoides* (Hand.-Mazz.) Keng f.)

China, Yunnan. See *Anzeiger der Akademie der Wissenschaften in Wien. Mathematische-naturwissenschaftliche Klasse. Wien* 62: 255. 1925, *Symbolae Sinicae* 7(5): 1272-1273. 1936, *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal of Bamboo Research* 5(1): 66. 1986.

Y. auctiaurita Yi

China. See *Acta Botanica Yunnanica* 13(2): 145-146, pl. 2. 1991.

Y. baishanzuensis Z.P. Wang & G.H. Ye

China. Young culm scabrous, dark purple sheath shedding late, sheath blade hastate or linear, sheath auricles present and indistinct, sheath ligule truncate and finely ciliate, leaves glabrous linear-lanceolate or ovate lanceolate, see *Journal Nanjing University. Natural Sciences Edition* 1983(3): 494, f. 4, 5. 1983, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

Y. basihirsuta (McClure) Z.P. Wang & G.H. Ye (*Indocalamus basihirsutus* McClure; *Sinarundinaria basihirsuta* (McClure) C.D. Chu & C.S. Chao; *Yushania longipilosa* Wen & S. C. Chen)

China, Guangdong. See *Sunyatsenia* 6(1): 35-37. 1941, *Acta Phytotaxonomica Sinica* 18(1): 22. 1980, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 92. 1981, *Bamboo Research in Asia* 1: 4. 1981, *Journal of Bamboo Research* 4(2): 13, f. 4. 1985.

Y. baviensis (Balansa) J.J.N. Campbell ex Ohrnb. (*Arundinaria baviensis* Bal.; *Chimonobambusa baviensis* (Bal.) Nakai; *Pleioblastus baviensis* (Bal.) T.Q. Nguyen)

Vietnam. See *Journal de Botanique* (Paris) 4: 27. 1890 and *Journal of the Arnold Arboretum* 6: 151. 1925, *Bot. Zhurn.* 75(2): 225. 1990.

Y. bojieiana Yi

China, Yunnan. Sheath persistent shorter than internode, 6-8 branches on each node, in evergreen hardwood forests, see *Journal of Bamboo Research* 5(1): 8, f. 1. 1986.

Y. brevipaniculata (Hand.-Mazz.) T.P. Yi (*Arundinaria brevipaniculata* Hand.-Mazz.; *Arundinaria chungii* Keng; *Fargesia brevipaniculata* (Hand.-Mazz.) Z.Y. Li & D.Z. Fu; *Sinarundinaria brevipaniculata* (Hand.-Mazz.) Keng f.; *Sinarundinaria chungii* (Keng) Keng f.; *Yushania chungii* (Keng) Z.P. Wang & G.H. Ye)

Asia temperate, China, Sichuan. Sheath persistent or falling late, sheath blade slender and long lanceolate, sheath auricle sickle-shaped and densely silky, leaves lanceolate, food for panda, see *Kaiserliche Akademie der Wissenschaften in Wien. Mathematisch-Naturwissenschaftliche Klasse. Anzeiger.* 57: 237. 1920, *Icon. Pl. Omeiensium* 1(2): t. 53. 1944, *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 93. 1981, *Journal of Bamboo Research* 5(1): 44. 1986, *Vascular Plants of the Hengduan Mountains* 2: 2163. 1994.

Y. brevis Yi

China, Yunnan. Culm wall thick, solid, sheath persistent, 3-6 branches on each node, shoot greenish, sheath auricles absent, sheath ligule truncate, leaves linear-lanceolate, in evergreen hardwood forests, see *Journal of Bamboo Research* 5(1): 11, t. 2. 1986.

Y. burmanica Yi

Burma. See *Journal of Bamboo Research* 14(2): 1, f. 1. 1995.

Y. canoviridis G.H. Ye & Z.P. Wang (*Fargesia canoviridis* Z.Y. Li; *Monospatha canoviridis* (G.H. Ye & Z.P. Wang) W.T. Lin)

China. Sheath greenish, sheath auricle present, small and narrow leaf, similar to *Yushania farinosa* Wang & Ye, see *Acta Phytotaxonomica Sinica* 27(3): 228, pl. 1, f. 1-4. 1989, *Journal of Bamboo Research* 13(4): 1-3, f. 1. 1994, *Journal of South China Agricultural University* 16(3): 49. 1995, *Keys to the Vascular Plants of the Wuling Mountains*, edited by Wang Wen Tsai, Li Zheng Yu, Li Liang Qian, Su Zhi Yun, Wang Ying Ming, Wu Te-Lin and Zhao Zuo Cheng, Beijing 1995.

Y. cartilaginea Wen

China, Guangxi. Sheath hard coriaceous much shorter than internode and ciliate, sheath auricle ovate to falciform, sheath ligule indistinct, leaves broadly lanceolate, see *Journal of Bamboo Research* 3(2): 28, t. 4. 1984.

Y. cava Yi

China, Sichuan, Shimian. Smooth, glabrous, hollow, 4-9 branches per node, sheath caducous, sheath blade erect, sheath auricles absent, sheath ligule concave, leaves linear-lanceolate, food for giant panda, see *Journal of Bamboo Research* 4(2): 33-34, f. 13. 1985.

Y. chingii Yi (*Sinarundinaria chingii* (T.P. Yi) K.M. Lan)

China, Guangxi, Tianlin, Guizhou. Erect or slanting, internodes usually scabrous, a pruinose ring below joint, 1 branch at each node, sheath persistent, sheath blade linear-lanceolate, sheath auricles falciform, sheath ligule truncate, leaves lanceolate to oblong-lanceolate, see *Journal of Bamboo Research* 5(1): 45, f. 16. 1986, *Flora Guizhouensis* 5: 290. 1988.

Y. chungii (Keng) Z.P. Wang & G.H. Ye (*Arundinaria chungii* Keng; *Sinarundinaria chungii* (Keng) Keng f.; *Yushania brevipaniculata* (Hand.-Mazz.) T.P. Yi)

China. See *Icon. Pl. Omeiensium* 1(2): t. 53. 1944, *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 93. 1981.

Y. collina Yi (*Fargesia collina* (T.P. Yi) Z.Y. Li & D.Z. Fu)

China, Sichuan. Young culm with a pruinose ring below joint, 6-10 branches on each node, sheath persistent, no sheath auricles, sheath ligule truncate or concave, leaves lanceolate, see *Journal of Bamboo Research* 5(1): 13, t. 3. 1986, *Vascular Plants of the Hengduan Mountains* 2: 2164. 1994.

Y. complanata Yi (*Fargesia canoviridis* Z.Y. Li; *Fargesia canoviridis* (T.P. Yi) Z.Y. Li; *Fargesia complanata* (T.P. Yi) Z.Y. Li; *Sinarundinaria complanata* (T.P. Yi) K.M. Lan)

China, Guizhou. Sheath caducous, 3-5 branches on each node, no sheath auricles, sheath ligule concave, leaves lanceolate, see *Journal of Bamboo Research* 5(1): 15, f. 4. 1986, *Flora Guizhouensis* 5: 290. 1988, *Keys to the vascular plants of the Wuling mountains* 581. 1995.

Y. confusa (McClure) Z.P. Wang & G.H. Ye (*Arundinaria nitida* Mitford ex Stapf; *Fargesia confusa* (McClure) Z.Y. Li & D.Z. Fu; *Indocalamus confusus* McClure; *Sinarundinaria confusa* (McClure) Keng f.)

China, Sichuan, Yunnan, Jiangxi. Culm sheath caducous purplish, see *Bulletin of Miscellaneous Information Kew* 109: 20. 1896 and *Lingnan University Science Bulletin* 9: 20. 1940, *Technical Bulletin of the National Forestry Research Bureau* 8: 13. 1948, *Journal Nanjing University. Natural Sciences Edition* 1981(1): 92. 1981, *Vascular Plants of the Hengduan Mountains* 2: 2164. 1994.

Y. crassicollis Yi

China, Yunnan. Sheath persistent longer than internode and densely silky, 6-11 branches on each node of the culm, sheath blade linear-lanceolate, sheath auricles absent, sheath ligule concave, 3-6 leaves on each twig, leaves lanceolate, edible shoot, culms used in weaving, see *Bulletin of Botanical Research* 8(4): 68-69, f. 3. 1988.

Y. crispata Yi (*Fargesia crispata* (T.P. Yi) Z.Y. Li & D.Z. Fu)

China, Sichuan. Culm nearly solid, pruinose when young, longitudinal stripes, sheath persistent coriaceous, sheath blade linear-lanceolate, sheath auricles absent, sheath ligule arcuate or truncate, leaves linear-lanceolate, culm used for house buildings, handles, for weaving, in hardwood forest, see *Journal of Bamboo Research* 19(1): 26. 1991, *Vascular Plants of the Hengduan Mountains* 2: 2163. 1994.

Y. dafengdingensis Yi

China. See *Journal of Bamboo Research* 15(3): 9-12, f. 4. 1996.

Y. densifolia (Munro) R.B. Majumdar (*Arundinaria densifolia* Munro; *Chimonobambusa densifolia* (Munro) Nakai; *Sinarundinaria densifolia* (Munro) C.S. Chao & Renvoize)

Sri Lanka. See *Transactions of the Linnean Society of London* 26(1): 32. 1868 and *Journal of the Arnold Arboretum* 6: 151. 1925, *Smithsonian Contr. Bot.* 72: 12. 1988, *Kew Bulletin* 44(2): 354. 1989, *Fl. Ind. Enumerat.-Monocot.* 282. 1989.

Y. elegans (Kurz) R.B. Majumdar (*Arundinaria elegans* Kurz; *Burmabambus elegans* (Kurz) Keng f.; *Sinarundinaria elegans* (Kurz) C.S. Chao & Renvoize; *Sinobambusa elegans* (Kurz) Nakai)

Burma. See *Journal of the Asiatic Society of Bengal. Part 2. Natural History* 42: 249. 1873 and *Journal of the Arnold Arboretum* 6(3): 152. 1925, *Journal of Bamboo Research* 1(2): 40. 1982, *Kew Bulletin* 44(2): 357. 1989, *Fl. Ind. Enumerat.-Monocot.* 282. 1989.

Y. elevata Yi

China, Yunnan. Sheath shedding late, sheath shorter than internode, 10-20 branches per node, no sheath auricles, sheath ligule concave, leaves narrow lanceolate, culm used in fencing, in hardwood forests, along stream banks, see *Journal of Bamboo Research* 5(1): 17, t. 5. 1986.

Y. exilis Yi

China, Sichuan. Sheath persistent, 5-8 branches on each node of the culm, slender twigs, no sheath auricles, sheath ligule truncate, leaves linear-lanceolate, in evergreen broad-leaved forest, see *Journal of Bamboo Research* 5(1): 20, t. 6. 1986.

Y. falcataurita Hsueh & Yi

China, Yunnan. Culm wall thick nearly solid, pruinose under the node, 5-15 branches per node, sheath shedding late, sheath auricles falciform, sheath ligule concave, leaves lanceolate, see *Journal of Bamboo Research* 5(1): 22, f. 7. 1986.

Y. farcticaulis Hsueh & Yi (*Fargesia farcticaulis* (T.P. Yi) Z.Y. Li & D.Z. Fu)

China, Yunnan. Internode nearly solid, mostly branches fascicled, sheath persistent, sheath auricles absent, sheath ligule arcuate or truncate, leaves lanceolate, see *Journal of Bamboo Research* 5(1): 24, f. 8. 1986, *Vascular Plants of the Hengduan Mountains* 2: 2164. 1994.

Y. farinosa Wang & Ye

China, Yangming, Hunan. Culm sheath blackish purple shedding late, sheath blade narrow-lanceolate to ribbon-like, no sheath auricles, sheath ligule purplish green, 3-5 leaves on each twig, leaf long ovate-lanceolate, see *Journal Nanjing University. Natural Sciences Edition* 1981(1): 93, f. 1. 1981.

Y. flexa Yi

China, Sichuan. Similar to *Yushania exilis* Yi, strips used in weaving, found in hardwood forests, along stream banks, on hill slopes, see *Acta Phytotaxonomica Sinica* 25(6): 480-481, pl. 1. 1987.

Y. glandulosa Hsueh & Yi

China, Yunnan. Pruinose ring under node, sheath persistent and coriaceous, shorter than internode, sheath blade linear-lanceolate, sheath auricle and cilia absent, sheath ligule drooping, 1-3 leaves on each twig, leaves ovate-lanceolate and glabrous, see *Bulletin of Botanical Research* 8(4): 73-76, f. 6. 1988.

Y. glauca Yi & T.L. Long

China, Sichuan. Young culm pruinose and glabrous, 3-5 branches at each node, sheath persistent oblong yellowish, sheath blade triangular or lanceolate, sheath auricles purplish red and prominent, leaves lanceolate, a food species for giant panda, see *Journal of Bamboo Research* 8(2): 33-36, f. 2. 1989.

Y. grammata Yi (also spelled *grummata*)

China, Yunnan. Sheath persistent shorter or longer than internode, 1 branch at each node, small sheath auricles deciduous, sheath ligule truncate, leaves lanceolate, culm used for house buildings and for making musical instruments, see *Journal of Bamboo Research* 9(3): 30-33, f. 3. 1990.

Y. hirsuta (Munro) R.B. Majumdar (*Arundinaria hirsuta* Munro; *Sinarundinaria hirsuta* (Munro) Chao & Renvoize)

India, Sikkim, Bhutan. Culm sheaths solid, see *Transactions of the Linnean Society of London* 26(1): 30. 1868 and *Fl. Ind. Enumerat.-Monocot.* 282. 1989, *Kew Bulletin* 44: 355. 1989.

Common names: hima, ustoh

Y. hirticaulis Wang & Ye

China, Jiangxi. Silky and pruinose, 3 or more branches per node, dark purple sheath persistent or shedding late, sheath blade triangular or broadly lanceolate, small sheath auricle slanting, sheath ligule dark purple slightly arcuate and ciliate, 3-5 leaves on each twig, leaves linear-lanceolate, see *Journal Nanjing University. Natural Sciences Edition* 1981(1): 94, f. 2. 1981.

Y. humbertii (A. Camus) Ohrnb. (*Arundinaria humbertii* A. Camus; *Sinarundinaria humbertii* (A. Camus) C.S. Chao & Renvoize)

Madagascar. See *Bulletin de la Société Botanique de France* 73: 624-625. 1927, *Kew Bulletin* 44(2): 362. 1989.

Y. lacera Q.F. Zheng & K.F. Huang

China. Young culm pruinose, 3-6 branches per node, sheath coriaceous shorter than internode, sheath auricles absent or papillose, 3-5 leaves on each twig, leaves lanceolate, see

Acta Phytotaxonomica Sinica 22(3): 218-219, pl. 1, f. 2a-g. 1984.

Y. laetevirens Yi

China, Yunnan. Internode pruinose when young, 5-9 branches on each node, sheath persistent, no sheath auricles and no cilia, sheath ligule truncate, leaves linear-lanceolate, see *Journal of Bamboo Research* 9(3): 34-35, f. 4. 1990.

Y. levigata Yi

China, Yunnan. Sheath persistent, 4-15 branches per node, no sheath auricles and no cilia, sheath ligule truncate or concave, leaves lanceolate or linear-lanceolate, shoot not edible, culms for papermaking and weaving, see *Journal of Bamboo Research* 5(1): 27, f. 9. 1986.

Y. lineolata Yi

China, Sichuan. Pruinose when young, sheath persistent or shedding late, 3-7 branches per node, sheath blade linear-lanceolate, food for giant panda, see *Journal of Bamboo Research* 4(2): 31-33, f. 12. 1985.

Y. longiaurita Q.F. Zheng & K.F. Huang

China. When young pruinose under the node, 1-5 branches on each node, sheath shorter than internode, leaf lanceolate, 5-9 leaves on each twig, leaf lanceolate, see *Acta Phytotaxonomica Sinica* 22(3): 217, pl. 1, f. 1a-f. 1984.

Y. longissima K.F. Huang & Q.F. Zheng (*Yushania longissima* T.P. Yi, nom. illeg., non *Yushania longissima* K.F. Huang & Q.F. Zheng)

China, Tibet. Young culm densely silky, pruinose under the node, 3-7 branches on each node, sheath shedding late, sheath coriaceous, no sheath auricles and no cilia, sheath ligule truncate, leaves linear-lanceolate or lanceolate, found on acid soil, see *Wuyi Science Journal* 2(2): 20, f. 3. 1982, *Journal of Bamboo Research* 2(2): 46, f. 11. 1983.

Y. longiuscula Yi

China, Yunnan. Internode solid, 8-13 fascicled branches on each node, sheath persistent, no sheath auricles, sheath ligule truncate or concave, leaves lanceolate, found in hardwood forest, see *Journal of Bamboo Research* 5(1): 30, f. 10. 1986.

Y. mabianensis Yi

China, Sichuan, Mabian. Purple spot when young, 1 or 3-4 branches per node, sheath persistent, auricles falciform, sheath ligule truncate, leaves lanceolate, in broad-leaved forest, see *Journal of Bamboo Research* 5(1): 47, f. 17. 1986.

Y. maculata Yi (*Fargesia maculata* (T.P. Yi) Z.Y. Li & D.Z. Fu)

China, Yunnan. Young culm pruinose, sheath persistent densely silky, sheath blade linear-lanceolate, no sheath auricles, sheath ligule truncate, leaves linear-lanceolate, see *Journal of Bamboo Research* 5(1): 33, f. 11. 1986, *Vascular Plants of the Hengduan Mountains* 2: 2163. 1994.

Y. madagascariensis (A. Camus) Ohrnb. (*Arundinaria madagascariensis* A. Camus; *Sinarundinaria madagascariensis* (A. Camus) C.S. Chao & Renvoize)

Madagascar. See *Bulletin du Muséum National d'Histoire Naturelle* 30: 394. 1924, *Kew Bulletin* 44(2): 362. 1989.

Y. maling (Gamble) R.B. Majumdar (*Arundinaria maling* Gamble; *Fargesia maling* T.P. Yi; *Fargesia maling* (Gamble) H. Simon ex D. McClintock; *Sinarundinaria maling* (Gamble) C.S. Chao & Renvoize; *Yushania maling* (Gamble) D.C. McClint. & Stapleton, nom. illeg., non *Yushania maling* (Gamble) R.B. Majumdar; *Yushania maling* (Gamble) Demoly, nom. illeg., non *Yushania maling* (Gamble) R.B. Majumdar)

India, Sikkim, Darjeeling, Bhutan, East Nepal. Erect, long rhizome, culm sheaths papery, spikelets long and narrow, see *Bulletin of Miscellaneous Information Kew* 1912: 139. 1912, *Kew Bulletin* 44: 356. 1989, *Fl. Ind. Enumerat.-Monocot.* 283. 1989, *Acta Botanica Yunnanica* 11(1): 37-38, f. 2. 1989, *Bamboo Soc. Newsl.* 12: 10. 1991, *Fl. Ind. Enumerat.-Monocot.* 15: 6. 1992.

Common names: maling, pheung

Y. marojejensis (A. Camus) Ohrnb. (*Arundinaria marojejensis* A. Camus)

Madagascar. See *Bulletin de la Société Botanique de France* 97: 84. 1950.

Y. megalothyrsa (Hand.-Mazz.) Wen (*Arundinaria megalothyrsa* Hand.-Mazz.; *Gaoligongshania megalothyrsa* (Hand.-Mazz.) D.Z. Li, J.R. Xue & N.H. Xia; *Indocalamus megalothyrsa* (Hand.-Mazz.) C.S. Chao & C.D. Chu; *Monocladus megalothyrsus* (Hand.-Mazz.) T.P. Yi)

China, Yunnan. See *Symbolae Sinicae* 7(5): 1270-1271. 1936, *J. Nanjing Techn. Forest. Prod.* 1981(3): 44. 1981, *Journal of Bamboo Research* 6(3): 34. 1987, *Acta Phytotaxonomica Sinica* 26(3): 212. 1988, *Journal of Bamboo Research* 12(2): 54. 1993, *Acta Phytotaxonomica Sinica* 33(6): 598, 600-601, pl. 1. 1995.

Y. menghaiensis Yi

China, Yunnan. Glossy, green, pruinose when young, 5-20 branches at each node, sheath persistent yellowish, sheath blade linear-lanceolate to triangular, no sheath auricles, sheath ligule truncate or concave, leaves lanceolate, growing in evergreen hardwood forest, see *Acta Botanica Yunnanica* 10(4): 441-443, f. 4. 1988.

Y. microphylla (Munro) R.B. Majumdar (*Arundinaria microphylla* Munro; *Sinarundinaria microphylla* (Munro) Chao & Renvoize)

Asia tropical, Nepal, Bhutan. Internodes smooth, waxy rings below nodes, culm sheaths tough, forming colonies, forage, animal food, alpine to subalpine, see *Transactions of the Linnean Society of London* 26(1): 32. 1868 and *Fl. Ind. Enumerat.-Monocot.* 283. 1989, *Kew Bulletin* 44(2): 354. 1989, *Rheedea* 7(11): 11-14. 1997.

Common names: mingma, meg

Y. mitis Yi

China, Yunnan. Culm pruinose when young, glabrous, 3-7 branches on each node, sheath caducous with purplish brown spots, no sheath auricles and no cilia, sheath ligule truncate, leaves narrow-lanceolate, edible shoot, culm tough and pliable used for weaving, see *Journal of Bamboo Research* 9(3): 35-37, f. 5. 1990.

Y. monophylla Yi & Yang (*Gelidocalamus monophyllus* (T.P. Yi & B.M. Yang) B.M. Yang; *Gelidocalamus stellatus* T.H. Wen)

China, Hunan. Glabrous, 1 or more leaves on each twig, sheath persistent yellowish brown, sheath blade erect linear-lanceolate, no auricles and no cilia, sheath ligule truncate, leaves lanceolate, see *Journal of Bamboo Research* 1(1): 22-23, f. 1. 1982, *Journal of Bamboo Research* 5(1): 50, f. 18. 1986, *Natural Science Journal of Hunan Normal University* 12(4): 338. 1989, *Acta Phytotaxonomica Sinica* 29(5): 452-455. 1991.

Y. multiramea Yi

China, Yunnan. Culm pruinose when young, solid, sheath persistent, sheath yellowish brown and coriaceous, sheath blade linear-lanceolate, no auricles and no cilia, sheath ligule truncate or concave, leaves lanceolate, see *Bulletin of Botanical Research* 8(4): 69-71, f. 4. 1988.

Y. niitakayamensis (Hayata) Keng f. (*Arundinaria niitakayamensis* Hayata; *Arundinaria oiwakensis* Hayata; *Indocalamus niitakayamensis* (Hayata) Nakai; *Indocalamus oiwakensis* (Hayata) Nakai; *Pleioblastus niitakayamensis* (Hayata) Ohki; *Pleioblastus oiwakensis* (Hayata) Ohki; *Pseudosasa oiwakensis* (Hayata) Makino & Nemoto; *Sasa niitakayamensis* (Hayata) E.G. Camus; *Sinarundinaria niitakayamensis* (Hayata) Keng f.)

Taiwan, the Philippines. Sympodial, erect, base arcuate, 1-3 or more branches on each node, sheath shedding late or persistent, leaves lanceolate, 3 stamens, ornamental, useful for erosion control, found in open grassland, forest, see *Botanical Magazine* 15(168): 18. 1901, *Botanical Magazine* 21(242): 49-50. 1907, *Les Bambusées* 24. 1913, *Icones plantarum formosandarum nec non et contributiones ad floram formosanam*. 6: 137-138, f. 48. 1916, *Journal of the Arnold Arboretum* 6(3): 145, 148, 150. 1925, *Botanical Magazine* (Tokyo) 43: 202. 1929, *Flora of Japan* edition 2, 1389. 1931, *Science Education [Rika Kyô-iku]* 15(6): 67. Tokyo 1932, *Flora of Japan*, Supplement 863. 1936, *Technical Bulletin of the National Forestry Research Bureau* 8: 14. 1948, *Acta Phytotaxonomica Sinica* 6(4): 357. 1957, *Claves Generum et Specierum Graminearum Primarum Sinicarum Appendice Nomenclatione Systematica* 153. 1957, J.Y. Hsiao and L.H. Rieseberg, "Population genetic structure of *Yushania niitakayamensis* (Bambusoideae, Poaceae) in Taiwan." *Molecular Ecology* 3: 201-208. 1994, J.Y. Hsiao and S.M. Lee, "Genetic diversity and microgeo-

graphic differentiation of Yushan cane (*Yushania niitakayamensis*; Poaceae) in Taiwan." *Molecular Ecology* 8(2): 263-270. Feb 1999.

in the Philippines: utod

Y. niitakayamensis (Hayata) Keng var. *microcarpa* (Camus) H.L. Li (*Sasa niitakayamensis* var. *microcarpa* E.G. Camus; *Yushania niitakayamensis* var. *microcarpa* (Hayata) Li)

The Philippines. See *Les Bambusées* 24. 1913, *Woody Fl. Taiwan* 915. 1963.

Y. oblonga Yi

China, Yunnan. Stem knee-jointed, smooth, glossy, pruinose, sheath persistent and yellowish brown, sheath blade erect and linear-lanceolate, sheath auricles oblong purple, sheath ligule truncate, leaves oblong-lanceolate, shoots edible, culm used for weaving and making flutes, see *Journal of Bamboo Research* 5(1): 52, f. 19. 1986.

Y. pachyclada Yi

China, Sichuan. Culm pruinose when young, solid, 1 or 2-5 branches on each node, sheath persistent, no auricles and no cilia, sheath ligule truncate or arcuate, leaves lanceolate, in evergreen hardwood forest, see *Journal of Bamboo Research* 5(1): 54, t. 20. 1986.

Y. pantlingii (Gamble) R.B. Majumdar (*Arundinaria pantlingii* Gamble; *Butania pantlingii* (Gamble) Keng f.; *Semiarundinaria pantlingii* (Gamble) Nakai; *Sinarundinaria pantlingii* (Munro) Chao & Renvoize; *Sinarundinaria pantlingii* (Gamble) C.S. Chao & Renvoize) (for the British botanist Robert Pantling, 1856/1857-1910 (Egypt), Kew gardener, Curator Royal Botanic Gardens Calcutta and Deputy Superintendent of the Government Cinchona Plantation in Bengal, illustrated Sir George King's (1840-1909) "The Orchids of the Sikkim-Himalaya." in *Annals of the Royal Botanic Garden, Calcutta*. 8(1-4). 1898; see J.H. Barnhart, *Biographical notes upon botanists*. 3: 47. 1965; E.M. Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. 1917-1933)

Bhutan. Culms very tough, solid, long and narrow spikelets, used for flooring, forest, see *Annals of the Royal Botanic Garden, Calcutta*. 7: 129, t. 118. 1896 and *Journal of the Arnold Arboretum* 6(3): 150-151. 1925, *Journal of Bamboo Research* 1(2): 42. 1982, *Fl. Ind. Enumerat.-Monocot*. 283. 1989, *Kew Bulletin* 44(2): 359. 1989.

Common name: zing

Y. papillosa (W.T. Lin) Ohrnb. (*Sinarundinaria papillosa* W.T. Lin; *Yushania papillosa* (W.T. Lin) W.T. Lin)

China. See *Journal South China Agricultural University* 14(3): 111-112. 1993, *Journal South China Agricultural University* 16(3): 49. 1995.

Y. pauciramificans Yi

China, Yunnan. Green, dark purple, pruinose when young, solid, 1 or 2-5 branches on each node, sheath persistent shorter than internode, sheath blade linear-lanceolate, no sheath auricles, sheath ligule truncate or concave, leaves ovate-lanceolate, see *Bulletin of Botanical Research* 8(4): 71-73, f. 5. 1988.

Y. perrieri (A. Camus) Ohrnb. (*Arundinaria perrieri* A. Camus)

Madagascar. See *Bulletin du Muséum National d'Histoire Naturelle* 30: 395. 1924.

Y. polytricha Hsueh & Yi

China, Yunnan. Culm pruinose when young, solid, 1-5 branches on each node, sheath persistent yellowish, purple sheath auricles falciform, sheath ligule truncate or arcuate, leaves lanceolate, in evergreen hardwood forest, see *Journal of Bamboo Research* 5(1): 58, f. 21. 1986.

Y. punctulata Yi

China, Sichuan. Young culm purplish, a pruinose ring below each joint, dark purple sheath persistent, sheath blade linear-lanceolate, no sheath auricles, sheath ligule truncate, leaves lanceolate or linear-oblong, in evergreen hardwood forest, see *Journal of Bamboo Research* 5(1): 59, f. 22. 1986.

Y. qiaojaensis Hsueh & Yi

China, Yunnan. Culm pruinose when young, 5-6 branches at each node, sheath caducous yellowish brown shorter than internode, sheath blade erect linear-triangular, no sheath auricles, sheath ligule truncate, leaves lanceolate or linear-lanceolate, see *Journal of Bamboo Research* 5(1): 35, f. 12. 1986.

Y. qiaojaensis Hsueh & Yi f. *nuda* Yi

China, Yunnan, Yongshan. Back of sheath glabrous, shoot edible, strips for weaving, see *Journal of Bamboo Research* 9(3): 42-43. 1990.

Y. qiaojaensis Hsueh & Yi var. *nuda* Yi

China, Yunnan, Yongshan. Back of sheath glabrous, shoot edible, strips for weaving, see *Journal of Bamboo Research* 9(3): 42-43. 1990.

Y. qiaojaensis Hsueh & Yi var. *qiaojaensis*

China, Yunnan.

Y. racemosa (Munro) R.B. Majumdar (*Arundinaria racemosa* Munro; *Fargesia racemosa* (Munro) Yi; *Sarocalamus racemosus* (Munro) Stapleton)

India, Bhutan, China. See *Transactions of the Linnean Society of London* 26(1): 17. 1868 and *Journal of Bamboo Research* 2(1): 39. 1983, *Fl. Ind. Enumerat.-Monocot*. 283. 1989, *Kew Bulletin* 44: 352. 1989, *Cell and Chromosome Research* 15(3): 12. 1992, *Novon* 14(3): 347. 2004.

Y. rigidula (A. Camus) Ohrnb. (*Arundinaria rigidula* E.G. Camus; *Indocalamus rigidulus* (E.G. Camus) Nakai)

China. See *Notulae Systematicae. Herbarium du Museum de Paris* 2(8): 243. 1912, *Journal of the Arnold Arboretum* 6: 148. 1925.

Y. rolloana (Gamble) Yi (*Arundinaria rolloana* Gamble; *Sinarundinaria rolloana* (Gamble) C.S. Chao & Renvoize) (for James Rollo)

India, Naga Hills. See *Annals of the Royal Botanic Garden. Calcutta*. 7: 24, t. 23. 1896 and *Journal of Bamboo Research* 2(1): 39. 1983, *Kew Bulletin* 44(2): 355. 1989.

Y. rugosa Yi (*Sinarundinaria rugosa* (T.P. Yi) K.M. Lan)

China, Guizhou. Young culm purplish, a pruinose ring below each joint, 1-2 nodes basal with aerial roots, 1 branch on each node, shoot purplish red, sheath persistent, no sheath auricles, sheath ligule concave, leaves oblong-lanceolate or ovate-elliptic, old leaves wrinkled, see *Journal of Bamboo Research* 5(1): 61, t. 23. 1986, *Flora Guizhouensis* 5: 292. 1988.

Y. straminea Yi

China, Yunnan. Young culm purplish, a pruinose ring below each joint, 1-3 branches on each node, sheath persistent shorter than the internode, sheath auricles falciform, sheath ligule truncate, culm used in house building and in weaving, see *Journal of Bamboo Research* 9(3): 37-40, f. 6. 1990.

Y. suijiangensis Yi

China, Yunnan. Sheath persistent oblong, 1-4 branches on each node, sheath blade linear-lanceolate, no sheath auricles and no cilia, sheath ligule truncate, leaves oblong-lanceolate, culm used for the abacus, see *Journal of Bamboo Research* 9(3): 40-42, f. 7. 1990.

Y. tessellata (Holtum) S. Dransf. (*Racemobambos tessellata* Holtum)

Sabah, Mt. Kinabalu, Malaysia. Sympodial, erect, open tufted, thin walls, reduced terminal floret, 2 glumes with acuminate tips, palea 2-keeled with hairy keels, 3 lodicules, 3 stamens, ornamental, common in mountain forest, see *Gard. Bull. Sing.* 26: 211. 1973 [also *Gardens' Bulletin, Straits Settlements* 26(2): 211. 1973], *Kew Bulletin* 37(4): 661-679. 1983, S. Dransfield, "The bamboos of Sabah." *Sabah Forest Record* 14: 78-80. 1992.

Y. uniramosa Hsueh & Yi (*Sinarundinaria uniramosa* (J.R. Xue & T.P. Yi) K.M. Lan)

China, Guizhou. Young culm purplish, solid, a pruinose ring below each joint, sheath persistent, sheath blade narrow-lanceolate, no sheath auricles and no cilia, sheath ligule truncate or concave, leaves lanceolate, see *Journal of Bamboo Research* 5(1): 64, f. 24. 1986, *Flora Guizhouensis* 5: 292. 1988.

Y. varians Yi

China, Jiangxi. Sheath persistent, 3-7 branches on each node, leaves linear-lanceolate, see *Journal of Bamboo Research* 5(1): 38, f. 13. 1986.

Y. vigens Yi

China, Yunnan. Solid or nearly solid, culm sheath persistent, 5-9 branches, 3-5 leaves per twig, strips used in weaving, found in evergreen hardwood forests, see *Journal of Bamboo Research* 5(1): 40, f. 14. 1986.

Y. violascens (Keng) Yi (*Arundinaria violascens* Keng; *Fargesia violascens* (Keng) Z.Y. Li & D.Z. Fu; *Sinarundinaria violascens* (Keng) Keng f.)

China, Yunnan. See *Journal of the Washington Academy of Sciences* 26(10): 396. 1936, *Technical Bulletin of the National Forestry Research Bureau* 8: 14. 1948, *Journal of Bamboo Research* 5(1): 45. 1986, *Vascular Plants of the Hengduan Mountains* 2: 2163. 1994.

Y. walkeriana (Munro) R.B. Majumdar (*Arundinaria walkeriana* Munro; *Indocalamus walkerianus* (Munro) Nakai; *Sinarundinaria walkeriana* (Munro) C.S. Chao & Renvoize)

Sri Lanka. See *Transactions of the Linnean Society of London* 26(1): 21. 1868 and *Journal of the Arnold Arboretum* 6: 148. 1925, *Bull. Misc. Inform.* 1938: 126. 1938, *Smithsonian Contr. Bot.* 72: 27. 1988, *Kew Bulletin* 44(2): 354. 1989, *Fl. Ind. Enumerat.-Monocot.* 282. 1989.

Y. wardii (Bor) J.J.N. Campbell ex Ohrnb. (*Arundinaria wardii* Bor)

Burma. See *Kew Bulletin* 12(3): 418. 1958.

Y. weixiensis Yi (*Fargesia weixiensis* (T.P. Yi) Z.Y. Li & D.Z. Fu)

China, Yunnan, Weixi. Young culm pruinose, 3-5 branches on each node, sheath persistent and coriaceous, sheath blade linear-lanceolate, no sheath auricles and no cilia, sheath ligule truncate or arcuate, leaves narrowly lanceolate, see *Journal of Bamboo Research* 5(1): 42, f. 15. 1986, *Vascular Plants of the Hengduan Mountains* 2: 2164. 1994.

Y. wightiana (Nees) R.B. Majumdar (*Arundinaria hispida* Steud.; *Arundinaria wightiana* Nees; *Arundinaria wightiana* var. *hispida* (Steud.) Gamble; *Indocalamus wightianus* (Nees) Nakai; *Indocalamus wightianus* var. *hispida* (Steud.) Nakai; *Sinarundinaria wightiana* (Nees) C.S. Chao & Renvoize; *Yushania wightiana* var. *hispida* (Steud.) R.B. Majumdar & Karth.)

India. See *Linnaea* 9(4): 482. 1834, *Synopsis Plantarum Glumacearum* 1: 335. 1854, *Annals of the Royal Botanic Garden. Calcutta*. 7: 5. 1896 and *Journal of the Arnold Arboretum* 6: 149. 1925, *Kew Bulletin* 44(2): 356. 1989, *Fl. Ind. Enumerat.-Monocot.* 283. 1989.

Y. wuyishanensis Q.F. Zheng & K.F. Huang

China, Fujian. Sheath coriaceous shorter than internode yellow purplish, 3-5 branches on each node, sheath blade linear-lanceolate erect, no sheath auricles, sheath ligule truncate, 6-8 leaves on each twig, leaves lanceolate glabrous

beneath, see *Acta Phytotaxonomica Sinica* 22(3): 219-220, pl. 2. 1984.

***Y. xizangensis* Yi**

China, Tibet. Smooth, glabrous, 12-19 branches on each node, sheath shedding late or persistent and coriaceous, no sheath auricles, sheath ligule arcuate, leaves narrow-lanceolate, on riverbanks, see *Journal of Bamboo Research* 2(2): 50, t. 12. 1983.

***Y. yadongensis* T.P. Yi** (*Fargesia longissima* (Yi) T.P. Yi; *Sinarundinaria longissima* Yi; *Yushania longissima* T.P. Yi, nom. illeg., non *Yushania longissima* K.F. Huang & Q.F. Zheng)

Bhutan, India, Sikkim. Internodes scabrous, temperate forests, along riverbanks and streams, see *Enumeration of the Vascular Plants of Xizang* 387. 1980, *Wuyi Science Journal* 2(2): 20, f. 3. 1982, *Journal of Bamboo Research* 2(2): 46, f. 11. 1983, *Journal of Bamboo Research* 4(2): 33. 1985, *Flora Xizangica* 5: 34-37, f. 16. 1987.

Yvesia A. Camus

Dedicated to the French botanist Alfred Marie Augustine Saint-Yves, 1855-1933, soldier, agrostologist; see J.H.

Barnhart, *Biographical notes upon botanists*. 3: 201. 1965; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection*. 1972; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. 664-665. Philadelphia 1964; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993.

One species, Madagascar. Panicoideae, Panicodae, Paniceae, annual, slender, herbaceous, auricles absent, ligule a fringed membrane, plants bisexual, open inflorescence paniculate, spikelets single, unilateral filiform rachis, 1 glume per spikelet, lower glume absent, upper glume 3-nerved, lemmas mucronate, palea present, 2 free and fleshy lodicules, 3 stamens, ovary glabrous, 2 stigmas, a segregate from *Brachiaria*, see *Bulletin de la Société Botanique de France* 73: 687-690. 1927.

Species

***Y. madagascariensis* A. Camus**

Madagascar. See *Bulletin de la Société Botanique de France* 73: 690, f. 1. 1927.

Z

Zea L. = *Euchlaena* Schrad., *Mays* Miller, *Mayzea* Raf., *Reana* Brignoli, *Thalysia* Kuntze

From the Greek *zeia*, *zea*, name used for a kind of cereal, probably a coarse barley or a fodder for horses; Akkadian *se'u* "grain corn," Sanskrit *yava* "barley," Latin *zea*, *ae* for spelt, *Triticum spelta* L., or for rosemary; see Carl Linnaeus, *Species Plantarum*. 971. 1753 and *Genera Plantarum*. Ed. 5. 419. 1754; Carmen Aguilera, *Flora y fauna Mexicana*. Mitología y tradiciones. 148-152. México [1985]; H. Gen-aust, *Etymologisches Wörterbuch der botanischen Pflanzen-namen*. 697-698. Basel 1996.

About 1-4 species, tropical America. Panicoideae, Andropogonodae, Maydeae, or Panicoideae, Andropogoneae, Tripsacinae, annual and rarely perennial, herbaceous, solid, tall, robust, thick, unbranched, adventitious roots from the lower nodes, culm nodes glabrous, ligule a fringed membrane, leaf sheaths strongly overlapping, leaves with wavy margins, modified leaves forming the ear, plants monoecious, all the fertile spikelets unisexual, male inflorescence a terminal panicle, composed of many spike-like racemes, male and female spikelets on different inflorescences, female inflorescence cylindrical, female inflorescences axillary, male flowers in terminal tassels or terminal primary axis, female flowers on a lateral thickened elongated axis, two glumes subequal, male florets 3-staminate, palea present, lodicules absent, stamens 0, ovary glabrous, 2 stigmas, fruiting inflorescence a cob, the fruits in many rows, cultigen, cultivated fodder, ground as flour, alcohol production, grain crop species, ornamental, intergeneric hybrids with *Euchlaena*, *Saccharum* and *Tripsacum*, type *Zea mays* L., see *Species Plantarum* 2: 971-972. 1753, Philip Miller (1691-1771), *The Gardeners Dictionary*. Containing the methods of cultivating and improving all sorts of trees, plants, and flowers, .. Abridged from the last folio ed. The 4th ed., cor. and enl. London 1754, *The Gardeners Dictionary*: . . . The 8th ed., rev. and altered according to the latest system of botany ... *Zea* no. 1, 3. London 1768, J.M. da Conceição Velloso (1742-1811), *Floræ fluminensis*, seu *Descriptionum plantarum praefectura Fluminensi* sponte nascentium liber primus ad systema sexuale concinnatus. Augustissimæ dominæ nostræ per manus ill.mi ac ex.mi Aloysii de Vasconcellos & Souza Brasilæ pro-regis quarti .. sistit fr. Josephus Marianus a Conceptione Vellozo .. 1790. Flumine Januario [Rio de Janeiro] 1825, C.S. Rafinesque,

Medical Flora 2: 241. 1830, *Index Seminum* [Goettingen] 1832: 3. 1832, Matthieu Bonafous (1793-1852), *Histoire naturelle, agricole et économique du maïs*. Paris 1836, *Flora Telluriana*. 1: 85, 86. 1836 [1837], *Sylva Telluriana*. 1: 17. 1838, *Annales des Sciences Naturelles, Botanique, sér. 3* 12: 365. 1849, *Gardener's Chronicle, New Series* 443. 1883, *Revisio Generum Plantarum* 2: 794. 1891 and Collins G.N., "Structure of the maize ear as indicated in *Zea-Euchlaena* hybrids." *Journal of Agricultural Research* 17: 127-135. 1919, E.D. Merrill, *Index rafinesquianus*. 76. 1949, J.F. Doebley and H.H. Iltis, "Taxonomy of *Zea* (Gramineae). I. Subgeneric classification with key to taxa." *American Journal of Botany* 67: 982-993. 1980, *Amer. J. Bot.* 67: 994-1004. 1980, *Proceedings of the Indian National Science Academy. Part B, Biological Sciences* 50: 107-112. 1984, *Acta Botanica Sinica* 27: 460-464. 1985, *Caryologia* 38: 23-30, 331-334. 1985, *Kulturpflanze* 34: 195-205. 1986, *Cytologia* 51: 527-547. 1986, *Acta Botanica Sinica* 29: 341-346, 465-468. 1987, *Chromosoma* 96: 119-131. 1988, *Kromosomo* 50: 1635-1651. 1988, *Annals of Botany* 64: 675-681. 1989, *Acta Genetica Sinica* 17: 86-93. 1990, *Annals of the Missouri Botanical Garden* 81(4): 775-783. 1994, *Flora Mesoamericana* 6: 400-401. 1994, *Breeding Science* 45: 157-161. 1995, E.S. Buckler and T.P. Holtsford, "*Zea* systematics: ribosomal ITS evidence." *Molecular Biology and Evolution* 13: 612-622. 1996, E.S. Buckler and T.P. Holtsford, "*Zea* ribosomal repeat evolution and substitution patterns." *Molecular Biology and Evolution* 13: 623-632. 1996, *Journal of Plant Research* 110: 417-420, 1997, R.P. Willing, D. Bashe and J.P. Mascarenhas, "An analysis of the quantity and diversity of messenger RNAs from pollen and shoots of *Zea mays*." *Theoretical Applied Genetics* 75: 751-753. 1998, *Cytologia* 63: 183-190. 1998, *Annals of Botany. Oxford* 82(Suppl. A): 107-115, 1998, *Journal of Wuhan Botanical Research* 16(3): 280-282. 1998, *American Journal of Botany* 85(9): 1237-1242. 1998, A. Eyre-Walker, R.L. Gaut, H. Hilton, D.L. Feldman and B.S. Gaut, "Investigation of the bottleneck leading to the domestication of maize." *PNAS [Proceedings of the National Academy of Sciences]* 95(8): 4441-4446. Apr 1998, H. Hilton and B.S. Gaut, "Speciation and domestication in maize and its wild relatives: evidence from the globulin-1 gene." *Genetics* 150(2): 863-872. Oct 1998, *Cytologia* 64: 101-109. 1999, E.S. Buckler, "Meiotic drive of chromosomal knobs reshaped the maize genome." *Genetics* 153(1): 415-426.

- Sept 1999, S.E. White and J.F. Doebley, "The molecular evolution of terminal ear1, a regulatory gene in the genus *Zea*." *Genetics* 153(3): 1455-1462. Nov 1999, D.A. Selinger and V.L. Chandler, "Major recent and independent changes in levels and patterns of expression have occurred at the b gene, a regulatory locus in maize." *PNAS* 96(26): 15007-15012. Dec 1999, Alan R. Orr, Rahkee Kaparathi, Chester L. Dewald and Marshall D. Sundberg, "Analysis of inflorescence organogenesis in eastern gamagrass, *Tripsacum dactyloides* (Poaceae): the wild type and the gynomonocious *gsf1* mutant." *Am. J. Bot.* 88: 363-381. 2001, Anne W. Sylvester, Vickie Parker-Clark and Glen A. Murray, "Leaf shape and anatomy as indicators of phase change in the grasses: comparison of maize, rice, and bluegrass." *Am. J. Bot.* 88: 2157-2167. 2001, D.R. Piperno and K.V. Flannery, "The earliest archaeological maize (*Zea mays* L.) from highland Mexico: new accelerator mass spectrometry dates and their implications." *PNAS [Proceedings of the National Academy of Sciences]* 98(4): 2101-2103. Febr 2001, L. Lukens and J. Doebley, "Molecular evolution of the teosinte branched gene among maize and related grasses." *Molecular Biology and Evolution* 18(4): 627-638. Apr 2001, P. Tiffin and B.S. Gaut, "Sequence diversity in the tetraploid *Zea perennis* and the closely related diploid *Z. diploperennis*: insights from four nuclear loci." *Genetics* 158(1): 401-412. May 2001, Alan R. Orr, Kevin Mullen, Darcey Klaahsen and Marshall D. Sundberg, "Inflorescence development in a high-altitude annual Mexican teosinte (Poaceae)." *Am. J. Bot.* 89: 1730-1740. 2002, Zhao D.L. et al., "Corn (*Zea mays* L.) growth, leaf pigment concentration, photosynthesis and leaf hyperspectral reflectance properties as affected by nitrogen supply." *Plant and Soil* 257: 205-217. 2003, *Contributions from the United States National Herbarium* 46: 240-241, 246, 543, 613, 635-639. 2003, *Genetics* 164(3): 1087-1097. July 2003, Wei Wang, Monica Scali et al. "Male-sterile mutation alters *Zea m1* (β -expansin 1) accumulation in a maize mutant." *Sexual Plant Reproduction* 17(1): 41-47. May 2004, *Genetics* 168(1): 425-434. Sept 2004, *Am. J. Bot.* 92(2): 352-369. 2005, Renata Reinheimer, Raúl Pozner and Abelardo C. Vegetti, "Inflorescence, spikelet, and floral development in *Panicum maximum* and *Urochloa plantaginea* (Poaceae)." *Am. J. Bot.* 92: 565-575. 2005, *Am. J. Bot.* 92: 214-223, 852-858, 979-984. 2005, Roberta J. Mason-Gamer, "The β -amylase genes of grasses and a phylogenetic analysis of the Triticeae (Poaceae)." *Am. J. Bot.* 92: 1045-1058. 2005, Y. Vigouroux et al., "An analysis of genetic diversity across the maize genome using microsatellites." *Genetics* 169(3): 1617-1630. March 2005, K. Fukunaga et al., "Genetic diversity and population structure of teosinte." *Genetics* 169(4): 2241-2254. Apr 2005, *Weed Biology and Management* 5(2): 62-68. June 2005, *Journal of Agronomy and Crop Science* 191(3): 172-184. June 2005, *New Phytologist* 166(3): 917-932. June 2005, B. Hirel et al., "Physiology of maize I: A comprehensive and integrated view of nitrogen metabolism in a C4 plant." *Physiologia Plantarum* 124(2): 167-177. June 2005, Costel C. Darie et al., "Isolation and structural characterization of the Ndh complex from mesophyll and bundle sheath chloroplasts of *Zea mays*." *FEBS Journal* 272(11): 2705-2716. June 2005, *The Plant Journal* 42(6): 923-928. June 2005, W.R. Whalley et al., "Structural differences between bulk and rhizosphere soil." *European Journal of Soil Science* 56(3): 353-360. June 2005.
- Species**
- Z.* sp.
- in Mexico: cal-coshac, huashacata, maíz cacahuazintle, maíz dulce
- in Peru: hahua sara, parhuay, paru sara
- Z. diploperennis*** H.H. Iltis, Doebley & R. Guzmán (*Zea perennis* subsp. *diploperennis* (H.H. Iltis, Doebley & R. Guzmán) Greb.)
- Northern America, Mexico, Jalisco. Perennial, vulnerable species, endangered, rare, diploperennial, elongated leaves, related to corn, the most primitive member of the *Zea* strain, resistant to diseases and moisture, see *American Journal of Botany* 29(10): 817. 1942, Hugh Iltis, J. Doebley, M. Guzman & B. Pazy, "*Zea diploperennis* (Gramineae): a new teosinte from Mexico." in *Science* 203: 186-188. 1979, *Cytologia* 50: 643-648. 1985, *Verzeichnis Landwirtschaftlicher und Gärtnerischer Kulturpflanzen (ohne Zierpflanzen)* (Aufl. 2) 3: 1594. 1986, *Maydica*, v. 35, no. 2: the Professor Hugh H. Iltis. *Commemorative Issue*: an avid investigator and searcher for the origins of corn. Istituto Sperimentale per la Cerealicoltura, Bergamo 1990, Cámara-Hernández J. and S. Gambino, "Ontogeny and morphology of *Zea diploperennis* inflorescences and the origin of maize (*Zea mays* ssp. *mays*)." *Maydica* 35: 113-124. 1990, M. Eubanks, "A cross between two maize relatives: *Tripsacum dactyloides* and *Zea diploperennis* (Poaceae)." *Economic Botany* 49: 172-182. 1995, M. Eubanks, "Molecular analysis of crosses between *Tripsacum dactyloides* and *Zea diploperennis* (Poaceae)." *Theoretical and Applied Genetics* 94: 707-712. 1997, *Journal of Ecology* 86(6): 999-1020. Dec 1998, *Plant, Cell and Environment* 22(9): 1071-1083. Sep 1999, R.S. MacNeish and Mary W. Eubanks, "Comparative analysis of the Río Balsas and Tehuacán models for the origin of maize. *Latin American Antiquity* 11(1): 3-20. 2000, M. Eubanks, "The origin of maize: evidence for *Tripsacum* ancestry." *Plant Breeding Reviews* 20: 15-66. 2001, M. Eubanks, "An Interdisciplinary perspective on the origin of maize." *Latin American Antiquity* 12(1): 91-98. 2001, M. Eubanks, "The mysterious origin of maize." *Economic Botany* 55(4): 492-514. 2001, Lázaro R. Sánchez-Velásquez et al., "Population dynamics of *Zea diploperennis*, an endangered perennial herb: effect of slash and burn practice." *Journal of Ecology* 90(4): 684-692. Aug 2002, *Hereditas* 137(1): 16-19. Oct 2002, Y.H. Han et al., "Physical mapping of the 5S and 45S rDNA in teosintes." *Hereditas*

137(1): 16-19. Oct 2002, Wen-Hui Wei et al., "Genomic in situ hybridization analysis for identification of introgressed segments in alloplasmic lines from *Zea mays* x *Zea diploperennis*." *Hereditas* 138(1): 21-26. Mar 2003, *Weed Research* 43(2): 139-145. Apr 2003, *Weed Research* 43(6): 471-472. Dec 2003, María Del Carmen Molina et al., "Meiotic pairing in the hybrid (*Zea diploperennis* x *Zea perennis*) x *Zea mays* and its reciprocal." *Hereditas* 141(2): 135-141. Nov 2004.

in English: black Aztec sweet corn, diploperennial teosinte, perennial corn

in Bolivia: maíz primitivo

in Mexico: chapule, maíz chapule, milpilla

Z. luxurians (Durieu & Asch.) R.M. Bird (*Euchlaena luxurians* Durieu & Asch.; *Euchlaena luxurians* Miers; *Euchlaena mexicana* var. *luxurians* (Durieu & Asch.) Haines; *Reana luxurians* Durieu; *Zea mays* subsp. *luxurians* (Durieu & Asch.) Hugh H. Iltis; *Zea mexicana* subsp. *luxurians* (Durieu & Asch.) Greb.)

Mexico, Guatemala, northern America, southern America. Annual, related to corn, forage, animal food, trapezoidal fruitcase, ear without fleshy kernels, found in flooded areas, see *Species Plantarum* 2: 971-972. 1753, *Index Seminum* [Goettingen] 1832: 3. 1832 [alt. *Index seminum horti academici goettingensis* 3. 1832], *Linnaea* 8: Lit.-Ber. 25. 1833, *Bulletin de la Société Nationale d'Acclimatation de France* 19: 581. 1872, *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1876: 164. 1876 and *Lexikon Generum Phanerogamarum* 599. 1904, *The Botany of Bihar and Orissa* 6: 1065. 1924, *Flore de la Guayane Française* [Albert Lemée, Brest] 1: 160. 1955, *Phytologia* 23(2): 249. 1972, *Taxon* 27(4): 363. 1978, *PNAS* 76: 4220. 1979, *American Journal of Botany* 67: 1000. 1980, *Verzeichnis Landwirtschaftlicher und Gärtnerischer Kulturpflanzen (ohne Zierpflanzen)* (ed. 2) 3: 1594-1595. 1986, *American Journal of Botany* 85(9): 1237-1242. 1998, *The Plant Journal* 25(6): 687-698. Mar 2001, *Plant, Cell and Environment* 26(1): 17-36. Jan 2003, *New Phytologist* 161(1): 35-49. Jan 2004.

in English: Guatemala, Florida teosinte, southern Guatemalan teosinte, buffalo grass

in Guatemala: teozintle

in Angola: téosinte

Z. mays L. (*Mays americana* Baumg.; *Mays zea* Gaertn.; *Mayzea cerealis* Raf.; *Mayzea cerealis* var. *gigantia* Raf.; *Zea altissima* C.C. Gmel. ex Steud.; *Zea americana* Mill.; *Zea canina* S. Watson; *Zea erythrolepis* Bonaf.; *Zea gigantea* (Bonaf.) hort. ex Vilm.; *Zea hirta* Bonaf.; *Zea mais* var. *hirta* (Bonaf.) Alef.; *Zea maíz* Vell.; *Zea mays* f. *variegata* (G. Nicholson) Beetle; *Zea mays* subsp. *sacharata* (Sturtev.) Zhuk.; *Zea mays* var. *pennsylvanica* Bonaf.; *Zea*

mays var. *precox* Torr.; *Zea mays* var. *saccharata* (Sturtev.) L.H. Bailey; *Zea mays* var. *variegata* G. Nicholson; *Zea mays* var. *virginica* Bonaf.; *Zea saccharata* Sturtev.; *Zea segetalis* Salisb.; *Zea vulgaris* Mill.)

America, Mexico, Guatemala. Annual, erect, robust, solid, usually simple, overlapping sheaths, ears thick, adventitious roots developing from the lower nodes, male and female inflorescences separate on the same plant, male inflorescence a terminal panicle, female inflorescence a modified spike, ear with fleshy kernels, mature infructescence enclosed by husks, grains dentate and translucent, sometimes ears persistent on stalk, cultivated, fodder, forage, boiled ripe corn, boiled ripe grains, meal, boiled and toasted, parched corn, corn silk decoction drunk to treat kidneys, infusion of the silks said to be diuretic and a renal tonic, fermented beverages *chicha* and *chicha morada*, see *Species Plantarum* 2: 971-972. 1753, *De Fructibus et Seminibus Plantarum*. . . 1: 6, t. 1, f. 9. 1788, *Prodromus stirpium in horto ad Chapel Allerton vigentium*. 28. Londini [London] (Nov.-Dec.) 1796, *Enumeratio Stirpium Transsylvanicae* 3: 281. 1816, *A Manual of Botany for the Northern States* 500. 1818, *Nomenclator Botanicus* 1: 898. 1821, *Medical Flora* 2: 241. 1830, *Landwirtschaftliche Flora* 309. 1866, *New York State Agric. Expt. Sta. Rept.* 1884(3). 156. 1885 [alt. *Report of the New York State Agricultural Experiment Station for the year...*], George Nicholson (1847-1908), *The Illustrated Dictionary of Gardening*. . . 4: 238. 1887, *Proceedings of the American Academy of Arts and Sciences* 26: 160. 1891 and *Cyclopedia of American Horticulture* 4: 2006. 1902, *Phytologia* 38(3): 176. 1978, *Amer. J. Bot.* 67: 1001. 1980, Cheng P.C., R.I. Greyson and D.B. Walden, "Organ initiation and the development of unisexual flowers in the tassel and ear of *Zea mays*." *American Journal of Botany* 70: 450-462. 1983, H. Walter Lack, *Ein Garten Eden*. Taschen 2001.

in English: Apache red pop corn, baby Indian corn, Inca purple corn, corn silk, corn silks, corn tassels, dried peel corn, dried peeled corn, sweet corn

in Arabic: âbu-âba, assengar, assenghar, beshna, djabbart, dra shami, draia (the cob), drâ, drâ l-hamra, dhurah hindi, dura shami, dura shamiyah, el-qitâniya, gafouli masri, hdawa, hamabat, hind, hortania safra, hrîr ed-drâ, kaddab el-durra (the silky styles), l-kbal, l-kbala, l-mekkî, ligi, masar, mstoura, qawleh (the cob), qbala (the cob), qttania, qwaleh (the cob), roum, rumi, s'ar ed-drâ, shurrabet el-dura (the silky styles), taratir el-dura (the silky styles), tifsî engafulî, turkia, umm abat, umm ghfara, umm habat

in Turkey: cala puskulu, misir, misir puskulu

in Cambodia: pôôt

in India: bara jowar, bara juar, bari junri, bhuta, bhuththe, bhutta, bottah, buta, cholam, chujak, gandume makka, gandume-makkah, goinjol, gomdhan, hintahe-rumi, jagung, janar, jonar, jooa, jouar, joudra, junri, kandarus, khandarus,

khalavan, khoshahe makki, kukri, maka, makai, makai-bonda, makka, makka bhuta, makka-cholam, makka javar, makka-jonna, makka jonnalulu, makka sholam, makka-zonnalu, makkah bhuttah, makkah jari, makkah javar, makkai, makkari, makkasholam, makki, makoi, makrai, mekkejola, moka, mokka janna, mokka jonna, moka-janna, mukka, mukka-jauri, munwairingu, musukojola, nahom, piyaanbu, piyaan-buhintahe rumi, pyaungboo, yavanala, youdra, zur-ratul makkah

in Indonesia: jagung

in Laos: khauz ph'ô:d, khauz sa:li:

in Malaysia: jagong

in the Philippines: mais

in Sri Lanka: iringu, makka cholam

in Thailand: bue khe sa, fot, khaao khae, khaao phot, khao phot, khaao saalee, khao sali, phot, saalee, sali

in Angola: kivala, masa, masasi, maçaroca de milho, milho

in Benin: gbadé, gbadèsè, gbadoda, bérétobourou, tchara igbado

in East Africa: bando

in Malawi: cimanga, imanga, mapiramanga, cingoma, nahe-bwe, ifrombe

in Morocco: maïs, drâ, drâ l-hamra, turkî, drâ turkiya, turkiya, dra shqubiya, mâser, mekkâ, l-mekkî, durra sâmîyâ, mazgur, mezzgur, âmezzgur, âsengar, tasengart, lahyat lakbal, char lakbal, l-kbal, l-kbala, durra sefra, el-qitâniya, mastura, tifsî engafulî, gafulî, âbu-âbat, hamabat, s'ar ed-drâ, hrîr ed-drâ

in Somalia: arabighi

in southern Africa: kiepiemielie, mielie, milie, miljie, soet-mielie, springmielie, Turksch koorn, Turksche taruw; chaake (Sotho); godi (Shoan); ilimone (Zulu); lefela (Pedi); mavhele (Venda); umbila (Swati); umnuli (Ndebele)

in Tanzania: elubaeg

in Tunisia: ktania

in Yoruba: agbado, igbado, erinigbado, eginrin agbado, erinka, elepee, ijeere, oka, yangan

in Spanish: maiz, maiz amarillo, panizo, panocha, mazorca (the fruit)

in Bolivia: sirionó, swan, maíz, choclo, maíz morocho, maíz morocho kharcaño, cubano amarillo, cubano colorau, choclo morado, maíz cubano blanco, maíz blanco granillo, maíz blanco harinoso, maíz culle, maíz pipoca, maíz chjulpe, maíz chiriguno

in Brazil: cabelo-de-milho, milho

in Colombia: abá, ajkuá, capio, capio amarillo, maíz amarillo, maíz amarillo de parva, maíz arroz, maíz blanco, maíz carpío, maíz chicalá, maíz chocolate, maíz Cuba, maíz de harina, maíz de montaña, maíz disciplinado, maíz perla, maíz pira, maíz pollo, maíz reventón, maíz sabanero, maíz

sabanero duro, maíz yucatán, maíz yucatán blanco, maíz zarco, marik, morocho, pé y peépetaké, pichimba, yomo

in Costa Rica: ink, kwo, whu

in Ecuador: shaa, pelo de choclo

in Guatemala: axi'n, choclo, elote, ishim, ixi'm, ixiiim, ixim, maiz

in Mexico: ahtziri, bachi, batchi, boc, cabellitos de elote, cabello de elote, cabellos de elote, cabellos de maíz, cal-coshac, co-shac, cu, cushi, deta, deto, em, estilos de maíz, hapxöl, hun, icú, ishim ixi'im, ishin, ithilh, ixiiim, ixim, ixin, llucu, maíz, maíz de coyote, maíz dulce, makui, mang-cú, mile, moc, mojc, mooc, moojc, ndechjó, nhal, nih-gnó, nua, nuh-ni, pi-nii-chita, pitili, shobe, shuba, siquíl, sonú, sonucú, sunu, sunucú, tagol, tlaoli, tlaolli, tlautlín, tsiri semilla, tziri taleta, xahuat, xi'im, xooa, xuba, xupaac, yoobe, yuuri

in Nicaragua: am, ama, awási

in Paraguay: avatí, avatí morotí, avatí tupí, gueina, maiz

in Peru: chchullpi, cuchi, ubina, kcaillu-sara (= yellow corn), puca-sara (= red corn), sacjsa-sara

in West Indies: mais, mi

in Pacific: ahi

Z. mays L. subsp. *huehuetenangensis* (H.H. Iltis & Doebley) Doebley (*Zea mays* var. *huehuetenangensis* H.H. Iltis & Doebley)

Southern America, Guatemala, Huehuetenango. Related to corn, see Iltis & Doebley, *Amer. J. Bot.* 67(6): 998, 1001-1003. 1980, *Maydica* 35: 148. 1990.

Common names: Huehuetenango teosinte, San Antonio Huista teosinte

Z. mays L. subsp. *mays* (*Mays americana* Baumg.; *Mays zea* Gaertn.; *Mayzea cerealis* Raf.; *Mayzea cerealis* var. *gigantia* Raf.; *Zea alba* Mill.; *Zea altissima* C.C. Gmel. ex Steud.; *Zea americana* Mill.; *Zea amyloacea* Sturtev.; *Zea canina* S. Watson; *Zea cryptosperma* Bonaf.; *Zea curagua* Molina; *Zea erythrolepis* Bonaf.; *Zea everta* Sturtev.; *Zea gigantea* (Bonaf.) hort. ex Vilm.; *Zea glumacea* Larrañaga; *Zea gracillima* (Körn.) Hort. ex Vilmorin; *Zea hirta* Bonaf.; *Zea indentata* Sturtev.; *Zea indurata* Sturtev.; *Zea japonica* Van Houtte; *Zea macrosperma* Klotzsch; *Zea mais* var. *hirta* (Bonaf.) Alef.; *Zea maiz* Vell.; *Zea mays* convar. *ceratina* Kuleshov; *Zea mays* f. *hanakibi* Makino; *Zea mays* f. *variegata* (G. Nicholson) Beetle; *Zea mays* cv. *alba* Alef.; *Zea mays* cv. *leucodon* Alef.; *Zea mays* subsp. *amyloacea* (Sturtev.) Zhuk.; *Zea mays* subsp. *ceratina* (Kuleshov) Zhuk.; *Zea mays* subsp. *everta* (Sturtev.) Zhuk.; *Zea mays* subsp. *indentata* (Sturtev.) Zhuk.; *Zea mays* subsp. *indurata* (Sturtev.) Zhuk.; *Zea mays* subsp. *saccharata* (Sturtev.) Zhuk., also spelled *sacharata*; *Zea mays* subsp. *semidentata* Kuleshov; *Zea mays* subsp. *tunicata* Sturtev.; *Zea mays* var. *everta* (Sturtev.) L.H. Bailey; *Zea mays* var. *flavorubra*

Körn.; *Zea mays* var. *gracillima* Körn.; *Zea mays* var. *gracillima* Körn. ex Hitchc.; *Zea mays* var. *indentata* (Sturtev.) L.H. Bailey; *Zea mays* var. *indurata* (Sturtev.) L.H. Bailey; *Zea mays* var. *japonica* (Van Houtte) A.W. Wood; *Zea mays* var. *multicoloramylacea* Yarchuk; *Zea mays* var. *oryzaea* Kuleshov; *Zea mays* var. *pennsylvanica* Bonaf.; *Zea mays* var. *precox* Torr.; *Zea mays* var. *rugosa* Bonaf.; *Zea mays* var. *saccharata* (Sturtev.) L.H. Bailey; *Zea mays* var. *striatiamylacea* Leizeron; *Zea mays* var. *subnigrovio-lacea* Yarchuk; *Zea mays* var. *tunicata* Larrañaga ex A. St.-Hil.; *Zea mays* var. *variegata* G. Nicholson; *Zea mays* var. *virginica* Bonaf.; *Zea mays* var. *vulgata* Körn. & H. Werner; *Zea minima* (Körn.) Hort. ex Vilmorin; *Zea minima* (Körn. ex Hitchc.) Hort. ex Vilmorin; *Zea odontosperma* Ten.; *Zea rostrata* Bonaf.; *Zea saccharata* Sturtev.; *Zea segetalis* Salisb.; *Zea tunicata* (Larrañaga ex A. St.-Hil.) Sturtev.; *Zea vittata* Hort. ex Vilmorin; *Zea vulgaris* Mill.)

New World, Mexico, Central America. Annual, solid, coarse, stout, tall and robust, straight, growing in dense stands, thick stems filled with pith, upright, poorly developed root system, rooting at basal nodes, internodes cylindrical in the upper part, arching leaves lanceolate and acuminate, sheaths overlapping, separate staminate (male) and pistillate (female) inflorescences, male inflorescences erect in large terminal panicles, the pistillate flowers occur as spikes (cobs) rising from axils of the lower leaves enveloped by large membranous bracts, cultivated as a food crop plant for humans and domesticated animals, palatability excellent for all green matter, ground as flour, alcohol production, the main use of the whole plant is as silage, corn may accumulate free nitrates, dry weather at pollination time seriously affects pollination, period of flowering and to maturity varies greatly, maize is subject to many diseases, maize has no tolerance to flooding, crops are very susceptible to erosion, seed is diuretic and a mild stimulant, a glue is made from the starch in the seed, dried cobs used as a fuel, pith of the stems used as a packing material, a decoction of the leaves and roots is used in the treatment of strangury, dysuria and gravel, numerous cultivars are available throughout the world, cultivated in field, requires a well-drained and fertile soil, fairly drought tolerant, very susceptible to frosts, stigmas are diuretic and anti-hypertensive, see *De Fructibus et Seminibus Plantarum*. . . . 1: 6, t. 1, f. 9. 1788, *Enumeratio Stirpium Transsilvaniae* 3: 281. 1816, *A Manual of Botany for the Northern States* 500. 1818, *Nomenclator Botanicus* 1: 898. 1821, *Annales des Sciences Naturelles, Botanique* 16: 144. 1829, *Catalogo del Real Orto Botanico di Napoli* 99. 1845, *Botanische Zeitung, Berlin* 9: 718. 1851, *Landwirthschaftliche Flora* 309. 1866, *The American Botanist and Florist* 2: 409. 1870, *Proceedings of the American Academy of Arts and Sciences* 26: 160. 1891, *Bulletin of the Torrey Botanical Club* 21: 335. 1894 and *Escritos de Don Damaso Antonio Larrañaga* 1: 217,

235. 1922, *Makinoa* 2: 26. 1947, *Phytologia* 38(3): 176. 1978, *Taxon* 30(1): 17. 1987.

in English: Arabian wheat, Arabic wheat, Egyptian corn, corn, corn of Mecca, Turkish corn, Turkish grain, Indian corn, American Indian corn, Oaxacan green dent corn, dent corn, field corn, flint corn, pod corn, popcorn, Anazasi flour corn, Apache red flour corn, Cahapalote corn, Chapalote corn, Hopi white flour corn, Hopi pink flour corn, Isleta blue corn, Papago corn, maize, mealie, sweet corn

in French: maïs, blé d'Inde, blé de Turquie

in Italian: maïs, maïs zuccherino, maïs dolce, granoturco da zucchero, granoturco

in Mexico: cintl, ixim, maíz, maíz de palomitas, maíz muchito, maíz reventador, man-cú, nite, quie-xoopa, xooba, xoopa, xupac, yooba

in Nicaragua: maiz, awási

in Paraguay: guejna

in Peru: maíz, chaxu, chinqui, chroop, misha, muti, sara, sha, shinki, trigo de Indias, wawati, xequi, xofiuro, yovato

in Arabic: âbu-âbat, drâ, drâ l-hamra, dhurah hindi, dura shami, el-qitâniya, hamabat, hind, hrîr ed-drâ, l-kbal, l-kbala, l-mekkî, ligi, masar, rumi, s'ar ed-drâ, tifsî engafulî, umm abat, umm habat, zora sukaria

in Angola: kivala, masa, masasi, maçaroca de milho, milho

in Benin: bérétohourou, gbadé, gbadèsè, gbadoda, tchara igbado

in Cameroon: ansang, begbabo, gombie, kwata, mbasi, mbwe, mgbi, mukala, ncue, ngesane, ngesang, ngue, ngui, ngun, ngwi, nowie

in Dahomey: aagbado, abirri, agbade, agbadeku, agbado, agogodo komè, agogokomè, ahavo, amelaamela, bayuri, birri, ebli, gbade, gbade asanmignan, gbade wewe, gbadevovo, gbado, gbadye, gbagi, gbagen, gbo, gboli, goekun, hunvè, huvè, kevè, khevet, kito, libo nuku, lingbo nuku, maana sore, manzo, niali, nioli, sege yore

in East Africa: bando

in Gambia: manyo, tubahnyo

in Ghana: abelé, able, ablo, aboloo, aburo, aburo pata, aburo, aburo, aburo guane, aburo pa, ada kple, adzembè, agbano, agidi, ahai, ahei, ahwanya, akassa, akple, akudono, asunwuntsem, asuwuntsem, awiaburo, banku, blafo, blé, blefo, bli, bli kple, buro fua, buro hono, churamba, eburo, efiita, itita, itità, jubia, jubja, kaloana, kaluwana, kaluwandi, kamana, karuwena, kawalog, kawanah, kawoana, kenki, kiumbena, klaklo, kokodibe, kokodibo, kokonko, komi, kpeli, kple, kpledji, kpledzi, kpleti, kpoli, kpolii, kroju, kuboyo, kuboyu, molikom, mpagua, ngmda, nkalma, nkalma me, nkalma pi, numele blefo, odokono, odooli, oloto, onta, tremasugbo, ulinga, watsi kple, woyu

in Guinea: burague, burague lissenion, burague sissenyon, butali, cissénion, cissényon, diokoroni, diskorobè, emaka iseget, fula kabe, gemaka, gogo ulè, irundù, kaba, kaba dialo, kaba ulè, kababa, kabalè diua, kabè, kakabe, kakaabe, kemank, kemank kesoor, kenkaabe, kobabo, kobay, kpey, maka, makaré, mano, nyode, sagada, sataba, sissenyon, soang, susu kabè, tsakabe, tubanyo, uteflef, woloma kpway

in Guinea-Bissau: bumaadsa, bumbaawa, caba, cada, midjo bassil, ntubanyo, tubanho

in Ivory Coast: able, agbo, bereguè, dabo, didi, dodo, dudu, dyobwo, dyogo, gbai, gbisi, gbogo, gboluu, gbongan, gbosu, go, gogo, gomutu, goo, gugoo, guugoo, jojoo, kaamaana, kaamande, kaara, kabà, kien, kokotu, kpà, kpauu, kpan, kpauu, kpè, kpi, kpoou, kpoto, kpotu, lobo, muntu, nadeng, nandegge, ngkwa, nyo, padeguè, seyezug, yee, yube, zinin

in Liberia: baai, gbaazi, gbado, gbai, gbu, gbuu, kpaì, nyo, nyoru, pamu, yibo, yubwo

in Malawi: cimanga, cingoma, ifirombe, imanga, mapira-manga, nahebwe

in Mali: kabalinkè, maka, mako, mano, manyimo, manyo, manyò, manyumani, sara ulè, saraguè, sataba, semonioni

in Morocco: mais, drâ, drâ l-hamra, turkî, drâ turkiya, turkiya, dra shqubiya, mâser, mekkâ, l-mekkî, durra sâmiyâ, mazgur, mezugur, âmezgur, âsengar, tasengart, l-kbal, l-kbala, durra sefra, el-qitâniya, mastura, tifsî engafulî, gafulî, âbu-âbat, hamabat, s'ar ed-drâ, hrîr ed-drâ

in Niger: abora aen massar, aboragh-masa, kolgoti, kolkoti, kotokoali, makkari, masara, massaru

in Nigeria: aagba, aagwa aakalaaba, aakaaba, aakaagwa, aakpà, acig bangkpa, acim, adun, agbado, agbodo, agidi, agu mana, agwado, agwawa, ajo kwana, aka, aka wari, akà apura, akà bolou, akà iwesi, akà pomu, akà sele, akà tuu, akà umgbou, akakpà, akan, akarebi, akpa akpa, akpakpa, akpakpà, akpe, akpoi, akpukpa, aku kwan, akwana, alakpà, amau, ambabat, amirkpa, aniwo, anjam, ansam, anyoliga, apanau, apenua, apenwa, aponò, arasham, argem, azankpa, ba gwariya, babir, bakaa, bakar masaraa, beng shwaa, ben-kpa, burudì, butaali, daawar masar, daawa baamasaraa, daenè, dakuhye, dakusè, dakushe, dakusi, damasar, damasar, damin uku, dan masaraa, dawa da mudu, dawai, dawusè, daza, diptura, dir kwozak, duna, dura shami, egbaado, egin-rin agbado, egu, ejama, ejere, ekpai, ekpoi, ekuleghi, ekuru agbado, elepe, elepee, eleperé, erinigbado, erinka, esaama, esahma, esut, ewesi, fan, fara, fatuma, fuan, gara, garaa, gau buza, geemun masaraa, gemun masara, gombi, gombie, goyon masara, gooyon masaraa, gudus, gupara, gwaari, gwari, haigim, hakorin kaaruwà, hi buku, hibeku, ibogpoy, ibokpot, ibokpot umon, idal tibok, idanyago, idi manseri, idi masiri, igbado, igbado funfun, igbado pupu, igbadoo, igbangkpa, igu, igu maakpa, igù, ihwe, iikarabu, ijali ogbedu, ijeere, ikpakpa, ikpangkpà, ikul, ikuleghi, ikuleke, ikuleko, ikureke, ikwel, imasarim, iraga, isangkpàr, isisi

oka, ivibowen, iwesi, izitura, izon aka, jeki, jerldi, jerlidi, jinin kare, ka, ka k'pa, ka kpa, ka yiri, kaada, kaadà, kaawa, kaba, kaba ejegi, kaba ekpo, kaba liakpiagi, kagba, kagbe ekpo, kai, kائي, kan masara, kan masaraa, kharebi, khauwa, khavwa, khiya masere, khlabir, khlabiri, kilbokta, kilbotka, kkarabu, kofa, komberi ma, koom, koomo, kpakira, kpan-kara, kukpa, kul bokta, kumkpa, kumkpà, kumpkpà, kututu, kwadaggaya, kwang ufa, kwatakwali, kwon ga, leka kogi, ligi, likam, limasara, maburaki, maburkaki, madaraa, mahar, mahara, makpa, mapinawe, mapinawin, mapinawo, masar, masaraa, masaràà, masaràà kwona, masaràà waadàà, masariel, masariri, masarmi, masasar fulaanii, masarmi, masiri, mba, mbayeri, miki, misakono, mkpà, mom kwae, mu bubu, muro, naà, nchamm, nggule, nggulia, nkurung, nkwi, nsam, nsamm, nsane, nshamm, ntchamm, nyawi, nyiawie, nywat epat, nzali, obiaka, ogbado, ogbadu, oghak kpa, oka, okà, oka amiacha, oka apuakampo, oka azen, oka irabo, oka mme, oka ntà, oka ofigbo, oka uku, oka uweni, okaa, okhà, okoru mmano nto, okpat, oogbadoo, ooka, ookpa, oti agbado, panu, pimisire, pinau, pinawo, pinawu, pino, pinodi, pitigadin, puno, raawayàà, rara, rawaya, resara, ripung, sawtere, sekete, seko, shwa pa, siek, sikon, silok akpat, solak akpat, som kiva, sopa, suwa kpat, swa pa, tap, toton masara, tsaa kpat, ubaakpa, ukhooru, ukhwooru, ukuru, ukul, ukwha oru, ukwel, ukworu, umm abat, umm habat, umn abat, uuguza, vesara, waundu, yag gulumbe, yakpat, yangan, yara kapas, za ki, za kwa, zaakim, zagin, zakeim, kakin, zakpa, zakim, zampka, zampkà, zakzak, zazankan

in Senegal: basit, bumaagi, bumaaji, ekontibaba, ekuntu-baba, gimaka, gwari makka, husit, kumohra, kumorha, maka, makandé, makarbodiri, makari, makaturantu, makka, mala, mano, mbogi, mboha, mbox, mboxa, morha, mum-baawo, pumaidi, pursin, sataba, sikuntubara, sikutumbara, sitikon, wende

in Sierra Leone: agbefel, amank, dahoyo, di, diomoko, ka, kaaba, kaabe, kaba, kabe, kabena, kama, kamoe, kande, kedi, ken, khan, khen, kutanki, nkan, nkangntol, nkison, nkuskus, nyo, nyoo, nyooroo, nyoro, nyue, soa, swahu, tamanyo, tanki, teher banwuridi

in Somalia: arabighi

in southern Africa: kiepiemielie, mielie, milie, miljie, soet-mielie, springmielie, Turksch koorn, Turksche taruw; chaake (Sotho); godi (Shoan); ilimone (Zulu); lefela (Pedi); mavhele (Venda); umbila (Swati); umnuli (Ndebele)

in Tanzania: elubaeg

in Togo: abue, abuè, adebii, akokora, asyita, ayita, baafoo, baragenarede, edeefa, emerge, idale, ima de, inkalma, itarende, kpabol, likokolè, maalaa, mala'a, n'kalma, oamela, samela, tschinjamla, uamela, uutuubo, yooklo

in Tunisia: ktania

in Upper Volta: agbaata, atoreyana, bamaka, dugu, dyudy-alle, gyeeye, kam aane, kamaane, kaman, kamana,

kamanaari, kampana, kokodli, korgare, makka, mbam-mbaari, sankedo, sankoke, sie, vaghaka

in Yoruba: adun, agbado, agidi, baafoo, egbaado, eginrin agbado, ejere, ekuru agbado, elepe, elepee, eleperé, erinigbado, erinka, erinkà, igbado, igbado funfun, igbado pupu, ijeere, oka, ooka, oti agbado, sekete, yangan

in Japan: tô-morokoshi, tomorokoshi

in Okinawa: gusun-tojin

in Bhutan: geza, ashom, domba, makai

in Cambodia: paut, put

in China: yu mi, yu mi xu, yu shu shu, yu kao liang, yu mi shu

in India: bara juar, barajowar, barajuar, bari junri, bhoottah, bhuta, bhuththe, bhutta, bottah, cholam, dodda jola, gandume makka, goinjol, govinajola, hallina jola, jagung, janar, jawdra, jola, jolu, junri, kandaja, kandarus, khalavan, khoshahe makki, kukri, kundige jola, maeo, mahaakaaya, maka, makaaya, makae, makai, makaibonda, makka, makka bhuta, makka-cholam, makka javar, makka-jonna, makka sholam, makka-zonnalul, makkah bhuttah, makkah jari, makkah javar, makkasholam, makkazonnalul, matthucholam, mekke jola, mekkejola, meksikan jola, mokka, mokaajanna, mosanam, mukka-jauri, munwairingu, musukina jola, piyaan-buhintahe rumi, ponthicholam, samputantastha, shikkhalu, turaka cholam, vavanala, yavanala, zonallo, zonaloo, zondllo, zurratul makkah

in Ladakhi: ma mospe lotog

in Laos: khao phot, sali

in Malay: jagong, jagung manis, sonak jagung

in the Philippine Islands: mais, gahilang, igi, mait, mañgi, mangi, tigi

in South Laos: (people Nya Hön) plää hlii, plää hlii duan (= corn with small grains), plää hlii maat (= corn with large grains)

in Thailand: bue khe sa, fot, khaao khae, khaao phot, khaao saalee, saalee

in Vietnam: ngo, bap, ho bo, ma khau ly

Z. mays L. subsp. **mexicana** (Schrader) H.H. Iltis (*Euchlaena luxurians* Durieu & Asch.; *Euchlaena mexicana* Schrad., *Euchlaena mexicana* var. *luxurians* (Durieu & Asch.) Haines; *Reana luxurians* Durieu; *Zea canina* S. Watson; *Zea mays* subsp. *luxurians* (Durieu & Asch.) Hugh H. Iltis; *Zea mays* subsp. *mexicana* H.H. Iltis; *Zea mexicana* (Schrader) Kuntze; *Zea mexicana* (Schrader) Reeves & Mangelsd.; *Zea mexicana* subsp. *luxurians* (Durieu & Asch.) Greb.)

Mesoamerica, Northern America, Mexico, Guatemala. Related to corn, tufted, forage, green fodder, good silage, it will not tolerate droughts, see *Species Plantarum* 2: 971-972. 1753, *Index seminum horti academici goettingensis*. 3. 1832, *Linnaea* 8: Lit.-Ber. 25. 1833, *Bulletin de la Société*

Nationale d'Acclimatation de France 19: 581. 1872, *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1876: 164. 1876 and *Lexicon Generum Phanerogamarum* 599. Stuttgart 1904, *The Botany of Bihar and Orissa* 6: 1065. 1924, *American Journal of Botany* 29(10): 817. 1942, *Annual Review of Genetics* 5: 450. 1971, *Phytologia* 23(2): 249. 1972, *Taxon* 27(4): 363. 1978, *Phytologia* 38(3): 176. 1978, *American Journal of Botany* 67: 1000. 1980, *Cytologia* 51: 527-547. 1986, *Journal of Cytology and Genetics* 25: 140-143. 1990, *Cuscatlania* 1(6): 1-29. 1991, Davidse, G., Sousa S., M., & Chater, A.O. (eds.). *Flora Mesoamericana*. México City: Universidad Nacional Autónoma de México. 543 pp. (Vol. 6) 1994.

in English: Durango teosinte, Mexican teosinte, rayana grass

in French: téosinte

in Spanish: maíz silvestre

in Mexico: acece, atzitzintle, maicillo, maíz correcaminos, maíz de coyote, maíz de diente, maíz silvestre, tecointli, Teozintle

Z. mays L. subsp. **parviglumis** H.H. Iltis & Doebley (*Zea mays* var. *parviglumis* H.H. Iltis & Doebley; *Zea mexicana* subsp. *parviglumis* (H.H. Iltis & Doebley) Greb.)

Mesoamerica, Northern America, Mexico, Guatemala. Related to corn, see *Lexicon Generum Phanerogamarum* 599. 1904, *American Journal of Botany* 67: 1001. 1980.

Local name: balsas teosinte

Z. mays L. var. **huehuetenangensis** H.H. Iltis & Doebley

Southern America, Guatemala, Huehuetenango. Related to corn, see Iltis & Doebley, *Amer. J. Bot.* 67: 998, 1001-1002. 1980.

Common names: Huehuetenango teosinte, San Antonio Huista teosinte

Z. mays L. var. **mays**

Southern America.

Z. mays L. var. **parviglumis** H.H. Iltis & Doebley (*Zea mexicana* subsp. *parviglumis* (H.H. Iltis & Doebley) Greb.; *Zea mexicana* subsp. *parviglumis* H.H. Iltis & Doebley)

Mesoamerica, Northern America, Mexico, Guatemala. Related to corn, see *Lexicon Generum Phanerogamarum* 599. 1904, *American Journal of Botany* 67: 1001. 1980.

Local name: balsas teosinte

Z. mexicana (Schrader) Kuntze (*Euchlaena luxurians* Durieu & Asch.; *Euchlaena mexicana* Schrad., *Euchlaena mexicana* var. *luxurians* (Durieu & Asch.) Haines; *Zea mays* subsp. *mexicana* (Schrader) H.H. Iltis; *Zea mays* subsp. *mexicana* H.H. Iltis; *Zea mexicana* (Schrader) Reeves & Mangelsd., nom. illeg., non *Zea mexicana* (Schrader) Kuntze)

Mexico. Annual, branched at the base, pistillate spikelets in two rows, see *Index Seminum Horti Academici* [Goettingen]

1832: 3. 1832, *Linnaea* 8(Litt.): 22-27. 1834, *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1876: 164. 1876 and *Lexikon Generum Phanerogamarum* 599. 1904, *American Journal of Botany* 29(10): 817. 1942, *Grasses of Ceylon* 205. 1956, *Annual Review of Genetics* 5: 450. 1971, *Phytologia* 23(2): 249. 1972, Y.H. Han et al., "Physical mapping of the 5S and 45S rDNA in teosintes." *Hereditas* 137(1): 16-19. Oct 2002, *Hereditas* 141(2): 135-141. Nov 2004.

Z. nicaraguensis H.H. Iltis (*Zea nicaraguensis* H.H. Iltis & B.F. Benz)

Guatemala, Nicaragua. See R.M. Bird, "A remarkable new teosinte from Nicaragua: growth and treatment of progeny." *Maize Genetics Cooperation Newsletter* 74: 58-59. 2000, H.H. Iltis & B.F. Benz, "*Zea nicaraguensis* (Poaceae), a new teosinte from Pacific coastal Nicaragua." *Novon* 10: 382-390. 2000, Alan R. Orr and Marshall D. Sundberg, "Inflorescence development in a new teosinte: *Zea nicaraguensis* (Poaceae)." *Am. J. Bot.* 91: 165-173. 2004.

Z. perennis (A.S. Hitchc.) Reeves & Mangelsd. (*Euchlaena perennis* A.S. Hitchc.; *Zea perennis* subsp. *perennis*)

Northern America, Mexico, Jalisco. Endangered species, related to corn, found along roadsides, in prairies, see *Journal of the Washington Academy of Sciences* 12(8): 207. 1922, *American Journal of Botany* 29(10): 817. 1942, A.P. Vovides, "Lista preliminar de plantas Mexicanas raras o en peligro de extinción. [Preliminary list of 210 rare, threatened and endangered Mexican plant species]." *Biotica* 6(2): 219-228. 1981, *Agro-Ciencia* 58: 113-126. 1984, *Cytologia* 50: 643-648. 1985, *Genética Ibérica* 38: 27-45. 1986, J. Doebley, "Molecular evidence for a missing wild relative of maize and the introgression of its chloroplast genome into *Zea perennis*." *Evolution* 43: 1555-1559. 1989, A.R. Orr and M.D. Sundberg, "Inflorescence development in a perennial teosinte: *Zea perennis* (Poaceae)." *American Journal of Botany* 81: 598-608. 1994, Y.H. Han et al., "Physical mapping of the 5S and 45S rDNA in teosintes." *Hereditas* 137(1): 16-19. Oct 2002.

in English: perennial teosinte

Zeia Lunell = *Triticum* L.

Greek *zeia*, *zea*, name used by Dioscorides for one-seeded wheat, a species of *Triticum*, and by Theophrastus (*HP*. 8.9.2) for rice-wheat.

Pooideae, Triticeae, Triticinae, type *Zeia spelta* (L.) Lunell, see *Species Plantarum* 1: 85-87. 1753 and *American Midland Naturalist* 4: 226. 1915, *Contributions from the United States National Herbarium* 48: 676-684, 694. 2003.

Zenkeria Trinius = *Zenkeria* Arn. (Fabaceae),
Zenkeria Rchb. (Bignoniaceae)

After the German botanist Jonathan Karl Zenker, 1799-1837, studied theology, natural history and medicine, botanical collector, 1825 Dr. med. at Jena, professor of natural history, 1836 professor in the medical faculty, his works include *Die Pflanzen*. Eisenach 1830 and *Plantae indicae*. Jena 1835-1837, with David Nathaniel Friedrich Dietrich (1799-1888) wrote *Musci thuringici*. Jenae 1821; see John H. Barnhart, *Biographical notes upon botanists*. 3: 539. 1965; H.N. Clokie, *Account of the Herbaria of the Department of Botany in the University of Oxford*. 268. Oxford 1964; G. Schmid, *Goethe und die Naturwissenschaften*. Halle 1940; Giulio Giorello & Agnese Grieco, a cura di, *Goethe scienziato*. Einaudi Editore, Torino 1998.

About 4 species, India, Sri Lanka, Myanmar/Burma. Arundinoideae, Danthonieae, perennial, herbaceous, erect, simple culms, tufted, fibrous base, ligule a fringe of hairs, nodes sparsely pilose, leaf blades flat or rolled, plants bisexual, open inflorescence paniculate, 2 florets, spikelets pedicellate and flattened, two glumes unequal or subequal shorter than lemma, lemmas membranous acute to acuminate, palea present, 2 free and membranous lodicules glabrous, 3 stamens, open areas, grassland, hills, upland, type *Zenkeria elegans* Trin., see *An Introduction to the Natural System of Botany* 449. 1836, *Linnaea* 11(2): 150. 1837, *Mag. Zool. Bot.* 2: 548. 1838, *Der Deutsche Botaniker Herbarienbuch* 236. 1841, *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kjøbenhavn* 88. 1853 and *Grasses of Burma ...* 481-482. 1960, *Bulletin of the Botanical Survey of India* 15(1-2): 142. 1973[1976], *Ecological Research* 14(4): 371-383. Dec 1999.

Species

Z. elegans Trin. (*Amphidonax heynei* Nees ex Steud.; *Amphidonax tenella* Wight & Arn. ex Steud.)

Southern India. Erect, bunchgrass, large, ligule fimbriate, panicle more or less contracted, spikelets 2-flowered, glumes 1-5-nerved, lemmas 7-9-nerved, palea 2-keeled and ciliate, 3 stamens, see *Linnaea* 11(2): 150, t. 3, f. 1-8. 1837, *Synopsis Plantarum Glumacearum* 1: 197. 1855 [1854] and *Handb. Fl. Ceylon* 5: 268. 1900, *Grasses of Ceylon* 53. 1956, *The Flora of the Tamilnadu Carnatic* 3: 1914. 1983.

in India: kallu bodhai

Z. jainii N.C. Nair, Sreek. & V.J. Nair

India. See *Journal of the Bombay Natural History Society* 78(2): 354. 1981.

Z. obtusiflora (Thw.) Benth. (*Amphidonax obtusiflora* Thwaites)

Sri Lanka. Robust, stout, lemmas obtuse, see *Enumeratio Plantarum Zeylaniae* 370. 1864, *Journal of the Linnean*

Society, Botany 19: 93. 1881 and *Grasses of Ceylon* 53. 1956.

Z. stapfi Henrard

Southern India, Sri Lanka. See *Repertorium Specierum Novarum Regni Vegetabilis* 17: 396. 1921.

Zeocriton Wolf = *Hordeum* L.

Greek *zeia*, *zea* “a kind of cereal” and *krithe* “barley-corn, barley.”

Pooideae, Triticeae, Hordeinae, type *Hordeum zeocriton* L., see *Species Plantarum* 1: 84-85, 560. 1753, *Genera Plantarum* 21. 1776, *Essai d'une Nouvelle Agrostographie* 115, 165, 182, t. 21, f. 2. 1812, *Genera Plantarum* 3(2): 1206. 1883 and *Canad. J. Bot.* 37: 679. 1959, *Acta Bot Neerl.* 15: 161. 1966, *Contributions from the United States National Herbarium* 48: 389-402, 695. 2003.

Zerna Panz. = *Bromopsis* (Dumort.) Fourr., *Bromus* L., *Vulpia* Gmel.

Pooideae, Bromoideae, type *Zerna ramosa* (Huds.) Lindm., see *Species Plantarum* 1: 76-78. 1753, *Flora Badensis Alsatica* 1: 8. 1805, *Ideen zu einer künftigen Revision der Gattungen der Gräser*. 46, 59. 1813, *Observations sur les Graminées de la Flore Belgique* 116, 117. 1823 [1824], *Annales de la Société Linnéenne de Lyon, sér. 2*, 17: 187. 1869 and *U.S.D.A. Div. Agrostol. Bull.* 23: 1-66. 1900, *Svensk Fanerogamflora* 101. 1918, *Brittonia* 7: 421. 1952, *Notes Roy. Bot. Gard.* 30: 366, 372. 1970, *Bot. Jahrb. Syst.* 102: 447. 1981, *Taxon* 41: 559. 1992, *Taxon* 44: 611-612. 1995, *Contributions from the United States National Herbarium* 48: 153-191, 695. 2003.

Zeugites P. Browne = *Desprezgia* Kunth, *Galeottia* M. Martens & Galeotti, *Krombholzia* Rupr. ex E. Fourn., *Senites* Adans.

Greek *zeugites* “yoked, joined in pairs,” Latin *zeugites*, *ae* for Plinius a kind of reed.

About 10-12 species, West Indies, Peru, Mexico, Guatemala, the Caribbean, Venezuela, from northwestern Mexico to central-northern South America. Centothecoideae, Centothecoaceae, or Panicoideae, Centothecoaceae, perennial, herbaceous, sometimes reed-like, branched above, unarmed, erect, decumbent, rooting at the nodes, trailing, scandent, stoloniferous, auricles absent, leaf blades lanceolate to ovate, contracted or long-pseudopetiolate leaves, plants bisexual, open inflorescence paniculate, 2-15-flowered, spikelets with one female and 1-2 male florets, lowermost florets in each spikelet female, male florets acute, glumes

truncate to dentate, palea present, 2 free lodicules, 0 stamens, 2 stigmas, damp places, forest margins, humid slopes, shade, forest floor, hillsides, type *Zeugites americana* Willd., see *Species Plantarum* 1: 82. 1753, *The Civil and Natural History of Jamaica in Three Parts* 341. 1756, *Familles des Plantes* 2: 39, 604. 1763, *Bulletin de la Société Botanique de Belgique* 15(3): 464. 1876, *Mexicanas Plantas* 2: 121. 1886, *Botanical Gazette* 21: 134, t. 12. 1896 and *Österreichische Botanische Zeitschrift* 52(10): 373. 1902, *Fl. Malay Pen.* 3: 122. 1907, *Contributions from the United States National Herbarium* 17(3): 368-370. 1913, *Torreya* 19: 48. 1919, *Brittonia* 23(3): 293-324. 1971, *Taxon* 30: 615. 1981, *Flora Mesoamericana* 6: 248-249. 1994, *Am. J. Bot.* 88: 1993-2012. 2001, *Am. J. Bot.* 90: 796-821. 2003, *Contributions from the United States National Herbarium* 46: 177, 242, 277, 569, 639-641. 2003.

Species

Z. americanus Willd. (also spelled *americana*) (*Apluda zeugites* L.; *Desprezgia mexicana* Kunth; *Senites haitiensis* (Pilg.) Hitchc. & Chase; *Senites mexicana* (Kunth) Hitchc.; *Senites zeugites* (L.) Nash; *Zeugites americanus* Rupr.; *Zeugites americanus* subsp. *haitiensis* Pilg.; *Zeugites americanus* subsp. *mexicanus* (Kunth) Pilg.; *Zeugites americanus* var. *mexicanus* (Kunth) McVaugh; *Zeugites haitiensis* (Pilg.) Urb.; *Zeugites jamaicensis* Raesch.; *Zeugites mexicana* (Kunth) Trin. ex Steud.; *Zeugites mexicana* var. *glandulosa* Hack.) (Art. 62.4 of the Code: “Generic names ending in *-anthes*, *-oides* or *-odes* are treated as feminine and those ending in *-ites* as masculine...”)

Jamaica, Mexico. Perennial, erect, more or less scandent, decumbent and ascending, scrambling, rooting from lower nodes, hollow, ligule rounded, leaf blades ovate-lanceolate, panicles oblong-pyramidal, spikelets with a female lowermost floret and male upper florets, glumes subequal and cross-nerved, female lemma awned, forming small clumps, in mountain forests, see *Systema Naturae, Editio Decima* 2: 1306. 1759, *Nomenclator Botanicus ed. 3*, ed. 3, 270. 1797, *Species Plantarum. Editio quarta* 4: 204. 1805, *Révision des Graminées* 2: 485, t. 157. 1831, *Nomenclator Botanicus. Editio secunda* 2: 798. 1841, *Bulletin de l'Académie Royale des Sciences et Belles-lettres de Bruxelles* 9(2): 247. 1842 and *Contributions from the United States National Herbarium* 12(3): 127. 1908, *Repertorium Specierum Novarum Regni Vegetabilis* 6: 158. 1908, *Symbolae Antillarum* 6: 3. 1909, *Contributions from the United States National Herbarium* 17(3): 370. 1913, *Contributions from the United States National Herbarium* 18(7): 392. 1917, *Symbolae Antillarum* 8: 51. 1920, *Flora Novo-Galiciana* 14: 413. 1983.

in Mexico: zacate

Z. americanus Willd. var. *americanus*
America.

Z. americanus Willd. var. **mexicanus** (Kunth) McVaugh (*Desprezgia mexicana* Kunth; *Krombholzia mexicana* Rupr. ex E. Fourn.; *Senites haitiensis* (Pilg.) Hitchc. & Chase; *Senites mexicana* (Kunth) Hitchc.; *Zeugites americanus* subsp. *haitiensis* Pilg.; *Zeugites americanus* subsp. *mexicanus* (Kunth) Pilg.; *Zeugites coloratus* Griseb.; *Zeugites galeottiana* Hemsl.; *Zeugites haitiensis* (Pilg.) Urb.; *Zeugites mexicanus* (Kunth) Trin. ex Steud.; *Zeugites mexicanus* var. *glandulosus* Hack.)

America. Good forage, see *Révision des Graminées* 2: 485, t. 157. 1831, *Nomenclator Botanicus. Editio secunda* 2: 798. 1841, *Flora of the British West Indian Islands* 536. 1864, *Bulletin de la Société Botanique de Belgique* 15(3): 464. 1876, *Biologia Centrali-Americana; . . . Botany . . .* 3(20): 577. 1885 and *Repertorium Specierum Novarum Regni Vegetabilis* 6: 158. 1908, *Symbolae Antillarum* 6: 3. 1909, *Contributions from the United States National Herbarium* 17(3): 370. 1913, *Contributions from the United States National Herbarium* 18(7): 392. 1917, *Symbolae Antillarum* 8: 51. 1920, *Flora Novo-Galiciana* 14: 413. 1983.

Z. americanus Willd. var. **pringlei** (Scribn.) McVaugh (*Senites pringlei* (Scribn.) Hitchc.; *Zeugites pringlei* Scribn.)

America. See *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 50, t. 6. 1898 and *Contributions from the United States National Herbarium* 17(3): 369. 1913, *Flora Novo-Galiciana* 14: 413. 1983.

Z. capillaris (Hitchc.) Swallen (*Senites capillaris* Hitchc.) Mexico. See *Contributions from the United States National Herbarium* 17(3): 369. 1913, *Annals of the Missouri Botanical Garden* 30(2): 130. 1943.

Z. guanchezii Davidse (for Francisco Guánchez Meza, botanist in Venezuela. See *Smithsonian Contr. Bot.* 56: 36. 1984; *Phytologia* 60: 295. 1986; *Ernstia* 39: 13. 1986; *Ann. Missouri Bot. Gard.* 78: 262. 1991; *Novon* 2: 143. 1992; *Novon* 3: 99. 1993)

Venezuela.

Z. hackelii Swallen (*Senites latifolia* subsp. *pringlei* (Hack.) Hitchc.; *Zeugites pittieri* var. *pringlei* Hack.; *Zeugites pringlei* Scribn.)

Mexico. See *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 50, t. 6. 1898 and *Österreichische Botanische Zeitschrift* 52(10): 373. 1902, *Contributions from the United States National Herbarium* 17(3): 369. 1913, *Annals of the Missouri Botanical Garden* 30(2): 130. 1943.

Z. hintonii Hartley

Mexico. See *Bulletin of Miscellaneous Information Kew* 1941(1): 22. 1941.

Z. latifolia (E. Fourn.) Hemsl. (*Krombholzia latifolia* E. Fourn.; *Senites latifolia* (E. Fourn.) Hitchc.; *Zeugites capillaris* (Hitchc.) Swallen)

Mexico. See *Biologia Centrali-Americana; . . . Botany . . .* 3(20): 577. 1885 and *Contributions from the United States National Herbarium* 17(3): 368. 1913.

Z. munroanus Hemsl. (*Senites hartwegii* (E. Fourn.) Arthur; *Zeugites hartwegii* E. Fourn.; *Zeugites hartwegii* E. Fourn. ex Hemsl.)

Guatemala. See *Biologia Centrali-Americana; . . . Botany . . .* 3(20): 577, t. 102A, f. 1-4. 1885, *Mexicanas Plantas* 2: 121. 1886 and *Torreyia* 19: 48. 1919.

Z. panamensis Swallen

Panama. See *Annals of the Missouri Botanical Garden* 30(2): 128. 1943.

Z. pittieri Hack. (*Zeugites pittieri* var. *pittieri*)

Costa Rica, Mexico. See *Österreichische Botanische Zeitschrift* 52(10): 373. 1902, *Fieldiana, Bot.* 24(2): 376. 1955.

Z. pringlei Scribn. (*Senites pringlei* (Scribn.) Hitchc.; *Zeugites americana* Willd. var. *pringlei* (Scribn.) McVaugh)

Mexico. Perennial, branched, weeping, female lemma awned, see *Bulletin, Division of Agrostology United States Department of Agriculture* 11: 50, t. 6. 1898 and *Contributions from the United States National Herbarium* 17(3): 369. 1913, *Flora Novo-Galiciana* 14: 413. 1983.

Z. sagittata Hartley

Mexico. See *Bulletin of Miscellaneous Information Kew* 1942(1): 22. 1941.

Z. smilacifolius Scribner (*Senites smilacifolia* (Scribn.) Hitchc.)

Mexico. See *Botanical Gazette* 21: 134, t. 12. 1896 and *Contributions from the United States National Herbarium* 17(3): 369. 1913.

Zingeria Smirnov = Zingeriopsis Prob.

After the Russian botanist Basil [Vasilij Jakovlevic, Vasilij Jakololewitsch] Zinger, see *Novosti Sist. Vyss. Rast.* 14: 12. 1977.

About 4-5 species, Russia, Eurasia, Western Asia. Pooideae, Poodae, Aveneae, annual, herbaceous, auricles absent, ligule an unfringed membrane, plants bisexual, open inflorescence paniculate, spikelets pedicellate and flattened or dorsally compressed, two glumes unequal or subequal, lower glume 1-nerved, upper glume 3-nerved, hairy awnless lemmas 3-nerved, palea 2-keeled 2-nerved, 2 free and membranous lodicules, 3 stamens, ovary glabrous, 2 stigmas, open areas, streams and meadows, streamsides, roadsides, similar to *Milium*, see *Species Plantarum* 1: 61. 1753 and *Novitates Botanicae ex Universitate Carolinae* 1963: 1-3. 1963, *Bot. Zhurn. (Moscow & Leningrad)* 59: 265-269. 1974, *Bot. Zhurn. (Moscow & Leningrad)* 70(5): 698-700. 1985, *Canadian Journal of Genetics and Cytology* 28: 554-562. 1986, *Bot. Zhurn. (Moscow & Leningrad)* 76: 1331-1332.

1991, *Bot. Zhurn. (Moscow & Leningrad)* 77(7): 75-79.
 1992, *Bot. Zhurn. (Moscow & Leningrad)* 78(4): 36-47.
 1993, J. Chris Pires et al., "Molecular cytogenetic analysis of recently evolved *Tragopogon* (Asteraceae) allopolyploids reveal a karyotype that is additive of the diploid progenitors." *Am. J. Bot.* 91: 1022-1035. 2004, Elizabeth A. Kellogg and Jeffrey L. Bennetzen, "The evolution of nuclear genome structure in seed plants." *Am. J. Bot.* 91: 1709-1725. 2004, *Biological Journal of the Linnean Society* 82(4): 615-625. Aug 2004.

Species

Z. biebersteiniana (Claus) Smirnov (*Agrostis biebersteiniana* Claus; *Zingeria trichopoda* subsp. *biebersteiniana* (Claus) Dogan)

Russia, Volga. Rare species, see *Beiträge zur Pflanzenkunde des Russischen Reiches* 8: 264. 1851, *Diagnoses plantarum orientarium novarum* 2(13): 45. Mai 1854 and *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 86. 1982, *Flora of Turkey and the East Aegean Islands* 9: 365. 1985.

Z. kochii (Mez) Tzvelev (*Milium kochii* Mez)

Russia, Armenia. See *Repertorium Specierum Novarum Regni Vegetabilis* 17(13-18): 211. 1921, *Bot. Zhurn. (Moscow & Leningrad)* 50: 1318. 1965.

Z. pisidica (Boiss.) Tutin (*Agrostis pisidica* Boiss.; *Agrostis trichoclada* var. *pisidica* (Boiss.) Boiss.)

Eurasia. See *Flora Rossica* 4(13): 439. 1852, *Annales des Sciences Naturelles; Botanique, série 4* 2: 255. 1854, *Flora Orientalis* 5: 511, 516. 1884 and *Botanical Journal of the Linnean Society* 76(4): 365. 1978, *Notes from the Royal Botanic Garden, Edinburgh* 40(1): 86. 1982.

Z. trichopoda (Boiss.) Smirn. (*Agrostis pisidica* Boiss.; *Agrostis trichoclada* var. *pisidica* (Boiss.) Boiss.; *Milium trichopodum* Boiss.; *Zingeria biebersteiniana* subsp. *trichopoda* (Boiss.) R.R. Mill; *Zingeria pisidica* (Boiss.) Tutin)

Russia. See *Diagnoses plantarum orientarium novarum* 2(13): 45. 1854, *Annales des Sciences Naturelles; Botanique, série 4* 2: 255. 1854, *Flora Orientalis* 5: 516. 1884 and *Botanical Journal of the Linnean Society* 76(4): 365. 1978, *Flora of Turkey and the East Aegean Islands* 9: 365. 1985.

Z. verticillata (Boiss. & Balansa) Chrték (*Milium verticillatum* Boiss. & Balansa; *Zingeriopsis verticillata* (Boiss. & Balansa) Prob.)

Central Europe. Glumes very unequal, see *Bulletin de la Société Botanique de France* 5: 169. 1858 and *Novitates Botanicae ex Universitate Carolinae* 1963: 3. 1963, *Novosti Sist. Vyss. Rast.* 14: 12. 1977.

Zingeriopsis Prob. = *Zingeria* P.A. Smirn.

Resembling *Zingeria* P.A. Smirn., see *Novosti Sist. Vyss. Rast.* 14: 12. 1977.

Zizania L. = *Ceratochaete* Lunell, *Elymus* J. Mitch., *Fartis* Adans., *Hydropyrum* Link, *Melinum* Link

Greek *zizanon*, ancient name for a wild grain, a weed that grows in wheat, Latin *zizania, orum* "darnel, cockle, tares"; see Manlio Cortelazzo & Paolo Zolli, *Dizionario etimologico della lingua italiana*. 5: 1468. Zanichelli, Bologna 1988; Giovanni Semerano, *Le origini della cultura europea*. Dizionario della lingua Latina e di voci moderne. 2(2): 620. Leo S. Olschki Editore, Firenze 1994; Giovanni Semerano, *Le origini della cultura europea*. Dizionari Etimologici. Basi semitiche delle lingue indeuropee. Dizionario della lingua Greca. Leo S. Olschki Editore, Firenze 1994.

About 3-4 species, eastern Asia, Indochina, North America. Bambusoideae, Oryzodae, Oryzeae, or Ehrhartoideae, Oryzeae, Zizaniinae, annual or perennial, herbaceous, hollow, succulent, aquatic, paludal, extremely variable, sometimes with creeping rhizomes, auricles absent, ligule an unfringed membrane, leaf blades linear-lanceolate, plants monoecious, inflorescence a large terminal panicle, panicle branches unisexual, lower branches spreading to ascending, spikelets unisexual, staminate spikelet generally drooping, pistillate spikelet generally ascending to erect, on the lower branches male spikelets, on the ascending branches female spikelets, male florets 6-staminate, glumes vestigial or absent, lemmas membranous to chartaceous terminating in a stiff twisted awn, palea present one-keeled, stamens 0, ovary glabrous, 2 stigmas, fruit a linear caryopsis, wild rice is unusually high in protein content, grain crop species, grow only in water, in lakes or ponds not stagnant, marshes, swamps, shallow water, type *Zizania aquatica* L., see *Species Plantarum* 2: 991. 1753, *Familles des Plantes* 2: 37, 557. 1763, John Mitchell (1711-1768), *Dissertatio brevis de principijs botanicorum et zoologorum...* 32. Nürnberg 1769, *Enumeratio plantarum horti regii berlinensis altera*. 1: 252. Berolini [Berlin] 1827, *Handbuch zur Erkennung der nutzbarsten und am häufigsten vorkommenden Gewächse*. 1: 96. 1829, *Journal of the Linnean Society, Botany* 19: 54. 1881 and *American Midland Naturalist* 4: 214. 1915, *U.S.D.A Bull.* 772: 18. 1920, *Canada Department of Agriculture Publications [Publications, Department of Agriculture, Canada]* 1393: 1-84. Ottawa 1960, *Journal d'Agriculture Traditionnelle et de Botanique Appliquée [J.A.T.B.A.]* 25: 67-84 Paris 1978, *The Flora of Canada* 2: 93-545. 1978 [1979], *Econ. Botany* 36: 274-285. 1982, *Genera Graminum* 74. 1986, M. Duvall and D. Biesboer, "Anatomical distinctions between the pistillate spikelets of species of wild-rice (*Zizania*, Poaceae)." *American Journal*

of Botany 75: 157-159. 1988, *Proceedings of the International Symposium on Botanical Gardens* 593-605. Nanjing 1988 [1990], M. Duvall and D. Biesboer, "Isoelectric protein profiles and their systematic implications in North American *Zizania*. *Biochemical Systematics and Ecology* 17: 39-43. 1989, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1990: 28-32. 1990, Cook, C. D. K. *Aquatic Plant Book*. SPB Academic Publishing, The Hague, The Netherlands. 1990, *Phytologia* 72: 6-7. 1992, E. Terrell, P. Peterson et al., "Taxonomy of North American species of *Zizania* (Poaceae)." *Sida* 17: 533-549. 1997, *Newslett. Int. Organ. Pl. Biosyst. (Oslo)* 30: 10-15. 1999, *International Journal of Plant Sciences* 160(6): 1127-1133. 1999, *Contributions from the United States National Herbarium* 39: 36, 56, 57, 63, 71, 116-118. 2000, Francis R. Horne and Ari Kahn, "Water loss and viability in *Zizania* (Poaceae) seeds during short-term desiccation." *Am. J. Bot.* 87: 1707-1711. 2000, *Am. J. Bot.* 88: 1993-2012. 2001, Song Ge, Ang Li, Bao-Rong Lu, Shou-Zhou Zhang and De-Yuan Hong, "A phylogeny of the rice tribe Oryzaceae (Poaceae) based on *matK* sequence data." *American Journal of Botany* 89: 1967-1972. 2002, *Journal of Applied Ecology* 39(1): 134-144. Feb 2002, *Physiologia Plantarum* 116(3): 299-307. Nov 2002, *Plant Pathology* 51(6): 813-813. Dec 2002, *Weed Biology and Management* 2(4): 186-193. Dec 2002, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *European Journal of Biochemistry* 270(1): 20-27. Jan 2003, *Restoration Ecology* 11(1): 3-12. Mar 2003, *Freshwater Biology* 48(9): 1640-1651. Sep 2003, *Physiologia Plantarum* 119(4): 534-543. Dec 2003, *Am. J. Bot.* 91: 1709-1725. 2004, *New Phytologist* 162(1): 157-166. Apr 2004, *Molecular Ecology Notes* 4(2): 262-264. June 2004, *Nutrition Bulletin* 29(2): 111-142. June 2004, *Ecological Research* 19(4): 375-380. July 2004, *Hereditas* 141(3): 243-251. Dec 2004, *Plant Biotechnology Journal* 3(3): 275-307. May 2005, *Weed Biology and Management* 5(2): 62-68. June 2005.

Species

Z. aquatica L. (*Ceratochaete aquatica* (L.) Lunell; *Hydrophyrum esculentum* Link; *Stipa angulata* L. ex Steud.; *Zizania aquatica* var. *subbrevis* B. Boivin; *Zizania clavulosa* Michx.; *Zizania effusa* Munro; *Zizania palustris* L.)

Northern America. Annual, aquatic, robust, erect, large branched flower panicles, only staminate flowers in the basal part and only pistillate flowers in the terminal part of the inflorescence, slender seeds, medicinal value, grains eaten by ducks and wild fowl, was a staple food of American Indians, found in fresh water, on the edges of lakes and rivers, mudflats along rivers, see *Mantissa Plantarum* 295. 1771, *Flora Boreali-Americana* 1: 75. 1803, *Nomenclator Botanicus. Editio secunda* 2: 642. 1841, *Proceedings of the Linnean Society of London* 6: 52. 1862 and *Rhodora* 8(95): 210. 1906, *American Midland Naturalist* 4: 214. 1915,

Rhodora 26(308): 158. 1924, *Le Naturaliste Canadien* 94: 528. 1967, *Novosti Sist. Vyss. Rast.* 8: 73. 1971, H.B. Hanten, G.E. Ahlgren and J.B. Carlson, "The morphology of grain abscission in *Zizania aquatica*." *Canadian Journal of Botany* 58: 2269-2273. 1980, M.F. Willson and K.P. Ruppel, "Resource allocation and floral sex ratios in *Zizania aquatica*." *Canadian Journal of Botany* 62: 799-805. 1984, *Phytologia* 72: 6-7. 1992, *Restoration Ecology* 7(1): 86-97. Mar 1999, *Global Change Biology* 5(4): 433-440. Apr 1999, *Restoration Ecology* 7(2): 127-138. June 1999, *Fish and Fisheries* 1(4): 337-359. Dec 2000, *Journal of Ecology* 89(1): 57-71. Feb 2001, *Molecular Ecology Notes* 1(1-2): 76-78. Mar 2001, *Freshwater Biology* 46(3): 389-397. Mar 2001, Emily K. Green and Susan M. Galatowitsch, "Effects of *Phalaris arundinacea* and nitrate-N addition on the establishment of wetland plant communities." *Journal of Applied Ecology* 39(1): 134-144. Feb 2002, *Physiologia Plantarum* 116(3): 299-307. Nov 2002, *Plant Pathology* 51(6): 813-813. Dec 2002, Robert S. Capers, "Six years of submerged plant community dynamics in a freshwater tidal wetland." *Freshwater Biology* 48(9): 1640-1651. Sep 2003, *Molecular Ecology Notes* 4(2): 262-264. June 2004, Brigid McKeivith, "Nutritional aspects of cereals." *Nutrition Bulletin* 29(2): 111-142. June 2004.

in English: annual wild rice, southern wild rice, water rice, Canadian wild rice, Manchurian water rice, wild oat, Tuscarora rice

in China: ku

Z. aquatica L. var. ***aquatica*** (*Ceratochaete aquatica* (L.) Lunell; *Hydrophyrum esculentum* Link; *Zizania aquatica* subsp. *aquatica*; *Zizania aquatica* L. var. *subbrevis* Boivin; *Zizania clavulosa* Michx.)

Northern America. Annual, see *Species Plantarum* 2: 991. 1753, *Flora Boreali-Americana* 1: 75. Paris 1803 and *Le Naturaliste Canadien* 94: 528. 1967, *Syst. Bot.* 11: 464-473. 1986, *Sida* 17: 536. 1997.

in English: annual wild rice, southern wild rice, southern zizania

Z. aquatica L. var. ***brevis*** Fassett (*Zizania aquatica* subsp. *brevis* (Fassett) S.L. Chen)

Northern America, Canada. Annual, tidal flats, canals, see *Species Plantarum* 2: 991. 1753 and *Rhodora* 26(308): 157. 1924, *Syst. Bot.* 11: 464-473. 1986, *Sida* 17: 536, 538. 1997.

in English: annual wild rice, estuarine wild rice, estuarine zizania

Z. latifolia (Griseb.) Turcz. ex Stapf (*Hydrophyrum latifolium* Griseb. ex Ledeb.; *Hydrophyrum latifolium* Griseb.; *Limnochloa caduciflora* Turcz. ex Trin. (Cyperaceae); *Zizania aquatica* L. var. *latifolia* (Griseb.) Kom.; *Zizania caduciflora* Hand.-Mazz.; *Zizania caduciflora* (Turcz. ex Trin.) Hand.-Mazz.; *Zizania dahurica* Turcz. ex Steud.;

Zizania latifolia (Griseb.) Stapf; *Zizania latifolia* Turcz.; *Zizania mezii* Prod.)

China, Japan, Vietnam, Thailand. Perennial, aquatic, strongly rhizomatous, stout, robust, vigorous, succulent stem, leaf sheath glabrous and spongy, large panicle, usually male flowers above and female below, six stamens, propagated by tillers, fodder for horses, human food, cultivated as a vegetable, rhizomes and grains eaten in times of scarcity, young shoots and swollen shoots edible after the husks are removed, leaves woven into mats, found along riverbanks, tidal flats, canals, roadside ditches, in stagnant ponds, in poorly drained soils, related to *Zizania palustris* L. and *Zizania aquatica* L., see *Bulletin de la Société Impériale des Naturalistes de Moscou* 1: 105. 1838, *Mémoires de l'Académie Impériale des Sciences de Saint-Petersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5: 183. 1840, *Flora Rossica* 4(14): 466. 1853, *Synopsis Plantarum Glumacearum* 1: 4. 1855 [1853] and *Bull. Misc. Inform. Kew* 1909(9): 385-390. 1909 [Kew Bulletin], *Botanisches Archiv* 1: 245. 1922, *Symbolae Sinicae* 7(5): 1278-1279. 1936, *Bulletin of the National Science Museum* 31: 143. Tokyo 1952, *Econ. Bot.* 36: 274-285. 1982, *New Zealand Journal of Botany* 29: 117-129. 1991, *Plant Resources of South-East Asia (PROSEA) (PI Res SEAs)* 8: 278-279. 1993, Tetsuo Shimada, Aaron Bowman and Mitsuru Ishida, "Effects of flooding on a wetland bird community." *Ecological Research* 15(2): 229-235. June 2000, *Journal of Ecology* 88(6): 978-987. Dec 2000, *Ecological Research* 16(3): 543-553, 569-585. Sep 2001, *Ecological Research* 19(4): 375-380. July 2004.

in English: water bamboo, broad-leaved rice grass, Manchurian zizania, Manchurian wild rice, water rice, Manchurian water rice, shattering wild rice

in Arabic: kharazan el-maa

in French: riz sauvage de Mandchourie, riz sauvage

in Spanish: arroz silvestre

in Portuguese: arroz bravo

in Italian: riso d'acqua, riso d'America, riso indiano, tuscarora

in Japan: ma-komo, makomo, makomo dake

in Okinawa: ma-komu

in China: jiao bai, ku, chiao tsao, Chiang tsao, chiao sun, coba, kuw-sun, kwo-bai

in Thailand: ka pek, kapek, no mai nam, nomai nam

in Vietnam: lua mieu, cu nieng, cu nieng dai

Z. palustris L. (*Melinum palustre* (L.) Link; *Zizania aquatica* L.; *Zizania aquatica* subsp. *angustifolia* (Hitche.) Tzvelev; *Zizania aquatica* var. *angustifolia* Hitche.; *Zizania palustris* f. *purpurea* Dore)

Northern America, Canada. Annual, aquatic, erect, tufted, rooting at the nodes, hollow stems, flat leaves, leaf blades margins finely toothed, strongly tillering, shallow root system, spongy roots, inflorescence a slender much-branched panicle large and narrow, female flowers above and male flowers below, lower branches with pendulous male spikelets, upper branches with erect female spikelets, lemma of the female spikelets long-awned, large-seeded, seed an important food of the North American Indians, wild and cultivated, noxious plant grown as a field crop, excellent forage, food for waterfowl, grain used as a staple food, grains cooked and eaten as rice, growing in waterways, flooded soils, streams, shallow waters, riverbanks, hybridizes freely with *Zizania palustris* L., see *Mantissa Plantarum* 295. 1771, *Staatswirthsch. Vorlesungen der Churpfälzischen Phys.-ökon. Ges.* 1: 200. Mannheim 1791, *Handbuch zur Erkennung der nutzbarsten und am häufigsten vorkommenden Gewächse* 1: 96. 1829 and *Rhodora* 8(95): 210. 1906, *Rhodora* 26(308): 158. 1924, *Novosti Sist. Vyss. Rast.* 8: 73. 1971, *Le Naturaliste Canadien* 103(6): 565. Quebec 1976 [1977], *Econ. Bot.* 36: 274-285. 1982, *Syst. Bot.* 11: 464-473. 1986, N.J. Page and R.E. Stucker, "An evaluation of factors affecting success of controlled crosses of wild rice (*Zizania palustris* L.) in the greenhouse." *Canadian Journal of Plant Science* 70: 677-681. 1990, *Phytologia* 72: 7. 1992, Douglas G. Muench, O. William Archibald and Allen G. Good, "Hypoxic metabolism in wild rice (*Zizania palustris*): enzyme induction and metabolite production." *Physiologia Plantarum* 89(1): 165-171. Sep 1993, M. Duvall, "Wild rice (*Zizania palustris*)." In: J. Williams (ed.). *Cereals and Pseudocereals*. Chapman & Hall, New York. Pp. 261-271. 1994, *Sida* 17: 536, 539, 542, 547. 1997, *Theoretical and Applied Genetics* 99(5): 793-799. Sept. 1999, *Journal of Chemical Ecology* 25(1): 209-220, 221-228. 1999, *Weed Biology and Management* 2(4): 186-193. Dec 2002, *Restoration Ecology* 11(1): 3-12. Mar 2003, *Physiologia Plantarum* 119(4): 534-543. Dec 2003, *New Phytologist* 162(1): 157-166. Apr 2004.

in English: northern wild rice, American wild rice, Indian rice, Canadian rice, squaw rice, water oats, blackbird oats, marsh oats, wild rice

in French: folle avoine

Z. palustris L. var. ***interior*** (Fassett) Dore (*Zizania aquatica* var. *interior* Fassett; *Zizania interior* (Fassett) Rydb.; *Zizania palustris* subsp. *interior* (Fassett) S.L. Chen)

Northern America, Canada, U.S. Annual, pubescent at nodes, cultivated for food, waterfowl, lake margins, wet meadows, quiet waters, ponds, shallow waters, see *Species Plantarum* 2: 991. 1753, *Mantissa Plantarum* 295. 1771 and *Rhodora* 26(308): 158. 1924, *Brittonia* 1(2): 82. 1931, *Publications, Department of Agriculture, Canada* 1393: 20. 1969, *Syst. Bot.* 11: 464-473. 1986, *Sida* 17: 536, 539, 542, 547. 1997.

in English: northern wild rice, interior wild rice, interior zizania, wild rice

Z. palustris L. var. *palustris* (*Melinum palustre* (L.) Link; *Zizania aquatica* subsp. *angustifolia* (A.S. Hitchc.) Tzvelev; *Zizania aquatica* var. *angustifolia* A.S. Hitchc.; *Zizania palustris* f. *purpurea* Dore; *Zizania palustris* subsp. *palustris*)

Northern America. Annual, see *Species Plantarum* 2: 991. 1753, *Mantissa Plantarum* 295. 1771 and *Rhodora* 8(95): 210. 1906, *Rhodora* 26(308): 158. 1924, *Le Naturaliste Canadien* 103(6): 565. 1976 [1977], *Syst. Bot.* 11: 464-473. 1986, *Sida* 17: 536, 539, 542, 547. 1997, Yingqing Lu, Donald M. Waller and Peter David, "Genetic variability is correlated with population size and reproduction in American wild-rice (*Zizania palustris* var. *palustris*, Poaceae) populations." *Am. J. Bot.* 92: 990-997. 2005.

in English: northern wild rice, northern zizania

Z. texana A.S. Hitchc.

Northern America, U.S. Slender seeds, growing in running water, near streams, see *Journal of the Washington Academy of Sciences* 23(10): 454. 1933, *Bull. Torrey Bot. Club* 105: 50-57. 1978, *Sida* 17: 543. 1997.

Northern America, Texas. Perennial, endangered.

in English: Texas wild rice, Texas zizania

Zizaniopsis Döll & Asch.

Resembling the genus *Zizania* L.

Five species, southern U.S. to Argentina, Brazil. Bambusoideae, Oryzodae, Oryzeae, or Ehrhartoideae, Oryzeae, Luziolinae, annual or perennial, reed-like, erect, herbaceous, hollow, unarmed, unbranched above or branched, robust, tufted, rhizomatous, leafy, ligule an unfringed membrane, plants monoecious, open inflorescence, panicle branches bisexual, spikelets unisexual and solitary, staminate spikelets below and female above, female lemma awned, male spikelets awnless, male florets 6-staminate, glumes wanting, palea pointed, stamens 0, ovary glabrous, 2 stigmas, fruit an ovoid achene, wetland habitats, river and stream banks, tidal forest, swampy areas, in water, provide nesting and cover to wildlife, type *Zizaniopsis microstachya* (Nees ex Trin.) Döll & Asch., see *Flora Brasiliensis* 2(2): 12-13. 1871, *Bulletin de la Société d'Histoire Naturelle de Toulouse* 12: 228, t. 3. 1878 and *Anales Museo Nacional de Historia Natural de Buenos Aires* 7: 183. 1902, *Contributions from the U.S. National Herbarium* 29(6): 251-275. 1949, *Flora Ilustrada de Entre Ríos (Argentina)* 6(2): 1-551. 1969, *Flora de la Provincia de Buenos Aires* 4(2): 35. 1970, *Hickenia* 1, 8: 39-42. 1976, *Phytologia* 37(4): 317-407. 1977, *Flora Novo-Galiciana* 14: 1-436. 1983, *Bulletin of the Nanjing Botanical Garden, Mem. Sun Yat Sen* 1990: 28-32. 1990, A.M. Fox, "Giant cutgrass—an unfriendly

native." *Aquatics* (Magazine of the Florida Aquatic Plant Management Society) 15(4): 4-9. 1993, *Contributions from the United States National Herbarium* 39: 118. 2000, S.B. Perelman, R.J.C. León and M. Oesterheld, "Cross-scale vegetation patterns of Flooding Pampa grasslands." *Journal of Ecology* 89(4): 562-577. Aug 2001, *Am. J. Bot.* 89: 1967-1972. 2002, *Diversity & Distributions* 9(1): 73-87. Jan 2003, *Ecography* 28(1): 88-98. Feb 2005.

Species

Z. bonariensis (Balansa & Poitr.) Speg. (*Zizania bonariensis* Balansa & Poitr.)

Uruguay, Argentina, Brazil. Weed, aquatic, reed-like, see *Bulletin de la Société d'Histoire Naturelle de Toulouse* 12: 228, t. 3. 1878 and *Anales del Museo Nacional de Buenos Aires* 7: 183. 1902, *Water Science & Technology* 44(11-12): 493-498. 2001.

in English: cut grass

in Spanish: espadaña

Z. killipii Swallen (after the American botanist Ellsworth Paine Killip, 1890-1968, traveller, Brazil 1929, plant collector in Amazonas and Pará, his writings include "New plants mainly from western South America." *J. Wash. Acad. Sci.* 16: 565-573. 1926, "List of sedges (Cyperaceae) collected in Siam by Dr. Hugh M. Smith." *Journal of the Siam Society. Natural History Supplement.* 7(1): 55-57. Bangkok 1927, "New South American Loasaceae." *J. Wash. Acad. Sci.* 18: 89-95. 1928, "New plants mainly from western South America. II." *J. Wash. Acad. Sci.* 19: 191-195. 1929, "New plants mainly from western South America. III." *J. Wash. Acad. Sci.* 21(15): 347-353. 1931, "New species of *Pilea* from the Andes." *Contr. U.S. Natl. Herb.* 26: i-vi, 367-394. 1936, *Mimosaceae and Caesalpinaceae of Columbia*. New York 1936, "The American species of Passifloraceae." *Publ. Field Mus. Nat. Hist., Bot. Ser.* 19(1): 1-331, 19(2): 332-613. 1938, "The Andean species of *Pilea*." *Contr. U.S. Natl. Herb.* 26(10): i-vi, 475-530, vii-viii. 1939, "Urticaceae. Flora of Panama." *Ann. Missouri Bot. Gard.* 47(2): 179-198. 1960, "Supplemental notes on the American species of Passifloraceae, with descriptions of new species." *Contr. U.S. Natl. Herb.* 35(1): 1-23, pl. 1-11. 1960, with C.V. Morton wrote "A revision of the Mexican and Central American species of *Smilax*." *Publ. Carnegie Inst. Wash.* 461: 257-290. 1936, with A.C. Smith wrote "The genus *Viburnum* in northwestern South America, with key to species." *Torrey Bot. Club.* July 1929. See J.F. Macbride, *Flora of Peru*. [Valerianaceae and Urticaceae by E.P. Killip] 1937; John H. Barnhart, *Biographical notes upon botanists.* 2: 289. 1965; Joseph Ewan, ed., *A Short History of Botany in the United States.* 1969; T.W. Bossert, *Biographical dictionary of botanists represented in the Hunt Institute portrait collection.* 211. 1972; S. Lenley et al., *Catalog of the manuscript and archival collections and index to the correspondence of John Torrey.* 250. 1973; A.A. Pulle, ed., *Flora of*

Suriname. Amsterdam 1932 etc.; R. Zander, F. Encke, G. Buchheim and S. Seybold, *Handwörterbuch der Pflanzennamen*. 14. Aufl. Stuttgart 1993; Ida Kaplan Langman, *A Selected Guide to the Literature on the Flowering Plants of Mexico*. Philadelphia 1964)

Colombia. See *Contributions from the U.S. National Herbarium* 29(6): 251-275. 1949 [1948].

Z. microstachya (Nees) Döll & Asch. (*Zizania microstachya* Nees ex Trin.)

Brazil. See *Mémoires de l'Académie Impériale des Sciences de Saint-Petersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 5,3(4): 183. 1839 [1840], *Fl. Bras.* 2(2): 13, t. 3. 1871.

Z. miliacea (Michx.) Döll & Asch. (*Zizania miliacea* Michx.)

U.S., Mexico. Perennial, very large, inflorescence spreading, wet shores of lakes and rivers, see *Fl. Bor.-Amer.* 1: 74-75. 1803, *Fl. Bras.* 2(2): 13, t. 3. 1871 and A.M. Fox & W.T. Haller, "Reproductive strategies in giant cutgrass [*Zizaniopsis miliacea*]. *Proceedings of the European Weed Research Society Eighth Symposium on Aquatic Weeds* 8: 103-104. 1990, Alison M. Fox and William T. Haller, "Production and survivorship of the functional stolons of giant cutgrass, *Zizaniopsis miliacea* (Poaceae)." *Am. J. Bot.* 87: 811-818. 2000.

in English: giant cutgrass, water millet

Z. villanensis Quarin

Argentina. See *Hickenia* 1: 40. 1976.

Zoisa J.M. Black

An orthographic variant, see *Zoysia* Willd.

Zoisia J.M. Black

An orthographic variant, see *Zoysia* Willd.

Zonotriche (C.E. Hubb.) J.B. Phipps =
Mitwabochloa J.B. Phipps, *Piptostachya* (C.E. Hubb.) J.B. Phipps

From the Greek *zone* "a belt, armour, girdle" and *thrix*, *trichos* "hair."

Three species, tropical Africa. Panicoideae, Panicodae, Arundinelleae, perennial, tufted, herbaceous, erect, clumped, ligule fringed, fibrous roots, plants bisexual, open or contracted inflorescence paniculate, spikelets pedicellate and in triplets, two glumes unequal 3-nerved, lemmas cleft and awned, palea 2-keeled 2-nerved, fleshy lodicules, 3

stamens, woodland, savanna, along roadsides, type *Zonotriche decora* (Stapf) J.B. Phipps, see *Bulletin of Miscellaneous Information Kew* 1936(5): 322. 1936, *Kirkia* 4: 107-109, 113. 1964, *Kirkia* 5: 235-258. 1966, *Kew Bulletin* 21(1): 119-124. 1967, *Boletim da Sociedade Broteriana, ser. 2* 41: 199-200. 1967, *Kew Bulletin* 26(1): 111-123. 1971.

Species

Z. brunnea (C.E. Hubb.) J.B. Phipps (*Mitwabochloa brunnea* J.B. Phipps)

Africa. See *Boletim da Sociedade Broteriana, ser. 2* 41: 200. 1967, *Kew Bulletin* 26(1): 119. 1971.

Z. decora (Stapf) J.B. Phipps (*Tristachya decora* Stapf)

Africa, Zambia. See *Flora Brasiliensis seu Enumeratio Plantarum* 2: 458. 1829, *Bulletin of Miscellaneous Information Kew* 1895: 75. 1895 and *Kirkia* 4: 113. 1964.

Z. inamoena (K. Schum.) Clayton (*Piptostachya inamoena* (K. Schum.) J.B. Phipps; *Tristachya inamoena* K. Schum.)

Tanzania, Zambia, Malawi. Perennial, tufted, clumped, erect, spikelets in triads, see *Die Pflanzenwelt Ost-Afrikas* C: 109. 1895 and *Kirkia* 4: 109. 1964, *Kew Bulletin* 21(1): 124. 1967.

Zotovia Edgar & Connor = Petriella Curzi
(Fungi), *Petriella Zotov*

For Victor Dmitrievich Zotov (1908-1977), born in Vladivostok, Russia, in 1924 emigrated to New Zealand with his parents, August 1928 became the assistant to H.H. Allan, 1936 contributed some 30 drawings for Allan's *An Introduction to the Grasses of New Zealand*, 1949 a member of the New Zealand - American Fiordland Expedition, in January 1961 collected specimens on Campbell Island, wrote *Survey of the Tussock-Grasslands of the South Island*, New Zealand. Wellington, N.Z. 1939 [*Dep. Sci. Ind. Res., Bull.* 73], "Synopsis of the grass subfamily Arundinoideae in New Zealand." *N.Z. J. Bot.* 1: 78-136. 1963, "Grasses of the subantarctic islands of the New Zealand region." *Rec. Dom. Mus., Wellington* 5: 101-146. 1965.

Three species, New Zealand. Bambusoideae, Oryzodae, Ehrharteae, perennial, rhizomatous, cushion-like, branching intravaginal, auricles fringed or absent, ligule ciliate, leaf blade flat or inrolled, inflorescence a contracted panicle or a raceme, spikelets shining and shortly pedicelled, uppermost floret bisexual, subequal persistent glumes, palea membranous, 2 lodicules, stamens 2, alpine, subalpine, found in moist sites, shady places, sometimes referred to *Ehrharta* Thunb. and *Tetrarrhena* R. Br., type *Zotovia colensoi* (Hook.f.) Edgar & Connor, see *Kongl. Vetenskaps Academiens Handlingar* 40: 217, pl. 8. 1779 and *Transactions and Proceedings of the Royal Society of New Zealand*

73: 235-236. 1943, *New Zealand Journal of Botany* 36: 565-586. 1998, *Flora of New Zealand* 5: 52-56. 2000.

Species

Z. acicularis Edgar & Connor

New Zealand. Perennial, slender, pubescent, rhizomatous, leaf sheath keeled, auricles absent, ligule ciliate and membranous, leaf blade inrolled, leaves with needle-like tips, spikelets pedicels pubescent to scabrid to prickly, palea apex ciliate, shady places, wet ground, see *New Zealand Journal of Botany* 36: 569-571, f. 2. 1998.

Z. colensoi (Hook.f.) Edgar & Connor (*Ehrharta colensoi* Hook.f.; *Microlaena colensoi* (Hook.f.) J.C. Sm.; *Microlaena colensoi* (Hook.f.) Mez; *Petriella colensoi* (Hook.f.) Zotov) (after the missionary Rev. (John) William Colenso, 1811-1899 (d. Napier, New Zealand), ethnologist and explorer, botanist, printer, plant collector, North Island, New Zealand)

New Zealand. Perennial, short, small, tufted, trailing, branching intravaginal, papery leaves, leaf blade flat, inflorescence a drooping contracted panicle, spikelets small and shortly pedicelled, found in shady wet places, grassland, forest margins, near streams, rock crevices, alpine, mountains, see *Prodromus Florae Novae Hollandiae* 210. 1810, *Flora Novae-Zelandiae* 1: 288, t. 65a. 1853 and *Transactions and Proceedings of the New Zealand Institute* 43: 253. 1911, *Repertorium Specierum Novarum Regni Vegetabilis* 17(19-30): 292. 1921, *Transactions and Proceedings of the Royal Society of New Zealand* 73: 236. 1943, *New Zealand Journal of Botany* 36: 571-573, f. 4. 1998.

Z. thomsonii (Petrie) Edgar & Connor (*Ehrharta thomsonii* Petrie; *Microlaena thomsonii* (Petrie) Petrie; *Petriella thomsonii* (Petrie) Zotov) (dedicated to the British (Indian-born, Calcutta) botanist and naturalist George Malcolm Thomson, 1848-1933, zoologist, 1868 in New Zealand, FLS 1879; see R. Glenn, *The Botanical Explorers of New Zealand*. 138-140. Wellington 1950; Thomas Frederick Cheeseman, *Manual of the New Zealand Flora*. xxxii. Wellington 1906; Ray Desmond, *Dictionary of British & Irish Botanists and Horticulturists*. 681-682. London 1994; J.H. Barnhart, *Biographical notes upon botanists*. 3: 379. 1965; Ethelyn Maria Tucker, *Catalogue of the library of the Arnold Arboretum of Harvard University*. Cambridge, Mass. 1917-1933)

New Zealand. Perennial, low, erect, forming dense and compact mats, rhizomatous, branching intravaginal, ligule a minute rim, leaf sheath smooth, leaf blade flat inrolled to incurved, inflorescence an erect raceme, spikelet pedicels glabrous, on wet ground, open habitat, rock crevices, alpine, mountains, bogs, grassland, see *Transactions and Proceedings of the New Zealand Institute* 12: 356, t. 10. 1880 and *The Subantarctic Islands of New Zealand* 2: 472. 1909, *Transactions and Proceedings of the Royal Society of New*

Zealand 73: 235. 1943, *New Zealand Journal of Botany* 36: 573-575, f. 3. 1998.

Zoydia Pers. = *Zoysia* Willdenow

See *Syn. Pl.* 1: 73. 1805.

Zoysia Willd. = *Brousemichea* Balansa, *Matrella* Pers., *Osterdamia* Kuntze, *Osterdamia* Neck. ex Kuntze

After the Austrian botanist Karl von Zoys, 1756-1800, plant collector.

Species

A genus of about 11 species, tropical and subtropical, Southeast Asia, Australasia, New Zealand, coastlines of Indian and Pacific Oceans. Chloridoideae, Cynodonteae, Zoysiinae, perennial, small, low, herbaceous, tough leaves and stems, low growing, often densely branched at base, decumbent, more or less shallow or deep rooted, creeping rhizomes and/or stolons, monopodial rhizomes, no auricles, ligule a very short ciliate membrane or a fringe of hairs, leaf sheath round to slightly flattened, distichous leaves short and pungent, leaf blades flat and rigid, plants bisexual, inflorescence base enclosed in inflated uppermost leaf sheaths, terminal cylindrical racemes spike-like and slender, spikelets solitary and laterally compressed, small spikelets shortly pedicellate and 1-flowered, floret bisexual, floret enclosed by the upper glume, glumes one per spikelet or two and very unequal, lower glume usually absent or minute, second glume mucronate or short-awned, lemma membranous, palea present or absent, lodicules absent, 2-3 stamens, ovary glabrous, 2 stigmas, fruit small, cultivated fodder, aggressive, salt tolerant, mat forming, develop a thick thatch layer, usually extremely drought tolerant, fairly resistant to weeds and diseases, highly versatile species, used for lawn grasses and golf courses, playing fields, excellent green turf grasses, resist weed invasion, halophytic, grows on sand dunes, secondary trampled sites, along sandy seashores, margins of salt swamps, coastal sands, open habitats, type *Zoysia pungens* Willd., see *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 440-441. 1801, *Syn. Pl.* 1: 73. 1805, *Journal de Botanique (Morot)* 4(8): 163. 1890, *Revisio Generum Plantarum* 2: 781. 1891 and N.L. Bor, *Grasses of Burma, Ceylon, India and Pakistan* 684. 1960, *Proc. N.Z. Ecol. Soc.* 17: 18-24. 1970, *New Zealand Journal of Botany* 9: 630-644. 1971, Hayashi I. and M. Numata, "Viable buried-seed population in the *Miscanthus*-and *Zoysia*-type grasslands in Japan." *Japanese Journal of Ecology* 20: 243-252. 1971, *Blumea* 26: 169-175. 1980, *Flora Mesoamericana* 6: 298. 1994, *Plant Pathology* 47(1): 1-9. Feb 1998, *Plant Species Biology* 14(1): 19-28. Apr 1999, *Flora of New Zealand* 5: 515-

518. 2000, *Ecological Research* 15(1): 13-20. Mar 2000, *Grass and Forage Science* 55(2): 166-172. Jun 2000, *Plant, Cell and Environment* 23(8): 811-823. Aug 2000, *Flora of Ecuador* 68: 125-127. 2001, *Contributions from the United States National Herbarium* 41: 35, 139, 177, 240. 2001, Shiro Tsuyuzaki and Masaki Goto. "Persistence of seed bank under thick volcanic deposits twenty years after eruptions of Mount Usu, Hokkaido Island, Japan." *Am. J. Bot.* 88: 1813-1817. 2001, *Ecological Research* 16(2): 257-262. Jun 2001, *Journal of Phytopathology* 149(7-8): 421-426. Aug 2001, *Flora of Australia* 43: 218, 242, 266. 2002, *Molecular Plant Pathology* 3(4): 185-195. Jul 2002, *Ethology* 108(8): 739-747. Aug 2002, *Journal of Ecology* 91(1): 114-125. Feb 2003, *Ecological Research* 18(6): 775-782. Nov 2003, Jeom Sook Lee and Byung Sun Ihm, "Growth strategies of four salt marsh plants on Mankyung River estuary in Korea." *Ecological Research* 19(1): 37-42. Jan 2004, *Restoration Ecology* 12(2): 190-199. Jun 2004, *Physiologia Plantarum* 121(3): 409-420. Jul 2004, *Plant Breeding* 123(6): 595-599. Dec 2004, M.G. Chapman and D.E. Roberts, "Use of seagrass wrack in restoring disturbed Australian saltmarshes." *Ecological Management and Restoration* 5(3): 183-190. Dec 2004, Shusuke Sato, "Perspectives on the grazing system in Japan." *Grassland Science* 51(1): 27-31. Mar 2005, Qing Liu, Nan-Xian Zhao, Gang Hao, Xiao-Ying Hu and Yun-Xiao Liu, "Caryopsis morphology of the Chloridoideae (Gramineae) and its systematic implications." *Botanical Journal of the Linnean Society* 148(1): 57-72. May 2005, *Flora of Australia* 44B: 263-265. 2005, *Plant Biotechnology Journal* 3(3): 363-370. May 2005.

Species

Z. japonica Steud. (*Osterdamia japonica* (Steud.) Hitchc.; *Zoysia koreana* Mez; *Zoysia matrella* subsp. *japonica* (Steudel) Masamune & Yanagita; *Zoysia matrella* var. *japonica* (Steudel) Sasaki; *Zoysia pungens* var. *japonica* (Steud.) Hack.)

China, Korea, Japan, Taiwan. Perennial or annual, light green, erect, coarse and tough, creeping, sometimes branched at base, sod forming, slender stolons, basal sheaths persistent, leaves flat and obtuse, loosely overlapping ovate spikelets, lower glume absent, palea absent, ornamental lawn grass cultivated and naturalized elsewhere, harsh and unpalatable to livestock, usually drought resistant, useful for erosion control, used on golf course greens, playing fields, found along sea cliffs, open places, near dams, moderately wet areas, under shade of trees, on heavy soils, grassy hillsides, see *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 441. 1801, *Synopsis Plantarum Glumacearum* 1: 414. 1854, *Bulletin de l'Herbier Boissier* 7(9): 642. 1899 and *United States Department of Agriculture: Bulletin* 772: 166. 1920, *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 146. 1921, *Journal of the Faculty of Science: University of*

Tokyo, Botany 3(1): 315. 1930, *Bulletin of Botanical Research* 17: 364, f. 1-2. 1997, H. Cai et al., "An AFLP-based linkage map of Zoysiagrass (*Zoysia japonica*)." *Plant Breeding* 123(6): 543-548. Dec 2004, Dezhi Li, Mutsuyasu Ito and Tsuyoshi Okajima, "Effects of soil nutrient heterogeneity on the growth of plants under the various distributions and levels of nutrients in *Zoysia japonica* Steud." *Grassland Science* 51(1): 41-44. Mar 2005.

in English: Korean grass, Korean temple grass, Korean lawngrass, Korean lawn grass, Japanese lawn grass, Japanese lawngrass, zoysia, zoysiagrass

in Japan: shiba

in Thailand: ya yipun

Z. macrantha Desv.

Asia, Australia. Perennial, leaf blades rigid, strongly rhizomatous and stoloniferous, a narrow raceme, spikelets solitary and smooth, smooth and shining glume mucronate or entire, lemma 1-keeled and shortly mucronate, pioneer grass, salt and drought tolerant, sand binder, lawn grass, palatable, fodder, readily grazed, grows on coastal sand, coastal foreshores, saline grasslands, along beach and estuarine areas, sand dunes, salt marshes, margins of salt swamps, see *Mémoires de la Société d'Agriculture, Sciences et Arts d'Angers* 1: 158. 1831.

in English: dune couch, coast couch, prickly couch

Z. macrantha Desv. subsp. *macrantha*

Asia, Australia.

Z. macrantha Desv. subsp. *walshii* Nightingale

Australia. See *Fl. Australia* 43: 376. 2002.

Z. macrostachya Franch. & Sav. (*Osterdamia macrostachya* (Franch. & Sav.) Honda)

Asia, Japan, Korea. Perennial, lawn grass, leaf sheaths overlapping, stiff leaf blades, extensive rhizomes, spikelets closely overlapping, lower glume absent, palea absent, see *Enumeratio Plantarum in Japonia Sponte Crescentium ...* 2: 608. 1879 and *Botanical Magazine* (Tokyo) 36: 114. 1932.

in Japan: onishiba

Z. matrella (L.) Merr. (*Agrostis matrella* L.; *Matrella juncea* Pers.; *Osterdamia matrella* (L.) Kuntze; *Osterdamia tenuifolia* (Willd. ex Thiele) Kuntze; *Osterdamia zoysia* Honda; *Osterdamia zoysia* var. *tenuifolia* (Willd. ex Thiele) Honda; *Osterdamia zoysia* var. *typica* Honda; *Zoysia aristata* Müll. Hal.; *Zoysia griffithiana* Müll. Hal.; *Zoysia malaccensis* Gand.; *Zoysia matrella* var. *matrella*; *Zoysia matrella* var. *tenuifolia* (Willd. ex Thiele) Sasaki; *Zoysia matrella* var. *typica* Sasaki; *Zoysia pungens* Willd.; *Zoysia pungens* var. *tenuifolia* (Willd. ex Thiele) T. Durand & Schinz; *Zoysia serrulata* Mez; *Zoysia tenuifolia* Willd. ex Thiele)

China, Thailand, Japan, Taiwan, Indonesia, Malaysia. Perennial, caespitose, sod forming, short, erect, slow growing,

variable, flowering culms erect, often strongly stoloniferous and branched, weakly rhizomatous with well-developed creeping rhizome, leaf blades flexible lanceolate contracted into a short pseudopetiole, leaf sheath loose and bearded at mouth, ligule very shallow sometimes with long hairs, distichous leaves erect or ascending and filiform or sometimes almost pungent, small terminal and cylindrical spike-like raceme, spikelets spirally arranged on short stalks, spikelets lanceolate to oblong, lower glume usually absent, upper glume with a short awn, lemma folded with a notched tip, palea narrow and hyaline or absent, ornamental, extensively cultivated, easily established, required frequent grazing to stimulate new growth, young leaves palatable to stock, ground cover, specialized fine-leaved lawn grass, turfgrass for putting greens, good sand-binder useful for erosion control, good for playing fields, weed species often growing in sand near the sea, coconut plantations, sandy soils in coastal areas, see *Mantissa Plantarum* 185. 1771, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 441. 1801, *Syn. Pl.* 1: 73. 1805, *Linnaea* 9(3): 309. 1835, *Botanische Zeitung. Berlin* 13(16): 272-273. 1855, *Revisio Generum Plantarum* 2: 781. 1891, *Conspectus Florae Africae* 5: 734. 1894 and *Handb. Fl. Ceylon* 5: 188. 1900, *Philippine Journal of Science* (ser. C) 7(4): 230. 1912, *Bulletin de la Société Botanique de France* 66(7): 303. 1919 [1920], *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 146. 1921, *Botanical Magazine* 36: 113. 1922, *List of Plants of Formosa* 80. 1928, *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 317. 1930, *Handb. Fl. Ceylon* 6: 329. 1931, *Acta Phytotaxonomica et Geobotanica* 10(4): 269. 1941, *Grasses of Ceylon* 104. 1956, *Ceylon J. Sci., Biol. Sci.* 2(2): 126. 1959, *Grasses of Burma ...* 684. 1960, *Grasses of Japan and its Neighboring Regions* 534. 1987.

in English: Manila grass, Manilagrass, Manila zoysiagrass, Mascarene grass, Japanese carpet grass, siglap grass, flawn, Korean grass

in Spanish: hierba Manila, pasto venezolano

in Indonesia: burikit, jukut kakawatan hijau, rebha sekemsekeman

in Japan: Kôshun-shiba, hari-shiba, Yonaguni-shiba

in Malaysia: rimput siglap

in the Philippine Islands: barit-baritan, damong-alat, malakuwerdas

in Thailand: nguan noi, ya nuan noi

Z. matrella (L.) Merr. var. *matrella*

Indian Ocean, SE Asia. Perennial, foliage more or less spreading, racemes exerted above the foliage.

Z. matrella (L.) Merr. var. *pacifica* Goudswaard (*Zoysia pacifica* (Goudswaard) M. Hotta & Kuroki; *Zoysia tenuifolia* Willd. ex Trin., nom. illeg., non *Zoysia tenuifolia* Willd. ex Thiele)

Pacific, Japan. Perennial, caespitose, foliage usually erect, stoloniferous or shallowly rhizomatous, forming low mats, stolons or rhizomes wiry, ligule a line of very short hairs, leaf blades linear and long-attenuate, inflorescence a narrow cylindrical spike-like raceme with 15-20 spikelets on appressed pedicels, spikelets lanceolate, first glume missing, 3 stamens, lawn grass, forming dense turfs, see *Mémoires de l'Académie Impériale des Sciences de Saint-Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 96. 1836 and *Philippine Journal of Science* (ser. C) 7(4): 230. 1912, *Blumea* 26: 172, 174, Map 1. 1980, *Acta Phytotaxonomica et Geobotanica* 45(1): 71-72, f. 1A. 1994.

in English: zoysia grass

Z. minima (Colenso) Zotov (*Gaimardia minima* Colenso)

New Zealand. Perennial, culm ridged, rhizomatous with a stout rhizome, ligule ciliate, leaf blades divergent and folded, inflorescences usually solitary, a single spikelet, lower glume usually absent or much reduced, lemma ovate, dry areas, sand dunes, open ground, gravel, see *Annales des Sciences Naturelles (Paris)* 5: 100. 1825, *Transactions of the Royal Society of New Zealand* 22: 491. 1890 and *Transactions and Proceedings of the Royal Society of New Zealand* 73: 237. 1943, *New Zealand Journal of Botany* 9: 640. 1971.

Z. pacifica (Goudswaard) M. Hotta & Kuroki (*Zoysia matrella* var. *pacifica* Goudswaard; *Zoysia tenuifolia* Willd. ex Trin., nom. illeg., non *Zoysia tenuifolia* Willd. ex Thiele)

Pacific, Japan. Perennial, caespitose, foliage usually erect, much branched and densely growing, stoloniferous, inflorescence linear, spikelets loosely overlapping, lower glume absent, upper glume sometimes awned, palea absent, excellent lawn grass, forming dense low turfs, see *Mémoires de l'Académie Impériale des Sciences de Saint-Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 96. 1836 and *Philippine Journal of Science* (ser. C) 7(4): 230. 1912, *Blumea* 26: 172, 174, Map 1. 1980, *Acta Phytotaxonomica et Geobotanica* 45(1): 71-72, f. 1A. 1994.

in English: zoysia grass

Z. pauciflora Mez

New Zealand. Perennial, coastal, variable, inflorescence loose or contracted, racemes imbricate, lower glume present or absent, sandy beach, rocky places, see *Repertorium Specierum Novarum Regni Vegetabilis* 17(8-12): 145. 1921 [also *Feddes Repertorium*].

Z. planifolia Zotov

New Zealand. See *New Zealand Journal of Botany* 9(4): 641. 1971.

Z. seslerioides (Bal.) Clayton & F.R. Richardson (*Brousemichea seslerioides* Bal.)

Asia. See *Journal de Botanique (Morot)* 4(8): 163. 1890 and *Kew Bulletin* 28(1): 41. 1973.

Z. sinica Hance (*Osterdamia sinica* (Hance) Kuntze; *Zoysia matrella* var. *macrantha* Nakai ex Honda; *Zoysia sinica* subsp. *nipponica* (Ohwi) T. Koyama; *Zoysia sinica* var. *macrantha* (Nakai ex Honda) Ohwi; *Zoysia sinica* var. *nipponica* Ohwi)

China, Korea, Japan, Malaysia. Perennial, erect, branched at base, leaf sheaths usually persistent at base, leaf blades apex pungent, slender rhizomes, inflorescence usually shortly exerted from uppermost leaf sheath, spikelets closely overlapping and with falcate tips, lower glume absent, palea absent, excellent tolerance to salt, suitable for turf use, good lawn grass, coastal sand, see *Journal of Botany, British and Foreign* 7(79): 168. 1869, *Revisio Generum Plantarum* 2: 781. 1891 and *Journal of the Faculty of Science: University of Tokyo, Botany* 3(1): 317. 1930, *Acta Phytotaxonomica et Geobotanica* 10(4): 269. 1941, *Acta Phytotaxonomica et Geobotanica* 12: 112. 1943, *Grasses of Japan and its Neighboring Regions* 534. 1987.

in English: seashore zoysia grass

Z. tenuifolia Willd. ex Thiele (*Agrostis matrella* L.; *Osterdamia tenuifolia* (Willd. ex Thiele) Kuntze; *Osterdamia zoysia* var. *tenuifolia* (Willd. ex Thiele) Honda; *Zoysia matrella* (L.) Merr.; *Zoysia matrella* subsp. *tenuifolia* (Willd. ex Thiele) T. Koyama; *Zoysia matrella* var. *matrella*; *Zoysia matrella* var. *tenuifolia* (Willd. ex Thiele) Sasaki; *Zoysia pungens* var. *tenuifolia* (Willd. ex Thiele) T. Durand & Schinz; *Zoysia tenuifolia* Willd. ex Trin., nom. illeg., non *Zoysia tenuifolia* Willd. ex Thiele)

Tropical Asia, China, Thailand, Japan, Taiwan, Indonesia, Malaysia. Prostrate, creeping, mat forming, dark green dense fluffy turf, shallow-rooted, leaves threadlike and strongly involute, small inconspicuous inflorescence subspicate, rachis undulate, spikelets lanceolate to oblong to narrowly oblong-lanceolate, ornamental grass ground cover, tolerates traffic and shade, resistant to salinity and drought, extremely slow growing, naturalized elsewhere, specialized lawn grass, playing fields, see *Mantissa Plantarum* 2: 185. 1771, *Der Gesellschaft Naturforschender Freunde zu Berlin, neue Schriften* 3: 441. 1801, *Linnaea* 9(3): 309. 1835, *Mémoires de l'Académie Impériale des Sciences de Saint-Pétersbourg. Sixième Série. Sciences Mathématiques, Physiques et Naturelles. Seconde Partie: Sciences Naturelles* 4,2(1): 96. 1836, *Revisio Generum Plantarum* 2: 781. 1891, *Conspectus Florae Africae* 5: 734. 1894 and *Philippine Journal of Science* (ser. C) 7(4): 230. 1912, *Botanical Magazine* 36: 113. 1922, *List of Plants of Formosa* 80. The Natural History Society of Formosa. 1928, *Blumea* 26: 171. 1980, *Grasses of Japan and its Neighboring Regions* 534. 1987.

in English: Mascarene grass, Mascarene velvet grass, velvetgrass, Korean velvet grass, Korean grass, Korean bumpgrass, fineleaf Manila templegrass, zoysia

in French: gazon des Mascareignes

in Mauritius: herbe pique fesses

in Thailand: ya kammayi, ya kao li, ya mutkarin

Zygochloa S.T. Blake

From the Greek *zygon*, *zygos* “yoke” and *chloe*, *chloa* “grass,” referring to the dioecious spikelets.

One species, Australia. Panicoideae, Panicoideae, Paniceae, or Spinificinae, perennial, bushy or shrubby, cane-like, woody, rhizomatous and stemmy tussock-forming, much branched and grooved along one side, solid internodes, leaf blades flat and stiff, ligule a fringe of hairs, leaves disarticulating from the sheaths, no auricles, plants dioecious, spikelets dimorphous and solitary, without hermaphrodite florets, female inflorescence of bracteate heads of spikelets, male spikelets with both florets male, male spikelets on separate individuals in small bracteate heads, female spikelets with lower floret sterile and upper female, two glumes subequal and awnless, palea present, 2 fleshy lodicules, stamens 0, ovary glabrous, 2 stigmas plumose, herbaceous seedheads, small fruit, a shelter and cover for wildlife, grazed by sheep and cattle, useful in trapping windborne sand, grows on arid sandy and rocky areas, hills, desert sand dunes and sand hills, sand ridges, open habitats, type *Zygochloa paradoxa* (R. Br.) S.T. Blake, see *Species Plantarum* 1: 55. 1753, *Mantissa Plantarum* 163, 300. 1771, *Exped. Centr. Austral.* 2: App. 89. 1849, *Fragmenta Phytographiae Australiae* 8: 199. 1874, *Hooker's Icones Plantarum* 3: t. 1243-1244. 1877-1879 and *University of Queensland Papers, Department of Biology*. 1(19): 7. 1941, *Genera Graminum* 307-308. 1986, *Flora of Australia* 43: 122-123, 163, 218. 2002.

Species

Z. paradoxa (R. Br.) S.T. Blake (*Neurachne paradoxa* R. Br.; *Panicum pseudo-neurachne* (R. Br.) F. Muell.; *Spinifex paradoxus* (R. Br.) Benth., also spelled *paradoxa*)

New South Wales, Queensland, Northern Territory, South Australia. Perennial, dioecious, robust, persistent, solid, glabrous, rhizomatous, shrubby, rigid or hard stems branching and spreading, creeping at the base, forming tussocks, leaves short and often drought-deciduous, male heads globose, female heads globose, spikelets of female plants with winged bracts, male spikelets shortly pedicellate, female spikelets shortly pedicellate, male florets 3-staminate, glumes much shorter than the lemmas, fertile lemma ovoid and acute, extremely drought-resistant, suitable as a sand-binder, grazed when young, found on desert sand-dunes, arid areas, on dune crests.

in English: sandhill canegrass, cane grass

Quod erat demonstrandum.

Bibliography

- Agricultural and Food Research Council (AFRC). 1993. *Energy and Protein Requirements of Ruminants*. CABI, Wallingford, UK.
- Ahrens U. and E. Seemüller. 1992. Detection of DNA of plant pathogenic mycoplasma-like organisms by a polymerase chain reaction that amplifies a sequence of the 16S rRNA gene. *Phytopathology* 82: 828–832.
- Aldous A. E. 1934. Effect of burning on Kansas bluestem pastures. *Kansas Agricultural Experiment Station Technical Bulletin* 38: 1–65.
- Aliscioni S. A., L. M. Giussani, F. O. Zuloaga, and E. A. Kellogg. 2003. A molecular phylogeny of *Panicum* (Poaceae: Paniceae): test of monophyly and phylogenetic placement within the Panicoideae. *American Journal of Botany* 90: 796–821.
- Allen E. B. and M. F. Allen. 1986. Water relations of xeric grasses in the field: interactions of mycorrhizae and competition. *New Phytologist* 104: 559–571.
- Allen E. B. and M. F. Allen. 1990. The mediation of competition by mycorrhizae in successional and patchy environments. In J. R. Grace and D. Tilman, [eds.], *Perspectives on Plant Competition*, 367–389. Academic Press, New York, USA.
- Allen M. F. 1985. Phytohormone action: an integrated approach to understanding diverse mycorrhizal responses. In R. Molina [ed.], *Proceedings of the Sixth North American Conference on Mycorrhizae*, 158–160. Forest Sciences Laboratory, Corvallis, Oregon, USA.
- Altpeter F., J. P. Xu, and S. Ahmed. 2000. Generation of large numbers of independently transformed fertile perennial ryegrass (*Lolium perenne* L.) plants of forage- and turf-type cultivars. *Molecular Breeding* 6: 519–528.
- Ambrose B. A., D. R. Lerner, P. Ciceri, C. M. Padilla, M. F. Yanofsky, and R. J. Schmidt. 2000. Molecular and genetic analyses of the *Silky1* gene reveals conservation in floral organ specification between eudicots and monocots. *Molecular Cell* 5: 569–579.
- Ammar H., S. Lopez, O. Bochi-Brum, R. Garcia, M. J. Ranilla. 1999. Composition and *in vitro* digestibility of leaves and stems of grasses and legumes harvested from permanent mountain meadows at different stages of maturity. *Journal of Animal and Feed Science* 8: 599–610.
- Angiosperm Phylogeny Group (APG). 1998. An ordinal classification for the families of flowering plants. *Annals of the Missouri Botanical Garden* 85: 531–553.
- Angiosperm Phylogeny Group (APG II). 2003. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG II. *Botanical Journal of the Linnean Society* 141: 399–436.
- Arber A. 1929. Studies in the Gramineae. VI. 1. *Streptochoeta*. 2. *Anomochloa*. 3. *Ichnanthus*. *Annals of Botany* 43: 35–53.
- Arber A. 1934. *The Gramineae*. Cambridge University Press, Cambridge, UK.
- Aregheore E. M. 2002. Voluntary intake and digestibility of fresh, wilted and dry *Leucaena* (*Leucaena leucocephala*) at four levels to a basal diet of guinea grass (*Panicum maximum*). *Asian–Australian Journal of Animal Science* 15: 1139–1146.
- Avise J. C. 2000. *Phylogeography: the history and formation of species*. Harvard University Press, Cambridge, Massachusetts, USA.
- Azcon-Aguilar C. and J. M. Barea. 1992. Interactions between mycorrhizal fungi and other rhizosphere microorganisms. In M. F. Allen [ed.], *Mycorrhizal Functioning, an Integrative Plant–Fungal Process*, 163–198. Chapman & Hall, New York, USA.
- Badaeva E. D., B. Friebe, and B. S. Gill. 1996. Genome differentiation in *Aegilops*. 1. Distribution of highly repetitive DNA sequences on chromosomes of diploid species. *Genome* 39: 293–306.
- Badaeva E. D., B. Friebe, B. S. Gill. 1996. Genome differentiation in *Aegilops*. 2. Physical mapping of 5 S and 18 S-26 S ribosomal RNA gene families in diploid species. *Genome* 39: 1150–1158.
- Ballard R.A., R. J. Simpson, and G. R. Pearce. 1990. Losses of the digestible components of annual ryegrass (*Lolium rigidum* Gaudin) during senescence. *Australian Journal of Agricultural Research* 41: 719–731.
- Barea J. M. and C. Azcon-Aguilar. 1983. Mycorrhizas and their significance in nodulating nitrogen-fixing plants. *Advanced Agronomy* 36: 1–54.
- Barkworth M.E. 1982. Embryological characters and the taxonomy of the Stipeae (Gramineae). *Taxon* 31: 233–243.
- Barkworth M. E. 1983. *Ptilagrostis* in North America and its relationship to other Stipeae (Gramineae). *Syst. Bot.* 8(4): 395–419.
- Barkworth M. E. 1990. *Nassella* (Gramineae, Stipeae): revised interpretation and nomenclatural changes. *Taxon* 39: 597–614.
- Barkworth M. E. 1993. North American Stipeae (Gramineae): taxonomic changes and other comments. *Phytologia* 74: 1–25.
- Barkworth M. E. and R. J. Atkins. 1984. *Leymus* Hochst. Gramineae: Triticeae in North America: taxonomy and distribution. *Amer. J. Bot.* 71(5): 609–625.
- Barkworth M. E. and D. R. Dewey. 1985. Genomically based genera in the perennial Triticeae of North America: identification and membership. *Amer. J. Bot.* 72(5): 767–776.
- Barkworth M. E., D. R. Dewey, and R. J. Atkins. 1983. New generic concepts in the Triticeae of the Intermountain Region: key and comments. *Great Basin Naturalist* 43(4): 561–572.
- Barkworth M. E. and J. Everett. 1987. Evolution in the Stipeae: identification and relationships of its monophyletic taxa. In T.R. Soderstrom, K.W. Hilu, C.S. Campbell and M.E. Barkworth [eds.], *Grass Systematics and Evolution*, 251–264. Smithsonian Institution, Washington, D.C., USA.

- Barnes R. F. 1990. Importance and problems of tall fescue. In M. J. Kasperbauer [ed.], *Biotechnology in Tall Fescue Improvement*, 1–12. CRC Press, Boca Raton, Florida, USA.
- Barrett S. C. H. 1988. The evolution, maintenance, and loss of self-incompatibility systems. In J. Lovett Doust, and L. Lovett Doust [eds.], *Plant Reproductive Ecology: Patterns and Strategies* 98–124 Oxford University Press, Oxford, UK.
- Barrett S. C. H., L. D. Harder, and A. C. Worley. 1996. The comparative biology of pollination and mating in flowering plants. *Philosophical Transactions of the Royal Society of London, B, Biological Sciences* 351: 1271–1280.
- Baumel A. M., L. Ainouche, and J. E. Levasseur. 2001. Molecular investigations in populations of *Spartina anglica* C. E. Hubbard (Poaceae) invading coastal Brittany (France). *Molecular Ecology* 10: 1689–1701.
- Baylis, G. T. S. 1975. The magnolioid mycorrhiza and mycotrophy in root systems derived from it. In F. E. Sanders, B. Mosse, and P. B. Tinker [eds.], *Endomycorrhizas*, 373–389. Academic Press, New York, NY.
- Benito C., A. M. Figueiras, and M. T. Gonzalez-Jaen. 1987. Location of genes coding isozyme markers on *Aegilops umbellulata* chromosomes adds data on homeology among Triticeae chromosomes. *Theoretical and Applied Genetics* 73: 581–588.
- Bennett M. D. 1988. Parental genome separation in F1 hybrids between grass species. *Kew Chromosome Conference III* 195–208.
- Bennetzen J. L. and M. Freeling. 1993. Grasses as a single genetic system: genome composition, collinearity and complementarity. *Trends in Genetics* 9: 259–261.
- Bennetzen J. L. and J. Ma. 2003. The genetic colinearity of rice and other cereals based on genomic sequence analysis. *Current Opinion in Plant Biology* 6: 128–133.
- Bennetzen J. L. and W. Ramakrishna. 2002. Exceptional haplotype variation in maize. *Proceedings of the National Academy of Sciences, USA* 99: 9093–9095.
- Bennetzen J. L., P. SanMiguel, M. Chen, A. Tikhonov, M. Francki, and Z. Avramova. 1998. Grass genomes. *Proceedings of the National Academy of Sciences, USA* 95: 1975–1978.
- Bennetzen J. L., K. Schrick, P. S. Springer, W. E. Brown, and P. SanMiguel. 1994. Active maize genes are unmodified and flanked by diverse classes of modified, highly repetitive DNA. *Genome* 37: 565–576.
- Bessey C. E. 1915. The phylogenetic taxonomy of flowering plants. *Annals of the Missouri Botanical Garden* 2: 108–164.
- Bettany A. J. E., S. J. Dalton, E. Timms, B. Manderyck, M. S. Dhanoa, and P. Morris. 2003. *Agrobacterium tumefaciens*-mediated transformation of *Festuca arundinacea* Schreb. and *Lolium multiflorum* Lam. *Plant Cell Reports* 21: 437–444.
- Bloom A. J., F. S. Chapin III, and H. A. Mooney. 1985. Resource limitation in plants — an economic analogy. *Annual Review of Ecology and Systematics* 16: 363–392.
- Bödvarsdóttir S. K. and K. Anamthawat-Jónsson. 2003. Isolation, characterization, and analysis of *Leymus*-specific DNA sequences. *Genome* 46: 673–682.
- Bowden W. M. 1959. The taxonomy and nomenclature of the wheats, barleys and ryes and their wild relatives. *Canadian Journal of Botany* 37: 657–684.
- Breiman A. 1987. Mitochondrial DNA diversity in the genera of *Triticum* and *Aegilops* revealed by Southern blot hybridization. *Theoretical and Applied Genetics* 73: 563–570.
- Bremer K. 2002. Gondwanan evolution of the grass alliance of families (Poales). *Evolution* 56: 1374–1387.
- Briggs B. G. and L. A. S. Johnson. 1998. *Georgeantha hexandra*, a new genus and species of Ecdiocoleaceae (Poales) from Western Australia. *Telopea* 7: 307–312.
- Briggs B. G. and L. A. S. Johnson. 2000. *Hopkinsiaceae* and *Lyginiaceae*, two new families of Poales in Western Australia, with revisions of *Hopkinsia* and *Lyginia*. *Telopea* 8: 477–502.
- Brockway D. G. and C. E. Lewis. 1997. Long-term effects of dormant-season prescribed fire on plant community diversity, structure and productivity in a longleaf pine-wiregrass ecosystem. *Forest Ecology and Management* 96: 167–183.
- Brown R. C., B. E. Lemmon, B. A. Stone, and O.-A. Olsen. 1997. Cell wall (13)- and (13,14)- β -glucans during early grain development in rice (*Oryza sativa* L.). *Planta* 202: 414–426.
- Brummitt R. K. 1992. Vascular plant families and genera. Royal Botanic Gardens, Kew, UK.
- Brundrett M. C. and B. Kendrick. 1988. The mycorrhizal status, root anatomy, and phenology of plants in a sugar maple forest. *Canadian Journal of Botany* 66: 1153–1173.
- Burd M. T. and F. H. Allen. 1988. Sexual allocation strategy in wind-pollinated plants. *Evolution* 42: 403–407.
- Campbell G. S. 1977. An introduction to environmental biophysics. Springer, Ulm, New York, USA.
- Campbell C. S. and E. A. Kellogg. 1987. Sister group relationships in the Poaceae. In T. R. Soderstrom, K. W. Hilu, C. S. Campbell, and M. E. Barkworth [eds.], *Grass Systematics and Evolution*, 217–224. Smithsonian Institution, Washington, D.C., USA.
- Carpita N. C. 1996. Structure and biogenesis of the cell walls of grasses. *Annual Review of Plant Physiology and Plant Molecular Biology* 47: 445–476.
- Catalán P., E. A. Kellogg, and R. G. Olmstead. 1997. Phylogeny of Poaceae subfamily Pooideae based on chloroplast ndhF gene sequences. *Molecular Phylogenetics and Evolution* 8: 150–166.
- Catalán P., P. Torrecilla, J. A. López Rodríguez, and R. G. Olmstead. 2004. Phylogeny of the festucoid grasses of subtribe Loliinae and allies (Poaceae, Pooideae) inferred from ITS and *trnL-F* sequences. *Molecular Phylogenetics and Evolution* 31: 517–541.
- Chandler V. L. and S. Wessler. 2001. Grasses. A collective model genetic system. *Plant Physiology* 125: 1155–1156.
- Chang T. T. 1985. Crop history and genetic conservation: rice—a case study. *Iowa State Journal of Research* 59: 425–455.
- Chapman G. P. (ed.). 1992. Desertified grasslands: their biology and management: papers presented at an International Symposium organized by the Linnean Society of London and Wye College, University of London, held at the Linnean Society's rooms, London, 27, 28 February and 1 March 1991. Academic Press, London, UK.

- Charlesworth D. 1985. Distribution of dioecy and self-incompatibility in angiosperms. In J. J. Greenwood, and M. Slatkin [eds.] *Evolution — Essays in Honour of John Maynard Smith*. 237–268 Cambridge University Press, Cambridge, UK.
- Chase M. W. D. E. Soltis, R. G. Olmstead, D. Morgan, D. H. Les, B. D. Mishler, M. R. Duvall, R. A. Price, H. G. Hills, Y.-L. Qiu, K. A. Kron, J. H. Rettig, E. Conti, J. D. Palmer, J. R. Manhart, K. J. Sytsma, H. J. Michaels, W. J. Kress, K. G. Karol, W. D. Clark, M. Hedren, B. S. Gaut, R. K. Jansen, K.-J. Kim, C. F. Wimpee, J. F. Smith, G. R. Furnier, S. H. Strauss, Q.-Y. Xiang, G. M. Plunkett, P. S. Soltis, S. M. Swensen, S. E. Williams, P. A. Gadek, C. J. Quinn, L. E. Eguiarte, E. Golenberg, G. H. Learn Jr., S. W. Graham, S. C. H. Barrett, S. Dayanandan, and V. A. Albert. 1993. Phylogenetics of seed plants: an analysis of nucleotide sequences from the plastid gene *rbcL*. *Annals of the Missouri Botanical Garden* 80: 528–580.
- Chase M. W. D. E. Soltis P. S. Soltis P. J. Rudall M. F. Fay W. H. Hahn S. Sullivan J. Joseph M. Molvray P. J. Kores T. J. Givnish K. J. Sytsma, and J. C. Pires. 2000. Higher-level systematics of the monocotyledons: an assessment of current knowledge and a new classification. In K. L. Wilson and D. A. Morrison [eds.], *Monocotyledons: Systematics and Evolution*, 3–16. CSIRO, Melbourne, Australia.
- Chase M. W. D. W. Stevenson P. Wilkin P. J. Rudall. 1995. Monocot systematics: a combined analysis. In P. J. Rudall, P. J. Cribb, D. F. Cutler, and C. J. Humphries [eds.], *Monocotyledons: Systematics and Evolution*, 685–730. Royal Botanic Gardens, Kew, London, UK.
- Chen CT, Kusalwong A. 2000. White leaf. In: Rott P, Bailey RA, Comstock JC, Croft BJ, Saumtally AS, eds. *A Guide to Sugarcane Diseases*. France: CIRAD ISSCT, 231–6.
- Chen J, Chang CJ, Jarret RL. 1992. DNA probes as molecular markers to monitor the seasonal occurrence of walnut witches'-broom mycoplasma-like organisms. *Plant Disease* 76: 1116–1119.
- Chennaveeraiah M. A. 1960. Karyomorphologic and cytotoxic studies in *Aegilops*. *Acta Horti Gothoburgensis* 23: 85–178.
- Christensen N. L. 1977. Fire and soil-plant nutrient relations in a pine-wiregrass savanna on the Coastal Plain of North Carolina. *Oecologia* 31: 27–44.
- Clayton, W.D. 1969. A revision of the genus *Hyparrhenia*. Kew Bull. Add. Series II. H.M. Stationery Office, London, UK.
- Clayton W. D. 1970. Flora of tropical East Africa. *Gramineae* part 1. London, Crown Agents.
- Clayton W. D. 1975. Chorology of the genera of Gramineae. *Kew Bulletin* 30: 111–132.
- Clayton W. D. 1990. The spikelet. In G. P. Chapman [ed.], *Reproductive Versatility in the Grasses*, 32–51. Cambridge University Press, Cambridge, Massachusetts, USA.
- Clayton W. D. and S. A. Renvoize. 1986. Part 1. The grass plant. In W. D. Clayton and S. A. Renvoize [eds.], *Genera Graminum, Grasses of the World*, vol. 13, Kew Bulletin Additional Series XIII, 1–27. Her Majesty's Stationary Office, London, UK.
- Clifford H. T. 1986. Spikelet and floral morphology. In T. R. Soderstrom, K. W. Hilu, C. S. Campbell, and M. E. Barkworth [eds.], *Grass: Systematics and Evolution*, 21–30. Smithsonian Institution, Washington, D.C., USA.
- Cocucci A. E. and A. M. Anton. 1988. The grass flower: suggestions on its origin and evolution. *Flora* 181: 353–362.
- Coen E. S. and J. M. Nugent. 1994. Evolution of flowers and inflorescences. *Development* (Supplement): 107–116.
- Cole, I. and Lunt, I. D. 2005. Restoring kangaroo grass (*Themeda triandra*) to grassland and woodland understoreys: a review of establishment requirements and restoration exercises in south-east Australia. *Ecological Management and Restoration* 6: 28–33.
- Collins S. L. and L. L. Wallace. 1990. Fire in North American tallgrass prairies. University of Oklahoma Press, Norman, Oklahoma, USA.
- Colomba E. L., K. Grunberg, S. Griffa, A. Ribotta, L. Mroginski, and E. Biderbost. 2006. The effect of genotype and culture medium on somatic embryogenesis and plant regeneration from mature embryos of fourteen apomictic cultivars of buffel grass (*Cenchrus ciliaris* L.). *Grass and Forage Science* 61(1): 2–8.
- Conner J. K. and A. Sterling. 1995. Testing hypotheses of functional relationships: a comparative survey of correlation patterns among floral traits in five insect-pollinated plants. *American Journal of Botany* 82: 1399–1406.
- Cope T. (ed.). 1999. Flora Zambesiaca: Mozambique, Malawi, Zambia, Zimbabwe, Botswana. Volume 10, pt. 2, edited by T. Cope, on behalf of the Editorial Board: S.J. Owens, M.A. Diniz, G.V. Pope. Kew: Published by the Royal Botanic Gardens, Kew, for the Flora Zambesiaca Managing Committee.
- Cope T. 1982. Poaceae (Flora of Pakistan; no. 143). Karachi: Dept. of Botany, University of Karachi, Pakistan.
- Corner E. J. H. 1976. The seeds of dicotyledons. Cambridge University Press, Cambridge, UK.
- Cowling D.W. and D. R. Lockyer. 1970. The response of perennial ryegrass to nitrogen in various periods of the growing season. *Journal of Agricultural Science, Cambridge* 75: 539–546.
- Crane P. R. 1986. Form and function in wind dispersed pollen. In S. Blackmore and I. K. Ferguson [eds.], *Pollen and Spores: Form and Function*, 179–202. Linnean Society of London, London, UK.
- Crisci J. V., M. M. Cigliano, J. J. Morrone, and S. Roig-Junent. 1991. Historical biogeography of southern South America. *Systematic Zoology* 40: 152–171.
- Cronquist A. 1981. *An Integrated System of Classification of Flowering Plants*. Columbia University Press, New York, USA.
- Crush J. R., J. E. Waller, and D. A. Care. 2005. Root distribution and nitrate interception in eleven temperate forage grasses. *Grass and Forage Science* 60(4): 385–392.
- Culley T. M., S. G. Weller, and A. K. Sakai. 2002. The evolution of wind pollination in angiosperms. *Trends in Ecology and Evolution* 17: 361–369.
- Cushwa C. T., E. V. Brender, and R. W. Cooper. 1966. The response of herbaceous vegetation to prescribed burning. USDA Forest Service Research Note SE-53. USDA Forest Service, Asheville, North Carolina, USA.

- Dahlgren R. M. T., H. T. Clifford, and P. F. Yeo. 1985. The families of the monocotyledons. Springer-Verlag, New York, USA.
- Daniels B. A., P. M. McCool, and J. A. Menge. 1981. Comparative inoculum potential of spores of six vesicular-arbuscular mycorrhizal fungi. *New Phytologist* 89: 385–391.
- Daniels B. A. and H. A. Skipper. 1982. Methods for the recovery and quantitative estimation of propagules from soil. In N. C. Schenck [ed.], *Methods and Principles on Mycorrhizal Research*, 29–35. American Phytopathological Society, St. Paul, Minnesota, USA.
- Davidse G. 1978. A systematic study of the genus *Lasiacis* (Gramineae, Panicoideae). *Ann. Missouri Bot. Gard.* 65: 1133–1254.
- Davidse G. 1988. A revision of the genus *Prionanthium* (Poaceae–Arundineae). *Bothalia* 18: 143–153.
- Davidse G. and R. P. Ellis. 1984. *Steyermarkochloa unifolia* Davidse & Ellis, a new genus from Venezuela and Colombia (Poaceae: Arundinoideae: Steyermarkochloae). *Ann. Missouri Bot. Gard.* 71: 994–1012.
- Davidse G. and R. P. Ellis. 1987. *Arundoclaytonia*, a new genus of the Steyermarkochloae (Poaceae: Arundinoideae) from Brazil. *Ann. Missouri Bot. Gard.* 74: 479–490.
- Davidse G., O. Morrone and F.O. Zuloaga. 2001. Two new species of *Paspalum* (Poaceae: Panicoideae) from Brazil. *Novon* 11(4): 389–394.
- Davidse G., T. R. Soderstrom, and R. P. Ellis. 1986. *Pohlidium petiolatum* (Poaceae: Centothecae), a new genus and species from Panama. *Syst. Bot.* 11: 131–144.
- Davidse G., M. Sousa, and S. Knapp (editores generales). 1995. *Flora Mesoamericana*. Vol. 1: *Psilotaceae a Salviniaceae*. Universidad Nacional Autónoma de México, México, D.F. 470 pp.
- Davidse G., M. Sousa, and A. O. Chater (editores generales). 1994. *Flora Mesoamericana*. Vol. 6: *Alismataceae a Cyperaceae*. Universidad Nacional Autónoma de México, México, D.F.
- Davidse G. and N. J. Turland. 1999. Proposal to conserve the name *Andropogon bicornis* (Gramineae) with a conserved type. *Taxon* 48: 573–574.
- Davis J. L., D. W. Stevenson, G. Peterson, O. Seberg, L. M. Campbell, J. V. Freudenstein, D. H. Goldman, C. R. Hardy, F. A. Michelangeli, M. P. Simmons, C. D. Specht, F. Vergara-Silva, and M. A. Gandolfo. 2004. A phylogeny of the monocots, as inferred from *rbcL* and *atpA* sequence variation, and a comparison of methods for calculating jackknife and bootstrap values. *Systematic Botany* 29: 460–510.
- Davis P.H. 1985. *Flora of Turkey and the East Aegean Islands*. Vol. 9. Edinburgh University Press, Scotland, UK.
- Davis R. I., B. Schneider, and K.S. Gibb. 1997. Detection and differentiation of phytoplasmas in Australia. *Australian Journal of Agricultural Research* 48: 535–44.
- Dawson J. W. 1963. Origins of New Zealand alpine flora. *New Zealand Journal of Ecology* 10: 12–15.
- de Koning R. and M. S. M. and Sosef. 1985. The Malesian Species of *Paspalum* L. (Gramineae). *Blumea* 30: 279–318.
- Delseny M. 2003. Towards an accurate sequence of the rice genome. *Current Opinion in Plant Biology* 6: 101–105.
- De La Rue S., A. Padovan, and K. S. Gibb. 2001. *Stylosanthes* is a host for several phytoplasmas, one of which shows unique 16S-23S intergenic spacer region heterogeneity. *Journal of Phytopathology* 149: 613–619.
- Deng S. and C. Hiruki. 1991. Amplification of 16S rRNA genes from culturable and nonculturable mollicutes. *Journal of Microbiological Methods* 14: 53–61.
- Devos K. M., Z. M. Wang, J. Beales, T. Sasaki, and M. D. Gale. 1998. Comparative genetic maps of foxtail millet (*Setaria italica*) and rice (*Oryza sativa*). *Theoretical and Applied Genetics* 96: 63–68.
- Dewey D. R. 1984. The genomic system of classification as a guide to intergeneric hybridization with the perennial Triticeae. In J. P. Gustafson [ed.], *Gene Manipulation in Plant Improvement, Proceedings of the 6th Stadler Genetics Symposium*, 209–279. Columbia University Press, New York, USA.
- Douglas S. M. 1986. Detection of mycoplasma-like organisms in peach and chokecherry with X-disease by fluorescence microscopy. *Phytopathology* 76: 784–787.
- Doust A. N. and E. A. Kellogg. 2002. Inflorescence diversification in the panicoid "bristle grass" clade (Paniceae, Poaceae): evidence from molecular phylogenies and developmental morphology. *American Journal of Botany* 89: 1203–1222.
- Doust A. N. and E. A. Kellogg. 2002. Integrating phylogeny, developmental morphology and genetics: a case study of inflorescence evolution in the "bristle grass" clade (Panicoideae: Poaceae). In Q. C. B. Cronk, R. M. Bateman, and J. A. Hawkins [eds.], *Developmental Genetics and Plant Evolution*, 298–314. Taylor & Francis, London, UK.
- Doyle J. J. and J. L. Doyle. 1990. Isolation of plant DNA from fresh tissue. *Focus* 12: 13–5.
- Dudley J. L. and K. Lajtha. 1993. The effects of prescribed burning on nutrient availability and primary production in sandplain grasslands. *American Midland Naturalist* 130: 286–298.
- Duistermaat H. 1987. A revision of *Oryza* (Gramineae) in Malesia and Australia. *Blumea* 32: 157–193.
- Dunn G. H. and S. M. Dabney. 1996. Modulus of elasticity and moment of inertia of grass hedge stems. *Transactions of the American Society of Agricultural Engineers* 39: 947–952.
- Duvall M. R., J. D. Noll, and A. H. Minn. 2001. Phylogenetics of Paniceae (Poaceae). *American Journal of Botany* 88: 1988–1992.
- Dvorák J. and H. B. Zhang. 1992. Reconstruction of the phylogeny of the genus *Triticum* from variation in repeated nucleotide sequences. *Theoretical and Applied Genetics* 84: 419–429.
- Eagles C. F. 1967. Variation in the soluble carbohydrate content of climatic races of *Dactylis glomerata* (Cocksfoot) at different temperatures. *Annals of Botany* 31: 645–651.
- Eig A. 1929. Monographisch-kritische Übersicht der Gattung *Aegilops*. *Repertorium Specierum Novarum Regni Vegetabilis* 55: 1–228.
- Estaun V., C. Calvet, and D. S. Hayman. 1987. Influence of plant genotype on mycorrhizal infection: response of three pea cultivars. *Plant and Soil* 103: 295–298.

- Evans D. G. and M. H. Miller. 1988. Vesicular-arbuscular mycorrhiza and the soil-disturbance-induced reduction of nutrient absorption in maize. I. Causal relations. *New Phytologist* 110: 67–74.
- Everson C.S. and G. P. Y. Clarke. 1987. A comparison of six methods of botanical analysis in the montane grasslands of Natal. *Vegetatio* 73: 47–51.
- Evitayani, W. L., A. Fariani, T. Ichinohe, and T. Fujihara. 2004. *In vitro* rumen degradability and gas production of grass during dry and rainy seasons in North Sumatra, Indonesia. In H. K. Wong, J. B. Liang, Z. A. Jelan, Y. W. Ho, Y. M. Goh, J. M. Panandam, W. Z. Mohamed, (eds), *Proceedings of the 11th Animal Science Congress Volume 3*, 5–9 September 2004, Kuala Lumpur, Malaysia. pp. 382–384. The Asian–Australasian Association of Animal Production Societies, Kuala Lumpur.
- Evitayani, W.L., A. Fariani, T. Ichinohe, A. S. Abdulrazak, M. Hayashida and T. Fujihara. 2005. Nutritive value of selected grasses in North Sumatra, Indonesia. *Animal Science Journal* 76(5): 461–468.
- Faegri K. and L. van der Pijl. 1979. The principles of pollination ecology, 3rd ed. Pergamon, Oxford, UK.
- Fassett N. C. 1924. A study of the genus *Zizania*. *Rhodora* 26: 153–160.
- Felsenstein J. 1989. Phylip – Phylogeny Inference Package version 3.2. *Cladistics* 5: 164–166.
- Filgueiras T.S., G. Davidse, and F. O. Zuloaga. 1993. *Ophiochloa*, a new endemic serpentine grass genus (Poaceae: Paniceae) from the Brazilian cerrado vegetation. *Novon* 3: 360–366.
- Finnigan J. J. and P. J. Mulhearn. 1978. Modelling waving crops in a wind tunnel. *Boundary-Layer Meteorology* 14: 253–277.
- Fitter A. H. and J. W. Merryweather. 1992. Why are some plants more mycorrhizal than others? an ecological inquiry. In D. J. Read, D. H. Lewis, A. H. Fitter, and I. J. Alexander [eds.], *Mycorrhizas in Ecosystems*, 26–37, CAB International, University Press, Cambridge, UK.
- Francis R. and D. J. Read. 1994. The contributions of mycorrhizal fungi to the determination of plant community structure. *Plant and Soil* 159: 11–25.
- Franks S. J. 2003. Facilitation in multiple life-history stages: evidence for nucleated succession in coastal dunes. *Plant Ecology* 168: 1–11.
- Franks S. J. and C. J. Peterson. 2003. Burial disturbance leads to facilitation among coastal dune plants. *Plant Ecology* 168: 13–21.
- Fraser J. and E. G. Kokko. 1993. Panicle, spikelet, and floret development in orchard grass (*Dactylis glomerata*). *Canadian Journal of Botany* 71: 523–532.
- Frederiksen S. 1986. Revision of *Taeniatherum* (Poaceae). *Nordic Journal of Botany* 6: 389–397.
- Frederiksen S. 1991. Taxonomic studies in *Eremopyrum* (Poaceae). *Nordic Journal of Botany* 11: 271–285.
- Frederiksen S. 1994. Hybridization between *Taeniatherum caput-medusae* and *Triticum aestivum* (Poaceae). *Nordic Journal of Botany* 14: 3–6.
- Frederiksen S. and R. von Bothmer. 1989. Intergeneric hybridization between *Taeniatherum* and different genera of Triticeae, Poaceae. *Nordic Journal of Botany* 9: 229–240.
- Freeman C. C. and L. C. Hulbert. 1985. An annotated list of the vascular flora of Konza Prairie Research Natural Area, Kansas. *Transactions of the Kansas Academy of Science* 88: 84–115.
- Freitag H. 1975. The genus *Piptatherum* (Gramineae) in Southwest Asia. *Notes, Royal Bot. Gard. Edinburgh* 33(3): 341–408.
- Freitag H. 1985. The genus *Stipa* (Gramineae) in Southwest and South Asia. *Notes, Royal Bot. Gard. Edinburgh* 42(3): 355–489.
- Friedman J. and L. D. Harder. 2004. Inflorescence architecture and wind pollination in six grass species. *Functional Ecology* 18: 851–860.
- Friedman J. and L. D. Harder. 2005. Functional associations of floret and inflorescence traits among grass species. *Am. J. Bot.* 92: 1862–1870.
- Friedman W. E., R. C. Moore, and M. D. Purugganan. 2004. The evolution of plant development. *American Journal of Botany* 91: 1726–1741.
- Fritz S. E. and A. J. Lukaszewski. 1989. Pollen longevity in wheat, rye and triticale. *Plant Breeding* 102: 31–34.
- Gale M. D. and K. M. Devos. 1998. Comparative genetics in the grasses. *Proceedings of the National Academy of Sciences, USA* 95: 1971–1974.
- Gange A. C., V. K. Brown, and G. S. Sinclair. 1993. Vesicular-arbuscular mycorrhizal fungi: a determinant of plant community structure in early succession. *Functional Ecology* 7: 616–622.
- Gange A. C. and H. M. West. 1994. Interactions between arbuscular mycorrhizal fungi and foliar-feeding insects in *Plantago lanceolata* L. *New Phytologist* 128: 79–87.
- Garcia A. T. R., G. Blanca, and C. M. Torres. 1987. *Linkagrostis*, un género nuevo de la familia Poaceae. *Candollea* 42: 379–388.
- Gardner C. A. 1952. Flora of Western Australia, vol. 1, part 1. Gramineae. Government Press, Perth, Australia.
- Garnier E. 1992. Growth analysis of congeneric annual and perennial grass species. *Journal of Ecology* 80: 665–675.
- Gaut B. S. 2001. Patterns of chromosomal duplication in maize and their implications for comparative maps of the grasses. *Genome Research* 11: 55–66.
- Gaut B. S. 2002. Evolutionary dynamics of grass genomes. *New Phytologist* 154: 15–28.
- Gaut B. S. and J. F. Doebley. 1997. DNA sequence evidence for the segmental allotetraploid origin of maize. *Proceedings of the National Academy of Sciences, USA* 94: 6809–6814.
- Ge S., A. Li, B. R. Lu, S. Z. Zhang, and D. Y. Hong. 2002. A phylogeny of the rice tribe Oryzae (Poaceae) based on *matK* sequence data. *American Journal of Botany* 89: 1967–1972.
- Ge S., T. Sang, B. R. Lu, and D. Y. Hong. 1999. Phylogeny of rice genomes with emphasis on origins of allotetraploid species. *Proceedings of the National Academy of Sciences, USA* 96: 14400–14405.
- Ge S., T. Sang, B. R. Lu, and D. Y. Hong. 2001. Phylogeny of the genus *Oryza* as revealed by molecular approaches. In G. S. Khush, D. S. Brar, and B. Hardy [eds.], *Rice Genetics IV. Proceedings of the Fourth International Rice Genetics Symposium*, 89–105. IRRI, Los Baños, Philippines.

- Gianinazzi-Pearson V., S. Gianinazzi, J. P. Guillemain, A. Trouvelot, and G. Duc. 1991. Genetic and cellular analysis of resistance of vesicular arbuscular (VA) mycorrhizal fungi in pea mutants. In H. Hennecke and D. P. S. Verma [eds.], *Advances in Molecular Genetics of Plant-Microbe Interactions*, 275–294. Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Gibbs Russell G. E. 1987. Taxonomy of the genus *Ehrharta* (Poaceae) in southern Africa: the Setacea group. *Bothalia* 17(1): 67–73.
- Gibbs Russell G. E. and R. P. Ellis. 1987. Species groups in the genus *Ehrharta* (Poaceae) in southern Africa. *Bothalia* 17(1): 51–65.
- Gibbs Russell G. E. and R. P. Ellis. 1988. Taxonomy and leaf anatomy of the genus *Ehrharta* (Poaceae) in southern Africa: the Dura group. *Bothalia* 18: 165–171.
- Gill K. S., B. S. Gill, T. R. Endo, and E. Boyko. 1996. Identification and high-density mapping of gene-rich regions in chromosome group 5 of wheat. *Genetics* 143: 1001–1012.
- Gill K. S., B. S. Gill, T. R. Endo, and T. Taylor. 1996. Identification and high-density mapping of gene-rich regions in chromosome group 1 of wheat. *Genetics* 144: 1883–1991.
- Giussani L. M., J. H. Cota-Sánchez, F. O. Zuloaga, and E. A. Kellogg. 2001. A molecular phylogeny of the grass subfamily Panicoideae (Poaceae) shows multiple origins of C4 photosynthesis. *American Journal of Botany* 88: 1993–2012.
- Glenn-Lewin D. C., L. A. Johnson, T. W. Jurik, A. Akey, M. Leoschke, and T. Rosberg. 1990. Fire in central North American grasslands: vegetative reproduction, seed germination, and seedling establishment. In S. L. Collins and L. L. Wallace [eds.], *Fire in North American Tallgrass Prairies*, 28–45. University of Oklahoma Press, Norman, Oklahoma, USA.
- Godt M. J. W. and J. L. Hamrick. 1998. Allozyme diversity in the grasses. In G. P. Cheplick [ed.], *Population Biology of the Grasses*, 11–29. Cambridge University Press, Cambridge, UK.
- Gould S. J. 1996. Allometry and size in ontogeny and phylogeny. *Biological Reviews* 41: 587–640.
- GPWG (Grass Phylogeny Working Group). 2001. Phylogeny and subfamilial classification of the grasses (Poaceae). *Annals of the Missouri Botanical Garden* 88: 372–457.
- Graham S. W., R. G. Olmstead, and S. C. H. Barrett. 2002. Rooting phylogenetic trees with distant outgroups: a case study from the commelinoid monocots. *Molecular Biology and Evolution* 19: 1769–1781.
- Grant V. 1994. Modes and origins of mechanical and ethological isolation in angiosperms. *Proceedings of the National Academy of Sciences, USA* 91: 3–10.
- Great Plains Flora Association. 1986. *Flora of the Great Plains*. University Press of Kansas. Lawrence, Kansas, USA.
- Hains M. J., R. J. Mitchell, B. J. Palik, L. R. Boring, and D. H. Gjerstad. 1999. Distribution of native legumes (Leguminosae) in frequently burned longleaf pine (Pinaceae)–wiregrass (Poaceae) ecosystems. *American Journal of Botany* 86: 1606–1614.
- Hansen R. 1971. *Drawings of Tissues and Plants Found in Herbivore Diets and in the Litter of Grasslands. Technical Report No. 70*. Colorado State University, Fort Collins, Colorado, USA.
- Harden G. J. 1990–1993. *Flora of New South Wales, Volumes I–IV*. New South Wales University Press, Sydney, Australia.
- Harder L. D. 1990. Pollen removal by bumble bees and its implications for pollen dispersal. *Ecology* 71: 1110–1125.
- Harder L. D. 1998. Pollen-size comparisons among animal-pollinated angiosperms with different pollination characteristics. *Biological Journal of the Linnean Society* 64: 513–525.
- Harder L. D. 2000. Pollen dispersal and the floral diversity of monocotyledons. In K. L. Wilson and D. A. Morrison [eds.], *Monocotyledons: Systematics and Evolution*, 243–257. CSIRO, Melbourne, Australia.
- Harder L. D., C. Y. Jordan, W. E. Gross, and M. B. Routley. 2004. Beyond floriculture: the pollination function of inflorescences. *Plant Species Biology* 19: 137–148.
- Harley J. L. and E. L. Harley. 1987. A checklist of mycorrhiza in the British flora. *New Phytologist Supplement* 105: 1–102.
- Harman H. H. 1976. *Modern Factor Analysis*, 3rd ed. University of Chicago Press, Chicago, Illinois, USA.
- Harper J. L. and E. D. Seneca. 1974. A preliminary study of flowering in *Uniola paniculata* along the North Carolina coast. *Bulletin of the Torrey Botanical Club* 101: 7–13.
- Hartnett D. C. and P. A. Fay. 1998. Plant populations: patterns and processes. In A. K. Knapp, J. M. Briggs, D. C. Hartnett, and S. L. Collins [eds.], *Grassland Dynamics: Long-Term Ecological Research in Tallgrass Prairie*, 81–100. Oxford University Press, New York, USA.
- Hartnett D. C. and K. H. Keeler. 1995. Population processes. In A. Joern and K. H. Keeler [eds.], *The Changing Prairie: North American Grasslands*, 82–99. Oxford University Press, New York, USA.
- Hartnett D. C., B. A. D. Hetrick, G. W. T. Wilson, and D. J. Gibson. 1993. VA-Mycorrhizal influence on intra- and interspecific neighbor interactions among co-occurring prairie grasses. *Journal of Ecology* 81: 787–795.
- Hartnett D. C., R. J. Samanus, L. E. Fischer, and B. A. D. Hetrick. 1994. Plant demographic responses to mycorrhizal symbiosis in tallgrass prairie. *Oecologia* 99: 21–26.
- Hass B. L., J. C. Pires, R. Porter, R. L. Phillips, and S. A. Jackson. 2003. Comparative genetics at the gene and chromosome levels between rice (*Oryza sativa*) and wildrice (*Zizania palustris*). *Theoretical and Applied Genetics* 107: 773–782.
- Hayes P. M., R. E. Stucker, and G. G. Wandrey. 1989. The domestication of American wildrice (*Zizania palustris*, Poaceae). *Economic Botany* 43: 203–214.
- Hayman D. S. 1986. Mycorrhizae of nitrogen-fixing legumes. *MIRCEN Journal* 2: 121–145.
- Hayman D. S. and B. Mosse. 1979. Improved growth of white clover in hill grasslands by mycorrhizal inoculation. *Annals of Applied Biology* 93: 141–148.
- Hayata B. 1911. Materials for a flora of Formosa. *Journal of the College of Science, Imperial University of Tokyo* 30: 1–471.
- Hedrick P. W. 2000. Genetics of populations. Jones & Bartlett, Sudbury, Massachusetts, USA.

- Hegde S. G., J. Valkoun, and J. G. Waines. 2002. Genetic diversity in wild and weedy *Aegilops*, *Amblyopyrum*, and *Secale* species—a preliminary survey. *Crop Science* 42: 608–614.
- Helfgott D. M. and R. J. Mason-Gamer. 2004. The evolution of North American *Elymus* (Triticeae, Poaceae) allotetraploids: evidence from phosphoenolpyruvate carboxylase gene sequences. *Systematic Botany* 29: 850–861.
- Herendeen P. S. and P. R. Crane. 1995. The fossil history of the monocotyledons. In P. J. Rudall, P. J. Cribb, D. F. Cutler, and C. J. Humphries [eds.], *Monocotyledons: Systematics and Evolution*, 570. Royal Botanic Gardens, Kew, London, UK.
- Heslop-Harrison J. 1982. Pollen–stigma interactions and cross-incompatibility in the grasses. *Science* 215: 1358–1364.
- Hester M. W. and I. A. Mendelsohn. 1987. Seed production and germination response of four Louisiana populations of *Uniola paniculata* (Gramineae). *American Journal of Botany* 74: 1093–1101.
- Hetrick B. A. D., D. G. Kitt, and G. W. T. Wilson. 1988. Mycorrhizal dependence and growth habit of warm-season and cool-season tallgrass prairie plants. *Canadian Journal of Botany* 66: 1376–1380.
- Hetrick B. A. D., G. W. T. Wilson, and J. F. Leslie. 1991. Root architecture of warm- and cool-season grasses: relationship to mycorrhizal dependence. *Canadian Journal of Botany* 69: 112–118.
- Hetrick B. A. D., G. W. T. Wilson, and T. C. Todd. 1990. Differential responses of C3 and C4 grasses to mycorrhizal symbiosis, P fertilization, and soil microorganisms. *Canadian Journal of Botany* 68: 461–467.
- Hitchcock A. S. [ed.] 1950. *Manual of the Grasses of the United States*, 2nd ed., A. Chase [ed.]. United States Department of Agriculture, Washington, D.C., USA.
- Hollingsworth P. M., R. M. Bateman, and R. J. Gornall [eds.]. 1999. *Molecular systematics and plant evolution*. Taylor & Francis, London, UK.
- Hoshino T. and G. Davidse. 1988. Chromosome numbers of grasses (Poaceae) from southern Africa. *Ann. Missouri Bot Gard.* 75: 866–873.
- Hsiao C., N. J. Chatterton, K. H. Asay, and K. B. Jensen. 1995. Molecular phylogeny of the Pooideae (Poaceae) based on nuclear rDNA (ITS) sequences. *Theoretical and Applied Genetics* 90: 389–398.
- Hsiao C., N. J. Chatterton, K. H. Asay, and K. B. Jensen. 1995. Phylogenetic relationships of the monogenomic species of the wheat tribe, Triticeae (Poaceae), inferred from nuclear rDNA (internal transcribed spacer) sequences. *Genome* 38: 211–223.
- Huang S., A. Sirikhachornkit, J. D. Faris, X. Su, B. S. Gill, R. Haselkorn, and P. Gornicki. 2002. Phylogenetic analysis of the acetyl-CoA carboxylase and 3-phosphoglycerate kinase loci in wheat and other grasses. *Plant Molecular Biology* 48: 805–820.
- Huang S., A. Sirikhachornkit, X. Su, J. D. Faris, B. S. Gill, R. Haselkorn, and P. Gornicki. 2002. Genes encoding plastid acetyl-CoA carboxylase and 3-phosphoglycerate kinase of the *Triticum/Aegilops* complex and the evolutionary history of polyploid wheat. *Proceedings of the National Academy of Sciences, USA* 99: 8133–8138.
- Hubbard C. E. 1934. Gramineae. In J. Hutchinson [ed.], *The Families of Flowering Plants*, vol. II, *Monocotyledons*, 199–229. Macmillan, London, UK.
- Hubbard C. E. 1959. Gramineae. In J. Hutchinson [ed.], *The Families of Flowering Plants*, vol. II, *Monocotyledons*, 710–741. Clarendon Press, London, UK.
- Huber, O. 2006. Herbaceous ecosystems on the Guayana Shield, a regional overview. *Journal of Biogeography* 33(3): 464–475.
- Hulbert S. H., T. E. Richter, J. D. Axtell, and J. L. Bennetzen. 1990. Genetic mapping and characterization of sorghum and related crops by means of maize DNA probes. *Proceedings of the National Academy of Sciences, USA* 87: 4251–4255.
- Humphreys M. W., R. S. Yadav, A. J. Cairns, L. B. Turner, J. Humphreys, and L. Sköt. 2006. A changing climate for grassland research. *New Phytologist* 169(1): 9–26.
- Ilic K., P. J. SanMiguel, and J. L. Bennetzen. 2003. A complex history of rearrangement in an orthologous region of the maize, sorghum and rice genomes. *Proceedings of the National Academy of Sciences, USA* 100: 12265–12270.
- Ingram A. L. and J. J. Doyle. 2003. The origin and evolution of *Eragrostis tef* (Poaceae) and related polyploids: evidence from nuclear *waxy* and plastid *rps16*. *American Journal of Botany* 90: 116–122.
- Ishii T., N. Mori, and Y. Ogihara. 2001. Evaluation of allelic diversity at chloroplast microsatellite loci among common wheat and its ancestral species. *Theoretical and Applied Genetics* 103: 896–904.
- Islam M. R., C. K. Saha, N. R. Sarker, M. Jahlil, and M. Hasanuz-zaman. 2003. Effect of variety on proportion of botanical fraction and nutritive value of different Napier grass (*Pennisetum purpureum*) and relationship between botanical fraction and nutritive value. *Asian–Australian Journal of Animal Science* 16: 837–842.
- Jacobs B. F., J. D. Kingston, and L. L. Jacobs. 1999. The origin of grass-dominated ecosystems. *Annals of the Missouri Botanical Garden* 86: 590–643.
- Jakob S. S., A. Meister, and F. R. Blattner. 2004. The considerable genome size variation of *Hordeum* species (Poaceae) is linked to phylogeny, life form, ecology, and speciation rates. *Molecular Biology and Evolution* 21: 860–869.
- Jakobsen I. 1991. Carbon metabolism in mycorrhiza. *Methods in Microbiology* 23: 149–180.
- Janos D. P. 1980. Mycorrhizal influence tropical succession. *Biotropia Supplement* 12: 56–64.
- Jauhar P. P. 1993. *Cytogenetics of the Festuca-Lolium complex: relevance to breeding*. Springer-Verlag, Berlin, Germany.
- Jones D.I.H. 1970. The effect of nitrogen fertilizers on the ensiling characteristics of perennial ryegrass and cocksfoot. *Journal of Agricultural Science, Cambridge* 75: 517–521.
- Johnson E. 1969. Archeological evidence for utilization of wild-rice. *Science* 163: 276–277.
- Judziewicz E. J., L. G. Clark, X. Londoño, and M. J. Stern. 1999. *American bamboos*. Smithsonian Institution, Washington, D.C., USA.
- Judziewicz E. J. and T. R. Soderstrom. 1989. Morphological, anatomical, and taxonomic studies in *Anomochloa* and *Streptochaeta* (Poaceae: Bambusoideae). *Smithsonian Contributions to Botany* 68: 1–52.

- Judziewicz E. J., R. J. Soreng, G. Davidse, P. M. Peterson, T. S. Filgueiras, and F. O. Zuloaga. 2000. Catalogue of New World Grasses (Poaceae): I. Subfamilies Anomochloideae, Bambusoideae, Ehrhartoideae, and Pharoideae. *Contr. U.S. Natl. Herb.* 39: 1–128.
- Kalmbacher R., N. Cellinese, and F. Martin. 2005. Seed obtained by vacuuming the soil surface after fire. *Native Plant Journal* 6: 105–112.
- Kaplinsky N. J., D. M. Braun, J. Penterman, S. A. Goff, and M. Freeling. 2002. Utility and distribution of conserved non-coding sequences in the grasses. *Proceedings of the National Academy of Sciences, USA* 99: 6147–6151.
- Kashkush K., M. Feldman, and A. A. Levy. 2002. Gene loss, silencing and activation in a newly synthesized wheat allotetraploid. *Genetics* 160: 1651–1659.
- Kashkush K., M. Feldman, and A. A. Levy. 2003. Transcriptional activation of retrotransposons alters the expression of adjacent genes in wheat. *Nature Genetics* 33: 102–106.
- Katayama T. 1995. Cytogenetical studies on the genus *Oryza*. XIV. Intergeneric hybridizations between tetraploid *Oryza* species and diploid *Leersia* species. *Japanese Journal of Genetics* 70: 47–55.
- Kelchner S. A. 2000. The evolution of non-coding chloroplast DNA and its application in plant systematics. *Annals of the Missouri Botanical Garden* 87: 482–498.
- Kelchner S. A. and L. G. Clark. 1997. Molecular evolution and phylogenetic utility of the *rpl16* intron in *Chusquea* and the Bambusoideae (Poaceae). *Molecular Phylogenetics and Evolution* 8: 385–397.
- Kellogg E. A. 1998. Relationships of cereal crops and other grasses. *Proceedings of the National Academy of Sciences, USA* 95: 2005–2010.
- Kellogg E. A. 2000. A model of inflorescence development. In K. L. Wilson and D. A. Morrison [eds.], *Monocotyledons: Systematics and Evolution*, 84–88. CSIRO, Melbourne, Australia.
- Kellogg E. A. 2000. The grasses: a case-study in macroevolution. *Annual Review of Ecology and Systematics* 31: 217–238.
- Kellogg E. A. 2000. Molecular and morphological evolution in the Andropogoneae. In S. W. L. Jacobs and J. Everett [eds.], *Grasses: Systematics and Evolution*, 149–158. CSIRO, Collingwood, Australia.
- Kellogg E. A. 2002. Are macroevolution and microevolution qualitatively different? Evidence from Poaceae and other families. In Q. C. B. Cronk, R. M. Bateman, and J. A. Hawkins [eds.], *Developmental Genetics and Plant Evolution*, 70–84. Taylor & Francis, London, UK.
- Kellogg E. A. 2004. Evolution of developmental traits. *Current Opinion in Plant Biology* 7: 92–98.
- Kellogg E. A. and L. Watson. 1993. Phylogenetic studies of a large data set. I. Bambusoideae, Andropogonodae, and Pooideae (Gramineae). *Botanical Review* 59: 273–343.
- Kellogg E. A. and R. Appels. 1995. Intraspecific and interspecific variation in 5S RNA genes are decoupled in diploid wheat relatives. *Genetics* 140: 325–343.
- Kennard W., R. L. Phillips, R. A. Porter, and A. W. Grombacher. 1999. A comparative map of wild rice (*Zizania palustris* L. $2n = 2x = 30$). *Theoretical and Applied Genetics* 101: 677–684.
- Kenneally K.F., D. C. Edinger, and T. Willing. 1996. *Broome and Beyond*. Department of Conservation and Land Management, Western Australia.
- Kirpes C. C., L. G. Clark, and N. R. Lersten. 1996. Systematic significance of pollen arrangement in microsporangia of Poaceae and Cyperaceae: review and observations on representative taxa. *American Journal of Botany* 83: 1609–1622.
- Knapp A. K., J. M. Briggs, J. M. Blair, and C. L. Turner. 1998. Patterns and controls of aboveground net primary production in tallgrass prairie. In A. K. Knapp, J. M. Briggs, D. C. Hartnett, and S. L. Collins [eds.], *Grassland Dynamics: Long-Term Ecological Research in Tallgrass Prairie*, 193–221. Oxford University Press, New York, USA.
- Körner C. 2003. *Alpine plant life: functional plant ecology of high mountain ecosystems*, 2nd ed. Springer-Verlag, Berlin, Germany.
- Kosakovsky S. L., S. D. W. Frost, and S. V. Muse. 2005. HyPhy: hypothesis testing using phylogenies. *Bioinformatics* 21: 676–679.
- Kotseruba V., D. Gernand, A. Meister, and A. Houben. 2003. Uniparental loss of ribosomal DNA in the allotetraploid grass *Zingera trichopoda* ($2n = 8$). *Genome* 46: 156–163.
- Kubitzki, K., P. J. Huber, P. J. Rudall, P. S. Stevens, and T. Stützel [eds.]. 1998. *The families and genera of vascular plants*, vol. 3, Flowering plants: monocotyledons. Springer-Verlag, Wien, Austria.
- Kucera C. L. and M. Koelling. 1964. The influence of fire on composition of central Missouri prairie. *American Midland Naturalist* 72: 142–147.
- Kuchler A. W. 1967. Some geographic features of the Kansas Prairie. *Transactions of the Kansas Academy of Science* 70: 388–401.
- Lajeunesse S. D., J. J. Dilustro, R. R. Sharitz, and B. S. Collins. 2006. Ground layer carbon and nitrogen cycling and legume nitrogen inputs following fire in mixed pine forests. *Am. J. Bot.* 93: 84–93.
- Lapointe L. and J. Molard. 1997. Costs and benefits of mycorrhizal infection in a spring ephemeral, *Erythronium americanum*. *New Phytologist* 135: 491–500.
- Launert E. 1965. A survey of the genus *Leersia* in Africa. *Senckenbergiana Biology* 46: 129–153.
- Lazarides M. and B. Hince. 1993. *CSIRO Handbook of Economic Plants of Australia*. CSIRO, East Melbourne, Australia.
- Lee I.-M., R. E. Davis, and D. E. Gundersen-Rindale. 2000. Phytoplasma: phytopathogenic mollicutes. *Annual Review of Microbiology* 54, 221–55.
- Leroux L. G. and E. A. Kellogg. 1999. Floral development and the formation of unisexual spikelets in the Andropogoneae (Poaceae). *American Journal of Botany* 86: 354–366.
- Levy A. A. and M. Feldman. 2002. The impact of polyploidy on grass genome evolution. *Plant Physiology* 130: 1587–1593.
- Li C. D., P. Langridge, X. Q. Zhang, P. E. Eckstein, B. G. Rossnagel, R. C. M. Lance, E. B. Lefol, M. Y. Lu, B. L. Harvey, and G. J. Scoles. 2002. Mapping of barley (*Hordeum vulgare* L.) *beta*-amylase alleles in which an amino acid substitution determines *beta*-amylase isoenzyme type and the level of free *beta*-amylase. *Journal of Cereal Science* 35: 39–50.

- Lilienfield F. A. 1951. Genome-analysis in *Triticum* and *Aegilops*. Concluding review. *Cytologia* 16: 101–123.
- Linder H. P. 1991. A review of the southern African Restionaceae. *Contributions from the Bolus Herbarium* 13: 209–264.
- Linder H. P. 1998. Morphology and the evolution of wind pollination. In S. J. Owens and P. J. Rudall [eds.], *Reproductive Biology*, 123–135. Royal Botanic Gardens, Kew, UK.
- Linder H. P. and G. Davidse. 1997. The systematics of *Trilobium* Desv. (Danthonieae: Poaceae). *Bot. Jahr. Syst.* 119: 445–507.
- Linder H. P. and R. P. Ellis. 1990. Vegetative morphology and interfire survival strategies in the Cape fynbos grasses. *Bothalia* 20: 91–103.
- Linder H. P. and E. A. Kellogg. 1995. Phylogenetic patterns in the commelinid clade. In P. J. Rudall, D. F. Cribb, and C. J. Humpries [eds.], *Monocotyledons: Systematics and Evolution*, 473–496. Royal Botanic Gardens, Kew, UK.
- Lorenz K.-H., B. Schneider, U. Ahrens, and E. Seemüller. 1995. Detection of the apple proliferation and pear decline phytoplasmas by PCR amplification of ribosomal and nonribosomal DNA. *Phytopathology* 85, 771–776.
- Löve Á. 1984. Conspectus of the Triticeae. *Feddes Repertorium* 95: 425–521.
- Lukens L. and J. Doebley. 2001. Molecular evolution of the *teosinte branched* gene among maize and related grasses. *Molecular Biology and Evolution* 18: 627–638.
- Lunt I. D. 1990. The soil seed bank of a long-grazed *Themeda triandra* grassland in Victoria. *Proceedings of the Royal Society of Victoria* 102: 53–57.
- Lunt I. D. and Morgan, J. W. 2002. The role of fire regimes in temperate lowland grasslands of south-eastern Australia. In R. Bradstock, J. Williams, and A.M. Gill [eds.], *Flammable Australia: The Fire Regimes and Biodiversity of a Continent*. 177–196. Cambridge University Press, Cambridge, UK.
- Mabberley D. J. 1997. *The Plant Book*. Cambridge University Press, New York, USA.
- MacFarlane T. D. and L. Watson. 1982. The classification of Poaceae subfamily Pooideae. *Taxon* 31: 178–203.
- Mack R. N. 1981. Invasion of *Bromus tectorum* L. into western North America: an ecological chronicle. *Agro-Ecosystems* 7: 145–165.
- Manyayu G. J., C. Chakoma, S. Sibanda, C. Mutisi, and I. C. Chakoma. 2003. The intake and palatability of four different types of Napier grass (*Pennisetum purpureum*) silage fed to sheep. *Asian–Australian Journal of Animal Science* 16: 823–829.
- Marañón T. and P. J. Grubb. 1993. Physiological basis and ecological significance of seed size and relative growth rate relationship in Mediterranean annuals. *Functional Ecology* 7: 591–599.
- Marchant N. G., J. R. Wheeler, B. L. Rye, E. M. Bennett, N. S. Lander, and T. D. MacFarlane. 1987. Flora of the Perth region. Western Australian Herbarium and Western Australian Department of Agriculture, Perth, Australia.
- Martensson A. and I. Rydberg. 1994. Variability among Pea varieties for infection with arbuscular mycorrhizal fungi. *Swedish Journal of Agricultural Research* 24: 13–19.
- Mason-Gamer R. J. and E. A. Kellogg. 1996. Testing for phylogenetic conflict among molecular data sets in the tribe Triticeae (Gramineae). *Systematic Biology* 45: 524–545.
- Mason-Gamer R. J. and E. A. Kellogg. 1996. Chloroplast DNA analysis of the monogenomic Triticeae: phylogenetic implications and genome-specific markers. In P. P. Jauhar [ed.], *Methods of Genome Analysis in Plants*, 301–325. CRC Press, Boca Raton, Florida, USA.
- Mason-Gamer R. J. 2001. Origin of North American species of *Elymus* (Poaceae: Triticeae) allotetraploids based on granule-bound starch synthase gene sequences. *Systematic Botany* 26: 757–768.
- Mason-Gamer R. J., N. L. Orme, and C. M. Anderson. 2002. Phylogenetic analysis of North American *Elymus* and the monogenomic Triticeae (Poaceae) using three chloroplast DNA data sets. *Genome* 45: 991–1002.
- Mason-Gamer R. J. 2004. Reticulate evolution, introgression, and intertribal gene capture in an allohexaploid grass. *Systematic Biology* 53: 25–37.
- McAdam J. H. 1986. Growth and production of a *Cortaderia pilosa* (Gramineae) community in the Falklands Islands. *Grass and Forage Science* 41: 281–287.
- McClintock B. 1932. A correlation of ring-shaped chromosomes with variegation in *Zea mays*. *Proceedings of the National Academy of Sciences, USA* 18: 677–681.
- McCoy R. E., A. Caudwell, C. J. Chang, T. A. Chen, L. N. Chiykowski, M. T. Cousin, J. L. Dale, G. T. N. de Leeuw, D. A. Golino, B. C. Hackett, B. C. Kirkpatrick, R. Marwitz, H. Petzold, R. C. Sinha, M. Sugiura, R. F. Whitcomb, I. L. Yang, B. M. Zhu, E. Seemüller. 1989. Plant diseases associated with mycoplasma-like organisms. In R. F. Whitcomb and J. G. Tully [eds.], *The Mycoplasmas, Vol. V: Spiroplasmas, Acholeplasmas, and Mycoplasmas of Plants and Arthropods*. 1–640, Academic Press, San Diego, California, USA.
- McFadden E. S. and E. R. Sears. 1946. The origin of *Triticum spelta* and its free-threshing hexaploid relatives. *Journal of Heredity* 37: 81–89.
- McGrath D. 1988. Seasonal variation in the water soluble carbohydrates of perennial and Italian ryegrass under cutting conditions. *Irish Journal of Agricultural Research* 27: 131–139.
- McKone M. K. 1985. Reproductive biology of several brome-grasses (*Bromus*): breeding system, pattern of fruit maturation, and seed set. *American Journal of Botany* 72: 1334–1339.
- Meyer S. E. and P. S. Allen. 1999. Ecological genetics of seed germination regulation in *Bromus tectorum* L. I. Phenotypic variance among and within populations. *Oecologia* 120: 27–34.
- Meyer S. E. and P. S. Allen J. Beckstead. 1997. Seed germination regulation in *Bromus tectorum* (Poaceae) and its ecological significance. *Oikos* 78: 475–485.
- Michelangeli F. A., J. I. Davis, and D. W. Stevenson. 2003. Phylogenetic relationships among Poaceae and related families as inferred from morphology, inversions in the plastid genome, and sequence data from the mitochondrial and plastid genomes. *American Journal of Botany* 90: 93–106.

- Milberg P. and B. B. Lamont. 1995. Fire enhances weed invasion of roadside vegetation in southwestern Australia. *Biological Conservation* 73: 45–49.
- Miller R. M. 1987. The ecology of vesicular-arbuscular mycorrhizae in grass- and shrublands. In G. R. Safir [ed.], *Ectophysiology of VA Mycorrhizal Plants*, 135–170. CRC Press, Boca Raton, Florida, USA.
- Miller S. M. and R. P. Thompson. 2005. Seasonal patterns of diet composition, herbage intake and digestibility identify limitations to performance of weaner sheep grazing native pasture in the Falkland Islands. *Grass & Forage Science* 60(4): 356–366.
- Milligan G. W. and M. C. Cooper. 1985. An examination of procedures for determining the number of clusters in a data set. *Psychometrika* 50: 159–179.
- Millikin G. A. and D. E. Johnson. 1984. Analysis of messy data, vol. 1, Designed experiments. Van Nostrand Reinhold, New York, USA.
- Minson D. J. 1990. The chemical composition and nutritive value of tropical grasses. In P. J. Skerman, D. G. Cameroon, and F. Riveros [eds.], *Tropical Grasses*, 172–180. Food and Agriculture Organization of the United Nations, Rome.
- Mitchell R. J., L. K. Kirkman, S. D. Pecot, C. A. Wilson, B. J. Palik, and L. R. Boring. 1999. Patterns and controls of ecosystem function in longleaf pine-wiregrass savannas. I. Aboveground net primary productivity. *Canadian Journal of Forest Research* 29: 743–751.
- Miyashita N. T., N. Mori, and K. Tsunewaki. 1994. Molecular variation in chloroplast DNA regions in ancestral species of wheat. *Genetics* 137: 883–889.
- Molloy B. P., E. Edgar, P. B. Heenan, and P. J. de Lange. 1999. New species of *Poa* (Gramineae) and *Ischnocarpus* (Brassicaceae) from limestone, North Otago, South Island, New Zealand. *New Zealand Journal of Botany* 37: 41–50.
- Moonen A. C. and P. Bàrberi. 2006. An ecological approach to study the physical and chemical effects of rye cover crop residues on *Amaranthus retroflexus*, *Echinochloa crus-galli* and maize. *Annals of Applied Biology* 148(1): 73–89.
- Moore D. M. 1968. The vascular flora of the Falkland Islands. *British Antarctic Survey Scientific Reports*, no. 60. British Antarctic Survey, Natural Environment Research Council, London, UK.
- Morrone O. and F. O. Zuloaga. 1992. Revisión de las especies sudamericanas nativas e introducidas de los géneros *Brachiaria* y *Urochloa* (Poaceae: Panicoideae: Paniceae). *Darwiniana* 31: 43–109.
- Morrone O., F. O. Zuloaga, G. Davidse, and T. S. Filgueiras. 2001. *Canastra*, a new genus of Paniceae (Poaceae, Panicoideae) segregated from *Arthropogon*. *Novon* 11(4): 429–436.
- Moss E. H. 1983. *Flora of Alberta*. 2nd ed. J. G. Packer [ed.]. University of Toronto Press, Toronto, Ontario, Canada.
- Muller B. and Garnier, E. 1990. Components of relative growth rate and sensitivity to nitrogen availability in annual and perennial species of *Bromus*. *Oecologia* 84: 513–518.
- Munns D. N. and B. Mosse. 1980. Mineral nutrition of legume crops. In R. J. Summerfield and A. H. Butting [eds.], *Advances in Legume Science*, 115–125. H.M. Stationery Office, London.
- Munz P. A. 1974. A flora of southern California. University of California Press, Berkeley, California, USA.
- Münzbergová Z. 2005. Determinants of species rarity: population growth rates of species sharing the same habitat. *Am. J. Bot.* 92: 1987–1994.
- Nakashima K., W. Chaleeprom, P. Wongkaew, and P. Sirithorn. 1994. Detection of mycoplasma-like organisms associated with white leaf disease of sugarcane in Thailand using DNA probes. *Japan International Research Center for Agricultural Sciences* 1, 57–67.
- Nasrullah Niimi M., R. Akashi, and O. Kawamura. 2003. Nutritive evaluation of forage plants in South Sulawesi, Indonesia. *Asian–Australian Journal of Animal Science* 16: 693–701.
- Nayar N. M. 1973. Origin and cytogenetics of rice. *Advances in Genetics* 17: 153–292.
- Negbi M. 1984. The structure and function of the scutellum of the Gramineae. *Botanical Journal of the Linnean Society* 88: 205–222.
- Newsham K. K., A. H. Fitter, and A. R. Watkinson. 1995. Multifunctionality and biodiversity in arbuscular mycorrhizas. *Trends in Ecology and Evolution* 10: 407–411.
- Newsham K. K. and A. R. Watkinson, H. M. West and A. H. Fitter. 1995. Symbiotic fungi determine plant community structure: changes in a lichen-rich community induced by fungicide application. *Functional Ecology* 9: 442–447.
- Niklas K. J. 1985. The aerodynamics of wind pollination. *Botanical Review* 51: 328–386.
- Niklas K. J. 1987. Pollen capture and wind-induced movement of compact and diffuse grass panicles: implications for pollination efficiency. *American Journal of Botany* 74: 74–89.
- Niklas K. J. 1988. Equations for the motion of airborne pollen grains near the ovulate organs of wind-pollinated plants. *American Journal of Botany* 75: 433–444.
- Niklas K. J. 1992. Plant biomechanics: an engineering approach to plant form and function. University of Chicago Press, Chicago, Illinois, USA.
- Niklas K. J. and S. Buchmann. 1985. Aerodynamics of wind pollination in *Simmondsia chinensis* (Link) Schneider. *American Journal of Botany* 72: 530–539.
- Novak S. J. and R. N. Mack. 2001. Tracing plant introduction and spread: genetic evidence from *Bromus tectorum* (cheatgrass). *BioScience* 51: 114–122.
- Novak S. J. and R. N. Mack D. E. Soltis. 1991. Genetic variation in *Bromus tectorum* (Poaceae): population differentiation in its North American range. *American Journal Botany* 78: 1150–1161.
- O'Hara G. W., N. Boonkerd, and M. J. Dilworth. 1988. Mineral constraints to nitrogenfixation. *Plant and Soil* 108: 93–110.
- Ojima D. S., D. S. Schimel, W. J. Parton, and C. E. Owensby. 1994. Long- and short-term effects of fire on nitrogen cycling in tallgrass prairie. *Biogeochemistry* 24: 67–84.
- Oka H. I. and H. Morishima. 1967. Variations in the breeding systems of a wild-rice, *Oryza perennis*. *Evolution* 21: 249–258.
- Okubo A. and S. A. Levin. 1989. A theoretical framework for data analysis of wind dispersal of seeds and pollen. *Ecology* 70: 329–338.

- Orr A. R. and M. D. Sundberg. 1994. Inflorescence development in a perennial Teosinte: *Zea perennis* (Poaceae). *American Journal of Botany* 81: 598–608.
- Orr A. R., R. Kaparthi, C. L. Dewald, and M. D. Sundberg. 2001. Analysis of inflorescence organogenesis in eastern gamagrass, *Tripsacum dactyloides* (Poaceae): the wild type and the gynomonocious *gsf1* mutant. *American Journal of Botany* 88: 363–381.
- Padovan A. C., K. S. Gibb, A. Bertaccini, M. Vibio, R. E. Bonfiglioli, P. A. Magarey, and B. B. Sears. 1995. Molecular detection of the Australian grapevine yellows phytoplasma and comparison with grapevine yellows phytoplasmas from Italy. *Australian Journal of Grape and Wine Research* 1, 25–31.
- Page R. D. M. 1996. Treeview: an application to display phylogenetic trees on personal computers. *Computer Applications in the Biosciences* 12, 357–358.
- Pate J. S., R. H. Froend, B. J. Bowen, A. Hansen, and J. Kuo. 1990. Seedling growth and storage characteristics of seeder and resprouter species of mediterranean-type ecosystems of S.W. Australia. *Annals of Botany* 65: 585–601.
- Paterson A. H., J. E. Bowers, M. D. Burow, X. Draye, C. G. Elsik, C. X. Jiang, C. S. Katsar, T. H. Lan, Y. R. Lin, and R. Ming. 2000. Comparative genomics of plant chromosomes. *Plant Cell* 12: 1523–1540.
- Paterson A. H., T. H. Lan, K. P. Reischmann, C. Chang, Y. R. Lin, S. C. Liu, M. D. Burow, S. P. Kowalski, C. S. Katsar, T. A. DelMonte, K. A. Feldmann, K. F. Schertz, and J. F. Wendel. 1996. Toward a unified genetic map of higher plants, transcending the monocot-dicot divergence. *Nature Genetics* 14: 380–382.
- Pawu T. K. and C. Hotton. 1989. Optimum pollen and female receptor size for anemophily. *American Journal of Botany* 76: 445–453.
- Petersen G. and O. Seberg. 1997. Phylogenetic analysis of the Triticeae (Poaceae) based on *rpoA* sequence data. *Molecular Phylogenetics and Evolution* 7: 217–230.
- Perry L. G., S. M. Galatowitsch, and C. J. Rosen. 2004. Competitive control of invasive vegetation: a native wetland sedge suppresses *Phalaris arundinacea* in carbon-enriched soil. *Journal of Applied Ecology* 41: 151–162.
- Petersen G. and O. Seberg. 2002. Molecular evolution and phylogenetic application of *DMC1*. *Molecular Phylogenetics and Evolution* 22: 43–50.
- Philipson W. R. 1985. Is the grass gynoeceum monocarpellary?. *American Journal of Botany* 72: 1954–1961.
- Phillips J. M. and D. S., Hayman. 1970. Improved procedures for clearing roots and staining parasitic and vesicular-arbuscular mycorrhizal fungi for rapid assessment of infection. *Transactions of the British Mycological Society* 55: 158–160.
- Pohl R. W. and G. Davidse. 1971. Chromosome numbers of Costa Rican grasses. *Brittonia* 23: 293–324.
- Posse G., J. Anchorena, and M. B. Collantes. 1996. Seasonal diets of sheep in the steppe region of Tierra del Fuego, Argentina. *Journal of Range Management* 49: 24–30.
- Pruitt R. E., J. L. Bowman, and U. Grossniklaus. 2003. Plant genetics: a decade of integration. *Nature Genetics Supplement* 33: 294–304.
- Purcell A. H. 1985. The ecology of bacterial and mycoplasma plant diseases spread by leafhoppers and planthoppers. In L. R. Nault and J. G. Rodriguez, [eds.], *The Leafhoppers and Planthoppers*. 351–380, John Wiley & Sons, New York, USA.
- Pyrah G. L. 1969. Taxonomic and distributional studies in *Leersia* (Gramineae). *Iowa State Journal of Science* 44: 215–270.
- Qiu Y.-L. and J. D. Palmer. 1999. Phylogeny of early land plants: insights from genes and genomes. *Trends in Plant Science* 4: 26–30.
- Radford A. E., H. E. Ahles, and C. R. Bell. 1968. Manual of the vascular flora of the Carolinas. University of North Carolina Press, Chapel Hill, North Carolina, USA.
- Ramakrishnan A. P., C. E. Coleman, S. E. Meyer, and D. J. Fairbanks. 2002. Microsatellite markers for *Bromus tectorum* (cheatgrass). *Molecular Ecology Notes* 2: 22–23.
- Ranwell D. S. 1972. Ecology of salt marshes and sand dunes. Chapman & Hall, New York, USA.
- Raven P. H. 1973. Evolution of subalpine and alpine plant groups in New Zealand. *New Zealand Journal of Botany* 11: 177–200.
- Raven P. H. 1975. The bases of angiosperm phylogeny: cytology. *Annals of the Missouri Botanical Garden* 62: 724–764.
- Read, D. J. 1991. Mycorrhizas in ecosystems-nature's responses to the "Law of the Minimum." In D. L. Hacksworth [ed.], *Frontiers in Mycology*, 101–130. CAB International, Wallingford, Connecticut, USA.
- Reeves M., W. J. Fulkenson, and R. C. Kelloway. 1996. Forage quality of kikuyu (*Pennisetum clandestinum*): the effect of time of defoliation and nitrogen fertiliser application and in comparison with perennial ryegrass (*Lolium perenne*). *Australian Journal of Agricultural Research* 47: 1349–1359.
- Reusch T. B. H., W. T. Stam, and J. L. Olsen. 2000. A microsatellite-based estimation of clonal diversity and population subdivision in *Zostera marina*, a marine flowering plant. *Molecular Ecology* 9: 127–140.
- Rice K. J. and R. N. Mack. 1991. Ecological genetics of *Bromus tectorum* I. A hierarchical analysis of phenotypic variation. *Oecologia* 88: 77–83.
- Robson A. D., G. W. O'Hara, and L. K. Abbott. 1981. Involvement of phosphorus in nitrogen fixation by subterranean clover (*Trifolium subterraneum* L.). *Australian Journal of Plant Physiology* 8: 427–436.
- Rock H. W. 1977. Prairie propagation handbook. Wehr Nature Center, Milwaukee County Park Commission, Hales Corners, Wisconsin, USA.
- Rudall P. J. and M. Buzgo. 2002. Evolutionary history of the monocot leaf. In C. B. Q. Cronk, R. Bateman, and J. Hawkins [eds.], *Developmental Genetics and Plant Evolution*, 432–458. Taylor & Francis, London, UK.
- Rudall P. J., P. J. Cribb, D. F. Cutler, and C. J. Humphries. 1995. *Monocotyledons: Systematics and Evolution*. Royal Botanic Gardens, Kew, London, UK.
- Rudall P. J., W. Stuppy, J. Cunniff, E. A. Kellogg, and B. G. Briggs. 2005. Evolution of reproductive structures in grasses (Poaceae) inferred by sister-group comparison with their putative closest living relatives, Ectociaceae. *Am. J. Bot.* 92: 1432–1443.

- Sage T. L., R. Bertin, and E. G. Williams. 1994. Ovarian and other late-acting self-incompatibility. In E. B. Williams, R. B. Knox, and A. E. Clarke [eds.] *Genetic Control of Self-Incompatibility and Reproductive Development in Flowering Plants* 116–140, Kluwer, Dordrecht, The Netherlands.
- Sahashi N., H. Nakamura, N. Yoshikawa, T. Kubono, T. Shoji, and T. Takahashi. 1995. Distribution and seasonal variation in detection of phytoplasma in bark phloem tissues of single *Paulownia* trees infected with witches' broom. *Annals of the Phytopathological Society of Japan* 61, 481–484.
- Salisbury E. 1970. The pioneer vegetation of exposed muds and its biological features. *Philosophical Transactions of the Royal Society of London, B, Biological Sciences* 259: 207–255.
- Salisbury F. B. and C. W. Ross. 1985. *Plant physiology*, 3rd ed. Wadsworth, Belmont, California, USA.
- Sargent E. and A. Robertson. 1905. The anatomy of the scutellum in *Zea mays*. *Annals of Botany* 19: 115–122.
- SAS. 1988. *SAS User's Guide: Statistics*, version 6 edition. SAS Institute, Cary, North Carolina, USA.
- Savolainen V. and M. W. Chase. 2003. A decade of progress in plant molecular phylogenetics. *Trends in Genetics* 19: 717–724.
- Schaal B. A., D. A. Hayworth, K. M. Olsen, J. T. Rauscher, and W. A. Smith. 1998. Phylogeographic studies in plants: problems and prospects. *Molecular Ecology*: 7: 465–474.
- Schaal B. A. and W. J. Leverich. 2001. Plant population biology and systematics. *Taxon* 50: 679–695.
- Schenk N. C. and Y. Perez. 1990. *Manual for the identification of VA mycorrhizal fungi*, 3rd edition. Synergistic Publications, University of Florida, Gainesville, Florida, USA.
- Schmidt R. R. and B. A. Ambrose. 1998. The blooming of grass flower development. *Current Opinion in Plant Biology* 1: 60–67.
- Schneider B., E. Seemüller, C. D. Smart, and B. C. Kirkpatrick. 1995. Phylogenetic classification of plant pathogenic mycoplasma-like organisms or phytoplasmas. In S. Razin and J. G. Tully [eds.], *Molecular and Diagnostic Procedures in Mycoplasma*. 369–380. Academic Press, San Diego, California, USA.
- Schneider B., A. Padovan, S. De La Rue, R. Eichner, R. Davis, A. Bernuettz, and K. Gibb. 1999. Detection and differentiation of phytoplasmas in Australia: an update. *Australian Journal of Agricultural Research* 50, 333–342.
- Sdoodee R., B. Schneider, A. Padovan, and K. Gibb. 1999. Detection and genetic relatedness of phytoplasmas associated with plant diseases in Thailand. *Journal of Biochemistry, Molecular Biology and Biophysics* 3, 133–142.
- Sears E. R. 1937. Self-sterility in plants. *Genetics* 22: 130–181.
- Seastedt, T. R. and R. A. Ramundo. 1990. The influence of fire on belowground processes of tallgrass prairie. In S. L. Collins and L. Wallace [eds.], *Fire in North American Tallgrass Prairies* 99–117. University of Oklahoma Press, Oklahoma, USA.
- Seavey S. R. and K. S. Bawa. 1986. Late-acting self-incompatibility in angiosperms. *Botanical Review* 52: 195–218.
- Seberg O. and S. Frederiksen. 2001. A phylogenetic analysis of the monogenomic Triticeae (Poaceae) based on morphology. *Botanical Journal of the Linnean Society* 136: 75–97.
- Seemüller E., U. Schaper, and F. Zimbelmann. 1984. Seasonal variation in the colonization patterns of mycoplasma-like organisms associated with apple proliferation and pear decline. *Journal of Plant Diseases and Protection* 91, 371–382.
- Semmartin M. and C. M. Ghera. 2006. Intraspecific changes in plant morphology, associated with grazing, and effects on litter quality, carbon and nutrient dynamics during decomposition. *Austral Ecology* 31(1): 99–105.
- Seneca E. D. 1972. Germination and seedling response of Atlantic and Gulf Coast populations of *Uniola paniculata*. *American Journal of Botany* 59: 290–296.
- Shimamoto K. and J. Kyojuka. 2002. Rice as a model for comparative genomics of plants. *Annual Review of Plant Biology* 53: 399–419.
- Simon B. K. and S. W. L. Jacobs. 2003. *Megathyrsus*, a new generic name for *Panicum* subgenus *Megathyrsus*. *Austrobaileya* 6: 571–574.
- Sleper D. A. and R. C. Buckner. 1995. The fescues. In R. F. Barnes, D. A. Miller, C. J. Nelson, and M. E. Heath [eds.], *Forages*, 345–356. Iowa State University Press, Ames, Iowa, USA.
- Sleper D. A. and C. P. West. 1996. Tall fescue. In L. E. Moser, D. R. Buxton and M. D. Casler [eds.], *Cool-Season Forage Grasses*, 471–502. American Society of Agronomy; Crop Science Society of America; Soil Science Society of America, Madison, Wisconsin, USA.
- Small R. L., R. C. Cronn, and J. F. Wendel. 2004. Use of nuclear genes for phylogeny reconstruction in plants. *Australian Systematic Botany* 17: 145–170.
- Smith B. G. and P. J. Harris. 1999. The polysaccharide composition of Poales cell walls: Poaceae cell walls are not unique. *Biochemical Systematics and Ecology* 27: 33–53.
- Smith D. C. 1944. Pollination and seed formation in grasses. *Journal of Agricultural Research* 68: 79–95.
- Smith F. A. and S. E. Smith. 1996. Mutualism and parasitism: diversity in function and structure in the “Arbuscular” (VA) mycorrhizal symbiosis. *Advanced Botanical Review* 22: 1–43.
- Smith R. L., M. F. Grando, Y. Y. Li, J. C. Seib, and R. G. Shatters. 2002. Transformation of bahiagrass (*Paspalum notatum* Flugge). *Plant Cell Reports* 20: 1017–1021.
- Soltis D. E., P. S. Soltis, M. D. Bennett, and I. J. Leitch. 2003. Evolution of genome size in the angiosperms. *American Journal of Botany* 90: 1596–1603.
- Soreng R. J. and J. I. Davis. 2000. Phylogenetic structure in Poaceae subfamily Pooideae as inferred from molecular and morphological characters: misclassification versus reticulation. In S. W. L. Jacobs and J. Everett [eds.], *Grasses: Systematics and Evolution*, 61–74. CSIRO, Melbourne, Victoria, Australia.
- Soreng R. J., J. I. Davis, and J. J. Doyle. 1990. A phylogenetic analysis of chloroplast DNA restriction site variation in Poaceae subfam. Pooideae. *Plant Systematics and Evolution* 172: 83–97.

- Spangenberg G., Z. Y. Wang, and I. Potrykus. 1998. Biotechnology in forage and turf grass improvement. Springer-Verlag, Berlin, Germany.
- Spangler R. E. 2003. Taxonomy of *Sarga*, *Sorghum* and *Vacoparis* (Poaceae: Andropogoneae). *Australian Systematic Botany* 16: 279–299.
- Spangler R. E., B. Zaitchik, E. Russo, and E. A. Kellogg. 1999. Andropogoneae evolution and generic limits in *Sorghum* (Poaceae) using *ndhF* sequences. *Systematic Botany* 24: 267–281.
- Spies J. J., G. Davidse, and H. Du Plessis. 1992. Cytogenetic studies in the genus *Tribolium* (Poaceae: Arundineae). *Amer. J. Bot.* 79: 689–700.
- Spjut R. W. 1994. A systematic treatment of fruit types. *Memoirs of the New York Botanical Garden* 70: 1–182.
- Stebbins G. L. 1956. Taxonomy and the evolution of genera with special reference to the family Gramineae. *Evolution* 10: 235–245.
- Stebbins G. L. and B. Crampton. 1961. A suggested revision of grass genera of temperate North America. *Recent Advances in Botany* 1: 133–145.
- Stebbins G. L. 1981. Coevolution of grasses and herbivores. *Annals of the Missouri Botanical Garden* 68: 75–86.
- Stebbins G. L. 1982. Major trends of evolution in the Poaceae and their possible significance. In J. R. Estes, R. J. Tylr, and J. N. Brunken [eds.], *Grasses and Grassland: Systematics and Ecology*. University of Oklahoma Press, Norman, Oklahoma, USA.
- Stevens P. F. 1990. Nomenclatural stability, taxonomic instinct, and flora writing — a recipe for disaster?. In P. Baas, K. Kalkman, and R. Geesink [eds.], *The plant diversity of Malesia*, 387–410. Kluwer, Dordrecht, The Netherlands.
- Stevenson D. W. and H. Loconte. 1995. Cladistic analysis of monocot families. In P. J. Rudall, D. F. Cribb, D. F. Cutler, and C. J. Humphries [eds.], *Monocotyledons: Systematics and Evolution*, 543–578. Royal Botanic Gardens, Kew, UK.
- Stock W. D. and N. Allsopp. 1992. Functional perspective of ecosystems. In R. M. Cowling [ed.], *Fynbos: Fire, Nutrients and Diversity*, 241–270. Oxford University Press, Cape Town, South Africa.
- Streitwolf-Engel R., T. Boller, A. Wiemken, and I. R. Sanders. 1997. Clonal growth traits of two *Prunella* species are determined by co-occurring arbuscular mycorrhizal fungi from a calcareous grassland. *Journal of Ecology* 85: 181–191.
- Sugiyama S. 2005. Developmental basis of interspecific differences in leaf size and specific leaf area among C3 grass species. *Functional Ecology* 19(6): 916–924.
- Sullivan J. T. 1973. Drying and storing herbage as hay. In: Butler GW, Bailey RW (eds.), *Chemistry and Biochemistry of Herbage*, pp.1–31. Academic Press, London.
- Suyama Y., K. Obayashi, and I. Hayashi. 2000. Clonal structure in a dwarf bamboo (*Sasa senanensis*) population inferred from amplified fragment length polymorphism (AFLP) fingerprints. *Molecular Ecology* 9: 901–906.
- Syrjälä-Qvist L., E. Pekkarinen, J. Setälä, and T. Kangasmäki. 1984. Effect of nitrogen fertilization on the protein quality of timothy grass and silage. *Journal of Agricultural Science in Finland* 56: 193–198.
- Tabachnick B. G. and L. S. Fidell. 1989. *Using Multivariate Statistics*, 2nd ed. Harper and Row, New York, USA.
- Takhtajan A.L. 1980. Outline of the classification of flowering plants (Magnoliophyta). *Bot. Rev.* 46: 225–359.
- Takhtajan A. 1997. Diversity and classification of flowering plants. Columbia University Press, New York, USA.
- Tarumoto I., H. Sato, and T. Horibata. 2005. The effect of temperature and daylength on heading in tetraploid cultivars of rhodesgrass (*Chloris gayana* Kunth). *Grassland Science* 51(4): 281–285.
- Tateoka T. 1963. Notes on some grasses. XIII. Relationship between Oryzeae and Ehrharteae, with special reference to leaf anatomy and histology. *Botanical Gazette* 124: 264–270.
- Taylor R. A. J. 1985. Migratory behaviour in Auchenorrhyncha. In L. R. Nault and J. G. Rodriguez [eds.], *The Leafhoppers and Planthoppers*, 259–288. John Wiley & Sons, New York, USA.
- Terrell E. E. and P. M. Peterson. 1993. Caryopsis morphology and classification in the Triticeae (Pooideae: Poaceae). Smithsonian Institution, Washington, D.C., USA.
- Terrell E. E., P. M. Peterson, and W. P. Wergin. 2001. Epidermal features and spikelet micromorphology in *Oryza* and related genera (Poaceae: Oryzeae). *Smithsonian Contributions to Botany* 91: 1–50.
- Terrell E. E. and H. Robinson. 1974. Luziolinae, a new subtribe of oryzoid grass. *Bulletin of the Torrey Botanical Club* 101: 235–245.
- Terrell J. H., J. P. Hart, S. Barut, N. Cellinese, A. Curet, T. Denham, C. Kusimba, K. D. Latinis, R. Oka, J. Palka, M. E. D. Pohl, K. Pope, P. R. Williams, H. Haines, and J. E. Staller. 2003. Domesticated landscapes: the subsistence ecology of plants and animal domestication. *Journal of Archaeological Method and Theory* 10(4): 323–368.
- Thompson J. D., D. G. Higgins, and T. J. Gibson. 1994. Clustal W: improving the sensitivity of progressive multiple sequence alignment through sequence weighting, position-specific gap penalties and weight matrix choice. *Nucleic Acids Research* 22: 4673–4680.
- Tomlinson P. B. 1995. Non-homology of vascular organisation in monocotyledons and dicotyledons. In P. J. Rudall, P. J. Cribb, D. F. Cutler, and C. J. Humphries [eds.], *Monocotyledons: Systematics and Evolution*, 589–622. Royal Botanic Gardens, Kew, London, UK.
- Torrecilla P. and P. Catalán. 2002. Phylogeny of broad-leaved and fine-leaved *Festuca* lineages (Poaceae) based on nuclear ITS sequences. *Systematic Botany* 27: 241–251.
- Towne E. G. and A. K. Knapp. 1996. Biomass and density responses in tallgrass prairie legumes to annual fire and topographic position. *American Journal of Botany* 83: 175–179.
- Tran-Nguyen L., K. R. Blanche, B. Egan, and K. S. Gibb. 2000. Diversity of phytoplasmas in northern Australian sugarcane and other grasses. *Plant Pathology* 49: 666–679.
- Trappe J. M. 1987. Phylogenetic and ecologic aspects of mycotrophy in the angiosperms from an evolutionary standpoint. In G. R. Safir [ed.], *Ecophysiology of VA Mycorrhizal Plants*, 5–26. CRC Press, Boca Raton, Florida, USA.

- Tremblay G. F., G. B elanger, and R. Drapeau. 2005. Nitrogen fertilizer application and developmental stage affect silage quality of timothy (*Phleum pratense* L.). *Grass and Forage Science* 60(4): 337–355.
- Trethewey J. A. K. and P. J. Harris. 2002. Location of (13)- and (13),(14)- β -d-glucans in vegetative cell walls of barley (*Hordeum vulgare*) using immunolabelling. *New Phytologist* 154: 347–358.
- Trethewey J. A. K., L. M. Campbell, and P. J. Harris. 2005. (13),(14)- β -d-Glucans in the cell walls of the Poales (sensu lato): an immunogold labeling study using a monoclonal antibody. *Am. J. Bot.* 92: 1660–1674.
- Tribsch A. and T. F. Stuessy. 2003. Evolution and phylogeography of arctic and alpine plants in Europe: introduction. *Taxon* 52: 415–416.
- Tudsri S. and C. Kaewkunya. 2002. Effect of *Leucaena* row spacing and cutting intensity on the growth of *Leucaena* and three associated grasses in Thailand. *Asian–Australian Journal of Animal Science* 15: 986–991.
- Tuinstra M. R. and J. Wedel. 2000. Estimation of pollen viability in grain sorghum. *Crop Science* 40: 968–970.
- Tzvelev N. N. 1989. The system of grasses (Poaceae) and their evolution. *Botanical Review* 55: 141–204.
- Vandepoele K., C. Simillion, and Y. Van de Peer. 2003. Evidence that rice and other cereals are ancient aneuploids. *Plant Cell* 15: 2192–2202.
- van Rooyen M. W. 1999. Functional aspects of short-lived plants. In W. R. J. Dean and S. J. Milton [eds.], *The Karoo: Ecological Patterns and Processes*, 27–41. Cambridge University Press, Cambridge, UK.
- van Royen P. 1983. *The Alpine Flora of New Guinea*, vol. 4. J. Cramer, Vaduz, Liechtenstein.
- van Slageren M. W. 1994. Wild wheats: a monograph of *Aegilops* L. and *Amblyopyrum* (Jaub. and Spach) Eig (Poaceae). Agricultural University, Wageningen & International Center for Agricultural Research in Dry Areas, Aleppo, Syria. [also *Wageningen Agricultural University Papers* 94–7.]
- van Steenis C. G. G. J. 1962. The land-bridge theory in botany with particular reference to tropical plants. *Blumea* 11: 235–372.
- van Steenis C. G. G. J. 1963. *Pacific Plant Areas*, vol. 1. Bureau of Printing, Manila, Philippines.
- van Steenis C. G. G. J. 1964. Plant geography of the mountain flora of Mt. Kinabalu. *Proceedings of the Royal Society of London, B, Biological Sciences* 161: 7–38.
- Vaughan D. A. 1994. The wild relative of rice: a genetic resources handbook. International Rice Research Institute, Manila, Philippines.
- Verboom G. A., H. P. Linder, and W. D. Stock. 2003. Phylogenetics of the grass genus *Ehrharta*: evidence for radiation in the summer-arid zone of the South African Cape. *Evolution* 57: 1008–1021.
- Verboom G. A., W. D. Stock, and H. P. Linder. 2002. Determinants of postfire flowering in the geophytic grass *Ehrharta capensis*. *Functional Ecology* 16: 705–713.
- Villar R., E. J. Veneklaas, P. Jordano, and H. Lambers. 1998. Relative growth rate and biomass allocation in 20 *Aegilops* (Poaceae) species. *New Phytologist* 140: 425–437.
- Viswanathan R. 2000. Grassy shoot. In: Rott P, Bailey RA, Comstock JC, Croft BJ, Saumtally AS, eds. *A Guide to Sugarcane Diseases*. France: CIRAD ISSCT, 215–220.
- Vitte C. and O. Panaud. 2003. Formation of solo-LTRs through unequal homologous recombination counterbalances amplifications of LTR retrotransposons in rice *Oryza sativa* L. *Molecular Biology and Evolution* 20: 528–540.
- Vogl C., J. Badger, P. Li, M. Kearney, M. Clegg, and T. Jiang. 2003. Probabilistic analysis indicates discordant gene trees in chloroplast evolution. *Journal of Molecular Evolution* 56: 330–340.
- Wagner R. H. 1964. The ecology of *Uniola paniculata* L. in the dune-strand habitat of North Carolina. *Ecological Monographs* 34: 79–96.
- Waller D. M., Y. Lu, and P. David. 2000. Population genetic variation among wild rice populations in northern Wisconsin. In L. S. Williamson L. A. Dlutkowski and A. P. McCammon Soltis [eds.], *Proceedings of the Wild Rice Research and Management Conference*. Great Lakes Indian Fish and Wildlife Commission, Odanah, Wisconsin, USA.
- Wang Z. Y., A. Hopkins, and R. Mian. 2001. Forage and turf grass biotechnology. *Critical Reviews in Plant Sciences* 20: 573–619.
- Waser N. M. and C. F. Williams. 2001. Inbreeding and outbreeding. In C. W. Fox, D. A. Roff, and D. J. Fairbairn [eds.], *Evolutionary Ecology: Concepts and Case Studies* Oxford University Press, Oxford, UK. Wang Z. Y., D. Lehmann, J. Bell, and A. Hopkins. 2002. Development of an efficient plant regeneration system for Russian wildrye (*Psathyrostachys juncea*). *Plant Cell Reports* 20: 797–801.
- Weatherwax P. 1929. The morphology of the spikelets of six genera of Oryzeae. *American Journal of Botany* 16: 547–555.
- Weaver, J. E. 1954. *North American Prairie*. Johnson Publishing Co., Lincoln, Nebraska, USA.
- Webster R. D. 1987. *The Australian Paniceae (Poaceae)*. J. Cramer, Berlin, Germany.
- Weschke W., R. Panitz, S. Gubatz, Q. Wang, R. Radchuk, H. Weber, and U. Wobus. 2003. The role of invertases and hexose transporters in controlling sugar ratios in maternal and filial tissues of barley caryopses during early development. *Plant Journal* 33: 395–411.
- Wheeler J. R. 1992. *Flora of the Kimberley Region*. Como, WA, Australia: Department of Conservation and Land Management (CALM).
- Wheeler D. J. B., S. W. L. Jacobs, and R. D. B. Whalley. 2002. *Grasses of New South Wales*, 3rd ed. University of New England, Armidale, New South Wales.
- Whipple C. J. P. Ciceri, C. M. Padilla, B. A. Ambrose, S. L. Bandong, and R. J. Schmidt. 2004. Conservation of B-class floral homeotic gene function between maize and Arabidopsis. *Development* 131: 6083–6091.
- Whitehead D. R. 1968. Wind pollination in the angiosperms: evolutionary and environmental considerations. *Evolution* 23: 28–35.
- Whitehead D. R. 1983. Wind pollination: some ecological and evolutionary perspectives. In L. Real [ed.], *Pollination Biology*, 97–108. Academic Press, New York, USA.

- Whitham T. G. and C. N. Slobodchikoff. 1981. Evolution by individuals, plant-herbivore interactions, and mosaics of genetic variability: the adaptive significance of somatic mutations in plants. *Oecologia* 49: 287–292.
- Whitson T. D., L. C. Burrill, S. A. Dewey, D. W. Cudney, B. E. Nelson, R. D. Lee, and R. Parker. 1992. *Weeds of the West*. Pioneer of Jackson Hole, Jackson, Wyoming, USA.
- Wilson C. A., R. J. Mitchell, J. J. Hendricks, and L. R. Boring. 1999. Patterns and controls of ecosystem function in longleaf pine-wiregrass savannas. II. Nitrogen dynamics. *Canadian Journal of Forest Research* 29: 752–760.
- Wilson G. W. T. and D. C. Hartnett. 1997. Effects of mycorrhizas on plant growth and dynamics in experimental tallgrass prairie microcosms. *American Journal of Botany* 84: 478–482.
- Wilson K. L. and D. A. Morrison. 2000. *Monocotyledons: Systematics and Evolution*. CSIRO Publishing, Collingwood, Victoria, Australia.
- Wilson W. A., S. E. Harrington, W. L. Woodman, M. Lee, M. E. Sorrells, and S. R. McCouch. 1999. Inferences on the genome structure of progenitor maize through comparative analysis of rice, maize and the domesticated panicooids. *Genetics* 153: 453–473.
- Wodehouse R. P. 1935. Pollen grains. MacGraw-Hill, New York, USA.
- Wongkaew P., Y. Hanboosong, P. Sirithorn, C. Choosai, S. Boonkrong, T. Tinnangwattana, R. Kitchareonpanya, and S. Damak. 1997. Differentiation of phytoplasmas associated with sugarcane and gramineous weed white leaf disease and sugarcane grassy shoot disease by RFLP and sequencing. *Theoretical and Applied Genetics* 95: 660–663.
- Wu C.-Y. 1998. Delineation and unique features of the Sino-Japanese floristic region. In D. E. Boufford and H. Ohba [eds.], *Sino-Japanese Flora: Its Characteristics and Diversification*. University Museum, University of Tokyo, Bulletin Number 37, 1–35. Tokyo University Press, Tokyo, Japan.
- Wu X., S. R. Larson, Z. Hu, A. J. Palazzo, T. A. Jones, R. R.-C. Wang, K. B. Jensen, and N. J. Chatterton. 2003. Molecular genetic linkage maps for allotetraploid *Leymus* wildryes (Gramineae: Triticeae). *Genome* 46: 627–646.
- Xia X. and Z. Xie. 2001. DAMBE: data analysis in molecular biology and evolution. *Journal of Heredity* 92: 371–373.
- Ya-Long G. and G. Song. 2005. Molecular phylogeny of Oryzaceae (Poaceae) based on DNA sequences from chloroplast, mitochondrial, and nuclear genomes. *Am. J. Bot.* 92: 1548–1558.
- Yamaguchi H. et al. 2005. A molecular phylogeny of wild and cultivated *Echinochloa* in East Asia inferred from non-coding region sequences of *trnT-L-F*. *Weed Biology and Management* 5(4): 210–218.
- Yates H.O. 1966. Morphology and cytology of *Uniola* (Gramineae). *Southw. Nat.* 11(2): 145–189.
- Yates H.O. 1966. Revision of grasses traditionally referred to *Uniola*. II. *Chasmanthium*. *Southw. Nat.* 11(4): 415–455.
- Yen C. and J.-L. Yang. 1990. *Kengyilia gobicola*, a new taxon from west China. *Can. J. Bot.* 68: 1894–1897.
- Yu J., S. N. Hu, J. Wang, G. K. S. Wong, S. G. Li, et al. 2002. A draft sequence of the rice genome (*Oryza sativa* L. subsp. *indica*). *Science* 296: 79–92.
- Zhang S. H. G. 1989. Phylogenetic analysis of the tribe Oryzaceae: total chloroplast DNA restriction fragment analysis (a preliminary report). *Rice Genetics Newsletter* 6: 76–80.
- Zhang H., J. Jia, M. D. Gale, and K. M. Devos. 1998. Relationship between the chromosomes of *Aegilops umbellulata* and wheat. *Theoretical and Applied Genetics* 96: 69–75.
- Zink T.A. and M. F. Allen. 1998. The effects of organic amendments on the restoration of a disturbed coastal sage scrub habitat. *Restoration Ecology* 6: 52–58.
- Zinselmeier C., J. Byeong-Ryong, and J. S. Boyer. 1999. Starch and the control of kernel number in maize at low water potentials. *Plant Physiology* 121: 25–35.
- Zobel M. and M. Moora. 1995. Interspecific competition and arbuscular mycorrhiza: importance for the coexistence of two calcareous grassland species. *Folia Geobotany and Phytotaxonomy, Praha* 30: 223–230.
- Zobel M. and M. Moora. 1997. Plant coexistence in the interactive environment: arbuscular mycorrhiza should not be out of mind. *Oikos* 78: 202–207.
- Zuloaga F. O. 1979. El género *Panicum* (Gramineae) en la República Argentina. I. *Darwiniana* 22: 3–44.
- Zuloaga F. O. 1989. El género *Panicum* (Poaceae: Paniceae) en la República Argentina. III. *Darwiniana* 29: 289–370.
- Zuloaga, F. O. and G. Davidse. 1999. A new species and new combination in the genus *Parodiolyra* (Poaceae: Bambusoideae: Olyreae). *Novon* 9(4): 587–659.
- Zuloaga F. O. and O. Morrone. 1995. *Panicum* L. In A. T. Hunziker [ed.], *Flora Fanerogámica Argentina*, fascículo 12, 59–88. Pugliese Siena, Córdoba, Argentina.
- Zuloaga F. O., O. Morrone, and L. M. Giussani. 2000. A cladistic analysis of the Paniceae: a preliminary approach. In S. W. L. Jacobs and J. Everett [eds.], *Grasses: Systematics and Evolution*, 123–135. CSIRO, Collingwood, Australia.
- Zuloaga F. O. and Judziewicz, E. J. 1991. A revision of *Raddiella* (Poaceae: Bambusoideae: Olyreae). *Ann. Miss. Bot. Gard.* 78: 928–941.
- Zuloaga F. O., O. Morrone, and E. J. Judziewicz. 1993. Endemic herbaceous bamboo genera of Cuba (Poaceae: Bambusoideae: Olyreae). *Ann. Miss. Bot. Gard.* 80: 846–861.
- Zuloaga F.O. and T. R. Soderstrom. 1985. Classification of the outlying species of New World *Panicum* (Poaceae: Paniceae). *Smithsonian Contrib. Bot.* 59. Smithsonian Institution, Washington, D.C., USA.

Biological Sciences

CRC WORLD DICTIONARY OF GRASSES

Common Names, Scientific Names,
Eponyms, Synonyms, and Etymology

VOLUME I A-D

"I think very highly of this work.... It represents an achievement unparalleled, to my knowledge, by any other botanist, compiler, taxonomist or encyclopaedist...."

"The scheme is alphabetical and easy to follow. Each genus and species has a detailed morphological description, a note of its geographical distribution, and a list of synonyms and vernacular names in many languages. Habitats, economic uses, historical and biographical allusions, botanical exploration and linguistics are all detailed. Most important are the bibliographies, which accompany each entry. These are comprehensive, up-to-date and multi-lingual. They represent years of painstaking research and will be of incalculable use to students and researchers in the future."

— Charles Quest-Ritson

Uniquely qualified by his passion and scholarship in the fields of botany, linguistics, medicine, and history, Umberto Quattrocchi has created a master reference that boldly organizes thousands of species of grasses with unparalleled detail and precision.

The *CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology* draws on a tremendous range of secondary and primary sources to bring together a vast range of otherwise dispersed data. While this work is the most authoritative and sophisticated lexicon ever compiled in this area, it is much more than a dictionary. It includes historical, biographical, and linguistic information on botany and medicine, as well as insight into the general history of mankind and science.

Providing ready access to a wealth of information never before found in a single volume, the *CRC World Dictionary of Grasses*—

- Offers an indispensable time-saving guide for all those involved with plants and gardens whether they are growing, studying, or writing about them
- Leads to a huge number of obscure sources of nearly impossible-to-find information
- Details approximately 800 generic names and thousands of species of grasses, including cereals and forages
- Lists all relevant properties related to the main and secondary uses of the grasses, as well as detailed descriptions and geographical distribution

Umberto Quattrocchi is the author of the bestselling *CRC World Dictionary of Plant Names*, winner of the prestigious Hanbury Botanical Garden Award.



Taylor & Francis

Taylor & Francis Group
an informa business

A CRC PRESS BOOK
www.taylorandfrancisgroup.com

6000 Broken Sound Parkway, NW
Suite 300, Boca Raton, FL 33487

270 Madison Avenue
New York, NY 10016

2 Park Square, Milton Park
Abingdon, Oxon OX14 4RN, UK

1303

ISBN 0-8493-1303-1



9 780849 313035